# Rittal – The System.

**Faster – better – everywhere.**

# SYSTEM 36
## CATALOGUE

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

RITTAL

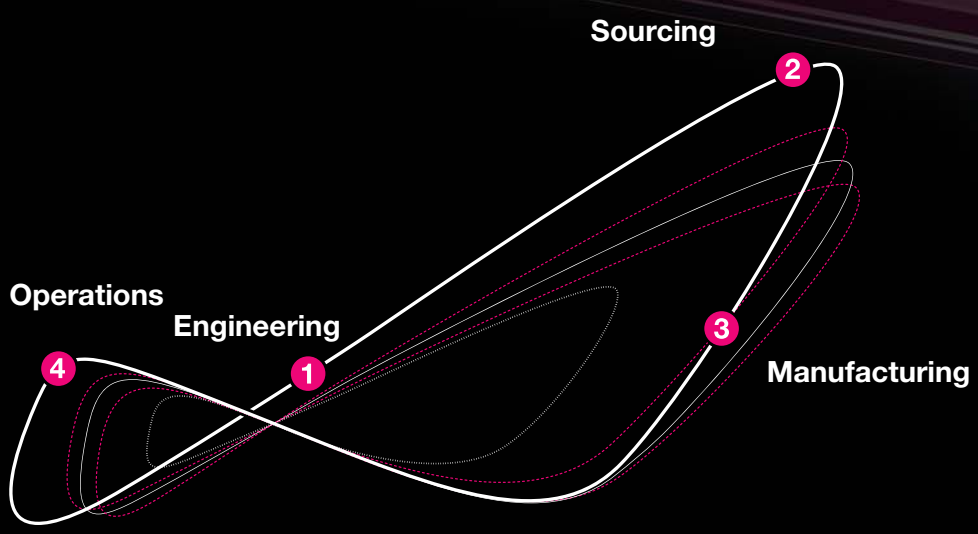
FRIEDHELM LOH GROUP

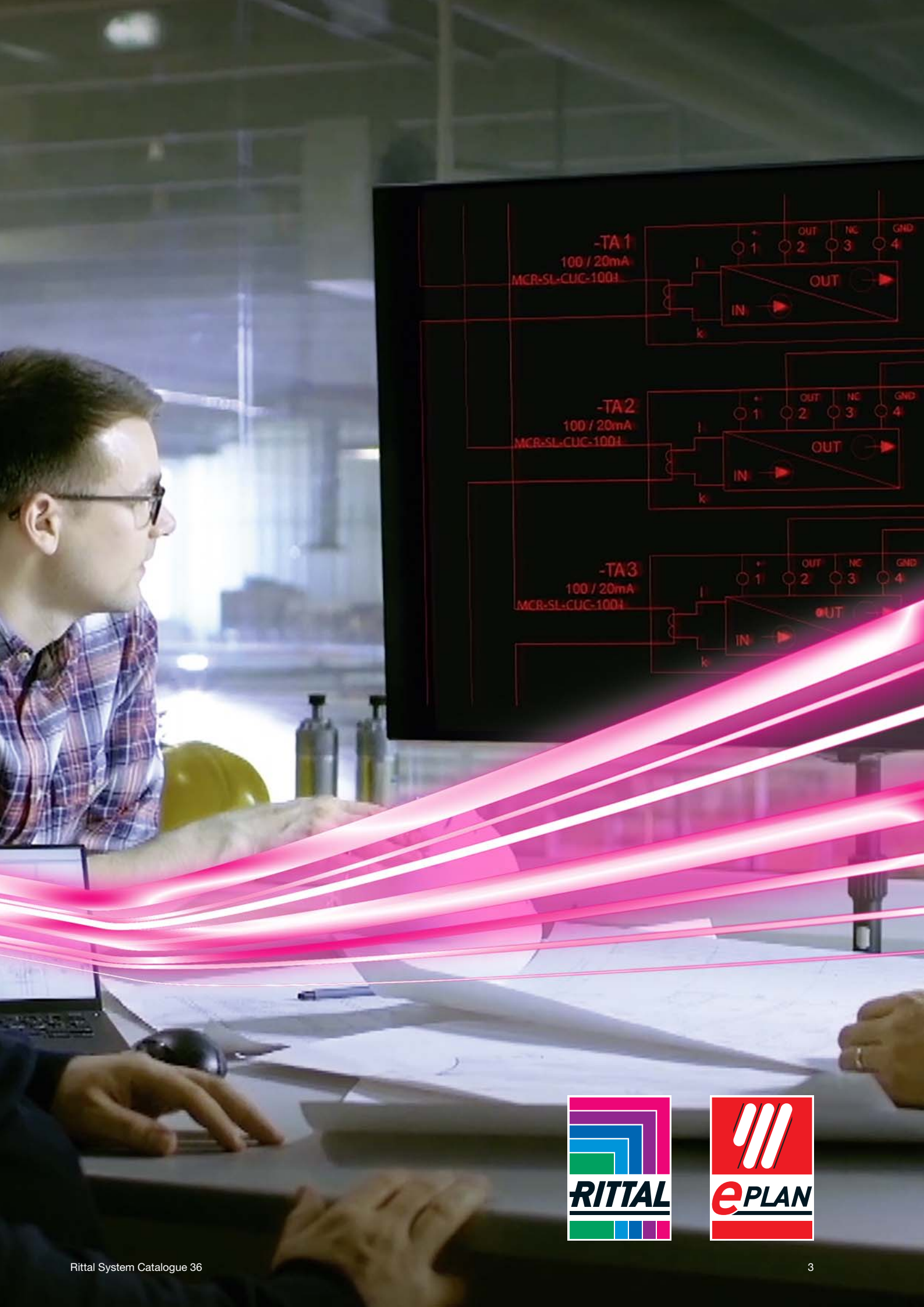
# Complex made simple

Eplan and Rittal are powerful partners in the game plan to optimise and streamline value chains. Our solutions speed up your processes and boost your productivity.
Your value chain is optimised and streamlined at every stage in the process, from engineering, purchasing and manufacturing, through to operations and IT. We support you to emerge as a winner through process streamlining in the goal to achieve the new Industry 4.0 standard.

Our approach is simple: The solutions our customers need tomorrow have been developed by us yesterday and are already in stock today.

# Our thinking is in sync with your processes.

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-TA3
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RITTAL
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# 1 Engineering

## Digitisation and prototyping boost productivity

The key to greater productivity in enclosure manufacturing lies in digital integration and end-to-end data transfer across the entire value chain. Digital protoyping from the outset, with the digital twin at its heart, provides the basis for rapid links between processes, systems and beyond.

The complete range of Eplan and Rittal tools is available to you for every aspect of engineering. Up-to-date product data from Rittal and other manufacturers can be accessed quickly via the EPLAN Data Portal. With EPLAN Pro Panel, you are ideally equipped for the future with 3D-assisted design.

Technical Specs

Mechanical Infrastructure

Technical Consulting & Design

Digital Twin

Product Functions Design

Thermal Design & Dimensioning

Checking & Correcting

Find your solution from page 18 onwards.

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# 2 Sourcing

## Do it faster, with configuration aids and our online shop

The Rittal Configuration System allows you to select your racks and enclosures quickly and easily at the click of a button, and then order them directly from the online shop. What's more, you benefit from error-free product & accessory configurations and detailed mechanical plans. It's never been easier to configure and order your perfect solution!

As an innovative and technological leader, Rittal uses automated production techniques based on Industry 4.0 principles to manufacture its world-leading products. Our mission is to manufacture rack and enclosure systems as efficiently and perfectly as possible, as at the digitally integrated Rittal plant in Haiger, for example.

Standard products are delivered within 24/48 hours in Germany/Europe, in line with our brand promise: "Rittal – The System. Faster, better, everywhere."

Ordering

Manufacturing Documents

Logistics

Kitting

Find your solution from page 1160 onwards.

24h
RITTAL
MAN
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# 3 Manufacturing

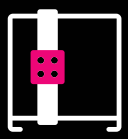
## Do it better with Industry 4.0 and automation

For customised machining of racks and enclosures with the same standards of precision and quality of volume production, Rittal offers fully automated machines for machining, component mounting and wire processing. EPLAN Smart Wiring makes wiring easier than ever before. All work stations are interlinked into one seamless, efficient process using data from the virtual prototype.

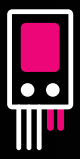
Rittal Automation Systems supplies all the automation support you need for faster, easier and more accurate panel building that can be duplicated time and again – your ideal workflow from a single source.

Cutting

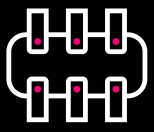
Labeling Devices



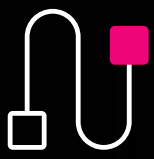
Panel Modification



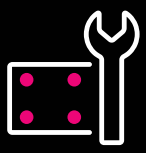
Wire Fabrication



Terminal Strip Assembly



Wiring



Mechanical Installation

Testing

Find your solution from page 560 onwards.

Wire Terminal
WT 36
RITTAL
ePLAN

# 4 Operations

## Do it more reliably with our smart, global service

We’re there for you, whether you are looking to replace vital cooling unit components or your systems need an efficiency check.

After commissioning, machines and systems must ensure reliable long-term operation as the key to efficient, high-performance production. Keep an eye on the status of your current project data, from any location, with the cloud-based solution EPLAN eVIEW. And use the Rittal global service to minimise downtime and boost efficiency.

We think ahead: With IoT links to our cooling units and chillers, for example, predictive maintenance is already a reality.

Operations

Service

Find your solution from page 1132 onwards.

Daten Cockpit
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# Become more future-proofed

## With the IT platform and edge cloud technology

The latest IT technologies and applications – from cloud and edge computing, to analytics and AI, through to 5G – will shape the production of the future.

Processing production data in real time, while ensuring data sovereignty and value creation, is a breeze with the turnkey edge cloud data centre ONCITE.

What is more, the Rittal IT platform with its modular system design will help you to master all IT scenarios quickly and easily, from rack installations through to edge and hyperscale data centres.

Monitoring

Data Analysis

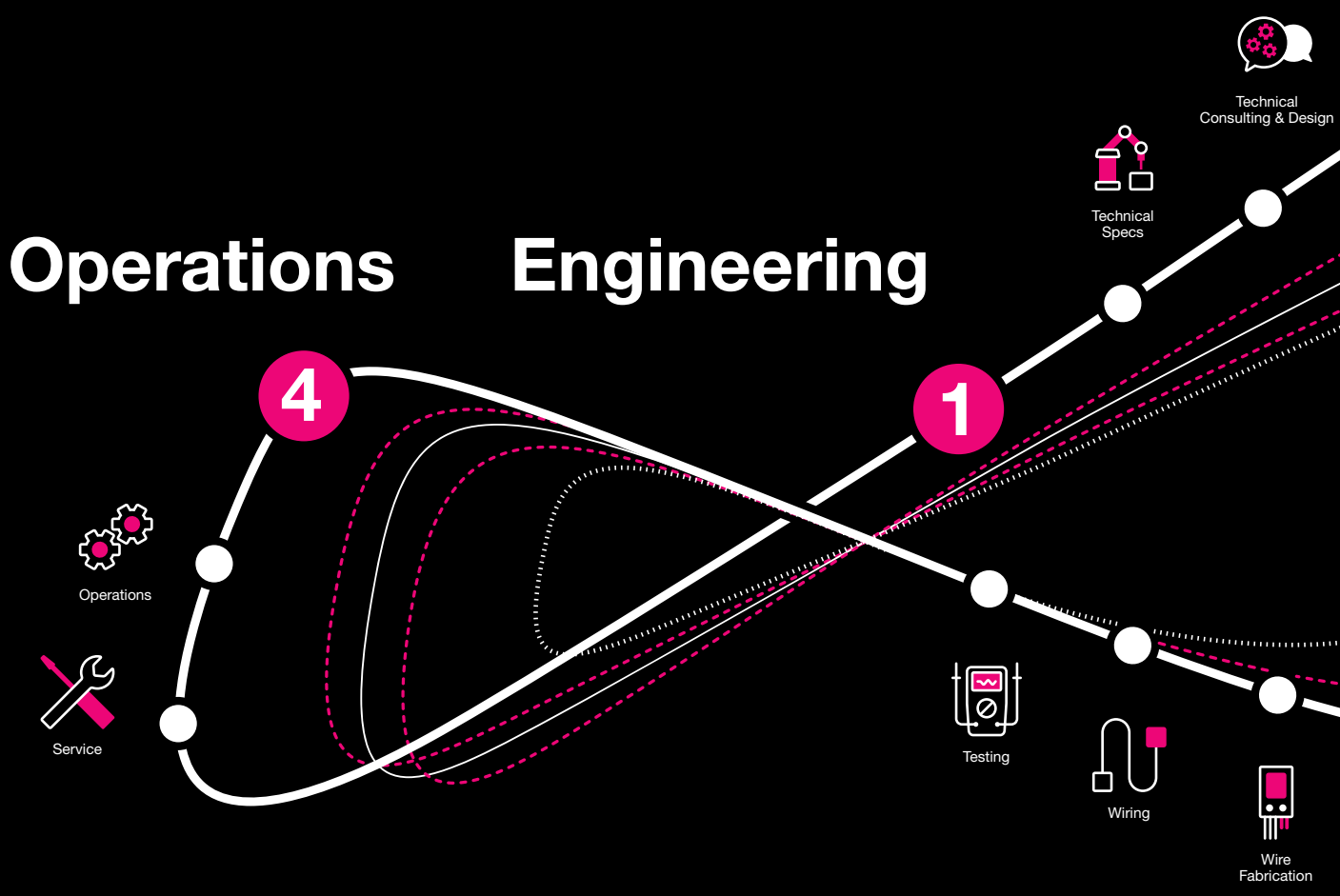
Find your solution from page 834/661 onwards.

# Be more competitive

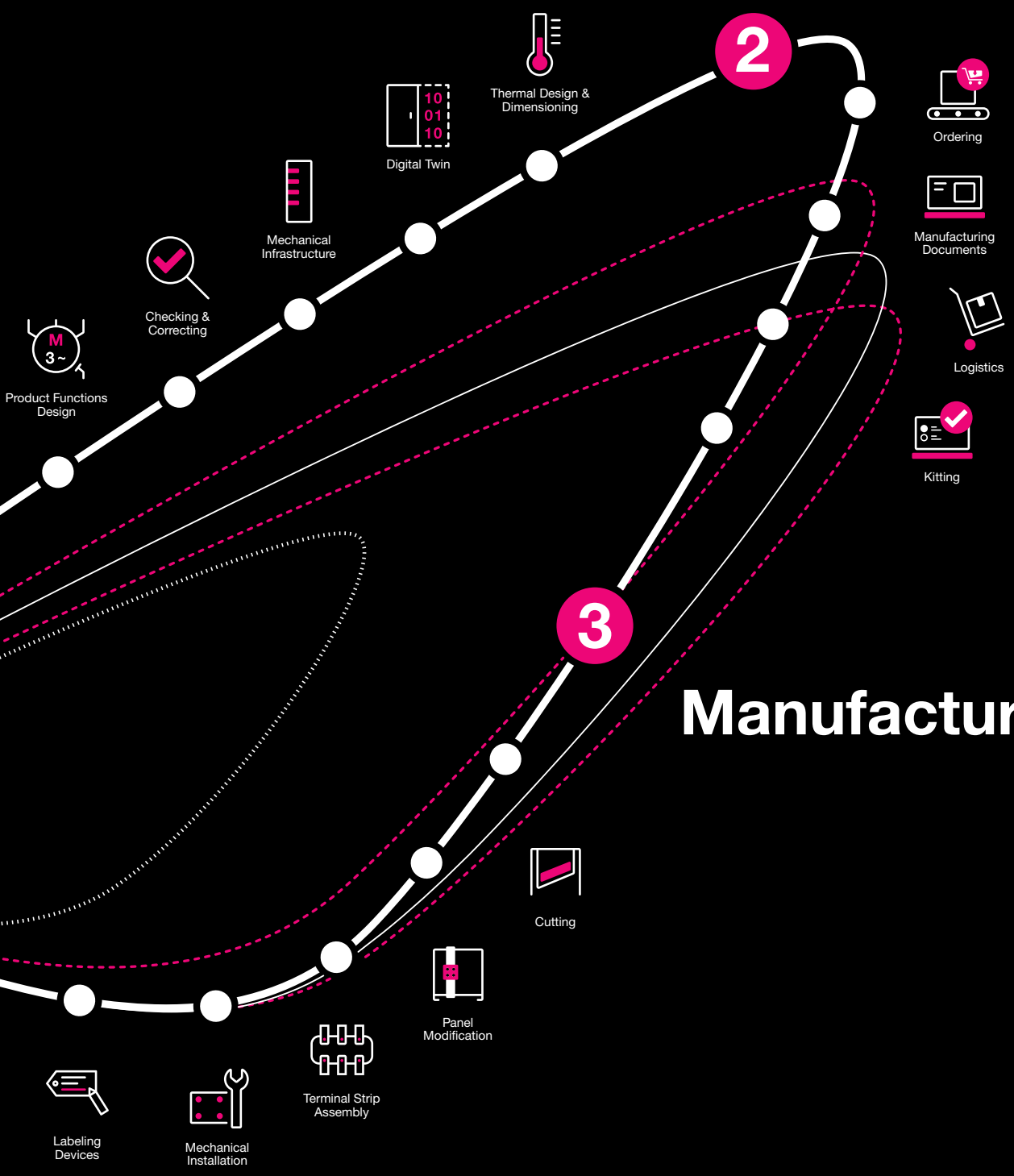
## With know-how and interplay

Combining engineering solutions from Eplan with system and automation expertise from Rittal will help to optimise and streamline your panel building and switchgear manufacturing processes across the entire value chain.

Invest in your future with Eplan and Rittal.
The future has arrived.



# Sourcing




# Manufacturing

# Rittal – The System.

**Faster – better – everywhere.**

**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

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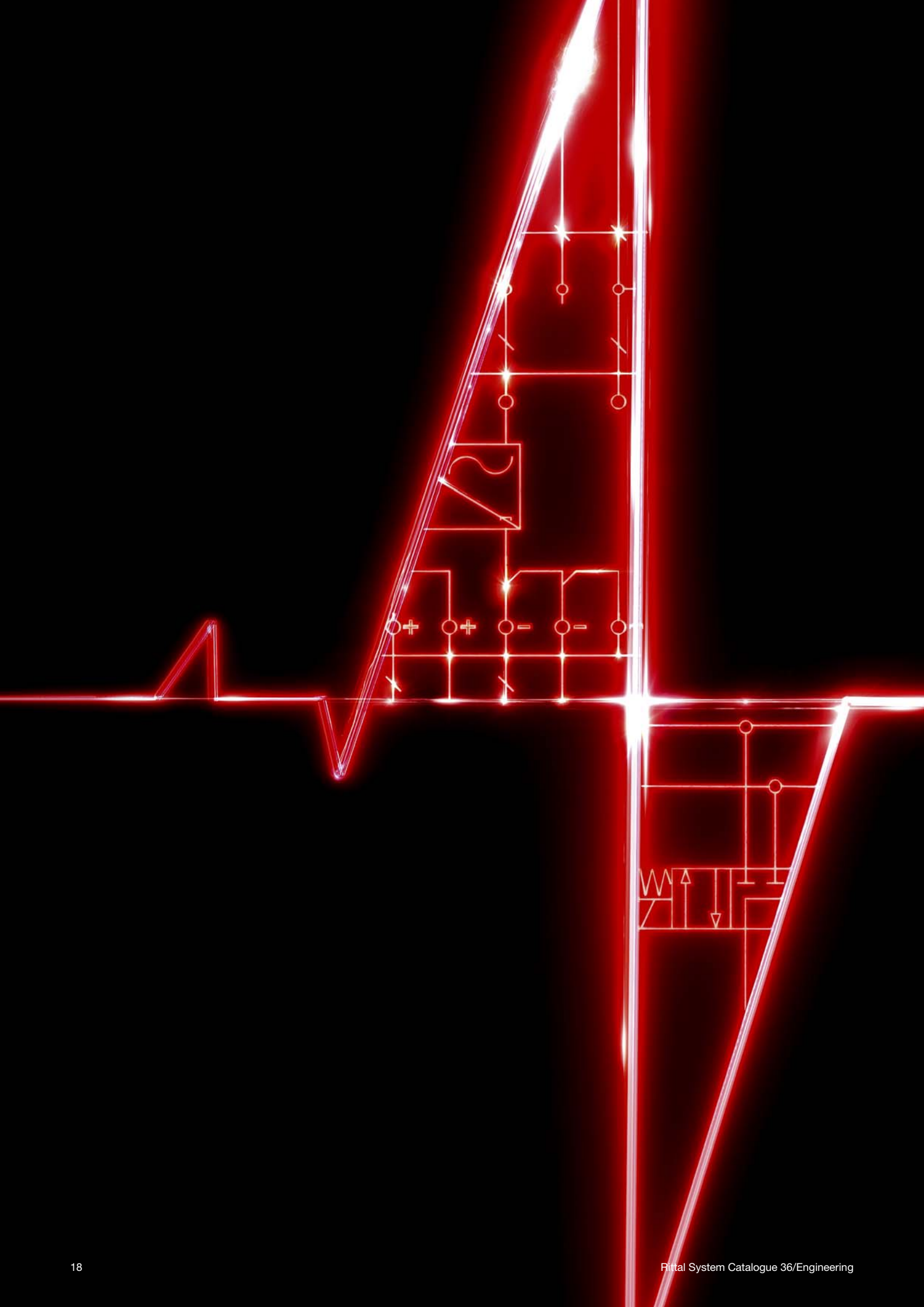

# Engineering

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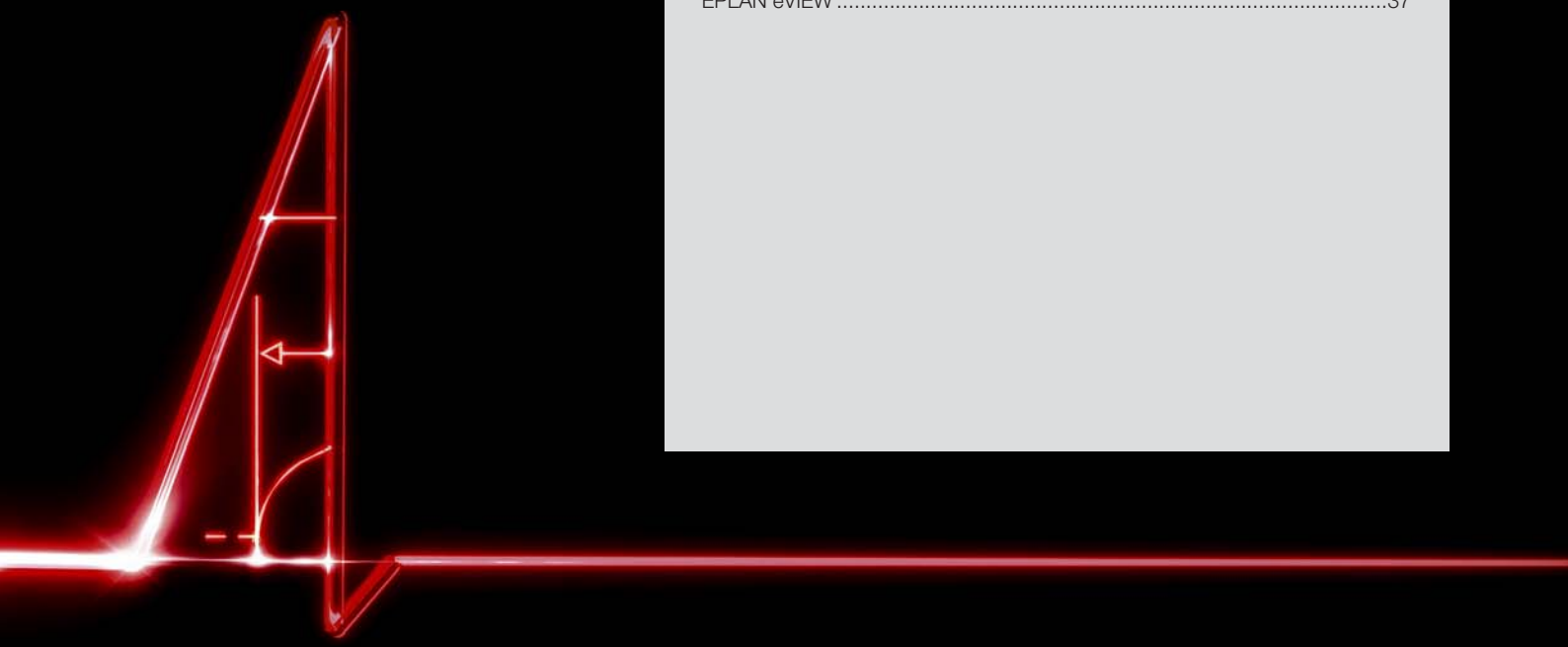
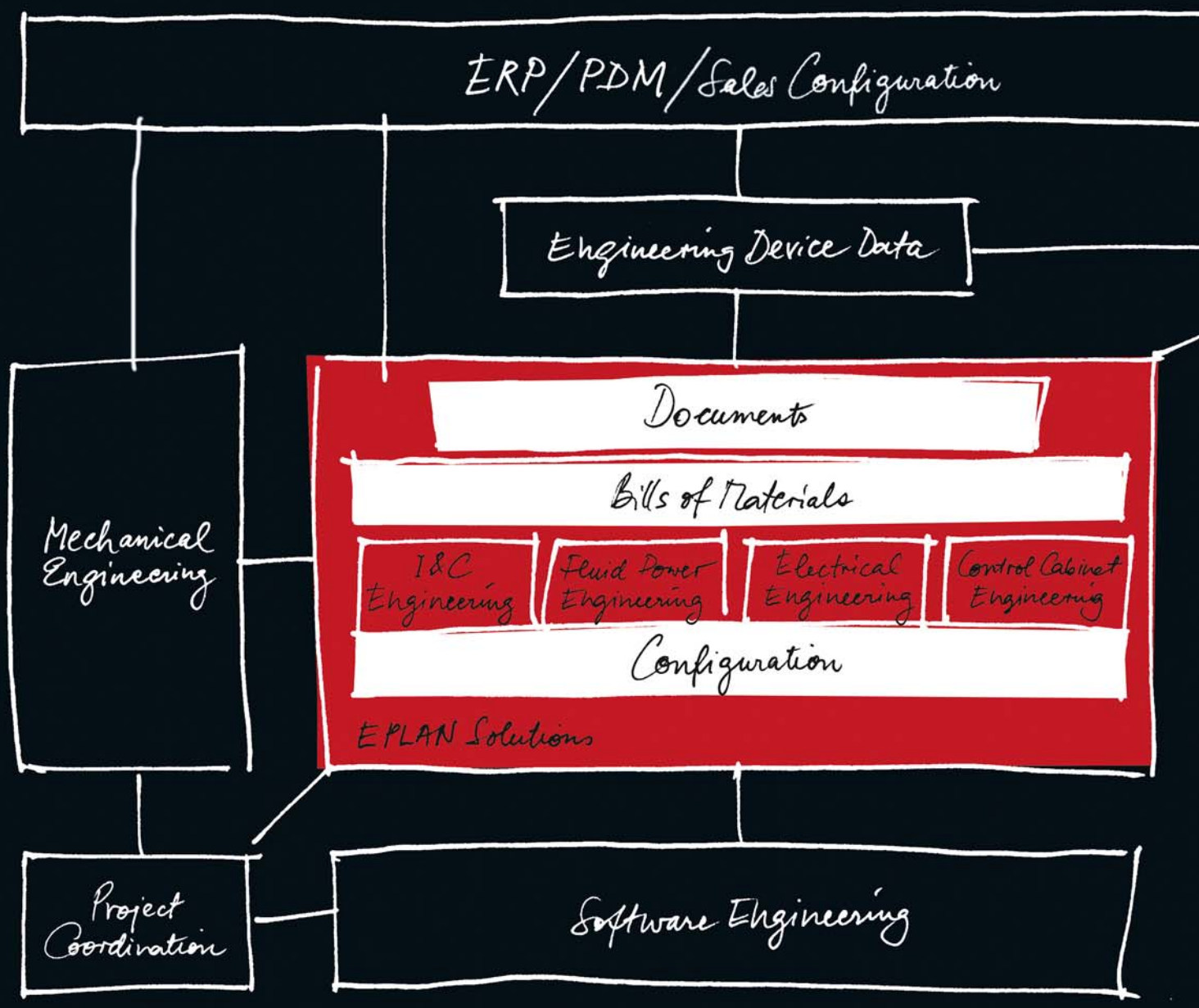


Eplan delivers software and service in all fields of electrical engineering, automation and mechatronics. We have developed one of the world's leading software solutions for mechanical & plant engineering and enclosure manufacturing.

"Efficient engineering" is our motto. When it comes to streamlining challenging engineering processes, Eplan is your ideal partner. Whether you are a small or a large company, we can help you deploy your expertise more efficiently.

# THE EPLAN PROCESS AT A GLANCE

**When it comes to your design, engineering and manufacturing tasks, having the correct expert systems is one thing. But what about the connections between the systems? And the single source of truth (SSOT)?**



We examine your process, across the full range of different operations to optimise greater efficiency and data continuity:

- Interdisciplinary communication
- Macros and configuration
- Two-way data exchange
- Interfaces to ERP/PDM
- Data forwarding to enclosure manufacturing
- Efficiency via cloud solutions

**From engineering to production**
One thing is clear: the greatest potential for efficiency improvements lies in the process. Smooth interactions between all systems, from engineering through to production, are the key to creating more value.

**Aim for reuse**
Similarly, structuring your projects and templates correctly will significantly enhance the opportunities to reuse them. We can help you!

**A standardised database for your project**
At the start of any project, you should ask yourself: Which components do we need for planning? The EPLAN Data Portal can supply these components and complete your data in a logical fashion.

EPLAN

efficient engineering.

# EPLAN SOLUTIONS – YOUR GATE-WAY TO GREATER EFFICIENCY

**EPLAN helps you to develop a cross-disciplinary approach to your engineering. The EPLAN platform provides the basis for this, by linking our software solutions together. For you, this translates into significant efficiency gains when working on your EPLAN project, because your digital data flows seamlessly from solution to solution, becoming further augmented with every process step.**
**EPLAN ePULSE additionally provides access to an innovative cloud system, genuinely adding value to multi-location projects, for example.**
**The EPLAN platform and EPLAN ePULSE combine to create EPLAN Solutions, your key to cutting-edge advanced engineering.**

“By digitizing your processes and standardizing your data, you will retain a long-term competitive edge.
We can support you, with open systems and professional advice to safeguard your efficient engineering for the future.”

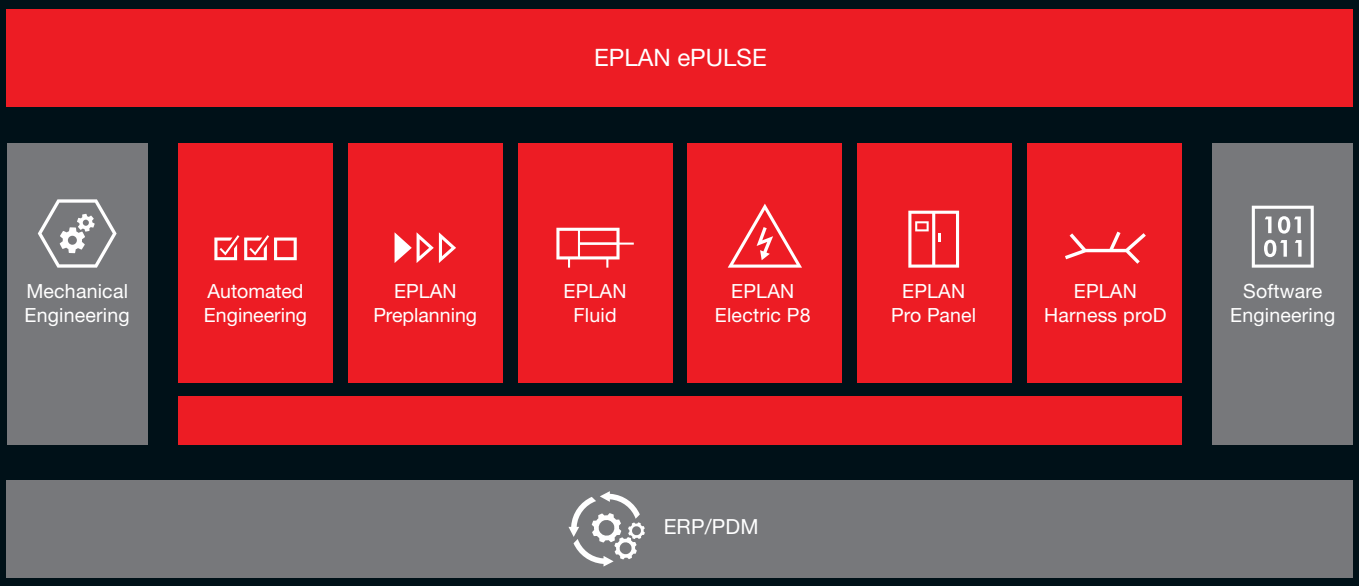
Bernd Schewior,
Vice President Professional Services EPLAN

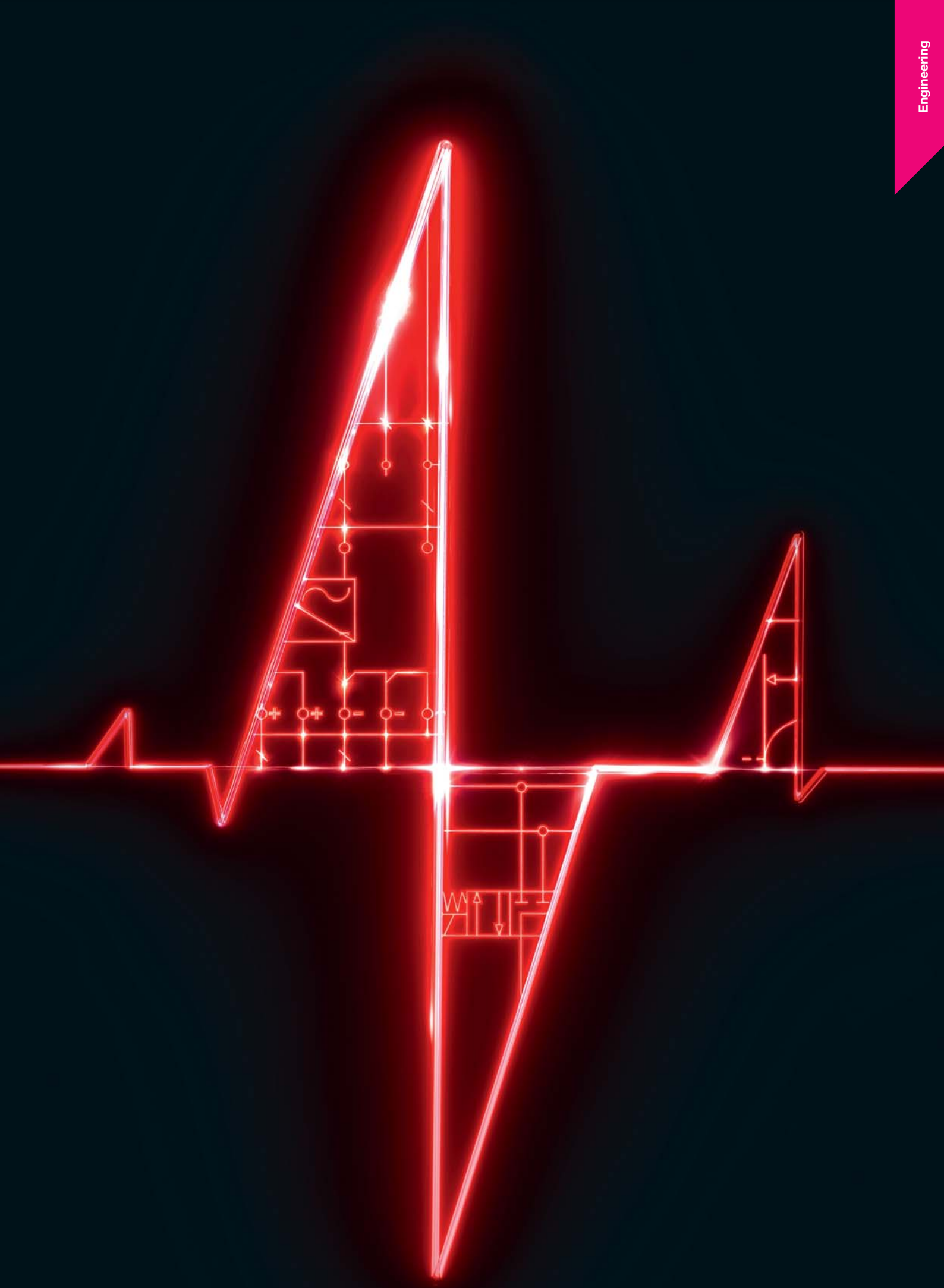
# ENGINEERING WITH ITS FINGER ON THE PULSE

**EPLAN platform**

**The EPLAN platform combines software solutions for every engineering discipline, from pre-planning, to project management, through to the construction of switchgear and cable harnesses. It comprises:**

- Automated Engineering: EPLAN Engineering Configuration (EEC) provides you with a versatile tool for the design and use of configuration interfaces. EPLAN Cogineer provides you with the basis for automated generation of wiring schematics.
- EPLAN Preplanning helps you to record engineering data even at the preplanning stage.
- EPLAN Fluid is your engineering tool specifically designed for the project management and automatic documentation of circuits for fluid engineering systems.
- EPLAN Electric P8 helps you project-plan your electrical design for machinery and equipment in an engineering solution at the heart of the EPLAN platform.
- With EPLAN Pro Panel you devise and design control cabinets, switchgear and power distribution systems for energy supply in 3D.
- Use EPLAN Harness proD for efficient design and documentation of cables and cable harnesses in 3D and 2D.





# EPLAN solutions

## EPLAN Cogineer

Maximise the potential of your engineering in next to no time with EPLAN Cogineer and boost the quality of your electrical and fluid documentation. Use your existing circuit templates to build a macro-library, and generate wiring schematics automatically at the click of a button with EPLAN Cogineer. What is more, you will benefit from the innovative techniques and add value to your engineering without a lengthy implementation process, across all industries and in companies of all sizes. With EPLAN Cogineer you can now compile circuit diagrams from a template library with just a few clicks directly from your Web browser.
Users of EPLAN ePULSE have automatic access to a free premium version of EPLAN Cogineer if already working with the Eplan platform.

**FAQs**

- **How will EPLAN Cogineer improve the quality of my projects?**
  EPLAN Cogineer is based on the standardised reuse of Eplan macros. Once correctly created, they work like a high-quality library, thus avoiding typical copy-and-paste errors. This saves time and money.
- **Do I need extensive prior knowledge to be able to work with EPLAN Cogineer?**
  You do not need expert knowledge of Eplan to be able to generate wiring schematics to the customer's specifications; training is fast and straightforward. Nor do you need any knowledge of advanced programming languages.
- **Can I benefit from EPLAN Cogineer even at the implementation phase?**
  Yes, because with EPLAN Cogineer you have the option of gradually phasing in versions of automated wiring schematics.

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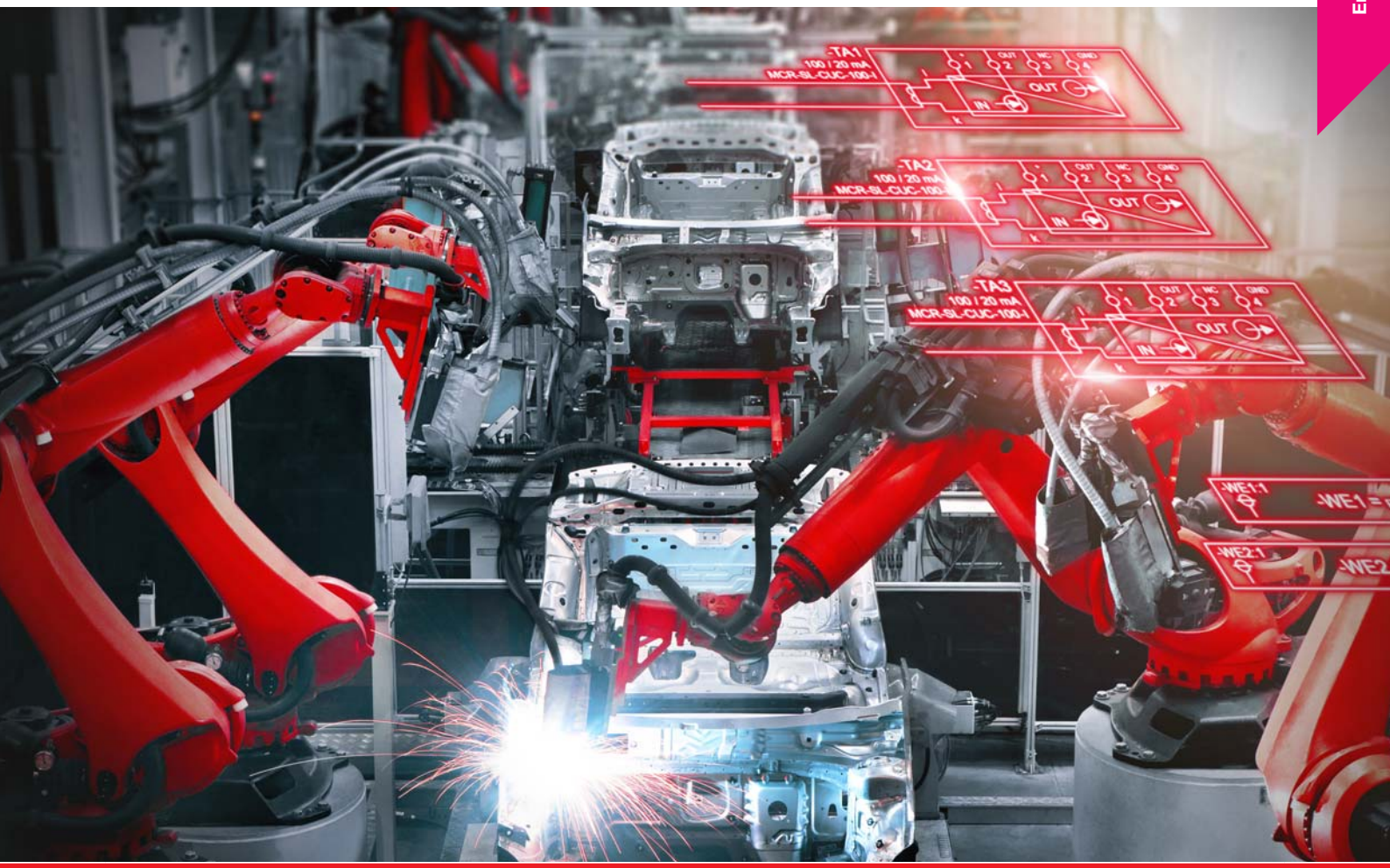
# EPLAN solutions




## EPLAN Engineering Configuration (EEC)

With EPLAN Engineering Configuration (EEC), you map your product portfolio in a modular system with interdisciplinary functional units. As a result, EEC is your go-to tool for the design and application of configuration interfaces and the automatic generation of documents. This multi-disciplinary approach integrates sales, order processing, mechanical engineering, electrical and control engineering as well as production and documentation. Standardised, recognizable structures also make the commissioning and servicing of your products easier.

**Your benefits**

- Benefit from automated data reuse with simple product structuring and the creation of modules.
- Save time and money, and optimise the quality of your documentation.
- Significantly shorten your production and delivery times, which in turn will cut project throughput times at your company.
- A wide range of distinct and varied specification parameters are supported and enable the handling of customer-specific requirements.
- EEC can be seamlessly integrated into existing system structures and supports consistent workflows.

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# EPLAN solutions

## EPLAN Preplanning

EPLAN Preplanning helps you to log your engineering data even at the preplanning stage. For example, this might include the actuators and sensors in a system, machine or building. You can import data from external spreadsheets as well as making a graphical record of plant and machine overviews and process and instrumentation diagrams. This allows you to generate the initial data sheets and specifications for material procurement quickly. Downstream engineering planning phases can also access the collated and augmented data from EPLAN Preplanning.

**Your benefits**

- You have a clearly structured overview of all plant, machine and building data at all times.
- Engineering data logged early on in the project remains readily accessible to anyone working on the project for its entire duration.
- Preplan basic information such as signal, pipeline and cable data in a graphical format to guide you more easily through the project.
- By using EPLAN Preplanning at the quote preparation phase and seamlessly transferring this information to engineering, you can boost the quality of your data throughout the entire planning process.

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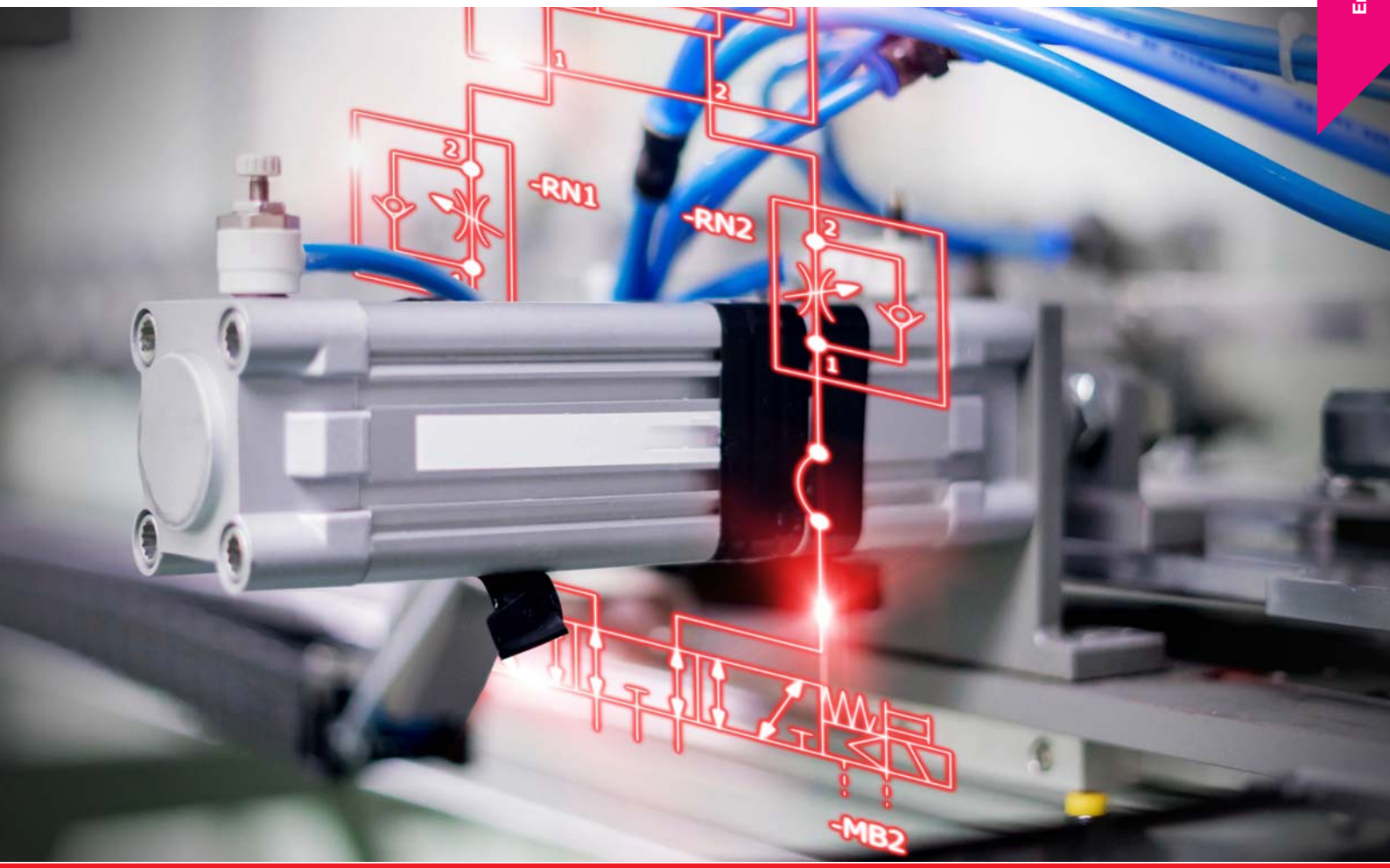
# EPLAN solutions




## EPLAN Fluid

EPLAN Fluid is your engineering tool specifically designed for the project planning and automatic documentation of fluid circuits in hydraulics, pneumatics, cooling and lubrication. The direct link to the EPLAN platform also allows you to implement tasks from other engineering disciplines in parallel. Planning and production documents are derived from the same source.

**Good to know**

- Fluid engineering planning with EPLAN Fluid is compliant with the latest standard ISO 1219 or IEC 81346 with a mechatronic approach.
- Standards and expertise are stored in the system as macros for reuse.

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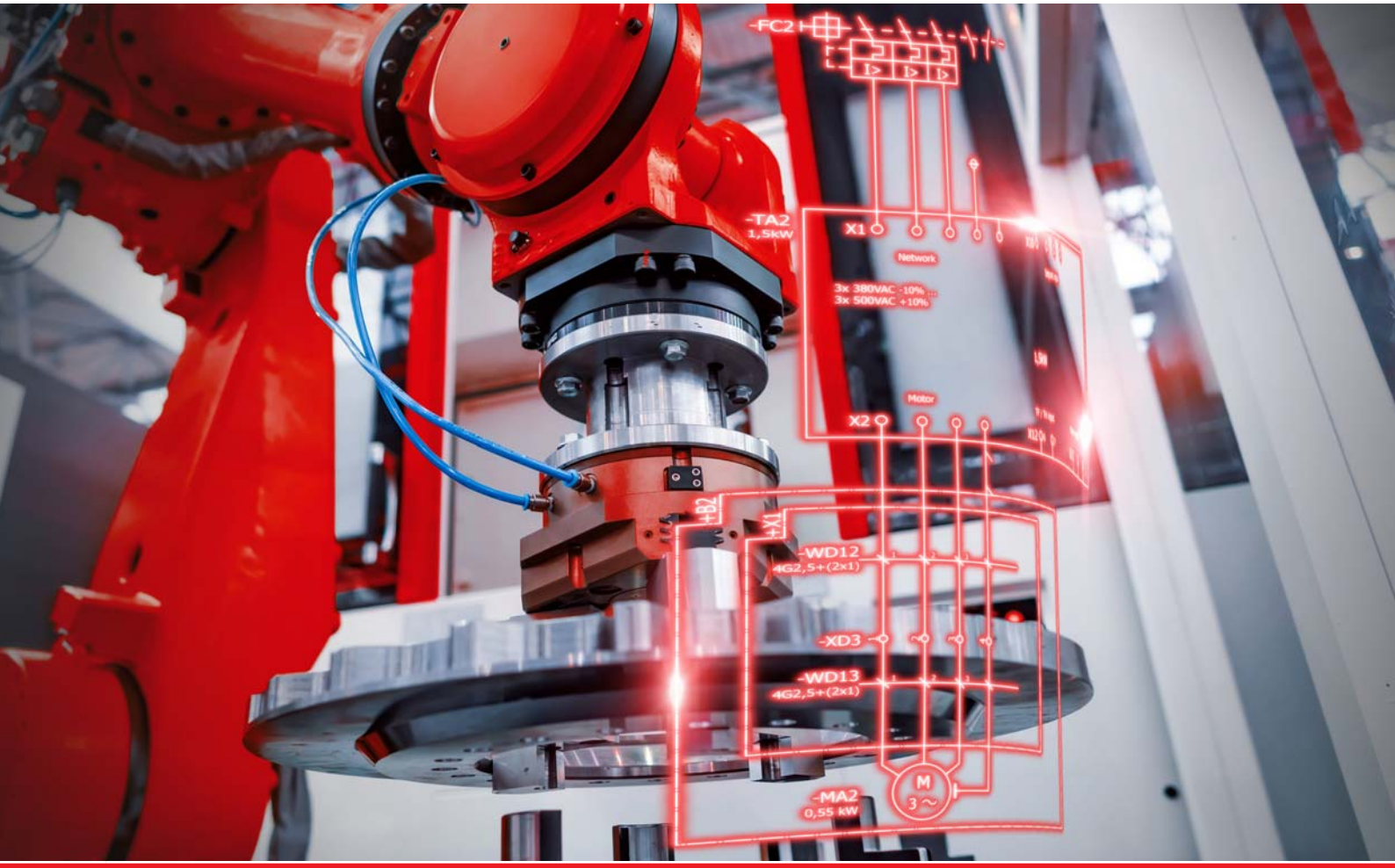
# EPLAN solutions




## EPLAN Electric P8

EPLAN Electric P8 allows consistent, seamless, fast project planning of your electrical machinery and equipment designs in one engineering system. The software supports a range of engineering techniques, from manual generation through to standardised and template-based approaches. Once recorded in the circuit diagram, the machinery and equipment documentation is auto-completed using the project data. EPLAN Electric P8 automatically generates detailed evaluations on your behalf as an integral part of the project documentation.
This can be supplied continuously or bundled at the end of the project, as you prefer. This allows you to supply all downstream process stages with the necessary engineering information: from seamless planning through to production, commissioning, maintenance and repair.

**Your benefits**

- Switch symbols are logically autoconnected in a flash.
- Choose between a graphical, logical or equipment-based project planning approach to support a variety of work processes.
- Evaluations such as terminal and cable plans or parts lists are generated automatically for you.
- Functions for processing mass data such as “search and replace” or “process in Excel” will accelerate your project planning while at the same time improving quality.

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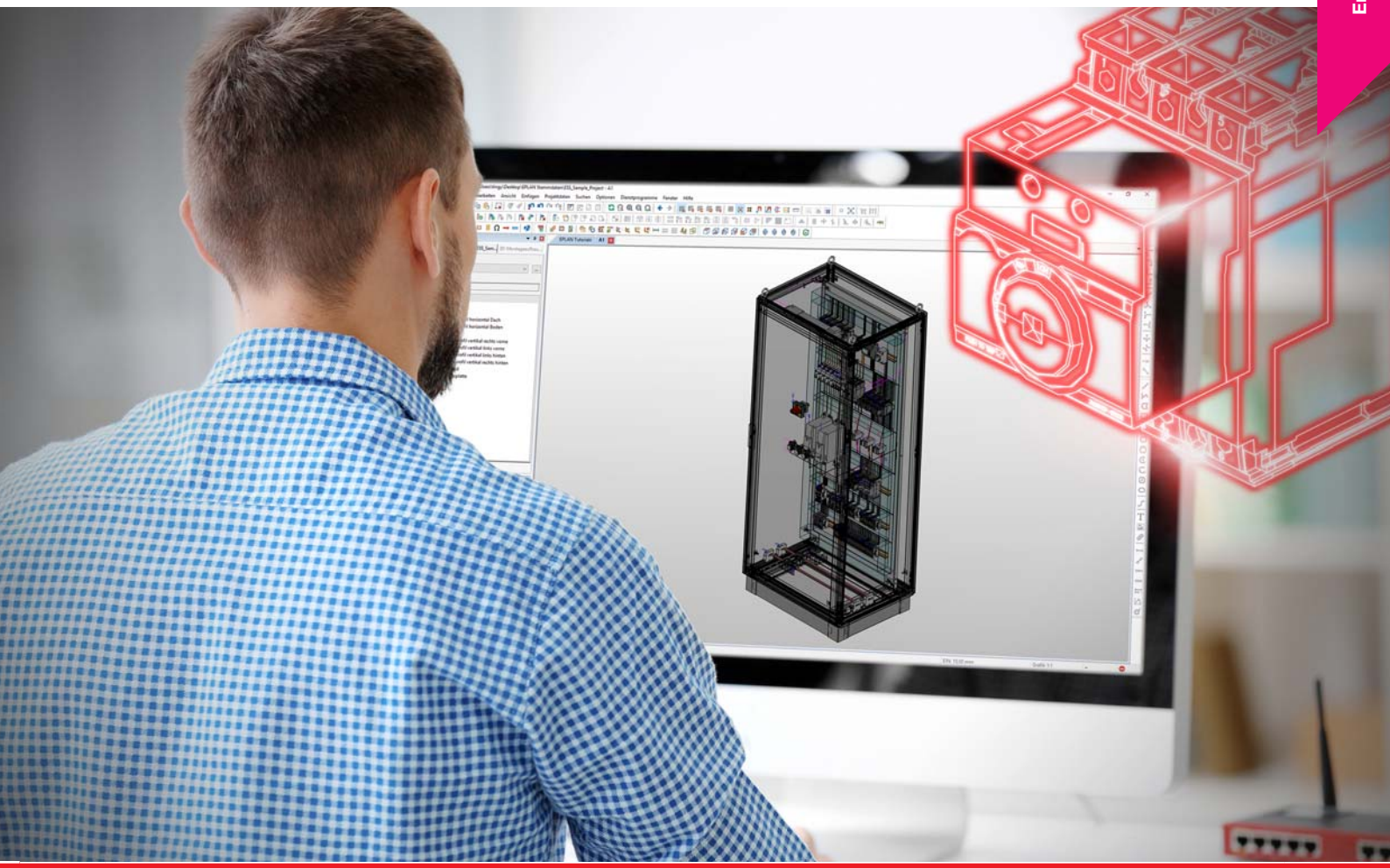
# EPLAN solutions



## EPLAN Pro Panel

EPLAN Pro Panel Professional allows you to devise and design control cabinets, switchgear and power distribution systems for energy supply in 3D. This means you can solve a wide range of engineering tasks with just one software package: from the creation of electrical circuit diagrams, to planning the installation layout in 3D, through to the virtual laying of connections. What is more, EPLAN Pro Panel Professional allows for comprehensive improvements of the production processes in enclosure and switchgear manufacturing: A wide range of manufacturing data and information is supplied automatically, from component labelling through to support of the manual wiring process.
In short, EPLAN Pro Panel Professional provides a solid foundation for the automation and streamlining of your enclosure manufacturing.

**Your benefits**

- From the creation of circuit diagrams to assembly layout to production integration, a single software package does it all.
- For more automated enclosure production, order information and comprehensive manufacturing documentation can be provided.
- Shorten throughput times and cut costs while maintaining a high standard of quality.
- Work profitably on any unit volume, from specific projects with a batch size of just 1 through to mass production.

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# EPLAN solutions

## EPLAN Smart Wiring

EPLAN Smart Wiring is your virtual assistant for manual wiring in enclosure production. From the connection point through to the precise cable route, the software provides wiring experts with all the information they need in digital form, in 3D if required. You decide whether to wire the displayed connections individually or in a preset sequence.
Wiring status can be indicated with the traffic-light principle. If you need confirmation, you can call up the electrical wiring plan to cross-check, starting from each individual connection. Any anomalies can be forwarded directly to the planning department by email. Project data is made available on a central server, allowing you to produce multiple identical enclosures in parallel or collaborate with several wiring experts.

**Your benefits**

- As a wiring expert, you receive detailed step-by-step instructions for simple usage.
- Wiring without a wiring plan is also possible, this is stored in the assistant.
- Assembly layout, operating equipment, connections, connection setups and cable routes are clearly and comprehensively visualised.
- For any last minute changes, an automatic project adjustment capability helps to prevent errors.
- Status information supports the transfer of the project to several different employees and enables you to monitor the project.

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# EPLAN solutions

## EPLAN Harness proD

EPLAN Harness proD is used for the efficient design and documentation of cables and cable harnesses in 3D and 2D. The software allows you to automate typical work operations in cable and cable harness design – from transferring the connection information from the EPLAN platform, to intuitive cable laying, through to generation of the production documents. The software is open to MCAD systems and is therefore seamlessly integrated into existing system landscapes. The cable and cable harness design does not depend on the availability of a mechanical prototype. You can upgrade the digital twin with the relevant electrical information even during the engineering process.

**Your benefits**

- The intuitive 3D environment makes it easier for you to design cables and cable harnesses.
- The required production documents including pinboard drawing and cable drawing can be derived automatically. This saves you time and money and enhances the quality of your documentation.
- Electrical pathways are more easily distinguished and wires and cables can be routed automatically.

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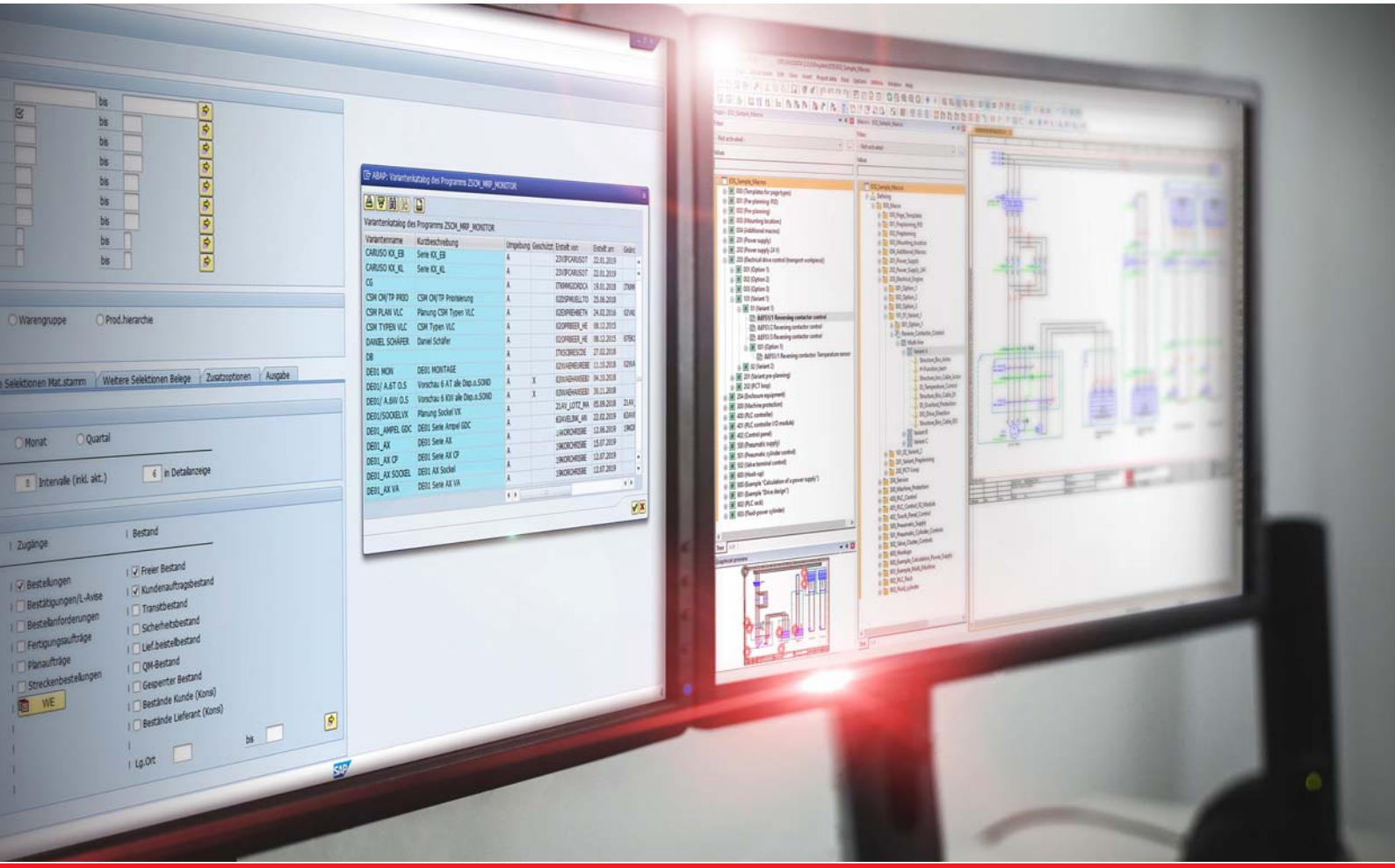
# EPLAN solutions



## EPLAN ERP/PDM Integration Suite

Seamless data flows ensure transparency in the product development process. The EPLAN Integration Suite supports integration into existing ERP, PDM and PLM system protocols. This helps you to optimise your work processes, from the circuit diagram through to the master data.
Fast, specific data is supplied in a two-way exchange with the systems without needing to leave your work space within the EPLAN platform.

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# EPLAN solutions

## EPLAN Data Portal

The EPLAN Data Portal gives you direct online access to high-quality product catalogues from a host of component manufacturers. All products within the EPLAN platform have equal access to this Web service. By dragging and dropping the available components into the EPLAN documentation, you can reduce project planning work and upgrade the quality of machine and system documentation. The time savings achieved with the EPLAN Data Portal at the start of project planning extend right through to commissioning: The representation of a device in various system plans is always based on a uniform source.

**Your benefits**

- Quickly and easily located standardised, intelligent, globally valid device data.
- Minimise the effort required for master data maintenance.
- Benefit from significant project planning time savings compared with manual generation.
- Significantly enhance the quality of your documentation.

**www.eplan-software.com/eplan-data-portal**

# EPLAN solutions

## EPLAN eBUILD

EPLAN eBUILD is a member of the EPLAN ePULSE family, which brings together open and cloud-based data and projects, disciplines and engineers worldwide.
The automated creation of wiring schematics helps users to take their first steps towards automated engineering.

**Your benefits**

- Free template libraries, including logic and variance, are available to use.
- Readily available in the Eplan platform (from version 2.8, hotfix 3).
- New template libraries from well-known manufacturers are continuously being added to EPLAN ePULSE as cloud-based options.
- This tool is suitable for universal use across all industries and is international.

**www.eplan-software.com/solutions**

# EPLAN solutions

## EPLAN eVIEW

With EPLAN eVIEW, your Eplan project is uploaded to the cloud for you. This means that any data created and added to in the EPLAN platform is evident to everyone involved in the project throughout the entire value chain, from engineering, production and assembly, through to maintenance and servicing. EPLAN eVIEW allows you to view project data from any location via your browser and comment on any amendments. The software guides you easily and intuitively through the redlining process.
This enables simple communication and collaboration across different projects, departments and companies, so you can collaborate securely and transparently with different teams, suppliers and service-providers. Everything is paperless, using data directly from the cloud.

**Good to know**

- EPLAN eVIEW allows you to access and view the status of a distinct EPLAN project at any time.
- Clearly definable access rights ensure data privacy.
- A consistent redlining process supports communication between the engineering team and the local commissioning and servicing teams.
- Cloud-to-cloud: EPLAN eVIEW can also be linked to your own in-house cloud solutions.

**www.eplan-software.com/solutions**

# Rittal – The System.

**Faster – better – everywhere.**

**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

FRIEDHELM LOH GROUP

# ENCLOSURES


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# Rittal – The System.

**Faster – better – everywhere.**

| Product group | | Small enclosures | Compact enclosures | Enclosure systems |
|---|---|---|---|---|
| | | Tough enough to take it all – there are practically no limits to the scope of applications for these especially robust small and compact enclosures. Electrical, electronic and pneumatic components are securely encapsulated with a high IK impact resistance. | | Ingeniously simple, fully symmetrical, and patented worldwide – this is the successful formula which has established the VX25/ VX SE as a global standard. |
| Material | Plastic | ■ | ■ | – |
| | Aluminium | ■ | – | – |
| | Sheet steel | ■ | ■ | ■ |
| | Stainless steel | ■ | ■ | ■ |
| Dimension variants | | More than 145 small enclosures and 190 compact enclosures in a range of individual materials and designs. | | Free-standing and bayed enclosures in more than 140 variants for controlgear production and plant manufacturing. |
| Product characteristics | | Exceptionally robust and with a high IP and IK protection class, Rittal small and compact enclosures are compliant with all major international approvals and standards. | | Infinite installation opportunities, simple assembly, uncompromising baying and tested quality are the distinguishing features of these enclosure systems. QR codes on all machinable components. |
| From page | | 43, 227 | 73, 227 | 99, 227 |

| | Console systems | PC enclosure systems | Industrial Workstations | Operating housings | Support arm systems | Stand systems | Hygienic Design |
|---|---|---|---|---|---|---|---|
| | Versatility through modularity – essential for meeting individual customer requirements for machine and plant operation perfectly and cost-effectively. | | | Always exactly the right position: Different viewing angles of the machine, tall or short operating staff – your ergonomic solution at the human/machine interface can be found here. | | | Hygienic Design (HD) enclosures are key elements in the design of open processes for the food industry and clean rooms, due to their ease of cleaning. |
| | – | – | – | – | – | – | – |
| | – | – | – | ■ | – | – | – |
| | ■ | ■ | ■ | ■ | ■ | ■ | – |
| | ■ | ■ | – | ■ | ■ | – | ■ |
| | Choose from console systems in over 30 combination variants, 8 PC enclosure systems and 13 variants of Industrial Workstations. | | | With over 30 operating housings, 5 support arm systems with a wide range of combination options and 8 stand systems, there is a solution for every requirement. | | | 18 different enclosure types and sizes. |
| | Robust and modular, especially designed for tough industrial environments where a high protection category and good accessibility are key. | | | Flexibility, stability, simple assembly and tremendous versatility with product combinations mean that every requirement is catered for. | | | The range is based on common European standards, directives and regulations in the food and luxury goods industry. |
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# Rittal – The System.

**Faster – better – everywhere.**

# Small enclosures


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## Bus enclosures KX

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# Polycarbonate enclosures PK

**PK accessories** Page 47 **System accessories** Page 877 **Cable gland, polyamide** Page 1056

**Applications:**
- Ambient temperature range: -35 °C...+80 °C
- The specified temperatures may be limited by the installed equipment

**Material:**
- Enclosure: Fibreglass-reinforced polycarbonate
- Cover grey: Fibreglass-reinforced polycarbonate, all-round foamed-in PU seal
- Cover transparent: Polycarbonate, all-round foamed-in PU seal
- Cover screws: Polyamide
- Insulating bungs: Polyethylene

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with cover
- Cover screws
- Insulating bungs for wall mounting screws

**Approvals:**
- UL
- cUL
- DNV-GL

## without knockouts

| **Width** mm | | | 65 | 94 | 94 | 94 | 110 | 110 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | | 65 | 65 | 94 | 94 | 110 | 110 | |
| **Depth** mm | | | 57 | 57 | 57 | 81 | 66 | 90 | |
| **Model No.** | | | **9500.000** | **9502.000** | **9504.000** | **9505.000** | **9506.000** | **9507.000** | |
| | | Packs of | 12 pc(s). | 8 pc(s). | 6 pc(s). | 6 pc(s). | 6 pc(s). | 6 pc(s). | |
| Cover | grey | | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| Mounting plate | | | – | – | – | – | – | – | |
| Hinge | | | – | – | – | – | – | – | |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

## without knockouts

| **Width** mm | | | 130 | 130 | 130 | 130 | 180 | 180 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | | 94 | 94 | 130 | 130 | 94 | 94 | |
| **Depth** mm | | | 57 | 81 | 75 | 99 | 57 | 81 | |
| **Model No.** | | | **9508.000** | **9509.000** | **9510.000** | **9511.000** | **9512.000** | **9513.000** | |
| | | Packs of | 4 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | 2 pc(s). | 2 pc(s). | |
| Cover | grey | | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| Mounting plate | | | – | – | – | – | – | – | |
| Hinge | | | – | – | – | – | – | – | |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

## without knockouts

| **Width** mm | | Packs of | 180 | 180 | 180 | 180 | 180 | 180 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | | 110 | 110 | 110 | 110 | 110 | 110 | |
| **Depth** mm | | | 90 | 90 | 111 | 111 | 165 | 165 | |
| **Model No.** | | 2 pc(s). | **9514.000** | **9514.100** | **9515.000** | **9515.100** | **9516.000** | **9516.100** | |
| Cover | grey | | ■ | – | ■ | – | ■ | – | |
| | transparent | | – | ■ | – | ■ | – | ■ | |
| **Accessories** | | | | | | | | | |
| Mounting plate | | | – | – | – | – | – | – | |
| Hinge | | 20 pc(s). | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 47 |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

## without knockouts

| **Width** mm | | Packs of | 182 | 182 | 182 | 182 | 182 | 182 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | | 180 | 180 | 180 | 180 | 180 | 180 | |
| **Depth** mm | | | 90 | 90 | 111 | 111 | 165 | 165 | |
| **Model No.** | | 1 pc(s). | **9517.000** | **9517.100** | **9518.000** | **9518.100** | **9519.000** | **9519.100** | |
| Cover | grey | | ■ | – | ■ | – | ■ | – | |
| | transparent | | – | ■ | – | ■ | – | ■ | |
| **Accessories** | | | | | | | | | |
| Mounting plate | | 10 pc(s). | 9548.000 | 9548.000 | 9548.000 | 9548.000 | 9548.000 | 9548.000 | 47 |
| Hinge | | 20 pc(s). | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 47 |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

## without knockouts

| **Width** mm | | Packs of | 254 | 254 | 254 | 254 | 254 | 254 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | | 180 | 180 | 180 | 180 | 180 | 180 | |
| **Depth** mm | | | 90 | 90 | 111 | 111 | 165 | 165 | |
| **Model No.** | | 1 pc(s). | **9520.000** | **9520.100** | **9521.000** | **9521.100** | **9522.000** | **9522.100** | |
| Cover | grey | | ■ | – | ■ | – | ■ | – | |
| | transparent | | – | ■ | – | ■ | – | ■ | |
| **Accessories** | | | | | | | | | |
| Mounting plate | | 8 pc(s). | 9549.000 | 9549.000 | 9549.000 | 9549.000 | 9549.000 | 9549.000 | 47 |
| Hinge | | 20 pc(s). | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 47 |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

## without knockouts

| **Width** mm | | Packs of | 360 | 360 | 360 | 360 | Page |
|---|---|---|---|---|---|---|---|
| **Height** mm | | | 254 | 254 | 254 | 254 | |
| **Depth** mm | | | 111 | 111 | 165 | 165 | |
| **Model No.** | | 1 pc(s). | **9523.000** | **9523.100** | **9524.000** | **9524.100** | |
| Cover | grey | | ■ | – | ■ | – | |
| | transparent | | – | ■ | – | ■ | |
| **Accessories** | | | | | | | |
| Mounting plate | | 4 pc(s). | 9550.000 | 9550.000 | 9550.000 | 9550.000 | 47 |
| Hinge | | 20 pc(s). | 9581.000 | 9581.000 | 9581.000 | 9581.000 | 47 |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 9583.000 | 47 |

# Polycarbonate enclosures PK

**PK accessories** Page 47 **System accessories** Page 877 **Cable gland, polyamide** Page 1056

**Applications:**
- Ambient temperature range: -35 °C...+80 °C
- The specified temperatures may be limited by the installed equipment

**Material:**
- Enclosure: Fibreglass-reinforced polycarbonate
- Cover: Fibreglass-reinforced polycarbonate, all-round foamed-in PU seal
- Cover screws: Polyamide
- Insulating bungs: Polyethylene

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with cover
- Cover screws
- Insulating bungs for wall mounting screws

**Approvals:**
- UL
- cUL
- DNV-GL

## with knockouts

| **Width** mm | | | 130 | 180 | 254 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | | 94 | 110 | 180 | |
| **Depth** mm | | | 57 | 90 | 111 | |
| **Model No.** | | | **9508.050** | **9514.050** | **9521.050** | |
| | | Packs of | 4 pc(s). | 2 pc(s). | 1 pc(s). | |
| Cover | grey | | ■ | ■ | ■ | |
| No. of metric knockouts | | | 10 x M16/M20 | 16 x M20<br>2 x M20/M25<br>2 x M32/M40 | 24 x M20<br>4 x M25/M32<br>4 x M32/M40 | |
| **Accessories** | | | | | | |
| Mounting plate | | 8 pc(s). | – | – | 9549.000 | 47 |
| Wall mounting bracket | | 40 pc(s). | 9583.000 | 9583.000 | 9583.000 | 47 |

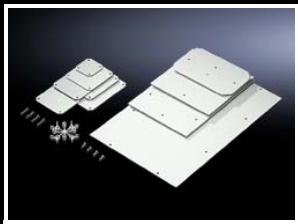
## Mounting plate

**for PK**
For individual interior installation.

**Material:**
– 2.5 mm melamine phenol-coated laminated paper

**Colour:**
– RAL 7035

**Supply includes:**
– Mounting plate
– Self-tapping assembly screws



| Mounting plate width mm | Mounting plate height mm | For enclosure width mm | For enclosure height mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 150 | 150 | 182 | 180 | 10 pc(s). | **9548.000** |
| 220 | 150 | 254 | 180 | 8 pc(s). | **9549.000** |
| 331 | 220 | 360 | 254 | 4 pc(s). | **9550.000** |

## Hinge

**for PK**
For hinged attachment of covers. The supplied drilling template ensures problem-free assembly.

**Material:**
– Polystyrene

**Colour:**
– Similar to RAL 7035

**Supply includes:**
– 20 hinges
– Assembly parts

| For enclosure width mm | For enclosure height mm | Material | Packs of | **Model No.** |
|---|---|---|---|---|
| ≥ 180 | ≥ 110 | Polystyrene | 20 pc(s). | **9581.000** |

## Wall mounting bracket

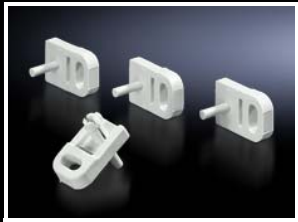
**for PK**
The enclosure can be screwed to the wall using four wall mounting brackets. The bracket is securely attached to the enclosure by means of pins.

**Applications:**
– For all PK enclosures

**Material:**
– Polyamide, grey

**Colour:**
– Similar to RAL 7035

| Packs of | **Model No.** |
|---|---|
| 40 pc(s). | **9583.000** |



# Cast aluminium enclosures GA

**GA accessories** Page 49 **System accessories** Page 877

**Material:**
- Enclosure: Cast aluminium
- Cover: Cast aluminium, all-round CR cellular rubber cord seal

**Surface finish:**
- Textured paint

**Colour:**
- RAL 7001

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4

**Supply includes:**
- Enclosure with cover
- Cover screws, captive
- Screws for attaching support rails
- Screw for connection of the PE conductor

| **Width** mm | | 58 | 98 | 75 | 125 | 175 | 250 | 122 | 220 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 64 | 64 | 80 | 80 | 80 | 80 | 120 | 120 | |
| **Depth** mm | | 36 | 36 | 58 | 58 | 58 | 58 | 82 | 93 | |
| **Model No.** | | **9101.210** | **9102.210** | **9104.210** | **9105.210** | **9106.210** | **9107.210** | **9108.210** | **9110.210** | |
| | Packs of | 5 pc(s). | 3 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | |
| **Accessories** | | | | | | | | | | |
| Mounting plate | | – | – | – | 9105.700 | – | – | 9108.700 | 9110.700 | 49 |
| | Packs of | – | – | – | 10 pc(s). | – | – | 2 pc(s). | 2 pc(s). | – |
| Wall mounting bracket | 2 pc(s). | – | – | – | – | – | – | 9121.122 | 9121.122 | 49 |
| Support rail | | see page | see page | see page | see page | see page | see page | see page | see page | 997 |
| Hinge, exterior | 2 pc(s). | – | – | – | – | – | – | 9123.000 | 9123.000 | 49 |
| Earth straps | | see page | see page | see page | see page | see page | see page | see page | see page | 1033 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | see page | see page | 1056 |

| **Width** mm | Packs of | 360 | 160 | 260 | 360 | 202 | 280 | 330 | 330 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 120 | 160 | 160 | 160 | 232 | 232 | 230 | 230 | |
| **Depth** mm | | 84 | 93 | 93 | 93 | 113 | 113 | 113 | 183 | |
| **Model No.** | 1 pc(s). | **9111.210** | **9112.210** | **9113.210** | **9114.210** | **9116.210** | **9117.210** | **9118.210** | **9119.210** | |
| **Accessories** | | | | | | | | | | |
| Mounting plate | | – | 9112.700 | 9113.700 | – | 9116.700 | 9117.700 | 9118.700 | 9118.700 | 49 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | – | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | – |
| Wall mounting bracket | 2 pc(s). | 9121.122 | 9121.160 | 9121.160 | 9121.160 | 9121.230 | 9121.230 | 9121.230 | 9121.230 | 49 |
| Support rail | | see page | see page | see page | see page | see page | see page | see page | see page | 997 |
| Hinge, exterior | 2 pc(s). | 9123.000 | 9123.000 | 9123.000 | 9123.000 | 9123.000 | 9123.000 | 9123.000 | 9123.000 | 49 |
| Earth straps | | see page | see page | see page | see page | see page | see page | see page | see page | 1033 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | see page | see page | 1056 |

## Mounting plate

**for GA**
For universal interior installation, with mounting holes.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Mounting plate width mm | Mounting plate height mm | For enclosure width mm | For enclosure height mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 114 | 69 | 125 | 80 | 10 pc(s). | **9105.700** |
| 109 | 107 | 122 | 120 | 2 pc(s). | **9108.700** |
| 207 | 107 | 220 | 120 | 2 pc(s). | **9110.700** |
| 145 | 142 | 160 | 160 | 2 pc(s). | **9112.700** |
| 245 | 142 | 260 | 160 | 2 pc(s). | **9113.700** |
| 183 | 214 | 202 | 232 | 1 pc(s). | **9116.700** |
| 264 | 214 | 280 | 232 | 1 pc(s). | **9117.700** |
| 314 | 214 | 330 | 230 | 1 pc(s). | **9118.700** |

## Wall mounting bracket

**for GA**
For external mounting on surfaces – no need to remove the cover if pre-assembled.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| For enclosure height mm | Packs of | **Model No.** |
|---|---|---|
| 120 | 2 pc(s). | **9121.122** |
| 160 | 2 pc(s). | **9121.160** |
| ≥ 230 | 2 pc(s). | **9121.230** |

## Hinge, exterior

**for GA**
For attaching the cover to the enclosure base.

**Material:**
– Die-cast aluminium

**Colour:**
– RAL 7001

**Supply includes:**
– 2 hinges
– 8 screws

| For enclosure height mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|
| ≥ 120 | ≥ 80 | 2 pc(s). | **9123.000** |

# Small enclosures KX – Product comparison

| Terminal boxes KX, sheet steel | Terminal boxes KX, stainless steel | E-Box KX, sheet steel |
|---|---|---|
| All enclosure panels may be taken directly from the packaging, without dismantling, and machined | | |
| The support rails may optionally be fitted on the integral perforated mounting strip or, to maximise the enclosure depth, directly onto the rear wall of the enclosure | | The mounting plate is simply attached from the front and secured to the integral perforated mounting strip in a space-saving solution |
| The wall mounting brackets are easily secured from the outside with a self-tapping screw | There is no opening to the wall mounting for hygiene reasons, but the position is prepunched and can be drilled without having to measure and mark out | The wall mounting brackets are easily secured from the outside with a self-tapping screw |
| A QR code on the enclosure, door or cover and mounting plate allows seamless monitoring, from receipt of the incoming goods through to delivery of the finished product | | |
| Earthing points accessible from the front facilitate fast, secure mounting of the earth straps | | |
| The mini cam lock may be fitted without using tools, and ensures that the cover is securely seated and centred when latching | | The 180° hinges are already prefitted on the door and ready to use, the cam locks may be attached without the use of tools, and the door is easily fitted |
| The three-phase surface treatment provides optimum protection against corrosion and is resistant to mineral oils, lubricants, machining emulsions and many solvents | Stainless steel 1.4301 (AISI 304) complies with maximum hygiene and corrosion protection requirements | The three-phase surface treatment provides optimum protection against corrosion and is resistant to mineral oils, lubricants, machining emulsions and many solvents |
| from page 56 | from page 230 | from page 64 |

# Small enclosures KX – Product comparison

| | E-Box KX, stainless steel | Bus enclosures KX, sheet steel | Bus enclosures KX, stainless steel |
|---|---|---|---|
| | All enclosure panels may be taken directly from the packaging, without dismantling, and machined | | |
| | The mounting plate is simply attached from the front and secured to the integral perforated mounting strip in a space-saving solution | The support rails may optionally be fitted on the integral perforated mounting strip or, to maximise the enclosure depth, directly onto the rear wall of the enclosure | |
| | There is no opening to the wall mounting for hygiene reasons, but the position is prepunched and can be drilled without having to measure and mark out | The wall mounting brackets are easily secured from the outside with a self-tapping screw | There is no opening to the wall mounting for hygiene reasons, but the position is prepunched and can be drilled without having to measure and mark out |
| | A QR code on the enclosure, door or cover and mounting plate allows seamless monitoring, from receipt of the incoming goods through to delivery of the finished product | | |
| | Earthing points accessible from the front facilitate fast, secure mounting of the earth straps | | |
| | The 180° hinges are prefitted on the door/cover and ready to use, the cam locks may be attached without the use of tools, and the door/cover is easily fitted | | |
| | Stainless steel 1.4301 (AISI 304) and stainless steel 1.4404 (AISI 316L), meets maximum hygiene and corrosion protection requirements | The three-phase surface treatment provides optimum protection against corrosion and is resistant to mineral oils, lubricants, machining emulsions and many solvents | Stainless steel 1.4301 (AISI 304) meets maximum hygiene and corrosion protection requirements |
| | from page 232 | from page 70 | from page 234 |

# Small enclosures KX – Product overview

| Width mm | Height x depth mm | Terminal boxes KX | | |
|---|---|---|---|---|
| | | Model No. | | Model No. |
| | Material | Sheet steel | Sheet steel | Stainless steel |
| | Version | Without gland plate | With gland plate | Without gland plate |
| 150 | 150 x 80 | 1514.000 | – | 1560.000 |
| 200 | | 1528.000 | – | – |
| 300 | | 1515.000 | – | 1561.000 |
| 150 | 150 x 120 | 1500.000 | – | 1564.000 |
| 200 | | 1529.000 | – | – |
| 300 | | 1501.000 | 1530.000 | – |
| 400 | | 1589.000 | – | – |
| 200 | 200 x 80 | 1516.000 | – | 1562.000 |
| 300 | | 1517.000 | – | 1563.000 |
| 400 | | 1518.000 | – | – |
| 200 | 200 x 120 | 1502.000 | – | 1565.000 |
| 300 | | 1503.000 | 1531.000 | 1566.000 |
| 400 | | 1504.000 | 1532.000 | 1568.000 |
| 500 | | 1505.000 | 1533.000 | – |
| 600 | | 1506.000 | – | – |
| 800 | | 1527.000 | – | – |
| 400 | 200 x 155 | – | – | – |
| 150 | 300 x 80 | – | – | – |
| 200 | | – | – | – |
| 150 | 300 x 120 | – | – | – |
| 200 | | – | – | – |
| 300 | | 1507.000 | 1535.000 | 1567.000 |
| 400 | | 1508.000 | 1536.000 | 1569.000 |
| 500 | | 1509.000 | 1537.000 | – |
| 600 | | 1510.000 | 1538.000 | – |
| 200 | 300 x 155 | – | – | – |
| 300 | | – | – | – |
| 380 | | – | – | – |
| 400 | | – | – | – |
| 600 | | – | – | – |
| 800 | | – | – | – |
| 200 | 400 x 80 | – | – | – |
| 200 | 400 x 120 | – | – | – |
| 300 | | – | – | – |
| 400 | | 1511.000 | 1539.000 | – |
| 600 | | 1512.000 | 1540.000 | – |
| 800 | | 1513.000 | 1541.000 | – |
| 300 | 400 x 155 | – | – | – |
| 200 | 500 x 120 | – | – | – |
| 300 | 600 x 155 | – | – | – |
| 300 | 800 x 155 | – | – | – |
| from page | | 56 | 59 | 230 |

# Small enclosures KX – Product overview

Enclosures

| | Width mm | E-Box KX | | | Bus enclosures KX | |
|---|---|---|---|---|---|---|
| | | Model No. | | | Model No. | |
| | | Sheet steel | Stainless steel 1.4301 (AISI 304) | Stainless steel 1.4404 (AISI 316L) | Sheet steel | Stainless steel |
| | | – | – | – | – | – |
| | 150 | **1551.000** | – | – | – | – |
| | 200 | – | – | – | – | – |
| | 300 | – | – | – | – | – |
| | 150 | **1553.000** | – | – | – | – |
| | 200 | – | – | – | – | – |
| | 300 | – | – | – | – | – |
| | 400 | – | – | – | – | – |
| | 200 | **1546.000** | – | – | – | – |
| | 300 | – | – | – | – | – |
| | 400 | – | – | – | – | – |
| | 200 | **1549.000** | – | – | – | – |
| | 300 | – | – | – | – | – |
| | 400 | – | – | – | – | **1585.000** |
| | 500 | – | – | – | – | – |
| | 600 | – | – | – | – | **1586.000** |
| | 800 | – | – | – | – | – |
| | 400 | | – | – | **1610.000** | – |
| | 150 | **1545.000** | – | – | – | – |
| | 200 | **1552.000** | – | – | – | **1583.000** |
| | 150 | **1548.000** | | – | – | – |
| | 200 | **1554.000** | **1584.000** | – | – | – |
| | 300 | **1555.000** | – | – | – | – |
| | 400 | – | – | – | – | – |
| | 500 | – | – | – | – | – |
| | 600 | – | – | – | – | – |
| | 200 | **1574.000** | **1587.000** | **1301.000** | – | – |
| | 300 | **1575.000** | – | – | – | – |
| | 380 | **1576.000** | **1588.000** | – | – | – |
| | 400 | – | – | – | **1611.000** | – |
| | 600 | – | – | – | **1612.000** | – |
| | 800 | – | – | – | **1613.000** | – |
| | 200 | **1547.000** | – | – | – | – |
| | 200 | **1550.000** | – | – | – | – |
| | 300 | **1556.000** | – | – | – | – |
| | 400 | – | – | – | – | – |
| | 600 | – | – | – | – | – |
| | 800 | – | – | – | – | – |
| | 300 | **1577.000** | – | – | – | – |
| | 200 | **1557.000** | – | – | – | – |
| | 300 | **1578.000** | – | – | – | – |
| | 300 | **1579.000** | – | – | – | – |
| | | 64 | 232 | 232 | 70 | 234 |

# Terminal boxes KX – Added precision

## Precision

- The mini cam lock is very simple to operate. A quarter of a turn is sufficient to correctly centre the cover while locking; this ensures all-round air-tight positioning.

## Ease of assembly

- The standard eyelet in the rear panel allows rapid screw-fastening of the wall mounting bracket from the outside with a self-tapping screw; no need for a lock nut on the inside. The high protection category is retained in full.

## Space utilisation

- The support rails may optionally be fitted on the front of the integral perforated mounting strip or, to maximise the enclosure depth, directly onto the rear wall of the enclosure.

## Potential equalisation

- Installation of the gland plate includes automatic potential equalisation. Contact is made by two self-tapping screws guided through special holes.

# Small enclosures KX

**System accessories** Page 877 **Terminal boxes KX, stainless steel** Page 230 **Ex enclosures** Page 257 **Hygienic Design** Page 217

**Material:**
- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal

**Surface finish:**
- Enclosure and cover: Dipcoat primed, powder-coated on the outside, textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 66

**NEMA protection category:**
- NEMA 4

**Supply includes:**
- Enclosure with cover
- Mini cam locks

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

## Terminal boxes KX, sheet steel, without gland plate

| **Width** mm | Packs of | 150 | 200 | 200 | 300 | 300 | 400 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 150 | 150 | 200 | 150 | 200 | 200 | |
| **Depth** mm | | 80 | 80 | 80 | 80 | 80 | 80 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1514.000** | **1528.000** | **1516.000** | **1515.000** | **1517.000** | **1518.000** | |
| Weight kg | | 1.40 | 1.45 | 1.80 | 1.90 | 2.39 | 3.01 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | 4 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1560.800 | 1575.800 | 1562.800 | 1561.800 | 1563.800 | 1564.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2315.000 | 2315.000 | 2316.000 | 2316.000 | 2317.000 | 997 |
| Support rails TS 35/15 | | – | – | – | – | – | – | |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2365.000 | 2365.000 | 2365.000 | 2365.000 | 2365.000 | 2365.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 1033 |
| Baying kit | | – | – | – | – | – | – | |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

## Terminal boxes KX, sheet steel, without gland plate

| **Width** mm | Packs of | 150 | 200 | 200 | 300 | 300 | Page |
|---|---|---|---|---|---|---|---|
| **Height** mm | | 150 | 150 | 200 | 150 | 200 | |
| **Depth** mm | | 120 | 120 | 120 | 120 | 120 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1500.000** | **1529.000** | **1502.000** | **1501.000** | **1503.000** | |
| Weight kg | | 1.46 | 1.75 | 2.13 | 2.32 | 2.69 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | |
| **Accessories** | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1560.800 | 1575.800 | 1562.800 | 1561.800 | 1563.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2315.000 | 2315.000 | 2316.000 | 2316.000 | 997 |
| Support rails TS 35/15 | | – | – | – | – | – | |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

## Terminal boxes KX, sheet steel, without gland plate

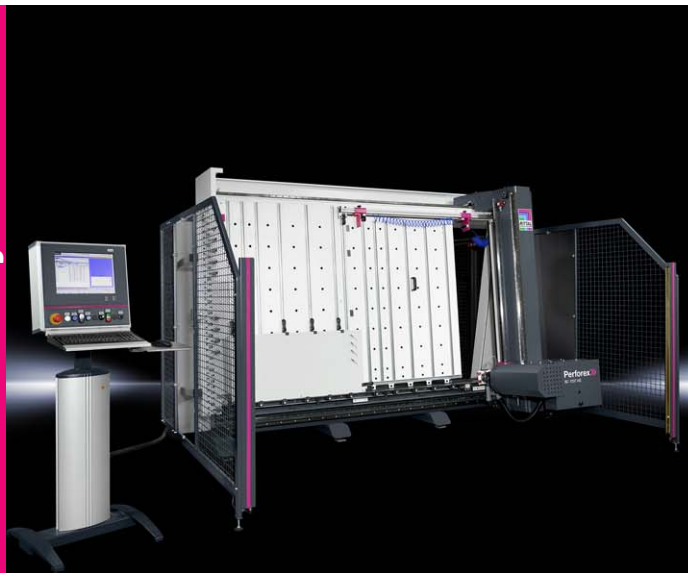
| **Width** mm | Packs of | 300 | 400 | 400 | 400 | 400 | 500 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 300 | 150 | 200 | 300 | 400 | 200 | |
| **Depth** mm | | 120 | 120 | 120 | 120 | 120 | 120 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1507.000** | **1589.000** | **1504.000** | **1508.000** | **1511.000** | **1505.000** | |
| Weight kg | | 3.78 | 2.98 | 3.42 | 4.70 | 5.67 | 4.18 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | 4 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1567.800 | 1576.800 | 1564.800 | 1568.800 | 1571.800 | 1565.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2316.000 | 2317.000 | 2317.000 | 2317.000 | 2317.000 | – | 997 |
| Support rails TS 35/15 | 10 pc(s). | – | – | – | – | – | 2318.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

# Small enclosures KX

## Terminal boxes KX, sheet steel, without gland plate

| **Width** mm | Packs of | 500 | 600 | 600 | 600 | 800 | 800 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 300 | 200 | 300 | 400 | 200 | 400 | |
| **Depth** mm | | 120 | 120 | 120 | 120 | 120 | 120 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1509.000** | **1506.000** | **1510.000** | **1512.000** | **1527.000** | **1513.000** | |
| Weight kg | | 5.57 | 4.92 | 6.28 | 8.35 | 6.45 | 11.00 | |
| Mini cam lock | | 4 | 6 | 6 | 6 | 6 | 6 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1569.800 | 1566.800 | 1570.800 | 1572.800 | 1574.800 | 1573.800 | 970 |
| Support rails TS 35/7.5 | | – | – | – | – | – | – | |
| Support rails TS 35/15 | 10 pc(s). | 2318.000 | 2319.000 | 2319.000 | 2319.000 | – | – | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |


Rittal – The System.



Perforex BC milling centre

see page 652

**System accessories** Page 877 **Terminal boxes KX, stainless steel** Page 230 **Ex enclosures** Page 257 **Hygienic Design** Page 217

**Material:**
- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal

**Surface finish:**
- Enclosure and cover: Dipcoat primed, powder-coated on the outside, textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**NEMA protection category:**
- NEMA 12

**Supply includes:**
- Enclosure with cover
- Mini cam locks
- Sheet steel gland plates with seals and assembly parts

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

## Terminal boxes KX, sheet steel, with gland plate

| **Width** mm | Packs of | 300 | 300 | 300 | 400 | 400 | 400 | 500 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 150 | 200 | 300 | 200 | 300 | 400 | 200 | |
| **Depth** mm | | 120 | 120 | 120 | 120 | 120 | 120 | 120 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1530.000** | **1531.000** | **1535.000** | **1532.000** | **1536.000** | **1539.000** | **1533.000** | |
| Weight kg | | 2.62 | 3.12 | 4.47 | 3.82 | 5.40 | 6.61 | 4.73 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| Gland plate (top + bottom), quantity | | 1 + 1 | 1 + 1 | 1 + 1 | 1 + 1 | 1 + 1 | 1 + 1 | 2 + 2 | |
| Gland plate (left + right), quantity | | – | – | 1 + 1 | – | 1 + 1 | 1 + 1 | – | |
| **Accessories** | | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1561.800 | 1563.800 | 1567.800 | 1564.800 | 1568.800 | 1571.800 | 1565.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2316.000 | 2316.000 | 2316.000 | 2317.000 | 2317.000 | 2317.000 | – | 997 |
| Support rails TS 35/15 | | – | – | – | – | – | – | – | |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Metal gland plates | 1 pc(s). | 1581.200 | 1581.200 | 1581.200 | 1581.200 | 1581.200 | 1581.200 | 1581.200 | 1054 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

# Small enclosures KX

## Terminal boxes KX, sheet steel, with gland plate

| **Width** mm | Packs of | 500 | 600 | 600 | 800 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | 300 | 300 | 400 | 400 | |
| **Depth** mm | | 120 | 120 | 120 | 120 | |
| Material thickness of enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness of cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1537.000** | **1538.000** | **1540.000** | **1541.000** | |
| Weight kg | | 6.01 | 7.02 | 9.32 | 11.10 | |
| Mini cam lock | | 4 | 6 | 6 | 6 | |
| Gland plate (top + bottom), quantity | | 2 + 2 | 2 + 2 | 2 + 2 | 3 + 3 | |
| Gland plate (left + right), quantity | | 1 + 1 | 1 + 1 | 1 + 1 | 1 + 1 | |
| **Accessories** | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1569.800 | 1570.800 | 1572.800 | 1573.800 | 970 |
| Support rails TS 35/7.5 | | – | – | – | – | |
| Support rails TS 35/15 | 10 pc(s). | 2318.000 | 2319.000 | 2319.000 | – | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge | 6 pc(s). | 1592.200 | 1592.200 | 1592.200 | 1592.200 | 951 |
| Metal gland plates | 1 pc(s). | 1581.200 | 1581.200 | 1581.200 | 1581.200 | 1054 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

# UL conformity

## Guaranteed when Rittal accessory components are used

# E-Box KX –
# Added time savings

## Protection

- The deliberately slimline enclosure edge fold provides broad, secure contact with the seamless PU foam seal and helps preserve the protection category of IP 66.

## Space

- The 180° door hinges create more space and improve access to the enclosure interior.

## Ease of assembly

- The standard eyelet in the rear panel allows rapid screw-fastening of the wall mounting bracket from the outside with a self-tapping screw; no need for a lock nut on the inside. The high protection category is retained in full.

## Speed

- The mounting plate and door may be taken straight from the packet and are ready for processing.

# Small enclosures KX

**System accessories** Page 877 **E-Box KX, stainless steel** Page 232 **Ex enclosures** Page 257

**Material:**
- Enclosure: Sheet steel
- Door: Sheet steel, all-round foamed-in PU seal

**Surface finish:**
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

**Colour:**
- RAL 7035

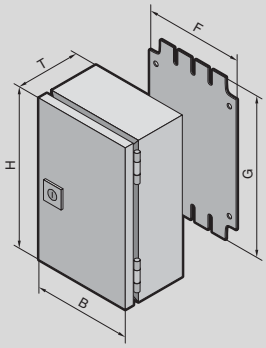
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4

**Supply includes:**
- Enclosure with door
- Mounting plate
- Cam lock with 3 mm double-bit insert

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.



## E-Box KX, sheet steel, depth 80 mm

| **Width** (B) mm | Packs of | 150 | 150 | 200 | 200 | 200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 150 | 300 | 200 | 300 | 400 | |
| **Depth** (T) mm | | 80 | 80 | 80 | 80 | 80 | |
| Mounting plate width (F) mm | | 125 | 125 | 175 | 175 | 175 | |
| Mounting plate height (G) mm | | 135 | 285 | 185 | 285 | 385 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – door mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – mounting plate mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| **Model No.** | 1 pc(s). | **1551.000** | **1545.000** | **1546.000** | **1552.000** | **1547.000** | |
| Weight kg | | 1.49 | 2.54 | 2.26 | 3.18 | 4.15 | |
| **Accessories** | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2314.000 | 2315.000 | 2315.000 | 2315.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2365.000 | 2365.000 | 2365.000 | 2365.000 | 2365.000 | 1002 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlocks and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Lock insert 7 mm square | 1 pc(s). | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 941 |
| Lock insert 8 mm square | 1 pc(s). | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 941 |
| Lock insert 7 mm triangular | 1 pc(s). | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 941 |
| Lock insert 8 mm triangular | 1 pc(s). | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 941 |
| Lock insert, screwdriver | 1 pc(s). | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 941 |
| Lock insert Daimler | 1 pc(s). | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 941 |
| Lock insert 3 mm double-bit | 1 pc(s). | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 941 |
| Lock insert Fiat | 1 pc(s). | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 941 |
| Lock insert 6.5 mm triangular | 1 pc(s). | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 941 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 1033 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

# Small enclosures KX

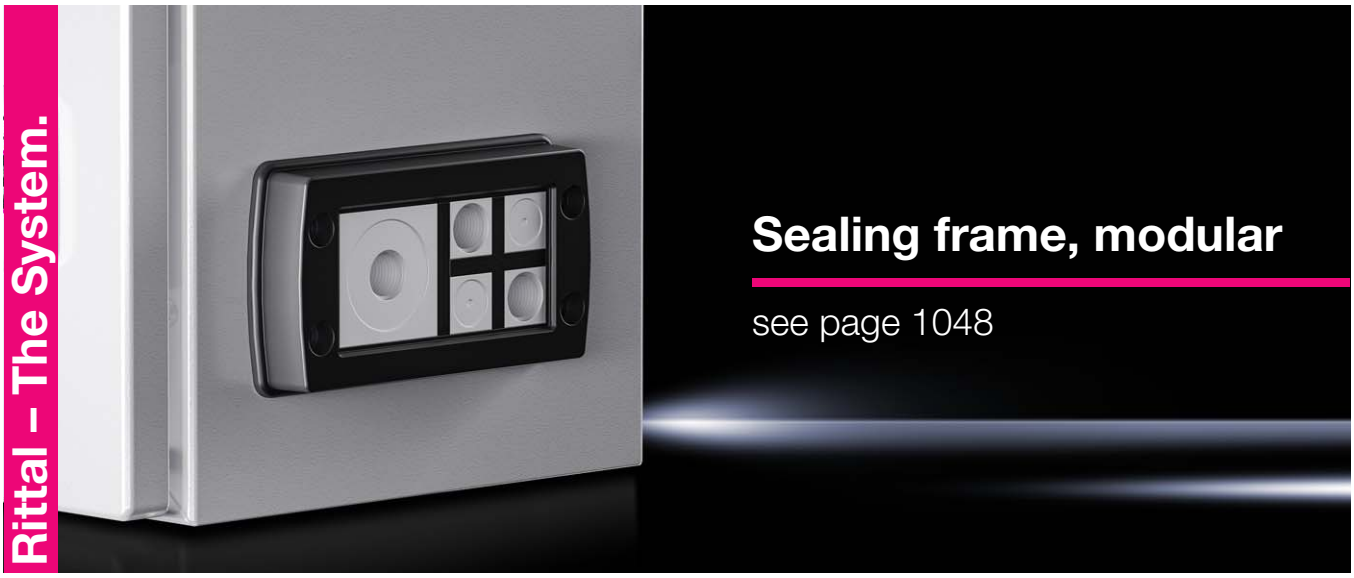
## E-Box KX, sheet steel, depth 120 mm

| **Width** (B) mm | Packs of | 150 | 150 | 200 | 200 | 200 | 200 | 300 | 300 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 150 | 300 | 200 | 300 | 400 | 500 | 300 | 400 | |
| **Depth** (T) mm | | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | |
| Mounting plate width (F) mm | | 125 | 125 | 175 | 175 | 175 | 175 | 275 | 275 | |
| Mounting plate height (G) mm | | 135 | 285 | 185 | 285 | 385 | 485 | 285 | 385 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – door mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – mounting plate mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| **Model No.** | 1 pc(s). | **1553.000** | **1548.000** | **1549.000** | **1554.000** | **1550.000** | **1557.000** | **1555.000** | **1556.000** | |
| Weight kg | | 1.72 | 2.93 | 2.64 | 3.63 | 4.62 | 5.57 | 5.14 | 6.38 | |
| **Accessories** | | | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2314.000 | 2315.000 | 2315.000 | 2315.000 | 2315.000 | 2316.000 | 2316.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlocks and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Lock insert 7 mm square | 1 pc(s). | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 941 |
| Lock insert 8 mm square | 1 pc(s). | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 941 |
| Lock insert 7 mm triangular | 1 pc(s). | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 941 |
| Lock insert 8 mm triangular | 1 pc(s). | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 941 |
| Lock insert, screwdriver | 1 pc(s). | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 941 |
| Lock insert Daimler | 1 pc(s). | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 941 |
| Lock insert 3 mm double-bit | 1 pc(s). | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 941 |
| Lock insert Fiat | 1 pc(s). | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 941 |
| Lock insert 6.5 mm triangular | 1 pc(s). | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 941 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

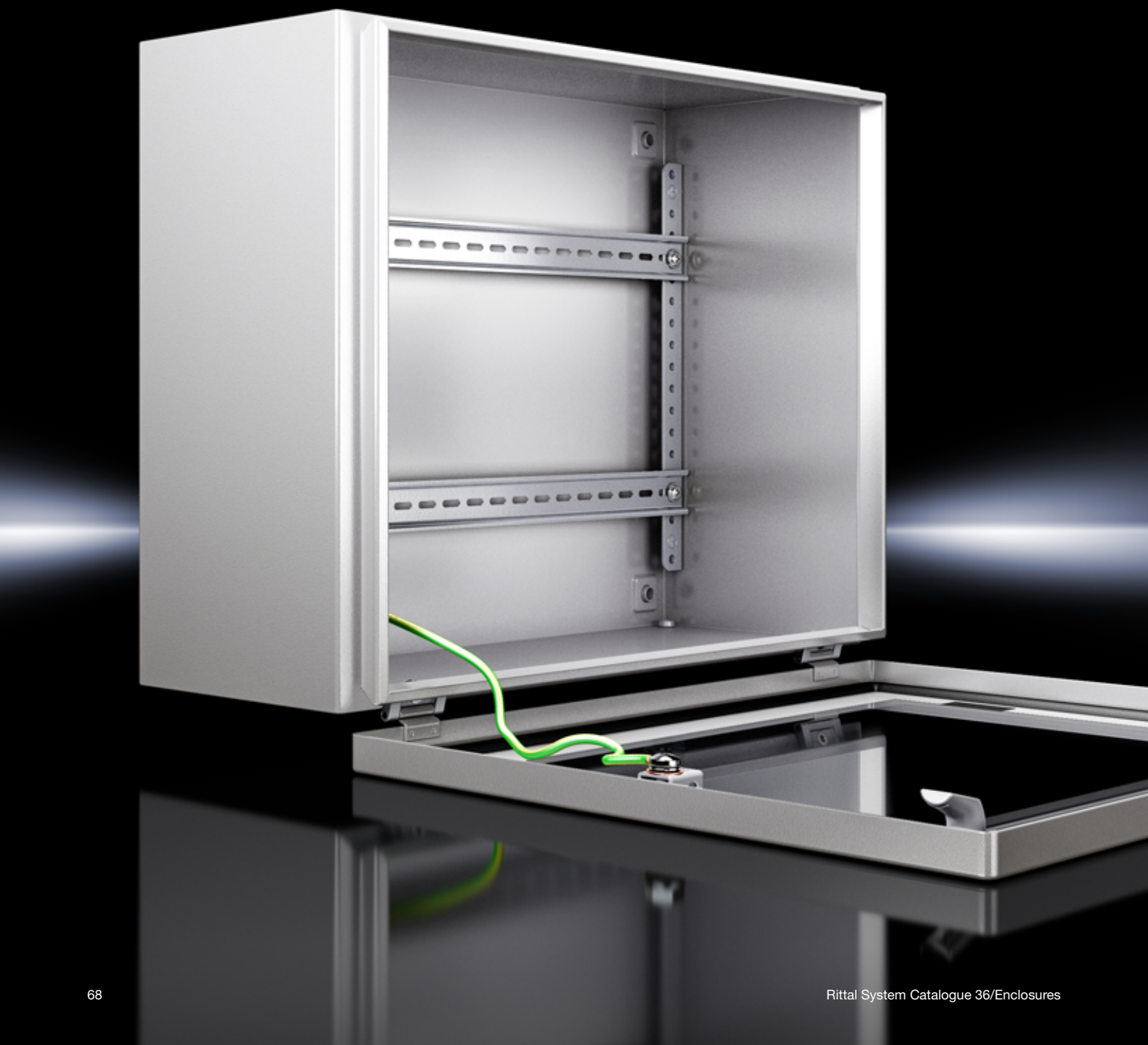
## E-Box KX, sheet steel, depth 155 mm

| **Width** (B) mm | Packs of | 200 | 300 | 300 | 300 | 300 | 380 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 300 | 300 | 400 | 600 | 800 | 300 | |
| **Depth** (T) mm | | 155 | 155 | 155 | 155 | 155 | 155 | |
| Mounting plate width (F) mm | | 175 | 275 | 275 | 275 | 275 | 365 | |
| Mounting plate height (G) mm | | 285 | 285 | 385 | 585 | 785 | 275 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – door mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – mounting plate mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| **Model No.** | 1 pc(s). | **1574.000** | **1575.000** | **1577.000** | **1578.000** | **1579.000** | **1576.000** | |
| Weight kg | | 3.98 | 5.50 | 6.98 | 10.30 | 12.80 | 6.64 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Support rails TS 35/7.5 | 10 pc(s). | 2315.000 | 2316.000 | 2316.000 | 2316.000 | 2316.000 | 2317.000[1)] | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlocks and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Lock insert 7 mm square | 1 pc(s). | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 941 |
| Lock insert 8 mm square | 1 pc(s). | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 941 |
| Lock insert 7 mm triangular | 1 pc(s). | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 941 |
| Lock insert 8 mm triangular | 1 pc(s). | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 941 |
| Lock insert, screwdriver | 1 pc(s). | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 941 |
| Lock insert Daimler | 1 pc(s). | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 941 |
| Lock insert 3 mm double-bit | 1 pc(s). | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 941 |
| Lock insert Fiat | 1 pc(s). | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 941 |
| Lock insert 6.5 mm triangular | 1 pc(s). | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 941 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

[1)] Must be cut to length accordingly

# Bus enclosures KX – Added clarity



## Flexibility

- Depending on requirements, the enclosures may be fitted with support rails or mounting plates.
- The support rails may optionally be fitted on the front of the integral perforated mounting strip or, to maximise the enclosure depth, directly onto the rear wall of the enclosure.

## Precision

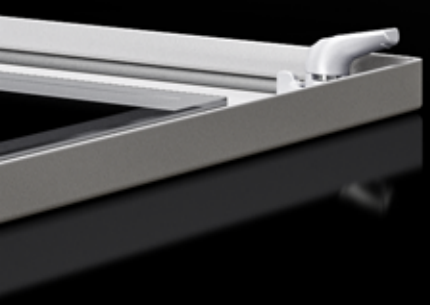
- The quick-release fastener is very simple to operate. A quarter of a turn is sufficient to correctly centre the cover while locking; this ensures all-round air-tight positioning.

## Access

- The wide door opening angle of up to 180° gives you plenty of space to fit and replace modules quickly and easily. The large viewing window is convenient for continuously monitoring the components inside the enclosure.

## Ease of assembly

- The standard eyelet in the rear panel allows rapid screw-fastening of the wall mounting bracket from the outside with a self-tapping screw; no need for a lock nut on the inside. The high protection category is retained in full.



# Small enclosures KX

**System accessories** Page 877 **Bus enclosures KX, stainless steel** Page 234

**Material:**
- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal
- Viewing window: Polycarbonate, 4 mm

**Surface finish:**
- Enclosure and cover: Dipcoat-primed, powder-coated on the outside, textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 65

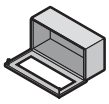
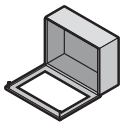
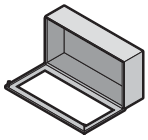
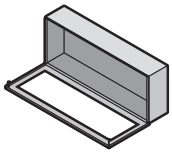
**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure with hinged cover
- Viewing window in cover
- Mini cam lock

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

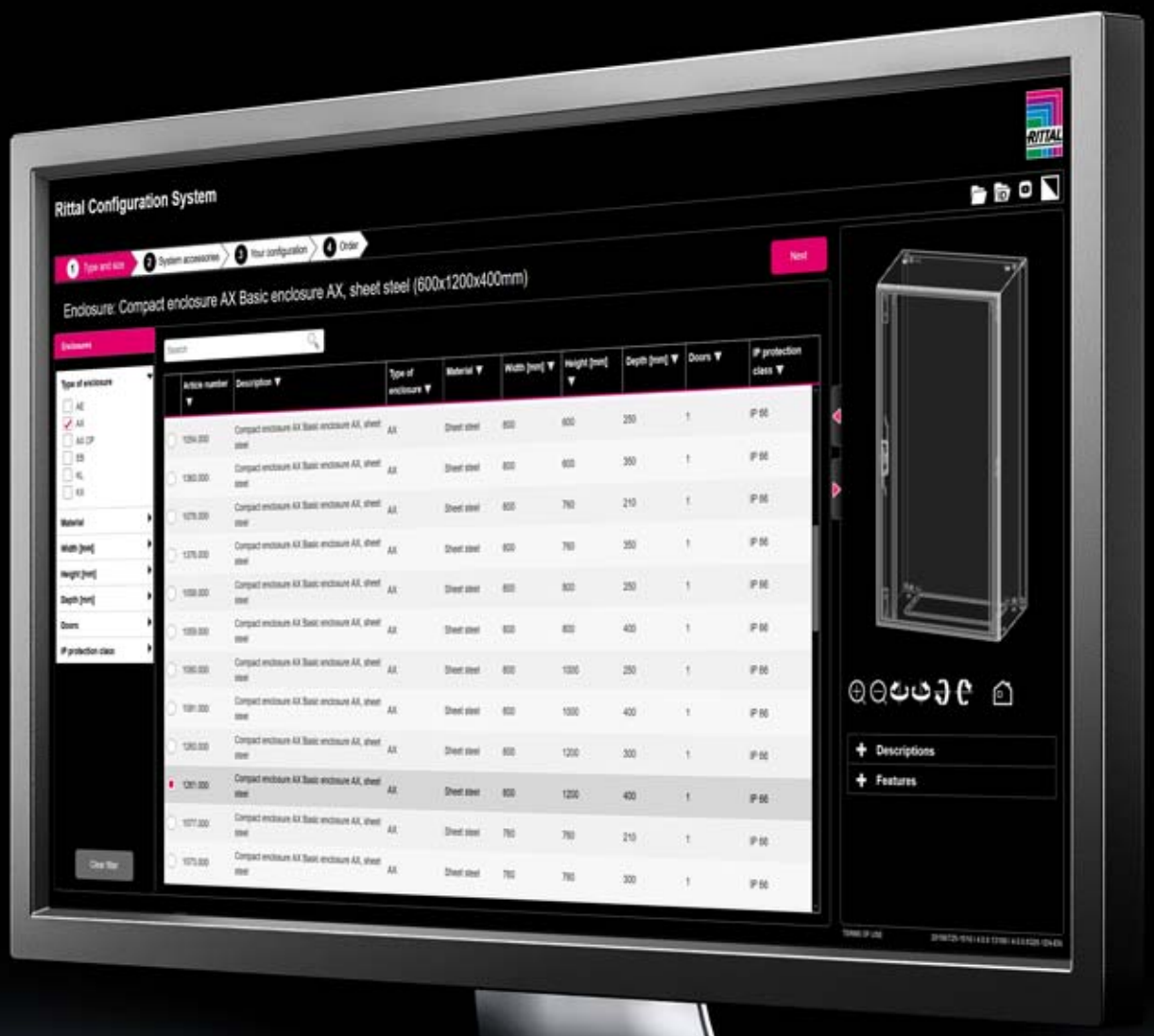
## Bus enclosures KX, sheet steel

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| **Width** mm | Packs of | 400 | 400 | 600 | 800 | Page |
| **Height** mm | | 200 | 300 | 300 | 300 | |
| **Depth** mm | | 155 | 155 | 155 | 155 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1610.000** | **1611.000** | **1612.000** | **1613.000** | |
| Weight kg | | 2.36 | 4.72 | 5.47 | 7.78 | |
| **Accessories** | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel | 4 pc(s). | 1590.010 | 1590.010 | 1590.010 | 1590.010 | 965 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1564.800 | 1568.800 | 1570.800 | 1570.810 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2317.000 | 2317.000 | 2319.000 | 2317.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Earth straps | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Self-tapping screws | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |
| Connector gland, small | 5 pc(s). | 2400.500 | 2400.500 | 2400.500 | 2400.500 | 1047 |

# Rittal Configuration System

## Plausibility-checked configuration of products and accessories, see page 272






**Configure online at**
**www.rittal.com/configurators**

# Rittal – The System.

**Faster – better – everywhere.**

# Compact enclosures

## Compact enclosures AX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## Plastic enclosures AX


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Product advantages ....92
Without viewing window ....94
With viewing window ....95
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# Compact enclosures AX – Product comparison

| Basic enclosure AX, single-door, sheet steel | Basic enclosure AX, single door, stainless steel | Basic enclosure AX, two-door, sheet steel |
|---|---|---|
| All enclosure panels may be taken directly from the packaging, without dismantling, and machined | | |
| Interior installation on a 25 mm pitch pattern; no machining required | | |
| Wall mounting brackets are easily secured from the outside with a self-tapping screw while retaining the UL | There is no opening to the wall mounting for hygiene reasons, but the position is prepunched and can be drilled without having to measure and mark out | Wall mounting brackets are easily secured from the outside with a self-tapping screw while retaining the UL |
| A QR code on the enclosure, door and mounting plate allows seamless monitoring, from receipt of the incoming goods through to delivery of the finished product | | |
| Simple earthing, even retrospectively, using machined keyholes in the mounting plate, and in the case of sheet steel enclosures, in the perforated door strip | | |
| For enclosures with a cam lock, the door and cam locks are rapidly fitted with no need for tools. For enclosures with 3-point locking system, the doors and locks are fully assembled. The locked door is easily relocated without machining the enclosure. | | |
| Up to 33% larger gland plates support cable entry with ever-higher packing densities | The fully sealed base ensures a high protection category of up to IP 66 | Up to 33% larger gland plates support cable entry with ever-higher packing densities |
| The three-phase surface treatment provides optimum protection against corrosion and is resistant to mineral oils, lubricants, machining emulsions and many solvents | Stainless steel 1.4301 (AISI 304) and stainless steel 1.4404 (AISI 316L) meet maximum hygiene and corrosion protection requirements | The three-phase surface treatment provides optimum protection against corrosion and is resistant to mineral oils, lubricants, machining emulsions and many solvents |
| from page 84 | from page 236 | from page 84 |

# Compact enclosures AX – Product comparison

| | Basic enclosure AX, two-door, sheet steel | Plastic enclosure AX, without viewing window | Plastic enclosure AX, with viewing window |
|---|---|---|---|
| | All enclosure panels may be taken directly from the packaging, without dismantling, and machined | Fully preassembled enclosure | |
| | Interior installation on a 25 mm pitch pattern; no machining required | Numerous mounting lugs for direct mounting of punched sections and rails for interior installation on a 25 mm pitch pattern | |
| | There is no opening to the wall mounting for hygiene reasons, but the position is prepunched and can be drilled without having to measure and mark out | The wall mounting brackets are easily secured from the outside while retaining the UL | |
| | A QR code on the enclosure, door and mounting plate allows seamless monitoring, from receipt of the incoming goods through to delivery of the finished product | | |
| | Simple earthing, even retrospectively, using machined keyholes in the mounting plate and perforated door strip | Simple earthing of the mounting plate, even retrospectively, using machined keyholes | |
| | The cam locks are rapidly fitted with no need for tools. For enclosures with a locking rod, the doors and locks are fully assembled. | The door hinge is easily swapped from right to left. The integral rain protection strip on the top and bottom of the door provides a double sealing level. The standard double-bit lock insert is easily exchanged for type A lock inserts. | |
| | The fully sealed base ensures a high protection category of up to IP 55 | All-round cable entry is supported with the modular sealing frame and cable glands | |
| | Stainless steel 1.4301 (AISI 304) and stainless steel 1.4404 (AISI 316L) meet maximum hygiene and corrosion protection requirements | The enclosure is made from fibreglass-reinforced, UL-certified plastic with a high level of chemical and UV resistance, all-insulated and suitable for outdoor applications | |
| | from page 236 | Page 94 | Page 95 |

# Compact enclosures AX – Product overview

| Height x depth mm | Width mm | Doors | Lock system | Basic enclosures AX | | |
|---|---|---|---|---|---|---|
| | | | | Model No. | Model No. | |
| Material | | | | Sheet steel | Stainless steel 1.4301 (AISI 304) | Stainless steel 1.4404 (AISI 316L) |
| **300 x 210** | 300 | 1 | 1/□ | **1033.000** | **1003.000** | **–** |
| | 380 | 1 | 1/□ | **1031.000** | **1011.000** | **–** |
| **350 x 150** | 250 | – | – | **–** | **–** | **–** |
| **380 x 210** | 300 | 1 | 1/□ | **–** | **1005.000** | **1302.000** |
| | 380 | 1 | 1/□ | **1380.000** | **1006.000** | **1303.000** |
| | 600 | 1 | 1/□ | **1039.000** | **1009.000** | **–** |
| **380 x 350** | 600 | 1 | 1/□ | **1339.000** | **–** | **–** |
| **400 x 200** | 300 | – | – | **–** | **–** | **–** |
| | 400 | – | – | **–** | **–** | **–** |
| **400 x 210** | 300 | 1 | 1/□ | **1034.000** | **–** | **–** |
| **500 x 210** | 400 | 1 | 2/□ | **1045.000** | **1015.000** | **–** |
| | 500 | 1 | 2/□ | **1050.000** | **1007.000** | **–** |
| **500 x 300** | 500 | 1 | 2/□ | **1350.000** | **1013.000** | **–** |
| **600 x 200** | 400 | – | – | **–** | **–** | **–** |
| | 600 | – | – | **–** | **–** | **–** |
| **600 x 210** | 380 | 1 | 2/□ | **1038.000** | **1008.000** | **–** |
| | 600 | 1 | 2/□ | **1060.000** | **1010.000** | **1304.000** |
| **600 x 250** | 600 | 1 | 2/□ | **1054.000** | **–** | **–** |
| **600 x 300** | 800 | 1 | 2/□ | **1055.000** | **–** | **–** |
| **600 x 350** | 380 | 1 | 2/□ | **1338.000** | **–** | **–** |
| | 600 | 1 | 2/□ | **1360.000** | **–** | **–** |
| **700 x 250** | 500 | 1 | 2/□ | **1057.000** | **–** | **–** |
| **760 x 210** | 600 | 1 | 2/□ | **1076.000** | **1012.000** | **–** |
| | 760 | 1 | 2/□ | **1077.000** | **–** | **–** |
| | 1000 | 2 | 2/□ | **1100.000** | | **–** |
| **760 x 300** | 760 | 1 | 2/□ | **1073.000** | **1014.000** | **–** |
| | 1000 | 2 | 2/□ | **1130.000** | **–** | **–** |
| **760 x 350** | 600 | 1 | 2/□ | **1376.000** | **–** | **–** |
| **800 x 250** | 600 | 1 | 2/□ | **1058.000** | **–** | **–** |
| **800 x 300** | 400 | 1 | 2/□ | **1037.000** | **–** | **–** |
| | 600 | – | – | **–** | **–** | **–** |
| **800 x 400** | 600 | 1 | 2/□ | **1059.000** | **–** | **–** |
| **1000 x 250** | 600 | 1 | 2/□ | **1090.000** | **–** | **–** |
| **1000 x 300** | 800 | 1 | 2/□ | **1180.000** | **1016.000** | **–** |
| | 1000 | 2 | 2/□ | **1110.000** | **1018.000** | **–** |
| **1000 x 400** | 600 | 1 | 2/□ | **1091.000** | **–** | **–** |
| | 800 | 1 | 2/□ | **1181.000** | **–** | **–** |
| **1200 x 300** | 600 | 1 | ■ | **1260.000** | **–** | **–** |
| | 800 | 1 | ■ | **1280.000** | **1017.000** | **–** |
| | 1000 | 2 | ■ | **1213.000** | **1019.000** | **1305.000** |
| **1200 x 400** | 600 | 1 | ■ | **1261.000** | **–** | **–** |
| | 800 | 1 | ■ | **1281.000** | **–** | **–** |
| | 1000 | 2 | ■ | **1214.000** | **–** | **–** |
| | 1200 | 2 | ■ | **1116.000** | **–** | **–** |
| **1400 x 300** | 1000 | 2 | ■ | **1114.000** | **–** | **–** |
| **1400 x 400** | 1000 | 2 | ■ | **1115.000** | **–** | **–** |
| from page | | | | 84 | 236 | 236 |

□ Cam lock ■ 3-point locking system

# Compact enclosures AX – Product overview

| | Width mm | Doors | Lock system | Plastic enclosures AX, without viewing window<br>Model No.<br>Fibreglass-reinforced unsaturated polyester | Plastic enclosures AX, with viewing window<br>Model No.<br>Fibreglass-reinforced unsaturated polyester |
|---|---|---|---|---|---|
| | 300 | – | – | – | – |
| | 380 | – | – | – | – |
| | 250 | 1 | 1/□ | **1432.000** | – |
| | 300 | – | – | – | – |
| | 380 | – | – | – | – |
| | 600 | – | – | – | – |
| | 600 | – | – | – | – |
| | 300 | 1 | 2/□ | **1434.000** | – |
| | 400 | 1 | 2/□ | **1444.000** | **1448.000** |
| | 300 | – | – | – | – |
| | 400 | – | – | – | – |
| | 500 | – | – | – | – |
| | 500 | 1 | 2/□ | **1453.000** | **1454.000** |
| | 400 | 1 | 2/□ | **1446.000** | **1449.000** |
| | 600 | 1 | 2/□ | **1466.000** | **1467.000** |
| | 380 | – | – | – | – |
| | 600 | – | – | – | – |
| | 600 | – | – | – | – |
| | 800 | – | – | – | – |
| | 380 | – | – | – | – |
| | 600 | – | – | – | – |
| | 500 | – | – | – | – |
| | 600 | – | – | – | – |
| | 760 | – | – | – | – |
| | 1000 | – | – | – | – |
| | 760 | – | – | – | – |
| | 1000 | – | – | – | – |
| | 600 | – | – | – | – |
| | 600 | – | – | – | – |
| | 400 | – | – | – | – |
| | 600 | 1 | 2/□ | **1468.000** | **1469.000** |
| | 600 | – | – | – | – |
| | 600 | – | – | – | – |
| | 800 | 1 | 3/□ | **1480.000** | **1479.000** |
| | 1000 | – | – | – | – |
| | 600 | – | – | – | – |
| | 800 | – | – | – | – |
| | 600 | – | – | – | – |
| | 800 | – | – | – | – |
| | 1000 | – | – | – | – |
| | 600 | – | – | – | – |
| | 800 | – | – | – | – |
| | 1000 | – | – | – | – |
| | 1200 | – | – | – | – |
| | 1000 | – | – | – | – |
| | 1000 | – | – | – | – |
| | | | | 94 | 95 |

□ Cam lock ■ 3-point locking system

# Compact enclosures AX – Added protection

## Flexibility/stability

- The integrated locators in the enclosure support the use of an interior installation rail for time-saving, precise installation with Rittal punched sections with mounting flanges and accessories.
- The height-flexible, form-fit rail used in the continuous pattern of locators for interior installation increases stability, especially with dynamic loads.

## Protection

- The deliberately slimline enlcosure edge fold provides broad, secure contact with the seamless PU foam seal and helps preserve the protection category (up to IP 66) and protection class IK 10.

## Potential equalisation

- Special drilled holes in the gland plate ensure automatic potential equalisation during screw-fastening, which saves time and materials as well as enhancing safety.

## Ease of assembly

- The standard eyelet in the rear panel allows rapid screw-fastening of the wall mounting bracket from the outside with a self-tapping screw; no need for a lock nut on the inside. The high protection category is retained in full.

# Compact enclosures AX – Added efficiency

## Ease of installation/flexibility

- Tool-free installation of the doors saves extra time. Simply position the door, press down on the hinge pin, and it's done.
- The AX door hinge allows you to swap the hinge to the opposite side, even with two-door enclosures, without any machining of the enclosure. This allows simple, fast relocation of the lockable door while the space-saving door population translates into extra space gains.

## Area extension

- The perforated door strip with U extrusion and system punchings on a flexible 25 mm pitch pattern allows fast, simple extension of the installation area. Because it is compatible with Rittal system accessories, no door machining is required.

## Time savings/rapid assembly

- Cam locks are supplied loose to allow unobstructed machining of the door. No time-consuming dismantling work is required in advance.
- Lock installation is fast and tool-free. Simply insert, lock into place, and voilà!

## The perfect fit

- The runner on the perforated door strip ensures that even heavily populated doors fit precisely and are compliant with the protection category.

# Compact enclosures AX – Added system benefits

## Reliable engineering

- A wide range of conversion and planning tools are available to Rittal customers to support them with the automated production process and when working with a virtual prototype:
  - Configurators
  - Parts list converters
  - EPLAN Pro Panel
  - 2D/3D CAD data
  - ecl@ss Advanced
  - Technical documentation
  - Data for planners
  - Assembly videos

## Digitalization

- The QR code on all machinable enclosure panels permits fully automated incorporation into the production workflow, for seamless digital monitoring from the incoming goods right through to the finished product.

## Diverse industries

- The choice of sheet steel or stainless steel allows the AX to be used in any industry, at any location, in any climate, in any environment, and in a wide range of individual applications.

## Time savings

- The process-optimised packaging concept means it can go straight into production, because all panels and cam locks are supplied unfitted, so no dismantling is required.

# Compact enclosures AX

**System accessories** Page 877 **AX stainless steel** Page 236 **AX plastic** Page 92 **Hygienic Design** Page 217 **Outdoor housing** Page 958

**Material:**
- Enclosure: Sheet steel
- Door: Sheet steel, all-round foamed-in PU seal

**Surface finish:**
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

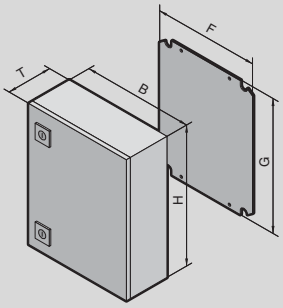
**Colour:**
- RAL 7035

**Supply includes:**
- Enclosure with door(s)
- Gland plate(s) in enclosure base
- Mounting plate
- Perforated door strip
- Lock: 3 mm double-bit

Please note the product-specific scope of supply.

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.



## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 300 | 300 | Page |
|---|---|---|---|---|
| **Height** (H) mm | | 300 | 400 | |
| **Depth** (T) mm | | 210 | 210 | |
| Mounting plate width (F) mm | | 250 | 250 | |
| Mounting plate height (G) mm | | 275 | 375 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | |
| Material thickness – door mm | | 1.5 | 1.5 | |
| Material thickness – mounting plate mm | | 2.0 | 2.0 | |
| **Model No.** | 1 pc(s). | **1033.000** | **1034.000** | |
| Weight kg | | 6.7 | 8.38 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | |
| **Product-specific scope of supply** | | | | |
| Door(s) | | 1 | 1 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | |
| Gland plate, size | | 1 | 1 | |
| Gland plate, qty | | 1 | 1 | |
| Cam lock | | 1 | 1 | |
| **Accessories** | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2561.200 | 2561.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2561.300 | 2561.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2571.100 | 2571.100 | 1053 |
| Sealing frame, modular | | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.210 | 2393.210 | 989 |
| Support strips, installation in the door | | – | – | |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | – | 8619.700 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | – | – | |
| LED system light | | – | – | |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | | – | – | |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | | – | – | |
| Lock inserts | | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | | – | – | |
| Viewing window, depth 62 mm | | – | – | |
| Operating panel | | – | – | |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | | – | – | |
| Plastic wiring plan pockets | | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | | – | – | |
| Base/plinth trim panels, sides, 100 mm | | – | – | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | | – | – | |
| Base/plinth trim panels, sides, 200 mm | | – | – | |
| Eyebolts | | – | – | |
| Protective roof | 1 pc(s). | 2361.010 | 2361.010 | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | 1056 |

# Compact enclosures AX

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 380 | 380 | 380 | 380 | 400 | 400 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 300 | 380 | 600 | 600 | 500 | 800 | |
| **Depth** (T) mm | | 210 | 210 | 210 | 350 | 210 | 300 | |
| Mounting plate width (F) mm | | 330 | 330 | 330 | 330 | 350 | 345 | |
| Mounting plate height (G) mm | | 275 | 355 | 575 | 575 | 475 | 775 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.5 | 1.25 | 1.5 | |
| Material thickness – door mm | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 2.0 | |
| Material thickness – mounting plate mm | | 2.0 | 2.0 | 2.5 | 2.5 | 2.0 | 2.5 | |
| **Model No.** | 1 pc(s). | **1031.000** | **1380.000** | **1038.000** | **1338.000** | **1045.000** | **1037.000** | |
| Weight kg | | 8.8 | 9.48 | 14.4 | 18.6 | 12.1 | 24.9 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | |
| **Product-specific scope of supply** | | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 2 | 2 | 2 | 5 | 2 | 5 | |
| Gland plate, qty | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cam lock | | 1 | 1 | 2 | 2 | 2 | 2 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2562.200 | 2562.200 | 2562.200 | 2565.200 | 2562.200 | 2565.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2562.300 | 2562.300 | 2562.300 | 2565.300 | 2562.300 | 2565.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2572.100 | 2572.100 | 2572.100 | 2575.100 | 2572.100 | 2575.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.210 | 2393.210 | 2393.210 | 2393.350 | 2393.210 | 2393.300 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4599.100 | 4599.100 | 4599.100 | 4599.100 | 4694.000 | 4694.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | – | – | – | – | 8619.710 | 8619.730 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | – | – | – | – | – | – | |
| LED system light | 1 pc(s). | – | – | – | – | 2500.100 | 2500.100 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | | – | – | – | – | – | – | |
| Viewing window, depth 62 mm | | – | – | – | – | – | – | |
| Operating panel | 1 pc(s). | 2741.010 | 2742.010 | 2743.010 | 2743.010 | – | – | 931 |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | – | – | – | – | 2515.200 | 2515.200 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | | – | – | – | – | – | – | |
| Base/plinth trim panels, sides, 100 mm | | – | – | – | – | – | – | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | | – | – | – | – | – | – | |
| Base/plinth trim panels, sides, 200 mm | | – | – | – | – | – | – | |
| Eyebolts | | – | – | – | – | – | – | |
| Protective roof | 1 pc(s). | 2472.010 | 2472.010 | 2472.010 | – | – | – | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | 1056 |

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 500 | 500 | 500 | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 500 | 500 | 700 | 380 | 380 | 600 | |
| **Depth** (T) mm | | 210 | 300 | 250 | 210 | 350 | 210 | |
| Mounting plate width (F) mm | | 450 | 450 | 450 | 550 | 550 | 550 | |
| Mounting plate height (G) mm | | 475 | 475 | 675 | 355 | 355 | 575 | |
| Material thickness – enclosure mm | | 1.25 | 1.5 | 1.5 | 1.25 | 1.5 | 1.5 | |
| Material thickness – door mm | | 1.5 | 1.5 | 2.0 | 1.5 | 1.5 | 1.5 | |
| Material thickness – mounting plate mm | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| **Model No.** | 1 pc(s). | **1050.000** | **1350.000** | **1057.000** | **1039.000** | **1339.000** | **1060.000** | |
| Weight kg | | 15.4 | 19.0 | 25.0 | 14.4 | 8.7 | 22.3 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | |
| **Product-specific scope of supply** | | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 3 | 6 | 3 | 4 | 7 | 4 | |
| Gland plate, qty | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cam lock | | 2 | 2 | 2 | 1 | 1 | 2 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2563.200 | 2566.200 | 2563.200 | 2564.200 | 2567.200 | 2564.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2563.300 | 2566.300 | 2563.300 | 2564.300 | 2567.300 | 2564.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2573.100 | 2576.100 | 2573.100 | 2574.100 | 2577.100 | 2574.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.210 | 2393.300 | 2393.250 | 2393.210 | 2393.350 | 2393.210 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 4696.000 | 4696.000 | 4696.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | 8619.710 | 8619.710 | 8619.760 | – | – | 8619.720 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | – | – | – | – | – | – | |
| LED system light | 1 pc(s). | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | 1 pc(s). | 2733.010 | 2733.010 | – | 2730.010 | 2730.010 | 2731.010 | 930 |
| Viewing window, depth 62 mm | 1 pc(s). | 2763.010 | 2763.010 | – | 2760.010 | 2760.010 | 2761.010 | 930 |
| Operating panel | 1 pc(s). | 2745.010 | 2745.010 | – | 2744.010 | – | 2746.010 | 931 |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | 2515.200 | 2515.200 | 2515.200 | 2515.300 | 2515.300 | 2515.300 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | | – | – | – | – | – | – | |
| Base/plinth trim panels, sides, 100 mm | | – | – | – | – | – | – | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | | – | – | – | – | – | – | |
| Base/plinth trim panels, sides, 200 mm | | – | – | – | – | – | – | |
| Eyebolts | | – | – | – | – | – | – | |
| Protective roof | 1 pc(s). | 2362.010 | – | – | 2473.010 | – | 2473.010 | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | 1056 |

# Compact enclosures AX

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 600 | 600 | 600 | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 600 | 600 | 760 | 760 | 800 | 800 | |
| **Depth** (T) mm | | 250 | 350 | 210 | 350 | 250 | 400 | |
| Mounting plate width (F) mm | | 550 | 550 | 550 | 550 | 545 | 545 | |
| Mounting plate height (G) mm | | 575 | 575 | 735 | 735 | 775 | 775 | |
| Material thickness – enclosure mm | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Material thickness – door mm | | 1.5 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Material thickness – mounting plate mm | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| **Model No.** | 1 pc(s). | **1054.000** | **1360.000** | **1076.000** | **1376.000** | **1058.000** | **1059.000** | |
| Weight kg | | 23.4 | 26.3 | 29.5 | 34.0 | 32.0 | 40.0 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | |
| **Product-specific scope of supply** | | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 4 | 7 | 4 | 7 | 4 | 7 | |
| Gland plate, qty | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cam lock | | 2 | 2 | 2 | 2 | 2 | 2 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2564.200 | 2567.200 | 2564.200 | 2567.200 | 2564.200 | 2567.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2564.300 | 2567.300 | 2564.300 | 2567.300 | 2564.300 | 2567.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2574.100 | 2577.100 | 2574.100 | 2577.100 | 2574.100 | 2577.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.250 | 2393.350 | 2393.210 | 2393.350 | 2393.250 | 2393.400 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | 8619.720 | 8619.720 | 8619.790 | 8619.790 | 8619.730 | 8619.730 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | – | – | – | – | – | – | |
| LED system light | 1 pc(s). | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | | – | – | – | – | – | – | |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | 1 pc(s). | 2731.010 | 2731.010 | 2732.010 | 2732.010 | – | – | 930 |
| Viewing window, depth 62 mm | 1 pc(s). | 2761.010 | 2761.010 | 2762.010 | 2762.010 | – | – | 930 |
| Operating panel | 1 pc(s). | 2746.010 | 2746.010 | – | – | – | – | 931 |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | 2515.300 | 2515.300 | 2515.300 | 2515.300 | 2515.300 | 2515.300 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | – | – | – | – | – | 2820.061 | 888 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | – | – | – | – | – | 2820.410 | 889 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | – | – | – | – | – | 2820.062 | 888 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | – | – | – | – | – | 2820.420 | 889 |
| Eyebolts | 2 pc(s). | – | – | – | – | – | 2509.010 | 964 |
| Protective roof | 1 pc(s). | – | 2476.010 | 2473.010 | 2476.010 | – | – | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | 1056 |

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 600 | 600 | 600 | 600 | 760 | 760 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1000 | 1000 | 1200 | 1200 | 760 | 760 | |
| **Depth** (T) mm | | 250 | 400 | 300 | 400 | 210 | 300 | |
| Mounting plate width (F) mm | | 545 | 545 | 545 | 545 | 705 | 705 | |
| Mounting plate height (G) mm | | 975 | 975 | 1175 | 1175 | 735 | 735 | |
| Material thickness – enclosure mm | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Material thickness – door mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Material thickness – mounting plate mm | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| **Model No.** | 1 pc(s). | **1090.000** | **1091.000** | **1260.000** | **1261.000** | **1077.000** | **1073.000** | |
| Weight kg | | 39.5 | 50.0 | 50.0 | 56.0 | 36.7 | 42.0 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | |
| **Product-specific scope of supply** | | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 4 | 7 | 7 | 7 | 2 | 5 | |
| Gland plate, qty | | 1 | 1 | 1 | 1 | 2 | 2 | |
| Cam lock | | 2 | 2 | – | – | 2 | 2 | |
| 3-point lock system | | – | – | ■ | ■ | – | – | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | – | – | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2564.200 | 2567.200 | 2567.200 | 2567.200 | 2562.200 | 2565.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2564.300 | 2567.300 | 2567.300 | 2567.300 | 2562.300 | 2565.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2574.100 | 2577.100 | 2577.100 | 2577.100 | 2572.100 | 2575.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.250 | 2393.400 | 2393.300 | 2393.400 | 2393.210 | 2393.300 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4696.000 | 4696.000 | 4596.000 | 4596.000 | 4599.200 | 4599.200 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | 8619.750 | 8619.750 | 8619.770 | 8619.770 | 8619.790 | 8619.790 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | 4 pc(s). | – | – | 8619.720 | 8619.720 | – | – | 952 |
| LED system light | 1 pc(s). | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | – | – | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | – | – | 2537.300 | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | – | – | 2435.100 | 2435.100 | – | – | 939 |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | – | – | 2435.400 | 2435.400 | – | – | 939 |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | | – | – | – | – | – | – | |
| Viewing window, depth 62 mm | | – | – | – | – | – | – | |
| Operating panel | | – | – | – | – | – | – | |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | 2515.300 | 2515.300 | 2515.300 | 2515.300 | 2515.400 | 2515.400 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | – | 2820.061 | 2820.061 | 2820.061 | – | – | 888 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | – | 2820.410 | 2820.310 | 2820.410 | – | – | 889 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | – | 2820.062 | 2820.062 | 2820.062 | – | – | 888 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | – | 2820.420 | 2820.320 | 2820.420 | – | – | 889 |
| Eyebolts | 2 pc(s). | – | 2509.010 | 2509.010 | 2509.010 | – | – | 964 |
| Protective roof | 1 pc(s). | – | – | – | – | – | 2474.010 | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | 1056 |

# Compact enclosures AX

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 800 | 800 | 800 | 800 | 800 | 1000 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 600 | 1000 | 1000 | 1200 | 1200 | 760 | |
| **Depth** (T) mm | | 300 | 300 | 400 | 300 | 400 | 210 | |
| Mounting plate width (F) mm | | 750 | 745 | 745 | 745 | 745 | 945 | |
| Mounting plate height (G) mm | | 575 | 975 | 975 | 1175 | 1175 | 735 | |
| Material thickness – enclosure mm | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Material thickness – door mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Material thickness – mounting plate mm | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| **Model No.** | 1 pc(s). | **1055.000** | **1180.000** | **1181.000** | **1280.000** | **1281.000** | **1100.000** | |
| Weight kg | | 34.2 | 52.0 | 59.5 | 63.5 | 69.0 | 49.0 | |
| Protection category IP to IEC 60 529 | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 55 | |
| Protection category NEMA | | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 4 | NEMA 12 | |
| **Product-specific scope of supply** | | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 2 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 5 | 5 | 5 | 5 | 5 | 3 | |
| Gland plate, qty | | 2 | 2 | 2 | 2 | 2 | 2 | |
| Cam lock | | 2 | 2 | 2 | – | – | 2 | |
| 3-point lock system | | – | – | – | ■ | ■ | – | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Plastic gland plate, modular | 1 pc(s). | 2565.200 | 2565.200 | 2565.200 | 2565.200 | 2565.200 | 2562.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2565.300 | 2565.300 | 2565.300 | 2565.300 | 2565.300 | 2563.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2575.100 | 2575.100 | 2575.100 | 2575.100 | 2575.100 | 2573.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.300 | 2393.300 | 2393.400 | 2393.300 | 2393.400 | 2393.210 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4697.000 | 4697.000 | 4697.000 | – | – | 4695.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | 8619.720 | 8619.750 | 8619.750 | 8619.770 | 8619.770 | 8619.790 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door[1)] | 4 pc(s). | – | – | – | 8619.730 | 8619.730 | 8619.710 | 952 |
| LED system light | 1 pc(s). | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | – | – | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | – | – | 2537.300 | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | – | – | – | 2435.100 | 2435.100 | – | 939 |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | – | – | – | 2435.400 | 2435.400 | – | 939 |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | | – | – | – | – | – | – | |
| Viewing window, depth 62 mm | | – | – | – | – | – | – | |
| Operating panel | | – | – | – | – | – | – | |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | 2515.400 | 2515.400 | 2515.400 | 2515.400 | 2515.400 | 2515.200 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 2820.081 | 2820.081 | 2820.081 | 2820.081 | 2820.081 | – | 888 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 2820.310 | 2820.310 | 2820.410 | 2820.310 | 2820.410 | – | 889 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 2820.082 | 2820.082 | 2820.082 | 2820.082 | 2820.082 | – | 888 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 2820.320 | 2820.320 | 2820.420 | 2820.320 | 2820.420 | – | 889 |
| Eyebolts | 2 pc(s). | – | 2509.010 | 2509.010 | 2509.010 | 2509.010 | – | 964 |
| Protective roof | 1 pc(s). | 2475.010 | 2475.010 | – | 2475.010 | – | – | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | 1056 |

[1)] For two-door enclosures: Installation in the lockable door

## Basic enclosure AX, sheet steel

| **Width** (B) mm | Packs of | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 760 | 1000 | 1200 | 1200 | 1,400 | 1,400 | 1200 | |
| **Depth** (T) mm | | 300 | 300 | 300 | 400 | 300 | 400 | 400 | |
| Mounting plate width (F) mm | | 945 | 945 | 945 | 945 | 945 | 945 | 1145 | |
| Mounting plate height (G) mm | | 735 | 975 | 1175 | 1175 | 1375 | 1375 | 1175 | |
| Material thickness – enclosure mm | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| Material thickness – door mm | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Material thickness – mounting plate mm | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| **Model No.** | 1 pc(s). | **1130.000** | **1110.000** | **1213.000** | **1214.000** | **1114.000** | **1115.000** | **1116.000** | |
| Weight kg | | 52.0 | 63.0 | 81.0 | 85.7 | 88.5 | 100.0 | 101.0 | |
| Protection category IP to IEC 60 529 | | IP 55 | IP 55 | IP 55 | IP 55 | IP 55 | IP 55 | IP 55 | |
| Protection category NEMA | | NEMA 12 | NEMA 12 | NEMA 12 | NEMA 12 | NEMA 12 | NEMA 12 | NEMA 12 | |
| **Product-specific scope of supply** | | | | | | | | | |
| Door(s) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Door hinged on the right, may be swapped to the left | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Gland plate, size | | 6 | 6 | 6 | 6 | 6 | 6 | 7 | |
| Gland plate, qty | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Cam lock | | 2 | 2 | – | – | – | – | – | |
| 3-point lock system | | – | – | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 20 mm | 4 pc(s). | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 2508.020 | 966 |
| Wall mounting bracket, for AX sheet steel, KX sheet steel, wall distance 40 mm | 4 pc(s). | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 2503.020 | 966 |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Pole clamp | | – | – | – | – | – | – | – | |
| Plastic gland plate, modular | 1 pc(s). | 2566.200 | 2566.200 | 2566.200 | 2566.200 | 2566.200 | 2566.200 | 2567.200 | 1050 |
| Plastic gland plate with membranes | 1 pc(s). | 2566.300 | 2566.300 | 2566.300 | 2566.300 | 2566.300 | 2566.300 | 2567.300 | 1052 |
| Metal gland plate with knockouts | 1 pc(s). | 2576.100 | 2576.100 | 2576.100 | 2576.100 | 2576.100 | 2576.100 | 2577.100 | 1053 |
| Sealing frame, modular | | see page | see page | see page | see page | see page | see page | see page | 1048 |
| Rail for interior installation | 4 pc(s). | 2393.300 | 2393.300 | 2393.300 | 2393.400 | 2393.300 | 2393.400 | 2393.400 | 989 |
| Support strips, installation in the door | 20 pc(s). | 4695.000 | 4695.000 | – | – | – | – | – | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | 4 pc(s). | 8619.790 | 8619.750 | 8619.770 | 8619.770 | 8619.780 | 8619.780 | 8619.770 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door[1)] | 4 pc(s). | 8619.710 | 8619.710 | 8619.710 | 8619.710 | 8619.710 | 8619.710 | 8619.720 | 952 |
| LED system light | 1 pc(s). | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 2537.100 | – | – | – | – | – | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 2537.300 | – | – | – | – | – | 940 |
| Comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | – | – | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 939 |
| Comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | – | – | 2435.400 | 2435.400 | 2435.400 | 2435.400 | 2435.400 | 939 |
| Lock inserts | | see page | see page | see page | see page | see page | see page | see page | 941, 942 |
| Viewing window, depth 36 mm | | – | – | – | – | – | – | – | |
| Viewing window, depth 62 mm | | – | – | – | – | – | – | – | |
| Operating panel | | – | – | – | – | – | – | – | |
| 180° hinge | 3 pc(s). | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 2449.010 | 951 |
| Door stay | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | 1 pc(s). | 2515.200 | 2515.200 | 2515.200 | 2515.200 | 2515.200 | 2515.200 | 2515.300 | 954 |
| Plastic wiring plan pockets | | see page | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | see page | see page | see page | see page | see page | see page | see page | 955 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 2820.101 | 2820.101 | 2820.101 | 2820.101 | 2820.101 | 2820.101 | 2820.121 | 888 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 2820.310 | 2820.310 | 2820.310 | 2820.410 | 2820.310 | 2820.410 | 2820.410 | 889 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 2820.102 | 2820.102 | 2820.102 | 2820.102 | 2820.102 | 2820.102 | 2820.122 | 888 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 2820.320 | 2820.320 | 2820.320 | 2820.420 | 2820.320 | 2820.420 | 2820.420 | 889 |
| Eyebolts | 2 pc(s). | – | 2509.010 | 2509.010 | 2509.010 | 2509.010 | 2509.010 | 2509.010 | 964 |
| Protective roof | 1 pc(s). | 2363.010 | 2363.010 | 2363.010 | – | 2363.010 | – | – | 958 |
| Dust guard trim | 1 pc(s). | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 2426.500 | 959 |
| Earth straps | | see page | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass | | see page | see page | see page | see page | see page | see page | see page | 1056 |
| Cable gland, polyamide | | see page | see page | see page | see page | see page | see page | see page | 1056 |

[1)] For two-door enclosures: Installation in the lockable door

# Plastic enclosures AX – Added durability

## Enclosures

- 14 different enclosure variants, with or without viewing panel
- Symmetrical layout means the enclosure is easily rotated through 180°
- Double seal with an integral rain protection strip on the top and bottom edge of the door to protect the seal from dust and rainwater
- Fibreglass-reinforced plastic with a high level of UV resistance

## Siting

- Wall mounting brackets are easily secured from the outside while retaining the UL approval
- The pole clamp may be screw-fastened directly into the external threaded inserts
- Ideally suited for outdoor applications

## Mounting plate

- The mounting plate is easily screw-fastened onto the pre-assembled bolts from the front
- Simple earthing of the mounting plate, even retrospectively, using machined keyholes
- If no mounting plate is used, top hat rails may be mounted directly onto the available mounting bosses

## Interior installation

- Numerous mounting bosses for individual interior installation
- Interior installation on a 25 mm pitch pattern with universal bracket for mounting punched sections and rails
- Direct door installation with support strips and punched sections with mounting flanges 14 x 39 mm, for use as an additional mounting surface
- Door-operated switches may be attached directly to the mounting bosses

# Plastic enclosures AX

**System accessories** Page 877 **Ex enclosures** Page 257

**Material:**
- Enclosure and door: Fibre-glass-reinforced unsaturated polyester
- Fire protection corresponding to UL 94 V-0
- Door: All-round foamed-in PU seal
- Mounting plate: Sheet steel

**Surface finish:**
- Enclosure and door: Dyed plastic with no after-treatment
- Mounting plate: Zinc-plated

**Colour:**
- Similar to RAL 7035

**Protection class:**
- II at 1000 V AC

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

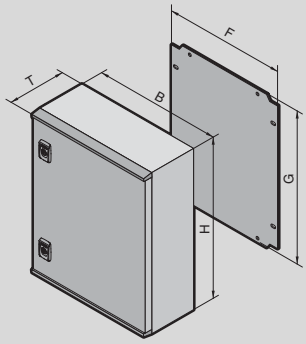
**Supply includes:**
- Enclosure with hinged door, of all-round solid construction, 3 mm double-bit lock
- Door hinged on the right, may be swapped to the left
- Mounting plate
- Twin seal on the top and bottom edges of the door as integral rain protection strip

Please note the product-specific scope of supply.

**Note:**
- Interior installation screws are required to secure components inside the enclosure
- Components such as punched sections with mounting flanges may be attached on a 25 mm pitch pattern using the universal bracket

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.




## without viewing window

| **Width** (B) mm | Packs of | 250 | 300 | 400 | 400 | 500 | 600 | 600 | 800 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 350 | 400 | 400 | 600 | 500 | 600 | 800 | 1000 | |
| **Depth** (T) mm | | 150 | 200 | 200 | 200 | 300 | 200 | 300 | 300 | |
| Mounting plate width (F) mm | | 155 | 205 | 305 | 305 | 405 | 505 | 505 | 705 | |
| Mounting plate height (G) mm | | 275 | 325 | 325 | 525 | 425 | 525 | 725 | 925 | |
| Mounting plate thickness mm | | 2.5 | 2.5 | 2.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| **Model No.** | 1 pc(s). | **1432.000** | **1434.000** | **1444.000** | **1446.000** | **1453.000** | **1466.000** | **1468.000** | **1480.000** | |
| Weight kg | | 4.4 | 6.3 | 7.8 | 11.1 | 13.1 | 15.5 | 22.4 | 34.2 | |
| **Product-specific scope of supply** | | | | | | | | | | |
| Cam lock | | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | |
| **Accessories** | | | | | | | | | | |
| Wall mounting bracket | 4 pc(s). | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 97 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | – | 968 |
| Universal bracket | 4 pc(s). | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 97 |
| Door stay | 2 pc(s). | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 96 |
| LED system light | | – | – | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX | 1 pc(s). | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 96 |
| Cable gland | | see page | see page | see page | see page | see page | see page | see page | see page | 1056 |
| Screw for interior installation | 50 pc(s). | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 97 |
| Wiring plan pocket | 1 pc(s). | – | – | – | – | – | 4116.500 | 4116.500 | 4116.500 | 955 |
| Punched section with mounting flange 23 x 64 mm, installation in the height | 4 pc(s). | – | 8617.110 | 8617.110 | 8617.130 | 8617.120 | 8617.130 | 8617.140 | 8617.150 | 991 |
| Punched section with mounting flange 23 x 64 mm, installation in the width | | – | – | 8617.110 | 8617.110 | 8617.120 | 8617.130 | 8617.130 | 8617.140 | |
| Support strips, installation in the door | 20 pc(s). | – | – | 4594.000 | 4594.000 | 4309.000 | 4596.000 | 4596.000 | 4598.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | 4 pc(s). | – | – | 8619.700 | 8619.700 | 8619.710 | 8619.720 | 8619.720 | 8619.730 | 952 |

**System accessories** Page 877 **Ex enclosures** Page 257

**Material:**
- Enclosure and door: Fibre-glass-reinforced unsaturated polyester
- Fire protection corresponding to UL 94 V-0
- Door: All-round foamed-in PU seal
- Mounting plate: Sheet steel
- Viewing window: Polycarbonate

**Surface finish:**
- Enclosure and door: Dyed plastic with no after-treatment
- Mounting plate: Zinc-plated

**Colour:**
- Similar to RAL 7035

**Protection class:**
- II at 1000 V AC

**Protection category IP to IEC 60 529:**
- IP 56

**Protection category NEMA:**
- NEMA 12

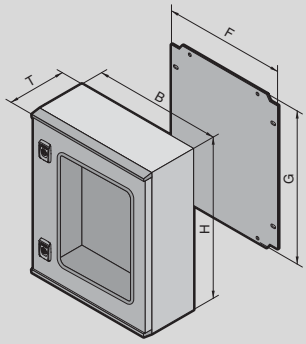
**Supply includes:**
- Enclosure with hinged door with viewing window, of all-round solid construction, 3 mm double-bit lock
- Door hinged on the right, may be swapped to the left
- Mounting plate
- Twin seal on the top and bottom edges of the door as integral rain protection strip

Please note the product-specific scope of supply.

**Note:**
- Interior installation screws are required to secure components inside the enclosure
- Components such as punched sections with mounting flanges may be attached on a 25 mm pitch pattern using the universal bracket

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.




## with viewing window

| **Width** (B) mm | Packs of | 400 | 400 | 500 | 600 | 600 | 800 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 400 | 600 | 500 | 600 | 800 | 1000 | |
| **Depth** (T) mm | | 200 | 200 | 300 | 200 | 300 | 300 | |
| Mounting plate width (F) mm | | 305 | 305 | 405 | 505 | 505 | 705 | |
| Mounting plate height (G) mm | | 325 | 525 | 425 | 525 | 725 | 925 | |
| Mounting plate thickness mm | | 2.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| **Model No.** | 1 pc(s). | **1448.000** | **1449.000** | **1454.000** | **1467.000** | **1469.000** | **1479.000** | |
| Weight kg | | 7.7 | 10.9 | 12.9 | 15.2 | 21.9 | 33.2 | |
| **Product-specific scope of supply** | | | | | | | | |
| Cam lock | | 2 | 2 | 2 | 2 | 2 | 3 | |
| **Accessories** | | | | | | | | |
| Wall mounting bracket | 4 pc(s). | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 1485.400 | 97 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | – | 968 |
| Universal bracket | 4 pc(s). | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 97 |
| Door stay | 2 pc(s). | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 96 |
| LED system light | | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.110 | 2500.110 | 1014 |
| Mini-comfort handle AX | 1 pc(s). | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 1485.600 | 96 |
| Cable gland | | see page | see page | see page | see page | see page | see page | 1056 |
| Screw for interior installation | 50 pc(s). | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 97 |
| Wiring plan pocket | 1 pc(s). | – | – | – | 4116.500 | 4116.500 | 4116.500 | 955 |
| Punched section with mounting flange 23 x 64 mm, installation in the height | 4 pc(s). | 8617.110 | 8617.130 | 8617.120 | 8617.130 | 8617.140 | 8617.150 | 991 |
| Punched section with mounting flange 23 x 64 mm, installation in the width | | 8617.110 | 8617.110 | 8617.120 | 8617.130 | 8617.130 | 8617.140 | |
| Support strips, installation in the door | 20 pc(s). | 4594.000 | 4594.000 | 4309.000 | 4596.000 | 4596.000 | 4598.000 | 952 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | 4 pc(s). | 8619.700 | 8619.700 | 8619.710 | 8619.720 | 8619.720 | 8619.730 | 952 |

## Accessories

### Mini-comfort handle AX

**for AX plastic**

The unlatched handle swivels to open the lock. Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **1485.600** |
| **Lock inserts, type A** | |
| 7 mm square | 2460.000 |
| 8 mm square | 2461.000 |
| 7 mm triangular | 2462.000 |
| 8 mm triangular | 2463.000 |
| Screwdriver | 2464.000 |
| Daimler insert | 2465.000 |
| 3 mm double-bit | 2466.000 |
| Fiat | 2307.000 |
| 6.5 mm triangular | 2460.650 |
| **Lock and push-button inserts** | |
| Lock insert, lock no. 3524 E[1] | 2467.000 |
| Push-button insert | 2468.000 |
| Push-button and lock insert[1] | 2469.000[2] |
| **Profile half-cylinders** | |
| To DIN 18 252[3] | 9785.040[5] |
| | 9785.042[4] |

[1] With 2 keys
[2] Lock no. 2123; no other lock is possible
[3] With 3 keys for each lock insert
[4] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[5] Lock-specific key

### Door stay AX

**for AX plastic and Ex enclosure, plastic**

To secure the door in the open position. May be fitted without machining the enclosure.

**Supply includes:**
– Assembly parts

**Installation options:**
– Installation directly at the top/bottom right
– When swapping the door hinge to the opposite side, the prefitted door stay is easily removed and re-installed

| Assembly | Packs of | Model No. |
|---|---|---|
| Top/bottom | 2 pc(s). | **1485.100** |

## Wall mounting bracket

**for AX plastic**
For attachment to the wall, only possible from the outside of the enclosure.

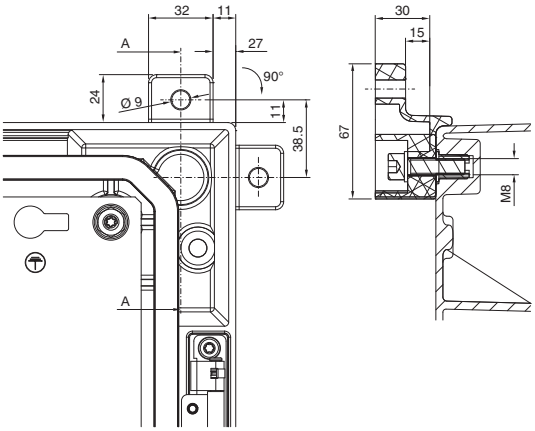
**Material:**
– Fibreglass-reinforced polyamide[1)]

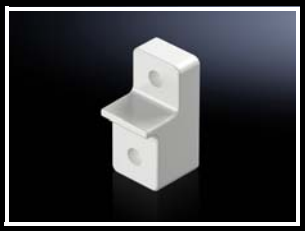
**Supply includes:**
– Assembly parts for mounting on the enclosure

| Colour | Packs of | Model No. |
|---|---|---|
| RAL 7035 | 4 pc(s). | **1485.400** |
| RAL 9011 | 4 pc(s). | **1485.500[1)]** |

[1)] With graphite additive for Ex applications

Section A – A



## Universal bracket

**for AX plastic and Ex enclosure, plastic**
For the interior installation on a
25 mm pitch pattern of
– Punched sections with mounting flanges
– Door rails
– Support strips

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **1485.200** |

## Screw for interior installation

**for AX plastic**
For mounting accessories on the mounting bosses of the enclosure frame.

Drive: Multi-tooth 25

Dimensions: 5 x 14 mm

| Type of screw | Packs of | Model No. |
|---|---|---|
| Pan head screw, self-tapping | 50 pc(s). | **1485.300** |

# Rittal – The System.

**Faster – better – everywhere.**

# Rack systems

## Baying enclosure system VX25

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## Free-standing enclosure system VX SE

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# Two powerful models – one accessory range – one system

## Free-standing enclosure system VX SE

For standalone enclosure applications up to 1800 mm wide

# Baying enclosure system VX25

For individual bayed combinations – accessible from all sides

# Baying enclosure system VX25 – Product comparison

| | | Basic enclosure | | Basic enclosure with glazed door | Electronic enclosure | IP 66/NEMA 4 | |
|---|---|---|---|---|---|---|---|
| **Material** | Sheet steel | ■ | – | ■ | ■ | ■ | |
| | Stainless steel | – | ■ | – | – | – | |
| **Cladding** | Door, front | ■ | ■ | – | – | ■ | |
| | Glazed door, front | – | – | ■ | – | – | |
| | Front frame | – | – | – | ■ | – | |
| | Front trim panels | – | – | – | – | – | |
| | Door, rear | – | – | ■ | ■ | – | |
| | Rear panel | ■ | ■ | – | – | ■ | |
| | Roof plate | ■ | ■ | ■ | ■ | ■ | |
| **Interior installation** | Mounting plate | ■ | ■ | – | ■ | ■ | |
| | Punched rails | ■ | ■ | – | – | ■ | |
| | Gland plate, solid | – | – | – | – | ■ | |
| | Gland plate, multi-piece | ■ | ■ | ■ | ■ | – | |
| | Locating frame for fuse-switch disconnectors | – | – | – | – | – | |
| | Adaptor section, 482.6 mm (19˝), front | – | – | – | ■ | – | |
| **Protection category** | IP to IEC 60 529 | IP 55 | IP 55 | IP 55 | – | IP 66 | |
| | NEMA | 12 | 12 | 12 | – | 4 | |
| from page | | 116 | 242 | 128 | 130 | 131 | |

# Baying enclosure system VX25 – Product comparison

| | IP 66/NEMA 4X | Distribution enclosure | Modular enclosure | Fuse-switch-disconnector enclosure | EMC enclosure |
|---|---|---|---|---|---|
| | – | ■ | ■ | ■ | ■[1)] |
| | ■ | – | – | – | – |
| | ■ | ■ | – | ■ | ■ |
| | – | – | – | – | – |
| | – | – | – | – | – |
| | – | – | – | ■ | – |
| | – | – | – | – | – |
| | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | – | ■ | ■ |
| | ■ | – | – | – | ■ |
| | ■ | – | – | – | ■ |
| | ■ | – | – | – | – |
| | – | ■ | ■ | ■ | ■ |
| | – | – | – | ■ | – |
| | – | – | – | – | – |
| | IP 66 | IP 55 | Up to IP 54[2)] | Up to IP 3X[2)] | IP 55 |
| | 4X | 12 | – | – | 12 |
| | 246 | 135 | 132 | 134 | 136 |

[1)] Sheet steel with magnesium zinc coating [2)] Depending on the cladding

# Baying enclosure system VX25 – Product overview

| | | | Basic enclosure | | Basic enclosure with glazed door[1] | Electronic enclosure[2] | IP 66/NEMA 4 |
|---|---|---|---|---|---|---|---|
| **Height x depth mm** | **Width mm** | **Doors** | **Model No.** | **Model No.** | **Model No.** | **Model No.** | **Model No.** |
| Material | | | Sheet steel | Stainless steel | Sheet steel | Sheet steel | Sheet steel |
| **1200 x 500** | 600 | 1 | **8615.000** | – | – | – | – |
| | 800 | 1 | **8815.000** | – | – | – | – |
| | 1200 | 2 | **8215.000** | – | – | – | – |
| **1400 x 500** | 600 | 1 | **8645.000** | – | – | – | – |
| | 800 | 1 | **8845.000** | – | – | – | – |
| | 1200 | 2 | **8245.000** | – | – | – | – |
| **1600 x 500** | 600 | 1 | **8665.000** | – | – | – | – |
| | 800 | 1 | **8865.000** | – | – | – | – |
| | 1200 | 2 | **8265.000** | – | – | – | – |
| **1600 x 600** | 600 | 1 | – | – | – | **8410.000** | – |
| **1600 x 800** | 600 | 1 | – | – | – | **8418.000** | – |
| **1800 x 400** | 600 | 1 | **8684.000** | – | – | – | – |
| | 800 | 1 | **8884.000** | **8454.000** | – | – | – |
| | 1000 | 1 | **8084.000** | – | – | – | – |
| | 1000 | 2 | **8080.000** | – | – | – | – |
| | 1200 | 2 | **8284.000** | **8456.000** | – | – | – |
| **1800 x 500** | 400 | 1 | **8485.000** | – | – | – | – |
| | 600 | 1 | **8685.000** | **8457.000** | – | – | – |
| | 800 | 1 | **8885.000** | **8455.000** | – | – | – |
| | 800 | 2 | **8880.000** | – | – | – | – |
| | 1200 | 2 | **8285.000** | **8453.000** | – | – | – |
| **1800 x 600** | 400 | 1 | **8486.000** | – | – | – | – |
| | 600 | 1 | **8686.000** | – | – | – | – |
| | 800 | 1 | **8886.000** | – | – | – | – |
| | 800 | 2 | **8881.000** | – | – | – | – |
| | 1200 | 2 | **8286.000** | – | – | – | – |
| **2000 x 400** | 400 | 1 | – | – | – | – | – |
| | 600 | 1 | **8604.000** | – | – | – | – |
| | 800 | 1 | **8804.000** | – | – | – | – |
| | 850 | 1 | – | – | – | – | – |
| | 1000 | 2 | **8004.000** | – | – | – | – |
| | 1100 | 2 | – | – | – | – | – |
| | 1200 | 2 | **8204.000** | – | – | – | – |
| **2000 x 500** | 400 | 1 | **8405.000** | – | – | – | – |
| | 600 | 1 | **8605.000** | – | – | – | – |
| | 800 | 1 | **8805.000** | – | – | – | – |
| | 1000 | 2 | **8005.000** | – | – | – | – |
| | 1200 | 2 | **8205.000** | – | – | – | – |
| **2000 x 600** | 400 | 1 | **8406.000** | – | – | – | – |
| | 600 | 1 | **8606.000** | **8452.000** | **8840.120** | **8430.000** | – |
| | 800 | 1 | **8806.000** | **8450.000** | **8840.100** | – | **8807.000** |
| | 850 | 1 | – | – | – | – | – |
| | 1000 | 2 | **8006.000** | – | – | – | – |
| | 1100 | 2 | – | – | – | – | – |
| | 1200 | 2 | **8206.000** | **8451.000** | – | – | – |
| **2000 x 800** | 400 | 1 | – | – | – | – | – |
| | 600 | 1 | **8608.000** | – | **8840.130** | **8438.000** | – |
| | 800 | 1 | **8808.000** | – | **8840.110** | – | – |
| | 1200 | 2 | **8208.000** | – | – | – | – |
| **2200 x 600** | 400 | 1 | – | – | – | – | – |
| | 600 | 1 | **8626.000** | – | – | – | – |
| | 800 | 1 | **8826.000** | – | – | – | – |
| | 1000 | 1 | – | – | – | – | – |
| | 1200 | 2 | **8226.000** | – | – | – | – |
| **2200 x 800** | 400 | 1 | – | – | – | – | – |
| | 600 | 1 | – | – | – | – | – |
| | 800 | 1 | – | – | – | – | – |
| | 1200 | 1 | – | – | – | – | – |
| from page | | | 116 | 242 | 128 | 130 | 131 |

[1] Glazed door at the front, rear door [2] Rear door

# Baying enclosure system VX25 – Product overview

| | | IP 66/NEMA 4X | Distribution enclosure | Modular enclosure[3] | Fuse-switch-disconnector enclosure | EMC enclosure |
|---|---|---|---|---|---|---|
| Width mm | Doors | Model No. | Model No. | Model No. | Model No. | Model No. |
| | | Stainless steel | Sheet steel | Sheet steel | Sheet steel | Sheet steel[4] |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 1000 | 1 | – | – | – | – | – |
| 1000 | 2 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 800 | 2 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 800 | 2 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 850 | 1 | – | **9666.956** | – | – | – |
| 1000 | 2 | – | – | – | – | – |
| 1100 | 2 | – | **9666.966** | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | – | – | – |
| 600 | 1 | – | – | – | – | – |
| 800 | 1 | – | – | – | – | – |
| 1000 | 2 | – | – | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | **9680.406** | – | – |
| 600 | 1 | – | – | **9680.606** | – | – |
| 800 | 1 | **8458.000** | – | **9680.806** | – | **8807.010** |
| 850 | 1 | – | **9666.916** | – | – | – |
| 1000 | 1 | – | – | – | **9680.005** | – |
| 1100 | 2 | – | **9666.926** | – | – | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | **9680.408** | – | – |
| 600 | 1 | – | – | **9680.608** | – | – |
| 800 | 1 | – | – | **9680.808** | – | **8807.020** |
| 1200 | 1 | – | – | – | **9680.207** | – |
| 400 | 1 | – | – | **9680.426** | – | – |
| 600 | 1 | – | – | **9680.626** | – | – |
| 800 | 1 | – | – | **9680.826** | – | – |
| 1000 | 1 | – | – | – | **9680.025** | – |
| 1200 | 2 | – | – | – | – | – |
| 400 | 1 | – | – | **9680.428** | – | – |
| 600 | 1 | – | – | **9680.628** | – | – |
| 800 | 1 | – | – | **9680.828** | – | – |
| 1200 | 1 | – | – | – | **9680.227** | – |
| | | 246 | 135 | 132 | 134 | 136 |

[3] Without door [4] Sheet steel with magnesium zinc coating

# Baying enclosure system VX25 – Added system benefits

**System benefits – Rittal's standards (not to be taken for granted) create additional cross-system benefits**

## Digitalization

- The QR code on all machinable enclosure panels permits fully automated incorporation into the production workflow, for seamless digital monitoring from the incoming goods right through to the finished product.

## Material savings

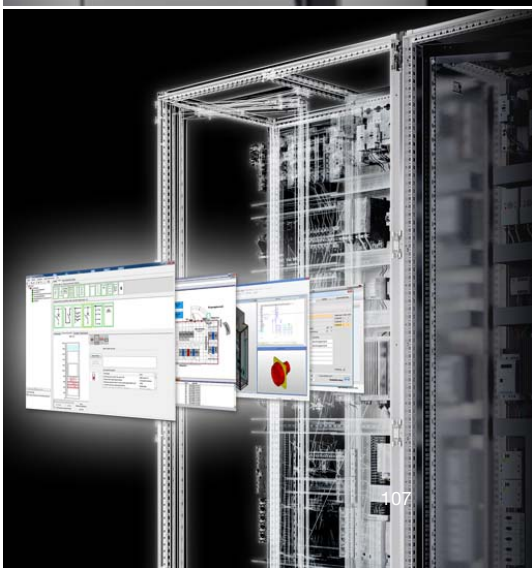
- As standard, potential equalisation of the enclosure panels occurs during screw-fastening, which saves up to seven earth straps per enclosure and also improves work safety by eliminating sharp-edged protruding parts.

## System

- Automatic potential equalisation of the roof, rear panel and sides acts as earthing when Rittal climate control devices and Rittal fan-and-filter units are installed.

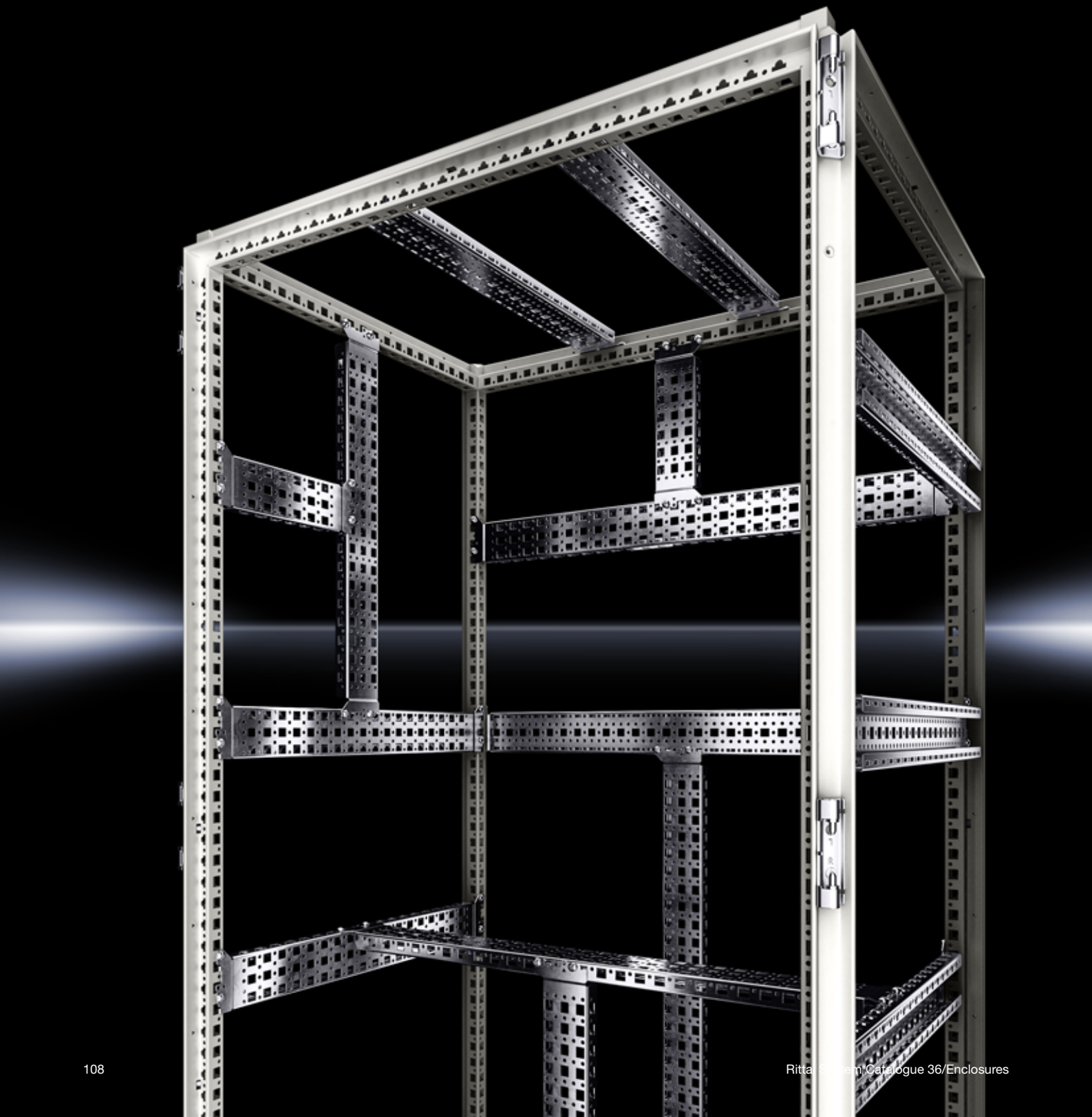
## Reliable engineering

- Rittal's customers are supported by a wealth of conversion and planning tools in the automated production process and when working with a virtual prototype:
  - Configurators
  - Parts list converters
  - EPLAN Pro Panel
  - 2D/3D CAD data
  - ecl@ss Advanced
  - Technical documentation
  - Data for planners
  - Assembly videos



# Baying enclosure system VX25 – Added system benefits

**Frame and punched sections – Now with added assembly-friendliness plus efficient engineering thanks to a symmetrical frame section on a 25 mm pitch pattern across all levels, accessible from all sides.**



## Accessibility

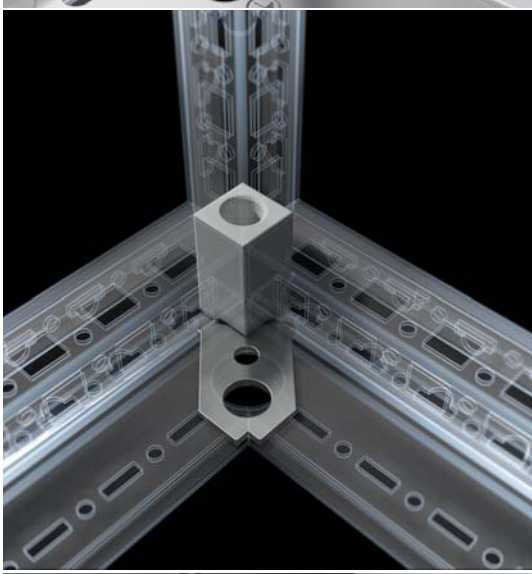
- The system offers an outer mounting level in addition to the inner level, making the enclosure readily accessible and configurable from the outside.

## Installation options

- The continuous pattern of square punchings supports the use of M5/M6//M8 cage nuts to create more mounting options at all profile levels.

## Stability

- The corner piece with welded base frame makes it easier to secure to the floor and base and improves stability.
- The enclosure is secured to the base/ plinth or subsurface either via the M12 thread in the corner piece or via the stable base structure.



## Simple cable entry

- The blunt edges minimise the risk of cable damage when routing cables underneath the enclosure.
- The earthing points pre-labelled as standard provide quick guidance and help to speed up the work process.
- The double edge fold of the gland plates is resistant to bending even under heavy loads to ensure compliance with the high protection category.

# Baying enclosure system VX25 – Added time savings

**Doors and walls – More flexible, assembly-friendly and economical, thanks to an ingenious hinge system, a quick-fit and readily replaceable lock system, and the elimination of avoidable machining processes.**

## Making life easier

- The new hinge allows doors to be fitted and removed incredibly easily without any tools, and separately locking and unlocking the hinge bolts is a thing of the past.

## Handling

- For one-man assembly, the positioning aid for the side and rear panels allows labour-saving pre-fixing for the ideal fit, which you can screw-fasten later on when you have both hands free.

## Flexibility

- Because the hinges of the main and adjacent doors in two-door enclosures can be swapped to the opposite side if required, this creates greater flexibility when installing cooling units in the enclosure doors and helps to avoid collisions between equipment and doors.

## Time savings

- The tool-free, readily exchangeable lock systems, e.g. on the comfort handle, reduce the amount of assembly time required.

# Baying enclosure system VX25 – Added reductions in complexity

**Baying – Complexity is further reduced thanks to a simplified, more consistent baying system for all applications.**

## Overview

- The baying connectors have been designed to cover every potential baying scenario in enclosure production with just a few baying solutions. This allows easier decision-making and relieves the pressure on engineering.

## Location flexibility

- The option of baying from all four sides allows an individual response to every space situation.

## Clamping force

- The baying connectors are screwed into place in the direction of baying to bring the enclosures safely into position and are approved for transportation.

## Sealing efficiency

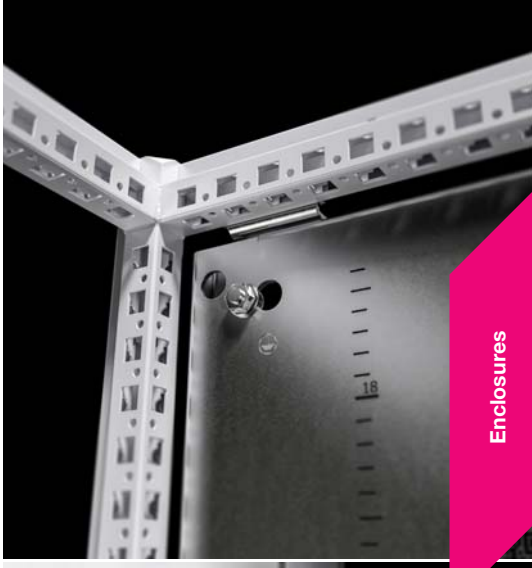
- The seal, which can be inserted in a flash, allows precise positioning and can be removed at any time.

# Baying enclosure system VX25 – Added assembly-friendliness

**Mounting plate – More time gains, installation options and assembly-friendliness thanks to improved mounting kits, also suitable for dynamic loads.**

## Space gain

- The option of fitting the mounting plate 20 mm deeper in the enclosure with a special installation kit creates additional space in the enclosure depth.



## Process efficiency

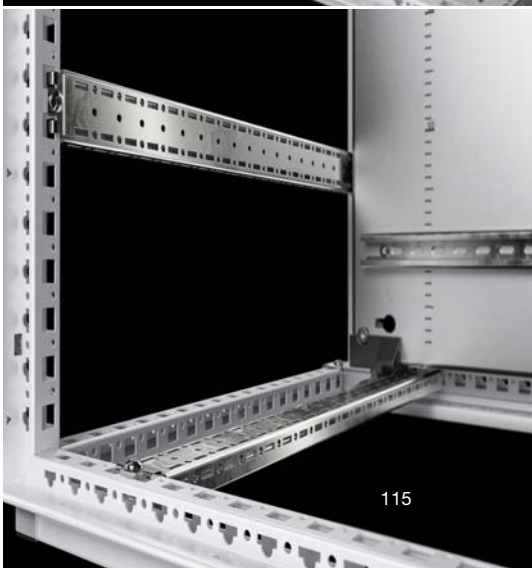
- The integral clip means that the mounting plate slide block can be dismantled with no need for tools and easily refitted. This helps to streamline the fully automated machining process in every respect.

## Flexibility

- The system divider designed for installation in the enclosure depth divides wide enclosures into two halves, increasing the flexibility of interior installation.

## Additional benefits

- The practical mounting plate slide rail can be removed once the mounting plate has been inserted and used elsewhere in the enclosure as a fully functional punched section.
- The grid print facilitates the simple, fast positioning of components on the mounting plate.



# Baying enclosure system VX25

**System accessories** Page 877 **VX25 basic enclosure with glazed door** Page 128 **VX25 stainless steel** Page 242 **VX25 EMC-shielded** Page 136

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dip-coat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dip-coat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated, passi-vated
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated

**Colour:**
- RAL 7035

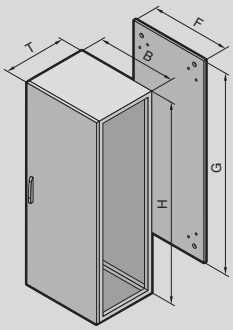
**Protection category IP to IEC 60 529:**
- IP 55

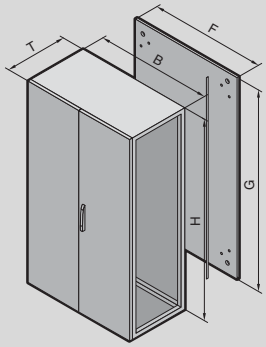
**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure frame
- Door(s) (r/h hinge, may be swapped to opposite side)
- Roof plate
- Rear panel
- Gland plates
- Mounting plate
- 2 punched rails 18 x 39 mm
- Lock: 3 mm double-bit

**Approvals:**
- UL
- cUL
- DNV-GL
- Lloyds Register of Shipping

Further approvals can be found on the Internet.



## Basic enclosure, height 1200 mm, depth 500 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1200 | 1200 | 1200 | |
| **Depth** (T) mm | | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1096 | 1096 | 1096 | |
| **Model No.** | 1 pc(s). | **8615.000** | **8815.000** | **8215.000** | |
| Weight kg | | 66.0 | 82.4 | 126.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.032 | 8640.032 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.042 | 8640.042 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8115.245 | 8115.245 | 8115.245 | 901 |
| Divider panel | | – | – | – | |
| Divider panel for module plates | | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | – | – | – | |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | | – | – | – | |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 1400 mm, depth 500 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1400 | 1400 | 1400 | |
| **Depth** (T) mm | | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1296 | 1296 | 1296 | |
| **Model No.** | 1 pc(s). | **8645.000** | **8845.000** | **8245.000** | |
| Weight kg | | 73.8 | 92.2 | 141.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.032 | 8640.032 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.042 | 8640.042 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8145.245 | 8145.245 | 8145.245 | 901 |
| Divider panel | | – | – | – | |
| Divider panel for module plates | | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | | – | – | – | |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | | – | – | – | |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

## Basic enclosure, height 1600 mm, depth 500 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1600 | 1600 | 1600 | |
| **Depth** (T) mm | | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1496 | 1496 | 1496 | |
| **Model No.** | 1 pc(s). | **8665.000** | **8865.000** | **8265.000** | |
| Weight kg | | 81.9 | 102.0 | 156.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.032 | 8640.032 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.042 | 8640.042 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8165.245 | 8165.245 | 8165.245 | 901 |
| Divider panel | | – | – | – | |
| Divider panel for module plates | | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | | – | – | – | |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | | – | – | – | |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 1800 mm, depth 400 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1000 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 1800 | 1800 | 1800 | |
| **Depth** (T) mm | | 400 | 400 | 400 | 400 | 400 | |
| Mounting plate width (F) mm | | 499 | 699 | 899 | 899 | 1099 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1696 | 1696 | 1696 | |
| **Model No.** | 1 pc(s). | **8684.000** | **8884.000** | **8080.000** | **8084.000** | **8284.000** | |
| Weight kg | | 86.9 | 109.0 | 138.0 | 133.0 | 166.0 | |
| **Product-specific scope of supply** | | | | | | | |
| Door(s) | | 1 | 1 | 2 | 1 | 2 | |
| **Accessories** | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.005 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.031 | 8640.031 | 8640.031 | 8640.031 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.024 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.041 | 8640.041 | 8640.041 | 8640.041 | 8640.041 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8184.245 | 8184.245 | 8184.245 | 8184.245 | 8184.245 | 901 |
| Divider panel | 1 pc(s). | 8609.200 | 8609.200 | 8609.200 | 8609.200 | 8609.200 | 905 |
| Divider panel for module plates | | – | – | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | 8618.000 | 8618.010 | – | – | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.710 | 8619.750 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4115.500 | – | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4115.000 | 4124.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.050 | 8617.050 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.010 | 8617.010 | 8617.010 | 8617.010 | 8617.010 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.150 | 8617.150 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.110 | 8617.110 | 8617.110 | 8617.110 | 8617.110 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.700 | 8617.700 | 8617.700 | 8617.700 | 8617.700 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4694.000 | 4694.000 | 4694.000 | 4694.000 | 4694.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4946.000 | 4946.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.820 | 8617.820 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.802 | 8619.802 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.802 | 8618.802 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.812 | 8618.812 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.430 | 8619.430 | 8619.440 | 1059 |

## Basic enclosure, height 1800 mm, depth 500 mm

| **Width** (B) mm | Packs of | 400 | 600 | 800 | 800 | 1200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 1800 | 1800 | 1800 | |
| **Depth** (T) mm | | 500 | 500 | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 299 | 499 | 699 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1696 | 1696 | 1696 | |
| **Model No.** | 1 pc(s). | **8485.000** | **8685.000** | **8880.000** | **8885.000** | **8285.000** | |
| Weight kg | | 66.4 | 90.0 | 119.0 | 113.0 | 173.0 | |
| **Product-specific scope of supply** | | | | | | | |
| Door(s) | | 1 | 1 | 2 | 1 | 2 | |
| **Accessories** | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.032 | 8640.032 | 8640.032 | 8640.032 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.042 | 8640.042 | 8640.042 | 8640.042 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8185.245 | 8185.245 | 8185.245 | 8185.245 | 8185.245 | 901 |
| Divider panel | 1 pc(s). | 8609.201 | 8609.201 | 8609.201 | 8609.201 | 8609.201 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.210 | 8609.210 | 8609.210 | 8609.210 | 8609.210 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | – | 8618.000 | – | 8618.010 | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.700 | 8619.720 | 8619.700 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | – | 4116.500 | – | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4114.000 | 4116.000 | 4114.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.010 | 8617.030 | 8617.040 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.110 | 8617.130 | 8617.140 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | – | 4944.000 | 4945.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | – | 8617.800 | 8617.810 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | 1033 |
| Cable entry plates | | – | 8619.800 | 8619.801 | 8619.801 | 8619.803 | 1044 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | – | 8618.800 | 8618.801 | 8618.801 | 8618.803 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | – | 8618.810 | 8618.811 | 8618.811 | 8618.813 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.400 | 8619.410 | 8619.420 | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 1800 mm, depth 600 mm

| **Width** (B) mm | Packs of | 400 | 600 | 800 | 800 | 1200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 1800 | 1800 | 1800 | |
| **Depth** (T) mm | | 600 | 600 | 600 | 600 | 600 | |
| Mounting plate width (F) mm | | 299 | 499 | 699 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1696 | 1696 | 1696 | |
| **Model No.** | 1 pc(s). | **8486.000** | **8686.000** | **8881.000** | **8886.000** | **8286.000** | |
| Weight kg | | 69.6 | 92.3 | 121.0 | 116.0 | 174.0 | |
| **Product-specific scope of supply** | | | | | | | |
| Door(s) | | 1 | 1 | 2 | 1 | 2 | |
| **Accessories** | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 8640.043 | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8186.245 | 8186.245 | 8186.245 | 8186.245 | 8186.245 | 901 |
| Divider panel | 1 pc(s). | 8609.202 | 8609.202 | 8609.202 | 8609.202 | 8609.202 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.211 | 8609.211 | 8609.211 | 8609.211 | 8609.211 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | – | 8618.000 | – | 8618.010 | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.700 | 8619.720 | 8619.700 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | – | 4116.500 | – | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4114.000 | 4116.000 | 4114.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 4590.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.010 | 8617.030 | 8617.040 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.030 | 8617.030 | 8617.030 | 8617.030 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.110 | 8617.130 | 8617.140 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 8617.130 | 8617.130 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.720 | 8617.720 | 8617.720 | 8617.720 | 8617.720 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | – | 4944.000 | 4945.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | – | 8617.800 | 8617.810 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | 1033 |
| Cable entry plates | | – | 8619.800 | 8619.801 | 8619.801 | 8619.803 | 1044 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | – | 8618.800 | 8618.801 | 8618.801 | 8618.803 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | – | 8618.810 | 8618.811 | 8618.811 | 8618.813 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.400 | 8619.410 | 8619.420 | 8619.420 | 8619.440 | 1059 |

## Basic enclosure, height 2000 mm, depth 400 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 400 | 400 | 400 | 400 | |
| Mounting plate width (F) mm | | 499 | 699 | 899 | 1099 | |
| Mounting plate height (G) mm | | 1896 | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **8604.000** | **8804.000** | **8004.000** | **8204.000** | |
| Weight kg | | 95.4 | 120.0 | 152.0 | 183.0 | |
| **Product-specific scope of supply** | | | | | | |
| Door(s) | | 1 | 1 | 2 | 2 | |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.031 | 8640.031 | 8640.031 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.041 | 8640.041 | 8640.041 | 8640.041 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8104.245 | 8104.245 | 8104.245 | 8104.245 | 901 |
| Divider panel | 1 pc(s). | 8609.203 | 8609.203 | 8609.203 | 8609.203 | 905 |
| Divider panel for module plates | | – | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | 8618.020 | 8618.030 | – | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.710 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4115.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4115.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4591.700 | 4591.700 | 4591.700 | 4591.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.050 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.010 | 8617.010 | 8617.010 | 8617.010 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.150 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.110 | 8617.110 | 8617.110 | 8617.110 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.700 | 8617.700 | 8617.700 | 8617.700 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4694.000 | 4694.000 | 4694.000 | 4694.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4946.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.820 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.802 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.802 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.812 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.430 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 2000 mm, depth 500 mm

| **Width** (B) mm | Packs of | 400 | 600 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 500 | 500 | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 299 | 499 | 699 | 899 | 1099 | |
| Mounting plate height (G) mm | | 1896 | 1896 | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **8405.000** | **8605.000** | **8805.000** | **8005.000** | **8205.000** | |
| Weight kg | | 73.0 | 98.0 | 122.0 | 156.0 | 187.0 | |
| **Product-specific scope of supply** | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 2 | 2 | |
| **Accessories** | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.032 | 8640.032 | 8640.032 | 8640.032 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.042 | 8640.042 | 8640.042 | 8640.042 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8105.245 | 8105.245 | 8105.245 | 8105.245 | 8105.245 | 901 |
| Divider panel | 1 pc(s). | 8609.204 | 8609.204 | 8609.204 | 8609.204 | 8609.204 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.212 | 8609.212 | 8609.212 | 8609.212 | 8609.212 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | – | 8618.020 | 8618.030 | – | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.700 | 8619.720 | 8619.730 | 8619.710 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | – | 4116.500 | 4118.500 | 4115.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4114.000 | 4116.000 | 4118.000 | 4115.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4591.700 | 4591.700 | 4591.700 | 4591.700 | 4591.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.010 | 8617.030 | 8617.040 | 8617.050 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.110 | 8617.130 | 8617.140 | 8617.150 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | – | 4944.000 | 4945.000 | 4946.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | – | 8617.800 | 8617.810 | 8617.820 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | 1033 |
| Cable entry plates | | – | 8619.800 | 8619.801 | 8619.802 | 8619.803 | 1044 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | – | 8618.800 | 8618.801 | 8618.802 | 8618.803 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | – | 8618.810 | 8618.811 | 8618.812 | 8618.813 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.400 | 8619.410 | 8619.420 | 8619.430 | 8619.440 | 1059 |

## Basic enclosure, height 2000 mm, depth 600 mm

| **Width** (B) mm | Packs of | 400 | 600 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 600 | 600 | 600 | 600 | 600 | |
| Mounting plate width (F) mm | | 299 | 499 | 699 | 899 | 1099 | |
| Mounting plate height (G) mm | | 1896 | 1896 | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **8406.000** | **8606.000** | **8806.000** | **8006.000** | **8206.000** | |
| Weight kg | | 75.2 | 101.0 | 126.0 | 160.0 | 191.0 | |
| **Product-specific scope of supply** | | | | | | | |
| Door(s) | | 1 | 1 | 1 | 2 | 2 | |
| **Accessories** | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 8640.043 | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8106.245 | 8106.245 | 8106.245 | 8106.245 | 8106.245 | 901 |
| Divider panel | 1 pc(s). | 8609.205 | 8609.205 | 8609.205 | 8609.205 | 8609.205 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.213 | 8609.213 | 8609.213 | 8609.213 | 8609.213 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | – | 8618.020 | 8618.030 | – | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.700 | 8619.720 | 8619.730 | 8619.710 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | – | 4116.500 | 4118.500 | 4115.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4114.000 | 4116.000 | 4118.000 | 4115.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4591.700 | 4591.700 | 4591.700 | 4591.700 | 4591.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.010 | 8617.030 | 8617.040 | 8617.050 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.030 | 8617.030 | 8617.030 | 8617.030 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.110 | 8617.130 | 8617.140 | 8617.150 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 8617.130 | 8617.130 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.720 | 8617.720 | 8617.720 | 8617.720 | 8617.720 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 4696.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | – | 4944.000 | 4945.000 | 4946.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | – | 8617.800 | 8617.810 | 8617.820 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | 1033 |
| Cable entry plates | | – | 8619.800 | 8619.801 | 8619.802 | 8619.803 | 1044 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | – | 8618.800 | 8618.801 | 8618.802 | 8618.803 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | – | 8618.810 | 8618.811 | 8618.812 | 8618.813 | 1045 |
| | Packs of | – | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.400 | 8619.410 | 8619.420 | 8619.430 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 2000 mm, depth 800 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 800 | 800 | 800 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **8608.000** | **8808.000** | **8208.000** | |
| Weight kg | | 106.0 | 138.0 | 201.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.034 | 8640.034 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.044 | 8640.044 | 8640.044 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8108.245 | 8108.245 | 8108.245 | 901 |
| Divider panel | 1 pc(s). | 8609.206 | 8609.206 | 8609.206 | 905 |
| Divider panel for module plates | | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | 8618.020 | 8618.030 | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4591.700 | 4591.700 | 4591.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.040 | 8617.040 | 8617.040 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.140 | 8617.140 | 8617.140 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.730 | 8617.730 | 8617.730 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4697.000 | 4697.000 | 4697.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

## Basic enclosure, height 2200 mm, depth 600 mm

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 2200 | 2200 | 2200 | |
| **Depth** (T) mm | | 600 | 600 | 600 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 2096 | 2096 | 2096 | |
| **Model No.** | 1 pc(s). | **8626.000** | **8826.000** | **8226.000** | |
| Weight kg | | 106.0 | 136.0 | 204.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8126.245 | 8126.245 | 8126.245 | 901 |
| Divider panel | 1 pc(s). | 8609.207 | 8609.207 | 8609.207 | 905 |
| Divider panel for module plates | | – | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 912 |
| Glazed door | 1 pc(s). | 8618.040 | 8618.050 | – | 917 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4592.700 | 4592.700 | 4592.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.030 | 8617.030 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.720 | 8617.720 | 8617.720 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4696.000 | 4696.000 | 4696.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.801 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

**System accessories** Page 877 **VX25 basic enclosure** Page 116 **VX25 stainless steel** Page 242 **VX25 EMC-shielded** Page 136

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Glazed door: Extruded aluminium section, powder-coated, single-pane safety glass, 3 mm
- Rear door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated, passivated

**Colour:**
- Enclosure frame, door frame, corner pieces, panels: RAL 7035
- Viewing window (printed mask on the inside): RAL 9005

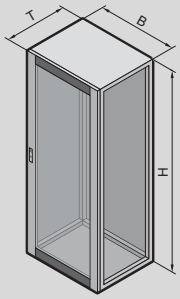
**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure frame
- Door(s) (r/h hinge, may be swapped to opposite side)
- Roof plate
- Glazed door at front
- Rear door
- Gland plates
- Lock: 3 mm double-bit

**Approvals:**
- UL
- cUL
- CSA

Further approvals can be found on the Internet.



## Basic enclosure with glazed door

| **Width** (B) mm | Packs of | 600 | 600 | 800 | 800 | Page |
|---|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 600 | 800 | 600 | 800 | |
| **Model No.** | 1 pc(s). | **8840.120** | **8840.130** | **8840.100** | **8840.110** | |
| Weight kg | | 71.0 | 75.4 | 84.2 | 90.0 | |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.003 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.034 | 8640.033 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.044 | 8640.043 | 8640.044 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8106.245 | 8108.245 | 8106.245 | 8108.245 | 901 |
| Divider panel | 1 pc(s). | 8609.205 | 8609.206 | 8609.205 | 8609.206 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.213 | – | 8609.213 | – | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Comfort handle VX with security lock insert, lock E1 | 1 pc(s). | 8618.240 | 8618.240 | 8618.240 | 8618.240 | 937 |
| Comfort handle VX for ASSA lock system | 1 pc(s). | 8618.270 | 8618.270 | 8618.270 | 8618.270 | 937 |
| Lock inserts | | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8618.330 | 8618.330 | 8618.330 | 8618.330 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.720 | 8619.730 | 8619.730 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4116.500 | 4118.500 | 4118.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4116.000 | 4118.000 | 4118.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 8618.420 | 956 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.030 | 8617.040 | 8617.040 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.040 | 8617.030 | 8617.040 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.130 | 8617.140 | 8617.140 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.130 | 8617.140 | 8617.130 | 8617.140 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.720 | 8617.730 | 8617.720 | 8617.730 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4696.000 | 4697.000 | 4696.000 | 4697.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4944.000 | 4945.000 | 4945.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.800 | 8617.810 | 8617.810 | 996 |
| LED system light | | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | 1033 |
| Cable entry plates | | 8619.800 | 8619.800 | 8619.801 | 8619.801 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.800 | 8618.801 | 8618.801 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.810 | 8618.811 | 8618.811 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.410 | 8619.420 | 8619.420 | 1059 |

# Baying enclosure system VX25

**System accessories** Page 877 **482.6 mm (19") installation accessories** Page 1075 **482.6 mm (19") climate control** Page 466

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Front frame: Extruded aluminium section, powder-coated
- Rear door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated, passivated
- 482.6 mm (19") adaptor sections: Sheet steel, zinc-plated

**Colour:**
- RAL 7035

**Supply includes:**
- Enclosure frame
- Front frame (r/h hinge, held on the left via magnetic snap fasteners)
- Rear door (r/h hinge, may be swapped to opposite side)
- Roof plate
- Gland plates
- Adaptor sections, 482.6 mm (19"), front

## Electronic enclosure

| **Height units** U | Packs of | 33 | 33 | 42 | 42 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 600 | 600 | |
| **Height** mm | | 1600 | 1600 | 2000 | 2000 | |
| **Depth** mm | | 600 | 800 | 600 | 800 | |
| **Model No.** | 1 pc(s). | **8410.000** | **8418.000** | **8430.000** | **8438.000** | |
| Weight kg | | 58.0 | 63.2 | 67.8 | 72.2 | |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.002 | 8640.002 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.034 | 8640.033 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.022 | 8640.022 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.044 | 8640.043 | 8640.044 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8166.245 | 8168.245 | 8106.245 | 8108.245 | 901 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 8618.200 | 8618.200 | 8618.200 | 937 |
| Comfort handle VX for lock inserts and padlock | 1 pc(s). | 8618.230 | 8618.230 | 8618.230 | 8618.230 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Lock inserts | | see page | see page | see page | see page | 941, 942 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.040 | 8617.030 | 8617.040 | 990 |
| LED system light | | see page | see page | see page | see page | 1014 |
| Section for cable entry, centre | 2 pc(s). | 8618.800 | 8618.800 | 8618.800 | 8618.800 | 1045 |
| Section for cable entry, rear | 2 pc(s). | 8618.810 | 8618.810 | 8618.810 | 8618.810 | 1045 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.410 | 8619.410 | 8619.410 | 1059 |
| Adaptor section, 482.6 mm (19") | 2 pc(s). | 8619.300 | 8619.300 | 8619.320 | 8619.320 | 1080 |
| Adaptor piece, 482.6 mm (19") | 4 pc(s). | 8619.330 | 8619.330 | 8619.330 | 8619.330 | 1081 |
| Slide rail with two-sided mounting | 10 pc(s). | 8613.161 | 8613.181 | 8613.161 | 8613.181 | 1089 |
| Slide rail with one-sided mounting | 10 pc(s). | 4531.001 | 4531.001 | 4531.001 | 4531.001 | 1089 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |

**System accessories** Page 877 **Cable entry** Page 1044

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint
- Roof: Sheet steel, 1.5 mm, dip-coat-primed and powder-coated, textured paint
- Door: Sheet steel, 2 mm, dip-coat-primed and powder-coated, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint
- Gland plate: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated

**Colour:**
- RAL 7035

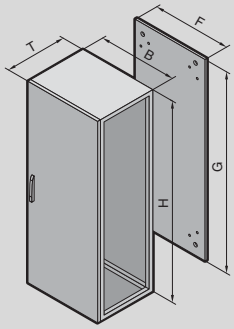
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4

**Supply includes:**
- Enclosure frame
- Door (r/h hinge, may be swapped to opposite side)
- Roof plate
- Base
- Rear panel
- Mounting plate
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm
- Accessory kit for side panels for upgrading to IP 66/NEMA 4

**Note:**
- The standard baying connectors VX for bayed suites may be used while maintaining the protection category IP 66/NEMA 4X

**Approvals:**
- UL
- cUL
- DNV-GL




## IP 66/NEMA 4

| **Width** (B) mm | Packs of | 800 | Page |
|---|---|---|---|
| **Height** (H) mm | | 2000 | |
| **Depth** (T) mm | | 600 | |
| Mounting plate width (F) mm | | 699 | |
| Mounting plate height (G) mm | | 1896 | |
| **Model No.** | 1 pc(s). | **8807.000** | |
| **Accessories** | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 892 |
| Side panels, screw-fastened, sheet steel | 2 pc(s). | 8106.245 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.200 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.250 | 937 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4118.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4118.000 | 955 |
| LED system light | | see page | 1014 |
| Cable duct | | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.420 | 1059 |

# Baying enclosure system VX25

**System accessories** Page 877 **Modular front design** Page 925 **Compartment configuration** Page 410

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

**Colour:**
- RAL 7035

**Basis of test:**
- IEC 61 439-1/-2
- IEC 61 641

**Protection category IP to IEC 60 529:**
- Up to IP 54, depending on the panels

**Supply includes:**
- Enclosure frame
- Rear panel
- Gland plates

## Modular enclosure, height 2000 mm

| **Width** mm | Packs of | 400 | 600 | 800 | 400 | 600 | 800 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 600 | 600 | 600 | 800 | 800 | 800 | |
| **Model No.** | 1 pc(s). | **9680.406** | **9680.606** | **9680.806** | **9680.408** | **9680.608** | **9680.808** | |
| Weight kg | | 43.8 | 51.0 | 61.0 | 46.0 | 53.7 | 64.2 | |
| **Accessories** | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.001 | 8640.002 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 8640.034 | 8640.034 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.021 | 8640.022 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 8640.044 | 8640.044 | 8640.044 | 882 |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8106.245 | 8106.245 | 8106.245 | 8106.245 | 8108.245 | 8108.245 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Partial door | | see page | see page | see page | see page | see page | see page | 926 |
| Front trim panel, top, solid | | see page | see page | see page | see page | see page | see page | 927 |
| Front trim panel, bottom, solid | | see page | see page | see page | see page | see page | see page | 927 |
| Front trim panel, bottom, vented | 1 pc(s). | 9682.354 | 9682.356 | 9682.358 | 9682.354 | 9682.356 | 9682.358 | 927 |
| Roof plate IP 55, solid | 1 pc(s). | 9681.646 | 9681.666 | 9681.686 | 9681.648 | 9681.668 | 9681.688 | 961 |
| Roof plate IP 2X with ventilation hole | 1 pc(s). | 9681.846 | 9681.866 | 9681.886 | 9681.848 | 9681.868 | 9681.888 | 961 |
| Roof plate for cable entry glands | 1 pc(s). | 9681.546 | 9681.566 | 9681.586 | 9681.548 | 9681.568 | 9681.588 | 961 |
| Cable entry gland | | see page | see page | see page | see page | see page | see page | 962 |

## Modular enclosure, height 2200 mm

| **Width** mm | Packs of | 400 | 600 | 800 | 400 | 600 | 800 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | |
| **Depth** mm | | 600 | 600 | 600 | 800 | 800 | 800 | |
| **Model No.** | 1 pc(s). | **9680.426** | **9680.626** | **9680.826** | **9680.428** | **9680.628** | **9680.828** | |
| Weight kg | | 43.2 | 54.0 | 59.4 | 46.1 | 55.8 | 66.0 | |
| **Accessories** | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.001 | 8640.002 | 8640.003 | 8640.001 | 8640.002 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 8640.034 | 8640.034 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.021 | 8640.022 | 8640.023 | 8640.021 | 8640.022 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 8640.044 | 8640.044 | 8640.044 | 882 |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8126.245 | 8126.245 | 8126.245 | 8128.245 | 8128.245 | 8128.245 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Partial door | | see page | see page | see page | see page | see page | see page | 926 |
| Front trim panel, top, solid | | see page | see page | see page | see page | see page | see page | 927 |
| Front trim panel, bottom, solid | | see page | see page | see page | see page | see page | see page | 927 |
| Front trim panel, bottom, vented | 1 pc(s). | 9682.354 | 9682.356 | 9682.358 | 9682.354 | 9682.356 | 9682.358 | 927 |
| Roof plate IP 55, solid | 1 pc(s). | 9681.646 | 9681.666 | 9681.686 | 9681.648 | 9681.668 | 9681.688 | 961 |
| Roof plate IP 2X with ventilation hole | 1 pc(s). | 9681.846 | 9681.866 | 9681.886 | 9681.848 | 9681.868 | 9681.888 | 961 |
| Roof plate for cable entry glands | 1 pc(s). | 9681.546 | 9681.566 | 9681.586 | 9681.548 | 9681.568 | 9681.588 | 961 |
| Cable entry gland | | see page | see page | see page | see page | see page | see page | 962 |

Rittal – The System.

Modular front design

see page 925

# Baying enclosure system VX25

**System accessories** Page 877 **Compartment configuration** Page 410 **Fuse-switch disconnector section** Page 415

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plate: Sheet steel, 1.5 mm, zinc-plated
- Front trim panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Compartment side panel: Sheet steel, 1.5 mm, zinc-plated

**Colour:**
- RAL 7035

**Basis of test:**
- IEC 61 439-1/-2
- IEC 61 641

**Protection category IP to IEC 60 529:**
- Up to IP 3X, depending on the panels

**Supply includes:**
- Enclosure frame
- Door
- Roof plate
- Rear panel
- Gland plates
- Front trim panels
- Lock: 3 mm double-bit
- Compartment side panels
- Locating frame for disconnectors with fuses (brands ABB SlimLine/Jean Müller SASIL)

## Fuse-switch-disconnector enclosure, height 2000 – 2200 mm

| **Width** mm | Packs of | 1000 | 1200 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | 2000 | 2000 | 2200 | 2200 | |
| **Depth** mm | | 600 | 800 | 600 | 800 | |
| **Model No.** | 1 pc(s). | **9680.005** | **9680.207** | **9680.025** | **9680.227** | |
| Weight kg | | 125.3 | 149,6 | 135.2 | 158.9 | |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.005 | 8640.007 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.034 | 8640.033 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.024 | 8640.025 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.044 | 8640.043 | 8640.044 | 882 |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8106.245 | 8108.245 | 8126.245 | 8128.245 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Roof plate IP 2X with ventilation hole | 1 pc(s). | 9681.806 | 9681.828 | 9681.806 | 9681.828 | 961 |

**System accessories** Page 877 **ISV assembly modules** Page 421 **VX basic enclosure** Page 116 **Lock systems** Page 937

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

**Colour:**
- RAL 7035

**Basis of test:**
- IEC 61 439-1/-2

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure frame
- Door(s) (door hinged on the right, may be swapped to the left)
- Gland plates
- Rear panel
- Roof plate
- Lock: 3 mm double-bit

Please observe the product-specific scope of supply.

**Note:**
- For 600 mm wide distribution enclosures, please use VX basic enclosures
- For a base/plinth height of 200 mm, 2 packs each of plinth corner pieces, 100 mm and base/plinth trim panels, 100 mm are required

## Distribution enclosure

| **Width** mm | Packs of | 850 | 1100 | 850 | 1100 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | 2000 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 400 | 400 | 600 | 600 | |
| **Model No.** | 1 pc(s). | **9666.956** | **9666.966** | **9666.916** | **9666.926** | |
| Weight kg | | 111.0 | 146.0 | 117.0 | 156.0 | |
| **Product-specific scope of supply** | | | | | | |
| Number of doors | | 1 | 2 | 1 | 2 | |
| **Also required** | | | | | | |
| ISV installation kit | 1 pc(s). | 9666.912 | 9666.922 | 9666.912 | 9666.922 | 420 |
| Mounting angles ISV | 2 pc(s). | 9666.712 | 9666.712 | 9666.712 | 9666.712 | 429 |
| Depth stay for installation kit ISV | 2 pc(s). | – | 9666.732 | – | 9666.732 | 430 |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.004 | 8640.006 | 8640.004 | 8640.006 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.031 | 8640.033 | 8640.033 | 882 |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8104.245 | 8104.245 | 8106.245 | 8106.245 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Roof plate for cable entry glands | 1 pc(s). | 9681.594 | 9681.514 | 9681.596 | 9681.516 | 961 |
| Cable entry gland | | see page | see page | see page | see page | 962 |

# Baying enclosure system VX25

**System accessories** Page 877 **VX25 basic enclosure** Page 116 **VX25 stainless steel** Page 242

The large enclosures in the VX25 series offer a good level of shielding across a broad frequency range, even in the standard version. For increased EMC requirements, Rittal's VX25 enclosure is also available in a high RF attenuation version.

**Material and surface finish:**
- Enclosure frame: Sheet steel, 1.5 mm, with magnesium zinc coating
- Roof: Sheet steel, 1.5 mm, with magnesium zinc coating, spray-finished on the outside and paint-free on the inside
- Door: Sheet steel, 2 mm, with magnesium zinc coating, spray-finished on the outside and paint-free on the inside
- Rear panel: Sheet steel, 1.5 mm, with magnesium zinc coating, spray-finished on the outside and paint-free on the inside
- Gland plates: Sheet steel, 1.5 mm, zinc-plated
- Mounting plate: Sheet steel, 3 mm, zinc-plated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**NEMA protection category:**
- NEMA 12

**Supply includes:**
- Enclosure frame
- Door(s) (door hinged on the right, may be swapped to the left)
- Rear panel
- Roof plate
- Gland plates
- Mounting plate
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

**Note:**
- For bayed enclosures, the EMC shielding seal is required

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

## EMC enclosure

| **Width** mm | Packs of | 800 | 800 | Page |
|---|---|---|---|---|
| **Height** mm | | 2000 | 2000 | |
| **Depth** mm | | 600 | 800 | |
| **Model No.** | 1 pc(s). | **8807.010** | **8807.020** | |
| Weight kg | | 130.0 | 135.0 | |
| **Accessories** | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.003 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.034 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.044 | 882 |
| EMC side panels | 2 pc(s). | 8106.760 | 8108.760 | 1028 |
| EMC shielding seal | 1 pc(s). | 8800.695 | 8800.695 | 1028 |
| Divider panel | 1 pc(s). | 8609.205 | 8609.206 | 905 |
| EMC divider panel seal | 1 pc(s). | 4348.500 | 4348.500 | 1028 |
| Rail for EMC shielding bracket | 1 pc(s). | 2388.850 | 2388.850 | 1029 |
| EMC shielding bracket | | see page | see page | 1029 |
| EMC shield bus | | see page | see page | 1030 |
| EMC gland plates | 1 pc(s). | 8618.821 | 8618.821 | 1029 |
| EMC earth clamps | | see page | see page | 1030 |
| EMC cable glands | | see page | see page | 1030 |
| Cable duct | | see page | see page | 1058 |
| LED system light | | see page | see page | 1014 |
| Earth strap | | see page | see page | 1033 |
| Earthing braid | | see page | see page | 1033 |
| Comfort handle VX | | see page | see page | 937 |

# LED system light

Innovative LED technology produces even more light,
see page 1012

# Free-standing enclosure system VX SE

## Added efficiency with planning and assembly

## Digitalization

- The QR code on all machinable enclosure panels permits fully automated incorporation into the production workflow, for seamless digital monitoring from the incoming goods right through to the finished product.

## Reliable engineering

- In the automated production process and when working with virtual prototypes, Rittal supports its customers with a host of conversion and planning tools:
  – Configurators
  – Parts list converters
  – EPLAN Pro Panel
  – 2D/3D CAD data
  – ecl@ss Advanced
  – Technical documentation
  – Data for planners

## Large variety of sizes

- Enclosure widths from 600 – 1800 mm
- Widths 1600 and 1800 mm are only available for VX SE. These replace several bayed enclosures.

  Benefits:
  – No baying work
  – One large, continuous mounting plate
  – Savings on accessories:
    – Only one base/plinth
    – Only one handle
  – No need to use a mounting plate infill
  – 300 mm deep enclosures are ideal for use in facility management

## Smart construction

- High stability thanks to a self-supporting, integral construction technique, with roof and sides from a single piece with roll-formed frame
- High protection category up to IP 66
- A wide range of sheet steel and stainless steel versions for almost any application area
- 300 mm deep enclosures are ideal for use in facility management

# Free-standing enclosure system VX SE

## Compatibility with the VX25 for added efficiency in interior installation, even more efficient

## Compatible interior installation

- With the new base assembly and optional adaptor rail, interior installation is compatible with the VX25
- All VX25 punched sections and bars for the inner mounting level may be used without restriction
- The large swing frame supports full or partial installation for 482.6 mm (19˝) components. It is fully depth-adjustable within the 25 mm pitch pattern, and hinged on the left or right. Two swing frames may also be fitted together in 1200 mm wide enclosures.

## Optimum installation options

- The continuous square holes on the vertical section when using adaptor rail VX support the use of metric screw-fastenings M5, M6, M8

## System benefits

- The smart enclosure design from a single piece eliminates the need for additional earth straps from the roof and side panels to the frame
- Automatic potential equalisation from the rear panel to the enclosure as standard
- When using a Rittal climate control device and Rittal fan-and-filter unit in the roof, rear panel and side panels, additional earthing is not required
- The smart enclosure design from a single piece ensures good EMC properties

## Simple cable entry

- The blunt edges minimise the risk of cable damage when routing cables underneath the enclosure
- The earthing points pre-labelled as standard provide quick guidance and help to accelerate the work process
- The double edge fold of the gland plates prevents bending even under heavy loads to ensure compliance with the high protection category

# Free-standing enclosure system VX SE

**System accessories** Page 877 **VX SE stainless steel** Page 248 **Base/plinth** Page 880

**Material and surface finish:**
- Enclosure: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated
- Gland plates: Sheet steel, 1.5 mm, zinc-plated, passivated

**Colour:**
- RAL 7035

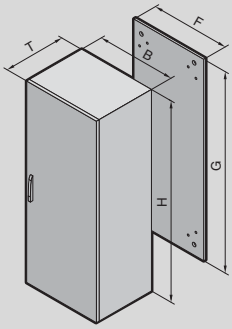
**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, solid top and sides
- Door(s)
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- Mounting plate
- Gland plates
- Rear panel, detachable
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

Please note the product-specific scope of supply.

**Approvals:**
- UL
- cUL



## Basic enclosure, width 600 mm

| **Width** (B) mm | Packs of | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 2000 | |
| **Depth** (T) mm | | 300 | 400 | 300 | |
| Mounting plate width (F) mm | | 499 | 499 | 499 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1896 | |
| **Model No.** | 1 pc(s). | **5820.600** | **5830.600** | **5821.600** | |
| **Product-specific scope of supply** | | | | | |
| Rear panel, one-piece | | ■ | ■ | ■ | |
| Door(s) | | 1 | 1 | 1 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.002 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.030 | 8640.031 | 8640.030 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.022 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.040 | 8640.041 | 8640.040 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Glazed door | 1 pc(s). | 8610.685 | 8610.685 | 8610.605 | 918 |
| Comfort handle for lock insert | 1 pc(s). | 8611.020 | 8611.020 | 8611.020 | 938 |
| Comfort handle for lock insert and padlock | 1 pc(s). | 8611.290 | 8611.290 | 8611.290 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.070 | 8611.070 | 8611.070 | 938 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8800.190 | 8800.190 | 8800.190 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.720 | 8619.720 | 8619.720 | 952 |
| Wiring plan pocket, depth 35 mm | 1 pc(s). | 4116.500 | 4116.500 | 4116.500 | 955 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4116.000 | 4116.000 | 4116.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 956 |
| Door stay for escape routes | 1 pc(s). | 4583.500 | 4583.500 | 4583.500 | 956 |
| Ride-up roller | 10 pc(s). | 4538.000 | 4538.000 | 4538.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750 | 8617.750 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.030 | 8612.040 | 8612.030 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.130 | 8612.140 | 8612.130 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | 4 pc(s). | 8617.100 | 8617.110 | 8617.100 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth[1)] | 4 pc(s). | – | 8617.700 | – | 993 |
| Support strip for the outer level for enclosure depth | 20 pc(s). | – | 4694.000 | – | 994 |
| Support strip for the inner level for enclosure depth | 20 pc(s). | – | 4309.000 | – | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4944.000 | 4944.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width[1)] | 2 pc(s). | 8617.800 | 8617.800 | 8617.800 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable entry plate | 2 pc(s). | 8619.800 | 8619.800 | 8619.800 | 1044 |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | 2 pc(s). | 8618.800 | 8618.800 | 8618.800 | 1045 |
| Section for cable entry, rear | 2 pc(s). | 8618.810 | 8618.810 | 8618.810 | 1045 |
| Cable duct | | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.410 | 8619.410 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986

# Free-standing enclosure system VX SE

## Basic enclosure, width 800 mm

| **Width** (B) mm | Packs of | 800 | 800 | 800 | 800 | 800 | 800 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 300 | 400 | 300 | 400 | 500 | 600 | |
| Mounting plate width (F) mm | | 699 | 699 | 699 | 699 | 699 | 699 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1896 | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **5822.600** | **5831.600** | **5823.600** | **5832.600** | **5833.600** | **5834.600** | |
| **Product-specific scope of supply** | | | | | | | | |
| Rear panel, one-piece | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 1 | |
| **Accessories** | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.030 | 8640.031 | 8640.030 | 8640.031 | 8640.032 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.040 | 8640.041 | 8640.040 | 8640.041 | 8640.042 | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Glazed door | 1 pc(s). | 8610.885 | 8610.885 | 8610.805 | 8610.805 | 8610.805 | 8610.805 | 918 |
| Comfort handle for lock insert | 1 pc(s). | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 938 |
| Comfort handle for lock insert and padlock | 1 pc(s). | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 938 |
| Lock inserts | | see page | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.730 | 8619.730 | 8619.730 | 8619.730 | 8619.730 | 8619.730 | 952 |
| Wiring plan pocket, depth 35 mm | 1 pc(s). | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 955 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4118.000 | 4118.000 | 4118.000 | 4118.000 | 4118.000 | 4118.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 956 |
| Door stay for escape routes | 1 pc(s). | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 956 |
| Ride-up roller | 10 pc(s). | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750 | 8617.750 | 8617.751 | 8617.751 | 8617.751 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.030 | 8612.040 | 8612.030 | 8612.040 | 8612.050 | 8612.060 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.130 | 8612.140 | 8612.130 | 8612.140 | 8612.150 | 8612.160 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | 4 pc(s). | 8617.100 | 8617.110 | 8617.100 | 8617.110 | 8617.120 | 8617.130 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | 4 pc(s). | 8617.140 | 8617.140 | 8617.140 | 8617.140 | 8617.140 | 8617.140 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth[1)] | 4 pc(s). | – | 8617.700 | – | 8617.700 | 8617.710 | 8617.720 | 993 |
| Support strip for the outer level for enclosure depth | 20 pc(s). | – | 4694.000 | – | 4694.000 | 4695.000 | 4696.000 | 994 |
| Support strip for the inner level for enclosure depth | 20 pc(s). | – | 4309.000 | – | 4309.000 | 4596.000 | 8800.130 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4945.000 | 4945.000 | 4945.000 | 4945.000 | 4945.000 | 4945.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width[1)] | 2 pc(s). | 8617.810 | 8617.810 | 8617.810 | 8617.810 | 8617.810 | 8617.810 | 996 |
| LED system light | | see page | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Cable entry plate | 2 pc(s). | 8619.801 | 8619.801 | 8619.801 | 8619.801 | 8619.801 | 8619.801 | 1044 |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | 2 pc(s). | 8618.801 | 8618.801 | 8618.801 | 8618.801 | 8618.801 | 8618.801 | 1045 |
| Section for cable entry, rear | 2 pc(s). | 8618.811 | 8618.811 | 8618.811 | 8618.811 | 8618.811 | 8618.811 | 1045 |
| Cable duct | | see page | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.420 | 8619.420 | 8619.420 | 8619.420 | 8619.420 | 8619.420 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986

# Free-standing enclosure system VX SE

## Basic enclosure, width 1000 – 1200 mm

| **Width** (B) mm | | Packs of | 1000 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 1800 | 1800 | 1800 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | | 400 | 300 | 400 | 300 | 400 | 500 | 600 | |
| Mounting plate width (F) mm | | | 899 | 1099 | 1099 | 1099 | 1099 | 1099 | 1099 | |
| Mounting plate height (G) mm | | | 1696 | 1696 | 1696 | 1896 | 1896 | 1896 | 1896 | |
| **Model No.** | | 1 pc(s). | **5840.600** | **5824.600** | **5841.600** | **5825.600** | **5843.600** | **5844.600** | **5845.600** | |
| **Product-specific scope of supply** | | | | | | | | | | |
| Rear panel, one-piece | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Door(s) | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| **Accessories** | | | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | | 2 pc(s). | 8640.005 | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | | 2 pc(s). | 8640.031 | 8640.030 | 8640.031 | 8640.030 | 8640.031 | 8640.032 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | | 2 pc(s). | 8640.024 | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | | 2 pc(s). | 8640.041 | 8640.040 | 8640.041 | 8640.040 | 8640.041 | 8640.042 | 8640.043 | 882 |
| Levelling feet | | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 4612.000 | 892 |
| Glazed door | | | – | – | – | – | – | – | – | |
| Comfort handle for lock insert | | 1 pc(s). | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 8611.020 | 938 |
| Comfort handle for lock insert and padlock | | 1 pc(s). | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 8611.290 | 938 |
| Comfort handle for profile half-cylinders | | 1 pc(s). | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 8611.070 | 938 |
| Lock inserts | | | see page | see page | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | | 4 pc(s). | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 8800.190 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for door | | 4 pc(s). | 8619.710 | 8619.720 | 8619.720 | 8619.720 | 8619.720 | 8619.720 | 8619.720 | 952 |
| Wiring plan pocket, depth 35 mm | | 1 pc(s). | 4115.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 955 |
| Wiring plan pocket, depth 90 mm | | 1 pc(s). | 4115.000 | 4116.000 | 4116.000 | 4116.000 | 4116.000 | 4116.000 | 4116.000 | 955 |
| Door stay | | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 956 |
| Door stay for escape routes | | 1 pc(s). | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 956 |
| Ride-up roller | | 10 pc(s). | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 956 |
| Adaptor rail VX to fit enclosure height | | 4 pc(s). | 8617.750 | 8617.750 | 8617.750 | 8617.751 | 8617.751 | 8617.751 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | | 4 pc(s). | 8612.040 | 8612.030 | 8612.040 | 8612.030 | 8612.040 | 8612.050 | 8612.060 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | | 4 pc(s). | 8612.140 | 8612.130 | 8612.140 | 8612.130 | 8612.140 | 8612.150 | 8612.160 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | | 4 pc(s). | 8617.110 | 8617.100 | 8617.110 | 8617.100 | 8617.110 | 8617.120 | 8617.130 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | | 4 pc(s). | 8617.150 | 8617.160 | 8617.160 | 8617.160 | 8617.160 | 8617.160 | 8617.160 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth[1)] | | 4 pc(s). | 8617.700 | – | 8617.700 | – | 8617.700 | 8617.710 | 8617.720 | 993 |
| Support strip for the outer level for enclosure depth | | 20 pc(s). | 4694.000 | – | 4694.000 | – | 4694.000 | 4695.000 | 4696.000 | 994 |
| Support strip for the inner level for enclosure depth | | 20 pc(s). | 4309.000 | – | 4309.000 | – | 4309.000 | 4596.000 | 8800.130 | 994 |
| C rail 30/15, for the enclosure width | | 6 pc(s). | 4946.000 | 4947.000 | 4947.000 | 4947.000 | 4947.000 | 4947.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width[1)] | | 2 pc(s). | 8617.820 | 8617.830 | 8617.830 | 8617.830 | 8617.830 | 8617.830 | 8617.830 | 996 |
| LED system light | | | see page | see page | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | | see page | see page | see page | see page | see page | see page | see page | 1033 |
| Cable entry plate | | 4 pc(s). | 8619.802 | 8619.803 | 8619.803 | 8619.803 | 8619.803 | 8619.803 | 8619.803 | 1044 |
| Cable entry grommets | 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| | 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| | 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 4 pc(s). | 8618.802 | 8618.803 | 8618.803 | 8618.803 | 8618.803 | 8618.803 | 8618.803 | 1045 |
| Section for cable entry, rear | | 4 pc(s). | 8618.812 | 8618.813 | 8618.813 | 8618.813 | 8618.813 | 8618.813 | 8618.813 | 1045 |
| Cable duct | | | see page | see page | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | | 2 pc(s). | 8619.430 | 8619.440 | 8619.440 | 8619.440 | 8619.440 | 8619.440 | 8619.440 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986

# Free-standing enclosure system VX SE

## Basic enclosure, width 1600 – 1800 mm

| **Width** (B) mm | Packs of | 1600 | 1800 | Page |
|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 2000 | |
| **Depth** (T) mm | | 400 | 500 | |
| Mounting plate width (F) mm | | 1499 | 1699 | |
| Mounting plate height (G) mm | | 1696 | 1896 | |
| **Model No.** | 1 pc(s). | **5842.600** | **5846.600** | |
| **Product-specific scope of supply** | | | | |
| Rear panel, two-piece | | ■ | ■ | |
| Door(s) | | 2 | 2 | |
| **Accessories** | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.008 | 8640.009 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.032 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.026 | 8640.027 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.041 | 8640.042 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 892 |
| Glazed door | | – | – | |
| Comfort handle for lock insert | 1 pc(s). | 8611.020 | 8611.020 | 938 |
| Comfort handle for lock insert and padlock | 1 pc(s). | 8611.290 | 8611.290 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.070 | 8611.070 | 938 |
| Lock inserts | 1 pc(s). | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8800.190 | 8800.190 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.730 | 8619.740 | 952 |
| Wiring plan pocket, depth 35 mm | 1 pc(s). | 4118.500 | – | 955 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4118.000 | 4123.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 956 |
| Door stay for escape routes | 1 pc(s). | 4583.500 | 4583.500 | 956 |
| Ride-up roller | 10 pc(s). | 4538.000 | 4538.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.040 | 8612.050 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.140 | 8612.150 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | 4 pc(s). | 8617.110 | 8617.120 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | 4 pc(s). | 8617.180 | 8617.190 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth[1)] | 4 pc(s). | 8617.700 | 8617.710 | 993 |
| Support strip for the outer level for enclosure depth | 20 pc(s). | 4694.000 | 4695.000 | 994 |
| Support strip for the inner level for enclosure depth | 20 pc(s). | 4309.000 | 4596.000 | 994 |
| LED system light | | see page | see page | 1014 |
| Earth straps | | see page | see page | 1033 |
| Section for cable entry, centre | 2 pc(s). | 8618.804 | – | 1045 |
| Section for cable entry, rear | 2 pc(s). | 8618.814 | – | 1045 |
| Cable duct | | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.450 | 8619.460 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986

**System accessories** Page 877 **VX SE IP 66/NEMA 4X stainless steel** Page 250 **Base/plinth** Page 880

**Material and surface finish:**
- Enclosure: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated
- Base: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint

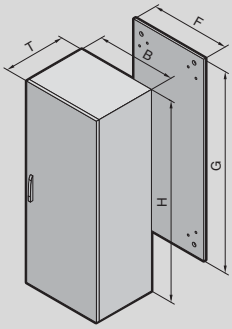
**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4

**Supply includes:**
- Enclosure, solid top and sides
- Door(s)
- Door hinged on the right, may be swapped to the left
- Mounting plate
- Base, solid
- Rear panel, detachable
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

**Approvals:**
- UL
- cUL




## IP 66/NEMA 4

| **Width** (B) mm | Packs of | 600 | 800 | 800 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 2000 | |
| **Depth** (T) mm | | 400 | 400 | 600 | |
| Mounting plate width (F) mm | | 499 | 699 | 699 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1896 | |
| **Model No.** | 1 pc(s). | **5830.680** | **5831.680** | **5834.680** | |
| Door(s) | | 1 | 1 | 1 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.031 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.041 | 8640.041 | 8640.043 | 882 |
| Levelling feet | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Comfort handle for lock insert | 1 pc(s). | 8611.020 | 8611.020 | 8611.020 | 938 |
| Comfort handle for lock insert and padlock | 1 pc(s). | 8611.290 | 8611.290 | 8611.290 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.070 | 8611.070 | 8611.070 | 938 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.720 | 8619.730 | 8619.730 | 952 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4118.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750 | 8617.750 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.040 | 8612.040 | 8612.060 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.140 | 8612.140 | 8612.160 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | 4 pc(s). | 8617.110 | 8617.110 | 8617.130 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | 4 pc(s). | 8617.130 | 8617.140 | 8617.140 | 991 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.420 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986

# Rittal – The System.

**Faster – better – everywhere.**

# Console systems/ PC enclosure systems/ Industrial Workstations

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## TopConsole system TP

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600 mm wide ..... 157
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## One-piece consoles TP

One-piece consoles TP ..... 161

## Universal consoles TP

Universal consoles TP ..... 162

## PC enclosure systems

PC enclosure systems ..... 164

## Industrial Workstations

Combination options ..... 166
IW enclosures and worktops ..... 167

# Console systems/PC enclosure systems/IW – Product comparison

| | TopConsole system | One-piece consoles | |
|---|---|---|---|
| **Version** | Modular console system for operation and monitoring. The separate modules have independent lock systems. | One-piece console for operation and monitoring, with large mounting plate | |
| **Protection category IP to IEC 60 529** | IP 55 | IP 55 | |
| **Protection category NEMA** | NEMA 12 | NEMA 12 | |
| **Service access** | Console from the front, desk unit from above, pedestal from the front (for a depth of 500 mm from the front and rear) | From the front and above | |
| **Lock system** | Lock inserts may be replaced individually | Lock inserts may be replaced individually | |
| **Installation options** | Option for interior installation with bar systems on a 25 mm pitch pattern in all modules plus additional installation with partial mounting plates | Option for interior installation with bar systems on a 25 mm pitch patterns plus additional installation with partial mounting plates | |
| from page | 153 | 161 | |

# Console systems/PC enclosure systems/IW – Product comparison

| | Universal consoles | PC enclosure systems | Industrial Workstations |
|---|---|---|---|
| | Enclosures with a high level of stability. The standard rear door provides free access to the continuous mounting plate. The mounting plate has a C-fold and is depth-adjustable on a 25 mm pitch pattern. The front may optionally be equipped with a short door and desk section or tall door. | Enclosure body folded from a single piece for a high level of stability. Continuous rear door for simple service access from the rear. High level of access protection thanks to an interior lock on the glazed door and lockable keyboard drawer. There are four versions with different operating concepts available to suit individual requirements. | Modular enclosure system for operation and monitoring. Five different enclosure variants may be combined into individual workstations with special worktops and command panels. |
| | IP 55 | IP 55 | IP 54/55 |
| | NEMA 12 | NEMA 12 | NEMA 12 |
| | From the front and rear | From the front and above | From the front and above |
| | Lock inserts may be replaced individually | Lock inserts may be replaced individually | Lock inserts may be replaced individually |
| | Option for interior installation with bar systems on a 25 mm pitch pattern. The desk unit may be designed as an operator console. | Option for interior installation with bar systems on a 25 mm pitch pattern. For the lower area, component shelves are available to accommodate computers, printers etc. plus a paper removal flap allowing the printer to be used without opening the door. | For the lower area, component shelves are available to accommodate computers, printers etc. plus a paper removal flap allowing the printer to be used without opening the door. The worktop may be extended with components from support arm system CP 60 and a command panel to create a complete workstation. |
| | 162 | 164 | 166 |

# Rittal – The System.

**Faster – better – everywhere.**

# TopConsole system TP



## Overview of installation components

1 Three-part assembly comprising:
- Console
- Desk unit
- Pedestal

2 Two-part assembly comprising:
- Desk unit
- Pedestal

3 One-part assembly comprising:
- Cover plate
- Pedestal

# TopConsole system TP

## Fast planning and assembly

- Identical covers for the console and desk unit ensure straightforward engineering
- Individual installation with bar systems
- Simple installation of preassembled modules using partial mounting plates

## Simple handling

- Simple one-handed operation and reliable latching of the lid stay in the topmost position
- Secure lock mechanism with end stop acknowledgement, suitable for all common lock inserts
- Stylishly finished with an aluminium strip (accessory) as a design or handle element on the cover

## Flexible interior installation

- Rapid assembly of the mounting plate, simply insert and clip into place (400 mm construction depth)
- Depth-adjustable mounting plate (500 mm construction depth)
- Plenty of free space for individual configuration on the mounting plate
- Individual installation with bar systems
- Two-piece gland plates for simple cable entry

# TopConsole system TP

**System accessories** Page 877 **Monitors, keyboards** Page 1109/1110 **Climate control** Page 449

**Material:**
- Enclosure: Sheet steel, 1.5 mm
- Door and console cover: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel 2.5 mm (depth 500 m), 3.0 mm (depth 400 mm)

**Surface finish:**
- Enclosure, cover and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
**Console**
- Enclosure
- Cover hinged at bottom, including cover retainer
- Open base for individual cable entry

**Desk section**
- Enclosure
- Hinged cover, 2 stays with automatic latching, automatic unlatching on the left and manual unlatching on the right
- Opening for cable entry into the enclosure base

**Pedestal**
- Enclosure open at top
- Door or double door with locking rod (with depth 400 mm at the front, with depth 500 mm at the front and rear)
- Depth-adjustable mounting plate (with depth 500 mm)
- Gland plates

**Approvals:**
- UL
- cUL

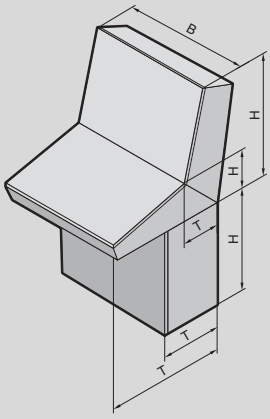
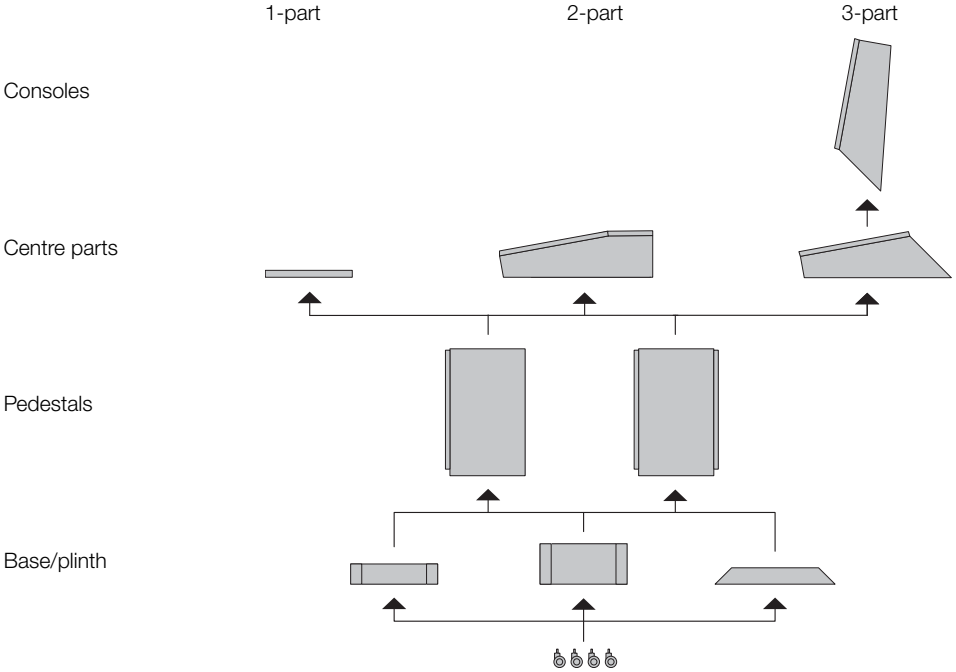


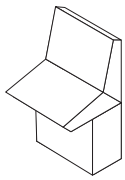
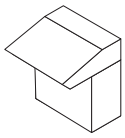
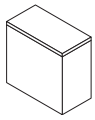

Photo shows a configuration example with equipment not included in the scope of supply

## Combination options



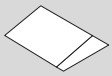
# TopConsole system TP

## 600 mm wide

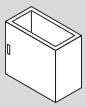




| | Configuration | 3-part | | 2-part | | 1-part | | |
|---|---|---|---|---|---|---|---|---|
| | Depth of pedestal in mm | 400 | 500 | 400 | 500 | 400 | 500 | |

| **Consoles** | | | | | | |
|---|---|---|---|---|---|---|
| | **Height** (H) mm | Packs of | 720 | – | – | Page |
| | **Depth** (T) mm | | 240 | – | – | |
| | **Model No.** | 1 pc(s). | **6720.500** | **–** | **–** | |
| **Accessories** | | | | | | |
| Partial mounting plate, locatable | Width 200 mm | 1 pc(s). | 6730.310 | – | – | 982 |
| | Width 500 mm | 1 pc(s). | 6730.330 | – | – | 982 |
| Rail for interior installation | For width | 4 pc(s). | 5001.050 | – | – | 995 |

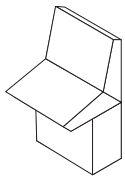
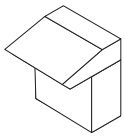
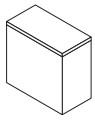
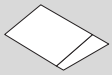
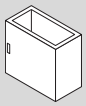
| **Centre parts** | | | | | | |
|---|---|---|---|---|---|---|
|  | **Height** (H) mm | Packs of | 235 | 235 | – | Page |
| | **Depth** (T) mm | | 730 | 755 | – | |
| | **Model No.** | 1 pc(s). | **6714.500** | **6710.500** | **–** | |
| **Accessories** | | | | | | |
| Rail for interior installation | For width | 4 pc(s). | 5001.050 | 5001.050 | – | 995 |

| **Cover plate** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Height** (H) mm | Packs of | – | – | 27 | | Page |
| | **Depth** (T) mm | | – | – | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **–** | **–** | **5001.130** | **6730.100** | 163 |

| **Pedestals** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
|  | **Height** (H) mm | Packs of | 675 | 675 | 675 | 675 | 675 | 675 | Page |
| | **Depth** (T) mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **6700.600** | **6704.600** | **6700.600** | **6704.600** | **6700.600** | **6704.600** | |
| **Accessories** | | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear | Height 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.002 | 8640.002 | 8640.002 | 8640.002 | 881 |
| | Height 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.022 | 8640.022 | 8640.022 | 8640.022 | 881 |
| Base/plinth trim panels, sides | Height 100 mm | 2 pc(s). | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 882 |
| | Height 200 mm | 2 pc(s). | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 882 |
| Cross member | | 2 pc(s). | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 891 |
| Rail for interior installation | For height | 4 pc(s). | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 995 |
| Punched section with mounting flange, 17 x 73 mm | In the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 992 |
| Support strip | In the depth | 20 pc(s). | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 994 |
| Punched section with mounting flange, 17 x 73 mm | For door | 4 pc(s). | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 992 |
| Support strip | For door | 20 pc(s). | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 952 |
| Cable clamp rail | | 1 pc(s). | 5001.080 | 5001.080 | 5001.080 | 5001.080 | 5001.080 | 5001.080 | 1059 |
| Sheet steel wiring plan pockets | | 1 pc(s). | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 955 |
| TP aluminium strip | | 1 pc(s). | 6731.120 | 6731.120 | 6731.120 | 6731.120 | – | – | 163 |
| Lock systems | | | from page | from page | from page | from page | from page | from page | 935 |
| LED system light | | | see page | see page | see page | see page | see page | see page | 1014 |

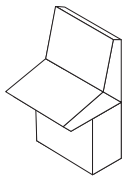
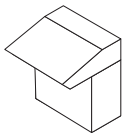
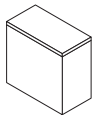
# TopConsole system TP

## 800 mm wide

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | |  | |  | |  | | |
| | Configuration | | 3-part | | 2-part | | 1-part | | |
| | Depth of pedestal in mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| **Consoles** | | | | | | | | | |
| | **Height** (H) mm | Packs of | 720 | | – | | – | | Page |
| | **Depth** (T) mm | | 240 | | – | | – | | |
| | **Model No.** | 1 pc(s). | **6721.500** | | **–** | | **–** | | |
| **Accessories** | | | | | | | | | |
| Partial mounting plate, locatable | Width 200 mm | 1 pc(s). | 6730.310 | | – | | – | | 982 |
| | Width 500 mm | 1 pc(s). | 6730.330 | | – | | – | | 982 |
| | Width 700 mm | 1 pc(s). | 6730.340 | | – | | – | | 982 |
| Rail for interior installation | For width | 4 pc(s). | 5001.051 | | – | | – | | 995 |
| **Centre parts** | | | | | | | | | |
|  | **Height** (H) mm | Packs of | 235 | | 235 | | – | | Page |
| | **Depth** (T) mm | | 730 | | 755 | | – | | |
| | **Model No.** | 1 pc(s). | **6715.500** | | **6711.500** | | **–** | | |
| **Accessories** | | | | | | | | | |
| Rail for interior installation | For width | 4 pc(s). | 5001.051 | | 5001.051 | | – | | 995 |
| **Cover plate** | | | | | | | | | |
| | **Height** (H) mm | Packs of | – | | – | | 27 | | Page |
| | **Depth** (T) mm | | – | | – | | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **–** | | **–** | | **5001.140** | **6730.110** | 163 |
| **Pedestals** | | | | | | | | | |
|  | **Height** (H) mm | Packs of | 675 | 675 | 675 | 675 | 675 | 675 | Page |
| | **Depth** (T) mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **6701.600** | **6705.600** | **6701.600** | **6705.600** | **6701.600** | **6705.600** | |
| **Accessories** | | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear | Height 100 mm | 2 pc(s). | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 8640.003 | 881 |
| | Height 200 mm | 2 pc(s). | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides | Height 100 mm | 2 pc(s). | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 882 |
| | Height 200 mm | 2 pc(s). | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 882 |
| Cross member | | 2 pc(s). | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 891 |
| Rail for interior installation | For height | 4 pc(s). | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 995 |
| Punched section with mounting flange, 17 x 73 mm | In the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 992 |
| Support strip | In the depth | 20 pc(s). | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 994 |
| Support strip | For door | 20 pc(s). | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 952 |
| Cable clamp rail | | 1 pc(s). | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 1059 |
| Sheet steel wiring plan pockets | | 1 pc(s). | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 955 |
| TP aluminium strip | | 1 pc(s). | 6731.120 | 6731.120 | 6731.120 | 6731.120 | – | – | 163 |
| Lock systems | | | from page | from page | from page | from page | from page | from page | 935 |
| LED system light | | | see page | see page | see page | see page | see page | see page | 1014 |

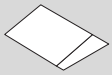
# TopConsole system TP

## 1200 mm wide

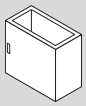




| | Configuration | 3-part | | 2-part | | 1-part | | |
|---|---|---|---|---|---|---|---|---|
| | Depth of pedestal in mm | 400 | 500 | 400 | 500 | 400 | 500 | |

| **Consoles** | | | | | | |
|---|---|---|---|---|---|---|
| | **Height** (H) mm | Packs of | 720 | – | – | Page |
| | **Depth** (T) mm | | 240 | – | – | |
| | **Model No.** | 1 pc(s). | **6722.500** | **–** | **–** | |
| **Accessories** | | | | | | |
| Partial mounting plate, locatable | Width 200 mm | 1 pc(s). | 6730.310 | – | – | 982 |
| | Width 500 mm | 1 pc(s). | 6730.330 | – | – | 982 |
| | Width 700 mm | 1 pc(s). | 6730.340 | – | – | 982 |
| Rail for interior installation | For width | 4 pc(s). | 5001.053 | – | – | 995 |

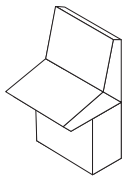
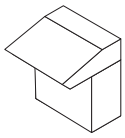
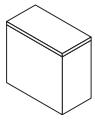
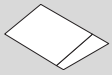
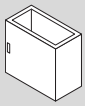
| **Centre parts** | | | | | | |
|---|---|---|---|---|---|---|
|  | **Height** (H) mm | Packs of | 235 | 235 | – | Page |
| | **Depth** (T) mm | | 730 | 755 | – | |
| | **Model No.** | 1 pc(s). | **6716.500** | **6712.500** | **–** | |
| | **Accessories** | | | | | |
| Rail for interior installation | For width | 4 pc(s). | 5001.053 | 5001.053 | – | 995 |

| **Cover plate** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Height** (H) mm | Packs of | – | – | 27 | | Page |
| | **Depth** (T) mm | | – | – | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **–** | **–** | **5001.160** | **6730.120** | 163 |

| **Pedestals** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
|  | **Height** (H) mm | Packs of | 675 | 675 | 675 | 675 | 675 | 675 | Page |
| | **Depth** (T) mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **6702.600** | **6706.600** | **6702.600** | **6706.600** | **6702.600** | **6706.600** | |
| **Accessories** | | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear | Height 100 mm | 2 pc(s). | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 8640.007 | 881 |
| | Height 200 mm | 2 pc(s). | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 8640.025 | 881 |
| Base/plinth trim panels, sides | Height 100 mm | 2 pc(s). | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 882 |
| | Height 200 mm | 2 pc(s). | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 882 |
| Cross member | | 2 pc(s). | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 891 |
| Rail for interior installation | For height | 4 pc(s). | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 995 |
| Punched section with mounting flange, 17 x 73 mm | In the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 992 |
| Support strip | In the depth | 20 pc(s). | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 994 |
| Punched section with mounting flange, 17 x 73 mm | For door | 4 pc(s). | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 8612.050 | 992 |
| Support strip | For door | 20 pc(s). | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 4596.000 | 952 |
| Cable clamp rail | | 1 pc(s). | 5001.083 | 5001.083 | 5001.083 | 5001.083 | 5001.083 | 5001.083 | 1059 |
| Sheet steel wiring plan pockets | | 1 pc(s). | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 4116.500 | 955 |
| TP aluminium strip | | 1 pc(s). | 6731.120 | 6731.120 | 6731.120 | 6731.120 | – | – | 163 |
| Lock systems | | | from page | from page | from page | from page | from page | from page | 935 |
| LED system light | | | see page | see page | see page | see page | see page | see page | 1014 |

# TopConsole system TP

## 1600 mm wide

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | |  | |  | |  | | |
| | Configuration | | 3-part | | 2-part | | 1-part | | |
| | Depth of pedestal in mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| **Consoles** | | | | | | | | | |
| | **Height** (H) mm | Packs of | 720 | | – | | – | | Page |
| | **Depth** (T) mm | | 240 | | – | | – | | |
| | **Model No.** | 1 pc(s). | **6723.500** | | **–** | | **–** | | |
| **Accessories** | | | | | | | | | |
| Partial mounting plate, locatable | Width 200 mm | 1 pc(s). | 6730.310 | | – | | – | | 982 |
| | Width 500 mm | 1 pc(s). | 6730.330 | | – | | – | | 982 |
| | Width 700 mm | 1 pc(s). | 6730.340 | | – | | – | | 982 |
| Rail for interior installation | For width | 4 pc(s). | 5001.054 | | – | | – | | 995 |
| **Centre parts** | | | | | | | | | |
|  | **Height** (H) mm | Packs of | 235 | | 235 | | – | | Page |
| | **Depth** (T) mm | | 730 | | 755 | | – | | |
| | **Model No.** | 1 pc(s). | **6717.500** | | **6713.500** | | **–** | | |
| **Accessories** | | | | | | | | | |
| Rail for interior installation | For width | 4 pc(s). | 5001.054 | | 5001.054 | | – | | 995 |
| **Trim panel** | | | | | | | | | |
| | **Height** (H) mm | Packs of | – | | – | | 27 | | Page |
| | **Depth** (T) mm | | – | | – | | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **–** | | **–** | | **6730.030** | **6730.130** | 163 |
| **Pedestals** | | | | | | | | | |
|  | **Height** (H) mm | Packs of | 675 | 675 | 675 | 675 | 675 | 675 | Page |
| | **Depth** (T) mm | | 400 | 500 | 400 | 500 | 400 | 500 | |
| | **Model No.** | 1 pc(s). | **6703.600** | **6707.600** | **6703.600** | **6707.600** | **6703.600** | **6707.600** | |
| **Accessories** | | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear | Height 100 mm | 2 pc(s). | 8640.008 | 8640.008 | 8640.008 | 8640.008 | 8640.008 | 8640.008 | 881 |
| | Height 200 mm | 2 pc(s). | 8640.026 | 8640.026 | 8640.026 | 8640.026 | 8640.026 | 8640.026 | 881 |
| Base/plinth trim panels, sides | Height 100 mm | 2 pc(s). | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 8640.031 | 8640.032 | 882 |
| | Height 200 mm | 2 pc(s). | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 8640.041 | 8640.042 | 882 |
| Cross member | | 2 pc(s). | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 891 |
| Rail for interior installation | For height | 4 pc(s). | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 5001.050 | 995 |
| Punched section with mounting flange, 17 x 73 mm | In the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 8612.140 | 8612.150 | 992 |
| Support strip | In the depth | 20 pc(s). | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 4694.000 | 4695.000 | 994 |
| Support strip | For door | 20 pc(s). | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 4598.000 | 952 |
| Cable clamp rail | Width 800 mm | 1 pc(s). | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 5001.081 | 1059 |
| Sheet steel wiring plan pockets | | 1 pc(s). | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 4118.500 | 955 |
| TP aluminium strip | | 1 pc(s). | 6731.120 | 6731.120 | 6731.120 | 6731.120 | – | – | 163 |
| Lock systems | | | from page | from page | from page | from page | from page | from page | 935 |
| LED system light | | | see page | see page | see page | see page | see page | see page | 1014 |

# One-piece consoles TP

**System accessories** P. 877 **Monitors, keyboards** P. 1109/1110 **Climate control** P. 449 **One-piece consoles, stainless steel** P. 251

**Material:**
- Enclosure: Sheet steel, 1.5 mm
- Door and console cover: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel, 3.0 mm

**Surface finish:**
- Enclosure, cover and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

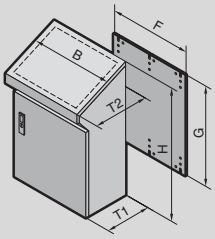
**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, solid back and sides
- Door or double door at front, with locking rod
- Mounting plate
- Cover hinged at rear, 2 stays with automatic locking. Automatic unlocking on the left, manual unlocking on the right
- Gland plates

**Approvals:**
- UL
- cUL




| **Width** (B) mm | Packs of | 600 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|
| **Height** (H) mm | | 975 | 975 | 975 | 975 | |
| **Depth, bottom** (T1) mm | | 400 | 400 | 400 | 400 | |
| **Depth, top** (T2) mm | | 520 | 520 | 520 | 520 | |
| Mounting plate width (F) mm | | 530 | 730 | 930 | 1130 | |
| Mounting plate height (G) mm | | 900 | 900 | 900 | 900 | |
| **Model No.** | 1 pc(s). | **6746.600** | **6748.600** | **6740.600** | **6742.600** | |
| Door(s) | | 1 | 1 | 2 | 2 | |
| **Accessories** | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.003 | 8640.005 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.031 | 8640.031 | 8640.031 | 8640.031 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.023 | 8640.024 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.041 | 8640.041 | 8640.041 | 8640.041 | 882 |
| Cross member | 2 pc(s). | 8601.450 | 8601.450 | 8601.450 | 8601.450 | 891 |
| TP aluminium strip | 1 pc(s). | 6731.120 | 6731.120 | 6731.120 | 6731.120 | 163 |
| Rail for interior installation | | see page | see page | see page | see page | 995 |
| Punched section with mounting flange, 17 x 73 mm | | see page | see page | see page | see page | 992 |
| Cable clamp rails | 1 pc(s). | 5001.080 | 5001.081 | 5001.082 | 5001.083 | 1059 |
| Sheet steel wiring plan pockets | 1 pc(s). | 4116.500 | 4118.500 | 4115.500 | 4116.500 | 955 |
| LED system light | | see page | see page | see page | see page | 1014 |

# Universal consoles TP

**System accessories** Page 877 **Monitors, keyboards** Page 1109/1110 **Climate control** Page 449

**Material:**
- Enclosure, gland plate: Sheet steel, 1.5 mm
- Door: Sheet steel, 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

**Surface finish:**
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate and gland plates: Zinc-plated

**Colour:**
- RAL 7035

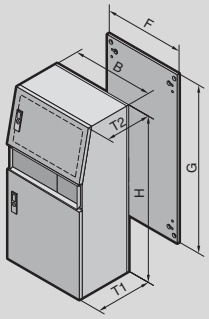
**Protection category IP to IEC 60 529:**
- IP 55

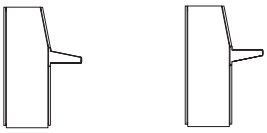
**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure with door(s)
- Mounting plate
- Gland plates

**Note:**
- For universal console with short front door: The desk section should be fitted in order to maintain the protection category

**Approvals:**
- UL
- CSA
- TÜV
- Russian Maritime Register of Shipping




| | |  | | |
|---|---|---|---|---|
| Version | Packs of | With short front door | With tall front door | Page |
| **Width** (B) mm | | 600 | 600 | |
| **Height** (H) mm | | 1300 | 1300 | |
| **Depth, bottom** (T1) mm | | 500 | 500 | |
| **Depth, top** (T2) mm | | 417.5 | 417.5 | |
| Mounting plate width (F) mm | | 499 | 499 | |
| Mounting plate height (G) mm | | 1196 | 1196 | |
| **Model No.** | 1 pc(s). | **2694.500** | **2695.500** | |
| Weight kg | | 77.0 | 80.0 | |
| **Also required** | | | | |
| Desk section | 1 pc(s). | 2696.500 | – | 163 |
| **Accessories** | | | | |
| Base/plinth, complete | 1 pc(s). | 2807.200 | 2807.200 | 890 |
| Cross member | 2 pc(s). | 8601.450 | 8601.450 | 891 |
| Cable clamp rail | 2 pc(s). | 5001.080 | 5001.080 | 1059 |
| Lock systems | | from page | from page | 935 |

## TP aluminium strip

For retrospective external mounting on TP desk units, consoles and one-piece consoles.

**Applications:**
- TP three-part/two-part
- One-piece consoles TP
- May be mounted on all enclosures/covers with 20 mm fold height (max. metal thickness 2 mm)

**Installation options:**
- Easily cut to length for other sizes
- 3 x width 600 mm
- 2 x width 800 mm
- 1 x width 1000 mm + 1 x width 600 mm
- 1 x width 1200 mm
- 1 x width 1600 mm

**Material:**
- Extruded aluminium section
- Cover caps: Plastic

**Surface finish:**
- Aluminium extruded section: Natural anodised

**Colour:**
- Cover caps: RAL 7035

| Length mm | **Model No.** |
|---|---|
| 1750 | **6731.120** |

**Supply includes:**
- 1 aluminium section
- 6 plastic cover caps
- Drilling template
- Assembly parts

## Cover plate

**for TP**

As cover for a TP pedestal.

**Material:**
- Sheet steel

**Surface finish:**
- Textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Assembly parts

| For enclosure | | **Model No.** |
|---|---|---|
| Width mm | Depth mm | |
| 600 | 400 | **5001.130** |
| 800 | 400 | **5001.140** |
| 1200 | 400 | **5001.160** |
| 1600 | 400 | **6730.030** |
| 600 | 500 | **6730.100** |
| 800 | 500 | **6730.110** |
| 1200 | 500 | **6730.120** |
| 1600 | 500 | **6730.130** |

## Desk section

**for TP universal console**

For installing display and control components and a keyboard. Closed at the side and front. Cover plates for top and bottom.

**Material:**
- Sheet steel

**Surface finish:**
- Dipcoat-primed, powder-coated on the outside, textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Assembly parts

| Height mm | **Model No.** |
|---|---|
| 200 | **2696.500** |

# PC enclosure systems

**Lock systems** Page 934 **Climate control** Page 449 **PC enclosure system, stainless steel** Page 252 **System accessories** Page 877

Secure accommodation of all PC components, from monitors, to PCs, to keyboards. For ultimate ease of operation in a modern design. Perfect protection from humidity and dirt, temperature fluctuations and unauthorised access.

**Material:**
- Enclosure, door, rear door, mounting compartment, supports: Sheet steel
- Handles, decorative trim panels: Plastic
- Door trim panel: Aluminium
- Viewing window: Single-pane safety glass

**Surface finish:**
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting compartment, support: Powder-coated

**Colour:**
- Enclosure, door, decorative trim panels, supports: RAL 7035
- Handle: RAL 7015
- Monitor panel, door centre part: RAL 7015

**Protection category IP to IEC 60 529:**
- IP 55

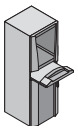
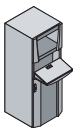
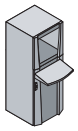
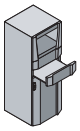
**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, door, rear door

Please note the product-specific scope of supply.

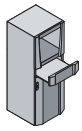
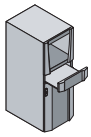
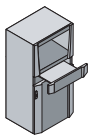
**Approvals:**
- UL
- cUL

## Width 600 mm

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| **Width** mm | Packs of | 600 | 600 | 600 | 600 | Page |
| **Height** mm | | 1600 | 1600 | 1600 | 1600 | |
| **Depth** mm | | 636 | 636 | 636 | 636 | |
| **Product-specific scope of supply** | | | | | | |
| Glazed door, top | | ■ | ■ | ■ | ■ | |
| Keyboard drawer | | ■ | – | – | ■ | |
| Component shelf | | ■ | ■ | ■ | ■ | |
| Fold-out keyboard tray | | – | ■ | – | – | |
| Desk section | | – | – | ■ | – | |
| Mounting compartment, small | | – | – | – | ■ | |
| **Model No.** | 1 pc(s). | **5366.050** | **5366.150** | **5366.250** | **5366.350** | |
| Max. keyboard dimensions (W x H x D) mm | | 480 x 70 x 260 | 497 x 50 x 250<br>497 x 60 x 200 | 540 x 40 x 175 | 480 x 70 x 260 | |
| Weight kg | | 101.4 | 98.0 | 95.5 | 95.5 | |
| **Accessories** | | | | | | |
| Base/plinth, stationary | 1 pc(s). | 8800.920 | 8800.920 | 8800.920 | 8800.920 | 890 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.002 | 8640.002 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.022 | 8640.022 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 8640.043 | 881 |
| Partial mounting plates[1)] | 1 pc(s). | 8617.550 | 8617.550 | 8617.550 | 8617.550 | 975 |
| Component shelf, pull-out | 1 pc(s). | 6902.960 | 6902.960 | 6902.960 | 6902.960 | 1007 |
| Drawer tray | 1 pc(s). | 6902.700 | 6902.700 | 6902.700 | 6902.700 | 1007 |
| Paper removal flap | 1 pc(s). | 6903.200 | 6903.200 | 6903.200 | 6903.200 | 1116 |

[1)] The adaptor rail for VX compatibility is required for the installation, see page 995

## Width 600 – 800 mm

| | |  |  |  | |
|---|---|---|---|---|---|
| **Width** mm | Packs of | 600 | 600 | 800 | Page |
| **Height** mm | | 1600 | 1600 | 1600 | |
| **Depth** mm | | 636 | 836 | 636 | |
| **Product-specific scope of supply** | | | | | |
| Keyboard drawer | | ■ | ■ | ■ | |
| Mounting compartment, large | | ■ | – | – | |
| Glazed door, top | | – | ■ | ■ | |
| Component shelf | | – | ■ | ■ | |
| **Model No.** | 1 pc(s). | **5366.450** | **5368.050** | **5386.050** | |
| Max. keyboard dimensions (W x H x D) mm | | 480 x 70 x 260 | 480 x 70 x 260 | 480 x 70 x 260 | |
| Weight kg | | 97.5 | 111.0 | 117.6 | |
| **Accessories** | | | | | |
| Base/plinth, stationary | 1 pc(s). | 8800.920 | – | – | 890 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.002 | 8640.002 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.034 | 8640.033 | 881 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.022 | 8640.022 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.044 | 8640.043 | 881 |
| Partial mounting plates[1)] | 1 pc(s). | 8617.550 | 8617.550 | 8617.580 | 975 |
| Component shelf, pull-out | 1 pc(s). | 6902.960 | 6902.980 | – | 1007 |
| Drawer tray | 1 pc(s). | 6902.700 | 6902.700 | – | 1007 |
| Paper removal flap | 1 pc(s). | 6903.200 | 6903.200 | 6903.200 | 1116 |

[1)] The adaptor rail for VX compatibility is required for the installation, see page 995

# Industrial Workstations

**System accessories** Page 877 **Comfort Panel** Page 172 **Optipanel** Page 174 **TFT monitor** Page 1109

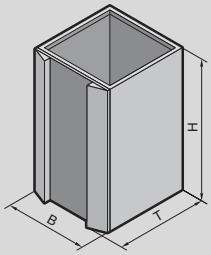
**Material:**
- Enclosure, roof, drawer tray, designer door, rear wall and rear door: Sheet steel
- Worktop: Chipboard, plastic-laminated on both sides (edging)
- Handle: Aluminium, powder-coated

**Surface finish:**
- Enclosure: Dipcoat-primed, powder-coated on the outside, textured paint

**Farbe:**
- Enclosure, worktop: RAL 7035
- Worktop edge strip: RAL 7015
- Worktop handle: RAL 9006

**Protection category:**
- See table

**Supply includes:**
Available on the Internet



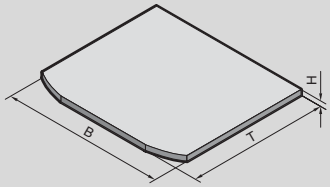
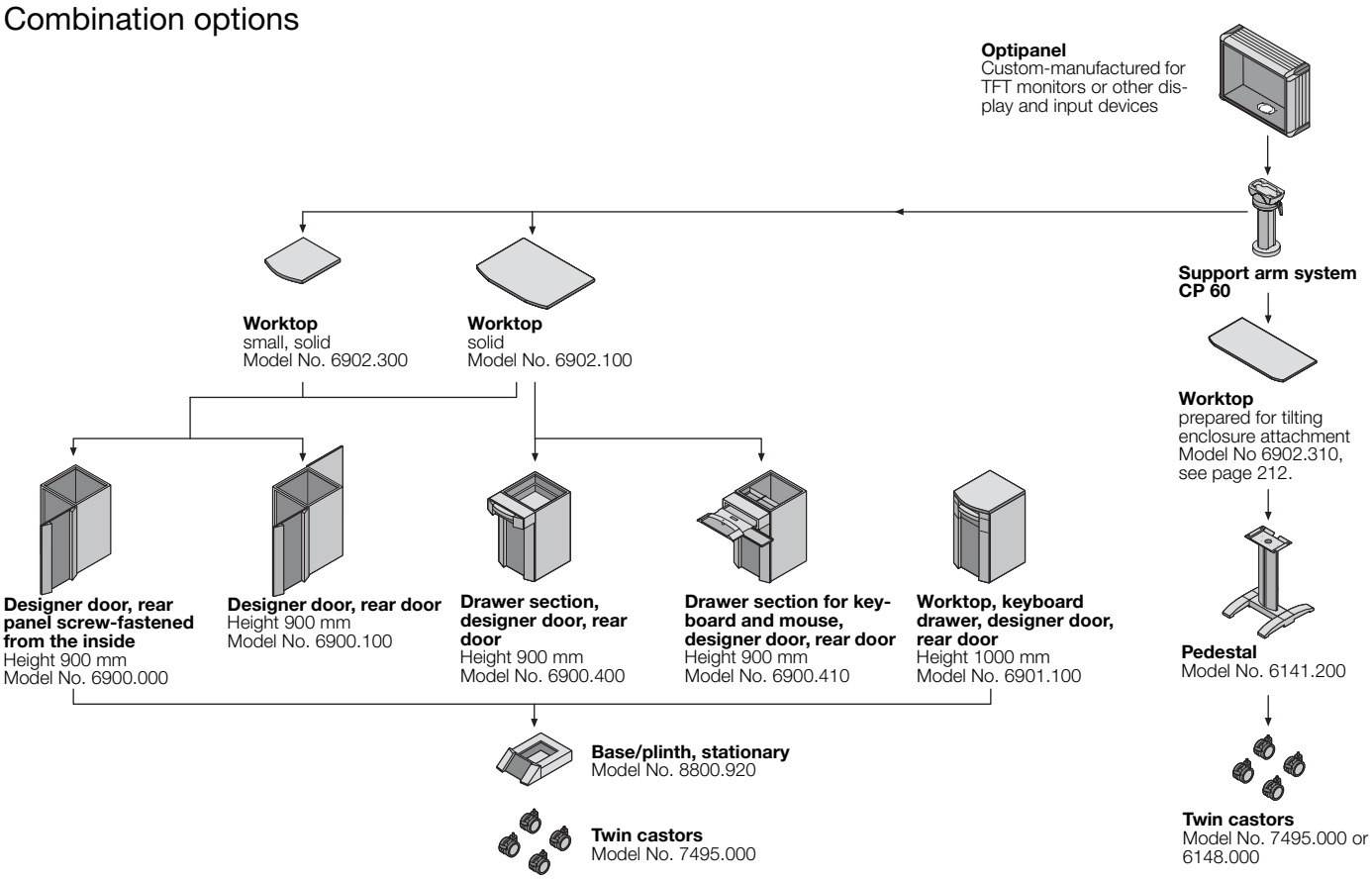
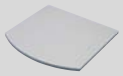




Photo shows a configuration example with equipment not included in the scope of supply

## Combination options



## IW enclosures and worktops

| **Enclosure** | | | | | | | | | | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| Version | | | | | Designer door, rear panel screw-fastened from the inside | Designer door, rear door | Drawer section, designer door, rear door | Drawer section for keyboard and mouse, designer door, rear door | Worktop, key-board drawer, designer door, rear door | |
| **Width** (B) mm | | | | | 600 | 600 | 600 | 600 | 600 | |
| **Height** (H) mm | | | | | 900 | 900 | 900 | 900 | 1000 | |
| **Depth** (T) mm | | | | | 600 | 600 | 600 (890) | 600 (890) | 645 | |
| Weight (kg) | | | | | 54.9 | 59.9 | 73 | 73 | 91 | |
| **Model No.** | | | | | **6900.000** | **6900.100** | **6900.400** | **6900.410** | **6901.100** | |
| **Protection category IP to IEC 60 529** | | | | | IP 55 | | IP 54 | | | |
| **Protection category NEMA** | | | | | NEMA 12 | | NEMA 12 | | | |
| | **Width** (B) mm | **Height** (H) mm | **Depth** (T) mm | Weight kg | **Model No.** | | | | | |
| **Worktops** | 610 | 38 | 645 | 11.6 | **6902.300** | **6902.300** | – | – | ■ | |
|  | 1000 | 38 | 895 | 24 | **6902.100** | **6902.100** | **6902.100** | **6902.100** | – | |

| **Accessories** | Packs of | | | | | | |
|---|---|---|---|---|---|---|---|
| Base/plinth, stationary | 1 pc(s). | 8800.920 | 8800.920 | 8800.920 | 8800.920 | 8800.920 | 890 |
| Cross member, adjustable | 2 pc(s). | 8601.680 | 8601.680 | 8601.680 | 8601.680 | – | 891 |
| Twin castors | 4 pc(s). | 7495.000 | 7495.000 | 7495.000 | 7495.000 | 7495.000 | 893 |
| Handle adaptor for comfort handle | 1 pc(s). | 8611.300 | 8611.300 | – | – | – | 918 |
| Cable gland | 1 pc(s). | 6902.770 | 6902.770 | 6902.770 | 6902.770 | 6902.770 | 1046 |
| Partial mounting plate VX for enclosure width 600 mm[1)] | 1 pc(s). | see page | see page | see page | see page | see page | 975 |
| Component shelf, static installation | 1 pc(s). | 8800.900 | 8800.900 | 8800.900 | 8800.900 | 8800.900 | 1007 |
| Component shelf, pull-out | 1 pc(s). | 6902.960 | 6902.960 | 6902.960 | 6902.960 | 6902.960 | 1007 |
| Drawer tray | 1 pc(s). | 6902.700 | 6902.700 | 6902.700 | 6902.700 | 6902.700 | 1007 |
| Paper removal flap | 1 pc(s). | 6903.200 | 6903.200 | 6903.200 | 6903.200 | 6903.200 | 1116 |
| Support arm systems | | see page | see page | see page | see page | see page | 183 |
| Operating housings | | see page | see page | see page | see page | see page | 169 |

[1)] The adaptor rail for VX compatibility is required for the installation, see page 995

# Rittal – The System.

**Faster – better – everywhere.**

# Operating housings/ support arm systems/ stand systems



## Comfort Panel

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## Optipanel

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## Stand systems

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Pedestal, complete ....212
Pedestal, open/pillar, small ....213
Accessories ....214

# Operating housings – Product comparison

| | | Comfort Panel | Optipanel |
|---|---|---|---|
| **Design** | | Enclosure made from extruded aluminium section with cooling fins for optimum passive cooling | Enclosure made from extruded aluminium section |
| **Protection category IP to IEC 60 529** | | IP 65 | IP 65 |
| **Protection category NEMA** | | NEMA 12 | NEMA 12 |
| **No. of sizes** | | 7 standard sizes available off the shelf | 7 standard sizes available off the shelf |
| **Support arm connection** | Cross-section | ▭ 120 x 65 mm up to depth 74 mm, Ø 130 mm from depth 152 mm | ▭ 120 x 65 mm depth 100 mm, Ø 130 mm depth 150 mm |
| | Quantity/ position | 1/top<br>Bottom by rotating the enclosure | 1/top<br>Bottom by rotating the enclosure |
| **Servicing access** | | From the rear, depending on the enclosure, hinged or screw-fastened; with the screw-fastened rear panel, the front flips open | From the rear, hinged rear panel |
| **Lock system** | | Lock inserts may be replaced individually | Lock inserts may be replaced individually |
| **Equipment** | | Prepared for the direct mounting of standard machine controllers and industrial PCs with corresponding screw clamps; all-round mounting channels integrated into the section for individual mounting of accessory components | Prepared for the direct mounting of standard machine controllers and industrial PCs with corresponding screw clamps |
| from page | | 172 | 174 |

# Operating housings – Product comparison

| | Operating housings AX with handle strips | Operating housing AX for desktop TFT | Compact Panel |
|---|---|---|---|
| | Enclosure made from sheet steel and front panel made from aluminium | Sheet steel enclosure and viewing panel made from 3 mm single-pane safety glass | Roof and base tray made from die-cast zinc, powder-coated, side panels made from extruded aluminium section, pow-der-coated |
| | IP 55 | IP 65 | IP 65 |
| | NEMA 12 | NEMA 12 | NEMA 12 |
| | 10 standard sizes available off the shelf | 1 standard size available off the shelf | 4 standard sizes available off the shelf |
| | Ø 130 mm | Ø 130 mm | ▭ 90 x 71 mm for CP 40, steel, the enclosure may optionally be mounted directly on a rotatable wall mounting |
| | 1/top<br>Bottom by rotating the enclosure, optional off-centre support arm connection, pre-formed | 1/top<br>Bottom by rotating the enclosure, optional off-centre support arm connection, pre-formed | 1/top<br>Bottom by rotating the enclosure |
| | Depends on the enclosure, from the front or rear | From the rear | From the rear, hinged rear panel |
| | Lock inserts may be replaced individually | Lock inserts may be replaced individually | Screw-fastened |
| | Interior installation bracket with system punchings for configuration with punched sections with mounting flanges 14 x 39 mm on a 25 mm pitch pattern. Simple machining of the front panel for installing machine controllers, industrial PCs or switches. | Retainer for desktop TFT with VESA 75/100 locator up to 24″ in the formats 16:9/16:10 | The customer's own front panels (2 – 6 mm) are easily inserted from the rear and secured with screw clamps |
| | 178 | 180 | 181 |

# Comfort Panel

**System accessories** Page 877 **Support arm systems** Page 183 **Stand systems** Page 211 **Industrial Workstations** Page 166

**Material:**
- Enclosure: Extruded aluminium section
- Corner pieces: Die-cast zinc
- Corner protectors: Plastic

**Colour:**
- Enclosure: Natural anodised
- Corner pieces: RAL 7035
- Corner protectors: similar to RAL 7024

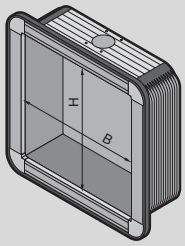
**Protection category IP to IEC 60 529:**
- IP 65

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Seals and assembly parts for front panels

**Note:**
- The support arm connection may be swapped over by rotating the enclosure

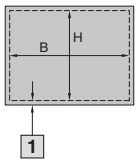
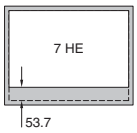
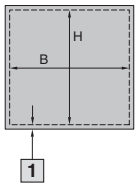
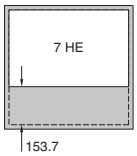
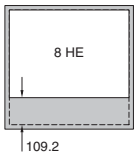
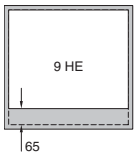
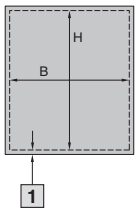
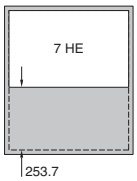
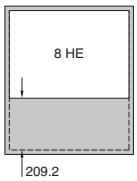
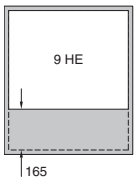
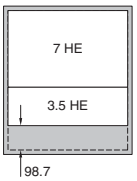
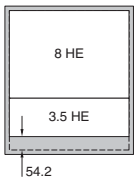
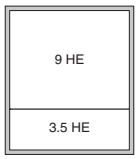
**Approvals:**
- UL
- cUL




| For front panel width (B) mm | Packs of | 520 | | | 520 | | 520 | | Page |
|---|---|---|---|---|---|---|---|---|---|
| For front panel height (H) mm | | 400 | | | 500 | | 600 | | |
| Installation depth mm | | 74 | 152 | 191 | 152 | 191 | 152 | 191 | |
| **Model No.** | 1 pc(s). | **6372.541** | **6372.542** | **6372.543** | **6372.552** | **6372.553** | **6372.562** | **6372.563** | |
| Weight kg | | 7.8 | 11.7 | 13.8 | 12.3 | 15.2 | 13.5 | 16.7 | |
| **Design** | | | | | | | | | |
| Support arm connection ▭ 120 x 65 mm | | ■ | – | – | – | – | – | – | |
| Support arm connection Ø 130 mm | | – | ■ | ■ | ■ | ■ | ■ | ■ | |
| Hinged rear panel on the long side, with screw lock | | ■ | – | – | – | – | – | – | |
| Hinged rear panel on the hinged long side, with cam[1] | | – | ■ | – | ■ | – | ■ | – | |
| Screw-fastened rear panel[2] | | – | – | ■ | – | ■ | – | ■ | |
| **Accessories** | | | | | | | | | |
| Front panel | 1 pc(s). | 6028.014 | 6028.014 | 6028.014 | 6028.015 | 6028.015 | 6028.016 | 6028.016 | 1107 |
| Cover plate for support arm connection | 1 pc(s). | 6505.100 | 6505.500 | 6505.500 | 6505.500 | 6505.500 | 6505.500 | 6505.500 | 1107 |
| Mounting bracket for interior installation | 4 pc(s). | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Spring nut M5 | 50 pc(s). | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 1003 |
| Earthing plate | 1 pc(s). | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 1034 |

[1] With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 941, plastic handles and T handles, version C, see page 942, 943
[2] Enclosure hinged at the front with side double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 941, plastic handles and T handles, version C, see page 942, 943

## Configuration examples

| Front panel height mm | Cut-out dimensions | | | | | | |
|---|---|---|---|---|---|---|---|
| 400 |  |  | | | | | |
| | B = 484 mm<br>H = 364 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |
| 500 |  |  |  |  | | | |
| | B = 484 mm<br>H = 464 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |
| 600 |  |  |  |  |  |  |  |
| | B = 484 mm<br>H = 564 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |

↕ Free space, available for individual installed equipment such as rows of switches etc.

HE = U

# Optipanel

**System accessories** Page 877 **Support arm systems** Page 183 **Stand systems** Page 211 **Industrial Workstations** Page 166

**Material:**
- Enclosure: Extruded aluminium section
- Corner pieces: Die-cast zinc
- Corner protector: Plastic

**Colour:**
- Enclosure: Natural anodised
- Corner pieces: RAL 7035
- Corner protectors: similar to RAL 7024

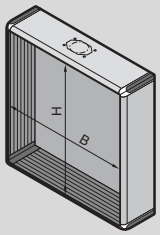
**Protection category IP to IEC 60 529:**
- IP 65

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Seals

**Note:**
- The support arm connection may be swapped over by rotating the enclosure

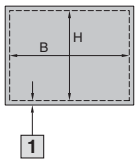
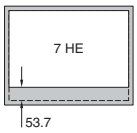
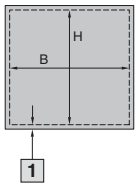
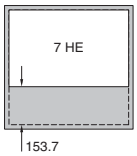
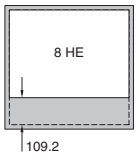
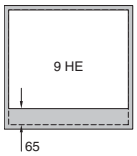
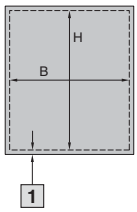
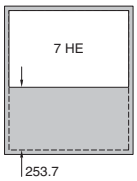
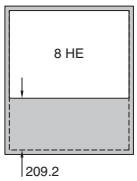
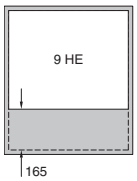
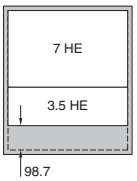
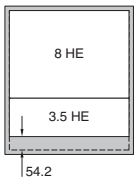
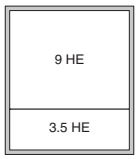
**Approvals:**
- UL
- cUL




| For front panel width (B) mm | Packs of | 430 | 482.6 | 482.6 | 520 | | 520 | 520 | Page |
|---|---|---|---|---|---|---|---|---|---|
| For front panel height (H) mm | | 343 | 310.3 | 354.8 | 400 | | 500 | 600 | |
| Installation depth mm | | 100 | 100 | 100 | 100 | 150 | 150 | 150 | |
| **Model No.** | 1 pc(s). | **6380.020**[1] | **6380.000** | **6380.040**[1] | **6380.400** | **6380.410** | **6380.510** | **6380.610** | |
| Weight kg | | 5.3 | 6.2 | 6.6 | 5.8 | 7.3 | 8.3 | 9.2 | |
| **Design** | | | | | | | | | |
| Support arm connection ▭ 120 x 65 mm | | ■ | ■ | ■ | ■ | – | – | – | |
| Support arm connection Ø 130 mm | | – | – | – | – | ■ | ■ | ■ | |
| Hinged rear panel on the hinged long side[2] | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Seals and assembly parts for front panels | | – | – | – | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| Front panel | 1 pc(s). | – | 6028.010 | – | 6028.014 | 6028.014 | 6028.015 | 6028.016 | 1107 |
| Cover plate for support arm connection | 1 pc(s). | 6505.100 | 6505.100 | 6505.100 | 6505.100 | 6505.500 | 6505.500 | 6505.500 | 1107 |
| Handle set, horizontal | 1 pc(s). | – | 6385.010 | 6385.010 | – | – | – | – | 1103 |
| Mounting bracket for interior installation | 4 pc(s). | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Earthing plate | 1 pc(s). | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 2570.500 | 1034 |
| Spring nut M5 | 50 pc(s). | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 1003 |

[1] To fit TFT monitors, see page 1109
[2] With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 941, plastic handles and T handles, version C, see page 942, 943

## Configuration examples

| Front panel height mm | Cut-out dimensions | | | | | | |
|---|---|---|---|---|---|---|---|
| 400 |  |  | | | | | |
| | B = 484 mm<br>H = 364 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |
| 500 |  |  |  |  | | | |
| | B = 484 mm<br>H = 464 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |
| 600 |  |  |  |  |  |  |  |
| | B = 484 mm<br>H = 564 mm<br>1 = 18 mm all-round for attaching the front panel | | | | | | |

↕ Free space, available for individual installed equipment such as rows of switches etc.

HE = U

# Operating housings AX with handle strips

## Uniform system in design and function

Modern design, adapted to support arm system CP 60/120/180

## Convenience in perfection

- Integral interior installation bracket with system punchings, to match system accessories
- Fast, safe, simple servicing access from the front or rear
- Lock with integral door runners for easy locking

## Built-in added value

- Support arm connection for one-person assembly
- Support arm connection Ø 130 mm, pre-formed off-centre in the reinforcement plate, easily drilled out

## Ergonomic design

- Design strip including handle function
- Aluminium front panel, easily dismantled for machining

# Operating housing AX with handle strips

**System accessories** Page 877 **Support arm system** Page 183 **Stand systems** Page 211 **Operating housings with door, stainless steel** Page 254

**Material:**
- Enclosure: Sheet steel
- Door: Sheet steel, all-round foamed-in PU seal
- Handle strips: Aluminium
- Front panel: Aluminium
- Cover caps: Plastic

**Surface finish:**
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Handle strip: Natural anodised
- Front panel: Natural anodised

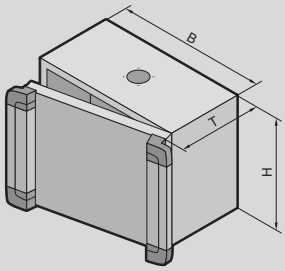
**Colour:**
- Enclosure and door: RAL 7035
- Cover caps: similar to RAL 7024

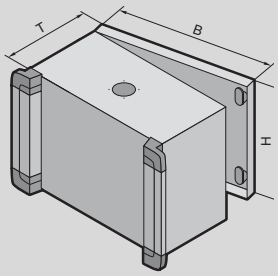
**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure with door, cut-out and reinforcement for support arm connection Ø 130 mm
- Front with maximum cut-out, covered with easily machinable 3 mm aluminium front panel
- Side handle strips and cover caps
- Integral interior installation bracket with system punchings
- Cam lock with 3 mm double-bit insert

**Note:**
- The support arm connection and door hinge may be swapped over by rotating the enclosure
- Optional: Support arm connection Ø 130 mm, pre-formed off-centre in the reinforcement plate, easily drilled out
- Lock systems for servicing access from the rear: Lock insert may be exchanged for mini-comfort handle AX, 27 mm lock inserts, type A
- Lock systems for servicing access from the front: Lock insert may be exchanged for 27 mm lock inserts, type A




**Approvals:**
- UL
- cUL

# Operating housing AX with handle strips

| **Width** (B) mm | | Packs of | 300 | 300 | 380 | 380 | 380 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 200 | 300 | 300 | 380 | 380 | |
| **Depth** (T) mm | | | 155 | 210 | 210 | 210 | 210 | |
| **Model No.** | | 1 pc(s). | **6320.050** | **6315.150** | **6315.250** | **6315.350** | **6320.350** | |
| Weight, approx. kg | | | 4.5 | 7.0 | 7.5 | 9.8 | 9.8 | |
| Servicing access | from the rear | | ■ | – | – | – | ■ | |
| | from the front | | – | ■ | ■ | ■ | – | |
| **Accessories** | | | | | | | | |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | 4 pc(s). | – | – | – | 8619.700 | 8619.700 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the width | | 4 pc(s). | 8619.700 | 8619.700 | – | – | – | 990 |
| Mounting bracket | | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Mounting bracket for interior installation | | 4 pc(s). | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Lock inserts | | | see page | see page | see page | see page | see page | 941, 942 |
| Earth straps | | | see page | see page | see page | see page | see page | 1033 |

| **Width** (B) mm | | Packs of | 500 | 500 | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 500 | 500 | 380 | 600 | 600 | |
| **Depth** (T) mm | | | 210 | 210 | 210 | 210 | 210 | |
| **Model No.** | | 1 pc(s). | **6315.450** | **6320.450** | **6320.550** | **6320.650** | **6315.650** | |
| Weight, approx. kg | | | 16.8 | 16.8 | 15.4 | 18.8 | 22.8 | |
| Servicing access | from the rear | | – | ■ | ■ | ■ | – | |
| | from the front | | ■ | – | – | – | ■ | |
| **Accessories** | | | | | | | | |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | 4 pc(s). | 8619.710 | 8619.710 | 8619.700 | 8619.720 | 8619.720 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the width | | 4 pc(s). | 8619.720 | 8619.720 | 8619.760 | 8619.760 | 8619.760 | 990 |
| Mounting bracket | | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Mounting bracket for interior installation | | 4 pc(s). | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Lock inserts | | | see page | see page | see page | see page | see page | 941, 942 |
| Earth straps | | | see page | see page | see page | see page | see page | 1033 |

# Operating housing AX for desktop TFT up to 24"

**System accessories** Page 877 **Support arm systems** Page 183 **Stand systems** Page 211

For the installation of commercially available desktop TFTs with a screen diagonal of up to 24" in the formats 16:9/16:10.

**Material:**
- Enclosure: Sheet steel
- Door: Sheet steel, all-round foamed-in PU seal
- Handle strips: Aluminium
- Cover caps: Plastic
- Viewing window: Single-pane safety glass
- TFT holder: Sheet steel

**Surface finish:**
- Enclosure and door: Powder-coated on the outside, textured paint
- Handle strip: Natural anodised

**Colour:**
- Enclosure and door: RAL 7035
- Cover caps: similar to RAL 7024

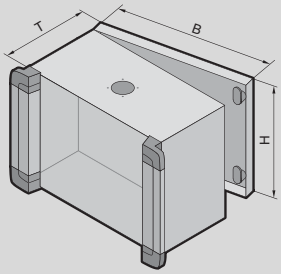
**Protection category IP to IEC 60 529:**
- IP 65

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure with door, cut-out and reinforcement for support arm connection Ø 130 mm
- Viewing window, single-pane safety glass
- Holder for desktop TFT with VESA 75/100 locator
- Side handle strips and cover caps
- Rear door with r/h hinge
- Cam lock with 3 mm double-bit insert

**Note:**
- The support arm connection and door hinge may be swapped over by rotating the enclosure
- Optional: Support arm connection Ø 130 mm, pre-formed off-centre in the reinforcement plate, easily drilled out
- Lock insert may be exchanged for mini-comfort handle AX, 27 mm lock inserts, type A

**Approvals:**
- UL
- cUL




| **Width** (B) mm | Packs of | 650 | Page |
|---|---|---|---|
| **Height** (H) mm | | 450 | |
| **Depth** (T) mm | | 155 | |
| **Model No.** | 1 pc(s). | **6321.050** | |
| Weight, approx. kg | | 18.0 | |
| Cam lock | | 2 | |
| **Accessories** | | | |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | 1 pc(s). | 2537.100 | 940 |
| Mini-comfort handle AX for padlock and lock inserts or profile half-cylinders | 1 pc(s). | 2537.300 | 940 |
| Lock inserts | | see page | 941, 942 |

**System accessories** Page 877 **Support arm systems** Page 183 **Stand systems** Page 211

For small operating units built into front panels. The front panel is inserted from the rear and secured with screw clamps. Special front panels with a material thickness of between 2 and 6 mm are possible. Rear panel optionally hinged on the left or right. Roof tray with cut-out and reinforcement for support arm system CP 40 steel.

**Design:**
- With support arm connection 90 x 71 mm for CP 40, steel

**Material:**
- Roof tray, base tray: Die-cast zinc
- Rear panel: Aluminium
- Side parts: Extruded aluminium section
- Screw cover: Plastic

**Surface finish:**
- Roof tray, base tray, side parts: Powder-coated
- Rear panel: natural anodised

**Colour:**
- RAL 7024

**Protection category IP to IEC 60 529:**
- IP 65

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Roof tray
- Base tray
- Rear panel
- Side parts
- Screw cover
- Seal and screw clamp

| **Width** mm | Packs of | 241 | 241 | 315 | 315 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | 238 | 388 | 238 | 388 | |
| **Depth** mm | | 87 | 87 | 87 | 87 | |
| To fit front panel width mm | | 178 | 178 | 252 | 252 | |
| To fit front panel height mm | | 200 | 350 | 200 | 350 | |
| **Model No.** | 1 pc(s). | **6340.000** | **6340.100** | **6340.300** | **6340.400** | |
| Weight kg | | 2.8 | 3.8 | 3.4 | 4.5 | |
| **Accessories** | | | | | | |
| Front panel | 1 pc(s). | 6028.500 | 6028.510 | 6028.530 | 6028.540 | 1107 |
| Wall mounting bracket | 2 pc(s). | 6341.000 | 6341.000 | 6341.000 | 6341.000 | 969 |
| Spring nut M5 | 50 pc(s). | 6108.000 | 6108.000 | 6108.000 | 6108.000 | 1003 |
| Cover plate | 1 pc(s). | 6505.200 | 6505.200 | 6505.200 | 6505.200 | 1107 |

# Rittal – The System.

**Faster – better – everywhere.**

# Support arm systems


## Support arm system CP 40

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## Support arm system CP 60

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## Support arm system CP 120

Component overview....197
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## Support arm system CP 180

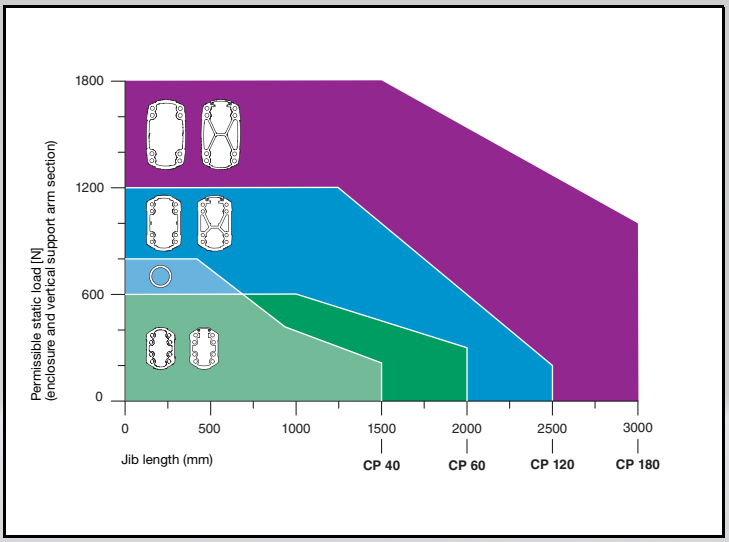
Component overview....201
Support section CP 180....202
Components CP 180....203

## Support arm system CP

Support section, height-adjustable....206


## Load information

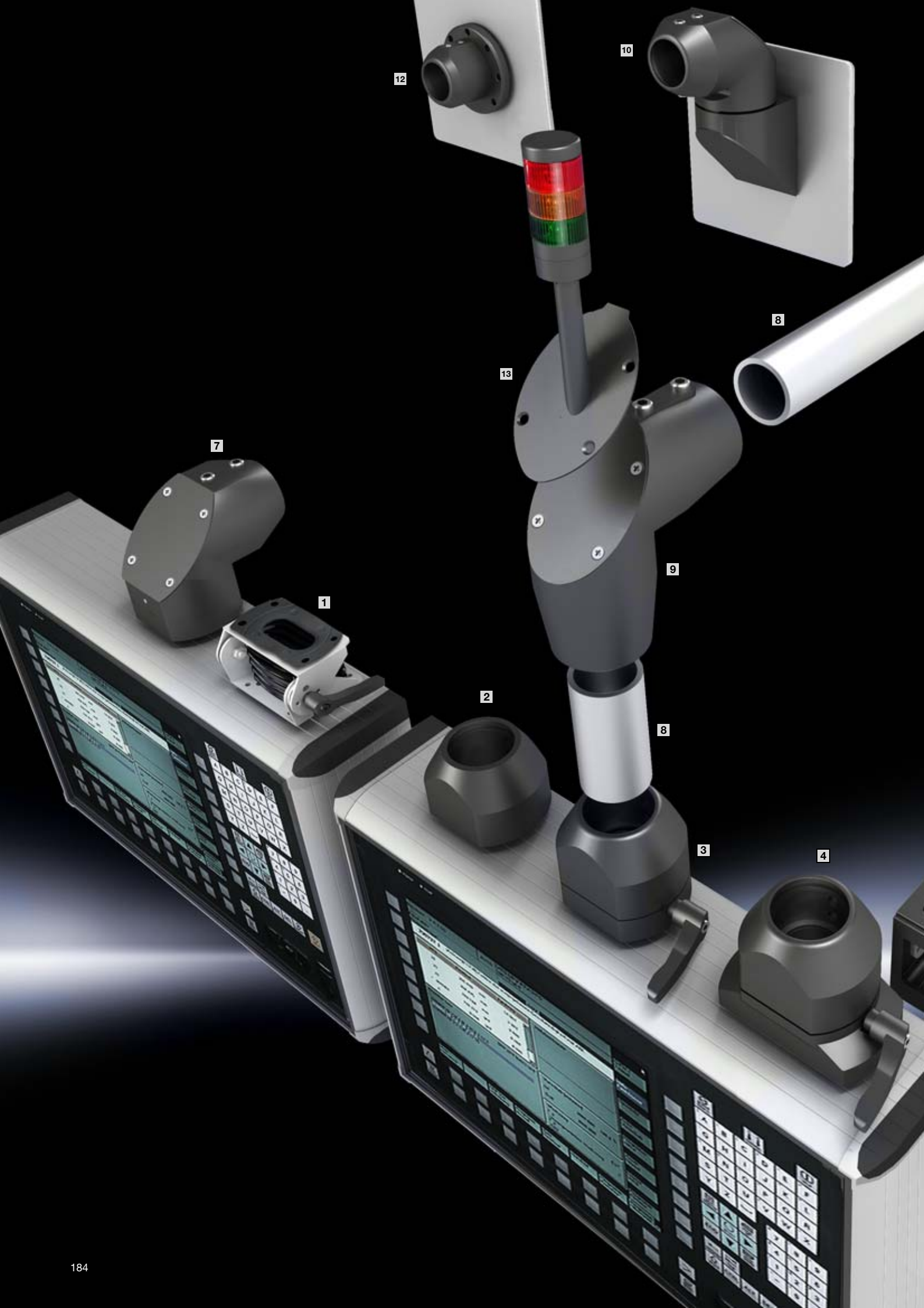
Comparison of support arm systems



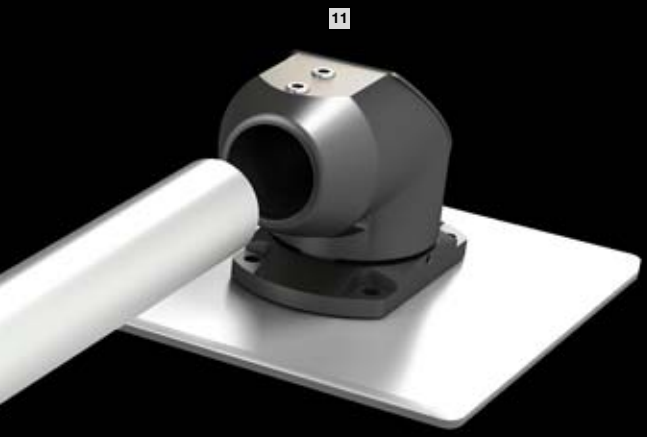

## Support arm configurator

The support arm configurator determines the correct support arm system according to user-specific parameters.

**More detailed information can be found at: www.rittal.com**


12
10
8
13
7
9
1
2
8
3
4

# Support arm system CP 40, steel




## Component overview

1 Tilting adaptor +100/-60° for support arm connection ▭ 120 x 65 mm/ ▭ 90 x 71 mm (6206.460)

2 Attachment CP 40, steel, for support arm connection ▭ 90 x 71 mm (6501.070)

3 Coupling CP 40, steel, for support arm connection ▭ 90 x 71 mm (6501.050)

4 Coupling CP 40, steel, for support arm connection ▭ 120 x 65 mm (6501.130)

5 Connection console VESA 75/100 for support arm connection ▭ 120 x 65 mm (6206.480)

6 Connection console for support arm connection ▭ 120 x 65 mm (6206.490)

7 Angle coupling 90° CP 40, steel (6501.120)

8 Support section CP 40, steel (6501.000, 6501.020)

9 Angle piece 90° CP 40, steel (6501.140)

10 Wall-mounted hinge CP 40, steel (6501.150)

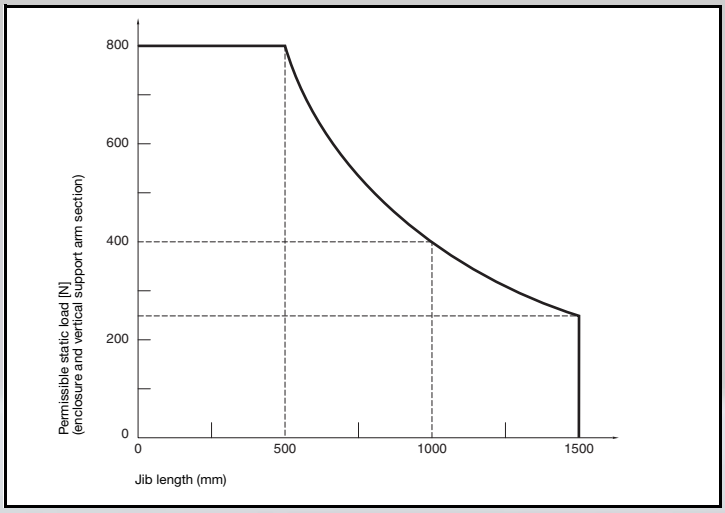
11 Top-mounted joint CP 40, steel (6501.160)

12 Wall/base mounting bracket CP 40, steel (6501.110)

13 Mounting components CP 40, steel, for signal pillar (2375.030)

## Load information

When using support arm system CP 40, steel in conjunction with support arm system CP 60 (in the horizontal run of the system), the load diagram for support arm system CP 60 applies.



# Support arm system CP 40, steel

**Comfort Panel** Page 172 **Optipanel** Page 174 **Compact Panel** Page 181 **Operating housings AX with handle strips** Page 178

**Support section CP 40, steel**
Attached to the connection components via 2 clamping screws

**Size:**
– Outer diameter: 48.3 mm
– Wall thickness: 4.0 mm

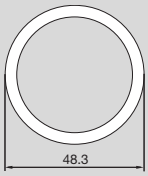
**Material:**
– Steel conduit, powder-coated

**Colour:**
– RAL 7035

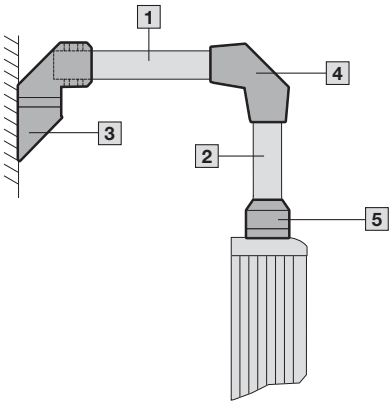
**Protection category IP to IEC 60 529:**
– IP 54

**Supply includes:**
– Support section, steel

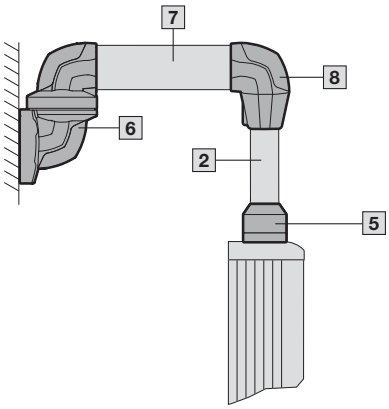
**Note:**
– Stainless steel, see page 188



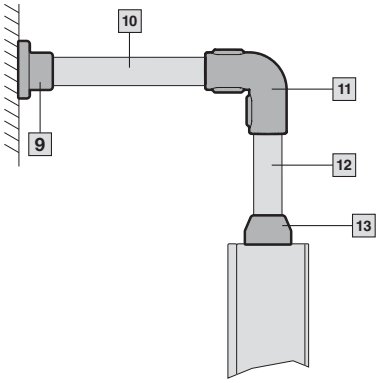

Integral adjustment facility




Combination with support arm system CP 60




Also available in stainless steel version, see page 188




1 Support section CP 40, steel, 1000 mm (6501.020)
2 Support section CP 40, steel, 500 mm (6501.000)
3 Wall-mounted hinge CP 40, steel (6501.150)
4 Angle piece 90° CP 40, steel (6501.140)
5 Coupling CP 40, steel (6501.050)
6 Wall-mounted hinge CP 60 (6206.740)
7 Support section CP 60, 1000 mm (6206.100)
8 Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
9 Wall/base mounting bracket, rigid, CP 40, stainless steel (6663.000)
10 Support section CP 40, stainless steel, 1000 mm (6660.010)
11 Angle piece 90° CP 40, stainless steel (6664.300)
12 Support section CP 40, stainless steel, 500 mm (6660.050)
13 Housing coupling CP 40, stainless steel (6664.000)

# Support arm system CP 40, steel

| | Rotating/tilting | Rigid | Length mm | Weight kg | Colour RAL | Enclosure section | Desk section | Wall section |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Model No. | | |
| **Tilting adaptor +100/-60° for support arm connection ▭ 120 x 65 mm/▭ 90 x 71 mm** | | | | | | | | |
| see page 209 | ■ | – | – | 0.8 | 7035/ 7024 | **6206.460** | – | – |
| **Attachment CP 40, steel, for support arm connection ▭ 90 x 71 mm** | | | | | | | | |
| | – | ■ | – | 1.0 | 7024 | **6501.070** | – | – |
| **Coupling CP 40, steel, for support arm connection ▭ 90 x 71 mm** | | | | | | | | |
| | ■ | – | – | 1.1 | 7024 | **6501.050** | – | – |
| **Coupling CP 40, steel, for support arm connection ▭ 120 x 65 mm** | | | | | | | | |
| | ■ | – | – | 1.5 | 7024 | **6501.130** | – | – |
| **Connection console VESA 75/100 for support arm connection ▭ 120 x 65 mm** | | | | | | | | |
| see page 207 | – | ■ | – | 1.1 | 7035/ 7024 | **6206.480** | – | – |
| **Connection console for support arm connection ▭ 120 x 65 mm** | | | | | | | | |
| see page 207 | – | ■ | – | 0.7 | 7035/ 7024 | **6206.490** | – | – |
| **Angle coupling 90° CP 40, steel, for support arm connection ▭ 90 x 71 mm** | | | | | | | | |
| | ■ | – | – | 1.6 | 7024 | **6501.120** | – | – |
| **Support section CP 40, steel** | | | | | | | | |
| | – | – | 500<br>1000 | 2.1<br>4.2 | 7035<br>7035 | | **6501.000**<br>**6501.020** | |
| **Angle piece 90° CP 40, steel** | | | | | | | | |
| | – | ■ | – | 1.1 | 7024 | **6501.140** | – | **6501.140** |
| **Top-mounted joint CP 40, steel** | | | | | | | | |
| | ■ | – | – | 1.8 | 7024 | – | – | **6501.160** |
| **Wall-mounted hinge CP 40, steel** | | | | | | | | |
| | ■ | – | – | 2.2 | 7024 | – | – | **6501.150** |
| **Wall/base mounting bracket CP 40, steel** | | | | | | | | |
| | – | ■ | – | 0.7 | 7024 | – | – | **6501.110** |
| **Mounting component CP 40, steel, for signal pillar** | | | | | | | | |
| see page 1125 | – | ■ | – | 0.3 | 7024 | **2375.030** | – | – |
| **Accessories** | | | | | | | | |
| Angle adaptor 90° for support arm combination CP 60/40 6206.640 | | | | | | | | see page 195 |

# Support arm system CP 40, stainless steel

**Command panel housing with door, stainless steel** P. 254 **Premium Panel, stainless steel** P. 253 **Support section CP 40, steel** P. 186

**Support section CP 40, stainless steel**
Attached to the connection components via 2 clamping screws

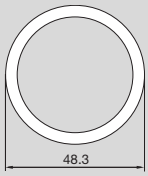
**Size:**
- Outer diameter: 48.3 mm
- Wall thickness: 3.6 mm

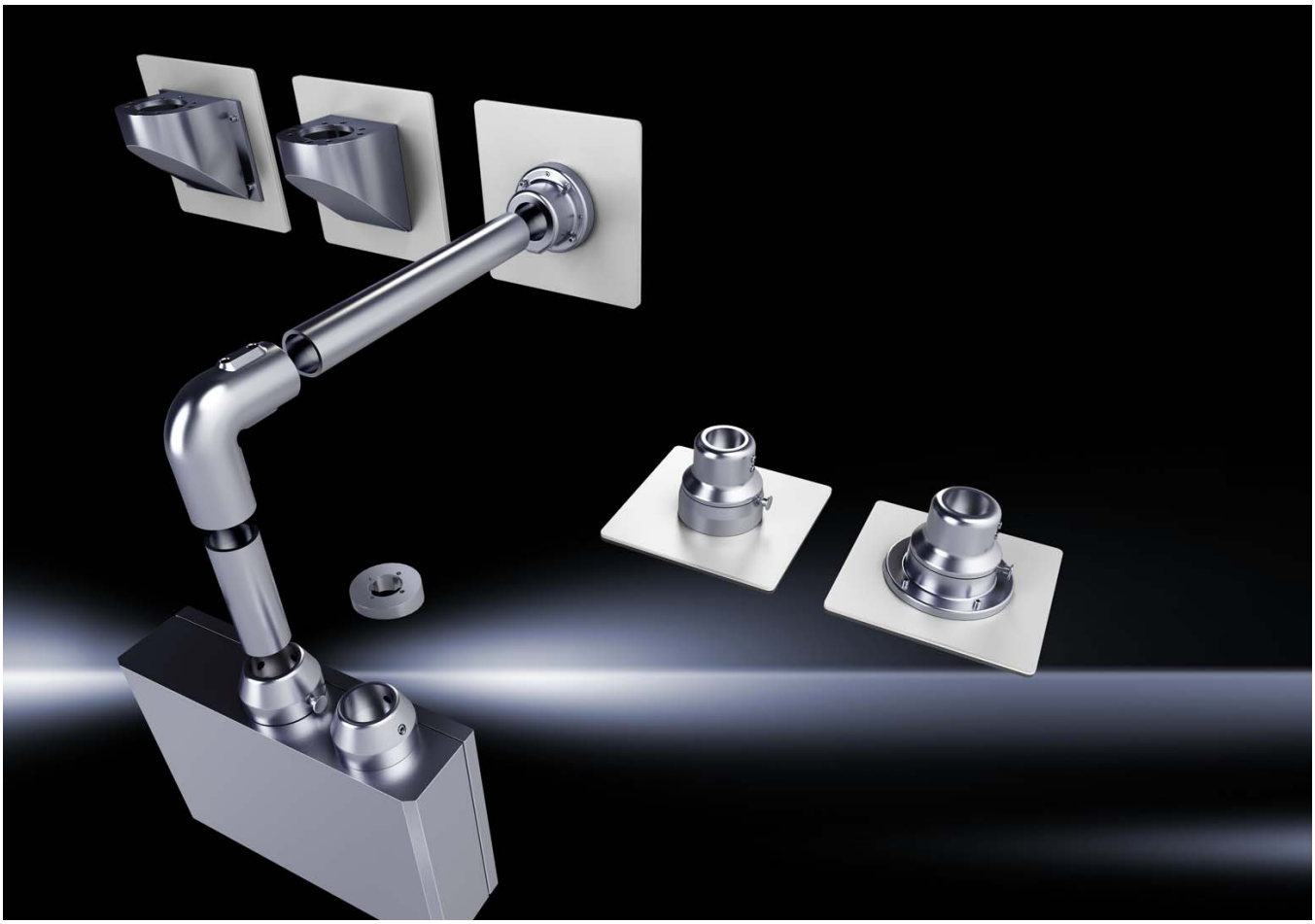
**Material:**
- Stainless steel

**Surface finish:**
- Brushed, grain size 400 (support section and wall console only)

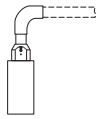
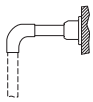
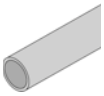
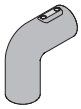
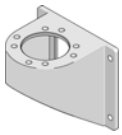
**Protection category IP to IEC 60 529:**
- IP 66
- IP X9

**Supply includes:**
- Support section, stainless steel

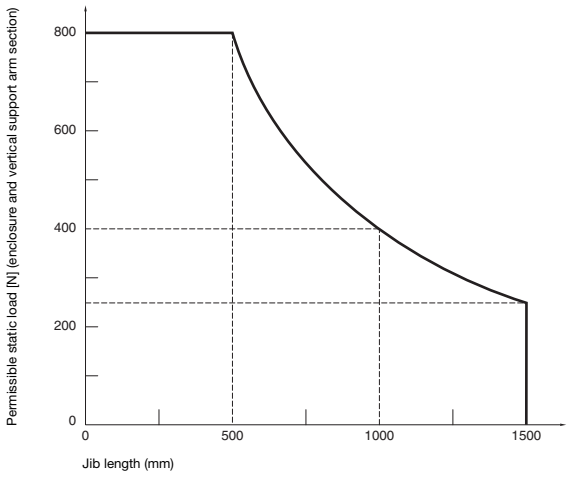


# Support arm system CP 40, stainless steel

| | | Rotating/tilting | Rigid | Length mm | Weight kg | Material | Enclosure section | Desk section | Wall section |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | |  |  |  |
| | | | | | | | Model No. | | |
| | **Tilting adaptor 10° CP 40, stainless steel** | | | | | | | | |
| | | – | ■ | – | 0.7 | 1.4305 (AISI 303) | **6664.100** | – | – |
| | **Attachment CP 40, stainless steel** | | | | | | | | |
| | | – | ■ | – | 1.3 | 1.4305 (AISI 303) | **6664.500** | – | – |
| | **Coupling CP 40, stainless steel** | | | | | | | | |
| | | ■ | – | – | 1.1 | 1.4305 (AISI 303) | **6664.000** | – | – |
|  | **Support section CP 40, stainless steel** | | | | | | | | |
| | | – | ■ | 500<br>1000 | 2.0<br>3.9 | 1.4301 (AISI 304) | **6660.050**<br>**6660.010** | | |
|  | **Angle piece 90° CP 40, stainless steel** | | | | | | | | |
| | | – | ■ | – | 1.3 | 1.4301 (AISI 304) | **6664.300** | – | **6664.300** |
| | **Wall/base mounting bracket, rigid, CP 40, stainless steel** | | | | | | | | |
| | | – | ■ | – | 1.7 | 1.430 (AISI 303) | – | – | **6663.000** |
| | **Wall/base mounting bracket, rotating, CP 40, stainless steel** | | | | | | | | |
| | Rear, thread M8<br>Front, hole Ø 9 mm | ■ | – | – | 3.9<br>4.5 | 1.430 (AISI 303) | – | – | **6663.500**<br>**6663.400** |
|  | **Wall console CP 40, stainless steel** | | | | | | | | |
| | Rear, thread M8<br>Front, hole Ø 9 mm | – | ■ | – | 1.5<br>1.8 | 1.4301 (AISI 304) | – | – | **6665.000**<br>**6665.500** |

**Load information**
Permissible load depending on system configuration



# Support arm system CP 60/120/180

## Uniform engineering

- All load levels up to 1800 N
- One system
- Simple system replacement in the vertical axis to cut costs and weight
- Consistent combination options

## Multi-functional assembly

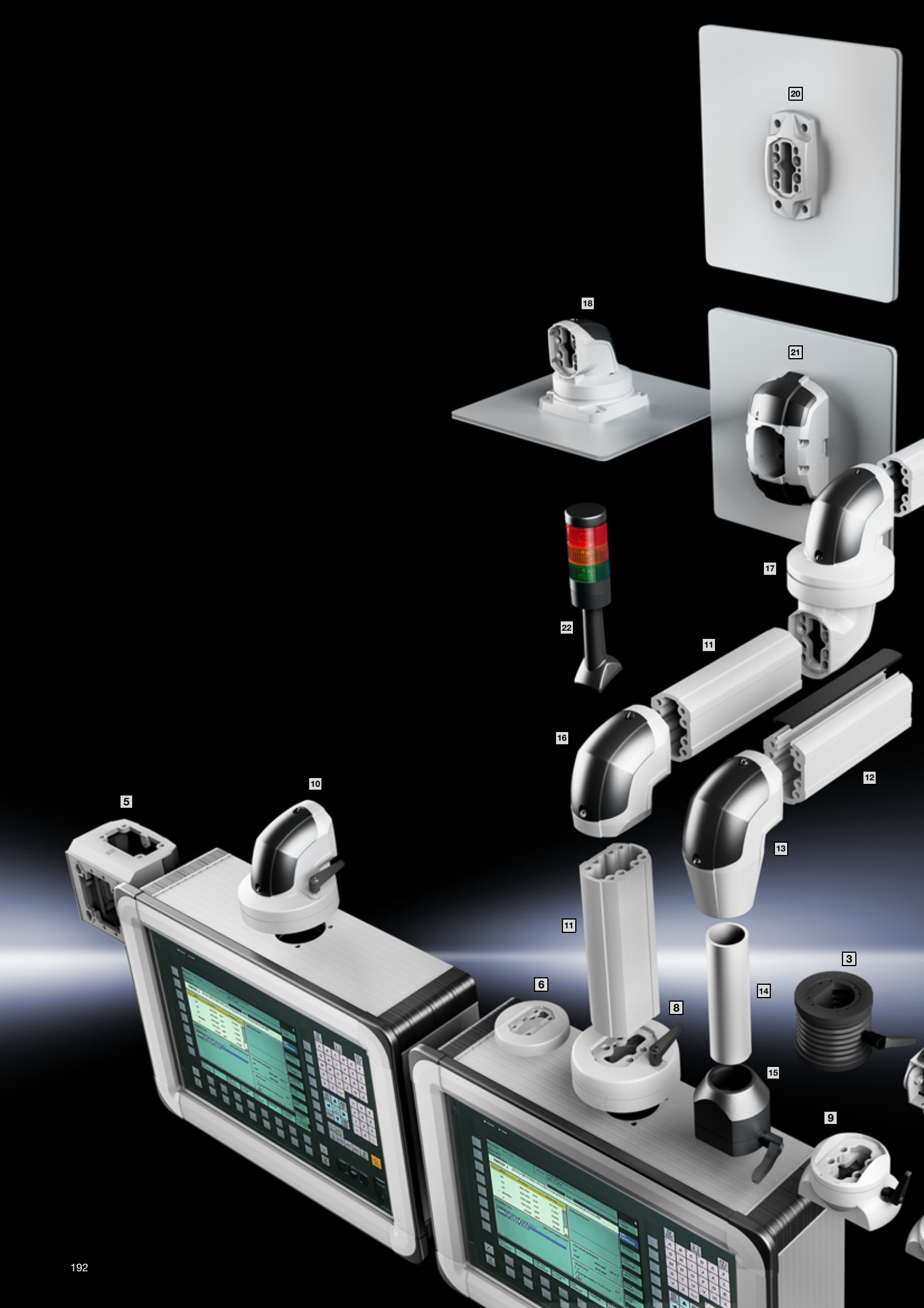
- Uniform adjustment principle, even retrospectively without dismantling
- Perfect limitation of rotation ranges
- Simple, one-person installation
- Sections are easily cut to the required length

## Efficient cable management

- Cross-section sufficient for large connectors
- Supports simple separation between data and power cables
- Flexible cable entry and routing options
- Automatic, consistent potential equalisation of all support arm components
- Open support section for easy upgrade and servicing access

## Consistent protection category

- Consistent protection category of all components, even with adaptations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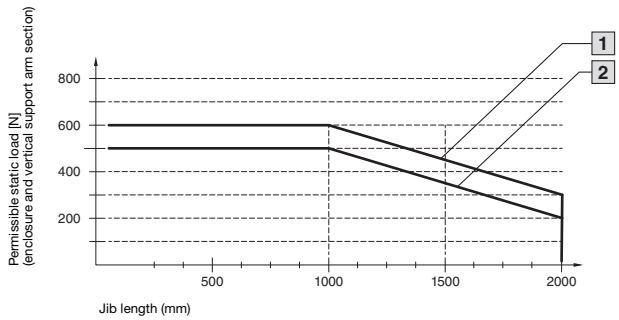
# Support arm system CP 60

## Component overview

1 Tilting adaptor 10° for support arm connection Ø 130 mm (6206.400)
2 Tilting adaptor 10° for support arm connection ▭ 120 x 65 mm (6206.440)
3 Tilting adaptor +/-45° for support arm connection Ø 130 mm (6206.420)
4 Tilting adaptor +100°/-60° for support arm connection ▭ 120 x 65 mm (6206.460)
5 Connection console VESA 75/100 for support arm connection ▭ 120 x 65 mm (6206.480)
6 Coupling CP 60 for support arm connection Ø 130 mm (6206.320)
7 Attachment CP 60 for support arm connection ▭ 120 x 65 mm (6206.360)
8 Coupling CP 60 for support arm connection Ø 130 mm (6206.300)
9 Coupling CP 60 for support arm connection ▭ 120 x 65 mm (6206.340)
10 Angle coupling 90° CP 60 for support arm connection Ø 130 mm (6206.380)
11 Support section CP 60, closed (6206.025, 6206.050, 6206.100, 6206.200)
12 Support section CP 60, open (6206.110)
13 Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
14 Support section CP 40, steel (6501.000)
15 Coupling CP 40, steel, for support arm connection ▭ 90 x 71 mm (6501.050)
16 Angle piece 90° CP 60 (6206.600)
17 Intermediate hinge CP 60 (6206.620)
18 Top-mounted joint CP 60, horizontal outlet (6206.700)
19 Wall-mounted hinge CP 60, horizontal outlet (6206.740)
20 Wall/base mounting bracket CP 60, small (6206.820)
21 Wall/base mounting bracket CP 60, large (6206.800)
22 Mounting component CP 60 for signal pillar (6206.900)

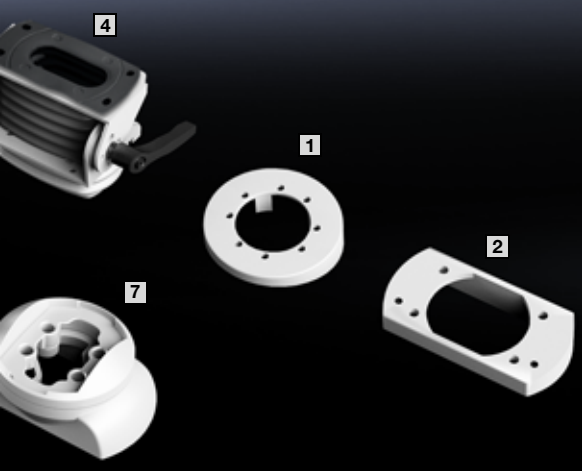
## Load information

Permissible load depending on system configuration




1 System configuration without intermediate hinge 6206.620
2 System configuration with intermediate hinge 6206.620

**Note:**
- Wall/base mounting bracket, small 6206.820 must not be used in conjunction with intermediate hinge 6206.620!
- Intermediate hinge 6206.620 should only be used once per system!



# Support arm system CP 60

**Comfort Panel** Page 172 **Optipanel** Page 174 **Compact Panel** Page 181 **Operating housings AX with handle strips** Page 178

**Support section CP 60**
Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section. Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section.

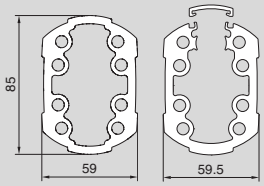
**Size:**
– External dimensions: 59 x 85 mm

**Material:**
– Support section: Extruded aluminium section

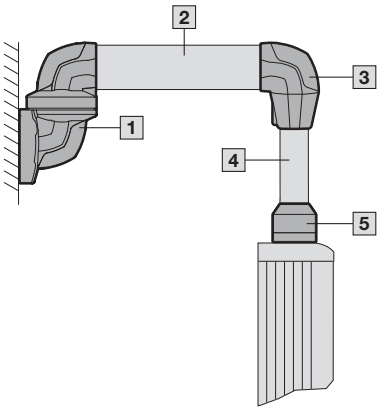
**Colour:**
– Support section: RAL 7035

**Protection category IP to IEC 60 529:**
– IP 54

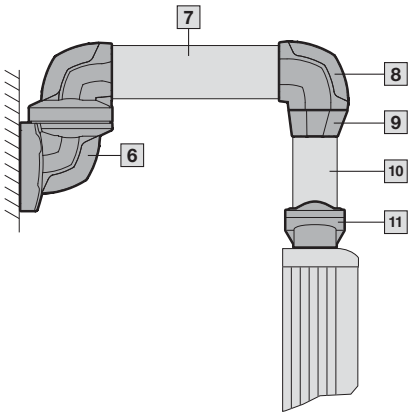
**Supply includes:**
– Support section



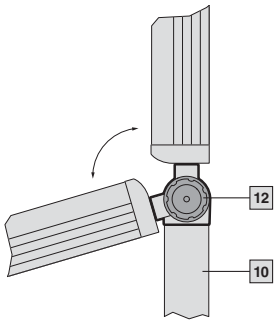

Combination with support arm system CP 40




Combination with support arm system CP 120

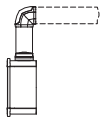
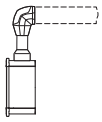
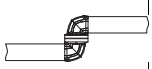
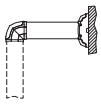



Roof plate with tilt coupler, see page 210




1 Wall-mounted hinge CP 60, horizontal outlet (6206.740)
2 Support section CP 60, 1000 mm (6206.100)
3 Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
4 Support section CP 40, steel, 500 mm (6501.000)
5 Coupling CP 40, steel, for support arm connection ▭ 120 x 65 mm (6501.130)
6 Wall-mounted hinge CP 120, horizontal outlet (6212.740)
7 Support section CP 120, 1000 mm (6212.100)
8 Angle piece 90° CP 120 (6212.600)
9 Adaptor for support arm combination CP 120/60 (6212.640)
10 Support section CP 60, 500 mm (6206.050)
11 Coupling CP 60 for support arm connection ▭ 120 x 65 mm (6206.340)
12 Tilt coupler for support arm system CP 60/6206.350

# Support arm system CP 60

| | Rotating/tilting | Rigid | Length mm | Weight kg | Colour RAL | Enclosure section CP 60 | Enclosure section CP 60/40 | Centre section CP 60 | Wall section CP 60 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | |  |  |  |  |
| | | | | | | Model No. | | | |
| **Tilting adaptor 10° for support arm connection** | | | | | | | | | |
| Ø 130 mm | – | ■ | – | 0.6 | 7035 | **6206.400** | – | – | – |
| ▭ 120 x 65 mm | | | | 0.4 | | **6206.440** | – | – | – |
| **Tilting adaptor +/-45°, tilting adaptor +100°/-60° for support arm connection** | | | | | | | | | see page 209 |
| Ø 130 mm | ■ | – | – | 1.2 | 7024 | **6206.420** | – | – | – |
| ▭ 120 x 65 mm | | | | 0.8 | 7035/ 7024 | **6206.460** | **6206.460** | – | – |
| ▭ 90 x 71 mm | | | | 0.8 | | – | **6206.460** | – | – |
| **Connection console VESA 75/100 for support arm connection** | | | | | | | | | see page 207 |
| ▭ 120 x 65 mm | – | ■ | – | 1.1 | 7035/ 7024 | **6206.480** | – | – | – |
| **Attachment CP 60/40 for support arm connection** | | | | | | | | | |
| Ø 130 mm | – | ■ | – | 0.7 | 7035 | **6206.320** | – | – | – |
| ▭ 120 x 65 mm | | | | 1.0 | 7035 | **6206.360** | – | – | – |
| ▭ 90 x 71 mm | | | | 1.0 | 7024 | – | **6501.070** | – | – |
| **Coupling CP 60/40 for support arm connection** | | | | | | | | | |
| Ø 130 mm | ■ | – | – | 2.1 | 7035 | **6206.300** | – | – | – |
| ▭ 120 x 65 mm | | | | 1.2 | 7035 | **6206.340** | **6501.130** | – | – |
| ▭ 90 x 71 mm | | | | 1.1 | 7024 | – | **6501.050** | – | – |
| **Angle coupling 90° CP 60/40 for support arm connection** | | | | | | | | | |
| Ø 130 mm | ■ | – | – | 1.8 | 7035/ 7024 | **6206.380** | – | – | – |
| **Support section CP 60/40** | | | | | | CP 60 | CP 40[1] | CP 60 | CP 60 |
| Closed | – | – | 250<br>500<br>1000<br>2000 | 1.25<br>2.5<br>5.0<br>10.0 | 7035 | **6206.025**<br>**6206.050**<br>**6206.100**<br>**6206.200** | –<br>**6501.000**<br>**6501.020**<br>– | **6206.025**<br>**6206.050**<br>**6206.100**<br>**6206.200** | **6206.025**<br>**6206.050**<br>**6206.100**<br>**6206.200** |
| Open | – | – | 1000 | 5.6 | 7035/ 7024 | **6206.110** | – | – | – |
| **Angle adaptor 90° for support arm combination CP 60/40** | | | | | | | | | |
| | – | ■ | – | 1.0 | 7035/ 7024 | – | **6206.640** | – | – |
| **Angle piece 90° CP 60** | | | | | | | | | |
| | – | ■ | – | 0.5 | 7035/ 7024 | **6206.600** | – | – | **6206.600** |
| **Intermediate hinge CP 60** | | | | | | | | | |
| | ■ | – | – | 2.2 | 7035/ 7024 | – | – | **6206.620** | – |
| **Top-mounted joint CP 60** | | | | | | | | | |
| Horizontal outlet | ■ | – | – | 2.2 | 7035/ 7024 | – | – | – | **6206.700** |
| **Wall-mounted hinge CP 60** | | | | | | | | | |
| Horizontal outlet | ■ | – | – | 2.85 | 7035/ 7024 | – | – | – | **6206.740** |
| **Wall/base mounting bracket CP 60, small** | | | | | | | | | |
| | – | ■ | – | 0.35 | 7035 | – | – | – | **6206.820** |
| **Wall/base mounting bracket CP 60, large** | | | | | | | | | |
| | – | ■ | – | 1.4 | 7035/ 7024 | – | – | – | **6206.800** |
| **Accessories** | | | | | | | | | |
| Mounting component for signal pillar, see page 1125/Adaptor CP 120/60 Ø 130 mm to ▭ 120 x 65 mm 6212.500, see page 199 | | | | | | | | | |

[1] Weight information and diagrams for CP 40, see page 187

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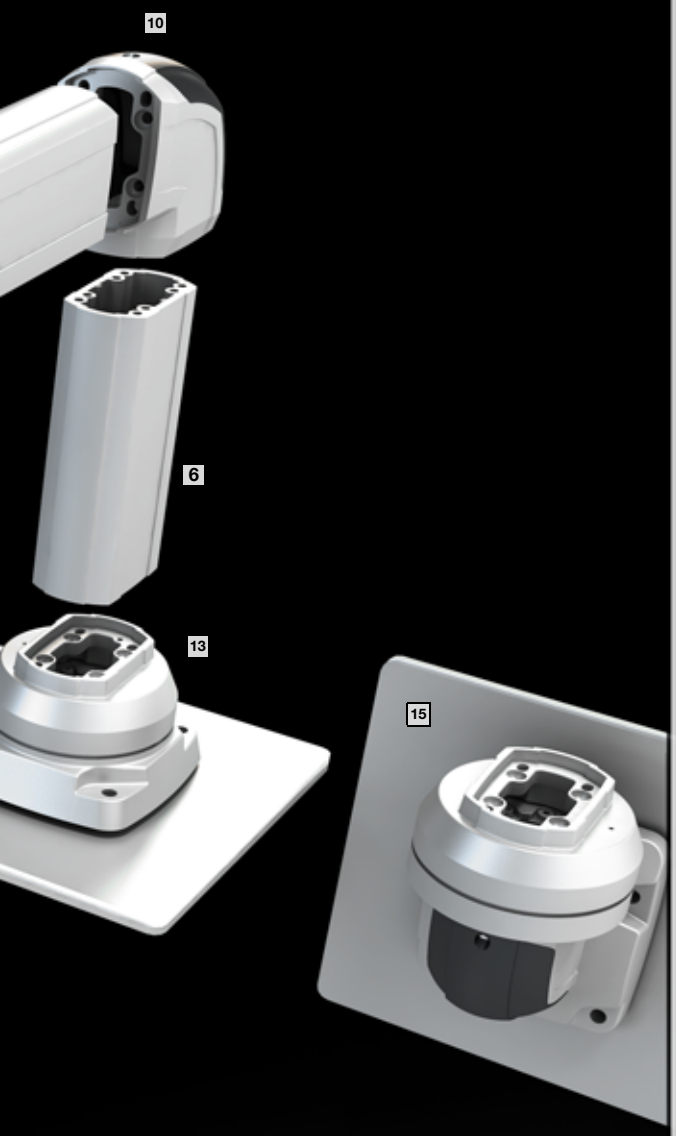
# Support arm system CP 120

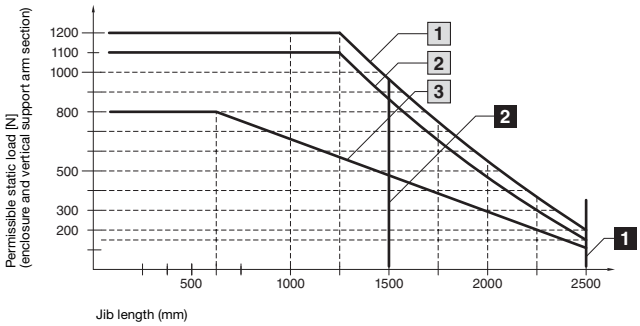



## Component overview

1 Adaptor CP 120 from support arm connection Ø 130 mm to ▭ 120 x 65 mm (6212.500)
2 Attachment CP 120 for support arm connection Ø 130 mm (6212.320)
3 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
4 Coupling CP 60 for support arm connection ▭ 120 x 65 mm (6206.340)
5 Angle coupling 90° CP 120 for support arm connection Ø 130 mm (6212.380)
6 Support section CP 120, closed (6212.025, 6212.050, 6212.100, 6212.200)
7 Support section CP 120, open (6212.150, 6212.110, 6212.210)
8 Support section CP 60, closed (6206.025, 6206.050, 6206.100, 6206.200)
9 Adaptor for support arm combination CP 120/60 (6212.640)
10 Angle piece 90° CP 120 (6212.600)
11 Intermediate hinge CP 120, without height offset (6212.680)
12 Intermediate hinge CP 120, with height offset (6212.620)
13 Top-mounted joint CP 120, vertical outlet (6212.720)
14 Top-mounted joint CP 120, horizontal outlet (6212.700)
15 Wall-mounted hinge CP 120, vertical outlet (6212.760)
16 Wall-mounted hinge CP 120, horizontal outlet, without height offset (6212.780)
17 Wall-mounted hinge CP 120, horizontal outlet, with height offset (6212.740)
18 Wall/base mounting bracket CP 120, small (6212.820)
19 Wall/base mounting bracket CP 120, large (6212.800)
20 Mounting component CP 120/180 for signal pillar (6212.900)

## Load information

Permissible load depending on system configuration




1 System configuration without intermediate hinge 6212.620/.680, with closed or open support section
2 System configuration with intermediate hinge 6212.620/.680 and closed support section
3 System configuration with intermediate hinge 6212.620/.680 and open support section
**1** Maximum system length 2500 mm for systems with horizontal outlet at the system start
**2** Maximum system length 1500 mm for systems with vertical outlet at the system start. The overall height at the vertical system start must not exceed 500 mm.

**Note:**
– Wall/base mounting bracket, small 6212.820 must not be used in conjunction with intermediate hinge 6212.620/.680!
– Intermediate hinge 6212.620/.680 should only be used once per system!

# Support arm system CP 120

**Comfort Panel** P. 172 **Optipanel** P. 174 **Operating housings AX with handle strips** P. 178 **Operating housing AX for desktop TFT** P. 180

**Support section CP 120**
Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section. Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section.

X-shaped profiling for greater load capacity, large cable routing channels. Upper channel adequate for cables with large connectors (e.g. DVI or VGA) and available/usable throughout the entire system.

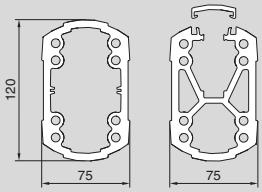
**Size:**
– External dimensions: 75 x 120 mm

**Material:**
– Support section: Extruded aluminium section

**Colour:**
– Support section: RAL 7035

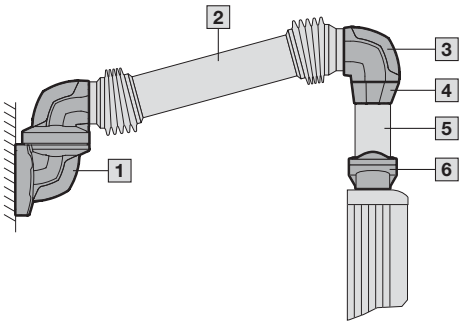
**Protection category IP to IEC 60 529:**
– IP 54

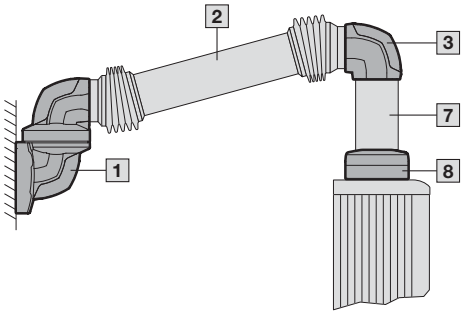
**Supply includes:**
– Support section

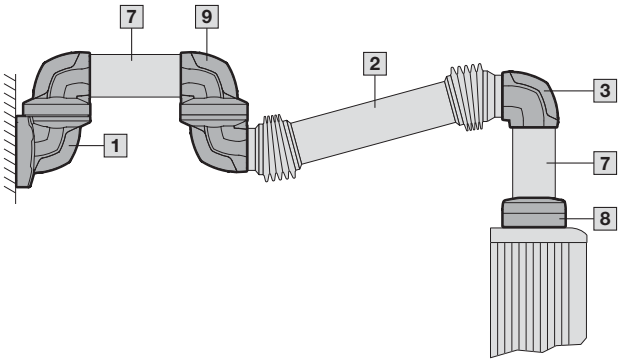



Combination with support section, height adjustable

**Note:**
When using an intermediate hinge, the height-adjustable support section should always be inserted in the closest horizontal position to the enclosure.

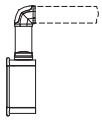
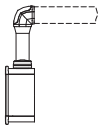
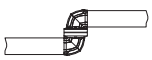
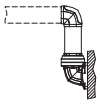
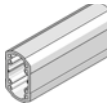
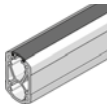
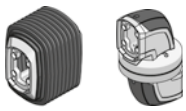
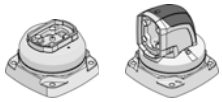
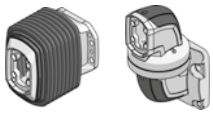


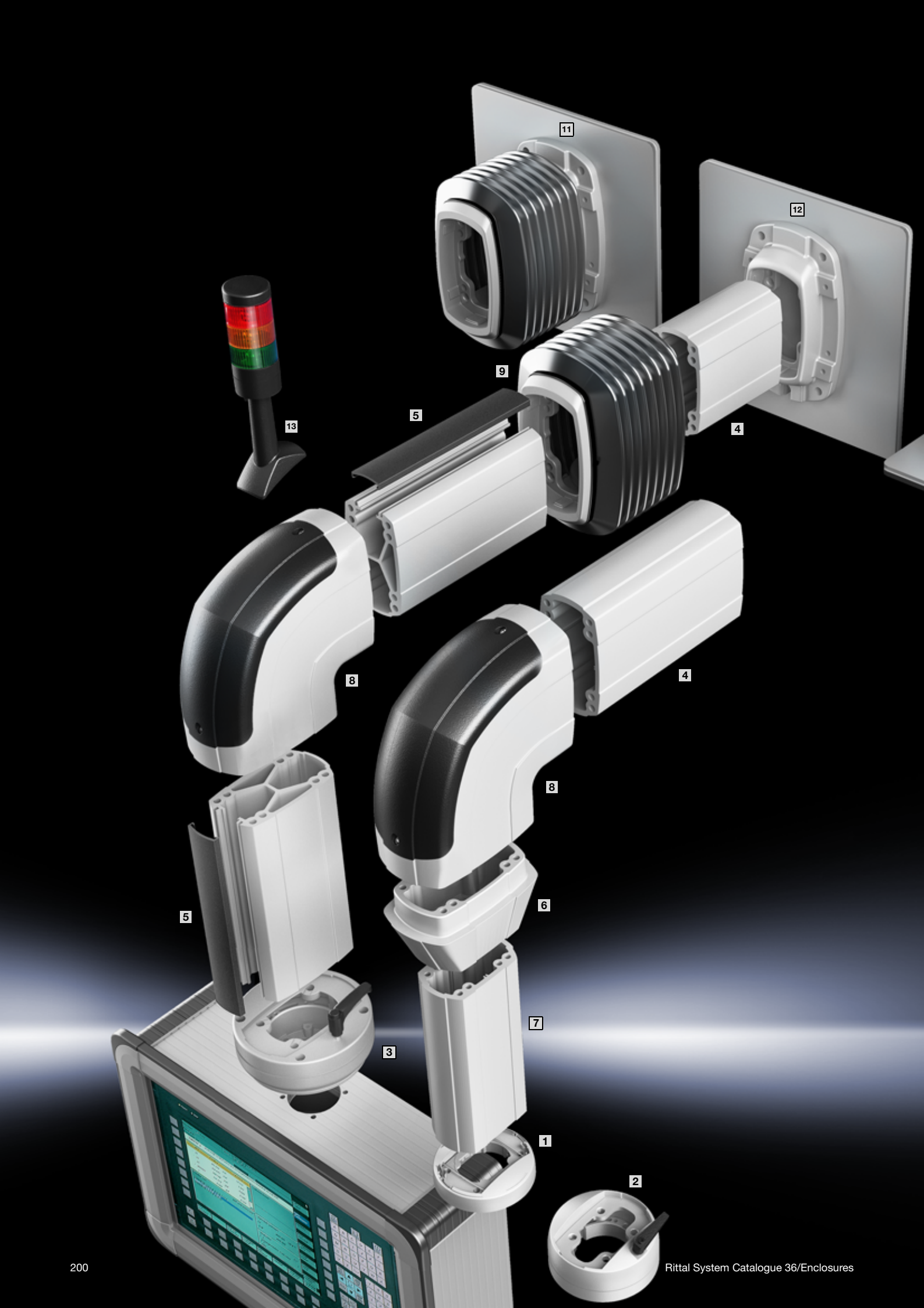




1 Wall-mounted hinge CP 120, horizontal outlet (6212.740)
2 Support section, height-adjustable (6212.120), see page 206
3 Angle piece 90° CP 120 (6212.600)
4 Adaptor for support arm combination CP 120/60 (6212.640)
5 Support section CP 60, L = 500 mm (6206.050)
6 Coupling CP 60 for support arm connection ▭ 120 x 65 mm (6206.340)
7 Support section CP 120, closed, L = 500 mm (6212.050)
8 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
9 Intermediate hinge CP 120 (6212.620)

# Support arm system CP 120

| | Rotating/tilting | Rigid | Length mm | Weight kg | Colour RAL | Enclosure section CP 120 | Enclosure section CP 120/60 | Centre section CP 120 | Wall section CP 120 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | |  |  |  |  |
| | | | | | | Model No. | | | |
| | **Adaptor CP 120/60 from support arm connection Ø 130 mm to ▭ 120 x 65 mm** | | | | | | | | |
| | – | ■ | – | 0.5 | 7035 | **6212.500** | **6212.500** | **–** | **–** |
| | **Attachment CP 120/60 for support arm connection** | | | | | | | | |
| | Ø 130 mm | – | ■ | – | 0.7 | 7035 | **6212.320** | **6206.320** | **–** | **–** |
| | ▭ 120 x 65 mm | – | ■ | – | 0.7 | 7035 | **–** | **6206.360** | **–** | **–** |
| | **Coupling CP 120/60 for support arm connection** | | | | | | | | |
| | Ø 130 mm | ■ | – | – | 2.0 | 7035 | **6212.300** | **6206.300** | **–** | **–** |
| | ▭ 120 x 65 mm | | | | | | **–** | **6206.340** | **–** | **–** |
| | **Angle coupling 90° CP 120 for support arm connection** | | | | | | | | |
| | Ø 130 mm | ■ | – | – | 2.1 | 7035/ 7024 | **6212.380** | **–** | **–** | **–** |
|  | **Support section CP 120/60** | | | | | CP 120 | CP 60[1] | CP 120 | CP 120 |
| | Closed | –<br>–<br>–<br>– | –<br>–<br>–<br>– | 250<br>500<br>1000<br>2000 | 2.0<br>3.9<br>7.8<br>15.6 | 7035 | **6212.025**<br>**6212.050**<br>**6212.100**<br>**6212.200** | **6206.025**<br>**6206.050**<br>**6206.100**<br>**6206.200** | **6212.025**<br>**6212.050**<br>**6212.100**<br>**6212.200** | **6212.025**<br>**6212.050**<br>**6212.100**<br>**6212.200** |
|  | Open | –<br>–<br>– | –<br>–<br>– | 500<br>1000<br>2000 | 4.6<br>9.2<br>18.4 | 7035/ 7024 | **6212.150**<br>**6212.110**<br>**6212.210** | **–**<br>**–**<br>**–** | **6212.150**<br>**6212.110**<br>**6212.210** | **6212.150**<br>**6212.110**<br>**6212.210** |
| | **Adaptor for support arm combination CP 120/60** | | | | | | | | |
| | – | ■ | – | 0.7 | 7035 | **–** | **6212.640** | **–** | **–** |
| | **Angle piece 90° CP 120** | | | | | | | | |
| | – | ■ | – | 1.1 | 7035/ 7024 | **6212.600** | **–** | **–** | **6212.600** |
|  | **Intermediate hinge CP 120** | | | | | | | | |
| | Without height offset | ■ | – | – | 4.0 | 7035/ 7024 | **–** | **–** | **6212.680** | **–** |
| | With height offset | ■ | – | – | 4.4 | 7035/ 7024 | **–** | **–** | **6212.620** | **–** |
|  | **Top-mounted joint CP 120** | | | | | | | | |
| | Vertical outlet | ■ | – | – | 3.8 | 7035 | **–** | **–** | **–** | **6212.720** |
| | Horizontal outlet | ■ | – | – | 4.3 | 7035/ 7024 | **–** | **–** | **–** | **6212.700** |
| | **Wall-mounted hinge CP 120, vertical outlet** | | | | | | | | |
| | | ■ | – | – | 5.5 | 7035/ 7024 | **–** | **–** | **–** | **6212.760** |
|  | **Wall-mounted hinge CP 120, horizontal outlet** | | | | | | | | |
| | Without height offset | ■ | – | – | 8.3 | 7035/ 7024 | **–** | **–** | **–** | **6212.780** |
| | With height offset | ■ | – | – | 6.1 | 7035/ 7024 | **–** | **–** | **–** | **6212.740** |
| | **Wall/base mounting bracket CP 120, small** | | | | | | | | |
| | – | ■ | – | 0.5 | 7035 | **–** | **–** | **–** | **6212.820** |
| | **Wall/base mounting bracket CP 120, large** | | | | | | | | |
| | – | ■ | – | 2.5 | 7035/ 7024 | **–** | **–** | **–** | **6212.800** |
| | **Accessories** | | | | | | | | |
| | Mounting component for signal pillar, see page 1125/<br>Tilting adaptor for support arm connection Ø 130 mm and ▭ 120 x 65 mm, see page 209 | | | | | | | | |

[1] Weight information and diagrams for CP 60, see page 195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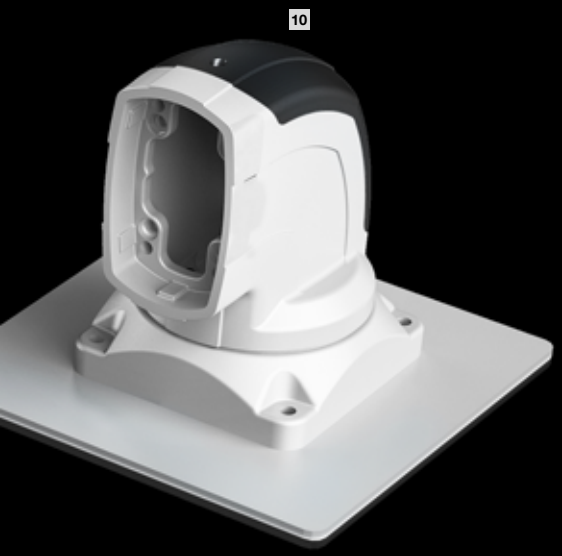
# Support arm system CP 180

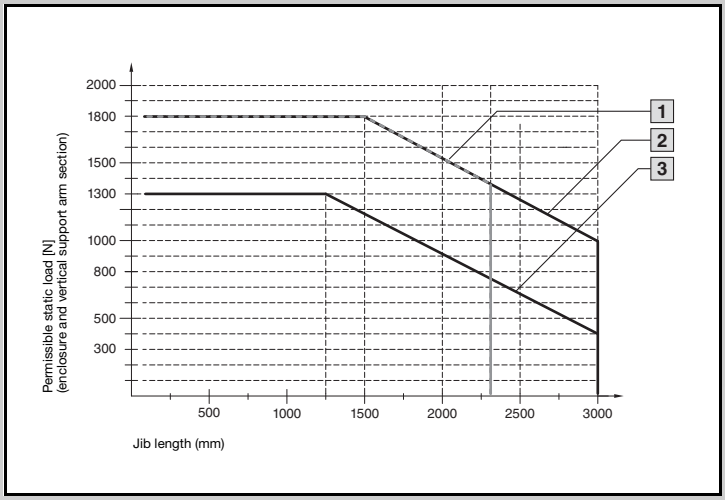



## Component overview

1 Attachment CP 120 for support arm connection Ø 130 mm (6212.320)
2 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
3 Coupling CP 180 for support arm connection Ø 130 mm (6218.300)
4 Support section CPS 180, closed (6218.050, 6218.100, 6218.200)
5 Support section CP 180, open (6218.150, 6218.110, 6218.210)
6 Adaptor for support arm combination, CP 180/120 (6218.640)
7 Support section CP 120, closed (6212.025, 6212.050, 6212.100, 6212.200)
8 Angle piece 90° CP 180 (6218.600)
9 Intermediate hinge CP 180 (6218.620)
10 Top-mounted joint CP 180, horizontal outlet (6218.700)
11 Wall-mounted hinge CP 180, horizontal outlet (6218.740)
12 Wall/base mounting bracket CP 180, small (6218.820)
13 Mounting component CP 120/180 for signal pillar (6212.900)

## Load information

Permissible load depending on system configuration




1 System configuration without intermediate hinge 6218.620, with closed or open support section
2 System configuration with intermediate hinge 6218.620 and closed support section
3 System configuration with intermediate hinge 6218.620 and open support section

**Note:**
- Intermediate hinge 6218.620 should only be used once per system!
- Where possible, Rittal recommends that the support section between components 6218.700, 6218.740, 6218.820 and intermediate hinge 6218.620 should be of a closed design

# Support arm system CP 180

**Comfort Panel** P. 172 **Optipanel** P. 174 **Operating housings AX with handle strips** P. 178 **Operating housing AX for desktop TFT** P. 180

**Support section CP 180**
Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section. Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section.

X-shaped profiling for greater load capacity, large cable routing channels. Upper channel adequate for cables with large connectors (e.g. DVI or VGA) and available/usable throughout the entire system.

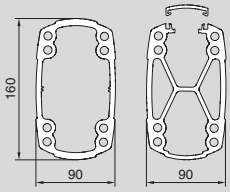
**Size:**
– External dimensions: 90 x 160 mm

**Material:**
– Support section: Extruded aluminium section

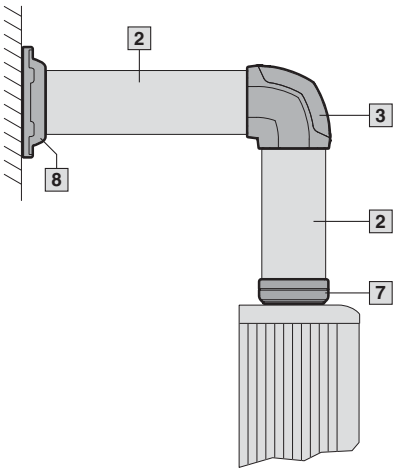
**Colour:**
– Support section: RAL 7035

**Protection category IP to IEC 60 529:**
– IP 54

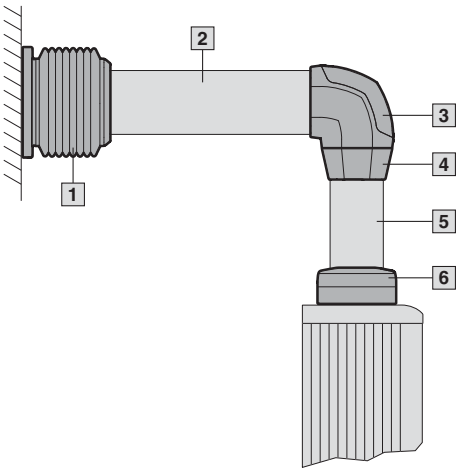
**Supply includes:**
– Support section




Support arm system CP 180

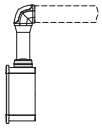
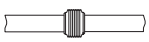
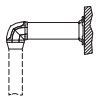



Combination with support arm system CP 120

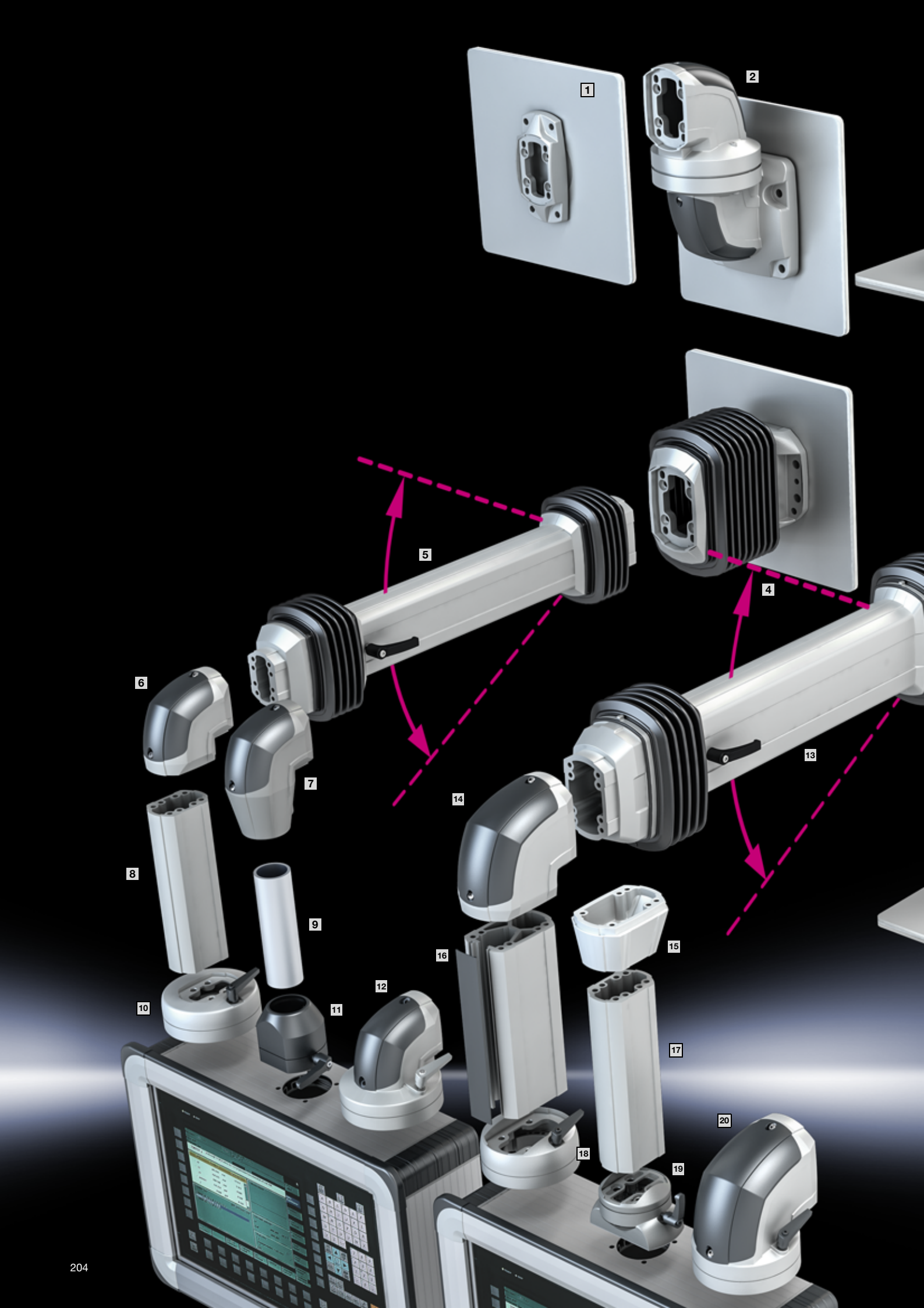



1 Wall-mounted hinge CP 180, horizontal outlet (6218.740)
2 Support section CP 180, closed, 1000 mm (6218.100)
3 Angle piece 90° CP 180 (6218.600)
4 Adaptor for support arm combination CP 180/120 (6218.640)
5 Support section CP 120, closed, L = 500 mm (6212.050)
6 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
7 Coupling CP 180 for support arm connection Ø 130 mm (6218.300)
8 Wall/base mounting bracket CP 180, small (6218.820)

# Support arm system CP 180

| | Rotating/tilting | Rigid | Length mm | Weight kg | Colour RAL | Enclosure section CP 180/120  | Centre section CP 180  | Wall section CP 180  |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Model No. | | |
| **Adaptor from support arm connection Ø 180 mm to Ø 130 mm** | | | | | | | | |
| | – | ■ | – | 0.6 | 7035 | **6212.520** | – | – |
| **Attachment CP 120 for support arm connection Ø 130 mm** | | | | | | | | |
| | – | ■ | – | 0.7 | 7035 | **6212.320** | – | – |
| **Coupling CP 180/120 for support arm connection Ø 130 mm** | | | | | | | | |
| | ■ | – | – | 5.3 | 7035 | **6218.300** | – | – |
| | ■ | – | – | 2.0 | | **6212.300** | – | – |
| **Support section CP 180/120** | | | | | | CP 120[1] | CP 180 | CP 180 |
| Closed | – | – | 250 | 2.6 | 7035 | **6212.025** | – | – |
| | – | – | 500 | 5.2 | | **6212.050** | **6218.050** | **6218.050** |
| | – | – | 1000 | 10.5 | | **6212.100** | **6218.100** | **6218.100** |
| | – | – | 2000 | 21 | | **6212.200** | **6218.200** | **6218.200** |
| Open | – | – | 500 | 5.8 | 7035/ 7024 | **6212.150** | **6218.150** | **6218.150** |
| | – | – | 1000 | 11.6 | | **6212.110** | **6218.110** | **6218.110** |
| | – | – | 2000 | 23.2 | | **6212.210** | **6218.210** | **6218.210** |
| **Adaptor for support arm combination CP 180/120** | | | | | | | | |
| | – | ■ | – | 1.5 | 7035 | **6218.640** | – | – |
| **Angle piece 90° CP 180** | | | | | | | | |
| | – | ■ | – | 3.6 | 7035/ 7024 | **6218.600** | – | **6218.600** |
| **Intermediate hinge CP 180** | | | | | | | | |
| | ■ | – | – | 10.3 | 7035/ 7024 | – | **6218.620** | – |
| **Top-mounted joint CP 180** | | | | | | | | |
| Horizontal outlet | ■ | – | – | 18.0 | 7035/ 7024 | – | – | **6218.700** |
| **Wall-mounted hinge CP 180** | | | | | | | | |
| Horizontal outlet | ■ | – | – | 13.0 | 7035/ 7024 | – | – | **6218.740** |
| **Wall/base mounting bracket CP 180, small** | | | | | | | | |
| | – | ■ | – | 5.0 | 7035 | – | – | **6218.820** |
| **Mounting component CP 120/180 for signal pillar** | | | | | | | | |
| Only for 6218.600, 6218.700, see page 1125 | – | ■ | – | 0.1 | 7024 | **6212.900** | – | **6212.900** |
| **Accessories** | | | | | | | | |
| Tilting adaptor for support arm connection Ø 130 mm and ▭ 120 x 65 mm, see page 209 | | | | | | | | |

[1] Weight information and diagrams for CP 120, see page 199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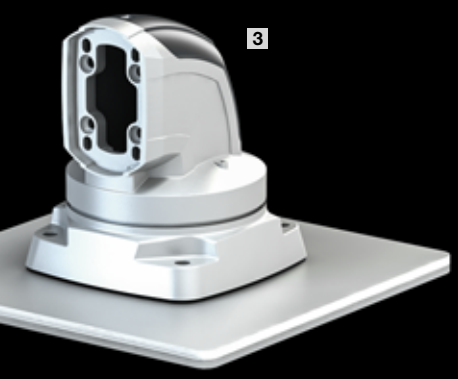
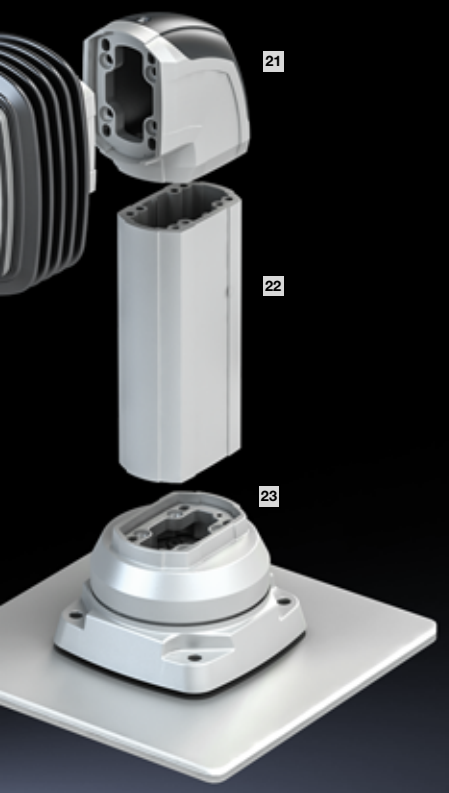
# Support arm system CP
# Support arm, height-adjustable




## Component overview

1 Wall/base mounting bracket CP 120, small (6212.820)
2 Wall-mounted hinge CP 120, horizontal outlet, with height offset (6212.740)
3 Top-mounted joint CP 120, horizontal outlet (6212.700)
4 Wall-mounted hinge CP 120, horizontal outlet, without height offset (6212.780)
5 Support section, height-adjustable CP 120/CP 60 (6212.060, 6212.065)
6 Angle piece 90° CP 60 (6206.600)
7 Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
8 Support section CP 60 (6206.110, 6206.025, 6206.050, 6206.100, 6206.200)
9 Support section CP 40, steel (6501.000, 6501.020)
10 Coupling CP 60 for support arm connection Ø 130 mm (6206.300)
11 Coupling CP 40, steel, for support arm connection ▭ 90 x 71 mm (6501.050)
12 Angle coupling 90° CP 60 for support arm connection Ø 130 mm (6206.380)
13 Support section, height-adjustable CP 120/CP 120 (6212.120)
14 Angle piece 90° CP 120 (6212.600)
15 Adaptor for support arm combination CP 120/60 (6212.640)
16 Support section CP 120, open (6212.150, 6212.110, 6212.210)
17 Support section CP 60 (6206.110, 6206.025, 6206.050, 6206.100, 6206.200)
18 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
19 Coupling CP 60 for support arm connection ▭ 120 x 65 mm (6206.340)
20 Angle coupling 90° CP 120 for support arm connection Ø 130 mm (6212.380)
21 Angle piece 90° CP 120 (6212.600)
22 Support section CP 120, closed (6212.025, 6212.050, 6212.100, 6212.200)
23 Top-mounted joint CP 120, vertical outlet (6212.720)

**Note:**
In combination with support support section, height adjustable observe:
– When using an intermediate hinge, the height-adjustable support section should always be inserted in the closest horizontal position to the enclosure.

## Support section, height-adjustable

Now even more ergonomic, thanks to
- Adjustment range for tall and short operators, as well as seated and stand-up workstations:
  6212.060/120: 600 mm ± 300 mm
  6212.065: 950 mm ± 475 mm
- Support arm holds securely in any position
- Additional fixing with clamping lever if required
- Precise coordination to the suspended load via an adjusting screw at the front of the support section
- Adjusting screw can be accessed without dismantling any components
- Removable side panel for easy access to cable routing
- Tilt angle of the mounted enclosure is identical in every height position
- Cables with connectors such as DVI, VGA are easily inserted
- Broad weight range from 4 to 60 kg with just two systems

Maximum cross-section for cable entry:
- 17 x 41 mm for CP 6212.060/.065
- 17 x 59 mm for CP 6212.120

**Colour:**
- RAL 7035/7024

**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Assembly parts

**Note:**
For combination with support section, height-adjustable, please note:
- When using an intermediate hinge, the height-adjustable support section should always be inserted in the closest horizontal position to the enclosure

| Wall/ machine side | Enclosure side | Overall length mm | Weight range kg[1)] | **Model No.** |
|---|---|---|---|---|
| CP 120 | CP 60 | 741 | 4 – 30 | **6212.060** |
| CP 120 | CP 60 | 1050 | 4 – 17 | **6212.065** |
| CP 120 | CP 120 | 790 | 10 – 60 | **6212.120** |

[1)] For configured enclosure and vertical support section

**Cable tray**

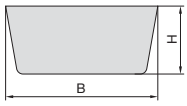
CP 6212.060/.065
30 x 10 mm (W x H)

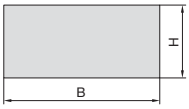
CP 6212.120
43 x 21 mm (W x H)

**Maximum connector dimensions**

CP 6212.060/.065
41 x 17 mm (W x H)

CP 6212.120
59 x 17 mm (W x H)




B = Width

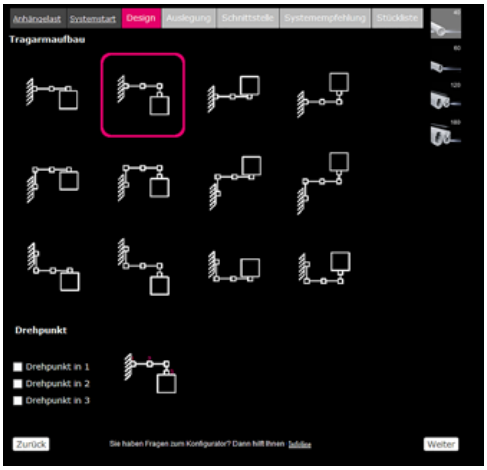
## Support arm configurator

**for CP 40/60/120/180 and support section, height-adjustable**

The tool determines the perfect system for your application from key user-specific parameters such as the jib length, enclosure weight or required cable cross-sections.

**Benefits:**
- Individual assembly tailored to the requirements of the application
- Built-in consistency check
- The outcome is a plausibility-checked parts list
- Detailed cutting dimensions for the support sections
- Free online configurator
- Simple, systematic menu prompting
- Seamless system solution
- Supply of CAD data for the configured system

**Note:**
- Configure online at www.rittal.com/configurators



## Connection console VESA 75/100

For rear connection of
- Slimline operating housings
- Commercially available TFTs
- Industrial PCs

with VESA 75/100 connection

Connection to Rittal support arm systems
- CP 40
- CP 60
- CP 120 via adaptor from support arm connection Ø 130 mm to ▭ 120 x 65 mm

**Benefits:**
- Fast, simple one-person assembly using machined keyholes
- More space for installation and servicing
- Cables may be routed to devices outside and inside the console
- Removable cover for simple cable routing and access to interior device connections
- Integral cable clamping facilities
- Cover with captive screws

**Material:**
- Die-cast zinc

**Colour:**
- Connection console: RAL 7035
- Cover: RAL 7024

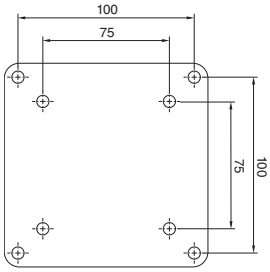
**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Connection console VESA
- Seals
- Cable ties for cable clamping
- Assembly parts

| Weight kg | **Model No.** |
|---|---|
| 1.1 | **6206.480** |

**Also required:**
- Attachment CP 60 for support arm connection ▭ 120 x 65 mm, 6206.360
- Coupling CP 60 for support arm connection ▭ 120 x 65 mm, 6206.340
- Tilting adaptor 10° for support arm connection ▭ 120 x 65 mm, 6206.440
- Coupling CP 40 for support arm connection ▭ 120 x 65 mm, 6501.130
- Tilting adaptor +/-45° for support arm connection ▭ 120 x 65 mm, 6206.460
- Adaptor from support arm connection Ø 130 mm to ▭ 120 x 65 mm, 6212. 500

VESA connection hole pattern



## Connection console

For rear connection of slimline operating housings. Removable lid for simple cable entry.

Connection to Rittal support arm systems
- CP 40
- CP 60
- CP 120 via adaptor from support arm connection Ø 130 mm to ▭ 120 x 65 mm

**Material:**
- Cast aluminium

**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Connection console
- Seals
- Assembly parts

| Colour | Weight kg | **Model No.** |
|---|---|---|
| RAL 7024 | 0.7 | **6206.490** |

**Also required:**
- Coupling CP 40 for support arm connection ▭ 120 x 65 mm, 6501.130
- Attachment CP 60 for support arm connection ▭ 120 x 65 mm, 6206.360
- Coupling CP 60 for support arm connection ▭ 120 x 65 mm, 6206.340

## Adaptor

**for Siemens Pro-Panel**

| Weight kg | Model No. |
|---|---|
| 0.3 | **6206.500** |

For the external mounting of Siemens Simatic
- MP 377 Pro
- Thin Client 15″ Pro
- Flat-Panel Monitor 15″, 19″ Pro
- HMI IPC477C Pro
- ThinClient Pro

Connection to support arm systems
- CP 40, steel
- CP 60/120 with support arm connection
  ▭ 120 x 65 mm

**Material:**
- Aluminium

**Colour:**
- RAL 7035

**Supply includes:**
- Adaptor
- Seals
- Assembly parts

## Connection plates

**with reinforcement plate**

| Weight kg | Model No. |
|---|---|
| 1.4 | **6212.540** |

For easy location of the command panel onto the support arm or pedestal. More space for cable entry.

For mounting command panels
- Comfort Panel from a front panel width of 247 mm and installation depth of 152 mm
- Optipanel from a front panel width of 220 mm and installation depth of 150 mm
- Sheet steel from 135 mm installation depth

For mounting on support arm system components
- Attachment CP 60/120 for support arm connection Ø 130 mm, 6206.320, 6212.320
- Coupling CP 60/120 for support arm connection Ø 130 mm, 6206.300, 6212.300
- Angle coupling 90° CP 60/120 for support arm connection Ø 130 mm, CP 6206.380, 6212.380
- Tilting adaptor 10° CP 60/120 for support arm connection Ø 130 mm, 6206.400
- Tilting adaptor +/-45° CP 60/120 for support arm connection Ø 130 mm, 6206.420
- Coupling CP 180 for support arm connection Ø 130 mm, 6218.300

**Material:**
- Connection plate: Cast aluminium
- Reinforcement plate: Sheet steel, 6 mm

**Colour:**
- RAL 7035

**Supply includes:**
- Connection plates
- Reinforcement plate
- Seals
- Assembly parts

## Tilting adaptor +/-45°

**for command panels with support arm connection Ø 130 mm**

| Weight kg | Model No. |
|---|---|
| 1.2 | **6206.420** |

For mounting between:
– Coupling CP 60, 6206.300
– Coupling CP 120, 6212.300
– Coupling CP 180, 6218.300
or
– Attachment CP 60, 6206.320
– Attachment CP 120, 6212.320
or
– Angle coupling 90°, CP 60, 6206.380
– Angle coupling 90°, CP 120, 6212.380
and the command panel

**Tilt angle:**
– Adjustable in 7.5° increments

**Material:**
– Tilting adaptor: Cast aluminium
– Concertina section: Plastic

**Colour:**
– RAL 7024

**Supply includes:**
– Tilting adaptor
– Concertina section
– Seals
– Assembly parts

## Tilting adaptor +100°/-60°

**for command panels with support arm connection ▭ 120 x 65 mm**

| Weight kg | Model No. |
|---|---|
| 0.8 | **6206.460** |

For mounting on
– IW worktop, prepared for attachment of Ø 130 mm
– Surfaces
– Attachment/coupling with support arm connection ▭ 120 x 65 mm

To fit enclosures up to 20 kg with support arm connection
– ▭ 90 x 71 mm
– Ø 130 mm
– ▭ 120 x 65 mm
– VESA Standard 75

With cable tube for protected cable entry.

**Tilt angle:**
– Adjustable in 7.2° increments via clamping lever and may be limited to +100°/–15° using the stop screw supplied loose

**Material:**
– Tilting adaptor: Sheet steel, spray-finished
– Concertina section: Plastic

**Colour:**
– Tilting adaptor: RAL 7035
– Concertina section: RAL 7024

**Supply includes:**
– Tilting adaptor
– Concertina section
– Assembly parts

## Tilt coupler

**for support arm system CP 60**
For mounting two enclosures on a support arm/ stand system.

**Benefits:**
– Ergonomic adjustment of the screen and key-board enclosure
– Simple, linear adjustment of the required position via the friction brake

**Material:**
– Cast aluminium

**Surface finish:**
– Textured paint

**Colour:**
– Tilt coupler: RAL 7035
– Covers: RAL 7024

**Protection category IP to IEC 60 529:**
– IP 54

**Supply includes:**
– Tilt coupler
– Seals
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6206.350** |

**Accessories:**
– Adaptor CP 60 to ▭ 120 x 65 mm, see page 210

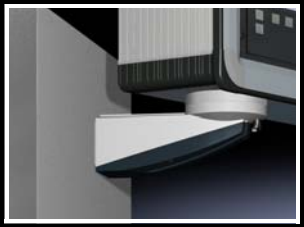
## Adaptor for tilt coupler

**CP 60 to support arm connection ▭ 120 x 65 mm**

**Material:**
– Cast aluminium

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6206.550** |



## Pivot

**with/without jib**
For direct, vertically hinged integration into machines and systems.

**Applications:**
– Enclosure suspended or top-mounted

**Benefits:**
– With integral rotation range restrictor

**Installation options:**
– To fit enclosures with support arm connection Ø 130 mm.

**Load capacity:**
– 700 N

**Rotation range/swivel area:**
– Approx. 310°
– The range of rotation can be limited by inserting the grub screws provided.

**Protection category IP to IEC 60 529:**
– IP 54

| Jib length mm | Colour | Packs of | Model No. |
|---|---|---|---|
| 200 | RAL 7024/7035 | 1 pc(s). | **6206.850** |
| – | RAL 7035 | 1 pc(s). | **6206.870** |

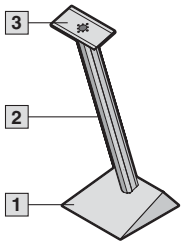
**Comfort Panel** Page 172 **Optipanel** Page 174 **Compact Panel** Page 181 **Operating housings AX with handle strips** Page 178

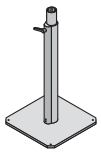
Pedestal, modular, consisting of:
- Pedestal base plate/cross member
- Support section
- Enclosure connection

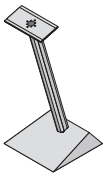
**Colour:**
- RAL 7035

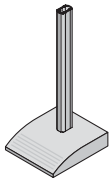
Photo shows a configuration example with equipment not included in the scope of supply

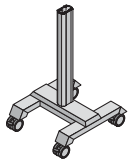
## Pedestal, modular









| | | | | | | |
|---|---|---|---|---|---|---|
| Weight load kg | | 15 | 18 | 35[1] | 35[1] | Page |
| **1 Pedestal base plate** | | **Model No.** | | | | |
| Pedestal base plate/cross member | | **6146.100** | **6106.100** | **6106.200** | **6106.400** | |
| Dimensions mm | Width | 400 | 400 | 490 | 600 | |
| | Height | 10 | 108 | 100 | 205 | |
| | Depth | 400 | 400 | 600 | 650 | |

| | | | | | |
|---|---|---|---|---|---|
| **2 Support section** | **Model No.** | | | | |
| Height-adjustable (adjustment range 732 – 1122 mm) | **6146.200** | **–** | **–** | **–** | |
| Closed, length 1000 mm | – | 6206.100 | 6206.100[1] | 6206.100[1] | |

| | | | | | |
|---|---|---|---|---|---|
| **3 Enclosure connection** | **Model No.** | | | | |
| Enclosure reinforcement, rigid | – | 6106.110 | – | – | |
| Attachment CP 40, steel, for support arm connection ▭ 90 x 71 mm | 6501.070 | – | – | – | |
| Coupling CP 40, steel, for support arm connection ▭ 90 x 71 mm | 6501.050 | – | – | – | |
| Coupling CP 40, steel, for support arm connection ▭ 120 x 65 mm | 6501.130 | – | – | – | |
| Attachment CP 60, for support arm connection Ø 130 mm | – | – | 6206.320 | 6206.320 | |
| Attachment CP 60, for support arm connection ▭ 120 x 65 mm | – | – | 6206.360 | 6206.360 | |
| Coupling CP 60, for support arm connection Ø 130 mm | – | – | 6206.300 | – | |
| Coupling CP 60, for support arm connection ▭ 120 x 65 mm | – | – | 6206.340 | – | |
| Tilt adjustment | **6146.300** | **–** | **–** | **–** | |

| | | | | | |
|---|---|---|---|---|---|
| **Accessories** | | | | | |
| Adaptor CP 60 to CP 40 | – | 6206.650 | 6206.650 | 6206.650 | 214 |
| Twin castors | 6148.000 | – | 6148.000 | ■ | 893 |
| Levelling feet | – | – | 4612.000 | – | 892 |
| Base mounting bracket | – | – | 6147.000 | – | 214 |

[1] Alternative: Support arm system CP 120 may also be used by simply drilling a hole, weight load 50 kg

# Stand systems

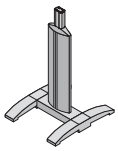
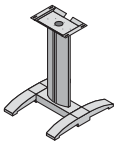
**Comfort Panel** Page 172 **Optipanel** Page 174 **Compact Panel** Page 181 **Operating housings AX with handle strips** Page 178

The right system to suit any application:
- Different design variants
- Weight load from 15 – 25 kg
- Reliable protection of cable management

**Colour:**
- RAL 7035

Photo shows a configuration example with equipment not included in the scope of supply

## Pedestal, complete

| |  |  | |
|---|---|---|---|
| Weight load kg | 25 | 25 | Page |
| **Model No.** | **6106.300** | **6141.200** | |
| Width mm | 600 | 600 | |
| Height mm | 1093 | 946 | |
| Depth mm | 660 | 660 | |
| **Supply includes** | | | |
| Cross member | ■ | ■ | |
| Base plate | – | – | |
| Support section | ■ | – | |
| Vertical aluminium panel | ■ | ■ | |
| Worktop attachment | – | ■ | |
| **Accessories** | | | |
| Adaptor CP 60 to CP 40 | 6206.650 | – | 214 |
| Twin castors | 6148.000, 7495.000 | 6148.000, 7495.000 | 893 |
| Levelling feet | 4612.000 | 4612.000 | 892 |
| Base mounting bracket | 6147.000 | 6147.000 | 214 |
| Attachment CP 60, for support arm connection Ø 130 mm | 6206.320 | – | 195 |
| Attachment CP 60, for support arm connection ▭ 120 x 65 mm | 6206.360 | – | 195 |
| Coupling CP 60, for support arm connection Ø 130 mm | 6206.300 | – | 195 |
| Coupling CP 60, for support arm connection ▭ 120 x 65 mm | 6206.340 | – | 195 |
| Worktop without handle[1)] | **–** | **6902.310** | |

[1)] W x H x D 950 x 38 x 600 mm

**Comfort Panel** Page 172 **Optipanel** Page 174 **Compact Panel** Page 181 **Operating housings AX with handle strips** Page 178

The welded alternatives to the pedestal, complete
- Open pedestal for retrospective cable entry with pre-assembled connectors
- Pillar, small: For heavy installed equipment

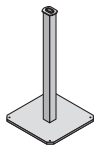
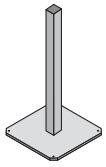
**Material:**
- Steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 7035

Photo shows a configuration example with equipment not included in the scope of supply

## Pedestal, open/pillar, small

| | |  |  | |
|---|---|---|---|---|
| Weight load kg | | 40 | 80 | Page |
| | | **6106.500** | **6112.500** | |
| **Supply includes** | | | | |
| Base plate cross section mm | Width | 380 | 500 | |
| | Height | 10 | 12 | |
| | Depth | 380 | 500 | |
| Overall height mm | | 1095 | 1150 | |
| **Accessories** | | | | |
| Attachment CP 60, for support arm connection Ø 130 mm | | 6206.320 | – | 195 |
| Attachment CP 60, for support arm connection ▭ 120 x 65 mm | | 6206.360 | – | 195 |
| Coupling CP 60, for support arm connection Ø 130 mm | | 6206.300 | – | 195 |
| Coupling CP 60, for support arm connection ▭ 120 x 65 mm | | 6206.340 | – | 195 |
| Attachment CP 120, for support arm connection Ø 130 mm | | – | 6212.320 | 199 |
| Coupling CP 120, for support arm connection Ø 130 mm | | – | 6212.300 | 199 |
| Adaptor CP 60 to CP 40 | | 6206.650 | – | 214 |

## Accessories

### Base mounting bracket

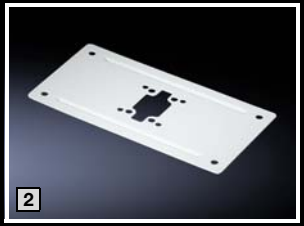
Brackets for screw-fastening from below to the pedestals with posidrive raised countersunk screws M12. Optionally with projection at the front, interior or sides, with Ø 11 mm hole for screw-fastening to the base.

**Material:**
– Steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Posidrive raised countersunk screws M12

| Packs of | **Model No.** |
|---|---|
| 4 pc(s). | **6147.000** |




### Enclosure reinforcement

For external or internal reinforcement of enclosures of a corresponding size. Smaller enclosures may also be mounted directly without reinforcement.

**Supply includes:**
– Assembly parts for the enclosure and support section plus 2 seals

| | For enclosure | Support arm connection | Material | Weight kg | **Model No.** |
|---|---|---|---|---|---|
| 1 | B1 ≥ 300 mm, T1 ≥ 150 mm | CP 40, stainless steel | Stainless steel 1.4301 | 0.9 | **6143.310** |
| 2 | B1 ≥ 300 mm, T1 ≥ 150 mm | CP 60 | Sheet steel | 0.9 | **6106.110** |

### Adaptor CP 60 to CP 40

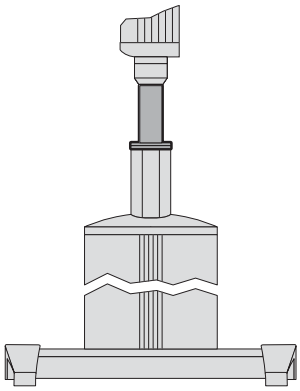
**for stand and support arm systems**
For the transition from support section CP 60 to 48 round pipe.

**Material:**
– Steel

**Colour:**
– RAL 7035

**Supply includes:**
– Adaptor
– Self-tapping screws for support section attachment
– Seal

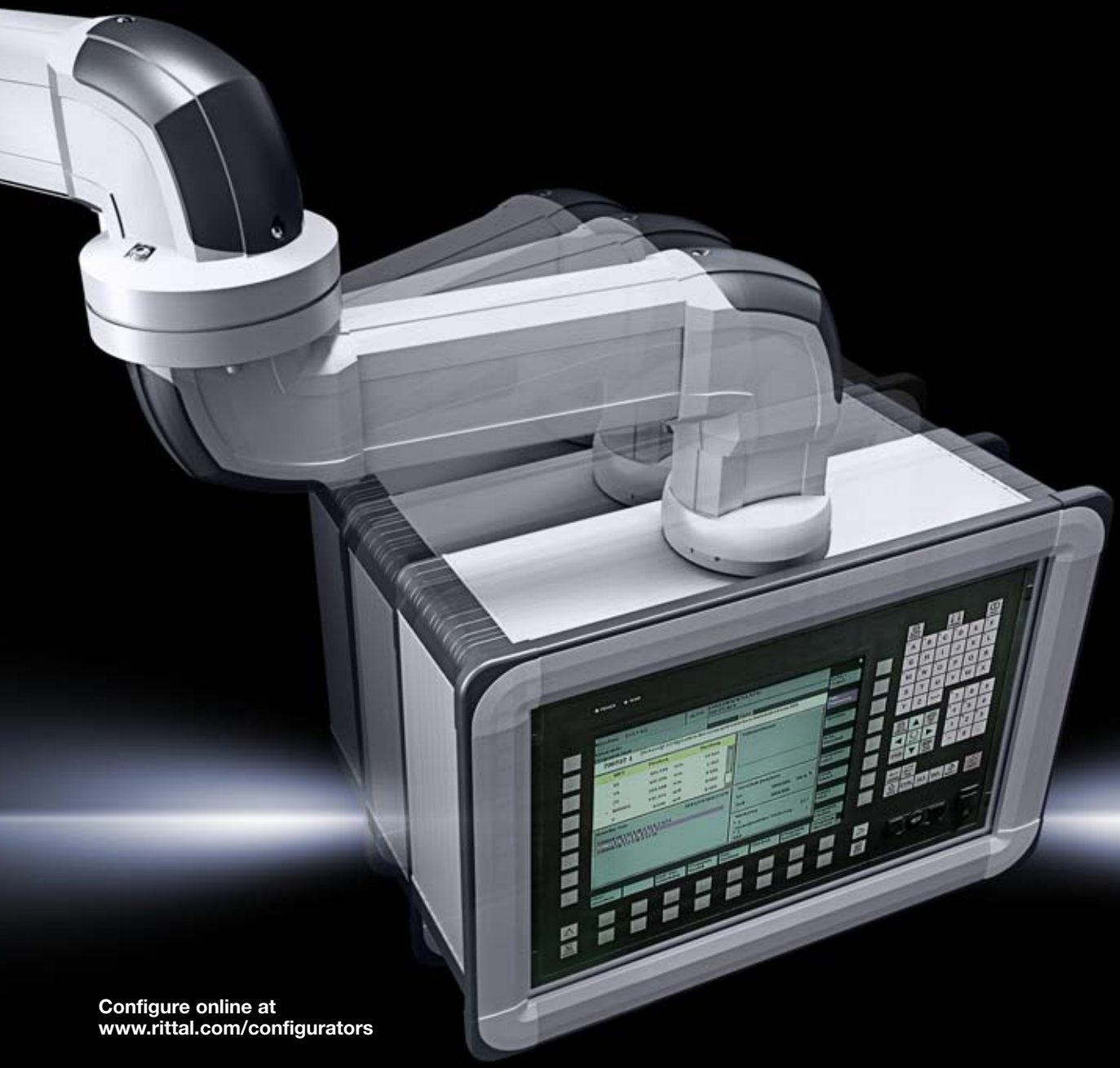
| Length mm | Weight kg | Rigid | Packs of | **Model No.** |
|---|---|---|---|---|
| 300 | 1.81 | ■ | 1 pc(s). | **6206.650** |



# Comfort Panel

Simple selection with the online configurator,
see page 273





**Configure online at**
**www.rittal.com/configurators**

# Rittal – The System.

**Faster – better – everywhere.**

# Hygienic Design

## Small and compact enclosures HD

Product advantages ....218
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Accessories ....223

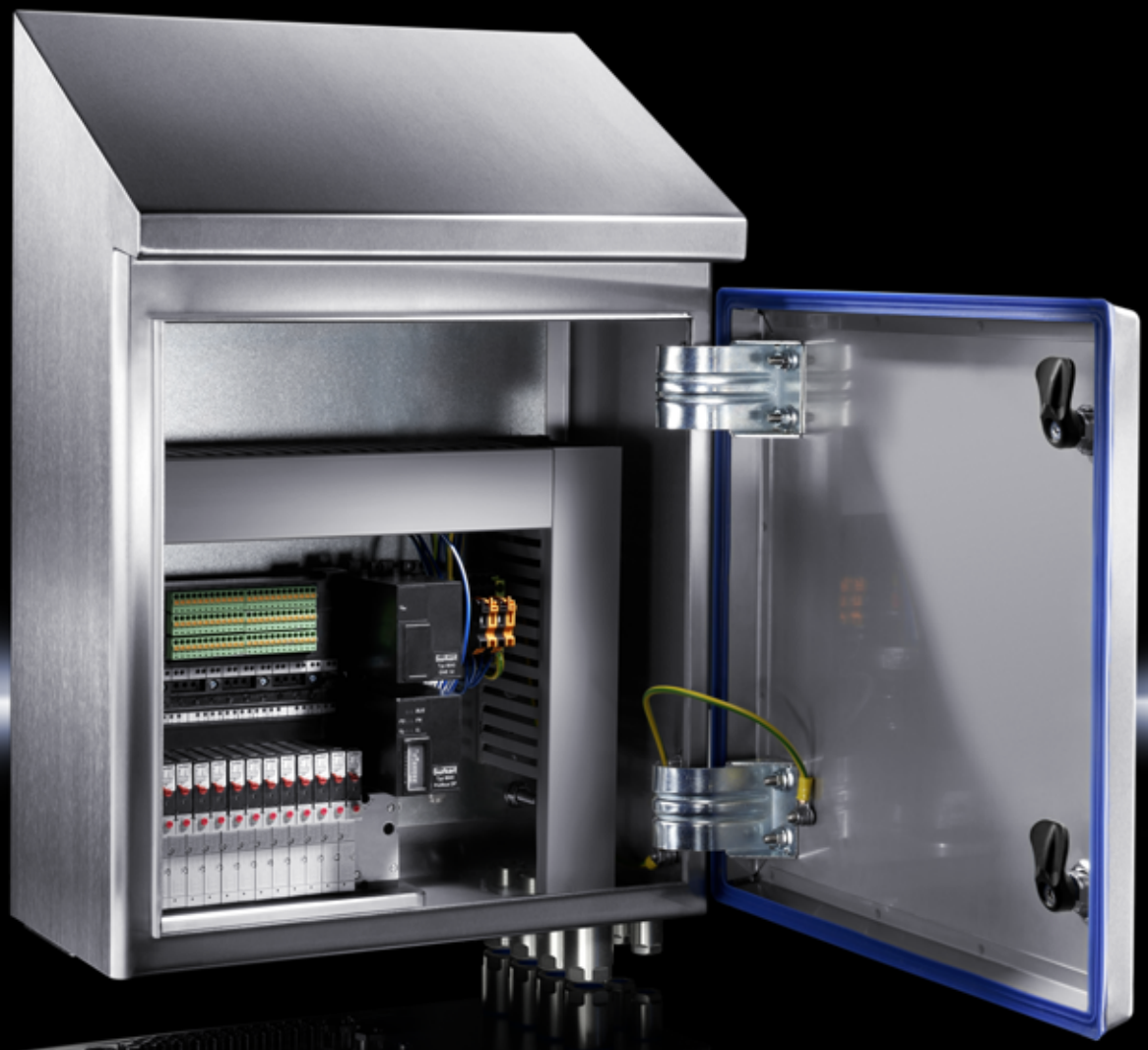
DGUV Test

NV 16201

Hygiene geprüft
hygiene tested

dguv.de/pruefzeichen

# Hygienic Design enclosures – Added cleanliness guaranteed!



## Silicone seal

- All-round external joint-free silicone seal
- Easy to replace
- Guides and fixes the lid to the screw fasteners
- All-round tilt for terminal boxes
  – Enclosure: 3°
  – Lid: 10°

## Interior installation

- Mounting hole pitch pattern of 6.25 mm for greater flexibility
- KX support rails and mounting plates may be directly fitted

## Hinges and seal

- Hinges that are inside the sealing zone create an exceptionally easy-clean design on the outside
- The durable all-round, external silicone seal is joint-free
- Installed sealing frames are easily replaced
- No external cavity between enclosure and door
- Seal dyed blue to clearly distinguish it from foodstuffs

## Screw fastener

- Captive
- With external seal
- Hexagon shape for perfect cleanliness

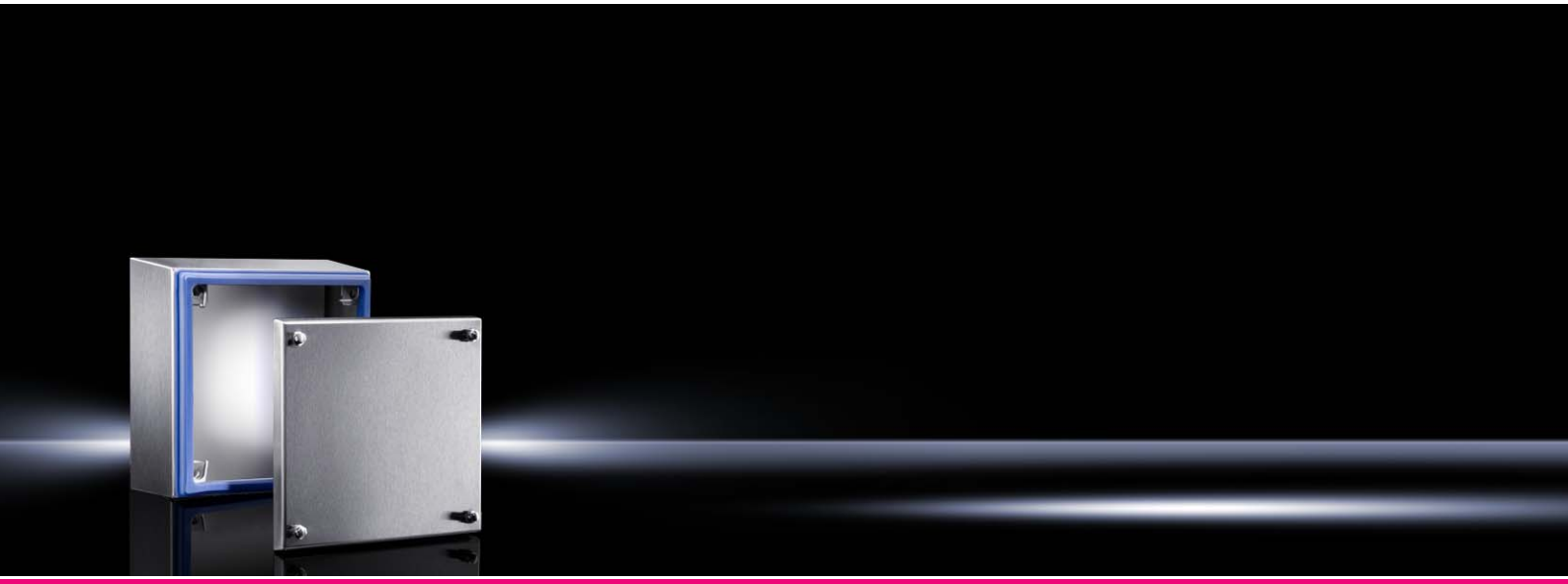
## Lock and lock insert

- External parts made of stainless steel
- Material and shape allow easy and reliable cleaning

## Roof, tilted

- 30° tilt on compact enclosures prevents objects from being deposited on it
- Easy inspected
- Allows fluids to drain off rapidly

# Hygienic Design



**HD accessories** Page 223 **System accessories** Page 877 **Terminal boxes KX, stainless steel** Page 230

**Design:**
- Enclosure angled forwards by 3°

**Material:**
- Enclosure and cover: Stainless steel 1.4301 (AISI 304) 1.5 mm
- Mounting bracket: Sheet steel, zinc-plated, passivated, 2.0 mm
- Screw plug: Stainless steel
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

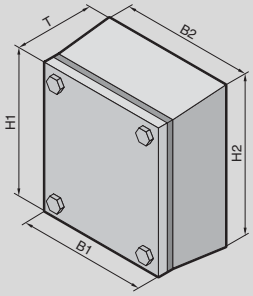
**Surface finish:**
- Enclosure and cover: Brushed, grain 400, peak-to-valley height < 0.8 µm
- Seal: Blue, dyed (RAL 5010)

**Protection category IP to IEC 60 529:**
- IP 66
- IP X9

**Protection category NEMA:**
- NEMA 13
- NEMA 3R
- NEMA 4X

**Supply includes:**
- Enclosure of all-round solid construction
- Cover
- Mounting bracket (pre-assembled)
- Seal and screw plug (supplied loose)

**Approvals:**
- UL
- cUL




## Terminal boxes HD

| **Width front** (B1) mm | Packs of | 150 | 150 | 200 | 300 | 400 | 400 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width rear** (B2) mm | | 172 | 177 | 227 | 327 | 427 | 427 | |
| **Height front** (H1) mm | | 150 | 150 | 200 | 200 | 200 | 300 | |
| **Height rear** (H2) mm | | 172 | 177 | 227 | 227 | 227 | 327 | |
| **Depth** (T) mm | | 80 | 120 | 120 | 120 | 120 | 120 | |
| **Model No.** | 1 pc(s). | **1670.600** | **1671.600** | **1672.600** | **1674.600** | **1675.600** | **1676.600** | |
| Weight kg | | 1.7 | 2.2 | 3.0 | 4.0 | 5.0 | 5.9 | |
| **Accessories** | | | | | | | | |
| Wall spacer bracket HD | 1 pc(s). | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 223 |
| Support rail TS 35/7.5 | 10 pc(s). | 2314.000 | 2314.000 | 2315.000 | 2316.000 | 2317.000 | 2317.000 | 997 |
| Cable gland HD | | see page | see page | see page | see page | see page | see page | 1057 |
| Mounting plate | 1 pc(s). | 1560.800 | 1560.800 | 1562.800 | 1563.800 | 1564.800 | 1568.800 | 970 |

**HD accessories** Page 223 **System accessories** Page 877 **AX stainless steel** Page 236

**Design:**
- Roof angled forwards by 30°

**Material:**
- Enclosure and door: Stainless steel 1.4301 (AISI 304)
- Mounting plate: Sheet steel
- Lock insert HD: Stainless steel 1.4404 (AISI 316L)
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

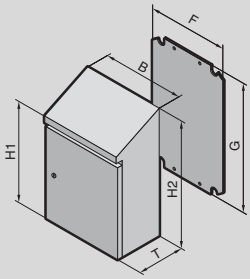
**Surface finish:**
- Enclosure and door: Brushed, grain 400, peak-to-valley height < 0.8 µm
- Mounting plate: Zinc-plated
- Seal: Blue, dyed (RAL 5010)

**Protection category IP to IEC 60 529:**
- IP 66
- IP X9

**Protection category NEMA:**
- NEMA 13
- NEMA 4X

**Supply includes:**
- Enclosure of all-round solid construction
- Door with inserted seal
- Door hinged on the right, may be swapped to the left
- Mounting plate

**Approvals:**
- UL
- cUL




## Compact enclosures HD, single-door

| **Width** (B) mm | Packs of | 220 | 390 | 390 | 510 | 610 | Page |
|---|---|---|---|---|---|---|---|
| **Height front** (H1) mm | | 350 | 430 | 650 | 550 | 430 | |
| **Height rear** (H2) mm | | 437 | 549 | 769 | 669 | 601 | |
| **Depth** (T) mm | | 155 | 210 | 210 | 210 | 300 | |
| Mounting plate width (F) mm | | 162 | 330 | 330 | 450 | 550 | |
| Mounting plate height (G) mm | | 275 | 355 | 575 | 475 | 355 | |
| **Model No.** | 1 pc(s). | **1302.600** | **1306.600** | **1308.600** | **1307.600** | **1320.600** | |
| Weight kg | | 6.6 | 14.7 | 17.9 | 19.7 | 21.7 | |
| **Accessories** | | | | | | | |
| Wall spacer bracket HD | 1 pc(s). | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 223 |
| Cable gland HD | | see page | see page | see page | see page | see page | 1057 |
| Rail for interior installation | 4 pc(s). | – | – | 5001.050 | – | – | 225 |
| T handle HD | 1 pc(s). | 4000.065 | 4000.065 | 4000.065 | 4000.065 | 4000.065 | 223 |

## Compact enclosures HD, single-door

| **Width** (B) mm | Packs of | 610 | 810 | 810 | 810 | 810 | Page |
|---|---|---|---|---|---|---|---|
| **Height front** (H1) mm | | 650 | 430 | 650 | 1050 | 1250 | |
| **Height rear** (H2) mm | | 769 | 549 | 821 | 1221 | 1421 | |
| **Depth** (T) mm | | 210 | 210 | 300 | 300 | 300 | |
| Mounting plate width (F) mm | | 550 | 750 | 750 | 745 | 745 | |
| Mounting plate height (G) mm | | 575 | 355 | 575 | 975 | 1145 | |
| **Model No.** | 1 pc(s). | **1310.600** | **1314.600** | **1315.600** | **1316.600** | **1317.600** | |
| Weight kg | | 27.4 | 25.5 | 39.0 | 60.1 | 71.0 | |
| **Accessories** | | | | | | | |
| Wall spacer bracket HD | 1 pc(s). | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 4000.100 | 223 |
| Cable gland HD | | see page | see page | see page | see page | see page | 1057 |
| Rail for interior installation | 4 pc(s). | 5001.050 | – | 5001.050 | see page | see page | 225 |
| T handle HD | 1 pc(s). | 4000.065 | 4000.065 | 4000.065 | 4000.065 | 4000.065 | 223 |

# Hygienic Design

**HD accessories** Page 223 **System accessories** Page 877 **AX stainless steel** Page 236

**Design:**
- Roof angled forwards by 30°

**Material:**
- Enclosure and doors: Stainless steel 1.4301 (AISI 304)
- Mounting plate: Sheet steel
- Lock insert HD: Stainless steel 1.4404 (AISI 316L)
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

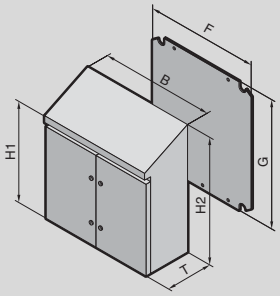
**Surface finish:**
- Enclosure and door: Brushed, grain 400, peak-to-valley height < 0.8 µm
- Mounting plate: Zinc-plated
- Seal: Blue, dyed (RAL 5010)

**Protection category IP to IEC 60 529:**
- IP 66
- IP X9

**Protection category NEMA:**
- NEMA 13
- NEMA 4X

**Supply includes:**
- Enclosure of all-round solid construction
- Door with inserted seal
- Mounting plate

**Approvals:**
- UL
- cUL




## Compact enclosures HD, two-door

| **Width** (B) mm | Packs of | 1010 | 1010 | Page |
|---|---|---|---|---|
| **Height front** (H1) mm | | 1050 | 1250 | |
| **Height rear** (H2) mm | | 1280 | 1480 | |
| **Depth** (T) mm | | 400 | 400 | |
| Mounting plate width (F) mm | | 945 | 945 | |
| Mounting plate height (G) mm | | 975 | 1175 | |
| **Model No.** | 1 pc(s). | **1318.600** | **1319.600** | |
| **Accessories** | | | | |
| Wall spacer bracket HD | 1 pc(s). | 4000.100 | 4000.100 | 223 |
| Cable gland HD | | see page | see page | 1057 |
| Rail for interior installation | 4 pc(s). | 5001.052 | 5001.053 | 225 |
| T handle HD | 1 pc(s). | 4000.065 | 4000.065 | 223 |

## Levelling feet HD

**Benefits:**
- Minimises cleaning time thanks to fully covered, permanently sealed threads
- Compensation of floor inclines up to an angle of 10° thanks to flexible base
- Baying can even be achieved on sloping floors, thanks to a large levelling range

**Material:**
- Stainless steel 1.4301 (AISI 304)

**Load capacity:**
- Max. 7000 N static per levelling foot

**Supply includes:**
- Assembly parts and seals

| Design | Thread | Adjustment range mm | Packs of | **Model No.** |
|---|---|---|---|---|
| without base mount | M12 | 122 - 175 | 4 pc(s). | **4000.240** |
| with base attachment | M12 | 122 - 175 | 4 pc(s). | **4000.250** |

## Wall spacer bracket HD

**Benefits:**
- Creates space for cleaning behind the enclosure
- Shorter assembly times by eliminating the need for an all-round seal
- Improved hygiene by avoiding inaccessible dead spaces or gaps between the enclosure and wall

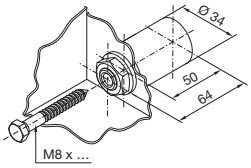
**Functions:**
- Mounting on the wall optionally from the enclosure interior via a through-hole (max. M8) or from the rear via an integral M10 thread

**Material:**
- Stainless steel 1.4301 (AISI 304)

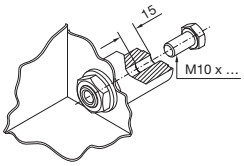
**Supply includes:**
- Assembly parts and seals

**Note:**
- Depending on the size of the enclosure, up to 4 wall spacer brackets are required to ensure sufficiently stable wall mounting

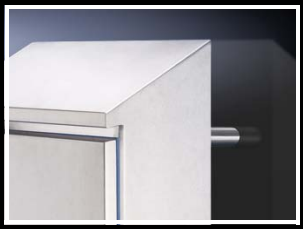
| Wall distance mm | Packs of | **Model No.** |
|---|---|---|
| 50 | 1 pc(s). | **4000.100** |




Attachment from inside




Attachment from outside



## T handle HD

For easy opening without a key. May be exchanged in all enclosures with cam lock.

**Material:**
- Stainless steel 1.4301 (AISI 304)

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4000.065** |

## Accessories

### Cam lock HD

Hygienic Design variant for easy, safe cleaning.

**Applications:**
– May be integrated into customised applications, e.g. covers of machine panels.

**Material:**
– Stainless steel 1.4404 (AISI 316L)
– Fastener lug, lock nut: Steel, zinc-plated

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2304.010** |

**Accessories:**

– Enclosure key HD, see page 224

### Enclosure key HD

For HD cam lock.

**Note:**
– Enclosure, case and lock systems are supplied as standard with matching keys

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2549.600** |

### Bit HD

**for universal key 2549.500**

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2549.510** |

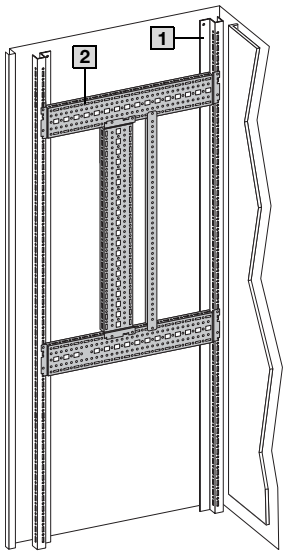
## Rails for interior installation

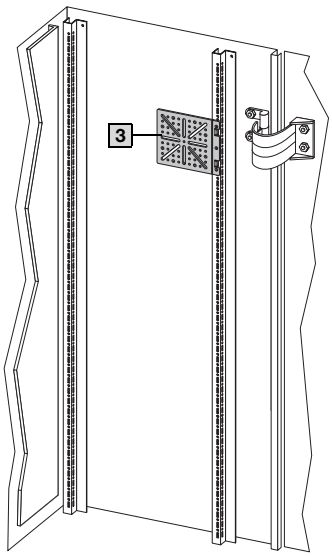
**for HD compact enclosures**
For mounting on the existing threaded bolts.
With system punchings on three sides.

**Material:**
– Sheet steel, zinc-plated

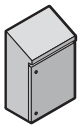
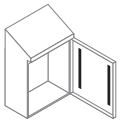
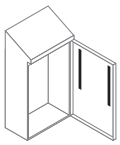
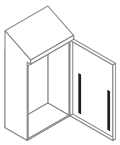
**Supply includes:**
– Assembly parts

| Length mm | Packs of | Model No. | Page |
|---|---|---|---|
| 510 | 4 pc(s). | **5001.050** | 995 |
| 710 | 4 pc(s). | **5001.051** | 995 |
| 910 | 4 pc(s). | **5001.052** | 995 |
| 1110 | 4 pc(s). | **5001.053** | 995 |

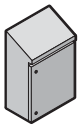



**Interior installation, door**

| Enclosure  | 1  | 1  | 1  |
|---|---|---|---|
| **Model No.** | **Model No.** | | |
| 1316.600 | 5001.052 | 5001.050 | 5001.050 |
| 1317.600 | 5001.053 | 5001.051<br>5001.050 | 5001.051<br>5001.050 |
| 1318.600 | 5001.052 | 5001.050 | 5001.050 |
| 1319.600 | 5001.053 | 5001.051<br>5001.050 | 5001.051<br>5001.050 |

**Interior installation, enclosure**

| Enclosure  | 1 Rails for interior installation | 2 Punched section with mounting flange, 17 x 73 mm | 3 Mounting plates |
|---|---|---|---|
| **Model No.** | **Model No.** | | |
| 1308.600<br>1310.600<br>1315.600 | 5001.050 | – | – |
| 1316.600 | 5001.052 | 8612.130<br>(only on lock side) | 8612.400<br>8612.410 |
| 1317.600 | 5001.053 | 8612.130<br>(only on lock side) | 8612.400<br>8612.410 |
| 1318.600 | 5001.052 | – | 8612.400<br>8612.410 |
| 1319.600 | 5001.053 | – | 8612.400<br>8612.410 |

# Rittal – The System.

**Faster – better – everywhere.**

# Stainless steel



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# Stainless steel enclosures

## The secure choice for harsh environments

## Incredible enclosure diversity

- Stainless steel enclosures for all requirement profiles in modern industrial technology. They meet the extremely high demands associated with corrosion protection and chemical substances.
- The smooth surface boasts outstanding hygienic properties which means less cleaning work.
- Depending on the requirements, the materials used are stainless steel 1.4301 (AISI 304) or stainless steel 1.4404 (AISI 316L).
- Cleverly thought-out system platforms, in conjunction with an extensive selection of system accessories, create outstanding solution diversity in the Rittal stainless steel range.

## Coordinating accessories

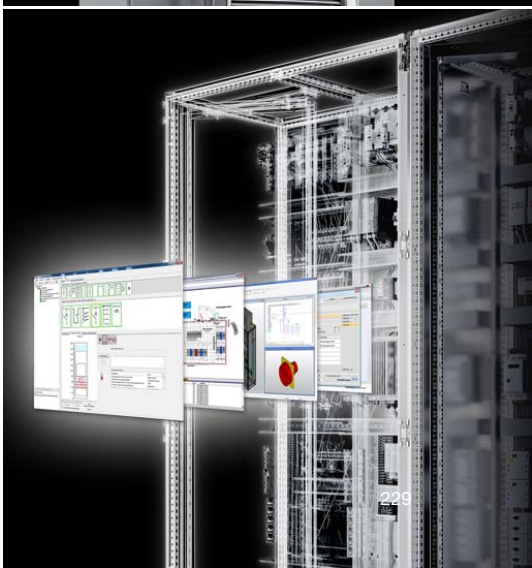
- The uniform system platforms used in the sheet steel range produce unique installation diversity with identical engineering.
- In particular, the interior installation largely eliminates any machining of the enclosures and therefore plays a key role in maintaining the high protection category.

## Optimum climate control

- Among stainless steel applications, climate control often represents a major problem because the risk of expensive system failures or machine standstills can only be decisively reduced with the right climate control components. Rely on Rittal for the perfect solutions:
  - An extensive range of wall- and roof-mounted cooling units with efficient Blue e+ technology
  - Fan-and-filter units combined with a hose-proof hood provide a simple, efficient and secure solution provided the ambient temperature is sufficiently low
  - With one of the world's leading ranges and a comprehensive service portfolio, Rittal offers individual solution concepts to minimise the risks

## Efficient engineering

- Uniform design basis for sheet steel and stainless steel racks and enclosures for simple, fast assembly
- Identical engineering for sheet steel and stainless steel allows simple, time-saving planning
- A host of tools provide support with the automated production process and when working with virtual prototypes:
  - Rittal Configuration System
  - EPLAN Pro Panel
  - 2D/3D CAD data
  - ecl@ss Advanced
  - Technical documentation
- Fast, efficient calculation of climate control requirements for individual enclosure assemblies with Therm software



# Small enclosures KX

**System accessories** Page 877 **Terminal boxes KX, sheet steel** Page 56 **Ex enclosures** Page 257 **Hygienic Design** Page 217

**Material:**
- Enclosures: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal

**Surface finish:**
- Enclosure and cover: Brushed, grain size 400

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with cover
- Mini cam locks

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

## Terminal boxes KX, stainless steel, without gland plate

| **Width** mm | Packs of | 150 | 150 | 300 | 200 | 200 | Page |
|---|---|---|---|---|---|---|---|
| **Height** mm | | 150 | 150 | 150 | 200 | 200 | |
| **Depth** mm | | 80 | 120 | 80 | 80 | 120 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1560.000** | **1564.000** | **1561.000** | **1562.000** | **1565.000** | |
| Weight, approx. kg | | 1.3 | 1.6 | 1.8 | 1.8 | 2.2 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | |
| **Accessories** | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 965 |
| Wall angle | 4 pc(s). | – | – | 2583.010 | 2583.010 | 2583.010 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1560.800 | 1560.800 | 1561.800 | 1562.800 | 1562.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2314.000 | 2316.000 | 2315.000 | 2315.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2365.000 | 2366.000 | 2365.000 | 2365.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge, stainless steel | 2 pc(s). | 1592.210 | 1592.210 | 1592.210 | 1592.210 | 1592.210 | 951 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.050 | 2565.100 | 2565.100 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | – | 1199.100 | – | – | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws for mounting plate | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |

## Terminal boxes KX, stainless steel, without gland plate

| **Width** mm | Packs of | 300 | 300 | 400 | 300 | 400 | Page |
|---|---|---|---|---|---|---|---|
| **Height** mm | | 200 | 200 | 200 | 300 | 300 | |
| **Depth** mm | | 80 | 120 | 120 | 120 | 120 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness – cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1563.000** | **1566.000** | **1568.000** | **1567.000** | **1569.000** | |
| Weight, approx. kg | | 2.4 | 2.9 | 3.6 | 3.9 | 4.6 | |
| Mini cam lock | | 4 | 4 | 4 | 4 | 4 | |
| **Accessories** | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 965 |
| Wall angle | 4 pc(s). | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1563.800 | 1563.800 | 1564.800 | 1567.800 | 1568.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2316.000 | 2316.000 | 2317.000 | 2316.000 | 2317.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2365.000 | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 2309.100 | 998 |
| Cover hinge, stainless steel | 2 pc(s). | 1592.210 | 1592.210 | 1592.210 | 1592.210 | 1592.210 | 951 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | – | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws for mounting plate | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |

# Small enclosures KX

**System accessories** Page 877 **E-Box KX, sheet steel** Page 64 **Ex enclosures** Page 257

**Material:**
- Enclosure: Stainless steel
- Door: Stainless steel, all-round foamed-in PU seal
- Mounting plate: Sheet steel

**Surface finish:**
- Enclosure and door: Brushed, grain size 400
- Mounting plate: Zinc-plated

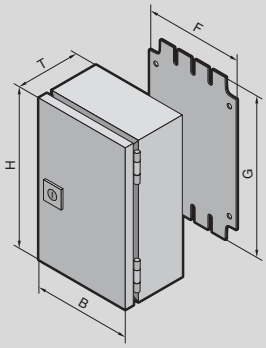
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with door
- Mounting plate
- Cam lock with 3 mm double-bit insert

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.



## E-Box KX, stainless steel, depth 120/155 mm

| **Width** (B) mm | | Packs of | 200 | 200 | 200 | 380 | Page |
|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 300 | 300 | 300 | 300 | |
| **Depth** (T) mm | | | 120 | 155 | 155 | 155 | |
| Mounting plate width (F) mm | | | 175 | 175 | 175 | 365 | |
| Mounting plate height (G) mm | | | 285 | 285 | 285 | 275 | |
| Material | Stainless steel 1.4301 (AISI 304) | | ■ | ■ | – | ■ | |
| | Stainless steel 1.4404 (AISI 316L) | | – | – | ■ | – | |
| Material thickness – enclosure mm | | | 1.25 | 1.25 | 1.5 | 1.25 | |
| Material thickness – door mm | | | 1.25 | 1.25 | 1.5 | 1.25 | |
| **Model No.** | | 1 pc(s). | **1584.000** | **1587.000** | **1301.000** | **1588.000** | |
| Weight, approx. kg | | | 3.6 | 4.1 | 4.1 | 7.5 | |
| **Accessories** | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel | | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 965 |
| Pole clamp | | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Support rails TS 35/7.5 | | 10 pc(s). | 2315.000 | 2315.000 | 2315.000 | 2317.000[1)] | 997 |
| Mounting clip for support rails | | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | | 20 pc(s). | 2366.000 | 2366.000 | 2366.000 | 2366.000 | 1002 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Mini-comfort handle AX for padlocks and lock inserts or profile half-cylinders | | 1 pc(s). | 2537.300 | 2537.300 | 2537.300 | 2537.300 | 940 |
| Cam lock with double-bit insert, stainless steel 1.4404 (AISI 316L) | | 1 pc(s). | 2309.110 | 2309.110 | 2309.110 | 2309.110 | 943 |
| Lock insert 7 mm square | | 1 pc(s). | 2460.000 | 2460.000 | 2460.000 | 2460.000 | 941 |
| Lock insert 8 mm square | | 1 pc(s). | 2461.000 | 2461.000 | 2461.000 | 2461.000 | 941 |
| Lock insert 7 mm triangular | | 1 pc(s). | 2462.000 | 2462.000 | 2462.000 | 2462.000 | 941 |
| Lock insert 8 mm triangular | | 1 pc(s). | 2463.000 | 2463.000 | 2463.000 | 2463.000 | 941 |
| Lock insert, screwdriver | | 1 pc(s). | 2464.000 | 2464.000 | 2464.000 | 2464.000 | 941 |
| Lock insert Daimler | | 1 pc(s). | 2465.000 | 2465.000 | 2465.000 | 2465.000 | 941 |
| Lock insert 3 mm double-bit | | 1 pc(s). | 2466.000 | 2466.000 | 2466.000 | 2466.000 | 941 |
| Lock insert Fiat | | 1 pc(s). | 2307.000 | 2307.000 | 2307.000 | 2307.000 | 941 |
| Lock insert 6.5 mm triangular | | 1 pc(s). | 2460.650 | 2460.650 | 2460.650 | 2460.650 | 941 |
| Earth straps | | 5 pc(s). | 2565.050 | 2565.050 | 2565.050 | 2565.050 | 1033 |
| Pressure relief stopper | | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws for mounting plate | | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 2487.000 | 1004 |

[1)] Must be cut to length accordingly

# Small enclosures KX

**System accessories** Page 877 **Bus enclosures KX, sheet steel** Page 70

**Material:**
- Enclosures: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal
- Hinges: Die-cast zinc

**Surface finish:**
- Enclosure and cover: Brushed, grain size 400

**Protection category IP to IEC 60 529:**
- IP 66

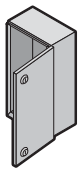
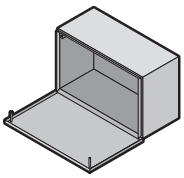
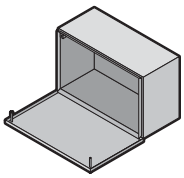
**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with hinged cover
- Mini cam lock

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.

## Bus enclosures KX, stainless steel

| | |  |  |  | |
|---|---|---|---|---|---|
| **Width** mm | Packs of | 200 | 400 | 600 | Page |
| **Height** mm | | 300 | 200 | 200 | |
| **Depth** mm | | 80 | 120 | 120 | |
| Material thickness – enclosure mm | | 1.25 | 1.25 | 1.25 | |
| Material thickness – cover mm | | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **1583.000** | **1585.000** | **1586.000** | |
| Weight, approx. kg | | 2.8 | 4.5 | 6.0 | |
| **Accessories** | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 965 |
| Wall angle | 4 pc(s). | – | – | 2583.010 | 967 |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 968 |
| Mounting plates | 1 pc(s). | 1563.800 | 1564.800 | 1566.800 | 970 |
| Support rails TS 35/7.5 | 10 pc(s). | 2315.000 | 2317.000 | – | 997 |
| Support rails TS 35/15 | 10 pc(s). | – | – | 2319.000 | 997 |
| Mounting clip for support rails | 30 pc(s). | 2309.000 | 2309.000 | 2309.000 | 997 |
| Mounting bracket | 4 pc(s). | 4597.000 | 4597.000 | 4597.000 | 999 |
| Rail mounting bracket | 20 pc(s). | 2365.000 | 2366.000 | 2366.000 | 1002 |
| Mounting claw for second mounting level | 20 pc(s). | 2309.100 | 2309.100 | 2309.100 | 998 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.050 | 2565.050 | 1033 |
| Baying kit | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 916 |
| Pressure relief stopper | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 900 |
| Condensate discharge | 6 pc(s). | 2459.000 | 2459.000 | 2459.000 | 900 |
| Self-tapping screws for mounting plate | 300 pc(s). | 2487.000 | 2487.000 | 2487.000 | 1004 |

**System accessories** Page 877

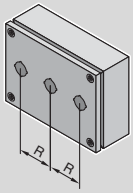
**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal

**Surface finish:**
- Enclosure and cover: Brushed, grain 240

**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure with cover
- Quick-release fastener including plastic bushes




## Switch housings, stainless steel

| **Width** mm | Packs of | 100 | 160 | 220 | 280 | Page |
|---|---|---|---|---|---|---|
| **Height** mm | | 100 | 100 | 100 | 100 | |
| **Depth** mm | | 90 | 90 | 90 | 90 | |
| Material thickness - enclosure mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| Material thickness - cover mm | | 1.25 | 1.25 | 1.25 | 1.25 | |
| **Model No.** | 1 pc(s). | **2384.010** | **2384.020** | **2384.030** | **2384.040** | |
| Pitch pattern (R) mm | | – | 60 | 60 | 60 | |
| No. of switch cut-outs Ø 22.5 mm | | 1 | 2 | 3 | 4 | |
| Number of locks | | 2 | 4 | 4 | 4 | |
| **Accessories** | | | | | | |
| Wall mounting bracket | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 965 |
| Pressure relief stoppers | 5 pc(s). | 2459.500 | 2459.500 | 2459.500 | 2459.500 | 900 |
| Cable gland HD | | see page | see page | see page | see page | 1057 |
| Earth straps | 5 pc(s). | 2565.100 | 2565.100 | 2565.100 | 2565.100 | 1033 |

# Compact enclosures AX

**System accessories** Page 877 **AX sheet steel** Page 84 **Ex enclosures** Page 257 **Hygienic Design** Page 217 **Outdoor housing** Page 958

**Material:**
- Enclosure: Stainless steel
- Door: Stainless steel, all-round foamed-in PU seal
- Mounting plate: Sheet steel
- Lock: Die-cast zinc, nickel-plated, double-bit insert: Stainless steel

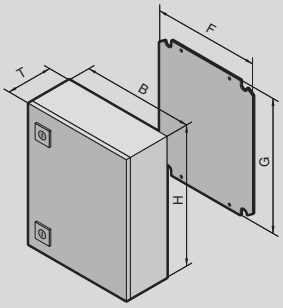
**Surface finish:**
- Enclosure and door: Brushed, grain size 400
- Mounting plate: Zinc-plated

**Supply includes:**
- Enclosure with door(s)
- Mounting plate
- Lock: 3 mm double-bit

Please note the product-specific scope of supply.

**Approvals:**
- UL
- cUL

Further approvals can be found on the Internet.



## Basic enclosure AX, stainless steel

| **Width** (B) mm | | Packs of | 300 | 300 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | | 300 | 380 | |
| **Depth** (T) mm | | | 210 | 210 | |
| Mounting plate width (F) mm | | | 250 | 250 | |
| Mounting plate height (G) mm | | | 275 | 355 | |
| Material | Stainless steel 1.4301 (AISI 304) | | ■ | ■ | |
| | Stainless steel 1.4404 (AISI 316L) | | – | – | |
| **Model No.** | | 1 pc(s). | **1003.000** | **1005.000** | |
| Weight, approx. kg | | | 6.9 | 8.4 | |
| Protection category IP to IEC 60 529 | | | IP 66 | IP 66 | |
| Protection category NEMA | | | NEMA 4X | NEMA 4X | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | | 1 | 1 | |
| Cam lock | | | 1 | 1 | |
| 3-point lock system | | | – | – | |
| **Accessories** | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel, wall distance 20 mm | | 4 pc(s). | 2433.010 | 2433.010 | 967 |
| Wall angle, stainless steel 1.4301 | | 4 pc(s). | 2583.010 | 2583.010 | 967 |
| Pole clamp | | 2 pc(s). | 2584.100 | 2584.100 | 968 |
| Rail for interior installation | | 4 pc(s). | 2393.210 | 2393.210 | 989 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | | – | – | |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | | – | – | |
| Support strips, installation in the door | | | – | – | |
| LED system light | | | – | – | |
| Comfort handle AX for lock inserts or profile half-cylinders | | | – | – | |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 940 |
| Cam lock with double-bit insert, stainless steel 1.4404 (AISI 316L) | | 1 pc(s). | 2304.100 | 2304.100 | 943 |
| Lock inserts | | | see page | see page | 941, 942 |
| Perforated door strip | | | – | – | |
| Door stay | | 1 pc(s). | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | | | – | – | |
| Plastic wiring plan pockets | | | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | | see page | see page | 955 |
| Protective roof | | 1 pc(s). | 2361.010 | 2361.010 | 958 |
| Earth straps | | | see page | see page | 1033 |
| Baying kit | | 1 pc(s). | 1199.100 | 1199.100 | 916 |
| Cable gland, brass M12 x 1.5 | | 15 pc(s). | 2411.801 | 2411.801 | 1056 |
| Cable gland, brass M16 x 1.5 | | 15 pc(s). | 2411.811 | 2411.811 | 1056 |
| Cable gland, brass M20 x 1.5 | | 10 pc(s). | 2411.821 | 2411.821 | 1056 |
| Cable gland, brass M25 x 1.5 | | 10 pc(s). | 2411.831 | 2411.831 | 1056 |
| Cable gland, brass M32 x 1.5 | | 5 pc(s). | 2411.841 | 2411.841 | 1056 |
| Cable gland, brass M40 x 1.5 | | 4 pc(s). | 2411.851 | 2411.851 | 1056 |
| Cable gland, brass M50 x 1.5 | | 2 pc(s). | 2411.861 | 2411.861 | 1056 |
| Cable gland, brass M63 x 1.5 | | 1 pc(s). | 2411.871 | 2411.871 | 1056 |
| Cable gland, polyamide M12 x 1.5 | | 50 pc(s). | 2411.601 | 2411.601 | 1056 |
| Cable gland, polyamide M16 x 1.5 | | 50 pc(s). | 2411.611 | 2411.611 | 1056 |
| Cable gland, polyamide M20 x 1.5 | | 50 pc(s). | 2411.621 | 2411.621 | 1056 |
| Cable gland, polyamide M25 x 1.5 | | 25 pc(s). | 2411.631 | 2411.631 | 1056 |
| Cable gland, polyamide M32 x 1.5 | | 15 pc(s). | 2411.641 | 2411.641 | 1056 |
| Cable gland, polyamide M40 x 1.5 | | 5 pc(s). | 2411.651 | 2411.651 | 1056 |
| Cable gland, polyamide M50 x 1.5 | | 5 pc(s). | 2411.661 | 2411.661 | 1056 |
| Cable gland, polyamide M63 x 1.5 | | 3 pc(s). | 2411.671 | 2411.671 | 1056 |

# Compact enclosures AX

## Basic enclosure AX, stainless steel

| **Width** (B) mm | | Packs of | 300 | 380 | 380 | 380 | 380 | 400 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 380 | 300 | 380 | 380 | 600 | 500 | |
| **Depth** (T) mm | | | 210 | 210 | 210 | 210 | 210 | 210 | |
| Mounting plate width (F) mm | | | 250 | 330 | 330 | 330 | 330 | 350 | |
| Mounting plate height (G) mm | | | 355 | 275 | 355 | 355 | 575 | 475 | |
| Material | Stainless steel 1.4301 (AISI 304) | | – | ■ | ■ | – | ■ | ■ | |
| | Stainless steel 1.4404 (AISI 316L) | | ■ | – | – | ■ | – | – | |
| **Model No.** | | 1 pc(s). | **1302.000** | **1011.000** | **1006.000** | **1303.000** | **1008.000** | **1015.000** | |
| Weight, approx. kg | | | 8.4 | 8.4 | 9.8 | 9.8 | 15.1 | 12.9 | |
| Protection category IP to IEC 60 529 | | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | |
| **Product-specific scope of supply** | | | | | | | | | |
| Door(s) | | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cam lock | | | 1 | 1 | 1 | 1 | 2 | 2 | |
| 3-point lock system | | | – | – | – | – | – | – | |
| **Accessories** | | | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel, wall distance 20 mm | | 4 pc(s). | 2433.510 | 2433.010 | 2433.010 | 2433.510 | 2433.010 | 2433.010 | 967 |
| Wall angle, stainless steel 1.4301 | | 4 pc(s). | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 967 |
| Pole clamp | | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Rail for interior installation | | 4 pc(s). | 2393.210 | 2393.210 | 2393.210 | 2393.210 | 2393.210 | 2393.210 | 989 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | 4 pc(s). | – | – | – | – | 8619.720 | 8619.710 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | | – | – | – | – | – | – | |
| Support strips, installation in the door | | | – | – | – | – | – | – | |
| LED system light | | | – | – | – | – | – | 2500.100 | 1014 |
| Comfort handle AX for lock inserts or profile half-cylinders | | | – | – | – | – | – | – | |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Cam lock with double-bit insert, stainless steel 1.4404 (AISI 316L) | | 1 pc(s). | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 943 |
| Lock inserts | | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Perforated door strip | | | – | – | – | – | – | – | |
| Door stay | | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable | | | – | – | – | – | – | – | |
| Plastic wiring plan pockets | | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | | see page | see page | see page | see page | see page | see page | 955 |
| Protective roof | | 1 pc(s). | 2361.010 | 2472.010 | 2472.010 | 2472.010 | 2472.010 | – | 958 |
| Earth straps | | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass M12 x 1.5 | | 15 pc(s). | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 1056 |
| Cable gland, brass M16 x 1.5 | | 15 pc(s). | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 1056 |
| Cable gland, brass M20 x 1.5 | | 10 pc(s). | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 1056 |
| Cable gland, brass M25 x 1.5 | | 10 pc(s). | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 1056 |
| Cable gland, brass M32 x 1.5 | | 5 pc(s). | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 1056 |
| Cable gland, brass M40 x 1.5 | | 4 pc(s). | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 1056 |
| Cable gland, brass M50 x 1.5 | | 2 pc(s). | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 1056 |
| Cable gland, brass M63 x 1.5 | | 1 pc(s). | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 1056 |
| Cable gland, polyamide M12 x 1.5 | | 50 pc(s). | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 1056 |
| Cable gland, polyamide M16 x 1.5 | | 50 pc(s). | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 1056 |
| Cable gland, polyamide M20 x 1.5 | | 50 pc(s). | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 1056 |
| Cable gland, polyamide M25 x 1.5 | | 25 pc(s). | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 1056 |
| Cable gland, polyamide M32 x 1.5 | | 15 pc(s). | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 1056 |
| Cable gland, polyamide M40 x 1.5 | | 5 pc(s). | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 1056 |
| Cable gland, polyamide M50 x 1.5 | | 5 pc(s). | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 1056 |
| Cable gland, polyamide M63 x 1.5 | | 3 pc(s). | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 1056 |

## Basic enclosure AX, stainless steel

| **Width** (B) mm | | Packs of | 500 | 500 | 600 | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 500 | 500 | 380 | 600 | 600 | 760 | |
| **Depth** (T) mm | | | 210 | 300 | 210 | 210 | 210 | 210 | |
| Mounting plate width (F) mm | | | 450 | 450 | 550 | 550 | 550 | 550 | |
| Mounting plate height (G) mm | | | 475 | 475 | 355 | 575 | 575 | 735 | |
| Material | Stainless steel 1.4301 (AISI 304) | | ■ | ■ | ■ | ■ | – | ■ | |
| | Stainless steel 1.4404 (AISI 316L) | | – | – | – | – | ■ | – | |
| **Model No.** | | 1 pc(s). | **1007.000** | **1013.000** | **1009.000** | **1010.000** | **1304.000** | **1012.000** | |
| Weight, approx. kg | | | 15.7 | 18.4 | 14.6 | 23.5 | 23.5 | 30.2 | |
| Protection category IP to IEC 60 529 | | | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | IP 66 | |
| Protection category NEMA | | | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 4X | |
| **Product-specific scope of supply** | | | | | | | | | |
| Door(s) | | | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cam lock | | | 2 | 2 | 1 | 2 | 2 | 2 | |
| 3-point lock system | | | – | – | – | – | – | – | |
| **Accessories** | | | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel, wall distance 20 mm | | 4 pc(s). | 2433.010 | 2433.010 | 2433.010 | 2433.010 | 2433.510 | 2433.010 | 967 |
| Wall angle, stainless steel 1.4301 | | 4 pc(s). | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 967 |
| Pole clamp | | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Rail for interior installation | | 4 pc(s). | 2393.210 | 2393.300 | 2393.210 | 2393.210 | 2393.210 | 2393.210 | 989 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | 4 pc(s). | 8619.710 | 8619.710 | – | 8619.720 | 8619.720 | – | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | | – | – | – | – | – | – | |
| Support strips, installation in the door | | 20 pc(s). | – | – | – | – | – | 4696.000 | 952 |
| LED system light | | 1 pc(s). | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 1014 |
| Comfort handle AX for lock inserts or profile half-cylinders | | | – | – | – | – | – | – | |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| Cam lock with double-bit insert, stainless steel 1.4404 (AISI 316L) | | 1 pc(s). | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 2304.100 | 943 |
| Lock inserts | | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Perforated door strip | | 2 pc(s). | – | – | – | – | – | 2311.076 | 953 |
| Door stay | | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable[1)] | | 1 pc(s). | – | – | – | – | – | 2515.300 | 954 |
| Plastic wiring plan pockets | | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | | see page | see page | see page | see page | see page | see page | 955 |
| Protective roof | | 1 pc(s). | 2362.010 | – | 2473.010 | 2473.010 | 2473.010 | 2473.010 | 958 |
| Earth straps | | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass M12 x 1.5 | | 15 pc(s). | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 1056 |
| Cable gland, brass M16 x 1.5 | | 15 pc(s). | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 1056 |
| Cable gland, brass M20 x 1.5 | | 10 pc(s). | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 1056 |
| Cable gland, brass M25 x 1.5 | | 10 pc(s). | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 1056 |
| Cable gland, brass M32 x 1.5 | | 5 pc(s). | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 1056 |
| Cable gland, brass M40 x 1.5 | | 4 pc(s). | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 1056 |
| Cable gland, brass M50 x 1.5 | | 2 pc(s). | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 1056 |
| Cable gland, brass M63 x 1.5 | | 1 pc(s). | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 1056 |
| Cable gland, polyamide M12 x 1.5 | | 50 pc(s). | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 1056 |
| Cable gland, polyamide M16 x 1.5 | | 50 pc(s). | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 1056 |
| Cable gland, polyamide M20 x 1.5 | | 50 pc(s). | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 1056 |
| Cable gland, polyamide M25 x 1.5 | | 25 pc(s). | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 1056 |
| Cable gland, polyamide M32 x 1.5 | | 15 pc(s). | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 1056 |
| Cable gland, polyamide M40 x 1.5 | | 5 pc(s). | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 1056 |
| Cable gland, polyamide M50 x 1.5 | | 5 pc(s). | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 1056 |
| Cable gland, polyamide M63 x 1.5 | | 3 pc(s). | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 1056 |

[1)] The perforated door strip is required for the installation

# Compact enclosures AX

## Basic enclosure AX, stainless steel

| **Width** (B) mm | | Packs of | 760 | 800 | 800 | 1000 | 1000 | 1000 | Page |
|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | | 760 | 1000 | 1200 | 1000 | 1200 | 1200 | |
| **Depth** (T) mm | | | 300 | 300 | 300 | 300 | 300 | 300 | |
| Mounting plate width (F) mm | | | 705 | 745 | 745 | 945 | 945 | 945 | |
| Mounting plate height (G) mm | | | 735 | 975 | 1175 | 975 | 1175 | 1175 | |
| Material | Stainless steel 1.4301 (AISI 304) | | ■ | ■ | ■ | ■ | ■ | – | |
| | Stainless steel 1.4404 (AISI 316L) | | – | – | – | – | – | ■ | |
| **Model No.** | | 1 pc(s). | **1014.000** | **1016.000** | **1017.000** | **1018.000** | **1019.000** | **1305.000** | |
| Weight, approx. kg | | | 42.5 | 52.9 | 61.5 | 71.0 | 76.0 | 76.0 | |
| Protection category IP to IEC 60 529 | | | IP 66 | IP 66 | IP 66 | IP 55 | IP 55 | IP 55 | |
| Protection category NEMA | | | NEMA 4X | NEMA 4X | NEMA 4X | NEMA 12 | NEMA 12 | NEMA 12 | |
| **Product-specific scope of supply** | | | | | | | | | |
| Door(s) | | | 1 | 1 | 1 | 2 | 2 | 2 | |
| Cam lock | | | 2 | 2 | – | 2 | – | – | |
| 3-point lock system | | | – | – | ■ | – | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| Wall mounting bracket, for AX stainless steel, KX stainless steel, wall distance 20 mm | | 4 pc(s). | 2433.010 | 2433.010 | 2433.010 | 2433.010 | 2433.010 | 2433.510 | 967 |
| Wall angle, stainless steel 1.4301 | | 4 pc(s). | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 2583.010 | 967 |
| Pole clamp | | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Rail for interior installation | | 4 pc(s). | 2393.300 | 2393.300 | 2393.300 | 2393.300 | 2393.300 | 2393.300 | 989 |
| Punched section with mounting flange 14 x 39 mm, installation in the height | | 4 pc(s). | – | 8619.750 | 8619.770 | 8619.750 | 8619.770 | 8619.770 | 990 |
| Punched section with mounting flange 14 x 39 mm, installation in the door | | 4 pc(s). | – | – | 8619.730 | – | 8619.710 | 8619.710 | 952 |
| Support strips, installation in the door[2] | | 20 pc(s). | 4599.200 | 4697.000 | 4697.000 | 4695.000 | 4695.000 | 4695.000 | 952 |
| LED system light | | 1 pc(s). | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 2500.110 | 1014 |
| Comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | – | – | 2435.300 | – | 2435.300 | 2435.300 | 939 |
| Mini-comfort handle AX for lock inserts or profile half-cylinders | | 1 pc(s). | 2537.100 | 2537.100 | – | 2537.100 | – | – | 940 |
| Cam lock with double-bit insert, stainless steel 1.4404 (AISI 316L) | | 1 pc(s). | 2304.100 | 2304.100 | 2304.100 | 2304.100 | – | 2304.100 | 943 |
| Lock inserts | | | see page | see page | see page | see page | see page | see page | 941, 942 |
| Perforated door strip | | 2 pc(s). | 2311.076 | 2311.100 | 2311.120 | 2311.100 | 2311.120 | 2311.120 | 953 |
| Door stay | | 1 pc(s). | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 2519.010 | 956 |
| Sheet steel wiring plan pockets, width-variable[1] | | 1 pc(s). | 2515.400 | 2515.400 | 2515.400 | 2515.200 | 2515.200 | 2515.200 | 954 |
| Plastic wiring plan pockets | | | see page | see page | see page | see page | see page | see page | 955 |
| Wiring plan pockets with transparent pouch | | | see page | see page | see page | see page | see page | see page | 955 |
| Protective roof | | 1 pc(s). | 2474.010 | 2475.010 | 2475.010 | 2363.010 | 2363.010 | 2363.010 | 958 |
| Earth straps | | | see page | see page | see page | see page | see page | see page | 1033 |
| Baying kit | | 1 pc(s). | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 1199.100 | 916 |
| Cable gland, brass M12 x 1.5 | | 15 pc(s). | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 2411.801 | 1056 |
| Cable gland, brass M16 x 1.5 | | 15 pc(s). | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 2411.811 | 1056 |
| Cable gland, brass M20 x 1.5 | | 10 pc(s). | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 2411.821 | 1056 |
| Cable gland, brass M25 x 1.5 | | 10 pc(s). | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 2411.831 | 1056 |
| Cable gland, brass M32 x 1.5 | | 5 pc(s). | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 2411.841 | 1056 |
| Cable gland, brass M40 x 1.5 | | 4 pc(s). | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 2411.851 | 1056 |
| Cable gland, brass M50 x 1.5 | | 2 pc(s). | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 2411.861 | 1056 |
| Cable gland, brass M63 x 1.5 | | 1 pc(s). | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 2411.871 | 1056 |
| Cable gland, polyamide M12 x 1.5 | | 50 pc(s). | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 2411.601 | 1056 |
| Cable gland, polyamide M16 x 1.5 | | 50 pc(s). | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 2411.611 | 1056 |
| Cable gland, polyamide M20 x 1.5 | | 50 pc(s). | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 2411.621 | 1056 |
| Cable gland, polyamide M25 x 1.5 | | 25 pc(s). | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 2411.631 | 1056 |
| Cable gland, polyamide M32 x 1.5 | | 15 pc(s). | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 2411.641 | 1056 |
| Cable gland, polyamide M40 x 1.5 | | 5 pc(s). | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 2411.651 | 1056 |
| Cable gland, polyamide M50 x 1.5 | | 5 pc(s). | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 2411.661 | 1056 |
| Cable gland, polyamide M63 x 1.5 | | 3 pc(s). | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 2411.671 | 1056 |

[1] The perforated door strip is required for the installation
[2] For two-door enclosures: Installation in the lockable door

# Hose-proof hood

Increases the protection category and facilitates cleaning, see page 538

# Baying enclosure system VX25

**System accessories** Page 877 **VX25 sheet steel** Page 116 **Hygienic Design** Page 217 **VX SE stainless steel** Page 248

**Material and surface finish:**
- Enclosure frame: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Roof: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated

**Protection category IP to IEC 60 529:**
- IP 55

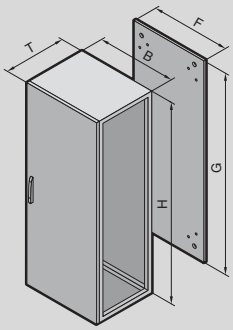
**Protection category NEMA:**
- NEMA 12

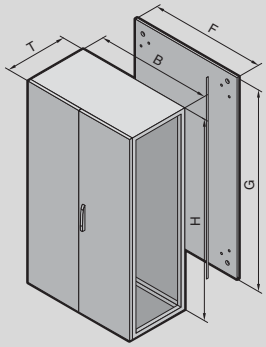
**Supply includes:**
- Enclosure frame
- Door(s) (r/h hinge, may be swapped to opposite side)
- Roof plate
- Gland plates
- Rear panel
- Mounting plate
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

**Note:**
- Due to the hardness of the material, we recommend using metal multi-tooth screw 2486.400 for the interior installation

**Approvals:**
- UL
- cUL
- DNV-GL

Further approvals can be found on the Internet.



## Basic enclosure, height 1800 mm, depth 400 mm, stainless steel

| **Width** (B) mm | Packs of | 800 | 1200 | Page |
|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | |
| **Depth** (T) mm | | 400 | 400 | |
| Mounting plate width (F) mm | | 699 | 1099 | |
| Mounting plate height (G) mm | | 1696 | 1696 | |
| **Model No.** | 1 pc(s). | **8454.000** | **8456.000** | |
| Weight kg | | 110.0 | 167.0 | |
| **Product-specific scope of supply** | | | | |
| Door(s) | | 1 | 2 | |
| **Accessories** | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.051 | 8620.053 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.070 | 8620.070 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.061 | 8620.063 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.080 | 8620.080 | 887 |
| Levelling feet | 4 pc(s). | 8100.780 | 8100.780 | 892 |
| Punched section with mounting flange 23 x 89 mm, stainless steel, in the depth | 4 pc(s). | 8100.730 | 8100.730 | 991 |
| Side panels, screw-fastened, stainless steel | 2 pc(s). | 8700.030 | 8700.030 | 901 |
| Divider panel | 1 pc(s). | 8609.200 | 8609.200 | 905 |
| Divider panel for module plates | | – | – | |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 912 |
| Baying connector, external, stainless steel | 6 pc(s). | 8617.503 | 8617.503 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.220 | 8618.220 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.280 | 8618.280 | 937 |
| Lock inserts | | see page | see page | 941, 942 |
| 180° hinges, stainless steel | 4 pc(s). | 8618.340 | 8618.340 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4590.700 | 4590.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.010 | 8617.010 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.110 | 8617.110 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.700 | 8617.700 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4694.000 | 4694.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | 1014 |
| Earth straps | | see page | see page | 1033 |
| Section for cable entry, centre | | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | 1058 |
| Metal multi-tooth screws | 300 pc(s). | 2486.400 | 2486.400 | 1004 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

## Basic enclosure, height 1800 mm, depth 500 mm, stainless steel

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1800 | 1800 | 1800 | |
| **Depth** (T) mm | | 500 | 500 | 500 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1696 | 1696 | 1696 | |
| **Model No.** | 1 pc(s). | **8457.000** | **8455.000** | **8453.000** | |
| Weight kg | | 91.8 | 113.0 | 172.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.050 | 8620.051 | 8620.053 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.071 | 8620.071 | 8620.071 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.060 | 8620.061 | 8620.063 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.081 | 8620.081 | 8620.081 | 887 |
| Levelling feet | 4 pc(s). | 8100.780 | 8100.780 | 8100.780 | 892 |
| Punched section with mounting flange 23 x 89 mm, stainless steel, in the depth | 4 pc(s). | 8100.731 | 8100.731 | 8100.731 | 991 |
| Side panels, screw-fastened, stainless steel | 2 pc(s). | 8700.040 | 8700.040 | 8700.040 | 901 |
| Divider panel | 1 pc(s). | 8609.201 | 8609.201 | 8609.201 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.210 | 8609.210 | 8609.210 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external, stainless steel | 6 pc(s). | 8617.503 | 8617.503 | 8617.503 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.220 | 8618.220 | 8618.220 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.280 | 8618.280 | 8618.280 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges, stainless steel | 4 pc(s). | 8618.340 | 8618.340 | 8618.340 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4590.700 | 4590.700 | 4590.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.020 | 8617.020 | 8617.020 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.710 | 8617.710 | 8617.710 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Metal multi-tooth screws | 300 pc(s). | 2486.400 | 2486.400 | 2486.400 | 1004 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

## Basic enclosure, height 2000 mm, depth 600 mm, stainless steel

| **Width** (B) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 2000 | 2000 | 2000 | |
| **Depth** (T) mm | | 600 | 600 | 600 | |
| Mounting plate width (F) mm | | 499 | 699 | 1099 | |
| Mounting plate height (G) mm | | 1896 | 1896 | 1896 | |
| **Model No.** | 1 pc(s). | **8452.000** | **8450.000** | **8451.000** | |
| Weight kg | | 101.0 | 126.0 | 191.0 | |
| **Product-specific scope of supply** | | | | | |
| Door(s) | | 1 | 1 | 2 | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.050 | 8620.051 | 8620.053 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.072 | 8620.072 | 8620.072 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.060 | 8620.061 | 8620.063 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.082 | 8620.082 | 8620.082 | 887 |
| Levelling feet | 4 pc(s). | 8100.780 | 8100.780 | 8100.780 | 892 |
| Punched section with mounting flange 23 x 89 mm, stainless steel, in the depth | 4 pc(s). | 8100.732 | 8100.732 | 8100.732 | 991 |
| Side panels, screw-fastened, stainless steel | 2 pc(s). | 8700.050 | 8700.050 | 8700.050 | 901 |
| Divider panel | 1 pc(s). | 8609.205 | 8609.205 | 8609.205 | 905 |
| Divider panel for module plates | 1 pc(s). | 8609.213 | 8609.213 | 8609.213 | 906 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 8617.500 | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 8617.501 | 8617.501 | 912 |
| Baying connector, external, stainless steel | 6 pc(s). | 8617.503 | 8617.503 | 8617.503 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.220 | 8618.220 | 8618.220 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.280 | 8618.280 | 8618.280 | 937 |
| Lock inserts | | see page | see page | see page | 941, 942 |
| 180° hinges, stainless steel | 4 pc(s). | 8618.340 | 8618.340 | 8618.340 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for tubular door frame | 4 pc(s). | 8619.720 | 8619.730 | 8619.720 | 952 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4116.500 | 4118.500 | 4116.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4116.000 | 955 |
| Door stay | 1 pc(s). | 8618.430 | 8618.430 | 8618.430 | 956 |
| Door stay for escape routes | 1 pc(s). | 8618.425 | 8618.425 | 8618.425 | 956 |
| Ride-up roller | 10 pc(s). | 8618.420 | 8618.420 | 8618.420 | 956 |
| Mounting plate infill | 1 pc(s). | 4591.700 | 4591.700 | 4591.700 | 971 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the width | 4 pc(s). | 8617.030 | 8617.040 | 8617.060 | 990 |
| Punched section with mounting flange 18 x 64 mm for the outer level, in the depth | 4 pc(s). | 8617.030 | 8617.030 | 8617.030 | 990 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width | 4 pc(s). | 8617.130 | 8617.140 | 8617.160 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth | 4 pc(s). | 8617.720 | 8617.720 | 8617.720 | 993 |
| Support strip for the enclosure depth | 20 pc(s). | 4696.000 | 4696.000 | 4696.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4945.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width | 2 pc(s). | 8617.800 | 8617.810 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Section for cable entry, centre | | 8618.800 | 8618.801 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.811 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | 1058 |
| Metal multi-tooth screws | 300 pc(s). | 2486.400 | 2486.400 | 2486.400 | 1004 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.440 | 1059 |

# Baying enclosure system VX25

**System accessories** Page 877 **Cable entry** Page 1044 **VX SE IP 66/NEMA 4** Page 147

**Material and surface finish:**
- Enclosure frame: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Roof: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated

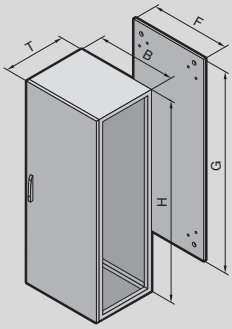
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure frame
- Door(s) (r/h hinge, may be swapped to opposite side)
- Roof
- Gland plate
- Rear panel
- Mounting plate
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm
- Accessory kit for side panels for upgrading to IP 66/NEMA 4X
- Baying seal

**Note:**
- Due to the hardness of the material, we recommend using metal multi-tooth screw 2486.400 for the interior installation
- The standard baying connectors VX for bayed suites may be used while maintaining the protection category IP 66/ NEMA 4X

**Approvals:**
- UL
- cUL
- EAC




## IP 66/NEMA 4X, stainless steel

| **Width** (B) mm | Packs of | 800 | Page |
|---|---|---|---|
| **Height** (H) mm | | 2000 | |
| **Depth** (T) mm | | 600 | |
| Mounting plate width (F) mm | | 699 | |
| Mounting plate height (G) mm | | 1896 | |
| **Model No.** | 1 pc(s). | **8458.000** | |
| Weight kg | | 129.0 | |
| **Accessories** | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.051 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.072 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.061 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.082 | 887 |
| Punched section with mounting flange 23 x 89 mm, stainless steel, in the depth | 4 pc(s). | 8100.732 | 991 |
| Side panels, screw-fastened, stainless steel | 2 pc(s). | 8700.050 | 901 |
| Baying bracket, internal | 6 pc(s). | 8617.500 | 912 |
| Baying block, internal | 6 pc(s). | 8617.501 | 912 |
| Comfort handle VX for lock inserts | 1 pc(s). | 8618.220 | 937 |
| Comfort handle VX for profile half-cylinders | 1 pc(s). | 8618.280 | 937 |
| Lock inserts | | see page | 941, 942 |
| Wiring plan pocket, sheet steel, depth 35 mm | 1 pc(s). | 4118.500 | 955 |
| Wiring plan pocket, sheet steel, depth 90 mm | 1 pc(s). | 4118.000 | 955 |
| LED system light | | see page | 1014 |
| Cable duct | | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.420 | 1059 |

# Cooling units Blue e+, stainless steel

Optimum climate control for stainless steel applications, see page 486

# Free-standing enclosure system VX SE

**System accessories** Page 877 **VX SE stainless steel** Page 142 **Lock systems** Page 936 **Rail systems** Page 986

**Material and surface finish:**
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated

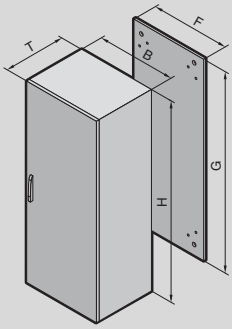
**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, solid top and sides
- Door(s)
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- Rear panel, detachable
- Mounting plate
- Gland plates
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

**Note:**
- Due to the hardness of the material, we recommend using metal multi-tooth screw 2486.400 for the interior installation

**Approvals:**
- UL
- cUL



# Free-standing enclosure system VX SE

## Basic enclosure, stainless steel

| **Width** (B) mm | Packs of | 600 | 600 | 800 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 1600 | 1800 | 1800 | 2000 | 1800 | 2000 | |
| **Depth** (T) mm | | 400 | 500 | 500 | 600 | 400 | 500 | |
| Mounting plate width (F) mm | | 499 | 499 | 699 | 699 | 899 | 1099 | |
| Mounting plate height (G) mm | | 1496 | 1696 | 1696 | 1896 | 1696 | 1896 | |
| **Model No.** | 1 pc(s). | **5850.600** | **5851.600** | **5852.600** | **5853.600** | **5854.600** | **5855.600** | |
| Door(s) | | 1 | 1 | 1 | 1 | 1 | 2 | |
| **Accessories** | | | | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.050 | 8620.050 | 8620.051 | 8620.051 | 8620.052 | 8620.053 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.070 | 8620.071 | 8620.071 | 8620.072 | 8620.070 | 8620.071 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.060 | 8620.060 | 8620.061 | 8620.061 | 8620.062 | 8620.063 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.080 | 8620.081 | 8620.081 | 8620.082 | 8620.080 | 8620.081 | 887 |
| Levelling feet | 4 pc(s). | 8100.780 | 8100.780 | 8100.780 | 8100.780 | 8100.780 | 8100.780 | 892 |
| Comfort handle for lock inserts | 1 pc(s). | 8611.330 | 8611.330 | 8611.330 | 8611.330 | 8611.330 | 8611.330 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.340 | 8611.340 | 8611.340 | 8611.340 | 8611.340 | 8611.340 | 938 |
| Lock inserts | 1 pc(s). | see page | see page | see page | see page | see page | see page | 941, 942 |
| 180° hinges | 4 pc(s). | 8701.180 | 8701.180 | 8701.180 | 8701.180 | 8701.180 | 8701.180 | 951 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.720 | 8619.720 | 8619.730 | 8619.730 | 8619.750 | 8619.720 | 952 |
| Wiring plan pocket, depth 35 mm | 1 pc(s). | 4116.500 | 4116.500 | 4118.500 | 4118.500 | – | 4116.500 | 955 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4116.000 | 4116.000 | 4118.000 | 4118.000 | 4124.000 | 4116.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 4583.000 | 956 |
| Door stay for escape routes | 1 pc(s). | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 4583.500 | 956 |
| Ride-up roller | 10 pc(s). | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 4538.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750[2] | 8617.750 | 8617.750 | 8617.751 | 8617.750 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.040 | 8612.050 | 8612.050 | 8612.060 | 8612.040 | 8612.050 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.150 | 8612.160 | 8612.140 | 8612.150 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1] | 4 pc(s). | 8617.110 | 8617.120 | 8617.120 | 8617.130 | 8617.110 | 8617.120 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1] | 4 pc(s). | 8617.130 | 8617.130 | 8617.140 | 8617.140 | 8617.150 | 8617.160 | 991 |
| Punched rail 18 x 39 mm for the enclosure depth[1] | 4 pc(s). | 8617.700 | 8617.710 | 8617.710 | 8617.720 | 8617.700 | 8617.710 | 993 |
| Support strip for the outer level for enclosure depth | 20 pc(s). | 4694.000 | 4695.000 | 4695.000 | 4696.000 | 4694.000 | 4695.000 | 994 |
| Support strip for the inner level for enclosure depth | 20 pc(s). | 4309.000 | 4596.000 | 4596.000 | 8800.130 | 4309.000 | 4596.000 | 994 |
| C rail 30/15, for the enclosure width | 6 pc(s). | 4944.000 | 4944.000 | 4945.000 | 4945.000 | 4946.000 | 4947.000 | 996 |
| Support rail 48 x 26 mm, for the enclosure width[1] | 2 pc(s). | 8617.800 | 8617.800 | 8617.810 | 8617.810 | 8617.820 | 8617.830 | 996 |
| LED system light | | see page | see page | see page | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |
| Cable entry plate | | 8619.800 | 8619.800 | 8619.801 | 8619.801 | 8619.802 | 8619.803 | 1044 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable entry grommets – 8 cables, max. Ø 13 mm | 25 pc(s). | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 4316.000 | 1044 |
| Cable entry grommets – 3 cables, max. Ø 21 mm | 25 pc(s). | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 4317.000 | 1044 |
| Cable entry grommets – 1 cable, max. Ø 47 mm | 25 pc(s). | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 4318.000 | 1044 |
| Connector grommets | 10 pc(s). | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 4311.000 | 1044 |
| Section for cable entry, centre | | 8618.800 | 8618.800 | 8618.801 | 8618.801 | 8618.802 | 8618.803 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Section for cable entry, rear | | 8618.810 | 8618.810 | 8618.811 | 8618.811 | 8618.812 | 8618.813 | 1045 |
| | Packs of | 2 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | 4 pc(s). | 4 pc(s). | |
| Cable duct | | see page | see page | see page | see page | see page | see page | 1058 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.410 | 8619.420 | 8619.420 | 8619.430 | 8619.440 | 1059 |

[1] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986
[2] The VX adaptor rail for 1800 mm high enclosures 8617.750 can be cut to length accordingly for use in 1600 mm high enclosures

# Free-standing enclosure system VX SE

**System accessories** Page 877 **VX SE stainless steel** Page 142

**Material and surface finish:**
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Mounting plate: Sheet steel, 3 mm, zinc-plated, passivated
- Base plate: Stainless steel 1.4301 (AISI 304), 1.5 mm

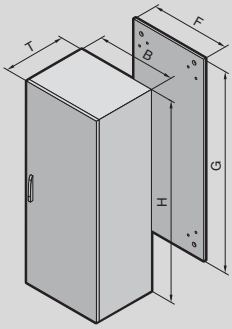
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure, solid top and sides
- Door(s)
- Door hinged on the right, may be swapped to the left
- Rear panel, detachable
- Mounting plate
- Base, solid
- Lock: 3 mm double-bit
- 2 punched rails 18 x 39 mm

**Note:**
- Due to the hardness of the material, we recommend using metal multi-tooth screw 2486.400 for the interior installation

**Approvals:**
- UL
- cUL




## IP 66/NEMA 4X, stainless steel

| **Width** (B) mm | Packs of | 600 | 800 | 800 | Page |
|---|---|---|---|---|---|
| **Height** (H) mm | | 1600 | 1800 | 2000 | |
| **Depth** (T) mm | | 400 | 500 | 600 | |
| Mounting plate width (F) mm | | 499 | 699 | 699 | |
| Mounting plate height (G) mm | | 1496 | 1696 | 1896 | |
| **Model No.** | 1 pc(s). | **5850.680** | **5852.680** | **5853.680** | |
| **Accessories** | | | | | |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8620.050 | 8620.051 | 8620.051 | 886 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8620.070 | 8620.071 | 8620.072 | 887 |
| Base/plinth corner pieces with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8620.060 | 8620.061 | 8620.061 | 886 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8620.080 | 8620.081 | 8620.082 | 887 |
| Levelling feet | 4 pc(s). | 8100.780 | 8100.780 | 8100.780 | 892 |
| Comfort handle for lock inserts | 1 pc(s). | 8611.330 | 8611.330 | 8611.330 | 938 |
| Comfort handle for profile half-cylinders | 1 pc(s). | 8611.340 | 8611.340 | 8611.340 | 938 |
| Lock inserts | 1 pc(s). | see page | see page | see page | 941, 942 |
| Punched section with mounting flange, 14 x 39 mm, for door | 4 pc(s). | 8619.720 | 8619.730 | 8619.730 | 952 |
| Wiring plan pocket, depth 90 mm | 1 pc(s). | 4116.000 | 4118.000 | 4118.000 | 955 |
| Door stay | 5 pc(s). | 4583.000 | 4583.000 | 4583.000 | 956 |
| Adaptor rail VX to fit enclosure height | 4 pc(s). | 8617.750[2)] | 8617.750 | 8617.751 | 995 |
| Punched section with mounting flange 17 x 73 mm for the inner level, in the depth | 4 pc(s). | 8612.040 | 8612.050 | 8612.060 | 992 |
| Punched section with mounting flange 17 x 73 mm for the outer level, in the depth | 4 pc(s). | 8612.140 | 8612.150 | 8612.160 | 992 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the depth[1)] | 4 pc(s). | 8617.110 | 8617.120 | 8617.130 | 991 |
| Punched section with mounting flange 23 x 64 mm for the inner level, in the width[1)] | 4 pc(s). | 8617.130 | 8617.140 | 8617.140 | 991 |
| LED system light | | see page | see page | see page | 1014 |
| Earth straps | | see page | see page | see page | 1033 |
| Cable clamp rail, right angle section | 2 pc(s). | 8619.410 | 8619.420 | 8619.420 | 1059 |

[1)] The VX adaptor rail is required for installation in the vertical enclosure sections. Overview of VX SE compatible rail systems, see page 986
[2)] The VX adaptor rail for 1800 mm high enclosures 8617.750 can be cut to length accordingly for use in 1600 mm high enclosures

**System accessories** Page 877 **Monitors, keyboards** Page 1109 **Climate control** Page 449 **One-piece consoles, sheet steel** Page 161

**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door or double door and console lid: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

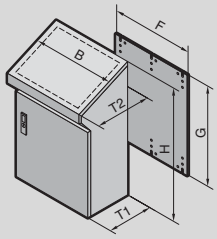
**Surface finish:**
- Enclosure, door, console lid and gland plates: Brushed, grain 400
- Mounting plate: Zinc-plated

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, solid back and sides
- Door or double door at front, with locking rod
- Console lid with lid stay and cam lock latched in the enclosure
- Locks with double-bit insert
- Gland plates, divided
- Mounting plate

**Approvals:**
- UL
- CSA
- TÜV
- Russian Maritime Register of Shipping




## Stainless steel

| **Width** (B) mm | Packs of | 600 | 800 | 1000 | 1200 | Page |
|---|---|---|---|---|---|---|
| **Height** (H) mm | | 960 | 960 | 960 | 960 | |
| **Depth, Bottom** (T1) mm | | 400 | 400 | 400 | 400 | |
| **Depth, Top** (T2) mm | | 480 | 480 | 480 | 480 | |
| Mounting plate width (F) mm | | 530 | 730 | 930 | 1130 | |
| Mounting plate height (G) mm | | 780 | 780 | 780 | 780 | |
| **Model No.** | 1 pc(s). | **2683.600** | **2684.600** | **2685.600** | **2686.600** | |
| Number of doors | | 1 | 1 | 2 | 2 | |
| Weight kg | | 52.0 | 65.2 | 79.5 | 90.3 | |
| **Accessories** | | | | | | |
| Base/plinth, complete | 1 pc(s). | 2865.000 | 2869.000 | 2867.000 | 2870.000 | 890 |
| Comfort handle AX | 1 pc(s). | 2435.300 | 2435.300 | 2435.300 | 2435.300 | 939 |
| Support rail TS 35/15 | 6 pc(s). | 4934.000 | 4935.000 | 4933.000 | 4937.000 | 997 |
| LED system light | | see page | see page | see page | see page | 1014 |
| Hose-proof hood | | see page | see page | see page | see page | 538 |

# PC enclosure system

**System accessories** Page 877 **Monitors, keyboards** Page 1109 **PC enclosure system, sheet steel** Page 164

**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Rear door: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Monitor field: Single-pane safety glass, 4 mm

**Surface finish:**
- Brushed, grain 400

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure, solid top and sides
- Rear door with locking rod
- Glazed door at the top, latched from the inside
- Component shelf
- Keyboard drawer with fold-down front door for handrest and mouse pad support
- Lock insert, lock no. 3524 E
- Bottom door with locking rod
- Gland plates, divided

**Approvals:**
- UL
- cUL

## Stainless steel

| **Width** mm | Packs of | 600 | Page |
|---|---|---|---|
| **Height** mm | | 1600 | |
| **Depth** mm | | 630 | |
| **Model No.** | 1 pc(s). | **4650.150** | |
| Weight kg | | 115.0 | |
| **Accessories** | | | |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 100 mm, stainless steel | 2 pc(s). | 8620.050 | 886 |
| Base/plinth trim panels, sides, 100 mm, stainless steel | 2 pc(s). | 8620.072 | 887 |
| Levelling feet | 4 pc(s). | 2859.000 | 893 |
| Comfort handle | | see page | 938 |
| Component shelf, pull-out | 1 pc(s). | 6902.960 | 1007 |
| Adaptor rail | 4 pc(s). | 8617.760 | 995 |
| Partial mounting plates | 1 pc(s). | 8617.550 | 975 |
| Punched section with mounting flange, 23 x 89 mm, stainless steel | 2 pc(s). | 8100.732 | 991 |
| Punched section with mounting flange, 23 x 64 mm | 4 pc(s). | 8617.130 | 991 |
| Punched section with mounting flange, 17 x 73 mm | | see page | 992 |
| LED system light | | see page | 1014 |

**System accessories** Page 877 **Support arm system CP 40, stainless steel** Page 188 **Hygienic Design** Page 217

**Benefits:**
- Resistant to high-pressure cleaning: The seal lies between two surfaces and is optimally compressed by the screw fastening.
- Suitable for clean room use: Screw fastening to comply with high standards in the food industry. With plastic stoppers on the inside or hex screws on the outside.

**Material:**
- Stainless steel 1.4301 (AISI 304)

**Surface finish:**
- Brushed, grain 400

**Protection category IP to IEC 60 529:**
- IP 66
- IP X9

**Clean room class:**
- Air purity class 1 to DIN EN ISO 14 644-1

## Stainless steel

| **Width** mm | Packs of | 530 | Page |
|---|---|---|---|
| **Height** mm | | 360 | |
| **Depth** mm | | 120 | |
| Operating housing for panel width mm | | 482.6 | |
| Operating housing for panel height mm | | 310 | |
| Installation depth mm | | 115 | |
| Support arm connection | | Top or bottom (by rotating the enclosure) | |
| **Model No.** | 1 pc(s). | **6681.000** | |
| Weight kg | | 9.3 | |

# Command panel housing with door

**System accessories** Page 877 **Support arm system CP 40, stainless steel** Page 188 **Hygienic Design** Page 217

**Material:**
- Enclosure and door: Stainless steel 1.4301 (AISI 304)
- Handle strips: Plastic approved for use with foodstuffs, dyed blue

**Surface finish:**
- Brushed, grain 400

**Colour:**
- Handle strips: similar to RAL 5002

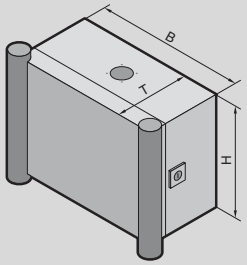
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 12

**Supply includes:**
- Enclosure of all-round solid construction
- Cut-out and reinforcement for support arm system CP 40 stainless steel
- Fastener with guide plate
- Door with sealing frame and side handle strips
- Lock: 3 mm double-bit

**Note:**
- The support arm connection and door hinge may be swapped over by rotating the enclosure
- 3 mm double-bit lock insert may be exchanged for 41 mm lock inserts, plastic handles and T handles, type C

**Approvals:**
- UL
- CSA
- TÜV



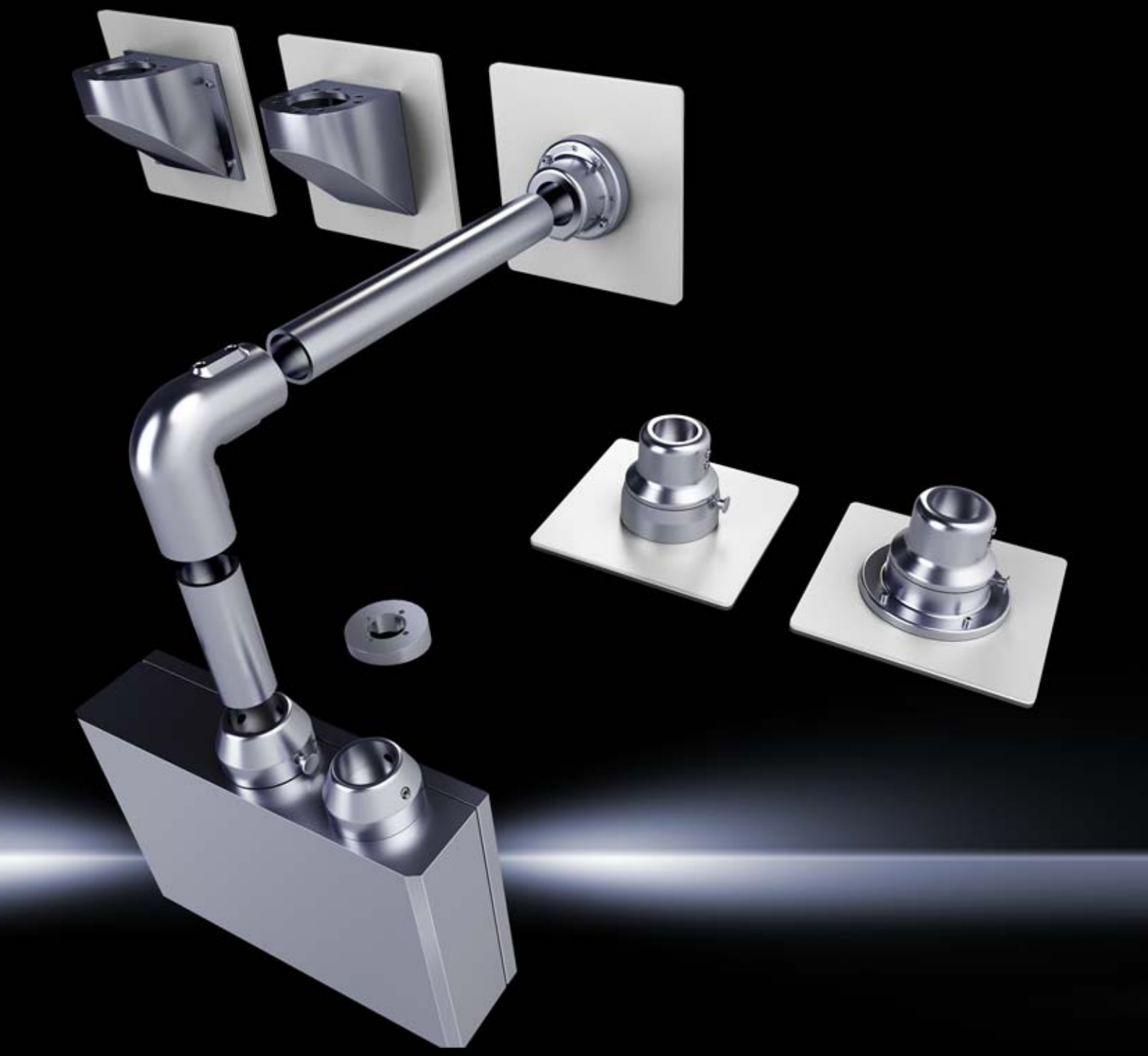

## Stainless steel

| **Width** (B) mm | Packs of | 300 | 400 | 400 | 600 | Page |
|---|---|---|---|---|---|---|
| **Height** (H) mm | | 300 | 300 | 400 | 400 | |
| **Depth** (T) mm | | 150 | 150 | 150 | 150 | |
| **Model No.** | 1 pc(s). | **6535.010** | **6536.010** | **6538.010** | **6539.010** | |
| Weight kg | | 6.3 | 7.5 | 8.8 | 12.1 | |
| **Accessories** | | | | | | |
| Support rail TS 35/7.5 | 10 pc(s). | 2316.000 | 2317.000 | 2317.000 | – | 997 |
| Support rail TS 35/15 | 10 pc(s). | – | – | – | 2319.000 | 997 |
| Support strip | 20 pc(s). | – | 4694.000 | 4694.000 | 4696.000 | 994 |

# Support arm system CP 40

Optimum interaction between operation and monitoring, also available in stainless steel, see page 188





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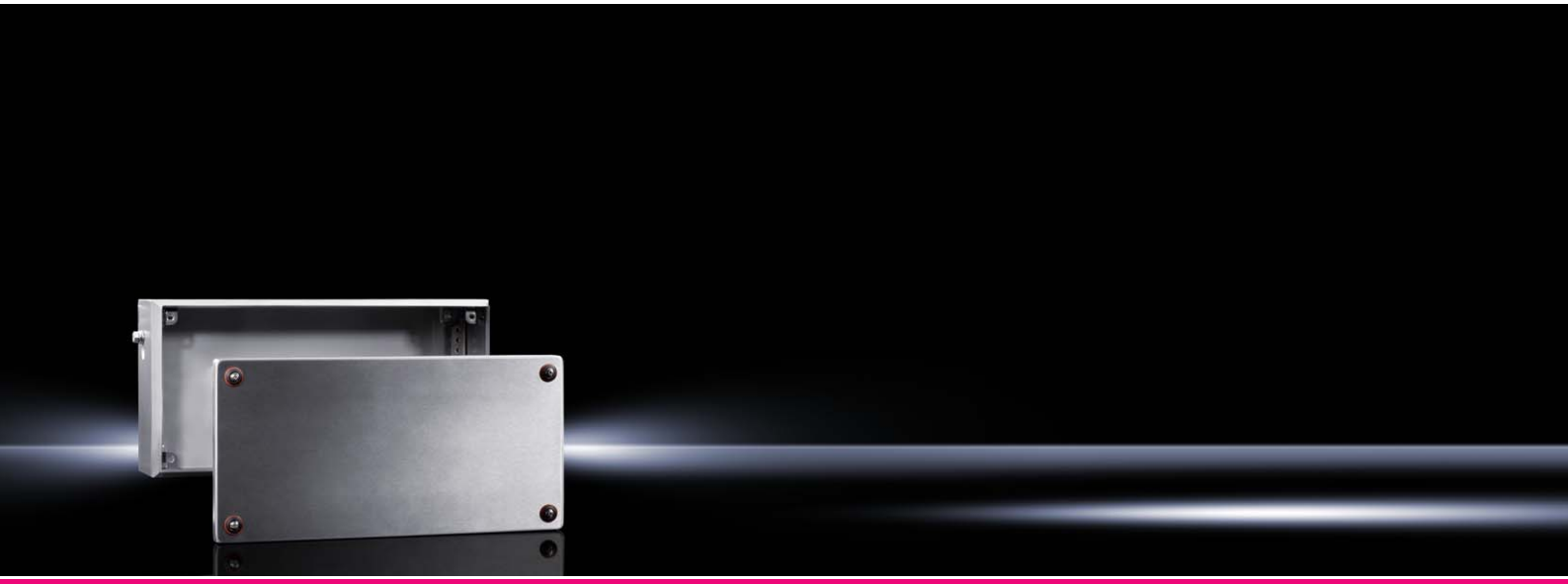
# Ex enclosures

## Ex enclosures

Stainless steel, empty enclosure with screw-fastened cover .....258
Stainless steel, empty enclosure with hinged door .....259
Plastic AX, empty enclosure with hinged door.....260
Accessories .....261

# Ex enclosures



**System accessories** Page 877

**Applications:**
- Zone 1 and 2 or 21 and 22 to 2014/34/EU
- Ambient temperature range: -30 °C...+80 °C
- The specified temperatures may be limited by the installed equipment
- Explosion protection category to EN 60 079: Equipment protection thanks to increased safety (Ex e), equipment protection thanks to enclosure (Ex tB)

**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in silicone seal

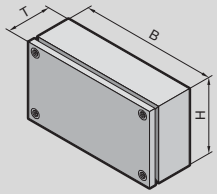
**Surface finish:**
- Enclosure: Exterior brushed, grain size 400

**Protection category IP to IEC 60 529:**
- IP 66

**Supply includes:**
- Enclosure
- Cover

**Certificates:**
- PTB 03 ATEX 1013U
- IEC Ex PTB 09.0033U

**Approvals:**
- ATEX
- IECEx PTB




## Stainless steel, empty enclosure with screw-fastened cover

| **Width** (B) mm | Packs of | 150 | 200 | 300 | 300 | 300 | 400 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 150 | 200 | 150 | 200 | 300 | 200 | |
| **Depth** (T) mm | | 80 | 80 | 80 | 80 | 120 | 120 | |
| **Model No.** | 1 pc(s). | **9301.000** | **9303.000** | **9302.000** | **9304.000** | **9306.000** | **9305.000** | |
| Weight kg | | 1.3 | 1.8 | 1.8 | 2.4 | 3.9 | 3.6 | |
| **Accessories** | | | | | | | | |
| Mounting plates | 1 pc(s). | 1560.800 | 1562.800 | 1561.800 | 1563.800 | 1567.800 | 1564.800 | 970 |
| Wall-mounting bracket, stainless steel | 4 pc(s). | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 1594.010 | 965 |
| Support rails TS 35/7.5 | 10 pc(s). | 2314.000 | 2315.000 | 2316.000 | 2316.000 | 2316.000 | 2317.000 | 997 |
| Earth straps | | see page | see page | see page | see page | see page | see page | 1033 |

**System accessories** Page 877

**Applications:**
- Zone 1 and 2 or 21 and 22 to 2014/34/EU
- Ambient temperature range: -30 °C...+80 °C
- The specified temperatures may be limited by the installed equipment
- Explosion protection category to EN 60 079: Equipment protection thanks to increased safety (Ex e), equipment protection thanks to enclosure (Ex tB)

**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304)
- Door: Stainless steel 1.4301 (AISI 304), all-round foamed-in silicone seal
- Mounting plate: Sheet steel

**Surface finish:**
- Enclosure: Brushed, grain size 400, peak-to-valley height < 0.8 µm
- Mounting plate: Zinc-plated

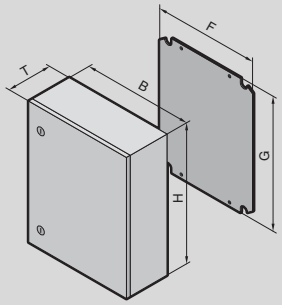
**Protection category IP to IEC 60 529:**
- IP 66

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Enclosure
- Door
- Mounting plate

**Certificates:**
- PTB 02 ATEX 1082U
- IEC Ex PTB 09.0035U

**Approvals:**
- UL
- cUL
- ATEX
- IECEx PTB




## Stainless steel, empty enclosure with hinged door

| **Width** (B) mm | Packs of | 200 | 300 | 380 | 380 | 380 | 600 | 600 | 760 | 800 | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 300 | 380 | 300 | 380 | 600 | 600 | 760 | 760 | 1000 | |
| **Depth** (T) mm | | 155 | 210 | 155 | 210 | 210 | 210 | 210 | 300 | 300 | |
| Mounting plate width (F) mm | | 162 | 275 | 334 | 334 | 334 | 549 | 549 | 704 | 739 | |
| Mounting plate height (G) mm | | 275 | 334 | 275 | 355 | 570 | 570 | 730 | 730 | 955 | |
| **Model No.** | 1 pc(s). | **9401.600** | **9409.600** | **9402.600** | **9403.600** | **9404.600** | **9405.600** | **9406.600** | **9407.600** | **9408.600** | |
| Cam lock with 3 mm double-bit insert | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| Reinforcement section in the door | | – | – | – | – | – | ■ | ■ | ■ | ■ | |
| Weight kg | | 5.0 | 8.1 | 7.8 | 10.1 | 16.9 | 25.2 | 32.5 | 44.1 | 57.8 | |
| **Accessories** | | | | | | | | | | | |
| Wall mounting bracket | 4 pc(s). | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 2433.000 | 261 |
| Support rails TS 35/7.5 | 10 pc(s). | 2315.000 | 2316.000 | – | – | – | – | – | – | – | 997 |
| Support rails TS 35/15 | 10 pc(s). | – | – | – | – | – | 2319.000 | 2319.000 | – | – | 997 |
| Earth straps | | see page | see page | see page | see page | see page | see page | see page | see page | see page | 1033 |

# Ex enclosures

**System accessories** Page 877

**Applications:**
- Zone 1 and 2 or 21 and 22 to 2014/34/EU
- Ambient temperature range: -30 °C...+80 °C
- The specified temperatures may be limited by the installed equipment
- Explosion protection category to EN 60 079: Equipment protection thanks to increased safety (Ex e), equipment protection thanks to enclosure (Ex tB)

**Material:**
- Enclosure: Fibreglass-reinforced unsaturated polyester, surface resistance: < $10^9$ Ω
- Door: Fibreglass-reinforced unsaturated polyester, surface resistance: < $10^9$ Ω all-round foamed-in silicone seal
- Mounting plate: Sheet steel, zinc-plated, passivated

**Colour:**
- RAL 9011

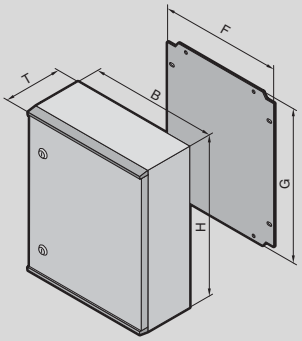
**Protection category IP to IEC 60 529:**
- IP 66

**Supply includes:**
- Enclosure
- Door
- Mounting plate

**Certificates:**
Available on the Internet

**Approvals:**
- ATEX
- IECEx PTB

Further approvals can be found




## Plastic AX, empty enclosure with hinged door

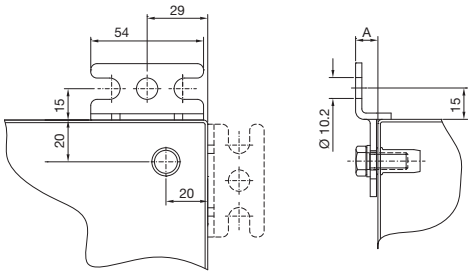
| **Width** (B) mm | Packs of | 250 | 300 | 400 | 400 | 500 | 600 | 600 | 800 | Page |
|---|---|---|---|---|---|---|---|---|---|---|
| **Height** (H) mm | | 350 | 400 | 400 | 600 | 500 | 600 | 800 | 1000 | |
| **Depth** (T) mm | | 150 | 200 | 200 | 200 | 300 | 200 | 300 | 300 | |
| Mounting plate width (F) mm | | 155 | 205 | 305 | 305 | 405 | 505 | 505 | 705 | |
| Mounting plate height (G) mm | | 275 | 325 | 325 | 525 | 425 | 525 | 725 | 925 | |
| **Model No.** | 1 pc(s). | **9202.100** | **9203.100** | **9204.100** | **9205.100** | **9207.100** | **9206.100** | **9208.100** | **9209.100** | |
| Cam lock with 3 mm double-bit insert | | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | |
| Weight kg | | 4.4 | 6.4 | 7.8 | 11.2 | 13.3 | 15.7 | 22.8 | 34.6 | |
| **Accessories** | | | | | | | | | | |
| Wall mounting bracket | 4 pc(s). | 1485.500 | 1485.500 | 1485.500 | 1485.500 | 1485.500 | 1485.500 | 1485.500 | 1485.500 | 261 |
| Screw for interior installation | 50 pc(s). | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 1485.300 | 261 |
| Pole clamp | 2 pc(s). | 2584.110 | 2584.110 | 2584.110 | 2584.110 | 2584.110 | 2584.110 | 2584.110 | 2584.110 | 968 |
| Universal bracket | 4 pc(s). | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 1485.200 | 97 |
| Door stay AX | 2 pc(s). | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 1485.100 | 96 |
| LED system light | | – | – | 2500.100 | 2500.100 | 2500.100 | 2500.100 | 2500.110 | 2500.110 | 1014 |

## Wall mounting bracket

For the attachment of Ex empty enclosures, stainless steel.

**Supply includes:**
– Assembly parts for mounting on the enclosure

| Material | Wall distance (A) mm | Packs of | **Model No.** |
|---|---|---|---|
| Stainless steel 1.4301 (AISI 304) | 10 | 4 pc(s). | **2433.000** |



## Wall mounting bracket

**for AX plastic**
For attachment to the wall, only possible from the outside of the enclosure.

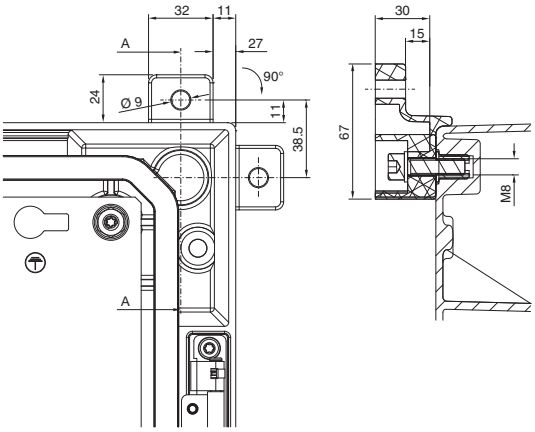
**Material:**
– Fibreglass-reinforced polyamide[1)]

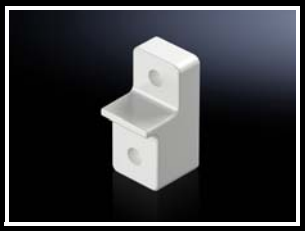
**Supply includes:**
– Assembly parts for mounting on the enclosure

| Colour | Packs of | **Model No.** |
|---|---|---|
| RAL 7035 | 4 pc(s). | **1485.400** |
| RAL 9011 | 4 pc(s). | **1485.500[1)]** |

[1)] With graphite additive for Ex applications

Section A – A



## Screw for interior installation

**for AX plastic**
For mounting accessories on the mounting bosses in the enclosure body.

Drive: Multi-tooth 25

Dimensions: 5 x 14 mm

| Type of screw | Packs of | **Model No.** |
|---|---|---|
| Pan head screw, self-tapping | 50 pc(s). | **1485.300** |

# Rittal – The System.

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# Outdoor

## Outdoor enclosures

Basic enclosures .....266
Wall-mounted enclosures .....269

## Outdoor project solutions

Toptec.....270
Multifunctional enclosures.....271

# At home in any outdoor application

## Energy

- Mounting benefits – Flexible basic enclosure, with doors front and rear on request, for rapid interior installation and optimum on-site accessibility
- Variable base mounting – Easy to plan, because it is suitable for all site conditions: Concrete base/plinth, base plate, plastic base/plinth

## Water industry

- The ideal material – Powder-coated aluminium for a long service life and corrosion resistance, plus fast machining of cut-outs
- Fast interior installation – All-round 25 mm system punchings and an extensive range of system accessories help to reduce assembly time

## Telecommunications

- Fully integrated system solutions for mobile communications and broadband network installation reduce planning complexity
- Vandal-resistant – Enclosure solutions up to resistance class RC4

## Telematics

- Optimum protection against corrosion – Coordinated mix of materials for heavily contaminated roadside environments helps to extend servicing intervals

# Outdoor Basic enclosures – Flexibility included

## Systematic roof concept

Multi-functional benefits:

- Roof projection increases the proportion of shading
- Air exchange with all-round louvred grilles
- Fan for active climate control has an IP-compatible covering

## Integral transport options

- Eyebolts on the inner roof, concealed by the rain canopy
- For transporting the fully configured unit by crane

## Systematic installation benefits

- System punchings in the base ensure system compatibility
- Extensive range of system-compatible accessories for individual installations

# Outdoor Basic enclosures

**Climate control** Page 449 **Outdoor housing** Page 958 **Cable routing** Page 1044

Outdoor enclosure with 100 mm transport plinth and rain canopy with projections on all sides.

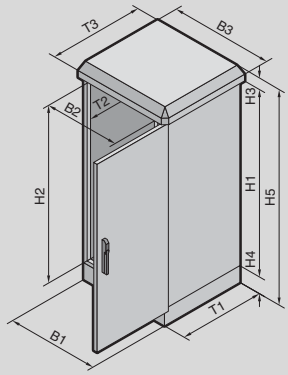
**Material:**
- Aluminium AlMg3

**Surface finish:**
- Powder-coated
- UV-resistant pure polyester

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55
- NEMA 3R

**Supply includes:**
- Single-walled outdoor enclosure, fully preconfigured
- Basic enclosure with three-part gland plate
- 25 mm system punchings in the roof, base, front and in the enclosure depth
- Front door(s) with door stay, swing lever handle and profile half-cylinder, lock BJ 20027
- Transport plinth with screw-fastened trim panels front and rear
- Enclosure width 1200 mm has two 600 mm wide mounting panels
- Rain canopy




## Single-walled

| **Width** (B1) mm | Packs of | 600 | 800 | 1200 | Page |
|---|---|---|---|---|---|
| **Height** (H1) mm | | 1200 | 1200 | 1200 | |
| **Depth** (T1) mm | | 500 | 500 | 500 | |
| Clearance width (B2) mm | | 512 | 712 | 512 | |
| Clearance height (H2) mm | | 1112 | 1112 | 1112 | |
| Clearance depth (T2) mm | | 449 | 449 | 449 | |
| Rain canopy width (B3) mm | | 650 | 850 | 1250 | |
| Rain canopy height (H3) mm | | 55 | 55 | 55 | |
| Rain canopy depth (T3) mm | | 550 | 550 | 550 | |
| Base/plinth height (H4) mm | | 100 | 100 | 100 | |
| Overall height (H5) mm | | 1355 | 1355 | 1355 | |
| **Model No.** | 1 pc(s). | **9783.530** | **9783.610** | **9784.540** | |
| Door(s) | | 1 | 1 | 2 | |
| Weight kg | | 38.0 | 49.5 | 66.0 | |
| With removable centre bar, 2 lockable doors | | – | – | ■ | |
| **Accessories** | | | | | |
| Mounting plate | 1 pc(s). | 9765.092 | 9765.095 | 9765.191 | 981 |
| Enclosure heater | 1 pc(s). | 3105.400 | 3105.400 | 3105.400 | 531 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 547 |
| Profile half-cylinders | 1 pc(s). | 9785.040 | 9785.040 | 9785.040 | 942 |
| Mounting angles, 482.6 mm (19") | 2 pc(s). | **7688.000** | **7688.000** | **7688.000** | |
| Installation bracket for mounting angles, 482.6 mm (19") | 2 pc(s). | **7696.000** | **7698.000** | **7696.000** | |
| LED system light | | see page | see page | see page | 1014 |

**Compact enclosures AX, stainless steel** Page 236 **Hygienic Design** Page 217 **Outdoor housing** Page 958

Outdoor enclosures for wall or pole mounting. Enclosure-within-an-enclosure concept, outer enclosure with cut-out at the bottom and integrated louvres on the rear panel and side panels for ventilation.

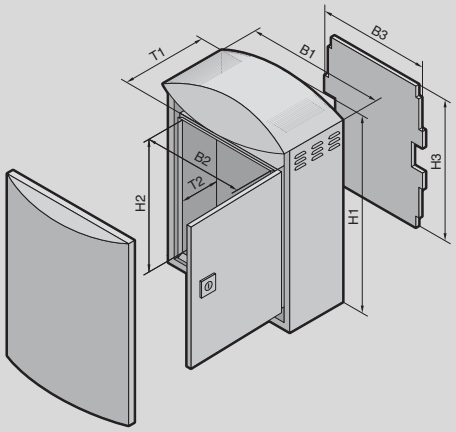
**Material:**
- Enclosure and mounting plate: Aluminium, AlMg3
- Door, inner enclosure: Stainless steel 1.4301 (AISI 304)

**Surface finish:**
- Enclosure: Powder-coated, UV-resistant pure polyester

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Supply includes:**
- Twin-walled outdoor enclosure, fully preconfigured
- Inner enclosure with mounting plate, gland plate and security lock (CS 9791.045 with 2 security locks)
- Mounting bracket for enclosure internal thermostat or hygrostat
- Outer enclosure with designer cover and security lock 3524 E
- 2 C rails on the rear panel




## Twin-walled

| **Outer enclosure** | | | | | | |
|---|---|---|---|---|---|---|
| **Width** (B1) mm | Packs of | 370 | 420 | 530 | 630 | Page |
| **Height** (H1) mm | | 522 | 560 | 700 | 780 | |
| **Depth** (T1) mm | | 210 | 210 | 265 | 380 | |
| **Inner enclosure** | | | | | | |
| **Width** (B2) mm | | 300 | 350 | 460 | 580 | |
| **Height** (H2) mm | | 400 | 440 | 565 | 580 | |
| **Depth** (T2) mm | | 170 | 170 | 220 | 333 | |
| Clearance width mm | | 280 | 330 | 440 | 560 | |
| Clearance height mm | | 380 | 420 | 545 | 560 | |
| Clearance depth mm | | 145 | 145 | 195 | 308 | |
| Mounting plate width (B3) mm | | 270 | 320 | 430 | 550 | |
| Mounting plate height (H3) mm | | 380 | 410 | 535 | 550 | |
| **Model No.** | 1 pc(s). | **9791.015** | **9791.025** | **9791.035** | **9791.045** | |
| **Accessories** | | | | | | |
| Pole clamp | 2 pc(s). | 2584.100 | 2584.100 | 2584.100 | 2584.100 | 968 |
| Enclosure heater | 1 pc(s). | 3105.330 | 3105.330 | 3105.330 | 3105.330 | 530 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Socket | 2 pc(s). | 2506.120 | 2506.120 | 2506.120 | 2506.120 | 1042 |
| LED system light | | see page | see page | see page | see page | 1014 |

# Toptec project solutions

**The universal platform for outdoor applications**

- Weather canopy – With projection on all sides
- Chimney effect of the twin-walled structure – Reduces the influence of sunlight
- Mounting benefit – Open frame structure for fast configuration, also applies to bayed variants
- Energy-efficient – The new wall-mounted cooling unit Blue e+ Outdoor can be used worldwide, thanks to its multi-voltage capability, and is suitable for use e.g. with Toptec project solutions

**Design**

**Enclosure type:**
– Outdoor enclosure, twin-walled

**Material:**
– Base frame: Stainless steel
– Enclosure panels: Aluminium
– Rain canopy: Aluminium

# Project solutions with multifunctional enclosures



**Your platform for telecommunications solutions**

- Weather canopy with ventilation
- Gland plate with cable glands
- 482.6 mm (19″) mounting angles inside the enclosure, in stainless steel throughout
- Aluminium mounting plate
- Depending on the design, with single door/two doors, symmetrical or asymmetrical

**Design**

**Enclosure type:**

– Modular outdoor enclosure system, single- or twin-walled

**Material:**

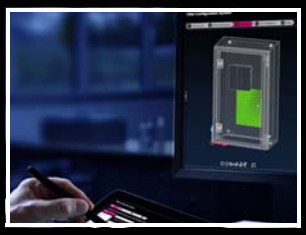
– Base frame: Aluminium
– Enclosure and panels: Aluminium
– Rain canopy: Aluminium
– 482.6 mm (19″) standard field: Stainless steel

# Software for enclosures

## Configurators/tools/CAD data

### Enclosures

Menu-prompted configurators help you to select the right enclosure and matching standard accessories. The calculated results contain the Rittal Model Numbers for your parts list definition.



### Rittal Configuration System

**The latest dimension in configuration for Rittal – The System.**

Simply select your preferred enclosure system and launch the configuration process. Climate control components, busbars and accessories are easily added to the enclosure without specialist product know-how, thanks to the use of plausibility-checked components. The configuration progress can be followed at any time with 3D visualisation. Cut-outs e.g. for fan-and-filter units, switches, connectors and cable entries are easily planned and positioned directly on the enclosure with the Rittal Configuration System. Parts lists, drawings and technical documents for your configuration are generated automatically.

**Benefits:**

- Plausibility-checked, error-free product configuration
- Control of the ongoing configuration status with 3D visualisation
- Simple planning of modifications and machining of enclosures and housings
- Order configured products directly from the Rittal online shop
- Direct data transfer of the configuration results into EPLAN Pro Panel
- Free online tool – suitable for use with any standard Web browser, no login required

**Note:**

- Configure online at www.rittal.com/configurators

## Human/machine interface

Operation and monitoring play an increasingly vital role in mechanical and plant engineering. Rittal meets the exacting requirements placed on the "packaging" of the sensitive yet powerful electronics with its integrated modular system at the human/machine interface.

Design, function and ergonomics are the distinguishing features of this product range.
Rittal provides free Internet planning tools to assist with planning and engineering of the command panels and support arm systems.
In this way, the right product for your customer application is achieved simply, quickly and reliably.

## Command panel configurators

**for aluminium command panels**

The online configurators for Comfort Panel and Optipanel allow you to configure individual, perfectly coordinated panel solutions. Using a catalogue of questions, the configurators automatically guide you through the individual selection masks until you have compiled a complete system. The system also has a built-in smart consistency check to ensure that your configuration is complete and error-free.

**Benefits:**
- Select the enclosure to match the HMI panel used (the integral database contains a variety of commercial panels from various manufacturers)
- Navigate easily through the catalogue of questions
- Quickly compile the required features
- Request a quote based on the selected data records
- Request a 3D CAD model for integration into the system design

**Note:**
- Optipanel and Comfort Panel: Configure online at www.rittal.com/configurators

## Support arm configurator

**for CP 40/60/120/180, support section, height-adjustable**

The tool is able to precisely define the correct system using important user-specific parameters such as the jib length, enclosure weight or required cable cross-sections.

**Benefits:**
- Individual assembly tailored to the requirements of the application
- Built-in consistency check
- The outcome is a plausibility-checked parts list plus CAD data for the configured components
- Order directly from the online shop

**Note:**
- Configure online at www.rittal.com/configurators

# Software for enclosures

## Configurators/tools/CAD data

### CAD data

**Greater efficiency in plant design**
Whichever CAD system you use, 2D and 3D CAD data provide effective support with the efficiency and productivity of your plant design work.

It includes both 2D and 3D drawings for all Rittal items plus an extensive range of system accessories.

**Retrieval options:**
- CAD data online: Request data from the product page on the Rittal website
- Online: Data via the Web platform "PARTcommunity"
- Online: As an app

**Benefits for users of CAD data:**
- All CAD data may be transferred into any commercially available CAD system, thanks to the intelligent, native 2D/3D multiCAD-compatible format.
- The accurately detailed and validated drawings allow users to create design drawings with optimum planning confidence, in a fraction of the time taken for conventional design, by simply remodelling.
- Thanks to the freely selectable level of detail in CAD models, these may be represented in a greatly simplified format, enabling huge performance enhancements among users.

**Note:**
- Fast online access to original data in all commercially available CAD formats directly from the Model Number

### Online conversion assistant for small enclosures KX and compact enclosures AX

**Convert quickly and easily with the parts list converter**
- Load your complete parts list based on enclosure types KL, EB, BG, AE and CM including accessories into the conversion assistant and convert to AX/KX
- Quick search: Individual Model Numbers are also easily located using the search box
- Generate CSV parts lists for uploading into the EPLAN Data Portal basket

**Benefits:**
- Save time with fast, simple conversion of entire parts lists
- Directly recode project parts lists and transfer all project items into your own item database via the EPLAN Data Portal basket. There is no need to download individual macros into the item database.

**Note:**
- Convert directly online at www.rittal.com/ax

### Product Scan app

**All product information in a single scan**
- Fast access to all relevant product information by scanning the QR code on the product
- Create scan lists and export the lists for subsequent use
- Track scanned products in your scan history

**Note:**
- Downloaded free from the App Store and from the Google Play Store

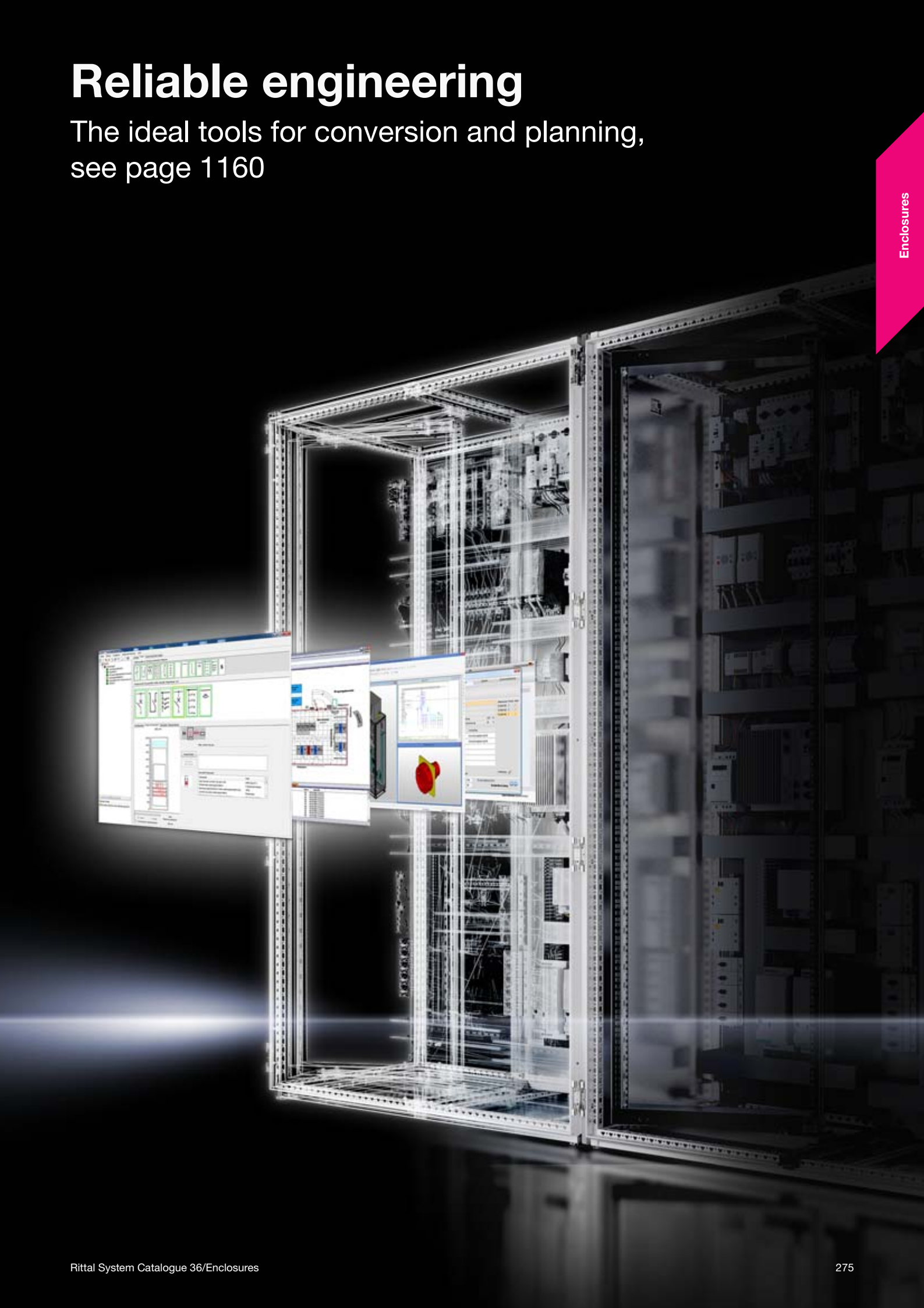
Android app

iPhone app

# Reliable engineering

The ideal tools for conversion and planning,
see page 1160





# Rittal – The System.

**Faster – better – everywhere.**

**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

FRIEDHELM LOH GROUP

# POWER DISTRIBUTION

## RiLine busbar systems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## Power distribution software


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# Rittal – The System.

**Faster – better – everywhere.**

| | RiLine busbar systems | | |
|---|---|---|---|
| | The tried-and-trusted, super-flexible power distribution systems for individual requirements. From small power distributors, to individual switchgear and controlgear, through to heavy-current power distributors for infrastructure and industry applications. Simple, secure assembly plus user-friendly planning with design verification are the distinguishing features of these systems. | | |
| Busbar system | RiLine Compact | Mini-PLS | RiLine PLS/flat copper bars |
| Bar centre distance mm | – | 40 | 60 |
| Rated current A up to | 125 | 250 | 800, 1600 |
| Product characteristics | ■ Contact hazard-protected board with integral busbars for the safe accommodation and contacting of components<br>■ The board and all components are simply top-mounted; no tools required<br>■ Suitable for AC and DC applications | ■ Space-saving design with full-surface top-mounting of the busbar supports and bar connector elements<br>■ Simple component installation via plug and lock action from the front<br>■ Optimum contact hazard protection with all-round encapsulation | ■ Thanks to the special styling of the PLS special busbars, top-mounting with components in the support area is not a problem<br>■ Optimum contact hazard protection with all-round encapsulation<br>■ Suitable for AC and DC applications |
| From page | 282 | 294 | 300 |

| | VX25 Ri4Power | | |
|---|---|---|---|
| | The tested complete solution – Enclosure and bar system. Mutual interference between electrical equipment in low-voltage switchgear systems has already been tested to IEC 61 439 and confirmed with a design verification. | Modular system for low-voltage switchgear with design verification to IEC 61 439-1/-2 and DIN EN 61 439-1/-2 plus power distributors and structured system solutions for switchgear with 1-4b Form separation. | ISV distribution enclosures for standard-compliant power supply in buildings and industry. Flexible configuration with practical power distribution modules. |
| | Flat copper busbars | Flat copper busbars | Flat copper busbars |
| | 185 | 60, 70, 80, 185 | 60, 100, 185 |
| | 2100 | 6300 | – |
| | ■ Supports top-mounting of the busbar supports with components on the cover system pitch pattern<br>■ Integral busbar shielding in the cover section to prevent accidental arcing<br>■ Top-mounting of the cover section and quick retrofitting of components without removing the cover section | ■ Tested system solutions to the internationally valid standard IEC 61 439-1 and simple creation of the design verification<br>■ High levels of short-circuit withstand strength up to $I_{cw}$ 100 kA for 1 sec./$I_{pk}$ 220 kA<br>■ Tested accidental arcing protection to IEC 61 641 | ■ Distribution enclosures as wall-mounted and free-standing enclosures for individual population with modular elements |
| | 362 | 391 | 419 |

# Rittal – The System.

**Faster – better – everywhere.**

# Busbar systems

## RiLine Compact busbar system


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NH fuse-switch disconnectors ....290
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## Mini-PLS busbar system (40 mm)


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## RiLine busbar system (60 mm)


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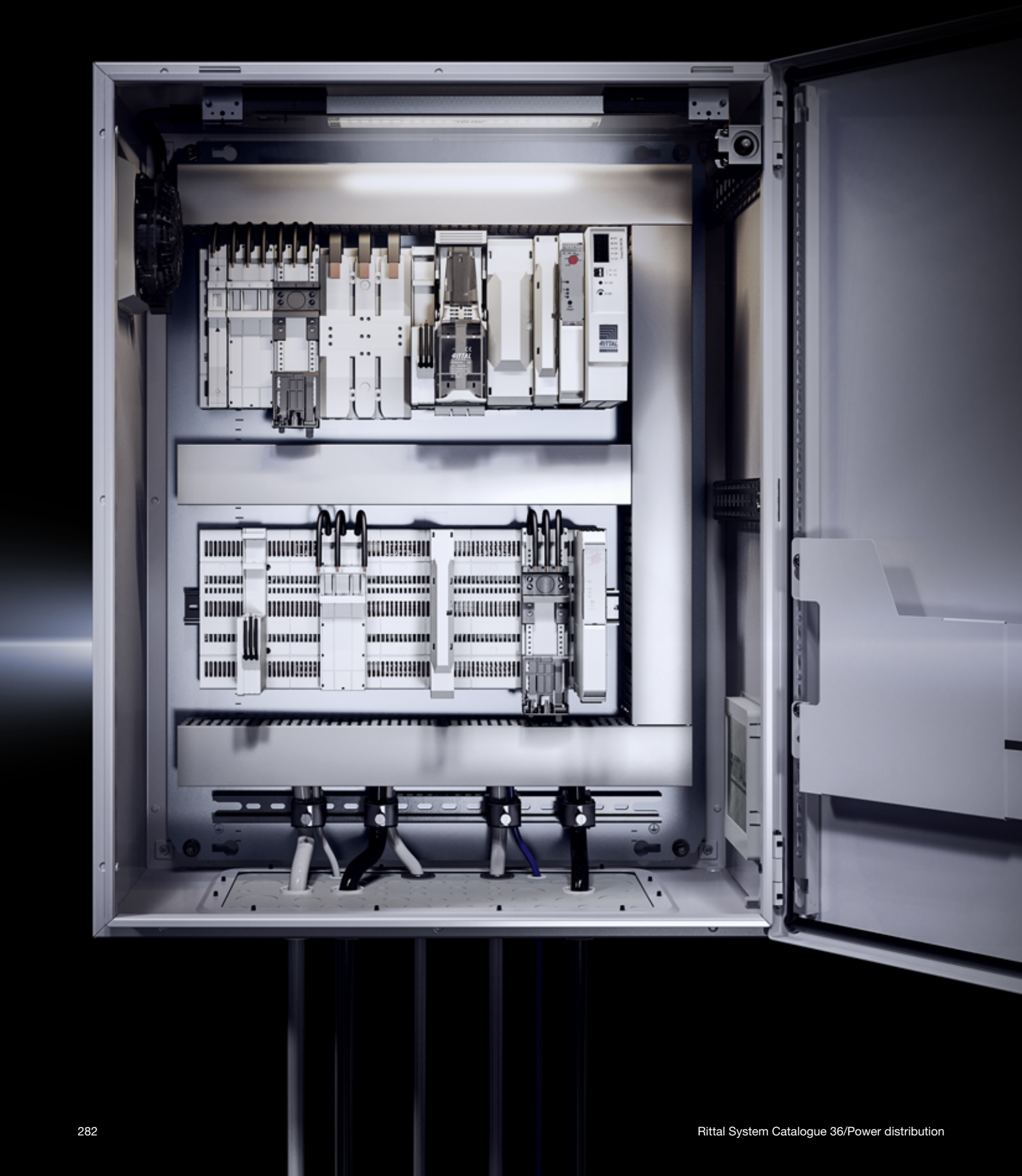
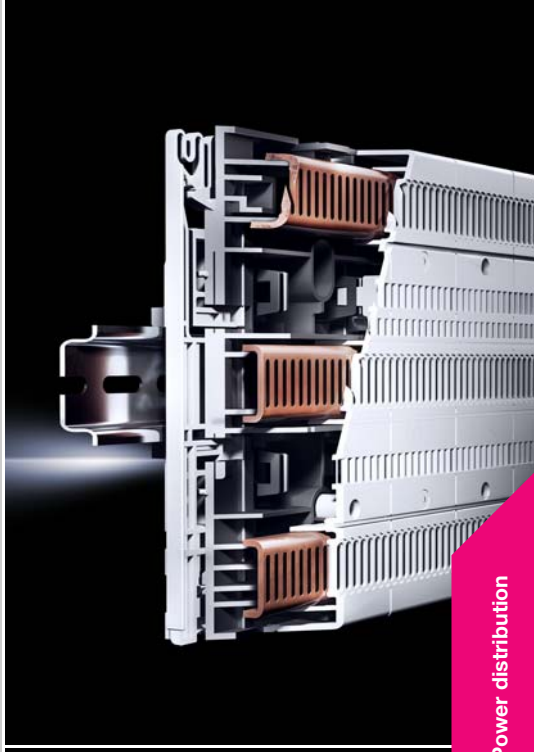
# RiLine Compact – Power distribution in a confined space



## Tool-free installation made easy

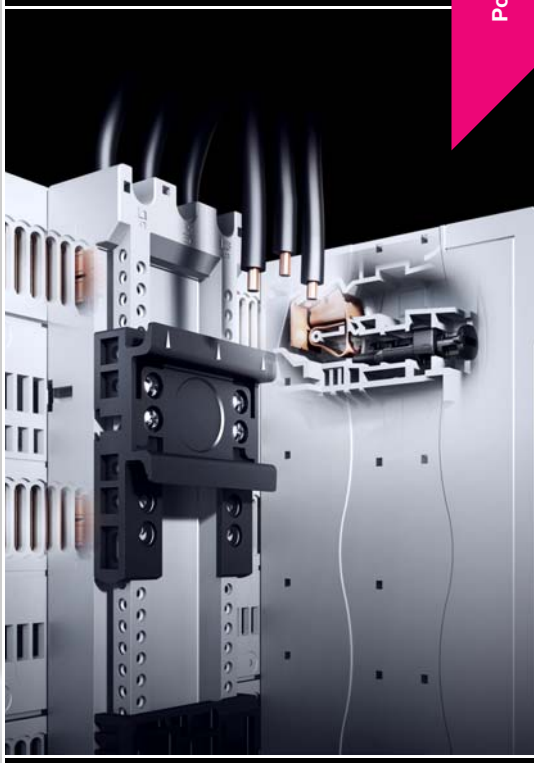
- The board with integral circuit board conductors and all components are simply top-mounted; no tools required.
- Attaching the components simultaneously ensures a secure electrical connection to the all-round shock-hazard-protected board.
- The contact pitch pattern of the RiLine Compact system allows the assemblies to be positioned anywhere, in line with requirements.





## Safe adaptor connection

- The RiLine Compact system adaptors support fast connection of cables and devices.
- The screw-free connection technology in the adaptor means that conductors are quickly connected, and the contact point itself is completely maintenance-free.
- The component adaptors with preassembled connection cables satisfy the special requirements of IEC 61 439 and UL.



## Space-saving installation of electronic components

- The compact power supply unit provides a regulated control voltage of 24 V DC. The integral push-in terminal allows simple, fast connection of the conductors.
- The motor controller with electronic overload protection has an exceptionally space-saving design and takes up 50% less space than a conventionally wired motor controller. The hybrid technology creates a low-loss motor controller which is particularly gentle on the switching contacts. This helps to extend the service life.

# Board

**Connection adaptors** Page 285 **Component adaptors** Page 286 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
- Shock-hazard-protected busbar board for the safe accommodation and contacting of components, thanks to simple plug-in mounting
- Pre-punched pitch units in the board allow secure, fast positioning of components
- Reduces wiring work by contacting directly onto the board
- For snap-on mounting onto 35 x 7.5/15 mm busbars or for direct attachment to the mounting plate

**Material:**
- Polyamide
- Polycarbonate
- E-Cu
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- Integral busbars

**Note:**
- The technical data may vary for UL applications

**Standards:**
- UL 508
- IEC 61 439

**Approvals:**
- UL

## RiLine Compact, 3-pole

| Rated current max. A | Packs of | 125 | 125 | Page |
|---|---|---|---|---|
| Rated operating voltage V | | 690 (AC)<br>600 (DC) | 690 (AC)<br>600 (DC) | |
| Number of poles | | 3-pole | 3-pole | |
| Max. pitch units @ 45 mm | | 5 | 9 | |
| Width mm | | 225 | 405 | |
| Height mm | | 160 | 160 | |
| Depth mm | | 45.1 | 45.1 | |
| **Model No.** | 1 pc(s). | **9635.000** | **9635.010** | |

**Board** Page 284 **Component adaptors** Page 286 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
– To supply power to the board

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– The technical data may vary for UL applications

**Approvals:**
– UL

## Rated current max. 80 – 125 A, 3-pole

| Rated current max. A | Packs of | 80 | 125 | Page |
|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | |
| Number of poles | | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | |
| Type of connection | | Spring terminal | Box terminal | |
| Connection of round conductors, fine wire without wire end ferrule $mm^2$ | | 1.5 - 16 | 6 - 50 | |
| Connection of round conductors, fine wire with wire end ferrule $mm^2$ | | 1.5 - 16 | 6 - 50 | |
| Connection of round conductors, multi-wire $mm^2$ | | 1.5 - 16 | 6 - 50 | |
| Connection of round conductors, single-wire $mm^2$ | | 1.5 - 10 | 6 - 50 | |
| Connection of round conductors | | AWG 6 - 16 | AWG 1 - 10 | |
| When using fine-wire round conductors 16 $mm^2$ with wire end ferrule, we recommend the following crimping tools: Rittal 4054.004, Weidmüller PZ 16, Phoenix Contact Crimpfox 25R | | ■ | – | |
| Can be used as a central infeed or as a longitudinal connector for two bayed boards | | – | ■ | |
| Width mm | | 22.5 | 45 | |
| Height mm | | 160 | 160 | |
| Depth mm | | 115.5 | 92.5 | |
| **Model No.** | 4 pc(s). | **9635.200** | **9635.210** | |

# Component adaptors

**Board** Page 284 **Connection adaptors** Page 285 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
- For mechanical attachment and direct contacting of electrical equipment on the board

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

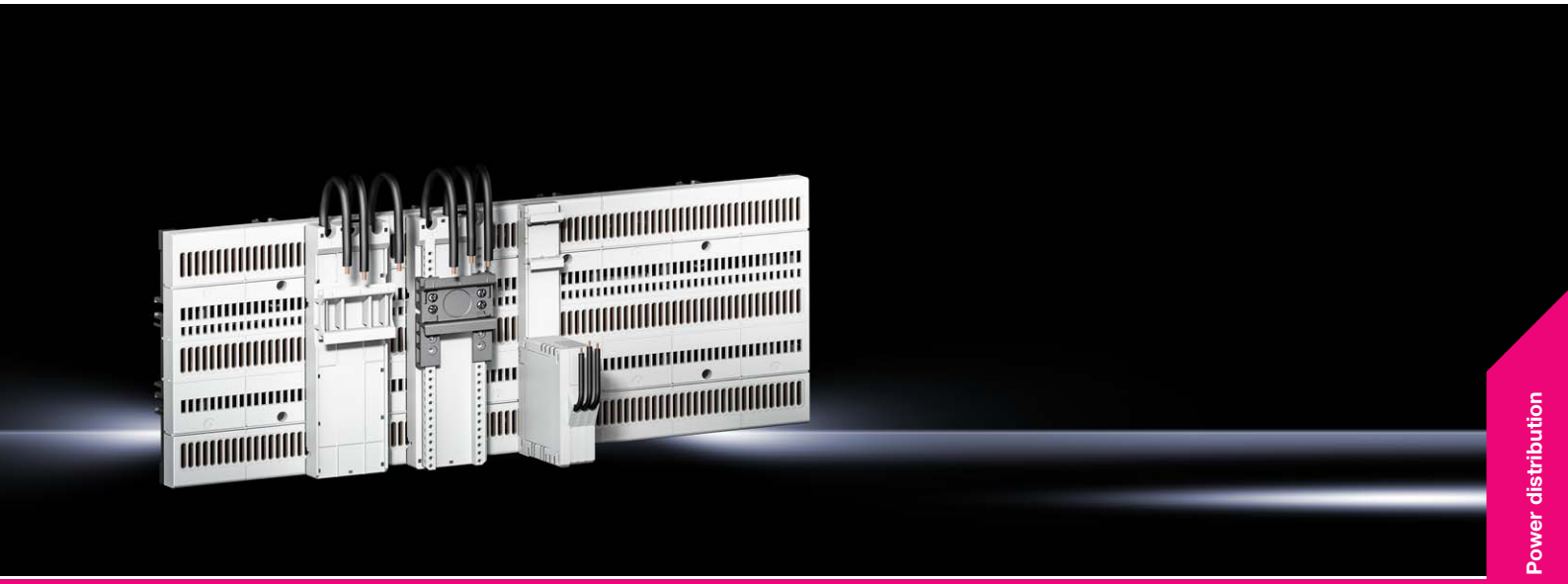
**Colour:**
- RAL 7035

**Note:**
- Different adaptor versions are required depending on the preferred phase connection
- The technical data may vary for UL applications

**Approvals:**
- UL

## Rated current max. 16 – 63 A, 1-pole

| Design | Packs of | L1 | L2 | L3 | L1 | L2 | L3 | Page |
|---|---|---|---|---|---|---|---|---|
| Rated current max. A | | 16 | 16 | 16 | 63 | 63 | 63 | |
| Rated operating voltage V, ~ | | 690 (AC), 1~ | 690 (AC), 1~ | 690 (AC), 1~ | 690 (AC), 1~ | 690 (AC), 1~ | 690 (AC), 1~ | |
| Number of poles | | Single-pole | Single-pole | Single-pole | Single-pole | Single-pole | Single-pole | |
| Connection cables, Design | | AWG 14 | AWG 14 | AWG 14 | AWG 8 | AWG 8 | AWG 8 | |
| Connection cables, Length mm | | 100 | 100 | 100 | 100 | 100 | 100 | |
| Support rails Qty/height mm | | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | |
| Support rail version | | static | static | static | static | static | static | |
| Width mm | | 18 | 18 | 18 | 18 | 18 | 18 | |
| Height mm | | 160 | 160 | 160 | 160 | 160 | 160 | |
| Depth mm | | 35 | 35 | 35 | 35 | 35 | 35 | |
| **Model No.** | 6 pc(s). | **9635.371** | **9635.372** | **9635.373** | **9635.381** | **9635.382** | **9635.383** | |





**Board** Page 284 **Connection adaptors** Page 285 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
- For mechanical attachment and direct contacting of electrical equipment on the board

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- The technical data may vary for UL applications

**Approvals:**
- UL

## Rated current max. 16 – 45 A, 3-pole

| Design | | With integral fuse holder | Basic | Basic | Comfort | Comfort | Comfort | Comfort | Page |
|---|---|---|---|---|---|---|---|---|---|
| Fuse type (class) | | CC | – | – | – | – | – | – | |
| Rated current max. A | | 16 | 16 | 32 | 16 | 25 | 32 | 45 | |
| Rated operating voltage V, ~ | | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Fuse size mm | | 10 x 38 | – | – | – | – | – | – | |
| Connection cables, Design | | AWG 14 | AWG 14 | AWG 10 | AWG 14 | AWG 12 | AWG 10 | AWG 8 | |
| Connection cables, Length mm | | 125 | 120 | 100 | 160 | 100 | 160 | 100 | |
| Support rails Qty/height mm | | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | 1 / 10 | |
| Support rail version | | static | static | static | adjustable | adjustable | adjustable | adjustable | |
| Width mm | | 22.5 | 45 | 45 | 45 | 45 | 45 | 45 | |
| Height mm | | 160 | 160 | 160 | 160 | 160 | 160 | 160 | |
| Depth mm | | 80 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | |
| **Model No.** | | **9635.300** | **9635.310** | **9635.320** | **9635.330** | **9635.340** | **9635.350** | **9635.360** | |
| | Packs of | 1 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | 4 pc(s). | |
| **Accessories** | | | | | | | | | |
| Support rail | 10 pc(s). | – | – | – | 9635.600 | 9635.600 | 9635.600 | 9635.600 | 293 |
| Positioner | | – | – | – | see page | see page | see page | see page | 293 |
| Extension module | 8 pc(s). | – | – | – | 9635.630 | 9635.630 | 9635.630 | 9635.630 | 293 |
| Extension kit | 4 pc(s). | – | – | – | 9635.640 | 9635.640 | 9635.640 | 9635.640 | 293 |

# Component support

**Board** Page 284 **Connection adaptors** Page 285 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
- For extending the mounting options on the board when using wide equipment

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

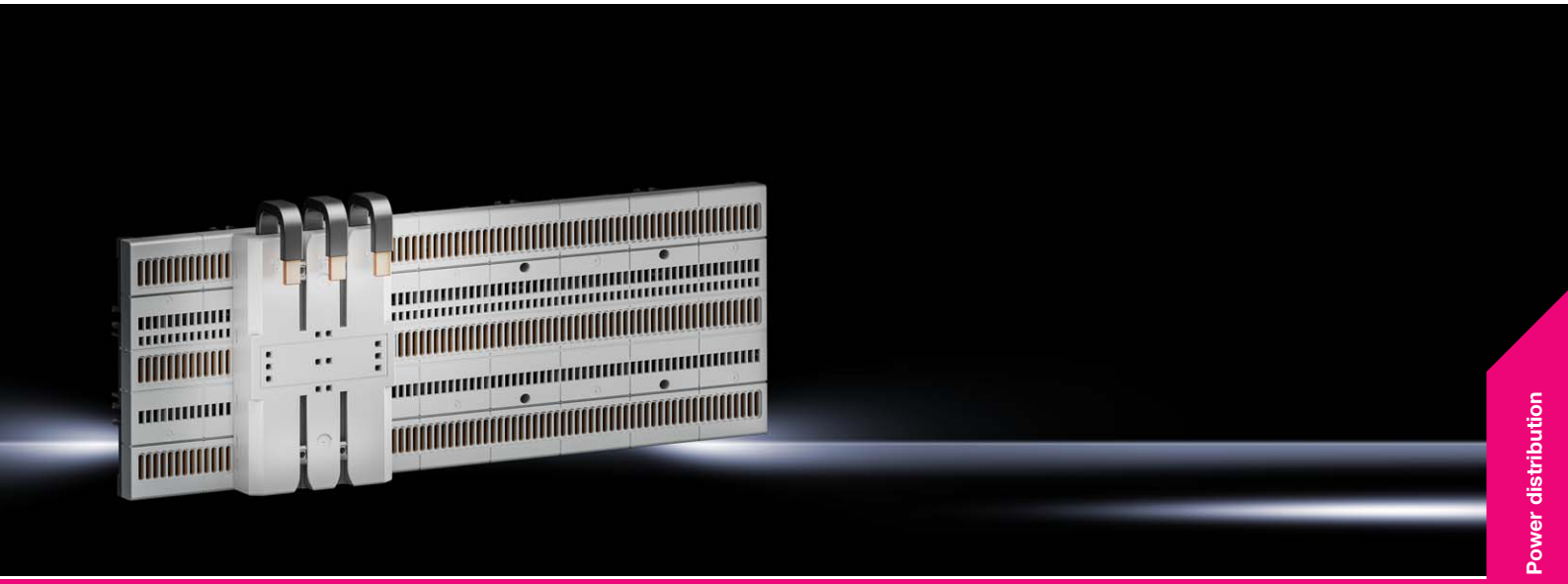
**Colour:**
- RAL 7035

**Approvals:**
- UL

## without contact system

| Support rails Qty/height mm | Packs of | 1 / 10 | Page |
|---|---|---|---|
| Support rail version | | static | |
| Width mm | | 18 | |
| Height mm | | 160 | |
| Depth mm | | 34.5 | |
| **Model No.** | 6 pc(s). | **9635.390** | |

# Circuit-breaker component adaptors





**Board** Page 284 **Connection adaptors** Page 285 **NH fuse-switch disconnectors** Page 290 **Motor controller/power pack** Page 291

**Functions:**
- For mechanical attachment and direct contacting of circuit-breakers on the board
- Circuit-breaker is fitted using variably adjustable fixing points (M4)

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

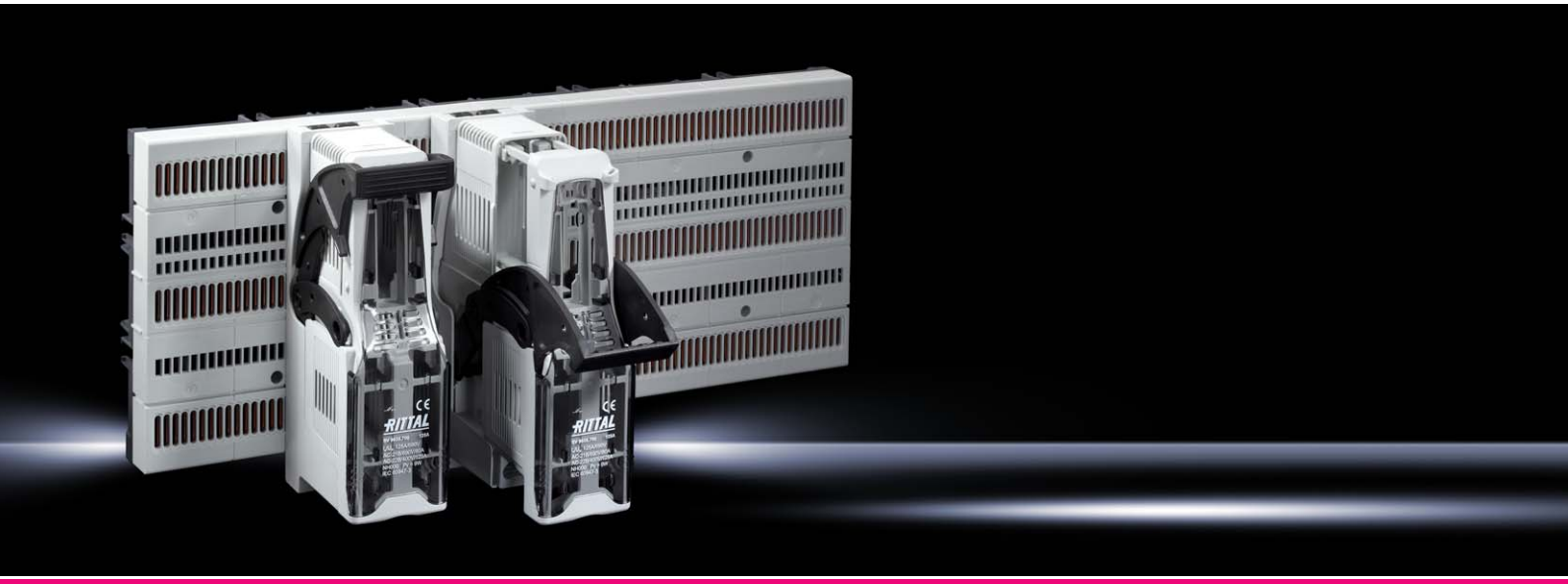
**Note:**
- Consider the mounting distance of the circuit-breaker when selecting the circuit-breaker component adaptor
- Depending on the circuit-breaker used, there may be a reduction in output
- The technical data may vary for UL applications

**Approvals:**
- UL

## Rated current max. 160 A, 3-pole

| Rated current max. A | Packs of | 160 | 160 | Page |
|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690 (AC), 3~<br>600 (DC), 3~ | 690 (AC), 3~<br>600 (DC), 3~ | |
| Number of poles | | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | |
| For switchgear make (model) | | ABB (XT1)<br>Allen Bradley (140G-G)<br>Siemens (3VA10, 3VA11, 3VA51) | ABB (XT2)<br>Allen Bradley (140G-H)<br>Eaton (NZM1)<br>Schneider Electric (NSXm) | |
| Mounting distance mm | | 25 | 30 | |
| Width mm | | 90 | 90 | |
| Height mm | | 160 | 160 | |
| Depth mm | | 45 | 45 | |
| **Model No.** | 1 pc(s). | **9635.100** | **9635.110** | |

# NH fuse-switch disconnectors



**Board** Page 284 **Connection adaptors** Page 285 **Component adaptors** Page 286 **Motor controller/power pack** Page 291

**Functions:**
- To protect connected equipment
- Integral test holes provide measurement access to the contact parts of the fuse inserts
- For cable outlet at the top, the NH fuse-switch disconnector must be mounted on the board rotated through 180°

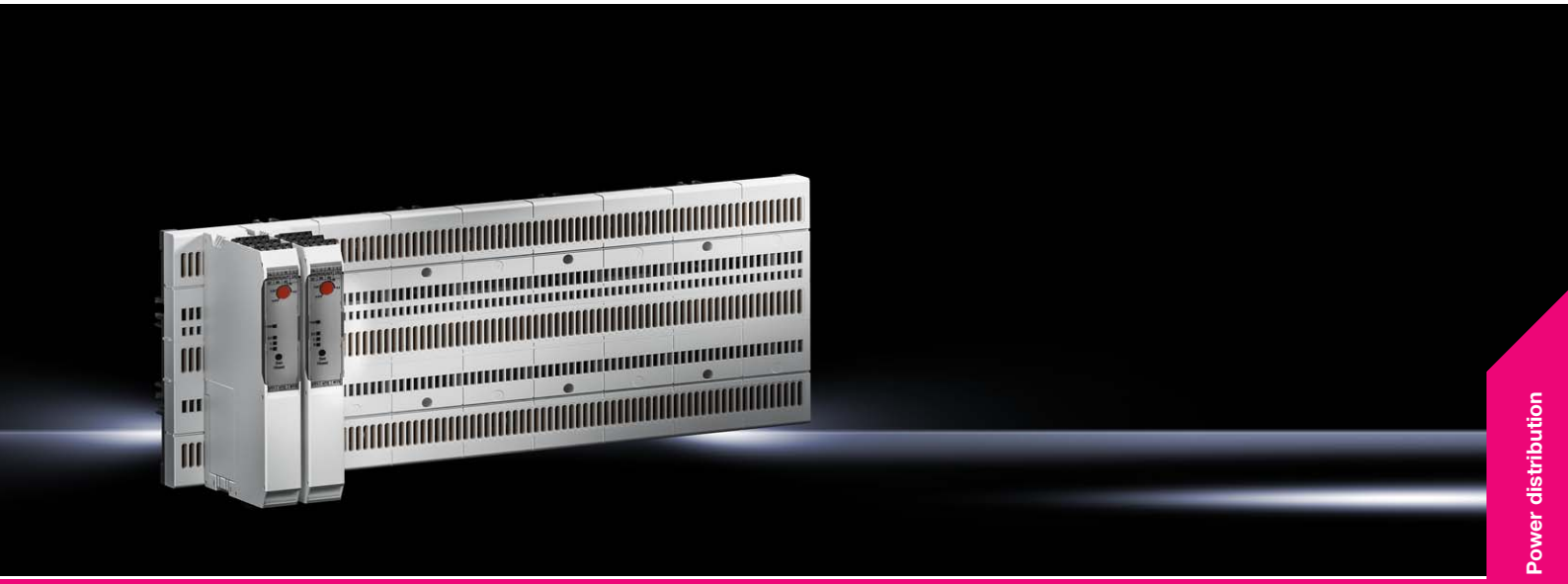
**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

**Colour:**
- RAL 7035

**Basis of test:**
- IEC/DIN EN 60 947-3

## Size 000

| Size | Packs of | 000 | Page |
|---|---|---|---|
| Rated operating current max. A | | 125 | |
| Rated operating voltage V, ~ | | 690 (AC), 3~<br>440 (DC), 3~ | |
| Number of poles | | 3-pole | |
| Cable outlet | | Top/bottom | |
| Type of connection | | Box terminal | |
| Connection of round conductors $mm^2$ | | 2.5 - 50 | |
| Clamping area for laminated copper bars (W x H) mm | | 10 x 10 | |
| Width mm | | 49.5 | |
| Height mm | | 174.5 | |
| Depth mm | | 96 | |
| **Model No.** | 1 pc(s). | **9635.700** | |





**Board** Page 284 **Connection adaptors** Page 285 **Component adaptors** Page 286 **NH fuse-switch disconnectors** Page 290

**Functions:**
- For controlling motors as direct or reversing starters with integral over-ride protection
- The hybrid technology used facilitates frequent switching by semi-conductors with zero wear
- During operation, mechanical contacts ensure a low heat loss
- Space-saving configuration thanks to the minimal build width

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- The technical data may vary for UL applications

## Rated current max. 0.6 – 9 A, 3-pole

| Rated current max. A | Packs of | 0.6 | 2.4 | 3 | 9 | 9 | Page |
|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 500 (AC), 3~, 50/60 | 500 (AC), 3~, 50/60 | 500 (AC), 3~, 50/60 | 500 (AC), 3~, 50/60 | 500 (AC), 3~, 50/60 | |
| Heat loss max. W | | 2.8 | 5.5 | 5.5 | 12 | 12 | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Fuse size mm | | 10 x 38 | 10 x 38 | 10 x 38 | 10 x 38 | 10 x 38 | |
| Connection of round conductors $mm^2$ | | 0.14 - 2.5 | 0.14 - 2.5 | 0.14 - 2.5 | 0.14 - 2.5 | 0.14 - 2.5 | |
| Safety integrity level (SIL) to IEC 61 508 - safe switch-off | | – | – | 3 | – | 3 | |
| Safety integrity level (SIL) to IEC 61 508 - motor protection | | – | – | 2 | – | 2 | |
| Adjustable current monitoring A | | 0.075 - 0.6 | 0.18 - 2.4 | 0.18 - 3 | 1.5 - 9 | 1.5 - 9 | |
| Width mm | | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | |
| Height mm | | 160 | 160 | 160 | 160 | 160 | |
| Depth mm | | 114 | 114 | 114 | 114 | 114 | |
| Approvals | | UL | UL | – | UL | – | |
| **Model No.** | 1 pc(s). | **9635.400** | **9635.410** | **9635.415** | **9635.420** | **9635.425** | |

# Power pack

**Board** Page 284 **Connection adaptors** Page 285 **Component adaptors** Page 286 **NH fuse-switch disconnectors** Page 290

**Functions:**
- 24 V DC control voltage supply
- Integral push-in terminal for tool-free connection of the output
- Supports parallel switching for increased output or for redundancy
- Fast commissioning, thanks to tool-free installation and automatic contacting of the power pack

**Material:**
- Plastic

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Protection class:**
- II (in the closed enclosure)

**Standards:**
- EN 61 000-6-2
- IEC 61 010-1 (SELV)

**Directives:**
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU

**Approvals:**
- UL

| Rated operating voltage V, ~, Hz | Packs of | 400, 2~, 50/60<br>400, 3~, 50/60<br>500, 2~, 50/60<br>500, 3~, 50/60 | Page |
|---|---|---|---|
| Output voltage V (DC) | | 24 | |
| Output current (max.) A | | 5 | |
| Connection of round conductors $mm^2$ | | 0.2 - 4 | |
| Width mm | | 36 | |
| Height mm | | 160 | |
| Depth mm | | 159 | |
| Operating temperature range | | -25 °C...+70 °C | |
| Storage temperature range | | -40 °C...+85 °C | |
| **Model No.** | 1 pc(s). | **9635.800** | |

## Support rail

**for Comfort component adaptors**
For attaching equipment and reverser combinations.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 9005

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 45 | 56 | 10 pc(s). | **9635.600** |

## Positioner

**for Comfort component adaptors**
For attaching equipment and reverser combinations.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 9005

| Width mm | Height mm | For switchgear make (model) | Packs of | **Model No.** |
|---|---|---|---|---|
| 45 | 65 | Siemens (S00, S0) | 10 pc(s). | **9635.610** |
| 45 | 47.5 | Eaton (PKZ/PKE size 0) | 10 pc(s). | **9635.620** |

## Extension module

**for Comfort component adaptors**
For attaching direct starters of varying lengths.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 45 | 40 | 8 pc(s). | **9635.630** |

## Extension kit

**for Comfort component adaptors**
For attaching reverser combinations with 90 mm width.

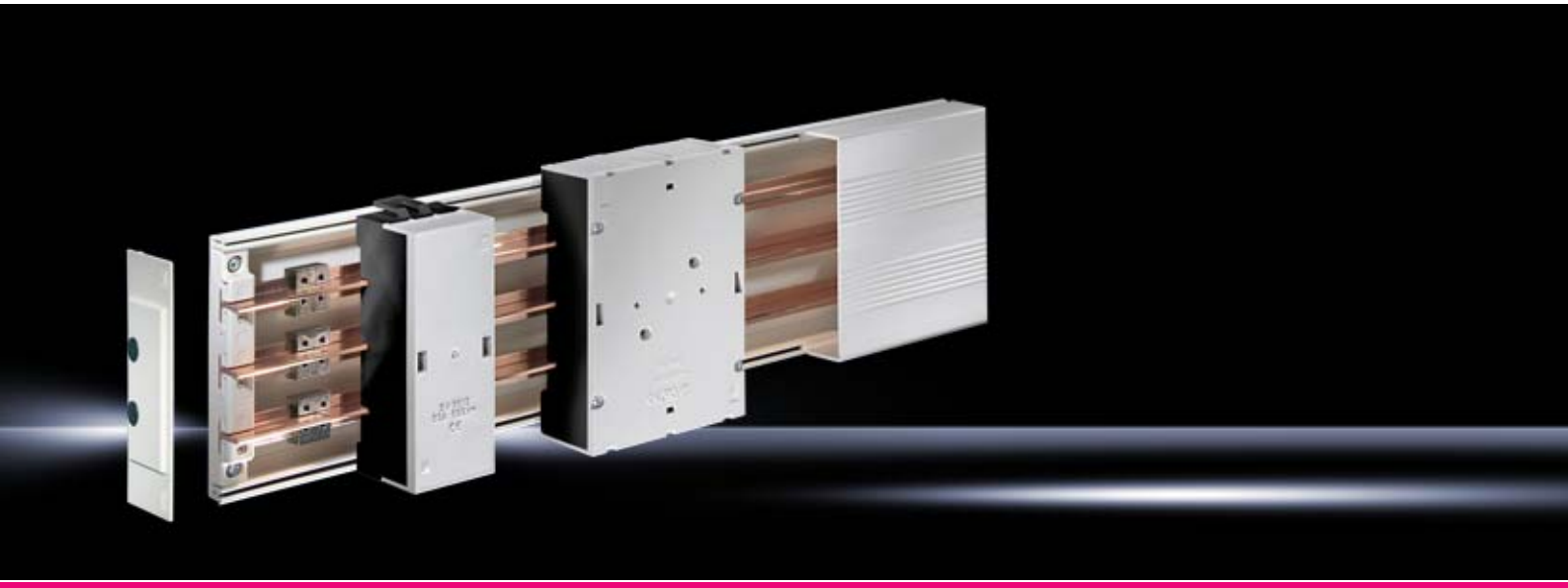
**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Supply includes:**
– 1 set consisting of 1 expansion module, 2 extension modules, 3 connection pins
– 1 set ≙ 1 pc(s).

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 90 | 80 | 4 pc(s). | **9635.640** |

# Mini-PLS busbar system (40 mm)



**Component adaptors** Page 296 **Fuse elements** Page 295

**Busbar supports, busbar connection adaptors**

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

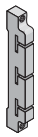
**Colour:**
- RAL 7035
- RAL 9011 (busbar connection adaptor chassis)

**Contact hazard protection**

**Material:**
- Thermally modified hard PVC
- Fire protection corresponding to UL 94-V0

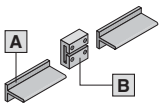
**Colour:**
- RAL 7035

**Mini-PLS busbar supports (3-pole)**



| | | |
|---|---|---|
| Busbar supports, suitable for top mounting | Packs of | ■ |
| Bar centre distance mm | | 40 |
| Approvals | | UR |
| **Model No.** | 4 pc(s). | **9600.000** |

**A Mini-PLS special busbars E-Cu,** bar thickness 3 mm, bar cross-section 120 mm²

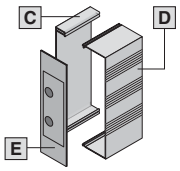



| | | | | | |
|---|---|---|---|---|---|
| Length mm | Packs of | 500 | 700 | 1100 | 1500 |
| Approvals | | UR | UR | UR | UR |
| **Model No.** | 3 pc(s). | **9601.000** | **9602.000** | **9603.000** | **9624.000** |

**Accessories**

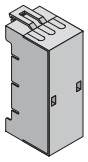
| | | | |
|---|---|---|---|
| | Approvals | | **Model No.** |
| B Busbar connectors | UR | 3 pc(s). | **9611.000** |

**Mini-PLS contact hazard protection**




| Components | Approvals | Length mm | Packs of | **Model No.** |
|---|---|---|---|---|
| C Base tray | UR | 500 | 1 pc(s). | **9605.000** |
| | | 700 | 1 pc(s). | **9606.000** |
| | | 1100 | 1 pc(s). | **9607.000** |
| D Cover section | UR | 250 | 1 pc(s). | **9608.000** |
| | | 500 | 1 pc(s). | **9609.000** |
| E End cover | UR | – | 2 pc(s). | **9610.000** |

**Mini-PLS busbar connection adaptors (3-pole)**



| | | | | Page |
|---|---|---|---|---|
| Rated max. current A | Packs of | 63 | 250 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | |
| Cable outlet | | Top/bottom | Top/bottom | |
| Connection of round conductors mm² | | 1.5 – 35 | 10 – 120 | |
| Clamping area for laminated copper bars, W x H mm | | 10 x 8 | 17 x 15 | |
| Width mm | | 54 | 115 | |
| Height mm | | 160 | 182 | |
| Approvals | | UR | UR | |
| **Model No.** | 1 pc(s). | **9613.000** | **9612.000** | |

**Accessories**

| | | | | |
|---|---|---|---|---|
| Laminated copper bar | | ■ | ■ | 346 |

**Busbar system** Page 294 **Connection adaptors** Page 294 **Connection adaptors** Page 296

**Bus-mounting fuse base**

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 9011
- Cover: RAL 7035

**NH fuse-switch disconnector**

**Material:**
- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

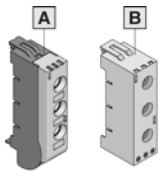
**Colour:**
- RAL 7035

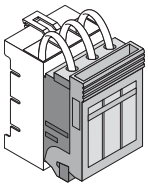
**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

**Busbar adaptor**

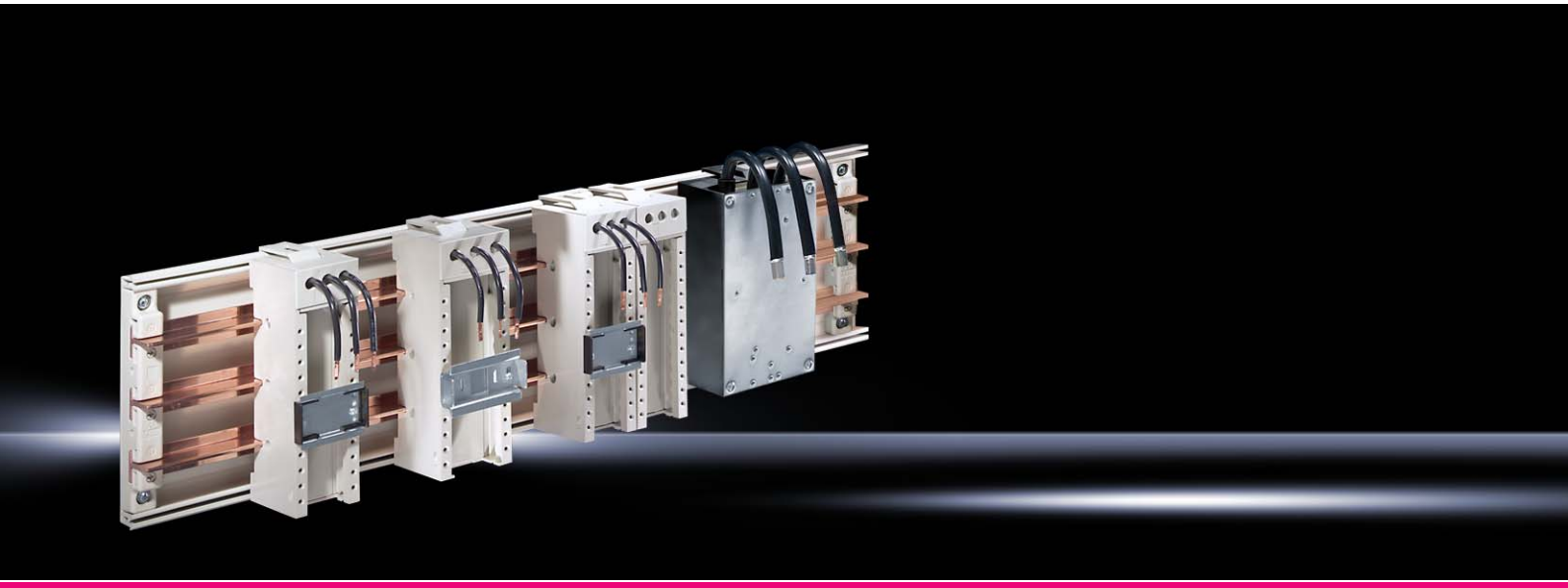
**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 9011

| **Mini-PLS bus-mounting fuse base (3-pole)** | | | A | B |
|---|---|---|---|---|
|  | Fuse insert | Packs of | D 02-E18 | D 02-E18 |
| | Rated max. current A | | 63 | 63 |
| | Rated operating voltage V, ~ | | 400, 3~ | 400, 3~ |
| | Connection of round conductors mm² | | 1.5 – 16 | 1.5 – 16 |
| | Connection type | | Spring terminal | Box terminal |
| | Width mm | | 39.5 | 38 |
| | Height mm | | 189 | 160 |
| | **Model No.** | 1 pc(s). | **9630.005** | **9630.000** |

| **NH fuse-switch disconnector size 000 (3-pole)** | | | | |
|---|---|---|---|---|
|  | Rated operating current max. A | Packs of | 100 | Page |
| | Rated operating voltage V, ~ | | 690, 3~ | |
| | Cable outlet | | Top/bottom | |
| | Connection type | | Box terminal | |
| | Connection of round conductors mm² | | 1.5 – 50 | |
| | Clamping area for laminated copper bars, W x H mm | | 10 x 10 | |
| | Width mm | | 89 | |
| | Height mm | | 141.5 | |
| | **Model No.** | 1 pc(s). | **3431.000** | 325 |
| **Also required** | | | | |
| **Mini-PLS busbar adaptor (3-pole)** | | | | |
| With connection cables mm² | | | 35 | |
| Width mm | | | 90 | |
| Height mm | | | 160 | |
| **Model No.** | | 1 pc(s). | **9629.100** | |
| **Accessories** | | | | |
| Micro-switch | | 5 pc(s). | 3071.000 | 358 |

# Mini-PLS component adaptors

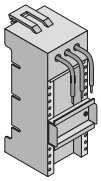
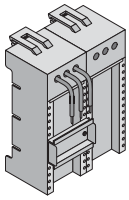


**Busbar system** Page 294 **Busbar connection adaptors** Page 294 **Fuse elements** Page 295 **Switchgear assignment** Page 297

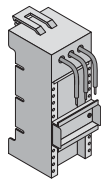
**Material:**
- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

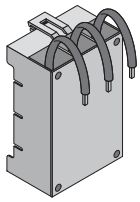
**Colour:**
- RAL 7035
- RAL 9011 (9629.000)

## Rated current max. 12 – 25 A

| | | |  | | | | | |  | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rated max. current A | | Packs of | 12 | 25 | 25 | 25 | 25 | 25 | 25 | Page |
| Rated operating voltage V, ~ | | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables | | | AWG 14 | AWG 12 | AWG 12 | AWG 12 | AWG 12 | AWG 12 | AWG 12 | |
| Support rails quantity/height mm | | | 1/7.5 | 1/7.5 | 1/15 | 1/7.5 | 1/15 | 1/7.5 | 1/7.5 | |
| Width mm | | | 45 | 45 | 45 | 54 | 54 | 72 | 90 | |
| Height mm | | | 160 | 160 | 160 | 160 | 160 | 160 | 160 | |
| Approvals | | | UR | UR | UR | UR | UR | UR | – | |
| **Model No.** | | 1 pc(s). | **9614.110** | **9614.100** | **9615.100** | **9614.000** | **9615.000** | **9625.000** | **9629.010** | |
| **Accessories** | | | | | | | | | | |
| Insert strip | | 2 pc(s). | 9623.000 | 9623.000 | 9623.000 | 9623.000 | 9623.000 | 9623.000 | 9623.000 | 353 |
| Support rails, height 7.5 mm | Width 45 mm | 10 pc(s). | 9320.150 | 9320.150 | 9320.150 | – | – | – | 9320.150 | 352 |
| | Width 54 mm | 10 pc(s). | – | – | – | 3548.000 | 3548.000 | – | – | 352 |

## Rated current max. 40 – 100 A





| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rated max. current A | | | Packs of | 40 | 40 | 40 | 100 | Page |
| Rated operating voltage V, ~ | | | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables | | | | AWG 10 | AWG 10 | AWG 10 | 35 mm² | |
| Support rails quantity/height mm | | | | 1/7.5 | 1/15 | 1/7.5 | – | |
| Width mm | | | | 54 | 54 | 72 | 90 | |
| Height mm | | | | 160 | 160 | 160 | 160 | |
| Approvals | | | | UR | UR | UR | UR | |
| **Model No.** | | | 1 pc(s). | **9616.000** | **9617.000** | **9627.000** | **9629.000** | |
| **Accessories** | | | | | | | | |
| Insert strip | | | 2 pc(s). | 9623.000 | 9623.000 | 9623.000 | – | 353 |
| Support rails | Height 7.5 mm | Width 54 mm | 10 pc(s). | 3548.000 | 3548.000 | – | – | 352 |
| | Height 15 mm | Width 72 mm | 5 pc(s). | – | – | – | 9320.120 | 352 |

## Switchgear assignment – Mini-PLS component adaptors 12 A/25 A

| Make/model | **Model No.** |
|---|---|
| **ABB** | |
| MS116 | 9614.100 |
| MS325 | 9614.000 |
| MS450 (max. 25 A) | 9614.000 |
| MS451 (max. 25 A) | 9614.000 |
| **Eaton** | |
| PKZM0 (up to 25 A) | 9614.100 |
| PKZM01 (up to 25 A) | 9614.100 |
| PKZM4 (up to 25 A) | 9614.000 |
| PKE12 | 9614.100 |
| PKE32 (up to 25 A) | 9614.100 |
| PKE65 (up to 25 A) | 9614.000 |
| **Schneider Electric** | |
| GV2-P (up to 25 A) | 9614.100 |
| GV2-RT | 9614.100 |
| GV2-LE10 | 9614.100 |
| GV3 (up to 25 A) | 9614.100 |

| Make/model | **Model No.** |
|---|---|
| **Siemens** | |
| **S0** | |
| 3RV10 21... | 9614.100 |
| 3RV20 21... (up to 25 A) | 9614.100 |
| **S00** | |
| 3RV10 11... | 9614.100[1)] |
| 3RV20 11... | 9614.100[1)] |
| **S2** | |
| 3RV10 31... (up to 25 A) | 9614.000 |

[1)] Support rail must be offset

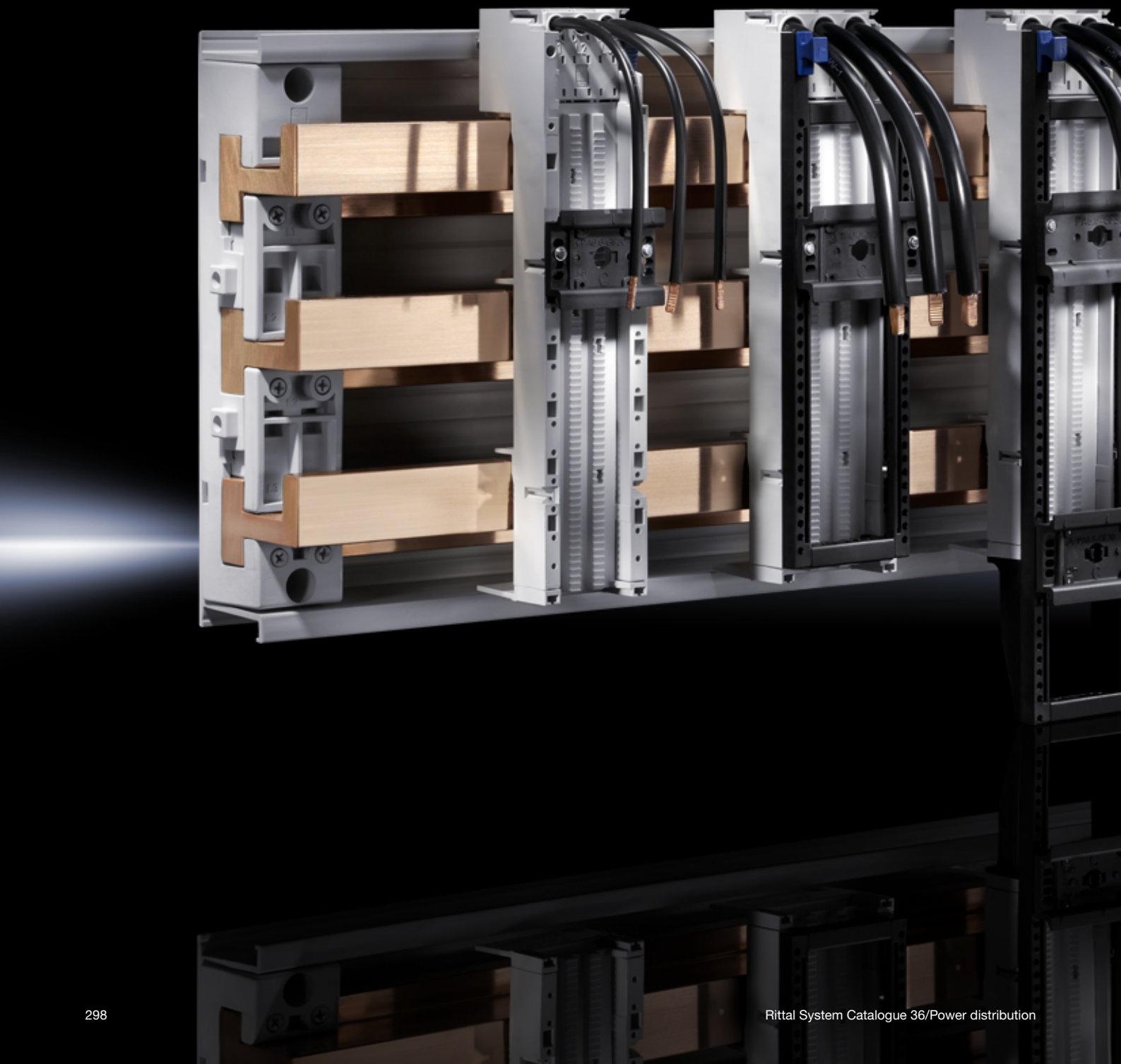
## Switchgear assignment – Mini-PLS component adaptors 40 A/100 A

| Make/model | **Model No.** | **Accessories Model No.** |
|---|---|---|
| **ABB** | | |
| MS450 (max. 40 A) | 9617.000 | – |
| MS451 (max. 40 A) | 9629.000 | 9320.120 |
| MS495 | 9629.000 | 9320.120 |
| MS496 | 9629.000 | 9320.120 |
| MS497 | 9629.000 | 9320.120 |
| **Tmax** | | |
| T1 | 9629.000 | – |
| T2 | 9629.000 | – |
| **Eaton** | | |
| NZM 1 | 9629.000 | – |
| PKZ2 | 9627.000 | – |
| PKZM4 (max. 40 A) | 9617.000 | – |
| PKZM4 | 9629.000 | 9320.120 |

| Make/model | **Model No.** | **Accessories Model No.** |
|---|---|---|
| **Schneider Electric** | | |
| NS 80 | 9629.000 | – |
| GV3 (max. 40 A) | 9616.000 | – |
| GV3 | 9629.000 | 9320.120 |
| **Siemens** | | |
| **S2** | | |
| 3RV10 31... (max. 40 A) | 9616.000 | – |
| 3RV10 31... | 9629.000 | 9320.120 |
| **S3** | | |
| 3RV1341/42 | 9629.000 | 9320.120 |

# Rittal – The System.

**Faster – better – everywhere.**



# RiLine

## Busbar systems 3-/4-pole and DC

Support + bars + contact hazard protection

- Flat copper bar system, see page 300
- PLS busbar system, see page 302
- Accessories, see page 340

## Connection system 3- and 4-pole

- Busbar connection adaptors, see page 304
- Connection clamps, see page 349
- Connection block, see page 351
- Accessories, see page 349

Power distribution

## Component adaptors 3- and 4-pole

- OM adaptors, see page 307
- Circuit-breaker component adaptors, see page 314
- Accessories, see page 352

## Fuse elements 3-pole

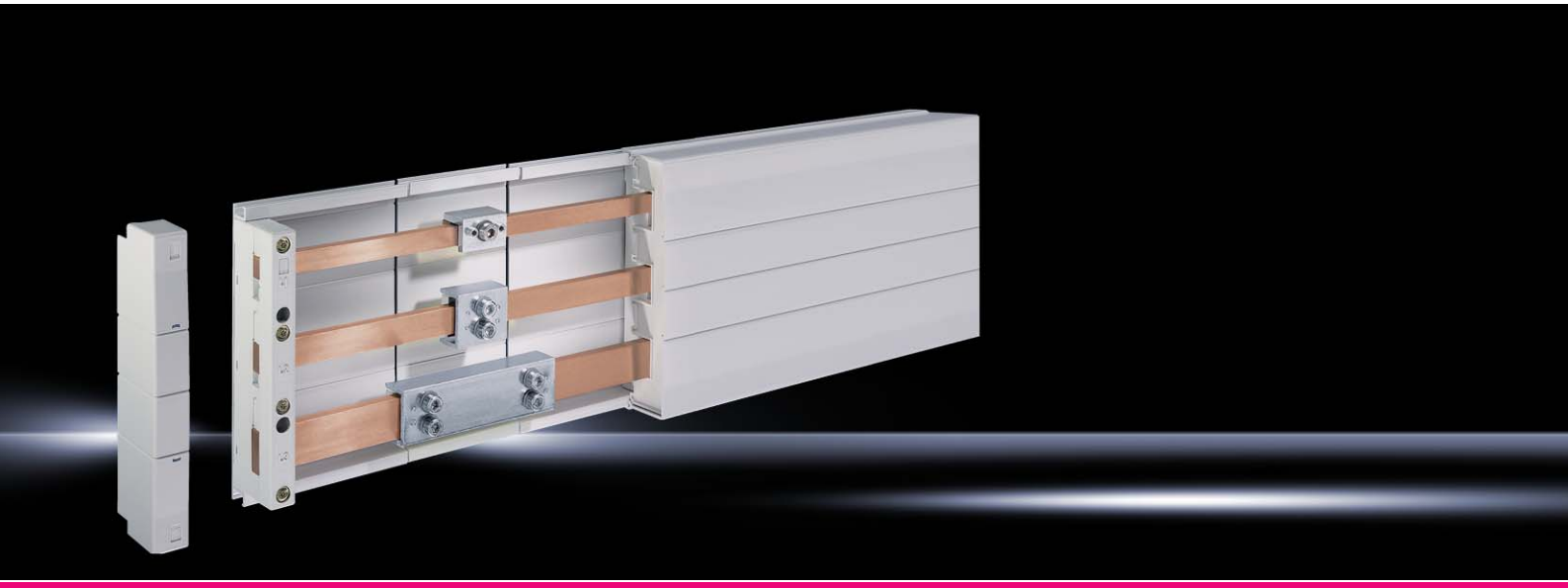
- Bus-mounting fuse bases, see page 323
- NH fuse-switch disconnectors, see page 325
- NH slimline fuse-switch disconnectors, see page 335
- Fuse holders, see page 337
- Accessories, see page 356

## VX25 Power Engineering

see page 446

- Simple component selection, integral switchgear database
- Automatic calculation of rated currents and heat losses
- Configuration of RiLine busbar systems (offline version RPE 7.0)

# RiLine busbar systems up to 800 A (60 mm)



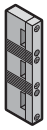
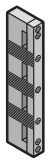
**Busbar connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314 **Fuse elements** Page 323

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- UL approval only valid in conjunction with AC applications
- The use of a base tray is required for UL applications.

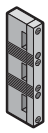
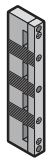
## Flat copper busbar system

| **Busbar supports** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | |  |  | |
| Number of poles | | Packs of | 3-pole | 3-pole | 3-pole | 4-pole | Page |
| Bar centre distance mm | | | 60 | 60 | 60 | 60 | |
| External attachment | | | ■ | – | – | – | |
| Internal attachment | | | – | ■ | ■ | ■ | |
| For busbars mm | 12 x 5/10 | | ■ | ■ | – | ■ | |
| | 15 x 5 – 30 x 10 | | ■ | ■ | ■ | ■ | |
| Rated operating voltage V, ~ | | | 1000, 3~ | 1000, 3~ | 1000, 3~ | 1000, 3~ | |
| | | | – | – | 1500 (DC) | – | |
| Approvals | | | – | – | UL | UL | |
| **Model No.** | | 4 pc(s). | **9340.010** | **9340.000** | **9340.050** | **9340.004** | |
| **Also required** | | | | | | | |
| Spacers when using busbars 12 x 5/10 mm | | | ■ | ■ | – | ■ | |
| **Model No.** | | 12 pc(s). | 9340.090 | 9340.090 | – | 9340.090 | 341 |

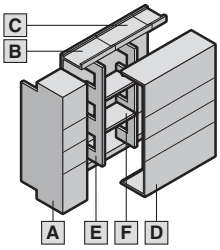
# RiLine busbar systems up to 800 A (60 mm)

## Flat copper busbar system

**Busbar supports**

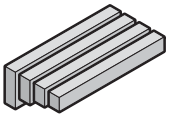
| | | | |  |  | |
|---|---|---|---|---|---|---|
| Number of poles | Packs of | 3-pole | 3-pole | 3-pole | 4-pole | Page |
| Bar centre distance mm | | 60 | 60 | 60 | 60 | |
| Model No. | 4 pc(s). | 9340.010 | 9340.000 | 9340.050 | 9340.004 | 300 |
| **Also required** | | | | | | |
| Spacer when using busbars 12 x 5/10 mm | | ■ | ■ | – | ■ | |
| **Model No.** | 12 pc(s). | 9340.090 | 9340.090 | – | 9340.090 | 341 |

**Contact hazard protection**



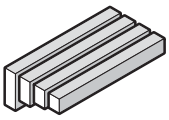

| Components | Length mm | Approvals | Packs of | Model No. | | | Model No. | Page |
|---|---|---|---|---|---|---|---|---|
| A End covers | – | UL | 2 pc(s). | **9340.070** | **9340.070** | **9340.070** | **9340.074** | – |
| B Base trays | 500 | UL | 2 pc(s). | – | 9340.100 | 9340.100 | – | 347 |
| | 700 | UL | 2 pc(s). | – | 9340.110 | 9340.110 | – | 347 |
| | 900 | UL | 2 pc(s). | – | 9340.120 | 9340.120 | – | 347 |
| | 1100 | UL | 2 pc(s). | – | 9340.130 | 9340.130 | 9340.134 | 347 |
| | 2400 | UL | 1 pc(s). | – | 9340.170 | 9340.170 | – | 347 |
| C Base tray infills | 100 | UL | 2 pc(s). | – | 9340.140 | 9340.140 | – | 347 |
| D Cover sections | 700 | UL | 2 pc(s). | – | 9340.200 | 9340.200 | – | 348 |
| | 1100 | UL | 2 pc(s). | – | 9340.210 | 9340.210 | 9340.214 | 348 |
| E Support panels | – | UL | 5 pc(s). | – | 9340.220 | 9340.220 | 9340.224 | 348 |
| F Cross members | 160 | UL | 2 pc(s). | – | – | 9340.230 | – | 348 |

**Busbars E-Cu, length: 2400 mm/bar**



| Dimensions mm | Max. rated current A according to DIN[1] | Max. rated current A according to UL 508 | Approvals | Packs of | Model No. | | | Model No. | Page |
|---|---|---|---|---|---|---|---|---|---|
| 12 x 5 | 210 | 160 | UL | 6 pc(s). | 3580.000 | 3580.000 | 3580.000 | 3580.000 | 342 |
| 12 x 10 | 340 | 320 | UL | 6 pc(s). | 3580.100 | 3580.100 | 3580.100 | 3580.100 | 342 |
| 15 x 5 | 260 | 200 | UL | 6 pc(s). | 3581.000 | 3581.000 | 3581.000 | 3581.000 | 342 |
| 15 x 10 | 360 | 400 | UL | 6 pc(s). | 3581.100 | 3581.100 | 3581.100 | 3581.100 | 342 |
| 20 x 5 | 274 | 270 | UL | 6 pc(s). | 3582.000 | 3582.000 | 3582.000 | 3582.000 | 342 |
| 20 x 10 | 427 | 540 | UL | 3 pc(s). | 3585.005 | 3585.005 | 3585.005 | 3585.005 | 342 |
| 25 x 5 | 327 | 330 | UL | 6 pc(s). | 3583.000 | 3583.000 | 3583.000 | 3583.000 | 342 |
| 30 x 5 | 379 | 400 | UL | 6 pc(s). | 3584.000 | 3584.000 | 3584.000 | 3584.000 | 342 |
| 30 x 10 | 573 | 810 | UL | 3 pc(s). | 3586.005 | 3586.005 | 3586.005 | 3586.005 | 342 |

**CUPONAL busbars, length: 2400 mm/bar**



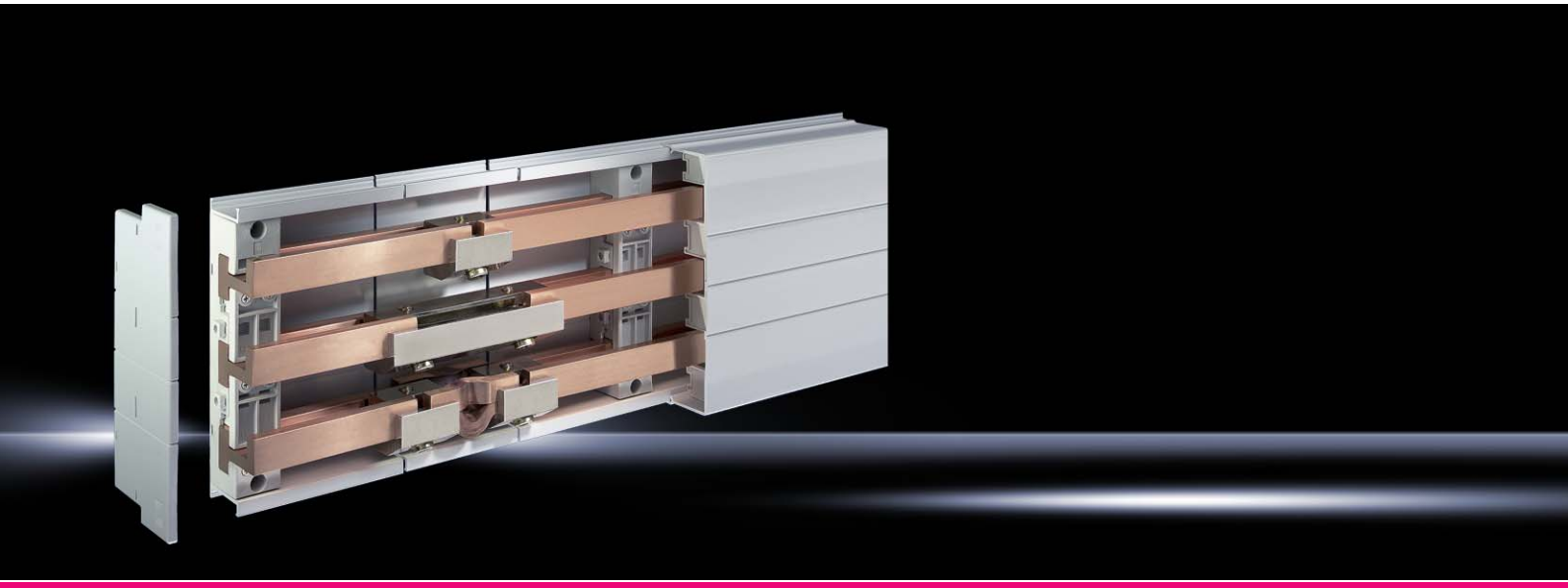
| Dimensions mm | Max. rated current A according to DIN[1] | Max. rated current A according to UL 508 | Approvals | Packs of | Model No. | | | Model No. | Page |
|---|---|---|---|---|---|---|---|---|---|
| 20 x 5 | 235 | – | – | 6 pc(s). | – | 3582.020 | 3582.020 | – | 342 |
| 20 x 10 | 363 | – | – | 3 pc(s). | – | 3585.020 | 3585.020 | – | 342 |
| 30 x 5 | 328 | – | – | 6 pc(s). | – | 3584.020 | 3584.020 | – | 342 |
| 30 x 10 | 493 | – | – | 3 pc(s). | – | 3586.020 | 3586.020 | – | 342 |

**Accessories**

| Components | For busbars mm | Approvals | Packs of | Model No. | | | Model No. | Page |
|---|---|---|---|---|---|---|---|---|
| Busbar connectors for single connection | 12 x 5 – 15 x 10 | UL | 3 pc(s). | 9350.075 | 9350.075 | 9350.075 | 9350.075 | 343 |
| | 20 x 5 – 30 x 10 | UL | 3 pc(s). | 9320.020 | 9320.020 | 9320.020 | 9320.020 | 343 |
| Busbar connectors for baying connection[2] | 20 x 5 – 30 x 10 | UL | 3 pc(s). | 9320.030 | 9320.030 | 9320.030 | 9320.030 | 343 |
| Busbar cover sections Length: 1000 mm/section | 12 x 5 – 30 x 10 | UR | 10 pc(s). | 3092.000 | 3092.000 | 3092.000 | 3092.000 | 343 |
| | 12/15 x 5 | UR | 4 pc(s). | 9350.010 | 9350.010 | 9350.010 | 9350.010 | 343 |
| | 12/15 x 10 | UR | 4 pc(s). | 9350.060 | 9350.060 | 9350.060 | 9350.060 | 343 |

[1] Maximum rated value of an exposed, uncovered busbar at a temperature increase of 30 K to DIN 43 671
[2] Connection from enclosure to enclosure

# RiLine busbar systems 800 A/1600 A (60 mm)



**Busbar connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314 **Fuse elements** Page 323

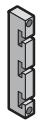
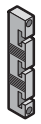
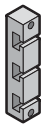
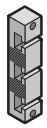
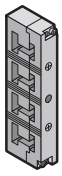
**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- UL approval only valid in conjunction with AC applications
- The use of a base tray is required for UL applications.

## PLS busbar system

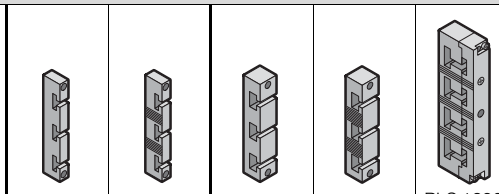
**Busbar supports**

| | |  |  |  |  |  PLS 1600 PLUS |
|---|---|---|---|---|---|---|
| For Rittal system | Packs of | **PLS 800** | | **PLS 1600** | | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 4-pole |
| Bar centre distance mm | | 60 | 60 | 60 | 60 | 60 |
| Internal attachment | | ■ | ■ | ■ | ■ | ■ |
| Busbar support, suitable for top mounting | | ■ | ■ | ■ | ■ | – |
| Rated operating voltage V, ~ | | 1000, 3~ | 1000, 3~ | 1000, 3~ | 1000, 3~ | 1000, 3~ |
| | | – | 1500 (DC) | – | 1500 (DC) | – |
| Approvals | | – | UL | – | UL | UL |
| **Model No.** | 4 pc(s). | **9341.000** | **9341.050** | **9342.000** | **9342.050** | **9342.004** |

# RiLine busbar systems 800 A/1600 A (60 mm)

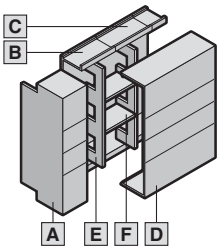
## PLS busbar system

**Busbar supports**



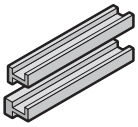

| For Rittal system | Packs of | PLS 800 | | PLS 1600 | | | Page |
|---|---|---|---|---|---|---|---|
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 4-pole | |
| Bar centre distance mm | | 60 | 60 | 60 | 60 | 60 | |
| Model No. | 4 pc(s). | 9341.000 | 9341.050 | 9342.000 | 9342.050 | 9342.004 | 302 |

**Contact hazard protection**




| Components | Length mm | Approvals | Packs of | Model No. | | Model No. | | | Page |
|---|---|---|---|---|---|---|---|---|---|
| A End covers | – | UL | 2 pc(s). | **9341.070** | **9341.070** | **9342.070** | **9342.070** | **9342.074** | – |
| B Base trays | 500 | UL | 2 pc(s). | 9341.100 | 9341.100 | 9342.100 | 9342.100 | – | 347 |
| | 700 | UL | 2 pc(s). | 9341.110 | 9341.110 | 9342.110 | 9342.110 | – | 347 |
| | 900 | UL | 2 pc(s). | 9341.120 | 9341.120 | 9342.120 | 9342.120 | – | 347 |
| | 1100 | UL | 2 pc(s). | 9341.130 | 9341.130 | 9342.130 | 9342.130 | 9342.134 | 347 |
| | 2400 | UL | 1 pc(s). | 9341.170 | – | 9342.170 | – | – | 347 |
| C Base tray infills | 100 | UL | 2 pc(s). | 9341.140 | 9341.140 | 9342.140 | 9342.140 | – | 347 |
| D Cover sections | 700 | UL | 2 pc(s). | 9340.200 | 9340.200 | 9340.200 | 9340.200 | – | 348 |
| | 1100 | UL | 2 pc(s). | 9340.210 | 9340.210 | 9340.210 | 9340.210 | 9340.214 | 348 |
| E Support panels | – | UL | 5 pc(s). | 9340.220 | 9340.220 | 9340.220 | 9340.220 | 9340.224 | 348 |
| F Cross members | 160 | UL | 2 pc(s). | – | 9340.230 | – | 9340.230 | – | 348 |

**PLS special busbars E-Cu**



| Version | | | Packs of | PLS 800 | PLS 1600 | Page |
|---|---|---|---|---|---|---|
| Bar cross-section mm² | | | | 300 | 900 | |
| Bar thickness mm | | | | 5 | 10 | |
| Max. rated current A acc. to | | DIN[1] | | 684 | 1368 | |
| | | UL 508 | | 890 | 1500 | |
| Length mm | For enclosure width mm | Approvals | | Model No. | Model No. | |
| 495 | 600 | UL | 3 pc(s). | 3524.000 | 3527.000 | 344 |
| 695 | 800 | UL | 3 pc(s). | 3525.000 | 3528.000 | 344 |
| 895 | 1000 | UL | 3 pc(s). | 3525.010 | 3528.010 | 344 |
| 1095 | 1200 | UL | 3 pc(s). | 3526.000 | 3529.000 | 344 |
| 2400 | variable | UL | 1 pc(s). | 3509.000 | 3516.000 | 344 |

**Accessories**

| Components | | Approvals | Packs of | Model No. | Model No. | Page |
|---|---|---|---|---|---|---|
| PLS busbar connectors | Single connection | UL | 3 pc(s). | 3504.000 | 3514.000 | 344 |
| | Bayed connection[2] | UL | 3 pc(s). | 3505.000 | 3515.000 | 344 |
| PLS expansion connector[3] | | UR | 3 pc(s). | 9320.060 | 9320.070 | 345 |

[1] Maximum rated value of an exposed, uncovered busbar at a temperature increase of 30 K to DIN 43 671
[2] Connection from enclosure to enclosure
[3] 2 PLS busbar connectors (single connection) are required to fit one expansion connector

# Connection adaptors

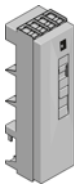
**Busbar system** Page 300 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314 **Fuse elements** Page 323

**Material:**
- Cover: ABS
- Punched section: Polyamide
- Chassis 3439.010: Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

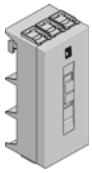
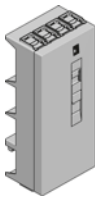
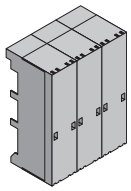
**Colour:**
- RAL 7035

**Note:**
- The technical data may vary for UL applications
- UL approval only applies in conjunction with AC application
- The rated operating voltage for DC applications depends on the busbar arrangement in the busbar supports 9340.050/ 9341.050/9342.050.

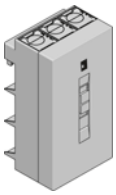
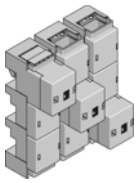
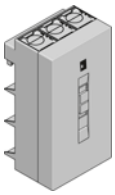
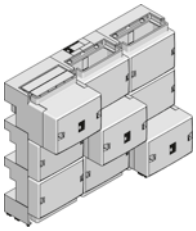
## Rated current max. 63 – 125 A

| | | | | | |  | |
|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 63 | 63 | 125 | 125 | 125 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 4~ | |
| Rated operating voltage (L1 + L2) V | | – | 1000 (DC) | – | 1000 (DC) | – | |
| Rated operating voltage (L1 + L3) V | | – | 1500 (DC) | – | 1500 (DC) | – | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 4-pole | |
| Cable outlet | | Top | Bottom | Top/bottom | Bottom | Top/bottom | |
| Connection of round conductors, fine wire with wire end ferrule $mm^2$ | | 2.5 - 10 | 2.5 - 10 | 10 - 25 | 10 - 25 | 10 - 25 | |
| Connection of round conductors, multi-wire $mm^2$ | | 2.5 - 10 | 2.5 - 10 | 16 - 35 | 16 - 35 | 16 - 35 | |
| Connection of round conductors, single-wire $mm^2$ | | 2.5 - 10 | 2.5 - 10 | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | – | – | 10 x 7.8 | 10 x 7.8 | 10 x 7.8 | |
| Clamping area for laminated copper bars with 5 mm bar thickness (W x H) | | – | – | – | – | – | |
| Clamping area for laminated copper bars with 10 mm bar thickness (W x H) | | – | – | – | – | – | |
| Width mm | | 20 | 20 | 55 | 55 | 75 | |
| Height mm | | 215 | 215 | 210 | 210 | 270 | |
| Approvals | | UL | UL | UR | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.200** | **9342.210** | **9342.220** | **9342.240** | **9342.224** | |
| **Accessories** | | | | | | | |
| Laminated copper bar | | – | – | see page | see page | see page | 346 |
| Connection adaptor expansion set | | – | – | – | – | – | |

## Rated current max. 250 – 600 A

| | |  | |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 250 | 250 | 250 | 600 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 4~ | 690, 3~ | |
| Rated operating voltage (L1 + L2) V | | – | 1000 (DC) | – | – | |
| Rated operating voltage (L1 + L3) V | | – | 1500 (DC) | – | – | |
| Number of poles | | 3-pole | 3-pole | 4-pole | 3-pole | |
| Cable outlet | | Top/bottom | Bottom | Top/bottom | Top/bottom | |
| Connection of round conductors, fine wire with wire end ferrule mm² | | 35 - 120 | 35 - 120 | 35 - 120 | 35 - 240 | |
| Connection of round conductors, multi-wire mm² | | 35 - 120 | 35 - 120 | 35 - 120 | 35 - 240 | |
| Connection of round conductors, single-wire | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 18.5 x 15.5 | 18.5 x 15.5 | 18.5 x 15.5 | 24 x 21 | |
| Clamping area for laminated copper bars with 5 mm bar thickness (W x H) | | – | – | – | – | |
| Clamping area for laminated copper bars with 10 mm bar thickness (W x H) | | – | – | – | – | |
| Width mm | | 90 | 90 | 118 | 180 | |
| Height mm | | 210 | 210 | 270 | 247 | |
| Approvals | | UL | UL | UL | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.250** | **9342.270** | **9342.254** | **3439.010** | |
| **Accessories** | | | | | | |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Connection adaptor expansion set | | – | – | – | – | |

## Rated current max. 800 – 1600 A

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 800 | 800 | 800 | 1600 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Rated operating voltage (L1 + L2) V | | – | 1000 (DC) | 1000 (DC) | 1000 (DC) | |
| Rated operating voltage (L1 + L3) V | | – | 1500 (DC) | 1500 (DC) | 1500 (DC) | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Bottom | Top/bottom | |
| Connection of round conductors, fine wire with wire end ferrule mm² | | 95 - 185 | 95 - 185 | 95 - 185 | – | |
| Connection of round conductors, multi-wire mm² | | 95 - 300 | 95 - 300 | 95 - 300 | – | |
| Connection of round conductors, single-wire | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 33 x 20 | – | 33 x 20 | – | |
| Clamping area for laminated copper bars with 5 mm bar thickness (W x H) mm | | – | 33 x 26 | – | 65 x 27 | |
| Clamping area for laminated copper bars with 10 mm bar thickness (W x H) mm | | – | 33 x 21 | – | 65 x 22 | |
| Width mm | | 129 | 150 | 129 | 255 | |
| Height mm | | 246 | 210 | 246 | 210 | |
| Approvals | | UR | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.280** | **9342.310** | **9342.300** | **9342.320** | |
| **Accessories** | | | | | | |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Connection adaptor expansion set | 1 pc(s). | – | 9342.314 | – | 9342.324 | 306 |

# Connection adaptor expansion set

**Busbar system** Page 300 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314 **Fuse elements** Page 323

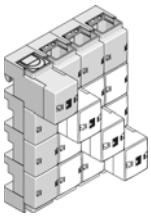
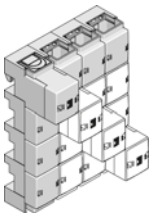
Single-pole extra set to complement the 3-pole connection adaptor for 4-pole configurations.

**Material:**
- Cover: ABS
- Punched section: Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- The technical data may vary for UL applications
- UL approval only applies in conjunction with AC application

## for 4-pole configuration

| | |  |  | |
|---|---|---|---|---|
| To fit Model No. | Packs of | 9342.310 | 9342.320 | Page |
| Rated current max. A | | 800 | 1600 | |
| Rated operating voltage V, ~ | | 690, 1~ | 690, 1~ | |
| Number of poles | | Single-pole | Single-pole | |
| Connection of round conductors, fine wire with wire end ferrule $mm^2$ | | 95 - 185 | – | |
| Connection of round conductors, multi-wire $mm^2$ | | 95 - 300 | – | |
| Clamping area for laminated copper bars with 5 mm bar thickness (W x H) mm | | 33 x 26 | 65 x 27 | |
| Clamping area for laminated copper bars with 10 mm bar thickness (W x H) mm | | 33 x 21 | 65 x 22 | |
| Width mm | | 50 | 85 | |
| Height mm | | 270 | 270 | |
| Approvals | | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.314** | **9342.324** | |
| **Accessories** | | | | |
| Laminated copper bar | | see page | see page | 346 |

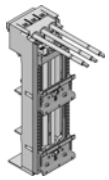
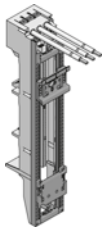
**Busbar system** Page 300 **Connection adaptors** Page 304 **Fuse elements** Page 323 **Allocation of switchgear** Page 319

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 7035

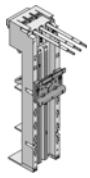
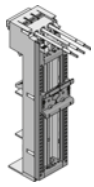
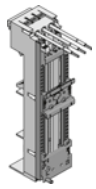
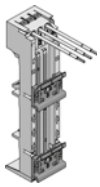
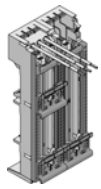
**Note:**
- The technical data may vary for UL applications

## Rated current max. 16 A, with connection cables

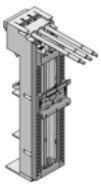
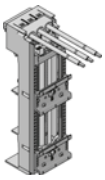
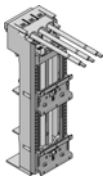
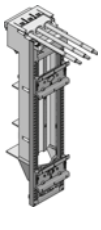
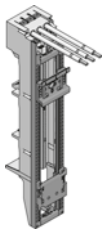
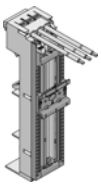
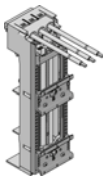
| | |  |  | |
|---|---|---|---|---|
| Rated current max. A | Packs of | 16 | 16 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | |
| Connection cables, Design | | AWG 12 | AWG 12 | |
| Connection cables, Length mm | | 165 | 165 | |
| With support frame mm | | 45 x 170 | 45 x 237 | |
| With support frame support | | – | ■ | |
| With PinBlock | | – | ■ | |
| With insert strips | | – | – | |
| Support rails Qty/height mm | | 2 / 10 | 1 / 10 | |
| Support rail version | | TS 45D<br>TS 45D-V | TS 45D | |
| Width mm | | 45 | 45 | |
| Height mm | | 208 | 272 | |
| Approvals | | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.780** | **9340.760** | |
| **Accessories** | | | | |
| Support rail 35 x 10 mm | | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 354 |
| PinBlock | 5 pc(s). | 9342.800 | – | 354 |
| OM supports | | see page | see page | 313 |

# OM adaptors

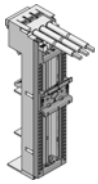
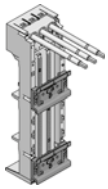
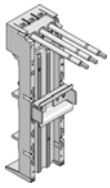
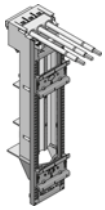
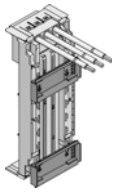
## Rated current max. 25 A, with connection cables

| | |  |  |  |  |  | |
|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 25 | 25 | 25 | 25 | 25 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables, Design | | AWG 12 | AWG 12 | AWG 12 | AWG 12 | AWG 12 | |
| Connection cables, Length mm | | 130 | 130 | 130 | 130 | 130 | |
| With support frame mm | | – | 45 x 170 | 45 x 170 | – | 45 x 170 | |
| With support frame support | | – | – | – | – | – | |
| With PinBlock | | – | – | ■ | – | – | |
| With insert strips | | – | – | – | – | – | |
| Support rails Qty/height mm | | 1 / 10 | 1 / 10 | 1 / 10 | 2 / 10 | 3 / 10 | |
| Support rail version | | TS 45C | TS 45C | TS 45C | TS 45D | TS 45D<br>TS 45D-V | |
| Width mm | | 45 | 45 | 45 | 45 | 90 | |
| Height mm | | 208 | 208 | 208 | 208 | 208 | |
| Approvals | | – | – | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.310** | **9340.340** | **9340.370** | **9340.320** | **9340.400** | |
| **Accessories** | | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 9340.290 | – | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 9340.280 | – | 354 |
| PinBlock | 5 pc(s). | – | 9342.800 | – | – | 9342.800 | 354 |
| OM supports | | see page | see page | see page | see page | – | 313 |

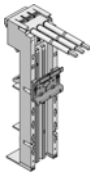
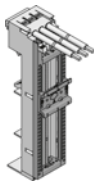
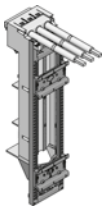
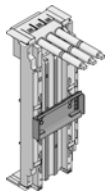
## Rated current max. 32 A, with connection cables

| | |  |  |  |  |  |  |  | |
|---|---|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 32 | 32 | 32 | 32 | 32 | 32 | 32 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables, Design | | AWG 10 | AWG 10 | AWG 10 | AWG 10 | AWG 10 | AWG 10 | AWG 10 | |
| Connection cables, Length mm | | 130 | 130 | 165 | 130 | 165 | 130 | 130 | |
| With support frame mm | | 45 x 170 | 45 x 170 | 45 x 170 | 45 x 237 | 45 x 237 | 55 x 170 | 55 x 170 | |
| With support frame support | | – | – | – | ■ | ■ | – | – | |
| With PinBlock | | – | – | – | – | ■ | – | – | |
| With insert strips | | – | – | – | – | – | – | – | |
| Support rails Qty/height mm | | 1 / 10 | 2 / 10 | 2 / 10 | 2 / 10 | 1 / 10 | 1 / 10 | 2 / 10 | |
| Support rail version | | TS 45C | TS 45D<br>TS 45D-V | TS 45D<br>TS 45D-V | TS 45D<br>TS 45D-V | TS 45D | TS 55D | TS 55D<br>TS 55D-V | |
| Width mm | | 45 | 45 | 45 | 45 | 45 | 55 | 55 | |
| Height mm | | 208 | 208 | 208 | 272 | 272 | 208 | 208 | |
| Approvals | | – | – | – | – | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.350** | **9340.380** | **9340.790** | **9340.390** | **9340.770** | **9340.460** | **9340.470** | |
| **Accessories** | | | | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | see page | see page | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 354 |
| PinBlock | 5 pc(s). | 9342.800 | 9342.800 | 9342.800 | 9342.800 | 9342.800 | 9342.810 | 9342.810 | 354 |
| OM supports | | see page | see page | see page | see page | see page | see page | see page | 313 |

## Rated current max. 40 A, with connection cables

| | |  |  |  |  |  | |
|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 40 | 40 | 40 | 40 | 40 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables, Design | | AWG 8 | AWG 8 | AWG 8 | AWG 8 | AWG 8 | |
| Connection cables, Length mm | | 130 | 130 | 130 | 130 | 130 | |
| With support frame mm | | 55 x 170 | – | – | 55 x 237 | – | |
| With support frame support | | – | – | – | ■ | – | |
| With PinBlock | | – | – | – | – | – | |
| With insert strips | | – | – | – | – | ■ | |
| Support rails Qty/height mm | | 1 / 10 | 2 / 10 | 1 / 15 | 2 / 10 | 2 / 7.5 | |
| Support rail version | | TS 55D | TS 55D | Metal | TS 55D<br>TS 55D-V | Metal | |
| Width mm | | 55 | 55 | 55 | 55 | 75 | |
| Height mm | | 208 | 208 | 208 | 272 | 208 | |
| Approvals | | – | – | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.720** | **9340.740** | **9340.750** | **9340.730** | **9340.710** | |
| **Accessories** | | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | see page | – | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 9340.290 | – | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 354 |
| PinBlock | 5 pc(s). | 9342.810 | – | – | 9342.810 | – | 354 |
| OM supports | | see page | see page | see page | see page | see page | 313 |

## Rated current max. 65 A, with connection cables

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 65 | 65 | 65 | 65 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection cables, Design | | AWG 6 | AWG 6 | AWG 6 | AWG 6 | |
| Connection cables, Length mm | | 130 | 130 | 130 | 130 | |
| With support frame mm | | – | 55 x 170 | 55 x 237 | – | |
| With support frame support | | – | – | ■ | – | |
| With PinBlock | | – | – | – | – | |
| With insert strips | | – | – | – | ■ | |
| Support rails Qty/height mm | | 1 / 10 | 1 / 10 | 2 / 10 | 1 / 7.5 | |
| Support rail version | | TS 55E | TS 55E | TS 55E<br>TS 55D-V | Metal | |
| Width mm | | 55 | 55 | 55 | 75 | |
| Height mm | | 208 | 208 | 272 | 208 | |
| Approvals | | – | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.410** | **9340.430** | **9340.450** | **9340.700** | |
| **Accessories** | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | – | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | – | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | – | 354 |
| PinBlock | 5 pc(s). | – | 9342.810 | 9342.810 | – | 354 |
| OM supports | | see page | see page | see page | see page | 313 |

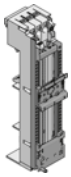
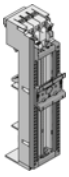
# OM adaptors

**Busbar system** Page 300 **Connection adaptors** Page 304 **Fuse elements** Page 323 **Allocation of switchgear** Page 319

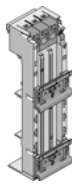
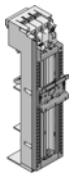
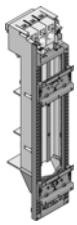
**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 7035

## Rated current max. 32 A, with spring terminals

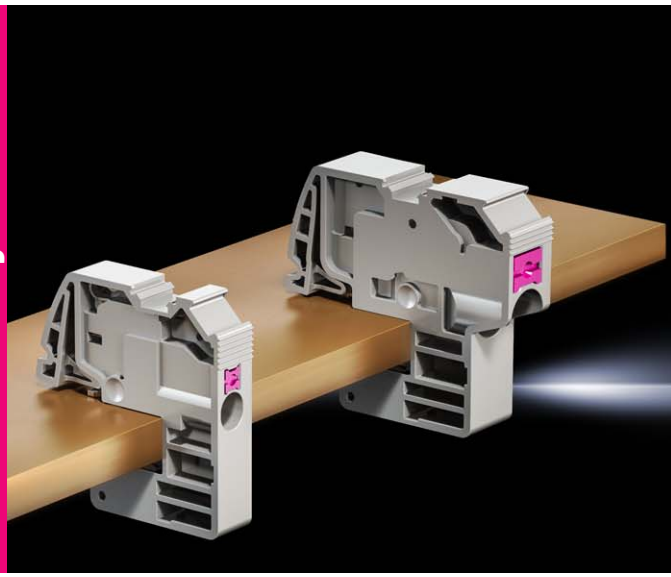
| | | | | |  | |  | |
|---|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 32 | 32 | 32 | 32 | 32 | 32 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection of round conductors $mm^2$ | | 1.5 - 6 | 1.5 - 6 | 1.5 - 6 | 1.5 - 6 | 1.5 - 6 | 1.5 - 6 | |
| With support frame mm | | – | – | 45 x 170 | 45 x 170 | 45 x 237 | 55 x 170 | |
| With support frame support | | – | – | – | – | ■ | – | |
| With PinBlock | | – | – | – | ■ | – | – | |
| Support rails Qty/height mm | | 1 / 10 | 2 / 10 | 1 / 10 | 1 / 10 | 2 / 10 | 1 / 10 | |
| Support rail version | | TS 45C | TS 45D | TS 45C | TS 45C | TS 45D<br>TS 45D-V | TS 55D | |
| Width mm | | 45 | 45 | 45 | 45 | 45 | 55 | |
| Height mm | | 208 | 208 | 208 | 208 | 272 | 208 | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.510** | **9340.520** | **9340.530** | **9340.550** | **9340.560** | **9340.660** | |
| **Accessories** | | | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | see page | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 354 |
| PinBlock | 5 pc(s). | – | – | 9342.800 | 9342.800 | 9342.800 | 9342.810 | 354 |
| Cable set | | see page | see page | see page | see page | see page | see page | 354 |
| Twin cord | | – | – | – | – | – | – | |
| OM supports | | see page | see page | see page | see page | see page | see page | 313 |

## Rated current max. 65 A, with spring terminals

| | | |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 65 | 65 | 65 | 65 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Connection of round conductors $mm^2$ | | 2.5 - 16 | 2.5 - 16 | 2.5 - 16 | 2.5 - 16 | |
| According to a heat dissipation test to IEC 61 439-1, a current carrying capacity of up to 80 A is supported | | ■ | ■ | ■ | ■ | |
| With support frame mm | | – | – | 55 x 170 | 55 x 237 | |
| With support frame support | | – | – | – | ■ | |
| With PinBlock | | – | – | – | – | |
| Support rails Qty/height mm | | 1 / 10 | 2 / 10 | 1 / 10 | 2 / 10 | |
| Support rail version | | TS 55E | TS 55E<br>TS 55D | TS 55E | TS 55E<br>TS 55D-V | |
| Width mm | | 55 | 55 | 55 | 55 | |
| Height mm | | 208 | 208 | 208 | 272 | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.610** | **9340.620** | **9340.630** | **9340.650** | |
| **Accessories** | | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 9340.290 | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 9340.280 | 354 |
| PinBlock | 5 pc(s). | – | – | 9342.810 | 9342.810 | 354 |
| Cable set | | see page | see page | see page | see page | 354 |
| Twin cord | | see page | see page | see page | see page | 355 |
| OM supports | | see page | see page | see page | see page | 313 |



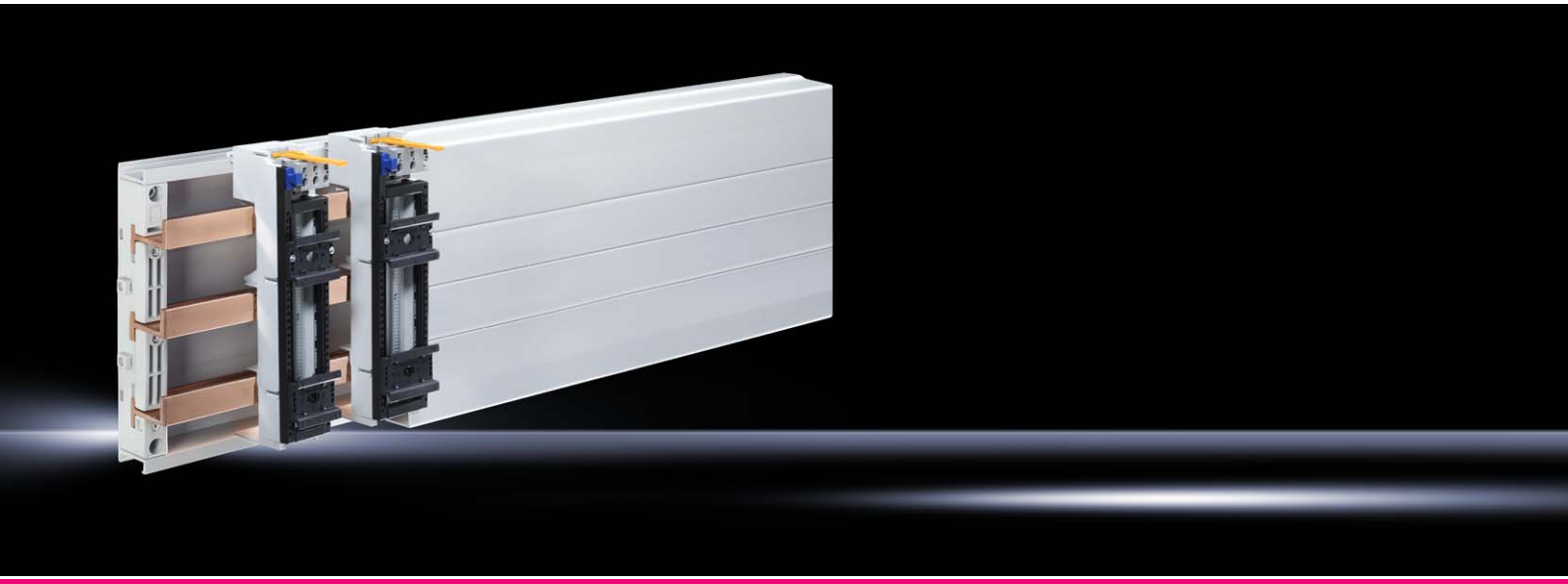
Rittal – The System.



Conductor connection clamps

see page 349

# OM adaptors

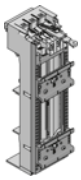
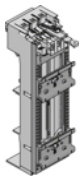


**Busbar system** Page 300 **Connection adaptors** Page 304 **Fuse elements** Page 323

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 7035

## Rated current max. 25 A, with plug-in cable outlet

| | |  |  | |
|---|---|---|---|---|
| Rated current max. A | Packs of | 25 | 25 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | |
| Connection of round conductors $mm^2$ | | 1.5 - 4 | 1.5 - 4 | |
| With support frame mm | | 45 x 170 | 55 x 170 | |
| Support rails Qty/height mm | | 2 / 10 | 2 / 10 | |
| Support rail version | | TS 45D<br>TS 45D-V | TS 55D<br>TS 55D-V | |
| Width mm | | 45 | 55 | |
| Height mm | | 208 | 208 | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.910** | **9340.930** | |
| **Product-specific scope of supply** | | | | |
| Connector with connection facility for 3 main contacts (1.5 – 4 $mm^2$) | | ■ | ■ | |
| **Accessories** | | | | |
| Support rail 35 x 10 mm | | see page | see page | 352 |
| Cable set | | see page | see page | 354 |

**Busbar system** Page 300 **Connection adaptors** Page 304 **Fuse elements** Page 323

For mounting of switchgear with external power supply.

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 7035

## without contact system

| | | | | | |
|---|---|---|---|---|---|
| Number of poles | Packs of | – | – | – | Page |
| With support frame mm | | 45 x 170 | 55 x 237 | – | |
| With support frame support | | – | ■ | – | |
| With PinBlock | | ■ | – | – | |
| Support rails Qty/height mm | | – | 1 / 10 | 2 / 10 | |
| Support rail version | | – | TS 55D-V | TS 45D | |
| Width mm | | 45 | 55 | 45 | |
| Height mm | | 208 | 272 | 208 | |
| Approvals | | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9340.260** | **9340.270** | **9340.300** | |
| **Accessories** | | | | | |
| Support rail 35 x 10 mm | | see page | see page | see page | 352 |
| Insert strip | 2 pc(s). | 9340.290 | 9340.290 | 9340.290 | 353 |
| Connection pin | 20 pc(s). | 9340.280 | 9340.280 | 9340.280 | 354 |

# Circuit-breaker component adaptors

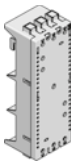
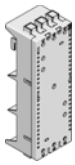
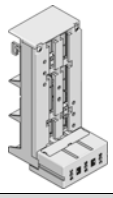
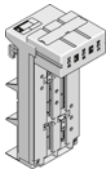
**Busbar system** Page 300 **Connection adaptors** Page 304 **Fuse elements** Page 323

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

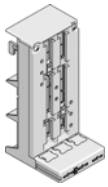
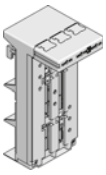
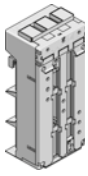
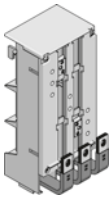
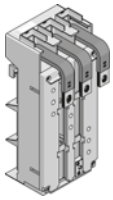
**Note:**
- Cable outlet: Switch outlet or as outgoing cable from the switchgear
- The technical data may vary for UL applications

## Rated current max. 100 – 125 A, 3-pole

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 100 | 100 | 125 | 125 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top | Bottom | Top | Bottom | |
| Type of connection | | Box terminal | Box terminal | Box terminal | Box terminal | |
| Connection of round conductors mm² | | 10 - 35 | 10 - 35 | 35 - 120 | 35 - 120 | |
| Clamping area for laminated copper bars (W x H) mm | | 10 x 7.8 | 10 x 7.8 | 18.5 x 15.5 | 18.5 x 15.5 | |
| For switchgear make (model) | | ABB (MS 495, MS 496, MS 497) Eaton (PKZ2) Schneider Electric (GV3ME80) Siemens (S3) | ABB (MS 495, MS 496, MS 497) Eaton (PKZ2) Schneider Electric (GV3ME80) Siemens (S3) | ABB (S1, S2, T1, T1 UL, T2, T2 UL, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, NZM1 UL, BZM B1) GE (FD160) OEZ (BC160N) Schneider Electric (NS80, NSC100, NSE75, NSE100) Schrack (MC1) Siemens (3RV13 53, 3VT1, 3VA10, 3VA11, 3VA51) Terasaki (E125, S125) | ABB (S1, S2, T1, T1 UL, T2, T2 UL, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, NZM1 UL, BZM B1) GE (FD160) OEZ (BC160N) Schneider Electric (NS80, NSC100, NSE75, NSE100) Schrack (MC1) Siemens (3RV13 53, 3VT1, 3VA10, 3VA11, 3VA51) Terasaki (E125, S125) | |
| Width mm | | 72 | 72 | 90 | 90 | |
| Height mm | | 210 | 210 | 225 | 225 | |
| Approvals | | UL | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.400** | **9342.410** | **9342.540** | **9342.550** | |
| **Product-specific scope of supply** | | | | | | |
| Terminal cover | | – | – | ■ | ■ | |
| Sliding blocks | | – | – | ■ | ■ | |
| **Accessories** | | | | | | |
| Support rail 35 x 15 mm | 5 pc(s). | 9320.120 | 9320.120 | – | – | 353 |
| Connection bracket | 3 pc(s). | – | – | 9342.570 | 9342.570 | 355 |
| Insert strip | | – | – | – | – | |

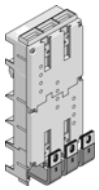
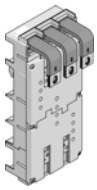
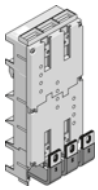
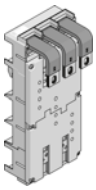
# Circuit-breaker component adaptors

## Rated current max. 160 – 250 A, 3-pole

| | |  |  |  |  |  | |
|---|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 160 | 160 | 250 | 250 | 250 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top | Bottom | Bottom | Top | Bottom | |
| Type of connection | | Box terminal | Box terminal | Box terminal | – | – | |
| Connection of round conductors $mm^2$ | | 35 - 120 | 35 - 120 | 35 - 120 | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 18.5 x 15.5 | 18.5 x 15.5 | 18.5 x 15.5 | – | – | |
| For switchgear make (model) | | ABB (S1, S2, T1, T2, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, BZM B1) GE (FD160) Legrand (DPX 125, DPX 160) OEZ (BC160N) Schneider Electric (NS80, NSC100) Schrack (MC1) Siemens (3RV13 53, 3VT1, 3VA10, 3VA11) Terasaki (E125, S125) | ABB (S1, S2, T1, T2, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, BZM B1) GE (FD160) Legrand (DPX 125, DPX 160) OEZ (BC160N) Schneider Electric (NS80, NSC100) Schrack (MC1) Siemens (3RV13 53, 3VT1, 3VA10, 3VA11) Terasaki (E125, S125) | ABB (S3, T3, T4/320 A, T3 UL, T4 UL, XT3, XT4) Allen Bradley (140U-J) Eaton (NZM2, NZM2 UL, BZM B2) GE (FE160, FE250, FD160) Legrand (DPX 250) Mitsubishi (NF125-SGW/ HGW, NF160-SGW/ HGW) OEZ (BD250N, BD250S) Schneider Electric (NS(X)100, NS(X)160, NS(X)250, GV7, NSF150, NSF250) Schrack (MC2) Siemens (VL150(X) UL, VL160(X), VL250, VL250 UL, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2, 3VA12/20/21/ 22, 3VA52/61/62) Terasaki (H125, L125, H160, L160, S160, E250, H250, L250) | ABB (S3, T3, T4/320 A, T3 UL, T4 UL, XT3, XT4) Allen Bradley (140U-J) Eaton (NZM2, NZM2 UL, BZM B2) GE (FE160, FE250, FD160) Legrand (DPX 250) Mitsubishi (NF125-SGW/ HGW, NF160-SGW/ HGW) OEZ (BD250N, BD250S) Schneider Electric (NS(X)100, NS(X)160, NS(X)250, GV7, NSF150, NSF250) Schrack (MC2) Siemens (VL150(X) UL, VL160(X), VL250, VL250 UL, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2, 3VA12/20/21/ 22, 3VA52/61/62) Terasaki (H125, L125, H160, L160, S160, E250, H250, L250) | ABB (S3, T3, T4/320 A, T3 UL, T4 UL, XT3, XT4) Allen Bradley (140U-J) Eaton (NZM2, NZM2 UL, BZM B2) GE (FE160, FE250, FD160) Legrand (DPX 250) Mitsubishi (NF125-SGW/ HGW, NF160-SGW/ HGW) OEZ (BD250N, BD250S) Schneider Electric (NS(X)100, NS(X)160, NS(X)250, GV7, NSF150, NSF250) Schrack (MC2) Siemens (VL150(X) UL, VL160(X), VL250, VL250 UL, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2, 3VA12/20/21/ 22, 3VA52/61/62) Terasaki (H125, L125, H160, L160, S160, E250, H250, L250) | |
| Width mm | | 90 | 90 | 105 | 105 | 105 | |
| Height mm | | 215 | 215 | 240 | 240 | 240 | |
| Approvals | | – | – | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.500** | **9342.510** | **9342.610** | **9345.600** | **9345.610** | |
| **Product-specific scope of supply** | | | | | | | |
| Terminal cover | | ■ | ■ | ■ | – | – | |
| Sliding blocks | | ■ | ■ | ■ | ■ | ■ | |
| Connection straps | | – | – | – | ■ | ■ | |
| **Accessories** | | | | | | | |
| Support rail 35 x 15 mm | | – | – | – | – | – | |
| Connection bracket | 3 pc(s). | 9342.570 | 9342.570 | – | – | – | 355 |
| Insert strip | | – | – | – | – | – | |

# Circuit-breaker component adaptors

## Rated current max. 400 – 630 A, 3-pole

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 400 | 400 | 630 | 630 | Page |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top | Bottom | Top | Bottom | |
| Type of connection | | – | – | – | – | |
| Connection of round conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) | | – | – | – | – | |
| When using the Siemens VL630 switchgear, insert strip 9342.720 is additionally required | | – | – | ■ | ■ | |
| For switchgear make (model) | | Eaton (NZM3, NZM3 UL/400 A) GE (FG400) Mitsubishi (NF400-SEW/HEW/REW) Schneider Electric (NS(X)400, NSJ400) Schrack (MC3) Siemens (VL400, VL400X UL, VL400 UL, 3VA23, 3VA63) Terasaki (E400, S400, H400, L400) | Eaton (NZM3, NZM3 UL/400 A) GE (FG400) Mitsubishi (NF400-SEW/HEW/REW) Schneider Electric (NS(X)400, NSJ400) Schrack (MC3) Siemens (VL400, VL400X UL, VL400 UL, 3VA23, 3VA63) Terasaki (E400, S400, H400, L400) | ABB (S5, T5, T5 UL) Allen Bradley (140U-L) Eaton (NZM3, NZM3 UL/630 A) GE (FG630) Legrand (DPX 630) Mitsubishi (NF630-SEW/HEW/REW) OEZ (BH630N, BH630S) Schneider Electric (NS(X)630, NSJ600) Schrack (MC3) Siemens (VL630, 3VA24, 3VT3, 3V10 73, 3RV13 73, 3RV13 74, 3VA64) Terasaki (E630, S630) | ABB (S5, T5, T5 UL) Allen Bradley (140U-L) Eaton (NZM3, NZM3 UL/630 A) GE (FG630) Legrand (DPX 630) Mitsubishi (NF630-SEW/HEW/REW) OEZ (BH630N, BH630S) Schneider Electric (NS(X)630, NSJ600) Schrack (MC3) Siemens (VL630, 3VA24, 3VT3, 3V10 73, 3RV13 73, 3RV13 74, 3VA64) Terasaki (E630, S630) | |
| Width mm | | 140 | 140 | 140 | 140 | |
| Height mm | | 345 | 345 | 345 | 345 | |
| Approvals | | UL | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9345.720** | **9345.730** | **9345.700** | **9345.710** | |
| **Product-specific scope of supply** | | | | | | |
| Connection straps | | ■ | ■ | ■ | ■ | |
| Sliding blocks | | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | |
| Support rail 35 x 15 mm | | – | – | – | – | |
| Connection bracket | | – | – | – | – | |
| Insert strip | 4 pc(s). | 9342.720 | 9342.720 | 9342.720 | 9342.720 | 353 |

# Circuit-breaker component adaptors

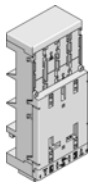
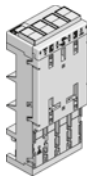
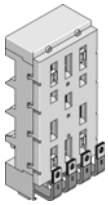
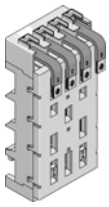
**Busbar system** Page 300 **Connection adaptors** Page 304

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

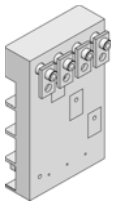
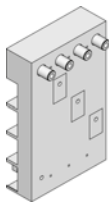
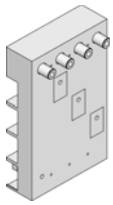
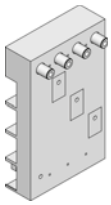
**Note:**
- Cable outlet: Switch outlet or as outgoing cable from the switchgear
- The technical data may vary for UL applications

## Rated current max. 160 – 250 A, 4-pole

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 160 | 160 | 250 | 250 | Page |
| Rated operating voltage V, ~ | | 690, 4~ | 690, 4~ | 690, 4~ | 690, 4~ | |
| Number of poles | | 4-pole | 4-pole | 4-pole | 4-pole | |
| Cable outlet | | Top | Bottom | Top | Bottom | |
| Type of connection | | Box terminal | Box terminal | – | – | |
| Connection of round conductors $mm^2$ | | 35 - 120 | 35 - 120 | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 18.5 x 15.5 | 18.5 x 15.5 | – | – | |
| For switchgear make (model) | | ABB (T1, T2, XT1, XT2) Eaton (NZM1-4/125 A, BZM E1-4/100 A) Schneider Electric (NSC100) Schrack (MC1) Siemens (3VA10, 3VA11) | ABB (T1, T2, XT1, XT2) Eaton (NZM1-4/125 A, BZM E1-4/100 A) Schneider Electric (NSC100) Schrack (MC1) Siemens (3VA10, 3VA11) | ABB (T3S, XT3) Eaton (NZM2-4/250 A) Schneider Electric (NS(X)100, NS(X)160, NS(X)250) Schrack (MC2) Siemens (VL160X, VL160, VL250, 3RV10 63, 3VA12/20/21/22, 3VA61/62) | ABB (T3S, XT3) Eaton (NZM2-4/250 A) Schneider Electric (NS(X)100, NS(X)160, NS(X)250) Schrack (MC2) Siemens (VL160X, VL160, VL250, 3RV10 63, 3VA12/20/21/22, 3VA61/62) | |
| Width mm | | 120 | 120 | 140 | 140 | |
| Height mm | | 277 | 277 | 310 | 310 | |
| Approvals | | UL | UL | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9342.504** | **9342.514** | **9345.604** | **9345.614** | |
| **Product-specific scope of supply** | | | | | | |
| Terminal cover | | ■ | ■ | – | – | |
| Sliding blocks | | ■ | ■ | ■ | ■ | |
| Connection straps | | – | – | ■ | ■ | |

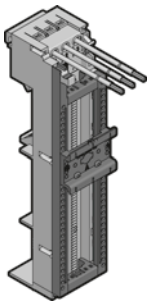
# Circuit-breaker component adaptors

## Rated current max. 500 A, 4-pole

| | |  |  |  |  | |
|---|---|---|---|---|---|---|
| Rated current max. A | Packs of | 500 | 500 | 500 | 500 | Page |
| Rated operating voltage V, ~ | | 690, 4~ | 690, 4~ | 690, 4~ | 690, 4~ | |
| Number of poles | | 4-pole | 4-pole | 4-pole | 4-pole | |
| Cable outlet | | Bottom | Bottom | Bottom | Bottom | |
| Type of connection | | – | – | – | – | |
| Connection of round conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) | | – | – | – | – | |
| For switchgear make (model) | | ABB (Tmax T5) | Schneider Electric (NS(X)400, NS(X)630) | Eaton (NZM3-4-XKR130) | Siemens (VL400) | |
| Width mm | | 185 | 185 | 185 | 185 | |
| Height mm | | 300 | 300 | 300 | 300 | |
| Approvals | | – | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9345.704** | **9345.714** | **9345.724** | **9345.734** | |
| **Product-specific scope of supply** | | | | | | |
| Copper spacer roll | | ■ | ■ | ■ | ■ | |
| Connection screws | | ■ | ■ | ■ | ■ | |
| Contact plates | | ■ | – | – | – | |

# OM adaptors with connection cables

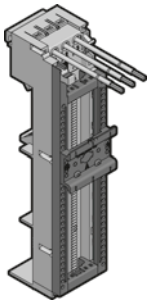
## Switchgear assignment



| For make/model | | ABB | | | | | | | | | | | | | Eaton | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Circuit-breaker | | | | Starter | | | Reversing starter | | | Soft starter | | | Circuit-breaker | | | | | | Starter | | | | | | Reversing starter | | | Soft starter | |
| | | MS 116/132 | MS 325 | MS 450/451 | MS 495/496/497 | MS 116 + AF09, AF12, AF16 | MS 132 + AF09, AF12, AF16, AF26, AF30, AF38 | MS 450 + A40, A50 | MS 116 + AF09, AF12, AF16 | MS 132 + AF09, AF12, AF16, AF26, AF30, AF38 | MS 450 + A40, A50 | MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25 | MS 325 + PSR25 | MS 450 + PSR30 | PKZM0 | PKZM01 | PKZM4 | PKE12 | PKE32 | PKE65 | MSC-D + M7 - M15 | MSC-D + M17 - M32 | PKZM4 + DILM 17-65 | MSC - DE ... M7 - M12 | MSC - DE ... M17 - M32 | PKE 65 + DILM 65 | MSC - R ... M7 - M12 | MSC - R ... M17 - M32 | PKE 65 + DILM 65 | PKE 12, PKE 32 + DS7-340 | PKZ0 + DS7-340 |
| | | Construction width | | | | | | | | | | | | | Construction width | | | | | | | | | | | | | | | | | |
| | | 45 | 54 | 55 | 70 | 45 | 45 | 70 | 90 | 90 | 140 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 90 | 90 | 110 | 45 | 45 |
| **Model No.** | **Version** | **Required quantity (pieces)** | | | | | | | | | | | | | **Required quantity (pieces)** | | | | | | | | | | | | | | | | | |
| **9340.340** | OM adaptor 25 A, AWG 12, W = 45 mm | 1 | | | | | | | | | | | | | | 1 | | 1 | 1 | | | | | | | | | | | | | |
| **9340.350** | OM adaptor 32 A, AWG 10, W = 45 mm | | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| **9340.370** | OM adaptor 25 A, AWG 12, W = 45 mm | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | 1 | | | | | |
| **9340.380** | OM adaptor 32 A, AWG 10, W = 45 mm | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | | | | |
| **9340.390** | OM adaptor 32 A, AWG 10, W = 45 mm | | | | | | 1 | | | 1 | | 1 | 1 | | | | | | | | | | | 1 | 1 | | | | | 1 | 1 |
| **9340.430** | OM adaptor 65 A, AWG 6, W = 55 mm | | | 1 | 1 | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | |
| **9340.450** | OM adaptor 65 A, AWG 6, W = 55 mm | | | | | | | 1 | | | 1 | | | 1 | | | | | | | | | 1 | | | 1 | | | | | |
| **9340.460** | OM adaptor 32 A, AWG 10, W = 55 mm | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **9340.260** | OM support, 45 x 208 mm | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | 1 | 1 | | | | |
| **9340.270** | OM support, 55 x 272 mm | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| **9342.860** | Support rail TS45D, 35 x 10 mm | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| **9342.870** | Support rail TS45D-V, 35 x 10 mm | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| **9340.290** | Insert strip, 10 x 208 mm | | | | 2 | | | 2 | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| **9340.280** | Connection pin | | | | | | | | 3 | 3 | 3 | | | | | | | | | | | | | | | | 3 | 3 | | | | |

# OM adaptors with connection cables

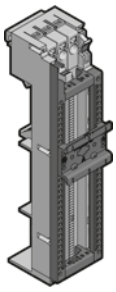
## Switchgear assignment



| For make/model | | Siemens | | | | | | | | | | | | | | | | | Schneider Electric | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Circuit-breaker | | | | | Starter | | | | | | | | Reversing starter | | | | | Circuit-breaker | | | Starter | | | | | | | Reversing starter | | | | | Soft starter |
| | | 3RV10 11... (S00) | 3RV10 21... (S0) | 3RV10 31... (S2) | 3RV20 11... (S00) screw terminal | 3RV20 21... (S0) screw terminal up to 40 A | 3RA11 10... (S00) | 3RA11 20... (S0) | 3RA11 30... (S2) | 3RA21 10... (S00) screw terminal | 3RV20 11...(S00 + S0) spring terminal block | 3RA21 20... (S00/S0) screw terminal | 3RA21 20... (S0) screw terminal | 3RA61 20... | 3RA12 10... (S00 + S00) | 3RA11 20... (S0 + S0) | 3RV10 31.. + 3RT103... (S2 + S2) | 3RA22 10... (S00) screw terminal | 3RA22 20... (S0) screw terminal | GV2 - ME (screw terminal and spring terminal block) | GV2 - P | GV2 - RT, LE10, L10 | GV3 BIS 65A | GV2 P + LC1D | GV2 ME + LC1D | GV2 - DM102 + LC1D/LC1K | GV2 - DP + LC1D/LC1K | GV3 + LC1D65 | LUB 12 | LUB 32 | GV2 P + LC2D (AC) | GV2 ME + LC2D/LC2K (AC) | GV2 DM + LC2D/LC2K | GV2 DP + LC2D/LC2K | GV2 DP + LC2D/LC2K | GV2 ME + ATS |
| | | Construction width | | | | | | | | | | | | | | | | | Construction width | | | | | | | | | | | | | | | | |
| | | 45 | 45 | 55 | 45 | 45 | 45 | 45 | 55 | 45 | 45 | 45 | 45 | 45 | 90 | 100 | 120 | 90 | 90 | 45 | 55 | 45 | 55 | 45 | 45 | 45 | 45 | 55 | 45 | 45 | 90 | 90 | 90 | 90 | 90 | 45 |
| **ModeNo.** | **Version** | **Required quantity (pieces)** | | | | | | | | | | | | | | | | | **Required quantity (pieces)** | | | | | | | | | | | | | | | | |
| **9340.760** | OM adaptor 16 A, AWG 12, W = 45 mm | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **9340.340** | OM adaptor 25 A, AWG 12, W = 45 mm | 1 | 1 | | 1 | | | | | | | | | | | | | | 1 | | 1 | | | | | | | 1 | | | | | | | |
| **9340.350** | OM adaptor 32 A, AWG 10, W = 45 mm | | | | | | | | | | | 1 | 1 | | | | | 1 | | | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | |
| **9340.770** | OM adaptor 32 A, AWG 10, W = 45 mm | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| **9340.370** | OM adaptor 25 A, AWG 12, W = 45 mm | | | | | | 1 | 1 | | 1 | | | | | 1 | 1 | | 1 | | | | | | | | | | | | | | | | | |
| **9340.390** | OM adaptor 25 A, AWG 12, W = 45 mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **9340.430** | OM adaptor 65 A, AWG 6, W = 55 mm | | | 1 | | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | |
| **9340.450** | OM adaptor 65 A, AWG 6, W = 55 mm | | | | | | | | 1 | | | | | | | | 1 | | | | | | | | | | 1 | | | | | | | | |
| **9340.720** | OM adaptor 40 A, AWG 8, W = 55 mm | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **9340.260** | OM support, 45 x 208 mm | | | | | | | | | | | | | | 1 | 1 | | 1 | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | |
| **9340.270** | OM support, 55 x 272 mm | | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | |
| **9340.290** | Insert strip, 10 x 208 mm | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | |
| **9340.280** | Connection pin | | | | | | | | | | | | | | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | 3 | 3 | 3 | 3 | 3 | |
| **9342.800** | PinBlock, W = 45 mm | | | | | | | | | | | 1 | 1 | | | | | | | | | | | 1 | 1 | 1 | 1 | | | | 2 | 2 | 2 | 2 | 2 | |
| **9342.820** | PinBlock PLUS | | | | | | | | | | | | | 1 | | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | | | |

# OM adaptors with spring terminal blocks

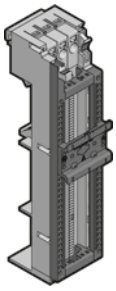
## Switchgear assignment



| For make/model | | ABB | | | | | | | | | | | | | Eaton | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Circuit-breaker | | | | Starter | | | Reversing starter | | | Soft starter | | | Circuit-breaker | | | | | | Starter | | | | | | Reversing starter | | | Soft starter | | |
| | | MS 116/132 | MS 325 | MS 450/451 | MS 495/496/497 | MS 116 + AF09, AF12, AF16 | MS 132 + AF09, AF12, AF16, AF26, AF30, AF38 | MS 450 + A40, A50 | MS 116 + AF09, AF12, AF16 | MS 132 + AF09, AF12, AF16, AF26, AF30, AF38 | MS 450 + A40, A50 | MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25 | MS 325 + PSR25 | MS 450 + PSR30 | PKZM0 | PKZM01 | PKZM4 | PKE12 | PKE32 | PKE65 | MSC-D + M7 - M15 | MSC-D + M17 - M32 | PKZM4 + DILM 17-65 | MSC - DE ... M7 - M12 | MSC - DE ... M17 - M32 | PKE 65 + DILM 65 | MSC - R ... M7 - M12 | MSC - R ... M17 - M32 | PKE 65 + DILM 65 | PKE 12 + DS7-340 | PKE 32 + DS7-340 | PKZ0 + DS7-340 |
| | | Construction width | | | | | | | | | | | | | Construction width | | | | | | | | | | | | | | | | | |
| | | 45 | 54 | 55 | 70 | 45 | 45 | 70 | 90 | 90 | 140 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 45 | 45 | 55 | 90 | 90 | 110 | 45 | 45 | 45 |
| **Model No.** | **Version** | **Required quantity (pieces)** | | | | | | | | | | | | | **Required quantity (pieces)** | | | | | | | | | | | | | | | | | |
| **9340.530** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | 1 | | | | 1 | | | | | | | | | 1 | 1 | | 1 | 1 | | | | | | | | | | | | | |
| **9340.550** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | | | | | | | | 1 | | | | | | | | | | | | 1 | 1 | | | | | 1 | 1 | | | | |
| **9340.560** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | | | | | | 1 | | | 1 | | 1 | 1 | | | | | | | | | | | 1 | 1 | | | | | 1 | 1 | 1 |
| **9340.660** | OM adaptor 32 A, 1.5 - 6 mm², W = 55 mm | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **9340.630** | OM adaptor 65 A, 2.5 - 16 mm², W = 55 mm | | | 1 | 1 | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | |
| **9340.650** | OM adaptor 65 A, 2.5 - 16 mm², W = 55 mm | | | | | | | 1 | | | 1 | | | 1 | | | | | | | | | 1 | | | 1 | | | 1 | | | |
| **9340.260** | OM support, 45 x 208 mm | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | 1 | 1 | | | | |
| **9340.270** | OM support, 55 x 272 mm | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | 1 | | | |
| **9340.290** | Insert strip, 10 x 208 mm | | | | 2 | | | 2 | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| **9340.280** | Connection pin | | | | | | | | 3 | 3 | 3 | | | | | | | | | | | | | | | | 3 | 3 | 3 | | | |
| **9340.860** | Cable set AWG 12 | 3 | | | | 3 | | | 3 | | | 3 | 3 | | | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | |
| **9340.870** | Cable set AWG 10 | | 3 | | | | 3 | | | 3 | | | | | 3 | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | 3 |
| **9340.890** | Cable set AWG 6 | | | 3 | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | |
| **9342.860** | Support rail TS45D, 35 x 10 mm | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **9342.930** | Support rail TS55D, 35 x 10 mm | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |

# OM adaptors with spring terminal blocks

## Switchgear assignment



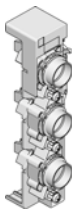
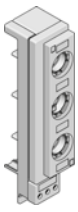
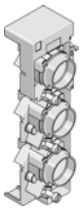
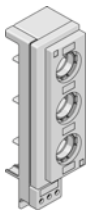
| For make/model | | Siemens | | | | | | | | | | | | | | | | Schneider Electric | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Circuit-breaker | | | | | Starter | | | | | | Reversing starter | | | | | Circuit-breaker | | | | Starter | | | | | | | Reversing starter | | | | Soft starter |
| | | 3RV10 11... (S00) | 3RV10 21... (S0) | 3RV10 31... (S2) | 3RV20 11... (S00) screw terminal | 3RV20 21... (S0) screw terminal up to 40 A | 3RA11 10... (S00) | 3RA11 20... (S0) | 3RA11 30... (S2) | 3RA21 10... (S00) screw terminal | 3RA21 20... (S00/S0) screw terminal | 3RA21 20... (S0) screw terminal | 3RA12 10... (S00 + S00) | 3RA11 20... (S0 + S0) | 3RV10 31.. + 3RT103... (S2 + S2) | 3RA22 10... (S00) screw terminal | 3RA22 20... (S0) screw terminal | GV2 - ME (screw terminal and spring terminal block) | GV2 - P | GV2 - RT, LE10, L10 | GV3 BIS 65A | GV2 P + LC1D | GV2 ME + LC1D | GV2 - DM102 + LC1D/LC1K | GV2 - DP + LC1D/LC1K | GV3 + LC1D65 | LUB 12 | LUB 32 | GV2 P + LC2D (AC) | GV2 ME + LC2D/LC2K (AC) | GV2 DM + LC2D/LC2K | GV2 DP + LC2D/LC2K | GV2 ME + ATS |
| | | Construction width | | | | | | | | | | | | | | | | Construction width | | | | | | | | | | | | | | | |
| | | 45 | 45 | 55 | 45 | 45 | 45 | 45 | 55 | 45 | 45 | 45 | 90 | 100 | 120 | 90 | 90 | 45 | 55 | 45 | 55 | 45 | 45 | 45 | 45 | 55 | 45 | 45 | 90 | 90 | 90 | 90 | 45 |
| **Model No.** | **Version** | **Required quantity (pieces)** | | | | | | | | | | | | | | | | **Required quantity (pieces)** | | | | | | | | | | | | | | | |
| **9340.530** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | 1 | 1 | | 1 | 1 | | | | | | | | | | | | 1 | | 1 | | | | | | | 1 | 1 | | | | | |
| **9340.550** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | |
| **9340.560** | OM adaptor 32 A, 1.5 - 6 mm², W = 45 mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **9340.630** | OM adaptor 65 A, 2.5 - 16 mm², W = 55 mm | | | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | |
| **9340.650** | OM adaptor 65 A, 2.5 - 16 mm², W = 55 mm | | | | | | | | 1 | | | | | | 1 | | | | | | | | | | | 1 | | | | | | | |
| **9340.260** | OM support, 45 x 208 mm | | | | | | | | | | | | 1 | 1 | | 1 | 1 | | | | | | | | | | | | 1 | | | | |
| **9340.270** | OM support, 55 x 272 mm | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| **9340.290** | Insert strip, 10 x 208 mm | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| **9340.280** | Connection pin | | | | | | | | | | | | 3 | 3 | 3 | | | | | | | | | | | | | | 3 | 3 | 3 | 3 | |
| **9340.860** | Cable set AWG 12 | 3 | | | 3 | | 3 | | | 3 | 3 | 3 | 3 | | | 3 | | | | | | | | | | | 3 | | | | | | |
| **9340.870** | Cable set AWG 10 | | 3 | | | | | 3 | | | | | | 3 | | | 3 | 3 | | 3 | | 3 | 3 | 3 | 3 | | | 3 | 3 | 3 | 3 | 3 | 3 |
| **9340.880** | Cable set AWG 8 | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **9340.890** | Cable set AWG 6 | | | 3 | | | | | 3 | | | | | | 3 | | | | 3 | | 3 | | | | | 3 | | | | | | | |
| **9342.820** | PinBlock PLUS | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | 1 | 1 | 1 | 1 | |

**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Bus-mounting fuse base: Fibreglass-reinforced, thermo-plastic polyester (PBT)
- Contact hazard protection: Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- For the use of fuse inserts to EN 60 269-3 (DIN VDE 0636-3)

| | | | |  |  |  |  | |
|---|---|---|---|---|---|---|---|---|
| Design | | – | Easy Connect | – | Easy Connect | – | Easy Connect | Page |
| Fuse inserts | | D 02-E 18 (adaptor sleeve) | D 02-E 18 (adaptor sleeve) | D II-E 27 (adaptor screw) | D II-E 27 (adaptor screw) | D III-E 33 (adaptor screw) | D III-E 33 (adaptor screw) | |
| Rated current max. A | | 63 | 63 | 25 | 25 | 63 | 63 | |
| Rated operating voltage V, ~ | | 400, 3~ 400 (DC) | 400, 3~ 400 (DC) | 500, 3~ 500 (DC) | 500, 3~ 500 (DC) | 690, 3~ 690 (DC) | 690, 3~ 690 (DC) | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Type of connection | | Box terminal | Box terminal | Box terminal | Box terminal | Box terminal | Box terminal | |
| Connection of round conductors $mm^2$ | | 1.5 - 25 | 1.5 - 16 | 1.5 - 16 | 1.5 - 16 | 1.5 - 25 | 1.5 - 16 | |
| Width mm | | 27 | 41 | 42 | 56 | 57 | 71 | |
| Height mm | | 209 | 251 | 209 | 251 | 209 | 251 | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | | **3418.010** | **3418.040** | **3427.010** | **3427.040** | **3433.010** | **3433.040** | |
| | Packs of | 10 pc(s). | 5 pc(s). | 10 pc(s). | 5 pc(s). | 10 pc(s). | 5 pc(s). | |
| **Product-specific scope of supply** | | | | | | | | |
| Pre-configured element ready for connection including cover plate, contact hazard protection and exterior connection clamps | | – | ■ | – | ■ | – | ■ | |
| **Also required** | | | | | | | | |
| Contact hazard protection cover plate | 10 pc(s). | 3418.020 | – | 3427.020 | – | 3433.020 | – | 356 |
| **Accessories** | | | | | | | | |
| Connection space extender | 10 pc(s). | 3418.030 | – | 3427.030 | – | 3433.030 | – | 356 |
| Cover, side | 10 pc(s). | 3093.010 | – | 3093.020 | – | 3093.020 | – | 356 |

# Bus-mounting fuse base D-Switch

**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- Chassis: RAL 7035
- Fuse holder: RAL 7001

**Supply includes:**
- Retaining springs for D 01 and 10 x 38 mm fuses

**Basis of test:**
- IEC/DIN EN 60 947-3

**Note:**
- For the use of fuse inserts to EN 60 269-3 (DIN VDE 0636-3)
- With integral visual fuse monitoring via flashing indicator and operating status display as well as cable routing for conductors up to 6 mm²

| Fuse inserts | Packs of | D 01 (with retaining spring)<br>D 02 (with Neozed adaptor sleeve)<br>10 x 38 (with retaining spring) | Page |
|---|---|---|---|
| Rated operating current max. A | | 63 | |
| Rated operating voltage V, ~ | | 400, 3~ | |
| Number of poles | | 3-pole | |
| Voltage, indicator light V | | 100 - 400 | |
| Type of connection | | Box terminal | |
| Connection of round conductors mm² | | 1.5 - 25 | |
| Width mm | | 27 | |
| Height mm | | 226 | |
| For bar systems with centre-to-centre spacing mm | | 60 | |
| For bar thickness mm | | 5/10 | |
| **Model No.** | 3 pc(s). | **9340.950** | |
| **Accessories** | | | |
| Wiring duct | 10 pc(s). | 9340.905 | 356 |

# NH fuse-switch-disconnectors, size 000

**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

**Colour:**
- Chassis: RAL 9011
- Cover: RAL 7035

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 000, for mounting plate assembly

| Size | Packs of | 000 | Page |
|---|---|---|---|
| Rated operating current max. A | | 100 | |
| Rated operating voltage V, ~ | | 690, 3~ | |
| Number of poles | | 3-pole | |
| Cable outlet | | Top/bottom | |
| Type of connection | | Box terminal | |
| Connection of round conductors $mm^2$ | | 1.5 - 50 | |
| Clamping area for laminated copper bars (W x H) mm | | 10 x 10 | |
| Width mm | | 89 | |
| Height mm | | 141.5 | |
| For mounting plate assembly | | ■ | |
| **Model No.** | 1 pc(s). | **3431.000** | |
| **Accessories** | | | |
| Micro-switch | 5 pc(s). | 3071.000 | 358 |

# NH fuse-switch-disconnectors, size 000

**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

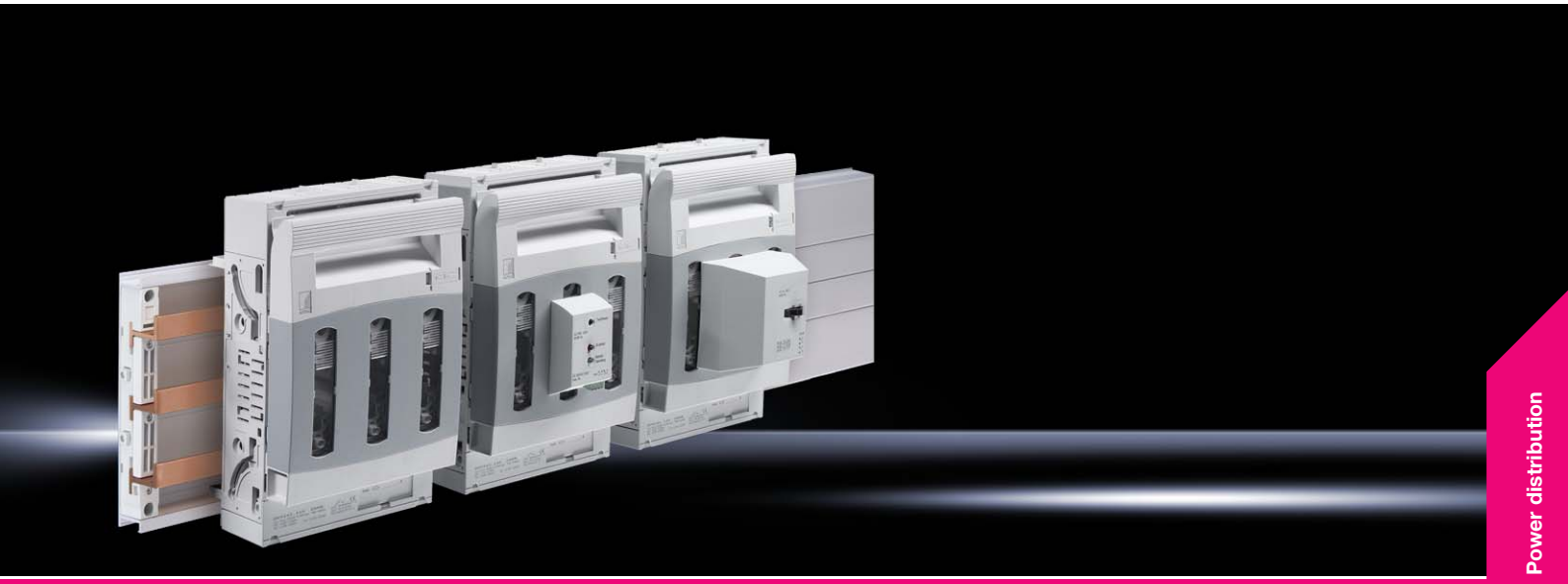
**Material:**
- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 000

| Size | Packs of | 000 | 000 | 000 | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 100 | 100 | 100 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top | Bottom | Bottom | |
| Type of connection | | Box terminal | Box terminal | Box terminal | |
| Connection of round conductors $mm^2$ | | 2.5 - 50 | 2.5 - 50 | 2.5 - 50 | |
| Width mm | | 53 | 53 | 53 | |
| Height mm | | 213 | 213 | 213 | |
| With electronic fuse monitoring | | – | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **3431.020** | **3431.030** | **3431.035** | |
| **Accessories** | | | | | |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 358 |





**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7035/7001

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

**Note:**
- The technical data may vary for UR applications. Applications to UR only in conjunction with "Special Purpose Fuses".

## Size 00

| Size | Packs of | 00 | 00 | 00 | 00 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 160 | 160 | 160 | 160 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M8 | Box terminal | Screw M8 | |
| Connection of round conductors $mm^2$ | | 4 - 95 | 10 - 95 | 4 - 95 | 10 - 95 | |
| Connection of sector-shaped conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 13 x 13 | 20 x 5 | 13 x 13 | 20 x 5 | |
| Width mm | | 106 | 106 | 106 | 106 | |
| Height mm | | 194 | 194 | 194 | 194 | |
| Approvals | | UR | UR | UR | UR | |
| For mounting plate assembly | | – | – | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | – | |
| **Model No.** | 1 pc(s). | **9343.000** | **9343.010** | **9344.000** | **9344.010** | |
| **Accessories** | | | | | | |
| Box terminal | | – | – | – | – | |
| Connection space cover | 2 pc(s). | 9344.520 | 9344.520 | 9344.520 | 9344.520 | 357 |
| Arcing chamber | | – | – | – | – | |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 3071.000 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.070 | – | – | – | 333 |

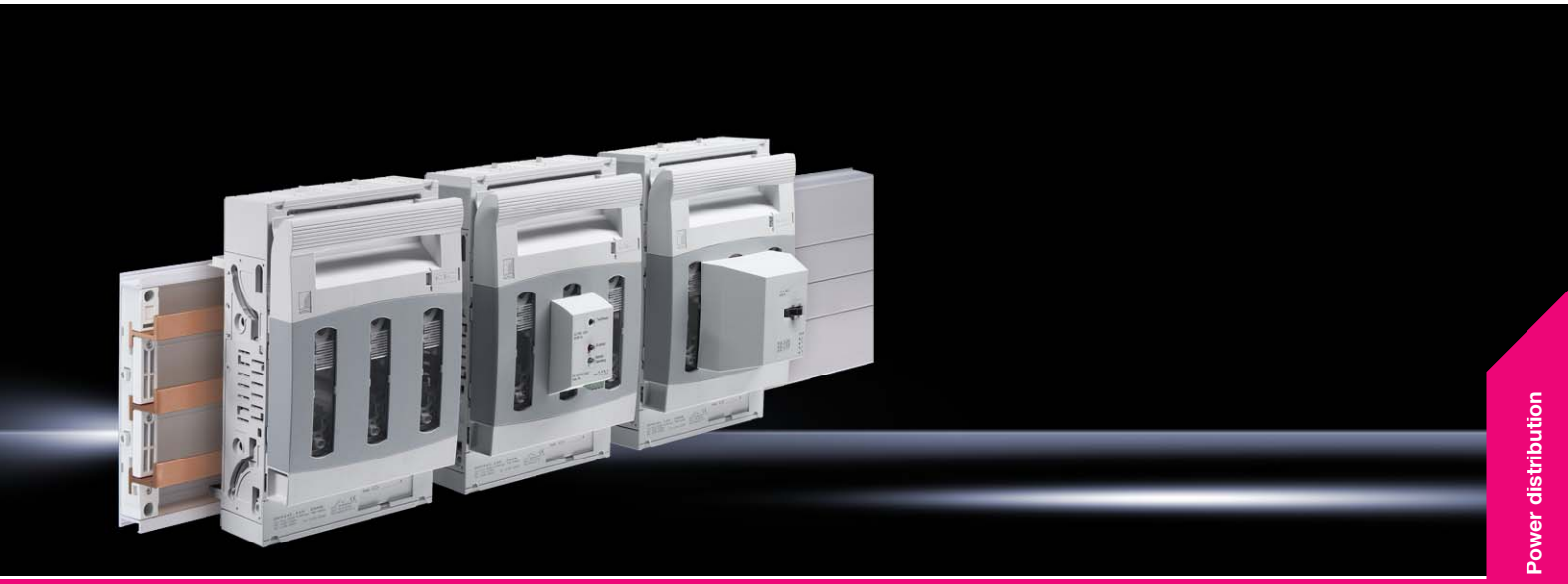
# NH fuse-switch-disconnectors, size 00 to 3

## Size 1

| Size | Packs of | 1 | 1 | 1 | 1 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 250 | 250 | 250 | 250 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M10 | Box terminal | Screw M10 | |
| Connection of round conductors $mm^2$ | | 35 - 150 | 10 - 150 | 35 - 150 | 10 - 150 | |
| Connection of sector-shaped conductors $mm^2$ | | 50 - 150 | – | 50 - 150 | – | |
| Clamping area for laminated copper bars (W x H) mm | | 20 x 3 - 14 | 32 x 10 | 20 x 3 - 14 | 32 x 10 | |
| Width mm | | 184 | 184 | 184 | 184 | |
| Height mm | | 298 | 298 | 298 | 298 | |
| Approvals | | UR | UR | UR | UR | |
| For mounting plate assembly | | – | – | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | – | |
| **Model No.** | 1 pc(s). | **9343.100** | **9343.110** | **9344.100** | **9344.110** | |
| **Accessories** | | | | | | |
| Box terminal | 3 pc(s). | – | 9344.610 | – | 9344.610 | 357 |
| Connection space cover | 2 pc(s). | 9344.530 | 9344.530 | 9344.530 | 9344.530 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.170 | – | – | – | 333 |

## Size 2 – 3

| Size | Packs of | 2 | 2 | 2 | 3 | 3 | 3 | Page |
|---|---|---|---|---|---|---|---|---|
| Rated operating current max. A | | 400 | 400 | 400 | 630 | 630 | 630 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M10 | Screw M10 | Box terminal | Screw M10 | Screw M10 | |
| Connection of round conductors $mm^2$ | | 95 - 300 | 10 - 240 | 10 - 240 | 95 - 300 | 10 - 300 | 10 - 300 | |
| Connection of sector-shaped conductors $mm^2$ | | 120 - 300 | – | – | 120 - 300 | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 32 x 10 - 20 | 50 x 10 | 50 x 10 | 32 x 10 - 20 | 50 x 10 | 50 x 10 | |
| Width mm | | 210 | 210 | 210 | 250 | 250 | 250 | |
| Height mm | | 298 | 298 | 298 | 298 | 298 | 298 | |
| Approvals | | UR | UR | UR | UR | UR | UR | |
| For mounting plate assembly | | – | – | ■ | – | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | 60 | 60 | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | 5/10 | 5/10 | – | |
| **Model No.** | 1 pc(s). | **9343.200** | **9343.210** | **9344.210** | **9343.300** | **9343.310** | **9344.310** | |
| **Accessories** | | | | | | | | |
| Box terminal | 3 pc(s). | – | 9344.620 | 9344.620 | – | 9344.620 | 9344.620 | 357 |
| Connection space cover | 2 pc(s). | 9344.540 | 9344.540 | 9344.540 | 9344.550 | 9344.550 | 9344.550 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.270 | – | – | 9343.370 | – | – | 333 |





**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7035/7001

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00, with electronic fuse monitoring

| Size | Packs of | 00 | 00 | 00 | 00 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 160 | 160 | 160 | 160 | |
| Rated operating voltage V, ~ | | 400 - 690, 3~ | 400 - 690, 3~ | 400 - 690, 3~ | 400 - 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M8 | Box terminal | Screw M8 | |
| Connection of round conductors $mm^2$ | | 4 - 95 | 10 - 95 | 4 - 95 | 10 - 95 | |
| Connection of sector-shaped conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 13 x 13 | 20 x 5 | 13 x 13 | 20 x 5 | |
| Width mm | | 106 | 106 | 106 | 106 | |
| Height mm | | 194 | 194 | 194 | 194 | |
| For mounting plate assembly | | – | – | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | – | |
| **Model No.** | 1 pc(s). | **9343.020** | **9343.030** | **9344.020** | **9344.030** | |
| **Accessories** | | | | | | |
| Box terminal | | – | – | – | – | |
| Connection space cover | 2 pc(s). | 9344.520 | 9344.520 | 9344.520 | 9344.520 | 357 |
| Arcing chamber | | – | – | – | – | |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 3071.000 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.070 | – | – | – | 333 |

# NH fuse-switch-disconnectors, size 00 to 3

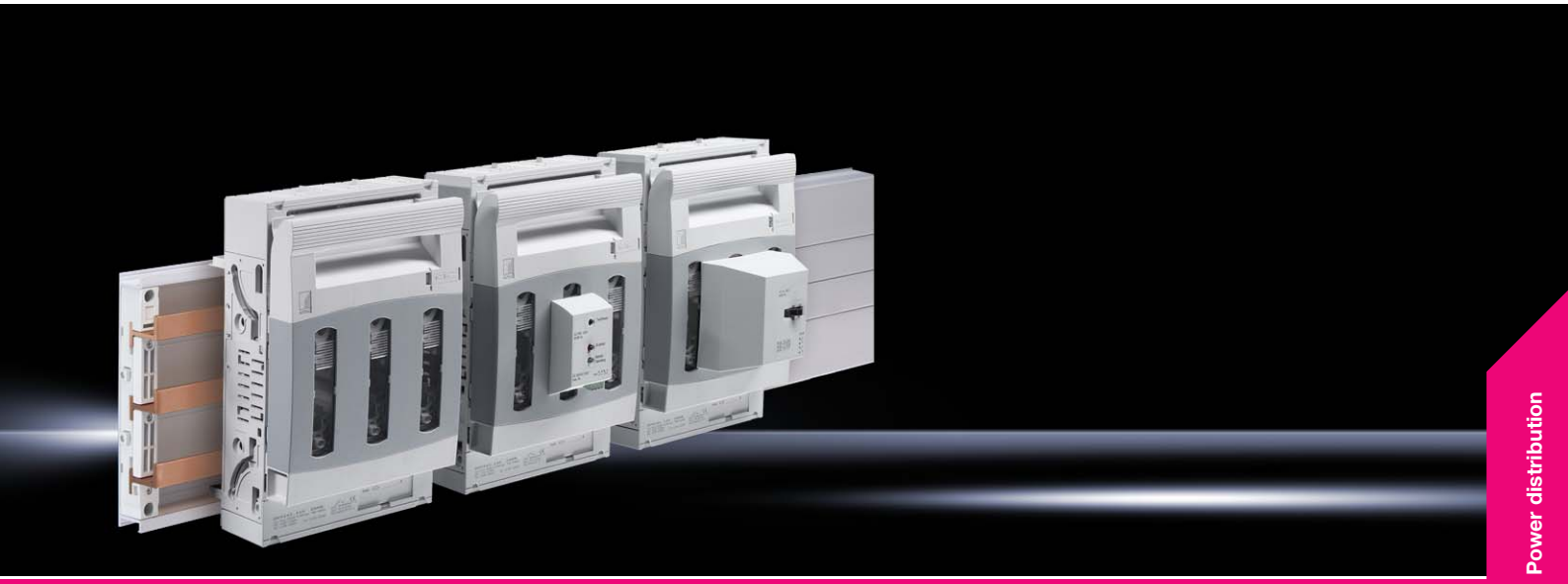
## Size 1, with electronic fuse monitoring

| Size | Packs of | 1 | 1 | 1 | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 250 | 250 | 250 | |
| Rated operating voltage V, ~ | | 400 - 690, 3~ | 400 - 690, 3~ | 400 - 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M10 | Screw M10 | |
| Connection of round conductors $mm^2$ | | 35 - 150 | 10 - 150 | 10 - 150 | |
| Connection of sector-shaped conductors $mm^2$ | | 50 - 150 | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 20 x 3 - 14 | 32 x 10 | 32 x 10 | |
| Width mm | | 184 | 184 | 184 | |
| Height mm | | 298 | 298 | 298 | |
| For mounting plate assembly | | – | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | |
| **Model No.** | 1 pc(s). | **9343.120** | **9343.130** | **9344.130** | |
| **Accessories** | | | | | |
| Box terminal | 3 pc(s). | – | 9344.610 | 9344.610 | 357 |
| Connection space cover | 2 pc(s). | 9344.530 | 9344.530 | 9344.530 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.170 | – | – | 333 |

## Size 2 – 3, with electronic fuse monitoring

| Size | Packs of | 2 | 2 | 3 | 3 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 400 | 400 | 630 | 630 | |
| Rated operating voltage V, ~ | | 400 - 690, 3~ | 400 - 690, 3~ | 400 - 690, 3~ | 400 - 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Screw M10 | Screw M10 | Screw M10 | Screw M10 | |
| Connection of round conductors $mm^2$ | | 10 - 240 | 10 - 240 | 10 - 300 | 10 - 300 | |
| Connection of sector-shaped conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 50 x 10 | 50 x 10 | 50 x 10 | 50 x 10 | |
| Width mm | | 210 | 210 | 250 | 250 | |
| Height mm | | 298 | 298 | 298 | 298 | |
| For mounting plate assembly | | – | ■ | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | – | 60 | – | |
| For bar thickness mm | | 5/10 | – | 5/10 | – | |
| **Model No.** | 1 pc(s). | **9343.230** | **9344.230** | **9343.330** | **9344.330** | |
| **Accessories** | | | | | | |
| Box terminal | 3 pc(s). | 9344.620 | 9344.620 | 9344.620 | 9344.620 | 357 |
| Connection space cover | 2 pc(s). | 9344.540 | 9344.540 | 9344.550 | 9344.550 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | | – | – | – | – | |

# NH fuse-switch-disconnectors, size 00 to 3





**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7035/7001

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00, with electromechanical fuse monitoring

| Size | Packs of | 00 | 00 | 00 | 00 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 160 | 160 | 160 | 160 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M8 | Box terminal | Screw M8 | |
| Connection of round conductors $mm^2$ | | 4 - 95 | 10 - 95 | 4 - 95 | 10 - 95 | |
| Connection of sector-shaped conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 13 x 13 | 20 x 5 | 13 x 13 | 20 x 5 | |
| Width mm | | 106 | 106 | 106 | 106 | |
| Height mm | | 194 | 194 | 194 | 194 | |
| For mounting plate assembly | | – | – | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | – | |
| **Model No.** | 1 pc(s). | **9343.040** | **9343.050** | **9344.040** | **9344.050** | |
| **Accessories** | | | | | | |
| Box terminal | | – | – | – | – | |
| Connection space cover | 2 pc(s). | 9344.520 | 9344.520 | 9344.520 | 9344.520 | 357 |
| Arcing chamber | | – | – | – | – | |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 3071.000 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.070 | – | – | – | 333 |

# NH fuse-switch-disconnectors, size 00 to 3

## Size 1, with electromechanical fuse monitoring

| Size | Packs of | 1 | 1 | 1 | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 250 | 250 | 250 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M10 | Screw M10 | |
| Connection of round conductors $mm^2$ | | 35 - 150 | 10 - 150 | 10 - 150 | |
| Connection of sector-shaped conductors $mm^2$ | | 50 - 150 | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 20 x 3 - 14 | 32 x 10 | 32 x 10 | |
| Width mm | | 184 | 184 | 184 | |
| Height mm | | 298 | 298 | 298 | |
| For mounting plate assembly | | – | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | – | |
| For bar thickness mm | | 5/10 | 5/10 | – | |
| **Model No.** | 1 pc(s). | **9343.140** | **9343.150** | **9344.150** | |
| **Accessories** | | | | | |
| Box terminal | 3 pc(s). | – | 9344.610 | 9344.610 | 357 |
| Connection space cover | 2 pc(s). | 9344.530 | 9344.530 | 9344.530 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | 346 |
| Smart monitoring system | 1 pc(s). | 9343.170 | – | – | 333 |

## Size 2 – 3, with electromechanical fuse monitoring

| Size | Packs of | 2 | 2 | 3 | 3 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 400 | 400 | 630 | 630 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Screw M10 | Screw M10 | Screw M10 | Screw M10 | |
| Connection of round conductors $mm^2$ | | 10 - 240 | 10 - 240 | 10 - 300 | 10 - 300 | |
| Connection of sector-shaped conductors | | – | – | – | – | |
| Clamping area for laminated copper bars (W x H) mm | | 50 x 10 | 50 x 10 | 50 x 10 | 50 x 10 | |
| Width mm | | 210 | 210 | 250 | 250 | |
| Height mm | | 298 | 298 | 298 | 298 | |
| For mounting plate assembly | | – | ■ | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | – | 60 | – | |
| For bar thickness mm | | 5/10 | – | 5/10 | – | |
| **Model No.** | 1 pc(s). | **9343.250** | **9344.250** | **9343.350** | **9344.350** | |
| **Accessories** | | | | | | |
| Box terminal | 3 pc(s). | 9344.620 | 9344.620 | 9344.620 | 9344.620 | 357 |
| Connection space cover | 2 pc(s). | 9344.540 | 9344.540 | 9344.550 | 9344.550 | 357 |
| Arcing chamber | 3 pc(s). | 9344.680 | 9344.680 | 9344.680 | 9344.680 | 357 |
| Micro-switch | 2 pc(s). | 9344.510 | 9344.510 | 9344.510 | 9344.510 | 358 |
| Laminated copper bar | | see page | see page | see page | see page | 346 |
| Smart monitoring system | | – | – | – | – | |

**NH fuse-switch disconnectors** Page 325

Compact measurement unit consisting of measurement data acquisition unit, evaluation electronics, communication module, measurement power supply and flash data memory.

**Functions:**
- Continuous measurement of energy-related data
- Data logging in CSV format (Excel)
- Individual limit monitoring and alarm function
- May be integrated into the CMC III monitoring system
- Automatic address allocation via CAN bus

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Supply includes:**
- NH measurement module
- Connector 2 x 2.5 mm² with preassembled bridge
- USB cable (mini-B connector on micro-B jack)

## NH measurement module for NH fuse-switch disconnectors

| For size | Packs of | 00 | 1 | 2 | 3 | Page |
|---|---|---|---|---|---|---|
| To fit Model No. | | 9343.000/ 9343.020/ 9343.040 | 9343.100/ 9343.120/ 9343.140 | 9343.200 | 9343.300 | |
| Rated operating current max. A | | 150 | 250 | 400 | 600 | |
| Rated operating voltage V, ~ | | 400, 3~ | 400, 3~ | 400, 3~ | 400, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Bottom | Bottom | Bottom | Bottom | |
| Type of connection | | Box terminal | Box terminal | Box terminal | Box terminal | |
| Connection of round conductors mm² | | 4 - 95 | 35 - 150 | 95 - 300 | 95 - 300 | |
| Connection of sector-shaped conductors mm² | | – | 50 - 150 | 120 - 300 | 120 - 300 | |
| Clamping area for laminated copper bars (W x H) mm | | 13 x 13 | 20 x 3 - 14 | 32 x 10 - 20 | 32 x 10 - 20 | |
| Width mm | | 102 | 170 | 185 | 214 | |
| Height mm | | 108 | 123 | 123 | 123 | |
| Depth mm | | 68 | 92 | 107 | 107 | |
| Precision class measurement output (voltage/current/power) | | 0.2 / 1.5 / 2 | 0.2 / 1.5 / 2 | 0.2 / 1.5 / 2 | 0.2 / 1.5 / 2 | |
| Interfaces | | 2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB | 2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB | 2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB | 2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB | |
| **Model No.** | 1 pc(s). | **9343.070** | **9343.170** | **9343.270** | **9343.370** | |

## Accessories

### LCD display

**for monitoring**

**Functions:**
- Illuminated display with more than 50 measurement parameters
- Intuitive configuration of alarm and limit values
- Voltage supply for display via pluggable RJ12 patch cable

**Material:**
- Polyphenylene ether (PPE)

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 51 (front)
- IP 41 (enclosure)

**Supply includes:**
- LCD display
- Modbus RTU cable (RJ12), length: 2 m

| | |
|---|---|
| Interfaces | 1 x Modbus RTU (RJ12) |
| Operating temperature range | -5 °C...+55 °C |
| Storage temperature range | -25 °C...+70 °C |
| Operating humidity range % | 5 - 95 |
| Width mm | 96 |
| Height mm | 96 |
| Depth mm | 46 |
| Packs of | 1 pc(s). |
| **Model No.** | **9343.410** |

**Also required:**

- Power pack, see page 334

### Power pack

**for LCD display**

For mounting on support rails to EN 60 715, 7.5 mm high.

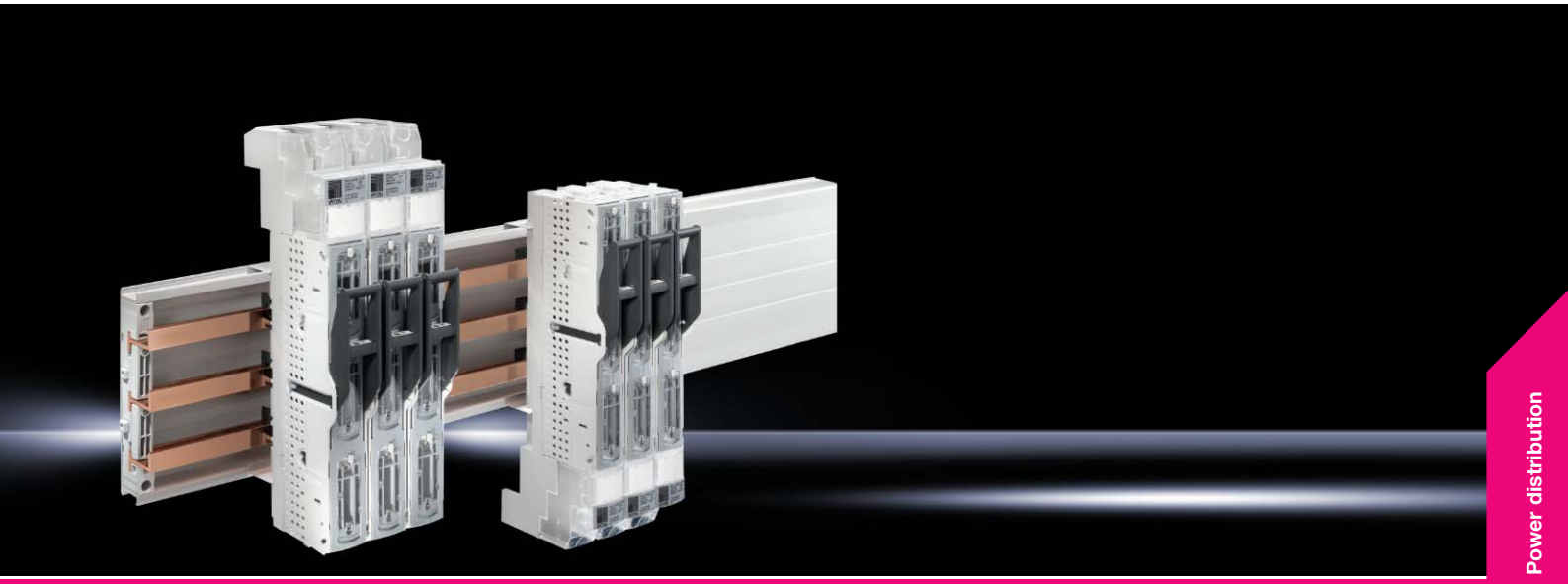
**Material:**
- Polycarbonate
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- Power pack
- Connector 2 x 2.5 $mm^2$

| | |
|---|---|
| Interfaces | 1 x Modbus RTU (RJ12)<br>2 x Modbus RTU (RJ45) |
| Operating temperature range | -5 °C...+55 °C |
| Storage temperature range | -25 °C...+70 °C |
| Operating humidity range % | 5 - 95 |
| Width mm | 71 |
| Height mm | 91 |
| Depth mm | 61 |
| Rated operating voltage V, Hz | 85 - 265 (AC/DC), 50/60 |
| Output current (max.) A | 0.42 |
| Output voltage V (DC) | 24 |
| Packs of | 1 pc(s). |
| **Model No.** | **9343.400** |





**Busbar system** Page 300 **Connection adaptors** Page 304 **NH slimline fuse-switch disconnectors 185 mm** Page 374

**Material:**
- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

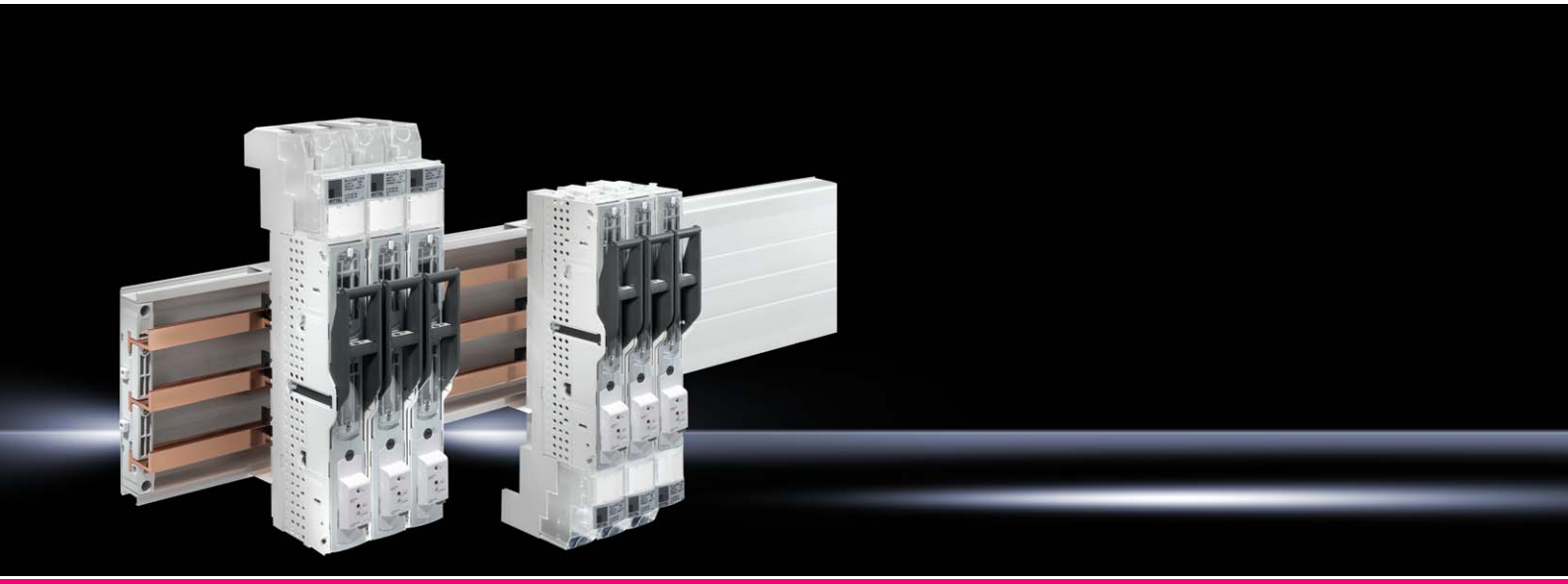
**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00

| Size | Packs of | 00 | 00 | 00 | 00 | 00 | Page |
|---|---|---|---|---|---|---|---|
| Rated operating current max. A | | 160 | 160 | 160 | 160 | 160 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Screw M8 | Box terminal | Screw M8 | Screw M8 | |
| Connection of round conductors $mm^2$ | | 2.5 - 95 | 2.5 - 95 | 2.5 - 95 | 2.5 - 95 | 2.5 - 95 | |
| Width mm | | 50 | 50 | 50 | 50 | 50 | |
| Height mm | | 400 | 400 | 400 | 400 | 400 | |
| For converter installation | | – | – | – | – | ■ | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 100 | 100 | 100 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9346.000** | **9346.010** | **9346.020** | **9346.030** | **9346.060** | |
| **Product-specific scope of supply** | | | | | | | |
| 3 mounting hooks | | ■ | ■ | ■ | ■ | – | |
| **Accessories** | | | | | | | |
| Connection space cover | 1 pc(s). | 9346.460 | 9346.460 | 9346.460 | 9346.460 | 9346.460 | 357 |
| Clamp-type terminal connection | 3 pc(s). | – | 3592.010 | – | 3592.010 | 3592.010 | 358 |
| Micro-switch | 5 pc(s). | 9346.400 | 9346.400 | 9346.400 | 9346.400 | 9346.400 | 358 |

# NH slimline fuse-switch disconnectors



**Busbar system** Page 300 **Connection adaptors** Page 304 **NH slimline fuse-switch disconnectors 185 mm** Page 374

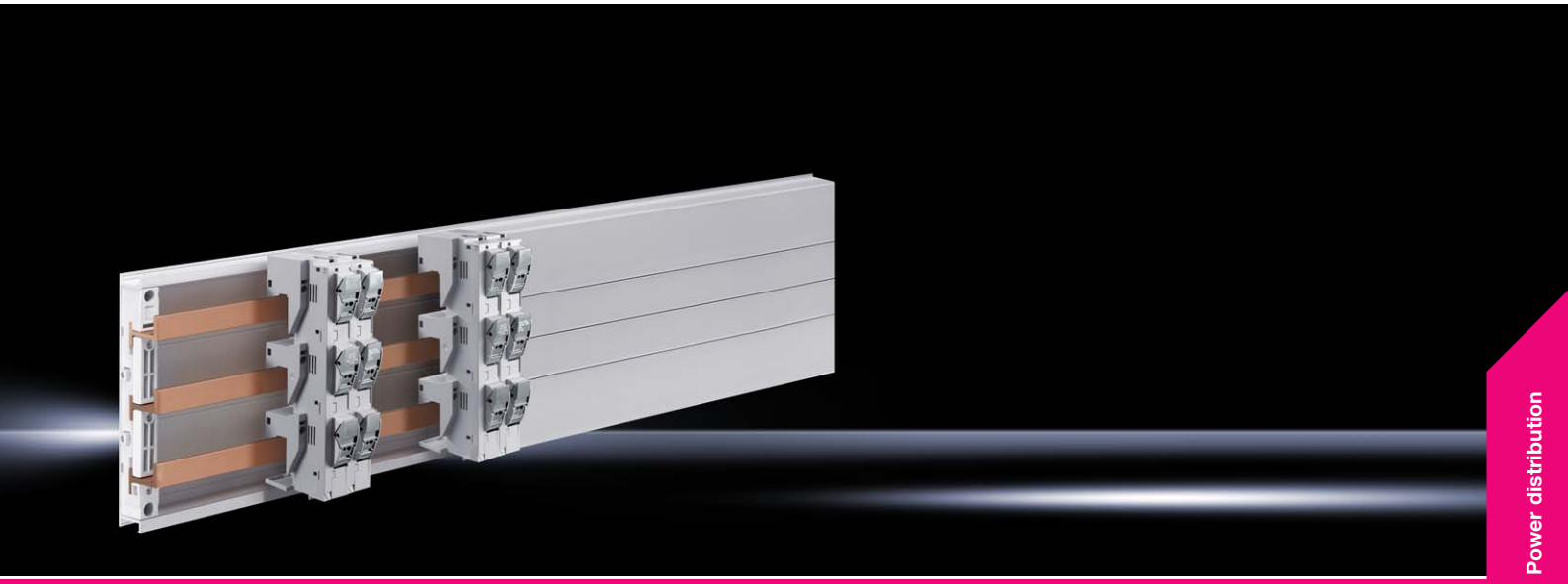
**Material:**
- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00, with electronic fuse monitoring

| Size | Packs of | 00 | Page |
|---|---|---|---|
| Rated operating current max. A | | 160 | |
| Rated operating voltage V, ~ | | 690, 3~ | |
| Number of poles | | 3-pole | |
| Cable outlet | | Top/bottom | |
| Type of connection | | Screw M8 | |
| Connection of round conductors $mm^2$ | | 2.5 - 95 | |
| Width mm | | 50 | |
| Height mm | | 400 | |
| For bar systems with centre-to-centre spacing mm | | 60 | |
| For bar thickness mm | | 5/10 | |
| **Model No.** | 1 pc(s). | **9346.015** | |
| **Product-specific scope of supply** | | | |
| 3 mounting hooks | | ■ | |
| **Accessories** | | | |
| Connection space cover | 1 pc(s). | 9346.460 | 357 |
| Clamp-type terminal connection | 3 pc(s). | 3592.010 | 358 |
| Micro-switch | 5 pc(s). | 9346.400 | 358 |





**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

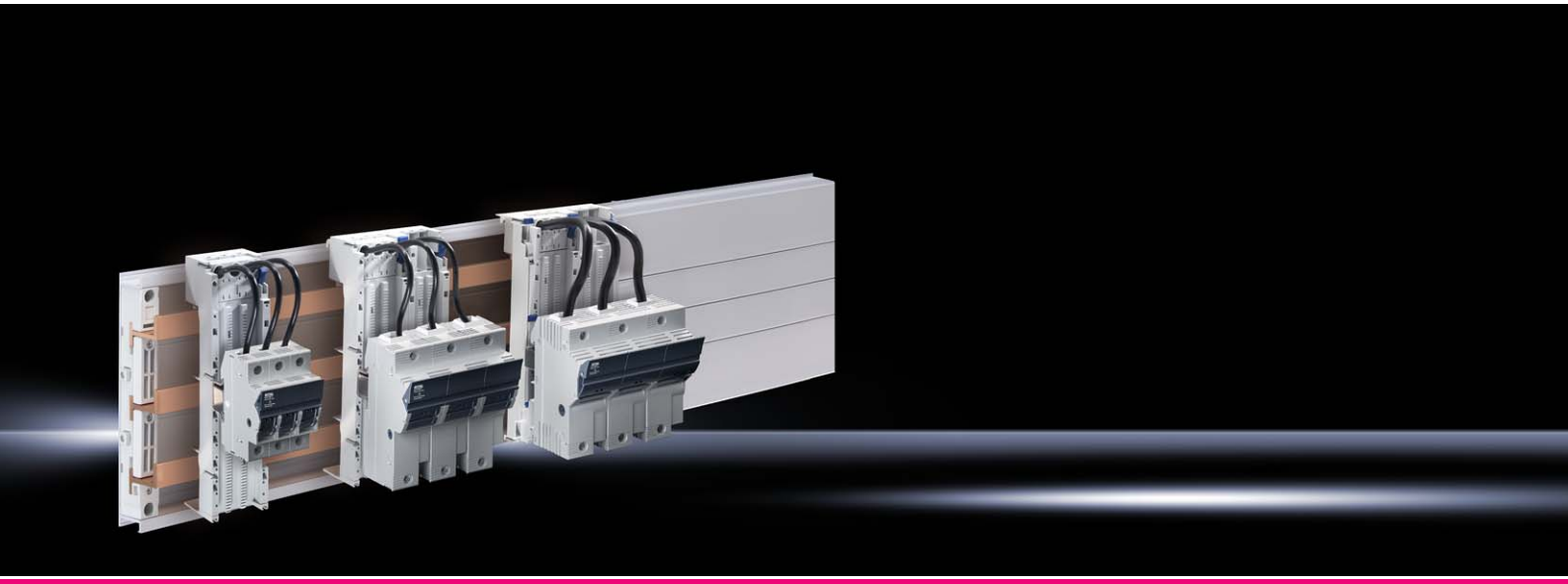
**Basis of test:**
- UL 4248-4

**Note:**
- Not suitable for accommodating fuses 10 x 38 mm to IEC 60 269-2/-4/-6

## Rated operating current max. 30 A

| Fuse type (class) | Packs of | CC | Page |
|---|---|---|---|
| Rated operating current max. A | | 30 | |
| Rated operating voltage V, ~ | | 600, 3~ | |
| Number of poles | | 3-pole | |
| Fuse standard | | UL 248-4 | |
| Fuse size mm | | 10 x 38 | |
| Voltage, indicator light V | | 110 - 600 | |
| Connection of round conductors $mm^2$ | | 1.5 - 6 | |
| Connection of round conductors | | AWG 10 - 16 | |
| Width mm | | 27 | |
| Height mm | | 200 | |
| For bar systems with centre-to-centre spacing mm | | 60 | |
| For bar thickness mm | | 5/10 | |
| **Model No.** | 4 pc(s). | **9345.040** | |

# Fuse holders



**Busbar system** Page 300 **Busbar connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Basis of test:**
- UL 4248-1
- UL 4248-4
- UL 4248-8

**Note:**
- For snap-on mounting on 35 mm (7.5 mm/15 mm high) support rails to DIN EN 60 715 or RiLine component adaptor adaptor combinations (OM adaptors/supports)

## Rated operating current max. 30 – 60 A

| Fuse type (class) | | CC | J | J | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 30 | 30 | 60 | |
| Rated operating voltage V, ~ | | 600, 3~ | 600, 3~ | 600, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Fuse standard | | UL 248-4 | UL 248-8 | UL 248-8 | |
| Fuse size mm | | 10 x 38 | 21 x 57 | 27 x 60 | |
| Voltage, indicator light V | | 110 - 600 | 110 - 600 | 110 - 600 | |
| Connection of round conductors $mm^2$ | | 0.75 - 25 | 1.5 - 50 | 2.5 - 50 | |
| Connection of round conductors | | AWG 8 - 18 | AWG 1 - 18 | AWG 1 - 14 | |
| Not suitable for accommodating fuses 10 x 38 mm to IEC 60 269-2/-4/-6 | | ■ | – | – | |
| Width mm | | 54 | 108 | 120 | |
| Height mm | | 81 | 115 | 118 | |
| **Model No.** | | **9345.005** | **9345.015** | **9345.035** | |
| | Packs of | 4 pc(s). | 2 pc(s). | 2 pc(s). | |

## Mounting example on 60 mm bar systems

| Required accessories | | For fuse holder | | | Page |
|---|---|---|---|---|---|
| Designation | Model No. | **9345.005** | **9345.015** | **9345.035** | |
| OM support | 9340.260 | – | 1 pc(s). | – | 313 |
| OM support | 9340.270 | – | – | 1 pc(s). | 313 |
| Connection pin | 9340.280 | – | 3 pc(s). | 6 pc(s). | 354 |
| Insert strip | 9340.290 | – | 1 pc(s). | 1 pc(s). | 353 |
| OM adaptor | 9340.410 | – | 1 pc(s). | 1 pc(s). | 309 |
| OM adaptor | 9340.460 | 1 pc(s). | – | – | 308 |
| Support rail | 9342.880 | – | 1 pc(s). | – | 352 |
| Support rail | 9342.950 | 1 pc(s). | 1 pc(s). | 2 pc(s). | 352 |

**Busbar system** Page 300 **Connection adaptors** Page 304 **OM adaptors** Page 307 **Circuit-breaker component adaptors** Page 314

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7035/7001

**Note:**
- UL (listed accessory) is met when using the fuse holder on RiLine busbar systems

**Standards:**
- UL 508

## Rated operating current max. 100 – 400 A

| Fuse type (class) | Packs of | J | J | J | Page |
|---|---|---|---|---|---|
| Rated operating current min. A | | 61 | 101 | 201 | |
| Rated operating current max. A | | 100 | 200 | 400 | |
| Rated operating voltage V, ~ | | 600, 3~ | 600, 3~ | 600, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Fuse standard | | UL 248-8 | UL 248-8 | UL 248-8 | |
| Fuse size mm | | 29 x 118 | 41 x 146 | 54 x 181 | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | Box terminal | Box terminal | |
| Connection of round conductors | | AWG 2 – MCM 300 | AWG 4/0 – MCM 600 | AWG 4/0 – MCM 600 | |
| Width mm | | 184 | 210 | 250 | |
| Height mm | | 288 | 288 | 328 | |
| Approvals | | UL | UL | UL | |
| For bar systems with centre-to-centre spacing mm | | 60 | 60 | 60 | |
| For bar thickness mm | | 5/10 | 5/10 | 5/10 | |
| **Model No.** | 1 pc(s). | **9345.100** | **9345.200** | **9345.400** | |

## Busbars/base isolators

### Busbar supports

**1-pole**

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- Multi-pole systems with 60 mm bar centre distance may be configured by baying the busbar supports

**Approvals:**
- UL

**Also required:**
- Busbars E-Cu, see page 342
- PLS special busbars E-Cu, see page 344

**Accessories:**
- Spacer, see page 341

| | | |
|---|---|---|
| For busbar mm | 12 x 5/10<br>15 x 5 - 30 x 10 | PLS 1600 |
| Note on Model No. | If 12 x 5/10 mm busbars are used, spacer 9340.090 is additionally required | – |
| PEN/N/PE support | ■ | ■ |
| Rated operating voltage V, ~ | 1000, 1~<br>1500 (DC) | 1000, 1~<br>1500 (DC) |
| Number of poles | Single-pole | Single-pole |
| Product-specific scope of supply | – | Including raised section for stepped configuration of the PLS busbars |
| Packs of | 4 pc(s). | 4 pc(s). |
| **Model No.** | **9340.030** | **9342.030** |

### Busbar supports

**2-pole**

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Also required:**
- Busbars E-Cu, see page 342

| | | |
|---|---|---|
| For busbar mm | 12 x 5 | 12 x 5 - 30 x 10 |
| Bar centre distance mm | 70 | 60 |
| PEN/N/PE support | ■ | ■ |
| N/PE support | ■ | ■ |
| Rated operating voltage V, ~ | 1000, 2~<br>1500 (DC) | 1000, 2~ |
| Number of poles | 2-pole | 2-pole |
| Approvals | – | UL |
| Packs of | 4 pc(s). | 4 pc(s). |
| **Model No.** | **9600.005** | **9340.040** |

## Spacer

**for RiLine busbar supports (flat busbar system)**
For adapting 12 x 5 and 12 x 10 mm size busbars.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 9340.000/9340.004/ 9340.010/9340.030 | 12 pc(s). | **9340.090** |

## Base isolator

For configuring busbar systems with any given bar centre distances and for assembling insulated PE or PEN busbars.

**Material:**
– Duroplastic polyester (UP resin)

| Height mm | 40 | 50 |
|---|---|---|
| Thread | M10 | M10 |
| Rated operating voltage kV | 1 | 1 |
| Tensile strength kN | 12 | 13 |
| Torsional strength Nm | 75 | 90 |
| Bending strength kN | 6 | 6 |
| Packs of | 6 pc(s). | 6 pc(s). |
| **Model No.** | **3031.000** | **3032.000** |

## Busbars

### CUPONAL busbars

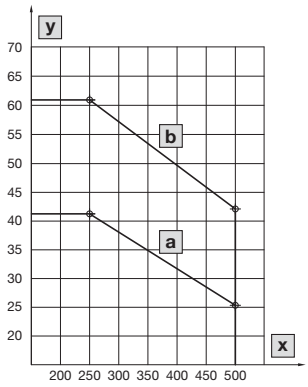
Copper-coated aluminium busbars, suitable for configuring busbar systems with busbar supports 9340.000/9340.050.

**Material:**
- Aluminium
- Copper

**Note:**
- The rated current is derived at 65 °C bar temperature and 35 °C ambient temperature
- Correction factor diagram to DIN EN 43 671
- May be cut individually to required length

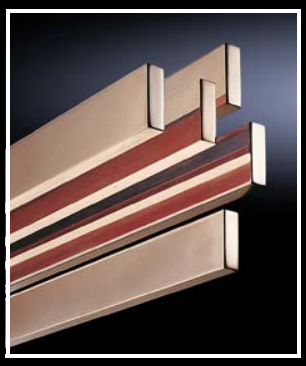
**Standards:**
- DIN EN 13 601

**Short-circuit resistance diagram 9340.000/9340.050**




**x** Busbar support spacing (mm)
**y** Ip Surge-current resistance (kA)
**a** CUPONAL 20 x 5/10 mm
**b** CUPONAL 30 x 5/10 mm

| Dimensions mm | Length mm | Rated current max. A | Packs of | **Model No.** |
|---|---|---|---|---|
| 20 x 5 | 2400 | 235 | 6 pc(s). | **3582.020** |
| 20 x 10 | 2400 | 363 | 3 pc(s). | **3585.020** |
| 30 x 5 | 2400 | 328 | 6 pc(s). | **3584.020** |
| 30 x 10 | 2400 | 493 | 3 pc(s). | **3586.020** |



### Busbars E-Cu

**Material:**
- E-Cu F30

**Note:**
- May be cut individually to required length

**Standards:**
- DIN EN 13 601

**Accessories:**
- Busbar connector, see page 343
- Busbar cover section, see page 343
- Inserted screw nuts M12, see page 1039

| Dimensions mm | Length mm | Approvals | Packs of | **Model No.** |
|---|---|---|---|---|
| 12 x 5 | 2400 | UL | 6 pc(s). | **3580.000** |
| 15 x 5 | 2400 | UL | 6 pc(s). | **3581.000** |
| 20 x 5 | 2400 | UL | 6 pc(s). | **3582.000** |
| 25 x 5 | 2400 | UL | 6 pc(s). | **3583.000** |
| 30 x 5 | 2400 | UL | 6 pc(s). | **3584.000** |
| 12 x 10 | 2400 | UL | 6 pc(s). | **3580.100** |
| 15 x 10 | 2400 | UL | 6 pc(s). | **3581.100** |
| 20 x 10 | 2400 | UL | 3 pc(s). | **3585.005** |
| 30 x 10 | 2400 | UL | 3 pc(s). | **3586.005** |
| 40 x 10 | 2400 | – | 3 pc(s). | **3587.000** |
| 50 x 10 | 2400 | – | 2 pc(s). | **3588.005** |
| 60 x 10 | 2400 | – | 2 pc(s). | **3589.005** |
| 80 x 10 | 2400 | – | 1 pc(s). | **3590.005** |
| 100 x 10 | 2400 | – | 1 pc(s). | **3590.015** |
| 120 x 10 | 2400 | – | 1 pc(s). | **3590.020** |

## Busbar cover section

Contact hazard protection by covering the busbars.

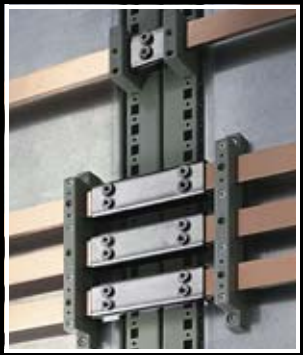
**Material:**
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– May be cut individually to required length

| For busbar mm | Length mm | Approvals | Packs of | **Model No.** |
|---|---|---|---|---|
| 12/15 x 5 | 1000 | – | 4 pc(s). | **9350.010** |
| 12/15 x 10 | 1000 | – | 4 pc(s). | **9350.060** |
| 12 x 5 - 30 x 10 | 1000 | UR | 10 pc(s). | **3092.000** |
| 40 - 60 x 10 | 1000 | UR | 10 pc(s). | **3085.000** |

## Busbar connector



For connecting rectangular busbars, no drilling required.

**Approvals:**
– UL

| For busbar mm | Connection type | Material | Packs of | **Model No.** |
|---|---|---|---|---|
| 12 x 5 - 15 x 10 | Single connection | Console: St 37, nickel-plated<br>Contact plate: E-Cu, nickel-plated | 3 pc(s). | **9350.075** |
| 20 x 5 - 30 x 10 | Single connection | Top piece: Sheet steel, zinc-plated, passivated<br>Contact plate: E-Cu, silver-plated | 3 pc(s). | **9320.020** |
| 20 x 5 - 30 x 10 | Baying connection from enclosure to enclosure | Top piece: Sheet steel, zinc-plated, passivated<br>Contact plate: E-Cu, silver-plated | 3 pc(s). | **9320.030** |

## Busbars

### PLS special busbars E-Cu

**Material:**
– E-Cu

**Note:**
– May be cut individually to required length

**Approvals:**
– UL

**Accessories:**

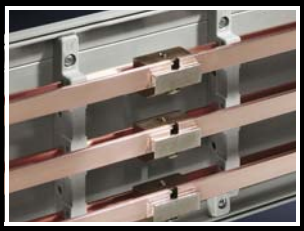
– PLS busbar connectors, see page 344
– PLS expansion connectors, see page 345

**For system PLS 800**

| For enclosure width mm | Cross-section mm² | Length mm | Bar thickness mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 600 | 300 | 495 | 5 | 3 pc(s). | **3524.000** |
| 800 | 300 | 695 | 5 | 3 pc(s). | **3525.000** |
| 1000 | 300 | 895 | 5 | 3 pc(s). | **3525.010** |
| 1200 | 300 | 1095 | 5 | 3 pc(s). | **3526.000** |
| – | 300 | 2400 | 5 | 1 pc(s). | **3509.000** |

**For system PLS 1600**

| For enclosure width mm | Cross-section mm² | Length mm | Bar thickness mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 600 | 900 | 495 | 10 | 3 pc(s). | **3527.000** |
| 800 | 900 | 695 | 10 | 3 pc(s). | **3528.000** |
| 1000 | 900 | 895 | 10 | 3 pc(s). | **3528.010** |
| 1200 | 900 | 1095 | 10 | 3 pc(s). | **3529.000** |
| – | 900 | 2400 | 10 | 1 pc(s). | **3516.000** |



### PLS busbar connectors

For connecting the PLS special busbars; no drilling required.

**Material:**
– E-Cu

**Surface finish:**
– Nickel-plated

**Approvals:**
– UL

**For system PLS 800**

| Connection type | Packs of | **Model No.** |
|---|---|---|
| Single connection | 3 pc(s). | **3504.000** |
| Baying connection from enclosure to enclosure | 3 pc(s). | **3505.000** |

**For system PLS 1600**

| Connection type | Packs of | **Model No.** |
|---|---|---|
| Single connection | 3 pc(s). | **3514.000** |
| Baying connection from enclosure to enclosure | 3 pc(s). | **3515.000** |

## PLS expansion connectors

For thermal and mechanical compensation when connecting PLS special busbars from enclosure to enclosure.

**Material:**
– E-Cu

**Note:**
– At a temperature increase of 30 K, there is an expansion in the length of the busbars by approximately 0.5 mm/m. For this reason, it is advisable to use an expanding connection for thermal compensation in busbar systems with busbar sections > 3600 mm.

**Approvals:**
– UR

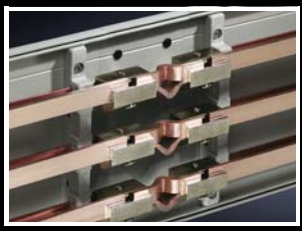
| For system | Packs of | **Model No.** |
|---|---|---|
| PLS 800 | 3 pc(s). | **9320.060** |
| PLS 1600 | 3 pc(s). | **9320.070** |

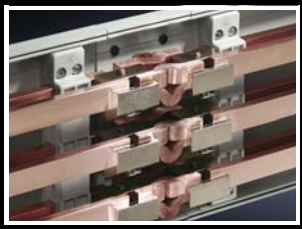
**Also required:**

– PLS busbar connectors, see page 344

**Assembly instruction:**

– Two busbar connectors are needed to fit one expansion connector.





The Copper Workstation CW 120-M is ideal for bending, punching and cutting busbars, from page 639

## Laminated copper bars

**Material:**
- Cu lamina High-purity electrolyte copper F20
- Insulation: Highly resistant vinyl compound, elongation 370%, temperature: -30 °C...+105 °C, fire protection corresponding to UL-94 V0, dielectric strength: 20 kV/mm

**Note:**
- Construction = Number of lamina x lamina width x lamina thickness
- May be cut individually to required length
- The conductor temperature of the laminated copper bar is derived by adding the ambient temperature and the temperature increase together. Example: 3565.005 carrying 180 A, i.e. the temperature increases by 30 K. At an ambient temperature of 35 °C, this produces a resultant conductor temperature of 35 °C + 30 K = 65 °C.

**Accessories:**
- Universal support, see page 346

| Construction mm | Length mm | Rated current (at 70 K) A | Rated current (at 50 K) A | Rated current (at 30 K) A | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 6 x 9 x 0.8 | 2000 | 285 | 240 | 180 | 1 pc(s). | **3565.005** |
| 6 x 15.5 x 0.8 | 2000 | 415 | 350 | 265 | 1 pc(s). | **3568.005** |
| 10 x 15.5 x 0.8 | 2000 | 575 | 480 | 365 | 1 pc(s). | **3569.005** |
| 5 x 20 x 1 | 2000 | 525 | 435 | 330 | 1 pc(s). | **3570.005** |
| 5 x 24 x 1 | 2000 | 605 | 510 | 385 | 1 pc(s). | **3571.005** |
| 10 x 24 x 1 | 2000 | 920 | 770 | 585 | 1 pc(s). | **3572.005** |
| 5 x 32 x 1 | 2000 | 770 | 645 | 485 | 1 pc(s). | **3573.005** |
| 10 x 32 x 1 | 2000 | 1155 | 965 | 730 | 1 pc(s). | **3574.005** |
| 5 x 40 x 1 | 2000 | 930 | 780 | 590 | 1 pc(s). | **3575.005** |
| 10 x 40 x 1 | 2000 | 1370 | 1145 | 865 | 1 pc(s). | **3576.005** |
| 5 x 50 x 1 | 2000 | 1125 | 940 | 710 | 1 pc(s). | **3577.005** |
| 10 x 50 x 1 | 2000 | 1635 | 1365 | 1030 | 1 pc(s). | **3578.005** |
| 10 x 63 x 1 | 2000 | 1950 | 1610 | 1230 | 1 pc(s). | **3579.005** |

## Universal support

**for laminated copper bars**
For the attachment of laminated copper bars from 5 x 20 x 1 to 10 x 63 x 1 mm.

**Material:**
- Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly parts

| Packs of | **Model No.** |
|---|---|
| 3 pc(s). | **3079.000** |

**Accessories:**
- Punched rail 23 x 23 mm, see page 994

## Universal support

**for laminated copper bars**
For the attachment of multi-stacked laminated copper bars from 5 x 40 x 1 to 10 x 100 x 1 mm.

**Material:**
- Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly parts

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **3079.010** |

**Note:**
- 1 universal support corresponding to the supply scope shown in the photograph

**Accessories:**
- C rails 30/15, see page 996

## Base tray

**for RiLine busbar systems**
For rear contact hazard protection of the busbar assembly.

**Material:**
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– May be cut individually to required length

**Approvals:**
– UL

**For system Flat copper busbars, 3-pole**

| Length mm | Packs of | Model No. |
|---|---|---|
| 500 | 2 pc(s). | **9340.100** |
| 700 | 2 pc(s). | **9340.110** |
| 900 | 2 pc(s). | **9340.120** |
| 1100 | 2 pc(s). | **9340.130** |
| 2400 | 1 pc(s). | **9340.170** |

**For system Flat copper busbars, 4-pole**

| Length mm | Packs of | Model No. |
|---|---|---|
| 1100 | 2 pc(s). | **9340.134** |

**For system PLS 800, 3-pole**

| Length mm | Packs of | Model No. |
|---|---|---|
| 500 | 2 pc(s). | **9341.100** |
| 700 | 2 pc(s). | **9341.110** |
| 900 | 2 pc(s). | **9341.120** |
| 1100 | 2 pc(s). | **9341.130** |
| 2400 | 1 pc(s). | **9341.170** |

**For system PLS 1600, 3-pole**

| Length mm | Packs of | Model No. |
|---|---|---|
| 500 | 2 pc(s). | **9342.100** |
| 700 | 2 pc(s). | **9342.110** |
| 900 | 2 pc(s). | **9342.120** |
| 1100 | 2 pc(s). | **9342.130** |
| 2400 | 1 pc(s). | **9342.170** |

**For system PLS 1600, 4-pole**

| Length mm | Packs of | Model No. |
|---|---|---|
| 1100 | 2 pc(s). | **9342.134** |

## Base tray infill

**for RiLine busbar systems**
For rear contact hazard protection when connecting the busbars from enclosure to enclosure.

**Material:**
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Approvals:**
– UL

| For system | Length mm | Packs of | Model No. |
|---|---|---|---|
| Flat copper busbars, 3-pole | 100 | 2 pc(s). | **9340.140** |
| PLS 800, 3-pole | 100 | 2 pc(s). | **9341.140** |
| PLS 1600, 3-pole | 100 | 2 pc(s). | **9342.140** |

## Contact hazard protection

### Cover section

**for RiLine busbar systems**
For clip-on mounting onto the base tray.

**Material:**
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– If the cover section is loaded from the front, the support panel is needed for stability
– May be cut individually to required length

**Approvals:**
– UL

| For system | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| Flat copper busbars, 3-pole<br>PLS 800, 3-pole<br>PLS 1600, 3-pole | 700 | 2 pc(s). | **9340.200** |
| Flat copper busbars, 3-pole<br>PLS 800, 3-pole<br>PLS 1600, 3-pole | 1100 | 2 pc(s). | **9340.210** |
| Flat copper busbars, 4-pole<br>PLS 1600, 4-pole | 1100 | 2 pc(s). | **9340.214** |

**Also required:**
– Base tray, see page 347

**Accessories:**
– Support panel, see page 348

### Support panel

**for cover section**
To prevent side access to the cover section. The support panel also provides additional stability. Recommended mounting distance ≤ 500 mm.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Approvals:**
– UL

| For system | Packs of | **Model No.** |
|---|---|---|
| 3-pole | 5 pc(s). | **9340.220** |
| 4-pole | 5 pc(s). | **9340.224** |

### Cross member

**for RiLine busbar connections**
To comply with the clearances required for "feeder circuits" under UL 508. For flat bar systems with 60 mm bar centre distance and PLS 800/1600.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– 2 cross members are required for one busbar connection

**Approvals:**
– UL

| For system | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 3-pole | 160 | 2 pc(s). | **9340.230** |

**Also required:**
– Support panel, see page 348

## Conductor connection clamps

**Push-in**

**Applications:**
- For use as busbar pick-off of L, N or PE conductors in switchgear and controlgear, and as a conductor connection clamp in meter boxes.
- For mounting on E-Cu or CUPONAL busbars

**Benefits:**
- Maintenance-free
- Time-saving top-mounting
- Terminal box with integral label panels
- Universal conductor connection

**Functions:**
- Fully insulated terminal for tool-free conductor connection
- Conductor is released by the integral release pin

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7042

**Basis of test:**
- IEC 60 999-1
- IEC 60 947-7-1/-2

| For bar thickness mm | Connection of round conductors, single-wire $mm^2$ | Connection of round conductors, multi-wire $mm^2$ | Connection of round conductors, fine wire without wire end ferrule $mm^2$ | Connection of round conductors, fine wire with wire end ferrule $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 5 | 0.5 - 6 | 0.5 - 4 | 0.5 - 4 | 0.5 - 4 | 10 pc(s). | **3450.505** |
| 5 | 1.5 - 16 | 1.5 - 16 | 1.5 - 16 | 1.5 - 16 | 10 pc(s). | **3451.505** |
| 10 | 0.5 - 6 | 0.5 - 4 | 0.5 - 4 | 0.5 - 4 | 10 pc(s). | **3455.505** |
| 10 | 1.5 - 16 | 1.5 - 16 | 1.5 - 16 | 1.5 - 16 | 10 pc(s). | **3456.505** |

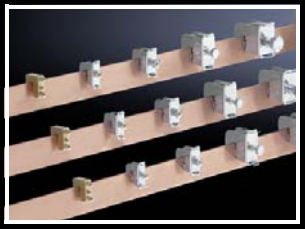
## Conductor connection clamps

For connecting round conductors and laminated copper bars.

**Note:**
- Wire end ferrules should be used with fine wire conductors

**Approvals:**
- UR

**Accessories:**
- Laminated copper bar, see page 346



| For bar thickness mm | Connection of round conductors $mm^2$ | Clamping area for laminated copper bars (W x H) mm | Material | Surface finish | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 5 | 1 - 4 | – | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3450.500** |
| 5 | 2.5 - 16 | 8 x 8 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3451.500** |
| 5 | 16 - 50 | 10.5 x 11 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3452.500** |
| 5 | 35 - 70 | 16.5 x 15 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3453.500** |
| 5 | 70 - 185 | 22.5 x 20 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3454.500** |
| 10 | 1 - 4 | – | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3455.500** |
| 10 | 2.5 - 16 | 8 x 8 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3456.500** |
| 10 | 16 - 50 | 10.5 x 11 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3457.500** |
| 10 | 35 - 70 | 16.5 x 15 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3458.500** |
| 10 | 70 - 185 | 22.5 x 20 | Sheet steel | Zinc-plated, passivated | 15 pc(s). | **3459.500** |
| 3 - 5 | 1 - 4 | – | Brass | – | 15 pc(s). | **3550.000** |
| 6 - 10 | 1 - 4 | – | Brass | – | 15 pc(s). | **3555.000** |

## Connection systems

### Plate clamps

For connecting laminated copper bars; no drilling required.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated, passivated

| For busbar mm | Clamping area for laminated copper bars (W x H) mm | Packs of | **Model No.** |
|---|---|---|---|
| 12 x 5 - 30 x 10 | 34 x 10 | 3 pc(s). | **3554.000** |
| 40 x 10 | 34 x 10 | 3 pc(s). | **3559.000** |
| 50 x 10 | 34 x 10 | 3 pc(s). | **3560.000** |
| 50 x 10 | 54 x 10 | 3 pc(s). | **3562.000** |
| 60 x 10 | 34 x 10 | 3 pc(s). | **3561.000** |
| 60 x 10 | 54 x 10 | 3 pc(s). | **3563.000** |
| 80 x 10 | 65 x 10 | 3 pc(s). | **3460.500** |

**Accessories:**

– Laminated copper bar, see page 346

### System cover

For conductor connection clamps and plate clamps.

**Material:**
– ABS
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Note:**
– For 3-pole systems with 60/100 mm bar centre distance
– Only suitable for use with systems without a base tray
– For systems with a base tray, the system covers must be mechanically shortened

**Approvals:**
– UR

| Width mm | Depth mm | Height when mounting on 60 mm busbar systems mm | Height when mounting on 100 mm busbar systems mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 50 | 80 | 230 | 325 | 4 pc(s). | **3086.000** |
| 100 | 80 | 230 | 325 | 4 pc(s). | **3087.000** |
| 100 | 110 | 230 | 325 | 4 pc(s). | **3090.000** |
| 200 | 80 | 230 | 325 | 4 pc(s). | **3088.000** |
| 200 | 110 | 230 | 325 | 4 pc(s). | **3091.000** |

## Connection block

Suitable for busbars 12 x 5 to 30 x 10 mm and PLS 800/1600.

**Material:**
- Punched section: Polyamide
- Cover: ABS
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Supply includes:**
- 3 terminals including cover

**Note:**
- When using the terminal on 2-pole busbar systems (SV 9340.040), the terminal must be rotated through 180° for connection to the PE busbar

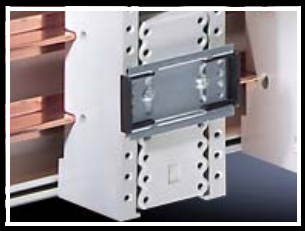
**Approvals:**
- UL

**Accessories:**
- Laminated copper bar, see page 346

| | | |
|---|---|---|
| Rated current max. A | 800 | 1600 |
| Rated operating voltage V, ~ | 690, 1~ | 690, 1~ |
| Rated operating voltage (L1 + L2) V | 1000 (DC) | 1000 (DC) |
| Rated operating voltage (L1 + L3) V | 1500 (DC) | 1500 (DC) |
| Cable outlet | Top/bottom | Top/bottom |
| Connection of round conductors, fine wire with wire end ferrule $mm^2$ | 95 - 185 | – |
| Connection of round conductors, multi-wire $mm^2$ | 95 - 300 | – |
| Clamping area for laminated copper bars with 5 mm bar thickness (W x H) mm | 33 x 26 | 65 x 27 |
| Clamping area for laminated copper bars with 10 mm bar thickness (W x H) mm | 33 x 22 | 65 x 22 |
| Width mm | 50 | 85 |
| Height mm | 88 | 88 |
| Packs of | 3 pc(s). | 3 pc(s). |
| **Model No.** | **9342.311** | **9342.321** |

# RiLine accessories

## for OM adaptors/supports/component adaptors



### Support rail 35 x 7.5 mm

**for Mini-PLS component adaptors**

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws and side anti-slip guard

| Width mm | Packs of | Model No. |
|---|---|---|
| 45 | 10 pc(s). | **9320.150** |
| 54 | 10 pc(s). | **3548.000** |

### Support rail 35 x 7.5 mm

**for OM adaptors/supports**

**Applications:**
– For assembly on 55 mm wide OM adaptors/ supports with 10 mm wide insert strips mounted on the right and left
– Arrangement of the mounting hole for central configuration on 55 mm wide adaptor section or support frame

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws and side anti-slip guard

| Width mm | Packs of | Model No. |
|---|---|---|
| 72 | 5 pc(s). | **9342.980** |

### Support rail 35 x 10 mm

**for OM adaptors/supports**
For attaching to the adaptor section and support frame.

**Material:**
– Polyamide

**Colour:**
– RAL 9005

**Supply includes:**
– Assembly screws

**Note:**
– UL approval in conjunction with OM adaptors/ supports
– Support rail TS xxD-V only suitable for non-pitch pattern-dependent mounting on support frame

| Width mm | With anti-slip guard for motor circuit-breaker | Design | Packs of | Model No. |
|---|---|---|---|---|
| 45 | ■ | TS 45C | 5 pc(s). | **9342.850** |
| 45 | – | TS 45D | 5 pc(s). | **9342.860** |
| 45 | – | TS 45D-V | 5 pc(s). | **9342.870** |
| 55 | ■ | TS 55C | 5 pc(s). | **9342.920** |
| 55 | – | TS 55D | 5 pc(s). | **9342.930** |
| 55 | – | TS 55D-V | 5 pc(s). | **9342.940** |

### Support rail 35 x 15 mm

**for OM adaptors/supports**
For attaching to the adaptor section.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws and side anti-slip guard

| Width mm | Packs of | Model No. |
|---|---|---|
| 45 | 5 pc(s). | **9342.880** |
| 55 | 5 pc(s). | **9342.950** |

## for OM adaptors/supports/component adaptors



### Support rail 35 x 15 mm

**for Mini-PLS/circuit-breaker component adaptors**

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws and side anti-slip guard

**Approvals:**
– UR

| Width mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|
| 72 | 9342.400/ 9342.410/ 9629.000 | 5 pc(s). | **9320.120** |

### Insert strip

**for Mini-PLS component adaptors**
To extend the construction width.

**Material:**
– ABS

**Colour:**
– RAL 7035

**Approvals:**
– UR

| Width mm | Packs of | **Model No.** |
|---|---|---|
| 9 | 2 pc(s). | **9623.000** |

### Insert strip

**for OM adaptors/supports**
To extend the construction width in a 10 mm pitch pattern. May be bayed as often as required on both sides. With integral cable duct.

**Material:**
– Polyamide

**Colour:**
– RAL 7035

**Supply includes:**
– 6 connection pins

**Approvals:**
– UL

| Width mm | Packs of | **Model No.** |
|---|---|---|
| 10 | 2 pc(s). | **9340.290** |

### Insert strip

**for circuit-breaker component adaptors**
To extend the construction width from 140 mm to 190 mm.

**Material:**
– ABS

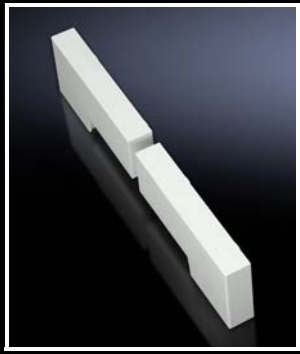
**Colour:**
– RAL 7035

**Supply includes:**
– Connection parts for power circuit-breaker, brand Siemens VL630 (3-pole)

**Note:**
– 4 pieces are needed to widen a component adaptor

**Approvals:**
– UL

| Width mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|
| 25 | 9345.700/ 9345.710/ 9345.720/ 9345.730 | 4 pc(s). | **9342.720** |



# RiLine accessories

## for OM adaptors/supports/component adaptors

### Connection pin

**for OM adaptors/supports**
For any required mechanical connection of OM adaptors/supports and insert strip 9340.290.

**Material:**
– Polyamide

**Colour:**
– RAL 5010

**Approvals:**
– UL

| Packs of | Model No. |
|---|---|
| 20 pc(s). | **9340.280** |

### PinBlock

**for support frames**
For reliable attachment and positioning of the contactor on motor starter combinations. Simple clip-on mounting onto the support frame. Individual vertical positioning is achieved by relocating the PinBlock.

**Material:**
– Polyamide

**Colour:**
– RAL 9005

**Note:**
– UL approval in conjunction with OM adaptors/supports

| For support frame width mm | Packs of | Model No. |
|---|---|---|
| 45 | 5 pc(s). | **9342.800** |
| 55 | 5 pc(s). | **9342.810** |

**Accessories:**
– PinBlock Plus, see page 354

### PinBlock Plus

**for starters with increased contactor attachment**
Mounted by simply clipping onto the PinBlock 9342.800/.810.

**Material:**
– Polyamide

**Colour:**
– RAL 9005

**Note:**
– UL approval in conjunction with OM adaptors/supports

| Packs of | Model No. |
|---|---|
| 5 pc(s). | **9342.820** |

### Cable set

**for OM adaptors with spring terminal block**
Pre-assembled connection cables for individual connection of switchgear, top-mounted on OM adaptors with tension spring clamps.

**Material:**
– PVC insulation
– Temperature resistant to 105 °C
– Wire ends with ultrasonic wire-end compression at both ends

**Note:**
– AWG = American Wire Gauge

| Cross-section | Length mm | Packs of | Model No. |
|---|---|---|---|
| AWG 14 = 2.08 $mm^2$ ≙ 2,5 $mm^2$ | 140 | 15 pc(s). | **9340.850** |
| AWG 12 = 3.31 $mm^2$ ≙ 4 $mm^2$ | 140 | 15 pc(s). | **9340.860** |
| AWG 10 = 5.26 $mm^2$ ≙ 6 $mm^2$ | 140 | 15 pc(s). | **9340.870** |
| AWG 8 = 8.37 $mm^2$ ≙ 10 $mm^2$ | 140 | 6 pc(s). | **9340.880** |
| AWG 6 = 13.3 $mm^2$ ≙ 16 $mm^2$ | 140 | 6 pc(s). | **9340.890** |

## for OM adaptors/supports/component adaptors



### Twin cord

**for OM adaptors with spring terminal block 2.5 – 16 mm²**

Pre-assembled connection cables for individual connection of up to two switchgear units per adaptor.

**Material:**
- PVC insulation
- Temperature resistant to 105 °C
- Wire ends with ultrasonic wire-end compression at both ends

**Note:**
- AWG = American Wire Gauge

| Cross-section | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| AWG 10 = 5.26 mm² ≙ 6 mm² | 140<br>250 | 6 pc(s). | **9340.820** |
| AWG 8 = 8.37 mm² ≙ 10 mm² | 140<br>250 | 6 pc(s). | **9340.830** |

### Sliding block

**for circuit-breaker component adaptors**

For additional locking of circuit-breakers with more than two attachment points.

**Colour:**
- RAL 7035

**Note:**
- UL approval in conjunction with circuit-breaker component adaptor

| To fit Model No. | With threaded insert | Packs of | **Model No.** |
|---|---|---|---|
| 9342.500/9342.510/<br>9342.504/9342.514/<br>9342.540/9342.550 | M3<br>M4 | 6 pc(s). | **9342.560** |
| 9345.600/9345.610/<br>9345.604/9345.614 | M4<br>M5 | 6 pc(s). | **9342.640** |

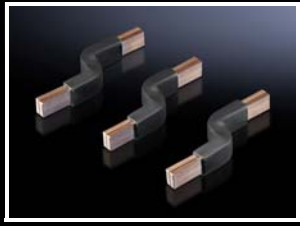
### Connection bracket

**for circuit-breaker component adaptors**

Pre-assembled, laminated flat copper for connecting standard, commercially available moulded case circuit-breakers (MCCB).

**Material:**
- Electrolytic copper F20

**Note:**
- Universal application for switchgear with a dimensional difference between the mounting level and the upper edge of the contact level of 20 ± 5 mm.



| For switchgear make (model) | To fit Model No. | Number of lamina | Membrane width mm | Membrane thickness mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| ABB (T1, T1 UL, T2, T2 UL)<br>Eaton (NZM1, NZM1 UL, BZM B1)<br>Schneider Electric (NSC100, NSE75, NSE100) | 9342.500/<br>9342.510/<br>9342.540/<br>9342.550 | 6 | 9 | 0.8 | 3 pc(s). | **9342.570** |

# RiLine accessories

## for bus-mounting fuse bases

### Contact hazard protection cover plate

**for bus-mounting fuse bases**
The cover ensures contact hazard protection from the front, top and below. All-round contact hazard protection (up to IP 2X) in conjunction with the side cover 3093.010/.020.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| To fit Model No. | Fuse inserts | Packs of | **Model No.** |
|---|---|---|---|
| 3418.010 | D 02-E 18 | 10 pc(s). | **3418.020** |
| 3427.010 | D II-E 27 | 10 pc(s). | **3427.020** |
| 3433.010 | D III-E 33 | 10 pc(s). | **3433.020** |

### Cover, side

**for bus-mounting fuse bases**
For clip-on mounting onto the cover plate, contact hazard protection.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| To fit Model No. | Fuse inserts | Packs of | **Model No.** |
|---|---|---|---|
| 3418.010 | D 02-E 18 | 10 pc(s). | **3093.010** |
| 3427.010/<br>3433.010 | D II-E 27<br>D III-E 33 | 10 pc(s). | **3093.020** |

### Connection space extender

**for bus-mounting fuse bases**
Contact hazard protection cover plate including cable duct for side extension of the connection space by 14 mm.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| To fit Model No. | Fuse inserts | Packs of | **Model No.** |
|---|---|---|---|
| 3418.010 | D 02-E 18 | 10 pc(s). | **3418.030** |
| 3427.010 | D II-E 27 | 10 pc(s). | **3427.030** |
| 3433.010 | D III-E 33 | 10 pc(s). | **3433.030** |

### Wiring duct

**for D-Switch bus-mounting fuse base**
For safe, shock-hazard-protected routing of connection cables. Also suitable for use as a spacer support.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| Width mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|
| 13.5 | 9340.950 | 10 pc(s). | **9340.905** |

## Box terminal

**for NH fuse-switch disconnectors**
For direct connection of round and sector-shaped conductors and laminated copper bars. Suitable for NH fuse-switch disconnectors with screw terminal.

**Material:**
– Cast brass

**Surface finish:**
– Nickel-plated

| For size | Connection of round conductors $mm^2$ | Connection of sector-shaped conductors $mm^2$ | Clamping area for laminated copper bars (W x H) mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 1 | 35 - 150 | 50 - 150 | 20 x 14 | 3 pc(s). | **9344.610** |
| 2/3 | 95 - 300 | 120 - 300 | 32 x 20 | 3 pc(s). | **9344.620** |

## Arcing chamber

**for NH fuse-switch disconnectors**
To increase switching capacity (utilisation category).

| For size | Packs of | **Model No.** |
|---|---|---|
| 1 - 3 | 3 pc(s). | **9344.680** |

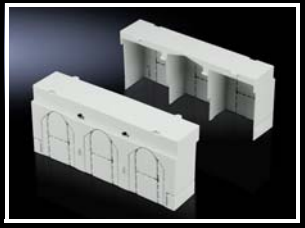
## Connection space cover

**for NH fuse-switch disconnectors**
For extending the contact hazard protection cover, e.g. when using ring terminals with a long collar. Bayable as required at the top and bottom.

**Material:**
– Polyamide

**Colour:**
– RAL 7035

| For size | Packs of | **Model No.** |
|---|---|---|
| 00 | 2 pc(s). | **9344.520** |
| 1 | 2 pc(s). | **9344.530** |
| 2 | 2 pc(s). | **9344.540** |
| 3 | 2 pc(s). | **9344.550** |



## Connection space cover

**for NH slimline fuse-switch disconnectors**
Extended version for the use of ring terminals with a long collar.

**Material:**
– Polycarbonate

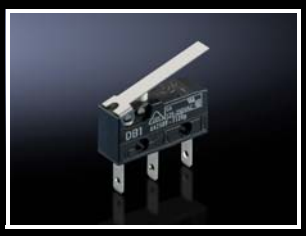
| For size | Packs of | **Model No.** |
|---|---|---|
| 00 | 1 pc(s). | **9346.460** |

## for NH fuse elements

### Micro-switch

**for NH fuse-switch disconnectors/NH slimline fuse-switch disconnectors (185 mm)**
To indicate the switch position of the NH unit (cover).

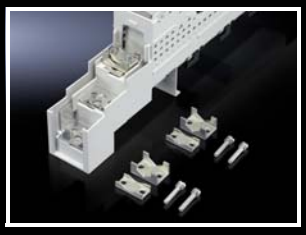
| For size | Rated operating current max. A | Rated operating voltage V | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|---|
| NH fuse-switch disconnectors, size 000/00 NH slimline fuse-switch disconnector, size 00 - 3 (185 mm) | 5 | 250 | – | 5 pc(s). | **3071.000** |
| NH fuse-switch disconnectors, size 1 - 3 | 5 | 250 | Including plastic lug for attaching the micro-switch to the disconnector chassis | 2 pc(s). | **9344.510** |



### Micro-switch

**for NH slimline fuse-switch disconnectors**
To indicate the switch position of the NH unit (cover).

| For size | Rated operating current max. A | Rated operating voltage V | Packs of | **Model No.** |
|---|---|---|---|---|
| 00 | 5 | 250 | 5 pc(s). | **9346.400** |



### Clamp-type terminal connection

**for NH slimline fuse-switch disconnectors**
For the connection of round conductors. Suitable for NH slimline fuse-switch disconnectors with screw terminal.

**Material:**
– Cast brass

**Surface finish:**
– Nickel-plated

| For size | Connection of round conductors $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|
| 00 | 1.5 - 95 | 3 pc(s). | **3592.010** |

# Push-in conductor connection clamps

Simple, tool-free cable connection, see page 349

# Rittal – The System.

**Faster – better – everywhere.**

# VX25 Ri4Power

## Busbar systems

Ri4Power busbar system (185 mm) ....368
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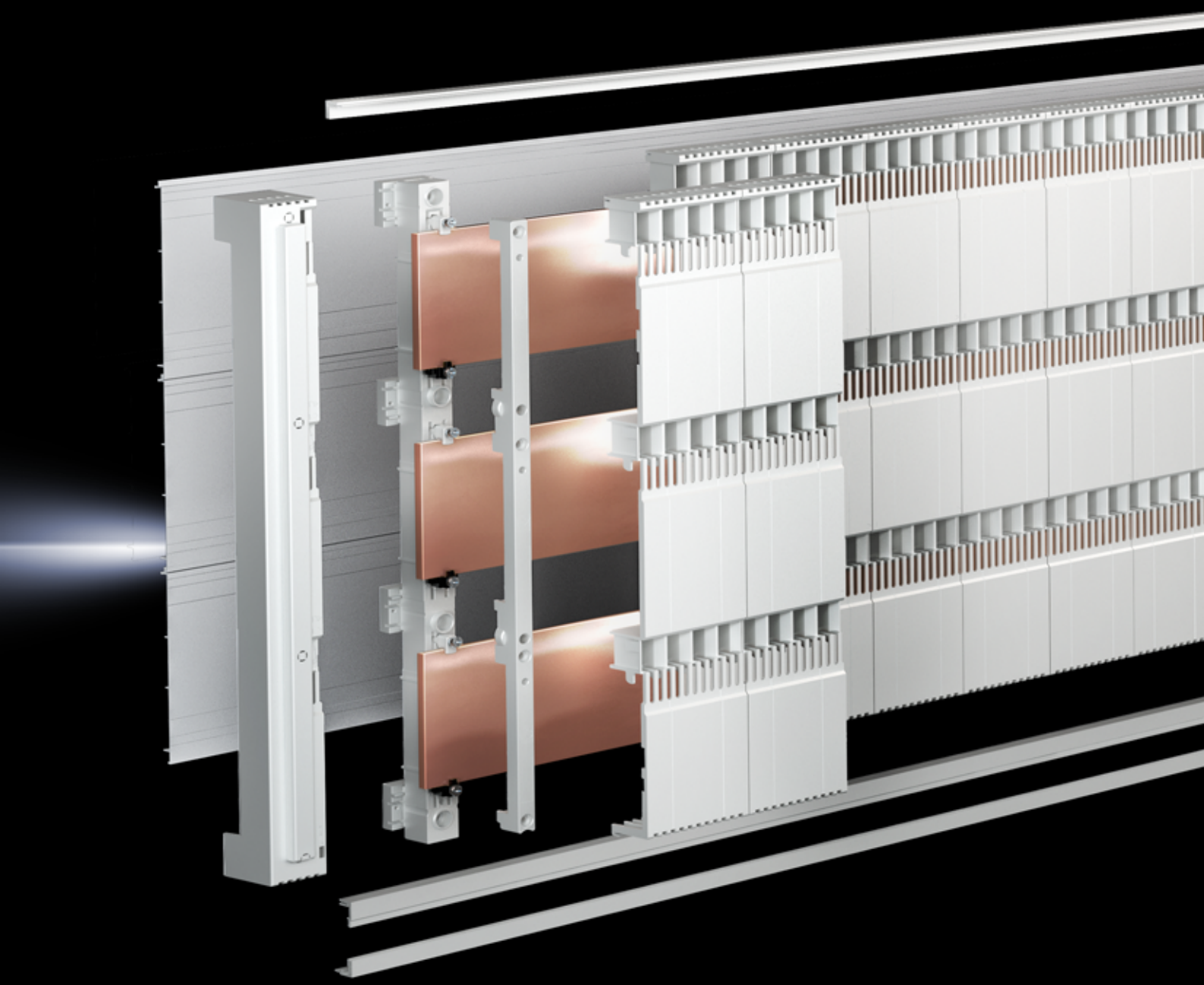
# VX25 Ri4Power system 185 mm – System assembly without drilling

**The busbar system is quickly and conveniently installed in the enclosure in just three steps:**

- Position the punched section with mounting flange and system attachment in the enclosure
- Secure the busbar assembly
- Clip the cover system into position



## Busbar support

- For busbar dimensions ranging from 40 x 10 to 120 x 10 mm
- The support may be top-mounted with components using the pitch pattern of the cover system
- Rated short-time withstand current $I_{cw}$ up to 50 kA
- Rated busbar currents of up to 2100 A
- Mounting via system attachment in the VX25 baying enclosure system, no drilling required

## Cover section

- Contact hazard protection up to IP 2XB (safe from finger-contact)
- Integral busbar shielding to prevent accidental arcing
- Secure positioning of the top-mounting components, thanks to centring device
- New contact system allows components to be top-mounted on the cover section
- Components are easily retrofitted without removing the cover section

## Base tray

- For rear contact hazard protection of the busbar assembly
- For optimum all-round contact hazard protection in conjunction with the cover section
- Prepared ready to install, fits VX25 baying enclosure system widths from 600 mm to 1200 mm

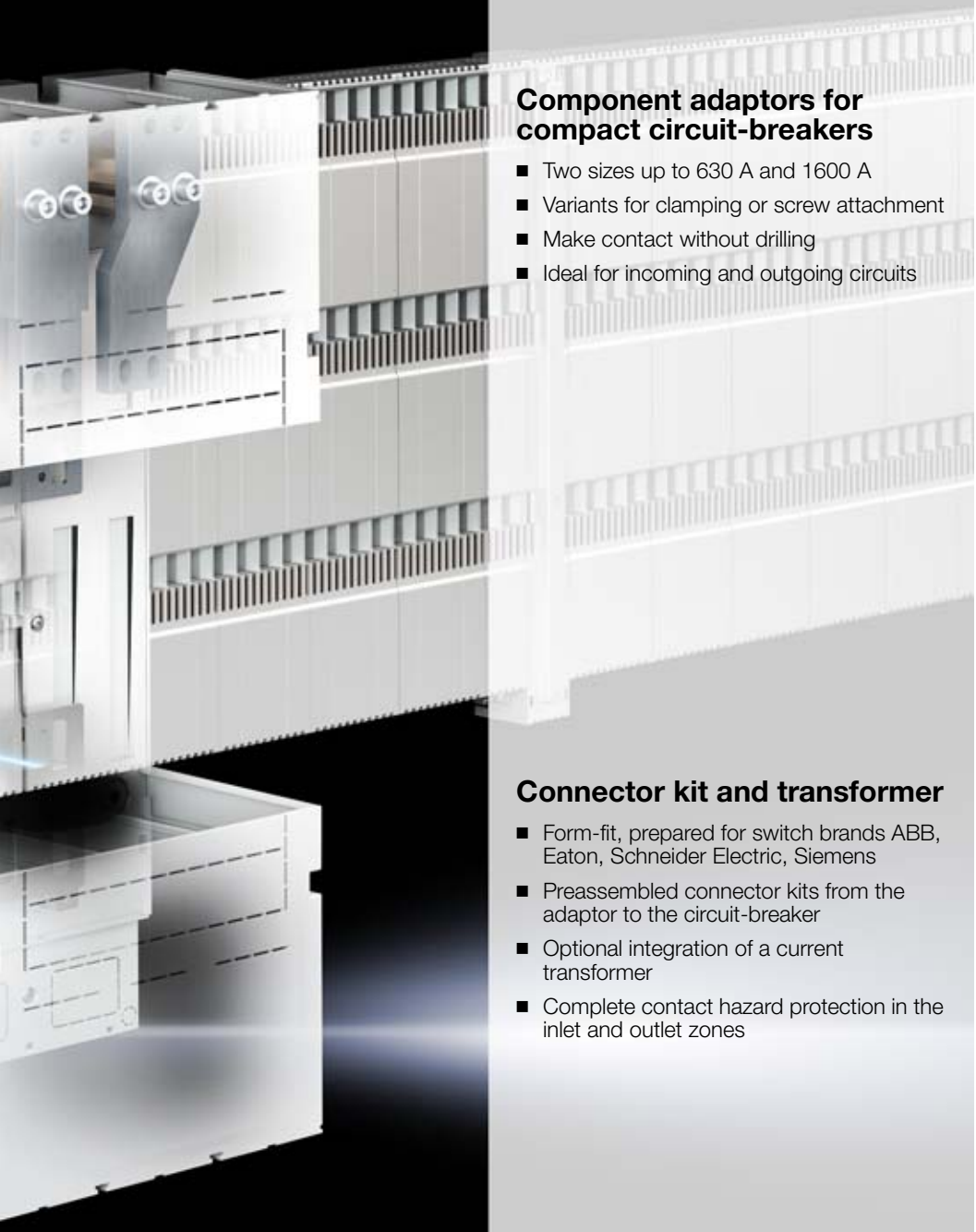
# The perfect-fit adaptor system

**Connection and component adaptors for tested, safe connection at high currents**

- For air circuit-breakers up to 630 A and 1600 A
- Direction connection of various conductor types
- No-drill connection system to the busbar

## Busbar connection adaptors and connection blocks

- Compact, fast connection of cables and lines
- Suitable for various types of conductor
- With standardised contact hazard protection cover plates



## Component adaptors for compact circuit-breakers

- Two sizes up to 630 A and 1600 A
- Variants for clamping or screw attachment
- Make contact without drilling
- Ideal for incoming and outgoing circuits

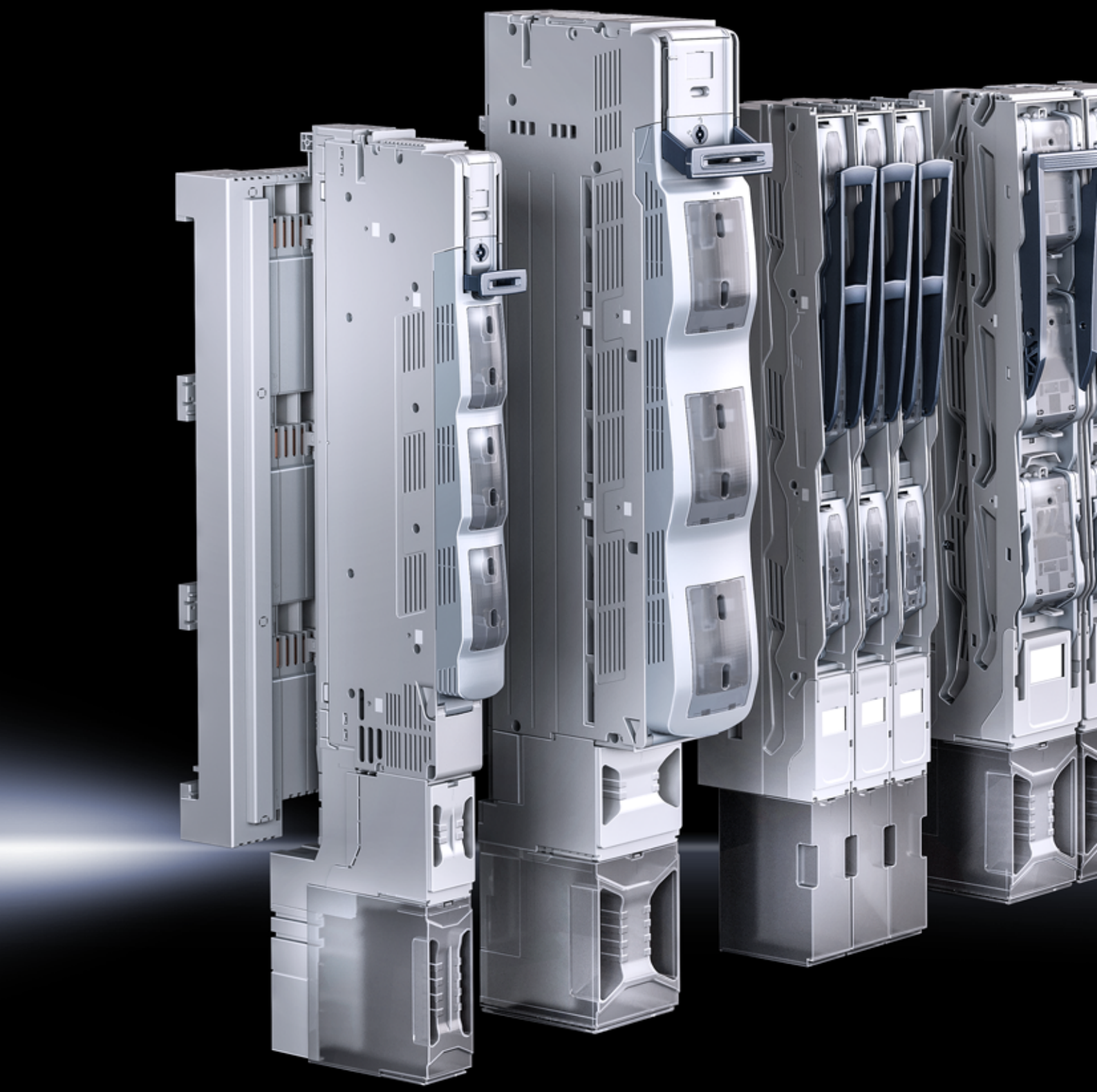
## Connector kit and transformer

- Form-fit, prepared for switch brands ABB, Eaton, Schneider Electric, Siemens
- Preassembled connector kits from the adaptor to the circuit-breaker
- Optional integration of a current transformer
- Complete contact hazard protection in the inlet and outlet zones

# Fuse elements to suit all situations

**The new system of NH slimline fuse-switch disconnectors is based on separate air routing for heat dissipation and targeted removal of switching gases, while the NH slimline switch-disconnectors ensure user-independent disconnection and switching for enhanced safety.**

- Simple device assembly
- Safe operation
- Optimum contact hazard protection

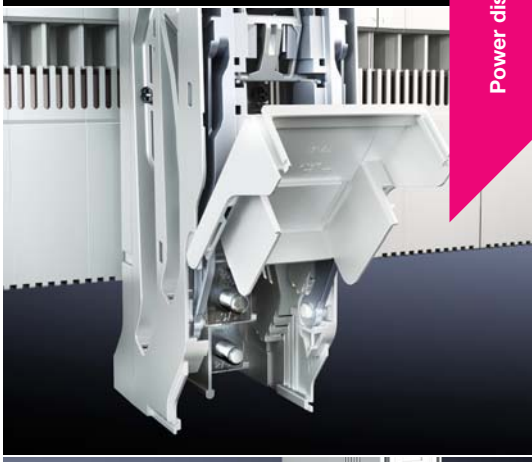


## NH slimline fuse-switch disconnectors, sizes 00 to 3

- Single-pole and 3-pole switchable variants
- Symmetrical layout for cable outlet at the top and bottom
- Optional integration of current transformers
- Versions with and without fuse monitoring
- Self-closing voltage testing holes
- Prepared for multiple lead seals
- Hinged terminal cover
- Cascadable connection space extension
- Simple conversion of the bolt or screw connections
- Contact hazard-proof fuse contacts with the top section dismantled
- Optional micro-switch monitoring of the cover switch position

## NH slimline switch-disconnectors, size 00 to 3

- Disconnect and switch with one device
- Integral, user-independent quick-break contact ensures safe operation
- User-friendly cable connection from above or below
- Versions with and without fuse monitoring
- Integral switch position display
- No-drill contacting with clamping screw attachment
- Double-break allows de-energised fuse replacement



# Busbar support (185 mm)

**Connection adaptors** Page 370 **Connection block** Page 371 **Component adaptors** Page 372 **NH slimline switch-disconnectors** Page 374

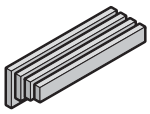
**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

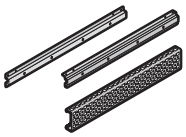
**Colour:**
- RAL 7035

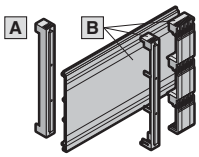
**Supply includes:**
- Including assembly components for contact hazard protection cover (base tray)

| | | | |
|---|---|---|---|
| Bar centre distance mm | Packs of | 185 | Page |
| Rated operating voltage V, ~ | | 1000, 3~<br>1500 (DC) | |
| Number of poles | | 3-pole | |
| For busbar mm | | 40 x 10<br>60 x 10<br>80 x 10<br>100 x 10<br>120 x 10 | |
| **Model No.** | 2 pc(s). | **9677.500** | |
| **Accessories** | | | |
| Busbars E-Cu | | see page | 369 |
| Contact hazard protection cover plate | | see page | 381 |
| End cover | 2 pc(s). | 9677.600 | 380 |

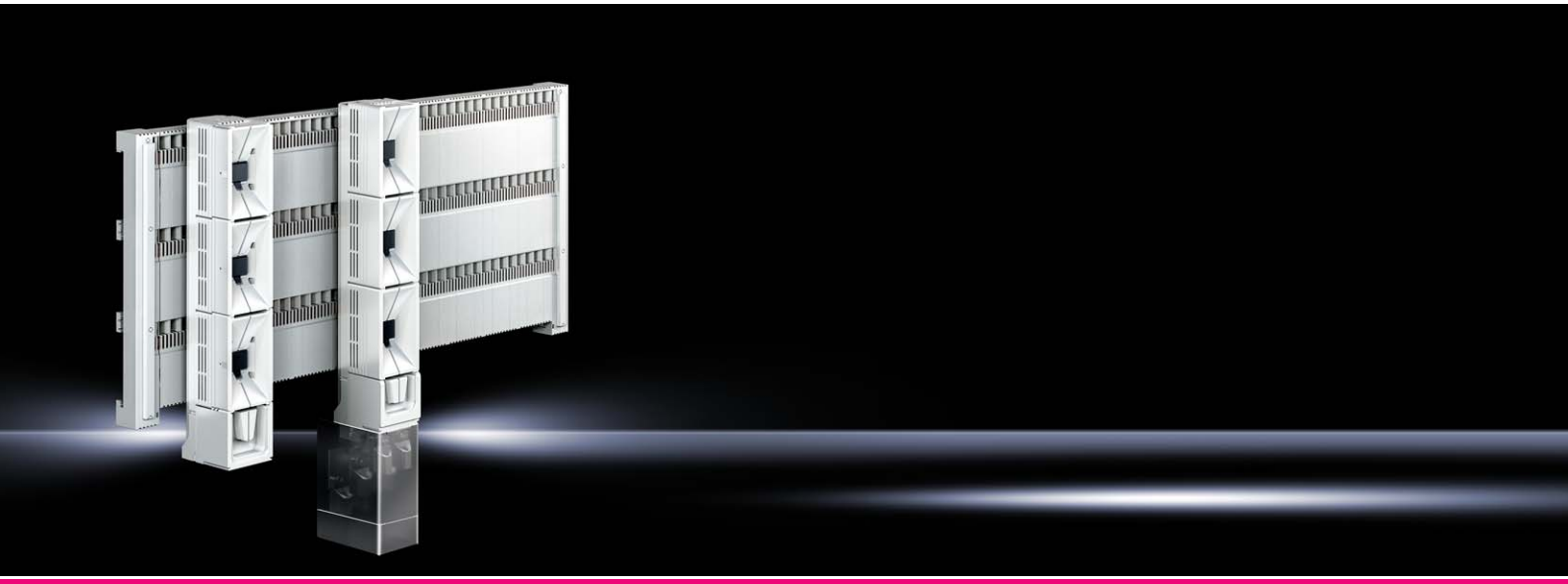
| Busbar supports | | | |
|---|---|---|---|
| **Note:**<br>Required quantity when using in the enclosure width<br>– 600/800 mm: 2 pc(s).<br>– 1000/1200 mm: 3 pc(s). | | | |
| Number of poles | Packs of | 3-pole | Page |
| Bar centre distance mm | | 185 | |
| **Model No.** | 2 pc(s). | 9677.500 | 368 |

| Busbars E-Cu, length: 2400 mm/bar | | | | |
|---|---|---|---|---|
|  | Dimensions<br>mm | Packs of | Model No. | Page |
| | 40 x 10 | 3 pc(s). | 3587.000 | 342 |
| | 60 x 10 | 2 pc(s). | 3589.005 | |
| | 80 x 10 | 1 pc(s). | 3590.005 | |
| | 100 x 10 | 1 pc(s). | 3590.015 | |
| | 120 x 10 | 1 pc(s). | 3590.020 | |
| **Accessories** | | | | |
| Busbar connector | | | see page | 380 |

| System attachment | | | | |
|---|---|---|---|---|
|  | For enclosure width<br>mm | Packs of | Model No. | Page |
| | 600 | 1 pc(s). | 9677.511 | 380 |
| | 800 | 1 pc(s). | 9677.521 | |
| | 1000 | 1 pc(s). | 9677.531 | |
| | 1200 | 1 pc(s). | 9677.541 | |
| **Accessories** | | | | |
| **Punched section with mounting flange, 23 x 64 mm** | | | | |
| | For enclosure depth<br>mm | Packs of | Model No. | Page |
| | 500 | 4 pc(s). | 8617.120 | 991 |
| | 600 | 4 pc(s). | 8617.130 | |
| | 800 | 4 pc(s). | 8617.140 | |

| Contact hazard protection | | | | | |
|---|---|---|---|---|---|
|  | Components | For enclosure width<br>mm | Packs of | Model No. | Page |
| | A End covers l/r | – | 2 pc(s). | 9677.600 | 380 |
| | B Cover plate, contact hazard protection (cover section, base tray, trim section) | 600 | 1 pc(s). | 9677.550 | 381 |
| | | 800 | 1 pc(s). | 9677.560 | |
| | | 1000 | 1 pc(s). | 9677.570 | |
| | | 1200 | 1 pc(s). | 9677.580 | |

# Connection adaptors



**Busbar system** Page 368 **Connection block** Page 371 **Component adaptors** Page 372 **NH slimline switch-disconnectors** Page 374

**Material:**
- Chassis: Fibreglass-reinforced polyester
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- When using components on busbars with contact hazard protection cover, the contact terminal must be used

## Rated current max. 800 – 1400 A

| Rated current max. A | Packs of | 800 | 1400 | Page |
|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | |
| Type of connection | | Screw M12 | Screw M12 | |
| Connection of round conductors $mm^2$ | | 6 - 240 | 6 - 300 | |
| Width mm | | 100 | 100 | |
| Height mm | | 665 | 960 | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.900** | **9677.905** | |
| **Product-specific scope of supply** | | | | |
| Contact hazard protection cover plate | | – | ■ | |
| **Accessories** | | | | |
| Contact terminal | 3 pc(s). | 9677.460 | 9677.460 | 383 |
| Busbar terminal | 3 pc(s). | 9677.480 | 9677.480 | 384 |

**Busbar system** Page 368 **Connection adaptors** Page 370 **Component adaptors** Page 372 **NH slimline switch-disconnectors** Page 374

For connecting cables and laminated copper bars.

**Material:**
- Sheet steel, zinc-plated
- E-Cu, tin-plated

## Rated current max. 1000 – 1600 A

| Rated current max. A | Packs of | 1000 | 1600 | 1600 | Page |
|---|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690, 1~ | 690, 1~ | 690, 1~ | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Box terminal | – | Ring terminal M12 | |
| Number of connection cables max. | | 2 | – | 4 | |
| Connection of round conductors $mm^2$ | | 185 - 300 | – | 240 | |
| Clamping area for laminated copper bars (W x H) mm | | – | 80 x 20 | – | |
| Width mm | | 98 | 98 | 98 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.915** | **9677.910** | **9677.920** | |
| **Also required** | | | | | |
| Contact hazard protection cover plate | 1 pc(s). | 9677.925 | 9677.925 | 9677.925 | 382 |

# Component adaptors

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **NH slimline switch-disconnectors** Page 374

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- Cable outlet: Switch outlet or as outgoing cable from the switchgear
- Suitable for the use of switchgear with front screw terminal
- For mounting on busbar systems with or without cover section

## Rated current max. 630 – 1600 A, clamping attachment

| Rated current max. A | Packs of | 630 | 1000 | 1600 | Page |
|---|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Installation type | | Clamping attachment | Clamping attachment | Clamping attachment | |
| Cable outlet | | Bottom | Bottom | Bottom | |
| For switchgear make (model) | | ABB (Tmax T5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA23, 3VA24, 3VL4) | ABB (Tmax T7 - 800 A/1000 A) Eaton (NZM4 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A) | ABB (Tmax T7 - 1250 A/1600 A) Eaton (NZM4 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/3VL8 - 1600 A) | |
| Width mm | | 150 | 300 | 300 | |
| Height mm | | 585 | 652 | 652 | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.770** | **9677.700** | **9677.710** | |
| **Product-specific scope of supply** | | | | | |
| Connection straps | | ■ | – | – | |
| **Also required** | | | | | |
| Connector kit | | – | see page | see page | 382 |
| Contact hazard protection cover plate | | – | see page | see page | 382 |

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **NH slimline switch-disconnectors** Page 374

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

**Note:**
- Cable outlet: Switch outlet or as outgoing cable from the switchgear
- Suitable for the use of switchgear with front screw terminal
- For attaching to busbars with holes. Please ensure that there is no cover section installed in the vicinity of the device.

## Rated current max. 630 – 1600 A, screw attachment

| Rated current max. A | Packs of | 630 | 1000 | 1600 | Page |
|---|---|---|---|---|---|
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Installation type | | Screw attachment | Screw attachment | Screw attachment | |
| Cable outlet | | Bottom | Bottom | Bottom | |
| For switchgear make (model) | | ABB (Tmax T5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA23, 3VA24, 3VL4) | ABB (Tmax T7 - 800 A/1000 A) Eaton (NZM4 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A) | ABB (Tmax T7 - 1250 A/1600 A) Eaton (NZM4 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/3VL8 - 1600 A) | |
| Width mm | | 150 | 300 | 300 | |
| Height mm | | 585 | 652 | 652 | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.780** | **9677.705** | **9677.715** | |
| **Product-specific scope of supply** | | | | | |
| Connection straps | | ■ | – | – | |
| **Also required** | | | | | |
| Connector kit | | – | see page | see page | 382 |
| Contact hazard protection cover plate | | – | see page | see page | 382 |

# NH slimline fuse-switch disconnectors

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **Component adaptors** Page 372

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

**Note:**
- When using components on busbars with contact hazard protection cover, the contact terminal must be used

## Size 00 – 3, design single-pole, switchable

| Size | Packs of | 00 | 1 | 2 | 3 | Page |
|---|---|---|---|---|---|---|
| Twin track | | – | – | – | – | |
| Rated operating current max. A | | 160 | 250 | 400 | 630 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Screw M8 | Bolt M12 | Bolt M12 | Bolt M12 | |
| Connection of round conductors $mm^2$ | | 1.5 - 95 | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 50 | 100 | 100 | 100 | |
| Height mm | | 670 | 670 | 670 | 670 | |
| For converter installation | | ■ | ■ | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.010** | **9677.110** | **9677.210** | **9677.310** | |
| **Accessories** | | | | | | |
| Connection space cover | 1 pc(s). | see page | 9677.410 | 9677.410 | 9677.410 | 383 |
| Contact terminal | 3 pc(s). | 9677.450 | 9677.460 | 9677.460 | 9677.460 | 383 |
| Busbar terminal | 3 pc(s). | 9677.470 | 9677.480 | 9677.480 | 9677.480 | 384 |
| Prism terminal | 3 pc(s). | 9677.420 | – | – | – | 384 |
| V connection terminal | 3 pc(s). | – | 9677.430 | 9677.430 | 9677.440 | 384 |
| Current converter | 1 pc(s). | 9677.810 | see page | see page | see page | 385 |
| Cover | 5 pc(s). | – | 9677.415 | 9677.415 | 9677.415 | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 3071.000 | 358 |

## Size 00 – 1, design 3-pole, switchable

| Size | Packs of | 00 | 00 | 1 | Page |
|---|---|---|---|---|---|
| Twin track | | – | – | – | |
| Rated operating current max. A | | 160 | 160 | 250 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Screw M8 | Box terminal | Bolt M12 | |
| Connection of round conductors mm² | | 1.5 - 95 | 1.5 - 95 | 6 - 240 | |
| Width mm | | 50 | 50 | 100 | |
| Height mm | | 670 | 670 | 670 | |
| For converter installation | | ■ | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.000** | **9677.025** | **9677.100** | |
| **Accessories** | | | | | |
| Connection space cover | 1 pc(s). | see page | see page | 9677.410 | 383 |
| Contact terminal | 3 pc(s). | 9677.450 | 9677.450 | 9677.460 | 383 |
| Busbar terminal | 3 pc(s). | 9677.470 | 9677.470 | 9677.480 | 384 |
| Prism terminal | 3 pc(s). | 9677.420 | – | – | 384 |
| V connection terminal | 3 pc(s). | – | – | 9677.430 | 384 |
| Current converter | 1 pc(s). | 9677.810 | 9677.810 | see page | 385 |
| Cover | 5 pc(s). | – | – | 9677.415 | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 358 |

## Size 2 – 3, design 3-pole, switchable

| Size | Packs of | 2 | 3 | 3 | Page |
|---|---|---|---|---|---|
| Twin track | | – | – | ■ | |
| Rated operating current max. A | | 400 | 630 | 1250 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Bottom | |
| Type of connection | | Bolt M12 | Bolt M12 | Bolt M12 | |
| Connection of round conductors mm² | | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 100 | 100 | 200 | |
| Height mm | | 670 | 670 | 670 | |
| For converter installation | | ■ | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.200** | **9677.300** | **9677.340** | |
| **Accessories** | | | | | |
| Connection space cover | 1 pc(s). | 9677.410 | 9677.410 | – | 383 |
| Contact terminal | 3 pc(s). | 9677.460 | 9677.460 | 9677.460 | 383 |
| Busbar terminal | 3 pc(s). | 9677.480 | 9677.480 | 9677.480 | 384 |
| Prism terminal | | – | – | – | |
| V connection terminal | 3 pc(s). | 9677.430 | 9677.440 | – | 384 |
| Current converter | | see page | see page | see page | 385 |
| Cover | 5 pc(s). | 9677.415 | 9677.415 | – | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 358 |

# NH slimline fuse-switch disconnectors

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **Component adaptors** Page 372

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

**Note:**
- When using components on busbars with contact hazard protection cover, the contact terminal must be used

## Size 00 – 3, with electronic fuse monitoring

| Size | Packs of | 00 | 1 | 2 | 3 | Page |
|---|---|---|---|---|---|---|
| Design | | 3-pole, switchable | 3-pole, switchable | 3-pole, switchable | 3-pole, switchable | |
| Rated operating current max. A | | 160 | 250 | 400 | 630 | |
| Rated operating voltage V, ~ | | 400, 3~ | 400, 3~ | 400, 3~ | 400, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Cable outlet | | Top/bottom | Top/bottom | Top/bottom | Top/bottom | |
| Type of connection | | Screw M8 | Bolt M12 | Bolt M12 | Bolt M12 | |
| Connection of round conductors $mm^2$ | | 1.5 - 95 | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 50 | 100 | 100 | 100 | |
| Height mm | | 830 | 830 | 830 | 830 | |
| For converter installation | | ■ | ■ | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.015** | **9677.115** | **9677.215** | **9677.315** | |
| **Accessories** | | | | | | |
| Connection space cover | 1 pc(s). | see page | 9677.410 | 9677.410 | 9677.410 | 383 |
| Contact terminal | 3 pc(s). | 9677.450 | 9677.460 | 9677.460 | 9677.460 | 383 |
| Busbar terminal | 3 pc(s). | 9677.470 | 9677.480 | 9677.480 | 9677.480 | 384 |
| Prism terminal | 3 pc(s). | 9677.420 | – | – | – | 384 |
| V connection terminal | 3 pc(s). | – | 9677.430 | 9677.430 | 9677.440 | 384 |
| Current converter | 1 pc(s). | 9677.810 | see page | see page | see page | 385 |
| Cover | 5 pc(s). | – | 9677.415 | 9677.415 | 9677.415 | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 5 pc(s). | 3071.000 | 3071.000 | 3071.000 | 3071.000 | 358 |

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **Component adaptors** Page 372

**Functions:**
- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00, design 3-pole, switchable

| Size | Packs of | 00 | 00 | 00 | 00 | Page |
|---|---|---|---|---|---|---|
| Rated operating current max. A | | 160 | 160 | 160 | 160 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | |
| Installation type | | Clamping attachment | Clamping attachment | Screw attachment | Screw attachment | |
| Cable outlet | | Bottom | Top | Bottom | Top | |
| Type of connection | | Screw M8 | Screw M8 | Screw M8 | Screw M8 | |
| Connection of round conductors $mm^2$ | | 1.5 - 95 | 1.5 - 95 | 1.5 - 95 | 1.5 - 95 | |
| Width mm | | 50 | 50 | 50 | 50 | |
| Height mm | | 676 | 676 | 676 | 676 | |
| For converter installation | | ■ | ■ | ■ | ■ | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.060** | **9677.070** | **9677.065** | **9677.075** | |
| **Accessories** | | | | | | |
| Connection space cover | 1 pc(s). | 9677.400 | 9677.400 | 9677.400 | 9677.400 | 383 |
| Connection space cover, rear | 1 pc(s). | 9677.402 | 9677.402 | 9677.402 | 9677.402 | 386 |
| Clamp-type terminal | 3 pc(s). | 9677.425 | 9677.425 | 9677.425 | 9677.425 | 386 |
| Box terminal | | – | – | – | – | |
| Contact terminal | | – | – | – | – | |
| Current converter | 1 pc(s). | 9677.810 | 9677.810 | 9677.810 | 9677.810 | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 1 pc(s). | 9677.418 | 9677.418 | 9677.418 | 9677.418 | 387 |

# NH slimline switch-disconnectors

## Size 1 – 2, design 3-pole, switchable

| Size | Packs of | 1 | 1 | 2 | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 250 | 250 | 400 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Installation type | | Screw attachment | Screw attachment | Screw attachment | |
| Cable outlet | | Bottom | Top | Bottom | |
| Type of connection | | Screw M12 | Screw M12 | Screw M12 | |
| Connection of round conductors $mm^2$ | | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 100 | 100 | 100 | |
| Height mm | | 772 | 772 | 772 | |
| For converter installation | | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.160** | **9677.165** | **9677.260** | |
| **Accessories** | | | | | |
| Connection space cover | 1 pc(s). | 9677.410 | 9677.410 | 9677.410 | 383 |
| Connection space cover, rear | 1 pc(s). | 9677.412 | 9677.412 | 9677.412 | 386 |
| Clamp-type terminal | | – | – | – | |
| Box terminal | | see page | see page | see page | 387 |
| Contact terminal | 3 pc(s). | 9677.485 | 9677.485 | 9677.485 | 387 |
| Current converter | | – | – | – | |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 1 pc(s). | 9677.418 | 9677.418 | 9677.418 | 387 |

## Size 2 – 3, design 3-pole, switchable

| Size | Packs of | 2 | 3 | 3 | Page |
|---|---|---|---|---|---|
| Rated operating current max. A | | 400 | 630 | 500 | |
| Rated operating voltage V, ~ | | 690, 3~ | 690, 3~ | 690, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | |
| Installation type | | Screw attachment | Screw attachment | Screw attachment | |
| Cable outlet | | Top | Bottom | Top | |
| Type of connection | | Screw M12 | Screw M12 | Screw M12 | |
| Connection of round conductors $mm^2$ | | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 100 | 100 | 100 | |
| Height mm | | 772 | 772 | 772 | |
| For converter installation | | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.265** | **9677.360** | **9677.365** | |
| **Accessories** | | | | | |
| Connection space cover | 1 pc(s). | 9677.410 | 9677.410 | 9677.410 | 383 |
| Connection space cover, rear | 1 pc(s). | 9677.412 | 9677.412 | 9677.412 | 386 |
| Clamp-type terminal | | – | – | – | |
| Box terminal | | see page | see page | see page | 387 |
| Contact terminal | 3 pc(s). | 9677.485 | 9677.485 | 9677.485 | 387 |
| Current converter | | – | – | – | |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 1 pc(s). | 9677.418 | 9677.418 | 9677.418 | 387 |

**Busbar system** Page 368 **Connection adaptors** Page 370 **Connection block** Page 371 **Component adaptors** Page 372

**Functions:**
- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

**Colour:**
- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

**Basis of test:**
- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

## Size 00 – 3, with electronic fuse monitoring

| Size | Packs of | 00 | 00 | 1 | 2 | 3 | Page |
|---|---|---|---|---|---|---|---|
| Design | | 3-pole, switchable | 3-pole, switchable | 3-pole, switchable | 3-pole, switchable | 3-pole, switchable | |
| Rated operating current max. A | | 160 | 160 | 250 | 400 | 630 | |
| Rated operating voltage V, ~ | | 400, 3~ | 400, 3~ | 400, 3~ | 400, 3~ | 400, 3~ | |
| Number of poles | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| Installation type | | Clamping attachment | Screw attachment | Screw attachment | Screw attachment | Screw attachment | |
| Cable outlet | | Bottom | Bottom | Bottom | Bottom | Bottom | |
| Type of connection | | Screw M8 | Screw M8 | Screw M12 | Screw M12 | Screw M12 | |
| Connection of round conductors $mm^2$ | | 1.5 - 95 | 1.5 - 95 | 6 - 240 | 6 - 240 | 6 - 240 | |
| Width mm | | 50 | 50 | 100 | 100 | 100 | |
| Height mm | | 860 | 860 | 941 | 941 | 941 | |
| For converter installation | | ■ | ■ | – | – | – | |
| For bar systems with centre-to-centre spacing mm | | 185 | 185 | 185 | 185 | 185 | |
| For bar thickness mm | | 10 | 10 | 10 | 10 | 10 | |
| **Model No.** | 1 pc(s). | **9677.080** | **9677.085** | **9677.180** | **9677.280** | **9677.380** | |
| **Accessories** | | | | | | | |
| Connection space cover | 1 pc(s). | 9677.400 | 9677.400 | 9677.410 | 9677.410 | 9677.410 | 383 |
| Connection space cover, rear | 1 pc(s). | 9677.402 | 9677.402 | 9677.412 | 9677.412 | 9677.412 | 386 |
| Clamp-type terminal | 3 pc(s). | 9677.425 | 9677.425 | – | – | – | 386 |
| Box terminal | | – | – | see page | see page | see page | 387 |
| Contact terminal | 3 pc(s). | – | – | 9677.485 | 9677.485 | 9677.485 | 387 |
| Current converter | 1 pc(s). | 9677.810 | 9677.810 | – | – | – | 385 |
| Trim strip | 2 pc(s). | 9677.407 | 9677.407 | 9677.407 | 9677.407 | 9677.407 | 386 |
| Micro-switch | 1 pc(s). | 9677.418 | 9677.418 | 9677.418 | 9677.418 | 9677.418 | 387 |

## Accessories

### System attachment

**for VX**

For attaching busbar systems with 185 mm centre-to-centre spacing inside the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– 2 system attachments (left/right)
– 2 punched sections without mounting flanges
– Assembly parts

| For enclosure width mm | Product-specific scope of supply | Packs of | Model No. |
|---|---|---|---|
| 600 | – | 1 pc(s). | **9677.511** |
| 800 | – | 1 pc(s). | **9677.521** |
| 1000 | System attachment (centre) | 1 pc(s). | **9677.531** |
| 1200 | System attachment (centre) | 1 pc(s). | **9677.541** |

**Assembly instruction:**

– For variable depth adjustment of the busbar system in the enclosure, the punched section with mounting flange 23 x 64 mm for VX (for the inner mounting level) is additionally required. Select according to the enclosure depth.

**Accessories:**

– Punched section with mounting flange, 23 x 64 mm, see page 991
– Captive nuts, see page 1002

### Busbar connector

For connecting rectangular busbars, no drilling required.

**Material:**
– E-Cu

**Surface finish:**
– Tin-plated

**Note:**
– If using a 100 x 10 mm busbar, one 9677.610 and one 9677.620 are required

| For busbar mm | Quantity required per bar | Length mm | Packs of | Model No. |
|---|---|---|---|---|
| 40 x 10<br>80 x 10<br>100 x 10 | 1<br>2<br>1 | 40 | 1 pc(s). | **9677.610** |
| 60 x 10<br>100 x 10<br>120 x 10 | 1<br>1<br>2 | 60 | 1 pc(s). | **9677.620** |

### End cover

**for busbar supports**

For contact hazard protection of the busbar system on the left and right. Attachment is on the busbar supports.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

**Supply includes:**
– 1 end cover, left
– 1 end cover, right

| To fit Model No. | Packs of | Model No. |
|---|---|---|
| 9677.500 | 2 pc(s). | **9677.600** |

## Contact hazard protection cover plate

**for 185 mm busbar system**

For contact hazard protection of the busbar assembly at the rear and front.

**Material:**
- Base tray: Polyphenylene ether (PPE)
- End section: Polyphenylene ether (PPE)
- Cover section: Polyamide
- Centre cover: Polyamide

**Colour:**
- RAL 7035

**Supply includes:**
- Cover section, slotted, 50 mm wide
- Cover sections, slotted, 100 mm wide
- Base trays
- Trim sections

| For enclosure width mm | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|
| 600 | – | 1 pc(s). | **9677.550** |
| 800 | – | 1 pc(s). | **9677.560** |
| 1000 | Centre cover for busbar support | 1 pc(s). | **9677.570** |
| 1200 | Centre cover for busbar support | 1 pc(s). | **9677.580** |

**Accessories:**

- Cover strip, see page 381

## Cover strip

**for contact hazard protection cover**

For covering the front exposed contact slots in the cover section.

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-V0

**Colour:**
- RAL 7035

| Width mm | Height mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|
| 100 | 67 | 9677.550/ 9677.560/ 9677.570/ 9677.580 | 3 pc(s). | **9677.650** |

## Contact hazard protection cover plate

**for enclosure connection**

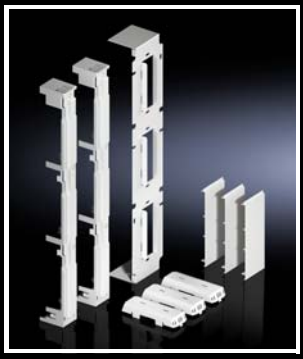
For rear and front contact hazard protection of the connection points from enclosure to enclosure, with and without busbar connectors.

**Material:**
- Base tray: Polyphenylene ether (PPE)
- Cover section: Polyamide
- Centre cover: Polyamide

**Colour:**
- RAL 7035

**Supply includes:**
- 3 base trays
- 1 cover (front)
- 2 centre covers for busbar support

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **9677.640** |



## Accessories

### Contact hazard protection cover plate

**for connection block**
To cover the connector block at the front.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– RAL 7035

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 105 | 245 | 1 pc(s). | **9677.925** |

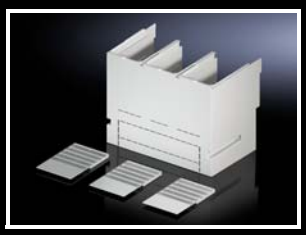
### Connector kit

**for component adaptors**
Preassembled connector kit for common brands of moulded-case circuit-breaker (MCCB). For electrical connection between the switch and the component adaptor (3-pole).

**Material:**
– E-Cu

**Supply includes:**
– Assembly parts

| For switchgear make (model) | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|
| ABB (Tmax T7 - 800 A/1000 A)<br>Schneider Electric (NS - 800 A/1000 A) | 9677.700/9677.705 | 1 pc(s). | **9677.730** |
| Eaton (NZM4 - 800 A/1000 A)<br>Siemens (VL1250/3VL7 - 1000 A) | 9677.700/9677.705 | 1 pc(s). | **9677.740** |
| ABB (Tmax T7 - 1250 A/1600 A)<br>Schneider Electric (NS - 1250 A/1600 A) | 9677.710/9677.715 | 1 pc(s). | **9677.750** |
| Eaton (NZM4 - 1250 A/1600 A)<br>Siemens (VL1250/3VL7 - 1250 A, VL1600/VL8 - 1600 A) | 9677.710/9677.715 | 1 pc(s). | **9677.760** |



### Contact hazard protection cover plate

**for component adaptors**
To cover the connector kit at the front. The cover may also optionally be used for the switchgear cable connection. Open cable accesses in the contact hazard protection cover may be sealed using the side panels.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Supply includes:**
– Side panels

| For switchgear make (model) | Packs of | **Model No.** |
|---|---|---|
| – | 1 pc(s). | **9677.790** |
| ABB (Tmax T7) | 1 pc(s). | **9677.792** |
| Eaton (NZM 4) | 1 pc(s). | **9677.794** |
| Siemens (3VL7/3VL8) | 1 pc(s). | **9677.796** |
| Schneider Electric (NS1600) | 1 pc(s). | **9677.798** |

## Connection space cover

**for NH slimline fuse-switch-disconnectors/NH slimline switch-disconnectors**

Cascadable connection space cover to guarantee contact hazard protection in the cable connection zone when using ring terminals with a long collar.

**Material:**
- Polycarbonate
- Fire protection corresponding to UL 94-V0

**Note:**
- When using NH slimline fuse-switch disconnectors with top cable outlet, use of the connection space cover is mandatory

| For size | To fit Model No. | Cable outlet | Note on Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 00 | 9677.0X0/9677.0X5 | Bottom | Also suitable for use with NH slimline switch-disconnectors with top cable outlet | 1 pc(s). | **9677.400** |
| 00 | 9677.000/9677.010/ 9677.015/9677.025 | Top | – | 1 pc(s). | **9677.405** |
| 1 - 3 | 9677.1X0/9677.1X5/ 9677.2X0/9677.2X5/ 9677.300/9677.310/ 9677.3X5 | Top/bottom | – | 1 pc(s). | **9677.410** |

## Contact terminal

**for NH slimline fuse-switch disconnectors/ connection adaptors**

For mounting components on busbar systems with 185 mm centre-to-centre spacing, no drilling required.

**Material:**
- Sheet steel, zinc-plated
- E-Cu, tin-plated

**Note:**
- Only suitable for use on busbar system with contact hazard protection cover (cover section, slotted)

| For size | Packs of | **Model No.** |
|---|---|---|
| 00 | 3 pc(s). | **9677.450** |
| 1 - 3 and connection adaptors | 3 pc(s). | **9677.460** |

## Accessories

### Busbar terminal

**for NH slimline fuse-switch disconnectors/ connection adaptors**
For mounting components on busbar systems with 185 mm centre-to-centre spacing, no drilling required.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Note:**
– Can only be used on busbar systems without contact hazard protection cover (cover section, slotted)

| For size | Packs of | **Model No.** |
|---|---|---|
| 00 | 3 pc(s). | **9677.470** |
| 1 - 3 and connection adaptors | 3 pc(s). | **9677.480** |

### Prism terminal

**for NH slimline fuse-switch disconnectors**
For the direct connection of round conductors.

**Material:**
– Brass

**Surface finish:**
– Tin-plated

| For size | To fit Model No. | Connection of round conductors $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|---|
| 00 | 9677.000/ 9677.010/ 9677.015 | 10 - 95 | 3 pc(s). | **9677.420** |

### V connection terminal

**for NH slimline fuse-switch disconnectors**
For the direct connection of round conductors.

**Material:**
– Brass

**Surface finish:**
– Tin-plated

| For size | To fit Model No. | Connection of round conductors $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|---|
| 1/2 | 9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215 | 70 - 240 | 3 pc(s). | **9677.430** |
| 3 | 9677.300/ 9677.310/ 9677.315 | 120 - 300 | 3 pc(s). | **9677.440** |

## Current converter

**for NH slimline fuse-switch-disconnectors/ NH slimline switch-disconnectors**

Compact design without altering the installation depth via mechanical integration into the NH slim-line switch-disconnector (185 mm centre-to-centre spacing); this allows space-saving assembly.

**Material:**
– Polyamide

**Basis of test:**
– IEC 60 044-1
– EN 60715
– DIN VDE 0414
– DIN 42 600-2

| For size | 00 | 1 - 3 | 1 - 3 | 1 - 3 | 1 - 3 |
|---|---|---|---|---|---|
| To fit Model No. | 9677.000/ 9677.010/ 9677.015/ 9677.025/ 9677.060/ 9677.065/ 9677.070/ 9677.075/ 9677.080/ 9677.085 | 9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340 | 9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340 | 9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340 | 9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340 |
| Primary current A | 150 | 200 | 250 | 400 | 600 |
| Secondary current A | 5 | 5 | 5 | 5 | 5 |
| Accuracy class | 1 | 1 | 1 | 1 | 1 |
| Rated frequency Hz | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 | 50 - 60 |
| Insulation voltage kV | 3 | 3 | 3 | 3 | 3 |
| Insulating material category | E | B | B | B | B |
| Connection of round conductors $mm^2$ | 2.5 - 4 | – | – | – | – |
| Type of connection | Screw terminals | Round conductor 2.5 $mm^2$ (length 1.5 m) | Round conductor 2.5 $mm^2$ (length 1.5 m) | Round conductor 2.5 $mm^2$ (length 1.5 m) | Round conductor 2.5 $mm^2$ (length 1.5 m) |
| Rated power input VA | 2.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| **Model No.** | **9677.810** | **9677.840** | **9677.860** | **9677.870** | **9677.880** |

## Cover

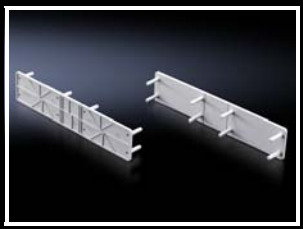
**for NH slimline fuse-switch disconnectors**

To increase rear contact hazard protection of the NH slimline fuse-switch-disconnector in the top section when mounting on a 185 mm bar system with contact hazard protection.

**Material:**
– Polyamide

**Colour:**
– RAL 7035

| For size | Packs of | **Model No.** |
|---|---|---|
| 1 - 3 | 5 pc(s). | **9677.415** |



## Accessories

### Trim strip

**for NH slimline fuse-switch-disconnectors/ NH slimline switch-disconnectors**
To create a contact surface for individual use of a front contact hazard protection cover plate. Mounted on the side of the NH strip enclosure.

**Material:**
– Hard PVC

**Colour:**
– RAL 7035

| For size | Packs of | Model No. |
|---|---|---|
| 00 - 3 | 2 pc(s). | **9677.407** |

### Connection space cover, rear

**for NH slimline switch-disconnectors**
To guarantee contact hazard protection in the rear cable connection zone when using ring terminals with long press sleeves. In conjunction with the front connection space cover (9677.400/.410), this achieves all-round contact hazard protection of the connection space.

**Material:**
– Polyamide

**Colour:**
– RAL 7035

| For size | Packs of | Model No. |
|---|---|---|
| 00 | 1 pc(s). | **9677.402** |
| 1 - 3 | 1 pc(s). | **9677.412** |

### Clamp-type terminal

**for NH slimline switch-disconnectors**
For the connection of round conductors.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| For size | Connection of round conductors $mm^2$ | Packs of | Model No. |
|---|---|---|---|
| 00 | 16 - 70 | 3 pc(s). | **9677.425** |

## Box terminal

**for NH slimline switch-disconnectors**
For converting NH slimline switch-disconnectors to box terminal connection for round conductors.

**Material:**
– Aluminium
– E-Cu, silver-plated

**Supply includes:**
– Connection space cover, rear

| For size | Connection of round conductors $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|
| 1 - 3 | 70 - 240 | 3 pc(s). | **9677.435** |
| 1 - 3 | 185 - 300 | 3 pc(s). | **9677.445** |

## Contact terminal

**for NH slimline switch-disconnectors**
For mounting NH slimline switch-disconnectors on bar systems with 185 mm centre-to-centre spacing, no drilling required.

**Material:**
– Sheet steel, zinc-plated
– E-Cu, tin-plated
– Polyamide

**Note:**
– Only suitable for use on busbar system with contact hazard protection cover (cover section, slotted)

| For size | Packs of | **Model No.** |
|---|---|---|
| 1 - 3 | 3 pc(s). | **9677.485** |

## Micro-switch

**for NH slimline switch-disconnectors**
To indicate the switch position of the NH unit (cover).

**Supply includes:**
– Bracket

| For size | Rated operating current max. A | Rated operating voltage V | Packs of | **Model No.** |
|---|---|---|---|---|
| 00 - 3 | 5 | 250 | 1 pc(s). | **9677.418** |

# Busbar systems (100/185/150 mm)

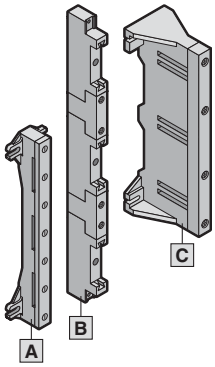
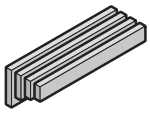
**NH slimline fuse-switch disconnectors** Page 335/374

**Material: Busbar supports, inserts**
- Fibreglass-reinforced, thermo-plastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

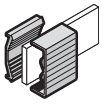
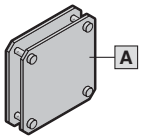
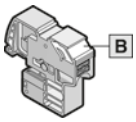
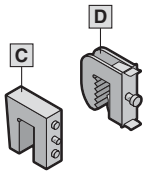
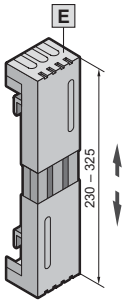
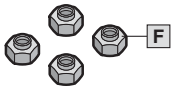
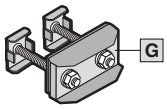
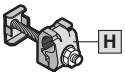
**Colour:**
- RAL 7035

**Note:**
- The base component of busbar support 3052.000 may also be used as a single-pole support

## Busbar systems
## 1250 A (100 mm), 1600 A (185 mm), 2500 A (150 mm), 3000 A (150 mm)

| **Busbar supports, 3-pole** | | | Packs of | Model No. | | | | Page |
|---|---|---|---|---|---|---|---|---|
| | | | | A 1250 A | B 1600 A | C 2500 A | C 3000 A | |
|  | Width x height x depth mm | | | 22 x 320 x 70 | 24 x 515 x 51 | 30 x 420 x 160 | 30 x 420 x 170 | |
| | Max. bar accommodation mm | | | 60 x 10 | 80 x 10 | 2 x 80 x 10 | 2 x 100 x 10 | |
| | Inserts for<br>a) Reducing the cross-section to mm<br>b) Reducing the bar width in 10 mm increments | | | 30 x 10 to 50 x 10<br>– | 50/60 x 10<br>– | –<br>■ | –<br>■ | |
| | Bar centre distance mm | | | 100 | 185 | 150 | 150 | |
| | Packs of | | | 4 pc(s). | 2 pc(s). | 2 pc(s). | 2 pc(s). | |
| | | | | **3073.000** | **3052.000** | **3055.000** | **3057.000** | |
| | **Accessories** | | | | | | | |
| | Inserts to adapt the bar dimensions | 30 x 10 mm | 24 pc(s). | **3074.000** | **–** | **–** | **–** | |
| | | 40 x 10 mm | 24 pc(s). | **3075.000** | **–** | **–** | **–** | |
| | | 50 x 10 mm | 24 pc(s). | **3076.000** | **3074.000** | **–** | **–** | |
| | | 60 x 10 mm | 24 pc(s). | **–** | **3075.000** | **–** | **–** | |
| | Spacing piece for reducing the bar width in 10 mm increments | | 12 pc(s). | **–** | **–** | **3056.000** | **3056.000** | |
| **Busbars E-Cu** to DIN EN 13 601, length 2400 mm | | | | | | | | |
|  | Dimensions mm | | | | | | | 342 |
| | 30 x 10 | | 3 pc(s). | 3586.005 | – | – | – | |
| | 40 x 10 | | 3 pc(s). | 3587.000 | – | – | – | |
| | 50 x 10 | | 2 pc(s). | 3588.005 | 3588.005 | – | – | |
| | 60 x 10 | | 2 pc(s). | 3589.005 | 3589.005 | 3589.005 | 3589.005 | |
| | 80 x 10 | | 1 pc(s). | – | 3590.005 | 3590.005 | 3590.005 | |
| | 100 x 10 | | 1 pc(s). | – | – | – | 3590.015 | |

# Busbar systems (100/185/150 mm)

| Contact hazard protection | | | Packs of | Model No. 1250 A | 1600 A | 2500 A | 3000 A | Page |
|---|---|---|---|---|---|---|---|---|
| | End cover for busbar supports | | 10 pc(s). | **3083.000** | **–** | **–** | **–** | |
|  | Busbar cover section, length 1 m for E-Cu | 30 x 10 mm | 10 pc(s). | 3092.000 | – | – | – | 343 |
| | | 40 x 10 to 60 x 10 mm | 10 pc(s). | 3085.000 | 3085.000 | – | – | |
| **Connection system,** see page 349 (system accessories) | | | | | | | | |
|  | **A Plate clamps** for connecting laminated copper bars; no drilling required | | | | | | | |
| | For busbars mm | Clamping area for laminated copper bars mm | | | | | | |
| | 30 x 10 | 34 x 10 | 3 pc(s). | 3554.000 | – | – | – | 350 |
| | 40 x 10 | 34 x 10 | 3 pc(s). | 3559.000 | – | – | – | |
| | 50 x 10 | 34 x 10 | 3 pc(s). | 3560.000 | 3560.000 | – | – | |
| | 50 x 10 | 54 x 10 | 3 pc(s). | 3562.000 | 3562.000 | – | – | |
|  | 60 x 10 | 34 x 10 | 3 pc(s). | 3561.000 | 3561.000 | – | – | |
| | 60 x 10 | 54 x 10 | 3 pc(s). | 3563.000 | 3563.000 | – | – | |
| | 80 x 10 | 65 x 10 | 3 pc(s). | – | 3460.500 | – | – | |
| | **B Push-in conductor connection clamps** for 10 mm bar thickness | | | | | | | |
|  | Connection of round conductors $mm^2$ | Clamping area for laminated copper bars mm | | | | | | |
| | 0.5 – 6 | – | 10 pc(s). | 3455.505 | 3455.505 | 3455.505 | 3455.505 | 349 |
| | 1.5 – 16 | – | 10 pc(s). | 3456.505 | 3456.505 | 3456.505 | 3456.505 | |
| | **Conductor connection clamps** for 10 mm bar thickness | | | | | | | |
| | Connection of round conductors $mm^2$ | Clamping area for laminated copper bars mm | | | | | | |
| | C 1 – 4 | – | 15 pc(s). | 3555.000 | 3555.000 | 3555.000 | 3555.000 | |
| | 1 – 4 | – | 15 pc(s). | 3455.500 | 3455.500 | 3455.500 | 3455.500 | |
| | 2.5 – 16 | 8 x 8 | 15 pc(s). | 3456.500 | 3456.500 | – | – | 349 |
| | D 16 – 50 | 10.5 x 11 | 15 pc(s). | 3457.500 | 3457.500 | – | – | |
| | 35 – 70 | 16.5 x 15 | 15 pc(s). | 3458.500 | 3458.500 | – | – | |
| | 70 – 185 | 22.5 x 20 | 15 pc(s). | 3459.500 | 3459.500 | – | – | |
|  | **E System covers** for conductor connection clamps and plate clamps | | | | | | | |
| | Width x depth mm | | | | | | | |
| | 50 x 80 | | 4 pc(s). | 3086.000 | – | – | – | |
| | 100 x 80 | | 4 pc(s). | 3087.000 | – | – | – | 350 |
| | 100 x 110 | | 4 pc(s). | 3090.000 | – | – | – | |
| | 200 x 80 | | 4 pc(s). | 3088.000 | – | – | – | |
| | 200 x 110 | | 4 pc(s). | 3091.000 | – | – | – | |
|  | **F Inserted screw nuts M12,** self-holding nuts with knurled ring for mounting NH slimline fuse-switch disconnectors | | | | | | | |
| | For drilled holes in busbars Ø 14.5 mm | | 30 pc(s). | 3591.060 | 3591.060 | – | – | 1039 |
| | **G Connection plate for laminated copper bars** | | | | | | | |
|  | For connecting laminated copper bars up to 2 x 10 x 100 x 1.0 mm to a busbar system with 2 bars per conductor | For laminated copper bars up to | | | | | | |
| | | 2 x 10 x 32 x 1 mm | 1 pc(s). | – | – | 9676.747[1] | 9676.747[1] | 399 |
| | | 2 x 10 x 63 x 1 mm | 1 pc(s). | – | – | 9676.748[1] | 9676.748[1] | |
| | | 2 x 10 x 100 x 1 mm | 1 pc(s). | – | – | 9676.749[1] | 9676.749[1] | |
|  | **H Direct connection terminal** | | | | | | | |
| | For the direct connection of round conductors 95 – 300 $mm^2$ (single-wire and multi-wire) | | 1 pc(s). | – | – | 9676.730[1] | 9676.730[1] | 398 |

[1] The required screw connection must be ordered separately according to the busbar width, see page 400

Power distribution

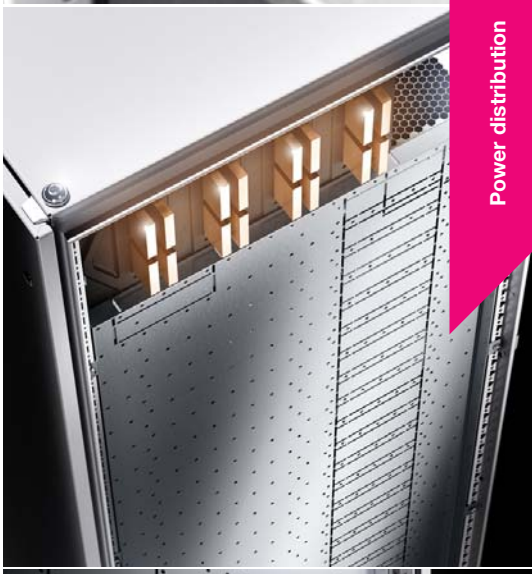
# VX25 Ri4Power – Greater flexibility with interior installation

## Variable adaptation

- Removal of the pre-punched knock-outs in the compartment dividers is burr-free, for flexible subdivision of the openings depending on the planned cable routing. This supports a continuous, direct power supply to the control and wiring sections.
- Cross member cutter 4054.870 for removing the pre-punched knock-outs, see page 586.

## Flexible busbar routing

- The main busbars may optionally be routed in the roof section or central rear section, for enhanced planning and space flexibility.



## Optimum continuity

- Because PE or N conductors are connected by directly screw-fastening the busbar supports to the frame section, this ensures an identical, consistent arrangement of bars in the rear or front enclosure area across all section types.

# VX25 Ri4Power – Enhanced efficiency for bar systems

## Significant reduction in parts

- The 25 mm pitch pattern allows busbar supports to be mounted directly onto the enclosure section. Just three screws is all you need. No further components are required.

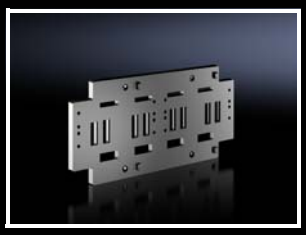
## A high level of standardisation

- Standard bars in sizes 30 x 10 mm and 50 x 10 mm are used.

## Quick busbar connection

- The open busbar support can additionally accommodate the busbar connector, for simple, fast connection to the next section.

## Flat-PLS



### Busbar supports

**for distribution busbar system**
For assembling vertical distribution busbar systems (2 x 30 x 10 mm, 3-/4-pole, 70 mm centre-to-centre spacing) or busbar systems (30 x 5/10 mm, 3-/4-pole, 60 mm centre-to-centre spacing) with RiLine components in modular outgoing sections.

**Material:**
– Duroplastic
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|
| 30 x 5/10<br>30 x 10 | 60<br>70 | 2 pc(s). | **9686.100** |

**Also required:**
– Busbars E-Cu, see page 342

**Accessories:**
– End cover, see page 396

### Busbar supports

**for busbar entry (roof section)**
For inserting 3- or 4-pole flat copper busbar systems into the roof section.

**Material:**
– Duroplastic
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|
| 30 x 10 | 80 | 2 pc(s). | **9686.010** |
| 50 x 10 | 80 | 2 pc(s). | **9686.040** |

**Also required:**
– Busbars E-Cu, see page 342
– Captive nuts, see page 1002

**Assembly instruction:**
– For the installation of max. 4 busbars (sub-conductors) per phase
– Cage nut (M8) 4165.500 is required to attach the busbar supports to the enclosure section.

**Accessories:**
– End cover, see page 396

## Busbar supports

**for busbar baying (roof section)**
For baying 3- or 4-pole flat copper busbar systems from enclosure to enclosure in the roof section.

**Material:**
– Duroplastic
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|
| 30 x 10 | 80 | 2 pc(s). | **9686.000** |
| 50 x 10 | 80 | 2 pc(s). | **9686.030** |

**Also required:**
– Busbars E-Cu, see page 342
– Longitudinal connector E-Cu, see page 397
– Captive nuts, see page 1002

**Assembly instruction:**
– For the installation of max. 4 busbars (sub-conductors) per phase
– Cage nut (M8) 4165.500 is required to attach the busbar supports to the enclosure section.

**Accessories:**
– End cover, see page 396

**Possible alternative:**
– Busbar E-Cu, slotted, see page 396

## Busbar supports

**for busbar entry (rear section)**
For inserting 3-pole flat copper busbar systems into the rear section of the enclosure.

**Material:**
– Duroplastic
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|
| 50 x 10 | 185 | 2 pc(s). | **9686.070** |

**Also required:**
– Busbars E-Cu, see page 342
– Captive nuts, see page 1002

**Assembly instruction:**
– For the installation of max. 4 busbars (sub-conductors) per phase
– Cage nut (M8) 4165.500 is required to attach the busbar supports to the enclosure section.

**Accessories:**
– End cover, see page 396

## Flat-PLS

### Busbar supports

**for busbar baying (rear section)**
For baying 3-pole flat copper busbar systems in the rear section from enclosure to enclosure.

**Material:**
– Duroplastic
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|
| 50 x 10 | 185 | 2 pc(s). | **9686.060** |

**Also required:**
– Busbars E-Cu, see page 342
– Longitudinal connector E-Cu, see page 397
– Captive nuts, see page 1002

**Assembly instruction:**
– For the installation of max. 4 busbars (sub-conductors) per phase
– Cage nut (M8) 4165.500 is required to attach the busbar supports to the enclosure section.

**Accessories:**
– End cover, see page 396

**Possible alternative:**
– Busbar E-Cu, slotted, see page 396

### End cover

**for busbar supports**
For shock-hazard-protected covering of the busbar ends on the busbar holder.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-HB

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 50 | 147 | 3 pc(s). | **9686.080** |

### Busbar E-Cu, slotted

Busbars with integral punchings.

**Material:**
– E-Cu F30

**Standards:**
– DIN EN 13 601

| Dimensions mm | Length mm | Hole diameter mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 50 x 10 | 385 | 11.5 | 1 pc(s). | **9684.004** |
| 50 x 10 | 585 | 11.5 | 1 pc(s). | **9684.006** |
| 50 x 10 | 785 | 11.5 | 1 pc(s). | **9684.008** |
| 50 x 10 | 985 | 11.5 | 1 pc(s). | **9684.010** |
| 50 x 10 | 1185 | 11.5 | 1 pc(s). | **9684.012** |

**Accessories:**
– Longitudinal connector E-Cu, see page 397

## Longitudinal connector E-Cu

**for busbar baying**
For connecting the main busbar system from enclosure to enclosure.

**Material:**
– E-Cu

**Supply includes:**
– Assembly parts

**Design for main busbar 30 x 10 mm**

| Dimensions mm | Length mm | No. of sub-conductors per phase | Packs of | **Model No.** |
|---|---|---|---|---|
| 35 x 10 | 195 | 1 | 1 pc(s). | **9686.210** |
| 60 x 10 | 195 | 2<br>4 | 1 pc(s). | **9686.200** |

**Design for main busbar 50 x 10 mm**

| Dimensions mm | Length mm | No. of sub-conductors per phase | Packs of | **Model No.** |
|---|---|---|---|---|
| 55 x 10 | 195 | 1 | 1 pc(s). | **9686.260** |
| 100 x 10 | 195 | 2<br>4 | 1 pc(s). | **9686.250** |

## Connection system Flat-PLS

### Busbar claw

**for flat copper busbars**
For mechanical stabilisation of busbar stacks. Suitable for 10 mm bar thickness.

**Material:**
– Stainless steel

| For no. of busbars | Mounting dimensions mm | Packs of | Model No. |
|---|---|---|---|
| 2 | 20 | 1 pc(s). | **9676.017** |
| 4 | 20 | 1 pc(s). | **9676.019** |

**Also required:**
– M10 screw, see page 400

**Assembly instruction:**
– The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
– Busbar claw with threaded insert M10

### Busbar claw

**for connection components**
For mechanical connection of connection components such as connection brackets. Suitable for 10 mm bar thickness.

**Material:**
– Stainless steel

| For no. of busbars | Mounting dimensions mm | Packs of | Model No. |
|---|---|---|---|
| 2 | 40 | 8 pc(s). | **9676.832** |

**Also required:**
– M10 screw, see page 400

**Assembly instruction:**
– The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
– Busbar claw with threaded insert M10

### Direct connection terminal

**for round conductors**
For connecting round conductors to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

**Material:**
– Connection clamp: Brass, tin-plated
– Busbar claw: Stainless steel

**Supply includes:**
– Assembly parts (excluding screws)

| No. of sub-conductors per phase | Connection of round conductors $mm^2$ | Mounting dimensions mm | Packs of | Model No. |
|---|---|---|---|---|
| 2 | 95 - 300 | 60 | 1 pc(s). | **9676.730** |

**Also required:**
– M10 screw, see page 400

**Assembly instruction:**
– The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
– Busbar claw with threaded insert M10

## Connection plate

**for laminated copper bars**

For connecting laminated copper bars to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

**Material:**
- Connection plate: E-Cu
- Thrust piece: Stainless steel
- Busbar claw: Stainless steel

**Supply includes:**
- Assembly parts (excluding screws)

| No. of sub-conductors per phase | Clamping area for laminated copper bars (W x H) mm | Mounting dimensions mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 2 | 32 x 20 | 50 | 1 pc(s). | **9676.747** |
| 2 | 63 x 20 | 50 | 1 pc(s). | **9676.748** |
| 2 | 100 x 20 | 50 | 1 pc(s). | **9676.749** |

**Also required:**
- M10 screw, see page 400

**Assembly instruction:**
- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
- Busbar claw with threaded insert M10

**Accessories:**
- Laminated copper bar, see page 346

## Connection plate

**for ring terminals**

For connecting ring terminals to a busbar distributor system made from flat copper. Suitable for 10 mm bar thickness.

**Material:**
- Connection plate: E-Cu, nickel-plated
- Busbar claw: Stainless steel

**Supply includes:**
- Assembly parts (excluding screws)

| Thread | No. of sub-con-ductors per phase | Mounting dimen-sions mm | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|---|
| M10 | 2 | 40 | – | 1 pc(s). | **9676.710** |
| M12 | 2 | 20 | Grub screw | 1 pc(s). | **9676.700** |

**Also required:**
- M10 screw, see page 400

**Assembly instruction:**
- The required screw length must be selected in line with the busbar width W, i.e. length = W + fastening measurement. Screws are not included with the supply.
- Busbar claw with threaded insert M10

## Connection system Flat-PLS

### Connection set

**for Flat-PLS**
For attaching NH slimline fuse-switch disconnectors and NH slimline switch-disconnectors (185 mm) or for connecting busbars. Suitable for busbar system with flat copper 50 x 10 mm

**Material:**
– Sheet steel, zinc-plated

**Note:**
– Screws are not included with the supply

| Thread | For no. of busbars | Packs of | **Model No.** |
|---|---|---|---|
| M8 | 2<br>4 | 3 pc(s). | **9686.800** |
| M10 | 2<br>4 | 3 pc(s). | **9686.810** |

**Assembly instruction:**

– The connection set may only be used with top-mounting components with screw fastening
– NH slimline fuse-switch disconnectors:
The required screw length when using busbars is 2 x 50 x 10 mm = 35 mm and 4 x 50 x 10 mm = 55 mm
– NH slimline switch-disconnectors: Only suitable for attaching to busbars 2 x 50 x 10 mm
– When using 4 busbars per phase, a filler piece is additionally required

**Accessories:**

– M10 screw, see page 400
– Filler piece, see page 400

### Filler piece

**for connection set**
When using top-mounting components on a busbar system with 4 busbars per phase, a filler piece is additionally required between the bars.

**Material:**
– E-Cu

| Dimensions mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 25 x 10 | 110 | 3 pc(s). | **9686.820** |

### M10 screw

For attaching the busbar claw or connection components to a flat copper busbar system.

**Material:**
– Stainless steel

| Screw design mm | Packs of | **Model No.** |
|---|---|---|
| M10 x 60 | 8 pc(s). | **9676.806** |
| M10 x 70 | 8 pc(s). | **9676.807** |
| M10 x 80 | 8 pc(s). | **9676.808** |
| M10 x 90 | 8 pc(s). | **9676.809** |
| M10 x 100 | 8 pc(s). | **9676.810** |
| M10 x 110 | 8 pc(s). | **9676.811** |
| M10 x 120 | 8 pc(s). | **9676.812** |
| M10 x 130 | 8 pc(s). | **9676.813** |
| M10 x 140 | 8 pc(s). | **9676.814** |
| M10 x 150 | 8 pc(s). | **9676.815** |
| M10 x 160 | 8 pc(s). | **9676.816** |
| M10 x 170 | 8 pc(s). | **9676.817** |
| M10 x 190 | 8 pc(s). | **9676.819** |

## End supports

**for Maxi-PLS busbars**
For attaching Maxi-PLS busbars when used as a cable connection system. The stepped configuration ensures simple cable installation.

**Material:**
– Polyamide
– Fire protection corresponding to UL 94-V0

**Colour:**
– Similar to RAL 9011

**Supply includes:**
– Assembly parts

| For system | Packs of | Model No. |
|---|---|---|
| Maxi-PLS 45 S<br>Maxi-PLS 45 | 2 pc(s). | **9649.010** |
| Maxi-PLS 60 | 2 pc(s). | **9659.010** |

**Also required:**

– Maxi-PLS busbar, E-Cu
for Maxi-PLS 45 S system, see page 401
– Maxi-PLS busbar, E-Cu
for Maxi-PLS 45 system, see page 401
– Maxi-PLS busbar, E-Cu
for Maxi-PLS 60 system, see page 402

## Maxi-PLS busbar, E-Cu

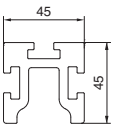
**for Maxi-PLS 45 S system**
For assembling cable connection systems.

**Material:**
– E-Cu

**Note:**
– May be cut individually to required length

**Cross-section 974 mm²**

| For enclosure width mm | Length mm | Packs of | Model No. |
|---|---|---|---|
| 600 | 451 | 1 pc(s). | **9640.207** |
| 800 | 651 | 1 pc(s). | **9640.237** |
| 1000 | 851 | 1 pc(s). | **9640.267** |
| 1200 | 1051 | 1 pc(s). | **9640.297** |
| – | 2400 | 3 pc(s). | **9640.365** |




Maxi-PLS 45 S

## Maxi-PLS busbar, E-Cu

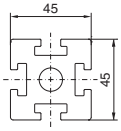
**for Maxi-PLS 45 system**
For assembling cable connection systems.

**Material:**
– E-Cu

**Note:**
– May be cut individually to required length

**Cross-section 1354 mm²**

| For enclosure width mm | Length mm | Packs of | Model No. |
|---|---|---|---|
| 600 | 451 | 1 pc(s). | **9640.202** |
| 800 | 651 | 1 pc(s). | **9640.232** |
| 1000 | 851 | 1 pc(s). | **9640.262** |
| 1200 | 1051 | 1 pc(s). | **9640.292** |
| – | 2400 | 3 pc(s). | **9640.360** |
| – | 2400 | 4 pc(s). | **9649.360** |




Maxi-PLS 45

## Maxi-PLS

### Maxi-PLS busbar, E-Cu

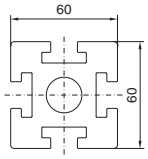
**for Maxi-PLS 60 system**
For assembling cable connection systems.

**Material:**
– E-Cu

**Note:**
– May be cut individually to required length

**Cross-section 2323 mm²**

| For enclosure width mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 451 | 1 pc(s). | **9650.202** |
| 800 | 651 | 1 pc(s). | **9650.232** |
| 1000 | 851 | 1 pc(s). | **9650.262** |
| 1200 | 1051 | 1 pc(s). | **9650.292** |
| – | 2400 | 3 pc(s). | **9650.360** |
| – | 2400 | 4 pc(s). | **9659.360** |




Maxi-PLS 60

## Connection clamp

**for round conductors**
For the connection of round conductors.

**Material:**
- Connection clamp: Brass, tin-plated
- Terminal stud: Steel, zinc-plated
- Sliding block: E-Cu

**Supply includes:**
- Connection clamp
- Terminal studs
- Sliding block
- Assembly parts

| For system | Connection of round conductors $mm^2$ | Packs of | **Model No.** |
|---|---|---|---|
| Maxi-PLS 45 S/45 | 95 - 300 | 1 pc(s). | **9640.325** |
| Maxi-PLS 60 | 95 - 300 | 1 pc(s). | **9650.325** |

## Connection plate

**for laminated copper bars**
For the connection of laminated flat copper bars.

**Material:**
- Connection plate: E-Cu
- Thrust piece: Stainless steel

**Supply includes:**
- Assembly parts

| For system | Clamping area for laminated copper bars (W x H) mm | Packs of | **Model No.** |
|---|---|---|---|
| Maxi-PLS 45 S/45 | 32 x 20 | 3 pc(s). | **9640.330** |
| Maxi-PLS 45 S/45 | 63 x 20 | 3 pc(s). | **9640.340** |
| Maxi-PLS 45 S/45 | 100 x 20 | 3 pc(s). | **9640.350** |
| Maxi-PLS 60 | 32 x 20 | 3 pc(s). | **9650.330** |
| Maxi-PLS 60 | 63 x 20 | 3 pc(s). | **9650.340** |

**Accessories:**
- Laminated copper bar, see page 346

## Terminal studs

**for Maxi-PLS**
For connecting cables with ring terminals.

**Material:**
- Terminal stud: Steel, zinc-plated
- Sliding block: E-Cu

**Supply includes:**
- Terminal studs
- Sliding blocks
- Assembly parts

| For system | Thread | Thread length mm | Packs of | **Model No.** |
|---|---|---|---|---|
| Maxi-PLS 45 S/45 | M12 | 30 | 3 pc(s). | **9640.370** |
| Maxi-PLS 45 S/45 | M16 | 30 | 3 pc(s). | **9640.380** |
| Maxi-PLS 60 | M12 | 32 | 3 pc(s). | **9650.370** |
| Maxi-PLS 60 | M16 | 32 | 3 pc(s). | **9650.380** |

## Sliding block

**for Maxi-PLS busbars**
For attaching flat copper bars and connection components to Maxi-PLS busbars. For sliding into the busbar section at the side and tightening the threaded bolts.

**Material:**
- E-Cu

| For system | Length mm | Thread | Packs of | **Model No.** |
|---|---|---|---|---|
| Maxi-PLS 45 S/45 | 20 | M8 | 15 pc(s). | **9640.970** |
| Maxi-PLS 45 S/45 | 25 | M10 | 15 pc(s). | **9640.980** |
| Maxi-PLS 60 | 25 | M10 | 15 pc(s). | **9650.980** |
| Maxi-PLS 60 | 35 | M12 | 15 pc(s). | **9650.990** |

**Also required:**
- Threaded bolts, see page 404

## Connection system Maxi-PLS

### Sliding nut

**for Maxi-PLS busbars**
For attaching flat copper bars and connection components to Maxi-PLS busbars. For sliding into the busbar section retrospectively and tightening the threaded bolts.

**Material:**
– E-Cu

| For system | Thread | Packs of | Model No. |
|---|---|---|---|
| Maxi-PLS 45 S/45 | M6 | 15 pc(s). | **9640.900** |
| Maxi-PLS 45 S/45 | M8 | 15 pc(s). | **9640.910** |
| Maxi-PLS 45 S/45 | M10 | 15 pc(s). | **9640.920** |
| Maxi-PLS 60 | M6 | 15 pc(s). | **9650.900** |
| Maxi-PLS 60 | M8 | 3 pc(s). | **9650.905** |
| Maxi-PLS 60 | M10 | 15 pc(s). | **9650.910** |
| Maxi-PLS 60 | M12 | 15 pc(s). | **9650.920** |

**Also required:**
– Threaded bolts, see page 404

### Threaded bolts

**for sliding blocks and sliding nuts**
For individual connection options.

**Material:**
– Steel

**Supply includes:**
– Assembly parts

**Also required:**
– Sliding block, see page 403
– Sliding nut, see page 404

| For system | Thread | Thread length mm | Packs of | Model No. |
|---|---|---|---|---|
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M6 | 35 | 6 pc(s). | **9640.930** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M8 | 35 | 6 pc(s). | **9640.940** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M10 | 35 | 8 pc(s). | **9676.971** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M10 | 45 | 8 pc(s). | **9676.972** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M10 | 55 | 8 pc(s). | **9676.973** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M10 | 70 | 8 pc(s). | **9676.976** |
| Maxi-PLS 45 S/45<br>Maxi-PLS 60 | M10 | 80 | 8 pc(s). | **9676.977** |
| Maxi-PLS 60 | M12 | 40 | 8 pc(s). | **9676.981** |
| Maxi-PLS 60 | M12 | 50 | 8 pc(s). | **9676.982** |
| Maxi-PLS 60 | M12 | 60 | 8 pc(s). | **9676.983** |
| Maxi-PLS 60 | M12 | 70 | 8 pc(s). | **9676.986** |
| Maxi-PLS 60 | M12 | 80 | 8 pc(s). | **9676.987** |

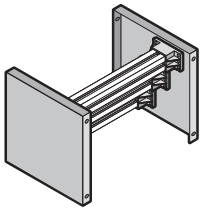
### Compact infeed

**for Maxi-PLS**
For individual use as a 3-pole cable connection bar system. Direct mounting on the mounting plate or punched section without mounting flange.

**Material:**
– End support: Polyamide (PA 6)
– Retaining plate: Sheet steel, zinc-plated
– Punched rail: Sheet steel, zinc-plated

**Supply includes:**
– 6 end supports
– 2 support plates for end supports
– 1 punched rail 23 x 23 mm (length 495 mm)
– Assembly parts

| For system | Packs of | Model No. |
|---|---|---|
| Maxi-PLS 45 S/45 | 1 pc(s). | **9660.980** |



## Accessories for connection components

### Screw

**for connection components**
For connecting components such as connection brackets and connection kits.

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– 8 nuts and 16 washers

| Screw design mm | Packs of | Model No. |
|---|---|---|
| M10 x 40 | 8 pc(s). | **9676.966** |
| M10 x 45 | 8 pc(s). | **9686.845** |
| M10 x 55 | 8 pc(s). | **9686.865** |
| M10 x 60 | 8 pc(s). | **9676.967** |
| M10 x 80 | 8 pc(s). | **9676.968** |

### Support set (stabiliser)

**for connector kit**
To support connector kits, top or bottom, for open air circuit-breakers (ACB).

**Material:**
– Stabiliser: Fibreglass-reinforced polyester
– Angle bracket: Sheet steel

**Supply includes:**
– 4 plastic stabilisers
– 2 angle brackets
– Assembly parts

**Note:**
– The angle brackets included with the supply are only suitable for use in TS enclosures
– When using the support set in VX enclosures, angle bracket 9686.495 is additionally required

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **9660.205** |

### Angle bracket

**for support set (stabiliser)**
For positioning and securing the holder set (stabiliser) to the enclosure section.

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– Assembly parts

**Note:**
– An angle bracket consists of one bracket to be fastened to the enclosure section or the compartment side panel, and one bracket for mounting plastic stabilisers

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **9686.495** |

## Connection components

### Connection components for air circuit-breakers and busbar connections

For connecting air circuit-breakers (ACB) or for connecting horizontal and vertical busbar systems (T-connectors).

**Material:**
– E-Cu

**Note:**
– The design code required for the configuration code is generated by the VX25 Rittal Power Engineering software (www.rittal.com/rpevx25/)
– Please quote the complete configuration code on all enquiries and orders (see example)

| Configuration code = order number + design code | Description | Section types |
|---|---|---|
| Model No. **9686.912** + design code | Connector kit for top/bottom | Air circuit-breakers (ACB), coupling section, cable transition section |
| Model No. **9686.924** + design code | T-connector kit for top/bottom | Modular outgoing feeder section, fuse-switch disconnector section horizontal/vertical, multi-terminal busbar section, riser section, corner section |

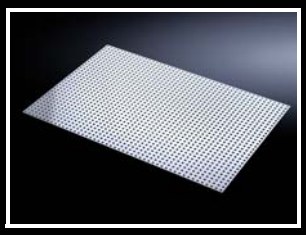
**Example of creating the configuration code**

1. Select section type “air circuit-breaker”

2. Select switch and manufacturer and enter other technical parameters, such as busbar position, number of poles, rated current etc.

3. The connector kit data is output using the "Determine prices and weights" function. Design code and associated drawings (.dwg, .pdf) are available via the "Download" function. The configuration code for the enquiry or order will then look like this: Air circuit-breaker (ACB) Model No. 9686.912 + 8068A1A4H3V661O4-70

## Form 1



### Cover plate

**Slotted**
To cover live parts and comply with the internal protection category IP 2X and IP XXB within low-voltage switchgear and controlgear. Integral vent holes allow convection inside a system.

**Material:**
– PVC

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 1200 | 800 | 1 pc(s). | **9674.990** |

**Accessories:**
– Mounting bracket, see page 408

### Mounting bracket

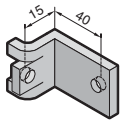
**for contact hazard protection cover**
For the attachment of contact hazard protection covers. Tapped hole M6.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws

| Packs of | **Model No.** |
|---|---|
| 24 pc(s). | **9660.090** |



## Contact hazard protection cover plate

**for enclosures with NH slimline fuse-switch disconnectors**

To cover outgoing sections with NH slimline fuse-switch disconnectors and busbar system in the rear enclosure section so that they are safe from finger contact (IP 2X).

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– 4 side panels (left/right side)
– 2 side panels (top/bottom)
– Assembly parts

**Note:**
– The specified installation width when using the contact hazard protection cover only applies when using busbar supports 9686.060/9686.070

| For enclosure width mm | Free installation width when using Flat-PLS mm | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 400 | 1 pc(s). | **9684.960** |
| 800 | 600 | 1 pc(s). | **9684.980** |
| 1000 | 800 | 1 pc(s). | **9684.900** |
| 1200 | 1000 | 1 pc(s). | **9684.920** |

**Accessories:**

– Blanking cover, see page 409

## Blanking cover

**for contact hazard protection cover**

To cover free NH slimline fuse-switch disconnector slots.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– 2 covers
– 2 cover brackets
– Assembly parts

| Width mm | Packs of | **Model No.** |
|---|---|---|
| 50 | 2 pc(s). | **9684.990** |

## Form 1-4

### Compartment side panel

**for VX**
Side divider panel for attaching partial mounting plates and compartment dividers.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**For busbar system assembly in the rear section**

| For enclosure height mm | For enclosure depth mm | Height mm | Depth mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 2000 | 600 | 1881 | 538 | 2 pc(s). | **9683.006** |
| 2000 | 800 | 1881 | 738 | 2 pc(s). | **9683.008** |

**For busbar system assembly in the roof section**

| For enclosure height mm | For enclosure depth mm | Height mm | Depth mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 2000 | 600 | 1731 | 538 | 2 pc(s). | **9683.016** |
| 2000 | 800 | 1731 | 738 | 2 pc(s). | **9683.018** |
| 2200 | 600 | 1931 | 538 | 2 pc(s). | **9683.036** |
| 2200 | 800 | 1931 | 738 | 2 pc(s). | **9683.038** |

**Accessories:**

– Plastic gland plate, see page 410
– Compartment divider, see page 411
– Partial mounting plate, see page 413

### Plastic gland plate

**for compartment side panel**
For closing cable entry openings.

**Material:**
– PVC, 3 mm

**Colour:**
– Similar to RAL 7045

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Packs of | Model No. |
|---|---|---|---|
| 152 | 48 | 10 pc(s). | **9683.040** |

### Retaining plate

**for cable connection space**
For mounting Maxi-PLS busbars including end supports in the cable connection area.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure depth mm | Height mm | Depth mm | Packs of | Model No. |
|---|---|---|---|---|
| 600 | 375 | 543 | 2 pc(s). | **9683.200** |
| 800 | 375 | 743 | 2 pc(s). | **9683.210** |

**Also required:**

– End supports, see page 401

## Terminal box

**for modular outgoing section**

For shielding the connections (terminals) of the compartment, busbar space and cable chamber in accordance with Form 4b to IEC 61 439-2.

**Material:**
- Lid and cover: Sheet steel, 1.5 mm
- Cable retainer: Sheet steel

**Surface finish:**
- Lid and cover: Zinc-plated

**Supply includes:**
- 2 lids (top/bottom)
- 2 covers (front/rear)
- 2 cable retainers
- Assembly parts

| For enclosure depth mm | For compartment height mm | Packs of | **Model No.** |
|---|---|---|---|
| 600<br>800 | 150 | 1 pc(s). | **9683.701** |
| 600<br>800 | 200 | 1 pc(s). | **9683.702** |
| 600<br>800 | 300 | 1 pc(s). | **9683.703** |
| 600<br>800 | 400 | 1 pc(s). | **9683.704** |
| 600<br>800 | 600 | 1 pc(s). | **9683.706** |

**Also required:**
- Compartment side panel, see page 410

**Assembly instruction:**
- The terminal boxes are externally mounted on the compartment side panel in the cable chamber, to match the heights of the compartments
- If necessary, a clamping strip may be mounted on the cable retainer included with the supply

## Compartment divider

**for VX**

For the horizontal separation of compartments. In combination with the side panels, this creates Form separation to Form 1 to 4. For attachment to the compartment side panel or the enclosure section. The integral cut-outs with pre-punched knock-out option are used for the vertical routing of control lines or cable ducts and for the routing of distribution busbars or connection kits.

**Design:**
- With louvres

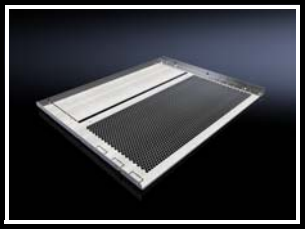
**Material:**
- Sheet steel, 1.5 mm

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

**Assembly instruction:**
- For assembling compartments as internal Form separation, compartment side panels are required

**Accessories:**
- Plastic gland plate, see page 412
- Compartment side panel, see page 410



| For enclosure width mm | For enclosure depth mm | Width mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 400 | 400 | 311 | 380 | 2 pc(s). | **9683.444** |
| 400 | 600 | 311 | 580 | 2 pc(s). | **9683.446** |
| 400 | 800 | 311 | 780 | 2 pc(s). | **9683.448** |
| 600 | 400 | 511 | 380 | 2 pc(s). | **9683.464** |
| 600 | 600 | 511 | 580 | 2 pc(s). | **9683.466** |
| 600 | 800 | 511 | 780 | 2 pc(s). | **9683.468** |
| 800 | 400 | 711 | 380 | 2 pc(s). | **9683.484** |
| 800 | 600 | 711 | 580 | 2 pc(s). | **9683.486** |
| 800 | 800 | 711 | 780 | 2 pc(s). | **9683.488** |
| 1000 | 600 | 911 | 580 | 2 pc(s). | **9683.406** |
| 1000 | 800 | 911 | 780 | 2 pc(s). | **9683.408** |
| 1200 | 600 | 1111 | 580 | 2 pc(s). | **9683.426** |
| 1200 | 800 | 1111 | 780 | 2 pc(s). | **9683.428** |

## Form 1-4

### Plastic gland plate

**for compartment divider**
To cover the compartment divider with gland.

**Material:**
– ABS

**Colour:**
– Similar to RAL 9005

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 250 | 251 | 2 pc(s). | **9683.504** |
| 450 | 251 | 2 pc(s). | **9683.506** |
| 650 | 251 | 2 pc(s). | **9683.508** |
| 850 | 251 | 2 pc(s). | **9683.500** |

### Air circuit-breaker support bar

For the configuration of air circuit-breakers (ACB) in compartments.

**Material:**
– Sheet steel, 2.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure width mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 296 | 2 pc(s). | **9683.304** |
| 600 | 496 | 2 pc(s). | **9683.306** |
| 800 | 696 | 2 pc(s). | **9683.308** |
| 1000 | 896 | 2 pc(s). | **9683.310** |
| 1200 | 1096 | 2 pc(s). | **9683.312** |

**! Also required:**

– Mounting bracket, see page 412

### Mounting bracket

**for air circuit-breaker support rail**
For attaching the air circuit-breaker support rail to the enclosure section or compartment side panel.

**Material:**
– Sheet steel, 2.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 2 pc(s). | **9683.326** |
| 800 | 2 pc(s). | **9683.328** |

## Partial mounting plate

**for compartment side panel**

For direct attachment to the compartment side panel for internal compartmentalisation. Universal interior installation with switchgear and controlgear. Creation of additional mounting levels. In combination with compartment dividers and side panel, internal compartmentalisation in accordance with Form 1 to 4 is possible.

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Angle brackets and assembly parts

**Design Solid**

| For enclosure width mm | For compartment height mm | Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 400 | 200 | 302 | 193 | 1 pc(s). | **9683.642** |
| 400 | 300 | 302 | 293 | 1 pc(s). | **9683.643** |
| 400 | 400 | 302 | 393 | 1 pc(s). | **9683.644** |
| 400 | 600 | 302 | 593 | 1 pc(s). | **9683.646** |
| 400 | 800 | 302 | 793 | 1 pc(s). | **9683.648** |
| 600 | 1000 | 502 | 993 | 1 pc(s). | **9683.660** |
| 600 | 150 | 502 | 143 | 1 pc(s). | **9683.661** |
| 600 | 200 | 502 | 193 | 1 pc(s). | **9683.662** |
| 600 | 300 | 502 | 293 | 1 pc(s). | **9683.663** |
| 600 | 400 | 502 | 393 | 1 pc(s). | **9683.664** |
| 600 | 600 | 502 | 593 | 1 pc(s). | **9683.666** |
| 600 | 800 | 502 | 793 | 1 pc(s). | **9683.668** |
| 800 | 1000 | 702 | 993 | 1 pc(s). | **9683.680** |
| 800 | 150 | 702 | 143 | 1 pc(s). | **9683.681** |
| 800 | 200 | 702 | 193 | 1 pc(s). | **9683.682** |
| 800 | 300 | 702 | 293 | 1 pc(s). | **9683.683** |
| 800 | 400 | 702 | 393 | 1 pc(s). | **9683.684** |
| 800 | 600 | 702 | 593 | 1 pc(s). | **9683.686** |
| 800 | 800 | 702 | 793 | 1 pc(s). | **9683.688** |
| 1000 | 400 | 902 | 393 | 1 pc(s). | **9683.604** |
| 1000 | 600 | 902 | 593 | 1 pc(s). | **9683.606** |
| 1000 | 800 | 902 | 793 | 1 pc(s). | **9683.608** |
| 1200 | 400 | 1102 | 393 | 1 pc(s). | **9683.624** |
| 1200 | 600 | 1102 | 593 | 1 pc(s). | **9683.626** |
| 1200 | 800 | 1102 | 793 | 1 pc(s). | **9683.628** |

**Design with gland made from insulating material**

| For enclosure width mm | For compartment height mm | Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 600 | 150 | 502 | 143 | 1 pc(s). | **9683.561** |
| 600 | 200 | 502 | 193 | 1 pc(s). | **9683.562** |
| 600 | 300 | 502 | 293 | 1 pc(s). | **9683.563** |
| 600 | 400 | 502 | 393 | 1 pc(s). | **9683.564** |

## Form 1-4

### Support frame

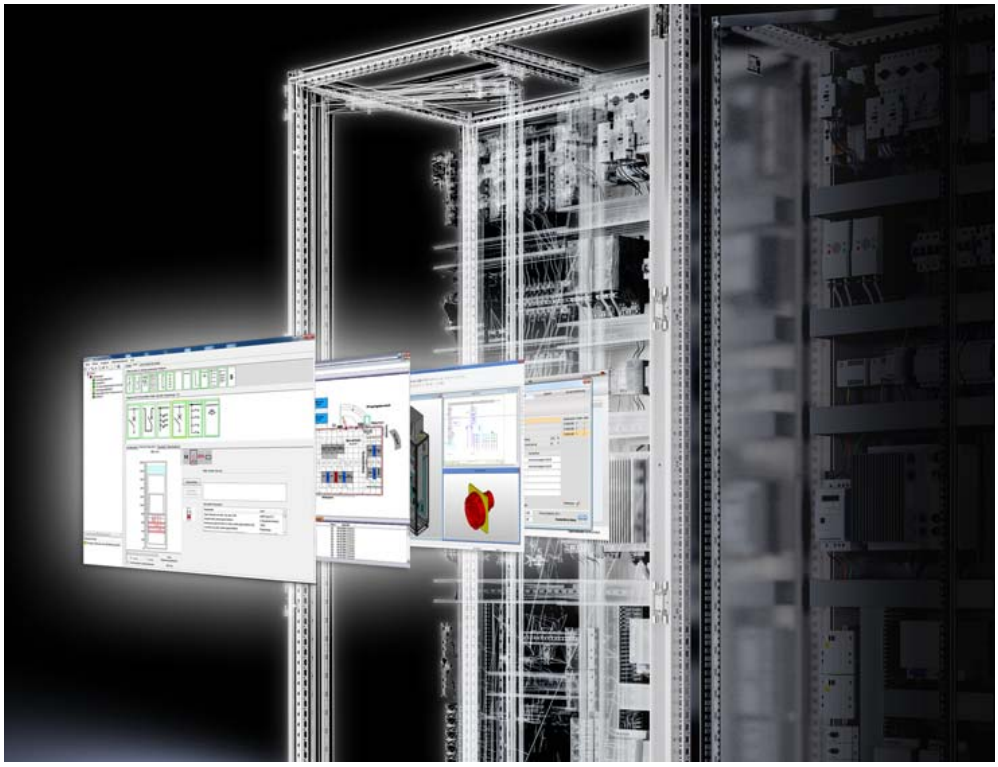
**for DIN rail-mounted devices**

Support frame set for accepting DIN rail-mounted devices (e.g. MCBs). The support rails are fastened with two mounting brackets to the compartment side panel. The cover is fastened to the support frame with knurled screws. In combination with functional space dividers, partial mounting plates and side panel modules, internal compartmentalisation in accordance with Form 2, 3 or 4 is possible.

**Material:**
- Support frame: Sheet steel, zinc-plated, passivated, 1.5 mm
- Cover: Sheet steel, spray finished, 1.5 mm

**Supply includes:**
- Support rails
- 2 mounting brackets
- 1 cover with cut-out
- Assembly parts

| For enclosure width mm | For compartment height mm | No. of pitch units 17.5 mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 600 | 300 | 2 x 24 | 1 pc(s). | **9683.763** |
| 800 | 300 | 2 x 36 | 1 pc(s). | **9683.783** |



Certainty for engineering: optimum conversion and planning tools, see page 1160

## Busbar support

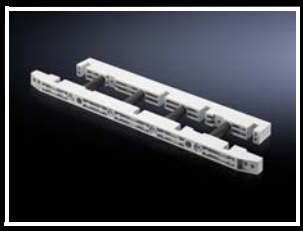
**for fuse-switch disconnector section**
Busbar supports for the distribution busbar system of the fuse-switch disconnector section.

**Material:**
– Duroplastic polyester

**Supply includes:**
– Mounting bracket and screws

| For busbars mm | Number of poles | Packs of | **Model No.** |
|---|---|---|---|
| 60 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.416** |
| 80 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.418** |
| 100 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.410** |

**Also required:**
– Busbars E-Cu, see page 342
– End support, see page 415



## End support

**for fuse-switch disconnector section**
End support for the distribution busbar system of the fuse-switch disconnector section, for vertical support of the distribution busbar system with infeed from above.

**Material:**
– Duroplastic polyester

**Supply includes:**
– Mounting bracket and screws

| For busbars mm | Number of poles | Packs of | **Model No.** |
|---|---|---|---|
| 60 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.436** |
| 80 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.438** |
| 100 x 10 | 3-pole<br>4-pole | 1 pc(s). | **9674.430** |

**Also required:**
– Busbars E-Cu, see page 342

## Cover

**Set for distribution busbar**
**(Jean Müller fuse-switch disconnector section)**
To cover the distribution busbar system of a fuse-switch disconnector section, designed to accommodate Jean Müller devices. The 150 mm high busbar and cable connection space covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

**Material:**
– PVC, black

**Supply includes:**
– Set consisting of 12 busbar covers and cable connection space covers

| For enclosure height mm | Packs of | **Model No.** |
|---|---|---|
| 2000<br>2200 | 1 pc(s). | **9674.380** |

**Also required:**
– Punched rail, see page 416

# Fuse-switch disconnector section

## Punched rail

**Set for cover, distribution busbar (Jean Müller fuse-switch disconnector section)**
Required for mounting the distribution busbar cover.

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– Set consisting of 2 punched rails
– Assembly parts

**Note:**
– For 1 fuse-switch disconnector section, 1 pack of punched rails is required.

| For enclosure height mm | Packs of | **Model No.** |
|---|---|---|
| 2000<br>2200 | 1 pc(s). | **9674.381** |

## Cover

**for distribution busbar (ABB/Siemens fuse-switch disconnector section)**
To cover the distribution busbar system of a switch-disconnector-fuse section, designed to accommodate ABB (SlimLine) or Siemens (3NJ62) devices. The 200 mm high busbar compartment covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

**Material:**
– PVC, black

**Note:**
– The cover may be ordered from ABB under model number NHP 407062R000X
– For enclosure height 2000 mm, a height of 1500 mm should be covered, and for enclosure height 2200 mm, a height of 1700 mm should be covered

## Copper spacer roll

**for Maxi-PLS busbars and flat copper bars**
For use as a universal spacer.

**Material:**
– E-Cu

| Height mm | Diameter mm | Hole Ø mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 20 | 30 | 13 | 4 pc(s). | **9676.503** |
| 20 | 40 | 13 | 4 pc(s). | **9676.504** |
| 20 | 50 | 13 | 4 pc(s). | **9676.505** |

## Wiring trim panel

**for VX**
Inner front cover of the main busbar system with the option of mounting a 40 x 20 mm (WxD) wiring channel. Suitable for use in Ri4Power switchgear with 300 mm high front trim panels. Horizontal cable routing behind the front trim panels. Also supports the installation of support rails with DIN rail mounted devices.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

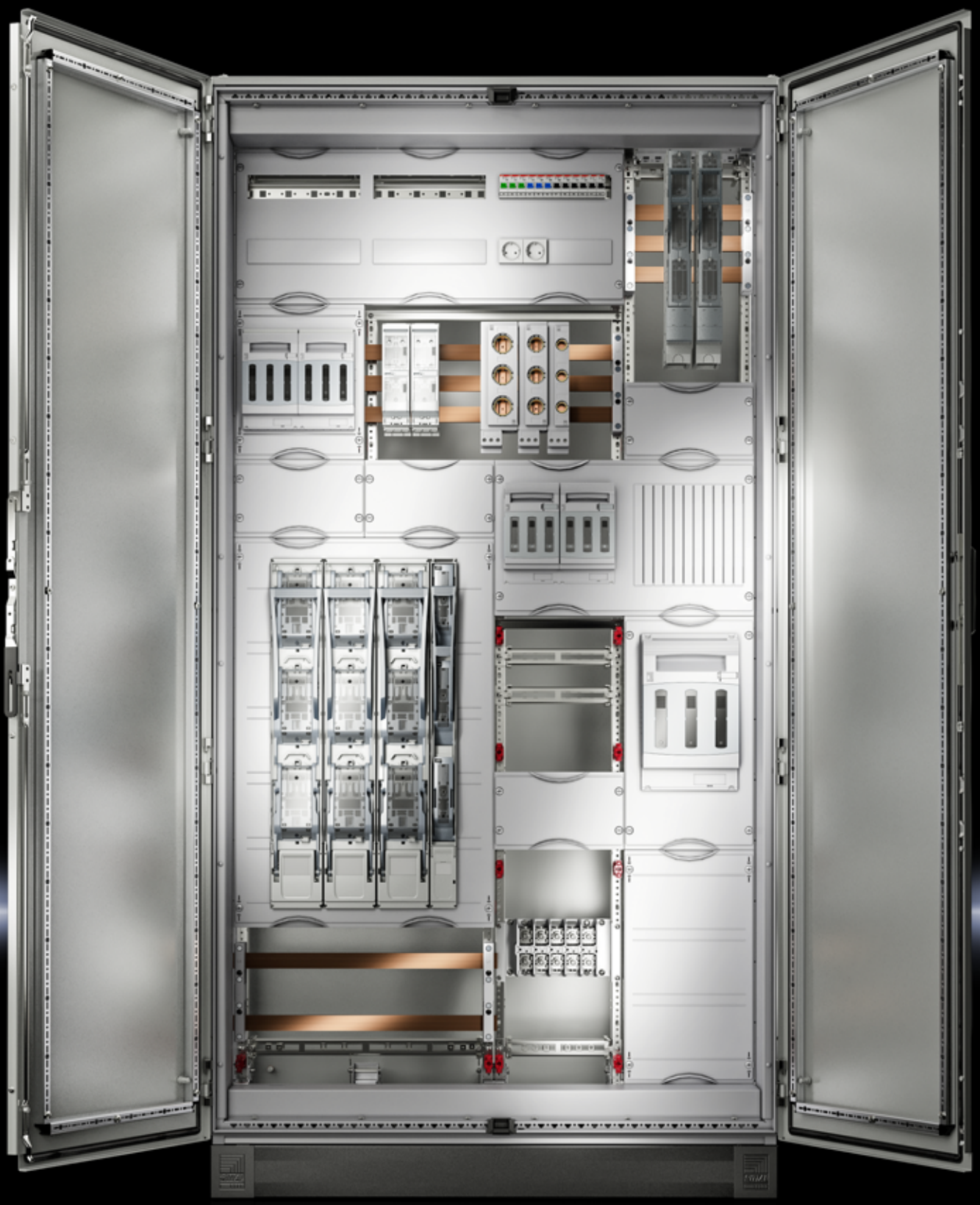
**Supply includes:**
– 1 wiring trim panel, 3-part
– Assembly parts

**Note:**
– For vertical cable routing, compartment dividers enable the installation of a wiring channel, thanks to pre-punched cut-outs.

| For enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 600<br>800 | 1 pc(s). | **9683.736** |
| 1000<br>1200 | 1 pc(s). | **9683.738** |

# Rittal – The System.

**Faster – better – everywhere.**



# VX25 Ri4Power ISV distribution enclosures

## Distribution enclosures

- Based on baying enclosure system VX25, see page 116
- Mounting kits, see page 420

## Wall-mounted distributors

- Based on compact enclosure AX, see page 84
- Mounting kits, see page 420

## Installation modules

- Easy mounting on support frame or support plate
- Individual combination and configuration
- Pitch pattern 150 x 250 mm
- Installation modules, see page 421

## Power distribution components

- Bus-mounting fuse bases, see page 323
- NH fuse-switch disconnectors, see page 325
- NH slimline fuse-switch disconnectors, see page 335

## Mounting kits

### ISV installation kit

**for VX**

For mounting ISV installation modules in the enclosure.

**Material:**
- Mounting frame holder: Sheet steel, zinc-plated
- Contact hazard protection: sheet steel, spray-finished
- Contact hazard protection, sides: PVC

**Supply includes:**
- Mounting aid support
- Contact hazard protection
- Assembly parts

**Accessories:**
- Cross rail ISV, see page 429
- Mounting angles ISV, see page 429
- Depth stay, see page 430
- Equipment support connectors, see page 430

| For enclosure width mm | For enclosure height mm | For enclosure depth mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | To fit Model No. | Note on Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|
| 600 | 1800 | 400<br>500<br>600 | 2 | 11 | 8457.000/<br>8684.000/<br>8685.000/<br>8686.000 | Mounting angle 9666.711 and mounting plate 8612.400 are additionally required | 1 pc(s). | **9666.932** |
| 600 | 2000 | 400<br>500<br>600 | 2 | 12 | 8452.000/<br>8604.000/<br>8605.000/<br>8606.000 | Mounting angle 9666.712 and mounting plate 8612.400 are additionally required | 1 pc(s). | **9666.902** |
| 850 | 2000 | 400<br>600 | 3 | 12 | 9666.916/<br>9666.956 | Mounting angle 9666.712 and mounting plate 8612.400 are additionally required | 1 pc(s). | **9666.912** |
| 1100 | 2000 | 400<br>600 | 4 | 12 | 9666.926/<br>9666.966 | Mounting angle 9666.712, depth stay 9666.732 and mounting board 8612.400 are additionally required | 1 pc(s). | **9666.922** |

### ISV installation kit

**for AX**

For mounting ISV installation modules in enclosures.

**Material:**
- Assembly kit: Sheet steel, zinc-plated
- Support rail: Sheet steel, zinc-plated
- Contact hazard protection: Sheet steel, spray-finished

**Supply includes:**
- Assembly kit
- Support rails
- Contact hazard protection
- Assembly parts

**Also required:**
- Mounting angles ISV, see page 429

| For enclosure width mm | For enclosure height mm | For enclosure depth mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 380 | 600 | 210 | 1 | 3 | 1008.X00/<br>1038.X00 | 1 pc(s). | **9666.801** |
| 500 | 700 | 250 | 1 | 4 | 1057.X00 | 1 pc(s). | **9666.811** |
| 600 | 760 | 210 | 2 | 4 | 1012.X00/<br>1076.X00 | 1 pc(s). | **9666.821** |
| 600 | 1000 | 250 | 2 | 6 | 1090.X00 | 1 pc(s). | **9666.831** |
| 600 | 1200 | 300 | 2 | 7 | 1260.X00 | 1 pc(s). | **9666.841** |
| 1000 | 1200 | 300 | 3 | 7 | 1019.X00/<br>1213.X00/<br>1305.X00 | 1 pc(s). | **9666.851** |

## Contact hazard protection module

For covering free installation areas. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 250 | 150 | 1 | 1 | 1 pc(s). | **9666.000** |
| 250 | 300 | 1 | 2 | 1 pc(s). | **9666.010** |
| 250 | 450 | 1 | 3 | 1 pc(s). | **9666.020** |
| 250 | 600 | 1 | 4 | 1 pc(s). | **9666.030** |
| 500 | 150 | 2 | 1 | 1 pc(s). | **9666.040** |
| 500 | 300 | 2 | 2 | 1 pc(s). | **9666.050** |
| 500 | 450 | 2 | 3 | 1 pc(s). | **9666.060** |
| 500 | 600 | 2 | 4 | 1 pc(s). | **9666.070** |
| 750 | 300 | 3 | 2 | 1 pc(s). | **9666.053** |
| 750 | 450 | 3 | 3 | 1 pc(s). | **9666.063** |
| 750 | 600 | 3 | 4 | 1 pc(s). | **9666.073** |

## Mounting plate module

Possible installation depth 105 - 140 mm. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Mounting plate: Sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Dimensions mounting plate (W x H) mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 250 | 150 | 1 | 1 | 188 x 116 | 1 pc(s). | **9666.080** |
| 250 | 300 | 1 | 2 | 188 x 266 | 1 pc(s). | **9666.090** |
| 250 | 450 | 1 | 3 | 188 x 416 | 1 pc(s). | **9666.100** |
| 250 | 600 | 1 | 4 | 188 x 566 | 1 pc(s). | **9666.110** |
| 500 | 150 | 2 | 1 | 438 x 116 | 1 pc(s). | **9666.120** |
| 500 | 300 | 2 | 2 | 438 x 266 | 1 pc(s). | **9666.130** |
| 500 | 450 | 2 | 3 | 438 x 416 | 1 pc(s). | **9666.140** |
| 500 | 600 | 2 | 4 | 438 x 566 | 1 pc(s). | **9666.150** |
| 750 | 300 | 3 | 2 | 688 x 266 | 1 pc(s). | **9666.133** |
| 750 | 450 | 3 | 3 | 688 x 416 | 1 pc(s). | **9666.143** |

## Installation modules

### Support rail module

For installing terminal blocks, switchgear, etc. with support rails 35 x 15 mm. Adjustable on a 25 mm pitch pattern. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Support rail: Sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Accessories:**

– Wiring bracket, see page 428

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Number of support rails | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 250 | 150 | 1 | 1 | 1 | 1 pc(s). | **9666.160** |
| 250 | 300 | 1 | 2 | 2 | 1 pc(s). | **9666.170** |
| 250 | 450 | 1 | 3 | 3 | 1 pc(s). | **9666.180** |
| 250 | 600 | 1 | 4 | 4 | 1 pc(s). | **9666.190** |
| 500 | 150 | 2 | 1 | 1 | 1 pc(s). | **9666.200** |
| 500 | 300 | 2 | 2 | 2 | 1 pc(s). | **9666.210** |
| 500 | 450 | 2 | 3 | 3 | 1 pc(s). | **9666.220** |
| 500 | 600 | 2 | 4 | 4 | 1 pc(s). | **9666.230** |
| 750 | 300 | 3 | 2 | 2 | 1 pc(s). | **9666.213** |
| 750 | 450 | 3 | 3 | 3 | 1 pc(s). | **9666.223** |

### DIN rail mounted device module

To accommodate DIN rail mounted devices. With support rails 35 x 15 mm. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Support rail: Sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Accessories:**

– Cover strip, see page 428

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Max. pitch units @ 18 mm | Number of cut-outs | Number of support rails | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|
| 250 | 150 | 1 | 1 | 12 | 1 | 1 | 1 pc(s). | **9666.240** |
| 250 | 300 | 1 | 2 | 24 | 2 | 2 | 1 pc(s). | **9666.250** |
| 250 | 450 | 1 | 3 | 36 | 3 | 3 | 1 pc(s). | **9666.260** |
| 250 | 600 | 1 | 4 | 48 | 4 | 4 | 1 pc(s). | **9666.270** |
| 500 | 150 | 2 | 1 | 24 | 2 | 1 | 1 pc(s). | **9666.280** |
| 500 | 300 | 2 | 2 | 48 | 4 | 2 | 1 pc(s). | **9666.290** |
| 500 | 450 | 2 | 3 | 72 | 6 | 3 | 1 pc(s). | **9666.300** |
| 750 | 300 | 3 | 2 | 72 | 6 | 2 | 1 pc(s). | **9666.293** |
| 750 | 450 | 3 | 3 | 108 | 9 | 3 | 1 pc(s). | **9666.303** |

## Connection terminal block

For connecting copper and aluminium conductors. For laminated copper bars or solid and stranded conductors with a pressed wire end ferrule.

**Material:**
– Duroplastic

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Also required:**

– Contact hazard protection module, see page 421
– Mounting set, see page 423

**Assembly instruction:**

– Contact hazard protection module 9666.020 is additionally required to cover the connection terminal block

| Rated current max. A | Number of poles | Connection of round conductors $mm^2$ | Clamping area for laminated copper bars (W x H) mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 250 | 5-pole | 16 - 150<br>2 x 16 - 70 | 17 x 21 | 1 pc(s). | **9666.340** |
| 400 | 5-pole | 50 - 240<br>2 x 25 - 120 | 25 x 21 | 1 pc(s). | **9666.350** |

## Mounting set

**for connection terminal block**
For attaching the connection terminal block to the frame of the ISV installation kit.

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– Assembly parts

| Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Packs of | **Model No.** |
|---|---|---|---|
| 1 | 3 | 1 pc(s). | **9666.310** |

## Installation modules

### NH fuse-switch-disconnector module

Suitable for accommodating NH fuse-switch disconnectors for mounting plate assembly. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Cross member: Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Assembly instruction:**

– When using the NH fuse-switch disconnector 2 x size 2 (9344.210/.230/.250) or 1 x size 3 (9344.310/.330/.350), the disconnector cross-member 9666.420 and contact hazard protection module 9666.060 should be used as the module unit

**Accessories:**

– Blanking cover, see page 428

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | For size | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 250 | 300 | 1 | 2 | 2 x size 00 | 9344.000/ 9344.010/ 9344.020/ 9344.030/ 9344.040/ 9344.050 | 1 pc(s). | **9666.380** |
| 500 | 300 | 2 | 2 | 4 x size 00 | 9344.000/ 9344.010/ 9344.020/ 9344.030/ 9344.040/ 9344.050 | 1 pc(s). | **9666.390** |
| 250 | 450 | 1 | 3 | 1 x size 1 | 9344.100/ 9344.110/ 9344.130/ 9344.150 | 1 pc(s). | **9666.400** |
| 250 | 450 | 1 | 3 | 1 x size 2 | 9344.210/ 9344.230/ 9344.250 | 1 pc(s). | **9666.410** |

### Disconnector cross member

**for NH fuse-switch disconnectors**
Suitable for accommodating NH fuse-switch disconnectors for mounting plate assembly.

**Material:**
– Sheet steel

**Supply includes:**
– Assembly parts

**Note:**
– When using the disconnector cross-member, contact hazard protection module 9666.060 is additionally required

**Also required:**

– Contact hazard protection module, see page 421

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | For size | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 500 | 450 | 2 | 3 | 2 x size 2<br>1 x size 3 | 9344.210/ 9344.230/ 9344.250/ 9344.310/ 9344.330/ 9344.350 | 1 pc(s). | **9666.420** |

## NH slimline fuse-switch-disconnector module

For NH slimline fuse-switch disconnectors, sizes 00 to 3 (3-pole, 100/185 mm bar centre distance).

**Material:**
– Cover: Polystyrene
– Holder: Fibreglass-reinforced plastic

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Note:**
– In order to ensure problem-free cable connection, a contact hazard protection module or an N/PE busbar module must be installed above or below the NH slimline fuse-switch disconnector modules.

**Also required:**
– Busbars E-Cu, see page 342

**Accessories:**
– Contact hazard protection module, see page 421
– Busbar module N/PE, see page 426

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | For size | To fit Model No. | For busbar mm | Bar centre distance mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|
| 250 | 450 | 1 | 3 | 3 x size 00 | 9346.020/ 9346.030 | 40 x 10 | 100 | 1 pc(s). | **9666.570** |
| 500 | 450 | 2 | 3 | 6 x size 00 | 9346.020/ 9346.030 | 40 x 10 | 100 | 1 pc(s). | **9666.580** |
| 500 | 750 | 2 | 5 | 8 x size 00<br>4 x size 1<br>4 x size 2<br>4 x size 3 | 9677.XXX | 60 x 10 | 185 | 1 pc(s). | **9666.550** |
| 750 | 450 | 3 | 3 | 10 x size 00 | 9346.020/ 9346.030 | 40 x 10 | 100 | 1 pc(s). | **9666.583** |
| 750 | 750 | 3 | 5 | 12 x size 00<br>6 x size 1<br>6 x size 2<br>6 x size 3 | 9677.XXX | 60 x 10 | 185 | 1 pc(s). | **9666.560** |

## Circuit-breaker module

Suitable for accommodating standard moulded-case circuit-breakers from ABB, Eaton, Schneider Electric and Siemens. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Support rail: Sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | For switchgear make (model) | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 250 | 300 | 1 | 2 | ABB (T1, T2, T3)<br>Eaton (NZM1, NZM2, BZM B1, BZM B2)<br>Schneider Electric (NSX100, NSX160, NSX250)<br>Siemens (3RV13 53, VL160(X), VL250, VT1, VT2) | 1 pc(s). | **9666.430** |
| 500 | 450 | 2 | 3 | ABB (T4, T5)<br>Eaton (NZM3)<br>Schneider Electric (NSX400, NSX630)<br>Siemens (3RV1.6., 3RV1.7., VL400, VL630, VT3) | 1 pc(s). | **9666.440** |

## Installation modules

### Meter mounting board module

Open module for internal measurements. Clearance depth available for meter installation 170 mm.

**Design:**
– Attachment rails to accommodate a meter

**Material:**
– Meter mounting board: Polystyrene
– Mounting rails: sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Note:**
– The meter mounting board module does not comply with meter mounting board standard DIN 43 870/VDE 0603 and does not meet the conditions for total insulation. Use in unmetered areas only by arrangement with the local electricity supply company.

**Assembly instruction:**

– 1 contact hazard protection module / DIN rail-mounted device module or support rail module with 1 WU and at least 1 U is required both above and below the meter mounting board module

**Accessories:**

– Contact hazard protection module, see page 421
– Support rail module, see page 422
– DIN rail mounted device module, see page 422

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 250 | 450 | 1 | 3 | 1 pc(s). | **9666.640** |

### Busbar module N/PE

For attaching busbars 12 x 5/10 mm, 20 x 5/10 and 30 x 5/10 mm for N and PE. Cover is prepared for a lead seal.

**Material:**
– Cover: Polystyrene
– Holder: Fibreglass-reinforced plastic
– Support rail: Sheet steel, zinc-plated

**Colour:**
– RAL 7035

**Also required:**

– Busbars E-Cu, see page 342

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 250 | 300 | 1 | 2 | 1 pc(s). | **9666.590** |
| 500 | 300 | 2 | 2 | 1 pc(s). | **9666.600** |
| 750 | 300 | 3 | 2 | 1 pc(s). | **9666.603** |

## Busbar module

**for fuse elements**

For assembling bus-mounting fuse bases E18, E27, E33 and D-Switch as well as NH fuse-switch disconnectors, sizes 000 and 00 (3-pole, 60 mm bar centre distance).

**Material:**
- Cover: Polystyrene
- Holder: Fibreglass-reinforced plastic

**Colour:**
- RAL 7035

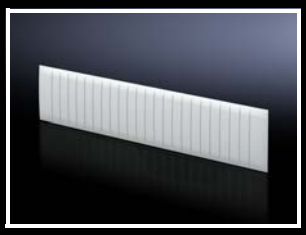
**Supply includes:**
- Assembly parts

**Also required:**
- Busbars E-Cu, see page 342

**Accessories:**
- Blanking cover, see page 428

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | To fit Model No. | For busbar mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 250 | 300 | 1 | 2 | 3418.010/ 3427.010/ 3433.010/ 3431.020/ 3431.030/ 3431.035/ 9340.950/ 9343.000/ 9343.020/ 9343.040 | 30 x 10 | 1 pc(s). | **9666.520** |
| 500 | 300 | 2 | 2 | 3418.010/ 3427.010/ 3433.010/ 3431.020/ 3431.030/ 3431.035/ 9340.950 | 30 x 10 | 1 pc(s). | **9666.530** |
| 750 | 300 | 3 | 2 | 3418.010/ 3427.010/ 3433.010/ 3431.020/ 3431.030/ 3431.035/ 9340.950 | 30 x 10 | 1 pc(s). | **9666.533** |

## Accessories



### Cover strip

**for DIN rail mounted device module**
For sealing unused component cut-outs in DIN rail mounted device modules, max. 12 pitch units (12 x 18 mm), divisible every 9 mm.

**Material:**
– ABS

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 5 pc(s). | **9666.650** |

### Blanking cover

**for busbar module**
For sealing unused cut-outs. Width: 16 – 34 mm, variable.

**Material:**
– Polypropylene

**Colour:**
– RAL 7035

| Width mm | To fit Model No. | Packs of | Model No. |
|---|---|---|---|
| 34 | 9666.520/ 9666.530/ 9666.533 | 10 pc(s). | **9666.660** |

### Blanking cover

**for NH fuse-switch-disconnector module**
For sealing unused cut-outs (size 00).

**Material:**
– PVC

**Colour:**
– RAL 7035

| Width mm | To fit Model No. | Packs of | Model No. |
|---|---|---|---|
| 117 | 9666.380/ 9666.390 | 1 pc(s). | **9666.665** |

### Wiring bracket

For tool-free attachment to the support rail 35 x 15 mm, for cable entry at the rear of support rail modules.

**Material:**
– Polyamide

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **9666.670** |

## Depth extension frame

**for NH fuse-switch disconnectors size 00**

For extending the depth of the contact hazard protection cover. Allows unrestricted connection of NH fuse-switch disconnectors, size 00 (3-pole, 60 mm bar centre distance).

**Material:**
– Polystyrene

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

**Note:**
– NH fuse-switch disconnectors size 00 with covers and depth extension frame cannot be used in conjunction with other equipment

| Width mm | Height mm | Width units (WU) @ 250 mm | Height units (U) @ 150 mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 250 | 300 | 1 | 2 | 1 pc(s). | **9666.680** |

## Cross rail ISV

**for VX**

For horizontal sub-division of the support frame in the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Width mm | Width units (WU) @ 250 mm | Packs of | Model No. |
|---|---|---|---|
| 500 | 2 | 2 pc(s). | **9666.722** |
| 750 | 3 | 2 pc(s). | **9666.723** |
| 1000 | 4 | 2 pc(s). | **9666.724** |

## Mounting angles ISV

**for VX**

For vertical sub-division of the support frame in the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Height mm | Height units (U) @ 150 mm | Packs of | Model No. |
|---|---|---|---|
| 300 | 2 | 2 pc(s). | **9666.702** |
| 450 | 3 | 2 pc(s). | **9666.703** |
| 600 | 4 | 2 pc(s). | **9666.704** |
| 750 | 5 | 2 pc(s). | **9666.705** |
| 900 | 6 | 2 pc(s). | **9666.706** |
| 1050 | 7 | 2 pc(s). | **9666.707** |
| 1650 | 11 | 2 pc(s). | **9666.711** |
| 1800 | 12 | 2 pc(s). | **9666.712** |

**Accessories:**

– Equipment support connectors, see page 430

## Mounting angles ISV

**for AX**

For vertical sub-division of the support frame in the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Height mm | Height units (U) @ 150 mm | Packs of | Model No. |
|---|---|---|---|
| 450 | 3 | 2 pc(s). | **9666.753** |
| 600 | 4 | 2 pc(s). | **9666.754** |
| 900 | 6 | 2 pc(s). | **9666.756** |
| 1050 | 7 | 2 pc(s). | **9666.757** |

## Accessories

### Depth stay

**for installation kit ISV**
For attaching the installation kit in the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosures | For enclosure depth mm | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|
| VX | 400<br>500<br>600 | 9666.902/<br>9666.912/<br>9666.922/<br>9666.932 | 2 pc(s). | **9666.732** |

### Equipment support connectors

**for mounting angles ISV**
For connecting 2 mounting angles. Increases the stability of the frame structure.

**Material:**
– T-section: Aluminium

**Supply includes:**
– Assembly parts

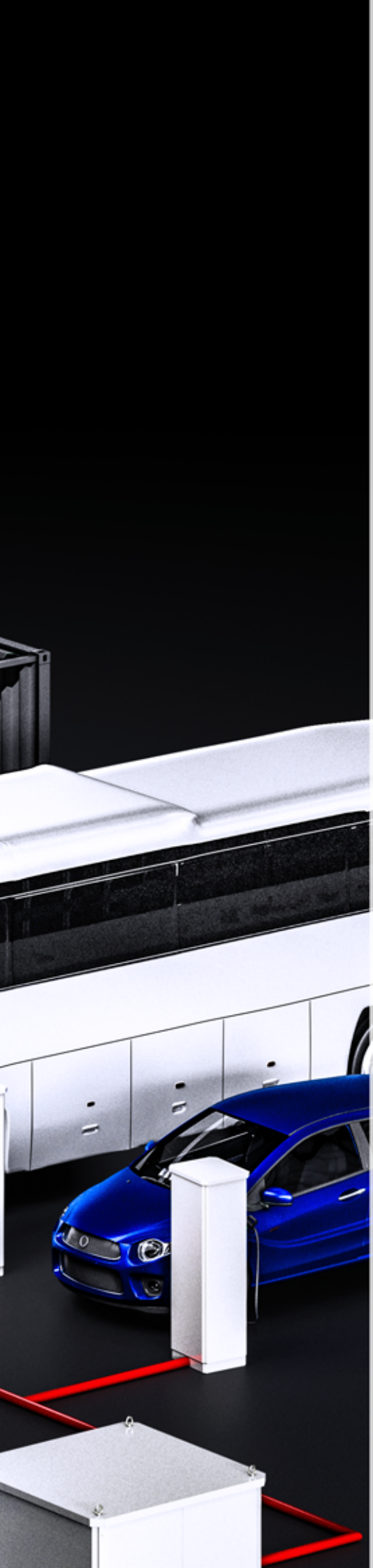
| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 9666.702/<br>9666.703/<br>9666.704/<br>9666.705/<br>9666.706/<br>9666.707/<br>9666.711/<br>9666.712 | 4 pc(s). | **9666.740** |

# Wall-mounted distributor

Based on compact enclosure AX, see page 78

# Rittal Energy and Power Solutions

## End-to-end solutions from generation to consumer



## Renewable energies

- Reliable energy generation and infeed, together with smart connectivity, are the key to the new energy world, where energy solutions must transcend individual sectors.
- There is a demand for solutions with global availability and internationally recognised approvals plus effective protection from a wide range of ambient conditions.
- Plant and systems engineering needs solutions to create significant competitive advantages through energy efficiency plus time and money savings.

## Energy storage solutions

- Battery stores can help to stabilise the power supply in the renewable energies environment, e.g. by means of peak load management, frequency retention and an uninterruptible power supply (UPS).
- The different battery module designs available on the market necessitate a variable solution for building energy storage systems. The standardised modular system offers the required degree of variability and supports the integration of 482.6 mm (19″) battery types and other variants using rails and heavy-duty shelves.
- The range of products includes indoor, outdoor and even container solutions. Our standard products will help to reduce your planning and production costs.

## Charging infrastructure

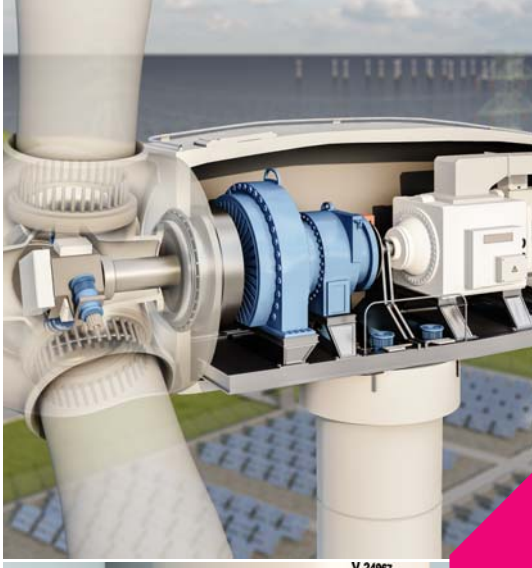
- Charging centres generally comprise a scalable number of charging pillars, the requisite backend infrastructure, plus a low-voltage main distributor.
- We usually distinguish between normal charging in the range < 50 kW (primarily AC technology), fast charging from 50 kW upwards, and high-power charging > 150 kW (DC technology).

# Renewable energies

## Flexible enclosure solutions for wind power and photovoltaics

## Rotor hub / nacelle

- Rittal provides suitable enclosure and case systems for all areas of wind farms, based on impressive modular technology.
- Control cabinets in the nacelle and pitch enclosure directly in the rotor hub, to reliably withstand even the highest dynamic forces



## Tower

- The components we use are modular, efficient and low-maintenance, for fast (and in some cases, customised) configuration.
- Complete system solutions for powerful frequency converters including climate control

## Central inverter

- There is a growing use of inverter systems under difficult ambient conditions.
- Smart standard solutions offer a high level of physical protection for the enclosure, equipped with power distributor and climate control.

## Solar panel

- Compact enclosures in the AX and KX series are ideal for housing the electronics for solar tracking systems or as a general junction box. The small and compact enclosures offer simpler, faster assembly coupled with greater flexibility and security.

# Renewable energies

| Application | | | Enclosure |
|---|---|---|---|
| System solution | | | Rittal enclosure solutions provide optimum protection for your components.<br>■ Protection category-tested enclosure technology to IP, IK, RC<br>■ Accredited in-house laboratory<br>■ 3-phase surface treatment for maximum corrosion protection<br>■ Choice of materials depending on the climate and requirement profile: Aluminium, stainless steel, sheet steel<br>■ EMC protection<br>■ Static load capacity up to 14,000 N |
| | | **Requirements** | |
| Wind energy | Rotor hub | ■ Dynamic loads<br>■ Walkable<br>■ Easy access | ■ Small and compact enclosures, material: sheet steel, stainless steel, from page 43 |
| | Nacelle | ■ Dynamic loads<br>■ Thermal management<br>■ Prevent condensation | ■ Large enclosure, material: Sheet steel, from page 116 |
| | Tower | ■ Confined space<br>■ Thermal management | ■ Large enclosure, material: Sheet steel, from page 116 |
| Photovoltaics | Central inverter | ■ Weather influences<br>■ Environmental conditions | ■ Large outdoor enclosure, material: Stainless steel, aluminium, from page 268 |
| | Solar panel | | ■ Small enclosure/PK, material: Plastic, sheet steel, from page 43 |

| | Climate control | Power distribution | Accessories | Quality management |
|---|---|---|---|---|
| | Efficient, innovative climate control solutions provide reliable protection for your power electronics.<br>■ Fans, cooling units and heaters for temperature control of the built-in equipment.<br>■ Individual design of the required climate control using our Therm software | Rittal offers a modular system for demand-based power distribution (from page 277).<br>■ Distribution and protection of the power supply focussing on standardisation and availability<br>■ Planning and design of low-voltage switchgear to IEC 61 439 with design certificate using Power Engineering software | | Rittal will support you from day one:<br>■ Project planning of technical specifications<br>■ Prototype assembly, testing and simulations<br>■ Manufacturing and assembly<br>■ Warehousing service and on-time delivery<br>■ Your own personal point of contact throughout the entire project |
| | ■ Fan-and-filer units with protection category IP 54 as standard.<br>More products from page 456 | ■ Modular system for low-voltage switchgear with design verification to IEC 61 439 up to 1600 A for DC and AC applications, from page 446<br>■ Rated current < 125 A RiLine Compact, from page 285<br>■ Rated current < 250 A Mini-PLS, from page 294<br>■ Rated current < 1600 A RiLine PLS, from page 300<br>■ Rated current < 6300 A VX25 Ri4Power, from page 314 | ■ Earthquake kit, from page 1032<br>■ EMC, from page 1028<br>■ Monitoring, from page 799<br>■ IoT interface, from page 554<br>■ Base/plinths, from page 880<br>■ Lock systems, from page 933<br>■ Rain canopies, from page 958<br>■ Interior installation, mounting plates, bar systems, from page 970<br>■ Industry-specific accessories available on request | Accredited Rittal test laboratory<br>■ Simulation of climatic conditions<br>■ Dynamic and static load tests<br>■ 3D measurement<br>■ Corrosion testing<br>■ Electrical safety and function tests<br>■ Software tests<br>■ Performance testing of chillers, cooling units and heat exchangers |
| | ■ Fan-and-filter units and Blue e+ (energy-efficient)<br>More products from page 456 | | | |
| | ■ Roof-mounted cooling unit; doors or side panels and escape routes are kept free<br>More products from page 498 | | | |
| | ■ TopTherm Blue e wall-mounted cooling unit, NEMA 4X, also as IIoT bundle<br>■ Outdoor cooling unit, from page 496<br>More products from page 477 | | | |
| | ■ Fan-and-filter units<br>■ Thermoelectric coolers<br>More products from page 456 | | | |

# Energy Storage Solutions (ESS)

## The perfect system solution for every storage task

## Heavy-duty shelves for loads up to 100 kg per level

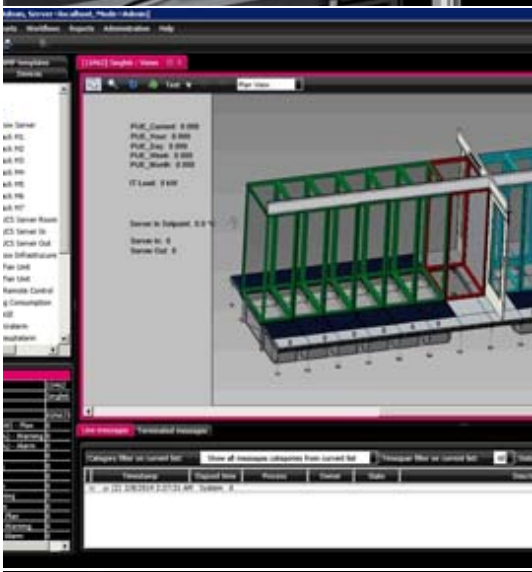
- Rittal's modular product system includes standard components for flexible assembly of an infrastructure with a battery energy storage system (BESS).
- Battery types not compliant with the 482.6 mm (19´) standard may be integrated, e.g. using heavy-duty shelves with a load-bearing capacity of up to 100 kg.

## Integration with the 482.6 mm (19´) rack mounting system

- The technology behind the 482.6 mm (19´) standard is exceptionally assembly-friendly and supports simple integration of these battery types.
- For larger battery capacities, Rittal enclosures may be bayed.

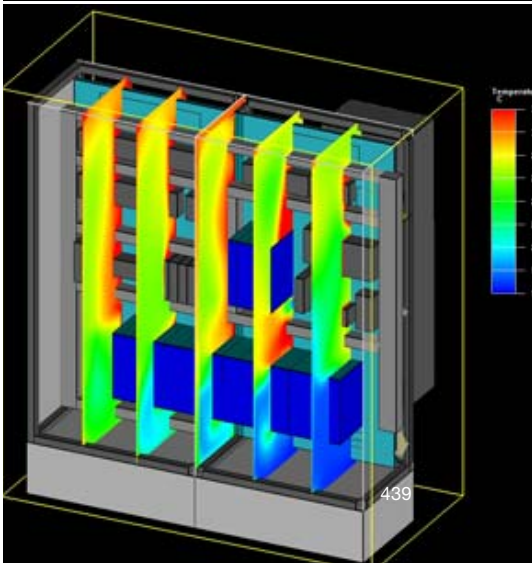
## Efficient monitoring

- For seamless monitoring of performance and risk of failure, ESS may be combined with CMC and RiZone for the monitoring system.
- Web connectivity is provided via the Rittal IoT interface.



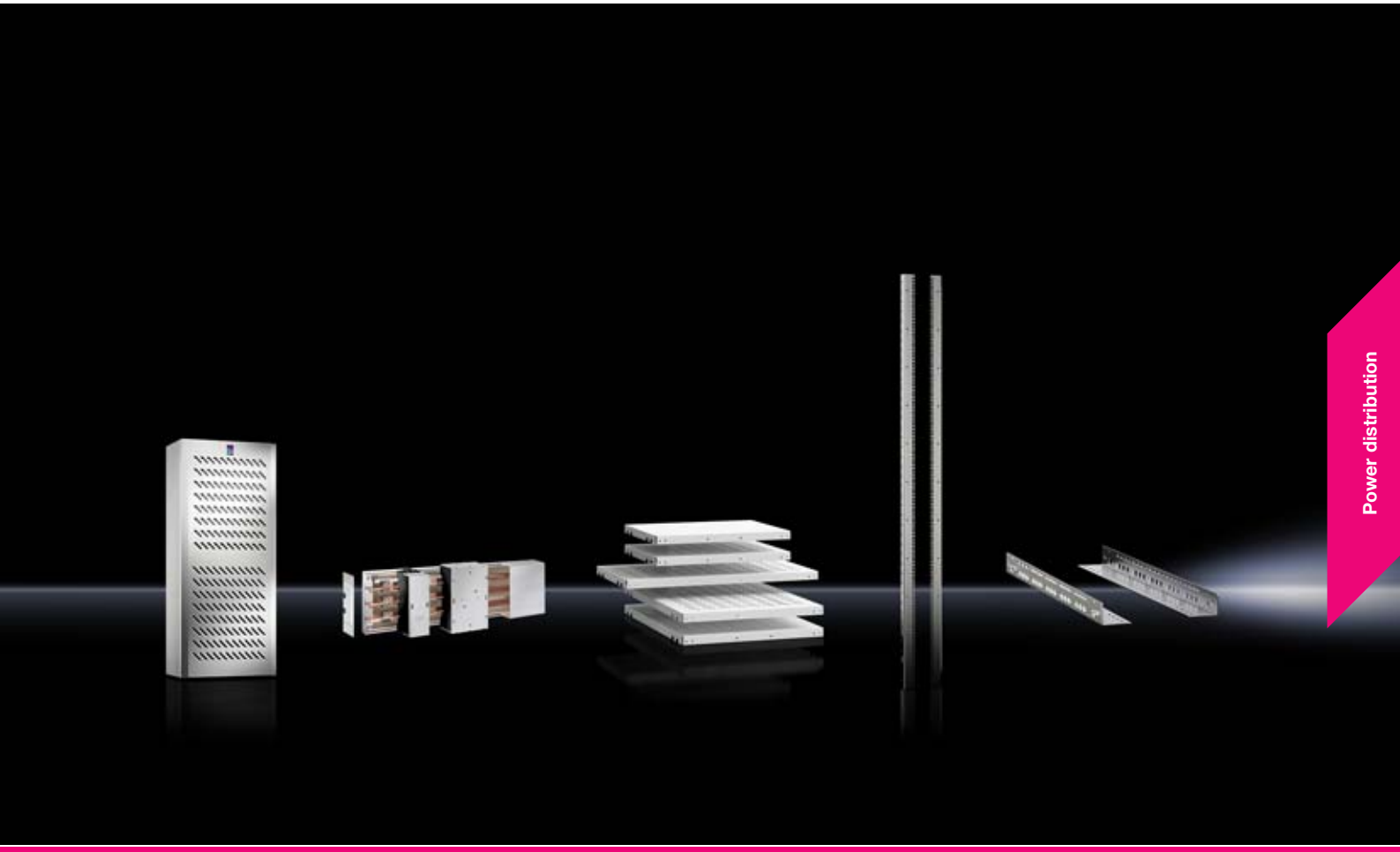
## Efficiency in plant design

- Lithium ion batteries have a specific thermal operating window which must be observed for safety reasons. Depending on the installation site and use of the system, therefore, a range of design features from active ventilation through to climate control may be required.
- Rittal offers FEM and CFD analyses to represent your individual project in its specific situation, so that you can gauge which concepts are viable and which are not.



# Energy storage solutions

| | | Enclosures | | | Climate control | | |
|---|---|---|---|---|---|---|---|
| **Type** | | **VX25 rack system** | **Outdoor enclosure system** | **Container** | **Wall-mounted cooling unit Blue e+** | **Roof-mounted cooling unit Blue e+** | |
| System solution | | The modular VX25 enclosure system is available in a range of sizes, both as a standalone rack and as a bayable solution. Our extensive range of accessories supports a broad range of solutions. With a weight capacity of 1500 kg, all standard battery types may be integrated. | Identical system platform in the outdoor sector as for IE or IT enclosure systems. Additionally with weather canopy, with projection on all sides. The double-walled design reduces the influence of sunlight. The open frame structure offers installation benefits. Also available as a baying variant. | On a project-specific basis, we offer 20ft and 40ft containers with up to 18/36 bays. Where required, these may be designed with suitable climate control. | Our energy-efficient Blue e+ wall-mounted cooling units ensure the correct temperature inside the enclosure. The outputs range from 1.6 to 6 kW. Their unique multi-voltage capability makes them suitable for international use. The cooling units are IIoT-compatible and support modern condition monitoring. | Our energy-efficient Blue e+ roof-mounted cooling units ensure the correct temperature inside the enclosure. The output is 1.3 kW. Their unique multi-voltage capability makes them suitable for international use. The cooling units are IIoT-compatible and support modern condition monitoring. | |
| Approvals | | CSA, DNV-GL, UL and C-UL | – | | CE, TÜV-tested safety, UL/cUL, UL/cUL-FTTA, EAC | CE, TÜV-tested safety, UR/cUR, EAC | |
| 482.6 mm (19″) configuration | Indoor | ■ | – | ■ | ■ | ■ | |
| | Outdoor | – | ■ | – | – | – | |
| Heavy-duty shelf | Indoor | ■ | – | ■ | ■ | ■ | |
| | Outdoor | – | ■ | – | – | – | |
| From page | | 116 | 263 | On request | 486 | 504 | |





| | Climate control | Power distribution | Interior installation | Accessories | |
|---|---|---|---|---|---|
| | **Outdoor cooling unit** | **Busbars** | **Component shelf for frame attachment** | **Adaptor section, 482.6 mm (19″)** | **Slide rails, static installation for VX IT** |
| | Useful cooling output 1500 W, temperature control via e+ controller on the rear of the cooling unit. For universal attachment to outdoor enclosures for external, partial internal and full internal mounting. Average 75% energy savings thanks to speed-regulated components and heat pipe technology. Multi-voltage capability for global use. In conjunction with the IoT interface, the cooling unit can be networked and digitalised | Flexible power distribution solutions, highly adaptable up to 6300 A. Project planning is child's play with the user-friendly Power Engineering software. | Mounting bolts / mounting rails may be installed on a 25 mm pitch pattern pattern in the enclosure depth. For frame attachment, for installation in enclosures without 482.6 mm (19″) accommodation. Load capacity up to 100 kg. | The adaptor mounting angles are available for enclosure heights 1600 mm (33 U), 1800 mm (38 U) and 2000 mm (42 U). The 482.6 mm (19″) measurement applies when mounting on the frame of 600 mm wide enclosures. Depth-offset installation in 600 mm wide enclosures is supported using punched sections with mounting flanges, 18 x 64 mm. | For mounting between the front and rear mounting levels. To support heavy installed equipment. Side system punchings for mounting accessories and cooling components that expel to the side. Load capacity up to 80 kg static load. |
| | International approvals (cULus Listed, cULus FTTA, CE and EAC) | – | – | – | – |
| | – | ■ | – | ■ | ■ |
| | ■ | ■ | – | ■ | ■ |
| | – | ■ | ■ | – | – |
| | ■ | ■ | ■ | – | – |
| | 497 | 281 | 1006 | 1080 | 1086 |

# Charging infrastructure

## System solutions to meet the challenges of a charging infrastructure

## Normal charging

- Normal charging refers to the output category below 22 kW, primarily with AC voltage. The charge control may be accommodated in the charging pillar itself or in a backend infrastructure supplying multiple charging pillars simultaneously. Typical application areas include company car parks, supermarkets, hotels or multi-storey car parks where vehicles are parked for long periods and therefore have sufficient time to charge the battery.

## Quick charging

- Quick charging refers to an output category of more than 22 kW. Quick charging is primarily achieved with DC voltage. As with normal charging, the charge control may be accommodated in the charging pillar itself or in a backend infrastructure supplying multiple charging pillars. Once again, typical applications include supermarkets, hotels and multi-storey car parks where the electric vehicles are parked for long periods and therefore have time to charge the battery.

## High-power charging

- High-power charging is always DC-based and in the output category of above 150 kW. The most common applications are service areas, bus stops and fuel stations where a quick recharge of the vehicle battery is needed. The enclosures must provide protection from harsh environmental conditions as well as access control.

# Charging infrastructure

| Application | | Enclosures | | Accessories |
|---|---|---|---|---|
| System solution | | Rittal enclosure solutions provide optimum protection for your components.<br>■ Protection category-tested enclosure technology to IP, IK, RC<br>■ Accredited in-house laboratory<br>■ 3-phase surface treatment for maximum corrosion protection<br>■ Choice of materials depending on the climate and requirement profile: Aluminium, stainless steel, sheet steel<br>■ EMC protection<br>■ Static load capacity up to 14,000 N | | |
| | Construction | Front end/charging pillar | Backend/infrastructure | |
| **Normal charging**<br>■ Company car park<br>■ Supermarket<br>■ Multi-storey car park<br>■ Hotel<br>■ Restaurant | AC<br>1 charging point<br>(< 22 kW) | ■ Compact enclosures AX, from page 84<br>■ Stainless steel (HD), from page 217 | | ■ Base/plinths, from page 880<br>■ Lock systems, from page 933<br>■ Rain canopies, from page 958<br>■ Interior installation, mounting plates, 482.6 mm (19') frame, bar systems, from page 970<br>■ System light, from page 1014<br>■ EMC, from page 1028<br>■ Cable entry/cable management, from page 1044 |
| | AC<br>n charging points<br>(< 22 kW) | ■ Stainless steel (HD), from page 217 | ■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | |
| **Quick charging**<br>■ Supermarket<br>■ Multi-storey car park<br>■ Hotel<br>■ Restaurant | DC<br>1 charging point | ■ Compact enclosures, from page 84<br>■ Stainless steel (HD), from page 217<br>■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | | |
| | DC<br>n charging points | ■ Compact enclosures AX,<br>■ from page 84<br>■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | ■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | |
| **High-power charging**<br>■ Service area<br>■ Bus stop | DC-HPC<br>(> 150 kW) | ■ Compact enclosures AX, from page 84<br>■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | ■ Toptec, from page 270<br>■ New Basic, from page 268<br>■ Baying systems VX25, from page 116 | |

Other enclosure variants available on request (emobility@rittal.de)

| | Climate control | Power distribution |
|---|---|---|
| | A charging centre may require various forms of climate control.<br>■ Fans, cooling units and heaters for temperature control of the built-in equipment.<br>■ Chillers for water cooling of the charging cable in the HPC sector or components with liquid cooling inside the enclosure<br>■ Individual design of the required climate control using Therm software | Rittal offers a modular system for demand-based power distribution.<br>■ Distribution and protection of the power supply focussing on standardisation and availability<br>■ Power Engineering software is used to plan and design low-voltage switchgear to IEC 61 439 with design verification, from page 446 |
| | ■ Heaters, from page 530<br>■ Passive cooling: TopTherm fan-and-filter units, from page 456<br>■ Protective canopies, from page 958<br>■ Active: Thermoelectric coolers, from page 474<br>■ Cooling units, from page 473<br>■ Liquid cooling, from page 509<br>■ Outdoor cooling unit, from page 496<br>■ Accessories: IoT interface, from page 554 | ■ Rated current < 125 A<br>RiLine Compact, from page 282<br>■ Rated current < 250 A<br>Mini-PLS, from page 294<br>■ Rated current < 1600 A<br>RiLine PLS, from page 299<br>■ Rated current < 6300 A<br>VX25 Ri4Power, from page 361 |

# Power distribution software

## Configurators/tools/CAD data

### Power distribution

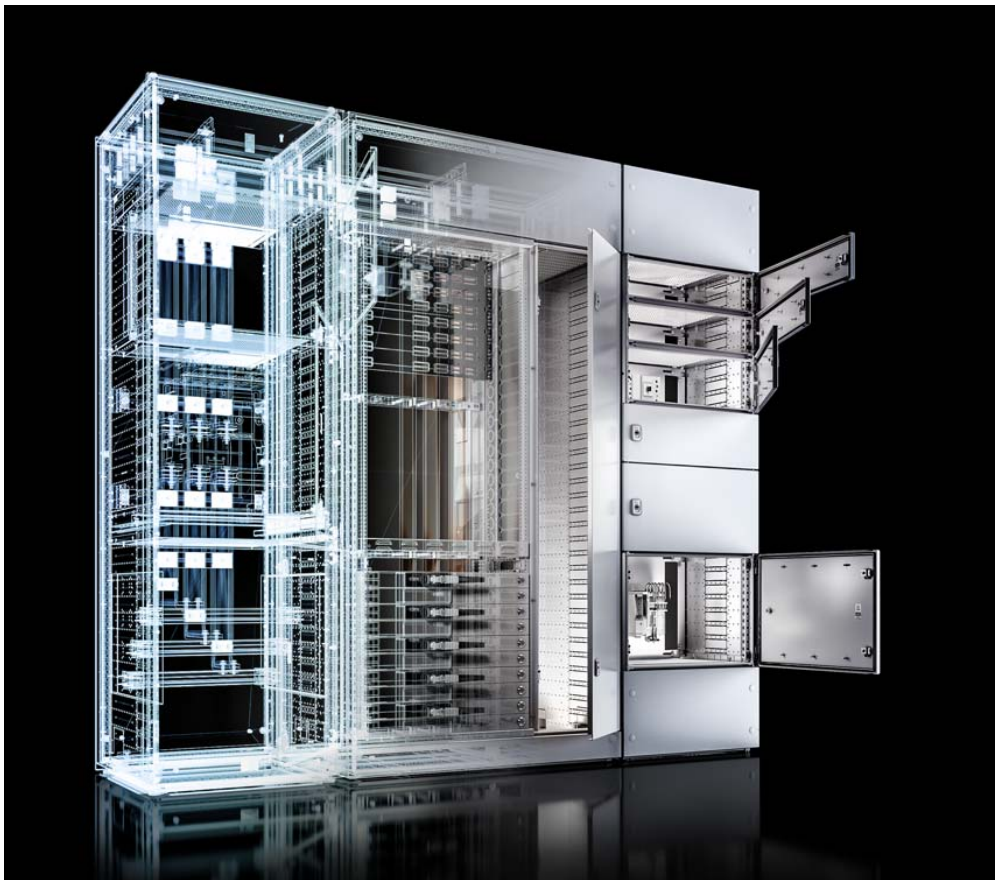
The VX25 Power Engineering planning software sets brand new standards when planning low-voltage switchgear. The Web-based tool guides users quickly and efficiently through the planning process in simple, logical steps.

### VX25 Power Engineering

**Efficient planning of low-voltage switchgear**
From plant configuration, to calculation of the copper bars, through to generation of the design verification to IEC 61 439.

**Benefits:**
- The web-based application ensures that planning data is always up-to-date
- Parts list creation and assembly based on a specific set of rules
- Automatic calculation and documentation of the copper busbars
- Generation of a design verification to IEC 61 439

**Note:**
- Download free at www.rittal.com/software



# Rittal Automation Systems

High productivity levels and consistent optimisation of all process steps, from page 561

# Rittal – The System.

**Faster – better – everywhere.**

**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

FRIEDHELM LOH GROUP

# CLIMATE CONTROL


Overview of climate control type ....450

## Cooling with ambient air

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## Liquid cooling

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## Service

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Services ....1140


BLUecoMPETENCE
Alliance Member
Partner of the Engineering Industry Sustainability Initiative

**UL listing under category FTTA**
Additional approval under the category "environmental-rated accessories for enclosures (CCN: FTTA)" is particularly beneficial for users.

This ensures that the type rating of the application (enclosure protection category) is retained even if the enclosure has a mounting cut-out for installation of a climate control component.

This is a clear benefit which facilitates use in the 508A zone and eliminates potential discussions about reducing the type rating.

| Type of climate control | Cooling with ambient air | Cooling units | |
|---|---|---|---|
| | Ambient air cooling units are ideally suited for dissipating heat loads exceptionally cost-effectively. The pre-requisite for this is that the ambient air must be relatively clean and at a temperature below the required enclosure internal temperature. | Cooling units keep the enclosure internal temperature at a constant level, which is independent of the ambient temperature. The air routing meets individual requirements. Two separate circuits prevent the ingress of dust into the enclosure. | |
| Air throughput, unimpeded airflow $m^3/h$ | 20 – 1069 | – | |
| Specific thermal output W/K | 17.5 – 90 | – | |
| Total cooling output W | – | 80 – 5800 | |
| Continuous thermal output W | – | – | |
| Product characteristics | Exceptionally energy-efficient, barely discernible loss of space within and outside of the enclosure, and a high protection category of IP 54 as standard. | The Rittal Blue e+ series is the world's most efficient cooling unit. With heat pipe technology as standard and speed-controlled components, average energy savings of 75% can be achieved. | |
| From page | 453 | 473 | |

| | Cooling with water | Enclosure heaters | Climate control accessories |
|---|---|---|---|
| | Efficient liquid cooling may be used in all situations where a high cooling load is required, such as process and machine cooling or when dissipating heat loss from enclosures via air/water heat exchangers. Liquid cooling allows you to achieve spatial separation between cooling production and process cooling. | Condensation poses a particular risk for control electronics, especially with outdoor siting. A range of output categories ensures that the correct thermal output is always available. | Perfectly coordinated components allow you to customise the climate control to your specific requirements, whether you need targeted air routing, precise control of the equipment or appropriate consumables. |
| | – | – | – |
| | – | – | – |
| | 300 – 25000 | – | – |
| | – | 10 – 800 | – |
| | Energy savings of up to 70% can be achieved with the Blue e+ generation of chillers. They ensure efficient cooling of liquid media with a high degree of control accuracy thanks to innovative DC inverter technology. | The innovative profile geometry means that heat is distributed evenly inside the enclosure and cold spots are prevented. The tool-free push-in connection technology speeds up the wiring process considerably. | With innovative accessories, the efficiency and reliability of climate control components can be additionally enhanced with monitoring, control and individual air routing. |
| | 509 | 530 | 533 |

# Rittal – The System.

**Faster – better – everywhere.**

# Cooling with ambient air

## TopTherm fan-and-filter units


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## Roof-mounted fans


Roof-mounted fans, roof ventilation ....500 – 965 m³/h ....464
Roof-mounted fans with EC technology ....1069 m³/h ....465


## Rack-mounted climate control


Rack-mounted fans for 482.6 mm (19″) ....320 – 480 m³/h ....466
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## Air/air heat exchangers


TopTherm, wall-mounted with controller ....17.5 – 90 W/K ....469
Roof-mounted 66 W/K ....470

# Fan-and-filter units and roof-mounted fans

## Efficient climate control with ambient air

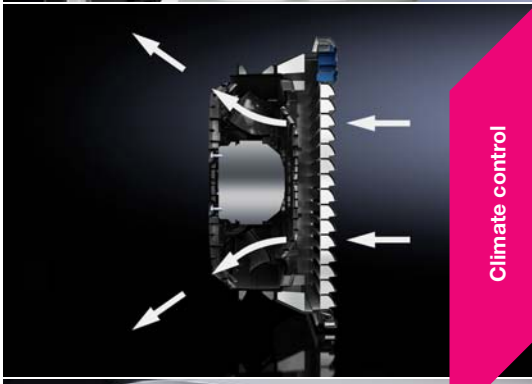
# TopTherm fan-and-filter units

## Tool-free assembly

- Straightforward assembly, maintenance and exchange with no need for tools of any kind
- The air flow direction is easily reversed by rotating the fan module
- The electrical connection is individually positionable using a screwless spring terminal; no tools required
- Louvred grille latch mechanism for fast filter mat replacement without tools

## Efficient technology

- New diagonal fan technology for greater pressure stability and constant air throughput in its installed state, even with a contaminated filter mat
- Minimum installation depth
- Air flows in a diagonal direction from the fan, for a more even air distribution inside the enclosure
- Extended service life of filter mats means longer maintenance intervals
- Fan with smart, efficient EC technology





# Roof-mounted fans

## Simple to fit and maintain

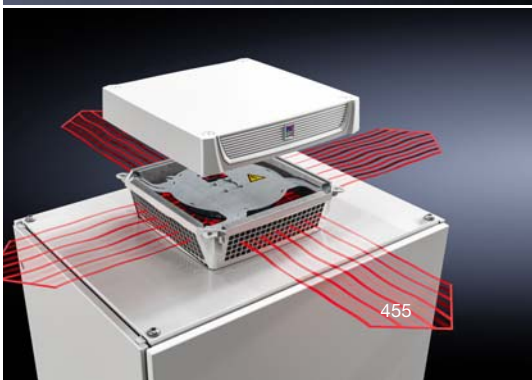
- Innovative clamping attachment supports flexible locking optionally from the outside or inside
- Connector terminal for easy electrical connection
- Good accessibility permits fast filter mat changes

## High protection category

- IP 55 as standard, thanks to a sophisticated labyrinth system and high-quality foamed-in seal

## High efficiency

- At an air throughput of 1,000 $m^3/h$, smart EC fans ensure maximum energy efficiency
- Integral interface for linear speed control and fan monitoring



# TopTherm fan-and-filter units

**Air throughputs incl. outlet filter and protection categories** Page 463 **Accessories for climate control** Page 533 **Therm software** Page 558

Fan-and-filter units with diagonal fan technology have superior pressure stability and ensure a more constant air throughput. The diagonal direction of outflow ensures more even heat dissipation from the enclosure.

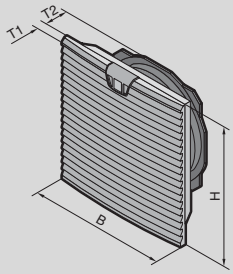
**Colour:**
- RAL 7035
- Optionally available in RAL 9005

**Supply includes:**
- Complete unit ready to install, including filter mat

**Note:**
- With the fan-and-filter unit 3237.XXX, electrical connection is made via two single wires on the unit. For all other fan-and-filter units, a screwless spring terminal is used.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet




## Air throughput 20 – 55 m³/h

| Model No. | Packs of | 3237.100 | 3237.110 | 3237.124 | 3238.100 | 3238.110 | 3238.124 | Page |
|---|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 50/60 | 24 (DC) | 230, 1~, 50/60 | 115, 1~, 50/60 | 24 (DC) | |
| **Air throughput, unimpeded air flow** m³/h | | **20 / 25** | **20 / 25** | **20** | **55 / 66** | **55 / 66** | **55** | |
| Rated current A | | 0.065 / 0.052 | 0.12 / 0.1 | 0.125 | 0.12 / 0.11 | 0.24 / 0.22 | 0.24 | |
| Power consumption W | | 11 / 9 | 11 / 9 | 3 | 19 / 18 | 19 / 18 | 5.5 | |
| Width (B) mm | | 116.5 | 116.5 | 116.5 | 148.5 | 148.5 | 148.5 | |
| Height (H) mm | | 116.5 | 116.5 | 116.5 | 148.5 | 148.5 | 148.5 | |
| Depth (T1) mm | | 16 | 16 | 16 | 16 | 16 | 16 | |
| Max. installation depth (T2) mm | | 43 | 43 | 43 | 58.5 | 58.5 | 58.5 | |
| Required mounting cut-out (BxH) mm | | 92 x 92 | 92 x 92 | 92 x 92 | 124 x 124 | 124 x 124 | 124 x 124 | |
| Fan | | Axial, shaded pole motor | Axial, shaded pole motor | Axial, DC motor | Axial, shaded pole motor | Axial, shaded pole motor | Axial, DC motor | |
| Operating temperature range | | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | |
| Noise level dB(A) | | 38 / 43 | 38 / 43 | 38 | 46 / 49 | 46 / 49 | 46 | |
| Service life of fans (L10, 40 °C) h | | 55000 / 60000 | 55000 / 60000 | 70000 | 68200 / 68200 | 68200 / 68200 | 95500 | |
| Weight kg | | 0.46 | 0.48 | 0.3 | 0.8 | 0.8 | 0.54 | |
| **Accessories** | | | | | | | | |
| Outlet filter | 1 pc(s). | 3237.200 | 3237.200 | 3237.200 | 3238.200 | 3238.200 | 3238.200 | 537 |
| Spare filter mat | | see page | see page | see page | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | – | – | – | 3238.055 | 3238.055 | 3238.055 | 536 |
| Hose-proof hood | 1 pc(s). | 3237.080 | 3237.080 | 3237.080 | 3238.080 | 3238.080 | 3238.080 | 538 |
| Blanking cover | 2 pc(s). | 3237.020 | 3237.020 | 3237.020 | 3238.020 | 3238.020 | 3238.020 | 538 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

## Air throughput 105 – 180 m³/h

| Model No. | Packs of | 3239.100 | 3239.110 | 3239.124 | 3240.100 | 3240.110 | 3240.124 | Page |
|---|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 50/60 | 24 (DC) | 230, 1~, 50/60 | 115, 1~, 50/60 | 24 (DC) | |
| **Air throughput, unimpeded air flow** m³/h | | **105 / 120** | **105 / 120** | **105** | **180 / 160** | **180 / 160** | **180** | |
| Rated current A | | 0.12 / 0.11 | 0.24 / 0.22 | 0.23 | 0.21 / 0.19 | 0.42 / 0.38 | 0.43 | |
| Power consumption W | | 19 / 18 | 19 / 18 | 5.5 | 35 / 34 | 35 / 34 | 10 | |
| Width (B) mm | | 204 | 204 | 204 | 255 | 255 | 255 | |
| Height (H) mm | | 204 | 204 | 204 | 255 | 255 | 255 | |
| Depth (T1) mm | | 24 | 24 | 24 | 25 | 25 | 25 | |
| Max. installation depth (T2) mm | | 90 | 90 | 90 | 107 | 107 | 107 | |
| Required mounting cut-out (BxH) mm | | 177 x 177 | 177 x 177 | 177 x 177 | 224 x 224 | 224 x 224 | 224 x 224 | |
| Fan | | Axial, shaded pole motor | Axial, shaded pole motor | Axial, DC motor | Diagonal, shaded pole motor | Diagonal, shaded pole motor | Diagonal, DC motor | |
| Operating temperature range | | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | |
| Noise level dB(A) | | 46 / 49 | 46 / 49 | 46 | 51 / 46 | 51 / 46 | 51 | |
| Service life of fans (L10, 40 °C) h | | 68200 / 68200 | 68200 / 68200 | 95500 | 72000 / 76000 | 72000 / 76000 | 75000 | |
| Weight kg | | 1.04 | 1.04 | 0.78 | 2.26 | 2.08 | 1.88 | |
| **Accessories** | | | | | | | | |
| Outlet filter | 1 pc(s). | 3239.200 | 3239.200 | 3239.200 | 3240.200 | 3240.200 | 3240.200 | 537 |
| Spare filter mat | | see page | see page | see page | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | 3181.100 | 3181.100 | 3181.100 | 3182.100 | 3182.100 | 3182.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3239.080 | 3239.080 | 3239.080 | 3240.080 | 3240.080 | 3240.080 | 538 |
| Blanking cover | 2 pc(s). | 3239.020 | 3239.020 | 3239.020 | 3240.020 | 3240.020 | 3240.020 | 538 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

## Air throughput 230 – 550 m³/h

| Model No. | Packs of | 3241.100 | 3241.110 | 3241.124 | 3243.100 | 3243.110 | Page |
|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 50/60 | 24 (DC) | 230, 1~, 50/60 | 115, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **230 / 250** | **230 / 250** | **230** | **550 / 600** | **550 / 600** | |
| Rated current A | | 0.26 / 0.24 | 0.52 / 0.48 | 0.8 | 0.37 / 0.39 | 0.78 / 0.8 | |
| Power consumption W | | 40 / 42 | 40 / 42 | 19 | 70 / 87 | 75 / 90 | |
| Width (B) mm | | 255 | 255 | 255 | 323 | 323 | |
| Height (H) mm | | 255 | 255 | 255 | 323 | 323 | |
| Depth (T1) mm | | 25 | 25 | 25 | 25 | 25 | |
| Max. installation depth (T2) mm | | 107 | 107 | 107 | 118.5 | 118.5 | |
| Required mounting cut-out (BxH) mm | | 224 x 224 | 224 x 224 | 224 x 224 | 292 x 292 | 292 x 292 | |
| Fan | | Diagonal, shaded pole motor | Diagonal, shaded pole motor | Diagonal, DC motor | Diagonal, 1~ capacitor motor | Diagonal, 1~ capacitor motor | |
| Operating temperature range | | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | |
| Noise level dB(A) | | 54 / 56 | 54 / 56 | 54 | 59 / 61 | 59 / 61 | |
| Service life of fans (L10, 40 °C) h | | 61000 / 60000 | 61000 / 60000 | 75000 | 65000 / 61000 | 61000 / 59000 | |
| Weight kg | | 2.24 | 2.26 | 2.04 | 3.58 | 3.58 | |
| **Accessories** | | | | | | | |
| Outlet filter | 1 pc(s). | 3240.200 | 3240.200 | 3240.200 | 3243.200 | 3243.200 | 537 |
| Spare filter mat | | see page | see page | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | 3182.100 | 3182.100 | 3182.100 | 3183.100 | 3183.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3240.080 | 3240.080 | 3240.080 | 3243.080 | 3243.080 | 538 |
| Blanking cover | 2 pc(s). | 3240.020 | 3240.020 | 3240.020 | 3243.020 | 3243.020 | 538 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

# TopTherm fan-and-filter units

## Air throughput 700 m³/h

| **Model No.** | Packs of | **3244.100** | **3244.110** | **3244.140** | Page |
|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 3~, 50/60<br>460, 3~, 60 | |
| **Air throughput, unimpeded air flow** m³/h | | **700 / 770** | **700 / 770** | **700 / 770** | |
| Rated current A | | 0.43 / 0.6 | 0.9 / 1.25 | 0.17 / 0.21 | |
| Power consumption W | | 95 / 135 | 100 / 145 | 93 / 140 | |
| Width (B) mm | | 323 | 323 | 323 | |
| Height (H) mm | | 323 | 323 | 323 | |
| Depth (T1) mm | | 25 | 25 | 25 | |
| Max. installation depth (T2) mm | | 130.5 | 130.5 | 130.5 | |
| Required mounting cut-out (BxH) mm | | 292 x 292 | 292 x 292 | 292 x 292 | |
| Fan | | Diagonal, 1~ capacitor motor | Diagonal, 1~ capacitor motor | Diagonal, three-phase motor | |
| Operating temperature range | | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | |
| Noise level dB(A) | | 65 / 66 | 65 / 66 | 67 / 70 | |
| Service life of fans (L10, 40 °C) h | | 66000 / 64000 | 66000 / 62000 | 66000 / 62000 | |
| Weight kg | | 4.3 | 4.3 | 4.1 | |
| **Accessories** | | | | | |
| Outlet filter | 1 pc(s). | 3243.200 | 3243.200 | 3243.200 | 537 |
| Spare filter mat | | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | 3183.100 | 3183.100 | 3183.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3243.080 | 3243.080 | 3243.080 | 538 |
| Blanking cover | 2 pc(s). | 3243.020 | 3243.020 | 3243.020 | 538 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | – | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | – | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | – | 546 |

Rittal – The System.

Spare filter mats

see page 535

**Air throughputs incl. outlet filter and protection categories** Page 463 **Accessories for climate control** Page 533 **Therm software** Page 558



EMC fan-and-filter units offer a high shielding/attenuation effect and meet requirement category 2 to EN 61587-3.

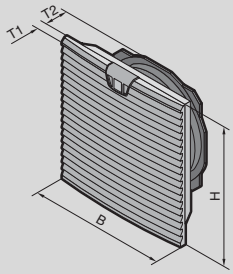
**Colour:**
– RAL 7035

**Supply includes:**
– Complete unit ready to install, including filter mat

**Note:**
– To improve energy efficiency and extend the service life of the devices, we recommend the use of thermostats or temperature displays

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet




## Air throughput 20 – 180 m³/h, EMC

| **Model No.** | Packs of | **3237.600** | **3238.600** | **3239.600** | **3240.600** | Page |
|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **20 / 25** | **55 / 66** | **105 / 120** | **180 / 160** | |
| Rated current A | | 0.065 / 0.052 | 0.12 / 0.11 | 0.12 / 0.11 | 0.21 / 0.19 | |
| Power consumption W | | 11 / 9 | 19 / 18 | 19 / 18 | 35 / 34 | |
| Width (B) mm | | 116.5 | 148.5 | 204 | 255 | |
| Height (H) mm | | 116.5 | 148.5 | 204 | 255 | |
| Depth (T1) mm | | 16 | 16 | 24 | 25 | |
| Max. installation depth (T2) mm | | 43 | 58.5 | 90 | 107 | |
| Required mounting cut-out (BxH) mm | | 92 x 92 | 124 x 124 | 177 x 177 | 224 x 224 | |
| Fan | | Axial, shaded pole motor | Axial, shaded pole motor | Axial, shaded pole motor | Diagonal, shaded pole motor | |
| Operating temperature range | | -15 °C...+55 °C | -15 °C...+55 °C | -15 °C...+55 °C | -30 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | |
| Noise level dB(A) | | 38 / 43 | 46 / 49 | 46 / 49 | 51 / 46 | |
| Service life of fans (L10, 40 °C) h | | 55000 / 60000 | 68200 / 68200 | 68200 / 68200 | 72000 / 76000 | |
| Weight kg | | 0.49 | 2.0 | 1.2 | 2.12 | |
| **Accessories** | | | | | | |
| Outlet filter | 1 pc(s). | 3237.060 | 3238.060 | 3239.060 | 3240.060 | 537 |
| Spare filter mat | 5 pc(s). | 3237.066 | 3238.066 | 3239.066 | 3240.066 | 535 |
| Fine filter mat | 5 pc(s). | – | 3238.055 | 3181.100 | 3182.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3237.080 | 3238.080 | 3239.080 | 3240.080 | 538 |
| Speed control | 1 pc(s). | 3120.200 | 3120.200 | 3120.200 | 3120.200 | 549 |
| EC speed control – Control unit for EC fan | | – | – | – | – | |
| EC speed control – Sensor for speed control | | – | – | – | – | |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

# TopTherm fan-and-filter units

## Air throughput 230 – 900 m³/h, EMC

| **Model No.** | Packs of | **3241.600** | **3243.600** | **3244.600** | **3245.600** | Page |
|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 200 - 240, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **230 / 250** | **550 / 600** | **700 / 770** | **900** | |
| Rated current A | | 0.26 / 0.24 | 0.37 / 0.39 | 0.43 / 0.6 | 1.33 / 1.33 | |
| Power consumption W | | 40 / 42 | 70 / 87 | 95 / 135 | 165 / 165 | |
| Width (B) mm | | 255 | 323 | 323 | 323 | |
| Height (H) mm | | 255 | 323 | 323 | 323 | |
| Depth (T1) mm | | 25 | 25 | 25 | 25 | |
| Max. installation depth (T2) mm | | 107 | 118.5 | 130.5 | 130.5 | |
| Required mounting cut-out (BxH) mm | | 224 x 224 | 292 x 292 | 292 x 292 | 292 x 292 | |
| Fan | | Diagonal, shaded pole motor | Diagonal, 1~ capacitor motor | Diagonal, 1~ capacitor motor | Diagonal, EC motor | |
| Operating temperature range | | -30 °C...+55 °C | -30 °C...+55 °C | -30 °C...+55 °C | -25 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -30 °C...+70 °C | -25 °C...+70 °C | |
| Noise level dB(A) | | 54 / 56 | 59 / 61 | 65 / 66 | 72 | |
| Service life of fans (L10, 40 °C) h | | 61000 / 60000 | 65000 / 61000 | 66000 / 64000 | 59000 | |
| Weight kg | | 2.12 | 3.56 | 4.28 | 3.5 | |
| **Accessories** | | | | | | |
| Outlet filter | 1 pc(s). | 3240.060 | 3243.060 | 3243.060 | 3243.060 | 537 |
| Spare filter mat | 5 pc(s). | 3240.066 | 3243.066 | 3243.066 | 3243.066 | 535 |
| Fine filter mat | 5 pc(s). | 3182.100 | 3183.100 | 3183.100 | 3183.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3240.080 | 3243.080 | 3243.080 | 3245.080 | 538 |
| Speed control | 1 pc(s). | 3120.200 | 3120.200 | 3120.200 | – | 549 |
| EC speed control – Control unit for EC fan | 1 pc(s). | – | – | – | 3235.440 | 548 |
| EC speed control – Sensor for speed control | 1 pc(s). | – | – | – | 3235.450 | 548 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |


Rittal – The System.

EC speed control

see page 548

**Air throughputs incl. outlet filter and protection categories** Page 463 **Accessories for climate control** Page 533 **Therm software** Page 558



Energy-efficient version of the TopTherm fan-and-filter units with diagonal fan technology. Fans 3240.500 to 3245.510 may be controlled and monitored. The fan may be activated via the control interface with tacho signal output integrated as standard, and monitoring of the fan speed and function is supported.

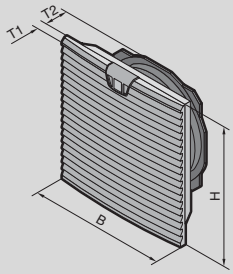
**Colour:**
– RAL 7035

**Supply includes:**
– Complete unit ready to install, including filter mat

**Note:**
– For even more efficient operation or for monitoring the fan-and-filter units, we recommend the use of an EC speed control for EC fan-and-filter units

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet




## Air throughput 55 – 230 m³/h, with EC technology

| **Model No.** | Packs of | **3238.500** | **3239.500** | **3240.500** | **3241.500** | Page |
|---|---|---|---|---|---|---|
| Control interface | | – | – | ■ | ■ | |
| Rated operating voltage V, ~, Hz | | 200 - 240, 1~, 50/60 | 200 - 240, 1~, 50/60 | 200 - 240, 1~, 50/60 | 200 - 240, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **55 / 55** | **105 / 105** | **180 / 180** | **230 / 230** | |
| Rated current A | | 0.045 / 0.045 | 0.045 / 0.045 | 0.12 / 0.12 | 0.17 / 0.17 | |
| Power consumption W | | 6.1 / 6.1 | 6.1 / 6.1 | 11 / 11 | 16 / 16 | |
| Width (B) mm | | 148.5 | 204 | 255 | 255 | |
| Height (H) mm | | 148.5 | 204 | 255 | 255 | |
| Depth (T1) mm | | 16 | 24 | 25 | 25 | |
| Max. installation depth (T2) mm | | 58.5 | 90 | 107 | 107 | |
| Required mounting cut-out (BxH) mm | | 124 x 124 | 177 x 177 | 224 x 224 | 224 x 224 | |
| Fan | | Diagonal, EC motor | Diagonal, EC motor | Diagonal, EC motor | Diagonal, EC motor | |
| Operating temperature range | | -20 °C...+55 °C | -20 °C...+55 °C | -25 °C...+55 °C | -25 °C...+55 °C | |
| Storage temperature range | | -30 °C...+70 °C | -30 °C...+70 °C | -25 °C...+70 °C | -25 °C...+70 °C | |
| Noise level dB(A) | | 49 / 49 | 53 / 53 | 47 / 47 | 52 / 52 | |
| Service life of fans (L10, 40 °C) h | | 62500 | 62500 | 71000 | 64000 | |
| Weight kg | | 0.62 | 0.91 | 2.01 | 1.98 | |
| **Accessories** | | | | | | |
| Outlet filter | 1 pc(s). | 3238.200 | 3239.200 | 3240.200 | 3240.200 | 537 |
| Spare filter mat | | see page | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | 3238.055 | 3181.100 | 3182.100 | 3182.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3238.080 | 3239.080 | 3240.080 | 3240.080 | 538 |
| Blanking cover | 2 pc(s). | 3238.020 | 3239.020 | 3240.020 | 3240.020 | 538 |
| EC speed control – Control unit for EC fan | 1 pc(s). | – | – | 3235.440 | 3235.440 | 548 |
| EC speed control – Sensor for speed control | 1 pc(s). | – | – | 3235.450 | 3235.450 | 548 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

# TopTherm fan-and-filter units

## Air throughput 550 – 900 m³/h, with EC technology

| **Model No.** | Packs of | **3243.500** | **3244.500** | **3245.500** | **3245.510** | Page |
|---|---|---|---|---|---|---|
| Control interface | | ■ | ■ | ■ | ■ | |
| Rated operating voltage V, ~, Hz | | 200 - 240, 1~, 50/60 | 200 - 240, 1~, 50/60 | 200 - 240, 1~, 50/60 | 100 - 130, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **550 / 550** | **700 / 700** | **900 / 900** | **900 / 900** | |
| Rated current A | | 0.5 / 0.5 | 0.7 / 0.7 | 1.33 / 1.33 | 2.1 / 2.1 | |
| Power consumption W | | 51 / 51 | 80 / 80 | 165 / 165 | 165 / 165 | |
| Width (B) mm | | 323 | 323 | 323 | 323 | |
| Height (H) mm | | 323 | 323 | 323 | 323 | |
| Depth (T1) mm | | 25 | 25 | 25 | 25 | |
| Max. installation depth (T2) mm | | 118.5 | 130.5 | 130.5 | 130.5 | |
| Required mounting cut-out (BxH) mm | | 292 x 292 | 292 x 292 | 292 x 292 | 292 x 292 | |
| Fan | | Diagonal, EC motor | Diagonal, EC motor | Diagonal, EC motor | Diagonal, EC motor | |
| Operating temperature range | | -25 °C...+55 °C | -25 °C...+55 °C | -25 °C...+55 °C | -25 °C...+55 °C | |
| Storage temperature range | | -25 °C...+70 °C | -25 °C...+70 °C | -25 °C...+70 °C | -25 °C...+70 °C | |
| Noise level dB(A) | | 63 / 63 | 64 / 64 | 72 / 72 | 72 / 72 | |
| Service life of fans (L10, 40 °C) h | | 65000 | 67000 | 59000 | 59000 | |
| Weight kg | | 2.92 | 2.7 | 3.46 | 3.76 | |
| **Accessories** | | | | | | |
| Outlet filter | 1 pc(s). | 3243.200 | 3243.200 | 3243.200 | 3243.200 | 537 |
| Spare filter mat | | see page | see page | see page | see page | 535 |
| Fine filter mat | 5 pc(s). | 3183.100 | 3183.100 | 3183.100 | 3183.100 | 536 |
| Hose-proof hood | 1 pc(s). | 3243.080 | 3243.080 | 3245.080 | 3245.080 | 538 |
| Blanking cover | 2 pc(s). | 3243.020 | 3243.020 | 3243.020 | 3243.020 | 538 |
| EC speed control – Control unit for EC fan | 1 pc(s). | 3235.440 | 3235.440 | 3235.440 | 3235.440 | 548 |
| EC speed control – Sensor for speed control | 1 pc(s). | 3235.450 | 3235.450 | 3235.450 | 3235.450 | 548 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

## Air throughput and protection category

### TopTherm fan-and-filter units

| Model No. | Air throughput m³/h at 50/60 Hz | | | | Protection category IP to IEC 60 529/NEMA protection category | | |
|---|---|---|---|---|---|---|---|
| | Unimpeded air flow | With outlet filter including filter mat | | | Standard filter | Standard filter and additional micro-filter mat | Standard filter and hose-proof hood |
| 3237.100 | 20/25 | 1 x 3237.200 **15/18** | – | – | IP 54/ Type 12 | – | IP 56/ Type 3, 3R |
| 3237.110 | | | | | | | |
| 3237.124 | 20 | | | | | | |
| 3238.100 | 55/66 | 1 x 3238.200 **43/50** | 2 x 3238.200 **46/56** | – | | IP 54/ Type 12 | IP 56/ Type 3, 3R Type 4, 4X |
| 3238.110 | | | | | | | |
| 3238.124 | 55 | 1 x 3238.200 **43** | 2 x 3238.200 **46** | | | | |
| 3239.100 | 105/120 | 1 x 3239.200 **87/100** | 2 x 3239.200 **93/108** | 1 x 3240.200 **98/111** | | IP 55/ Type 12 | |
| 3239.110 | | | | | | | |
| 3239.124 | 105 | 1 x 3239.200 **87** | 2 x 3239.200 **93** | 1 x 3240.200 **98** | | | |
| 3240.100 | 180/160 | 1 x 3240.200 **138/121** | 2 x 3240.200 **165/140** | 1 x 3243.200 **165/140** | | | |
| 3240.110 | | | | | | | |
| 3240.124 | 180 | 1 x 3240.200 **138** | 2 x 3240.200 **165** | 1 x 3243.200 **165** | | | |
| 3241.100 | 230/250 | 1 x 3240.200 **183/205** | 2 x 3240.200 **203/220** | 1 x 3243.200 **203/230** | | | |
| 3241.110 | | | | | | | |
| 3241.124 | 230 | 1 x 3240.200 **183** | 2 x 3240.200 **203** | 1 x 3243.200 **203** | | | |
| 3243.100 | 550/600 | 1 x 3243.200 **465/510** | 2 x 3243.200 **508/548** | – | | | |
| 3243.110 | | | | | | | |
| 3244.100 | 700/770 | 1 x 3243.200 **544/587** | 2 x 3243.200 **630/690** | – | | | |
| 3244.110 | | | | | | | |
| 3244.140 | | | | | | | |

### TopTherm fan-and-filter units, EMC

| Model No. | Air throughput m³/h at 50/60 Hz | | | | Protection category IP to IEC 60 529/NEMA protection category | | |
|---|---|---|---|---|---|---|---|
| | Unimpeded air flow | With EMC outlet filter including EMC filter mat | | | Standard filter | Standard filter and additional micro-filter mat | Standard filter and hose-proof hood |
| 3237.600 | 20/25 | 1 x 3237.060 **15/18** | – | – | IP 54/ Type 12 | – | IP 56/ Type 3, 3R |
| 3238.600 | 55/66 | 1 x 3238.060 **43/50** | 2 x 3238.060 **46/56** | – | | IP 54/ Type 12 | IP 56/ Type 3, 3R Type 4, 4X |
| 3239.600 | 105/120 | 1 x 3239.060 **87/100** | 2 x 3239.060 **93/108** | 1 x 3240.060 **98/111** | | IP 55/ Type 12 | |
| 3240.600 | 180/160 | 1 x 3240.060 **138/121** | 2 x 3240.060 **165/140** | 1 x 3243.060 **165/140** | | | |
| 3241.600 | 230/250 | 1 x 3240.060 **183/205** | 2 x 3240.060 **203/220** | 1 x 3243.060 **203/230** | | | |
| 3243.600 | 550/600 | 1 x 3243.060 **465/510** | 2 x 3243.060 **508/548** | – | | | |
| 3244.600 | 700/770 | 1 x 3243.060 **544/587** | 2 x 3243.060 **630/690** | – | | | |
| 3245.600 | 900 | 1 x 3243.060 **680** | 2 x 3243.060 **820** | – | IP 51 | IP 52 | IP 56/ Type 1, 12 Type 3, 3R |

### TopTherm fan-and-filter units with EC technology

| Model No. | Air throughput m³/h at 50/60 Hz | | | | Protection category IP to IEC 60 529/NEMA protection category | | |
|---|---|---|---|---|---|---|---|
| | Unimpeded air flow | With outlet filter including filter mat | | | Standard filter | Standard filter and additional micro-filter mat | Standard filter and hose-proof hood |
| 3238.500 | 55 | 1 x 3238.200 **43** | 2 x 3238.200 **46** | – | IP 54/ Type 12 | IP 54/ Type 12 | IP 56/ Type 3, 3R Type 4, 4X |
| 3239.500 | 105 | 1 x 3239.200 **87** | 2 x 3239.200 **93** | 1 x 3240.200 **98** | | IP 55/ Type 12 | |
| 3240.500 | 180 | 1 x 3240.200 **138** | 2 x 3240.200 **165** | 1 x 3243.200 **165** | | | |
| 3241.500 | 230 | 1 x 3240.200 **183** | 2 x 3240.200 **203** | 1 x 3243.200 **203** | | | |
| 3243.500 | 550 | 1 x 3243.200 **465** | 2 x 3243.200 **508** | – | | | |
| 3244.500 | 700 | 1 x 3243.200 **544** | 2 x 3243.200 **630** | – | | | |
| 3245.500 | 900 | 1 x 3243.200 **680** | 2 x 3243.200 **820** | – | IP 51 | IP 52 | IP 56/ Type 1, 12 Type 3, 3R |
| 3245.510 | 900 | 1 x 3243.200 **680** | 2 x 3243.200 **820** | – | | | |

# Roof-mounted fan, roof vent

**Accessories for climate control** Page 533 **Therm software** Page 558

Roof-mounted fan with a high protection category and flexible installation from the inside or outside.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 21 without filter mat
– IP 55 including filter mat

**Protection category NEMA:**
– NEMA 12

**Supply includes:**
– Complete unit ready to install, including filter mat

**Note:**
– To improve energy efficiency and extend the service life of the devices, we recommend the use of thermostats or temperature displays

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Air throughput, unimpeded air flow 500 – 965 m³/h

| **Model No.** | Packs of | **3138.000** | **3139.100** | **3139.110** | **3140.100** | **3140.110** | **3140.140** | Page |
|---|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | – | 220 - 240, 1~, 50/60 | 115, 1~, 60 | 220 - 240, 1~, 50/60 | 115, 1~, 60 | 380 - 415, 3~, 50/60 400 - 480, 3~, 60 | |
| **Air throughput, unimpeded air flow (without filter mats)** m³/h | | – | **500 / 525** | **525** | **873 / 965** | **965** | **863 / 942** | |
| **Air throughput, unimpeded air flow (with filter mats)** m³/h | | – | **417 / 446** | **446** | **725 / 759** | **759** | **700 / 749** | |
| Rated current A | | – | 0.23 / 0.27 | 0.56 | 0.43 / 0.56 | 1.2 | 0.17 / 0.2 | |
| Power consumption W | | – | 51 / 62 | 65 | 99 / 130 | 138 | 98 / 130 | |
| Width mm | | 400 | 400 | 400 | 400 | 400 | 400 | |
| Height mm | | 133 | 133 | 133 | 133 | 133 | 133 | |
| Depth mm | | 400 | 400 | 400 | 400 | 400 | 400 | |
| Max. installation depth mm | | 27.5 | 34.6 | 34.6 | 34.6 | 34.6 | 34.6 | |
| Required mounting cut-out mm | | 258 x 258 | 258 x 258 | 258 x 258 | 258 x 258 | 258 x 258 | 258 x 258 | |
| Fan | | without fan motor | Radial, capacitor motor | Radial, capacitor motor | Radial, capacitor motor | Radial, capacitor motor | Radial, rotary current motor | |
| Operating temperature range | | -20 °C...+55 °C | -20 °C...+55 °C | -20 °C...+55 °C | -20 °C...+55 °C | -20 °C...+55 °C | -20 °C...+55 °C | |
| Storage temperature range | | -40 °C...+70 °C | -40 °C...+70 °C | -40 °C...+70 °C | -40 °C...+70 °C | -40 °C...+70 °C | -40 °C...+70 °C | |
| Service life of fans (L10, 40 °C) h | | – | 69000 / 67600 | 69400 / 68000 | 62800 / 65800 | 67800 / 66400 | 63500 / 61500 | |
| Weight kg | | 3.2 | 5.2 | 5.2 | 6.0 | 6.0 | 6.0 | |
| **Accessories** | | | | | | | | |
| Outlet filter | 1 pc(s). | 3243.200 | 3243.200 | 3243.200 | 3243.200 | 3243.200 | 3243.200 | 537 |
| Spare filter mat | 12 pc(s). | 3174.100 | 3174.100 | 3174.100 | 3174.100 | 3174.100 | 3174.100 | 535 |
| Speed control | 1 pc(s). | – | 3120.200 | 3120.200 | 3120.200 | 3120.200 | – | 549 |
| Thermostat | 1 pc(s). | – | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | – | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | – | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

**Accessories for climate control** Page 533 **Therm software** Page 558

Energy-efficient and powerful design of the roof-mounted fans. The fan may be activated via the control interface with tacho signal output integrated as standard, and monitoring of the fan speed and function is supported.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 21 without filter mat
– IP 55 including filter mat

**Protection category NEMA:**
– NEMA 12

**Supply includes:**
– Complete unit ready to install, including filter mat

**Note:**
– For even more efficient operation or for monitoring the fans, we recommend the use of the EC speed controls

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



## Air throughput, unimpeded air flow 1069 m³/h, with EC technology

| **Model No.** | Packs of | **3140.500** | **3140.510** | Page |
|---|---|---|---|---|
| Control interface | | ■ | ■ | |
| Rated operating voltage V, ~, Hz | | 220 - 240, 1~, 50/60 | 115, 1~, 60 | |
| **Air throughput, unimpeded air flow (without filter mats)** m³/h | | **1069 / 1069** | **1069** | |
| **Air throughput, unimpeded air flow (with filter mats)** m³/h | | **841 / 841** | **841** | |
| Rated current A | | 1 / 1 | 1.51 | |
| Power consumption W | | 129 / 129 | 112 | |
| Width mm | | 400 | 400 | |
| Height mm | | 133 | 133 | |
| Depth mm | | 400 | 400 | |
| Max. installation depth mm | | 34.6 | 34.6 | |
| Required mounting cut-out mm | | 258 x 258 | 258 x 258 | |
| Fan | | Radial, EC motor | Radial, EC motor | |
| Operating temperature range | | -20 °C...+55 °C | -20 °C...+55 °C | |
| Storage temperature range | | -40 °C...+70 °C | -40 °C...+70 °C | |
| Service life of fans (L10, 40 °C) h | | 84000 / 84000 | 82000 / 82000 | |
| Weight kg | | 5.6 | 5.6 | |
| **Accessories** | | | | |
| Outlet filter | 1 pc(s). | 3243.200 | 3243.200 | 537 |
| Spare filter mat | 12 pc(s). | 3174.100 | 3174.100 | 535 |
| EC speed control – Control unit for EC fan | 1 pc(s). | 3235.440 | 3235.440 | 548 |
| EC speed control – Sensor for speed control | 1 pc(s). | 3235.450 | 3235.450 | 548 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 546 |

# Rack-mounted fans for 482.6 mm (19")

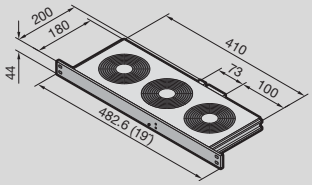
**Accessories for climate control** Page 533

Rack-mounted fan for direct installation in the 482.6 mm (19") level. Installation allows air to circulate permanently inside the enclosure, thus preventing the formation of hot spots.

**Colour:**
- RAL 7035

**Supply includes:**
- Fully wired unit ready for connection
- Terminal strip and assembly parts

**Approvals:**
Available on the Internet




## Air throughput, unimpeded air flow 320 – 480 m³/h

| **Model No.** | Packs of | **3340.230** | **3341.115** | **3341.230** | **3342.024** | **3342.230** | **3342.500** | Page |
|---|---|---|---|---|---|---|---|---|
| With monitoring | | – | – | – | – | – | ■ | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 50/60 | 230, 1~, 50/60 | 24 (DC) | 230, 1~, 50/60 | 115 - 230, 1~, 50/60 24 (DC) | |
| **Air throughput, unimpeded air flow** m³/h | | **320** | **480** | **480** | **480** | **480** | **480** | |
| No. of fans | | 2 | 3 | 3 | 3 | 3 | 3 | |
| Distance between axes mm | | 85 | 85 | 85 | 105 | 105 | 105 | |
| Rated current A | | 0.24 / 0.22 | 0.69 / 0.69 | 0.36 / 0.33 | 0.74 | 0.36 / 0.33 | 0.85 | |
| Width mm | | 482.6 | 482.6 | 482.6 | 482.6 | 482.6 | 482.6 | |
| Height mm | | 44 | 44 | 44 | 44 | 44 | 44 | |
| Depth mm | | 200 | 200 | 200 | 200 | 200 | 200 | |
| Operating temperature range | | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | |
| Noise level dB(A) | | 51 | 52 | 51 | 51 | 51 | 51 | |
| Weight kg | | 2.24 | 2.0 | 2.74 | 1.86 | 2.78 | 2.0 | |
| **Accessories** | | | | | | | | |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Speed control | 1 pc(s). | 3120.200 | 3120.200 | 3120.200 | – | 3120.200 | – | 549 |

# Vario rack-mounted fans for 482.6 mm (19")

**Accessories for climate control** Page 533

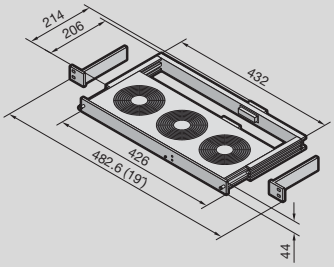
Rack-mounted fan for direct installation in the 482.6 mm (19") level. Installation allows air to circulate permanently inside the enclosure, thus preventing the formation of hot spots.

**Benefits:**
- Guide frame ensures easy maintenance and replacement of the fans

**Colour:**
- RAL 7035

**Supply includes:**
- Fully wired unit ready for connection
- Terminal strip and assembly parts

**Approvals:**
Available on the Internet






## Air throughput, unimpeded air flow 320 – 480 m³/h

| **Model No.** | Packs of | **3350.230** | **3351.230** | **3352.230** | **3352.500** | Page |
|---|---|---|---|---|---|---|
| With monitoring | | – | – | – | ■ | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 115 - 230, 1~, 50/60 24 (DC) | |
| **Air throughput, unimpeded air flow** m³/h | | **320** | **480** | **480** | **480** | |
| No. of fans | | 2 | 3 | 3 | 3 | |
| Distance between axes mm | | 85 | 85 | 105 | 105 | |
| Rated current A | | 0.24 / 0.22 | 0.36 / 0.33 | 0.36 / 0.33 | 0.85 / 0.85 | |
| Width mm | | 482.6 | 482.6 | 482.6 | 482.6 | |
| Height mm | | 44 | 44 | 44 | 44 | |
| Depth mm | | 200 | 200 | 200 | 200 | |
| Operating temperature range | | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | -10 °C...+55 °C | |
| Noise level dB(A) | | 51 | 51 | 51 | 51 | |
| Weight kg | | 2.0 | 2.7 | 2.78 | 2.04 | |
| **Also required** | | | | | | |
| Guide frame | 1 pc(s). | 3355.100 | 3355.100 | 3355.100 | 3357.100 | 557 |
| **Accessories** | | | | | | |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Speed control | 1 pc(s). | 3120.200 | 3120.200 | 3120.200 | – | 549 |

# Tangential fan for 482.6 mm (19")

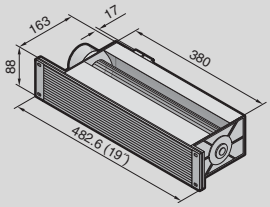
**Accessories for climate control** Page 533

Centrifugal fans for direct installation in the 482.6 mm (19") level provide a wide column of air plus favourable noise characteristics to set them apart from other fans.

**Colour:**
- RAL 9005

**Supply includes:**
- Fully wired unit ready for connection
- Filter mat

**Approvals:**
Available on the Internet




## Air throughput, unimpeded air flow 320 m³/h

| **Model No.** | Packs of | **3144.000** | Page |
|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | |
| **Air throughput, unimpeded air flow** m³/h | | **320** | |
| Rated current A | | 0.16 | |
| Power consumption W | | 37 | |
| Width mm | | 482.6 | |
| Height mm | | 88 | |
| Depth mm | | 163 | |
| Operating temperature range | | -10 °C...+55 °C | |
| Noise level dB(A) | | 52 | |
| Speed rpm | | 2245 | |
| Maximum static pressure difference Pa | | 65 - 70 | |
| Weight kg | | 2.02 | |
| **Accessories** | | | |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 546 |
| Thermostat | 1 pc(s). | 3110.000 | 547 |
| Filter mat | 5 pc(s). | 3177.000 | 533 |
| Front outlet grille 2 U | 1 pc(s). | 3176.000 | 539 |
| Speed control | 1 pc(s). | 3120.200 | 549 |

**Accessories for climate control** Page 533 **Therm software** Page 558



Air/air heat exchangers are particularly well-suited to aggressive ambient conditions, because the internal and external air circuits are completely separate from one another.

**Temperature control:**
- Electronic control with digital display (factory setting +35 °C)

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- Internal circuit IP 54
- External circuit IP 34

**Supply includes:**
- Complete unit ready for connection
- Plug-in terminal strip
- Floating fault signal contact in case of overtemperature
- Drilling template
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Specific thermal output 17.5 – 90 W/K, wall-mounted with controller

| **Model No.** | Packs of | **3126.100** | **3127.100** | **3128.100** | **3129.100** | **3130.100** | Page |
|---|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| **Specific thermal output** W/K | | **17.5** | **30** | **45** | **60** | **90** | |
| Rated current A | | 0.22 / 0.26 | 0.56 / 0.68 | 0.6 / 0.8 | 0.75 / 0.8 | 1.35 / 1.8 | |
| Rated power input W | | 50 / 60 | 120 / 150 | 140 / 180 | 170 / 180 | 300 / 400 | |
| Width mm | | 280 | 400 | 400 | 400 | 400 | |
| Height mm | | 550 | 950 | 950 | 950 | 1580 | |
| Depth mm | | 150 | 205 | 205 | 225 | 215 | |
| Operating temperature range | | -5 °C...+55 °C | -5 °C...+55 °C | -5 °C...+55 °C | -5 °C...+55 °C | -5 °C...+55 °C | |
| Weight kg | | 10.0 | 18.0 | 19.0 | 21.0 | 34.0 | |
| **Accessories** | | | | | | | |
| Filter mat | 3 pc(s). | 3286.300 | 3286.400 | 3286.400 | 3286.400 | 3286.400 | 533 |
| Metal filter | 1 pc(s). | 3286.310 | 3286.410 | 3286.410 | 3286.410 | 3286.410 | 534 |

# Air/air heat exchanger

**Accessories for climate control** Page 533 **Therm software** Page 558

Air/air heat exchangers are particularly well-suited to aggressive ambient conditions, because the internal and external air circuits are completely separate from one another.

**Colour:**
- Cover: RAL 7035
- Enclosure: RAL 7016

**Protection category IP to IEC 60 529:**
- Internal circuit IP 54
- External circuit IP 34

**Supply includes:**
- Complete unit ready for connection
- The fans are connected via two 3-wire connection cables, with wire end ferrules
- Drilling template
- Assembly parts

**Note:**
- For precise temperature control inside the enclosure, we recommend the enclosure internal thermostat, the digital enclosure internal temperature display and thermostat or the speed control.

## Specific thermal output 66 W/K, roof-mounted

| **Model No.** | Packs of | **3248.000** | Page |
|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | |
| **Specific thermal output** W/K | | **66** | |
| No. of fans | | 2 | |
| Max. rated current per fan A | | 0.32 / 0.4 | |
| Rated power input W | | 70 / 90 | |
| Width mm | | 595 | |
| Height mm | | 362 | |
| Depth mm | | 440 | |
| Operating temperature range | | -5 °C...+55 °C | |
| Type of electrical connection | | Connection cable | |
| Weight kg | | 25.0 | |
| **Accessories** | | | |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 546 |
| Thermostat | 1 pc(s). | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 547 |
| Speed control | 1 pc(s). | 3120.200 | 549 |

# Roof-mounted fans

Simple installation and a high protection category,
from page 464

# Rittal – The System.

**Faster – better – everywhere.**

# Cooling units

## Thermoelectric coolers


Thermoelectric coolers ..... 80 W ..... 474


## Wall-mounted cooling units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TopTherm Blue e ..... 500 W ..... 478
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Product advantages ..... 484
Blue e+ ..... 1600 W ..... 487
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TopTherm Blue e, NEMA 4X ..... 500 – 1500 W ..... 490
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Product advantages ..... 496
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## Roof-mounted cooling units


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## Integration solution


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## Modular climate control concept


Cooling module Blue e ..... 1500 – 2500 W ..... 506
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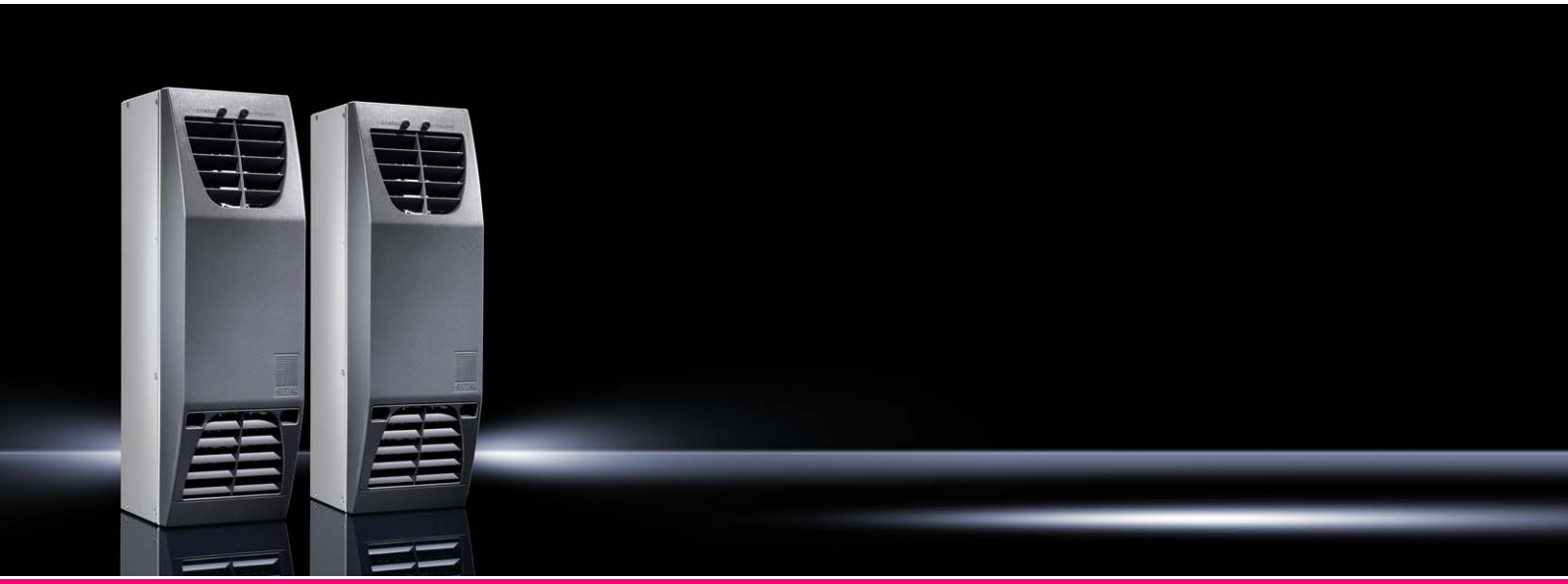
## The perfect symbiosis of the VX25 baying enclosure system and Blue e+ cooling unit

- **Integrated all-in-one system**
  The Blue e+ cooling unit is already integrated in the VX25 enclosure
- **Plug & play**
  Cooling unit, door limit switches and cabling are installed ready to connect
- **State-of-the-art design**
  No cooling unit built onto the enclosure

# Thermoelectric coolers



**Accessories for climate control** Page 533 **Therm software** Page 558

Powerful thermoelectric cooling units in a lightweight design for the climate control of command panels and small enclosures.

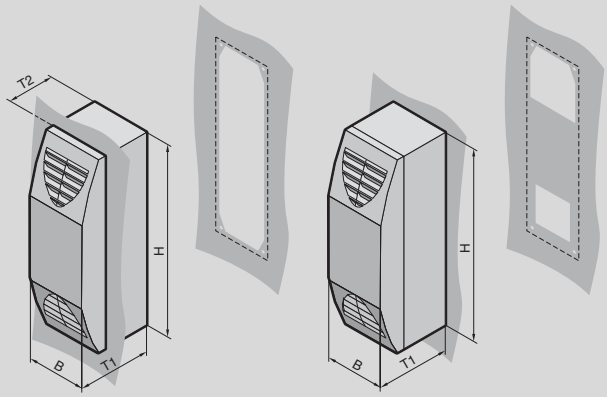
**Material:**
– Device: Aluminium, anodised

**Colour:**
– Cover: RAL 7015

**Protection category IP to IEC 60 529:**
– External circuit IP 34
– Internal circuit IP 54

**Supply includes:**
– Thermoelectric climate control unit
– Fully wired ready for connection (plug-in terminal strip)
– Mounting accessories
– Filter mat
– USB cable A/B
– Drilling template

**Performance diagrams:**
Available on the Internet




## Total cooling output 80/100 W

| **Model No.** | Packs of | **3201.200** | **3201.300** | Page |
|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 100 - 240, 1~, 50/60 | 24 (DC) | |
| **Total cooling output L35 L35** W | | **80 / 80** | **80** | |
| **Total cooling output L35 L30** W | | **100 / 100** | **100** | |
| **Thermal output** W | | **80** | **80** | |
| Width (B) mm | | 125 | 125 | |
| Height (H) mm | | 400 | 400 | |
| Depth (T1) mm | | 155 | 155 | |
| Installation depth (T2) mm | | 100 | 100 | |
| Operating temperature range | | -30 °C...+55 °C | -30 °C...+60 °C | |
| Setting range, cooling | | +5 °C...+55 °C | +5 °C...+55 °C | |
| Setting range, heating | | -10 °C...+20 °C | -10 °C...+20 °C | |
| Refrigeration factor/COP | | 0.8 | 0.9 | |
| Power pack integrated | | ■ | – | |
| Weight kg | | 3.3 | 2.6 | |
| **Accessories** | | | | |
| Spare filter mat | 5 pc(s). | 3201.050 | 3201.050 | 535 |
| Condensate hose | 1 pc(s). | 3301.606 | 3301.606 | 544 |

# TopTherm wall-mounted cooling units, horizontal format

**Accessories for climate control** Page 533 **Therm software** Page 558

Compact wall-mounted cooling units in horizontal format, with nano-coated condenser.

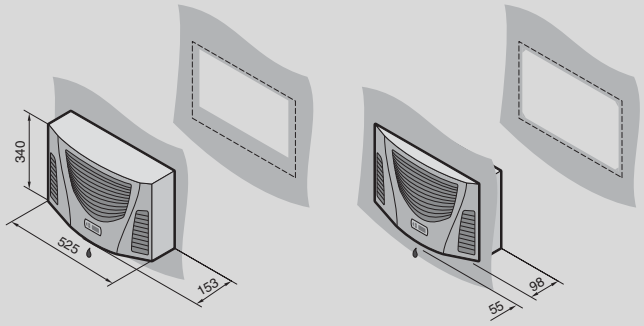
**Temperature control:**
- Basic controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet






## Output class 300 W

| **Model No.** | | Packs of | **3302.300** | **3302.310** | Page |
|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.36** | – | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.36 / 0.38 | 0.38 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.21 / 0.22 | 0.23 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 60 | |
| Width mm | | | 525 | 525 | |
| Height mm | | | 340 | 340 | |
| Depth mm | | | 153 | 153 | |
| Rated current max. A | | | 1.6 / 1.7 | 4 | |
| Start-up current A | | | 4.3 / 5.3 | 12 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.27 / 0.29 | 0.32 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +30 °C...+55 °C | +30 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.34 / 1.3 | 1.18 | |
| Refrigerant g | | | R134a, 100 | R134a, 100 | |
| Weight kg | | | 13.0 | 13.0 | |
| **Accessories** | | | | | |
| Filter mat | | 3 pc(s). | 3286.110 | 3286.110 | 533 |
| Metal filter | | 1 pc(s). | 3286.120 | 3286.120 | 534 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Condensate hose | | 1 pc(s). | 3301.608 | 3301.608 | 544 |
| Electric condensate evaporator | | 1 pc(s). | 3301.500 | 3301.500 | 543 |

# TopTherm wall-mounted cooling units

**Accessories for climate control** Page 533 **Therm software** Page 558

Compact wall-mounted cooling units, with nano-coated condenser.

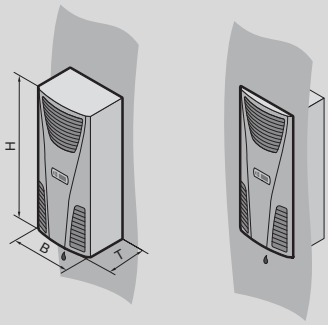
**Temperature control:**
- Basic controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet




## Output class 300 W

| **Model No.** | | Packs of | **3302.100** | **3302.110** | **3302.200** | Page |
|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | – | |
| | RAL 9007 | | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.36** | – | **0.36** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.36 / 0.38 | 0.38 | 0.36 / 0.38 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.21 / 0.23 | 0.23 | 0.21 / 0.23 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 60 | 230, 1~, 50/60 | |
| Width (B) mm | | | 280 | 280 | 280 | |
| Height (H) mm | | | 550 | 550 | 550 | |
| Depth (T) mm | | | 140 | 140 | 140 | |
| Rated current max. A | | | 1.6 / 1.7 | 3.3 | 1.6 / 1.7 | |
| Start-up current A | | | 3 / 3.4 | 8 | 3 / 3.4 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.27 / 0.28 | 0.32 | 0.27 / 0.28 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +30 °C...+55 °C | +30 °C...+55 °C | +30 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.3 / 1.32 | 1.18 | 1.3 / 1.32 | |
| Refrigerant g | | | R134a, 100 | R134a, 100 | R134a, 100 | |
| Weight kg | | | 13.0 | 13.0 | 13.0 | |
| **Accessories** | | | | | | |
| Filter mat | | 3 pc(s). | 3286.300 | 3286.300 | 3286.300 | 533 |
| Metal filter | | 1 pc(s). | 3286.310 | 3286.310 | 3286.310 | 534 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Condensate hose | | 1 pc(s). | 3301.610 | 3301.610 | 3301.610 | 544 |
| Electric condensate evaporator | | 1 pc(s). | 3301.500 | 3301.500 | 3301.500 | 543 |

# TopTherm wall-mounted cooling units Blue e

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with integral e-Comfort controller and RiNano coating on the condenser as standard.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

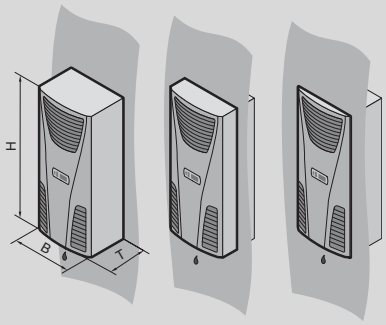
**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Note:**
- The technical specifications for the wall-mounted cooling unit 3361.540 apply with an external transformer connected.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet








Further technical information available on the Internet.

# TopTherm wall-mounted cooling units Blue e

## Output class 500 W

| **Model No.** | | Packs of | **3303.500** | **3303.510** | **3303.600** | Page |
|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | – | |
| | RAL 9007 | | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.55** | – | **0.55** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.55 / 0.66 | 0.66 | 0.55 / 0.66 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.33 / 0.4 | 0.4 | 0.33 / 0.4 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 60 | 230, 1~, 50/60 | |
| Width (B) mm | | | 280 | 280 | 280 | |
| Height (H) mm | | | 550 | 550 | 550 | |
| Depth (T) mm | | | 210 | 210 | 210 | |
| Rated current max. A | | | 2.6 / 2.6 | 5.7 | 2.6 / 2.6 | |
| Start-up current A | | | 5.1 / 6.4 | 11.5 | 5.1 / 6.4 | |
| Toroidal transformer (external) Ø x D | | | – | – | – | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.39 / 0.41 | 0.5 | 0.39 / 0.41 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.4 / 1.21 | 1.31 | 1.4 | |
| Refrigerant g | | | R134a, 170 | R134a, 170 | R134a, 170 | |
| Weight kg | | | 17.0 | 17.0 | 17.0 | |
| **Accessories** | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.300 | 3286.300 | 3286.300 | 533 |
| Metal filter | | 1 pc(s). | 3286.310 | 3286.310 | 3286.310 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 550 |
| Electric condensate evaporator | | 1 pc(s). | 3301.500 | 3301.500 | 3301.500 | 543 |
| Condensate hose | | 1 pc(s). | 3301.610 | 3301.610 | 3301.610 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 559 |

## Output class 750 W

| **Model No.** | | Packs of | **3361.500** | **3361.510** | **3361.540** | **3361.600** | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | – | |
| | RAL 9007 | | – | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.85** | – | **0.85** | **0.85** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.85 / 0.89 | 0.89 | 0.85 / 0.89 | 0.85 / 0.89 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.67 / 0.67 | 0.67 | 0.67 / 0.67 | 0.67 / 0.67 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 60 | 400, 2~, 50/60 | 230, 1~, 50/60 | |
| Width (B) mm | | | 280 | 280 | 280 | 280 | |
| Height (H) mm | | | 550 | 550 | 550 | 550 | |
| Depth (T) mm | | | 280 | 280 | 280 | 280 | |
| Rated current max. A | | | 2.7 / 2.7 | 5.3 | 1.2 / 1.4 | 2.7 / 2.7 | |
| Start-up current A | | | 6 / 9.6 | 12 | 3.1 / 3.3 | 6 / 9.6 | |
| Toroidal transformer (external) Ø x D mm | | | – | – | 126 x 65 | – | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.4 / 0.43 | 0.55 | 0.4 / 0.43 | 0.4 / 0.43 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+52 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | +53 °C | +52 °C | +53 °C | +53 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.08 / 2.03 | 1.59 | 2.08 / 2.03 | 2.08 / 2.03 | |
| Refrigerant g | | | R134a, 280 | R134a, 260 | R134a, 280 | R134a, 280 | |
| Weight kg | | | 22.0 | 22.0 | 22.0 | 22.0 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.300 | 3286.300 | 3286.300 | 3286.300 | 533 |
| Metal filter | | 1 pc(s). | 3286.310 | 3286.310 | 3286.310 | 3286.310 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 550 |
| Electric condensate evaporator | | 1 pc(s). | 3301.500 | 3301.500 | 3301.500 | 3301.500 | 543 |
| Condensate hose | | 1 pc(s). | 3301.610 | 3301.610 | 3301.610 | 3301.610 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 559 |

# TopTherm wall-mounted cooling units Blue e

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with integral e-Comfort controller, RiNano coating on the condenser and electrical condensate evaporation as standard.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

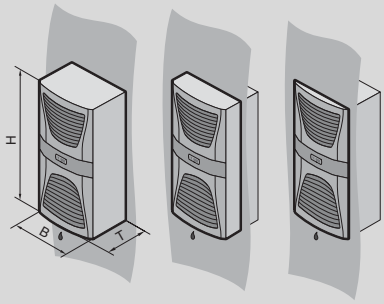
**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet






## Output class 1000 W

| **Model No.** | | Packs of | **3304.500** | **3304.510** | **3304.540** | **3304.600** | **3304.640** | Page |
|---|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | – | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | – | – | |
| | RAL 9007 | | – | – | – | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.1** | **1.1** | **1.1** | **1.1** | **1.1** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.1 / 1.25 | 1.1 / 1.25 | 1.1 / 1.25 | 1.1 / 1.25 | 1.1 / 1.26 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.91 / 0.9 | 0.91 / 0.9 | 0.98 / 0.9 | 0.91 / 0.9 | 0.98 / 0.9 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width (B) mm | | | 400 | 400 | 400 | 400 | 400 | |
| Height (H) mm | | | 950 | 950 | 950 | 950 | 950 | |
| Depth (T) mm | | | 260 | 260 | 260 | 260 | 260 | |
| Rated current max. A | | | 3.9 / 4.3 | 8 / 8.8 | 2.2 / 2.1 | 3.9 / 4.3 | 2.2 / 2.1 | |
| Start-up current A | | | 12 / 14 | 26 / 28 | 11.5 / 12.7 | 12 / 14 | 11.5 / 12.7 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.64 / 0.68 | 0.64 / 0.68 | 0.64 / 0.79 | 0.6 / 0.68 | 0.64 / 0.79 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.83 / 1.84 | 1.83 / 1.84 | 1.72 / 1.58 | 1.83 / 1.84 | 1.72 / 1.59 | |
| Refrigerant g | | | R134a, 325 | R134a, 325 | R134a, 325 | R134a, 325 | R134a, 325 | |
| Weight kg | | | 39.0 | 44.0 | 40.0 | 39.0 | 40.0 | |
| **Accessories** | | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.400 | 3286.400 | 3286.400 | 3286.400 | 3286.400 | 533 |
| Metal filter | | 1 pc(s). | 3286.410 | 3286.410 | 3286.410 | 3286.410 | 3286.410 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | 3213.310 | 3213.310 | 3213.310 | 3213.310 | 3213.310 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 559 |



Further technical information available on the Internet.

# TopTherm wall-mounted cooling units Blue e

## Output class 1500 W

| **Model No.** | | Packs of | **3305.500** | **3305.510** | **3305.540** | Page |
|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.6** | **1.6** | **1.6** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.6 / 1.76 | 1.6 / 1.76 | 1.6 / 1.61 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.25 / 1.37 | 1.25 / 1.37 | 1.33 / 1.35 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width (B) mm | | | 400 | 400 | 400 | |
| Height (H) mm | | | 950 | 950 | 950 | |
| Depth (T) mm | | | 260 | 260 | 260 | |
| Rated current max. A | | | 5.5 / 5.8 | 11.5 / 12.5 | 2.5 / 2.8 | |
| Start-up current A | | | 12 / 14 | 26 / 28 | 12.2 / 11.3 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.87 / 0.98 | 0.87 / 0.98 | 0.9 / 1.08 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.83 / 1.79 | 1.83 / 1.79 | 1.83 / 1.49 | |
| Refrigerant g | | | R134a, 500 | R134a, 500 | R134a, 500 | |
| Weight kg | | | 41.0 | 46.0 | 42.0 | |
| **Accessories** | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.400 | 3286.400 | 3286.400 | 533 |
| Metal filter | | 1 pc(s). | 3286.410 | 3286.410 | 3286.410 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | 3213.310 | 3213.310 | 3213.310 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 559 |

# TopTherm wall-mounted cooling units Blue e

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with integral e-Comfort controller, RiNano coating on the condenser and electrical condensate evaporation as standard.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

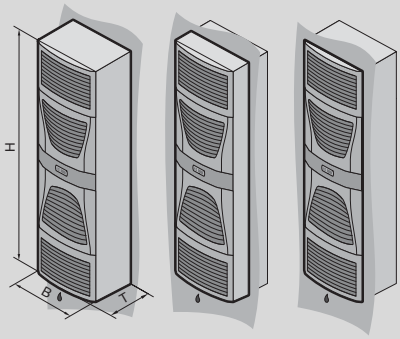
**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet






## Output class 2000 W

| **Model No.** | | Packs of | **3328.500** | **3328.540** | Page |
|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **2.2** | **2.2** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 2.2 / 2.56 | 2.2 / 2.55 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.82 / 1.95 | 1.65 / 1.89 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width (B) mm | | | 400 | 400 | |
| Height (H) mm | | | 1580 | 1580 | |
| Depth (T) mm | | | 295 | 295 | |
| Rated current max. A | | | 6.1 / 6.6 | 2.8 / 3.3 | |
| Start-up current A | | | 20 / 22 | 6.8 / 7.8 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.91 / 1.03 | 0.92 / 1.15 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.4 / 2.47 | 2.4 / 2.22 | |
| Refrigerant g | | | R134a, 950 | R134a, 950 | |
| Weight kg | | | 66.0 | 67.0 | |
| **Accessories** | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.400 | 3286.400 | 533 |
| Metal filter | | 1 pc(s). | 3286.410 | 3286.410 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | 3213.320 | 3213.320 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 559 |
| Eyebolts | | 4 pc(s). | 4568.000 | 4568.000 | 964 |

# TopTherm wall-mounted cooling units Blue e

## Output class 2500 W

| **Model No.** | | Packs of | **3329.500** | **3329.540** | Page |
|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **2.55** | **2.55** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 2.55 / 2.71 | 2.55 / 2.75 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.8 / 1.8 | 1.95 / 2 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width (B) mm | | | 400 | 400 | |
| Height (H) mm | | | 1580 | 1580 | |
| Depth (T) mm | | | 295 | 295 | |
| Rated current max. A | | | 7.9 / 9.3 | 3.3 / 3.4 | |
| Start-up current A | | | 25 / 22 | 6.8 / 7.6 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 1.21 / 1.35 | 1.19 / 1.39 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.11 / 2.01 | 2.11 / 1.97 | |
| Refrigerant g | | | R134a, 950 | R134a, 950 | |
| Weight kg | | | 69.0 | 70.0 | |
| **Accessories** | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.400 | 3286.400 | 533 |
| Metal filter | | 1 pc(s). | 3286.410 | 3286.410 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | 3213.320 | 3213.320 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 559 |
| Eyebolts | | 4 pc(s). | 4568.000 | 4568.000 | 964 |


Rittal – The System.

**Blue e IoT adaptor**

see page 555

# TopTherm wall-mounted cooling units Blue e, slimline

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with e-Comfort controller integrated as standard, RiNano coating on the condenser and electrical condensate evaporation. Slimline design.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts for internal mounting

**Note:**
- For external mounting of the cooling unit, trim frame 3377.000 including assembly parts may be fitted. This gives the cooling unit a closed front appearance.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



## Output class 1500 W

| **Model No.** | | Packs of | **3366.500** | **3366.540** | Page |
|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.6** | **1.6** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.6 / 1.6 | 1.6 / 1.6 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.15 / 1.2 | 1.08 / 1.18 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | | 435 | 435 | |
| Height mm | | | 1590 | 1590 | |
| Depth mm | | | 205 | 205 | |
| Rated current max. A | | | 6.7 / 6.9 | 2.7 / 2.9 | |
| Start-up current A | | | 22 / 24 | 8 / 8.8 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.84 / 0.97 | 0.9 / 1.05 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.9 / 1.65 | 1.9 / 1.52 | |
| Refrigerant g | | | R134a, 700 | R134a, 700 | |
| Weight kg | | | 45.0 | 46.0 | |
| **Accessories** | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3286.400 | 3286.400 | 533 |
| Metal filter | | 1 pc(s). | 3286.410 | 3286.410 | 534 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 550 |
| Trim frame | | 1 pc(s). | 3377.000 | 3377.000 | 556 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 544 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 559 |

# Wall-mounted cooling units Blue e+

The world's most efficient range of cooling units.

## Incredibly efficient

- Average 75% energy savings with innovative hybrid technology
- Active cooling circuit with speed-regulated components for demand-based cooling
- Integral heat pipe for passive cooling dissipates heat from the enclosure as soon as the ambient temperature falls below the setpoint

## Intelligent networking

- In conjunction with the IoT interface, all Blue e+ cooling units can now be networked and digitalised

  **The benefits for you:**
  – Continuous monitoring of temperature levels
  – Avoidance of downtime costs and consequential damage
  – Automatic notification of any cooling unit malfunctions
  – Asset Management: Localisation and organisation of cooling units
  – Remote access: Device parameters can be configured remotely

## Easier to operate

- Fast unit analysis using RiDiag III software via USB port
- Fast parameterisation, data reading and plain-text system messages via the intelligent, multilingual, industry-grade display
- Contactless on-site information sharing and fast, direct analysis via the NFC interface with the Blue e+ app

## Maximum flexibility

- One device for all voltages and networks, suitable for worldwide use thanks to inverter technology:
  – 110 to 240 V, 1~, 50/60 Hz
  – 380 to 480 V, 3~, 50/60 Hz
- International approvals and certifications
- Available in sheet steel or stainless steel
- One version for external mounting, partial internal mounting and full internal mounting with identical mounting cut-out

# Wall-mounted cooling units Blue e+

**Accessories for climate control** Page 533 **Therm software** Page 558 **Blue e+ app** Page 559 **IoT interface** Page 554

**Benefits:**
- Average 75% energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

**Temperature control:**
- e+ controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- Internal circuit IP 55

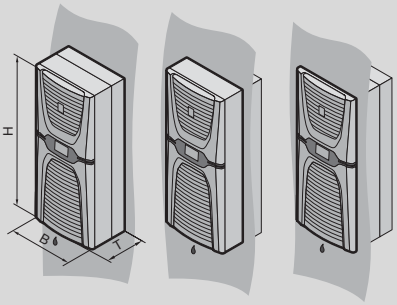
**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Assembly parts
- Fully wired ready for connection (plug-in terminal strip)

**Optional:**
- For remote monitoring and networking of cooling units and chillers in the Blue e+ generation, please use the IoT interface (Model No. 3124.300). Increase machine availability and process reliability with remote monitoring of device data, statuses and system messages.

**Note:**
- Please observe the mounting instructions.
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



## Output class 1600 W

| **Model No.** | | Packs of | **3185.530** | **3185.830** | Page |
|---|---|---|---|---|---|
| Material | Sheet steel | | – | ■ | |
| | Stainless steel 1.4301 (AISI 304) | | ■ | – | |
| Colour | RAL 7035 | | – | ■ | |
| | RAL 9007 | | ■ | – | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.6** | **1.6** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.6 / 1.6 | 1.6 / 1.6 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.2 / 1.2 | 1.2 / 1.2 | |
| Rated operating voltage V, ~, Hz | | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Width (B) mm | | | 400 | 400 | |
| Height (H) mm | | | 950 | 950 | |
| Depth (T) mm | | | 310 | 310 | |
| Rated power input kW | | | 0.62 | 0.62 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.54 / 0.54 | 0.54 / 0.54 | |
| Operating temperature range | | | -20 °C...+60 °C | -20 °C...+60 °C | |
| Setting range | | | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 3.1 / 3.1 | 3.1 / 3.1 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | | 6.4 | 6.4 | |
| Refrigerant g | | | R134a, 750 | R134a, 750 | |
| Weight kg | | | 36.3 | 37.1 | |
| **Accessories** | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 554 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3285.800 | 3285.800 | 533 |
| Metal filter | | 1 pc(s). | 3285.810 | 3285.810 | 534 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 3124.400 | 549 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 544 |
| Eyebolts | | 4 pc(s). | 4568.000 | 4568.000 | 964 |
| RiDiag | | 1 pc(s). | 3159.300 | 3159.300 | 559 |



Rittal – The System.

IoT Interface

see page 554

# Wall-mounted cooling units Blue e+

**Accessories for climate control** Page 533 **Therm software** Page 558 **Blue e+ app** Page 559 **IoT interface** Page 554

**Benefits:**
- Average 75% energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

**Temperature control:**
- e+ controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- Internal circuit IP 55

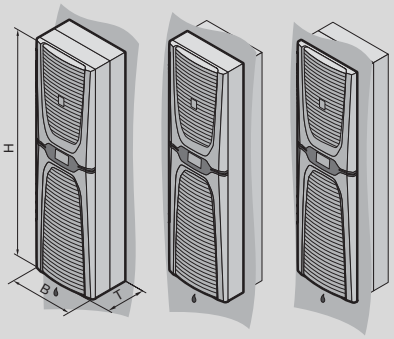
**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Assembly parts
- Fully wired ready for connection (plug-in terminal strip)

**Optional:**
- For remote monitoring and networking of cooling units and chillers in the Blue e+ generation, please use the IoT interface (Model No. 3124.300). Increase machine availability and process reliability with remote monitoring of device data, statuses and system messages.

**Note:**
- Please observe the mounting instructions.
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



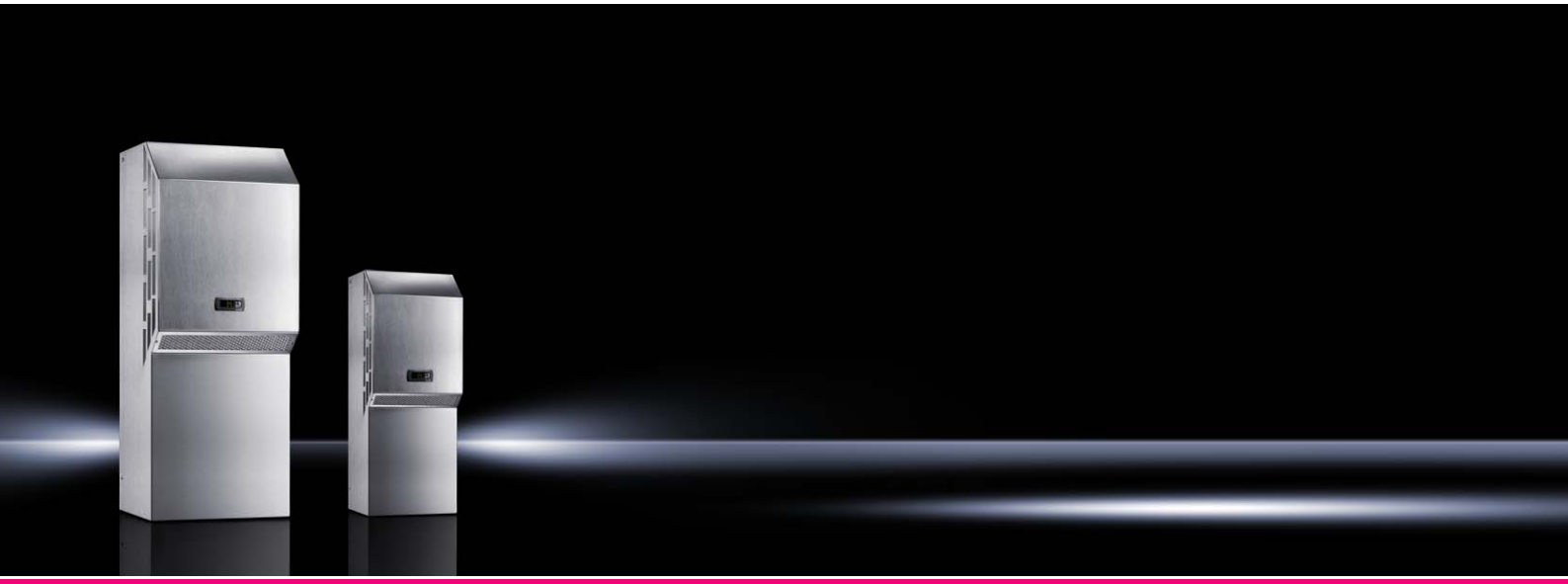
## Output class 2000 – 2600 W

| **Model No.** | | Packs of | **3186.630** | **3186.930** | **3187.630** | **3187.930** | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | – | ■ | – | ■ | |
| | Stainless steel 1.4301 (AISI 304) | | ■ | – | ■ | – | |
| Colour | RAL 7035 | | – | ■ | – | ■ | |
| | RAL 9007 | | ■ | – | ■ | – | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **2** | **2** | **2.6** | **2.6** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 2 / 2 | 2 / 2 | 2.6 / 2.6 | 2.6 / 2.6 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.29 / 1.29 | 1.29 / 1.29 | 1.82 / 1.82 | 1.82 / 1.82 | |
| Rated operating voltage V, ~, Hz | | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Width (B) mm | | | 450 | 450 | 450 | 450 | |
| Height (H) mm | | | 1600 | 1600 | 1600 | 1600 | |
| Depth (T) mm | | | 294 | 294 | 294 | 294 | |
| Rated power input kW | | | 0.73 | 0.73 | 1.05 | 1.05 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.57 / 0.57 | 0.57 / 0.57 | 0.99 / 0.99 | 0.99 / 0.99 | |
| Operating temperature range | | | -20 °C...+60 °C | -20 °C...+60 °C | -20 °C...+60 °C | -20 °C...+60 °C | |
| Setting range | | | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 3.5 / 3.5 | 3.5 / 3.5 | 2.63 / 2.63 | 2.63 / 2.63 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | | 8.1 | 8.1 | 6.2 | 6.2 | |
| Refrigerant g | | | R134a, 1150 | R134a, 1150 | R134a, 1150 | R134a, 1150 | |
| Note on Model No. | | | – | – | – | – | |
| Weight kg | | | 54.8 | 55.2 | 54.8 | 55.2 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3285.900 | 3285.900 | 3285.900 | 3285.900 | 533 |
| Metal filter | | 1 pc(s). | 3285.910 | 3285.910 | 3285.910 | 3285.910 | 534 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 3124.400 | 3124.400 | 3124.400 | 549 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Eyebolts | | 4 pc(s). | 4568.000 | 4568.000 | 4568.000 | 4568.000 | 964 |
| RiDiag | | 1 pc(s). | 3159.300 | 3159.300 | 3159.300 | 3159.300 | 559 |

## Output class 4200 – 5800 W

| **Model No.** | | Packs of | **3188.640** | **3188.940** | **3189.640** | **3189.940** | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | – | ■ | – | ■ | |
| | Stainless steel 1.4301 (AISI 304) | | ■ | – | ■ | – | |
| Colour | RAL 7035 | | – | ■ | – | ■ | |
| | RAL 9007 | | ■ | – | ■ | – | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **4.2** | **4.2** | **5.8** | **5.8** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 4.2 / 4.2 | 4.2 / 4.2 | 5.8 / 5.8 | 5.8 / 5.8 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 3.02 / 3.02 | 3.02 / 3.02 | 4.2 / 4.2 | 4.2 / 4.2 | |
| Rated operating voltage V, ~, Hz | | | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | |
| Width (B) mm | | | 450 | 450 | 450 | 450 | |
| Height (H) mm | | | 1600 | 1600 | 1600 | 1600 | |
| Depth (T) mm | | | 393 | 393 | 393 | 393 | |
| Rated power input kW | | | 1.3 | 1.3 | 2.2 | 2.2 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 1.21 / 1.21 | 1.21 / 1.21 | 2.2 / 2.2 | 2.2 / 2.2 | |
| Operating temperature range | | | -20 °C...+60 °C | -20 °C...+60 °C | -20 °C...+60 °C | -20 °C...+60 °C | |
| Setting range | | | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 3.46 / 3.46 | 3.46 / 3.46 | 2.64 / 2.64 | 2.64 / 2.64 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | | 8.1 | 8.1 | 6.2 | 6.2 | |
| Refrigerant g | | | R134a, 1750 | R134a, 1750 | R134a, 1750 | R134a, 1750 | |
| Note on Model No. | | | Full installation not possible | Full installation not possible | Full installation not possible | Full installation not possible | |
| Weight kg | | | 71.2 | 72.4 | 71.2 | 72.4 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Filter mat | | 3 pc(s). | 3285.900 | 3285.900 | 3285.900 | 3285.900 | 533 |
| Metal filter | | 1 pc(s). | 3285.910 | 3285.910 | 3285.910 | 3285.910 | 534 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 3124.400 | 3124.400 | 3124.400 | 549 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Eyebolts | | 4 pc(s). | 4568.000 | 4568.000 | 4568.000 | 4568.000 | 964 |
| RiDiag | | 1 pc(s). | 3159.300 | 3159.300 | 3159.300 | 3159.300 | 559 |

# TopTherm wall-mounted cooling units Blue e, NEMA 4X



**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with e-Comfort controller integrated as standard, RiNano coating on the condenser and electrical condensate evaporation. Protection category NEMA 4X.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 55

**Protection category NEMA:**
- NEMA 4X

**Supply includes:**
- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Please observe the product-specific scope of supply.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 500 – 1500 W

| **Model No.** | | Packs of | **3303.504** | **3303.514** | **3304.504** | **3304.544** | **3305.504** | **3305.544** | Page |
|---|---|---|---|---|---|---|---|---|---|
| Material | Stainless steel 1.4404 (AISI 316L) | | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.55** | – | **1.1** | **1.1** | **1.6** | **1.6** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.55 / 0.66 | 0.66 | 1.1 / 1.25 | 1.1 / 1.26 | 1.6 / 1.76 | 1.6 / 1.61 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.33 / 0.4 | 0.4 | 0.91 / 0.9 | 0.98 / 1.09 | 1.25 / 1.37 | 1.33 / 1.35 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 60 | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | | 285 | 285 | 405 | 405 | 405 | 405 | |
| Height mm | | | 620 | 620 | 1020 | 1020 | 1020 | 1020 | |
| Depth mm | | | 298 | 298 | 358 | 358 | 358 | 358 | |
| Rated current max. A | | | 2.6 / 2.6 | 5.7 | 3.9 / 4.3 | 2.2 / 2.1 | 5.5 / 5.8 | 2.5 / 2.8 | |
| Start-up current A | | | 5.1 / 6.4 | 11.5 | 12 / 14 | 11.5 / 12.7 | 12 / 14 | 12.2 / 11.3 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.39 / 0.41 | 0.5 | 0.64 / 0.68 | 0.64 / 0.79 | 0.87 / 0.98 | 0.9 / 1.08 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 1.4 | 1.31 | 1.83 / 1.84 | 1.83 / 1.56 | 1.83 / 1.79 | 1.83 / 1.49 | |
| Refrigerant g | | | R134a, 170 | R134a, 170 | R134a, 325 | R134a, 325 | R134a, 500 | R134a, 500 | |
| Weight kg | | | 25.0 | 25.0 | 49.0 | 50.0 | 51.0 | 52.0 | |
| **Product-specific scope of supply** | | | | | | | | | |
| Integral electric condensate evaporation | | | – | – | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | – | – | 3213.310 | 3213.310 | 3213.310 | 3213.310 | 542 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 559 |

# TopTherm wall-mounted cooling units Blue e, NEMA 4X

## Output class 2000 – 2500 W

| **Model No.** | | Packs of | **3328.544** | **3329.544** | Page |
|---|---|---|---|---|---|
| Material | Stainless steel 1.4404 (AISI 316L) | | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **2.2** | **2.55** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 2.2 / 2.55 | 2.55 / 2.75 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.45 / 1.69 | 1.9 / 1.95 | |
| Rated operating voltage V, ~, Hz | | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | | 405 | 405 | |
| Height mm | | | 1650 | 1650 | |
| Depth mm | | | 388 | 388 | |
| Rated current max. A | | | 2.8 / 3.3 | 3.3 / 3.4 | |
| Start-up current A | | | 6.8 / 7.8 | 6.8 / 7.6 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.92 / 1.15 | 1.19 / 1.39 | |
| Operating temperature range | | | +10 °C...+50 °C | +10 °C...+50 °C | |
| Setting range | | | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.4 / 2.22 | 2.11 / 1.97 | |
| Refrigerant g | | | R134a, 900 | R134a, 900 | |
| Weight kg | | | 81.0 | 84.0 | |
| **Product-specific scope of supply** | | | | | |
| Integral electric condensate evaporation | | | ■ | ■ | |
| **Accessories** | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 555 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 1024 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 550 |
| Air diverter | | 1 pc(s). | 3213.320 | 3213.320 | 542 |
| RiDiag | | 1 pc(s). | 3159.100 | 3159.100 | 559 |



Rittal – The System.

Therm software

see page 558

# Wall-mounted cooling unit TopTherm Blue e, UL Type 3R/4

For indoor and outdoor

## Suitable for outdoor siting

- Vandalism-protected (e-Comfort controller on the rear of the cooling unit)
- Outdoor paint finish in accordance with UL 1332
- Temperature range: -20 °C to +50 °C (in compressor mode +10 °C to +50 °C)

## Optimum protection

- Protection category: UL Type 3R/4/12 and IP 56
- The cooling units provide protection against damaging influences, e.g. water and external icing
- The RiNano coating prevents the accumulation of dirt deposits on the condenser, thereby extending maintenance intervals and ensuring a constant long-term cooling output

## Benefits of Blue e technology

- Energy savings of up to 45%
- Intelligent control with Comfort controller, icing protection and motor monitoring
- Eco-mode control: The evaporator coil fan cuts out as necessary, depending on the enclosure internal temperature
- Longer service life of components in the enclosure and cooling units, because efficient components such as fans and compressors run at their optimum operating point
- The integral electric condensate evaporation system means that condensate evaporates and dissipates to the ambient air via the external fan

## Worldwide use

- International approvals (cULus Listed, cULus FTTA, CE and EAC)
- Worldwide service and spare parts availability

## Intelligent networking

- In conjunction with the IoT interface and Blue e IoT adaptor, it is a simple matter to integrate the cooling units into Industry 4.0 environments
- Condition monitoring of up to 10 cooling units in a master/slave arrangement

# TopTherm wall-mounted cooling units Blue e, UL Type 3R/4

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559

Energy-efficient Blue e wall-mounted cooling units with integral e-Comfort controller, RiNano coating on the condenser and electric condensate evaporation as standard, protection category UL Type 3R/4, 12.

**Benefits:**
- Suitable for outdoor siting
- Blue e technology
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 56

**Protection category NEMA:**
- UL Type 3R
- UL Type 4
- UL Type 12

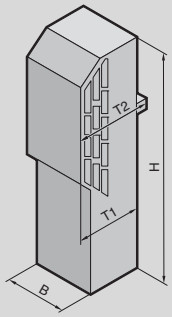
**Supply includes:**
- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Connection box
- Drilling template
- Assembly parts

Please observe the product-specific scope of supply.

**Note:**
- Compressor cooling mode from +10 °C ambient temperature. Only the internal fan is active in the temperature range -20 °C to +10 °C.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



# TopTherm wall-mounted cooling units Blue e, UL Type 3R/4

## Output class 500 – 2500 W

| **Model No.** | Packs of | **3303.508** | **3303.518** | **3304.508** | **3304.548** | **3305.548** | **3329.548** | Page |
|---|---|---|---|---|---|---|---|---|
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | **0.46** | – | **1.1** | **1.15** | **1.49** | **2.55** | |
| Total cooling output 50/60 Hz L35 L35 kW | | 0.46 / 0.55 | 0.55 | 1.1 / 1.26 | 1.15 / 1.3 | 1.49 / 1.7 | 2.55 / 2.75 | |
| Total cooling output 50/60 Hz L35 L50 kW | | 0.27 / 0.32 | 0.32 | 0.9 / 1.07 | 0.95 / 1.11 | 1.04 / 1.17 | 1.95 / 2.00 | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 115, 1~, 60 | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width (B) mm | | 285 | 285 | 405 | 405 | 405 | 405 | |
| Height (H) mm | | 620 | 620 | 1020 | 1020 | 1020 | 1650 | |
| Depth (T1) mm | | 298 | 298 | 358 | 358 | 358 | 388 | |
| Installation depth of connection box (T2) mm | | 350 | 350 | 410 | 410 | 410 | 440 | |
| Rated current max. A | | 2.6 / 2.6 | 5.7 | 3.9 / 4.3 | 2.2 / 2.1 | 2.5 / 2.8 | 3.3 / 3.4 | |
| Start-up current A | | 5.1 / 6.4 | 11.5 | 12 / 14 | 11.5 / 12.7 | 12.2 / 11.3 | 6.8 / 7.6 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | 0.35 / 0.42 | 0.42 | 0.62 / 0.68 | 0.75 / 0.78 | 0.65 / 0.82 | 1.19 / 1.39 | |
| Operating temperature range | | -20 °C...+50 °C | -20 °C...+50 °C | -20 °C...+50 °C | -20 °C...+50 °C | -20 °C...+50 °C | -20 °C...+50 °C | |
| Setting range | | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | 1.31 / 1.3 | 1.3 | 1.75 / 1.86 | 1.53 / 1.67 | 2.28 / 2.07 | 2.14 / 1.97 | |
| Refrigerant g | | R134a, 170 | R134a, 170 | R134a, 325 | R134a, 325 | R134a, 500 | R134a, 900 | |
| Weight kg | | 25.0 | 25.0 | 49.0 | 50.0 | 52.0 | 84.0 | |
| **Product-specific scope of supply** | | | | | | | | |
| Integral electric condensate evaporation | | – | – | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | |
| IoT interface | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Door-operated switch | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| RiDiag | 1 pc(s). | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 3159.100 | 559 |
| Master/slave cable | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 550 |
| Air diverter | 1 pc(s). | – | – | 3213.310 | 3213.310 | 3213.310 | 3213.320 | 542 |
| Eyebolts | 4 pc(s). | 4568.000 | 4568.000 | 4568.000 | 4568.000 | 4568.000 | 4568.000 | 964 |



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Machine approvals in North America under the new NEC 2017

www.rittal.com/downloads

# Wall-mounted cooling unit Blue e+ outdoor

## Energy efficiency for the outdoor sector

**Suitable for outdoor siting**

- Vandalism-protected enclosure (e+ controller on the rear of the cooling unit)
- For universal mounting on outdoor enclosures
- Aluminium enclosure with outdoor spray finish to UL 1332
- Temperature range: -30 °C to +60 °C

**Optimum protection**

- Protection category: UL type 3R/4/12 and IP 56
- The cooling units provide protection against damage e.g. from water and external icing
- The RiNano coating prevents the accumulation of dirt deposits on the condenser, thereby extending maintenance intervals and ensuring a consistent cooling output for longer

**Benefits of Blue e+ technology**

- Efficiency – Average 75% energy savings thanks to speed-controlled components and heat pipe technology
- Versatility – Unique multi-voltage capability supports global use
- Reliability – Component-friendly cooling helps extend the service life of all components inside the enclosure and the cooling unit
- User-friendliness – Touch display and smart interfaces support intuitive operation

**Global use**

- International approvals (cULus Listed, cULus FTTA, CE and EAC)
- Worldwide service and spare parts availability

**Intelligent networking**
In conjunction with the IoT interface, all Blue e+ cooling units can now be networked and digitalised

- Continuous monitoring of temperature levels
- Avoidance of downtime costs and consequential damage
- Automatic notification of any cooling unit malfunctions
- Asset management: Localisation and organisation of cooling units
- Remote access: Device parameters can be configured remotely

# Wall-mounted cooling unit Blue e+ outdoor

**Accessories for climate control** Page 533 **Toptec** Page 270 **RiDiag software** Page 559

The energy-efficient wall-mounted cooling unit Blue e+ Outdoor can be used worldwide, thanks to its multi-voltage capability, and is suitable for use with Toptec project solutions, for example.

**Benefits:**
- Average 75% energy savings thanks to speed-regulated components and heat pipe technology
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

**Temperature control:**
- e+ controller (factory setting +35 °C)

**Material:**
- Aluminium AlMg3

**Surface finish:**
- Powder-coated
- UV-resistant pure polyester

**Colour:**
- RAL 7035

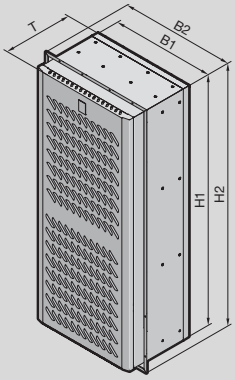
**Protection category IP to IEC 60 529:**
- Internal circuit IP 56

**Protection category NEMA:**
- UL Type 4/3R/12

**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Sealing frame for universal attachment to outdoor enclosures for external, partial internal and full internal mounting.
- Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet






## Output class 1500 W

| **Model No.** | Packs of | **3185.330** | Page |
|---|---|---|---|
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | **1.5** | |
| Total cooling output 50/60 Hz L35 L35 kW | | 1.5 / 1.5 | |
| Total cooling output 50/60 Hz L35 L50 kW | | 1.2 / 1.2 | |
| Rated operating voltage V, ~, Hz | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Width (B1) mm | | 415 | |
| Height (H1) mm | | 990 | |
| Depth (T) mm | | 279 | |
| Enclosure dimensions including sealing frame and designer cover (B2 x H2 x T) mm | | 467 x 1042 x 279 | |
| Dimensions to fit enclosure type | | Toptec | |
| with height mm | | ≥ 1200 | |
| with width mm | | ≥ 600 | |
| Rated power input kW | | 0.62 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | 0.54 / 0.54 | |
| Operating temperature range | | -30 °C...+60 °C | |
| Setting range | | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | 3.1 / 3.1 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | 6.4 | |
| Refrigerant g | | R134a, 750 | |
| Weight kg | | 37.1 | |
| **Also required** | | | |
| Enclosure heater | | see page | 531 |
| Thermostat | 1 pc(s). | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 547 |
| **Accessories** | | | |
| IoT interface | 1 pc(s). | 3124.300 | 554 |
| Door-operated switch | 1 pc(s). | 4127.010 | 1024 |

# TopTherm roof-mounted cooling units Blue e

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559 **Air routing** Page 540

Energy-efficient Blue e roof-mounted cooling units with integral e-Comfort controller, RiNano coating on the condenser and electric condensate evaporation as standard.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

**Note:**
- The roof-mounted cooling unit 3273.500 is also suitable for office applications, thanks to its low noise level.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 500 W

| **Model No.** | | Packs of | **3382.500** | **3382.510** | **3382.600** | Page |
|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | – | |
| | RAL 9007 | | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.55** | **0.55** | **0.55** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.55 / 0.62 | 0.55 / 0.62 | 0.55 / 0.62 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.42 / 0.48 | 0.42 / 0.48 | 0.42 / 0.48 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | |
| Depth mm | | | 380 | 380 | 380 | |
| Rated current max. A | | | 2.3 / 2.6 | 4.7 / 5.4 | 2.3 / 2.6 | |
| Start-up current A | | | 9.1 / 8.8 | 18.2 / 15.9 | 9.1 / 8.8 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.27 / 0.31 | 0.27 / 0.31 | 0.27 / 0.31 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.04 / 1.96 | 2.04 / 1.96 | 2.04 / 1.96 | |
| Refrigerant g | | | R134a, 300 | R134a, 300 | R134a, 300 | |
| Weight kg | | | 30.0 | 35.0 | 30.0 | |
| **Accessories** | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.500 | 3286.500 | 3286.500 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.510 | 3286.510 | 3286.510 | 534 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 540 |
| Shallow air duct system | | 1 pc(s). | 3286.850 | 3286.850 | 3286.850 | 541 |
| Air duct adaptor | | 1 pc(s). | 3286.840 | 3286.840 | 3286.840 | 540 |
| Stoppers | | 2 pc(s). | 3286.780 | 3286.780 | 3286.780 | 542 |

## Output class 750 W

| Model No. | | Packs of | 3359.500 | 3359.510 | 3359.540 | 3359.600 | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | – | |
| | RAL 9007 | | – | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **0.77** | **0.77** | **0.77** | **0.77** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 0.77 / 0.79 | 0.77 / 0.79 | 0.77 / 0.79 | 0.77 / 0.79 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.52 / 0.47 | 0.52 / 0.47 | 0.52 / 0.47 | 0.52 / 0.47 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | 417 | |
| Depth mm | | | 380 | 380 | 380 | 380 | |
| Rated current max. A | | | 2.8 / 3.7 | 5.6 / 7.4 | 1.6 / 2.1 | 2.8 / 3.7 | |
| Start-up current A | | | 9.2 / 9 | 18.4 / 18 | 5.4 / 5.2 | 9.2 / 9 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.33 / 0.42 | 0.33 / 0.43 | 0.33 / 0.43 | 0.33 / 0.42 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.28 / 1.85 | 2.28 / 1.82 | 2.28 / 1.82 | 2.28 / 1.85 | |
| Refrigerant g | | | R134a, 400 | R134a, 400 | R134a, 400 | R134a, 400 | |
| Weight kg | | | 32.0 | 37.0 | 37.0 | 32.0 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 534 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 540 |
| Shallow air duct system | | 1 pc(s). | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 541 |
| Air duct adaptor | | 1 pc(s). | 3286.840 | 3286.840 | 3286.840 | 3286.840 | 540 |
| Stoppers | | 2 pc(s). | 3286.780 | 3286.780 | 3286.780 | 3286.780 | 542 |

## Output class 1000 W

| Model No. | | Packs of | 3383.500 | 3383.510 | 3383.540 | 3383.600 | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | – | |
| | RAL 9007 | | – | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1** | **1** | **1** | **1** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1 / 1.09 | 1 / 1.09 | 1 / 1.09 | 1 / 1.09 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.71 / 0.81 | 0.71 / 0.81 | 0.71 / 0.81 | 0.71 / 0.81 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | 417 | |
| Depth mm | | | 475 | 475 | 475 | 475 | |
| Rated current max. A | | | 2.9 / 3.9 | 6.2 / 8.4 | 1.7 / 2.2 | 2.9 / 3.9 | |
| Start-up current A | | | 8.8 / 10.1 | 14.4 / 15.8 | 4.6 / 5.7 | 8.8 / 10.1 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.38 / 0.47 | 0.38 / 0.45 | 0.38 / 0.45 | 0.38 / 0.47 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.58 / 2.28 | 2.58 / 2.28 | 2.58 / 2.28 | 2.58 / 2.28 | |
| Refrigerant g | | | R134a, 650 | R134a, 650 | R134a, 650 | R134a, 650 | |
| Weight kg | | | 40.0 | 46.0 | 46.0 | 40.0 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 534 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 540 |
| Shallow air duct system | | 1 pc(s). | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 541 |
| Air duct adaptor | | | – | – | – | – | 540 |
| Stoppers | | 2 pc(s). | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 542 |

# TopTherm roof-mounted cooling units Blue e

## Output class 1100 – 1500 W

| **Model No.** | | Packs of | **3273.500** | **3384.500** | **3384.510** | **3384.540** | **3384.600** | Page |
|---|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | – | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | ■ | – | |
| | RAL 9007 | | – | – | – | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.1** | **1.5** | **1.5** | **1.5** | **1.5** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.1 / 1.2 | 1.5 / 1.65 | 1.5 / 1.65 | 1.5 / 1.65 | 1.5 / 1.65 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.85 / 0.87 | 1.15 / 1.3 | 1.15 / 1.3 | 1.15 / 1.3 | 1.15 / 1.3 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | 417 | 417 | |
| Depth mm | | | 475 | 475 | 475 | 475 | 475 | |
| Rated current max. A | | | 5.2 / 5.4 | 4.2 / 4.9 | 8.7 / 10.1 | 2.5 / 2.9 | 4.2 / 4.9 | |
| Start-up current A | | | 15.5 / 16.5 | 14.7 / 13.6 | 27.2 / 23.2 | 8.7 / 7.6 | 14.7 / 13.6 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.51 / 0.53 | 0.67 / 0.77 | 0.67 / 0.76 | 0.67 / 0.76 | 0.67 / 0.77 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | +50 °C | – | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.12 / 2.23 | 2.24 / 2.13 | 2.24 / 2.13 | 2.24 / 2.13 | 2.24 / 2.13 | |
| Refrigerant g | | | R134a, 700 | R134a, 700 | R134a, 700 | R134a, 700 | R134a, 700 | |
| Weight kg | | | 42.0 | 41.0 | 47.0 | 47.0 | 41.0 | |
| **Accessories** | | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 534 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 540 |
| Shallow air duct system | | 1 pc(s). | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 541 |
| Air duct adaptor | | | – | – | – | – | – | 540 |
| Stoppers | | 2 pc(s). | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 542 |

## Output class 2000 W

| **Model No.** | | Packs of | **3385.500** | **3385.510** | **3385.540** | **3385.600** | **3385.640** | Page |
|---|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | ■ | ■ | – | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | – | – | ■ | ■ | |
| Colour | RAL 7035 | | ■ | ■ | ■ | – | – | |
| | RAL 9007 | | – | – | – | ■ | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **2** | **2** | **2** | **2** | **2** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 2 / 2.14 | 2 / 2.14 | 2 / 2.14 | 2 / 2.14 | 2 / 2.14 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 1.41 / 1.51 | 1.41 / 1.51 | 1.41 / 1.51 | 1.41 / 1.51 | 1.41 / 1.51 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 115, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | 400, 2~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | 417 | 417 | |
| Depth mm | | | 475 | 475 | 475 | 475 | 475 | |
| Rated current max. A | | | 5.9 / 6.3 | 13.3 / 13.5 | 3.5 / 3.7 | 5.9 / 6.3 | 3.5 / 3.7 | |
| Start-up current A | | | 19.7 / 17.9 | 42.2 / 31.1 | 11.7 / 11.7 | 19.7 / 17.9 | 11.7 / 11.7 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.95 / 1.14 | 0.95 / 1.17 | 0.95 / 1.17 | 0.95 / 1.14 | 0.95 / 1.17 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.09 / 1.88 | 2.09 / 1.88 | 2.09 / 1.88 | 2.09 / 1.88 | 2.09 / 1.88 | |
| Refrigerant g | | | R134a, 900 | R134a, 900 | R134a, 900 | R134a, 900 | R134a, 900 | |
| Weight kg | | | 42.0 | 48.0 | 48.0 | 42.0 | 48.0 | |
| **Accessories** | | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 3286.500 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 3286.510 | 534 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 540 |
| Shallow air duct system | | 1 pc(s). | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 3286.850 | 541 |
| Air duct adaptor | | | – | – | – | – | – | 540 |
| Stoppers | | 2 pc(s). | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 542 |

## Output class 3000 – 4000 W

| **Model No.** | | Packs of | **3386.540** | **3386.640** | **3387.540** | **3387.640** | Page |
|---|---|---|---|---|---|---|---|
| Material | Sheet steel | | ■ | – | ■ | – | |
| | Stainless steel 1.4301 (AISI 304) | | – | ■ | – | ■ | |
| Colour | RAL 7035 | | ■ | – | ■ | – | |
| | RAL 9007 | | – | ■ | – | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **3** | **3** | **3.8** | **3.8** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 3 / 3.3 | 3 / 3.3 | 3.8 / 4 | 3.8 / 4 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 2.2 / 2.5 | 2.2 / 2.5 | 3.05 / 3.3 | 3.05 / 3.3 | |
| Rated operating voltage V, ~, Hz | | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | | 796 | 796 | 796 | 796 | |
| Height mm | | | 470 | 470 | 470 | 470 | |
| Depth mm | | | 580 | 580 | 580 | 580 | |
| Rated current max. A | | | 3.4 / 3.4 | 3.4 / 3.4 | 3.9 / 3.9 | 3.9 / 3.9 | |
| Start-up current A | | | 8 / 9 | 8 / 9 | 17 / 19 | 17 / 19 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 1.17 / 1.48 | 1.17 / 1.48 | 1.59 / 2.03 | 1.59 / 2.03 | |
| Operating temperature range | | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Operating temperature (max.) 60 Hz | | | – | – | – | – | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.56 / 2.23 | 2.56 / 2.23 | 2.38 / 1.97 | 2.38 / 1.97 | |
| Refrigerant g | | | R134a, 1600 | R134a, 1600 | R134a, 1800 | R134a, 1800 | |
| Weight kg | | | 70.0 | 70.0 | 77.0 | 77.0 | |
| **Accessories** | | | | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Filter mat | | 3 pc(s). | 3286.600 | 3286.600 | 3286.600 | 3286.600 | 533 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Metal filter | | 1 pc(s). | 3286.610 | 3286.610 | 3286.610 | 3286.610 | 534 |
| Air duct system | | 1 pc(s). | 3286.970 | 3286.970 | 3286.970 | 3286.970 | 540 |
| Shallow air duct system | | | – | – | – | – | 541 |
| Air duct adaptor | | | – | – | – | – | 540 |
| Stoppers | | 2 pc(s). | 3286.980 | 3286.980 | 3286.980 | 3286.980 | 542 |



Rittal – The System.

Blue e IoT adaptor

see page 555

# VX25 Blue e+ integration solution/ Blue e+ roof-mounted cooling units

With revolutionary efficiency

## Time and cost savings

- Plug and play: Cooling unit, door limit switches and cabling are pre-installed and ready to connect
- The cooling unit pulls forwards easily for maintenance purposes

## Comfort

- Intuitive operation with touch display

## Optimum data quality

- All cooling solutions are available in duplicate – real and digital. Thanks to the digital twin, planning, ordering, machining and much more can be carried out by the person who knows your company the best: You.

## Efficiency

- High level of energy efficiency, also when used as an autonomous roof-mounted cooling unit

## Ready for Industry 4.0

- Digitalisation and networking offer huge opportunities for every company. With the IoT interface (optional), Rittal cooling solutions are easily connected to Industry 4.0 environments.

# Blue e+ roof-mounted cooling unit

**Accessories for climate control** Page 533 **Therm software** Page 558 **RiDiag software** Page 559 **IoT interface** Page 554

**Benefits:**
- Average 75% energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

**Temperature control:**
- e+ controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 54 with pleated filter
- Internal circuit IP 54 with pleated filter

**Supply includes:**
- Blue e+ roof-mounted cooling unit
- Pleated filter
- Fully wired ready for connection
- Assembly parts
- Condensate hose (3 m)

**Optional:**
- For remote monitoring and networking of cooling units and chillers in the Blue e+ generation, please use the IoT interface (Model No. 3124.300). Increase machine availability and process reliability with remote monitoring of device data, statuses and system messages.

**Note:**
- Only suitable for mounting on enclosures with minimum dimensions (W x D) 800 x 600 mm
- Operation without a pleated filter is inadmissible
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 1300 W

| **Model No.** | | Packs of | **3185.730** | Page |
|---|---|---|---|---|
| Material | Sheet steel | | ■ | |
| Colour | RAL 7035 | | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.3** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.3 / 1.3 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.76 / 0.76 | |
| Rated operating voltage V, ~, Hz | | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Width mm | | | 700 | |
| Height mm | | | 308 | |
| Depth mm | | | 560 | |
| Rated power input kW | | | 0.75 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.67 / 0.67 | |
| Operating temperature range | | | -20 °C...+55 °C | |
| Setting range | | | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.04 / 2.04 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | | 5.3 | |
| Refrigerant g | | | R134a, 590 | |
| Weight kg | | | 38.0 | |
| **Accessories** | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 554 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 1024 |
| Pleated filter | | 3 pc(s). | 3285.700 | 536 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 549 |
| Display frame | | 1 pc(s). | 3355.700 | 557 |
| Electrical condensate evaporation | | 1 pc(s). | 3355.720 | 543 |
| RiDiag | | 1 pc(s). | 3159.300 | 559 |

# VX25 Blue e+ integration solution

**Accessories for climate control** Page 533 **RiDiag software** Page 559 **Blue e+ roof-mounted cooling unit** Page 504 **IoT interface** Page 554

**Benefits:**
- The perfect symbiosis of the VX25 baying enclosure system and Blue e+ cooling unit
- The cooling unit is easily pulled out forwards for maintenance purposes
- No assembly work required – the cooling unit, door-operated switch and connection cabling are installed ready-to-connect
- Cooling unit offers all the benefits of Blue e+ Technology

**Temperature control:**
- e+ controller (factory setting +35 °C)

**Protection category IP to IEC 60 529:**
- External circuit IP 54 with pleated filter
- Internal circuit IP 54 with pleated filter

**Supply includes:**
- Basic enclosure VX25, door, roof, rear panel, side panels, gland plates, mounting plate
- Lock: 3 mm double-bit
- Integral door-operated switch
- Integral Blue e+ cooling unit
- Electric condensate evaporator
- Pleated filter
- Condensate hose (3 m)

**Optional:**
- For remote monitoring and networking of cooling units and chillers in the Blue e+ generation, please use the IoT interface (Model No. 3124.300). Increase machine availability and process reliability with remote monitoring of device data, statuses and system messages.

**Note:**
- Operation without a pleated filter is inadmissible
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet



## Output class 1300 W

| **Model No.** | | Packs of | **3185.030** | Page |
|---|---|---|---|---|
| Material | Sheet steel | | ■ | |
| Colour | RAL 7035 | | ■ | |
| **Total cooling output 50 Hz L35 L35 to DIN EN 14511** kW | | | **1.3** | |
| Total cooling output 50/60 Hz L35 L35 kW | | | 1.3 / 1.3 | |
| Total cooling output 50/60 Hz L35 L50 kW | | | 0.76 / 0.76 | |
| Rated operating voltage V, ~, Hz | | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Width mm | | | 800 | |
| Height mm | | | 2200 | |
| Depth mm | | | 600 | |
| Mounting plate width mm | | | 699 | |
| Mounting plate height mm | | | 1696 | |
| Rated power input kW | | | 0.75 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | | 0.67 / 0.67 | |
| Operating temperature range | | | -20 °C...+55 °C | |
| Setting range | | | +20 °C...+50 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | | 2.04 / 2.04 | |
| Seasonal energy efficiency ratio (SEER) 50/60 Hz | | | 5.3 | |
| Refrigerant g | | | R134a, 590 | |
| Weight kg | | | 180.0 | |
| **Accessories** | | | | |
| IoT interface | | 1 pc(s). | 3124.300 | 554 |
| Pleated filter | | 3 pc(s). | 3285.700 | 536 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 549 |
| Display frame | | 1 pc(s). | 3355.700 | 557 |

# Modular climate control concept – cooling module Blue e

**Accessories for climate control** Page 533 **VX25 enclosures** Page 116 **Therm software** Page 558 **RiDiag software** Page 559

All cooling modules may be individually combined with any climate control door. The cooling modules are equipped with energy-efficient Blue e technology, with integral e-Comfort controller, RiNano coating on the condenser and electric condensate evaporation as standard.

**Benefits:**
- May be linked to the IoT interface via the Blue e IoT adaptor

**Temperature control:**
- e-Comfort controller (factory setting +35 °C)

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

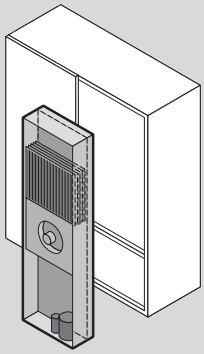
**Protection category IP to IEC 60 529:**
- External circuit IP 34
- Internal circuit IP 54

**Supply includes:**
- Cooling module prepared for installation in climate control door
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)

**Note:**
- A base/plinth with a height of 100 or 200 mm is required for efficient operation

**Approvals:**
Available on the Internet

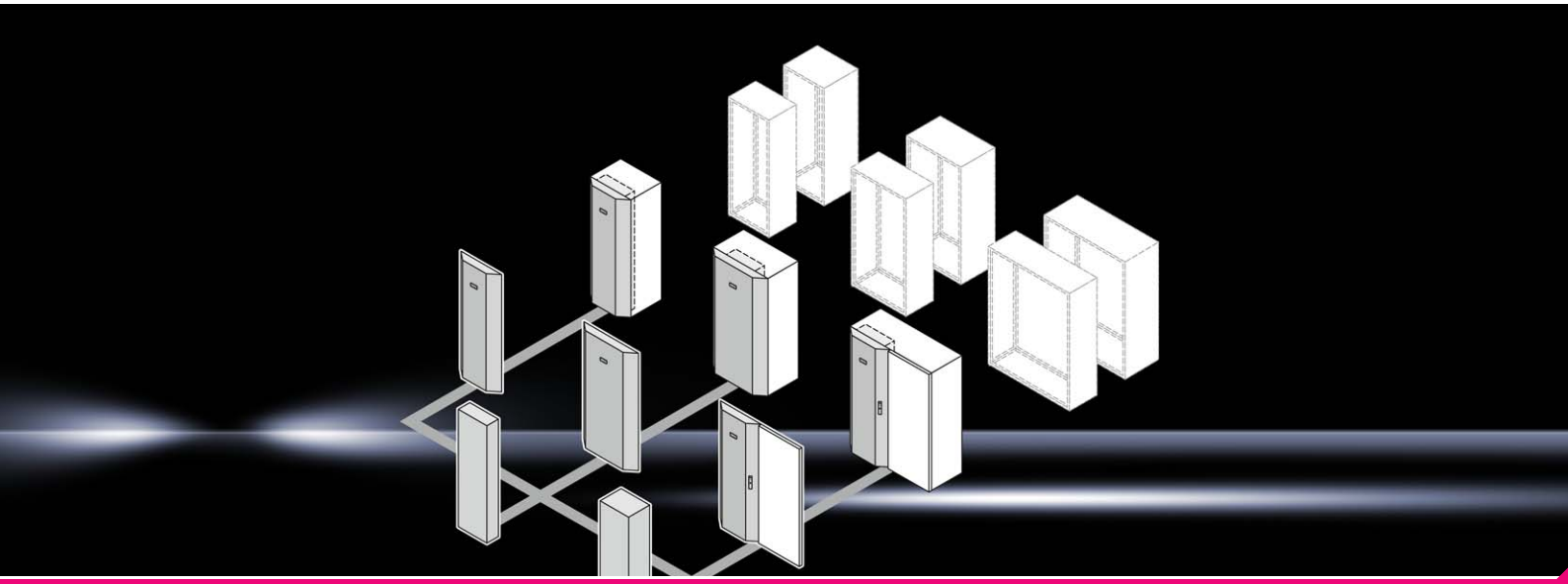
**Performance diagrams:**
Available on the Internet



## Output class 1500 – 2500 W

| **Model No.** | Packs of | **3307.700** | **3307.740** | **3310.700** | **3310.740** | Page |
|---|---|---|---|---|---|---|
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | 230, 1~, 50/60 | 400, 3~, 50<br>460, 3~, 60 | |
| **Total cooling output 50/60 Hz L35 L35** kW | | **1.5 / 1.55** | **1.5 / 1.55** | **2.5 / 2.52** | **2.5 / 2.5** | |
| Total cooling output 50/60 Hz L35 L50 kW | | 0.85 / 0.9 | 0.93 / 0.95 | 1.62 / 1.76 | 1.76 / 1.8 | |
| Rated current max. A | | 6 / 6.1 | 2.5 / 2.7 | 7.6 / 9.4 | 3.5 / 3.7 | |
| Start-up current A | | 22 / 24 | 8.5 / 9.2 | 22 / 24 | 13 / 14 | |
| Power consumption $P_{el}$ 50/60 Hz L35 L35 kW | | 0.85 / 1.05 | 0.79 / 1 | 1.31 / 1.52 | 1.13 / 1.48 | |
| Operating temperature range | | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | +10 °C...+55 °C | |
| Setting range | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Energy efficiency ratio (EER) 50/60 Hz L35 L35 | | 1.76 / 1.48 | 1.9 / 1.55 | 1.91 / 1.66 | 2.21 / 1.69 | |
| Refrigerant g | | R134a, 700 | R134a, 700 | R134a, 1175 | R134a, 1175 | |
| Weight kg | | 68.0 | 68.0 | 73.0 | 72.0 | |
| **Also required** | | | | | | |
| Modular climate control concept – climate control door VX25 | | see page | see page | see page | see page | 507 |
| **Accessories** | | | | | | |
| IoT interface | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 3124.300 | 554 |
| Blue e IoT adaptor | 1 pc(s). | 3124.310 | 3124.310 | 3124.310 | 3124.310 | 555 |
| Master/slave cable | 1 pc(s). | 3124.100 | 3124.100 | 3124.100 | 3124.100 | 550 |
| Door-operated switch | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |

# Modular climate control concept – climate control door VX25



**Accessories for climate control** Page 533 **VX25 enclosures** Page 116 **Therm software** Page 558

Sheet steel climate control doors for the installation of climate control module types SK 3307.7XX to 3310.7XX. The climate control doors fit perfectly with the overall design of the enclosure.

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

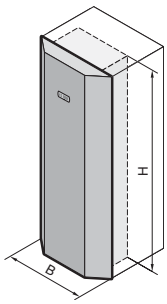
**Supply includes:**
- Climate control door without preconfigured cooling module
- 180° hinges, door opening angle approx. 130°

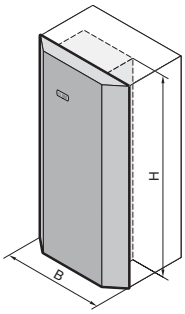
**Note:**
- To fit VX enclosures
- For 1200 mm wide VX enclosures, the existing hinged door may be used, irrespective of the device position (left or right)

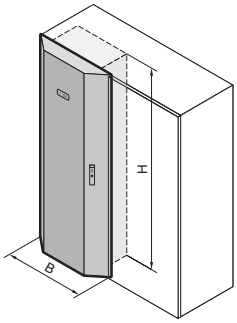
**Approvals:**
Available on the Internet



## for installing cooling modules




| **Model No.** | Packs of | **3201.800** | **3201.810** | **3201.820** | **3201.830** | **3201.840** | **3201.850** | Page |
|---|---|---|---|---|---|---|---|---|
| Dimensions to fit enclosure type | | VX | VX | VX | VX | VX | VX | |
| with height mm | | 1800 | 2000 | 1800 | 2000 | 1800 | 2000 | |
| with width mm | | 600<br>1200 | 600<br>1200 | 800 | 800 | 600<br>1200 | 600<br>1200 | |
| Unit positioned on the left | | – | – | – | – | ■ | ■ | |
| Note on Model No. | | R/h door hinge | R/h door hinge | R/h door hinge | R/h door hinge | L/h door hinge | L/h door hinge | |
| Weight kg | | 19.0 | 20.0 | 27.0 | 31.0 | 19.0 | 22.0 | |
| **Also required** | | | | | | | | |
| Modular climate control concept - cooling module Blue e | | see page | see page | see page | see page | see page | see page | 506 |
| **Accessories** | | | | | | | | |
| Metal filter | 1 pc(s). | 3284.210 | 3284.210 | 3284.210 | 3284.210 | 3284.210 | 3284.210 | 534 |
| Comfort handle VX | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 8618.250 | 937 |
| Ride-up roller | 10 pc(s). | – | 8618.420 | – | 8618.420 | – | 8618.420 | 956 |

# Rittal – The System.

**Faster – better – everywhere.**

# Liquid cooling

## Air/water heat exchangers


Wall-mounted ..... 300 – 600 W .....510
Wall-mounted ..... 950 – 1250 W .....511
Wall-mounted ..... 2000 – 2800 W .....512
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Roof-mounted ..... 1875 – 3000 W .....516
Roof-mounted ..... 4000 W .....517


## Liquid Cooling Package


LCP Rack Industry ..... 10000 W .....518


## Chillers


TopTherm, roof-mounted ..... 1000 – 1500 W .....519

Product advantages .....520
Blue e+ ..... 2500 – 5500 W .....522

Product advantages .....524
Blue e ..... 11000 – 15000 W .....526
Blue e ..... 20000 – 25000 W .....527

VX25 TopTherm ..... 8000 – 12000 W .....528
VX25 TopTherm ..... 16000 – 25000 W .....529


DGUV Test

NV 17040

Hygiene geprüft
hygiene tested

dguv.de/pruefzeichen

The DGUV test certificate applies to HD air/water heat exchangers.

# Air/water heat exchangers

**Accessories for climate control** Page 533 **Chillers** Page 519 **Therm software** Page 558

For use in harsh environments and temperature ranges up to +70 °C. User-friendly assembly plus flexible water connection options. External mounting or full internal mounting are supported.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Cooling medium:**
– Water (see Internet for specifications)

**Supply includes:**
– Fully wired ready for connection
– Drilling template
– Sealing and assembly parts

**Note:**
– Integral non-return valve for version with e-Comfort controller

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 300 – 600 W, wall-mounted

| **Model No.** | | Packs of | **3212.024** | **3212.230** | **3363.100** | **3363.500** | **3214.100** | Page |
|---|---|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | ■ | ■ | ■ | ■ | ■ | |
| Temperature control | Basic controller (factory setting +35 °C) | | – | – | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | – | – | – | ■ | – | |
| | Thermostat-controlled magnetic valve | | – | – | – | – | ■ | |
| **Total cooling output L35 W10, 200 l/h** kW | | | **0.3** | **0.3** | – | – | **0.6** | |
| **Total cooling output L35 W10, 400 l/h** kW | | | – | – | **0.5** | **0.5** | **0.7** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | – | 23 / 27 | 37 / 38 | 37 / 38 | 36 / 37 | |
| Power consumption $P_{el}$ W | | | 26 | – | – | – | – | |
| Rated operating voltage V | | | 24 (DC) | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 150 | 150 | 280 | 280 | 200 | |
| Height mm | | | 300 | 300 | 550 | 550 | 500 | |
| Depth mm | | | 85 | 85 | 120 | 120 | 100 | |
| Rated current max. A | | | 1.2 | 0.11 / 0.13 | 0.18 / 0.18 | 0.18 / 0.18 | 0.17 / 0.18 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | – | – | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | – | – | ■ | ■ | ■ | |
| | G ⅜" external thread | | – | – | ■ | ■ | – | |
| | ⅜" connector sleeve | | ■ | ■ | – | – | – | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | – | 280 / 310 | 290 / 345 | 290 / 345 | 280 / 310 | |
| Air throughput of fans (unimpeded air flow), Internal circuit with DC $m^3/h$ | | | 250 | – | – | – | – | |
| Weight as delivered kg | | | 3.2 | 3.2 | 8.0 | 8.0 | 7.0 | |
| **Accessories** | | | | | | | | |
| Condensate hose | | 1 pc(s). | 3301.610 | 3301.610 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Toroidal transformer | | | – | see page | see page | see page | see page | 550 |
| Flow regulator valve | | | see page | see page | see page | see page | see page | 545 |

## Output class 950 – 1250 W, wall-mounted

| **Model No.** | | Packs of | **3364.504** | **3364.100** | **3364.500** | **3215.100** | Page |
|---|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | – | ■ | ■ | ■ | |
| | Water-carrying parts, stainless steel (1.4571) | | ■ | – | – | – | |
| Temperature control | Basic controller (factory setting +35 °C) | | – | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | ■ | – | ■ | – | |
| | Thermostat-controlled magnetic valve | | – | – | – | ■ | |
| **Total cooling output L35 W10, 200 l/h** kW | | | – | – | – | **1.25** | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **0.95** | **1** | **1** | **1.3** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 37 / 38 | 37 / 38 | 37 / 38 | 83 / 85 | |
| Power consumption $P_{el}$ | | | – | – | – | – | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 280 | 280 | 280 | 200 | |
| Height mm | | | 550 | 550 | 550 | 950 | |
| Depth mm | | | 120 | 120 | 120 | 100 | |
| Rated current max. A | | | 0.18 / 0.18 | 0.18 / 0.18 | 0.18 / 0.18 | 0.38 / 0.4 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | – | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 290 / 345 | 290 / 345 | 290 / 345 | 680 / 735 | |
| Air throughput of fans (unimpeded air flow), Internal circuit with DC | | | – | – | – | – | |
| Weight as delivered kg | | | 9.0 | 9.0 | 9.0 | 13.0 | |
| **Accessories** | | | | | | | |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Toroidal transformer | | | see page | see page | see page | see page | 550 |
| Flow regulator valve | | | see page | see page | see page | see page | 545 |



Rittal – The System.

Connection set

see page 545

# Air/water heat exchangers

## Output class 2000 – 2800 W, wall-mounted

| **Model No.** | | Packs of | **3373.100** | **3373.140** | **3373.500** | **3374.504** | Page |
|---|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | ■ | ■ | ■ | – | |
| | Water-carrying parts, stainless steel (1.4571) | | – | – | – | ■ | |
| Temperature control | Basic controller (factory setting +35 °C) | | ■ | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | – | – | ■ | ■ | |
| **Total cooling output L35 W10, 200 l/h** | | | – | – | – | – | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **2** | **2** | **2** | **2.8** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 110 / 140 | 110 / 140 | 110 / 140 | 169 / 232 | |
| Power consumption $P_{el}$ | | | – | – | – | – | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 400 | 400 | 400 | 400 | |
| Height mm | | | 950 | 950 | 950 | 950 | |
| Depth mm | | | 145 | 145 | 145 | 145 | |
| Rated current max. A | | | 0.49 / 0.61 | 0.28 / 0.35 | 0.49 / 0.61 | 0.76 / 1.01 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 880 / 950 | 880 / 950 | 880 / 950 | 1150 / 1300 | |
| Air throughput of fans (unimpeded air flow), Internal circuit with DC | | | – | – | – | – | |
| Weight as delivered kg | | | 20.0 | 23.0 | 20.0 | 23.0 | |
| **Accessories** | | | | | | | |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Toroidal transformer | | | – | – | – | – | 550 |
| Flow regulator valve | | | see page | see page | see page | see page | 545 |

## Output class 3000 W, wall-mounted

| **Model No.** | | Packs of | **3374.100** | **3374.140** | **3374.500** | **3374.540** | Page |
|---|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | ■ | ■ | ■ | ■ | |
| Temperature control | Basic controller (factory setting +35 °C) | | ■ | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | – | – | ■ | ■ | |
| **Total cooling output L35 W10, 200 l/h** | | | – | – | – | – | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **3** | **3** | **3** | **3** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 169 / 232 | 169 / 232 | 169 / 232 | 169 / 232 | |
| Power consumption $P_{el}$ | | | – | – | – | – | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 400, 2~, 50/60 | 230, 1~, 50/60 | 400, 2~, 50/60 | |
| Width mm | | | 400 | 400 | 400 | 400 | |
| Height mm | | | 950 | 950 | 950 | 950 | |
| Depth mm | | | 145 | 145 | 145 | 145 | |
| Rated current max. A | | | 0.76 / 1.01 | 0.44 / 0.58 | 0.76 / 1.01 | 0.44 / 0.58 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 1150 / 1300 | 1150 / 1300 | 1150 / 1300 | 1150 / 1300 | |
| Air throughput of fans (unimpeded air flow), Internal circuit with DC | | | – | – | – | – | |
| Weight as delivered kg | | | 23.0 | 26.0 | 23.0 | 26.0 | |
| **Accessories** | | | | | | | |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Toroidal transformer | | | – | – | – | – | 550 |
| Flow regulator valve | | | see page | see page | see page | see page | 545 |

## Output class 4500 – 5000 W, wall-mounted

| **Model No.** | | Packs of | **3375.504** | **3375.100** | **3375.500** | **3375.540** | Page |
|---|---|---|---|---|---|---|---|
| Design | Water carrying parts copper/brass (Cu/CuZn) | | – | ■ | ■ | ■ | |
| | Water-carrying parts, stainless steel (1.4571) | | ■ | – | – | – | |
| Temperature control | Basic controller (factory setting +35 °C) | | – | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | ■ | – | ■ | ■ | |
| **Total cooling output L35 W10, 200 l/h** | | | – | – | – | – | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **4.5** | **5** | **5** | **5** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 172 / 172 | 172 / 172 | 172 / 172 | 183 / 183 | |
| Power consumption $P_{el}$ | | | – | – | – | – | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 400, 2~, 50/60 | |
| Width mm | | | 450 | 450 | 450 | 450 | |
| Height mm | | | 1400 | 1400 | 1400 | 1400 | |
| Depth mm | | | 220 | 220 | 220 | 220 | |
| Rated current max. A | | | 1.45 / 1.45 | 1.45 / 1.45 | 1.45 / 1.45 | 0.8 / 0.8 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 1500 / 1500 | 1500 / 1500 | 1500 / 1500 | 1500 / 1500 | |
| Air throughput of fans (unimpeded air flow), Internal circuit with DC | | | – | – | – | – | |
| Weight as delivered kg | | | 39.0 | 39.0 | 39.0 | 42.0 | |
| **Accessories** | | | | | | | |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Toroidal transformer | | | – | – | – | – | 550 |
| Flow regulator valve | | | see page | see page | see page | see page | 545 |



Rittal – The System.

Chillers Blue e+

see page 522

# Air/water heat exchangers

**Accessories for climate control** Page 533 **Chillers** Page 519 **Therm software** Page 558

For use in harsh environments and temperature ranges up to +70 °C. With thermostatically controlled magnetic valve.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Cooling medium:**
– Water (see Internet for specifications)

**Supply includes:**
– Fully wired ready for connection (plug-in terminal strip)
– Drilling template
– Sealing and assembly parts

**Note:**
– Use 3-pole miniature circuit-breaker

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 7000 W, wall-mounted

| **Model No.** | | Packs of | **3216.480** | Page |
|---|---|---|---|---|
| Temperature control | Thermostat-controlled magnetic valve | | ■ | |
| **Total cooling output L35 W10, 500 l/h** kW | | | **7** | |
| **Total cooling output L35 W20, 500 l/h** kW | | | **4.5** | |
| Rated operating voltage V, ~, Hz | | | 400, 3~, 50/60<br>480, 3~, 60 | |
| Width mm | | | 450 | |
| Height mm | | | 1800 | |
| Depth mm | | | 300 | |
| Rated current max. A | | | 1.4 / 1.6 | |
| Operating temperature range | | | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | |
| | G ⅜" external thread | | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 4075 / 4840 | |
| Weight as delivered kg | | | 79.0 | |
| **Accessories** | | | | |
| Door-operated switch | | 1 pc(s). | 4127.010 | 1024 |
| Condensate hose | | 1 pc(s). | 3301.612 | 544 |
| Flow regulator valve | | | see page | 545 |
| Connection set | | 1 pc(s). | 3201.990 | 545 |
| Cooling medium (ready-mixed) | | | see page | 545 |

**Accessories for climate control** Page 533 **Chillers** Page 519 **Therm software** Page 558 **Hygienic Design HD** Page 217



Air/water heat exchanger for hygienically sensitive production zones in the food and consumables industry – the optimum addition to the Rittal Hygienic Design range. The cleaning-friendly design reduces the risk of contamination and ensures food safety.

**Benefits:**
- Easy-to-clean, hygienic design
- A roof tilt of 30° prevents objects from being deposited on it, and allows liquids to run off quickly
- All-round external, replaceable silicone seal prevents the accumulation of dirt between the enclosure and the air/water heat exchanger

**Material:**
- Enclosure: Stainless steel 1.4301 (AISI 304)

**Surface finish:**
- Enclosure: Brushed, grain 400, peak-to-valley height < 0.8 µm

**Protection category IP to IEC 60 529:**
- IP 56/59

**Protection category NEMA:**
- NEMA 4X

**Cooling medium:**
- Water (see Internet for specifications)

**Supply includes:**
- Fully wired ready for connection
- Drilling template
- Sealing and assembly parts

**Note:**
- To achieve a protection category of IP 66/69 to IEC 60 529, the ingress of leakage air through the condensate discharge opening must be completely prevented

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 600 – 1200 W, wall-mounted HD

| **Model No.** | | Packs of | **3214.700** | **3215.700** | Page |
|---|---|---|---|---|---|
| Temperature control | Thermostat-controlled magnetic valve | | ■ | ■ | |
| **Total cooling output L35 W10, 200 l/h** kW | | | **0.6** | **1** | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **0.65** | **1.2** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 33 / 34 | 77 / 104 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 220 | 215 | |
| Height mm | | | 526 | 982 | |
| Depth mm | | | 100 | 100 | |
| Rated current max. A | | | 0.16 / 0.14 | 0.38 / 0.47 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+60 °C | +20 °C...+60 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | G ⅜" external thread | | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 280 / 310 | 680 / 735 | |
| Weight as delivered kg | | | 6.0 | 14.0 | |
| **Accessories** | | | | | |
| Toroidal transformer | | | see page | see page | 550 |
| Cooling medium (ready-mixed) | | | see page | see page | 545 |

# Air/water heat exchangers

**Accessories for climate control** Page 533 **Chillers** Page 519 **Air routing** Page 540

For use in harsh environments and temperature ranges up to +70 °C. The air/water heat exchanger is assembled on the roof of the enclosure using flexible water connection options.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Cooling medium:**
– Water (see Internet for specifications)

**Supply includes:**
– Fully wired ready for connection (plug-in terminal strip)
– Drilling template
– Sealing mat
– Assembly parts

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 1875 – 3000 W, roof-mounted

| **Model No.** | | Packs of | **3209.504** | **3209.100** | **3209.500** | **3210.504** | Page |
|---|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | – | ■ | ■ | – | |
| | Water-carrying parts, stainless steel (1.4571) | | ■ | – | – | ■ | |
| Temperature control | Basic controller (factory setting +35 °C) | | – | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | ■ | – | ■ | ■ | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **1.87** | **2.5** | **2.5** | **3** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 95 / 110 | 95 / 110 | 95 / 110 | 100 / 120 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | 417 | |
| Depth mm | | | 475 | 475 | 475 | 475 | |
| Rated current max. A | | | 0.4 / 0.48 | 0.4 / 0.48 | 0.4 / 0.48 | 0.44 / 0.5 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 925 / 1030 | 925 / 1030 | 925 / 1030 | 815 / 925 | |
| Weight as delivered kg | | | 23.5 | 23.5 | 23.5 | 25.5 | |
| **Accessories** | | | | | | | |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Master/slave cable | | 1 pc(s). | 3124.100 | – | 3124.100 | 3124.100 | 550 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 3286.870 | 540 |
| Stoppers | | 2 pc(s). | 3286.880 | 3286.880 | 3286.880 | 3286.880 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 3301.612 | 544 |
| Cooling medium (ready-mixed) | | | see page | see page | see page | see page | 545 |

## Output class 4000 W, roof-mounted

| **Model No.** | | Packs of | **3210.100** | **3210.500** | **3210.540** | Page |
|---|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | ■ | ■ | ■ | |
| Temperature control | Basic controller (factory setting +35 °C) | | ■ | – | – | |
| | e-Comfort controller (factory setting +35 °C) | | – | ■ | ■ | |
| **Total cooling output L35 W10, 400 l/h** kW | | | **4** | **4** | **4** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 100 / 120 | 100 / 120 | 102 / 125 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | 400, 2~, 50/60 | |
| Width mm | | | 597 | 597 | 597 | |
| Height mm | | | 417 | 417 | 417 | |
| Depth mm | | | 475 | 475 | 475 | |
| Rated current max. A | | | 0.44 / 0.5 | 0.44 / 0.5 | 0.25 / 0.3 | |
| Operating temperature range | | | +1 °C...+70 °C | +1 °C...+70 °C | +1 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +1 °C...+30 °C | +1 °C...+30 °C | +1 °C...+30 °C | |
| Water connection | ½" connector sleeve | | ■ | ■ | ■ | |
| | G ⅜" external thread | | ■ | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 10 | 1 - 10 | 1 - 10 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 815 / 925 | 815 / 925 | 815 / 925 | |
| Weight as delivered kg | | | 25.5 | 25.5 | 29.5 | |
| **Accessories** | | | | | | |
| Door-operated switch | | 1 pc(s). | 4127.010 | 4127.010 | 4127.010 | 1024 |
| Master/slave cable | | 1 pc(s). | – | 3124.100 | 3124.100 | 550 |
| Air duct system | | 1 pc(s). | 3286.870 | 3286.870 | 3286.870 | 540 |
| Stoppers | | 2 pc(s). | 3286.880 | 3286.880 | 3286.880 | 542 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 3301.612 | 544 |
| Cooling medium (ready-mixed) | | | see page | see page | see page | 545 |

# Liquid Cooling Package

**Accessories for climate control** Page 533 **Chillers** Page 519 **Therm software** Page 558

Air/water heat exchanger in the bayed enclosure system VX25. To fit 600 or 800 mm deep and 2,000 mm high VX25 enclosures. Air outlet either with 5 kW on each side or 10 kW on one side only. Flexible options for water connection on the top or bottom of the unit.

**Temperature control:**
– e-Comfort controller (factory setting +35 °C)

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Cooling medium:**
– Water (see Internet for specifications)

**Supply includes:**
– Cooling unit ready for connection, wired to terminal strip
– Front door with display
– Rear panel
– Multilingual documentation

**Note:**
– Bayable by screw-fastening at the sides

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 10000 W, LCP rack industry

| **Model No.** | | Packs of | **3378.300** | **3378.380** | Page |
|---|---|---|---|---|---|
| Design | Water-carrying parts, copper/brass (Cu/CuZn) | | ■ | ■ | |
| **Total cooling output L35 W10, 2000 l/h** kW | | | **9.5** | **9.5** | |
| Power consumption $P_{el}$ 50/60 Hz W | | | 350 / 350 | 350 / 350 | |
| Rated operating voltage V, ~, Hz | | | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | | 300 | 300 | |
| Height mm | | | 2000 | 2000 | |
| Depth mm | | | 600 | 800 | |
| Rated current max. A | | | 2.65 / 2.62 | 2.65 / 2.62 | |
| Operating temperature range | | | +5 °C...+70 °C | +5 °C...+70 °C | |
| Setting range | | | +20 °C...+55 °C | +20 °C...+55 °C | |
| Water inlet temperature | | | +7 °C...+30 °C | +7 °C...+30 °C | |
| Water connection | G ¾" internal thread | | ■ | ■ | |
| Permissible operating pressure (p) bar | | | 1 - 6 | 1 - 6 | |
| Air throughput of fans (unimpeded air flow), Internal circuit 50/60 Hz $m^3/h$ | | | 1950 / 1950 | 1950 / 1950 | |
| Weight as delivered kg | | | 106.0 | 115.0 | |
| **Accessories** | | | | | |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 100 mm | | 2 pc(s). | 8640.000 | 8640.000 | 881 |
| Base/plinth trim panels, sides, 100 mm | | 2 pc(s). | 8640.033 | 8640.034 | 882 |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 200 mm | | 2 pc(s). | 8640.020 | 8640.020 | 881 |
| Base/plinth trim panels, sides, 200 mm | | 2 pc(s). | 8640.043 | 8640.044 | 882 |
| Baying connector, external | | 6 pc(s). | 8617.502 | 8617.502 | 912 |
| Side panel, screw-fastened, sheet steel | | 2 pc(s). | 8106.245 | 8108.245 | 901 |
| Condensate hose | | 1 pc(s). | 3301.612 | 3301.612 | 544 |
| EC speed control | | 1 pc(s). | 3235.440 | 3235.440 | 548 |
| Comfort handle VX | | 1 pc(s). | 8618.250 | 8618.250 | 937 |
| Master/slave cable | | 1 pc(s). | 3124.100 | 3124.100 | 550 |
| Cooling medium (ready-mixed) | | | see page | see page | 545 |

**Accessories for climate control** Page 533 **Chiller configurator** Page 558



**Design:**
- Compact, modular layout of the refrigeration components
- Nano-coated condenser
- Pump to convey the medium

**Benefits:**
- Precise temperature control, based on microprocessor technology
- Collective fault signal with floating contact
- One version for two frequencies = international compatibility

**Temperature control:**
- Microcontroller control (factory setting +20 °C)

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 44 (electrics)

**Supply includes:**
- Complete unit ready for connection
- Multilingual documentation including functional diagram and wiring plans

**Characteristic curves of pump:**
Available on the Internet

**Approvals:**
Available on the Internet

## Output class 1000 – 1500 W

| **Model No.** | Packs of | **3318.610** | **3319.610** | Page |
|---|---|---|---|---|
| Total cooling output at $T_w$ = 10 °C/$T_u$ = 32 °C kW | | 0.8 / 0.9 | 1.2 / 1.3 | |
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 32 °C** kW | | **1 / 1.1** | **1.5 / 1.7** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | 0.69 / 1.07 | 0.86 / 0.99 | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50/60 | 230, 1~, 50/60 | |
| Width mm | | 600 | 600 | |
| Height mm | | 400 | 400 | |
| Depth mm | | 455 | 455 | |
| Rated current max. A | | 5.1 / 5.6 | 5.7 / 5.6 | |
| Operating temperature range | | +10 °C...+43 °C | +10 °C...+43 °C | |
| Refrigerant g | | R134a, 975 | R134a, 975 | |
| Water connection G ½" internal thread | | ■ | ■ | |
| Pump pressure bar | | 2.5 | 2.5 | |
| Volumetric flow (cooling medium) l/min | | 4 / 6 | 4 / 6 | |
| Air throughput of fans (unimpeded air flow), 50/60 Hz $m^3/h$ | | 900 / 900 | 900 / 900 | |
| Temperature hysteresis | | ± 2 K | ± 2 K | |
| Temperature of liquid | | +10 °C...+30 °C | +10 °C...+30 °C | |
| Water circuit version | | hermetically open | hermetically open | |
| Tank | | PP plastic | PP plastic | |
| Tank capacity l | | 2.5 | 2.5 | |
| Weight as delivered kg | | 48.0 | 51.0 | |
| **Also required** | | | | |
| Cooling medium (ready-mixed) | | see page | see page | 545 |
| **Accessories** | | | | |
| Metal filter | 1 pc(s). | 3286.510 | 3286.510 | 534 |

# Blue e+ chillers with the e+ principle

## Forward-looking climate control

- Active cooling circuit with speed-controlled components for demand-based cooling
- High control accuracy thanks to DC inverter technology with two regulating modes
- Excellent operational reliability thanks to integrated flow sensor, overflow valve and electronic fill level monitoring
- Temperature limits from -5 °C to +50 °C
- 55% less refrigerant thanks to the use of microchannel technology
- Energy savings of up to 70%

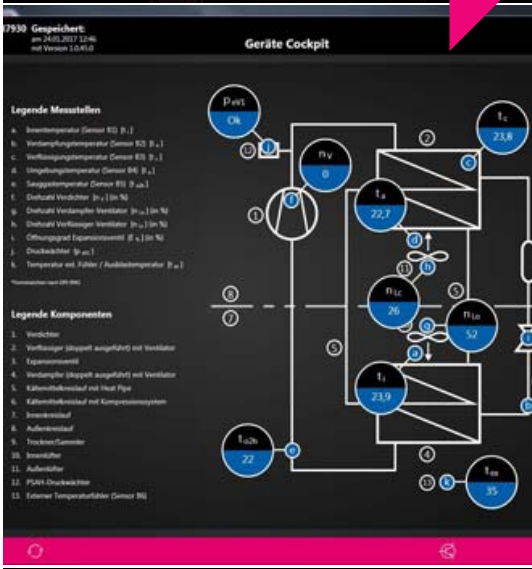
## Intelligent networking

- In conjunction with the IoT interface, all Blue e+ chillers can now be networked and digitalised

  **The benefits for you:**
  – Continuous monitoring of temperature accuracy
  – Avoidance of downtime costs and consequential damage
  – Temperature records and energy efficiency analyses
  – Enhanced process reliability

## Easier to operate

- Fast unit analysis using RiDiag III software via the USB port
- Fast parameterisation, data reading and plain-text system messages via the intelligent, multilingual, industry-grade display (21 languages pre-installed)




## Maximum flexibility with assembly and siting

- Simple plug & play assembly
- Identical footprint for all performance classes
- Eyebolts for easier transportation
- Service-friendly thanks to optimum accessibility of all components
- Easy replacement of components

## For global use

- One device for all voltages and networks:
  – 380 to 415 V, 3~, 50 Hz
  – 440 to 480 V, 3~, 60 Hz
- International approvals:
  cULus Listed, EAC, CB-Report
- Pre-configured option packages

# Chillers Blue e+

**Accessories for climate control** Page 533 **Chiller configurator** Page 558 **IoT interface** Page 554

**Benefits:**
- Blue e+ chillers ensure centralised and efficient cooling of liquid media with a high level of temperature accuracy and innovative DC inverter technology
- Suitable for international use thanks to its unique multi-voltage capability (without rewiring) and high operating limits
- Maximum reliability thanks to integral overflow valve and monitoring sensors
- Intuitive operation due to touch display and intelligent interfaces
- Compact and modular layout ensures minimum footprint
- Pumps with highly efficient IE3 motors

**Temperature control:**
- e+ controller (factory setting +20 °C)

**Colour:**
- Textured RAL 7035

**Protection category IP to IEC 60 529:**
- IP 24

**Supply includes:**
- Complete unit ready for connection (plug-in terminal strip)
- Multilingual documentation

**Optional:**
- For remote monitoring and networking of cooling units and chillers in the Blue e+ generation, please use the IoT interface (Model No. 3124.300). Increase machine availability and process reliability with remote monitoring of device data, statuses and system messages.

**Approvals:**
Available on the Internet

**Performance diagrams:**
Available on the Internet

## Output class 2500 – 5500 W

| **Model No.** | | Packs of | **3320.200** | **3334.300** | **3334.400** | Page |
|---|---|---|---|---|---|---|
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 35 °C to DIN EN 14511** kW | | | **2.5 / 2.4** | **4 / 3.9** | **5.5 / 5.4** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | | 1.38 / 1.57 | 2.49 / 2.72 | 2.49 / 2.72 | |
| Rated operating voltage V, ~, Hz | | | 380 - 415, 3~, 50<br>440 - 480, 3~, 60 | 380 - 415, 3~, 50<br>440 - 480, 3~, 60 | 380 - 415, 3~, 50<br>440 - 480, 3~, 60 | |
| Width mm | | | 450 | 450 | 450 | |
| Height mm | | | 820 | 820 | 1000 | |
| Depth mm | | | 710 | 710 | 710 | |
| Rated current max. A | | | 2.17 / 1.95 | 3.95 / 3.47 | 3.95 / 3.47 | |
| Operating temperature range | | | -5 °C...+50 °C | -5 °C...+50 °C | -5 °C...+50 °C | |
| Refrigerant g | | | R134a, 460 | R134a, 760 | R134a, 930 | |
| Water connection | ¾" internal thread | | ■ | ■ | ■ | |
| Pump pressure bar | | | 2.4 | 2.9 | 2.9 | |
| Volumetric flow (cooling medium) l/min | | | 7 / 25 | 15 / 30 | 15 / 30 | |
| Temperature hysteresis | | | ± 0.5 K | ± 0.5 K | ± 0.5 K | |
| Temperature of liquid | | | +5 °C...+35 °C | +5 °C...+35 °C | +5 °C...+35 °C | |
| Water circuit version | | | hermetically open | hermetically open | hermetically open | |
| Tank | | | PE plastic | PE plastic | PE plastic | |
| Tank capacity l | | | 12 | 12 | 12 | |
| Weight as delivered kg | | | 84.0 | 90.0 | 96.0 | |
| **Also required** | | | | | | |
| Cooling medium (ready-mixed) | | | see page | see page | see page | 545 |
| **Accessories** | | | | | | |
| Filter mat for cooling units, air/air heat exchangers and chillers | | 3 pc(s). | 3285.920 | 3285.920 | 3285.900 | 533 |
| Filter mat for Blue e+ chillers (inverter housings) | | 3 pc(s). | 3285.940 | 3285.940 | 3285.940 | 533 |
| Metal filter | | 1 pc(s). | 3285.930 | 3285.930 | 3285.910 | 534 |
| IoT interface | | 1 pc(s). | 3124.300 | 3124.300 | 3124.300 | 554 |
| RiDiag | | 1 pc(s). | 3159.300 | 3159.300 | 3159.300 | 559 |
| Temperature sensor | | 1 pc(s). | 3124.400 | 3124.400 | 3124.400 | 549 |
| Cross member | | 2 pc(s). | 8601.680 | 8601.680 | 8601.680 | 891 |
| Levelling feet | | 4 pc(s). | 4612.000 | 4612.000 | 4612.000 | 892 |
| Twin castors | | 1 pc(s). | 6148.000 | 6148.000 | 6148.000 | 893 |
| Flow regulator valve | | | see page | see page | see page | 545 |



Rittal – The System.

IoT Interface

see page 554

# Blue e chillers

## Targeted cooling output with exceptional efficiency

## Simple user prompting

- Fast parameterisation, data reading and plain-text system messages via the intelligent, multilingual, industry-grade touch display
- Prioritised error messages with three escalation levels (warning, error, maintenance)

## Targeted climate control

- Central activation of the fan and compressor via a digital controller
- Hysteresis with precision controller (HGBP) ± 0.25 K

## Sustainably eco-friendly

- 40% less refrigerant thanks to the use of microchannel technology
- No galvanic corrosion, as the microchannel heat exchanger is made from 100% aluminium

## Simple assembly

- Plug & play
- Fully wired ready for connection
- Service-friendly thanks to optimum accessibility of all components

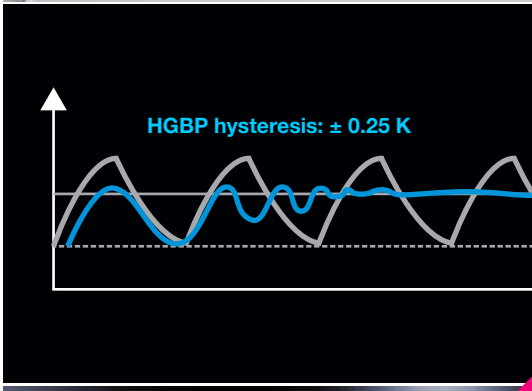
## Integral safety functions

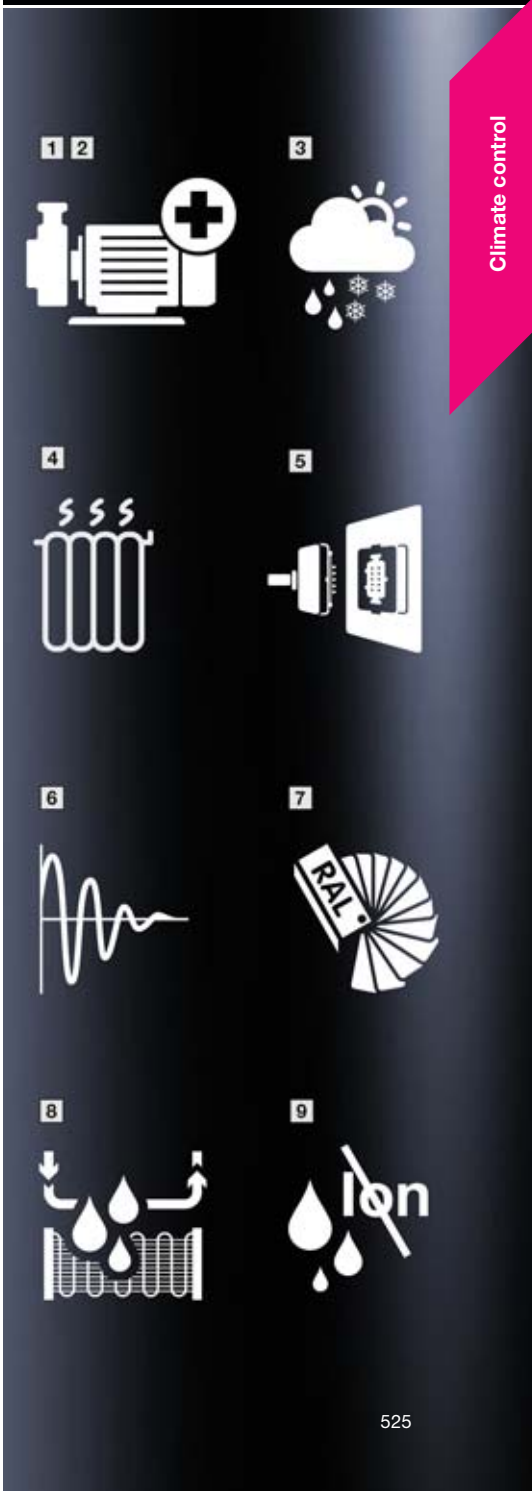
- Integral overflow valves
- Fill level monitoring
- Flow monitor

## Pre-configured options (also available as add-on packages)

- For shorter delivery times and a simplified ordering process

1 Increased-output pump (4 and 6 bar)
2 Pumps: Multi-circuit systems
3 Outdoor (up to -20 °C)
4 Heater
5 Industrial connector
6 Precision controller (HGBP)
7 Special spray finish
8 Water-cooled condenser
9 Laser application



# Chillers Blue e

**Accessories for climate control** Page 533 **Cooling medium** Page 545

**Design:**
- Robust industrial standard
- Variable air routing is possible via the l/h or r/h side panel
- Floating contact for collective fault signal

**Benefits:**
- Reduced volume of refrigerant, thanks to microchannel technology
- Touch display for simplified user guidance
- Intelligent interfaces
- Integral safety functions
- Pre-configured options

**Colour:**
- Enclosure: RAL 7035
- Base/plinth: RAL 7016

**Protection category IP to IEC 60 529:**
- IP 44 (electrics)

**Supply includes:**
- Chiller wired ready for connection
- Multilingual documentation including functional diagram and wiring plans

**Approvals:**
Available on the Internet

## Output class 11000 – 15000 W

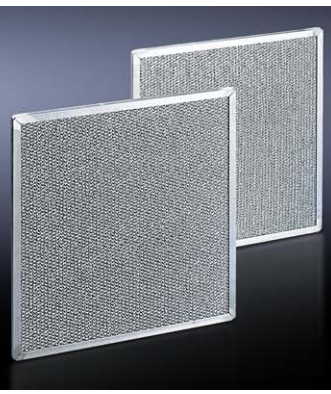
| **Model No.** | Packs of | **3336.400** | **3336.405** | **3336.410** | **3336.415** | Page |
|---|---|---|---|---|---|---|
| Total cooling output at $T_w$ = 10 °C/$T_u$ = 32 °C kW | | 10.2 / 11.7 | 10.2 / 11.7 | 12.2 / 12.3 | 12.2 / 12.3 | |
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 32 °C** kW | | **11.8 / 13.2** | **11.8 / 13.2** | **14.3 / 14.8** | **14.3 / 14.8** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | 6.3 / 8.8 | 6.3 / 8.8 | 7.02 / 8.75 | 7.7 / 9.9 | |
| Rated operating voltage V, ~, Hz | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | 660 | 660 | 660 | 660 | |
| Height mm | | 1265 | 1265 | 1265 | 1265 | |
| Depth mm | | 1315 | 1315 | 1315 | 1315 | |
| Rated current max. A | | 10.2 / 11.3 | 11.1 / 13.1 | 12.9 / 12.9 | 13.8 / 14.65 | |
| Performance-enhanced pump | | – | ■ | – | ■ | |
| Control voltage 24 V DC | | – | ■ | – | ■ | |
| Precision controller | | – | ■ | – | ■ | |
| Operating temperature range | | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | |
| Refrigerant g | | R410a, 1350 | R410a, 1350 | R410a, 1350 | R410a, 1350 | |
| Water connection R 1" internal thread | | ■ | ■ | ■ | ■ | |
| Pump pressure bar | | 2 / 2 | 5 / 7 | 2 / 2 | 5 / 7 | |
| Volumetric flow (cooling medium) l/min | | 30 / 55 | 30 / 55 | 35/ 55 | 35/ 55 | |
| Air throughput of fans (unimpeded air flow), 50/60 Hz $m^3$/h | | 6000 / 7200 | 6000 / 7200 | 6000 / 7200 | 6000 / 7200 | |
| Temperature hysteresis | | ± 2 K | ± 0.25 K | ± 2 K | ± 0.25 K | |
| Temperature of liquid | | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | |
| Tank | | PE plastic | PE plastic | PE plastic | PE plastic | |
| Tank capacity l | | 49 | 49 | 49 | 49 | |
| Weight as delivered kg | | 247.0 | 247.0 | 253.0 | 253.0 | |
| **Accessories** | | | | | | |
| Cooling medium (ready-mixed) | | see page | see page | see page | see page | 545 |
| Metal filter | 2 pc(s). | 3286.560 | 3286.560 | 3286.560 | 3286.560 | 534 |

## Output class 20000 – 25000 W

| **Model No.** | Packs of | **3336.430** | **3336.435** | **3336.450** | **3336.455** | Page |
|---|---|---|---|---|---|---|
| Total cooling output at $T_w$ = 10 °C/$T_u$ = 32 °C kW | | 16.3 / 19.2 | 16.3 / 19.2 | 19.9 / 22.9 | 19.9 / 22.9 | |
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 32 °C** kW | | **19.3 / 22** | **19.3 / 22** | **24.4 / 26.3** | **24.4 / 26.3** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | 8.5 / 10.9 | 8.5 / 10.9 | 10.6 / 13.3 | 11.3 / 14.4 | |
| Rated operating voltage V, ~, Hz | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | 760 | 760 | 760 | 760 | |
| Height mm | | 1265 | 1265 | 1265 | 1265 | |
| Depth mm | | 1515 | 1515 | 1515 | 1515 | |
| Rated current max. A | | 19 / 15.9 | 19.9 / 17.2 | 21.7 / 22.4 | 22.6 / 24.1 | |
| Performance-enhanced pump | | – | ■ | – | ■ | |
| Control voltage 24 V DC | | – | ■ | – | ■ | |
| Precision controller | | – | ■ | – | ■ | |
| Operating temperature range | | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | |
| Refrigerant g | | R410a, 1450 | R410a, 1450 | R410a, 1450 | R410a, 1450 | |
| Water connection R 1¼" internal thread | | ■ | ■ | ■ | ■ | |
| Pump pressure bar | | 2 / 2 | 4.75 / 6.75 | 2 / 2 | 4.5 / 6.7 | |
| Volumetric flow (cooling medium) l/min | | 45 / 75 | 45 / 75 | 55 / 75 | 55 / 75 | |
| Air throughput of fans (unimpeded air flow), 50/60 Hz $m^3/h$ | | 12000 / 14500 | 12000 / 14500 | 12000 / 14500 | 12000 / 14500 | |
| Temperature hysteresis | | ± 2 K | ± 0.25 K | ± 2 K | ± 0.25 K | |
| Temperature of liquid | | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | |
| Tank | | PE plastic | PE plastic | PE plastic | PE plastic | |
| Tank capacity l | | 78 | 78 | 78 | 78 | |
| Weight as delivered kg | | 310.0 | 310.0 | 326.0 | 326.0 | |
| **Accessories** | | | | | | |
| Cooling medium (ready-mixed) | | see page | see page | see page | see page | 545 |
| Metal filter | 2 pc(s). | 3286.570 | 3286.570 | 3286.570 | 3286.570 | 534 |



Rittal – The System.



Metal filters

see page 534

# VX25 TopTherm chillers

**Accessories for climate control** Page 533 **Chiller configurator** Page 558

TopTherm chillers in a VX25 enclosure with a small footprint are perfect for integrating into an enclosure suite. Their dual-frequency compatibility makes them extremely flexible. The microchannel technology reduces the volume of refrigerant required.

**Benefits:**
- Convenient servicing
- High reliability thanks to icing protection
- One version for two frequencies = international compatibility
- Reduced volume of refrigerant, thanks to microchannel technology
- Bayable by screw-fastening at the sides
- Integral safety functions

**Temperature control:**
- e-controller (factory setting +18 °C)

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 44 (electrics)

**Supply includes:**
- Fully wired unit ready for connection with side panels and door

**Note:**
- Regular leak tests are not prescribed by law.

**Characteristic curves of pump:**
Available on the Internet

**Approvals:**
Available on the Internet

## Output class 8000 – 12000 W

| **Model No.** | Packs of | **3335.920** | **3335.930** | **3335.940** | Page |
|---|---|---|---|---|---|
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 32 °C** kW | | **8 / 8.6** | **8 / 8.6** | **12 / 13.1** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | 4.34 / 5.22 | 4.65 / 5.71 | 6.35 / 7.31 | |
| Rated operating voltage V, ~, Hz | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | 805 | 805 | 805 | |
| Height mm | | 1700 | 2100 | 2140 | |
| Depth mm | | 605 | 605 | 605 | |
| Rated current max. A | | 8.4 / 7.5 | 9 / 8.3 | 9.9 / 10.8 | |
| Operating temperature range | | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | |
| Refrigerant g | | R410a, 1200 | R410a, 1200 | R410a, 1400 | |
| Water connection G 1" internal thread | | ■ | ■ | ■ | |
| Pump pressure bar | | 2.5 | 2.5 | 2.5 | |
| Volumetric flow (cooling medium) l/min | | 30 / 45 | 30 / 45 | 35 / 55 | |
| Temperature hysteresis | | ± 2 K | ± 2 K | ± 2 K | |
| Temperature of liquid | | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | |
| Tank capacity l | | 75 | 75 | 75 | |
| Weight as delivered kg | | 242.0 | 248.0 | 282.0 | |
| **Accessories** | | | | | |
| Metal filter | 1 pc(s). | 3286.650 | 3286.630 | 3286.630 | |
| Cooling medium (ready-mixed) | | see page | see page | see page | 545 |
| Flow regulator valve | | see page | see page | see page | 545 |
| Comfort handle VX | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Twin castors | 1 pc(s). | 7495.000 | 7495.000 | 7495.000 | 893 |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.003 | 8640.003 | 8640.003 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.023 | 8640.023 | 8640.023 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 882 |

## Output class 16000 – 25000 W

| **Model No.** | Packs of | **3335.950** | **3335.960** | **3335.970** | Page |
|---|---|---|---|---|---|
| **Total cooling output at $T_w$ = 18 °C/$T_u$ = 32 °C** kW | | **16 / 17.6** | **20 / 21.8** | **25 / 27.6** | |
| Power consumption $P_{el}$ 50/60 Hz kW | | 7.05 / 8.71 | 9.21 / 11.75 | 11.31 / 14.12 | |
| Rated operating voltage V, ~, Hz | | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | 400, 3~, 50<br>460, 3~, 60 | |
| Width mm | | 805 | 1205 | 1205 | |
| Height mm | | 2140 | 2140 | 2140 | |
| Depth mm | | 605 | 605 | 605 | |
| Rated current max. A | | 12.6 / 12.3 | 20.2 / 17.3 | 22.9 / 23.8 | |
| Operating temperature range | | +10 °C...+43 °C | +10 °C...+43 °C | +10 °C...+43 °C | |
| Refrigerant g | | R410a, 1400 | R410a, 1550 | R410a, 1700 | |
| Water connection G 1" internal thread | | ■ | ■ | ■ | |
| Pump pressure bar | | 2.5 | 2.5 | 2.5 | |
| Volumetric flow (cooling medium) l/min | | 35 / 65 | 45 / 75 | 50 / 85 | |
| Temperature hysteresis | | ± 2 K | ± 2 K | ± 2 K | |
| Temperature of liquid | | +10 °C...+25 °C | +10 °C...+25 °C | +10 °C...+25 °C | |
| Tank capacity l | | 75 | 150 | 150 | |
| Weight as delivered kg | | 282.0 | 360.0 | 374.0 | |
| **Accessories** | | | | | |
| Metal filter | 1 pc(s). | 3286.630 | 3286.640 | 3286.640 | |
| Cooling medium (ready-mixed) | | see page | see page | see page | 545 |
| Flow regulator valve | | see page | see page | see page | 545 |
| Comfort handle VX | 1 pc(s). | 8618.250 | 8618.250 | 8618.250 | 937 |
| Twin castors | 1 pc(s). | 7495.000 | 7495.000 | 7495.000 | 893 |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 100 mm | 2 pc(s). | 8640.003 | 8640.007 | 8640.007 | 881 |
| Base/plinth trim panels, sides, 100 mm | 2 pc(s). | 8640.033 | 8640.033 | 8640.033 | 882 |
| Base/plinth corner piece with base/plinth trim panels, front and rear, 200 mm | 2 pc(s). | 8640.023 | 8640.025 | 8640.025 | 881 |
| Base/plinth trim panels, sides, 200 mm | 2 pc(s). | 8640.043 | 8640.043 | 8640.043 | 882 |



Rittal – The System.

Chiller configurator

see page 558

# Enclosure heaters

**Accessories for climate control** Page 533 **Therm software** Page 558

Enclosure heaters to regulate relative humidity, prevent temperatures from dropping below the dew point and stop condensation forming inside the enclosure. This prevents consequential damage associated with corrosion or electrical short circuits.

**Material:**
– Aluminium, anodised

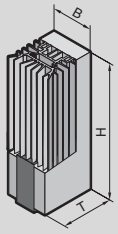
**Protection category IP to IEC 60 529:**
– IP 20

**Protection class:**
– II (all-insulated)

**Supply includes:**
– PTC heater
– Quick-connection terminal
– Assembly parts

**Note:**
– A thermostat is recommended for precise temperature control inside the enclosure
– In order to prevent condensation on assemblies, a hygrostat is recommended to regulate heating
– In larger enclosures, even heat distribution is best achieved by installing several low-output heaters

**Approvals:**
Available on the Internet




## Continuous thermal output 10 – 150 W, without fan

| **Model No.** | Packs of | **3105.310** | **3105.320** | **3105.330** | **3105.340** | **3105.350** | **3105.360** | **3105.370** | Page |
|---|---|---|---|---|---|---|---|---|---|
| Width (B) mm | | 45 | 45 | 64 | 64 | 64 | 90 | 90 | |
| Height (H) mm | | 120 | 120 | 155 | 155 | 230 | 165 | 180 | |
| Depth (T) mm | | 46 | 46 | 56 | 56 | 56 | 75 | 75 | |
| **Continuous thermal output at $T_u$ = 10 °C** W | | **8 - 10** | **18 - 20** | **23 - 30** | **49 - 50** | **63 - 75** | **86 - 100** | **130 - 150** | |
| Rated operating voltage V, ~, Hz | | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | 110 - 240, 1~, 50/60 | |
| **Accessories** | | | | | | | | | |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |
| Bottom-mounted adaptor | 1 pc(s). | 3110.200 | 3110.200 | 3110.200 | 3110.200 | 3110.200 | 3110.200 | 3110.200 | 548 |

**Accessories for climate control** Page 533 **Therm software** Page 558



Enclosure heaters to regulate relative humidity, prevent temperatures from dropping below the dew point and stop condensation forming inside the enclosure. This prevents consequential damage associated with corrosion or electrical short circuits.

**Material:**
– Plastic

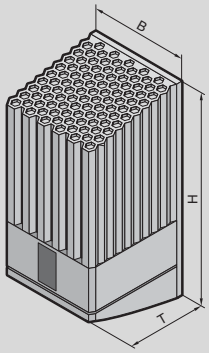
**Protection category IP to IEC 60 529:**
– IP 20

**Protection class:**
– II (all-insulated)

**Supply includes:**
– PTC heater with fan
– Assembly parts

**Note:**
– A thermostat is recommended for precise temperature control inside the enclosure
– In order to prevent condensation on assemblies, a hygrostat is recommended to regulate heating
– In larger enclosures, even heat distribution is best achieved by installing several low-output heaters

**Approvals:**
Available on the Internet




## Continuous thermal output 235 – 800 W, with fan

| **Model No.** | Packs of | **3105.410** | **3105.380** | **3105.420** | **3105.390** | **3105.430** | **3105.400** | Page |
|---|---|---|---|---|---|---|---|---|
| Width (B) mm | | 103 | 103 | 103 | 103 | 103 | 103 | |
| Height (H) mm | | 200 | 200 | 200 | 200 | 200 | 200 | |
| Depth (T) mm | | 103 | 103 | 103 | 103 | 103 | 103 | |
| **Continuous thermal output at $T_u$ = 10 °C 50/60 Hz** W | | **235 / 250** | **250 / 265** | **355 / 400** | **400 / 415** | **710 / 800** | **800 / 870** | |
| Rated operating voltage V, ~, Hz | | 115, 1~, 50/60 | 230, 1~, 50/60 | 115, 1~, 50/60 | 230, 1~, 50/60 | 115, 1~, 50/60 | 230, 1~, 50/60 | |
| **Accessories** | | | | | | | | |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |
| Hygrostat | 1 pc(s). | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 3118.000 | 547 |
| Digital enclosure internal temperature display and thermostat | 1 pc(s). | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 3114.200 | 546 |

# Innovative climate control accessories

Perfectly coordinated components customised to your requirements, from page 533

## Filter mat

**for tangential fans**

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to 100 °C, self-extinguishing category F1 to DIN 53 438. Dust-laden air side: Open structure. Clean-air side: Closed structure. Reliable filtering of virtually all types of dust from a particle size of 10 µm.

**Material:**
– Chemical fibres

**For tangential fans/front outlet grilles 2 U**

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3144.000/ 3145.000/ 3176.000 | 425 x 85 x 8 | 5 pc(s). | **3177.000** |

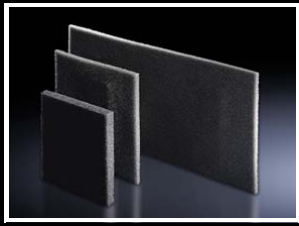
## Filter mat

**for cooling units, air/air heat exchangers and chillers**

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

**Benefits:**
– Temperature-resistant from -40 °C...+80 °C

**Material:**
– Open-celled polyurethane foamed plastic



| To fit Model No. | for cooling units | for air/air heat exchangers | for chillers | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 3320.200/3334.300 | – | – | ■ | 320 x 599 x 8 | 3 pc(s). | **3285.920** |
| 3302.300/3303.310 | ■ | – | – | 190 x 95 x 10 | 3 pc(s). | **3286.110** |
| 3273..../3382..../3383..../ 3384..../3385..../3359..../ 3301.800 | ■ | – | – | 530 x 255 x 10 | 3 pc(s). | **3286.500** |
| 3386..../3387.... | ■ | – | – | 720 x 300 x 10 | 3 pc(s). | **3286.600** |
| 3185.830/3185.530 | ■ | – | – | 360 x 297 x 10 | 3 pc(s). | **3285.800** |
| 3186.930/3187.930/ 3188.940/3189.940/ 3186.630/3187.630/ 3188.640/3189.640/ 3334.400 | ■ | – | ■ | 390 x 397 x 10 | 3 pc(s). | **3285.900** |
| 3302.1xx/3302.200/ 3303.xx0/3361..../ 3126.100/3126.115 | ■ | ■ | – | 265 x 200 x 10 | 3 pc(s). | **3286.300** |
| 3304.xx0/3305.xx0/ 3328.xx0/3329.xx0/ 3332..../3366..../ 3127.100/3127.115/ 3128.100/3128.115/ 3129.100/3129.115/ 3130.100/3130.115 | ■ | ■ | – | 344 x 268 x 10 | 3 pc(s). | **3286.400** |

## Filter mat

**for Blue e+ chillers (inverter housings)**

Flat-pleated filter for Blue e+ chillers made from polyester with all-round frame and V brackets on the end face.

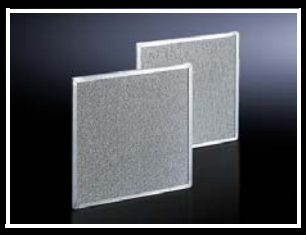
**Material:**
– Polyester

**Filter class to DIN EN 779:**
– G3

**For Blue e+ chillers**

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3320.200/ 3334.300/ 3334.400 | 131 x 113 x 13 | 3 pc(s). | **3285.940** |

## Filter technology



### Metal filter

Particularly when cooling units are used in dusty and oily environments, it is advisable to use washable metal filters. If air or steam condenses on the metal surfaces, any particles present will adhere to the metal, and can easily be washed out with water or grease-dissolving detergents.

**Material:**
– Aluminium

| To fit Model No. | for cooling units | for air/air heat exchangers | for chillers | for climate control door/ section door | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 3185.830/3185.530 | ■ | – | – | – | 320 x 280 x 10 | 1 pc(s). | **3285.810** |
| 3320.200/3334.300 | – | – | ■ | – | 295 x 599 x 15 | 1 pc(s). | **3285.930** |
| 3336.400/3336.405/ 3336.410/3336.415 | – | – | ■ | – | 700 x 724 x 20 | 2 pc(s). | **3286.560** |
| 3336.430/3336.435/ 3336.450/3336.455 | – | – | ■ | – | 945 x 765 x 20 | 2 pc(s). | **3286.570** |
| 3186.930/3187.930/ 3188.940/3189.940/ 3186.630/3187.630/ 3188.640/3189.640/ 3334.400 | ■ | – | ■ | – | 380 x 358 x 10 | 1 pc(s). | **3285.910** |
| 3300.040/3300.050/ 3300.060/3300.070/ 3300.080/3300.090/ 3300.110/3300.120/ 3201.800/3201.810/ 3201.820/3201.830/ 3201.840/3201.850 | – | – | – | ■ | 425 x 78 x 10 | 1 pc(s). | **3284.210** |
| 3302.300/3302.310 | ■ | – | – | – | 190 x 95 x 10 | 1 pc(s). | **3286.120** |
| 3302.1xx/3302.200/ 3303.xx0/3361..../ 3126.100/3126.115 | ■ | ■ | – | – | 265 x 200 x 10 | 1 pc(s). | **3286.310** |
| 3304.xx0/3305.xx0/ 3328.xx0/3329.xx0/ 3332..../3366.../ 3127.100/3127.115/ 3128.100/3128.115/ 3129.100/3129.115/ 3130.100/3130.115/ 3360.100 | ■ | ■ | ■ | – | 344 x 268 x 10 | 1 pc(s). | **3286.410** |
| 3273..../3382..../3383..../ 3384..../3385..../3359..../ 3318.600/3318.610/ 3319.600/3319.610/ 3334.660 | ■ | – | ■ | – | 530 x 255 x 10 | 1 pc(s). | **3286.510** |
| 3320.600/3334.600 | – | – | ■ | – | 500 x 558 x 8 | 1 pc(s). | **3286.520** |
| 3386..../3387.... | ■ | – | – | – | 720 x 300 x 10 | 1 pc(s). | **3286.610** |
| 3335.840/3335.850/ 3335.880 | – | – | ■ | – | 595 x 1030 x 20 | 1 pc(s). | **3286.530** |
| 3335.860/3335.870/ 3335.890 | – | – | ■ | – | 1000 x 1035 x 20 | 1 pc(s). | **3286.540** |
| 3335.790/3335.830 | – | – | ■ | – | 595 x 780 x 20 | 1 pc(s). | **3286.550** |

## Spare filter mat

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to 100 °C, self-extinguishing category F1 to DIN 53 438. Dust-laden air side: Open structure. Clean-air side: Closed structure. Reliable filtering of virtually all types of dust from a particle size of 10 µm.

**Note:**
– Performance data, protection category and device approvals are only guaranteed when used in conjunction with original Rittal filter mats.

**For roof-mounted fan**

| To fit Model No. | Material | W x H x D mm | Filter class to DIN EN 779 | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 3138..../3139..../ 3140.... | Chemical fibre | 264 x 95 x 17 | G3 | 12 pc(s). | **3174.100** |

**For EMC fan-and-filter units**

| To fit Model No. | Material | W x H x D mm | Filter class to DIN EN 779 | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 3237.6.. | Copper-nickel-chrome coated chemical fibres | 92 x 92 x 10 | G2 | 5 pc(s). | **3237.066** |
| 3238.6.. | Copper-nickel-chrome coated chemical fibres | 125 x 125 x 12 | G2 | 5 pc(s). | **3238.066** |
| 3239.6.. | Copper-nickel-chrome coated chemical fibres | 178 x 178 x 17 | G3 | 5 pc(s). | **3239.066** |
| 3240.6../3241.6.. | Copper-nickel-chrome coated chemical fibres | 226 x 226 x 17 | G3 | 5 pc(s). | **3240.066** |
| 3243.6../3244.6../ 3245.6.. | Copper-nickel-chrome coated chemical fibres | 294 x 294 x 17 | G3 | 5 pc(s). | **3243.066** |

**For fan-and-filter units**

| To fit Model No. | Material | W x H x D mm | Filter class to DIN EN 779 | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 3237.... | Chemical fibre | 89 x 89 x 10 | G2 | 5 pc(s). | **3321.700** |
| 3237.... | Chemical fibre | 89 x 89 x 10 | G2 | 50 pc(s). | **3321.705** |
| 3238.... | Chemical fibre | 120 x 120 x 12 | G2 | 5 pc(s). | **3322.700** |
| 3238.... | Chemical fibre | 120 x 120 x 12 | G2 | 50 pc(s). | **3322.705** |
| 3239.... | Chemical fibre | 173 x 173 x 17 | G3 | 5 pc(s). | **3171.100** |
| 3239.... | Chemical fibre | 173 x 173 x 17 | G3 | 50 pc(s). | **3171.105** |
| 3240..../3241.... | Chemical fibre | 221 x 221 x 17 | G3 | 5 pc(s). | **3172.100** |
| 3240..../3241.... | Chemical fibre | 221 x 221 x 17 | G3 | 50 pc(s). | **3172.105** |
| 3243..../3244..../ 3245.... | Chemical fibre | 289 x 289 x 17 | G3 | 5 pc(s). | **3173.100** |
| 3243..../3244..../ 3245.... | Chemical fibre | 289 x 289 x 17 | G3 | 50 pc(s). | **3173.105** |

**For Thermoelectric coolers**

| To fit Model No. | Material | W x H x D mm | Filter class to DIN EN 779 | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 3201.200/3201.300 | Chemical fibre | 90 x 106 x 8 | G2 | 5 pc(s). | **3201.050** |

## Filter technology

### Fine filter mat

**for fan-and-filter units**
Made of chopped-fibre mat with a progressive structure. Temperature-resistant to 100 °C, self-extinguishing category F1 to DIN 53 438. Dust-laden air side: Open structure. Clean-air side: Closed structure. Reliable filtering of virtually all types of dust with a particle size of up to 1 µm.

**Material:**
– Chemical fibres

**Note:**
– Performance data, protection category and device approvals are only guaranteed when used in conjunction with original Rittal filter mats.

| To fit Model No. | W x H x D mm | Filter class to DIN EN 779 | Packs of | **Model No.** |
|---|---|---|---|---|
| 3238.... | 120 x 120 x 12 | F5/M5 | 5 pc(s). | **3238.055** |
| 3239.... | 173 x 173 x 12 | F5/M5 | 5 pc(s). | **3181.100** |
| 3240..../3241.... | 221 x 221 x 12 | F5/M5 | 5 pc(s). | **3182.100** |
| 3243..../3244..../3245.... | 289 x 289 x 12 | F5/M5 | 5 pc(s). | **3183.100** |

### Pleated filter

**for Blue e+ roof-mounted cooling unit and VX25 Blue e+ integration solution**
To achieve a protection category of IP 54 with roof-mounted cooling unit Blue e+ and VX25 Blue e+ integration solution.

**Material:**
– Non-woven fabric

**Note:**
– Operation without a pleated filter is inadmissible

**Filter class to DIN EN 779:**
– G4

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3185.030/ 3185.730 | 652 x 158 x 15 | 3 pc(s). | **3285.700** |

## Outlet filter

**Standard**
For ventilation by convection, an outlet filter can be installed in the upper and lower sections of the enclosure.

**Material:**
– ABS

**Colour:**
– RAL 7035
– Optionally available in RAL 9005

**Protection category IP to IEC 60 529:**
– IP 54 including filter mat
– IP 55 with standard filter and additional fine filter
– IP 56 with standard filter and hose-proof hood

**Protection category NEMA:**
– NEMA 12

**Supply includes:**
– Outlet filter
– Filter mat

**Accessories:**
– Spare filter mat, see page 535
– Fine filter mat, see page 536
– Hose-proof hood, see page 538
– Blanking cover, see page 538

| W x H x D mm | Required cut-out, width mm | Required cut-out, height mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 116.5 x 116.5 x 16 | 92 | 92 | 1 pc(s). | **3237.200** |
| 148.5 x 148.5 x 24 | 124 | 124 | 1 pc(s). | **3238.200** |
| 204 x 204 x 24 | 177 | 177 | 1 pc(s). | **3239.200** |
| 255 x 255 x 25 | 224 | 224 | 1 pc(s). | **3240.200** |
| 323 x 323 x 25 | 292 | 292 | 1 pc(s). | **3243.200** |

## Outlet filter

**EMC**
For ventilation by convection, an outlet filter can be installed in the upper and lower sections of the enclosure.

**Material:**
– ABS

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 54 including filter mat
– IP 55 with EMC filter mat and additional fine filter
– IP 56 with EMC filter mat and hose-proof hood

**Supply includes:**
– Outlet filter
– Filter mat

**Accessories:**
– Spare filter mat, see page 535
– Fine filter mat, see page 536
– Hose-proof hood, see page 538

| W x H x D mm | Required cut-out, width mm | Required cut-out, height mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 116.5 x 116.5 x 16 | 92 | 92 | 1 pc(s). | **3237.060** |
| 148.5 x 148.5 x 24 | 124 | 124 | 1 pc(s). | **3238.060** |
| 204 x 204 x 24 | 177 | 177 | 1 pc(s). | **3239.060** |
| 255 x 255 x 25 | 224 | 224 | 1 pc(s). | **3240.060** |
| 323 x 323 x 25 | 292 | 292 | 1 pc(s). | **3243.060** |

## Filter technology

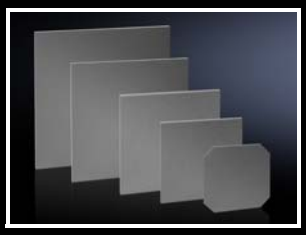
### Hose-proof hood

**to increase the protection category**
For fan-and-filter units/outlet filters. Easy cleaning thanks to exterior silicone coating approved for use with foodstuffs.

**Material:**
– Stainless steel
– Silicone

**Protection category IP to IEC 60 529:**
– IP 56 when fitted over fan-and-filter unit/outlet filter with filter mat

| To fit Model No. | W x H x D mm | Protection category | Packs of | **Model No.** |
|---|---|---|---|---|
| 3237.... | 150 x 230 x 40 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R | 1 pc(s). | **3237.080** |
| 3238.... | 176 x 245 x 55 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R<br>NEMA 4<br>NEMA 4X | 1 pc(s). | **3238.080** |
| 3239.... | 233 x 330 x 55 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R<br>NEMA 4<br>NEMA 4X | 1 pc(s). | **3239.080** |
| 3240..../3241.... | 282 x 390 x 85 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R<br>NEMA 4<br>NEMA 4X | 1 pc(s). | **3240.080** |
| 3243..../3244.... | 350 x 480 x 110 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R<br>NEMA 4<br>NEMA 4X | 1 pc(s). | **3243.080** |
| 3245.... | 350 x 480 x 160 | NEMA 1<br>NEMA 12<br>NEMA 3<br>NEMA 3R | 1 pc(s). | **3245.080** |



### Blanking cover

**for fan-and-filter units / outlet filters**
If existing mounting cut-outs for fan-and-filter units/ outlet filters need to be closed to achieve a higher protection category, the filter mat of the fan-and-filter unit/outlet filter can simply be replaced with a blanking cover; welding or other mechanical modification of the enclosure is not necessary.

**Material:**
– PE, closed-cell

**Colour:**
– Anthracite

**Protection category IP to IEC 60 529:**
– IP 54

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3237.... | 81 x 81 x 6 | 2 pc(s). | **3237.020** |
| 3238.... | 114 x 114 x 8 | 2 pc(s). | **3238.020** |
| 3239.... | 167 x 167 x 15 | 2 pc(s). | **3239.020** |
| 3240..../<br>3241.... | 214 x 214 x 15 | 2 pc(s). | **3240.020** |
| 3243..../<br>3244..../<br>3245.... | 282 x 282 x 15 | 2 pc(s). | **3243.020** |

## Front outlet grille 2 U

**for tangential fans**

This front outlet grille is required if a 482.6 mm (19") cross-flow blower (SK 3144.000/SK 3145.000) is used in the lower section of the electronic enclosure and the hot air is to be expelled to the outside from the upper section of the enclosure. The design of the grille matches that of the intake grille in the cross-flow blower. These grilles can also be used as simple inflow and outflow grilles with natural convection.

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **3176.000** |

**Accessories:**

– Filter mat, see page 533

## Enclosure internal fan

To prevent hot-spots and support the air routing of active enclosure climate control components. Adjustable in two axes. Attached to the frame section. Several fans may be cascaded using the quick-release clamping strip.

**Supply includes:**
– Complete unit with axial fan ready for connection
– Snap-on pivot device
– Assembly parts

| Air throughput (unimpeded air flow) $m^3/h$ | Rated operating voltage V, ~, Hz | Power consumption W | Rated current A | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 160 | 230, 1~, 50/60 | 19 / 18 | 0.12 / 0.11 | 1 pc(s). | **3108.100** |
| 160 | 115, 1~, 50/60 | 19 / 18 | 0.24 / 0.23 | 1 pc(s). | **3108.115** |
| 160 | 24 (DC) | 3.5 | 0.15 | 1 pc(s). | **3108.024** |

## Mini fan

Compact DC fan for enclosure and component cooling in enclosures.

**Supply includes:**
– Fan
– Assembly screws
– Contact hazard protection

| W x H x D mm | Air throughput (unimpeded air flow) $m^3/h$ | Rated operating voltage V | Power consumption W | Operating temperature range | Noise level dB(A) | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 60 x 60 x 25.4 | 21 | 24 (DC) | 1 | -20 °C...+70 °C | 20 | 1 pc(s). | **3236.124** |

## Integrated louvres

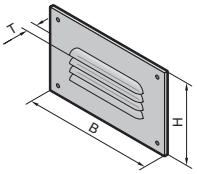
For ventilation by convection; easily retro-fitted using 4 screws.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| W x H x D mm | Packs of | **Model No.** |
|---|---|---|
| 160 x 110 x 8 | 4 pc(s). | **2541.235** |
| 210 x 100 x 8 | 4 pc(s). | **2542.235** |
| 330 x 110 x 8 | 4 pc(s). | **2543.235** |



## Air routing

### Air duct system

**for roof-mounted cooling units and roof-mounted air/water heat exchangers**
Cold air may be routed directly to specific areas of the enclosure using the air duct system.
The risk of air short circuits due to self-ventilated installed devices is therefore eliminated.
The dimensions of the shallow duct are W x H x D 229 x 1500 x 29 mm, and can be shortened to the required length.

**Material:**
– Flame-resistant plastic to DIN 4102/B1

**Colour:**
– RAL 7035

**Supply includes:**
– Shallow duct
– Compensating hose

**Note:**
– Do not direct cold air straight at active components.
– When using the ducting system, the performance of the cooling unit may be reduced, depending on the application in question.
– For devices 3359..../3382...., the air duct adaptor 3286.840 is additionally required.

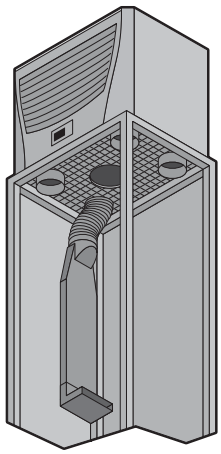
| To fit Model No. | Packs of | Model No. |
|---|---|---|
| 3209..../3210..../3273..../3359..../3382..../3383..../3384..../3385.... | 1 pc(s). | **3286.870** |
| 3386..../3387.... | 1 pc(s). | **3286.970** |

**Also required:**

– Support strip, see page 952

**Accessories:**

– Deflector, 90°, see page 540
– Stoppers, see page 542
– Flat duct extension, see page 541



### Air duct adaptor

**for air duct system and shallow air duct system**
The adaptor serves as a connection between the roof-mounted cooling unit (air inlet opening) and the air-duct system.

**Material:**
– ABS

**Colour:**
– RAL 9005

| To fit Model No. | Packs of | Model No. |
|---|---|---|
| 3359..../3382.... | 1 pc(s). | **3286.840** |

### Deflector, 90°

**for air duct system**
For targeted air deflection at the end of the shallow duct.

**Material:**
– Flame-resistant plastic to DIN 4102/B1

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3286.990** |

## Shallow air duct system

**for roof-mounted cooling units and roof-mounted air/water heat exchangers**

Cold air may be routed directly to specific areas of the enclosure using the air duct system.
The risk of air short circuits due to self-ventilated installed devices is therefore eliminated.
The dimensions of the shallow duct are W x H x D 229 x 1500 x 29 mm, and can be shortened to the required length.

**Applications:**
- Suitable for enclosures with widths of 800 mm or more and depths of 600 mm or more

**Material:**
- Flame-resistant plastic to DIN 4102/B1

**Colour:**
- RAL 7035

**Supply includes:**
- Shallow duct
- Adaptor
- Compensating piece
- Deflector, 90°

**Note:**
- Do not direct cold air straight at active components.
- When using the ducting system, the performance of the cooling unit may be reduced, depending on the application in question.
- Not suitable for use in conjunction with quick-change frame.

| To fit Model No. | Packs of | Model No. |
|---|---|---|
| 3209..../3210..../3273..../3383..../3384..../3385..../3359..../3382.... | 1 pc(s). | **3286.850** |

**Also required:**

- Air duct adaptor, see page 540
- Support strip, see page 952

**Assembly**

- For devices 3359.XXX and 3382.XXX, the air duct adaptor 3286.840 is required for mounting.

**Accessories:**

- Deflector, 90°, see page 540
- Stoppers, see page 542
- Flat duct extension, see page 541

## Flat duct extension

Extension kit for shallow air duct system 3286.850 for length compensation in the width, depth or height in enclosures.

**Material:**
- Flame-resistant plastic to DIN 4102/B1

**Colour:**
- RAL 7035

**Supply includes:**
- Shallow duct 1500 mm
- Connecting piece

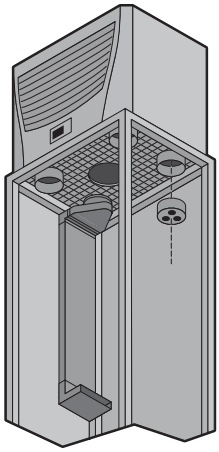
| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3286.860** |

## Air routing

### Stoppers

**for roof-mounted cooling units and roof-mounted air/water heat exchangers**
To cover any cold air outlets that are not required.

**Material:**
– Polyurethane foam



| To fit Model No. | Ø mm | Max. no. of stoppers per unit | Packs of | **Model No.** |
|---|---|---|---|---|
| 3359..../3382.... | 80 | 1 | 2 pc(s). | **3286.780** |
| 3209..../3210..../3273..../ 3383..../3384..../3385.... | 100 | 2 | 2 pc(s). | **3286.880** |
| 3386..../3387.... | 150 | 1 | 2 pc(s). | **3286.980** |

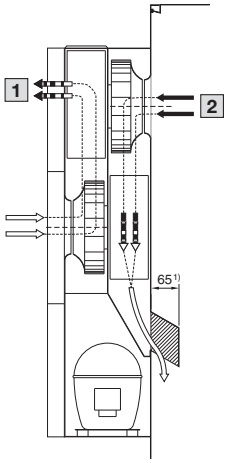
### Air diverter

For use with wall-mounted cooling units, for targeted routing of cold air in a downward direction. Particularly well-suited for densely-packed electrical components in the lower section of the enclosure.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

| To fit Model No. | Installation depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 3304..../3305.... | 65 | 1 pc(s). | **3213.310** |
| 3328..../3329.... | 65 | 1 pc(s). | **3213.320** |




1) 115 mm for 3213.330
1 External air circuit
2 Internal air circuit

## Electric condensate evaporator

For external mounting on the enclosure. For use with all enclosure cooling units and air/water heat exchangers (wall-mounted).

**Benefits:**
– Suitable for international use thanks to multi-voltage support

**Colour:**
– RAL 7035

**Supply includes:**
– Electric condensate evaporator, ready to connect

| W x H x D mm | Rated operating voltage V, ~, Hz | Operating temperature range | Evaporation performance | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 280 x 129 x 105 | 115 - 230, 1~, 50/60 | +5 °C...+60 °C | 230 V: 3.5 l/d<br>115 V: 3.0 l/d | 1 pc(s). | **3301.500** |
| 400 x 129 x 105 | 115 - 230, 1~, 50/60 | +5 °C...+60 °C | 230 V: 3.5 l/d<br>115 V: 3.0 l/d | 1 pc(s). | **3301.505** |

## Electrical condensate evaporator

**for Blue e+ roof-mounted cooling units**
Tool-free mounting of the condensate evaporator on the underside of the roof-mounted Blue e+ so that it is not visible from the outside. Any condensation is evaporated and emitted to the ambient air via the air exhaust of the cooling unit.

**Material:**
– Plastic

**Colour:**
– RAL 9005

**Supply includes:**
– Electrical condensate evaporation
– Shipping brace screw
– Entry grommet

**Note:**
– Power is supplied via the cooling unit

| To fit Model No. | W x H x D mm | Rated operating voltage V (DC) | Operating temperature range | Evaporation performance | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 3185.730 | 89 x 121 x 158 | 380 | +5 °C...+60 °C | 100 ml/h | 1 pc(s). | **3355.720** |

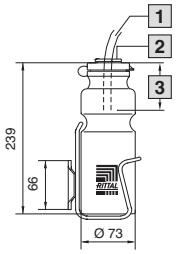
## Water distribution

### Condensate collecting bottle

For mounting on the enclosure. For use with all enclosure cooling units and air/water heat exchangers. Safety overflow at the side. Capacity approximately 0.75 l.

**Supply includes:**
- Condensate collecting bottle
- Bottle holder
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3301.600** |




1 Condensate discharge tube
2 Membrane grommet
3 Max. 70 mm

### Condensate hose

For discharging and transporting condensate. For connection to enclosure cooling units and air/water heat exchangers.

**Material:**
- PVC, transparent

| To fit Model No. | Length m | Ø mm | Material thickness mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 3201.... | 5 | 6 | 1 | 1 pc(s). | **3301.606** |
| 3302.300/3302.310 | 10 | 8 | 1.5 | 1 pc(s). | **3301.608** |
| 3212..../3303..../3361..../3302.1xx/ 3302.2xx | 10 | 10 | 1.5 | 1 pc(s). | **3301.610** |
| 3209...3210/3214.100/3215.100/ 3216.480/3273..../3304...3305/ 3328...3329/3332..../3359..../ 3363...3364/3366..../3373...3375/ 3377...3378/3382...3385/3386...3387/ 3185.830/3185.530/3186.930/ 3186.630/3187.930/3187.630/ 3188.940/3188.640/3189.940/ 3189.640 | 10 | 12 | 2 | 1 pc(s). | **3301.612** |

## Connection set

**for air/water heat exchangers**
For professional laying of water connections and regulation of volumetric flow. The pressure hoses may be cut to length individually, depending on the application.

**Material:**
– Water-carrying parts EPDM/brass

**Supply includes:**
– Hose for water return
– Hose for water inlet including regulator valve for regulating the volumetric flow (setting range 3 to 12 l/min)
– Assembly parts

| To fit Model No. | Length mm | Water connections | Permissible operating pressure (p. max.) bar | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 3209.XX0/3210.XX0/3216.480/ 3363.XX0/3364.XX0/3373.XX0/ 3374.XX0/3375.XX0 | 3600 | G ⅜" internal thread | 1 - 10 | 1 pc(s). | **3201.990** |

## Flow regulator valve

For use with air/water heat exchangers, especially if more than one heat exchanger (n > 1) is used in the water cooling circuit. The correctly set valve then ensures the same quantity of cooling medium for all equipment.

**Applications:**
– The valve is used for hydraulic balancing.

**Material:**
– Brass

| Design | Setting range l/min | Packs of | **Model No.** |
|---|---|---|---|
| ¾" x ½" for volumetric flow control | 3 - 12 | 1 pc(s). | **3301.930** |
| ¾" x ¾" for volumetric flow control | 3 - 12 | 1 pc(s). | **3301.940** |

## Cooling medium (ready-mixed)

**For chillers and air/water heat exchangers**
As well as protecting against frost, this cooling medium also serves to inhibit bacterial growth and provide optimum corrosion protection.

| Application | Antifreeze/water mixture | Container | Contents l | Operating temperature range | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| Outdoor | 1 : 2 | Canister | 10 | -20 °C...+60 °C | 1 pc(s). | **3301.950** |
| Outdoor | 1 : 2 | Canister | 25 | -20 °C...+60 °C | 1 pc(s). | **3301.955** |
| Standard | 1 : 4 | Canister | 10 | -10 °C...+60 °C | 1 pc(s). | **3301.960** |
| Standard | 1 : 4 | Canister | 25 | -10 °C...+60 °C | 1 pc(s). | **3301.965** |

## Control/regulation

### Digital enclosure internal temperature display and thermostat

For installation in the enclosure door or wall.

**Technical specifications:**
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)
- Freely selectable switching difference

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 54

| Rated operating voltage V, ~, Hz | Installation depth mm | Setting range | Operating temperature range | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 100 - 230, 1~, 50/60 24 - 60 (DC) | 100 | +5 °C...+55 °C | +0 °C...+50 °C | 1 pc(s). | **3114.200** |

### Digital enclosure internal temperature display and thermostat

**integrated into a patch panel 1 U**
Including cable attachment for connection cable and label holder.

**Technical specifications:**
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)
- Freely selectable switching difference

| Rated operating voltage V, ~, Hz | Installation depth mm | Setting range | Colour | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 100 - 230, 1~, 50/60 24 - 60 (DC) | 100 | +5 °C...+55 °C | RAL 7035 | 1 pc(s). | **7109.035** |
| 100 - 230, 1~, 50/60 24 - 60 (DC) | 100 | +5 °C...+55 °C | RAL 9005 | 1 pc(s). | **5302.041** |

## Thermostat

**Enclosure internal thermostat**
Particularly suitable for controlling fans, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

**Benefits:**
- Time-saving connection technique using a terminal strip with a screw connection from the outside
- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the enclosure section or on the mounting plate using the supplied adaptor

**Technical specifications:**
- Bi-metal controller as a temperature-sensitive element with thermal feedback
- Contact population: Single-pole change-over contact as a quick-break contact
- Permissible contact load: Category 5 – 3 (heating) AC 10 (4) A (inductive load at cos ϕ = 0.6)/category 5- 4 (cooling): AC 5 (4) A (inductive load at cos ϕ = 0.6)/DC = max. 30 W
- Switching difference: approx. 1 K ± 0.8 K

**Colour:**
- RAL 7035

**Accessories:**
- Bottom-mounted adaptor, see page 548
- Mounting plate, see page 998

| W x H x D mm | Rated operating voltage V, ~ | Setting range | Packs of | **Model No.** |
|---|---|---|---|---|
| 71 x 71 x 33.5 | 24 - 230, 1~<br>24 - 60 (DC) | +5 °C...+60 °C | 1 pc(s). | **3110.000** |

## Hygrostat

Activates the heater and/or fan when a preset relative humidity in the enclosure is exceeded. This reduces the relative humidity and prevents condensation on assemblies and electronic components.

**Benefits:**
- Time-saving connection technique using a terminal strip with a screw connection from the outside
- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the enclosure section or on the mounting plate using the supplied adaptor

**Technical specifications:**
- Contact population: Single-pole change-over contact as a quick-break contact
- Permissible contact load: AC ~ 5 (0.2) A (inductive load at cos ϕ = 0.6)/DC = max. 20 W
- Setting range: 50 – 100% relative humidity
- Switching difference: approx. 4%

**Colour:**
- RAL 7035

| W x H x D mm | Rated operating voltage V, ~ | Packs of | **Model No.** |
|---|---|---|---|
| 71 x 71 x 33.5 | 24 - 250, 1~<br>24 - 75 (DC) | 1 pc(s). | **3118.000** |

**Accessories:**
- Bottom-mounted adaptor, see page 548
- Mounting plate, see page 998

## Control/regulation

### Bottom-mounted adaptor

**for enclosure internal thermostat and hygrostat**

With mounting option for screwed cable glands, for targeted cable infeed from appropriate equipment such as SK fan-and-filter units and enclosure heaters. In conjunction with screwed cable glands, it also provides strain relief.

**Colour:**
– RAL 7035

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 3110.000/3118.000 | 1 pc(s). | **3110.200** |

### EC speed control

**Control unit for EC fan**

Temperature-dependent speed control for EC fans to reduce noise and save energy. The function of the fan can also be monitored.

**Functions:**
– Activation and monitoring of up to 4 EC fan-and-filter units
– For mounting on a 35 mm support rail EN 50 022
– External temperature sensor to record the actual temperature
– Status LED to display the operating status
– Alarm relay for reporting overtemperature, fan defect, cable break and sensor failure

**Supply includes:**
– Speed control
– NTC sensor, length 1.80 m

| To fit Model No. | Rated operating voltage V | Setting range | Packs of | **Model No.** |
|---|---|---|---|---|
| 3240.500/3241.500/3243.500/ 3244.500/3245.XXX/3140.500/ 3140.510 | 100 - 250 | +5 °C...+55 °C | 1 pc(s). | **3235.440** |

### EC speed control

**Sensor for speed control**

NTC sensor for temperature-dependent speed control of EC fans to reduce noise and save energy. Activation and power supply via an EC fan-and-filter unit.

**Technical specifications:**
– Control characteristic: fixed setpoint at 35 °C, with linear control range between +35 °C (maximum speed 100%) and +20 °C (minimum speed 10%)

**Protection category IP to IEC 60 529:**
– IP 40

**Supply includes:**
– External sensor with connection cable (length 3 m)

| To fit Model No. | Rated operating voltage V | Operating temperature range | Packs of | **Model No.** |
|---|---|---|---|---|
| 3240.500/3241.500/ 3243.500/3244.500/ 3245.XXX/3140.500/ 3140.510 | 10 - 12 (DC) | -25 °C...+80 °C | 1 pc(s). | **3235.450** |

## Speed control

**For fan-and-filter units and air/air heat exchangers**
Temperature-dependent speed control to minimise noise and save energy in part-load operation.

**Technical specifications:**
- For mounting on a 35 mm support rail EN 50 022
- Phase cross-over with microcontroller
- Maximum fan output 300 W or 2 A

**Supply includes:**
- Speed control
- NTC sensor, length 1.80 m

**Note:**
- Only suitable for use with single-phase AC motors and equipment
- Not suitable for EC motors

**Accessories:**
- Mounting plate, see page 998

| W x H x D mm | Rated operating voltage V | Setting range | Packs of | **Model No.** |
|---|---|---|---|---|
| 105 x 90.5 x 60.2 | 100 - 230 | +20 °C...+55 °C | 1 pc(s). | **3120.200** |

## Temperature sensor

**for Blue e+ cooling units, Blue e+ chillers**
NTC sensor to regulate Blue e+ cooling units according to an individual measurement point within the enclosure (control based on an external sensor), and according to the cold air outlet from the cooling unit inside the enclosure (control based on outlet temperature). For chillers: Differential control is used if it is necessary to regulate the temperature of the medium depending on the ambient temperature (positive or negative). For this, the temperature sensor needs to be positioned near the Blue e+ chiller.

**Supply includes:**
- External sensor with connection cable (length 2.5 m)

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **3124.400** |

## Control/regulation

### Master/slave cable

**for SK BUS system**

The SK BUS system allows several cooling units and air/water heat exchangers with e-Comfort controller to communicate with one another Master-slave configuration for complex bayed enclosure systems, for optimum operating results.

**Technical specifications:**
- The master-slave layout facilitates common activation and deactivation via door limit switches, parallel activation and deactivation via a temperature setpoint, and common collective fault signals and temperature logging, eliminating the need for intricate wiring.

**Supply includes:**
- 3 m shielded interface cable
- Operating instructions on programming the cooling units

**Note:**
- $n_B = n_K - 1$
- $n_B$: Number of order units (SK BUS system)
- $n_K$: Number of cooling units to be linked

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3124.100** |

### Toroidal transformer

**Primary connection 115 V/400 V**

For the power supply of wall-mounted 230 V air/water heat exchangers. Available with 115 V or 400 V primary connection.

**Technical specifications:**
- Output 110 VA
- Voltage tolerance ±10%
- Primary connection 3500 mm long
- Secondary connection 1500 mm long
- For mounting on a 35 mm support rail EN 50 022

**Supply includes:**
- Toroidal transformer
- Assembly parts

| To fit Model No. | W x H x D mm | Rated operating voltage V, ~, Hz | Packs of | Model No. |
|---|---|---|---|---|
| 3363.X0X/3364.X0X/3212.230/3214.100/3214.700/3215.100/3215.700 | 105 x 123 x 55 | 400 (primary), 2~, 50/60<br>230 (secondary), 1~, 50/60 | 1 pc(s). | **3201.960** |
| 3363.X0X/3364.X0X/3214.100/3214.700/3215.100/3215.700 | 105 x 123 x 55 | 115 (primary), 1~, 50/60<br>230 (secondary), 1~, 50/60 | 1 pc(s). | **3201.970** |

# Industrial Internet of Things

Fast, uninterrupted, automated production,
from page 552

# IoT interface

## Digitalised and networked

## Industrial Internet of Things

- Fast, uninterrupted, automated production
- The Industrial Internet of Things (IIoT) makes it possible.

## Condition monitoring for rack and process cooling

- In conjunction with the IoT interface, Rittal cooling solutions can now be networked and digitalised
- Continuous monitoring plays a key role in boosting system availability.

## Sensors for enclosure monitoring

- The use of Rittal sensors allows reliable monitoring of a wide range of switchgear parameters.
- Potential failures are identified early on, and operational reliability is increased

## Rittal Smart Service

- Data-based service for visualising the response of your networked cooling solutions
- Overview of energy and $CO_2$ consumption
- Centralised detection of maintenance requirements and critical errors, including recommended actions
- Fast problem analysis and troubleshooting

Rittal Smart Service

## IoT interface

The IoT interface is a central component for the intelligent networking of Rittal cooling solutions or sensors for monitoring physical ambient conditions. Equipped with a wide range of interfaces and protocols, it is used to collate and transmit data to superordinate IT systems or to systems for the local monitoring of machine statuses.

**Benefits:**
- Digitalisation and networking offer huge opportunities for every company. With the IoT interface, Rittal cooling solutions and sensors for monitoring physical ambient conditions are easily connected to Industry 4.0 environments without affecting the automation logic.
- Plug and run: The IoT interface is quickly and conveniently configured and commissioned via the integral Web server, no programming required.

**Material:**
- Plastic to UL 94-V0

**Colour:**
- RAL 7016

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- IoT interface
- USB cable (USB-A connector on micro-USB-B connector)
- Angle bracket for Blue e+ cooling unit

**Note:**
- The IoT interface is only supported by Blue e+ cooling units from firmware version 1.11.0 or above. If applicable, update the firmware using the RiDiag III software (3159.300).
- To interlink cooling units in the Blue e series, the Blue e IoT adaptor (3124.310) is additionally required.

**Assembly**
- The IoT interface can be secured on a 35 x 7.5 top hat rail to DIN EN 60715 using a spring-loaded metal clip, or to the rear of a Blue e+ cooling unit using the angle bracket.

**Accessories:**
- Blue e IoT adaptor, see page 555

| | |
|---|---|
| W x H x D mm | 18 x 117 x 120 |
| For | TopTherm cooling units with e-Comfort controller<br>Blue e+ cooling units<br>Blue e+ chillers<br>Smart Monitoring System for NH fuse-switch disconnectors<br>Rittal sensors |
| Operating temperature range | +0 °C...+70 °C |
| Protocols | OPC-UA/SNMPv1/SNMPv2c/SNMPv3/Modbus/TCP/TCP/IPv4/TCP/IPv6/Radius/Telnet/SSH/FTP/SFTP/HTTP/HTTPS/NTP/DHCP/DNS/SMTP/Syslog/LDAP |
| Interfaces | 1 x Micro USB type B (device) for USB 2.0<br>1 x Micro-SD memory card slot for SD 2.0<br>1 x USB 2.0 high-speed functions (EHCI)<br>1 x acknowledgement button<br>1 x push-in spring connection terminal for NTC sensor<br>2 x RJ45 jack for RS 485 interface (climate control unit interface) |
| Network interface | Ethernet IPv4/IPv6<br>Ethernet to IEEE 802.3 via 10BASE-T, 100BASE-T and 1000BASE-T |
| Interface bus system | 2 x RJ45 CAN bus |
| Type of electrical connection | Push-in spring connection terminal (24 V DC) |
| Weight kg | 0.278 |
| Packs of | 1 pc(s). |
| **Model No.** | **3124.300** |

## Blue e IoT adaptor

In conjunction with the IoT interface, the adaptor supports intelligent networking of cooling units in the Blue e series.

**Benefits:**
- Digitalisation and networking offer huge opportunities for every company. In conjunction with the IoT interface (3124.300), cooling units in the Blue e series are easily connected to Industry 4.0 environments without affecting the automation logic.
- Plug and run: The IoT interface is quickly and conveniently configured and commissioned via the integral Web server, no programming required.
- Condition monitoring of up to 10 cooling units in a master/slave arrangement

**Material:**
- Plastic
- Front: Smooth
- Enclosure: Textured

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- Blue e IoT adaptor
- Installation and Short User's Guide
- Mounting bracket
- Assembly parts
- Sub-D to RJ11 connection cable
- Mounting clips for securing top-hat rails

**Also required:**

- IoT interface, see page 554

| | |
|---|---|
| To fit Model No. | 3303.5/6xx/3304.5/6xx/3305.5/6xx/3328.5/6xx/3329.5/6xx/3332.5/6xx/3361.5/6xx/3366.5/6xx/3377.5/6xx/3307.7xx/3310.7xx/3382.5/6xx/3359.5/6xx/3383.5/6xx/3273.500/3384.5/6xx/3385.5/6xx/3386.5/6xx/3387.5/6xx/9776.550 |
| W x H x D mm | 80 x 30 x 40 |
| For | TopTherm cooling units with e-Comfort controller |
| Operating temperature range | +0 °C...+55 °C |
| Interfaces | 1 x Modbus RTU<br>1 x cooling unit interface |
| Weight kg | 0.201 |
| Packs of | 1 pc(s). |
| **Model No.** | **3124.310** |

# Accessories for climate control

## Mounting accessories

### Trim frame

**for slimline cooling units**

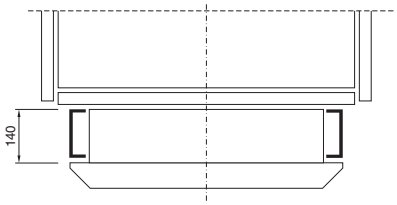
Slimline cooling units can be internally or externally mounted on an enclosure door or wall. The trim frame presents a closed front for the cooling unit.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Trim frame
– Sealing and assembly parts

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3366.... | 448 x 1583 x 140 | 1 pc(s). | **3377.000** |



### Baying plate

**for VX25 Blue e+ integration solution**

The baying plate guarantees a protection category of IP 54 when baying the VX25 Blue e+ integration solution to a 2,000 mm high, 600 mm deep enclosure.

**Material:**
– Sheet steel

**Colour:**
– Textured RAL 7035

**Supply includes:**
– Baying plate
– Cross member
– Assembly parts and sealing material

| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3185.030 | 600 x 200 x 17 | 1 pc(s). | **3355.710** |

### Quick-change frame

**for roof-mounted cooling units**

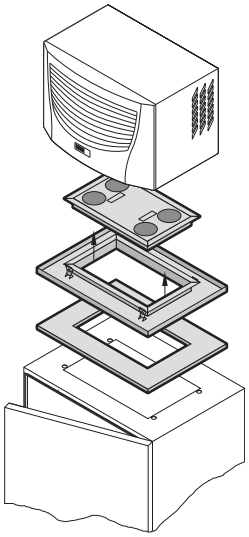
The quick-change frame is more than just an alternate frame. Together with the seal, the lower part of the frame is screw-fastened to the enclosure. In this way, it is possible to install and remove the connector-ready cooling unit with the upper part of the alternate frame previously mounted on the cooling unit with quick-release fasteners. During servicing work, this means shorter assembly times and hence minimised downtime. What is more, the quick-change frame offers effective protection against the ingress of oil into the enclosure in oily atmospheres, thanks to its integral drainage trough.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Quick-change frame
– Seal
– Quick-release fasteners

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 3359..../3382.... | 1 pc(s). | **3286.700** |
| 3209..../3210..../3383..../3384..../3385.... | 1 pc(s). | **3286.800** |
| 3386..../3387.... | 1 pc(s). | **3286.900** |



## Guide frame

**for Vario rack-mounted fan**

**Supply includes:**
- Guide frame
- Connector and fitted connection cable
- Mounting bracket for optional attachment to the 482.6 mm (19") mounting level
- Assembly parts

| To fit Model No. | Suitable for rated operating voltage | Length of connection cable m | Packs of | **Model No.** |
|---|---|---|---|---|
| 3350.230/3351.230/ 3352.230 | 115 V, 50/60 Hz 230 V, 50/60 Hz | 3 | 1 pc(s). | **3355.100** |
| 3352.500 | 24 V DC 115 - 230 V | 3 | 1 pc(s). | **3357.100** |

## Display frame

**for Blue e+ roof-mounted cooling unit and VX25 Blue e+ integration solution**

The display frame allows the touch display of the roof-mounted cooling unit Blue e+ or the VX25 Blue e+ integration solution to be positioned in the enclosure door.

**Benefits:**
- For positioning the display at the optimum operator height

**Material:**
- Plastic

**Colour:**
- RAL 7016

**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Display frame
- Blanking cover
- RJ 12 extension cable (3 m)
- Assembly parts and sealing material

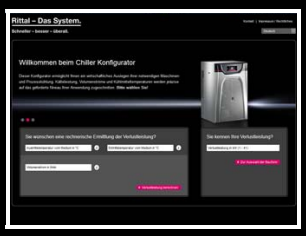
| To fit Model No. | W x H x D mm | Packs of | **Model No.** |
|---|---|---|---|
| 3185.030/ 3185.730 | 316 x 118 x 27.5 | 1 pc(s). | **3355.700** |

# Climate control software

## Configurators/tools/CAD data

### Climate control

The optimum design, control and monitoring of the installation are crucial to efficient climate control. We support you with user-friendly tools and software for rapid calculation, plus Web-based tools and interfaces to easily control your climate control solution.




### Chiller configurator

The chiller configurator is the cost-effective way to design your required machine and process cooling. Cooling output, volumetric flow and refrigerant temperatures are precisely tailored to your required application.

**Benefits:**
- Calculate the heat loss, either mathematically or manually
- Comprehensive range of accessories
- Drawings downloadable in dwg, pdf, or 3D pdf format
- Downloadable specifications/tender texts
- Interactive performance diagram: cooling output and pump output
- Add option packages and download bill of materials
- Transfer order list to shopping basket
- Send a quote request

**Note:**
- Configure online at www.rittal.com/configurators

### Chiller app

The Rittal Chiller app allows users to make their selections from a mobile device. Alongside the existing online version of the chiller configurator, the app also supports automated calculation of the required cooling output. The matching chiller may be selected interactively in just four steps, with outputs ranging from 1 to 40 kW.

**Note:**
- Download free from the App Store

iPhone app

### Therm software

**Precise, efficient climate control**

Therm undertakes the time-consuming calculation of the required cooling output and selects suitable products. The calculation provides you with detailed documentation for maximum peace of mind when designing the optimum climate control. Therm is based on the requirements of IEC/TR3 60890 AMD 1 and DIN 3168 for enclosure cooling units. The overtemperature to DIN 61439 is calculated with a single click.

**Benefits:**
- Fast, thorough determination of the required climate control measures
- Identification of the correct climate control measures can cut costs
- Easy calculation of the required actual cooling output, as well as any upgrades or enhancements to the switchgear
- Detailed documentation is supplied with the calculation

**Note:**
- Configure online at www.rittal.com/software

### Therm app

**Note:**
- Downloaded free from the App Store and from the Google Play Store

Android app

iPhone app

## RiDiag II

For the diagnosis, maintenance and long-term data capture of TopTherm units with e-Comfort controller. RiDiag logs equipment data and prepares an error list. RiDiag also offers the option of displaying and setting the device's operating parameters. Logged measurement data can be tracked in real time in the form of a diagram.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3159.100** |

**Note:**
– Download free at www.rittal.com/software

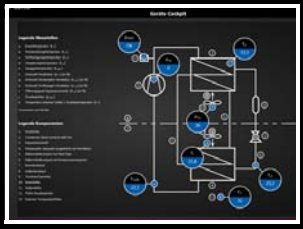
## RiDiag III

Diagnosis software for the analysis and parameterisation of cooling units and chillers in the Blue e+ series.

The following functions may be used in the device and efficiency cockpit:
– Quick analysis and setting of all parameters
– Display configuration: e.g. NFC, language, PIN
– Reading of historical data from the last two years[1)]
– Creation of service enquiries and selection of spare parts
– Software and firmware updates for devices

| | Model No. |
|---|---|
| [1)]This additional function can be enabled with a chargeable licence | **3159.300** |

**Note:**
– Download RiDiag III for free at www.rittal.com/software



## Blue e+ app

The Blue e+ app supports the contactless exchange of information as well as quick on-site analysis via the NFC interface.

**Benefits:**
– Saves time when reading the units
– Limit access by requesting a PIN (PIN of cooling unit)
– Superior operational reliability, thanks to improved fault and maintenance management
– Identical displays and menu prompting as on the Blue e+ device display
– Direct link to Rittal Service
– Simply send repair, maintenance and spare parts enquiries from your smartphone

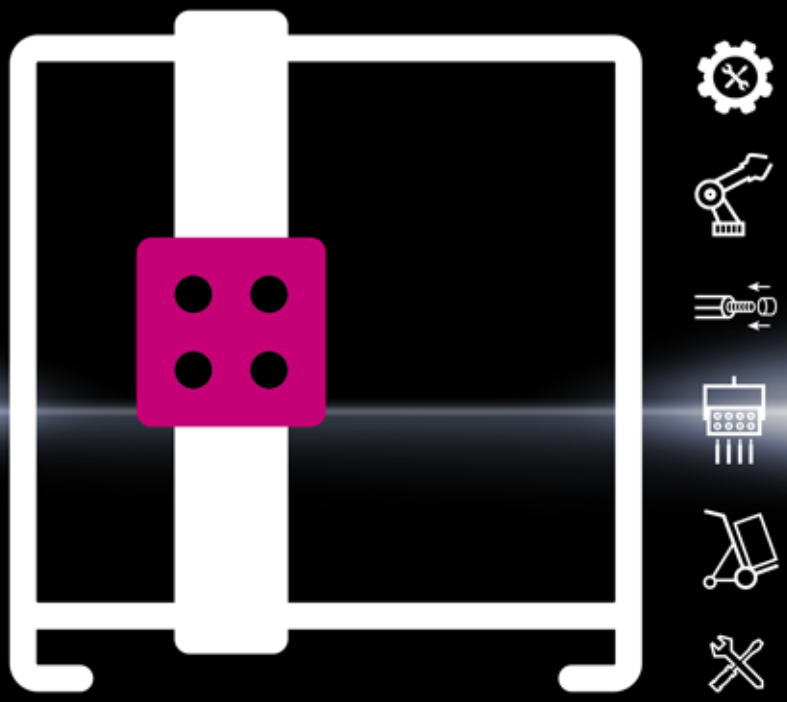
**Note:**
– Download for free from the Google Play Store

Android app

# Boosting efficiency through automation

**Rittal has all the machines and devices you need** – The Rittal Automation Systems division can supply everything you need to make panel building and switchgear manufacturing easier, faster, more accurate and more reproducible through automation. This allows you to link all work operations together into one highly efficient, digitally seamless, automated process.
Manual handling aids and a wide selection of hand tools are available from a single source and can be ordered directly from Rittal.

Further information, machines and devices can be found in the brochure
“Rittal Automation Systems – Automate your panel building and switchgear manufacturing”.



# Manufacturing

3

## RITTAL AUTOMATION SYSTEMS

### Tools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# Harness your potential for greater productivity

Rittal offers quality tools made from high-quality materials and semi-automated machines for wire assembly and copper processing for professional industry use.
Ergonomic, efficient handling systems for transport and lifting operations round out our standard portfolio.
We can supply all the machining and handling technology you need for time-saving and cost-cutting manufacturing processes, all from a single source.

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

FRIEDHELM LOH GROUP

## Perfecting the hand tool

High-quality hand tools for professional use in industry and trade,
from page 565

## Simplify handling

Ergonomic, efficient handling systems for transport and lifting operations,
from page 606

## Systematise wire processing

Professional, rational solutions for manual wire machining and processing
Crimping tools, from page 574
Semi-automatic machines, from page 632

## Streamline wiring

To complete the process chain, Rittal Automation Systems are involved in developing pioneering wiring solutions, right through to full automation.

## Automate machining

Fully automated milling or laser machining, plus machining of cable ducts and busbars
Busbar machining, from page 638

## Make component mounting more flexible

Automatic manufacturing and component mounting of terminal strips,
from page 658

# The right tool for every application!

**All from a single source –** Rittal offers a comprehensive range of hand-held tools for professional support with your work operations. All the machining and handling technology you need for time-saving and cost-cutting manufacturing processes, all from a single source.

## Tool bag

**Configured**

Configured tool bag comprising a selected range of Rittal hand tools, designed especially for electricians. The practical, high-quality shoulder bag may be used either as a tool bag or laptop case.

**Design:**
- 19 separate compartments for tools
- Cushioned compartment for laptop or tablet
- Document wallet
- Two additional storage pockets inside

**Benefits:**
- Careful storage
- Shoulder pad for comfortable carrying
- Flexible use

**Material:**
- Polyester

**Supply includes:**
- Screwdriver, insulated SL 3.5 x 0.6 (Model No.: 4052.102), SL 6 x 1.2 (Model No.: 4052.107), PZ 2 (Model No.: 4052.122)
- Screwdriver, non-insulated PZ 2 (Model No.: 4052.022), SL 6 x 1.2 (Model No.: 4052.011), TX 20 (Model No.: 4052.055), TX 25 (Model No.: 4052.056), TX 30 (Model No.: 4052.058)
- Bit holder with handle, magnetic (Model No.: 4053.300)
- Bit set with bit holder, 7-piece (Model No.: 4053.420)
- Crimping pliers for wire end ferrules, for cross-section 0.5 - 6 $mm^2$, square crimp (Model No.: 4054.001)
- Wire stripper for wire end ferrules, for cross-section 0.02 - 11 $mm^2$ (Model No.: 4054.300)
- Stripping tools for cables Ø 2.5 - 11 mm (Model No.: 4054.400), for cables Ø 8 - 13 mm (Model No.: 4054.405)
- Side cutter for cables Ø 0.2 - 11 mm (Model No.: 4054.600)
- Electrician's scissors for cables Ø 0.1 - 3.7 mm (Model No.: 4054.700)
- Combination pliers with insulated handle (Model No.: 4054.800)
- Needle-nose pliers with insulated handle (Model No.: 4054.850)
- Tool bag (Model No.: 4053.000)

| Width mm | Height mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 420 | 340 | 190 | 1 pc(s). | **4053.500** |

## Tool bag

**Unconfigured**

The practical, high-quality shoulder bag may be used either as a tool bag or laptop case.

**Design:**
- 19 separate compartments for tools
- Cushioned compartment for laptop or tablet
- Document wallet
- Two additional storage pockets inside

**Benefits:**
- Careful storage
- Shoulder pad for comfortable carrying
- Flexible use

**Material:**
- Polyester

| Width mm | Height mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 420 | 340 | 190 | 1 pc(s). | **4053.000** |

## Screwdrivers

**insulated**
With a long, slender handle and high-performance tip with non-transfer insulation.

**Design:**
- Isolation protection 1000 V

**Benefits:**
- Minimal force required, thanks to ergonomically styled handle
- Handle head with anti-roll protection and clear screw labelling
- Black coated blade tip to preserve precision and accuracy of fit
- Handle 30% and insulation up to 50% slimmer than comparable tools
- Optimum interconnection of hand and handle supports higher torques and longer, fatigue-free working

**Material:**
- Blade: Chrome-molybdenum-vanadium alloy
- Handle core: Hard plastic
- Handle body: Elastic, highly flexible plastic

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Standards:**
- IEC 60 900

**Approvals:**
- VDE
- TÜV-tested safety

**For slot-head screws**

| Blade tip | Blade (width x thickness) mm | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| SL | 3 x 0.5 | 100 | 3.5 | 105 | 25 | 1 pc(s). | **4052.101** |
| SL | 3.5 x 0.6 | 100 | 3.5 | 105 | 25 | 1 pc(s). | **4052.102** |
| SL | 4 x 0.8 | 100 | 4 | 105 | 25 | 1 pc(s). | **4052.104** |
| SL | 5.5 x 1 | 125 | 5.5 | 115 | 27 | 1 pc(s). | **4052.106** |
| SL | 6.5 x 1.2 | 125 | 6.5 | 115 | 27 | 1 pc(s). | **4052.107** |

**For Pozidriv screws**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| PZ 1 | – | 80 | 4.5 | 105 | 25 | 1 pc(s). | **4052.121** |
| PZ 2 | – | 100 | 6 | 115 | 27 | 1 pc(s). | **4052.122** |

**For Phillips-head screws**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| PH 1 | – | 80 | 4.5 | 105 | 25 | 1 pc(s). | **4052.131** |
| PH 2 | – | 100 | 6 | 115 | 27 | 1 pc(s). | **4052.132** |

**For plus/minus**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| Z 1 | – | 80 | 4.5 | 105 | 25 | 1 pc(s). | **4052.141** |
| Z 2 | – | 100 | 6 | 115 | 27 | 1 pc(s). | **4052.142** |

## Screwdriver set

**insulated**
Multi-part screwdriver set. With a long, slender handle and high-performance tips with non-transfer insulation.

**Design:**
– Isolation protection 1000 V

**Benefits:**
– Minimal force required, thanks to ergonomically styled handle
– Handle head with anti-roll protection and clear screw labelling
– Black coated blade tip to preserve precision and accuracy of fit
– Handle 30% and insulation up to 50% slimmer than comparable tools

**Material:**
– Blade: Chrome-molybdenum-vanadium alloy
– Handle core: Hard plastic
– Handle body: Elastic, highly flexible plastic

**Colour:**
– Handle: Anthracite and Rittal Power Pink

**Supply includes:**
– Set with 5 screwdrivers

**Standards:**
– IEC 60 900

**Approvals:**
– VDE
– TÜV-tested safety

| Blade tip | Packs of | **Model No.** |
|---|---|---|
| SL 3 x 0.5 mm<br>SL 4 x 0.8 mm<br>SL 5.5 x 1 mm<br>PH 1<br>PH 2 | 1 pc(s). | **4052.210** |
| SL 3 x 0.5 mm<br>SL 4 x 0.8 mm<br>SL 5.5 x 1 mm<br>PZ 1<br>PZ 2 | 1 pc(s). | **4052.211** |
| SL 3 x 0.5 mm<br>SL 4 x 0.8 mm<br>PH 1<br>PH 2<br>Z 2 | 1 pc(s). | **4052.212** |

## Screwdrivers

**uninsulated**
Ergonomic screwdriver which adapts perfectly to the hand, thereby minimising the force required.

**Benefits:**
- Handle head with anti-roll protection and clear screw labelling
- Black coated blade tip to preserve precision and accuracy of fit
- Optimum interconnection of hand and handle supports higher torques and longer, fatigue-free working

**Material:**
- Blade: Chrome-molybdenum-vanadium alloy
- Handle core: Hard plastic
- Handle body: Elastic, highly flexible plastic

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Approvals:**
- TÜV-tested safety

**For slot-head screws**

| Blade tip | Blade (width x thickness) mm | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| SL | 2.5 x 0.4 | 75 | 2.5 | 86 | 25 | 1 pc(s). | **4052.001** |
| SL | 3.5 x 0.6 | 100 | 3.5 | 86 | 25 | 1 pc(s). | **4052.003** |
| SL | 4 x 0.8 | 100 | 4 | 94 | 30 | 1 pc(s). | **4052.004** |
| SL | 5.5 x 1 | 150 | 5 | 101 | 33 | 1 pc(s). | **4052.007** |
| SL | 6.5 x 1.2 | 150 | 6 | 106 | 36 | 1 pc(s). | **4052.011** |
| SL | 8 x 1.2 | 175 | 7 | 112 | 39 | 1 pc(s). | **4052.014** |
| SL | 5.5 x 1 | 25 | 5 | 60 | 21 | 1 pc(s). | **4052.018** |

**For Pozidriv screws**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| PZ 1 | – | 80 | 4.5 | 94 | 30 | 1 pc(s). | **4052.021** |
| PZ 2 | – | 100 | 6 | 106 | 36 | 1 pc(s). | **4052.022** |

**For Phillips-head screws**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| PH 1 | – | 80 | 4.5 | 94 | 30 | 1 pc(s). | **4052.031** |
| PH 2 | – | 100 | 6 | 106 | 36 | 1 pc(s). | **4052.032** |
| PH 2 | – | 25 | 6 | 60 | 21 | 1 pc(s). | **4052.038** |

**For multi-tooth screws**

| Blade tip | Blade (width x thickness) | Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| TX 10 | – | 100 | 3.5 | 86 | 25 | 1 pc(s). | **4052.053** |
| TX 15 | – | 100 | 4 | 94 | 30 | 1 pc(s). | **4052.054** |
| TX 20 | – | 100 | 5 | 101 | 33 | 1 pc(s). | **4052.055** |
| TX 25 | – | 100 | 5 | 106 | 36 | 1 pc(s). | **4052.056** |
| TX 30 | – | 115 | 6 | 112 | 39 | 1 pc(s). | **4052.058** |

## Screwdriver set

**uninsulated**
Multi-part screwdriver set.

**Benefits:**
- Minimal force required, thanks to ergonomically styled handle
- Handle head with anti-roll protection and clear screw labelling
- Black coated blade tip to preserve precision and accuracy of fit

**Material:**
- Blade: Chrome-molybdenum-vanadium alloy
- Handle core: Hard plastic
- Handle body: Elastic, highly flexible plastic

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Approvals:**
- TÜV-tested safety

| Blade tip | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|
| SL 3.5 x 0.6 mm<br>SL 6.5 x 1.2 mm<br>PZ 1<br>PZ 2<br>PH 1<br>PH 2 | 6-part set | 1 pc(s). | **4052.200** |
| PH 1<br>PH 2<br>TX 15<br>TX 20<br>TX 25<br>TX 30 | 6-part set | 1 pc(s). | **4052.201** |
| TX 10<br>TX 15<br>TX 20<br>TX 25<br>TX 30 | 5-part set | 1 pc(s). | **4052.202** |

## Interchangeable screwdriver set

**uninsulated**
13-piece tool set with comfortable, foldable, lockable handle.

**Technical specifications:**
- PH 1 - SL 4 x 0.8 mm
- PH 2 - PH 3
- PZ 1 - SL 5 x 0.8 mm
- PZ 2 - SL 6 x 1 mm
- PZ 3 - SL 7 x 1.2 mm
- TX 6 - TX 7
- TX 8 - TX 9
- TX 10 - TX 15
- TX 20 - TX 25
- TX 30 - TX 40
- Hex socket 3 mm - hex socket 4 mm
- Hex socket 5 mm - hex socket 6 mm

**Material:**
- Blade: Chrome-molybdenum-vanadium alloy
- Handle core: Hard plastic
- Handle body: Elastic, highly flexible plastic

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Supply includes:**
- Combined blade holder: Screwdriver and T handle
- 12 blades each with 2 tips
- Storage box

| Blade length mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 160 | 105 | 39 | 1 pc(s). | **4053.450** |

## Hex wrench set

**for Allen screws**

Hex wrench with optimum, narrow-tolerance hexagonal profiles and precise ballhead geometry. The extra-long design achieves a greater leverage effect.

**Benefits:**
- Up to 30% more corrosion resistance
- Optimum hardness and elasticity
- Intensive leverage effect
- Special geometry in the critical zone

**Technical specifications:**
- For hex socket: 1.27 - 1.5 - 2.0 - 2.5 - 3.0 - 3.5 - 4.0 - 4.5 - 5.0 - 5.5 - 6.0 - 7.0 - 8.0 - 9.0 - 10.0 mm

**Supply includes:**
- 15 hex wrenches
- Storage box

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4052.480** |

## Industrial bit for cordless screwdrivers

**with long shaft**
Precisely manufactured screwdriver with a long shaft for industrial use.

**Benefits:**
– Maximum hardness and torque values

**Technical specifications:**
– Tool adaptation E 6.3 (¼")

**Material:**
– High-quality special tool steel

**For slot-head screws**

| Blade tip | Blade (width x thickness) mm | Length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| SL | 3.5 x 0.6 | 73 | 6.3 | 3 pc(s). | **4053.002** |
| SL | 4 x 0.8 | 73 | 6.3 | 3 pc(s). | **4053.003** |

**For Pozidriv screws**

| Blade tip | Blade (width x thickness) | Length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| PZ 1 | – | 73 | 6.3 | 3 pc(s). | **4053.011** |
| PZ 2 | – | 73 | 6.3 | 3 pc(s). | **4053.012** |

**For Phillips-head screws**

| Blade tip | Blade (width x thickness) | Length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| PH 1 | – | 73 | 6.3 | 3 pc(s). | **4053.021** |
| PH 2 | – | 73 | 6.3 | 3 pc(s). | **4053.022** |

**For plus/minus**

| Blade tip | Blade (width x thickness) | Length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| Z 1 | – | 73 | 6.3 | 3 pc(s). | **4053.031** |
| Z 2 | – | 73 | 6.3 | 3 pc(s). | **4053.032** |

**For multi-tooth screws**

| Blade tip | Blade (width x thickness) | Length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| TX 10 | – | 73 | 6.3 | 3 pc(s). | **4053.041** |
| TX 15 | – | 73 | 6.3 | 3 pc(s). | **4053.042** |
| TX 20 | – | 73 | 6.3 | 3 pc(s). | **4053.043** |
| TX 25 | – | 73 | 6.3 | 3 pc(s). | **4053.044** |
| TX 27 | – | 73 | 6.3 | 3 pc(s). | **4053.045** |
| TX 30 | – | 73 | 6.3 | 3 pc(s). | **4053.046** |
| TX 40 | – | 73 | 6.3 | 3 pc(s). | **4053.047** |

## Industrial bit set for cordless screwdriver

**with long shaft**
Precisely manufactured screwdriver with a long shaft for industrial use.

**Benefits:**
– Robust viewing box
– Secure storage

**Technical specifications:**
– Tool adaptation E 6.3 (¼")

**Material:**
– High-quality special tool steel

**Supply includes:**
– Set with 6 bits
– Viewing box

| Blade tip | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| SL 3.5 x 0.6 mm<br>SL 4 x 0.8 mm<br>SL 5.5 x 1 mm<br>PH 1<br>PH 2<br>PZ 2 | 73 | 1 pc(s). | **4053.400** |
| TX 10<br>TX 15<br>TX 20<br>TX 25<br>TX 30<br>TX 40 | 73 | 1 pc(s). | **4053.410** |

## Bit set

**with bit holder**
7-piece bit set with a practical assortment of quality bits with a short shaft and magnetic holder.

**Benefits:**
– One-handed operation
– Function as auxiliary screwdriver

**Technical specifications:**
– Tool adaptation C 6.3 (¼")

**Supply includes:**
– Set with 6 bits
– Bit holder

| Blade tip | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| TX 25<br>TX 30<br>TX 40<br>PH 1<br>PH 2<br>PH 3 | 25 | 1 pc(s). | **4053.420** |

## Bit holder

**with handle, magnetic**
Ergonomic, adaptable bit holder with handle.

**Benefits:**
– Extra-strong magnet for optimum retention force
– Precise concentricity
– Handle for anti-roll protection

**Technical specifications:**
– Tool adaptation C 6.3 (¼")
– Tool adaptation E 6.3 (¼")

**Material:**
– Handle core: Hard plastic
– Handle body: Elastic, highly flexible plastic

**Colour:**
– Handle: Anthracite and Rittal Power Pink

| Blade length mm | Blade dia. mm | Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 100 | 6.3 | 101 | 33 | 1 pc(s). | **4053.300** |

## Bit holder

**magnetic**
Magnetic holder with hex drive to hold bits securely.

**Benefits:**
– Extra-strong magnet for optimum retention force
– Precise concentricity

**Technical specifications:**
– Tool adaptation E 6.3 (¼")

**Material:**
– High-quality special tool steel

| Blade length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|
| 47 | 6.3 | 1 pc(s). | **4053.310** |

## Flex crimping tool

**for wire end ferrules**
For use with wire end ferrules with no insulating collar to DIN 46228, Part 1 and wire end ferrules with insulating collar to DIN 46228, Part 4.

**Benefits:**
- Front or side accommodation of the wire end ferrule with a rotatable head
- Minimal effort required with large conductor cross-sections
- Uniformly high quality compression
- Releasable ratchet
- Self-adjusting

**Material:**
- High-quality special tool steel

**Surface finish:**
- Coated, black, matt

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Accessories:**
- Wire end ferrules, see page 581

| For cross-section mm² | AWG | Direction of cable entry | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 0.14 - 10 | 26 - 8 | front and side | Trapezoid crimp | 180 | Straight | 1 pc(s). | **4054.030** |

## Crimping pliers

**for wire end ferrules**
For use with wire end ferrules with no insulating collar to DIN 46228, Part 1 and wire end ferrules with insulating collar to DIN 46228, Part 4.

**Benefits:**
- Minimal effort required with large conductor cross-sections
- Uniformly high quality compression
- Releasable ratchet
- Self-adjusting

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Accessories:**
- Wire end ferrules, see page 581

| For cross-section mm² | AWG | Direction of cable entry | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 0.14 - 10 | 26 - 8 | Side | Square crimp | 176 | Straight | 1 pc(s). | **4054.002** |
| 0.14 - 10 | 26 - 8 | Side | Hexagonal crimp | 176 | Straight | 1 pc(s). | **4054.003** |

## Crimping pliers

**for wire end ferrules**

For use with wire end ferrules with no insulating collar to DIN 46228 Part 1 and wire end ferrules with insulating collar to DIN 46228 Part 4.

**Benefits:**
- Minimal effort required with large conductor cross-sections
- Uniformly high quality compression
- Marked die stations for precise machining of the relevant cross-sections
- Releasable ratchet

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Accessories:**

- Wire end ferrules, see page 581

| For cross-section $mm^2$ | AWG | Direction of cable entry | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 0.25 - 6 | 24 - 10 | Side | Trapezoid crimp | 198 | Angled | 1 pc(s). | **4054.000** |
| 0.5 - 6 | 22 - 10 | Front | Square crimp | 198 | Angled | 1 pc(s). | **4054.001** |
| 10 - 25 | 8 - 4 | Side | WM crimp | 256 | Straight | 1 pc(s). | **4054.004** |
| 35 - 50 | 2 - 1 | Side | WM crimp | 256 | Straight | 1 pc(s). | **4054.008** |

## Crimping pliers

**for crimp tab terminals**

For use with non-insulated crimp tab terminals.

**Benefits:**
- Releasable ratchet
- Marked die stations for precise machining of the relevant cross-sections

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cross-section $mm^2$ | AWG | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 0.1 - 1.5 | 26 - 16 | B-crimp | 198 | Angled | 1 pc(s). | **4054.080** |
| 0.5 - 6 | 22 - 10 | B-crimp | 256 | Straight | 1 pc(s). | **4054.081** |

## Crimping pliers

**for ring terminals**
For use with non-insulated ring terminals.

**Benefits:**
- Releasable ratchet
- Optimised lever transmission means that only minimal actuator forces are required, even with large cross-sections

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cross-section $mm^2$ | AWG | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 0.5 - 2.5 | 20 - 14 | Indent crimp | 198 | Angled | 1 pc(s). | **4054.020** |
| 0.35 - 6 | 22 - 10 | Indent crimp | 198 | Angled | 1 pc(s). | **4054.021** |
| 4 - 10 | 12 - 8 | Double-indent crimp | 256 | Straight | 1 pc(s). | **4054.023** |
| 10 - 25 | 8 - 4 | Indent crimp | 256 | Straight | 1 pc(s). | **4054.024** |

## Crimping pliers

**for ring terminals**
For use with insulated ring terminals and connectors.

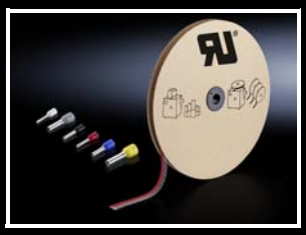
**Benefits:**
- Clear allocation of cross-sections, thanks to colour coding on the dies
- Releasable ratchet
- Releases as soon as the required pressure is reached, to prevent underpressing

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cross-section $mm^2$ | AWG | Compression | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 0.75 - 2.5 | 22 - 14 | Oval crimp | 198 | Angled | 1 pc(s). | **4054.140** |
| 0.75 - 6 | 22 - 10 | Oval crimp | 256 | Straight | 1 pc(s). | **4054.141** |



## Wire end ferrules

**on a reel**
With plastic collar.

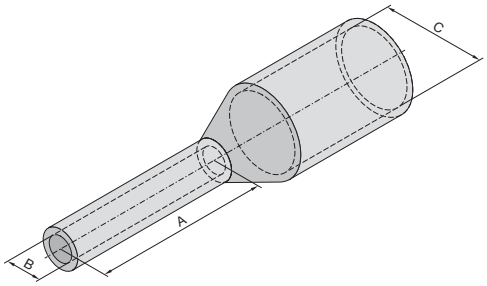
**Technical specifications:**
– Heat-resistant to 105 °C

**Material:**
– E-Cu, galvanic tin-plated
– Plastic collar: Polypropylene

**Note:**
– UL-certified in conjunction with the relevant tools, such as crimping machines.

**Standards:**
– AEH DIN 46228

**Approvals:**
– Available on the Internet




A: Length
B: Cross-section
C: Internal diameter

**For cross-section 0.5 mm², delivery form: on a reel**

| Model No. | 4051.540 | 4051.597 | 4051.548 | 4050.746 | 4051.536 | 4051.598 |
|---|---|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC | Crimping machine RC |
| For cross-section mm² | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| AWG | 20 | 20 | 20 | 20 | 20 | 20 |
| Length mm | 8 | 8 | 8 | 8 | 10 | 10 |
| Internal diameter mm | 2.9 | 2.6 | 2.9 | 2.6 | 2.9 | 2.6 |
| Colour | Orange | Orange | White | White | Orange | Orange |
| DIN colour code | – | – | ■ | ■ | – | – |
| Rittal colour code | ■ | ■ | – | – | ■ | ■ |
| Multiple colour codes supported | ■ | – | ■ | – | ■ | – |

**For cross-section 0.5 - 0.75 mm², delivery form: on a reel**

| Model No. | 4051.544 | 4051.695 | 4051.549 | 4050.747 | 4051.541 | 4051.599 |
|---|---|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC | Crimping machine RC | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E |
| For cross-section mm² | 0.5 | 0.5 | 0.75 | 0.75 | 0.75 | 0.75 |
| AWG | 20 | 20 | 18 | 18 | 18 | 18 |
| Length mm | 10 | 10 | 8 | 8 | 8 | 8 |
| Internal diameter mm | 2.9 | 2.6 | 3.4 | 2.8 | 3.4 | 2.8 |
| Colour | White | White | Grey | Grey | White | White |
| DIN colour code | ■ | ■ | ■ | ■ | – | – |
| Rittal colour code | – | – | – | – | ■ | ■ |
| Multiple colour codes supported | ■ | – | ■ | – | ■ | – |

**For cross-section 0.75 mm², delivery form: on a reel**

| Model No. | 4051.545 | 4051.696 | 4051.537 | 4051.600 |
|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC | Crimping machine RC | Crimping machine RC | Crimping machine RC |
| For cross-section mm² | 0.75 | 0.75 | 0.75 | 0.75 |
| AWG | 18 | 18 | 18 | 18 |
| Length mm | 10 | 10 | 10 | 10 |
| Internal diameter mm | 3.4 | 2.8 | 3.4 | 2.8 |
| Colour | Grey | Grey | White | White |
| DIN colour code | ■ | ■ | – | – |
| Rittal colour code | – | – | ■ | ■ |
| Multiple colour codes supported | ■ | – | ■ | – |

**For cross-section 1 mm², delivery form: on a reel**

| Model No. | 4051.542 | 4051.601 | 4051.550 | 4050.748 | 4051.538 | 4051.602 |
|---|---|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC | Crimping machine RC |
| For cross-section mm² | 1 | 1 | 1 | 1 | 1 | 1 |
| AWG | 18 | 18 | 18 | 18 | 18 | 18 |
| Length mm | 8 | 8 | 8 | 8 | 10 | 10 |
| Internal diameter mm | 3.5 | 3 | 3.5 | 3 | 3.5 | 3 |
| Colour | Yellow | Yellow | Red | Red | Yellow | Yellow |
| DIN colour code | – | – | ■ | ■ | – | – |
| Rittal colour code | ■ | ■ | – | – | ■ | ■ |
| Multiple colour codes supported | ■ | – | ■ | – | ■ | – |

**For cross-section 1 - 1.5 mm², delivery form: on a reel**

| Model No. | 4051.546 | 4051.697 | 4051.543 | 4051.603 | 4051.551 | 4050.749 |
|---|---|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC | Crimping machine RC | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E | Crimping machine RC Crimping machine R8 | Crimping machine RC Crimping machine R8 Crimping machine R8 E |
| For cross-section mm² | 1 | 1 | 1.5 | 1.5 | 1.5 | 1.5 |
| AWG | 18 | 18 | 16 | 16 | 16 | 16 |
| Length mm | 10 | 10 | 8 | 8 | 8 | 8 |
| Internal diameter mm | 3.5 | 3 | 4 | 3.5 | 4 | 3.5 |
| Colour | Red | Red | Red | Red | Black | Black |
| DIN colour code | ■ | ■ | – | – | ■ | ■ |
| Rittal colour code | – | – | ■ | ■ | – | – |
| Multiple colour codes supported | ■ | – | ■ | – | ■ | – |

**For cross-section 1.5 mm², delivery form: on a reel**

| Model No. | 4051.539 | 4051.604 | 4051.547 | 4051.698 |
|---|---|---|---|---|
| Packs of | 4000 pc(s). | 5000 pc(s). | 4000 pc(s). | 5000 pc(s). |
| For | Crimping machine RC | Crimping machine RC | Crimping machine RC | Crimping machine RC |
| For cross-section mm² | 1.5 | 1.5 | 1.5 | 1.5 |
| AWG | 16 | 16 | 16 | 16 |
| Length mm | 10 | 10 | 10 | 10 |
| Internal diameter mm | 4 | 3.5 | 4 | 3.5 |
| Colour | Red | Red | Black | Black |
| DIN colour code | – | – | ■ | ■ |
| Rittal colour code | ■ | ■ | – | – |
| Multiple colour codes supported | ■ | – | ■ | – |

**For cross-section 2.5 mm², delivery form: on a reel**

| Model No. | 4050.750 | 4051.605 |
|---|---|---|
| Packs of | 3000 pc(s). | 3000 pc(s). |
| For | Crimping machine RC<br>Crimping machine R8<br>Crimping machine R8 E | Crimping machine RC |
| For cross-section mm² | 2.5 | 2.5 |
| AWG | 14 | 14 |
| Length mm | 8 | 10 |
| Internal diameter mm | 4.2 | 4.2 |
| Colour | Blue | Blue |
| DIN colour code | ■ | ■ |
| Rittal colour code | ■ | ■ |
| Multiple colour codes supported | ■ | ■ |

## Wire end ferrules

**loose**
With plastic collar.

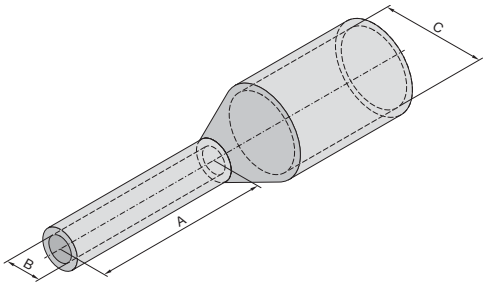
**Technical specifications:**
– Heat-resistant to 105 °C

**Material:**
– E-Cu, galvanic tin-plated
– Plastic collar: Polypropylene

**Note:**
– UL-certified in conjunction with the relevant tools, such as crimping machines.

**Standards:**
– AEH DIN 46228

**Approvals:**
– Available on the Internet




A: Length
B: Cross-section
C: Internal diameter

**For cross-section 0.14 - 0.5 mm², delivery form: loose**

| Model No. | 4050.752 | 4050.754 | 4050.757 | 4050.760 | 4050.730 | 4050.742 | 4050.761 |
|---|---|---|---|---|---|---|---|
| Packs of | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). |
| For | manual wire processing | manual wire processing | manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | manual wire processing |
| For cross-section mm² | 0.14 | 0.25 | 0.34 | 0.5 | 0.5 | 0.5 | 0.5 |
| AWG | 26 | 24 | 22 | 20 | 20 | 20 | 20 |
| Length mm | 8 | 8 | 8 | 8 | 8 | 8 | 10 |
| Internal diameter mm | 1.5 | 1.8 | 2 | 2.6 | 2.6 | 2.9 | 2.6 |
| Colour | Grey | Light blue | Turquoise | Orange | White | White | Orange |
| DIN colour code | – | – | – | – | ■ | ■ | – |
| Rittal colour code | ■ | ■ | ■ | ■ | – | – | ■ |

**For cross-section 0.75 - 1 mm², delivery form: loose**

| Model No. | 4050.731 | 4050.743 | 4050.764 | 4050.766 | 4050.769 | 4050.732 | 4050.744 |
|---|---|---|---|---|---|---|---|
| Packs of | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). |
| For | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing |
| For cross-section mm² | 0.75 | 0.75 | 0.75 | 0.75 | 1 | 1 | 1 |
| AWG | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| Length mm | 8 | 8 | 8 | 10 | 8 | 8 | 8 |
| Internal diameter mm | 2.8 | 3.4 | 2.8 | 2.8 | 3 | 3 | 3.5 |
| Colour | Grey | Grey | White | White | Yellow | Red | Red |
| DIN colour code | ■ | ■ | – | – | – | ■ | ■ |
| Rittal colour code | – | – | ■ | ■ | ■ | – | – |

# Wire end ferrules

**For cross-section 1 - 2.5 mm², delivery form: loose**

| Model No. | 4050.770 | 4050.773 | 4050.733 | 4050.745 | 4050.774 | 4050.734 | 4050.779 |
|---|---|---|---|---|---|---|---|
| Packs of | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). | 500 pc(s). |
| For | manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | Crimping machine L8 manual wire processing | manual wire processing | Crimping machine L8 manual wire processing | manual wire processing |
| For cross-section mm² | 1 | 1.5 | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 |
| AWG | 18 | 16 | 16 | 16 | 16 | 14 | 14 |
| Length mm | 10 | 8 | 8 | 8 | 10 | 8 | 10 |
| Internal diameter mm | 3 | 3.5 | 3.5 | 4 | 3.5 | 4.2 | 4.2 |
| Colour | Yellow | Red | Black | Black | Red | Blue | Blue |
| DIN colour code | – | – | ■ | ■ | – | ■ | – |
| Rittal colour code | ■ | ■ | – | – | ■ | ■ | ■ |

**For cross-section 4 - 6 mm², delivery form: loose**

| Model No. | 4050.782 | 4050.735 | 4050.783 | 4050.736 | 4050.785 |
|---|---|---|---|---|---|
| Packs of | 500 pc(s). | 500 pc(s). | 500 pc(s). | 100 pc(s). | 100 pc(s). |
| For | manual wire processing | manual wire processing | manual wire processing | manual wire processing | manual wire processing |
| For cross-section mm² | 4 | 4 | 4 | 6 | 6 |
| AWG | 12 | 12 | 12 | 10 | 10 |
| Length mm | 8 | 10 | 12 | 12 | 12 |
| Internal diameter mm | 4.8 | 4.8 | 4.8 | 6.3 | 6.3 |
| Colour | Grey | Grey | Grey | Yellow | Black |
| DIN colour code | – | – | ■ | ■ | – |
| Rittal colour code | ■ | ■ | – | – | ■ |

**For cross-section 0.5 - 1 mm², delivery form: loose (10 packs of 100)**

| Model No. | 4051.638 | 4050.737 | 4051.641 | 4050.738 | 4051.644 | 4050.739 |
|---|---|---|---|---|---|---|
| Packs of | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). |
| For | manual wire processing | manual wire processing | manual wire processing | manual wire processing | manual wire processing | manual wire processing |
| For cross-section mm² | 0.5 | 0.5 | 0.75 | 0.75 | 1 | 1 |
| AWG | 20 | 20 | 18 | 18 | 18 | 18 |
| Length mm | 10 | 12 | 10 | 12 | 10 | 12 |
| Internal diameter mm | 2.6 | 2.6 | 2.8 | 2.8 | 3 | 3 |
| Colour | White | White | Grey | Grey | Red | Red |
| DIN colour code | ■ | ■ | ■ | ■ | ■ | ■ |
| Rittal colour code | – | – | – | – | – | – |

**For cross-section 1.5 - 2.5 mm², delivery form: loose (10 packs of 100)**

| Model No. | 4051.647 | 4050.740 | 4051.525 | 4050.741 |
|---|---|---|---|---|
| Packs of | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). | 1000 pc(s). |
| For | manual wire processing | manual wire processing | manual wire processing | manual wire processing |
| For cross-section mm² | 1.5 | 1.5 | 2.5 | 2.5 |
| AWG | 16 | 16 | 14 | 14 |
| Length mm | 10 | 12 | 10 | 12 |
| Internal diameter mm | 3.5 | 3.5 | 4.2 | 4.2 |
| Colour | Black | Black | Blue | Blue |
| DIN colour code | ■ | ■ | ■ | ■ |
| Rittal colour code | – | – | – | – |

## Wire stripper

For stripping cables and conductors. Self-adjusting, with ergonomically styled handle, replaceable insulation stripping blade.

**Benefits:**
- Flexible end stop for the insulation stripping length
- Practical integrated wire cutter
- Automatic adjustment mechanism for a wide range of insulations and conductor diameters
- Dies compatible with all types of pliers, may be replaced in a few actions
- Two-component handle with anti-slip soft zone

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Accessories:**
- Spare blades can be found on the Internet

| For cross-section $mm^2$ | AWG | Length mm | Design | Note | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 0.02 - 10 | 34 - 8 | 191 | – | – | 1 pc(s). | **4054.300** |
| 0.02 - 10 | 34 - 8 | 168 | Angled | – | 1 pc(s). | **4054.315** |
| 0.1 - 4 | 28 - 12 | 191 | – | Also suitable for rubber and silicone insulation | 1 pc(s). | **4054.310** |
| 4 - 16 | 12 - 5 | 191 | – | – | 1 pc(s). | **4054.305** |

## Stripping tool

**for cables Ø 2.5 - 11 mm**

For stripping installation cables and wires.

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cable diameters mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 2.5 - 11 | 90.5 | 1 pc(s). | **4054.400** |

**Accessories:**
- Spare blades can be found on the Internet

## Stripping tool

**for cables Ø 8 - 13 mm**

For stripping single- and multi-wire signal, pilot and fibreglass cables.

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cable diameters mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 8 - 13 | 125 | 1 pc(s). | **4054.405** |

## Stripping tool

**for cables Ø 4.5 - 40 mm**

For stripping cables. Vertically hinged blade for creating round, longitudinal and spiral cuts.

**Colour:**

– Handle: Anthracite and Rittal Power Pink

| For cable diameters mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 4.5 - 40 | 167 | 1 pc(s). | **4054.410** |

**Accessories:**

– Spare blades can be found on the Internet

## Side cutter

For copper and aluminium conductors.

**Benefits:**
- Guarantees long-term stable cutting performance and a clean cut
- Ergonomically styled handles for fatigue-free, non-slip working

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Standards:**
- Isolation protection 1000 V
- VDE

| For cable diameters mm | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|
| 0.2 - 11 | 160 | Straight | 1 pc(s). | **4054.600** |

## Electronic side cutter

With pointed head, 21° angled blades and small chamfer.

**Benefits:**
- Even, smooth-running opening with opening spring
- Ergonomically styled handles
- Box-joint for permanent stability and optimum force progression

**Material:**
- High-quality special tool steel

**Surface finish:**
- Polished, oiled

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| Length mm | Packs of | **Model No.** |
|---|---|---|
| 115 | 1 pc(s). | **4054.750** |

## Cable cutter

For copper and aluminium conductors.

**Benefits:**
- Ergonomically styled handles for fatigue-free, non-slip working

**Material:**
- High-quality special tool steel

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Standards:**
- Isolation protection 1000 V
- VDE

| For cross-section $mm^2$ | For cable diameters mm | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 0.5 - 35 | 12 | 160 | Straight | 1 pc(s). | **4054.650** |
| 0.5 - 50 | 18 | 180 | Angled | 1 pc(s). | **4054.660** |

## Electrician's scissors

For cutting copper, aluminium, Kevlar and plastic.

**Benefits:**
- High cutting performance thanks to micro-serration in the cutting zone
- Ergonomically styled handles
- Two-component handle with anti-slip soft zone
- Adjustable screw joint

**Material:**
- High-quality special tool steel

**Surface finish:**
- Brushed

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| For cable diameters mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 0.1 - 3.7 | 160 | 1 pc(s). | **4054.700** |

## Cross member cutter

To create openings by cutting the cross members in compartment side panels and compartment dividers for VX enclosures and for fuse-switch-disconnector enclosures.

**Benefits:**
- Cutting of materials without deformation
- Clean edge cuts, no reworking of the cut section required
- Easy to use
- Ergonomically styled handles for fatigue-free, non-slip working

**Material:**
- Tool body: Special tool steel, rolled, oil-hardened

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Supply includes:**
- Cross member cutter including swarf deflector

| To fit Model No. | Length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|
| 9683.006/9683.008/ 9683.016/9683.018/ 9683.036/9683.038/ 9680.005/9680.025/ 9680.207/9680.227/ 9683.406/9683.408/ 9683.426/9683.428/ 9683.444/9683.446/ 9683.448/9683.464/ 9683.466/9683.468/ 9683.484/9683.486/ 9683.488 | 280 | Straight | 1 pc(s). | **4054.870** |

## Combination pliers

| Length mm | Packs of | Model No. |
|---|---|---|
| 180 | 1 pc(s). | **4054.800** |

With serrated gripping surface and integral ring spanner M8 to M10.

**Benefits:**
- Ergonomically styled handles for fatigue-free, non-slip working
- Favourable transmission ratios for good holding and cutting performance
- Minimal force required

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Standards:**
- Isolation protection 1000 V
- VDE

## Needle-nose pliers

| Length mm | Packs of | Model No. |
|---|---|---|
| 200 | 1 pc(s). | **4054.850** |

With serrated gripping surface.

**Benefits:**
- Ergonomically styled handles for fatigue-free, non-slip working

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

**Standards:**
- Isolation protection 1000 V
- VDE

## Electronic needle-nose pliers

| Length mm | Packs of | Model No. |
|---|---|---|
| 120 | 1 pc(s). | **4054.860** |

With smooth gripping surface.

**Benefits:**
- Ergonomically styled handles for fatigue-free, non-slip working
- Even, smooth-running opening with opening spring

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

**Colour:**
- Handle: Anthracite and Rittal Power Pink

## Slip-joint pliers

For width across flats 10 - 36 mm.

**Benefits:**
- Ergonomically styled handles for fatigue-free, non-slip working
- Smooth cheeks avoid the usual damage caused by wrenches and pipe wrenches on screws/nuts
- QuickSnap ratcheting for fast adjustment to the workpiece with no push-button
- Robust box-joint

**Material:**
- High-quality special tool steel

**Surface finish:**
- Matt, plated

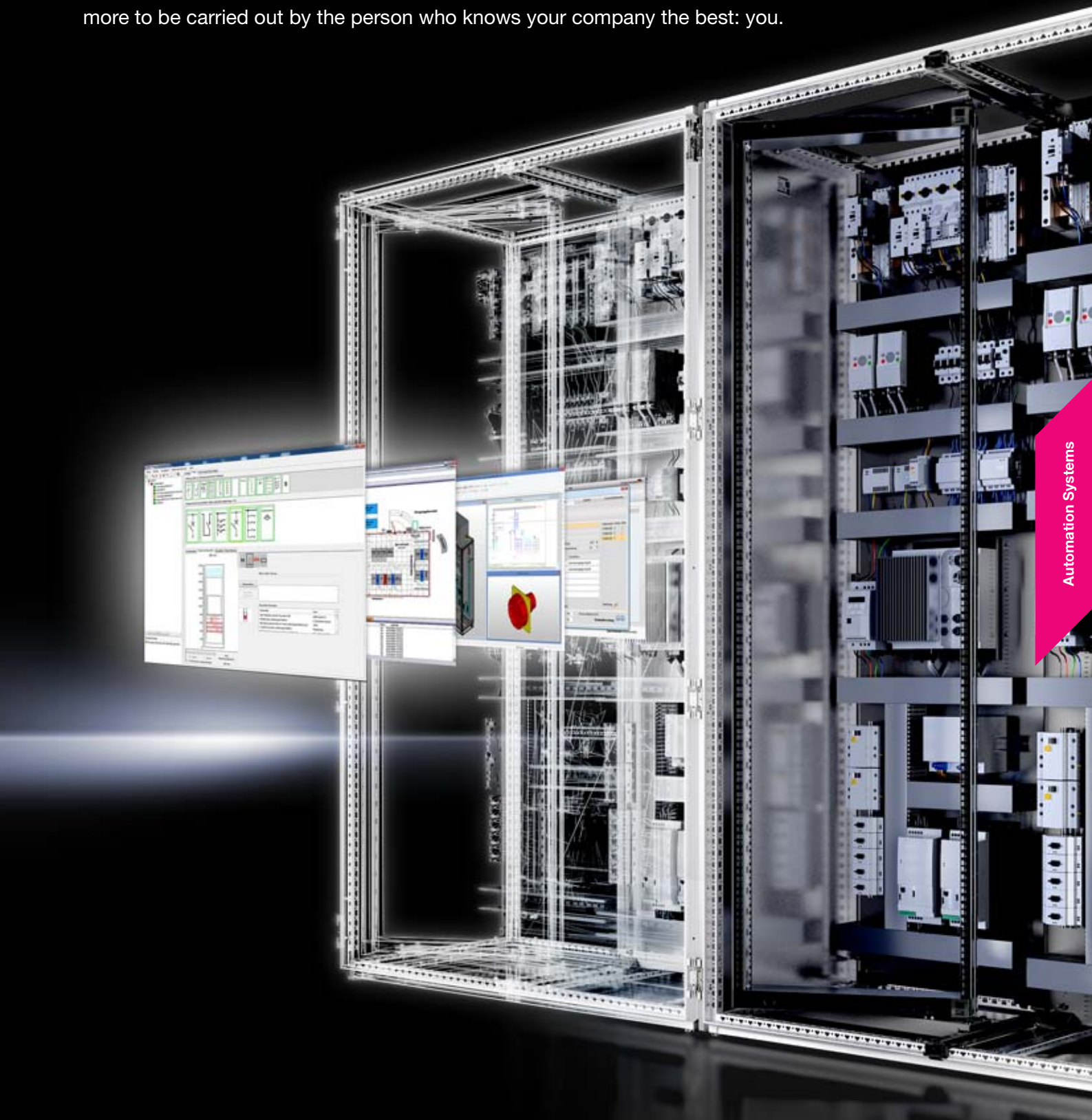
**Colour:**
- Handle: Anthracite and Rittal Power Pink

| Length mm | Packs of | **Model No.** |
|---|---|---|
| 260 | 1 pc(s). | **4054.900** |

# Maximum data quality

## Streamline your workflow with software-based engineering

This enclosure is available in duplicate – real and digital.
The maximum data quality of the enclosures creates greater flexibility with configuration, manufacturing and assembly. What's more, the digital twin allows the planning, ordering, processing and much more to be carried out by the person who knows your company the best: you.



## Deburring blade

Universal deburrer, for deburring holes and edges.

**Design:**
- Steel blade may be clamped in an axial or radial direction as required
- Steel blade brushed on both sides

**Benefits:**
- Blade automatically assumes the optimum position
- Length of blade support is adjustable
- Easy to use
- Effortless deburring
- Ergonomically styled handle

**Material:**
- Handle core: Hard plastic
- Handle body: Elastic, highly flexible plastic
- Blade holder: Steel
- Blade: Hardened steel blade, with PVD TiN (titanium nitride) coating

**Colour:**
- Handle: Black and red

**Supply includes:**
- Handle
- Blade holder
- Steel blade

| Handle length mm | Handle dia. mm | Packs of | **Model No.** |
|---|---|---|---|
| 110 | 28 | 1 pc(s). | **4050.722** |

**Accessories:**
- Steel blade, see page 590

## Steel blade

**for deburring blade**

Spare blade for deburrer. Rotating 360° blades for deburring.

**Design:**
- Steel blade brushed on both sides

**Material:**
- Hardened steel blade, with PVD TiN (titanium nitride) coating

| To fit Model No. | Blade length mm | Blade dia. mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 4050.722 | 23 | 3 | 10 pc(s). | **4050.723** |

**Also required:**
- Deburring blade, see page 590

## Multitool

**for AX, VX**

Multifunctional tool. Ideal for handling and mounting AX enclosures and VX doors.

**Functions:**
- Cutting of packaging (tapes and foil)
- Enclosure key (double-bit)
- Installation and dismantling of hinge pins with AX enclosures
- Temporary door stay for AX enclosures
- Safe installation and removal of VX doors
- Magnet for securing drawings and attaching to enclosure surfaces
- Bottle opener function

**Technical specifications:**
- Load capacity max. 40 kg (lift door)

**Material:**
- Door lift function: Stainless steel
- Double-bit: Die-cast zinc
- Mounting aid for hinge pins: Die-cast zinc
- Door stay: Die-cast zinc
- Blade: Stainless steel blade
- Handle: Plastic

**Colour:**
- Handle: Anthracite and Rittal Power Pink

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4052.000** |

## Lifting aid for mounting plate

**for AX**

Lifting tool to support the assembly process of mounting plates for AX enclosures. Allows easy location and positioning of the mounting plate without risk of injury.

**Benefits:**
- Easy location of populated mounting plates
- Tool-free mounting on the mounting plate
- Loop function for crane use
- No risk of fingers or hands becoming trapped

**Technical specifications:**
- Load capacity max. 40 kg per cable

**Material:**
- Lifting rope and loop: Steel
- Handle: Plastic
- Mounting plate adaptor: Die-cast zinc

**Colour:**
- Handle: Anthracite and Rittal Power pink

**Supply includes:**
- 1 set ≙ 4 lifting aids

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4050.140** |

## Drilling template

**for AX**

For precise positioning and support when drilling extra holes in AX enclosures. Designed for steel and stainless steel enclosures.

**Applications:**
- Universal bracket 2373.000
- Swing frame installation kit 2034.010
- Door stay 1485.100
- 180° hinges 2449.010

**Benefits:**
- Protects the edge of the enclosure
- No measurement or marking out required
- Avoids scratches and damage to the enclosure surface

**Technical specifications:**
- For holes Ø 4.5 / 5.5 / 6.5 mm

**Material:**
- Hard plastic

**Colour:**
- RAL 9005

| Width mm | Height mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 96 | 30 | 45 | 1 pc(s). | **4052.500** |

## Hydraulic punches

### Manual hydraulic punch

For punching round, square and rectangular cut-outs.

**Benefits:**
– Extend tool life with a built-in overpressure valve

**Punching capacity:**
– Round punch up to Ø 82 mm
– Square punch up to 68 x 68 mm
– Rectangular punch up to 46 x 86 mm
– Punching force 75 kN
– Max. operating pressure 680 bar/9850 psi

**Material:**
– Aluminium

**Supply includes:**
– Manual hydraulic punch
– Hydraulic screw Ø 19 mm
– Hydraulic screw Ø 9.5 / 19 mm
– HSS pilot drill Ø 11 mm
– Spacer sleeve set (3-part)
– Plastic case

| Design | Packs of | Model No. |
|---|---|---|
| Straight | 1 pc(s). | **4055.000** |
| With 90° angled and 360° rotating cylinder head | 1 pc(s). | **4055.010** |
| Flexible, with hydraulic hose and separate cylinder | 1 pc(s). | **4055.020** |

### Electric hydraulic punch

For punching round, square and rectangular cut-outs.

**Benefits:**
– Extend tool life with a built-in overpressure valve
– High-performance drive motor with ergonomically styled handle
– Slide in the battery packs from two sides to balance the weight

**Punching capacity:**
– Round punch up to Ø 82 mm
– Square punch up to 68 x 68 mm
– Punching force 75 kN
– Max. operating pressure 680 bar/9850 psi

**Material:**
– Aluminium

**Supply includes:**
– Electric hydraulic punch with 2 NiMH batteries, 18 V
– Charging device 18 - 28 V
– Hydraulic screw Ø 9.5 / 19 mm
– Hydraulic screw Ø 19 mm
– Spacer sleeve set (3-part)
– HSS pilot drill Ø 11 mm
– Plastic case

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4055.041** |

## Manual hydraulic punch set, M16 - M63

Manual hydraulic punch in a practical set with hole punches for sheet steel. Maximum machinable material thickness 2 or 3 mm.

**Benefits:**
– Extend tool life with a built-in overpressure valve

**Supply includes:**
– Manual hydraulic punch, straight
– 7 splitter hole punches, triple splitting
– Hydraulic screw Ø 19 mm
– Hydraulic screw Ø 9.5 / 19 mm
– HSS pilot drill Ø 10 mm
– Spacer sleeve set (3-part)
– Plastic case

| For threads | Ø punch mm | Packs of | **Model No.** |
|---|---|---|---|
| M16<br>M20<br>M25<br>M32<br>M40<br>M50<br>M63 | 16.2<br>20.4<br>25.4<br>32.5<br>40.5<br>50.5<br>63.5 | 1 pc(s). | **4055.070** |

## Manual hydraulic punch set, M16 - M40

Manual hydraulic punch in a practical set with hole punches for sheet steel. Maximum machinable material thickness 2 or 3 mm.

**Design:**
– With 90° angled and 360° rotating cylinder head

**Benefits:**
– Extend tool life with a built-in overpressure valve

**Supply includes:**
– Manual hydraulic punch
– 5 splitter hole punches, triple splitting
– Hydraulic screw Ø 19 mm
– Hydraulic screw Ø 9.5 / 19 mm
– HSS pilot drill Ø 10 mm
– Spacer sleeve set (3-part)
– Plastic case

| For threads | Ø punch mm | Packs of | **Model No.** |
|---|---|---|---|
| M16<br>M20<br>M25<br>M32<br>M40 | 16.2<br>20.4<br>25.4<br>32.5<br>40.5 | 1 pc(s). | **4055.080** |

## Manual hydraulic punch set, PG 9 - PG 48

Manual hydraulic punch in a practical set with hole punches for sheet steel. Maximum machinable material thickness 2 or 3 mm.

**Design:**
– With 90° angled and 360° rotating cylinder head

**Benefits:**
– Extend tool life with a built-in overpressure valve

**Supply includes:**
– Manual hydraulic punch
– 9 splitter hole punches, triple splitting
– Hydraulic screw Ø 19 mm
– Hydraulic screw Ø 9.5 / 19 mm
– HSS pilot drill Ø 10 mm
– Spacer sleeve set (3-part)
– Plastic case

| For PG | Ø punch mm | Packs of | **Model No.** |
|---|---|---|---|
| 9<br>11<br>13<br>16<br>21<br>29<br>36<br>42<br>48 | 15.2<br>18.6<br>20.4<br>22.5<br>28.3<br>37<br>47<br>54<br>60 | 1 pc(s). | **4055.085** |

## Hole punches

### Hole punch, round

**for sheet steel**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With 3 cutting points

**Supply includes:**
– Female dies
– Male dies
– Tension screw without ball bearing

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used
– Other sizes, see splitter hole punch, round, stainless steel

**Accessories:**
– Tension screw, see page 602
– Hydraulic tension screw, see page 603

| For threads | For PG | Ø punch mm | Tension screw (Ø x L) mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Ø mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|
| M12 | 7 | 12.7 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.212** |
| – | 9 | 15.2 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.215** |
| M16 | – | 16.2 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.216** |
| – | 11 | 18.6 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.218** |
| M20 | 13 | 20.4 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.220** |
| – | 16 | 22.5 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.222** |
| M25 | – | 25.4 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.225** |
| – | 21 | 28.3 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.228** |
| M32 | – | 32.5 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.232** |
| – | 29 | 37 | 19 x 55 | 4055.633 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.237** |
| M40 | – | 40.5 | 19 x 55 | 4055.633 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.240** |
| – | 36 | 47 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.247** |
| M50 | – | 50.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.250** |
| – | 42 | 54 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.254** |
| – | 48 | 60 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.260** |
| M63 | – | 63.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.263** |

## Hole punch set, metric

**for sheet steel**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With 3 cutting points

**Supply includes:**
– 5 female dies
– 5 male dies
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Accessories:**
– Tension screw, see page 602
– Hydraulic tension screw, see page 603

| For threads | Ø punch mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| M16 | 16.2 | 4055.631 | 4055.661 | 2 | 1 pc(s). | **4055.480** |
| M20 | 20.4 | 4055.631 | 4055.661 | 2 | | |
| M25 | 25.4 | 4055.631 | 4055.661 | 2 | | |
| M32 | 32.5 | 4055.631 | 4055.661 | 2 | | |
| M40 | 40.5 | 4055.633 | 4055.663 | 3 | | |

## Hole punch set, PG

**for sheet steel**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With 3 cutting points

**Supply includes:**
– 5 female dies
– 5 male dies
– 2 tension screws with ball bearing Ø 9.5 x 50 mm
– HSS pilot drill Ø 11 mm
– 1 tube of lubricant paste
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Accessories:**
– Hydraulic tension screw, see page 603

| For PG | Ø punch mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 9 | 15.2 | 4055.661 | 2 | 1 pc(s). | **4055.481** |
| 11 | 18.6 | | | | |
| 13 | 20.4 | | | | |
| 16 | 22.5 | | | | |
| 21 | 28.3 | | | | |

## Hole punches

## Splitter hole punch, round

**for sheet steel, with triple splitting**

For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
- With triple splitting

**Supply includes:**
- Female dies
- Male dies

**Note:**
- When operating with wrenches, tension screws with ball bearings should be used
- Other sizes, see splitter hole punch, round, stainless steel

**Accessories:**

- Tension screw, see page 602
- Hydraulic tension screw, see page 603

| For threads | For PG | Ø punch mm | Tension screw (Ø x L) mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Ø mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|
| M12 | – | 12.5 | 6 x 40 | 4055.630 | 6/19 | 4055.660 | 1.5 | 1 pc(s). | **4055.512** |
| – | 9 | 15.2 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.515** |
| M16 | – | 16.2 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.516** |
| – | 11 | 18.6 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.518** |
| M20 | 13 | 20.4 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.520** |
| – | 16 | 22.5 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.522** |
| M25 | – | 25.4 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.525** |
| – | 21 | 28.3 | 9.5 x 50 | 4055.631 | 9.5/19 | 4055.661 | 2 | 1 pc(s). | **4055.528** |
| M32 | – | 32.5 | 19 x 55 | 4055.633 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.532** |
| – | 29 | 37 | 19 x 55 | 4055.633 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.537** |
| M40 | – | 40.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.540** |
| – | 36 | 47 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.547** |
| M50 | – | 50.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.550** |
| – | 42 | 54 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.554** |
| – | 48 | 60 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.560** |
| M63 | – | 63.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 3 | 1 pc(s). | **4055.563** |

## Splitter hole punch set, M16 to M40

**for sheet steel, with triple splitting**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With triple splitting

**Supply includes:**
– 5 female dies
– 5 male dies
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Accessories:**
– Tension screw, see page 602
– Hydraulic tension screw, see page 603

| For threads | Ø punch mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| M16 | 16.2 | 4055.631 | 4055.661 | 2 | 1 pc(s). | **4055.580** |
| M20 | 20.4 | 4055.631 | 4055.661 | 2 | | |
| M25 | 25.4 | 4055.631 | 4055.661 | 2 | | |
| M32 | 32.5 | 4055.633 | 4055.663 | 3 | | |
| M40 | 40.5 | 4055.634 | 4055.663 | 3 | | |

## Splitter hole punch set, M12 to M40

**for sheet steel, with triple splitting**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With triple splitting

**Supply includes:**
– 6 female dies
– 6 male dies
– Tension screw with ball bearing Ø 6 x 40 mm
– Tension screw with ball bearing Ø 9.5 x 50 mm
– Tension screw with ball bearing Ø 19 x 55 mm
– HSS pilot drill Ø 10 mm
– 1 can of lubricant paste
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Accessories:**
– Hydraulic tension screw, see page 603

| For threads | Ø punch mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| M12 | 12.5 | 4055.660 | 1.5 | 1 pc(s). | **4055.581** |
| M16 | 16.2 | 4055.661 | 2 | | |
| M20 | 20.4 | 4055.661 | 2 | | |
| M25 | 25.4 | 4055.661 | 2 | | |
| M32 | 32.5 | 4055.663 | 3 | | |
| M40 | 40.5 | 4055.663 | 3 | | |

## Hole punches

### Splitter hole punch set, PG 9 to PG 21

**for sheet steel, with triple splitting**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Design:**
– With triple splitting

**Supply includes:**
– 6 female dies
– 6 male dies
– 2 tension screws with ball bearing Ø 9.5 x 50 mm
– HSS pilot drill Ø 10 mm
– 1 tube of lubricant paste
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Accessories:**
– Hydraulic tension screw, see page 603

| For PG | Ø punch mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 9<br>11<br>13<br>16<br>21 | 15.2<br>18.6<br>20.4<br>22.5<br>28.3<br>30.5 | 4055.661 | 2 | 1 pc(s). | **4055.582** |

## Splitter hole punch, round

**for stainless steel, round, with triple splitting**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

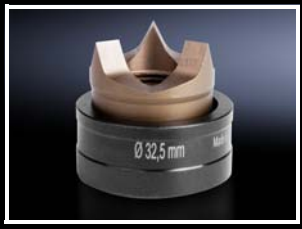
**Design:**
– With triple splitting

**Supply includes:**
– Female dies
– Male dies

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

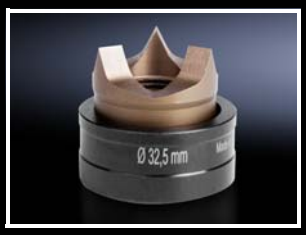
**Also required:**

– Tension screw, see page 602
– Hydraulic tension screw, see page 603
– Hydraulic tension screw for higher loads, see page 603



| For threads | For PG | Ø punch mm | Tension screw (Ø x L) mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Ø mm | Hydraulic tension screw Model No. | Maximum machinable material thickness, stainless steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|
| – | 9 | 15.2 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.115** |
| M16 | – | 16.2 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.116** |
| – | 11 | 18.6 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.118** |
| M20 | 13 | 20.4 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.120** |
| – | 16 | 22.5 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.122** |
| M25 | – | 25.4 | 11.1 x 60 | 4055.632 | 11.1/19 | 4055.665 | 2 | 1 pc(s). | **4055.125** |
| – | 21 | 28.3 | 19 x 55 | 4055.633 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.128** |
| – | – | 30.5 | 19 x 55 | 4055.633 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.130** |
| M32 | – | 32.5 | 19 x 55 | 4055.633 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.132** |
| – | – | 34.6 | 19 x 55 | 4055.633 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.134** |
| – | 29 | 37 | 19 x 55 | 4055.633 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.137** |
| M40 | – | 40.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.140** |
| – | – | 43.2 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.143** |
| – | 36 | 47 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.147** |
| – | – | 49.6 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.149** |
| M50 | – | 50.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.150** |
| – | 42 | 54 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.154** |
| – | 48 | 60 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.160** |
| – | – | 61.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.161** |
| M63 | – | 63.5 | 19 x 75 | 4055.634 | 19 | 4055.663 | 2.5 | 1 pc(s). | **4055.163** |

## Hole punches



### Splitter hole punch set, metric

**for stainless steel, round, with triple splitting**
For punching round cut-outs. The hole punch is operated with a wrench or hydraulic punch.

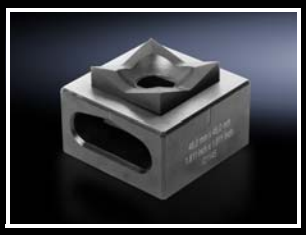
**Design:**
– With triple splitting

**Supply includes:**
– 5 female dies
– 5 male dies
– Plastic case

**Note:**
– When operating with wrenches, tension screws with ball bearings should be used

**Also required:**
– Tension screw, see page 602
– Hydraulic tension screw, see page 603
– Hydraulic tension screw for higher loads, see page 603

| For threads | Ø punch mm | Tension screw with ball bearing Model No. | Hydraulic tension screw Model No. | Maximum machinable material thickness, stainless steel mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| M16 | 16.2 | 4055.632 | 4055.665 | 2 | 1 pc(s). | **4055.180** |
| M20 | 20.4 | 4055.632 | 4055.665 | 2 | | |
| M25 | 25.4 | 4055.632 | 4055.665 | 2 | | |
| M32 | 32.5 | 4055.633 | 4055.663 | 2.5 | | |
| M40 | 40.5 | 4055.634 | 4055.663 | 2.5 | | |



### Hole punch, square

**for sheet steel**
For punching square cut-outs. The hole punch is operated with a hydraulic punch.

**Benefits:**
– With side ejector for the waste
– No jamming of the die

**Supply includes:**
– Female dies
– Male dies
– Tension bolts
– Lock nut
– Plastic case

| ☐ punch mm | Maximum machinable material thickness, sheet steel mm | Product-specific scope of supply | Operation, manual | Operation, hydraulic | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 22.2 x 22.2 | 2 | Pressure nut with ball bearing<br>Adaptor for hydraulics | ■ | ■ | 1 pc(s). | **4055.322** |
| 45.5 x 45.5 | 3 | – | – | ■ | 1 pc(s). | **4055.345** |
| 46 x 46 | 3 | – | – | ■ | 1 pc(s). | **4055.346** |
| 50.8 x 50.8 | 3 | – | – | ■ | 1 pc(s). | **4055.350** |
| 68 x 68 | 3 | – | – | ■ | 1 pc(s). | **4055.368** |
| 92 x 92 | 3 | Spacer sleeve<br>Special tension bolt | – | ■ | 1 pc(s). | **4055.392** |

## Hole punch, rectangular

**for sheet steel**

For punching rectangular cut-outs. The hole punch is operated with a wrench or hydraulic punch.

**Benefits:**
- With side ejector for the waste
- No jamming of the die

**Supply includes:**
- Female dies
- Male dies
- Tension bolts
- Lock nut
- Plastic case

| ▭ punch mm | Maximum machinable material thickness, sheet steel mm | Product-specific scope of supply | Operation, manual | Operation, hydraulic | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 22 x 30 | 2 | Pressure nut with ball bearing Adaptor for hydraulics | ■ | ■ | 1 pc(s). | **4055.400** |
| 22 x 42 | 2 | Pressure nut with ball bearing Adaptor for hydraulics | ■ | ■ | 1 pc(s). | **4055.401** |
| 45 x 92 | 2 | – | – | ■ | 1 pc(s). | **4055.402** |
| 46 x 92 | 2 | – | – | ■ | 1 pc(s). | **4055.403** |

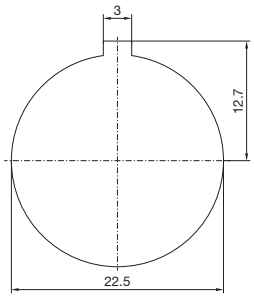
## Hole punch, special contour

**for sheet steel**

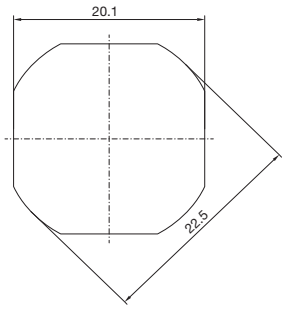
For punching cut-outs with a special contour. The hole punch is operated with a wrench or hydraulic punch.

**Benefits:**
- With side ejector for the waste
- No jamming of the die

**Supply includes:**
- Female dies
- Male dies
- Tension bolts
- Lock nut
- Pressure nut with ball bearing
- Adaptor for hydraulics
- Plastic case




4055.440




4055.441

| Design | Ø punch mm | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|
| With 3 mm lug | 22.5 | 2 | 1 pc(s). | **4055.440** |
| Flattened to 20.1 mm on 4 sides | 22.5 | 2 | 1 pc(s). | **4055.441** |

# Hole punching tools

## Hole punches

### Hole punch, heavy connectors

**for sheet steel**
For punching rectangular cut-outs for connectors.
The hole punch is operated with a hydraulic punch.

**Benefits:**
- With side ejector for the waste
- No jamming of the die
- When the die and stamp are compressed, the mounting holes for connectors are marked on the metal sheet between them

**Supply includes:**
- Female dies
- Male dies
- Tension bolts
- Lock nut

| ▭ punch mm | No. of poles | Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 36 x 52 | 6-pole | 2 | 1 pc(s). | **4055.460** |
| 36 x 65 | 10-pole | 2 | 1 pc(s). | **4055.461** |
| 36 x 86 | 16-pole | 2 | 1 pc(s). | **4055.463** |
| 36 x 112 | 24-pole | 2 | 1 pc(s). | **4055.465** |

### Tension screw

Accessories for hole punches. Required as a connecting part between the die and stamp.

**Note:**
- For operation with wrench

| Tension screw (Ø x L) mm | Packs of | **Model No.** |
|---|---|---|
| 9.5 x 40 | 1 pc(s). | **4055.600** |
| 9.5 x 50 | 1 pc(s). | **4055.601** |
| 19 x 55 | 1 pc(s). | **4055.602** |
| 19 x 75 | 1 pc(s). | **4055.603** |

### Tension screw

**with ball bearing**
Accessories for hole punches. Required as a connecting part between the die and stamp.

**Note:**
- For operation with wrench

| Tension screw (Ø x L) mm | Packs of | **Model No.** |
|---|---|---|
| 6 x 40 | 1 pc(s). | **4055.630** |
| 9.5 x 50 | 1 pc(s). | **4055.631** |
| 11.1 x 60 | 1 pc(s). | **4055.632** |
| 19 x 55 | 1 pc(s). | **4055.633** |
| 19 x 75 | 1 pc(s). | **4055.634** |

## Hydraulic tension screw

Accessories for hole punches. Required as a connecting part between the die and stamp.

**Note:**
– For operation via hydraulic punch

| Hydraulic tension screw Ø mm | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|
| 6/19 | Adaptor for hydraulics | 1 pc(s). | **4055.660** |
| 9.5/19 | Adaptor for hydraulics | 1 pc(s). | **4055.661** |
| 11.1/19 | Adaptor for hydraulics | 1 pc(s). | **4055.662** |
| 19 | – | 1 pc(s). | **4055.663** |

## Hydraulic tension screw for higher loads

Accessories for hole punches. Required as a connecting part between the die and stamp.

**Benefits:**
– Hydraulic tension screw made from high-alloy tool steel for higher loads

**Note:**
– For operation via hydraulic punch

| Hydraulic tension screw Ø mm | Packs of | **Model No.** |
|---|---|---|
| 9.5/19 | 1 pc(s). | **4055.664** |
| 11.1/19 | 1 pc(s). | **4055.665** |

## Notching pliers

Punches slots quickly and easily. Saves the time-consuming process of filing the grooves for anti-twist protection of push buttons, switches and instruments. Slots in sizes 3.2 mm and 4.8 mm can be created.

**Benefits:**
– Long service life
– Male and female die made from hardened tool steel
– Easy punching with large leverage

**Material:**
– Handles: Plastic-coated

| Maximum machinable material thickness, sheet steel mm | Packs of | **Model No.** |
|---|---|---|
| 2 | 1 pc(s). | **4055.690** |

# Wiring duct cutter MC 125

For manual cutting of wiring ducts, with adjustable length end stop for the machined material. Anodised contact surface with laser-engraved calibration in millimetres and inches. Integral finger guard ensures safe machining. Intended for mounting on a workbench.

**Benefits:**
- Enables inexpensive manual cutting of wiring ducts
- Easier for cutting wiring ducts to length compared to sawing by hand

**Machinable material:**
- Plastic

| **Model No.** | Packs of | **4050.435** | Page |
|---|---|---|---|
| Footprint size (W x H x D) mm | | 1332 x 798 x 405 | |
| Max. machinable width of cable duct mm | | 125 | |
| Max. machinable wall thickness of cable duct mm | | 2.5 | |
| Max. insertion height mm | | 28 | |
| Weight kg | | 15.0 | |
| **Accessories** | | | |
| Spare blade MC 125 | 1 pc(s). | 4050.436 | |

# Support rail cutter MC3

**Support rails** Page 996 **Mounting angles** Page 996

Manual profile cutter for cutting C rails 30/15 and support rails TS 35/7.5 and TS 35/15 to length, burr-free. The desired rail length is set precisely and reproducibly using the ruler (mm/inch) and the adjustable end stop. For mounting on the workbench.

**Benefits:**
- Inexpensive manual cutting of mounting angles and support rails
- Easier to cut mounting angles and support rails to the correct length than sawing by hand
- Burr-free cutting to length with eccentric lever, no major force required
- Low-maintenance and with a long service life

**Machinable material:**
- Sheet steel
- Aluminium
- Copper

| **Model No.** | Packs of | **4050.437** | Page |
|---|---|---|---|
| Maximum machinable material thickness mm | | 1.5 | |
| Footprint size (W x H x D) mm | | 1343 x 1162 x 312 | |
| Weight kg | | 14.0 | |
| **Accessories** | | | |
| Support rail TS 35/15 | | see page | 997 |
| Support rail TS 35/7.5 | | see page | 997 |
| C rails 30/15 | | see page | 996 |

# Assembly frames and LT 1000 storage and transport trolley

We have the perfect ergonomic solution for you, particularly when it comes to the automation and rationalisation of every stage of the enclosure machining, assembly, wiring and testing process. Our assembly frames are mobile, tiltable and (depending on the version) height-adjustable for machining mounting plates and enclosures. All types offer simple, variable fixing of mounting plates using quick-release fasteners, are independent from the mains power, and take up minimal space when not in use. For easier handling of enclosure panels, we also offer the storage and transport trolley LT 1000.

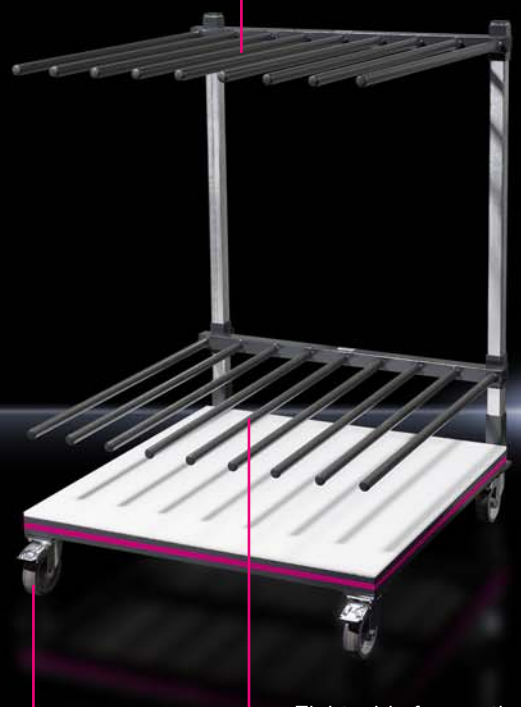
- Tilt-adjustable and optionally height-adjustable for ergonomic, effective, time-saving construction, wiring and testing of mounting plates or complete enclosures

Numerous adaptation options available:
- Widening to a maximum of 1900 mm
- Wire routing
- Wire reel holder

More options, see brochure "Rittal Automation Systems – Automate your panel building and switchgear manufacturing", from page 58

- Four castors including total lock function ensure simple handling

- Individually adjustable thanks to height-adjustable supports



- Eight wide fan sections for effortless storage and transportation of enclosure panels

- User-friendly transportation through the workshop on castors

# Assembly frame

**Accessories** Page 608

The assembly frames are mobile, tiltable and (depending on the version) height-adjustable frames for assembling plates and enclosures.

**Benefits:**
- For ergonomic, back-friendly working
- Individually positionable in the workshop, as it is independent from the power network
- Minimum space requirements during non-use
- Simple handling due to four castors including total lock function
- Variable fixing of mounting plates with a quick-release fastener

**Technical specifications:**
- Tilt adjustment approx. 0 – 80°

**Supply includes:**
- Assembly frame
- 1 clamping unit pack, bottom
- 1 clamping unit pack, top

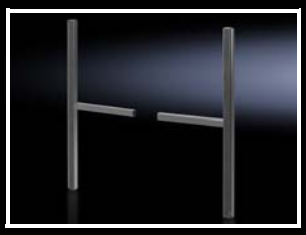
Please observe the product-specific scope of supply.

**Note:**
- With the assembly frame extension, a maximum machining area of 1900 x 1900 mm can be achieved

| **Model No.** | Packs of | **4050.150** | **4050.200** | **4050.300** | Page |
|---|---|---|---|---|---|
| Design | | 150 MN (manually tilt-adjustable) | 200 EN (electrically tilt-adjustable) | 300 ENH (electrically tilt- and height-adjustable) | |
| Dimensions (W x D) mm | | 1400 x 1250 | 1400 x 1250 | 1400 x 1250 | |
| Dimensions of support surface (W x H) min. mm | | 1110 x 1230 | 1110 x 1230 | 1110 x 1230 | |
| Dimensions of support surface (W x H) max. mm | | 1110 x 1900 | 1110 x 1900 | 1110 x 1900 | |
| Load capacity kg | | 150 | 200 | 300 | |
| Working height (min./max.) cm | | 100 / 100 | 90 / 90 | 80 / 110 | |
| Weight kg | | 138.0 | 148.0 | 250.0 | |
| **Product-specific scope of supply** | | | | | |
| Charger unit | | – | ■ | ■ | |
| Battery | | – | ■ | ■ | |
| **Accessories** | | | | | |
| Extension | 1 pc(s). | 4050.210 | 4050.210 | 4050.210 | 608 |
| Enclosure set | 1 pc(s). | 4050.211 | 4050.211 | 4050.211 | 608 |
| Wire routing | 1 pc(s). | 4050.212 | 4050.212 | 4050.212 | 608 |
| Clamping unit | | see page | see page | see page | 608 |
| Wire reel holder | 1 pc(s). | 4050.216 | 4050.216 | 4050.216 | 609 |
| Screw adaptor | 1 pc(s). | 4050.218 | 4050.218 | 4050.218 | 609 |
| Set of brackets | 1 pc(s). | 4050.221 | 4050.221 | 4050.221 | 610 |
| Roller conveyor | 1 pc(s). | – | – | 4050.220 | 609 |
| Spare battery | 1 pc(s). | – | 4050.217 | 4050.217 | 609 |
| Voltage supply | 1 pc(s). | – | 4050.219 | 4050.219 | 610 |
| Connection adaptor | 1 pc(s). | – | 4050.222 | 4050.222 | 610 |

# Accessories

## for assembly frame



### Extension

**for assembly frame**
For widening assembly frames 150 MN, 200 EN, 300 ENH to a maximum width of 1900 mm.

**Supply includes:**
– Extension
– Assembly parts

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.150/4050.200/ 4050.300/4051.100 | 1 pc(s). | **4050.210** |

### Enclosure set

**for assembly frame**
For secure attachment of an enclosure such as AX to assembly frame 150 MN, 200 EN, 300 ENH.

**Supply includes:**
– Packs of 2

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.150/ 4050.200/ 4050.300 | 1 pc(s). | **4050.211** |

### Wire routing

**for assembly frame**
For user-friendly handling of wires on assembly frame 150 MN, 200 EN, 300 ENH.

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.150/ 4050.200/ 4050.300 | 1 pc(s). | **4050.212** |

### Clamping unit

**for assembly frame**
For secure attachment of a mounting plate onto the assembly frames 150 MN, 200 EN and 300 ENH.

| To fit Model No. | For | Design | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 4050.150/ 4050.200/ 4050.300 | Mounting plate VX/SE | Top | 1 clamping unit pack, top | 2 pc(s). | **4050.213** |
| 4050.150/ 4050.200/ 4050.300 | Mounting plate VX/SE | Bottom | 1 clamping unit pack, bottom | 2 pc(s). | **4050.214** |

## Wire reel holder

**for assembly frame**
For adapting wire reels or drums on assembly frames 150 MN, 200 EN and 300 ENH.

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.150/<br>4050.200/<br>4050.300/<br>4051.100 | 1 pc(s). | **4050.216** |

## Spare battery

**for assembly frame**
Battery to fit electrical tilt/height adjuster for assembly frame 200 EN, 300 ENH.

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.200/<br>4050.300 | 1 pc(s). | **4050.217** |

## Screw adaptor

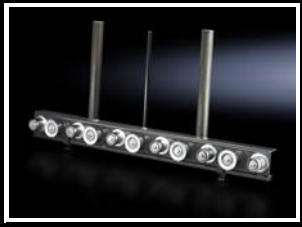
**for spindle hoist**
For operating the assembly frame spindle drive using a cordless screwdriver. To fit assembly frame 150 MN.

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.150 | 1 pc(s). | **4050.218** |

## Roller conveyor

**for assembly frame**
For inserting the mounting plate sideways into the enclosure. To fit assembly frame 300 ENH.

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.300 | 1 pc(s). | **4050.220** |



# Accessories

## for assembly frame

### Set of brackets

**for assembly frame**
For secure attachment of a mounting plate onto the assembly frames 150 MN, 200 EN, 300 ENH.

**Supply includes:**
– 4 cover caps
– 12 handles
– 2 holders
– 16 washers
– 12 sliding blocks

| To fit Model No. | For | Packs of | **Model No.** |
|---|---|---|---|
| 4050.150/ 4050.200/ 4050.300 | Mounting plate AX | 1 pc(s). | **4050.221** |

### Voltage supply

**for assembly frame**
Charging station power pack for assembly frame 200 EN and 300 ENH.

| To fit Model No. | Suitable for rated operating voltage | Packs of | **Model No.** |
|---|---|---|---|
| 4050.200/ 4050.300 | 110 V | 1 pc(s). | **4050.219** |

**Also required:**
– Connection adaptor, see page 610

### Connection adaptor

**for voltage supply**
Adaptor connector for the power supply to assembly frames 200 EN and 300 ENH.

**Design:**
– USA, Canada, Central and South America, Japan

| To fit Model No. | Packs of | **Model No.** |
|---|---|---|
| 4050.200/4050.300 | 1 pc(s). | **4050.222** |

**Also required:**
– Voltage supply, see page 610

# Storage and transport trolley LT 1000

The LT 1000 warehouse and transport trolley is used for storage and order picking, and ensures easy handling of enclosure panels such as mounting plates, enclosure doors, side panels and rear panels.

**Design:**
- 2 fan supports each with 8 slots, distance between tubes 100 mm

**Benefits:**
- Individually adjustable thanks to height-adjustable supports
- Effortless storage and transportation of enclosure panels
- User-friendly transportation on industrial castors
- Fan support, powder-coated, protects enclosure panels such as doors, side panels etc. from scratches and damage

**Material:**
- Base plate: Plastic
- Fan support: Steel, powder-coated

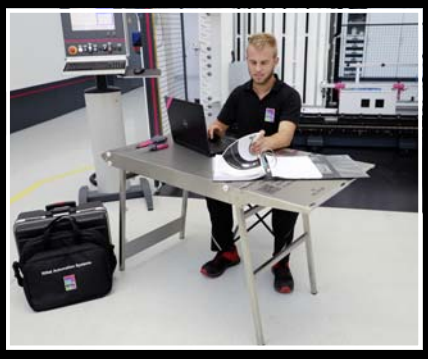
| **Model No.** | Packs of | **4050.000** | Page |
|---|---|---|---|
| Transport dimensions (W x H x D) mm | | 1000 x 1500 x 1000 | |
| Load capacity kg | | 500 | |
| Weight kg | | 122.0 | |

# Functional trolley

The functional trolley is a veritable multi-talent: Whether for transporting materials and tools to the installation site or for commissioning, the functional trolley is perfectly suited for assembly technicians and service personnel. The sophisticated fold-out concept is the ideal solution when you are on the road, and its compact dimensions mean that it can be conveniently transported by car.

Folds together for space-saving transportation

Handcart function



Integral folding chair, e.g. for programming work during commissioning

- Made from V2A stainless steel for robustness and durability
- Computer mouse-friendly surface

- Converts from a transport function to a practical desk by simply unfolding

# Functional trolley

Whether for transporting essential materials and tools to the installation site or for commissioning, the functional trolley's fold-out system is the ideal solution for assembly technicians and service personnel.

**Benefits:**
- Table surface suitable for computer mouse
- Converts from its transport function to a practical desk by simply unfolding
- High level of resilience and robustness

**Material:**
- Functional trolley: Stainless steel 1.4301 (AISI 304)
- Work surface: Plastic coating
- Seat surface: Woven polyester fabric, coated in PVC

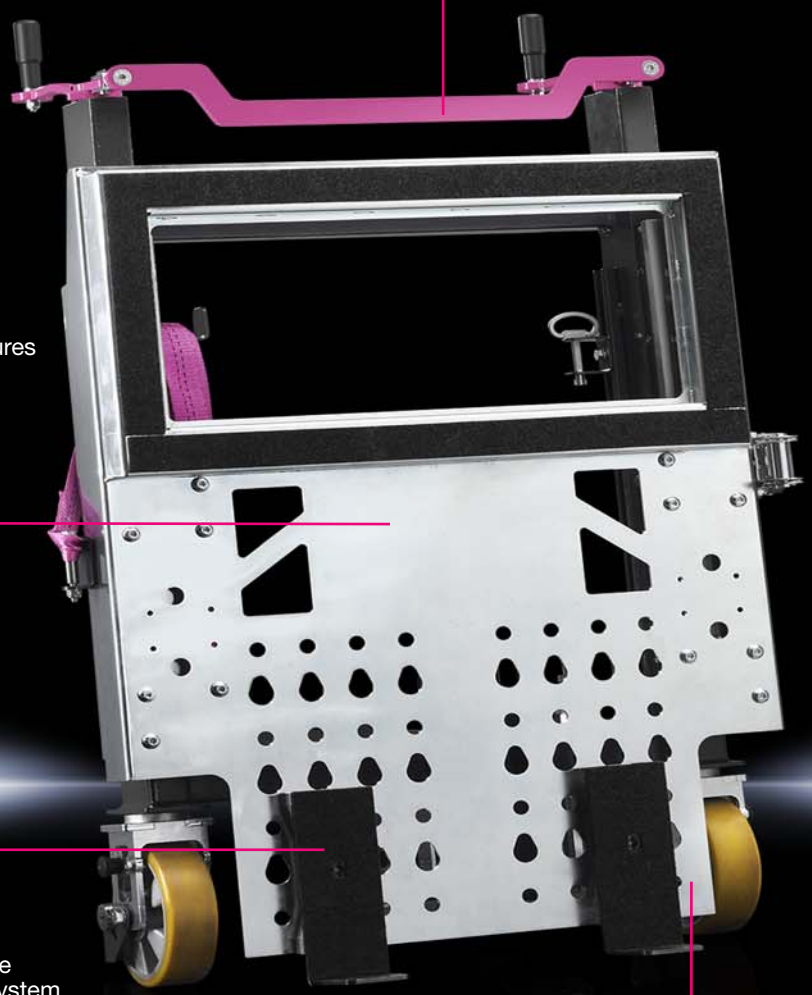
**Load capacity:**
- Handcart (max. 20 kg)
- Table (max. 30 kg)
- Folding chair (max. 100 kg)

**Supply includes:**
- Functional trolley
- Folding chair

| **Model No.** | Packs of | **4050.130** | Page |
|---|---|---|---|
| Transport dimensions (W x H x D) mm | | 610 x 1000 x 85 | |
| Handcart dimensions (W x H x D) mm | | 300 x 610 x 1000 | |
| Table dimensions (W x H x D) mm | | 1290 x 780 x 610 | |
| Weight kg | | 20.0 | |

# Smart Lifter enclosure lifting and transportation device

Enclosure logistics made easy: the Smart Lifter allows populated and bayed enclosures up to a maximum weight of 1.8 t and a length of 4.8 m to be safely and easily transported. The height adjuster with torque drive can lift to a height of 230 mm, allowing operators to fit the base/plinth and lower onto pallets or square timbers. By using the torque cranks, the entire system can be gently lowered into place.



- The steering system with heavy-duty castors allows smooth relocation of the enclosure suite, and even rotation on the spot
- Lift function with torque crank handle allows the bayed enclosures to be gently raised and lowered
- Simple, safe relocation of the support points with a lock system makes the Smart Lifter a universal lifting tool for different enclosure depths
- Height adjustment with a lift of 230 mm allows easier fitting of the base/plinth to enclosures

The Smart Lifter is your flexible, mobile transport system for switchgear manufacturers, logistics specialists and service teams.
The Smart Lifter is distinguished by its versatility and industrial design with built-in torque crank handle to protect employees from incorrect operation.

The belt and double-bit key are stored outside of the work zone

The torque crank handle allows bayed enclosures to be raised and lowered with minimal force

Steering system for easy manoeuvring

Simple base/plinth mounting with lift function up to 230 mm

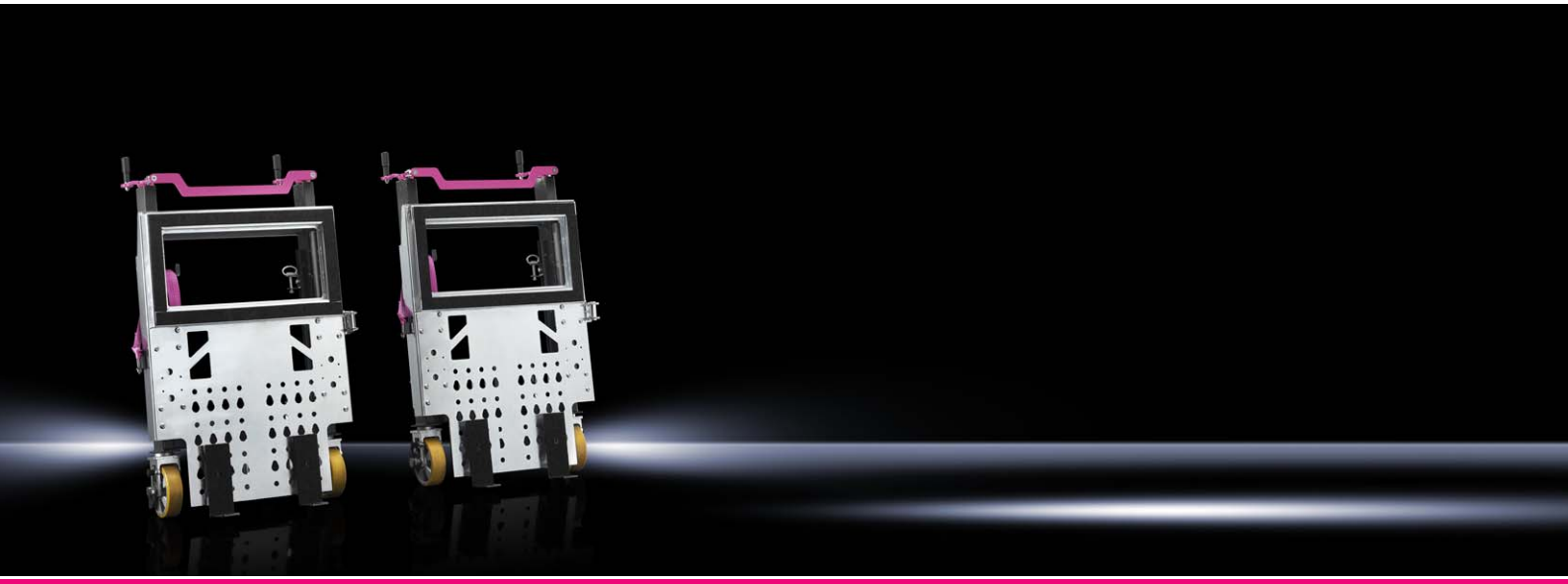
The pick-up forks for different enclosure depths are easily adjusted

Transportation of enclosures in various lengths, depths and weights




We reserve the right to make technical modifications.

# Smart Lifter



Lifting and transport device for enclosures and enclosure suites up to 4.80 m length.

**Benefits:**
- Supports simple mounting of base/plinths beneath enclosures
- Easy transportation of bayed enclosures in the workshop or at the installation site
- Flexible use for enclosures of different depths, thanks to adjustable forks
- Ergonomic working (lifting and lowering) with a torque crank

**Functions:**
- Transportation of bayed enclosures up to a length of 4.80 m
- Lifting of bayed enclosures up to a height of 230 mm and a weight of 1800 kg

**Technical specifications:**
- Dimensions per trolley (W x H x D): 750 x 1100 x 400 mm

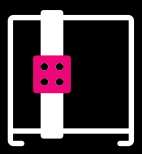
**Supply includes:**
- 2 transport trolleys

| **Model No.** | | **4050.005** | Page |
|---|---|---|---|
| Load capacity kg | | 1800 | |
| Weight kg | | 70.0 | |

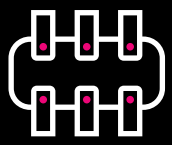
# Boost efficiency, cut costs

The digital twin engineered using Eplan software tools links together all downstream processes in panel building and switchgear manufacturing 4.0.

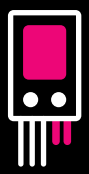
**Cutting**



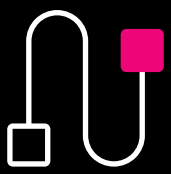
**Panel Modification**



**Terminal Strip Assembly**



**Wire Fabrication**



**Wiring**

## Smart Wiring

The browser-based EPLAN Smart Wiring solution supplies all wiring data in a 100% digital form and visualises your wiring in 3D. Users benefit from a significant reduction in errors and substantial time savings. A digital twin of the enclosure also contains all the information needed for wiring enclosures. See page 32.

# Wire Station WS 540 wiring workstation

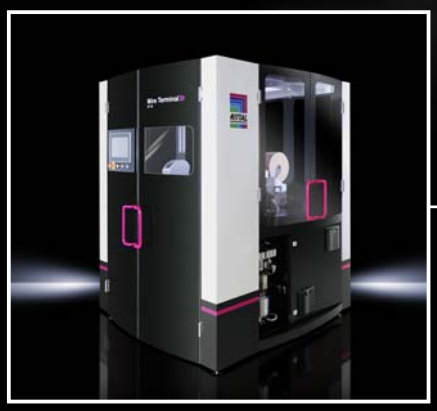
For flexible, efficient wire assembly and wiring work in the workshop. The wiring workstation is the ideal interface between the fully automated production of wires with the Rittal Wire Terminal and wiring work on mounting plates or in the enclosure. The Wire Station WS 540 is an ergonomic process optimiser for use with all wiring-related activities.

- Universal accessories tailored to the application, such as component supports for semi-automatic machines
- Optional workstation add-ons help to boost flexibility and efficiency in essential manual process stages

**EPLAN Smart Wiring: Wiring made easy**
- Using data from the Digital Twin
- Wire lists with filter function
- Visualisation of cable routes
- Wiring plan revision management

- Stocking and processing of pre-produced wires from the Rittal Wire Terminal
- Complete project handling with variable arrangement of the wire magazines directly at the workstation

**Wire management, stocking and production**
- Automatic cutting with the Rittal C8+ length-cutting machine accelerates and streamlines the manual wiring process



**Wire Terminal WT fully automated wire processing machine**
Fully automated wire processing with patented ordering system, see page 656

**Rittal assembly frames**
Flexible, straightforward handling in the workshop. Ergonomically adjustable assembly frames for building and wiring enclosures and mounting plates, see page 606

With the complete modular system surrounding the WS 540, your workstation can be functionally adapted to suit individual panel building and switchgear manufacturing requirements. Assistance is at hand for process-optimised project handling with EPLAN Smart Wiring, the Rittal length-cutting, insulation-stripping and crimping machines, and label printers. Another modular element to boost efficiency in modern panel building and switchgear manufacturing.

Optional monitor support

Integral scale and electrically adjustable operating height

Optional tool/drinks holder

Optional Mini-PC holder

Optional wire routing for up to 8 different wires

Integral socket strip

Integral shadow board to fit Rittal tools such as screwdrivers, side cutters, crimping tools etc., see page 566

To fit the following products:

4052.058, 4052.141
4052.101, 4052.142
4052.102, 4054.002
4052.104, 4054.004
4052.106, 4054.141
4052.107, 4054.300
4052.121, 4054.410
4052.122, 4054.600
4052.131, 4054.750
4052.132, 4054.850




We reserve the right to make technical modifications.

# Wire Station WS 540

**Accessories for Wire Station WS 540** Page 621 **Length-cutting machine C8+** Page 632 **Crimping machines** From page 634

Mobile wiring workstation, height-adjustable, for flexible use in the workshop. For ergonomic, fatigue-free wire processing work.

**Benefits:**
- Electronically adjustable desk for the optimum working height, adjustable from 710 – 1250 mm
- Multiplex worktop, washable and scratch-resistant
- Ideal solution in conjunction with the length-cutting and crimping machines plus pre-assembled wires with the Wire Terminal
- Integral scale for quick manual measurements
- Prepared to accommodate a monitor for wire processing with EPLAN Smart Wiring
- Optionally expandable with shelves for wire boxes, wire reels and holders for tools and small parts
- For flexible use in the workshop thanks to rubberised wheels
- Drawer with shadow board prepared for tools

**Supply includes:**
- Wiring table with electrical height adjuster
- Connection cable, 7 m
- 7-way socket strip, with rocker switch

**Note:**
- The vertical mounting braces, Model No. 4051.106, are required for accessories such as storage box holders, magazine supports etc.

| **Model No.** | Packs of | **4051.100** | Page |
|---|---|---|---|
| Dimensions (W x H x D) mm | | 900 x 1350 x 781 | |
| Working height (min./max.) mm | | 710 / 1205 | |
| Input voltage | | 230 V AC, 50 Hz | |
| Weight kg | | 95.0 | |
| **Accessories** | | | |
| Shelf | 2 pc(s). | 4051.101 | 621 |
| Component support, left | 1 pc(s). | 4051.102 | 621 |
| Component support, right | 1 pc(s). | 4051.103 | 622 |
| Monitor attachment | 1 pc(s). | 4051.104 | 622 |
| LED work light | 1 pc(s). | 4051.105 | 623 |
| Mounting braces, vertical | 1 pc(s). | 4051.106 | 623 |
| Storage box holder | 1 pc(s). | 4051.107 | 624 |
| Adaptor bracket | 1 pc(s). | 4051.108 | 624 |
| Waste bin | 1 pc(s). | 4051.115 | 624 |
| Socket strip | 1 pc(s). | 4051.114 | 625 |
| Magazine support | 1 pc(s). | 4051.111 | 625 |
| Wire routing for mounting braces, vertical | 1 pc(s). | 4051.120 | 625 |
| Wire routing for component support, left | 1 pc(s). | 4051.121 | 626 |
| Wire pack holder | | see page | 626 |
| Wire coil holder | | see page | 627 |
| Wire reel holder | 1 pc(s). | 4050.216 | 609 |
| Tool holder, round | 1 pc(s). | 4051.113 | 627 |
| Stripping machine console | 1 pc(s). | 4051.112 | 628 |
| Universal utility shelf | 1 pc(s). | 4051.109 | 628 |
| Mini-PC holder | 1 pc(s). | 4051.110 | 628 |

## Shelf

**for WS 540**

Shelf set for mounting below the desktop. Different shelf depths provide ample knee and leg room for seated working at the workstation.

**Benefits:**
- For optimum use of the space beneath the desktop without restricting legroom
- Tool-free mounting of the shelves by simply hanging in place

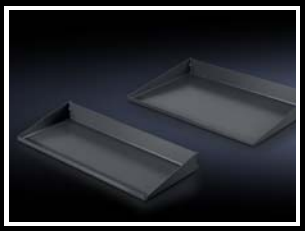
**Technical specifications:**
- Top shelf (W x D): 510 x 335 mm
- Bottom shelf (W x D): 510 x 200 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- 2 shelves

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **4051.101** |



## Component support, left

**for WS 540**

Component support unit to fit length-cutting machine C8+ and an additional shelf to accommodate most common label printer brands. Mounted on the left of the WS 540 Wire Station.

**Benefits:**
- Additional shelf for universal use
- Compact external mounting
- Flexibly adjustable in the width and height

**Technical specifications:**
- Component support (W x H x D): 360 x 335 x 20 mm, including height adjustment of 480 mm
- Support arm (W x H): 500 x 700 mm
- Shelf (W x H x D): 417 x 267 x 20 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- Component support for the C8+ length-cutting machine
- Semi-automated machine support arm, left
- Universal shelf for printer/label printer
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.102** |

## for Wire Station WS 540

### Component support, right

**for WS 540**

Component support unit to fit crimping machine RC or R8 E, for mounting on the right of the Wire Station WS 540.

**Benefits:**
- Compact external mounting
- Flexibly adjustable in the width and height

**Technical specifications:**
- Component support (W x H x D): 318 x 313 x 20 mm, including conduit for height adjustment of 480 mm
- Support arm (W x H): 500 x 700 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- Component support for crimping machines
- Semi-automated machine support arm, right
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.103** |

### Monitor attachment

**for WS 540**

For mounting all commercially available monitors up to screen diagonals of 32" with Vesa 75/100.

**Benefits:**
- Stable monitor attachment
- Vertically hinged
- Height-adjustable

**Technical specifications:**
- Height-adjustable up to 285 mm
- Extendable up to 430 mm
- Swivel range left/right with full extension 90°
- Swivel range of ball head 35° all-round
- Vesa 75/100

**Material:**
- Aluminium/sheet steel

**Supply includes:**
- Monitor attachment
- Assembly parts

**Approvals:**
- GS-tested

| Load capacity max. kg | Packs of | Model No. |
|---|---|---|
| 10 | 1 pc(s). | **4051.104** |

## LED work light

**for WS 540**

For attaching to the table top, with clamping device.

**Benefits:**
- Bright, glare- and flicker-free lighting, homogeneous and shadow-free
- Selectable colour temperature between warm white, neutral white and daylight white promotes concentration and reduces symptoms of fatigue
- Excellent colour fidelity and high contrast
- Aluminium spring arm with 3D head joint, swivelling and lockable for free positioning of the light source

**Technical specifications:**
- Spring arm: Length 970 mm
- Colour reproduction: 94 – 98 Ra
- Transmission angle: 100°

**Material:**
- Light housing: Aluminium
- Glare control: Macrolon

**Protection category IP to IEC 60 529:**
- IP 40

**Protection class:**
- III (SELV)

**Supply includes:**
- LED work light
- Assembly parts

| | |
|---|---|
| Width mm | 545 |
| Height mm | 90 |
| Depth mm | 35 |
| Luminous flux lm | 2930 |
| Light | 84 SMD LEDs |
| Rated operating voltage V, ~, Hz | 110 - 240, 1~, 50/60 |
| Power consumption W | 26 |
| Service life h | ≥ 60000 |
| Operating temperature | -10 °C...+40 °C |
| Length of connection cable m | 3 |
| Connection options | Plug-in power supply (CEE 7/16) with AC adaptor |
| Packs of | 1 pc(s). |
| **Model No.** | **4051.105** |

## Mounting braces, vertical

**for WS 540**

For optional attachment of accessories such as wire pack holders, open-fronted storage boxes and shelves.

**Benefits:**
- Individual and functional configuration with component supports, storage box holders, consoles, wire pack holders, etc.
- Simple screw-fastening of accessories
- Individual height adjustment of the accessories with a rail system

**Technical specifications:**
- Dimensions (W x H x D): 85 x 1350 x 50 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4051.106** |

# Accessories

## for Wire Station WS 540

### Storage box holder

**for WS 540**

For fastening to the vertical mounting braces of the WS 540 and for storing small parts and accessories.

**Technical specifications:**
- Dimensions of storage box holder (W x H x D): 110 x 350 x 15 mm
- Dimensions of open-fronted storage box (W x H x D): 100 x 85 x 160 mm

**Material:**
- Support: Sheet steel
- Open-fronted storage boxes: Plastic

**Colour:**
- Support: RAL 7016
- Open-fronted storage boxes: Yellow

**Supply includes:**
- Storage box holder
- 3 open-fronted storage boxes
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.107** |

**Also required:**
- Mounting braces, vertical, see page 623

### Adaptor bracket

**for WS 540**

For individual configuration and enlargement of the WS 540. The adaptor bracket is required for mounting additional vertical mounting braces and supports a range of width settings from 50 – 400 mm.

**Technical specifications:**
- Side dimensions (W x H): 483 x 383 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.108** |

**Also required:**
- Mounting braces, vertical, see page 623

### Waste bin

**for WS 540**

For waste disposal directly at the workstation.

**Benefits:**
- Front mounting without impairing legroom

**Technical specifications:**
- Dimensions (W x H x D): 150 x 290 x 320 mm
- Capacity: 12 litres

**Material:**
- Plastic

**Colour:**
- Dark grey

**Supply includes:**
- Waste bin
- Bracket
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.115** |

## Socket strip

**for WS 540**
For mounting on the worktop of the WS 540.

**Design:**
– 5-way, with rocker switch (green)

**Benefits:**
– Ergonomic access thanks to the 45° angle on the worktop

**Material:**
– Extrusion: Aluminium
– Socket inserts: Plastic

**Supply includes:**
– Socket strip, connection cable and earthing contact plug
– Assembly parts

| Electrical connection V, Hz | Rated current A | Packs of | **Model No.** |
|---|---|---|---|
| 230, 50 | 16 | 1 pc(s). | **4051.114** |

## Magazine support

**for WS 540**
To accommodate up to 4 wire rail magazines with pre-assembled wires from the Wire Terminal WT.

**Benefits:**
– For universal use on any mounting brace, vertical

**Technical specifications:**
– Dimensions (W x H x D): 330 x 200 x 35 mm

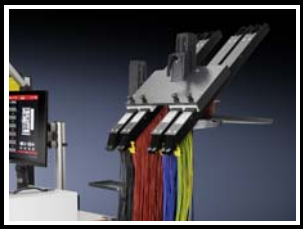
**Material:**
– Sheet steel

**Colour:**
– RAL 7016

**Supply includes:**
– Magazine support
– Assembly parts

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4051.111** |

**Also required:**
– Mounting braces, vertical, see page 623



## Wire routing for mounting braces, vertical

**for WS 540**
Targeted wire routing for up to 8 different wires is supported. Mounting on the vertical mounting braces.

**Benefits:**
– Individually height-adjustable on the mounting brace
– Optimum running characteristics of the wires

**Technical specifications:**
– Dimensions (W x H x D): 130 x 263 x 322 mm
– Depth adjustment directly at the wire guide up to 100 mm
– Wire routing from 0.5 – 2.5 $mm^2$ supported

**Material:**
– Holder: Sheet steel
– Reel and wire guide: Plastic

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4051.120** |

**Also required:**
– Mounting braces, vertical, see page 623

## for Wire Station WS 540

### Wire routing for component support, left

**for WS 540**

Targeted wire routing for up to 8 different wires is supported. For mounting on the component support, left.

**Benefits:**
- Optimum wire routing to the C8+ length-cutting centre
- Optimum running characteristics of the wires

**Technical specifications:**
- Dimensions (W x H x D): 129 x 190 x 169 mm
- Wire routing from 0.5 – 2.5 $mm^2$ supported

**Material:**
- Holder: Sheet steel
- Reel and wire guide: Plastic

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4051.121** |

**Also required:**

- Component support, left, see page 621

### Wire pack holder

Shelf for wire packs, to fit assembly frames and WS 540. Attached to the Wire Station on the vertical mounting braces on the left or right.

**Technical specifications:**
- Dimensions of wire pack holder (W x H x D): 207 x 105 x 207 mm
- Storage space to fit wire packs up to a maximum size of 207 x 207 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- Wire pack holder
- Assembly parts

| To fit Model No. | Design | Packs of | **Model No.** |
|---|---|---|---|
| 4051.100/ 4050.150/ 4050.200/ 4050.300 | left | 1 pc(s). | **4051.116** |
| 4051.100/ 4050.150/ 4050.200/ 4050.300 | right | 1 pc(s). | **4051.117** |

**Also required:**

- Mounting braces, vertical, see page 623

## Wire coil holder

Wire coil shelf to fit assembly frames and WS 540. Attached to the Wire Station on the vertical mounting braces on the left or right.

**Technical specifications:**
– Storage space (W x H x D): 375 x 20 x 475 mm

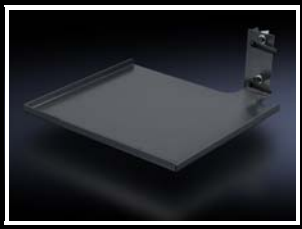
**Material:**
– Sheet steel

**Colour:**
– RAL 7016

**Supply includes:**
– Wire coil holder
– Assembly parts

| To fit Model No. | Design | Packs of | **Model No.** |
|---|---|---|---|
| 4051.100/ 4050.150/ 4050.200/ 4050.300 | left | 1 pc(s). | **4051.118** |
| 4051.100/ 4050.150/ 4050.200/ 4050.300 | right | 1 pc(s). | **4051.119** |

**Also required:**
– Mounting braces, vertical, see page 623



## Tool holder, round

**for WS 540**
For safe storage of hand-held devices or drinks. The tool holder is secured to the desktop.

**Applications:**
– Holder for hand tools such as cordless screwdrivers, hot-air dryers or beverage bottles
– For hand-held tools up to 80 mm in diameter

**Technical specifications:**
– Dimensions (W x H x D): 140 x 87 x 200 mm

**Material:**
– Sheet steel

**Colour:**
– RAL 7016

**Supply includes:**
– Tool holder, round
– Assembly parts

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4051.113** |

# Accessories

## for Wire Station WS 540

### Stripping machine console

**for WS 540**

For positioning the S22 stripping machine on the WS 540. The console may be positioned on either the left or right.

**Technical specifications:**
- Console area (W x D): 278 x 178 mm
- Height-adjustable up to 480 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.112** |

**Assembly instruction:**

- The stripping machine console is also suitable for component supports 4051.102 and 4051.103

### Universal utility shelf

**for WS 540**

Universal utility shelf for mounting on the vertical mounting braces of the WS 540. Storage for tools or small parts.

**Technical specifications:**
- Dimensions (W x H x D): 130 x 15 x 190 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- Universal utility shelf
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.109** |

**Also required:**

- Mounting braces, vertical, see page 623

### Mini-PC holder

**for WS 540**

For secure attachment of a mini-PC to the WS 540. The holder is mounted underneath the workbench on the left.

**Technical specifications:**
- Dimensions (W x H x D): 70 x 235 x 200 mm
- Individually adjustable up to 60 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7016

**Supply includes:**
- Mini-PC holder
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4051.110** |

# Length-cutting machine C8+ and stripping machine S22

The length-cutting machine C8+ makes work processes more efficient by cutting wires up to 8 mm diameter or 10 mm² cross-section to individually set lengths. Cutting orders can also be managed, documented and transmitted to the length-cutting machine C8+ from a PC or CAE data interface (EPLAN Pro Panel) via USB. In this way, the C8+ length-cutting machine additionally supports the cable labelling and wiring process by displaying the source/target code.

The stripping machine S22 is electrically powered for accurate, careful stripping of the insulation from your wires.

- Start/stop function for individual wire production in conjunction with labelling
- Controllable pressing force of the feed rollers
- Touch display for all wire information
- CAE data interface

C8+

- Simple insertion of the wires
- Simple opening of the feed rollers

- Equipment connection and cross-section setting
- Rotary knob allows linear adjustment of the stripping length from 3 – 20 mm
- Linear adjustment of the stripping length from 3 – 20 mm for full or partial stripping via the rotary knob

S22

- Central insertion of wires with cross-sections from 0.05 – 6 mm²
- Insertion length 22 mm





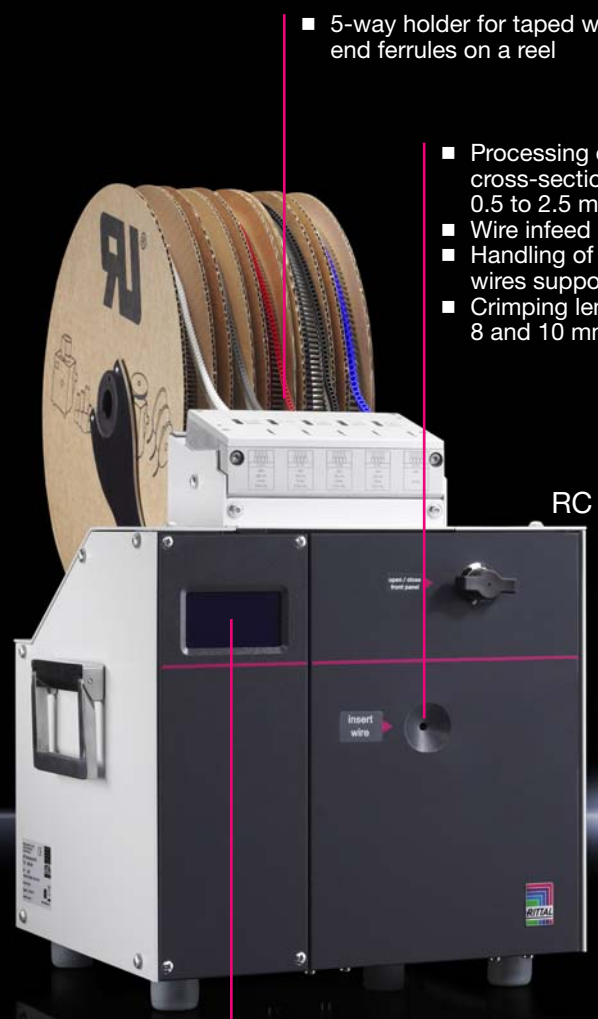
We reserve the right to make technical modifications.

# Stripping and crimping machine R8 E

The electrically driven R8 E crimping machine processes insulated wire end ferrules and standard PVC cables in cross-sections ranging from 0.5 to 2.5 mm² (AWG 20 – 14) with a crimping length of 8 mm. For flexible use in the workshop, all you need is a power connection. The machine guarantees UL-certified crimping in conjunction with wire end ferrules from Rittal.

# Stripping and crimping machines L8 and RC

Electro-pneumatically driven wire-stripping and crimping machines for safe, fast processing of insulated wire end ferrules. The particular feature of our electro-pneumatic crimping machines is their fully automated detection of the wire cross-section and processing of the wire end ferrules. No tool changes are required. Linear adjustment of the blades and the high forces generated by the pneumatic crimping unit support the processing of all standard cables as well as special ferrules (AWG) in the application range from 0.5 to 2.5 mm² (AWG 20 – 14) with a crimping length of 8 mm. The integrated daily unit counter provides a continuous overview of your project quantities.
The crimping machine RC is suitable for processing wire end ferrules in 8 mm and 10 mm lengths with labelling on the underside. The 5-way holder eliminates the need to switch between wire end ferrules for different cross-sections.




**Note:**
The wire end ferrules shown here are not included with the supply.




We reserve the right to make technical modifications.

# Length-cutting machine C8+

Semi-automated machine for cutting wires to an individually adjustable length.

**Design:**
- With command panel
- Stop & go function

**Benefits:**
- User-friendly operation
- Simple insertion of the wires
- Simple opening of the feed rollers
- PC compatible
- Length-cutting with interface to CAE data supported
- Supports the process of labelling cables by showing the connection point on the display
- Simply transmit projects and orders to length-cutting machine C8+

**Technical specifications:**
- Fine-wire strand 0.08 - 10 $mm^2$ (AWG 28 - 8)
- Single-wire strand 0.08 - 2.5 $mm^2$ (AWG 28 - 14)
- For wire lengths 1 - 99999 mm
- Feed rate 0 - 1.5 m/s
- Controllable pressing force of the feed rollers
- DC servo-drive
- Insertion length 27 mm (1.06 in.)

**Supply includes:**
- Length-cutting machine C8+
- Connection cable with connector
- Software connection, CAE data
- Installation CD

| **Model No.** | Packs of | **4050.455** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 380 x 470 x 360 | |
| Cycle time s | | < 2 | |
| Electrical connection V, ~, Hz | | 100 - 240, 1~, 50 | |
| Apparent power VA | | 240 | |
| Interfaces | | EPLAN Pro Panel<br>CAE data | |
| Weight kg | | 20.0 | |
| **Accessories** | | | |
| Wire dispenser | 1 pc(s). | 4050.463 | 637 |

# Stripping machine S22

Semi-automated machine for stripping wires of varying cross-section ranges.

**Design:**
- Touchscreen display
- Integral counter (total quantity)
- Integral counter (daily quantity)
- Linear adjustment of the wire stripping length

**Benefits:**
- Cross-section is easily set using the rotary knob
- Simple insertion of the wires
- User-friendly operation

**Technical specifications:**
- Electrically powered
- Wire stripping range 0.05 - 6 $mm^2$ (AWG 30 - 10)
- Insulation stripping length 3 - 20 mm (0.12 - 0.79 in.)
- Draw-off length 3 - 20 mm (0.12 - 0.79 in.)
- Insertion length 22 mm (0.87 in.)

**Supply includes:**
- Stripping machine S22
- Special funnel for inserting thin conductors
- Spare blades

| **Model No.** | Packs of | **4050.451** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 190 x 190 x 295 | |
| Cycle time s | | 0.5 | |
| Electrical connection V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Apparent power VA | | 70 | |
| Weight kg | | 7.5 | |

# Crimping machine R8 E

**Wire end ferrules** Page 578

Electrically powered wire stripping and crimping machine for taped wire end ferrules on a reel.

**Design:**
– Touchscreen display

**Benefits:**
– Easy to operate
– Fast adjustment
– Flexible use in the workshop
– Rapid replacement of consumables

**Technical specifications:**
– Crimping range 0.5 - 2.5 $mm^2$ (AWG 20 - 14)
– Crimping length 8 mm (0.31 in.)
– Insertion length 40 mm (1.57 in.)

**Note:**
– The standard crimping form is trapezoid – others available on request

| **Model No.** | Packs of | **4050.454** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 288 x 230 x 345 | |
| Cycle time s | | 1.8 | |
| Compression | | Trapezoid crimp | |
| Electrical connection V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Apparent power VA | | 100 | |
| Weight kg | | 16.0 | |
| **Accessories** | | | |
| Wire end ferrules | | see page | 578 |

# Crimping machine L8

**Wire end ferrules** Page 578

Electro-pneumatically driven wire stripping and crimping centre for loose, insulated wire end ferrules.

**Design:**
- Touchscreen display

**Benefits:**
- Easy to operate
- Secure, fast processing of insulated wire end ferrules
- No set-up time, thanks to automatic tool change
- Handling of special wires supported
- Simple, quick component mounting
- Automatic detection of cross-sections

**Technical specifications:**
- Crimping range 0.5 - 2.5 $mm^2$ (AWG 20 - 14)
- Crimping length 8 mm (0.31 in.)
- Insertion length 35 mm (1.38 in.)
- Processing of wire end ferrules with plastic collars in special sizes supported

**Supply includes:**
- Crimping machine L8
- 1 oscillating conveyor 0.5 - 1.5 $mm^2$
- 1 oscillating conveyor 1.5 - 2.5 $mm^2$

**Note:**
- The standard crimping form is trapezoid – others available on request

| **Model No.** | Packs of | **4050.452** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 390 x 460 x 330 | |
| Cycle time s | | 1.5 | |
| Compression | | Trapezoid crimp | |
| Electrical connection V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Apparent power VA | | 110 | |
| Compressed air connection bar | | 5.5 | |
| Weight kg | | 31.0 | |
| **Accessories** | | | |
| Oscillating conveyor | | see page | 637 |
| Wire end ferrules | | see page | 581 |

# Crimping machine RC

**Wire end ferrules** Page 578

Electropneumatic crimping machine with 5-way magazine for processing insulated wire end ferrules on a reel.

**Design:**
- Touchscreen display
- Select the wire cross-section via touchscreen
- Support may be fitted with a maximum of 23,000 wire end ferrules

**Benefits:**
- Easy to operate
- Secure, fast processing of insulated wire end ferrules
- No set-up time, thanks to automatic tool change
- Simple, quick component mounting
- No changing of the wire end ferrules required due to 5-way magazine

**Technical specifications:**
- Crimping range 0.5 - 2.5 $mm^2$ (AWG 20 - 14)
- Crimping length 8 and 10 mm
- Insertion length 27 mm (1.06 in.)

**Note:**
- The standard crimping form is trapezoid – others available on request

| **Model No.** | Packs of | **4050.456** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 335 x 565 x 485 | |
| Cycle time s | | < 2 | |
| Compression | | Trapezoid crimp | |
| Electrical connection V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Apparent power VA | | 16 | |
| Compressed air connection bar | | 5.5 | |
| Weight kg | | 22.0 | |
| **Accessories** | | | |
| Wire end ferrules | | see page | 578 |

## Oscillating conveyor

**for crimping machine L8**

Feed guide for loose wire end ferrules.

**Benefits:**

– Accurate, careful feeding of wire end ferrules

| To fit Model No. | Application | Packs of | **Model No.** |
|---|---|---|---|
| 4050.452 | For loose wire end ferrules with cross-section 0.5 – 1.5 $mm^2$ | 1 pc(s). | **4050.467** |
| 4050.452 | For loose wire end ferrules with cross-section 1.5 – 2.5 $mm^2$ | 1 pc(s). | **4050.468** |

## Wire dispenser

**for length-cutting machine**

Dispensing device for the infeed of conductors. Suitable for conductors on cable coils or from boxes.

**Benefits:**

– Convenient removal and dispensing of cables and wires

**Technical specifications:**

– Cable coil diameter ≤ 300 mm (≤ 11.8 in.)
– Cable coil width ≤ 200 mm (≤ 7.9 in.)
– Clamping cone 15 - 23 mm (0.59 - 0.91 in.)
– Box dimensions 240 x 250 x 150 mm (9.45 x 9.84 x 5.9 in.)

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4050.463** |

# Busbar machining, static CW 120-S

The units in the CW 120-S product series are ideal for bending, punching and cutting busbars. The integral precision laser facilitates the cutting and bending process.

**Electro-hydraulic pump**
- To operate products in the CW 120-S product series.

**Busbar cutting unit**
- Time savings compared to manual cutting
- Precise marking of the cutting point

**Busbar bending and hole-punching unit**
- Simple tool changes
- High level of bending and punching accuracy
- Independent busbar machining

**Machining examples for the CW 120-S**

Punching

Cutting a busbar to length

Bending a busbar

# Busbar machining, mobile CW 120-M

The Copper Workstation CW 120-M is ideal for bending, punching and cutting busbars. It supports cutting and bending up to a maximum width of 120 mm and a maximum thickness of 12 mm. The integral precision laser facilitates the cutting and bending process. Generally speaking, round holes with a diameter of 6.6 to 21.5 mm and slots up to a maximum width of 18 mm and a length of 21 mm may be punched.

**Machining examples for the CW 120-M**

Cutting busbars to length with integral precision laser

Bending busbars

Punching busbars, pull-out measurement system

Making cut-outs in steel and stainless steel (accessories, hydraulic hose and cylinder, see page 645)




We reserve the right to make technical modifications.

# Busbar bending and hole-punching unit CW 120-S

**Female dies** Page 643 **Male dies** Page 643 **Accessories** Page 644

The bending and hole-punching unit in the CW 120-S product series is ideal for bending and punching busbars. Round holes and slots may be punched. The bending and hole-punching unit is easily positioned on a workbench.

**Design:**
- Electric protractor
- Length stop
- Mandrel R10
- Bending die
- Laser pointer (auxiliary laser), beam power laser class 1

**Benefits:**
- High level of bending and punching accuracy
- Simple tool changes

**Machinable material:**
- Copper
- Aluminium

**Note:**
- With a Z bend, the length of the short side depends on the material thickness

| **Model No.** | Packs of | **4055.700** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 700 x 410 x 461 | |
| Footprint size (W x H x D) mm | | 756 x 426 x 461 | |
| Bending (max.) mm | | 120 x 12 | |
| Bending angle (max.) ° | | 90 | |
| Bending/side length (min.) mm | | 50 | |
| U-bending (min.) mm | | 100 | |
| Z-bending (min.) mm | | 72 | |
| Punching (max.) mm | | 6.6 x 21.5 | |
| Punching/material thickness (max.) mm | | 12 | |
| Punching/material width (max.) mm | | 120 | |
| Weight kg | | 60.0 | |
| **Also required** | | | |
| Electro-hydraulic pump | 1 pc(s). | 4055.720 | 644 |
| Foot-switch | 1 pc(s). | 4055.712 | 644 |

# Busbar cutting unit CW 120-S

**Accessories** Page 644

The cutting unit in the CW 120-S product series is ideal for cutting busbars to length. The unit is easily mounted on a workbench.

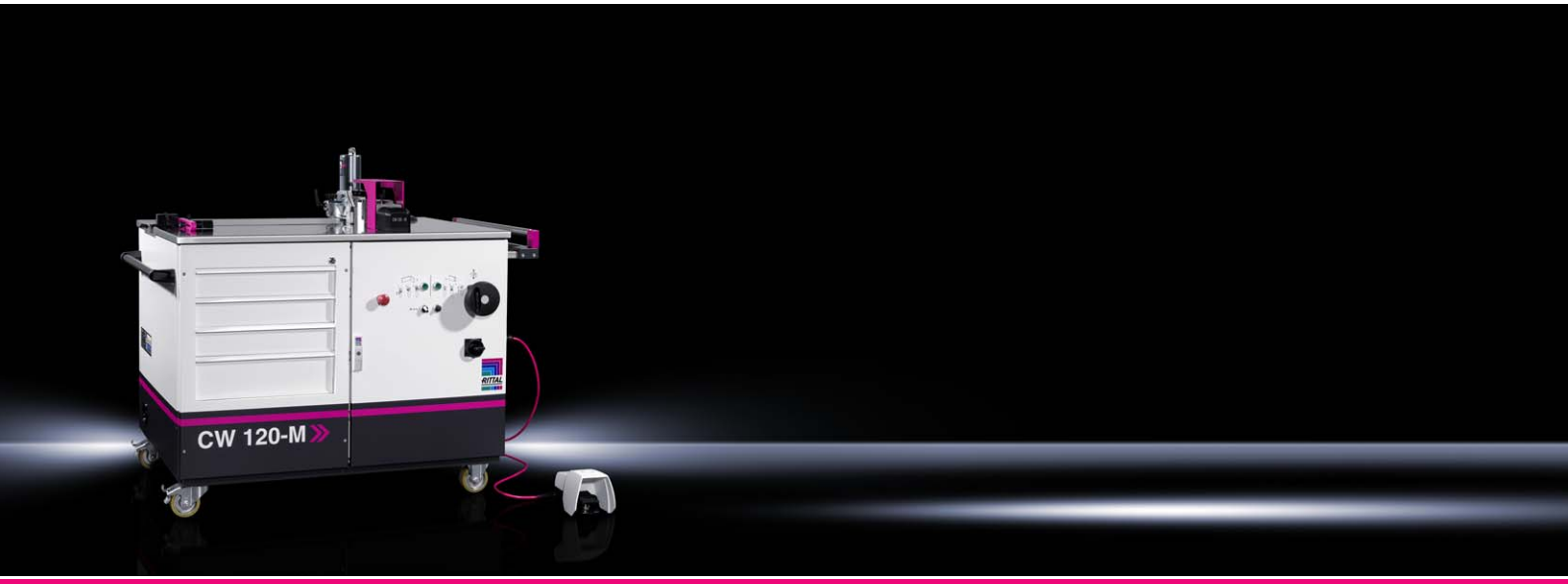
**Design:**
- Laser pointer (auxiliary laser), beam power laser class 1

**Benefits:**
- Significant time savings compared to manual cutting

**Machinable material:**
- Copper
- Aluminium

| **Model No.** | Packs of | **4055.710** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 335 x 370 x 275 | |
| Footprint size (W x H x D) mm | | 283 x 318 x 372 | |
| Cutting (max.) mm | | 120 x 12 | |
| Weight kg | | 20.5 | |
| **Also required** | | | |
| Electro-hydraulic pump | 1 pc(s). | 4055.720 | 644 |
| Foot-switch | 1 pc(s). | 4055.712 | 644 |
| **Accessories** | | | |
| Ride-up roller | 2 pc(s). | 4055.714 | 645 |

# Busbar machining CW 120-M




**Female dies** Page 643 **Male dies** Page 643 **Accessories** Page 644

The mobile product solution for busbar machining is ideal for the precise, fast and ergonomic bending, punching and cutting of busbars directly at your workstation. The integral precision laser facilitates the cutting and bending process.

**Design:**
- Electric protractor
- Mandrel R10
- Bending die
- External 230 V power inlet
- Pull-out side support extension for long rails
- External hydraulic connection for almost all machining options
- 4 castors (2 lockable)
- Drawer pull-outs
- Integral hydraulic pump
- Laser pointer (auxiliary laser), beam power laser class 1
- Length end stop, pull-out

**Benefits:**
- High level of bending and punching accuracy
- Simple tool changes
- Flexible use in the workshop

**Machinable material:**
- Copper
- Aluminium

**Supply includes:**
- Busbar machining, mobile CW 120-M
- Foot-switch

**Note:**
- With a Z bend, the length of the short side depends on the material thickness
- For punching, slots of up to a max. of 21 x 18 mm are also supported
- Slot tools available on request
- We reserve the right to make technical modifications

| **Model No.** | Packs of | **4055.800** | Page |
|---|---|---|---|
| Machine dimensions (W x H x D) mm | | 1380 x 1270 x 945 | |
| Support surface (W x D) mm | | 811 x 1211 | |
| Working height mm | | 974 | |
| Power consumption kW | | 2.2 | |
| Electrical connection V, Hz | | 230, 50/60 | |
| Permissible operating pressure (p. max.) bar | | 700 | |
| Bending (max.) mm | | 120 x 12 | |
| Bending angle (max.) ° | | 90 | |
| Bending/side length (min.) mm | | 50 | |
| Z-bending (min.) mm | | 72 | |
| Punching (max.) mm | | 6.6 x 21.5 | |
| Punching/material thickness (max.) mm | | 12 | |
| Cutting (max.) mm | | 120 x 12 | |
| Length stop (max.) mm | | 1224 | |
| Weight kg | | 390.0 | |
| **Accessories** | | | |
| Hydraulic hose | 1 pc(s). | 4055.807 | 645 |
| Hydraulic cylinder | 1 pc(s). | 4055.806 | 645 |
| Male and female dies for slots | 1 pc(s). | 4055.791 | 644 |

## Male dies

Male dies for punching round holes in busbars.

**Machinable material:**
– Copper

| Thread | Diameter mm | Material thickness (max.) mm | Packs of | **Model No.** |
|---|---|---|---|---|
| M6 | 6.6 | 10 | 1 pc(s). | **4055.740** |
| M8 | 9 | 12 | 1 pc(s). | **4055.741** |
| M8 | 9.5 | 12 | 1 pc(s). | **4055.742** |
| M10 | 11 | 12 | 1 pc(s). | **4055.743** |
| M10 | 11.5 | 12 | 1 pc(s). | **4055.744** |
| M12 | 13.5 | 12 | 1 pc(s). | **4055.745** |
| M12 | 14 | 12 | 1 pc(s). | **4055.746** |
| M16 | 17.5 | 12 | 1 pc(s). | **4055.747** |
| M16 | 18 | 12 | 1 pc(s). | **4055.748** |
| M20 | 21 | 12 | 1 pc(s). | **4055.749** |
| M20 | 21.5 | 12 | 1 pc(s). | **4055.750** |

**Also required:**

– Busbar bending and hole-punching unit CW 120-S, see page 640
– Busbar machining CW 120-M, see page 642
– Female dies, see page 643

## Female dies

The female dies should be used in combination with the respective male die. This allows round holes to be punched in busbars.

**Machinable material:**
– Copper

| Diameter mm | Material thickness (max.) mm | Packs of | **Model No.** |
|---|---|---|---|
| 6.6 | 10 | 1 pc(s). | **4055.770** |
| 9 | 12 | 1 pc(s). | **4055.771** |
| 9.5 | 12 | 1 pc(s). | **4055.772** |
| 11 | 12 | 1 pc(s). | **4055.773** |
| 11.5 | 12 | 1 pc(s). | **4055.774** |
| 13.5 | 12 | 1 pc(s). | **4055.775** |
| 14 | 12 | 1 pc(s). | **4055.776** |
| 17.5 | 12 | 1 pc(s). | **4055.777** |
| 18 | 12 | 1 pc(s). | **4055.778** |
| 21 | 12 | 1 pc(s). | **4055.779** |
| 21.5 | 12 | 1 pc(s). | **4055.780** |

**Also required:**

– Busbar bending and hole-punching unit CW 120-S, see page 640
– Male dies, see page 643
– Busbar machining CW 120-M, see page 642

# Accessories

## for busbar machining CW 120

### Male and female dies for slots

For incorporating slots up to max. 21 x 18 mm into busbars.

**Machinable material:**
– Copper

**Supply includes:**
– Male and female dies for slots

**Note:**
– Slot tools available on request

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4055.791** |

**Also required:**

– Busbar bending and hole-punching unit CW 120-S, see page 640
– Busbar machining CW 120-M, see page 642

### Electro-hydraulic pump

The electro-hydraulic pump is used to drive products in the CW 120-S product series.

| | |
|---|---|
| Oil type | HLP 32 |
| Delivery rate (max.) l/min | 1.1 |
| Fill volume l | 3.2 |
| Work volume l | 2.2 |
| Permissible operating pressure (p. max.) bar | 700 |
| Machine dimensions (W x H x D) mm | 400 x 325 x 335 |
| Space requirements (W x H x D) mm | 402 x 342 x 397 |
| Electrical connection V, Hz | 230, 50 |
| Power consumption kW | 1.3 |
| Rated current A | 5.65 |
| Packs of | 1 pc(s). |
| **Model No.** | **4055.720** |

### Foot-switch

Footswitch including connection cable, for using busbar machining equipment from the CW 120-S range.

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **4055.712** |

## Hydraulic cylinder

The hydraulic cylinder is ideal for making cut-outs in sheet steel and stainless steel. It is used in conjunction with the hydraulic pump or the CW 120-M.

**Design:**
– With quick-release coupling

**Benefits:**
– Flexible use in the workshop
– Ergonomic handling
– Allows you to create cut-outs without the application of force

**Machinable material:**
– Sheet steel
– Stainless steel

| Punching force t | Packs of | **Model No.** |
|---|---|---|
| 11 | 1 pc(s). | **4055.806** |

**Also required:**

– Hydraulic hose, see page 645

## Hydraulic hose

The hydraulic hose, in combination with the hydraulic cylinder, allows round, square and rectangular cut-outs to be punched in sheet steel and stainless steel. It is used in conjunction with the hydraulic pump or the CW 120-M.

**Design:**
– Double-walled

| Length m | Packs of | **Model No.** |
|---|---|---|
| 3 | 1 pc(s). | **4055.807** |

## Ride-up roller

**for busbars**

Ride-up roller for user-friendly handling when cutting busbars to size.

| Packs of | **Model No.** |
|---|---|
| 2 pc(s). | **4055.714** |

# Boost productivity at every step

**Seamless optimisation of all process stages.** The efficiency of panel building and switchgear manufacturing is determined by the quality of productivity, as well as all automated and manual work stages. Digitalization supports the ideal workflow, from engineering right through to production.

## Machining

- Significant time savings with the Perforex BC milling centre
- High level of precision with the Perforex BC laser centre
- Less wastage with the Secarex AC 18 cutting centre

## Component mounting

- Efficient population of terminal blocks on support rails with the Athex TC 80 CS terminal block assembly centre

## Wire processing and wiring

- Faster processes, thanks to fully automated wire processing with the Wire Terminal WT

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

## Perfecting the hand tool

High-quality hand tools for professional use in industry and trade,
from page 565

## Simplify handling

Ergonomic, efficient handling systems for transport and lifting operations,
from page 606

## Systematise wire processing

Professional, rational solutions for manual wire machining and processing
Crimping tools, from page 574
Semi-automatic machines, from page 632

## Streamline wiring

To complete the process chain, Rittal Automation Systems are involved in developing pioneering wiring solutions, right through to full automation.

## Automate machining

Fully automated milling or laser machining, plus machining of busbars and cable ducts
Busbar machining, from page 638

## Make component mounting more flexible

Automatic manufacturing and component mounting of terminal strips,
from page 658

**EPLAN Electric P8**
For project management, documentation and administration of electrical engineering automation projects

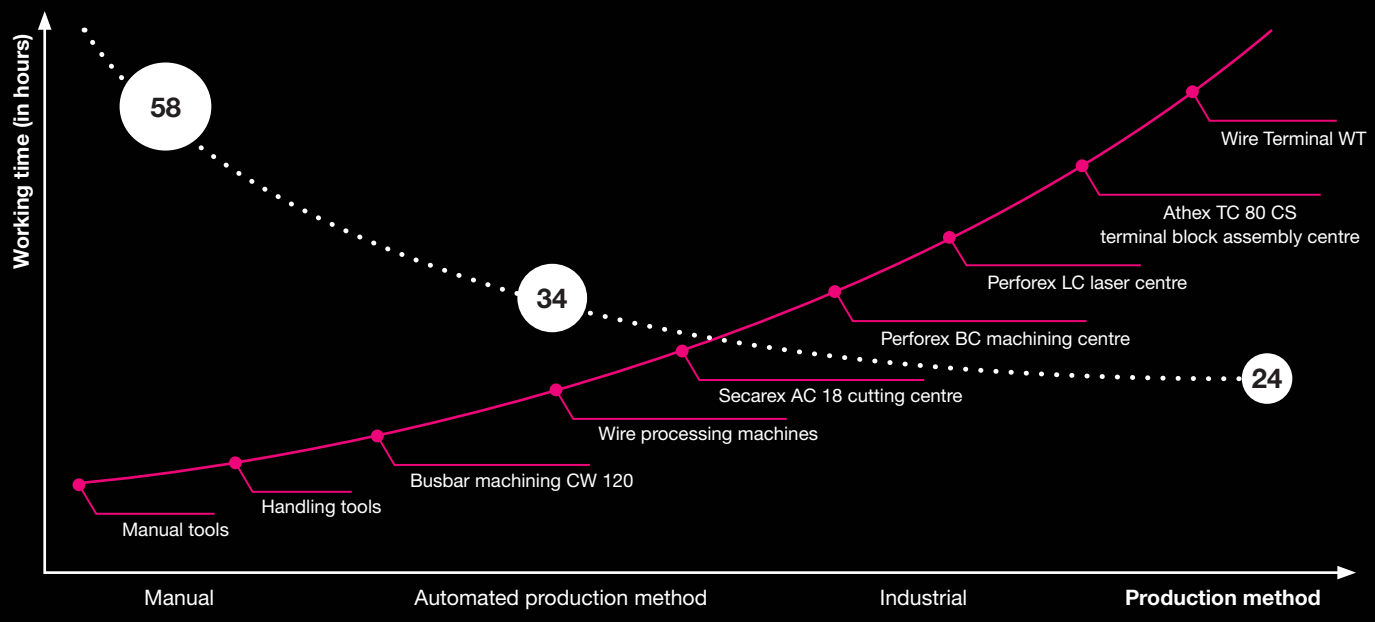
**EPLAN Data Portal**
Database with over 500,000 data models for electrical engineering project management

**EPLAN Pro Panel**
For technological project management and 3D assembly layout of enclosures

# Rittal and EPLAN automate panel building

Alongside the Eplan software tools, Rittal Automation Systems provides a comprehensive range of equipment for professional workshop operation. To accelerate individual production stages, we offer a number of automation concepts which may be cost-effectively adapted to suit individual requirements and different sized companies.
Our product spectrum ranges from manual tools through to fully automated machining centres. Depending on the level of automation, you can reduce machining times, as illustrated by the following case study.

**Accelerate processes by boosting the level of automation**



# Cutting centre Secarex AC 18

The Secarex cutting centre is convenient to use and cuts wiring ducts, cable duct covers and support rails to length quickly, precisely and reliably. The integral label printer provides project-specific labelling of the support rails and cable trunking. The cutting centre helps to improve quality, optimise cutting waste, lower costs and accelerate the overall process. Investing in a Secarex cutting centre AC 18 for cutting support rails and wiring ducts to size is cost-effective from just 200 enclosures per annum. In this example, the ROI calculation is approximately 3 years.

- Modern operating solution: 18.5″ monitor, top-hat rail industrial PC with i3 processor, and keyboard with trackball
- Data is transferred directly from CAE systems (EPLAN Pro Panel) or Perforex workshop programming, or alternatively, dimensions may be entered manually by the operator
- USB interface

- Special equipment: Optional drawer system

- Five DIN rail sizes in one template

Mousepad support, vertically hinged

Machine operation with keyboard and label printing for project-specific allocation of blanks when using cut optimisation

Cut-to-size unit for support rails and wiring ducts

- Safe, two-handed operation for cutting wiring ducts and support rails to size at the push of a button

- Cut optimisation across multiple projects
- Automatic length end stop

- Special equipment: Optional Storage system





We reserve the right to make technical modifications.

# Milling centre Perforex BC

Perforex machining centres accelerate your throughput times when machining anything from the smallest enclosures and enclosure panels, right through to large enclosures. The drilling and milling centres in the Perforex BC series allow you to machine any material, including spray-finished sheet and stainless steel as well as aluminium, copper and plastic. The Perforex BC series is characterised by its fast, simple machining. The fully welded machine frame guarantees short throughput times with a consistently high machining quality plus fast, precise and reliable working. A short-term ROI of < 3 years can be achieved from just 150 enclosures per annum.

**User-friendly shop-floor programming with central database**

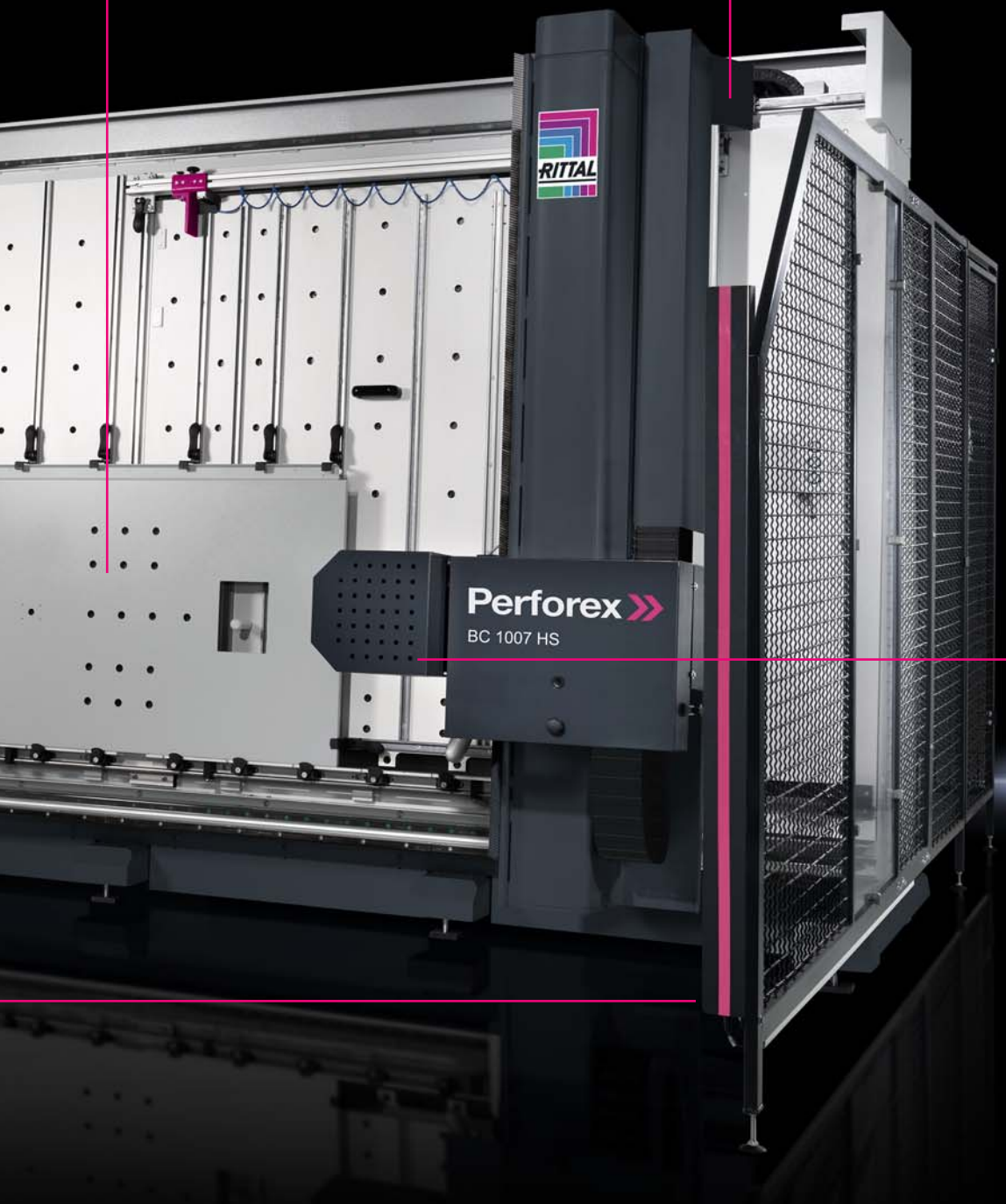
- Interface to EPLAN Pro Panel and all common CAD systems
- Processing of the neutral DXF format
- Transfer of configuration data from the Rittal Configuration System (RiCS)

**Operational safety**

- A light barrier/light array ensures operator safety and correct functioning of the machine
- The machine can be restarted directly after acknowledging the safety function

**Performance package**
- Faster feed rate for the milling cutter
- Rapid, user-friendly clamping of workpieces
- Dampened vibrations and noise emissions
- Extended tool life
- Shorter processing times

**Installation – Maintenance – Servicing**
- Short installation and training times
- Maintenance-friendly with easy access
- Global service network




**Powerful high-performance spindle**
- Up to 23,000 rpm
- Faster processing times
- Higher throughput
- Use of DIN tools and automatic tool checks

**Integral swarf extraction in the spindle**
- Extraction close to machining
- Less cleaning work
- Fast workpiece changes
- Greater productivity




We reserve the right to make technical modifications.

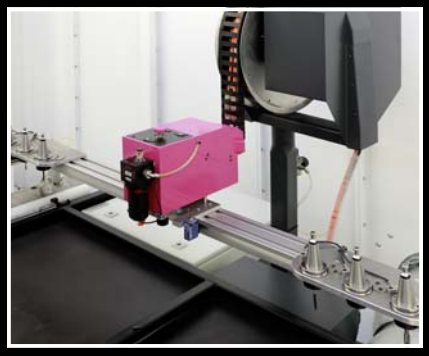
# Laser centre Perforex LC

The 3D laser technology in the Perforex LC is ideally suited for machining stainless steel and sheet steel, as well as powder-coated metals such as enclosure doors, side panels etc. Spray-finished metal parts are cut without any visible paint damage or discolouration, even with delicate contours. What is more, there is no tarnishing of the cut edges when machining stainless steel. It is worth investing in a laser from around 300 enclosures per annum, ideally with a stainless steel proportion of around 30%.

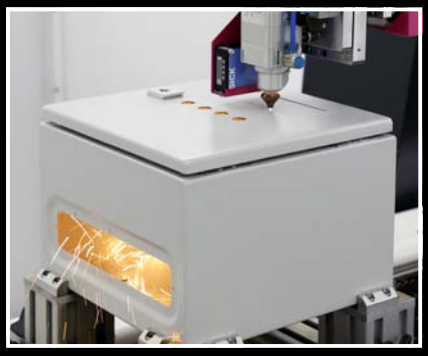
**User-friendly shop-floor programming with central database**

- Machine operation with 3D visualisation
- Interfaces to EPLAN Pro Panel
- Processing of the neutral DXF format
- Transfer of configuration data from the Rittal Configuration System (RiCS)

**Simultaneous machining of five sides**
- Less setup time
- Less strain on the operating personnel
- Machining of multiple components in a single operation



**Thread tapping option for LC 3030**
- Six different thread sizes in the tool magazine
- Automatic change-over of the machine head
- Greater variability in manufacturing



**Contactless, low-vibration manufacturing process**
- Clean, non-wearing cutting without coolant/lubricant
- Machining speed with stainless steel is several times higher than with conventional milling processes
- No rework required
- Shorter throughput times
- Greater productivity

**Simple attachment of enclosures without clamping**
- More ergonomic
- Faster population
- Less risk of damage
- Less strain on the operating personnel



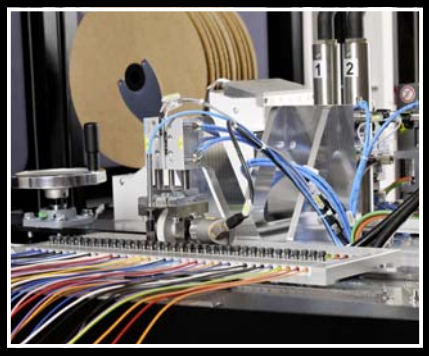

We reserve the right to make technical modifications.

# Wire Terminal WT fully automated wire processing machine

Component wiring is a time-consuming task, accounting for around 50% of the time in panel building and switchgear manufacturing. The compact Wire Terminal 24 or 36 fully automated wire processing machine ensures efficient, cost-effective wire processing. Up to 36 different wires in cross-sections ranging from 0.5 $mm^2$ to 2.5 $mm^2$ may be processed fully automatically without retooling. The optional print system prints the wires in black or white, then transfers them to downstream process stages via a controlled ordering system capable of accommodating up to 1800 processed wires.
All production data can be read and processed via suitable interfaces. Manual logging of wire lists is likewise supported.

- Integral touch display for data processing
- Label printer for wire magazine identification

**Wire storage**
The modular, space-saving wire store and wire routing system for the Wire Terminal. Six wire drums are stored on each of the two levels in a space-saving design. Depending on the number of wires used, the fully automatic wire processing machine may be fitted with additional wire stores (central, left, right), each with space for 12 wire containers.



**24 or 36 wires**
The Wire Terminal may be fitted with wire guides for 24 or 36 wires. Wires are fed in via a 24-/36-wire feed magazine which is horizontally adjustable and controlled via a servo-motor NC axis. Wires are clamped by a spring-assisted clamp which is pneumatically released during the wire feed process.

**Wire labelling and processing**
To ensure optimum positioning of the origin/destination on the wires, the Wire Terminal may be fitted with black, white or both marking systems. Multiple insulation stripping and crimping machines may also be integrated via an optional lift.

**Selection of wire magazines**
The pre-processed wires can be sequentially stored in 13 wire rails by cross-section and by other project-specific criteria.

**Wire Cart**
The optional Wire Cart allows assembled wires to be processed directly at the workstation on a project-specific basis. It can also accommodate tools and provide for adaptation of a monitor. The integral storage system can be used for more wires.

**Smart Wiring**
EPLAN Smart Wiring is ideal for efficient wire processing.



**Design**
- For fully automatic processing of wire lists for wire assembly
- Suitable wire stores are selected depending on the number of wires
- When using multiple crimping machines for different cross-sections, the machine may be fitted with a lift option

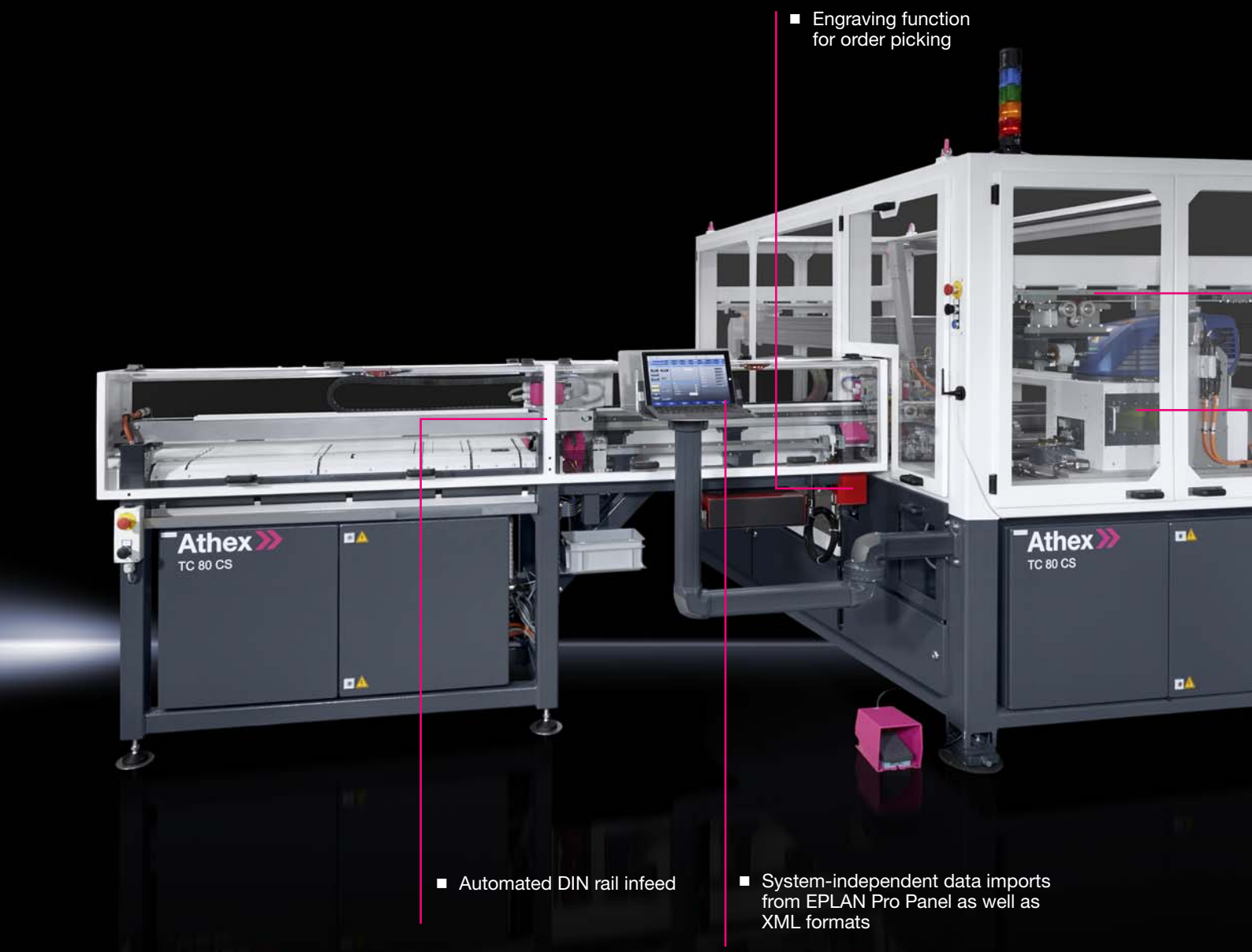
**Benefits**
- Processes are 8 times faster, thanks to fully automated wire processing with individual wire printing and order-picking
- Fully interlinked, from the E-CAD tool through to the production processes
- Consistently high quality
- Amortisation period of 2.5 years from a minimum of 300 enclosures per annum

**Machinable material**
- Fine-wire copper cables to DIN VDE 0295 Category 5


We reserve the right to make technical modifications.

# Terminal block assembly centre Athex TC 80 CS

The Athex TC 80 CS terminal block assembly centre handles data from EPLAN Pro Panel or manually configured XML formats. During machining, support rails from the buffer store are measured and automatically cut to size, then marked on the underside with a needle engraver for order-picking / project-planning. In a subsequent operation, the terminals required are either fitted directly on the terminal strip with a gripper system, or optionally labelled with the laser marking system prior to positioning. The finished terminal strip is ejected from the machine via the sorting unit and can be removed. Users with a high volume of terminal blocks (> 760,000 units per annum) will achieve ROI within approximately 4 years.



**Design**

- Material store for support rail versions TS 35/7.5 and TS 35/15 to EN 60 715
- Automatic measurement and cutting unit
- Needle marking system for labelling the support rail undersides
- Fully automated gripper system for populating the support rails with terminal blocks
- Laser marking system for labelling the terminals and components
- Sorting and buffer stores for the finished terminal strips

Sorting unit and buffer stores for the finished terminal strips

- Upgradable with up to 80 magazine slots
- Up to 800 terminals per hour (excluding printing)
- Terminal types from all well-known manufacturers may be used

Stocking of up to 80 magazines for terminal blocks, miniature fuse-breakers etc.

Automated terminal block assembly and labelling with a laser marking system

- Labelling during assembly with a laser marking system





We reserve the right to make technical modifications.

# Rittal – The System.

**Faster – better – everywhere.**

**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

FRIEDHELM LOH GROUP

For information on the delivery times of your preferred Model No., please go to:
**www.rittal.com**

Individual configuration options:
**www.rittal.com/configurators**

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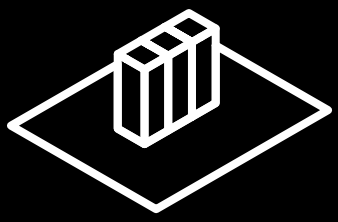
# Industry 4.0 trends

## Data processing close to production

**More automation, more data**

The digital transformation is revolutionising production. To control production in line with Industry 4.0, all components are now interlinked and communicate with one another: robots, human/machine interfaces, sensors and actuators, machines, tools and control systems. Their values are compared against their digital twin. This generates vast volumes of data.

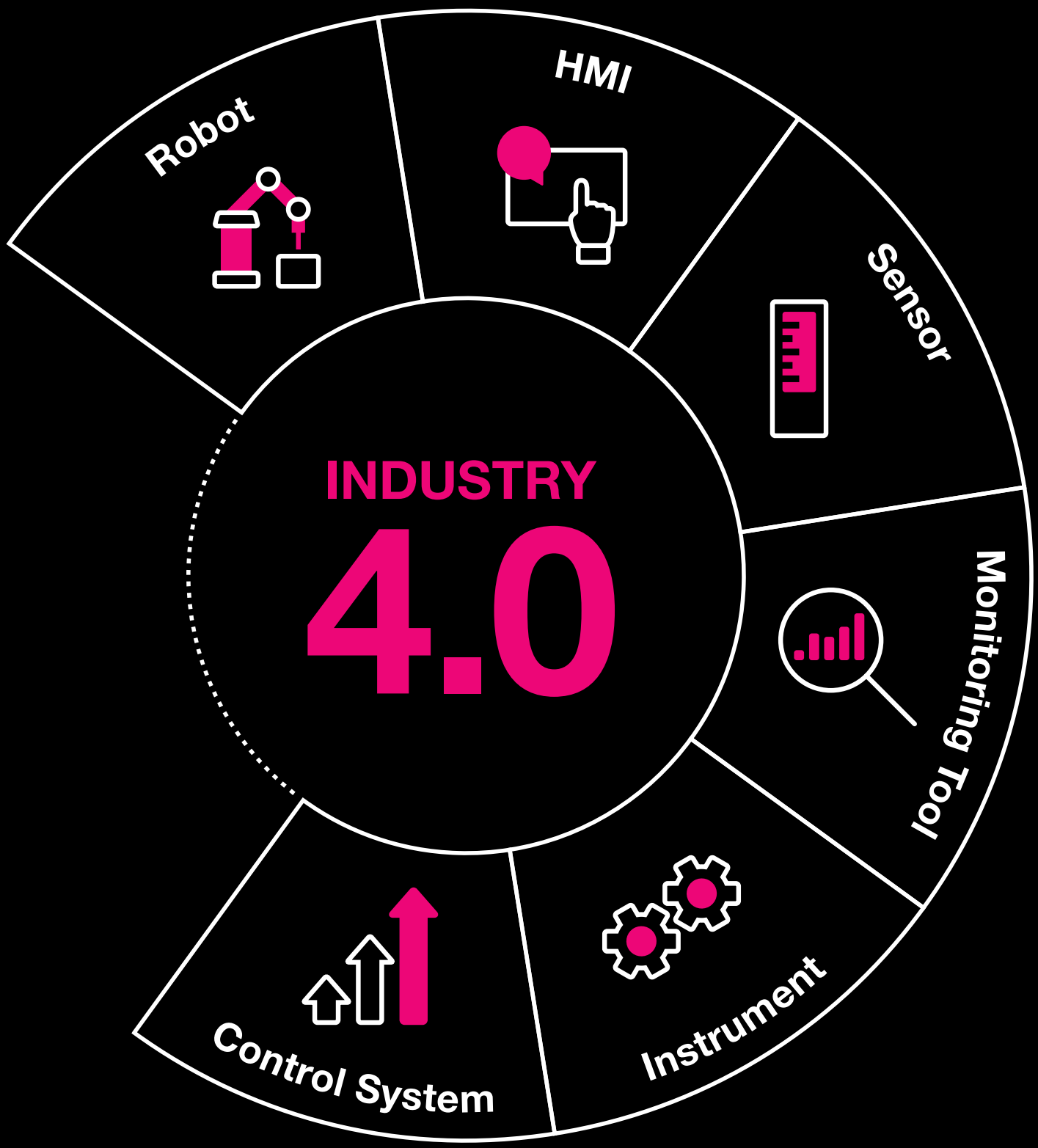


**Edge data centres reduce latencies**

Large volumes of data generated in the immediate production environment must be processed quickly and reliably. To this end, Rittal offers scalable edge data centres which ensure low latencies, maximum computing power and optimum security.

**Private clouds offer security**

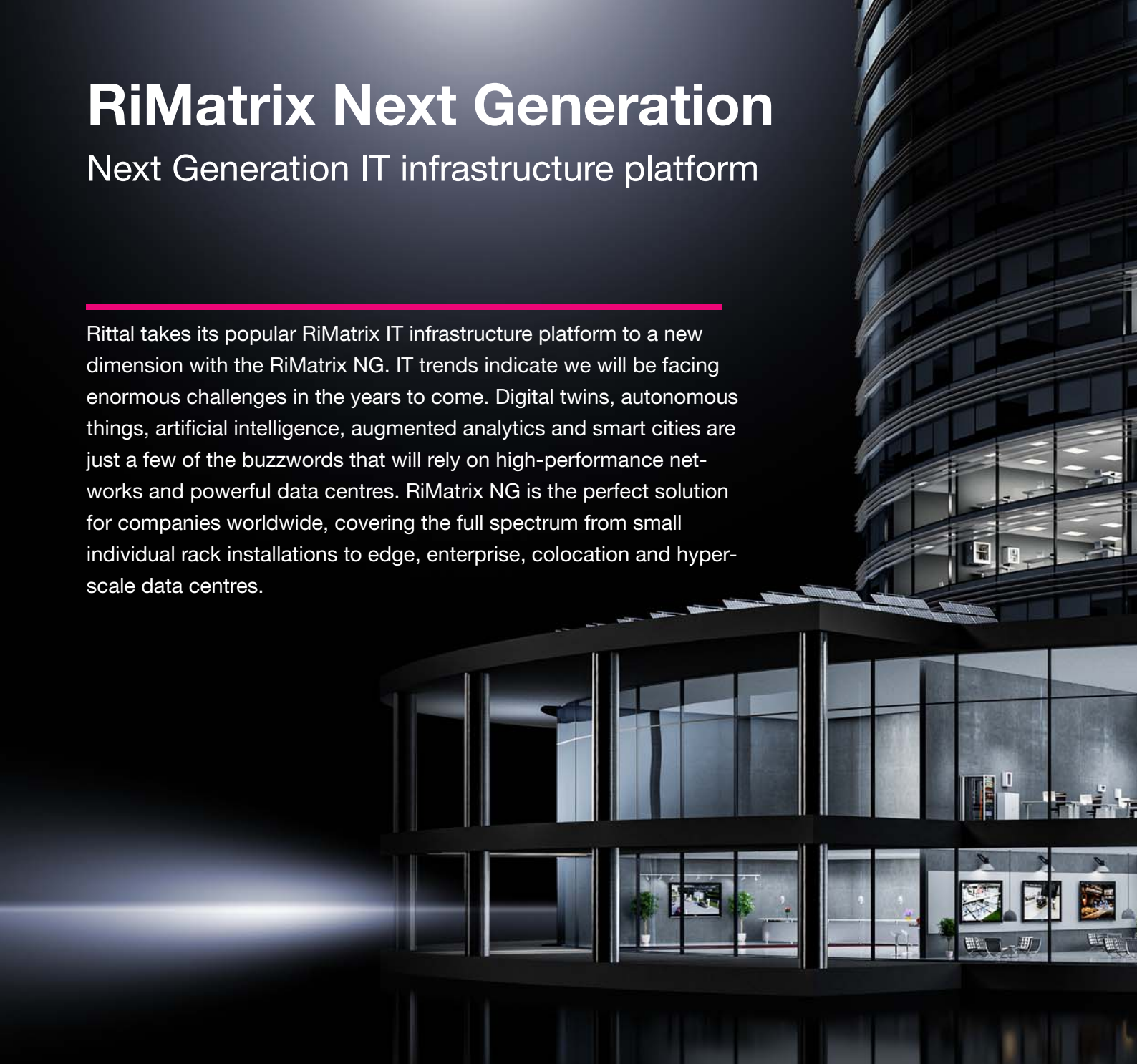
From the individual sensor to the private cloud: invaluable, success-critical data flows need protective mechanisms to meet escalating security requirements.  A combination of edge data centres and private cloud solutions allows customers to decide for themselves who may use their data and to what extent.


INDUSTRY
4.0
Robot
HMI
Sensor
Monitoring Tool
Instrument
Control System

# RiMatrix Next Generation

## Next Generation IT infrastructure platform

Rittal takes its popular RiMatrix IT infrastructure platform to a new dimension with the RiMatrix NG. IT trends indicate we will be facing enormous challenges in the years to come. Digital twins, autonomous things, artificial intelligence, augmented analytics and smart cities are just a few of the buzzwords that will rely on high-performance networks and powerful data centres. RiMatrix NG is the perfect solution for companies worldwide, covering the full spectrum from small individual rack installations to edge, enterprise, colocation and hyper-scale data centres.



**Innovative platform**

- RiMatrix NG now includes a number of additional key components, such as predefined data centre modules and built-in OCP technology.
- Our ongoing R&D work keeps us up-to-date with future technology trends.
- Energy-efficient components provide the basis for implementing customised sustainability concepts.

**Flexibly adaptable**

- RiMatrix NG flexibly supports the IT lifecycle, from planning through to operation and optimisation.
- RiMatrix NG is freely scalable in every dimension, be it output range, installation size, availability or fail-safe operation. The open platform concept supports the addition of certified products and solutions from third-party providers.
- Variable financing models complement the portfolio and support flexible investment decisions.

**Fast availability**

- Predefined, tried-and-tested solutions such as edge and container data centres reduce the customer input.
- RiMatrix NG is perfectly tailored to the demands of IT components as well as superordinate management systems and applications, and supports the prompt implementation of complete solutions (XaaS).

**Reliable solutions**

- RiMatrix NG is synonymous with tested Rittal quality which meets international standards.
- The new platform is compatible with existing installed systems and guarantees flexible extendibility.
- Documentation and training, plus a comprehensive customer service package, round out the platform concept.

# Rittal Competence Centre

## Expert teams for the data centre lifecycle

**Safeguard long-term efficiency and scalability**
Data centres demand long-term action extending far beyond the initial setup. Everything must be modular and flexible to enable it to grow over a period of many years, while still maintaining maximum efficiency. With this in mind, the expert teams at the Rittal Competence Centre IT are happy to support your data projects throughout their entire lifecycle.

**The lifecycle IT**
Rittal's lifecycle IT helps you to develop state-of-the-art IT landscapes. It defines the periodic lifecycle of data centres at the following stages:

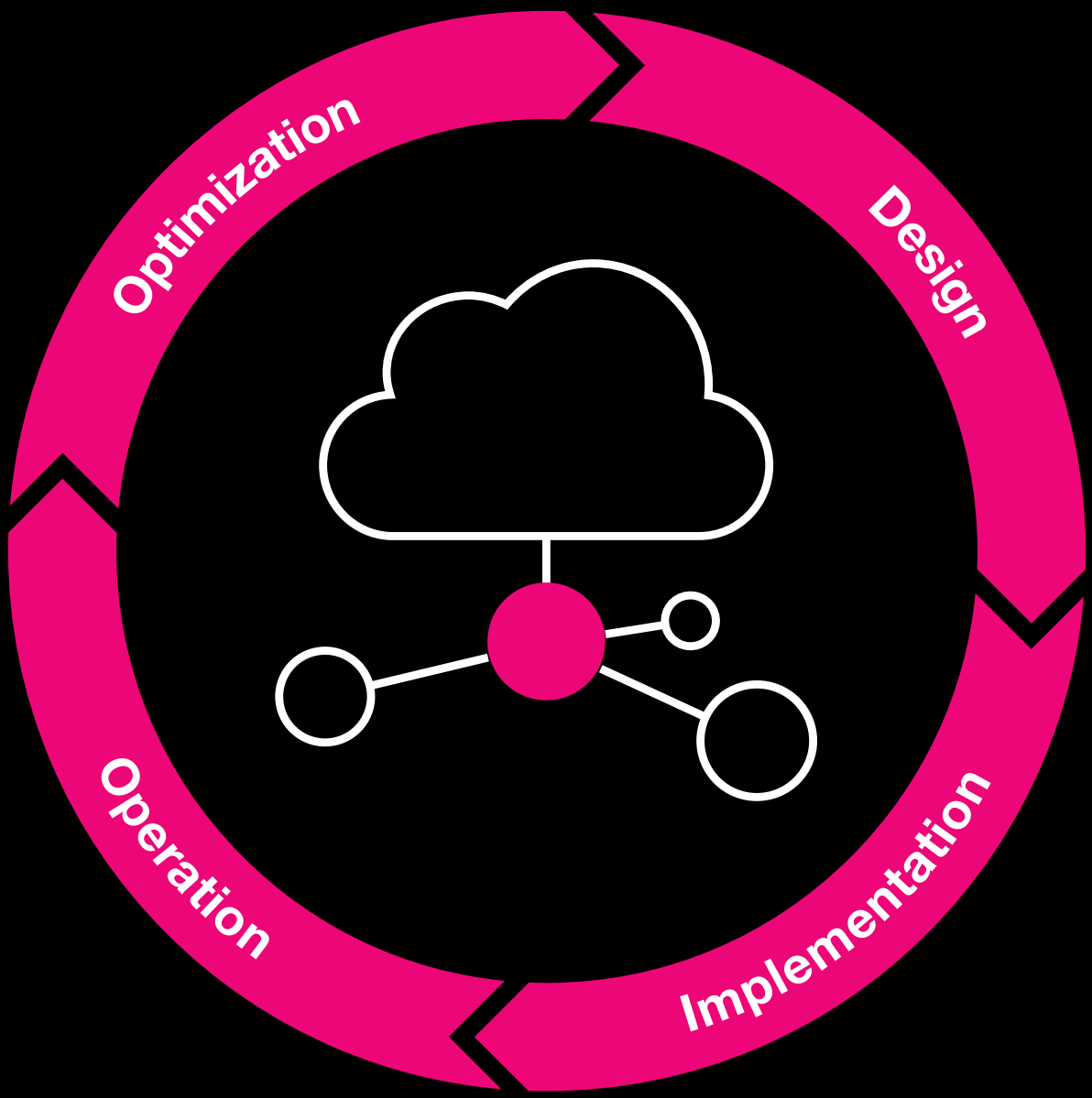
**Design**
Once the data centre concept has been developed, the solution modules are selected, and the investment (CAPEX) and operating costs (OPEX) are calculated.

**Implementation**
The physical infrastructure (electricity, cooling, monitoring, security) is assembled. This is followed by commissioning and sign-off of the data centre.

**Operation**
You may opt to operate the data centre yourself, or use a managed service from Innovo Cloud. You can also link into Innovo's central data centres, e.g. for backup purposes or to cushion peak loads.

**Optimization**
The efficiency, costs, sustainability and scalability of the installed solution are analysed. This allows us to draw conclusions about the potential for optimising your IT landscape.

Adopting an holistic view of all framework conditions and influencing factors helps to prevent data centre planning errors and develop a future-viable, resilient solution. A flexible, modular data centre architecture means you can respond flexibly to new or modified requirements to ensure that you always operate your data centre at the optimum point. This guarantees permanent savings, not just in relation to investments but also with operating costs. The expert teams at the Rittal IT competence centres have extensive expertise from many years spent working on countless international IT projects. Our specialists will support you with all issues relating to concept development and detailed planning of data centres, calculation of TCO, security aspects, and monitoring and maintenance planning.



# Edge data centres

## On-site data management

Production to Industry 4.0 generates huge volumes of data which must be processed and transported extremely rapidly, securely and seamlessly, for example for interaction between machines. This may prove too much for cloud-based solutions. Edge data centres, on the other hand, allow data to be processed in the immediate environment of the production process (i.e. at the edge of the cloud). This helps to boost the level of automation in production directly on site.

### Minimal latency

- Autonomous systems such as vehicles and machines must be able to respond quickly to data generated in real time.
- High-performing data networks such as optical fibre connections, as well as 5G connections and edge data centres, are the key technologies in this regard.

### System security

- Data privacy is vital and poses a challenge, particularly in distributed systems such as IIoT applications.
- Not only is it necessary to protect personal data, but also product and process data. Digital twin is the buzzword here, because a product's data is just as important as the product itself.

### Local data processing

- Smart machines, autonomous systems and robots generate such huge volumes of data that it would be inappropriate to transmit them directly to a core or cloud data centre.
- Within the context of Industry 4.0 applications, as well as in smart cities, edge data centres are indispensable for bringing applications to the point of data generation.

### High availability

- The availability of an edge data centre reflects the availability of the application.
- Redundant supply paths, backed-up power supplies and cooling, together with finely-tuned workflows and failover scenarios help to ensure the availability of a solution.

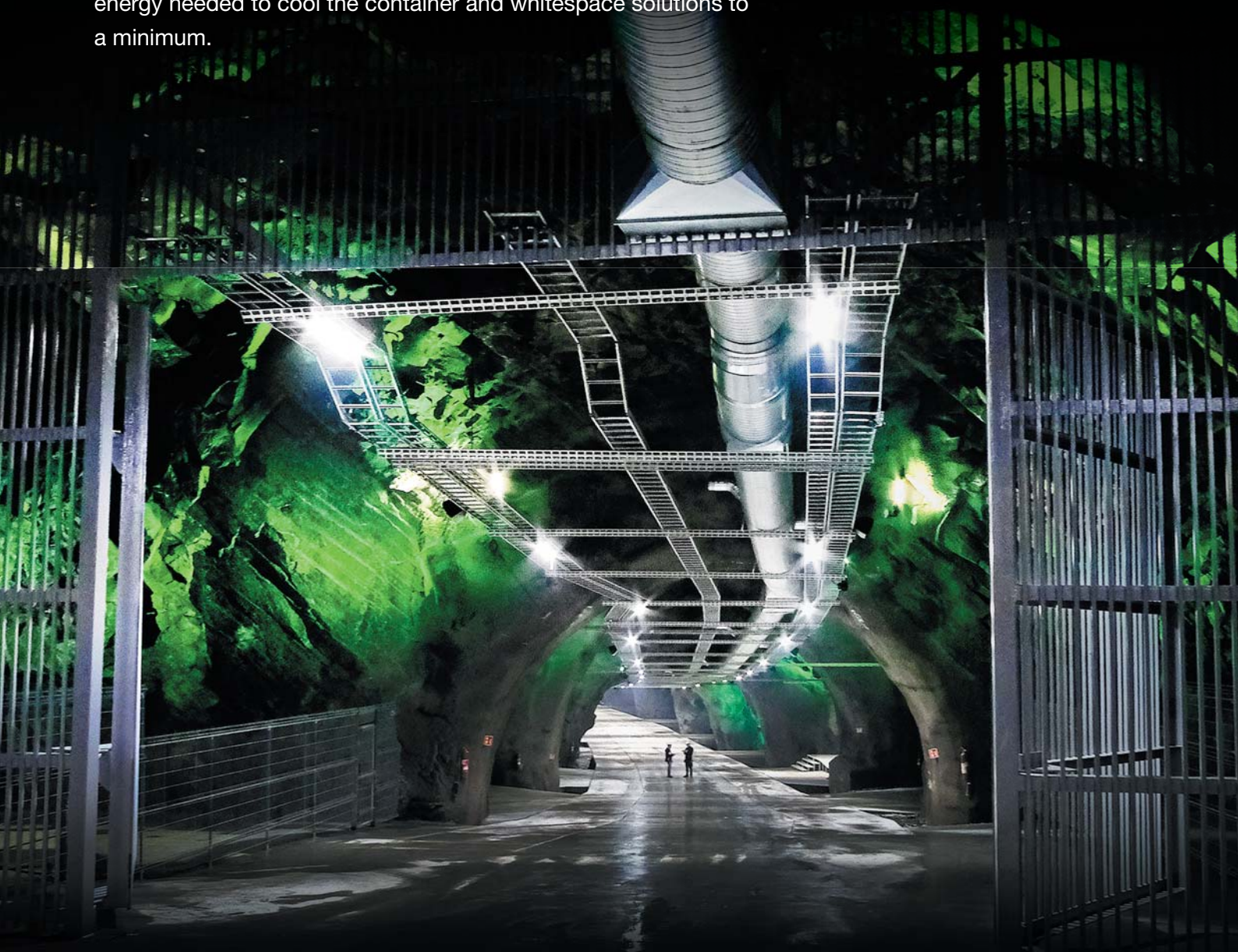
### Dynamically scalable systems

- Edge applications are tailored to the customer's requirements. This calls for a high level of flexibility in infrastructure components (IT and OT) as well as in applications.
- For this reason, edge data centres need to be scalable and, in conjunction with the applications, capable of aligning with requirements. Predefined data centre modules that nevertheless offer a high degree of flexibility provide the basis for distributed data centre topologies.

# IT infrastructure solutions

## Green, reliable and efficient – an example

One of the world's largest data centres is housed in a decommissioned mine at the Lefdal Mine Datacenter (LMD) on the west coast of Norway. The five-storey tunnel system with 75 chambers provides 120,000 square metres of space with a potential total capacity of up to 200 MW. It is one of the most cost-effective, secure, flexible and eco-friendly data centre solutions in Europe. It is powered solely by electricity from renewable sources such as hydropower plants and solar farms, and uses water from the nearby fjord for cooling.
The primary circuit is connected to the 565 metre deep fjord, which guarantees unlimited supplies of cold water. Water/water heat exchangers supply the secondary circuit in the mine, keeping the energy needed to cool the container and whitespace solutions to a minimum.



LMD uses IT containers from the Rittal container platform, such as server containers with an output of up to 300 kW. Standardised interfaces for power supply, water connections and the network allows equipment to be incorporated rapidly into the heavy-duty shelving system, where up to three containers may be stacked on top of one another in a tunnel. The container platform is scalable in terms of both output and redundancy, and customer requests are flexibly accommodated.

The tunnels at LMD are also perfectly suited to whitespace solutions. The Rittal security room GSR is used to protect valuable IT components from the harsh mine environment. Infrastructure modules from the aforementioned container solutions are installed here. Individual planning of these areas is supported, making LMD freely scalable in every dimension.

When the Total Cost of Ownership (TCO) is taken into account, LMD is 40 percent cheaper than other data centres in Europe. This is due not only to the attractive electricity price and the use of sea water cooling from the fjord, but also to the outstanding partial PUE (efficiency) of the standardised data centre modules across the full breadth of applications, from memory-intensive storage/backup solutions through to high-performance computing (HPC).

Of course, a comprehensive security concept is also included in the range of services. In this regard, the mine system offers inestimable benefits: the facility is only accessible via well-protected entry points. The rock formation provides natural protection from electromagnetic pulses. Specially trained security staff patrol the entire installation around the clock, 365 days a year. A three-stage authentication process and smart camera systems provide additional security. The installation is certified to Uptime Tier III design and represents one of the most secure data centre solutions in the Nordic market.

# Rittal – The System.

**Faster – better – everywhere.**

# IT rack system/racks

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## Your benefits

**Network/server racks**

- For individual use as stand-alone installations and data centres
- Complete system solutions for small to large networks
- Maximum configuration versatility and protection for installed equipment
- Simple conversions and use of our extensive modular system ensures flexibility and safeguards your investment

**Wall-mounted enclosures**

- A comprehensive choice of products – the right enclosure for every application – up to protection category IP 66
- Wide range of sizes available from 3 U to 21 U
- Extensive selection of accessories with "Rittal – The System."
- Fast assembly, modification and simple installation based on the modular principle

## Sample applications

1 Wall-mounted enclosure EL, see page 715

2 VerticalBox, see page 712

3 Wall-mounted enclosure AX IT with 482.6 mm (19˝) mounting angles, see page 719

4 VX IT with glazed door for rack climate control, see page 692, base/plinth and installation accessories, see page 880

5 VX IT with vented door for room cooling, see page 686, bayed with base/plinth and installation accessories, see page 878

6 Small fibre-optic distributor, see page 720

# VX IT

## The solution for all network and server applications

Whether you need a network rack to house a corridor distributor, or server racks for an edge, cloud or hyperscale data centre, the new VX IT provides the ideal platform and meets all the requirements of a modern IT infrastructure.

**Consistent customer focus**
The new VX IT is based on a modular concept with a customer-friendly configurator to guide you quickly and easily to a solution that is tailored to your individual requirements. A state-of-the-art production line and optimised logistics ensure fast availability and on-time delivery.

**Matching modules**
The new VX IT provides the basis for RiMatrix Next Generation, the latest generation to have evolved from our extremely popular Rittal IT system, now with numerous new features and innovative products.

**Seamless compatibility**
A data centre infrastructure will outlive its individual servers. Compatibility with established RiMatrix systems is therefore crucial. The VX IT and RiMatrix NG are therefore ideal for extending existing data centres and replacing individual components.

**Future-proof**
We stay abreast of the latest trends and understand what drives experts and companies, enabling us to deliver forward-looking solutions. The VX IT, like the RiMatrix NG, are continuously being refined to keep pace with the challenges of an evolving IT infrastructure.

# Comprehensive modular system

For all requirements

## Versatility for every application

- Even the standard variants are available in up to 28 sizes (EU series) – 2 widths, 6 heights and 4 depths.
- Select your individual 482.6 mm (19″) installation to meet your specific requirements from a comprehensive range of racks, components and accessories plus two different load classes (dynamic or standard, as per the detailed rack specifications) and your chosen 482.6 mm (19″) interior installation variant, with maximum load limits of 15,000 N or 18,000 N.

## Tailored door concept

The choice of door depends on the spatial conditions and your individual requirements with regard to access, climate control and protection category.

- The new 180° hinge ensures a maximum door opening angle even when bayed plus a large-scale handle system including security lock with profile half-cylinder.
- There is a door to suit every climate control system, be it rack, suite or room cooling.
- New options include an automatic door opener to provide emergency cooling or to ensure rack extinguishing with a gas-based room extinguisher system.
- Glazed doors are available for an optimum view or to ensure a closed climate control zone in conjunction with high-performance cooling applications, such as high-capacity heat exchangers.

## Roof concept with the required protection category

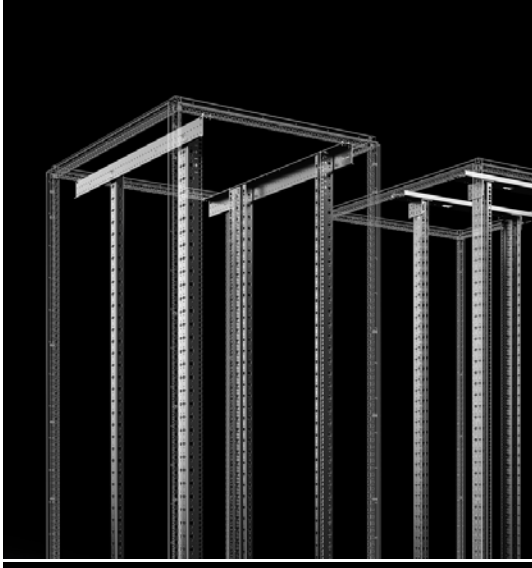
The choice of roof solution will depend on your planned cable entry and prescribed protection category, for example:

- One-piece, solid, with a  protection category of up to IP 55
- With brush strip on both sides across the entire enclosure depth
- Cable entry via brush strip horizontally at the rear, across the entire enclosure width
- Cable entry in the corner zones via brush strips

## User-friendly side panel solutions

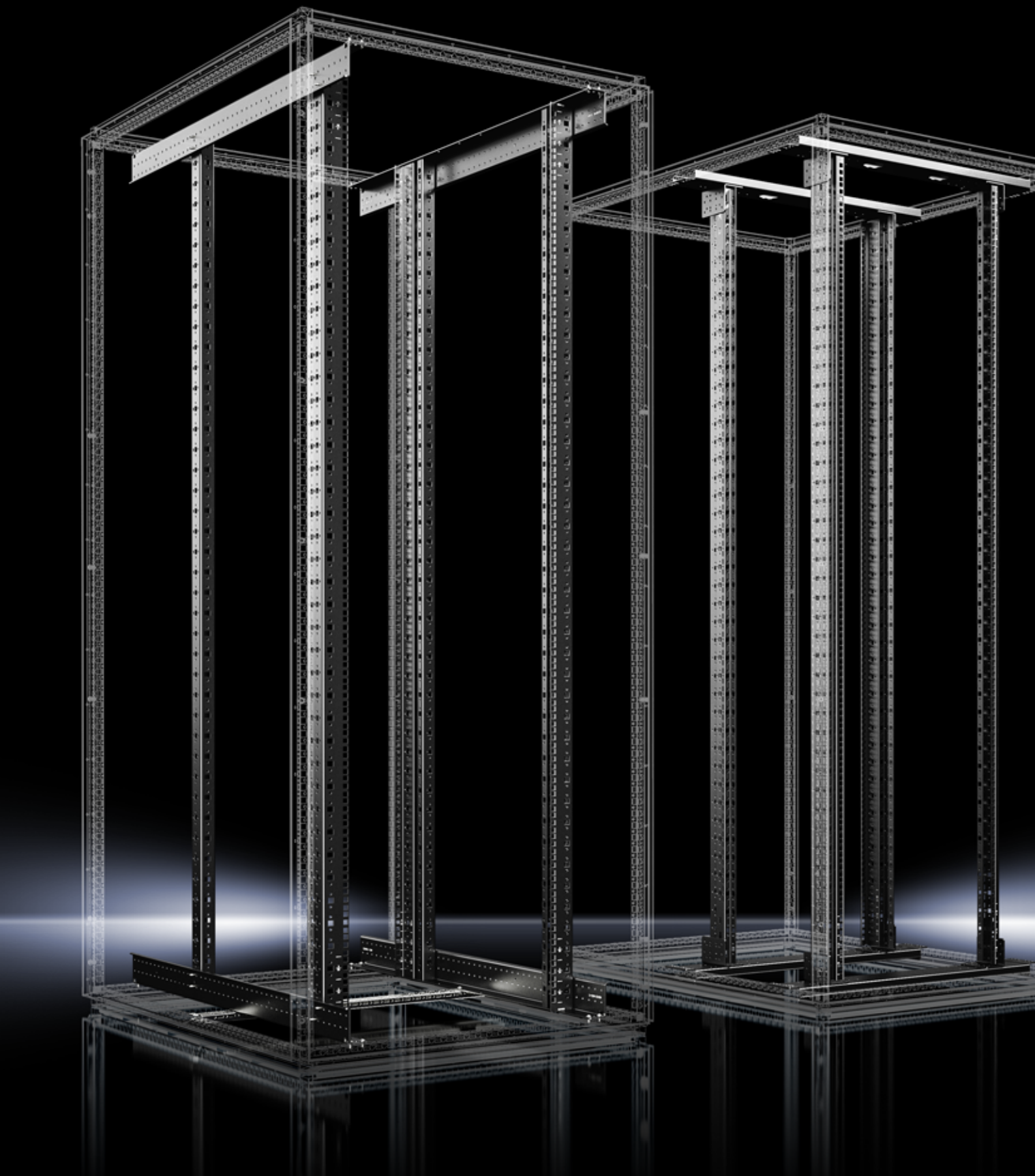
Your choice of side panel will depend on the required level of access and the prescribed security and protection category parameters, for example:

- For individual enclosures: Optionally one-piece, multi-piece, horizontally divided, plug-in or vertically divided, hinged
- To finish off an enclosure suite: Multi-piece, screw-fastened or partitions, one-piece, slide-in fixing for physical separation of individual enclosures within an enclosure suite



# High load capacity

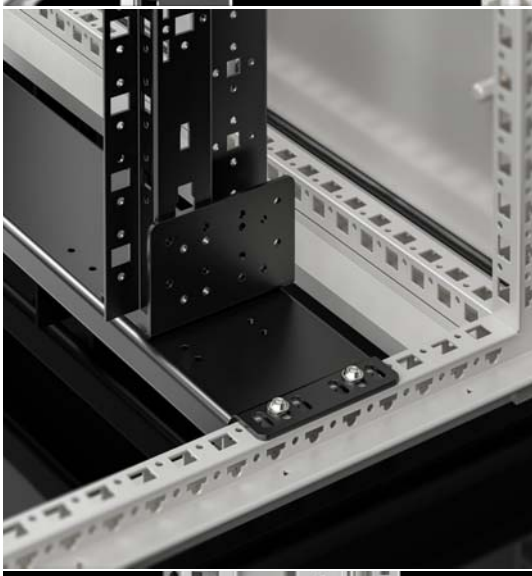
## With maximum flexibility



## Flexible 482.6 mm (19˝) installation

Choose from two 482.6 mm (19˝) installation systems to suit your requirements:

- Standard – Load capacity up to a maximum of 15,000 N or 12,000 N to UL 2416
- Dynamic – Load capacity up to a maximum of 18,000 N or 15,000 N to UL 2416
- Different installation concepts are available for the 482.6 mm (19˝) mounting angles, depending on the enclosure dimensions. While 600 mm wide racks are mounted directly onto the enclosure frame, in 800 mm wide racks the 482.6 mm (19˝) levels are mounted on depth stays or cross-members. In this way, alternative mounting dimensions of 21˝, 23˝ and 24˝ are readily accommodated in the enclosure width 800 mm, as are asymmetrical arrangements of the 482.6 mm (19˝) mounting level. The standard installation variant with cross-members is used with rack depths of up to 800 mm and is ideally suited for use as a network distributor by supporting fast, simple cable management across the entire enclosure width in any height unit.
- An asymmetrical arrangement of the 482.6 mm (19˝) level gains additional installation space on one side which may be used for optimised cable routing or to integrate a Liquid Cooling Unit (LCU).



## Easily extend your existing systems

- The VX IT is also compatible with all existing IT infrastructure solutions assembled with the TS IT and DK TS systems – in other words, further configuration and baying are easily achieved with the VX IT.
- The new baying variant with 3 mm baying gap means that entire racks or liquid cooling packages are easily extracted from the enclosure suite and replaced with updated hardware.

## Converting to VX IT couldn't be simpler

- Our smart conversion assistant, available on the Rittal website, allows you to easily convert your existing enclosure systems to the new VX IT system.

# Security and ease of use

## Customised at all levels

## Roof

- A broad spectrum of individual roof solutions
- Ideal solutions for secure, simple cable entry, even with high cable volumes
- Closed variants for a high protection category of IP 55

## Walls

- Divided side panels for problem-free one-man assembly
- Vertically divided, hinged side panels for easy access without dismantling the side panel
- Side panels latched from the inside for superior access protection

## Doors

- Vented or solid, to suit the individual climate control concept
- Mechanical and electronic lock systems for optimum security
- Door control systems to automatically open the doors in the event of a cooling failure or for room-based extinguisher systems

## Base

- Individual base modules for optimum, secure cable entry from below
- Base/plinth systems with integral cable management solutions

## Room integration

- Perfectly adapted modules for achieving cold or hot aisle solutions

# Interior installation

## With unlimited diversity

## Power

- Wide range of socket strips and power distribution systems
- Power distribution unit in the zero-U space
- Professional monitoring and link to DCIM software (such as RiZone)
- Measurement of power, current, active and apparent power and power factor

## Cooling

- Individual climate control concepts for rack, suite and room cooling up to 53 kW per rack
- Energy-efficient systems help to minimise operating costs

## Monitoring

- CMC III enables preventive intervention to reduce the risk of downtime
- Mechanical and electronic lock systems for optimum security

## Security

- Fire alarm and extinguisher systems for early fire detection and automatic extinguishing
- Door control systems to automatically open the doors in the event of a cooling failure and for room-based extinguisher systems

## Interior installation

- Practical vertical and horizontal air routing inside the rack, even with a high density of ports
- Component shelves, for static or withdrawable installation
- Air blocking systems for optimum air routing inside the rack, adapted to the individual climate control concept

# Network/server racks VX IT

| Door variant, front | | Vented door | Vented door | Vented door | |
|---|---|---|---|---|---|
| **482.6 mm (19") configuration** | | **standard** | **dynamic** | **standard** | |
| Material thickness 482.6 mm (19") configuration variant, mm | | 2.0 | 2.5 | 2.0 | |
| Load capacity, static N max., depending on size variant | | 15000 | 18000 | 15000 | |
| Load capacity, static N max., to UL 2416, depending on size variant | | 12000 | 15000 | 12000 | |
| Load capacity, dynamic N max., transport using castors, depending on size variant | | 10000 | 10000 | 10000 | |
| Protection category to IEC 60 529 | | – | – | – | |
| Variants | | 53XX.11X | 53XX.81X | 53XX.166 | |
| **Product-specific scope of supply** | | | | | |
| Base | Open | ■ | ■ | – | |
| | Multi-piece, solid | – | – | – | |
| Rear door | One-piece, solid, 130° hinges | – | – | – | |
| | Vertically divided, from H ≥ 1800 mm, solid, 180° hinges | – | – | – | |
| | One-piece, vented, 130° hinges | ■ | ■ | – | |
| | Vertically divided, from H ≥ 1800 mm, vented, 180° hinges | ■ | ■ | ■ | |
| | Rear panel, screw-fastened | – | – | – | |
| Roof | With cable entry | ■ | ■ | ■ | |
| | Solid | – | – | – | |
| **Pre-configured** | | | | | |
| Base/plinth | VX base/plinth, vented | – | – | ■ | |
| Base | Solid front, one base module as infill panel | – | – | ■ | |
| Walls | One-piece, screw-fastened | – | – | ■ | |
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| | | | | | | |
|---|---|---|---|---|---|---|
| | **Glazed door** | **Glazed door** | **Glazed door** | **Glazed door** | **Glazed door** | **Glazed door** |
| | **standard** | **dynamic** | **standard** | **standard** | **swing frame** | **without interior installation** |
| | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | – |
| | 15000 | 18000 | 15000 | 15000 | 3500 | – |
| | 12000 | 15000 | 12000 | 12000 | 3500 | – |
| | 10000 | 10000 | 10000 | 10000 | 3500 | – |
| | – | – | IP 55 | – | – | IP 55 |
| | 53XX.12X | 53XX.82X | 53XX.13X | 53XX.15X | 53XX.157 | 53XX.190 |
| | | | | | | |
| | ■ | ■ | – | – | – | – |
| | – | – | ■ | – | – | ■ |
| | ■ | ■ | ■ | ■ | – | ■ |
| | ■ | ■ | – | ■ | – | – |
| | – | – | – | – | – | – |
| | – | – | – | – | – | – |
| | – | – | – | – | ■ | – |
| | ■ | ■ | – | ■ | ■ | – |
| | – | – | ■ | – | – | ■ |
| | | | | | | |
| | – | – | – | ■ | ■ | – |
| | – | – | – | ■ | ■ | – |
| | – | – | – | ■ | ■ | – |
| | | | | | | |
| | 692 | 695 | 696 | 697 | 698 | 699 |

IT infrastructure

# Network/server racks VX IT

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation, vent grille at the front: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Aluminium/sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Sheet steel rear door, vented (vented surface area approx. 85% perforated)
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

Please observe the product-specific scope of supply.

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with vented doors, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 24 | 24 | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|---|---|
| **Width** mm | | 800 | 800 | 600 | 600 | 600 | |
| **Height** mm | | 1200 | 1200 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 800 | 1000 | 600 | 800 | 1000 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front | front and rear | front and rear | |
| 482.6 mm (19") attachment | | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 8000 | 15000 | 7500 | 15000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 8000 | 12000 | 6000 | 12000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 520 | 720 | – | 520 | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 150 / 130 | 87 / 193 | 87 / 435 | 87 / 193 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5303.114** | **5304.116** | **5329.111** | **5330.113** | **5308.113** | |
| **Product-specific scope of supply, roof plate** | | | | | | | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | ■ | ■ | – | – | – | |
| Roof plate, multi-piece, removable, for horizontal cable entry at the rear and with covered cut-out for fan mounting plate | 1 pc(s). | – | – | ■ | – | – | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | – | – | – | ■ | ■ | |
| **Product-specific scope of supply, door** | | | | | | | |
| Sheet steel door, vented, one-piece, 130° hinges | 1 pc(s). | ■ | ■ | – | – | – | |
| Sheet steel rear door, vented, vertically divided, 180° hinges | 1 pc(s). | – | – | ■ | ■ | ■ | |
| **Accessories** | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8175.245 | 8176.245 | 8106.245 | 8108.245 | 8100.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | – | – | – | – | 5301.250 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.337 | 5301.344 | – | – | 5301.338 | 897 |

## with vented doors, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 42 | 42 | 42 | 42 | 47 | Page |
|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 800 | 800 | 800 | 600 | |
| **Height** mm | | 2000 | 2000 | 2000 | 2000 | 2200 | |
| **Depth** mm | | 1200 | 800 | 1000 | 1200 | 800 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | screw-fastened onto depth stays, top and bottom, and to the support rail on the frame structure | with mounting bracket screw-fastened to the frame at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 15000 | 8000 | 15000 | 15000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | 8000 | 12000 | 12000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 720 | 520 | 720 | 720 | 520 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 150 / 330 | 150 / 130 | 87 / 193 | 150 / 330 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5310.118** | **5307.114** | **5309.116** | **5311.116** | **5331.113** | |
| **Product-specific scope of supply, roof plate** | | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | – | – | – | ■ | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | ■ | ■ | ■ | – | |
| **Product-specific scope of supply, door** | | | | | | | |
| Sheet steel rear door, vented, vertically divided, 180° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8102.245 | 8108.245 | 8100.245 | 8102.245 | 8128.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.254 | – | 5301.250 | 5301.254 | – | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.341 | 5301.337 | 5301.344 | 5301.347 | – | 897 |

# Network/server racks VX IT

## with vented doors, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 47 | 47 | 47 | 47 | 47 | Page |
|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | 800 | |
| **Height** mm | | 2200 | 2200 | 2200 | 2200 | 2200 | |
| **Depth** mm | | 1000 | 1200 | 800 | 1000 | 1200 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | screw-fastened onto depth stays, top and bottom, and to the support rail on the frame structure | |
| Max. load capacity (static) per enclosure N | | 15000 | 15000 | 8000 | 15000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | 12000 | 8000 | 12000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 720 | 720 | 520 | 720 | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 193 | 150 / 330 | 150 / 130 | 87 / 193 | 150 / 330 | |
| **Model No.** | 1 pc(s). | **5313.113** | **5315.118** | **5312.114** | **5314.116** | **5316.116** | |
| **Product-specific scope of supply, roof plate** | | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | ■ | – | – | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | ■ | ■ | ■ | |
| **Product-specific scope of supply, door** | | | | | | | |
| Sheet steel rear door, vented, vertically divided, 180° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8120.245 | 8122.245 | 8128.245 | 8120.245 | 8122.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.257 | 5301.261 | – | 5301.257 | 5301.261 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.341 | 5301.337 | 5301.344 | 5301.347 | 897 |

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**Material:**
- Sheet steel
- Aluminium

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation, vent grille at the front: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Aluminium/sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Sheet steel rear door, vented (vented surface area approx. 85% perforated), vertically divided, 180° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

Please observe the product-specific scope of supply.

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with vented doors, with 482.6 mm (19") mounting angles, dynamic

| **Units** U | Packs of | 42 | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | |
| **Height** mm | | 2000 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1200 | 1000 | 1200 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and on depth stays at the bottom | on depth stays, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 18000 | 18000 | 18000 | 18000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 15000 | 15000 | 15000 | 15000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 700 | 725 | 700 | 725 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 213 | 150 / 325 | 87 / 213 | 150 / 325 | |
| **Model No.** | 1 pc(s). | **5308.813** | **5310.818** | **5309.816** | **5311.816** | |
| Note on Model No. | | – | – | – | – | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | ■ | – | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8100.245 | 8102.245 | 8100.245 | 8102.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.250 | 5301.254 | 5301.250 | 5301.254 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.341 | 5301.344 | 5301.347 | 897 |

# Network/server racks VX IT

## with vented doors, with 482.6 mm (19") mounting angles, dynamic

| **Units** U | Packs of | 47 | 47 | 47 | 47 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | |
| **Height** mm | | 2200 | 2200 | 2200 | 2200 | |
| **Depth** mm | | 1000 | 1200 | 1000 | 1200 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and on depth stays at the bottom | on depth stays, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 18000 | 18000 | 18000 | 18000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 15000 | 15000 | 15000 | 15000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 700 | 725 | 700 | 725 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 213 | 150 / 325 | 87 / 213 | 150 / 325 | |
| **Model No.** | 1 pc(s). | **5313.813** | **5315.818** | **5314.816** | **5316.816** | |
| Note on Model No. | | – | – | – | – | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | ■ | – | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8120.245 | 8122.245 | 8120.245 | 8122.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.257 | 5301.261 | 5301.257 | 5301.261 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.341 | 5301.344 | 5301.347 | 897 |

## with vented doors, with 482.6 mm (19") mounting angles, dynamic

| **Units** U | Packs of | 52 | 52 | 52 | 52 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | |
| **Height** mm | | 2450 | 2450 | 2450 | 2450 | |
| **Depth** mm | | 1000 | 1200 | 1000 | 1200 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and on depth stays at the bottom | on depth stays, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 18000 | 18000 | 18000 | 18000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 15000 | 15000 | 15000 | 15000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 700 | 725 | 700 | 725 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 213 | 150 / 325 | 87 / 213 | 150 / 325 | |
| **Model No.** | 1 pc(s). | **5334.813** | **5332.818** | **5335.816** | **5333.816** | |
| Note on Model No. | | Minimum order quantity = 10 pc(s). | Minimum order quantity = 10 pc(s). | Minimum order quantity = 10 pc(s). | Minimum order quantity = 10 pc(s). | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | ■ | – | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | | – | – | – | – | |
| Side panel, horizontally divided | 1 pc(s). | 5301.264 | 5301.265 | 5301.264 | 5301.265 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.341 | 5301.344 | 5301.347 | 897 |

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Plastic

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation, vent grille at the front, base/plinth: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Aluminium/sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Sheet steel rear door, vented (vented surface area approx. 85% perforated), vertically divided, 180° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- 482.6 mm (19") mounting angle, standard, variably screw-fastened to depth stays at the top and bottom
- Side panels, one-piece, for screw fastening
- Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate
- Base module mounted at front as infill panel
- Base/plinth system VX, 100 mm, vented
- Base/plinth corner pieces and trim panels, sides, screw-fastened
- Base/plinth trim panels, front and rear plus corner and baying covers supplied loose
- 4 levelling feet, M12, including base/plinth adaptor (supplied loose)
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- 4 combination rails for inner and outer mounting level, to fit rack depth (supplied loose)
- 10 cable shunting rings, metal, 125 x 65 mm (supplied loose)
- IPPC pallet

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with vented doors, pre-configured, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 42 | Page |
|---|---|---|---|
| **Width** mm | | 800 | |
| **Height** mm | | 2000 | |
| **Height including base/plinth** mm | | 2100 | |
| **Depth** mm | | 1000 | |
| Max. load capacity (static) per enclosure N | | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5309.166** | |
| **Accessories** | | | |
| Fan mounting plate | 1 pc(s). | 5502.020 | 790 |
| Cable route | 1 pc(s). | 5302.120 | 1066 |

# Network/server racks VX IT

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

Please observe the product-specific scope of supply.

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with glazed door, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 15 | 24 | 24 | 24 | 38 | Page |
|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | 600 | |
| **Height** mm | | 800 | 1200 | 1200 | 1200 | 1800 | |
| **Depth** mm | | 600 | 600 | 800 | 1000 | 600 | |
| Mounting position of the 482.6 mm (19") level(s) | | front | front | front and rear | front and rear | front | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 7500 | 7500 | 8000 | 15000 | 7500 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 6000 | 6000 | 8000 | 12000 | 6000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | – | – | 520 | 720 | – | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 435 | 87 / 435 | 150 / 130 | 87 / 193 | 87 / 435 | |
| **Model No.** | 1 pc(s). | **5325.121** | **5326.121** | **5303.124** | **5304.126** | **5327.121** | |
| **Product-specific scope of supply, roof plate** | | | | | | | |
| Roof plate, multi-piece, with horizontal cable entry at the rear and prepared for fan mounting plate | 1 pc(s). | ■ | ■ | – | – | ■ | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | ■ | ■ | – | |
| **Product-specific scope of supply, door** | | | | | | | |
| Sheet steel rear door, solid, one-piece, 130° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | – | |
| Sheet steel rear door, solid, vertically divided, 180° hinges | 1 pc(s). | – | – | – | – | ■ | |
| **Accessories** | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8173.245 | 8170.245 | 8175.245 | 8176.245 | 8186.245 | 901 |
| Side panel, horizontally divided | | – | – | – | – | – | |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | – | – | 5301.337 | 5301.344 | – | 897 |

## with glazed door, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 38 | 38 | 42 | 42 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 800 | 600 | 600 | |
| **Height** mm | | 1800 | 1800 | 2000 | 2000 | |
| **Depth** mm | | 800 | 800 | 600 | 800 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 15000 | 8000 | 7500 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | 8000 | 6000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 520 | 520 | – | 520 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 193 | 150 / 130 | 87 / 435 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5328.123** | **5305.124** | **5329.121** | **5330.123** | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | – | – | ■ | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | ■ | – | – | |
| Roof plate, multi-piece, with horizontal cable entry at the rear and prepared for fan mounting plate | 1 pc(s). | – | – | ■ | – | |
| **Product-specific scope of supply, door** | | | | | | |
| Sheet steel rear door, solid, vertically divided, 180° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8188.245 | 8188.245 | 8106.245 | 8108.245 | 901 |
| Side panel, horizontally divided | | – | – | – | – | |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | – | 5301.337 | – | – | 897 |

## with glazed door, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 42 | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | 800 | |
| **Height** mm | | 2000 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1200 | 600 | 800 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on the cross-member, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 15000 | 15000 | 4000 | 8000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | 12000 | 4000 | 8000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 720 | 720 | – | 520 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 193 | 150 / 330 | 150 / 372 | 150 / 130 | |
| **Model No.** | 1 pc(s). | **5308.123** | **5310.128** | **5306.122** | **5307.124** | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | ■ | – | – | |
| Roof plate, multi-piece, with horizontal cable entry at the rear and prepared for fan mounting plate | 1 pc(s). | – | – | ■ | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | – | – | ■ | |
| **Product-specific scope of supply, door** | | | | | | |
| Sheet steel rear door, solid, vertically divided, 180° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8100.245 | 8102.245 | 8106.245 | 8108.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.250 | 5301.254 | – | – | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.341 | 5301.336 | 5301.337 | 897 |

# Network/server racks VX IT

## with glazed door, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 42 | 42 | 47 | 47 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 800 | 800 | 800 | 800 | |
| **Height** mm | | 2000 | 2000 | 2200 | 2200 | |
| **Depth** mm | | 1000 | 1200 | 800 | 1000 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | on depth stays, screw-fastened at the top and bottom | screw-fastened onto depth stays, top and bottom, and to the support rail on the frame structure | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 15000 | 15000 | 8000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 12000 | 12000 | 8000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 720 | 720 | 520 | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 193 | 150 / 330 | 150 / 130 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5309.126** | **5311.126** | **5312.124** | **5314.126** | |
| **Product-specific scope of supply, roof plate** | | | | | | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | ■ | ■ | ■ | ■ | |
| **Product-specific scope of supply, door** | | | | | | |
| Sheet steel rear door, solid, vertically divided, 180° hinges | 1 pc(s). | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8100.245 | 8102.245 | 8128.245 | 8120.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.250 | 5301.254 | – | 5301.257 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.344 | 5301.347 | 5301.337 | 5301.344 | 897 |

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Sheet steel rear door, solid, vertically divided, 180° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

Please observe the product-specific scope of supply.

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with glazed door, with 482.6 mm (19") mounting angles, dynamic

| **Units** U | Packs of | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|
| **Width** mm | | 600 | 800 | 800 | |
| **Height** mm | | 2000 | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1000 | 1200 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | on depth stays, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 18000 | 18000 | 18000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 15000 | 15000 | 15000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 700 | 700 | 725 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 213 | 87 / 213 | 150 / 325 | |
| **Model No.** | 1 pc(s). | **5308.823** | **5309.826** | **5311.826** | |
| **Product-specific scope of supply, roof plate** | | | | | |
| Roof plate, multi-piece, with cable entry in the corner sections front and rear | 1 pc(s). | ■ | – | – | |
| Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate | 1 pc(s). | – | ■ | ■ | |
| **Accessories** | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8100.245 | 8100.245 | 8102.245 | 901 |
| Side panel, horizontally divided | 1 pc(s). | 5301.250 | 5301.250 | 5301.254 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 5301.310 | 914 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.338 | 5301.344 | 5301.347 | 897 |

# Network/server racks VX IT

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**Material:**
- Sheet steel
- Aluminium
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation: RAL 9005
- Handle and hinges: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 55 only in conjunction with baying seal or screw-fastened side panels

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Sheet steel rear door, solid, one-piece, 130° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Roof plate, one-piece, solid
- Base tray with gland plate, multi-piece, solid
- Baying seal and sealing kit for gland plates (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with glazed door, IP 55, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 24 | 24 | 42 | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 800 | 600 | 600 | 800 | 800 | |
| **Height** mm | | 1200 | 1200 | 2000 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 600 | 800 | 600 | 800 | 800 | 1000 | |
| Mounting position of the 482.6 mm (19") level(s) | | front | front and rear | front | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | with mounting bracket screw-fastened to the frame at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 7500 | 8000 | 7500 | 15000 | 8000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 6000 | 8000 | 6000 | 12000 | 8000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | – | 520 | – | 520 | 520 | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 87 / 435 | 150 / 130 | 87 / 435 | 87 / 193 | 150 / 130 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5326.131** | **5303.134** | **5329.131** | **5330.133** | **5307.134** | **5309.136** | |
| **Accessories** | | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8170.245 | 8175.245 | 8106.245 | 8108.245 | 8108.245 | 8100.245 | 901 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Combination rails | 4 pc(s). | 5302.020 | 5302.021 | 5302.020 | 5302.021 | 5302.021 | 5302.022 | 1063 |
| Cable route | 1 pc(s). | – | – | 5302.120 | 5302.120 | 5302.120 | 5302.120 | 1066 |
| Component shelf for frame attachment | | see page | see page | see page | see page | see page | see page | 1006 |

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Plastic
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation, base/plinth: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Side panels, one-piece, screw-fastened
- Roof plate, multi-piece, with side cable entry in the depth, double-sided, prepared for fan mounting plate
- Base module mounted at front as infill panel
- Base/plinth system VX, 100 mm, vented
- Base/plinth corner pieces and trim panels, sides, screw-fastened
- Base/plinth trim panels, front and rear plus corner and baying covers supplied loose
- 4 levelling feet, M12, including base/plinth adaptor (supplied loose)
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- 4 combination rails for inner and outer mounting level, to fit rack depth (supplied loose)
- 10 cable shunting rings, metal, 125 x 65 mm (supplied loose)
- IPPC pallet

Please observe the product-specific scope of supply.

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

## with glazed door, pre-configured, with 482.6 mm (19") mounting angles, standard

| **Units** U | Packs of | 24 | 42 | 42 | Page |
|---|---|---|---|---|---|
| **Width** mm | | 800 | 800 | 800 | |
| **Height** mm | | 1200 | 2000 | 2000 | |
| **Height including base/plinth** mm | | 1300 | 2100 | 2100 | |
| **Depth** mm | | 800 | 800 | 1000 | |
| Mounting position of the 482.6 mm (19") level(s) | | front and rear | front and rear | front and rear | |
| 482.6 mm (19") attachment | | on the cross-member, screw-fastened at the top and bottom | on the cross-member, screw-fastened at the top and bottom | on depth stays, screw-fastened at the top and bottom | |
| Max. load capacity (static) per enclosure N | | 8000 | 8000 | 15000 | |
| Max. load capacity (static) per enclosure to UL 2416 N | | 8000 | 8000 | 12000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 520 | 520 | 720 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 150 / 130 | 150 / 130 | 87 / 193 | |
| **Model No.** | 1 pc(s). | **5303.154** | **5307.154** | **5309.156** | |
| **Product-specific scope of supply, door** | | | | | |
| Sheet steel rear door, solid, one-piece, 130° hinges | 1 pc(s). | ■ | – | – | |
| Sheet steel rear door, solid, vertically divided, 180° hinges | 1 pc(s). | – | ■ | ■ | |
| **Accessories** | | | | | |
| Fan mounting plate | 1 pc(s). | 5502.020 | 5502.020 | 5502.020 | 790 |
| Combination rails | 4 pc(s). | 5302.021 | 5302.021 | 5302.022 | 1063 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.337 | 5301.337 | 5301.344 | 897 |
| Castor module | 2 pc(s). | 5301.518 | 5301.518 | 5301.518 | 894 |

# Network/server racks VX IT

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Plastic
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Interior installation: Spray-finished
- Rear panel and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear panel and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Interior installation, base/plinth: RAL 9005
- Handle and hinges: RAL 9005

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front (180°), with comfort handle for profile half-cylinders and security lock 3524 E
- Rear panel
- Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate
- Base module mounted at front as infill panel
- Swing frame, large, with side trim panel for the installation of 482.6 mm (19") mounting components whilst utilising the full rack height, 130°
- Side panels, one-piece, for screw fastening
- Base/plinth system VX, 100 mm, vented
- Base/plinth corner pieces and trim panels, sides, screw-fastened
- Base/plinth trim panels, front and rear plus corner and baying covers supplied loose
- 4 levelling feet, M12, including base/plinth adaptor (supplied loose)
- Spacers, height 50 mm, to raise the cover plate above the fan cut-out in the roof plate, for passive cooling (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- 4 combination rails for inner and outer mounting level, to fit rack depth (supplied loose)
- 10 cable shunting rings, metal, 125 x 65 mm (supplied loose)
- IPPC pallet

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with glazed door, pre-configured, with 482.6 mm (19") swing frame

| **Width** mm | Packs of | 800 | Page |
|---|---|---|---|
| **Height** mm | | 2000 | |
| **Height including base/plinth** mm | | 2100 | |
| **Depth** mm | | 800 | |
| Max. load capacity (static) per enclosure N | | 3500 | |
| **Model No.** | 1 pc(s). | **5307.157** | |
| **Accessories** | | | |
| Fan mounting plate | 1 pc(s). | 5502.020 | 790 |
| Combination rails | 4 pc(s). | 5302.021 | 1063 |
| Cable route | 1 pc(s). | 5302.120 | 1066 |
| Gland plate set, multi-piece, solid | 1 pc(s). | 5301.337 | 897 |

**IT power** Page 723 **IT cooling** Page 757 **IT monitoring** Page 799 **System accessories** Page 877

**Material:**
- Sheet steel
- Aluminium
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Rear door and roof: Dipcoat-primed, powder-coated
- Front door: Aluminium, anodised/spray-finished

**Colour:**
- Enclosure frame, rear door and roof: RAL 7035
- Front door: Vertical sections, silver coloured and horizontal sections, RAL 9005
- Handle and hinges: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 55 only in conjunction with baying seal or screw-fastened side panels

**Supply includes:**
- VX enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Sheet steel rear door, solid, one-piece, 130° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- Roof plate, one-piece, solid
- Base tray with gland plate, multi-piece, solid
- Baying seal and sealing kit for gland plates (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 25 multi-tooth screws, conductive (supplied loose)
- IPPC pallet

**Note:**
- Depending on how and where it is sited, the door opening angle may vary for selected applications

**Approvals:**
- UL
- cUL

## with glazed door, IP 55, empty rack

| **Width** mm | Packs of | 600 | 600 | 600 | 600 | 600 | 600 | Page |
|---|---|---|---|---|---|---|---|---|
| **Height** mm | | 800 | 1200 | 1800 | 1800 | 2000 | 2000 | |
| **Depth** mm | | 600 | 600 | 600 | 800 | 1000 | 600 | |
| **Model No.** | 1 pc(s). | **5325.190** | **5326.190** | **5327.190** | **5328.190** | **5308.190** | **5329.190** | |
| **Accessories** | | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8173.245 | 8170.245 | 8186.245 | 8188.245 | 8100.245 | 8106.245 | 901 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Cable route | 1 pc(s). | – | – | – | – | 5302.120 | 5302.120 | |
| Combination rails | 4 pc(s). | 5302.020 | 5302.020 | 5302.020 | 5302.021 | 5302.022 | 5302.020 | 1063 |
| Component shelf for frame attachment | | see page | see page | see page | see page | see page | see page | 1006 |

## with glazed door, IP 55, empty rack

| **Width** mm | Packs of | 600 | 600 | 800 | 800 | 800 | Page |
|---|---|---|---|---|---|---|---|
| **Height** mm | | 2000 | 2200 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 800 | 800 | 600 | 800 | 1000 | |
| **Model No.** | 1 pc(s). | **5330.190** | **5331.190** | **5306.190** | **5307.190** | **5309.190** | |
| **Accessories** | | | | | | | |
| Side panel, screw-fastened, sheet steel | 2 pc(s). | 8108.245 | 8128.245 | 8106.245 | 8108.245 | 8100.245 | 901 |
| Baying connector, external | 6 pc(s). | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 8617.502 | 912 |
| Cable route | 1 pc(s). | 5302.120 | 5302.122 | 5302.120 | 5302.120 | 5302.120 | 1066 |
| Combination rails | 4 pc(s). | 5302.021 | 5302.021 | 5302.020 | 5302.021 | 5302.022 | 1063 |
| Component shelf for frame attachment | | see page | see page | see page | see page | see page | 1006 |

# Cable management enclosure

## More space for network cabling

**The cable management enclosure is the ideal solution when you need to manage large quantities of cables, especially surplus cables. Because it is fitted as standard with six punched sections with mounting flanges, the enclosure is perfectly equipped to accommodate a wide range of cable management systems. The cable management enclosure can also be used for the symmetrical balancing of cold/ hot aisle containment.**

**The benefit to you:**

- Optimum integration into VX IT rack suites, 2000 mm high and 1000 / 1200 mm deep
- Doors at the front and rear for easy access
- Fast cable entry in the base and roof section, thanks to integral brush strips

# Cable management rack VX IT

**Cable management** Page 1044 **System accessories** Page 877 **IT monitoring** Page 799 **IT cooling** Page 757

For laying, securing and storing cables or as an empty enclosure with uneven Liquid Cooling Package (LCP) installations.

**Applications:**
- As a cable management rack between fully configured network and server racks
- As an empty rack for symmetrical balancing in cold/hot aisle containment with an uneven number of LCPs in two enclosure suites
- As a placeholder for easy retrofitting of LCP installations

**Benefits:**
- Optimum accommodation of surplus cables and structured cable management

**Material:**
- Sheet steel
- Aluminium

**Surface finish:**
- Enclosure frame: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

**Colour:**
- Enclosure: RAL 7035
- Front: RAL 9005

**Supply includes:**
- Enclosure frame with front and rear door
- Aluminium door, front, solid with black designer trim panel, 180° hinges
- Sheet steel rear door, solid, one-piece, 130° hinges
- Lock front and rear: Comfort handle for profile half-cylinders and security lock 3524 E
- 2 roof/base plates, with cut-outs for cable entry via brush strips
- 3 VX punched sections with mounting flanges mounted on the left and right
- Baying seal

**Note:**
- For positioning at the start/end of an enclosure suite, a side panel will be required

| **Width** mm | Packs of | 300 | 300 | Page |
|---|---|---|---|---|
| **Height** mm | | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1200 | |
| **Model No.** | 1 pc(s). | **5380.830** | **5381.830** | |
| **Accessories** | | | | |
| Side panel, horizontally divided | 1 pc(s). | 5301.250 | 5301.254 | 902 |
| Baying connector, external, 3 mm | 1 pc(s). | 5301.310 | 5301.310 | 914 |
| Combination rails | 4 pc(s). | 5302.022 | 5302.025 | 1063 |
| Nylon tape holder | 10 pc(s). | 5502.155 | 5502.155 | 1062 |
| Cable manager | 20 pc(s). | 5502.405 | 5502.405 | 1064 |
| Cable shunting ring | | see page | see page | 1064 |
| Cable clip | | see page | see page | 1060 |
| Surplus cable holder | 1 pc(s). | 7220.500 | 7220.500 | 1066 |
| Support | 1 pc(s). | 7246.500 | 7246.500 | 1097 |

# Network racks TE 8000

## Efficient and cost-effective

## TE 8000 – the flexible network rack

- 482.6 mm (19˝) network rack, may be dismantled, which uses the 482.6 mm (19˝) level as its supporting structure
- By removing the doors and side panels, free access is available from all sides
- The entire interior is available to use for IT components, cabling and accessories
- Fast assembly, dismantling and conversion (dismantles fully for transporting to confined locations)

## Comprehensive range of accessories for customised interior installation

- AX comfort handle with various lock options
- Brush strip for sealing the cable entries in the roof plate
- Depth-variable cable guide rail
- Universal interior installation with depth-variable attachment
- Direct installation on the 482.6 mm (19˝) mounting frame

## System accessories for assembling a professional IT environment

- Power distribution system (PDU) in a range of sizes and functions
- Enclosure monitoring with the CMC III monitoring system
- Optimum cable management with the Network Cable Organizer (NCO)
- Cooling options for use in the network sector

# Network racks TE 8000

**System accessories** Page 877 **IT monitoring** Page 799 **IT cooling** Page 757 **IT power** Page 723

**Benefits:**
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed
- Interchangeable door hinge

**Material:**
- Sheet steel
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Mounting frame: Dipcoat-primed
- Enclosure panels: Powder-coated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Max. load capacity (static) per enclosure:**
- 4000 N

**Supply includes:**
- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Glazed door at the front, including 130° hinge, designer handle and security lock 3524 E
- Sheet steel door at the rear, including 130° hinge, security lock 3524 E
- Base frame with maximum cut-out (for optional population with module plates)
- Roof plate including concealed cut-out for cable entry and optional fan
- 4 levelling feet, M10 (supplied loose)
- 4 spacers, 20 mm (supplied loose) to raise the roof plate

Please observe the product-specific scope of supply.

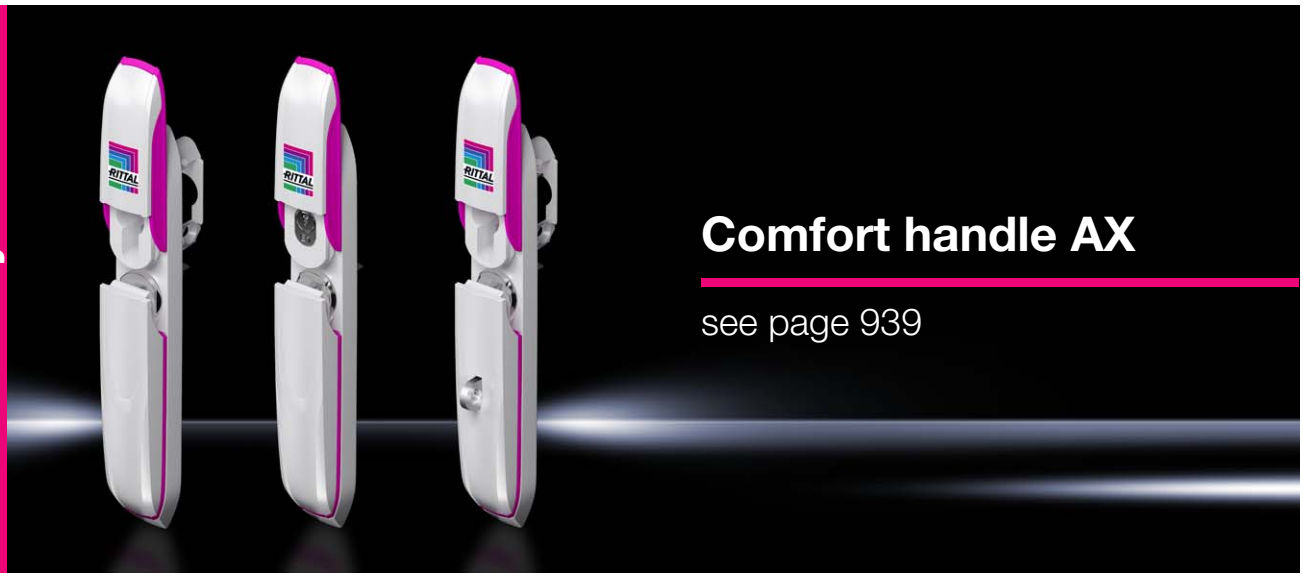
## Width 600 mm

| **Units** U | Packs of | 11 | 11 | 24 | 24 | 42 | 42 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 600 | 600 | 600 | 600 | |
| **Height** mm | | 600 | 600 | 1200 | 1200 | 2000 | 2000 | |
| **Depth** mm | | 600 | 800 | 600 | 800 | 600 | 800 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 495 | 495 | 495 | 495 | 495 | 495 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 30 / 30 | 130 / 130 | 30 / 30 | 130 / 130 | 30 / 30 | 130 / 130 | |
| **Model No.** | 1 pc(s). | **7888.390** | **7888.410** | **7888.430** | **7888.440** | **7888.500** | **7888.510** | |
| **Product-specific scope of supply** | | | | | | | | |
| Side panels, lockable, including security lock 3524 E | 2 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Side panel | | – | – | – | – | – | – | |
| Baying kit | 4 pc(s). | 7888.640 | 7888.640 | 7888.640 | 7888.640 | 7888.640 | 7888.640 | 916 |
| Brush kit | 2 pc(s). | 7888.610 | 7888.610 | 7888.610 | 7888.610 | 7888.610 | 7888.610 | 963 |
| Fan mounting plate | 1 pc(s). | 5502.020 | 5502.020 | 5502.020 | 5502.020 | 5502.020 | 5502.020 | 790 |
| Complete earthing kit | 1 pc(s). | 7000.675 | 7000.675 | 7000.675 | 7000.675 | 7000.675 | 7000.675 | 1036 |
| Comfort handle AX | 1 pc(s). | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 939 |
| Component shelf, static installation | 1 pc(s). | 7000.620 | 7000.620 | 7000.620 | 7000.620 | 7000.620 | 7000.620 | 1008 |
| Component shelf, pull-out | 1 pc(s). | 7000.625 | 7000.625 | 7000.625 | 7000.625 | 7000.625 | 7000.625 | 1009 |
| Slide rail | 2 pc(s). | 7963.410 | 7963.410 | 7963.410 | 7963.410 | 7963.410 | 7963.410 | 1088 |
| Socket strip in a plastic housing | 1 pc(s). | 7000.630 | 7000.630 | 7000.630 | 7000.630 | 7000.630 | 7000.630 | 1041 |

## Width 800 mm

| **Units** U | Packs of | 24 | 42 | 42 | 42 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 800 | 800 | 800 | 800 | |
| **Height** mm | | 1200 | 2000 | 2000 | 2000 | |
| **Depth** mm | | 800 | 600 | 800 | 800 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 495 | 495 | 495 | 495 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 130 / 130 | 30 / 30 | 130 / 130 | 130 / 130 | |
| **Model No.** | 1 pc(s). | **7888.460** | **7888.520** | **7888.530** | **7888.532** | |
| **Product-specific scope of supply** | | | | | | |
| Side panels, lockable, including security lock 3524 E | 2 pc(s). | ■ | ■ | ■ | – | |
| Baying kit | 4 pc(s). | – | – | – | ■ | |
| **Accessories** | | | | | | |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Side panel | 2 pc(s). | – | – | – | 7888.652 | 903 |
| Baying kit | 4 pc(s). | 7888.640 | 7888.640 | 7888.640 | – | 916 |
| Brush kit | 2 pc(s). | 7888.612 | 7888.612 | 7888.612 | 7888.612 | 963 |
| Fan mounting plate | 1 pc(s). | 5502.020 | 5502.020 | 5502.020 | 5502.020 | 790 |
| Complete earthing kit | 1 pc(s). | 7000.675 | 7000.675 | 7000.675 | 7000.675 | 1036 |
| Comfort handle AX | 1 pc(s). | 2435.100 | 2435.100 | 2435.100 | 2435.100 | 939 |
| Component shelf, static installation | 1 pc(s). | 7000.620 | 7000.620 | 7000.620 | 7000.620 | 1008 |
| Component shelf, pull-out | 1 pc(s). | 7000.625 | 7000.625 | 7000.625 | 7000.625 | 1009 |
| Slide rail | 2 pc(s). | 7963.410 | 7963.410 | 7963.410 | 7963.410 | 1088 |
| Socket strip in a plastic housing | 1 pc(s). | 7000.630 | 7000.630 | 7000.630 | 7000.630 | 1041 |

Rittal – The System.



Comfort handle AX

see page 939

# Network racks TE 8000

**System accessories** Page 877 **IT monitoring** Page 799 **IT cooling** Page 757 **IT power** Page 723

**Benefits:**
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed
- Interchangeable door hinge

**Material:**
- Enclosure: Sheet steel
- Glazed door: Single-pane safety glass, 3 mm

**Surface finish:**
- Mounting frame: Dipcoat-primed
- Enclosure panels: Powder-coated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Max. load capacity (static) per enclosure:**
- 4000 N

**Supply includes:**
- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Glazed door at the front, including 130° hinge, designer handle and security lock 3524 E
- Sheet steel door at the rear, including 130° hinge, security lock 3524 E
- Side panels, lockable, including security lock 3524 E
- Base frame with maximum cut-out (for optional population with module plates)
- Roof plate including concealed cut-out for cable entry and optional fan
- 4 levelling feet, M12, including base/plinth adaptor (supplied loose)
- 4 spacers, 20 mm (supplied loose) to raise the roof plate
- Base/plinth system VX, 100 mm, vented
- Tested frame earthing to IEC 60 950, fitted
- 4 cable guide rails, for cable clamping in the enclosure depth via cable clamps (supplied loose)
- 10 cable shunting rings, metal, 125 x 65 mm (supplied loose)
- 12 x 482.6 mm (19") fastener, 1 U, conductive (supplied loose)
- 50 multi-tooth screws, conductive (supplied loose)
- Brush kit for cable entry in the roof (supplied loose)

## Pre-configured

| **Units** U | Packs of | 24 | 42 | Page |
|---|---|---|---|---|
| **Width** mm | | 800 | 800 | |
| **Height** mm | | 1200 | 2000 | |
| **Height including base/plinth** mm | | 1300 | 2100 | |
| **Depth** mm | | 800 | 800 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 495 | 495 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 130 / 130 | 130 / 130 | |
| **Model No.** | 1 pc(s). | **7888.840** | **7888.850** | |
| **Accessories** | | | | |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 1097 |
| Baying kit | 4 pc(s). | 7888.640 | 7888.640 | 916 |
| Fan mounting plate | 1 pc(s). | 5502.020 | 5502.020 | 790 |
| Complete earthing kit | 1 pc(s). | 7000.675 | 7000.675 | 1036 |
| Comfort handle AX | 1 pc(s). | 2435.100 | 2435.100 | 939 |
| Component shelf, static installation | 1 pc(s). | 7000.620 | 7000.620 | 1008 |
| Slide rail | 2 pc(s). | 7963.410 | 7963.410 | 1088 |
| Complete CAT 6 system | | see page | see page | 1069 |
| IT LED system light | 1 pc(s). | 7859.000 | 7859.000 | 1027 |
| Socket strip in a plastic housing | 1 pc(s). | 7000.630 | 7000.630 | 1041 |

# Network racks TE 8000

**System accessories** Page 877 **Power System Module** Page 744 **IT monitoring** Page 799 **Climate control** Page 449

**Benefits:**
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed
- Interchangeable door hinge

**Material:**
- Sheet steel

**Surface finish:**
- Mounting frame: Dipcoat-primed
- Enclosure panels: Powder-coated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Max. load capacity (static) per enclosure:**
- 7000 N

**Supply includes:**
- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Sheet steel door vented (vented surface area > 67%), front with designer handle, 130° hinge, security lock 3524 E
- Sheet steel door vented (vented surface area > 67%), rear with 130° hinge, security lock 3524 E
- Base frame with maximum cut-out (for optional population with module plates)
- Roof plate including concealed cut-out for cable entry and optional fan
- 4 levelling feet, M10 (supplied loose)
- 4 spacers, 20 mm (supplied loose) to raise the roof plate

Please observe the product-specific scope of supply.

## Vented

| **Units** U | Packs of | 24 | 42 | 42 | Page |
|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 800 | |
| **Height** mm | | 1200 | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1000 | 1000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 745 | 745 | 745 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 80 / 130 | 80 / 130 | 80 / 130 | |
| **Model No.** | 1 pc(s). | **7888.875** | **7888.882** | **7888.892** | |
| **Product-specific scope of supply** | | | | | |
| Side panels, lockable, including security lock 3524 E | 2 pc(s). | ■ | – | – | |
| Baying kit | 4 pc(s). | – | ■ | ■ | |
| **Accessories** | | | | | |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Side panel | 2 pc(s). | – | 7888.653 | 7888.653 | 903 |
| Baying kit | 4 pc(s). | 7888.640 | – | – | 916 |
| Brush kit | 2 pc(s). | 7888.610 | 7888.610 | 7888.612 | 963 |
| Complete earthing kit | | see page | see page | see page | 1036 |
| Comfort handle AX | 1 pc(s). | 2435.100 | 2435.100 | 2435.100 | 939 |
| Component shelf, static installation | 1 pc(s). | 5501.665 | 5501.665 | 5501.665 | 1008 |
| Component shelf, pull-out | 1 pc(s). | 5501.685 | 5501.685 | 5501.685 | 1009 |
| Slide rails, heavy-duty | 2 pc(s). | 7063.740 | 7063.740 | 7063.740 | 1087 |
| Slide rail, 1 U, depth-variable | 2 pc(s). | 5302.035 | 5302.035 | 5302.035 | 1088 |
| Combination rails | 4 pc(s). | 5302.020 | 5302.020 | 5302.020 | 1063 |
| Cable clamp rail, depth-variable | 1 pc(s). | 5302.044 | 5302.044 | 5302.044 | 1063 |
| Transport castors | 4 pc(s). | 7000.672 | 7000.672 | 7000.672 | 895 |
| Socket strip in a plastic housing | 1 pc(s). | 7000.630 | 7000.630 | 7000.630 | 1041 |

# Distributor racks

**19" installation** Page 1079 **System accessories** Page 877 **TE 8000** Page 703

**Benefits:**
- Optimum accessibility from all sides during assembly and nstallation
- Unrestricted airflow, due to the open design
- The distance between attachment levels is infinitely variable

**Material:**
- Sheet steel

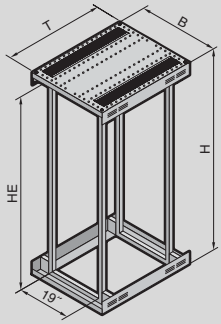
**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

**Max. load capacity (static) per enclosure:**
- 7000 N

**Supply includes:**
- Self-supporting mounting frame, with 482.6 mm (19") mounting level front and rear
- Roof-plate, prepared for accommodating cable organisers
- Open base frame with 2 punched sections with mounting flanges for individual configuration fitted in the width
- 4 levelling feet, M10 (supplied loose)

Please observe the product-specific scope of supply.




## TE 8000 open

| **Units** U | Packs of | 42 | 42 | Page |
|---|---|---|---|---|
| **Width** mm | | 600 | 800 | |
| **Height** mm | | 2000 | 2000 | |
| **Depth** mm | | 1000 | 1000 | |
| Distance between prefitted 482.6 mm (19") levels mm | | 745 | 745 | |
| Free mounting space to the 482.6 mm (19") level, front/rear mm | | 80 / 130 | 80 / 130 | |
| **Model No.** | 1 pc(s). | **7888.940** | **7888.944** | |
| **Product-specific scope of supply** | | | | |
| Roof plate with brush strip, rear horizontal | | ■ | – | |
| Roof plate with brush strip on both sides | | – | ■ | |
| **Accessories** | | | | |
| Cable organiser | 4 pc(s). | 7888.950 | 7888.950 | 963 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 1097 |
| Component shelf, static installation | 1 pc(s). | 5501.665 | 5501.665 | 1008 |
| Component shelf, pull-out | 1 pc(s). | 5501.685 | 5501.685 | 1008 |
| Slide rails, heavy-duty | 2 pc(s). | 7063.740 | 7063.740 | 1087 |
| Slide rail, 1 U, depth-variable | 2 pc(s). | 5302.035 | 5302.035 | 1088 |
| Combination rails | 4 pc(s). | 5302.026 | 5302.026 | 1074 |
| Cable route | 1 pc(s). | 7000.685 | 7000.685 | 1066 |
| Cable duct | 1 pc(s). | – | – | |
| Cable routing bars, 482.6 mm (19") attachment | 4 pc(s). | 7111.224 | 7111.224 | 1067 |
| Shunting ring | 4 pc(s). | – | 7220.600 | 1064 |
| Cable management panel | | see page | see page | 1072 |

**19" installation** Page 1079 **IT monitoring** Page 799 **Power System Module** Page 747 **Accessories for Data Rack** Page 1079

**Material:**
- Profile frame, base/plinth: Sheet steel
- Feet: Die-cast zinc

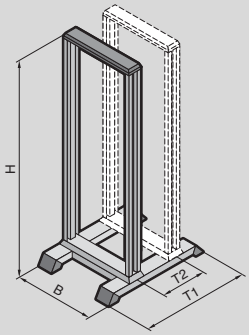
**Colour:**
- Profile frame, base/plinth: RAL 7035
- Trim panel, feet: RAL 5018

**Max. load capacity (static) per 482.6 mm (19") level:**
- 1500 N

**Supply includes:**
- Torsionally stiff profile frame with 482.6 mm (19") punchings
- Stable base/plinth with integral feet, with the option of floor anchoring without base trim panels
- Mounting accessories

**Note:**
- Order second mounting level separately

Photo shows a configuration example with equipment not included in the scope of supply




## Data Rack

| **Units** U | Packs of | 31 | 36 | 40 | 45 | Page |
|---|---|---|---|---|---|---|
| **Width** (B) mm | | 550 | 550 | 550 | 550 | |
| **Height** (H) mm | | 1500 | 1722 | 1900 | 2122 | |
| **Depth** (T1) mm | | 750 | 750 | 750 | 750 | |
| Distance from the second mounting level, 50 mm pitch pattern (T2) mm | | 150 - 350 | 150 - 350 | 150 - 350 | 150 - 350 | |
| **Model No.** | 1 pc(s). | **7391.000** | **7396.000** | **7400.000** | **7445.000** | |
| **Accessories** | | | | | | |
| Second pair of mounting angles | 1 pc(s). | 7296.000 | 7297.000 | 7298.000 | 7299.000 | 1079 |
| Levelling feet | | see page | see page | see page | see page | 892 |
| Twin castors | 1 pc(s). | 7495.000 | 7495.000 | 7495.000 | 7495.000 | 893 |
| Baying clamp | 3 pc(s). | 7494.000 | 7494.000 | 7494.000 | 7494.000 | 1079 |
| Support strips | 2 pc(s). | 7401.000 | 7401.000 | 7401.000 | 7401.000 | 1079 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |
| Component shelf 2 U, static installation | | see page | see page | see page | see page | 1010 |
| Slide rail, 2 U, static installation, continuous | 2 pc(s). | 7402.000 | 7402.000 | 7402.000 | 7402.000 | 1079 |
| Slide rail | | see page | see page | see page | see page | 1079 |
| Combination rails | 4 pc(s). | 5302.026 | 5302.026 | 5302.026 | 5302.026 | 1074 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Keyboard drawer 2 U | 1 pc(s). | 7281.035 | 7281.035 | 7281.035 | 7281.035 | 1115 |

# Small IT racks series

## Solutions for every application

## VerticalBox – the ideal solution for small networks in office environments

- Compact wall-mounted, under-desk or desktop rack
- Free access from all sides to the 482.6 mm (19˝) level
- Door and side parts may be dismantled with no need for tools
- Passive ventilation as standard, fan may be retrofitted

## FlatBox – the space-saving flat-pack solution

- 482.6 mm (19˝) rack for networks in office environments
- Supplied flat-packed, for easy and fast tool-free assembly
- May be used as wall-mounted or floor-standing enclosure, with free access from all sides
- Passive ventilation as standard, fan may be retrofitted

## Wall-mounted enclosure EL, 3-part – optimum access to IT components

- Flexible wall-mounted enclosure in a range of designs and outputs
- Vertically hinged centre part for optimum access to IT equipment
- Suitable for industrial and IT applications
- High protection category up to IP 55

## AX IT – for use in harsh environments

- Enclosure series to accommodate small IT components
- Data collection and distribution in industrial environments
- High protection category up to IP 66

# VerticalBox

**System accessories** Page 877

Compact 482.6 mm (19") enclosure for small networks.

**Benefits:**
- May be used as wall-mounted, under-desk or desktop enclosure
- Free access from three sides for interior installation
- Passive ventilation with vent slots
- Rear panel prepared to accommodate a fan
- Freely selectable door hinging
- Space-saving, vertical mounting of 482.6 mm (19") installation components at the side

**Material:**
- Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

**Supply includes:**
- Enclosure with glazed door
- Side panels (1 x fixed, 1 x slot-in) with vent slots
- Knockouts for cable entry via roof or base
- Slot-in rear panel with knockouts for cable entry and fan accommodation
- 482.6 mm (19") mounting level, 5 U, horizontal front and rear, depth-variable, distance between levels 434 – 489 mm
- Security lock 12321 on the door, side and rear panel
- 4 plastic feet, self-adhesive

| **Units** U | Packs of | 5 | Page |
|---|---|---|---|
| **Width** mm | | 300 | |
| **Height** mm | | 540 | |
| **Depth** mm | | 600 | |
| **Model No.** | 1 pc(s). | **7501.000** | |
| **Accessories** | | | |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 1097 |
| Captive nuts | 50 pc(s). | 2094.500 | 1098 |
| Assembly screws | 50 pc(s). | 7094.130 | 1098 |
| IT LED system light | 1 pc(s). | 7859.000 | 1027 |
| Brush strip | 1 pc(s). | 7072.200 | 1055 |
| Complete earthing kit | 1 pc(s). | 7000.675 | 1036 |
| Fan expansion kit | 1 pc(s). | 7980.100 | 790 |
| Socket strip in a plastic housing | 1 pc(s). | 7000.630 | 1041 |
| Socket strip for IEC 320 connectors | 1 pc(s). | 7240.200 | 1040 |
| Socket strip in an aluminium duct | | see page | 1040 |
| Blanking panel, 482.6 mm (19") | | see page | 1093 |
| Cable management panel | | see page | 1072 |
| Cable management panel with brush strip | 1 pc(s). | 5302.202 | 1074 |

**System accessories** Page 877

For flexible use as a wall-mounted or floor-standing enclosure.

**Benefits:**
- Tool-free quick assembly
- System assembly on the open 482.6 mm (19") frame

**Material:**
- Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

**Supply includes:**
- Flat-packed enclosure
- 1 wall section
- 2 basic supports
- 2 roof/base plates, with cut-outs for cable entry via brush strips
- 2 side panels, lockable
- 1 glazed door, lockable, security lock 3524 E, door hinge point selectable
- Connection components for tool-free, fast assembly
- Earthing kit for system-compatible earthing of all enclosure parts

Please observe the product-specific scope of supply.

**Note:**
- Max. installation depth: Depth - 58 mm to rear panel
- Max. distance between two 482.6 mm (19") levels: Depth - 104 mm

Photo shows a configuration example with equipment not included in the scope of supply

## Design with 482.6 mm (19") mounting angles

| **Units** U | Packs of | 6 | 6 | 9 | 9 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 600 | 600 | |
| **Height** mm | | 358 | 358 | 492 | 492 | |
| **Depth** mm | | 400 | 600 | 400 | 600 | |
| Load capacity | | max. 300 N | max. 300 N | max. 450 N | max. 450 N | |
| **Model No.** | 1 pc(s). | **7507.000** | **7507.100** | **7507.010** | **7507.110** | |
| **Product-specific scope of supply** | | | | | | |
| 482.6 mm (19") mounting frame | 1 pc(s). | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | |
| Base/plinth | 1 pc(s). | – | 7507.750 | – | 7507.750 | 891 |
| Transport castors | 4 pc(s). | 7000.672 | 7000.672 | 7000.672 | 7000.672 | 895 |
| Levelling feet | 4 pc(s). | 7507.740 | 7507.740 | 7507.740 | 7507.740 | 892 |
| Mounting angles, 482.6 mm (19") | 2 pc(s). | 7507.706 | 7507.706 | 7507.709 | 7507.709 | 1085 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |
| Component shelf 2 U, static installation | | see page | see page | see page | see page | 1010 |
| Component shelf, pull-out | 1 pc(s). | – | 5501.675 | – | 5501.675 | 1007 |
| Cover plates for fan panels | 6 pc(s). | 7507.760 | 7507.760 | 7507.760 | 7507.760 | 791 |
| Combination rails | 4 pc(s). | 5302.026 | 5302.026 | 5302.026 | 5302.026 | 1074 |
| Fan expansion kit | | see page | see page | see page | see page | 790 |
| Cable management panel | 1 pc(s). | 5502.205 | 5502.205 | 5502.205 | 5502.205 | 1072 |
| Cable management panel with brush strip | 1 pc(s). | 5302.202 | 5302.202 | 5302.202 | 5302.202 | 1074 |
| Earth rail, horizontal | 1 pc(s). | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 1036 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |

# FlatBox

## Design with 482.6 mm (19") mounting frame

| **Units** U | Packs of | 12 | 12 | 15 | 15 | 18 | 21 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 600 | 700 | 700 | 700 | |
| **Height** mm | | 625 | 625 | 758 | 758 | 892 | 1025 | |
| **Depth** mm | | 400 | 600 | 400 | 700 | 700 | 700 | |
| Load capacity | | max. 600 N | max. 600 N | max. 750 N | max. 750 N | max. 750 N | max. 750 N | |
| **Model No.** | 1 pc(s). | **7507.020** | **7507.120** | **7507.030** | **7507.200** | **7507.210** | **7507.220** | |
| **Product-specific scope of supply** | | | | | | | | |
| 482.6 mm (19") mounting angles | 2 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | |
| Base/plinth | 1 pc(s). | – | 7507.750 | – | 7507.755 | 7507.755 | 7507.755 | 891 |
| Transport castors | 4 pc(s). | 7000.672 | 7000.672 | 7000.672 | 7000.672 | 7000.672 | 7000.672 | 895 |
| Levelling feet | 4 pc(s). | 7507.740 | 7507.740 | 7507.740 | 7507.740 | 7507.740 | 7507.740 | 892 |
| Mounting angles, 482.6 mm (19") | 2 pc(s). | 7507.712 | 7507.712 | 7507.715 | 7507.715 | 7507.718 | 7507.721 | 1085 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |
| Component shelf 2 U, static installation | | see page | see page | see page | see page | see page | see page | 1010 |
| Component shelf, pull-out | 1 pc(s). | – | 5501.675 | – | 5501.675 | 5501.675 | 5501.675 | 1007 |
| Cover plates for fan panels | 6 pc(s). | 7507.760 | 7507.760 | 7507.760 | 7507.760 | 7507.760 | 7507.760 | 791 |
| Combination rails | 4 pc(s). | 5302.026 | 5302.026 | 5302.026 | 5302.026 | 5302.026 | 5302.026 | 1074 |
| Fan expansion kit | | see page | see page | see page | see page | see page | see page | 790 |
| Cable management panel | 1 pc(s). | 5502.205 | 5502.205 | 5502.205 | 5502.205 | 5502.205 | 5502.205 | 1072 |
| Cable management panel with brush strip | 1 pc(s). | 5302.202 | 5302.202 | 5302.202 | 5302.202 | 5302.202 | 5302.202 | 1074 |
| Earth rail, horizontal | 1 pc(s). | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 1036 |
| Thermostat | 1 pc(s). | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 3110.000 | 547 |

# Wall-mounted enclosures EL, 3-part

**System accessories** Page 877 **Socket strips** Page 1040 **Wall mounting bracket** Page 958 **Cable clamps** Page 1060

Wall-mounted enclosure with optimum accessibility due to hinged part.

**Material:**
- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

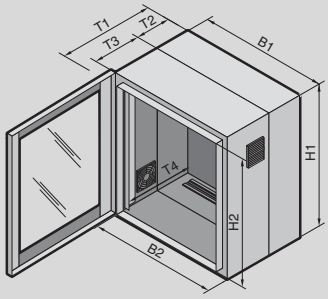
**Colour:**
- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

**Protection category IP to IEC 60 529:**
- IP 54 in conjunction with solid gland plate, top and bottom

**Supply includes:**
- Wall section with solid gland plate at the top and brush strip at the bottom, two vertical mounting rails and C rail, horizontal, for cable clamping
- Hinged part with 25 mm pitch pattern of holes in the front and rear frame, two 482.6 mm (19") mounting angles at the front, infinitely depth-variable, and side outlet filters on the left and right
- Earth rail with star earthing
- Designer glazed door
- 1 double-kit key no. 5

Please observe the product-specific scope of supply.

**Approvals:**
- UL
- cUL




## Pre-configured with mounting angles, depth-variable

| **Units** U | Packs of | 9 | 9 | 15 | 15 | 21 | 21 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** (B1) mm | | 600 | 600 | 600 | 600 | 600 | 600 | |
| **Height** (H1) mm | | 478 | 478 | 746 | 746 | 1012 | 1012 | |
| **Depth** (T1) mm | | 573 | 673 | 573 | 673 | 573 | 673 | |
| Clearance width (B2) mm | | 502 | 502 | 502 | 502 | 502 | 502 | |
| Clearance height (H2) mm | | 415 | 415 | 683 | 683 | 949 | 949 | |
| Depth of wall section (T2) mm | | 135 | 135 | 135 | 135 | 135 | 135 | |
| Depth of hinged part (T3) mm | | 416 | 516 | 416 | 516 | 416 | 516 | |
| Max. installation depth (T4) mm | | 520 | 620 | 520 | 620 | 520 | 620 | |
| Load capacity of hinged part (static) N | | 450 | 450 | 750 | 750 | 750 | 750 | |
| **Model No.** | 1 pc(s). | **7709.735** | **7709.535** | **7715.735** | **7715.535** | **7721.735** | **7721.535** | |
| **Product-specific scope of supply** | | | | | | | | |
| Wall mounting bracket, 10 mm | 4 pc(s). | ■ | – | ■ | – | ■ | – | |
| Mini-comfort handle for lock inserts | 1 pc(s). | ■ | ■ | ■ | ■ | – | – | |
| Security lock 3524 E | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| Wall mounting bracket, 10 mm, reinforced | 4 pc(s). | – | ■ | – | ■ | – | ■ | |
| Comfort handle for lock inserts and 2-point locking | 1 pc(s). | – | – | – | – | ■ | ■ | |
| **Accessories** | | | | | | | | |
| Gland plate for metric cable glands | 1 pc(s). | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 1054 |
| Fan expansion kit | 1 pc(s). | 7980.100 | 7980.100 | 7980.100 | 7980.100 | 7980.100 | 7980.100 | 790 |
| Spare filter mat | 5 pc(s). | 3322.700 | 3322.700 | 3322.700 | 3322.700 | 3322.700 | 3322.700 | 535 |
| Component shelf 2 U, static installation | | see page | see page | see page | see page | see page | see page | 1010 |
| Cable management panel | 1 pc(s). | 7257.200 | 7257.200 | 7257.200 | 7257.200 | 7257.200 | 7257.200 | 1072 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Wall mounting bracket | 4 pc(s). | 2503.020 | – | 2503.020 | – | 2503.020 | – | 967 |

# Wall-mounted enclosures EL, 3-part

**System accessories** Page 877 **Socket strips** Page 1040 **Wall mounting bracket** Page 958 **Earthing** Page 1033

Wall-mounted enclosure with optimum accessibility due to hinged part.

**Material:**
- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

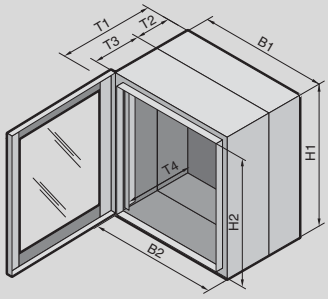
**Colour:**
- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

**Protection category IP to IEC 60 529:**
- IP 55

**Supply includes:**
- Wall section with solid gland plate, top and bottom, two vertical mounting rails and C rail, horizontal, for cable clamping
- Hinged part with 25 mm pitch pattern of holes in the front and rear frame, and two 482.6 mm (19") mounting angles at the front, infinitely depth-variable
- 4 wall mounting brackets 10 mm
- Designer glazed door
- 1 double-kit key no. 5

Please observe the product-specific scope of supply.

**Approvals:**
- UL
- cUL




## with punched rails and mounting angles, depth-variable

| **Units** U | Packs of | 6 | 9 | 12 | 15 | 21 | Page |
|---|---|---|---|---|---|---|---|
| **Width** (B1) mm | | 600 | 600 | 600 | 600 | 600 | |
| **Height** (H1) mm | | 345 | 478 | 612 | 746 | 1012 | |
| **Depth** (T1) mm | | 473 | 473 | 473 | 473 | 473 | |
| Clearance width (B2) mm | | 502 | 502 | 502 | 502 | 502 | |
| Clearance height (H2) mm | | 282 | 415 | 549 | 683 | 949 | |
| Depth of wall section (T2) mm | | 135 | 135 | 135 | 135 | 135 | |
| Depth of hinged part (T3) mm | | 316 | 316 | 316 | 316 | 316 | |
| Max. installation depth (T4) mm | | 420 | 420 | 420 | 420 | 420 | |
| Load capacity of hinged part (static) N | | 300 | 450 | 600 | 750 | 750 | |
| **Model No.** | 1 pc(s). | **7706.135** | **7709.135** | **7712.135** | **7715.135** | **7721.135** | |
| **Product-specific scope of supply** | | | | | | | |
| Mini-comfort handle for lock inserts | 1 pc(s). | ■ | ■ | ■ | ■ | – | |
| Security lock 3524 E | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | |
| Comfort handle for lock inserts and 2-point locking | 1 pc(s). | – | – | – | – | ■ | |
| **Accessories** | | | | | | | |
| Gland plate with brush insert | 1 pc(s). | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 1055 |
| Gland plate for metric cable glands | 1 pc(s). | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 1054 |
| Earth rail, horizontal | 1 pc(s). | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 1036 |
| Component shelf 2 U, static installation | | see page | see page | see page | see page | see page | 1010 |
| Cable management panel | 1 pc(s). | 7257.200 | 7257.200 | 7257.200 | 7257.200 | 7257.200 | 1072 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |

# Wall-mounted enclosures EL, 3-part

**System accessories** Page 877 **Socket strips** Page 1040 **Wall mounting bracket** Page 958 **Cable clamps** Page 1060

Wall-mounted enclosure with optimum accessibility due to hinged part.

**Material:**
- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

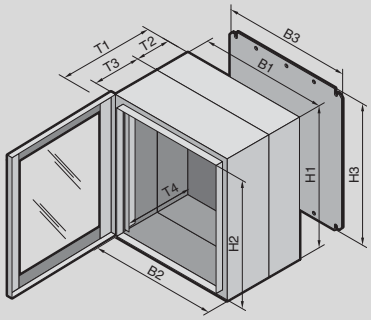
**Colour:**
- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

**Protection category IP to IEC 60 529:**
- IP 55

**Supply includes:**
- Wall section with solid gland plate, top and bottom and mounting plate (supplied loose).
- Hinged part with 25 mm pitch pattern of holes in the front and rear frame, and two 482.6 mm (19") mounting angles, front, static installation
- Designer glazed door
- 1 double-kit key no. 5

Please observe the product-specific scope of supply.

**Approvals:**
- UL
- cUL




## with mounting plate and mounting angles, static installation

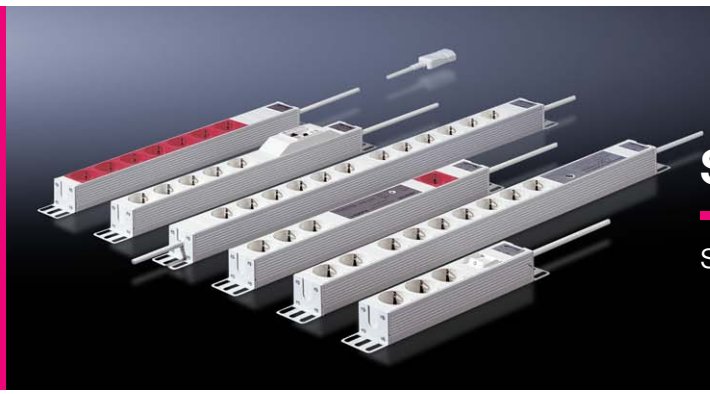
| **Units** U | Packs of | 3 | 3 | 6 | 6 | 9 | 9 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** (B1) mm | | 600 | 600 | 600 | 600 | 600 | 600 | |
| **Height** (H1) mm | | 212 | 212 | 345 | 345 | 478 | 478 | |
| **Depth** (T1) mm | | 373 | 473 | 373 | 473 | 373 | 473 | |
| Clearance width (B2) mm | | 502 | 502 | 502 | 502 | 502 | 502 | |
| Clearance height (H2) mm | | 149 | 149 | 282 | 282 | 415 | 415 | |
| Depth of wall section (T2) mm | | 135 | 135 | 135 | 135 | 135 | 135 | |
| Depth of hinged part (T3) mm | | 216 | 316 | 216 | 316 | 216 | 316 | |
| Max. installation depth (T4) mm | | 320 | 420 | 320 | 420 | 320 | 420 | |
| Mounting plate width (B3) mm | | 485 | 485 | 485 | 485 | 485 | 485 | |
| Mounting plate height (H3) mm | | 165 | 165 | 299 | 299 | 432 | 432 | |
| Load capacity of hinged part (static) N | | 150 | 150 | 300 | 300 | 450 | 450 | |
| **Model No.** | 1 pc(s). | **2243.605** | **2253.605** | **2246.605** | **2256.605** | **2249.605** | **2259.605** | |
| **Product-specific scope of supply** | | | | | | | | |
| Mini-comfort handle for lock inserts | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| Security lock 3524 E | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| **Accessories** | | | | | | | | |
| Gland plate with brush insert | 1 pc(s). | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 1055 |
| Gland plate for metric cable glands | 1 pc(s). | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 1054 |
| Wall mounting bracket | | see page | see page | see page | see page | see page | see page | 966 |
| Component shelf 2 U, static installation | | – | see page | – | see page | – | see page | 1010 |
| Blanking plate, 482.6 mm (19") | | see page | see page | see page | see page | see page | see page | 1092 |
| Lock insert | | see page | see page | see page | see page | see page | see page | 941 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |

# Wall-mounted enclosures EL, 3-part

## with mounting plate and mounting angles, static installation

| **Units** U | Packs of | 12 | 12 | 15 | 15 | 21 | 21 | Page |
|---|---|---|---|---|---|---|---|---|
| **Width** (B1) mm | | 600 | 600 | 600 | 600 | 600 | 600 | |
| **Height** (H1) mm | | 612 | 612 | 746 | 746 | 1012 | 1012 | |
| **Depth** (T1) mm | | 373 | 473 | 373 | 473 | 373 | 473 | |
| Clearance width (B2) mm | | 502 | 502 | 502 | 502 | 502 | 502 | |
| Clearance height (H2) mm | | 549 | 549 | 683 | 683 | 949 | 949 | |
| Depth of wall section (T2) mm | | 135 | 135 | 135 | 135 | 135 | 135 | |
| Depth of hinged part (T3) mm | | 216 | 316 | 216 | 316 | 216 | 316 | |
| Max. installation depth (T4) mm | | 320 | 420 | 320 | 420 | 320 | 420 | |
| Mounting plate width (B3) mm | | 485 | 485 | 485 | 485 | 485 | 485 | |
| Mounting plate height (H3) mm | | 565 | 565 | 699 | 699 | 965 | 965 | |
| Load capacity of hinged part (static) N | | 600 | 600 | 750 | 750 | 750 | 750 | |
| **Model No.** | 1 pc(s). | **2252.605** | **2262.605** | **2255.605** | **2265.605** | **2261.605** | **2271.605** | |
| **Product-specific scope of supply** | | | | | | | | |
| Mini-comfort handle for lock inserts | 1 pc(s). | ■ | ■ | ■ | ■ | – | – | |
| Security lock 3524 E | 1 pc(s). | ■ | ■ | ■ | ■ | ■ | ■ | |
| Comfort handle for lock inserts and 2-point locking | 1 pc(s). | – | – | – | – | ■ | ■ | |
| **Accessories** | | | | | | | | |
| Gland plate with brush insert | 1 pc(s). | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 7705.035 | 1055 |
| Gland plate for metric cable glands | 1 pc(s). | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 7705.235 | 1054 |
| Wall mounting bracket | | see page | see page | see page | see page | see page | see page | 967 |
| Component shelf 2 U, static installation | | – | see page | – | see page | – | see page | 1010 |
| Blanking plate, 482.6 mm (19") | | see page | see page | see page | see page | see page | see page | 1092 |
| Lock insert | | see page | see page | see page | see page | see page | see page | 941 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |

Rittal – The System.



Socket strips

see page 1040

# Wall-mounted enclosures AX IT

**System accessories** Page 877 **Socket strips** Page 1040 **Captive nuts** Page 1002 **Glazed doors** Page 926

IT wall-mounted enclosure based on AX, with high protection category, for use in industrial environments.

**Applications:**
- IT enclosure for use in industrial environments
- Secure, protected integration of IT directly into your production plant processes

**Benefits:**
- Fully pre-assembled IT enclosure for immediate accommodation of 482.6 mm (19") IT components, with depth-variable mounting angles
- Welded enclosure construction with all-round solid body ensures maximum protection for installed components, up to IP 66
- Door hinged on the right, may be swapped to the left
- Maximum usable interior volume with an extremely compact design
- Individual interior configuration
- Maximum cut-out in the enclosure base with optimised gland plates increases the space for cable routing by up to 33%
- Convenient cable entry from below via a gland plate with integral brush strip

**Installation options:**
- Pre-configured mounting bracket including C rail for cable clamping
- Mounting bracket to accommodate a central earth rail
- Mounting bracket for mounting a 482.6 mm (19") socket strip

**Material:**
- Sheet steel

**Surface finish:**
- Enclosure and door: Dipcoat primed, powder-coated on the outside, textured paint
- Interior installation: Zinc-plated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 10 (up to IP 66 on request)
- Up to IP 66 (depending on the selected gland pate)

**Supply includes:**
- Pre-assembled IT enclosure with hinged door, of all-round solid construction
- Cam lock with 3 mm double-bit insert
- Gland plate with brush strip
- 482.6 mm (19") mounting angle, front, mounted onto four interior installation rails with depth adjustment in 25 mm pitch pattern
- Mounting bracket
- C rail, fastened to the rear panel

**Note:**
- Variant with UL approval available on request

## with 482.6 mm (19") mounting angles, depth-variable

| **Units** U | Packs of | 7 | 12 | 15 | 15 | Page |
|---|---|---|---|---|---|---|
| **Width** mm | | 600 | 600 | 600 | 600 | |
| **Height** mm | | 380 | 600 | 760 | 800 | |
| **Depth** mm | | 350 | 350 | 350 | 400 | |
| Max. installation depth mm | | 278 | 278 | 278 | 316 | |
| Cam locks | | 1 | 2 | 2 | 2 | |
| **Model No.** | 1 pc(s). | **7641.350** | **7643.350** | **7645.350** | **7646.400** | |
| Gland plate, size | | 7 | 7 | 7 | 7 | |
| Gland plate, qty. | | 1 | 1 | 1 | 1 | |
| **Accessories** | | | | | | |
| Wall angle | 4 pc(s). | 2505.510 | 2505.510 | 2505.510 | 2505.510 | 967 |
| Wall mounting bracket | | see page | see page | see page | see page | 967 |
| Plastic gland plate | 1 pc(s). | 2567.200 | 2567.200 | 2567.200 | 2567.200 | 1050 |
| Metal gland plate | 1 pc(s). | 2577.100 | 2577.100 | 2577.100 | 2577.100 | 1053 |
| Plastic gland plate | 1 pc(s). | 2567.300 | 2567.300 | 2567.300 | 2567.300 | 1052 |
| Component shelf, pull-out, 2 U | 1 pc(s). | 5501.635 | 5501.635 | 5501.635 | 5501.635 | 1010 |
| Earth rail, horizontal | 1 pc(s). | 7113.000 | 7113.000 | 7113.000 | 7113.000 | 1036 |
| Mini-comfort handle AX | 1 pc(s). | 2537.100 | 2537.100 | 2537.100 | 2537.100 | 940 |
| 482.6 mm (19") fastener, 1 U | 24 pc(s). | 2090.000 | 2090.000 | 2090.000 | 2090.000 | 1097 |
| Cable management panel | 1 pc(s). | 5502.205 | 5502.205 | 5502.205 | 5502.205 | 1072 |
| Cable management panel with brush strip | 1 pc(s). | 5302.202 | 5302.202 | 5302.202 | 5302.202 | 1074 |

# Small fibre-optic distributor

**System accessories** Page 877

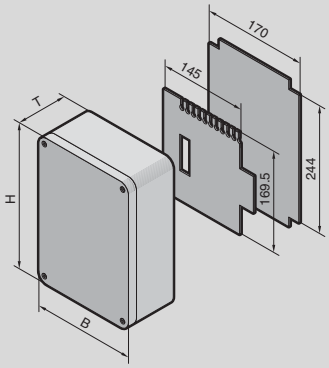
**Benefits:**
- Mounting plate with variable accommodation for up to two splicing cassettes (cassette width variable from 92 to 120 mm) and integral anti-twist guard
- Dividing plate with comb strip for cable clamping, to cover the splicing cassette, and to accommodate 2 patch panels
- Cable entry via prepunched knockouts using cable glands (2 x 22.5 mm and 12 x 12.5 mm)

**Material:**
- Enclosure with cover: Fibreglass-reinforced polycarbonate
- Cover screws: Polyamide
- Insulating bungs: Polyamide
- Foamed-in PU seal

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 66

**Supply includes:**
- Enclosure with knockouts for cable glands
- Hinged cover with seal
- 2 cover screws, prepared for a lead seal
- Insulating bungs for wall mounting
- Mounting plate
- Dividing plate
- 12 cable glands M12 x 1.5
- 1 cable gland M20 x 1.5




## with mounting plate and splicing cassette accommodation

| **Width** (B) mm | Packs of | 180 | Page |
|---|---|---|---|
| **Height** (H) mm | | 254 | |
| **Depth** (T) mm | | 90 | |
| Maximum number of fibres (when using patch panels) | | 24 | |
| **Model No.** | 1 pc(s). | **7451.000** | |
| **Accessories** | | | |
| Patch panels for small fibre-optic distributors | | see page | 1101 |
| Wall mounting bracket | 40 pc(s). | 9583.000 | 47 |

# Network rack TE 8000

A comprehensive range of accessories for individual interior installation, see page 877

# Rittal – The System.

**Faster – better – everywhere.**

# IT power

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## UPS systems

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## Power Distribution Rack

Power Distribution Rack ....728

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## Upgrade solution

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## Your benefits

- Holistic, systematic energy management concepts
- Comprehensive, complete solutions for power distribution and back-up, consistently modular, and flexibly extendible at any time
- Optimum energy and cost efficiency with maximum availability of the entire system
- Reduced installation, administration and resource costs
- High level of investment security
- All from a single source

## Sample applications

1 Power distribution, see page 724

2 UPS (partner product), see page 726

3 Power Distribution Rack PDR, see page 728

4 Power Distribution Unit PDU, see page 742

# VX25 Ri4Power

## The reliable mains infeed for supplying power to data centres

## Low-voltage power distribution for data centres

- The VX25 Ri4Power is suitable for use with open and compact circuit-breakers from all well-known manufacturers.
- The busbar systems are dimensioned to your specific requirements with standard copper bars up to 6300 A and individually configured.
- This allows you to achieve a range of infeed sources for data centres (A and B supply) and to connect emergency generators and UPS systems.
- Automatic transfer switches (ATS) may be used to switch between different infeed sources.

## Tailored power distribution

- Power supply to individual areas (e.g. server zone, plant room) is implemented in the outgoing section.
- Individual functional spaces, shielded from one another, are created within the outgoing section.
- Each outgoing section can be tailored to your specific requirements and individually populated e.g. with switchgear.
- May also be contacted directly with the multi-terminal busbar systems in data centres using a flexible busbar system.

## Simple, efficient planning

- The Rittal Power Engineering planning software makes it much easier to configure section types and equipment. The connector kits are automatically generated and documented when this software is used for project planning.
- Installation of the operating equipment in low-voltage switchgear complies with IEC 61 439 and documented with a design verification. Once the system has been planned with Rittal Power Engineering, the design verification is easily generated.

# UPS systems

## The ideal power back-up solution for data centres

## UPS systems from ABB/Rittal

- Critical loads need to be protected by online double conversion UPS systems. The UPS systems from ABB provide optimum availability and total cost of ownership (TCO), and are based on a complete redundancy concept.
- In the modular UPS series, each UPS module has all the hardware and software needed for autonomous operation. All critical components are available in each individual module, thereby eliminating weak points altogether. This modular approach is known as DPA™ (decentralised parallel architecture).

## UPS systems for every application

- The DPA UPScale RI is one of the most compact uninterruptible power supply systems on the market. It can be installed directly into the 482.6 mm (19″ level) of the rack and is therefore particularly ideal for customer-specific solutions. DPA UPScale RI is designed for applications in the lower and medium output range with 10kW or 20 kW modules and an overall output of between 10 kW and 80 kW per system.
- Conceptpower DPA S4 is a double conversion UPS system for applications in the medium to high output range. The modular architecture of Conceptpower DPA allows a flexible output configuration with 50 kVA rack-mounted modules, which may be retrofitted to meet a rising power demand. This enables implementation of rack-mounted modular and monoblock systems with an output of up to 3 MW.
- With an efficiency of 97.4% in online double conversion mode, this is one of the most advanced systems available on the marketplace.

## Communicate easily

- In line with IEC/EN 62040-3, the double conversion UPS meets all the requirements for category VFI-SS-111.
- For connecting the UPS to the network with the option of linking additional sensors and I/O options, either directly on the card or via a sensor manager. HTTP, SNMP, SMTP, Modbus RS232 and Modbus TCP protocols are supported.

# Power Distribution Rack

## Targeted power distribution in the data centre

## Power distribution module in the 482.6 mm (19˝) format

- Power distribution between the UPS and rack PDU or PSM in a compact 482.6 mm (19˝) form factor for installation within the IT rack
- Ideal for small data centres and individual rack installations
- Four fused 3-phase outlets to the rack
- Independent fusing of each phase and each output
- Built-in master switch
- All outputs plug-type
- Optional RC circuit-breaker

## Power distribution for the rack suite

- Compact PDR for installation within the rack suite with a width of just 300 mm
- Seamless integration into a rack suite with VX IT rack
- Additional equipment may optionally be connected whilst operational
- Optional current measurement system
- Prepared for project-specific design
- Ideal for applications in the IT container

## Flexible power distribution

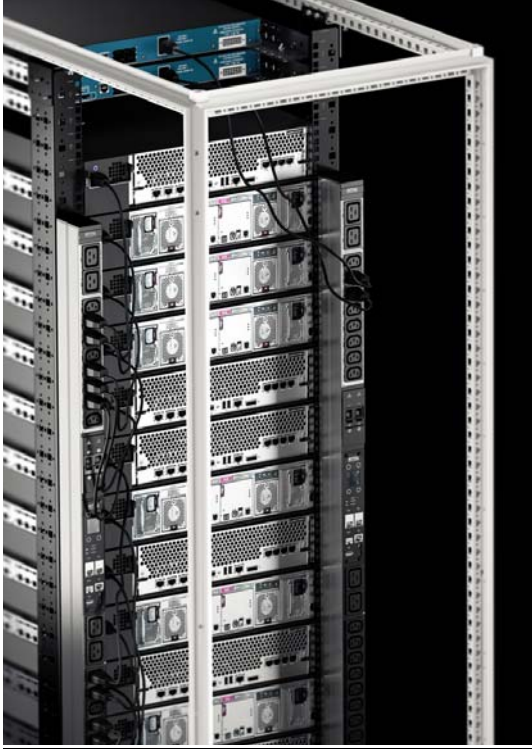
- Installation as either a room or rack solution
- Project-specific selection of peripheral conditions such as rack type and form, ACB type and options ensures flexibility
- Compact design

# Power Distribution Unit

## Demand-based power distribution in the IT rack

## The convincing benefits

- The compact design and tool-free clip fastening onto the 482.6 mm (19″) frame in Rittal IT racks allows simple installation in the zero-U-space, guaranteeing free access to the 482.6 mm (19″) level – a major advantage when retrofitting IT equipment with the system operational.
- The PDU has every application covered with just five variants
  - Basic (simple power distribution)
  - Metered (measurement per phase)
  - Metered Plus (measurement per output slot
  - Switched (measurement per phase, switching function per output)
  - Managed (measurement and switching per output)
- The fully redundant Gigabit network interface for connection to management systems such as RiZone allows cascading of up to 16 PDUs.



## Technical perfection

- Key monitoring functions (alarm relay, digital input and alarm signal generator) are pre-integrated into the PDU, and up to 8 sensors are supported.
- Extended measuring functions such as fault current monitoring (RCM type B) are available.
- The modular concept means that the PDU controller board and overvoltage protection are replaceable.
- The reliable bistable relays allow up to 300 A starting current on all switchable PDUs.
- Optional integrated surge protection with arresters, which can be replaced with the system operational.

## Configure your individual solution online

- The PDU's modular system concept allows individual configuration and optimum adaptation to your specific application. For example, you choose the colour of the housing, the length of the cable, the connector plug or the position of the display yourself.
- Rittal can provide further configuration options, e.g. changing the output slots, adding features such as fault current monitoring and overvoltage protection. Please call us to discuss your individual configuration.

# Power Distribution Unit

**Overview** Page 737 **Network/server racks VX IT** Page 686

**Benefits:**
- With the compact PDU, any IT rack is easily equipped with a professional power distribution system
- With the VX IT rack, assembly is tool-free
- Compact design
- Easy to install, even in the zero-U-space
- Power-saving design with minimal inherent consumption by the PDU itself, thanks to the use of bistable relays and durable TFT colour display with power-saving function
- Integral Web server for direct network connection with extensive user administration functions
- Redundant power supply from all 3 phases and additionally via an existing PoE (Power over Ethernet) network
- Extensive range of management and monitoring functions
- High-MTBF and measurement accuracy of ±1%
- Redundant network interface, may also be used for cascading up to 16 PDUs (not with PDU basic)
- Electric handle systems and ambient monitoring with up to 8 CMC III sensors (temperature, humidity, access, vandalism)
- 2 x Gigabit Ethernet interfaces for fully redundant network connection
- PDU controller may be replaced without having to disconnect the PDU from the power supply

**PDU design variants:**
**PDU basic**
Robust, compact basic power distributor for the IT environment

**PDU metered**
Energy measurement per phase, i.e. output requirement of an entire IT rack

**PDU metered plus**
Energy measurement per output connector, to determine the power requirements of individual consumers

**PDU switched**
Measurement function per phase and individually switchable output slots

**PDU managed**
High-end IT rack, power distribution with energy measurement and monitoring functions for each individual output slot

**Material:**
- Extruded aluminium section, anodised

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- Connector lock for IEC C14 and C20 connectors
- Assembly parts

**Standards:**
- EN 62 368-1
- EN 61 000-4
- EN 61 000-6
- EN 55 022

**Assembly instructions:**
- For mounting in the TE 8000 rack, mounting adaptor 7000.688 is additionally required

**Low Voltage Directive:**
- 2014/35/EU

**EMC directive:**
- 2014/30/EU

## PDU, basic version

| Power | | | Slots/slot type | | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs IEC C13 | Outputs IEC C19 | Outputs Earthing-pin | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT (zero U) 482.6 mm (19") mounting angles | |
| 1~ | 16 | 3.7 | IEC C20 | 8 | – | – | – | – | 450 (19"/1 U) | 800 | 800 | **7979.102** |
| 1~ | 16 | 3.7 | CEE | – | – | 8 | – | – | 450 (19"/1 U) | 800 | 800 | **7979.103** |
| 1~ | 32 | 7.4 | CEE | 4 | 2 | – | – | – | 450 (19"/1 U) | 800 | 800 | **7979.104** |
| 1~ | 16 | 3.7 | CEE | 12 | 1 | – | – | – | 695 | 1200 | 1200 | **7979.110** |
| 1~ | 16 | 3.7 | CEE | – | – | 10 | – | – | 695 | 1200 | 1200 | **7979.111** |
| 1~ | 32 | 7.4 | CEE | 16 | 2 | – | – | – | 845 | 1200 | 1200 | **7979.112** |
| 1~ | 32 | 7.4 | CEE | 12 | 4 | – | – | – | 845 | 1200 | 1200 | **7979.113** |
| 1~ | 32 | 7.4 | CEE | – | – | 16 | – | – | 1095 | 1200 | 1800 | **7979.114** |
| 1~ | 16 | 3.7 | CEE | 24 | 4 | – | – | – | 1095 | 1200 | 1800 | **7979.115** |
| 1~ | 32 | 7.4 | CEE | 24 | 4 | – | – | – | 1295 | 1800 | 1800 | **7979.116** |
| 3~ | 16 | 11 | CEE | – | 9 | – | – | – | 695 | 1200 | 1200 | **7979.130** |
| 3~ | 32 | 22 | CEE | – | 12 | – | – | – | 1095 | 1200 | 1800 | **7979.131** |
| 3~ | 16 | 11 | CEE | 6 | 6 | – | – | – | 695 | 1200 | 1200 | **7979.132** |
| 3~ | 16 | 11 | CEE | – | – | 18 | – | – | 1095 | 1200 | 1800 | **7979.133** |
| 3~ | 32 | 22 | CEE | – | – | 24 | – | – | 1695 | 1800 | 2000 | **7979.134** |
| 3~ | 16 | 11 | CEE | 18 | 3 | – | – | – | 845 | 1200 | 1200 | **7979.135** |
| 3~ | 16 | 11 | CEE | 24 | 6 | – | – | – | 1095 | 1200 | 1800 | **7979.136** |
| 3~ | 32 | 22 | CEE | 24 | 6 | – | – | – | 1495 | 1800 | 1800 | **7979.137** |
| 3~ | 16 | 11 | CEE | 18 | 12 | – | – | – | 1295 | 1800 | 1800 | **7979.138** |
| 3~ | 32 | 22 | CEE | 12 | 12 | – | – | – | 1495 | 1800 | 1800 | **7979.139** |
| 3~ | 16 | 11 | CEE | 36 | 6 | – | – | – | 1495 | 1800 | 1800 | **7979.140** |
| 3~ | 32 | 22 | CEE | 36 | 6 | – | – | – | 1895 | 2000 | 2200 | **7979.141** |
| 3~ | 16 | 11 | CEE | 42 | – | – | – | – | 1495 | 1800 | 1800 | **7979.142** |
| 3~ | 32 | 22 | CEE | 48 | – | – | – | – | 1895 | 2000 | 2200 | **7979.143** |

## PDU, metered version

| Power | | | Slots/slot type | | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs IEC C13 | Outputs IEC C19 | Outputs Earthing-pin | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT (zero U) 482.6 mm (19") mounting angles | |
| 1~ | 16 | 3.7 | IEC C20 | 6 | – | – | per phase | – | 450 (19"/1 U) | 800 | 800 | **7979.202** |
| 1~ | 16 | 3.7 | CEE | – | – | 4 | per phase | – | 450 (19"/1 U) | 800 | 800 | **7979.203** |
| 1~ | 32 | 7.4 | CEE | 4 | 2 | – | per phase | – | 450 (19"/1 U) | 800 | 800 | **7979.204** |
| 1~ | 16 | 3.7 | CEE | 12 | 1 | – | per phase | – | 845 | 1200 | 1200 | **7979.210** |
| 1~ | 16 | 3.7 | CEE | – | – | 10 | per phase | – | 1095 | 1200 | 1800 | **7979.211** |
| 1~ | 32 | 7.4 | CEE | 16 | 2 | – | per phase | – | 1095 | 1200 | 1800 | **7979.212** |
| 1~ | 32 | 7.4 | CEE | 12 | 4 | – | per phase | – | 1095 | 1200 | 1800 | **7979.213** |
| 1~ | 32 | 7.4 | CEE | – | – | 16 | per phase | – | 1295 | 1800 | 1800 | **7979.214** |
| 1~ | 16 | 3.7 | CEE | 24 | 4 | – | per phase | – | 1295 | 1800 | 1800 | **7979.215** |
| 1~ | 32 | 7.4 | CEE | 24 | 4 | – | per phase | – | 1495 | 1800 | 1800 | **7979.216** |
| 3~ | 16 | 11 | CEE | – | 9 | – | per phase | – | 845 | 1200 | 1200 | **7979.230** |
| 3~ | 32 | 22 | CEE | – | 12 | – | per phase | – | 1495 | 1800 | 1800 | **7979.231** |
| 3~ | 16 | 11 | CEE | 6 | 6 | – | per phase | – | 1095 | 1200 | 1800 | **7979.232** |
| 3~ | 16 | 11 | CEE | – | – | 18 | per phase | – | 1495 | 1800 | 1800 | **7979.233** |
| 3~ | 32 | 22 | CEE | – | – | 24 | per phase | – | 1895 | 2000 | 2200 | **7979.234** |
| 3~ | 16 | 11 | CEE | 18 | 3 | – | per phase | – | 1095 | 1200 | 1800 | **7979.235** |
| 3~ | 16 | 11 | CEE | 24 | 6 | – | per phase | – | 1495 | 1800 | 1800 | **7979.236** |
| 3~ | 32 | 22 | CEE | 24 | 6 | – | per phase | – | 1740 | 2000 | 2000 | **7979.237** |
| 3~ | 16 | 11 | CEE | 18 | 12 | – | per phase | – | 1695 | 1800 | 2000 | **7979.238** |
| 3~ | 32 | 22 | CEE | 12 | 12 | – | per phase | – | 1695 | 1800 | 2000 | **7979.239** |
| 3~ | 16 | 11 | CEE | 36 | 6 | – | per phase | – | 1895 | 2000 | 2200 | **7979.240** |
| 3~ | 16 | 11 | CEE | 42 | – | – | per phase | – | 1695 | 1800 | 2000 | **7979.242** |

# Power Distribution Unit

## PDU, metered plus version

| Power | | | Slots/slot type | | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs IEC C13 | Outputs IEC C19 | Outputs Earthing-pin | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT (zero U) 482.6 mm (19") mounting angles | |
| 1~ | 16 | 3.7 | IEC C20 | 6 | – | – | per output | – | 450 (19"/1 U) | 800 | 800 | **7979.502** |
| 1~ | 16 | 3.7 | CEE | – | – | 4 | per output | – | 450 (19"/1 U) | 800 | 800 | **7979.503** |
| 1~ | 32 | 7.4 | CEE | 4 | 2 | – | per output | – | 450 (19"/1 U) | 800 | 800 | **7979.504** |
| 1~ | 16 | 3.7 | CEE | 12 | 1 | – | per output | – | 845 | 1200 | 1200 | **7979.510** |
| 1~ | 16 | 3.7 | CEE | – | – | 10 | per output | – | 1095 | 1200 | 1800 | **7979.511** |
| 1~ | 32 | 7.4 | CEE | 16 | 2 | – | per output | – | 1095 | 1200 | 1800 | **7979.512** |
| 1~ | 32 | 7.4 | CEE | 12 | 4 | – | per output | – | 1095 | 1200 | 1800 | **7979.513** |
| 1~ | 32 | 7.4 | CEE | – | – | 16 | per output | – | 1495 | 1800 | 1800 | **7979.514** |
| 1~ | 16 | 3.7 | CEE | 24 | 4 | – | per output | – | 1295 | 1800 | 1800 | **7979.515** |
| 1~ | 32 | 7.4 | CEE | 24 | 4 | – | per output | – | 1495 | 1800 | 1800 | **7979.516** |
| 3~ | 16 | 11 | CEE | – | 9 | – | per output | – | 845 | 1200 | 1200 | **7979.530** |
| 3~ | 32 | 22 | CEE | – | 12 | – | per output | – | 1495 | 1800 | 1800 | **7979.531** |
| 3~ | 16 | 11 | CEE | 6 | 6 | – | per output | – | 1095 | 1200 | 1200 | **7979.532** |
| 3~ | 16 | 11 | CEE | – | – | 18 | per output | – | 1495 | 1800 | 1800 | **7979.533** |
| 3~ | 32 | 22 | CEE | – | – | 24 | per output | – | 2095 | 2200 | 2200 | **7979.534** |
| 3~ | 16 | 11 | CEE | 18 | 3 | – | per output | – | 1095 | 1200 | 1800 | **7979.535** |
| 3~ | 16 | 11 | CEE | 24 | 6 | – | per output | – | 1495 | 1800 | 1800 | **7979.536** |
| 3~ | 32 | 22 | CEE | 24 | 6 | – | per output | – | 1740 | 2000 | 2000 | **7979.537** |
| 3~ | 16 | 11 | CEE | 18 | 12 | – | per output | – | 1695 | 1800 | 2000 | **7979.538** |
| 3~ | 32 | 22 | CEE | 12 | 12 | – | per output | – | 1695 | 1800 | 2000 | **7979.539** |
| 3~ | 16 | 11 | CEE | 36 | 6 | – | per output | – | 1895 | 2000 | 2200 | **7979.540** |
| 3~ | 16 | 11 | CEE | 42 | – | – | per output | – | 1695 | 1800 | 2000 | **7979.542** |

## PDU, switched version

| Power | | | Slots/slot type | | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs IEC C13 | Outputs IEC C19 | Outputs Earthing-pin | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT (zero U) 482.6 mm (19") mounting angles | |
| 1~ | 16 | 3.7 | IEC C20 | 6 | – | – | per phase | ■ | 450 (19"/1 U) | 800 | 800 | **7979.302** |
| 1~ | 16 | 3.7 | CEE | – | – | 4 | per phase | ■ | 450 (19"/1 U) | 800 | 800 | **7979.303** |
| 1~ | 32 | 7.4 | CEE | 4 | 2 | – | per phase | ■ | 450 (19"/1 U) | 800 | 800 | **7979.304** |
| 1~ | 16 | 3.7 | CEE | 12 | 1 | – | per phase | ■ | 845 | 1200 | 1200 | **7979.310** |
| 1~ | 16 | 3.7 | CEE | – | – | 10 | per phase | ■ | 1095 | 1200 | 1800 | **7979.311** |
| 1~ | 32 | 7.4 | CEE | 16 | 2 | – | per phase | ■ | 1095 | 1200 | 1800 | **7979.312** |
| 1~ | 32 | 7.4 | CEE | 12 | 4 | – | per phase | ■ | 1095 | 1200 | 1800 | **7979.313** |
| 1~ | 32 | 7.4 | CEE | – | – | 16 | per phase | ■ | 1495 | 1800 | 1800 | **7979.314** |
| 1~ | 16 | 3.7 | CEE | 24 | 4 | – | per phase | ■ | 1295 | 1800 | 1800 | **7979.315** |
| 1~ | 32 | 7.4 | CEE | 24 | 4 | – | per phase | ■ | 1495 | 1800 | 1800 | **7979.316** |
| 3~ | 16 | 11 | CEE | – | 9 | – | per phase | ■ | 845 | 1200 | 1200 | **7979.330** |
| 3~ | 32 | 22 | CEE | – | 12 | – | per phase | ■ | 1495 | 1800 | 1800 | **7979.331** |
| 3~ | 16 | 11 | CEE | 6 | 6 | – | per phase | ■ | 1095 | 1200 | 1200 | **7979.332** |
| 3~ | 16 | 11 | CEE | – | – | 18 | per phase | ■ | 1495 | 1800 | 1800 | **7979.333** |
| 3~ | 32 | 22 | CEE | – | – | 24 | per phase | ■ | 2095 | 2200 | 2200 | **7979.334** |
| 3~ | 16 | 11 | CEE | 18 | 3 | – | per phase | ■ | 1095 | 1200 | 1800 | **7979.335** |
| 3~ | 16 | 11 | CEE | 24 | 6 | – | per phase | ■ | 1495 | 1800 | 1800 | **7979.336** |
| 3~ | 32 | 22 | CEE | 24 | 6 | – | per phase | ■ | 1740 | 2000 | 2000 | **7979.337** |
| 3~ | 16 | 11 | CEE | 18 | 12 | – | per phase | ■ | 1695 | 1800 | 2000 | **7979.338** |
| 3~ | 32 | 22 | CEE | 12 | 12 | – | per phase | ■ | 1695 | 1800 | 2000 | **7979.339** |
| 3~ | 16 | 11 | CEE | 36 | 6 | – | per phase | ■ | 1895 | 2000 | 2200 | **7979.340** |
| 3~ | 16 | 11 | CEE | 42 | – | – | per phase | ■ | 1695 | 1800 | 2000 | **7979.342** |

## PDU, managed version

| Power | | | Slots/slot type | | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs IEC C13 | Outputs IEC C19 | Outputs Earthing-pin | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT (zero U) 482.6 mm (19") mounting angles | |
| 1~ | 16 | 3.7 | IEC C20 | 6 | – | – | per output | ■ | 450 (19"/1 U) | 800 | 800 | **7979.402** |
| 1~ | 16 | 3.7 | CEE | – | – | 4 | per output | ■ | 450 (19"/1 U) | 800 | 800 | **7979.403** |
| 1~ | 32 | 7.4 | CEE | 4 | 2 | – | per output | ■ | 450 (19"/1 U) | 800 | 800 | **7979.404** |
| 1~ | 16 | 3.7 | CEE | 12 | 1 | – | per output | ■ | 845 | 1200 | 1200 | **7979.410** |
| 1~ | 16 | 3.7 | CEE | – | – | 10 | per output | ■ | 1095 | 1200 | 1800 | **7979.411** |
| 1~ | 32 | 7.4 | CEE | 16 | 2 | – | per output | ■ | 1095 | 1200 | 1800 | **7979.412** |
| 1~ | 32 | 7.4 | CEE | 12 | 4 | – | per output | ■ | 1095 | 1200 | 1800 | **7979.413** |
| 1~ | 32 | 7.4 | CEE | – | – | 16 | per output | ■ | 1495 | 1800 | 1800 | **7979.414** |
| 1~ | 16 | 3.7 | CEE | 24 | 4 | – | per output | ■ | 1295 | 1800 | 1800 | **7979.415** |
| 1~ | 32 | 7.4 | CEE | 24 | 4 | – | per output | ■ | 1495 | 1800 | 1800 | **7979.416** |
| 3~ | 16 | 11 | CEE | – | 9 | – | per output | ■ | 845 | 1200 | 1200 | **7979.430** |
| 3~ | 32 | 22 | CEE | – | 12 | – | per output | ■ | 1495 | 1800 | 1800 | **7979.431** |
| 3~ | 16 | 11 | CEE | 6 | 6 | – | per output | ■ | 1095 | 1200 | 1200 | **7979.432** |
| 3~ | 16 | 11 | CEE | – | – | 18 | per output | ■ | 1495 | 1800 | 1800 | **7979.433** |
| 3~ | 32 | 22 | CEE | – | – | 24 | per output | ■ | 2095 | 2200 | 2200 | **7979.434** |
| 3~ | 16 | 11 | CEE | 18 | 3 | – | per output | ■ | 1095 | 1200 | 1800 | **7979.435** |
| 3~ | 16 | 11 | CEE | 24 | 6 | – | per output | ■ | 1495 | 1800 | 1800 | **7979.436** |
| 3~ | 32 | 22 | CEE | 24 | 6 | – | per output | ■ | 1740 | 2000 | 2000 | **7979.437** |
| 3~ | 16 | 11 | CEE | 18 | 12 | – | per output | ■ | 1695 | 1800 | 2000 | **7979.438** |
| 3~ | 32 | 22 | CEE | 12 | 12 | – | per output | ■ | 1695 | 1800 | 2000 | **7979.439** |
| 3~ | 16 | 11 | CEE | 36 | 6 | – | per output | ■ | 1895 | 2000 | 2200 | **7979.440** |
| 3~ | 16 | 11 | CEE | 42 | – | – | per output | ■ | 1695 | 1800 | 2000 | **7979.442** |

## PDU UK, basic version

| Power | | | Slots/slot type | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs BS1363 | Outputs IEC C19 | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT 482.6 mm (19") mounting angles | |
| 1~ | 13 | 3.0 | BS1363 | 6 | – | – | – | 450 (19"/1 U) | 800 | 800 | **7979.801** |
| 1~ | 13 | 3.0 | BS1363 | 8 | – | – | – | 695 | 800 | 800 | **7979.811** |
| 1~ | 13 | 3.0 | BS1363 | 12 | – | – | – | 845 | 1200 | 1200 | **7979.812** |
| 1~ | 13 | 3.0 | BS1363 | 16 | – | – | – | 1095 | 1200 | 1800 | **7979.813** |
| 1~ | 16 | 3.7 | CEE | 16 | 4 | – | – | 1295 | 1800 | 1800 | **7979.814** |
| 1~ | 32 | 7.4 | CEE | 16 | 4 | – | – | 1495 | 1800 | 1800 | **7979.815** |

## PDU UK, metered version

| Power | | | Slots/slot type | | | Function | | Dimensions | PDU installed in rack/ min. rack height mm | | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of phases | Phase current A | Output kW | Input | Outputs BS1363 | Outputs IEC C19 | Measuring | Switching | PDU length mm | VX IT rack frame | VX IT 482.6 mm (19") mounting angles | |
| 1~ | 13 | 3.0 | BS1363 | 16 | – | per phase | – | 1495 | 1800 | 1800 | **7979.821** |
| 1~ | 16 | 3.7 | CEE | 16 | 4 | per phase | – | 1695 | 1800 | 2000 | **7979.822** |
| 1~ | 32 | 7.4 | CEE | 16 | 4 | per phase | – | 1695 | 1800 | 2000 | **7979.823** |

# Power Distribution Unit

## Overvoltage protection modules, with replaceable arresters and alarm contact

| Overvoltage protection module type 3 | Type of connection | Connection cable/length | Phases | Phase current A | Output kW | Packs of | **Model No.** | Page |
|---|---|---|---|---|---|---|---|---|
| Design | CEE connector/coupling | H05VV-F3G2.5, 1 m | 1~ | 16 | 3.7 | 1 pc(s). | **7979.721** | 754 |
| Design | CEE connector/coupling | H05VV-F3G4.0, 1 m | 1~ | 32 | 7.4 | 1 pc(s). | **7979.722** | 754 |
| Design | CEE connector/coupling | H05VV-F5G2.5, 1 m | 3~ | 16 | 11.0 | 1 pc(s). | **7979.723** | 754 |
| Design | CEE connector/coupling | H05VV-F5G4.0, 1 m | 3~ | 32 | 22.0 | 1 pc(s). | **7979.724** | 754 |

## PDU accessories

| | Packs of | **Model No.** | Page |
|---|---|---|---|
| Slot cover for C13 jack, lockable | 10 pc(s). | **7955.010** | 752 |
| Slot cover for C19 jack, lockable | 10 pc(s). | **7955.015** | 752 |
| Connector lock for C14/C20 connector | 20 pc(s). | **7979.020** | 752 |
| PDU mounting adaptor for TE 7000/TE 8000 | 2 pc(s). | **7000.688** | 752 |
| PDU accessory pack | 1 pc(s). | **7979.001** | |

## CMC III/PDU sensors

| **CMC III/PDU sensor type** | Packs of | **Model No.** | Page |
|---|---|---|---|
| Temperature sensor | 1 pc(s). | **7030.110** | 807 |
| Temperature/humidity sensor (combi-sensor) | 1 pc(s). | **7030.111** | 807 |
| Infrared access sensor | 1 pc(s). | **7030.120** | 807 |
| Vandalism sensor | 1 pc(s). | **7030.130** | 807 |
| Analogue airflow sensor | 1 pc(s). | **7030.140** | 807 |
| Analogue differential pressure sensor | 1 pc(s). | **7030.150** | 807 |
| Universal sensor (digital inputs) | 1 pc(s). | **7030.190** | 807 |
| Smoke detector | 1 pc(s). | **7030.400** | 807 |
| Leak sensor | 1 pc(s). | **7030.430** | 807 |
| Leak sensor, 15 m | 1 pc(s). | **7030.440** | 807 |
| CMC III CAN bus connection cable RJ 45 (length: 0.5 m, 1x required for each sensor) | 1 pc(s). | **7030.090**[1)] | 818 |
| CMC III CAN bus connection cable RJ 45 (length: 1.0 m, 1x required for each sensor) | 1 pc(s). | **7030.091**[1)] | 818 |
| CMC III CAN bus connection cable RJ 45 (length: 1.5 m, 1x required for each sensor) | 1 pc(s). | **7030.092**[1)] | 818 |
| CMC III CAN bus connection cable RJ 45 (length: 2.0 m, 1x required for each sensor) | 1 pc(s). | **7030.093**[1)] | 818 |

[1)] Other cable lengths may be found under CMC III accessories on page 818

## VX IT handle system

| **VX IT handle system (2 handles may be connected per PDU)** | Packs of | **Model No.** | Page |
|---|---|---|---|
| CMC III online comfort handle VX | 1 pc(s). | **7030.611** | 814 |
| Coded lock for CMC III | 1 pc(s). | **7030.223** | 813 |
| Transponder reader for CMC III | 1 pc(s). | **7030.233** | 813 |
| CMC III Access Control (1x required for each handle system) | 1 pc(s). | **7030.202** | 812 |

## Overview

| PDU version[1] | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|

| Mechanical | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Compact extruded aluminium section, black anodised (other enclosure colours optionally available), W x D: 1 U x 70 mm, various lengths depending on number of slots | ■ | ■ | ■ | ■ | ■ |
| May be fitted in the the zero-U-space in the 600 mm wide Rittal IT rack, (2 PDUs per side, up to 4 in 800 mm wide Rittal IT racks) | ■ | ■ | ■ | ■ | ■ |
| Special PDU versions available for 482.6 mm (19") mounting | ■ | ■ | ■ | ■ | ■ |
| Colour coding of phases and fuse circuits (L1 = pink, L2 = black, L3 = white) | ■ | ■ | ■ | ■ | ■ |
| Universal mounting kit and assembly parts included with the supply | ■ | ■ | ■ | ■ | ■ |
| Tool-free installation kit especially for Rittal VX IT rack included with the supply | ■ | ■ | ■ | ■ | ■ |
| Display/controller unit in the PDU enclosure rotatable through 180° and replaceable | ■ | ■ | ■ | ■ | – |
| Connection cable, static, 3 m, with CEE (IEC 60 309) or IEC C20 input connector (customised modification available) | ■ | ■ | ■ | ■ | ■ |
| Compact circuit-breaker, 16 A, Carling type (only for 32 A PDU versions) | ■ | ■ | ■ | ■ | ■ |
| Output slots IEC 60 320 C13 available | ■ | ■ | ■ | ■ | ■ |
| Output slots IEC 60 320 C19 available | ■ | ■ | ■ | ■ | ■ |
| Output slots CEE 7/3 (earthing-pin socket) available | ■ | ■ | ■ | ■ | ■ |
| Output slots BS 1363 (UK plug) available | – | – | – | ■ | ■ |
| Connector lock for C13 and C19 sockets (optionally as accessories) | ■ | ■ | ■ | ■ | ■ |
| Lockable cover for unneeded C13/C19 slots (optional accessory) | ■ | ■ | ■ | ■ | ■ |

| Electrical | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Rated operating voltage 230 V (400 V, 3~), 50 – 60 Hz | ■ | ■ | ■ | ■ | ■ |
| PDUs for rated current 16 A/32 A, single-phase/3-phase | ■ | ■ | ■ | ■ | ■ |
| Integral, fully-redundant power pack, power supply from all phases | ■ | ■ | ■ | ■ | – |
| Power-saving design, minimal intrinsic power consumption | ■ | ■ | ■ | ■ | – |
| PDU with own power supply, no external power supply required | ■ | ■ | ■ | ■ | – |
| Error-tolerant PDU power supply redundant across all phases (with 3-phase PDUs) | ■ | ■ | ■ | ■ | – |
| Emergency power supply to PDU web server via PoE (Power over Ethernet) and sequential relay circuit (PoE+ to IEEE 802.3at), remains accessible even in the event of a mains failure | ■ | ■ | – | – | – |
| Optional: Type 3 overvoltage protection with interchangeable arresters while operational, with status monitoring, suitable for integration into PDU enclosure) | ■ | ■ | ■ | ■ | ■ |
| Switching function per output slot | ■ | ■ | – | – | – |
| Sequential activation of the outputs once the power is resumed (avoids overload peaks) | ■ | ■ | – | – | – |
| Relay states are saved even in the event of a power failure | ■ | ■ | – | – | – |
| Bistable relays/low current consumption/high switching capacity also for higher starting currents (max. 300 A) | ■ | ■ | – | – | – |
| Grouping (joint switching of several outputs) | ■ | ■ | – | – | – |
| Programmable startup response following voltage recovery (on/off/last status) | ■ | ■ | – | – | – |
| Programmable startup response (time and programmable logic) | ■ | ■ | – | – | – |

| Measurement functions | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Voltage (V), current (A), frequency (Hz) | ■ | ■ | ■ | ■ | – |
| Active power (kW), active energy (kWh), apparent power (VA), apparent energy (kVA) | ■ | ■ | ■ | ■ | – |
| Power factor (cosPhi) and phase angle | ■ | ■ | ■ | ■ | – |
| Neutral conductor measurement to identify unbalanced loads (3-phase PDUs only) | ■ | ■ | ■ | ■ | – |
| Optional: Differential current measurement (type B) per infeed/phase/fuse | ■ | ■ | ■ | ■ | – |
| Fuse monitoring for PDUs with integral fuse (32 A PDUs) | ■ | ■ | ■ | ■ | – |
| Monitoring of the optionally available overvoltage protection | ■ | ■ | ■ | ■ | – |
| Alarm contact for optional overvoltage protection on terminals | – | – | – | – | ■ |
| Measurement per phase or infeed | ■ | ■ | ■ | ■ | – |
| Measurement per output slot | ■ | – | ■ | – | – |
| Measurement accuracy ±1% to IEC/EN 62 053-21 | ■ | ■ | ■ | ■ | – |

[1] In addition to the defined products, customised modifications are also possible.

**Note:**
– Select plausibility-checked enclosures and components easily with the Rittal Configuration System, plan machining and place your order, see page 272

# Power Distribution Unit

## Overview

| PDU version[1] | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|

| Connectivity/management functions | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Powerful CPU (ARM Cortex A8) | ■ | ■ | ■ | ■ | – |
| Integral real-time clock with battery buffering (max. 10 years, battery replaceable) | ■ | ■ | ■ | ■ | – |
| Integral piezo beeper | ■ | ■ | ■ | ■ | – |
| Digital input (floating contact) | ■ | ■ | ■ | ■ | – |
| Additional alarm output/relay output (changeover contact) | ■ | ■ | ■ | ■ | – |
| Bright TFT display, 128 x 128 pixels (RGB) with back-lighting and energy-saving mode (display of output data and basic PDU configuration) | ■ | ■ | ■ | ■ | – |
| Position sensors for display rotation and correct PDU representation on the website | ■ | ■ | ■ | ■ | – |
| Multi-colour LEDs (green/amber/red) to indicate switching states and warning/alarm limits per phase or infeed | ■ | ■ | ■ | – | – |
| Multi-colour LEDs (green/amber/red) to indicate switching states and limits per individual output slot | ■ | – | ■ | – | – |
| Power LED, indicates presence of voltage | ■ | ■ | ■ | ■ | – |
| Adjustable limit values (warning/alarm) for voltage, current, output | – | ■ | – | ■ | – |
| Adjustable limit values (warning/alarm) for current, voltage, output, individually setting for each output slot | ■ | – | ■ | – | – |
| Operating hours meter, total and cyclical (resettable) | ■ | ■ | ■ | ■ | – |
| Fully redundant Ethernet interface 10/100/1000 Mbit/s (2 x RJ45) | ■ | ■ | ■ | ■ | – |
| USB 2.0 port (USB-A) for mass configuration, firmware update and data logging | ■ | ■ | ■ | ■ | – |
| CAN bus interface (RJ 45) for a maximum of 8 ambient sensors | ■ | ■ | ■ | ■ | – |
| Serial interface RS232 (RJ12) for CMC III LTE unit, scripting, CLI | ■ | ■ | ■ | ■ | – |
| Web server (HTTP, HTTPS, SSL, SSH) Telnet, NTP | ■ | ■ | ■ | ■ | – |
| TCP/IP v4 and v6, DHCP, DNS | ■ | ■ | ■ | ■ | – |
| SNMP v1, v2c and v3, Modbus/TCP, OPC-UA | ■ | ■ | ■ | ■ | – |
| MIB for linking into 3rd party DCIM software | ■ | ■ | ■ | ■ | – |
| FTP/SFTP (update/file transfer) | ■ | ■ | ■ | ■ | – |
| Rest API | ■ | ■ | ■ | ■ | – |
| Use of own certificates/TLS 1.3 | ■ | ■ | ■ | ■ | – |
| E-mail forwarding in case of alarm (SMTP) | ■ | ■ | ■ | ■ | – |
| User administration including rights management | ■ | ■ | ■ | ■ | – |
| LDAP(S)/Radius/Active Directory connection | ■ | ■ | ■ | ■ | – |
| Syslog server connection (max. 2 servers) | ■ | ■ | ■ | ■ | – |
| Fully redundant monitoring via 2nd network | ■ | ■ | ■ | ■ | – |
| CMC III CAN bus sensors may be connected for ambient monitoring (max. 8 sensors) | ■ | ■ | ■ | ■ | – |
| CMC III sensors: Temperature, humidity, smoke detector, VX IT handle systems, infrared access sensor, vandalism sensor, airflow, differential pressure, etc. | ■ | ■ | ■ | ■ | – |

| Ambient conditions | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Operating temperature | +5...+50 °C @100% load | | | | |
| Storage temperature | -25 °C...+70 °C | | | | |
| Ambient humidity (non-condensing) | 10 – 95% rel. humidity | | | | |
| Protection category (IEC 60 529) | IP 20 | | | | |

| Approvals and standards | managed | switched | metered plus | metered | basic |
|---|---|---|---|---|---|
| Approvals and standards | CE/EAC/RoHS/WEEE | | | | |
| Low Voltage Directive | 2014/35/EU | | | | |
| EMC Directive | 2014/30/EU | | | | |
| Standards (excerpt) | EN 62 368-1/EN 62 053-21/EN 61 000-3/EN 61 000-4/ EN 61 000-6 | | | | |

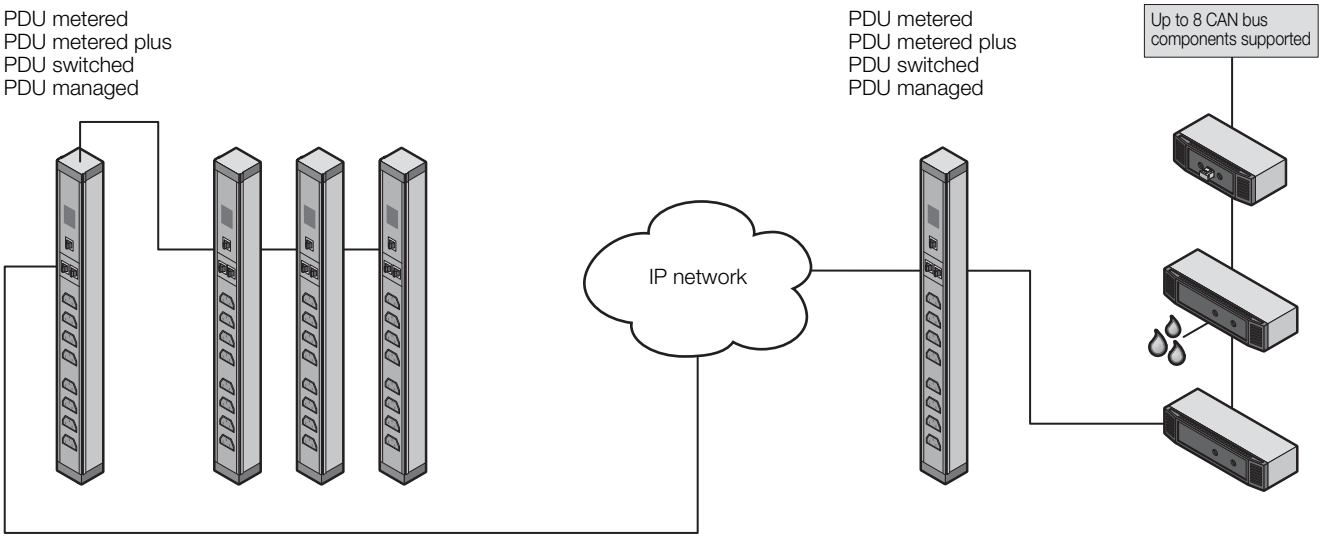
[1] In addition to the defined products, customised modifications are also possible.

## Sample application

**PDU cascading**
Cascading of up to 16 PDUs in series is supported via the network interface.

**Master/slave operating mode**
Each PDU may also be used individually as a master or slave PDU. The master PDU controls up to three slave PDUs.

**Connection of CAN bus sensors**
Up to 8 CMC III CAN bus sensors may be connected to one PDU for ambient monitoring (temperature, humidity, access, vandalism).




## Technical specifications

| Equipment | | |
|---|---|---|
| Standards | Safety | EN 62 368-1 |
| | EMC | EN 55 022/B, EN 61 000-4-2, EN 61 000-4-3, EN 61 000-6-2, EN 61 000-6-3 |
| Low Voltage Directive | | 2014/35/EU |
| EMC Directive | | 2014/30/EU |
| MTBF (at 40 °C) | | 100,000 hours |
| Protection category | | IP 20 (IEC 60 529) |
| Protection class | | 1 |
| Contamination level | | 2 |
| Overvoltage category | | II |
| Environmental properties | | RoHS 2 (2011/65/EU) |
| Storage temperature | | -20 °C...+70 °C |
| Ambient temperatures | | +5 °C...+50 °C |
| Ambient humidity (non-condensing) | | 10 – 95% rel. humidity |
| Connector lock C14/C20 | | 1 x (optional additional locks 7979.020) |
| Covers C13 | | Optional 7955.010 |
| Covers C19 | | Optional 7955.015 |

# Power Distribution Unit

## Technical specifications

Compact power distributor for use in IT server and network racks. Please observe the relevant product dimensions and check whether the PDU can be installed in your preferred rack. The PDU dimensions and the minimum rack height required may be found in the ordering table from page 733. The technical specifications listed below apply wholly or partially to the following PDU products:

- PDU metered (power measurement at the infeed or per phase. Without switching function)
- PDU metered plus (power measurement per individual outgoing slot. Without switching function)
- PDU switched (power measurement at the infeed or per phase. With switching function)
- PDU managed (power measurement per individual outgoing slot. With switching function)

Technical specifications apply to the following product variants:
PDU metered 7979.2XX, PDU metered plus 7979.5XX, PDU switched 7979.3XX, PDU managed 7979.4XX

| **Equipment** | | |
|---|---|---|
| Input voltage range (L – N) | | 230 V (400 V, 3~), 50 – 60 Hz |
| Input current | | 16 A/32 A (depending on product variant) |
| No. of phases | | 1 or 3 depending on product variant |
| PDU inherent supply | | Integral long-range SMPS, error-tolerant from all phases |
| PDU power consumption | | approx. 10 W |
| Redundant power supply via PoE | | Yes (with PDU switched, PDU managed) |
| Marking of phases (3-phase PDUs only: L1, L2, L3) | | Rittal Power Pink, black, white |
| Slots type EN 60 320/C13 | | Quantity depends on version |
| Slots type EN 60 320/C19 | | Quantity depends on version |
| No. of circuit-breakers | | 2 (single-phase) or 6 (3-phase) with 32 A version |
| Hydraulic-magnetic protective circuit-breaker | | 16 A (Carling) |
| Slots individually switchable | | Yes, only for PDU switched, PDU managed (bistable relay, minimal inherent consumption) |
| Connector, PDU input | | EN 60 309/CEE or EN 60 320-C20 (depending on product variant) |
| Length of connection cable | | 3 m |
| Connection cable type | | H05-VV |
| No. of wires | | 3/5 (single-phase/3-phase PDU) |
| Cable cross-section | | 2.5 $mm^2$/4.0 $mm^2$ (for 16 A/32 A versions) |
| PDU enclosure width | | 44 mm (1 U) |
| PDU enclosure depth | | 70 mm |
| PDU enclosure height (length) | | Depends on product variant |
| PDU material | | Aluminium, anodised in RAL 9005 (black, other colours may be configured) |
| PDU mounting adaptor | | Plastic, black |
| PDU mounting options | | On the enclosure frame, at the side of the 482.6 mm (19") mounting frame (zero-U space) as well as on the cable route (push-button attachment) |
| Measurement functions (input/phase or output slot) | Values recorded (standard configuration) | Voltage (V), phase current (A), frequency (Hz), active power (kW), active energy (kWh), apparent power (VA), apparent energy, reactive power, power factor, neutral-conductor measurement / load imbalance detection, crest factor, THDU/THDI, fuse monitoring (with 32 A versions) and operating hours meter |
| | Acquired values (individually configurable) | Differential current measurement (RCM type B), measurement range: 0 - 100 mA AC, max. 6 measuring points per PDU supported, input per phase/per fuse |
| | Overvoltage protection (type 3, replaceable with the system operational) | Electronic monitoring with PDU metered, metered plus, switched, managed, with PDU basic via floating alarm contact |
| | Voltage measurement range | 90 V – 260 V |
| | Voltage resolution | 0.1 V |
| | Current measurement range | 0 – 16/32 A (depending on product variant) |
| | Current resolution | 0.1 A |
| | Measurement accuracy | Typ. 1% |
| | Freely settable limit values for warning/ alarm | Yes |
| Operating hours meter | | Yes |
| Display | | TFT colour display, RGB 128 x 128 pixels, LED per slot (for PDU switched, PDU managed) |
| Network interface | | 2 x RJ45, 10/100/1000 Mbit/s |
| Supported protocols | | TCP/IP v4 and v6, HTTP, HTTPS, SSL, SSH, NTP, Telnet, DHCP, DNS, NTP, Syslog, SNMP v1, v2c and v3, XML, FTP/SFTP (update/file transfer), e-mail forwarding (SMTP), OPC-UA server, Modbus/TCP |
| User administration including rights management | | Yes |
| LDAP(S)/Radius/Active Directory connection | | Yes |
| **Interfaces** | | |
| USB port for firmware update, data logging function, mass configuration | | Yes |
| Serial interface | | RS232 (RJ12) for LTE unit, scripting, CLI |
| Digital input | | Floating contact |
| Alarm (acoustic) | | Piezo beeper |
| CAN bus interface | | RJ45, for connecting sensors |
| CAN sensor types | | Temperature, temperature/humidity (combined), infrared access sensor, vandalism sensor, handle systems (except wireless) and automatic door opening |
| Max. number of sensors per PDU | | 8 sensor configuration freely selectable |
| Plug & play drivers in the Rittal RiZone DCIM software | | Yes |
| Conformity | | CE, EAC |

We reserve the right to make technical modifications

# Power Distribution Unit

Ambient monitoring with up to 8 CMC III sensors,
see page 730

# Modular Power Distribution Unit

## Flexible power distribution in IT racks

## Maximum efficiency

- A modern PDU (PSM) allows you to respond flexibly at any time to changing requirements for the IT power supply in the server rack, even years later. You can change the slot configuration of the modular PDU (PSM) at any time, and even add completely new functions, without having to interrupt the power supply to the IT rack.
- The vertical, contactless busbar as the basic equipment for any IT rack permits a high degree of flexibility with versatile, plug-in modules with different socket types that may be exchanged while the system is operational.
- Patented plug & play system for exchanging modules while operational. In redundant systems, the circuit is changed by simply rotating the module.

## Monitor, control and switch

- Power measurement and switching functions for the output slots can be added to any busbar with these plug-in modules. The modules are also suitable for upgrading existing installations if it becomes necessary to record the power data or add a switching option for the connected equipment.
- The outgoing slots may be switched individually and in groups, with the status for each slot indicated by an LED.
- Voltage, current and active power limits may be configured to suit your requirements. This supports the implementation of ISO 50001 and EN 600-2-2.

## Impressive functions

- Extensive power measurement and switching functions for each output slot, both individually and in groups
- Easily integrated into the CMC III monitoring system
- Single-phase or 3-phase infeed, up to 22 kW per PSM busbar
- All standard protocols supported in conjunction with CMC III

## Modular busbars

### PSM busbars and PSM socket modules

**PSM busbars**
The modular system facilitates basic configuration of the racks, thanks to a vertical support rail with single-/3-phase infeed. The various socket modules to supply the active components may be snap-fitted into the support rail. This can even be done whilst the system is operational, because the support section is shock hazard-protected.

**PSM socket modules**
The various modules, earthing pins, IEC 60 320 etc. may be inserted into the support rail in any combination. This is easily achieved, even by non-electricians, thanks to the shock hazard protected plug & play system.

**Approvals:**
Available on the Internet

**Technical specifications/benefits:**
- Each socket module picks off a phase on the support rail, either from infeed **A** or from the redundant infeed **B**, depending on the direction of connection
- Single-/3-phase construction with a maximum current of 2 x (3 x 16 A)
- 3-phase redundant infeed supported
- The redundant circuit is completely separate from the 3 phases of the support rail
- Modules may be retrofitted whilst operational
- Modules may be equipped with integral overcurrent protection, so that only the affected module is deactivated in the event of an excessively high current; the other modules remain operational
- Overvoltage protection may be integrated into the supply line
- Various modules also available with current measurement and switchable outputs

## PSM busbar

| | Model No. | | | | |
|---|---|---|---|---|---|
| **Equipment** | **7856.005** | **7856.006** | **7856.008** | **7856.010** | **7856.020** |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Minimum height of rack | 2000 mm | 2000 mm | 2200 mm | 1200 mm | 2000 mm |
| Type of connection/length | fixed/3 m | fixed/3 m | WAGO jack | WAGO jack | WAGO jack |
| Connector | CEE | CEE | X-COM | X-COM | X-COM |
| No. of infeeds | 1 | 2 | 2 | 2 | 2 |
| No. of phases | 3 | 3 | 3 | 3 | 3 |
| Phase current | 16 A | 16 A | 16 A | 16 A | 16 A |
| Various connection cables, also for single-phase connection | – | – | ■ | ■ | ■ |
| No. of PSM module slots | 7 | 7 | 8 | 4 | 7 |
| Integral energy measurement of voltage, current, active power, apparent power, active energy, power factor, mains frequency | – | – | – | – | – |
| Measurement accuracy (U, I, f, P, S) | – | – | – | – | – |
| Measurement accuracy (E/kWh) | – | – | – | – | – |
| Graphic display for visualising the measurements (24 V DC required) | – | – | – | – | – |
| CAN bus interface for connecting to CMC III system | – | – | – | – | – |
| Web server (IPv4, IPv6, SNMP, SSH) via CMC III (PU 7030.000/PU Compact 7030.010) | – | – | – | – | – |
| E-mail forwarding of exceeded limits and alarms (CMC III required) | – | – | – | – | – |
| Operating temperature | +5 °C...+45 °C | | | | |
| Ambient humidity (non-condensing) | 10 – 90% | | | | |
| Protection category IP (to IEC 60 529) | IP 20 | | | | |
| Approvals | CE | CE | CE | CE | CE |

| | Model No. | | | |
|---|---|---|---|---|
| **Equipment** | **7856.321** | **7856.323** | **7859.050** | **7859.053** |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Minimum height of rack | 2000 mm | 2000 mm | 2000 mm | 2000 mm |
| Type of connection/length | fixed/3 m | fixed/3 m | WAGO jack | fixed/3 m |
| Connector | CEE | CEE | X-COM | CEE |
| No. of infeeds | 1 | 1 | 2 | 1 |
| No. of phases | 1 | 3 | 3 | 1 |
| Phase current | 32 A | 32 A | 16 A | 32 A |
| Various connection cables, also for single-phase connection | – | – | ■ | – |
| No. of PSM module slots | 6 | 6 | 6 | 6 |
| Integral energy measurement of voltage, current, active power, apparent power, active energy, power factor, mains frequency | – | – | ■ | ■ |
| Measurement accuracy (U, I, f, P, S) | – | – | 2% | 2% |
| Measurement accuracy (E/kWh) | – | – | 1% | 1% |
| Graphic display for visualising the measurements (24 V DC required) | – | – | ■ | ■ |
| CAN bus interface for connecting to CMC III system | – | – | ■ | ■ |
| Web server (IPv4, IPv6, SNMP, SSH) via CMC III (PU 7030.000/PU Compact 7030.010) | – | – | ■ | ■ |
| E-mail forwarding of exceeded limits and alarms (CMC III required) | – | – | ■ | ■ |
| Operating temperature | +5 °C...+45 °C | | | |
| Ambient humidity (non-condensing) | 10 – 90% | | | |
| Protection category IP (to IEC 60 529) | IP 20 | | | |
| Approvals | CE | CE | CE | CE |

**Also required:**

- PSM socket modules, see page 748

**Accessories:**

- Mounting kit for PSM busbars, see page 751
- Connection cables, see page 751
- Cable lock, see page 752
- Overvoltage protection, see page 751

## Modular busbars

### PSM zero-U space

Modular PDU for space-saving integration in the zero-U space between side panel and 482.6 mm (19") mounting level in 800 mm wide IT racks.

| | Model No. | | |
|---|---|---|---|
| **Equipment** | **7859.080** | **7859.081** | **7859.090** |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Minimum height of rack | 2000 mm | 2000 mm | 2000 mm |
| Length | 1695 mm | 1695 mm | 1695 mm |
| Type of connection/length | WAGO jack | fixed/3 m | fixed/3 m |
| Connector | X-COM | CEE | CEE |
| No. of infeeds | 2 | 1 | 1 |
| No. of phases | 3 | 3 | 1 |
| Phase current | 16 A | 16 A | 32 A |
| Various connection cables, also for single-phase connection | ■ | – | – |
| No. of PSM module slots | 6 | 6 | 5 |
| Operating temperature | +5 °C...+45 °C | | |
| Ambient humidity (non-condensing) | 10 – 90% | | |
| Protection category IP (to IEC 60 529) | IP 20 | | |
| Approvals | CE | CE | CE |

**Also required:**

- PSM socket modules, see page 748
- Mounting kit for PSM busbars 7859.065, see page 751

**Accessories:**

- Connection cables, see page 751
- Cable lock, see page 752
- Overvoltage protection, see page 751

## PSM measurement bar for CMC III

Measurement bars for direct connection to the CMC III system. With a PSM mounting kit, the measurement bar may be vertically mounted in 2000 mm high VX IT racks. Display and monitoring of all major output parameters is supported, separated by phase and infeed. An integral display provides a local on-site display in the rack. Remote administration and network connectivity are created via the CMC III system.

**Benefits:**
- Modular extendible system
- For 16 A and 32 A phase current
- Various PSM connection modules (pin patterns)
- PSM modules may be connected with the system operational
- Easy to assemble
- CAN bus for connection to CMC III system
- Extensive management and monitoring monitoring functions (via CMC III)
- High-MTBF and measurement accuracy of 1 %
- Energy-efficient electric design – minimal inherent power consumption
- High-quality aluminium housing, for flexible mounting

**Measurement functions:**
- Voltage (V), current (A), frequency (Hz)
- Active power (kW), active energy (kWh), apparent power (VA), apparent energy (kVAh)
- Power factor (cos phi)
- Zero conductor current measurement/ load imbalance detection
- Measurement per phase or infeed
- Measurement accuracy 1% (kWh) to IEC 62 053-21

**Material:**
- Extruded aluminium section, anodised

**Protection category IP to IEC 60 529:**
- IP 20

**Standards:**
- EN 61 000-6-1
- EN 61 000-6-2
- EN 55 022

**Low Voltage Directive:**
- 2014/35/EU

**EMC directive:**
- 2014/30/EU

**Approvals:**
Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

| **Model No.** | **7859.050** | **7859.053** | Page |
|---|---|---|---|
| Packs of | 1 pc(s). | 1 pc(s). | |
| Version/rated current (per phase) | 16 A | 32 A | |
| No. of infeeds (3-phase, 16 A/single-phase, 32 A) | 2 | 1 | |
| Connection cable, plug-in, various configurations | ■ | – | |
| Connection cable, fixed, 3 m, with CEE connector, 32 A, single-phase (IEC 60 309) | – | ■ | |
| Electromagnetic circuit-breaker (2 x 16 A, type C) | – | ■ | |
| Input voltage 230 V/400 V (50/60 Hz) | ■ | ■ | |
| Power supply via CMC III system (24 V DC) | ■ | ■ | |
| CAN bus for direct connection to CMC III system (RJ45, 2x sockets) | ■ | ■ | |
| Maximum no. of systems that may be connected to one CMC III PU | 8 | 8 | |
| **Ambient conditions** | | | |
| Operating temperature | 0 °C…+45 °C | | |
| Storage temperature | -25 °C…+70 °C | | |
| Ambient humidity (non-condensing) | 10 – 95 % | | |
| **Accessories** | | | |
| PSM connection cable, 3-phase, with CEE connectors (IEC 60 309), length 3 m (2 x required when using both infeeds) | 7856.025 | Fixed installation | 751 |
| PSM mounting kit for mounting on the VX IT rack frame, height 2000 mm | 7859.060 | 7859.060 | 751 |
| PSM module 4 x earthing-pin, black | 7856.100 | 7856.100 | 748 |
| PSM module 4 x earthing-pin, red | 7856.240 | 7856.240 | 748 |
| PSM module 6 x C13 | 7856.080 | 7856.080 | 748 |
| PSM module 4 x C19 | 7856.230 | 7856.230 | 748 |
| Other PSM socket modules | see page 748 | | |

## PSM socket modules

**max. 16 A/3680 W per module**

| | Model No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | | | | | | | |
| **Equipment** | **7856.080** | **7856.082** | **7856.100** | **7856.240** | **7856.230** | **7856.070** | **7856.220** | **7856.090** |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Occupied slots in PSM busbar | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Connector pattern (type) | IEC 60 320 C13 | IEC 60 320 C13 | Earthing-pin CEE 7/3 | Earthing-pin CEE 7/3 | IEC 60 320 C19 | IEC 60 320 C13 | IEC 60 320 C13 | Earthing-pin CEE 7/3 |
| Number of outputs | 6 | 6 | 4 | 4 | 4 | 6 | 4 | 4 |
| Colour of slots | black | red | black | red | black | black | black | black |
| Lockable connectors (optional) | ■ | ■ | – | – | – | – | – | – |
| Miniature fuse per output | – | – | – | – | – | – | ■ | – |
| Thermal overload protection | – | – | – | – | – | ■ | – | ■ |
| Optical LED display (total current) | – | – | – | – | – | – | – | – |
| Optical LED display (switching status/status) | – | – | – | – | – | – | – | – |
| Illuminated colour display (display of measurements/alarms) | – | – | – | – | – | – | – | – |
| Switchable outputs (via CMC III) | – | – | – | – | – | – | – | – |
| Energy measurement per module (total values) | – | – | – | – | – | – | – | – |
| Dimensions (W x H x D) | 52 x 250 x 45 mm | | | | | | | |
| Operating temperature | +5 °C...+45 °C | | | | | | | |
| Ambient humidity (non-condensing) | 10 – 95 % | | | | | | | |
| Material | Extruded aluminium section/plastic | | | | | | | |
| Approvals | CE | CE | CE | CE | CE | CE | CE | CE |

| | Model No. | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2 | | 3 | | 4 | | |
| **Equipment** | **7856.120** | **7856.191** | **7859.120** | **7859.130** | **7859.410** | **7859.420** | **7859.430** |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Occupied slots in PSM busbar | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Connector pattern (type) | UTE CEE7/5 | Switzerland T23 | IEC 60 320 C13 | IEC 60 320 C19 | IEC 60 320 C13 | IEC 60 320 C19 (+ 2 C13) | Earthing-pin CEE7/3 (+ 2 C13) |
| Number of outputs | 4 | 4 | 6 | 4 | 8 | 6 | 6 |
| Colour of slots | black | black | black | black | black | black | black |
| Lockable connectors (optional) | – | – | ■ | – | ■ | ■ | – |
| Miniature fuse per output | – | – | – | – | – | – | – |
| Thermal overload protection | – | – | – | – | – | – | – |
| Optical LED display (total current) | – | – | ■ | ■ | – | – | – |
| Optical LED display (switching status/status) | – | – | – | – | ■ | ■ | ■ |
| Illuminated colour display (display of measurements/alarms) | – | – | – | – | ■ | ■ | ■ |
| Switchable outputs (via CMC III) | – | – | – | – | ■ | ■ | ■ |
| Energy measurement per module (total values) | – | – | – | – | ■ | ■ | ■ |
| Dimensions (W x H x D) | 52 x 250 x 45 mm | | | | 52 x 505 x 45 mm | | |
| Operating temperature | +5 °C...+45 °C | | | | +5 °C...+60 °C (at max 8 A per switch output) | | |
| Ambient humidity (non-condensing) | 10 – 95 % | | | | | | |
| Material | Extruded aluminium section/plastic | | | | | | |
| Approvals | CE | CE | CE | CE | CE | CE | CE |

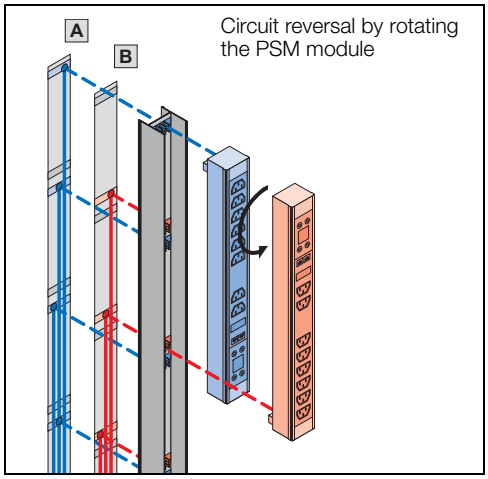
**Approvals:**
Available on the Internet

## PSM measurement modules with CAN bus

**for PSM busbars**

A power meter and switching functions for the output slots can be added to any PSM busbar with these PSM plug-in modules. The modules are also suitable for upgrading existing PSM installations if it becomes necessary to record the power data or add a switching option for the connected equipment.

There are three variants available with different socket types. In the PSM busbar, the PSM modules occupy two module slots each. Measurements are displayed locally on a backlit LC display. For quick checks, the colour of the display backlight changes to red if current and power limits are exceeded.




**Integration into the CMC III monitoring system**

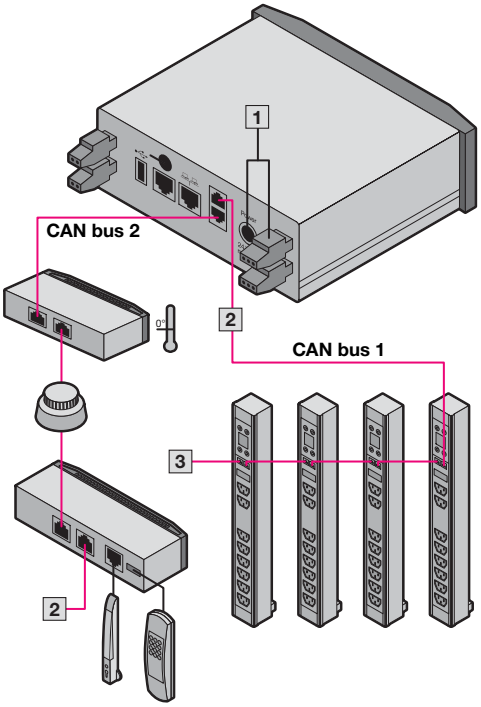
Multiple modules may be interconnected and linked directly to the CMC III enclosure monitoring system via the integral CAN bus interface. The PSM measurement module supports the configuration of an energy data management (EMS) system to ISO 50001. This may be combined with the CMC III. Using the CMC III, the individual output slots of the PSM modules may be switched individually or in groups via the network. Similarly, data logging, including diagrammatic representation, is also available via the CMC III website. Data is forwarded from the CMC III via an Ethernet interface with common protocols such as SNMPv3, Modbus/TCP and OPC-UA. The switch function is easily linked to other sensors connected to the CMC III monitoring system (e.g. CMC III temperature sensor, smoke alarm or DET-AC III extinguisher system). In larger installations, we recommend incorporating the CMC III PU with PSM modules into a DCIM software package (e.g. RiZone).

**Additional functions:**

- Alarm management via CMC III (e.g. e-mail or text message)
- Visualisation of the switching status on the CMC III website and RiZone
- Up to 16 PSM modules on one CMC III PU (per IP address)
- Rights management via CMC III (e.g. restriction of the switching function)

**Functions:**

- Simple, shock-hazard-protected, plug & play installation with the system operational
- Measurement of power consumption per module
- Output slots may be switched individually and in groups
- Blue LEDs per slot to visually indicate the switching status
- Status LEDs for CAN bus communication per module
- LC matrix display with multi-coloured backlight for local display
- Location sensor for correct display and Web view in 90° increments
- Adjustable limits for voltage, current and active power
- Configurable overload detection per module
- High level of measurement accuracy
- Alarm signalling via the display
- Facilitates the implementation of requirements to ISO 50 001 and EN 50 600-2-2
- Stable aluminium section with plastic socket inserts
- Supports universal connector locking of the IEC 60 320, C13 and C19 slots
- Supports the closure of unneeded IEC 60 320, C13 and C19 slots
- PSM module is easily fitted into and removed from the PSM busbar, for use at different locations
- Compatible with the European PSM busbar range
- Depending on the PSM busbar, up to four modules per bar may be fitted
- In redundant systems, the circuit may be switched over by rotating the module
- For ambient temperatures up to +60 °C




1 Voltage supply 24 V (DC) and redundant voltage supply 24 V (DC)

2 Supports up to 16 sensors per CAN bus (depending on the power supply/connection combinations)

3 Supports up to 8 PSM modules per CAN bus

## PSM measurement modules with CAN bus

**for PSM busbars**

**Supply includes:**
- PSM measurement module, depending on type
- CAN bus connection cable, 1 m long

**Also required:**
- PSM busbars and accessories, see page 745
- CMC III Processing Unit/Compact, see page 803
- CMC III accessories, see page 806

**Accessories:**
- Slot cover, see page 752
- Connector lock, see page 752

| **Model No.** | **7859.410** | **7859.420** | **7859.430** |
|---|---|---|---|
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| No. of IEC 60 320 C13 slots | 8 | 2 | 2 |
| No. of IEC 60 320 C19 slots | – | 4 | – |
| No. of earthing-pin slots (CEE 7/3 or type F) | – | – | 4 |
| Total no. of all switchable outputs | 8 | 6 | 6 |
| No. of slots required in the PSM busbar | 2 | 2 | 2 |
| Module dimensions (W x H x D) | 53 x 500 x 45 mm | | |
| Section | Aluminium, anodised | | |
| Plastic | PA 6 | | |
| **Electrical** | | | |
| No. of infeeds per module | 1 pc(s). | | |
| Input voltage | 230 V AC | | |
| Input voltage, tolerance | 207 – 250 V AC | | |
| Rated current | 16 A | | |
| Distribution power per module (at 230 V) | 3680 W | | |
| Power supply (via CMC III system, alternatively with power pack 7201.210) | 18 – 24 V DC | | |
| Relay type | Dual coil/bistable | | |
| Relay switching load | 4000 VA | | |
| **Measurement functions** | | | |
| Voltage V, current A, frequency Hz | ■ | | |
| Active power kW, active energy kWh | ■ | | |
| Reactive power kVar, reactive energy kVarh | ■ | | |
| Apparent power kVA, apparent energy kVAh | ■ | | |
| Power factor cos ϕ, crest factor (amplitude factor) | ■ | | |
| Operating hours meter d, h, min | ■ | | |
| Measurement accuracy | ±1% | | |
| **Resettable measurement functions/reset via software/interval measurement** | | | |
| Active energy kWh | ■ | | |
| Operating hours meter h | ■ | | |
| Threshold values (warning/alarm) freely configurable | Voltage, current, active power | | |
| **Connectivity / management functions (in conjunction with CMC III)** | | | |
| Maximum number of usable modules per CMC III Processing Unit | 16 (2 x 8) | | |
| Maximum number of usable modules per CMC III Processing Unit Compact | 4 | | |
| CAN bus for direct connection to CMC III system | 2 (RJ45) | | |
| Network functionality (only in conjunction with CMC III system) | IPv4, IPv6, SNMPv3, Modbus/TCP, OPC-UA | | |
| **Ambient conditions** | | | |
| Operating temperature (at max. 8 A per output slot) | +5 °C…+60 °C | | |
| Storage temperature | -20 °C…+70 °C | | |
| Ambient humidity (non-condensing) | rel. humidity 10 – 90% | | |
| Maximum operating altitude | 2000 m | | |
| Contamination level | 2 | | |
| Protection class (IEC 60 529) | IP 20 | | |
| **Approvals and standards** | | | |
| Approval | CE | | |
| Standards (excerpt) | Low Voltage Directive 2014/35/EU, EMC Directive, 2014/30/EU, EN 50 600-2-2 | | |

## Mounting kit

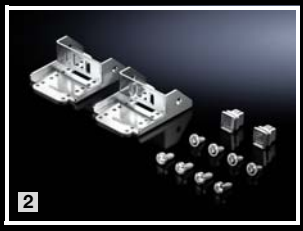
**for PSM busbars**

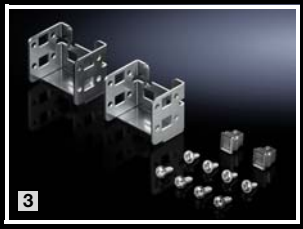
**Benefits:**
- In the VX IT rack, orientation of the busbar is possible either to the rear or to the enclosure interior

**Material:**
- Sheet steel, zinc-plated

**Supply includes:**
- 2 mounting brackets
- Assembly parts

| To fit enclosure type | Installation options | Packs of | Model No. |
|---|---|---|---|
| 1 TE 8000 | Static | 1 pc(s). | **7000.684** |
| 2 VX IT | Plug & play on the rack frame | 1 pc(s). | **7859.060** |
| 3 VX IT | Plug & play in the zero-U space | 1 pc(s). | **7859.065** |




## Connection cable

**for PSM busbars**

| | Length m | Packs of | Model No. |
|---|---|---|---|
| **Connection cable, 3-phase** | | | |
| CEE-conforming 5-pole/16 A | 3 | 1 pc(s). | **7856.025** |
| **Connection cable, 1-phase** | | | |
| CEE-conforming 3-pole/16 A | 3 | 1 pc(s). | **7856.026** |
| **Connection cable, UPS, single-phase** | | | |
| C14/X-COM 10 A/UPS, 1 – 2 kVA | 3 | 1 pc(s). | **7856.027** |
| C20/X-COM 16 A/UPS, 3 kVA | 3 | 1 pc(s). | **7856.030** |
| **Connection cable C19/C20** | | | |
| 16 A | 2 | 1 pc(s). | **7200.217** |
| **Connection cable C13/C14** | | | |
| 10 A | 0.5 | 2 pc(s). | **7856.014** |

## Overvoltage protection PSM

Connected upstream of the busbar.

**Rated operating voltage:**
- 230 V, 3~

**Rated current:**
- 16 A

**Overvoltage protection:**
- Fine fuse (type 3 arrester)

**Connections:**
- Jack Wago X-COM
- Connector Wago X-COM

| Overvoltage protection | Packs of | Model No. |
|---|---|---|
| With adaptor connector | 1 pc(s). | **7856.170** |

**Note:**
- With redundant infeed to the PSM busbar, 2 x this item is required

## Accessories

### Cable lock PSM

**for all modules with EN 60 320 C13 connector configurations**
All terminal connection cables are therefore protected against unintentional disconnection of the power supply. Two bars are needed for two cables.

| Type | Packs of | Model No. |
|---|---|---|
| Bar | 20 pc(s). | **7856.013** |

**Accessories:**
– Optimum locking function is only achieved with connection cable 7856.014, see page 751

### Connector lock

**for C14 and C20 connectors**
The universal lock can be used to latch IEC 60 320 C14 or C20 connectors in place to prevent accidental removal. Latching is adjustable and adapts to standard connector forms. This creates a reliable manufacturer-independent connection for most connection cables commonly available on the market.

**Material:**
– Plastic (PA 12)

**Colour:**
– RAL 9005

| Packs of | Model No. |
|---|---|
| 20 pc(s). | **7979.020** |

### Slot cover

**for C13 and C19 slots**
The slot cover is used to close open, unused IEC 60 320 C13 and C19 slots. This prevents accidental overloading of individual phases. The cover can be removed at any time using the enclosed release tool (or a slotted screwdriver).

**Material:**
– Plastic (PA 66)

**Colour:**
– RAL 9005

**Supply includes:**
– Release tool

| For slots | Packs of | Model No. |
|---|---|---|
| C13 | 10 pc(s). | **7955.010** |
| C19 | 10 pc(s). | **7955.015** |

### PDU mounting adaptor

**for TE**
For installing the power distribution unit PDU in the zero-U space of the TE. The divider kit included with the supply of the PDU is required for mounting.

**Material:**
– Sheet steel, zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7000.688** |

**Modular PDU (PSM)** Page 744 **Power basic** Page 733

Autonomous energy metering unit (including differential current monitoring) in a 1 U/19" form factor. The unit is incorporated into the supply lead to the equipment, a PDU basic or a modular PDU without measurement function. All key electrical characteristics are logged in the same way as with a PDU metered. Additionally, the measurement module features an integral differential current measurement (type B) for fault current monitoring of the connected equipment. Consumption data is conveniently retrieved via a network interface or locally via a TFT display. Additionally, all the PDU metered interfaces, e.g. for connecting external sensors and smart handle systems, are available.

**Benefits:**
- The ideal solution for upgrading existing installations which lack modern measurement functions
- Includes differential current measurement/fault current monitoring
- Extensive measuring functions (as with PDU metered)
- Versions for 16 A/32 A phased current, 1-phase/3-phase
- Versions with connection cable and CEE connectors, ready to use immediately
- Fast upgrade, installation only requires a brief interruption to operation
- Compact 482.6 mm (1 U 19") enclosure with pre-assembled connection cables
- High degree of measurement accuracy (typically ±1%)
- Energy-efficient design, minimal inherent power consumption
- Acoustic alarm may be set if certain limits are exceeded (such as fault currents)
- Integral GbE interface with web server for autonomous operation without any additional components
- Sensor interface for up to 8 CMC III/PDU ambient sensors (including access management/handle systems)

**Material:**
- Extruded aluminium section, anodised

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 51

**Standards:**
- EN 62 368-1
- EN 61 000-4
- EN 61 000-6
- EN 55 022

**Low Voltage Directive:**
- 2014/35/EU

**EMC directive:**
- 2014/30/EU

## RCM measurement module – Inline meter

| Model No. | | 7979.711 | 7979.712 | 7979.713 | 7979.714 |
|---|---|---|---|---|---|
| | Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Version | | 16 A | 32 A | 16 A | 32 A |
| Type of connection | | CEE connector/coupling | CEE connector/coupling | CEE connector/coupling | CEE connector/coupling |
| Connection cable/length | | H05VV F3G2.5/1 m | H05VV F3G4.0/1 m | H05VV F5G2.5/1 m | H05VV F5G4.0/1 m |
| Output kW | | 3.7 | 7.4 | 11.0 | 22.0 |
| Phases | | 1~ | 1~ | 3~ | 3~ |
| Phase current | | 16 A | 32 A | 16 A | 32 A |

# Upgrade solution

**Modular PDU (PSM)** Page 744 **Power distribution unit (PDU)** Page 732

Compact overvoltage protection module for protecting terminal equipment (type 3) with alarm contact, for mounting on the enclosure frame. The modules are used to protect sensitive hardware and represent the third or final stage in the overvoltage protection chain. Additionally, other type 1 or type 2 overvoltage protective devices must be present in the building installation or power distribution system.

**Benefits:**
- Fully wired overvoltage protection solution, ready to connect and use immediately
- For universal use
- High availability – In the event of a fault, arresters can be replaced without interrupting the power supply
- Maintenance-friendly version with a plug-in system for the protective modules
- Versions for 16 A/32 A phased current, 1-phase/3-phase
- Versions with connection cable and CEE connectors
- Ready to use immediately on TN-S networks
- Connection paths L/N and N/PE
- Optical status monitoring directly on the arrester
- Status message via floating alarm contact for forwarding e.g. to building services management
- Space-saving assembly thanks to compact design

**Material:**
- Extruded aluminium section, anodised

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 51

**Standards:**
- IEC 61 643-11
- EN 61 643-11

**Low Voltage Directive:**
- 2014/35/EU

**EMC directive:**
- 2014/30/EU

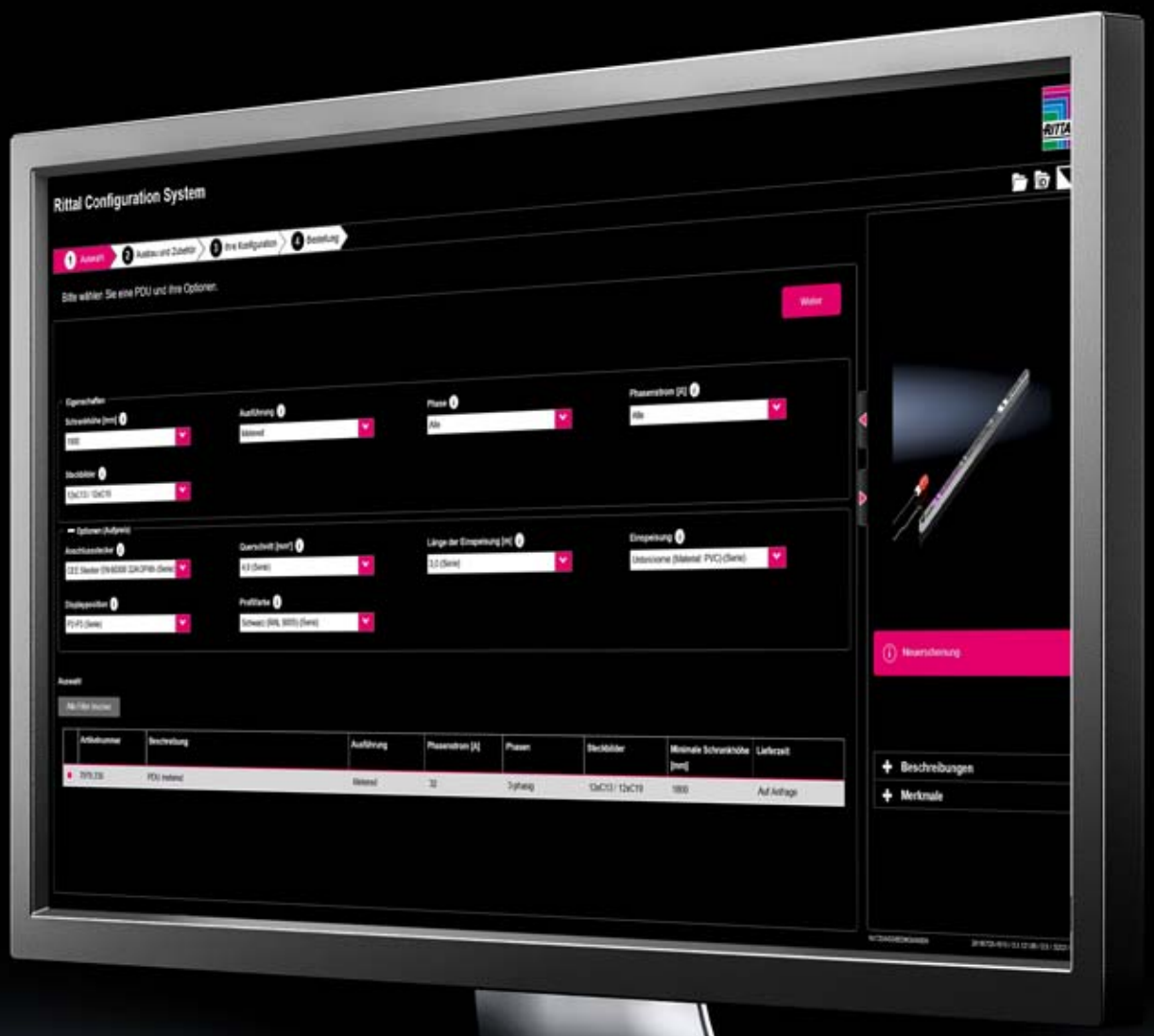
**Supply includes:**
- Assembly parts

## Overvoltage protection module, type 3

| **Model No.** | | **7979.721** | **7979.722** | **7979.723** | **7979.724** |
|---|---|---|---|---|---|
| | Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Type of connection | | CEE connector/coupling | CEE connector/coupling | CEE connector/coupling | CEE connector/coupling |
| Connection cable/length | | H05VV F3G2.5/1 m | H05VV F3G4.0/1 m | H05VV F5G2.5/1 m | H05VV F5G4.0/1 m |
| Output kW | | 3.7 | 7.4 | 11.0 | 22.0 |
| Phases | | 1~ | 1~ | 3~ | 3~ |
| Phase current | | 16 A | 32 A | 16 A | 32 A |

# Rittal Configuration System

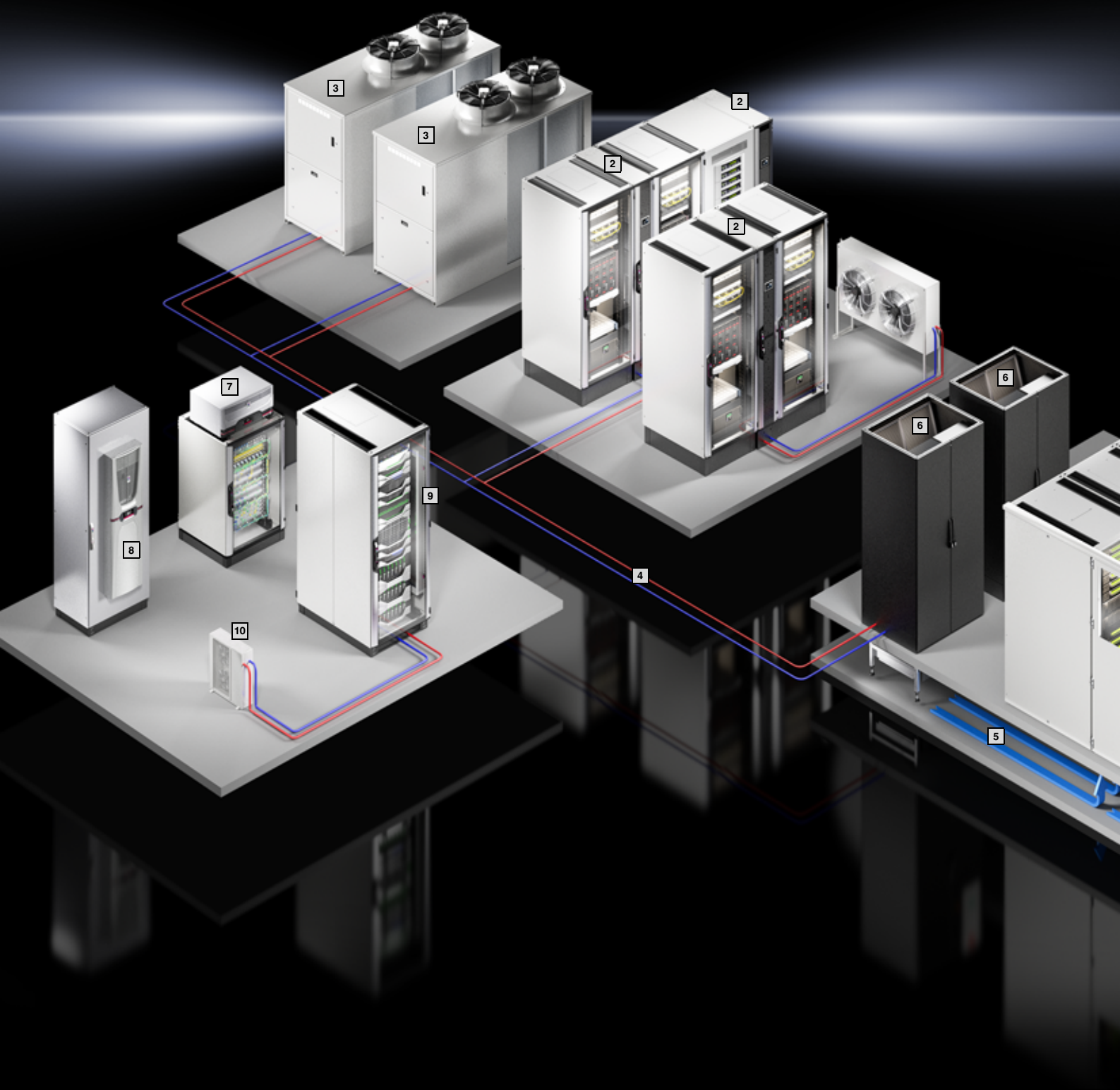
## Customised, modular PDU variants




**Use it online at www.rittal.com/rics**

# Rittal – The System.

**Faster – better – everywhere.**



# IT cooling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## Your benefits

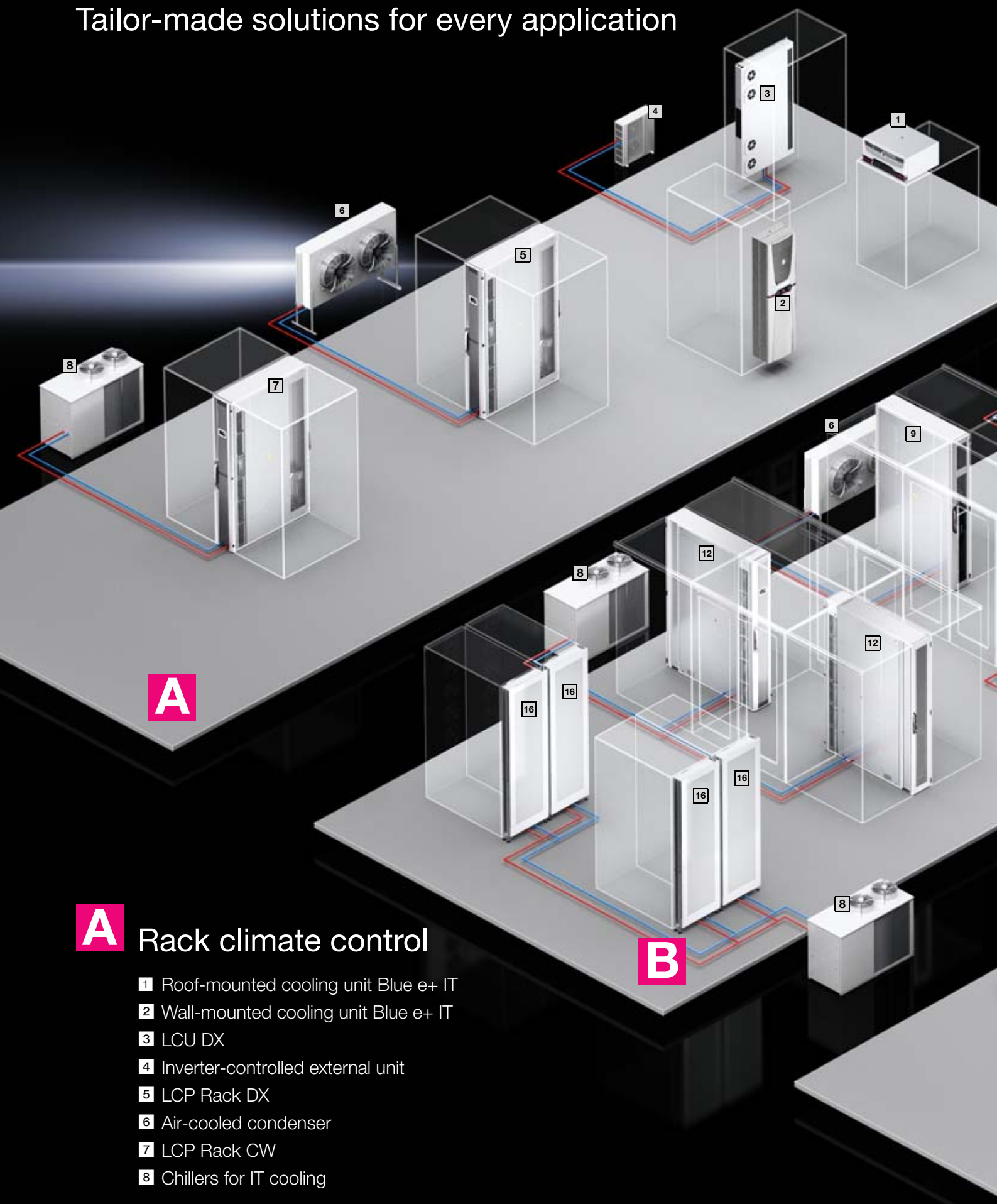
- State-of-the-art climate control technology, from cooling of a single rack through to entire data centres
- Individual climate control concepts for rack, suite and room cooling
- Enhanced security plus superior energy and cost efficiency
- Optimisation with aisle containment and cross-system control concepts
- Energy-efficient cooling using IT chillers
- Minimise your operating costs with free cooling
- Environmentally friendly, thanks to resource savings and reduced $CO_2$ emissions
- Planning, assembly, commissioning and servicing – all from a single source!

## Sample applications

1 Aisle containment, see page 788
2 Liquid Cooling Package LCP, from page 773
3 IT chiller with integral free cooling (partner product), see page 794
4 Pipework
5 Raised floor for cold air supply
6 Computer Room Air Conditioner CRAC (partner product), see page 792
7 Roof-mounted cooling unit Blue e+ IT, see page 764
8 Wall-mounted cooling unit Blue e+ IT, see page 765
9 LCU DX, see page 768
10 Inverter-regulated external unit, see page 768

# IT cooling

## Tailor-made solutions for every application




## A Rack climate control

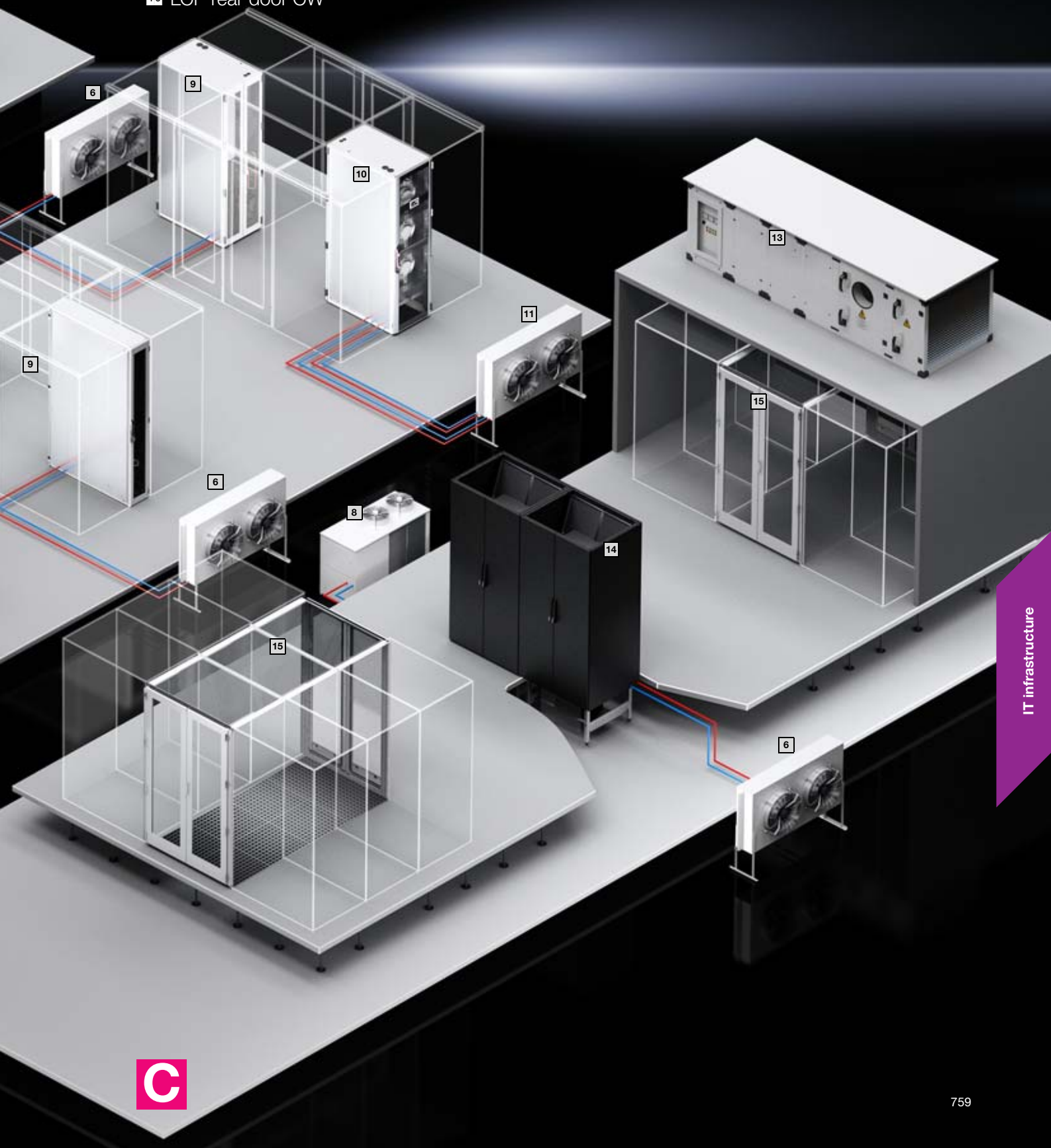
1. Roof-mounted cooling unit Blue e+ IT
2. Wall-mounted cooling unit Blue e+ IT
3. LCU DX
4. Inverter-controlled external unit
5. LCP Rack DX
6. Air-cooled condenser
7. LCP Rack CW
8. Chillers for IT cooling

## B Bayed climate control

- 6 Air-cooled condenser
- 8 Chillers for IT cooling
- 10 LCP Inline DX, flush
- 10 LCP Inline DX/FC
- 11 Air-cooled condenser with integral free cooler
- 12 LCP Inline CW, set forward
- 16 LCP rear door CW

## C Room climate control

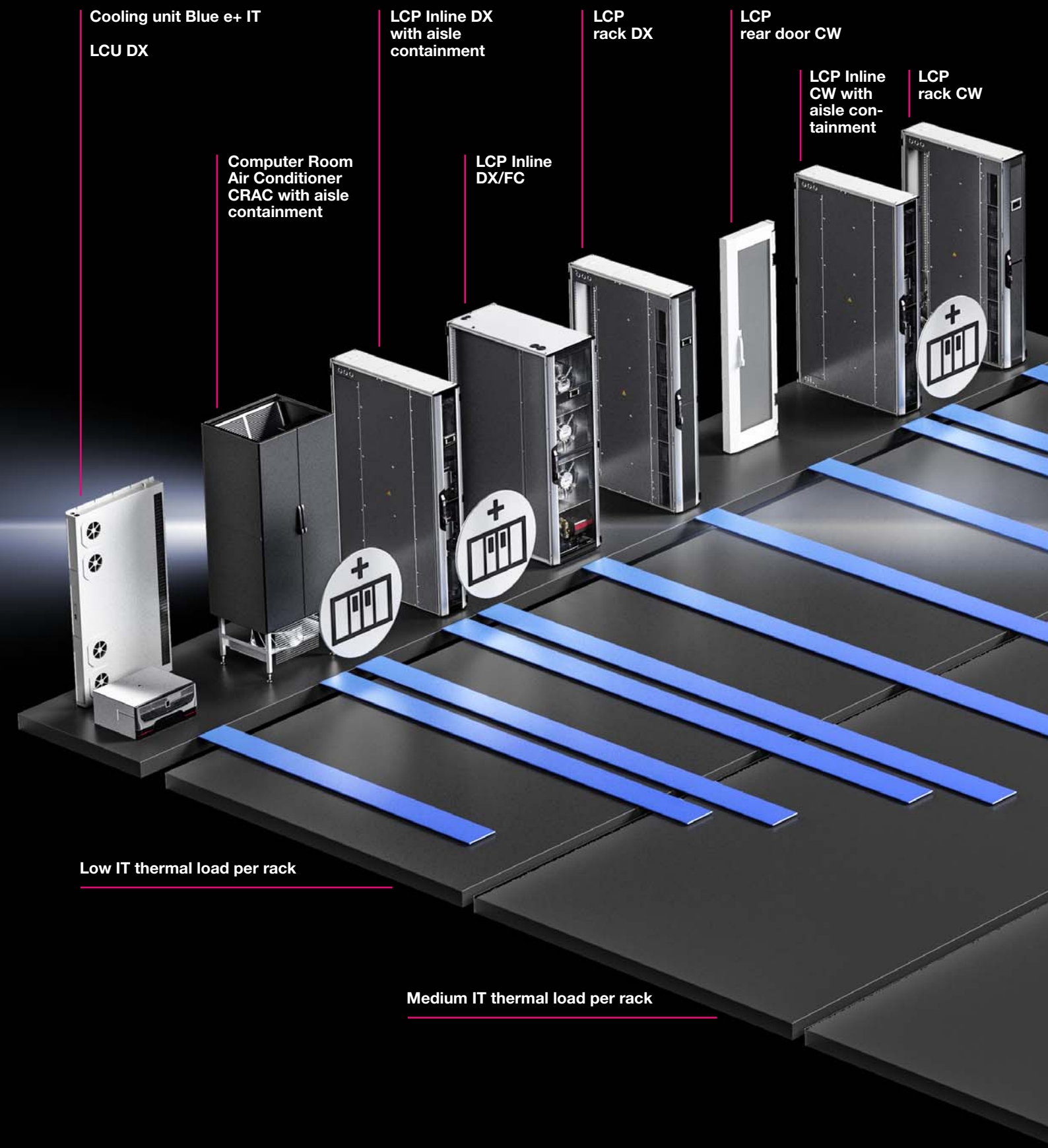
- 6 Air-cooled condenser
- 8 Chillers for IT cooling
- 13 Air Handling Unit AHU
- 14 Computer Room Air Conditioner CRAC
- 15 Aisle containment



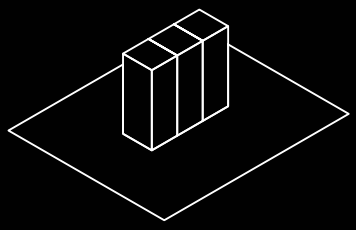

C

# State-of-the-art climate control technology

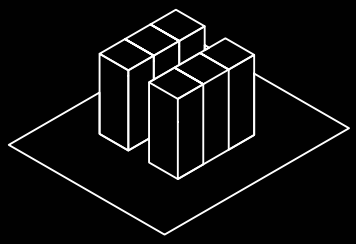
## Bespoke climate control concepts



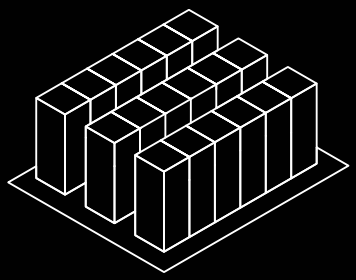
From cooling a single rack through to entire data centres – climate control technology from Rittal covers all your applications. Whether you opt for fan systems, refrigerant-based or water-based solutions, reliability and optimum energy and cost efficiency are the paramount considerations.



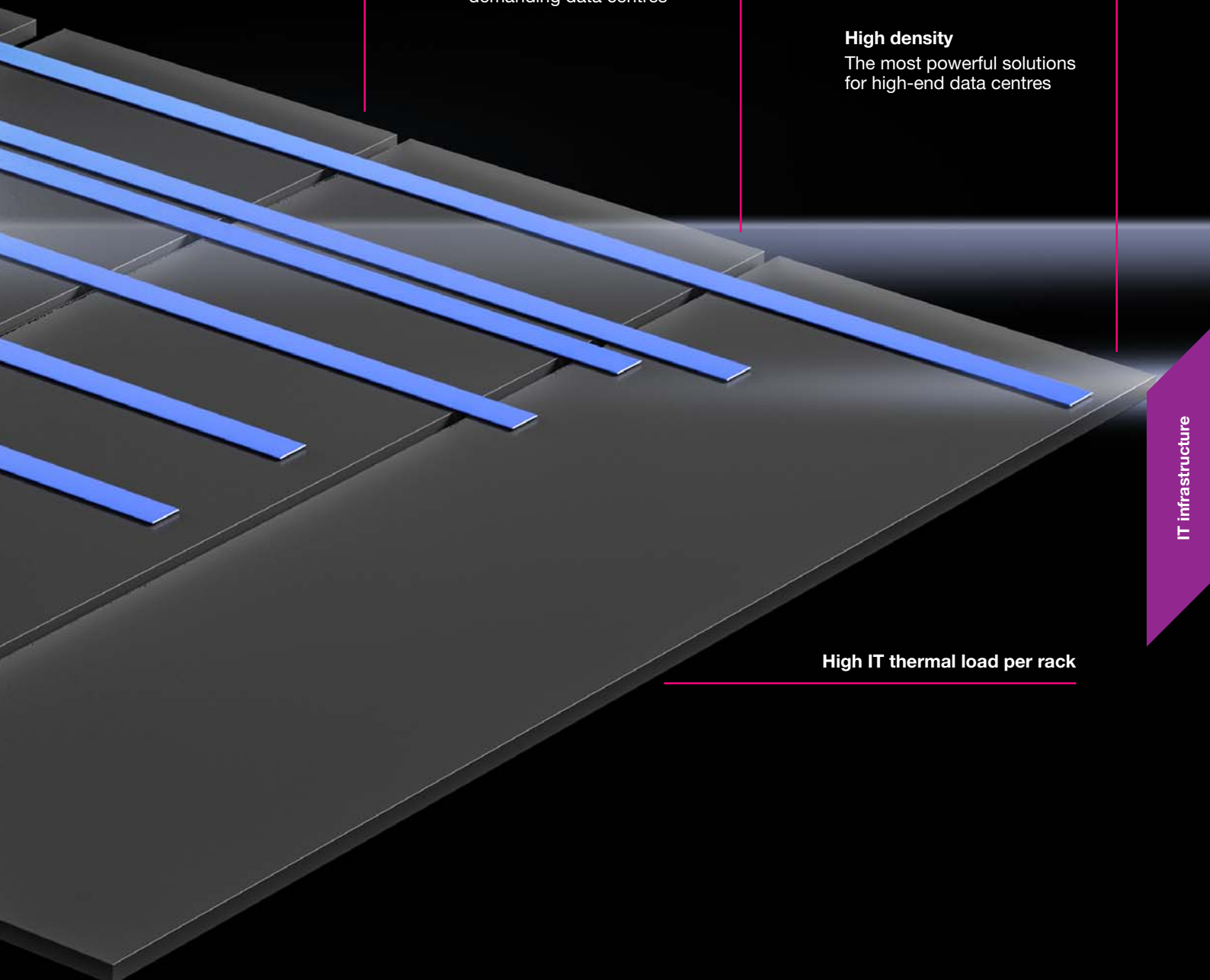
**Low density**
Professional IT climate control for individual IT racks and mini data centres



**Mid density**
Bespoke solutions for more demanding data centres



**High density**
The most powerful solutions for high-end data centres



**High IT thermal load per rack**

IT infrastructure

# Cooling units Blue e+ IT

## Rack cooling with innovative hybrid technology

## Blue e+ IT – the world's most efficient IT cooling unit

- Cooling of closed IT racks with a heat loss of up to 3 kW in ventilated rooms
- Cooling of edge data centres and network racks in ventilated corridor distributor rooms
- Heat pipe technology reduces operating costs
- Simple installation equals minimal commissioning costs
- Suitable for use in industrial environments, thanks to the high protection category

## How are Blue e+ units used?

- The roof-mounted unit is mounted on the racks. The cold air is blasted immediately in front of the 482.6 mm (19˝) level and drawn in by the IT equipment. The warm air expelled to the rear is drawn in and cooled down again by the roof-mounted unit. Air baffle plates on the 482.6 mm (19˝) level separate the cold and hot air.
- The wall-mounted unit is mounted on the rear door of the IT rack The outlet opening of the cooling unit docks onto an air duct which directs the cold air forwards, in front of the 482.6 mm (19˝) level. There, the cold air is drawn in by the IT equipment, heated, expelled to the rear and then drawn in again by the cooling unit.
- In both applications, air baffle plates on the 482.6 mm (19˝) level separate the cold and hot air

## Simply efficient

- Active cooling circuit with speed-regulated components for demand-based cooling
- Integral heat pipe for passive cooling achieves up to 75% energy savings
- USB interface, Blue e+ app, IoT interface, touchscreen display
- Ethernet connection and data retrieval via SNMP, OPC-UA and Modbus/TCP
- Blue e+ efficiency calculator

# Roof-mounted cooling unit Blue e+ IT

**Accessories for IT cooling** Page 784 **IT rack system** Page 684 **Roof-mounted cooling unit** Page 498 **IoT interface** Page 554

The use of Blue e+ technology makes this bundle ideally suited to the requirements of energy-efficient cooling of IT racks. In combination with the IoT interfaces, it supports communication with various different systems as well as monitoring and energy management.

**Benefits:**
- Energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Intuitive operation due to touch display and intelligent interfaces

**Functions:**
- The cold air is directed immediately in front of the 482.6 mm (19") level and drawn in by the IT equipment. The warm air expelled to the rear is drawn in and cooled down again by the roof-mounted unit. Air baffle plates on the 482.6 mm (19") level separate the cold and hot air.

**Temperature control:**
- e+ controller

**Protection category IP to IEC 60 529:**
- External circuit IP 54 with pleated filter
- Internal circuit IP 54 with pleated filter

**Supply includes:**
Bundle comprised of the following individual components:
- Roof-mounted cooling unit (3185.730)
- IoT interface (3124.300)
- Temperature sensor (3124.400)
- Connection cable (7030.091)
- Nylon loop cable holder (7111.350)

**Note:**
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

| **Model No.** | Packs of | **3312.800** | Page |
|---|---|---|---|
| **Technical specifications, cooling unit** | | | |
| Total cooling output L30 L22 W | | 1600 | |
| **Width** mm | | 700 | |
| **Height** mm | | 308 | |
| **Depth** mm | | 560 | |
| Material | | Sheet steel | |
| Colour | | RAL 7035 | |
| Rated operating voltage V, ~, Hz | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Type of electrical connection | | Plug-in terminal strip | |
| Operating temperature range | | -20 °C...+55 °C | |
| Refrigerant g | | R134a, 590 | |
| **Technical specifications, IoT interface** | | | |
| Protocols | | OPC-UA/SNMPv1/SNMPv2/SNMPv3/Modbus/TCP/TCP/IPv4/TCP/IPv6/Radius/Telnet/SSH/FTP/SFTP/HTTP/HTTPS/NTP/DHCP/DNS/SMTP/Syslog/LDAP | |

# Wall-mounted cooling unit Blue e+ IT

**Accessories for IT cooling** Page 784 **IT rack system** Page 684 **Wall-mounted cooling unit** Page 475 **IoT interface** Page 554

The use of Blue e+ technology makes this bundle ideally suited to the requirements of energy-efficient cooling of IT racks. In combination with the IoT interfaces, it supports communication with various systems as well as monitoring and energy management.

**Benefits:**
- Energy savings thanks to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Intuitive operation due to touch display and intelligent interfaces

**Functions:**
- The wall-mounted unit is mounted on the rear door of the IT rack. The outlet opening of the cooling unit docks onto an air duct which directs the cold air forwards, in front of the 482.6 mm (19") level. There, the cold air is drawn in by the IT equipment, heated, blown out to the rear and then drawn in again by the cooling unit.

**Temperature control:**
- e+ controller

**Protection category IP to IEC 60 529:**
- External circuit IP 24
- Internal circuit IP 55

**Supply includes:**
Bundle comprised of the following individual components:
- Wall-mounted cooling unit (3187.930)
- IoT interface (3124.300)
- Temperature sensor (3124.400)
- Connection cable (7030.091)
- Nylon loop cable holder (7111.350)

**Note:**
- Firmware can be updated using the RiDiag III software (3159.300)

**Approvals:**
Available on the Internet

| **Model No.** | Packs of | **3312.810** | Page |
|---|---|---|---|
| **Technical specifications, cooling unit** | | | |
| Total cooling output L30 L22 W | | 3000 | |
| **Width** mm | | 450 | |
| **Height** mm | | 1600 | |
| **Depth** mm | | 294 | |
| Material | | Sheet steel | |
| Colour | | RAL 7035 | |
| Rated operating voltage V, ~, Hz | | 110 - 240, 1~, 50/60<br>380 - 480, 3~, 50/60 | |
| Type of electrical connection | | Plug-in terminal strip | |
| Operating temperature range | | -20 °C...+60 °C | |
| Refrigerant g | | R134a, 1150 | |
| **Technical specifications, IoT interface** | | | |
| Protocols | | OPC-UA/SNMPv1/SNMPv2/SNMPv3/Modbus/TCP/TCP/IPv4/TCP/IPv6/Radius/Telnet/SSH/FTP/SFTP/HTTP/HTTPS/NTP/DHCP/DNS/SMTP/Syslog/LDAP | |
| **Also required** | | | |
| Air duct | 1 pc(s). | 3312.820 | 784 |

# Liquid Cooling Unit DX

## Efficient cooling with no loss of space

## Single or redundant – your compact IT cooling solution

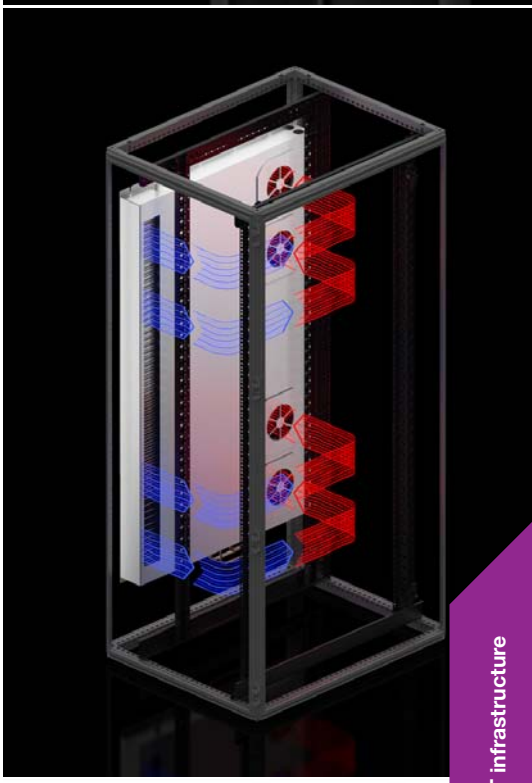
- Cooling of closed IT racks with a heat loss of up to 6.5 kW
- Cooling of edge and micro data centres
- Cooling of IT equipment in uncooled IT rooms or decentralised data centre applications
- Single version (one cooling circuit) and redundant version (two separate cooling circuits) have the same internal unit dimensions, but two independent external units

## How are the LCU DX units used?

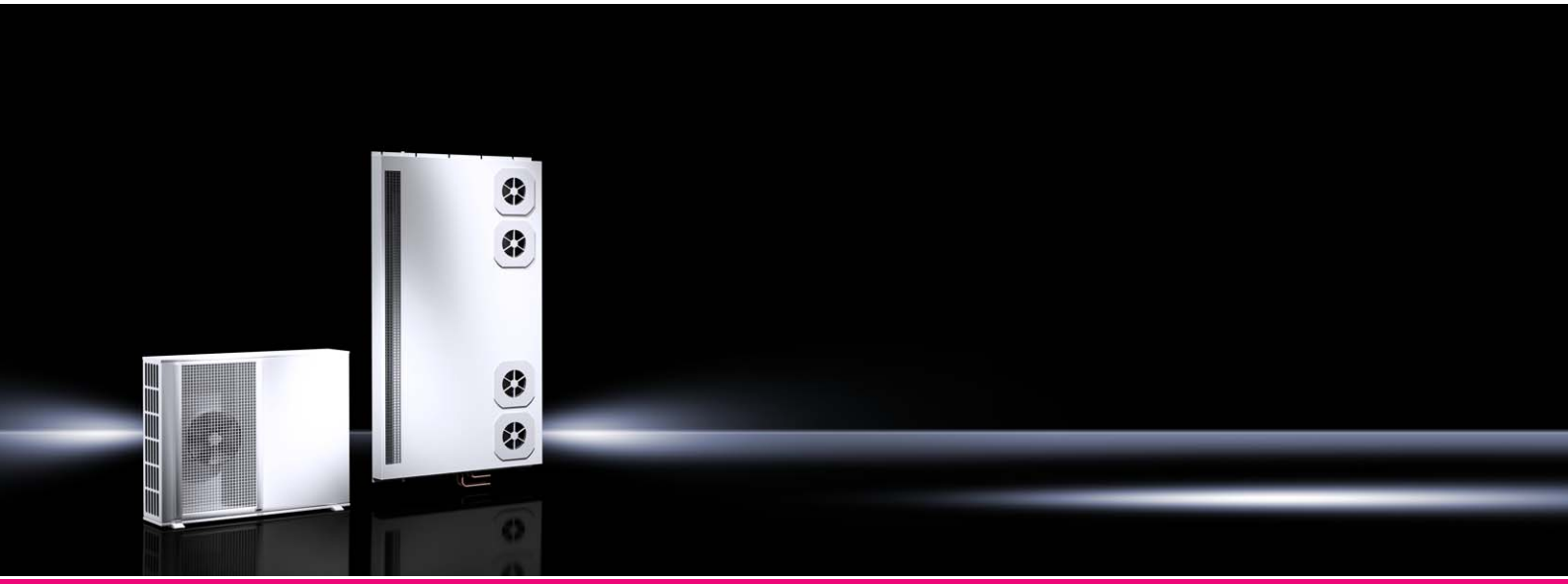
- The LCU DX is fitted in the IT rack at the side, to the left or right of the 482.6 mm (19˝) level
- The cold air is blasted in front of the slightly recessed 482.6 mm (19˝) level across the entire height of the LCU DX and drawn in by the IT equipment
- The warm air expelled to the rear is drawn back in over the full height of the LCU DX at the rear and cooled
- Air baffle plates on the 482.6 mm (19˝) level separate the cold and hot air

## The compact system solution

- Active cooling circuit with speed-regulated components for demand-based cooling
- By only cooling the IT rack rather than the entire room, energy savings are achieved
- Unlike conventional ceiling and wall cassettes, cooling is demand-based
- All waste heat from the IT equipment is dissipated out of the building and emitted to the surrounding environment at the site of the external condenser
- May be combined with integral rack extinguisher systems



# Liquid Cooling Unit



**Network/server racks VX IT** Page 686 **Micro Data Center** Page 842

**Applications:**
- Cooling unit for VX IT server racks and for Micro Data Centers

**Benefits:**
- Space-saving solution by installing the internal unit in the VX IT server enclosure or the Micro Data Center
- Maximum energy efficiency due to EC fan technology and IT-based control
- Control of the server inlet temperature
- The inverter-controlled compressor adapts the cooling output to the current heat loss inside the enclosure
- Absorbed thermal energy is emitted directly to the ambient air at the (inverter-controlled) external unit's location, without heating up the installation room

**Functions:**
- The device supports front-to-back air routing typical of IT applications, and regulates the server inlet temperature to the set value

**Material:**
- Sheet steel, spray-finished

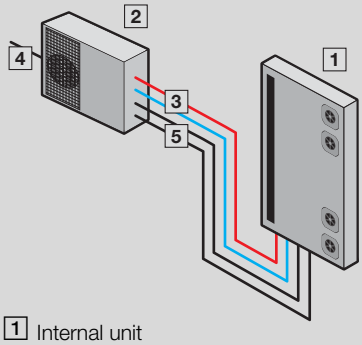
**Colour:**
- Internal unit: RAL 7035
- External unit: white

**Protection category IP to IEC 60 529:**
- Internal unit IP 20
- External unit IP X4

**Supply includes:**
- Internal unit (evaporator coil)
- External unit (inverter-controlled)
- 482.6 mm (19") mounting trim panel with display and control components
- Condensate hose

**Note:**
- Below the operating limit, fluctuations in the air inlet temperature are possible
- The electrical connection is made on the external unit. The internal unit is supplied by the external unit.

**Installation in VX IT:**
- 482.6 mm (19") mounting angles, standard or dynamic, must be offset in the width by 50 mm off-centre
- The front distance between the 482.6 mm (19") mounting angles and the front edge of the VX frame must be at least 100 mm
- Two punched sections with mounting flanges are required for attachment on the inner mounting level
- Air baffle plates are required to separate the hot/cold zones within an enclosure
- A base/plinth is required to route the cable downwards




1 Internal unit
2 External unit
3 Refrigerant lines
4 Power supply
5 Data cable

## LCU DX, single

| **Model No.** | Packs of | **3311.490** | **3311.492** | Page |
|---|---|---|---|---|
| Modulation range kW | | 1 - 3 | 3 - 6.5 | |
| **Useful cooling output L22 L35** kW | | **3** | **6.5** | |
| For enclosure width mm | | 800 | 800 | |
| For enclosure height mm | | ≥ 1800 | ≥ 1800 | |
| For enclosure depth mm | | ≥ 1000 | ≥ 1000 | |
| External unit, W x H x D mm | | 810 x 558 x 310 | 845 x 700 x 320 | |
| Internal unit, W x H x D mm | | 105 x 1550 x 820 | 105 x 1550 x 820 | |
| Type of electrical connection | | Connection clamp | Connection clamp | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50 | 230, 1~, 50 | |
| Rated current max. A | | 7 | 15.9 | |
| Pre-fuse A | | 16 | 20 | |
| Refrigerant | | R410a | R410a | |
| Duty cycle % | | 100 | 100 | |
| Sound pressure level at a distance of 10 m (external unit) dB(A) | | 40 | 40 | |
| Operating temperature range (external unit) | | -20 °C...+45 °C | -20 °C...+45 °C | |
| Weight as delivered kg | | 116.0 | 121.5 | |
| **Accessories** | | | | |
| Refrigerant lines | 1 pc(s). | 3311.495 | 3311.496 | 785 |

# Liquid Cooling Unit

**Network/server racks VX IT** Page 686 **Micro Data Center** Page 842

**Applications:**
- Cooling unit for VX IT server racks and for Micro Data Centers

**Benefits:**
- Space-saving solution by installing the internal unit in the VX IT server enclosure or the Micro Data Center
- Maximum energy efficiency due to EC fan technology and IT-based control
- Control of the server inlet temperature
- The inverter-controlled compressor adapts the cooling output to the current heat loss inside the enclosure
- Absorbed thermal energy is emitted directly to the ambient air at the (inverter-controlled) external unit's location, without heating up the installation room

**Functions:**
- The redundant variants have two cooling circuits and controllers inside the internal unit, plus two inverter-regulated external units. The fault and operating hours changeover allows regular switching between the two external units, and ensures automatic changeover in the event of a malfunction or failure.
- The device supports front-to-back air routing typical of IT applications, and regulates the server inlet temperature to the set value

**Material:**
- Sheet steel, spray-finished

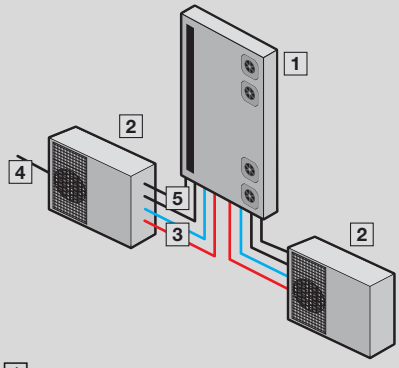
**Colour:**
- Internal unit: RAL 7035
- External unit: white

**Protection category IP to IEC 60 529:**
- Internal unit IP 20
- External unit IP X4

**Supply includes:**
- Internal unit (evaporator coil)
- 2 external units (inverter-controlled)
- 482.6 mm (19") mounting trim panel with display and control components
- Condensate hose

**Note:**
- Below the operating limit, fluctuations in the air inlet temperature are possible
- The electrical connection is made on the external unit. The internal unit is supplied by the external unit.
- A separate power supply may be needed, depending on the external unit

**Installation in VX IT:**
- 482.6 mm (19") mounting angles, standard or dynamic, must be offset in the width by 50 mm off-centre
- The front distance between the 482.6 mm (19") mounting angles and the front edge of the VX frame must be at least 100 mm
- Two punched sections with mounting flanges are required for attachment on the inner mounting level
- Air baffle plates are required to separate the hot/cold zones within an enclosure
- A base/plinth is required to route the cable downwards




1 Internal unit
2 External unit
3 Refrigerant lines
4 Power supply
5 Data cable

IT infrastructure

# Liquid Cooling Unit

## LCU DX, redundant

| **Model No.** | Packs of | **3311.491** | **3311.493** | Page |
|---|---|---|---|---|
| Modulation range kW | | 1 - 3 | 3 - 6.5 | |
| **Useful cooling output L22 L35** kW | | **3** | **6.5** | |
| For enclosure width mm | | 800 | 800 | |
| For enclosure height mm | | ≥ 1800 | ≥ 1800 | |
| For enclosure depth mm | | ≥ 1000 | ≥ 1000 | |
| External unit, W x H x D mm | | 810 x 558 x 310 | 845 x 700 x 320 | |
| Internal unit, W x H x D mm | | 105 x 1550 x 820 | 105 x 1550 x 820 | |
| Type of electrical connection | | Connection clamp | Connection clamp | |
| Rated operating voltage V, ~, Hz | | 230, 1~, 50 | 230, 1~, 50 | |
| Rated current max. A | | 7 | 15.9 | |
| Pre-fuse A | | 16 | 20 | |
| Refrigerant | | R410a | R410a | |
| Duty cycle % | | 100 | 100 | |
| Sound pressure level at a distance of 10 m (external unit) dB(A) | | 40 | 40 | |
| Operating temperature range (external unit) | | -20 °C...+45 °C | -20 °C...+45 °C | |
| Weight as delivered kg | | 161.0 | 184.0 | |
| **Accessories** | | | | |
| Refrigerant lines | 1 pc(s). | 3311.495 | 3311.496 | 785 |


Rittal Service.

## Service with manufacturer know-how

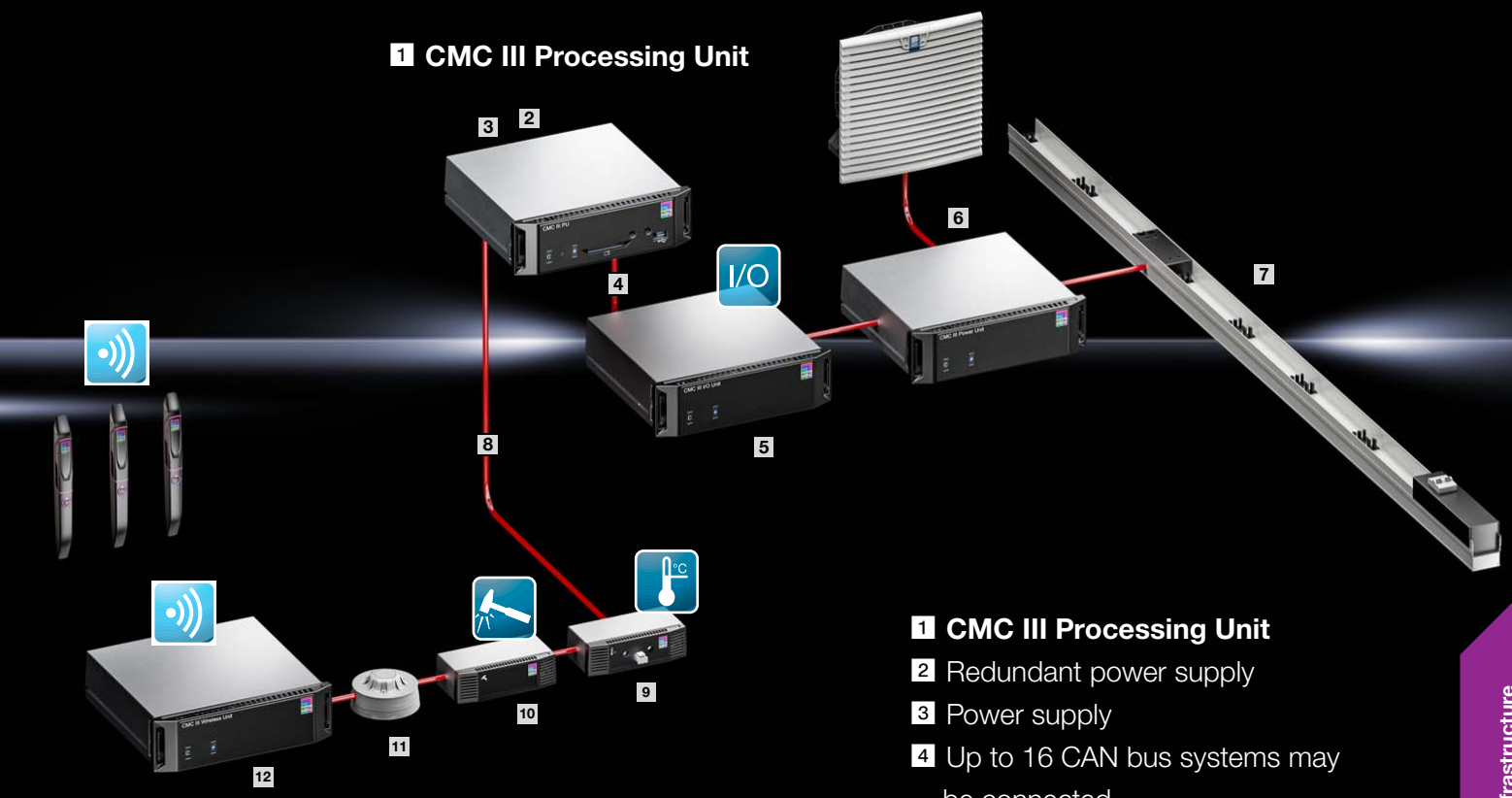
Our service experts would be pleased to offer you their advice on our full range of customer services:

- Construction, installation and commissioning
- Fast trouble-shooting
- Inspection
- Leak test
- Professional maintenance
- Original spare parts
- Individual service contracts
- Efficiency and system consulting
- Modernisation

We would be pleased to visit you in person.

# CMC III – Monitoring system

Computer Multi Control (CMC) is an alarm system for network and server enclosures, standard enclosures, containers and rooms.




**1 CMC III Processing Unit**

2 Redundant power supply

3 Power supply

4 Up to 16 CAN bus systems may be connected

5 CMC III I/O unit

6 CMC III power unit

7 CMC III PSM measurement bar for direct connection

8 Up to 16 CAN bus systems may be connected

9 CMC III temperature sensor

10 CMC III vandalism sensor

11 CMC III smoke alarm

12 CMC III Wireless Unit with radio comfort handles VX

# Liquid Cooling Packages DX

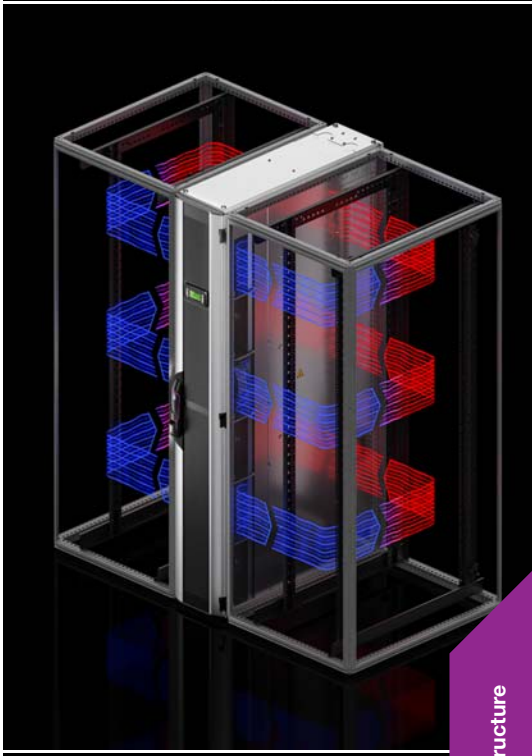
## The new output categories for suite cooling

## LCP DX – An innovative solution for both rack and suite cooling

- Cooling of closed and open IT racks with high heat losses in the output categories 12 kW, 20 kW and 35 kW
- Cooling of IT equipment in uncooled IT rooms or decentralised data centre applications (edge)
- Ideal for IT cooling in small and medium-sized enterprises (SMEs)
- 35 kW DX/FC variant saves energy by using indirect free cooling
- With suite cooling, additional equipment such as UPS, printers and other equipment in the installation room are cooled at the same time

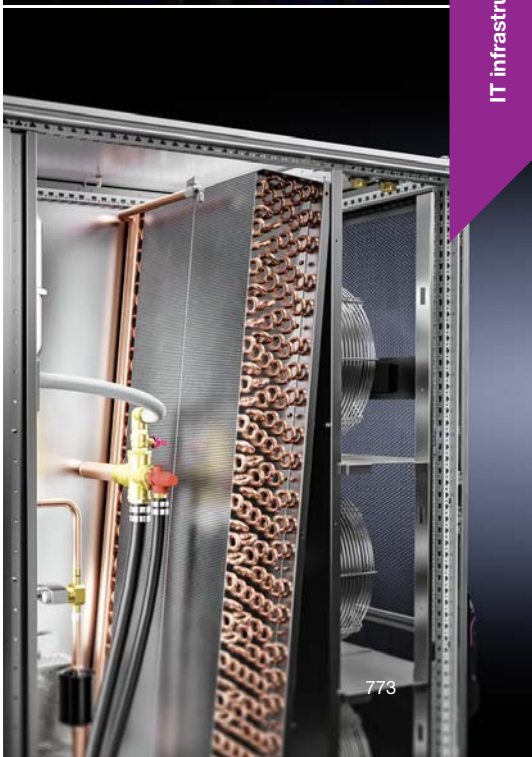
## How are the LCP DX units used?

- LCP rack DX units cool up to two closed IT racks to the left and right of the unit. The cold air is blasted in front of the slightly recessed 482.6 mm (19˝) level across the entire height of the LCP DX and drawn in by the IT equipment. The warm air expelled to the rear is drawn in again across the full height of the LCP DX at the rear and cooled.
- LCP Inline DX units cool multiple open IT racks in suites on both the left and right. To this end, the cold air from the LCP Inline DX is blasted into the cold aisle and drawn in by the IT equipment via the perforated front doors of the IT racks. The air heated by the IT hardware is blasted into the hot aisle via the perforated rear door of the IT rack and from there, is drawn in via the perforated rear door of the LCP Inline DX and cooled again. Aisle containment separates the air in the cold/hot aisle.
- In both cases, air baffle plates on the 482.6 mm (19˝) level separate the cold and hot air within the IT rack.



## Customer benefits

- Active cooling circuit with speed-regulated components for demand-based cooling
- Regulated to the IT inlet temperature
- Hot spot cooling directly at the point of heat generation
- All waste heat from the IT equipment is dissipated and emitted to the surrounding environment at the site of the external condenser
- Depending on the application, this may be combined with integral rack or room extinguisher systems



# Liquid Cooling Package

**Accessories for IT cooling** Page 784 **Network/server racks VX IT** Page 686 **System accessories** Page 877

**Applications:**
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately

**Benefits:**
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- Thanks to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements
- With redundant temperature sensor integrated at the air end as standard
- Specific maintenance of the LCP DX due to separation of cooling and server racks

**Functions:**
- The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room

**IT monitoring:**
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

**Temperature control:**
- Linear fan control
- Inverter-controlled compressor

**Material:**
- Sheet steel, spray-finished

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Cooling medium:**
- Refrigerant

**Optional:**
- Humidifier
- Dehumidification and reheater
- Condensate drain pump
- Higher cooling output
- Low-temperature/high-temperature condenser (-40 °C/+53 °C)

**Note:**
- Variant with UL approval available on request

## LCP rack DX, LCP rack DX/FC

| **Model No.** | Packs of | **3313.290** | **3313.410** | **3313.420** | Page |
|---|---|---|---|---|---|
| Design | | DX | DX | DX | |
| Modulation range kW | | 5 - 20 | 3 - 12 | 3 - 12 | |
| **Total cooling output/Number of fan modules** kW | | **20 / 4** | **12 / 4** | **12 / 4** | |
| Width mm | | 300 | 300 | 300 | |
| Height mm | | 2000 | 2000 | 2000 | |
| Depth mm | | 1200 | 1000 | 1200 | |
| Type of electrical connection | | Connection clamp | Connection clamp | Connection clamp | |
| Installation in bayed enclosure suite | | Flush | Flush | Flush | |
| Rated operating voltage V, ~, Hz | | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | |
| Pre-fuse (T) A | | 32 | 20 | 20 | |
| Air throughput at max. cooling output $m^3/h$ | | 4800 | 4800 | 4800 | |
| Fans may be exchanged with the system operational | | ■ | ■ | ■ | |
| EC fan | | ■ | ■ | ■ | |
| SNMP card | | ■ | ■ | ■ | |
| Rated current max. A | | 12.4 | 7.5 | 7.5 | |
| Cooling medium | | Refrigerant | Refrigerant | Refrigerant | |
| Refrigerant | | R410a | R410a | R410a | |
| Duty cycle % | | 100 | 100 | 100 | |
| Operating temperature range | | +5 °C...+35 °C | +5 °C...+35 °C | +5 °C...+35 °C | |
| Weight as delivered kg | | 239.0 | 181.0 | 201.0 | |
| **Also required** | | | | | |
| Condenser unit | 1 pc(s). | 3311.363 | 3311.360 | 3311.360 | 785 |

**Accessories for IT cooling** Page 784 **Network/server racks VX IT** Page 686 **Aisle containment** Page 788

**Applications:**
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately

**Benefits:**
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Temperature monitoring and control
- With redundant temperature sensor integrated at the air end as standard
- Thanks to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements
- Specific maintenance of the LCP DX due to separation of cooling and server racks
- Using LCP DX/FC variants in combination with indirect free cooling helps to save operating costs

**Functions:**
- The LCP is designed for siting within a bayed enclosure suite. Hot air is drawn in from the aisle at the rear of the device, cooled by the high-capacity compact impellers, and blown back into the room or cold aisle after cooling.
- The LCP DX/FC variants include both a refrigerant and a water/glycol heat exchanger. There is an additional free cooler integrated into the external condenser.
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room

**IT monitoring:**
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

**Temperature control:**
- Linear fan control
- Inverter-controlled compressor

**Material:**
- Sheet steel, spray-finished

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Optional:**
- Humidifier
- Dehumidification and reheater
- Condensate drain pump
- Higher cooling output
- Air filter
- Low-temperature/high-temperature condenser (-40 °C/+53 °C)

**Note:**
- Variant with UL approval available on request

## LCP Inline DX, LCP Inline DX/FC

| **Model No.** | Packs of | **3313.390** | **3313.430** | **3313.440** | **3313.450** | Page |
|---|---|---|---|---|---|---|
| Design | | DX | DX | DX | DX | |
| Modulation range kW | | 5 - 20 | 3 - 12 | 3 - 12 | 8 - 35 | |
| **Total cooling output/Number of fan modules** kW | | **20 / 4** | **12 / 4** | **12 / 4** | **35 / 3** | |
| Width mm | | 300 | 300 | 300 | 600 | |
| Height mm | | 2000 | 2000 | 2000 | 2000 | |
| Depth mm | | 1200 | 1000 | 1200 | 1000 | |
| Type of electrical connection | | Connection clamp | Connection clamp | Connection clamp | Connection clamp | |
| Installation in bayed enclosure suite | | Flush | Flush | Flush | Flush | |
| Rated operating voltage V, ~, Hz | | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | |
| Pre-fuse (T) A | | 32 | 20 | 20 | 40 | |
| Air throughput at max. cooling output $m^3/h$ | | 4800 | 4800 | 4800 | 9900 | |
| Fans may be exchanged with the system operational | | ■ | ■ | ■ | ■ | |
| EC fan | | ■ | ■ | ■ | ■ | |
| SNMP card | | ■ | ■ | ■ | ■ | |
| Rated current max. A | | 12.4 | 7.5 | 7.5 | 22.4 | |
| Cooling medium | | Refrigerant | Refrigerant | Refrigerant | Refrigerant | |
| Refrigerant | | R410a | R410a | R410a | R410a | |
| Duty cycle % | | 100 | 100 | 100 | 100 | |
| Operating temperature range | | +5 °C...+35 °C | +5 °C...+35 °C | +5 °C...+35 °C | +5 °C...+35 °C | |
| Weight as delivered kg | | 239.0 | 181.0 | 201.0 | 300.0 | |
| **Also required** | | | | | | |
| Condenser unit | 1 pc(s). | 3311.363 | 3311.360 | 3311.360 | 3311.370 | 785 |

# Liquid Cooling Package

## LCP Inline DX, LCP Inline DX/FC

| **Model No.** | Packs of | **3313.460** | **3313.470** | **3313.480** | Page |
|---|---|---|---|---|---|
| Design | | DX/FC | DX | DX/FC | |
| Modulation range kW | | 8 - 35 | 8 - 35 | 8 - 35 | |
| **Total cooling output/Number of fan modules** kW | | **35 / 3** | **35 / 3** | **35 / 3** | |
| Width mm | | 600 | 600 | 600 | |
| Height mm | | 2000 | 2000 | 2000 | |
| Depth mm | | 1000 | 1200 | 1200 | |
| Type of electrical connection | | Connection clamp | Connection clamp | Connection clamp | |
| Installation in bayed enclosure suite | | Flush | Flush | Flush | |
| Rated operating voltage V, ~, Hz | | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | 380 - 480, 3~, 50/60 | |
| Pre-fuse (T) A | | 50 | 40 | 50 | |
| Air throughput at max. cooling output $m^3/h$ | | 9900 | 9900 | 9900 | |
| Fans may be exchanged with the system operational | | ■ | ■ | ■ | |
| EC fan | | ■ | ■ | ■ | |
| SNMP card | | ■ | ■ | ■ | |
| Rated current max. A | | 31.6 | 22.4 | 31.6 | |
| Cooling medium | | Refrigerant | Refrigerant | Refrigerant | |
| Refrigerant | | R410a | R410a | R410a | |
| Duty cycle % | | 100 | 100 | 100 | |
| Operating temperature range | | +5 °C...+35 °C | +5 °C...+35 °C | +5 °C...+35 °C | |
| Weight as delivered kg | | 398.0 | 300.0 | 398.0 | |
| **Also required** | | | | | |
| Condenser unit | 1 pc(s). | 3311.380 | 3311.370 | 3311.380 | 785 |


Rittal Service.

**Rittal IT health check – do you know the real condition of your data centre?**

Upon request, we can perform a free health check on your data centre:

- Evaluation of your current solution
- Assessment of the risk of obsolescence
- Analysis of energy consumption
- Due consideration of current laws and regulations
- Elaboration of optimal measures, including individual guidance on actions to safeguard your efficiency and availability

# IT cooling calculator

## For simple calculation of the required cooling output of LCP CW cooling units

**Configure online at**
**www.rittal.com/configurators**

# Liquid Cooling Packages CW

## High-performance cooling

## LCP CW – Efficient high-performance cooling

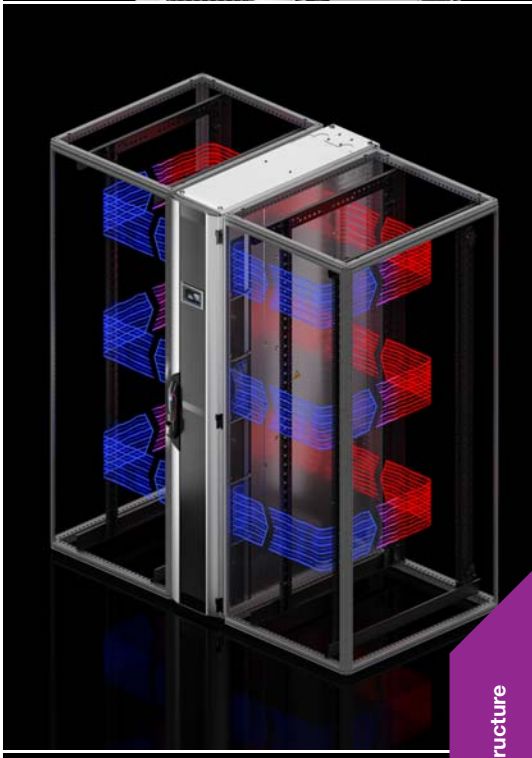
- Cooling of closed and open IT racks with high heat losses of up to 53 kW
- Cooling of IT equipment in uncooled IT rooms or decentralised data centre applications (edge)
- Ideal for IT cooling in medium and large data centre infrastructures as well as high-performance computing (HPC)
- Saves energy by using indirect free cooling
- Cooling of very high heat losses with a small footprint (HPC)

## How are the LCP CW units used?

- LCP rack CW units cool up to two closed IT racks to the left and right of the unit. The cold air is blasted in front of the slightly recessed 482.6 mm (19˝) level across the entire height of the LCP rack CW and drawn in by the IT equipment. The warm air expelled to the rear is drawn in again across the full height of the LCP rack CW at the rear and cooled.
- LCP Inline CW units cool multiple open IT racks in suites on both the left and right. Cold air is blasted into the cold aisle via the perforated front door or at the side of the LCP Inline CW, and from here, is drawn in by the IT equipment via the perforated front doors of the IT racks. Warm air from the IT hardware is blasted into the hot aisle via the perforated rear door of the IT rack and from there, is drawn in via the perforated rear door of the LCP Inline CW and cooled again.
- In both cases, air baffle plates on the 482.6 mm (19˝) level separate the cold and hot air within the IT rack.

## A configurable portfolio

- Cooling output is achieved with high water inlet temperatures, which enables a high proportion of free cooling
- High water return temperatures with LCP CW glycol variants help to improve heat recovery
- All waste heat from the IT systems is dissipated out of the building and emitted to the surrounding environment at the installation site of the external chiller or free cooler
- Depending on the application, this may be combined with integral rack or room extinguisher systems
- A calculator enables the simple selection of Liquid Cooling Packages CW for rack and suite cooling in the IT infrastructure.
- IT cooling calculator: www.rittal.com/configurators



# Liquid Cooling Package

**Accessories for IT cooling** Page 784 **Network/server racks VX IT** Page 686 **Chillers for IT cooling** Page 795

**Benefits:**
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- With redundant temperature sensor integrated at the air end as standard
- Optimum adaptability due to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Targeted cooling output due to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- The separation of cooling and enclosure prevents the ingress of water into the server enclosure
- A footprint of max. 0.36 $m^2$ for all cooling services
- Improved heat recovery, thanks to high water return temperatures when using LCP CW glycol variants, for example in combination with a heat pump
- Optimum access for maintenance and servicing from the front and rear
- Tool-free replacement of the fan modules

**Functions:**
- The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

**IT monitoring:**
- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

**Temperature control:**
- Linear fan control
- Two-way control valve

**Material:**
- Sheet steel, spray-finished

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Optional:**
- Fully integrated fire detection and extinguisher system
- Automatic server enclosure door opening
- Direct connection of additional CMC III sensors is supported
- Racks 2200 mm high

## LCP Rack CW

| **Model No.** | Packs of | **3313.130** | **3313.230** | **3313.250** | **3313.260** | Page |
|---|---|---|---|---|---|---|
| Design | | CW | CW | CWG | CW | |
| **Total cooling output/Number of fan modules** kW | | **10 / 1**<br>**20 / 2**<br>**30 / 3** | **10 / 1**<br>**20 / 2**<br>**30 / 3** | **38 / 4**<br>**40 / 5**<br>**44 / 6** | **48 / 4**<br>**51 / 5**<br>**53 / 6** | |
| Number of fan modules in supplied state | | 1 | 1 | 4 | 4 | |
| Width mm | | 300 | 300 | 300 | 300 | |
| Height mm | | 2000 | 2000 | 2000 | 2000 | |
| Depth mm | | 1000 | 1200 | 1200 | 1200 | |
| Type of electrical connection | | Connector | Connector | Connector | Connector | |
| Installation in bayed enclosure suite | | Flush | Flush | Flush | Flush | |
| Rated operating voltage V, ~, Hz | | 200 – 240, 1~, 50/60<br>346 – 415, 3~, 50/60 | 200 – 240, 1~, 50/60<br>346 – 415, 3~, 50/60 | 200 – 240, 1~, 50/60<br>346 – 415, 3~, 50/60 | 200 – 240, 1~, 50/60<br>346 – 415, 3~, 50/60 | |
| Air throughput at max. cooling output $m^3/h$ | | 4800 | 4800 | 4800 | 8000 | |
| Fans may be exchanged with the system operational | | ■ | ■ | ■ | ■ | |
| EC fan | | ■ | ■ | ■ | ■ | |
| Optimised condensate management, even at low water inlet temperatures | | – | – | ■ | – | |
| Water inlet temperature °C | | 15 | 15 | 15 | 15 | |
| Permissible operating pressure (p. max.) bar | | 10 | 10 | 10 | 10 | |
| Duty cycle % | | 100 | 100 | 100 | 100 | |
| Water connection | | DN 40<br>(G 1½" external thread) | DN 40<br>(G 1½" external thread) | DN 40<br>(G 1½" external thread) | DN 40<br>(G 1½" external thread) | |
| Weight as delivered kg | | 225.0 | 230.0 | 280.0 | 260.0 | |
| **Accessories** | | | | | | |
| Fan module | 1 pc(s). | 3313.016 | 3313.016 | 3313.016 | 3313.016 | 787 |
| Touchscreen display, colour | 1 pc(s). | 3311.030 | 3311.030 | 3311.030 | 3311.030 | 785 |
| Connection hose | 2 pc(s). | 3311.040 | 3311.040 | 3311.040 | 3311.040 | 786 |
| Condensate pump | 1 pc(s). | – | – | 3312.012 | – | 786 |

# Liquid Cooling Package

**Accessories for IT cooling** Page 784 **Network/server racks VX IT** Page 686 **Chillers for IT cooling** Page 795 **Aisle containment** Page 788

**Benefits:**
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Optimum adaptability due to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Targeted cooling output due to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- With redundant temperature sensor integrated at the air end as standard
- The separation of cooling and enclosure prevents the ingress of water into the server enclosure
- A footprint of max. 0.36 $m^2$ for all cooling services
- Improved heat recovery, thanks to high water return temperatures when using LCP CW glycol variants, for example in combination with a heat pump
- Optimum access for maintenance and servicing from the front and rear
- Tool-free replacement of the fan modules

**Functions:**
- The hot air is drawn in from the room or hot aisle at the rear of the device and expelled at the front into the cold aisle after cooling. With this product, a raised floor is not necessary.

**IT monitoring:**
- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

**Temperature control:**
- Linear fan control
- Two-way control valve

**Material:**
- Sheet steel, spray-finished

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Optional:**
- Direct connection of additional CMC III sensors is supported
- Racks 2200 mm high

## LCP Inline CW, LCP Inline CWG

| **Model No.** | Packs of | **3313.530** | **3313.540** | **3313.550** | **3313.560** | **3313.570** | Page |
|---|---|---|---|---|---|---|---|
| Design | | CW | CW | CWG | CW | CWG | |
| **Total cooling output/Number of fan modules** kW | | **10 / 1<br>20 / 2<br>30 / 3** | **18 / 2<br>27 / 3<br>30 / 4** | **20 / 2<br>31 / 3<br>35 / 4** | **48 / 4<br>51 / 5<br>53 / 6** | **38 / 4<br>40 / 5<br>44 / 6** | |
| Number of fan modules in supplied state | | 1 | 2 | 2 | 4 | 4 | |
| Width mm | | 300 | 300 | 300 | 300 | 300 | |
| Height mm | | 2000 | 2000 | 2000 | 2000 | 2000 | |
| Depth mm | | 1200 | 1200 | 1200 | 1200 | 1200 | |
| Type of electrical connection | | Connector | Connector | Connector | Connector | Connector | |
| Installation in bayed enclosure suite | | Set forward | Flush | Flush | Set forward | Set forward | |
| Rated operating voltage V, ~, Hz | | 200 – 240,<br>1~, 50/60<br>346 – 415,<br>3~, 50/60 | 200 – 240,<br>1~, 50/60<br>346 – 415,<br>3~, 50/60 | 200 – 240,<br>1~, 50/60<br>346 – 415,<br>3~, 50/60 | 200 – 240,<br>1~, 50/50<br>346 – 415,<br>3~, 50/60 | 200 – 240,<br>1~, 50/60<br>346 – 415,<br>3~, 50/60 | |
| Air throughput at max. cooling output $m^3/h$ | | 4800 | 5000 | 5000 | 8000 | 4800 | |
| Fans may be exchanged with the system operational | | ■ | ■ | ■ | ■ | ■ | |
| EC fan | | ■ | ■ | ■ | ■ | ■ | |
| Optimised condensate management, even at low water inlet temperatures | | – | – | ■ | – | ■ | |
| Water inlet temperature °C | | 15 | 15 | 15 | 15 | 15 | |
| Permissible operating pressure (p. max.) bar | | 10 | 10 | 10 | 10 | 10 | |
| Duty cycle % | | 100 | 100 | 100 | 100 | 100 | |
| Water connection | | DN 40<br>(G 1½"<br>external thread) | DN 40<br>(G 1½"<br>external thread) | DN 40<br>(G 1½"<br>external thread) | DN 40<br>(G 1½"<br>external thread) | DN 40<br>(G 1½"<br>external thread) | |
| Weight as delivered kg | | 230.0 | 220.0 | 280.0 | 260.0 | 280.0 | |
| **Accessories** | | | | | | | |
| Fan module | 1 pc(s). | 3313.016 | 3313.016 | 3313.016 | 3313.016 | 3313.016 | 787 |
| Touchscreen display, colour | 1 pc(s). | 3311.030 | 3311.030 | 3311.030 | 3311.030 | 3311.030 | 785 |
| Connection hose | 2 pc(s). | 3311.040 | 3311.040 | 3311.040 | 3311.040 | 3311.040 | 786 |
| Rear adaptor | | see page | – | – | see page | see page | 786 |
| Condensate pump | 1 pc(s). | – | – | 3312.012 | – | 3312.012 | 786 |

## Accessories

### Air duct

**for wall-mounted cooling unit Blue e+ IT**
For cold air infeed in front of the 482.6 mm (19") level in combination with the Blue e+ IT wall-mounted cooling unit.

**Benefits:**
– One air duct for different enclosure depths

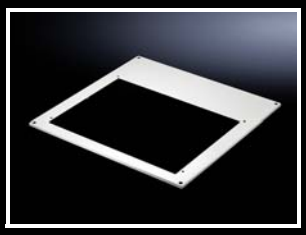
**Installation options:**
– Mounting in the bottom 3 U of the 482.6 mm (19") level

**Material:**
– Sheet steel, spray-finished

**Colour:**
– RAL 9005

**Supply includes:**
– Assembly parts

| Width mm | Height U | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 482.6 | 3 | 800<br>1000<br>1200 | 1 pc(s). | **3312.820** |



### Roof plate

**for roof-mounted cooling unit Blue e+ IT**
For mounting the roof-mounted cooling unit. The cut-out in the roof plate is arranged so that the roof-mounted cooling unit is positioned centrally on the enclosure.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7035

| To fit Model No. | Width mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 3312.800 | 800 | 800 | 1 pc(s). | **3312.805** |
| 3312.800 | 800 | 1000 | 1 pc(s). | **3312.806** |
| 3312.800 | 800 | 1200 | 1 pc(s). | **3312.807** |

**Assembly**

– Use the assembly parts of the existing solid roof plate for assembly

### Sheet steel door

**for wall-mounted cooling unit Blue e+ IT**
For mounting the roof-mounted unit. The cut-out in the door is arranged so that the roof-mounted cooling unit is positioned centrally on the door.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Sheet steel door at the rear, 180° hinges
– Comfort handle for profile half-cylinders with security lock 3524 E
– Assembly parts

| To fit Model No. | Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 3312.810 | 600 | 2000 | 1 pc(s). | **3312.815** |
| 3312.810 | 800 | 2000 | 1 pc(s). | **3312.816** |

## Refrigerant lines

**for LCU DX**

For connecting the internal and external unit of the LCU DX. Consisting of intake gas line and liquid line. The refrigerant lines are insulated.

| Design | Length m | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|
| LCU DX 3 kW | 20 | Intake gas line ½"<br>Liquid line ¼" | 1 pc(s). | **3311.495** |
| LCU DX 6.5 kW | 20 | Intake gas line ⅝"<br>Liquid line ⅜" | 1 pc(s). | **3311.496** |

## Touchscreen display, colour

**for LCP Rack/Inline CW**

The display offers the opportunity of directly monitoring key functions of the LCP, and implementing settings.

**Supply includes:**
– Assembly parts

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **3311.030** |

## Condenser unit

**for LCP DX**

The condenser units are necessary for operating refrigerant-based LCPs. Depending on the version, the units have an external condenser and fan, or additionally a free cooler. The variant with free cooler is needed for the combination variant LCP DX/FC. The units are suitable for roof and wall mounting.

**Material:**
– Sheet steel, spray-finished

**Surface finish:**
– Powder-coated, zinc-plated

**Colour:**
– RAL 9003

**Supply includes:**
– Assembly parts

| W x H x D mm | 1303 x 915 x 620 | 2282 x 818 x 552 | 2219 x 1099 x 850 | 3048 x 1270 x 1100 |
|---|---|---|---|---|
| Design | Condenser | Condenser | Condenser | Condenser with free cooler |
| Temperature control | Speed-controlled fan | Speed-controlled fan | Speed-controlled fan | Speed-controlled fan |
| No. of fans | 2 | 3 | 2 | 2 |
| Rated operating voltage V, ~, Hz | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 | 230, 1~, 50/60 |
| Cooling medium | - | - | - | Water/glycol |
| Refrigerant | R410a | R410a | R410a | R410a |
| Weight kg | 29.0 | 68.0 | 210.0 | 285.0 |
| Packs of | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| **Model No.** | **3311.360** | **3311.363** | **3311.370** | **3311.380** |

## Accessories

### Vertical shielding

**for VX IT**
To block the airflow on the left and right of the 482.6 mm (19") level, for enclosure height 2000 mm.

**Design:**
– Self-adhesive on one side

**Material:**
– Cellular PU foam
– Flame-inhibiting to UL 94 (HF1)

**Colour:**
– Anthracite

| Sealing between | W x H x D mm | For enclosure width mm | Packs of | **Model No.** |
|---|---|---|---|---|
| LCP and 482.6 mm (19") level | 210 x 1915 x 110 | 800 | 1 pc(s). | **3301.320** |
| LCP and 482.6 mm (19") level | 110 x 1915 x 110 | 600 | 1 pc(s). | **3301.370** |
| Side panel and 482.6 mm (19") level | 84 x 1910 x 84 | 600 | 1 pc(s). | **3301.380** |
| Side panel and 482.6 mm (19") level | 184 x 1910 x 84 | 800 | 1 pc(s). | **3301.390** |

### Connection hose

**for LCP Rack/Inline CW**
Flexible connection hose at the bottom or top, may be cut to required length, including union nuts on both ends for connecting the LCP to existing pipe-work.

**Material:**
– EPDM

| Length m | Water connections | Packs of | **Model No.** |
|---|---|---|---|
| 1.8 | 1½" | 2 pc(s). | **3311.040** |

### Rear adaptor

**for LCP Inline CW**
May be positioned to the rear of the set forward LCP Inline CW to close the existing gap to the rear section.

**Material:**
– Sheet steel, spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Adaptor
– With roof plate
– Assembly parts

| Width mm | Height mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 300 | 2000 | 200 | 1 pc(s). | **3312.081** |

### Condensate pump

**for LCP Rack/Inline CW**
For discharging condensate with LCP Rack/Inline CW applications.

**Benefits:**
– Plug & play installation in all LCP Rack/Inline CW variants

**Supply includes:**
– Condensate pump
– Condensate hose
– Condensate sensor
– Connection cable
– Assembly parts

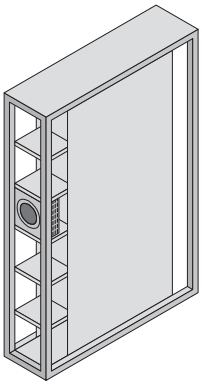
| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **3312.012** |

## Fan module

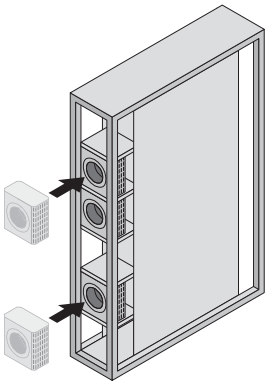
**for LCP Rack/Inline CW**

To increase the cooling output, individual fan modules may be retro-fitted into the LCPs. Additional integration can also achieve redundancy and reduce the electrical power consumption of the LCP.

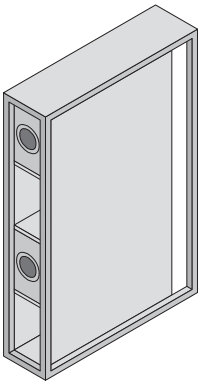
| Packs of | Model No. |
|---|---|
| 1 pc(s). | **3313.016** |



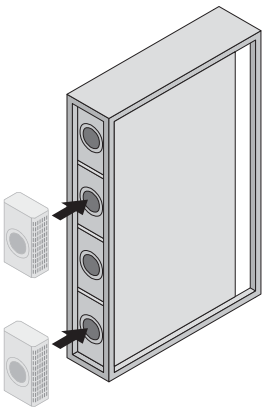
The LCP 3313.130/.230/.530 (max. 30 kW) is supplied with one fan module as standard.



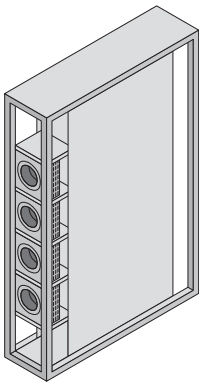
To achieve the max. cooling output, the customer/service should install two additional fan modules.



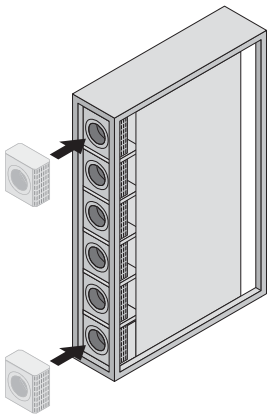
The LCP 3313.540/.550 (max. 30/28 kW) is supplied with two fan modules as standard.



To achieve the max. cooling output, the customer/service should install two additional fan modules.



The LCP 3313.250/.260/.560/.570 (max. 35/53/53/35 kW) is supplied with four fan modules as standard.



To achieve the max. cooling output, the customer/service should install two additional fan modules.

**Note:**

– The max. cooling output for the relevant LCP variants can be found in the order tables from page 774

# Aisle containment

**Liquid Cooling Package** Page 772 **Network/server racks VX IT** Page 686

Slimline door element with viewing window and sliding door. Stable roof elements in a composite material with a high level of light permeability. Where required, safety glass may also be used. The aisle width is 1,200 mm.

**Applications:**
- Depending on the application, aisle containment may be used with CRAC systems or LCP Inline as hot or cold aisle containment

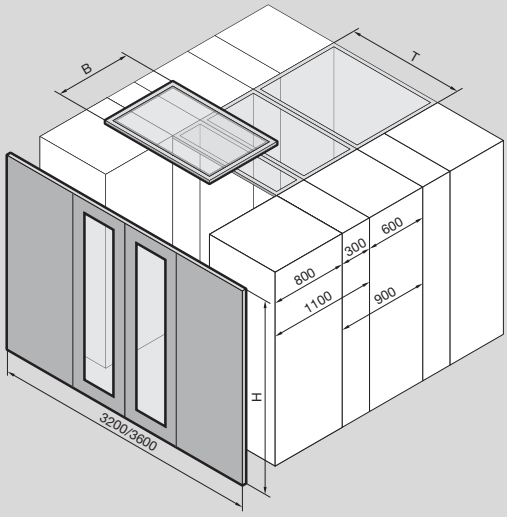
**Benefits:**
- Increased energy efficiency and performance capability of climate control
- Easily installed and retrofitted, as it is fully compatible with the VX IT rack system
- An inexpensive way to boost the performance of your existing installation, lengthening the investment cycle until a replacement needs to be purchased

**Functions:**
- Aisle containment is a combination of door and roof components which facilitate consistent separation of the hot and cold air in the data centre. Such separation is pivotal to saving energy and increasing the efficiency of the available climate control technology.

**Material:**
- Sheet steel, spray-finished

**Colour:**
- RAL 7035

Photo shows a configuration example with equipment not included in the scope of supply




| Model No. | Packs of | 3311.161 | 3311.163 | 3311.170 | 3311.180 | 3311.190 | 3311.200 | 3311.210 | 3311.270 | 3311.280 | Page |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Design | | Door element | Door element | Roof element centre | Roof element centre | Roof element centre | Roof element centre | Roof element centre | Roof element start/end | Roof element start/end | |
| For enclosure depth mm | | 1000 | 1200 | – | – | – | – | – | – | – | |
| Width (B) mm | | 3200 | 3600 | 600 | 800 | 300 | 900 | 1100 | 600 | 800 | |
| Height (H) mm | | 2000 | 2000 | – | – | – | – | – | – | – | |
| Depth (T) mm | | – | – | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | |
| Weight as delivered kg | | 120.0 | 150.0 | 30.0 | 35.0 | 20.0 | 30.0 | 33.0 | 30.0 | 28.0 | |

## Roof-mounted fans

**for VX, VX IT, for the office sector**

This roof ventilation concept offers many performance, assembly and cost benefits associated when using integrated ventilation systems. The roof-mounted fan may be ordered with and without a roof plate. For the version with roof plate, the roof-mounted fan is pre-installed. This roof plate also has an integral rear cable entry via a sliding plate with rubber cable clamp strip. Another outstanding feature is the enormous volumetric flow combined with exceptionally low noise levels, making it ideal for use in sensitive office areas.

**Benefits:**
- Easy assembly, the roof plate variant eliminates the need to create mounting cut-outs
- Fully wired ready for connection

**Material:**
- Sheet steel, spray-finished

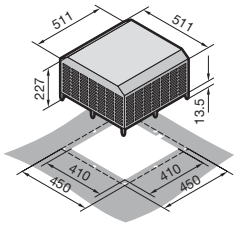
**Colour:**
- RAL 7035

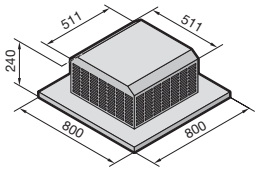
**Supply includes:**
- Roof-mounted fans
- Assembly parts

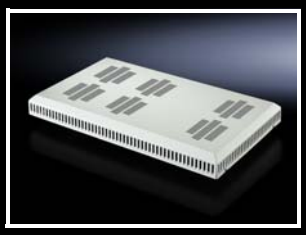
**Note:**
- Reduction in the specified air throughput to 800 $m^3$/h at 40 Pa counterpressure using two vented base/plinth trim panels

| Model No. | 3164.230 | 3164.620 |
|---|---|---|
| Packs of | 1 pc(s). | 1 pc(s). |
| Rated operating voltage V, ~, Hz | 230, 1~, 50/60 | 230, 1~, 50/60 |
| Air throughput, unimpeded air flow $m^3$/h | 1500 | 1500 |
| Design | Without roof plate | With roof plate |
| Rated current A | 0.3 / 0.35 | 0.3 / 0.35 |
| Power consumption W | 68 / 81 | 68 / 81 |
| Width mm | 511 | 800 |
| Height mm | 227 | 240 |
| Depth mm | 511 | 800 |
| Required mounting cut-out mm | 410 x 410 | – |
| Fan | Radial | Radial |
| Operating temperature range | +20 °C...+55 °C | +20 °C...+55 °C |
| Noise level dB(A) | 40 | 40 |
| Weight kg | 19.5 | 30.0 |

**Accessories:**
- Digital enclosure internal temperature display and thermostat integrated into a patch panel 1 U, see page 546
- Digital enclosure internal temperature display and thermostat , see page 546
- Thermostat, see page 547





## Fan mounting plate

**for VX IT, TE**

For active ventilation. The unit may optionally be extended with additional fans.

**Applications:**
- For use in the cut-out integrated into the roof plate

**Colour:**
- RAL 7035

**Supply includes:**
- 1 fan unit
- 2 fans
- 1 thermostat
- Connection cable, open-ended
- Assembly parts

**Note:**
- The noise level given refers to the first fan
- Connection via distributor box or country-specific connector

**Accessories:**
- Fan expansion kit, see page 790

| W x H x D mm | Installation options | No. of fans | Number of fans (max.) | Air through-put per fan m³/h | Output per fan W | Rated operating voltage V, ~, Hz | Operating tempera-ture range | Noise level per fan dB(A) | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|---|
| 200 x 59 x 550 | In VX IT with W x D (mm): 600 x 600 / 600 x 800 / 600 x 1000 / 600 x 1200 / 800 x 600 | 2 | 3 | 160 / 180 | 15 / 14 | 230, 1~, 50/60 | +5 °C...+5 5 °C | 37 | 1 pc(s). | **5502.010** |
| 340 x 54 x 550 | In VX IT with W x D (mm): 800 x 800 / 800 x 1000 / 800 x 1200 In TE 8000 with W x D (mm): 600 x 600 / 600 x 800 / 600 x 1000 / 800 x 600 / 800 x 800 / 800 x 1000 | 2 | 6 | 160 / 180 | 15 / 14 | 230, 1~, 50/60 | +5 °C...+5 5 °C | 37 | 1 pc(s). | **5502.020** |

## Fan expansion kit

For use as a stand-alone fan, and for upgrading various fan units or to supplement the fan mounting plate.

**Supply includes:**
- Fan
- Connection cable (0.61 m)
- Assembly parts

| W x H x D mm | Air through-put (unimpeded air flow) m³/h | Rated operating voltage V, ~, Hz | Power consumption W | Operating temperature range | Noise level dB(A) | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 119 x 119 x 38 | 160 / 180 | 230, 1~, 50/60 | 15 / 14 | -10 °C...+55 °C | 37 / 37 | 1 pc(s). | **7980.000** |
| 119 x 119 x 25 | 108 / 120 | 230, 1~, 50/60 | 14 / 12 | -20 °C...+70 °C | 34 / 34 | 1 pc(s). | **7980.100** |
| 119 x 119 x 38 | 184 | 48 (DC) | 7.7 | -20 °C...+70 °C | 43 | 1 pc(s). | **7980.148** |

## Cover plates for fan panels

**for FlatBox**
To cover unused fan panels when using fans in the FlatBox.

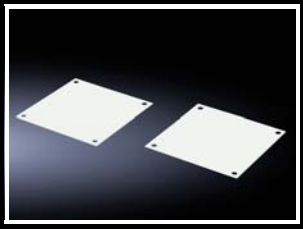
**Material:**
– Sheet steel

**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Packs of | **Model No.** |
|---|---|
| 6 pc(s). | **7507.760** |



## Vent cover

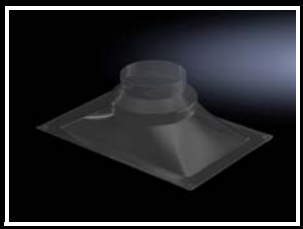
**for VX, VX IT**
The ideal addition for incorporating sealed racks into an existing central climate control system. The stepped connection is suitable for standard pipe diameters, thereby ensuring effective cooling thanks to targeted air exchange inside the rack.

**Material:**
– PET-G

**Colour:**
– Transparant

**Supply includes:**
– Assembly parts

**Note:**
– Required cut-out in the roof plate (W x D): 380 x 230 mm



| W x H x D mm | Diameter of hose connection mm | Weight kg | Packs of | **Model No.** |
|---|---|---|---|---|
| 450 x 144 x 300 | 150/200 | 0.96 | 1 pc(s). | **7826.750** |

# CRAC systems

## Precision climate control units for data centres

## CRAC DX/CW – Climate control for large data centres

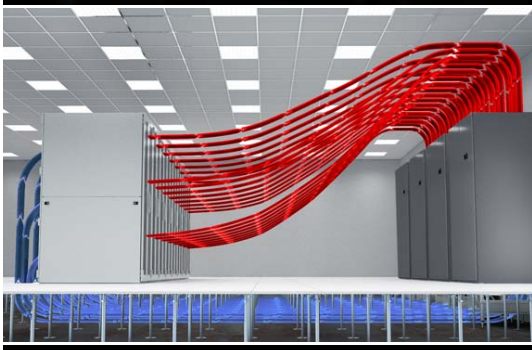
- Cooling with CRAC systems is ideal for data centres with low to medium outputs per IT rack
- The racks being cooled must be open
- Precision climate control units with accurate temperature and humidity control
- Reliable, familiar technology with a tried-and-tested track record spanning several decades

## How are CRAC systems used?

- Downflow: CRAC units extract hot air from the data centre via the unit's open roof. The air is cooled via a heat exchanger and then blasted into the raised floor by fans.
- Upflow: CRAC units extract hot air via the front of the device and blast cold air back into the room via the open roof
- In both cases, air baffle plates on the 482.6 mm (19´) level separate the cold and hot air within the IT rack

## Tried-and-tested technology

- All waste heat from the IT systems is dissipated out of the building and emitted to the surrounding environment
- There are a range of different options (humidifier, reheater, filter, pressure regulator etc.) available
- Downflow units (raised floor required)
- Upflow units (raised floor not required)
- DX, CW or dual fluid (DX + CW) versions available
- Direct free cooling is supported



# IT chillers

## Precision climate control units for high cooling outputs

## IT chillers – A continuous supply of cool water

- The ideal solution for server rooms and data centres with medium to high outputs which are supplied with cold water by one or more chillers (e.g. for CRAC CW or LCP CW systems, depending on the heat loss of the IT systems)
- Numerous configurations of the many different variants cover a broad spectrum of required cooling outputs
- Integral or additional free cooling option available for all variants

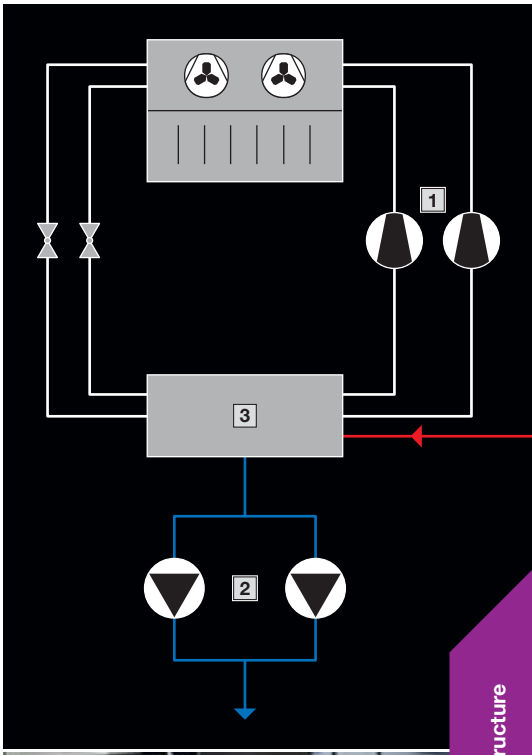
## How do IT chillers work?

- IT chillers are air-cooled and suitable for outdoor siting
- Using large heat exchangers and high-end scroll compressors enables a high level of energy efficiency; depending on the cooling output, cold water is produced on the evaporator coil by one or two independent cooling circuits
- From the evaporator coil, one or two pumps (redundant) supply the equipment (CRACs or LCPs) with cold water. The use of an inverter gives the system a high degree of flexibility to vary the water flow-rate as well as the available pressure (to support large distances between chillers and server rooms)
- The smart device software manages thermal load fluctuations via the regulated use of all or selected compressors and via the pump speed
- At low external temperatures (below the water return temperature), the free cooling function is activated, which helps to save energy by shutting off selected compressors

1 Two independent cooling circuits (two or more compressors)
2 Two pumps (one operational, one in standby mode)
3 Evaporator coil

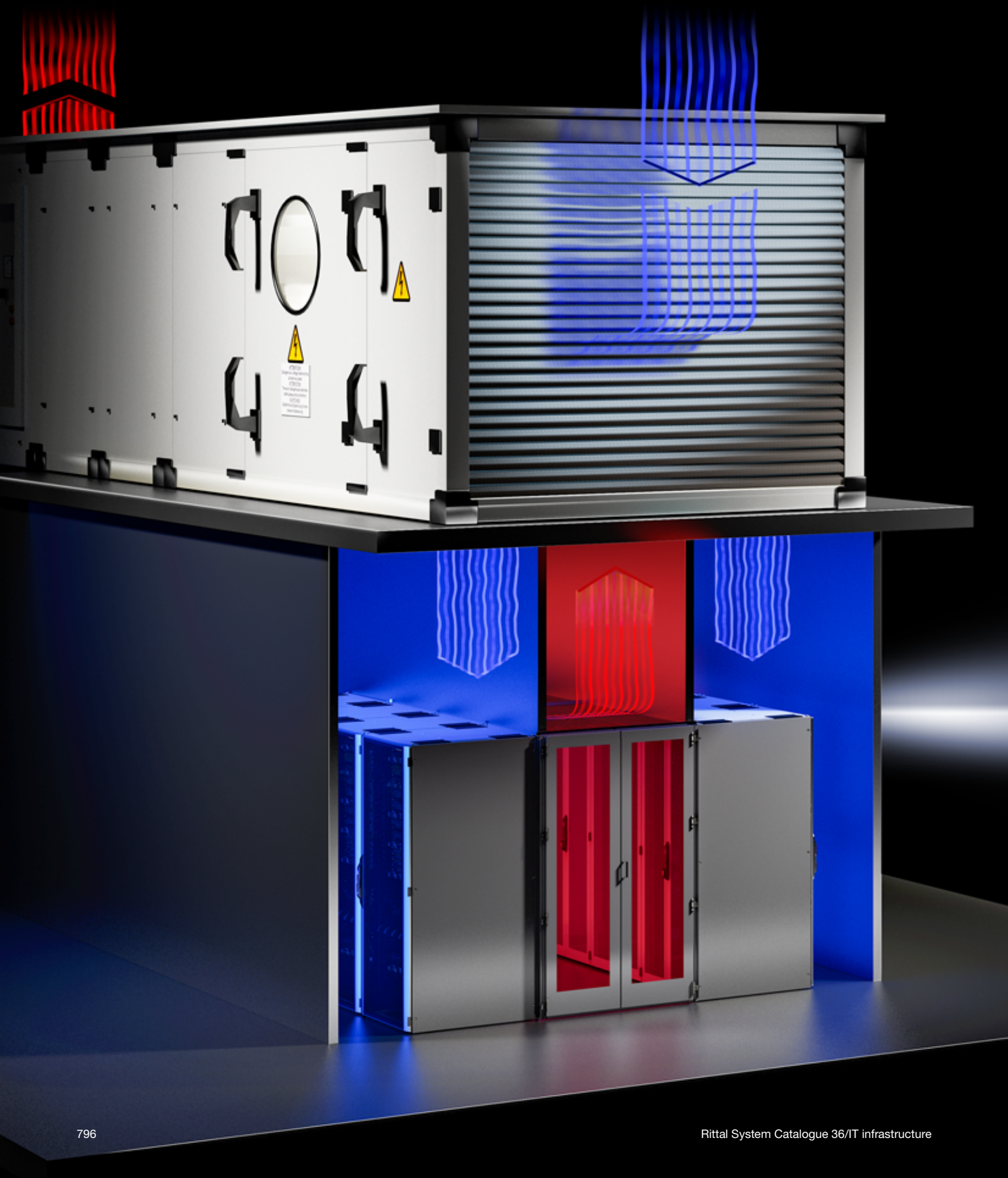
## Customer benefits

- Low operating costs, thanks to a high level of energy efficiency and free cooling option
- Redundancy in selected chillers, thanks to two integrated, independent cooling circuits (over 50 kW) and two redundant pumps
- System redundancy permits cascading of multiple chillers and automatic operational rotation, either a preset times or in the event of a malfunction
- Remote monitoring via Ethernet and polling of status and alarm messages, plus remote operation of device functions



# Air Handling Unit

## High-efficiency room cooling for large data centres



## AHU – Cooling for large data centres

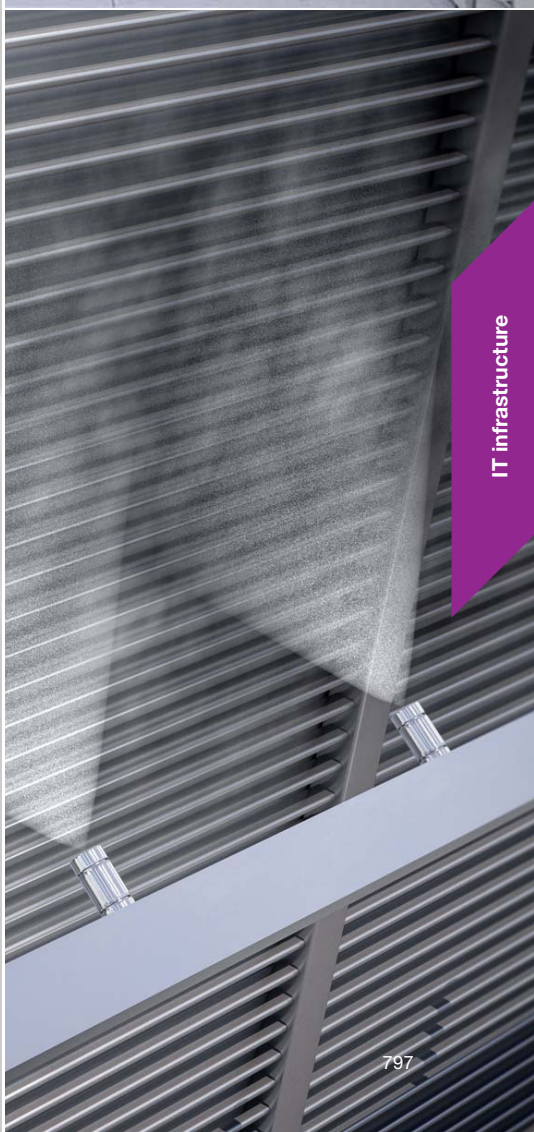
- An air handling unit or ventilation system is generally used in large data centres (hyperscale) where large volumes of air need to be moved
- The ventilation system makes extensive cooling output available without taking up space in the data centre. As the thermal loads being dissipated are generally high, a very large volumetric efficiency of the air-flow is required.

## How does an AHU work with adiabatic cooling in the data centre?

- In the ventilation system, the hot waste air from the IT systems emits its energy to the cooler ambient air
- Energy is exchanged in the AHU via heat exchangers, e.g. cross-flow (indirect cooling)
- The data centre air does not come into contact with potentially contaminated exterior air
- Air is fed into the data centre via air ducts
- If the exterior air is cooler than the waste air from the IT systems, an active cooling system is not needed (indirect free cooling)
- As the exterior temperature rises, this period can be extended by spraying the heat exchanger with water (adiabatic cooling, or evaporation cooling)
- In enclosure suites, cold and hot zones are separated via aisle partitioning
- Air baffle plates on the 482.6 mm (19˝) level separate cold and hot air within the IT rack

## Integration into the building structure

- The AHU and its infrastructure (air ducts etc.) must be incorporated into the data centre structure. For this reason, AHUs tend only to be used with new-build data centres.
- Retrofitting existing building infrastructures is usually too costly and labour-intensive
- AHUs are custom-designed for each specific project – please contact us for advice



# Rittal – The System.

**Faster – better – everywhere.**

# IT monitoring

## CMC III – Monitoring system

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## Your benefits

- A better overview of your IT infrastructure
- Enhanced security
- Automated processes
- Exceptional cost efficiency
- Huge energy savings
- Simple project management
- Fast installation
- Flexible, individual solutions using standard products from Rittal
- High standard of quality with coordinated standard products

## Sample applications

1 CMC III, see page 802
2 Liquid Cooling Package LCP, see page 772
3 Monitor/keyboard unit, see page 822
4 Integrated Web interface of a CMC III Processing Unit, see page 806
5 Radio comfort handle VX, see page 947
6 Fire alarm and extinguisher system DET-AC master, see page 823
7 Add-on unit DET-AC III slave, see page 825
8 CMC III sensors, see page 807
9 RiZone, see page 828

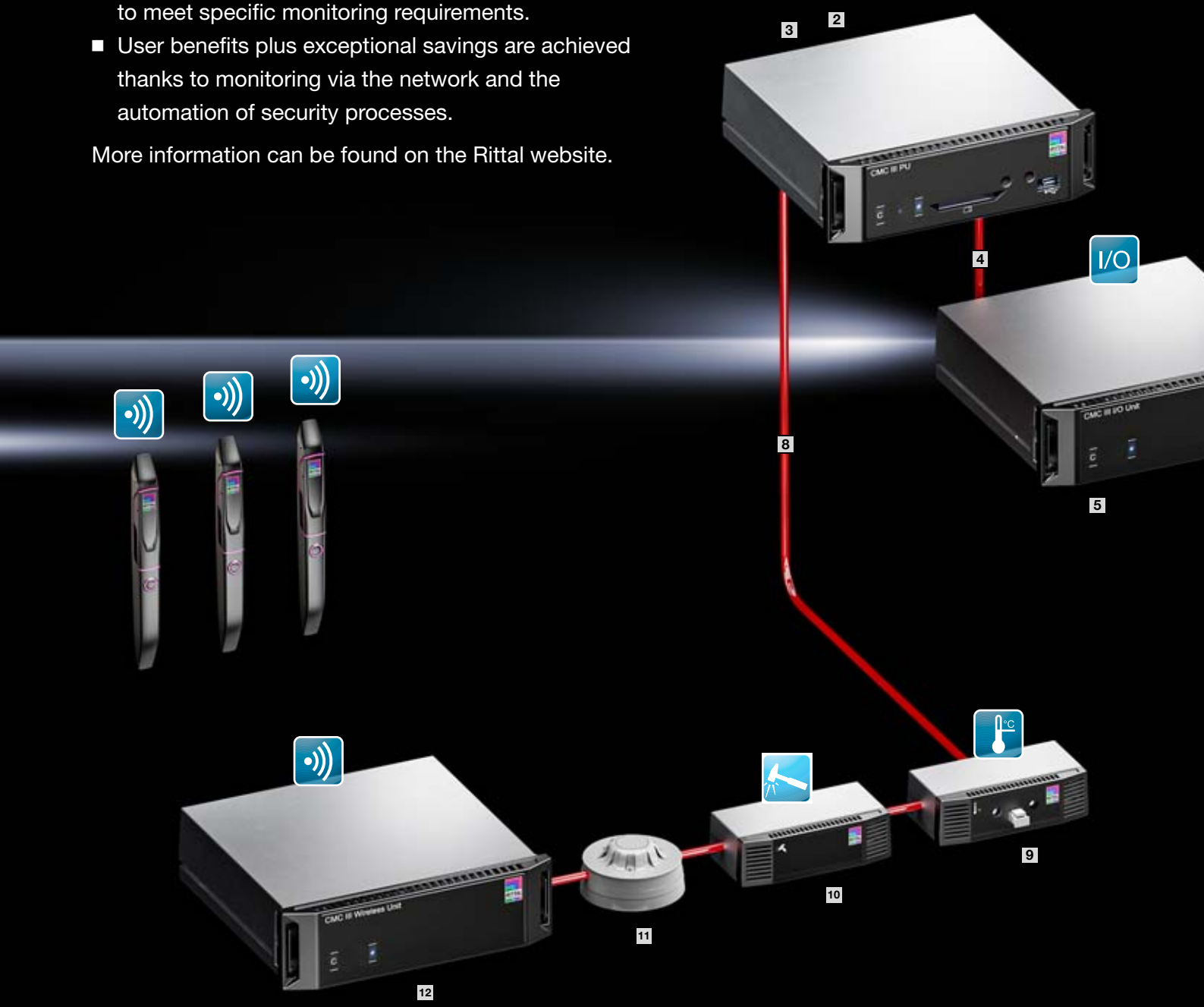
# CMC III – Monitoring system

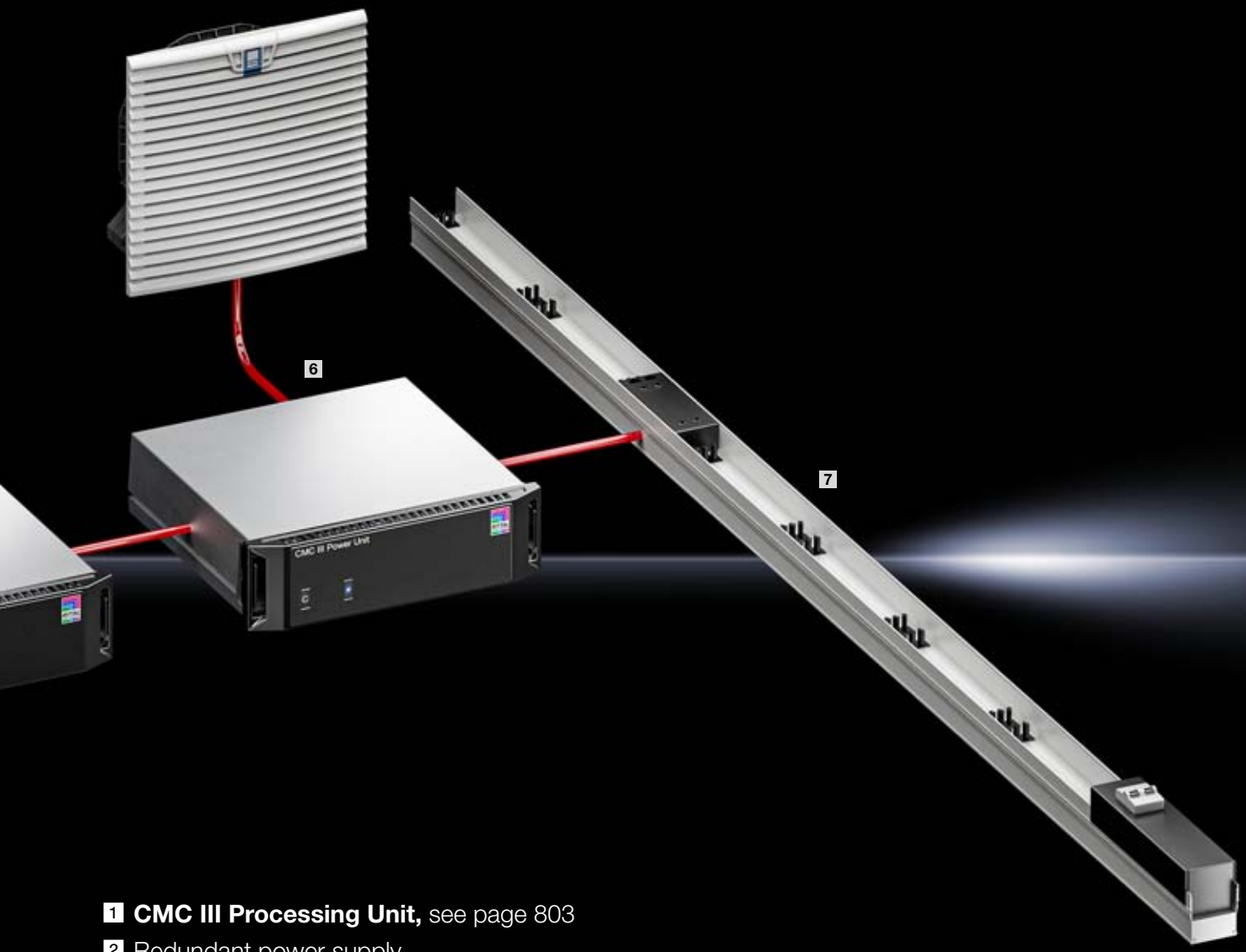
Computer Multi Control (CMC) is a monitoring system system for network and server racks, standard enclosures, containers and rooms.

- It monitors temperatures, humidity, access, smoke, energy and many other physical ambient parameters.
- The system is modular and can be flexibly adapted to meet specific monitoring requirements.
- User benefits plus exceptional savings are achieved thanks to monitoring via the network and the automation of security processes.

More information can be found on the Rittal website.

**1 CMC III Processing Unit**

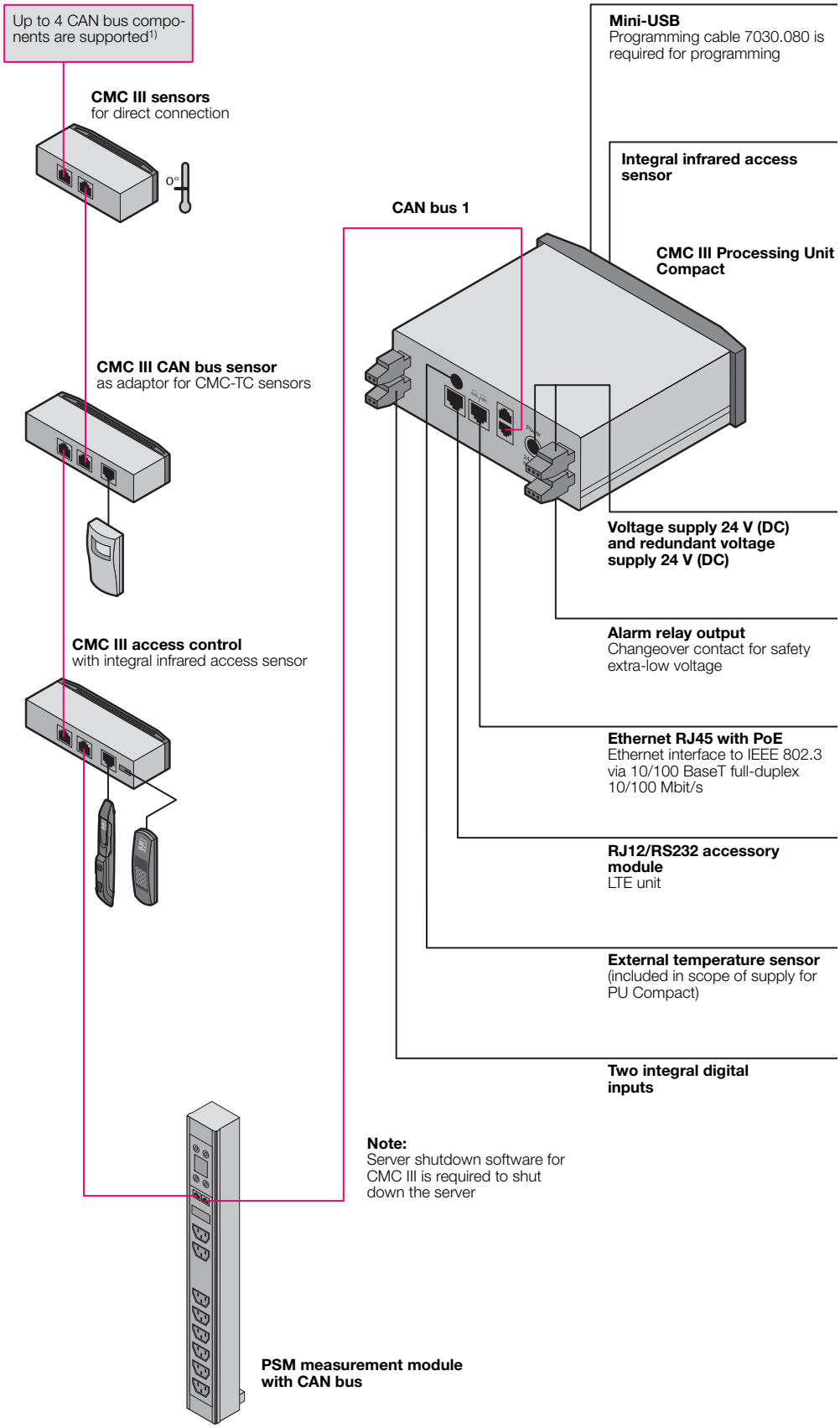





1 **CMC III Processing Unit,** see page 803
2 Redundant power supply
3 Power supply
4 Up to 16 CAN bus systems may be connected
5 CMC III I/O unit
6 CMC III power unit
7 CMC III PSM measurement bar for direct connection
8 Up to 16 CAN bus systems may be connected
9 CMC III temperature sensor
10 CMC III vandalism sensor
11 CMC III smoke alarm
12 CMC III Wireless Unit with radio comfort handles VX

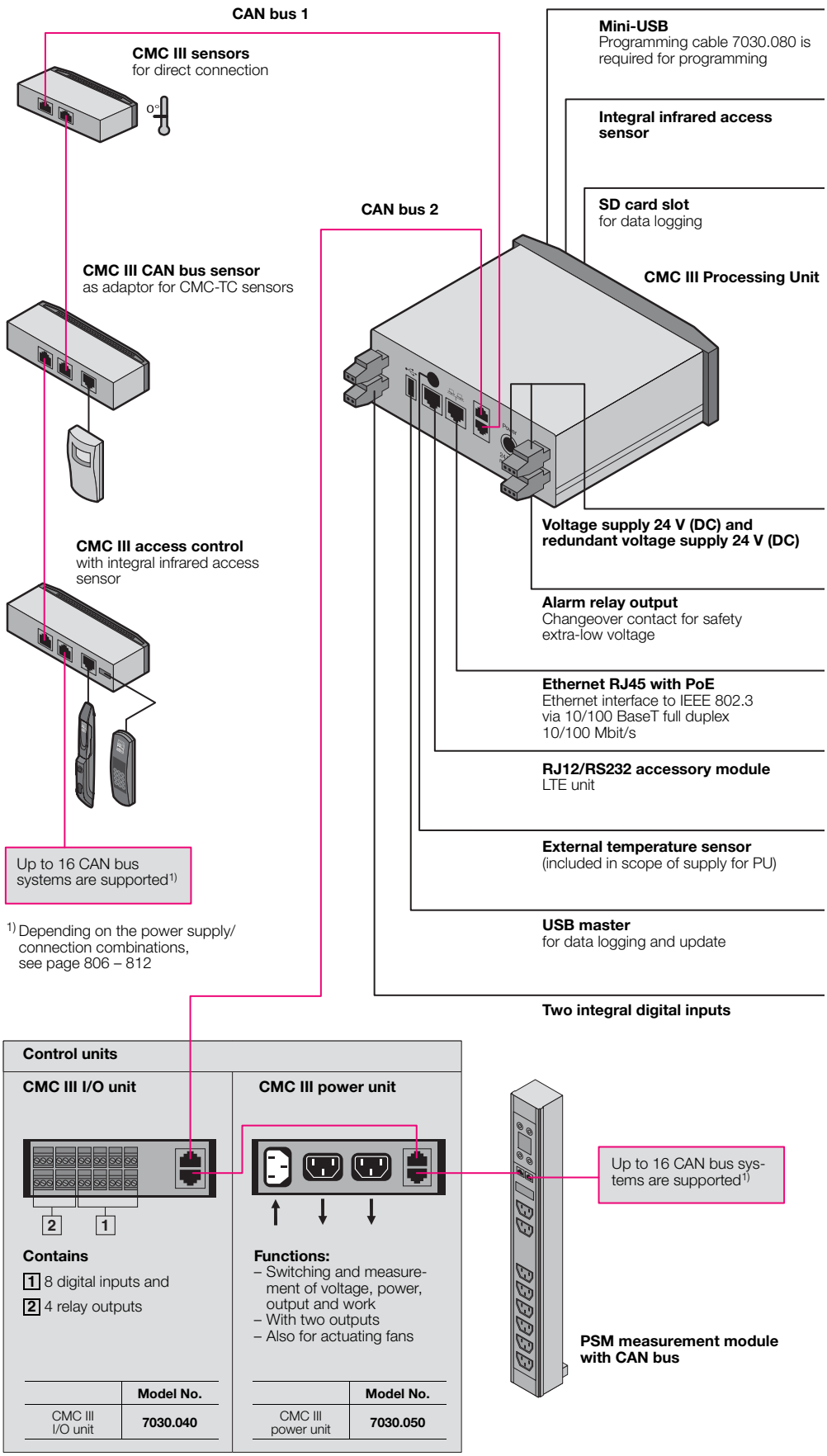
# CMC III Processing Unit Compact

## System overview




[1)] Depending on the power supply/ connection combinations, see page 806 – 812

## System overview




| | Model No. |
|---|---|
| CMC III I/O unit | 7030.040 |

| | Model No. |
|---|---|
| CMC III power unit | 7030.050 |

# CMC III Processing Unit / Compact

**System overview** Page 802/803 **Basic modules and connection accessories** From page 806

Central unit of the CMC III monitoring system.
In addition, up to 32/4 external sensors/CAN-Bus connection units may be connected to the integral sensors.

**Applications:**
- Monitoring of enclosures, rooms and containers in the IT environment

**Benefits:**
- High redundancy due to redundant power supply
- Cost saving due to optimal space utilisation and connection technique
- High flexibility due to modular system
- High reliability due to permanent monitoring of the physical enclosure parameters

**Material:**
- Plastic

**Surface finish:**
- Front: Smooth
- Enclosure: Textured

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- Basic system
- External temperature sensor incl. connection cable (supplied loose)
- Infrared access sensor (integrated)
- Assembly parts for mounting on surfaces

**Note:**
- Unencrypted protocols may be deactivated for enhanced network security

**Approvals:**
- UL
- cUL

Photo shows a configuration example with equipment not included in the scope of supply

# CMC III Processing Unit / Compact

| | | Packs of | CMC III Processing Unit | CMC III Processing Unit Compact |
|---|---|---|---|---|
| W x H x D mm | | | 138 x 40 (1 U) x 120 + 12 (front assembly) | 138 x 40 (1 U) x 120 + 12 (front assembly) |
| Operating temperature range | | | 0 °C…+45 °C | 0 °C…+45 °C |
| Operating humidity range | | | 5 – 95% relative humidity, non-condensing | 5 – 95% relative humidity, non-condensing |
| Sensors/CAN bus connection units | | | max. 32 | max. 4 |
| Max. overall cable length for CAN bus | | | 2 x 50 m | 1 x 50 m |
| **Model No.** | | 1 pc(s). | **7030.000** | **7030.010** |
| **Interfaces** | Network interface (RJ45) | | Ethernet to IEEE 802.3 via 10/100BaseT with PoE | Ethernet to IEEE 802.3 via 10/100BaseT with PoE |
| | Front USB interface | | Mini USB for system setting | Mini USB for system setting |
| | Rear USB interface | | for USB stick for data recording up to 32 GB | – |
| | Front SD-HC slot | | 1 x up to 32 GB for data recording | – |
| | Rear serial RS232 (RJ12) | | 1 x for connecting LTE unit with SMS functions | 1 x for connecting LTE unit with SMS functions |
| | CAN bus (RJ45) | | 2 x for max. 16 sensors each = 32 sensors in total (quantity restriction, see page 806 – 812) | 1 x for max. 4 sensors (quantity restriction, see page 806 – 812) |
| **Inputs and outputs** | Digital inputs (terminal) | | 2 | 2 |
| | Relay output (terminal) | | Changeover contact max. 24 V (DC), 1 A | Changeover contact max. 24 V (DC), 1 A |
| **Operation/ signals** | Switch/concealed reset button | | 1 x acknowledgement button/1 x service button | 1 x acknowledgement button/1 x service button |
| | Piezo signal generator | | 1 | 1 |
| | LED display | | 1 x multi-colour OK/warning/alarm | 1 x multi-colour OK/warning/alarm |
| | Rear LED | | 1 x for the network status | 1 x for the network status |
| **Protocols** | Ethernet | | TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, (S)FTP, HTTP(S), NTP, DHCP, DNS, SMTP(S), TLS, Syslog | TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, (S)FTP, HTTP(S), NTP, DHCP, DNS, SMTP(S), TLS, Syslog |
| **Redundant power supply** | Input 24 V (DC) (jack) | | 1 x for connecting the CMC III power pack | 1 x for connecting the CMC III power pack |
| | Input 24 V (DC) (terminals) | | 1 x for direct connection or for connecting the CMC III power pack | 1 x for direct connection or for connecting the CMC III power pack |
| | Power over Ethernet (PoE) | | 1 x 15.4 W | 1 x 15.4 W |
| **Functions** | Time function | | Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP | Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP |
| | User administration | | Local, LDAP(S), Radius | Local, LDAP(S), Radius |
| | User interface | | Integral Web server with flexible dashboard and mobile view | Integral Web server with flexible dashboard and mobile view |
| | Control room connection | | Integral OPC-UA server, Modbus/TCP | Integral OPC-UA server, Modbus/TCP |
| | Video monitoring | | Incorporation of 1 x network camera | – |
| **Also required** | | | | |
| Mounting unit, 1 U | | 1 pc(s). | 7030.088 | 7030.088 |
| CMC III power pack | | 1 pc(s). | 7030.060 | 7030.060 |
| Programming cable | | 1 pc(s). | 7030.080 | 7030.080 |

## System components

### Control units for CMC III Processing Unit

**Dimensions:**
– W x H x D:
138 x 40 x 120 + 12 mm front frame

**Material:**
– Plastic

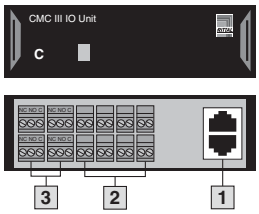
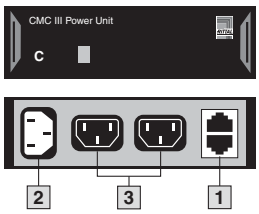
**Surface finish:**
– Front: Smooth
– Enclosure: Textured

**Colour:**
– Front: RAL 9005
– Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
– IP 30

**Supply includes:**
– Basic system
– Assembly parts for mounting on surfaces

**Also required:**
– CAN bus connection cable, see page 818
– CMC III Processing Unit, see page 804
– Mounting unit, 1 U, see page 819

| | | 1 Connection RJ45 2 x CAN bus | 2 Inputs | 3 Outputs | Model No. Packs of 1 | PU Compact Maximum quantity | PU Maximum quantity |
|---|---|---|---|---|---|---|---|
|   | **CMC III I/O unit**<br>In the software, the relays can be linked to measurement values so that they are actuated under certain circumstances. This allows devices to be controlled and messages to be forwarded.<br>Cannot be operated with the Processing Unit Compact.<br>– Inputs for potential-free signals<br>– Relay output (changeover contact) can handle loads of up to max. 24 V (DC) / 1 A | ■ | 8 x digital | 4 x relays | **7030.040** | – | 16 |
|   | **CMC III power unit**<br>The input is switched to the outputs via two relays. In this way, the outputs can be linked to measured values for automatic switching. Fan regulation is one example of a potential application. Manual switching via the CMC III operating interface is likewise supported. Each output is monitored individually, and various values are measured.<br>Cannot be operated with the Processing Unit Compact.<br>– Switches 2 outputs<br>– Measures voltage, current, power, work<br>– Application: Controlling and switching fans, heaters, equipment<br>– Note:<br>For controlling fans, one interference suppressor 7030.051 per fan is required | ■ | 1 x C14<br>110 – 230 V<br>50/60 Hz | 2 x C13<br>Aggregate current max. 10 A | **7030.050** | – | 16 |

## CMC III sensors for direct connection

CMC III sensors are used for monitoring the physical environment and can be connected directly to the PU via a CAN bus connection cable RJ45. The sensors may also be linked together to form a bus.

**Dimensions:**
- 7030.110/.111/.120/.130
  W x H x D: 80 x 30 x 40 mm
- 7030.140/.150/.190/.430/.440
  W x H x D: 110 x 30 x 40 mm
- 7030.400
  Ø x H: 100 x 60 mm

**Material:**
- Plastic

**Surface finish:**
- Front: Smooth
- Enclosure: Textured

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035
- Smoke detector: White

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- Sensor
- Mounting plate
- Assembly parts

**Also required:**
- CAN bus connection cable, see page 818

| | 1 Connection RJ45 2 x CAN bus | 2 Inputs | Model No. Packs of 1 | PU Compact Maximum quantity | PU Maximum quantity |
|---|---|---|---|---|---|
| **Temperature sensor**<br>– External NTC sensor, 2 m cable<br>– Measurement range for external sensors: -40 °C…+80 °C | ■ | – | **7030.110** | 4 | 32 |
| **Temperature/humidity sensor**<br>– Measurement range: 0 °C…+55 °C/ 5 – 95% rel. humidity | ■ | – | **7030.111** | 4 | 32 |
| **Infrared access sensor**<br>– Monitoring with reflector on the door, spacing adjustable | ■ | – | **7030.120** | 4 | 32 |
| **Vandalism sensor**<br>– Axis: x, y, z<br>– Acceleration limits: -7...7 g, adjustable | ■ | – | **7030.130** | 4 | 32 |
| **Analog airflow sensor**<br>– External airflow sensor: 4 – 20 mA<br>– Measurement range: 0.2 – 10 m/s<br>– Application: Fans, filters, climate control devices | ■ | – | **7030.140** | 4 | 10[1] |
| **Analog differential pressure sensor**<br>– Two pressure measuring points (infeed via hose)<br>– Measurement range: -500 m Pa…+500 m Pa<br>– Application: Cold aisle containment, raised floor | ■ | – | **7030.150** | 4 | 32 |
| **Universal sensor**<br>– Choice of digital inputs for an application:<br>  – Potential-free signals<br>  – $S_0$ input for energy measurement systems<br>  – 1 Wiegand interface (external access systems) | ■ | 2 x digital may be switched over to pulse input $S_0$ or a Wiegand interface<br>1 x analog 4 – 20 mA | **7030.190** | 4 | 32 |
| **Smoke detector**<br>– Monitors the room air for smoke particles using an optical component | ■ | – | **7030.400** | 4 | 32 |
| **Leak sensor**<br>– Monitors a given point on the floor of the data centre or enclosure for liquids. The external sensor probe allows free selection of the point to be monitored. | ■ | – | **7030.430** | 4 | 32 |
| **Leak sensor, 15 m**<br>– Monitors a larger floor area for liquids using the 15 metre long detection cable. The sensor additionally indicates the section of cable where a leak has been detected. | ■ | – | **7030.440** | 4 | 32 |

[1] Max. 5 pieces for power supply with PoE

## System components

# Interface for CMC-TC sensors

The CMC III CAN bus sensor supports the connection of selected sensors from the CMC-TC system to the current CMC III, allowing old applications to be upgraded with the CMC III Processing Unit / Compact.
As well as the two CAN bus connections, the unit also has another connection for one of the CMC-TC sensors. In this way, the unit functions as an interface between the CMC-TC sensor and the current CMC III Processing Unit, and adapts the sensor data to the CAN bus protocol.

**Dimensions:**
– W x H x D:
110 x 30 x 40 mm

**Material:**
– Plastic

**Surface finish:**
– Front: Smooth
– Enclosure: Textured

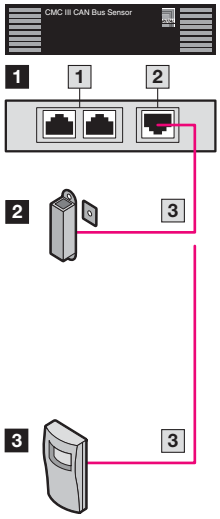
**Colour:**
– Front: RAL 9005
– Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
– IP 30

**Supply includes:**
– Sensor
– Mounting plate
– Assembly parts

**The following CMC-TC access sensors may connected to the CMC III CAN bus sensor:**
– 1 x temperature sensor
– 1 x analog input 4 – 20 mA
– 5 x access sensors in series
– 1 x airflow sensor
– 1 x smoke detector
– 1 x motion detector
– 1 x digital input
– 1 x digital relay output
– 1 x voltage monitor
– 1 x 48 V voltage sensor
– 1 x leak sensor
– 1 x leak sensor, 15 m sensors
– 1 x door control unit (two connections)
– 1 x DET-AC Plus extinguisher system (three connections)
– 1 x DET-AC Plus early fire detection system (three connections)

**! Also required:**
– CAN bus connection cable, see page 818




| | 1 | 2 | 3 | Model No. | PU Compact | PU |
|---|---|---|---|---|---|---|
| | Connection RJ45 2 x CAN bus | Input RJ12 | Output RJ12 | Packs of | Maximum quantity | |
| **1 CMC III CAN bus sensor**<br>– For connecting one CMC-TC sensor | ■ | 1 x | – | **7030.100**<br>1 pc(s). | 4 | 32 |
| **Connectable sensors (max. 1 sensor per CAN bus sensor)** | | | | | | |
| **2 CMC III access sensor VX**<br>– Sensor: Reed contact/magnet<br>– Max. 5 reed contacts in series<br>– 0.5 m cable included with the supply<br>**Also required:**<br>– Connection cable RJ12 for connecting a sensor, see page 819<br>– Extension cable RJ12 for connecting more sensors in series, see page 819 | – | – | 1 x | **7030.128**<br>1 pc(s). | – | – |
| **3 CMC motion detector**<br>– Sensor: Infrared<br>– 2 m cable included with the supply | – | – | 1 x | **7320.570**<br>1 pc(s). | – | – |

## Products with CAN bus interface for direct connection

| | Model No. | PU Compact | PU | Page |
|---|---|---|---|---|
| | | Maximum quantity | | |
| PSM measurement bars 16 A, with 2 infeeds | 7859.050 | 4 | 8 | 747 |
| PSM measurement bars 32 A, with 1 infeed | 7859.053 | 4 | 8 | 747 |
| PSM measurement module with CAN bus, 8 x C13 | 7859.410 | 4 | 16 | 750 |
| PSM measurement module with CAN bus, 2 x C13, 4 x C19 | 7859.420 | 4 | 16 | 750 |
| PSM measurement module with CAN bus, 2 x C13, 4 x earthing-pin | 7859.430 | 4 | 16 | 750 |

| | | | | |
|---|---|---|---|---|
| Fire alarm and extinguisher system DET-AC III master | 7338.121 | 4 | 16 | 823 |
| Add-on unit DET-AC III slave | 7338.321 | 4 | 16 | 825 |
| Early fire detection system EFD III | 7338.221 | 4 | 16 | 824 |

| | | | | |
|---|---|---|---|---|
| NH measurement module for NH fuse-switch disconnectors, size 00 | 9343.070 | 4 | 8 | 333 |
| NH measurement module for NH fuse-switch disconnectors, size 1 | 9343.170 | 4 | 8 | 333 |
| NH measurement module for NH fuse-switch disconnectors, size 2 | 9343.270 | 4 | 8 | 333 |
| NH measurement module for NH fuse-switch disconnectors, size 3 | 9343.370 | 4 | 8 | 333 |

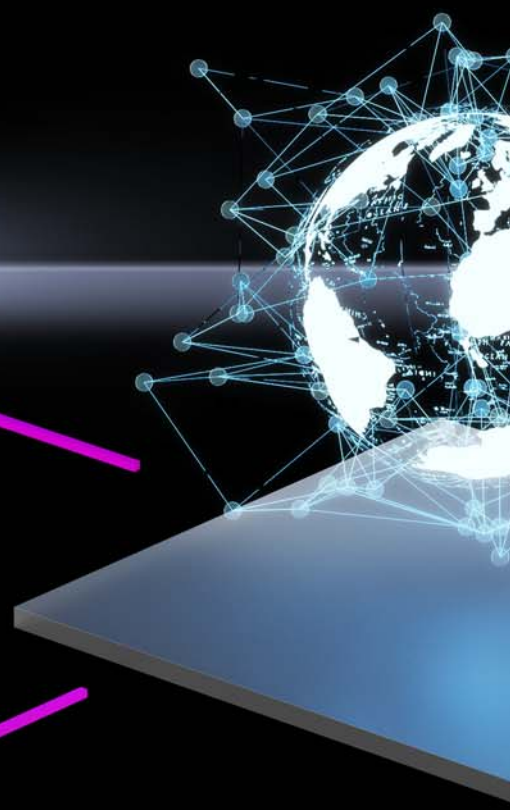
**Accessories:**

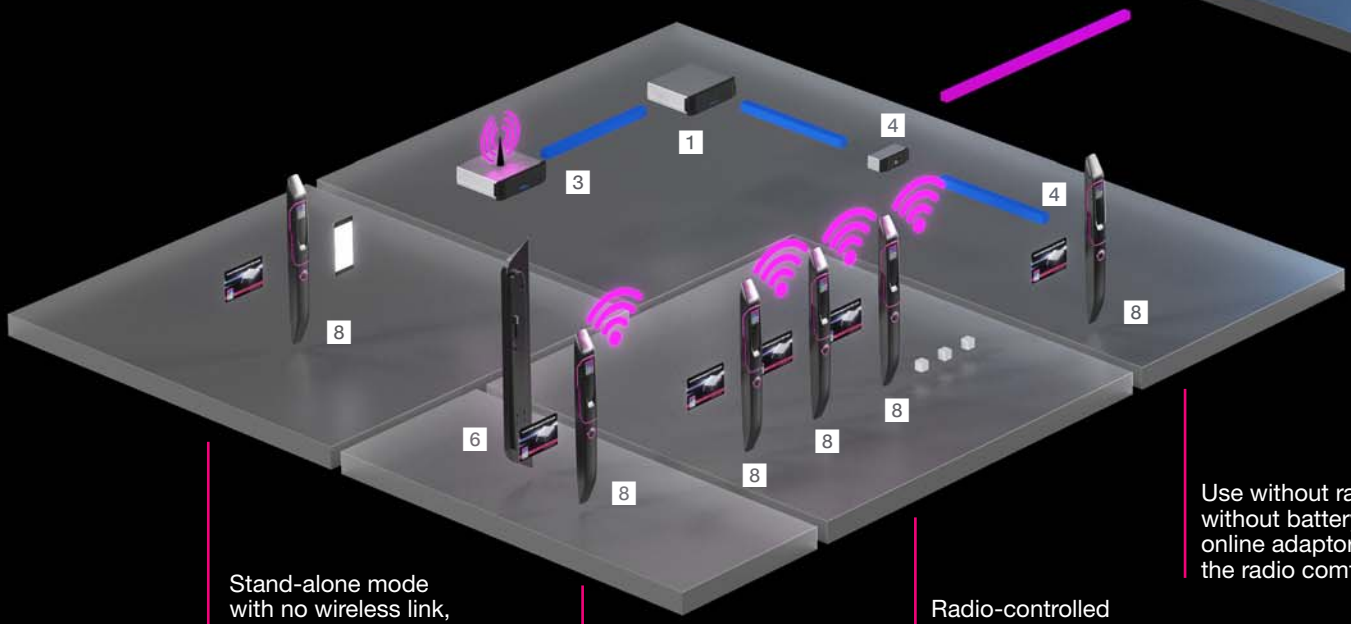
– CAN bus connection cable, see page 818

# CMC III access

## The secure solution

RiZone






Stand-alone mode with no wireless link, with card administration via the app

Radio comfort handle compatible with TS racks via mounting adaptor

Radio-controlled mode with up to 128 handles

Use without radio link/ without battery: use the online adaptor to connect the radio comfort handle

**CMC III Processing Unit, see page 803**

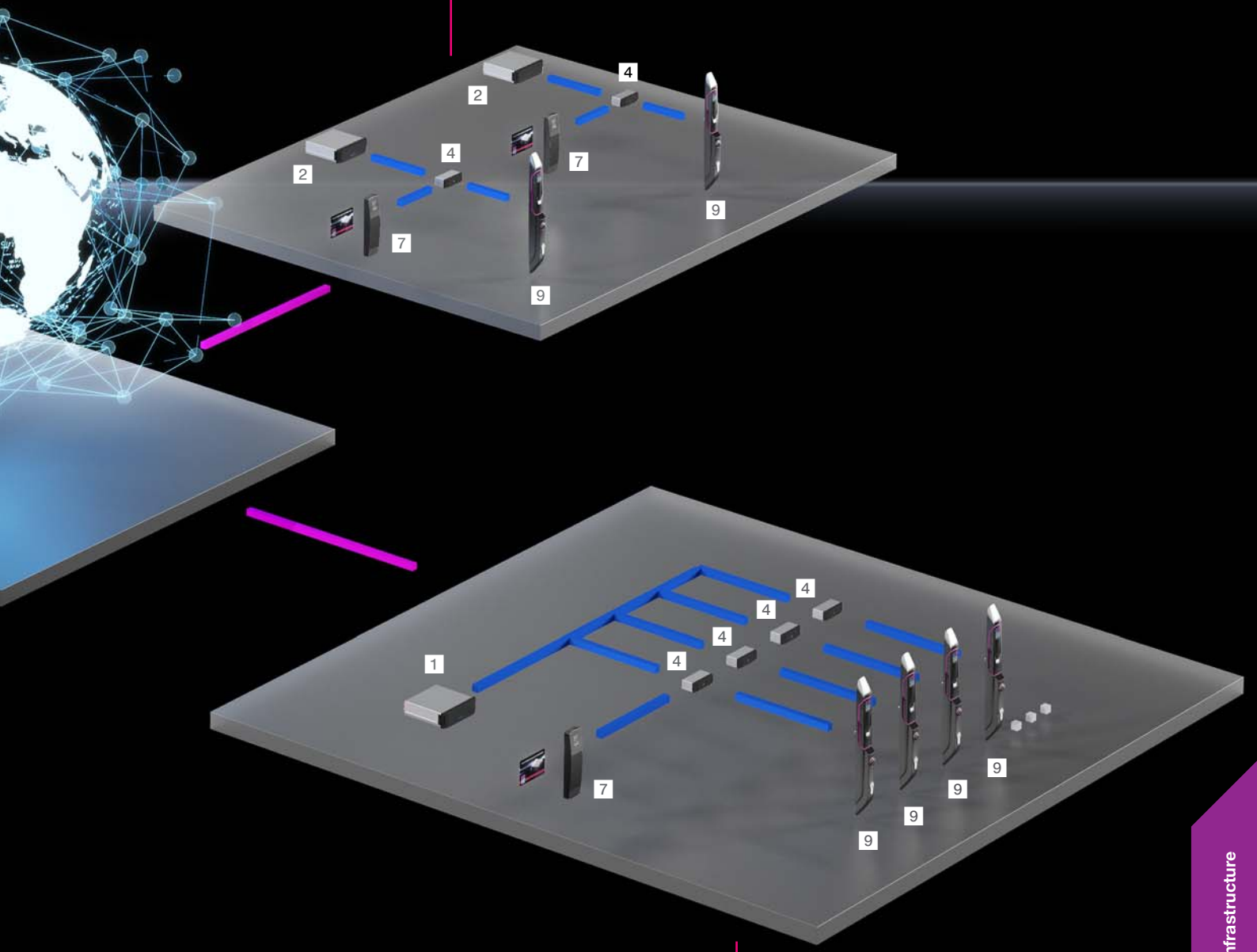
**CMC III Processing Unit Compact, see page 802**

**CMC III Wireless Unit for radio comfort handle VX, see page 815**

**CMC III access control, see page 812**

**Online adaptor, see page 948**

Distributed edge application
for individual racks




Transponder reader:
Activate up to 16 handles

**Mounting adaptor, see page 948**

**Transponder reader for CMC III, see page 813**

**Radio comfort handle VX with card reader for VX, VX IT, see page 947**

**CMC III online comfort handle VX with master key function for VX, VX IT, see page 946**

## System components

# CMC III access control

CMC III unit for controlling and monitoring access to enclosures. One handle and one reader unit may be connected to one CMC III access control. The handles can be linked to various numerical codes or transponder cards via the CMC III Processing Unit/Compact website, which means that all the handles connected to a CMC III Processing Unit/Compact can be controlled with just one reader unit. The integral infrared sensor also ensures that the status of the controlled door (open/closed) is monitored.

**Dimensions:**
- W x H x D:
  110 x 30 x 40 mm

**Sample applications:**
- Record of every access and each time the door is opened, with user information and time stamp
- One central reader unit per CMC III system is supported
- Fixed allocation between handles and reader units
- Four-eyes principle
- Central administration of access rights across systems and locations with RiZone
- Activating the LED display in the handle

**Material:**
- Plastic

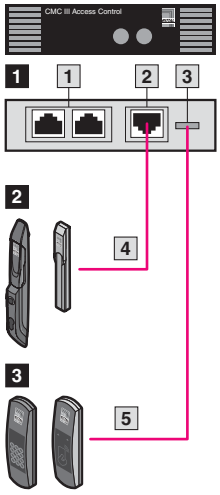
**Surface finish:**
- Front: Smooth
- Enclosure: Textured

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- CMC III access control
- Mounting plate
- Assembly parts

**! Also required:**
- CAN bus connection cable, see page 818




| | Connection | Inputs | | Outputs | | Model No. | PU Compact | PU | Page |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | | | |
| | RJ45 2 x CAN bus | RJ12 | Flat-pin connector | RJ12 | Flat-pin connector | Packs of 1 | Maximum quantity | | |
| **1 CMC III access control**<br>– For connecting one handle and one reader unit to monitor a door<br>– Integral IR access sensor | ■ | 1 x | 1 x | – | – | **7030.202** | 2 | 16[1] | |
| **Connectable handles and reader units (max. 1 handle and max. 1 reader unit per CMC access control)** | | | | | | | | | |
| **2 Handles**<br>**– CMC III online comfort handle VX**<br>RAL 9005 | – | – | – | 1 x | – | **7030.611** | – | – | 946 |
| **– Ergoform-S handle (electromagnetic, for TE 8000) RAL 7035** | – | – | – | 1 x | – | **7320.700** | – | – | 949 |
| **3 CMC III reader units**<br>**– Coded lock**<br>RAL 9005 | – | – | – | – | 1 x | **7030.223** | – | – | 813 |
| **– Transponder reader**<br>RAL 9005 | – | – | – | – | 1 x | **7030.233** | – | – | 813 |

[1] Max. 5 pieces for power supply with PoE

## Coded lock

**for CMC III**

For managing access to doors.

**Benefits:**
- Individual codes with up to 8 digits
- Use of a read system for multiple handles is supported, provided this is connected to the same CMC III system
- High security standards thanks to the four-eyes principle

**Installation options:**
- On VX IT doors
- Adjacent to room doors

**Functional principle:**
- Direct connection to the CMC III Access Control or CMC III Door Control Module
- Optical (LED) and acoustic (alarm sound) status display
- Authorisations are managed via the CMC III system or RiZone
- Door opening with a maximum of two linked numerical codes (four-eyes principle)
- Control via CMC III of:
  - Online comfort handle VX
  - Automatic Door Opening System (vent flaps)
  - Relay outputs from the CMC III

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.223** |

**Dimensions:**
- W x H x D: 50 x 190 x 25 mm door-mounted

**Material:**
- Plastic

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 40

**Supply includes:**
- Coded lock
- Connection cable 2.9 m
- Adaptor for glazed aluminium door for VX IT
- Assembly parts

**Also required:**
- CMC III access control, see page 812
- CMC III Processing Unit/Compact, see page 804

**Accessories:**
- CMC III online comfort handle VX, see page 946
- Door control module, see page 817

## Transponder reader

**for CMC III**

For managing access to doors.

**Benefits:**
- Use of a read system for multiple handles is supported, provided this is connected to the same CMC III system
- High security standards thanks to the four-eyes principle

**Installation options:**
- On VX IT doors
- Adjacent to room doors

**Functional principle:**
- Direct connection to the CMC III Access Control or CMC III Door Control Module
- Optical (LED) and acoustic (alarm sound) status display
- Authorisations are managed via the CMC III system or RiZone
- Door opening with a maximum of two linked transponder cards (four-eyes principle)
- Control via CMC III of:
  - Online comfort handle VX
  - Automatic Door Opening System (vent flaps)
  - Relay outputs from the CMC III

**Dimensions:**
- W x H x D: 50 x 190 x 25 mm door-mounted

**Material:**
- Plastic

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 40

**Supply includes:**
- Transponder reader
- Connection cable 2.9 m
- Adaptor for glazed aluminium door for VX IT
- Mifare classic transponder card
- Assembly parts

**Also required:**
- CMC III access control, see page 812
- CMC III Processing Unit/Compact, see page 804

**Accessories:**
- Transponder card, see page 814
- Door control module, see page 817
- CMC III online comfort handle VX, see page 946

| Design | Frequency | Packs of | Model No. |
|---|---|---|---|
| Transponder reader for Mifare, Legic Advant, HID, FeliCa (Legic Prime available on request) | RFID – 13.56 MHz | 1 pc(s). | **7030.233** |

## System components

### Transponder card

**Mifare classic**
Contactless smart card for opening doors.

**Benefits:**
– Personalised authentication with history is supported in conjunction with the CMC III system

**Applications:**
– For use with the CMC III transponder reader or the CMC III radio comfort handle VX with integral card reader

**Dimensions:**
– W x H x D: 85 x 54 x 1 mm

| Transponder card | Packs of | **Model No.** |
|---|---|---|
| Mifare classic | 2 pc(s). | **7030.628** |

**Also required:**
– CMC III transponder reader, see page 813
– CMC III radio comfort handle VX, see page 947

### CMC III online comfort handle VX

**with master key function for VX, VX IT**
For door locking, handle lever monitoring and status display.

Further ordering information may be found in the chapter on system accessories, page 946

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **7030.611** |

## CMC III Wireless Unit

**for radio comfort handle VX**

Up to 16 radio comfort handles VX and/or defined EnOcean sensors may be connected via the Wireless Unit. In complex environments with high levels of interference, additional CMC III Wireless Units may be used at alternative locations. This allows the wireless comfort handles/sensors to send their signal to multiple Wireless Units and facilitate redundancy. The Wireless Units can also be placed in multiple separate rooms/units in order to interlink the existing radio handles and sensors. The maximum overall length of the CAN bus route is 50 m/bus. The unit is compatible with the CMC III Processing Unit.

**Benefits:**
- High standard of security thanks to encrypted radio transmission of security-relevant signals
- Redundant transmission with up to 16 Wireless Units

**Dimensions:**
- W x H x D:
  138 x 40 (1 U) x 120 + 12 mm front assembly

**Material:**
- Plastic

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- Basic system
- Aerial with magnetic base, 2.5 m connection cable
- Assembly parts for mounting on surfaces

| Radio technology | Packs of | **Model No.** |
|---|---|---|
| EnOcean, 868 MHz | 1 pc(s). | **7030.690** |

**Max. no. of wireless units/radio comfort handles/ EnOcean sensors**

| | Wireless Unit | Processing Unit | Processing Unit Compact |
|---|---|---|---|
| Wireless Unit | – | 16 | – |
| Radio comfort handle/ EnOcean sensor | 16 | 128 | – |

**Note:**
- More information on the compatibility of other EnOcean sensors can be found at www.rittal.de under Model No. 7030.690.

**Also required:**
- CAN bus connection cable, see page 818
- CMC III Processing Unit, see page 804
- Mounting unit, 1 U, see page 819
- Radio comfort handle VX, see page 947

## Radio comfort handle VX

**with card reader for VX, VX IT**

Battery-operated radio handle for door locking, handle lever/rack door monitoring and status display.

Further ordering information may be found in the chapter on system accessories, page 947

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **7030.621** |

## CMC III Automatic Door Opening (ADO)

For automatic cooling of closed network/server racks in an emergency situation.

The ADO system is comprised of:
- Door control module
- Glazed door VX IT for ADO with integral vent flaps

**Applications:**
- Overtemperature in the closed VX IT rack
- Extinguisher gas should be able to enter the rack from the room

Activated via the Door Control Module (DCM) unit. One DCM activates one rack with 2 doors (front/rear door). The vent flaps integrated into the glazed door VX IT for ADO are kept closed by a system of magnets, and in an emergency situation are pressed open by the gas pressure damper system. We recommend the use of CMC III and access sensors.

**Benefits:**
- Stand-alone mode
- Independent power supply
- The integral temperature sensor ensures a high level of reliability, by making it independent from other systems and their power supplies
- The ADO system is not activated for normal access to the rack interior

**Note:**
The following doors may be connected:
- 2 glazed doors VX IT for ADO with integral vent flaps, Model No. depending on door variant
- For emergency ventilation, we recommend use of the DCM temperature sensor which creates fewer dependencies on other systems and their power supplies for superior reliability.

Activation in case of alarm:
- CMC III task
- DCM, temperature sensor including connection cable
- DCM, digital input

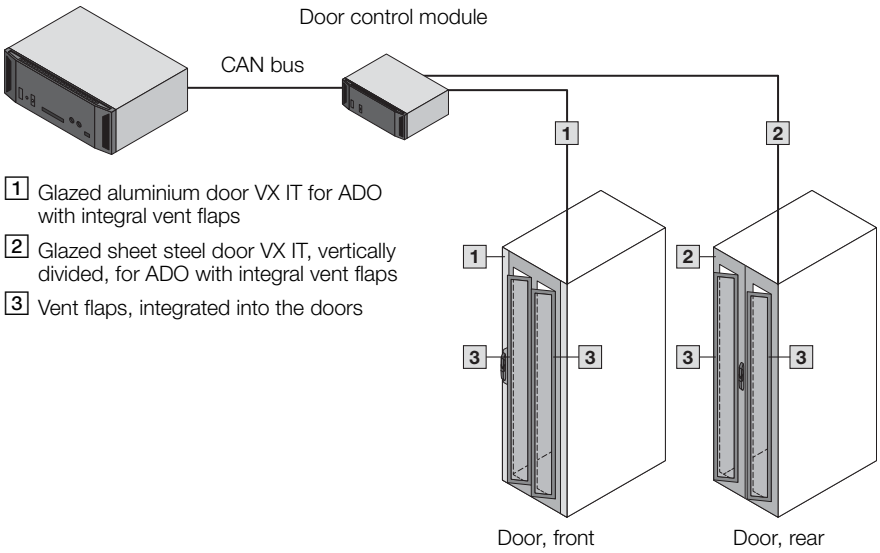
Activation for user access:
- The lock system for manual door access may be selected with standard VX IT doors, see page 919

**Also required:**
- Door control module DCM, see page 817
- Glazed door VX IT for ADO with integral vent flaps, see page 919

**Accessories:**
- CMC III Processing Unit/Compact, see page 804
- Combination lock/transponder reader for local function tests, see page 813
- Access sensor, see from page 807

**System diagram CMC III Automatic Door Opening (ADO)**
- Maximum of 16 door control modules per Processing Unit
- Maximum of 4 door control modules may be connected per Processing Unit Compact

CMC III
- Processing Unit
- Processing Unit Compact




1 Glazed aluminium door VX IT for ADO with integral vent flaps

2 Glazed sheet steel door VX IT, vertically divided, for ADO with integral vent flaps

3 Vent flaps, integrated into the doors

## Door control module

Control unit for automatic opening of glazed doors VX IT for ADO with integral vent flaps. Designed for a rack with front and rear door. To fit CMC III system with CAN bus.

**Material:**
– Plastic

**Colour:**
– Front: RAL 9005
– Enclosure: RAL 7035

**Supply includes:**
– Basic system
– Temperature sensor including connection cable (supplied loose)
– Assembly parts for mounting on surfaces

**Also required:**
– Glazed doors VX IT for ADO with integral vent flaps, see page 919
– CMC III power pack, see page 818
– Mounting unit, 1 U, see page 819

**Accessories:**
– Redundant power pack, see page 818
– Coded lock/transponder reader, see page 813
– CMC III Processing Unit/Compact, see page 804
– CAN bus cable, see page 818

| **Model No.** | **7030.501** |
|---|---|
| Packs of | 1 pc(s). |
| Maximum no. of PU/PU Compact | 16/4 |
| 1st rated voltage | 24 V (DC) 7030.060 for door control module and glazed doors VX IT for ADO, redundant to 2nd rated voltage |
| 2nd rated voltage | 24 V (DC) 7030.060 for door control module and glazed doors VX IT for ADO |
| 1 x temperature sensor input | Temperature sensor including connection cable (supplied loose) |
| 3 x digital inputs | Alarm/front door flaps/rear door flaps |
| 1 x input for reader units | Combination lock/transponder reader for local function testing of the vent flaps |
| 2 x outputs for glazed doors VX IT for ADO with integral vent flaps | Magnet system with damper integrated into the door |
| 2 x CAN bus CMC III | RJ45 for CAN bus cable |

## Glazed door VX IT

**for Automatic Door Opening (ADO)**

The doors for the Automatic Door Opening System replace the standard doors of the VX IT.

Further ordering information may be found in the chapter on system accessories, page 919

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **7030.262** |
| 1 pc(s). | **7030.263** |
| 1 pc(s). | **7030.272** |
| 1 pc(s). | **7030.273** |
| 1 pc(s). | **7030.282** |
| 1 pc(s). | **7030.283** |

## Accessories

### CMC III power pack

**for PU, PU Compact, LED light strip, door control module**

The power pack is specifically tailored to the CMC III design and may be positioned in a mounting unit. As well as a special connector for the CMC III Processing Unit/Compact, there are also two further terminals available as 24 V outputs.

**Technical specifications:**
- Input voltage: 100 – 240 V / 50/60 Hz
- Output voltage: 24 V (DC)/2.5 A
- Length of 24 V (DC) connection cable: 0.6 m
- Input: IEC 320 connector C14

**Dimensions:**
- W x H x D:
  138 x 40 x 120 + 12 mm front frame

**Material:**
- Plastic

**Surface finish:**
- Front: Smooth
- Enclosure: Textured

**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Supply includes:**
- Assembly parts for mounting on surfaces

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.060** |

**Also required:**
- Connection cable, see page 819
- Mounting unit, 1 U, see page 819

### Programming cable

For first-time commissioning of the Processing Unit (PU) or PU Compact. During initial start-up, the programming cable connects the CMC III Processing Unit/Compact to the USB interface of a PC. A driver for Windows systems is also included with the supply and must be installed on the PC.

**Supply includes:**
- CD with driver and system description

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.080** |

### CAN bus connection cable

For connecting the PU to the CAN bus sensors III, units III and control units III as a bus, also for cabling together.
Because it is available in different lengths, the CMC III system can be adapted to various applications and built to a custom design.

| CMC III CAN bus connection cable | Length m | Packs of | Model No. |
|---|---|---|---|
| RJ45 | 0.5 | 1 pc(s). | **7030.090** |
| RJ45 | 1 | 1 pc(s). | **7030.091** |
| RJ45 | 1.5 | 1 pc(s). | **7030.092** |
| RJ45 | 2 | 1 pc(s). | **7030.093** |
| RJ45 | 3 | 1 pc(s). | **7030.480** |
| RJ45 | 4 | 1 pc(s). | **7030.490** |
| RJ45 | 5 | 1 pc(s). | **7030.094** |
| RJ45 | 10 | 1 pc(s). | **7030.095** |

## Connection cable/extension

**For connecting to:**
- CMC III power pack C14
- CMC III power unit C13/C14
- PDU C19

**Technical specifications:**
- PVC cable, 3-pole, with IEC 60 320 cable coupling (non-heating appliances) with contact protection CEE22
- Length: Minimum 1.8 m

| Country version | Voltage (V) | Packs of | Model No. |
|---|---|---|---|
| D/F/B/C13 | 230 | 1 pc(s). | **7200.210** |
| IEC 320 device extension C13/C14 | 230/115 | 1 pc(s). | **7200.215** |
| Connection cable D/C19 | 230/115 | 1 pc(s). | **7200.216** |
| Connection cable C19/C20 | 230/115 | 1 pc(s). | **7200.217** |

## Connection/ extension cable RJ12

**with RJ12 connector/jack**

To extend cable connections to CMC-TC sensors and CMC III online comfort handle VX and to connect the CMC III access sensor 7030.128, either individually or in a row of sensors.

| Length m | Packs of | Model No. |
|---|---|---|
| 1 | 2 pc(s). | **7320.814** |

## Mounting unit, 1 U

For installing CMC III units in network and server racks. To accommodate up to three CMC III enclosures and for mounting in the 482.6 mm (19") section.

**To accommodate:**
- CMC III Processing Unit
- CMC III Processing Unit Compact
- CMC III control unit
- CMC III Wireless Unit
- CMC III power pack
- CMC III LTE unit
- CMC III door control module

**Benefits:**
- Fire protection: Self-extinguishing to UL 94-HB

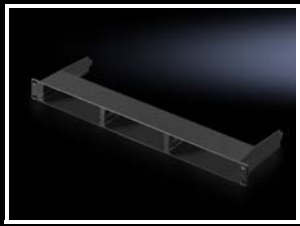
| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.088** |

**Material:**
- Plastic

**Colour:**
- RAL 9005

**Supply includes:**
- Mounting unit, 1 U
- 2 blanking covers
- Assembly parts

**Accessories:**
- Cable clamp strap 7030.087, see page 819



## Cable clamp strap

For tool-free attachment to the rear of the CMC III 482.6 mm (19") mounting unit 7030.088. Enables tidy cable routing behind the built-in CMC III devices and can be used to attach cables for strain relief purposes. Cables are easily laid in a loop to allow the built-in CMC III devices to be removed from the mounting unit without the need for tools.

**Applications:**
- Cable management

**Benefits:**
- Cable support
- Fire protection: Self-extinguishing to UL 94-HB

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.087** |

**Material:**
- Plastic

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

## Accessories

### Mounting unit

To accommodate one CMC III unit and for mounting on the enclosure frame.

**To accommodate:**
- CMC III Processing Unit
- CMC III Processing Unit Compact
- CMC III Control unit
- CMC III Wireless Unit
- CMC III Power pack
- CMC III LTE unit
- CMC III Door control module

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.071** |

### CMC III LTE unit

For configuring a redundant transmission channel or, if there is no network infrastructure available, for alarm forwarding. The alarm signal is designed in text message format. Cover for LTE (4G), UMTS (3G) and GSM (2G) with automatic changeover function, see bands and frequencies. A standard, commercially available SIM card must be provided by the customer.

**Material:**
- Plastic

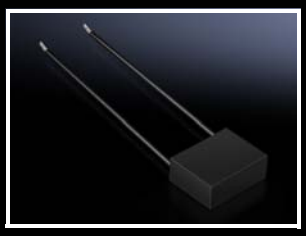
**Colour:**
- Front: RAL 9005
- Enclosure: RAL 7035

**Supply includes:**
- CMC III LTE unit
- RJ12 cable
- Aerial including magnetic base
- Assembly parts for mounting on surfaces

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.571** |

**Network support / bands and frequencies:**
- 4G LTE band 1 (2100 MHz)
- 4G LTE band 3 (1800 MHz)
- 4G LTE band 8 (900 MHz)
- 4G LTE band 20 (800 MHz)
- 4G LTE band 28 (700 MHz)
- 3G UMTS band 1 (2100 MHz)
- 3G UMTS band 8 (900 MHz)
- 2G GSM (900 MHz)
- 2G GSM (1800 MHz)

**Also required:**
- CMC III Processing Unit/Compact, see page 804
- Mounting unit, 1 U, see page 819



### Interference suppressor for fans

**for CMC III**

For connecting fans via the CMC III power unit 7030.050. The interference suppressor prevents excessive breaking currents. One interference suppressor is required for each fan.

**Material:**
- Plastic

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.051** |

## LED light strip

**for CMC III**

For colour status display within a network/server rack. If an error occurs, the light strip will change to the set colour.

**Benefits:**
- Stand-alone mode by connecting the RGB LED light strip directly to a 24 V (DC) power pack
- Easy to install with the integral magnetic attachment

**Functional principle:**
- Activation via CMC III
- Connection via three of the four relay connections on the CMC III I/O unit
- Connection via the alarm relay of the Processing Unit/Compact with colour change
- Connects directly to the CMC III power pack
- The three connection cables of the LED light strip activate the three basic colours red, green and blue. Activating two or three colours simultaneously will create the corresponding secondary colours. Links to sensor warnings or alarms are made via task links in the CMC III system.

**Technical specifications:**
- Rated voltage: 24 V (DC)
- Rated current: 1.1 A

**Dimensions:**
- W x H x D: 18 x 1830 x 24.2 mm

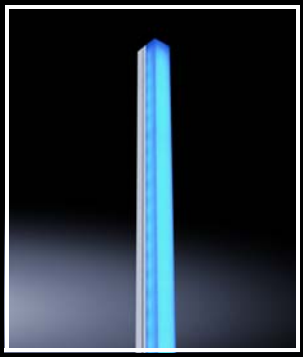
**Material:**
- Aluminium
- Plastic

**Supply includes:**
- LED light strip including magnetic attachment
- Connection cable 0.1 m
- Connection cable 2.4 m with four pre-assembled connectors for the CMC III I/O unit

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.950** |

**Also required:**
- CMC III power pack, see page 818

**Accessories:**
- CMC III I/O unit, see page 806
- CMC III Processing Unit/Compact, see page 804



## Monitor/keyboard unit, 1 U

**with 17" TFT display and VGA/DVI connection**

The unit is housed in a pull-out drawer. The monitor can be flipped up and the drawer latches into the end position. This means that the unit only requires 1 U in the 482.6 mm (19") rack.

**Benefits:**
- With digital and analog interfaces, VGA, DVI-D, PS/2, USB
- Simple one-person assembly

**Main components:**
- TFT monitor 17"
- Keyboard, German or English
- Touchpad

**Supply includes:**
- Monitor/keyboard unit
- VGA cable
- DVI cable
- 2 x PS/2 cable
- USB cable
- Earthing-pin mains cable
- Assembly parts

**Technical design:**
- 432 mm/17" TFT display
- Physical resolution: 1280 x 1024
- Format: 4 : 3
- Colours: 16.7 million colours
- Brightness approx. 350 cd/m$^2$ (typ.)
- Contrast ratio: approx. 1000 : 1
- Mains voltage: 100 – 240 V / 50/60 Hz
- Ambient temperature: +5 °C…+45 °C (operation)
- Max. power consumption in operation: 32 W
- Max. power consumption with closed monitor unit: < 1 W
- Rear connections: Mains voltage, VGA, DVI, PS/2, USB
- Lockable at the front
- Cables are safely routed in the energy chain

| Width | Height U | Depth mm | Installation depth mm | Colour | Keyboard | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 482.6 mm/ 19" | 1 | 680 | 680 – 850 | RAL 7035 | German | 1 pc(s). | **9055.310** |
| | | | | | US English | 1 pc(s). | **9055.312** |
| | | | | RAL 9005 | German | 1 pc(s). | **9055.410** |
| | | | | | US English | 1 pc(s). | **9055.412** |

# Fire alarm and extinguisher system

**System accessories** Page 877 **Network/server racks VX IT** Page 686 **Micro Data Center** Page 842

The active extinguisher system includes the smoke extraction system and the extinguisher unit. The smoke extraction system is identical to the smoke extraction system in the EFD III. The extinguishing process begins automatically when a main alarm is activated. For the extinguishing process, the tank is pressurised via a propellant cartridge. The extinguisher gas Novec™ 1230 evaporates at the extinguisher nozzle and is distributed in the server enclosure.

**Benefits:**
- Early fire detection
- Automatic extinguishing
- Innovative extinguisher Novec™ 1230: eco-friendly, non-critical for IT components, non-conductive
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- Floating relay outputs (pre-alarm/main alarm/ collective fault)

**Material:**
- Sheet steel

**Colour:**
- Enclosure: RAL 7035
- Front: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

**Note:**
- This system is designed solely for use in closed, non-accessible enclosure systems with a maximum volume of 2.8 $m^3$.

## DET-AC III master

| Width mm | Packs of | 482.6 | Page |
|---|---|---|---|
| Height mm | | 44 | |
| Depth mm | | 660 | |
| Weight kg | | 21.5 | |
| **Model No.** | 1 pc(s). | **7338.121** | |
| Operating temperature range | | +10 °C...+40 °C | |
| Storage temperature range without batteries | | -20 °C...+65 °C | |
| Storage temperature range of batteries | | -15 °C...+40 °C | |
| Ambient humidity (non-condensing) % | | 96 | |
| Rated operating voltage V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Emergency power supply | | approx. 4 h | |
| Airflow monitoring | | approx. ±10% of total airflow | |
| Interfaces | | 4 x/3 x relay outputs for alarms and faults (terminals/RJ12 jacks)<br>1 x/1 x input for door contact switch (terminal/RJ12 jack)<br>2 x CAN connections for master-slave networking<br>2 x connection (external alarm/manual triggering device)<br>1 x voltage output for DET-AC slave III (24 V DC max. 500 mA)<br>1 x USB<br>2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact) | |
| Sensors | | Optical smoke detector (sensitivity: approx. 3.5%/m light obscuration)<br>Optical smoke detector HS (sensitivity: approx. 0.25%/m light obscuration) | |
| Display | | Plain-language display with 6 LEDs | |
| Technical specifications | | Extinguisher is emitted via a propellant cartridge, with integral electrical activation unit<br>Integral extinguisher monitoring (indication of >15% loss) | |
| Tank: Material/volume l | | Aluminium / 2 | |
| Extinguisher: Type/fill volume l | | Novec™ 1230 / 1.8 | |
| **Also required** | | | |
| CMC III access sensor VX | 1 pc(s). | 7030.128 | 808 |
| CMC III CAN bus connection cable | 1 pc(s). | 7030.091 | 818 |
| Sealing kit for VX IT and LCP | 1 pc(s). | 7338.135 | 826 |
| Pipe kit | 1 pc(s). | 7338.130 | 826 |
| Slide rail, 1 U, depth-variable | 2 pc(s). | 5302.035 | 1088 |

# Early fire detection system

**System accessories** Page 877 **Network/server racks VX IT** Page 686 **Micro Data Center** Page 842

The EFD III early fire detection system includes the smoke extraction system in a 482.6 mm (19") subrack with just 1 U. An integral fan continuously extracts air from the area being protected via a system of pipes. The air drawn in passes two fire detectors. If smoke is detected, the highly sensitive detector will emit a pre-alarm, while the second detector will activate the main alarm. The fire detectors are permanently monitored for correct functioning by the evaluation and control electronics on the control card.

**Benefits:**
- Early fire detection
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- Floating relay outputs (pre-alarm/main alarm/ collective fault)

**Material:**
- Sheet steel

**Colour:**
- Enclosure: RAL 7035
- Front: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

**Note:**
- This system is designed solely for use in closed, non-accessible enclosure systems.

## EFD III

| Width mm | Packs of | 482.6 | Page |
|---|---|---|---|
| Height mm | | 44 | |
| Depth mm | | 490 | |
| Weight kg | | 15.0 | |
| **Model No.** | 1 pc(s). | **7338.221** | |
| Operating temperature range | | +10 °C...+40 °C | |
| Storage temperature range without batteries | | -20 °C...+65 °C | |
| Storage temperature range of batteries | | -15 °C...+40 °C | |
| Ambient humidity (non-condensing) % | | 96 | |
| Rated operating voltage V, ~, Hz | | 100 - 240, 1~, 50/60 | |
| Emergency power supply | | approx. 4 h | |
| Airflow monitoring | | approx. ±10% of total airflow | |
| Interfaces | | 4 x/3 x relay outputs for alarms and faults (terminals/RJ12 jacks)<br>1 x/1 x input for door contact switch (terminal/RJ12 jack)<br>2 x CAN connections for master-slave networking<br>3 x connection (external alarm/manual call point/tank and fill level)<br>1 x voltage output for DET-AC slave III (24 V DC max. 500 mA)<br>1 x USB<br>2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact) | |
| Sensors | | Optical smoke detector (sensitivity: approx. 3.5%/m light obscuration)<br>Optical smoke detector HS (sensitivity: approx. 0.25%/m light obscuration) | |
| Display | | Plain-language display with 6 LEDs | |
| **Also required** | | | |
| CMC III CAN bus connection cable | 1 pc(s). | 7030.091 | 818 |
| Pipe kit | 1 pc(s). | 7338.130 | 826 |
| Slide rail, 1 U, depth-variable | 2 pc(s). | 5302.035 | 1088 |

**System accessories** Page 877 **Network/server racks VX IT** Page 686 **Micro Data Center** Page 842

This add-on unit to the DET AC III Master includes an additional extinguisher unit. In addition to the DET-AC III unit, a DET-AC III slave unit is used for each additional bayed enclosure and supplies the extinguishing agent for that enclosure. Detection occurs via the DET-AC III master system, even when multiple enclosures are bayed together. If a main alarm is reported, the DET-AC III Master will activate extinguishing in all systems simultaneously.

**Benefits:**
- Innovative extinguisher Novec™ 1230: eco-friendly, non-critical for IT components, non-conductive
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- In conjunction with the DET-AC III Master, extinguishes up to five racks in an enclosure suite
- May be used in combination with EFD III
- Floating relay outputs (pre-alarm/main alarm/ collective fault)

**Material:**
- Sheet steel

**Colour:**
- Enclosure: RAL 7035
- Front: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

**Note:**
- This system is designed solely for use in closed, non-accessible enclosure systems with a maximum volume of 2.8 $m^3$.

## DET-AC III slave

| Width mm | Packs of | 482.6 | Page |
|---|---|---|---|
| Height mm | | 44 | |
| Depth mm | | 660 | |
| Weight kg | | 19.1 | |
| **Model No.** | 1 pc(s). | **7338.321** | |
| Operating temperature range | | +10 °C...+40 °C | |
| Storage temperature range without batteries | | -20 °C...+65 °C | |
| Storage temperature range of batteries | | -15 °C...+40 °C | |
| Ambient humidity (non-condensing) % | | 96 | |
| Rated operating voltage V | | 24 (DC) | |
| Emergency power supply | | approx. 4 h | |
| Interfaces | | 4 x/3 x relay outputs for alarms and faults (terminals/RJ12 jacks)<br>1 x/1 x input for door contact switch (terminal/RJ12 jack)<br>2 x CAN connections for master-slave networking<br>2 x connection (external alarm/manual triggering device)<br>1 x voltage output for DET-AC slave III (24 V DC max. 500 mA)<br>1 x USB<br>2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact) | |
| Technical specifications | | Extinguisher is emitted via a propellant cartridge, with integral electrical activation unit<br>Integral extinguisher monitoring (indication of >15% loss) | |
| Tank: Material/volume l | | Aluminium / 2 | |
| Extinguisher: Type/fill volume l | | Novec™ 1230 / 1.8 | |
| **Also required** | | | |
| CMC III access sensor VX | 1 pc(s). | 7030.128 | 808 |
| Sealing kit for VX IT and LCP | 1 pc(s). | 7338.135 | 826 |
| Pipe kit | 1 pc(s). | 7338.130 | 826 |
| Slide rail, 1 U, depth-variable | 2 pc(s). | 5302.035 | 1088 |

## Accessories

### Pipe kit

**for DET-AC III/EFD III**

Non-adhesive plug-in system for connecting to the DET-AC III fire alarm and extinguisher system and the EFD III early fire detection system.

**Functions:**
- The system fans continuously draw air out of the protected area via this pipe system.

**Technical specifications:**
- Diameter of plastic pipe: 18 mm internal, 22 mm external

**Colour:**
- Black

**Supply includes:**
- 3 plastic pipes @ 1 m
- T-piece
- 2 connector pieces, straight
- 4 connection brackets, 90°
- 2 end caps
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7338.130** |

### Sealing kit for VX IT and LCP

**in conjunction with DET-AC III master/slave**

For closing openings in VX IT network/server racks and Liquid Cooling Packages when using a DET-AC III fire alarm and extinguisher system.

**Applications:**
- Closes the brush strips in two roof plates of the VX IT rack
- Closes 1 brush strip in the roof plate of the LCP
- Closes the opening in the base of the LCP CW/ LCP DX in the vicinity of the refrigerant/water lines

**Benefits:**
- Sealing of cable, hose and pipe glands in the roof and base section without impairing their function

**Material:**
- Polythene foam, self-adhesive on one side

**Colour:**
- Anthracite

**Supply includes:**
- 4 blanks to fit two VX IT roof plates
- 1 blank for an LCP

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7338.135** |

# IT Infrastructure Selector

## All data centre product categories at a glance

**Use it online at**
**www.rittal.com/it-configurator**

# RiZone

## Data centre infrastructure management – RiZone

RiZone is Rittal's DCIM solution for easy, efficient monitoring and control of a data centre's physical infrastructure. It is designed to help improve the availability and efficiency of the data centre.
The high availability demands of data centre users necessitates a comprehensive security management system. This relies on the monitoring of all data centre components and parameters with relevance to security and availability. RiZone is tasked with implementing all messages, sensor values and actuators in the IT infrastructure and server environment into a plausible message chain to ensure transparent operation of the data centre. The formulaic correlation in RiZone Editor transforms individual warnings, data or signals into logical information and actions, to maintain the data centre's availability.

**RiZone – Optimum monitoring of IT infrastructure components**

- Incorporation of the physical IT infrastructure
- Automatic detection of Rittal components
- Simple configuration of power distribution systems
- Workflow editor for user-defined scenarios
- Enhanced security and reliability
- Improved energy efficiency
- Integration of SNMP-compatible third-party equipment

## IT infrastructure in context

RiZone is the ideal solution for operating the entire IT infrastructure safely and efficiently. To this end, all processes are viewed in context and all components are perfectly coordinated with one another.

**Prevention and reliability**

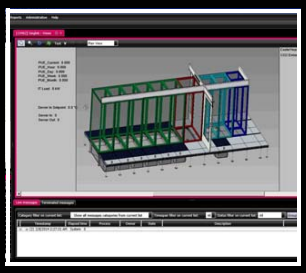
- Identify hot spots in servers early on
- Continuously monitor individual electricity phases, avoid overloads and safeguard availability
- Set optimum climate control parameters

**Trends and resource planning**

- Identify bottlenecks in the physical supply early on
- Transparently plan extensions to the infrastructure

**Functionality and efficiency**

- Monitor PUE (power usage effectiveness) values
- Optimise energy efficiency in all areas



## DCIM – Data Centre Infrastructure Management

**RiZone – Perfect support of IT infrastructure components**

Optional support of Rittal components – from server enclosures to power supply and climate control, through to security and monitoring technology – during integration and in the operational phase, with coordinated sensors and control systems.

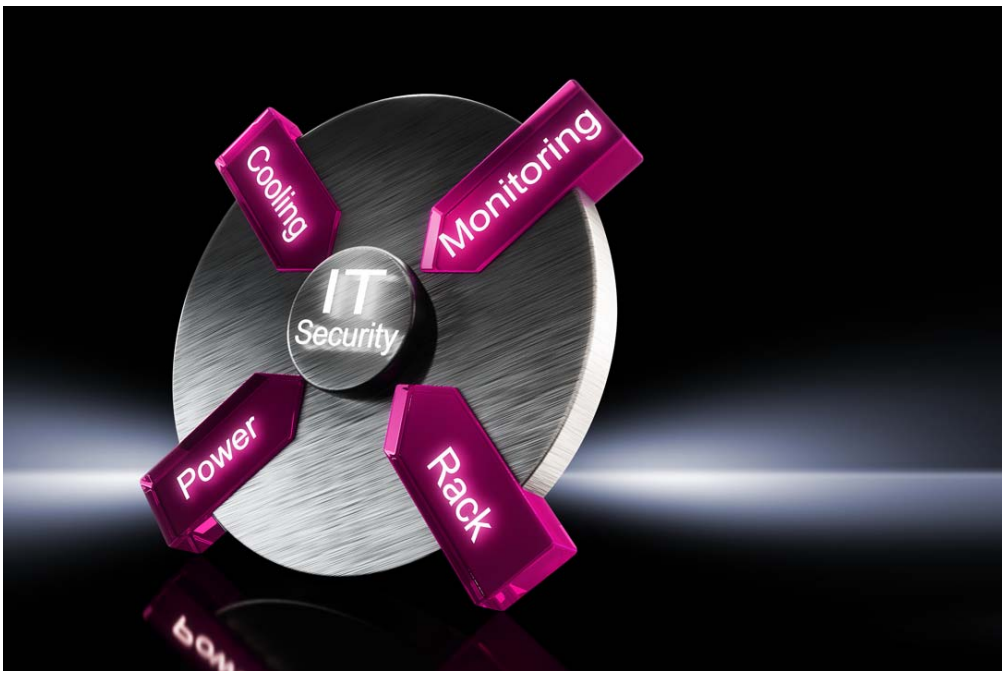
- The physical data centre infrastructure (OT devices) is incorporated into a data centre infrastructure management system.
- RiZone supports SNMP V1/V2C and SNMP V3
- Simple configuration
- Automatic detection of Rittal components
- Workflow editor for user-defined scenarios (what happens if ...)
- Enhanced security and reliability thanks to logical representation of the operating concept in RiZone
- Energy optimisation in the data centre
- Integration of SNMP-compatible third-party equipment

- **Autodiscovery**
  Detection of all SNMP-compatible IT infrastructure components
- **Database**
  In-house SQL database or link to external MS-SQL and Oracle databases
- **Capacity management**
  - Monitoring of data centre capacity utilisation
  - Redundancy monitoring of the climate control and power supply
  - Determination of optimum server installation positions
  - Optimisation of capacity utilisation and data centre availability
- **Off-line project planning**
  - Pre-configuration of RiZone projects
  - Supports Rittal CMC III components as well as RiMatrix S
  - Components are easily replaced using drag and drop
- **Central access control**
  - Central administration of acess data and PINs
  - One-time PIN function
  - Emergency PIN function
  - 2-way authorisation
- **User administration**
  - Granular user administration within RiZone
  - Support directory services
- **Open Virtualization Format (OVF)**
  - The virtual RiZone appliance is supplied in the industry standard OVF
- **Active Directory**
  - The RiZone server may be a member of a directory service
  - RiZone users may be a member of a directory service
- **CMC III access control**
  - Central administration of access control by RiZone
  - Administration of transponder cards
  - Centralised administration of access data
  - Import function

RiZone plus Rittal components creates a system solution with maximum energy efficiency.

**Note:**
- RiZone Appliance Standard
- RiZone IP node licence

see page 831



## Rizone Appliance Standard

RiZone is supplied as a software appliance.

The software appliance is available as a virtual server in Open Virtualization Format (OVF) which is easily used on existing hardware in the data centre.

RiZone installer
- RiZone is installed on a client server
- The software is installed by a Rittal engineer on a Windows server 2012R2 or 2016

**Note:**
- RiZone supports the protocols SNMP V1/V2C and SNMP V3 for monitoring infrastructure components (OT devices) in a data centre. RiZone is manufacturer-neutral and suitable for use in a heterogeneous landscape of OT devices.
- Available to download at www.rittal.com/software

**! Also required:**
- RiZone IP node licence according to the number of IP nodes available

| Standard version | Model No. | | |
|---|---|---|---|
| Software appliance[1] | Hard drive + Windows | RiZone software | RiZone graphics tool |
| | **7990.103** | **7990.203** | **7990.303** |
| Installer | **–** | **7990.402** | **7990.502** |

[1] All Model Nos. on the same line belong together, and must always be ordered together

## RiZone Appliance IP node licence

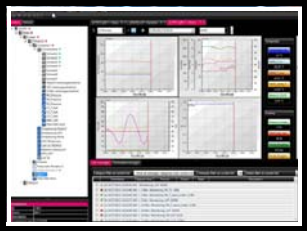
The flexible RiZone licence model allows optimum adaptation to any project size, while at the same time being capable of growing with the data centre.

The volume licences for the IP nodes are graduated with 25 and 100 nodes and may be adapted precisely to the size of the data centre. One node licence is required for each active component or other SNMP-compatible component to be covered.

| For no. of IP nodes[1] | Console licences included | Model No. | |
|---|---|---|---|
| | | RiZone software | RiZone graphics tool |
| 25 | 4 | **7990.206** | **7990.306** |
| 100 | 8 | **7990.208** | **7990.308** |

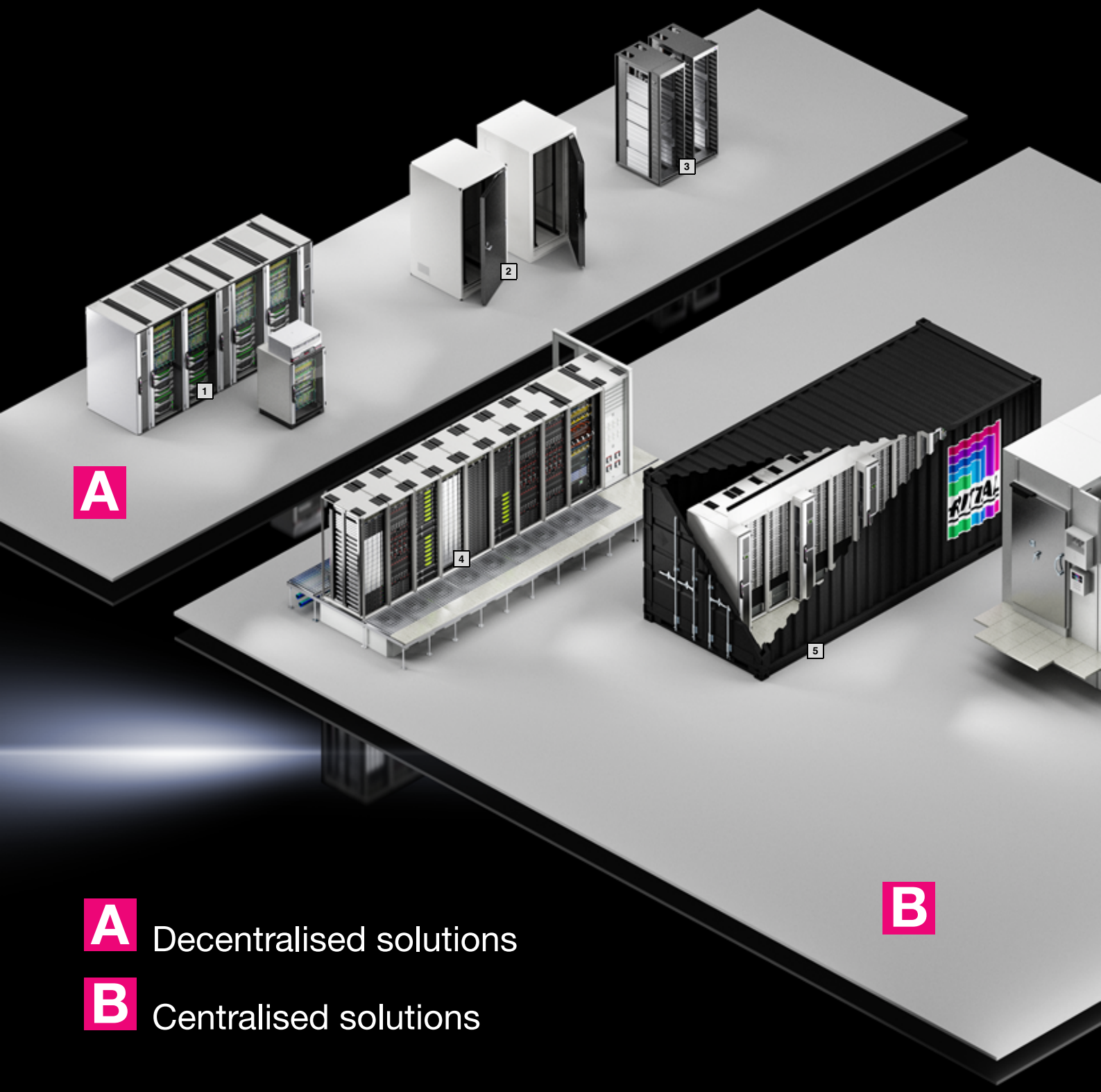
[1] All Model Nos. on the same line belong together, and must always be ordered together

**Note:**
- Download available at www.rittal.com/software



# Rittal – The System.

**Faster – better – everywhere.**




**A** Decentralised solutions

**B** Centralised solutions

# IT solutions

## Edge Data Center

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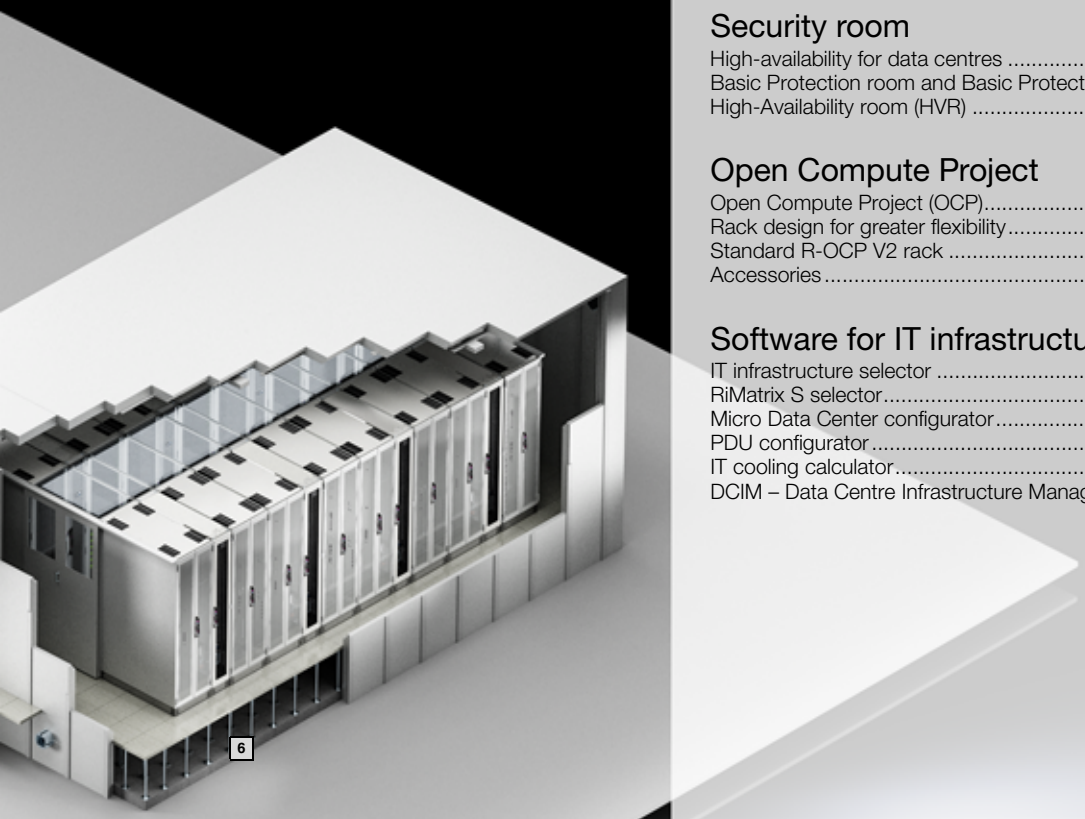


## Sample applications

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2 Micro Data Center, see page 842
3 Open Compute Project, see page 866
4 RiMatrix S, see page 848
5 IT container, see page 852
6 Security room, see page 862

# Edge Data Center

## The ideal solution for your applications

## Edge & cloud solutions – for successful digitalization

- Industry 4.0, mobile streaming and self-driving cars all demand the fastest response times, top-level security, and availability. Rittal edge solutions deliver just that. They allow you to securely store, process and share large quantities of data in real time, wherever it is needed.
- Edge computing can significantly reduce storage and transmission costs, because large volumes of data can be pre-processed with only relevant data subsequently being transferred to a cloud or IT infrastructure. In this way, an edge data centre ensures minimal latency combined with maximum reliability and security.

## Flexibility and reliability

- Edge data centres are always based around the local application. They must offer all the features of a “conventional” data centre, such as security and availability, since the availability of a production line depends on all its components, from the robot through to the edge data centre.
- Redundancy and fail-safe operation are key: The concept of continuous power & cooling ensures that the IT remains available for a defined period of time following a power failure so that the systems can be made safe.
- Fully redundant edge solutions can also be used to protect highly sensitive applications.

## Scalability and physical protection

- Edge data centres are found across all industries in a wide range of application scenarios. The ability to adapt flexibly to the current situation is vital, as are standardised modular solutions enabling the fast assembly of large-scale edge topologies.
- Container solutions and outdoor enclosures facilitate siting outdoors, while micro data centres and security rooms provide bespoke protection in buildings when edge data centres must be protected from physical threats. Of course, the physical protective shield can be tailored precisely to keep pace with your growth plans.

# Edge Data Center

## With efficient plug & play solutions and innovative cooling technology

In industrial operations, building management, the logistics chain and logistics centres, the market for applications with edge data centres is continuously expanding. The emphasis here is on efficiency and reliability. Rittal's innovative cooling units in the Blue e+ series with integral heatpipe herald a new dimension in efficiency, particularly for edge data centres at the lower end of the output range.

**Your benefits at a glance:**

- Interfaces to all sensors, machines and devices
- Low latency in critical applications
- Capture and analysis of unstructured data to avoid unnecessary transmission to the cloud
- Interface to other edge data centres and to superimposed services in the cloud
- Efficient plug & play cooling solution with no installation work required

**Example of a rear door-mounted cooling unit application:**

- Cooling of IT equipment with standalone enclosure solutions
- Plug & play cooling solution with no installation work
- Rack-based cooling solution combined with 482.6 mm (19″) rack extinguisher systems
- For use in industrial environments

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| IT rack | Network/server enclosure VX IT, IP 55 | 1 | 5309.136 |
| IT power | PDU metered, 24 x C13/4 x C19, 1~, 16 A | 2 | 7979.215 |
| IT cooling | Wall-mounted-mounted cooling unit Blue e+ IT, up to 3 kW | 1 | 3312.810 |
| | Air duct for wall-mounted cooling unit Blue e+ IT | 1 | 3312.820 |
| IT monitoring | IoT interface | 1 | 3124.300 |
| | Temperature/humidity sensor | 1 | 7030.111 |
| | Access sensor | 2 | 7030.120 |
| IT security | Fire alarm and extinguisher system DET-AC III | 1 | 7338.121 |
| IT accessories | IT LED system light, 600 lm | 1 | 7859.000 |

All the variants shown are sample configurations. Individually adaptable.

**Example of a roof-mounted cooling unit application:**

This edge solution is perfect for production and IoT sensor data capture, and for managing all types of data.

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| IT rack | Network/server enclosure VX IT, IP 55 | 1 | 5303.134 |
| IT power | PDU metered, 12 x C13/1 x C19, 1~, 16 A | 2 | 7979.210 |
| IT cooling | Roof-mounted cooling unit Blue e+ IT, 1.6 kW | 1 | 3312.800 |
| IT monitoring | IoT interface | 1 | 3124.300 |
| | Temperature/humidity sensor | 1 | 7030.111 |
| | Access sensor | 2 | 7030.120 |
| IT security | Smoke detector | 1 | 7030.400 |
| IT accessories | IT LED system light, 600 lm | 1 | 7859.000 |

All the variants shown are sample configurations. Individually adaptable.

# Edge Data Center

## Reliable and redundant with split cooling solutions

Edge data centres can handle a wide variety of tasks, not just data capture and condition monitoring. With critical processes, such as controlling traffic flows or monitoring production processes, it is particularly vital for an edge data centre to reflect the availability of the application. Scalable redundancy is the key here.

## Example of an integrated cooling unit application:

IT infrastructures comprising just one or two IT racks must still offer the same features as a large data centre. This begins with a reliable power supply and cooling, and extends through to monitoring. Smaller edge data centres are ideally suited for distributed installation across various locations for processing data in real time (for example, traffic monitoring and control).

The coolant-based cooling units are designed as split solutions. Depending on the cooling output, the heat exchanger is either built into the server rack or bayed to the server rack. Heat is emitted direct outside of the building.

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| IT rack | Network/server enclosure VX IT, IP 55 | 2 | 5309.190 |
| IT power | PDU metered, 24 x C13/4 x C19, 1~, 32 A | 4 | 7979.216 |
| IT cooling | LCU DX, redundant, 6.5 kW | 2 | 3311.493 |
| IT monitoring | CMC III monitoring system | 1 | 7030.000 |
| IT security | Fire alarm and extinguisher system DET-AC III | 1 | 7338.121 |
| IT accessories | IT LED system light, 600 lm | 2 | 7859.000 |
| | CAT 6, Network Cable Organizer | 4 | 7044.110 |

All the variants shown are sample configurations. Individually adaptable.

## Example of a rack-based suite cooling application:

Smart cities, interconnected vehicles and streaming services bring with them the challenge of continuous availability of safety-relevant data. This calls for data centres with a maximum degree of fail-safeness. Edge data centres are the answer, being exceptionally energy-efficient with a small footprint.

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| IT rack | Network/server rack VX IT, IP 55 | 4 | 5309.136 |
| IT power | PDU metered, 24 x C13/6 x C19, 3~, 16 A | 8 | 7979.236 |
| IT cooling | LCP Rack DX, 12 kW | 3 | 3313.420 |
| | Condenser unit for LCP DX | 3 | 3311.360 |
| IT monitoring | CMC III monitoring system | 1 | 7030.000 |
| | Automatic door opening (ADO) | 1 | 7030.262 |
| | Access sensor | 2 | 7030.120 |
| IT security | Fire alarm and extinguisher system DET-AC III | 1 | 7338.121 |
| | Add-on unit DET-AC III | 3 | 7338.321 |
| IT accessories | IT LED system light, 600 lm | 1 | 7859.000 |

All the variants shown are sample configurations. Individually adaptable.

# Edge Data Center

## The modular concept in a security safe or container

Data such as personal patient data is highly sensitive and must be protected from theft, while production data must be protected from physical threats such as dust, fire and splashed water. The Micro Data Center provides the perfect housing for edge data centres. The numerous options available, coupled with the opportunity of baying, permit a high degree of flexibility at the point of use.

Continuously growing data volumes are having a major impact on IT infrastructure. Demand for CPU and storage capacity is increasing at the same pace, which means that more and more servers and storage systems are needed, while the floorspace available for IT infrastructure has barely changed. Rittal's data centres in containers offer the perfect solution, because the standardised RiMatrix Data Cubes are installed in a short time and the concept is individually tailored to your requirements.

**Benefits of Rittal container solutions:**

- Customised container solutions on a platform basis
- Predefined modules are individually compiled to create a container data centre
- Pre-assembled container solutions can be up and running in next to no time.
- Project planning by Rittal
- Turnkey delivery of a field-tested solution complete with comprehensive documentation.

If there is no suitable space available in the office building, factory hall or institution, it may be possible to site the edge data centre outdoors. The modular container from Rittal is the ideal platform for combining predefined solutions of server, power and cooling containers. Numerous options and a choice of redundancy classes mean that solutions are precisely aligned with customer requirements.

**Application examples for Rittal container solutions:**

- Lack of space, because more IT hardware is needed as data volumes grow
- Influence of IoT and Industry 4.0: Data exchange between the machines and data centre must be guaranteed
- With edge data centres, the computing performance is provided locally, data volumes are reduced, and pressure on the main company data centre is relieved

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| Container | RiMatrix Data Center Container all-in-one, max. IT output 35 kW | 1 | RDC-AIO 35/ 3-M-II |
| IT rack | Server rack | 3 | 5310.009 |
| | Network rack | 1 | 5311.009 |
| IT power | Low voltage distribution | 1 | 7857.009 |
| | UPS, modular, 40 + 20 kW | 1 | DPA UPScale ST TS 8 |
| | PDU metered, 24 x C13/6 x C19, 3~, 16 A | 4 x 2 | 7979.236 |
| IT cooling | LCP Inline DX, 12 kW | 5 | 3313.430 |

All the variants shown are sample configurations. Individually adaptable.

**Example of a security safe application:**

With its modular layout and option of dismantling and reassembly at any time, your edge data centre expands to accommodate your growing requirements. The security safe provides complete protection from physical threats and ensures the requisite fail-safeness for automated production in Industry 4.0 environments.

| IT Infrastructure | Product description | Packs of | Model No. |
|---|---|---|---|
| IT rack | Micro Data Center Level E | 1 | 7999.009 |
| IT power | PDU metered, 24 x C13/4 x C19, 1~, 32 A | 2 | 7979.216 |
| IT cooling | LCU DX, redundant, 6.5 kW | 1 | 3311.493 |
| IT monitoring | CMC III monitoring system Compact | 1 | 7030.010 |
| IT security | Fire alarm and extinguisher system DET-AC III | 1 | 7338.121 |
| IT accessories | IT LED system light, 600 lm | 1 | 7859.000 |
| | CAT 6, Network Cable Organizer | 2 | 7044.110 |

All the variants shown are sample configurations. Individually adaptable.

# Micro Data Center

## High availability in a security safe

## Optimum protection from physical threats

- Data such as personal patient data can be highly sensitive and must be protected from theft, while production data must be protected from physical threats such as dust, fire and splashed water.
- The Micro Data Center provides the perfect housing for data centres. The numerous options available, coupled with the opportunities for baying, make it an extremely flexible solution.
- With its modular layout and option of dismantling and reassembly at any time, your data centre can expand as your requirements grow. The security safe offers complete protection from physical threats in even the smallest space.

## Options for adapting to your needs

- The Micro Data Center is available in two variants – Level B (solid basic protection) and Level E (maximum protection).
- Level E MDCs are also bayable and can be fitted around your current installed IT racks even while operational.
- There are a range of climate control options available, with varying dissipated thermal loads and redundancies. For example, cooling in a security safe may be designed as fully redundant.
- A fire alarm and extinguisher system protects your valuable IT components from threats inside the safe.

## Simple configuration of tested system solutions

- With the Rittal Micro Data Center, your security safe solution can be tailored to your exact application.
- System-tested quality means that the entire solution has been tested for fire protection, intruder protection, smoke protection and water/dust-tightness in accordance with the specified standards.
- Testing has been carried out by accredited institutes and confirmed with test reports.

# Micro Data Center Level E

**System accessories** Page 877

**Applications:**
- A high level of protection against potential physical threats for IT components
- Targeted configuration components transform the safe into a complete Micro Data Center

**Benefits:**
- As well as facilitating installation in poorly accessible sites, the modular design also makes it possible to retrospectively enclose existing IT structures.
- Extendibility, dismantling and re-assembly mean targeted, future-safe investments
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

**Protection standards:**
- Fire protection category F 90 to DIN 4102 Part 2
- Compliance with limit values ΔT < 50 K, rel. humidity < 85% over 30 minutes
- Burglary resistance RC 2, optionally RC 3, tool attack analogous to DIN EN 1630/ 2011-09 and optionally WK 4, tool attack analogous to DIN V ENV 1630/ 1999-04/WK 4
- Smoke protection based on DIN 18 095-2: 1991-03

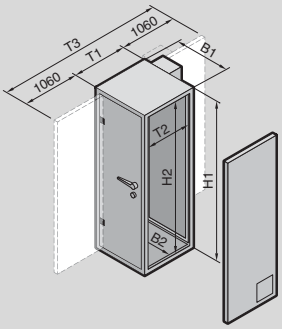
**Material:**
- Sheet steel, coated

**Colour:**
- Enclosure and service door: RAL 7035
- Operator door: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 56

**Supply includes:**
- Micro Data Center with operator door and service door
- Cable entry in both side elements
- Both doors with key lock

**Optional:**
- Choice of door hinges
- Bifold doors
- Different cable entry systems and different positions
- Cable entry in the top/base unit
- Different lock variants
- Supporting structure




**Note:**
- The Micro Data Center is configured on a project-specific basis

| **U** | | 42 | 47 | 42 | 47 | Page |
|---|---|---|---|---|---|---|
| **External dimensions** mm | Width (B1) | 1100 | 1100 | 1100 | 1100 | |
| | Height (H1) | 2210 | 2410 | 2210 | 2410 | |
| | Depth (T1) | 1200 | 1200 | 1400 | 1400 | |
| | Depth (T3) | 3320 | 3320 | 3520 | 3520 | |
| **Internal dimensions** mm | Width (B2) | 920 | 920 | 920 | 920 | |
| | Height (H2) | 2030 | 2230 | 2030 | 2230 | |
| | Depth (T2) | 1000 | 1000 | 1200 | 1200 | |
| **Model No.** | | **7999.009** | **7999.009** | **7999.009** | **7999.009** | |
| **Empty weight excluding cooling unit and excluding rack** approx. kg | | 660 | 700 | 730 | 800 | |
| **Accessories** | | | | | | |
| Fire alarm and extinguisher system DET-AC/EFD III | | see page | see page | see page | see page | 823 |
| CMC III monitoring system | | see page | see page | see page | see page | 800 |
| PSM – Modular Power Distribution Unit | | see page | see page | see page | see page | 744 |
| PDU – Power Distribution Unit | | see page | see page | see page | see page | 732 |
| LCU – Liquid Cooling Unit | | see page | see page | see page | see page | 768 |

**Standard protection from:**

Fire

Extinguishing water

Corrosive gases

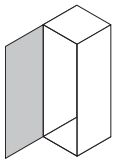
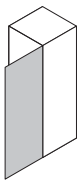
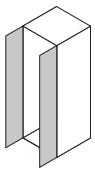
Vandalism

Unauthorised access

Dust

Theft/burglary

## Level E, options

| **Operator door** | L/h DIN door hinge | R/h DIN door hinge | Bifold door |
|---|---|---|---|
| |  |  |  |
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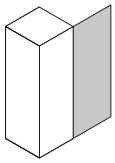
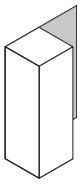
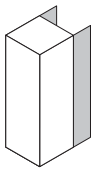
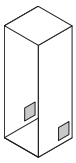
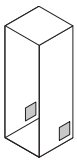
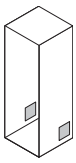
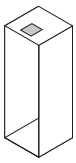
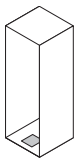
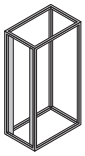
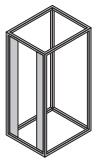
| **Service door** | L/h DIN door hinge | R/h DIN door hinge | Bifold door |
|---|---|---|---|
| |  |  |  |
| | ■ | □ | □ |

| **Cable entry** | Soft duct[1] in both side elements | Hard duct[2] in both side elements | Cable box[3] in both side elements | Hard duct[2] in top element | Hard duct[2] in base element |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| | ■ | □ | □ | □ | □ |

[1] Size of soft duct: approx. 267 x 165 mm
For fire protection reasons, the duct may be configured up to a max. of 60% with a maximum cable diameter of 15 mm and a maximum conduit diameter of 18 mm.
[2] Size of hard duct: 2 panels each 120 x 120 mm
Cables up to a diameter of 15 mm may be routed through the hard duct.
[3] Size of cable box: Field 1 approx. 210 x 44, field 2 approx. 210 x 25 mm
Cables up to a diameter of 15 mm and hoses up to a diameter of 44 mm may be routed through the cable box.
No conduits may be routed through the cable box.
Other positions are also possible.

| **Locks** | Key lock with 2 keys | Electronic combination lock[1] | Electronic combination lock for activation via an access control system supplied by the customer |
|---|---|---|---|
| | ■ | □ | □ |

[1] First code, second code and double code allocation possible. Key-based opening for inspection purposes supported.

| **VX IT rack with air baffle plates** |  | | | |  | | | |
|---|---|---|---|---|---|---|---|---|
| Width mm | 600 | | | | 800 | | | |
| Height mm | 2000 | 2200 | 2000 | 2200 | 2000 | 2200 | 2000 | 2200 |
| Depth mm | 1000 | 1000 | 1200 | 1200 | 1000 | 1000 | 1200 | 1200 |
| | □ | □ | □ | □ | □ | □ | □ | □ |

| **Supporting structure** | Steel supporting structure to compensate for the raised floor height when siting the security safe on the bare floor.<br>The height of the supporting structure is selectable between 100 mm and 1000 mm. | Steel supporting structure to compensate for the raised floor height when siting the security safe on the bare floor.<br>The supporting structure has a fire-proof covering.<br>The height of the supporting structure is selectable between 100 mm and 1000 mm. |
|---|---|---|
| | □ | □ |

■ Included with the supply □ Optional

# Micro Data Center Level B

**System accessories** Page 877

**Applications:**
- Basic protection against potential physical threats for IT components.
- Targeted configuration components transform the safe into a complete Micro Data Center.

**Benefits:**
- Modular layout for installation in hard-to-access locations
- Lower weight than the Level E Micro Data Center
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

**Protection standards:**
- Fire protection – fire resistance class EI 90/F 90 to DIN EN 1363-1: 1999 based on DIN 4102-2: 1997
- Burglar resistance RC 2 Tool attack analogous to DIN EN 1630/2011-09/RC 2
- Smoke protection based on DIN EN 1634-3: 2005-01

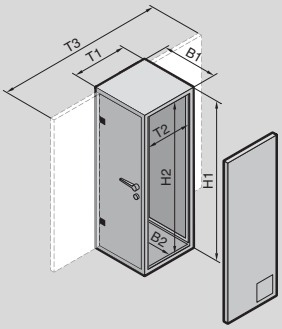
**Material:**
- Sheet steel, coated

**Colour:**
- Enclosure and service door: RAL 7035
- Operator door: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 56

**Supply includes:**
- Security safe with integral VX frame
- 482.6 mm (19") mounting angles, standard, front and rear
- Adjusted air baffle plates
- Every side element is prepared for one cable entry at the bottom and one cable entry at the top
- Operator and service door with swing-lever handle and profile half-cylinder

**Optional:**
- Choice of door hinges
- Bifold doors
- Different cable entry systems and different positions
- Different lock variants
- Supporting structure with fire protection




**Note:**
- The Micro Data Center is configured on a project-specific basis

| **U** | | 42 | 47 | 42 | 47 | Page |
|---|---|---|---|---|---|---|
| **External dimensions** mm | Width (B1) | 1115 | 1115 | 1115 | 1115 | |
| | Height (H1) | 2205 | 2405 | 2205 | 2405 | |
| | Depth (T1) | 1377 | 1377 | 1577 | 1577 | |
| | Depth (T3) | 3274 | 3274 | 3474 | 3474 | |
| **Internal dimensions** mm | Width (B2) | 905 | 905 | 905 | 905 | |
| | Height (H2) | 2000 | 2200 | 2000 | 2200 | |
| | Depth (T2) | 1060 | 1060 | 1260 | 1260 | |
| **Model No.** | | **7999.709** | **7999.709** | **7999.709** | **7999.709** | |
| **Empty weight excluding cooling unit** approx. kg | | 595 | 630 | 660 | 700 | |
| **Accessories** | | | | | | |
| Fire alarm and extinguisher system DET-AC/EFD III | | see page | see page | see page | see page | 823 |
| CMC III monitoring system | | see page | see page | see page | see page | 800 |
| PSM – Modular Power Distribution Unit | | see page | see page | see page | see page | 744 |
| PDU – Power Distribution Unit | | see page | see page | see page | see page | 732 |
| LCU – Liquid Cooling Unit | | see page | see page | see page | see page | 768 |

**Standard protection from:**

Fire

Extinguishing water

Corrosive gases

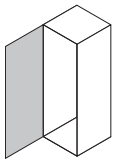
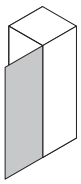
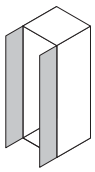
Vandalism

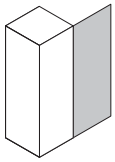
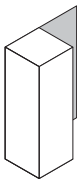
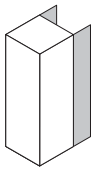
Unauthorised access

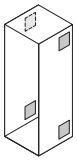
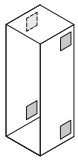
Dust

Theft/burglary

## Level B, options

| **Operator door** | L/h DIN door hinge | R/h DIN door hinge | Bifold door |
|---|---|---|---|
| |  |  |  |
| | ■ | □ | □ |

| **Service door** | L/h DIN door hinge | R/h DIN door hinge | Bifold door |
|---|---|---|---|
| |  |  |  |
| | ■ | □ | □ |

| **Cable entry** | Soft duct[1] in both side elements | Cable box[2] in both side elements |
|---|---|---|
| |  |  |
| | ■ | □ |

[1] Size of soft duct: approx. 267 x 165 mm
For fire protection reasons, the duct may be configured up to a max. of 60% with a maximum cable diameter of 15 mm and a maximum conduit diameter of 18 mm.
[2] Size of cable box: Field 1 approx. 210 x 44, field 2 approx. 210 x 25 mm. Cables up to a diameter of 15 mm and hoses up to a diameter of 44 mm may be routed through the cable box. No conduits may be routed through the cable box.

| **Locks** | Swing lever handle with interchangeable profile half-cylinder | Swing lever handle with electronic lock for external activation | Swing lever handle with electronic lock with combination code |
|---|---|---|---|
| | ■ | □ | □ |

| **Supporting structure** | Steel supporting structure to compensate for the raised floor height when siting the security safe on the bare floor. The supporting structure has a fire-proof covering. The height of the supporting structure is selectable between 100 mm and 1000 mm. | | |
|---|---|---|---|
| | □ | □ | □ |

■ Included with the supply □ Optional

# RiMatrix S

## The standardised data centre

## IT infrastructure – Fully operational

The RiMatrix S standardised data centre is suitable for all architectures, be it main data centres, small data centres in distributed locations, or edge data centres located outdoors. The local conditions are of secondary importance, because RiMatrix S can be used both in existing properties and in container data centres.
The significantly reduced planning times are key, because these highly efficient modules are fully pre-planned, including existing data sheets, implementation diagrams and documentation.
In the longer term, another benefit of this system-tested solution is a significant reduction in your electricity bills, with detailed calculations possible even at the planning phase.

## Save time when planning

- Easily select your required modules with just one Model No.
- Complete documentation available at the planning phase
- Short delivery times and fast commissioning
- Pre-assembled modules for the installation of IT equipment, ready to use immediately
- Simplified final certification of the finished data centre

## Efficient technology

- Unique, efficient cooling solution
- Space-saving climate control in the raised floor
- n+1 redundancy in the power supply and cooling
- Complete low-voltage distribution system and PDUs pre-installed in the racks, UPS built into selected modules
- Optional packages for comprehensive PUE (power usage effectiveness) monitoring using a prefabricated DCIM solution are available
- Documented low PUE (power usage effectiveness) of between 1.5 and 1.15
- Documented system test of the entire data centre module

## Scalability from the edge to the cloud

- Standardised modules for simplified worldwide delivery
- Simple, uniform connection to supply infrastructures
- Different modules with outputs ranging from 10 kW to 450 kW (scalable)
- For use in existing premises in a simple protective cover or robust container structure

# RiMatrix S at a glance

## Standard room

The standardised data centre is assembled at your premises within the context of hot aisle/cold aisle containment.

**Benefits:**
- Aisle containment is a combination of door and roof components which allow consistent separation of the hot and cold air

**Supply includes:**
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Commissioning and handover
- Documentation, training, instruction
- Hotline and service/service agreements
- Precise-fit aisle containment

| | Single 6 | Double 6 | Single 9 | Double 9 |
|---|---|---|---|---|
| **Model No.** | **7998.106** | **7998.107** | **7998.406** | **7998.407** |
| Exterior dimensions, width mm | 2807 | 4839 | 2807 | 4839 |
| Exterior dimensions, height mm | 2750 | 2750 | 2750 | 2750 |
| Exterior dimensions, depth mm | 7067 | 7070 | 7067 | 7070 |
| Interior dimensions, width mm | 2750 | 4774 | 2750 | 4774 |
| Interior dimensions, height mm | 2722 | 2722 | 2722 | 2722 |
| Interior dimensions, depth mm | 7000 | 7000 | 7000 | 7000 |
| Fire protection | – | – | – | – |
| Burglar resistance | – | – | – | – |
| Acrid gas-tightness | – | – | – | – |
| Dust- and water-tightness | IP 20 | IP 20 | IP 20 | IP 20 |
| Basic EMC protection | – | – | – | – |
| Early fire detection | ■ | ■ | ■ | ■ |
| Room extinguisher system | optional | optional | optional | optional |
| Humidification and dehumidification system | optional | optional | optional | optional |
| **Server rack (600 x 2000 x 1200 mm)** | 6 | 12 | 8 | 16 |
| **Combined network/server rack (800 x 2000 x 1200 mm)** | 1 | 2 | 1 | 2 |
| Uninterruptible power supply | 60 kW + 20 kW n+1 redundant | 2 x (60 kW + 20 kW) n+1 redundant | – | – |
| Low-voltage main distribution board (NSHV) | 1 | 2 | 1 | 2 |
| PDU basic | 14 | 28 | 18 | 36 |
| Climate control (ZUCS) | 60 kW + 10 kW n+1 redundant | 120 kW + 20 kW n+2 redundant | 90 kW + 10 kW n+1 redundant | 180 kW + 20 kW n+2 redundant |
| **Efficiency package** | **7998.905** | **7998.906** | **7998.907** | **7998.908** |

# RiMatrix S at a glance

## Security room

The standardised data centre at your premises is equipped with an additional security room (room-within-a-room) to provide additional protection from fire, water and smoke.

**Material:**
- Element core made from thermally effective insulating material
- Robust, encapsulated sheet steel cassette panels
- Innovative connection system using patented profile technology
- Use of temperature- and humidity-resistant seals
- Optional use of overpressure control dampers
- Dismantling and reassembly are possible at any time

**Supply includes:**
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Commissioning and handover
- Documentation, training, instruction
- Hotline and service/service agreements

## Container

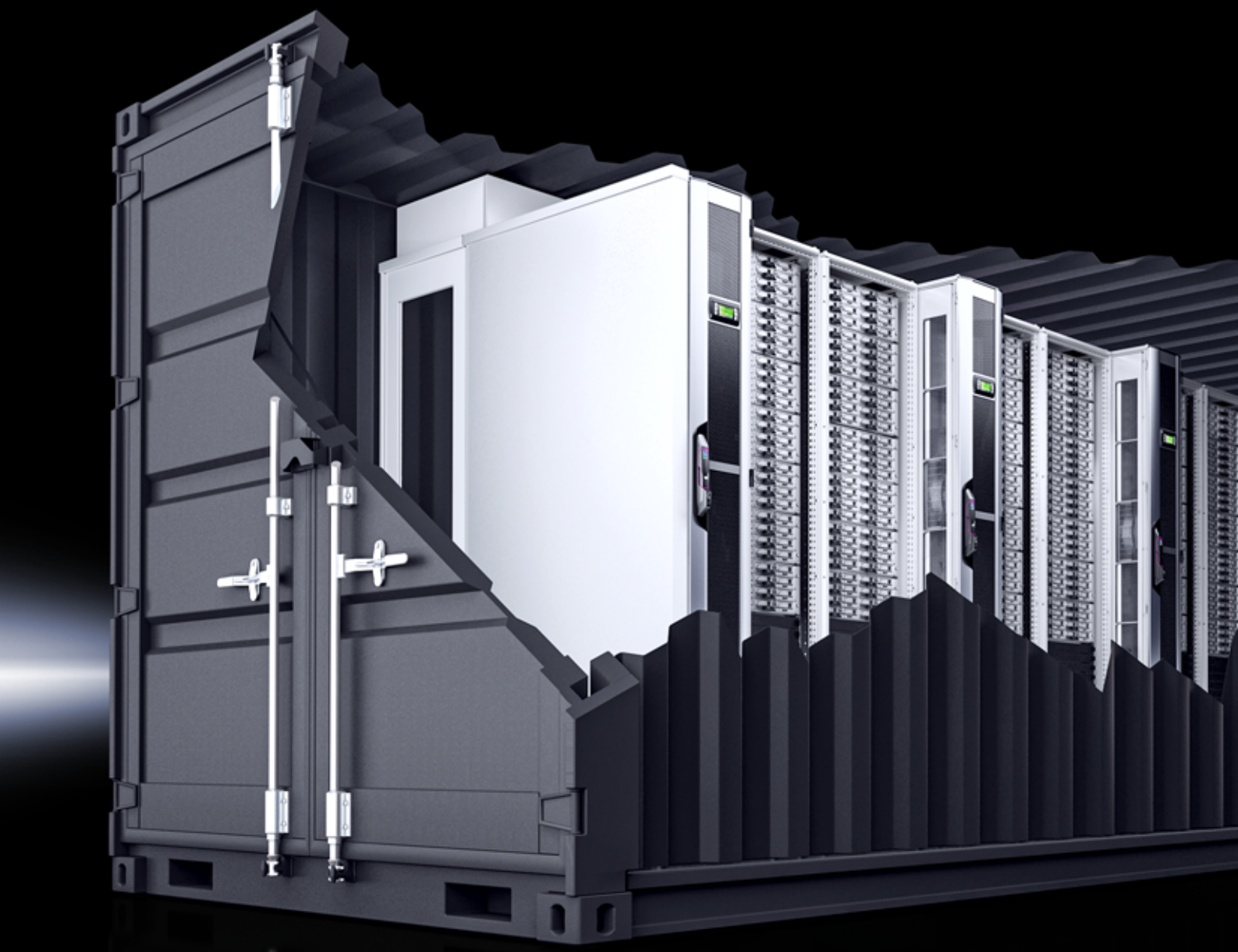
The standardised data centre is implemented in a container solution and can due to the robust sheet steel container construction be sited outdoors if required.

**Supply includes:**
- Robust sheet steel container with reinforced frame structure for optimum weight distribution
- Housed interior wall structure with thermal insulating materials
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Documentation, training, instruction
- Hotline and service/service agreements

| | Single 6 | Double 6 | Single 9 | Double 9 | Single 6 | Single 9 |
|---|---|---|---|---|---|---|
| | **7998.306** | **7998.307** | **7998.606** | **7998.607** | **7998.206** | **7998.506** |
| | 2950 | 4976 | 2950 | 4976 | 3000 | 3000 |
| | 2800 | 2800 | 2800 | 2800 | 3000 | 3000 |
| | 7420 | 7420 | 7420 | 7420 | 7250 | 7250 |
| | 2750 | 4776 | 2750 | 4776 | 2750 | 2750 |
| | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| | 7220 | 7220 | 7220 | 7220 | 7000 | 7000 |
| | EI 90 according to EN 1363/F 90 based on DIN 4102 | EI 90 according to EN 1363/F 90 based on DIN 4102 | EI 90 according to EN 1363/F 90 based on DIN 4102 | EI 90 according to EN 1363/F 90 based on DIN 4102 | – | – |
| | RC III | RC III | RC III | RC III | RC II | RC II |
| | ■ | ■ | ■ | ■ | – | – |
| | IP 56 | IP 56 | IP 56 | IP 56 | IP 55 | IP 55 |
| | ■ | ■ | ■ | ■ | ■ | ■ |
| | ■ | ■ | ■ | ■ | ■ | ■ |
| | optional | optional | optional | optional | optional | optional |
| | optional | optional | optional | optional | optional | optional |
| | 6 | 12 | 8 | 16 | 6 | 8 |
| | 1 | 2 | 1 | 2 | 1 | 1 |
| | 60 kW + 20 kW n+1 redundant | 2 x (60 kW + 20 kW) n+1 redundant | – | – | 60 kW + 20 kW n+1 redundant | – |
| | 1 | 2 | 1 | 2 | 1 | 1 |
| | 14 | 28 | 18 | 36 | 14 | 18 |
| | 60 kW + 10 kW n+1 redundant | 120 kW + 20 kW n+2 redundant | 90 kW + 10 kW n+1 redundant | 180 kW + 20 kW n+2 redundant | 60 kW + 10 kW n+1 redundant | 90 kW + 10 kW n+1 redundant |
| | 7998.905 | 7998.906 | 7998.907 | 7998.908 | 7998.905 | 7998.907 |

# Data centre container

## The modular concept for complete IT infrastructures



## IT technology plus matching infrastructure equals a complete system

Growing data volumes and escalating requirements are creating ever more problems with space. Modular containers suitable for outdoor siting offer a possible solution and are highly scalable. Thanks to the container structure, a data centre can be planned with minimal effort and extended in the future. RiMatrix Data Cubes are a modular system from Rittal which provide the ideal basis for suitable projects and include server, power and cooling modules. There is also an all-in-one (AIO) variant available as a plug & play solution, in which the server zone and technical room are accommodated together in a single module.

## A scalable, modular system

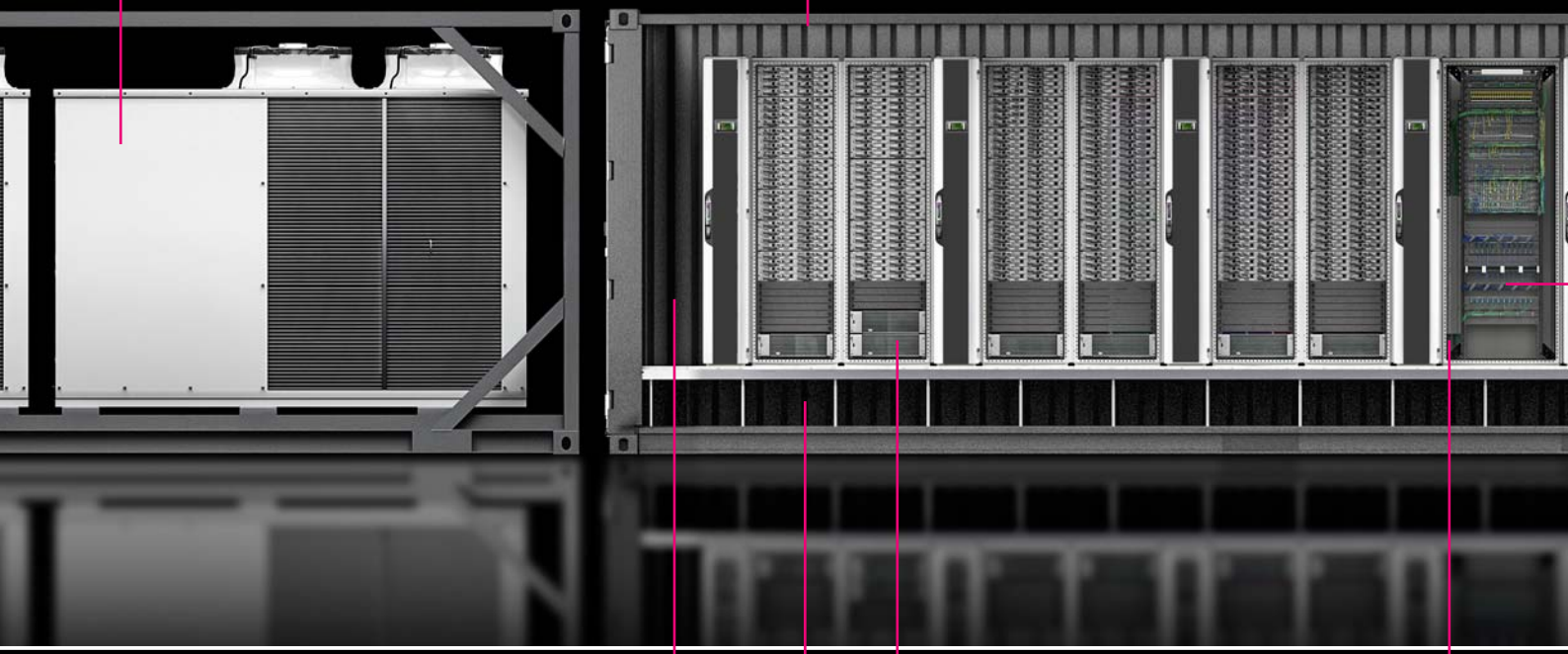
- This flexible solution accommodates the specific requirements of individual applications
- Simple selection options help to streamline planning, with detailed planning of individual assemblies specifically for the application in each container
- Standardised components with tested and certified safety.
- Industrial production of the entire container is very fast, with installation and cabling of the IT hardware on request
- Suitable for outdoor siting
- Reduced installation phase thanks to the plug & play principle
- High level of scalability
- Mobile and future-proof

## Efficiency and service

- Low $CO_2$ emissions: Modern IT cooling units from Rittal support high levels of efficiency in containers compared with conventional data centres
- Continuous advice and planning from the Rittal data centre experts
- Servicing and preventive maintenance help to safeguard the longevity and maximum availability of your infrastructure

**RiMatrix Data Cube Cooling:**
Efficient recooling systems in the container frame, ready to connect and system-tested with redundant chillers, free-cooling mode or additional free cooler and network functions

**RiMatrix Data Cube IT:**
Ready-to-connect IT infrastructure in a robust container shell, as standardised IT modules in a range of output categories for SME, Cloud and Edge applications.



**Robust container cover:**
For siting outdoors, standardised dimensions for reduced planning effort

**Network racks:**
Pre-configured type VX IT for installing network technology and structured cabling, with two PDUs for redundant power supply

**Modular raised floor:**
In a range of application-specific heights

**Server racks:**
Pre-configured type VX IT for server installation, with cable guide rails and two PDUs for redundant power supply in the server exhaust air zone

# RiMatrix Data Cube

## Modules with maximum scalability

From individual all-in-one containers through to large container parks, Rittal offers the maximum possible scalability with its comprehensive portfolio of solutions. For larger applications, uninterruptible power supply and cooling modules in the same container pitch pattern are added to the RiMatrix Data Cubes.
For the conventional components of rack, power, cooling and monitoring, Rittal and its strategic partners Innovo Cloud and Lefdal also offer "IT as a Service", together with a location – the Lefdal Mine Datacenter in Norway – which can save up to 40 percent energy costs annually compared with a data centre in Germany.

**RiMatrix Data Cube Power:**
Modular UPS systems with redundancy to supply one or more IT modules

**Individual equipment:**
All containers are equipped with the necessary infrastructure (lighting, service sockets, structured cabling etc.)

**Low-voltage distributor:**
Complete distributor system with connection point for the main supply and the outgoing feeders from all PDUs

**IT cooling:**
Cold water or coolant-based systems for energy-efficient cooling of the entire server inlet air zone, speed-controlled and with redundancy

# RiMatrix Data Cube IT

| Design | | | RDC IT 50/10-L-III | RDC IT 60/12-L-II |
|---|---|---|---|---|
| Maximum total IT output in kW | | | 50 | 60 |
| Maximum IT output per rack in kW | | | 5 | 5 |
| Redundancy of cooling system | | | 2n | n+1 |
| Redundancy of power supply | | | 2n | 2n |
| Cooling concept | | | LCP systems are positioned between the racks, and depending on the variant, are either flush with or set forward from the enclosure suite. These systems cool the entire cold aisle in front of the servers and have a redundant design in the container variants.<br>The variants with a second set of cold water pipelines also support n+n redundancies. | |
| Power concept | | | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply to which one or two UPS-buffered supply lines may be connected. A RiMatrix Data Cube Power with integral UPS may also be used to supply the containers.<br>The container peripherals are supplied via an additional C-line. | |
| Racks | Server rack W x H x D mm | 600 x 2000 x 1200 | 10 | 12 |
| | Network rack W x H x D mm | 800 x 2000 x 1200 | 1 | 1 |
| | Technical rack W x H x D mm | 600 x 2000 x 600 | – | – |
| | | 600 x 2000 x 1200 | 1 | 1 |
| Current | Low-voltage distributor | | 1 | 1 |
| | UPS, modular | | – | – |
| | PDU | | 11 x 2 | 13 x 2 |
| Cooling | Quantity | | 6 x LCP CW | 4 x LCP CW |
| | Pipe systems | | 2 set(s) | 1 set(s) |
| Container size L x W x H mm (external dimensions) | | | 12192 (40 ft.) x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 |

| | RDC IT 90/8-M-I | RDC IT 100/10-L-II | RDC IT 100/10-L-III |
|---|---|---|---|
| | 90 | 100 | 100 |
| | 10 | 10 | 10 |
| | n+1 | n+1 | 2n |
| | 2n | 2n | 2n |
| | Use of the zero-U-space cooling system (ZUCS) optimises use of the interior space by positioning the cooling units underneath the racks in the raised floor. Efficient EC fans ensure a constant server inlet air temperature in the shielded cold aisle. This system provides a redundancy of n+1. | LCP systems are positioned between the racks, and depending on the variant, are either flush with or set forward from the enclosure suite. These systems cool the entire cold aisle in front of the servers and have a redundant design in the container variants. The variants with a second set of cold water pipelines also support n+n redundancies. | |
| | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply to which one or two UPS-buffered supply lines may be connected. A RiMatrix Data Cube Power with integral UPS may also be used to supply the containers. | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply to which one or two UPS-buffered supply lines may be connected. A RiMatrix Data Cube Power with integral UPS may also be used to supply the containers. The container peripherals are supplied via an additional C-line. | |
| | 8 | 10 | 10 |
| | 1 | 1 | 1 |
| | 1 | – | – |
| | – | 1 | 1 |
| | 1 | 1 | 1 |
| | – | – | – |
| | 9 x 2 | 11 x 2 | 11 x 2 |
| | 9 x ZUCS | 6 x LCP CW | 6 x LCP CW |
| | 1 set(s) | 1 set(s) | 2 set(s) |
| | 7250 x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 |

# RiMatrix Data Cube IT

| | | | | |
|---|---|---|---|---|
| Design | | | **RDC IT 200/10-L-II** | |
| Maximum total IT output in kW | | | 200 | |
| Maximum IT output per rack in kW | | | 20 | |
| Redundancy of cooling system | | | n+1 | |
| Redundancy of power supply | | | 2n | |
| Blob arrangement | | | – | |
| Cooling concept | | | Energy-efficient LCP systems with a cold water supply are used as cooling systems, and can each produce a cooling output of up to 55 kW. These systems are positioned in the row between the server racks and can easily be set forward into the cold aisle. This brings the cold air directly in front of the servers for cooling without deflection losses. | |
| Power concept | | | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply to which one or two UPS-buffered supply lines may be connected. A RiMatrix Data Cube Power with integral UPS may also be used to supply the high-performance containers. The container peripherals are supplied via an additional C-line. | |
| Racks | Server rack W x H x D mm | 600 x 2000 x 800 | – | |
| | | 600 x 2000 x 1200 | 10 | |
| | Network rack W x H x D mm | 800 x 2000 x 800 | – | |
| | | 800 x 2000 x 1200 | 1 | |
| | Technical rack W x H x D mm | 600 x 2000 x 1200 | 1 | |
| Current | Low-voltage distributor | | 1 | |
| | UPS, modular | | – | |
| | PDU | | 11 x 2 | |
| Cooling | Quantity | | 6 x LCP CW | |
| | Pipe systems | | 1 set(s) | |
| Container size L x W x H mm (external dimensions) | | | 12192 (40 ft.) x 3000 x 3000 | |

| | RDC IT 200/10-L-I | RDC IT 200/10-ISO L-I |
|---|---|---|
| | 200 | 200 |
| | 20 | 20 |
| | n+1 | n+1 |
| | 2n | 2n |
| | The racks and cooling systems are arranged so that two racks form a unit with one LCP. An additional LCP in the suite ensures redundancy. All racks are cooled evenly and energy-efficiently via the shared cold aisle, even with varying loads. | |
| | Energy-efficient LCP systems with a cold water supply are used as cooling systems, and can each produce a cooling output of up to 55 kW. These systems are positioned in the row between the server racks and can easily be set forward into the cold aisle. This brings the cold air directly in front of the servers for cooling without deflection losses. | |
| | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply to which one or two UPS-buffered supply lines may be connected. A RiMatrix Data Cube Power with integral UPS may also be used to supply the high-performance containers. The container peripherals are supplied via an additional C-line. | |
| | – | 10 |
| | 10 | – |
| | – | 1 |
| | 1 | – |
| | – | – |
| | 1 | 1 |
| | – | – |
| | 11 x 2 | 11 x 2 |
| | 7 x LCP CW | 7 x LCP CW |
| | 1 set(s) | 1 set(s) |
| | 12192 (40 ft.) x 3000 x 3000 | 12192 (40 ft.) x 2438 x 2896 (ISO High Cube) |

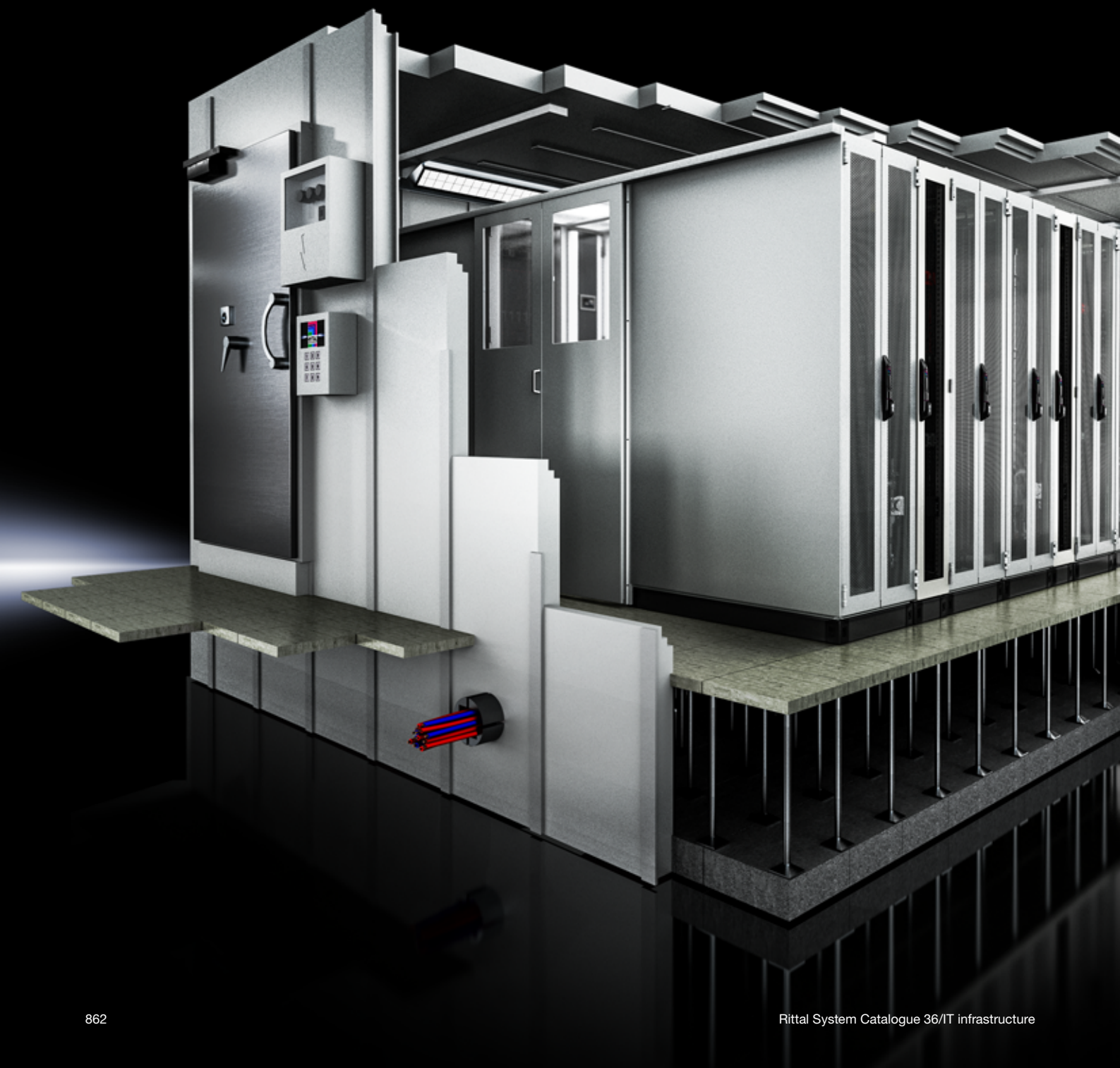
# RiMatrix Data Cube All-in-One

| Design | | | RDC AIO 35/3-M-II | RDC AIO 45/8-L-II |
|---|---|---|---|---|
| Maximum total IT output in kW | | | 35 | 45 |
| Maximum IT output per rack in kW | | Server rack | 10 | 5 |
| | | Network rack | 5 | 5 |
| Redundancy of cooling system | | | n+1 | n+1 |
| Redundancy of power supply | | | 2n | 2n |
| Cooling concept | | | LCP systems are positioned between the racks, and depending on the variant, are either flush with or set forward from the enclosure suite. These systems cool the entire cold aisle in front of the servers and have a redundant design in the container variants. Coolant-based DX systems may also be used in the AIO variants, which are linked to the relevant external unit. These may also be optionally secured directly to the outer container sleeve. | |
| Power concept | | | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply; the integral modular UPS is positioned directly at the infeed to the B-line. The container peripherals are supplied via an additional C-line. | |
| Racks | Server rack W x H x D mm | 600 x 2000 x 1200 | 3 | 8 |
| | Network rack W x H x D mm | 800 x 2000 x 1200 | 1 | 1 |
| | Technical rack W x H x D mm | 600 x 2000 x 600 | – | – |
| | | 600 x 2000 x 1200 | – | – |
| Current | Low-voltage distributor | | 1 | 1 |
| | UPS, modular | | 40 + 20 kW | 60 + 20 kW |
| | PDU | | 4 x 2 | 9 x 2 |
| Cooling | Quantity | | 5 x LCP DX | 6 x LCP DX |
| | Pipe systems | | Single | Single |
| Container size L x W x H mm (external dimensions) | | | 7250 x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 |

| | RDC AIO 60/6-M-I | RDC AIO 90/8-L-II | RDC AIO 180/16-L-II | RDC AIO 180/16-L-III |
|---|---|---|---|---|
| | 60 | 90 | 180 | 180 |
| | 10 | 10 | 10 | 10 |
| | – | 5 | 5 | 5 |
| | n+1 | n+1 | n+1 | 2n |
| | 2n | 2n | 2n | 2n |
| | Use of the zero-U-space cooling system (ZUCS) optimises use of the interior space by positioning the cooling units underneath the racks in the raised floor. Efficient EC fans ensure a constant server inlet air temperature in the shielded cold aisle. This system provides a redundancy of n+1. | LCP systems are positioned between the racks, and depending on the variant, are either flush with or set forward from the enclosure suite. These systems cool the entire cold aisle in front of the servers and have a redundant design in the container variants. The variants with a second set of cold water pipelines also support n+n redundancies. | | |
| | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. A UPS is already integrated into the RDC-AIO 60/6-M-II. | The container main power supply is split among individual outgoing feeders to the PDUs in the individual enclosures via a low-voltage distributor. Each enclosure has an A supply and a B supply, thereby achieving n+1 redundancy. The main distributor offers separate connections for the A and B supply; the integral modular UPS is positioned directly at the infeed to the B-line. The container peripherals are supplied via an additional C-line. | | |
| | 6 | 8 | 2 x 8 | 2 x 8 |
| | 1 | 1 | 2 x 1 | 2 x 1 |
| | 1 | – | – | – |
| | – | – | – | – |
| | 1 | 1 | 2 x 1 | 2 x 1 |
| | 60 + 20 kW | 100 + 20 kW | 2 x (100 + 20 kW) | 2 x (100 + 20 kW) |
| | 7 x 2 | 9 x 2 | 2 x (9 x 2) | 2 x (9 x 2) |
| | 6 x ZUCS for server zone<br>1 x ZUCS for UPS zone | 6 x LCP CW | 2 x (6 x LCP CW) | 2 x (6 x LCP CW) |
| | 1 set(s) | 1 set(s) | 2 x 1 set(s) | 2 x 2 set(s) |
| | 7250 x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 | 12192 (40 ft.) x 3000 x 3000 |

# Security room

## High availability for data centres



## Customised protection from physical threats

- Innovative services provided by regional governments and banks, for example, demand the highest standards of security for storing sensitive citizen data and protecting it from manipulation.
- This data must be protected from physical threats such as fire, smoke, corrosive gases, dust and water, as well as unauthorised access.
- Security rooms are a room-within-a-room solution, in other words, a security room is constructed from base, wall and ceiling elements in an existing building and can be flexibly adapted to suit the local conditions, especially if changes cannot be made to the building's structure.

## Adaptation to the building infrastructure and operational IT requirements

- The basic protection room/basic protection Plus room provides a high-quality, system-tested solution. The basic protection room is an optimum, modular room-within-a-room solution for protecting IT components and creating technical rooms. The flexible modular system allows it to be extended whilst operational.
- The high-availability room offers maximum physical protection for data centres. The system was certified by ECB (European Certification Body GmbH) to ECB·S regulations. The modular concept offers the same benefits as a basic protection room, but with a higher level of protection.

## Tested system solutions

- System-tested quality means that the entire solution has been tested for fire protection, intruder protection, smoke protection and water-/dust-tightness in accordance with the specified standards.
- System testing covers the entire structure, comprising the cell structure and built-in modules such as doors, cable shields and ventilation units.
- Testing is carried out by accredited institutes and documented in test reports.

# Basic Protection room and Basic Protection Plus room (GSR)

**IT power** Page 722 **IT cooling** Page 756 **IT monitoring** Page 798

**Your benefits with GSR, GSR Plus and HVR**
- System-tested protection
- Multi-functional risk coverage
- Dust- and noise-reduced installation
- Dismantling and reassembly plus extendibility = investment security
- Adaptation of the different room systems

With HVR only:
- System-tested high-availability protection
- ECB·S certification
- Independent quality monitoring

**High security requirements**
The Basic Protection room provides a system-tested solution for protecting infrastructure components such as extinguisher systems, uninterruptible power supplies and cooling.
The Basic Protection Plus room also offers solid basic protection for IT in addition to protection of infrastructure components.

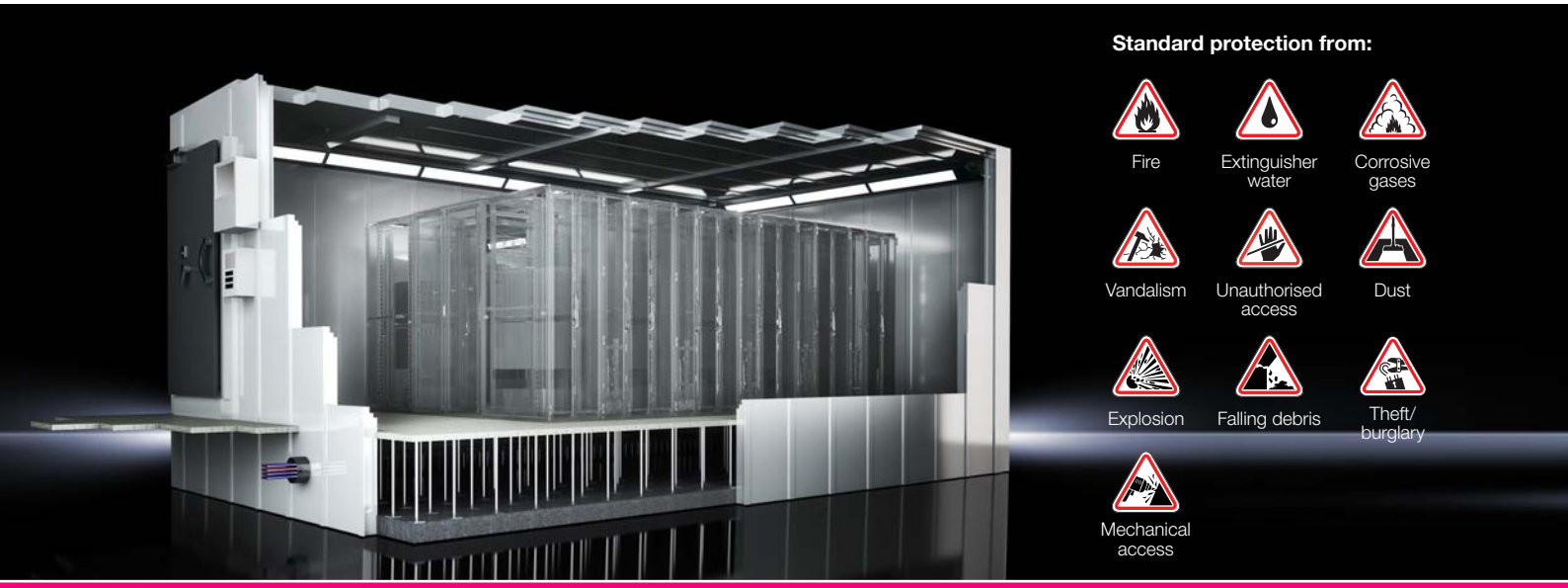
**Structure of the Basic Protection room**
- Element core made from thermally effective insulating material
- Robust, encapsulated sheet steel cassette panels
- Innovative connection system using patented profile technology
- Use of temperature- and humidity-resistant seals

| Criterion | Standard | |
|---|---|---|
| **System testing** | System testing | |
| **Fire protection** | ECB·S certification to EN 1047-2, 50 K temperature increase and 85% rel. humidity up to 24 hours (post-heating period), 60 minutes flame impingement time | |
| | 50 K temperature increase and 85% rel. humidity without post-heating period, flame impingement time 30 minutes | |
| | F 120 to DIN 4102; EI 120 (wall) to EN 1363 (component-tested) | |
| | F 90 to DIN 4102 | |
| | EI 90 to EN 1363 | |
| **Corrosive combustion gases** | Acrid gas-tightness based on DIN 18 095 | |
| **Falling debris** | Impact test 200 kg from a drop height of 1.5 m with impact energy of 3,000 Nm | |
| **Water** | Protection category IP X6 to IEC 60 529 | |
| | Protection from standing water | |
| **Dust** | Protection category IP 5X to IEC 60 529 | |
| **Unauthorised access** | Resistance class RC4, tool attack analogous to DIN/EN 1630, door system only | |
| | Resistance class RC3, tool attack analogous to DIN/EN 1630 | |
| | Resistance class RC2, tool attack analogous to DIN/EN 1630 | |
| **Explosion** | Detonation test | |
| **EMC** | Shield attenuation levels of up to 60 dB in the frequency range from 30 MHz to 3 GHz | |

System-tested structures are tested as a complete unit, comprising the cell structure and built-in modules such as doors, cable shields or ventilation units.
By contrast, generic component testing only refers to individual parts.

Conventional construction methods refer to room structures made of plasterboard, concrete and other standard construction materials which do not offer sufficient protection for data centre applications. Conventional construction methods are generally unsuitable for use as a fire wall and are only component-tested.

# High-Availability room (HVR)




**IT power** Page 722 **IT cooling** Page 756 **IT monitoring** Page 798

**Maximum security**
The High-Availability room offers maximum physical protection for data centres and IT system locations. The system was certified by ECB (European Certification Body GmbH) to ECB·S regulations. This certification confirms that the High-Availability room meets the requirements of EN 1047-2 without restriction. Moreover, the construction of the security room is subject to continuous quality monitoring by an independent agent.

**Structure of the High-Availability room**
- Complex 4-layer element core made of thermally effective insulation substances
- Robust, encapsulated sheet steel cassette panels
- ECB·S tested, multiple lock, panic release
- Patented connection system
- Fireproof floor elements
- Use of extremely temperature- and humidity-resistant seals

| | Basic Protection room | Basic Protection Plus room | High-Availability room |
|---|---|---|---|
| | ■ | ■ | ■ |
| | – | – | ■ |
| | – | ■ | ■ |
| | – | – | ■ |
| | ■ | ■ | ■ |
| | ■ | ■ | – |
| | ■ | ■ | ■ |
| | ■ | ■ | ■ |
| | ■ | ■ | ■ |
| | – | – | ■ |
| | ■ | ■ | ■ |
| | – | – | ■ |
| | – | □ | ■ |
| | ■ | ■ | ■ |
| | – | – | ■ |
| | □ | □ | □ |

■ Standard □ Option

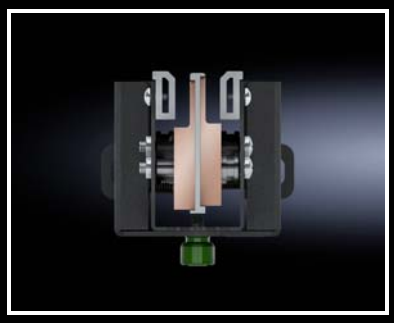
IT infrastructure

# Open Compute Project (OCP)

Big data is a subject which is shaking up many areas of industry, commerce and trade. It is not only that data volumes are increasing exponentially. Also important is that efficient and fast data processing will in future be more and more decisive for business success.
The OCP community came together to find solutions to this challenge. The prime objective of the Open Compute Project (OCP) is to reduce the investment and operating costs, energy consumption and environmental impact of data centres by way of innovative, fully standardised IT architectures. To this end, the OCP provides an open platform for the sharing of ideas and know-how, as a vehicle for the definition of ground-breaking standards for the data centre of the future.

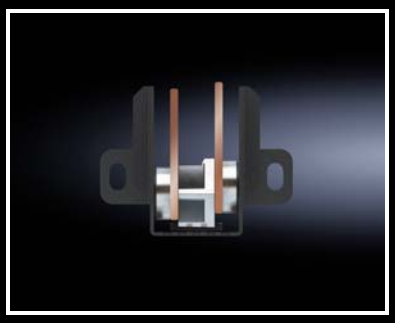
**IT infrastructure – Architectures for the future**
As a leading manufacturer of IT infrastructures, Rittal is proud to be a member of the OCP community. Expertise in the standardization of data centre architectures, in particular, has established Rittal's reputation as a strong partner when it comes to demanding OCP-related tasks.
As well as building application-specific racks, Rittal has also extended its standard portfolio to include the Open Compute Project segment. This means that Rittal can now handle customer-specific enquiries as well as requests for standardised racks based on the latest OCP design. As well as the rack itself, Rittal also offers a comprehensive range of accessories, a special power supply unit, and a cooling system tailored to innovative OCP architecture, reinforcing Rittal's image as an operational technology (OT) portfolio provider to the OCP segment.

In a joint collaboration with Bel Power Solutions & Protection, Rittal provides power supplies for OCP racks. These innovative and efficient power distributors are a key element of any OCP architecture. Substantial power savings can be made by transforming the power centrally and distributing it via the busbars that typify an OCP system.



**48 V DC/36 kW**

**48 V DC/15 kW**



**12 V DC/6.6 – 13.2 kW**

# Open Compute Project (OCP)

## Rack design for greater flexibility

## Tried-and-tested rack design

- Complies with Open Rack Standards 1.2 and 2.0
- Stable, firmly linked frame structure on castors
- Prepared to accommodate special OCP hardware with a system width of 21″ at the front
- Highly efficient power distribution by connecting the hardware directly to the busbar integrated into the rack
- UL listed, CE compliant
- Variants available for both system voltages 12 V DC and 48 V DC
- Potential output range of a rack based on OCP: 13.2 kW – 40 kW

## More flexibility

- Doors available with a broad selection of lock options for keys, magnetic cards or numerical codes
- One-piece side panel for the end of row (EOR) rack
- Modular configuration of busbars

## Variable interior

- Height units in the Open Compute Design with a variable OpenU pitch pattern (OU) from 1 OU (48 mm) to 3 OU
- Preconfigured slide rails for direct installation of servers, height-adjustable on the OpenU (OU) pitch pattern
- 21″/19″ adaptor for the additional integration of 482.6 mm (19″) components optionally available
- Standard 1 U 482.6 mm (19″) adaptor for tool-free installation of 19″ hardware
- Special 482.6 mm (19″) EIA brackets in various heights to accommodate multiple 19″ devices

# Standard R-OCP V2 rack

OCP rack, 41 OpenU (OU), for use in energy-efficient IT architectures based on the principles of the Open Compute Project. Depending on the variant, with split 12 V DC busbar fitted at the rear, or without busbar for individual configuration. Depending on accessories and the use of power packs, one (single) or two (dual) power zones may be used in the rack.

**Benefits:**
- Complies with Open Rack Standards 1.2 and 2.0
- Stable, firmly linked frame structure on castors
- Height units in the Open Compute Design with a variable OpenU pitch pattern (OU) of between 1 OU (48 mm) and 3 OU
- Pre-assembled slide rails for direct installation of servers, height-adjustable on the OpenU (OU) pitch pattern
- Prepared to accommodate special OCP hardware with a system width of 21" at the front
- Highly efficient power distribution by connecting the hardware directly to the 12 V DC busbar integrated into the rack
- 21"/19" adaptor for the additional integration of 482.6 mm (19") components optionally available
- Matching OCP power packs (power shelves) and batteries (back-up units) for central power supply and protection optionally available in the rack
- Extendible up to a maximum of 3 busbars

**Material:**
- Frame: Sheet steel

**Colour:**
- RAL 9005

**Supply includes:**
- Firmly linked frame structure, with fitted castors, without doors, without side panels
- 2 pairs of slide rails, 3 OU, pre-assembled
- 16 pairs of slide rails, 2 OU, pre-assembled

Please observe the product-specific scope of supply.

**Standards:**
- Open Rack Standard V2

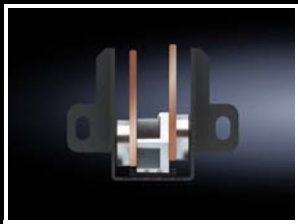
**Approvals:**
- UL

| **Units** OU | Packs of | 41 | 41 | Page |
|---|---|---|---|---|
| **Width** mm | | 600 | 600 | |
| **Height** mm | | 2246 | 2246 | |
| **Depth** mm | | 1068 | 1068 | |
| Design | | OCP V2 rack, deep, without busbar, for individual configuration | OCP V2 rack, deep, incl. preconfigured 12 V DC busbar with 2 power zones | |
| Load capacity | | 15,000 N | 15,000 N | |
| Colour | | RAL 9005 | RAL 9005 | |
| Power consumption min./max. kW | | – | 6.6 / 13.2 | |
| **Model No.** | 1 pc(s). | **7100.200** | **7100.221** | |
| **Product-specific scope of supply** | | | | |
| 1 x OCP busbar 12 V DC | | – | ■ | |
| **Also required** | | | | |
| OCP busbar | 1 pc(s). | 7100.312 | – | 871 |
| **Accessories** | | | | |
| OCP busbar | 1 pc(s). | – | 7100.312 | 871 |
| OCP adaptor | 2 pc(s). | 7100.401 | 7100.401 | 871 |
| OCP V2 side panel | 2 pc(s). | 7100.501 | 7100.501 | 871 |
| OCP PDU | | see page | see page | 872 |

## Accessories

### OCP busbar

| Design | Output range | Packs of | **Model No.** |
|---|---|---|---|
| 12 V DC | 6.6 - 13.2 kW | 1 pc(s). | **7100.312** |



OCP busbar 12 V DC for power distribution in a standard R-OCP V2 rack. The busbar is fitted at the rear and is used to supply power to the hardware in the rack. The hardware and busbar make contact via a clip connection at the rear of the hardware.

**Benefits:**
- Multiple 12 V DC busbars may be combined
- Simple configuration of two to one power zone
- Greater energy efficiency with silver-plated contact area

**Material:**
- Copper, zinc-plated, silver-plated

**Supply includes:**
- Assembly parts

### OCP V2 side panel

| Height mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 2246 | 1068 | 2 pc(s). | **7100.501** |

OCP V2 side panel, 1-piece, for finishing off a rack suite with standard R-OCP V2 racks.

**Material:**
- Sheet steel

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

### OCP adaptor

| U OU | Packs of | **Model No.** |
|---|---|---|
| 1 | 2 pc(s). | **7100.401** |

**21"/19"**
Adaptor for installing 482.6 mm (19") components in the 21" OCP rack system. The adaptor is screw-fastened to the enclosure frame.

**Material:**
- Sheet steel

**Supply includes:**
- Assembly parts

## Accessories

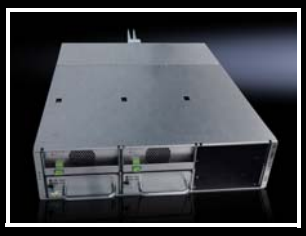
## OCP PDU

The OCP PDU installed on the rack is needed to supply power to the OCP power shelves. The OCP PDU distributes power from the data centre to the power shelves fitted in the rack.

**Material:**
– Enclosure: Sheet steel

**Supply includes:**
– Connection cable

| Input voltage | Infeeds | Phases per infeed | Output voltage | Number of outputs | Rated voltage A | Type of electrical connection | Overvoltage protection | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|---|
| 240 / 415 V AC | 1 | 3~ | 240 / 415 V AC | 2 | 32 | IEC 60 309 | ■ | 7100.200/ 7100.221 | 1 pc(s). | **7100.911** |
| 277 / 480 V AC | 2 | 3~ | 277 / 480 V AC | 2 | 20 | L22-20P | ■ | 7100.200/ 7100.221 | 1 pc(s). | **7100.912** |
| 277 / 480 V AC | 1 | 3~ | 277 / 480 V AC | 2 | 30 | L22-30P | ■ | 7100.200/ 7100.221 | 1 pc(s). | **7100.913** |
| 48 V DC | 2 | – | 48 V DC | 2 | 250 | – | – | 7100.200/ 7100.221 | 1 pc(s). | **7100.914** |
| 200 / 415 V AC | 1 | 3~ | 54.5 V DC | 3 | – | – | – | 7100.200 | 1 pc(s). | **7100.915** |



## OCP Power Shelf

The power shelf connects the power supply to the busbar of the OCP rack, while at the same time functioning as a rack-mounted frame for the power supply units and the battery back-up units. Depending on the variant, a built-in controller is pre-fitted for monitoring the power supply.

**Also required:**
– OCP PDU, see page 872
– OCP Power Supply Unit, see page 873

**Accessories:**
– OCP Battery Back-up Unit, see page 873
– OCP Power Supply Unit, see page 873

| Design | Number of slots | Redun-dancy | Output voltage | Active power kW | Number of outputs | Height OU | Product-specific scope of supply | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|---|
| Shelf type: AC-DC | 3 x PSU / 3 x UPS | 2+1 | 12 V DC | 6.6 | 1 | 3 | – | 7100.221 | 1 pc(s). | **7100.921** |
| Shelf type: AC/DC-DC | 6 x PSU | 3+3 / 5+1 | 12 V DC | 18 | 3 | 1 | Built-in controller | 7100.200 | 1 pc(s). | **7100.922** |
| Shelf type: AC/DC-DC | 6 x PSU | 3+3 / 5+1 | 12 V DC | 18 | 1 | 1 | Built-in controller | 7100.221 | 1 pc(s). | **7100.923** |
| Shelf type: AC/DC-DC | 6 x PSU | 3+3 / 5+1 | 48 V DC | 24 | 1 | 1 | Built-in controller | 7100.200 | 1 pc(s). | **7100.924** |
| Shelf type: DC-DC | 6 x PSU | 3+3 / 5+1 | 12 V DC | 15 | 1 | 1 | Built-in controller | 7100.221 | 1 pc(s). | **7100.925** |
| Blanking cover | – | – | – | – | – | 1 | – | 7100.921 | 1 pc(s). | **7100.961** |
| Blanking cover | – | – | – | – | – | 1 | – | 7100.921 | 1 pc(s). | **7100.962** |

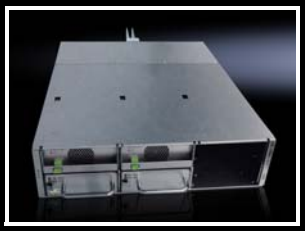
## OCP Power Supply Unit

The power supply unit (PSU) is a power pack which centrally transforms the current or voltage in an OCP rack. The PSUs operate in parallel mode. A power shelf is needed for installation of the power supply units. Depending on the power shelf, up to 6 PSUs may be installed.

**Benefits:**
– May be connected with the system operational
– Parallel operation with active load distribution

| Design | Input voltage | Output voltage | Active power kW | Power pack | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| Power Module PM | 200 - 277 V AC | 12.6 V DC | 3.3 | AC - DC | 7100.921 | 1 pc(s). | **7100.931** |
| Power Module PM | 90 - 300 V AC / 240 - 400 V DC | 12.3 V DC | 3 | AC/DC - DC | 7100.922/ 7100.923 | 1 pc(s). | **7100.932** |
| Power Module PM | 90 - 300 V AC / 192 - 400 V DC | 12.3 V DC | 3.6 | AC/DC - DC | 7100.922/ 7100.923 | 1 pc(s). | **7100.933** |
| Power Module PM | 200 - 277 V AC / 192 - 400 V DC | 48 V DC | 4 | AC/DC - DC | 7100.924 | 1 pc(s). | **7100.934** |
| Power Module PM | 40 - 72 V DC | 12,5 V DC | 3 | DC - DC | 7100.925 | 1 pc(s). | **7100.935** |
| Blanking cover | – | – | – | – | 7100.922/ 7100.923 | 1 pc(s). | **7100.963** |

## OCP Battery Back-up Unit



The battery back-up unit is an internal UPS in OCP architecture housed inside the rack, to ensure a controlled shutdown of the hardware and data backup in the event of a power failure.

**Benefits:**
– May be connected with the system operational
– Parallel operation with active load distribution

| Design | Input voltage | Active power kW | To fit Model No. | Packs of | **Model No.** |
|---|---|---|---|---|---|
| Lithium ion battery back-up unit | 52.5 V DC | 3.6 | 7100.921 | 1 pc(s). | **7100.951** |

# Software for IT infrastructure

## Configurators/Tools/CAD data

### IT Infrastructure

Security, availability and efficiency are crucial to the productive operation of a data centre. This calls for a comprehensive approach which addresses all the relevant requirements as well as the peripheral conditions in order to devise a suitable solution. As well as personalised advice, Rittal can also provide you with a comprehensive range of tools for selecting, configuring and monitoring all relevant parameters.

### IT infrastructure selector

The selector supports you as partner, system integrator, system engineer or end customer in selecting the right IT products for your specific application.

**Selector for:**
- VX IT network/server enclosures
- Power Distribution Unit
- Liquid Cooling Package DX/CW
- Monitoring system CMC III
- Monitor/keyboard unit
- Fire alarm and extinguisher system DET-AC III

**Benefits:**
- All product segments in the data centre at a glance: Network/server racks, solutions for IT cooling, IT power and IT monitoring
- For added value, suitable accessories are suggested in every segment.
- The result is an individual IT infrastructure, ready for you to request a quote from Rittal.

**Note:**
- Use it online at www.rittal.com/it-configurator

### RiMatrix S selector

Your selector for standardised data centres for SMEs, branch concepts and flexible cloud applications. Your solution is configured on the basis of standardised data centre modules.

**Benefits:**
- RiMatrix S at a glance
- Explanation of the option packages
- Efficiency calculation for your location
- As the outcome, you can save your compiled RiMatrix S solution as a PDF file.

**Note:**
- Use it online at www.rittal.com/configurators
- Download for free from the Google Play Store or App Store

Android app

iPhone app

### Micro Data Center configurator

Configuration of your security safe, including a range of configuration components.

**Benefits:**
- Your complete micro data centre in just a few steps
- Individual selection of configuration components
- When you have finished, you can request a quote for your current configuration

**Note:**
- Configure online at www.rittal.com/mdc-configurator

## PDU configurator

Customise PDUs from the Rittal standard portfolio to suit your specific requirements. Assisted by the Rittal Configuration System (RiCS), you can then visualise your configured solution directly during the selection process.

**The modular concept:**
- Adapt existing standard PDUs (built to order), delivery time up to 14 days
- Use a modular system comprised of individual system modules
- Wide range of accessories
- Additional modules, e.g. for overvoltage protection and for measuring differential current

**Benefits:**
- List and visualise your configuration
- Delivery times are shown transparently
- Get direct pricing information when you log into the online shop

**Note:**
- Use it online at www.rittal.com/configurators

## IT cooling calculator

Simple selection of water-based Liquid Cooling Packages (LCP) for rack and suite cooling for your IT infrastructure.

**Benefits:**
- Calculation of the cooling output of LCPs
- Consideration of the various physical parameters
- Save your finished calculation as a PDF file

**Note:**
- Configure online at www.rittal.com/it-cc

## DCIM – Data Centre Infrastructure Management

**RiZone – Perfect support of IT infrastructure components**
- Customer-focused and cost-efficient
- Optimum monitoring of IT infrastructure components
- The physical data centre infrastructure (OT devices) is incorporated into a data centre infrastructure management system.
- RiZone supports SNMP V1/V2C and SNMP V3
- Simple configuration
- Automatic detection of Rittal components
- Workflow editor for user-defined scenarios
- Enhanced security and reliability
- Enhanced energy efficiency
- Integration of SNMP-compatible third-party equipment

**Note:**
- Detailed product description, see page 830

# Rittal – The System.

**Faster – better – everywhere.**

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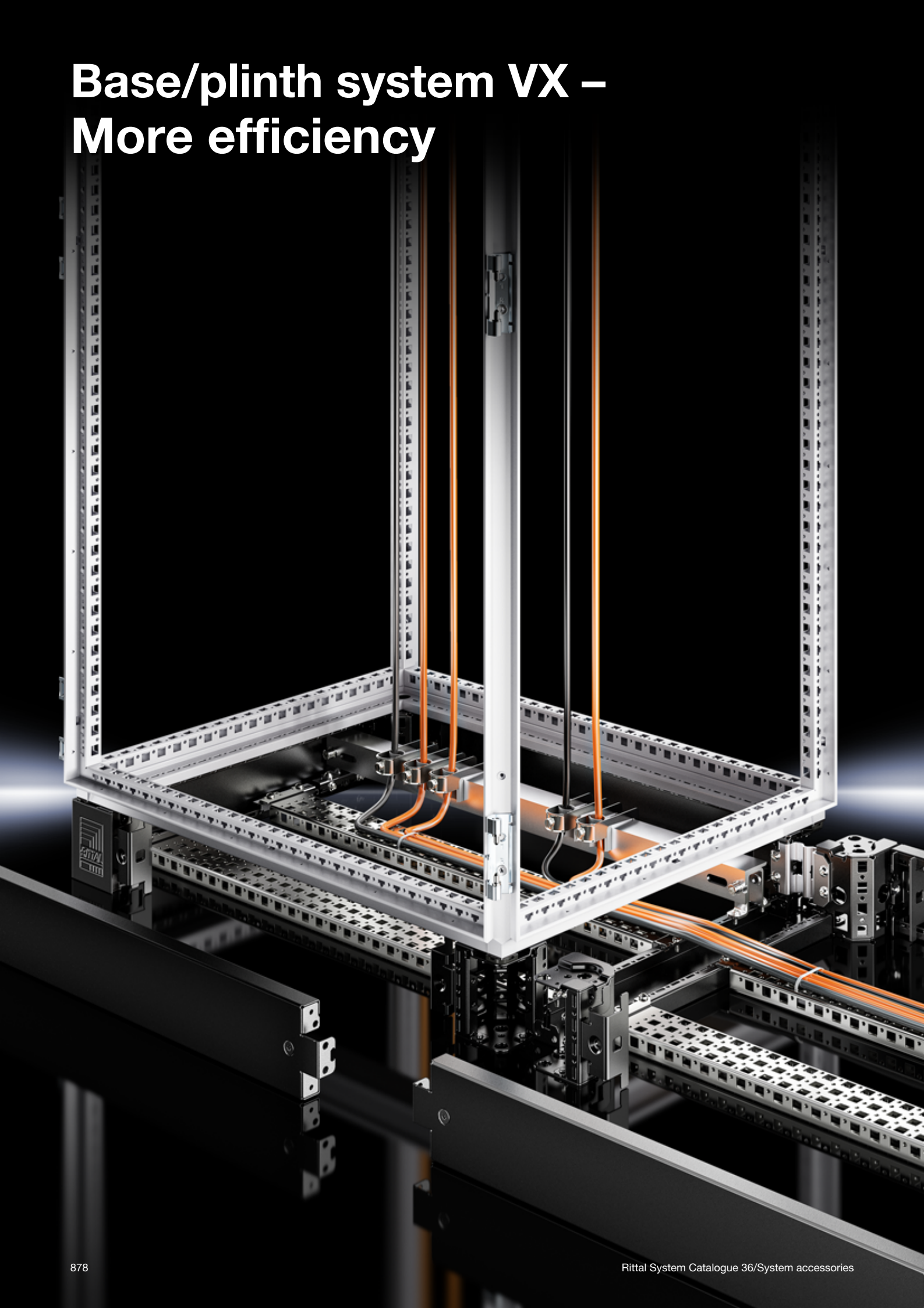
# Base/plinth system VX – More efficiency



## Integral centring aid

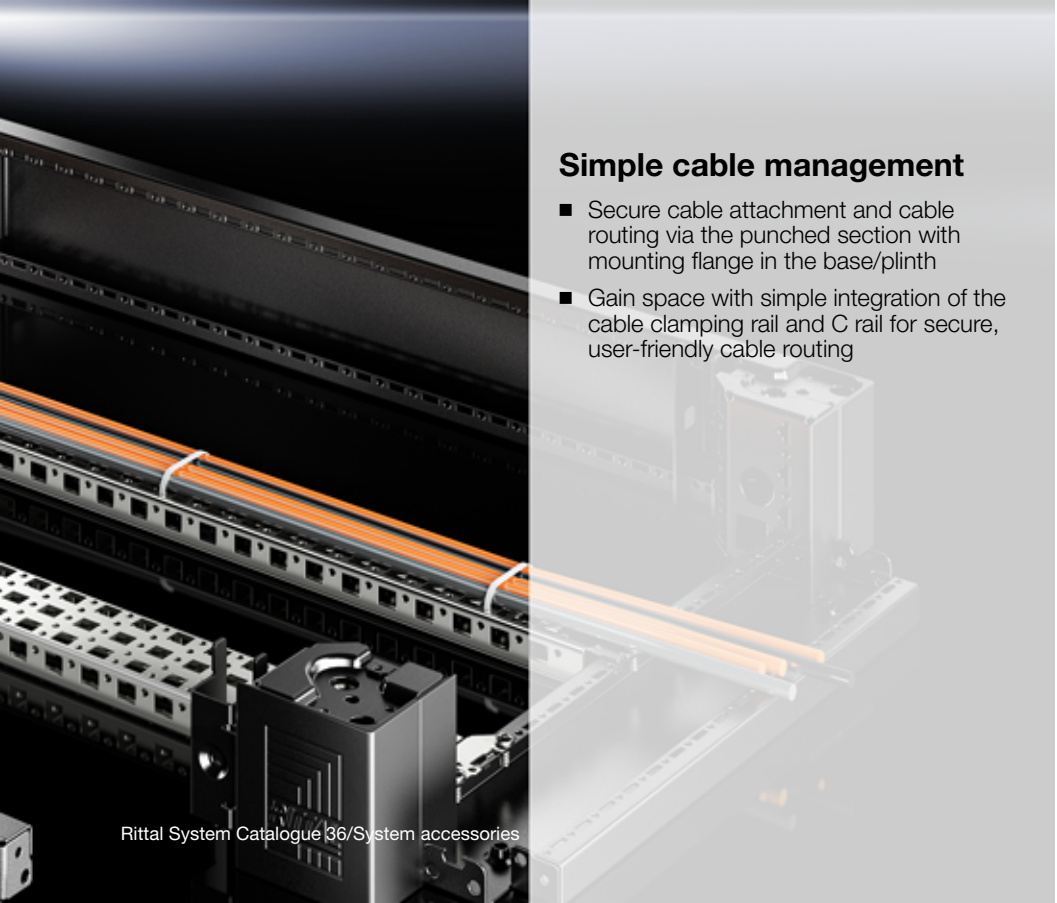
- The centring aid for base/plinth mounting on the enclosure frame ensures precise positioning of the enclosure on the base/plinth

## Enclosure attachment

- The nuts integrated into the base/plinth corner piece allow screw-fastening directly from above, through the stable base frame, or from below, into the enclosure corner piece

## Simple cable management

- Secure cable attachment and cable routing via the punched section with mounting flange in the base/plinth
- Gain space with simple integration of the cable clamping rail and C rail for secure, user-friendly cable routing



## Base/plinth system VX

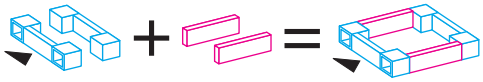
### Modular base/plinth diversity

The innovative base/plinth system VX offers an unprecedented diversity of functions and applications. It combines all existing base/plinth functions in a single solution, as well as opening up many new applications. As if that isn't enough, it is also compatible with existing enclosure solutions TS, TS IT, SE, PC and IW. In short, it is a base/plinth system.

The base/plinth system VX comprises the following components:
- Base/plinth corner pieces with base/plinth trim panels, front and rear
- Base/plinth trim panels, sides

Thanks to fully symmetrical corner pieces, and by using the same base/plinth trim panels in the width and depth, the system opens up many new applications. For example, the vented trim panels and trim panels with brush strips available as accessories may now optionally be attached at the sides, or exchanged for the front/rear trim panels.

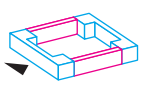
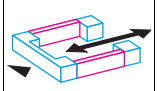
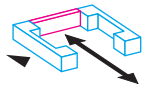
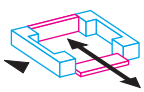
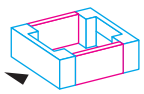
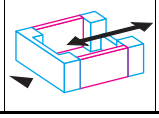
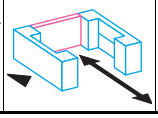
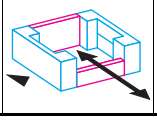
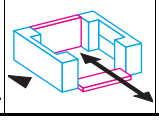
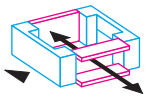
All trim panels may optionally be clipped into the corner piece, or securely screw-fastened. Depending on the application, for example, users can dispense with the trim panels between bayed enclosure suites, or a 100 mm high trim panel may be used to stabilise the base/plinth corner pieces. In combination with its extensive range of accessories, and thanks to its compatibility with enclosure accessories, the base/plinth system VX offers almost infinite possibilities in terms of siting, transportation, cable routing, cable attachment and base/plinth configuration.



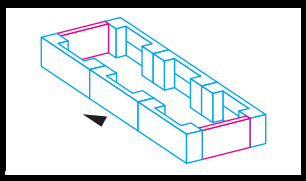
One Model No. for the **base/plinth corner pieces with base/plinth trim panels,** front and rear

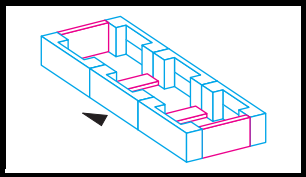
One Model No. for the **base/plinth trim panels,** sides

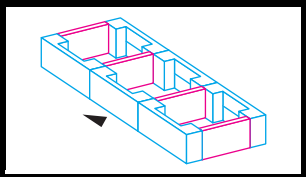
One complete **base/plinth VX**

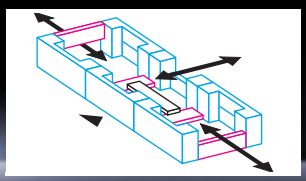
| Base/plinth height | Basic form | Cable entry options | | | Stabilisation of bayed base/plinths | |
|---|---|---|---|---|---|---|
| 100 mm |  |  |  | |  | |
| 200 mm |  |  |  |  |  |  |

### Configuration examples









| Order includes | Functional benefits |
|---|---|
| 3 packs Base/plinth corner pieces with base/plinth trim panels<br>1 pack Base/plinth trim panels, sides, 200 mm high | Continuous cable chamber |
| 3 packs Base/plinth corner pieces with base/plinth trim panels<br>1 pack Base/plinth trim panels, sides, 200 mm high<br>1 pack Base/plinth trim panels, sides, 100 mm high<br>1 pack Baying brackets, internal (8617.500, packs of 6)<br>4 pc(s). are required for this solution | Additional stability during transportation with base/plinth trim panels rotated through 90° |
| 3 packs Base/plinth corner pieces with base/plinth trim panels<br>2 packs Base/plinth trim panels, sides, 200 mm high | Shielding of the base/plinths from one another |

Other options:
- Cable entry at the side by fitting a 100 mm base/plinth trim panel with brush strip
- Cable entry from the rear by dismantling one or more trim panels from the base/plinth corner pieces and replacing them with trim panels with brush strips
- Cable routing in the base/plinth by using punched sections with mounting flanges on the base/plinth trim panels

## Base/plinth corner pieces with base/plinth trim panels, front and rear

**Sheet steel**
**for VX, VX IT, VX SE, TE, TopConsole, one-piece console, PC, IW**
High-load capacity base/plinth corner pieces with moulded self-positioning to the enclosure, may be used with or without trim panels depending on the application. Large openings in the corner piece for optimum access to the screw-fastening point, may be concealed with a plastic corner and baying cover.

**Material:**
- Base/plinth corner piece: Sheet steel
- Base/plinth trim panel, front/rear: Sheet steel
- Corner and baying cover: Plastic

**Colour:**
- RAL 9005

**100 mm high supply includes:**
- 4 base/plinth corner pieces, 100 mm high
- 4 corner covers
- 1 baying cover
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

**200 mm high supply includes:**
- 4 base/plinth corner pieces, 200 mm high
- 4 corner covers
- 1 baying cover
- 1 base/plinth trim panel, front/rear, 200 mm high
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

**100 mm high**

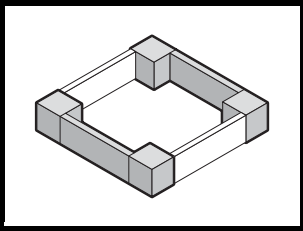
| For enclosure width mm | Model No. |
|---|---|
| 300 | **8640.000** |
| 400 | **8640.001** |
| 600 | **8640.002** |
| 800 | **8640.003** |
| 850 | **8640.004** |
| 1000 | **8640.005** |
| 1100 | **8640.006** |
| 1200 | **8640.007** |
| 1600 | **8640.008** |
| 1800 | **8640.009** |

**200 mm high**

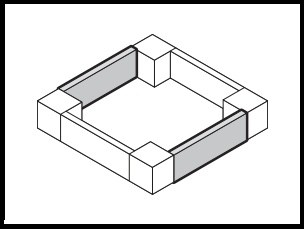
| For enclosure width mm | Model No. |
|---|---|
| 300 | **8640.020** |
| 400 | **8640.021** |
| 600 | **8640.022** |
| 800 | **8640.023** |
| 1000 | **8640.024** |
| 1200 | **8640.025** |
| 1600 | **8640.026** |
| 1800 | **8640.027** |

**Also required:**
- Base/plinth trim panels, sides, to finish off a unit, for additional stabilisation between base/plinths, or for interior configuration, see page 882

**Accessories:**
- Base/plinth trim panels with brush strip, see page 882
- Base/plinth trim panels, vented, see page 883
- Base/plinth installation bracket, see page 885
- Levelling component for base/plinth, see page 886
- Base mounting plate, see page 885
- Base/plinth adaptor for twin castors and levelling feet, see page 893
- Baying bracket, internal, see page 912
- Transport castors for base/plinth VX, see page 884
- C rails, see page 996



## Base/plinth system VX



### Base/plinth trim panels, sides

**Sheet steel**
**for base/plinth VX**
To finish off a base/plinth unit at the sides and for additional stabilisation or for the interior configuration of bayed base/plinths. One 200 mm high or two 100 mm high trim panels may optionally be fitted on 200 mm high base/plinths.

**Material:**
– Sheet steel

**Colour:**
– RAL 9005

**Supply includes:**
– 2 base/plinth trim panels
– Assembly parts

**100 mm high**

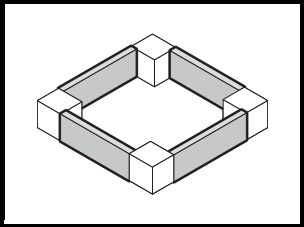
| For enclosure depth mm | Model No. |
|---|---|
| 300 | **8640.030** |
| 400 | **8640.031** |
| 500 | **8640.032** |
| 600 | **8640.033** |
| 800 | **8640.034** |
| 1000 | **8640.035** |
| 1200 | **8640.036** |

**200 mm high**

| For enclosure depth mm | Model No. |
|---|---|
| 300 | **8640.040** |
| 400 | **8640.041** |
| 500 | **8640.042** |
| 600 | **8640.043** |
| 800 | **8640.044** |
| 1000 | **8640.045** |
| 1200 | **8640.046** |

**Accessories:**
– Base/plinth installation bracket, see page 885

**Possible alternative:**
– Base/plinth trim panels with brush strip, see page 882
– Base/plinth trim panels, vented, see page 883



### Base/plinth trim panels with brush strip

**Sheet steel**
**for base/plinth VX**
For cable entry in the base/plinth. With a base/plinth height of 200 mm, one or two trim panels with brush strips may optionally be used. Thanks to the complete symmetry of the base/plinth system VX, the trim panels with brush strip may either be fitted at the front, rear or side on the base/plinth corner piece.

**Material:**
– Base/plinth trim panels: Sheet steel
– Brush strip: Plastic, self-extinguishing

**Colour:**
– RAL 9005

**Supply includes:**
– 2 base/plinth trim panels with brush strip
– Assembly parts

| For enclosure width/depth mm | Model No. |
|---|---|
| 600 | **8620.092** |
| 800 | **8620.093** |
| 1000 | **8620.094** |
| 1200 | **8620.095** |

## Base/plinth trim panels, vented

**Sheet steel**
**for base/plinth VX**
For venting the enclosure via the base/plinth. Specifically in applications such as power distribution where the enclosure gland plates are not used, this can be used to achieve a higher air throughput inside the enclosure. Various solutions to raise the roof and special roof plates with vent openings are also available for enclosure venting. With a 200 mm base/plinth height, one or two vented trim panels may optionally be used. Thanks to the complete symmetry of the base/plinth system VX, the vented trim panels may either be fitted at the front, rear or side on the base/plinth corner piece.

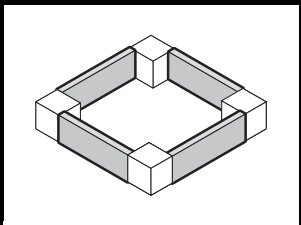
**Material:**
– Sheet steel

**Colour:**
– RAL 9005

**Supply includes:**
– 2 base/plinth trim panels, vented
– Assembly parts for mounting on the base/plinth corner piece

| For enclosure width/depth mm | Model No. |
|---|---|
| 600 | **8620.090** |
| 800 | **8620.091** |

**Accessories:**
– Filter mat, see page 883
– Base/plinth installation bracket, see page 885
– Spacers for lifting the roof, see page 964
– Roof plate with vent holes, see page 961



## Filter mat

**for base/plinth trim panel, vented**
The filter mat is simply inserted into the trim panel from the rear.

**Supply includes:**
– 1 pack = 2 rolls, length 2 m each, may be shortened to required length

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8620.100** |

## Baying cover

**for VX base/plinth**
To neatly close the gap between two bayed base/plinths and it is required to close the gap at the rear when baying three or more base/plinths.

**Material:**
– Plastic ABS, halogen-free

**Colour:**
– RAL 9005

**Note:**
– A baying cover is already included as standard with the supply of base/plinth corner pieces with base/plinth trim panels, front and rear

| Height mm | Packs of | Model No. |
|---|---|---|
| 100 | 10 pc(s). | **8620.010** |
| 200 | 10 pc(s). | **8620.011** |

## Base/plinth system VX

### Cable chamber

**for VX, VX SE**
With integral system punchings for individual system accessories.

Height: 200 mm

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– 1 frame
– 2 trim panels front/rear
– Assembly parts for mounting on the enclosure

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 400 | 500 | 1 pc(s). | **8600.455** |
| 400 | 600 | 1 pc(s). | **8600.465** |
| 600 | 500 | 1 pc(s). | **8600.655** |
| 600 | 600 | 1 pc(s). | **8600.665** |
| 800 | 500 | 1 pc(s). | **8600.855** |
| 800 | 600 | 1 pc(s). | **8600.865** |
| 1200 | 500 | 1 pc(s). | **8600.255** |
| 1200 | 600 | 1 pc(s). | **8600.265** |

**Accessories:**

– Side panels for cable chamber, see page 884

### Side panel

**for cable chamber**

Height: 200 mm

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– 2 side panels
– Assembly parts

| For enclosure depth mm | Packs of | Model No. |
|---|---|---|
| 500 | 2 pc(s). | **8600.510** |
| 600 | 2 pc(s). | **8600.520** |

### Transport castors

**for VX base/plinth**
For locating onto the base/plinth corner piece, 100 or 200 mm high.

**Load capacity:**
– Maximum permissible load per twin castor: 750 N

**Colour:**
– RAL 9005

**Supply includes:**
– 4 twin castors, 2 x with, 2 x without locks

| Floor clearance mm | Model No. |
|---|---|
| 100 | **8100.700** |

**Accessories:**

– Base/plinth trim panels, sides, sheet, for stabilisation, see page 882
– Base/plinth trim panels, sides, stainless steel, for stabilisation, see page 887

## Base mounting plate

**for base/plinth VX, base/plinth AX and base/plinth, complete**
For attaching the base/plinth to the floor.
For assembly screws up to 12 mm Ø.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **2817.000** |

## Base/plinth installation bracket

**for VX base/plinth**
For configuring the base/plinth with punched sections with mounting flanges or cable clamp rails. To fit 100 and 200 mm high base/plinth trim panels in sheet steel and stainless steel.

**Material:**
– Stainless steel 1.4301 (AISI 304)

**Supply includes:**
– 2 installation brackets
– 2 mounting brackets for cable clamp rail
– Assembly parts

**Note:**
– For interior installation on upright base/plinth trim panels
– For base/plinth trim panels rotated through 90°, the installation bracket is not needed, because in this position, the system punchings of the base/plinth trim panels may be used directly

1 Installation bracket with mounting bracket for cable clamp rail

2 Cable clamp rail

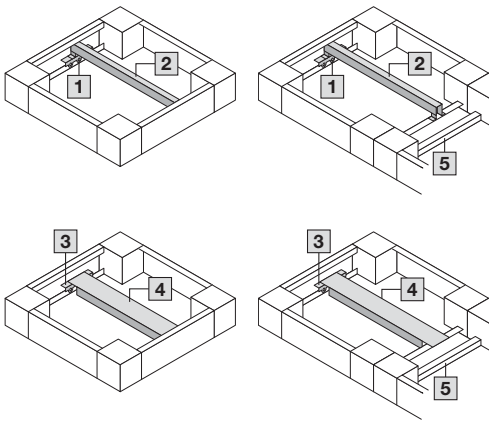
3 Installation bracket

4 Punched section with mounting flange, 23 x 89 mm

5 Base/plinth trim panel, rotated through 90°

| For base/plinth trim panel Height mm | Packs of | Model No. |
|---|---|---|
| 100 | 2 pc(s). | **8620.400** |
| 200 | 2 pc(s). | |

**Accessories:**
– Punched section with mounting flange, 23 x 64 mm, see page 991
– Punched section with mounting flange, 23 x 89 mm, see page 991
– Cable clamp rail, see page 1059



## Base/plinth system VX

### Levelling component

**for VX base/plinth**

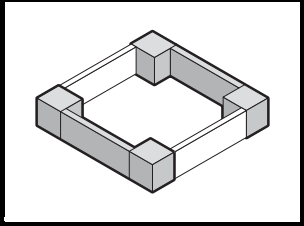
For retrospective levelling on uneven floors at the installation site up to a maximum of 15 mm. Installed through the base/plinth corner piece. Adjusted using a hex spanner, width across flats 19 mm.

**Benefits:**
- A door offset caused by uneven flooring can be corrected
- Installed on the assembled enclosure, i.e. no need to plan levelling in advance

**Load capacity:**
- Max. admissible load: 2500 N per levelling component (check the load capacity of the floor)

**Supply includes:**
- Assembly parts

| For base/plinth height mm | Packs of | Model No. |
|---|---|---|
| 100 | 4 pc(s). | **8100.710** |
| 200 | 4 pc(s). | **8100.711** |



### Base/plinth corner pieces with base/plinth trim panels, front and rear

**Stainless steel**
**for VX, VX SE, PC**

High-load capacity base/plinth corner pieces with moulded self-positioning to the enclosure, may be used with or without trim panels depending on the application. Large openings in the corner piece for optimum access to the screw-fastening point, may be concealed with a plastic corner and baying cover.

**Material:**
- Base/plinth corner piece: Stainless steel 1.4301 (AISI 304)
- Base/plinth trim panel, front/rear: Stainless steel 1.4301 (AISI 304 steel)
- Corner and baying cover: Plastic

**Surface finish:**
- Trim panel: Grain size 400

**100 mm high supply includes:**
- 4 base/plinth corner pieces, 100 mm high
- 4 corner covers
- 1 baying cover
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

**200 mm high supply includes:**
- 4 base/plinth corner pieces, 200 mm high
- 4 corner covers
- 1 baying cover
- 1 base/plinth trim panel, front/rear, 200 mm high
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

| For enclosure width mm | Height mm | Model No. |
|---|---|---|
| 600 | 100 | **8620.050** |
| 800 | 100 | **8620.051** |
| 1000 | 100 | **8620.052** |
| 1200 | 100 | **8620.053** |
| 600 | 200 | **8620.060** |
| 800 | 200 | **8620.061** |
| 1000 | 200 | **8620.062** |
| 1200 | 200 | **8620.063** |

**Also required:**
- Base/plinth trim panels, sides, to finish off a unit, for additional stabilisation between base/plinths, or for interior configuration, see page 887

**Accessories:**
- Base/plinth installation bracket, see page 885
- Levelling component for base/plinth, see page 886
- Base mounting plate, see page 885
- Base/plinth adaptor for twin castors and levelling feet, see page 893
- Transport castors for base/plinth, see page 884
- C rails, see page 996

## Base/plinth trim panels, sides

**Stainless steel**
**for base/plinth VX**
To finish off a base/plinth unit at the sides and for additional stabilisation or for the interior configuration of bayed base/plinths. One 200 mm high or two 100 mm high trim panels may optionally be fitted on 200 mm high base/plinths.

**Material:**
– Stainless steel 1.4301 (AISI 304)

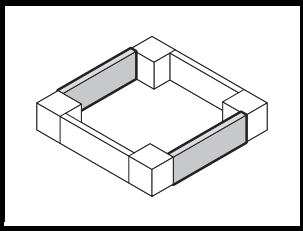
**Surface finish:**
– Brushed, grain size 400

**Supply includes:**
– 2 base/plinth trim panels
– Assembly parts

| For enclosure depth mm | Height mm | Model No. |
|---|---|---|
| 400 | 100 | **8620.070** |
| 500 | 100 | **8620.071** |
| 600 | 100 | **8620.072** |
| 400 | 200 | **8620.080** |
| 500 | 200 | **8620.081** |
| 600 | 200 | **8620.082** |

**Accessories:**

– Base/plinth installation bracket, see page 885

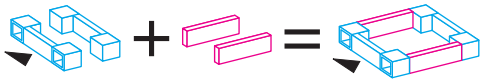


## Base/plinth system AX

### Modular base/plinth diversity

The innovative base/plinth system AX offers an unprecedented diversity of functions and applications.

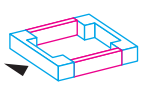
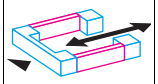
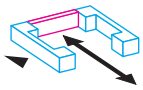
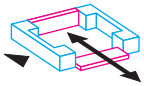
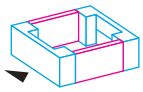
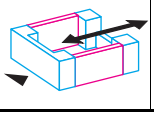
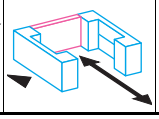
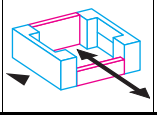
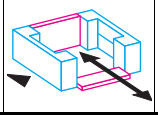
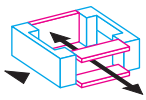
The base/plinth system AX comprises the following components:
- Base/plinth corner pieces with base/plinth trim panels, front and rear
- Base/plinth trim panels, sides

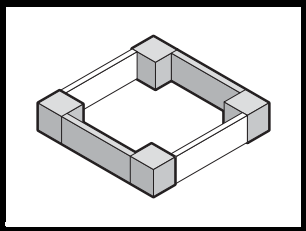


One Model No. for the **base/plinth corner pieces with base/plinth trim panels,** front and rear

One Model No. for the **base/plinth trim panels,** sides

One complete **base/plinth AX**

| Base/plinth height | Basic form | Cable entry options | | | Stabilisation of bayed base/plinths | |
|---|---|---|---|---|---|---|
| 100 mm |  |  |  | |  | |
| 200 mm |  |  |  |  |  |  |



### Base/plinth corner pieces with base/plinth trim panels, front and rear

**Sheet steel**
**for AX, AX IT**
Base/plinth corner pieces with large opening for optimum access to the screw-fastening point, may be concealed with a plastic corner cover.

**Material:**
- Base/plinth corner piece: Sheet steel
- Base/plinth trim panel, front/rear: Sheet steel
- Corner cover: Plastic

**Colour:**
- RAL 9005

**100 mm high supply includes:**
- 4 base/plinth corner pieces, 100 mm high
- 4 corner covers
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

**200 mm high supply includes:**
- 4 base/plinth corner pieces, 200 mm high
- 4 corner covers
- 1 base/plinth trim panel, front/rear, 200 mm high
- 2 base/plinth trim panels, front/rear, 100 mm high
- Assembly parts

**100 mm high**

| For enclosure width mm | Model No. |
|---|---|
| 600 | **2820.061** |
| 800 | **2820.081** |
| 1000 | **2820.101** |
| 1200 | **2820.121** |

**200 mm high**

| For enclosure width mm | Model No. |
|---|---|
| 600 | **2820.062** |
| 800 | **2820.082** |
| 1000 | **2820.102** |
| 1200 | **2820.122** |

**Also required:**
- Side base/plinth trim panels, to finish off a base/plinth unit at the end or for interior configuration of the base/plinth, see page 889

**Accessories:**
- Base mounting plate, see page 885

## Base/plinth trim panel, sides

**Sheet steel**
**for base/plinth AX**
To finish off a base/plinth unit at the sides or for the interior configuration of the base/plinth.
One 200 mm high or two 100 mm high trim panels may optionally be fitted on 200 mm high base/plinths.

**Material:**
– Sheet steel

**Colour:**
– RAL 9005

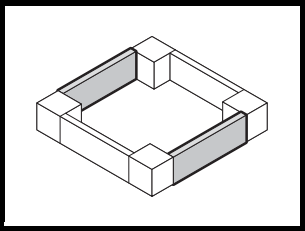
**Supply includes:**
– 2 base/plinth trim panels
– Assembly parts

**100 mm high**

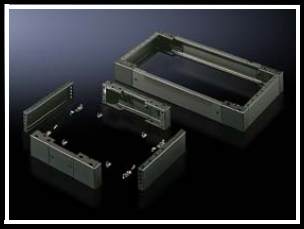
| For enclosure depth mm | Model No. |
|---|---|
| 300 | **2820.310** |
| 400 | **2820.410** |

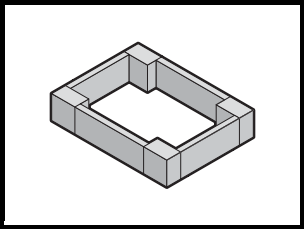
**200 mm high**

| For enclosure depth mm | Model No. |
|---|---|
| 300 | **2820.320** |
| 400 | **2820.420** |



## Base/plinth





### Base/plinth, complete

**Sheet steel**
**for TP universal console**
Trim panels, front and rear with fitted corner pieces and side trim panels.

Height: 100 mm

**Material:**
– Sheet steel

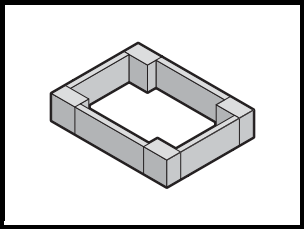
**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7022

**Supply includes:**
– 4 corner pieces
– 2 trim panels, front/rear
– 2 trim panels, side
– Mounting accessories for mounting on the enclosure

| For consoles | | Base/plinth depth mm | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 600 | 500 | 450 | **2807.200** |

**Accessories:**
– Fastening bolt, see page 891
– Base mounting plate, see page 885



### Base/plinth, complete

**Stainless steel**
**for one-piece console, stainless steel**

Height: 100 mm
Where necessary, 2 base/plinths may be installed one above the other.

**Material:**
– Stainless steel 1.4301 (AISI 304)

**Surface finish:**
– Brushed

**Supply includes:**
– 2 trim panels, front/rear
– 2 trim panels, side
– Mounting accessories for mounting on the enclosure

| For enclosures / consoles | | Model No. |
|---|---|---|
| Width mm | Depth mm | |
| 600 | 400 | **2865.000** |
| 800 | 400 | **2869.000** |
| 1000 | 400 | **2867.000** |
| 1200 | 400 | **2870.000** |

**Accessories:**
– Levelling feet HD, see page 223

### Base/plinth, static

**for PC, IW**
Design-coordinated with the enclosures, height 100 mm, with front projection.

**Material:**
– Sheet steel, 2.0 mm

**Colour:**
– RAL 7035
– Design component, front: RAL 7015

**Supply includes:**
– 1 design component, front
– 1 base/plinth component, rear
– 2 base/plinth trim panels, side

| For depth mm | Packs of | Model No. |
|---|---|---|
| 600 | 1 pc(s). | **8800.920** |

**Accessories:**
– Twin castors 7495.000, see page 893
– Levelling feet 4612.000, see page 892
– Fastening bolt 2819.000, see page 891

## Fastening bolts

**for base/plinth, complete and base/plinth, static**

For mounting on base/plinth trim panels, side. The lockable fastening bolt allows the installation of cable clamp rails. Tighten with hex spanner, width across flats 19 mm.

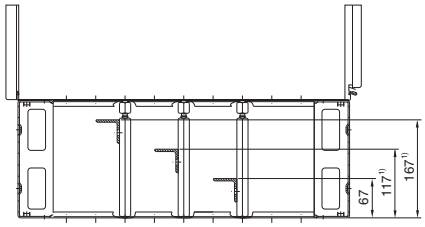
**Material:**
– Hexagonal steel

**Surface finish:**
– Zinc-plated

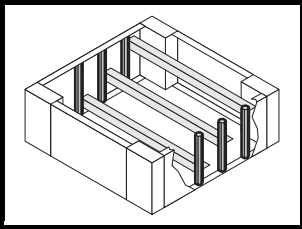
| For base/plinth trim panel Height mm | Packs of | Model No. |
|---|---|---|
| 100 | 10 pc(s). | **2819.000** |
| 200 | 10 pc(s). | **2819.200** |

**Accessories:**

– Cable clamp rail, see page 1059




[1] Only for height 200 mm



## Cross member

**adjustable**
**for VX, VX SE, TP, PC, IW**

To increase stability, adjustable to the enclosure depth.

Height: 70 mm

To increase stability, the cross member is positioned below the base frame of the enclosure and protrudes 138 mm at the front and rear. For deeper enclosures, the rear part may be extended and screw-fastened again. For screw-fastening to the floor and enclosure with mounting hole at the sides, front and rear. The castors and levelling feet may be secured to the welded nuts M12.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7015

| For enclosure depth mm | Model No. |
|---|---|
| 400 | **8601.450** |
| 500 | |
| 600 | **8601.680** |
| 800 | |

**Accessories:**

– Twin castors 6148.000, 7495.000, see page 893
– Levelling feet 4612.000, see page 892

**Assembly instruction:**

– Ensure sufficient stability to prevent the enclosure from tipping over

## Base/plinth

**for FlatBox**

For attachment purposes, the base/plinth may be mounted on the pre-existing thread in the base area of the FlatBox. There is a rear recess provided for cable entry.

**Material:**
– Sheet steel

**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7035

**Supply includes:**
– 4 levelling feet
– Assembly parts

| For base area | | Height mm | Packs of | Model No. |
|---|---|---|---|---|
| Width mm | Depth mm | | | |
| 600 | 600 | 50 | 1 pc(s). | **7507.750** |
| 700 | 700 | 50 | 1 pc(s). | **7507.755** |

## Base

### Levelling feet

**for VX, VX IT, VX SE, PC, IW**
To compensate for height differences with floor irregularities. Mounting thread M12.

**Load capacity:**
– Max. admissible load: approx. 3000 N per levelling foot

| For enclosure | Levelling range mm | Packs of | **Model No.** |
|---|---|---|---|
| Sheet steel | 18 – 43 | 4 pc(s). | **4612.000** |
| Stainless steel | 55 – 125 | 4 pc(s). | **8100.780** |

**Also required:**
– For mounting on the base/plinth: Base/plinth adaptor, see page 893

### Levelling feet

**with internal adjustment, for VX IT**
To compensate for floor irregularities. When used in the mounting bracket, the levelling feet are moved inwards to allow convenient operation from inside the enclosure so that the enclosure is easily levelled, even retrospectively.

**Load capacity:**
– Max. admissible static load: 6500 N per levelling foot

**Supply includes:**
– 4 levelling feet, M12, with TX30 hex socket drive
– 4 mounting brackets
– Assembly parts

| Packs of | **Model No.** |
|---|---|
| 4 pc(s). | **5301.326** |

**Note:**
– Use levelling foot 4612.000 and base/plinth adaptor 8100.770 for mounting on the VX base/plinth

### Levelling feet

**for FlatBox**
**M10 x 20 mm**
For screw-fastening onto the enclosure base when used as a floor-standing or desktop enclosure. Width across flats 17, mounting thread multi-tooth 30.

**Load capacity:**
– Max. admissible static load:
5500 N per levelling foot
700 N per enclosure

| Packs of | **Model No.** |
|---|---|
| 4 pc(s). | **7507.740** |

## Levelling feet

**for VX, VX SE, PC**
**85 – 115 mm high**
For mounting on enclosures, for easier floor cleaning and to compensate for floor irregularities ±15 mm.

**Load capacity:**
– Max. admissible load: 3,500 N per levelling foot

**Material:**
– Stainless steel 1.4301 (AISI 304)

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **2859.000** |

## Twin castors

Mounting thread M12 x 20.

For:
– Baying enclosure system VX
– Network/server racks VX IT
– Free-standing enclosure system VX SE
– PC enclosure system
– Pedestal base plate
– Pedestal 6106.200/6106.300
– TopConsole pedestals
– Industrial Workstation
– Data Rack

**Supply includes:**
– Packs of 4 twin castors, 2 x with, 2 x without locks
– Assembly parts

| | | |
|---|---|---|
| 1 | Maximum admissible static load (per castor) | 75 kg |
| | Floor clearance | 85 mm |
| | Colour | Black with grey running surface |
| | **Model No.** | **6148.000** |

| | | |
|---|---|---|
| 2 | Maximum admissible static load (per castor) | 120 kg |
| | Floor clearance | 125 mm |
| | Colour | Black |
| | **Model No.** | **7495.000** |

**Note:**
For mounting on the VX base/plinth, only twin castors 7495.000 may be used in combination with the base/plinth adaptor for twin castors, see page 893

## Base/plinth adaptor

**for twin castors and levelling feet**
For mounting twin castors and levelling feet to the base/plinth.

| Material | Packs of | Model No. |
|---|---|---|
| Sheet steel | 4 pc(s). | **8100.770** |
| | 4 pc(s). | **8100.771** |

**Also required:**
– When fitting twin castors, side trim panels, see page 882/887, are required.

## Base

### Transport kit

**for VX, VX IT empty enclosures**
To easily transport empty enclosures to the point of use.

**Load capacity:**
– Max. static load: 2,000 N per set of castors, including enclosure

**Supply includes:**
– 4 castors
– 4 mounting brackets
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5301.515** |

**Assembly instruction:**
– The base area must be open at the mounting points

### Castor module

**for VX, VX IT**
For mobile use even with preconfigured enclosures. The castor module is screw-fastened to the structure directly underneath the base frame and is suitable for transporting configured enclosures on flat ground and inside buildings. The castor modules already have pre-integrated levelling feet, allowing the enclosure to be levelled directly on site at the point of installation. The castor module can remain underneath the enclosure.

**Load capacity:**
– Max. admissible load: Static 15,000 N
– Max. admissible load: Dynamic 10,000 N

**Supply includes:**
– 1 transport module with 2 castors
– 1 transport module with 2 castors, fixed
– Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **5301.516** |
| 800 | 2 pc(s). | **5301.518** |

**Note:**
– The maximum admissible load capacity (dynamic) of 10,000 N refers to rolling over flat ground

**Assembly instruction:**
– The base area must be open at the mounting points

### Stabiliser

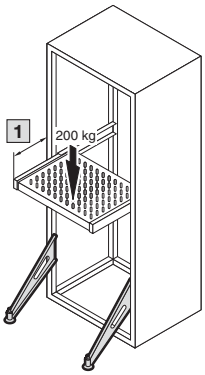
**for VX IT**
If required, the optional stabiliser for the VX IT may be retrofitted in situ at any time. With the front door open, simply snap onto the vertical sections of the enclosure frame and level to match the enclosure height. This enlarges the enclosure's footprint and makes it less likely to tip over when installed components are withdrawn from the enclosure or fitted in the front. It can be used as an alternative if the enclosures cannot be screw-fastened to the floor or secured in an enclosure suite. After installation, simply remove the stabiliser again. The stabiliser may be used on the enclosure frame without bottom-mounting and in combination with levelling feet or a base/plinth up to 200 mm high. The striking signal-red spray-finish draws attention to this trip hazard.

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **5301.325** |

**Load capacity:**
– Max. extension weight: 200 kg, point of gravity 250 mm from the enclosure front

**Material:**
– Sheet steel, spray finished in RAL 3001 (signal red)

**Supply includes:**
– 2 levelling stabilisers with fast, tool-free installation




1 Max. distance to the front edge of the enclosure 250 mm

## Base

### Transport castors

**for TE**

The castors may be screw-fastened in the corner areas of the base frame in place of the levelling feet. Floor clearance: 58 mm, mounting thread M10 x 20

**Supply includes:**
– Assembly parts

| Max. load capacity (static) per enclosure N | Packs of | **Model No.** |
|---|---|---|
| 3000 | 4 pc(s). | **7000.672** |

### System divider

**for VX, VX SE**

Divides the enclosure width into two zones. For example, this allows mounting plates, cable clamp rails or swing frames from 600 mm wide enclosures to be fitted in 1200 mm wide enclosures.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

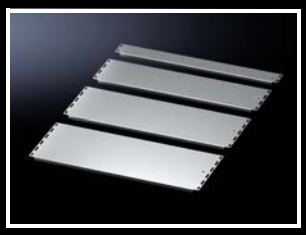
**Supply includes:**
– Assembly parts

| Depth mm | Packs of | **Model No.** |
|---|---|---|
| 500 | 2 pc(s). | **8620.900** |
| 600 | 2 pc(s). | **8620.901** |

**Accessories:**

– Swing frame mounting kit, see page 1078
– Cable clamp rail, see page 1059
– Support rails 48 x 26 mm, see page 996

## Base



### Gland plates

**for VX, VX IT, VX SE**
For individual configuration of the floor space. Potential equalisation is provided via assembly components and earthing points.

**Material:**
– Sheet steel

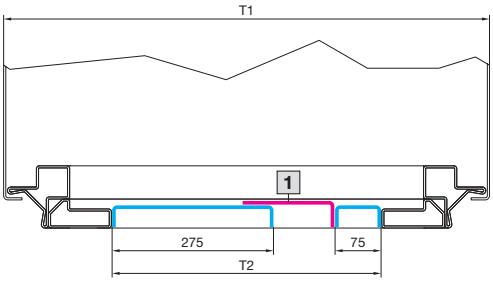
**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Note:**
– At least one sliding plate is required to fully seal a base opening
– For two-door enclosures, one pack is sufficient for one half of the enclosure

**Example with enclosure depth 600 mm**
T1 (600 mm) - 148 = T2 (452 mm)

1 Sliding plate




**Accessories:**
– Sliding plate, see page 896

**For enclosure width 600 mm**

| Depth mm | Packs of | Model No. |
|---|---|---|
| 75 | 1 pc(s). | **8001.210** |
| 175 | 1 pc(s). | **8001.214** |
| 237.5 | 1 pc(s). | **8001.218** |
| 275 | 1 pc(s). | **8001.222** |

**For enclosure width 800 mm**

| Depth mm | Packs of | Model No. |
|---|---|---|
| 75 | 1 pc(s). | **8001.211** |
| 175 | 1 pc(s). | **8001.215** |
| 237.5 | 1 pc(s). | **8001.219** |
| 275 | 1 pc(s). | **8001.223** |

**For enclosure width 1000 mm**

| Depth mm | Packs of | Model No. |
|---|---|---|
| 75 | 1 pc(s). | **8001.212** |
| 175 | 1 pc(s). | **8001.216** |
| 237.5 | 1 pc(s). | **8001.220** |
| 275 | 1 pc(s). | **8001.224** |

**For enclosure width 1200 mm**

| Depth mm | Packs of | Model No. |
|---|---|---|
| 75 | 1 pc(s). | **8001.213** |
| 175 | 1 pc(s). | **8001.217** |
| 237.5 | 1 pc(s). | **8001.221** |
| 275 | 1 pc(s). | **8001.225** |

### Sliding plate

**for VX, VX IT, VX SE**
For variable compensation as well as a flexible opening in the base area. May be combined with gland plates.

**Sliding plate depth:**
– 65 – 115 mm

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 1 pc(s). | **8001.239** |
| 800 | 1 pc(s). | **8001.241** |
| 1000 | 1 pc(s). | **8001.242** |
| 1200 | 1 pc(s). | **8001.243** |

## Gland plate set, multi-piece, solid

**for VX IT**

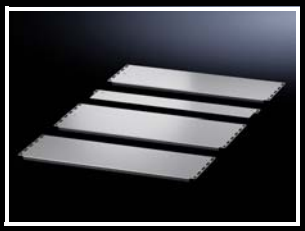
Multi-piece gland plate set consisting of solid base plate modules and a sliding plate for cable entry. The solid gland plate module, depth 237.5 mm, may optionally be exchanged for gland plate module variants for cable entry.

**Benefit:**
- The sequence of individual modules may be freely selected

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Gland plate set
- Sealing tape
- Assembly parts



| For enclosure width mm | For enclosure depth mm | Gland plate module, solid | | | | Sliding plate depth 115 mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|
| | | Depth 75 mm | Depth 175 mm | Depth 237.5 mm | Depth 275 mm | | | |
| 600 | 1000 | – | – | 2 | 1 | 1 | 1 pc(s). | **5301.338** |
| 600 | 1200 | – | – | 4 | – | 1 | 1 pc(s). | **5301.341** |
| 800 | 600 | 1 | 1 | – | – | 2 | 1 pc(s). | **5301.336** |
| 800 | 800 | 1 | – | 2 | – | 1 | 1 pc(s). | **5301.337** |
| 800 | 1000 | – | – | 2 | 1 | 1 | 1 pc(s). | **5301.344** |
| 800 | 1200 | – | – | 4 | – | 1 | 1 pc(s). | **5301.347** |

## Gland plate module, vented

**for VX IT**

For closing the base

**Benefit:**
- Large perforated section to support passive climate control of the enclosure
- Filter mat slides in from above for easy replacement

**Gland plate depth:**
- 237.5 mm

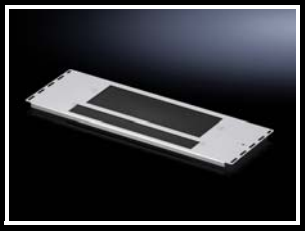
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Gland plate module, vented
- Filter mat
- Assembly parts

| For enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 1 pc(s). | **5301.330** |
| 800 | 1 pc(s). | **5301.331** |

**Assembly instruction:**
- Several gland module plates must be combined to seal the base completely in the VX IT
- The gland plate module may be combined in exchange with other base modules with a depth of 237.5 mm



## Gland plate module, one-piece, with brush strip

**for VX IT**

For targeted cable entry from below.

**Gland plate depth:**
- 237.5 mm

**Material:**
- Module plate: Sheet steel
- Brush strip: Plastic, UL 94 HB, halogen-free

**Surface finish:**
- Module plate: Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 1 pc(s). | **5301.332** |
| 800 | 1 pc(s). | **5301.333** |

**Note:**
- Gland plate modules with brush strip not suitable for applications with a protection category to IEC 60 529

**Assembly instruction:**
- Several gland module plates must be combined to seal the base completely in the VX IT
- The gland plate module may be combined in exchange with other base modules with a depth of 237.5 mm

## Base

### Gland plate module, multi-piece, with brush strip, super-airtight

**for VX IT**

For targeted cable entry from below. With correct cable entry, special brush strips with alternating off-set brushes provide a more effective seal from the environment to support climate control. The two-piece design even allows retrospective fitting of the base module with the cables already installed.

**Gland plate depth:**
– 237.5 mm

**Material:**
– Module plate: Sheet steel
– Brush strip: Plastic, UL 94 HB, halogen-free

**Surface finish:**
– Module plate: Zinc-plated

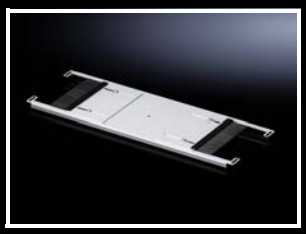
**Supply includes:**
– Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 1 pc(s). | **5301.334** |
| 800 | 1 pc(s). | **5301.335** |

**Note:**
– Gland plate modules with brush strip not suitable for applications with a protection category to IEC 60 529

**Assembly instruction:**

– Several gland module plates must be combined to seal the base completely in the VX IT
– The gland plate module may be combined in exchange with other base modules with a depth of 237.5 mm.



### Gland plate module for side cable entry

**for VX IT**

With adjustable opening and brush strips on both sides. The version which is open at the side even allows the base plate module to be retro-fitted with the cables already installed.

**Gland plate depth:**
– 237.5 mm

**Material:**
– Module plate: Sheet steel
– Brush strip: Plastic, UL 94 HB, halogen-free

**Surface finish:**
– Module plate: Zinc-plated

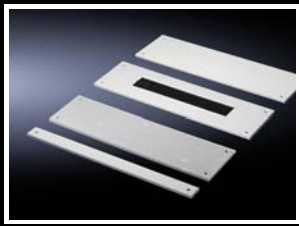
**Supply includes:**
– Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 800 | 1 pc(s). | **5301.348** |

**Note:**
– Gland plate modules with brush strip not suitable for applications with a protection category to IEC 60 529

**Assembly instruction:**

– Several gland module plates must be combined to seal the base completely in the VX IT
– The gland plate module may be combined in exchange with other base modules with a depth of 237.5 mm.



## Module plates

**for TE**
The base area of the TE may be varied as required using the module plates.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Compensating panel design**

| Width B1 mm | Depth T1 mm | For enclosure width mm | **Model No.** |
|---|---|---|---|
| 450 | 50 | 600 | **7526.750** |
| 450 | 150 | 600 | **7526.755** |
| 650 | 50 | 800 | **7526.790** |
| 650 | 150 | 800 | **7526.795** |

**Vented design**

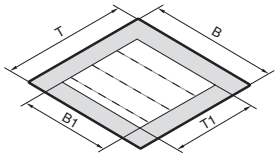
| Width B1 mm | Depth T1 mm | For enclosure width mm | **Model No.** |
|---|---|---|---|
| 450 | 200 | 600 | **7526.829** |
| 650 | 200 | 800 | **7526.834** |

**Solid design**

| Width B1 mm | Depth T1 mm | For enclosure width mm | **Model No.** |
|---|---|---|---|
| 450 | 200 | 600 | **7526.760** |
| 450 | 550 | 600 | **7526.770** |
| 450 | 750 | 600 | **7526.780** |
| 650 | 200 | 800 | **7526.800** |
| 650 | 550 | 800 | **7526.785** |
| 650 | 750 | 800 | **7526.820** |

**Design with brush strip**

| Width B1 mm | Depth T1 mm | For enclosure width mm | **Model No.** |
|---|---|---|---|
| 450 | 200 | 600 | **7526.850** |
| 650 | 200 | 800 | **7526.860** |




Please note the following when selecting suitable module plates:
B1 = Enclosure width (B) - 150 mm
T1 = Enclosure depth (T) - 50 mm

## Base

### Base mounting bracket

**for VX, VX IT**

To anchor the enclosure to the floor, particularly if it is top-heavy and inclined to tilt or cannot be incorporated into a suite of enclosures.

**Material:**
- Sheet steel, zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **5301.350** |

**Assembly instruction:**
- The base area must be open at the mounting points
- Additional holes in the false base are required for mounting
- The assembly parts for connecting the enclosure to the substructure will vary according to its specific properties and are not included with the supply

### Pressure relief stopper

Especially when enclosures are exposed to changing climatic conditions, pressure differences may cause condensation to form in sealed enclosures. The integral sealing membrane in the pressure relief stopper largely prevents such pressure differences and hence eliminates condensation; additionally, it also prevents the ingress of moisture from the outside.
Installed in vertical surfaces to protect against dirt.

**Technical specifications:**
- Air permeability up to 120 litres/hour with a pressure difference of 70 mbar
- Connection thread M12 x 1.5
- For fitting in wall thicknesses up to 4 mm

| Packs of | Model No. |
|---|---|
| 5 pc(s). | **2459.500** |

**Material:**
- Polyamide

**Colour:**
- Similar to RAL 9005

**Protection category IP to IEC 60 529:**
- IP X8

**Protection category IP to DIN 40 040-9:**
- IP 69K

**Supply includes:**
- Lock nut

### Condensate discharge

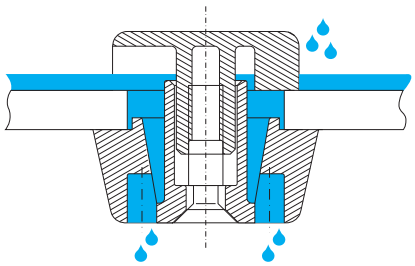
For reliable condensate discharge from the inside and protection against splashed water from the outside (labyrinth effect). A hole diameter of 16 mm is required (with AX sheet steel, the holes are already provided in the base).

**Material:**
- Polyamide

**Colour:**
- Similar to RAL 7035

**Protection category:**
- Protection from splashed water, when correctly installed at the bottom

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **2459.000** |



## Side panel, screw-fastened, sheet steel

**for VX, VX IT**

- Time-saving assembly thanks to clip-in side panel holders
- Automatic potential equalisation and higher EMC protection, thanks to enclosure panel holders with earthing inserts located on the inside
- Easy positioning in the height and depth with the location aid
- Simple assembly
- Earthing bolts with large, paint-free contact surface for optimum contact

**Material:**
- Sheet steel, 1.5 mm

**Surface finish:**
- Dipcoat-primed, powder-coated on the outside

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55 (in conjunction with enclosures from the VX, VX IT series)

**Protection category NEMA:**
- NEMA 12 (in conjunction with enclosures from the VX, VX IT series)

**Supply includes:**
- Assembly parts

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Height mm | Depth mm | | |
| 800 | 600 | 2 pc(s). | **8173.245** |
| 1200 | 500 | 2 pc(s). | **8115.245** |
| 1200 | 600 | 2 pc(s). | **8170.245** |
| 1200 | 800 | 2 pc(s). | **8175.245** |
| 1200 | 1000 | 2 pc(s). | **8176.245** |
| 1400 | 500 | 2 pc(s). | **8145.245** |
| 1600 | 500 | 2 pc(s). | **8165.245** |
| 1600 | 600 | 2 pc(s). | **8166.245** |
| 1600 | 800 | 2 pc(s). | **8168.245** |
| 1800 | 400 | 2 pc(s). | **8184.245** |
| 1800 | 500 | 2 pc(s). | **8185.245** |
| 1800 | 600 | 2 pc(s). | **8186.245** |
| 1800 | 800 | 2 pc(s). | **8188.245** |
| 2000 | 400 | 2 pc(s). | **8104.245** |
| 2000 | 500 | 2 pc(s). | **8105.245** |
| 2000 | 600 | 2 pc(s). | **8106.245** |
| 2000 | 800 | 2 pc(s). | **8108.245** |
| 2000 | 1000 | 2 pc(s). | **8100.245** |
| 2000 | 1200 | 2 pc(s). | **8102.245** |
| 2200 | 600 | 2 pc(s). | **8126.245** |
| 2200 | 800 | 2 pc(s). | **8128.245** |
| 2200 | 1000 | 2 pc(s). | **8120.245** |
| 2200 | 1200 | 2 pc(s). | **8122.245** |

**Accessories:**

- Hinge for side panel, screw-fastened, sheet steel, see page 902

## Side panel, screw-fastened, stainless steel

**for VX**

- Time-saving assembly thanks to clip-in side panel holders
- Automatic potential equalisation and higher EMC protection, thanks to enclosure panel holders with earthing inserts located on the inside
- Easy positioning in the height and depth with the location aid
- Simple assembly
- Earthing bolts with large, paint-free contact surface for optimum contact

**Material:**
- Stainless steel 1.4301 (AISI 304), 1.5 mm

**Surface finish:**
- Brushed, grain size 400

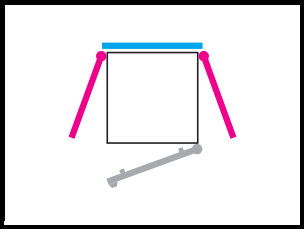
**Protection category IP to IEC 60 529:**
- IP 55 (in conjunction with enclosures from the VX series)

**Protection category NEMA:**
- NEMA 12 (in conjunction with enclosures from the VX series)

**Supply includes:**
- Assembly parts

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Height mm | Depth mm | | |
| 1800 | 400 | 2 pc(s). | **8700.030** |
| 1800 | 500 | 2 pc(s). | **8700.040** |
| 2000 | 600 | 2 pc(s). | **8700.050** |

## Side panels



### Hinge

**for side panel, screw-fastened, sheet steel**
The 180° opening angle allows unhindered access from the side.

**Material:**
– Die-cast zinc

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55 (in conjunction with enclosures from the VX, VX IT series)

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **8106.260** |

**Note:**
– Hinge mounting (red) is only possible in the vicinity of the rear panel (blue)
– Only for use with a side panel depth of 800 mm or less

### Internal latch

**for side panel, screw-fastened, sheet steel**
Additional security is achieved via the option of latching the side panel from the inside. The side panels on the frame section are screw-fastened from the inside with latching brackets.

**Surface finish:**
– Sheet steel, zinc-plated

**Protection category IP to IEC 60 529:**
– IP 55 (in conjunction with enclosures from the VX, VX IT series)

**Supply includes:**
– 2 mounting brackets
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **5301.235** |

**Assembly instruction:**
– Access via the front and rear doors must be guaranteed

### Side panel, horizontally divided

**for VX IT**
For sealing IT enclosure systems, both stand-alone and baying arrangements.

**Benefits:**
– Simple handling
– Supports tool-free installation and removal of the side wall
– Locked using security lock 3524 E
– Integral internal latch

**Material:**
– Sheet steel

**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 20

**Supply includes:**
– Top piece
– Bottom piece
– 6 mounting brackets
– 2 lock components
– Assembly parts

| For enclosure height mm | For enclosure depth mm | Packs of | Model No. |
|---|---|---|---|
| 2000 | 1000 | 1 pc(s). | **5301.250** |
| 2000 | 1200 | 1 pc(s). | **5301.254** |
| 2200 | 1000 | 1 pc(s). | **5301.257** |
| 2200 | 1200 | 1 pc(s). | **5301.261** |
| 2450 | 1000 | 1 pc(s). | **5301.264** |
| 2450 | 1200 | 1 pc(s). | **5301.265** |

## Side panel, vertically divided

**for VX IT**

**Benefits:**
- Simple handling
- Easy to close with snap fasteners
- Optimum access to all installed components
- Opening is only possible via internal locking elements, which requires free access via the doors, but significantly increases access security
- Individual side parts may be completely dismantled at any time without the need for tools

**Material:**
- Sheet steel

**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

| For enclosure height mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 2000 | 800 | 1 pc(s). | **5301.246** |
| 2000 | 1000 | 1 pc(s). | **5301.236** |
| 2000 | 1200 | 1 pc(s). | **5301.242** |
| 2200 | 800 | 1 pc(s). | **5301.243** |
| 2200 | 1000 | 1 pc(s). | **5301.244** |
| 2200 | 1200 | 1 pc(s). | **5301.245** |

**Supply includes:**
- 2 side parts
- Punched rail
- 6 hinges
- 4 quick-release fasteners
- Assembly parts

**Assembly instruction:**

- Access via the front and rear doors must be guaranteed

## Side panel

**for TE 8000**

Simple assembly with insertion aid at the bottom and lock at the top. Earthing bolt with contact lug.

**Material:**
- Sheet steel

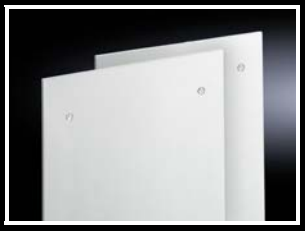
**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

| For enclosure height mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 2000 | 800 | 2 pc(s). | **7888.652** |
| 2000 | 1000 | 2 pc(s). | **7888.653** |

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- 4 cam locks including security lock 3524 E



## Corrosion protection primer

The one-component primer is suitable as corrosion protection on paint-free spots which occur due to cut-outs etc. Used to renew corrosion protection of paint-free spots in accordance with the standard IEC 61439 for low-voltage and switchgear assemblies.

**Benefits:**
- Exceptional bonding
- Passive protection from corrosion
- Very high filling force

**Colour:**
- Dark grey

| | Contents ml | Packs of | **Model No.** |
|---|---|---|---|
| Paint pen | 12 | 1 pc(s). | **2436.800** |

## Paint

For touching up and repairing powder-coated and wet-painted surfaces, air-drying.

| | Colour | **Model No.** |
|---|---|---|
| Touch-up pen 12 ml | RAL 7035 | **2436.735** |
| Tin 1000 ml | RAL 7035 | **2438.735** |
| Spray can 150 ml | RAL 7035 | **2440.735** |
| | RAL 9005 | **2440.905** |

## Divider panels/partitions

### Partition, one-piece, for slide-in fixing

**for VX IT**

For rack mounting, suspended between two bayed enclosures. With one Ø 40 mm hole in the left-hand and right-hand corner areas for inserting cables, conduits etc. These drilled holes may be sealed with the enclosed cover caps.

**Benefits:**
- Simply slides into position

**Material:**
- Sheet steel, zinc-plated

**Protection category:**
- IP 20 (with fitted cover caps)

**Supply includes:**
- Partition
- 2 cover caps

**Note:**
- Use baying connector, external, 3 mm
- Not suitable for use in conjunction with a baying seal
- Any baying seal that may be present must be removed prior to installation

| For enclosure height mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 2000 | 1000 | 1 pc(s). | **5301.270** |
| 2000 | 1200 | 1 pc(s). | **5301.281** |
| 2200 | 1000 | 1 pc(s). | **5301.287** |
| 2200 | 1200 | 1 pc(s). | **5301.300** |
| 2450 | 1000 | 1 pc(s). | **5301.315** |
| 2450 | 1200 | 1 pc(s). | **5301.317** |

**Assembly instruction:**
- A baying gap of 3 mm is required to insert the partition

**Accessories:**
- Baying connector, external, 3 mm, see page 914

### Partition, vertically divided, for screw fastening

**for VX IT**

For retrospective installation/dismantling of bayed enclosures. The integrated sealing profile supports enclosure sealing for climate control or for applications with extinguisher gas. It may be fitted from the outside prior to baying the enclosure, or from the inside after baying the enclosure. As the partition is located inside the frame structure, it may be retrofitted at any time. There are no specific required baying distances between the enclosures.

**Material:**
- Sheet steel, zinc-plated

**Supply includes:**
- 2 partitioning plates
- 4 cover caps
- Punched rail
- Seal
- Assembly parts

| For enclosure height mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|
| 2000 | 1000 | 1 pc(s). | **5301.274** |
| 2000 | 1200 | 1 pc(s). | **5301.284** |
| 2200 | 1000 | 1 pc(s). | **5301.291** |
| 2200 | 1200 | 1 pc(s). | **5301.303** |
| 2450 | 1000 | 1 pc(s). | **5301.319** |
| 2450 | 1200 | 1 pc(s). | **5301.321** |

**Assembly instruction:**
- Assembly/removal only supported for enclosures without interior installation

**Accessories:**
- Baying connector, external, see page 912
- Baying connector, external, 3 mm, see page 914

## Divider panel

**for VX**

For shielding individual enclosure cells. Thanks to the symmetry of the frame system, the divider panel can also be used at the rear. All-round, double fold for stability and to hold the seal.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Protection category IP to IEC 60 529:**
– IP 54 (in conjunction with enclosures from the VX series)

**Supply includes:**
– Assembly parts

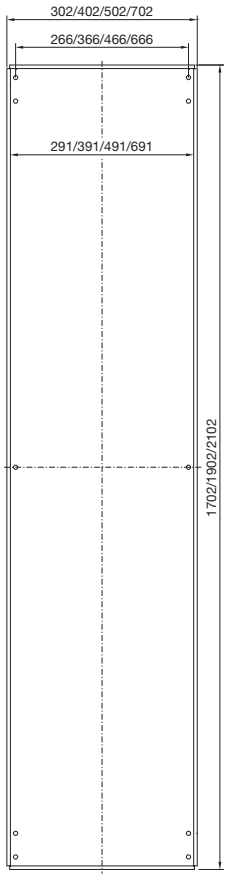
**Also required:**

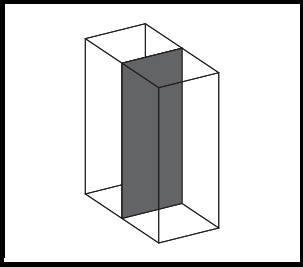
– When baying in conjunction with a divider panel: Baying bracket, internal 8617.500, see page 912 or baying connector, external 8617.502/ 8617.503, see page 912

**Accessories:**

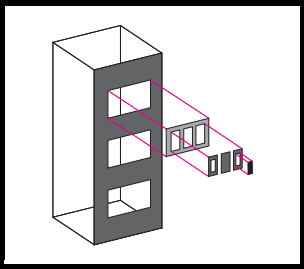
– Cover with door, see page 908

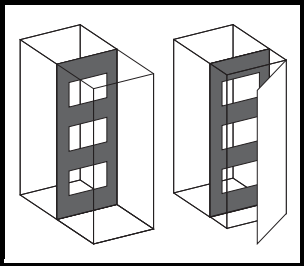
| For enclosures | | Model No. |
|---|---|---|
| Height mm | Depth mm | |
| 1800 | 400 | **8609.200** |
| 1800 | 500 | **8609.201** |
| 1800 | 600 | **8609.202** |
| 2000 | 400 | **8609.203** |
| 2000 | 500 | **8609.204** |
| 2000 | 600 | **8609.205** |
| 2000 | 800 | **8609.206** |
| 2200 | 600 | **8609.207** |





## Divider panels/partitions





# Divider panel

**for module plates**
**for VX**

With cut-outs for the installation of module plates for connectors or for cable entry, and also for the entry of busbar systems and other installed equipment. All-round, double fold for stability and to hold the seal. The symmetry of the enclosure frame means that divider panels may also be fitted at the rear, dimensions permitting.

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Zinc-plated

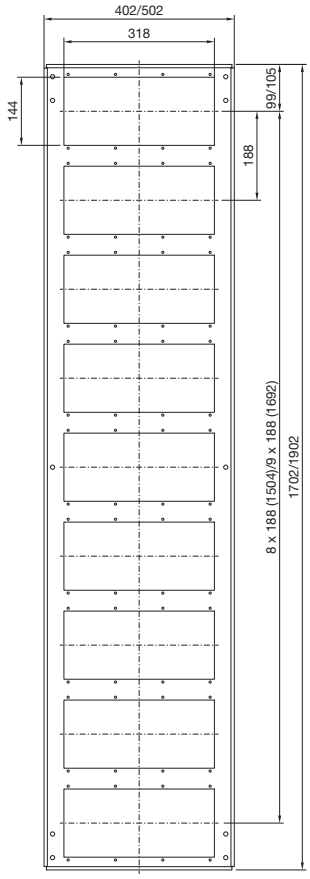
**Supply includes:**
– Seal and assembly parts

**Also required:**

– When baying in conjunction with a divider panel: Baying bracket, internal 8617.500, see page 912
or
baying connector, external 8617.502/ 8617.503, see page 912

**Accessories:**

– Module plates, see page 907
– Cover with door, see page 908
– Baying bracket, internal, see page 912




| For enclosures | | Number of cut-outs | **Model No.** |
|---|---|---|---|
| Height mm | Depth mm | | |
| 1800 | 500 | 9 | **8609.210** |
| 1800 | 600 | 9 | **8609.211** |
| 2000 | 500 | 10 | **8609.212** |
| 2000 | 600 | 10 | **8609.213** |

## Module plates

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Seal

| Version | Cut-outs | Packs of | Model No. |
|---|---|---|---|
| Solid | – | 1 pc(s). | **8609.160** |
| For 16-pole connectors | 4 | 1 pc(s). | **8609.150** |
| For 24-pole connectors | 4 | 1 pc(s). | **8609.140** |
| For cable entry | 1 | 1 pc(s). | **8609.170** |
| With cable sleeve | 1 | 1 pc(s). | **8609.390** |

**Solid**
For sealing unused cut-outs. Easily machined for individual cut-outs.

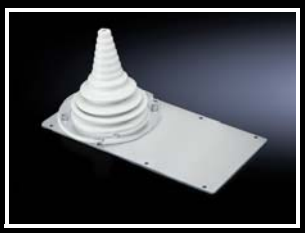
**For 16/24-pole connectors**
With cut-outs to accommodate connectors.

**Accessories:**
– Adaptor, cover plate, see page 908
– Connector gland for connector cut-outs, see page 1046
– Sealing frame, modular, see page 1048

**For cable entry**
For the entry of pre-assembled cables. Sealed, secure routing is achieved via adjustable angle brackets with inserted foam cable clamp strip. Fixed bracket, punched, for cable clamping.

**Accessories:**
– Cable tie for fast assembly 2597.000, see page 1061

**With cable sleeve**
For cable diameters from 10 to 65 mm.
The flexible grommet adapts to the cable's bending radius



## Divider panels/partitions

### Adaptor

**for connector cut-outs**
For using connectors with varying numbers of poles.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Seal and assembly parts

| For reduction | Packs of | Model No. |
|---|---|---|
| From 24 to 16 poles | 5 pc(s). | **2479.000** |
| From 24 to 10 poles | 5 pc(s). | **2480.000** |
| From 24 to 6 poles | 5 pc(s). | **2481.000** |
| From 16 to 10 poles | 5 pc(s). | **2401.000** |
| From 16 to 6 poles | 5 pc(s). | **2402.000** |

### Cover plate

**for connector cut-outs**
For unused cut-outs.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Seal and assembly parts

| For | Packs of | Model No. |
|---|---|---|
| 24-pole cut-outs | 20 pc(s). | **2477.000** |
| 16-pole cut-outs | 20 pc(s). | **2478.000** |

### Cover with door

**for VX**
– To protect and finish off connectors or other installed equipment.
– Optional cable entry from above or below

**Material:**
– Cover: Sheet steel, 1.5 mm
– Door: Sheet steel, 2.0 mm

**Surface finish:**
– Dipcoat-primed, powder-coated on the outside

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55 (in conjunction with enclosures from the VX series)

**Protection category to NEMA:**
– NEMA 12 (in conjunction with enclosures from the VX series)

**Supply includes:**
– Cover
– Door with locking rod and double-bit lock insert
– 2 trim panels for top and bottom

| For enclosures | | Model No. |
|---|---|---|
| Height mm | Depth mm | |
| 2000 | 500 | **8609.220** |
| 2000 | 600 | **8609.230** |

**Accessories:**

– Lock inserts, type G, see page 941
– Comfort handle VX, see page 937
– 180° hinge, see page 951

## Isolator door cover

**for VX**

Including main door latch for safety locking of enclosures and bayed enclosure suites in accordance with UL regulations. Tested in conjunction with actuator lever for master switch from the following companies:
- Allen Bradley
- Square D
- General Electric
- Eaton
- Siemens

A detailed overview of types can be found on the Internet, together with the product description.

**Benefits:**
- Meets the requirements of UL 508 A
- In conjunction with the operating mechanism, adjacent door lock and interconnecting rods, these requirements are also met for bayed combinations
- Optional mounting on the left or right of the enclosure. With this cover, all single-door bayed enclosures may be configured as isolator door enclosures. The complete installation surface of the enclosure is retained.
- In conjunction with the integrated mounting plate infill, the mounting surface of the main enclosure can be enlarged by up to 14%.
- Two cut-outs for actuator levers on the front, for internal mounting at varying heights

**Protection category IP to IEC 60 529:**
- IP 55 (in conjunction with enclosures from the VX series)

**Protection category to NEMA:**
- NEMA 12 (in conjunction with enclosures from the VX series)

**Supply includes:**
- Main door lock, cover plate and assembly parts

**Note:**
- Cover may only be mounted on a single-door enclosure with tubular door frame

**Also required:**

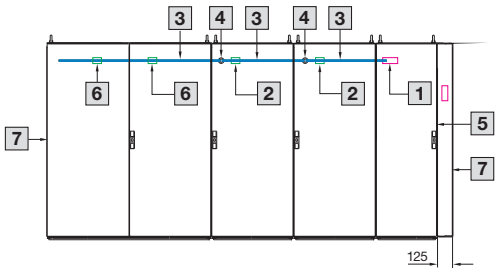
For bayed suites:
- Operating mechanism 4912.000, for enclosure with isolator door cover and additionally in every fourth adjacent enclosure, see page 910
- Adjacent door latch 4911.000, 4911.100, for every adjacent enclosure, see page 910
- Interconnecting rods, for every adjacent enclosure in the appropriate enclosure width, see page 910
- Side panel, screw-fastened, see page 901

**Accessories:**
- Mounting plate infill, see page 971

**Isolator door lock**

1 Operating mechanism
2 Adjacent door latch (single-door)
3 Interconnecting rod
4 Connection component
5 Main door latch
6 Adjacent door latch (two-door)
7 Side panel, screw-fastened

Installation to the right of the enclosure



| Width mm | Height mm | Depth mm | Material thickness mm | Surface finish | Colour | Model No. | |
|---|---|---|---|---|---|---|---|
| | | | | | | Sheet steel | Stainless steel 1.4301 (AISI 304) |
| 103 | 1800 | 400 | 1.5 | Powder-coated | RAL 7035 | **8951.020** | **–** |
| 103 | 1800 | 400 | 1.5 | Brushed, grain size 400 | – | **–** | **8952.020** |
| 103 | 1800 | 500 | 1.5 | Powder-coated | RAL 7035 | **8951.030** | **–** |
| 103 | 1800 | 500 | 1.5 | Brushed, grain size 400 | – | **–** | **8952.030** |
| 103 | 2000 | 500 | 1.5 | Powder-coated | RAL 7035 | **8951.000** | **–** |
| 103 | 2000 | 500 | 1.5 | Brushed, grain size 400 | – | **–** | **8952.000** |
| 103 | 2000 | 600 | 1.5 | Powder-coated | RAL 7035 | **8951.010** | **–** |
| 103 | 2000 | 600 | 1.5 | Brushed, grain size 400 | – | **–** | **8952.010** |

## Isolator door locking

### Door latch for bayed enclosure suites

In conjunction with the isolator door cover, the requirements of UL 508 A are also met for bayed enclosure suites. Depending on the baying combination, different components will be required; refer to the assembly sketch on page 909.

**Note:**

– The door latch for bayed enclosure suites can also be used without the isolator door cover and in combination with commercially available master switches. In this way, adjacent doors cannot be opened until the main door has been opened.

1 **Operating mechanism**
Fitted in the enclosure with main switch and additionally in every fourth adjacent enclosure

| | Packs of | **Model No.** |
|---|---|---|
| Operating mechanism | 1 pc(s). | **4912.000** |

2 **Adjacent door latch**
Installation in adjacent enclosure

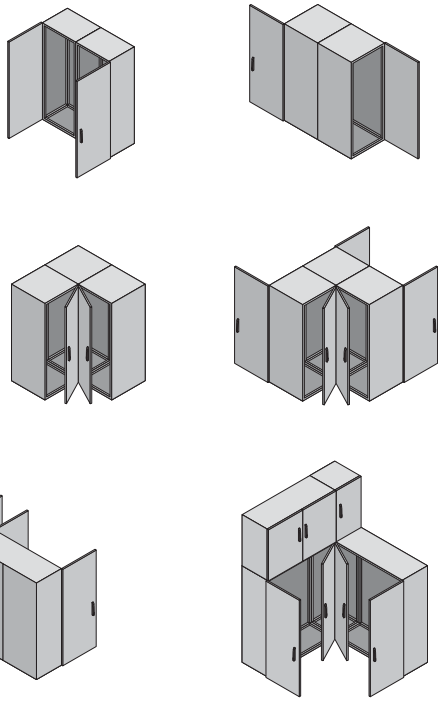
| Adjacent door latch for | Packs of | **Model No.** |
|---|---|---|
| Single-door enclosures | 1 pc(s). | **4911.000** |
| Two-door enclosures | 1 pc(s). | **4911.100** |

3 **Interconnecting rods**
To extend locking from the main enclosure to the adjacent enclosures of a bayed suite.
One interconnecting rod corresponding to the width of the enclosure is required for each adjacent enclosure.

| For enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 10 pc(s). | **4916.000** |
| 800 | 10 pc(s). | **4918.000** |
| 1200 | 10 pc(s). | **4920.000** |

## Bayable on all sides

Whether around corners, forwards, backwards, to the left or right or even upwards if required, the baying options are unlimited.

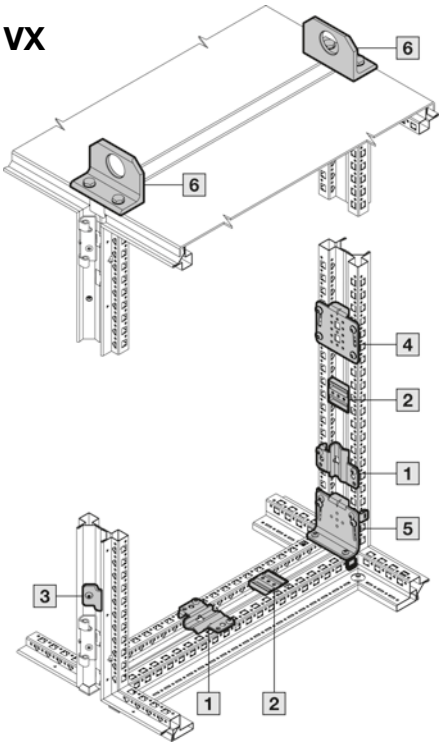


## Overview of bayed VX/VX IT

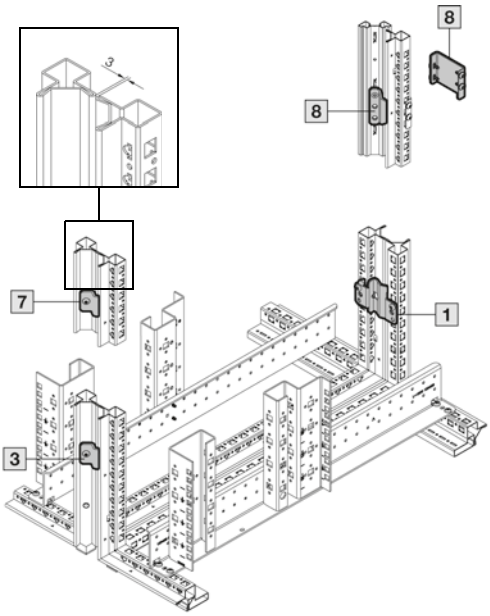
1 Baying bracket, internal, for VX/VX IT
2 Baying block, internal, for VX
3 Baying connectors, external, for VX/VX IT
4 Quick-fit baying clamp for VX
5 Angular baying bracket for VX
6 Combination angle for VX
7 Baying connector, external, 3 mm for VX IT
8 Baying connector for VX IT/TS IT

**Notes** on the transportation of bayed VX enclosures, see page 915.

### VX




### VX IT



## Baying

### Baying bracket, internal

**for VX, VX IT**

- Fast, secure installation either from the front or from the side
- For all-round installation on the baying point
- May be flexibly positioned to avoid collisions with installed equipment
- Also suitable for baying base/plinth components

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Baying bracket, internal
- Baying seal
- Assembly parts

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **8617.500** |

**Note:**
- 1 pack is sufficient for one baying joint
- Transportation of bayed enclosures, see page 915

**Possible alternative:**

- Baying block, internal, see page 912
- Baying connector, external 8617.502, see page 912

### Baying block, internal

**for VX, VX IT**

- Side mounting creates a flush surface to the profile, suitable for top mounting, thus avoiding collisions with installed equipment
- For all-round installation on the baying point

**Material:**
- Die-cast zinc

**Supply includes:**
- Baying block, internal
- Baying seal
- Assembly parts

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **8617.501** |

**Note:**
- 1 pack is sufficient for one baying joint

**Possible alternative:**

- Baying bracket, internal, see page 912
- Baying connector, external 8617.502, see page 912

### Baying connector, external

**for VX, VX IT**

For mounting on the vertical enclosure sections from the outside.

**Supply includes:**
- Baying connector, external
- Baying seal
- Assembly parts

| Material | Packs of | Model No. |
|---|---|---|
| Sheet steel, zinc-plated | 6 pc(s). | **8617.502** |
| Stainless steel 1.4301 (AISI 304) | 6 pc(s). | **8617.503** |

**Note:**
- 1 pack is sufficient for one baying joint

**Possible alternative:**

- Baying bracket, internal, see page 912
- Baying block, internal, see page 912

## Quick-fit baying clamps

**for VX**
- For all-round installation on the baying point
- May be flexibly positioned to avoid collisions with installed equipment
- Simply tighten the screws, tap in the quick-fit baying clamp, pull the enclosures together and secure
- Additional mounting level between bayed enclosures, e.g. for mounting cable ducts

**Material:**
- Sheet steel

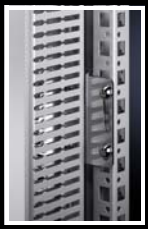
**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **8617.506** |

**Note:**
- 1 pack is sufficient for one baying joint

**Accessories:**
- Baying seal 8617.507, see page 914



## Angular baying bracket

**for VX**
For stable connection in the corners of bayed enclosures. Perfectly suited for aligning enclosures with one another on uneven floors

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **8617.508** |

**Note:**
- 1 pack is sufficient for one baying joint
- To achieve the required protection category and transportation stability, further baying connectors should be used halfway up the enclosure

## Baying connector, external, 9 mm

**for VX IT/VX IT with side panels**
For retrospective baying of enclosures with side panels.

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **7824.540** |

## Baying

### Baying connector, external, 3 mm

**for VX IT**

**Applications:**
- For retrospectively exchanging racks or LCP devices
- For retroactive installation/removal of partitions, one-piece, slide-in

**Benefits:**
- Supports retroactive exchange of racks or LCP devices
- Guarantees the required baying distance of 3 mm for carrying out retrospective modifications

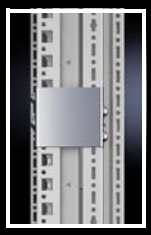
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 4 baying connectors, external, 3 mm
- Baying seal, 8 m
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5301.310** |

**Note:**
- Within a bayed enclosure suite, the external dimension is increased by 2 mm per baying point
- The maximum achievable IP protection category to IEC 60 529 is IP 20.



### Baying clamp

**for VX IT/TS IT**

For baying enclosures in the VX IT series to TS IT.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 4 baying connectors, external
- 2 baying connectors, internal
- Baying seal, 8 m
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5301.312** |

**Note:**
- The maximum achievable IP protection category to IEC 60 529 is IP 54

### Baying seal

**for VX**

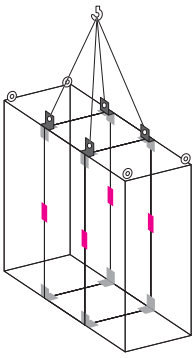
May be used individually for baying on all existing enclosure sizes. The seal sits securely around the section edge, and is easily removed at any time without leaving any residues. It is also reusable.

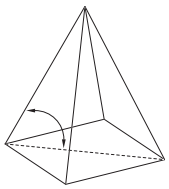
| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8617.507** |

**Material:**
- EPDM

**Supply includes:**
- 8 m

## Notes on the transportation of bayed VX enclosures





When transporting bayed enclosures, for example, the baying bracket, internal (8617.500), the baying block, internal (8617.501) or the baying connector, external (8617.502 and 8617.503) may be used in conjunction with the combination angle (4540.000). The load capacity with a cable pull angle of 60° is as follows:
for the left-hand enclosure 7000 N,
for the central enclosure 14000 N,
for the right-hand enclosure 7000 N.

The cable pull angle between the roof plate and the cable has a significant influence on the total permissible load. The cable pull angle must not be less than 45°, and ideally not less than 60°.

## Combination angle

**for VX**
For optimum distribution of tensile forces during transportation of bayed enclosures by crane.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **4540.000** |

**Accessories:**
– Baying cover, top, see page 915

## Baying cover, top

**for VX, VX IT**
A cover with two end caps may additionally be clipped over the seal between the two enclosures. This prevents dirt and liquid from accumulating on the baying seal.

**Supply includes:**
– Assembly parts

**Note:**
– May also be fitted in the width with enclosure suites bayed back-to-back
– May be cut to required length, if necessary.
– May also be used in conjunction with dust guard trim, see page 959

| For enclosure depth mm | Packs of | Plastic RAL 7035 | Stainless steel 1.4301 (AISI 304) | Model No. |
|---|---|---|---|---|
| 400 | 1 pc(s). | ■ | – | **8800.845** |
| 500 | 1 pc(s). | ■ | – | **8800.855** |
| 600 | 1 pc(s). | ■ | – | **8800.865** |
| 800 | 1 pc(s). | ■ | – | **8800.885** |
| 400 | 1 pc(s). | – | ■ | **8700.140** |
| 500 | 1 pc(s). | – | ■ | **8700.150** |
| 600 | 1 pc(s). | – | ■ | **8700.160** |
| 1000 – 1200 | 1 pc(s). | ■ | – | **8800.825** |

## Baying

### Baying cover, vertical

**for VX**

To balance out the gap between the side panels when baying back-to-back. For enclosure height 2200 mm, or may be cut to length individually for lower heights.

**Material:**
– Cover section: Plastic

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **8800.875** |

**Also required:**

– Baying connector, external, 8617.502, see page 912

### Baying kit, VX25 to TS 8

For extending existing TS 8 bayed enclosure suites with VX25 enclosures.

**Material:**
– Baying connector: Sheet steel

**Supply includes:**
– 8 baying connectors
– 1 seal
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8617.505** |

### Baying kit

**for TE/TE**

For connecting individual enclosures into bayed suites at the sides. The enclosures are connected between the base and roof frame.

**Benefits:**
– Baying of TE 8000 to TE 7000 enclosures is supported

| Width mm | Packs of | Model No. |
|---|---|---|
| 55 | 4 pc(s). | **7888.640** |

**Material:**
– Sheet steel, spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

### Baying kit

**for AX, KX**

For baying AX/KX enclosures.
The additional cut-outs are to be provided by the customer.

Special screws and nuts
– For fast, simple assembly without thread-tapping
– Compression of the seal is limited to a prede-fined level, to ensure a long-lasting, permanent seal between enclosures

Seal, self-adhesive
– Comprised of bayable sealing elements and corner pieces, for individual adaptation to various enclosure sizes

One pack is sufficient for a baying joint up to H x D = 800 x 350 mm.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **1199.100** |

**Supply includes:**
– Special screws and nuts
– Sealing elements, self-adhesive

## Glazed door

**for VX**
Instead of a sheet steel door or rear panel.

**Material:**
– Frame: Extruded aluminium section
– Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
– Powder-coated

**Colour:**
– Frame and corner pieces: RAL 7035
– Viewing window (printed mask on the inside): RAL 9005

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Glazed door
– Locking rod with double-bit lock insert and lock plate
– 180° hinges, 4 pc(s).

| For enclosures | | Model No. |
|---|---|---|
| Width mm | Height mm | |
| 600 | 1800 | **8618.000** |
| 800 | 1800 | **8618.010** |
| 600 | 2000 | **8618.020** |
| 800 | 2000 | **8618.030** |
| 600 | 2200 | **8618.040** |
| 800 | 2200 | **8618.050** |

**Also required:**
– When mounting instead of the rear panel or double door: Lock components for frame 8618.110, see page 917

**Accessories:**
– Comfort handle VX, see page 937
– Lock inserts, type G, see page 941

## Lock components

For retrofitting a glazed door or sheet steel door in place of a rear panel.

**Material:**
– Die-cast zinc

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **8618.110** |

## Lockable and adjacent door

**for VX**
For example, if two 400 mm doors are used instead of one 800 mm wide door in order to comply with escape routes. May also be fitted instead of an 800 mm wide rear panel.

**Material:**
– Sheet steel

**Surface finish:**
– Dipcoat-primed, powder-coated on the outside

**Colour:**
– RAL 7035

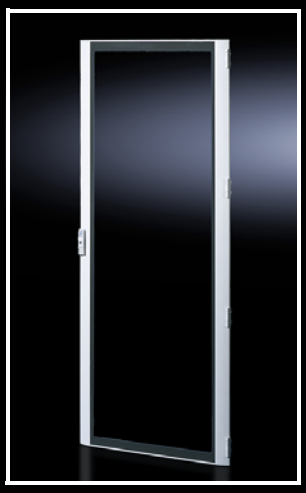
**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– 2 doors, including tubular door frame, hinges and lock components

| For enclosures | | Model No. |
|---|---|---|
| Width mm | Height mm | |
| 800 | 2000 | **8618.120** |

**Accessories:**
– Comfort handle VX, see page 937
– Lock inserts, type G, see page 941

## Door variants



### Glazed door

**for VX SE**
Instead of a sheet steel door.

**Material:**
– Frame: Extruded aluminium section
– Corner pieces: Die-cast zinc
– Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
– Powder-coated

**Colour:**
– Frame and corner pieces: RAL 7035
– Viewing window (printed mask on the inside): RAL 9005

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Glazed door
– Locking rod with double-bit lock insert and lock plate
– 180° hinges, 4 pc(s).

| For enclosures | | Model No. |
|---|---|---|
| Width mm | Height mm | |
| 600 | 1800 | **8610.685** |
| 800 | 1800 | **8610.885** |
| 600 | 2000 | **8610.605** |
| 800 | 2000 | **8610.805** |

**Accessories:**
– Comfort handle, see page 938
– Lock inserts, version F, see page 941

### Handle adaptor

The handle adaptor compensates for the design chamfer in the door profile to enable installation of the comfort handle.

**Material:**
– Plastic

**Supply includes:**
– 1 adaptor plate
– 1 bolt to extend the screw-on dome
– 2 assembly screws

**For glazed door VX SE**

| Colour | Model No. |
|---|---|
| RAL 7035 | **8611.080** |

**For designer door IW and PC, bottom door**

| Colour | Model No. |
|---|---|
| RAL 7035 | **8611.300** |

## Glazed door VX IT

**for Automatic Door Opening (ADO)**
With integral vent valves for automated opening function in the event of an alarm or power failure. The glazed door for the Automatic Door Opening System replaces the standard VX IT door.

**Benefits:**
- Supports remote control via the CMC III system
- Tinted single-pane safety glass ensures a high standard of safety
- Combining the vent flaps with a tubular door frame creates exceptional stability
- The vent flaps only protrude into the escape route by 200 mm
- No adjustment to the lock systems system required
- Manual opening of the door without any effect on the vent flaps
- Automatic opening of the vent valves in the event of a power failure

**Functional principle:**
- Activation via CMC III door control module (DCM)
- Automatic, mechanical opening of the integral vertical ventilation flaps in an emergency if the cooling system fails or an extinguishing system is activated
- Depending on the room volume and temperature, the air inside the room is used for emergency cooling, or the extinguisher gas may flow directly into the IT enclosures

**Technical specifications:**
- Rated voltage: 24 V DC
- Rated current: 780 mA
- External projection of the vent flap: 200 mm (when opened)
- Internal projection of the mechanism: 52.5 mm
- Connection cable from door catch: 2.5 m
- Door hinged on the right, may be swapped to the left
- Spring damper for flap opening
- Magnets for fixing the flaps
- Valves are open at zero current

**Protection category IP to IEC 60 529:**
- IP 20 for solid vent flaps

**Supply includes:**
- Glazed door with comfort handle VX for profile half-cylinders
- Connection cable

**Note:**
- Other colours (RAL 9005) and sizes (H = 2200 mm) available on request

**Also required:**
- Door control module, see page 817
- CMC III power pack, see page 818

**Accessories:**
- CMC III Processing Unit/Compact with connection, power supply and mounting accessories, from page 804
- Lock inserts, see page 942

| Design | Material | Colour | Dimensions Width mm | Dimensions Height mm | Packs of | Model No. |
|---|---|---|---|---|---|---|
| One-part, with vent flaps | Frame: Extruded aluminium section Viewing window: Single-pane safety glass, tinted | – | 600 | 2000 | 1 pc(s). | **7030.262** |
| | | | 800 | 2000 | 1 pc(s). | **7030.263** |
| One-part, with vent flaps | Frame: Sheet steel Viewing window: Single-pane safety glass, tinted | RAL 7035 | 600 | 2000 | 1 pc(s). | **7030.272** |
| | | | 800 | 2000 | 1 pc(s). | **7030.273** |
| Two-part, vertically divided, with vent flaps | Frame: Sheet steel Viewing window: Single-pane safety glass, tinted | RAL 7035 | 600 | 2000 | 1 pc(s). | **7030.282** |
| | | | 800 | 2000 | 1 pc(s). | **7030.283** |

## Door variants

### Glazed aluminium door, one-piece

**for VX IT**
To replace existing doors.

**Material/surface finish:**
- Frame: Extruded aluminium section
- Vertical extrusion: Aluminium, anodised
- Horizontal extrusion: Aluminium, spray finished
- Viewing window: Single-pane safety glass, 3 mm

**Colour:**
- Comfort handle VX, hinges, horizontal extrusion: RAL 9005
- Vertical profile: silver coloured

**Protection category IP to IEC 60 529:**
- IP 55

**Supply includes:**
- Door with comfort handle VX for profile half-cylinders with security lock 3524 E
- 3 x 180° hinges, fitted
- Assembly parts

**Note:**
- Door opening angle for stand-alone siting: max. 240°
- Door opening angle when baying: max. 105°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 800 | 2000 | 1 pc(s). | **5301.423** |

**Assembly instruction:**
- For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

### Glazed sheet steel door, vertically divided

**for VX IT**
To replace existing doors. With underlaid viewing panel and 4-point locking rod. The divided design allows room-optimised siting of the enclosures coupled with the best possible access, thanks to a reduced distance between the individual bayed enclosure suites.

**Material:**
- Frame: Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

**Surface finish:**
- Powder-coated

**Colour:**
- Frame: RAL 7035
- Comfort handle VX, hinges: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 55

**Supply includes:**
- Door, vertically divided, with comfort handle VX for profile half-cylinders with security lock 3524 E, right
- 4 x 180° hinges, fitted on each half of the door
- Assembly parts

**Note:**
- Door opening angle for stand-alone siting: max. 240°
- Door opening angle when baying: max. 160°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 800 | 2000 | 1 pc(s). | **5301.437** |
| 800 | 2200 | 1 pc(s). | **5301.438** |

**Assembly instruction:**
- For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

## Sheet steel door, one-piece, solid

**for VX IT**
To replace existing doors.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– Door: RAL 7035
– Comfort handle VX: RAL 9005

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Door with comfort handle VX for profile half-cylinders with security lock 3524 E
– 4 x 130° hinges, inside
– Assembly parts

**Note:**
– Door opening angle for stand-alone siting: max. 165°
– Door opening angle when baying: max. 110°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 800 | 2000 | 1 pc(s). | **5301.540** |
| 800 | 2200 | 1 pc(s). | **5301.542** |

**Assembly instruction:**

– For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

## Sheet steel door, vertically divided, solid

**for VX IT**
To replace existing doors. Thanks to the minimal rotation radius of the individual doors, the distance between individual bayed enclosure suites may be reduced.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– Door: RAL 7035
– Comfort handle VX, hinges: RAL 9005

**Protection category IP to IEC 60 529:**
– IP 20

**Supply includes:**
– Door, vertically divided, with comfort handle VX for profile half-cylinders with security lock 3524 E, right
– 3 x 180° hinges, fitted on each half of the door
– Assembly parts

**Note:**
– Door opening angle for stand-alone siting: max. 240°
– Door opening angle when baying: max. 160°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 600 | 2000 | 1 pc(s). | **5301.602** |
| 800 | 2000 | 1 pc(s). | **5301.612** |

**Assembly instruction:**

– For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

## Door variants

### Aluminium/sheet steel door, vented

**for VX IT**
To replace existing doors. The vented surface area is approx. 85% perforated.

**Material/surface finish:**
– Frame: Extruded aluminium section
– Vent grille: Sheet steel
– Vertical extrusion: Aluminium, anodised
– Horizontal extrusion: Aluminium, spray finished

**Colour:**
– Comfort handle VX, hinges, horizontal extrusion, vent grille: RAL 9005
– Vertical profile: silver coloured

**Supply includes:**
– Door with comfort handle VX for profile half-cylinders with security lock 3524 E
– 3 x 180° hinges, fitted
– Assembly parts

**Note:**
– Door opening angle for stand-alone siting: max. 240°
– Door opening angle when baying: max. 105°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 600 | 2200 | 1 pc(s). | **5301.450** |
| 800 | 2000 | 1 pc(s). | **5301.446** |
| 800 | 2200 | 1 pc(s). | **5301.453** |

**Assembly instruction:**

– For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

### Sheet steel door, one-piece, vented

**for VX IT**
To replace existing doors. The vented surface area is approx. 85% perforated.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– Door: RAL 7035
– Comfort handle VX: RAL 9005

**Protection category IP to IEC 60 529:**
– IP 20

**Supply includes:**
– Door with comfort handle VX for profile half-cylinders with security lock 3524 E
– 3 x 130° hinges, fitted on the inside
– Assembly parts

**Note:**
– Door opening angle for stand-alone siting: max. 165°
– Door opening angle when baying: max. 110°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 600 | 2000 | 1 pc(s). | **5301.561** |
| 800 | 2000 | 1 pc(s). | **5301.571** |

**Assembly instruction:**

– For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

## Sheet steel door, vertically divided, vented

**for VX IT**

To replace existing doors. The vented surface area is approx. 85% perforated.

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- Door: RAL 7035
- Comfort handle VX, hinges: RAL 9005

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- Door, vertically divided, with comfort handle VX for profile half-cylinders with security lock 3524 E, right
- 3 x 180° hinges, fitted on each half of the door
- Assembly parts

**Note:**
- Door opening angle for stand-alone siting: max. 240°
- Door opening angle when baying: max. 160°

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Height mm | | |
| 800 | 2000 | 1 pc(s). | **5301.652** |

**Assembly instruction:**

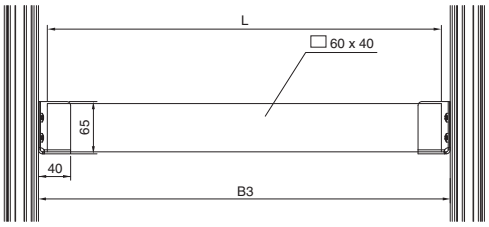
- For a door opening angle of 180° when baying, a 180° baying hinge is required, see page 951

## Door variants

### Protective bar

As an alternative to a door, e.g. in sealed switch rooms. Prevents people from falling into the open enclosure frame. Easily removable for maintenance purposes. For 1200 mm enclosure width; may be shortened or divided for other sizes.

**Material:**
– Wood, spray-finished, RAL 3000




| For enclosure width mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 1200 | 1090 | 1 pc(s). | **8801.010** |

| Enclosure width mm | Clearance between the enclosure frame (B3) mm | Length of protective bar (L) mm |
|---|---|---|
| 400 | 311 | 290[1)] |
| 600 | 511 | 490[1)] |
| 800 | 711 | 690[1)] |
| 1000 | 911 | 890[1)] |
| 1200 | 1111 | 1090 |

[1)] The protective bar 8801.010 (1090 mm) will need to be shortened

**Also required:**
– Holder 8801.000, see page 924

### Holder

**for protective bar**
For mounting on the vertical section. The protective bar is simply inserted.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly screws

| Packs of | **Model No.** |
|---|---|
| 2 pc(s). | **8801.000** |

### Variable modular climate control concept

Instead of an enclosure door in a 600 mm/800 mm/1200 mm wide and 1800 mm/2000 mm high VX enclosure, section doors with integral cooling module may be retrofitted without major assembly work.

**Possible alternative:**
– Modular climate control concept, see page 506/507

## Installation accessories for modular front design

### Modular front design

Suitable for 400 to 1200 mm wide enclosures instead of a door or rear panel.
The partial doors with and without viewing panels for the baying enclosure system VX25, see page 132/133, may be combined with one another as required. A trim panel is required at the top and bottom in each case.
The requirements for your individual front design and the considerations which must be taken into account are illustrated on the sample configuration opposite.

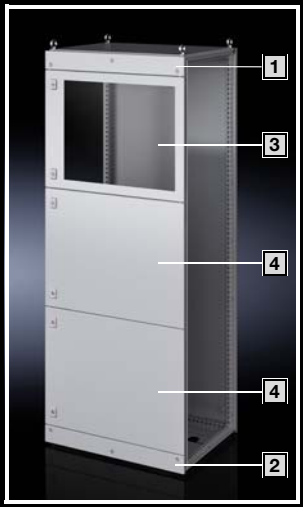
1 Front trim panel, top

2 Front trim panel, bottom

3 Partial door with viewing window

4 Partial door

**Note:**
Installation accessories for modular front design, see page 926 – 927



## Installation accessories for modular front design

# Partial door

**for VX**

The door may be optionally hinged on the right or left. The partial door is attached to the enclosure with no drilling required. Standard double-bit lock insert may be exchanged for lock inserts, type A.

**Material:**
- Partial door: Sheet steel, 2 mm
- Viewing window: 3 mm single-pane safety glass

**Surface finish:**
- Textured paint

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Cross member, hinges and lock components
- Assembly parts

**Note:**
- Opening angle of partial doors max. 130°

**Also required:**

- Front trim panel, top, see page 927 or top-hinged trim panel, see page 928
- Front trim panel, bottom, see page 927

**Accessories:**

- Mini-comfort handle AX for partial door from a height of 200 mm, see page 940
- Lock inserts, type A, see page 941
- Perforated mounting strip, see page 927

**For enclosure width 400 mm**

| Height mm | With viewing window | Number of locks | Packs of | Model No. |
|---|---|---|---|---|
| 200 | – | 1 | 1 pc(s). | **9682.142** |
| 300 | – | 1 | 1 pc(s). | **9682.143** |
| 400 | – | 2 | 1 pc(s). | **9682.144** |
| 600 | – | 2 | 1 pc(s). | **9682.146** |
| 800 | – | 2 | 1 pc(s). | **9682.148** |
| 1000 | – | 3 | 1 pc(s). | **9682.140** |
| 1200 | – | 3 | 1 pc(s). | **9682.152** |
| 1400 | – | 3 | 1 pc(s). | **9682.154** |
| 1600 | – | 4 | 1 pc(s). | **9682.156** |
| 1800 | – | 4 | 1 pc(s). | **9682.158** |
| 2000 | – | 4 | 1 pc(s). | **9682.150** |

**For enclosure width 600 mm**

| Height mm | With viewing window | Number of locks | Packs of | Model No. |
|---|---|---|---|---|
| 150 | – | 1 | 1 pc(s). | **9682.161** |
| 200 | – | 1 | 1 pc(s). | **9682.162** |
| 300 | – | 1 | 1 pc(s). | **9682.163** |
| 400 | – | 2 | 1 pc(s). | **9682.164** |
| 600 | – | 2 | 1 pc(s). | **9682.166** |
| 600 | ■ | 2 | 1 pc(s). | **9682.167** |
| 800 | – | 2 | 1 pc(s). | **9682.168** |
| 800 | ■ | 2 | 1 pc(s). | **9682.169** |
| 1000 | – | 3 | 1 pc(s). | **9682.160** |
| 1200 | – | 3 | 1 pc(s). | **9682.172** |
| 1400 | – | 3 | 1 pc(s). | **9682.174** |
| 1600 | – | 4 | 1 pc(s). | **9682.176** |
| 1800 | – | 4 | 1 pc(s). | **9682.178** |
| 2000 | – | 4 | 1 pc(s). | **9682.170** |

**For enclosure width 800 mm**

| Height mm | With viewing window | Number of locks | Packs of | Model No. |
|---|---|---|---|---|
| 150 | – | 1 | 1 pc(s). | **9682.181** |
| 200 | – | 1 | 1 pc(s). | **9682.182** |
| 300 | – | 1 | 1 pc(s). | **9682.183** |
| 400 | – | 2 | 1 pc(s). | **9682.184** |
| 600 | – | 2 | 1 pc(s). | **9682.186** |
| 600 | ■ | 2 | 1 pc(s). | **9682.187** |
| 800 | – | 2 | 1 pc(s). | **9682.188** |
| 1000 | – | 3 | 1 pc(s). | **9682.180** |
| 1200 | – | 3 | 1 pc(s). | **9682.192** |
| 1400 | – | 3 | 1 pc(s). | **9682.194** |
| 1600 | – | 4 | 1 pc(s). | **9682.196** |
| 1800 | – | 4 | 1 pc(s). | **9682.198** |
| 2000 | – | 4 | 1 pc(s). | **9682.190** |

**For enclosure width 1000 mm**

| Height mm | With viewing window | Number of locks | Packs of | Model No. |
|---|---|---|---|---|
| 400 | – | 2 | 1 pc(s). | **9682.104** |
| 600 | – | 2 | 1 pc(s). | **9682.106** |
| 800 | – | 2 | 1 pc(s). | **9682.108** |

**For enclosure width 1200 mm**

| Height mm | With viewing window | Number of locks | Packs of | Model No. |
|---|---|---|---|---|
| 400 | – | 2 | 1 pc(s). | **9682.124** |
| 600 | – | 2 | 1 pc(s). | **9682.126** |
| 800 | – | 2 | 1 pc(s). | **9682.128** |

## Installation accessories for modular front design

### Perforated mounting strip

**for partial door**
For retrospective external mounting. The perforated mounting strips have a 25 mm pitch pattern of holes and may be used for mounting individual accessories such as cable ducts, conduit holders etc. on the rear of the door.

Hole diameter of perforated mounting strip: 4.5 mm

**Material:**
– Sheet steel, 1 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure width mm | Length mm | For partial door height mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 400 | 198 | 200 – 800 | 10 pc(s). | **9681.204** |
| 600 | 398 | 150 – 800 | 10 pc(s). | **9681.206** |
| 800 | 598 | 150 – 800 | 10 pc(s). | **9681.208** |

**Note:**
– For enclosure width 1000 mm you will need: 1 x 9681.204 and 1 x 9681.206
– For enclosure width 1200 mm you will need: 2 x 9681.206

### Front trim panel, top

**for VX**
To finish off the modular front design at the top when using partial doors. The front trim panels may be removed from the outside by unscrewing.
The cross member required for mounting is included with the supply of the mounted partial door.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Textured paint

**Colour:**
– RAL 7035

**Supply includes:**
– Front trim panel
– Assembly parts

**Solid, protection category IP 54**

| For enclosure width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 100 | 1 pc(s). | **9682.314** |
| 400 | 300 | 1 pc(s). | **9682.324** |
| 600 | 100 | 1 pc(s). | **9682.316** |
| 600 | 300 | 1 pc(s). | **9682.326** |
| 800 | 100 | 1 pc(s). | **9682.318** |
| 800 | 300 | 1 pc(s). | **9682.328** |
| 1000 | 300 | 1 pc(s). | **9682.320** |
| 1200 | 300 | 1 pc(s). | **9682.322** |

### Front trim panel, bottom

**for VX**
To finish off the modular front design at the bottom when using partial doors. If version IP 2X is chosen, a roof plate with protection category IP 2X should be selected for top ventilation. The front trim panels may be removed from the outside by unscrewing.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Textured paint

**Colour:**
– RAL 7035

**Supply includes:**
– Front trim panel including cross member
– Assembly parts

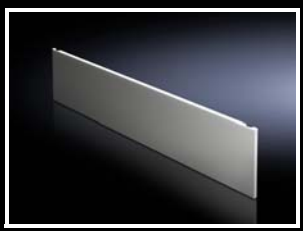
**Solid, protection category IP 54**

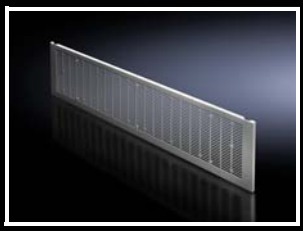
| For enclosure width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 100 | 1 pc(s). | **9682.334** |
| 400 | 300 | 1 pc(s). | **9682.344** |
| 600 | 100 | 1 pc(s). | **9682.336** |
| 600 | 300 | 1 pc(s). | **9682.346** |
| 800 | 100 | 1 pc(s). | **9682.338** |
| 800 | 300 | 1 pc(s). | **9682.348** |
| 1000 | 100 | 1 pc(s). | **9682.330** |
| 1000 | 300 | 1 pc(s). | **9682.340** |
| 1200 | 100 | 1 pc(s). | **9682.332** |
| 1200 | 300 | 1 pc(s). | **9682.342** |

**Vented, protection category IP 2X**

| For enclosure width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 300 | 1 pc(s). | **9682.354** |
| 600 | 300 | 1 pc(s). | **9682.356** |
| 800 | 300 | 1 pc(s). | **9682.358** |
| 1000 | 300 | 1 pc(s). | **9682.350** |
| 1200 | 300 | 1 pc(s). | **9682.352** |

**Also required:**
Roof plate IP 2X, see page 961





## Installation accessories for modular front design

### Trim panel, hinged at the top

For the installation of control and display components, in conjunction with
- Modular front design
- Protective bar

**Material:**
- Sheet steel, 2 mm

**Surface finish:**
- Textured paint

**Colour:**
- RAL 7035

**Supply includes:**
- Hinges, cam locks with double-bit insert and assembly parts

| Width mm | Height mm | Packs of | Model No. |
|---|---|---|---|
| 600 | 300 | 1 pc(s). | **8620.500** |
| 800 | 300 | 1 pc(s). | **8620.501** |
| 1200 | 300 | 1 pc(s). | **8620.502** |

**Accessories:**
- Stay for trim panel, hinged at the top, see page 928
- Lock inserts, type A, see page 941

### Drawer

For mouse and keyboard with a maximum width of 500/700 mm. A high level of protection is retained, even with the flap open.

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Supply includes:**
- Flap and assembly parts
- Cross member

| Height mm | Width mm | Model No. |
|---|---|---|
| 200 | 600 | **8620.520** |
| 200 | 800 | **8620.521** |

**Accessories:**
- Lock inserts, type A, see page 941

### Support stay

**for trim panel, hinged at the top**
5 pitch pattern positions up to a maximum opening angle of approx. 85°.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **8801.260** |

## Viewing window/operating panel

## System window

To cover display and operating elements or cut-outs, and to protect against dirt and liquids as well as unauthorised access.

**Consisting of the following 2 components:**

**1. Base frame:**
- Easily screw-fastened to the door thanks to modified dimensions (tubular door frame may be used as a drilling template)
- Readily height-adjustable
- Stabilises the door cut-out
- Conceals the cut edge
- The rain canopy
  - prevents dirt from landing on the seal
  - protects the glass from being lifted out
  - prevents the ingress of dirt, and prevents moisture from running behind the window when opened
- Frame section height 30 mm or 60 mm

**2. Viewing window:**
- Made from single-pane safety glass:
  - High level of resistance to solvents and scratches
  - Anti-static
  - Reduced risk of injury if broken
- Cam lock with double-bit insert, may be exchanged for lock inserts, type A, see page 941
- Hinge with 180° opening angle, easily inserted

**Material:**
- Extruded aluminium sections with die-cast zinc corner pieces and single-pane safety glass

**Surface finish:**
- Base frame: Powder-coated in RAL 7035
- Hinge and lock section: Natural-anodised

**Protection category IP to IEC 60 529:**
- IP 54

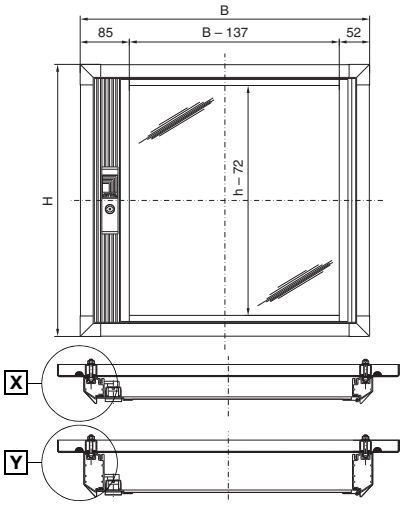
**30 section**

| To fit enclosure width mm | Window dimensions, external mm | | Model No. |
|---|---|---|---|
| | W | H | |
| 600 | 500 | 270 | **2735.500** |
| | | 370 | **2735.510** |
| | | 470 | **2735.520** |
| | | 570 | **2735.530** |
| | | 670 | **2735.540** |
| 800 | 700 | 270 | **2735.560** |
| | | 370 | **2735.570** |
| | | 470 | **2735.580** |
| | | 570 | **2735.590** |
| | | 670 | **2735.250** |

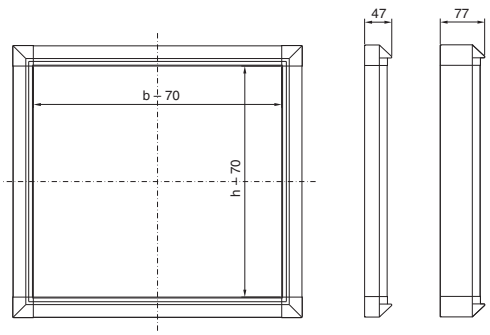
**60 section**

| To fit enclosure width mm | Window dimensions, external mm | | Model No. |
|---|---|---|---|
| | W | H | |
| 600 | 500 | 370 | **2736.510** |
| | | 470 | **2736.520** |
| | | 570 | **2736.530** |
| | | 670 | **2736.540** |
| 800 | 700 | 670 | **2736.500** |

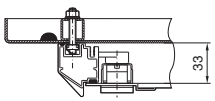
**Note:**
- Not suitable for outdoor siting



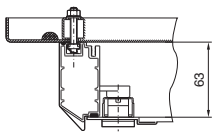

Viewing area (B–137) offset by 16.5 mm towards the hinge side




View X
for section height 30




View Y
for section height 60



## Viewing window/operating panel

### Viewing window

For mounting on
- AX enclosures instead of the door
- Surfaces

Max. installation depth: Depth - 4 mm
Visible area:
(Width - 60 mm) x (Height - 60 mm)

**Material:**
- Frame: Aluminium, natural anodised
- Glazed panel: Acrylic

**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Plastic handle with lock insert no. 3524 E

**Depth 36 mm**

| For use as door variant with | Width mm | Height mm | Model No. |
|---|---|---|---|
| 1050.000, 1350.000, 1007.000, 1013.000 | 497 | 497 | **2733.010** |
| 1039.000, 1339.000, 1009.000 | 597 | 377 | **2730.010** |
| 1010.000, 1054.000, 1060.000, 1360.000 | 597 | 597 | **2731.010** |
| 1012.000, 1076.000, 1376.000 | 597 | 757 | **2732.010** |

**Depth 62 mm**

| For use as door variant with | Width mm | Height mm | Model No. |
|---|---|---|---|
| 1050.000, 1350.000, 1007.000 | 497 | 497 | **2763.010** |
| 1039.000, 1339.000, 1009.000 | 597 | 377 | **2760.010** |
| 1010.000, 1054.000, 1060.000, 1360.000 | 597 | 597 | **2761.010** |
| 1012.000, 1076.000, 1376.000 | 597 | 757 | **2762.010** |

### Acrylic glazed cover

With security lock, lock no. 3524 E.

**Material:**
- Frame:
  Extruded aluminium sections with die-cast corner pieces
- Glazed panel: Smoked acrylic

**Protection category IP to IEC 60 529:**
- IP 54

**Acrylic glazed covers, 482.6 mm (19")**

| U | Width mm | Height mm | Depth mm | Model No. |
|---|---|---|---|---|
| 3 | 320 | 158 | 47.5 | **2780.000** |
| 3 | 534 | 158 | 47.5 | **2781.000** |
| 6 | 534 | 291.5 | 47.5 | **2782.000** |
| 9 | 534 | 425 | 47.5 | **2796.000** |

Max. installation depth: 43 mm
Visible area:
(Width - 40 mm) x (Height - 20.5 mm)

**Metric acrylic glazed covers**

| Width mm | Height mm | Depth mm | Model No. |
|---|---|---|---|
| 400 | 200 | 47.5 | **2784.000** |
| 400 | 400 | 47.5 | **2785.000** |
| 500 | 200 | 47.5 | **2786.000** |
| 500 | 400 | 47.5 | **2787.000** |
| 600 | 200 | 47.5 | **2788.000** |
| 600 | 400 | 47.5 | **2789.000** |

Max. installation depth: 43 mm
Visible area:
(Width - 40 mm) x (Height - 20.5 mm)

## Viewing window

**Stainless steel**
Fitted as standard with internal 130° hinges and all-round seal. The double-bit lock insert may be exchanged for 27 mm lock inserts, type A.

**Material:**
– Stainless steel 1.4301 (AISI 304)
– Single-pane safety glass

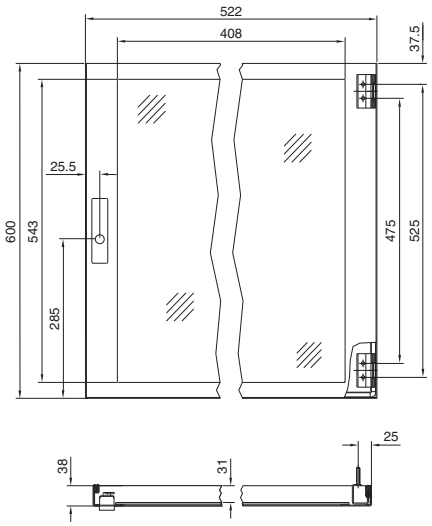
**Protection category IP to IEC 60 529:**
– IP 54

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Depth mm | Model No. |
|---|---|---|---|
| 522 | 600 | 38 | **2793.560** |

**Accessories:**

– Lock inserts 27 mm, type A, see page 941



## Operating panel

For mounting on
– AX enclosures instead of the door
– Surfaces

Frame construction with a 3 mm aluminium plate secured from the inside.

**Material:**
– Aluminium, natural anodised

**Protection category IP to IEC 60 529:**
– IP 54

**Supply includes:**
– Aluminium frame
– Display panel
– Hinges
– Brackets

| For use as door variant for AX | Width mm | Height mm | Depth mm | Model No. |
|---|---|---|---|---|
| 1004.000<br>1011.000<br>1031.000 | 377 | 297 | 36 | **2741.010** |
| 1006.000<br>1303.000<br>1380.000 | 377 | 377 | 36 | **2742.010** |
| 1008.000<br>1038.000<br>1338.000 | 377 | 597 | 36 | **2743.010** |
| 1007.000<br>1013.000<br>1050.000<br>1350.000 | 497 | 497 | 36 | **2745.010** |
| 1009.000<br>1039.000<br>1339.000 | 597 | 377 | 36 | **2744.010** |
| 1010.000<br>1060.000<br>1304.000<br>1360.000 | 597 | 597 | 36 | **2746.010** |
| For surfaces | 197 | 297 | 36 | **2740.010** |

Area available for population:
(Width - 70 mm) x (Height - 70 mm)

Dimensions of aluminium plate:
(Width - 54 mm) x (Height - 54 mm)

**Accessories:**

– Cam lock 2749.100, see page 932

## Viewing window/operating panel

### Cam lock

**for operating panel**
May be retrofitted to the operating area or enclosure wall of operating panels. Standard double-bit insert may be exchanged for lock inserts, type C.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2749.100** |

**Accessories:**

– Lock inserts, type C, see page 941

### Identification strip

For individual field identifiers on the door, including transparent cover and assembly parts.

For labels:
Width: Enclosure width - 150 mm
Height: 29 mm
Thickness: 0.75 mm

**Colour:**
– RAL 7035

| For enclosure width mm | Model No. |
|---|---|
| 600 | **8618.450** |
| 800 | **8618.451** |

## Allocation of lock systems

# Small enclosures, compact enclosures and operating housings AX, sheet steel

| | | Enclosure series | | | | | | Lock inserts for handle systems | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | E-Box KX | Compact enclosure AX/AX IT | | Operating housings with handle strips AX | Plastic enclosure AX | EL 3-part | Profile half-cylinders | | Lock inserts | | |
| Application | | With cam | With cam | With 3-point lock | With cam | With cam | 3 – 15 U | Lock and push-button inserts | DIN 18 252 | Type A | Type F | Lock and push-button inserts |
| | from page | 65 | 85 | 89 | 179 | 94 | 715 | 942 | 942 | 941 | 941 | 942 |
| **Handle systems for enclosures** | | | | | | | | | | | | |
| **Comfort handle AX** | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 939 | – | – | ■ | – | – | – | ■ | ■ | ■ | – | – |
| With security lock insert E1 | 939 | – | – | ■ | – | – | – | – | – | – | – | – |
| For padlock and lock inserts or profile half-cylinders | 939 | – | – | ■ | – | – | – | ■ | ■ | ■ | – | – |
| **Mini-comfort handle AX** | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 940 | ■ | ■ | – | ■ | – | – | ■ | ■ | ■ | – | – |
| For padlock and lock inserts or profile half-cylinders | 940 | ■ | ■ | – | ■ | – | – | ■ | ■ | ■ | – | – |
| **Mini-comfort handle for AX plastic** | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 941 | – | – | – | – | ■ | – | ■ | ■ | ■ | – | – |
| **Mini-comfort handle for 3-part EL enclosures** | | | | | | | | | | | | |
| For lock inserts | 949 | – | – | – | – | – | ■ | ■ | – | – | ■ | – |
| For profile half-cylinders | 949 | – | – | – | – | – | ■ | ■ | ■ | – | – | – |
| **Lock inserts for enclosures** | | | | | | | | | | | | |
| **Lock inserts** | | | | | | | | | | | | |
| Type A | 941 | ■ | ■ | ■ | ■ | ■ | – | | | | | |

## Allocation of lock systems

## Large enclosures and PC enclosures, sheet steel

| Application | | Enclosure series | | | | | | Lock inserts for handle systems | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PC enclosure | | Profile half-cylinders | | Lock inserts | | | |
| | | VX/VX IT | VX SE | VX partial doors for modular front design | TE | Door | For keyboard drawer or fold-out tray | Lock and push-button inserts | DIN 18 252 | Type A | Type F | Version G | Lock and push-button inserts |
| | from page | 117/ 687 | 143 | 926 | 704 | 164 | 164 | 942 | 942 | 941 | 941 | 941 | 942 |
| **Handle systems for enclosures** | | | | | | | | | | | | | |
| **Comfort handle VX** | | | | | | | | | | | | | |
| For lock inserts | 937 | ■ | – | – | – | – | – | – | – | – | – | ■ | ■ |
| For padlock and lock inserts | 937 | ■ | – | – | – | – | – | – | – | – | – | ■ | ■ |
| With security lock insert E1 | 937 | ■ | – | – | – | – | – | – | – | – | – | – | – |
| For profile half-cylinders | 937 | ■ | – | – | – | – | – | ■ | ■ | – | – | – | – |
| Prepared for ASSA lock system | 937 | ■ | – | – | – | – | – | – | – | – | – | – | – |
| With code | 946 | ■ | – | – | – | – | – | – | ■ | – | – | – | – |
| **CMC III online comfort handle VX** | | | | | | | | | | | | | |
| With master key function | 946 | ■ | – | – | – | – | – | – | ■ | – | – | – | – |
| **Radio comfort handle VX** | | | | | | | | | | | | | |
| With card reader | 947 | ■ | – | – | – | – | – | – | – | – | – | – | – |
| **Comfort handle for VX SE, PC, IW, EL** | | | | | | | | | | | | | |
| For lock inserts | 938 | – | ■ | – | – | ■[1] | – | – | – | – | ■ | – | ■ |
| For padlock and lock inserts | 938 | – | ■ | – | – | ■[1] | – | – | – | – | ■ | – | ■ |
| For profile half-cylinders | 938 | – | ■ | – | – | ■[1] | – | ■ | ■ | – | – | – | – |
| **Comfort handle AX** | | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 939 | – | – | – | ■ | – | – | ■ | ■ | ■ | – | – | – |
| With security lock insert E1 | 939 | – | – | – | ■ | – | – | – | – | – | – | – | – |
| For padlock and lock inserts or profile half-cylinders | 939 | – | – | – | ■ | – | – | – | – | ■ | – | – | – |
| **Mini-comfort handle AX** | | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 940 | – | – | ■ | – | – | – | ■ | ■ | ■ | – | – | – |
| For padlock and lock inserts or profile half-cylinders | 940 | – | – | ■ | – | – | – | ■ | ■ | ■ | – | – | – |
| **Ergoform-S handle** | | | | | | | | | | | | | |
| With code | 949 | – | – | – | ■ | – | – | – | ■ | ■ | – | – | – |
| Electromagnetic | 950 | – | – | – | ■ | – | – | – | ■ | ■ | – | – | – |
| **Lock inserts for enclosures** | | | | | | | | | | | | | |
| **Lock inserts** | | | | | | | | | | | | | |
| Type A | 941 | – | – | ■ | ■ | – | ■ | | | | | | |
| Type F | 941 | – | ■ | – | – | ■ | – | | | | | | |
| Version G | 941 | ■ | – | – | – | – | – | | | | | | |

[1] Only in conjunction with the handle adaptor for comfort handle 8611.300, see page 918

## Allocation of lock systems

# Console systems, industrial workstation, Comfort Panel and Optipanel, sheet steel

| Application | | Enclosure series | | | | | | | | Lock inserts for handle systems | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TopConsole TP | | One-piece console TP | | | | | | Profile half-cylinders | | Lock inserts | | |
| | | Desk section and console | Pedestal | Console cover | Console door | Universal console TP | IW | Comfort Panel | Optipanel | Lock and push-button inserts | DIN 18 252 | Type A | Type F | Lock and push-button inserts |
| | from page | 157 | 157 | 161 | 161 | 162 | 167 | 172 | 174 | 942 | 942 | 941 | 941 | 942 |
| **Handle systems for enclosures** | | | | | | | | | | | | | | |
| **Comfort handle for VX SE, PC, IW, EL** | | | | | | | | | | | | | | |
| For lock inserts | 938 | – | – | – | – | – | ■ | – | – | – | – | – | ■ | ■ |
| For padlock and lock inserts | 938 | – | – | – | – | – | ■ | – | – | – | – | – | ■ | ■ |
| For profile half-cylinders | 938 | – | – | – | – | – | ■ | – | – | ■ | ■ | – | – | – |
| **Comfort handle AX** | | | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 939 | – | ■ | – | ■ | ■ | – | – | – | ■ | ■ | ■ | – | – |
| With lock insert, lock E1 | 939 | – | ■ | – | ■ | ■ | – | – | – | – | – | – | – | – |
| For padlock and lock inserts or profile half-cylinders | 939 | – | ■ | – | ■ | ■ | – | – | – | ■ | ■ | ■ | – | – |
| **T handles** | | | | | | | | | | | | | | |
| Type B | 943 | ■ | – | ■ | – | – | – | – | – | | | | | |
| Type C | 943 | – | – | – | – | – | – | ■ | ■ | | | | | |
| **Plastic handles** | | | | | | | | | | | | | | |
| Type B | 942 | ■ | – | ■ | – | – | – | – | – | | | | | |
| Type C | 942 | – | – | – | – | – | – | ■ | ■ | | | | | |
| **Lock inserts for enclosures** | | | | | | | | | | | | | | |
| **Lock inserts** | | | | | | | | | | | | | | |
| Type A | 941 | ■ | ■ | ■ | ■ | ■ | – | – | – | | | | | |
| Type F | 941 | – | – | – | – | – | ■ | – | – | | | | | |
| **Lock cylinder inserts** | | | | | | | | | | | | | | |
| Type B | 943 | – | – | – | – | – | ■ | – | – | | | | | |

System accessories

## Allocation of lock systems

## Enclosures and cases, stainless steel

| Application | Page | E-Box KX | AX: With cam | AX: With 3-point lock | One-piece console TP: Console cover | VX | VX SE | Lock inserts for handle systems: Profile half-cylinders: Lock and push-button inserts | Profile half-cylinders: DIN 18 252 | Lock inserts: Type A | Lock inserts: Type F | Lock inserts: Type G | Lock inserts: Lock and push-button inserts |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Enclosure series | | | | | | | | | | | |
| | Page | 233 | 237 | 240 | 251 | 243 | 249 | 942 | 942 | 941 | 941 | 941 | 942 |
| **Handle systems for enclosures** | | | | | | | | | | | | | |
| **Comfort handle VX** | | | | | | | | | | | | | |
| For lock inserts, stainless steel, precision-cast | 937 | – | – | – | – | ■ | – | – | – | – | – | ■ | ■ |
| For profile half-cylinders, stainless steel, precision-cast | 937 | – | – | – | – | ■ | – | ■ | ■ | – | – | – | – |
| **Comfort handle for VX SE, PC, IW, EL** | | | | | | | | | | | | | |
| For lock inserts, matt chrome | 938 | – | – | – | – | – | ■ | – | – | – | ■ | – | ■ |
| For profile half-cylinders, matt chrome | 938 | – | – | – | – | – | ■ | ■ | ■ | – | – | – | – |
| **Comfort handle AX** | | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders, stainless steel, precision-cast | 939 | – | – | ■ | – | – | – | ■ | ■ | ■ | – | – | – |
| **Mini-comfort handle AX** | | | | | | | | | | | | | |
| For lock inserts or profile half-cylinders | 940 | ■ | ■ | – | – | – | – | ■ | ■ | ■ | – | – | – |
| For padlock and lock inserts or profile half-cylinders | 940 | ■ | ■ | – | – | – | – | ■ | ■ | ■ | – | – | – |
| **Plastic handle** | | | | | | | | | | | | | |
| Type C | 942 | – | – | – | ■ | – | – | | | | | | |
| **T handle** | | | | | | | | | | | | | |
| Type C | 943 | – | – | – | ■ | – | – | | | | | | |
| **Lock inserts for enclosures** | | | | | | | | | | | | | |
| **Lock inserts** | | | | | | | | | | | | | |
| Type A | 941 | ■ | ■ | ■ | – | – | – | | | | | | |
| Type C | 941 | – | – | – | ■ | – | – | | | | | | |
| Type F | 941 | – | – | – | – | – | ■ | | | | | | |
| Type G | 941 | – | – | – | – | ■ | – | | | | | | |
| **Cam lock, stainless steel** | | | | | | | | | | | | | |
| With double-bit insert, stainless steel 1.4404 (AISI 316L) | 943 | ■ | ■ | – | – | – | – | | | | | | |
| **Lock cylinder inserts** | | | | | | | | | | | | | |
| Type C | 943 | – | – | – | ■ | – | – | | | | | | |

## Comfort handle VX

**for VX, VX IT**

As the handle does not take up any swing space, due to its folding action, the door surface area available for installed equipment is maximised. Simple assembly, thanks to the snap-mounted handle system.
Prepared for the installation of lock inserts, lock and push-button inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders.

| | | | | | |
|---|---|---|---|---|---|
| | For lock inserts | For padlock and lock inserts | With security lock insert E1[1] | For profile half-cylinders | Prepared for ASSA lock system |
| | **Model No.** | | | | |
| Die-cast zinc RAL 7035 | **8618.200** | **8618.230** | **8618.240** | **8618.250** | **8618.270** |
| Die-cast zinc RAL 9005 | **8618.201** | **8618.231** | **–** | **8618.251** | **–** |
| Precision-cast stainless steel | **8618.220** | **–** | **–** | **8618.280** | **–** |
| **Lock inserts, type G** | | | | | |
| 7 mm square | 8618.300 | 8618.300 | – | – | – |
| 8 mm square | 8618.301 | 8618.301 | – | – | – |
| 7 mm triangular | 8618.302 | 8618.302 | – | – | – |
| 8 mm triangular | 8618.303 | 8618.303 | – | – | – |
| Screwdriver | 8618.304 | 8618.304 | – | – | – |
| Daimler insert | 8618.305 | 8618.305 | – | – | – |
| 3 mm double-bit | 8618.306 | 8618.306 | – | – | – |
| Fiat | 8618.307 | 8618.307 | – | – | – |
| 6.5 mm triangular | 8618.308 | 8618.308 | – | – | – |
| **Lock and push-button inserts** | | | | | |
| Lock insert, lock no. 3524 E[2] | 8611.180 | 8611.180 | – | 2467.000 | – |
| Push-button insert | 8611.190 | 8611.190 | – | 2468.000 | – |
| Push-button and lock insert[2] | 8611.200[3] | 8611.200[3] | – | 2469.000[4] | – |
| **Profile half-cylinders** | | | | | |
| To DIN 18 252[5] | – | – | – | 9785.040[7] | – |
| | – | – | – | 9785.042[6] | – |

[1] Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key
[2] With 2 keys
[3] Lock no. 12321, no other lock is possible
[4] Lock no. 2123, no other lock is possible
[5] With 3 keys for each lock insert
[6] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[7] Lock-specific key

## Locking bar latch to CNOMO[1]

**for VX**

To fit all locking bars in doors and glazed doors with standard lock or comfort handle VX. The latch prevents the locking bars from moving when the door is open.

[1] CNOMO is a French automobile industry standard. For safety reasons, it must not be possible to lock the handle whilst the door is open.

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **8618.460** |

**Also required:**

– For CNOMO[1] lock inserts, type G, 6.5 mm triangular insert 8618.308, see page 941

## Lock systems

### Comfort handle

**for VX SE, PC, IW, EL**

As the handle does not take up any swing space, due to its folding action, the door surface area available for installed equipment is maximised.
Prepared for the installation of lock inserts, lock and push-button inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders.

**Also required:**

– Handle adaptor, see page 918, for mounting on glazed door for VX SE , PC bottom door, IW designer door

**Note:**

– When replacing the comfort handle in the wall-mounted enclosure EL, 3-part with 21 U, please note that the handle can only be replaced as a complete system (handle including lock insert)
– The comfort handle 8611.020 is included with the supply of the enclosure

| | | | |
|---|---|---|---|
| | For lock inserts | For padlock and lock inserts | For profile half-cylinders |
| | **Model No.** | | |
| Die-cast zinc RAL 7035 | **8611.020** | **8611.290** | **8611.070** |
| Matt chrome | **8611.330** | **–** | **8611.340** |
| **Lock inserts, type F** | | | |
| 7 mm square | 8611.100 | 8611.100 | – |
| 8 mm square | 8611.110 | 8611.110 | – |
| 7 mm triangular | 8611.120 | 8611.120 | – |
| 8 mm triangular | 8611.130 | 8611.130 | – |
| Screwdriver | 8611.140 | 8611.140 | – |
| Daimler insert | 8611.150 | 8611.150 | – |
| 3 mm double-bit | 8611.160 | 8611.160 | – |
| Fiat | 8611.170 | 8611.170 | – |
| 6.5 mm triangular | 8611.220 | 8611.220 | – |
| **Lock and push-button inserts** | | | |
| Lock insert, lock no. 3524 E[1] | 8611.180 | 8611.180 | 2467.000 |
| Push-button insert | 8611.190 | 8611.190 | 2468.000 |
| Push-button and lock insert[1] | 8611.200[2] | 8611.200[2] | 2469.000[3] |
| **Profile half-cylinders** | | | |
| to DIN 18 252[4] | – | – | 9785.040[6] |
| | – | – | 9785.042[5] |

[1] With 2 keys
[2] Lock no. 12321, no other lock is possible
[3] Lock no. 2123, no other lock is possible
[4] With 3 keys for each lock insert
[5] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[6] Lock-specific key

## Comfort handle AX

**for compact enclosures AX with 3-point lock system, TE, TP, swing frame, large**

The unlocked handle folds out forwards, and the lock is opened by swivelling.
Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

| | | | |
|---|---|---|---|
| | For lock inserts or profile half-cylinders | With security lock insert E1[1] | For padlocks and lock inserts or profile half-cylinders |
| | **Model No.** | | |
| Die-cast zinc RAL 7035 | **2435.100** | **2435.200** | **2435.400** |
| Precision-cast stainless steel | **2435.300** | **–** | **–** |
| **Lock inserts, type A** | | | |
| 7 mm square | 2460.000 | – | 2460.000 |
| 8 mm square | 2461.000 | – | 2461.000 |
| 7 mm triangular | 2462.000 | – | 2462.000 |
| 8 mm triangular | 2463.000 | – | 2463.000 |
| Screwdriver | 2464.000 | – | 2464.000 |
| Daimler insert | 2465.000 | – | 2465.000 |
| 3 mm double-bit | 2466.000 | – | 2466.000 |
| Fiat | 2307.000 | – | 2307.000 |
| 6.5 mm triangular | 2460.650 | – | 2460.650 |
| **Lock and push-button inserts** | | | |
| Lock insert, lock no. 3524 E[2] | 2467.000 | – | 2467.000 |
| Push-button insert | 2468.000 | – | 2468.000 |
| Push-button and lock insert[2] | 2469.000[3] | – | 2469.000[3] |
| **Profile half-cylinders** | | | |
| to DIN 18 252[4] | 9785.040[6] | – | 9785.040[6] |
| | 9785.042[5] | – | 9785.042[5] |

[1] Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key
[2] With 2 keys.
[3] Lock no. 2123; no other lock is possible
[4] With 3 keys for each lock insert
[5] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[6] Lock-specific key

## Lock systems

# Mini-comfort handle AX

**for AX/AX IT with cam lock, KX with cam lock, partial doors for modular front design**

The lock is opened by swivelling the unlocked handle.
Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

| | | |
|---|---|---|
| | For lock inserts or profile half-cylinders | For padlocks and lock inserts or profile half-cylinders |
| | **Model No.** | |
| Die-cast zinc RAL 7035 | **2537.100** | **2537.300** |
| **Lock inserts, type A** | | |
| 7 mm square | 2460.000 | 2460.000 |
| 8 mm square | 2461.000 | 2461.000 |
| 7 mm triangular | 2462.000 | 2462.000 |
| 8 mm triangular | 2463.000 | 2463.000 |
| Screwdriver | 2464.000 | 2464.000 |
| Daimler insert | 2465.000 | 2465.000 |
| 3 mm double-bit | 2466.000 | 2466.000 |
| Fiat | 2307.000 | 2307.000 |
| 6.5 mm triangular | 2460.650 | 2460.650 |
| **Lock and push-button inserts** | | |
| Lock insert, lock no. 3524 E[1] | 2467.000 | 2467.000 |
| Push-button insert | 2468.000 | 2468.000 |
| Push-button and lock insert[1] | 2469.000[2] | 2469.000[2] |
| **Profile half-cylinders** | | |
| to DIN 18 252[3] | 9785.040[5] | 9785.040[5] |
| | 9785.042[4] | 9785.042[4] |

[1] With 2 keys.
[2] Lock no. 2123; no other lock is possible
[3] With 3 keys for each lock insert
[4] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[5] Lock-specific key

## Mini-comfort handle AX

**for AX plastic**

The lock is opened by swivelling the unlocked handle.
Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **1485.600** |
| | |
| **Lock inserts, type A** | |
| 7 mm square | 2460.000 |
| 8 mm square | 2461.000 |
| 7 mm triangular | 2462.000 |
| 8 mm triangular | 2463.000 |
| Screwdriver | 2464.000 |
| Daimler insert | 2465.000 |
| 3 mm double-bit | 2466.000 |
| Fiat | 2307.000 |
| 6.5 mm triangular | 2460.650 |
| **Lock and push-button inserts** | |
| Lock insert, lock no. 3524 E[1] | 2467.000 |
| Push-button insert | 2468.000 |
| Push-button and lock insert[1] | 2469.000[2] |
| **Profile half-cylinders** | |
| to DIN 18 252[3] | 9785.040[5] |
| | 9785.042[4] |

[1] With 2 keys.
[2] Lock no. 2123; no other lock is possible
[3] With 3 keys for each lock insert
[4] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[5] Lock-specific key

## Lock inserts

**for handles and enclosures**

**Accessories:**

– Enclosure key, see page 945

| Type | A | C | F | G |
|---|---|---|---|---|
| | | | | |
| Material | Die-cast zinc | Die-cast zinc | Die-cast zinc | Die-cast zinc |
| Length | 27 mm | 41 mm | | |
| | **Model No.** | | | |
| 7 mm square | **2460.000** | **2523.000** | **8611.100** | **8618.300** |
| 8 mm square | **2461.000** | **2526.000** | **8611.110** | **8618.301** |
| 7 mm triangular | **2462.000** | **2527.000** | **8611.120** | **8618.302** |
| 8 mm triangular | **2463.000** | **2528.000** | **8611.130** | **8618.303** |
| Screwdriver | **2464.000** | **–** | **8611.140** | **8618.304** |
| Daimler insert | **2465.000** | **2522.000** | **8611.150** | **8618.305** |
| 3 mm double-bit | **2466.000** | **2483.000** | **8611.160** | **8618.306** |
| Fiat | **2307.000** | **–** | **8611.170** | **8618.307** |
| 6.5 mm triangular | **2460.650** | **–** | **8611.220** | **8618.308** |

## Lock systems

# Lock inserts

**for installation in comfort handle, mini-comfort handle**

**Lock and push-button inserts**

**Installation options:**
- In comfort handle VX for lock inserts
- In comfort handle for VX SE, IW, PC for lock inserts
- In mini-comfort handle for EL for lock inserts

| | Model No. |
|---|---|
| Security lock insert, lock no. 3524 E[1] | **8611.180** |
| Push-button insert | **8611.190** |
| Push-button and lock insert[1] | **8611.200[2]** |

[1] With two keys
[2] Lock no. 12321; no other lock is possible

**Lock and push-button inserts and profile half-cylinders**

**Installation options:**
- In comfort handle VX for profile half-cylinders
- In comfort handle AX
- In mini-comfort handle AX
- In mini-comfort handle AX for AX plastic
- In mini-comfort handle for EL for profile half-cylinder

| | Model No. |
|---|---|
| Security lock insert, lock no. 3524 E[1] | **2467.000** |
| Push-button insert | **2468.000** |
| Push-button and lock insert[1] | **2469.000[2]** |
| Profile half-cylinders to DIN 18 252[3] | **9785.040[5]** |
| | **9785.042[4]** |

[1] With two keys
[2] Lock no. 2123; no other lock is possible
[3] With 3 keys for each lock insert
[4] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[5] Lock-specific key

# Plastic handles

With or without lock cylinder insert.

**Supply includes:**
- Assembly parts and seal

| Type | B | | C | |
|---|---|---|---|---|
| | | | | |
| | With lock cylinder insert, lock no. 3524 E[1] | Without lock cylinder insert | With lock cylinder insert, lock no. 3524 E[1] | Without lock cylinder insert |
| Installation in | Console lid TP, sheet steel | | Console lid TP, stainless steel<br>Comfort Panel<br>Optipanel | |
| | **Model No.** | | | |
| RAL 9011 | **2576.000** | **2533.000** | **2485.000** | **2485.100** |

[1] With two keys

## T handles

With or without lock cylinder insert.

**Supply includes:**
– Seal

| Type | B | | C | |
|---|---|---|---|---|
| | | | | |
| | With lock cylinder insert[1] | Without lock cylinder insert | With lock cylinder insert[1] | Without lock cylinder insert |
| Installation in | Console lid TP, sheet steel | | Console lid TP, stainless steel<br>Comfort Panel<br>Optipanel | |
| | **Model No.** | | | |
| | **2575.000[2]** | **2572.000** | **2535.000[2]** | **2536.000** |

[1] With 2 keys
[2] Lock no. 3524 E

## Cam lock, stainless steel

**for AX, KX E-Box**
With double-bit insert.

**Material:**
– Made entirely from stainless steel 1.4404 (AISI 316L)

| For | Packs of | Model No. |
|---|---|---|
| AX | 1 pc(s). | **2304.100** |
| KX E-Box | 1 pc(s). | **2309.110** |

**Accessories:**

– Lock inserts, type A, see page 941

## Lock cylinder inserts

| Type | B | C |
|---|---|---|
| | | |
| | With lock no. 3524 E[1] | With lock no. 3524 E[1] |
| Installation in | IW | Console lid TP, stainless steel |
| Material | Die-cast zinc | Die-cast zinc |
| | **Model No.** | |
| | **2571.000** | **2525.000** |

[1] With two keys

## Lock systems

### Multiple lock

**for 6 padlocks**
The ideal solution in cases where several people need individual access for maintenance and repair purposes.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2493.500** |

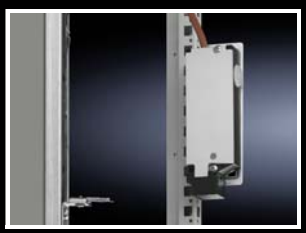
### Lock cover

**for AX/AX IT, prepared for a lead seal**
For retrospective mounting on all compact enclosures AX, sheet steel, with cam lock.

**Material:**
– Polyamide

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2476.100** |



### Safety lock

Fitted to doors, to protect against contact with live electrical equipment whilst the master switch is ON.

**Function:**
– Locks the door when the master switch is ON.
– Mains power (voltage) is only enabled whilst the door is closed.
– Monitoring of the lock magnet via an additional closing contact.

**Supply includes:**
– Lock
– Actuator
– Angle bracket
– Assembly parts

| Connection voltage for lock magnet | Model No. |
|---|---|
| 230 V AC 11 VA | **2416.000** |
| 24 V DC 8 W | **2418.000** |
| 120 V AC 8 VA | **2419.000** |

**Also required:**

– For twin-door enclosures (for the overlapping door, to indicate "enclosure door closed"): Door-operated switch 4127.010, see page 1024

## Enclosure key

For lock inserts. Enclosure, case and lock systems are supplied as standard with matching keys.

| | | | | |
|---|---|---|---|---|
| | **Model No.** | | | |
| | **–** | **–** | **2549.000** | **2549.500**[2)3)] |
| Double-bit no. 5 | **2531.000** | **–** | ■ | ■ |
| Security lock no. 3524 E | **–** | **2532.000**[1)] | **–** | **–** |
| 7 mm triangular | **2545.000** | **–** | **–** | ■ |
| 8 mm triangular | **2546.000** | **–** | ■ | ■ |
| 7 mm square | **2547.000** | **–** | **–** | ■ |
| 8 mm square | **2548.000** | **–** | ■ | ■ |
| For HD locks | **2549.600** | **–** | **–** | **–** |
| For Daimler | **2521.000** | **–** | **–** | **–** |
| For Fiat | **2308.000** | **–** | **–** | **–** |

1) Packs of 2
2) With bit adaptor and reversible bit for: Multi-tooth size 25 and 30
3) Bit 2549.510 for HD lock insert, see page 224

## Lock systems

### Comfort handle VX

**with numerical code, for VX, VX IT**
Flexible access opportunities with individual 4-digit code.

**Benefits:**
- Enhanced security by automatically wiping the code after use
- Emergency opening and overwriting of the code is possible with a 40 mm profile half-cylinder to DIN 18 252

**Functional principle:**
- The 4-digit code may be set individually by the user
- Programming mode can only be accessed via the set code
- Once the code has been entered or used, it is automatically reset to the digits "0000" and thus cannot be read by a third person once the handle has been opened
- May be opened in an emergency situation or if the code is forgotten using the master key function with key

**Dimensions:**
- W x H x D: 41 x 386 x 46 mm, door-mounted

**Material:**
- Die-cast zinc
- Plastic

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.601** |

**Supply includes:**
- Comfort handle for profile half-cylinders
- Handle adaptor for VX IT aluminium glazed door and VX IT aluminium sheet steel door, vented (door hinge on right/left)
- Assembly parts

**Also required:**
- Profile half-cylinders, see page 942

**Accessories:**
- Mounting adaptor for TS 8 doors, see page 948

### CMC III online comfort handle VX

**with master key function for VX, VX IT**
For door locking, handle lever monitoring and status display. It can be opened directly via a 24 V DC supply voltage or connected to the CMC III via the CMC III Access Control.

**Benefits:**
- Remote control and an extensive range of functions for automated access control by linking to the CMC III, e.g. activation via an optional coded lock or transponder reader
- Optical LED status display of the handle or superordinate CMC III system in the rack
- Individual activation and colour selection configurable via the CMC III
- Prepared for use of a 40 mm profile half-cylinder to DIN 18 252

**Technical specifications:**
- Rated voltage: 24 V DC
- Rated current: 100 mA

**Dimensions:**
- W x H x D: 41 x 386 x 42 mm, door-mounted

**Material:**
- Die-cast zinc
- Plastic

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.611** |

**Supply includes:**
- Comfort handle for profile half-cylinders
- Connection cable RJ12, 2.9 m
- Handle adaptor for VX IT aluminium glazed door and VX IT aluminium sheet steel door, vented (door hinge on right/left)
- Assembly parts

**Also required:**
- Profile half-cylinders, see page 942

**Accessories:**
- CMC III access control, see page 812
- CMC III Processing Unit/Compact, from page 804
- CMC III coded lock VX, see page 813
- CMC III transponder reader VX, see page 813

## Radio comfort handle VX

**with card reader for VX, VX IT**

Battery operated radio handle for door locking, handle lever/rack door monitoring and status display.

**Benefits:**
- Supports remote control via radio by linking to CMC III
- Stand-alone operation supported
- Easily retrofitted without any machining thanks to radio technology
- Optical LED status display of the handle or superordinate CMC III system in the rack
- Individual activation and colour selection configurable via CMC III
- Service life of the integral batteries is up to 2 years.
- Supports use of the handle without radio technology, connection to CMC III via optional online adapter
- High standard of security thanks to encrypted radio transmission of security-relevant signals using Advanced Encryption Standard 128 Bit (AES 128)

**Functional principle:**
- Battery operation: EnOcean 868 MHz radio technology with encryption
- Operation with CMC III: Up to 128 radio handles on one CMC III system
- Stand-alone operation: Handle settings via master card or Android app “Access Control VX” with NFC-enabled smartphone
- Supports emergency opening via an integral USB-C-slot, transponder handle and external power supply
- Integral transponder card reader for Legic Advant, HID, FeliCa and NFC via Android app (Legic Prime available on request)
- Integral monitoring of lever handle
- Integral rack door monitoring of the handle position with a compass signal or infrared sensor

**Dimensions:**
- W x H x D: 41 x 377 x 27 mm, door-mounted

**Material:**
- Die-cast zinc
- Plastic

**Colour:**
- RAL 9005

**Protection category IP to IEC 60 529:**
- IP 30

**Supply includes:**
- Handle
- 2 batteries, type CR123A
- Handle adaptor for VX IT aluminium glazed door and VX IT aluminium sheet steel door, vented (door hinge on right/left)
- 1 Mifare classic transponder card
- Assembly parts

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **7030.621** |

**Max. number of radio comfort handles/sensors**

| Wireless Units | Processing Unit Compact | Processing Unit |
|---|---|---|
| 16 | 0 | 128 |

**Operating modes/transponder cards**

| Operating mode | Setting of user cards | Max. number of user cards per handle |
|---|---|---|
| Stand-Alone | Master card | 10 |
| Stand-Alone | Android App + Master card | 50 |
| CMC III via radio | CMC III | 1000 |

**Also required:**
- Only for remote control via the CMC III:
  CMC III Wireless Unit, see page 815
  CMC III Processing Unit/-Compact, from page 804

**Accessories:**
- Transponder card, see page 814
- Online adaptor for radio comfort handle, see page 948
- VX mounting adaptor for TS 8 doors, see page 948

## Lock systems

### Mounting adaptor

**for comfort handle VX with numerical code, radio comfort handle VX**
For mounting VX handles on doors

**Colours:**
– RAL 9005

**Supply includes:**
– Adaptor
– Coupling element
– Adaptor for TS glazed aluminium door
– Assembly parts

| To fit enclosure type | Packs of | Model No. |
|---|---|---|
| TS 8 | 1 pc(s). | **7030.692** |

### Online adaptor

**for radio comfort handle VX**
For converting the VX radio comfort handle to a wired solution. The adaptor is inserted into the VX radio comfort handle instead of the batteries.

**Application:**
– Deactivation of radio technology

**Functional principle:**
– Control via connection cable and 24 V DC power supply instead of batteries
– Connection to CMC III access control system is also optionally supported

**Technical specifications:**
– Rated voltage: 24 V DC
– Rated current: 100 mA

**Dimensions:**
– W x H x D: 34 x 33 x 21 mm

**Material:**
– Plastic

**Supply includes:**
– Connection cable RJ12, 2.9 m

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.624** |

**Also required:**
– Radio comfort handle VX, see page 947

**Accessories:**
– CMC III access control, see page 812
– CMC III Processing Unit/Compact, from page 804

### Cable routing kit for doors

**VX, VX IT**
For optimised cable routing on the inside of the VX enclosure system doors when using a CMC III handle.

**Benefits:**
– The duct cover and the ring cable holder may be shortened to any desired length

**Functional principle:**
– When installing handles or reader units with cables, these will need to be laid close to the inside of the door. The cables are routed in the aluminium extrusion of the doors.
– To close the duct, the duct cover simply snaps onto the profile.
– For cable routing with ventilated or sheet steel doors, the ring cable holder is glued to the inside of the door.

**Material:**
– Plastic

**Colour:**
– Pale grey

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7030.695** |

**Supply includes:**
– Duct cover, 2 m
– 4 ring cable holders, 0.5 m
– Assembly parts

## Mini-comfort handle

**for EL 3-part, , 3 – 15 U**

Prepared for the installation of lock inserts or for the installation of standard commercially available 40 or 45 mm profile half-cylinders, as well as lock and push-button inserts.

| | | |
|---|---|---|
| | For lock inserts | For profile half-cylinders |
| | **Model No.** | |
| Die-cast zinc RAL 7035 | **7705.110** | **7705.120** |
| **Lock inserts, type F[6]** | | |
| 7 mm square | 8611.100 | – |
| 8 mm square | 8611.110 | – |
| 7 mm triangular | 8611.120 | – |
| 8 mm triangular | 8611.130 | – |
| Screwdriver | 8611.140 | – |
| Daimler insert | 8611.150 | – |
| 3 mm double-bit | 8611.160 | – |
| Fiat | 8611.170 | – |
| 6.5 mm triangular | 8611.220 | – |
| **Lock and push-button inserts** | | |
| Lock insert, lock no. 3524 E[1] | 8611.180 | 2467.000 |
| Push-button insert | 8611.190 | 2468.000 |
| Push-button and lock insert[1] | 8611.200[2] | 2469.000[3] |
| **Profile half-cylinders** | | |
| to DIN 18 252[4] | – | 9785.040[7] |
| | – | 9785.042[5] |

[1] With 2 keys
[2] Lock no. 12321, no other lock is possible
[3] Lock no. 2123, no other lock is possible
[4] With 3 keys for each lock insert
[5] Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs
[6] Replacement of the complete system only (handle including lock inserts)
[7] Lock-specific key

## Ergoform-S handle

**with numerical code, for TE**

Flexible access options thanks to individual 3-digit numerical code without key, or via the master key function with the additional use of 40 or 45 mm profile half-cylinders to DIN 18 252, independently of the code.

| Colour | Packs of | **Model No.** |
|---|---|---|
| RAL 7035 | 1 pc(s). | **7200.810** |

**Accessories:**

– Profile half-cylinders, see page 942
– Lock inserts, type A, see page 941

## Lock systems

### Ergoform-S handle

**electromagnetic, for TE**

For door locking and handle lever monitoring.
If the 24 V DC voltage supply is applied, the handle cannot be opened with the push-button insert.
The handle may be connected to the CMC III via the CMC III access control and activated in this way.
The push-button insert may be replaced with a lock insert or a profile half-cylinder, 40 or 45 mm to DIN 18 252.

**Technical specifications:**
- Rated voltage: 24 V DC
- Rated current: 100 mA

**Supply includes:**
- Handle including cable 0.4 m
- Push-button insert
- Connection cable RJ12, 3 m

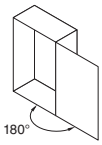
| Colour | Packs of | **Model No.** |
|---|---|---|
| RAL 7035 | 1 pc(s). | **7320.700** |

**Accessories:**
- Profile half-cylinders, see page 942
- Lock inserts, type A, see page 941
- CMC III access control, see page 812
- CMC III Processing Unit/Compact, see page 804

## 180° hinges

**Supply includes:**
– Assembly parts

**Note:**
– The protection category of the enclosure may be reduced
– Door hinge remains the same within a bayed enclosure suite

| Enclosure type | Door variant | Material | Colour | Packs of |   Model No. |
|---|---|---|---|---|---|
| VX25 | Sheet steel door | Steel/precision-cast | RAL 7035 | 4 pc(s). | **8618.330[1)]** |
| | | | RAL 9005 | 4 pc(s). | **8618.335[1)]** |
| | Stainless steel door | Stainless steel/ precision-cast | – | 4 pc(s). | **8618.340[1)]** |
| VX SE | Sheet steel door | Die-cast zinc | RAL 7035 | 4 pc(s). | **8800.190** |
| | | | Matt nickel-plated | | **8701.180** |
| VX SE | Doors with high dynamic loads, door installations up to 900 N | Precision casting/ die-cast zinc | RAL 7035 | 4 pc(s). | **8800.710** |
| VX IT bayed enclosure suites with comfort handle | Sheet steel doors | Die-cast zinc | RAL 7035<br>RAL 9005 | 4 pc(s). | **5301.400**<br>**5301.401** |
| | Aluminium doors | Die-cast zinc | RAL 9005 | | **5301.403** |
| AX/AX IT | Sheet steel door | Die-cast zinc | – | 3 pc(s). | **2449.010** |

[1)] May be mounted without machining the door, suitable for door installations up to 900 N

## Cover hinge

**for terminal boxes KX**
The cover hinge is simply screw-fastened to the enclosure protection channel and to the edge fold. The position of the installation holes is prepunched, so no need to measure and mark out.

**Supply includes:**
– Cover hinge
– Stoppers
– Assembly parts

| Material | Packs of | Model No. |
|---|---|---|
| Die-cast zinc | 6 pc(s). | **1592.200** |
| Stainless steel 1.4404 (AISI 316L) | 2 pc(s). | **1592.210** |

## Door, internal

### Support strip

For attachment of
- Cable ducts
- Cable conduit holders
- Contact hazard protection covers
- Equipment installed on the door
- Cable clamping and attachment

4.5 mm diameter hole on a 25 mm DIN pitch pattern

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

**Accessories:**
- Screws and self-tapping screws M5, see page 1004

**For VX, VX SE, AX plastic, TP, PC, IW**

**Installation options:**
- In VX, VX SE, PC, IW on tubular door frame
- TP on perforated door strip
- In AX plastic on mounting boss in the door

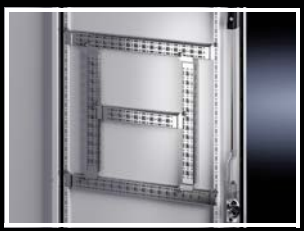
| For door width mm | Distance between attachment points mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 275 | 20 pc(s). | **4594.000** |
| 500 | 375 | 20 pc(s). | **4309.000** |
| 600 | 475 | 20 pc(s). | **4596.000** |
| 800 | 675 | 20 pc(s). | **4598.000** |
| 900 | 775 | 20 pc(s). | **4579.000** |
| 1000 | 875 | 20 pc(s). | **4599.000** |

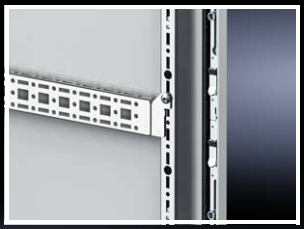
**For AX**

**Installation options:**
- In AX sheet steel in the enclosure door with cam lock
- In AX stainless steel in enclosure door with cam lock in conjunction with perforated door strip

| For door width mm | Distance between attachment points mm | Packs of | **Model No.** |
|---|---|---|---|
| 380 | 305 | 20 pc(s). | **4599.100** |
| 400 | 325 | 20 pc(s). | **4694.000** |
| 500 | 425 | 20 pc(s). | **4695.000** |
| 600 | 525 | 20 pc(s). | **4696.000** |
| 760 | 685 | 20 pc(s). | **4599.200** |
| 800 | 725 | 20 pc(s). | **4697.000** |

**Also required:**
- For installation in AX stainless steel: AX perforated door strip, stainless steel, see page 953





### Punched section with mounting flange, 14 x 39 mm

**for door installation, for VX, VX SE, AX, AX plastic, PC, IW**

Secure location and fast mounting on the tubular door frame.

For attaching
- Cable ducts
- Cable conduit holders
- Equipment installed on the door, etc.

**Installation options:**
- In VX, VX SE, PC, IW on tubular door frame
- In AX sheet steel in the enclosure door with 3-point lock system in the lockable door
- In AX stainless steel in enclosure door with 3-point lock system in the lockable door in conjunction with perforated door strip
- In AX plastic on mounting boss in the door

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For door width mm | Distance between attachment points mm | Packs of | **Model No.** |
|---|---|---|---|
| 400 | 275 | 4 pc(s). | **8619.700** |
| 500 | 375 | 4 pc(s). | **8619.710** |
| 600 | 475 | 4 pc(s). | **8619.720** |
| 800 | 675 | 4 pc(s). | **8619.730** |
| 900 | 775 | 4 pc(s). | **8619.740** |
| 1000 | 875 | 4 pc(s). | **8619.750** |

**Also required:**
- For installation in AX stainless steel: AX perforated door strip, stainless steel, see page 953

**Accessories:**
- Screws and self-tapping screws M5 for configuring the customer's own components on the punched section with mounting flange, see page 1004

## Spacers

The universal assembly component for all situations where a distance from the mounting level is required. With self-tapping thread for 4.5 mm diameter holes. The following components may be attached to the rear using 5.5 x 13 mm screws:
- Top-hat / cross rails
- Contact hazard protection covers
- Master switch trim panels
- Cable clamp rails

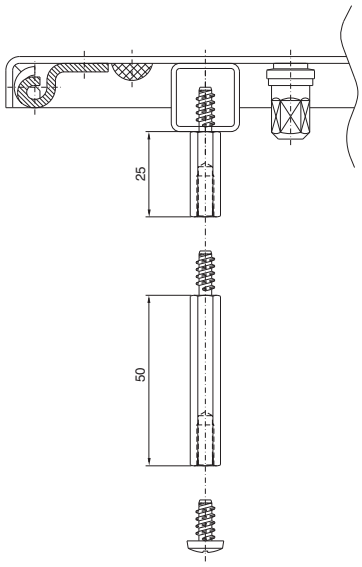
etc.

**Material:**
- Hexagonal steel (SW8)

**Surface finish:**
- Zinc-plated

**Accessories:**
- Screws 5.5 x 13 mm, see page 1004

| Length mm | Packs of | Model No. |
|---|---|---|
| 25 | 12 pc(s). | **2311.225** |
| 50 | 12 pc(s). | **2311.250** |



## Perforated door strip

**for AX stainless steel**

For vertical mounting on the threaded bolts of the door.

For attaching
- Support strips
- Punched section with mounting flange, 14 x 39 mm
- Door stay

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| For door height mm | Packs of | Model No. |
|---|---|---|
| 760 | 2 pc(s). | **2311.076** |
| 1000 | 2 pc(s). | **2311.100** |
| 1200 | 2 pc(s). | **2311.120** |

**Accessories:**
- Support strip, see page 952
- Punched section with mounting flange, 14 x 39 mm, see page 952
- Door stay, see page 956
- Screws, see page 1004

## Utility lectern

**for VX, VX SE, TP, PC**

For programming units etc., prepared for mounting on the tubular door frame. When required for servicing, it folds out quickly with a maximum support area, and after use is lowered between the tubular door frames in a space-saving design.

**Load capacity:**
- Max. 300 N

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

| Support area | | For door width mm | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 413 | 400 | 600 | **4638.600** |
| 613 | 400 | 800 | **4638.800** |

## Door, internal

### Wiring plan lectern

**for VX, VX SE, TP, PC**

Holds wiring plans during fault-finding and maintenance work. Wiring plan lecterns may be bayed in line with the door width. For mounting on the tubular door frame.

**Material:**
- Utility lectern: Polypropylene
- Mounting bracket: Die-cast zinc

**Colour:**
- Similar to RAL 7035

**Supply includes:**
- Wiring plan lectern (width 210 mm)
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4120.000** |

| For door width mm | Required/possible number of wiring plan lecterns | |
|---|---|---|
| | min. | max. |
| 400 | 1 | 1 |
| 500 | 1 | 1 |
| 600 | 2 | 2 |
| 800 | 2 | 3 |
| 1000 | 3 | 3 |

### Storage box

For fixing to all flat, clean surfaces with double-sided adhesive tape. Secure storage of CDs/DVDs, small parts such as fuses etc.

**Capacity:**
- Max. 10 CDs/DVDs

**Material:**
- Polyamide

**Colour:**
- RAL 7035

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2446.000** |

### Wiring plan pocket, sheet steel

**width-variable, for AX**

For fastening to the perforated door strip at any height. Variable and easily adjustable in the width.

Depth: 35 mm

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly screws

| To fit door width mm | Clearance opening mm | | Model No. |
|---|---|---|---|
| | Width | Height | |
| 400, 500 | 325 – 425 | 210 | **2515.200** |
| 600 | 475 – 575 | 210 | **2515.300** |
| 760, 800 | 625 – 725 | 210 | **2515.400** |

**Also required:**

- For installation in AX stainless steel: AX perforated door strip, stainless steel, see page 953

## Wiring plan pocket, sheet steel

**for VX, VX SE, TP pedestal, PC**
For fastening to tubular door frames at any height.

**Colour:**
– RAL 7035

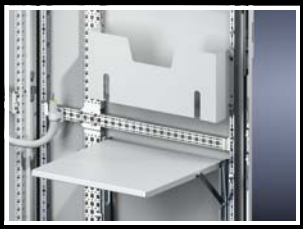
**Supply includes:**
– Assembly parts

**D = 90 mm**

| To fit door width mm | Clearance opening mm | | Model No. |
|---|---|---|---|
| | W | H | |
| 400 | 255 | 210 | **4114.000** |
| 500 | 355 | 210 | **4115.000** |
| 600 | 455 | 210 | **4116.000** |
| 800 | 655 | 210 | **4118.000** |
| 900 | 755 | 210 | **4123.000** |
| 1000 | 855 | 210 | **4124.000** |

**D = 35 mm**

| To fit door width mm | Clearance opening mm | | Model No. |
|---|---|---|---|
| | W | H | |
| 500 | 355 | 210 | **4115.500** |
| 600 | 455 | 210 | **4116.500** |
| 800 | 655 | 210 | **4118.500** |



## Plastic wiring plan pocket

For adhering to surfaces.

**Material:**
– Polystyrene with self-adhesive fastening strips

**Colour:**
– Similar to RAL 7035

| For format | Clearance opening mm | | | Model No. |
|---|---|---|---|---|
| | W | H | D | |
| A3 landscape | 438 | 286 | 45 | **2513.000** |
| A4 portrait | 228 | 254 | 17 | **2514.000** |
| A5 landscape | 228 | 174 | 17 | **2515.000** |

## Wiring plan pocket with transparent pouch

With welded-on transparent pouch and self-adhesive backing.

| For format | Model No. |
|---|---|
| A4 | **2510.000** |
| A3 | **2512.000** |

## Door, internal

### Door stay

To secure the door in the open position. May be fitted without machining the enclosure/housing.

**Supply includes:**
– Assembly parts

| For | Mounting | Packs of | **Model No.** |
|---|---|---|---|
| VX | bottom | 1 pc(s). | **8618.430** |
| VX SE,<br>TP universal console,<br>PC | bottom | 5 pc(s). | **4583.000** |
| TP | top | 2 pc(s). | **2519.200** |
| AX sheet steel<br>AX stainless steel | top | 1 pc(s). | **2519.010** |

**Also required:**

– For installation in AX sheet steel:
AX rail for interior installation in the appropriate depth, see page 989
– For installation in AX stainless steel:
AX perforated door strip, stainless steel, see page 953

### Door stay for escape routes

In an emergency situation, conventional door stays could block the escape route. The stay is activated automatically by pressure, releasing the door in both directions. In conjunction with 180° hinges, this ensures that no escape routes are blocked by open doors in the event of an emergency.

**Supply includes:**
– Assembly parts

| For | Packs of | **Model No.** |
|---|---|---|
| 1 VX | 1 pc(s). | **8618.425** |
| 2 VX SE, PC | 1 pc(s). | **4583.500** |

**Accessories:**

– 180° hinge, see page 951

### Ride-up roller

**for door VX, VX SE, PC**
Lifts up the door when there is heavy installed equipment (e.g. cooling unit) as a closing aid.
For attaching to the tubular door frame.

| For | Packs of | **Model No.** |
|---|---|---|
| 1 VX | 10 pc(s). | **8618.420** |
| 2 VX SE, PC | 10 pc(s). | **4538.000** |

## Shipping brace

**for door VX**

To stabilise the door when transporting from an additional weight load of 15 kg.

**Material:**
– Plastic

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **8618.410** |

## Transport and mounting handle

**for doors VX, VX SE**

For safe installation and removal of the door and during relocation in the workshop.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2415.100** |

## Document clip, magnetic

For simple attachment of installation documentation as a reminder or for flexible accommodation of a wide range of documents, measurement records, test reports etc. May be attached to any magnet-compatible surface via a permanent magnet.

**Material:**
– Plastic

**Colour:**
– Clip: Transparent
– Handle pieces: Black

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7950.200** |

## Alternate frame, magnetic

For individual marking or labelling of the existing network infrastructure. The magnetic surface facilitates flexible mounting on all magnet compatible surfaces. Adhesive strips are supplied for non-magnetic surfaces. The maximum size of the labels is 130 x 50 mm.

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **7950.150** |

# Roof/wall mounting

## Roof

### Outdoor housing

**for compact enclosures AX**

- For use outdoors
- For creating an enclosure-within-an-enclosure concept
- Cut-out at the bottom and integrated louvres in the side and base for optimum enclosure ventilation

**Material:**
- Aluminium AlMg3

**Surface finish:**
- Powder-coated

**Note:**
- Depending on the application/environment, a sheet steel or stainless steel enclosure may be built into the housing

| Housing W x H x D mm | For AX enclosures W x H x D mm | Packs of | ModelNo. |
|---|---|---|---|
| 421 x 550 x 308 | 300 x 400 x 210 | 1 pc(s). | **9792.055** |
| 621 x 650 x 308 | 500 x 500 x 210 | 1 pc(s). | **9792.065** |
| 721 x 750 x 448 | 600 x 600 x 350 | 1 pc(s). | **9792.075** |

**Also required:**

- Wall mounting bracket for AX, sheet steel, see page 966
  or wall mounting bracket for AX, stainless steel, see page 967

**Accessories:**

- Pole clamp, see page 968

### Protective roof

**for AX**

The sloping protective roof reliably protects the enclosure from standing moisture and other soiling from above.

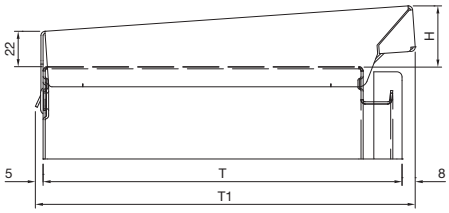
**Material:**
- Stainless steel 1.4301 (AISI 304)

**Surface finish:**
- Brushed, grain size 240

**Supply includes:**
- Assembly parts

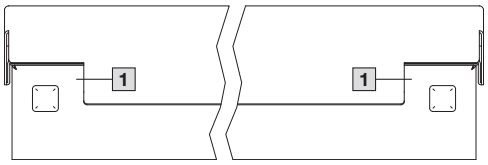
| For | | H mm | Model No. |
|---|---|---|---|
| Enclosure width mm | Enclosure depth T mm | | |
| 300 | 210 | 37 | **2361.010** |
| 380 | 210 | 37 | **2472.010** |
| 500 | 210 | 37 | **2362.010** |
| 600 | 210 | 37 | **2473.010** |
| 600 | 350 | 47 | **2476.010** |
| 760 | 300 | 43 | **2474.010** |
| 800 | 300 | 43 | **2475.010** |
| 1000 | 300 | 43 | **2363.010** |

Side view




T1 = Enclosure depth T + 13 mm

Rear view




1 Recess for wall mounting bracket

## Dust guard trim

**for AX, KX**

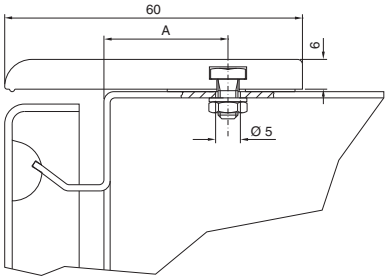
To protect against deposits on the upper edge of the door and between the enclosure and the door/cover. Cut the dust guard trim to length according to the enclosure width. Drill the enclosure and fit the dust guard trim using the adhesive strips and screws.

**Material:**
– Plastic, UV-resistant

**Colour:**
– Similar to RAL 7024

**Supply includes:**
– Assembly parts

| For enclosure | Length mm | A mm | **Model No.** |
|---|---|---|---|
| AX | 1200 | 21.5 | **2426.500** |
| KX | | 21 | |



## Dust guard trim

**for VX, VX SE**

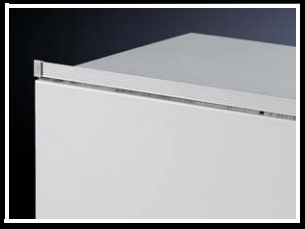
To protect against dust deposits on the upper edge of the door and between the door and upper horizontal enclosure section. The dust guard trim provides space for texts or company logos.

**Colour:**
– RAL 7035

**Supply includes:**
– Clear plastic strip for text labels (height 29.5 mm)
– Assembly parts

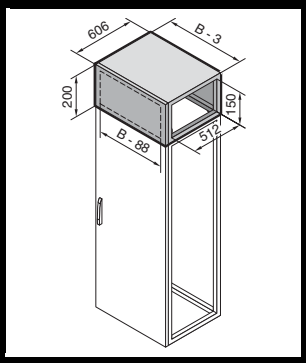
| Length mm | **Model No.** |
|---|---|
| 600 | **2424.100** |
| 800 | **2425.100** |
| 1000 | **2427.100** |
| 1200 | **2426.100** |

**Note:**
– Also suitable for use in conjunction with top baying cover, see page 915



# Roof/wall mounting

## Roof




### Top-mounting module

As a cable chamber for cable infeed from above, or for power distribution with busbar systems across bayed enclosures. The cover plate supplied as standard is used to finish off at the top. The enclosure height is increased by 200 mm with the top-mounting module fitted. Installation accessories for top and bottom, see diagram and explanations below.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Spray-finished, textured paint

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

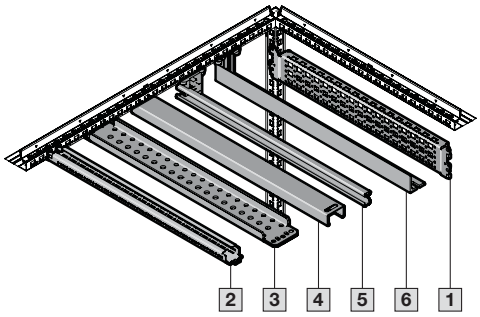
**Protection category NEMA:**
– NEMA 12

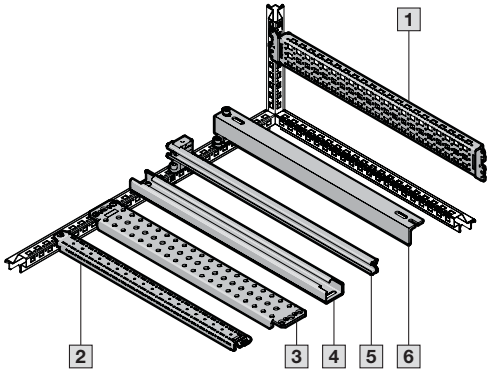
| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width (B) mm | Depth mm | | |
| 600 | 600 | 1 pc(s). | **8618.501** |
| 800 | 600 | 1 pc(s). | **8618.511** |
| 1000 | 600 | 1 pc(s). | **8618.521** |
| 1200 | 600 | 1 pc(s). | **8618.531** |

**Supply includes:**
– 1 frame module
– 2 trim panels (front and rear)
– 8 retainers with automatic potential equalisation
– Assembly parts

**Also required:**

– Side panel for top-mounting module 8618.541, see page 960




**Accessories:**

| Description | Page |
|---|---|
| 1 Punched section with mounting flange 23 x 64 mm (for the inner level) | 991 |
| 2 Punched rail 18 x 39 mm | 993 |
| 3 Support rail 75 x 20 mm | 996 |
| 4 Support rail 48 x 26 mm | 996 |
| 5 C rail 30/15 | 996 |
| 6 Cable clamp rail | 1059 |

### Side panel

**for top-mounting module**
To finish off the side of a top-mounting module or bayed suite.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Spray-finished, textured paint

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **8618.541** |

## Roof plate IP 55, solid

**for VX, VX IT**
For enclosures without roof plate and in exchange for the standard roof.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Textured paint

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Assembly parts

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 400 | 600 | 1 pc(s). | **9681.646** |
| 400 | 800 | 1 pc(s). | **9681.648** |
| 600 | 600 | 1 pc(s). | **9681.666** |
| 600 | 800 | 1 pc(s). | **9681.668** |
| 600 | 1000 | 1 pc(s). | **9681.660** |
| 600 | 1200 | 1 pc(s). | **9681.662** |
| 800 | 600 | 1 pc(s). | **9681.686** |
| 800 | 800 | 1 pc(s). | **9681.688** |
| 800 | 1000 | 1 pc(s). | **9681.680** |
| 800 | 1200 | 1 pc(s). | **9681.682** |

**Accessories:**

– Pressure stoppers, see page 962
– Eyebolt, see page 964

## Roof plate IP 2X with ventilation hole

**for VX, VX IT**
For enclosures without roof plate and in exchange for the standard roof.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Textured paint

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 2X

**Supply includes:**
– Assembly parts

| For enclosures | | Build height mm | Packs of | Model No. |
|---|---|---|---|---|
| Width mm | Depth mm | | | |
| 400 | 600 | 72 | 1 pc(s). | **9681.846** |
| 400 | 800 | 72 | 1 pc(s). | **9681.848** |
| 600 | 600 | 72 | 1 pc(s). | **9681.866** |
| 600 | 800 | 72 | 1 pc(s). | **9681.868** |
| 800 | 600 | 72 | 1 pc(s). | **9681.886** |
| 800 | 800 | 72 | 1 pc(s). | **9681.888** |
| 1000 | 600 | 72 | 1 pc(s). | **9681.806** |
| 1000 | 800 | 72 | 1 pc(s). | **9681.808** |
| 1200 | 600 | 72 | 1 pc(s). | **9681.826** |
| 1200 | 800 | 72 | 1 pc(s). | **9681.828** |

## Roof plate for cable entry glands

**for VX, VX IT**
For enclosures without roof plate and in exchange for the standard roof.

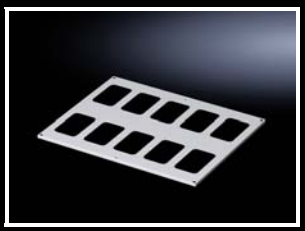
**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Textured paint

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| For enclosures | | Required no. of glands | Packs of | Model No. |
|---|---|---|---|---|
| Width mm | Depth mm | | | |
| 400 | 600 | 3 | 1 pc(s). | **9681.546** |
| 400 | 800 | 4 | 1 pc(s). | **9681.548** |
| 600 | 400 | 2 | 1 pc(s). | **9681.564** |
| 600 | 600 | 4 | 1 pc(s). | **9681.566** |
| 600 | 800 | 8 | 1 pc(s). | **9681.568** |
| 800 | 600 | 8 | 1 pc(s). | **9681.586** |
| 800 | 800 | 8 | 1 pc(s). | **9681.588** |
| 850 | 400 | 3 | 1 pc(s). | **9681.594** |
| 850 | 600 | 6 | 1 pc(s). | **9681.596** |
| 1100 | 400 | 4 | 1 pc(s). | **9681.514** |
| 1100 | 600 | 8 | 1 pc(s). | **9681.516** |



**Also required:**

– Cable entry gland, see page 962
– Eyebolt, see page 964

# Roof/wall mounting

## Roof

### Pressure stoppers

**for roof plate**
For converting the IP 55 roof plate into a roof plate with pressure relief function. The pressure relief function is essential for compliance with health and safety regulations for arc-proofing to IEC/TR 61 641. After fitting the pressure stopper, a protection category of IP 54 is achieved.

**Material:**
– Polyamide

**Supply includes:**
– 2 warning stickers

**Note:**
– 2 pressure stoppers and 1 warning sticker are required for one roof plate
– The arc-proofing compliance limits are dependent on the busbar system used

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **9674.790** |

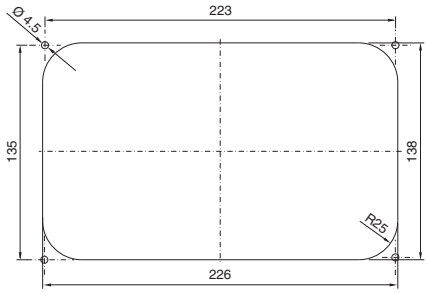
### Cable entry gland

**for roof plate**
For simple, secure cable entry in the roof zone.

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Seal




Cut-out dimensions for 9665.750 to 9665.785

| Version | Material | Width mm | Depth mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 14 x M25/32 | Insulating material | 250 | 160 | 1 pc(s). | **9665.750** |
| 2 x M25/32/40, 1 x M32/40/50, 2 x M40/50/63 | Insulating material | 250 | 160 | 1 pc(s). | **9665.760** |
| With sealing membranes 32 x Ø 7 – 16 mm, 4 x Ø 10 – 20 mm, 3 x Ø 14 – 26 mm | Insulating material | 250 | 160 | 1 pc(s). | **9665.770** |
| With entry fittings up to Ø 66 mm | Insulating material | 250 | 160 | 1 pc(s). | **9665.780** |
| Solid | Sheet steel, spray-finished | 250 | 160 | 4 pc(s). | **9665.785** |

## Roof plate, two-piece

**for cable entry**
**for VX, VX IT**
In exchange for the standard roof. Equipped with a sliding angular bracket in the rear section. Rubber cable clamp strip on both sides for attaching cable bundles and bunched cables.
Due to the symmetrical design of the VX frame, side cable entry can also be achieved by rotating the roof plate. The two-piece design allows convenient retrofitting.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 600 | 600 | 1 pc(s). | **7826.665** |
| 600 | 800 | 1 pc(s). | **7826.685** |
| 600 | 1000 | 1 pc(s). | **7826.605** |
| 800 | 600 | 1 pc(s). | **7826.865** |
| 800 | 800 | 1 pc(s). | **7826.885** |
| 800 | 1000 | 1 pc(s). | **7826.805** |
| 800 | 1200 | 1 pc(s). | **7826.825** |

**Protection category IP to IEC 60 529:**
– IP 20

**Supply includes:**
– Assembly parts

## Brush kit for cable entry in the roof

**for TE**
For cable entry in the roof plate.

**Benefits:**
– For simple top-mounting on the cut-out edge

**Material:**
– Plastic support with brushes
– Brush strip: Plastic UL 94-V0
– Bristles: Plastic UL 94-HB

| For enclosure width mm | Bristle length mm | Width mm | Length mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 600 | 30 | 19 | 390 | 2 pc(s). | **7888.610** |
| 800 | 30 | 19 | 590 | 2 pc(s). | **7888.612** |

## Cable organiser

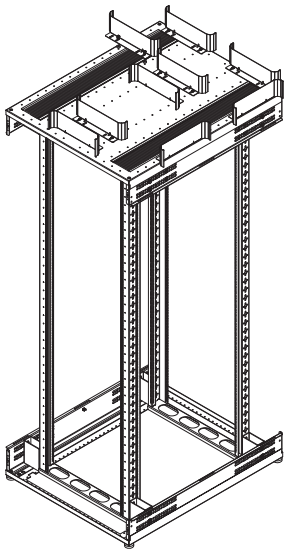
**for TE open**
Cable routing plate for targeted routing of cables.

**Applications:**
– Optionally on the roof plate of the TE open

**Material:**
– Sheet steel, spray-finished

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **7888.950** |



Further technical information available on the Internet.

# Roof/wall mounting

## Roof

### Spacers

**for roof plate**
To raise the roof for ventilation purposes, in three different heights.

Thread: M12

**Material:**
– Hexagonal sectional steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Height mm | Packs of | Model No. |
|---|---|---|
| 10 | 4 pc(s). | **2422.000** |
| 20 | 4 pc(s). | **2423.000** |
| 50 | 4 pc(s). | **7967.000** |

### Eyebolt

**for VX, VX SE**
For transporting enclosures by crane.

Thread: M12

**Supply includes:**
– 4 eyebolts M12
– 4 serrated sealing washers A 12.5

| Material | Packs of | Model No. |
|---|---|---|
| Sheet steel, zinc-plated, C 15E | 4 pc(s). | **4568.000** |
| Stainless steel 1.4301 (AISI 304) | 4 pc(s). | **4568.500** |

### Eyebolt

**for AX**
For crane transportation of enclosures, with reinforcement plate to be inserted underneath.

Thread: M12

**Supply includes:**
– 2 eyebolts
– 2 reinforcement plates

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2509.010** |

## Wall mounting bracket

**for AX sheet steel, KX sheet steel, AX IT, EL**
For the attachment of sheet steel enclosures.

**Benefits:**
– Screw-fastened directly from the rear with a self-tapping screw in the enclosure eyelet

**Supply includes:**
– Assembly parts

| Material | Wall distance mm | Packs of | **Model No.** |
|---|---|---|---|
| Sheet steel, zinc-plated | 10 | 4 pc(s). | **1590.010** |

## Wall mounting bracket

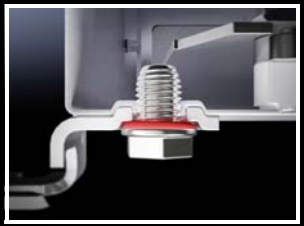
**for AX stainless steel, KX stainless steel, stainless steel switch housing**
For the attachment of stainless steel enclosures.

**Supply includes:**
– Assembly parts

**Note:**
– For hygiene reasons, and in view of the protection category, the stainless steel enclosures do not have any drilled holes for the wall mounting bracket.

| Material | Wall distance mm | Packs of | **Model No.** |
|---|---|---|---|
| Stainless steel 1.4301 (AISI 304) | 10 | 4 pc(s). | **1594.010** |

## Wall mounting



### Wall mounting bracket

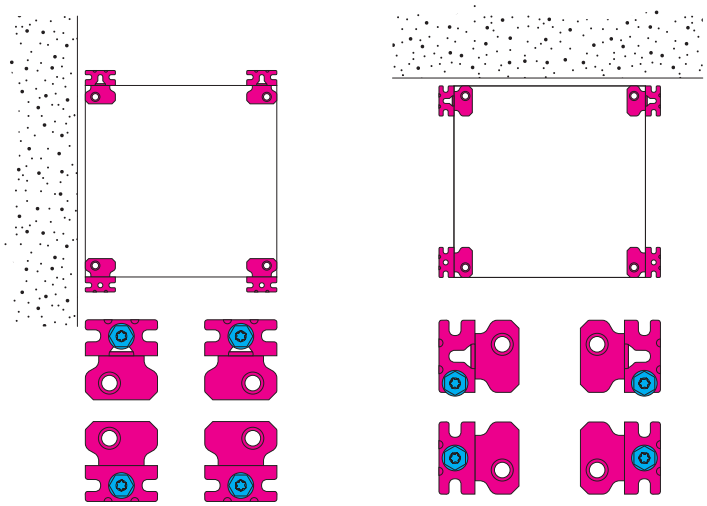
**for AX sheet steel, KX sheet steel, AX IT, EL**
Ideal for convenient one-person assembly of wall-mounted enclosures, even in confined spaces.

**Benefits:**
- Screw-fastened directly from the rear with a self-tapping screw in the enclosure eyelet
- Simply suspend the wall mounting bracket 2508.020, which is equipped with an additional suspension contour, from a screw in the wall
- Different mounting positions allow the wall mounting bracket to be tailored to local conditions on site
- If necessary, the support may be finished with a stylish cover cap
- Additional option of attaching with a nut for dynamic applications

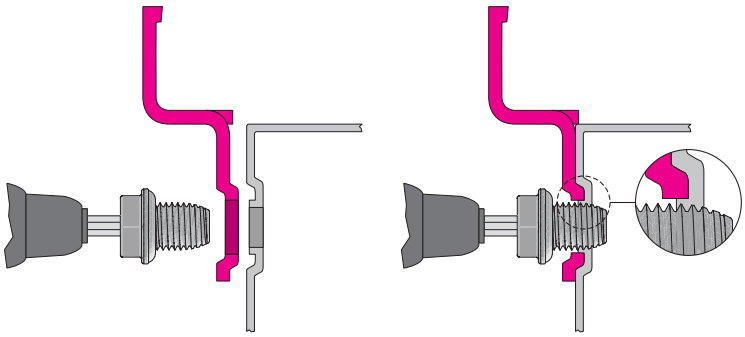
**Supply includes:**
- Wall mounting bracket
- Cover cap
- Assembly parts

| Material | Wall distance mm | Packs of | **Model No.** |
|---|---|---|---|
| Sheet steel, zinc-plated | 20 | 4 pc(s). | **2508.020** |
| | 40 | 4 pc(s). | **2503.020** |

**Sample applications**



Attachment with self-tapping screw



## Wall mounting bracket

**for AX stainless steel, KX stainless steel**

For the attachment of AX and KX stainless steel enclosures.

**Benefits:**
- Simply suspend the wall-mounted bracket from a screw in the wall
- Different mounting positions allow the wall mounting bracket to be tailored to local conditions on site
- If necessary, the support may be finished with a stylish cover cap

**Supply includes:**
- Wall mounting bracket
- Cover cap
- Assembly parts

**Note:**
- For hygiene reasons, and in view of the protection category, the stainless steel enclosures do not have any drilled holes for the wall mounting brackets

| Material | Wall distance mm | Packs of | **Model No.** |
|---|---|---|---|
| Stainless steel 1.4301 (AISI 304) | 20 | 4 pc(s). | **2433.010** |
| Stainless steel 1.4404 (AISI 316L) | 20 | 4 pc(s). | **2433.510** |

## Wall angle

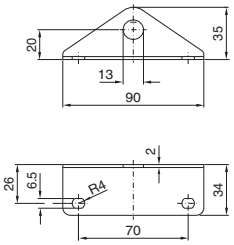
**for AX, KX, AX IT**

For the attachment of sheet steel and stainless steel enclosures.

**Supply includes:**
- Assembly parts for mounting on the enclosure

**Note:**
- Additional holes required in the enclosure

| Material | Colour | Packs of | **Model No.** |
|---|---|---|---|
| Sheet steel | RAL 7035 | 4 pc(s). | **2505.510** |
| Stainless steel 1.4301 (AISI 304) | – | 4 pc(s). | **2583.010** |



## Wall bracket

**for VX, VX SE, VX IT**

For attaching enclosures with a shallow depth and e.g. heavy components on the door or a built-in swing frame, to a wall at the top.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| Packs of | **Model No.** |
|---|---|
| 4 pc(s). | **4595.000** |

## Wall mounting

### Pole clamp

**for AX, KX, AX plastic, AX IT**
For reliable, convenient fastening to round or square poles.

For pole diameter / size:
– Ø from 40 to 170 mm
– □ from 50 to 150 mm

**Material:**
– Mounting angles, clamping section: Sheet steel
– Clamping strap: Stainless steel 1.4301 (AISI 304)

**Surface finish:**
– Mounting angle, clamping section: Zinc-plated

**Supply includes:**
– 2 mounting angles, 600 mm long
– 4 clamping sections
– 2 clamping straps
– 4 clamping brackets
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2584.100** |

**Note:**
– The pole clamp cannot be used in conjunction with a protective roof for AX

### Enclosure connectors

**Adjustable**
Between command panels, terminal boxes, compact enclosures and horizontal or vertical surfaces. Pre-mount the connector halves on both sides, screw together and secure with a locking screw, and/or adjust the angle of rotation.

**Rotation range:**
– ±105° adjustable in 7.5° stepped increments

**Material:**
– Die-cast zinc

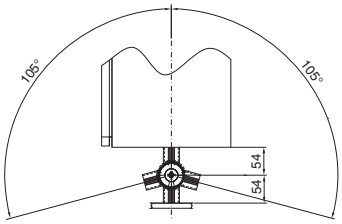
**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts for both sides

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **6016.200** |

**Note:**
– The locking screws may be exchanged for standard, commercially available clamping levers (M10 x 50 mm)



## Frame connector, adjustable

**for Comfort Panel**
Between the command panel and keyboard housing and horizontal or vertical surfaces.

**Rotation range:**
– Adjustable in 8° stepped increments, see drawing

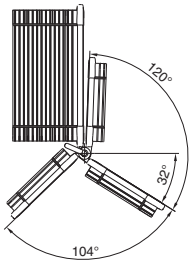
**Material:**
– Die-cast zinc

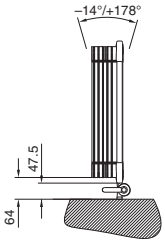
**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7024

**Supply includes:**
– Assembly parts and clamping levers for both sides

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **6005.500** |



## Wall mounting

**Vertically hinged**
Between the Compact Panel and horizontal or vertical surfaces.

**Rotation range:**
– 180° adjustable on a 7.2° pitch pattern

**Material:**
– Wall mounting: Sheet steel
– Knurled screw: Steel with plastic knurled handle

**Supply includes:**
– Knurled screw and assembly parts for mounting on the Compact Panel

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **6341.000** |

## Mounting plates

### Mounting plate

**for terminal boxes KX, bus enclosures KX, terminal boxes HD, Ex enclosures**
For component installation outside of the enclosure. Assembly screws included as accessories with the enclosure.

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Zinc-plated

**Accessories:**
– Self-tapping screws 2487.000, see page 1004

**Possible alternative:**
– Support rail, see page 997

| For size mm | For Model No. | **Model No.** |
|---|---|---|
| 150 x 150 | 1500.000, 1514.000, 1560.000, 1564.000, 1670.600, 1671.600, 9301.000 | **1560.800** |
| 200 x 150 | 1528.000, 1529.000 | **1575.800** |
| 300 x 150 | 1501.000, 1515.000, 1530.000, 1561.000, 9302.000 | **1561.800** |
| 400 x 150 | 1589.000 | **1576.800** |
| 200 x 200 | 1502.000, 1516.000, 1562.000, 1565.000, 1672.600, 9303.000 | **1562.800** |
| 300 x 200 | 1503.000, 1517.000, 1531.000, 1563.000, 1566.000, 1674.600, 1583.000, 9304.000 | **1563.800** |
| 400 x 200 | 1504.000, 1518.000, 1532.000, 1568.000, 1585.000, 1610.000, 1675.600, 9305.000 | **1564.800** |
| 500 x 200 | 1505.000, 1533.000 | **1565.800** |
| 600 x 200 | 1506.000, 1586.000 | **1566.800** |
| 800 x 200 | 1527.000 | **1574.800** |
| 300 x 300 | 1507.000, 1535.000, 1567.000, 9306.000 | **1567.800** |
| 400 x 300 | 1508.000, 1536.000, 1569.000, 1611.000, 1676.600 | **1568.800** |
| 500 x 300 | 1509.000, 1537.000 | **1569.800** |
| 600 x 300 | 1510.000, 1538.000, 1612.000 | **1570.800** |
| 800 x 300 | 1613.000 | **1570.810** |
| 400 x 400 | 1511.000, 1539.000 | **1571.800** |
| 600 x 400 | 1512.000, 1540.000 | **1572.800** |
| 800 x 400 | 1513.000, 1541.000 | **1573.800** |

## Mounting plate infill

**for VX**

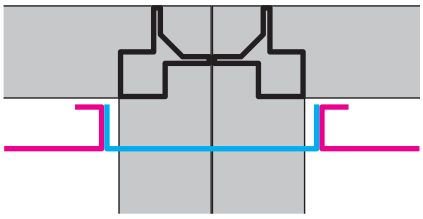
For a continuous mounting surface in bayed suites where the mounting plate is set forward.

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure height mm | Packs of | Model No. |
|---|---|---|
| 1800 | 1 pc(s). | **4590.700** |
| 2000 | 1 pc(s). | **4591.700** |
| 2200 | 1 pc(s). | **4592.700** |

| Detail | Mounting position of mounting plate | Benefits |
|---|---|---|
|  | Set forward from the enclosure frame on a 25 mm pitch pattern<br>Position:<br>-25 mm<br>-50 mm<br>-75 mm<br>etc. | The usable mounting width is enlarged by up to 25%, depending on the enclosure selection. |

## Mounting plate attachment

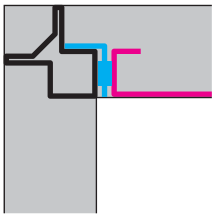
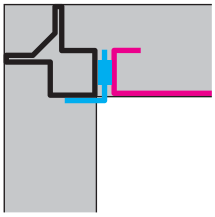
**Type A, for VX**

To reduce vibrations in the mounting plate, e.g. in dynamic applications and when transporting with heavy assemblies. Simple mounting directly on the enclosure frame. During installation, the mounting plate latches automatically into the mounting plate attachment. The mounting plate attachment type A keeps the front of the mounting plate completely free for unrestricted use. Populated mounting plates may be mounted from the front without dismantling the rear panel.

| Packs of | Model No. |
|---|---|
| 5 pc(s). | **8617.353** |

**Material:**
– Spring steel

**Supply includes:**
– Safety clip
– Assembly parts

| Detail | Mounting position of mounting plate | Installation option | Attachment to the mounting plate |
|---|---|---|---|
|  | Flush with the enclosure frame<br>Position:<br>± 0 mm,<br>fitted at the rear | Fitted on the left and right of the mounting plate | Latched home |
|  | Flush with the enclosure frame<br>Position:<br>± 0 mm,<br>fitted at the front | Fitted on the left and right of the mounting plate at half height | Latched home |

## Mounting plate attachment

**Type B, for VX**

To reduce vibrations in the mounting plate, e.g. in dynamic applications and when transporting with heavy assemblies. Simple mounting directly on the enclosure frame or on the punched section with mounting flange 23 x 64 mm. The mounting plate may optionally be screw-fastened with the mounting plate attachment, or form-fit connected. Depending on the installation situation, the mounting plate attachment type B either minimally surrounds the mounting plate, or keeps the front of the mounting plate completely free for unrestricted use. May be mounted from the front or the rear, depending on the situation.

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **8617.351** |

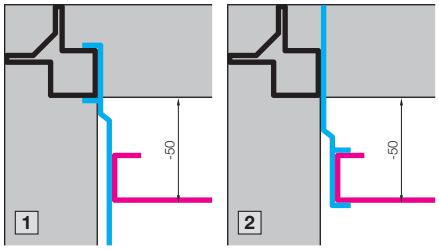
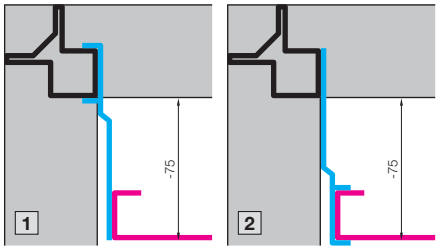
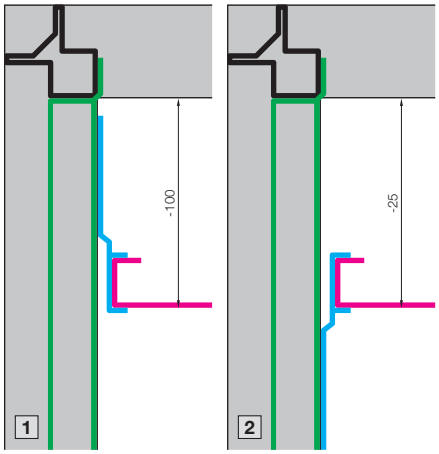
**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated, passivated

**Supply includes:**
– Assembly parts

**Accessories:**

– Punched section with mounting flange 23 x 64 mm for the inner level, see page 991

| Detail | Mounting position of mounting plate | Installation option | Attachment to the mounting plate |
|---|---|---|---|
|   | Set forward from the enclosure frame<br>Position: -50 mm | 1 2 pc(s). per enclosure/ mounting plate, at the side, half-way up the mounting plate | Screw-fastened |
| | Set forward from the enclosure frame<br>Position: -50 mm | 2 All-round between the enclosure and mounting plate in any quantity | Connected |
|   | Set forward from the enclosure frame<br>Position: -75 mm | 1 2 pc(s). per enclosure/ mounting plate, at the side, half-way up the mounting plate | Screw-fastened |
| | Set forward from the enclosure frame<br>Position: -75 mm | 2 All-round between the enclosure and mounting plate in any quantity | Connected |
|   | Set forward from the enclosure frame<br>1 Position: -100 mm or larger<br>2 Position: -25 mm or larger | All-round between the enclosure and mounting plate in any quantity. One punched section with mounting flange 23 x 64 mm to match the enclosure depth is required for each mounting plate attachment. | Connected |

## Mounting plate attachment

**Type C, for VX**

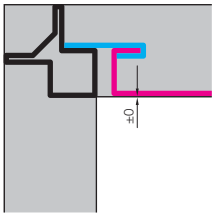
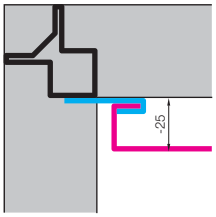
To reduce vibrations in the mounting plate, e.g. in dynamic applications and when transporting with heavy assemblies. Simple mounting directly on the enclosure frame. The mounting plate may be form-fit connected and clamped with the mounting plate attachment. The mounting plate attachment type C keeps the front of the mounting plate completely free for unrestricted use. With the mounting plate installed and the rear panel dismantled, it can be fitted from the rear.

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **8617.352** |

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated, passivated

**Supply includes:**
- Assembly parts

| Detail | Mounting position of mounting plate | Installation option | Attachment to the mounting plate |
|---|---|---|---|
|   | Flush with the enclosure frame<br>Position:<br>± 0 mm | All-round between the enclosure and mounting plate in any quantity | Connected, clamped |
|   | Set forward from the enclosure frame<br>Position:<br>-25 mm | All-round between the enclosure and mounting plate in any quantity | Connected, clamped |

## VX installation kit

**for back-to-back mounting plates**

The minimum spacing between the mounting plates facilitates maximum assemblies on both mounting plates.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated, passivated

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8617.360** |

**Also required:**
- Second mounting plate, to fit the enclosure dimensions, refer to Rittal list of spares at www.rittal.com

**Accessories:**
- For enclosures with a rear panel, following may be used for optimum access to the rear mounting plate:
  Glazed door instead of rear panel, see page 917
  Lockable and adjacent door 8618.120, for enclosure dimensions W x H = 800 x 2000 mm, see page 917

## Mounting plates

### Multi-function mounting kit VX

**for mounting plate**

**For installing the mounting plate from the rear of the enclosure**
- Mounting position flush with the enclosure frame, position ± 0 mm
- The mounting plate is removable from the front and rear for servicing
- For 20 mm more installation depth in the enclosure
- Mounting position set back behind the enclosure frame, position ±20 mm

**For additional screw-fastening of the mounting plate**
- For all mounting positions

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8617.370** |

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated, passivated

**Supply includes:**
- Assembly parts

### Slide rail

**for mounting plates, for VX, VX SE**

For sliding the mounting plate in from the side. For mounting in a set-forward position.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **8617.400** |
| 800 | 2 pc(s). | **8617.401** |
| 1200 | 2 pc(s). | **8617.402** |

### Cross-brace

**for mounting plates, for VX, VX SE**

Additional horizontal rigidity for vibration damping and/or retrospective stabilisation of wide mounting plates. This brace may also be used as an attachment aid for heavy components.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 2 sections
- 4 clamping sections
- 4 grub screws M10 x 16 mm

| For enclosure width mm | Model No. |
|---|---|
| 1200 | **4333.120** |
| 1600 | **4333.160** |
| 1800 | **4333.180** |

## Partial mounting plate VX

**for VX, VX SE, PC, IW**

To accommodate additional components inside the enclosure. Partial mounting plates are extremely versatile, providing a platform for a diverse range of applications.
For optional installation either upright as a vertical mounting surface, or flat as a horizontal base. For attachment either directly to the enclosure section or, with a set-forward construction, for example, to any mounting level in the enclosure using punched sections with mounting flanges. For multi-level installation one behind the other, partial mounting plates may be vertically hinged, via hinge attachment 8617.650, to allow rapid access to the levels behind.

**Material:**
– Sheet steel, 2.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Note:**
– Depending on the mounting situation, additional parts such as punched sections with mounting flanges may be required, see installation example on page 976

**Also required:**

– For the installation in VX SE, PC, IW: Adaptor rail VX, see page 995

**Accessories:**

– Punched section with mounting flange 18 x 64 mm for the outer level, see page 990
– Punched section with mounting flange 23 x 64 mm for the inner level, see page 991
– Hinge attachment 8617.650, see page 977

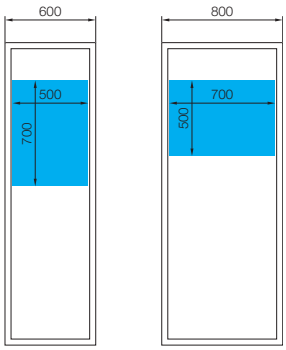
**Installation examples:**
See page 976

| For installation in | | | | | | | | | Door width mm | Dimensions mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enclosure width mm | | | | | Enclosure depth (side) mm | | | | | | | |
| 400 | 600 | 800 | 1000 | 1200 | 400 | 500 | 600 | 800 | | | | |
| ■ | ■ | – | – | – | ■ | – | ■ | – | 600 | 500 x 300 | 1 pc(s). | **8617.510** |
| – | ■ | – | – | – | – | ■ | ■ | – | 600 | 500 x 400 | 1 pc(s). | **8617.520** |
| – | ■ | – | – | – | – | – | ■ | – | 600 | 500 x 500 | 1 pc(s). | **8617.530** |
| – | ■ | ■ | – | – | – | – | ■ | ■ | 600 | 500 x 700 | 1 pc(s). | **8617.540** |
| – | ■ | – | – | – | – | – | ■ | – | 600 | 500 x 775 | 1 pc(s). | **8617.550** |
| ■ | – | ■ | – | – | ■ | – | – | ■ | 800 | 700 x 300 | 1 pc(s). | **8617.560** |
| – | – | ■ | – | – | – | ■ | – | ■ | 800 | 700 x 400 | 1 pc(s). | **8617.570** |
| – | – | ■ | – | – | – | – | – | ■ | 800 | 700 x 700 | 1 pc(s). | **8617.580** |
| ■ | – | – | ■ | – | ■ | – | – | – | 1000 | 900 x 300 | 1 pc(s). | **8617.590** |
| – | – | – | ■ | – | – | ■ | – | – | 1000 | 900 x 400 | 1 pc(s). | **8617.600** |
| – | ■ | – | ■ | – | – | – | ■ | – | 1000 | 900 x 500 | 1 pc(s). | **8617.610** |
| ■ | – | – | – | ■ | ■ | – | – | – | – | 1100 x 300 | 1 pc(s). | **8617.620** |
| – | – | – | – | ■ | – | ■ | – | – | – | 1100 x 400 | 1 pc(s). | **8617.630** |
| – | ■ | – | – | ■ | – | – | ■ | – | – | 1100 x 500 | 1 pc(s). | **8617.640** |

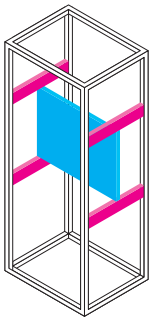
## Mounting plates

### Partial mounting plates VX, installation examples

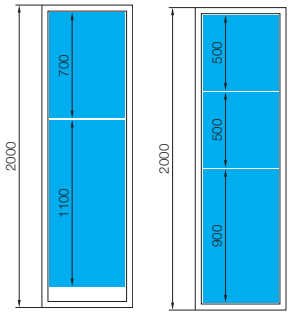
**Full installation in the width/depth**
Choose a partial mounting plate 100 mm smaller than the nominal size of the enclosure.
For example, a partial mounting plate with dimensions 500 x 700 mm can be installed in enclosures with nominal dimensions of 600 and 800 mm.




**Full installation, set forward in the width/depth**
For set-forward installation, punched sections with mounting flanges are required for the inner or outer mounting level, according to the enclosure depth.



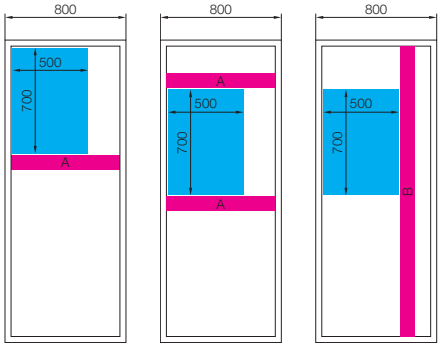
**Full installation in the height**
The sum total of partial mounting plates 100 mm should be smaller than the nominal size of the enclosure. For example, in a 2000 mm high enclosure, the sum total of partial mounting plates should not exceed 1900 mm.



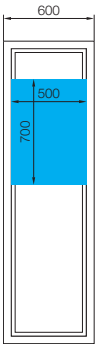

**Partial installation**

**Also required:**

- Punched section with mounting flange 23 x 64 mm **(A)** to match the enclosure width or depth, see page 991
- Punched section with mounting flange 23 x 64 mm **(B)** to match the enclosure height, see page 991




**Door installation**
Choose a partial mounting plate 100 mm smaller than the nominal size of the enclosure.
For example, a partial mounting plate with dimensions 500 x 700 mm can be installed on the tubular door frame of enclosures with a nominal size of 600 mm.



## Hinge attachment

**for partial mounting plate VX**

In conjunction with the mounting kit for swing frames, small, the partial mounting plate VX can be hinged to allow access to the components behind it for servicing.

**Installation options:**
- At the front, on the frame section
- Set back, in the enclosure depth
- At the side, in conjunction with the hinged side panel

**Material:**
- Steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

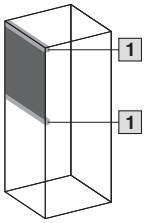
| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8617.650** |

**Also required:**
- Installation kit for swing frame, small, for enclosure width 600 mm (8619.600) or 800 mm (8619.610), see page 1076
- Punched section with mounting flange 23 x 64 mm according to the enclosure depth, see page 991

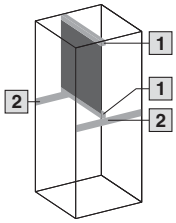
## Examples

**In the highest or lowest position**

Front




Set back

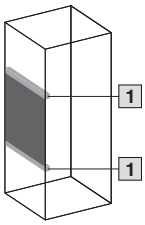



1 Installation kit for swing frame, small

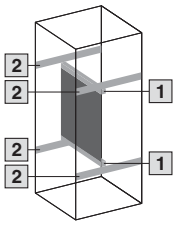
2 Punched section with mounting flange 23 x 64 mm in accordance with the enclosure depth

**In a central position**

Front




Set back



## Mounting plates

### Partial mounting plate holder

**for partial mounting plate VX**

The partial mounting plate may be fitted set back by 20 mm behind the enclosure frame using the partial mounting plate holder, and also fastened directly to the frame from the outside. The partial mounting plate is also removable from the inside for servicing.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated, passivated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **8617.655** |

# Partial mounting plate VX

Provides flexible and individual interior installation,
see page 980

System accessories

## Mounting plates

### Partial mounting plate VX

**for VX, VX SE**

To accommodate additional components inside the enclosure. Partial mounting plates are extremely versatile, providing a platform for a diverse range of applications. They are attached directly to the enclosure section. For individual interior installation, system punchings are additionally provided in the edge fold.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

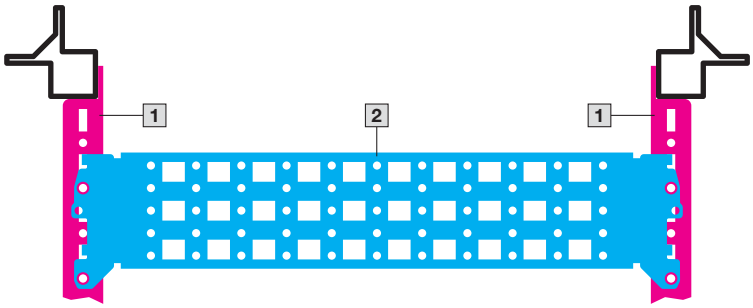
| Dimensions mm | Packs of | Model No. |
|---|---|---|
| 500 x 400 | 1 pc(s). | **8617.660** |
| 500 x 600 | 1 pc(s). | **8617.661** |
| 600 x 400 | 1 pc(s). | **8617.662** |
| 600 x 600 | 1 pc(s). | **8617.663** |
| 800 x 400 | 1 pc(s). | **8617.664** |
| 800 x 600 | 1 pc(s). | **8617.665** |

**Also required:**

– For the installation in VX SE: Adaptor rail VX, see page 995

Outer mounting level

Inner mounting level




1 Partial assembly plate

2 Punched section with mounting flange, 23 x 64 mm

## Transport handle

**for mounting plate,**
**for VX, VX SE**
For use at any given position in the side C-fold.
Benefits include:
– Adapts to users of different heights
– Optimised force transmission
– Simple handling

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2415.500** |

## Mounting plate

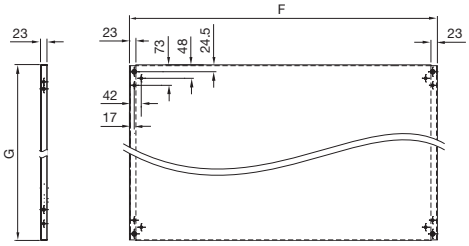
**for Outdoor Basic enclosure**
For the configuration of mounting levels.
The mounting plates are depth-adjustable on a 25 mm pitch pattern.

**Material:**
– Aluminium, 3 mm

**Supply includes:**
– Assembly parts

**Note:**
– For an enclosure width of 1200 mm, partial installation with one or two 600 mm wide mounting plates is possible

| For enclosure | | F mm | G mm | Model No. |
|---|---|---|---|---|
| Width mm | Height mm | | | |
| 600 | 1200 | 499 | 1096 | **9765.092** |
| 800 | 1200 | 699 | 1096 | **9765.095** |
| 1200 | 1200 | 1099 | 1096 | **9765.191** |




## Mounting plate attachment

**for TP one-piece console, TP pedestal**
**for high dynamic loads**
To reduce vibrations in the mounting plate.

**Applications:**
– During transportation with heavy assemblies
– For dynamic applications, if a direct connection between the mounting plate and the enclosure is required for mobile use (e.g. with accompanying enclosures in crane systems, etc.)

Tested as per DIN EN 60 721
Severity 3 M4, with a weight of 150 kg evenly distributed over the mounting plate.

Simply screw-fasten to the existing holes in the mounting plate to pre-assemble for:

1 **Wall mounting from the inside**
Direct using a bracket and wall / support mounted enclosure.

2 **Wall mounting from the outside**
Screws for wall mounting brackets can easily be screwed into the square nut from the outside

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5001.075** |

## Mounting plates

### Partial mounting plate, locatable

**for TP**

For installation in
- Console and desk unit on the interior installation system rails
- Punched sections with mounting flanges or support strips fitted to the side of the pedestal in the depth

For easy mounting on pre-fitted assembly screws. Bayable by screw-fastening at the sides.

**Material:**
- Sheet steel

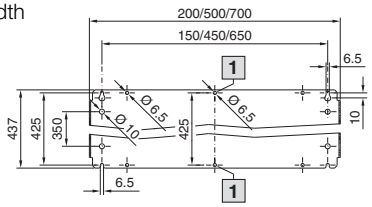
**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 200 | 437 | 1 pc(s). | **6730.310** |
| 500 | 437 | 1 pc(s). | **6730.330** |
| 700 | 437 | 1 pc(s). | **6730.340** |

| For console/desk unit width mm | Max. partial mounting plates that may be installed |
|---|---|
| 600 | 1 x 6730.330 |
| 800 | 1 x 6730.340 |
| 1200 | 2 x 6730.310<br>1 x 6730.340 |
| 1600 | 1 x 6730.330<br>1 x 6730.340 |

1 From width 500 mm

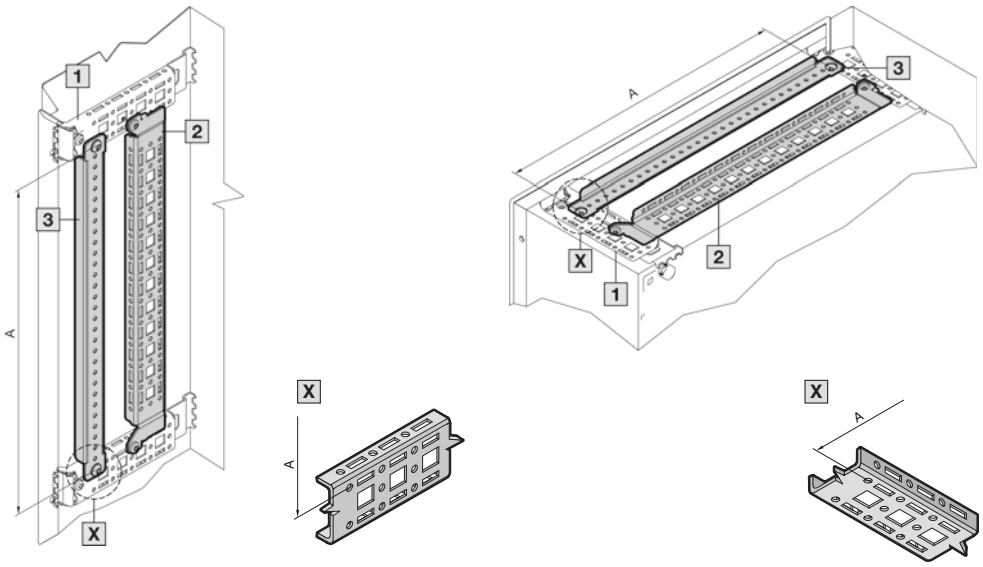


## AX installation examples with system rails

| Preparing for installation | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 Rail for interior installation AX | Packs of | For enclosure depth mm | | | | | Page |
| | | 210 | 250 | 300 | 350 | 400 | |
| **Model No.** | 4 pc(s). | 2393.210 | 2393.250 | 2393.300 | 2393.350 | 2393.400 | 989 |

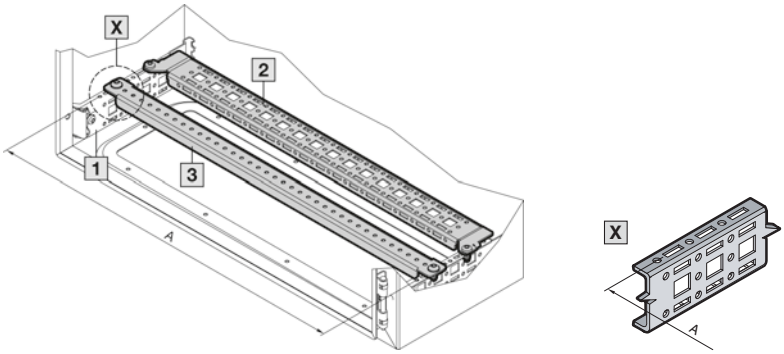
| Installation of support strip and punched section with mounting flange 14 x 39 mm in enclosure height/width | | | | | | | |
|---|---|---|---|---|---|---|---|
| For enclosure height/width mm | A[1] mm | 2 Punched section with mounting flange, 14 x 39 mm | | Page | 3 Support strip | | Page |
| | | Packs of | **Model No.** | | Packs of | **Model No.** | |
| 400 | 275 | 4 pc(s). | 8619.700 | 990 | 20 pc(s). | 4594.000 | 994 |
| 500 | 375 | 4 pc(s). | 8619.710 | | 20 pc(s). | 4309.000 | |
| 600 | 475 | 4 pc(s). | 8619.720 | | 20 pc(s). | 4596.000 | |
| 700 | 575 | 4 pc(s). | 8619.760 | | 20 pc(s). | 8800.130 | |
| 760 | 635 | 4 pc(s). | 8619.790 | | 20 pc(s). | – | |
| 800 | 675 | 4 pc(s). | 8619.730 | | 20 pc(s). | 4598.000 | |
| 1000 | 875 | 4 pc(s). | 8619.750 | | 20 pc(s). | 4599.000 | |
| 1200 | 1075 | 4 pc(s). | 8619.770 | | 20 pc(s). | – | |
| 1,400 | 1275 | 4 pc(s). | 8619.780 | | 20 pc(s). | – | |

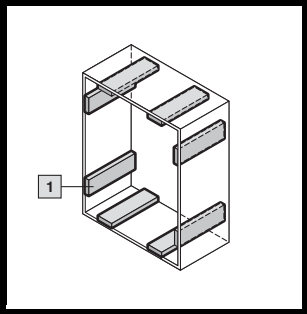
[1] A = Rail mounting distance



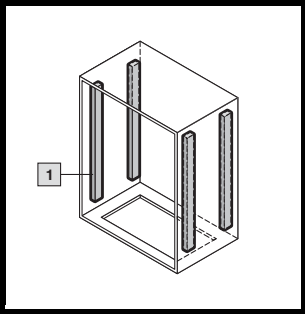

| Installation of support strip and punched section with mounting flange 14 x 39 mm in enclosure width | | | | | | | |
|---|---|---|---|---|---|---|---|
| For enclosure width mm | A[1] mm | 2 Punched section with mounting flange, 14 x 39 mm | | Page | 3 Support strip | | Page |
| | | Packs of | **Model No.** | | Packs of | **Model No.** | |
| 300 | 275 | 4 pc(s). | 8619.700 | 990 | 20 pc(s). | 4594.000 | 994 |
| 400 | 375 | 4 pc(s). | 8619.710 | | 20 pc(s). | 4309.000 | |
| 500 | 475 | 4 pc(s). | 8619.720 | | 20 pc(s). | 4596.000 | |
| 600 | 575 | 4 pc(s). | 8619.760 | | 20 pc(s). | 8800.130 | |
| 700 | 675 | 4 pc(s). | 8619.730 | | 20 pc(s). | 4598.000 | |
| 800 | 775 | 4 pc(s). | 8619.740 | | 20 pc(s). | 4579.000 | |

[1] A = Rail mounting distance





## Rail systems




# TP pedestal/one-piece console
# Installation examples with system rails

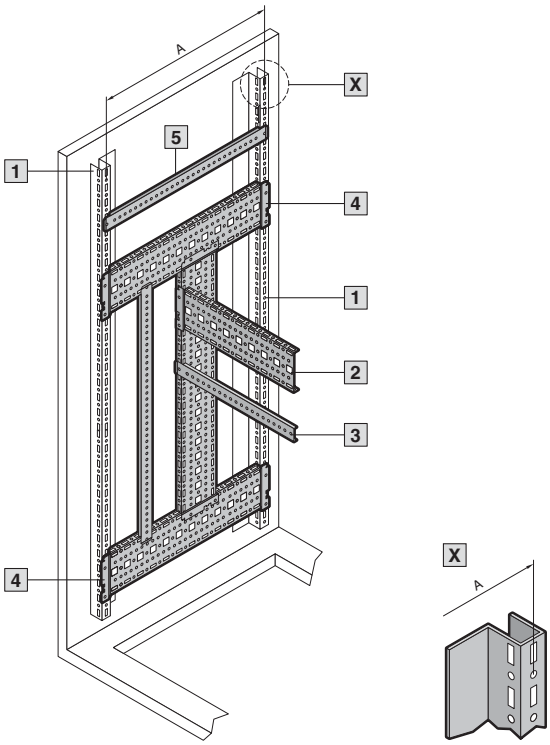
| Preparing for installation | | | | |
|---|---|---|---|---|
| 1 Rail for interior installation | Packs of | For enclosure height mm | | Page |
| | | 675 | 960 | |
| **Model No.** | 4 pc(s). | 5001.050 | 5001.051 | 995 |

| Installation in the width | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Packs of | **Model No.** | | | | | |
| For enclosure width mm | | 600 | 800 | 1000 | 1200 | 1600 | |
| A[1] mm | | 575 | 775 | 975 | 1175 | 1575 | |
| 1 Punched section with mounting flange, 17 x 73 mm | 4 pc(s). | 8612.060 | – | – | – | – | 992 |
| 3 Support strip | 20 pc(s). | 8800.130 | 4579.000 | – | – | – | 994 |

| Installation in the depth | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | For enclosure depth mm | A[1] mm | Packs of | **Model No.** | | | | | |
| 4 Punched section with mounting flange 17 x 73 mm | 400 | 325 | 4 pc(s). | 8612.140 | 8612.140 | 8612.140 | 8612.140 | 8612.140 | 992 |
| | 500 | 425 | 4 pc(s). | 8612.150 | 8612.150 | 8612.150 | 8612.150 | 8612.150 | |
| 5 Support strip | 400 | 325 | 20 pc(s). | 4694.000 | 4694.000 | 4694.000 | 4694.000 | 4694.000 | 994 |
| | 500 | 425 | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 4695.000 | |

| Installation in the height (individual installation e.g. with) | |
|---|---|
| Punched section with mounting flange, 17 x 73 mm | see page 992 |
| Support strip | see page 994 |

[1] A = Rail mounting distance

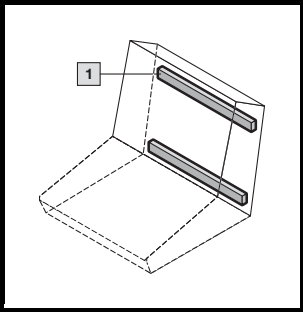


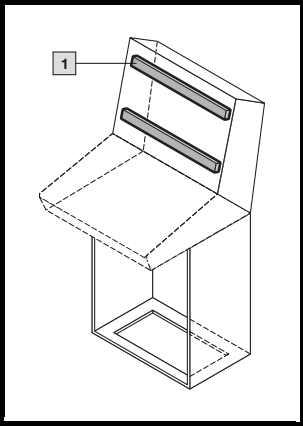
## TP console
## Installation examples with system rails

| Preparing for installation | | | | | | |
|---|---|---|---|---|---|---|
| 1 Rail for interior installation | Packs of | For enclosure width mm | | | | Page |
| | | 600 | 800 | 1200 | 1600 | |
| **Model No.** | 4 pc(s). | 5001.050 | 5001.051 | 5001.053 | 5001.054 | 995 |

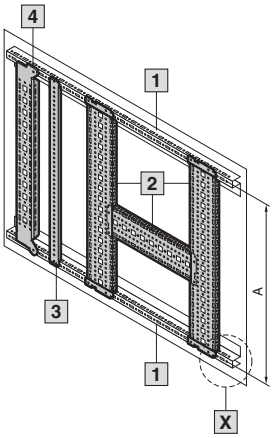
| Installation in the height | | | | | | | |
|---|---|---|---|---|---|---|---|
| | A[1] mm | Packs of | **Model No.** | | | | |
| For enclosure width mm | | | 600 | 800 | 1200 | 1600 | |
| 1 Punched section with mounting flange, 17 x 73 mm | | | | | | | |
| For cover | 375 | 4 pc(s). | 8612.040 | 8612.040 | 8612.040 | 8612.040 | 992 |
| For enclosure | 425 | 4 pc(s). | 8612.150 | 8612.150 | 8612.150 | 8612.150 | 992 |
| 3 Support strip | | | | | | | |
| For cover | 375 | 20 pc(s). | 4309.000 | 4309.000 | 4309.000 | 4309.000 | 994 |
| For enclosure | 425 | 20 pc(s). | 4695.000 | 4695.000 | 4695.000 | 4695.000 | 994 |
| 4 Punched section with mounting flange 14 x 39 mm | | | | | | | |
| For enclosure | 375 | 4 pc(s). | 8619.710 | – | – | – | 990 |

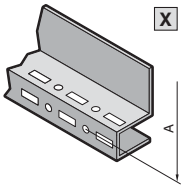
[1] A = Rail mounting distance



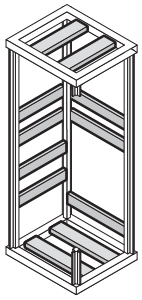

Console/console lid

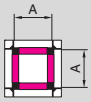
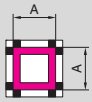
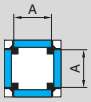
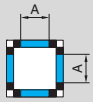


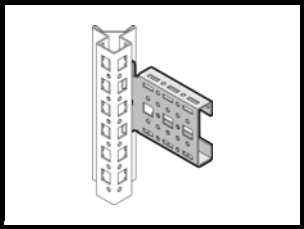



## Rail systems

## VX/ VX SE installation examples with system rails

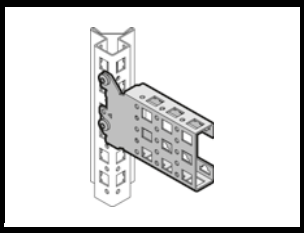


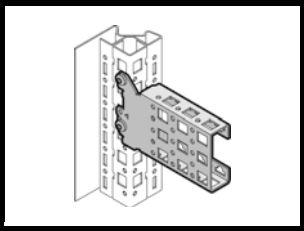
| | Installation in the roof and base frame in the width/depth | | Installation between vertical sections in the width/depth | | | | |
|---|---|---|---|---|---|---|---|
| | | | Inner level | | Outer level | | |
| | VX | VX SE | VX | VX SE | VX | VX SE | |
| | | |  |  |  |  | |



| Punched section with mounting flange 18 x 64 mm, installation in VX | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| For enclosure width/height/depth mm | Packs of | A[1] mm | **Model No.[2]** | | **Model No.** | **Model No.[2]** | | Page |
| 300 | 4 pc(s). | 225 | 8617.000 | – | – | 8617.000 | – | 990 |
| 400 | 4 pc(s). | 325 | 8617.010 | – | – | 8617.010 | – | |
| 500 | 4 pc(s). | 425 | 8617.020 | – | – | 8617.020 | – | |
| 600 | 4 pc(s). | 525 | 8617.030 | – | – | 8617.030 | – | |
| 800 | 4 pc(s). | 725 | 8617.040 | – | – | 8617.040 | – | |
| 1000 | 4 pc(s). | 925 | 8617.050 | – | – | 8617.050 | – | |
| 1200 | 4 pc(s). | 1125 | 8617.060 | – | – | 8617.060 | – | |

[1] A = Rail mounting distance
[2] Only suitable for installation in the roof

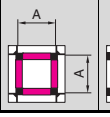
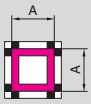
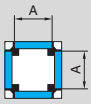
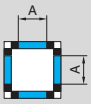




| Punched section with mounting flange 23 x 64 mm, installation in VX, VX SE | | | | | | |
|---|---|---|---|---|---|---|
| For enclosure width/height/depth mm | Packs of | A[1] mm | **Model No.[2]** | **Model No.[2]** | **Model No.** | Page |
| 300 | 4 pc(s). | 225 | 8617.100 | 8617.100 | – | 991 |
| 400 | 4 pc(s). | 325 | 8617.110 | 8617.110 | – | |
| 500 | 4 pc(s). | 425 | 8617.120 | 8617.120 | – | |
| 600 | 4 pc(s). | 525 | 8617.130 | 8617.130 | – | |
| 800 | 4 pc(s). | 725 | 8617.140 | 8617.140 | – | |
| 1000 | 4 pc(s). | 925 | 8617.150 | 8617.150 | – | |
| 1200 | 4 pc(s). | 1125 | 8617.160 | 8617.160 | – | |
| 1,400 | 4 pc(s). | 1325 | 8617.170 | 8617.170 | – | |
| 1600 | 4 pc(s). | 1525 | 8617.180 | 8617.180 | – | |
| 1800 | 4 pc(s). | 1725 | 8617.190 | 8617.190 | – | |
| 2000 | 4 pc(s). | 1925 | 8617.200 | 8617.200 | – | |
| 2200 | 4 pc(s). | 2125 | 8617.210 | 8617.210 | – | |

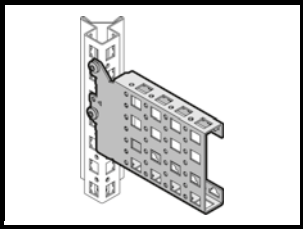
[1] A = Rail mounting distance
[2] For the installation on the vertical section of the VX SE, the adaptor rail VX is required, see page 995

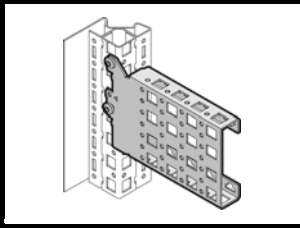
## VX/VX SE installation examples with system rails

| | Installation in the roof and base frame in the width/depth | | Installation between vertical sections in the width/depth | | | | |
|---|---|---|---|---|---|---|---|
| | | | Inner level | | Outer level | | |
| | VX | VX SE | VX | VX SE | VX | VX SE | |
| | | |  |  |  |  | |

| Punched section with mounting flange 23 x 89 mm, stainless steel, installation in VX, VX SE | | | | | | |
|---|---|---|---|---|---|---|
| For enclosure width/depth mm | Packs of | A[1] mm | **Model No.[2]** | **Model No.[2]** | **Model No.** | Page |
| 400 | 2 pc(s). | 325 | 8100.730 | 8100.730 | – | 991 |
| 500 | 2 pc(s). | 425 | 8100.731 | 8100.731 | – | |
| 600 | 2 pc(s). | 525 | 8100.732 | 8100.732 | – | |
| 800 | 2 pc(s). | 725 | 8100.733 | 8100.733 | – | |

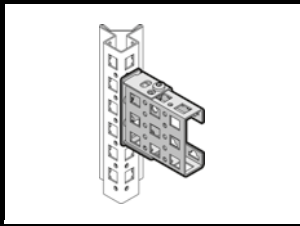
[1] A = Rail mounting distance
[2] For the installation on the vertical section of the VX SE, the adaptor rail VX is required, see page 995

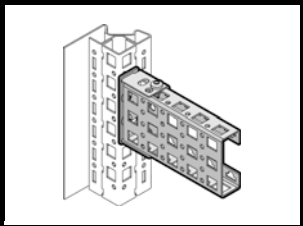




| Punched section without mounting flange 23 x 64 mm, installation in VX, VX SE | | | | | | |
|---|---|---|---|---|---|---|
| For enclosure width/height/depth mm | Packs of | A[1] mm | **Model No.[2]** | **Model No.[2]** | **Model No.** | Page |
| 400 | 2 pc(s). | 325 | 8100.740 | 8100.740 | – | 993 |
| 500 | 2 pc(s). | 425 | 8100.741 | 8100.741 | – | |
| 600 | 2 pc(s). | 525 | 8100.742 | 8100.742 | – | |
| 800 | 2 pc(s). | 725 | 8100.743 | 8100.743 | – | |
| 1200 | 2 pc(s). | 1125 | 8100.745 | 8100.745 | – | |

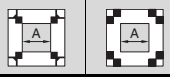
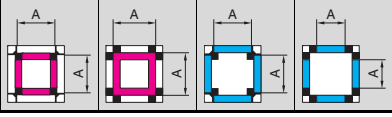
[1] A = Rail mounting distance
[2] For the installation on the vertical section of the VX SE, the adaptor rail VX is required, see page 995

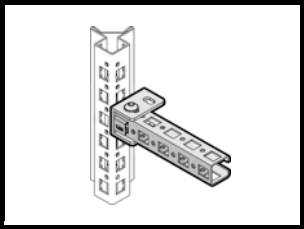


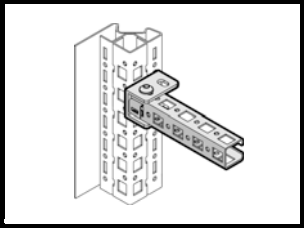


## Rail systems

## VX/VX SE installation examples with system rails

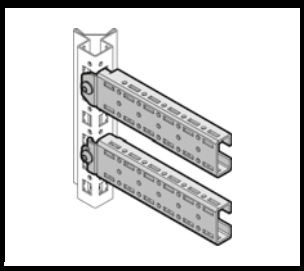
| | Installation in the roof and base frame in the width/depth | | Installation between vertical sections in the width/depth | | | | |
|---|---|---|---|---|---|---|---|
| | | | Inner level | | Outer level | | |
| | VX | VX SE | VX | VX SE | VX | VX SE | |
| |  | |  | | | | |

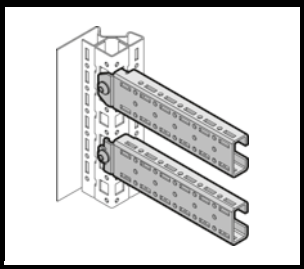




| Punched rail 23 x 23 mm, installation in VX, VX SE | | | | | | |
|---|---|---|---|---|---|---|
| For enclosure width/height/depth mm | Packs of | A[1] mm | **Model No.[2] [3]** | **Model No.[2] [3]** | **Model No.** | Page |
| 400 | 12 pc(s). | 325 | 4169.000 | 4169.000 | – | 994 |
| 500 | 12 pc(s). | 425 | 4170.000 | 4170.000 | – | |
| 600 | 12 pc(s). | 525 | 4171.000 | 4171.000 | – | |
| 800 | 12 pc(s). | 725 | 4172.000 | 4172.000 | – | |
| 1000 | 12 pc(s). | 925 | 4173.000 | 4173.000 | – | |
| 1200 | 6 pc(s). | 1125 | 4174.000 | 4174.000 | – | |
| 1400 | 6 pc(s). | 1325 | 4393.000 | 4393.000 | – | |
| 1600 | 6 pc(s). | 1525 | 4175.000 | 4175.000 | – | |
| 1800 | 6 pc(s). | 1725 | 4176.000 | 4176.000 | – | |
| 2000 | 6 pc(s). | 1925 | 4177.000 | 4177.000 | – | |
| 2200 | 6 pc(s). | 2125 | 4178.000 | 4178.000 | – | |

[1] A = Rail mounting distance
[2] For the installation on the vertical section of the VX SE, the adaptor rail VX is required, see page 995
[3] For the installation in VX and VX SE, the mounting bracket 4182.000 and a U nut are required, see page 1002/1003





| Punched rail 18 x 39 mm, installation in VX, VX SE | | | | | | |
|---|---|---|---|---|---|---|
| For enclosure width/depth mm | Packs of | A[1] mm | **Model No.[2]** | **Model No.[2]** | **Model No.** | Page |
| 400 | 4 pc(s). | 325 | 8617.700 | 8617.700 | – | 993 |
| 500 | 4 pc(s). | 425 | 8617.710 | 8617.710 | – | |
| 600 | 4 pc(s). | 525 | 8617.720 | 8617.720 | – | |
| 800 | 4 pc(s). | 725 | 8617.730 | 8617.730 | – | |

[1] A = Rail mounting distance
[2] For the installation on the vertical section of the VX SE, the adaptor rail VX is required, see page 995

## Rail for interior installation AX

For mounting in the enclosure, no machining required. Suitable for mounting on the side, base and roof using the locators integrated into the enclosure.

Variable with 2 rows of system punchings, creates additional mounting space e.g. for:
- Punched section with mounting flange, 14 x 39 mm
- Enclosure lights
- Door-operated switch
- Door stay
- Cable conduit holder

**Benefits:**
- Only one screw for attaching the rail inside the enclosure
- Including adaptor for door-operated switch
- Compatibility with VX25 accessories
- Enclosure protection category is retained (no machining required)
- Automatic potential equalisation
- May be retro-fitted even with the mounting plate in situ, suitable for installation via gland plates

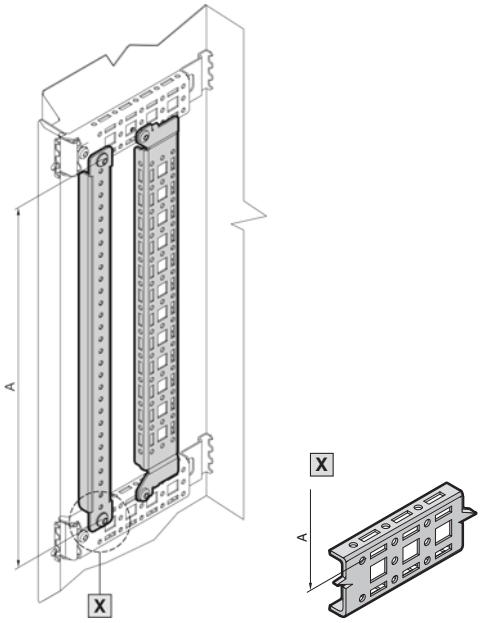
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

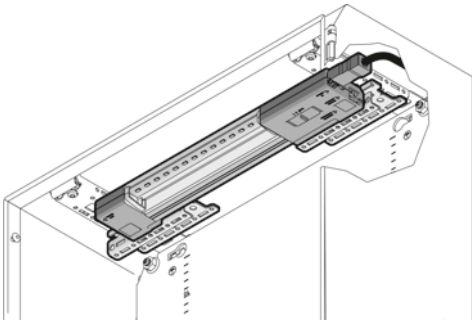
**Also required:**
- For installing LED system light: Mounting bracket for interior installation, see page 1000

| For enclosure depth mm | Packs of | Model No. |
|---|---|---|
| 210 | 4 pc(s). | **2393.210** |
| 250 | 4 pc(s). | **2393.250** |
| 300 | 4 pc(s). | **2393.300** |
| 350 | 4 pc(s). | **2393.350** |
| 400 | 4 pc(s). | **2393.400** |

**Configuration examples:**




A = Rail mounting distance



Mounting of LED system light

## Rail systems

### Punched section with mounting flange, 14 x 39 mm

**for AX**
Interior installation in the enclosure height and width
Locates securely onto the interior installation rail AX.

For the attachment of
– Cable ducts
– Cable conduit holder

**Material:**
– Sheet steel

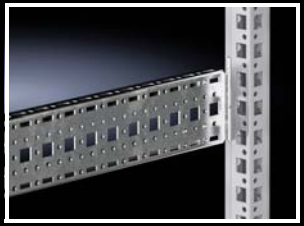
**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure height/width mm | Distance between attachment points mm | Packs of | Model No. |
|---|---|---|---|
| 400 | 275 | 4 pc(s). | **8619.700** |
| 500 | 375 | 4 pc(s). | **8619.710** |
| 600 | 475 | 4 pc(s). | **8619.720** |
| 700 | 575 | 4 pc(s). | **8619.760** |
| 760 | 635 | 4 pc(s). | **8619.790** |
| 800 | 675 | 4 pc(s). | **8619.730** |
| 1000 | 875 | 4 pc(s). | **8619.750** |
| 1200 | 1075 | 4 pc(s). | **8619.770** |
| 1400 | 1275 | 4 pc(s). | **8619.780** |

**Also required:**
– Interior installation rail AX for configuration in the enclosure height and width, see page 989

**Accessories:**
– Screws and self-tapping screws M5 for configuring the customer's own components on the punched section with mounting flange, see page 1004



### Punched section with mounting flange, 18 x 64 mm

**for VX**
For variable, individual interior installation of the enclosure frame on the outer mounting level. Simply locate into the system punchings from the outside and screw-fasten. System punchings on all four sides. With bayed enclosures, the punched sections with mounting flanges may also be fitted from the inside of the enclosure.

**Installation options:**
– On the outer mounting level, on the enclosure section
– On the outer mounting level, between two punched sections with mounting flanges 23 x 64 mm

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| For enclosure width/height/depth mm | Packs of | Model No. |
|---|---|---|
| 300 | 4 pc(s). | **8617.000** |
| 400 | 4 pc(s). | **8617.010** |
| 500 | 4 pc(s). | **8617.020** |
| 600 | 4 pc(s). | **8617.030** |
| 800 | 4 pc(s). | **8617.040** |
| 1000 | 4 pc(s). | **8617.050** |
| 1200 | 4 pc(s). | **8617.060** |

**Accessories:**
– Screws, see page 1004
– Cable tie 2597.000, see page 1061

## Punched section with mounting flange, 23 x 64 mm

**for VX, VX IT, VX SE, AX plastic**

For variable and individual interior installation. Simply locate into punchings and screw-fasten. System punchings on all four sides. With slots at the top and bottom for cage nuts, for attaching your own components via metric screws.

**Installation options:**

VX/VX IT
- On the inner mounting level, on the enclosure section VX

VX SE
- On the vertical section of the VX SE with adaptor rail VX

AX plastic
- In the width and height of the enclosure in conjuction with universal bracket

System accessories
- On identical punched sections with mounting flanges
- In the base/plinth system VX in the width and depth, combined with a base/plinth installation bracket

**Material:**
- Sheet steel

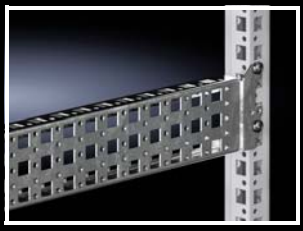
**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width/height/depth mm | Packs of | Model No. |
|---|---|---|
| 300 | 4 pc(s). | **8617.100** |
| 400 | 4 pc(s). | **8617.110** |
| 500 | 4 pc(s). | **8617.120** |
| 600 | 4 pc(s). | **8617.130** |
| 800 | 4 pc(s). | **8617.140** |
| 1000 | 4 pc(s). | **8617.150** |
| 1200 | 4 pc(s). | **8617.160** |
| 1400 | 4 pc(s). | **8617.170** |
| 1600 | 4 pc(s). | **8617.180** |
| 1800 | 4 pc(s). | **8617.190** |
| 2000 | 4 pc(s). | **8617.200** |
| 2200 | 4 pc(s). | **8617.210** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995
- For AX plastic: Universal bracket 1485.200, see page 97

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061
- Cage nut, see page 1002
- Base/plinth installation bracket, see page 885



## Punched section with mounting flange, 23 x 89 mm

**Stainless steel**
**for VX, VX SE**

For variable, individual interior installation of the enclosure frame on the inner mounting level. Simply locate into punchings and screw-fasten. System punchings on all four sides. With slots at the top and bottom for cage nuts, for attaching your own components via metric screws. Especially for cable routing in the base/plinth system VX, stainless steel and for the installation of busbar supports (non-magnetic stainless steel).

**Installation options:**

VX
- On the inner mounting level, on the enclosure section VX

VX SE
- On the vertical section of the VX SE with adaptor rail VX

System accessories
- On identical punched sections with mounting flanges
- In the base/plinth system VX, stainless steel, in the width and depth, combined with a base/plinth installation bracket

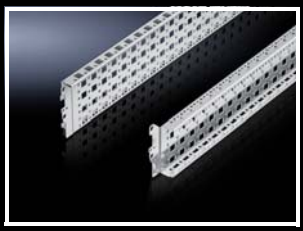
**Material:**
- Stainless steel

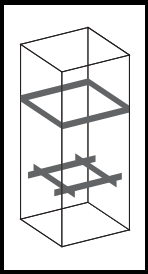
**Supply includes:**
- Assembly parts

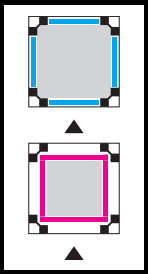
| For enclosure width/depth mm | Packs of | Model No. |
|---|---|---|
| 400 | 2 pc(s). | **8100.730** |
| 500 | 2 pc(s). | **8100.731** |
| 600 | 2 pc(s). | **8100.732** |
| 800 | 2 pc(s). | **8100.733** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061
- Cage nut, see page 1002
- Base/plinth installation bracket, see page 885







## Punched section with mounting flange, 17 x 73 mm

**for VX SE, TP, PC, IW**

For universal skeleton structures or partial assembly. Simply locate onto the punchings and secure.

**Installation options:**

VX SE, PC, IW
- On the vertical enclosure section
  - On the outer mounting level, all-round, at the same height
  - On the inner mounting level, all-round, height-offset

VX SE, PC
- On the horizontal enclosure extrusion
  - May be mounted on the top horizontal section in the depth

TP
- Via rail for interior installation
  - In the depth, for outer mounting level
  - In the width, for inner mounting level

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly screws

**Also required:**

- For installation in TP: Rail for interior installation, see page 995

**Accessories:**

- Screws, see page 1004
- Cable tie for fast assembly 2597.000, see page 1061.

**For the outer mounting level**

| For enclosure width/depth mm | Packs of | **Model No.** |
|---|---|---|
| 300 | 4 pc(s). | **8612.130** |
| 400 | 4 pc(s). | **8612.140** |
| 500 | 4 pc(s). | **8612.150** |
| 600 | 4 pc(s). | **8612.160** |

**For the inner mounting level**

| For enclosure width/depth mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 300 | 290 | 4 pc(s). | **8612.030** |
| 400 | 390 | 4 pc(s). | **8612.040** |
| 500 | 490 | 4 pc(s). | **8612.050** |
| 600 | 590 | 4 pc(s). | **8612.060** |

## Punched section without mounting flanges, 23 x 64 mm

**for VX, VX SE**

For variable, individual interior installation of the enclosure frame on the inner mounting level. Mounted flush with enclosure frame The additional mounting brackets mean it can also be used with a pre-installed mounting plate, and is also prepared for cutting to any required length. System punchings on all four sides. With slots at the top and bottom for cage nuts, for attaching your own components via metric screws.

**Installation options:**

VX
- On the inner mounting level, on the enclosure section

VX SE
- On the vertical section of the VX SE with adaptor rail VX

System accessories
- Between two punched sections with mounting flanges for the inner mounting level
- As installation kit for component shelves

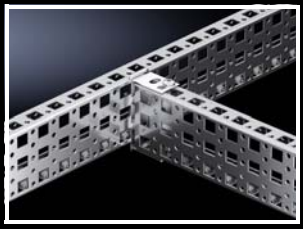
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 1 pack =
  2 punched sections without mounting flanges 23 x 64 mm
  4 mounting brackets

| For enclosure width/height/depth mm | Packs of | Model No. |
|---|---|---|
| 400 | 2 pc(s). | **8100.740** |
| 500 | 2 pc(s). | **8100.741** |
| 600 | 2 pc(s). | **8100.742** |
| 800 | 2 pc(s). | **8100.743** |
| 1200 | 2 pc(s). | **8100.745** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995



## Punched rail 18 x 39 mm

**for VX, VX SE**

For variable, individual interior installation of the enclosure frame on the inner mounting level, may also be used in conjunction with other punched sections. Prepared at the rear to accommodate cable clamps for optimum cable routing inside the enclosure

**Installation options:**

VX
- On the inner mounting level, on the enclosure section

VX SE
- On the vertical section of the VX SE with adaptor rail VX

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width/depth mm | Packs of | Model No. |
|---|---|---|
| 400 | 4 pc(s). | **8617.700** |
| 500 | 4 pc(s). | **8617.710** |
| 600 | 4 pc(s). | **8617.720** |
| 800 | 4 pc(s). | **8617.730** |

**Note:**
- In enclosures with a mounting plate, two punched rails (as mounting plate slide rails) are already included with the supply

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061
- Cable clamps, see page 1060

## Rail systems

### Punched rail 23 x 23 mm

**for VX, VX SE**

**Installation options:**
VX
– To the vertical and horizontal enclosure sections via mounting brackets

VX SE
– To the vertical enclosure section via mounting brackets in conjunction with adaptor rail VX
– To the horizontal section/in roof via mounting brackets in conjunction with adaptor rail VX in the depth

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Length mm | For WHD mm | Packs of | Model No. |
|---|---|---|---|
| 295 | 400 | 12 pc(s). | **4169.000** |
| 395 | 500 | 12 pc(s). | **4170.000** |
| 495 | 600 | 12 pc(s). | **4171.000** |
| 695 | 800 | 12 pc(s). | **4172.000** |
| 895 | 1000 | 12 pc(s). | **4173.000** |
| 1095 | 1200 | 6 pc(s). | **4174.000** |
| 1295 | 1400 | 6 pc(s). | **4393.000** |
| 1495 | 1600 | 6 pc(s). | **4175.000** |
| 1695 | 1800 | 6 pc(s). | **4176.000** |
| 1895 | 2000 | 6 pc(s). | **4177.000** |
| 2095 | 2200 | 6 pc(s). | **4178.000** |

**Also required:**
– For VX SE: Adaptor rail VX, see page 995
– U nuts, see page 1003
– Mounting bracket 4182.000, see page 1002

**Accessories:**
– Cable attachment, see page 1061
– Screws, see page 1004
– Cable tie for fast assembly 2597.000, see page 1061

### Support strip

**for VX, VX SE**
For simple cable routing from the mounting plate to the door.

**Installation options:**
– On the inner and outer mounting level, on the enclosure section

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Note:**
– Installation options for TP interior installation, see page 984/985
– VX, VX SE, AX, TP, PC, IW door installation, see page 952

**Accessories:**
– Screws, see page 1004
– Cable tie 2597.000, see page 1061

| For enclosure width/depth mm | For enclosure system, inner level | For enclosure system, outer level | Rail mounting distance mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 400 | VX | VX, VX SE | 325 | 20 pc(s). | **4694.000** |
| | VX SE | – | 375 | 20 pc(s). | **4309.000** |
| 500 | VX | VX, VX SE | 425 | 20 pc(s). | **4695.000** |
| | VX SE | – | 475 | 20 pc(s). | **4596.000** |
| 600 | VX | VX, VX SE | 525 | 20 pc(s). | **4696.000** |
| | VX SE | – | 575 | 20 pc(s). | **8800.130** |
| 800 | VX | VX, VX SE | 725 | 20 pc(s). | **4697.000** |
| | VX SE | – | 775 | 20 pc(s). | **4579.000** |

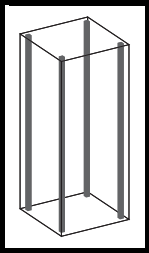
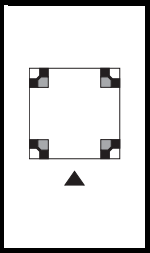
## Adaptor rail VX

**for VX compatibility**
**for VX SE**
To create compatibility of the interior installation between VX SE and VX25. The adaptor rail VX can be cut to length for customised configurations.

**Installation options:**
- On the vertical enclosure section of the VX SE (over the full installation height or in sub-sections)
- On the horizontal roof section of the VX SE, in the width

**Supply includes:**
- 4 adaptor rails
- Assembly parts

| For enclosure height mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| – | 200 | 4 pc(s). | **8617.760** |
| 1800 | – | 4 pc(s). | **8617.750** |
| 2000 | – | 4 pc(s). | **8617.751** |

## Rail for interior installation

**for TP, compact enclosures HD**
For mounting on the existing threaded bolts. With system punchings on three sides.

**Material:**
- Sheet steel

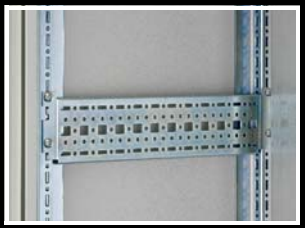
**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm TP[1] | For enclosure height mm TP[2] | For enclosure height mm HD | Packs of | **Model No.** |
|---|---|---|---|---|
| 600 | 675 | 650 | 4 pc(s). | **5001.050** |
| 800 | 960 | – | 4 pc(s). | **5001.051** |
| 1000 | – | 1050 | 4 pc(s). | **5001.052** |
| 1200 | – | 1250 | 4 pc(s). | **5001.053** |
| 1600 | – | – | 4 pc(s). | **5001.054** |

[1] Only with TP console and desk unit (cover or rear panel/base), one-piece console in cover
[2] Only with TP pedestal/one-piece console

**Note:**
- Installation options TP, see page 984/985
- Installation options HD, see page 225



## Base configuration rail

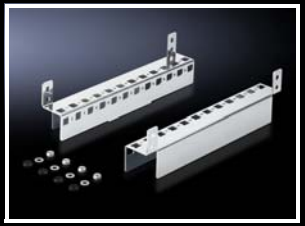
**for TP**
For mounting in the enclosure depth, on the existing threaded bolts, no machining required. System punchings on 2 sides. Creates additional installation options.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|
| 400 | 2 pc(s). | **5001.370** |



## Rail systems

### C rail 30/15

**to EN 60 715, for VX, VX SE**

**Installation options:**
- On the inner mounting level, on the enclosure section
- In the base/plinth VX

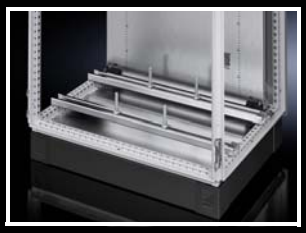
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| For enclosure width/depth mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 500 | 455 | 6 pc(s). | **4943.000** |
| 600 | 555 | 6 pc(s). | **4944.000** |
| 800 | 755 | 6 pc(s). | **4945.000** |
| 1000 | 955 | 6 pc(s). | **4946.000** |
| 1200 | 1155 | 6 pc(s). | **4947.000** |

**Accessories:**
- Cable clamps, see page 1060
- Support bracket or spacer, see page 1001
- Quick-assembly block, see page 1001

**Possible alternative:**
- Rail for EMC shielding bracket and strain relief, see page 1029



### Support rail 48 x 26 mm

**for VX, VX SE**

For heavy installed equipment such as transformers. T-head screw and slots in the support rail accommodate all mounting dimensions.

**Installation options:**

VX
- On the inner mounting level, on the enclosure section

VX SE
- On the inner mounting level, on the enclosure section in conjunction with adaptor rail VX

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 2 pc(s). | **8617.800** |
| 800 | 2 pc(s). | **8617.810** |
| 1000 | 2 pc(s). | **8617.820** |
| 1200 | 2 pc(s). | **8617.830** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

**Accessories:**
- Punched section with mounting flange 23 x 64 mm for height-offset installation, see page 991

### Support rail 75 x 20 mm

**for VX, VX SE**

For heavy installed equipment such as base isolators or transformers.

**Installation options:**

VX
- On the inner mounting level, on the enclosure section

VX SE
- On the inner mounting level, on the enclosure section in conjunction with adaptor rail VX

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width/depth mm | Packs of | **Model No.** | **Model No.** |
|---|---|---|---|
| | | **Slotted** | **Unslotted** |
| 400 | 4 pc(s). | **4394.000** | **–** |
| 500 | 4 pc(s). | **4395.000** | **–** |
| 600 | 4 pc(s). | **4396.000** | **4396.500** |
| 800 | 4 pc(s). | **4398.000** | **4398.500** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

## Support rail 65 x 42 mm

**for VX, VX SE**

For heavy installed equipment such as base isolators or transformers.

**Installation options:**

VX
- On the inner mounting level, on the enclosure section

VX SE
- On the inner mounting level, on the enclosure section in conjunction with adaptor rail VX

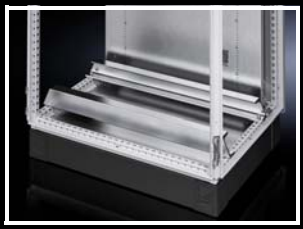
**Material:**
- Steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **8612.960** |
| 800 | 2 pc(s). | **8612.980** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995



## Support rails TS 35/15

**to EN 60 715**
**for VX, VX SE**

Mounting on the vertical section via
- threaded block M8, 4163.000, see page 1003

| For enclosure width/depth mm | Support rail length mm | Packs of | Model No. |
|---|---|---|---|
| 500 | 455 | 6 pc(s). | **4933.000** |
| 600 | 555 | 6 pc(s). | **4934.000** |
| 800 | 755 | 6 pc(s). | **4935.000** |
| 1200 | 1155 | 6 pc(s). | **4937.000** |
| – | 2000 | 6 pc(s). | **2313.150** |

## Support rails TS 35/7.5 and TS 35/15

**to EN 60 715**
**for KX, AX, terminal box HD**

| For enclosure width mm | Support rail length mm | Version | Packs of | Model No. |
|---|---|---|---|---|
| 150 | 137 | TS 35/7.5 | 10 pc(s). | **2314.000** |
| 200 | 187 | | 10 pc(s). | **2315.000** |
| 300 | 287 | | 10 pc(s). | **2316.000** |
| 400 | 387 | | 10 pc(s). | **2317.000** |
| – | 2000 | | 6 pc(s). | **2313.750** |
| 500 | 487 | TS 35/15 | 10 pc(s). | **2318.000** |
| 600 | 587 | | 10 pc(s). | **2319.000** |

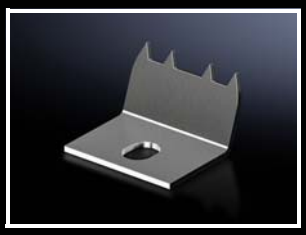
## Mounting clip

For fast, secure attachment of:
- Cable ducts
- Mounting plates
- Mounting angles

on support rail TS 35/7.5 and 35/15 to EN 60 715. Simply pre-assemble the mounting clip on the part to be installed, then snap into position on the support rail.

| Packs of | Model No. |
|---|---|
| 30 pc(s). | **2309.000** |

## Rail systems

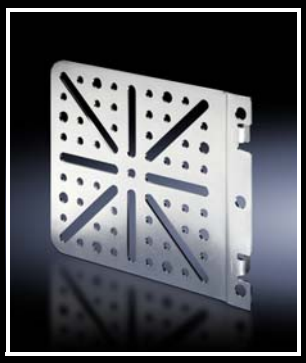


### Mounting claw for second mounting level

**for terminal boxes KX, bus enclosures KX**
For fixing top hat rails directly onto the rear panel of KX terminal boxes and KX bus enclosures. Creates an additional mounting level with an extra 10 mm of installation depth without having to machine the enclosure.

| Packs of | Model No. |
|---|---|
| 20 pc(s). | **2309.100** |

**Accessories:**
- Support rails TS 35/7.5 to EN 60 715, see page 997



### Mounting plate

**Locatable**
**for AX, VX, VX SE**

**Installation options:**
- On the inner and outer mounting level, on the enclosure section
- On punched sections with mounting flanges
- On rail for interior installation AX
- On the perforated door strip AX

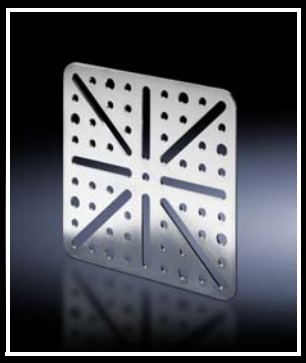
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly screws

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **8612.400** |

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061



### Mounting plate

**Screw-fastened, large**
**for AX, VX, VX SE, AX plastic**

**Installation options:**
- On all enclosures and mounting parts with system punchings on a 25 mm pitch pattern
- On the perforated door strip AX

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly screws

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **8612.410** |

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061

## Mounting plate

**Screw-fastened, small**
**for AX, VX, VX SE, AX plastic**

**Installation options:**
- On all enclosures and mounting parts with system punchings on a 25 mm pitch pattern
- On the perforated door strip AX

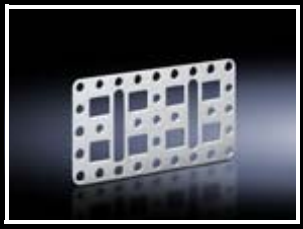
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly screws

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **4532.000** |

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061



## Mounting plate

**with integral top hat rail**
**for AX, VX, VX SE, AX IT, VX IT, TE**
For direct snap-mounting of components such as speed control, enclosure internal thermostat and hygrostat.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7526.964** |

## Mounting bracket

**Installation options:**
- On all enclosures and mounting parts with system punchings on a 25 mm pitch pattern

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly screws

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **4597.000** |

**Accessories:**
- Screws, see page 1004
- Cable tie 2597.000, see page 1061

## Mounting bracket

**for interior installation**

For installing punched sections with mounting flanges and support strips in
- Comfort Panel horizontal/vertical from 74 mm installation depth

or for installing in:
- Optipanel from an installation depth of 100 mm

For installing the LED system light in
- compact enclosures AX in conjunction with the rail for interior installation AX, see page 989, without machining and without the use of tools

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **6205.100** |

**Mounting options in Comfort Panel/Optipanel**

| | | Front panel width 482.6 mm (19") | Page |
|---|---|---|---|
| Punched section with mounting flange | Horizontal | 8612.150 | 992 |
| | Vertical | | |
| Support strips | Horizontal | 4695.000 | 994 |
| | Vertical | | |

## Bracket/spacer

For flexible attachment of C rails, punched rails or cable clamp rails (angle piece). On the sides, to accommodate square sections or tubes (Ø 20 mm). Attachment points with M8 thread.

**Installation options:**
- On vertical and horizontal VX, VX SE enclosure section
- On punched sections with mounting flanges for the inner mounting level
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

**Material:**
- Die-cast zinc

**Supply includes:**
- 1 pc(s). =
  1 bracket/spacer
  2 screws M8 x 16 mm
  2 spring lock washers
  2 cage nuts M8
  2 screws

| Packs of | Model No. |
|---|---|
| 6 pc(s). | **4199.000** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

**Accessories:**
- Angle piece 4134.000, see page 1001

## Quick-assembly block

for a variety of installation options.

**Installation options:**
- On vertical and horizontal VX, VX SE enclosure section
- On punched sections with mounting flanges for the inner mounting level
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

**Material:**
- Die-cast zinc

**Supply includes:**
- 12 quick-assembly blocks
- 12 threaded blocks M8
- 24 screws M8 x 12 mm
- 24 square nuts M8

| Packs of | Model No. |
|---|---|
| 12 pc(s). | **4133.000** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

**Accessories:**
- Angle piece 4134.000, see page 1001

## Angle piece

For assembling mounting surfaces with a 45° incline. Optimum positioning of cable clamp rails, etc.

With two mounting options as standard:
- Conductively connected to the subsurface
- Insulated from the mounting surface

**Installation options:**
- On vertical and horizontal VX, VX SE enclosure section
- On punched sections with mounting flanges for the inner mounting level
- On the bracket/spacer
- On the quick-assembly block
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

**Material:**
- Angle pieces: Die-cast zinc
- Insulating pieces: Plastic

**Supply includes:**
- 1 pc(s). =
  1 angle piece
  1 insulating piece
  1 insulating screw
  2 assembly screws
  1 threaded block M8

| Packs of | Model No. |
|---|---|
| 12 pc(s). | **4134.000** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

## Assembly components

### Mounting bracket

**for VX, VX SE**

For variable attachment of punched rail 23 x 23 mm.

**Installation options:**
- Optionally flush with the outer edge of the enclosure or the enclosure clearance width
- On the vertical VX, VX SE enclosure section
- On the horizontal VX enclosure section
- On the horizontal VX SE enclosure section, bottom
- On the horizontal VX SE enclosure section, top in the width and depth
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

**Material:**
- Die-cast zinc

**Supply includes:**
- 1 pc(s). =
  1 mounting bracket
  1 screw M6 x 12 mm,
  1 cage nut M6

| Packs of | Model No. |
|---|---|
| 24 pc(s). | **4182.000** |

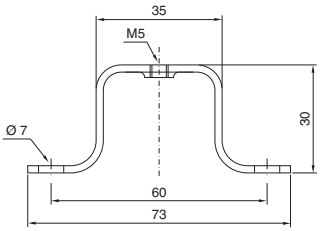
**Also required:**
- U nut (recommended: M6), see page 1003
- Multi-tooth screws M6 x 12 mm, see page 1004
- For VX SE: Adaptor rail VX, see page 995

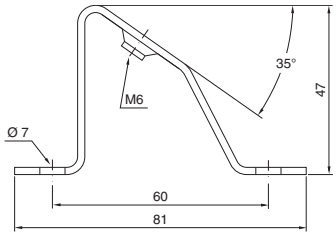
### Rail mounting bracket

For individual mounting of rails at a distance from the mounting surface.

**Material:**
- Sheet steel, zinc-plated

| Rail mounting bracket | Packs of | Model No. |
|---|---|---|
| Flat | 20 pc(s). | **2365.000** |
| Inclined | 20 pc(s). | **2366.000** |



### Cage nut

For all-round metric mounting on the enclosure section.

**Benefits:**
- For all-round mounting on the enclosure section
- The compression spring, designed as an insertion aid, ensures reliable mechanical and electrical connection in the system punchings.
- Simply slides in from the side
- Safely and easily released with a screwdriver

**Installation options:**
- On vertical and horizontal VX, VX SE enclosure section
- On punched sections with mounting flanges, 23 x 64 mm
- On punched sections with mounting flanges, 23 x 89 mm, stainless steel
- On punched rails 23 x 23 mm
- On punched section without mounting flanges, 23 x 64 mm
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

| Thread | Packs of | Model No. |
|---|---|---|
| M5 | 20 pc(s). | **4166.500** |
| M6 | 20 pc(s). | **4164.500** |
| M8 | 20 pc(s). | **4165.500** |

**Also required:**
- For VX SE: Adaptor rail VX, see page 995

## U nut

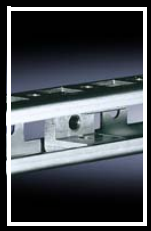
**for punched rail 23 x 23 mm**

For mounting punched rails and punched sections without mounting flanges on mounting brackets, we recommend U nuts with M6 thread 4179.000.

| Thread | Packs of | **Model No.** |
|---|---|---|
| M4 | 20 pc(s). | **4119.000** |
| M5 | 20 pc(s). | **4157.000** |
| M6 | 20 pc(s). | **4179.000** |
| M8 | 20 pc(s). | **4180.000** |

**Accessories:**

– Multi-tooth screws M6 x 12 mm, for 4179.000, see page 1004



## Threaded block

For all-round metric mounting in the enclosure section. With snap-off insertion aid, made from die-cast zinc.

**Installation options:**
- On vertical and horizontal VX, VX SE enclosure section
- On punched sections with mounting flanges, 23 x 64 mm
- On punched sections with mounting flanges, 23 x 89 mm, stainless steel
- On punched rails 23 x 23 mm
- On punched section without mounting flanges, 23 x 64 mm
- On enclosures and rails with rectangular system punching 12.5 x 11 mm

| Thread | Packs of | **Model No.** |
|---|---|---|
| M6 | 50 pc(s). | **4162.000** |
| M8 | 50 pc(s). | **4163.000** |

**Also required:**

– For VX SE: Adaptor rail VX, see page 995

## Spring nut M5

For
- Comfort Panel from an installation depth of 74 mm
- Optipanel from an installation depth of 100 mm
- Compact Panel

The spring ensures reliable protection against unintentional displacement.

Other interior installation, e.g. with
- Mounting bracket 4597.000, see page 999 or
- mounting bracket components for interior installation 6205.100, see page 1000

**Material:**
- Steel, zinc-plated

| Packs of | **Model No.** |
|---|---|
| 50 pc(s). | **6108.000** |

# Interior installation

## Assembly components

### Universal bracket

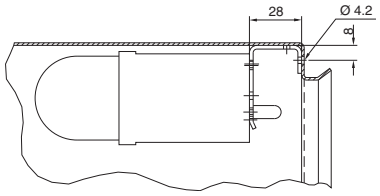
For the installation of
- Enclosure lights in
  - Compact enclosures AX
- Door-operated switches in
  - Compact enclosures AX
  - TopConsole system TP
- Cable conduit holders 2593.000 and 2591.000 in
  - Compact enclosures AX
- Support rails for terminals in
  - Operating housings and operating housings with door

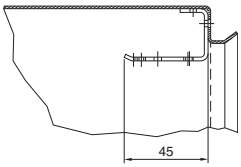
Mounting screws are concealed when the door is closed. Offers variable mounting options in compact enclosures, command panels and consoles.

**Material:**
- Sheet steel, zinc-plated

**Supply includes:**
- Assembly parts

| Packs of | **Model No.** |
|---|---|
| 6 pc(s). | **2373.000** |



### Multi-tooth screw

M6 x 12 to fit:
- Cage nuts 4164.500
- U nuts 4179.000
- Threaded blocks 4162.000

M8 x 12 to fit:
- Cage nuts 4165.500
- U nuts 4180.000
- Threaded blocks 4163.000

### Metal multi-tooth screw

For the round holes Ø 4.5 mm in the enclosure section, punched rails and punched sections without mounting flanges.

### Self-tapping screw

For the round holes Ø 4.5 mm in the enclosure section, punched rails and punched sections without mounting flanges.

### Self-tapping screw

Mark, drill and tighten in a single operation using electric or pneumatic tools.

For metal thickness: 0.8 – 3 mm
Length: 16 mm
Usable length: 9.5 mm
Width across flats: 8 mm

Multi-tooth drive for optimum transmission of torques, an extended tool life and increased safety and reliability when tightening and loosening screw connections.

| Type of screw | Dimensions mm | Packs of | **ModelNo.** |
|---|---|---|---|
| Multi-tooth screws | M6 x 12<br>M8 x 12 | 300 pc(s).<br>300 pc(s). | **2504.500**<br>**2504.800** |
| Metal multi-tooth screws | 5.5 x 13 | 300 pc(s). | **2486.600** |
| Metal multi-tooth screws for stainless steel | 5 x 13 | 300 pc(s). | **2486.400** |
| Self-tapping screws | | | |
| – Hex screws | M5 x 10 | 500 pc(s). | **2504.000** |
| – Posidrive raised countersunk screws | M5 x 12 | 500 pc(s). | **2488.000** |
| – Pan-head screws, posidrive | M5 x 12 | 500 pc(s). | **2489.000** |
| – Multi-tooth pan-head screws | M5 x 12 | 500 pc(s). | **2489.500** |
| Self-tapping screws | ST 4.8 x 16 | 300 pc(s). | **2487.000** |

## Connection kit

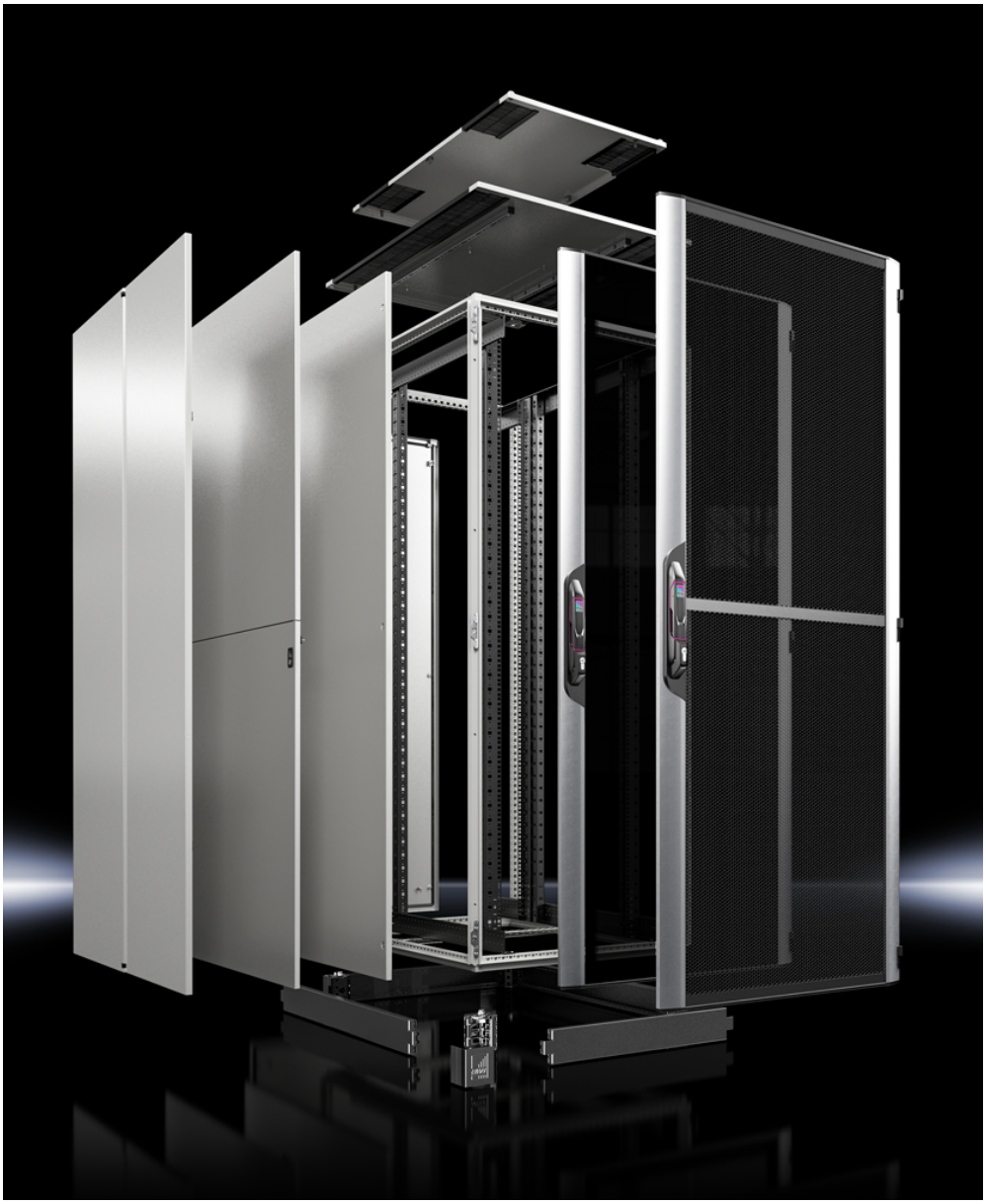
**for separated frame VX IT**

Every VX IT frame is easily converted to a rack suitable for dismantling. To this end, the frame sections in the roof and base frame must be separated, optionally in the width or depth. The four connection components are inserted into the frame section and screw-fastened. The external dimensions of the frame remain unchanged.

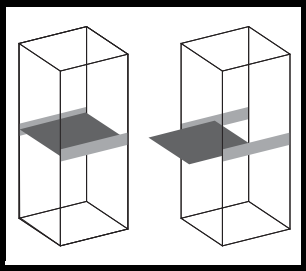
**Supply includes:**
- 4 connection components, internal
- 4 connection components, external
- Earth strap
- Assembly parts

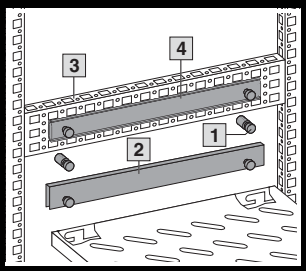
**Note:**
- The maximum achievable IP protection category is restricted by separation of the frame
- The static load capacity of the frame structure is reduced to 8000 N

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **5302.037** |



## Component shelves for frame attachment






1 Assembly bolts
2 Mounting rails
3 Punched sections without mounting flanges
4 Telescopic slides

### Component shelf for frame attachment

**for empty enclosures VX and VX IT with enclosure width 600 and 800 mm**
For installation in enclosures **without** 482.6 mm (19") accommodation.
Max. depth of component shelves = Enclosure depth - 100 mm.

**Technical specifications:**
- Mounting bolts or mounting rails may be installed on a 25 mm pitch pattern in the enclosure depth
- Mounting hole for handles provided.
- Component shelf, vented

**Installation options:**
- Static installation: Component shelf, 50 kg with fixing bolts on punched section without mounting flange
- Static installation: Component shelf, 100 kg with mounting rails on punched sections without mounting flange
- Depth variable: Component shelf with telescopic slides on punched sections without mounting flange

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 7035

**500 N version supply includes:**
- Component shelf, vented
- 4 fixing bolts

**1000 N version supply includes:**
- Component shelf, vented
- 2 mounting rails

**Enclosure width 600 mm**

| Load capacity N (static surface load) | 500 | 500 | 500 | 500 | 1000 | 1000 | 1000 | 1000 |
|---|---|---|---|---|---|---|---|---|
| Component shelf width mm | 471 | 471 | 471 | 471 | 471 | 471 | 471 | 471 |
| Component shelf depth mm | 400 | 500 | 600 | 700 | 400 | 500 | 600 | 700 |
| Component shelf height mm | 29 | 29 | 29 | 29 | 45 | 45 | 45 | 45 |
| **Model No.** | **7164.035** | **7165.035** | **7166.035** | **7166.735** | **7464.035** | **7465.035** | **7466.035** | **7466.735** |

**Enclosure width 800 mm**

| Load capacity N (static surface load) | 500 | 500 | 500 | 500 | 1000 | 1000 | 1000 | 1000 |
|---|---|---|---|---|---|---|---|---|
| Component shelf width mm | 671 | 671 | 671 | 671 | 671 | 671 | 671 | 671 |
| Component shelf depth mm | 400 | 500 | 600 | 700 | 400 | 500 | 600 | 700 |
| Component shelf height mm | 29 | 29 | 29 | 29 | 45 | 45 | 45 | 45 |
| **Model No.** | **7184.035** | **7185.035** | **7186.035** | **7186.735** | **7484.035** | **7485.035** | **7486.035** | **7486.735** |

**Accessories:**

| | | Model No. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Telescopic slides | | 7061.000 | 7081.000 | 7161.000 | 7161.700 | 7064.000 | 7065.000 | 7066.000 | 7066.700 |
| Handles for component shelves | | 5501.730 | 5501.730 | 5501.730 | 5501.730 | 5501.730 | 5501.730 | 5501.730 | 5501.730 |
| Cable support, hinged, with anti-kink device and clamp for enclosure depth mm | ≤ 600 | 7163.560 | 7163.560 | 7163.560 | 7163.560 | 7163.560 | 7163.560 | 7163.560 | 7163.560 |
| | > 600 | 7163.565 | 7163.565 | 7163.565 | 7163.565 | 7163.565 | 7163.565 | 7163.565 | 7163.565 |

**Also required:**

| | | Model No. |
|---|---|---|
| Punched section without mounting flange, 23 x 64 mm, as installation kit for enclosure depth, see page 993 | 500 | 8100.741 |
| | 600 | 8100.742 |
| | 800 | 8100.743 |
| | 1000/1200 | 8100.745 |

## Component shelves for frame attachment

### Component shelf, pull-out

**for VX SE, PC, IW**
For direct mounting on the vertical enclosure section.

**Load capacity:**
– 300 N surface load, static

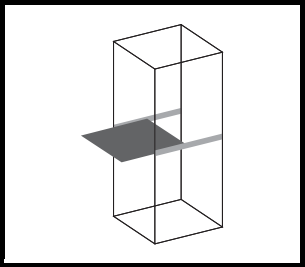
**Material:**
– Sheet steel

**Colour:**
– RAL 7015

**Supply includes:**
– 2 telescopic slides

| For enclosures[1] | | Support area | | Model No. |
|---|---|---|---|---|
| Width mm | Depth mm | Width mm | Depth mm | |
| 600 | 600 | 465 | 545 | **6902.960[2]** |
| 600 | 800 | 465 | 745 | **6902.980** |

[1] For enclosures without a mounting plate
[2] May also be installed in 800 mm deep enclosures (pull-out rear attachment)



### Component shelf, static installation

**for VX SE, PC, IW**
**prepared for fan expansion kit**
For direct mounting on the vertical enclosure section. Simply locate into 4 pre-fitted screws and secure.

**Load capacity:**
– 400 N surface load, static

**Material:**
– Sheet steel

**Colour:**
– RAL 7015

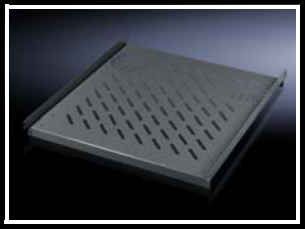
**Supply includes:**
– Assembly parts

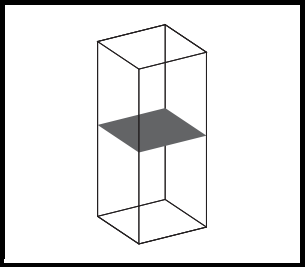
| For enclosures[1] | | Support area | | Model No. |
|---|---|---|---|---|
| Width mm | Depth mm | Width mm | Depth mm | |
| 600 | 600 | 507 | 550 | **8800.900** |
| 600 | 800 | 507 | 750 | **8800.910** |

[1] For enclosures without a mounting plate

**Accessories:**

– Fan expansion kit 7980.XXX, see page 790





### Drawer tray

**for IW, PC**
**pull-out**
Width 600 mm and depth 600 – 800 mm
Tray height: 800 mm

**Load capacity:**
– 400 N surface load, static

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– 2 telescopic slides

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6902.700** |

## Component shelves for attachment to the 482.6 mm (19") system

### Component shelf, static installation

**482.6 mm (19"), depth-variable**
**for VX IT, TE**

For static installation between two 482.6 mm (19") mounting levels.
- Contact width: 489 mm
- Depth-variable to adapt to individual distances between levels
- Tool-free, time-saving one-man assembly

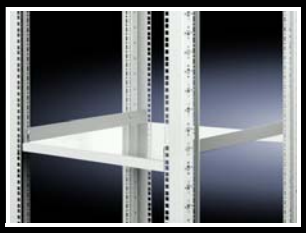
**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| Distance between levels mm | Load capacity, static kg | Height U | Packs of | **Model No.** |
|---|---|---|---|---|
| 400 – 600 | 50 | ½ | 1 pc(s). | **5501.655** |
| 600 – 900 | 50 | ½ | 1 pc(s). | **5501.665** |
| 400 – 600 | 100 | 1 | 1 pc(s). | **5501.695** |
| 600 – 900 | 100 | 1 | 1 pc(s). | **5501.705** |



### Component shelf, static installation

**for TE**

The component shelf is attached directly at the side to the front and rear 482.6 mm (19") mounting frames for TE.

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly parts

**Note:**
- Not suitable for combination with telescopic slides

| | |
|---|---|
| Contact surface, width mm | 505 |
| Contact surface, depth mm | 410 |
| Distance between 482.6 mm (19") levels mm | 495 |
| Load capacity (static) N | 300 |
| Packs of | 1 pc(s). |
| **Model No.** | **7000.620** |

### Component shelf, pull-out

**482.6 mm (19")**
**for VX IT, TE**

For mounting between two 482.6 mm (19") mounting levels.
- Contact width: 419 mm
- Depth-variable to adapt to individual distances between levels
- Tool-free, time-saving one-man assembly from the enclosure front
- Self-locking
- Full withdrawal

**Material:**
- Sheet steel

**Surface finish:**
- Component shelf: Spray-finished
- Mounting kit/telescopic slides: Zinc-plated

**Colour:**
- Component shelf: RAL 9005

**Supply includes:**
- Component shelf, slotted
- Telescopic slide with mounting kit
- Assembly parts

| Distance between levels mm | Load capacity, static kg | Height U | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 400 – 600 | 50 | 1 | 500 | 1 pc(s). | **5501.675** |
| 600 – 900 | 50 | 1 | 700 | 1 pc(s). | **5501.685** |
| 400 – 600 | 100 | 1½ | 500 | 1 pc(s). | **5501.715** |
| 600 – 900 | 100 | 1½ | 700 | 1 pc(s). | **5501.725** |

**Accessories:**
- Handle for component shelf 5501.730, see page 1011

## Component shelves for attachment to the 482.6 mm (19") system

### Component shelf, pull-out

**for TE**
For mounting between two 482.6 mm (19") mounting levels.

**Benefits:**
- Depth-variable to adjust to the distance between 482.6 mm (19") levels in a 25 mm pitch pattern
- Full withdrawal

**Material:**
- Base: Sheet steel

**Surface finish:**
- Base: Spray-finished
- Mounting kit/telescopic slides: Zinc-plated

**Colour:**
- RAL 7035

**Supply includes:**
- Component shelf, vented
- Telescopic slides with mounting kit

| | |
|---|---|
| Contact surface, width mm | 409 |
| Contact surface, depth mm | 500 |
| Distance between 482.6 mm (19") levels mm | 395 – 645 |
| Load capacity (static) N | 500 |
| Packs of | 1 pc(s). |
| **Model No.** | **7000.625** |

### Component shelf 1 U, static installation

**482.6 mm (19")**
**for one 482.6 mm (19") mounting level**
The ideal support surface for small active components such as modems or mini-hubs.

**Load capacity:**
- 10 kg surface load, static

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 7035

**Note:**
- Usable height inside the U approx. 35 mm

| Component shelf depth mm | Packs of | **Model No.** |
|---|---|---|
| 140 | 1 pc(s). | **7119.140** |

**Also required:**
- Cage nuts, see page 1002
- Screws, see page 1004

## Component shelves for attachment to the 482.6 mm (19") system

### Component shelf 2 U, static installation

**482.6 mm (19")**
**for one 482.6 mm (19") mounting level**
The ideal support surface for small active components such as modems or mini-hubs.

**Load capacity:**
– 25 kg surface load, static

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

| Component shelf depth mm | Colour | Packs of | **Model No.** |
|---|---|---|---|
| 250 | RAL 7035 | 1 pc(s). | **7119.250** |
| | RAL 9005 | 1 pc(s). | **5501.615** |
| 400 | RAL 7035 | 1 pc(s). | **7119.400** |
| | RAL 9005 | 1 pc(s). | **5501.625** |

**Also required:**
– Cage nuts, see page 1002
– Screws, see page 1004

### Component shelf, pull-out, 2 U

**for one 482.6 mm (19") mounting level**
For simple, front installation of wall-mounted or floor-standing enclosures with at least one 482.6 mm (19") mounting level. This complete set comprises the pre-configured variant including telescopic slides, moulded handle, flange and locking pins.

**Benefits:**
– Simple tool-free assembly
– Full withdrawal
– Self-locking

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

**Supply includes:**
– Component shelf, pre-configured
– Assembly parts

| Contact surface, width mm | Contact surface, depth mm | Load capacity (static) N | Packs of | **Model No.** |
|---|---|---|---|---|
| 430 | 300 | 250 | 1 pc(s). | **5501.635** |

## Telescopic slide

**for component shelf for frame attachment**
Static component shelves are easily converted to full withdrawal by exchanging the existing assembly bolts or mounting rails (heavy-duty version) for telescopic slides.

**Technical specifications:**
– For installation and locking on a 25 mm pitch pattern in the enclosure depth

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

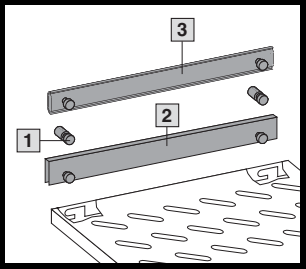
**Load capacity 50 kg**

| For component shelf depth mm | Packs of | Model No. |
|---|---|---|
| 400 | 2 pc(s). | **7061.000** |
| 500 | 2 pc(s). | **7081.000** |
| 600 | 2 pc(s). | **7161.000** |
| 700 | 2 pc(s). | **7161.700** |

**Load capacity 100 kg**

| For component shelf depth mm | Packs of | Model No. |
|---|---|---|
| 400 | 2 pc(s). | **7064.000** |
| 500 | 2 pc(s). | **7065.000** |
| 600 | 2 pc(s). | **7066.000** |
| 700 | 2 pc(s). | **7066.700** |

1 Assembly bolts
2 Mounting rails
3 Telescopic slides




## Cable support

**Hinged, with anti-kink device and quick-release fastener**
For secure routing of connection cables from the component shelves with telescopic pull-out to the clamping point. Kink-free cable routing in the central part via mobile chain links. The attachment may be released on both sides, thanks to the quick-release fastener.

**Material:**
– Sheet steel, zinc-plated
– Central part: Plastic

**Supply includes:**
– Cable support
– 2 mounting brackets
– Assembly parts

| For enclosure depth mm | Packs of | Model No. |
|---|---|---|
| ≤ 600 | 1 pc(s). | **7163.560** |
| > 600 | 1 pc(s). | **7163.565** |

**Note:**
– Max. depth of component shelves = Enclosure depth - 200 mm

## Handle

**for pull-out component shelves**
The component shelves are prepared for the attachment of handles.

**Material:**
– Die-cast zinc

**Surface finish:**
– Spray-finished

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **5501.730** |

**Colour:**
– Silver grey

**Supply includes:**
– Assembly parts

## Fastening bolts

**for slotted component shelves**
For non-slip attachment of your components.
The bolts are screwed into the longitudinal slots of the component shelf support surface. Consequently, they are infinitely adjustable and can be adapted to suit any appliance.

| Packs of | Model No. |
|---|---|
| 4 pc(s). | **7115.000** |

**Material:**
– Steel

**Surface finish:**
– Clear-chromated

# LED system light – Sensationally bright

## Optimum illumination

- Innovative LED technology for even more light into the very last corner
- Intelligent lighting, tailored to the geometry of the enclosure, thanks to a special optical cover with Fresnel structure
- Optical cover with two different Fresnel structures
- The cover is easily rotated – to adapt the light distribution to the current installation situation
- Enormous luminous intensity up to 1200 lumens, directed selectively into the enclosure

## Simple assembly

- Fast, tool-free assembly thanks to a latching hook system on a 25 mm pitch pattern of holes; simply latch and secure
- Optional screw-fastening also available, or opt for complete flexibility with a magnetic attachment freely positionable inside the enclosure
- May be fitted horizontally and vertically with no loss of space in the enclosure; existing rails and sections can simply be covered
- Lights with motion detectors are equipped with a rotating LED board as standard, allowing the direction of light to be perfectly adapted to any installation situation

## Flexible connection

- Rotating connectors support installation in the most confined spaces
- Simple through-wiring based on the plug & play system
- Variants with integral motion detectors eliminate the need for installing separate door-operated switches
- If additionally equipped with a socket, electricity will be available whenever it is needed for maintenance work
- Suitable for immediate, global use with wide-range voltage 100 – 240 V (AC) and 24 V (DC)

## New – socket box as a plug-in system

- The alternative to the LED system light with integrated socket
- Easier planning for international projects – same light, but with a country-specific socket
- No additional wiring required, thanks to simple connection technology and integration of the LED system light into the circuit
- Socket modules can be easily replaced to suit the user market via plug and play

# LED system light

**Baying enclosure system VX25** Page 116 **Free-standing enclosure system VX SE** Page 142 **Compact enclosures AX** Page 84

**Benefits:**
- Optimum illumination of the entire enclosure
- Optionally with clip, screw or magnetic attachment
- Equipment to suit every application

**Material:**
- Plastic
- Aluminium

**Colour:**
- Enclosure: RAL 7016

**Protection class:**
- II (all-insulated)

**Light colour:**
- 4000 K (neutral white)

**Supply includes:**
- Assembly screws

**Note:**
- Connection accessories should be ordered separately

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model No.** | | | **2500.300** | **2500.310** | **2500.311** | **2500.312** | **2500.313** | Page |
| Output (lumens) | | | 1200 | 1200 | 1200 | 1200 | 1200 | |
| Length (mm) | | | 437 | 437 | 437 | 437 | 437 | |
| Motion sensor | | | ■ | ■ | ■ | ■ | ■ | |
| Rated operating voltage | 100 – 240 V AC | | ■ | ■ | ■ | ■ | ■ | |
| | 24 V DC | | – | – | – | – | – | |
| Equipment | Socket | | – | D, earthing-pin | GB | F/B | CH | |
| | 90° rotating connector | | ■ | ■ | ■ | ■ | ■ | |
| | Adjustable light direction | | ■ | ■ | ■ | ■ | ■ | |
| | Adjustable light distribution | | ■ | ■ | ■ | ■ | ■ | |
| Approvals | UL/cUL | | ■ | – | – | – | – | |
| | CSA | | ■ | – | – | – | – | |
| | CCC | | ■ | – | – | – | – | |
| | ENEC | | ■ | ■ | ■ | ■ | ■ | |
| Installation type | Screw-fastening | | ■ | ■ | ■ | ■ | ■ | |
| | Clip attachment | | ■ | ■ | ■ | ■ | ■ | |
| | Magnetic attachment to surfaces (accessory) | | ■ | – | – | – | – | |
| Connection options | Infeed | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| | Through-wiring | | 3-pole | 3-pole | 3-pole | 3-pole | 3-pole | |
| | Door-operated switch (accessory) | | – | – | – | – | – | |
| Mounting options[1] | Enclosures with a 25 mm pitch pattern | Screw fastening/clip | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | |
| **Accessories** | | | | | | | | |
| Rail for interior installation AX | | | see page | see page | see page | see page | see page | 989 |
| Mounting bracket | | | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mounting kit magnet | | | 2500.490 | – | – | – | – | 1024 |
| Door-operated switch | | | – | – | – | – | – | |
| Door-operated switch, UL | | | – | – | – | – | – | |
| **Connection accessories** | | | | | | | | |
| Infeed, 2-pole | | | – | – | – | – | – | |
| Infeed, 2-pole, UL | | | – | – | – | – | – | |
| Infeed, 3-pole | | | 2500.400 | 2500.400 | 2500.400 | 2500.400 | 2500.400 | 1023 |
| Infeed, 3-pole, UL | | | 2500.500 | – | – | – | – | 1023 |
| Through-wiring, 2-pole | | | – | – | – | – | – | |
| Through-wiring, 2-pole, UL | | | – | – | – | – | – | |
| Through-wiring, 3-pole | | | 2500.430 | 2500.430 | 2500.430 | 2500.430 | 2500.430 | 1023 |
| Through-wiring, 3-pole, UL | | | 2500.530 | – | – | – | – | 1023 |

[1] The internal mounting rail AX and the mounting bracket are required when installing in compact enclosures AX

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| **Model No.** | | | **2500.314** | **2500.320** | **2500.200** | **2500.210** | **2500.211** | Page |
| Output (lumens) | | | 1200 | 1200 | 900 | 900 | 900 | |
| Length (mm) | | | 437 | 437 | 437 | 437 | 437 | |
| Motion sensor | | | ■ | ■ | – | – | – | |
| Rated operating voltage | 100 – 240 V AC | | 100 – 125 V AC | – | ■ | ■ | ■ | |
| | 24 V DC | | – | ■ | – | – | – | |
| Equipment | Socket | | USA / CDN | – | – | D, earthing-pin | GB | |
| | 90° rotating connector | | ■ | ■ | ■ | ■ | ■ | |
| | Adjustable light direction | | ■ | ■ | – | – | – | |
| | Adjustable light distribution | | ■ | ■ | ■ | ■ | ■ | |
| Approvals | UL/cUL | | ■ | ■ | ■ | – | – | |
| | CSA | | ■ | – | ■ | – | – | |
| | CCC | | – | ■ | ■ | – | – | |
| | ENEC | | ■ | – | ■ | ■ | ■ | |
| Installation type | Screw-fastening | | ■ | ■ | ■ | ■ | ■ | |
| | Clip attachment | | ■ | ■ | ■ | ■ | ■ | |
| | Magnetic attachment to surfaces (accessory) | | – | ■ | ■ | – | – | |
| Connection options | Infeed | | 3-pole | 2-pole | 3-pole | 3-pole | 3-pole | |
| | Through-wiring | | 3-pole | 2-pole | 3-pole | 3-pole | 3-pole | |
| | Door-operated switch (accessory) | | – | – | ■ | ■ | ■ | |
| Mounting options[1] | Enclosures with a 25 mm pitch pattern | Screw fastening/clip | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | |
| **Accessories** | | | | | | | | |
| Rail for interior installation AX | | | see page | see page | see page | see page | see page | 989 |
| Mounting bracket | | | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mounting kit magnet | | | – | 2500.490 | 2500.490 | – | – | 1024 |
| Door-operated switch | | | – | – | 2500.460 | 2500.460 | 2500.460 | 1024 |
| Door-operated switch, UL | | | – | – | 2500.470 | – | – | 1024 |
| **Connection accessories** | | | | | | | | |
| Infeed, 2-pole | | | – | – | – | – | – | |
| Infeed, 2-pole, UL | | | – | 2500.410 | – | – | – | 1023 |
| Infeed, 3-pole | | | – | – | 2500.400 | 2500.400 | 2500.400 | 1023 |
| Infeed, 3-pole, UL | | | 2500.500 | – | 2500.500 | – | – | 1023 |
| Through-wiring, 2-pole | | | – | – | – | – | – | |
| Through-wiring, 2-pole, UL | | | – | 2500.440 | – | – | – | 1023 |
| Through-wiring, 3-pole | | | – | – | 2500.430 | 2500.430 | 2500.430 | 1023 |
| Through-wiring, 3-pole, UL | | | 2500.530 | – | 2500.530 | – | – | 1023 |

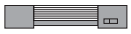
[1] The internal mounting rail AX and the mounting bracket are required when installing in compact enclosures AX

Rittal – The System.

Connection accessories

see page 1023

# LED system light

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | |  | |
| **Model No.** | | | **2500.212** | **2500.213** | **2500.214** | **2500.220** | Page |
| Output (lumens) | | | 900 | 900 | 900 | 900 | |
| Length (mm) | | | 437 | 437 | 437 | 437 | |
| Motion sensor | | | – | – | – | – | |
| Rated operating voltage | 100 – 240 V AC | | ■ | ■ | 100 – 125 V AC | – | |
| | 24 V DC | | – | – | – | ■ | |
| Equipment | Socket | | F/B | CH | USA / CDN | – | |
| | 90° rotating connector | | ■ | ■ | ■ | ■ | |
| | Adjustable light direction | | – | – | – | – | |
| | Adjustable light distribution | | ■ | ■ | ■ | ■ | |
| Approvals | UL/cUL | | – | – | ■ | ■ | |
| | CSA | | – | – | ■ | ■ | |
| | CCC | | – | – | – | ■ | |
| | ENEC | | ■ | ■ | ■ | ■ | |
| Installation type | Screw-fastening | | ■ | ■ | ■ | ■ | |
| | Clip attachment | | ■ | ■ | ■ | ■ | |
| | Magnetic attachment to surfaces (accessory) | | – | – | – | ■ | |
| Connection options | Infeed | | 3-pole | 3-pole | 3-pole | 2-pole | |
| | Through-wiring | | 3-pole | 3-pole | 3-pole | 2-pole | |
| | Door-operated switch (accessory) | | ■ | ■ | ■ | ■ | |
| Mounting options[1] | Enclosures with a 25 mm pitch pattern | Screw fastening/clip | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | |
| **Accessories** | | | | | | | |
| Rail for interior installation AX | | | see page | see page | see page | see page | 989 |
| Mounting bracket | | | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mounting kit magnet | | | – | – | – | 2500.490 | 1024 |
| Door-operated switch | | | 2500.460 | 2500.460 | 2500.460 | 2500.460 | 1024 |
| Door-operated switch, UL | | | – | – | 2500.470 | 2500.470 | 1024 |
| **Connection accessories** | | | | | | | |
| Infeed, 2-pole | | | – | – | – | – | |
| Infeed, 2-pole, UL | | | – | – | – | 2500.410 | 1023 |
| Infeed, 3-pole | | | 2500.400 | 2500.400 | – | – | 1023 |
| Infeed, 3-pole, UL | | | – | – | 2500.500 | – | 1023 |
| Through-wiring, 2-pole | | | – | – | – | – | |
| Through-wiring, 2-pole, UL | | | – | – | – | 2500.440 | 1023 |
| Through-wiring, 3-pole | | | 2500.430 | 2500.430 | – | – | 1023 |
| Through-wiring, 3-pole, UL | | | – | – | 2500.530 | – | 1023 |

[1] The internal mounting rail AX and the mounting bracket are required when installing in compact enclosures AX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model No.** | | | **2500.100** | **2500.104** | **2500.110** | **2500.114** | Page |
| Output (lumens) | | | 400 | 400 | 600 | 600 | |
| Length (mm) | | | 262 | 262 | 337 | 337 | |
| Motion sensor | | | – | – | – | – | |
| Rated operating voltage | 100 – 240 V AC | | ■ | ■ | ■ | ■ | |
| | 24 V DC | | – | – | – | – | |
| Equipment | Socket | | – | – | – | – | |
| | 90° rotating connector | | – | – | – | – | |
| | Adjustable light direction | | – | – | – | – | |
| | Adjustable light distribution | | – | – | – | – | |
| Approvals | UL/cUL | | – | ■ | – | ■ | |
| | CSA | | – | ■ | – | ■ | |
| | CCC | | ■ | ■ | ■ | ■ | |
| | ENEC | | ■ | ■ | ■ | ■ | |
| Installation type | Screw-fastening | | ■ | ■ | ■ | ■ | |
| | Clip attachment | | ■ | ■ | ■ | ■ | |
| | Magnetic attachment to surfaces (accessory) | | ■ | ■ | ■ | ■ | |
| Connection options | Infeed | | 2-pole | 2-pole | 2-pole | 2-pole | |
| | Through-wiring | | 2-pole | 2-pole | 2-pole | 2-pole | |
| | Door-operated switch (accessory) | | ■ | ■ | ■ | ■ | |
| Mounting options[1] | Enclosures with a 25 mm pitch pattern | Screw fastening/clip | Directly on the profile | Directly on the profile | Directly on the profile | Directly on the profile | |
| **Accessories** | | | | | | | |
| Rail for interior installation AX | | | see page | see page | see page | see page | 989 |
| Mounting bracket | | | 6205.100 | 6205.100 | 6205.100 | 6205.100 | 1000 |
| Mounting kit magnet | | | 2500.490 | 2500.490 | 2500.490 | 2500.490 | 1024 |
| Door-operated switch | | | 2500.460 | – | 2500.460 | – | 1024 |
| Door-operated switch, UL | | | – | 2500.470 | – | 2500.470 | 1024 |
| **Connection accessories** | | | | | | | |
| Infeed, 2-pole | | | 2500.420 | – | 2500.420 | – | 1023 |
| Infeed, 2-pole, UL | | | – | 2500.520 | – | 2500.520 | 1023 |
| Infeed, 3-pole | | | – | – | – | – | |
| Infeed, 3-pole, UL | | | – | – | – | – | |
| Through-wiring, 2-pole | | | 2500.450 | – | 2500.450 | – | 1023 |
| Through-wiring, 2-pole, UL | | | – | 2500.550 | – | 2500.550 | 1023 |
| Through-wiring, 3-pole | | | – | – | – | – | |
| Through-wiring, 3-pole, UL | | | – | – | – | – | |

[1] The internal mounting rail AX and the mounting bracket are required when installing in compact enclosures AX

Rittal – The System.

IT LED system light

see page 1027

# Socket box – The plug-in system

## A global player

- Socket modules in all standard, country-specific variants
- UL variant for the North American market
- Socket modules can be easily replaced to suit the user market via plug and play

## Simple assembly

- Easy to screw securely to the round holes in the enclosure profile
- No loss of space thanks to perfect integration into the profile
- No obstruction when installing and removing the mounting plate
- Supports flexible installation throughout the entire enclosure and on the tubular door frame

## Fast connection

- Connection ready to plug in without any wiring work
- Direct integration of the LED system light into the circuit
- Same connection accessories as for LED system light
- Multiple socket boxes can be cascaded with numerous LED system lights

# Interior installation

## LED system light

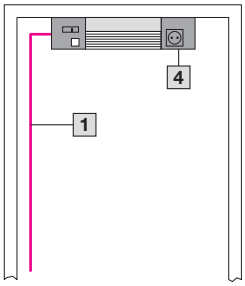
### The optimum system solution

**for improved flexibility**
The socket box turns the LED system light into an all-in-one system, making it possible to easily install additional sockets in six country-specific variants anywhere in the enclosure.

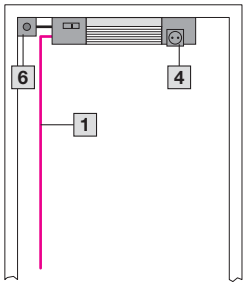
A key advantage of this solution is that the appropriate socket for the end user's particular country can be easily installed via plug and play when the system is delivered. There is no need to replace the LED system light with one that has a suitable socket. All components are ready to plug in and can be installed without manual wiring.

### Configuration examples

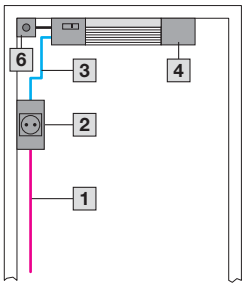
**Free-standing enclosure**
LED system light with socket
and motion detector



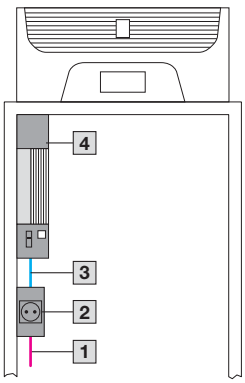

**Free-standing enclosure**
LED system light with socket
and additional door-operated switch




**Free-standing enclosure**
LED system light without socket or motion sensor,
but with additional door-operated switch and additional socket box

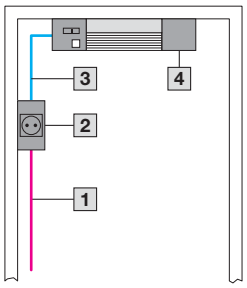



**Free-standing enclosure**
LED system light fastened to the side with motion detector
and additional socket box

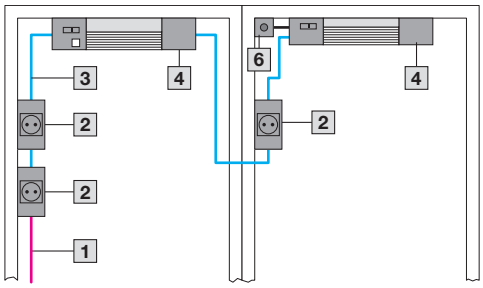


## LED system light

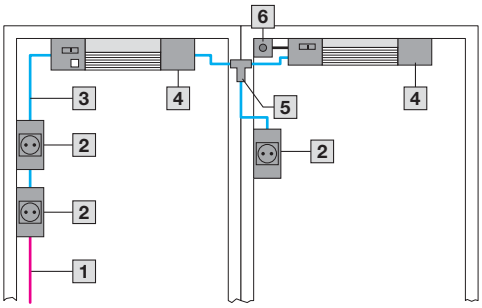
**Free-standing enclosure**
LED system light with motion detector
and additional socket box




**Bayed enclosure with through-wiring via socket box**
Enclosure 1:
LED system light with motion detector and additional socket boxes
Enclosure 2:
LED system light without socket or motion detector, but with additional door-operated switch
and additional socket box




**Bayed enclosure with through-wiring via T distributor**
Enclosure 1:
LED system light with motion detector and additional socket boxes
Enclosure 2:
LED system light without socket or motion detector, but with additional door-operated switch
and additional socket box



1 Infeed
2 Socket box
3 Through-wiring
4 LED system light (various types)
5 T distributor
3 Door-operated switch with connection cable

## Completely UL-compliant construction

The entire system can be constructed in full compliance with UL requirements if UL-approved components (infeed, LED system light, through-wiring and socket box) are used.

## LED system light

### Socket box

**for LED system light**
In combination with the LED system light, the socket box creates a flexible modular system for international use.

**Benefits:**
- Identical connection accessories as for LED system light
- Cascadable with LED system light
- Supports flexible installation throughout the entire enclosure and on the tubular door frame
- No additional wiring required, thanks to simple connection technology and integration of the LED system light into the circuit

**Material:**
- Plastic

**Colour:**
- RAL 7016

**Supply includes:**
- Assembly parts

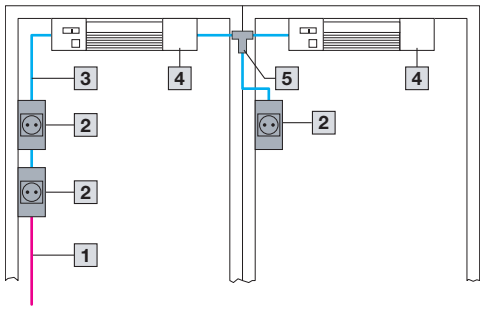
**Configuration examples:**
See from page 1020.

| | Socket | UL | Packs of | Model No. |
|---|---|---|---|---|
| | D, earthing-pin | – | 1 pc(s). | **2500.710** |
| | GB | – | 1 pc(s). | **2500.711** |
| | F/B | – | 1 pc(s). | **2500.712** |
| | CH | – | 1 pc(s). | **2500.713** |
| | US | ■ | 1 pc(s). | **2500.714** |
| | CN | – | 1 pc(s). | **2500.715** |

**Also required:**
- Depending on the application, through-wiring or a 3-pole infeed may be required, see page 1023

**Accessories:**
- T distributor, see page 1023
- Through-wiring, 3-pole, see page 1023
- Infeed, 3-pole, see page 1023

1 Infeed
2 Socket box
3 Through-wiring
4 LED system light
5 T distributor



## Connection accessories

**for LED system light**

The following components can be used for time-saving, easy installation of the lights:

**Accessories:**

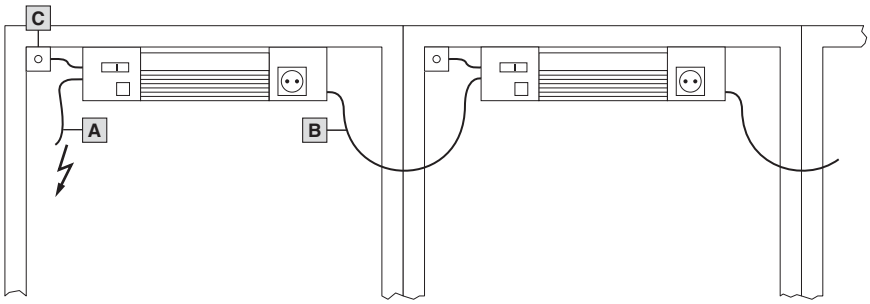
– Cable ties for quick assembly, see page 1061

| Connection cable for | | ENEC | UL | Length mm | Packs of | Model No. orange | Model No. black |
|---|---|---|---|---|---|---|---|
| 1 | Infeed, 3-pole, 100 – 240 V AC | ■ | ■ | 3000 | 1 pc(s). | **2500.500** | – |
| | Infeed, 3-pole, 100 – 240 V AC | ■ | – | 3000 | 5 pc(s). | **2500.400** | – |
| 2 | Infeed, 2-pole, 100 – 240 V AC | – | ■ | 3000 | 1 pc(s). | **2500.520** | – |
| | Infeed, 2-pole, 100 – 240 V AC | ■ | – | 3000 | 5 pc(s). | **2500.420** | – |
| 3 | Infeed, 2-pole, 24 V DC | ■ | ■ | 3000 | 5 pc(s). | – | **2500.410** |
| 4 | Through-wiring, 3-pole, 100 – 240 V AC | ■ | – | 200 | 1 pc(s). | **2500.435** | – |
| | Through-wiring, 3-pole, 100 – 240 V AC | ■ | ■ | 1000 | 1 pc(s). | **2500.530** | – |
| | Through-wiring, 3-pole, 100 – 240 V AC | ■ | – | 1000 | 5 pc(s). | **2500.430** | – |
| 5 | Through-wiring, 2-pole, 100 – 240 V AC | – | ■ | 3000 | 1 pc(s). | **2500.550** | – |
| | Through-wiring, 2-pole, 100 – 240 V AC | ■ | – | 1000 | 5 pc(s). | **2500.450** | – |
| 6 | Through-wiring, 2-pole, 24 V DC | ■ | ■ | 1000 | 5 pc(s). | – | **2500.440** |

A Connection cable for infeed

B Connection cable for through-wiring

C Door-operated switch with connection cable (not required for LED system light with integral motion sensor)

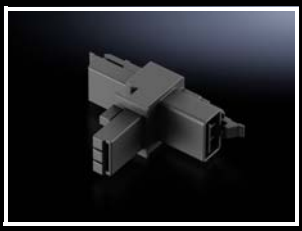



## T distributor

**with two sockets and one connector**

For creating safe, shock-hazard-protected junctions when wiring LED system lights and socket boxes.

| Packs of | Model No. |
|---|---|
| 5 pc(s). | **2500.680** |



## Connection accessories for self-assembly

**for LED system light**

For individual wiring with commercially available cables.

**Connector/jack**

| Type | Input voltage | UL | Packs of | Model No. |
|---|---|---|---|---|
| Jack, 3-pole | 100 – 240 V | ■ | 5 pc(s). | **2500.600** |
| Jack, 2-pole | 24 V DC | ■ | 5 pc(s). | **2500.610** |
| Jack, 2-pole | 100 – 240 V | ■ | 5 pc(s). | **2500.620** |
| Connector, 3-pole | 100 – 240 V | ■ | 5 pc(s). | **2500.630** |
| Connector, 2-pole | 24 V DC | ■ | 5 pc(s). | **2500.640** |
| Connector, 2-pole | 100 – 240 V | ■ | 5 pc(s). | **2500.650** |

## LED system light

### Door-operated switch

**with connection cable for LED system light**

**Supply includes:**
– Assembly parts

| | ENEC | UL | Length mm | To fit | Packs of | Model No. |
|---|---|---|---|---|---|---|
| | | | | | | **Black** |
| Connection cable | ■ | – | 800 | 230 V AC/24 V DC, 1 A | 1 pc(s). | **2500.460** |
| | – | ■ | 800 | | 1 pc(s). | **2500.470** |

### Door-operated switch

**without connection cable for self-assembly**
– With normally closed contact and normally open contact
– Custom wiring of the LED system light when combined with the connection cable for door-operated switch
– Can be used to control the various Rittal climate control solutions when combined with standard cables

| Technical specifications | UL | Packs of | Model No. |
|---|---|---|---|
| 240 V, 6 A<br>125 V DC, 8 A<br>24 V, 6 A<br>24 V DC, 6 A | ■ | 1 pc(s). | **4127.010** |

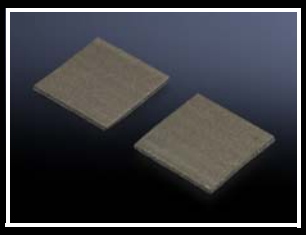
**Also required:**
– For the installation in TE: Mounting kit **7888.615**

### Connection cable

**for door-operated switch**
**for LED system light**

Connection cable with pre-assembled connector for simple, fast connection of the LED system light. With open end for cutting the connection cable to the required individual length.

| Length mm | UL | Packs of | Model No. |
|---|---|---|---|
| 3000 | – | 1 pc(s). | **2500.660** |
| 3000 | ■ | 1 pc(s). | **2500.670** |



### Mounting kit magnet

**for LED system light**
For sticking onto the rear of lights without a socket.

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **2500.490** |

## LED compact system light

**in 24 V (DC) version**

- Max. EMC compatibility
- Protected, as it operates within the safety extra-low voltage range
- Door operated switch connection supported
- Integral through-wiring
- Vertically hinged light cone

**Material:**
- Light body: Extruded aluminium
- Light cover: Polycarbonate (halogen-free)
- Light ends: PC-ABS

**Colour:**
- Similar to RAL 7035

**Protection category IP to IEC 60 529:**
- IP 20

**Supply includes:**
- LED compact system light with clip and screw mounting kits, assembly parts

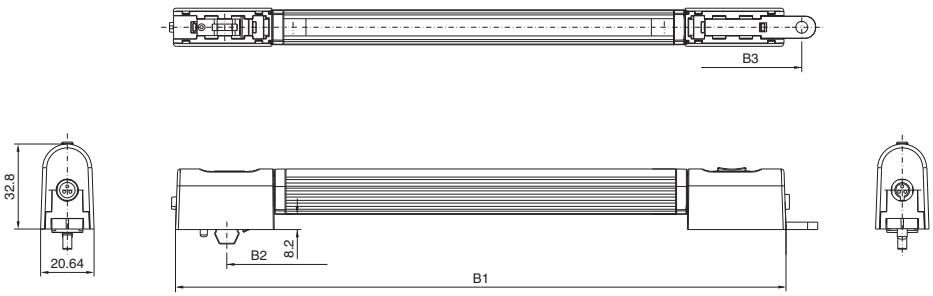
| Model No. | 4140.810 | 4140.820 | 4140.830 | 4140.840 |
|---|---|---|---|---|
| Rated voltage | 24 V (DC) (±10%) | | | |
| Number of LEDs | 10 | 20 | 30 | 40 |
| Degree of protection | III (SELV) | | | |
| Width (B1) mm | 230 | 330 | 430 | 530 |
| Mounting distance CLIP (B2) mm | 175 | 275 | 375 | 475 |
| Mounting distance, screw attachment (B3) mm | 250 | 350 | 450 | 550 |
| Rated current A[1)] | 0.04 | 0.08 | 0.12 | 0.16 |
| Switch | Integral on/off/door-operated switch mode | | | |

[1)] Maximum baying up to a total rated current strength of 2 amps

**Also required:**
- LED connection cable, see page 1026 or
- Door-operated switch with LED connection cable, see page 1026

**Accessories:**
- Mounting kit magnet for LED compact system light, see page 1025
- Door-operated switch with LED connection cable, see page 1026
- LED connection cable, see page 1026
- Adaptor power pack, see page 1026

**Note:**
- Only intended for use in enclosures and sealed cases!
- When using on customer-supplied power packs, it is important to obtain the requisite approvals depending on the application.




## Mounting kit magnet

**for LED compact system light**

For reliable adhesion on all sheet steel surfaces.

| Packs of | Model No. |
|---|---|
| 2 pc(s). | 4140.000 |

## LED compact system light

## Connection accessories

**for LED compact system light**

| | **Connection cable** | Length mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | LED connection cable | 3000 | 1 pc(s). | **4315.800** |

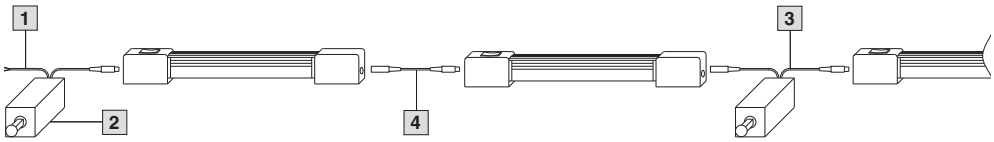
| | **Door-operated switch** | Length mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 2 | With LED connection cable | 3000 | 1 pc(s). | **4315.810** |
| 3 | With LED interconnecting cable | 1000 | 1 pc(s). | **4315.820** |

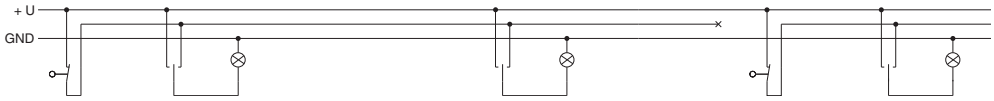
| | **Interconnecting cable** | Length mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 4 | LED interconnecting cable | 600 | 1 pc(s). | **4315.830** |
| | | 1000 | 1 pc(s). | **4315.840** |
| | | 3000 | 1 pc(s). | **4315.850** |

| | **Adaptor power pack** | Technical specifications | Packs of | **Model No.** |
|---|---|---|---|---|
| 5 | Adaptor power pack | 100 – 230 V/24 V (DC), 1 A | 1 pc(s). | **4315.860** |

**Layout diagram for LED compact system light 24 V (DC):**

1 Connection cable
2 Door-operated switch with LED connection cable (open end/cable bush)
3 Door-operated switch with LED interconnecting cable
4 LED interconnecting cable for through-wiring



# IT LED system light

**Network/server racks VX IT** Page 686 **Network racks TE 8000** Page 704 **Wall-mounted enclosures AX/EL** from page 715

**Benefits:**
- Plug and play compatibility system
- Optimum illumination of the entire IT rack
- Optionally with clip, screw or magnetic attachment
- Equipment to suit every application
- Ready to use immediately, thanks to plug-in connection cable
- Attachment with no loss of U in the rack

**Type:**
- All-insulated, with internal fuse (T 2A) for operation with Europlug (to CEE 7/16) and IEC 320 connector

**Material:**
- Plastic
- Aluminium

**Colour:**
- Enclosure: RAL 7016

**Protection class:**
- II (all-insulated)

**Light colour:**
- 4000 K (neutral white)

**Supply includes:**
- Mounting kit magnet
- Assembly screws

**Note:**
- Connection accessories should be ordered separately
- The two plug-in connection cables should only be used with the IT LED system light. Use with all other Rittal system lights or external products is inadmissible.
- Cascading of multiple IT LED system lights is not possible

| **Model No.** | | | | |
|---|---|---|---|---|
| | | | **7859.000** | Page |
| Output (lumens) | | | 600 | |
| Length (mm) | | | 337 | |
| Motion sensor | | | – | |
| Rated operating voltage | 100 – 240 V AC, 50/60 Hz | | ■ | |
| Equipment | Socket | | – | |
| | 90° rotating connector | | ■ | |
| | Adjustable light direction | | ■ | |
| | Adjustable light distribution | | ■ | |
| Approvals | UL/cUL | | ■ | |
| | CSA | | ■ | |
| | CCC | | ■ | |
| Installation type | Screw-fastening | | ■ | |
| | Clip attachment | | ■ | |
| | Magnetic attachment to surfaces | | ■ | |
| Connection options | Infeed | | 2-pole | |
| | Door-operated switch (accessory) | | ■ | |
| Installation options | Enclosures with a 25 mm pitch pattern | Screw fastening/clip | Directly on the profile | |
| | TE 8000, IT enclosure based on AX/EL | Mounting kit magnet | ■ | |
| **Accessories** | | | | |
| Door-operated switch | | | 2500.460 | 1024 |
| Door-operated switch, UL | | | 2500.470 | 1024 |
| **Also required: Connection accessories** | | | | |
| 1 | Connection cable with Europlug EN 50075, CEE 7/16, type: H05VV-F, 2 x 0.75 mm², ready for connection, black, length 2 m, packs of 1 | | **7859.010** | |
| 2 | Connection cable with IEC 60 320 C18 connector, UL version, to fit IEC 60 320 C13 sockets type: SJT 2 x 18 60D, ready for connection, black, length 2 m, packs of 1 | | **7859.020** | |

**Connection cable with Europlug EN 50075**

**Connection cable with IEC 60 320 C18 connector**

## EMC

### EMC side panel

**for VX**
Automatic potential equalisation via assembly components, and a high level of EMC protection thanks to a special EMC seal.

**Material:**
– Sheet steel, 1.5 mm

**Surface finish:**
– Magnesium zinc coated, powder-coated on the outside

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

**Supply includes:**
– Assembly parts

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Height mm | Depth mm | | |
| 2000 | 600 | 2 pc(s). | **8106.760** |
| 2000 | 800 | 2 pc(s). | **8108.760** |

### EMC shielding seal

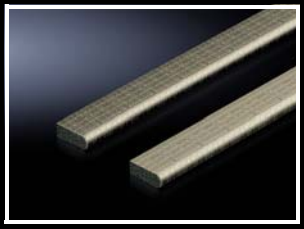
**for VX**
For EMC-compliant shielding of the baying point in conjunction with external baying connector.

**Protection category IP to IEC 60 529:**
– IP 55 in conjunction with external baying connector

**Supply includes:**
– 8 m

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **8800.695** |

**Also required:**
– Baying connector, external, page 912



### EMC divider panel seal

**for VX**
With bayed EMC enclosure systems and when using a zinc-plated divider panel, this seal ensures optimum contact and shield attenuation.

**Material:**
– PU foam with electrically conductive sheathing

**Supply includes:**
– 6 m

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **4348.500** |

## Rail

**for EMC shielding bracket and strain relief**

Combined rail for strain relief and EMC contacting of inserted cables.

**Design:**
- C rail to accommodate cable clamps
- T-head cut-outs on a 40 mm pitch pattern for cable clamping using cable ties

**Benefits:**
- Additional contacting on the left or right of the rail via existing holes (9 mm diameter)
- Prepared for tool-free mounting of EMC shielding brackets

**Installation options:**
- On the horizontal/vertical VX, VX SE, PC enclosure section
- On the mounting plate, may also be fitted without a retaining bracket

**Material:**
- Extruded aluminium section

**Surface finish:**
- Chrome-free passivated

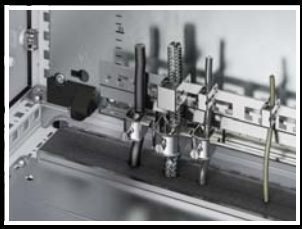
**Supply includes:**
- 1 rail
- 2 retaining brackets
- Assembly parts

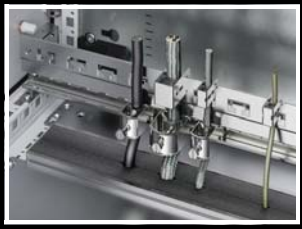
| For enclosure width mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 553 | 1 pc(s). | **2388.650** |
| 800 | 753 | 1 pc(s). | **2388.850** |
| 1000 | 953 | 1 pc(s). | **2388.050** |
| 1200 | 1153 | 1 pc(s). | **2388.125** |

**Also required:**
- EMC shielding bracket, see page 1029
- Cable clamps, see page 1060

**Accessories:**
- Support bracket or spacer, see page 1001
- Quick-assembly block, see page 1001
- Angle piece, see page 1001
- Earth straps, see page 1033
- Earthing braid, see page 1033

**Possible alternative:**
- C rails 30/15, see page 996





## EMC shielding bracket

Quick assembly without the use of tools: Press the EMC shielding bracket against the cable shield and clip into the rail. Diameter changes are compensated in full by the spring of the EMC shielding bracket.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| For shield diameter mm | Packs of | **Model No.** |
|---|---|---|
| 3 – 10 | 10 pc(s). | **2388.100** |
| 4 – 15 | 10 pc(s). | **2388.150** |
| 10 – 20 | 10 pc(s). | **2388.200** |
| 15 – 28 | 10 pc(s). | **2388.280** |

## EMC gland plate

**for VX, VX SE**

For shielded cables with a maximum diameter of 20 mm. Combined EMC/IP seal provides low-resistance contact between cable shield and gland plate. For all 400, 500, 600 and 800 mm deep enclosures in conjunction with standard gland plates.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 1 gland plate with twin hammer-head punching
- 1 sliding base plate
- 2 EMC/IP seals

| Width mm | Packs of | **Model No.** |
|---|---|---|
| 600 | 1 pc(s). | **8618.820** |
| 800 | 1 pc(s). | **8618.821** |
| 1000 | 1 pc(s). | **8618.822**[1)] |
| 1200 | 1 pc(s). | **8618.823**[1)] |

[1)] For one enclosure half only

## EMC

### EMC cable gland

The cable sheathing may optionally be interrupted at the contact point or removed completely inside the enclosure. The cable shielding in the enclosure is retained. The supplied lock nut cuts automatically into the paint when screwed down, thus creating a conductive connection.

**Protection category IP to IEC 60 529:**
– IP 68

**Possible alternative:**

– Cable gland Hygienic Design, see page 1057

**Cable gland, metric**

| Size | Cable diameter mm | Minimum[1] shield diameter mm | Packs of | **Model No.** |
|---|---|---|---|---|
| M16 | 4.5 – 10 | 3 | 5 pc(s). | **2843.160** |
| M20 | 6 – 12 | 5 | 5 pc(s). | **2843.200** |
| M25 | 11 – 17 | 8 | 5 pc(s). | **2843.250** |
| M32 | 15 – 21 | 10 | 1 pc(s). | **2843.320** |
| M40 | 19 – 28 | 15 | 1 pc(s). | **2843.400** |
| M50 | 27 – 38 | 19 | 1 pc(s). | **2843.500** |
| M63 | 34 – 44 | 30 | 1 pc(s). | **2843.630** |

[1] Minimum shield diameter = cable diameter minus cable sheathing

### EMC shield bus

Made of corrosion-proof steel strip, 75 mm$^2$ cross section, for cable shield contact.

**Supply includes:**
– Assembly parts

| Rail length mm | Connections | Packs of | **Model No.** |
|---|---|---|---|
| 375 | 10 | 1 pc(s). | **2413.375** |
| 550 | 16 | 1 pc(s). | **2413.550** |

### EMC earth clamp

The clamps may be used directly on the device or operating equipment on the mounting plate for cable shield contact.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Size mm | Packs of | **Model No.** |
|---|---|---|
| 4 | 50 pc(s). | **2367.040** |
| 6 | 50 pc(s). | **2367.060** |
| 8 | 50 pc(s). | **2367.080** |
| 12 | 50 pc(s). | **2367.120** |
| 16 | 50 pc(s). | **2367.160** |
| 20 | 25 pc(s). | **2367.200[1]** |

[1] 2 mounting brackets

### Contact cutter

The contact cutter enables EMC-compatible preparation of the contact point e.g. for earthing braids. Plastic-bound abrasive with guide pin for round system punchings. With location point for drill, grinder etc.

| For | **Model No.** |
|---|---|
| Frame section | **2414.000** |
| Earthing bolts[1] | **2414.500** |

[1] Not necessary with VX, VX SE

### Contact paint

Contact paint prevents the corrosion of conductive, unprotected contact points.

**Contents:**
– 12 ml

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **2415.000** |

## VX25 for areas at risk of earthquakes

The versions listed have been tested and meet the requirements to Telcordia GR 63-CORE. They should be seen as a comparative variable to the customer's own plant, since empty enclosures cannot be certified.

**Note:**
- Further information can be found in the white paper “Earthquake protection for switchgear systems” on the Internet

**VX25 for earthquake zone 1 and 2 to Telcordia GR 63-CORE**
VX 8806.000:
W x H x D: 800 x 2000 x 600 mm, see page 125

Fitted with:
- Side panels, see page 901
- Base/plinth VX (corner pieces with base/plinth trim panels, front and rear and side base/plinth trim panels, 100 mm high), see page 881/882

**VX25 for earthquake zone 3 to Telcordia GR 63-CORE**
VX 8806.000:
W x H x D: 800 x 2000 x 600 mm, see page 125

Fitted with:
- Side panels, see page 901
- Comfort handle VX, see page 937
- Earthquake base/plinth, see page 1032

**VX25 for earthquake zone 4 to Telcordia GR 63-CORE**
VX 8806.000:
W x H x D: 800 x 2000 x 600 mm, see page 125

Fitted with:
- Side panels, see page 901
- Comfort handle VX, see page 937
- Earthquake base/plinth, see page 1032
- Earthquake kit, see page 1032

## VX25 for areas at risk of earthquakes

### Earthquake base/plinth

**for VX**
**Height 100 mm**

- For stable attachment of the earthquake-resistant enclosure to the subsurface.
- External metric M6 thread for a stable connection to the subsurface from the outside

**Material:**
- Corner piece: Sheet steel, 5 mm
- Trim panels: Sheet steel, 2 mm

**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7022

**Supply includes:**
- 1 pc(s). =
  4 corner pieces,
  2 depth stays,
  1 trim panel each front and rear
  Fully assembled.

| For enclosures W x D mm | Packs of | Model No. |
|---|---|---|
| 800 x 600 | 1 pc(s). | **8601.860** |

### Earthquake kit

**for VX**

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- 1 pc(s) =
  2 side reinforcements, bottom
  4 bracing struts, sides
  6 gusset plates
  2 door safety brackets
  4 punched sections with mounting flanges 23 x 64 mm
  2 mounting rails 18 x 39 mm
  8 angle plates
  Mounting plate attachment
  Assembly parts

| For enclosures W x H x D mm | Packs of | Model No. |
|---|---|---|
| 800 x 2000 x 600 | 1 pc(s). | **8618.600** |

## Earth straps

For configuring a reliable earthing connection with perfect contact
- With ring terminals in M6 and M8 to match the earthing screws
- Length-optimised and ready to install

| Enclosure | Connection option | | |
|---|---|---|---|
| | Door/cover | Enclosure | Mounting plate |
| KX | M6 | M6 | M6 |
| AX | M8 | M8 | M8 |
| VX | M8 | M8 | M8 |
| Ex | M8 | M8 | M8 |
| TP | M6 | M8 | M8 |
| VX SE | M8 | M8 | M8 |
| PC | M8 | M8 | – |

| Connection | Cross-section mm² | Length mm | Packs of | Model No. |
|---|---|---|---|---|
| M8 – M8 | 4 | 170 | 5 pc(s). | **2564.000** |
| M8 – M8 | 16 | 170 | 5 pc(s). | **2565.000** |
| M8 – M8 | 25 | 170 | 5 pc(s). | **2566.000** |
| M6 – M6 | 10 | 200 | 5 pc(s). | **2565.100** |
| M8 – M8 | 4 | 300 | 5 pc(s). | **2567.000** |
| M6 – M8 | 10 | 300 | 5 pc(s). | **2565.110** |
| M8 – M8 | 10 | 300 | 5 pc(s). | **2565.120** |
| M8 – M8 | 16 | 300 | 5 pc(s). | **2568.000** |
| M8 – M8 | 25 | 300 | 5 pc(s). | **2569.000** |
| M6 – M6 | 10 | 350 | 5 pc(s). | **2565.050** |

**Also required:**

- Assembly parts for earth straps, see page 1033

## Earthing braid

Tin-plated copper, in various lengths and cross-sections with press-fitted contact rings. Earthing braids counteract the current displacement effect at high frequencies, whilst at the same time offering highly flexible connection opportunities.

**Approvals:**
- UR, cUR

| For | Cross-section mm² | Length mm | Packs of | Model No. |
|---|---|---|---|---|
| M6 | 10 | 200 | 10 pc(s). | **2412.210** |
| M8 | 16 | 200 | 10 pc(s). | **2412.216** |
| M8 | 25 | 200 | 10 pc(s). | **2412.225** |
| M6 | 10 | 300 | 10 pc(s). | **2412.310** |
| M8 | 16 | 300 | 10 pc(s). | **2412.316** |
| M8 | 25 | 300 | 10 pc(s). | **2412.325** |

**Also required:**

- Assembly parts for earth straps, see page 1033

## Assembly parts

**for earth straps**

For fastening the earth straps and earthing braids to:
- Horizontal and vertical enclosure sections
- Punched section with mounting flange, 23 x 64 mm
- Punched section without mounting flanges, 23 x 64 mm
- Gland plates

| Size | Packs of | Model No. |
|---|---|---|
| M6 | 10 pc(s). | **2570.000** |
| M8 | 10 pc(s). | **2559.000** |

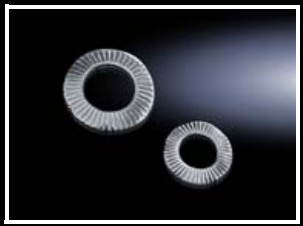
**Also required:**

- For mounting on horizontal and vertical enclosure sections: Cage nuts, see page 1002

## Contact washer

Serrated contact washers facilitate the secure connection of PE conductors, so there is no need to manually strip paint in the connection area.

| Size | Packs of | Model No. |
|---|---|---|
| M5 | 100 pc(s). | **2343.000** |
| M6 | 100 pc(s). | **2334.000** |
| M8 | 100 pc(s). | **2335.000** |



## Earthing

### Earthing plate

For installation in
- Comfort Panel
- Optipanel
- VX
- VX SE
- PC

One earthing cable can be screw-fastened to the threaded bolt and connected to up to 8 components with earth straps via 6.3 mm flat-pin connectors.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2570.500** |

**Supply includes:**
- Assembly parts

### Central earthing point

For connecting
- Earth straps
- Earthing braids

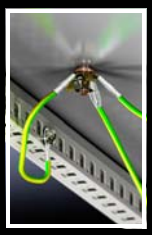
to the vertical and horizontal enclosure sections. The connection bracket is connected to the enclosure frame with 2 screws and is securely contacted. Earth connection is via the threaded bolt M8 x 20 mm.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7829.200** |

**Supply includes:**
- 1 connection bracket
- 2 assembly screws for mounting on the enclosure section
- 2 serrated washers
- 1 nut M8
- 1 contact washer M8
- 1 washer



### Potential equalisation star

**for 8 mm earthing bolt**

The earthing connector is used for simple potential equalisation on an 8 mm earthing bolt, or in conjunction with central earthing point 7829.200. Up to five flat-pin connectors (6.3 mm) may be contacted on one earthing point.

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **7548.210** |

**Supply includes:**
- 10 earthing connectors
- Assembly parts

## Potential equalisation kit

**for VX IT**

Central earthing point on the enclosure frame for simple connection of the enclosure to the earthing/ potential equalisation network (rack bonding conductor (RBC) connection point).

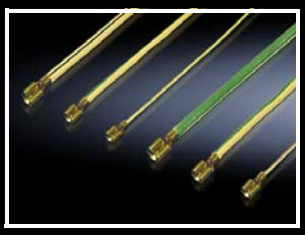
**Application:**
- To create seamless central potential equalisation between all installed components and/or to ensure functional earthing to EN 50 310

**Functional principle:**
- Contact between all enclosure panels and the enclosure frame as central earthing point plus contact with all installed components to the same potential, via a conductive attachment or separate earth strap

**Supply includes:**
- 7 earth straps (4 $mm^2$), for doors and optional side panels
- Central earthing point
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5302.027** |

**Note:**
- If a risk assessment of the ultimate application has been carried out by a qualified electrician and no extended risk potential has been identified, no protective earthing measures are required



## Earthing extension kits

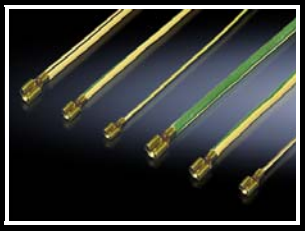
To supplement the existing earthing or potential equalisation sets for integrating additional installation components into the potential equalisation system. For targeted contact of installation components with the enclosure frame. The earth conductors are pre-assembled with connectors ready for connection and cut to the correct length.

**Application:**
- For extending the existing potential equalisation set

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7829.150** |

**Supply includes:**
- 8 earth straps, UL style 1015 AWG 12
- Connection accessories

**Approvals:**
- UL



## Potential equalisation kit, Plus version

**for VX IT**

For improved EMC.

**Benefits:**
- All enclosure elements are connected via earthing braids to a central, vertical potential equalisation rail (rack bonding busbar, RBB) via the frame structure as central consolidation point

**Application:**
- Ensures continuous potential equalisation and/or functional earthing
- Improved protection from high-frequency interfering radiation to EN 50 310

**Functional principle:**
- Potential equalisation rail for central potential equalisation of all installed equipment on the enclosure and components connected to the potential equalisation

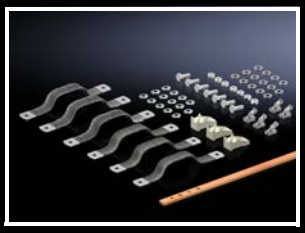
**Supply includes:**
- 6 earthing braids (M8), 10 $mm^2$, for sheet steel doors, side panels, potential equalisation rail
- Potential equalisation rail, length 1545 mm, for height 1800 – 2000 mm
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5302.028** |

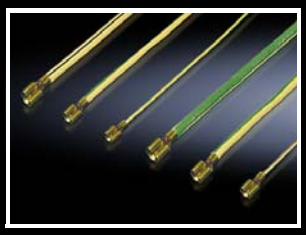
**Note:**
- If a risk assessment of the ultimate application has been carried out by a qualified electrician and no extended risk potential has been identified, no protective earthing measures are required
- To ensure an increased shielding effect of the enclosure, use of an enclosure with an all-round sealed body is advisable, similar to that used in IP enclosure variants with a solid sheet steel door at the front (as configuration only), solid roof plate, screw-fastened side panels and solid base

**Assembly instruction:**
- The specific connection cables between the installed equipment and the potential equalisation rail must be supplied by the user

**Accessories:**
- Conductor connection clamp, see page 349



## Earthing



### Complete earthing kit

**for TE**

For system-compatible earthing of all housing parts on the housing frame. The earth conductors are pre-assembled with connectors ready for connection and cut to the correct length.

**Supply includes:**
- 4 earth straps, 300 mm
- 4 earth straps, 350 mm
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7000.675** |

**Note:**
- If a risk assessment of the ultimate application has been carried out by a qualified electrician and no extended risk potential has been identified, no protective earthing measures are required

### PE busbar

699 mm long PE busbar with 42 pre-fitted screws, including terminal clamps up to 6 mm$^2$ (fine wire conductors), 10 mm$^2$ (single wire or multi-wire conductors) and main terminal clamp up to 35 mm$^2$.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2364.000** |

**Accessories:**
- Cable retainer, see page 1002

### Earth rail, horizontal

**for VX, VX SE, VX IT**

**Supply includes:**
- Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601, 15 x 5 mm
- 20 connection points with M5 screws
- 2 earth connections 25 mm$^2$
- 2 isolators
- Assembly parts

| For enclosure width mm | Width mm | Height mm | Length mm | Packs of | Model No. |
|---|---|---|---|---|---|
| 600, 800 | 15 | 5 | 450 | 1 pc(s). | **7113.000** |

### Earth rail, vertical

**for VX, VX IT**

Easily fitted to the 25 mm DIN pitch pattern of distributors or to the 482.6 mm (19′) mounting angles. The supplied earth conductors facilitate star earthing of the cable clamp straps in the patch panels. The earth terminals are fully adjustable. Current carrying capacity of rail approx. 200 A.

**Supply includes:**
- Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601, 15 x 5 mm
- 16 push-in conductor connection clamps, 1.5 – 16 mm$^2$
- 15 earthing leads 6 mm$^2$, L = 500 mm
- Assembly parts

| For enclosure height mm | Length mm | Packs of | Model No. |
|---|---|---|---|
| 800 | 545 | 1 pc(s). | **7541.000** |
| 1000 | 745 | 1 pc(s). | **7542.000** |
| 1200 | 945 | 1 pc(s). | **7543.000** |
| 1400 | 1145 | 1 pc(s). | **7544.000** |
| 1600 | 1345 | 1 pc(s). | **7545.000** |
| 1800 | 1545 | 1 pc(s). | **7546.000** |
| 2000 | 1745 | 1 pc(s). | **7547.000** |
| 2200 | 1945 | 1 pc(s). | **7548.000** |

## Extension kit

**for earth rail, vertical**

For system-compatible expansion of the star earthing on the vertical potential equalisation rail.

**Supply includes:**
- Earthing leads 6 mm², L = 500 mm
- Preassembled, with ring terminal and wire end ferrule
- Push-in conductor connection clamps 1.5 – 16 mm²
- Assembly parts

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **7549.000** |

## ESD connection point

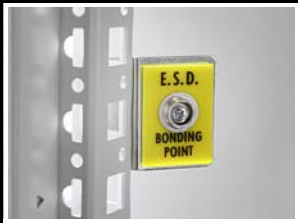
Dangerously high potential differences can occur during maintenance or conversion work on the enclosure. To protect sensitive electronic components, this standardised connection point (push-button) provides potential equalisation between service engineer and enclosure. The connection point is directly conductively connected to the enclosure frame via two screws.

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7752.950** |

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts



## Earthing

### PE/PEN busbar E-Cu

**for VX**
With integral punchings.

**Material:**
– E-Cu

**Standards:**
– DIN EN 13601

**Accessories:**
– PE/PEN angle bracket, see page 1038
– PE/PEN baying bracket E-Cu, see page 1039

**Dimension 30 x 5 mm**

| For enclosure width mm | Length mm | Hole Ø mm | Packs of | Model No. |
|---|---|---|---|---|
| 400 | 300 | 11.5 | 2 pc(s). | **9686.524** |
| 600 | 500 | 11.5 | 2 pc(s). | **9686.526** |
| 800 | 700 | 11.5 | 2 pc(s). | **9686.528** |
| 1000 | 900 | 11.5 | 2 pc(s). | **9686.520** |
| 1200 | 1100 | 11.5 | 2 pc(s). | **9686.522** |

**Dimension 30 x 10 mm**

| For enclosure width mm | Length mm | Hole Ø mm | Packs of | Model No. |
|---|---|---|---|---|
| 400 | 300 | 11.5 | 2 pc(s). | **9686.534** |
| 600 | 500 | 11.5 | 2 pc(s). | **9686.536** |
| 800 | 700 | 11.5 | 2 pc(s). | **9686.538** |
| 1000 | 900 | 11.5 | 2 pc(s). | **9686.530** |
| 1200 | 1100 | 11.5 | 2 pc(s). | **9686.532** |

**Dimension 40 x 10 mm**

| For enclosure width mm | Length mm | Hole Ø mm | Packs of | Model No. |
|---|---|---|---|---|
| 400 | 300 | 11.5 | 2 pc(s). | **9686.544** |
| 600 | 500 | 11.5 | 2 pc(s). | **9686.546** |
| 800 | 700 | 11.5 | 2 pc(s). | **9686.548** |
| 1000 | 900 | 11.5 | 2 pc(s). | **9686.540** |
| 1200 | 1100 | 11.5 | 2 pc(s). | **9686.542** |

**Dimension 80 x 10 mm**

| For enclosure width mm | Length mm | Hole Ø mm | Packs of | Model No. |
|---|---|---|---|---|
| 400 | 300 | 11.5 | 2 pc(s). | **9686.584** |
| 600 | 500 | 11.5 | 2 pc(s). | **9686.586** |
| 800 | 700 | 11.5 | 2 pc(s). | **9686.588** |
| 1000 | 900 | 11.5 | 2 pc(s). | **9686.580** |
| 1200 | 1100 | 11.5 | 2 pc(s). | **9686.582** |

### PE/PEN angle bracket

**for VX**
For attaching the PE/PEN busbar to the enclosure section.

**Material:**
– Sheet steel, 3.0 mm

**Supply includes:**
– Assembly parts

| For busbar mm | Packs of | Model No. |
|---|---|---|
| 30 x 5<br>30 x 10<br>40 x 10<br>80 x 10 | 2 pc(s). | **9686.350** |

## PE/PEN baying bracket E-Cu

**for VX**

For connecting the busbars from enclosure to enclosure.

**Material:**
- E-Cu

**Standards:**
- DIN EN 13601

| Size mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 30 x 5 | 180 | 2 pc(s). | **9686.529** |
| 30 x 10 | 180 | 2 pc(s). | **9686.539** |
| 40 x 10 | 180 | 2 pc(s). | **9686.549** |
| 80 x 10 | 180 | 2 pc(s). | **9686.589** |

## Busbar support

**N conductor**

For assembling 1-pole neutral or PEN conductors. The busbar holder is mounted onto the enclosure section.

**Material:**
- Polyamide
- Fire protection corresponding to UL 94-HB

**Colour:**
- Similar to RAL 7016

**Supply includes:**
- Assembly parts

| For busbar mm | Packs of | **Model No.** |
|---|---|---|
| 50 x 10 | 2 pc(s). | **9686.300** |

**Also required:**
- Busbars E-Cu, see page 342.

**Assembly instruction:**
- For the installation of max. 4 busbars (sub-conductors) per phase

**Accessories:**
- Longitudinal connector E-Cu, see page 397

## Inserted screw nut M12

Self-holding nuts with knurled ring for busbars E-Cu.

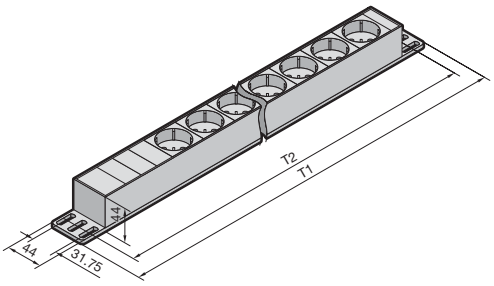
Hole diameter: 14.5 mm

| Packs of | **Model No.** |
|---|---|
| 30 pc(s). | **3591.060** |

## Socket strips

**in an aluminium duct**

The socket strips are available in various lengths with different functional elements. Special attention has been devoted to practical, universal fastening: Variable attachment facilities have been created with an angle bracket which may be inserted in four positions. Hence, for example, the 482 mm long socket strip may optionally be mounted on 482.6 mm (19") mounting angles, the 482.6 mm (19") mounting frame, on the enclosure frame, or in the rear section of the wall-mounted distributor. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm hole pattern. This makes selection much easier, as well as providing additional flexibility and saving on warehousing. Provision has also been made for cable routing of the infeed, and when mounting in the 482.6 mm (19") section there is adequate space to route the infeed between the socket strip and the profile rail without kinks.
The arrangement of the IEC 320 sockets at a 45° angle allows unrestricted use of angular connectors.




**Technical specifications:**
**Earthing-pin socket strips**
- Connector type F (CEE 7/3)
- Rated operating voltage: 250 V
- Connection cable: 2 m long H05VV-F3G1.5 without connector, 5 with connector

**Belgium/France (UTE) socket strips**
- Connector type E (CEE 7/5)
- Rated operating voltage: 250 V
- Connection cable: 2 m long H05VV-F3G1.5 with wire end ferrules

**Equipment connector strips (IEC 60 320-1/C13) socket strips**
- Rated operating voltage: 250 V
- Input: With C14 connector (H05VV-F3G1.0) or without connector (H05VV-F3G1.5), depending on the variant

**Material:**
- Aluminium section: Natural anodised
- Socket inserts: Polycarbonate

**Supply includes:**
- Socket strip
- 2 mounting brackets
- Assembly parts

**Standards:**
- Earthing-pin socket: DIN 49 440
- IEC 320 socket: EN 60 320-2-2
- Overvoltage protection: DIN EN 61 643-11 (VDE 0675 Part 6-11)

**Approvals:**
- CE
- RoHS

**Note:**
- Depending on the application, we recommend use of a charging current reserve to prevent incorrect activation due to starting-current spikes

**Earthing-pin connector type**

| Version | Rated current A | Connection | No. of sockets | Attachment: Frame | Attachment: Wall-mounted distributor, horizontal | Attachment: 482.6 mm (19") level | Length (T1) mm | Mounting dimension (T2) mm[1] | Packs of | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 Without rocker switch | 16 | Cable | 3 | ■ | – | – | 262.6 | 232.5 | 1 pc(s). | **7240.110** |
| | | | 7 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.210** |
| | | | 12 | ■ | – | – | 658.6 | 628.5 | 1 pc(s). | **7240.310** |
| 2 With rocker switch | 16 | Cable | 3 | ■ | – | – | 306.6 | 276.5 | 1 pc(s). | **7240.120** |
| | | | 7 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.220** |
| 3 Overvoltage protection, type3 and interference suppressor filter | 16 | Cable | 5 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.230** |
| | | | 9 | ■ | – | – | 658.6 | 628.5 | 1 pc(s). | **7240.330** |
| 4 Circuit-breaker, type B, 16 A, 2-pole | 16 | Cable | 5 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.240** |
| 5 UPS strip, connection cable with 10 A IEC 320 connector, type E, with G fuse, 10 A | 10 | C14 | 7 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.260** |
| 6 FI switch, 0.03 A, 2-pole, type A | 16 | Cable | 5 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.280** |
| UTE sockets, type E with earthing pin (Belgium/France) | 16 | Cable | 7 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.510** |

[1] Variable attachment distance within a range of 25 mm, the distance given is hole centre – hole centre of mounting bracket

**C13 connector type**

| Version | Rated current A | Connection | No. of sockets | Attachment: Frame | Attachment: Wall-mounted distributor, horizontal | Attachment: 482.6 mm (19") level | Length (T1) mm | Mounting dimension (T2) mm[1] | Packs of | Model No. |
|---|---|---|---|---|---|---|---|---|---|---|
| For IEC 320 connectors | 16 | Cable | 12 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.200** |
| For IEC 320 connectors with IEC 320 input | 10 | C14 | 9 | ■ | ■ | ■ | 482.6 | 452.5 | 1 pc(s). | **7240.201** |

[1] Variable attachment distance within a range of 25 mm, the distance given is hole centre – hole centre of mounting bracket

## Socket strip

**Earthing-pin, with plastic housing**

Robust 8-way earthing-pin socket strip in a plastic housing. The strip may be mounted vertically on the enclosure frame or in the 482.6 mm (19") section. 2.5 U are required for 482.6 mm (19") installation The earthing-pin inserts are arranged at an angle of 45° so that angular connectors are also easily used. The connection cable is attached to a terminal connection (behind a removable cover) in the socket strip. The socket strip has a terminal for an external earthing connection.

**Technical specifications:**
- Connector type F (CEE 7/3)
- Rated operating voltage: 230 V
- Rated current: 16 A
- Connection cable: Type H05VV-F3G1.5 (black) with wire end ferrules
- Length: 2 m
- Dimensions: W x H x D: 483 x 74 x 45 mm

| Socket strip | Packs of | **Model No.** |
|---|---|---|
| 8-way, earthing-pin | 1 pc(s). | **7000.630** |

**Supply includes:**
- Socket strip
- Assembly parts

**Material:**
- Plastic (grey/black)

**Approvals:**
- CE
- RoHS

## Socket strip

**with power measurement**

The socket strip 7x CEE 7/3 (type F - earthing-pin socket) with integrated display measures the power consumed by all connected equipment.
The 482.6 mm (19") long socket strip may optionally be mounted on the 482.6 mm (19") mounting angles, on the enclosure frame or in the rear section of wall-mounted distributors. The installation bracket may be mounted in four different positions for variable mounting. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm hole pattern.

**Installation options:**
- Components with a 25 mm pitch pattern
- 482.6 mm (19") level
- Enclosure frame
- IT rack, at the rear, horizontal (adequate width provided)

**Benefits:**
- Measurement accuracy of ± 5 %

**Functions:**
- Measurement of current, voltage, frequency, active power, active energy and phase shift

**Material:**
- Aluminium section: Natural anodised
- Socket inserts: Polycarbonate

**Colour:**
- Socket: RAL 7035

**Supply includes:**
- Socket strip
- 2 mounting brackets
- 3 m connection cable with wire end ferrules
- Assembly parts

| Version | No. of sockets | Socket/jack (type) | Height mm | Length mm | Depth mm | Mounting dimension mm | Rated voltage | Phase current A | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|---|---|---|
| With display | 7 | D, earthing-pin (type F, CEE 7/3) | 45 | 482.6 | 50 | 464.1 | 230 V AC | 16 | 1 pc(s). | **7240.301** |

## Socket strips

### Junction box

**with multi-functional bracket**
The angle bracket can be installed in all network enclosures in a system-compatible design. The junction box serves as a transfer point for the power supply to all equipment (fans, lights and socket strips). As well as being used as a junction box or interchange point, the bracket can also accommodate the enclosure internal thermostat 3110.000 or the hygrostat 3118.000, thanks to its integral holes.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Junction box
– Bracket
– 6 m connection cable 3 x 1.5 $mm^2$ (flexible)

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7280.035** |

### Socket

– For mounting on support rails TS 35/7.5 and TS 35/15 to EN 60 715
– Uniform screw terminals from one side
– Enclosure width: 45 mm

**Technical specifications:**
– Rated voltage: 250 V AC
– Rated current: 16 A

**Material:**
– Polyamide

**Colour:**
– Grey

**Approvals:**
– VDE

| Version | Packs of | Model No. |
|---|---|---|
| Earthing-pin/CEE 7/3 | 2 pc(s). | **2506.120** |

### Service socket

**for enclosure frame attachment/16 A**
Integration of a service socket within a separate supply circuit, independently of the IT network and UPS. Simple installation via an angle bracket for attaching to the enclosure frame.

Type: Earthing contact/CEE 7/3

**Material:**
– Angle bracket: Sheet steel
– Socket: Plastic

**Surface finish:**
– Angle bracket: Zinc-plated

**Supply includes:**
– Service socket
– Angle bracket
– Damp-proof socket (IP 44)
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7280.100** |

## Energy-Box, 3 U, 482.6 mm (19")

**Technical specifications:**
- Depth-adjustable top hat rail for installed equipment to DIN 43 880, sizes 1 – 3 (e.g. to accommodate built-in sockets, circuit-breakers etc.)
- Cable clamping at the rear, one N and one PE rail on an insulated plinth.
- Plastic hood including extension cover (UL 94-V0)
- Maximum accommodation capacity of 22 HP (22 x 18 mm = 396 mm).
- Enclosure height: 3 U
- Enclosure depth: 155 mm
- Overall installation depth with C rail: 155 mm
- Dimensions: W x H x D: 483 x 132.5 x 155 mm

**Colour:**
- RAL 7035

**Supply includes:**
- Energy-Box with fitted N and PE rails and brush strip
- 4 connection clamps, 35 $mm^2$
- 18 connection clamps, 16 $mm^2$
- 2 blanking covers
- 12 clips for cable strain relief
- Identification strips, self-adhesive

| U | Packs of | **Model No.** |
|---|---|---|
| 3 | 1 pc(s). | **7480.035** |

Photo shows a configuration example with equipment not included in the scope of supply

## Energy-Box, 3 U, 482.6 mm (19")

**Pull-out**

**Technical specifications:**
- Depth-adjustable top hat rail for snap-in attachment of installed equipment to DIN 43 880 in sizes 1 – 3 (e.g. to accommodate built-in sockets, circuit-breakers etc.) or entire installation assemblies.
- Cable clamping at rear
- Two power distribution rails with connection clamps on insulated base/plinth
- Plastic hood including extension cover
- Maximum accommodation capacity of 22 HP (22 x 18 mm = 396 mm).
- Enclosure height: 3 U
- Enclosure depth: 223 mm
- Maximum extension: 220 mm
- Dimensions: W x H x D: 483.5 x 132 x 223 mm

**Colour:**
- RAL 7035

**Supply includes:**
- Energy-Box with fitted N and PE rails and brush strip
- 4 connection clamps, 35 $mm^2$
- 18 connection clamps, 16 $mm^2$
- 2 blanking covers
- 12 clips for cable strain relief
- Identification strips, self-adhesive

| U | Packs of | **Model No.** |
|---|---|---|
| 3 | 1 pc(s). | **7480.300** |

Photo shows a configuration example with equipment not included in the scope of supply

## Cable entry

### Cable entry plate

**for VX, VX SE**
– Cable entry grommet
– Connector grommet
instead of segments from the standard divided gland plates

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

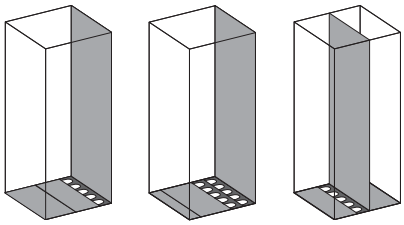
**Protection category IP to IEC 60 529:**
– IP 55 in conjunction with cable entry grommets or connector grommets

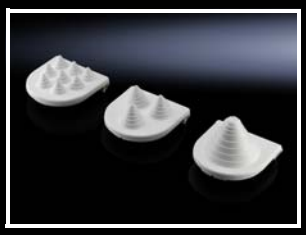
**Supply includes:**
– Assembly parts

| Enclosure width mm | Cut-outs per plate | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 6 | 2 pc(s). | **8619.800** |
| 800 | 8 | 2 pc(s). | **8619.801** |
| 1000 | 5 | 4 pc(s). | **8619.802** |
| 1200 | 6 | 4 pc(s). | **8619.803** |

**Also required:**
– Cable entry grommet, see page 1044 or
– Connector grommet, see page 1044

**Three examples from a wide range of possibilities**
The diagrams show three examples for positioning cable entry plates instead of segments from the three-piece gland plates supplied as standard. In this way, they can be positioned to fit the mounting plate. Thanks to the enclosure symmetry, where dimensions permit, cable entry plates may also be inserted in the enclosure depth, right and left, analogous to the gland plates.





### Cable entry grommet

In conjunction with the cable entry plate, supports simple, fast sealing of cables inserted into the base area of enclosures.

**Material:**
– Body: Polypropylene
– Cover: Thermoplastic elastomer

**Protection category IP to IEC 60 529:**
– IP 55 if installed correctly

| Cables per grommet | Max. Ø mm | Packs of | **Model No.** |
|---|---|---|---|
| 8 | 13 | 25 pc(s). | **4316.000** |
| 3 | 21 | 25 pc(s). | **4317.000** |
| 1 | 47 | 25 pc(s). | **4318.000** |

### Connector grommets

Suitable for cable diameters from 8 to 36 mm.

**Material:**
– Outer cover: Polypropylene covered with thermoplastic elastomer
– Seal: Cellular rubber

**Protection category IP to IEC 60 529:**
– IP 55 if installed correctly

| Packs of | **Model No.** |
|---|---|
| 10 pc(s). | **4311.000** |

## Section for cable entry, centre

**for VX, VX SE**

For top-mounting on gland plates.

**Material:**
- Extruded aluminium section
- Seal: PU foam
- Cross-section: 30 x 25 mm

**Protection category IP to IEC 60 529:**
- IP 55 if installed correctly

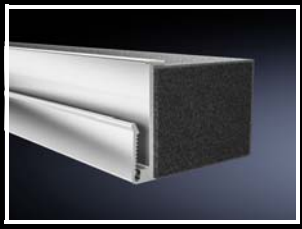
**Supply includes:**
- Plug-in sections, incl. foam rubber clamp strips

**Note:**
- You will need two pieces per cable entry point.
- From an enclosure width of 1000 mm, the base assembly is divided into two sections in the width. Two cable entry points (left/right) may be used.

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **8618.800** |
| 800 | 2 pc(s). | **8618.801** |
| 1000 | 4 pc(s). | **8618.802** |
| 1200 | 4 pc(s). | **8618.803** |
| 1600 | 4 pc(s). | **8618.804** |

**Accessories:**

- Cable clamp rail, see page 1059



## Section for cable entry, rear

**for VX, VX SE**

For top-mounting on the gland plate and enclosure frame.

**Material:**
- Extruded aluminium section
- Seal: PU foam
- Cross-section: 30 x 25 mm

**Protection category IP to IEC 60 529:**
- IP 55 if installed correctly

**Supply includes:**
- Plug-in sections, incl. foam rubber clamp strips

**Note:**
- You will need two pieces per cable entry point.
- From an enclosure width of 1000 mm, the base assembly is divided into two sections in the width. Two cable entry points (left/right) may be used.

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **8618.810** |
| 800 | 2 pc(s). | **8618.811** |
| 1000 | 4 pc(s). | **8618.812** |
| 1200 | 4 pc(s). | **8618.813** |
| 1600 | 4 pc(s). | **8618.814** |

**Accessories:**

- Cable clamp rail, see page 1059

## Foam rubber cable clamp strip

For sealing the cable entry between the gland plates. Particularly suitable for identical cable cross-sections.

**Material:**
- PU foam
- Cross-section: 30 x 30 mm

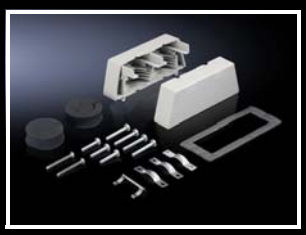
**Protection category IP to IEC 60 529:**
- IP 55 if installed correctly

| Packs of | Model No. |
|---|---|
| 3 m | **2573.000** |

## Cable entry

### EMC gland plates

see page 1029



### Connector gland

**for connector cut-outs (24-pole)**
For inserting 2 pre-assembled cables through the connector cut-out, without dismantling the cable connector.

Cable diameters: 8 – 36 mm

**Material:**
– Enclosure: Plastic
– Clamps: Sheet steel

**Surface finish:**
– Clamps: Zinc-plated

**Supply includes:**
– 1 pc(s). =
  2 half-shells, including seals, with fastening clamp

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2400.000** |

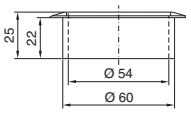
### Cable gland

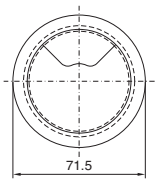
**for IW worktops**
To fit drilled holes Ø 60 mm. For the entry of cables with pre-assembled connectors, the rotating flap and cover are easily removed.

**Material:**
– Plastic

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6902.770** |



## Edge protection

For covering sharp edges of cut-outs. Provides protection of injuries and prevents damage to inserted cables. The edge protector is suitable for material thicknesses of approx. 1.0 – 2.0 mm, and may be cut to length individually.

**Material:**
– Plastic PVC

**Colour:**
– Black

| Packs of | **Model No.** |
|---|---|
| 10 m | **7072.100** |

## Connector gland, small

For pre-assembled cables with connectors. For use with material thickness of up to 4 mm. Strain relief of the pre-assembled cables can be achieved with cable ties.

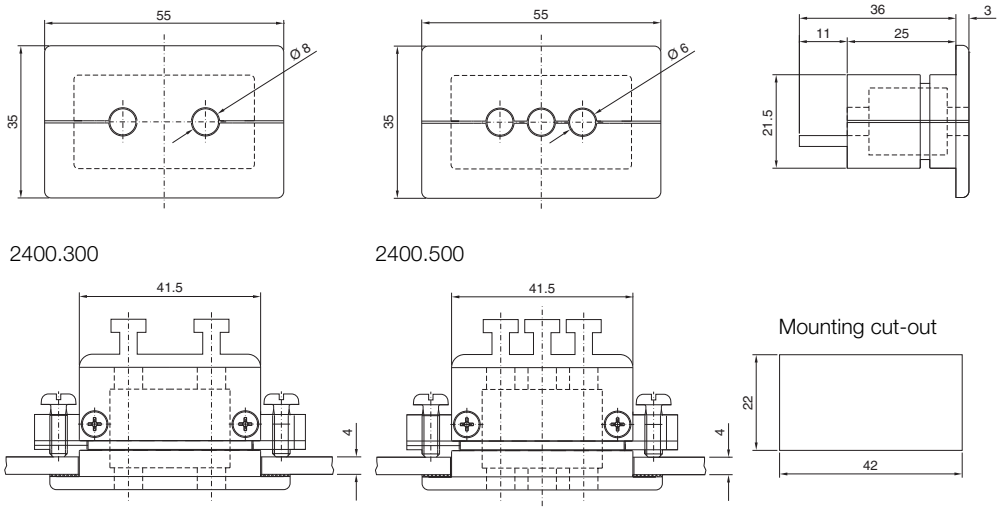
**Material:**
– Plastic

**Colour:**
– RAL 9005

**Protection category IP to IEC 60 529:**
– IP 65 if installed correctly

**Supply includes:**
– Assembly parts

| To fit | Packs of | **Model No.** |
|---|---|---|
| 2 cables<br>Ø 6 – 8 mm | 1 pc(s). | **2400.300** |
| 3 cables<br>Ø 4 – 6 mm | 5 pc(s). | **2400.500** |



## Cable entry

### Cable gland module

**for support arm connection Ø 130 mm**

Use of the mounting cut-out for support arm connection Ø 130 mm, round, with enclosures mounted on the wall, for sealed cable entry. May also be mounted retrospectively with the cables already inserted. Fitted with T-heads for cable clamping. Particularly well-suited to cables with identical cross-sections.

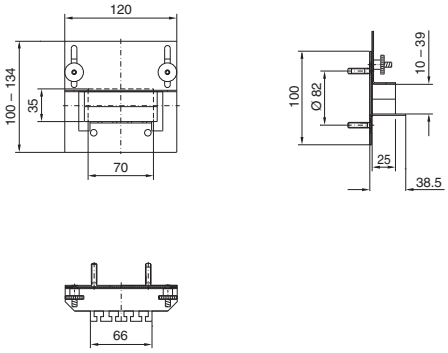
**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Protection category IP to IEC 60 529:**
– IP 55 with correct installation and cable entry

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6052.500** |



### Stepped collar

**for wall thicknesses from 1.5 to 4.5 mm**

For cable entry, simply cut off at the required level to match the cable diameter.

**Material:**
– Plastic to UL 94-HB

**Protection category IP to IEC 60 529:**
– IP 54 with careful cable entry

| For hole | Sealing range mm | Packs of | Model No. |
|---|---|---|---|
| M20 | 5 – 16 | 100 pc(s). | **2899.200** |
| M25 | 5 – 21 | 50 pc(s). | **2899.250** |
| M32 | 13 – 26.5 | 25 pc(s). | **2899.320** |
| M40 | 13 – 34 | 20 pc(s). | **2899.400** |

### Sealing frame, modular

For the universal use on all surfaces and walls, for feeding through pre-fabricated cables with connectors. Can also be mounted onto 24-pole or 16-pole connector cut-outs.

**Material:**
– Plastic

**Colour:**
– Black

**Protection category IP to IEC 60 529:**
– IP 66

**Supply includes:**
– Sealing frame
– Locking frame

| Number of small seal inserts | For cut-out mm | Model No. |
|---|---|---|
| 10 | 113.5 x 46 (24-pole) | **2583.100** |
| 8 | 91 x 46 (16-pole) | **2583.080** |

**Also required:**

– Inlay for plastic gland plate, modular and sealing frame, modular, see page 1051
– Seal inserts for cable gland plates, modular and sealing frame, modular, see page 1051

## Plastic gland plate, modular and sealing frame, modular

The plastic gland plate, modular and the sealing frame, modular, offer extensive flexibility with the entry of assembled and unassembled cables, with or without connectors. Depending on the cable cross-section, suitable modules may be selected to retain the high protection category of IP 66 after cable entry.

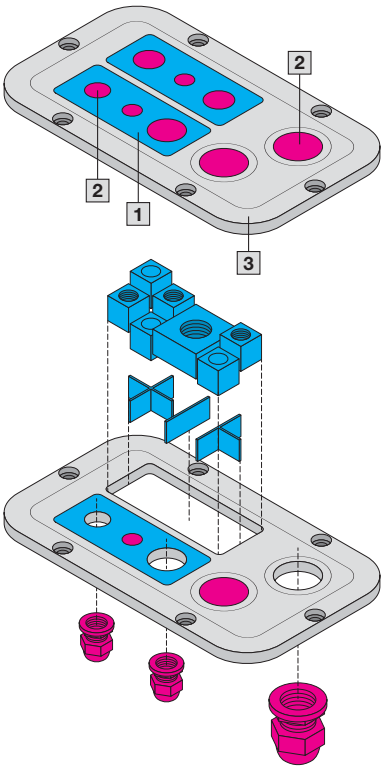
The gland plate design also supports mixed use with standard cable glands and inlays with seal inserts. In this way, cables prefitted with connectors may be safely inserted into the enclosure retrospectively. Seven different gland plate sizes are available. The sealing frame design may be used on any sufficiently large surface.

Plastic gland plate, modular for AX

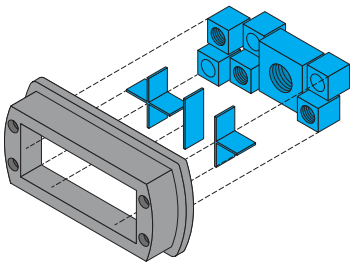
1 Rectangular cut-outs for inlays and seal inserts, see page 1051

2 Metric knockouts for cable glands, see page 1056

3 Plastic gland plates, modular, see page 1050




Sealing frame, modular for AX, KX



## Gland plates

### Plastic gland plate, modular

**with metric knockouts, for AX**

Simply pierce the plastic knockouts, and pull through the cable. Additional rectangular cut-outs and reinforcement frame allow the inlays and seal inserts to be installed directly.

**Temperature range:**
– Suitable for use from -40 °C…+80 °C

**Material:**
– Plastic to UL 94-V0

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 66 if installed correctly

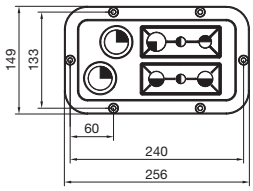
**Note:**
– The applicable size may be taken from the relevant product ordering page

**Accessories:**

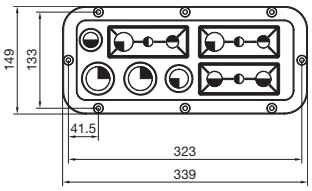
– Inlay, see page 1051
– Seal inserts, see page 1051
– Cable glands, see page 1056

| Model No. | | 2561.200 | 2562.200 | 2563.200 | 2564.200 | 2565.200 | 2566.200 | 2567.200 |
|---|---|---|---|---|---|---|---|---|
| Packs of | | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Gland plate | | Size 1 | Size 2 | Size 3 | Size 4 | Size 5 | Size 6 | Size 7 |
| Dimensions W x D mm | | 256 x 149 | 339 x 149 | 447 x 149 | 534 x 149 | 301 x 221 | 401 x 221 | 436 x 221 |
| | Diameter mm | Number of cable entries | | | | | | |
| | M12 | 2 | 3 | 4 | 5 | 4 | 4 | 4 |
| | M16 | 1 | 2 | 3 | 4 | 4 | 5 | 5 |
| | M20 | 2 | 3 | 5 | 6 | 4 | 5 | 5 |
| | M25 | 1 | 3 | 3 | 5 | 3 | 4 | 4 |
| | M32 | 2 | 2 | 1 | 1 | 1 | 1 | 4 |
| | M40 | – | – | 1 | 1 | 1 | 1 | 1 |
| | M50 | – | – | – | – | – | 1 | 1 |
| Rectangular cut-outs | | 2 | 3 | 4 | 6 | 5 | 6 | 6 |

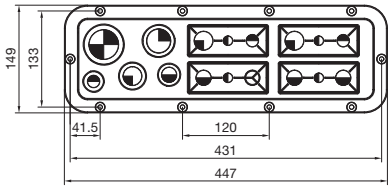
Size 1



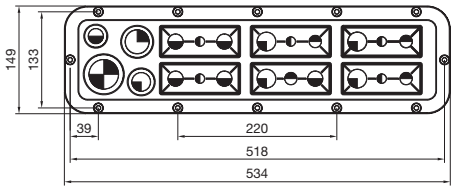

Size 2



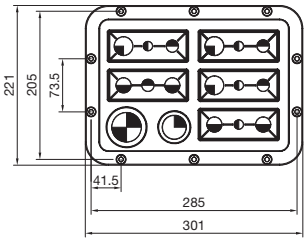

Size 3



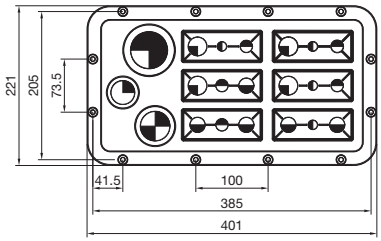

Size 4



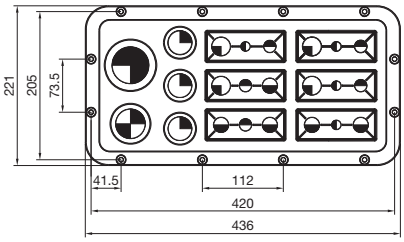

Size 5




Size 6




Size 7



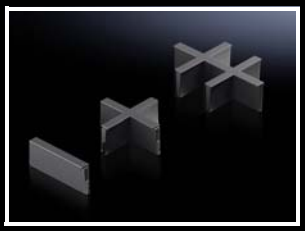
## Inlay

**for plastic gland plate, modular and sealing frame, modular**
Individual inserts to subdivide the cut-outs in the modular plastic gland plate and the modular sealing frame.

**Material:**
– Plastic

**Colour:**
– Black

| Version | Packs of | Model No. |
|---|---|---|
| 1 slot | 5 pc(s). | **2582.100** |
| 2 slots | 5 pc(s). | **2582.200** |
| 4 slots | 5 pc(s). | **2582.400** |
| 6 slots | 5 pc(s). | **2582.600** |



## Seal inserts

**for plastic gland plate, modular and sealing frame, modular**
In conjunction with the inlays, the seal inserts allow individual cable entry, even with preassembled cables.

**Material:**
– Plastic

**Colour:**
– RAL 7035

**Accessories:**

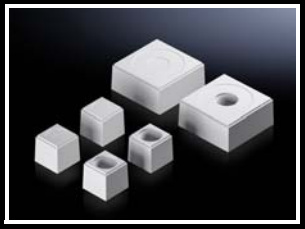
– When using as a gland plate, modular: Locking clip for seal inserts, see page 1051

**Seal inserts, small**

| For cable diameter | Packs of | Model No. |
|---|---|---|
| Solid | 10 pc(s). | **2580.000** |
| 3 mm | 10 pc(s). | **2580.003** |
| 4 mm | 10 pc(s). | **2580.004** |
| 5 mm | 10 pc(s). | **2580.005** |
| 6 mm | 10 pc(s). | **2580.006** |
| 7 mm | 10 pc(s). | **2580.007** |
| 8 mm | 10 pc(s). | **2580.008** |
| 9 mm | 10 pc(s). | **2580.009** |
| 10 mm | 10 pc(s). | **2580.010** |
| 11 mm | 10 pc(s). | **2580.011** |
| 12 mm | 10 pc(s). | **2580.012** |
| 13 mm | 10 pc(s). | **2580.013** |
| 14 mm | 10 pc(s). | **2580.014** |

**Seal inserts, large**

| For cable diameter | Packs of | Model No. |
|---|---|---|
| Solid | 5 pc(s). | **2580.100** |
| 15 mm | 5 pc(s). | **2580.115** |
| 16 mm | 5 pc(s). | **2580.116** |
| 17 mm | 5 pc(s). | **2580.117** |
| 18 mm | 5 pc(s). | **2580.118** |
| 19 mm | 5 pc(s). | **2580.119** |
| 20 mm | 5 pc(s). | **2580.120** |
| 21 mm | 5 pc(s). | **2580.121** |
| 22 mm | 5 pc(s). | **2580.122** |
| 23 mm | 5 pc(s). | **2580.123** |
| 24 mm | 5 pc(s). | **2580.124** |
| 25 mm | 5 pc(s). | **2580.125** |



## Locking clip

**for seal inserts**
In conjunction with the plastic gland plate, modular, the locking clips ensure the seal inserts are held securely and cannot be accidentally pushed into the enclosure.

**Material:**
– Plastic

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **2583.120** |

## Gland plates

### Plastic gland plate

**with membranes, for AX**
Simply pierce the plastic with a sharp object, and pull through the cable.

**Material:**
– Plastic to UL 94-V0

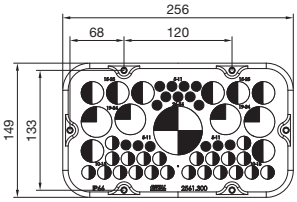
**Colour:**
– Similar to RAL 7035

**Protection category IP to IEC 60 529:**
– IP 66 if installed correctly

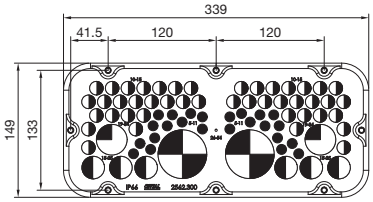
**Note:**
– The applicable size may be taken from the relevant product ordering page

| Model No. | | 2561.300 | 2562.300 | 2563.300 | 2564.300 | 2565.300 | 2566.300 | 2567.300 |
|---|---|---|---|---|---|---|---|---|
| Packs of | | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Gland plate | | Size 1 | Size 2 | Size 3 | Size 4 | Size 5 | Size 6 | Size 7 |
| Dimensions W x D mm | | 256 x 149 | 339 x 149 | 447 x 149 | 534 x 149 | 301 x 221 | 401 x 221 | 436 x 221 |
| | Diameter mm | Number of cable entries | | | | | | |
| ● | 5 – 11 | 15 | 24 | 36 | 28 | 30 | 30 | 30 |
| ◑ | 10 – 15 | 22 | 44 | 46 | 48 | 40 | 50 | 52 |
| ◐ | 15 – 25 | 8 | 6 | 8 | 8 | 5 | 8 | 8 |
| ◔ | 19 – 34 | 4 | 2 | 2 | 2 | 2 | 2 | 6 |
| ◕ | 26 – 35 | – | – | 4 | 2 | – | 2 | 4 |
| ◕ | 26 – 54 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| ○ | 50 – 110 | – | – | – | 1 | 1 | 1 | 1 |

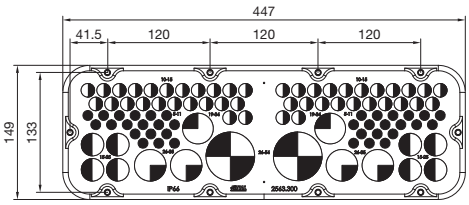
Size 1



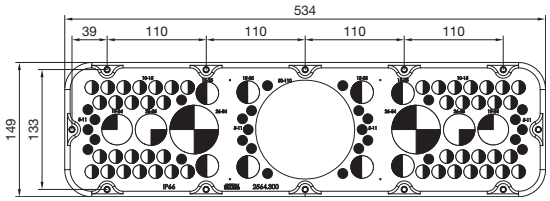

Size 2



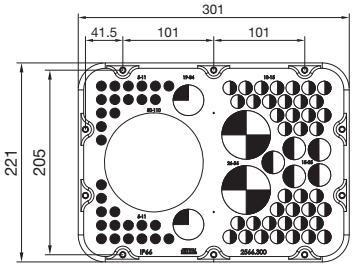

Size 3



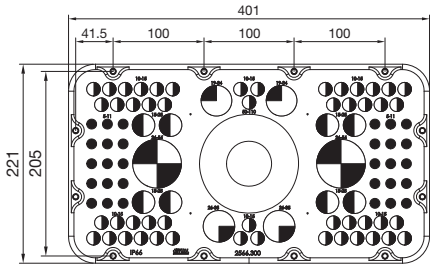

Size 4



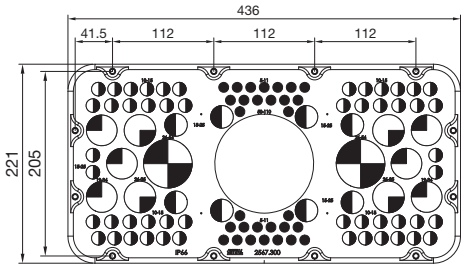

Size 5




Size 6




Size 7



## Metal gland plate

**with metric knockouts, for AX**
Simply knock out the holes for the cable glands using a screwdriver.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

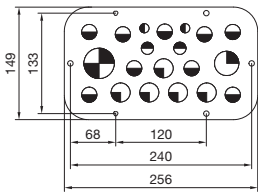
**Protection category IP to IEC 60 529:**
– IP 66 if installed correctly

**Note:**
– The applicable size may be taken from the relevant product ordering page

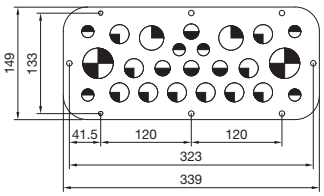
**Accessories:**
– Cable glands made from polyamide or brass, see page 1056

| Model No. | | 2571.100 | 2572.100 | 2573.100 | 2574.100 | 2575.100 | 2576.100 | 2577.100 |
|---|---|---|---|---|---|---|---|---|
| Packs of | | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). | 1 pc(s). |
| Gland plate | | Size 1 | Size 2 | Size 3 | Size 4 | Size 5 | Size 6 | Size 7 |
| Dimensions W x D mm | | 256 x 149 | 339 x 149 | 447 x 149 | 534 x 149 | 301 x 221 | 401 x 221 | 436 x 221 |
| | Diameter | Number of cable entries | | | | | | |
| | M12 | 2 | – | 4 | 1 | 2 | 2 | 6 |
| | M16 | 2 | 6 | 4 | 6 | 10 | 10 | 10 |
| | M20 | 9 | 4 | 7 | 8 | 8 | 8 | 8 |
| | M25 | 5 | 10 | 15 | 11 | 10 | 18 | 20 |
| | M32 | 1 | 2 | 2 | 6 | 2 | 4 | 4 |
| | M40 | 1 | 2 | 2 | 4 | 4 | 4 | 4 |

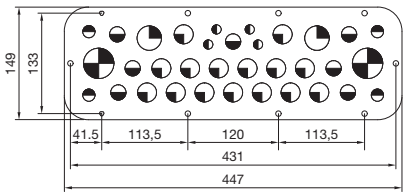
Size 1



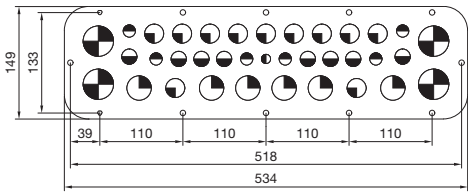

Size 2



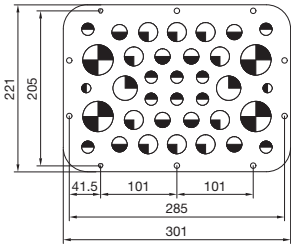

Size 3



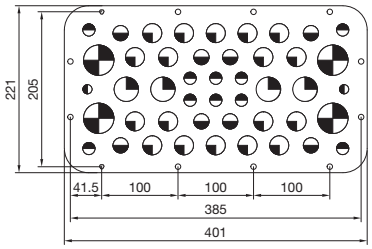

Size 4



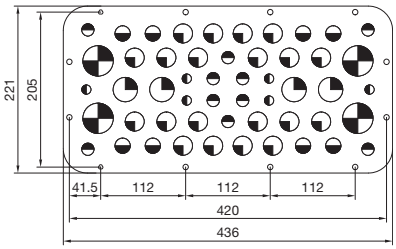

Size 5



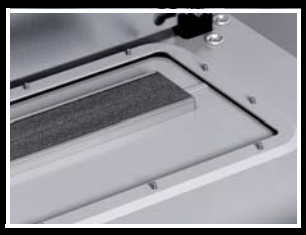

Size 6




Size 7



## Gland plates



### Gland plate

**with foam rubber cable clamp strip, for AX**
For feeding through pre-fabricated cables when the gland plate has already been fitted to the enclosure. Split gland plates can be sealed using movable plates with a foam rubber cable clamp strip.

**Material:**
– Gland plate: Sheet steel

**Colour:**
– RAL 7035

| Gland plate size | Dimensions mm | Packs of | **Model No.** |
|---|---|---|---|
| 5 | 301 x 221 | 1 pc(s). | **2565.400** |
| 6 | 401 x 221 | 1 pc(s). | **2566.400** |
| 7 | 436 x 221 | 1 pc(s). | **2567.400** |

### Metal gland plate

**with metric knockouts, for KX**
Simply knock out the holes for the cable glands using a screwdriver.

**Material:**
– Sheet steel

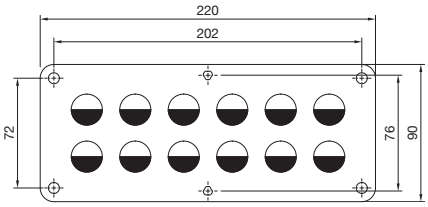
**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55 if installed correctly

| Diameter | Packs of | **Model No.** |
|---|---|---|
| M20 | 1 pc(s). | **1581.200** |

**Accessories:**

– Cable glands made from polyamide or brass, see page 1056



### Gland plate

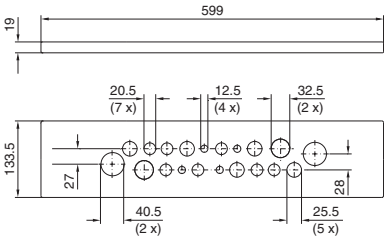
**for metric cable glands, for EL**
Folded gland plate with foamed-in seal and pre-punched, knock-out holes for metric cable glands M12, M20, M25, M32, M40.

**Material:**
– Sheet steel, 1.5 mm

**Colour:**
– RAL 7035

**Protection category IP to IEC 60 529:**
– IP 55

| Width mm | Depth mm | Cable entry (quantity x Ø) | Packs of | **Model No.** |
|---|---|---|---|---|
| 599 | 133.5 | 4 x M12<br>7 x M20<br>5 x M25<br>2 x M32<br>2 x M40 | 1 pc(s). | **7705.235** |



## Gland plate

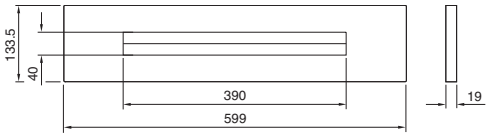
**with brush insert, for EL**

Folded gland plate with foamed-in seal and plastic brush inserts for simple cable entry.

**Material:**
– Sheet steel, 1.5 mm

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **7705.035** |



## Brush strip

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any given positions in the side panel, rear panel, doors, roof and base plate may be finished off attractively by simply attaching the brush strip.

**Material:**
– Plastic, UL 94-HB

| Packs of | Model No. |
|---|---|
| 2 m | **7072.200** |

**Technical specifications:**
– For metal thickness: 0.6 – 1.5 mm
– Bristle length: 30 mm
– Plastic sheath: 18 mm
– Snap-on surface: 10 mm
– Maximum cut-out height: 38 mm

## Brush strip, super-airtight

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any position in the side panel, rear panel, doors, roof and base plate.
These special brush strips may be used to create airtight entries for cable sections and conductors. The brush strips arranged in an offset configuration ensure good sealing from the routed cables even with large quantities of cables. In this way, unwanted flow losses may be reduced to a minimum.

| Packs of | Model No. |
|---|---|
| 2 x 1 m | **7825.375** |

**Technical specifications:**
– For metal thickness: 1.5 – 2 mm
– Bristle length: 58 mm
– Plastic sheath: 14 mm
– Snap-on surface: 11.5 mm
– Cut-out width: 88 – 90 mm

**Material:**
– Plastic, fire protection to UL 94-HB

**Supply includes:**
– 1 brush strip right-hand version
– 1 brush strip left-hand version

## Cable glands

### Cable gland, brass

**Benefits:**
- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage
- Clamping membranes for even tightening and strain relief to protect the cables

**Material:**
- Brass
- Seal: CR/NBR

**Surface finish:**
- Nickel-plated

**Protection category IP to IEC 60 529:**
- IP 68 (5 bar, 30 min.)

**Approvals:**
- VDE, UR, cUR

| Size | Packs of | Model No. |
|---|---|---|
| M12 x 1.5 | 15 pc(s). | **2411.801** |
| M16 x 1.5 | 15 pc(s). | **2411.811** |
| M20 x 1.5 | 10 pc(s). | **2411.821** |
| M25 x 1.5 | 10 pc(s). | **2411.831** |
| M32 x 1.5 | 5 pc(s). | **2411.841** |
| M40 x 1.5 | 4 pc(s). | **2411.851** |
| M50 x 1.5 | 2 pc(s). | **2411.861** |
| M63 x 1.5 | 1 pc(s). | **2411.871** |

**Possible alternative:**

- Cable gland Hygienic Design, see page 1057

### Cable gland, polyamide

**Benefits:**
- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage
- Clamping membranes for even tightening and strain relief to protect the cables

**Material:**
- Polyamide 6
- Seal: CR

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 68 (5 bar, 30 min.)

**Approvals:**
- VDE, UL, cUL, CSA

| Size | Packs of | Model No. |
|---|---|---|
| M12 x 1.5 | 50 pc(s). | **2411.601** |
| M16 x 1.5 | 50 pc(s). | **2411.611** |
| M20 x 1.5 | 50 pc(s). | **2411.621** |
| M25 x 1.5 | 25 pc(s). | **2411.631** |
| M32 x 1.5 | 15 pc(s). | **2411.641** |
| M40 x 1.5 | 5 pc(s). | **2411.651** |
| M50 x 1.5 | 5 pc(s). | **2411.661** |
| M63 x 1.5 | 3 pc(s). | **2411.671** |

### EMC cable gland

see page 1030

## Cable gland HD

**More compact design and the lock nut is included with the supply.**

**Applications:**
- Manufacturing and packaging of foodstuffs etc.
- Clean room technology (e.g. pharmaceuticals)
- Biotechnology
- Chemical industry

**Benefits:**
- Smooth, solid exterior surfaces effectively prevent the depositing of harmful micro-organisms
- Much easier, therefore cheaper, cleaning compared with conventional cable glands

**Material:**
- Cap nut: Stainless steel 1.4305 (AISI 303)
- Seal: Compliant with FDA 21 CFR 177.2600

**Protection category IP to IEC 60 529:**
- IP 69
- IP X8 (5 bar, 30 min.)

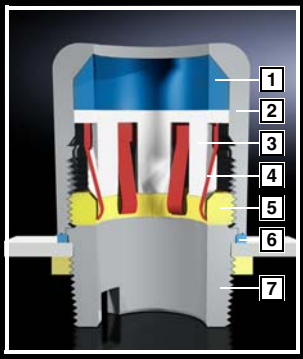
**Supply includes:**
- HD cable gland
- Lock nut

**Standard version**

| Size | Cable diameter mm | Packs of | **Model No.** |
|---|---|---|---|
| M12 x 1.5 | 3 – 6.5 | 5 pc(s). | **2410.001** |
| M16 x 1.5 | 5 – 10 | 5 pc(s). | **2410.011** |
| M20 x 1.5 | 6 – 12 | 5 pc(s). | **2410.021** |
| M25 x 1.5 | 12 – 17 | 5 pc(s). | **2410.031** |

**EMC version**

| Size | Cable diameter mm | Packs of | **Model No.** |
|---|---|---|---|
| M16 x 1.5 | 5 – 10 | 5 pc(s). | **2410.111** |
| M20 x 1.5 | 6 – 12 | 5 pc(s). | **2410.121** |
| M25 x 1.5 | 12 – 17 | 5 pc(s). | **2410.131** |

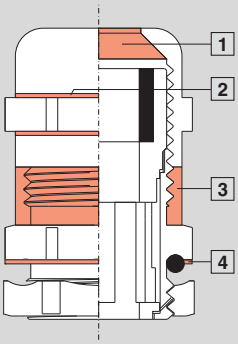


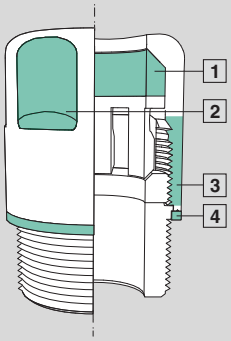

1 Seal
2 Cap nut
3 Gripper jaws
4 Shield spring (EMC version only)
5 Clamping ring
6 Enclosure seal
7 Base with locator for assembly tool

**Why use hygienic cable glands?**

**Critical points with conventional solutions**

1 Cable entry in front of seal
2 No minimum radii on the hexagon
3 External threads
4 Gap caused by O-ring on the enclosure surface




**Hygienic design features**

1 Seal directly at the cable entry
2 Compliance with minimum radii on the hexagon
3 No external threads
4 Flush termination between the cap nut and the enclosure

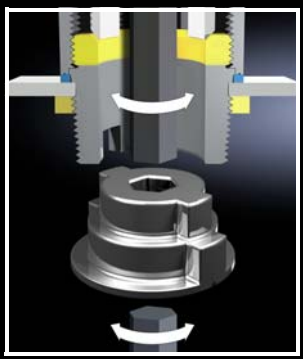
## Assembly tool

**for cable gland HD**

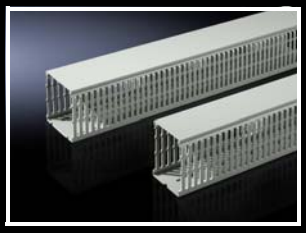
For attaching HD cable glands in an internal thread or using lock nuts. This can be achieved either from the inside or from the outside using an Allen key.

**Supply includes:**
- 1 pc(s). = Adaptor for sizes from M12 – M25

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **2410.290** |



## Cable routing inside the enclosure



### Cable duct

- With special DIN punchings for direct mounting on the enclosure section or on surfaces such as mounting plates.
- If the mounting plate is installed flush with the enclosure frame at the rear (installation position ±0 mm), the horizontally mounted cable ducts are aligned with the cable ducts mounted on the enclosure section.
- Cable duct 50 mm wide for individually sited VX25 enclosures with side panel on the vertical section, on the left and right adjacent to the mounting plate.
- Cable duct 100 mm for mounting on the vertical enclosure frame with bayed enclosures.

**Technical specifications:**
- Depth: 80 mm
- Length: 2000 mm, may be cut to length
- Bar width: 5.5 mm
- Slot width: 4.5 mm

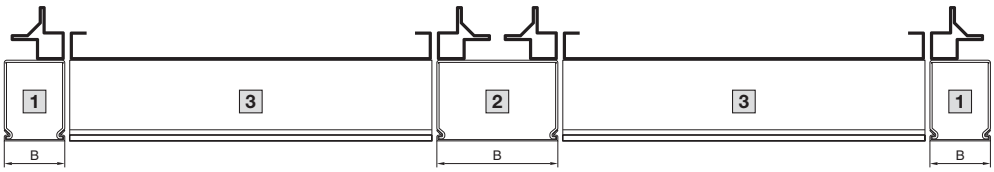
**Material:**
- Hard PVC
- Flame-resistant, self-extinguishing
- Temperature resistant to +60 °C

| Width (B) mm | Packs of | **Model No.** |
|---|---|---|
| 30 | 24 pc(s). | **8800.750** |
| 40 | 20 pc(s). | **8800.751** |
| 50 | 18 pc(s). | **8800.755** |
| 60 | 18 pc(s). | **8800.752** |
| 80 | 12 pc(s). | **8800.753** |
| 100 | 12 pc(s). | **8800.754** |

**Colour:**
- Similar to RAL 7030

**Accessories:**
- Metal multi-tooth screw 5.5 x 13 mm, see page 1004
- Isolator cap, see page 1058

1 = W 50 mm
2 = W 100 mm
3 = W 30 to 100 mm



### Isolator cap

**for screw head**
To isolate screw heads within the cable duct.

**Material:**
- Plastic

| Packs of | **Model No.** |
|---|---|
| 100 pc(s). | **8800.770** |

## Cable clamp rail

**Right-angle section**
**for VX, VX SE, PC, TP, VX base/plinth**
For strain relief with cable entry. Depth-variable mounting on a 25 mm pitch pattern on the horizontal enclosure section or in the base/plinth.

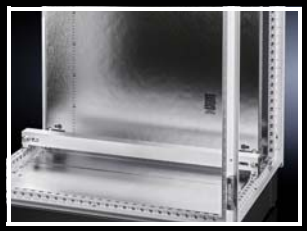
**Material:**
– Steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Enclosure width mm | Packs of | **Model No.** |
|---|---|---|
| 400 | 2 pc(s). | **8619.400** |
| 600 | 2 pc(s). | **8619.410** |
| 800 | 2 pc(s). | **8619.420** |
| 1000 | 2 pc(s). | **8619.430** |
| 1200 | 2 pc(s). | **8619.440** |
| 1600 | 2 pc(s). | **8619.450** |
| 1800 | 2 pc(s). | **8619.460** |

**Accessories:**
– Base/plinth installation bracket, see page 885



## Cable clamp

**for cable clamp rails**
For fastening the cables to the cable clamp rails.

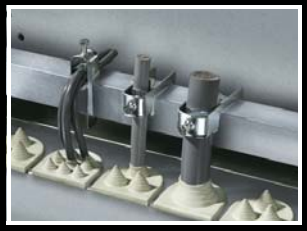
**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Plastic insert

| For cable diameter mm | Packs of | **Model No.** |
|---|---|---|
| 6 – 12 | 25 pc(s). | **2350.000** |
| 12 – 16 | 25 pc(s). | **2351.000** |
| 14 – 18 | 25 pc(s). | **2352.000** |
| 18 – 22 | 25 pc(s). | **2353.000** |
| 22 – 26 | 25 pc(s). | **2354.000** |
| 26 – 30 | 25 pc(s). | **2355.000** |
| 30 – 34 | 25 pc(s). | **2356.000** |
| 34 – 38 | 25 pc(s). | **2357.000** |
| 38 – 42 | 25 pc(s). | **2358.000** |
| 42 – 46 | 25 pc(s). | **2359.000** |
| 46 – 50 | 25 pc(s). | **2360.000** |

**Possible alternative:**
– Rail for EMC shielding bracket and strain relief, see page 1029



## Cable clamp rail

**C rail, for mounting plates**
**for VX, VX SE, TP**
For strain relief with cable entry.
The length of the cable clamp rail is tailored to the width of the mounting plate. The mounting bracket included with the supply supports three different installation situations on the mounting plate:

1 Straight, at a distance of 23 mm from the mounting plate

2 Straight, at a distance of 10 mm from the mounting plate

3 Tilted towards the mounting plate

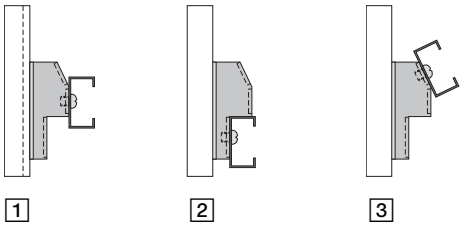
**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Two mounting brackets and assembly screws

| For enclosure width mm | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 499 | 1 pc(s). | **5001.080** |
| 800 | 699 | 1 pc(s). | **5001.081** |
| 1000 | 899 | 1 pc(s). | **5001.082** |
| 1200 | 1099 | 1 pc(s). | **5001.083** |

**Accessories:**
– Cable clamp for C rails, see page 1060



## Cable routing inside the enclosure

### Cable clamping bracket

For installation in command panels with mounting cut-out ▭ 120 x 65 mm and Ø 130 mm. Cable clamping optionally via:
- Cable clamps
  or
- Cable ties 2597.000
- Standard commercially available cable ties

Bracket height = 25 mm with fitted C rail 40 mm

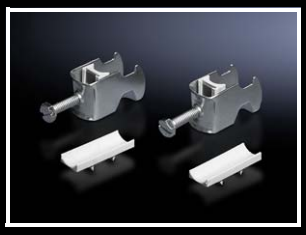
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- C rail and assembly screws

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6052.000** |

**Accessories:**
- Cable clamp, see page 1060
- Cable ties, see page 1061



### Cable clamp

**for C rail, combination rail**
For attaching cables to the C rail.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Plastic insert

| For cable diameter mm | Packs of | Model No. |
|---|---|---|
| 6 – 14 | 25 pc(s). | **7077.000** |
| 12 – 18 | 25 pc(s). | **7078.000** |
| 18 – 22 | 25 pc(s). | **7097.000** |
| 22 – 26 | 25 pc(s). | **7097.220** |
| 26 – 30 | 25 pc(s). | **7097.260** |
| 30 – 34 | 25 pc(s). | **7097.300** |
| 34 – 38 | 25 pc(s). | **7097.340** |
| 38 – 42 | 25 pc(s). | **7098.000** |
| 42 – 56 | 25 pc(s). | **7098.100** |
| 56 – 64 | 25 pc(s). | **7099.000** |

**Accessories:**
- C rail, see from page 996
- Combination rail, see page 1063

### Cable conduit and cable conduit holder

For secure cable routing e.g. from the enclosure or mounting plate to the door. An attachment facility for standard commercially available cable ties is provided on the cable conduit holder, so that cables may be attached upon entry to/exit from the cable conduit.

**Material:**
- Cable conduit: Polyethylene
- Cable conduit holder: Polyamide

**Cable conduit**

| Internal Ø mm | Packs of | Model No. |
|---|---|---|
| 16 | 25 m | **2595.000** |
| 29 | 25 m | **2589.000** |
| 36 | 25 m | **2596.000** |
| 48 | 25 m | **2590.000** |

**Cable conduit holder**

| For cable conduit Ø mm | Packs of | Model No. |
|---|---|---|
| 16 | 20 pc(s). | **2593.000** |
| 29 | 20 pc(s). | **2591.000** |
| 36 | 20 pc(s). | **2594.000** |
| 48 | 20 pc(s). | **2592.000** |

**Also required:**
- For the installation in AX: Rail for interior installation AX, see page 989 or punched section with mounting flange 14 x 39 mm, see page 952/990

## Cable attachment

For professional, secure fastening of cables and conduits.

For fastening:
- Slide into the punched rail 23 x 23 mm,
- Screw-fasten onto the round punchings of the enclosures, as well as all punched rails and punched sections

**Material:**
- Polyamide

**Note:**
- As the attachments are bayable, several attachments, even those of different sizes, can be assembled using just 2 screws

| For cable diameter from – to mm | Packs of | **Model No.** |
|---|---|---|
| 6 – 9 | 50 pc(s). | **4319.090** |
| 9 – 12 | 50 pc(s). | **4319.120** |
| 12 – 16 | 50 pc(s). | **4319.160** |
| 16 – 20 | 50 pc(s). | **4319.200** |

**Also required:**
- Posidrive raised countersunk screw M5 x 12 mm, 2488.000, for screw-fastening to the round system punchings, see page 1004

**Accessories:**
- Punched rail 23 x 23 mm, see page 994

## Cable tie

The super-fast solution for fastening cables to the enclosure profile or mounting system parts. Simply clip into the round system punchings.

| Length mm | Packs of | **Model No.** |
|---|---|---|
| 150 | 100 pc(s). | **2597.000** |

## Nylon loop

With the nylon loop, secured cables are easily released, allowing individual cables to be added or removed. Ideal for sensitive data cables (fibre-optic/Cu), as it avoids indentations on the cable sheathing. In addition, the nylon loop may be screw-fastened to the round system punchings or attached using a quick-release fastener.

**Colour:**
- Black

**Supply includes:**
- Quick-release fasteners

| Width mm | Length mm | Max. cable diameter mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 20 | 130 | 30 | 10 pc(s). | **7072.220** |
| 20 | 200 | 50 | 10 pc(s). | **7072.230** |
| 20 | 300 | 90 | 10 pc(s). | **7072.240** |

**Also required:**
- Screw 2486.600 for screw-fastening to the round system punchings, see page 1004

## Nylon tape

For tidy cable routing. Supplied on a reel for cutting to the required length.

Unlike cable ties, nylon tape
- protects the cable sheathing
- is easily reopened and
- is reusable

| Length mm | Width mm | Packs of | **Model No.** |
|---|---|---|---|
| 5000 | 16 | 1 pc(s). | **2203.400** |

## Cable routing inside the enclosure

### Nylon tape holder

- For simple, fast cable attachment
- Tool-free mounting in the system punchings with 10.5 x 12.5 mm, with a quarter rotation
- Direct use on the horizontal VX frame section, on the support strips and mounting angles of the VX IT 482.6 mm (19") interior installation, on the cable route or on punched sections with mounting flanges
- Length of nylon tape: 400 mm

**Material:**
- Plastic

**Supply includes:**
- 10 nylon tapes
- 10 holders

| Packs of | Model No. |
|---|---|
| 10 pc(s). | **5502.155** |

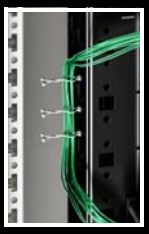
### Nylon loop cable holder

**Self-adhesive**
Universally suitable for use in all network enclosures and server racks, wall-mounted enclosures, mounting plates and gland plates.

**Material:**
- Woven polyamide 6.6

**Colour:**
- Black

| Size length x width mm | Packs of | Model No. |
|---|---|---|
| 70 x 16 | 10 pc(s). | **7111.350** |



### Snap-in cable routing

**for clipping into the system punchings**
Cable routing suitable for universal use, for tool-free, fast assembly, in two variants:

For locking
- User-friendly opening for cable management via locating points
- For cable diameters 14 – 19 mm
- For system punchings 6.2 mm

For twisting
- User-friendly opening for cable management
- For cable diameters 10.2 – 12.7 mm
- For system punchings 4.7 mm

**Material:**
- Polyamide 6.6, self-extinguishing to UL 94-V2

**Colour:**
- Natural

| Version | Packs of | Model No. |
|---|---|---|
| For locking, for system punchings 6.2 mm | 10 pc(s). | **7111.300** |
| For twisting, for system punchings 4.7 mm | 10 pc(s). | **7111.310** |

## Combination rail

**for VX IT**

Combination of a C rail for cable clamping with cable clamps and a cable guide rail with T-heads for cable routing. The cables can optionally be secured to the combination rail with cable clamps, cable ties or velcro fasteners to be relieved of strain.

**Applications:**
- For cable routing and strain relief of routed cables on the VX frame structure

**Benefits:**
- May be installed on either the outside or inside of the enclosure frame

**Installation options:**
- Direct screw-fastening between the vertical uprights of the enclosure frame

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosures | | Packs of | Model No. |
|---|---|---|---|
| Width mm | Depth mm | | |
| 600 | 600 | 4 pc(s). | **5302.020** |
| 800 | 800 | 4 pc(s). | **5302.021** |
| 1000 | 1000 | 4 pc(s). | **5302.022** |
| 1200 | 1200 | 4 pc(s). | **5302.025** |

**Accessories:**
- Cable ties, see page 1061
- Nylon loop, see page 1061
- Angle bracket for combination rail, see page 1063

## Angle bracket

**for combination rail**

For variable mounting of combination rails between two punched sections with mounting flanges in the enclosure interior.

**Applications:**
- Cascaded cable routing

**Benefits:**
- Simple clip attachment or optionally screw-fastened

| Packs of | Model No. |
|---|---|
| 8 pc(s). | **5302.038** |

## Cable clamp rail, depth-variable

**for VX IT, TE**

For cable routing on the enclosure frame and for strain relief of the routed cables. The cables can be attached to the cable clamp rails with cable ties or velcro fasteners.
The cable clamp rails can be located horizontally at the rear directly onto a 482.6 mm (19") mounting level or in the enclosure depth between two mounting levels. An additional screw fastening secures the unit.
The depth variability of the rails allows their length to be flexibly adapted to the given mounting distance between the two 482.6 mm (19") mounting levels.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Mounting dimension[1] mm | Packs of | Model No. |
|---|---|---|
| 325 – 575 | 1 pc(s). | **5302.044** |

[1] Mounting dimensions + 152 mm = distance between 482.6 mm (19") levels

**Accessories:**
- Cable ties, see page 1061
- Nylon loop, see page 1061

# Cable management

## Cable routing inside the enclosure

### Cable manager

**Applications:**
– For vertical cable routing and strain relief with network and server applications

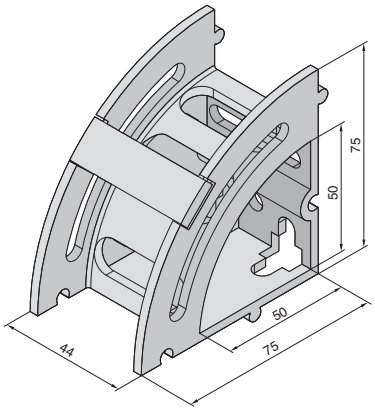
**Benefits:**
– Simple assembly with tool-free quick-release fastening
– Alternatively suitable for screw-fastening
– Integral multifunctional punching for attaching cable routing components
– Integral mounting holes for fixing the PDUs in a 7 U pitch pattern via a keyhole recess

**Material:**
– Plastic, UL 94-V0

**Colour:**
– RAL 9005

**Supply includes:**
– Mounting clips and assembly parts

| | Packs of | Model No. |
|---|---|---|
| Maxi-kit | 20 pc(s). | **5502.405** |



### Cable shunting ring

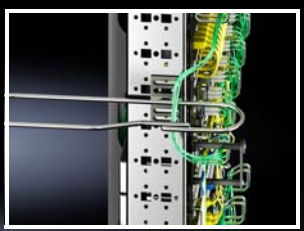
For flexible, system-compatible cable routing at the side of the 482.6 mm (19") mounting angles.

**Material:**
– Steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Dimensions mm | Packs of | Model No. |
|---|---|---|
| 125 x 85 | 10 pc(s). | **7111.900** |
| 125 x 65 | 10 pc(s). | **7111.000** |
| 85 x 43 | 10 pc(s). | **7112.000** |



### Shunting ring

To accommodate large quantities of cables. Shunting ring for side attachment to 482.6 mm (19") sections in 800 mm wide network enclosures. The ring is attached asymmetrically providing approx. 110 mm free space in front of the 482.6 mm (19") level. This allows even large quantities of cables to be effectively managed.

**Material:**
– Steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Dimensions mm | Packs of | Model No. |
|---|---|---|
| 330 x 90/70 | 4 pc(s). | **7220.600** |

## Fibre-optic shunting rings

Fibre-optic shunting or jumper cables can be inserted into the grooves of the inner body.
A rubber ring holds different fibre-optic cables up to Ø 4.5 mm. Strain relief and bending radius are ensured.

Length: 120 mm

**Material:**
– 2K plastic

**Colour:**
– Exterior: RAL 7035
– Interior: Black

**Supply includes:**
– 2 rubber rings
– Baying kit
– Assembly parts

**Assembly:**
The supplied mounting brackets are suitable for universal use; the fibre-optic cables can be routed to the patch panel in all directions in various mounting positions:

1 At the side, directly on the patch panel

2 In front of the patch panel

4 At the side next to the patch panel

4 Behind the patch panel

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7116.500** |

**Possible alternative:**

– Fibre-optic cable management panel, 1 U, see page 1065

## Fibre-optic cable management panel , 1 U

**482.6 mm (19")**

The four fibre-optic cable shunting rings integrated into the front permit optimum management of individual fibres while allowing for minimum baying radii.

**Material:**
– Panel: Sheet steel
– Ring: 2K plastic

**Colour:**
– Panel: RAL 9005
– Cable shunting rings on the outside: RAL 7035, Body: RAL 9005

| U | Packs of | Model No. |
|---|---|---|
| 1 | 1 pc(s). | **5302.203** |

**Possible alternative:**

– Fibre-optic cable shunting ring, see page 1065

## System supports for cable routes

**for VX, VX IT**

The depth-variable support system may be attached to all 800 – 1200 mm deep VX enclosures with external screw-fastening of the roof plate. The integral system punchings, for screws or captive nuts, support the attachment of most common cable route systems.

– May be combined with VX IT fan mounting plate
– In combination with punched rail, suitable for accommodating additional cable routing rails or pipelines.
– Support height: 102 mm

**Material:**
– Sheet steel

**Surface finish:**
– Powder-coated

**Colour:**
– RAL 7035

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7831.472** |

**Accessories:**

– Metal multi-tooth screws 5.5 x 13 mm, 2486.600, see page 1004

## Cable routing inside the enclosure

### Cable route

**for VX, VX IT**

**Applications:**
– For vertical cable routing and strain relief with network and server applications

**Installation options:**
– On the VX IT frame between the roof and base frames, all-round
– In 800 mm wide VX IT racks, alternatively, screw-fastening between the upper and lower depth stays is supported

**Benefits:**
– Simple assembly with tool-free quick-release fastening
– Alternatively suitable for screw-fastening
– Integral multifunctional punching for attaching cable routing components
– Integral mounting holes for fixing the PDUs in a 7 U pitch pattern via a keyhole recess

**Material:**
– Sheet steel

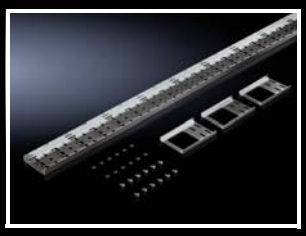
**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 145 | 2000 | 1 pc(s). | **5302.120** |
| 145 | 2200 | 1 pc(s). | **5302.122** |
| 265 | 2000 – 2200 | 1 pc(s). | **5302.322** |

**Accessories:**
– Cable ties, see page 1061
– Nylon tape, see page 1061
– Nylon tape holder, see page 1062
– Wall-mounted enclosures, see page 1064
– Cable routing bars, see page 1067



### Cable route

**for TE**

For vertical cable entry at the side of the 482.6 mm (19") mounting frame for TE, independently from the enclosure frame.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Width mm | Height mm | Packs of | **Model No.** |
|---|---|---|---|
| 100 | 1700 | 1 pc(s). | **7000.685** |

### Surplus cable holder

For fastening at the rear area of the enclosure, or at the side of network enclosures. The surplus cable holder can be attached to all depth stays or to punched sections and rails with a 25 mm pitch pattern – mounting dimension 150 mm.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| W x H x D mm | Packs of | **Model No.** |
|---|---|---|
| 280 x 151 x 75 | 1 pc(s). | **7220.500** |

## Cable routing bars, 482.6 mm (19") attachment

For structured routing of entire cable bundles, the cable bars may be secured to a variety of different positions inside the enclosure.

**Applications:**
- For horizontal cable routing within the distributor level. Thanks to their open mounting holes, they can also be retrospectively slotted onto the 482.6 mm (19") system punchings of the mounting level at any time and secured with the existing mounting screws of the installed components.

**Material:**
- Support: Sheet steel
- Cable routing bars, connection combs: Plastic UL 94-V0

**Colour:**
- RAL 9005

**Supply includes:**
- Cable routing bars
- Connection combs

**Note:**
- Size of individual chambers (WxD) approx. 34 x 100 mm

| Units U | Number of connection combs | Packs of | **Model No.** |
|---|---|---|---|
| 4 | 2 | 4 pc(s). | **7111.224** |
| 1 | 8 | 10 pc(s). | **7111.214** |

## Cable routing bars for universal use

For structured routing of entire cable bundles, the cable bars may be secured to a variety of different positions inside the enclosure.

**Applications:**
- All-round attachment for universal use for vertical and horizontal cable routing inside the enclosure or within the distributor level.

**Material:**
- Support: Sheet steel
- Cable routing bars, connection combs: Plastic UL 94-V0

**Colour:**
- RAL 9005

**Supply includes:**
- Cable routing bars
- Connection combs

**Note:**
- Size of individual chambers (WxD) approx. 34 x 100 mm

| Units U | Number of connection combs | Packs of | **Model No.** |
|---|---|---|---|
| 4 | 2 | 4 pc(s). | **7111.222** |
| 1 | 5 | 10 pc(s). | **7111.212** |

## Cable routing 19"

### Cable duct

**for VX IT, TE**

Cable duct for concealed cable routing. Convenient access to the cabling at any time via the hinged duct cover, optionally removable. The duct has cable entry options to the enclosure interior and through the rear panel of the duct. The cable retaining bars enclosed with the duct are snap-mounted onto the cable fingers of the duct with variable depth to support cable routing. Alternatively, the cable duct may also be screw-fastened. For optimum air routing, it may be combined with the brush kit for VX IT.

**Benefits:**
- Simple assembly with tool-free quick-release fastening
- High packing density due to U-based cable routing
- Suitable for back-to-back baying
- Cable duct may be used as a shielding element to prevent air short-circuits within cold aisle containment
- Lockable cable glands, may be fitted with installation components on the 1 U mounting standard

**Material:**
- Sheet steel
- Plastic to UL 94-HB

**Colour:**
- RAL 9005

**Supply includes:**
- Cable duct
- 2 covers
- 14 cable fingers , 6 U
- 10 cable retaining bars
- Assembly parts

**Accessories:**
- Brush kit, see page 1068
- Cable management panel with brush strip, see page 1074
- Blanking panel, 482.6 mm (19"), see page 1093

| For enclosure | For enclosure width mm | For enclosure height mm | Units U | Packs of | **Model No.** |
|---|---|---|---|---|---|
| VX IT<br>TE 8000<br>Data Rack | 800 | 1800<br>2000<br>1900 | 38 | 1 pc(s). | **5302.051** |
| VX IT<br>Data Rack | 800 | 2000<br>2122 | 42 | 1 pc(s). | **5302.052** |
| VX IT | 800 | 2200 | 47 | 1 pc(s). | **5302.053** |

### Brush kit

**for cable duct VX IT**

For all-round shielding of the 482.6 mm (19") mounting level and targeted routing of the cold air flow to the installed equipment.

**Applications:**
- The brush kit is designed for combining two vertical cable ducts on both sides of the 482.6 mm (19") mounting level. The brush kit may be combined with a cable duct and used as an alternative to the air baffle plate.
- A combination with air baffle plate and cable duct is also possible as partial installation

**Benefits:**
- Simple assembly with tool-free quick-release fastening
- Alternatively suitable for screw-fastening
- Tailored to the maximum enclosure height 47 U for cutting to the required individual length

**Functions:**
- The brush kit consists of vertical brush strips for the area between the cable duct and side panel as well as horizontal air baffle plates with brush strips for sealing in the roof and floor area on the 482.6 mm (19") mounting level

**Installation options:**
- 482.6 mm (19") mounting angles, standard
- 482.6 mm (19") mounting angles, dynamic

**Material:**
- Brush strip: Plastic, UL 94-V0
- Bristles: Plastic, UL 94-HB
- Air baffle plates: Sheet steel, spray finished

| For enclosure width mm | Bristle length mm | Packs of | **Model No.** |
|---|---|---|---|
| 800 | 48 | 1 pc(s). | **5302.036** |

**Colour:**
- RAL 9005

**Supply includes:**
- 2 brush strips, vertical
- 2 air baffle plates, horizontal, including brush strip
- Assembly parts

**Also required:**
- Blanking panel, 482.6 mm (19"), see page 1093

**Assembly instruction:**
- When using the cable duct combined with the brush kit as an air routing component, the cable entry openings in the cable duct must be closed or covered with a cable management panel with brush strip

**Accessories:**
- Cable management panel with brush strip, see page 1074

## Cable finger

**for VX IT**

For structured cable routing on the 482.6 mm (19") mounting level in 1 U increments.

**Benefits:**
- Simple, tool-free installation by snap-mounting directly into the 482.6 mm (19") mounting angle

**Installation options:**
- Installation is possible both on the front and on the side of the mounting angles at the front and rear

**Material:**
- Plastic to UL 94-V0

**Colour:**
- RAL 9005

**Note:**
- Cable routing in conjunction with air baffle plates is supported

| Units U | Design | Packs of | **Model No.** |
|---|---|---|---|
| 6 | for VX IT 482.6 mm (19") mounting angles, dynamic | 14 pc(s). | **5302.046** |
| 6 | for VX IT 482.6 mm (19") mounting angles, standard | 14 pc(s). | **5502.115** |

## Complete CAT 6 system

**for Network Cable Organizer**

Modern network infrastructures rely on maximum performance and the greatest possible flexibility in cabling. A useful component here is the Network Cable Organizer (NCO). The robust 1 U mounting frame is pre-configured with 24 cable cassettes and revolutionises conventional structured cabling with 8 times faster installation.

**Applications:**
- For use in all network racks from a depth of 800 mm.

**Benefits:**
- Minimise cable chaos – Prevent obstructions to the air circulation in the vicinity of network switches
- Always the right length: Surplus cable lengths – whether CAT 6 or fibre-optic – are simply with-drawn with a spring balancer
- Every cable is 100% tested and supplied with a corresponding measurement record
- Front access – Ideal for retrofitting into racks with a depth of 800 mm or more

**Functions:**
- Attachment to the front and rear 482.6 mm (19") level

**Technical specifications:**
- CAT 6 cable STP
- 2 x RJ 45 connectors per cable
- Shielded RJ 45 connector with gold-coated pins
- Usable cable length per cassette: 1.6 m
- ISO/IEC 11801:2002, AWG 36, 100% copper, 250 MHz

**Material:**
- Mounting frame: Sheet steel
- Cassettes: Stainless steel, plastic (POM)

**Colour:**
- Mounting frame: RAL 9005

**Supply includes:**
- Complete CAT 6 system
- 24 CAT 6 cassettes
- Installation kit
- Assembly parts

**Accessories:**
- Mounting frame, see page 1070
- Blanking cover, see page 1071
- Identification labels, see page 1071

| Units U | Width mm | Height mm | Depth mm | Colour | Operating temperature range | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 1 | 450 | 44 | 600 | Cable: black | +10 °C...+45 °C | 1 pc(s). | **7044.110** |
| 1 | 450 | 44 | 600 | Cable: blue | +10 °C...+45 °C | 1 pc(s). | **7044.120** |
| 1 | 450 | 44 | 600 | Cable: red | +10 °C...+45 °C | 1 pc(s). | **7044.130** |
| 1 | 450 | 44 | 600 | Cable: yellow | +10 °C...+45 °C | 1 pc(s). | **7044.140** |
| 1 | 450 | 44 | 600 | Cable: green | +10 °C...+45 °C | 1 pc(s). | **7044.150** |
| 1 | 450 | 44 | 600 | Cable: violet | +10 °C...+45 °C | 1 pc(s). | **7044.160** |
| 1 | 450 | 44 | 600 | Cable: white | +10 °C...+45 °C | 1 pc(s). | **7044.170** |

## Cable routing 19"

### Mounting frame

**for Network Cable Organizer**
Robust 1 U mounting frame for 24 cable cassettes. For individual configuration of the Network Cable Organizer.

**Applications:**
- For use in all network racks from a depth of 800 mm.
- Attachment to the front and rear 482.6 mm (19") level

**Benefits:**
- Minimise cable chaos – Prevent obstructions to the air circulation in the vicinity of network switches
- Always the right length: Surplus cable lengths – whether CAT 6 or fibre-optic – are simply withdrawn with a spring balancer
- Front access – Ideal for retrofitting into racks with a depth of 800 mm or more

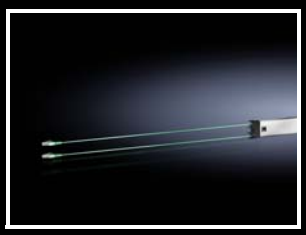
**Material:**
- Mounting frame: Sheet steel

**Colour:**
- Mounting frame: RAL 9005

**Supply includes:**
- Robust, 1 U sheet steel mounting frame for 24 cable cassettes
- Installation kit
- Assembly parts

**Accessories:**
- Blanking cover, see page 1071
- Identification labels, see page 1071
- CAT 6 cassettes, see page 1070
- Fibre-optic cassettes, see page 1071

| Units U | Width mm | Height mm | Depth mm | Design | Operating temperature range | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 1 | 450 | 44 | 600 | Item is configurable, options available for selection | +10 °C...+45 °C | 1 pc(s). | **7044.010** |



### CAT 6 cassettes

**for Network Cable Organizer**
CAT 6 cassettes for self-configuration in the complete Network Cable Organizer system and for independent assembly in the Network Cable Organizer mounting frame.

**Applications:**
- Network Cable Organizer
- Mounting frame

**Material:**
- Cassettes: Stainless steel, plastic (POM)

| Colour | Packs of | **Model No.** |
|---|---|---|
| Cable: black | 3 pc(s). | **7044.113** |
| Cable: blue | 3 pc(s). | **7044.123** |
| Cable: red | 3 pc(s). | **7044.133** |
| Cable: yellow | 3 pc(s). | **7044.143** |
| Cable: green | 3 pc(s). | **7044.153** |
| Cable: violet | 3 pc(s). | **7044.163** |
| Cable: white | 3 pc(s). | **7044.173** |

## Fibre-optic cassettes

**for Network Cable Organizer**

Fibre-optic cassettes for Network Cable Organizer mounting frame.

**Benefits:**

- Always the right length: Surplus cable lengths – whether CAT 6 or fibre-optic – are simply with-drawn with a spring balancer
- Every cable is 100% tested and supplied with a corresponding measurement record
- Secure locking – Each cable cassette has a cable attachment to avoid mechanical strain on the cable

**Material:**

- Cassettes: Stainless steel, plastic (POM)

| Cable version | Colour | Packs of | **Model No.** |
|---|---|---|---|
| Connector type 1: LC duplex / connector type 2: LC duplex<br>Fibre-optic cable, OS2 RBS 9 µ/125 µ<br>Single mode, ISO/IEC 11801 EN 50173 | Cable: yellow | 3 pc(s). | **7044.210** |
| Connector type 1: LC duplex / connector type 2: SC duplex<br>Fibre-optic cable, OS2 RBS 9 µ/125 µ<br>Single mode, ISO/IEC 11801 EN 50173 | Cable: yellow | 3 pc(s). | **7044.211** |
| Connector type 1: LC duplex / connector type 2: LC duplex<br>Fibre-optic cable, OM3 RBS 50 µ/125 µ<br>Multi mode, ISO/IEC 11801 EN 50173 | Cable: aqua | 3 pc(s). | **7044.230** |
| Connector type 1: LC duplex / connector type 2: SC duplex<br>Fibre-optic cable, OM3 RBS 50 µ/125 µ<br>Multi mode, ISO/IEC 11801 EN 50173 | Cable: aqua | 3 pc(s). | **7044.231** |
| Connector type 1: LC duplex / connector type 2: LC duplex<br>Fibre-optic cable, OM4 RBS 50 µ/125 µ<br>Multi mode, ISO/IEC 11801 EN 50173 | Cable: violet | 3 pc(s). | **7044.240** |
| Connector type 1: LC duplex / connector type 2: SC duplex<br>Fibre-optic cable, OM4 RBS 50 µ/125 µ<br>Multi mode, ISO/IEC 11801 EN 50173 | Cable: violet | 3 pc(s). | **7044.241** |

## Blanking cover

**for Network Cable Organizer**

For covering unused slots in the Network Cable Organizer.

**Material:**

- Plastic POM

| Packs of | **Model No.** |
|---|---|
| 10 pc(s). | **7044.020** |

## Identification labels

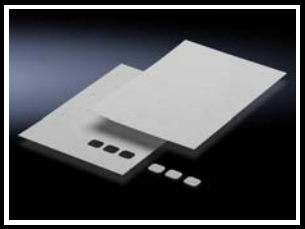
**for Network Cable Organizer**

Identification labels for Network Cable Organizer.

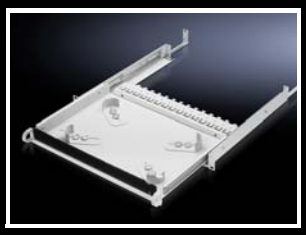
**Supply includes:**

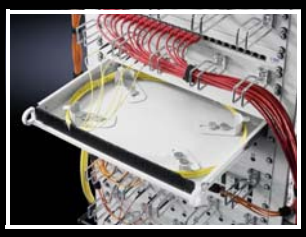
- 2 DIN A5 sheets of 48 labels

| Design | Packs of | **Model No.** |
|---|---|---|
| White, on DIN A5 sheet | 1 pc(s). | **7044.178** |



## Cable routing 19"





### Drawer 482.6 mm (19")

**to accommodate surplus cables**

The 1 U drawer offers a convenient opportunity for storing surplus cables in an organised, compact and secure way within the 482.6 mm (19") levels.

**Applications:**
- May be fitted between two 482.6 mm (19") levels
- For mounting on L-shaped mounting angles, cranked mounting angles or mounting frames

**Benefits:**
- With brush strip at the front for cable entry
- T-head rail in the rear section for cable clamping
- Ring-shaped kink-free routing of the conductors on adjustable elements in the interior

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Supply includes:**
- Drawer
- Telescopic slides
- Assembly parts

| Units U | Distance between levels mm | Packs of | **Model No.** |
|---|---|---|---|
| 1 | 435 - 750 | 1 pc(s). | **7063.200** |

### Cable management panel

**with plastic rings**

For horizontal management of the patch cables, with 5 cable shunting rings.

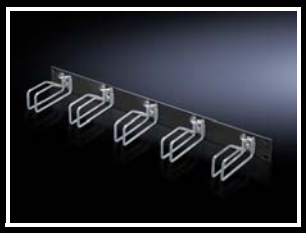
**Width:**
- 482.6 mm

**Material:**
- Panel: Sheet steel
- Ring: Plastic UL 94-V0

**Supply includes:**
- Cable management panel
- Cable shunting rings (supplied loose)

**Note:**
- The sizes given are external dimensions.

| Units U | Ring size mm | Colour | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 70 x 44 | RAL 9005 | 1 pc(s). | **7159.017** |



### Cable management panel

**with steel rings**

For horizontal management of the patch cables, with 5 cable shunting rings.

**Width:**
- 482.6 mm

**Material:**
- Panel: Sheet steel
- Ring: Steel

**Surface finish:**
- Panel: Spray-finished
- Ring: Zinc-plated

**Note:**
- The sizes given are external dimensions.

| Units U | Ring size mm | Colour | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 105 x 43 | RAL 7035 | 1 pc(s). | **7257.035** |
| 1 | 55 x 43 | RAL 7035 | 1 pc(s). | **7257.200** |
| 2 | 125 x 85 | RAL 7035 | 1 pc(s). | **7257.100** |
| 1 | 105 x 43 | RAL 9005 | 1 pc(s). | **7257.005** |
| 1 | 55 x 43 | RAL 9005 | 1 pc(s). | **5502.205** |
| 2 | 125 x 85 | RAL 9005 | 1 pc(s). | **7257.105** |

## Cable management panel

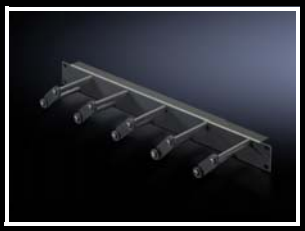
**with cable routing bars**

For horizontal management of the patch cables with 5 cable routing bars. Opening the individual cable routing bars allows user-friendly modification and extension of the cabling.

**Width:**
– 482.6 mm

**Material:**
– Panel: Sheet steel, spray finished
– Cable routing bars: Plastic

| Units U | Bar depth mm | No. of bars/ U | Colour | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 1 | 100 | 5 | RAL 9005 | 1 pc(s). | **5502.225** |



## Cable management panel

**with front flap**

The cable routing chamber has cut-outs from above, into which the patch cables can be inserted. The cable management panel is equipped with a flap and quick-release fasteners at the front, for optimum access to the cables. From the rear, the cables can be inserted via a cut-out with brush strips.

**Width:**
– 482.6 mm

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

| Surface finish | Units U | Bar depth mm | Colour | Packs of | **Model No.** |
|---|---|---|---|---|---|
| Spray-finished | 2 | 100 | RAL 9005 | 1 pc(s). | **5502.235** |

**Accessories:**

– Cable clamp rail, see page 1063

## Cable routing channel

**482.6 mm (19")**

To hold the patching cables.

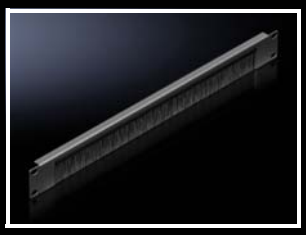
**Width:**
– 482.6 mm

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

| Surface finish | Units U | Depth mm | Colour | Packs of | **Model No.** |
|---|---|---|---|---|---|
| Spray-finished | 1 | 85 | RAL 9005 | 1 pc(s). | **5502.245** |

## Cable routing 19"



### Cable management panel with brush strip

**482.6 mm (19")**

For convenient, simple cable routing between two areas separated by a 482.6 mm (19") mounting level, for example, between the front and rear areas of the 482.6 mm (19") mounting level.

**Applications:**
- For locking and simultaneous cable routing in installation zones to the 1 U, 482.6 mm (19") mounting standard

**Benefits:**
- To make the cable entry larger, two panels are easily combined with one another

**Width:**
- 482.6 mm

**Material:**
- Sheet steel
- Brush strip: Plastic, UL 94-HB

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

| Units U | Packs of | **Model No.** |
|---|---|---|
| 1 | 1 pc(s). | **5302.202** |

**Accessories:**

- Cable clamp rail, see page 1063

### Cable tray, depth-variable

**for VX IT, TE 8000**

For protected cable routing between the front and rear installation area.

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| Surface finish | Mounting dimensions mm | Packs of | **Model No.** |
|---|---|---|---|
| Spray-finished | 350 - 550 | 1 pc(s). | **5302.043** |

### Combination rails

**for 482.6 mm (19")**

The combination rail offers a functional combination of a C rail for cable clamping with cable clamps and a cable guide rail with T-heads for cable routing using cable ties or nylon loops in a rail system.

**Applications:**
- For cable routing and strain relief on the 482.6 mm (19") level

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts for the combination rail, without assembly parts for fixing the cables

| Height U | Packs of | **Model No.** |
|---|---|---|
| 1 | 4 pc(s). | **5302.026** |

**Accessories:**

- 482.6 mm (19") fastener, 1 U, see page 1097
- Cable clip, see page 1060
- Cable ties, see page 1061
- Nylon loop, see page 1061

## Swing frame, small

**for VX, VX SE, AX**
**for 600 and 800 mm wide enclosures**
For mounting 482.6 mm (19") equipment.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– 1 cam with double-bit lock insert
– 2 x 130° hinges
– Assembly parts

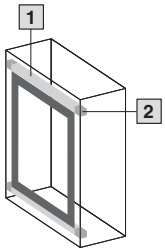
| U | For enclosure/ housing | From enclosure height mm | Packs of | Model No. |
|---|---|---|---|---|
| 3 | VX, VX SE, AX | 380 | 1 pc(s). | **8619.500** |
| 6 | | 600 | 1 pc(s). | **8619.510** |
| 9 | | 600 | 1 pc(s). | **8619.520** |
| 12 | | 760 | 1 pc(s). | **8619.530** |
| 15 | VX, VX SE | – | 1 pc(s). | **8619.540** |
| 18 | | – | 1 pc(s). | **8619.550** |

**Note:**
– For the installation in baying enclosure system VX, VX SE, see page 1076

**Also required:**
– The swing frame stay is required to lock the open swing frame 8619.270, see page 1078

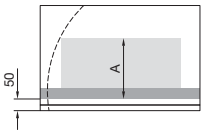
**Accessories:**
– 482.6 mm (19") fastener, 1 U, 2090.000, see page 1097

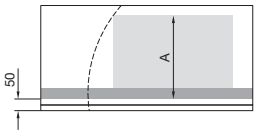
**For mounting in compact enclosures AX, the following components are also required:**




| | | For enclosure width mm | | Page |
|---|---|---|---|---|
| 1 Installation kit | 1 pc(s). | 600 | 800 | |
| | | 8619.600 | 8619.610 | 1076 |
| 2 Mounting kit AX | 4 pc(s). | 2034.010 | 2034.010 | 1076 |

**Max. installation depth for compact enclosures AX**



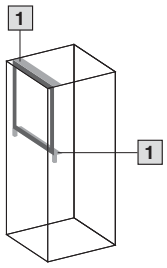
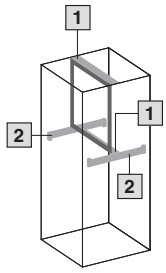
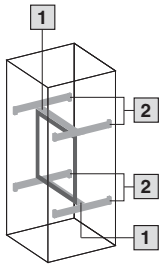

| Enclosure dimensions mm | | A = max. installation depth mm with internal mounting | |
|---|---|---|---|
| Width | Depth | Centre | Side |
| 600 | 210 | 130 | – |
| 600 | 250 | 170 | – |
| 600 | 350 | 220 | – |
| 600 | 400 | 220 | – |
| 600 | 500 | – | – |
| 600 | 600 | – | – |
| 600 | 800 | – | – |
| 800 | 300 | 210 | 210 |
| 800 | 400 | 310 | 310 |
| 800 | 500 | – | – |
| 800 | 600 | – | – |
| 800 | 800 | – | – |

## Swing frames

### Swing frame, small

**for VX, VX SE, AX**
**for 600 and 800 mm wide enclosures**

**For the installation in baying enclosure system VX, VX SE, the following components are also required:**

| Installation[1] | Front, top/bottom | Set back, top/bottom | Set back/front, centre |
|---|---|---|---|
| |  |  |  |

| | | | For enclosure width mm | | Page |
|---|---|---|---|---|---|
| 1 Installation kit | | 1 pc(s). | 600 | 800 | |
| | | | 8619.600 | 8619.610 | 1076 |
| 2 Punched section with mounting flange 23 x 64 mm, 2 or 4 pc(s). required | For enclosure depth mm | | | | |
| | 400 | 4 pc(s). | 8617.110 | | 991 |
| | 500 | 4 pc(s). | 8617.120 | | 991 |
| | 600 | 4 pc(s). | 8617.130 | | 991 |
| | 800 | 4 pc(s). | 8617.140 | | 991 |

[1] For the installation in VX SE, the adaptor rail VX is required, see page 995

**Note:**
Product information, see page 1075

### Installation kit

**for swing frame, small, and partial mounting plate**
For mounting the small swing frame in AX, VX, VX SE or a partial mounting plate (in conjunction with a hinge for partial mounting plates).

**Installation options:**
- In VX, VX SE
  - Directly on the enclosure section in the foremost position
  - In conjunction with punched section with mounting flange 23 x 64 mm, offset in the depth

**Load capacity:**
- Up to 1500 N

**Material:**
- Sheet steel

**Surface finish:**
- Nickel-plated

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 1 pc(s). | **8619.600** |
| 800 | 1 pc(s). | **8619.610** |

**! Also required:**
- For the installation in compact enclosures AX: Mounting kit AX, see page 1076
- For the installation in standalone rack VX SE: Adaptor rail VX, see page 995

### Mounting kit AX

**for installation kit for swing frame, small**
For mounting the small swing frame in compact enclosures AX.

**Supply includes:**
- 4 mounting brackets

**Note:**
- 1 pack is sufficient for mounting one small swing frame

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2034.010** |

## Swing frame, large

**for VX, VX SE**
**for 600, 800 and 1200 mm wide enclosures**
For mounting 482.6 mm (19") equipment.

**Material:**
– Sheet steel

**Surface finish:**
– Frame: Zinc-plated
– Trim panels: Spray finished

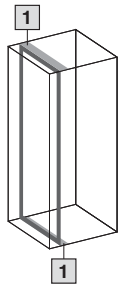
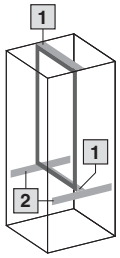
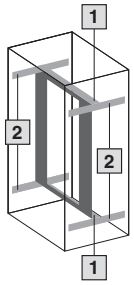
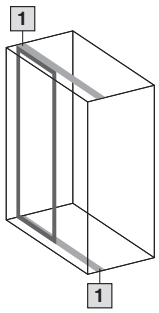
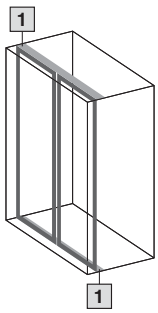
**Colour:**
– Trim panels: RAL 7035

**Supply includes:**
– Lock system, 130° hinge and parts for attaching to the installation kit

**Note:**
– The swing frame stay is required to lock the open swing frame 8619.270, see page 1078

**Accessories:**
– 482.6 mm (19") fastener, 1 U, 2090.000, see page 1097

**Installation options**

| Full installation, front/set back | Partial installation, top, front/set back[1] | Partial installation, centre, front/set back[1] | Full installation, front | Full installation, front |
|---|---|---|---|---|
|  |  |  |  |  |

| Trim panel | | | Without | One side | Both sides | Page |
|---|---|---|---|---|---|---|
| | | | | | | |
| For enclosure width mm | | | 600 | 800 | 800 | |
| U | For min. enclosure height mm | Packs of | **Model No.** | | | |
| 22 | 1200 | 1 pc(s). | **8619.010** | **8619.020** | **8619.030** | |
| 31 | 1600 | 1 pc(s). | **8619.011** | **8619.021** | **–** | |
| 35 | 1800 | 1 pc(s). | **8619.012** | **8619.022** | **8619.032** | |
| 40 | 2000 | 1 pc(s). | **8619.013** | **8619.023** | **8619.033** | |
| 44 | 2200 | 1 pc(s). | **8619.014** | **8619.024** | **8619.034** | |
| Lock system | Cam lock | | ■ | – | – | |
| | Locking rod | | – | ■ | ■ | |
| **Also required** | | | | | | |
| 1 Installation kit | For enclosure width mm | Packs of | | | | |
| | 600 | 1 pc(s). | 8619.040 | – | – | 1078 |
| | 800 | 1 pc(s). | 8619.041 | 8619.041 | 8619.041 | 1078 |
| | 1200 | 1 pc(s). | 8619.042 | 8619.042 | 8619.042 | 1078 |
| 2 Punched section with mounting flange 23 x 64 mm, 2 or 4 pc(s). required | Installation in enclosure depth mm | Packs of | | | | |
| | 400 | 4 pc(s). | 8617.110 | 8617.110 | 8617.110 | 991 |
| | 500 | 4 pc(s). | 8617.120 | 8617.120 | 8617.120 | 991 |
| | 600 | 4 pc(s). | 8617.130 | 8617.130 | 8617.130 | 991 |
| | 800 | 4 pc(s). | 8617.140 | 8617.140 | 8617.140 | 991 |
| **Accessories** | | | | | | |
| Comfort handle AX | | | – | see page | see page | 939 |
| Lock inserts, type A | | | – | see page | see page | 939 |
| 180° hinges for VX[2] | | 1 pc(s). | 8619.050 | 8619.050 | 8619.050 | 1078 |

[1] For the installation in VX SE, the adaptor rail VX is required, see page 995
[2] Only in conjunction with 800 mm wide installation kit

## Swing frames

### Installation kit

**for swing frame, large**
For mounting
– Directly on the enclosure section when installed across the entire enclosure height
– In conjunction with punched section with mounting flange 23 x 64 mm, for partial installation in the enclosure height

**Material:**
– Sheet steel, 3 mm

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| For enclosure width mm | Load capacity N | Packs of | **Model No.** |
|---|---|---|---|
| 600 | 3500 | 1 pc(s). | **8619.040** |
| 800 | 3500 | 1 pc(s). | **8619.041** |
| 1200 | 1500 | 1 pc(s). | **8619.042** |

### Swing frame stay

Secures the swing frame in the open position.

For mounting on swing frame, large
– 8619.270 at the top of the enclosure
– 1980.200 at the bottom of the enclosure (with safety stop at 160°)

For mounting on swing frame, small
– 8619.270, may be mounted at the top or bottom on the installation kit

| | Packs of | **Model No.** |
|---|---|---|
| For 130° hinge | 1 pc(s). | **8619.270** |
| For 180° hinge | 1 pc(s). | **1980.200** |

### 180° hinge

**for swing frame, large, for VX**
To extend the opening angle from 130° to 180° in the foremost installation position.
Provides optimum access to the components and 482.6 mm (19") components located behind the swing frame.

**Load capacity:**
– Up to 1500 N

**Material:**
– Die-cast

**Note:**
– Only suitable for installation in VX

| Packs of | **Model No.** |
|---|---|
| 1 pc(s). | **8619.050** |

### Slide rail

**for swing frames**
To support heavy slide-in 482.6 mm (19") electronic equipment in the swing frame.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| For slide-in equipment with max. installation depth | Packs of | **Model No.** |
|---|---|---|
| < 190 mm | 10 pc(s). | **1962.200** |
| > 190 mm | 10 pc(s). | **1963.200** |

## Second pair of mounting angles

**for Data Rack**

To accommodate 482.6 mm (19") network components or for the attachment of component shelves and slide rails. 482.6 mm (19") punched profile at the front, hole centre distance 465 mm (470 mm at the rear), tailored to the attachment of patch panels and cable routing rails. The mounting level may be positioned on a 50 mm pitch pattern. Minimum distance between levels 150 mm, maximum distance between levels 350 mm.

**Material:**
– Sheet steel, 2 mm

**Surface finish:**
– Spray-finished

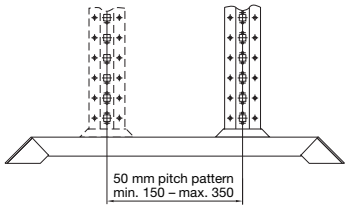
**Colour:**
– Profile frame: RAL 7035
– Trim panel: RAL 5018

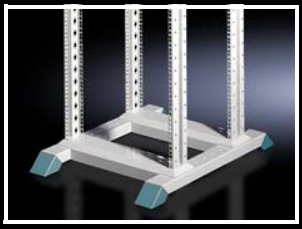
**Supply includes:**
– Torsionally stiff profile frame with 482.6 mm (19") punchings
– Mounting accessories

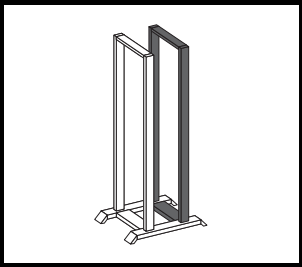
| Units U | Packs of | Model No. |
|---|---|---|
| 31 | 1 pc(s). | **7296.000** |
| 36 | 1 pc(s). | **7297.000** |
| 40 | 1 pc(s). | **7298.000** |
| 45 | 1 pc(s). | **7299.000** |

**Accessories:**

– Depth stays, see page 1079





## Baying connector

**for Data Rack**

For assembling rows of distributor frames, or for cable routing between data racks.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

| Length mm | Packs of | Model No. |
|---|---|---|
| 53 | 3 pc(s). | **7494.000** |

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

## Depth stays

**for Data Rack**

For securing and stabilising two pairs of 482.6 mm (19") mounting angles in the Data Rack. The length of the depth stays is adjustable, and can accommodate the following spacings of mounting angles: 250, 300 and 350 mm.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7401.000** |

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

## Slide rail, 2 U, static installation, continuous

**for two pairs of 482.6 mm (19") mounting angles**

To support heavy equipment in the Data Rack. The mounting dimensions of the slide rails were selected to enable them to be combined with 500 mm deep, 482.6 mm (19") component shelves. The mounting distance of the 482.6 mm (19") mounting angles is 350 mm.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Load capacity:**
– 500 N, static

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **7402.000** |

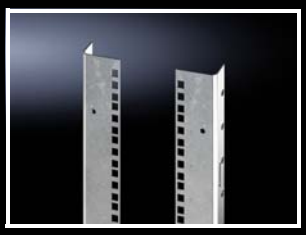
**Also required:**

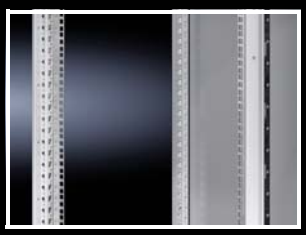
– Second pair of mounting angles, see page 1079

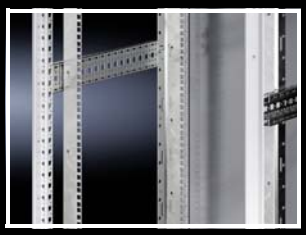
**Accessories:**

– 482.6 mm (19") fastener, 1 U, see page 1097
– Component shelf for frame attachment, see page 1006

## Mounting angles







### Adaptor section, 482.6 mm (19")

**for VX, VX SE, enclosure width 600 mm**
For mounting electronic components, subracks and other 482.6 mm (19") equipment. Adaptor sections are easily shortened for partial assemblies.

**Material:**
– Sheet steel, 2 mm

**Supply includes:**
– Assembly parts

**Note:**
– The 482.6 mm (19") measurement applies when mounting on the frame
– Depth-offset installation is possible using punched sections with mounting flanges, 18 x 64 mm

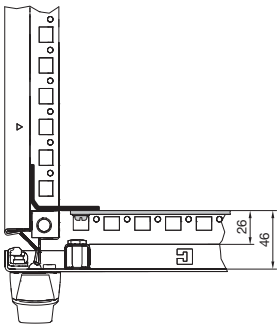
| For enclosure height mm | U | Packs of | **Model No.** |
|---|---|---|---|
| 1600 | 33 | 2 pc(s). | **8619.300[1)]** |
| 1800 | 38 | 2 pc(s). | **8619.310** |
| 2000 | 42 | 2 pc(s). | **8619.320[1)]** |

[1)] For the rear of electronic enclosures, see page 130

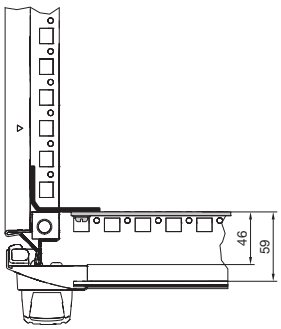
**Accessories:**
– 482.6 mm (19") fastener, 1 U, see page 1097
– Slide rail VX for adaptor section 482.6 mm (19") with attachment on one side, see page 1089
– Slide rail VX for adaptor section 482.6 mm (19") with attachment on both sides, see page 1089
– Punched section with mounting flange, 18 x 64 mm, see page 990
– Multi-tooth screws, see page 1004
– Metal multi-tooth screws, see page 1004
– Self-tapping screws, see page 1004

## Installation examples for VX

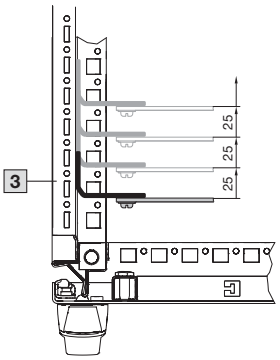
**Foremost installation position**
In conjunction with a sheet steel door




In conjunction with a glazed door

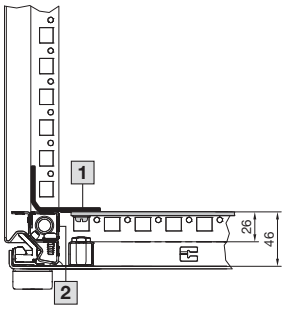



**Offset installation position**
May be depth-mounted on a 25 mm pitch pattern on punched sections with mounting flanges

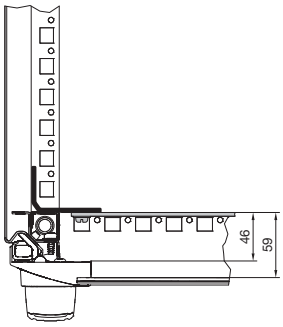



## Installation examples for VX SE

**Foremost installation position**
On adaptor rail VX in conjunction with a sheet steel door




On adaptor rail VX in conjunction with a glazed door




1 Adaptor sections 482.6 mm (19")
2 Adaptor rail VX
3 Punched section with mounting flange 18 x 64 mm

## Adaptor pieces, 482.6 mm (19")

**for VX, VX SE**

The 1 U sub-section of adaptor sections. For the installation of subracks and other 482.6 mm (19") equipment.

**Material:**
- Sheet steel, 2 mm

**Supply includes:**
- Assembly parts

**Note:**
- The 482.6 mm (19") measurement applies when mounting on the frame of 600 mm wide enclosures
- Depth-offset installation in 600 mm wide enclosures is possible using punched sections with mounting flanges, 18 x 64 mm

| Units U | Packs of | **Model No.** |
|---|---|---|
| 1 | 4 pc(s). | **8619.330** |

**Accessories:**
- 482.6 mm (19") fastener, 1 U, see page 1097
- Punched section with mounting flange, 18 x 64 mm, see page 990
- Multi-tooth screws, see page 1004
- Metal multi-tooth screws, see page 1004
- Self-tapping screws, see page 1004

## 482.6 mm (19") mounting angles, standard

**for VX IT**

Suitable for assembling a 482.6 mm (19") mounting level or for 482.6 mm (19") partial installation.
The L-shaped design directly accommodates all commercially available installation kits for server systems, which are fastened directly to the 482.6 mm (19") system punchings.

**Applications:**
- For mounting a 482.6 mm (19") mounting level within the VX IT rack system

**Benefits:**
- Integral, bidirectional U labelling
- Integral system punchings on a U pitch pattern on the front and sides, allows U-specific mounting of cable routing components for structured cabling

**Installation options:**
- Alternative installation widths from 21" – 24", depending on the mounting variant and rack dimensions selected

**Technical specifications:**
- Side punchings, round and square, on a U pitch pattern
- Potential equalisation within the mounting level and with the locating frame is achieved via the assembly components
- 482.6 mm (19") mounting hole including U centre fixing attachment to standard EIA 310 E

**Material:**
- Sheet steel, 2 mm

**Surface finish:**
- Primed

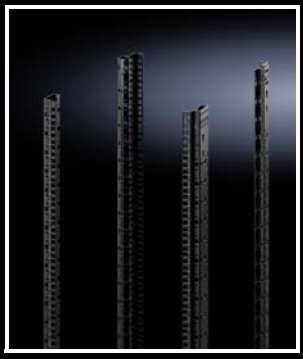
**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| For enclosure height U | Installation position | Packs of | **Model No.** |
|---|---|---|---|
| 15 | front | 2 pc(s). | **5302.100** |
| 15 | rear | 2 pc(s). | **5302.101** |
| 24 | front | 2 pc(s). | **5302.102** |
| 24 | rear | 2 pc(s). | **5302.103** |
| 38 | front | 2 pc(s). | **5302.104** |
| 38 | rear | 2 pc(s). | **5302.105** |
| 42 | front | 2 pc(s). | **5302.106** |
| 42 | rear | 2 pc(s). | **5302.107** |
| 47 | front | 2 pc(s). | **5302.108** |
| 47 | rear | 2 pc(s). | **5302.109** |

**Assembly instruction:**
- A combination with cross-member, depth stays or mounting bracket is required for attachment
- Use of the different mounting options depends on the relevant enclosure dimensions

**Accessories:**
- Cross member, see page 1083
- Mounting bracket, see page 1082
- Depth stays, see page 1083



## Mounting angles

### 482.6 mm (19") mounting angles, dynamic

**for VX IT**

Suitable for assembling a 482.6 mm (19") mounting level or for 482.6 mm (19") partial installation.
The L-shaped design can directly accommodate all commercially available mounting kits for server systems, which are fastened directly to the 482.6 mm (19") system punchings.

**Applications:**
- For mounting a 482.6 mm (19") mounting level within the VX IT rack system

**Benefits:**
- Integral, bidirectional U labelling
- Integral system punchings on a U pitch pattern on the front and sides, allows U-specific mounting of cable routing components for structured cabling

**Installation options:**
- Alternative installation widths from 21" – 24", depending on the mounting variant and rack dimensions selected

**Technical specifications:**
- Side punchings, round and square, on a U pitch pattern
- Potential equalisation within the mounting level and with the locating frame is achieved via the assembly components
- 482.6 mm (19") mounting hole including U centre fixing attachment to standard EIA 310 E

**Material:**
- Sheet steel, 2.5 mm

**Surface finish:**
- Primed

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| For enclosure height U | Installation position | Packs of | **Model No.** |
|---|---|---|---|
| 38 | front | 2 pc(s). | **5302.152** |
| 38 | rear | 2 pc(s). | **5302.153** |
| 42 | front | 2 pc(s). | **5302.154** |
| 42 | rear | 2 pc(s). | **5302.155** |
| 47 | front | 2 pc(s). | **5302.156** |
| 47 | rear | 2 pc(s). | **5302.157** |

**Assembly instruction:**
- A combination with cross-member, depth stays or mounting bracket is required for attachment
- Use of the different mounting options depends on the relevant enclosure dimensions

**Accessories:**
- Mounting bracket, see page 1082
- Cross member, see page 1083
- Depth stays, see page 1083

### Mounting bracket

**for VX IT 482.6 mm (19") mounting angles**

For mounting 482.6 mm (19") mounting angles in VX IT network/server racks. For racks with a width of 600 mm, they are attached directly to the frame and for racks with a width of 800 mm to the cross-member.

**Benefits:**
- Direct potential equalisation of the mounting angles via the attachment

**Material:**
- Sheet steel

**Surface finish:**
- Clear-chromated

**Colour:**
- RAL 9005

**Supply includes:**
- Assembly parts

| Design | For enclosure width mm | Packs of | **Model No.** |
|---|---|---|---|
| for VX IT 482.6 mm (19") mounting angles, standard | 600 | 4 pc(s). | **5302.110** |
| for VX IT 482.6 mm (19") mounting angles, dynamic | 600 | 4 pc(s). | **5302.160** |
| for cross member | 800 | 4 pc(s). | **5302.169** |

**Accessories:**
- Cross member, see page 1083

## Cross member

**for VX IT mounting angles, 482.6 mm (19"), standard**

For width-variable mounting of standard 482.6 mm (19") mounting angles in 800 mm wide VX IT network/server enclosures.

**Benefits:**
- Symmetrical or asymmetrical installation supported
- More space for cable routing or integration of a Liquid Cooling Unit (LCU) with one-sided, asymmetrical (laterally offset) installation
- Ideal for integrating 482.6 mm (19") mounting angles for alternative installation with 21", 23", or 24" components
- To boost the energy efficiency of an integral rack climate control system, the surrounding area around the 482.6 mm (19") mounting level can be covered with air baffle plates, enabling the more selective use of the cooling airflow and minimising exhaust airflows

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

**Load capacity:**
- 4000 N

**Supply includes:**
- Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 800 | 2 pc(s). | **5302.167** |

**Note:**
- The maximum load capacity of one mounting level on a cross member is 4000 N per mounting level.

**Also required:**
- Mounting bracket, see page 1082

**Assembly instruction:**
- It is attached directly onto the enclosure frame
- A cross member mounting bracket is needed to screw-fasten the mounting angles to the cross member

**Accessories:**
- Air baffle plate, see page 1094

## Depth stays

**for 482.6 mm (19") mounting angles**

To accommodate 19" mounting angles.

**Benefits:**
- Particularly high load capacity up to 15,000 N
- Enhanced stability thanks to improved load distribution
- Symmetrical or asymmetrical installation supported
- More space for cable routing or integration of a Liquid Cooling Unit (LCU) with one-sided, asymmetrical (laterally offset) installation
- Ideal for integrating 482.6 mm (19") mounting angles for alternative installation with 21", 23", or 24" components

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

**Supply includes:**
- 2 depth stays each for top and bottom for enclosure width > 600 mm
- Assembly parts

| Design | For enclosure depth mm | For enclosure width mm | Packs of | Model No. |
|---|---|---|---|---|
| for VX IT 482.6 mm (19") mounting angles, standard | 1000 | > 600 | 1 pc(s). | **5302.111** |
| for VX IT 482.6 mm (19") mounting angles, standard | 1200 | > 600 | 1 pc(s). | **5302.112** |
| for VX IT 482.6 mm (19") mounting angles, dynamic | 1000 | > 600 | 1 pc(s). | **5302.161** |
| for VX IT 482.6 mm (19") mounting angles, dynamic | 1200 | > 600 | 1 pc(s). | **5302.164** |
| for VX IT 482.6 mm (19") mounting angles, standard<br>for VX IT 482.6 mm (19") mounting angles, dynamic | 1200 | 600 | 2 pc(s). | **5302.166** |

**Also required:**
- Support rail, see page 1084
- Mounting bracket, see page 1082

**Assembly instruction:**
- For the attachment of mounting angles in enclosures that are greater than 1000 mm deep and greater than 600 mm wide, additional mounting brackets are required
- For the attachment of mounting angles in enclosures that are greater than 1000 mm deep and greater than 600 mm wide, an additional support rail for VX IT is required

## Mounting angles

### Support rail

**for VX IT**

For the attachment of mounting angles in enclosures > 1000 mm deep and 600 mm or 800 mm wide when using depth stays. The support rail improves load distribution in network/server racks.

**Technical specifications:**
– Side round and square punchings

**Material:**
– Sheet steel

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5302.170** |

**Assembly instruction:**

– The support rail is screw-fastened onto the centre of the frame structure at right-angles below the depth stays

### Mounting angles additional fastening attachment

**for VX IT 482.6 mm (19") mounting angles, standard**

Prevents the mounting angles from twisting in case of unevenly distributed loads. Secured directly between the mounting angle and a mounting section on the outer mounting level of the VX frame structure.

**Applications:**
– For fixing the 482.6 mm (19") mounting angle, standard, onto the outer mounting level

**Benefits:**
– Can also be used as individual fastening with 482.6 mm (19") partial installation

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

**Supply includes:**
– Assembly parts

| For enclosure width mm | Packs of | Model No. |
|---|---|---|
| 600 | 2 pc(s). | **5302.123** |
| 800 | 2 pc(s). | **5302.124** |

**Also required:**

– Punched section with mounting flange, 18 x 64 mm, see page 990

### Mounting kit, 2 U

**for 482.6 mm (19") equipment**

Facilitates fast, simple integration of additional 2 U mounting space within an enclosure by attaching to the enclosure frame or to the existing mounting angles at the sides. The flexible slot fastening of the brackets means that the distance between the two installation brackets may be freely selected, so that other 482.6 mm (19″) attachment dimensions may be implemented. The second row of holes is used for the optional configuration of additional mounting surfaces.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Units U | Packs of | Model No. |
|---|---|---|
| 2 | 2 pc(s). | **7246.420** |

## Mounting angles, 482.6 mm (19")

**for FlatBox**
L-shaped bracket as 2nd attachment level

**Material:**
– Sheet steel, spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts for fast, tool-free assembly.

**Note:**
– The 2nd attachment level should always be ordered in the same height as the basic enclosure
– Partial configuration is not possible

| Units U | Packs of | Model No. |
|---|---|---|
| 6 | 2 pc(s). | **7507.706** |
| 9 | 2 pc(s). | **7507.709** |
| 12 | 2 pc(s). | **7507.712** |
| 15 | 2 pc(s). | **7507.715** |
| 18 | 2 pc(s). | **7507.718** |
| 21 | 2 pc(s). | **7507.721** |

## Adhesive measurement strip, 482.6 mm (19")

With numerical labelling on a 482.6 mm (19") pitch pattern for clear identification of the various height units.

**Applications:**
– For retrofitting to existing 482.6 mm (19") sections
– For sticking onto the side adjacent to the system punchings

**Benefits:**
– Double-sided labelling allows the counting direction to be freely selected
– Clear documentation of the various installed components

**Material:**
– Sheet steel, spray-finished

| Design | Width mm | Packs of | Model No. |
|---|---|---|---|
| Labelling range 1 – 56 U | 6 | 1 pc(s). | **7950.100** |

## Cover, magnetic

**for VX IT**
For optionally covering the front system punchings with complete air blocking of the front, or in the absence of installed cable fingers. With additional labelling strips for bidirectional U labelling.

**Applications:**
– For retrofitting to existing 482.6 mm (19") sections

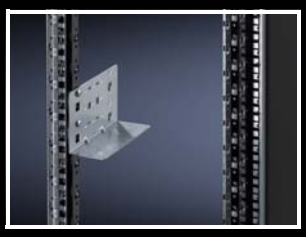
**Benefits:**
– Double-sided labelling allows the counting direction to be freely selected
– Clear documentation of the various installed components

**Material:**
– Cover: PVC
– Adhesive measurement strips: Plastic

**Supply includes:**
– Cover (front)
– 2 adhesive measurement strips, self-adhesive, bi-directional

| Design | Length m | Width mm | Packs of | Model No. |
|---|---|---|---|---|
| Labelling range 1 – 56 U | 5 | 15 | 1 pc(s). | **5501.895** |

## Slide rails



### Slide rail, 2 U, static installation

**for VX IT**
System punchings for mounting accessories and cooling active components.

**Applications:**
– For mounting on a 482.6 mm (19") mounting level

**Installation options:**
– for 482.6 mm (19") mounting angles, standard
– for 482.6 mm (19") mounting angles, dynamic

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Load capacity:**
– 300 N, static

**Supply includes:**
– Assembly parts

| Units U | Length mm | Packs of | **Model No.** |
|---|---|---|---|
| 2 | 150 | 2 pc(s). | **5501.400** |

### Slide rail, 1 U, static installation

**for VX IT**
Side system punchings for mounting accessories and cooling components that expel to the side.

**Applications:**
– For mounting on the front mounting level
– To support heavy installed equipment

**Benefits:**
– Simply locate into the system punchings of the 482.6 mm (19") mounting brackets after adjusting the required 482.6 mm (19") distance between levels

**Installation options:**
– for 482.6 mm (19") mounting angles, standard

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Load capacity:**
– 800 N, static

**Supply includes:**
– Assembly parts

**Note:**
– Effective contact surface 35 mm per side

| Units U | Length mm | Distance between 482.6 mm (19") levels mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 275 | 345 | 2 pc(s). | **5501.410** |
| 1 | 375 | 445 | 2 pc(s). | **5501.420** |
| 1 | 475 | 545 | 2 pc(s). | **5501.430** |
| 1 | 575 | 645 | 2 pc(s). | **5501.440** |
| 1 | 675 | 745 | 2 pc(s). | **5501.450** |

**Assembly instruction:**

– The 482.6 mm (19") spacing between levels in the VX IT must be adjusted accordingly prior to installation

## Slide rail, 2 U, static installation, heavy duty

**for VX IT**

Side system punchings for mounting accessories and cooling components that expel to the side.

**Applications:**
- For mounting on the front mounting level
- To support heavy installed equipment

**Benefits:**
- Simply locate into the system punchings of the 482.6 mm (19") mounting brackets after adjusting the required 482.6 mm (19") distance between levels

**Installation options:**
- 482.6 mm (19") mounting angles, standard
- 482.6 mm (19") mounting angles, dynamic

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Load capacity:**
- 2000 N, static

**Supply includes:**
- Assembly parts

**Note:**
- Effective contact surface 35 mm per side

| 482.6 mm (19") distance between levels, standard mm | 482.6 mm (19") distance between levels, dynamic mm | Packs of | **Model No.** |
|---|---|---|---|
| 320 | 325 | 2 pc(s). | **5302.030** |
| 420 | 425 | 2 pc(s). | **5302.031** |
| 520 | 525 | 2 pc(s). | **5302.032** |
| 620 | 625 | 2 pc(s). | **5302.033** |
| 720 | 725 | 2 pc(s). | **5302.034** |

## Slide rail, heavy-duty

**for TE**

For L-shaped mounting angles with a preconfigured clearance between levels of 740 mm. Easily and quickly installed due to locating brackets for the rear level.

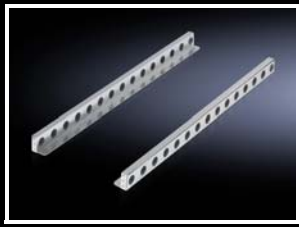
**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

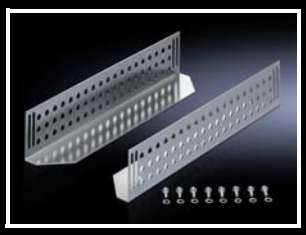
**Load capacity (static):**
- 1000 N

**Supply includes:**
- Assembly parts

| Distance between 482.6 mm (19") levels mm | Contact surface, width mm | Contact surface, depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 745 | 50 | 734 | 2 pc(s). | **7063.740** |



## Slide rails



### Slide rail

**for TE**

For mounting between the front and rear 482.6 mm (19") mounting levels. The slide rails can be used to support heavy 482.6 mm (19") components.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Load capacity (static):**
– 800 N

**Supply includes:**
– Assembly parts

| Distance between 482.6 mm (19") levels mm | Contact surface, width mm | Contact surface, depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 395 | 85 | 324 | 2 pc(s). | **7963.310** |
| 495 | 85 | 424 | 2 pc(s). | **7963.410** |
| 595 | 85 | 524 | 2 pc(s). | **7963.510** |
| 695 | 85 | 624 | 2 pc(s). | **7963.610** |
| 795 | 85 | 724 | 2 pc(s). | **7963.710** |

### Slide rail, 1 U, depth-variable

**for VX IT, TE**

**Applications:**
– For mounting on the front mounting level
– To support heavy installed equipment
– To adapt to individual distances between 482.6 mm (19") levels

**Benefits:**
– Tool-free, time-saving one-man assembly from the enclosure front
– All three mounting holes in the EIA system punchings are available for screw-fastening the equipment.
– Alternatively, direct screw fastening in the TE 8000 to the 482.6 mm (19") system punchings is also possible

**Installation options:**
– 482.6 mm (19") L mounting angles, front and rear
– 482.6 mm (19") mounting frames front and rear
– for VX IT 482.6 mm (19") mounting angles, standard
– for VX IT 482.6 mm (19") mounting angles, dynamic

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

**Note:**
– Effective contact surface 25 mm per side

| Distance between 482.6 mm (19") levels mm | Load capacity (static) | Packs of | **Model No.** |
|---|---|---|---|
| 600 - 900 | 800 N | 2 pc(s). | **5302.035** |
| 400 - 600 | 800 N | 2 pc(s). | **5501.460** |

## Slide rail, 1 U, depth-variable

**for VX IT, TE**

For direct attachment to the 482.6 mm (19") system punchings on the mounting angles. The slide rails are pulled out to the required length and secured between the front and rear mounting level on the 482.6 mm (19") pitch pattern.

**Applications:**
- For mounting on the front mounting level

**Benefits:**
- No loss of U
- Thanks to the thin support surface of only around 0.8 mm thickness, exceeding the U pitch pattern is generally avoided, provided the components do not exceed a maximum height of 43.5 mm. In this way, several units may be easily arranged on top of one another without offset.

**Installation options:**
- For attachment between the front and rear 482.6 mm (19") mounting level

| Distance between 482.6 mm (19") levels mm | Packs of | **Model No.** |
|---|---|---|
| 390 - 550 | 2 pc(s). | **7063.750** |
| 550 - 750 | 2 pc(s). | **7063.752** |

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Load capacity:**
- 20 kg static load

**Supply includes:**
- Assembly parts

**Note:**
- Effective contact surface 30 mm per side

## Slide rail VX

**for adaptor section 482.6 mm (19") with attachment on both sides**

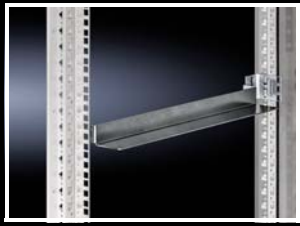
Mounting between the 482.6 mm (19") front and rear adaptor sections or 482.6 mm (19") adaptor pieces.

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|
| 500 | 10 pc(s). | **8613.151** |
| 600 | 10 pc(s). | **8613.161** |
| 800 | 10 pc(s). | **8613.181** |



## Slide rail VX

**for adaptor section 482.6 mm (19") with attachment on one side**

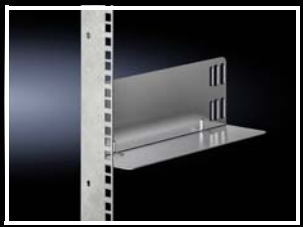
Mounted on the adaptor section , 482.6 mm (19").

**Material:**
- Sheet steel

**Surface finish:**
- Zinc-plated

**Supply includes:**
- Assembly parts

| Length mm | Packs of | **Model No.** |
|---|---|---|
| 270 | 10 pc(s). | **4531.001** |



## 482.6 mm (19") installation

### Server telescopic slides

Facilitate optimum accessibility to the servers, even when built-in. For servers with a maximum width of 426 mm.

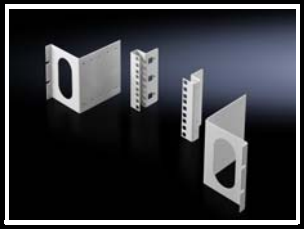
**Material:**
– Sheet steel

**Load capacity:**
– 30 kg

**Supply includes:**
– Telescopic slide with mounting kit
– Assembly parts

**Note:**
– Only in conjunction with L-shaped mounting angles

| Design | Extension length mm | For enclosure depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| For 468.6 - 687.4 mm distance between levels | 511.2 | 600 | 2 pc(s). | **3659.180** |
| For 559.0 - 789.0 mm distance between levels | 596.4 | 800 | 2 pc(s). | **3659.190** |



### Adaptor kit, 3 U

**for 800 mm wide VX enclosures**
For fastening individual 482.6 mm (19") components, or as an additional mounting facility at the rear of the enclosure. The mounting level in the adaptor angle can be adjusted in 25 mm increments by up to 100 mm in the depth, leaving sufficient space for baying where patch panels or splicing boxes are used. Attachment is on the inner mounting level of the frame section or a suitable chassis in the enclosure depth.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

| Units U | Design | Packs of | **Model No.** |
|---|---|---|---|
| 3 | Installation position, centre | 2 pc(s). | **7246.100** |

### Adaptor, 3 U

**Depth offset 100 mm**
This adaptor is used to recess 482.6 mm (19") mounting of equipment inside enclosures with 482.6 mm (19") installation in the foremost position, such as server or electronic enclosures. In this way, sufficient space can be gained in front of the mounting equipment to integrate patch panels or switches, whilst at the same time exploiting the maximum enclosure depth.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Units U | Packs of | **Model No.** |
|---|---|---|
| 3 | 2 pc(s). | **7246.400** |

## 482.6 mm (19") installation

### Adaptor, metric to 21"/19"

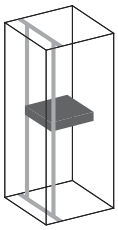
With this adaptor, 482.6 mm (19") assemblies may be fastened to metric (535 mm) mounting angles, or combined systems may be configured.

**Material:**
– Extruded aluminium section

| Units U | Height SU | Packs of | **Model No.** |
|---|---|---|---|
| 1 | 2 | 2 pc(s). | **7246.010** |
| 3 | 6 | 2 pc(s). | **7246.030** |
| 6 | 11 | 2 pc(s). | **7246.060** |

### Drawer

**for one 482.6 mm (19") mounting level**
For front attachment to mounting angles, 482.6 mm (19"). With cover and telescopic slides to accommodate assignment lists, operating manuals and small parts. The small version of the 2 U variant is also suitable for mounting inside a swing frame.



**Material:**
– Sheet steel

**Supply includes:**
– Fully assembled
– Security lock 12321
– Assembly parts

| Units U | Width | Clearance openings, width mm | Clearance openings, depth mm | Installation depth mm | Colour | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 2 | 19" | 411 | 419 | 427 | RAL 7035 | 1 pc(s). | **7282.035** |
| 2 | 19" | 411 | 244 | 250 | RAL 7035 | 1 pc(s). | **7282.135** |
| 3 | 19" | 411 | 419 | 427 | RAL 7035 | 1 pc(s). | **7283.035** |
| 2 | 19" | 411 | 419 | 427 | RAL 9005 | 1 pc(s). | **5502.305** |
| 3 | 19" | 411 | 419 | 427 | RAL 9005 | 1 pc(s). | **5502.325** |

### Small equipment box, 4 U, shielded

**for one 482.6 mm (19") mounting level**
For accommodation of small equipment and other accessories within a partitioned 482.6 mm (19") installation level. The small equipment box contains an adjustable mounting base which can be used to further sub-divide the box.

**Material:**
– Sheet steel
– Brush strip: Plastic, UL 94-HB

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

**Load capacity:**
– 200 N surface load, static

**Supply includes:**
– Small equipment box with brush strip
– 1 shelf

| Contact surface, width mm | Contact surface, depth mm | Height mm | Width mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|---|---|
| 405 | 300 | 170 | 427 | 400 | 1 pc(s). | **5501.900** |

## 482.6 mm (19") installation

### 482.6 mm (19") installation aid

**for Network Cable Organizer**
For easier mounting of 482.6 mm (19") installed components within the mounting level.

**Applications:**
– To support heavy installed equipment

**Installation options:**
– For mounting on the front mounting level

**Material:**
– Sheet steel

**Colour:**
– RAL 9005

**Load capacity:**
– max. 150 N

**Supply includes:**
– Assembly parts

**Note:**
– Effective contact surface 35 mm per side

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **5502.110** |

### Blanking plate, 482.6 mm (19")

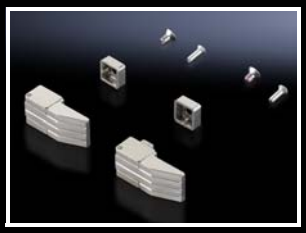
For installation in electronic enclosures or housings.

**Benefits:**
– To neatly finish off free locations within the mounting level.

**Material:**
– Aluminium, 3 mm

**Surface finish:**
– Natural anodised

| Units U | Packs of | Model No. |
|---|---|---|
| 1 | 3 pc(s). | **1931.200** |
| 2 | 3 pc(s). | **1932.200** |
| 3 | 3 pc(s). | **1933.200** |
| 4 | 3 pc(s). | **1934.200** |
| 6 | 3 pc(s). | **1936.200** |
| 7 | 3 pc(s). | **1935.200** |
| 9 | 3 pc(s). | **1939.200** |
| 12 | 3 pc(s). | **1937.200** |



### Hinge

**for blanking plates**

**Material:**
– Die-cast zinc

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **1950.000** |

## 482.6 mm (19") installation

### Blanking panel, 482.6 mm (19")

As an extension cover or for population as required.

**Width:**
– 482.6 mm

**Material:**
– Sheet steel

**Colour RAL 7035**

| Units U | Installation height mm | Width | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 44 | 19" | 2 pc(s). | **7151.035** |
| 1.5 | 66 | 19" | 2 pc(s). | **7157.035** |
| 2 | 88 | 19" | 2 pc(s). | **7152.035** |
| 3 | 132.5 | 19" | 2 pc(s). | **7153.035** |
| 6 | 266 | 19" | 2 pc(s). | **7156.035** |

**Colour RAL 9005**

| Units U | Installation height mm | Width | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 44 | 19" | 2 pc(s). | **7151.005** |
| 2 | 88 | 19" | 2 pc(s). | **7152.005** |
| 3 | 132.5 | 19" | 2 pc(s). | **7153.005** |
| 6 | 266 | 19" | 2 pc(s). | **7156.005** |

### Blanking panel, 482.6 mm (19")

**Tool-free attachment**
The blanking panel is used to seal unused areas within the 482.6 mm (19") mounting level. Quick tool-free attachment means that it is easily integrated anywhere, and can also be removed again if necessary. The consistent use of blanking panels ensures targeted air routing in partially populated racks.

**Material:**
– Plastic
– Fire protection: Self-extinguishing , to UL 94 HB, halogen-free

**Colour:**
– RAL 9005

**Supply includes:**
– Blanking panel, 1 U, with integral quick-fastening

| Installation height U | Width | Packs of | **Model No.** |
|---|---|---|---|
| 1 | 19" | 10 pc(s). | **5302.200** |

### Vent trim panel, 482.6 mm (19")

For targeted air infeed from the front zone into the 482.6 mm (19") level.

**Applications:**
– Targeted routing of cold air from the raised floor via the front to the rear for cooling separate components

**Benefits:**
– Vented surface area approx. 85 % perforated

**Material:**
– Sheet steel

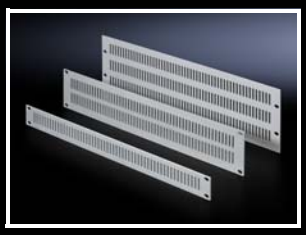
**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

| Units U | Packs of | **Model No.** |
|---|---|---|
| 1 | 1 pc(s). | **5302.201** |

**Also required:**
– 482.6 mm (19") fastener, 1 U, see page 1097
– Multi-tooth screws, see page 1098

## 482.6 mm (19") installation



### Ventilated front panels

**Width 482.6 mm (19")**
For venting enclosures and housings.

**Material:**
– Aluminium

**Surface finish:**
– Natural anodised

| Units U | Packs of | **Model No.** |
|---|---|---|
| 1 | 3 pc(s). | **2231.000** |
| 2 | 3 pc(s). | **2232.000** |
| 3 | 3 pc(s). | **2233.000** |

### Air baffle plate

**for VX IT 482.6 mm (19") mounting angles, standard**

**Applications:**
– To separate the hot/cold zones within an enclosure with aisle containment or when using an LCP system.

**Benefits:**
– For selectively boosting the energy efficiency of a climate control system
– Vertical brush strip for collision-free shielding with installed rail systems on the outer mounting level

**Material:**
– Sheet steel
– Blanking panel: Plastic, UL 94-HB, halogen-free
– Brush strip: Plastic, UL 94-HB

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 9005

**Supply includes:**
– 2 vertical trim panels
– 2 horizontal trim panels
– 4 brush strips
– 4 cellular PU foam pieces
– Assembly parts

**Assembly instruction:**

– The vertical trim panels with brush strip may be fitted on both the front and rear 482.6 mm (19") mounting angles for partitioning.
– The horizontal trim panels with brush strips can only be mounted on the front 482.6 mm (19") mounting angles.
– 482.6 mm (19") mounting cut-outs integrated within the partitioning areas may optionally be sealed with the supplied blanking panels, or used to install additional components or for cable routing. Please see the product-specific scope of supply.

**Accessories:**

– 482.6 mm (19") fastener, 1 U, see page 1097

| For enclosure width mm | For enclosure height mm | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|
| 600 | 1200 | – | 1 pc(s). | **5302.010** |
| 800 | 1200 | 4 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.011** |
| 600 | 1800 | – | 1 pc(s). | **5302.012** |
| 800 | 1800 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.013** |
| 600 | 2000 | – | 1 pc(s). | **5302.016** |
| 800 | 2000 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.014** |
| 600 | 2200 | – | 1 pc(s). | **5302.017** |
| 800 | 2200 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.015** |

## Air baffle plate

**for VX IT 482.6 mm (19") mounting angles, dynamic**

For selectively boosting the energy efficiency of a climate control system.

**Applications:**
- To separate the hot/cold zones within an enclosure with aisle containment or when using an LCP system.

**Benefits:**
- Vertical brush strip for collision-free shielding with installed rail systems on the outer mounting level

**Material:**
- Sheet steel
- Blanking panel: Plastic, UL 94-HB, halogen-free
- Brush strip: Plastic, UL 94-HB

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 9005

**Supply includes:**
- 2 vertical trim panels
- 2 horizontal trim panels
- 4 brush strips
- 4 cellular PU foam pieces
- Assembly parts

**Assembly instruction:**
- The vertical trim panels with brush strip may be fitted on both the front and rear 482.6 mm (19") mounting angles for partitioning.
- The horizontal trim panels with brush strips can only be mounted on the front 482.6 mm (19") mounting angles.
- 482.6 mm (19") mounting cut-outs integrated within the partitioning areas may optionally be sealed with the supplied blanking panels, or used to install additional components or for cable routing. Please see the product-specific scope of supply.

**Accessories:**
- 482.6 mm (19") fastener, 1 U, see page 1097

| For enclosure width mm | For enclosure height mm | Product-specific scope of supply | Packs of | **Model No.** |
|---|---|---|---|---|
| 600 | 1200 | – | 1 pc(s). | **5302.000** |
| 800 | 1200 | 4 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.001** |
| 600 | 1800 | – | 1 pc(s). | **5302.002** |
| 800 | 1800 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.003** |
| 600 | 2000 | – | 1 pc(s). | **5302.004** |
| 800 | 2000 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.005** |
| 600 | 2200 | – | 1 pc(s). | **5302.006** |
| 800 | 2200 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.007** |
| 600 | 2450 | – | 1 pc(s). | **5302.008** |
| 800 | 2450 | 6 blanking panels, 482.6 mm (19"), 1 U | 1 pc(s). | **5302.009** |

## 482.6 mm (19") air duct

**for horizontal air routing**

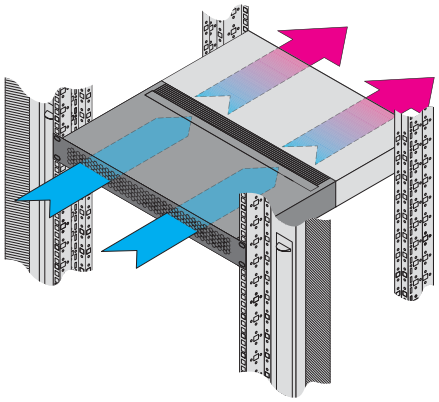
Air duct, passive, for cold air supply to 482.6 mm (19") IT equipment installed at the rear of server racks; air is drawn in from the front.

**Benefits:**
- For superior air infeed to the rear 482.6 mm (19") components
- Integral brush strip for cable entry of 482.6 mm (19") IT equipment
- Supports front-to-back air routing
- Depth-variable

**Material:**
- Sheet steel, spray-finished
- Brush strip: Plastic, UL 94-HB

**Colour:**
- RAL 9005

| Width mm | Height U | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 482.6 | 1 | 223 - 356 | 1 pc(s). | **3301.391** |



## 482.6 mm (19") installation

### Air duct

**for side air routing**

Air duct, passive, for cold air intake to 482.6 mm (19") IT equipment with side air inlet. Suitable for use in conjunction with all-round partitioning around the mounting level via air baffle plates and targeted management of the airflow through the air duct.

**Benefits:**
- For superior air infeed to the rear 482.6 mm (19") equipment with side air routing
- Integral membrane cover allows cable entry to the rear
- Depth-variable

**Installation options:**
- for 482.6 mm (19") mounting angles, standard

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

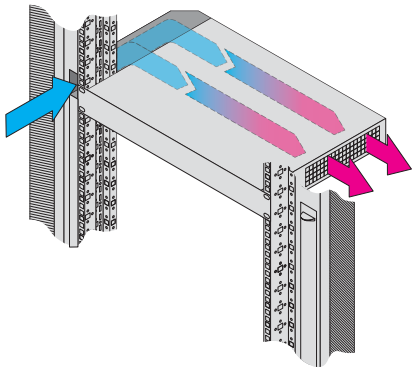
**Colour:**
- RAL 9005

**Supply includes:**
- Air duct
- Adaptor for attaching to 482.6 mm (19") mounting angles
- Magnetic strip to cover the remaining vertical openings in the air baffle plate

| Height U | Depth mm | For enclosure width mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 2 | 275 - 418 | 800 | 1 pc(s). | **3301.392** |

**Also required:**
- Air baffle plate, see page 1094

**Assembly instruction:**
- Only suitable for fitting on the front 482.6 mm (19") installation level
- Can only be mounted in the area of the vertical 19" openings of the air baffle plate



### Brush strip, vertical

**for VX IT**

Within the network distributor, this serves as a flexible infill panel which stylishly conceals the cable management area to the side of the 482.6 mm (19") mounting level. The brush strip facilitates convenient cable routing from the side and rear distributor area to the front connection level. The clearance required in front of the mounting level is at least 75 mm. The brush strip is mounted at the side on the vertical frame section, on horizontal or vertical punched sections.

**Material:**
- Aluminium section, natural anodised
- Brush strip: Plastic, UL 94-HB

| Length mm | Bristle length mm | For enclosure height mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 950 | 95 | 2000 | 4 pc(s). | **7827.544** |

**Assembly instruction:**
- The brush strip will need to be shortened when mounting on 482.6 mm (19") mounting angles.

## 482.6 mm (19") installation

### Mounting panel, 482.6 mm (19")

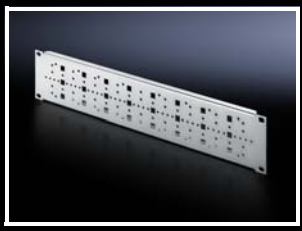
For fast integration of smaller mounting units within the 482.6 mm (19") level, such as potential equalisation rails, distributor boxes, small electrical components etc. Simple screw-fastening of the components to the integral 25 mm system punchings.

**Material:**
– Sheet steel

**Also required:**
– 482.6 mm (19") fastener, 1 U, see page 1097
– Multi-tooth screws, see page 1098

**Accessories:**
– 482.6 mm (19") fastener, 1 U, see page 1097

| Units U | Mounting surface width mm | Colour | Surface finish | Packs of | **Model No.** |
|---|---|---|---|---|---|
| 2 | 450 | – | Zinc-plated | 1 pc(s). | **7151.300** |
| 1 | 450 | RAL 9005 | Spray-finished | 1 pc(s). | **5302.204** |



### Support

**for small appliances**

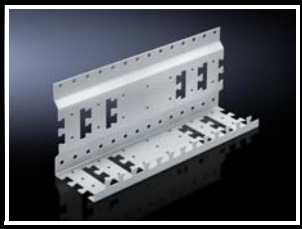
For secure attachment of non-482.6 mm (19")-conforming small appliances such as modems, power packs, routers etc. Angular support for mounting in the free space at the side between the 482.6 mm (19") level and the side panel on mounting angles or punched sections. Attachment of the components and connection cables can be achieved quickly and easily using nylon tape or cable ties. Also suitable for cable routing in the enclosure depth.

| Height mm | Width mm | Depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 150 | 350 | 97 | 1 pc(s). | **7246.500** |

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts



### 482.6 mm (19") fastener, 1 U

**with contact**

For simple screw connection of installation components within the 482.6 mm (19") mounting level. Simply slide onto the mounting angle from the inside and lock home.

**Benefits:**
– Fast positioning and installation instead of using individual cage nuts
– Integral contacting for potential equalisation
– Preconfigured 1 U support with 3 cage nuts, including centre attachment to standard EIA 310
– Supports multiple dismantling and reuse

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

| Thread | Packs of | **Model No.** |
|---|---|---|
| M5 | 24 pc(s). | **2090.000** |

**Note:**
– All enclosures in the Rittal range have already been tested within their tolerances for the use of 482.6 mm (19") fasteners. Suitability for use in enclosures from other manufacturers cannot be guaranteed.

**Also required:**
– Multi-tooth screws, see page 1098

## 482.6 mm (19") installation

### Captive nuts

For the attachment of rack-mounted electronic equipment, 482.6 mm (19") installed equipment and blanking plates to mounting angles, 482.6 mm (19"). For use with metal thickness from 0.8 – 2.5 mm. Optionally with or without contact of the installed equipment to the 482.6 mm (19") section/enclosure.

| Thread | Design | For metal thickness mm | Packs of | **Model No.** |
|---|---|---|---|---|
| M5 | without contact | 0.8 - 2.5 | 50 pc(s). | **2092.500** |
| M5 | with contact | 0.8 - 2.5 | 50 pc(s). | **2094.500** |
| M6 | without contact | 0.8 - 2.5 | 50 pc(s). | **2092.200** |
| M6 | with contact | 0.8 - 2.5 | 50 pc(s). | **2094.200** |

**Possible alternative:**

– 482.6 mm (19") fastener, 1 U, see page 1097

### Assembly screws

For electronic equipment, 482.6 mm (19") installed components and blanking plates.

**Supply includes:**
– Plastic washers

| Thread | Thread length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|
| M5 | 16 | Phillips-head screw | 50 pc(s). | **7094.120** |
| M5 | 16 | Multi-tooth 25 | 50 pc(s). | **7094.130** |
| M6 | 16 | Phillips-head screw | 50 pc(s). | **7094.100** |
| M6 | 16 | Slot-head screw | 50 pc(s). | **7094.110** |
| M6 | 16 | Multi-tooth 30 | 50 pc(s). | **7094.140** |

**Assembly instruction:**

– Max. tightening torque 3 Nm

### Front-mounting cage nut, 482.6 mm (19")

The cage nut consists of an expanding nut which is simply inserted into the square attachment hole at the front and then secured with the assembly screw. When tightening the screw, the cage expands and thus secures the required components. Clamping range from 1.2 – 4.5 mm. Multi-tooth screw head, bit size T 30.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Pan-head screws
– Expanding nuts
– Plastic washers

| Thread | Thread length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|
| M6 | 16 | Size of mounting hole 9.5 x 9.5 mm | 50 pc(s). | **2094.400** |

## 482.6 mm (19") installation

### Spring nuts with screws

**for T-slot mounting angle**

The spring nuts ensure flexible, secure mounting of accessory components on the T-slot mounting angles.

**Supply includes:**
- Spring nuts
- Screws, self-locking

| Thread | Thread length mm | Design | Packs of | **Model No.** |
|---|---|---|---|---|
| M6 | 10 | Phillips-head screw | 50 pc(s). | **7000.990** |

### Fibre-optic splicing box, depth-variable

The 482.6 mm (19") splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19") accommodation and used as a fibre-optic termination or distributor. The variable cassette fixture permits twist-proof installation of all standard splicing cassettes. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps. The splicing box is infinitely depth-adjustable up to 100 mm within the 482.6 mm (19") flanges. In addition, the splicing box may be fully withdrawn from the 482.6 mm (19") flanges. Two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

**Material:**
- Sheet steel

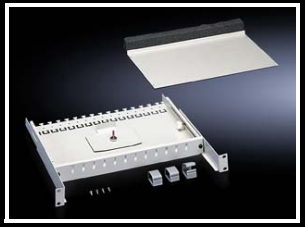
**Colour:**
- RAL 7035

**Supply includes:**
- Splicing box
- Cable routing clips
- Cassette cover
- Mounting accessories for patch panel

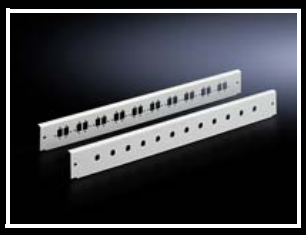
**Note:**
- Supplied without patch panels and splicing cassettes

| Units U | Maximum no. of splicing cassettes | Installation depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 2 | 302 | 1 pc(s). | **7241.005** |

**Also required:**
- Patch panels, see page 1100



## 482.6 mm (19") installation



### Patch panels

**for fibre-optic splicing box, depth-variable, and fibre-optic breakout box, 1 U**
With cut-outs for population with fibre-optic couplings.

**Applications:**
– for fibre-optic splicing box, depth-variable, and fibre-optic breakout box, 1 U

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

| Units U | For couplings | Number of locations | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | E-2000<br>E-2000 duplex<br>SC<br>LC duplex | 24 | 1 pc(s). | **7241.024** |
| 1 | SC duplex<br>LC quad | 12 | 1 pc(s). | **7241.045** |

### Fibre-optic splicing box with telescopic pull-out

**lockable**
The 482.6 mm (19") splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19") accommodation and used as a fibre-optic termination or distributor. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps; two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

**Benefits:**
– The telescopic pull-out provides optimum access to the splicing cassettes and cable clamp
– The variable cassette fixture permits twist-proof installation of all standard splicing cassettes
– The security lock fitted at the front protects against unauthorised access

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

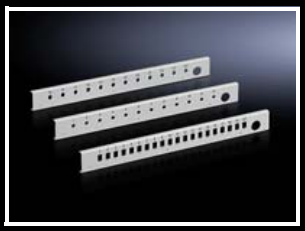
**Supply includes:**
– Splicing box
– Cable routing clips
– Security lock
– Cassette cover
– Mounting accessories for patch panel

**Note:**
– Supplied without patch panels and splicing cassettes

| Units U | Maximum no. of splicing cassettes | Installation depth mm | Packs of | **Model No.** |
|---|---|---|---|---|
| 1 | 2 | 363 | 1 pc(s). | **7170.535** |
| 2 | 4 | 363 | 1 pc(s). | **7470.535** |

**Also required:**
– Patch panel, see page 1101

## 482.6 mm (19") installation



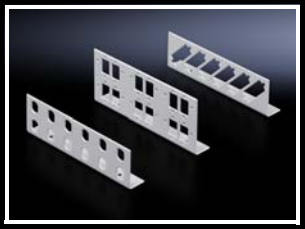
### Patch panel

**for fibre-optic splicing box, lockable**
For splicing boxes, there is a choice of multiple panels with corresponding cut-outs for the installation of single or duplex fibre-optic couplings.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

| Units U | For couplings | Number of locations | Packs of | **Model No.** |
|---|---|---|---|---|
| 2 | E-2000<br>E-2000 duplex<br>SC<br>LC duplex | 24 | 1 pc(s). | **7478.535** |
| 1 | E-2000<br>E-2000 duplex<br>SC<br>LC<br>LC duplex | 20 | 1 pc(s). | **7178.535** |
| 1 | SC duplex<br>LC quad | 12 | 1 pc(s). | **7169.535** |
| 2 | ST | 24 | 1 pc(s). | **7474.535** |



### Patch panels for small fibre-optic distributors

Various patch panels with different connector types are available for individual configuration of small fibre-optic distributors.

**Material:**
– Sheet steel

**Colour:**
– RAL 7035

**Supply includes:**
– Patch panel
– Assembly parts

| For couplings | Number of locations single/duplex | Max. no. of patch panels per housing | Packs of | **Model No.** |
|---|---|---|---|---|
| ST | 12 | 2 | 2 pc(s). | **7462.000** |
| SC<br>E-2000<br>E-2000 duplex | 12 / 6 | 2 | 2 pc(s). | **7463.100** |
| SC duplex | 6 | 2 | 2 pc(s). | **7463.200** |

## LSA connection system

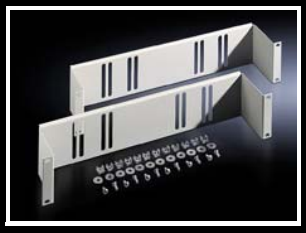
### Support unit, 3 U

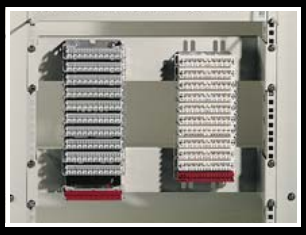
**for LSA-Plus strips, max. 150 paired wires**
To accommodate a maximum of 15 LSA-Plus strips (each with 10 paired wires). 3 x 5 LSA-Plus connection strips 2/10, series 2, may be installed horizontally. Strip length 124 mm, height pitch pattern 22.5 mm. The support unit may be integrated in all 482.6 mm (19") mounting levels. The mounting level is recessed 75 mm behind the 482.6 mm (19") flanges. Integral shunting rings enable tidy routing and distribution of the telecommunication cables.

**Material:**
– Stainless steel

**Supply includes:**
– Support unit, 8 shunting rings

| Units U | Model No. |
|---|---|
| 3 | **7050.100** |





### Accommodation system, 2 U

**for LSA installation kit**
To accommodate LSA support systems within the 482.6 mm (19") mounting level.

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Units U | Depth mm | Packs of | Model No. |
|---|---|---|---|
| 2 | 98.5 | 2 pc(s). | **7050.035** |

## Handle set

**for Comfort Panel**
For external mounting on corner pieces, also suitable for retro-fitting.

**Material:**
- Handle tube: Aluminium
- Handle holder: Die-cast zinc
- Covers: Polyamide

**Surface finish:**
- Handle tube: Natural anodised
- Handle holder: Powder-coated

**Colour:**
- Handle holder: RAL 7024
- Covers: Similar to RAL 7024

**Supply includes:**
- Handle tube, Ø 20 mm
- 2 handle holders
- 2 covers
- Assembly parts

**For horizontal mounting**

| With front panel width | Packs of | Model No. |
|---|---|---|
| 482.6 mm (19") | 1 pc(s). | **6375.010** |

**Note:**
- Shorter heights and widths can be achieved by cutting the handle tube to length
- For enclosures with 74 mm installation depth, cannot be mounted on the same side as the support arm connection

**Accessories:**
- Clipboard, see page 1106
- Display board, see page 1106

## Handle set

**for Optipanel**
For external mounting on corner pieces, also suitable for retro-fitting.

**Material:**
- Handle tube: Aluminium
- Handle holder: Die-cast zinc
- Covers: Polyamide

**Surface finish:**
- Handle tube: Natural anodised
- Handle holder: Powder-coated

**Colour:**
- Handle holder: RAL 7035
- Covers: RAL 7024

**Supply includes:**
- Handle tube, Ø 25 mm
- 2 handle holders
- 2 covers
- Assembly parts

**For horizontal mounting**

| With front panel width | Packs of | Model No. |
|---|---|---|
| 482.6 mm (19") | 1 pc(s). | **6385.010** |

**Note:**
- Shorter heights and widths can be achieved by cutting the handle tube to length
- For enclosures with 100 mm installation depth, cannot be mounted on the same side as the support arm connection

**Accessories:**
- Clipboard, see page 1106
- Display board, see page 1106

## Handle set

For vertical and horizontal mounting on all surfaces.

Overall length: 420 mm

**Material:**
– Handle tube: Aluminium
– Tube holder: Die-cast zinc

**Surface finish:**
– Handle tube: Natural anodised

**Colour:**
– Tube holder: RAL 7035

**Supply includes:**
– 4 tube holders
– 2 handle tubes

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2389.000** |

**Accessories:**

– Clipboard, see page 1106
– Display board, see page 1106

## TP aluminium strip

For retrofitting externally on:
– TP three-part/two-part
– TP one-piece console
– May be mounted on all enclosures/covers with 20 mm fold height (max. metal thickness 2 mm)

Length: 1750 mm (easily cut to length for other dimensions)

Sufficient for desk sections and consoles:
– 3 x width 600 mm
– 2 x width 800 mm
– 1 x width 1000 mm + 1 x width 600 mm
– 1 x width 1200 mm
– 1 x width 1600 mm

| Length mm | Model No. |
|---|---|
| 1750 | **6731.120** |

**Material:**
– Aluminium strip: Extruded aluminium section
– Cover caps: Plastic

**Surface finish:**
– Aluminium strip: Natural anodised

**Colour:**
– Cover caps: RAL 7035

**Supply includes:**
– 1 aluminium section
– 6 plastic cover caps
– Drilling template
– Assembly parts

## Handles

For horizontal or vertical attachment to the enclosure panel of:
- Comfort Panel
- Optipanel
- Other enclosures or
- Surfaces

Mounting holes and surfaces without fins are required for assembly purposes.
For the Comfort Panel version with fins, selectable via configurators at www.rittal.com/configurators, corresponding milling work may be carried out. To this end, please specify "Prepared for handle set 6107.XXX" for the command panel.

**Material:**
- Handle holder: Die-cast zinc
- Cover bungs: Plastic
- Handle tube: Aluminium

**Surface finish:**
- Handle tube: Powder-coated

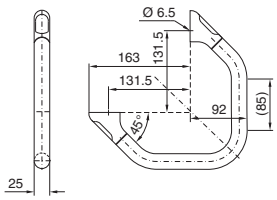
**Colour:**
- Handle holder: RAL 7035
- Cover bungs: Similar to RAL 7035
- Handle tube: Similar to RAL 9006

## Corner handle

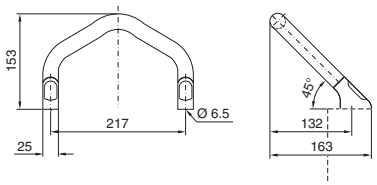
**Supply includes:**
- 4 handle holders
- 2 handle tubes
- Assembly parts

| Packs of | **Model No.** |
|---|---|
| 2 pc(s). | **6107.000** |

Mounting on enclosure corner




External mounting on straight surface
(90° rotation of handle holder)

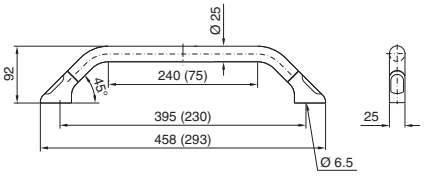



## U handle

**Supply includes:**
- 2 handle holders
- 1 handle tube
- Assembly parts

| For front panel size | Packs of | **Model No.** |
|---|---|---|
| ≥ 7 U | 1 pc(s). | **6107.100** |
| 482.6 mm (19") | 1 pc(s). | **6107.200** |

**Accessories:**
- For 6107.200: Clipboard, see page 1106
- For 6107.200: Display board, see page 1106




**Note:**
- Dimensions in brackets for front size 7 U

## Clipboard

For securing operating instructions or plans (A4 size) at eye level. Prepared for mounting on the right-hand side; mounting on the left is also possible by unscrewing and moving the clip part. For mounting purposes, a straight tube length of ≥ 200 mm, Ø 20 mm or Ø 25 mm is required.

**Material:**
- Clipboard: Sheet steel
- Clip part: Aluminium

**Surface finish:**
- Clip part: Natural anodised

**Colour:**
- RAL 7035

| Width mm | Height mm | Packs of | Model No. |
|---|---|---|---|
| 225 | 315 | 1 pc(s). | **6013.000** |

**Also required:**
- Handle set 2389.000, see page 1104
  or
- Handle set for Comfort Panel, see page 1103
  or
- Handle set for Optipanel, see page 1103
  or
- U handle 6107.200, see page 1105

## Display board

**with wall bracket**

To accommodate test plans, documents etc. in A4 format.

Mounting
- On surfaces
- On a 25 mm pitch pattern of the enclosure frame or rail system
- On handle set Ø 20 mm or Ø 25 mm

**Supply includes:**
- Display board
- Wall bracket
- Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6013.100** |

**Accessories:**
- Handle set 2389.000, see page 1104
  or
- Handle set for Comfort Panel, see page 1103
  or
- Handle set for Optipanel, see page 1103
  or
- U handle 6107.200, see page 1105

## Front panel

**for Comfort Panel and Optipanel**

**Material:**
– Aluminium, 3 mm

**Surface finish:**
– Natural anodised

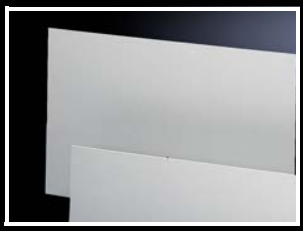
**Note:**
– Mounting kits included with the supply of 520 mm wide standard enclosures.

**With threaded bolts M5**

| Width mm | Height mm | Model No. |
|---|---|---|
| 482.6 (19") | 155.0 (3.5 U) | **6027.010** |
| 482.6 (19") | 310.3 (7 U) | **6028.010** |
| 520 | 400 | **6028.014** |
| 520 | 500 | **6028.015** |
| 520 | 600 | **6028.016** |

**Also required:**

– Mounting kit for Comfort Panel 6053.800, see page 1108
– Mounting kit for Optipanel 6053.000/.500, see page 1108



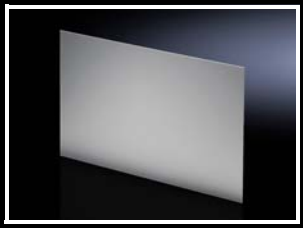
## Front panel

**for Compact Panel**

**Material:**
– Aluminium, 3 mm

**Surface finish:**
– Natural anodised

| Size W x H mm | To fit Compact Panel | Model No. |
|---|---|---|
| 178 x 200 | 6340.000 | **6028.500** |
| 178 x 350 | 6340.100 | **6028.510** |
| 252 x 200 | 6340.300 | **6028.530** |
| 252 x 350 | 6340.400 | **6028.540** |



## Cover plate

**for support arm connection**

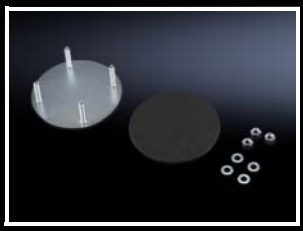
For secure sealing of an unrequired support arm connection in the enclosure.

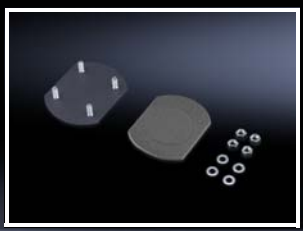
**Material:**
– Sheet steel

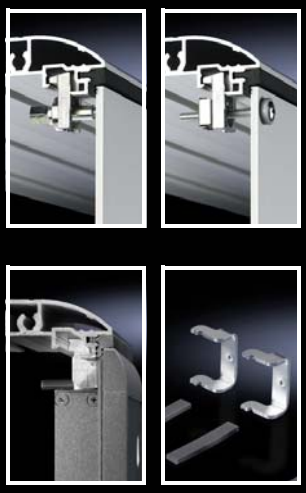
**Supply includes:**
– Seal and assembly parts

**Note:**
With
– Comfort Panel
– Optipanel
– Compact Panel
If there are already 2 support arm cut-outs provided, a cover plate is included with the supply of the enclosure

| Support arm connection | Surface finish | Model No. |
|---|---|---|
| ▭ 90 x 71 mm | Spray finished in RAL 7024 | **6505.200** |
| Ø 130 mm | Zinc-plated, passivated | **6505.500** |
| ▭ 120 x 65 mm | Zinc-plated, passivated | **6505.100** |







## Mounting kit

**for Optipanel**
For installation of
– Aluminium front panels
– Command panels
– Keyboards

**for drilled holes**

**Supply includes:**
– Packs of 30 retaining claws, cage nuts, screws and sealing washers

| For front panels | Thread | **Model No.** |
|---|---|---|
| Other | M4 | **6058.000** |
| Rittal and others | M5 | **6053.000** |

**for threaded bolts**

**Supply includes:**
– Packs of 10 retaining claws and cap screws

| For front panels | Thread | **Model No.** |
|---|---|---|
| Other | M4 | **6058.500** |
| Rittal and others | M5 | **6053.500**[1)] |

[1)] For the installation of TFT monitors 15", 17" and 19"

**for screw clamp**

**Supply includes:**
– Packs of 4 pressure plates, 4 attachment strips

**Note:**
– The command panels MP 377 12" Touch, MP 377 15" Touch are installed using an adaptor plate

| For direct installation of | **Model No.** |
|---|---|
| Siemens Sinumerik: OP 010, OP 010C, OP 012, OP 015, OP 019, MCP 483, PP 012, Qwerty 19˝, KB 483C, TP 015A | **6053.210** |
| Siemens Simatic: Panel PC 477C, 577C, 677C: 12.1"-Touch, 15.1˝-Touch, 12.1"-Key, 15.1"-Key, 19"-Touch[1)], 22"-Touch[1)], Flat Panel[1)] 12", 15", 19" | |
| Industrial Flat Panel: IFP 1200 Touch, IFP 1500 Touch, IFP 1200 Key, IFP 1500 Key, IFP 1900 Touch, IFP 2200 Touch | |
| Industrial Thin Client: ITC 1200, ITC 1500, ITC 1900, ITC 2200 | |

The mounting set can only be installed vertically
[1)] 2 packs are required

## Mounting kit

**for Comfort Panel**
For the installation of aluminium front panels, command panels and keyboards.

**Supply includes:**
– 6053.800:
20 each of retaining claws, cage nuts, screws, nuts and sealing washers
– 6053.300:
8 medium retaining claws, 8 short retaining claws, 4 long retaining claws.

**Note:**
– The command panels listed are merely a reduced selection of standard units from various manufacturers which support direct installation into the Comfort Panel.

1 6053.800
2 6053.300

**For drilled holes/bolts/front panel mounting from behind**

| Thread | **Model No.** |
|---|---|
| M5 | **6053.800** |

**For direct installation of e.g. operating fronts, monitors, panel PCs**

| For installation of | **Model No.** |
|---|---|
| Siemens Sinumerik: OP 010, OP 010 C, OP 012, OP 015, OP 015 A, OP 019, MCP 483 C, MCP 483, PP 012, PP 012 Erweiterung, MCP, KB 483 C, Qwerty 19" | **6053.300** |
| Siemens Simatic: TP 1500 Comfort, TP 1900 Comfort, TP 2200 Comfort, KP 900 Comfort, KP 1200 Comfort, KTP 1000 Basic, KTP 1500 Basic | |
| Panel PC 477C, 577C, 677C: 12.1" Key, 12.1" Touch, 15.1" Key, 15.1" Touch, 19" Touch, 22" Touch[1)] | |
| MP 377 12" Touch, MP 377 15" Touch, MP 377 19" Touch | |
| Industrial Flat Panel: IFP 1200 Touch, IFP 1500 Touch, IFP 1200 Key, IFP 1500 Key, IFP 1900 Touch, IFP 2200 Touch | |
| Industrial Thin Client: ITC 1200, ITC 1500, ITC 1900, ITC 2200 | |
| B & R: Automation Panel, Panel PC | |

[1)] 2 packs are required

## TFT monitor

Installation variant for surfaces and command panels.

**Benefits:**
- High-quality industrial design
- Reduced installation work thanks to integral front frame
- No additional ventilation required
- Very small installation depth (45 mm)

**Material:**
- Front frame: Aluminium

**Surface finish:**
- Powder-coated

**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 65 (at the front)

**Supply includes:**
- Seal, hex nuts (for installation in surfaces), VGA cables, threaded bolts M5 for rear mounting. Touch variants additionally with integral connection cable and driver CD-ROM.

| Size | Width mm | Height mm | Model No. | |
|---|---|---|---|---|
| | | | Touch | |
| | | | Without[1] | resistive, USB |
| 15" | 430 | 343 | **6450.010** | **6450.070** |
| 17" | 482.6 | 354.8 | **6450.020** | **–** |
| 19" | 482.6 | 399.3 | **6450.170** | **–** |

[1] With anti-reflection coated safety glass screen

**Note:**
- Other variants as resistive touchscreen with serial or USB interface are also possible

**Also required:**
- Mounting kit 6053.800 (when installing in Comfort Panel), see page 1108
- Mounting kit 6053.500 (when installing in Optipanel), see page 1108
- Power pack 6450.050, see page 1109 and
- Connection cable 6450.060, see page 1109

| Technical specifications | 15" | 17" | 19" |
|---|---|---|---|
| Resolution of display (max. pixels) | 1024 x 768 | 1280 x 1024 | 1280 x 1024 |
| Resolution of controller/million colours | VGA-XGA/16.7[1] | VGA-SXGA/16.7 | VGA-SXGA/16.7 |
| Brightness cd/m² | 400 | 350 | 350 |
| Contrast ratio | 700:1 | 1000:1 | 1000:1 |
| H-Sync. kHz/V-Sync. Hz | 31.4 – 80/60 – 75 | 31.4 – 80/60 – 75 | 31.5 – 80/60 – 75 |
| Reading angle horizontal (right/left) | 80°/80° | 85°/85° | 85°/85° |
| Reading angle vertical (top/bottom) | 70°/70° | 80°/80° | 85°/85° |
| Backlight/operating time h | LED/min. 50000 | | |
| On-screen display (OSD) | Operating buttons on the rear | | |
| VGA input/DVI-D | VGA (D-SUB HD 15-pole)/DVI-D jack | | |
| Rated voltage V (DC) | 12 | | |
| Power consumption (W) | 15 | 20 | 20 |
| Operating temperature/storage temperature | 0 °C…+50 °C/ -40 °C…+85 °C | 0 °C…+50 °C/ -30 °C…+85 °C | 0 °C…+50 °C/ -20 °C…+60 °C |
| Max. humidity during operation and storage, non-condensing | 90% relative humidity for 240 h | 80% rel. humidity for 300 h at 50 °C | 80 % relative humidity |

[1] For 6450.070: 16.2

## Power pack

**for TFT monitor**
- With IEC 60 320 connector C14 for C13 connection
- Integral cable (1.5 m) for connecting to the TFT monitor

Dimensions, W x H x D: 112 x 31 x 47 mm

**Technical specifications:**
- Input voltage: 100 – 240 V
- Output voltage: 12 V (DC)
- Operating temperature: +10 °C...+40 °C
- Storage temperature: -10 °C...+80 °C

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6450.050** |

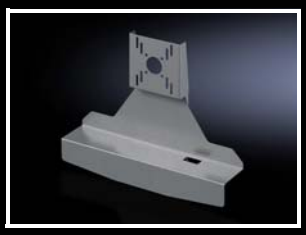
**Material:**
- Enclosure: Plastic

## Connection cable

**for power pack**
With IEC 320 socket C13 at one end for C14 connectors.

Length: 1.5 m

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6450.060** |



## TFT holder

Suitable for mounting TFTs with VESA 75/100 adaptation up to 21" on
- Attachment CP 40, 6501.070, see page 187
- Attachment CP 60 for support arm connection ▭ 120 x 65 mm, 6206.360, see page 195
- Vertical support arm via tilting adaptor +100°/-60°, 6206.460, see page 209

**Material:**
- Sheet steel

**Surface finish:**
- Spray-finished

**Colour:**
- RAL 7024

| Dimensions mm | Packs of | **Model No.** |
|---|---|---|
| 477 x 372 x 110.5 | 1 pc(s). | **2383.030** |

## Keyboard, pull-out

**with integral trackball**

Super-slimline keyboard with cursor keys and trackball. The handle also serves as a hand rest. The 10° angled pullout ensures ergonomic working.

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- Front panels
- Directly in a suitably sized Comfort Panel and Optipanel, selectable via configurators at www.rittal.com/configurators

**Technical specifications:**
Keyboard:
- 84 short-stroke keys, IBM-AT compatible (MF2), incl. cursor keys
- With integral trackball
- Interface: 2 x USB
- Operating temperature: +5 °C...+50 °C
- Storage temperature: -10 °C...+60 °C
- Humidity: max. 95 % (non-condensing)

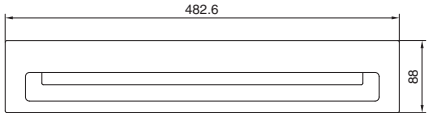
| Keyboard layout | Packs of | **Model No.** |
|---|---|---|
| German | 1 pc(s). | **6002.130** |

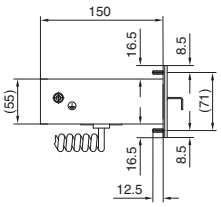
**Material:**
- Sheet steel

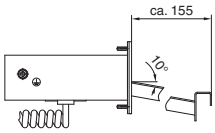
**Surface finish:**
- Front panel: Powder-coated

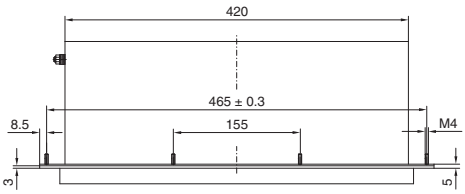
**Colour:**
- RAL 7035

**Protection category IP to IEC 60 529:**
- IP 65 (at the front, sealed)

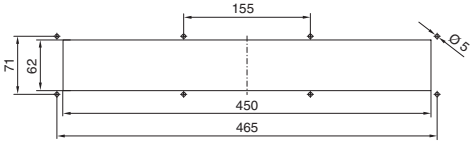



Mounting cut-out



## Built-in keyboard 482.6 mm (19")/4 U

**with integral touchpad**

The integral touchpad eliminates the need to install an additional, correct protection category mouse, which in turn reduces cabling. The short stroke keys are easily identified by edge embossing, less force is required to operate them, and they have a good tactile action

**Benefits:**
- The separate number pad enables the parameters to be entered quickly
- Sealed, wipeable surface finish
- High level of mechanical and chemical resistance as per DIN 42 115.

**Technical specifications:**
- Number of keys: 105
- Front panel dimensions: 482.6 x 177.0 mm (19" x 4 U)
- Keyboard depth: 30 mm
- Installation depth: 27 mm
- 12 M5 x 20 threaded bolts at the rear
- Actuation travel/force: 0.3 mm/2.6 N
- Service life: 3 million switching cycles
- Operating temperature: -40 °C...+90 °C
- Touchpad resolution, capacitive: 40 pixels/mm
- Interface: USB

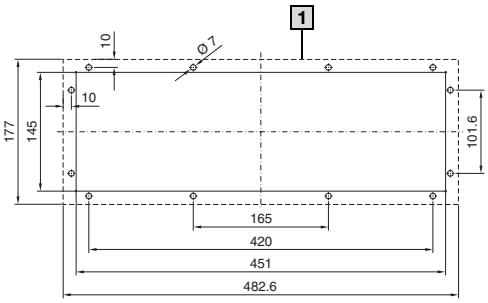
**Material:**
- Front panel: Aluminium

**Protection category IP to IEC 60 529:**
- IP 65 (at the front)

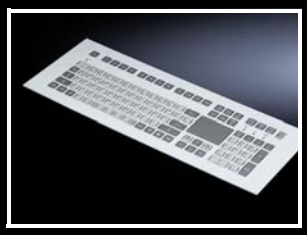
**Supply includes:**
- USB connection cable, length 1.8 m
- Seal
- Drilling template
- Assembly parts for surfaces

| Keyboard layout | Packs of | **Model No.** |
|---|---|---|
| German | 1 pc(s). | **6446.030** |

**Also required:**
- Mounting kit 6053.800 (when installing in Comfort Panel), see page 1108
- Mounting kit 6053.500 (when installing in Optipanel), see page 1108




1 Support surface



## Fold-out tray

**for keyboard and mouse**

For installation in
- 600 and 800 mm wide doors
- 482.6 mm (19") swing frames and enclosures

Standard double-bit lock insert may be exchanged for 41 mm lock inserts, type C, see page 941

**Material:**
- Flap: Sheet steel
- Side parts: Cast aluminium
- Tray: Extruded aluminium section
- Double-bit lock insert: Stainless steel

**Surface finish:**
- Flap, side parts: Textured paint
- Tray: Natural anodised

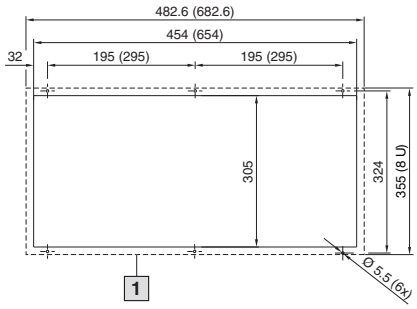
**Colour:**
- Flap, side parts: RAL 7035

**Protection category IP to IEC 60 529:**
- IP 55

**Protection category NEMA:**
- NEMA 12

**Accessories:**
- Mousepad support, pull-out, see page 1112

Mounting cut-out




1 Support surface

| For door width mm | External dimensions W x H x D mm | Installation depth mm | Max. keyboard dimensions W x H x D mm | **Model No.** |
|---|---|---|---|---|
| 600 | 482.6 (19") x 355 (8 U) x 126 | 93 | 405 x 45 x 245<br>405 x 45 x 190[1)] | **2379.600** |
| 800 | 682.6 x 355 (8 U) x 126 | 93 | 605 x 45 x 245<br>605 x 45 x 190[1)]<br>475[1)] x 45 x 245 | **2379.800** |

[1)] Maximum keyboard size with holder for mouse

## Support for mousepad, pull-out

**with mouse holder**
For screw-fastening into the fold-out tray 2379.600/ 2379.800, see page 1111. To fit all standard mousepads up to 250 x 205 mm.

**Colour:**
– RAL 7035

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2379.900** |

## Utility bar, vertically hinged

To support standard keyboards during programming and servicing work. Mounting distance of utility bars for problem-free insertion: at least 300 mm. Depth adequate for keyboards up to max. 210 mm.

For mounting beneath
– Comfort Panel[1)]
– Optipanel[2)]
– Any sufficiently large surface, such as:
  – Worktops IW
  – Command panel AX with handle strips

on
– Vertical surfaces (doors/side panels)

Min. front panel width
[1)] 385 mm
[2)] 405 mm

After use, the utility bars fit securely and neatly under the mounting surface, thus giving the operator more space to move around.

| Packs of | Model No. |
|---|---|
| 2 pc(s). | **6514.200** |

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

## Drawer 482.6 mm (19")/2 U

**for keyboard and mouse**

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- 482.6 mm (19") system punchings
- Front panels
- Directly in a suitably sized Comfort Panel and Optipanel, selectable via configurators at www.rittal.com/configurators

Suitable for
- Accommodation of keyboards up to max. 390 x 32 x 139 mm
- Support of standard commercially-available mouse or trackball

**Version:**
- Drawer: With stay
- Front panel: With security lock (lock no. 12321) and handle strip

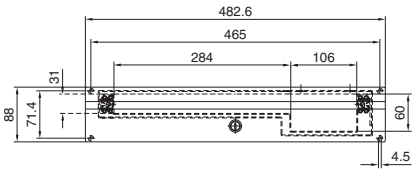
| Width mm | U | Depth mm | **Model No.** |
|---|---|---|---|
| 482.6 (19") | 2 | 150 | **6002.000** |

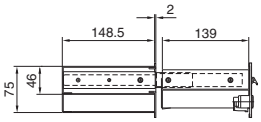
**Material:**
- Drawer housing: Sheet steel
- Drawer and front panel: Aluminium

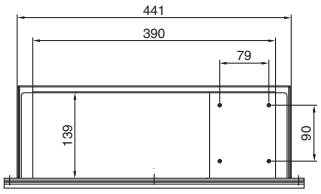
**Surface finish:**
- Drawer housing: Zinc-plated
- Drawer and front panel: Natural anodised

**Protection category IP to IEC 60 529:**
- IP 54

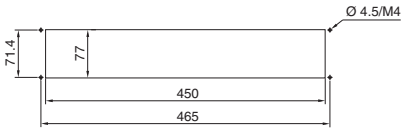
**Supply includes:**
- Assembly parts for installation in Comfort Panel/ Optipanel command panels




Mounting cut-out
(for installation in surfaces)



## Drawer for keyboard and mouse

**with mousepad support**

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- Front panels

Suitable for accommodating
- Keyboards up to a maximum of 460 x 42 x 170 mm
- Standard mouse and mousepad

**Version:**
- Drawer and housing: With side pull-out mousepad support and tray
- Front panel: With 3 mm double-bit lock insert, folds out as handrest

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **6003.000** |

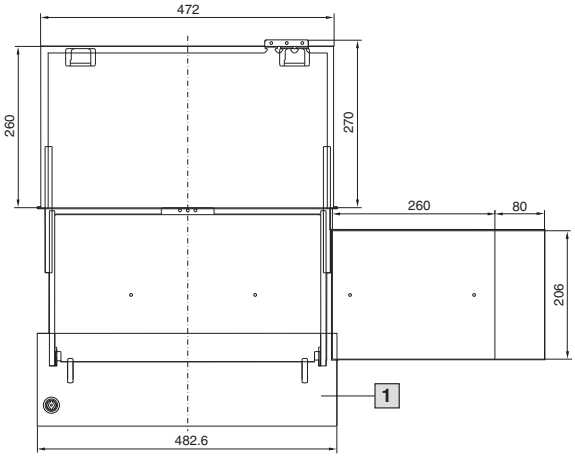
**Material:**
- Drawer and housing: Sheet steel
- Front panel: Aluminium

**Surface finish:**
- Drawer and housing: Spray-finished
- Front panel: Natural anodised

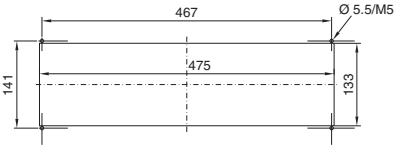
**Protection category IP to IEC 60 529:**
- IP 54

**Supply includes:**
- Assembly parts

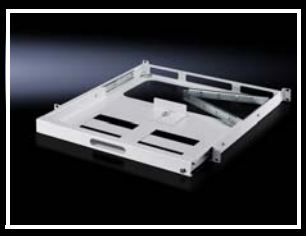
**Accessories:**
- Standard double-bit lock insert may be exchanged for 27 mm lock inserts, type A, see page 941




Mounting cut-out
for installation in surfaces




1 Front trim panel



## Keyboard drawer 1 U

**for two 482.6 mm (19") mounting levels**

This space-saving keyboard drawer is screw-fastened to the front and rear 482.6 mm (19") mounting angles. The installation spacing is infinitely adjustable from 460 – 750 mm. It is fully extendible, lockable, with strain relief and hinged cable support. The drawer is suitable for accommodating 482.6 mm (19") keyboards.

**Interior dimensions:**
- W x H x D: approx. 420 x 40 x 220 mm

**Material:**
- Sheet steel

**Colour:**
- RAL 7035

**Supply includes:**
- Assembly parts, excluding keyboard

**Note:**
- Monitor/keyboard unit, 1 U, see page 822

| Distance between levels mm | Model No. |
|---|---|
| 460 – 750 | **7281.200** |

## Keyboard drawer 2 U

**for one 482.6 mm (19") mounting level**

For keyboards up to 430 mm wide and 250 mm deep with the front panel folded over.

Height: 2 U

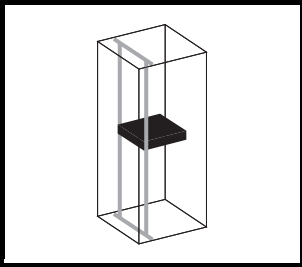
**Material:**
– Sheet steel with aluminium front

**Surface finish:**
– Spray-finished

**Supply includes:**
– Lockable drawer with handles
– Folding front
– Pull-out mousepad
– Mouse support
– Practical cable entry and strain relief

| Colour | Packs of | **Model No.** |
|---|---|---|
| RAL 7035 | 1 pc(s). | **7281.035** |
| RAL 9005 | 1 pc(s). | **5302.205** |

Installation depth: 390 mm



## Support for mousepad

**for command panels and surfaces**

The angle of the mousepad support is individually adjustable. Two holes are needed on the enclosure for attachment purposes.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Weight kg | Packs of | **Model No.** |
|---|---|---|
| 1.0 | 1 pc(s). | **2381.000** |

**Accessories:**

– Holder for mouse, see page 1116

## Keyboard support

**for command panels or surfaces**

**Benefits:**
– Adjustable to different keyboard depths via a simple slide function
– Connection to command panels with support arm connection at the top or bottom
– Easily adjustable tilt angle
– Open support at the side prevents dirt from being deposited

**Installation options:**
– Operating housing AX with handle strips
– Operating housing AX for desktop TFT up to 24"
– External mounting on vertical surfaces and beneath horizontal surfaces

**Technical specifications:**
– Support surface fully depth adjustable from 128 – 228 mm

**Material:**
– Sheet steel
– Hand rest: Extruded aluminium section

**Surface finish:**
– Textured paint
– Handrest: Natural anodised

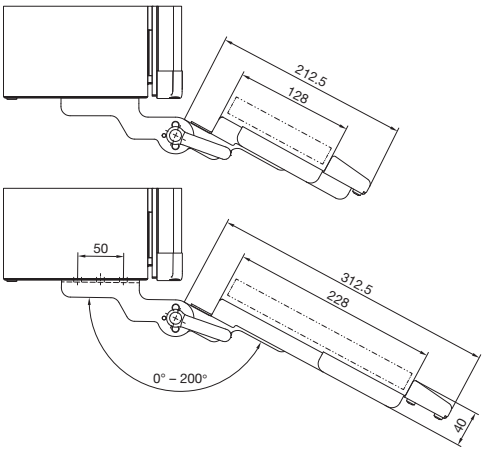
**Colour:**
– RAL 7035

| Width mm | Weight kg | Packs of | **Model No.** |
|---|---|---|---|
| 430 | 3.0 | 1 pc(s). | **6321.010** |

**Supply includes:**
– Support fully preassembled
– Nylon tape for attaching the keyboard
– Assembly parts

**Accessories:**

– Mousepad support, vertically hinged, see page 1116








Further technical information available on the Internet.

## Mousepad support, vertically hinged

For mounting on the left/right, beneath the keyboard support. Latches home automatically, both when retracted and extended. With mounting holes for holder for mouse 2382.000.

**Material:**
– Sheet steel

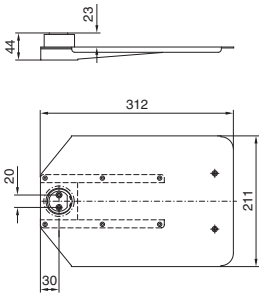
**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts and mousepad, stuck on with adhesive

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2383.020** |

**Accessories:**

– Holder for mouse, see page 1116



## Holder for mouse

To fit mousepad support and for secure accommodation of a standard mouse.

**Material:**
– Sheet steel

**Surface finish:**
– Zinc-plated

**Supply includes:**
– Assembly parts

| Packs of | Model No. |
|---|---|
| 1 pc(s). | **2382.000** |

## Paper removal flap

**For installation in surfaces**
Facilitates easy removal of pages from the printer without opening the enclosure door. Acrylic glazed flap with magnetic lock.

| Paper removal flap | Colour | Packs of | Model No. |
|---|---|---|---|
| A4 | RAL 7015 | 1 pc(s). | **6903.200** |

## Base

**for tubular door frame**
The space-saving alternative to component shelves for accommodating tower PCs (maximum 20 kg). For screw-fastening to the tubular door frame of 600 mm wide enclosures.

**Load capacity:**
– 20 kg

**Material:**
– Sheet steel

**Surface finish:**
– Spray-finished

**Colour:**
– RAL 7015

**Supply includes:**
– Retaining strap and assembly parts

| Width x height x depth mm | Packs of | Model No. |
|---|---|---|
| 445 x 159 x 230 | 1 pc(s). | **6902.950** |

**Also required:**

– Support strip for direct screw-fastening to the tubular door frame, see page 952

## Interface extension with wall connection and built-in RJ45 module

For extending the internal enclosure interfaces – e.g. of industrial PCs and switches – up to the outside of the enclosure. The wall connection only needs the same space as a switch.

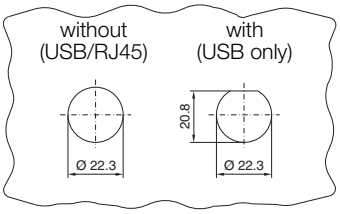
**Benefits:**
- Rapid access for maintenance work
- The protection category of the enclosure is preserved
- The lock nut cuts automatically into the spray-finish or eloxal layer, thereby creating a conductive connection
- Captive protective cap

**Material:**
- Housing: Brass
- Cover: Aluminium
- Seal: Polyamide

**Surface finish:**
- Housing: Nickel-plated
- Cover: Natural anodised

**Protection category IP to IEC 60 529:**
- IP 66/67 (with protective cap closed)

Anti-twist guard




Material thickness: 1 – 6 mm

| Version | Wall connection | Inside | Length m | Packs of | **Model No.** |
|---|---|---|---|---|---|
| USB 2.0 | Type A jack | Type A connector | 0.5 | 1 pc(s). | **2482.210** |
| | | | 1.0 | 1 pc(s). | **2482.220** |
| | | | 2.0 | 1 pc(s). | **2482.230** |
| RJ45 | Jack | Connector | 0.5 | 1 pc(s). | **2482.700** |
| | | | 1.0 | 1 pc(s). | **2482.710** |
| | | | 2.0 | 1 pc(s). | **2482.720** |
| RJ45 | Jack | Jack | – | 1 pc(s). | **2482.730** |

## Interface flap

**for RC circuit-breakers**

According to standard EN 60 204-1, all circuits with a rated current of ≤ 20 A that supply sockets in or on machine enclosures must be fused with a residual-current circuit-breaker with a rated differential current of ≤ 30 mA. Prepared for the installation of standard, 2-pole RCBO circuit-breakers.

**Applications:**
- As programming interface for controllers
- As maintenance access for networks
- For temporary connection of additional equipment
- For quick connection to existing network structures
- For programming and maintenance of integral components

**Version:**
- Spring-action terminals max. 2 x 2.5 mm, connection at rear

**Benefits:**
- Protection against fault currents and overload
- Standard-compliant fuse to EN 60 204
- The RC switch may be reset without opening the enclosure
- Spring mechanism raises the unlocked cover by 30°, ensuring that you do not forget to close the cover

**Functions:**
- A snap fastener ensures reliable sealing. This may be locked if required.

**Material:**
- Mounting frame: Plastic PBT (black)
- Plastic flap: Polycarbonate (semi-transparent)

**Protection category IP to IEC 60 529:**
- IP 65

**Supply includes:**
- Interface flap, complete, consisting of plastic frame, socket (VDE), RJ45 (jack/jack, Cat 5e) and cut-out for RC circuit-breaker
- Knockout provided for USB A (jack/jack)
- 3 mm double-bit with slot-in rotary knob

**Note:**
- Interface flap may only be used with fitted RC circuit-breaker

| Width mm | Height mm | Required mounting cut-out mm | Installation depth mm | Rated operating voltage V, ~, Hz | Rated current A | Packs of | **Model No.** |
|---|---|---|---|---|---|---|---|
| 131 | 127 | 117 x 91 | 70 | 250, 1~, 50/60 | 10 - 16 | 1 pc(s). | **2482.600** |

## Interface flap, modular

For universal use in all situations where rapid access to interfaces and sockets is needed. The affected enclosure remains closed and is therefore protected from ambient influences and unauthorised access.
Space-saving installation e.g.
- in **small enclosures and compact enclosures** as a programming interface for controllers
- in **IT and industrial distributors** as maintenance access for networks
- in **PC enclosures and console systems** for the temporary connection of additional equipment
- in mobile **industrial workstations** for rapid connection to existing network structures
- in **command panel systems** for programming and maintenance of integral components.

The mounting frame has a flap which snaps into position at various opening angles from 90 to 180°. A snap fastener ensures reliable sealing. This may be locked if required.

**Material:**
- Mounting frame and metal flap: Die-cast zinc
- Plastic flap: Polycarbonate (semi-transparent)
- Lock: Polycarbonate, RAL 7024

**Surface finish:**
- Mounting frame and metal flap: Matt nickel-plated

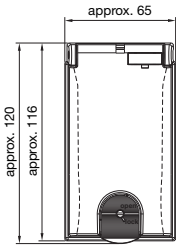
**Colour:**
- Lock: RAL 7024

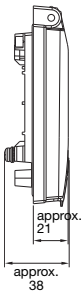
**Protection category IP to IEC 60 529:**
- IP 65 (with sealed flap and proper assembly)

| Description | cUR | UR | Packs of | Model No. |
|---|---|---|---|---|
| **Mounting frame[1)]** | | | | |
| 1 Single, with plastic flap (semi-transparent) | – | – | 1 pc(s). | **2482.300** |
| Double, with plastic flap (semi-transparent) | – | – | 1 pc(s). | **2482.310** |
| 2 Single, with metal flap | ■ | ■ | 1 pc(s). | **2482.320** |
| 3 Double, with metal flap | ■ | ■ | 1 pc(s). | **2482.330** |
| **Socket modules** | | | | |
| 4 Germany (VDE), spring-action terminals max. 2 x 2.5 mm², connection at rear | – | – | 1 pc(s). | **2482.400[3)]** |
| 5 Germany (VDE), screw terminals max. 6 mm², connection at rear, colour: yellow (RAL 1016), for installation in front of master switch | – | – | 1 pc(s). | **2482.410[3)]** |
| **Interface inserts** | | | | |
| 6 2 x SUB-D9 (jack/pin) | ■ | ■ | 1 pc(s). | **2482.500** |
| 7 SUB-D9 (jack/jack) | ■ | ■ | 1 pc(s). | **2482.510** |
| 8 2 x USB A (jack/jack) | ■ | ■ | 1 pc(s). | **2482.540[2)]** |
| 9 RJ45 (jack/jack, Cat. 5e), SUB-D9 (jack/jack), SUB-D9 (pin/pin) | ■ | ■ | 1 pc(s). | **2482.550** |
| 10 2 x RJ45 (jack/jack, Cat. 5e) | ■ | ■ | 1 pc(s). | **2482.560[2)]** |
| 11 USB A (jack/jack), RJ45 (jack/jack, Cat. 5e), SUB-D9 (jack/pin) | ■ | ■ | 1 pc(s). | **2482.570[2)]** |
| 12 Blanking plate (slimline), for individual population, usable area: 45 x 75 mm | ■ | ■ | 1 pc(s). | **2482.590** |

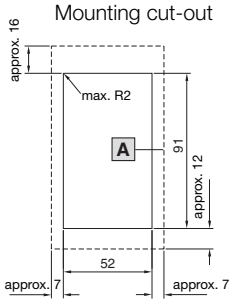
1) Electrically conductive
2) Conductively linked to mounting frame
3) Rated voltage: 250 V, Rated current: 10 – 16 A
All SUB-D interfaces may be rotated while in use

Interface flap, single



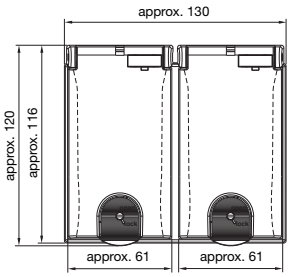

Mounting cut-out

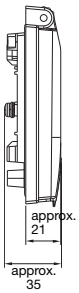



Permissible material thickness: 1 – 5 mm

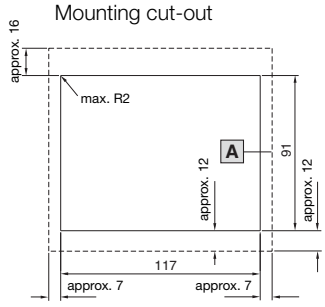
A Contact surface

Interface flap, double




Mounting cut-out



# Signal pillars

For real-time display of operating statuses

# Signal pillars at a glance

## Plug-and-play system

### Signal pillar, 3-way LED

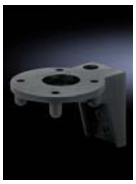
| For wall/base mounting | For conduit mounting |
|---|---|
| **Model No.** | |
| **2372.102** | **2372.101** |

1 LED steady light component 24 V AC/DC, < 35 mA
2 LED steady light component 230 V, < 35 mA
3 LED flashing light component 24 V AC/DC
4 LED flashing light component 230 V
5 Stroboscopic light component 24 V (DC), < 35 mA
6 Acoustic component 24 V AC/DC, 95 – 105 dB (continuous tone or pulsating)
7 Acoustic component 24 V AC/DC, 102 dB (adjustable volume and choice of 8 sounds)
8 Acoustic component 230 V, 95 – 105 dB (continuous tone or pulsating)
9 Acoustic component 230 V, 102 dB (adjustable volume and choice of 8 sounds)
10 Mounting component for support arm system CP 40, steel
– angle piece 90° 6501.140
11 Mounting component for support arm system CP 60
– Angle adaptor 90° for support arm combination CP 60 to CP 40 6206.640
– Angle coupling 90° 6206.380
– Angle piece 90° 6206.600
– Intermediate hinge 6206.620
– Wall-mounted hinge 6206.740
– Top-mounted joint 6206.700
12 Mounting component for support arm system CP 120
– Angle coupling 90° 6212.380
– Angle piece 90° 6212.600
– Intermediate hinge 6212.620
– Wall-mounted hinge 6212.740
– Top-mounted joint 6212.700
12 Mounting component for support arm system CP 180
– Angle piece 90° 6218.600
– Top-mounted joint 6218.700

### Label panel

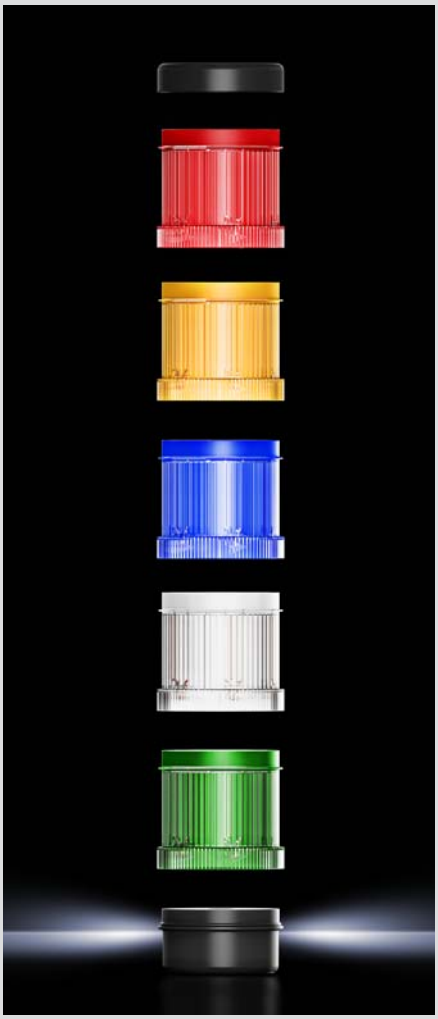
| Model No. |
|---|
| **2374.150** |

### Mounting component for conduit mounting

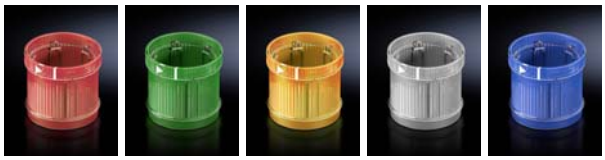


| Base with integral conduit, Ø 25 mm, 110 mm long | Individual base | Individual conduit, 250 mm long | Individual conduit, 400 mm long | Angle bracket for conduit mounting |
|---|---|---|---|---|
| **Model No.** | | | | |
| **2374.000** | **2374.010** | **2374.020** | **2374.030** | **2374.050** |

## Modular system



### Optical component for signal pillar, modular



| | Red | Green | Yellow | Clear | Blue |
|---|---|---|---|---|---|
| | Model No. | | | | |
| 1 | 2372.001 | 2372.011 | 2372.021 | 2372.031 | 2372.041 |
| 2 | 2370.151 | 2370.161 | 2370.171 | – | – |
| 3 | 2370.501 | 2370.511 | 2370.521 | 2370.531 | 2370.541 |
| 4 | 2370.551 | – | 2370.571 | – | – |
| 5 | 2371.001 | – | 2371.021 | – | – |

### Acoustic component

| | Model No. |
|---|---|
| 6 | 2376.001 |
| 7 | 2376.011 |
| 8 | 2376.021 |
| 9 | 2376.031 |

### Connection component for signal pillar, modular

| For conduit mounting | For wall/base mounting |
|---|---|
| Model No. | |
| 2368.001 | 2368.002 |

### Mounting component for support arm systems

| 10 | 11 | 12 |
|---|---|---|
| Model No. | | |
| 2375.030 | 6206.900 | 6212.900 |

### Mounting component for wall/base mounting

| Bracket for connection component | For side cable outlet |
|---|---|
| Model No. | |
| 2374.040 | 2374.080 |

System accessories

## Signal pillar, 3-way LED

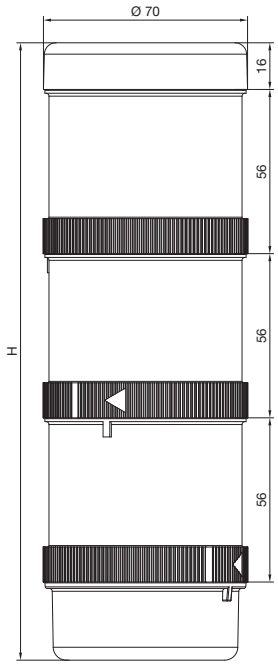
**Benefits:**
- Complete plug-and-pay solution
- Extremely long service life of the LEDs (max. 100,000 hours, therefore maintenance-free)
- Minimal assembly work and warehousing costs

**Technical specifications:**
- 3-stage: red, yellow and green
- Operating voltage: 24 V AC/DC
- Electrical connection: Screwless spring terminals
- Lamp: LED
- Transmission angle: 3 x 120°
- Operating temperature: -20 °C...+50 °C
- Flashing function: Controllable via PLC
- Cable entry: Metric screwed cable gland M12 x 1.5 for cable diameter 3.0 – 6.5 mm

**Protection category IP to IEC 60 529:**
- IP 65

| Design | Packs of | H mm | **Model No.** |
|---|---|---|---|
| for conduit mounting | 1 pc(s). | 210.5 | **2372.101** |
| for base mounting | 1 pc(s). | 212.0 | **2372.102** |

**Accessories:**
- Mounting component, see page 1125/1126
- Label panel, see page 1127



## Signal pillar, modular

**Benefits:**
- Simple assembly and contact using bayonet fastener
- Configuration of up to five components with the same voltage
- Flashing and stroboscopic light component including lamp, for direct use
- Components available in a range of colours and voltages

For modular configuration of
- Connection components
- Optical components
- Acoustic components
- Label panel

## Connection component

**for signal pillar, modular**
- Optionally for conduit or wall/base mounting
- Screwless spring terminals in the connection component
- With cover for optical components
- Contact hazard protection to VDE
- 12 – 230 V AC/DC

**Material:**
- Polyamide enclosure

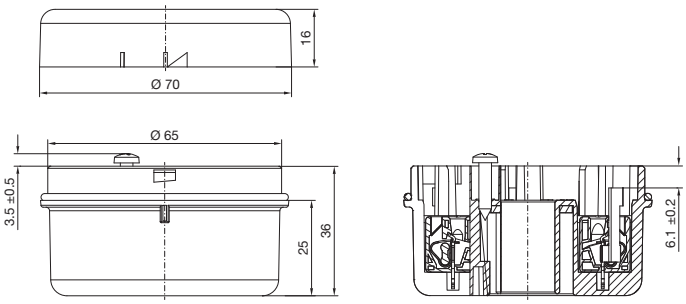
**Colour:**
- Black

**Protection category IP to IEC 60 529:**
- IP 65

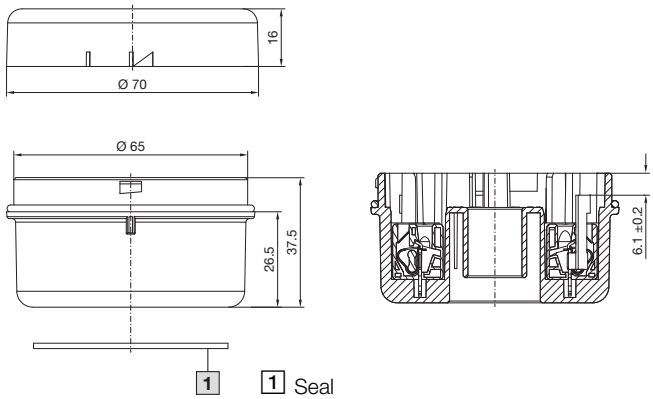
| Connection component | Model No. |
|---|---|
| for conduit mounting | **2368.001** |
| for wall/base mounting | **2368.002** |

**Accessories:**
- Mounting component, see page 1125/1126

Connection component for conduit mounting 2368.001




Connection component for wall/base mounting



## Optical component

**for signal pillar, modular**

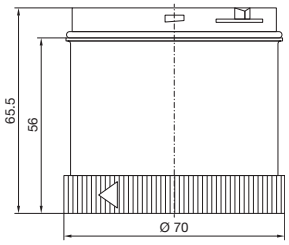
- With 360° signal transmission thanks to optimised prism system
- No. of potential stages = 5 components, with identical voltage

**Material:**

- Enclosure: Polyamide
- Spherical cap: Transparent polycarbonate

**Protection category IP to IEC 60 529:**

- IP 65, provided a cover or acoustic component is fitted at the top




**LED steady light component 24 V AC/DC, < 35 mA**

| Model No. | | | | |
|---|---|---|---|---|
| Red | Green | Yellow | Clear | Blue |
| **2372.001** | **2372.011** | **2372.021** | **2372.031** | **2372.041** |

**LED steady light component 230 V, < 35 mA**

| Model No. | | | | |
|---|---|---|---|---|
| Red | Green | Yellow | Clear | Blue |
| **2370.151** | **2370.161** | **2370.171** | **–** | **–** |

**LED flashing light component 24 V AC/DC, < 30 mA**

| Model No. | | | | |
|---|---|---|---|---|
| Red | Green | Yellow | Clear | Blue |
| **2370.501** | **2370.511** | **2370.521** | **2370.531** | **2370.541** |

**LED flashing light component 230 V, < 35 mA**

| Model No. | | | | |
|---|---|---|---|---|
| Red | Green | Yellow | Clear | Blue |
| **2370.551** | **–** | **2370.571** | **–** | **–** |

**Stroboscopic light component 24 V (DC), < 35 mA**

| Model No. | | | | |
|---|---|---|---|---|
| Red | Green | Yellow | Clear | Blue |
| **2371.001** | **–** | **2371.021** | **–** | **–** |

## Mounting component

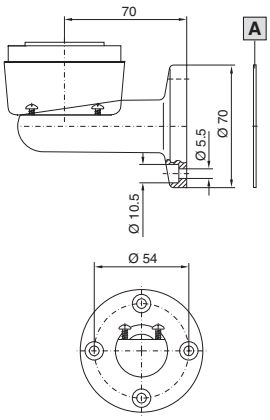
**for wall/base mounting**

| Fig. | Mounting component | Colour | **Model No.** |
|---|---|---|---|
| 1 | Bracket for connection component | Black | **2374.040** |
| 2 | For side cable outlet | Black | **2374.080** |

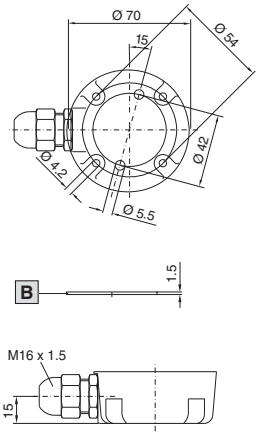
**Also required:**

– With the modular system for wall/base mounting:
Connection component 2368.002,
see page 1123

Bracket for connection component




For side cable outlet




A Seal
B Flat seal

## Mounting component

**for support arm systems**

For external mounting of a signal pillar on the plastic cover of support arm components.

| Fig. | Mounting component | Colour | **Model No.** |
|---|---|---|---|
| 3 | For support arm system CP 40, steel<br>– Angle piece 90° 6501.140 | RAL 7024<br>(graphite grey) | **2375.030** |
| 4 | For support arm system CP 60<br>– Angle adaptor 90° for support arm combination CP 60 to CP 40 6206.640<br>– Angle coupling 90° 6206.380<br>– Angle piece 90° 6206.600<br>– Intermediate hinge 6206.620<br>– Wall mounted hinge 6206.740<br>– Top mounted joint 6206.700 | RAL 7024<br>(graphite grey) | **6206.900** |
| 5 | For support arm system CP 120<br>– Angle coupling 90° 6212.380<br>– Angle piece 90° 6212.600<br>– Intermediate hinge 6212.620<br>– Wall-mounted hinge 6212.740<br>– Top-mounted joint 6212.700 | RAL 7024<br>(graphite grey) | **6212.900** |
| | For support arm system CP 180<br>– Angle piece 90° 6218.700,<br>– Top-mounted joint 6218.700 | RAL 7024<br>(graphite grey) | **6212.900** |

**Also required:**

– With the modular system for conduit mounting:
Connection component 2368.001,
see page 1123

## Mounting component

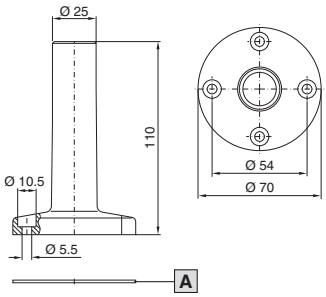
**for conduit mounting**

| Fig. | Mounting component | Colour | **Model No.** |
|---|---|---|---|
| 6 | Base with integral conduit, Ø 25 mm, 110 mm long | Black | **2374.000** |
| 7 | Individual base | Black | **2374.010** |
| 8 | Individual conduit, 250 mm long | Aluminium | **2374.020** |
| | Individual conduit, 400 mm long | Aluminium | **2374.030** |
| 9 | Angle bracket for conduit mounting | Black | **2374.050** |

**! Also required:**

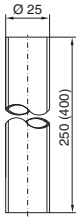
– With the modular system for conduit mounting:
Connection component 2368.001,
see page 1123

Base with integral conduit

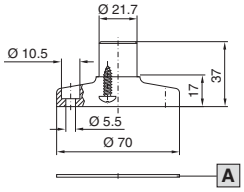



A Seal

Individual conduit

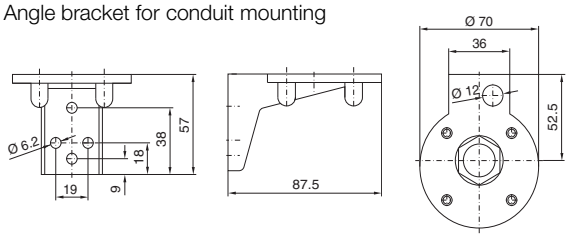



Individual base, plastic




A Seal

Angle bracket for conduit mounting



## Acoustic component

**for signal pillar, modular**
To indicate warnings or malfunctions.

**Material:**
– Enclosure: Polyamide

**Colour:**
– Black

**Protection category IP to IEC 60 529:**
– IP 65

**Note:**
– For mounting only on the upper end of the optical components or directly onto the connection component

**24 V AC/DC**

| Acoustic components | Packs of | Model No. |
|---|---|---|
| 105 dB[1)] | 1 pc(s). | **2376.001** |
| 102 dB[2)] | 1 pc(s). | **2376.011** |

[1)] Continuous tone or pulsating
[2)] Adjustable volume and choice of 8 sounds

**230 V**

| Acoustic components | Packs of | Model No. |
|---|---|---|
| 105 dB[1)] | 1 pc(s). | **2376.021** |
| 102 dB[2)] | 1 pc(s). | **2376.031** |

[1)] Continuous tone or pulsating
[2)] Adjustable volume and choice of 8 sounds

## Label panel

**for signal pillar, 3-way LED and signal pillar, modular**
For adding texts on up to 5 optical components, with break point for any fields that are not required (50 x 150 mm), including clamping section for base / conduit with Ø 25 mm.

**Material:**
– Acrylic, transparent

| Label panel | Model No. |
|---|---|
| for 5 optical components | **2374.150** |

## The 3-phase coating procedure

| Coating procedure | Technical properties | Technical specifications | |
|---|---|---|---|
| Surface pretreatment | Used as corrosion protection and to improve paint adhesion. | Degreasing, nanoceramic conversion layer | |
| Anodic dipcoat priming | Even layer formation on all surfaces, edges and in cavities, which produces a high level of corrosion protection even at the assembly stage. | Erichsen cupping test to DIN EN ISO 1520 | ≥ 4 mm |
| | | Buchholz hardness to DIN EN ISO 2815 | ≥ 80 |
| | | Cross cutting to DIN EN ISO 2409 | Gt 0 |
| | The primer is readily overpainted and free from heavy metals, chromate and silicone. | | |
| Stove enamelling | | | |
| Textured powder coating | Powder-coating is distinguished by a high level of mechanical resistance, excellent corrosion protection, good resistance to chemicals and temperature, and its facility for decontamination. | Erichsen cupping test to DIN EN ISO 1520 | ≥ 3.5 mm |
| | | Buchholz hardness to DIN EN ISO 2815 | ≥ 85 |
| | | Cross cutting to DIN EN ISO 2409 | GT 0-1 |
| | | Salt spray test to DIN EN ISO 9227 NSS | Test period: 168 hrs |
| | | Condensate test to DIN EN ISO 6270-2 CH | Test period: 500 hrs |
| | | Condensate test to DIN EN ISO 6270-2 AHT | Test period: 20 cycles |
| | The powder coating is readily overpainted and is free from heavy metals, chromate, silicone and solvents. | | |
| Stove enamelling | | | |

The coating is resistant to:
- Mineral oils
- Lubricants
- Machine emulsions
- Alcohol-based solvents (briefly, e.g. during cleaning)
- Weak acids and alkalines

## Primer or powder coating suitable for overpainting

After careful cleaning of the surface, the standard coating may be overpainted with
- DD gloss paints
- Single and dual-component gloss paints
- Car repair paints
- Powder paints
- Water-based paints

If in doubt, perform a compatibility test. Always follow the paint manufacturer's instructions. When overpainting, take care not to exceed 180 °C and a baking time of 15 minutes.

## Outdoor use of enclosures

In order to guarantee satisfactory long-term function of enclosures in outdoor use, the relevant environmental factors must be taken into account.

These include:
- UV radiation, the corrosive action of air pollution, rain, icing, snow, wind or other factors in special climatic conditions.

**Condensation inside the enclosure**
Condensation must be prevented by means of appropriate measures, e.g. by venting or heating the enclosure.

**Protection category**
The enclosure may be exposed to extreme weather conditions during outdoor use.
Long periods of rain, snow, ice, high winds and temperature fluctuations place particularly high demands on the enclosure sealing. The protection category IP X3 as envisaged for external weather conditions in DIN VDE 0100, part 737, point 5.2 is often insufficient to provide permanent protection for electrical equipment.

## Protection categories to IEC 60 529 (EN 60 529)

| The IP protection category is characterised by 2 numerals. | |
|---|---|
| **Example of a protection category, e.g. IP 43:** | |
| Code letters<br>IP | |
| First numeral<br>4 | Second numeral<br>3 |

| Degrees of protection for protection against contact and foreign bodies: First numeral | | | Degrees of protection for protection against water: Second numeral | | |
|---|---|---|---|---|---|
| First numeral | Degree of protection | | Second numeral | Degree of protection | |
| | Description | Explanation | | Description | Explanation |
| 1 | Protected against solid foreign objects with a diameter of 50 mm and greater | The object probe, a sphere 50 mm in diameter, must not penetrate fully.[1] | 1 | Protected against vertically falling water drops | Vertically falling drops shall have no harmful effects. |
| 2 | Protected against solid foreign objects with a diameter of 12.5 mm and greater | The object probe, a sphere 12.5 mm in diameter, must not penetrate fully.[1] The articulated test finger may penetrate up to its length of 80 mm, but adequate distance from hazardous parts must be adhered to. | 2 | Protected against vertically falling water drops when the enclosure is tilted up to 15° | Vertically falling drops shall not have any harmful effects when the enclosure is tilted up to 15° on either side of the vertical. |
| 3 | Protected against solid foreign objects with a diameter of 2.5 mm and greater | The object probe, a sphere 2.5 mm in diameter, must not penetrate at all.[1] | 3 | Protected against sprayed water | Water sprayed at an angle of up to 60° on either side of the vertical shall have no harmful effects. |
| 4 | Protected against solid foreign objects with a diameter of 1.0 mm and greater | The object probe, a sphere of 1.0 mm in diameter, must not penetrate at all.[1] | 4 | Protected against splashed water | Water splashed on the enclosure from any direction shall have no harmful effects. |
| 5 | Dust-protected | The ingress of dust is not fully prevented, but dust shall not enter to such an extent as to impair satisfactory operation of the device or safety. | 5 | Protected against water jets | Water directed at the enclosure from any direction in a jet shall have no harmful effects. |
| 6 | Dust-tight | No ingress of dust at a partial vacuum of 20 mbar inside the enclosure. | 6 | Protected against powerful water jets | Water directed at the enclosure from any direction in a powerful jet shall have no harmful effects. |
| | | | 7 | Protected against temporary immersion in water | Water must not ingress to such an extent as to cause harmful effects when the enclosure is temporarily immersed in water under standardised pressure and time conditions. |
| | | | 8 | Protected against continuous immersion in water | Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed under conditions to be agreed between the manufacturer and the user. However, the conditions must be more difficult than for numeral 7. |
| | | | 9 | Protected against high-pressure and high-temperature water jets | Water projected at high pressure and high temperature against the enclosure from any direction shall not have harmful effects. |

[1] The full diameter of the object probe must not pass through an opening of the enclosure.

Automatic potential equalisation via the mounting components (while observing DIN EN 62 208)

## UL type rating

UL (Underwriters Laboratories) is an independent organisation based in Chicago which safety-tests products for the North American market. A key aspect for enclosures is the protection of individuals from unintentional contact with equipment and the protection of installed equipment from external factors. Protection categories are classified by UL type ratings.

Further information on protection categories may be found on the Internet at: **www.rittal.com**

| UL/NEMA Type | Intended use and description |
|---|---|
| 1 | Enclosures for use indoors<br>Protection against the penetration of foreign bodies |
| 3 | Enclosures for use indoors and outdoors<br>Protection from rain, hail, dust, icing and the damage caused by icing |
| 3R | Enclosures for use predominantly outdoors<br>Protection from rain, hail, icing and the damage caused by icing |
| 3S | Enclosures for use predominantly outdoors<br>Protection from rain, hail and dust<br>External mechanisms remain usable despite being coated in ice |
| 4 | Enclosures for indoor or outdoor use<br>Protection against rain, foreign bodies, splashed water and hosed water and against damage caused by icing on the exterior of the enclosure |
| 4X | Enclosures for indoor or outdoor use<br>Protection against rain, foreign bodies, splashed water and hosed water and against damage caused by icing on the exterior of the enclosure<br>Increased protection from corrosion |
| 12, 12K | Enclosures for use indoors<br>Protection against dust deposits, foreign bodies, oil and non-corrosive dripping refrigerants |
| 13 | Enclosures for use predominantly indoors<br>Protection against dust deposits, sprayed water, oil, and non-corrosive refrigerants |

The UL/NEMA classifications are not directly comparable with IP protection categories, since both the test conditions and the evaluation of the test results are different

## Approvals and permits

Product certifications and approvals are pivotal to the global acceptance of industrial products.
Rittal products meet the highest internationally recognised quality yardsticks. All components are subjected to the most stringent testing in accordance with international standards and regulations.
The consistently high product quality is ensured by a comprehensive quality management system. Regular production inspections by external test institutes also guarantee compliance with global standards

A precise allocation of products to marks of conformity can be found on our product and service pages on the Internet: **www.rittal.com**

## Earthing

The PE conductor connection must be designed by the manufacturer of switchgear in accordance with the relevant VDE and/or local regulations.
The enclosure packs generally contain earthing materials (screws, nuts, washers). The assembly instructions contain recommendations on installing a PE conductor.
The pre-assembled earth straps, available as accessories in various cross-sections and lengths, are intended to make assembly of a PE conductor easier.

## Stainless steel, rust-proof

Rust-proof stainless steel is a collective term for more than 120 different types of steel, all of which are alloyed with at least 10.5% chromium and are resistant to corrosion without any protective coating. They form an invisible passive layer under the influence of oxygen.

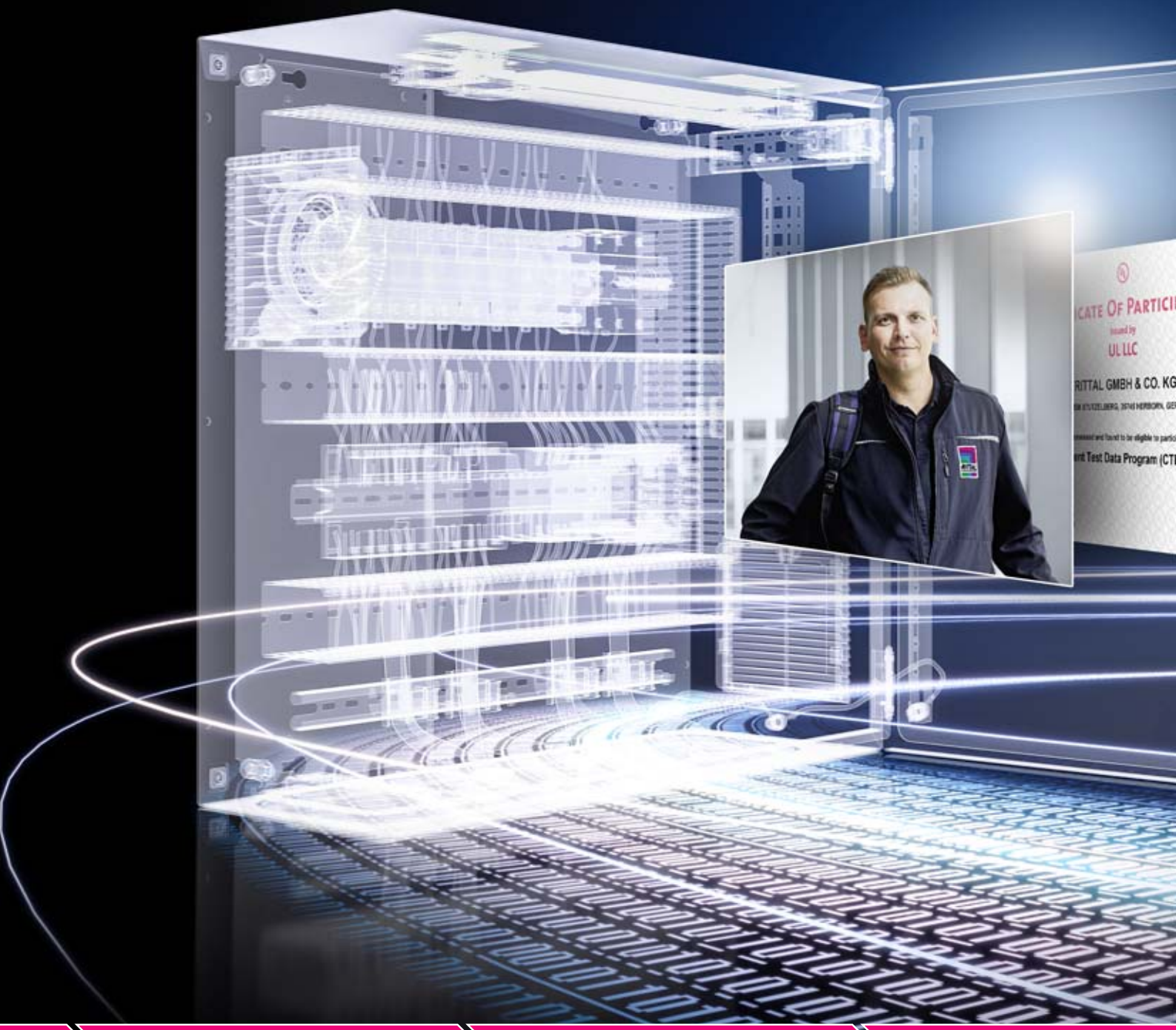
| **Short name** | x 5 CrNi 1810 | x 2 CrNiMo 17-12-2 |
|---|---|---|
| **Material number** | 1.4301 | 1.4404 |
| **Principal property** | easy to weld<br>corrosion-resistant<br>malleable | weldable<br>highly corrosion-resistant |
| **Typical uses** | Foodstuffs industry<br>Dairies | Chemical industry<br>Construction sector<br>Paper industry |
| **Chemical composition/mass content in %** | | |
| **Carbon** C | < 0.07 | < 0.07 |
| **Chromium** Cr | 17.5/19.5 | 16.5/18.5 |
| **Molybdenum** Mo | – | 2.0/2.5 |
| **Nickel** Ni | 8.0/10.5 | 10.0/13.0 |

**Benefits**

- Highly resistant to corrosion and chemical substances
- Outstanding hygiene properties and minimal cleaning effort, thanks to the smooth surface
- No need to treat the surface with enamel or paint
- Environmentally friendly, as 100% recyclable
- Good material properties (tensile strength, expansion, abrasion)

# Rittal – The System.

**Faster – better – everywhere.**




**ENCLOSURES** **POWER DISTRIBUTION** **CLIMATE CONTROL**

FRIEDHELM LOH GROUP

# SERVICE & QUALITY

## International service

Global availability ....1134
Our service portfolio....1136

## Rittal Manufacturer's Service

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## Smart Service

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## Software & services

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## Competent. Globally present. A one-stop service.

Use our service to minimise downtimes, boost efficiency and benefit from the following advantages:

- Around 1,000 service specialists worldwide
- Highly qualified service technicians and infrastructure specialists
- Solid expert knowledge with manufacturer expertise
- Ready availability of original spare parts
- Maximum system availability
- Short response times
- Professional lifecycle management
- 24-hour availability

Whenever, wherever and however you need us, we are always on hand to assist you!

## Rittal service addresses worldwide

**Headquarters/Europe**
Tel. +49 (0) 2772 505-1855
Email: service@rittal.de

**USA**
Tel.: +1 800-477-4000
Email: rittal@rittal.us

**Mexico**
Tel. +52 (55) 5559 5369
Email: servicemx@rittal.com.mx

**Chile**
Tel.: +56 (2) 2 94 77 400
Email: info@rittal.cl

**Middle East**
Tel.: +971 4 3416855
Email: service@rittal-middle-east.com

**Singapore**
Tel.: +65 6309 7315
Email: service@rittal.com.sg

**India**
Tel.: +91 (80) 33720783
Email: service@rittal-india.com

**China**
Tel. +86 800 820 0866
Email: service@rittal.cn

## Your requirements

Enhanced system availability

Cost and resource savings

## What we offer

- Assembly, installation, commissioning
- Fast trouble-shooting
- Inspection
- Professional maintenance

# International service – Global availability

Value retention and maintenance

Rapid access to spare parts

Modernisation

Original spare parts

Bespoke service agreements

Efficiency and system advice

Individual optimisation and sustainability

## Installation and commissioning

Correctly installed equipment is less susceptible to errors and operates more efficiently. You can be sure that the manufacturer's expertise is applied to the installation and commissioning of your Rittal components.

**The benefits for you:**

- Reliability from the outset
- Less susceptible to errors
- More efficient operation of your systems

## Maintenance and inspection

The remaining service life of the installed components can be significantly extended with professional maintenance by the Rittal service team. This ensures efficient operation and associated cost savings. The additional inspection and leak test by certified service engineers guarantees compliance with statutory regulations, such as the F-gas regulation (EU) No. 517/2014, which in turn ensures the efficient operation of your equipment.

- Visual inspection and assessment of the general condition of your equipment
- Measurement and documentation of system parameters
- Basic cleaning of the equipment
- Inspection of fans, air routing and system parameters

**The benefits for you:**

- Downtime is prevented, to minimise your risks
- Improved value retention for your systems
- The remaining service life of installed components is extended
- Efficiency is increased by up to 30%, with associated cost savings

# International service – What we offer

## Repairs and troubleshooting

Rittal service engineers are continuously trained to provide top-quality, on-site troubleshooting. The result? 90% of Rittal's service deployments are resolved with just one on-site visit and include a detailed service report with further recommendations. Alternatively, you may opt to send your equipment to our factory for repair.

**The benefits for you:**

- Fast, professional troubleshooting
- Minimised downtimes
- Reliable service performance

## Spare parts – any time, anywhere

**Global availability of individual parts adds value**

Professional spare parts management ensures maximum availability of spares, because optimum stocking ensures that repairs can be carried out without delay.

- Original spare parts
- Express shipment with 24h delivery promise (working days only)
- Customer-specific stocking of spare parts, either at Rittal or at your premises
- Our Global Distribution Centre has over 2,000 different standard spare parts in stock
- Local availability, with stocks held by Rittal subsidiaries worldwide
- Predictive replacement of worn parts thanks to professional life cycle management

## Life cycle management

Knowing the age and condition of installed equipment enables predictive replacement of worn parts. This reduces downtimes and also allows you to plan costs. Here, too, you can rely on the support of Rittal's after sales service team.

# International service – What we offer

# Efficiency and service check

**Regular checks of your Rittal components will ensure maximum performance of all cooling units while keeping consumption levels to a minimum.**

During the efficiency check, Rittal will analyse your installed equipment for current performance and energy costs. Based on the findings, Rittal will advise you on potential savings and efficiency enhancements and will calculate the amortisation periods of any investments that may be required. The service check is more comprehensive than the efficiency check and includes an analysis of the current status of your equipment, highlighting any maintenance requirements, and incorporating this into your investment calculation.

**The benefits for you:**

- Performance analysis of installed equipment
- Presentation of energy costs and potential savings
- Reduction of unscheduled production stoppages and associated costs
- Specific energy-saving approaches
- The value of your equipment is preserved

**Receipt of the equipment**
The current status is ascertained by the Rittal Service team

**Analysis**
- Potential energy savings
- $CO_2$ reductions
- Amortisation period of required investments (ROI)

**Presentation of the results and advice**

**Assistance**
with applying for government subsidies

**Dismantling, installation and commissioning of the products and solutions**
- Project coordination
- Logistics from a single source

**Regular maintenance**
for continued problem-free operation

**Note:**
**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

# Rittal Manufacturer's Service – Service for industrial applications

# Service agreements – Individual and combinable

Rittal service agreements allow you to tailor the scope of services to your specific requirements and combine various modules – with fixed, transparent terms and conditions.

**The benefits for you:**

- Maximum uptime
- Plannable costs
- Guaranteed response times
- Warranty extension
- Individual stocking of spares

| | Scope of services included in standard agreement | | Optional modules | |
|---|---|---|---|---|
| **Maintenance** | 1 x per year | | 2 x per year | |
| **Availability** | Working days (Mon – Fri) 7 am – 5 pm | Working days (Mon – Fri) 24 hours | Every day of the week (Mon – Sun) 24 hours | |
| **On-site service** | Next working day (Mon–Fri) 7 am–5 pm | Next week day (Mon – Sat) 7 am–5 pm | Within 8 hours | Within 4 hours |
| **Warranty extension** | No contract commitment, separate agreement | Contract extension +12/+24/+36 months | Preventive replacement of worn parts +12/+24/+36 months | |
| **Stocking of spare parts** | At Rittal | At Rittal and delivered within 24 hours | Individually agreed | |
| **Inspection** | 1 x per year | 4 x per year | 12 x per year | |

**Note:**

**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

# Rittal Manufacturer's Service – Service agreements for industrial applications

# Rittal Automation Systems – Professional service for your machines

No-one knows your machines better than the manufacturer.
Our Manufacturer's Service specialists safeguard the availability and performance of your machines. Regular maintenance of your machines ensures a long service life and a high degree of fail-safe operation.
With our service, you can benefit from consistently high quality and rely on your machines operating exactly as expected.

**Service agreements – Individual and combinable**

Rittal service agreements allow you to tailor the scope of services to your specific requirements and combine various modules – with fixed, transparent terms and conditions.

| | Scope of services included in standard agreement | Optional modules |
|---|---|---|
| **Maintenance** | 1 x per year | 2 x per year |
| **Availability** | Working days (Mon – Fri)<br>7 am – 5 pm | Every day of the week (Mon – Sun)<br>24 hours |
| **On-site service** | Within 72 hours,<br>incl. reduced hourly rate | Within 48 hours,<br>incl. reduced hourly rate |
| **Warranty of the machine** | No warranty extension | + 12 months |
| **Individual stocking of spares** | On request | |
| **DXF remote training** | One training session | |
| **Software update** | As necessary<br>(but excluding hardware/PC or operating system replacement) | |

**Note:**

**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

# Rittal Manufacturer’s Service – Service for machines

## Maintenance and troubleshooting

Modern IT systems are the lifeblood of many companies. As data volumes grow ever larger and more complex, today it is more important than ever before to rely on a functioning digital infrastructure which is always available. Detailed expert knowledge, short response times and exceptional support quality are basic requirements for every Rittal service. Put your trust in our proven abilities.

## IT Health Check

**Exceptional performance and early risk detection by servicing your IT infrastructure.**

The IT Health Check provides an insight into the maintenance status of your cooling systems and any leaks, as well as energy efficiency and sustainability, the capacity utilisation and scalability of your systems, any obsolescence risks, alarm chains, redundancy circuits, and compliance with statutory requirements, guidelines and standards.

As the outcome of the IT Health Check you will receive an assessment report containing individual optimisation and organisation options including identified cost drivers, potential savings and risk minimisation associated with the optional, predictive replacement of wearing parts.

**The benefits for you:**

- Individual optimisation and modernisation options
- A list of identified cost drivers and potential savings
- Risk management with predictive replacement of wearing parts

**Note:**

**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

# Rittal Manufacturer's Service – Service for IT infrastructure

# Service agreements – Individual and combinable

Rittal service agreements allow you to tailor the scope of services to your specific requirements and combine various modules – with fixed, transparent terms and conditions.

**The benefits for you:**

- Maximum uptime
- Plannable costs
- Guaranteed response times
- Individual stocking of spares
- Warranty extension

| | Scope of services included in standard agreement | | Optional modules | |
|---|---|---|---|---|
| **Maintenance** | 1 x per year | | 2 x per year | |
| **Availability** | Working days (Mon – Fri) 7 am – 5 pm | Working days (Mon – Fri) 24 hours | Every day of the week (Mon – Sun) 24 hours | |
| **On-site service** | Next working day (Mon–Fri) 7 am –5 pm | Next week day (Mon–Sat) 7 am–5 pm | Within 8 hours | Within 4 hours |
| **Warranty extension** | +12/+24/+36 months, includes defined spare parts and repairs | | +12/+24/+36 months, includes defined spare parts, repairs and predictive replacement of wearing parts | |
| **Stocking of spare parts** | At Rittal | At Rittal and delivered within 24 hours | Individually agreed | |
| **Inspection** | 1 x per year | 4 x per year | 12 x per year | |
| **Leakage test** | 1 × per year from 5 t $CO_2$ equivalent | 2 × per year from 50 t $CO_2$ equivalent | 4 × per year from 500 t $CO_2$ equivalent | |
| **Replacement of wearing parts** | By operating hours | | | |

**Note:**

**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

# Rittal Manufacturer's Service – Service agreements for IT infrastructure

# Smart Service

**Increased machine availability and optimised service processes for Rittal components in the Blue e+ generation.**

Rittal Smart Service visualises the operational performance of Blue e+ cooling units and transfers data in real time for prompt identification of maintenance requirements and critical errors. The automated processing of device data allows fast, efficient troubleshooting.

In the event of a malfunction, you receive situation-specific recommendations and can generate energy efficiency reports via the Rittal Smart Service portal.

Benefit from a combination of event-related recommendations and manufacturer expertise, remote diagnosis and advice from Rittal service experts as the basis for your predictive maintenance.

**The advantages to you:**

- Asset management and control of maintenance measures
- Visualisation of device data via Web portal including monitoring (condition monitoring)
- Access to operating and temperature characteristics
- Energy efficiency reports and efficiency analyses
- Situational recommendations based on manufacturer expertise

**How you benefit:**

- Enhanced machine availability
- Increased service efficiency and lower servicing costs, thanks to requirement-driven maintenance
- Fast problem analysis and troubleshooting with remote diagnosis

**Note:**

**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

**Blue e+ generation**

# Smart Service – Predictive and efficient

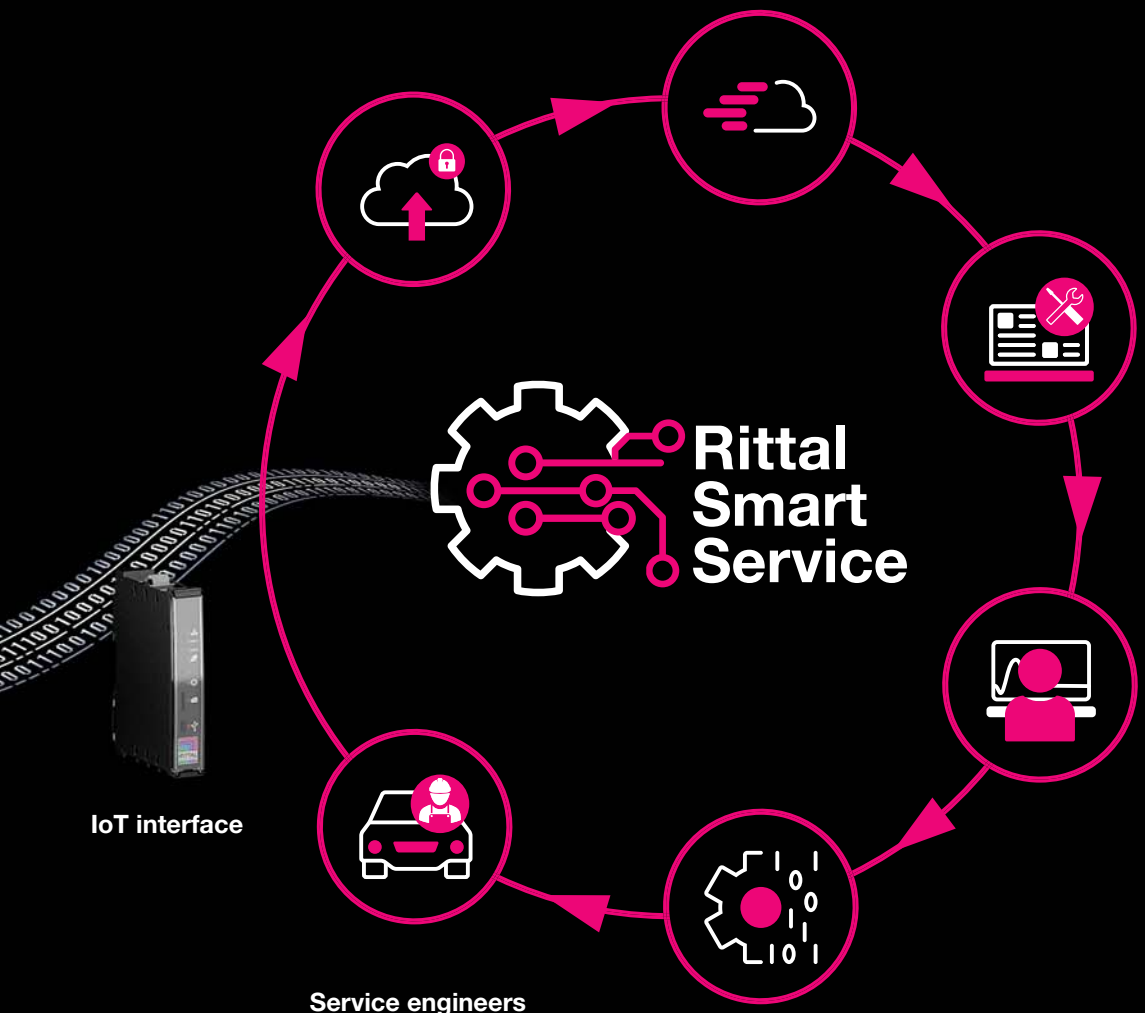
**Smart Service Cloud**

- Unidirectional, encrypted data transmission
- Certified Cloud in Germany

**Data analyses**

Based on manufacturer expertise

- Development of intelligent algorithms
- The basis for preventive maintenance




**Smart Service Portal**

- Overview of networked devices (asset management)
- Access to operating data
- The latest messages and recommended actions
- Energy consumption

**Monitoring by Rittal service experts**

- Continuous monitoring of device statuses in real time
- Remote diagnosis with manufacturer know-how
- Situational advice on optimum measures

**Automated handling**

- Identification of the correct spare part
- Initiation of service measures

**Service engineers**

- Respond on demand
- Ensure fast, efficient on-site troubleshooting

**IoT interface**

# Smart Service – Bespoke and demand-driven

You can opt into our Smart Service at any time and flexibly adapt it to suit your requirements. In this way, we tailor the appropriate service level and range of services to each individual customer.
Rittal Smart Service offers various different service levels, which build on one another to become ever more comprehensive.

**Level 3**

**Smart Maintenance Agreement**

| Smart Monitoring | Modular service agreement | Automated service handling |
|---|---|---|

This level combines the advantages of our Remote Diagnostic Service and Smart Monitoring with a conventional service agreement. Individual maintenance measures need not be ordered separately, as they are agreed in your individual service agreement.

**Level 2**

**Smart Monitoring**

| Remote Diagnostic Service | Equipment monitoring/service management by Rittal |
|---|---|

Rittal service experts monitor your networked devices connected to the smart service and proactively notify you of any critical faults and essential measures for maintaining availability. Any essential maintenance measures are ordered separately by you, so you remain in full control of the measures implemented and the associated costs at all times.

**Level 1**

**Remote Diagnostic Service**

| Access to your personal dashboard | Asset management | Visualisation of device data, including monitoring | Energy efficiency reports and efficiency analyses |
|---|---|---|---|

| Situational recommendations based on manufacturer expertise | Advice and error diagnosis from the Rittal Service team |
|---|---|

You can access the Smart Service Portal including the visualisation of all your networked devices and device statuses, and generate energy efficiency analyses. You can also consult Rittal service experts for fast, remote diagnosis, and receive optimum, bespoke advice in addition to situational recommendations.

**Note:**
**Please contact your local ASM or customer service team to discuss the scope and availability of this service in your region.**

## Rittal Service

Please contact us with any questions you may have relating to our service portfolio; we will be happy to issue quotes and provide practical assistance.
**www.rittal.com/service-worldwide**

# Quality management is a must. Quality philosophy is an attitude.

**“Rittal – The System.” stands for consistent quality management and on-going refinements to products, services and internal processes.**

Rittal quality management ensures that regulations and standards are observed, and individual customer requirements are met. In addition to this, we also define our exacting product quality demands in supplementary Rittal standards. The consistent Rittal quality philosophy guarantees perpetually high standards and ensures the global usability of all products with countless international approvals and licences.

**Alongside product quality, we also focus on process and service quality.**

All internal processes are continuously refined by quality control groups, and reviewed during in-house audits. Each year, our improvements and high standards are verified by countless successful external system and customer audits.

SQS

Zertifikat

Die SQS bescheinigt hiermit, dass nachstehend genanntes Unternehmen über ein Managementsystem verfügt, das den Anforderungen der aufgeführten normativen Grundlagen entspricht.

RITTAL

FRIEDHELM LOH GROUP
RITTAL GmbH & Co. KG
Auf dem Stützelberg
35745 Herborn
Deutschland

Geltungsbereich

Gemäss Appendix

Tätigkeitsgebiet

Entwicklung und Fertigung von Lösungen in den Bereichen Schaltschränke, Stromverteilung, Klimatisierungen, IT-Infrastrukturen sowie Software und Service – passgenaue Lösungen aus der Serie für nahezu jede Branche

Normative Grundlagen

| | |
|---|---|
| ISO 9001:2015 | Qualitätsmanagementsystem |
| ISO 14001:2015 | Umweltmanagementsystem |
| OHSAS 18001:2007 | Arbeitssicherheits- und Gesundheitsschutz-Management-system |

Scopeno: 19

Gültigkeit: 25.01.2018 – 24.01.2021
Version: 25.01.2018

Reg.-Nr. 33379

R. Edelmann, Präsident SQS

F. Müller, CEO SQS

Schweizerische Vereinigung für Qualitäts- und Management-Systeme SQS
Bernstrasse 103, 3052 Zollikofen, Schweiz

Partner of IQNet

UL

CERTIFICATE OF PARTICIPATION

Issued by
UL LLC

RITTAL GMBH & CO. KG

AUF DEM STUTZELBERG, 35745 HERBORN, GERMANY

has been assessed and found to be eligible to participate in the

Client Test Data Program (CTDP)

DA File: DA478
Issued: 2018-12-21
Expires: 2020-01-05

Kevin Mehaffey
Program Manager

## Rittal offers support from day one

- Project planning of technical specifications
- Prototype assembly, testing and simulations
- Manufacturing and assembly
- Warehousing service and on-time delivery
- Your own personal point of contact throughout the entire project

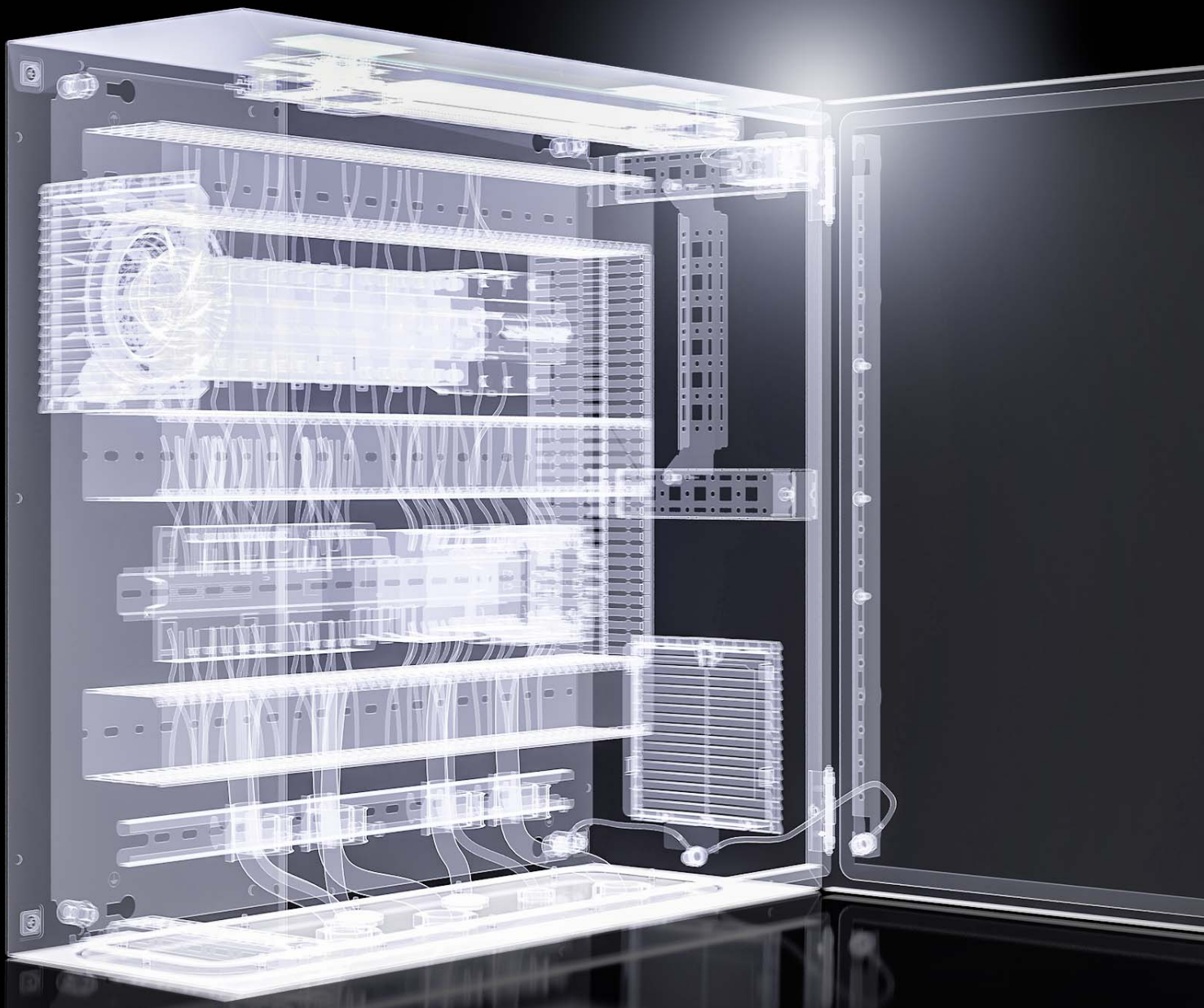
## Accredited Rittal test laboratory

- Simulation of climatic conditions
- Dynamic and static load tests
- 3D measurement
- Testing of IP/IK protection categories and NEMA type ratings
- Corrosion testing
- Electrical safety and function tests
- Software tests
- Performance testing of chillers, cooling units and heat exchangers
- Material testing

# Quality management

# Project handling with Rittal and Eplan tools

Software and services spanning the entire value chain



## Boost your efficiency everywhere – with individual software and service modules from Rittal and Eplan

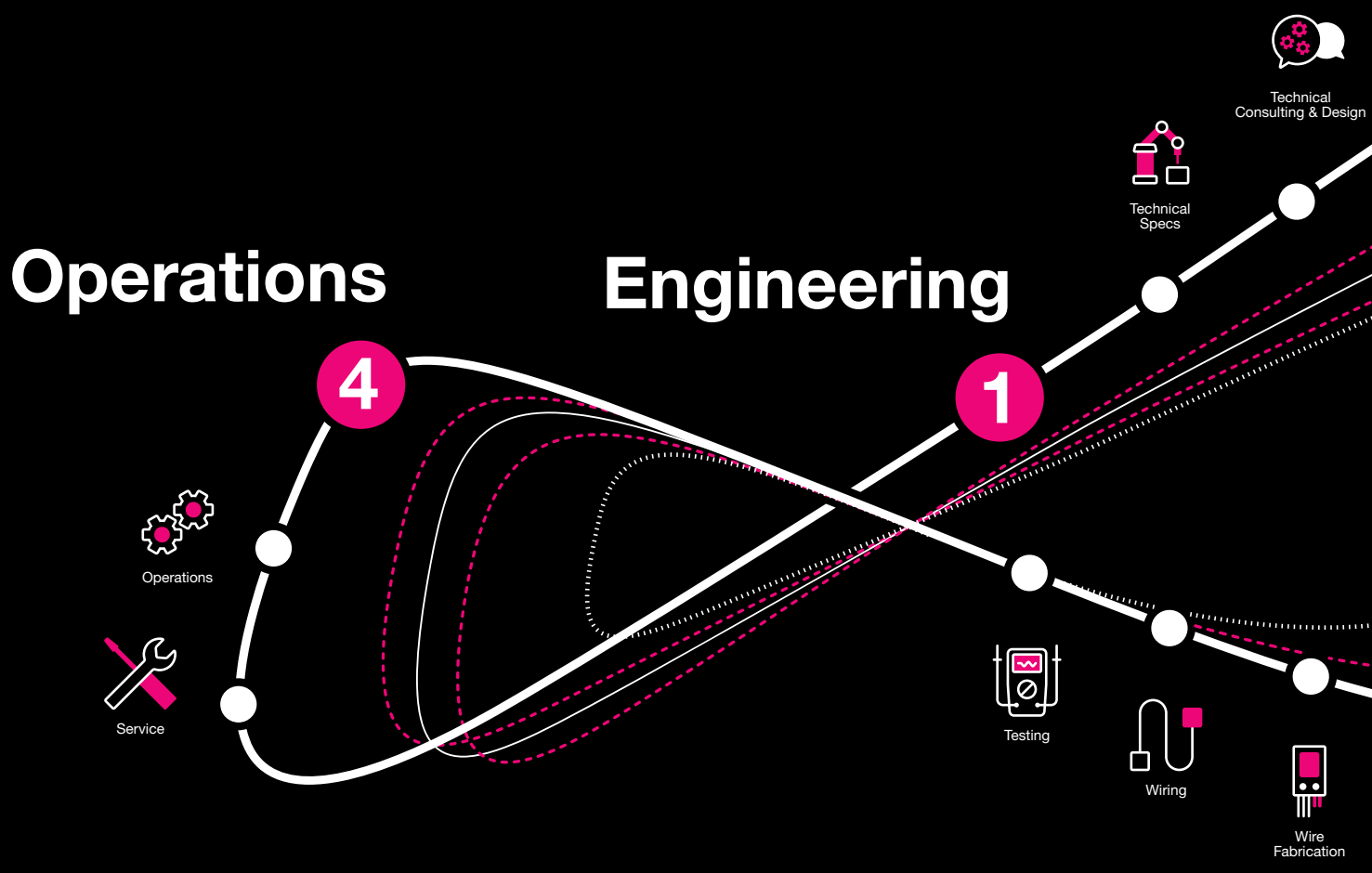
From small businesses and medium-sized companies to fully automated large-volume producers, our comprehensive portfolio provides every rack and controlgear manufacturer with a suitable selection of software and service modules tailored precisely to their individual production process. Optimum compatibility between all tools, even those that are not currently required or used, ensures maximum continuity and efficiency in both manual, semi-automated and fully automated production.

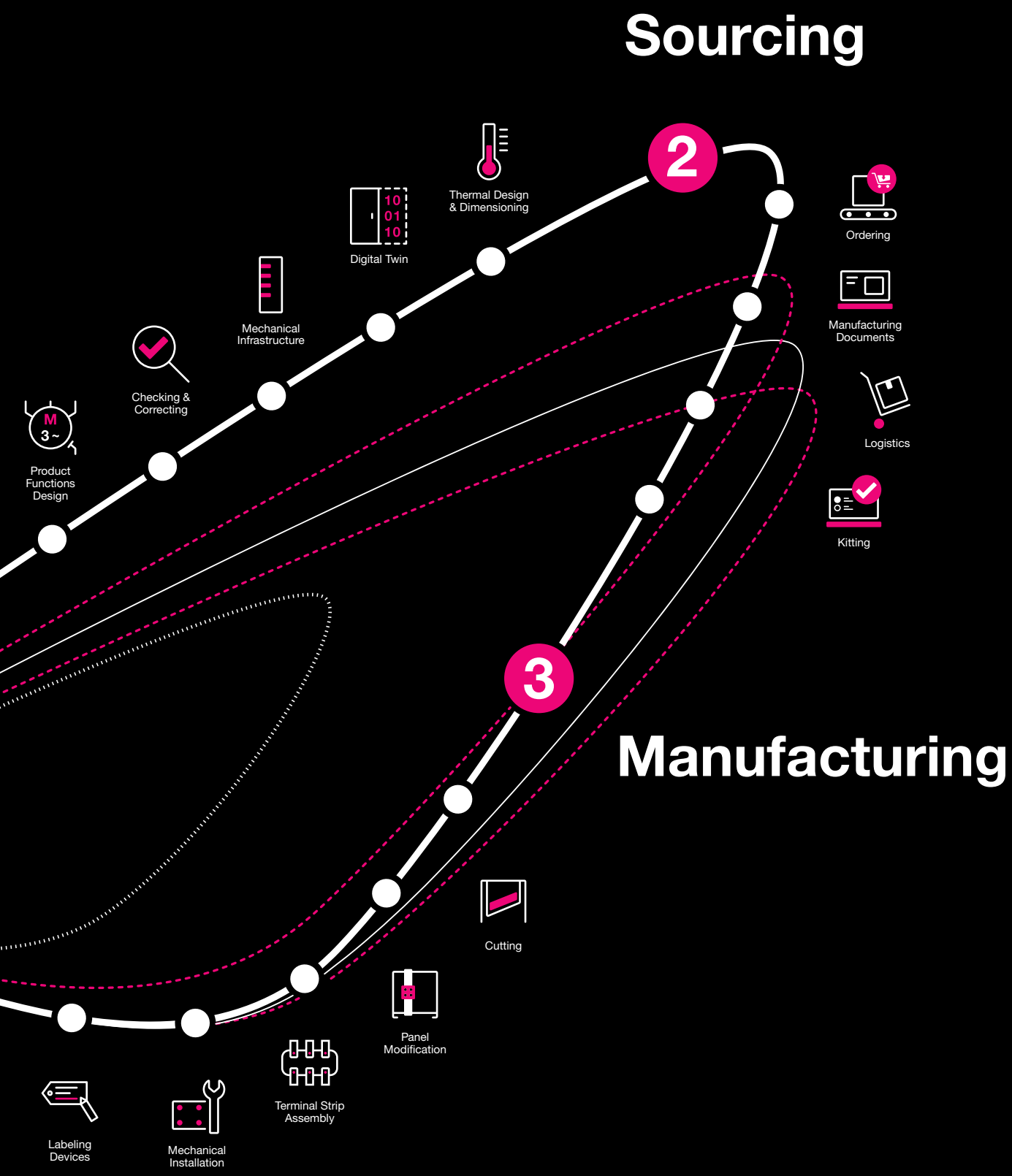
The benefits for you:

- Efficient software tools
- Plausibility-checked product and accessory configurations
- Plan cut-outs and drilled holes
- Generate tested manufacturing documents for the configured racks
- Transfer data into Eplan tools
- Enquire about configured products or order directly online
- Transfer data into Rittal machining centres
- Service modules tailored to individual requirements

# Optimum value creation for all target groups

Tools that guide users simply and efficiently to their individual product configuration provide the starting-point for successful project planning. These are not complex engineering solutions but user-friendly software tools which in just a few minutes can help you to find the right product or simply redefine the parameters for a cooling unit.




Sourcing
2
Thermal Design & Dimensioning
Digital Twin
10
01
10
Mechanical Infrastructure
Checking & Correcting
M
3 ~
Product Functions Design
Ordering
Manufacturing Documents
Logistics
Kitting
3
Manufacturing
Cutting
Panel Modification
Terminal Strip Assembly
Labeling Devices
Mechanical Installation

# Software and tools for industry

## Enclosure

### Rittal Configuration System
Select, plan and order plausibility-checked enclosures and components easily.
See page 272

### Command panel configurators
**for aluminium command panels**
The online configurators for Comfort Panel and Optipanel help you to configure individual, perfectly coordinated panel solutions.
See page 273

### Support arm configurator
**for CP 40/60/120/180, support section, height-adjustable**
Plausibility-checked planning of support arm systems.
See page 273

### Online conversion assistant for small enclosures KX and compact enclosures AX
Convert quickly and easily with the parts list converter.
See page 274

## Power Distribution

### VX25 Power Engineering
The Web-based tool guides users quickly and efficiently through the entire switchgear planning process in simple, logical steps.
See page 446

## Climate Control

### Chiller configurator
The chiller configurator is a cost-effective way of selecting your required machine and process cooling.
See page 558

### Therm software
**Clever climate control planning**
Therm takes care of the time-consuming calculation of your climate control requirements and proposes a suitable selection of products.
See page 558

### RiDiag
RiDiag is a software package for the diagnosis and analysis of cooling units and chillers to ensure proper operation and to simplify maintenance and the diagnosis of system messages.
See page 559

### Blue e+ app
The Blue e+ app supports the contact-less exchange of information as well as rapid on-site analysis via the NFC interface.
See page 559

## Rittal Automation Systems

Take value creation to the next level by working more efficiently with the latest tools and new automation solutions.
See page 560

## General

### CAD data
**Greater efficiency in plant design**
2D and 3D CAD data for all Rittal components in more than 70 different formats, for use in all standard commercially available CAD systems. Fast online access to original files in all common CAD formats.
See page 274

### Product scan app
**All product information in a single scan**
Fast access to all relevant product information by scanning the QR code on the product.
See page 274

## Eplan

Engineering solutions from Eplan help companies to optimise their controlgear and switchgear manufacturing processes. At its heart is the digital twin, which uses seamless data to link all value creation processes together.
See page 14

Further configurators may be found on the Internet at
**www.rittal.com/configurators**

# Software and tools for IT infrastructure

## Racks and enclosures

### Rittal Configuration System
Easily select plausibility-checked enclosures and components, plan machining and place your order.
See page 272

### IT infrastructure selector
The selector supports partners, system integrators, system engineers and end clients in selecting the right IT products for their specific application.
See page 874

### RiMatrix S Selector
Your standardised data centre selector for SMEs, branch concepts and flexible cloud applications. Your solution is configured on the basis of standardised data centre modules.
See page 874

### Micro Data Center configurator
Configuration of your security safe, including a range of configuration components.
See page 874

## IT power

### PDU configurator
The PDU configurator helps you to configure and equip customised PDUs. The PDU portfolio allows you to generate the optimum product for your application.
See page 875

## IT cooling

### IT cooling calculator
Easily select water-based Liquid Cooling Packages (LCP) for rack and suite cooling for your IT infrastructure.
See page 875

### Blue e+ app
The Blue e+ app supports the contact-less exchange of information as well as rapid on-site analysis via the NFC interface.
See page 559

## General

### CAD data
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2D and 3D CAD data for all Rittal components in more than 70 different formats, for use in all standard commercially available CAD systems. Fast online access to original files in all common CAD formats.
See page 274

### Product scan app
**All product information in a single scan**
Fast access to all relevant product information by scanning the QR code on the product.
See page 274

### DCIM – Data Centre Infrastructure Management
RiZone provides perfect support for your IT infrastructure components. Customer-centric and cost-efficient
See page 828

# List of model numbers

## 1003.000 to 2360.000

| Model No. | | Page |
|---|---|---|
| **1003.000** | AX | 237 |
| **1005.000** | AX | 237 |
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| **2535.000** | SZ | 943 |
| **2536.000** | SZ | 943 |
| **2537.100** | AX | 940 |
| **2537.300** | AX | 940 |
| **2541.235** | SK | 539 |
| **2542.235** | SK | 539 |
| **2543.235** | SK | 539 |
| **2545.000** | SZ | 945 |
| **2546.000** | SZ | 945 |
| **2547.000** | SZ | 945 |
| **2548.000** | SZ | 945 |
| **2549.000** | SZ | 945 |
| **2549.500** | SZ | 945 |
| **2549.510** | HD | 224 |
| **2549.600** | HD | 224 |
| **2559.000** | SZ | 1033 |
| **2561.200** | AX | 1050 |
| **2561.300** | AX | 1052 |
| **2562.200** | AX | 1050 |
| **2562.300** | AX | 1052 |
| **2563.200** | AX | 1050 |
| **2563.300** | AX | 1052 |
| **2564.000** | SZ | 1033 |
| **2564.200** | AX | 1050 |
| **2564.300** | AX | 1052 |
| **2565.000** | SZ | 1033 |
| **2565.050** | SZ | 1033 |
| **2565.100** | SZ | 1033 |
| **2565.110** | SZ | 1033 |
| **2565.120** | SZ | 1033 |
| **2565.200** | AX | 1050 |
| **2565.300** | AX | 1052 |
| **2565.400** | AX | 1054 |
| **2566.000** | SZ | 1033 |
| **2566.200** | AX | 1050 |
| **2566.300** | AX | 1052 |
| **2566.400** | AX | 1054 |
| **2567.000** | SZ | 1033 |
| **2567.200** | AX | 1050 |
| **2567.300** | AX | 1052 |
| **2567.400** | AX | 1054 |
| **2568.000** | SZ | 1033 |
| **2569.000** | SZ | 1033 |
| **2570.000** | SZ | 1033 |
| **2570.500** | SZ | 1034 |
| **2571.000** | SZ | 943 |
| **2571.100** | AX | 1053 |
| **2572.000** | SZ | 943 |
| **2572.100** | AX | 1053 |
| **2573.000** | SZ | 1045 |
| **2573.100** | AX | 1053 |
| **2574.100** | AX | 1053 |
| **2575.000** | SZ | 943 |
| **2575.100** | AX | 1053 |
| **2576.000** | SZ | 942 |
| **2576.100** | AX | 1053 |
| **2577.100** | AX | 1053 |
| **2580.000** | AX | 1051 |
| **2580.003** | AX | 1051 |
| **2580.004** | AX | 1051 |
| **2580.005** | AX | 1051 |
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| **2580.011** | AX | 1051 |
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| **2580.013** | AX | 1051 |
| **2580.014** | AX | 1051 |
| **2580.100** | AX | 1051 |
| **2580.115** | AX | 1051 |
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| **2580.119** | AX | 1051 |
| **2580.120** | AX | 1051 |
| **2580.121** | AX | 1051 |
| **2580.122** | AX | 1051 |
| **2580.123** | AX | 1051 |
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| **2580.125** | AX | 1051 |
| **2582.100** | AX | 1051 |
| **2582.200** | AX | 1051 |
| **2582.400** | AX | 1051 |
| **2582.600** | AX | 1051 |
| **2583.010** | SZ | 967 |
| **2583.080** | AX | 1048 |
| **2583.100** | AX | 1048 |
| **2583.120** | AX | 1051 |
| **2584.100** | AX | 968 |
| **2589.000** | SZ | 1060 |
| **2590.000** | SZ | 1060 |
| **2591.000** | SZ | 1060 |
| **2592.000** | SZ | 1060 |
| **2593.000** | SZ | 1060 |
| **2594.000** | SZ | 1060 |
| **2595.000** | SZ | 1060 |
| **2596.000** | SZ | 1060 |
| **2597.000** | SZ | 1061 |
| **2683.600** | TP | 251 |
| **2684.600** | TP | 251 |
| **2685.600** | TP | 251 |
| **2686.600** | TP | 251 |
| **2694.500** | TP | 162 |
| **2695.500** | TP | 162 |
| **2696.500** | TP | 163 |
| **2730.010** | AX | 930 |
| **2731.010** | AX | 930 |
| **2732.010** | AX | 930 |
| **2733.010** | AX | 930 |
| **2735.250** | FT | 929 |
| **2735.500** | FT | 929 |
| **2735.510** | FT | 929 |
| **2735.520** | FT | 929 |
| **2735.530** | FT | 929 |
| **2735.540** | FT | 929 |
| **2735.560** | FT | 929 |
| **2735.570** | FT | 929 |
| **2735.580** | FT | 929 |
| **2735.590** | FT | 929 |
| **2736.500** | FT | 929 |
| **2736.510** | FT | 929 |
| **2736.520** | FT | 929 |
| **2736.530** | FT | 929 |
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| **2740.010** | AX | 931 |
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| **2749.100** | AX | 932 |
| **2760.010** | AX | 930 |
| **2761.010** | AX | 930 |
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| **2780.000** | FT | 930 |
| **2781.000** | FT | 930 |
| **2782.000** | FT | 930 |
| **2784.000** | FT | 930 |
| **2785.000** | FT | 930 |
| **2786.000** | FT | 930 |
| **2787.000** | FT | 930 |
| **2788.000** | FT | 930 |
| **2789.000** | FT | 930 |
| **2793.560** | FT | 931 |
| **2796.000** | FT | 930 |
| **2807.200** | PS | 890 |
| **2817.000** | SO | 885 |
| **2819.000** | SZ | 891 |
| **2819.200** | SZ | 891 |
| **2820.061** | AX | 888 |
| **2820.062** | AX | 888 |
| **2820.081** | AX | 888 |
| **2820.082** | AX | 888 |
| **2820.101** | AX | 888 |
| **2820.102** | AX | 888 |
| **2820.121** | AX | 888 |
| **2820.122** | AX | 888 |
| **2820.310** | AX | 889 |
| **2820.320** | AX | 889 |
| **2820.410** | AX | 889 |
| **2820.420** | AX | 889 |
| **2843.160** | SZ | 1030 |
| **2843.200** | SZ | 1030 |
| **2843.250** | SZ | 1030 |
| **2843.320** | SZ | 1030 |
| **2843.400** | SZ | 1030 |
| **2843.500** | SZ | 1030 |
| **2843.630** | SZ | 1030 |
| **2859.000** | SO | 893 |
| **2865.000** | TP | 890 |
| **2867.000** | TP | 890 |
| **2869.000** | TP | 890 |
| **2870.000** | TP | 890 |
| **2899.200** | SZ | 1048 |
| **2899.250** | SZ | 1048 |
| **2899.320** | SZ | 1048 |
| **2899.400** | SZ | 1048 |
| **3031.000** | SV | 341 |
| **3032.000** | SV | 341 |
| **3052.000** | SV | 388 |
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| **3057.000** | SV | 388 |
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| **3073.000** | SV | 388 |
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| **3085.000** | SV | 343 |
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| **3088.000** | SV | 350 |
| **3090.000** | SV | 350 |
| **3091.000** | SV | 350 |
| **3092.000** | SV | 343 |
| **3093.010** | SV | 356 |
| **3093.020** | SV | 356 |
| **3105.310** | SK | 530 |
| **3105.320** | SK | 530 |
| **3105.330** | SK | 530 |
| **3105.340** | SK | 530 |
| **3105.350** | SK | 530 |
| **3105.360** | SK | 530 |
| **3105.370** | SK | 530 |
| **3105.380** | SK | 531 |
| **3105.390** | SK | 531 |
| **3105.400** | SK | 531 |
| **3105.410** | SK | 531 |
| **3105.420** | SK | 531 |
| **3105.430** | SK | 531 |
| **3108.024** | SK | 539 |
| **3108.100** | SK | 539 |
| **3108.115** | SK | 539 |
| **3110.000** | SK | 547 |
| **3110.200** | SK | 548 |
| **3114.200** | SK | 546 |
| **3118.000** | SK | 547 |
| **3120.200** | SK | 549 |
| **3124.100** | SK | 550 |
| **3124.300** | SK | 554 |
| **3124.310** | SK | 555 |
| **3124.400** | SK | 549 |
| **3126.100** | SK | 469 |
| **3127.100** | SK | 469 |
| **3128.100** | SK | 469 |
| **3129.100** | SK | 469 |
| **3130.100** | SK | 469 |
| **3138.000** | SK | 464 |
| **3139.100** | SK | 464 |
| **3139.110** | SK | 464 |
| **3140.100** | SK | 464 |
| **3140.110** | SK | 464 |
| **3140.140** | SK | 464 |
| **3140.500** | SK | 465 |
| **3140.510** | SK | 465 |
| **3144.000** | SK | 468 |
| **3159.100** | SK | 559 |
| **3159.300** | SK | 559 |
| **3164.230** | SK | 789 |
| **3164.620** | SK | 789 |
| **3171.100** | SK | 535 |
| **3171.105** | SK | 535 |
| **3172.100** | SK | 535 |
| **3172.105** | SK | 535 |
| **3173.100** | SK | 535 |
| **3173.105** | SK | 535 |
| **3174.100** | SK | 535 |
| **3176.000** | SK | 539 |
| **3177.000** | SK | 533 |
| **3181.100** | SK | 536 |
| **3182.100** | SK | 536 |
| **3183.100** | SK | 536 |
| **3185.030** | SK | 505 |

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| 3185.730 | SK | 504 |
| 3185.830 | SK | 487 |
| 3186.630 | SK | 489 |
| 3186.930 | SK | 489 |
| 3187.630 | SK | 489 |
| 3187.930 | SK | 489 |
| 3188.640 | SK | 489 |
| 3188.940 | SK | 489 |
| 3189.640 | SK | 489 |
| 3189.940 | SK | 489 |
| 3201.050 | SK | 535 |
| 3201.200 | SK | 474 |
| 3201.300 | SK | 474 |
| 3201.800 | SK | 507 |
| 3201.810 | SK | 507 |
| 3201.820 | SK | 507 |
| 3201.830 | SK | 507 |
| 3201.840 | SK | 507 |
| 3201.850 | SK | 507 |
| 3201.960 | SK | 550 |
| 3201.970 | SK | 550 |
| 3201.990 | SK | 545 |
| 3209.100 | SK | 516 |
| 3209.500 | SK | 516 |
| 3209.504 | SK | 516 |
| 3210.100 | SK | 517 |
| 3210.500 | SK | 517 |
| 3210.504 | SK | 516 |
| 3210.540 | SK | 517 |
| 3212.024 | SK | 510 |
| 3212.230 | SK | 510 |
| 3213.310 | SK | 542 |
| 3213.320 | SK | 542 |
| 3214.100 | SK | 510 |
| 3214.700 | SK | 515 |
| 3215.100 | SK | 511 |
| 3215.700 | SK | 515 |
| 3216.480 | SK | 514 |
| 3235.440 | SK | 548 |
| 3235.450 | SK | 548 |
| 3236.124 | SK | 539 |
| 3237.020 | SK | 538 |
| 3237.060 | SK | 537 |
| 3237.066 | SK | 535 |
| 3237.080 | SK | 538 |
| 3237.100 | SK | 456 |
| 3237.110 | SK | 456 |
| 3237.124 | SK | 456 |
| 3237.200 | SK | 537 |
| 3237.600 | SK | 459 |
| 3238.020 | SK | 538 |
| 3238.055 | SK | 536 |
| 3238.060 | SK | 537 |
| 3238.066 | SK | 535 |
| 3238.080 | SK | 538 |
| 3238.100 | SK | 456 |
| 3238.110 | SK | 456 |
| 3238.124 | SK | 456 |
| 3238.200 | SK | 537 |
| 3238.500 | SK | 461 |
| 3238.600 | SK | 459 |
| 3239.020 | SK | 538 |
| 3239.060 | SK | 537 |
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| 3239.100 | SK | 457 |
| 3239.110 | SK | 457 |
| 3239.124 | SK | 457 |
| 3239.200 | SK | 537 |
| 3239.500 | SK | 461 |
| 3239.600 | SK | 459 |
| 3240.020 | SK | 538 |
| 3240.060 | SK | 537 |
| 3240.066 | SK | 535 |
| 3240.080 | SK | 538 |
| 3240.100 | SK | 457 |
| 3240.110 | SK | 457 |
| 3240.124 | SK | 457 |
| 3240.200 | SK | 537 |
| 3240.500 | SK | 461 |
| 3240.600 | SK | 459 |
| 3241.100 | SK | 457 |
| 3241.110 | SK | 457 |
| 3241.124 | SK | 457 |
| 3241.500 | SK | 461 |
| 3241.600 | SK | 460 |
| 3243.020 | SK | 538 |
| 3243.060 | SK | 537 |
| 3243.066 | SK | 535 |
| 3243.080 | SK | 538 |
| 3243.100 | SK | 457 |
| 3243.110 | SK | 457 |
| 3243.200 | SK | 537 |
| 3243.500 | SK | 462 |
| 3243.600 | SK | 460 |
| 3244.100 | SK | 458 |
| 3244.110 | SK | 458 |
| 3244.140 | SK | 458 |
| 3244.500 | SK | 462 |
| 3244.600 | SK | 460 |
| 3245.080 | SK | 538 |
| 3245.500 | SK | 462 |
| 3245.510 | SK | 462 |
| 3245.600 | SK | 460 |
| 3248.000 | SK | 470 |
| 3273.500 | SK | 500 |
| 3284.210 | SK | 534 |
| 3285.700 | SK | 536 |
| 3285.800 | SK | 533 |
| 3285.810 | SK | 534 |
| 3285.900 | SK | 533 |
| 3285.910 | SK | 534 |
| 3285.920 | SK | 533 |
| 3285.930 | SK | 534 |
| 3285.940 | SK | 533 |
| 3286.110 | SK | 533 |
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| 3286.410 | SK | 534 |
| 3286.500 | SK | 533 |
| 3286.510 | SK | 534 |
| 3286.520 | SK | 534 |
| 3286.530 | SK | 534 |
| 3286.540 | SK | 534 |
| 3286.550 | SK | 534 |
| 3286.560 | SK | 534 |
| 3286.570 | SK | 534 |
| 3286.600 | SK | 533 |

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| 3286.610 | SK | 534 |
| 3286.700 | SK | 556 |
| 3286.780 | SK | 542 |
| 3286.800 | SK | 556 |
| 3286.840 | SK | 540 |
| 3286.850 | SK | 541 |
| 3286.860 | SK | 541 |
| 3286.870 | SK | 540 |
| 3286.880 | SK | 542 |
| 3286.900 | SK | 556 |
| 3286.970 | SK | 540 |
| 3286.980 | SK | 542 |
| 3286.990 | SK | 540 |
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| 3301.370 | SK | 786 |
| 3301.380 | SK | 786 |
| 3301.390 | SK | 786 |
| 3301.391 | SK | 1095 |
| 3301.392 | SK | 1096 |
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| 3301.600 | SK | 544 |
| 3301.606 | SK | 544 |
| 3301.608 | SK | 544 |
| 3301.610 | SK | 544 |
| 3301.612 | SK | 544 |
| 3301.930 | SK | 545 |
| 3301.940 | SK | 545 |
| 3301.950 | SK | 545 |
| 3301.955 | SK | 545 |
| 3301.960 | SK | 545 |
| 3301.965 | SK | 545 |
| 3302.100 | SK | 476 |
| 3302.110 | SK | 476 |
| 3302.200 | SK | 476 |
| 3302.300 | SK | 475 |
| 3302.310 | SK | 475 |
| 3303.500 | SK | 478 |
| 3303.504 | SK | 490 |
| 3303.508 | SK | 495 |
| 3303.510 | SK | 478 |
| 3303.514 | SK | 490 |
| 3303.518 | SK | 495 |
| 3303.600 | SK | 478 |
| 3304.500 | SK | 479 |
| 3304.504 | SK | 490 |
| 3304.508 | SK | 495 |
| 3304.510 | SK | 479 |
| 3304.540 | SK | 479 |
| 3304.544 | SK | 490 |
| 3304.548 | SK | 495 |
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| 3305.540 | SK | 480 |
| 3305.544 | SK | 490 |
| 3305.548 | SK | 495 |
| 3307.700 | SK | 506 |
| 3307.740 | SK | 506 |
| 3310.700 | SK | 506 |
| 3310.740 | SK | 506 |
| 3311.030 | SK | 785 |
| 3311.040 | SK | 786 |
| 3311.161 | SK | 788 |

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| 3311.163 | SK | 788 |
| 3311.170 | SK | 788 |
| 3311.180 | SK | 788 |
| 3311.190 | SK | 788 |
| 3311.200 | SK | 788 |
| 3311.210 | SK | 788 |
| 3311.270 | SK | 788 |
| 3311.280 | SK | 788 |
| 3311.360 | SK | 785 |
| 3311.363 | SK | 785 |
| 3311.370 | SK | 785 |
| 3311.380 | SK | 785 |
| 3311.490 | SK | 768 |
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| 3311.493 | SK | 770 |
| 3311.495 | SK | 785 |
| 3311.496 | SK | 785 |
| 3312.012 | SK | 786 |
| 3312.081 | SK | 786 |
| 3312.800 | SK | 764 |
| 3312.805 | SK | 784 |
| 3312.806 | SK | 784 |
| 3312.807 | SK | 784 |
| 3312.810 | SK | 765 |
| 3312.815 | SK | 784 |
| 3312.816 | SK | 784 |
| 3312.820 | IT | 784 |
| 3313.016 | SK | 787 |
| 3313.130 | SK | 781 |
| 3313.230 | SK | 781 |
| 3313.250 | SK | 781 |
| 3313.260 | SK | 781 |
| 3313.290 | SK | 774 |
| 3313.390 | SK | 775 |
| 3313.410 | SK | 774 |
| 3313.420 | SK | 774 |
| 3313.430 | SK | 775 |
| 3313.440 | SK | 775 |
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| 3313.460 | SK | 776 |
| 3313.470 | SK | 776 |
| 3313.480 | SK | 776 |
| 3313.530 | SK | 783 |
| 3313.540 | SK | 783 |
| 3313.550 | SK | 783 |
| 3313.560 | SK | 783 |
| 3313.570 | SK | 783 |
| 3318.610 | SK | 519 |
| 3319.610 | SK | 519 |
| 3320.200 | SK | 523 |
| 3321.700 | SK | 535 |
| 3321.705 | SK | 535 |
| 3322.700 | SK | 535 |
| 3322.705 | SK | 535 |
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| 3328.540 | SK | 481 |
| 3328.544 | SK | 491 |
| 3329.500 | SK | 482 |
| 3329.540 | SK | 482 |
| 3329.544 | SK | 491 |
| 3329.548 | SK | 495 |
| 3334.300 | SK | 523 |
| 3334.400 | SK | 523 |
| 3335.920 | SK | 528 |
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| **3335.950** | SK | 529 |
| **3335.960** | SK | 529 |
| **3335.970** | SK | 529 |
| **3336.400** | SK | 526 |
| **3336.405** | SK | 526 |
| **3336.410** | SK | 526 |
| **3336.415** | SK | 526 |
| **3336.430** | SK | 527 |
| **3336.435** | SK | 527 |
| **3336.450** | SK | 527 |
| **3336.455** | SK | 527 |
| **3340.230** | SK | 466 |
| **3341.115** | SK | 466 |
| **3341.230** | SK | 466 |
| **3342.024** | SK | 466 |
| **3342.230** | SK | 466 |
| **3342.500** | SK | 466 |
| **3350.230** | SK | 467 |
| **3351.230** | SK | 467 |
| **3352.230** | SK | 467 |
| **3352.500** | SK | 467 |
| **3355.100** | SK | 557 |
| **3355.700** | SK | 557 |
| **3355.710** | SK | 556 |
| **3355.720** | SK | 543 |
| **3357.100** | SK | 557 |
| **3359.500** | SK | 499 |
| **3359.510** | SK | 499 |
| **3359.540** | SK | 499 |
| **3359.600** | SK | 499 |
| **3361.500** | SK | 478 |
| **3361.510** | SK | 478 |
| **3361.540** | SK | 478 |
| **3361.600** | SK | 478 |
| **3363.100** | SK | 510 |
| **3363.500** | SK | 510 |
| **3364.100** | SK | 511 |
| **3364.500** | SK | 511 |
| **3364.504** | SK | 511 |
| **3366.500** | SK | 483 |
| **3366.540** | SK | 483 |
| **3373.100** | SK | 512 |
| **3373.140** | SK | 512 |
| **3373.500** | SK | 512 |
| **3374.100** | SK | 512 |
| **3374.140** | SK | 512 |
| **3374.500** | SK | 512 |
| **3374.504** | SK | 512 |
| **3374.540** | SK | 512 |
| **3375.100** | SK | 513 |
| **3375.500** | SK | 513 |
| **3375.504** | SK | 513 |
| **3375.540** | SK | 513 |
| **3377.000** | SK | 556 |
| **3378.300** | SK | 518 |
| **3378.380** | SK | 518 |
| **3382.500** | SK | 498 |
| **3382.510** | SK | 498 |
| **3382.600** | SK | 498 |
| **3383.500** | SK | 499 |
| **3383.510** | SK | 499 |
| **3383.540** | SK | 499 |
| **3383.600** | SK | 499 |
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| **8700.040** | VX | 901 |
| **8700.050** | VX | 901 |
| **8700.140** | TS | 915 |
| **8700.150** | TS | 915 |
| **8700.160** | TS | 915 |
| **8701.180** | TS | 951 |
| **8800.130** | TS | 994 |
| **8800.190** | TS | 951 |
| **8800.695** | VX | 1028 |
| **8800.710** | TS | 951 |
| **8800.750** | TS | 1058 |
| **8800.751** | TS | 1058 |
| **8800.752** | TS | 1058 |
| **8800.753** | TS | 1058 |
| **8800.754** | TS | 1058 |
| **8800.755** | VX | 1058 |
| **8800.770** | VX | 1058 |
| **8800.825** | TS | 915 |
| **8800.845** | TS | 915 |
| **8800.855** | TS | 915 |
| **8800.865** | TS | 915 |
| **8800.875** | VX | 916 |
| **8800.885** | TS | 915 |
| **8800.900** | PC | 1007 |
| **8800.910** | PC | 1007 |
| **8800.920** | PC | 890 |
| **8801.000** | TS | 924 |
| **8801.010** | TS | 924 |
| **8801.260** | TS | 928 |
| **8804.000** | VX | 123 |
| **8805.000** | VX | 124 |
| **8806.000** | VX | 125 |
| **8807.000** | VX | 131 |

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| **8807.010** | VX | 136 |
| **8807.020** | VX | 136 |
| **8808.000** | VX | 126 |
| **8815.000** | VX | 117 |
| **8826.000** | VX | 127 |
| **8840.100** | VX | 129 |
| **8840.110** | VX | 129 |
| **8840.120** | VX | 129 |
| **8840.130** | VX | 129 |
| **8845.000** | VX | 118 |
| **8865.000** | VX | 119 |
| **8880.000** | VX | 121 |
| **8881.000** | VX | 122 |
| **8884.000** | VX | 120 |
| **8885.000** | VX | 121 |
| **8886.000** | VX | 122 |
| **8951.000** | VX | 909 |
| **8951.010** | VX | 909 |
| **8951.020** | VX | 909 |
| **8951.030** | VX | 909 |
| **8952.000** | VX | 909 |
| **8952.010** | VX | 909 |
| **8952.020** | VX | 909 |
| **8952.030** | VX | 909 |
| **9055.310** | DK | 822 |
| **9055.312** | DK | 822 |
| **9055.410** | DK | 822 |
| **9055.412** | DK | 822 |
| **9101.210** | GA | 48 |
| **9102.210** | GA | 48 |
| **9104.210** | GA | 48 |
| **9105.210** | GA | 48 |
| **9105.700** | GA | 49 |
| **9106.210** | GA | 48 |
| **9107.210** | GA | 48 |
| **9108.210** | GA | 48 |
| **9108.700** | GA | 49 |
| **9110.210** | GA | 48 |
| **9110.700** | GA | 49 |
| **9111.210** | GA | 48 |
| **9112.210** | GA | 48 |
| **9112.700** | GA | 49 |
| **9113.210** | GA | 48 |
| **9113.700** | GA | 49 |
| **9114.210** | GA | 48 |
| **9116.210** | GA | 48 |
| **9116.700** | GA | 49 |
| **9117.210** | GA | 48 |
| **9117.700** | GA | 49 |
| **9118.210** | GA | 48 |
| **9118.700** | GA | 49 |
| **9119.210** | GA | 48 |
| **9121.122** | GA | 49 |
| **9121.160** | GA | 49 |
| **9121.230** | GA | 49 |
| **9123.000** | GA | 49 |
| **9202.100** | KE | 260 |
| **9203.100** | KE | 260 |
| **9204.100** | KE | 260 |
| **9205.100** | KE | 260 |
| **9206.100** | KE | 260 |
| **9207.100** | KE | 260 |
| **9208.100** | KE | 260 |
| **9209.100** | KE | 260 |
| **9301.000** | KE | 258 |
| **9302.000** | KE | 258 |

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| **9303.000** | KE | 258 |
| **9304.000** | KE | 258 |
| **9305.000** | KE | 258 |
| **9306.000** | KE | 258 |
| **9320.020** | SV | 343 |
| **9320.030** | SV | 343 |
| **9320.060** | SV | 345 |
| **9320.070** | SV | 345 |
| **9320.120** | SV | 353 |
| **9320.150** | SV | 352 |
| **9340.000** | SV | 300 |
| **9340.004** | SV | 300 |
| **9340.010** | SV | 300 |
| **9340.030** | SV | 340 |
| **9340.040** | SV | 340 |
| **9340.050** | SV | 300 |
| **9340.070** | SV | 301 |
| **9340.074** | SV | 301 |
| **9340.090** | SV | 341 |
| **9340.100** | SV | 347 |
| **9340.110** | SV | 347 |
| **9340.120** | SV | 347 |
| **9340.130** | SV | 347 |
| **9340.134** | SV | 347 |
| **9340.140** | SV | 347 |
| **9340.170** | SV | 347 |
| **9340.200** | SV | 348 |
| **9340.210** | SV | 348 |
| **9340.214** | SV | 348 |
| **9340.220** | SV | 348 |
| **9340.224** | SV | 348 |
| **9340.230** | SV | 348 |
| **9340.260** | SV | 313 |
| **9340.270** | SV | 313 |
| **9340.280** | SV | 354 |
| **9340.290** | SV | 353 |
| **9340.300** | SV | 313 |
| **9340.310** | SV | 308 |
| **9340.320** | SV | 308 |
| **9340.340** | SV | 308 |
| **9340.350** | SV | 308 |
| **9340.370** | SV | 308 |
| **9340.380** | SV | 308 |
| **9340.390** | SV | 308 |
| **9340.400** | SV | 308 |
| **9340.410** | SV | 309 |
| **9340.430** | SV | 309 |
| **9340.450** | SV | 309 |
| **9340.460** | SV | 308 |
| **9340.470** | SV | 308 |
| **9340.510** | SV | 310 |
| **9340.520** | SV | 310 |
| **9340.530** | SV | 310 |
| **9340.550** | SV | 310 |
| **9340.560** | SV | 310 |
| **9340.610** | SV | 311 |
| **9340.620** | SV | 311 |
| **9340.630** | SV | 311 |
| **9340.650** | SV | 311 |
| **9340.660** | SV | 310 |
| **9340.700** | SV | 309 |
| **9340.710** | SV | 309 |
| **9340.720** | SV | 309 |
| **9340.730** | SV | 309 |
| **9340.740** | SV | 309 |
| **9340.750** | SV | 309 |

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| **9340.760** | SV | 307 |
| **9340.770** | SV | 308 |
| **9340.780** | SV | 307 |
| **9340.790** | SV | 308 |
| **9340.820** | SV | 355 |
| **9340.830** | SV | 355 |
| **9340.850** | SV | 354 |
| **9340.860** | SV | 354 |
| **9340.870** | SV | 354 |
| **9340.880** | SV | 354 |
| **9340.890** | SV | 354 |
| **9340.905** | SV | 356 |
| **9340.910** | SV | 312 |
| **9340.930** | SV | 312 |
| **9340.950** | SV | 324 |
| **9341.000** | SV | 302 |
| **9341.050** | SV | 302 |
| **9341.070** | SV | 303 |
| **9341.100** | SV | 347 |
| **9341.110** | SV | 347 |
| **9341.120** | SV | 347 |
| **9341.130** | SV | 347 |
| **9341.140** | SV | 347 |
| **9341.170** | SV | 347 |
| **9342.000** | SV | 302 |
| **9342.004** | SV | 302 |
| **9342.030** | SV | 340 |
| **9342.050** | SV | 302 |
| **9342.070** | SV | 303 |
| **9342.074** | SV | 303 |
| **9342.100** | SV | 347 |
| **9342.110** | SV | 347 |
| **9342.120** | SV | 347 |
| **9342.130** | SV | 347 |
| **9342.134** | SV | 347 |
| **9342.140** | SV | 347 |
| **9342.170** | SV | 347 |
| **9342.200** | SV | 304 |
| **9342.210** | SV | 304 |
| **9342.220** | SV | 304 |
| **9342.224** | SV | 304 |
| **9342.240** | SV | 304 |
| **9342.250** | SV | 305 |
| **9342.254** | SV | 305 |
| **9342.270** | SV | 305 |
| **9342.280** | SV | 305 |
| **9342.300** | SV | 305 |
| **9342.310** | SV | 305 |
| **9342.311** | SV | 351 |
| **9342.314** | SV | 306 |
| **9342.320** | SV | 305 |
| **9342.321** | SV | 351 |
| **9342.324** | SV | 306 |
| **9342.400** | SV | 314 |
| **9342.410** | SV | 314 |
| **9342.500** | SV | 315 |
| **9342.504** | SV | 317 |
| **9342.510** | SV | 315 |
| **9342.514** | SV | 317 |
| **9342.540** | SV | 314 |
| **9342.550** | SV | 314 |
| **9342.560** | SV | 355 |
| **9342.570** | SV | 355 |
| **9342.610** | SV | 315 |
| **9342.640** | SV | 355 |
| **9342.720** | SV | 353 |

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| **9342.810** | SV | 354 |
| **9342.820** | SV | 354 |
| **9342.850** | SV | 352 |
| **9342.860** | SV | 352 |
| **9342.870** | SV | 352 |
| **9342.880** | SV | 352 |
| **9342.920** | SV | 352 |
| **9342.930** | SV | 352 |
| **9342.940** | SV | 352 |
| **9342.950** | SV | 352 |
| **9342.980** | SV | 352 |
| **9343.000** | SV | 327 |
| **9343.010** | SV | 327 |
| **9343.020** | SV | 329 |
| **9343.030** | SV | 329 |
| **9343.040** | SV | 331 |
| **9343.050** | SV | 331 |
| **9343.070** | SV | 333 |
| **9343.100** | SV | 328 |
| **9343.110** | SV | 328 |
| **9343.120** | SV | 330 |
| **9343.130** | SV | 330 |
| **9343.140** | SV | 332 |
| **9343.150** | SV | 332 |
| **9343.170** | SV | 333 |
| **9343.200** | SV | 328 |
| **9343.210** | SV | 328 |
| **9343.230** | SV | 330 |
| **9343.250** | SV | 332 |
| **9343.270** | SV | 333 |
| **9343.300** | SV | 328 |
| **9343.310** | SV | 328 |
| **9343.330** | SV | 330 |
| **9343.350** | SV | 332 |
| **9343.370** | SV | 333 |
| **9343.400** | SV | 334 |
| **9343.410** | SV | 334 |
| **9344.000** | SV | 327 |
| **9344.010** | SV | 327 |
| **9344.020** | SV | 329 |
| **9344.030** | SV | 329 |
| **9344.040** | SV | 331 |
| **9344.050** | SV | 331 |
| **9344.100** | SV | 328 |
| **9344.110** | SV | 328 |
| **9344.130** | SV | 330 |
| **9344.150** | SV | 332 |
| **9344.210** | SV | 328 |
| **9344.230** | SV | 330 |
| **9344.250** | SV | 332 |
| **9344.310** | SV | 328 |
| **9344.330** | SV | 330 |
| **9344.350** | SV | 332 |
| **9344.510** | SV | 358 |
| **9344.520** | SV | 357 |
| **9344.530** | SV | 357 |
| **9344.540** | SV | 357 |
| **9344.550** | SV | 357 |
| **9344.610** | SV | 357 |
| **9344.620** | SV | 357 |
| **9344.680** | SV | 357 |
| **9345.005** | SV | 338 |
| **9345.015** | SV | 338 |
| **9345.035** | SV | 338 |
| **9345.040** | SV | 337 |

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| **9345.100** | SV | 339 |
| **9345.200** | SV | 339 |
| **9345.400** | SV | 339 |
| **9345.600** | SV | 315 |
| **9345.604** | SV | 317 |
| **9345.610** | SV | 315 |
| **9345.614** | SV | 317 |
| **9345.700** | SV | 316 |
| **9345.704** | SV | 318 |
| **9345.710** | SV | 316 |
| **9345.714** | SV | 318 |
| **9345.720** | SV | 316 |
| **9345.724** | SV | 318 |
| **9345.730** | SV | 316 |
| **9345.734** | SV | 318 |
| **9346.000** | SV | 335 |
| **9346.010** | SV | 335 |
| **9346.015** | SV | 336 |
| **9346.020** | SV | 335 |
| **9346.030** | SV | 335 |
| **9346.060** | SV | 335 |
| **9346.400** | SV | 358 |
| **9346.460** | SV | 357 |
| **9350.010** | SV | 343 |
| **9350.060** | SV | 343 |
| **9350.075** | SV | 343 |
| **9401.600** | KE | 259 |
| **9402.600** | KE | 259 |
| **9403.600** | KE | 259 |
| **9404.600** | KE | 259 |
| **9405.600** | KE | 259 |
| **9406.600** | KE | 259 |
| **9407.600** | KE | 259 |
| **9408.600** | KE | 259 |
| **9409.600** | KE | 259 |
| **9500.000** | PK | 44 |
| **9502.000** | PK | 44 |
| **9504.000** | PK | 44 |
| **9505.000** | PK | 44 |
| **9506.000** | PK | 44 |
| **9507.000** | PK | 44 |
| **9508.000** | PK | 44 |
| **9508.050** | PK | 46 |
| **9509.000** | PK | 44 |
| **9510.000** | PK | 44 |
| **9511.000** | PK | 44 |
| **9512.000** | PK | 44 |
| **9513.000** | PK | 44 |
| **9514.000** | PK | 45 |
| **9514.050** | PK | 46 |
| **9514.100** | PK | 45 |
| **9515.000** | PK | 45 |
| **9515.100** | PK | 45 |
| **9516.000** | PK | 45 |
| **9516.100** | PK | 45 |
| **9517.000** | PK | 45 |
| **9517.100** | PK | 45 |
| **9518.000** | PK | 45 |
| **9518.100** | PK | 45 |
| **9519.000** | PK | 45 |
| **9519.100** | PK | 45 |
| **9520.000** | PK | 45 |
| **9520.100** | PK | 45 |
| **9521.000** | PK | 45 |
| **9521.050** | PK | 46 |
| **9521.100** | PK | 45 |

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| **9522.000** | PK | 45 |
| **9522.100** | PK | 45 |
| **9523.000** | PK | 45 |
| **9523.100** | PK | 45 |
| **9524.000** | PK | 45 |
| **9524.100** | PK | 45 |
| **9548.000** | PK | 47 |
| **9549.000** | PK | 47 |
| **9550.000** | PK | 47 |
| **9581.000** | PK | 47 |
| **9583.000** | PK | 47 |
| **9600.000** | SV | 294 |
| **9600.005** | SV | 340 |
| **9601.000** | SV | 294 |
| **9602.000** | SV | 294 |
| **9603.000** | SV | 294 |
| **9605.000** | SV | 294 |
| **9606.000** | SV | 294 |
| **9607.000** | SV | 294 |
| **9608.000** | SV | 294 |
| **9609.000** | SV | 294 |
| **9610.000** | SV | 294 |
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| **9612.000** | SV | 294 |
| **9613.000** | SV | 294 |
| **9614.000** | SV | 296 |
| **9614.100** | SV | 296 |
| **9614.110** | SV | 296 |
| **9615.000** | SV | 296 |
| **9615.100** | SV | 296 |
| **9616.000** | SV | 297 |
| **9617.000** | SV | 297 |
| **9623.000** | SV | 353 |
| **9624.000** | SV | 294 |
| **9625.000** | SV | 296 |
| **9627.000** | SV | 297 |
| **9629.000** | SV | 297 |
| **9629.010** | SV | 296 |
| **9629.100** | SV | 295 |
| **9630.000** | SV | 295 |
| **9630.005** | SV | 295 |
| **9635.000** | SV | 284 |
| **9635.010** | SV | 284 |
| **9635.100** | SV | 289 |
| **9635.110** | SV | 289 |
| **9635.200** | SV | 285 |
| **9635.210** | SV | 285 |
| **9635.300** | SV | 287 |
| **9635.310** | SV | 287 |
| **9635.320** | SV | 287 |
| **9635.330** | SV | 287 |
| **9635.340** | SV | 287 |
| **9635.350** | SV | 287 |
| **9635.360** | SV | 287 |
| **9635.371** | SV | 286 |
| **9635.372** | SV | 286 |
| **9635.373** | SV | 286 |
| **9635.381** | SV | 286 |
| **9635.382** | SV | 286 |
| **9635.383** | SV | 286 |
| **9635.390** | SV | 288 |
| **9635.400** | SV | 291 |
| **9635.410** | SV | 291 |
| **9635.415** | SV | 291 |
| **9635.420** | SV | 291 |
| **9635.425** | SV | 291 |

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| **9635.600** | SV | 293 |
| **9635.610** | SV | 293 |
| **9635.620** | SV | 293 |
| **9635.630** | SV | 293 |
| **9635.640** | SV | 293 |
| **9635.700** | SV | 290 |
| **9635.800** | SV | 292 |
| **9640.202** | SV | 401 |
| **9640.207** | SV | 401 |
| **9640.232** | SV | 401 |
| **9640.237** | SV | 401 |
| **9640.262** | SV | 401 |
| **9640.267** | SV | 401 |
| **9640.292** | SV | 401 |
| **9640.297** | SV | 401 |
| **9640.325** | SV | 403 |
| **9640.330** | SV | 403 |
| **9640.340** | SV | 403 |
| **9640.350** | SV | 403 |
| **9640.360** | SV | 401 |
| **9640.365** | SV | 401 |
| **9640.370** | SV | 403 |
| **9640.380** | SV | 403 |
| **9640.900** | SV | 404 |
| **9640.910** | SV | 404 |
| **9640.920** | SV | 404 |
| **9640.930** | SV | 404 |
| **9640.940** | SV | 404 |
| **9640.970** | SV | 403 |
| **9640.980** | SV | 403 |
| **9649.010** | SV | 401 |
| **9649.360** | SV | 401 |
| **9650.202** | SV | 402 |
| **9650.232** | SV | 402 |
| **9650.262** | SV | 402 |
| **9650.292** | SV | 402 |
| **9650.325** | SV | 403 |
| **9650.330** | SV | 403 |
| **9650.340** | SV | 403 |
| **9650.360** | SV | 402 |
| **9650.370** | SV | 403 |
| **9650.380** | SV | 403 |
| **9650.900** | SV | 404 |
| **9650.905** | SV | 404 |
| **9650.910** | SV | 404 |
| **9650.920** | SV | 404 |
| **9650.980** | SV | 403 |
| **9650.990** | SV | 403 |
| **9659.010** | SV | 401 |
| **9659.360** | SV | 402 |
| **9660.090** | SV | 408 |
| **9660.205** | SV | 405 |
| **9660.980** | SV | 404 |
| **9665.750** | SV | 962 |
| **9665.760** | SV | 962 |
| **9665.770** | SV | 962 |
| **9665.780** | SV | 962 |
| **9665.785** | SV | 962 |
| **9666.000** | SV | 421 |
| **9666.010** | SV | 421 |
| **9666.020** | SV | 421 |
| **9666.030** | SV | 421 |
| **9666.040** | SV | 421 |
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| **9666.053** | SV | 421 |
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| **9666.080** | SV | 421 |
| **9666.090** | SV | 421 |
| **9666.100** | SV | 421 |
| **9666.110** | SV | 421 |
| **9666.120** | SV | 421 |
| **9666.130** | SV | 421 |
| **9666.133** | SV | 421 |
| **9666.140** | SV | 421 |
| **9666.143** | SV | 421 |
| **9666.150** | SV | 421 |
| **9666.160** | SV | 422 |
| **9666.170** | SV | 422 |
| **9666.180** | SV | 422 |
| **9666.190** | SV | 422 |
| **9666.200** | SV | 422 |
| **9666.210** | SV | 422 |
| **9666.213** | SV | 422 |
| **9666.220** | SV | 422 |
| **9666.223** | SV | 422 |
| **9666.230** | SV | 422 |
| **9666.240** | SV | 422 |
| **9666.250** | SV | 422 |
| **9666.260** | SV | 422 |
| **9666.270** | SV | 422 |
| **9666.280** | SV | 422 |
| **9666.290** | SV | 422 |
| **9666.293** | SV | 422 |
| **9666.300** | SV | 422 |
| **9666.303** | SV | 422 |
| **9666.310** | SV | 423 |
| **9666.340** | SV | 423 |
| **9666.350** | SV | 423 |
| **9666.380** | SV | 424 |
| **9666.390** | SV | 424 |
| **9666.400** | SV | 424 |
| **9666.410** | SV | 424 |
| **9666.420** | SV | 424 |
| **9666.430** | SV | 425 |
| **9666.440** | SV | 425 |
| **9666.520** | SV | 427 |
| **9666.530** | SV | 427 |
| **9666.533** | SV | 427 |
| **9666.550** | SV | 425 |
| **9666.560** | SV | 425 |
| **9666.570** | SV | 425 |
| **9666.580** | SV | 425 |
| **9666.583** | SV | 425 |
| **9666.590** | SV | 426 |
| **9666.600** | SV | 426 |
| **9666.603** | SV | 426 |
| **9666.640** | SV | 426 |
| **9666.650** | SV | 428 |
| **9666.660** | SV | 428 |
| **9666.665** | SV | 428 |
| **9666.670** | SV | 428 |
| **9666.680** | SV | 429 |
| **9666.702** | SV | 429 |
| **9666.703** | SV | 429 |
| **9666.704** | SV | 429 |
| **9666.705** | SV | 429 |
| **9666.706** | SV | 429 |
| **9666.707** | SV | 429 |
| **9666.711** | SV | 429 |

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## RAL colours

| | Colour RAL | Designation |
|---|---|---|
| | | Rittal Power Pink |
| | 5002 | ultramarine blue |
| | 5018 | turquoise blue |
| | 7001 | silver grey |
| | 7015 | slate grey |
| | 7016 | anthracite grey |
| | 7022 | umbra grey |
| | 7024 | graphite grey |
| | 7030 | stone grey |
| | 7035 | pale grey |
| | 7045 | telegrey 1 |
| | 9003 | signal white |
| | 9005 | jet black |
| | 9006 | white aluminium |
| | 9007 | grey aluminium |
| | 9011 | graphite black |

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