

Rittal – The System.

Faster – better – everywhere.

▶ Rittal Automation Systems Assembly Frames



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Rittal – The System.

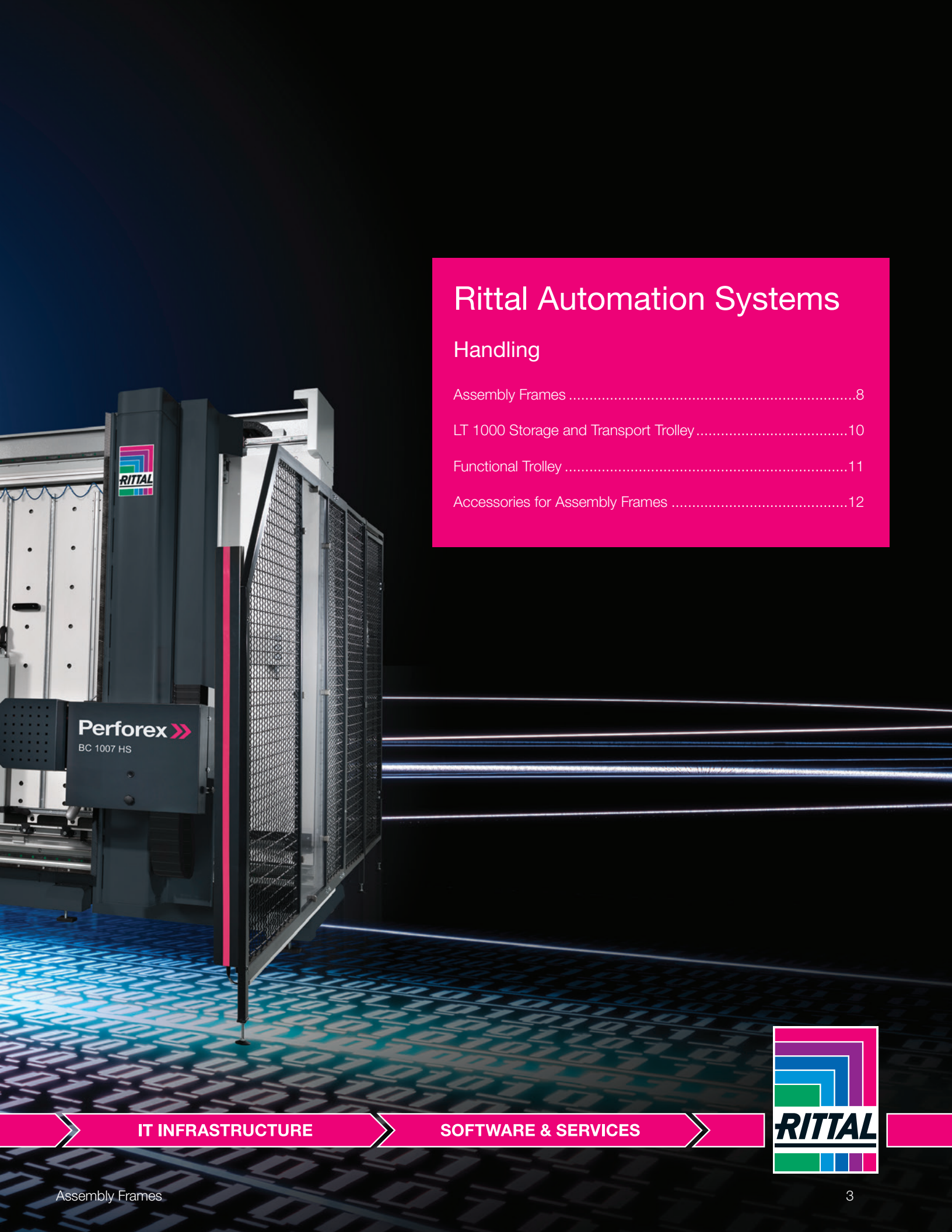
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Rittal Automation Systems

Handling

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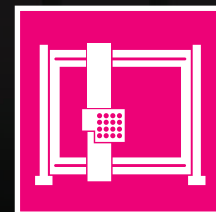
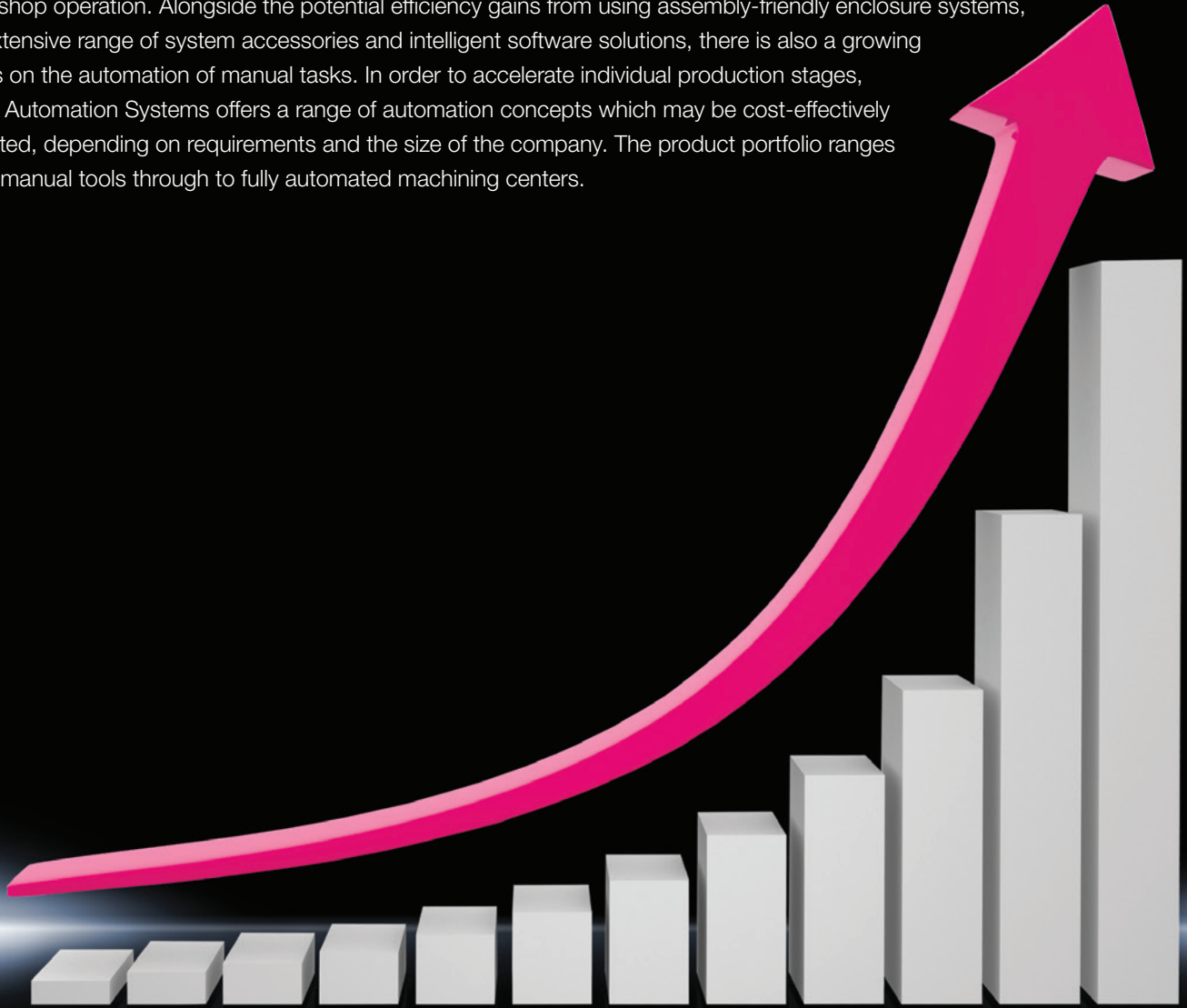
IT INFRASTRUCTURE

SOFTWARE & SERVICES



Rittal automates enclosure manufacturing

The new Rittal Automation Systems business unit extends Rittal's comprehensive range of solutions for control and switchgear engineering and manufacturing. By taking over the entire product range of its sister company Kiesling, Rittal is continuing to expand "The System", offering a comprehensive range of equipment for professional workshop operation. Alongside the potential efficiency gains from using assembly-friendly enclosure systems, an extensive range of system accessories and intelligent software solutions, there is also a growing focus on the automation of manual tasks. In order to accelerate individual production stages, Rittal Automation Systems offers a range of automation concepts which may be cost-effectively adapted, depending on requirements and the size of the company. The product portfolio ranges from manual tools through to fully automated machining centers.



Automation

ENCLOSURES

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CLIMATE CONTROL

Optimization of the complete workflow in enclosure manufacturing

The Rittal Automation Systems business unit with its portfolio of services supports all process stages in control and switchgear engineering. From manual tools through to fully automated systems, find your customized solutions for process-optimized workshop operations.

- Machining of enclosures and components
- Assembly of terminal blocks on DIN rails
- Assembly of wires and cables
- Automated wiring solutions
- Handling systems and tools



Machining



Tools



Handling

Machining:

Discover our solutions for the fully automated, fast, precise and reliable milling or laser machining of enclosures and boxes, plus optimized cutting and kitting of cable ducts and DIN rails.

- Perforex BC – Milling, thread tapping, drilling
- Perforex LC – Laser cutting of stainless steel and powder-coated sheet steel enclosures
- Secarex – For cutting cable ducts and DIN rails to length
- Copper busbar processing CW 120 – Bending, punching, cutting

IT INFRASTRUCTURE

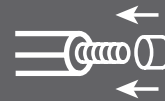
SOFTWARE & SERVICES



Optimization of the complete workflow in enclosure manufacturing



Assembly



Wire processing



Tools



Handling

Assembly:

Our component mounting products are used for the automated manufacturing of terminal strips in control and switchgear engineering.

- **Athex** – Terminal assembly and labeling

Wire processing:

Take advantage of our professional, sensible solutions in wire processing.

- Cutting machine
- Stripping machines
- Stripping/crimping machines

Tools:

The right tool for every application.

- Screwdrivers
- Pliers
- Insulation stripping and crimping tools
- Hole punching tools

ENCLOSURES

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CLIMATE CONTROL



Wiring



Tools



Handling

Wiring

The efficient interplay between engineering, handling, assembly and hand tools makes your wiring process swift, ergonomic and safe.

To complete the process chain, our automation teams are dedicated to the development of pioneering wiring solutions through to full automation.

Handling:

We support you with ergonomic, efficient handling systems for a wide range of transport and lifting operations in the workshop.

- **LUT 1000** – Workpiece stillage and transport
- **Assembly frames** – Ergonomic assembly and wiring
- **Functional trolley** – Practical solution for transport of parts and a working table in the factory

IT INFRASTRUCTURE

SOFTWARE & SERVICES




Assembly frames

When it comes to the automation and rationalization of processes throughout every stage of machining, assembly, wiring and testing of enclosures, we have the right ergonomic solution for you. Our assembly frames are mobile, tiltable and (depending on the version) height-adjustable frames 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.

Item name	Assembly Frame 150 MN	Assembly Frame 200 EN	Assembly Frame 300 ENH	Assembly Frame 300 ENH Prepackaged***
Adjustment range	Infinitely adjustable from the vertical to the horizontal using a crank handle	Infinitely adjustable tilt angle via battery-powered electric motor	Infinitely adjustable height and tilt angle via battery-powered electric motor	Infinitely adjustable height and tilt angle via battery-powered electric motor
Working height (ft.)	1 m (3.2 ft.)	0.90m (2.9 ft.)	0.80 – 1.10m (2.62 – 3.6 ft.)	0.80 – 1.10m (2.62 – 3.6 ft.)
Tilt adjustment	approx. 0 – 80°	approx. 0 – 80°	approx. 0 – 80°	approx. 0 – 80°
Dimensions (W x D) mm (in.)	1400 x 1250 (55.11 x 49.2 in.)	1400 x 1250 (55.11 x 49.2 in.)	1400 x 1250 (55.11 x 49.2 in.)	1400 x 1250 (55.11 x 49.2 in.)
Clampable workpieces (H x W) mm (in.)	min. 1250 x 1110 max. 1900 x 1110 max. 1900 x 1900 with 4050.210 (min. 49.2 x 43.7 in.) (max. 74.8 x 43.7 in.) (max. 74.8 x 74.8 in. with 4050.210)	min. 1250 x 1110 max. 1900 x 1110 max. 1900 x 1900 with 4050.210 (min. 49.2 x 43.7 in.) (max. 74.8 x 43.7 in.) (max. 74.8 x 74.8 in. with 4050.210)	min. 1250 x 1110 max. 1900 x 1110 max. 1900 x 1900 with 4050.210 (min. 49.2 x 43.7 in.) (max. 74.8 x 43.7 in.) (max. 74.8 x 74.8 in. with 4050.210)	min. 1250 x 1110 max. 1900 x 1110 max. 1900 x 1900 with 4050.210 (min. 49.2 x 43.7 in.) (max. 74.8 x 43.7 in.) (max. 74.8 x 74.8 in. with 4050.210)
Maximum support load (lbs.)	150 kg (330 lbs.)	200 kg (440.1 lbs.)	300 kg (661 lbs.)	300 kg (661 lbs.)
Model No.	4050.150	4050.200**	4050.300**	9973.099

**Note: For 4050.200 and 4050.300 you must order both 4050.219 and 4050.222 if Assembly Frame is used in the USA

***Note: Prepackaged version includes 4050.300 Assembly Frame plus 4050.219, 4050.221, 4050.222 and 9973.158



- 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 1900 mm (74.8 in.)
- Wire routing
- Wire reel handler
- Reel track for side insertion of mounting plates
- Mounting frame accessory is required for AE/WM mounting panels
- More options on pages 12-14

- Easily maneuverable with industrial rated locking casters

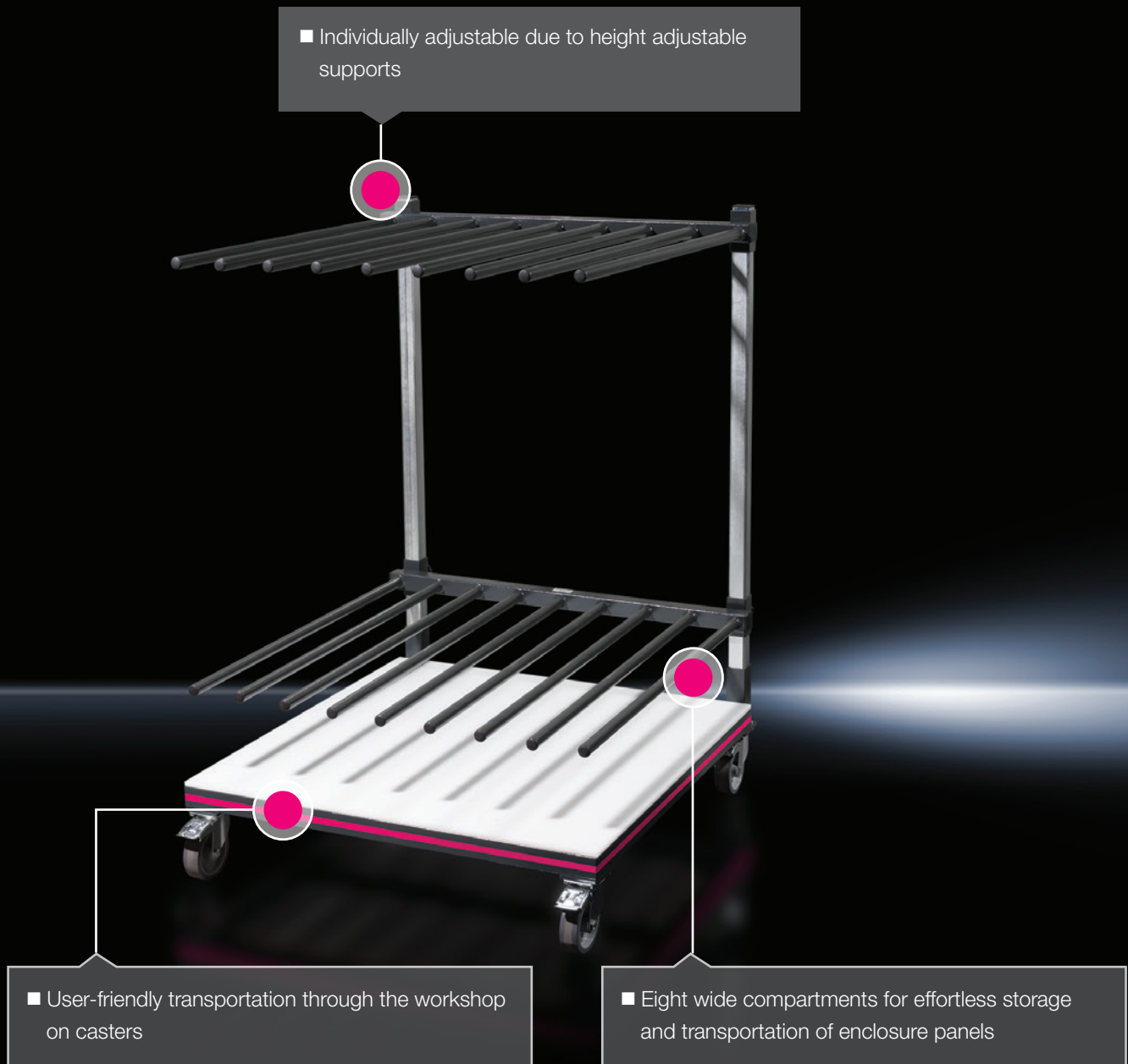
LT 1000 storage and transport trolley

The LT 1000 workpiece stillage and transport trolley ensures easy handling and storage of enclosure panels. It is individually adjustable due to height-adjustable supports and with effortless storage and transportation of enclosure panels the LT 1000 offers user-friendly transportation on industrial casters.

Technical specifications

- Support surface W x D 1000 x 1000 mm (39.3 x 39.3 in.)
- Height 1500 mm (59 in.)
- Max. load capacity 500 kg (1102 lbs.)

Item name	Model No.
LT 1000 storage and transport trolley	4050.000



Practical and mobile

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 refined system with its fold-out concept is the ideal solution when you are on the road, and its compact dimensions mean it can be transported by car.

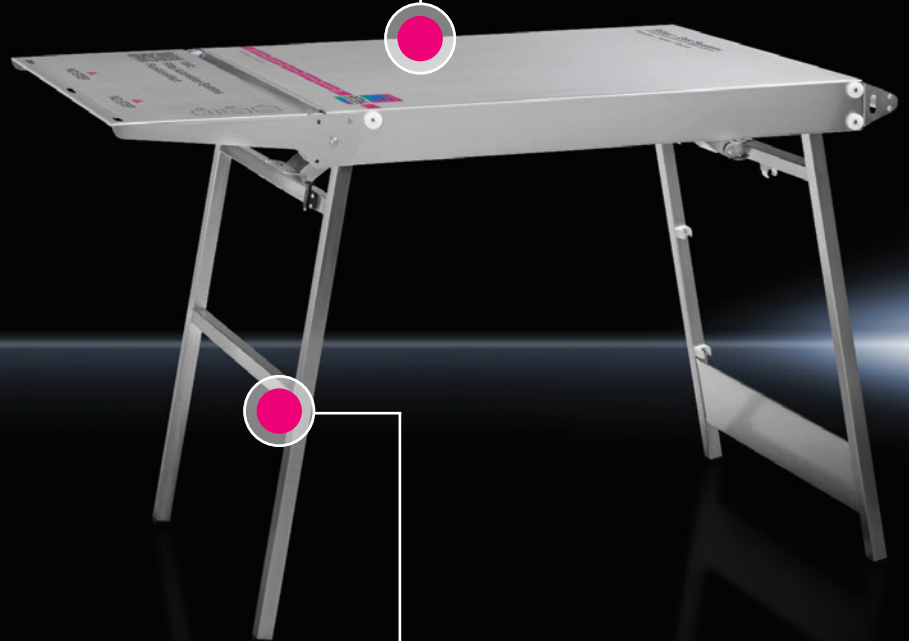


Item name	Model No.
Functional trolley	4050.130

■ Surface suitable for computer mouse

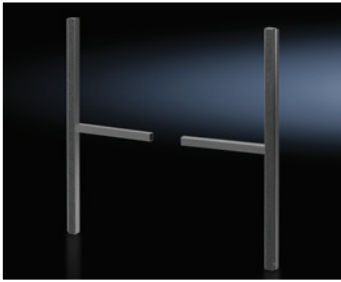


■ Made from V2A stainless steel for robustness and durability



■ Converts from a transport function to a desk by simply unfolding

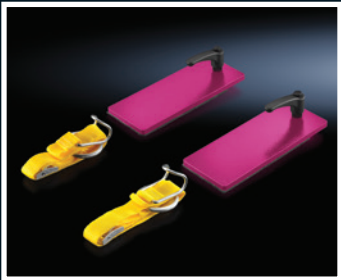
Accessories for assembly frame



Assembly frame extension

To widen assembly frames 150 MN, 200 EN, 300 ENH to a maximum width of 1900 mm (74.80 inches).

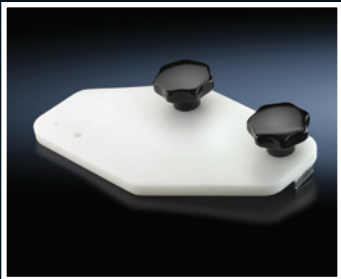
To fit Model No.	Packs of	Model No.
4050.150/ 4050.200/ 4050.300	2 pc(s).	4050.210



Enclosure kit for assembly frame

For secure attachment of an enclosure such as AE or WM to 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).	4050.211



Wire guide 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 panel onto assembly frame 150 MN, 200 EN, 300 ENH.

To fit Model No.	For	Design	Product specific scope of supply	Packs of	Model No.
4050.150/ 4050.200/ 4050.300	Mounting panel TS/SE	Top	1 clamping unit pack, top	1 pc(s).	4050.213
4050.150/ 4050.200/ 4050.300	Mounting panel TS/SE	Bottom	1 clamping unit pack, bottom	1 pc(s).	4050.214



Accessories for assembly frame

Wire reel holder for assembly frame

For adapting wire reels or drums 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).	4050.216



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/ 4050.300	1 pc(s).	4050.217



Screw adapter 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 from the side into the enclosure. To fit assembly frame 300 ENH.

To fit Model No.	Packs of	Model No.
4050.300	1 pc(s).	4050.220



AE/WM panel brackets for assembly frame

For secure attachment of small mounting panels onto assembly frame 150 MN, 200 EN, 300 ENH.

Supply includes:

- 4 cover caps
- 12 handles
- 2 holders
- 16 washers
- 12 sliding blocks

To fit Model No.	Packs of	Model No.
4050.150/ 4050.200/ 4050.300	1 pc(s).	4050.221

Note: included with 9973.099



Accessories for assembly frame



Voltage supply for assembly frame

Charging station power pack for assembly frame 200 EN and 300 ENH.

Note: Must order for all 4050.200 and 4050.300 Assembly Frames sold for use in the USA.

To fit Model No.	Suitable for rated operating voltage	Packs of	Model No.
4050.200/ 4050.300	110V	1 pc(s).	4050.219

Note: included with 9973.099



Connection adaptor for voltage supply

Adaptor connector for the power supply to assembly frames 200 EN and 300 ENH.

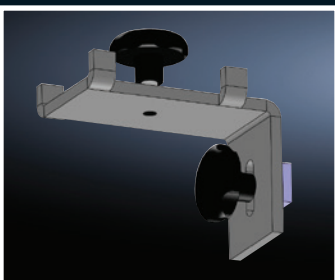
Design:

– USA, Canada, Central and South America, Japan.

Note: Must order for all 4050.200 and 4050.300 Assembly Frames sold for use in the USA.

To fit Model No.	Packs of	Model No.
4050.200/ 4050.300	1 pc(s).	4050.222

Note: included with 9973.099



U.S. Clamping Kit for non-Rittal mounting panels

Clamping will allow non-Rittal mounting panels to be secured to Assembly Frames.

Supply includes;

– 4 clamping brackets
– Assembly instructions

To fit Model No.	Packs of	Model No.
4050.150/ 4050.200/ 4050.300	4 pc(s).	9973.158

Note: included with 9973.099

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- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

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