Rittal – The System.

Faster – better – everywhere.

An appetite for perfection?

Rittal solutions for the food and beverage industry

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

FRIEDHELM LOH GROUP

One for all. Especially for you. “Rittal – The System.”

With tailor-made products, modern IT infrastructures and comprehensive service, Rittal offers specific solutions for every industry – for improved efficiency, greater added value and more security.

Contents

Today's food producers must meet stringent standards in terms of hygiene, efficiency and digitalisation if they are to remain competitive. Industry professionals must seek answers to a series of questions. Which enclosures can I use in which hygiene zone? How do I reduce the carbon emissions from my production? How can I ensure reliable, continuous data traceability? The industry-specific solutions from Rittal provide an ideal platform.
This brochure showcases our portfolio of solutions for the food and beverage industry.

Rittal – The System.
At home in every industry

Rittal is one of the world's leading providers of enclosure systems, automation solutions and infrastructure. Our products are used in more than 90 percent of sectors including industry, IT, energy and power, cooling and servicing. With a workforce of more than 9,200 and 65 subsidiaries, Rittal delivers bespoke, pioneering systems, including modular and energy-efficient data centres as well as solutions for the food and beverage industry.

Rittal's approach is to channel its hardware and software expertise into optimising processes at every stage of the value chain. Partners such as Eplan and Cideon complement our engineering solutions, while Rittal Automation Systems delivers automation solutions for switchgear manufacturing.

Rittal is committed to sustainability, the environment and an ethical management style. With our unequivocal delivery promise, standard products are delivered within 2 hours in Germany, and within 48 hours in Europe. Founded in 1961, the company is part of the Friedhelm Loh Group, winner of the "Best Place to Learn" award.

Every industry has its own specific needs. Knowing just what these are is the only way to offer a system that fits. A solution that combines both universal and specific aspects and which is both cost-efficient and customised. Our solutions do not just cater to certain segments; they also meet highly exacting requirements – **Yours.**

Custom-made solutions

Aviation industry

Safe solutions for the aviation industry

Automotive industry

Standardised system solutions that ensure operational reliability and efficiency

Oil & gas industry

Integrating innovative technologies into demanding processes

Energy sector

Making modern energy supply efficient and flexible

Infrastructure / Telecommunications

Optimising bandwidth and availability

Railway technology

Setting the points for the future with Rittal

Electrical engineering and automation

Boost productivity with automated panel building and switchgear manufacturing

Mechanical engineering

Controlling machines safely and efficiently

Maritime industry

Flexible on land and on the high seas

Food and beverage industry

Producing food hygienically and safely

Hygiene-compliant production in the food and beverage industry is regulated by law to ensure freshness and tolerance.

Discerning on every level. Food as a quality product

Exacting production conditions, the growing importance of food safety and digitalisation all pose major challenges for the food and beverage industry.

Clean work: Hygiene
In 2023, there were more than 300 food items recalled from circulation in Germany alone.[1] Meticulous hygiene is an absolute must, and this relies on optimum cooling/climate control to prevent the formation of pathogens, particularly in the case of fresh meat and poultry, dairy products, fruit and vegetables. Exacting standards and guidelines are rightfully and rigorously enforced by a wide range of regulations. Open processes in particular need systems and components to satisfy the most stringent hygiene requirements.

Sustainable manufacturing: Energy efficiency
Blue e+ cooling units could reduce carbon emissions in Europe by 3 million tonnes.[2] Alongside the quality of the products, resource consumption and pricing are the other main competitive factors in the food sector. High energy consumption levels are therefore a key cost driver. Moreover, climate change is creating a demand for solutions with a minimal carbon footprint and low F-gas emissions. These areas offer untapped potential for savings and sustainability.

Transparent information: Digitalisation
84 percent of food companies view digitalisation as an opportunity.[3] In these times of well-informed customers, financial success is dictated by fairly traded quality, transparent supply chains and new business models. What is more, highly automated operations are reliant on consistent equipment availability and maintenance-friendly machinery, because systems can be adversely affected by ambient conditions such as heat, dust and damp. Powerful IT systems, the Industrial Internet of Things (IIoT), digital value chains and predictive maintenance offer new prospects for the future in this regard.

Blue e+ cooling units
could cut carbon emissions in Europe by
3 million tonnes.

1 https://www.bvl.bund.de/SharedDocs/Pressemitteilungen/01_lebensmittel/2024/02_LMWarnungen.html
2 https://www.rittal.com/de_de/blue_e/new/public/en
3 https://www.lebensmittelverarbeitung-online.de/branchennews/bitkom-und-bve-umfrage-digitalisierung-bringt-transparenz-in-die-lebensmittelproduktion

Trust is good ...
Directives, standards and legislation

Meticulous hygiene in the food and beverage industry is not voluntary, but a legal requirement, as set out in numerous national, EU and international regulations.

European standards and directives

- EN 1672-2-2009-07 Food machinery/General design principles/Part 2: Hygiene requirements
- EN ISO 14159:2008-07 Safety of machinery – Hygiene requirements for the design of machinery
- EN 16001:2009-06 Energy management to improve energy efficiency
- Machinery directive 2006/42/EC binding
- Document 13 EHEDG guideline on the hygienic design of apparatus for open processes
- EU Regulation No. 517/2014 on Fluorinated Greenhouse Gases
- EU Hygiene Regulation (EC) No. 852/2004

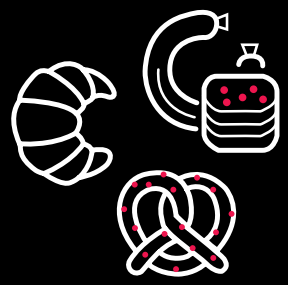
EU regulations

- 852/2004 on the hygiene of foodstuffs
- 853/2004 with specific hygiene rules for food of animal origin
- 854/2004 with specific rules for the organisation of official controls on products of animal origin intended for human consumption
- 1935/2004 on materials and articles intended to come into contact with food

In the interests of consumer safety, all regulations are designed to guarantee simple and thorough cleaning of production facilities. Food producers are inspected by recognised organisations to ensure that they meet these high quality standards.

Rittal Hygienic Design has been specifically designed to facilitate easier cleaning of the components, machinery and production equipment. Detailed requirements governing the material, design and use of equipment ensures that all statutory regulations are observed.

The subtle differences in the food industry



The subtle differences in the food industry
The equipment design, material type and its use apply in varying degrees and with variable weighting, depending on the product being manufactured. The multifood, dairy and beverage segments rely on company-specific solutions and measures to ensure a safe process and efficient production.

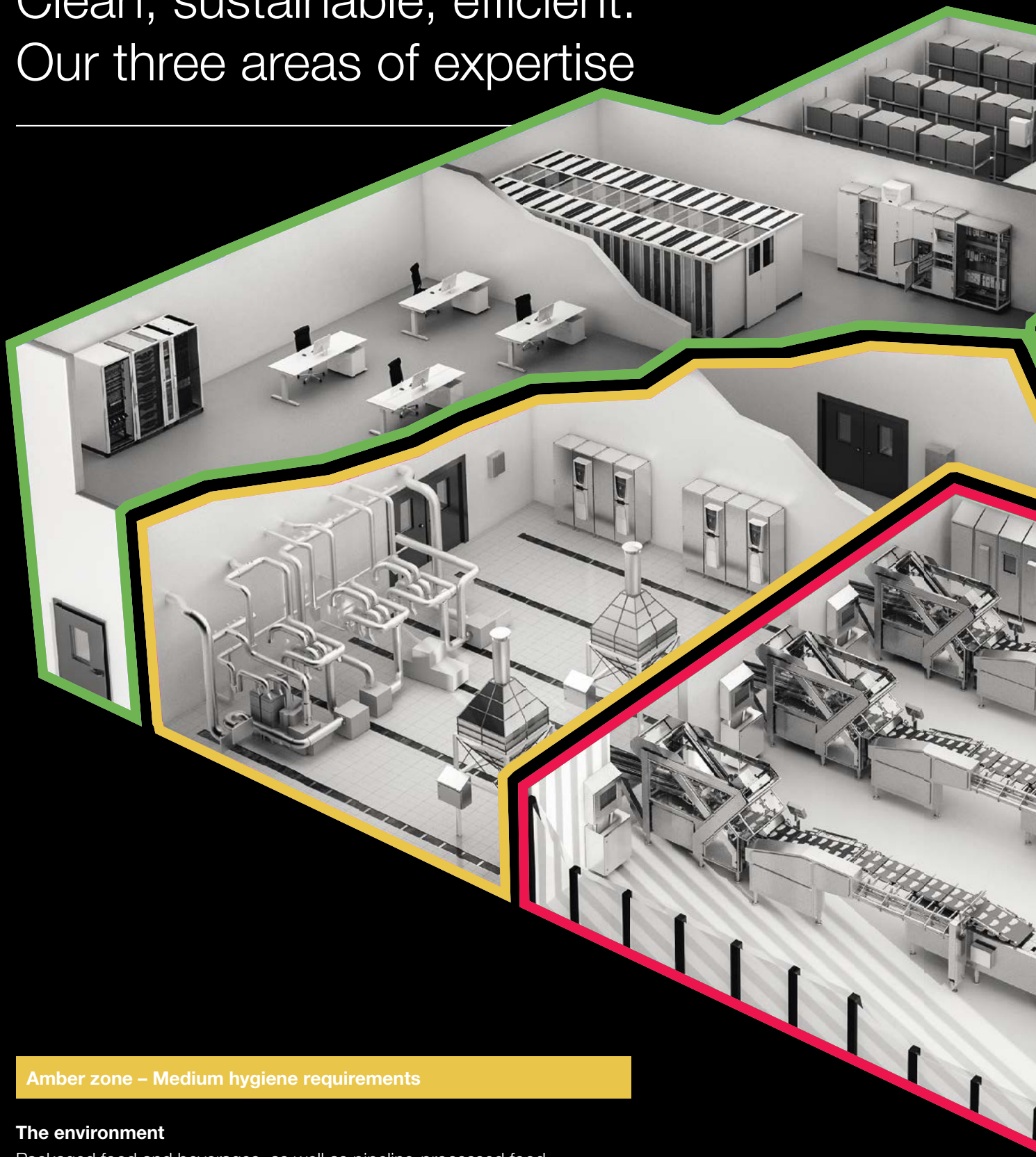
Foods
Food production must be exceptionally hygienic, efficient and fast to give discerning consumers the freshness, durability and optimum taste they demand. Daily cleaning cycles in cold environments guarantee clean production and compliance with hygiene standards, which are audited with random but regular inspections. Hygienic, reliable components are essential for ensuring a smooth production process.

Dairy products
Dairy products are a sensitive commodity, and a high level of automation is crucial. The proportion of closed and open processes varies according to the individual product. As the ambient conditions tend to be warm, there is an increased demand for powerful cooling units and bespoke climate control systems. Significant productivity gains can be achieved here with innovative IIoT solutions.

Beverages
Efficiency and continuous availability of machines is a top priority for the beverage industry. As the ambient conditions tend to be warm, this industry segment likewise needs energy-saving climate control solutions and carbon-free production where possible. Such operations must prioritise investments in measures that maximise digitalisation potential, minimise downtime or contribute to energy efficiency.

With hygiene-optimised enclosures, energy-efficient Blue e+ cooling units, IoT interfaces and edge data centres, Rittal has the best solutions to meet the specific requirements of each segment.

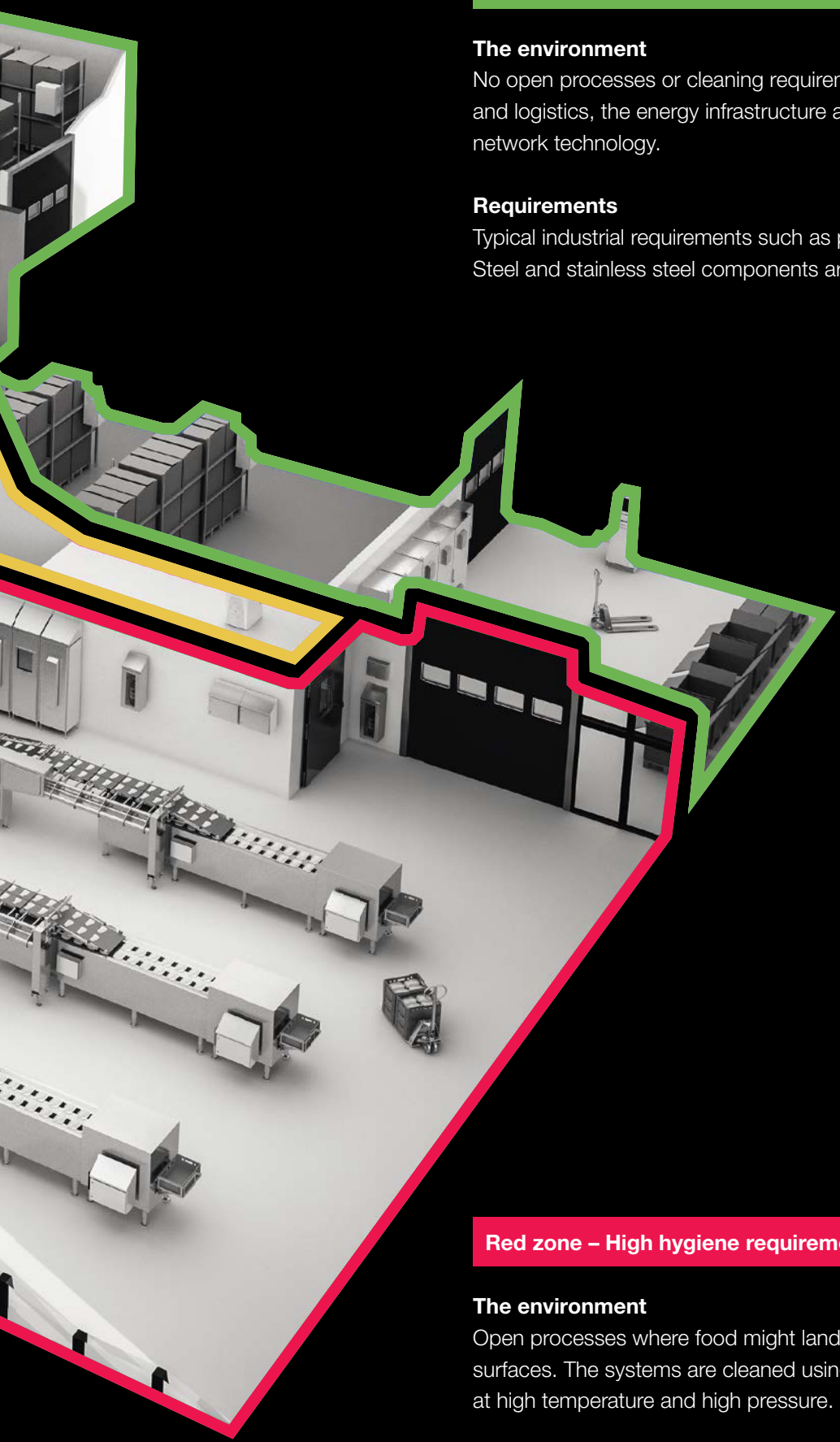
Clean, sustainable, efficient: Our three areas of expertise



Amber zone – Medium hygiene requirements

The environment
Packaged food and beverages, as well as pipeline-processed food.
The machinery and systems are cleaned at regular intervals, as are the floors and other heavy-traffic surfaces.

Requirements
Equipment must be resistant to water, corrosion and chemical vapours arising during the cleaning process.



Green zone – No hygiene requirements

The environment
No open processes or cleaning requirements. These zones are for storage and logistics, the energy infrastructure and switchgear, office areas and network technology.

Requirements
Typical industrial requirements such as protection from dust and water. Steel and stainless steel components are used here.

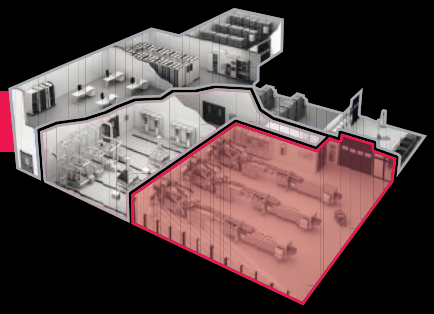
Red zone – High hygiene requirements

The environment
Open processes where food might land on the machines, floors or other surfaces. The systems are cleaned using aggressive detergents and water at high temperature and high pressure.

Requirements
The equipment should be able to withstand intensive cleaning. Hygienic Design products with a protection category of IP x9, slanting surfaces and silicone seals are generally used.

The right solution for every zone

Red zone – High hygiene requirements



Hygienic Design enclosures
Safer and cleaner with Hygienic Design enclosures, designed specifically for use in the food and beverage industry.

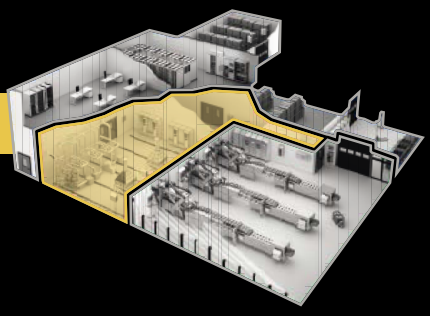
- Small and compact enclosures
- Large enclosures made from stainless steel in Hygienic Design options

HD wall-mounted air/water heat exchangers
Air/water heat exchangers 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.

Hygienic Design accessories
Hygienic accessories such as

- Levelling feet
- Wall spacer bracket
- Cable glands

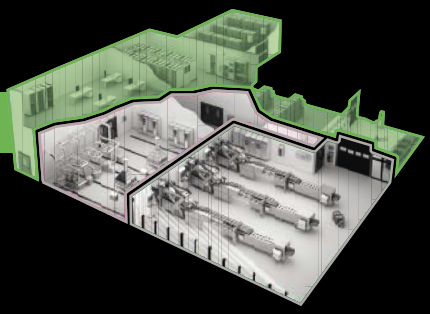
Amber zone – Medium hygiene requirements



Stainless steel portfolio
These robust stainless steel enclosures are your reliable allies for optimum plant protection. Our comprehensive stainless steel range provides versatile protection from external influences such as dust and humidity, while its flexible design adapts easily to a variety of applications.

Blue e+ cooling units
Energy-efficient Blue e+ wall-mounted cooling units in output categories 1600 W to 5800 W. Average energy savings of 75% can be achieved with speed-regulated components and heat pipe technology.

Green zone – No hygiene requirements



IT Infrastructure
Future-centric solutions for your IT infrastructure are efficient, secure and scalable. Rittal supplies customised complete solutions across the entire spectrum, from micro data centres through to data centres in containers.

Power distribution
Play it safe with super-flexible power distribution technology. Simple, secure assembly and user-friendly planning are what set our tested solutions apart.

Rittal ePOCKET – Enhanced efficiency and an improved workflow

Digitalisation can significantly boost efficiency and competitiveness in the food and beverage industry. The Rittal ePOCKET digital wiring plan pocket is an innovative solution designed to help your company to streamline processes and cut costs.

Challenging problems associated with documentation are commonplace in the food and beverage industry.

- Old equipment may need to be converted, upgraded or integrated.
- Minimum downtime and time savings are critical.
- Out-of-date documentation must be reviewed and updated in a time-consuming process.

Rittal ePOCKET can help customers create an easy-to-use workflow, whether for in-house departments or in collaboration with suppliers. The Rittal ePOCKET replaces conventional paper documentation and offers a central, secure storage space in the cloud for all Rittal enclosures. All relevant documents can be digitally retrieved at any time using a QR code or manually.

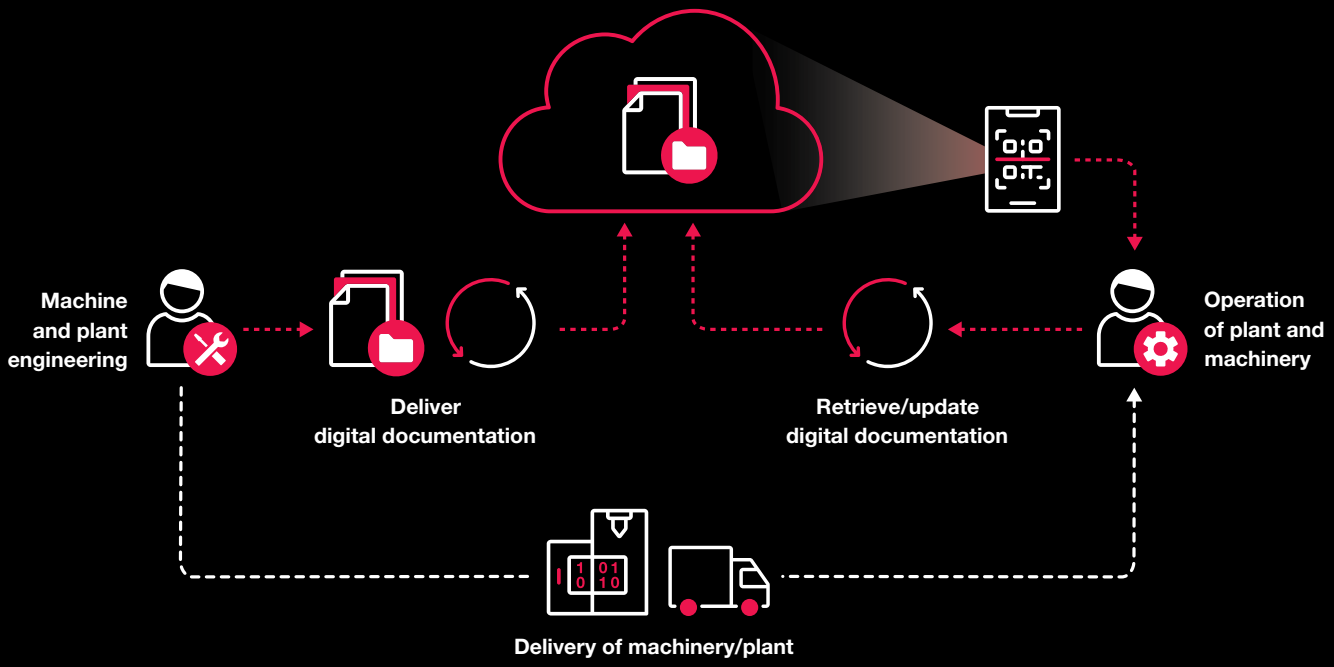
The all-digital process from wiring plan creation through to documentation in Rittal ePOCKET not only saves paper and time, but also reduces carbon emissions. Machine and plant documentation is delivered efficiently and in a future-proof form.

Your benefits:

- Simple data exchange between companies
- Easier collaboration between all project participants
- Efficient fault-finding – Plant documentation is always up-to-date
- Slash your maintenance and repair costs and minimise downtime

Rittal ePOCKET

Digital machinery and plant documentation



Future cloud solutions facilitate continuous communication between operators, planners, switchgear manufacturers and maintenance teams, while the digital twin accompanies the real enclosure in the digital wiring plan pocket.

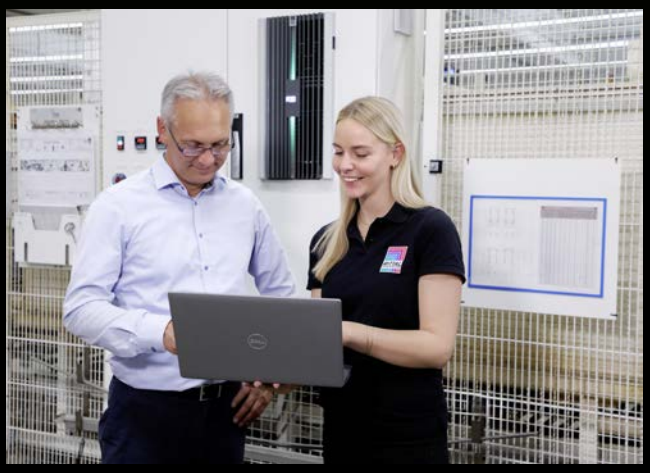
Rittal ePOCKET helps companies in the food and beverage sector to boost their efficiency, optimise processes, and successfully meet the challenges of digital transformation. At the same time, by eliminating paper documentation you are helping to cut carbon emissions and contribute to sustainability.

Your benefits:

- A superior overview, with central storage of all wiring plan documents
- Digital processes guarantee a rapid workflow for documentation amendments
- Up-to-date documentation ensures error-free working
- Track changes including notifications for transparent collaboration
- Easy access to comprehensive machine and plant documentation

Rittal 360° service – there for you anytime and anywhere

Sustainability and energy efficiency are among the biggest challenges facing organisations today.
At the same time, uptime of critical equipment still needs to be guaranteed in production processes at all times.
Downtime and performance losses cost time and money.
Rittal service provides comprehensive support – quickly, efficiently and globally.



Efficiency and service check

Is your cooling unit still efficient and up-to-date? Let us check it for you with the Rittal efficiency and service check! We capture data on site and check the general condition and service status of your equipment. By carrying out energy analyses, we show you how much you can save – for the sake of the environment and your budget.

- Overview of the current status of your equipment
- Illustration of energy consumption and costs as well as potential savings
- Specific and detailed programmes and initiatives for energy audits to ISO 50001

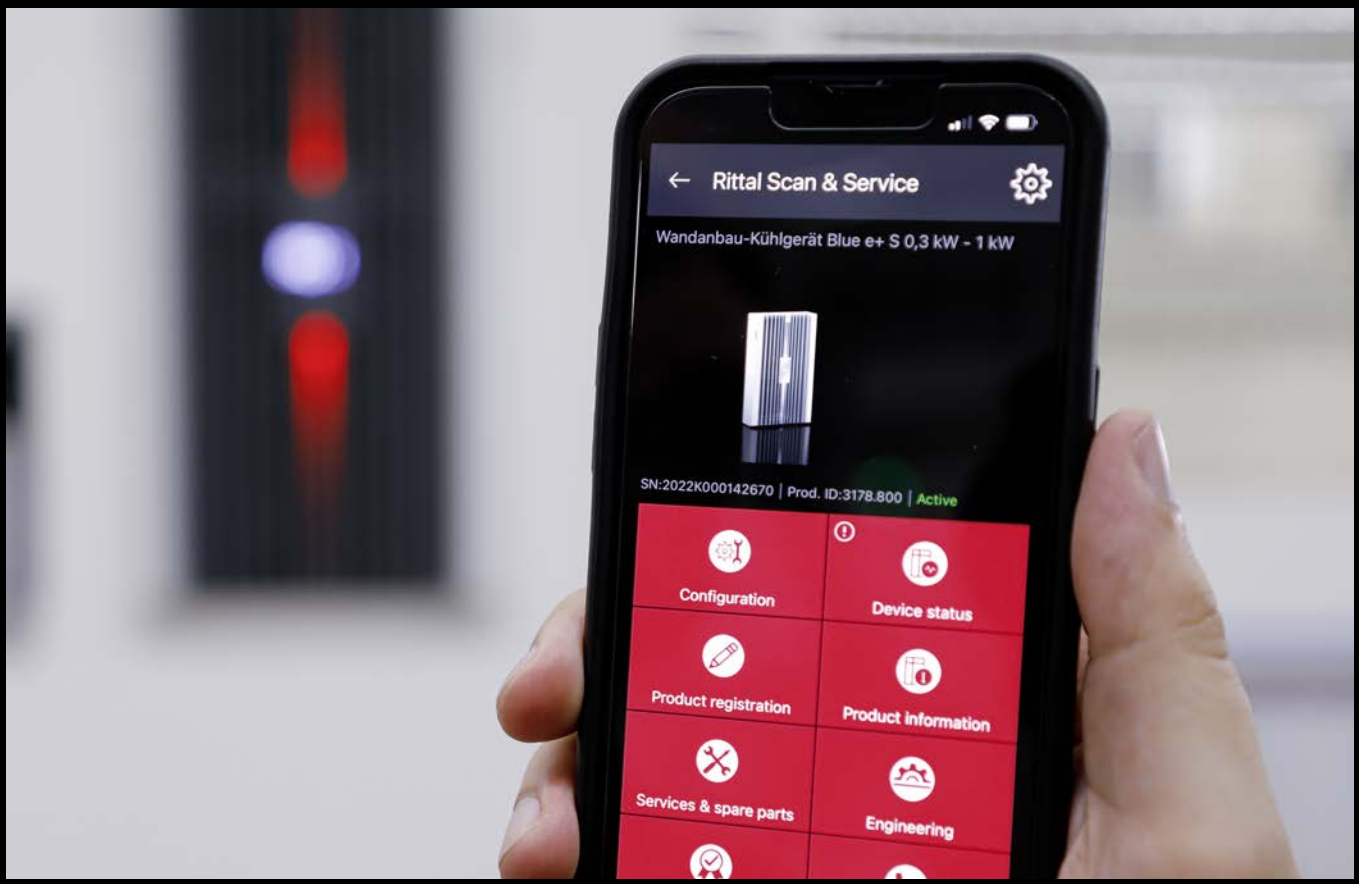
Service agreements

Would you like to be able to plan your maintenance and costs? The design of Rittal service agreements gives you the flexibility to tailor the scope of our services to your requirements and to choose from various service packages.

- Minimum downtime thanks to guaranteed response times
- Plannable service budget
- Peace of mind in daily operations

Rittal Scan & Service app – your digital product manager

Rittal is always there for you – even on your smartphone. The Rittal Scan & Service app helps you find relevant information relating to your units even faster. From configuring your cooling units to rapidly analysing faults and getting an overview of spare parts – our app offers you valuable benefits. That way, you always have an eye on the big picture.



Your benefits at a glance:

- **Time saving and efficiency increases** thanks to rapid parametrisation with our fast-copy function
- **Simple product management** with the aid of the QR scanning function
- **Comprehensive product information** thanks to technical data and product-specific guides
- **Minimisation of downtime and more efficient service call-outs** thanks to more accurate and focused first-time diagnosis
- **Optimised spare parts and accessories management** using the wish list function
- **Fast support** through simple creation and transmission of service reports, requests and notifications
- **Exclusive benefits** from product registration

Functions of the Rittal Scan & Service app at a glance

The Rittal Scan & Service app contains a whole host of features that simplify and speed up your operations:

NFC (near field communication)
All device parameters can be transmitted to the cooling unit quickly, easily and contactlessly via NFC.

Fast copy
This function enables you to easily transfer all the settings from one cooling unit seamlessly to other cooling units.

Spare parts and accessories
After scanning a product, finding the right accessories and spare parts and placing them on a wish list is quick and easy. You can then order them in the online shop with just a few clicks.

Product information
You can access all relevant product information, such as technical data, guides and various tutorials.

Initial diagnosis
If your cooling unit displays a notification, you can read it out via NFC yourself, making it easy to get recommendations for troubleshooting.

Service message
You can use the app to send service queries to Rittal round the clock or check the service contact details for your region.

Product list
You can manage your scanned products and create your own product lists.

Available on the App Store and Google Play

Download on the App Store

GET IT ON Google Play

Digital processes in food production

Digital processes are increasingly important for ensuring efficient, transparent food production where quality and safety are the top priorities. The use of digital technologies also extends to other areas, including the monitoring and control of production processes, stock management of raw materials and products, as well as product traceability at every stage of the supply chain.

Modern technologies such as sensors, automated systems and machine learning technologies help manufacturers to enhance product quality, cut costs and minimise errors. What's more, logging consumer data and preferences enables targeted food production and the development of new products.

The food and beverage industry poses a number of challenges, including food safety, hygiene, resource consumption and the growing importance of digitalisation, all of which need suitable solutions. This is where RiMatrix Micro Data Centers come into play, by keeping your IT up and running in even the most challenging environments.

As a complete solution for your IT infrastructure, RiMatrix Micro Data Centers meet the following food production requirements:

1. Next-level solutions for your process and manufacturing industry: RiMatrix Micro Data Centers will help ensure the consistent digitalisation of your production lines. Their standardised solutions can be adapted to different production locations.
2. Processing of critical sensor data: RiMatrix Micro Data Centers process critical sensor data for quality and hygiene monitoring in real time. This guarantees hygiene and process safety and protection from contamination.
3. Cooling and monitoring of all manufacturing processes: RiMatrix Micro Data Centers deliver consistent cooling and monitoring of all manufacturing processes. They reliably monitor temperature, humidity, leaks and smoke with integral extinguisher systems.

As state-of-the-art IT systems at the very heart of many companies today, RiMatrix Micro Data Centers also offer a host of other convincing benefits:

- Suitable for use on production lines for beverages and luxury foodstuffs.
- Standardised modules allow flexible extendibility, dismantling and reassembly.
- Hygienic protection from heat and all types of contamination in production.
- The monitoring of temperature, humidity, leaks and smoke, including extinguisher systems, are also supported.
- RiMatrix Micro Data Centers stand out with their energy-efficient climate control based on innovative cooling technologies from Rittal.
- They meet international safety standards.
- The OT modules are perfectly coordinated.
- Plausibility checks guarantee operability.
- Standard components for short delivery times.

84%

of food producers questioned view **digitalisation as an opportunity.**[4]

4 https://www.lebensmittelverarbeitung-online.de/branchennews/bitkom-und-bve-umfrage-digitalisierung-bringt-transparenz-in-die-lebensmittelproduktion

Your gains:
Added value and benefits

Rittal ensures fast planning, assembly/dismantling and commissioning. We translate trends into innovative products and are always close at hand. Faster – better – everywhere.
We're here to help you.

Enhanced efficiency in the food industry
Rittal's industry-specific solutions provide tangible benefits and added value for its end clients. Food and beverage companies benefit in particular from significant efficiency gains in production.

Specifically, our customers enjoy the following benefits:

- Greater reliability with certification and audits
- Faster, more effective cleaning for greater productivity
- Energy-saving climate control for carbon-neutral production
- Servicing and maintenance to minimise machine downtime
- Global availability and short delivery times for standard products and accessories
- Quality leadership on the market
- Simple supply of spare parts

Integrated solutions for machinery and plant manufacturing

For machine manufacturers that supply the food industry, Rittal offers attractive opportunities to underpin their market position as leading innovators:

- The right product available off the shelf for every hygiene zone
- Smart software solutions for efficient, integrated engineering with Rittal configurators and Eplan Solutions
- Support for smart engineering scenarios with intelligent products such as Blue e+, IoT, CMC III and smart monitoring

Innovative solutions for planners

Rittal provides system designers and planners with access to tried-and-tested solutions and systems that can be tailored to a specific project planning task, to enhance their expertise with innovative infrastructures:

- Minimal liability risk
- Based around current standards – State-of-the-art building planning technology
- Our high quality and up-to-date industry knowledge makes us a valued contact for food producers

Food and beverage sector:
Superior, efficient and intelligent Rittal solutions.

Powerful partners for the food industry

Save time on system expansions, updates or retrofits and at the same time increase your production.

Digitalisation and integration.
Clear efficiency gains

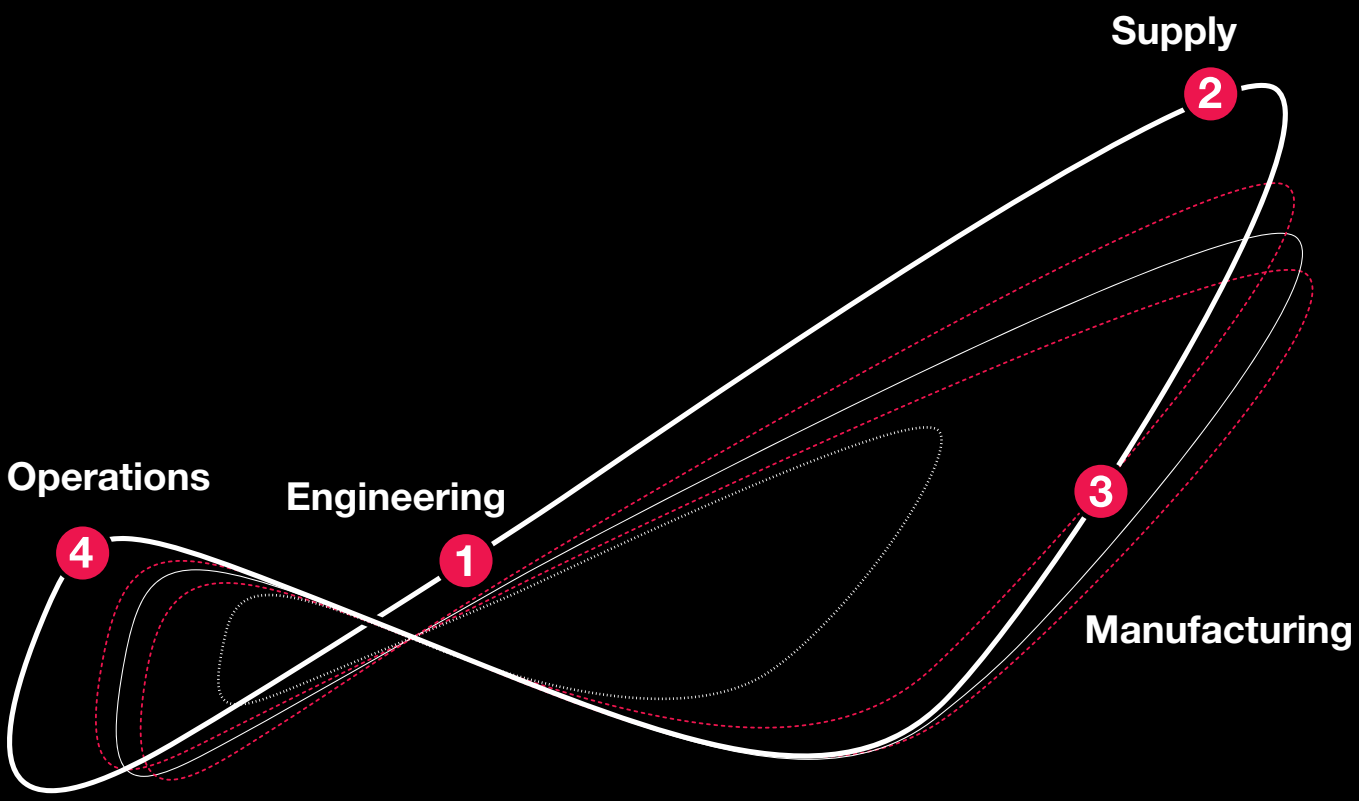
With incredibly tight food production cycles, the industry is always under huge time and cost pressure. Apart from delivering a delicious product, competitiveness relies on an efficient process and high plant availability. From the original specification, planning and design, to ordering, production and delivery, through to the after-sales service, food producers should collaborate closely with their machine suppliers and switchgear manufacturers, and consider the entire value creation chain. This will help them to boost their efficiency and gain market advantages.

Joining forces to add value

Powerful partners Eplan and Rittal have a shared philosophy: To make complex things simple. Our solutions speed up your processes and boost your productivity. We optimise and industrialise every stage in your value chain and across the entire process – from design, planning and engineering, procurement and manufacturing through to operation and IT. With our help, you can triumph in the industrial transformation to the new Industry 4.0 standard.

Our goal:
Yesterday, we devised the solutions our customers will need tomorrow, and we are already stocking them today.

Rittal and Eplan. Your partners for the future.
We think in terms of your processes.



Everything from a single source: Eplan Solutions

By digitalising your processes and standardising 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,
Senior Vice President,
Professional Services Eplan

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.

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 record engineering data, even at the pre-planning 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 platform

Harry-Brot: Energy savings of 60 percent with Rittal Blue e+ S cooling units

Soltau is something of a hotspot. When the ovens at Harry-Brot reach over 200 degrees Celsius, the bread rolls and loaves aren't alone in feeling the heat. The company's staff and equipment also work up a sweat.
Despite a room air temperature of 45 degrees, everything needs to run like clockwork – excellent test conditions for the new Blue e+ cooling units from Rittal.

A wonderful aroma of bread fills the air. Every day, the ovens at Harry-Brot in Soltau turn out products including some 180,000 sandwich loaves. Freshly baked, they make their way through the production section and are then packaged and loaded into lorries to embark on their journey to supermarkets across Germany. To ensure everything goes like clockwork, systems need to be in continuous operation. It hasn't always been that way, however. Heat-related breakdowns used to be a regular occurrence at the plant. These were mainly caused by the failure of control technology installed in enclosures, and the consequences were huge. “When our systems go down, it also brings our lorries to a standstill, and we are unable to deliver our bread. That's a big problem, because our customers expect to find fresh bread on the supermarket shelves every day,” explains Björn von Frieling, the site's Workshop Manager.

Our systems are reliable, and we have roughly halved our energy consumption.

Björn von Frieling
Workshop Manager at Harry-Brot in Soltau

Every day, the ovens at Harry-Brot in Soltau turn out products including some 180,000 sandwich loaves – a real climate control challenge for equipment and systems.

Even though temperatures outside the enclosure can often reach 45 degrees, temperatures inside are much, much higher. They have been measured at between 60 and 70 degrees in the past – hardly the ideal conditions for sensitive electronics, especially when installed in relatively small compact enclosures. Rather than climate control units, Harry-Brot had simply been using fan-and-filter units for these enclosures. The reason for this was simple. “Cutting-edge, energy-efficient Blue e+ cooling units from Rittal were previously only available with high cooling outputs of at least 1.6 kW – definitely too high for our purposes,” explains von Frieling. He was therefore delighted when Rittal launched the new Blue e+ S-units with lower cooling outputs. “These are ideal for the levels of heat generated by our application. In consultation with the Rittal sales team, we agreed on a trial here at the plant to put the units through their paces in our operation,” he says.

Surprising test result

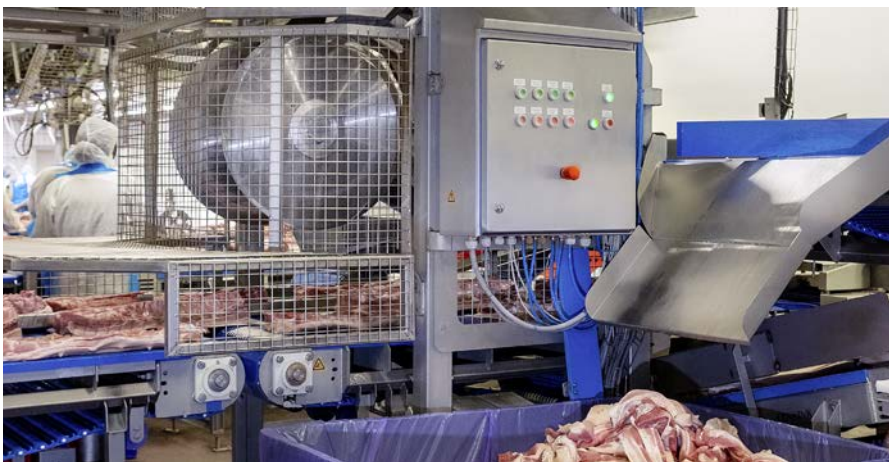
Besides ensuring high system availability, Harry-Brot also considers reducing the company's carbon footprint to be a top priority and therefore prefers to invest in energy-efficient technologies. Accordingly, it used the trial to compare a new energy-efficient Blue e+ S cooling unit with a Blue e unit that had also previously been available with a lower cooling output. For both units (500 W), the energy consumption was measured continuously during the trial. The result for the first five months surprised von Frieling. “I wouldn't have expected a result like that,” he reveals. The Blue e+ S unit consumed just 248 kWh of electrical energy, compared with 626 kWh for the Blue e unit. This corresponds to savings of 60 per cent over the entire test period and 884 kWh for the year as a whole. Based on an average industrial electricity price of around 26 cents per kilowatt-hour, Harry-Brot can thus achieve an annual saving of around 230 euros per cooling unit. What's more, Blue e+ S units come with integrated condensate evaporation. Excluding the proportion of energy consumption accounted for by this function, the saving is over 260 euros per cooling unit.

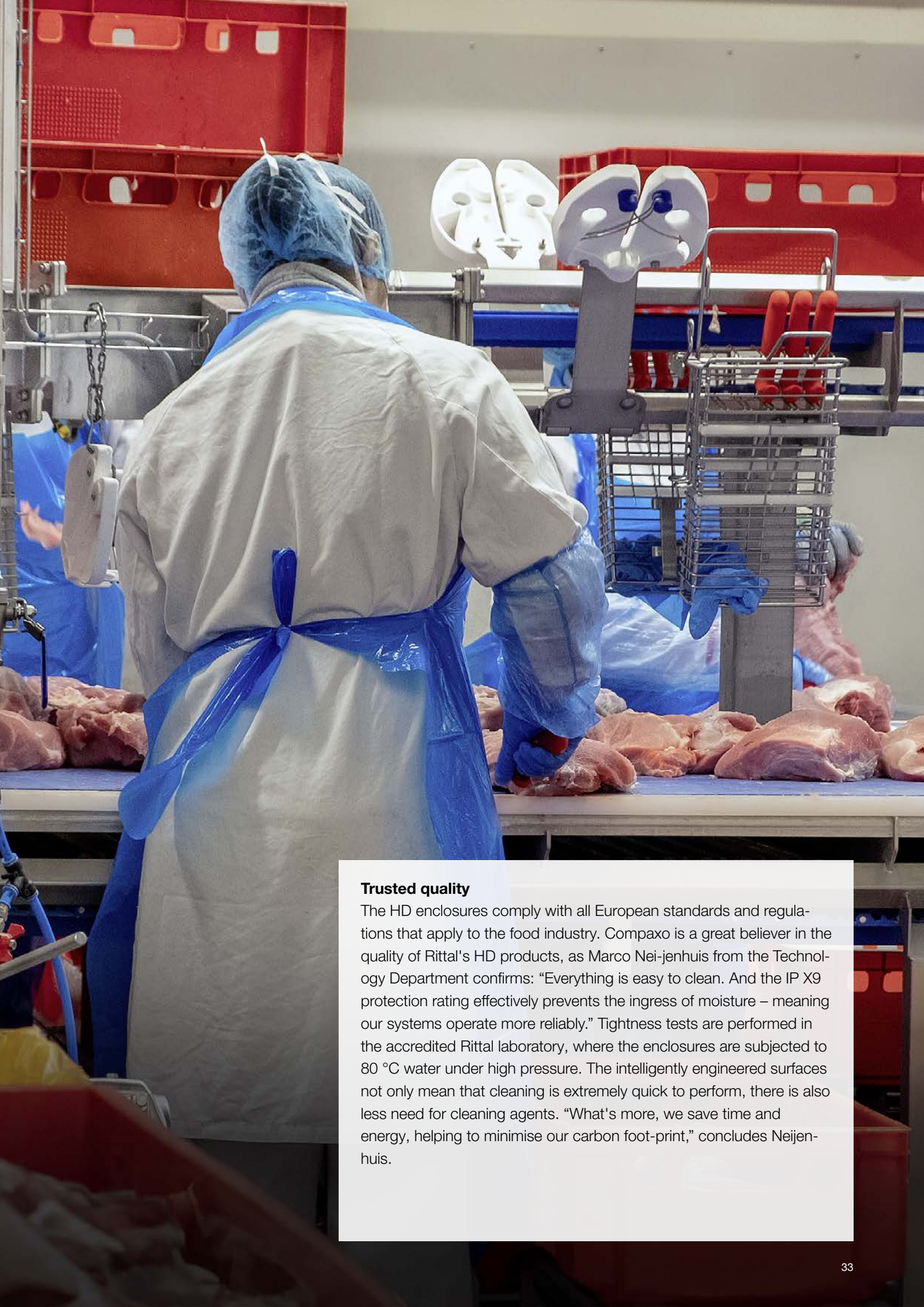
Compaxo:
Better bacon with Rittal HD enclosures

Hygiene is an absolute must in the food industry. But so, too, is the smooth running of production systems. This is especially true for a major slaughterhouse such as Compaxo in the Netherlands, which processes around 35,000 pigs every week. The company sources its housings and enclosures exclusively from Rittal. These offer robust protection for electronic components and boast a hygienic design suitable for all areas of production.

Hygienic design (HD) is essential for products deployed in the food industry. HD is based on very specific principles. For instance, all surfaces and parts must be easy to clean. They are therefore shaped to avoid the accumulation of dirt and dust. Moreover, there are other features that safeguard cleanliness in manufacturing: For example, Rittal's HD enclosures have an all-round seamless silicon seal that can be easily replaced – and is coloured blue. This ensures that if any part of the seal should break off, potentially contaminating the food, it can be easily detected and removed. The enclosure hinges are located underneath the seal, simplifying exterior cleaning. Specially designed stainless steel closures further aid efficient, reliable hygiene. The upper sides of the enclosures are inclined at 30°, helping liquids to drain away easily and discouraging employees from depositing unwanted items.

> Rittal gives us enhanced workplace hygiene.
>
> Marco Neijenhuis,
> Technology Department, Compaxo





Trusted quality

The HD enclosures comply with all European standards and regulations that apply to the food industry. Compaxo is a great believer in the quality of Rittal's HD products, as Marco Nei-jenhuis from the Technology Department confirms: “Everything is easy to clean. And the IP X9 protection rating effectively prevents the ingress of moisture – meaning our systems operate more reliably.” Tightness tests are performed in the accredited Rittal laboratory, where the enclosures are subjected to 80 °C water under high pressure. The intelligently engineered surfaces not only mean that cleaning is extremely quick to perform, there is also less need for cleaning agents. “What's more, we save time and energy, helping to minimise our carbon foot-print,” concludes Neijenhuis.

Nestlé PTC: Electricity consumption slashed by 72 percent

When you enter the heart of Nestlé's coffee research lab in the Swiss town of Orbe, it's like being invited into a maze. The production hall at the Nestlé Production Technology Center (PTC) houses countless cables, machines and control panels. One field of development is the fine-tuning and improvement of Nespresso capsules. For decades, these halls have also been used to refine the freeze-drying process for roasted coffee. Thanks to a slew of successful product innovations, the Nestlé research centre is now the Group's flagship technology centre for the use of new process technologies. The PTC uses the combined expertise of countless partners, and operations staff agreed to undertake a trial comparing the energy efficiency gains achievable with Rittal Blue e+ versus a standard cooling unit.

> We are always motivated to gain genuine innovations and establish a foothold in the market.

Philippe Demarque,
Project Leader at Nestlé PTC Orbe

The food industry requires both process heat and continuous cooling, with maximum energy efficiency.

Focus on saving cooling energy

The food industry requires both process heat and continuous cooling, with maximum energy efficiency. Alongside the cold storage and freezing of foodstuffs, the cooling of critical electrical equipment also uses a lot of energy. Continuous heat dissipation is needed to guarantee constant temperatures inside the enclosure. Rittal approached Nestlé PTC with the idea of pitting a conventional Blue e cooling unit against one of its latest-generation Blue e+ units. Both units were mounted on identical Rittal enclosures already in use at the customer's factory. For the duration of the test, Rittal not only supplied the new climate control device but also provided measurement records and measuring instruments. It soon became clear that the Rittal Blue e+ option massively improves energy efficiency. Based on the results, electricity consumption during the test phase is expected to be around 72 percent lower with the Blue e+ unit than with the older Blue e standard unit.

Active and passive cooling

Enclosure cooling has taken a quantum leap forwards with the latest generation of Blue e+ wall-mounted cooling units. Rittal has succeeded in incorporating two heat transmission technologies into one device. Firstly, the speed-controlled compressor ensures optimum cooling output. Secondly, the refrigerant fills the volume of the heat pipe in both its liquid and vapour state. At a certain point in the pipe (in the evaporator coil), heat is transferred from the interior of the enclosure to the liquid, which then evaporates. This creates a pressure difference in the interior of the pipe, so that the vapour produced rises to the top near the condenser. The latent heat previously absorbed is emitted to the ambient air and the refrigerant changes its aggregate state from vapour back to liquid. Thanks to the power of gravity, the liquid refrigerant flows back into the evaporator coil and the cycle begins again. However, this principle can only work if the temperature outside of the enclosure is lower than the interior temperature. The heat pipe supports free cooling without external interference.

Manner:
Rittal safeguard documentation

The cost and energy savings were the main factor in opting for the cold aisle solution, another point in Rittal's favour.

Richard Freitag,
IT and network operation, Manner

A fine aroma of ground cocoa beans pervades the air in Vienna. Manner has been producing its popular wafers in the Austrian capital for more than 100 years. This traditional company is currently investing heavily in a new production site, including a revamped headquarters with a brand new data centre, for which Rittal supplied the IT infrastructure. All areas of the food and beverage industry are required to keep detailed production records allowing product traceability and ingredient listing. A reliable IT system is therefore crucial.

Joint planning
Rittal's task was to equip the data centre with IT racks and energy-efficient climate control for reliable server operation, while also ensuring temperature, humidity and leak monitoring with a connected alarm and a redundant power supply. Manner's entire IT team got involved in planning the data centre.

Focus on energy efficiency
The Manner servers were accommodated in 14 Rittal TS IT racks, arranged in two rows facing one another to form the cold aisle. The aisle housing prevents cold and warm air from mixing, as this would adversely affect the energy footprint. Door and roof components separate hot and cold air in the data centre. By preventing the air flows from mixing, the efficiency of the cooling system is increased, which in turn improves energy consumption and helps to conserve the power reserves of the climate control technology.

Reliable maintenance included
Manner also operates a monitoring solution from Rittal. The Computer Multi Control III (CMC III) system uses sensors in the racks to monitor temperature and humidity, while any leaks trigger an alarm. A central fault signal unit notifies the technical support service in the event of malfunctions. Cooperation between Rittal and Manner extends beyond the system commissioning, with a service package which also includes a customised maintenance contract.

The Manner servers are accommodated in 14 Rittal TS IT racks, which are arranged in two rows facing one another to form the cold aisle.

Coca-Cola Europacific Partners: 90 percent reduction in electricity consumption measured

The slogan “This is forward” is central to the sustainability agenda of Coca-Cola Europacific Partners (CCEP) – the largest independent bottler of the Coca-Cola Company's soft drinks. The agenda's goals are ambitious. By 2030, the beverage producer is looking to achieve a 30 percent reduction in greenhouse gas emissions compared with 2019 – at its Genshagen plant and 13 other sites in Germany. By 2040, it is aiming to achieve climate neutrality. The focus is on packaging and raw materials.
“For example, we are continuing to ramp up our business with reusable containers and want our airbag packaging to be made from 100 percent recycled PET. Production accounts for 9 percent of CO_2 emissions, and we are looking for optimisation potential in this area, too,” explains Quality and Food Safety Manager Florian Happe, who was also responsible for energy management at CCEP until 2021.

Comparative measurement over a 12-month period

Certifying the plants as CO_2-neutral step by step involves examining every detail and looking for potential ways to make further energy savings. One impressive strategy identified at the plant in Genshagen, near Berlin, was replacing old cooling units with Blue e+ cooling units from Rittal, which offer significant energy-saving potential thanks to their hybrid technology.
The budget was soon approved and the units were replaced. That was not enough to obtain certification, though. “The savings Rittal predicted sounded good, but we had to provide proof in order to obtain ISO 50001 certification,”

While the bottles rattle by, the Rittal Blue e+ cooling units reliably do their job – despite the significant seasonal temperature fluctuations that can occur in the bottling plant.

We're constantly looking for potential to make savings and found what we were looking for in the Rittal Blue e+ cooling units.

Florian Happe,
Quality and Food Safety Manager, CCEP

recalls Mario Drescher, Environmental and Energy Coordinator at CCEP in Genshagen. “I therefore carried out a comparative measurement between an old unit and a new Rittal model over a 12-month period. If I hadn't taken the measurements myself, I wouldn't have believed it. The energy requirements were 90 percent lower,” he reveals.
The cooling solutions' energy efficiency is a big plus for CCEP, but not the only benefit. The beverage producer also requires maximum system availability to ensure on-time deliveries and thus satisfied customers. “Our lines need to keep running, even during increasingly hot summers. Anything that helps reliably prevent downtime is good, and that includes perfect cooling of the enclosures to ensure the technology doesn't overheat,” continues Drescher.

Blanket replacement – but how?
Following the successful replacement of the units in Genshagen, CCEP was very interested in working with Rittal to extend the roll-out to its remaining 13 plants. Once a trial at the CCEP plant in Lüneburg had confirmed the extent of the savings, there was nothing standing in the way of the follow-up project. But how do you actually accomplish a blanket switchover of this kind? Norbert Borchert from the Aftermarket Field Sales team at Rittal explains. “In such cases, we analyse the current situation on site. On this basis, we then calculate potential savings and propose tailored solutions geared to the requirements. After all, a 1:1 replacement of units often also means a 1:1 reproduction of errors,” he says. Borchert is well aware that, in many cases, the technology inside the enclosure will have changed since the original cooling units were installed, so the dimensioning will no longer be appropriate. CCEP needed a higher cooling output than before in some places, but requirements were actually lower in some instances.

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