Rittal – The System.

Faster – better – everywhere.

Digitalized and networked.

IIoT solutions for the entire shop floor.

ENCLOSURES POWER DISTRIBUTION CLIMATE CONTROL IT INFRASTRUCTURE SOFTWARE & SERVICES

RITTAL

FRIEDHELM **L O H** GROUP

Industrial Internet of Things.
Concepts – Products – Services.

Fast, uninterrupted, automated production

Ever shorter product life cycles and growing order complexity are revolutionising the demands placed on modern manufacturing. The future-proof factory uses intelligent networking for its production processes. This creates considerable potential for process optimization, enables real-time transparency and enhances production availability.

Forward-looking solutions and demand-based smart services

Rittal is driving the development of IIoT with its own solutions and smart services: Enclosure monitoring sensors, smart cooling solutions and cloud computing support intelligent data analysis. In this way, operating, service and energy data for all enclosure and cooling units is available in real time. Rittal combines this real-time data management with expert knowledge and cutting-edge smart services that are tailored to specific customer needs.

In this way, we help companies to boost the reliability of their production sites, optimize energy consumption and drive digitalization forwards.

Award-winning
The Rittal IoT interface won Silver in the Golden Mousetrap Awards 2019

Rittal IIoT solutions in practice.

Your end-to-end benefits with intelligent products and smart services.

Fire monitoring to boost operational reliability

Door monitoring for optimum protection of power electronics

Access control to prevent unauthorized access

Humidity monitoring for early detection of limit value violations

Temperature monitoring for early detection of excess temperatures
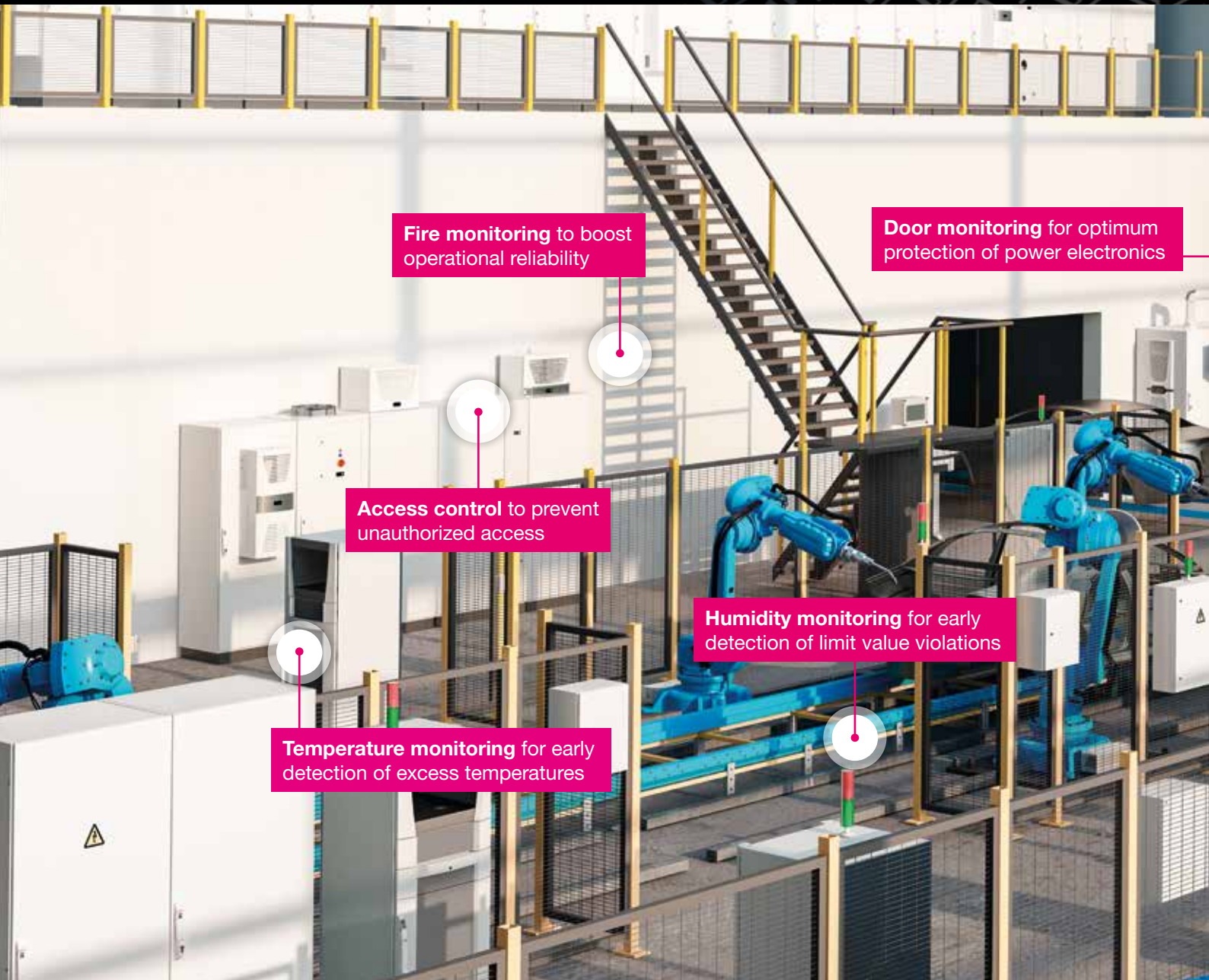
Industry 4.0 scenarios such as predictive maintenance are based on data supply and networked communications. This relies on IoT-compatible devices that are equipped with the relevant communication capabilities.

Rittal's new IoT interface creates the basis for optimum integration of cooling units, chillers and sensors into Industry 4.0 applications. This facilitates end-to-end communications from the sensor to the cloud as well as connection to higher-level monitoring or energy management systems. Reap the benefits with Rittal IIoT solutions for the entire shop floor: From sensors for enclosure monitoring, condition monitoring of enclosure and process cooling and edge data centres to our comprehensive range of smart services.

Rittal Smart Service

For smart, preventive maintenance

Edge Data Center for real-time processing of large data volumes

Condition monitoring – Enclosure cooling to boost system availability

Condition monitoring – Process cooling to boost process availability
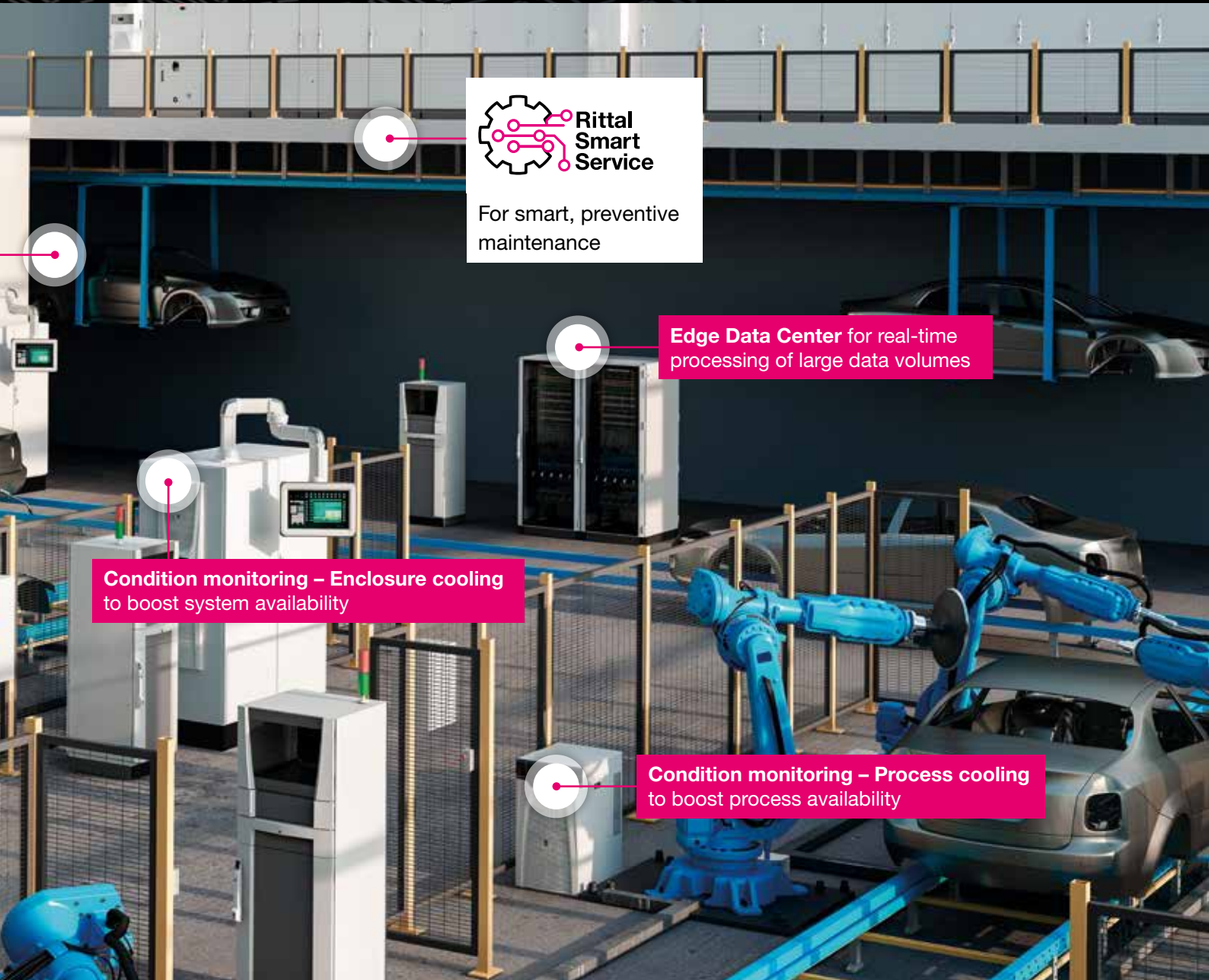
Condition monitoring
Enclosure and process cooling

A failure in the enclosure and process cooling system can quickly lead to unplanned plant shutdowns and expensive downtime and consequential costs.

In conjunction with the IoT interface, all Rittal chillers in the Blue e+ series and all cooling units in the Blue e and Blue e+ series can now be retroactively networked and digitalized without affecting the automation logic. Plug and run: The IoT interface is quickly and conveniently configured and commissioned via the integral web server without the need for programming. This digital retrofit supports the latest condition monitoring technology and will significantly boost your system availability.

Your advantages

- Continuous monitoring of temperature levels and temperature accuracy
- Prompt action if a threshold value is exceeded
- Automatic notification of cooling unit and chiller malfunctions
- Temperature logging and energy efficiency analyses
- Avoidance of downtime costs and consequential damage
- Remote access: Remote configuration of device parameters

Operating & monitoring

IoT, SCADA, MES and ERP systems

Further information
The Blue e IoT adaptor (Model No. 3124.310) is additionally required for networking cooling units in the Blue e series.

Go to product
Blue e IoT adaptor
(3124.310)

Go to product
IoT interface
(3124.300)

Operating & monitoring

IoT, SCADA, MES and ERP systems

Rittal cooling unit

IoT interface

Blue e IoT
adaptor

Rittal cooling unit

IoT interface

Rittal chiller

Condition monitoring
Sensors for enclosure monitoring

Nowadays, factories rely on the use of smart components. Rittal sensors facilitate reliable monitoring of a wide range of switchgear parameters.

Your advantages

- Enhanced operational reliability
- Enhanced system availability
- Early detection of possible failures
- Easily integrated into IoT, SCADA, MES and ERP systems

Operating & monitoring

IoT, SCADA, MES and ERP systems

IoT interface

Rittal enclosure

Rittal IIoT bundles

Rittal IIoT starter bundles contain everything you need for rapid access to the Internet of Things:

IoT interface, sensors/hardware tailored to your specific application and connectivity

IIoT bundle – Humidity monitoring

Enclosures sited outdoors are often exposed to temperature fluctuations and high levels of humidity, leading to the formation of condensation. The IIoT "humidity monitoring" bundle allows you to monitor the relative humidity inside the enclosure from anywhere in the world.

IIoT bundle – Fire detection

Damaged and defective conductors increase the risk of fire in switchgear systems. The IIoT "fire detection" bundle ensures that fires are reliably detected as they start to develop.

IIoT bundle – Temperature monitoring

Temperatures are a critical indicator of the service life and performance of electronic components. The IIoT "temperature monitoring" bundle allows you to monitor temperature readings in switchgear and machine beds from virtually anywhere in the world.

IIoT bundle – Door monitoring

Enclosures protect the devices inside, and also protect humans from electric shocks. To permanently guarantee both these functions, enclosure doors should never be left open during regular operation. The IIoT "door monitoring" bundle permanently monitors the door status (open / closed).

IIoT bundle – Access control

Access to control cabinets with safety-critical and sensitive electronics must be limited to authorized individuals. Unauthorized access can soon cause serious damage. The IIoT "access monitoring" bundle allows you to centrally administer access to the enclosures via the network, with no need for keys or lock systems.

Rittal Edge
Real-time data available on site.

Digitalization is transforming your production. Industry 4.0 is paving the way for digital twins, predictive maintenance and smart factories.
Sensors in machines and their components are interlinked, enabling data processing and communication in real time.

You can optimize your production processes by ensuring that all data is analyzed as quickly as possible. The Edge Data Center allows you to manage this information and make it available in real time to improve product quality, traceability, and availability.

Your advantages

- Rapid implementation of a flexible IT environment for IoT applications in an industrial setting
- Standardized solutions for cost-effective digitalization incorporating both OT and IT components
- Minimal latency, because data is processed at the point of origin
- Digital processes are protected by a high-MTBF IT infrastructure
- Easily scalable for different sizes and cooling outputs

Fast configuration

The Rittal Edge Data Center is a platform enabling the rapid configuration of solutions for flexible use in any IT environment. The assemblies are available in various output categories and can be combined to create a ready-to-use solution in next to no time. This makes it much faster for companies to implement a data centre with optimum operating efficiency.

Use the Edge Data Center Configurator to help you configure complete turnkey private cloud solutions with ease.

Go to the Edge Data Center
Configurator

Rittal Smart Service
Maximum availability through preventive maintenance.

Rittal Smart Service visualizes the behaviour of your Blue e+ series cooling units and chillers, helps you identify maintenance requirements via remote monitoring, guarantees early detection of critical faults, and uses data-based error diagnosis for swift troubleshooting.

Create energy efficiency reports, analyze cost and CO_2 savings and access trouble-shooting recommendations via the Rittal Smart Service Portal, which uses real-time data.

Event-based recommendations from Rittal service experts, coupled with analysis of your equipment data using manufacturer know-how, provide the ideal basis for predictive maintenance.

Your advantages

■ Asset management and control of maintenance measures

■ Visualization of device data via the web portal (condition monitoring) including visualization and monitoring of device data via the Smart Service Portal (condition monitoring)

■ Access to operating and temperature characteristics

■ Energy efficiency reports and analyses

■ Situational recommendations based on manufacturer expertise

Your benefits

■ Enhanced machine availability

■ Reduced servicing costs, thanks to requirement-driven maintenance

■ Fast problem analysis and troubleshooting using remote diagnosis

■ Enhanced service efficiency

Blue e+ generation

iNNOVO CLOUD

Smart Service Cloud
- Unidirectional, encrypted data transmission
- Certified Cloud in Germany

GERMAN EDGE CLOUD

Data analyses

Based on manufacturer expertise
- Development of intelligent algorithms
- The basis for preventive maintenance
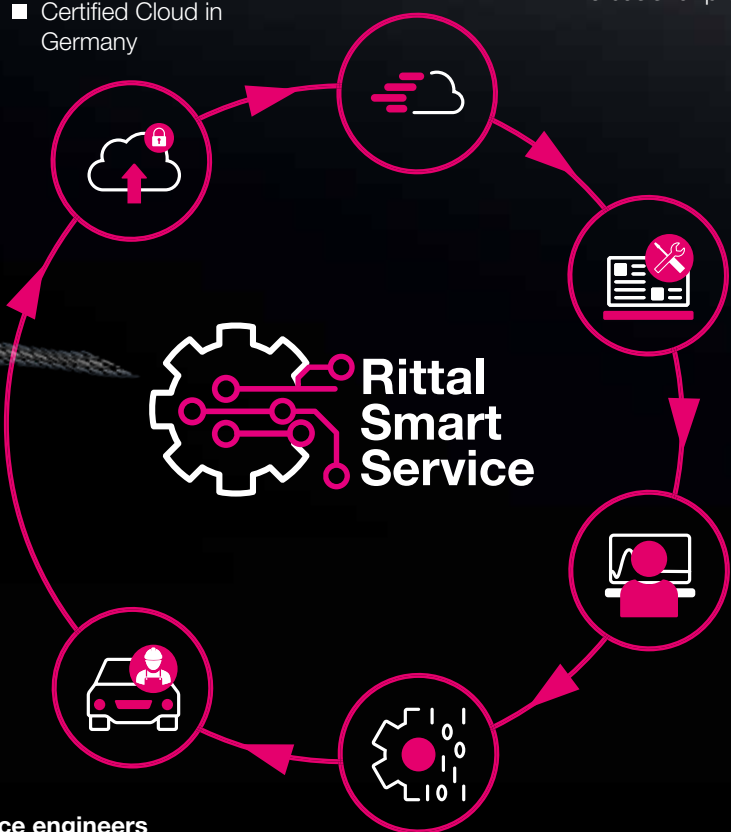
Smart Service Portal
- Overview of networked devices (asset management)
- Access to operating data
- The latest messages and recommended actions
- Energy consumption

Rittal Smart Service

Monitoring by Rittal service experts
- Continuous monitoring of device statuses in real time
- Remote diagnosis with manufacturer know-how
- Situational advice on optimum measures

IoT interface

Service engineers
- Respond on demand
- Ensure fast, efficient on-site troubleshooting

Automated handling
- Identification of the correct spare part
- Initiation of service measures

Rittal Smart Service –
Individual and targeted.

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 incorporates a range of different service levels which build on one other to become ever more comprehensive.

Level 3

Smart Maintenance Agreement

Smart Monitoring	Modular Service Agreement	Automated Service Handling

This level combines the advantages of 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 associated costs at all times.

Level 1

Remote Diagnostic Service

Access to your personal dashboard	Asset management	Visualization of device data including monitoring	Energy efficiency reports and 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 visualization 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.

AIRBUS

"If the cooling of our simulation computers were to fail, we would not be able to carry out the tests. The IoT interface in the Blue e+ cooling units allows us to scan all statuses in real time."

Volker Jacobs,
Head of Functional Testing Group
at Airbus

dmk Group

"Monitored climate control with Blue e+ cooling units from Rittal has enabled us to increase our system availability."

Henning Möhrmann,
Team Coordinator at DMK Group

KAMPF

"The smart Blue e+ cooling units dovetail neatly with our concept. Interlinking our machines enables us to control production using real-time data, thereby improving maintenance intervals and energy efficiency. We were impressed by the Rittal Smart Service offer and the option of incorporating the Blue e+ family of devices into our own tool the@vanced."

Dr.-Ing. Dontaus Weber,
Head of Innovation & Industry 4.0
at Kampf Slitting and Winding
Technologies

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.

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MindSphere

Rittal – The System.

Faster – better – everywhere.

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

You can find the contact details of all
Rittal companies throughout the world here.

www.rittal.com/contact

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