

Rittal – The System.

Faster – better – worldwide.

► Rail technology



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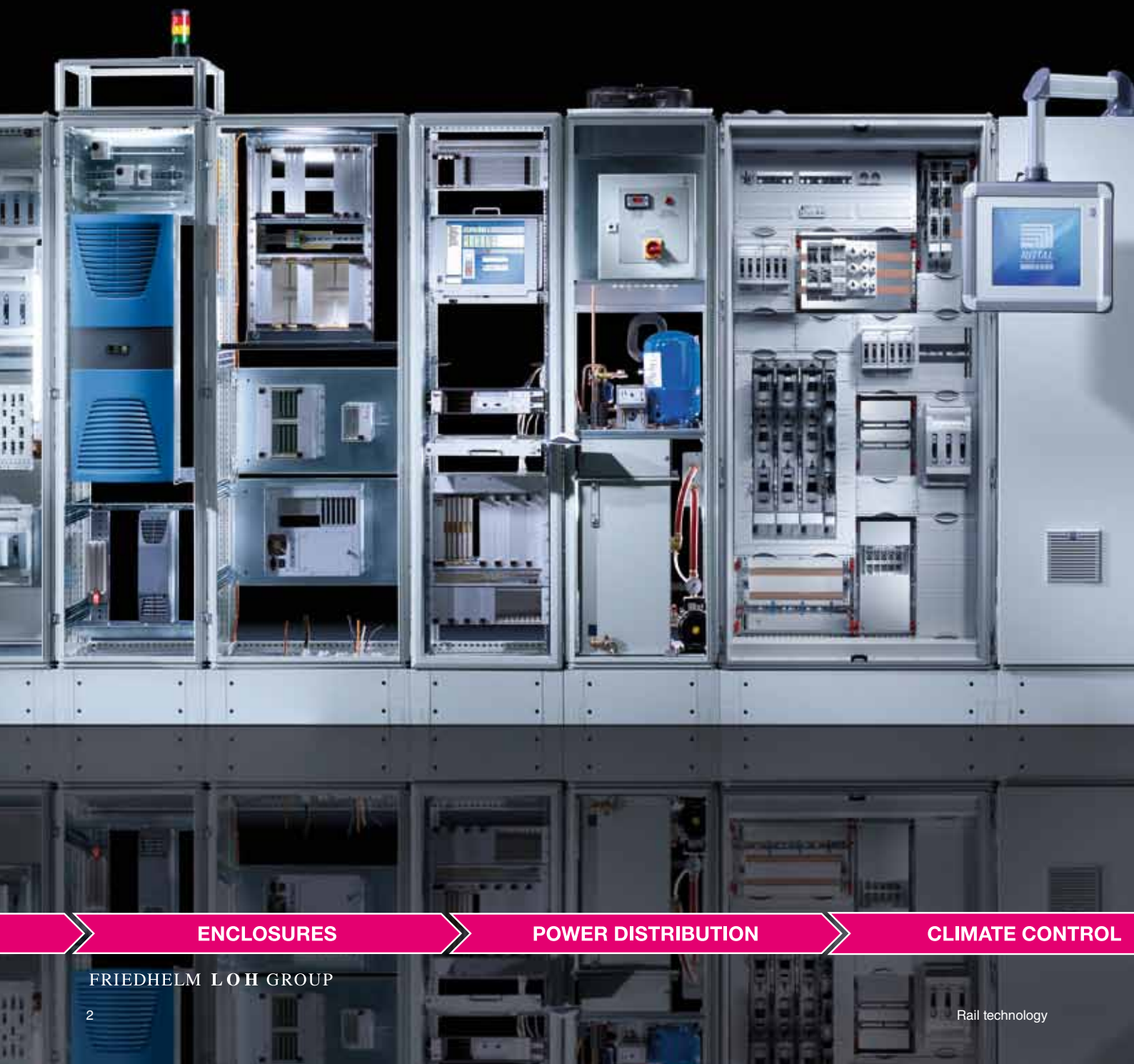
SOFTWARE & SERVICES

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The whole is more than the sum of its parts.

That is also true for “Rittal – The System.” It was with this in mind that we decided to bundle our innovative products from the fields of enclosures, power distribution, climate control and IT infrastructure into a system platform. Paired with our comprehensive software tools and global service, this becomes the key to unique added value for the most diverse applications – for the whole rail technology sector. Following our simple principle **faster – better – worldwide**, we tie innovative products and efficient service into an optimum package.

Faster – thanks to the modular solutions which make up “Rittal – The System.” and a degree of system compatibility which guarantees swift planning, assembly, modification and commissioning.

Better – thanks to the rapid implementation of market trends in products. Our innovation strength safeguards your competitive advantage.

Worldwide – thanks to a global network of 150 locations. Rittal can rely on over 60 subsidiaries, more than 250 service partners and over 1,000 service technicians around the world. For more than 50 years now, we have been on your doorstep with advice, assistance and product solutions.

Whether indoors in stations, signalling centres, data centres or backbones, or out at the trackside, at level crossings and in tunnels, it is today difficult to imagine railway infrastructures without the high-tech products from Rittal. They are chosen for original installations by leading international contractors such as Alstom Transport, Balfour Beatty, Bombardier and Siemens Infrastructure & Cities, and are thus standard equipment for Deutsche Bahn and other international operators.

Rittal is a service and cooperation partner of Deutsche Bahn.

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Indoor



Outdoor



Rail technology

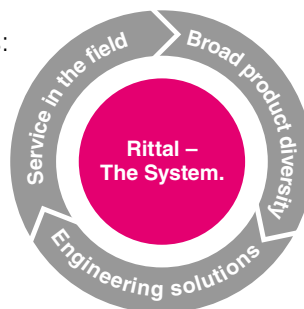
Every sector places its own specific demands on the associated applications. For the “Rail” sector, therefore, Rittal offers complete system solutions whose robustness and functionality meet every requirement, e. g. solutions for train control and protection, data communication, traction power supplies, signalling systems and tunnel safety. In dialogue with customers, Rittal develops efficient products for static use. Whether indoors and outdoors. Tailored sector solutions in full compliance with the typically strict specifications and standards to be observed by housings, enclosures, climate control and power distribution components for use in this field.

As our solutions are based on the wide product diversity of the standard Rittal range, considerable cost and time can be saved through flexible combination and fast availability from stock.

The perfectly developed system platform, the innovative products, future-oriented engineering solutions and all-embracing service are merged optimally for your benefit: “Rittal – The System.” This system offers all the elements you need to configure your own, precisely customised system solution.

The benefits for Rittal customers:

- Wide product diversity
- Engineering
- Local service



IT INFRASTRUCTURE

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Indoor



Traffic control and monitoring, IT, building power supplies, customer information systems – maximum safety and absolute reliability are imperative in rail transport operations. The infrastructure solutions from Rittal meet these high demands. Testing in our own research laboratories and manufacturing in certified production facilities are the basis for identically high product quality and service standards with global availability. On the basis of standard products, Rittal develops individual, sector-specific

solution and service concepts with exemplary cost-benefit profiles.

For the indoor sector, Rittal offers a diversity of wall-mounting and free-standing enclosures from stock, as well as efficient IT infrastructures with optimum equipment for data and communication centres, e. g. GSM-R networking, ticketing systems and logistics applications. Further Rittal solutions cater for power distribution: From distribution

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boards for building supplies up to redundant IT power installations with corresponding UPS systems. For climate control, Rittal delivers the decisive advantage, with efficient

system climate control solutions for all ambient conditions and power losses. This naturally includes also housing and enclosure climate control.

1 Signalling centre enclosure for Bombardier

Rittal solutions for signalling systems:

- TS 8 enclosures with standard accessories
- 19" equipment
- Climate control



2 Testing of a wheel axle at DB Systemtechnik in Minden

Rittal solutions for laboratory testing:

- PC enclosures for laboratory and test bays
- Comprehensive system accessories
- Modern industrial design and an ergonomic, user-friendly concept



3 DB washing plant for rail vehicles

Rittal solutions for vehicle washing systems:

- Stainless steel enclosure
- High-quality surface finish, resistant against cleaning agents
- Compliant with protection category IP 66



Outdoor



Railway operators tolerate no interruptions. Whether it rains or snows, and irrespective of whatever other extreme ambient conditions may arise. If everything is to run smoothly and continuously, all those components which shield essential functions from the influences of the weather must deliver ultimate performance.

Rittal outdoor enclosures with climate control defy wind and weather – and even vandalism if need be. They are manufactured from high-quality materials (aluminium or stainless steel) and embody decades of production experience.

The proven modular concept “Rittal – The System.” stands for enormous variety based on standard solutions. Series enclosures available directly from stock and practically unlimited accessory compatibility thanks to a common system platform.

For outdoor use, Rittal supplies secure and durable housings in single- and double-walled designs. High-quality standard products can be combined with further Rittal system modules to meet individual requirements – whether that means special colours or an optional nano-coating as protection against dirt. Where IT components stand at the

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focus of an outdoor project, the needs can be met with CS Outdoor or container solutions for mobile BTS equipment. In the field of power distribution, too, Rittal offers numerous solutions. These range from simple housings and enclosures with ISV distribution modules to redun-

dant IT power supplies including full UPS functionality. In addition, Rittal develops efficient system climate control solutions for all ambient conditions and power losses, with corresponding specifications for either indoor or outdoor deployment.

1 Outdoor enclosure with EBA approval for Bombardier

Rittal solutions for infrastructures:

- Aluminium enclosure with high-quality powder coating
- Proven series quality tailored to individual requirements, available directly from stock



2 Enclosure for remote switching mechanisms for Balfour Beatty

Rittal solutions for contact line systems:

- Enclosure with protection category IP 66
- Protection against vandalism
- Preparation for customer integration



Outdoor



3 Distributor enclosure for Siemens in Wallisellen

Rittal solutions for communication infrastructures:

- Locking systems: Standard or to customer specifications
- EMC design in conjunction with protection rating IP 65
- High-quality materials such as stainless steel 1.4301 and 1.4404



4 Tunnel safety lighting for the Berlin North-South link

Rittal solutions for tunnel installations:

- Plastic enclosures with special locking system
- Enclosure designed to withstand pressure and suction effects
- Optimised mounting system



5 BTS+ shelter for Nokia Siemens Networks

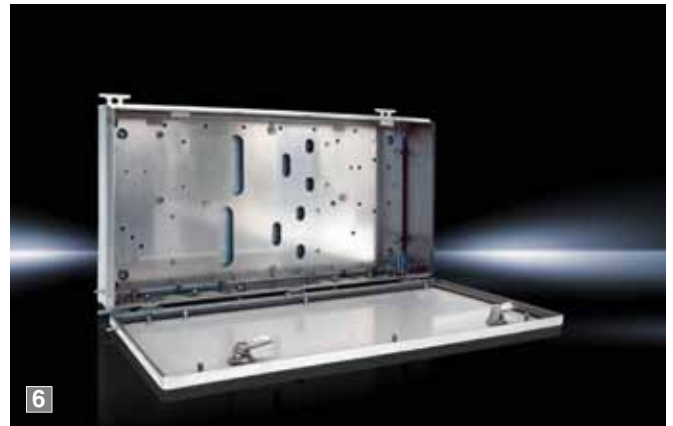
Rittal solutions for telecommunications:

- Solutions for freestanding installation and wall or pole mounting
- Active or passive climate control

6 TRE box for Alstom TIS

Rittal solutions for data infrastructures:

- Customised housing for worldwide use
- Choice of dimensions, materials and surface finishes



7 Fuel cell

Rittal solutions for stand-by power supplies:

- Modular and scalable emergency power supply
- Fuel cell modules 2.5 kW, including controller
- For DC and AC output voltages
- Back-up for high-availability applications, e.g. GSM-R



8 Data centre container for IT systems

Rittal solutions for mobile IT infrastructures:

- Data Centre Container for mobile or temporary deployment of IT systems
- Incorporates innovative, direct free cooling for up to 20 kW
- Up to 40% energy cost savings



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

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