



Rittal – Renewable Energy

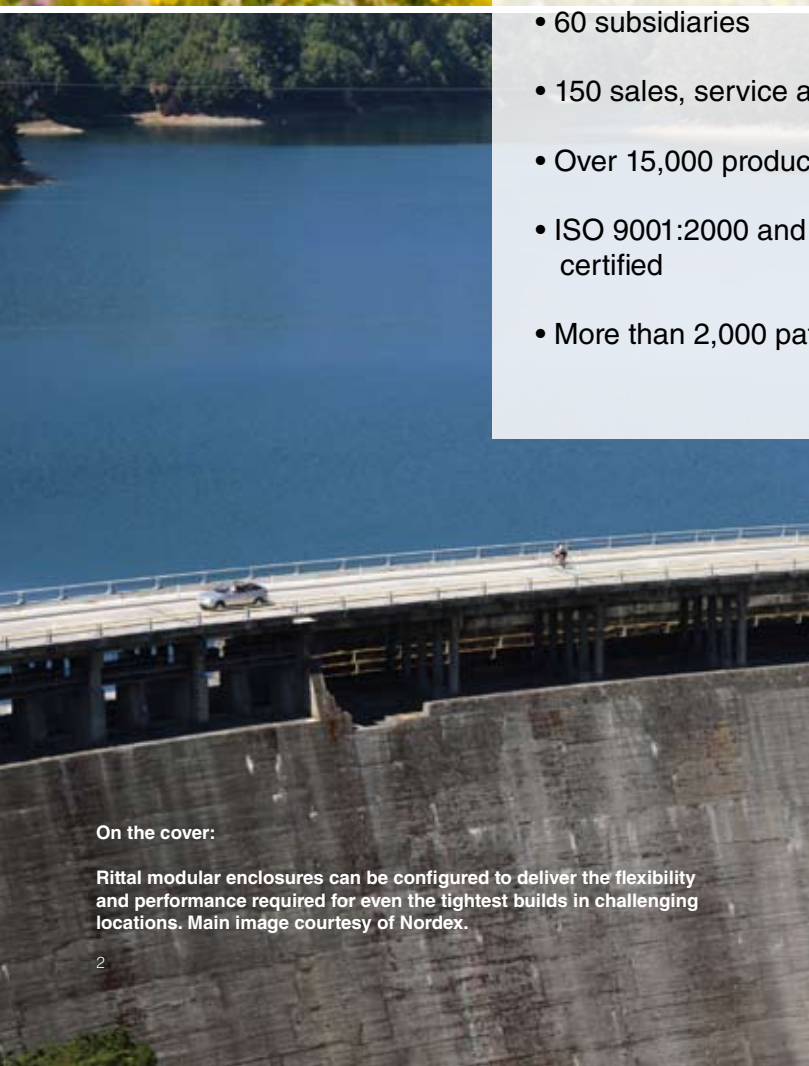


Enclosures, climate control & power distribution



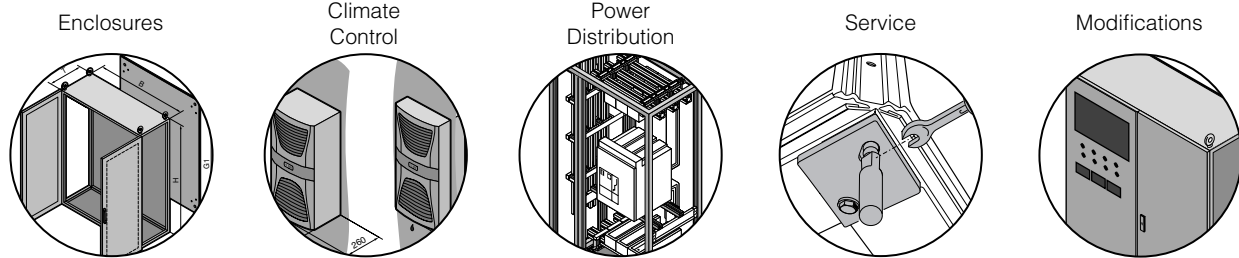
Rittal At A Glance

- Founded in 1961
- On 6 continents and in over 70 countries worldwide
- 10,200 employees
- 19 high-tech production locations
- Global manufacturing footprint of 5.32 million square feet
- 60 subsidiaries
- 150 sales, service and logistics centers
- Over 15,000 products
- ISO 9001:2000 and ISO 14001:2004 certified
- More than 2,000 patents worldwide



On the cover:

Rittal modular enclosures can be configured to deliver the flexibility and performance required for even the tightest builds in challenging locations. Main image courtesy of Nordex.



Comprehensive Enclosure Systems & Experience You Can Trust

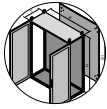
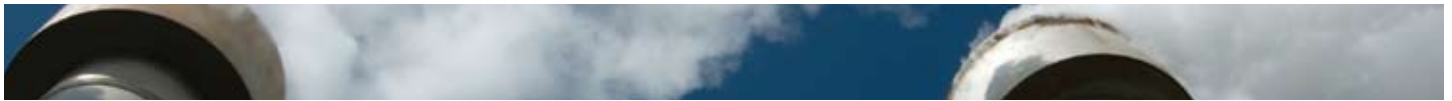
Rittal's systems approach to project design stands apart from that of other manufacturers because it allows you to craft complete solutions that are tailored to your needs either from scratch or from industry-leading, standard base offerings. Our modular enclosure and accessory philosophy and ability to integrate efficient power and climate control solutions from our own product families give you everything for your control systems infrastructure and beyond—all from one reliable source.

You won't find another manufacturer that can beat the quality, value and flexibility of total system solutions offered by Rittal. Combined with our decades of experience in global renewable energy markets, worldwide support services and an "open playbook" approach, a partnership with Rittal is an investment in the success of your projects and the sustainability of the world we all share.



Rittal TS8 enclosure in a wind turbine tower.
Image courtesy of Enercon.

- Expansive enclosure offerings for indoor/outdoor freestanding, wallmount and HMI applications available off-the-shelf in a wide variety of sizes, protection categories and construction materials—Rittal's modular enclosure designs have come to set industry standards
- Climate control products for any environment utilizing advance technologies to offer superior cooling capacities and efficiency with reduced maintenance
- Modular, scalable power distribution systems from 175 to 3200 amps
- All products can be integrated into user-specific configurations and most can be custom engineered or modified to meet our customers' needs
- Trusted by European renewable energy pioneers for decades



Enclosures



The **Modular Freestanding TS8** features a 16-fold tubular frame and multi-level mounting for unsurpassed strength and flexibility, supporting up to 1,500 lbs on the mounting panel. The unique 25 mm hole pattern allows components and accessories to be mounted in three directions providing maximum space utilization.

- UL Type 12, 3R, 4, 4X
- Carbon, 304 or 316L Stainless Steel
- Single or Double Door
- Disconnect

Rittal **Wallmount and Junction Box enclosures** offer the mounting space and protection required to meet the challenges of practically any environment or application. Highly adaptable, these enclosures can be easily integrated into your designs.

- UL Type 12, 3R, 4, 4X
- Carbon, 304 or 316L Stainless Steel, Fiberglass
- Single or Double Door
- Disconnect



From basic protection against humidity, temperature fluctuations and sunlight, to extreme conditions such as seawater or earthquake resistance, Rittal's **CS Outdoor Enclosure Systems** are available off-the-shelf or configured-to-order.

- IP 55 to EN 60 529/10.91—complies with NEMA 3R
- Aluminum construction provides exceptional corrosion protection
- High degree of EMC protection
- Integrated climate control solutions
- Modular design



Climate Control



Rittal's **Panel Heaters** are the ideal way to regulate the internal conditions of your enclosure. Advanced PTC technology allows the heater to self-regulate its operation. When used in conjunction with available thermostats and hygrometers, humidity, condensation and temperature are all accurately controlled.

- Ready to use out of the box
- Quick installation with screws or by simply snap-fastening to the mounting panel or 1.4" C rails
- Self-regulating PTC technology reduces power consumption



Rittal **TopTherm PLUS air conditioners** are available in wall and roof-mounted models and a wide range of cooling capacities. Rittal's RiNano coating on the condenser coils repels dirt, oil and other contaminants for increased performance, longer maintenance intervals and reduced carbon emissions.

- UL Type 12, 4X
- Carbon and Stainless Steel
- Integrated condensate evaporators eliminate collection bottles

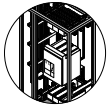
Rittal's **air-to-air and air-to-water heat exchangers** provide equipment protection by removing heat from the enclosure in a closed-loop configuration and with high levels of efficiency.

- Low maintenance with few moving parts
- Economical solution for high density installations

Rittal **Filter Fans** provide cost-effective heat dissipation in environments where enclosure contents do not need to be cooled to temperatures below ambient conditions.

- Roof and wallmount models
- EMC shielding available





Power Distribution

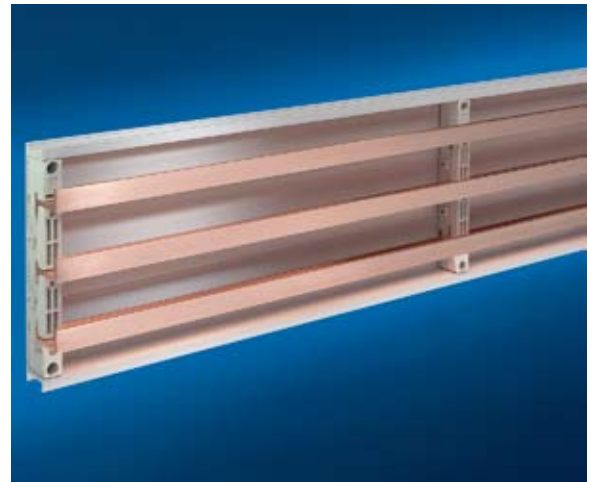


Rittal's **Ri4Power** is a **modular power management system** that utilizes the flexibility of Rittal's TS8 modular enclosure platform to create compartment-based load isolation from low-voltage switchgear components.

- Alternative to expensive pre-built motor control centers
- Suitable for arc flash applications

Rittal's **Busbar** solutions provide quick, easy response to fast-changing operating and market-driven needs. Rittal is known worldwide for its high quality, space-saving power distribution products and systems. Our expert staff can help you create your own custom power distribution solution, tailored to your requirements.

- UL 508A listed
- 175 A up to 1400 A current ratings
- Ideal for motor control, circuit breaker and drive applications



Rittal's **Maxi-PLS** busbar system is designed with customized hole patterns to make installation fast, easy, and simple. With the flexibility of multiple attachment levels and a variety of accessories, the Maxi-PLS offers you the freedom you need to configure your ideal power distribution solution.

- UL 508, 845 and 891 recognized
- 1600 A, 2000 A and 3200 A current capacities
- Optimal for drive, switchgear and high current applications



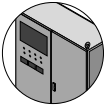


Modifications to Meet Your Needs

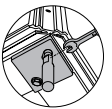
Because Rittal produces the most flexible standard lineup of modular freestanding, wallmount and junction box enclosures and accessories available in the world today, there is an excellent chance you may find what you're looking for right off the shelf—in a wide variety of construction materials and protection ratings. If you decide that a more customized product is needed, you can choose to modify many of our standard products through our RittalXpress program or start from scratch with a newly designed, comprehensive solution.

- Enclosure and accessory assembly
- Custom sizes
- Holes and cut-outs
- Customized internal mounting capabilities
- Seismic upgrades
- Custom paint colors and finishes
- Systems integration
- Climate control installation
- Power distribution installation
- EMC shielding

Modifications



Service



Worldwide Service—Local Support



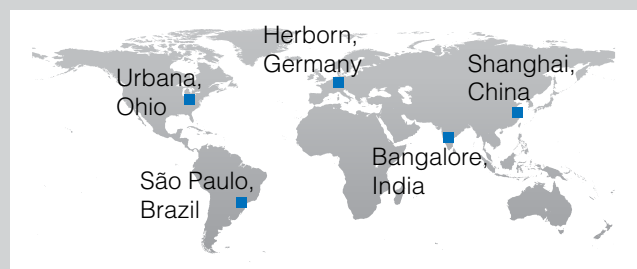
More than a manufacturer, Rittal brings you a world of expertise and support capabilities unsurpassed by others in our industry. Decades of experience in

breaking new ground in modular enclosure and power distribution technologies used in renewable energy installations promise you value in quality, functionality and sensitivity to your needs.

Not only is Rittal capable of getting your products and services to you where and when you need them, but our team of expert sales and support staff have the knowledge, attention to detail and patience to walk you through the design and

implementation of the ideal solutions to meet your specific requirements—from standard enclosure and accessory configuration assistance to ground-up engineering and special solution design.

Thanks to our history of involvement with renewable energy technologies, we know what it takes to tackle application challenges as they arise and have an intimate understanding of the efforts required to see your project through to the end.



Rittal Global Service Centers

Rittal – Your Renewable Energy Partner

Find out how Rittal can help you create the ideal solution for your renewable energy project.
You can contact Rittal:

- By phone: 1-800-477-4000
- On the Internet: www.rittal-corp.com or rittal@rittal-corp.com
- By Fax: 800-477-4003

Rittal Literature

To see the latest Rittal literature, go to www.rittal-corp.com/literature



Industrial Buyers Guide

Enclosures, climate control and power distribution for even the most demanding environments.



Ri4Power

Power distribution systems for the world's leading modular enclosures.



CS Outdoor Solutions

Outdoor enclosures for your unique applications.



Rittal Global Services

Learn how Rittal can help you protect your investment.