

Rittal – The System.

Faster – better – everywhere.

Rittal Outdoor Solutions

Protection for continuous, problem-free operation under the harshest conditions



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES



FRIEDHELM LOH GROUP

The right solution for every environment

The intelligent modular system including enclosure and climate control components offers a multitude of choices for configuring your **bespoke outdoor solution**.

Benefit from uniform design with built-in compatibility, delivery within 24/48 h and the convenience of a single supplier for all your product needs – for every outdoor application and for every climate type.

The name Rittal is synonymous with superior quality, durability and reliability in enclosure manufacturing. This is particularly true of the outdoor segment. **Our goal is to ensure maximum protection for your electrical equipment and components, however hostile the environment.** Whether that means extreme temperatures, exposure to UV radiation, aggressive, abrasive or corrosive substances, high winds, dust or humidity: Rittal enclosures stand up to even the harshest conditions.

Rittal standard outdoor solutions – Six good reasons to ensure you are prepared and protected and keeping your installations safe and secure



Instant availability as a modular system – no loss of time



Global service network



Security with a long service life – long-term investment



Wide temperature range – safe protection in all climate conditions



Sustainability – protect the environment and reduce your carbon footprint



Convenient installation and servicing – fast commissioning, minimal downtime



The choice is yours: Opt for single- or twin-walled enclosures depending on your requirements, then add on cooling units, ventilation grilles, lock systems or heaters as standard. Everything you need to keep your system up and running – whatever the environment.

You can absolutely depend on Rittal to help you plan, design and operate your application effortlessly:

■ **Flexible outdoor solutions from a single source**

Suitable for rapid use across all sectors, thanks to the smart combination of enclosures with climate control solutions

■ **Resistant to all weathers**

Rittal outdoor solutions are made from weather-proof aluminium with a UV-resistant polyester coating or fibreglass-reinforced plastic with a high level of UV resistance. This ensures a long service life and reduced maintenance cycles.

■ **Protection from vandalism and security threats**

Whether your equipment is sited in public spaces, by the roadside or in fenced-off PV fields. Rittal's standard portfolio includes a wide range of options, including double locks, burglary protection (RC2) and enhanced status monitoring.

■ **Perfect climate control**

Rittal carries out ongoing and extensive testing in our quality laboratory and can propose solutions that significantly increase the service life of your equipment and appreciably minimise energy costs. For high power losses, we particularly recommend the use of the energy-efficient Blue e+ cooling unit.

In view of constant changes in external and climatic conditions, we recommend carrying out regular checks. Rittal's service team is on hand to assist you.

Reliable protection in hostile environments.

Further information can be found on our website:

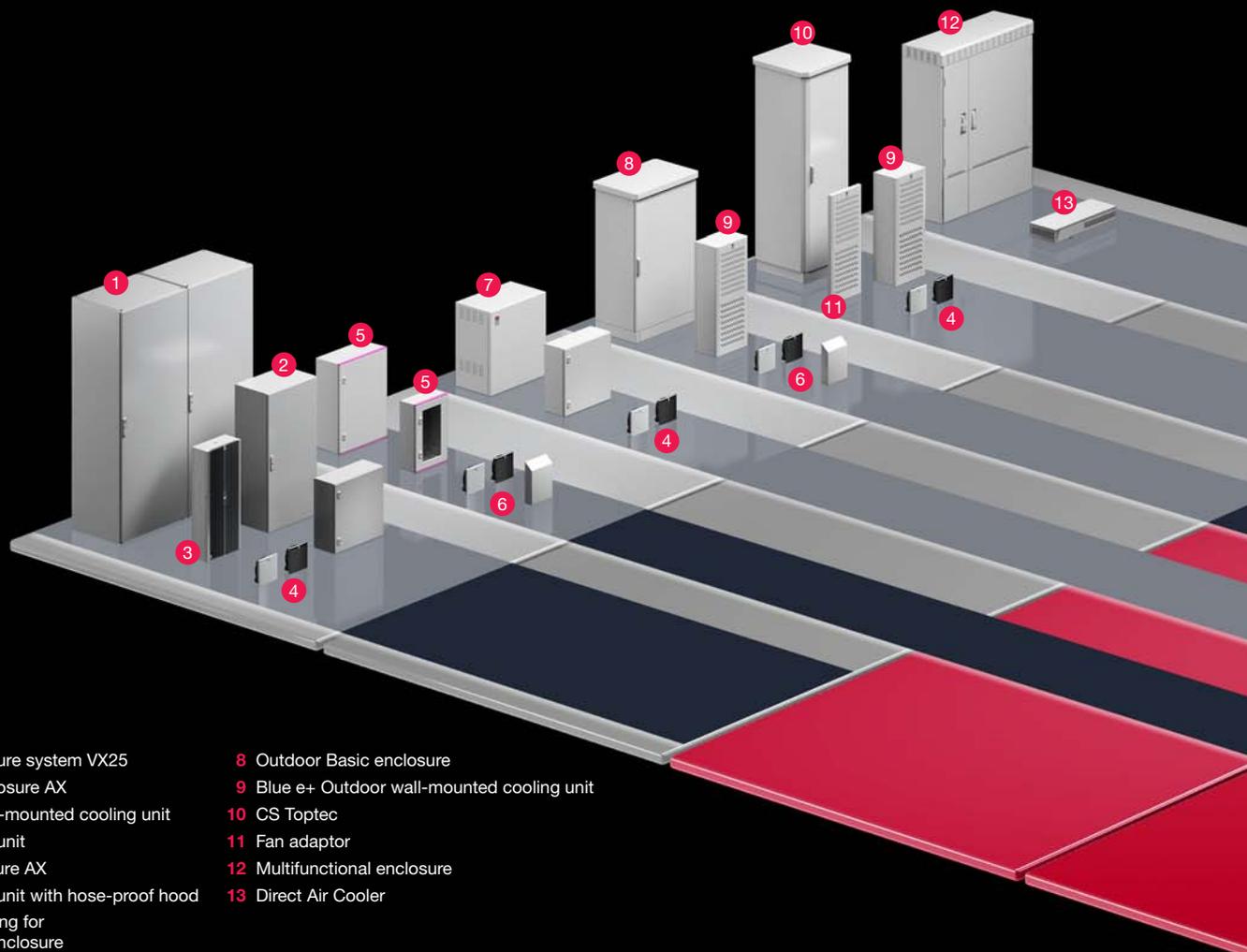
https://www.rittal.com/com-en/products/Outdoor_Enclosures



Not all outdoor applications are the same. What are your key requirements?

Where will your enclosure be located? Depending on the environment and any existing protection, you will require different types of protective and resilient enclosures, different climate control solutions, coatings, heating options, network capabilities and more besides. The challenges facing outdoor systems are extremely demanding and varied:

- Wide temperature fluctuations call for different active and passive climate control solutions
- Humidity, UV radiation and salt necessitate high degrees of protection against corrosion and surface protection
- Protection from vandalism and unauthorised access is security-critical
- Noise emissions must be minimised effectively for installations located in urban environments



- | | |
|--|---|
| 1 Baying enclosure system VX25 | 8 Outdoor Basic enclosure |
| 2 Compact enclosure AX | 9 Blue e+ Outdoor wall-mounted cooling unit |
| 3 Blue e+ S wall-mounted cooling unit | 10 CS Toptec |
| 4 Fan-and-filter unit | 11 Fan adaptor |
| 5 Plastic enclosure AX | 12 Multifunctional enclosure |
| 6 Fan-and-filter unit with hose-proof hood | 13 Direct Air Cooler |
| 7 Outdoor housing for AX compact enclosure | |



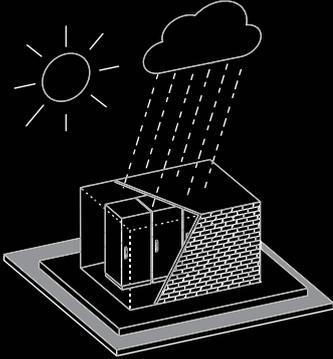
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We have outlined a range of environments to help you select the correct Rittal solution. From protected environments in sealed rooms, to covered spaces, to publicly accessible areas exposed to ever-changing weather conditions.

Environment 1



Indoor Advanced Protection

Installations protected from the weather and without access by unauthorised persons (car parks, wind turbines etc.)

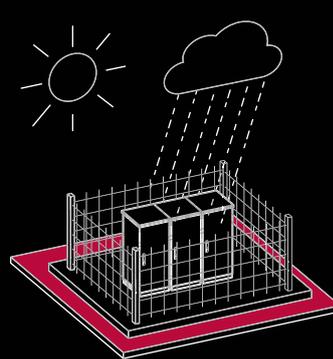
Environment 2



Outdoor Light

Installations that are largely protected from the weather in non-public areas

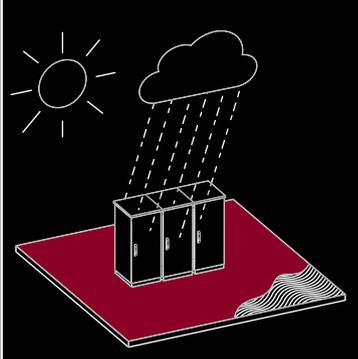
Environment 3



Outdoor Advanced

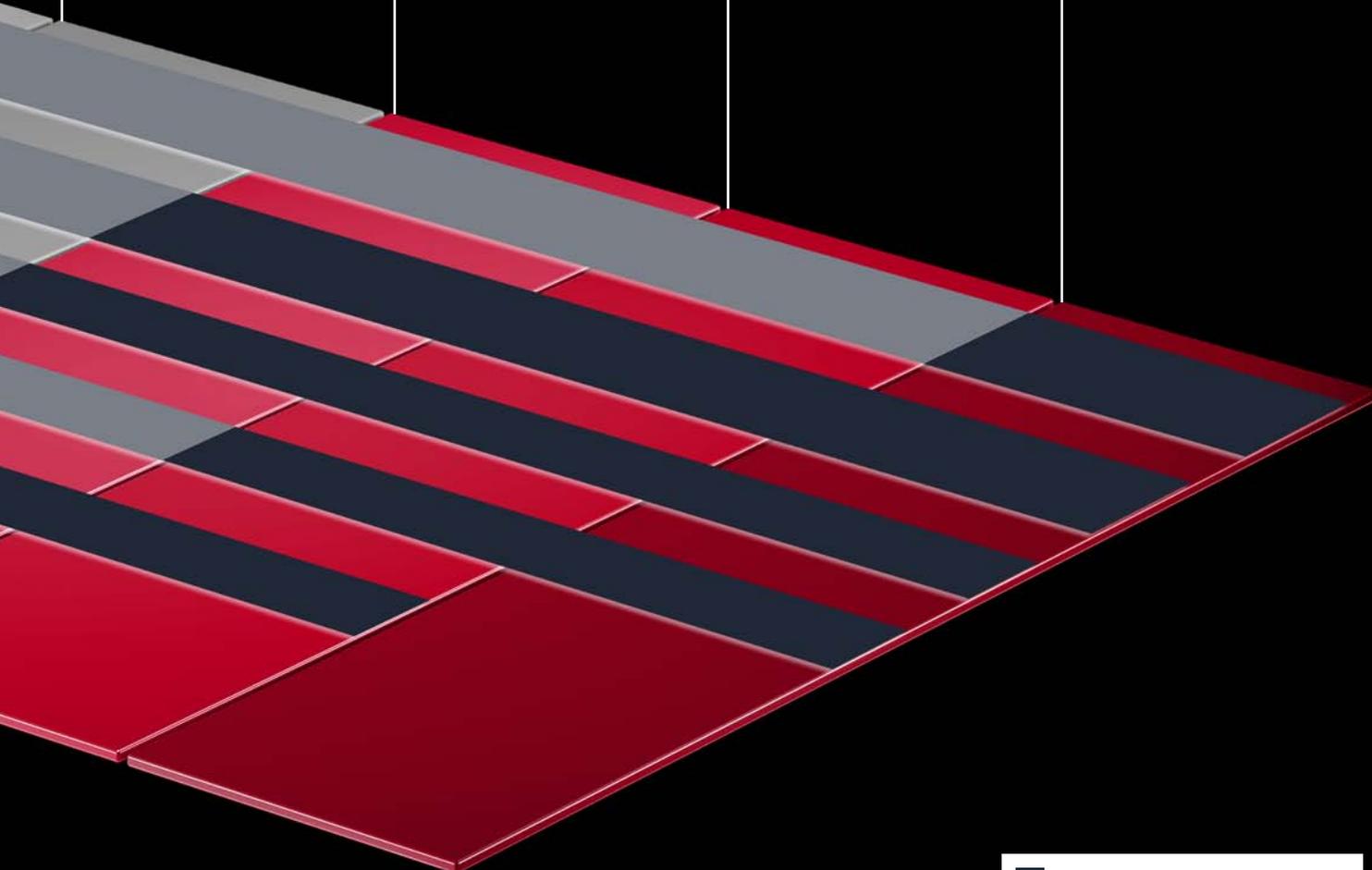
Installations that are exposed to the weather and with potentially aggressive/abrasive/corrosive substances in the atmosphere in non-public areas

Environment 4



Outdoor Extreme

Installations that are fully exposed to the weather in public areas and extreme environments with potentially aggressive/abrasive/corrosive substances in the atmosphere.



■ Optimum application area

Durable, rugged and robust outdoor enclosures combined with smart climate control solutions

Choose from a comprehensive range of **standard modular enclosure products with climate control solutions**, and benefit from our fast and simple purchasing process. Keeping you flexible, today and well into the future. Irrespective of the climate type, and however harsh the environment, the smart modular system featuring enclosures and climate control components, heaters, special coatings and networking modules ensures reliable operation and the perfect outdoor solution every time.

Enclosures



www.rittal.com/outdoor_enclosures

Climate Control



www.rittal.com/outdoor_climate_control



Basic enclosures

Single-walled enclosure systems, one-door and two-door. Ready to use in all applications with passive interior installation or minimal heat loss in the outdoor sector. Roof concept with all-round ventilation louvres.

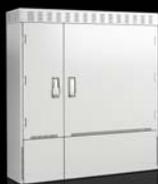
- 3 standard sizes
- Material: Aluminium AlMg3
- Mounting plate / 482.6 mm (19"), optional
- Impact protection IK09



CS Toptec

Outdoor enclosure with 100 mm transport plinth and overhanging rain canopy on all sides. Side panels, rear panel and door fully double-walled on the outside, the entire TS 8 frame is available for interior installation.

- 4 standard sizes
- Twin-walled
- Material, frame: Stainless steel 1.4301 (AISI 304)
- Material, enclosure panels: Aluminium AlMg3
- Mounting plate / 482.6 mm (19"), optional
- Impact protection IK10



Multifunctional enclosure

Multifunctional enclosures – The platform for extreme ambient conditions with an enhanced resistance class (RC2)

- 3 standard sizes
- Twin-walled
- Material: Aluminium AlMg3
- Impact protection IK10
- Fitted mounting plate
- 19"/ETSI optional
- Resistance class RC2



Plastic enclosure AX

Plastic enclosures AX, with or without the optional viewing window, are ideally suited to applications in the outdoor sector. Numerous mounting bosses inside the enclosure allow individual interior configuration on a 25 mm pitch pattern, e.g. with punched sections and rails.

- 8 standard sizes
- Material: Fibreglass-reinforced plastic
- Mounting plate included
- Impact protection IK09



Outdoor housing

Housing for AX compact enclosures, for use outdoors. For the creation of an enclosure-within-an-enclosure option. Cut-out at the bottom and integrated louvres in the side and base for optimum enclosure ventilation.

- 3 standard sizes
- Material: Aluminium AlMg3
- Interior installation with AX enclosure

Single- or twin-walled?



Sample enclosure

Dimensions:
 – W 800 x H 1600 x D 800 mm

Installed heat loss:
 – 500 W

Ambient conditions:
 – Max. outdoor temperature: 40 °C
 – Max. global radiation: 112 W/m²
 (assumptions for central Europe)

Enclosure wall	Internal temperature without active climate control	Required climate control at max. 45 °C interior temperature
single-walled	85 °C	150 W
twin-walled	70 °C	100 W

During operation, there is significant variation between the internal temperatures of single-walled and twin-walled enclosure solutions with identical dimensions, external temperatures and siting environments. The key here is to maintain a constant interior temperature as far as possible and avoid temperature spikes to allow the components inside the enclosure to operate without interruption. It is important to remember that active climate control for a single-walled enclosure will need to be dimensioned significantly larger than for a twin-walled enclosure solution. This effect is amplified with rising heat loss from the application.

Rittal will be happy to advise you on selecting the correct combination of enclosure and climate control.



Hose-proof hood



Fan-and-filter unit



Fan adaptor



Blue e+ outdoor



Direct Air Cooler

- The basic enclosure combined with a fan-and-filter-based climate control system is the smart solution to effortlessly protect your applications from environmental influences

- Depending on the ambient conditions, it may be appropriate to combine a Blue e+ unit with the single-walled Basic enclosure range to protect your application

- If the insulating twin-walled construction is insufficient to protect your application from sunlight and heat generation, you can combine it with fan-and-filter units and a suitable adaptor plate for the perfect solution with minimal heat loss

- For demanding applications, the Topotec in conjunction with the Blue e+ cooling unit is the perfect choice
- Minimal assembly work coupled with exceptional efficiency

- The Direct Air Cooler in conjunction with the resistant (RC2), twin-walled multifunctional enclosure features a fully integrated climate control solution in the roof

- The perfect combination for protected outdoor areas
- The high air throughput of our fan-and-filter units ensures optimum climate control in conjunction with a plastic enclosure AX

- Use the AX interior enclosure for configuration and installation of the fan-and-filter units
- The outdoor housing protects your application, while the integral louvres ensure air exchange

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- 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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