



Rittal – Shipping



Packaging systems
for maritime applications

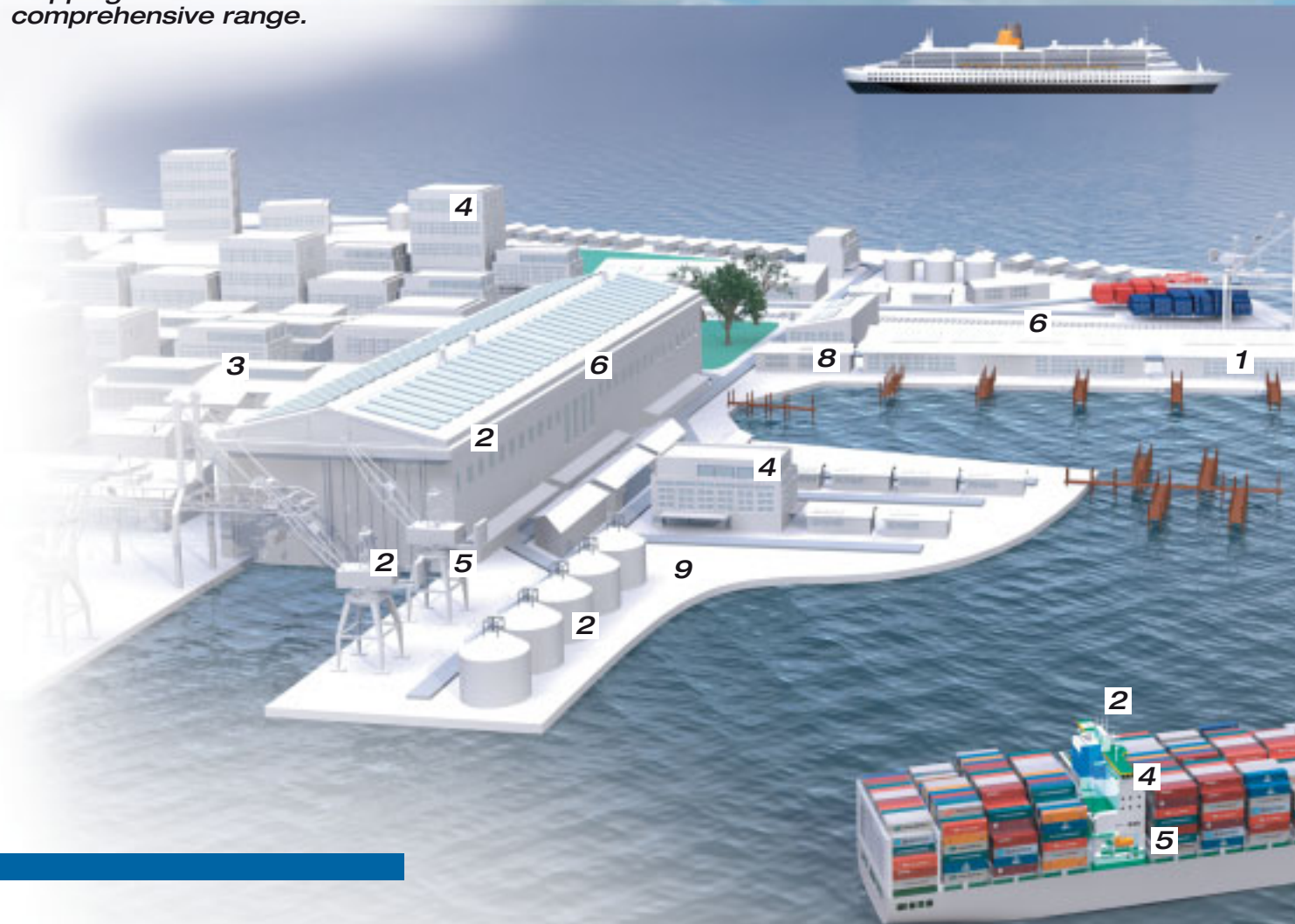
On course with Rittal



Whether offshore or onshore, Rittal offers comprehensive expertise on every aspect of port technology and shipping – Top-quality, standardised components for holistic, individual packaging solutions. Rittal supplies one of the most comprehensive ranges of enclosure and case technology for all maritime applications, both on the high seas and for oil and gas extraction closer to the shore. This company's wide-ranging experience in enclosure solutions for difficult ambient conditions leads to outstanding product reliability.

With Rittal, you have a competent, future-oriented partner at your side. From the first meeting, throughout the application engineering, development supervision and prototyping phases, through to monitoring of the finished product in use, Rittal firmly believes in the importance of constant dialogue with its customers. The major benefit to you is that Rittal provides perfect solutions for even the most demanding applications, leading you free to concentrate all your energies on your core competencies.

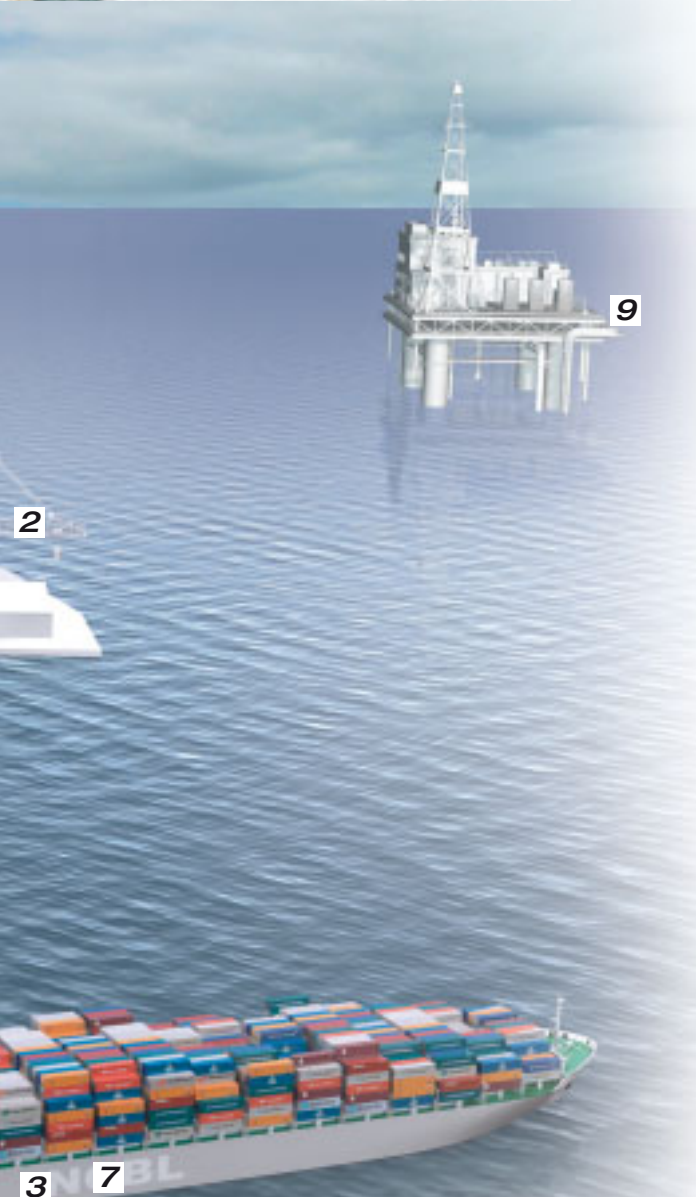
Shipping – Rittal offers a comprehensive range.





Maximum reliability up to gale force 10

The systems must function uncompromisingly in all conditions – be it in calm seas or heavy swell. In order to ensure that the crew and cargo are not at risk, only the best and most reliable is good enough when it comes to fitting out vessels and rigs. Play it safe with Rittal. You can always rely on proven Rittal technology, which has been extensively tested at our own accredited laboratories.



Application areas

1 On the jetty and the moorings

Outdoor enclosures and systems

- Reliable protection of the system from rain, humidity and salt spray

2 In the warehouse, for cranes, on platforms

Small enclosures

- Decentralised enclosures for controllers
- Distributor enclosures

3 In the refrigeration room

Stainless steel enclosures

- For applications with maximum hygiene and corrosion protection requirements
- High protection category

4 Data distribution in administration and logistics

Server and network enclosures

- Reliability of the IT infrastructure
- Optimised power and climate control concepts
- Extensive range of accessories

5 For radio and signalling systems in the navigation and communications sector

Electronic systems, 482.6 mm (19") technology, subracks

- Customised integration of a wide range of components

6 For power supply and distribution

Power distribution components

- Reliable low-voltage distribution and ISV distribution enclosure

7 For applications on board and in the shipyard

Climate control components

- Holistic protection of the process control system in hot and cold climates

8 Departure and arrival times at the ferry mooring

Interactive Terminal Systems

- Information and ticketing services for passengers

9 For use in potentially explosive areas

Ex enclosures to ATEX

- Individual Ex accessories
- Approval by a test institute

Cast off with systems from Rittal



Confidently on the right track

The diversity of Rittal busbar systems facilitates fast, reliable and hence cost-effective configuration of individual low-voltage distribution systems.

The Rittal Top enclosure system TS 8 meets individual requirements perfectly and cost-effectively.



As individual as your requirements

The enclosures, cases and frames from Rittal satisfy all maritime requirements. Materials, surface finishes, system accessories – solutions are produced according to our customers' individual specifications.

Navigation equipment, maritime radio systems, radar equipment, satellite telephones – it is vital for the many individual components in the vast array of electronic equipment to interact perfectly with one another. Only in this way is the luxury liner able to stay reliably on course, and the container ship able to reach its destination on time. Enclosure and case solutions from Rittal ensure the necessary high level of operational reliability for sensitive nautical equipment.

International shipping often goes hand in hand with rough seas and the twin pressures of corrosion and humidity. Under these conditions, it is important to use products whose design and surface finish meet all the necessary requirements. Rittal offers enclosure systems in a full range of sizes and for all requirements to ensure the safe accommodation of controllers and switchgear, including individual climate control solutions.

The extensive range includes small enclosures for decentralised controllers and network enclosures, as well as large enclosures, operating housings and ITS terminals. The Rittal Computer Multi Control Top Concept (CMC-TC) ensures comprehensive monitoring of the physical safety of the infrastructure with racks and enclosures.





Top quality, signed and sealed

The extraordinary resilience of Rittal products really comes into its own when faced with the tough demands of maritime applications. It goes without saying that enclosure and case systems from Rittal satisfy the stringent requirements of international classification companies.



Rittal approvals for maritime applications

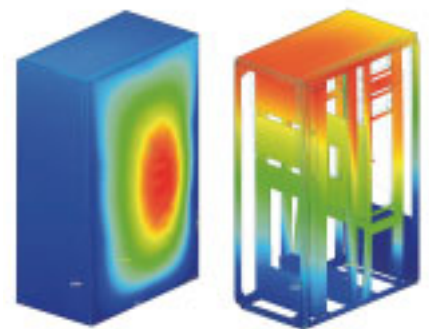
Approvals are key to the global acceptance of industrial products. Rittal products meet the highest internationally recognised quality yardsticks. All components are subjected to the most stringent testing in accordance with international standards and regulations.

Detailed information is available at www.rittal.com > Service > Technical information



Intelligent protection with added value

When it comes to server and network enclosures, Rittal offers a one-stop service, covering everything from enclosures, to innovative climate control technology and efficient energy management, through to flexible security solutions, remote monitoring and administration.



Precision project-planning ensures reliability

Qualified specification also includes calculation of the enclosure and the principal components in an FEM program. This facilitates a precise assessment of mechanical strength.



Rittal – at home in any port



Safe from the elements

Individual enclosure and system solutions from the CS Outdoor range are ideally suited for use in salt-laden air, thanks to the Rittal 3-stage coating process.



Totally fit in business

Whether used for ticketing or passenger information, Interactive Terminal Systems from Rittal provide information services 24/7, in a choice of indoor or outdoor, disability-friendly or vandal-proof models.

From reliable data transfer to the optimum installation of controllers: Rittal offers perfect solutions for a diverse range of onshore and offshore applications – global, holistic, and from a single source.

Rittal solutions are manufactured in sheet steel, aluminium zinc and stainless steel to customer specifications, as are the surface finishes. Extremely resistant surface coatings and finishes ensure lasting protection and reliable functioning of the sensitive electronics. A high protection category goes without saying.

- Material to order
 - Aluminium
 - Aluminium zinc
 - Stainless steel
 - 1.4301 (AISI 304)
 - 1.4404 (AISI 316L)
 - 1.4571 (AISI 316)
 - Sheet steel
- Protection category up to IP 66
- IP 69K

Take the sting out of salt

Enclosure and case systems from Rittal are extremely corrosion-resistant and weather-proof from -30°C to $+70^{\circ}\text{C}$. Electrophoretic dipcoat priming as standard, zinc phosphating (outdoor enclosures) and optional alumination ensure increased corrosion protection and guarantee exceptional longevity and resistance.

As one of the world's leading enclosure manufacturers, Rittal now uses a spray-finishing pre-treatment which guarantees optimum performance down to the last detail: Nano-technology. The nanoceramic surface treatment replaces conventional iron phosphating. This allows the coating to be applied extremely evenly, with significantly improved corrosion protection of spray-finished surfaces.





Uncompromising when it comes to Ex protection

In the offshore oil and gas rig sector, the system components are not only exposed to the most adverse ambient conditions, but are also often used in potentially explosive areas.

The demands placed on Ex enclosures under ATEX are particularly high in these types of applications. For this reason, Rittal is uncompromising in its rigorous standards, and adapts tried and tested enclosure concepts to meet the specific requirements of potentially explosive environments.



Program diversity for onshore and offshore

Application-oriented program diversity for every packaging task – Rittal small enclosures and Ex enclosures in conformity with ATEX offer the best equipment conditions for onshore and offshore facilities.



On the test bench

We conduct exhaustive experiments and measurements – including a salt spray test to DIN 50021 – at our accredited laboratories, so that optimum corrosion protection can be guaranteed. We can also offer protection category testing for dust and water.



Looking for solutions in the shipping sector? Talk to us.

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***Tender specification texts
available as downloads on
the Internet:
www.rittal.com/downloads***

An exemplary service

- Rapid support from expert consultants
- Customised development of individual system solutions
- Time-saving engineering software for project-planning, configuration and commissioning, amongst others
- Integration of individual components into a complete system
- Qualification and international certification at our own accredited laboratories
- Application-specific seminars for the practical transfer of know-how

A global presence

- 19 high-tech production sites
- Over 70 international agencies
- 60 international subsidiaries
- 150 sales and distribution centres



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