



Rheinhold & Mahla

Since 1887

Cabin IV

BATH

Cabin III

Captain

Experts for ship interior.

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Welcome on board



R&M Group is a global provider of individual and turnkey solutions for interior outfitting on board of all types of ships. Our extensive portfolio comprises all interior design services along the entire value chain of new builds, conversions and repairs. Headquartered in Germany, R&M operates around the globe with its subsidiaries, various locations and joint ventures.

Due to our long-term partnerships with renowned international designers, owners and shipbuilders, as well as our engineering expertise, we offer our customers a unique, broad range of solutions for interior outfitting.

In the maritime industry, it is very important to observe the environment and the related changes in order to quickly react. The market environment is fast, flexibility is an important component for secure positioning in the market.

Through many years of experience and expert knowledge, we are able to react and at the same time create quality, reliability and the highest possible comfort. R&M has implemented optimization processes and have registered continuous growth. With our wide-ranging expertise in combination with unique technical know-how and highly specialized engineers as well as profound ship industry knowledge, we have gained an excellent reputation as a global leader.

As life cycle partner of the maritime industry, we deliver the highest quality. Our prime motivation of actions is the success of our customers and therefore, the well-being of passengers and crew members on board. Also R&M applies risk management and stringent supply chain management processes to ensure that the envisaged performance is guaranteed. We continuously adopt the necessary measures to secure financial stability and investments in future innovations.



Supporting along the entire value chain

Experts for ship interior.

New build Repair Refurbishment

Services

- Product development
- Project engineering and Consulting
- Production and Logistics
- Project management and Site executions
- Maintenance and Refurbishment
- Insulation

Products

- Walls
- Ceilings
- Floors
- Doors
- Furniture
- Wet units/pods
- Prefab cabins

Cruise and Ferry

- Cruise ships
- River cruise vessels
- Expedition vessels
- RoPax ferries
- RoRo ferries

Special vessels and Navy

- Mega yachts
- Pilot boats
- SWATH vessels
- Research vessels
- Fishing vessels
- Support vessels
- Platforms
- Seismic vessels
- Authority vessels
- Platform supply vessels
- Offshore service vessels
- Construction support vessels
- Well intervention vessels
- Surface vessels
- Submarines

Public area

- Restaurants, bars, lounges
- Discos, casinos
- Spa, wellness
- Staircases, corridors

Passenger area

- Outside and inside cabins
- Suites
- Prefab cabins
- Wet units

Crew area

- Prefab cabins
- Wet units
- Recreational rooms
- Mess rooms

Utility area

- Bridges
- AC rooms
- Laundries
- Galleys, pantries, provision stores
- Engine rooms

Single component • Complete package • Steel-to-steel turnkey solution • Visual turnkey solution



Our locations worldwide.







rm-group.com

R&M has a suitable solution for every request.

From individual single components to steel-to-steel turnkey solutions – our portfolio covers services and products for new builds, conversions, and repairs. With our broad portfolio, we are able to support our customers along the entire value chain - from engineering, planning, project management, logistics, on board installations and executions. Since we are able to implement turnkey solutions, our customers can benefit from a smooth process.

Our range of services include product development, engineering & consulting, production & logistics, project management & field-executions, maintenance & refurbishment as well as thermal and acoustic insulation and noise and vibration protection. In addition to our services and through our own production facilities we offer accommodation systems – including walls, ceilings, doors, floors, wet units, prefabricated cabins and furniture.

Our versatile range and high-quality services at every stage of a project, based on many years of experience, make R&M's portfolio unique, whether as an individual or turnkey solution.

An important part of our work and an essential characteristic of the R&M Group is to strike a coherent balance between λ (thermal conductivity), f (vibration), dB (sound), and $^{\circ}\text{C}$ (temperature) in comparison with cost and material. The significance of the Lambda symbol in our logo represents this context. Whether in the planning, preparation, or realization phase of a project, with our products and services we guarantee maximum comfort and safety on board for our customers worldwide. Therefore R&M serves a wide range of business sectors, with a focus on cruise and ferry vessels as well as offshore specialized vessels and platforms.

Broad experience in all business sectors

R&M Group has many years of experience in interior outfitting on board of all types of ships and maritime facilities. There are many different specifications to be met for each type.

Cruise and Ferry

- Cruise ships
- River cruise ships
- Expedition vessels
- RoPax ferries
- RoRo ferries

Special Vessels and Navy

- Mega yachts
- Pilot boats
- SWATH vessels
- Research vessels
- Fishing vessels
- Support vessels
- Platforms
- Seismic vessels
- Authority vessels
- Platform supply vessels
- Offshore service vessels
- Construction support vessels
- Well intervention vessels
- Surface vessels
- Submarines



Distinctive interior on board



Our high-quality products are regularly subjected to comprehensive tests in accordance with the quality management standards and international guidelines.

We manufacture components for interior outfitting on board of all types of ships for all areas: walls, ceilings, doors, floors, wet units, prefab cabins, and furniture. We offer our customers standard as well as customized products, which are tailor-made according to their needs. Thus the products fit perfectly well in corresponding design concepts.

Our services at a glance

- Guarantee of quality
- Individual customization and configuration on request
- Tested and approved structural materials
- Just-in-time delivery
- Worldwide shipping, assembly, and installation
- Complete installation for electrical, air conditioning and sprinkler systems
- Assembly line for prefabricated wet units and cabins on site



Our production facilities



Wismar

Our production facility in Wismar produces furniture according to standard specifications and individual customer requirements.

From here our excellent design solutions are continuously developed. Thanks to the latest computerized numerical control (CNC) machines, we are also able to meet the most specific requirements in a short turnaround time while maintaining our quality guarantee. The final assembly of our furniture, which was stationed in Rostock for many years, will also be moved back to the Wismar site at the end of 2022.

Furthermore, together with our suppliers we can offer a range of products, from sophisticated stainless steel work and superior solid surfaces to creative mirrors, glass features, and high-grade upholstery.

Kunshan

Our largest production facility is located in Kunshan, near Shanghai, China. There we produce doors, high-grade wall and ceiling panels, as well as wet units. European standards of quality and international logistics guidelines are strictly observed during the manufacturing process. The team is multinational with extensive experience and is able to offer our customers a great deal of choice when it comes to product selection and interior design.

One of the important aspects in our business is excellent quality management. In order to guarantee this quality and to continuously develop our products, it requires outstanding product development.



Comfort and safety down to the last detail

For our complete and full detailed product range please visit:



Walls

In addition to excellent quality, our products include the best possible fire protection, to ensure the highest possible level of safety. All interior preferences and requirements can be implemented in a variety of designs and a wide range of colors.

In addition to the standard wall fixtures, the panels can also be fitted with tested fireproof inspection hatches.

- Single wall (25 mm, 50 mm)
- Double wall (>70 mm)
- Multi-layered wall (50 mm)

Classifications:

- B-0 ■ B-15 ■ A-15

Surface coatings:

- Steel, stainless steel
- Aluminum
- PVC Coatings
- Varnished in RAL- and NCS-colors

Ceilings

Our ceiling panels are robustly designed and easy to use. Depending on the customer's preferences, the panels are designed as single-layer-tray or sandwich systems. They are extremely strong and have excellent load-bearing capacity and can also be disassembled, if required.

In addition to the standard ceiling fixtures, the panels can also be fitted with tested fireproof inspection hatches.

- Single-layer-tray ceiling panel, removable (35 mm)
- Sandwich ceiling panel, removable (25mm, 35mm, 48mm)
- Ceiling panel with shadow gap (20 mm)

Classifications:

- C ■ B-0/A-15 ■ B-0/A-30 ■ B-15/A-30

Surface coatings:

- Steel, stainless steel
- Aluminum (C-class only)
- Varnished in RAL- and NCS-colors
- Perforation of the ceilings mainly for fitting in machinery control rooms

Floors

Particularly high levels of noise and vibrational impact are generated in the ship's operational areas. The demands on sound-absorbing flooring in adjoining areas and decks are correspondingly high. Our floors are perfectly suited for this purpose, all of them meet the technical requirements in terms of noise protection and can be installed quickly and easily.

Standard floors:

- Floating floor C
- Acoustic elevated floor systems

Fire protection classifications:

- C

Surface coatings:

- Steel
- Aluminum

Doors

R&M provides the right door with the necessary fire protection and a guarantee of quality and durability for every type of ship. The doors can be equipped with all the relevant accessories and include the right surface coating that matches the design of the existing environment.

Standard doors:

- Single-hinged doors
- Double-hinged doors
- Sliding doors

Classifications:

- B-15 ■ A-15 ■ A-60

Surface coatings:

- Door leaf: coated with PVC, HPL, varnished or stainless steel
- Door frame: varnished or stainless steel

Optional features:

- Ventilation (normal or offset)
- Kick-out panel
- Door closer
- Peephole
- Window
- Opening for fire hose
- Closing system
- Door handle set in various designs
- Integrated head piece
- Passage height up to 2.53 m



Cabins – Homely atmosphere for feeling good

Our prefabricated cabins provide individual standards for passenger- and crew cabins, suitable for every requirement. All models include sanitary facilities, variable wall- and ceiling systems, doors and furniture. The integrated wet units are fully outfitted, from sink to toilet. Specially sealed floor pans ensure that the units are watertight. The electrical connections and water pipes can be connected to the on board systems immediately after the units are installed.

Our Services:

- Individual customizations, equipment and configurations upon request
- Complete installation for electrical, air-conditioning and sprinkler systems
- Easy to transport on board; just-in-time delivery
- Guaranteed quality
- Tested and approved structural materials

Wet units – Functionality and beautiful design

In our production facility in Kunshan, China, the manufacturing of wet units is our everyday business, in time and in a variety of designs tailored to customers' needs. This specifically includes the accessories, for example, the shower, mirror, or sink as well as any other wishes. We deliver in time and the wet units are ready to operate immediately. The pipelines for fresh, gray, and black water and the wiring for the electrics are already installed when the wet unit is delivered.

The most important facts about our wet units

- B-15 design with high damping properties
- Stainless steel, aluminum, or preserved black steel floor pan with a Bolidt floor, epoxy coating, polyurethane, or tile covering
- Sandwich-style walls coated with PVC film in various patterns, or steel walls with outside insulation, and tiles or plastic surfaces
- Inspection panel behind the toilet bowl for accessing the vacuum technology

- Sandwich-style door with air gap below door leaf, lock, and door limiter
- Sandwich-style ceiling coated with PVC film or with lacquered surface
- Ceiling light, wall lights, and illuminated mirror cabinets
- Stainless steel black water pipes
- Plastic or copper fresh water pipes
- Exhaust air device, installed in the wall or ceiling panel

Furniture – Sophisticated design meets impressive functionality

Whether hand-crafted individual pieces or series production items, we incorporate our customers' requests into all our product designs and developments.

Our furniture line ranges from sofas and seating, wooden or metal beds to table, and counter systems of all kinds and wall, ceiling, and pillar panels can be customized to suit individual needs. With regard to the materials, we consult our customers and offer an abundance of options. Our stylish solutions are not only a sight to see, but also suitable for extreme usage and in extreme conditions regarding vibrations, fire protection, and durability.

Our services

- Diverse range of panel materials for furniture, e.g. solid surface panels, glass and metals
- Advice on implementation with regard to furniture design, decorative work, and upholstery
- Individual items of furniture with rounded or curved molded parts
- Integration of an extensive range of technical equipment, e.g. refrigerators and lighting
- Special requirements, e.g. CNC finishing on molded parts
- Custom-fit weight management
- Worldwide shipping and assembly
- Work preparation by use of CAD/CAM Solutions for all customer desires with a "Design to Build" philosophy

Experience and innovation along the entire life cycle of a ship

From the initial ideas to the finished interior outfitting, our priority is customer satisfaction. Therefore, we always have the view for the entirety. Our comprehensive concepts include a long-term service level agreement and reliable services for our customers at all times.

Product development

Ever since our foundation in 1887, we have been investing in our innovative capacity. We collaborate with various different research institutes worldwide enabling us to keep our broad product portfolio at the cutting edge. Thus, we can quickly and effectively react to changing customer needs.

Our team consists of highly qualified engineers with many years of experience and technical know-how in ship interior fittings. Experienced engineers and technicians design, develop, and test customized concepts, particularly for thermal and acoustic insulation and fire protection, while keeping in mind international regulations for shipbuilding. Such concepts are based on a comprehensive calculation of acoustics. Besides our own sound laboratory enables R&M to carry out flexible further development of our products, especially with regard to sound measurement values. We have patents and utility models ranging from multilayer-panels and floor modules to de-icing with vibration. These enable us to enhance and boost quality for our existing products and for new products yet to come.

Engineering & Consulting

R&M has deep knowledge of shipbuilding standards and processes based on many years of experience combined with our high quality and cost effective project execution model.

The engineering team is familiar with all types of maritime applications and their technical specialties. This provides our team with deep understanding of the specific requirements that each type of ship demands, whether a cruise ship, ferry, offshore vessel or mega yacht.

Benefits for our customers

- Value adding solutions coming out of effective collaboration across our worldwide organization and its vertically integrated delivery portfolio
- Increased flexibility and improved time to market through on demand, project based engineering services
- Risk and cost control by using standardized processes and our rigorous application of quality and performance control mechanisms

Our engineers develop outfitting solutions, that fulfill individual design and function requirements. Photo realistic visualizations of interiors replace the construction of elaborate physical mock-ups, significantly reducing the time and expense involved.

Production & Logistics

We provide efficient, customized, and individual and complete solutions in maritime interior design. As manufacturer of a wide range of products, wet units, prefab cabins and furniture, R&M guarantees the highest quality in accordance with modern and standardized requirements. The products are manufactured in our production facilities in Germany and in China, where we have sophisticated, efficient, and worker-friendly production lines. Thanks to our integrated supply chain management, our deliveries are in time and in place. The logistics department is extremely well organized around the world.



Project Management & Field-Executions

Both for small and large projects, the planning phase is the most important step and has to be performed on a professional level. R&M takes a well-structured approach to deliver on its promises in a controlled manner. This approach covers the entire life cycle of our projects.

Our motivated, multi-faceted and interdisciplinary teams on site are able to carry out all measures seamlessly and in close cooperation with owners, architects and shipyards.

The key aspects of this approach

- Well thought through delivery plan which is based on R&M's experience and proven delivery approach
- Rigorous quality management procedures help to enforce excellent results to our clients
- Strong governance and risk management to control the uncertainties of shipbuilding projects
- Experienced and highly motivated teams, who have the relevant expertise using state of the art tools
- Leadership commitment to deliver on our promises to our clients – right down to the last detail.

Maintenance & Refurbishment

All ships are exposed to extreme conditions in a salt environment and have to be maintained and refurbished after a certain period, depending on usage, abrasion, and size. Our services range from recording the damage to inspection in conjunction with the ship-ping group's inspectors.

Professionalism, flexibility, and competency count - R&M can support you at every stage of the ship's life cycle.

Our services

- Engineering
- Ship inspections
- Repairs offshore
- Material and spare parts deliveries
- Supervision and project management
- Service level agreements

Insulation

Our insulation solutions have been well established at the international shipbuilding market ever since our foundation representing the roots of our company. This means we have an abundance of know-how within our Research & Development department for this special subject.

Particularly for noise-sensitive areas on board offshore vessels, which are used in drastically changing temperature and climate conditions, or for cruise ships with high noise emissions within working and living areas, as well as for piping systems that transport goods at a temperature of unusual minus or plus degrees.

Economically sustainable solutions using environmentally friendly and energy-efficient materials as well as quick and reliable completion of the insulation work are a main priority for R&M.

Our services

- Thermal insulation
- Fire safety
- Noise and vibration protection
- Floor insulation
- Pipeline and surface insulation
- Insulation of exhaust and HVAC systems
- Insulation of cargo tanks on LNG tankers
- Pressure hull insulation for submarines



Perfect interior in a wide variety of areas

Both passenger and crew areas need to provide private atmosphere, so every guest on board is able to feel comfortable. Perfect interior design and privacy are therefore indispensable factors. Public areas must meet the needs of many tastes, lifestyles and generations.

The area, which is characterized with the highest standards, is the utility area - responsible for an optimal flow during navigation and smooth execution.

Passenger areas – Only the best for your guest

R&M meets all requirements to combine individuality, functionality and quality. Our consistently high supply capability helps boost the cost-effectiveness of every shipbuilding project.

Our services

- Responsibility of the entire logistics chain
- Execution and project management
- Prefabricated wet units and prefabricated cabins to reduce turnaround time
- Flat-packed wet units and prefabricated cabins
- Just-in-time delivery



Crew areas – Feel at home on the high seas

Three different aspects play an important role in outfitting crew areas: workplace, recreation room, and private retreat. R&M pays particularly close attention to the conceptual optimization of workflow processes as well as to the protection against noise, vibration, and temperature extremes.

R&M offers tried-and-tested solutions for

- Cabins and wet units
- Recreational rooms
- Crew mess rooms



For every type of a ship R&M develops effective design solution in keeping with the character of the vessel, which makes every cruise an unforgettable experience.



Public areas – Great places to be and relax

Public areas are always a special challenge. Every ship has its requirements and must be designed in line with certain themes. R&M has been working on these challenges for decades. Today we are a specialist on board.

We design, develop and implement for you

- Restaurants and bars
- Wellness and spa
- Staircases and corridors
- Lounges, discos, casinos etc.

Utility areas – High quality, safety, practicality, and design combined

Our specialty lies in providing turnkey catering areas that are designed to fulfill the operator's needs. In addition to fitting out the galleys and service areas, R&M offers consultation regarding organizational issues, service and provision logistics as a useful supplement to its services.

The interior in the utility areas must comply high quality, safety, functionality, design, fire and vibration protection requirements as well as perfect climate and well-designed room utilization concepts. Our engineers fulfill these requirements with sophisticated and economical outfitting concepts and implement them professionally and customer oriented. All products and designs meet the highest quality standards and the requirements of the United States Public Health Service (USPH).

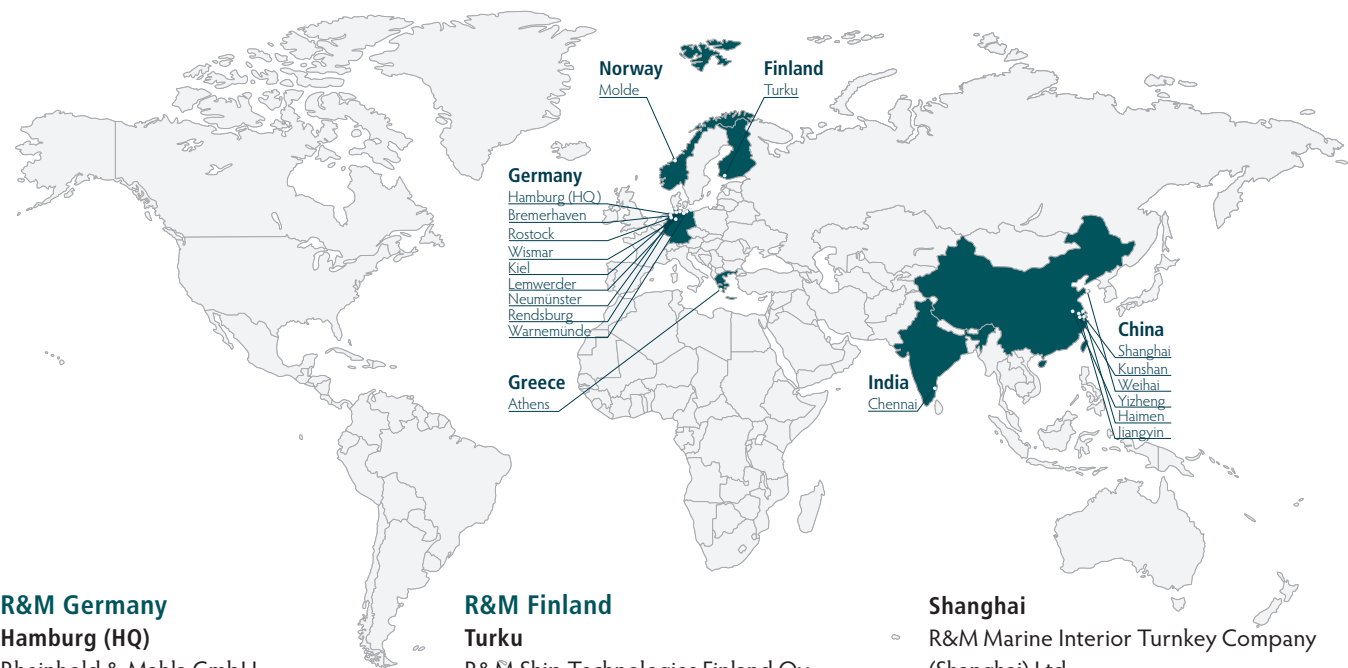
In particular, galleys frequently perform logistical and culinary excellence, often under difficult conditions. R&M offers solution from planning to installation of extremely durable and functional kitchens as well as consultation on the storage of provisions or the preparation and distribution.

We plan, deliver and install

- Entire galley areas
- Cold rooms, freezer rooms, and dry stores
- Service corridors and lobby areas
- Preparation areas, pantries and ice stations
- Bars, pantries and buffet lines



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