



Potable Water for People at Sea and Extraordinary Places

Maritime Water Treatment Systems
& Reverse Osmosis Plants for Drinking Water Purposes

An underwater photograph of a coral reef. The top of the image shows the surface of the water with white foam and bubbles. Below the surface, the water is a deep blue. In the lower half, the water is a lighter turquoise color, revealing a sandy bottom and various coral structures. A dark blue rectangular box is positioned in the lower-left corner, containing white text.

Clean Water
is Our Passion
and Our Task

Potable Water for People at Sea and Extraordinary Places



Approximately 70 percent of the earth's surface is covered by water, most of it by the oceans. The KOW Watertreatment plants make salt water drinkable and usable for industrial purposes and irrigation.

KOW Watertreatment is one of the leading suppliers of reverse osmosis (RO) plants generating fresh water with a reliable and highly efficient production process.

The systems are suitable for cruise liners, offshore platforms and islands. The core of our water processing plants is the reverse osmosis technology, that converts sea water into fresh, clean drinking water.

Our standardized low range RO systems are designed for 100 m³/d. Custom-made new build or retrofit systems are designed with a capacity up to 1.200 m³/d and higher. To meet growing demands for high quality drinking water onboard we offer the INTERSTAGE BOOSTING technology, invented by KOW, to increase the capacity of existing RO plants.

The INTERSTAGE BOOSTING process has been developed for long serving RO systems without any energy recovery system. This innovative procedure provides for an increased fresh water production of the existing RO plant of up to a 50 percent higher output, without additional energy consumption.

Our portfolio of water processing plants includes:

- New building
- Retrofits
- Upgrades and modernization
- Container installations
- Land based installations

Applications of our RO systems:

- Single stage RO plants with energy recovery system
- 2nd stage RO plant for higher water quality demands
- Technical water stage systems

Services of our engineers and technicians:

- Annual maintenance service
- Commissioning and crew training
- Repair works and spare parts



**Drinking Water
for Maritime Life**

Maritime Applications



As one of the leading suppliers for water treatment plants in the maritime sector the product portfolio of KOW Watertreatment includes small RO plants for yachts till major plants for cruise line vessels.

The daily drinking water output of our RO plants ranges from of 5 m³/d, up to 1.200 m³/d and higher. Beside RO plants KOW also offers the full range of fresh water treatment according to U.S. Public Health Service (USPH) guidelines.

The plants can be installed during the building phase in dock or as retrofit during operation. In a retrofit, the plant is brought on board in customized prepared components and will be installed within 2–3 weeks without interruption of service. To ensure long-term trouble-free operation, we offer a worldwide after sales service and spare part delivery for KOW and any water treatment plant manufacturer.

Processes of water treatment plants:

- Fresh water treatment
 - Mineralization
 - Disinfection
 - pH-control
- Treatment for water distribution
 - Chlorination
 - pH-adjustment
 - Distant point analysing
- Bunker water treatment
 - UV-systems
 - Chlorination
 - Chemical dosing units
- Softening systems to supply laundry and galleys

Application of the plants:

- Cruise line vessels
- Mega yachts
- Research and supply vessels
- Offshore platforms
- Military vessels



Refreshing Water –
Wherever You Are



Hotels and Holiday Resorts

Next to the maritime use of its water treatment plants KOW also realizes land-based plants, to ensure water supply for people on islands, in rural areas or at any place without access to drinking water.

Hotels and resorts have a huge demand for high quality fresh water to ensure health and satisfaction of their customers. It is not only used for sanitation in the rooms but also for bathing purposes in the pools, for the kitchen, for the laundry, and for watering the parks and lawn surrounding the hotel.

The technical solutions for the water production include container or skid-based plants for the treatment of seawater, brackish water and surface water. The core technology of de-mineralizing is the reverse osmosis (RO) plant. With pre-filtration, pH-adjustment and disinfection unit a consistently high quality of potable water is guaranteed for our customers.

Purposes of fresh water in hotels:

- Sanitation
- Bathing and pools
- Kitchen
- Laundry
- Watering lawn

Applications of the plants:

- Hotels and resorts
- Islands
- Rural areas
- Golf courses and parks
- For irrigation purposes



Islanders Need
Insular Solutions

Municipal and Industry Supply

Whether land-based or on islands, KOW Watertreatment offers a wide range of water treatment processes to support municipal water suppliers, to ensure water quality and required volume needed for their customers.

Our portfolio ranges from water pre-treatment systems with cartridge filters and softener plants, membrane technology with reverse osmosis (RO), ultra-filtration (UF) or micro-filtration (MF), to post-treatment units such as disinfection by UV or chlorination and pH-adjustment.

Along to potable water treatment, KOW also provides the industrial sector with de-mineralized, low conductivity water (permeate). The use of RO plants to produce permeate is applicable for make-up water for steam generators, for cooling systems, for the chemical and pharmaceutical industry and wherever high quality pure water is needed.



Processes of water treatment:

- Cartridge filter
- Softener
- Membrane technology (RO, MF, UF)
- pH-adjustment
- Disinfection

Applications of the plants:

- Laundries
- Food & beverage industry
- Steam generators and cooling systems
- Chemical and pharmaceutical industry
- Agricultural irrigation



Where People Work
Fresh Water is Needed



Oil Drilling Islands and Offshore Platforms

Not only on ships but also on offshore platforms hundreds of workers and employees must be provided with fresh water for drinking and bathing purposes.

Even when the platforms are fixed and do not change their location like ships do, it is almost impossible and inefficient to connect them to the land-based water supplier. Often the platforms are located far away from the coast and make KOW fresh water production plants a reliable and cost-effective solution to ensure water supply for all people working on the platforms.

KOW offers standardized container or skid-based plants for plug and produce or customized design, regarding the available space on the platforms. Additionally, our technical support assists with commissioning and maintenance services. To ensure long-term trouble-free operation of the plants, we offer a worldwide after sales service and spare part delivery. Furthermore, our portfolio includes crew training for staff.

Processes of water treatment:

- Desalinization
- Soften or harden fresh water
- pH-adjustment
- Disinfection

Plant components for water treatment:

- Cartridge filter
- Gravel Filter
- Reverse osmosis
- Chemical dosing unit
- UV unit



Expertise and
Progress for the
Environment

About Us



KF Unternehmensgruppe

The family-run KF Group encompasses a variety of medium-sized companies with a total of 250 staff. The focus of our portfolio is environmental technology. We offer solutions to prevent and remove environmental pollution in soil, water and air.

Water *Element for a Healthy Life*

Clean water is the most vital element for a healthy life. Yet access to clean water is not always a matter of course. The KF Group offers a wide range of services from water treatment solutions to securing the water supply. These measures include ground water decontamination, process water treatment and ultra pure water production. Whether on a large industrial scale or for small private solutions, the KF Group provides you with customized plants to meet your needs.

- Harbauer
- Harbauer India
- Harbauer do Brasil
- WEIL Wasseraufbereitung
- ROWA 4 You
- ROWA Aquaristik
- KOW Watertreatment
- GEH (Shareholder)

Soil *Basis of Life*

Soil is the basis of life, whether we grow food crops in it or use it as a solid foundation for building a house. With a large spectrum of mechanical, physical and chemical processes, the KF Group remediates and treats all kinds of soil. Furthermore, our portfolio includes the investigation of subsoil with targeted drilling and the removal of munitions from the ground.

- Dausg Schüler
- Kemmer Engineering
- Märkische Ziegel
- gbav (Shareholder)
- bio (Shareholder)

Air *Crucial for High Quality of Life*

A deep breath of fresh air doesn't just invigorate us – it is crucial for a high quality of life. The KF Group offers waste air solutions for industry and for sewage systems. Waste air is disinfected and odours as well as contaminants are removed by using innovative UV technology.

- uviblox
- Harbauer



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