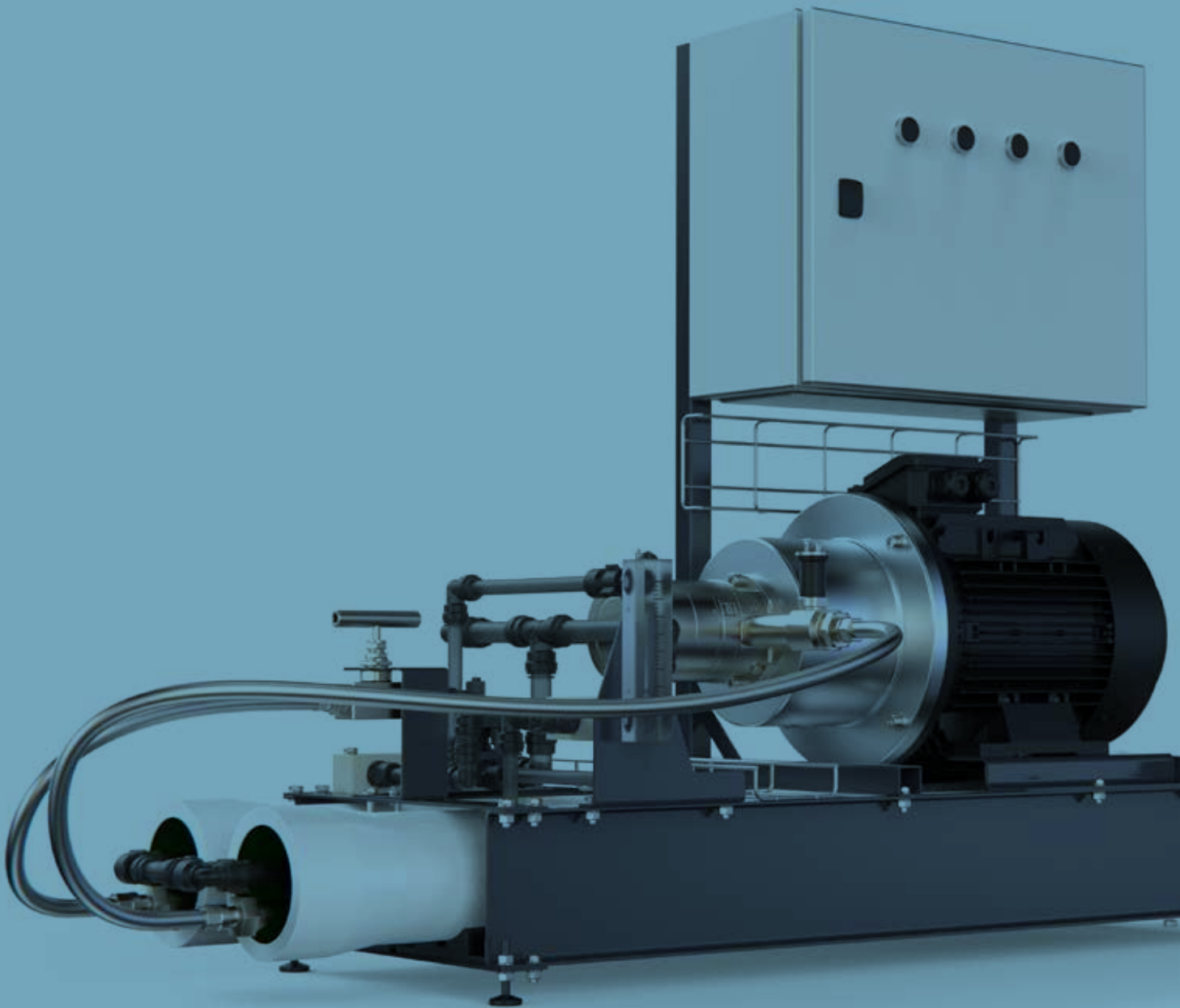


LIQTECH WATER



SWRO
Desalination



**LIQTECH
WATER**

IMPROVING OUR FUTURE

The world is running out of clean water and it is essential that we treat the resources we have with respect and care. LiqTech has developed a unique SWRO filtration technology capable of removing impurities such as chlorine, heavy metals, dissolved solids, ions, bacteria, and viruses, etc. from seawater. The SWRO unit represents a robust filtration solution to provide clean water anywhere, anytime.

Sustainable Desalination for Unlimited Freshwater

Generate potable and technical water directly from seawater.

According to the UN, water scarcity is a severe problem facing the world now and in the future. Therefore, it is critical to find sustainable and viable solutions, which can protect current freshwater resources and supply new ones. Fortunately, innovative water treatment solutions such as Seawater Reverse Osmosis (SWRO) may hold the key to solve this immense, global problem.

By virtue of its high energy efficiency and guaranteed consistent water quality, SWRO provides one of the most efficient and sustainable solutions to convert seawater into drinkable freshwater.

Clean Water Anywhere, Anytime

The LiqTech SWRO units are suitable for small commercial vessels, fishing boats, sailing boats, small port

- ⊕ Produce drinking water on a vessel at a cost that is cheaper than bottled water
- ⊕ Clean potable & technical water anywhere, anytime
- ⊕ Long lifetime & low maintenance
- ⊕ Greener footprint
- ⊕ Fully automated solution
- ⊕ Easy to operate
- ⊕ Smaller footprint than conventional technologies

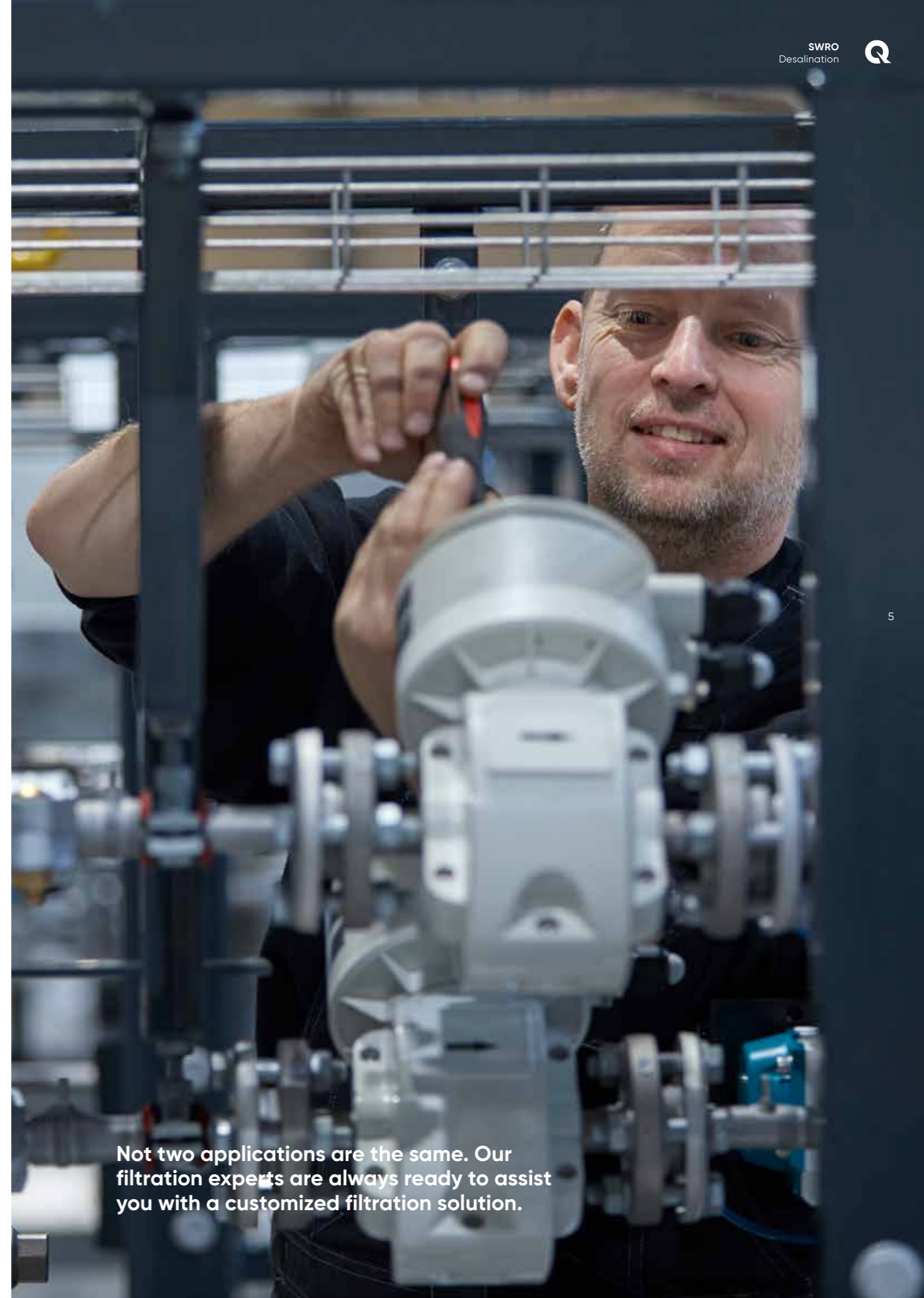


applications, and generally all places with access to seawater and where desalinated, potable water is needed. To ensure potable water quality, the LiqTech SWRO is equipped with a conductivity sensor that continuously measures the water's salinity.

Reverse Osmosis Principle

The reverse osmosis principle utilizes a polymeric membrane, which is a thin, semi-permeable membrane to produce clean water. The RO-membrane allows pure water to pass through while impurities such as chlorine, heavy metals, dissolved solids, ions, bacteria, and viruses are rejected. Reverse osmosis is a clean way of producing pure water as it does not add or use any chemicals to purify the water.

The LiqTech SWRO is constructed using only high-quality components to ensure long life and low maintenance cost, delivering significant advantages to your business.



Not two applications are the same. Our filtration experts are always ready to assist you with a customized filtration solution.

300+ water treatment systems installed worldwide and 20+ years of experience in the filtration industry.

High-Quality Filtration Products for the Marine Industry

LiqTech's applications for the marine industry are installed on hundreds of commercial vessels and ships worldwide. With more than 20 years in the filtration industry, we are highly experienced in working with shipowners, shipyards, and leading marine equipment manufacturers, all characterized by the non-tolerance towards any risk that can terminate the operation.

We can provide you with sustainable market-proven marine applications and solutions, ensuring compliance with current and future environmental regulations and sustainable production. Such solutions are essential in order to lower harmful emissions to protect ecosystems, human health, and aquatic species.

Not two systems are the same. Therefore, we also make customized systems that are tailored specifically to your marine application requirements. Our in-house capabilities in specifications, design, fabrication, programming, process, and chemistry make our turnkey water treatment systems unique and ensure the best efficiency.

LiqTech's applications for the marine industry are installed on hundreds of vessels worldwide. Our industry leaders' references include vessels such as cruise ships, Ro-Ro passenger ships, Ro-Ro cargo ships, container ships, bulk carriers, tanker ships, etc.





We have long-term experience working with water filtration in various industries world-wide, and we have a market-proven solution.

Modular System Design - Easily Upgradable

- + Low Energy Consumption
- + Low Maintenance
- + Easy to Increase Capacity

LiqTech's SWRO water treatment unit is available in four sizes (26-52-74-148 / 2.6-14.8 m³/24h). You can add customized details and equipment. We can accommodate your requests for an energy-efficient and cost-effective operation with a unit capable of converting seawater into extremely pure drinking water. The solution is flexible, easy to install and operate, and you can always increase your capacity after installation if needed.



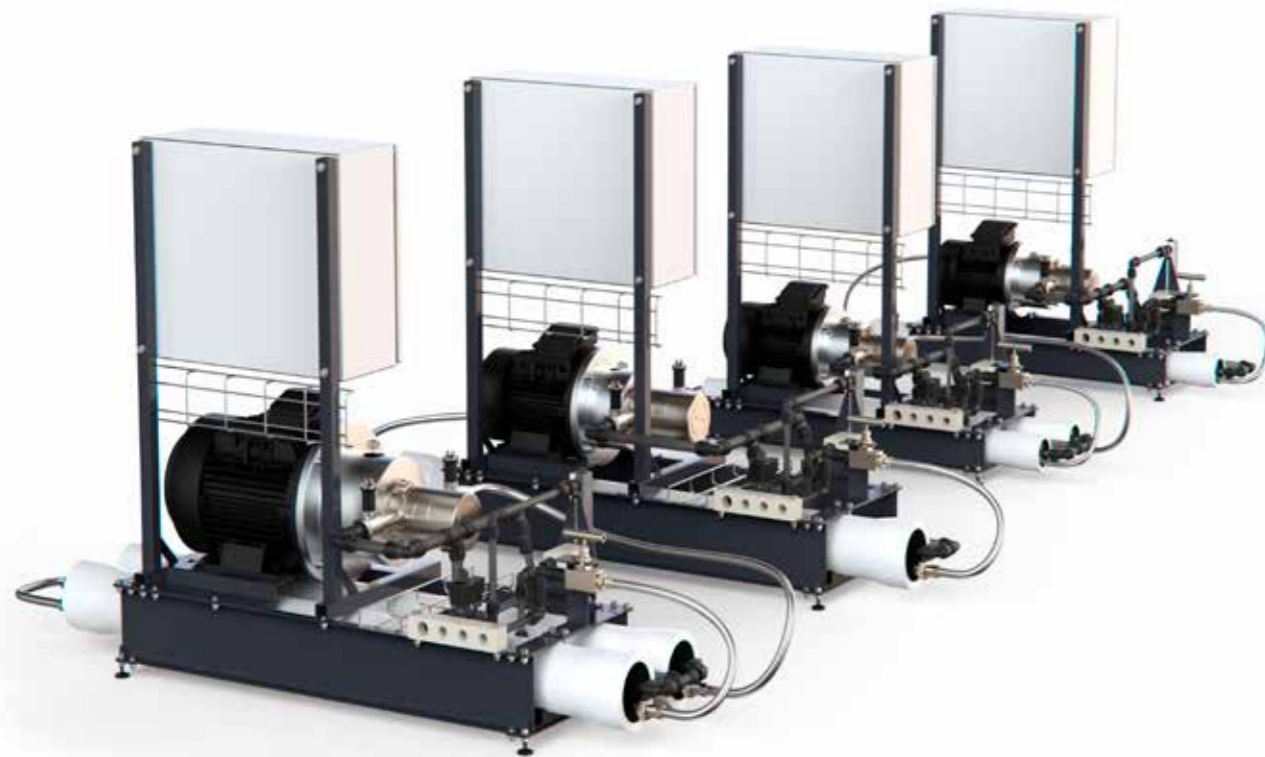
Benefits of the LiqTech SWRO System

The LiqTech SWRO unit is a direct flow reverse osmosis (RO) appliance that offers high-quality, clean potable water. The system automatically flushes in start-stop scenarios, ensuring membrane conservation for shorter periods of downtime. As the Liqtech SWRO unit does not rely on an external accumulation tank, it provides high production and availability.

At LiqTech, we also offer pre- and post-treatment solutions. The LiqTech SWRO unit can operate with most types of pre- and post-treatment. The SWRO unit merely needs a simple pre-treatment to protect the membranes and the pump, which can be, e.g., a 5-micron sediment filter. A remineralization filter can be utilized as post-treatment to add healthy minerals.

At LiqTech, we can assist you with the right filters for pre- and post-treatment and specialist knowledge in terms of how to operate the SWRO best.

- ⊕ Clean potable & technical water anywhere, anytime
- ⊕ Long Lifetime
- ⊕ Low Maintenance Cost
- ⊕ Low Energy Consumption
- ⊕ Easy to Operate
- ⊕ Smaller Footprint than Conventional Technologies
- ⊕ Consistent, High-Quality Water
- ⊕ Fully Automated Solution



To ensure the quality of the drinking water, the LiqTech SWRO is equipped with a conductivity sensor that continuously measures the water's salinity.



Benefits of Membrane Technology

We have developed and manufactured innovative and unique membrane technologies that can deliver significant advantages to your business for more than two decades. We are experienced with various types of membranes, including SiC, hybrid, and polymeric membranes. Likewise, we are experienced with multiple types of applications for several types of industries.

Membrane technology represents a revolutionary filtration technology, which meets many end-users demands of today and the future by providing current and future compliance of environmental regulations and sustainable production. In addition to fighting the global problem of clean water, membranes contribute to low energy consumption, high capacity, and a small footprint.

Membranes are the most crucial part of an SWRO filtration system as they purify seawater by removing impurities such as chlorine, heavy metals, dissolved solids, ions, bacteria, and viruses. Membranes can filter and clean water at different levels depending on the specific needs and requirements, making membranes relevant for various tasks in many industries.

With more than 20 years of experience in the filtration industry, we can assist you with competent specialist know-how within all aspects of water filtration. We have refined our technologies using solid materials to ensure durable, high-quality systems with a long lifetime.

Filtration Process for SWRO

The LiqTech system is a compact solution that utilizes RO to desalinate seawater. This is a clean way of producing pure water as it does not add or use any chemicals to clean the water. The RO principle utilizes a thin, semi-permeable, polymeric membrane. The membranes remove up to 99 % of dissolved solids, minerals, and salts, which deliver exceptionally pure freshwater.

Polymeric membranes are highly applicable for reverse osmosis as the organic material ensures the most optimal and durable performance for this type of filtration due to the dense pore size.

In practice, seawater enters the SWRO unit, and pressure

is applied. The RO-membrane allows pure water to pass through while impurities such as chlorine, heavy metals, dissolved solids, ions, bacteria, and viruses are rejected. This ultimately delivers a concentrated stream of sludge consisting of dissolved solids, minerals, salts, and a permeate stream of extremely clean potable freshwater.

The retentate can safely and sustainably be discharged back to sea as it only contains low concentrations of the same natural elements as are in the feed seawater.

The SWRO unit can be used with any pre-treatment and post-treatment processes for optimal performance, matching your specific demands.

Reverse osmosis is a clean way of producing pure water as it does not add or use any chemicals to purify the water.

End-to-End Service

At LiqTech, we have everything that is key to our customers in-house. We have many filtration experts with specialist know-how, more than 20 years of experience in the filtration industry, and successfully delivered 300+ high-quality water treatment systems to our customers. This enables us to know our customers' technology and equipment in detail.

Technical Sales Support

Our technical sales team is highly experienced and competent engineers with years of experience, enabling us to discuss and advise on the best system configuration for any type and size.

Process Engineering Consulting


Through 20 years of manufacturing marine water filtration systems, our process engineers are expert advisors in choosing the best filtration solution matching your specific needs. We provide the most reliable marine water treatment systems available on the market.

Service

We are ready to support you with your new LiqTech system by:

- Providing technical support to your staff, who will enjoy in-depth, expert assistance from our highly qualified team of service engineers during the entire process, from sales to operations and repair.
- Providing live demonstrations and in-house training.
- Performing pre-shipment FAT on every system, ensuring every delivered system works according to specifications.
- Continuously upgrading our control module operating system and provide our customers with these upgrades, ensuring the best possible operational performance.
- Providing 24/7 support so you can have complete confidence in your LiqTech system. The team is always ready to assist through remote service and support system installation, commissioning, system status, and preventive maintenance.

With our extensive experience in marine water filtration, your SWRO filtration system will be fully supported by experts, meet your specific needs, and meet or exceed the ISO 10500 standard and WHO specifications for drinking water.



Remote monitoring and control
24/7 - anywhere in the world
with highly skilled engineers.



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