

Datasheet



Advanced Water Treatment Solutions:
Reverse Osmosis (RO) Systems

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What is Reverse Osmosis?

Reverse Osmosis (RO) is one of today's most reliable and advanced water treatment technologies, providing molecular-level filtration. By utilizing semi-permeable membranes, it removes dissolved solids, heavy metals, and microorganisms from water, ensuring high-quality purified water even from the most challenging sources.

At Ptech GmbH, we offer Reverse Osmosis technology as a physical separation process that removes impurities from water at the molecular level. This system is not merely a filtration unit; it is an advanced engineering solution capable of converting even the most challenging water sources, such as seawater and high-conductivity well water, into high-purity process water.

How Do Reverse Osmosis Systems Work?

Our Reverse Osmosis systems are designed in two main stages to ensure maximum efficiency and protect system components.

Pre-Filtration Stage:

During the pre-filtration stage, raw water is treated to remove sediment, suspended particles, scale-forming substances, and microorganisms. This stage reduces the fouling load on the membranes, helping preserve system performance and extend service life.

High-Pressure Membrane Separation:

Water that passes through pre-filtration is fed to semi-permeable membranes under high pressure. Using the cross-flow principle, water molecules pass through the membrane pores, while salts, bacteria, nitrates, and heavy metals are rejected at rates of up to 99.8% and discharged through the reject line.

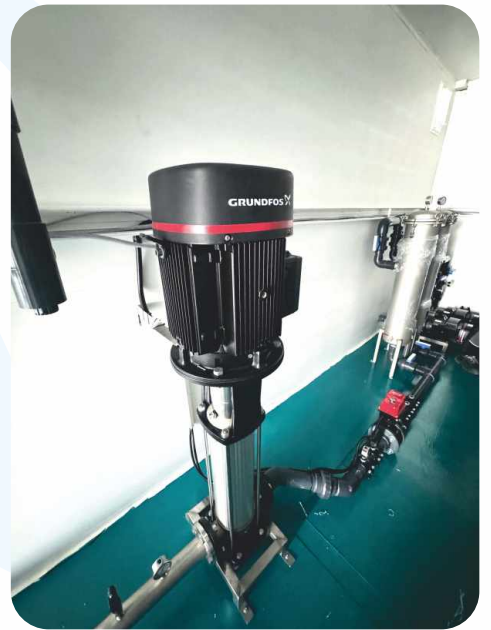
Advantages of Reverse Osmosis Systems

- High-capacity production of high-quality purified water
- Customizable water quality tailored to specific industry requirements
- Effective treatment of challenging water sources
- Potable water production
- High energy efficiency
- Easy installation and commissioning
- Compact, space-saving designs
- Containerized and portable solutions
- High-performance solutions for industrial wastewater treatment

Usage Areas

- Drinking Water Treatment
- Industrial Wastewater Treatment
- Seawater Desalination
- Process Water Production
- Power Generation Industry
- Agriculture and Irrigation
- Food and Beverage Industry
- Hotels and Resorts
- Healthcare Facilities





Corporate Solution Partnership and Engineering Vision

At Ptech GmbH, we design Reverse Osmosis system solutions tailored to the specific needs and quality standards of your operation. Backed by our engineering expertise, we develop system configurations optimized according to the chemical characteristics of the water, ensuring high efficiency and low operating costs.

Holistic Project Management and Engineering Approach

Operating in accordance with international standards and meticulous engineering practices, our company delivers reliable solutions across a wide range of applications, from critical production lines to the healthcare sector. By combining advanced treatment technologies with extensive industry experience, Ptech GmbH continues to provide reliable and sustainable water treatment solutions.

Industrial Reliability and Quality Standards

At Ptech GmbH, we base all our projects on international quality standards, combining proper equipment selection, meticulous engineering, and careful workmanship. Across a wide range of applications, from critical production lines to the healthcare sector, we aim to deliver high-performance, reliable, and long-lasting systems. With our focus on quality, operational continuity, and process safety, we provide our customers with sustainable and efficient solutions.

Sector-Specific Project Design

At Ptech GmbH, we develop project solutions tailored to the unique operational requirements of your business.



Ptech

ENERGY - WATER - SEWAGE TREATMENT TECHNOLOGY

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