

Flow Reverse Osmosis System (F-RO)



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Reverse Osmosis Systems

Introduction

Reverse osmosis (RO) is a simple, safe and cost effective water treatment process that uses a semi-permeable membrane to remove pollutants. It has a high rejection of metals, minerals, and chemical contaminants, a high recovery rate, and sturdy built-to-last design-and make it portable. It is used whenever salt removal or deionization is required.

Numerous industries, including pharmaceutical, healthcare, food and beverage, and saltwater desalination, can benefit from the utilization of RO water systems. RO is effective when combined with other purification techniques like ultrafiltration or continuous electro-deionization (CEDI).



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Process

Osmosis is the process by which water molecules pass across a semipermeable membrane from a region with a low solute concentration to one with a high solute concentration. However, in the RO system a pump generates pressure that forces the feed water against its natural flow across the semi-permeable membrane which acts as a barrier to all salts, inorganic compounds, and organic molecules.

While impurities are retained and released through a reject stream, the water molecules enter a purified water tank. The reject stream can be recycled in other procedures or disposed of safely.

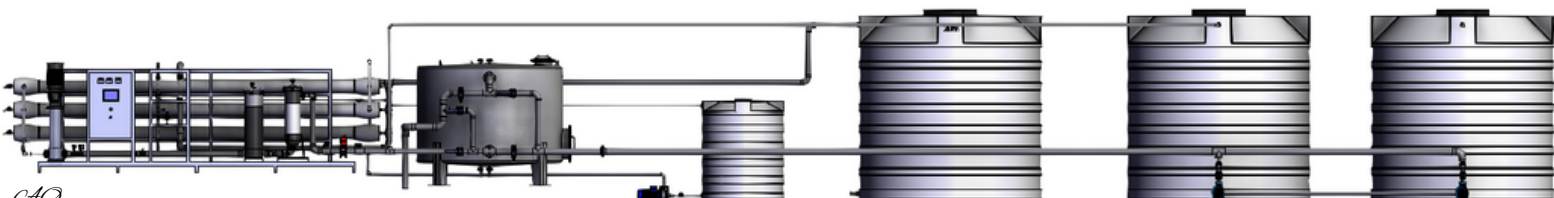
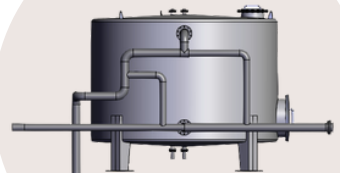
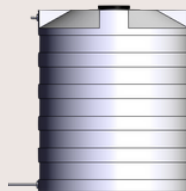
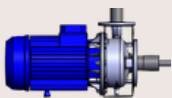
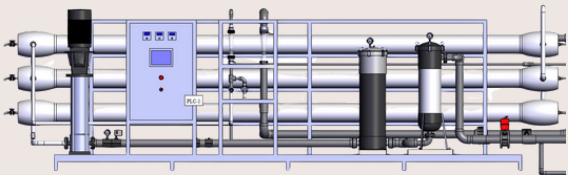
RO-produced water has very low TDS and is free of organic, colloidal, and particulate contaminants.



Reverse Osmosis Systems

Component

- High pressure feed pump.
- Multimedia Filter.
- Cartridge filter.
- Anti-scalant Dosing System.
- Chlorination Dosing System.
- De-Chlorination Dosing System.
- Pressure Vessels.
- The RO Membranes.
- Flow Meters.
- High-Pressure Gauge.
- (CIP) System.
- Control Panel.
- System Pumps.



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Advantages

- Continuous membrane and pump protection.
- Integrated membrane cleaning system.
- Dependability and adaptability in operation.
- Easy to use and maintain.
- Cost effective.
- The RO Membranes.
- Flow Meters.
- High-Pressure Gauge.
- (CIP) System.
- Control Panel.
- System Pumps.

System Capacity

The RO system comes in several capacities and models as described in below:

Model	Capacity	Model	Capacity
F-RO-1	1 m ³ /hr	F-RO-50	50 m ³ /hr
F-RO-5	5 m ³ /hr	F-RO-60	60 m ³ /hr
F-RO-10	10 m ³ /hr	F-RO-70	70 m ³ /hr
F-RO-20	20 m ³ /hr	F-RO-80	80 m ³ /hr
F-RO-30	30 m ³ /hr	F-RO-90	90 m ³ /hr
F-RO-40	40 m ³ /hr	F-RO-100	100 m ³ /hr

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