

ECOSOFT MO-20 INDUSTRIAL REVERSE OSMOSIS SYSTEM

PURPOSE. Ecosoft MO-20 is an industrial reverse osmosis system for purification of brackish water. Ecosoft RO systems feature simple and efficient design for high recovery low energy operation.



MAIN SPECIFICATIONS:	
Nominal capacity ¹	20 m ³ /h
Normal recovery rate ¹	75%
Electrical requirements	400 V, 50 Hz (3 phase)
Power requirements	15 kW
Membrane elements	Dow Filmtec™ 20 pcs
Dimensions (Width × Depth × Height)	5.4×2.0×2.2 m
¹ At 15°C, 2000 ppm feed water, ±10%	

KEY ASSETS.

- Energy efficiency with Dow Filmtec™ XLE membranes and Grundfos pump
- Reliable performance with quality components and engineering
- Individual project evaluation per request
- CE label for electrical safety compliance
- ISO 9001 certified factory

Purified water is used in most sectors of industry. Main applications of Ecosoft RO systems include:

<i>Semiconductor manufacturing</i>	<i>Steam boilers</i>	<i>Textile industry</i>
<i>Pharmaceutical manufacturing</i>	<i>Heat and cooling circuits</i>	<i>Fish farms</i>
<i>Chemical manufacturing</i>	<i>Agriculture</i>	<i>Utility water treatment</i>
<i>Food processing</i>	<i>Insulation glazing</i>	<i>Laundry and car wash</i>
<i>Galvanic and electroplating works</i>	<i>Desalination</i>	<i>Drinking water bottling</i>

MAIN EQUIPMENT.

• DOW Filmtec™ XLE membranes	• Sediment pre-filters
• Grundfos CR pump	• 3 pressure switches
• Danfoss motorized valves	• Float switch
• Honeywell regulating valves	• Conductivity probe
• Ecosoft RO controller	• Anti-vibration pressure gauges and rotameters
• Praher and John Guest pipe, fitting, and valves	• Powder coated steel frame

OPTIONS.

Special purpose DOW Filmtec™ membranes	— For problem water with high nitrate, ammonium, TDS, TOC or other water quality issues
EMEC dosing pump	— For hard water or other water quality issues
Permeate rinse	— Prolongs membrane life and extends runtime before membrane clean (CIP)
Raw water blending	— Corrects purified water analysis and increases total flow rate

EXTENDED SPECIFICATIONS.

Inlet pressure of water ¹	2...4 bar
Operating pressure	7...10 bar
Maximum pressure	14 bar
Influent flow rate during service	28...40 m³/h
Influent flow rate during rinse	28...40 m³/h
Connection port sizes:	<div>— feed water DN80</div> <div>— permeate DN65</div> <div>— concentrate DN80</div>
Dimensions (Width x Depth x Height)	5.4×2.0×2.2 m
Weight	1300 kg

¹ stable pressure (±0.5 bar) within specified limits is required for sustainable operation

FEED WATER REQUIREMENTS.

1	Total Dissolved Solids	< 3000	mg/L (ppm)
2	Hardness ²	< 150	mg/L CaCO ₃ (ppm CaCO ₃)
3	Iron	< 0.1	mg/L (ppm)
4	Manganese	< 0.05	mg/L (ppm)
5	Hydrogen Sulfide	none	
6	Silica ²	< 20	
7	Chlorine	< 0.1	mg/L (ppm)
8	Silt Density Index	< 5	mg/L (ppm)

² Higher values can be treated with antiscalant