Overview
The MRO-SW series of Reverse Osmosis units are designed to process seawater and provide a high quality freshwater supply for a variety of potable, domestic, and industrial uses. The product platform is very flexible for customization and offers a wide range of output capacities (5,000-300,000 GPD). All components are carefully selected for exceptional performance and energy efficiency while maintaining an economical capital price.

Operating Parameters
- Operating Pressure: 750–1000 psig
- Nominal Recovery: 25–40%
- Operating Temperature: 45–85° F
- Design Temperature: 60° F
- Minimum Inlet Pressure: 40 psig
- Control Circuit: 120 VAC, 1-phase, 60 Hz.

Materials of Construction
- Skid Frame: Epoxy-coated carbon steel
- Membrane Housings: FRP (1000 psig rated)
- Prefilter Housings: Polypropylene or FRP
- Low pressure piping: Sch 80 PVC
- High pressure piping: Duplex Stainless Steel 2205

Pump and Motor
- Pump: Duplex Stainless Steel Axial Piston (models 50K and smaller)
- Pump: Duplex Stainless Steel Multi-Stage Centrifugal (models 75K and larger)
- Motor: TEFC, 460 VAC, 3-phase, 60 Hz.
- Energy Recovery Turbocharger (models 75K and larger)

Standard Features
- High rejection, TFC membrane elements
- 5-micron sediment pre-filter housing
- Allen Bradley MicroLogix 1400 PLC System with PanelView 800 operator interface
- Ethernet/Modbus PLC communications
- Prewired motor starter with fused disconnect switch
- NEMA-4 electrical enclosures
- UL-508A Listed electrical panels
- Automatic product water divert valve
- Product water conductivity transmitter
- Product and reject flow transmitters
- 316SS pressure gauges
- Low inlet pressure switch with alarm
- High pump discharge pressure switch with alarm

Optional Equipment Available
- 380 VAC, 3-phase, 50 Hz power
- Variable Frequency Drives (VFD) (Standard on models 25K and larger)
- Membrane clean-in-place (CIP) / Flush system
- pH/ORP monitors
- Super duplex stainless steel 2507 high pressure piping
- All stainless steel skid/frame
- Atmospheric storage tanks with level control and repressurization pump systems
- Pretreatment chemical injection systems
- Multi-media / Activated carbon pre-filters
- Export crating
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>PRODUCT WATER CAPACITY</th>
<th>ELEMENT SIZE</th>
<th>ELEMENT QUANTITY</th>
<th>RO FEED</th>
<th>RO REJECT</th>
<th>SYSTEM PIPING CONNECTIONS (INCHES)</th>
<th>PUMP HP</th>
<th>OVERALL DIMENSIONS (INCHES)</th>
<th>SHIPPING WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRO-5000-SW</td>
<td>3.5 GPM</td>
<td>5,000 GPD</td>
<td>4&quot;x40&quot;</td>
<td>8</td>
<td>11.6 GPM</td>
<td>8.1 GPM</td>
<td>1&quot;</td>
<td>1½&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td>MRO-7500-SW</td>
<td>5 GPM</td>
<td>7,500 GPD</td>
<td>4&quot;x40&quot;</td>
<td>10</td>
<td>17.4 GPM</td>
<td>12.2 GPM</td>
<td>1&quot;</td>
<td>1½&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td>MRO-15K-SW</td>
<td>10 GPM</td>
<td>15,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>4</td>
<td>30 GPM</td>
<td>20 GPM</td>
<td>1½&quot;</td>
<td>1&quot;</td>
<td>1½&quot;</td>
</tr>
<tr>
<td>MRO-20K-SW</td>
<td>14 GPM</td>
<td>20,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>6</td>
<td>40 GPM</td>
<td>26 GPM</td>
<td>1½&quot;</td>
<td>1&quot;</td>
<td>1½&quot;</td>
</tr>
<tr>
<td>MRO-25K-SW</td>
<td>17 GPM</td>
<td>25,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>8</td>
<td>43 GPM</td>
<td>26 GPM</td>
<td>2&quot;</td>
<td>1½&quot;</td>
<td>1½&quot;</td>
</tr>
<tr>
<td>MRO-35K-SW</td>
<td>24 GPM</td>
<td>35,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>12</td>
<td>60 GPM</td>
<td>36 GPM</td>
<td>2&quot;</td>
<td>1½&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>MRO-50K-SW</td>
<td>35 GPM</td>
<td>50,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>16</td>
<td>87 GPM</td>
<td>52 GPM</td>
<td>3&quot;</td>
<td>1¾&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>MRO-75K-SW</td>
<td>52 GPM</td>
<td>75,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>18</td>
<td>130 GPM</td>
<td>78 GPM</td>
<td>3&quot;</td>
<td>2&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>MRO-100K-SW</td>
<td>69 GPM</td>
<td>100,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>24</td>
<td>173 GPM</td>
<td>104 GPM</td>
<td>3&quot;</td>
<td>2&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>MRO-150K-SW</td>
<td>104 GPM</td>
<td>150,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>36</td>
<td>260 GPM</td>
<td>156 GPM</td>
<td>4&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>MRO-200K-SW</td>
<td>139 GPM</td>
<td>200,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>48</td>
<td>347 GPM</td>
<td>208 GPM</td>
<td>4&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>MRO-250K-SW</td>
<td>173 GPM</td>
<td>250,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>60</td>
<td>434 GPM</td>
<td>260 GPM</td>
<td>6&quot;</td>
<td>4&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>MRO-300K-SW</td>
<td>208 GPM</td>
<td>300,000 GPD</td>
<td>8&quot;x40&quot;</td>
<td>72</td>
<td>521 GPM</td>
<td>313 GPM</td>
<td>6&quot;</td>
<td>4&quot;</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

### Notes

1. All dimensions and weights shown are approximate and dependent on options selected.
2. Specifications based on seawater at 36,000 ppm TDS and an operating temperature of 60°F.
3. Requires minimum of 48" additional length on each side of the skid for membrane removal.
4. Feedwater to RO system must be free of chlorine and pre-conditioned by polymer injection to prevent membrane scaling.
5. Intake and supply pumps to bring seawater to the RO system are not included.