



Enhanced fouling resistant RO element for brackish water and wastewater reuse

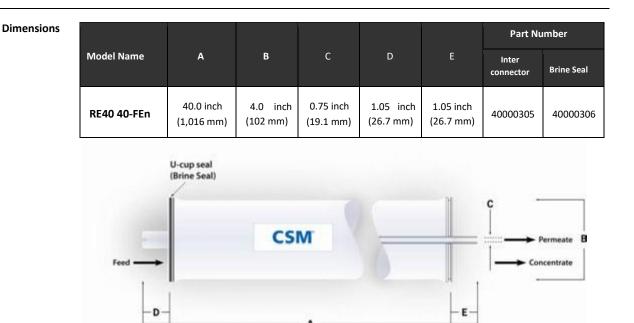
## SPECIFICATIONS

| General  | Permeate flow rate: 2,400 GPD ( 9.1 m <sub>3</sub> /da |  |  |
|----------|--|--|--|
| Features | Nominal salt rejection:                                | 99.7%                                    |  |
|          | Effective membrane area:                               | 85 ft <sub>2</sub> (7.9 m <sub>2</sub> ) |  |

1. The stated product performance is based on data taken after 30 minutes of operationa t the following test conditions:

- 2,000 mg/L NaCl solution at 225 psig (1.5 MPa) applied pressure
- 15% recovery
- 77 °E (22 °C)
- pH 6.5 -7.0
- 2. Minimum salt rejectoi n is 99.5%.
- 3. Permeate flow rate for each element may vary but will be no more than 15%.
- 4. All elements are vacuum sealed in a polyethylene bag containing 1.0% SBS (sodium bisulfite) solution and individuallyp ackaged in a cardboard box .

Membrane type: Membrane material: Element configuration: Thin-Film Composite Polyamide(PA) Spiral-Wound, FRP W rapping



1. Each membrane elements upplied with one brine seal, one interconnector (coupler) and four o-rings. 2. All RE4040 elements fit nominal 4.0 inch (102 mm) I.D. pressure vessels.

The information provided in this document is solely for informative purpose.s It is the user's responsibility to ensure the appropriate usage of this productW. oongjin Chemical assumes no obligation, liability or damages incurred for the misuse of the product or for the information provided in this documentT. his document does not express or implies any warranty as to the merchantability or fitness of the product.



Enhanced fouling resistant RO element

RE 4040-FE n

for brackish water and wastewater reuse

| APPLICA TION DATA :                                |   |  |
|--|---|--|
| Operating Limits                                   | <ul> <li>Max. Pressure Drop / Element</li> <li>Max. Pressure Drop / 240" Vessel</li> </ul>  | 15 psi (0.1 MPa)<br>60 psi (0.41 Mpa)  |
|  | · Max. Operating Pressure   | 600 psi (4.14 MPa)   |
|  | · Max. Feed Flow Rate   | 18 gpm (4.09 m³/hr)  |
|  | · Min. Concentrate Flow Rate  | 4 gpm (0.91 m₃/hr)   |
|  | $\cdot$ Max. OperatingT emperature  | 113 °F (45 °C)   |
|  | · Operating pH Range  | 2.0–11.0   |
|  | · CIP pH Range  | 1.0–13.0   |
|  | · Max. Turbidity  | 1.0 NTU  |
|  | · Max. SDI (15 min)   | 5.0  |
|  | · Max. Chlorine Concentration   | < 0.1 mg/L   |
| Design Guidelines for Various<br>Water S<br>ources | <ul> <li>Wastewater Conventional (SDI &lt; 5)</li> <li>Wastewater Pretreated by UF/MF (SDI &lt; 3)</li> <li>Seawater, Open Intake (SDI &lt; 5)</li> <li>Seawater, Beach Well (SDI &lt; 3)</li> <li>Surface Water (SDI &lt; 5)</li> <li>Surface Water (SDI &lt; 3)</li> <li>Well water (SDI &lt; 3)</li> <li>RO permeate (SDI &lt; 1)</li> </ul>   | 8–12 gfd<br>10–14 gfd<br>7–10 gfd<br>8–12 gfd<br>12–16 gfd<br>13–17 gfd<br>21–30 gfd |
| Saturation Limits<br>(Using Antiscalants)          | •Langlier Saturation Index (LSI)<br>Stiff and Davis Saturation Index (SDSI)<br>• CaSO 4   | <+1.5<br><+0.5<br>230% saturation  |
|  | · SrSO 4  | 800% saturation  |
|  | · BaSO4   | 6,000% saturation  |
|  | · SiO <sub>2</sub>  | 100% saturation  |
|  | above saturation limits are typically accepted by proprietary antiscalant<br>manufacturers. It is the user's responsibility to ensure proper chemical(s) and<br>concentration are dosed ahead of the membrane system to prevent scale<br>formation anywhere within the membrane system. Membrane elements<br>fouled or damaged due to scale formation are not covered by the limited<br>warranty. |  |

warranty.

GENERAL HANDLING PROCEDURES Elements contained in the boxes must be kept dry at room temperature (7-32°C; 40 -95°F) and should not be stored in direct sunlight. If the polyethylene bag is damaged, a new preservative solution (sodium bisul-te) must be added and air-tight sealed to prevent drying and biological growth. Permeate from the -rst hour of operation should be discarded to ush out the preservative solution. Elements should be immersed in a preservative solution during storage, shipping and system shutdowns to prevent biological growth and freezing. The standard storage solution contains 1% by weight sodium bisul-te or sodium metabisul-te (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisul-te solution is adequate for preventing biological growth. Keep elements moist at all times after initial wetting. Avoid excessive pressure and ow spikes. Only use chemicals compatible with the membrane elements and components. Use of such chemicals may void the element limited warranty. Permeate pressure must always be equal or less than the feed/concentrate pressure. Damage caused by permeate back pressure voids the element limited warranty