### NE8040-90

Normal grade NF element with

# **CSM**



### high monovalent ion rejection

### SPECIFICATIONS

General Features

Permeate flow rate 1: 7,500 GPD (28.4 m<sup>3</sup>/day)

Monovalent ion rejection (NaCl)  $^{1}$ : 85.0 - 95.0%Divalent ion rejection  $(CaCl_{2})^{2}$ : 90.0 - 95.0%Effective membrane area:  $400 \text{ ft}^{2} (37.2 \text{ m}^{2})$ 

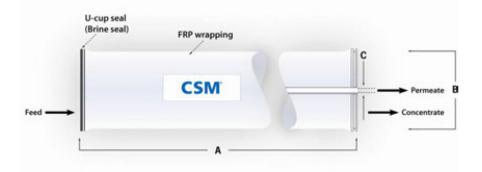
- 1. The stated product performance is based on data taken after 30 minutes of operationat the following monovalenttest conditions:
  - 2,000 mg/L NaCl solution at 75 psig (0.5 MPa) applied pressure
  - 15% recov ery
  - 77 °F (25 °C)
  - pH 6.5 -7.0
- 2. The stated product performance is based on data taken after 30 minutes of operationat the following divalent test conditions:
  - 500 mg/L CaCl 2 solution at 75 psig (0.5 MPa) applied pressure
  - · 15% recovery
  - 77 °F (25 °Ć)
  - pH 6.5 -7.0
- 3. MgSO<sub>4</sub> rejection is 97.0%. (Test conditions are equivalent with NaCl)
- 4. Permeate flow rate for each element may vary but will be no more than 20%
- 5. All elements are vacuum sealed in a polyethylene bag containing 1.0% SBS (sodium bisulfite) ution and individually packaged in a cardboard box.

Membrane type: Thin-Film Composite
Membrane material: Polyamide(PA)

Element configuration: Spiral-Wound, FRP W rapping

Dimensions and Weight

					Part Number	
Model Name	A	В	С	Weight	Inter -	2: 6 1
					connector	Brine Seal
N E 8040 -90	40.0 inch	8.0 inch	1.12 inch	15 kg	40000308	40000309



- 1. Each membrane elementsupplied with one brine seal, one interconnector (coupler) and four o-rings.
- 2. All NE8040 elements fit nominal 8.0 inch (201 mm) I.D. pressure vessels.

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

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### APPLICATION DATA

**Operating Limits** 

· Max. Pressure Drop / Element 15 psi (0.1 MPa) Max. Pressure Drop / 240" Vessel 60 psi (0.41 Mpa) Max. Operating Pressure 600 psi (4.14 MPa) · Max. Feed Flow Rate 75 gpm (17.0 m<sup>3</sup>/hr) · Min.Concentrate Flow Rate 16 gpm (3.6 m<sup>3</sup>/hr) Max. O perating Temperature 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  $< 0.1 \,\mathrm{mg/L}$ 

Design Guidelines for Various Water Sources

 Wastewater Conventional (SDI < 5)</li> 8-12 afd Wastewater Pretreated by UF/MF (SDI < 3) 10-14 afd Seawater, Open Intake (SDI < 5) 7-10 qfd Seawater, Beach Well (SDI < 3) 8-12 afd SurfaceWater (SDI < 5) 12-16 gfd Surface Water (SDI < 3) 13-17 afd · Well water (SDI < 3) 13-17 qfd 21-30 gfd · RO permeate (SDI < 1)

Saturation Limits (Using Antiscalants)

Langlier Saturation Index(LSI)
 Stiff and Davis Saturation Index(SDSI)
 +0.5

CaSO 4
 SrSO 4
 BaSO 4
 BaSO 4
 SiO 2
 230% saturation
 800% saturation
 6,000% saturation
 100% saturation

<sup>†</sup>The above saturation limits are typically accepted by proprietary antiscalant manufacturers. It is the user's responsibility to ensure proper chemical(s) and concentration are dosed ahead of the membrane system to prevent scale formation anywhere within the membrane system. Membrane elements fouled or damaged due to scale formation are not covered by the limited 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 bisulfite) must be added and airtight seabd to prevent drying and biological growth.
- Permeate from the first hour of operation should be discarded to flush 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 bisulfite or sodium metabisulfite (food grade). For short term storage (i.e. one week or less) 1% by weight sodium metabisulfite solution is adequate for preventing biological growth.

- Keep elements moist at all times after initial wetting.
- Avoid excessive pressure and flow 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.



info@ilser.com Tel: +90 232 441 1 441 www.ilsersuaritma.com Fax: +90 232 441 09 19