RE4021-BLN Low pressuregrade RO element for brackish water



SPECIFICATIONS

General Permeate flow rate:

1,050 GPD (4.0 m³/day)

Features

Nominal salt rejection: 99.2%

Effective membrane area: 35 ft² (3.3 m²)

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

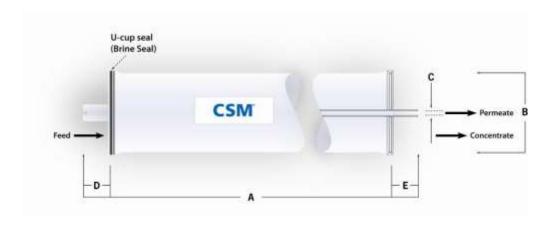
- 1,500 mg/L NaCl solution at 150 psig (1.0 MPa) applied pressure
- 15% recovery
- 77 °F (25 °C)
- pH 6.5-7.0
- 2. Minimum salt rejection is 99.0%.
- 3. Permeate flow rate for each element may vary but will be no more than 15%.
- 4. All elements are vacuum sealed in a polyethylene bag containing 1.0% SBS (sodium bisulfite) solution and individually packaged in a cardboard box.

						Part Number		
Model Name	A	В	С	D	E	Interconnector	Brine Seal	
RE4021-BLN	21.0 inch (534 mm)	4.0 inch (102 mm)	0.75 inch (19.1 mm)	1.05 inch (26.7 mm)	1.05 inch (26.7 mm)	40000305	40000306	

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

Element configuration: Spiral-Wound, FRP Wrapping

Dimensions



- 1. Each membrane element supplied with one brine seal, one interconnector (coupler) and four o-rings.
- 2. All RE4021 elements fit nominal 4.0 inch (102 mm) I.D. pressure vessels.

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RE4021-BLN

Low pressure grade RO element for brackish water

APPLICATION DATA:

Operating Limits	· Max. Pressure Drop / Element · Max. Pressure Drop / 240" Vessel	15 psi (0.1 MPa) 60 psi (0.41 Mpa)	
	· Max. Operating Pressure	600 psi (4.14 MPa)	
	· Max. Feed Flow Rate	13 gpm (2.95 m³/hr)	
	· Min. Concentrate Flow Rate	3 gpm (0.68 m³/hr)	
	· Max. Operating 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 mg/L	
Design Guidelines for Various Water Sources	 Wastewater Conventional (SDI < 5) Wastewater Pretreated by UF/MF (SDI < 3) 	8–12 gfd 10–14 gfd	
	· Seawater, Open Intake (SDI < 5)	7–10 gfd	

	· Seawater, Beach Well (SDI < 3)	8–12 gfd 12–16 gfd 13–17 gfd	
	· Surface Water (SDI < 5)		
	· Surface Water (SDI < 3)		
	· Well water (SDI < 3)	13–17 gfd	
	· RO permeate (SDI < 1)	21–30 gfd	
Saturation Limits	· Langlier Saturation Index (LSI)	<+1.5	
(Using Antiscalants)	· Stiff and Davis Saturation Index (SDSI)	<+0.5	
	· CaSO ₄	230% saturation	
	· SrSO ₄	800% saturation	
	· BaSO ₄	6,000% saturation	
	• SiO ₂ 100% †The above saturation limits are typically accepted by proprieta manufacturers. It is the user's responsibility to ensure proper c concentration are dosed ahead of the membrane system to preformation anywhere within the membrane system. Membrane or damaged due to scale formation are not covered by the limit		

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 air-tight sealed 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.

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- 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.