Product Data Sheet

FilmTec™ SOAR 4000i Element

Low Energy, Brackish Water RO Element for DesaliTec™ CCRO Systems

Description

The FilmTec™ SOAR 4000i Element is an advanced element design based on a cleanable membrane chemistry that provides good solute rejection with reduced feed pressure and is suitable for a wide range of applications including municipal water and wastewater, ingredient water and industrial uses such as process water, cooling tower water and general-purpose industrial water.

Advantages:

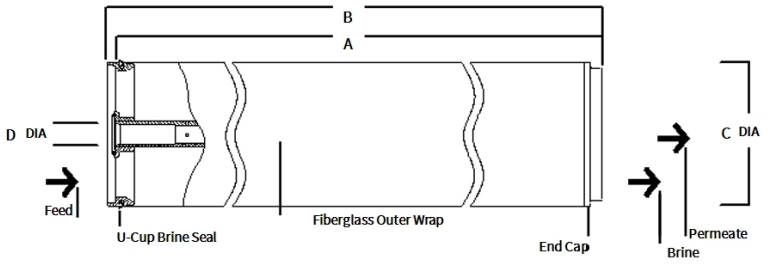
- Combines versatility of patented DesaliTec™ CCRO process with DuPont's industry-leading FilmTec™ membrane innovation for even better reliability.
- Durable membrane with a cleaning tolerance over a wide pH range (pH 1-13) for consistent, long-lasting life.
- iLEC™ interlocking end caps, helping to reduce system operating costs and the risk of o-ring leaks that can cause poor water quality.

Typical Properties

FilmTec™ Element	Active Area ft^2 (m^2)	Permeate Flow Rate gpd (m^3/d)	Minimum Salt Rejection (%)	Stabilized Salt Rejection (%)
FilmTec™ SOAR 4000i	400 (37)	15,000 (56)	99.2	99.4

1. Permeate flow and salt (NaCl) rejection is based on the following standard test conditions: 2,000 ppm NaCl, 200 psi (13.8 bar), 77°F (25°C), pH 8 and 20% recovery.
2. Flow rates for individual elements may vary but will be no more than +/- 15%.
3. Stabilized salt rejection is generally achieved within 24-48 hours of continuous use; depending upon feedwater characteristics and operating conditions.
4. Sales specifications may vary as design revisions take place.

Element Dimensions



Dimensions – inches (mm)					1 inch = 25.4 mm
FilmTec™ Element	Feed Spacer (mil)	A inch (mm)	B inch (mm)	C inch (mm)	D inch (mm)
FilmTec™ SOAR 4000i	34	40.0 (1,016)	40.5 (1029)	7.9 (201)	1.125 ID (29)

1. Refer to FilmTec™ Design Guidelines for multiple-element systems of 8-inch elements (Form No. 45-D01695-en).
2. Element to fit nominal 8-inch (203 mm) I.D. pressure vessel
3. Individual elements with iLEC™ endcaps measure 40.5 inches (1,029 mm) in length (B). The net length (A) of the elements when connected is 40.0 inches (1,016 mm).

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Operating and Cleaning Limits

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperature[a]	113 °F (45 °C)
Maximum Operating Pressure	600 psig (41 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation[a]	2 - 11
Short-Term Cleaning (30 min.)[b]	1 - 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance[c]	< 0.1 ppm

a. Maximum temperature for continuous operation above pH 10 is 95 °F (35 °C)
b. Refer to guidelines in Cleaning Guidelines (Form No. 45-D01696-en) .
c. Since oxidation damage is not covered under warranty, DuPont recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater (Form No. 45-D01569-en) for more information.

Important Information

Please consider good operating practices for the optimal performance of the Reverse Osmosis membrane elements to assure damage free operation:

- Loading of Pressure Vessels - Preparation & Element Loading (Form No. 45-D01602-en)
- Start-Up Sequence (Form No. 45-D01609-en)
- RO & NF Systems Shutdown (Form No. 45-D01613-en)
- Storage and Shipping of New FilmTec™ Elements (Form No. 45-D03716-en)

Full information of plant design, system operation and troubleshooting is given in the FilmTec™ Reverse Osmosis Membranes Technical Manual (Form No. 45-D01504-en).

General Information

- Keep elements moist at all times after initial wetting.
- If operating limits and guidelines given in this bulletin are not strictly followed, the FilmTec™ Reverse Osmosis and Nanofiltration Three-Year Prorated Limited Warranty (Form No. 45-D00903-en) will be null and void.
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution.
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements.
- Avoid static permeate-side backpressure at all times.
- Permeate obtained from the first hour of operation should be discarded.
- The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Have a question? Contact us at:

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