FILMTEC™ Membranes

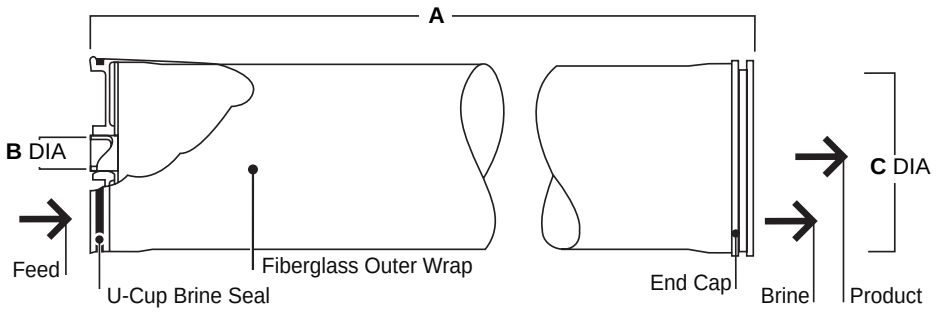
FILMTEC **SW30-8040** Seawater Reverse Osmosis Element

Product Specifications

Product	Active Area ft² (m²)	Permeate Flow Rate gpd (m³/d)	Minimum Salt Rejection %	Stabilized Salt Rejection %
SW30-8040	300 (28)	6,000 (23)	98.6	99.1

1. The above benchmark values are based on the following test conditions: 32,000 ppm NaCl, 5 ppm Boron, 800 psi (5.5 MPa), 77°F (25°C), pH 8 and 10% recovery.
2. Permeate flows for individual elements may vary +/-15%.
3. Product specifications may vary slightly as improvements are implemented.
4. Active area guaranteed +/-5%. Active area as stated by FilmTec Corporation is not comparable to the nominal membrane area figure often stated by some element suppliers. Measurement method described in Form No. 609-00434.

Figure 1



Product	Dimensions – Inches (mm) A	B	C
SW30-8040	40 (1,016)	1.125 (29)	7.9 (201)

1. Refer to FilmTec Corporation Design Guidelines for multiple-element systems.
2. Elements fit nominal 8-inch (203 mm) I.D. pressure vessel.

1 inch = 25.4 mm

Operating Limits

• Membrane Type	Thin-Film Composite
• Maximum Operating Pressure	1,015 psi (7.0 MPa)
• Maximum Operating Temperature	113°F (45°C)
• Maximum Feed Turbidity	1 NTU
• Free Chlorine Tolerance	<0.1 ppm
• pH Range, Continuous Operation	2 – 11
• pH Range, Short-Term Cleaning (30 min.)	1 – 13
• Maximum Feed Flow	60 gpm (14 m³/h)
• Maximum Feed Silt Density Index (SDI)	SDI 5

Important Information

Proper start-up of reverse osmosis water treatment systems is essential to prepare the membranes for operating service and to prevent membrane damage due to overfeeding or hydraulic shock. Following the proper start-up sequence also helps ensure that system operating parameters conform to design specifications so that system water quality and productivity goals can be achieved.

Before initiating system start-up procedures, membrane pretreatment, loading of the membrane elements, instrument calibration and other system checks should be completed.

Please refer to the application information literature entitled “Start-Up Sequence” (Form No. 609-02077) for more information.

Operation Guidelines

Avoid any abrupt pressure or cross-flow variations on the spiral elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During start-up, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-60 second time frame.
- Cross-flow velocity at set operating point should be achieved gradually over 15-20 seconds.
- Permeate obtained from first hour of operation should be discarded.

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 limited warranty will be null and void. Refer to FILMTEC™ Reverse Osmosis and Nanofiltration Element Three-Year Prorated Limited Warranty (Form No. 609-35010)
- 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.
- Maximum pressure drop across an entire pressure vessel (housing) is 50 psi (3.4 bar).
- Avoid static permeate-side backpressure at all times.

Notice: 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.

Notice: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer’s use and for ensuring that Customer’s workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN. ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.