FILMTEC Membranes

RO Elements for Sanitary Applications

Features

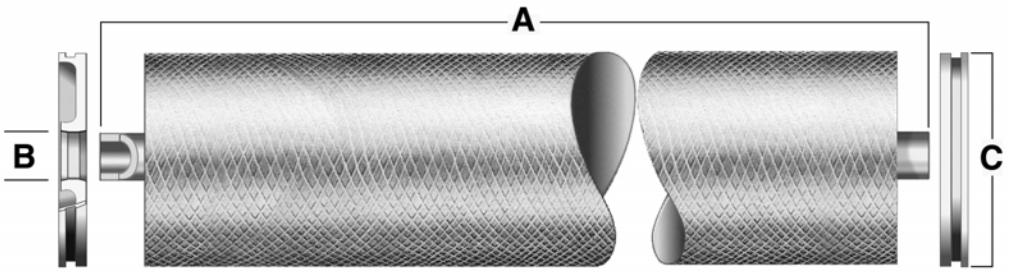
FILMTEC™ RO reverse osmosis membrane elements deliver high flux and outstanding quality water for applications requiring sanitary grade membrane elements. The full-fit configuration minimizes stagnant areas and is optimal for applications requiring a sanitary design. All components comply with FDA standards.

Product Specifications

Product	Part Number	Active Surface Area ft^2 (m^2)	Stabilized Permeate Flow Rate gpd (m^3/d)	Typical Stabilized Salt Rejection (%)
RO-4040-FF	84286	85 (7.9)	2,400 (9.1)	99.5
RO-390-FF	116314 / 100608	390 (36)	10,800 (40.9)	99.5

1. RO-4040-FF was previously named BW30-4040-LW.
2. RO-390-FF replaces BW30-380-LW and BW30-8040-LW.
3. Permeate flow and salt rejection based on standard conditions: 2,000 ppm NaCl, 225 psi (16 bar), 77°F (25°C), pH 8 and 15% recovery.
4. Minimum stabilized salt rejection is 98.0%.

Figure 1



	Dimensions – Inches (mm)		
Product	A	B	C
RO-4040-FF	40.0 (1,016)	0.75 OD (19)	3.9 (99)
RO-390-FF	40.0 (1,016)	1.125 ID (28.58)	7.9 (200)

1 inch = 25.4 mm

Operating Limits

• Membrane Type	Thin-Film Composite
• Maximum Operating Temperature	113°F (45°C)
• Maximum Operating Pressure	600 psi (41 bar)
• Maximum Differential Pressure	15 psi (1.0 bar)
• Maximum Feed Turbidity	1 NTU
• Free Chlorine Tolerance	Below Detectable Limits
• pH Range, Continuous Operation	3 – 10
• pH Range, Short-Term Cleaning (30 min.)*	1 – 12
• Maximum Feed Silt Density Index (SDI)	5

* Refer to Cleaning Guidelines in specification sheet 609-23010.

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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. 609-00298) 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.
- 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 60 psi (4.1 bar).
- Avoid permeate-side backpressure at all times.

FILMTEC Membranes
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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.

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