MAXTRON™ Fiberglassed Elements for Light Industrial Systems

Description

MAXTRON ™ brackish water reverse osmosis membrane elements provide consistent system performance in light industrial applications.

- MAXTRON BW30-4040 is an industry standard for reliable operation and production of high quality water.
- MAXTRON BW30-2540 elements are designed for systems smaller than 1 gpm (0.2 m3/h) offering a hard shell exterior for extra strength.

Elements with a hard shell exterior are recommended for systems with multiple-element housings containing three or more membranes, as they are designed to withstand higher pressure drops.

Product Type

Spiral-wound element with polyamide thin-film composite membrane

Product Specifications

Product	Part Number	FeedSpacer Thickness (mil)	Permeate Flow Rate gpd (m3/d)	Stabilized Salt Rejection %
BW30-4040	80783	34	2,400 (9.1)	99.5
BW30-2540	80766	28	1,000 (3.8)	99.5

1. Permeate flow and salt rejection based on the following test conditions: 2,000 ppm NaCl and 225 psig (15.5 bar), pH 8, 77ºF (25ºC) and 15% recovery.
2. Minimum salt rejection is 98.0%.
3. Permeate flows for individual elements may vary +/-20%.

Figure 1
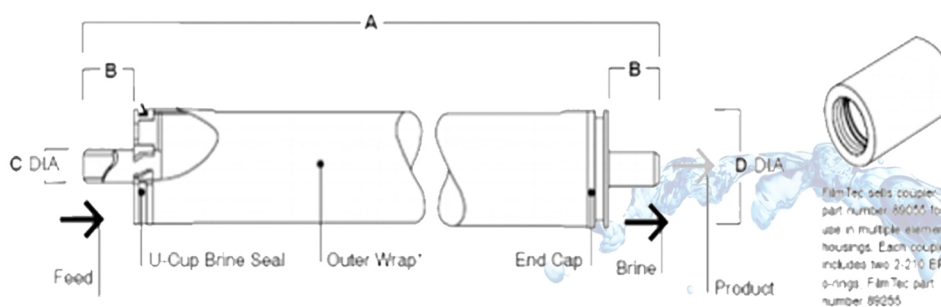
Dimensions - inches (mm)   1 inch = 25.4 mm

Product	A	B	C	D
BW30-4040	40.0 (1,016)	1.05 (26.7)	0.75 (19)	3.9 (99)
BW30-2540	40.0 (1,016)	1.19 (30.2)	0.75 (19)	2.4 (61)

1. Refer to MAXTRON ™ Design Guidelines for multiple-element systems.
2. Maxtron BW30-2540 elements fit nominal 2.5-inch I.D. pressure vessel.
   BW30-4040 elements fit nominal 4-inch I.D. pressure vessel.

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Operating Limits

Membrane Type	Polyamide Thin-Film Composite
Maximum Operating Temperaturea	113ºF (45ºC)
Maximum Operating Pressure	600 psi (41 bar)
Maximum Feed Flow Rate	
4040 Elements	16 gpm (3.6 m3/h)
2540 Elements	6 gpm (1.4 m3/h)
Maximum Pressure Drop	15 psig (1.0 bar)
pH Range, Continuous Operationa	2 - 11
pH Range, Short-Term Cleaning (30 min.)b	1 - 3
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerancec	< 0.1 ppm

a. Maximum temperature for continuous operation above pH 10 is 95ºF (35ºC).
b. Refer to Cleaning Guidelines in specification sheet 609-23010.
c. Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure.
Since oxidation damage is not covered under warranty, it is recommended that residual free chlorine be removed by
pretreatment prior to membrane exposure.Please refer to technical bulletin 609-22010 for more information

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.

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:

Operation Guidelines

- Feed pressure should be increased gradually over a 30-60 second timeframe.
- 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.

Please refer to the product technical manual.

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 ina preservative solution
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements

UPDATE 2023

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