

8" Reverse Osmosis Membrane



BW30HRLE-440 Brackish Water
High rejection - Low energy



REVERSE OSMOSIS COMPONENTS

8" REVERSE OSMOSIS MEMBRANE

BW30HRLE-440 BRACKISH WATER

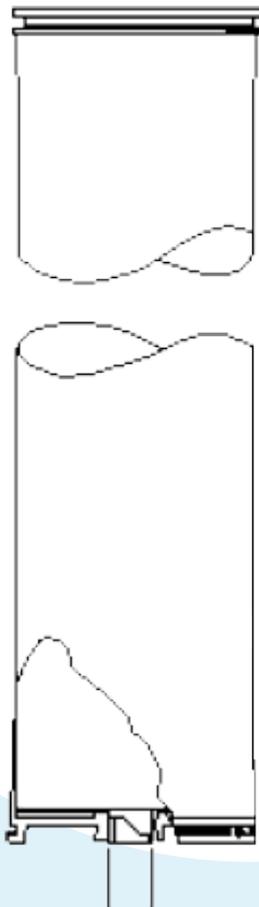
Permeate flow rate	48 m ³ /day	(12650 gpd)
Salt rejection	99.5 %	(Min. 99.3%)
Applied pressure	10.3 bar	(150 psig)
Active area	41 m ²	(440 ft ²)

* Permeate flow rate and salt rejection based on the following test conditions :
2000 ppm NaCl, 10.3 bar (150 psig), 25°C (77°F), pH 8 and 15% recovery.

* **Typical rejections : Silica 99.8% - Boron 68% - Nitrate 97% - Ammonium 97.5%
Isopropyl alcohol 94%** based on the following test conditions :
2000 ppm NaCl, 10.3 bar (150 psig), 25°C (77°F), Ph 7 and 15% recovery,
50 ppm SiO₂, 5 ppm B, 100 ppm NO₃⁻, 100 ppm NH₄⁺, or 100 ppm IPA

* Permeate flow rates for individual elements may vary but will be no more than 15%
below the value shown.

* Active area guaranteed +/- 3%.



APPLICATIONS

BW30HRLE-440 Surface Area, Low-Energy Brackish Water RO Element with iLEC™ Interlocking Endcaps delivers the same 99.5% nominal NaCl rejection as traditional brackish water elements but at 33% lower pressures.

- Existing low energy systems can be retrofitted to achieve lower permeate TDS than possible with previous low energy elements
- The combination of low energy and high rejection is ideally suited for use in the second pass of seawater and high-purity applications
- Excellent rejection of silica, boron, nitrate and ammonium
- Increased IPA rejection (IPA rejection is a common surrogate for TOC removal)
- Available dry for longer storage life and easier handling

BW30HRLE-440 Reverse osmosis membrane

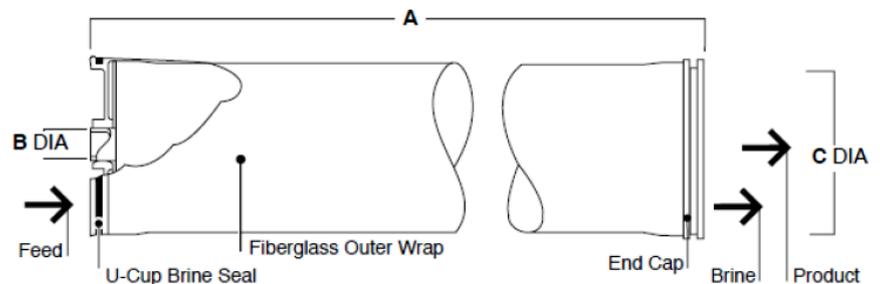
PRODUCT SPECIFICATIONS

Membrane type	Spiral wound polyamide thin-film composite membrane element
Feed spacer	28 mil
Maximum operating temperature	45°C - 113°F
Maximum operating pressure	41 bar – 600 psi
Maximum pressure drop	1.0 bar – 15 psig
Maximum feed flow rate	19 m ³ /h – 85 gpm
pH range continuous operation	2 to 11 (if > pH10 max.temp=35°C)
pH range short term cleaning	1 to 13
Maximum feed Silt Density Index	SDI 5
Free chlorine tolerance	< 0.1 ppm

DIMENSIONS

	mm	inches
A	1016	40.0
B	29 ID	1.125 ID
C	201	7.9

"Coupling" delivered with each element (ref 313198) :



* Element to fit nominal 8-inch (203 mm) I.D. pressure vessel.

RECOMMANDATIONS

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 pre-treatment, 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: 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.

Keep elements moist at all times after initial wetting. If operating limits and guidelines given 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 50 psi (3.4 bar). Avoid static permeate-side back pressure at all times.

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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