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MEMBRANE TECHNOLOGY
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MemTeck™ BWRO 4040 & 8040

Brackish Water Reverse Osmosis Membranes (BWRO)

KEY FEATURES

Key Features of BWRO Membrane

The **BWRO** series is designed to deliver exceptional efficiency, reliability, and cost-effective operation for brackish water treatment applications.

- **Low Operating Pressure**

Optimized to operate at reduced feed pressures, significantly lowering energy consumption.

- **High Permeate Flow**

Ensures excellent water productivity and maximized system output.

- **Superior Salt Rejection (Up to 99.5%)**

BWRO membrane elements achieve outstanding salt rejection at feed salinity up to 3,000 ppm, while maintaining high productivity even at lower operating pressures.

- **Advanced Feed Spacer Technology**

Incorporates proprietary feed spacer design to minimize pressure drop and enhance long-term operational stability.

- **Enhanced Anti-Fouling Performance**

Engineered to reduce fouling potential, resulting in:

- Lower chemical cleaning requirements
- Reduced operational costs
- Decreased energy consumption
- Extended membrane service life

Applications

Applications of BWRO Series

The **BWRO low-pressure membrane elements** are engineered to provide reliable, energy-efficient performance across a wide range of municipal and industrial water treatment applications.

Ideal for:

✓Brackish Water Treatment
Efficient desalination with high salt rejection and optimized energy consumption.

✓Surface Water Treatment
Stable and consistent performance under variable feed water conditions.

✓Municipal Wastewater Reuse
Supports sustainable water recovery and reuse programs with dependable permeate quality.

✓Dairy Processing Applications
Reliable performance for process water treatment and product-related water management.

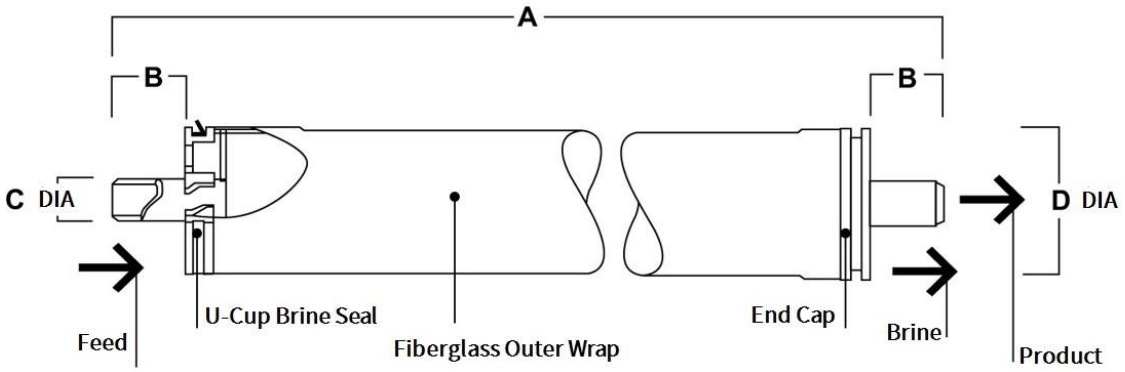
✓Domestic Water Supply Systems
Provides safe, high-quality potable water with energy-efficient operation.

Typical Properties

Product	Act17ive Membrane Area ft2 (m2)	Permeate Flow Rate GPD (m3/d)	Stabilized Salt Rejection %	Feed Spacer mil
BWRO - 4040	100 (9.2)	2600 (11)	99.5 %	28
BWRO - 8040	400 (37.2)	11,000 (42)	99.5 %	28

1. Test conditions:2000 ppm NaCl, 225 psi (10 bar), pH 8, 77˚F (25˚C), 15 % recover.
2. Minimum salt rejection is 99 %.
3. Individual elements may have different permeate flows by +/15%.

Element Dimensions



Product	Dimensions – inches (mm) 1 inch = 25.4 mm A	B	C	D
BWRO 4040	40.0 (1,016)	1.05 (26.7)	0.75 (19)	3.9 (99)
BWRO 8040	40.0 (1,016)	1.19 (30.2)	1.25 (28.6)	7.9 (200)

Operation Specifications and cleaning limits*

Membrane Type	BWRO 4040	BWRO 8040
Membrane Materials	Polyamide Thin-Film Composite	
Maximum Operating Temperature[a]	113˚F (45˚C)	113˚F (45˚C)
Maximum Operating Pressure	600 psi (41 bar)	600 psi (41 bar)
Maximum Feed Flow Rate	16 gpm (3.6 m^3/h)	75 gpm (17 m^3/h)
Maximum Pressure Drop	15 psig (1.0 bar)	15 psig (1.0 bar)
pH Range	2 - 11	2 - 11
Maximum Feed Silt Density Index (SDI)	SDI 5	SDI 5
Free Chlorine Tolerance	< 0.1 ppm	< 0.1 ppm

1. Over pH 10, the maximum continuous temperature is 95˚F (35˚C).
2. In certain conditions, free chlorine and other oxidizing agents can cause premature membrane failure. Pretreatment prior to membrane exposure is recommended to prevent oxidation damage, since oxidation damage is not covered by warranty.

General Information

1. After initial wetting, keep elements moist at all times
2. The limited warranty will be null and void if the operating limits and guidelines are not strictly followed.
3. For the purpose of preventing biological growth during prolonged system operation shutdowns, membrane elements should be immersed in a preservative solution
4. The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements
5. The maximum pressure drops across an entire pressure vessel (housing) is 50 psi (3.4 bar).
6. Always avoid static backpressure on the permeate side
7. The permeate obtained from the first hour of operation should be discarded.
8. Make sure there are no abrupt changes in pressure or crossflow
9. During start-up, shutdown, cleaning, or other sequences, spiral elements should be protected from damage. It is recommended to gradually transition from a standstill to an operating state during startup:
10. The feed pressure should be gradually increased over a 30-60-minute period
11. The crossflow velocity should be gradually increased over 15-20 seconds to reach the set operating point.
12. It is crucial that the system is designed and operated correctly in order to reduce cysts and pathogens effectively.
13. The permeate obtained from the first hour of operation should be discarded.

Important Information

14. To prevent membrane damage due to overfeeding or hydraulic shock, it is essential to start up reverse osmosis water treatment systems properly. As a result of following the proper start-up sequence, system water quality and productivity goals can also be achieved.
15. Pretreatment of the membrane, loading of the membrane elements, instrument calibration, and other system checks should be completed before starting the system

Regulatory Note

Please check the application status of this product before using or selling it; some countries may restrict the use of this product in drinking water.

Would you like to ask a question? Contact us at: www.memteck.com