



MemTech™ SWRO-LP 4040 & 8040

Sea Water-Low Pressure (SWRO-LP) Membranes

KEY FEATURES	Applications
Key Features of SWRO-LP Membranes • Low Operating Pressure Designed to operate efficiently at reduced feed pressures (300 to 600 psi) , minimizing energy consumption while maintaining high productivity. • High Permeate Flow Ensures high water output, improving overall system recovery and performance. • Superior Salt Rejection (Up to 99.5%) ○ SWRO-LP membrane elements provide up to 99.5% salt rejection at feed salinity levels up to 20,000 ppm, with excellent productivity at lower pressures. ○ SWRO-LP (High Rejection) membranes are specially designed for applications requiring enhanced salt removal and superior permeate quality. • Advanced Feed Spacer Technology Incorporates proprietary feed spacer design to: ○ Reduce pressure drop ○ Improve flow distribution ○ Enhance long-term stable performance • Excellent Anti-Fouling Properties Optimized membrane surface and spacer design improve fouling resistance, resulting in: ○ Reduced cleaning frequency ○ Lower chemical consumption ○ Reduced energy usage ○ Extended membrane service life	Applications of SWRO-LP Series The SWRO-LP high-rejection membranes are engineered for superior performance across a wide range of demanding water treatment applications, delivering reliable operation, excellent permeate quality, and long-term stability. Ideal for: ✓ Highly Saline Brackish Water Treatment Efficiently handles elevated TDS levels ranging from 8,000 to 20,000 ppm while maintaining exceptional salt rejection and productivity. ✓ Surface Water Treatment Ensures consistent, high-quality permeate from variable raw water sources. ✓ Municipal Wastewater Reuse Supports sustainable water recovery and reuse initiatives with reliable performance. ✓ Dairy Processing Applications Provides dependable separation performance for process water and product concentration needs. ✓ Pharmaceutical Water Systems Delivers high-purity water to meet stringent industry standards. ✓ Oil & Gas Industry Designed to perform under challenging industrial conditions with enhanced durability and stability.

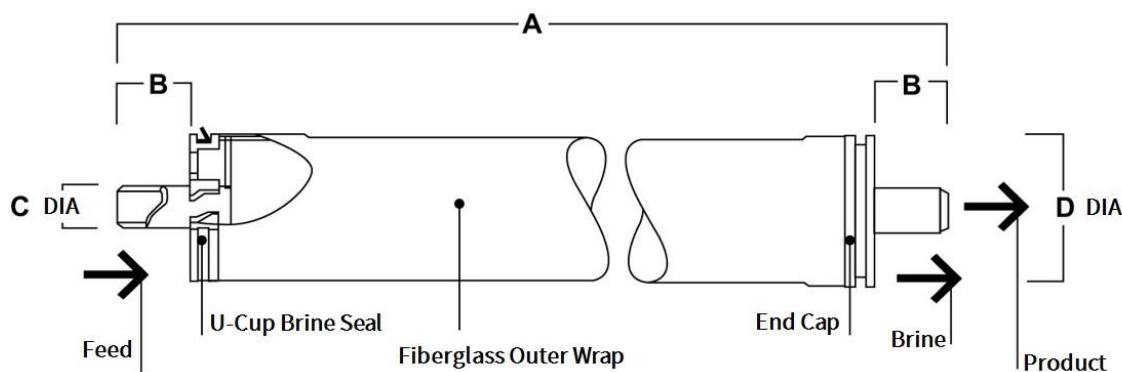
Typical Properties

Product	Active Membrane Area ft ² (m ²)	Permeate Flow Rate GPD (m ³ /d)	Stabilized Salt Rejection %	Feed Spacer mil
SWRO - LP 4040	100 (9.2)	2600 (9.8)	99.5 %	28
SWRO - LP 8040	400 (37.2)	8500 (32)	99.5 %	28

1. Test conditions: 10,000 ppm NaCl, 350 psig (23.8 bar), pH 8, 77°F (25°C), 15 % recovery.
2. Minimum salt rejection is 99.1 %.
3. Individual elements may have different permeating flows by +/- 15%.



Element Dimensions



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

Operation Specifications and cleaning limits*

Membrane Type	SWRO-LP-4040	SWRO-LP-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 drop 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.