

PRO-XR1-X-LD

Extra Low Fouling High Rejection Reverse Osmosis

The PRO-XR1-X-LD is a unique spiral wound membrane customized specifically for challenging industrial process applications. This membrane is based on existing Hydranautics high performance membrane products to treat a variety of challenging industrial feed streams.

Key Features:

- The membrane module uses an innovative feed spacer design, which reduces feed channel fouling accumulation, optimizes feed channel flow hydrodynamic condition and enhances cleaning efficacy. The benefit of reduced feed channel differential pressure is demonstrated in the Chart 1 on the second page.
- This membrane is recommended for heavy foulant loading applications such as industrial wastewater reuse for zero or minimal liquid discharge.

Performance*

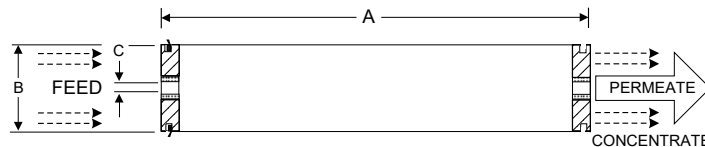
Permeate Flow:	11,500 gpd (43.5 m ³ /d)
Salt Rejection:	99.8% (99.6% minimum)
Test Conditions:	2,000 ppm NaCl solution
	225 psig (1.55 MPa) Applied Pressure
	77°F (25°C) Operating Temperature
	15% Permeate Recovery
	6.5 - 7.0 pH Range

*The Performance listed above is based on data taken after a minimum 10 minutes of operation. Actual testing of elements may be done at conditions which vary from these exact values; in which case, the performance is normalized back to these standard conditions. Permeate flow for individual elements may vary ± 15 percent from the value specified above.

General Product Description**

Configuration:	Extra Low Fouling Spiral Wound
Membrane Polymer:	Composite Polyamide
	Neutrally Charged Surface
Membrane Active Area**:	400 ft ² (37.2 m ²)
Feed Spacer:	38 mil (0.97 mm)

Packaging: All membrane elements are supplied with a brine seal, interconnector, and O-rings. Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution, and then packaged in a cardboard box.



Element Details**

A, inches (mm)	B, inches (mm)	C, inches (mm)
40.0 (1016)	7.89 (200)	1.125 (28.6)

**Values listed are indicative, not specified. For more detailed specifications, see our Technical Service Bulletin documents or contact Hydranautics Technical Department.

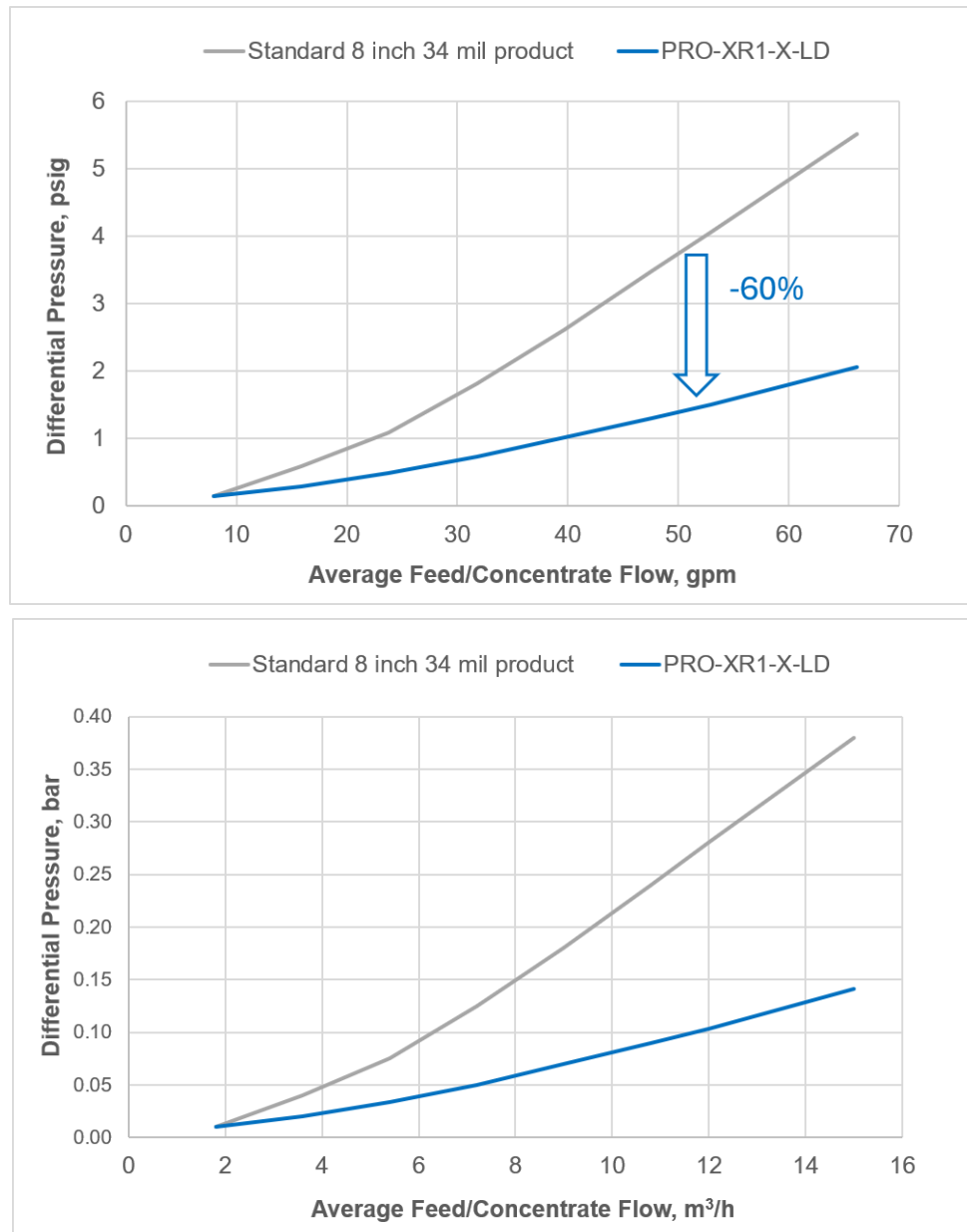
Product Use and Restrictions^

Maximum Applied Pressure:	600 psig (4.14 MPa)
Maximum Chlorine Concentration:	< 0.1 ppm
Maximum Operating Temperature:	113°F (45°C)
pH Range, Continuous (Cleaning):	2-11 (1-13) at T < 25°C
	2-11 (1-12) at T = 25 to < 35°C

pH Range, Continuous (Cleaning): 3-10.5 (2-11) at T= 35 to 45°C
 Maximum Feedwater Turbidity: 1.0 NTU
 Maximum Feedwater SDI (15 mins): 5.0
 Maximum Feed Flow: 85 gpm (19.3 m³/h)
 Minimum Brine Flow: 12 gpm (2.7 m³/h)
 Maximum Pressure Drop for Each Element: 15 psi (0.10 MPa)

^The limitations shown here are for general use. For specified projects, operation at more conservative values may ensure the best performance and longest life of the membrane. See Hydranautics Technical Bulletins for more details.

Chart 1. Single element differential pressure comparison as a function of flow rate for PRO-XR1-X-LD versus standard RO membrane product



Disclaimer: The information and data are presented in good faith and in lieu of all warranties. All express or implied warranties, including the warranties of merchantability and fitness for a particular purpose, are hereby disclaimed and excluded. Conditions and methods of use of our products are beyond our control. Hydranautics assumes no liability for results obtained or damages incurred through the application of the presented information and data. It is the user's responsibility to determine the appropriateness of Hydranautics' products for the user's specific end uses. Aug 30, 2026