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HYDRANAUTICS

PRO-XT2

Ultra High Temperature Reverse Osmosis

The Hydranautics® PRO-XT series is a set of spiral wound membranes customized specifically for high temperature industrial applications. These membranes are based on existing Hydranautics high performance membrane products which have been specially designed to treat high fouling or chemically aggressive process feed streams.

Specified Performance*

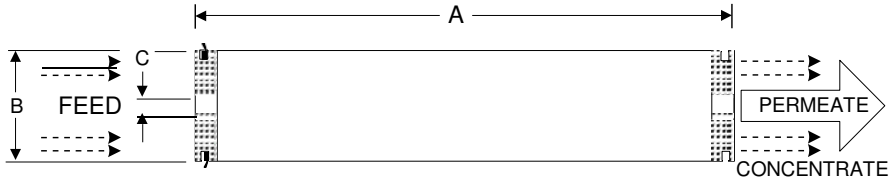
Permeate Flow (at initial test):	6,230 gpd (23.6 m^3/d)
Salt Rejection:	99.7% (99.6% minimum)
Test Conditions:	32,000 ppm NaCl solution 800 psig (5.5 MPa) Applied Pressure 77 °F (25 °C) Operating Temperature 15% Permeate Recovery 6.5 - 7.0 pH Range

*The Specified Performance is based on data taken after a minimum of 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% from the value specified. Expect as much as 25% flux loss after operating near high temperature/pressure limits.

General Product Description**

Configuration:	Low Fouling Spiral Wound
Membrane Polymer:	Composite Polyamide
Membrane Active Area**:	340 ft^2 (31.6 m^2)
Feed Spacer:	34 mil (0.86 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:	Temperature dependent (see Chart 1 for detail)	
Maximum Chlorine Concentration:	< 0.1 ppm	
Maximum Operating Temperature:	Pressure dependent (see Chart 1 for detail)	
pH range, Continuous (Cleaning)	2-11 (1-13)	at T <25˚C
	2-11 (1-12)	at T= 25 to 35˚C
	3-10.5 (2-11)	at T= 35 to 65˚C
	4-8 (na)	at T= 65 to 95˚C
Maximum Feedwater Turbidity:	1.0 NTU	
Maximum Feedwater SDI (15 mins):	5.0	
Maximum Feed Flow:	75 gpm (17.0 m^3/h)	
Minimum Brine Flow:	12 gpm (2.7 m^3/h)	
Maximum Pressure Drop for Each Element:	10 psi (0.07 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.

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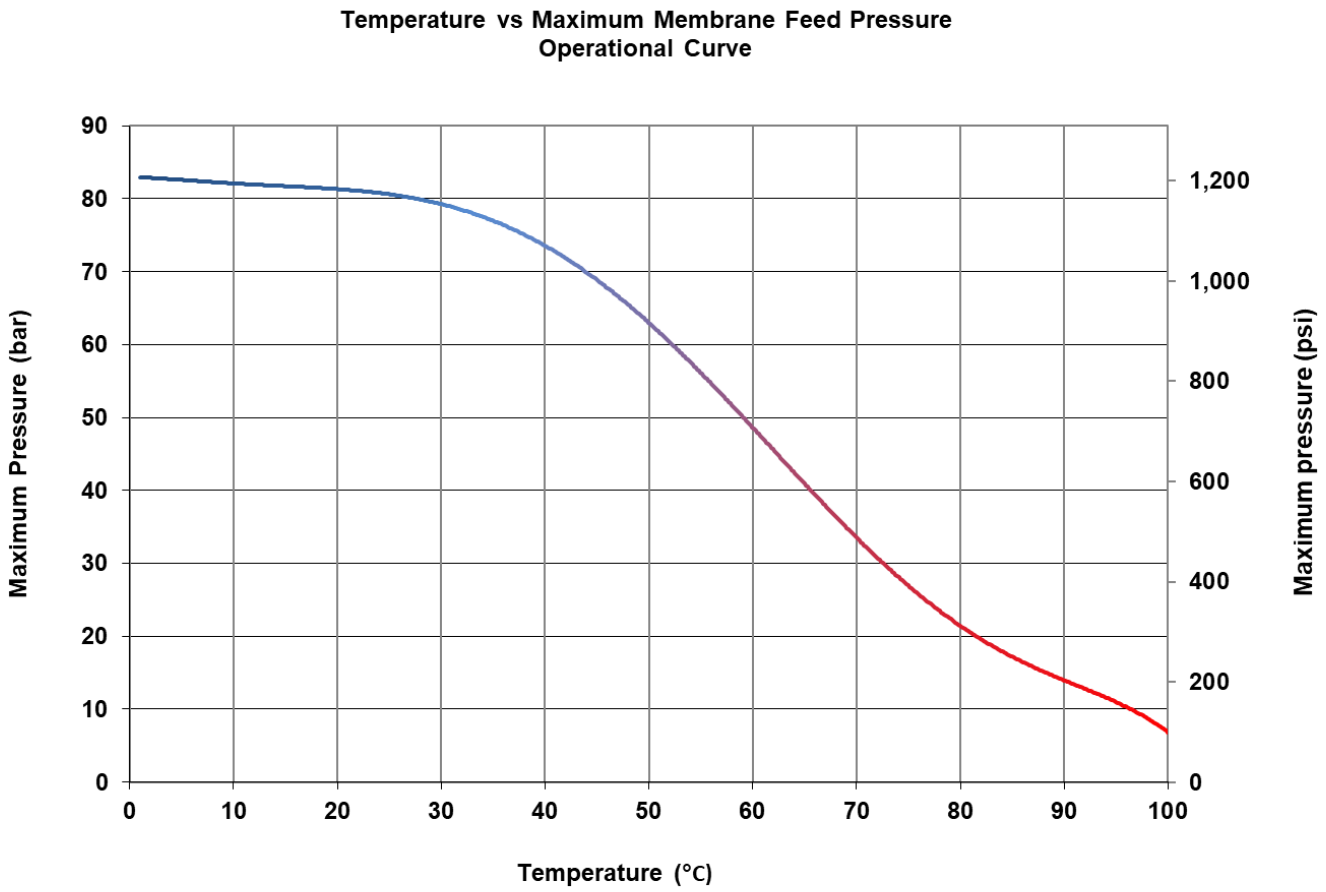
Chart 1: Temperature vs. Maximum Membrane Feed Pressure



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