



PRO-XS2

Extra Selectivity Nanofiltration

The Hydranautics[®] PRO-XS series is a unique set of nanofiltration spiral wound membranes customized specifically for challenging industrial process applications. These membranes are based on Hydranautics high performance membrane products which have then been specially designed to treat a variety of challenging industrial feed streams including high fouling, high TDS, and having special ion separation requirements.

Specified Performance*

Permeate Flow (Nominal): 11,000 gpd (41.6 m³/d) MgSO₄ Rejection: 99.7% (99.6% minimum)

Test Conditions: 2,000 ppm MgSO₄

110 psig (0.76 MPa) Applied Pressure 77°F (25 °C) Operating Temperature

15% Permeate Recovery 6.5 - 7.0 Feed pH

Preference Synthetic Water Performance[†]:

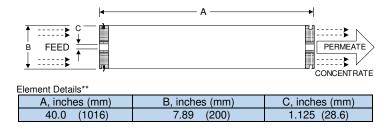
Nominal Sulfate Rejection: 99.8% Nominal Chloride Rejection: <10%

†Reference Synthetic Water Test Condition: 10,000 ppm NaCl + 10,000 ppm Na₂SO₄, at 15 lmh operating flux condition, 77 °F (25 °C), 15% permeate recovery, 6.5-7.0 feed nH

General Product Description**

Configuration: Spiral Wound
Membrane Polymer: Composite Polyamide
Membrane Active Area**: 400 ft² (37.2 m²)
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 2% Safeguard® 100 as preservation solution, and then packaged in a cardboard box. For more Safeguard® 100 flushing instructions, please refer to Hydranautics TSB118. For proper storage and handling, including storage temperature limitations, please refer to Hydranautics TSB 608.



^{**}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</td>Maximum Operating Temperature:113 °F (45 °C)pH Range, Continuous (Cleaning[£]):3.0 - 9.0 (1.0 - 11.5)Maximum Feedwater Turbidity:1.0 NTU

Maximum Feedwater SDI (15 mins):5.0Maximum 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)

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^{*} 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 ±20 percent from the value specified.

[^] The limitations shown here are for general use. For specific projects, operating at more conservative values may ensure the best performance and longest life of the membrane. See Hydranautics Technical Bulletins for more detail on operation limits, cleaning pH, and cleaning temperatures. £ For more information on cleaning pH and temperature, please refer to Hydranautics TSB 608.