

# HYDRapro 102

## High Pressure Maple Sap Membrane Elements

Hydranautics membrane elements are favorite elements for maple sap concentration, balancing high sucrose rejection with high flux. This composite polyamide membrane provides better than 99% sucrose rejection, making it ideal for removing water from maple sap before further concentration in the evaporator step. It is provided in 8040 sizes with 34 mil feed spacer and high pressure construction. Each element is provided with a U-Cup brine seal, anti-telescoping device, and interconnector.

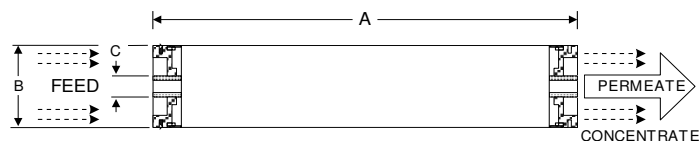
<b>Performance</b>	HYDRapro 102 permeate flow:	12,000 gpd (45.4 m <sup>3</sup> /d)
	NaCl Rejection:	99.2% (99.0% minimum)
<b>Type</b>	Configuration:	Spiral Wound with FRP wrapping (high pressure construction)
	Membrane Polymer:	Composite Polyamide
	Nominal Membrane Area:	400 ft <sup>2</sup> (37 m <sup>2</sup> )
<b>Application Data*</b>	Maximum Applied Pressure:	1200 psig (8.3 MPa)
	Maximum Chlorine Concentration:	< 0.1 PPM
	Maximum Operating Temperature:	113°F (45°C)
	pH Range, Continuous (Cleaning):	2.0-10.0 (1.0-12.0)*
	Maximum Feedwater Turbidity:	1.0 NTU
	Maximum Feedwater SDI (15 mins):	5.0
	Maximum Feed Flow:	85 GPM (19.3 m <sup>3</sup> /h)
	Maximum Pressure Drop for Each Element:	15 psi (0.10 MPa)

\* 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 and design guidelines for more detail on operation limits, cleaning pH, and cleaning temperatures.

### Test Conditions.

The stated performance is initial data (taken after 10 minutes of operation), based on the following conditions:

- 500 ppm NaCl solution
- 100 psi (0.7 MPa) Applied Pressure
- 77°F (25°C) Operating Temperature
- 15% Permeate Recovery
- 6.5 - 7.0 pH Range



A, inches (mm)	B, inches (mm)	C, inches (mm)
40.0 (1016)	7.89 (200.0)	1.50 (38.1)

Core tube ID = 1.125" (28.6 mm)

**Notice:** Permeate flow for individual elements may vary + or - 15 percent. Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution and 10% propylene glycol, and then packaged in a cardboard box.

All membrane elements are supplied with a brine seal, interconnector, and o-rings. Element may be tested at conditions other than stated test condition. Hydranautics believes the information and data contained herein to be accurate and useful. The information and data are offered in good faith, but without guarantee, as 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.

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