

## HYDRapro® 500 Series

The HYDRapro® 500 series is a unique set of spiral wound membranes customized specifically for industrial process applications. These membranes are based on existing Hydranautics high performance membrane products which have been specially designed to treat a variety of challenging industrial feed streams including high fouling, high temperature, or chemically aggressive feeds.

### Products & Guidelines

Model	Area, ft <sup>2</sup>	Feed Spacer, mil	Product Output, gpd (m <sup>3</sup> /d)	Rejection (Avg), %
HYDRapro®501 series	501-2540	23	380 (1.4)	99.7
	501-4040	70	1160 (4.4)	
	501-8040	320	5300 (20.0)	
HYDRapro®502 series	502-2540	23	500 (1.9)	99.5
	502-4040	70	1530 (5.8)	
	502-8040	320	7000 (26.5)	

### Type

Configuration: Low Fouling Spiral Wound  
 Membrane Polymer: Composite Polyamide

### Application Data\*

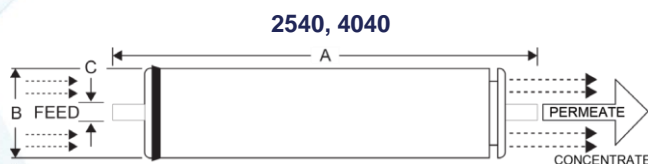
Maximum Applied Pressure: 600 psig (4.1 MPa) at 65 °C  
 (see Chart 1 for detail) 200 psig (1.4 MPa) at 90 °C  
 Maximum Chlorine Concentration: < 0.1 ppm  
 Maximum Operating Temperature: Pressure dependent (see Chart 1 for detail)  
 pH Range, Continuous (Cleaning): 2 –11 (1 –13)\*  
 Maximum Feedwater Turbidity: 1.0 NTU  
 Maximum Feedwater SDI (15 mins): 5.0  
 Maximum Feed Flow for **2540**: 6 gpm (23 l/m)  
 Maximum Feed Flow for **4040**: 16 gpm (3.6 m<sup>3</sup>/h)  
 Maximum Feed Flow for **8040**: 75 gpm (17 m<sup>3</sup>/h)  
 Maximum Pressure Drop for Each Element: 15 psi

\*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 Service Bulletin TSB107 for more details on operation limits, cleaning pH, and cleaning temperatures.

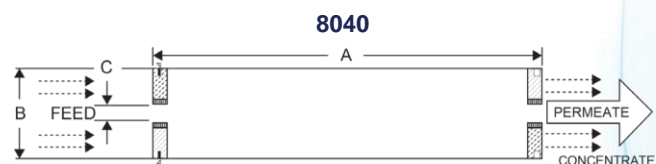
### Performance Conditions

Performance is from after 30 minutes of operation, in the following conditions:

<p><b>HYDRapro® 501</b>                  32000 ppm NaCl solution                  800 psi (5.5 MPa) Applied Pressure                  77 °F (25 °C) Operating Temperature                  15% Permeate Recovery                  6.5 – 7.0 pH Range</p>	<p><b>HYDRapro® 502</b>                  1500 ppm NaCl solution                  225 psi (1.55 MPa)                  77 °F (25 °C) Operating Temperature                  15% Permeate Recovery                  6.5 – 7.0 pH Range</p>
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	A, inches(mm)	B, inches(mm)	C, inches(mm)
<b>2540</b>	40 (1016)	2.4 (61)	0.75 (19.05)
<b>4040</b>	40 (1016)	3.95 (100.3)	0.75 (19.05)



A, inches(mm)	B, inches(mm)	C, inches(mm)
40 (1016)	7.89 (200.0)	1.125 (28.6)

Core Tube Extension = 1.05" (26.7 mm)

**Notice:** Elements are enclosed in a sealed polyethylene bag containing less than 1.0% sodium meta-bisulfite solution, 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.

**Chart 1: Pressure VS Temperature Limits**

