



## Membrane Element

## ESPA2 MAX

### Performance

Permeate Flow: 12,000 gpd (45.4 m<sup>3</sup>/d)  
Salt Rejection: 99.6% (99.5% minimum)

### Type

Configuration: Spiral Wound  
Membrane Polymer: Composite Polyamide  
Membrane Active Area: 440 ft<sup>2</sup> (40.8m<sup>2</sup>)

### Application Data\*

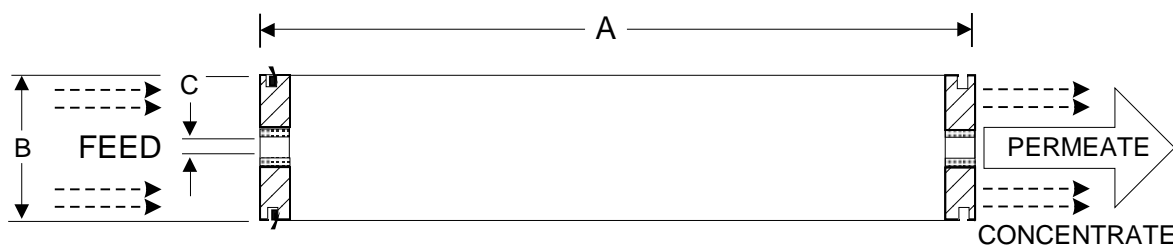
Maximum Applied Pressure: 600 psig (4.14 MPa)  
Maximum Chlorine Concentration: < 0.1 PPM  
Maximum Operating Temperature: 113 °F (45 °C)  
pH Range, Continuous (Cleaning): 2-10.6 (1-12)\*  
Maximum Feedwater Turbidity: 1.0 NTU  
Maximum Feedwater SDI (15 mins): 5.0  
Maximum Feed Flow: 75 GPM (17.0 m<sup>3</sup>/h)  
Minimum Ratio of Concentrate to Permeate Flow for any Element: 5:1  
Maximum Pressure Drop for Each Element: 15 psi

\* 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.

### Test Conditions

The stated performance is initial (data taken after 30 minutes of operation), based on the following conditions:

1500 PPM NaCl solution  
150 psi (1.05 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)	Weight, lbs. (kg)
40.0 (1016)	7.89 (200)	1.125 (28.6)	36 (16.4)

**Notice:** Permeate flow for individual elements may vary + or - 15 percent. Membrane active area may vary +/-4%. Element weight may vary. 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.

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. 11/03/15