

# ESPA1

## Specified Performance\*

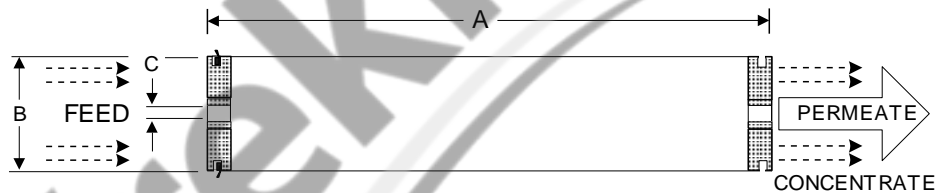
Permeate Flow:	12,000 gpd (45.4 m <sup>3</sup> /d)
Salt Rejection:	99.4% (99.2% minimum)
Test Conditions:	1500 ppm NaCl solution
	150 psig (1.03 MPa) Applied Pressure
	77 °F (25 °C) Operating Temperature
	15% Permeate Recovery
	6.5 - 7.0 pH Range

\*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 +25 / -15 percent from the value specified.

## General Product Description\*\*

Configuration:	Spiral Wound
Membrane Polymer:	Composite Polyamide
Membrane Active Area**:	400 ft <sup>2</sup> (37.2 m <sup>2</sup> )

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:	600 psig (4.14 MPa)
Maximum Chlorine Concentration:	< 0.1 ppm
Maximum Operating Temperature:	113 °F (45 °C)
pH Range, Continuous (Cleaning):	2-10 (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 Brine Flow:	12 gpm (2.7 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 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.

**Disclaimer:** The information and data are presented in good faith and in lieu of all warranties. All express or implied warranties, including the warranties of merchantability and fitness for a particular purpose, are hereby disclaimed and excluded. 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. 1/17/19