



NITTO DENKO



HYDRANAUTICS

Membrane Element

ESPA21, 2 (\$ (\$

Performance:

Permeate Flow:

9,000 gpd (34.1 m³/d)

Salt Rejection:

99.6 % (99.5 % minimum)

Type

Configuration:

Spiral Wound

Membrane Polymer:

Composite Polyamide

Membrane Active Area:

400 ft² (37.1 m²)

Application Data*

Maximum Applied Pressure:

600 psig (4.16 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 m³/h)

Minimum Ratio of Concentrate to

Permeate Flow for any Element:

5:1

Maximum Pressure Drop for Each Element:

10 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:

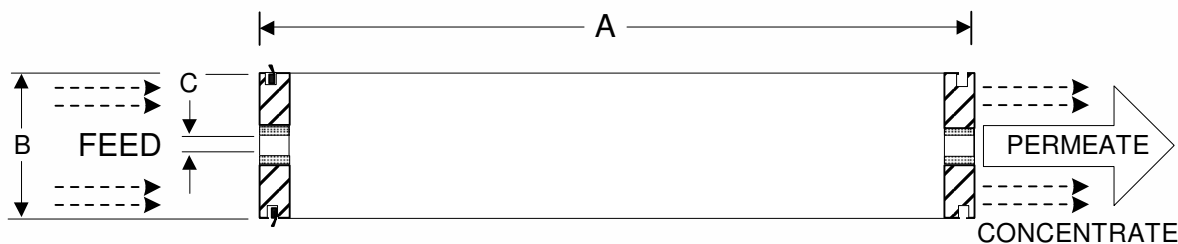
1500 PPM NaCl solution

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%. 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.

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