Membrane Element ESPAB 1640

Performance

Permeate Flow:	34,000 gpd (128.7 m^3/d)
Salt Rejection:	99.3% (99.1% minimum)
Boron Rejection (Average) @ pH = 10:	96.0 %†

Type

Configuration:	Spiral Wound
Membrane Polymer:	Composite Polyamide
Membrane Active Area:	1700 ft^2 (158 m^2)
Feed Spacer:	28 mil (0.71 mm)

Application Data*

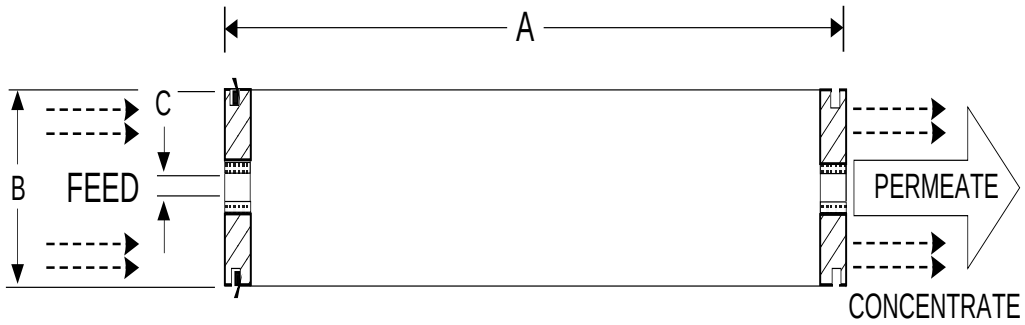
Maximum Applied Pressure:	600 psig (4.14 MPa)
Maximum Chlorine Concentration:	< 0.1 PPM
Maximum Operating Temperature:	113 °F (45 °C)
pH Range, Continuous (Cleaning)	2.0 - 10.6 (1-12)*
Maximum Feedwater Turbidity:	1.0 NTU
Maximum Feedwater SDI (15 mins):	5.0
Maximum Feed Flow:	250 GPM (56 m^3/h)
Minimum 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 details 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)	Dry Weight, lbs. (kg)	Wet, Drained Weight, lbs (kg)
40.9 (1038.9)	15.8 (401.8)	3.000 (76.2)	114 (51.7)	139 (63)

Notice: Permeate flow for individual elements may vary + 20 /-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.

† When tested at standard test conditions with 10.0 ppm Boron at pH = 10.0.