NITTO DENKO

HYDRANAUTICS
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A Nitto Denko Company

Membrane Element ESNA1-LF2-LD

(Low Fouling Technology)

Stable Performance

Permeate Flow:	10,500 gpd (39.7 m^3/d)
$CaCl_2$ Rejection:	86%
$CaCl_2$ Rejection (minimum/maximum)	83%/90%

* Expected calcium rejection for a typical 500 ppm well water is 93% at 13 gfd operating flux and 25 C.

Type

Configuration:	Low Fouling Spiral Wound
Membrane Polymer:	Composite Polyamide
Membrane Active Area:	400 ft^2 (37.1m^2)
Feed Spacer:	34 mil (0.864mm)

Application Data*

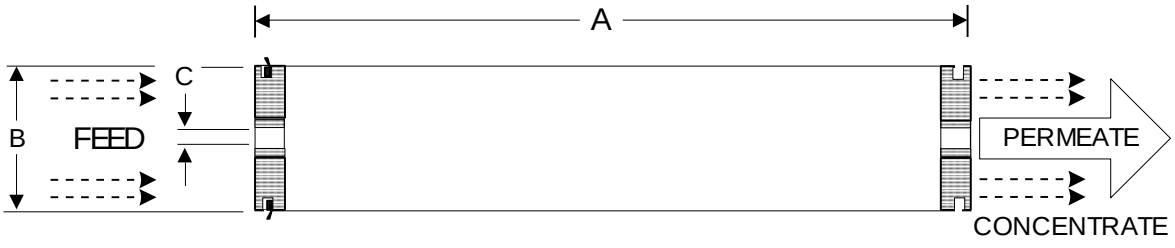
Maximum Applied Pressure:	600 psig (4.16 MPa)
Maximum Chlorine Concentration:	< 0.1 PPM
Maximum Operating Temperature:	113 °F (45 °C)
pH Range, Continuous (Cleaning):	2-10 (1-12)*
Maximum Feedwater Turbidity:	1.0 NTU
Maximum Feedwater SDI (15 mins):	4.0
Maximum Feed Flow:	75 GPM (17.0 m^3/h)
Minimum 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 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:

500 ppm $CaCl_2$
75 psi (0.52 MPa) Applied Pressure
77 °F (25 °C) Operating Temperature
15% Permeate Recovery
6.5 – 7.0 Feed pH



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 -20/+25 percent. Membrane active area may vary +/-4%. All membrane elements are supplied with a brine seal, interconnector, and o-rings. Elements are vacuum sealed in a polyethylene bag containing less than 1.0% sodium bisulfite solution, and then packaged in a cardboard box.

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