

## Membrane Element

## NANO-SW

### Performance

#### MgSO<sub>4</sub>

Permeate Flow (Nominal):  
MgSO<sub>4</sub> Rejection:

11,000 gpd (41.6 m<sup>3</sup>/d)  
99.8% (99.6% minimum)

### Type

Configuration:  
Membrane Polymer:  
Nominal Membrane Area:  
Feed/Brine Spacer Thickness:

Spiral Wound  
Composite Polyamide  
400 ft<sup>2</sup> (37 m<sup>2</sup>)  
34 mil (0.87 mm) with  
HYDRAblock™ Technology

### Application Data<sup>^</sup>

Maximum Applied Pressure (Allowed): 1200 psig (8.27 MPa)  
 Maximum Applied Pressure (Recommended)\*: 600 psig (4.16 MPa)  
 Maximum Chlorine Concentration: < 0.1 PPM  
 Maximum Operating Temperature: 113 °F (45 °C)  
 pH Range, Operation (Cleaning): 3.0 - 9.0 (1.0 – 11.5)<sup>^</sup>  
 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  
 Typical Seawater Performance<sup>†</sup>:  
 Nominal Permeate Flow: 6,500 gpd (24.6 m<sup>3</sup>/d)  
 Nominal Chloride Rejection: 25%  
 Nominal Sulfate Rejection: 99.8%

\* Exceeding 600 psi may cause a reduction in membrane permeability.

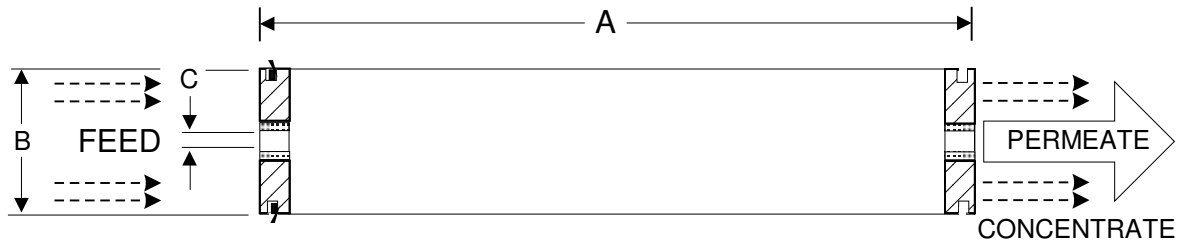
<sup>^</sup> The limitations shown here are for general use. For specific projects, operating at more conservative values may ensure the best performance and longest life of the membrane. See Hydranautics Technical Bulletins for more detail on operation limits, cleaning pH, and cleaning temperatures.

<sup>†</sup> Typical Synthetic Seawater Test Condition: 35,000 ppm NaCl + 8000 ppm MgSO<sub>4</sub>, 200 psi (1.4 MPa), 77 °F (25°C), 15% Permeate Recovery, 6.5 – 7.0 feed pH.

### Test Conditions

The stated performance is based on the following test conditions:

2000 ppm MgSO<sub>4</sub>  
 130 psi (0.9 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 + or - 20 percent. Element weight may vary. All membrane elements are supplied with a brine seal, interconnector, and o-rings. All membrane elements are supplied with a brine seal, interconnector, and o-rings. Elements are enclosed in a sealed polyethylene bag containing deionized water, and then packaged in a cardboard box.

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