

# ESNA4-LD

## Specified Performance\*

|                               |                                     |
|-------------------------------|-------------------------------------|
| Permeate Flow:                | 1,900 gpd (7.2 m <sup>3</sup> /d)   |
| CaCl <sub>2</sub> Rejection : | 93% (88% - 97% minimum/maximum)     |
| Test Conditions:              | 500 ppm CaCl <sub>2</sub>           |
|                               | 75 psig (0.52 MPa) Applied Pressure |
|                               | 77 °F (25 °C) Operating Temperature |
|                               | 15% Permeate Recovery               |
|                               | 6.5 - 7.0 pH Range                  |

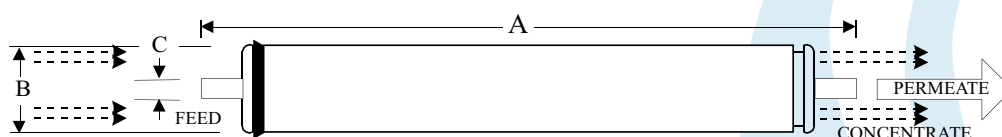
\* Expected calcium rejection for a typical 500 ppm well water is 96% at 13 gfd operating flux and 25 °C.

\*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 -20 or +25 percent from the values specified.

## General Product Description\*\*

|                         |                                           |
|-------------------------|-------------------------------------------|
| Configuration:          | Low Fouling Spiral Wound                  |
| Membrane Polymer:       | Composite Polyamide                       |
| Membrane Active Area**: | 80 ft <sup>2</sup> (7.43 m <sup>2</sup> ) |
| Feed Spacer:            | 34 mil (0.86mm)                           |

**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)    | 3.95 (100.3)   | 0.75 (19.1)    |

Core tube extension = 1.05" (26.7 mm)

\*\*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 (2-12 at 25 °C for 30 minutes) |
| Maximum Feedwater Turbidity:            | 1.0 NTU                             |
| Maximum Feedwater SDI (15 mins):        | 5.0                                 |
| Maximum Feed Flow:                      | 16 gpm (3.6 m <sup>3</sup> /h)      |
| Minimum Brine Flow:                     | 3 gpm (0.7 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.

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