# AC series

## very high rejection seawater RO elements

Water Technologies & Solutions
**fact sheet**

The AC Series, family of proprietary thin film reverse osmosis membrane elements, is characterized by an excellent sodium chloride rejection. AC Series is selected when high quality permeate is demanded from seawater that is relatively high in TDS.

AC Series new membrane chemistry provides excellent rejection characteristics when operated at seawater operating conditions (pressures exceeding 800psi (5,516kPa) and elevated temperatures).

### Table 1: Element Specification

| | |
|---|---|
| **Membrane** | A-series, thin-film membrane (TFM*) |

| Model | Average permeate flow gpd ($m^3$/day) (1)(2) | Ave. NaCl rejection (1)(2) | Min. NaCl rejection (2) | Min. Boron Rejection (2) |
|---|---|---|---|---|
| AC-400, 34 | 5800 (21.9) | 99.86% | 99.5% | 96.0% |
| AC-440 | 6400 (24.2) | 99.86% | 99.5% | 96.0% |

(1) Average salt rejection after 24 hours of operation. Individual flow rate may vary ±20%.
(2) Testing conditions: 32,000mg/l NaCl & 5mg/l Boron solution at 800psi (5,516kPa) operating pressure, 77°F (25°C), pH 8.0 and 10% recovery.

| Model | Active area $ft^2$ ($m^2$) | Outer wrap | Part number |
|---|---|---|---|
| AC-400, 34 | 400 (37.2) | Fiberglass | 3154588 |
| AC-440 | 440 (40.9) | Fiberglass | 3157144 |

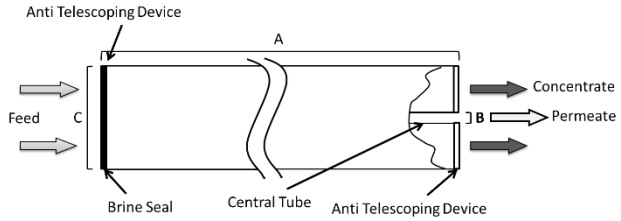



**Figure 1: Element Dimensions Diagram – Female**

### Table 2: Operating and CIP parameters

| | |
|---|---|
| **Typical Operating Pressure** | 800psi (5,516kPa) |
| **Typical Operating Flux** | 7-11GFD (12-19LMH) |
| **Maximum Operating Pressure** | 1,200psi (8,274kPa) |
| **Maximum Temperature** | Continuous operation: 122°F (50°C)<br>Clean-In-Place (CIP): 122°F (50°C) |
| **pH range** | Optimum rejection pH: 7.0-7.5,<br>Continuous operation: 2.0-11.0,<br>Clean-In-Place (CIP): 2.0 – 12.0(1) |
| **Maximum Pressure Drop** | Over an element: 12 psi (83 kPa)<br>Per housing: 50 psi (345 kPa) |
| **Chlorine Tolerance** | 1,000+ ppm-hours, dechlorination recommended |
| **Feedwater** | NTU < 1<br>$SDI_{15}$ < 5 |

(1) Refer to Cleaning Guidelines Technical Bulletin TB1194.

### Table 3: Dimensions and Weights

| Model | Type | Dimensions, inches (cm) | | | Boxed Weight lbs (kg) |
|---|---|---|---|---|---|
| | | A | B | C | |
| AC-400, 34 | Female | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 35 (16) |
| AC-440 | Female | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 35 (16) |


LENNTECH
info@lenntech.com Tel. +31-152-610-900
www.lenntech.com Fax. +31-152-616-289