GE
Water & Process Technologies

Fact Sheet

# AD Series

## Seawater Desalination RO Elements

DESAL®
MEMBRANE PRODUCTS

The A-Series, family of proprietary thin-film reverse osmosis membrane elements are characterized by a good sodium chloride rejection.

AD Seawater Elements feature high-pressure construction, a fiberglass outer wrap and standard feed spacers.

### Table 1: Element Specification

| | |
|---|---|
| Membrane | A-Series, Thin-Film Membrane (TFM*) |

| Model | Average permeate flow gpd (m3/day) [1,2] | Average NaCl rejection [1,2] | Minimum NaCl rejection [1,2] |
|---|---|---|---|
| AD2540FM | 410 (1.5) | 99.6 % | 99.2 % |
| AD4040FM | 1,100 (4.2) | 99.6 % | 99.2 % |
| AD8040F | 5,600 (21.2) | 99.6 % | 99.2 % |

[1] Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-25%.
[2] Testing conditions: 32,000ppm NaCl solution at 800psi (5,516kPa) operating pressure, 77 °F, pH 7.5 and 7% recovery.

| Model | Active area ft² (m²) | Outer wrap | Part number |
|---|---|---|---|
| AD2540FM | 26 (2.4) | Fiberglass | 1223377 |
| AD4040FM | 86 (8.0) | Fiberglass | 1223378 |
| AD8040F | 370 (34.4) | Fiberglass | 1223381 |

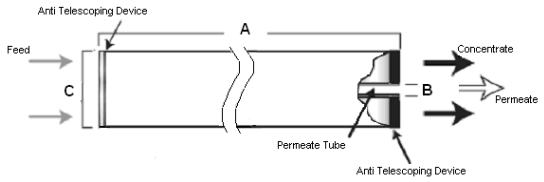



**Figure 1: Element Dimensions Diagram – Female**

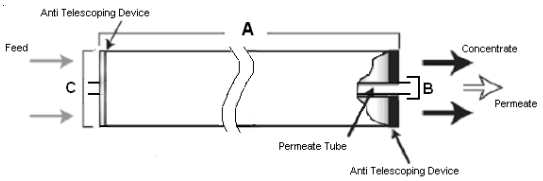



**Figure 2: Element Dimensions Diagram – Male**

### Table 2: Dimensions and Weight

| Model [1] | Dimensions, inches (cm) | | | Boxed |
|---|---|---|---|---|
| | A | B [2] | C | Weight lbs (kg) |
| AD2540FM | 40.0 (101.6) | 0.75 (1.90) OD | 2.4 (6.1) | 6.6 (3.0) |
| AD4040FM | 40.0 (101.6) | 0.75 (1.90) OD | 3.9 (9.9) | 9 (4) |
| AD8040F | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 35 (16) |

[1] These elements are bagged wet before shipping.
[2] Internal diameter unless specified OD (outside diameter).

### Table 3: Operating and CIP parameters

| | |
|---|---|
| Typical Operating Pressure | 800psi (5,516 kPa) |
| Typical Operating Flux | 7-11GFD (12-19LMH) |
| Maximum Operating Pressure | 1,200psi (8,268 kPa) |
| Maximum Temperature | Continuous operation: 122°F (50°C)<br>Clean-In-Place (CIP): 122°F (50°C) |
| pH Range | Optimum rejection: 7.0 – 7.5<br>Continuous operation: 4.0 - 11.0<br>Clean-In-Place (CIP): 2.0 - 11.5 |
| Maximum Pressure Drop | Over an element: 12 psi (83 kPa)<br>Per housing: 50 psi (345 kPa) |
| Chlorine Tolerance | 1,000+ ppm-hours<br>Dechlorination recommended |
| Feedwater | NTU < 1<br>SDI < 5 |

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