Water Technologies & Solutions
fact sheet

AE Series

high rejection low energy seawater RO elements

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

AE series new membrane chemistry provides excellent rejection characteristics when operated at seawater operating conditions (pressures exceeding 800psi (5,516kPa).

AE series is certified to NSF/ANSI 61.

Table 1: Element Specification

Membrane	Thin-film membrane (TFM*)

Model	Average permeate flow GPD (m^3/day) (1) (2)	Ave. NaCl rejection (1) (2)	Min. NaCl rejection (1) (2)	Min. Boron Rejection (2)
AE-90	2000 (7.6)	99.8%	99.3%	90.0%
AE-400, 34	9000 (34.1)	99.8%	99.3%	90.0%
AE-440	9900 (37.5)	99.8%	99.3%	90.0%

(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
AE-90	90 (8.4)	Fiberglass	3056660
AE-400, 34	400 (37.2)	Fiberglass	3056662
AE-440	440 (40.9)	Fiberglass	3056663

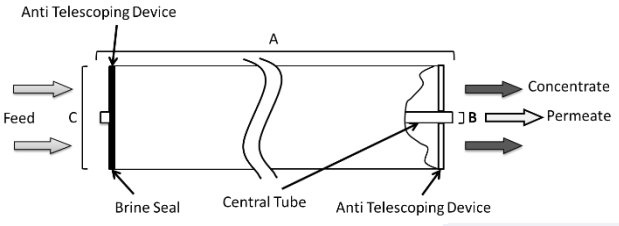


Figure 1a: Element Dimensions Diagram – Male

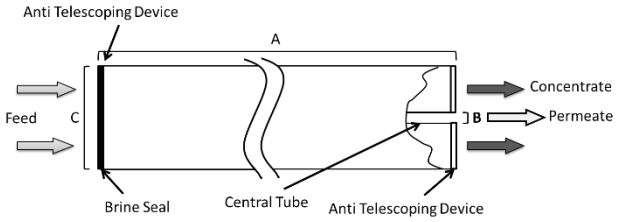


Figure 1b: Element Dimensions Diagram – Female

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) Clean-In-Place (CIP): 122°F (50°C)
pH range	Optimum rejection pH: 7.0-7.5, Continuous operation: 2.0-11.0, Clean-In-Place (CIP): 2.0 – 12.0 (1)
Maximum Pressure Drop	Over an element: 12 psi (83 kPa) Per housing: 50 psi (345 kPa)
Chlorine Tolerance	1,000+ ppm-hours, dechlorination recommended
Feedwater	NTU < 1 SDI_{15} < 5

(1) Please refer to Cleaning Guidelines Technical Bulletin TB1194.

Table 3: Dimensions and Weights

Model	Type	Dimensions, inches (cm) A	B	C	Boxed Weight lbs (kg)
AE-90	Male	40.0 (101.6)	0.75 (1.90)	3.9 (9.9)	9 (4)
AE-400, 34	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)
AE-440	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)

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