GE Power & Water
Water & Process Technologies

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AD LE Series

High Rejection High Flow Seawater RO Elements

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

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

Table 1: Element Specification

Membrane	Thin-film membrane (TFM*)		
Model	**Average permeate flow gpd (m3/day)[1,2]**	**Average NaCl rejection[1,2]**	**Minimum NaCl rejection[1,2]**
AD-90 LE	1700 (6.4)	99.75%	99.3%
AD-400 LE	7500 (28.4)	99.75%	99.3%
AD-440 LE	8200 (31.0)	99.75%	99.3%

[1] Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-15%.
[2] Testing conditions: 32,000mg/l NaCl solution at 800psi (5,516kPa) operating pressure, 77°F (25°C), pH7.5 and 7% recovery.

Model	Active area ft² (m²)	Outer wrap	Part number
AD-90 LE	90 (8.4)	Fiberglass	3056657
AD-400 LE	400 (37.2)	Fiberglass	3056658
AD-440 LE	440 (40.9)	Fiberglass	3056659

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: 7.0-7.5, Continuous operation 4.0-11.0, Clean-In-Place (CIP): 2.0-11.5
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[3]	NTU < 1 SDI < 5

[3]SDI is measured on a non-linear scale using a 0.45 micron filter paper. Additionally, finer colloids, particulates and microorganisms that pass through the filter paper and not measured in the SDI test, will potentially foul the RO element. For performance consistency and project warranty, please use Winflows projection software and consult your Filters with Membranes representative.

Figure 1a: Element Dimensions Diagram – Male

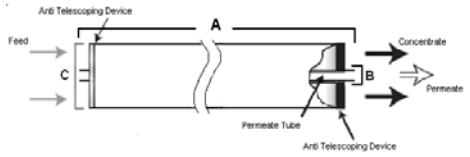

Figure 1b: Element Dimensions Diagram – Female

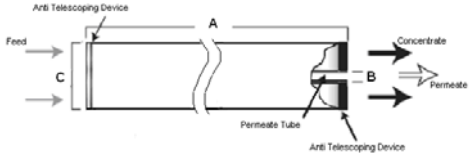

Table 3: Dimensions and Weights

Model[1]	Type	Dimensions, inches (cm)			Boxed
		A	B[2]	C	Weight lbs (kg)
AD-90 LE	Male	40.0 (101.6)	0.75 (1.90)	3.9 (9.9)	9 (4)
AD-400 LE	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)
AD-440 LE	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)