Fact Sheet

GE Power
Water & Process Technologies

AK LE Series

High Flow Low Energy Brackish Water RO Elements

The A-Series family of proprietary thin-film reverse osmosis membrane is characterized by high flux and high sodium chloride rejection. AK LE brackish water elements are selected when high rejection, high flow and ultra-low operating pressures are desired.

The AK LE element is a low energy high flow element for beverage, light commercial, residential and general industrial applications. AK LE Series elements feature a Fiberglass outer wrap.

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]
AK-90 LE	2,900 (11.0)	99.3%	99.0%
AK-400 LE	12,900 (48.8)	99.3%	99.0%
AK-440 LE	14,000 (53.0)	99.3%	99.0%

[1] Average salt rejection after 24 hours of operation.
Individual flow rate may vary ±20%.

[2] Testing conditions: 500ppm NaCl solution at 115psi (793kPa) operating pressure, 77°F (25°C), pH7 and 15% recovery.

Model	Active area ft² (m²)	Outer wrap	Part number
AK-90 LE	90 (8.4)	Fiberglass	3056683
AK-400 LE	400 (37.2)	Fiberglass	3056684
AK-440 LE	440 (40.9)	Fiberglass	3056685

Figure 1b: Element Dimensions Diagram – Female

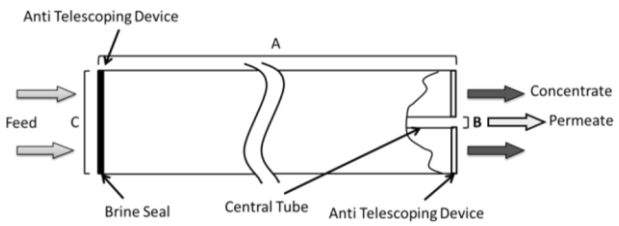

Table 2: Operating and CIP parameters

Typical Operating Pressure	110 psi (758 kPa)
Typical Operating Flux	10-20GFD (15-35LMH)
Maximum Operating Pressure	400 psi (2,758 kPa)
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): 1.0-13.0[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[2]	NTU < 1 SDI < 5

[1] Please refer to Cleaning Guidelines Technical Bulletin TB1194

[2] 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 GE representative.