

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.

AK LE series is certified to NSF/ANSI 61.

Table 1: Element Specification

| Membrane | A-Series, Thin-film membrane (TFM*) | | |
|---------------|--------------------------------------------------------------|----------------------------------|----------------------------------|
| Model | Average permeate flow gpd (m ³ /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, 34 | 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 ft ² (m ²) | Outer wrap | Part number |
|---------------|--------------------------------------------------|------------|-------------|
| AK-90 LE | 90 (8.4) | Fiberglass | 3056683 |
| AK-400 LE, 34 | 400 (37.2) | Fiberglass | 3056684 |
| AK-440 LE | 440 (40.9) | Fiberglass | 3056685 |

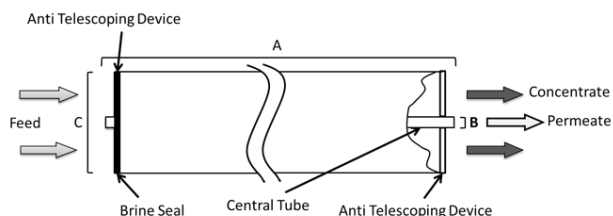


Figure 1a: Element Dimensions Diagram – Male

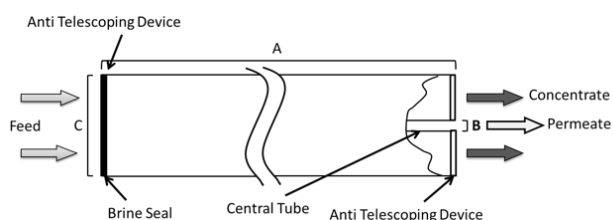


Figure 1b: Element Dimensions Diagram – Female

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 |
| Feedwater² | NTU < 1 SDI ₁₅ < 5 |

(1) Please refer to Cleaning Guidelines Technical Bulletin TB1194

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Table 3: Dimensions and Weights

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