

AG LE H Series

High performance, low energy, high rejection brackish water RO elements

The AG LE H Series of thin-film reverse osmosis (RO) membranes are designed to perform in brackish water applications where the customer and application seek to balance low energy and high rejection requirements. AG LE H Series membranes optimize SUEZ chemistry and manufacturing advancements to deliver differentiated performance over the life of the element. In contrast to ultra-low energy AK H Series, the AG LE H Series membranes are often used with the need to control flux due to increased risk of fouling such as when a surface water source is used.

All AG LE H Series membranes have NSF 61 certification.

Table 1: Element Specification

| Membrane | Thin-film membrane (TFM*), polyamide |
|----------|--------------------------------------|
|----------|--------------------------------------|

| Model | Average permeate flow gpd (m ³ /day) (1,2) | Typical NaCl rejection (1,2) | Minimum NaCl rejection (1,2) |
|-------------|---|------------------------------|------------------------------|
| AG-400 LE H | 10,000 (37.9) | 99.5% | 99.0% |
| AG-440 LE H | 11,000 (41.6) | 99.5% | 99.0% |

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

(2) Testing conditions: 2,000 ppm NaCl solution at 150 psi (1,034 kPa) operating pressure, 77°F (25°C), pH 7 and 15% recovery.

| Model | Active area ft ² (m ²) | Outer wrap | Feed Spacer (mil) | Part number |
|-------------|---|------------|-------------------|-------------|
| AG-400 LE H | 400 (37.2) | Fiberglass | 34 | 3187569 |
| AG-440 LE H | 440 (40.9) | Fiberglass | 28 | 3187650 |

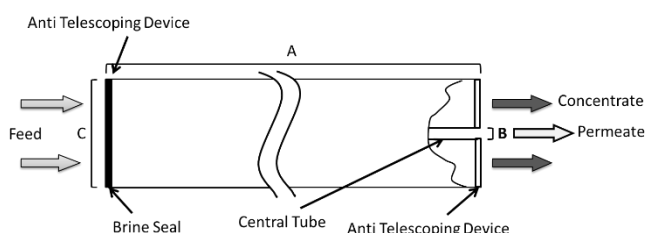


Figure 1: Element Dimensions Diagram – Female

Table 2: Dimensions and Weights

| Model | Type | Dimensions, inches (cm) | | | Boxed weight lbs (kg) |
|-------------|--------|-------------------------|--------------|------------|-----------------------|
| | | A | B | C | |
| AG-400 LE H | Female | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 40 (18) |
| AG-440 LE H | Female | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 42 (19) |

Table 3: Operating and CIP parameters

| | |
|----------------------------|--|
| Typical Operating Pressure | 150 psi (1,034 kPa) |
| Typical Operating Flux | 10-20 GFD (15-35 LMH) |
| Maximum Operating Pressure | 600 psi (4,137 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: 2.0-11.0 Clean-In-Place (CIP): 1.0-12.0 (1) |
| Maximum Pressure Drop | Over an element: 15 psi (103 kPa) Per housing: 50 psi (345 kPa) |
| Chlorine Tolerance | 1,000+ ppm-hours, dechlorination recommended |
| Feedwater ² | NTU < 1 SDI ₁₅ < 5 |

(1) Please refer to Cleaning Guidelines Technical Bulletin TB1194

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Additional Information

- As with any product, use of the products mentioned in this publication in a given application must be tested (including field testing, etc.) by the user in advance to determine suitability.
- Treat RO elements with care; do not drop the element.
- Each RO element is wet tested, preserved in a 1% weight sodium bisulfite solution, and vacuum packed in oxygen barrier bags.
- During storage, avoid freezing and direct sunlight. The temperature should be below 35°C (95°F).

After Installation

- Keep the RO elements wet and use a compatible preservative for storage duration longer than 7 days.
- During the initial start-up, discharge the first permeate to drain for 30 minutes.
- Permeate back pressure should not exceed feed pressure at any time.
- The RO elements shall be maintained in a clean condition, unfouled by particulate matter or precipitates or biological growth.
- Consider cleaning, if the pressure drop increases by 20% or water permeability decreases by 10%. Use only chemicals which are compatible with the membrane.