# AG HR LF Series

*FACT SHEET*

## High rejection low fouling brackish water RO element

The A-Series family of proprietary thin-film reverse osmosis elements are characterized by high flux and high sodium chloride rejection. The AG HR LF Series is selected for the treatment of impaired water when high rejection is desired. The AG HR LF membrane features a more neutral charge and therefore reduces interactions with potential foulants present in surface water or tertiary effluent.

**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) |
|---|---|---|---|
| AG-90 LF | 1875 (7.1) | 99.8% | 99.3% |
| AG-400 LF, 34 | 10500 (39.7) | 99.8% | 99.3% |

(1) Average salt rejection after 24 hours of operation. Individual flow rate may vary +25%/-20%.

(2) Testing conditions: 2,000ppm NaCl solution at 225psi (1,550kPa) operating pressure, 77°F (25°C), pH7 and 15% recovery.

**Table 2: Element Properties (3)**

| Model | Active area $ft^2$ ($m^2$) | Outer wrap | Part number |
|---|---|---|---|
| AG-90 LF | 90 (8.4) | Fiberglass | 3056674 |
| AG-400 LF, 34 | 400 (37.2) | Fiberglass | 3056675 |

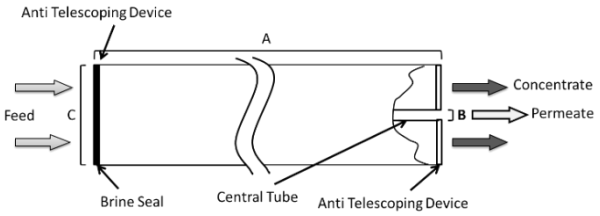


**Figure 1: Element Dimensions Diagram – Female**

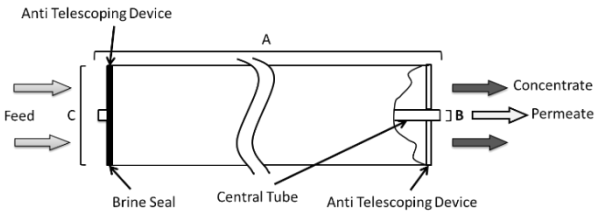


**Figure 2: Element Dimensions Diagram – Male**

**Table 3: Dimensions and Weights (3)**

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

**Table 4: Operating and CIP Parameters (3)**

| | |
|---|---|
| **Typical Operating Pressure** | 200 psi (1,380 kPa) |
| **Typical Operating Flux** | 10-20GFD (15-35LMH) |
| **Maximum Operating Pressure** | 600 psi (4,137 kPa) |
| **Maximum Temperature** | Continuous operation: 122°F (50°C)<br>Clean-In-Place (CIP): 122°F (50°C) |
| **pH range** | Optimum rejection: 7.0-7.5,<br>Continuous operation 2.0-11.0,<br>Clean-In-Place (CIP): 1.0-13.0 (4) |
| **Maximum Pressure Drop** | Over an element: 15 psi (103 kPa)<br>Per housing: 50 psi (345 kPa) |
| **Chlorine Tolerance** | 1,000+ ppm-hours,<br>dechlorination recommended |
| **Feedwater** | NTU < 1<br>$SDI_{15}$ < 5 |

(3) Element properties and parameters are indicative numbers. Specific values by element may vary within normal element manufacturing tolerances.

(4) Refer to Cleaning Guidelines Technical Bulletin TB1194..



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