

AG FR series

standard brackish water RO elements

The A-Series family of proprietary thin-film reverse osmosis membrane is characterized by high flux and relatively high sodium chloride rejection. AG FR brackish water elements are selected when durability and cleaning effectiveness are important.

The AG FR membrane element is specifically designed with a larger feed spacer to enhance feed flow channels, maximizing the element energy & cleaning efficiencies at the same time. This feature improves the membrane element durability over the time, by promoting effective CIPs, reducing cleaning intervals and need for harsher chemicals.

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⁾ |
|-------------------|---|--|--|
| AG4040FM FR,34 | 2,200 (8.8) | 99.5% | 99.0% |
| AG8040F 400 FR,34 | 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 225 psi (1,551 kPa) operating pressure, 77°F (25°C), pH 7.5 and 15% recovery.

| Model | Membrane area ft ² (m ²) | Outer wrap | Part Number |
|-------------------|---|------------|-------------|
| AG4040FM FR,34 | 80 (7.4) | Fiberglass | 3114336 |
| AG8040F 400 FR,34 | 400 (37.2) | Fiberglass | 3136931 |

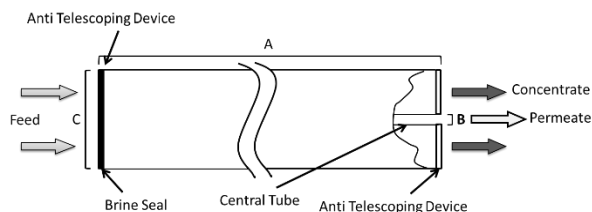


Figure 1 : Element Dimensions Diagram – Female

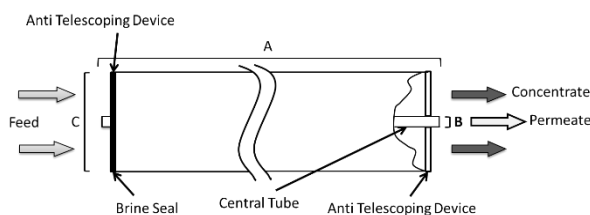


Figure 2: Element Dimensions Diagram – Male

Table 2: Dimensions and Weight

| Model | Type | Dimensions, inches (cm) | | | Boxed Weight lbs. (kg) |
|----------|--------|-------------------------|--------------|------------|------------------------|
| | | A | B | C | |
| AG4040FM | Male | 40.0 (101.6) | 0.75 (1.90) | 3.9 (9.9) | 11 (5) |
| AG8040F | Female | 40.0 (101.6) | 1.125 (2.86) | 7.9 (20.1) | 35 (16) |

Table 3: Operating and CIP parameters

| | |
|-----------------------------------|---|
| Typical Operating Pressure | 200 psi (1,379 kPa) |
| Typical Operating Flux | 10-20GFD (15-35LMH) |
| 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): 1.0-13.0 ⁽¹⁾ |
| Maximum Pressure Drop | Over an element: 12 psi (83 kPa) Per housing: 50 psi (345 kPa) |
| Chlorine Tolerance | 1,000+ ppm x hours, Dechlorination recommended |
| Feedwater | NTU < 1 SDI ₁₅ < 5 |

(1) Refer to Cleaning Guidelines Technical Bulletin TB1194.

Available with: