

## **AG HR Series**

## **FACT SHEET**

## High rejection 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. AG HR brackish water elements are selected when high rejection and operating pressures as low as 200 psi (1,379 kPa) are desired. These elements are recommended for brackish water with salt concentration (TDS) levels between 1,000 and 10,000mg/l or when very high salt rejection of monovalent ions is required.

AG HR series is certified to NSF/ANSI 61.

**Table 1: Element Specification** 

| Membrane A-series, thin-film membrane (TFM*) |
|--|
|--|

| Model     | Average<br>permeate<br>flow gpd<br>(m³/day) (1)(2) | Average<br>NaCl<br>rejection (1)(2) | Minimum<br>NaCl<br>rejection (1)(2) |
|-----------|--|-------------------------------------|-------------------------------------|
| AG-90     | 2400 (9.1)   | 99.8%                               | 99.3%                               |
| AG-365    | 10,000 (37.9)                                      | 99.8%                               | 99.3%                               |
| AG-400    | 11,000 (41.6)                                      | 99.8%                               | 99.3%                               |
| AG-400,34 | 11,000 (41.6)                                      | 99.8%                               | 99.3%                               |
| AG-440    | 12,000 (45.4)                                      | 99.8%                               | 99.3%                               |

<sup>(1)</sup> Average salt rejection after 24 hours operation. Individual flow rate may vary  $\pm 20\%$ .

| Model     | Active area ft <sup>2</sup> (m <sup>2</sup> ) | Outer wrap | Part<br>number |
|-----------|---|------------|----------------|
| AG-90     | 90 (8.4)                                      | Fiberglass | 3056665        |
| AG-365    | 365 (33.9)                                    | Fiberglass | 3056666        |
| AG-400    | 400 (37.2)                                    | Fiberglass | 3056667        |
| AG-400,34 | 400 (37.2)                                    | Fiberglass | 3056668        |
| AG-440    | 440 (40.9)                                    | Fiberglass | 3056669        |

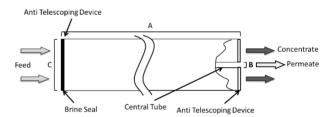


Figure 1a: Element Dimensions Diagram - Female

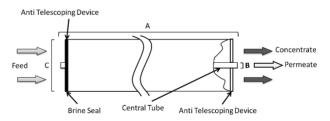


Figure 1b: Element Dimensions Diagram - Male

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

**Table 2: Operating and CIP parameters** 

| 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 (1) |  |  |
| Maximum Pressure<br>Drop   | Over an element: 15 psi (103 kPa)<br>Per housing: 50 psi (345 kPa)                                   |  |  |
| Chlorine Tolerance         | 1,000+ ppm-hours, dechlorination recommended   |  |  |
| Feedwater                  | NTU < 1<br>SDI <sub>15</sub> < 5   |  |  |

<sup>(1)</sup> Refer to Cleaning Guidelines Technical Bulletin TB1194

**Table 3: Dimensions and Weights** 

|           |        | Dimensions, inches (cm) |                 |               | Boxed<br>Weight |
|-----------|--------|-------------------------|-----------------|---------------|-----------------|
| Model     | Type   | Α                       | В               | С             | lbs<br>(kg)     |
| AG-90     | Male   | 40.0<br>(101.6)         | 0.75<br>(1.90)  | 3.9<br>(9.9)  | 9<br>(4)        |
| AG-365    | Female | 40.0<br>(101.6)         | 1.125<br>(2.86) | 7.9<br>(20.1) | 35<br>(16)      |
| AG-400    | Female | 40.0<br>(101.6)         | 1.125<br>(2.86) | 7.9<br>(20.1) | 35<br>(16)      |
| AG-400,34 | Female | 40.0<br>(101.6)         | 1.125<br>(2.86) | 7.9<br>(20.1) | 35<br>(16)      |
| AG-440    | Female | 40.0<br>(101.6)         | 1.125<br>(2.86) | 7.9<br>(20.1) | 35<br>(16)      |