

# 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 10,000 mg/l or when very high salt rejection of monovalent ions is required.

The AG HR series is certified to NSF/ANSI 61.

**Table 1: Element Specification**

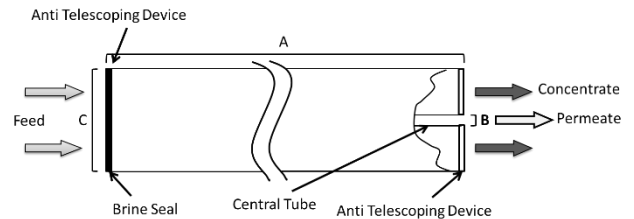
Membrane	A-series, thin-film membrane (TFM)
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Model	Average permeate flow gpd (m <sup>3</sup> /day) (1)(3)	Average NaCl rejection (2)(3)	Minimum NaCl rejection (2)(3)
AG-400	11,000 (41.6)	99.8%	99.3%
AG-440	12,000 (45.4)	99.8%	99.3%

(1) Individual flow rate may vary ±20%.  
 (2) Stabilized salt rejection after 24 hours of operation.  
 (3) Testing conditions: 2,000ppm NaCl solution at 225psi (1,550kPa) operating pressure, 77°F (25°C), pH 7 and 15% recovery.

**Table 2: Element Properties (4)**

Model	Active area ft <sup>2</sup> (m <sup>2</sup> )	Outer wrap	Feed Spacer (mil)	Part number
AG-400	400 (37.2)	Fiberglass	34	3056667
AG-440	440 (40.9)	Fiberglass	28	3056669



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

**Table 3: Dimensions and Weights (4)**

Model	Type	Dimensions, inches (cm)			Boxed Weight lbs (kg)
		A	B	C	
AG-400	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)
AG-440	Female	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)

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

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

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

(5) Refer to Cleaning Guidelines Technical Bulletin TB1194