

AG P Series

High Performance Brackish Water RO Elements (Replaces B400 HP and B440 HP)

The AG P-Series thin-film reverse osmosis (RO) membrane is characterized by very high ionic rejection and water productivity that makes it ideal for high performance BWRO applications. The AG P family of brackish water elements also offers very high rejection of uncharged and lightly charged species including silica and boron. These high-performance features are the result of SUEZ's highly cross-linked polyamide thin film layer with low surface zeta potential that can also withstand multiple cleanings and maintain differentiated performance for the life of the element.

AG P series is certified to NSF 61.

Table 1a: Element Specification

Membrane	AG P-series, thin-film membrane (TFM*)
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Model	Average permeate flow gpd (m ³ /day) (1)(2)	Average NaCl rejection (1)(2)	Minimum NaCl rejection (1)(2)
AG-400 P	10,500 (39.9)	99.7%	99.3%
AG-440 P	11,600 (43.9)	99.7%	99.3%

(1) Average salt rejection after 24 hours of operation. Individual flow rate may vary with a minimum of 8,400 gpd (31.9 m³/d) for the AG-400 P and 9,200 gpd (35.1 m³/d) for the AG-440 P.

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

Model	Active area ft ² (m ²)	Outer wrap	Feed spacer mil	Part number
AG-400 P	400 (37.2)	Fiberglass	31	3185615
AG-440 P	440 (40.9)	Fiberglass	28	3185616

Table 1b: Typical rejection of other species

Nitrate, NO ₃ ⁻ (1)(3)	Silica, SiO ₂ (1)(3)	Isopropyl Alcohol (IPA) (2)(3)	Boron, B (1)(3)
98.5%	99.7%	95.0%	80.0%

(1) Typical rejection performance for specific ions based on the above test condition plus 100 mg/L NO₃⁻, 50 mg/L SiO₂, or 5 mg/L B respectively.

(2) Isopropyl alcohol testing is at 100 mg/L IPA without NaCl.

(3) These items are provided as general information only. They are approximate values and are not considered part of the product specifications.

Table 2: Dimensions and Weights

Model	Dimensions, inches (cm)			Boxed
	A	B	C	Weight lbs (kg)
AG-400 P	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	40 (18)
AG-440 P	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	42 (19)

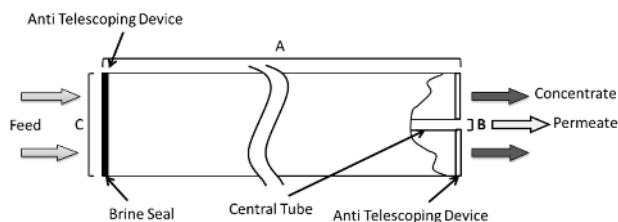


Figure 1: Element Dimensions Diagram

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Table 3: 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	Operation: 113°F (45°C)
pH range	Continuous operation 2.0 – 11.0 Clean-In-Place (CIP): 1.0-12.0
Maximum Pressure Drop	Over an element: 15 psi (103 kPa) Per housing: 50 psi (345 kPa)
Chlorine Tolerance	0.1 ppm maximum
Feedwater	NTU < 1 SDI ₁₅ < 5

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