

411-HR(PA)

Brackish Water Desalination FRP Membrane Element Reverse Osmosis, High Rejection

ELEMENT SPECIFICATIONS

Model	Flow GPD	Flow (m3/d)	Active Area		Rejection		Part Number
			ft2	m2	Average	Minimum	
411-HR(PA)	1,600	6.1	75	7.0	99.5%	99.0%	1119067

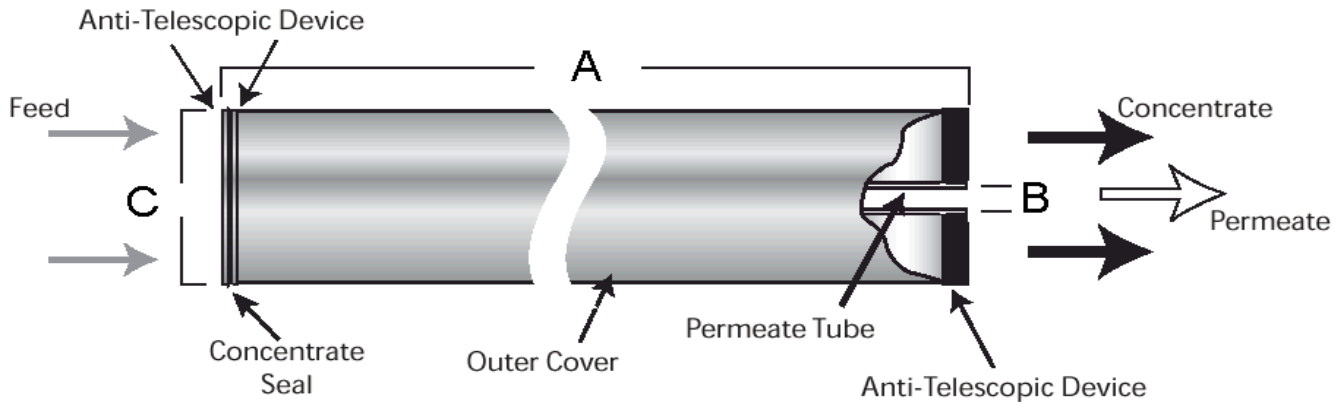
Specifications are based on a 2000 mg/L NaCl solution at 225 psig operating pressure (1551kPa), 77deg.F.(25deg.C), 15% recovery, pH 7.5. Individual flux may vary +25%/ -15%. Average salt rejection after a minimum of 24 hours in continuous operation.

OPERATING AND DESIGN PARAMETERS

Membrane: Thin-Film Membrane (TFM®)
Typical Operating Pressure: 200psig (1396.8 kPa)
Maximum Pressure: 600psig (4190 kPa)
Maximum Pressure Drop: 10 psig (69 kPa) per element
 50 psig (345 kPa) per vessel
Chlorine Tolerance: 1,000 ppm-hrs, Dechlorination recommended
Typical Operating Flux: 10 - 20 GFD (15-35 LH-1.M-2)

Optimum rejection pH: 7.0 - 7.5
Operating pH range: 4.0 - 11.0
Cleaning pH range: 2.0 - 11.5
Maximum Temperature: 122°F (50°C)
Feed NTU: <1
Feed SDI: <3

ELEMENT DIMENSIONS AND WEIGHT



Model	A inches (mm)	B inches (mm)	C* inches (mm)	Weight lbs (kg)
411-HR(PA)	40 (1016)	0.775 (20)	3.94 (100)	11 (5)

* The element diameter (dimension C) is designed for optimum performance in Osmonics pressure vessels. Other pressure vessel dimension and tolerance may result in excessive bypass and

Notes:

The Langelier Saturation Index (LSI) of the concentrate must be negative to minimize the possibility of calcium scale formation on the membrane surface.

At start-up the first two hours of permeate should be discarded because of element preservative.

Storage conditions should be less than: <100F, dry, in original carton and not in direct sunlight.



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