Water Technologies & Solutions
fact sheet

OSMO HR(PA) Series

high rejection brackish water desalination RO elements

The OSMO HR(PA) are polyamide TFM used for desalination of brackish water sources.

Table 1: Element Specification

Membrane Model	Thin-Film Membrane (TFM*)		
	Average permeate flow gpd (m³/day)[1,2]	Average NaCl rejection [1,2]	Minimum NaCl rejection [1,2]
OSMO 411-HR(PA)	1,600 (6.0)	99.5%	99.0%
OSMO 416-HR(PA)	2,200 (8.3)	99.0%	98.0%
OSMO 811-HR(PA)	9,600 (36.3)	99.5%	99.0%
OSMO 813-HR(PA)	10,200 (38.6)	99.0%	98.0%
OSMO 815-HR(PA)	9,000 (34.1)	99.5%	99.0%
OSMO 817-HR(PA)	9,600 (36.3)	99.0%	98.0%

[1] Average salt rejection after 24 hours operation. Individual flow rate may vary +/-25%.

[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 ft² (m²)	Outer wrap	Part Number
OSMO 411-HR(PA)	75 (7.0)	Fiberglass	1119067
OSMO 416-HR(PA)	80 (7.4)	Net	1158140
OSMO 811-HR(PA)	350 (32.5)	Fiberglass	1140921
OSMO 813-HR(PA)	375 (34.8)	Net	1158142
OSMO 815-HR(PA)	330 (33.0)	Fiberglass	1140920
OSMO 817-HR(PA)	350 (32.5)	Net	1158141

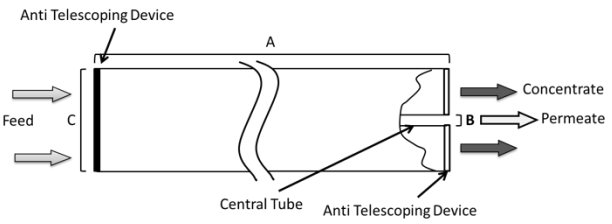

Figure 1: Element Dimensions Diagram – Female

Table 2: Dimensions and Weight

Model[1]	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B[2]	C	
OSMO 411-HR(PA)	40.0 (101.6)	0.775 (2.0)	3.94 (10.0)	11 (5)
OSMO 416-HR(PA)	40.0 (101.6)	0.775 (2.0)	3.94 (10.0)	11 (5)
OSMO 811-HR(PA)	40.0 (101.6)	1.139 (29)	8.3 (211)	42 (19.1)
OSMO 813-HR(PA)	40.0 (101.6)	1.139 (29)	8.3 (211)	40 (18.1)
OSMO 815-HR(PA)	40.0 (101.6)	1.139 (29)	7.9 (20.1)	39.5 (18)
OSMO 817-HR(PA)	40.0 (101.6)	1.139 (29)	7.9 (20.1)	37.5 (17)

[1] These elements are bagged dried.
[2] Internal diameter.

Table 3: Operating and CIP parameters

Typical Operating Pressure	200 psi (1,379 kPa)
Typical Operating Flux	10 – 20 GFD (15 – 35 LMH)
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: 4.0-11.0, Clean-In-Place (CIP): 2.0-11.5
Maximum Pressure Drop	Over an element: 10 psi (69 kPa) Per housing: 50 psi (345 kPa)
Chlorine Tolerance	1,000+ ppm-hours, Dechlorination recommended
Feedwater [3]	NTU < 1 SDI < 3

[3] SDI is measured on a non-linear scale using a 0.45 micron filter paper. Additionally, finer colloids, particulates and micro-organisms that pass through the filter paper and not measured in the SDI test, will potentially foul the RO element. For performance consistency and project warranty, please use Winflows* projection software and consult your SUEZ representative.

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