OSMO USPG Series

FACT SHEET

Pharma Grade RO Elements

The OSMO USPG series has been designed for pharmaceutical applications with a sanitary Full-Fit design. The elements feature a 316 SS electro-polished central tube and Noryl ATDs.

The OSMO USPG Elements are typically used in pharmaceutical related processes requiring regulations. All materials used in the OSMO USPG Series have passed testing according to USP Class VI-121°C. Each element is shipped with a certificate of compliance.

Table 1: Element Specification

Membrane	Thin-Film Membrane (TFM*)

Model	Average permeate flow gpd (m^3/day) [1,2]	Average NaCl rejection [1,2]	Minimum NaCl rejection [1,2]
OSMO 416-USPG	2,400 (9.1)	99.0%	98.0%
OSMO 813-USPG	10,000 (37.9)	99.0%	98.0%
OSMO 817-USPG	10,000 (37.9)	99.0%	98.0%

[1]Average salt rejection after 24 hours operation. Individual flow rate may vary +25%/-15%.
[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 ft^2 (m^2)	Outer wrap	Part Number
OSMO 416-USPG	90 (8.4)	Net	1160154
OSMO 813-USPG	400 (37.2)	Net	1234559
OSMO 817-USPG	400 (37.2)	Net	1159818

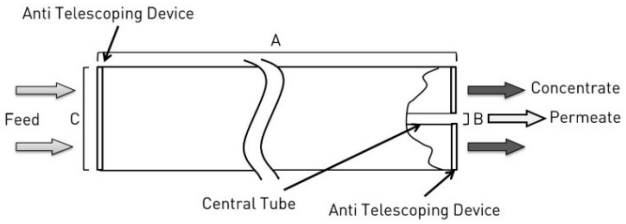

Figure 1: Element Dimensions Diagram – Female

Table 2: Dimensions and Weight

Model	Dimensions, inches (cm)			Boxed Weight lbs (kg)
	A	B	C	
OSMO 416-USPG	40.0 (101.6)	0.775 (2.0)	3.94 (10.0)	11 (5)
OSMO 813-USPG	40.0 (101.6)	1.139 (2.9)	8.3 (21.1)	42 (19.1)
OSMO 817-USPG	40.0 (101.6)	1.139 (2.9)	7.9 (20.1)	37.5 (17)

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 Veolia representative.

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