OSMO* BEV ULE Series

FACT SHEET

Reverse osmosis element for beverage and bottled water production

The OSMO BEV ULE Reverse Osmosis (RO) membrane element is engineered to provide beverage plants product water with a very efficient removal of total dissolved solids (TDS) at Ultra Low Energy (ULE) requirements. Low TDS is often required when producing purified water, teas, very low- and sodium-free products, and carbonated soft drinks.

OSMO BEV ULE RO elements will produce treated water with lower levels of hardness, alkalinity, sodium and chloride, and is also the element of choice on high TDS feed-water streams.

OSMO BEV ULE RO series is certified to NSF/ANSI 61.

Features include a Caged Outerwrap design (Figure 1) that eliminates the stagnant zone associated with industrial FRP elements and their brine seals, which can act as a site for bacterial growth. The OSMO BEV ULE RO element forms a flush-fit with the inner diameter of the membrane element housing, creating a self-cleaning effect. This design also offers less pressure resistance than an industrial FRP element, resulting in lower brake horsepower and substantial energy savings. The OSMO BEV ULE RO membrane element is 100% Wet Test Quality Assurance.

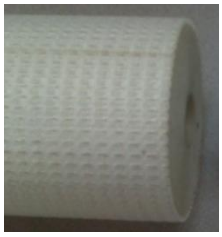

Figure 1: Robust Cage Outerwrap

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-BEV-ULE-CG-WT	10,000 (37.8)	95%	92%

(1) Average salt rejection after 24 hours of operation. Individual flow rate may vary ±20%.
(2) Testing conditions: 500ppm NaCl solution at 75psi (520kPa) operating pressure, 77 °F (25°C), pH 7.5 and 15% recovery.

Model	Active area ft^2 (m^2)	Outer wrap	Part number
OSMO-BEV-ULE-CG-WT	400 (37.1)	Cage	3099336

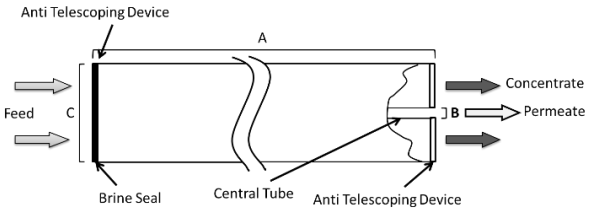

Figure 2: Element Dimensions Diagram – Female

Table 2: Dimensions and Weight

Model	Dimensions, inches (cm)			Boxed
	A	B	C	Weight lbs (kg)
OSMO-BEV-ULE-CG-WT	40.0 (101.6)	1.125 (2.86)	7.9 (20.1)	35 (16)

Table 3: Operating and CIP parameters

Typical Operating Pressure	50-100 psig (345-690 kPa) (1)
Typical Operating Temperature	105 to 50°F (41 to 10°C)
Typical Operating Flux	13-23 GFD (22-39 LMH)
Maximum Operating Pressure	250 psi (1724 kPa) (1)
Maximum Temperature	Continuous operation: 122°F (50°C) Clean-In-Place (CIP): 122°F (50°C)
Minimum Crossflow	30gpm (6.8 m^3/hr)
pH Range	Continuous operation: 4.0-11.0, Clean-In-Place (CIP): 1.0 – 13.0 (2)
Maximum Pressure Drop	Over an element: 12 psi (83 kPa) Per housing: 50 psi (345 kPa)
Chlorine Tolerance	1,000+ ppm-hours, dechlorination recommended
Feedwater	NTU < 1 SDI_{15} < 5

(1) At 50-70°F (10-21° C) water temperature.
(2) Refer to Cleaning Guidelines Technical Bulletin TB1194.

Veolia Water Technologies
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