

## Water Technologies & Solutions fact sheet

# OSMO BEV CA series

## beverage and bottled water production

The OSMO\* BEV CA membrane element is engineered to provide beverage plants with consistent, high quality water for production of carbonated soft drinks, juices, and sport drinks. The OSMO BEV CA element will process most municipal or plant well water to meet your alkalinity, hardness and low sodium requirements. The OSMO BEV CA membrane element is chlorine tolerant and offers a salt passage profile that permits maximum water recovery.

The OSMO BEV CA membrane element is tested and certified by NSF International against NSF/ANSI Standard 61 for material requirements only.

Features include a Full-Fit\* design 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 CA 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 CA membrane is following a 100% Wet Test Quality Assurance.

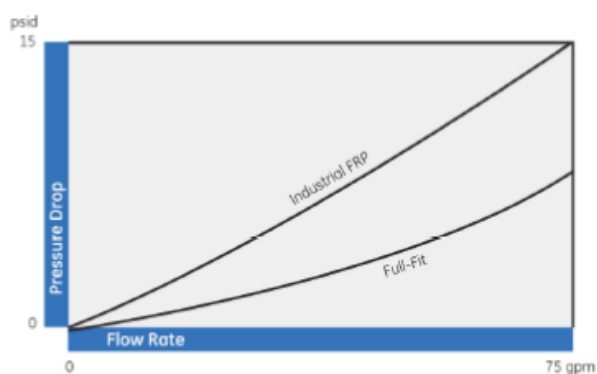


Figure 1: High Flow Rate at Low Pressure Drop.

Table 1: Element Specification

| Membrane          | Cellulose Acetate                                                    |                                     |                                       |
|-------------------|----------------------------------------------------------------------|-------------------------------------|---------------------------------------|
| Model             | Average permeate flow<br>gpd<br>(m <sup>3</sup> /day) <sup>1,2</sup> | Average NaCl rejection <sup>1</sup> | Minimum NaCl rejection <sup>1,2</sup> |
| OSMO-BEV-RO-CA-FF | 7,400<br>(28.0)                                                      | 97.5%                               | 96.0%                                 |

<sup>1</sup> Average salt rejection after 24 hours of operation. Individual flow rate may vary  $\pm 20\%$ .

<sup>2</sup> Testing conditions: 2,000ppm NaCl solution at 425psi (2,930kPa) operating pressure, 77 °F, pH 6.5 and 15% recovery.

| Model             | Active area<br>ft <sup>2</sup> (m <sup>2</sup> ) | Outer wrap | Part number |
|-------------------|--------------------------------------------------|------------|-------------|
| OSMO-BEV-RO-CA-FF | 336 (31.2)                                       | Full-Fit*  | 3133706     |

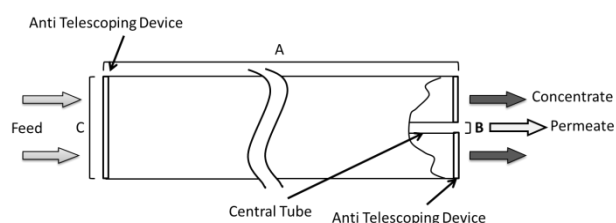


Figure 1 : Element Dimensions Diagram – Female

Table 2: Dimensions and Weight

| Model             | Dimensions, inches (cm) |                 |               | Boxed Weight<br>lbs. (kg) |
|-------------------|-------------------------|-----------------|---------------|---------------------------|
|                   | A                       | B               | C             |                           |
| OSMO-BEV-RO-CA-FF | 40.0<br>(101.6)         | 1.125<br>(2.86) | 7.9<br>(20.1) | 35<br>(16)                |

**Table 3: Operating and CIP parameters**

|                            |                                                                             |
|----------------------------|-----------------------------------------------------------------------------|
| Typical Operating Pressure | 60-200psi (413.7 - 1,379kPa)                                                |
| Typical Operating Flux     | 10-20GFD (15-35LMH)                                                         |
| Maximum Operating Pressure | 450psi (3,102kPa)                                                           |
| Maximum Temperature        | Continuous Operation: 86°F (30°C)<br>Clean-In-Place (CIP): 86°F (30°C)      |
| Minimum Crossflow          | 30gpm (6.8 m3/hr)                                                           |
| pH Range                   | Continuous Operation: 5.0-6.5<br>Clean-In-Place (CIP): 3.0-8.0 <sup>1</sup> |
| Maximum Pressure Drop      | Over an element: 12psi (83kPa)<br>Per housing: 50psi (345kPa)               |
| Chlorine Tolerance         | 1ppm maximum continuous<br>30ppm for 30 min. during sanitization            |
| Feedwater <sup>2</sup>     | NTU < 1<br>SDI < 5                                                          |

<sup>1</sup> Please refer to Cleaning Guidelines Technical Bulletin TB1194.

<sup>2</sup> SDI is measured on a non-linear scale using a 0.45-micron filter paper. Additionally, finer colloids, particulates and microorganisms 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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