

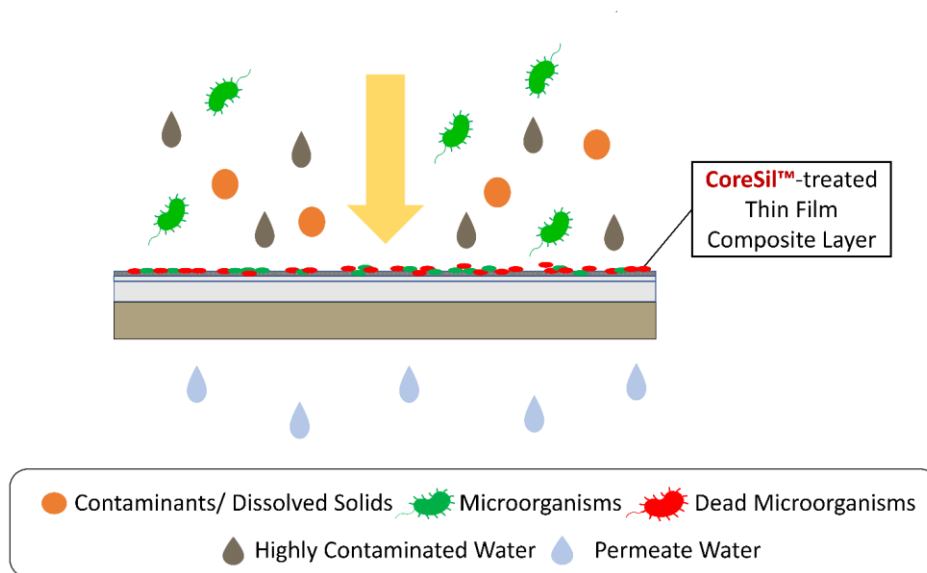


# CoreSil™ Anti-fouling Fiberglass Wrapped RO

Advanced Brackish Water Membranes - 8040

Cactus Materials reverse osmosis membranes incorporate innovative CoreSil™ anti-fouling technology to supply superior performance for a wide range of applications, including wastewater treatment and non-potable water reuse. The fiberglass-wrapped brackish RO with CoreSil™ technology delivers high-quality permeate while removing contaminants of concern at low operating pressures. The polyamide thin-film composite membranes with CoreSil™ technology are best suited for applications with challenging feed conditions of high biological fouling potential.

- ❖ Hard fiberglass exterior supplies added strength and withstands higher pressure drops than tape-wrapped elements.
- ❖ Reduces biological fouling rates and thus cleaning frequency (up to > 60%).
- ❖ More effective restoration of nominal performance after cleaning.
- ❖ Up to 19% less energy consumption at the same water productivity.
- ❖ CS-CPA series elements are used for all critical high-purity applications from pharmaceutical to power industry.
- ❖ CS-BW30 is an industry standard for high performance and high salt rejection.
- ❖ CS-XLE elements are ideal for high-quality permeate water at low operating costs.
- ❖ CS-TM720D-400 is designed for sources with medium salinity (2,000-10,000 ppm).



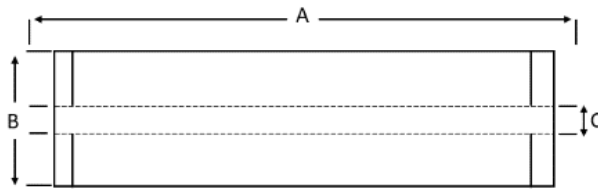
## Biofouling Control with CoreSil™ Membrane Technology

Membrane Model	Permeate Flow Rate Range	A	B	C	Minimum Salt Rejection
	gpd	Inches	Inches	Inches	(%)
CS-CPA3	11,000	40	7.89	1.125	99.7 <sup>1</sup>
CS-CPA5-LD	11,000	40	7.89	1.125	99.7 <sup>1</sup>
CS-CPA7-LD	11,500	40	7.89	1.125	99.8 <sup>1</sup>
CS-CPA5-MAX	12,000	40	7.89	1.125	99.7 <sup>1</sup>
CS-CPA7-MAX	12,600	40	7.89	1.125	99.8 <sup>1</sup>
CS-LFC3-LD	11,000	40	7.89	1.125	99.7 <sup>1</sup>
CS-BW30-PRO 400/34	11,000	40	7.90	1.125	99.6 <sup>2</sup>
CS-BW30-PRO-400	11,000	40	7.90	1.125	99.4 <sup>2</sup>
CS-BW30HR-440i	12,650	40	7.90	1.125	99.4 <sup>2</sup>
CS-TM720D-400	11,000	40	7.90	1.125	99.8 <sup>2</sup>
CS-XLE-440	14,000	40	7.90	1.50	99.0 <sup>3</sup>

**Test Conditions<sup>1</sup>:** 1500 ppm NaCl solution, 225 psig (1.55 MPa) applied pressure, 77 °F (25 °C) Operating Temperature, 15% Permeate Recovery, 6.5 - 7.0 pH Range.

**Test Conditions<sup>2</sup>:** 2,000 ppm NaCl feed stream, applied pressure 225 psi (15.5 bar), 77°F (25°C), pH 8 and 15% recovery. Flow rates for individual elements may vary but will be no more than 15% below the value shown.

**Test Conditions<sup>3</sup>:** 2,000 ppm NaCl feed stream, applied pressure 125 psig (8.7 bar), 77°F (25°C), pH 8 and 15% recovery. Flow rates for individual elements may vary but will be no more than 15% below the value shown.



Application Specifications (Applicable to All)	
Maximum Chlorine Concentration	< 0.1 ppm
Maximum Operating Pressure	600 psig
Maximum Operating Temperature	113°F (45°C)
Maximum Feed Water Turbidity	1 NTU
Maximum Feed Water SDI (15 min)	4-5
Maximum Pressure Drop	15 psig

Other Specifications	Value	Applicable to:
Feed water pH Range	2-11	CS-BW30-PRO-400/34, CS-BW30-PRO-400, CS-BW30HR-440i, CS-XLE-440, CS-TM720D-400
Maximum Pressure Drop	15 psig	CS-BW30-PRO-400, CS-BW30-PRO-400/34, CS-BW30HR-440i, XLE-440
Maximum Pressure Drop	20 psig	CS-TM720D-400

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