

Data Sheet



**Brackish Water
Reverse Osmosis (RO) Membranes**

LG BW 440 UES

Ultra low energy membrane with increased membrane area for higher productivity.

Overview

LG Chem's NanoH₂O™ brackish water RO membranes serve various municipal, industrial and commercial applications. Incorporating LG Chem's proprietary Thin Film Nanocomposite (TFN) technology, all LG BWRO membranes deliver reliable and superior performance with intrinsic anti-fouling properties.

LG BW 440 UES membrane elements, with increased active membrane area, deliver high permeability at very low feed pressures for ultra-low energy savings. Ideal applications include brackish feed water with low salinity.

Product Specifications

Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Feed Spacer, mil
440 (41)	12,650 (47.9)	99.0	98.0	28

Test Conditions : 2,000 ppm NaCl at 25°C (77°F), 125 psi (8.6 bar), pH 7, Recovery 15%. Permeate flow rates for individual elements may vary but will be no more than 20% below the value shown.

LG Chem recommends operating LG BW 440 UES membrane elements within one year from its original delivery date. The seller, at its discretion, may refuse to guarantee the performance in the event the membrane elements are not operated for more than one year from the original delivery date.

A, mm (in.)	B, mm (in.)	C, mm (in.)	Weight, kg (lbs.)
1,016 (40)	200 (7.9)	28.6 (1.125)	16 (35)

All dimensional information is indicative and for reference purpose only. Please contact LG Chem for detailed technical specification.

Operating Specifications

For more information and operating guidelines, visit www.lgwatersolutions.com

Max. Applied pressure	600 psi (41 bar)
Max. Chlorine concentration	< 0.1 ppm
Max. Operating temperature	45°C (113°F)
pH Range, Continuous (Cleaning)	2-11 (2-12)
Max. Feedwater turbidity	1.0 NTU
Max. Feedwater SDI (15 mins)	5.0
Max. Feed flow	75 gpm (17 m ³ /h)
Max. Pressure drop (ΔP) for each element	15 psi (1.0 bar)

The Membrane Elements performance is expressly conditioned on Buyer's storing, installing, operating, and maintaining Product in accordance with industry-accepted good practices and Seller's written instructions provided in the Seller's Technical Manual, which consists of LG Chem, Ltd [Technical Service Bulletins \("TSB"\)](#) and [Technical Applications Bulletins \("TAB"\)](#) and may be viewed and downloaded at www.lgwatersolutions.com.

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Referential Performance at 500 ppm NaCl

Type	Pressure	Projected performance*
LG BW 440 UES	100 psi (6.89 bar)	12,600 GPD, 99.3%
	110 psi (7.58 bar)	13,900 GPD, 99.4%

Test Conditions : 100/110 psi, 500 ppm NaCl at 25°C (77°F), pH 7, Recovery 15%. The above performance data is calculated through LG Chem's Q+ Projection Software.

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