

Data Sheet



**Seawater
Reverse Osmosis (RO) Membranes
LG SW 440 ES**

Overview

LG Chem's NanoH₂O™ seawater RO membranes, incorporated with innovative Thin Film Nanocomposite (TFN) technology, reduce the cost of desalination while delivering superior water quality. Our seawater RO membranes provide industry leading salt rejection and produce 20% more flow than membranes manufactured with conventional technologies. We continue to leverage the technological advantages of our seawater RO membranes to expand our market share, accruing more than 3,000 Million Liter per Day (MLD) projects for both new and replacement market since the establishment.

LG SW ES (Energy Saving) membranes offer significant energy savings while producing good water quality; suitable for low to medium salinity seawater applications.

Product Specifications at 600 psi

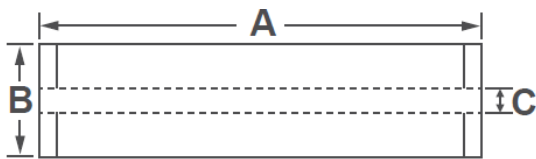
Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Boron Rejection, %	Feed Spacer, mil
440 (41)	7,480 (28.3)	99.6	99.3	81	28

Test Conditions : 32,000 ppm NaCl, 5 ppm boron at 25°C (77°F), 600 psi (41 bar), pH 8, Recovery 8%.
Permeate flows for individual elements may vary +/-20%.

Referential Product Specifications at 800 psi

Active Membrane Area, ft ² (m ²)	Permeate Flow Rate, GPD (m ³ /d)	Stabilized Salt Rejection, %	Minimum Salt Rejection, %	Boron Rejection, %	Feed Spacer, mil
440 (41)	15,070 (57.0)	99.8	99.6	89	28

Test Conditions : 32,000 ppm NaCl, 5 ppm boron at 25°C (77°F), 800 psi (55 bar), pH 8, Recovery 8%.
Permeate flows for individual elements may vary +/-15%.



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

Operating Specifications

Max. Applied pressure	1,200 psi (82.7 bar)
Max. Chlorine concentration	< 0.1 ppm
Max. Operating temperature	45°C (113°F)
pH Range, Continuous (Cleaning)	2-11 (2-13)
Max. Feedwater turbidity	1.0 NTU
Max. Feedwater SDI (15 mins)	5.0
Max. Feed flow	75 gpm (17 m ³ /h)
Min. Ratio of concentrate to permeate flow for any element	5 : 1
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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