

Nano:H₂O™



Product Data Sheet

LG SW 440 ES

Energy-saving seawater RO membrane with proven, long-lasting

Key Features

- High permeate flow rate
- Best-in-class salt rejection for Energy-saving SWRO membranes

Main Benefits

- Improved system productivity
- Reduced feed pressure and energy consumption
- Well-proven and long-lasting reliability

Ideal Applications

- Multi-pass desalination plant design

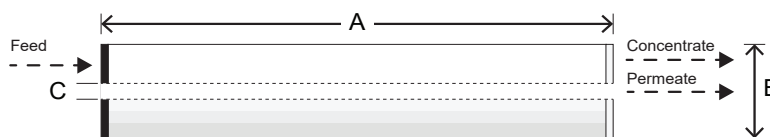
Performance Specifications

Specification	Unit	Test condition A	Test condition B
Permeate Flow Rate	GPD (m ³ /d)	7,480 (28.3)	15,070 (57.0)
Stabilized Salt Rejection	%	99.6	99.8
Minimum Salt Rejection	%	99.3	99.6
Stabilized Boron Rejection	%	81	89
Active Membrane Area	ft ² (m ²)	440 (41)	
Feed Spacer Thickness	mil	28	

The specifications outlined above are normalized performances based on the following test conditions:

- **Test Condition A:** 32,000 ppm NaCl, 5 ppm Boron, 600 psi (41.3 bar), 25°C (77°F), pH 8, Recovery 8%
 - Permeate flow rates for individual elements may vary by ±20%
- **Test Condition B (referential only):** 32,000 ppm NaCl, 5 ppm Boron, 800 psi (55.1 bar), 25°C (77°F), pH 8, Recovery 8%
 - Permeate flow rates for individual elements may vary by ±15%

Dimensions and Weight



Dimensions: in (mm)			Wet weight: kg (lbs)
A	B	C	
Element Length	Element O.D.	Core Tube I.D.	16 (35)
40 (1,016)	200 (7.9)	1.125 (28.6)	



This product is certified to NSF/ANSI/CAN Standard 61 for drinking water systems

As the exclusive producer of the breakthrough Thin-Film Nanocomposite (TFN) technology, LG Chem's NanoH₂O™ seawater and brackish water RO membranes leverage this proprietary innovation to enhance membrane performance

Operating Specifications

Item	Unit	Value
Maximum Applied Pressure	psi (bar)	1,200 (82.7)
Maximum Chlorine Concentration	ppm	< 0.1
Maximum Operating Temperature	°C (°F)	45 (113)
pH Range, Continuous Operation		2–11
pH Range, Cleaning		2–13
Maximum Feed Water Turbidity	NTU	1.0
Maximum Feed Water SDI ₁₅		5.0
Maximum Feed Flow	gpm (m ³ /h)	75 (17)
Maximum Pressure Drop (ΔP) for Each Element	psi (bar)	15 (1.0)

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. The information and data contained herein are deemed to be accurate and reliable and are offered in good faith, but without guarantee of performance. LG Chem assumes no liability for results obtained or damages incurred through the application of the information contained

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