

# Energy Savings

## Seawater Reverse Osmosis (RO) Element

### LG SW 440 ES



### Overview

LG Chem's thin-film NanoH<sub>2</sub>O™ nanocomposite (TFN) membranes lower water treatment costs by improving energy efficiency and productivity. These membranes feature benign nanomaterials incorporated into the thin-film polyamide layer of a composite membrane. This innovative patented and patent-pending technology significantly increases membrane permeability while matching best-in-class salt rejection.

- Higher flux with requisite salt rejection
- Standard 8-inch spiral wound element design
- Easy to retrofit existing RO plants
- NSF Standard 61 Certified

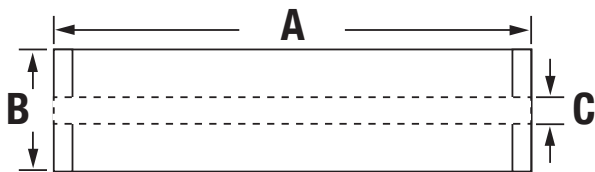


### Product Specifications

Configuration: 8-inch spiral wound  
 Membrane Polymer: Thin-film nanocomposite (TFN) polyamide

Product Number	Permeate flow rate m <sup>3</sup> /d (gpd)	Minimum NaCl Rejection %	Stabilized NaCl Rejection %	Active Membrane Area m <sup>2</sup> (ft <sup>2</sup> )	Feed Spacer mil	Stabilized Boron Rejection %
LG SW 440 ES	57 (15,070)	99.6	99.8	41 (440)	28	89

Note: The above values are normalized to the following conditions: 32,000 ppm NaCl, 5 ppm boron, 5.5 MPa (800 psi), 25°C (77°F), pH 8, 8% recovery. Permeate flows for individual elements may vary +/- 15%.



Part Number	Length A	Element O.D. B	Perm Tube I.D. C	Weight kg (lbs.)
LG SW 440 ES	1016 mm (40 in.)	200 mm (7.9 in.)	28.6 mm (1.125 in.)	16.4 (36)

### Operating Specifications

For more information and operating guidelines, visit [www.LGwatersolutions.com](http://www.LGwatersolutions.com)

Max. Applied Pressure:	82.7 bar (1200 psi)
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:	18.0 m <sup>3</sup> /h (80 GPM)
Min. Ratio of Concentrate to Permeate Flow for any Element:	5:1
Max. Pressure Drop (ΔP) for Each Element:	1 bar (15 psi)

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