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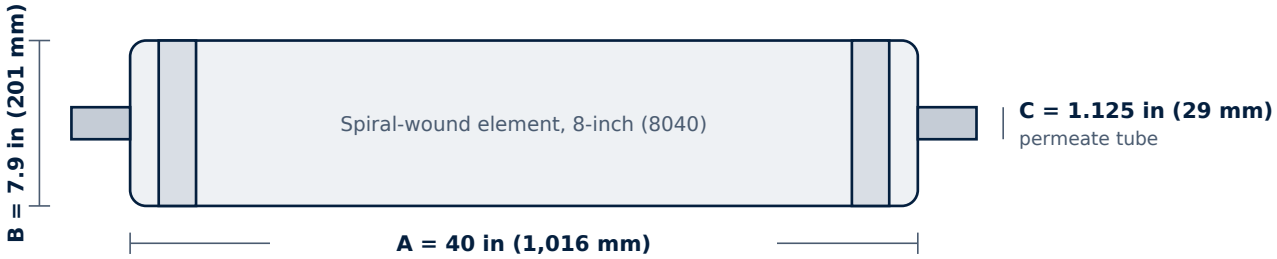
Osmoflux MR TW 440 ES

Seawater RO membrane, energy saving · Datasheet

Energy-saving seawater RO membrane, Osmoflux series. 440 ft² (41 m²) 8-inch (8040) spiral-wound element with a 28 mil feed spacer. High flow at lower pressure, for low to medium salinity and cold seawater.



Performance

Permeate flow	15,070 gpd (57.0 m³/d)
Salt rejection (stabilised)	99.8 %
Salt rejection (minimum)	99.6 %
Boron rejection	89 %
At 600 psi (41 bar)	7,480 gpd (28.3 m³/d), 99.6 %
Nominal flux (calculated)	34.2 gpd/ft² (≈ 58 L/m²·h)

Element

Configuration	Spiral wound
Membrane	Polyamide thin-film composite
Active membrane area	440 ft² (41 m²)
Feed spacer	28 mil
Element size	8 in × 40 in (8040)

Operating limits *

Operating pressure, maximum	1,200 psi (83 bar)
Operating temperature, maximum	45 °C (113 °F)
Free chlorine tolerance	< 0.1 ppm
pH, continuous operation	2 to 11
pH, short-term cleaning	1 to 13
Cleaning temperature, maximum	35 °C (95 °F)
Feed flow, maximum	75 gpm (17 m³/h)
Pressure drop per element, max.	15 psi (1.0 bar)
Feed water turbidity, maximum	1 NTU
Feed water SDI, maximum	5

* General-use limits. Values may be more conservative for a specific project to give the best performance and the longest membrane life.

Test conditions (initial performance)

32,000 ppm NaCl with 5 ppm boron · 800 psi (55 bar) operating pressure · 25 °C · pH 8 · 8 % recovery

Fits the same pressure vessels as

LG Chem	LG SW 440 ES

Brand and model names belong to their owners and are used only to identify the elements an Osmoflux element can replace. Check operating conditions against this datasheet before replacing elements.

Operating guidelines

- Avoid abrupt changes in pressure or cross-flow during start-up, shutdown and cleaning.
- Raise feed pressure gradually over 30 to 60 seconds, and reach the set cross-flow velocity over 15 to 20 seconds.
- Discard the permeate made in the first hour of operation. Avoid static back-pressure on the permeate side at all times.
- Complete pretreatment, element loading, instrument calibration and system checks before start-up.
- Clean at pH 2 to 12 at up to 35 °C; clean at pH 1 or pH 13 only at 25 °C or below.

General notes

- Permeate flow of an individual element may vary by ±15 % at 800 psi and ±20 % at 600 psi.
- Each element is supplied with brine seal, interconnector and O-rings, in a sealed polyethylene bag with less than 1 % sodium metabisulfite solution, packed in a cardboard box.
- Keep elements wet at all times after first wetting. During long shutdowns, keep them in preservative solution to prevent biological growth.
- Theway RO three-year prorated limited warranty. Operation outside the stated limits voids the warranty; the user is responsible for the effects of incompatible chemicals and lubricants.

Theway Membranes believes the information here to be accurate and offers it in good faith. Conditions of use are outside our control. Use of this product alone does not guarantee removal of cysts and pathogens; that depends on the complete system design, operation and maintenance.

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Important information

Osmoflux MR TW 440 ES RO element datasheet. Read with every page of this document.

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Legal notice

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