QuantumFlux

Seawater Reverse Osmosis (RO) Element

Qfx SW 400 ES

Overview



NanoH$_2$O's thin-film nanocomposite (TFN) ***Quantum*Flux** membranes lower the cost of desalination by improving energy efficiency and productivity. Qfx 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.

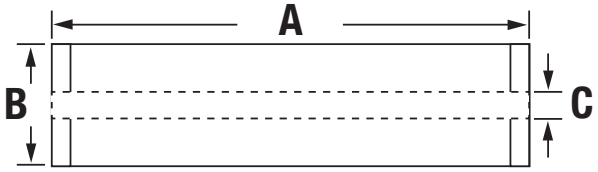
- Higher flux with requisite salt rejection
- Standard 8-inch spiral wound element design
- Easy to retrofit existing RO plants
- NSF Standard 61 Certified
- NEW Anti-telescoping device with raised lip and bi-directional seal for easy element loading and removal

Product Specifications

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

Product Number	Permeate flow rate m³/d (gpd)	Minimum NaCl Rejection %	Stabilized NaCl Rejection %	Active Membrane Area m² (ft²)	Feed Spacer mil	Stabilized Boron Rejection %
Qfx SW 400 ES	52 (13,700)	99.7	99.8	37 (400)	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.)
Qfx SW 400 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.nanoh2o.com

Max. Applied Pressure:	8.27 MPa (1200 psig)
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:	17.0 m³/h (75 GPM)
Min. Ratio of Concentrate to Permeate Flow for any Element:	5:1
Max. Pressure Drop (ΔP) for Each Element:	0.7 bar (10 psi)

The information and data contained herein are deemed to be accurate and reliable and are offered in good faith, but without guarantee of performance. NanoH$_2$O assumes no liability for results obtained or damages incurred through the application of the information contained herein. Customer is responsible for determining whether the products and information presented herein are appropriate for the customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Specifications subject to change without notice. QuantumFlux and Qfx are trademarks of NanoH$_2$O, Inc. All rights reserved. © 2013 NanoH$_2$O, Inc.

NanoH$_2$O, Inc. • 750 Lairport Street, El Segundo, CA 90245 USA
Tel: +1 424.218.4000 • Fax: +1 424.218.4001 • www.nanoh2o.com

Rev. D (07.13)