Product Datasheet

TM800M Series

Standard Sea Water Reverse Osmosis (RO) Membrane Element

The company reverse osmosis membrane technology applies decades of R&D and precision automated manufacturing under ISO 9001 for consistency in product quality. State-of-the-art cross-linked fully aromatic polyamide composite membranes produce high- quality permeate and robust membrane chemistry for improved performance and longer membrane life.

Product Specifications	Unit	TM820M-400	TM820M-440
Membrane Area	ft^2 (m^2)	400 (37)	440 (41)
Nominal Salt Rejection	%	99.80	99.80
Minimum Salt Rejection	%	99.50	99.50
Product Flow Rate	gpd (m^3/d)	7,000 (26.5)	7,700 (29.2)
Min. Product Flow Rate	gpd (m^3/d)	5,600 (21.2)	6,200 (23.5)
Feed spacer thickness	mil	34	28

Products manufactured at our U.S. facility (TMUS) are certified to NSF/ANSI 61 for drinking water applications.

Test Conditions: Feed water pressure 800 psi (5.52 MPa); Feed water temperature 77 °F (25°C); Feed water concentration 32,000 mg/L as NaCl; Recovery rate 8%; Feed water pH 7

Typical Boron Rejection: 95% at pH 8 (5 mg/L Boron added to feed water)

Applications

Seawaterdesalination, High salinity feed water, Industrial wastewater, High recovery RO systems

Dimensions	in. (mm)
A	7.9 (201)
B	40 (1,016)
C	1.125 (29)

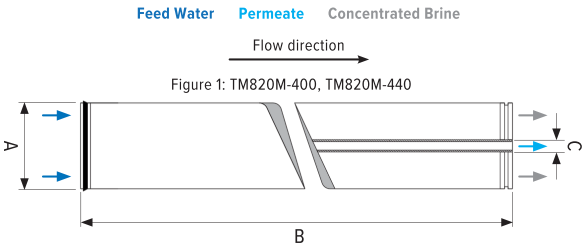

Figure 1: TM820M-400, TM820M-440

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GLOBAL PROVENTUS

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Operating Limits		Unit	Value
Maximum operating pressure[6]		psi (MPa)	1,200 (8.3)
Maximum feed water temperature		°F (°C)	113 (45)
Maximum feed water SDI_{15}			5
Feed water chlorine concentration		ppm	Not detectable
Feed water pH range	Continuous operation		2–11
	Chemical cleaning		1–12
Maximum pressure drop per element		psi (MPa)	15 (0.10)
Maximum pressure drop per vessel		psi (MPa)	50 (0.34)

Operating Information

1. Please consult the latest The company technical bulletin, design guidelines, computer design program, or call an application specialist for the recommended design range. Not strictly following the operating limits stated in this bulletin will void and nullify the Limited Warranty.
2. All elements are wet tested, and then packaged in approximately 0.5–1.0 wt% sodium bisulfite solution, or sodium chloride solution with an oxygen scavenger.
3. The presence of free chlorine and other oxidizing agents under certain conditions, such as heavy metals that act as oxidation catalysts in the feed water, will cause unexpected oxidation of the membrane. The company strongly recommends removing these oxidizing agents contained in feed water before operating the RO system.
4. The company recommends flushing The company RO elements for 30 to 60 minutes once every two days with sufficient quality flushing water, such as pre-treated feed water, to prevent biological growth during system shutdown. Please refer to The company RO Handling Manual for suggested flushing water quality.
5. Permeate from the first hour of operation shall be discarded.
6. The customer is fully responsible for the effects of chemicals that are incompatible with the elements. Their use will void the element Limited Warranty.
7. Maximum operating pressure will vary depending on feed temperature. Please ask for detailed information from The company if needed.

The company accepts no responsibility for results obtained by the application of this information or the safety or suitability of the company products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product combination for their own purposes.

All data may change without prior notice, due to technical modifications or production changes. Please be sure to inquire about the latest product specifications.

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