

# Sea Water RO Elements

## TM800C

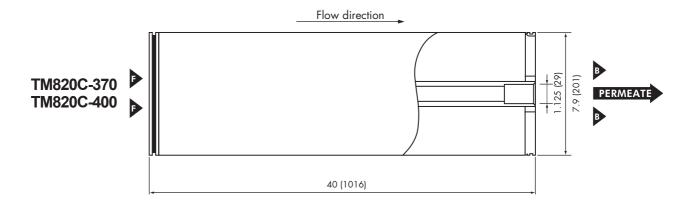
Туре	Diameter inch	Membrane Area ft² (m²)	Salt Rejection %	Product Flow Rate gpd (m³/d)
TM820C-370	8"	370 (34)	99.75	6,000 (22.7)
TM820C-400	8"	400 (37)	99.75	6,500 (24.6)

1. Membrane Type		Cross Linked Fully Aromatic Polyamide Composite	
2. Test Conditions			
	Feed Water Pressure	800 psi (5.52 MPa)	
	Feed Water Temperature	77 °F (25 °C)	
	Feed Water Concentration	32,000 mg/l NaCl	
	Recovery Rate	8 %	
	Feed Water pH	8	
3. Minimum Salt Rejection		99.5 %	
4. Minimum Product Flow Rate		4,800 gpd ( 18.2 m <sup>3</sup> /d) (TM820C-370)	
		5,200 gpd ( 19.7 m <sup>3</sup> /d) (TM820C-400)	
5. Boron Rejection		93% at pH8	
(typical value)		(5mg/l Boron added to Feed water)	

### **Dimensions**

All dimensions shown in inches (millimeter).

Feed Water
Concentrated Brine



#### **Operating Limits**

Maximum Operating Pressure —	1200 psi (8.3 MPa)
Maximum Feed Water Temperature —	113 °F (45 °C)
Maximum Feed Water SDI <sub>15</sub>	5
Feed Water Chlorine Concentration —	Not Detectable
Feed Water pH Range, Continuous Operation ———	2-11
Feed Water pH Range, Chemical Cleaning —	1-12
Maximum Pressure Drop per Element	
Maximum Pressure Drop per Vessel —	60 psi (0.4 MPa)

### **Operating Information**

- For the recommended design range, please consult the latest Toray technical bulletin, design guidelines, computer design program, and/or call an application specialist. If the operating limits given in this Product Information Bulletin are not strictly followed, the Limited Warranty will be null and void.
- All elements are wet tested, treated with tested feed water solution, and then vacuum packed in oxygen barrier bags with deoxidant inside. To prevent biological growth during system shutdown, it is recommended to perform 30-60 minutes flushing of Toray elements with seawater once in every two days.
- 3. Permeate from the first hour of operation shall be discarded.
- 4. The customer is fully responsible for the effects of chemicals that are incompatible with the elements. Their use will void the element Limited Warranty.

#### **Notice**

- Toray accepts no responsibility for results obtained by the application of this information or the safety or suitability of Toray's 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.
- 2. All data may change without prior notice, due to technical modifications or production changes.

Asia and Oceania: Toray Industries, Inc. RO Membrane Products Department

8-1, Mihama 1-chome Urayasu, Chiba 279-8555, Japan

Te1: +81 47 350 6030 Fax: +81 47 350 6066 http://www.toraywater.com Americas: Toray Membrane USA, Inc. Sales Office

12233 Thatcher Court, Poway, CA 92064, U.S.A. Tel: +1 858 218 2390 Fax: +1 858 486 3063 **Europe, Middle East and Africa: Toray Membrane Europe AG** 

Grabenackerstrasse 8 CH-4142 Münchenstein 1, Switzerland

Tel: +41 61 415 87 10 Fax: +41 61 415 87 20