

# Brackish Water RO Elements

## TML

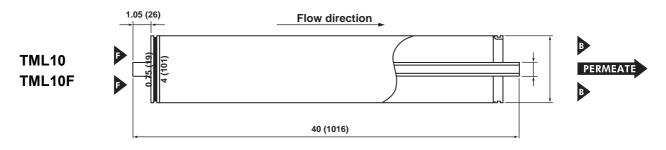
Туре	Diameter inch	Membrane Area ft <sup>2</sup> (m <sup>2</sup> )	Salt Rejection %	Product Flow Rate gpd (m³/d)
TML10	4"	73 (7)	99.7	1,850 (7.0)
TML10F	4"	87 (8)	99.7	2,200 (8.3)
TML20-370	8"	370 (34)	99.7	9,500 (36.0)
TML20-400	8"	400 (37)	99.7	10,200 (38.6)

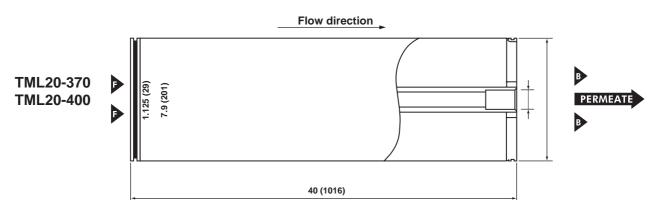
1. Membrane Type		Cross Linked Fully Aromatic Polyamide Composite	
2. Test Conditions			
	Feed Water Pressure	225 psi (1.55 MPa)	
	Feed Water Temperature	77 °F (25 °C)	
	Feed Water Concentration	2,000 mg/l NaCl	
	Recovery Rate	15 %	
	Feed Water pH	7	
3. Minimum Salt Rejection		99.0 %	
4. Minimum Product Flow Rate		1,500 gpd (5.6 m <sup>3</sup> /d) (TML10)	
		1,850 gpd (7.0 m <sup>3</sup> /d) (TML10F)	
		7,500 gpd (28.4m <sup>3</sup> /d) (TML20-370)	
		8,200 gpd (31.0m <sup>3</sup> /d) (TML20-400)	

#### **Dimensions**

All dimensions shown in inches (millimeter).

Feed Water
Concentrated Brine





### **Operating Limits**

	600 psi (4.1 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	20 psi (0.14 MPa)
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 guide lines, computer design program, and/or call an application specialist. If the operating limits giv en in this Product Information Bulletin are not strictly followed, the Limited Warranty will be null and void
- 2. All elements are wet tested, treated with a 1% by weight percent sodium bisulfite storage solution, and then vacuum packed in oxygen barrier bags. To prevent biological growth during short term storage, shipment, or system shutdown, it is recommended that Toray elements be immersed in a protective solution containing 500 1,000 ppm of sodium bisulfite (food grade) dissolved in permeate.
- 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 combin ation for their own purposes.
- 2. All data may change without prior notice, due to technical modifications or production changes.

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