



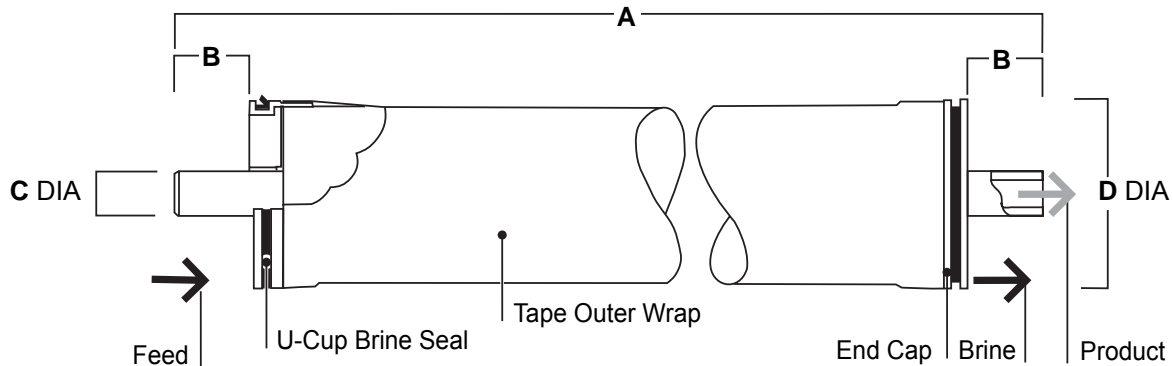
FILMTEC Membranes

FILMTEC® 4" Tapwater RO Elements

Product Specifications

Product	Product Water Flow Rate			Minimum Salt Rejection Cl ⁻ (%)	Stabilized Salt Rejection Cl ⁻ (%)
	(gpd)	(m ³ /d)	(l/h)		
TW30-4014	475	1.80	76	98.0	99.0
TW30-4021	900	3.41	142	98.0	99.0
TW30-4040	2200	8.33	347	98.0	99.0
TW30HP-4040	2800	10.60	442	98.0	99.0

1. Permeate flow and salt rejection based on the following test conditions: 2000 ppm NaCl, 225 psi (1.6 MPa), 77°F (25°C), pH 8, and recovery as indicated below.
2. Flow rates for individual elements may vary -15%/+25% for TW30-4014, TW30-4021 and TW30-4040 and -15%/NUL (NUL: No Upper Limit) for TW30HP-4040.
3. Sales specification of TW30-4014 and TW30-4021 may vary slightly as design revisions take place.



Operating Limits

Membrane Type.....	Thin-Film Composite
Maximum Operating Pressure.....	300 psi (2.1 MPa)
Maximum Feed Flow Rate	17 gpm (3.9 m ³ /h) [†]
pH Range, Continuous.....	2 to 11
pH Range, Cleaning Cycle (30 min.)	1 to 12
Maximum Operating Temperature	113° F (45 °C)
Maximum Feed Turbidity	1 NTU
Maximum Feed Silt Density Index	SDI 5
Free Chlorine Tolerance	<0.1 ppm

Product	Single-Element Recovery (Permeate Flow to Feed Flow)	Dimensions – Inches (mm)			
		A	B	C	D
TW30-4014	0.05	14.0 (356)	1.05 (27)	0.75 (19)	3.913 (99.4)
TW30-4021	0.08	21.0 (533)	1.05 (27)	0.75 (19)	3.913 (99.4)
TW30-4040	0.15	40.0 (1016)	1.05 (27)	0.75 (19)	3.913 (99.4)
TW30HP-4040	0.15	40.0 (1016)	1.05 (27)	0.75 (19)	3.913 (99.4)

4. Consult most recent DESIGN GUIDELINES for multiple element applications and recommended element recovery rates for various feed sources.
5. Element to fit 4.00-inch I.D. pressure vessel.
[†]Maximum feed flow for TW30HP-4040 is 18 gpm (4.1 m³/h).

1 inch = 25.4 mm

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Important Operating Information

1. Keep elements moist at all times after initial wetting.
2. If operating specifications given in this Product Information bulletin are not strictly followed, the limited warranty will be null and void.
3. Permeate obtained from first hour of operation should be discarded.
4. To prevent biological growth during storage, shipping or system shutdowns it is recommended that FILMTEC elements be immersed in a protective solution. The standard storage solution contains 1.5 percent (by weight) sodium metabisulfite (food grade).
5. Elements must be in use for at least six hours before formaldehyde is used as a biocide. If the elements are exposed to formaldehyde before being in use for this period of time, a loss in flux may result.
6. The membrane shows some resistance to short-term attack by chlorine (hypochlorite). Continuous exposure, however, may damage the membrane and should be avoided.
7. The customer is fully responsible for the effects of incompatible chemicals on elements. Their use will void the element limited warranty.

Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

Notice: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

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