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## DOW FILMTEC™ Membranes

### Next Generation of Residential Reverse Osmosis Elements

#### Features

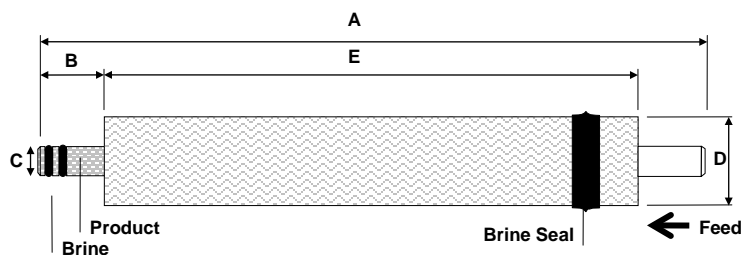
DOW FILMTEC™ reverse osmosis (RO) membranes for home drinking water treatment units are some of the most reliable and consistent elements in the industry. Advanced membrane technology and automated fabrication allow Dow to precisely produce each and every element to tight, pre-defined specifications. Dow's advanced and consistent RO element quality helps customers develop, and maintain brand recognition along with a reputation for building systems that reliably provide low impurity drinking water. DOW FILMTEC™ elements are shipped dry for convenient handling and long shelf-life. Dow's next generation elements are a fully compatible replacement for existing DOW FILMTEC™ residential RO elements.

#### Product Specifications

Product	Applied Pressure psig (bar)	Permeate Flow Rate gpd (l/h)	Stabilized Salt Rejection (%)
TW30-1812-24	50 (3.4)	24 (3.8)	98
TW30-1812-36	50 (3.4)	36 (5.7)	98
TW30-1812-50	50 (3.4)	50 (7.9)	98
TW30-1812-75	50 (3.4)	75 (12)	98

1. Permeate flow and salt rejection based on the following test conditions: 250 ppm softened tap water, 77°F (25°C), 15% recovery and the specified applied pressure.
2. Minimum salt rejection is 96.0%.
3. Permeate flows for individual elements may vary +/-20%.

Figure 1



Dimensions – Inches (mm)	A	B	C	D	E
TW30-1812	11.74 (298)	1.17 (30)	0.68 (17)	1.75 (44.5)	9.4 (239)

1. TW30-1812 Home Drinking Water elements seal at a standard 2.0 inch – 2.05 inch I.D. within pressure vessels

Operating Limits	Membrane Type	Polyamide Thin-Film Composite
	Maximum Operating Temperature	113° F (45°C)
	Maximum Operating Pressure	150 psig (10 bar)
	Maximum Feed Flow Rate	2.0 gpm (7.6 lpm)
	pH Range, Continuous Operation <sup>a</sup>	2 – 11
	Maximum Feed Silt Density Index (SDI)	5
	Free Chlorine Tolerance <sup>b</sup>	< 0.1 ppm

a. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

b. Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, Dow recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical bulletin 609-22010 for more information.

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### Influence of Temperature and Pressure on TW30-1812 Permeate Flow

Figure 2.

Impact of Pressure on Permeate Flow  
(constant temperature, recovery)

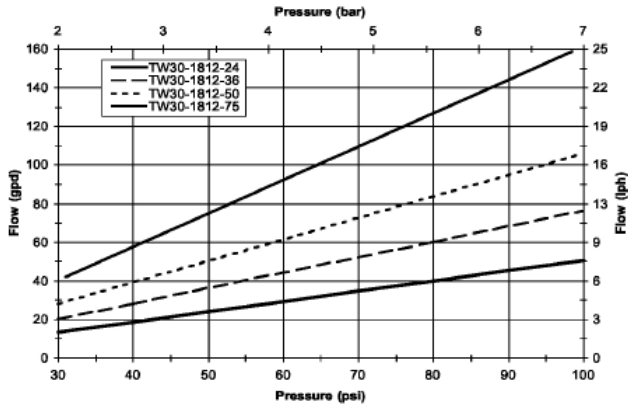
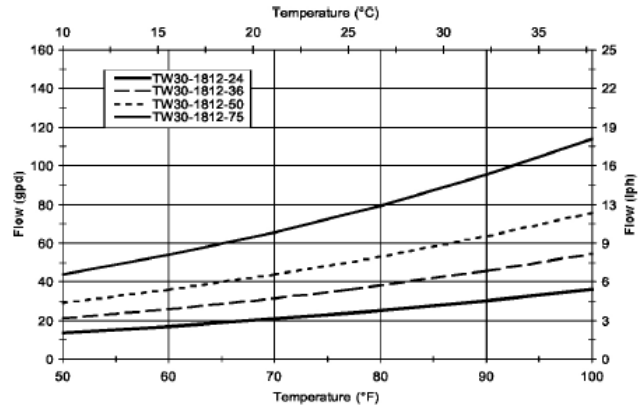


Figure 3.

Impact of Temperature on Permeate Flow  
(constant pressure, recovery)



#### Important Information

- It is recommended that systems using these elements rinse the elements for 24 hours, prior to first use, to meet NSF/ANSI 58 Standard.
- The first full tank of permeate must be discarded. Do not use this initial permeate for drinking water or food preparation.
- To ease installation, it is recommended to use a lubricant safe for indirect water contact on all seals. Potential options include water, glycerin based lubricants, and Dow Corning™ 111.
- Rotate the element about a quarter turn to ease installation and removal of the element. Ensure good interface between the o-rings and brine seal with their connection surfaces.
- Keep elements moist at all times after initial wetting.
- To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution. Rinse out the preservative before use.
- The membrane shows some resistance to short-term attack by chlorine (hypochlorite). Continuous exposure, however, may damage the membrane and should be avoided.
- DOW FILMTEC™ Home Drinking Water Reverse Osmosis Elements may be covered under the DOW FILMTEC™ Reverse Osmosis and Nanofiltration Element Three-Year Prorated Limited Warranty, 609-35010-1006 extended to OEMs. Such Limited Warranty is non-transferable. Contact a Dow representative for more information.

If operating limits and guidelines given in this Product Information Bulletin are not strictly followed, the Limited Warranty will be null and void. The OEM is fully responsible for the effects of incompatible chemicals and lubricants on elements. Use of any such chemicals or lubricants will void the Limited Warranty.

These membranes may be subject to drinking water application restrictions in some countries: please check the application status before use and sale. These elements have not been through the French approval process for use in potable water.

DOW FILMTEC™ Membranes  
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**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.

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