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Product Bulletin

DOW™ FILMTEC™ Membranes

Home Drinking Water Reverse Osmosis Elements

Features

DOW™ FILMTEC™ reverse osmosis (RO) membranes for home drinking water treatment units are 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 unmatched consistent RO element quality helps original equipment manufacturers (OEMs) 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. These elements are NSF/ANSI Standard 58 listed. Equipment suppliers can use Dow's Standard 58 listing and participation in the NSF Data Transfer Protocol to reduce costs for elective reduction claims for their systems.

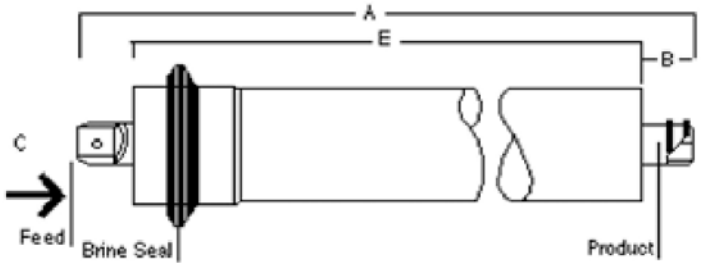
Product Specifications

Product	Part Number	Applied Pressure psig (bar)	Permeate Flow Rate gpd (l/h)	Stabilized Salt Rejection (%)
TW30-1812-24	93430	50 (3.4)	24 (3.8)	98
TW30-1812-36	80719	50 (3.4)	36 (5.7)	98
TW30-1812-50	80722	50 (3.4)	50 (7.9)	98
TW30-1812-75	114731	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%.

For ease of installation, element o-rings have been pre-lubricated with glycerin

Figure 1



NSF COMPONENT

This component is Tested and Certified by NSF International against NSF/ANSI Standard 58 for material requirements only.

Dimensions – Inches (mm)	A	B	C	D	E
TW30-1812	11.74 (298)	0.87 (22)	0.68 (17)	1.75 (44.5)	10.1 (254)

1. TW30-1812 Home Drinking Water elements fit nominal 2-inch I.D. 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[a]	2 – 11
Maximum Feed Silt Density Index (SDI)	5
Free Chlorine Tolerance[b]	< 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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DOW™ FILMTEC™ Membranes

Home Drinking Water Reverse Osmosis Elements
Influence of Temperature and Pressure on TW30-1812 Permeate Flow

Figure 1.
Impact of Pressure on Permeate Flow
(constant temperature, recovery)

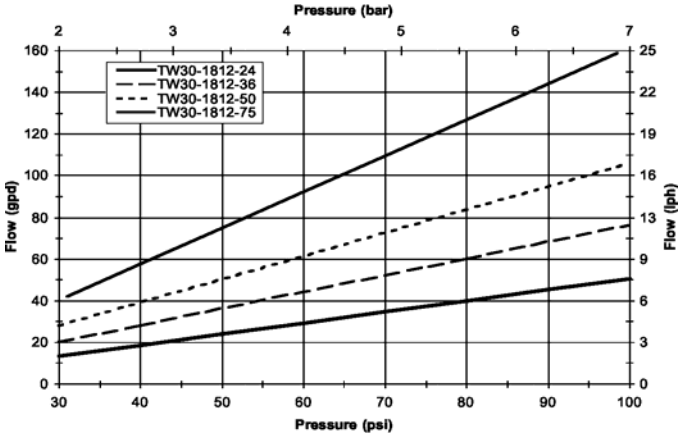
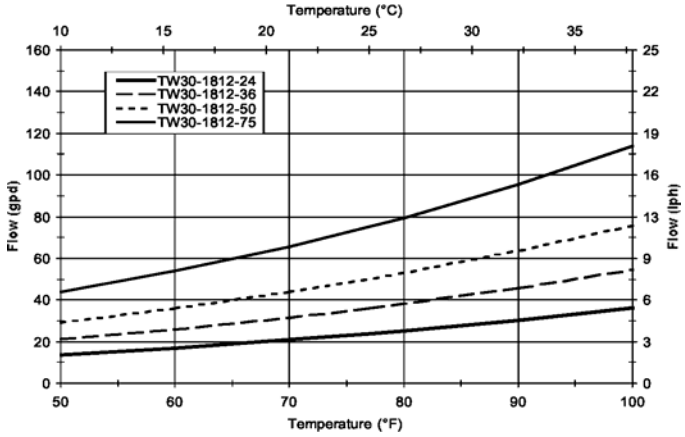


Figure 2.
Impact of Temperature on Permeate Flow
(constant pressure, recovery)



Important Information

- It is recommended that systems using these elements rinse the elements for 24 hours, prior to first use, to meet the NSF/ANSI 58 Standard.
- The first full tank of permeate should be discarded. Do not use this initial permeate for drinking water or food preparation.
- 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.
- 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.
- 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.

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 Dow 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. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" mean the Dow legal entity selling products to Customer unless otherwise expressly noted. Any claim for breach of warranty may only be brought against the selling entity. The applicable law governing this document shall be the law set forth in Dow's general terms and conditions or as otherwise agreed to by the parties for the sale of products. For sales governed by German law, a "Limited Warranty" will not be granted. NO WARRANTIES ARE GIVEN EXCEPT FOR ANY SPECIFIC WARRANTY SET FORTH HEREIN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

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