# DOW FILMTEC™ Membranes

DOW FILMTEC High Flow 100 Gallons Per Day Drinking Water Element

## Features

Dow Water & Process Solutions reverse osmosis membrane elements for home drinking water are the industry's most reliable. Advanced membrane technology and automated fabrication allow these elements to deliver consistent performance that equipment suppliers, water treatment dealers and residential customers can rely on. DOW FILMTEC elements are shipped dry for convenient handling and long shelf-life.

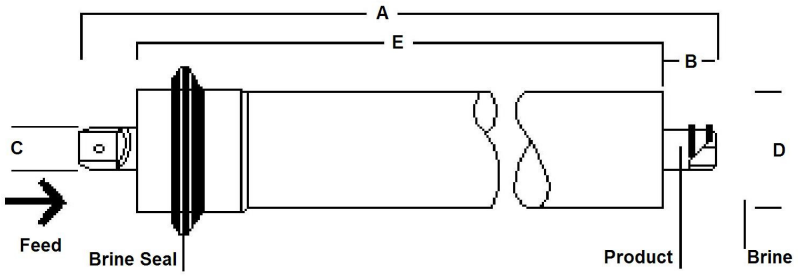
DOW FILMTEC™ TW30-1812-100 is rated a 50 psi and will purify about 20% more water than competitive elements rated at 60 psi.

## Product Specifications

| Product | Part Number | Applied Pressure psig (bar) | Permeate Flow Rate gpd (l/h) | Stabilized Salt Rejection (%) |
|---|---|---|---|---|
| **TW30-1812-100** | 170102 | 50 (3.4) | 100 (16) | 90 |

1. Permeate flow and salt rejection based on the following test conditions: 250 ppm softened tapwater, 77°F (25°C), 15% recovery and the specified applied pressure.
2. Minimum salt rejection is 90.0%.
3. Permeate flows for individual elements may vary +/-20%.
4. Product specifications may vary slightly as improvements are implemented.
5. For ease of installation, element o-rings have been pre-lubricated with glycerin.

## Figure 1




| Product | Dimensions – Inches (mm) A | B | C | D | E |
|---|---|---|---|---|---|
| **TW30-1812-100** | 11.74 (298) | 0.87 (22) | 0.68 (17) | 1.75 (44.5) | 10.0 (254) |

1. TW30-1812-100 elements fit nominal 2-inch I.D. pressure vessel.

1 inch = 25.4 mm

## Operating Limits

| | |
|---|---|
| • Membrane Type | Polyamide Thin-Film Composite |
| • Maximum Operating Temperature | 113°F (45°C) |
| • Maximum Operating Pressure | 300 psig (21 bar) |
| • Maximum Feed Flow Rate | 2.0 gpm (7.6 lpm) |
| • pH Range, Continuous Operation[a] | 2 - 11 |
| • pH Range, Short-Term Cleaning (30 min.)[b] | 1 - 13 |
| • Maximum Feed Silt Density Index (SDI) | 5 |
| • Free Chlorine Tolerance[c] | < 0.1 ppm |

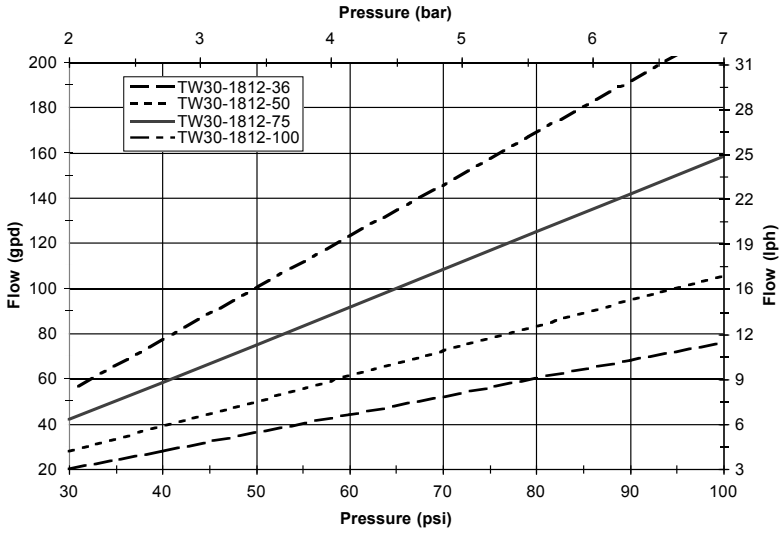
[a] Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

[b] Refer to Cleaning Guidelines in specification sheet 609-23010.

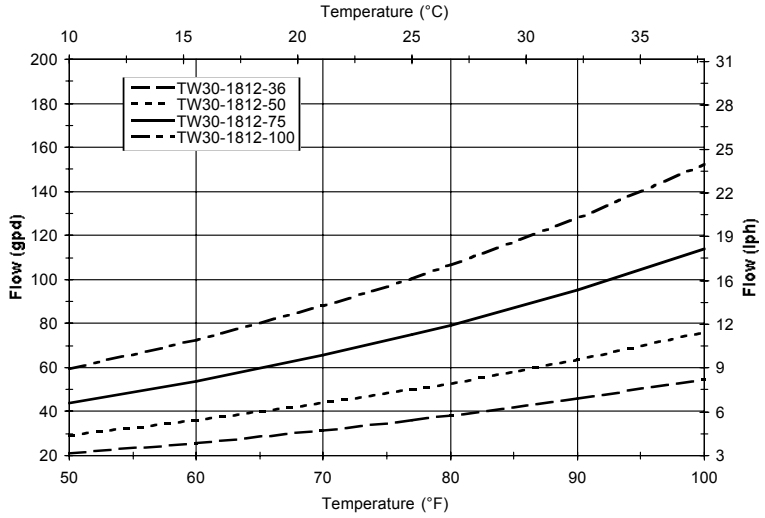
[c] Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, FilmTec recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical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


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## Figure 2. Impact of Pressure on Permeate Flow (constant temperature, recovery)




## Figure 3. Impact of Temperature on Permeate Flow (constant pressure, recovery)




For information about other DOW FILMTEC™ home drinking water elements, please refer to specification sheet 609-09010 or go to www.filmtec.com.


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## General Information

- 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.
- If operating limits and guidelines given in this bulletin are not strictly followed, the limited warranty will be null and void.
- 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.
- The customer is fully responsible for the effects of incompatible chemicals and lubricants on elements. Their use will void the element limited warranty.

Note: These elements have not been through the French approval process for use in potable water.

**NOTICE:** The use of this product 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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