



DOW FILMTEC™ TW30-1812-50

Next Generation of Residential Reverse Osmosis Elements

Description

DOW FILMTEC™ residential elements are the most reliable, consistent and highest quality in the industry. Our elements offer the best balance of flow and rejection, producing industry leading flow rates (around 20% higher) than competitive elements at similar pressures.

DOW FILMTEC™ Residential Elements Feature:

- Longer lifetimes that can reduce operating cost for OEM's/brand owners
- NSF safety certification and ability for NSF data transfer reducing certification costs
- Fully-automated manufacturing that ensures consistent and high quality elements
- Dry shipping for convenient handling and longer shelf-life
- High quality elements significantly reduce or eliminate element Quality Control (QC) costs

Product Type

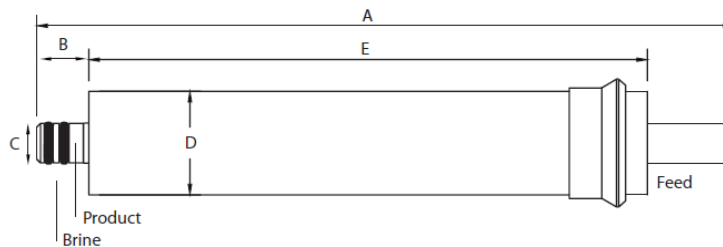
Spiral-wound element with polyamide thin-film composite membrane

Product Specifications

DOW FILMTEC™ Element	Applied Pressure		Permeate Flow Rate		Typical Stabilized Salt Rejection (%)
	(psig)	(bar)	(GPD)	(l/h)	
TW30-1812-50	50	3.4	50	7.9	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%.

Element Dimensions



DOW FILMTEC™ Element	A		B		C		D		E	
	(in.)	(mm.)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
TW30-1812-50	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

DOW FILMTEC™ Membranes

Residential Reverse Osmosis Elements

Influence of temperature and pressure on permeate flow

Figure 2:

Impact of pressure on permeate flow
(constant temperature, recovery)

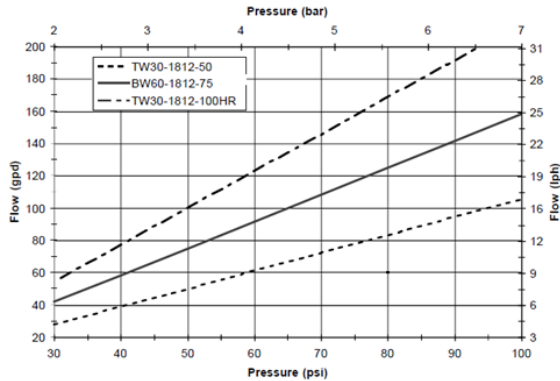
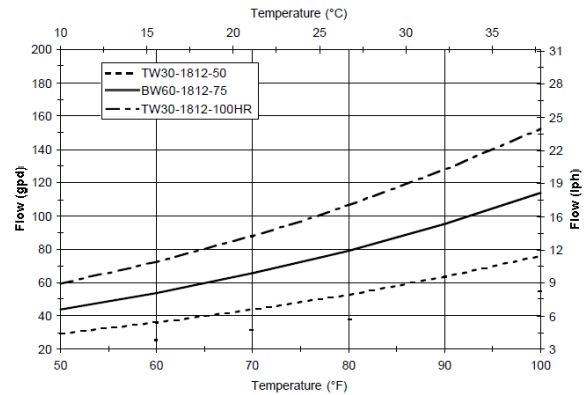


Figure 3:

Impact of temperature on permeate flow
(constant temperature, recovery)



Operating and Cleaning Limits

Maximum Operating Temperature ^a	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)	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 Water & Process Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical bulletin "[Dechlorinating Feedwater](#)" for more information.

Additional 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.

Regulatory Note

These membranes may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support.

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