



Product Data Sheet

FilmTec™ TW30-1812-100HR Element

Description

FilmTec™ Residential Elements are some of the most reliable, consistent and highest quality in the industry. Our 100 GPD elements offer a superior balance of the highest available flow with premium rejection, ideal for low feed pressure residential applications.

FilmTec™ Residential Elements feature:

- New advanced membrane chemistry can achieve stabilized salt rejection of 98%.
- High active membrane area and twin leaf design for optimized performance
- NSF58 safety Certification and reduced certification costs / resources with NSF data transfer Certification
- Fully-automated manufacturing that ensures consistent and high quality elements
- Dry shipping for convenient handling and longer shelf-life
- Proven consistency and reliability for longer membrane life

Product Type

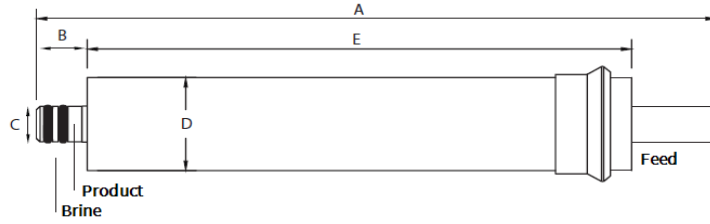
Spiral-wound element with polyamide thin-film composite membrane

Typical Properties

FilmTec™ Element	Applied Pressure		Permeate Flow Rate		Typical Stabilized Salt Rejection (%)
	(psig)	(bar)	(GPD)	(l/h)	
TW30-1812-100HR	50	3.4	100	15.8	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



COMPONENT

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

	A		B		C		D		E	
FilmTec™ Element	(in.)	(mm.)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
TW30-1812-100HR	11.74	298	0.875	22.2	0.68	17	1.75	44.5	9.4	239

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

FilmTec™ Membranes

Residential Reverse Osmosis Elements

Influence of temperature and pressure on permeate flow

Figure 1: Impact of pressure on permeate flow
(constant temperature, recovery)

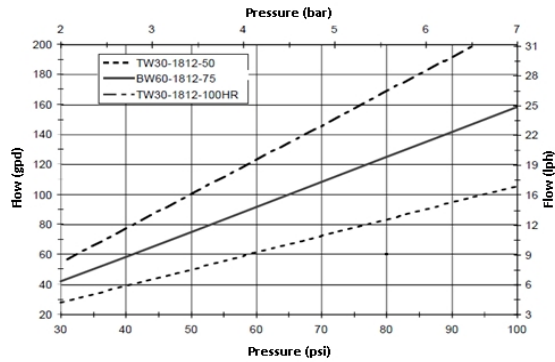
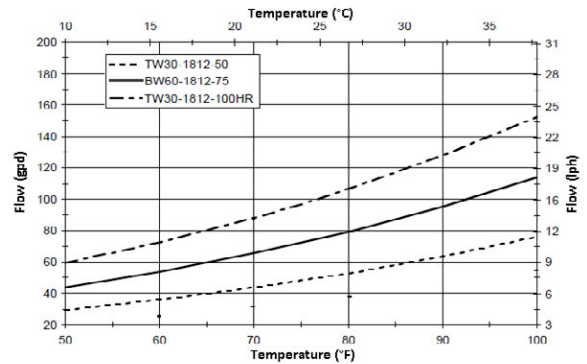


Figure 2: Impact of temperature on permeate flow
(constant pressure, recovery)



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, DuPont Water Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to [Dechlorinating Feedwater](#) (Form No. 45-D01569-en) 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 MOLYKOTE[®] 111 Compound.
- 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.
- For successful operation of Reverse Osmosis (RO) and Nanofiltration (NF) membrane systems, the operation must follow the guidelines provided in the [FilmTec™ Reverse Osmosis / Nanofiltration Elements Operation Excellence and Limiting Conditions Tech Fact](#) (Form No. 45-D04388-en).

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.

Product Stewardship

DuPont 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 DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- 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.
- Permeate obtained from the first hour of operation should be discarded.

Regulatory Note

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

It is recommended that systems using these elements rinse the elements for 24hours, prior to first use, to meet NSF/ANSI 58 Standard.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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