



TAPTEC™ TT-1812-50 Element

Description

TAPTEC™ Residential Reverse Osmosis (RO) Elements provide a unique balance of reliability and value for performance through leveraging the proven technologies from Dow - one of the most trusted brands in water treatment and the inventor of thin-film composite RO membrane, the core of modern RO technology. Focused on the local water conditions and water purifier operations, TAPTEC™ RO Elements are committed to be the choice for normal households.

For further information on product selection, please visit <https://www.dow.com/en-us/water-and-process-solutions> or seek advice from your Dow representative in order to determine the best membrane choice and optimum operating conditions.

Product Type

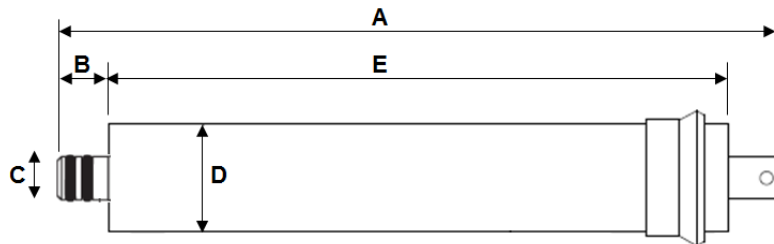
Spiral-wound element with polyamide thin-film composite membrane

Product Specifications

TAPTEC™ Element	Applied Pressure		Permeate Flow Rate		Typical Stabilized Salt Rejection (%)
	(psig)	(bar)	(GPD)	(L/h)	
TT-1812-50	60	4.1	50	7.9	98

1. Permeate flow and salt rejection based on the following test conditions: 250 ppm NaCl, 77°F (25°C), pH 8.0, 15% recovery and the specified applied pressure.
2. Minimum salt rejection is 96.0%.
3. Minimum permeate flow for individual elements is 50 GPD.

Element Dimensions



TAPTEC™ Element	A		B		C		D		E	
	(in.)	(mm.)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)	(in.)	(mm)
TT-1812-50	11.74	298	0.87	22	0.68	17	1.75	45	9.4	239

1. TT-1812 Residential Elements seal at a standard 2.0 inch – 2.05 inch I.D. within pressure vessels

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

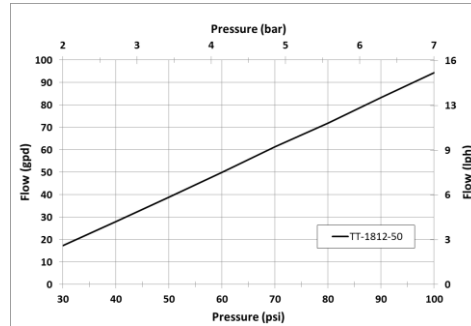
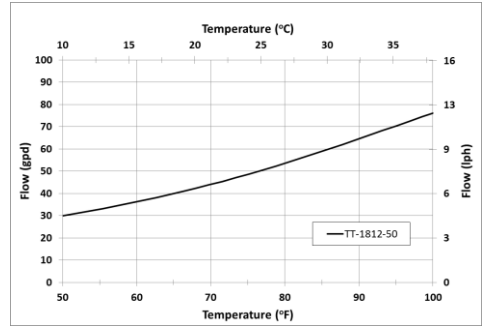


Figure 2
Impact of Temperature on Target Permeate Flow
(constant temperature, recovery)



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	4 – 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 609-22010 for more information.

Additional Important Information

- Permeate water obtained from the first hour of use should be discarded to the drain.
- Keep elements moist at all times after initial wetting.
- 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 MOLYKOTE™ 111 Lubricant.
- 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.
- 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 operation and maintenance of the system.
- DOW TAPTEC™ Residential RO Elements may be covered under the DOW TAPTEC™ Residential Element Limited Warranty, 609-50319. 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.

Storage

Refer to technical bulletin 609-02103 for further information.

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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