Get a Quote www.pureaqua.com

Product Information



DOW FILMTEC[™] Membranes

DOW FILMTEC Extra Low Energy (XLE) Elements for Commercial Systems

Features New DOW FILMTEC[™] XLE elements offer better system performance and economics by operating at very low applied pressure. XLE membrane, made with a patented technology, provides consistent and reliable system performance. And for added convenience, XLE elements are available in a dry state for rapid start-up (see Figure 1 on reverse). The new XLE series of elements replaces TW30LE elements which were made with an older membrane technology.

Product Specifications

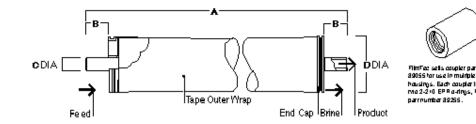
Product	Part Number	Applied Pressure psig (bar)	Permeate Flow Rate gpd (m ³ /d)	Stabilized Salt Rejection (%)
XLE-2521	154530	100 (6.9)	365 (1.4)	99.0
XLE-2540	154543	100 (6.9)	850 (3.2)	99.0
XLE-4021	154540	100 (6.9)	1,025 (3.9)	99.0
XLE-4040	154546	100 (6.9)	2,600 (9.8)	99.0

1. Permeate flow and salt rejection based on the following test conditions: 500 ppm NaCl feedstream, pressure specified above, 77°F (25°C) and the following recovery rates: XLE-2521, XLE-4021 – 8%; XLE-2540, XLE-4040 – 15%.

2. Permeate flows for individual elements may vary +/-20%

3. For the purpose of improvement, specifications may be updated periodically.

Figure 1



	Maximum Feed Flow Rate	Dimensions – Inches (mm)				
Product	gpm (m³/h)	А	В	С	D	
XLE-2521	6 (1.4)	21.0 (533)	1.19 (30.2)	0.75 (19)	2.4 (61)	
XLE-2540	6 (1.4)	40.0 (1,016)	1.19 (30.2)	0.75 (19)	2.4 (61)	
XLE-4021	14 (3.2)	21.0 (533)	1.05 (26.7)	0.75 (19)	3.9 (99)	
XLE-4040	14 (3.2)	40.0 (1,016)	1.05 (26.7)	0.75 (19)	3.9 (99)	
1. Refer to DOW FILM	1 inch = 25.4 mm					

1. Refer to DOW FILMTEC Design Guidelines for multiple-element systems.

•

2. XLE-2521 and XLE-2540 elements fit nominal 2.5-inch I.D. pressure vessel. XLE-4021 and XLE-4040 elements fit nominal 4-inch I.D. pressure vessel.

Operating Limits

Membrane Type

- Maximum Operating Temperature^a •
- Maximum Operating Pressure
- Maximum Pressure Drop
- pH Range, Continuous Operation^a •
- pH Range, Short-Term Cleaning^b
- Maximum Feed Silt Density Index •
- Free Chlorine Tolerance^c .
- <0.1 ppm Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
- Refer to Cleaning Guidelines in specification sheet 609-23010.
- 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 FILMTEC recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to technical bulletin 609-22010 for more information.

Polyamide Thin-Film Composite

113°F (45°C)

600 psi (41 bar)

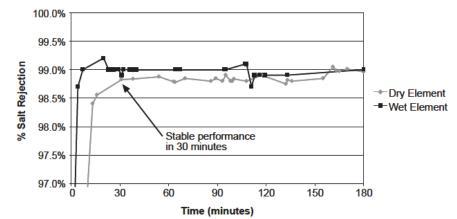
13 psig (0.9 bar)

2 - 11

1 - 13

SDI 5

Figure 1. XLE-4040 start-up data



Important Information Proper start-up of reverse osmosis water treatment systems is essential to prepare the membranes for operating service and to prevent membrane damage due to overfeeding or hydraulic shock. Following the proper start-up sequence also helps ensure that system operating parameters conform to design specifications so that system water quality and productivity goals can be achieved.

Before initiating system start-up procedures, membrane pretreatment, loading of the membrane elements, instrument calibration and other system checks should be completed.

Please refer to the application information literature entitled "Start-Up Sequence" (Form No. 609-02077) for more information.

Operation Guidelines Avoid any abrupt pressure or cross-flow variations on the spiral elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During start-up, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-60 second time frame.
- Cross-flow velocity at set operating point should be achieved gradually over 15-20 seconds.
- Permeate obtained from first hour of operation should be discarded.

General Information

- 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 customer is fully responsible for the effects of incompatible chemicals and lubricants on elements.
- Maximum pressure drop across an entire pressure vessel (housing) is 30 psi (2.1 bar).
- Avoid static permeate-side backpressure at all times.

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 government enactments. Dow assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

