



## FILMTEC™ XLE-2521 Membranes

FILMTEC Extra Low Energy (XLE) Elements for Commercial Systems

### Features

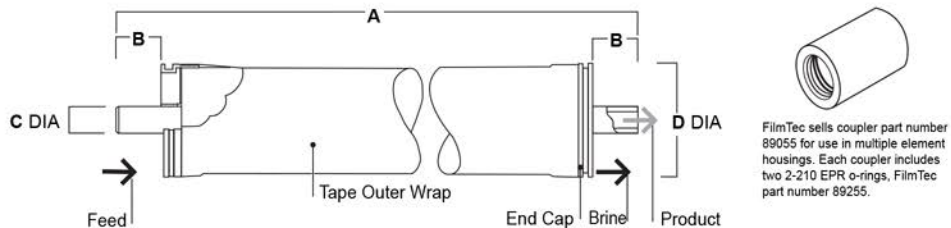
New FILMTEC™ XLE elements offer better system performance and economics by operating at very low applied pressure. XLE membrane, made with a patented technology, provides consistent and reliable system performance. And for added convenience, XLE elements are available in a dry state for rapid start-up (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	Active Area ft <sup>2</sup> (m <sup>2</sup> )	Applied Pressure psig (bar)	Permeate Flow Rate gpd (m <sup>3</sup> /d)	Stabilized Salt Rejection (%)
XLE-2521	154530	13 (1.2)	100 (6.9)	365 (1.4)	99.0
XLE-2540	154543	28 (2.6)	100 (6.9)	850 (3.2)	99.0
XLE-4021	154540	36 (3.3)	100 (6.9)	1,025 (3.9)	99.0
XLE-4040	154546	87 (8.1)	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



Product	Maximum Feed Flow Rate gpm (m <sup>3</sup> /h)	Dimensions – Inches (mm)			
		A	B	C	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 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.
- 1 inch = 25.4 mm

### Operating Limits

- Membrane Type: Polyamide Thin-Film Composite
- Maximum Operating Temperature<sup>a</sup>: 113°F (45°C)
- Maximum Operating Pressure: 600 psi (41 bar)
- Maximum Pressure Drop: 13 psig (0.9 bar)
- pH Range, Continuous Operation<sup>a</sup>: 2 - 11
- pH Range, Short-Term Cleaning<sup>b</sup>: 1 - 13
- Maximum Feed Silt Density Index: SDI 5
- Free Chlorine Tolerance<sup>c</sup>: <0.1 ppm

<sup>a</sup> Maximum temperature for continuous operation above pH 10 is 95°F (35°C).

<sup>b</sup> Refer to Cleaning Guidelines in specification sheet 609-23010.

<sup>c</sup> 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.