



3M™ Liqui-Cel™ EXF-14×40 Series Membrane Contactor

Typical Properties

Membrane Characteristics		
Cartridge Configuration	Extra-Flow with Center Baffle	
Liquid Flow Guidelines	16 – 125 m ³ /hr (70 – 550 gpm)	
Membrane Type	X40 Fiber	
	Recommended for O ₂ removal from liquid and other gas transfer applications	
Membrane/Potting Material	Polypropylene / Epoxy	
Priming Volume (approximate)		
	With Nylon End Caps	With Engineered Thermoplastic End Caps
Shellside	51.3 L (13.5 gal)	53.2 L (14.1 gal)
Lumenside	23.8 L (6.3 gal)	25.9 L (6.9 gal)

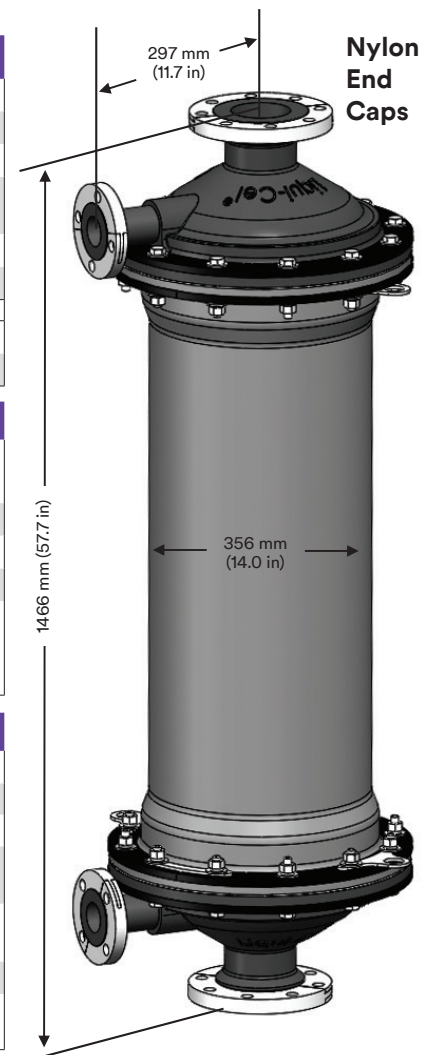
Pressure Guidelines*	
Maximum Shellside <u>LIQUID</u> Working Temperature/ Pressure	5-25°C, 7.2 barg (41-77°F, 105 psig) 50°C, 2.1 barg (122°F, 30 psig)
If no vacuum is used, 1.0 barg (15 psig) can be added to pressures above.	
Maximum Applied Gas Pressure	4.1 barg at 25°C (60 psig at 77°F)
Maximum applied gas pressure is for integrity testing at ambient temperatures. Normal operating pressures are typically lower.	
*Pressures are based on fluid group 2 (other) liquids and gases per the European Union Pressure Equipment Directive 2014/68/EU. See Operating Guide for pressure limits in the European Union with fluid group 1 (hazardous) liquids and gases. Also, see Operating Guide for complete temp/pressure limits for housings and membrane. Note: Liquid pressure should always exceed gas pressure.	

Housing Characteristics	
Housing Material	PVC Vessel with Engineered Thermoplastic or Nylon End Caps
Flange Backing Rings	SMC (Sheet Molding Compound)
Flange Connections	
Shellside (Liquid Inlet/Outlet)	4 inch class 150 raised face flange per ANSI B16.5 100A at 10K raised face flange per JIS B2238
Lumenside	2 inch class 150 raised face flange per ANSI B16.5 50A at 10K flat face flange per JIS B2238
Mounting Kit	A Mounting Kit with 2 cradles and 2 straps is available and sold separately. It will hold the contactor horizontally or vertically.

Seal Options	
Material	Applications
EPDM (ANSI / NSF 61)	All Purpose

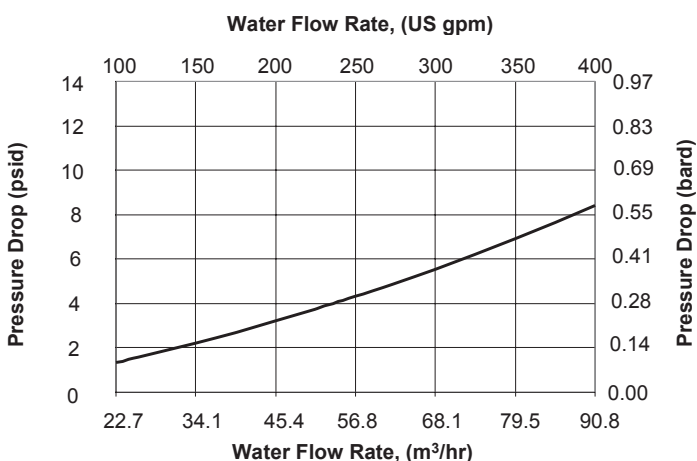
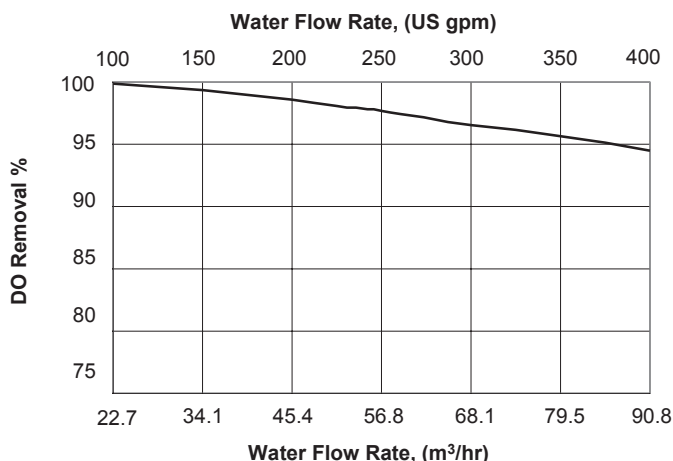
Weight (approximate)		
	With Nylon End Caps	With Engineered Thermoplastic End Caps
Dry	72 kg (160 lbs)	64 kg (141 lbs)
Water-filled	124 kg (273 lbs)	116 kg (256 lbs)

Regulatory
Complies with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.



NOTE: Overall length with engineered thermoplastic end caps is 1466 mm (57.7 in). All dimensions are nominal values. See full housing drawings on 3M.com/Liqui-Cel for additional details.

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Curves represent nominal values, generated using water at 20°C.
 Test condition O₂ Removal: X40 membrane, N₂-vacuum combo mode, Vacuum: 50 torr, N₂: 0.8 scfm.
 Characteristics may change under different operating conditions.

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