



3M™ Liqui-Cel™ EXF-10×28 Industrial Series Membrane Contactor

Typical Properties

Membrane Characteristics	
Cartridge Configuration	Industrial Use Extra-Flow with Center Baffle
Liquid Flow Guidelines	10 – 48 m³/hr (44 – 210 gpm)
Membrane Type	X-IND Fiber
Membrane/Potting Material	Polypropylene / Epoxy
Priming Volume (approximate)	
Shellside	26.1 L (6.9 gal)
Lumenside	10.6 L (2.8 gal)

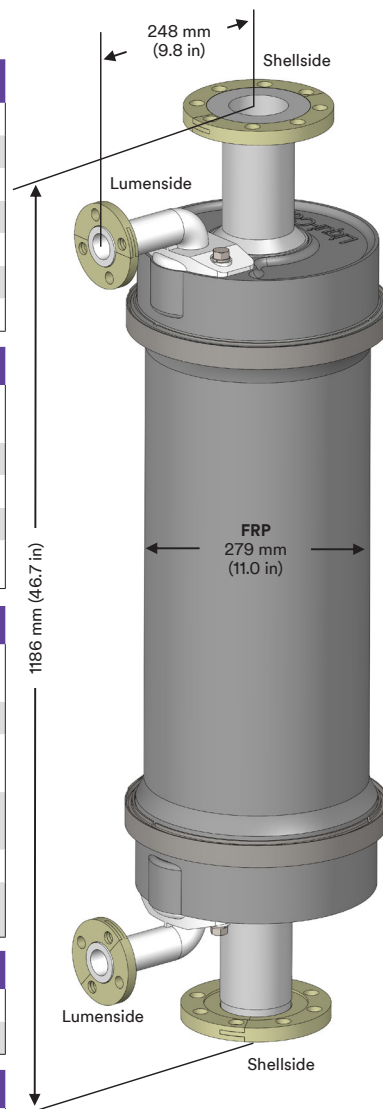
Pressure Guidelines*	
Maximum Shellside LIQUID Working Temperature/ Pressure	5-50°C, 4.1 barg (41-122°F, 60 psig)
If no vacuum is used, 1.0 barg (15 psig) can be added to pressures above.	
Maximum Applied Gas Pressure	4.1 barg at 25°C (60 psig at 77°F)
Maximum applied gas pressure is for integrity testing at ambient temperatures. Normal operating pressures are typically lower.	
* See Operating Guide for complete temp/pressure limits for housings and membrane. Note: Liquid pressure should always exceed gas pressure.	

Housing Characteristics	
Material	Fiber Reinforced Plastic (FRP) for Industrial Use Exterior finish is gray
Flange Connections	
Shellside (Liquid Inlet/Outlet)	3 inch class 150 raised face flange per ANSI B16.5 80A at 10K flat face flange per JIS B2238
Lumenside	1 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	General Purpose

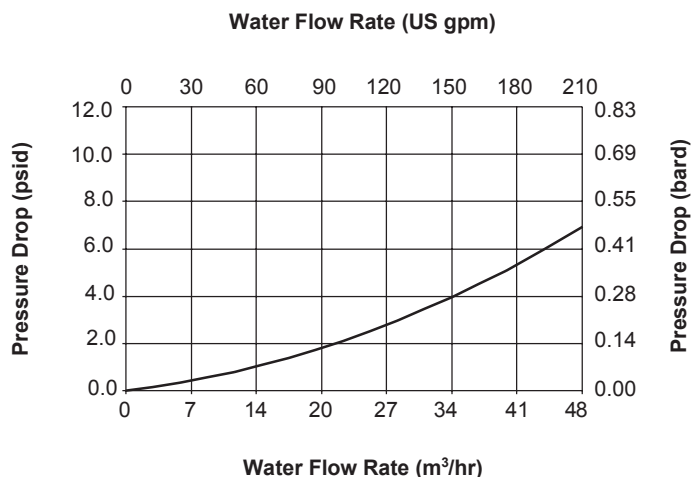
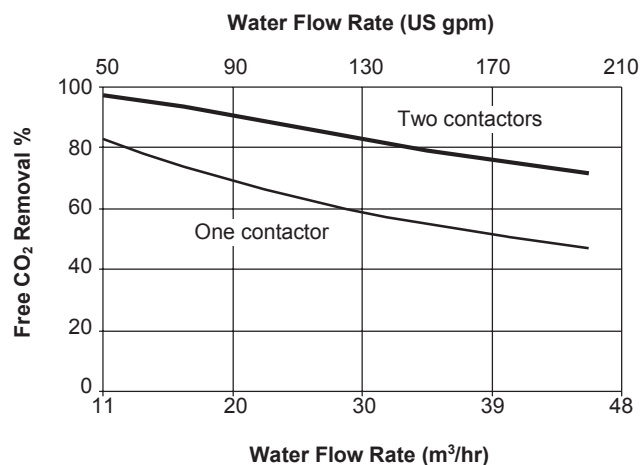
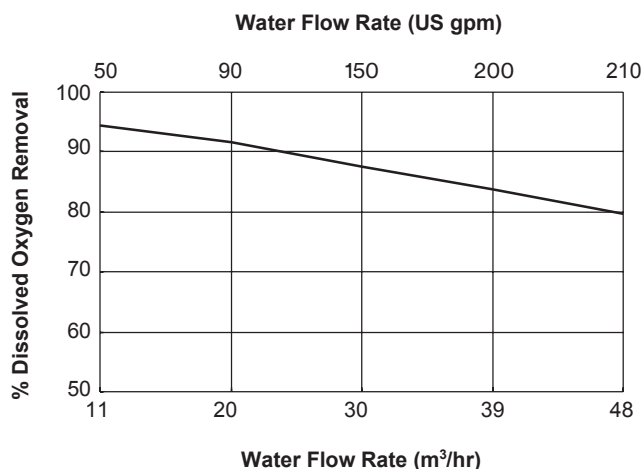
Weight (approximate)	
Dry	33 kg (73 lbs)
Water-filled (shellside)	57 kg (125 lbs)
Cartridge only – dry	10 kg (23 lbs)

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



All dimensions are nominal values.
See full housing drawing on
3M.com/Liqui-Cel for
additional details.

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Curves represent nominal values, generated using water at 20°C. Characteristics may change under different operating conditions.

Test condition O₂ Removal: N₂-vacuum combo mode, vacuum: 50 mm Hg N₂ sweep: 0.25 scfm at 20°C.

Test condition CO₂ Removal: Air vacuum combo mode, vacuum: 75 mm Hg, air sweep, 1 scfm at 25°C.

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