



# 3M™ Liqui-Cel™ EXF-8×20 Series Membrane Contactor

## Typical Properties

Membrane Characteristics	
Cartridge Configuration	Extra-Flow with Center Baffle
Liquid Flow Guidelines	1 – 11 m <sup>3</sup> /hr (5 – 50 gpm)
Membrane Type	X40 Fiber
	Recommended for O <sub>2</sub> and CO <sub>2</sub> removal from liquids, carbonation and other gas transfer applications
Membrane/Potting Material	Polypropylene / Epoxy
Priming Volume (approximate)	
Shellside	6.3 L (1.7 gal)
Lumenside	9.5 L (2.5 gal)

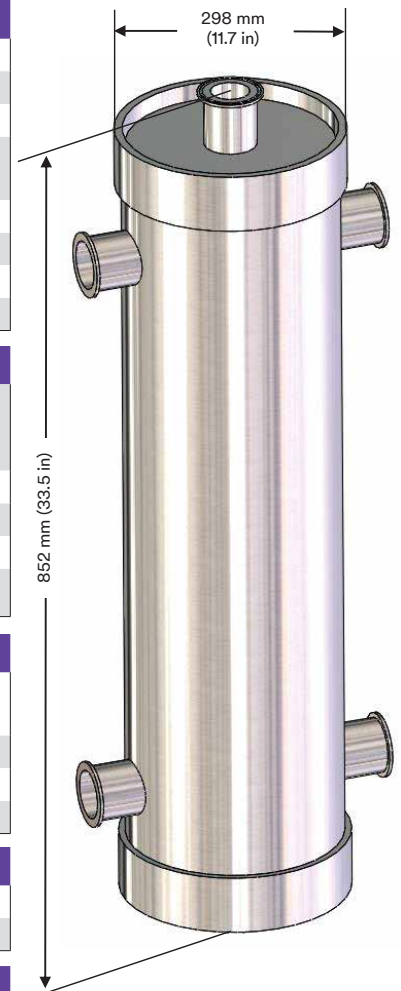
Pressure Guidelines*	
Maximum Shellside LIQUID Working Temperature/ Pressure	25°C, 9.3 barg (77°F, 135 psig) 50°C, 3.1 barg (122°F, 45 psig) 70°C, 1.1 barg (158°F, 15 psig)
If no vacuum is used, 1.0 barg (15 psig) can be added to pressures above.	
Maximum Applied Gas Pressure	5.2 barg at 25°C (75 psig 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. <b>Note:</b> Liquid pressure should always exceed gas pressure.	

Housing Characteristics	
Material	316L SS Housing ABS Cartridge Shell
Port Connections	
Shellside (Liquid Inlet/Outlet)	2 inch sanitary
Lumenside	2 inch sanitary

Seal Options	
Material	Applications
EPDM	All Purpose

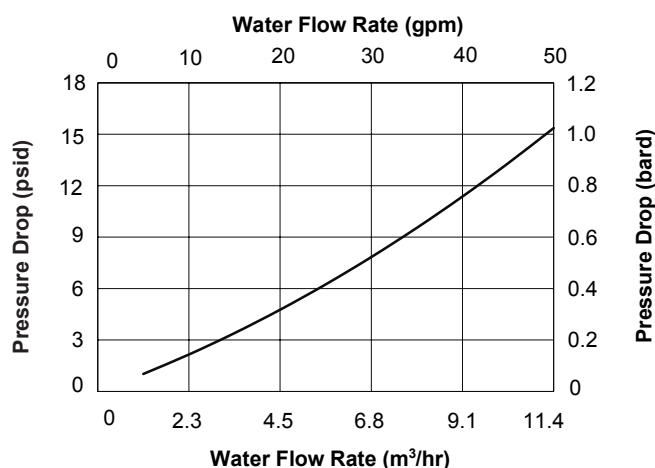
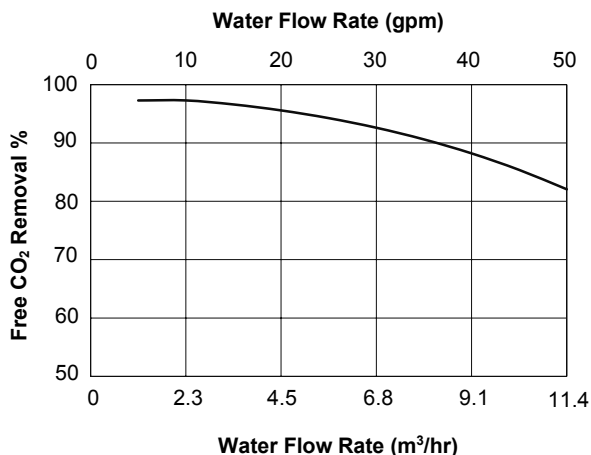
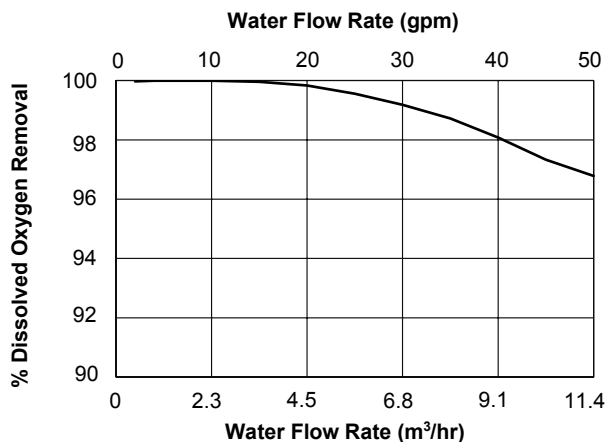
Weight (approximate)	
Dry	37 kg (82 lbs)
Water-filled (shellside)	44 kg (96 lbs)

Regulatory	
Complies with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC. Constructed of FDA CFR title 21 compliant materials for wetted parts only.	



All dimensions are nominal values. See full housing drawing on [3M.com/Liqui-Cel](http://3M.com/Liqui-Cel) for additional details.

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Curves represent nominal values. Characteristics may change under different operating conditions.

Test condition O<sub>2</sub> Removal: N<sub>2</sub>-vacuum combo mode with water at 20°C. Vacuum: 50 mm Hg abs. N<sub>2</sub> sweep: 0.25 scfm.

Test condition CO<sub>2</sub> Removal: Air sweep mode with water at 25°C. Air Sweep: 10 scfm.

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