



# 3M™ Liqui-Cel™ EXF-8×40 Series Membrane Contactor

## Typical Properties

Membrane Characteristics	
Cartridge Configuration	Extra-Flow with Center Baffle
Liquid Flow Guidelines	7 – 28 m <sup>3</sup> /hr (30 – 125 gpm)
Membrane Type	<b>X40 Fiber</b>
	Recommended for high pressure O <sub>2</sub> removal and other gas transfer applications
Membrane/Potting Material	Polypropylene / Epoxy
Priming Volume (approximate)	
Shellside	15.4 L (4.1 gal)
Lumenside	13.6 L (3.6 gal)

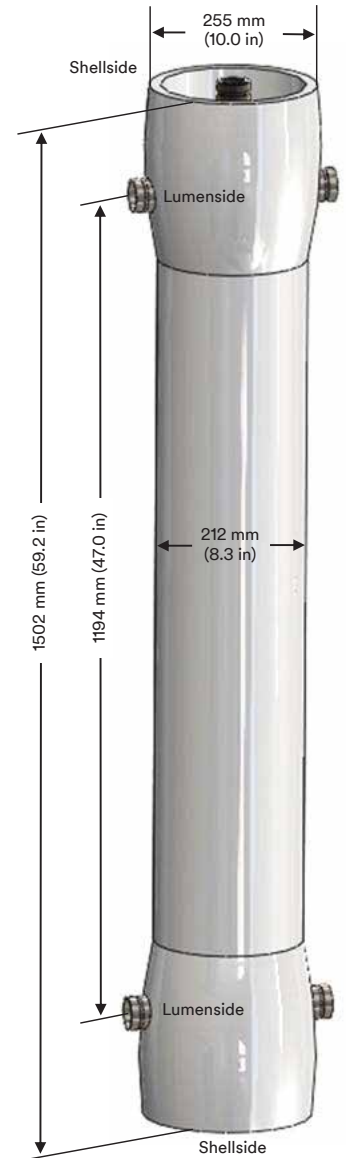
Pressure Guidelines*	
Maximum Shellside <b>LIQUID</b> Working Temperature/ Pressure	5-25°C, 19.7 barg (41-86°F, 285 psig) 60°C, 12.0 barg (140°F, 175 psig) 85°C, 1 barg (185°F, 15 psig)
If no vacuum is used, 1.0 barg (15 psig) can be added to pressures above.	
Maximum Applied Gas Pressure	2.1 barg at 25°C (30 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	Fiber Reinforced Plastic (FRP) FRP Vessel Code-rated to ASME BPVC Section X
Connections	
Shellside (Liquid Inlet/Outlet)	1.5 Inch Grooved pipe fitting
Lumenside	1.5 Inch Grooved pipe fitting

Seal Options	
Material	<b>Applications</b>
EPDM	All Purpose

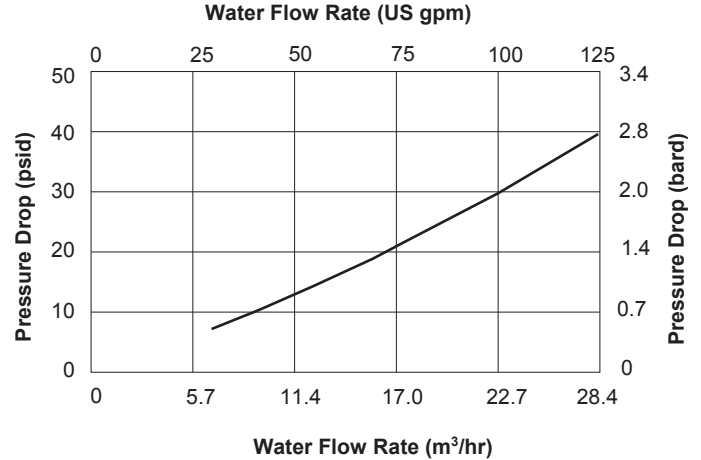
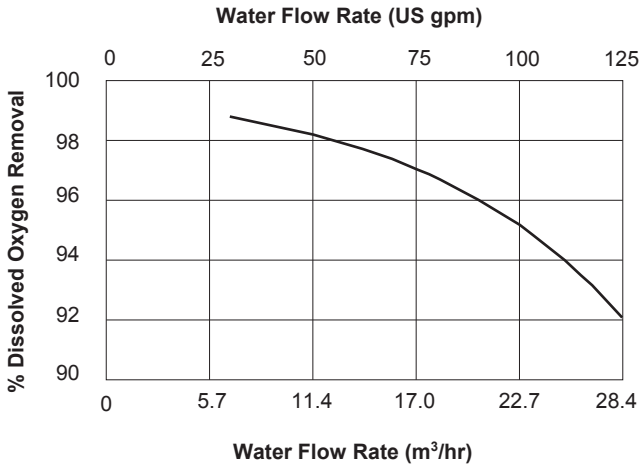
Weight (approximate)	
Dry	35 kg (78 lbs)
Water-filled (shellside)	50 kg (110 lbs)

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](http://3M.com/Liqui-Cel) for additional details.

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Curves represent nominal values with FRP housing using water at 20°C. Characteristics may change under different operating conditions.

Test condition O<sub>2</sub> Removal with X40 membrane: N<sub>2</sub>-vacuum combo mode, vacuum: 50 mm Hg N<sub>2</sub> sweep: 0.5 SCFM.

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**LENNTECH**

info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289

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