

3M™ Liqui-Cel™ SP-4×13 Series Membrane Contactor

Typical Properties

Membrane Characteristics		
Cartridge Configuration	Extra-Flow with Center Baffle	
Liquid Flow Guidelines	0.2 – 3.4 m³/hr (1–15 gpm) Liquid must flow on the shellside	
Membrane/Potting Material	Polyolefin / Polyethylene	
Priming Volume (approximate)	Polypropylene	316L SS
Shellside	1.3 L (0.3 gal)	1.3 L (0.3 gal)
Lumenside	0.5 L (0.1 gal)	0.4 L (0.1 gal)
Pressure Guidelines*		
	Polypropylene	316L SS
Maximum Shellside LIQUID Working Temperature/ Pressure	5–25°C, 4.1 barg (41–77°F, 60 psig) 40°C, 1.0 barg (104°F, 15 psig)	5–25°C, 4.1 barg (41–77°F, 60 psig) 50°C, 2.0 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)	

* See Operating Guide for complete listing of temp/pressure limits for housings and membrane.

Note: Liquid pressure should always exceed gas pressure.

Housing Characteristics		
Material	Polypropylene	316L SS
Flange Connections		
Shellside (Wetted surface)	2.54 cm (1 inch) Sanitary 1.91 cm (3/4 inch) NPT Female 2.54 cm (1 inch) George Fisher Rc 3/4 inch per JIS B0203	2.54 cm (1 inch) Sanitary
Lumenside (Gas/Vacuum)	2.54 cm (1 inch) Sanitary 1.91 cm (3/4 inch) NPT Female Rc 3/4 inch per JIS B0203	2.54 cm (1 inch) Sanitary

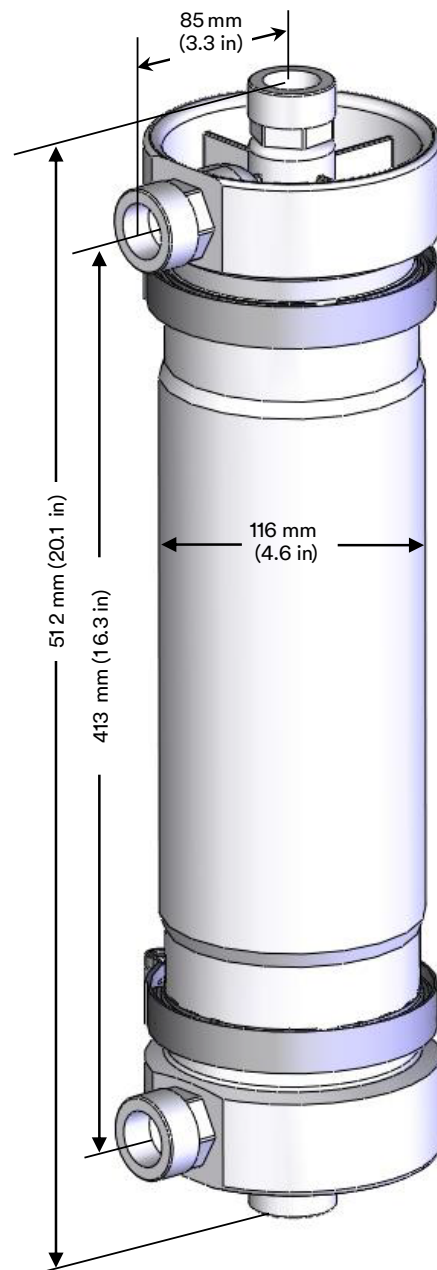
Seal Options	
Material	Applications
FKM	General Purpose
FFKM (K-UPW)**	Ultra Pure Water

** Only available in PP housing with NPT connections.

Weight (approximate)		
	Polypropylene	316L SS
Dry	3 kg (7 lb)	7 kg (15 lb)
Water-Filled (shellside)	4 kg (9 lb)	8 kg (18 lb)

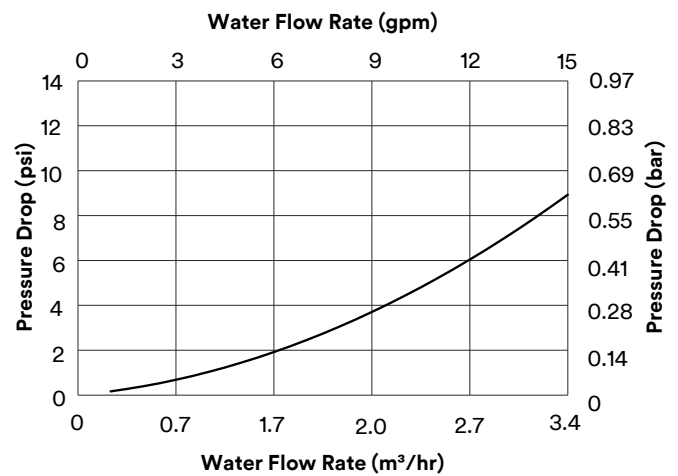
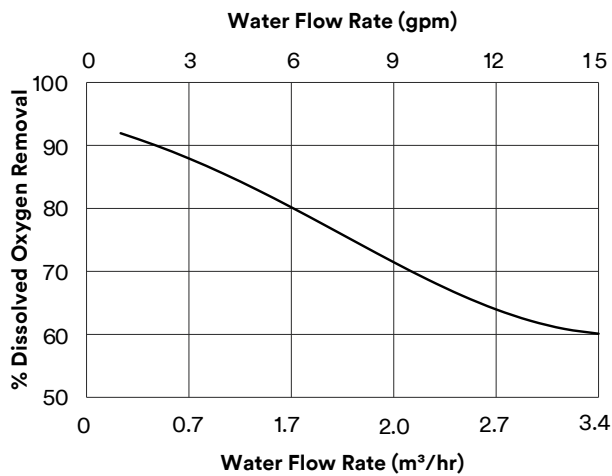
Regulatory
Complies with the limits as set by (EU) 2015/863 amending Annex II to the Restriction on Hazardous Substances (RoHS) Directive (2011/65/EU). 3M™ Liqui-Cel™ SP-4×13 Series Membrane Contactors with FKM seals are constructed of FDA Title 21 CFR § 174-186 compliant materials for wetted parts only at ambient temperatures. 3M™ Liqui-Cel™ SP-4×13 Series Membrane Contactors with FFKM (K-UPW) seals are not constructed of FDA Title 21 CFR § 174-186 compliant materials and are not for use in food contact applications.

Not for consumer sale or use.



All dimensions are nominal values for the polypropylene housing with NPT connections. See full housing drawing on 3M.ca/Liqui-Cel for additional details.

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Curves represent nominal values, generated using water at 25°C (77°F).

Test condition: O₂ Removal with 50 torr abs vacuum.

Characteristics may change under different operating conditions.

Product Selection and Use
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