

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 m ³ /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.

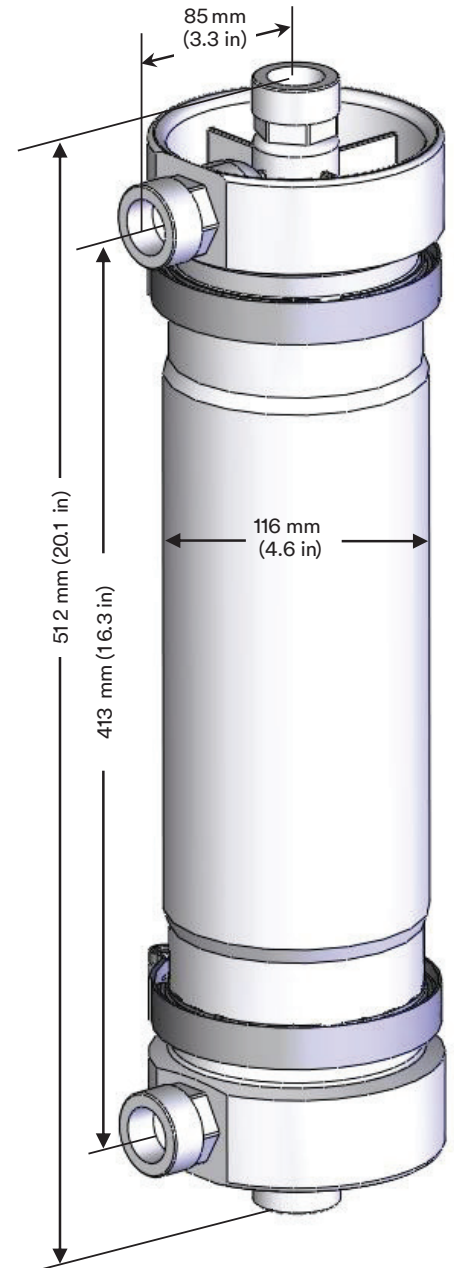
Housing Characteristics		
Material	Polypropylene	316L SS
Flange Connections		
Shellside (Wetted surface)	1 inch Sanitary ¾ inch NPT Female 1 inch George Fisher Rc ¾ inch per JIS B0203	1 inch Sanitary
Lumenside (Gas/Vacuum)	1 inch Sanitary ¾ inch NPT Female Rc ¾ inch per JIS B0203	1 inch Sanitary

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 lbs.)	7 kg (15 lbs.)
Water-Filled (shellside)	4 kg (9 lbs.)	8 kg (18 lbs.)

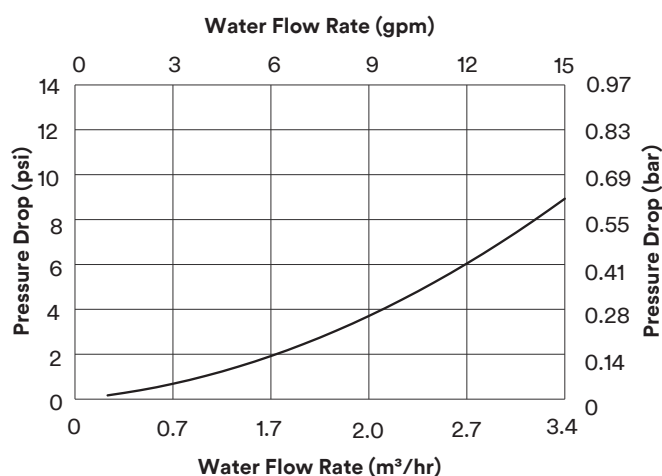
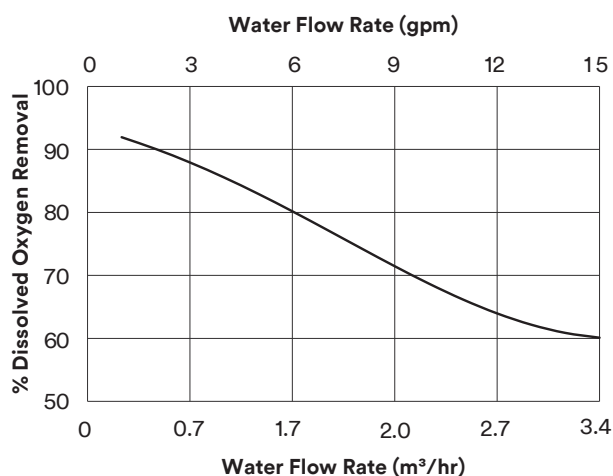
Regulatory
Complies with the limits as set by (EU) 2015/863 amending Annex II to the Restriction on Hazardous Substances (RoHS) Directive (2011/65/EU). 3M™ Liqui-Cel™ SP-4×13 Series Membrane Contactors with FKM seals are constructed of FDA Title 21 CFR § 174-186 compliant materials for wetted parts only 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.



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

Not for consumer sale or use.

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



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

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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