

3M™ Liqui-Cel™ EXF-8×20 Series Membrane Contactor for TransMembrane ChemiSorption

All operating parameters listed in this data sheet are based on a sulfuric acid stripping solution on the lumen side. Refer to Operating Guide for other acids. Usual operation is semi-batch mode with feedwater running in single pass through membrane contactor with acid in recirculation mode.

Typical Properties

Membrane Characteristics	
Cartridge Configuration	Extra-Flow with Center Baffle
Shell Side Liquid Flow Guideline	0.25 – 2 m³/hr (1 – 9 gpm)
Lumen Side Liquid Flow Guideline	0.25 – 2 m³/hr (1 – 9 gpm)
Membrane Type	X50 Fibre
	Recommended for Transmembrane Chemisorption (TMCS) process
Membrane/Potting Material	Polypropylene/Epoxy
Priming Volume (approximate)	
Shell Side	6.6 L (1.7 gal.)
Lumen Side	5.6 L (1.5 gal)

Pressure Guidelines	
Maximum Shell Side Liquid Operating Temperature/Pressure	5-50°C, 3.1 barg (41-122°F, 45 psig)
Maximum Lumen Side Liquid Operating Temperature/Pressure*	5-50°C, 3.1 barg (41-122°F, 45 psig)

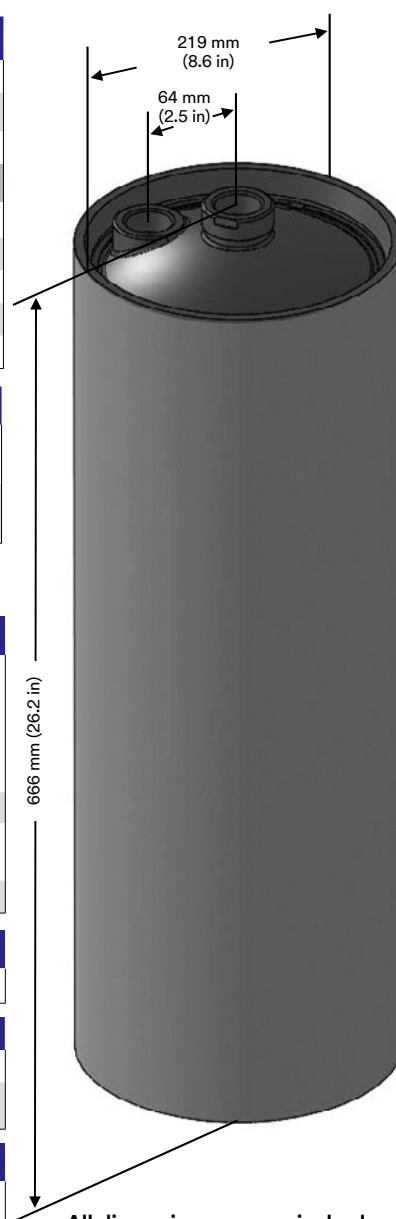
* Maximum 50% acid concentration. Lumen side pressure may require derating depending on acid type. See User Guide for TransMembrane ChemiSorption (TMCS) for details.

Housing Options and Characteristics	
Material	<ul style="list-style-type: none"> PVC housing Due to the nature of the material, scratches, blemishes and other marks may be visible on the housing surface. These do not impact contactor function. Engineering thermoplastic end caps
Port Connections	
Shell Side (Inlet/Outlet)	1.5 inch OD grooved pipe fitting with internal 1 inch female NPT thread
Lumen Side (Inlet/Outlet)	1 Inch female NPT

Seal Material	
FKM	

Weight (approximate)	
Dry	12 kg (27 lb)
Water-Filled (Shell Side and Lumen Side)	25 kg (54 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).	

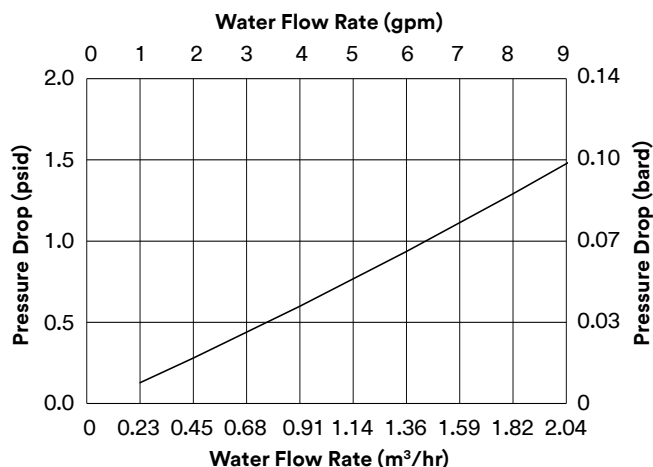


All dimensions are nominal values. See 3M.ca/Liqui-Cel for all housing drawings.

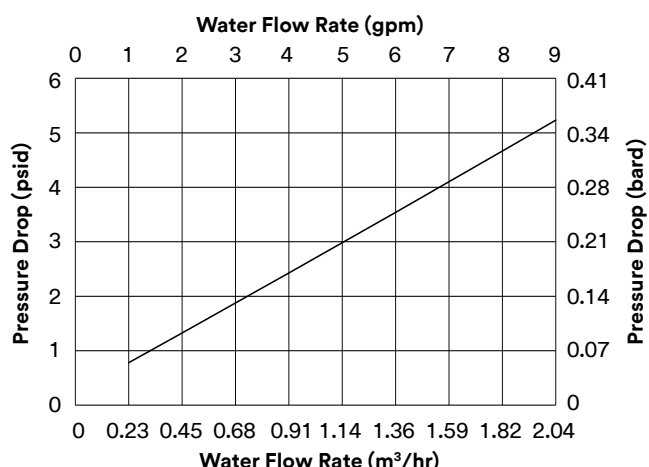
Not for consumer sale or use.

3M™ Liqui-Cel™ EXF-8×20 Series Membrane Contactor for TransMembrane ChemiSorption

Shell Side Pressure Drop (dP)



Lumen Side Pressure Drop (dP)



Pressure drop (dP) curves represent nominal values using water. Characteristics may change under different operating conditions. These charts should not be used to design systems.

Test conditions

One membrane contactor in series
Water temperature shell side: 25°C (68°F)
Water temperature lumen side: 20°C (77°F)
Viscosity: 1 cP (1 mPa-s)

Viscosity has a strong influence on dP and is a function of liquid type, concentration, and temperature.

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product 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.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is expressly identified on the applicable 3M product literature or packaging (in which case such express warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

3M, 3M Science. Applied to Life. and Liqui-Cel are trademarks of 3M. Used under license in Canada. © 2023, 3M. All rights reserved. 2212-225349b E



3M Separation and Purification Sciences Division
3M Canada
300 Tartan Drive
London, Ontario N5V 4M9
Canada
1-800-443-1661

LC-1206
Rev. 12/2022
[3M.ca/Liqui-Cel](https://www.3m.ca/Liqui-Cel)