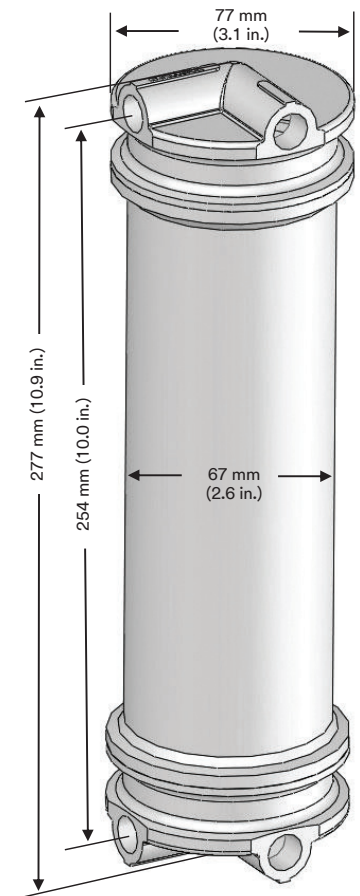


# 3M™ Liqui-Cel™ EXF-2.5×8 Series Membrane Contactor for TransMembrane ChemiSorption

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	20 – 100 L/hr
Lumen Side Liquid Flow Guideline	20 – 100 L/hr
Membrane Type	X50 Fiber
	Recommended for Transmembrane Chemisorption (TMCS) process
Membrane/Potting Material	Polypropylene/Polyethylene
Priming Volume (approximate)	
Shell Side	0.3 L (0.07 gal.)
Lumen Side	0.1 L (0.03 gal.)
Pressure Guidelines	
	X50 Fiber
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	Polypropylene
Flange Connections	
Shell side (Inlet/Outlet)	¼ inch NPT female
Lumen side (Inlet/Outlet)	¼ inch NPT female
Seal Material Options	
FKM	
Weight (approximate)	
Dry	0.5 kg (1.1 lbs)
Water-filled (Shell Side and Lumen Side)	0.9 kg (1.9 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).	

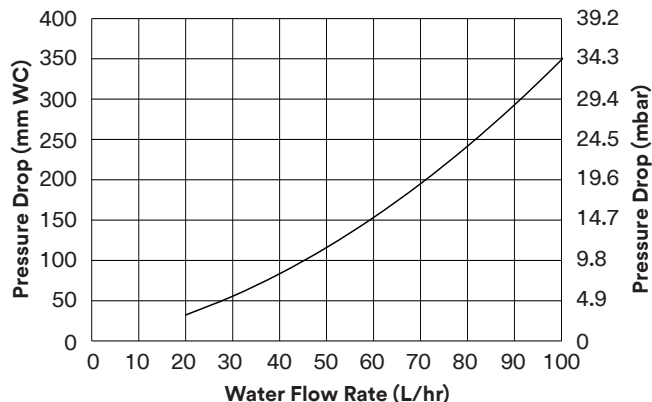


All dimensions are nominal values  
See full housing drawing on  
[3M.com/Liqui-Cel](http://3M.com/Liqui-Cel) for  
additional details.

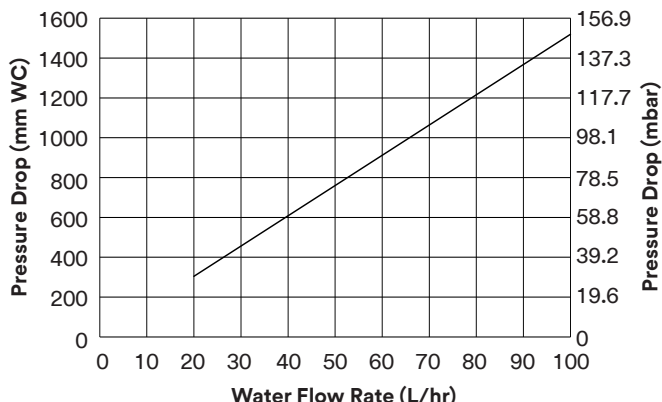
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# 3M™ Liqui-Cel™ EXF-2.5×8 Series Membrane Contactor for TransMembrane ChemiSorption

**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: 25 - 35 °C (77 - 95 °F)  
 Viscosity: 1 cP (1 mPa-s)

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

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