Industrial filtration

Liqui-Cel TMCS 2.5×8 membrane contactors

Thermo Scientific™ Liqui-Cel™ Membrane Contactors provide high-performance dissolved gas control in a compact design. Utilizing hollow fiber membrane technology, Thermo Scientific membrane contactors remove dissolved gases from or add gases to compatible liquid streams in-line and without chemicals to help facilities around the world improve operating efficiency and protect product quality in many industrial processes. 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.

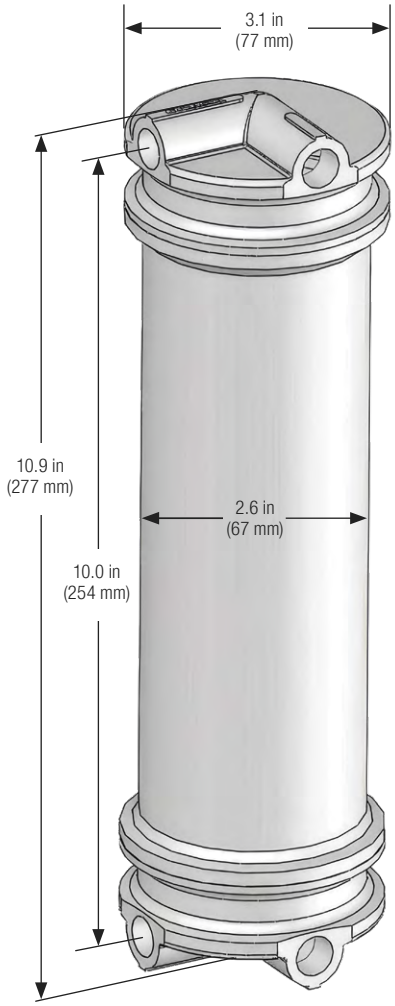
Typical properties

Membrane characteristics	
Cartridge configuration	Extra-flow with center baffle
Shell side liquid flow guidelines	20 - 100 L/hr
Lumen side liquid flow guidelines	20 - 100 L/hr
Membrane/potting material	Polypropylene/polyethylene
Membrane type	X50 fiber
	Recommended for Transmembrane Chemisorption (TMCS) process
Priming volume (approximate)	
Shell side	0.07 gal (0.3 L)
Lumen side	0.03 gal (0.1 L)
Operating parameters	
Pressure guidelines*	
Maximum shell side LIQUID operating temperature/pressure	
41 - 122°F (5 - 50°C)	45 psig (3.1 barg)
Maximum lumen side LIQUID operating temperature/pressure	
41 - 122°F (5 - 50°C)	45 psig (3.1 barg)

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

Housing characteristics	
Material	Polypropylene
Port connections	
Shell side (liquid inlet/outlet)	0.25-inch NPT female
Lumen side (inlet/outlet)	0.25-inch NPT female
Seal material options for shell side wetted parts	
FKM	
Weight (approximate)	
Dry	1.1 lbs (0.5 kg)
Water-filled (shell side and lumen side)	1.9 lbs (0.9 kg)

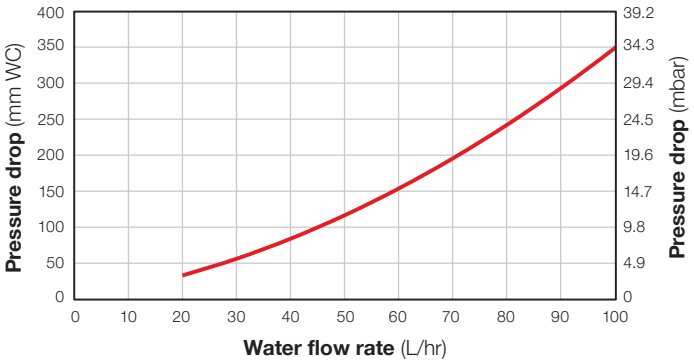
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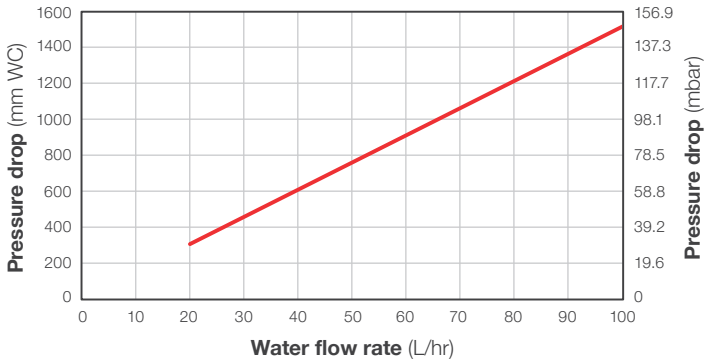
Note: All dimensions are nominal values for contactors with polypropylene housing and NPT connections. See housing drawings for additional dimensional details.

Typical properties

Shell side pressure drop (dP)



Lumen side pressure drop (dP)



Notes

- Pressure drop (dP) curves represent nominal values using water. Characteristics may change under different operating conditions.
- Test conditions:
  - One membrane contactor in series
  - Water temperature: 77 - 95°F (25 - 35°C)
  - Viscosity: 1 mPa-s (1 cP)
- Viscosity has a strong influence on dP and is a function of liquid type, concentration, and temperature.
- These charts should not be used to design systems.

Intended Use: Liqui-Cel membrane contactors are intended to remove dissolved gases and bubbles from liquids or to add gases to a liquid stream. Liqui-Cel membrane contactors are for use in industrial separation applications of industrial fluids only, in accordance with the applicable product instructions, specifications, and where materials of construction are compatible. Liqui-Cel membrane contactors may further be used in the production of water for various pharmaceutical products upstream of the final water sterilization step.

Since there are many factors that can affect a product's use, the customer and user remain responsible for determining whether the Thermo Scientific product is suitable and appropriate for the user's specific application, including user risk assessments and evaluation of the Thermo Scientific product in the user's application.

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Liqui-Cel TMCS 2.5×8 products are not for use in food contact applications.

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