Industrial filtration

Liqui-Cel TMCS 8×20 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.

Typical properties

Membrane characteristics	
Cartridge configuration	Extra-flow with center baffle
Shell side liquid flow guidelines	1 - 9 gpm (0.25 - 2 m^3/hr)
Lumen side liquid flow guidelines	1 - 9 gpm (0.25 - 2 m^3/hr)
Membrane/potting material	Polypropylene/epoxy
Membrane type	X50 fiber
	X50 fiber recommended for Transmembrane ChemiSorption (TMCS) process
Priming volume (approximate)	
Shell side	1.7 gal (6.6 L)
Lumen side	1.5 gal (5.6 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.

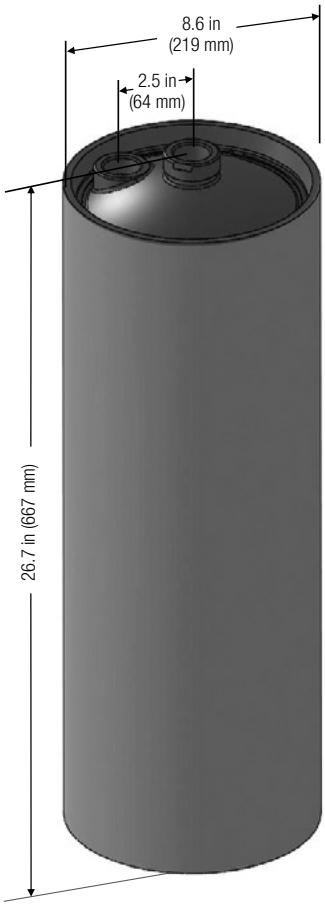
Housing characteristics	
Material	• PVC vessel • Engineered thermoplastic end caps • Due to the nature of the material, scratches, blemishes and other marks may be visible on the housing surface. These do not impact contactor function.

Port connections	
Shell side (liquid inlet/outlet)	Each shell side port on the end caps has a dual connection with 1.5-inch OD grooved pipe fitting and 1-inch female NPT
Lumen side (inlet/outlet)	1-inch female NPT

Seal material options for shell side wetted parts
FKM

Mounting kit
Contains 2 cradles and 2 straps sold separately and will hold the contactor horizontally or vertically

Weight (approximate)	
Dry	27 lbs (12 kg)
Water-filled (shell side and lumen side)	54 lbs (25 kg)

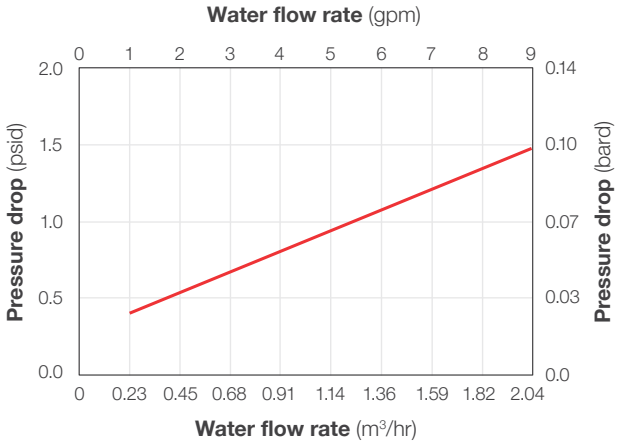


Note: All dimensions are nominal values. See housing drawings for additional dimensional details.

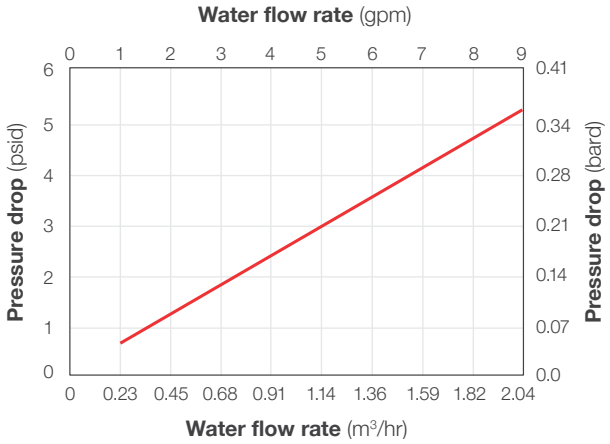
Not for consumer sale or use.

Typical properties

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.

Test conditions

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

Intend 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. Liqui-Cel membrane contactors may be used in Transmembrane Chemisorption (TMCS) processes where the removed gases are absorbed into a liquid phase and converted by chemical reaction.

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 conducting an appropriate risk assessment and evaluating the Thermo Scientific product in user's application.

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Liqui-Cel TMCS 8×20 products are not for use in food contact applications.

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