Industrial filtration

Liqui-Cel EXF 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.

Typical properties

Membrane characteristics		
Cartridge configuration	Extra-flow with center baffle	
Liquid flow guidelines	0.5 - 3.0 gpm (0.1- 0.7 m^3/hr)	
Membrane/potting material	Polypropylene/polyethylene	
Membrane type	X50 fiber	X40 fiber
	Recommended for CO_2 removal from compatible liquid streams	Recommended for O_2 removal from compatible liquid streams
Priming volume (approximate)	X50 fiber	X40 fiber
Shell side	0.11 gal (0.40 L)	0.11 gal (0.40 L)
Lumen side	0.04 gal (0.15 L)	0.04 gal (0.15 L)
Operating parameters		
Pressure guidelines*	X50 fiber or X40 fiber	
Maximum shell side LIQUID operating temperature/pressure		
41 - 104°F (5 - 40°C)	120 psig (8.3 barg)	
158°F (70°C)	45 psig (3.1 barg)	
Maximum lumen side GAS operating temperature/pressure		
77°F (25°C)	70 psig (4.8 barg)	
Maximum lumen side LIQUID operating temperature/pressure of semibody contactor		
41°F (5°C)	90 psig (6.2 barg)	
59 - 77°F (15 - 25°C)	70 psig (4.8 barg)	
158°F (70°C)	15 psig (1.0 barg)	

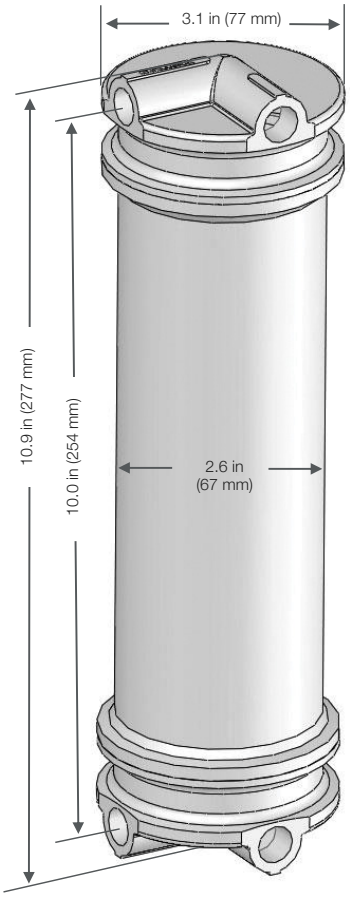
*Note: Liquid pressure should always exceed gas pressure in operation.

Housing characteristics	
Material	Polypropylene
Port connections	
Shell side (liquid inlet/outlet)	• 0.25-inch NPT female • 0.375-inch Flaretek® (nut included)** • 0.5-inch Flaretek® (nut included)**
Lumen side (inlet/outlet)	• 0.25-inch NPT female

**Only available with FKM seal option with welded end caps.

Seal material options for shell side wetted parts	
FKM	
FFKM (K-UPW)	Only available with welded end caps with NPT connections and X40 fiber
FFKM (K-EXT)	Only available with clamped end caps and NPT connections
Weight (approximate)	
Dry	1.1 lbs (0.5 kg)
Water-filled (shell side)	2.0 lbs (0.9 kg)

Not for consumer sale or use.



Welded end caps with NPT connections

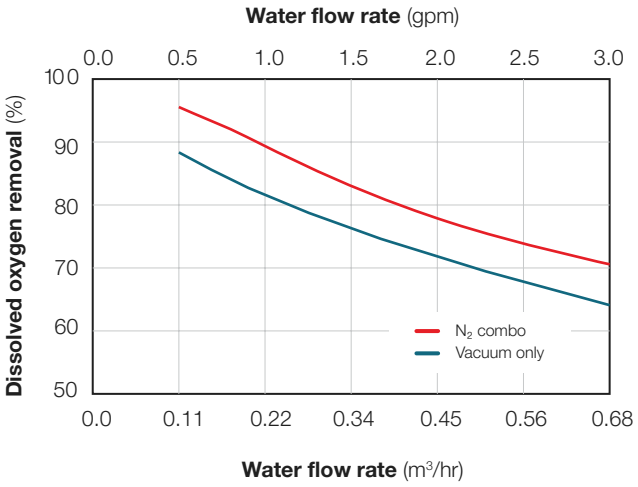
Note: All dimensions are nominal values for contactors with polypropylene housing and NPT connections. Overall length increases with Flaretek® connections. See housing drawings for additional dimensional details by housing and connection type.

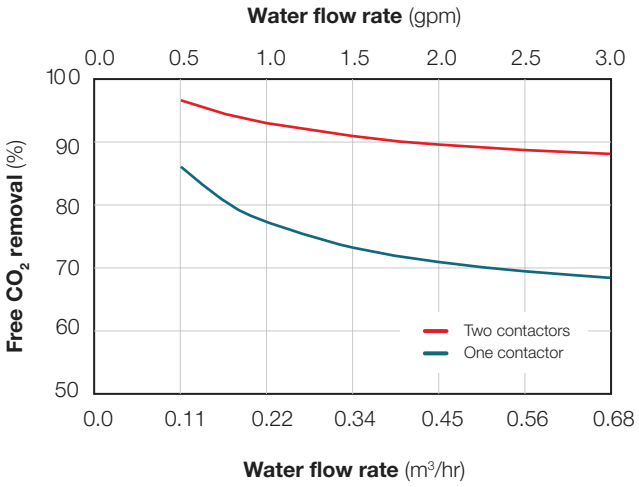
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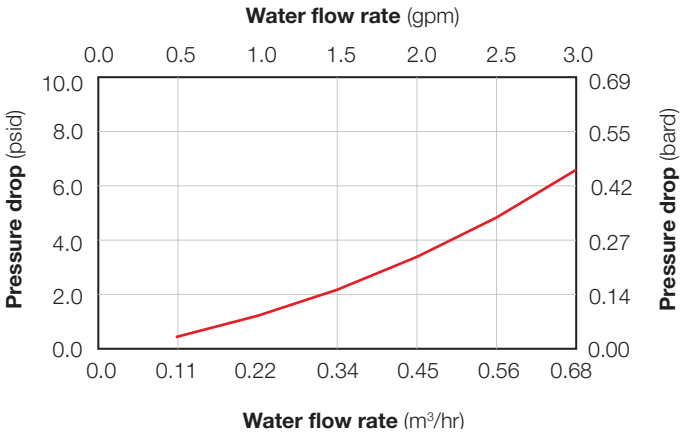
Regulatory

Certain Thermo Scientific™ Liqui-Cel™ EXF 2.5x8 Membrane Contactor products with FKM seals are compliant with US FDA 21 CFR, EU Food Contact Regulation (EC) 1935/2004, EU Regulation 10/2011, Japan MHLW – Food Sanitization Act, and other food contact regulations. Liqui-Cel EXF 2.5x8 membrane contactor products with FFKM (K-UPW) or FFKM (K-EXT) seals are not for use in food contact applications. Contact your Thermo Fisher Scientific representative for detailed declaration of compliance information for food contact applications.

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Notes

- Curves represent nominal values using water at 68ºF (20ºC) for O_2 removal andwater at 77ºF (25ºC) for CO_2 removal. Characteristics may change under different operating conditions.
- Test condition O_2 removal with X40 membrane: N_2-vacuum combo mode: 50 mm Hg vacuum, N_2 sweep 0.05 SCFM. Vacuum mode: 50 mm Hg vacuum.
- Test condition CO_2 removal with X50 membrane: Air-vacuum combo mode:
- 150 mm Hg vacuum, air sweep 0.5 G/L.
- Pressure drop curves using NPT connection.
- These charts should not be used to design systems.
- Flaretek® connection will have lower pressure drop.

Intended Use: Liqui-Cel membrane contactors are intended 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.

Certain Liqui-Cel membrane contactors are compliant for use in Food and Beverage applications. For specific details regarding use or limitations for food contact applications please refer to the Liqui-Cel product's data sheet or contact your Thermo Fisher Scientific Inc. representative for more information.

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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