

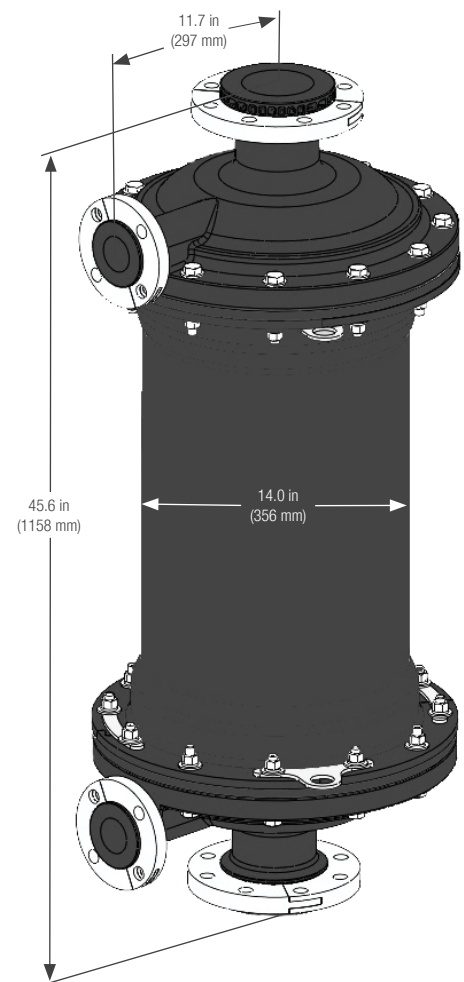
## Industrial filtration

# Thermo Scientific™ Liqui-Cel™ EXF 14×28 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 added 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

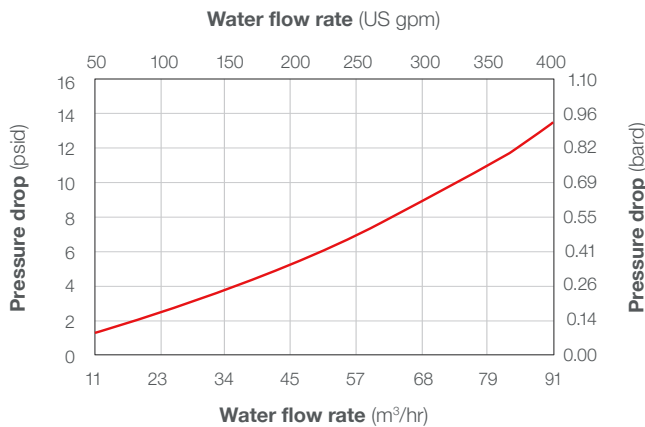
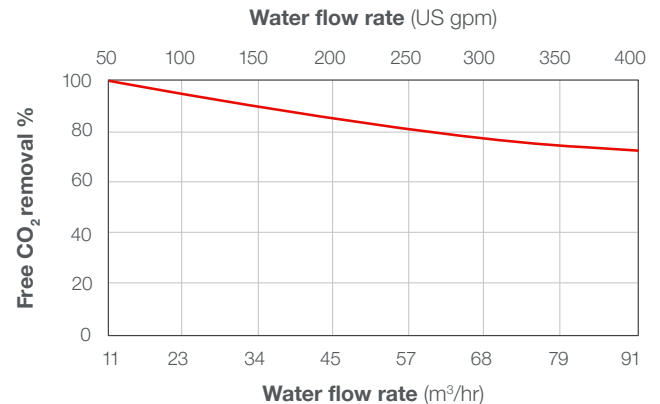
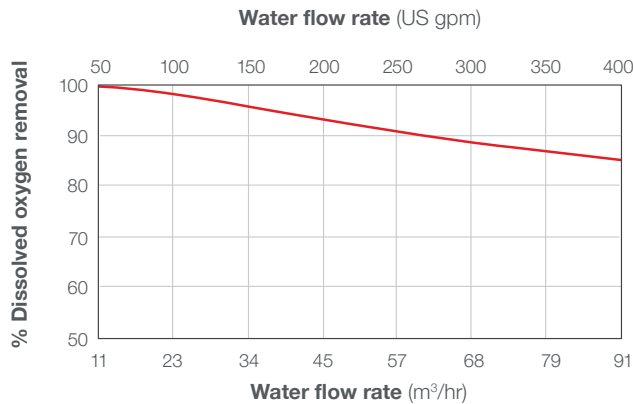
Membrane characteristics		
Cartridge configuration	Extra-flow with center baffle	
Liquid flow guidelines	70 - 400 gpm (16 - 97 m <sup>3</sup> )	
Membrane/potting material	Polypropylene/epoxy	
Membrane type	X50 fiber	X40 fiber
	X50 fiber recommended for CO <sub>2</sub> removal from compatible liquid streams	X40 fiber recommended for O <sub>2</sub> removal from compatible liquid streams
Priming volume (approximate)	X50	X40
Shell side	9.6 gal (36.5 L)	9.5 gal (36.1 L)
Lumen side	6.7 gal (25.5 L)	6.8 gal (25.7 L)
Operating parameters		
Pressure guidelines*	X50 fiber	X40 fiber
Maximum shell side LIQUID working temperature/pressure limit		
41 - 77°F (5 - 25°C)	120 psig (8.3 barg)	120 psig (8.3 barg)
122°F (50°C)	45 psig (3.1 barg)	45 psig (3.1 barg)
Maximum lumen side GAS operating temperature/pressure limit		
77°F (25°C)	46.4 psig (3.2 barg)	46.4 psig (3.2 barg)
*Note: Liquid pressure should always exceed gas pressure in operation.		
Housing characteristics		
Material	PVC vessel with engineered thermoplastic end caps	
Flange connections		
Shell side (liquid inlet/outlet)	<ul style="list-style-type: none"> <li>• 4 inch class 150 raised face flange per ANSI B16.5</li> <li>• 100A 10K raised face flange per JIS B2238</li> </ul>	
Lumen side (inlet/outlet)	<ul style="list-style-type: none"> <li>• 2 inch class 150 raised face flange per ANSI B16.5</li> <li>• 50A 10K flat face flange per JIS B2238</li> </ul>	
Flange backing rings	SMC (Sheet molded compound)	
Seal material options for shell side wetted parts		
EPDM		
FKM**		
**Liqui-Cel EXF 14×28 membrane contactors with FKM seals are NOT tested and certified against NSF/ANSI/CAN 61.		
Mounting kit		
Contains 2 cradles and 2 straps sold separately and will hold the contactor horizontally or vertically.		
Weight (approximate)		
Dry	129 lbs (59 kg)	
Water-filled (Shell side)	209 lbs (95 kg)	



Note: All dimensions are nominal values for contactors with PVC housing with engineered thermoplastic end caps. See housing drawings for additional dimensional details.

Not for consumer sale or use.

## Typical properties



### Notes

- Performance can be improved by adjusting the sweep rate.
- Curves represent nominal values using water at 68°F (20°C). Characteristics may change under different operating conditions.
- Test condition O<sub>2</sub> removal with X40 membrane: N<sub>2</sub>-vacuum combo mode: 75 mm Hg vacuum, N<sub>2</sub> sweep 0.25 SCFM.
- Test condition CO<sub>2</sub> removal with X50 membrane: Air-vacuum combo mode: 150 mm Hg vacuum, air sweep 8 SCFM.
- These charts should not be used to design systems.

Certain Liqui-Cel EXF 14×28 membrane contactors have been tested and certified against NSF/ANSI/CAN 61. Contact your Thermo Fisher Scientific Inc. representative for additional information.

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

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Liqui-Cel EXF 14×28 products are not for use in food contact applications.

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