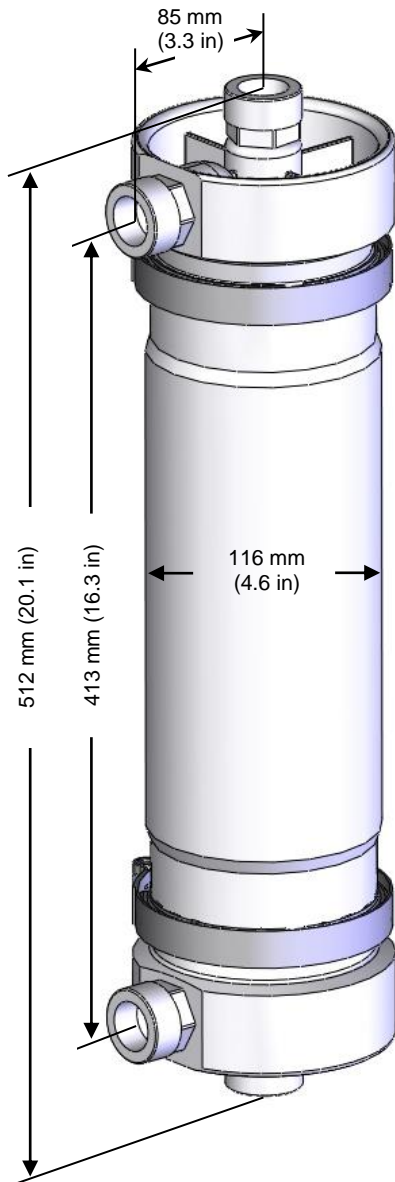


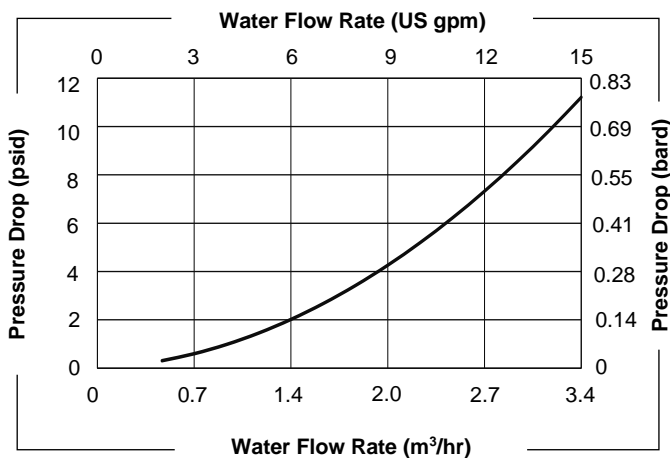
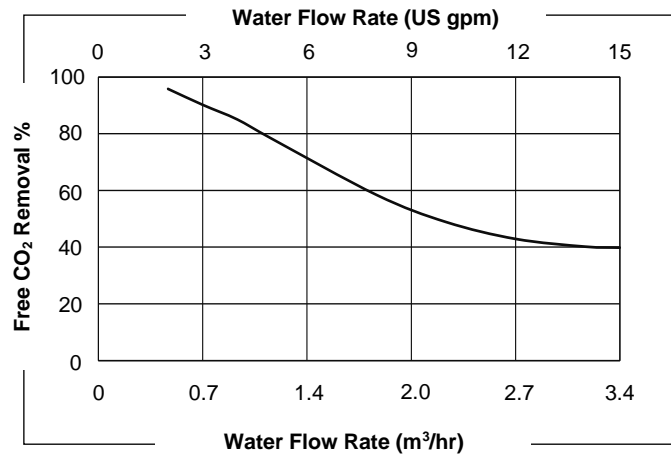
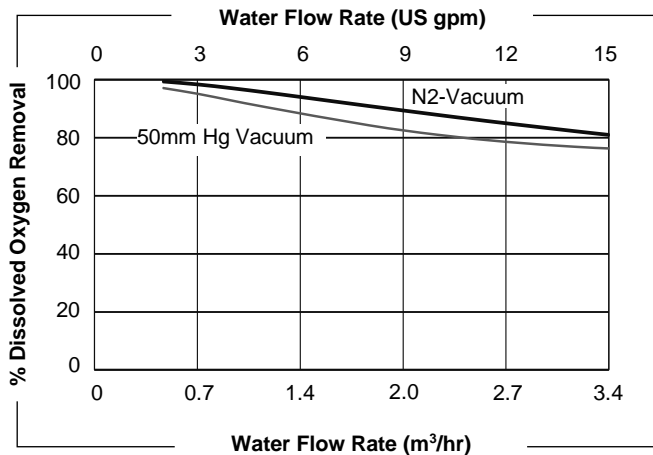
## 4 x 13 EXTRA-FLOW PRODUCT DATA SHEET



**Note:** All dimensions are nominal values for the Polypropylene vessel with NPT connections. Dimensions for other housings are at [www.liqui-cel.com](http://www.liqui-cel.com).

<b>Membrane Characteristics</b>			
<b>Cartridge Configuration</b>	Extra-Flow with Center Baffle		
<b>Liquid Flow Guidelines</b>	0.5– 3.4 m <sup>3</sup> /hr (2–15 gpm)		
<b>Membrane Type</b>	<b>X50</b>	<b>X40</b>	
	Recommended for CO <sub>2</sub> removal from water	Recommended for all other gas transfer applications	
<b>Membrane/Potting Material</b>	Polypropylene / Polyethylene		
<b>Typical Membrane Surface Area</b>	8 m <sup>2</sup> (86 ft <sup>2</sup> )		
<b>Priming Volume (approximate)</b>			
Shellside	1.3 L (0.3 gal)		
Lumenside	0.6 L (0.2 gal)		
<b>Pressure Guidelines*</b>			
	<b>PP X50 or X40</b>	<b>316L SS X50</b>	<b>316L SS X40</b>
<b>Maximum Shellside LIQUID Working Temperature/ Pressure</b>	5-30° C, 7.2 barg (41-86° F, 105 psig) 40° C, 5.2 barg (104° F, 75 psig)	5-50° C, 7.2 barg (41-122° F, 105 psig) 70° C, 2.1 barg (158° F, 30 psig)	5-50° C, 9.3 barg (41-122° F, 135 psig) 70° C, 2.1 barg (158° F, 30 psig)
If no vacuum is used, 1 barg (15 psig) can be added to pressures above.			
<b>Maximum Applied Gas Pressure</b>	4.1 barg at 25° C (60 psig at 77° F)	6.2 barg at 25° C (90 psig at 77° F)	
Max applied gas pressure is for integrity testing at ambient temperatures. Normal operating pressures are typically lower.			
*See Operating Guide for complete temp/pressure limits for housings and membrane. Note: Liquid pressure should always exceed gas pressure.			
<b>Housing Options &amp; Characteristics</b>			
<b>Material</b>	Polypropylene	316L SS Vessel and End Caps ≤ 0.8µm SI (32 RA).	
<b>Flange Connections</b>			
Shellside (Liquid Inlet/Outlet)	<ul style="list-style-type: none"> <li>1 inch Sanitary</li> <li>¾ inch NPT Female</li> <li>1 inch GF</li> <li>Rc ¾ per JIS B0203</li> </ul>	<ul style="list-style-type: none"> <li>1 inch Sanitary</li> </ul>	
Lumenside (Gas/Vacuum)	<ul style="list-style-type: none"> <li>1 inch 90° Sanitary</li> <li>¾ inch 90° NPT Female</li> <li>Rc ¾ per JIS B0203</li> </ul>	<ul style="list-style-type: none"> <li>1 inch Sanitary</li> </ul>	
<b>Seal Options</b>			
<b>Material</b>	<b>Applications</b>		
Viton	General Purpose		
K - UPW	Ultra Pure Water		
K - EXT	Chemical Extraction		
Buna-N	Beverage		
<b>Weight (approximate)</b>	<b>PP</b>	<b>316L SS</b>	
Dry weight	3 kg (6 lbs)	5 kg (11 lbs)	
Liquid full (shellside)	4 kg (8 lbs)	7 kg (16 lbs)	
Shipping Weight	3 kg (7 lbs)	6 kg (14 lbs)	
<b>Regulatory</b>			
Complies with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC. Constructed of FDA CFR title 21 compliant materials for wetted parts only at ambient temperatures.			

## 4 x 13 EXTRA-FLOW PRODUCT DATA SHEET



Curves represent nominal values, generated using water at 20°C (68 °F). Characteristics may change under different operating conditions.

Test condition O<sub>2</sub> Removal with X40 membrane: N<sub>2</sub>-vacuum combo mode, vacuum: 50 mm Hg, N<sub>2</sub> sweep: 1.4 L/min (0.05 scfm) at 20° C (68° F). Vacuum mode, vacuum: 50 mm Hg at 20° C.

Test condition CO<sub>2</sub> Removal with X50 membrane: Air-combo mode, vacuum: 150 mm Hg, N<sub>2</sub> sweep 2.8 L/min (0.1 scfm) at 20° C (68° F).

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