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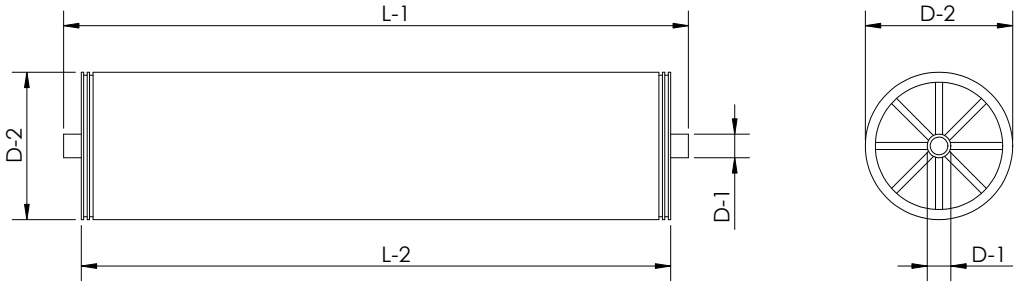
PolyCera® Hydro 100 Ultrafiltration High Solids Spiral Monolith® Element Specifications

Performance & Operating Parameters

Membrane material:	PolyCera Hydro
Nominal pore size/MWCO:	20 nm/100 kDa
Operating pH ranges:	1.0 – 12.0
Operating temperature ranges:	5°C – 50°C (41°F – 122°F)
Maximum inlet pressure:	8.3 bar (120 psi)
Max pressure drop per element:	0.35 bar (5 psi)
Free oil and grease:	≤ 5 mg/L
Total suspended soilds:	≤ 500 mg/L
Turbidity:	≤ 500 NTU
Continuous free chlorine:	≤2 ppm
Operating flux:	20 - 120 LMH (12 - 72 GFD)
Feed spacer hickness:	80 mil
Recommended pre-filter:	150 µm

Model Number			Hydro 100XB-1812-80HS-TWM		Hydro100XB-4040-80HS-TWM		Hydro100XB-8040-80HS-FRF	
Size			1812		4040		8040	
Active Area	m^2	(ft^2)	**0.12**	**(1.3)**	**3.8**	**(30)**	**15.4**	**(166)**
Weight	*kg*	*(lb)*	**0.45**	**(1)**	**3.5**	**(8)**	**13**	**(29)**
Outer Wrap			**Tape**		**Tape**		**Fiberglass**	
Endcap			**Male**		**Male**		**Female**	
Standard crossflow	m^3/h	*gpm*	**0.68 – 1.14**	**(3 – 5)**	**2.27 – 5.68**	**(10 – 25)**	**6.81 – 34.07**	**(30 –150)**
D-1	*cm*	*(in)*	**1.71**	**(0.67)**	**1.90**	**(0.75)**	**2.86**	**(1.13)**
D-2	*cm*	*(in)*	**4.6**	**(1.80)**	**10.2**	**(4.00)**	**20.3**	**(8.00)**
L-1	*cm*	*(in)*	**30.48**	**(12.00)**	**101.6**	**(40.00)**	**NA**	
L-2	*cm*	*(in)*	**29.8**	**(11.75)**	**96.1**	**(37.93)**	**101.6**	**(40.00)**

Note: All element dimensions have specified tolerances of +0.00/-0.06"



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Cleaning & Chemical Exposure Guidelines

Maximum backwash pressure:	1.7 bar (25 psi)
Backwash flux:	40 - 240 LMH (24 - 144 GFD)
Standard backwash duration:	30 seconds
Maximum backwash duration:	2 minutes
Maximum cleaning temperature:	50°C (122°F) @ pH≤ 13.5, 70°C (158°F) @ pH ≤ 10
Maximum cleaning pH:	1.0 < pH < 13.5 @ 50°C, 1.0 < pH < 10.0 @70°C
Hydrochloric acid:	≤ 0.4% or 1.0 Normal (pH > 1.0)
Citric acid:	≤ 2% or 0.1 Normal (pH > 2.0)
Sodium hydroxide:	≤ 4% or 1.0 Normal (pH < 13.5)
Free chlorine instantaneous/total:	100 ppm/300,000 ppmh @ pH 11
Peroxide/Ozone:	None

Notes: 1) Increased crossflow during backwash enhances cleaning efficacy
2) Backwas flux should be 1.5 to 2 times of operating flux
3) Consult PolyCera for application specific operating parameters beyond those described

Handling & Storage Instructions

New Element Handling & Storage Guidelines

- ◊ Recommended storage temperature: 5°C – 20°C (41°F – 68°F). Do not freeze element
- ◊ Handle with care. Damage to elements/end-caps/ATDs can compromise performance
- ◊ It is recommended to store elements wet and horizontally
- ◊ Whenever possible, store elements in original packaging
- ◊ Drying can damage membrane surface and compromise performance
- ◊ Membrane elements should be stored in dry, dark, and ventilated conditions

Installation & Initial Use Guidelines

- ◊ Prior to use, soak element for 24 hours with DI water then flush for at least 30 minutes
- ◊ Elements can be mounted vertically or horizontally
- ◊ When mounted vertically, it is recommended to orient feed to flow from top to bottom
- ◊ Use water or glycerin to lubricate seal

After Use Storage and Preservation Guidelines

Use standard CIP procedure to clean feed and filtrate from the elements prior to shut down. Then perform element preservation as recommended below:

- ◊ 1 – 7 days: Sanitize element by flushing with 10 ppm bleach and adjust to pH 11 for 30 minutes. Fill up element and housing with fresh 1 ppm bleach solution, seal the housing and store
- ◊ More than 7 days: Contact PolyCera Inc. for further information

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