

PolyCera® TITAN Off-Shore Ultrafiltration

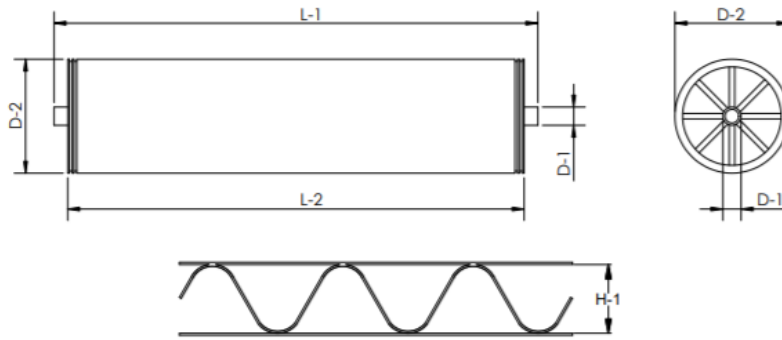


TITAN-UF-70-OFFSHORE-90

Performance & Operating Parameters		Cleaning & Chemical Exposure Guidelines	
Membrane Material	Titan	Max Backwash Pressure	1.7 bar
Nominal Pore Size/MWCO	5 nm/70 kDa	Backwash Flux	40 - 240LMH
Operating pH Range	0 – 13.5 @ T≤50°C 0 – 10.0 @ T≤90°C	Standard Backwash Duration	30 seconds
Operating Temperature Range	5 - 90°C	Max Backwash Duration	120 seconds
Max Inlet Pressure	8.3 bar	Max Cleaning Temperature	90°C @ 0 < pH ≤ 10 50°C @ 10 < pH ≤ 13.5
Max Pressure Drop Per Element	1.72 bar	Max Cleaning pH	0 < pH < 13.5 @ 50°C 0 < pH < 10.0 @ 90°C
*Max Free Oil & Grease	≤10000 mg/L	Hydrochloric Acid	≤0.4% (pH > 1.0)
*Max Total Suspended Solids	≤5000 mg/L	Citric Acid	≤20% (pH > 1.0)
Continuous Free Chlorine	≤2.0 mg/L	Sodium Hydroxide	≤4% (pH < 13.5)
Typical Operating Flux	20 - 200LMH	Free Chlorine Instantaneous/Total	50 ppm/100,000 ppm hour @ pH 11
Recommended Pre-Filter	150µm	Peroxide/Ozone	Not compatible
Notes	<p>Increased crossflow during backwash enhances cleaning efficacy; Backwash flux should be 1.5 to 2 times of operating flux ; *Max Free Oil & Grease/ Max Total Suspended Solids means the max concentration at concentration side. It's dependent on raw feed water quality and design recovery rate.</p>		

Elements

Model	Titan-UF-70-OFFSHORE-90-4040	Titan-UF-70-OFFSHORE-90-8040
Filter Area m2 (ft2)	3.1 (33.4)	13.9 (149.6)
Weight kg (lbs)	3.5 (7.7)	13.0 (28.7)
Outer Wrap	Tape/FRP	FRP
Endcap	Male	Female
Recommend crossflow (m3/h)	6.8	45.4
Filtrate flowrate (m3/h)	0.53	2.4
Permeate connection D-1 cm(in)	1.90 (0.75)	2.86 (1.125)
Element diameter D-2 cm(in)	10.2 (4.00)	20.3 (8.00)
Element length (male) L-1 cm(in)	101.6 (40.00)	N/A
Element length(female) L-2 cm(in)	96.1 (37.93)	101.6 (40.00)
Feed Spacer Size H-1 mm(mil)	2.28 (90)	2.28 (90)
Notes	<p>*Testing condition: synthetic produced water feed stream with 1,000 mg/L crude oil, 30°C, 15.9m3/h (8040 element) cross-flow, 2bar (29psi) transmembrane pressure, 10% recovery Actual results will vary depending on feed water quality and operation conditions **All element dimensions have specified tolerances of +0.00/-0.06".</p>	



Handling & Storage Instructions

New Element Handling & Storage Guidelines

- Recommended storage temperature: $\geq 5^{\circ}\text{C}$ (41°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 environmental conditions.

Installation & Initial Use Guidelines

- Prior to use, soak element for 24 hours with portable water then flush for at least 30 minutes.
- Elements can be mounted vertically or horizontally.
- Use water or glycerin to lubricate seal.

After Use Storage & 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.
- 1 week to 6 months: Fill up element and housing with 0.3% Saniclean* solution, seal the housing and store. Every four weeks drain the Saniclean solution from the system and flush with clean water. Refill the element and housing with 0.3 % Saniclean solution, seal the housing and store. If Saniclean solution is not available, use 0.2% sodium azide solution or 45% glycerin solution instead.
- More than 6 months: Please Contact PSP.US, Inc. for further information.

*Saniclean is a USDA accepted, low-foaming acid anionic rinse product made by Five Star Chemicals & Supplies, Inc. (Colorado, USA).

PSP.US, Inc.

721 S Glasgow Ave.
Unit D
Los Angeles, CA 90301

E: info@polycera.com

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PolyCera

www.polyceramembranes.com

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