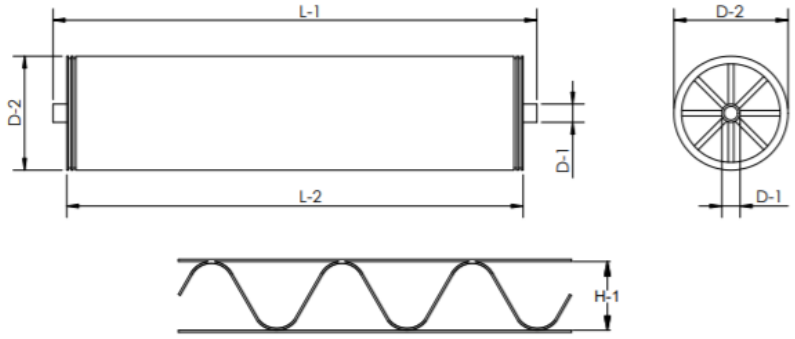
PolyCera® TITAN Off-Shore Ultrafiltration

TITAN-UF-70-OFFSHORE-40

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℃ 0 – 10.0 @ T≤90℃	Standard Backwash Duration	30 seconds
Operating Temperature Range	5 - 90℃	Max Backwash Duration	120 seconds
Max Inlet Pressure	8.3 bar	Max Cleaning Temperature	90℃ @ 0＜pH≤10 50℃ @ 10＜pH≤ 13.5
Max Pressure Drop Per Element	1.72 bar	Max Cleaning pH	0＜pH＜13.5 @ 50℃ 0＜pH＜10.0 @ 90℃
*Max Free Oil & Grease	≤5000 mg/L	Hydrochloric Acid	≤0.4% (pH＞1.0)
*Max Total Suspended Solids	≤1000 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	100μm	Peroxide/Ozone	Not compatible
Notes	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.		

Elements

Model	Titan-UF-70-OFFSHORE-40-4040	Titan-UF-70-OFFSHORE-40-8040
Filter Area m2 (ft2)	5.5 (59.2)	23.6 (254.0)
Weight kg (lbs)	3.5 (7.7)	13.0 (28.7)
Outer Wrap	Tape/FRP	FRP
Endcap	Male	Female
Recommend crossflow (m3/h)	5.7	34.1
Filtrate flowrate (m3/h)	0.38	1.65
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)	1.02 (40)	1.02 (40)
Notes	*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".	



Handling & Storage Instructions

New Element Handling & Storage Guidelines

- Recommended storage temperature: ⩾5°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 avalible, 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).

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