

## PolyCera® TITAN Nanofiltration

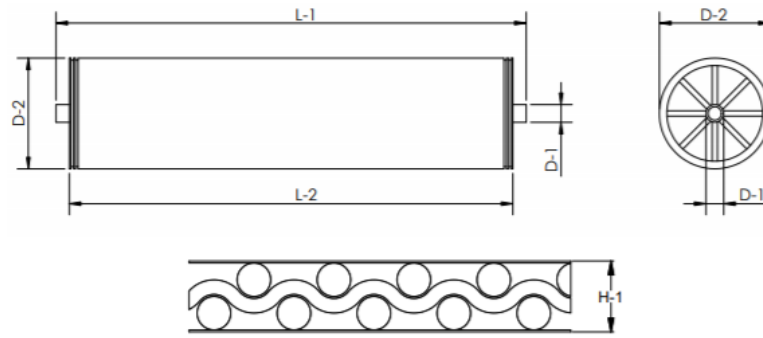


## TITAN-NF-500-28

Performance & Operating Parameters		Cleaning & Chemical Exposure Guidelines	
Membrane Material	Titan	Dye (Rose Bengal) rejection	> 99%
Nominal Pore Size/MWCO	500 Da	Monovalent ion rejection	< 1%
Operating pH Ranges	1 – 10.0 @ T≤70°C 1 – 13.5 @ T≤50°C	Divalent ion (Hardness) rejection	< 5%
Operating Temperature Ranges	5 – 70°C	Free Chlorine Instantaneous/Total	50 ppm/100,000 ppm hour @ pH 11
Max Inlet Pressure	20.7 bar	Max Cleaning Temperature	85°C @ 1 < pH ≤ 10 50°C @ 10 < pH ≤ 13.5
Max Pressure Drop Per Element	1.7 bar	Max Cleaning pH	1 < pH < 13.5 @ 50°C 1 < pH < 10.0 @ 85°C
*Max Total Suspended Solids	≤50 mg/L	Hydrochloric Acid	≤0.4% (pH > 1.0)
Continuous Free Chlorine	≤2.0 mg/L	Citric Acid	≤20% (pH > 1.0)
Typical Operating Flux	10 - 40LMH	Sodium Hydroxide	≤4% (pH < 13.5)
Recommended Pre-Filter	50µm	Peroxide/Ozone	Not compatible
Notes	*Max Total Suspended Solids means the max concentration at concentrate side. It's dependent on raw feed water quality and design recovery rate.		

## Elements

Model	Titan-NF-500-28-4040	Titan-NF-500-28-8040
Filter Area m2 (ft2)	7.1 (76.4)	30.4 (327.2)
Weight kg (lbs)	3.5 (7.7)	13.0 (28.7)
Outer Wrap	Tape/FRP	Tape/FRP
Endcap	Male	Female
Recommend crossflow (m3/h)	6.0	16.0
Filtrate flowrate (m3/h)	3.5	15.0
Permeate connection D-1 cm(in)	1.9 (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)	101.6 (40.00)	101.6 (40.00)
Feed Spacer Size H-1 mm(mil)	0.7 (28)	0.7 (28)
Notes	*Testing condition: de-ionized water, 25°C, 10.3 bar ( 150psi) transmembrane pressure. 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:  $\geq 5^{\circ}\text{C}$  (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).

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