

PolyCera[®] Titan 70 – Ultrafiltration Specifications

Titan 70 Spiral Monolith[®] Elements

Model Number Size	Titan70XB-1812-80SM-TWM 1812	Titan70XB-2540-80SM-TWM 2540	Titan70XB-4040-80SM-TWM 4040	Titan70XB-8040-80SM-FRF 8040
Active Area <i>m² (ft²)</i>	0.12 (1.3)	1.21 (13)	3.5 (38)	15.2 (164)
Weight <i>kg (lb)</i>	0.45 (1)	1.8 (4)	3.5 (8)	29 (13)
Outer Wrap	Tape	Tape	Tape	Fiberglass
Endcap	Male	Male	Male	Female
Standard crossflow <i>gpm</i>	3 - 5	5 - 10	10 - 30	30 - 150
D-1 <i>cm (in)</i>	1.71 (0.67)	1.90 (0.75)	1.90 (0.75)	2.86 (1.13)
D-2 <i>cm (in)</i>	4.6 (1.80)	6.1 (2.40)	10.2 (4.00)	20.3 (8.00)
L-1 <i>cm (in)</i>	30.48 (12.00)	101.6 (40.00)	101.6 (40.00)	NA
L-2 <i>cm (in)</i>	29.8 (11.75)	96.1 (37.93)	96.1 (37.93)	101.6 (40.00)

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

Operating Instructions

Flushing

- ◆ Prior to use, soak element for 24 hours with DI water then flush for at least 30 minutes in single-pass mode.

Installation

- ◆ 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

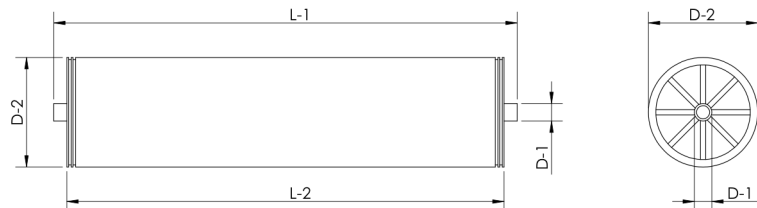
Operation

- ◆ Continuous pH range: 1.0 - 13.5
- ◆ Continuous temperature range: 5°C - 70°C (41°F - 158°F)
- ◆ Free chlorine: Consult Water Planet
- ◆ Maximum applied feed pressure: 8.3 bar (120 psi)
- ◆ Maximum transmembrane pressure (TMP): 2.1 bar (30 psi)
- ◆ Design axial pressure drop per element: 0.07 bar - 0.8 bar (1 psi - 12 psi)
- ◆ Maximum free oil tolerance: ≤ 500 mg/L
- ◆ Maximum total suspended solids: ≤ 200 mg/L
- ◆ Recommended pre-filter: 150 µm

Backwashing

- ◆ Maximum backwash TMP: 1.7 bar (25 psi)
- ◆ Standard backwash duration: 30 seconds
- ◆ Maximum backwash duration: 2 minutes

Note: Increased crossflow during backwash enhances cleaning efficacy



Chemical Cleaning & Exposure Guidelines

Water Planet recommends the use of our proprietary cleaning chemicals for best results. The water for clean-in-place (CIP) should be deionized for best performance. If other cleaning chemicals are used, please follow guidelines below:

Maximum Exposure (intermittent, during cleaning)

- ◆ Maximum cleaning temperature: 85°C (185°F) at 2.0 < pH < 10.0 **

Conventional Cleaning Chemicals

- ◆ Citric Acid: ≤ 2% or 0.1 Normal (pH > 2.0)
- ◆ Sodium Hydroxide: ≤ 4% or 1.0 Normal (pH < 13.5)
- ◆ NaOCl: Consult Water Planet
- ◆ Peroxide/Ozone: None
- ◆ Other cleaning chemicals: Consult Water Planet

Handling & Storage

Prior to use

- ◆ 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.

After use

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.

> 7 days (long-term storage):

Contact Water Planet for application specific long-term preservation procedures.

* Consult Water Planet for application specific operating parameters and chemical compatibilities beyond those described

** If pH > 10, temperature of fluid must be < 45°C

Water Planet, Inc

8915 La Cienega Blvd. Unit C

Los Angeles, CA 90301

+1 424.331.7700 | info@waterplanet.com