

Submerged Membrane Microfiltration Module

	HYDRAsub [®] - MBR	HSM500-ES
Module Specifications	Configuration: Fiber Orientation: Filtrate Flow : Membrane Polymer: Pore Size (nominal): Fiber Dimensions: Number of Elements in Module: Nominal Membrane Area per Module: Permeate Connections: Air Connections: Guide Pipe Connections: Typical Module Dry Weight: Typical Module Wet Weight:	Submerged Membrane Vertical Bi-directional Polyvinylidene Flouride (PVDF) 0.4 µm OD 0.11" (2.8 mm) 20 (25 m ² each) 5382 ft ² (500 m ²) Two- 2" FNPT Connections Two- 2" FNPT Connections To fit 2" pipe 1166 lbs (530 kg) 2449 lbs (1111 kg)
Operating Specifications	Maximum Trans Membrane Pressure (Vacuum): Maximum Backwash Trans Membrane Pressure : Maximum Instantaneous Chlorine Concentration: Maximum Chlorine Tolerance: MLSS Range: Operating Temperature Range: Feed Water pH Range: Cleaning pH Range: Operating Mode: Aerator Pressure Loss @ Maximum Air Flow (excluding hydraulic head):	-6 psig (-0.41 bar) 2 psig (0.14 bar) 5,000 ppm ^a 742,000 ppm-hrs ^b 8,000 - 12,000 mg/L ^c 41 - 104°F (5 - 40° C) 6.0 - 8.0 1.0 - 11.0 Outside to Inside 0.58 psig (0.04 bar)
Typical Process Conditions	Operating Filtrate Flux [†] : Peak Operating Flux [†] : Nominal Air Flow: Air Flow Range: Chemically Enhanced Backwash (CEB) Flux: CEB Chemicals: Clean In Place (CIP) Flux: CIP Chemicals:	4-20 gfd (7-34 lmh) 30 gfd (51 lmh) 90 scfm (152 Nm ³ /hr) 69 -103 scfm (117-175 Nm ³ /hr) 2.4 gfd (4 lmh) NaOCl ^d 2.4 gfd (4 lmh) NaOCl or Citric Acid ^d

† -Depends on temperature and application

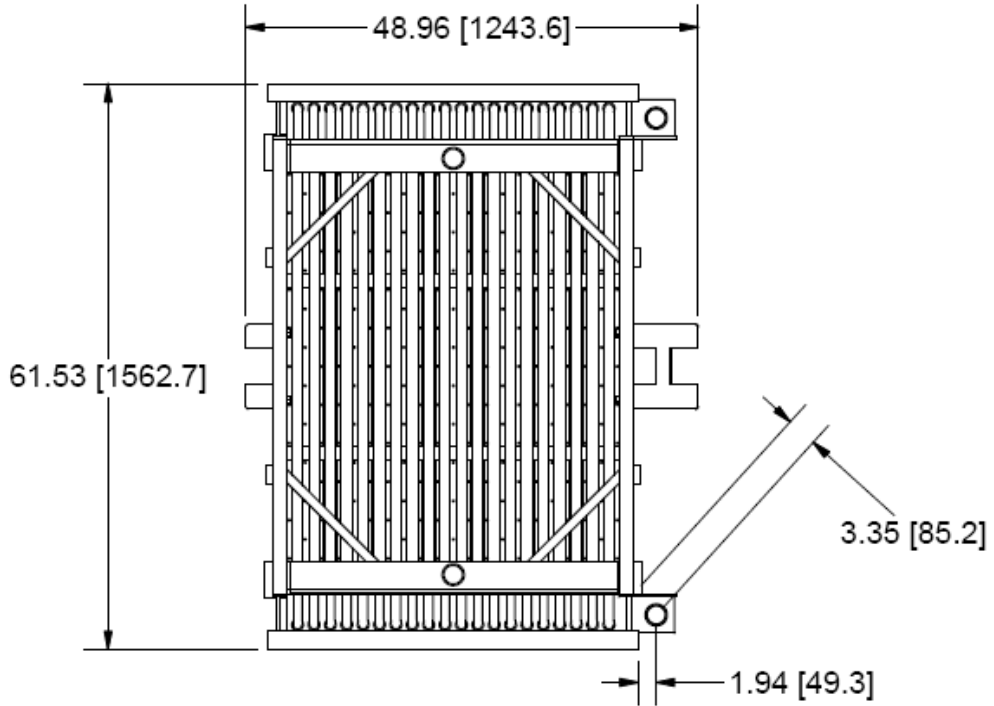
a -For a maximum of 2 hours

b- Maximum chemical tolerance for estimated life span of membrane

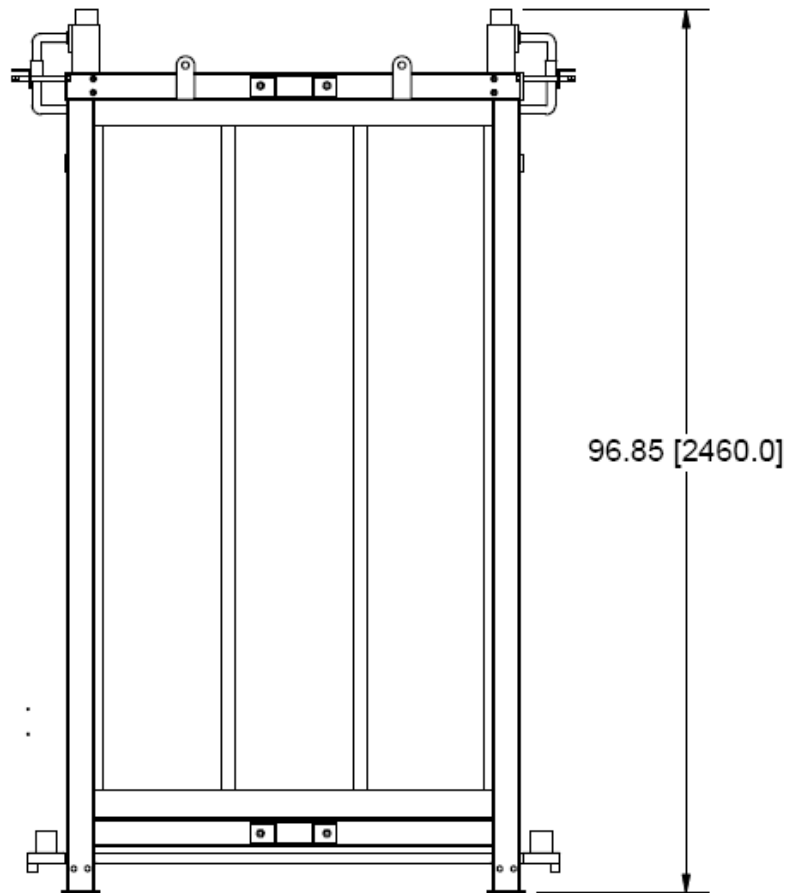
c -In membrane tank at steady state for municipal wastewater

d- Refer to operating manual for chemical concentrations and cleaning frequencies

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Top View



Side View

Note: Cage is made of stainless steel 304. Connections are in English units. For more detailed drawings, contact Hydranautics.

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