

Submerged Microfiltration Membrane Module

| | HYDRAsub [®] - MBR | HSM75-ES-HSE15 |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module Specifications | Configuration: Fiber Orientation: Filtrate Flow : Membrane Polymer: Pore Size (nominal): 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 5 (15 m ² each) 807 ft ² (75 m ²) (2)- 2" MNPT (2)- 1 1/2" MNPT (2)- to fit 2.5" pipes 281 lbs (127 kg) 386 lbs (175 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: | -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 |
| Typical Process Conditions | Operating Filtrate Flux [†] : Peak Operating Flux [†] : Chemically Enhanced Backwash (CEB) Flux: CEB Chemicals: Clean In Place (CIP) Flux: CIP Chemicals: | 4-20 gfd (7-34 l/mh) 30 gfd (51 l/mh) 2.4 gfd (4 l/mh) NaOCl ^d 2.4 gfd (4 l/mh) NaOCl or Citric Acid ^d |

† -Depends on temperature and application.

a -For a maximum of 2 hours.

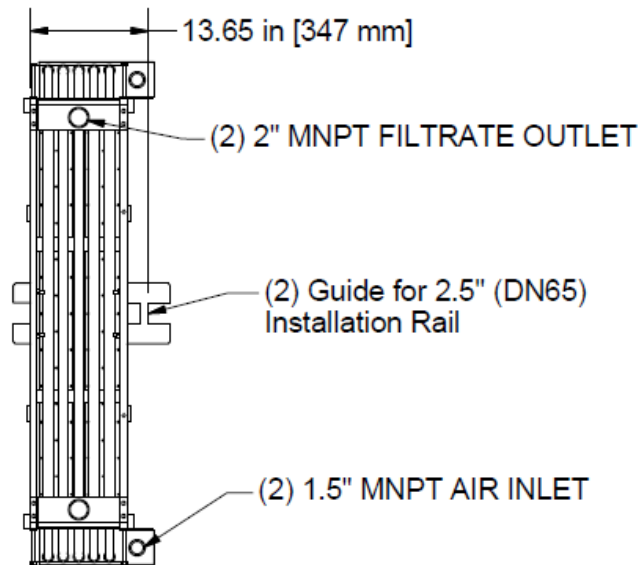
b- Maximum chemical tolerance for estimated life span of membrane.

c -In membrane tank at steady state for municipal wastewater.

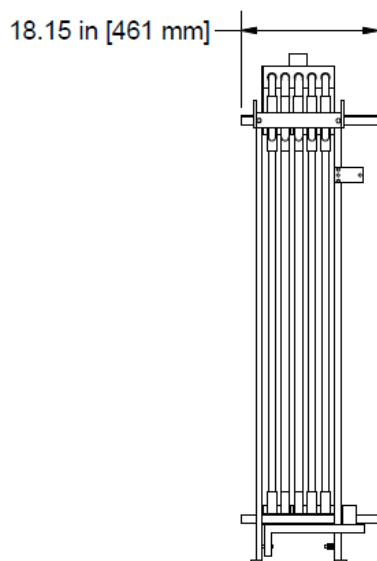
d- Refer to operating manual for chemical concentrations and cleaning frequencies.

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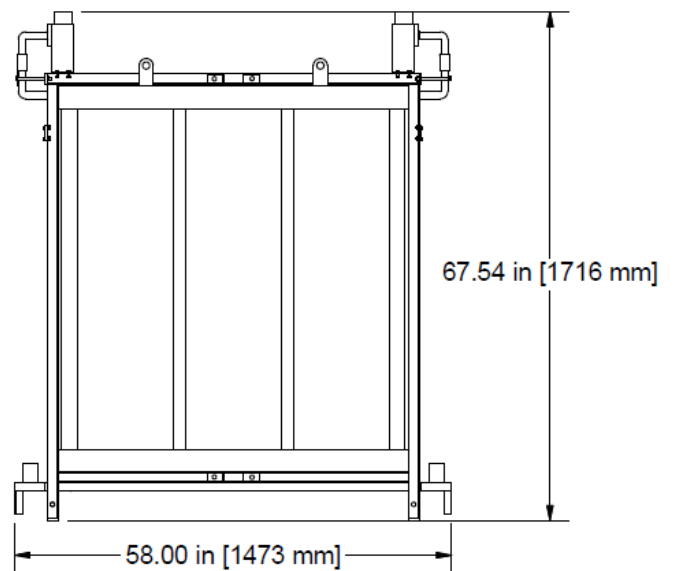
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Top View



Side View



Front View

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

8/28/14