

Submerged Ultrafiltration Membrane Module

	HYDRAsub™ MAX-MBR	HSMM400-ES
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) 0.05 µm 10 (40 m ² each) 4304 ft ² (400 m ²) (2)- 2" MNPT (2)- 2" MNPT (2)- to fit 3" pipes 587 lbs (267 kg) 1406 lbs (637 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.

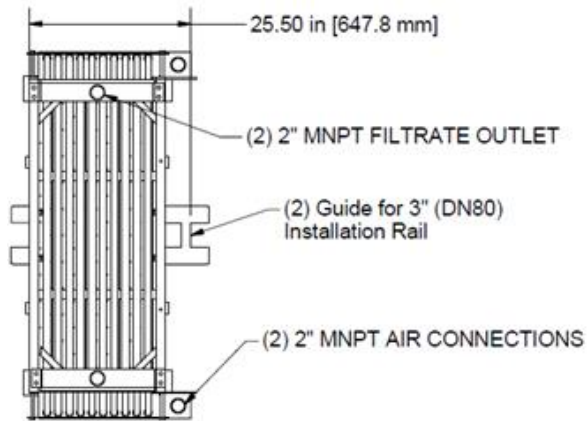
d- Refer to operating manual for chemical concentrations and cleaning frequencies.

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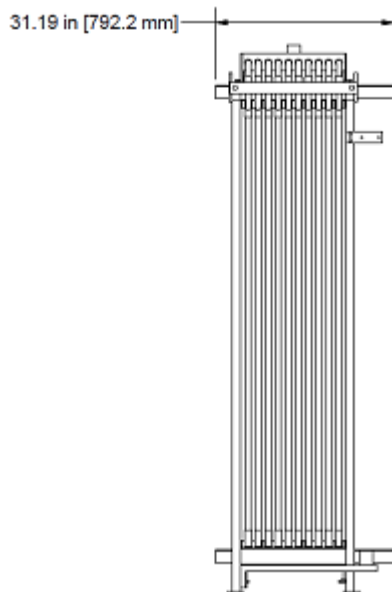
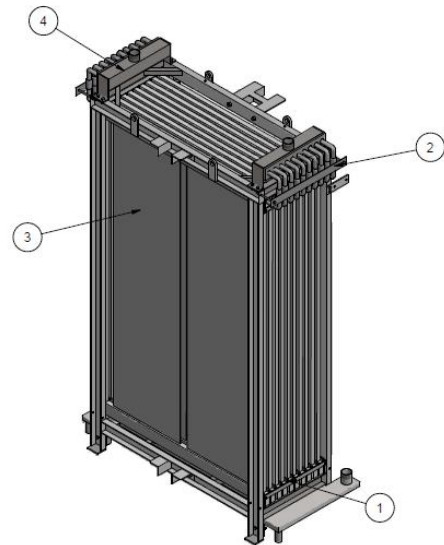
Hydranautics Corporate office

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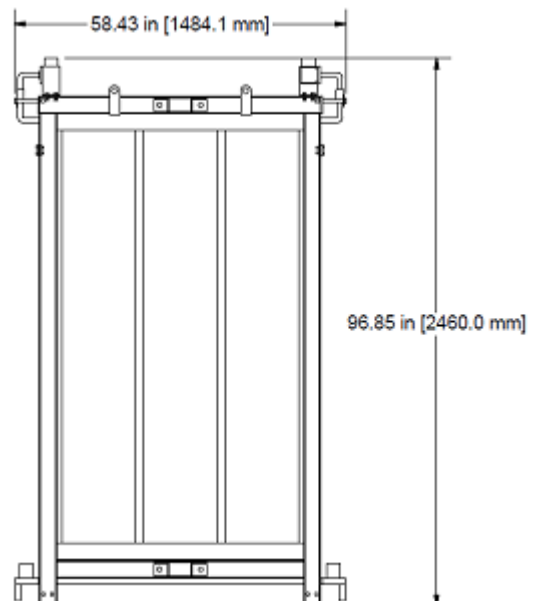
Top View



Isometric View



Side View



Front View

HYDRAsub-MBR Parts List to Order 400m ² w/ HSME40			
Item #	Qty	Part Number	Description
1	1	HSMC400-ES*	HYDRAsub Cage SS304
2	20	HSA25	HYDRAsub Filtrate Adapter
3	10	HSME40	HYDRAsub Element
4	0	HSP	HYDRAsub Plug

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

*SS316 Cage part number – HSMC400-ES-316

2/6/2024

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