



Absorb



Apply



Diffuse



Filter



Vent



Wick

POREX® TMF 13

TUBULAR MEMBRANE FILTER (TMF) MODULES



Optimal high solids separation at high flux rates

POREX TMF cross-flow tubular membrane modules contain Porex's unique, structural membrane tubes. The superior strength of the membrane/substrate composite allows higher operating and backwash pressures for superior solids removal efficiency, higher flux and reduced system footprint. The structural composite membrane features PVDF membrane anchored to PE substrate.

Chemical resistance

POREX TMF modules are resistant to a broad spectrum of corrosive chemicals and reagents as well as pH ranges of 0 to 14. Typically, pilot feasibility tests are needed to determine the actual TMF module performance under real operating conditions.

TMF Series Features

- Consistent, reliable solid/liquid separations and long service life
- Unique support with PVDF membrane offers high performance tubular membrane with superior operating characteristics
- Three distinct membrane pore sizes available
- Uniform, thermally-bonded omni-directional substrate pore structure provides an optimized support structure for tubular membranes and enhanced membrane durability
- Now available in multiple tube quantities and diameters for increased surface area and flux

Porex's TMF Business Partner: **Danheng**

Nanjing Danheng Technology Co., Ltd. (Danheng) is Porex's TMF business partner. Located in Nanjing, China, Danheng is qualified and authorized to build POREX®TMF modules to specified POREX design and following the POREX manufacturing process using POREX manufacture tube membrane. Danheng has been working with POREX TMF water treatment modules for more than 10 years and has experience with serving global customers in TMF applications with design consultation, engineering support, and aftermarket product services. Danheng holds more than 30 patents in industrial water treatment and has in-house testing for R&D and customer process verification.

To purchase Porex TMF modules:
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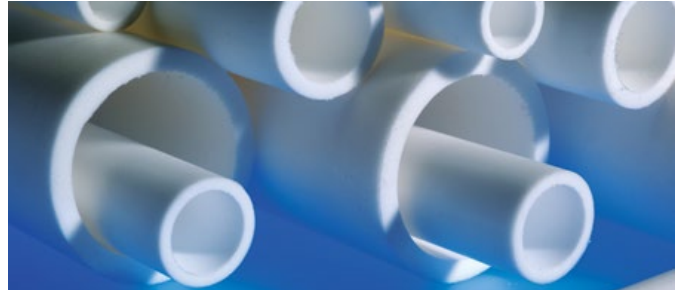


Operating Specifications

Pre-Use Wetting Agent	IPA
Water Flux	>200 GFD (340 LMH)
Cross Flow Liquid Velocity	10 - 16 ft/sec (3.0 to 4.9 m/s)
pH Range	0-14
Max Backpulse Pressure	20 psi (138 kPa) at 25°C
Max Differential Pressure	60 psi (414 kPa) at 25°C
Max Solids	18%
Min Solids	0.25%
Max Viscosity	50 cp
Min Viscosity	<1 cp

Physical Specifications

Modules	
Housing Diameter	6" Sc40
Filtrate Port (Qty 2)	ø2.875" x 1.89" L pipe stub
Retentate Ports	6" pipe Anvil Gruzlok groove
Mounting Required	Horizontal; 2 point
Module Length	72" (1829 mm)
Tubes	
Number of Tubes	13
Nominal ID	1" (25.4 mm)
Nominal OD	1.34" (34 mm)
Total Active Surface Area	19.8 ft ² (1.84 m ²)
Internal Liquid Volume	
Filtrate Volume	3.06 gallons (11.58 ltr)
Concentrate Volume	3.18 gallons (12.04 ltr)
Total Volume	6.25 gallons (23.66 ltr)
Materials of Construction	
Potting	Solvent Cement
Internal Supports	Polypropylene
Gasket Material	None
Preservative	Propylene Glycol
Membrane	PVDF



Coupling and Tubing Specifications

Filtrate Port Vinyl Tubing Specifications	
I.D.	3 in. (76.2 mm)
O.D.	3 1/2 in. (88.9 mm)
Wall Thickness	1/4 in. (6.35 mm)
Approx. Max. Pressure	21 psi at 70°F
Weight (lbs / 100 ft)	144
Gruzlok Coupling Specifications	
Gruzlok Model	Anvil 7001 Standard Coupling
Sized	6 in.
Standard Gasket	C Style
Standard Gasket Material	Grade E (EPDM) suitable for most applications
Approx. Weight Each	11.8 lbs (5.4 kg)
Vitauclic Coupling Specifications	
Vitauclic Model	77 or 75 flexible coupling
Sized	6 in.
Standard Gasket Material	Grade E (EPDM) suitable for most applications
Approx. Weight Each	7 lbs (3.2 kg)

Maximum Cleaning Solution Strength

Bleach (NaOCl)	< 17% to 100°F (38°C)
Caustic (NaOH)	< 15% to 104°F (40°C)
Acid (HCl)	< 15% to 140°F (60°C)
Peroxide (H₂O₂)	< 5% to 100°F (38°C)

TMF Item Numbers

Item Number	Description	Normal Pore Size (µm)	Maxium Continuous Operating Temperature*	Housing	Substrate Tube	Shipping Dimensions	Shipping Weight
MME3005613VP	13 Tube PVC Module / PE 1" tube - 0.05 µm	0.05 µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 in. 305 x 191 x 1918 mm	45 lbs 20.41 kg
MME3S01613VP	13 Tube PVC Module / PE 1" tube - 0.1 µm	0.1 µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 in. 305 x 191 x 1918 mm	45 lbs 20.41 kg
MME3002613VP	13 Tube PVC Module / PE 1" tube - 0.02 µm	0.02 µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 in. 305 x 191 x 1918 mm	45 lbs 20.41 kg

* For operation at higher than listed temperatures, contact Danheng.

Note: Rapid temperature changes may potentially cause damage to the TMF modules.

For information on all TMF modules, go to porex.com/TMF
To purchase TMF modules, contact Danheng directly

Website: www.njdhkj.cn
Email: TMF@njdhkj.cn

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Patent Pending

