

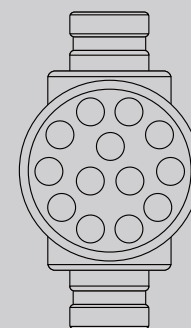
## POREX® TMF 13-Tubular Membrane Filter (TMF) Modules

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 bonded to PVDF substrate or anchored to PE substrate.

### 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
- Sintered PVDF substrate with PVDF membrane offers high temperature and improved chemical compatibility (pH range of 0–14)
- PVDF/PVDF composite option offers increased abrasion resistance and enhanced membrane durability
- Three distinct membrane pore sizes available on two different substrate options
- 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



### 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.

For additional information on our TMF Tubular Membrane Filters call 866-515-7783 or visit our web site at [www.porexfiltration.com](http://www.porexfiltration.com).

### 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 Gruvlok 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 <sup>2</sup> (1.84 m <sup>2</sup> )
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

## ▶ POREX® TMF 13-Tubular Membrane Filter (TMF) Modules

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)

### 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
Gruvlok Coupling Specifications	
Gruvlok 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	
Victaulic 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)

Item Number	Description	Nominal Pore Size (µm)	Maximum Continuous Operating Temperature*	Housing	Substrate Tube	Shipping Dimensions (inch) (mm)	Shipping Weight (lbs) (kg)
MME3005613VP	13 Tube PVC Module / PE 1" tube - 0.05µm	0.05µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	45 20.41
MME3S01613VP	13 Tube PVC Module / PE 1" tube - 0.1µm	0.1µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	45 20.41
MME3S05613VP	13 Tube PVC Module / PE 1" tube - 0.5µm	0.5µm	43°C / 110°F	Grade 1 PVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	45 20.41
MME3005613VC	13 Tube CPVC Module / PE 1" tube - 0.05µm	0.05µm	43°C / 110°F	CPVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	47.1 21.36
MME3S01613VC	13 Tube CPVC Module / PE 1" tube - 0.1µm	0.1µm	43°C / 110°F	CPVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	47.1 21.36
MME3S05613VC	13 Tube CPVC Module / PE 1" tube - 0.5µm	0.5µm	43°C / 110°F	CPVC	UHMWPE	12 x 7.5 x 75.5 305 x 191 x 1918	47.1 21.36
MMV3005613VP	13 Tube PVC Module / PVDF 1" tube - 0.05µm	0.05µm	60°C / 140°F	Grade 1 PVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	59.1 26.8
MMV3S01613VP	13 Tube PVC Module / PVDF 1" tube - 0.1µm	0.1µm	60°C / 140°F	Grade 1 PVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	59.1 26.8
MMV3S05613VP	13 Tube PVC Module / PVDF 1" tube - 0.5µm	0.5µm	60°C / 140°F	Grade 1 PVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	59.1 26.8
MMV3005613VC	13 Tube CPVC Module / PVDF 1" tube - 0.05µm	0.05µm	80°C / 176°F	CPVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	61.1 27.71
MMV3S01613VC	13 Tube CPVC Module / PVDF 1" tube - 0.1µm	0.1µm	80°C / 176°F	CPVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	61.1 27.71
MMV3S05613VC	13 Tube CPVC Module / PVDF 1" tube - 0.5µm	0.5µm	80°C / 176°F	CPVC	PVDF	12 x 7.5 x 75.5 305 x 191 x 1918	61.1 27.71

\* For operation at higher than listed temperatures, contact your Porex representative. Note: rapid temperature changes can damage the Filter Modules.



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