

PCI TMF 1.05 - PCI TUBULAR MEMBRANE FILTER (TMF™) MODULES



Optimal high solids separation at high flux rates

PCI TMF cross-flow tubular membrane modules contain PCI Membranes' 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

PCI 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 PCI TMF module performance under real operating conditions.

PCI 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

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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 | 120 psi (827 kPa) at 25°C |
| Max. Solids | 18% |
| Min. Solids | 0.25% |
| Max. Viscosity | 50 cp |
| Min. Viscosity | < 1 cp |

| Maximum Cleaning Solution Strength | |
|---|-----------------------|
| Bleach (NaOCl) | < 17% at 100°F (38°C) |
| Caustic (NaOH) | < 15% at 104°F (40°C) |
| Acid (HCl) | < 15% at 140°F (60°C) |
| Peroxide (H ₂ O ₂) | < 5% at 100°F (38°C) |

| Physical Specifications | |
|----------------------------------|---|
| Modules | |
| Housing Diameter | 1 off 1 1/4" Sc40 |
| Filtrate Port (Qty 2) | 2 off 3/4" NPT Female |
| Feed & Retentate Ports | 2 off 1 1/4" pipe stub |
| Mounting Required | Horizontal; 2 point |
| Module Length | 72" (1,829 mm) |
| Tubes | |
| Number of Tubes | 1 |
| Nominal ID | 0.5" (12.7 mm) |
| Nominal OD | 0.79" (20 mm) |
| Total Active Surface Area | 0.75 ft ² (0.07 m ²) |
| Internal Liquid Volume | |
| Filtrate Volume | 0.37 gallons (1.4 ltr) |
| Concentrate Volume | 0.06 gallons (0.23 ltr) |
| Total Volume | 0.44 gallons (1.67 ltr) |
| Materials of Construction | |
| Potting | Solvent Cement |
| Internal Supports | None |
| Gasket Material | None |
| Preservative | Propylene Glycol |
| Membrane | PVDF |

| PCI TMF relevant parameters overview | | | | | | | |
|--------------------------------------|--|-----------------------|--|-------------|----------------|--------------------------------------|-------------------|
| Item Number | Description | Normal Pore Size (µm) | Maxium Continuous Operating Temperature* | Housing | Substrate Tube | Shipping Dimensions | Shipping Weight |
| MME2005601VP | 1 Tube PVC Module / PE 0.5" tube - 0.05 µm | 0.05 µm | 43°C/110°F | Grade 1 PVC | UHMWPE | 4 x 4 x 74 in 102 x 102 x 1880 mm | 5.5 lbs 2.5 kg |
| MME2S01601VP | 1 Tube PVC Module / PE 0.5" tube - 0.1 µm | 0.1 µm | 43°C/110°F | Grade 1 PVC | UHMWPE | 4 x 4 x 74 in 102 x 102 x 1880 mm | 5.5 lbs 2.5 kg |
| MME2002601VP | 1 Tube PVC Module / PE 0.5" tube - 0.02 µm | 0.02 µm | 43°C/110°F | Grade 1 PVC | UHMWPE | 4 x 4 x 74 in 102 x 102 x 1880 mm | 5.5 lbs 2.5 kg |

* For operation at higher than listed temperatures, contact PCI Membranes.

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

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