Twice the Flow and Recirculation Rate With Next Generation PTFE Membrane Filter Cartridges

Mega-Pure PTFE membrane filter cartridges provide unsurpassed flow rate capability. Parker’s PTFE membrane cartridge outperforms all competitive cartridges of the same rating at a ratio of 2 to 1 or greater, thus reducing the number of cartridges and housings required. PTFE membrane filter cartridges are a low-cost alternative to all-Teflon cartridges. The Mega-Pure PTFE Membrane Series of filter cartridges meets or exceeds requirements for the filtration of UHP liquids used in the fabrication of state-of-the-art microelectronic devices.

The Mega-Pure PTFE Membrane Series is available in 0.05µm, 0.1µm, 0.2µm, 0.45µm and 1µm pore sizes.

Applications

UHP Chemicals
- Acids
- Solvents
- Photoresists
- Tank Vents
- Etchants
- Alkalines

- Developers
- Strippers
- Recirculation
- Wet-Etch Systems
- Rinse Baths

- Process Gases & Compressed Air
- Polymer Filtration

Features and Benefits

Superior PTFE Membrane Yields Maximum Filtration Results
- High flow rates and reduced pressure drops for improved filtration efficiency.
- Rinased to 18 megohm-cm resistivity with UHP water.
- Large, high-purity filtration area for maximum yields.
- Non-fiber releasing.
- Narrow pore size distribution ensures the ultimate in retention and flow rate.
- Available prewetted for immediate use in process.

Parker’s TQM System Assures Consistent Performance and Reliable Filtration
- Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- Integrity-tested and testable in situ.
- Thermally welded, eliminating adhesive extractables.
- Biosafe in accordance with USP Class VI-121° Plastics Tests.
- Specifically designed to ensure cleanliness.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
Specifications

Materials of Construction:
- Membrane: hydrophobic PTFE
- Membrane Support/Drainage: polypropylene
- Structural Components: polypropylene
- O-Ring Material: various
- Sealing Method: thermal welding

Dimensions:
- Diameter: 2.7 in (6.8 cm)
- Lengths: 10-40 in (25-102 cm)

Surface Area (10 in cartridge):
- Minimum 7.5 ft² (0.7 m²)

Integrity Test:
- Bubble Point (100% IPA):
  - $0.05 \mu m \geq 50 \text{ psig (3.4 bar)}$
  - $0.1 \mu m \geq 24 \text{ psig (1.7 bar)}$
  - $0.2 \mu m \geq 16 \text{ psig (1.1 bar)}$
  - $0.45 \mu m \geq 6 \text{ psig (0.4 bar)}$
  - $1 \mu m \geq 3 \text{ psig (0.2 bar)}$

Recommended Operating Conditions:
- Maximum Temperature:
  - 176°F (80°C) @ 30 \Delta P (2.1 bar)
- Maximum Differential Pressure:
  - Forward:
    - 70 psi (4.8 bar) @ 77°F (25°C)
    - 30 psi (2.1 bar) @ 176°F (80°C)
  - Reverse:
    - 50 psi (3.4 bar) @ 77°F (25°C)

Sterilization/Sanitization Methods:
- Hydrogen Peroxide
- Sodium Hydroxide
- IPA (70%)
- 180°F (82°C) Water

PTFE Cartridges:
Flow rate vs. \Delta P for a 1 cps liquid @ 73°F (23°C)**

Ordering Information

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<th>PF</th>
<th>F</th>
<th>B</th>
<th>10</th>
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<th>TC</th>
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<td>Length (in)</td>
<td>O-Ring Material</td>
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Flow Factors:

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* Trademark of E.I. du Pont de Nemours & Co.
** Consult Process Filtration Division for gas flow data.