# Advantage™ PF Filter Cartridges

■ **PTFE Membrane**

## *Mega-Pure Membrane Series*

## 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*

- 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.
- Rinsed 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.

**Process Filtration Division**



Parker Filtration

## 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 (68mm).
- Lengths: 10-40 in (250-1020mm).

**Surface Area:**

- Minimum 7.5ft² (0.7 m²).

**Integrity Test:**

- Bubble Point (100% IPA).
  0.05µm ≥ 50 psig (3.4 bar).
  0.1µm ≥ 24 psig (1.7 bar).
  0.2µm ≥ 16 psig (1.1 bar).
  0.45µm ≥ 6 psig (0.4 bar).
  1µm ≥ 3 psig (0.2 bar).

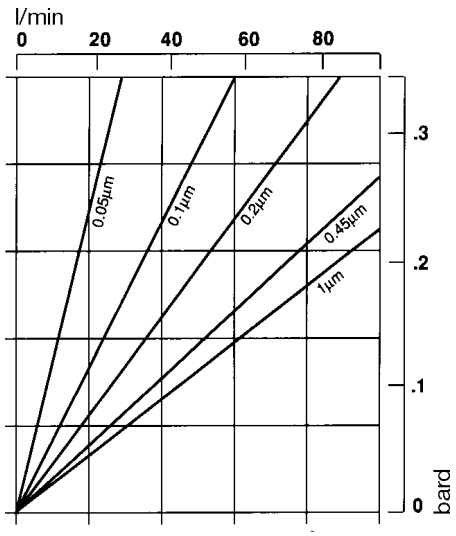
**Recommended Operating Conditions:**

- Maximum Temperature:
  176°F (80°C) @ 30 ΔP (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/Sanitisation Methods:**

- Hydrogen Peroxide.
- Sodium Hydroxide.
- IPA (70%).
- 180°F (82°C) Water.

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




*Flow Rate*

**Flow Factors:**

| Pore Size (µm) | l/min/ bar | bar/ l/min |
|---|---|---|
| 0.05 | 82 | 0.012 |
| 0.1 | 164 | 0.006 |
| 0.2 | 247 | 0.004 |
| 0.45 | 356 | 0.003 |
| 1 | 411 | 0.002 |

## Ordering Information

| PF | F | B | 10 | E | TC | E | W |
|---|---|---|---|---|---|---|---|
| *Cartridge Code* | *Pore Size (µm)* | *Diameter (mm)* | *Length (mm)* | *O-Ring Material* | *End Cap Configuration* | *Grade* | *Special Preparation* |
| PF = Polypropylene/ PTFE | D = 0.05<br>S = 0.1<br>F = 0.2<br>R = 0.45<br>Q = 1 | B = 68 | 10 = 254<br>20 = 508<br>30 = 762<br>40 = 1016 | B = Buna N<br>C = CR 503<br>D = CR 570<br>E = EPR<br>L = KR 8201<br>S = Silicone<br>T = PFA/Viton*<br>V = Viton*<br>X = No O-Ring | SC = 2-226 /Flat<br>SF = 2-226 /Fin<br>TC = 2-222/Flat<br>TF = 2-222/Fin<br>HH = DOE (Gaskets)<br>AC = 020/Flat (Gelman)<br>LC = 120/Flat (Nuclepore; Gelman G Syle)<br>LL = 120/120 (Filterite LMO and Nuclepore Polymeric Housings; Gelman N Style)<br>PC = 213/Flat (Ametek and Parker LT Polymeric Housings; Gelman H Style) | E = Mega Pure | W = Prewetted With Ozonated UHP Water |

* Consult Process Filtration Division for gas flow data.

**Process Filtration Division**

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