# LENNTECH

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# **Double the Flow With Next Generation PTFE Membrane Filter Cartridges**

Ultra-Pure PTFE membrane filter cartridges perform at the highest flow rate to provide the cleanest fluids at the lowest possible cost. Parker's unique PTFE membrane construction serves as a low-cost alternative to all Teflon cartridges in less aggressive applications and maintains broad chemical compatibility with low extractable levels and high particle retention rates.

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

## **Applications**

### **Pharmaceutical**

- Tank Vents
- Filtration of Compressed Gases
- Filtration of Solvents

### **Process Gases**

- Bulk and Pointof-Use Gases
- Compressed Air

### **Food and Beverage**

- Sterile Venting of Holding Tanks
- Sterile CO<sub>2</sub> Filtration
- Microbial Control of Inlet Air for Bioprocessing of Foods

### **Chemicals**

- Solvents
- Bulk Filling
- Acids

# **Features and Benefits**

### **Superior PTFE Membrane Yields**

### **Maximum Filtration Results**

- High flow rates and optimized surface area reduce processing time and filter consumption.
- Rinsed with 18 megohm-cm UHP water for high purity.
- Non-fiber releasing.

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- All-polypropylene component construction complemented by a variety of O-ring seals withstands demanding operating parameters.
- Narrow pore size distribution ensures the ultimate in retention and flow rate.
- Naturally hydrophobic membrane maintains air flow rates in venting and gas applications.
- Available prewetted for immediate use in process.

# Advantage<sup>™</sup> PF Filter Cartridges

PTFE Membrane

# **Ultra-Pure Membrane Series**



#### 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**

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### **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 ft<sup>2</sup> (0.7 m<sup>2</sup>)

#### **Endotoxins:**



#### **Integrity Test:**

Bubble Point (100% IPA):  $0.1 \mu m \ge 24 psig (1.7 bar)$  $0.2\mu m \ge 16 \text{ psig} (1.1 \text{ bar})$  $0.45\mu m \ge 6 psig (0.4 bar)$  $1\mu m \ge 3 psig (0.2 bar)$ 

#### **Recommended Operating Conditions:**

Maximum Temperature: 176°F (80°C) @ 30 ∆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:

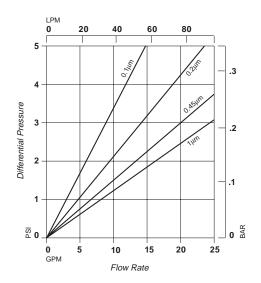
50 psi (3.4 bar) @ 77°F (25°C)

### Sterilization/Sanitization Methods:

Autoclave or *in situ* Steam: 250°F (121°C) for 30 minutes at 15 psi (1.0 bar) 70% IPA 10% Hydrogen Peroxide

**PTFE Cartridges:** Flow rate vs.  $\Delta P$  for a 1 cps

liquid @ 73°F (23°C)\*\*



#### Flow Factors:

| Pore Size<br>(μm) | GPM/<br>1 PSID | LPM/<br>1 Bar | PSID/<br>1 GPM | Bar/<br>1 LPM |
|-------------------|----------------|---------------|----------------|---------------|
| 0.1               | 3.0            | 164           | 0.33           | 0.006         |
| 0.2               | 4.5            | 247           | 0.22           | 0.004         |
| 0.45              | 6.5            | 356           | 0.15           | 0.003         |
| 1                 | 7.5            | 411           | 0.13           | 0.002         |

| ।<br>Cartridge Code         | l<br>Pore Size (μm)                     | l<br>Diameter (in) | 10<br> <br>Length (in)                   | E<br> <br><i>O-Ring Material</i>  | TC<br> <br>End Cap Configuration  | U<br> <br>Grade              | W<br> <br>Special Preparation               |
|-----------------------------|---|--------------------|--|---|---|------------------------------|---|
| PF = Polypropylene/<br>PTFE | S = 0.1<br>F = 0.2<br>R = 0.45<br>Q = 1 | B = 2.7            | 10 = 10<br>20 = 20<br>30 = 30<br>40 = 40 | B = Buna N $C = CR 503$ $D = CR 570$ $E = EPR$ $L = KR 8201$ $S = Silicone$ $T = PFA/Viton*$ $V = Viton*$ $X = No O-Ring$ | 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 (Nuclepord<br>Gelman G Style)<br>LL = 120/120 (Filterite<br>LMO and Nuclepord<br>Polymeric Housing<br>Gelman N Style)<br>PC = 213/Flat (Ametek a<br>Parker LT Polymer<br>Housings: Gelman | e;<br>re<br>js;<br>ind<br>ic | W = Prewetted With<br>Ozonated UHP<br>Water |

#### Housings; Gelman H Style)

## **Process Filtration Division**

Filtration

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\*\* Consult Process Filtration Division for gas flow data.

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