

PTM Filter Cartridges

PTFE Membrane



PTM Membrane Filter Cartridges are sterilizing grade filters manufactured with inherently hydrophobic polytetrafluoroethylene (PTFE) membrane. These cartridges are designed for use in the filtration of aggressive solvents and as compressed gas and vent filters. Each cartridge module is individually tested using the water intrusion method before it is released from manufacture. The cartridge surface area, filter core design, pleat configuration, and pleat packing density have been optimized to provide increased cartridge life and lower filtration operating costs. Rugged construction ensures repeatable steaming and testing.

Construction Materials

Filtration Media	Polytetrafluoroethylene (PTFE)
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding
O-rings	Buna, Viton® (or FKM), EP, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.

Applications

- ◆ Compressed Air
- ◆ Fermentation Air
- ◆ Solvents
- ◆ Pressurized Gases
- ◆ Tank Ventilation

Dimensions

Length	5 to 40 in. (12.7 to 101.6 cm) nominal
Outside Diameter	2.75 in. (7.0 cm) nominal
Filtration Area	8.2 ft ² (0.76 m ²) per 10 in. length

Integrity Test Specifications

Per 10 in. length

Pore Size (liquid)	Bubble Point 60/40 IPA/water wetted	Water Intrusion
0.10 μm	22 psig (1.52 barg)	10 cc/10 minutes @ 35 psi (2.4 bar)
0.22 μm	18 psig (1.24 barg)	13 cc/10 minutes @ 35 psi (2.4 bar)
0.45 μm	9 psig (621 mbarg)	N/A
1.0 μm	6 psig (414 mbarg)	N/A
3.0 μm	2 psig (138 mbarg)	N/A
5.0 μm	1 psig (69 mbarg)	N/A

Maximum Operating Parameters

Differential Pressure	
• Forward	50 psid (3.4 bard) at 20 °C (68 °F)
• Reverse	40 psid (2.7 bard) at 20 °C (68 °F)
Operating Temperature	82 °C (180 °F) at 10 psid (0.69 bard)
Recommended Changeout Pressure	35 psid (2.4 bard)

Sanitization/Sterilization

Autoclave	121 °C (250 °F), 30 min, multiple cycles
In-line Steam	135 °C (275 °F), 30 min, multiple cycles

For all elevated temperature procedures, a stainless steel support ring is required.

Chemical Sanitization

Performed using industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

