



## PureFlo® PTFE Mini Cartridges (PTFE/PP Construction)

### Versatile Small Cartridge

PureFlo® PTFE mini filter cartridges are highly retentive, hydrophobic PTFE membrane filters that have been specially designed for critical applications. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity pyrogen-free water to reduce extractables and downtime.

The naturally hydrophobic PTFE membrane is ideally suited for filtering aggressive chemicals such as acids, bases, and solvents. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for gas filtration and tank venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. We are currently offering seven different PTFE pore sizes with eight different end modifications and three different length options to meet the needs of a wide variety of processes.



### Retrofit for Mini Cartridge

#### Applications

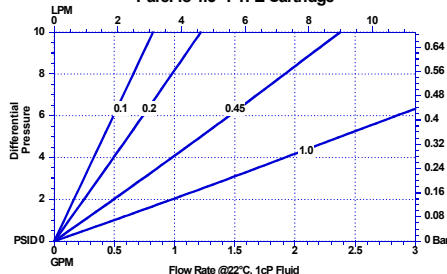
Buffers and Media	Fermentation Tanks
Product Sterilization	Venting
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Scale up Processing
Ink Jets	Acids and Bases

### Specification

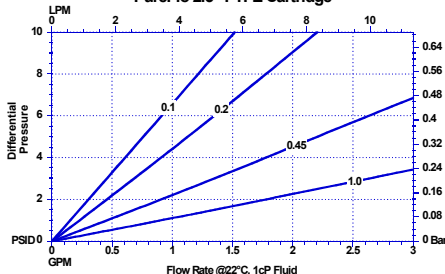
Materials of Construction:	Media: PTFE Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.70 ft <sup>2</sup> (650 cm <sup>2</sup> ) per 1.5" cartridge 1.35 ft <sup>2</sup> (1250 cm <sup>2</sup> ) per 2.5" cartridge 2.6 ft <sup>2</sup> (2420 cm <sup>2</sup> ) per 5.0" cartridge
Available Ratings:	0.1 µm to 10 µm (see ordering guide)
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (60 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

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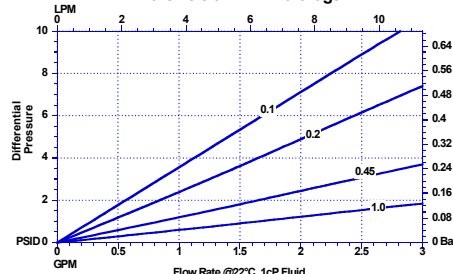
PureFlo 1.5" PTFE Cartridge



PureFlo 2.5" PTFE Cartridge



PureFlo 5.0" PTFE Cartridge



### Specifications (cont.)

#### Bacterial Retention (for 0.2 µm membrane):

Complete retention of  $> 10^7$  organisms/cm<sup>2</sup> of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

#### Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also be sanitized by hot water or common chemicals that are compatible with filter components.

#### Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.



Flange End Modification

### PureFlo® PTFE Mini Cartridge Ordering Guide

PureFlo Mini PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMF = Mini PTFE Cartridge	010 - 0.10 micron 020 - 0.20 micron (0.003µm Gas filter) 045 - 0.45 micron 100 - 1.0 micron 300 - 3.0 micron 500 - 5.0 micron 999 - 10 micron	0 = 222 O-Ring Flat 6 = 226 O-Ring Flat A = 116 Inner O-Ring B = 1.5" Tri-Clamp C = 015 O-Ring D = 1/2" MNPT E = 118 O-Rings F = Flange* G = 1/2" Tri-Clamp M = 123 O-Rings with hold down tabs** N = 116 Inner Housing Seal P = 118 O-Rings with hold down tabs S = 116 Inner O-Ring with locking groove T = 126 O-Rings with locking tabs***	H = 1.5" S = 2.5" L = 5"	E = EPDM N = Buna N S = Silicone T = TEV U = TES V = Fluoroelastomer O = O-Ringless	2P = 2pc/ pack (5") 3P = 3pc/ pack (1.5" and 2.5")
					Option - 5 = SS Insert
Example - A 3 pack of 2.5", 0.1 micron filters with 2-015 EPDM o-ring would be <b>MMF010CSE3P</b>					
* - F end modification is compatible to fit in a PALL SealKleen™ Housing, ** - M end modification is compatible to fit in a Millipore OptiSeal™ Housing, *** - T end modification is compatible to fit a Parker TrueSeal™ Housing					