

POLY-CLEAR®

High Surface Area Polypropylene Microfiber Cartridges for Critical Processes



Description

POLY-CLEAR Series filter cartridges deliver high efficiency and consistent filtration of fluids in a wide range of critical applications. POLY-CLEAR filter cartridges are constructed of pleated melt blown filter media that provides absolute removal of particles from 0.6 to 50 μm . The high surface area POLY-CLEAR filters ensure long service life and low initial pressure drops.

All cartridge hardware components are high purity polypropylene materials for use in critical process applications. POLY-CLEAR cartridges are manufactured and assembled in a clean room environment to minimize the possibility of contamination.

POLY-CLEAR Series cartridges are available in a wide range of configurations to fit most commercially available filter housings.

Benefits

- Filter cartridges are constructed of microfiber melt blown media to provide high area, surfactant-free and non-fiber releasing filtration.
- Multi-layered filter media is optimized for high efficiency particle removal and high contaminant holding capacity resulting in longer on-stream life cycles.
- 100% polypropylene materials of construction provide wide chemical compatibility with acids, bases, salts, and most organic solvents. The high purity construction assures quick rinse up in high purity applications.
- All materials of construction are FDA-listed for food and beverage contact according to CFR Title 21 and comply with USP Class VI toxicity tests for plastics.
- Durable, thermal bonded construction ensures cartridge integrity under severe operating conditions. No adhesives, binders, lubricants, or anti-static agents are used in the manufacturing process.
- Pharmaceutical grade offers 100% lot traceability and can be autoclaved or steam sterilized.

Applications

- Food and Beverage Processing
- High Purity Chemicals
- RO Pretreatment
- Cosmetics and Fragrances
- Chemical Mechanical Polishing
- Photographic Solutions
- Metal Finishing/Plating Solutions
- Solvent Filtration
- Paints and Coatings

Performance Specifications

Retention Ratings	0.6, 1.2, 2.5, 5.0, 10, 20, 50 µm absolute			
Liquid Removal Efficiency¹	Grade	99.99%	99.0%	90.0%
	006	0.6	0.5	0.4
	012	1.2	0.8	0.6
	025	2.5	1.2	0.8
	050	5.0	3.0	2.5
	100	10.0	6.0	5.0
	200	20.0	15.0	10.0
	500	50.0	45.0	40.0
Differential Pressure Forward	to 80 psid (5.5 bar) @ 70° F (21° C)			
Differential Pressure Reverse	to 35 psid (2.4 bar) @ 175° F (80° C)			
Maximum Operating Temperature	185° F (85° C)			
Sterilization Parameters	Maximum 10 cycles at 250° F (121° C) for 30 minutes at ≤5 psid Minimum 1 cycle at 259° F (126° C) for 30 minutes at ≤5 psid			

Materials of Construction

Media	Polypropylene
Support Layers	Polypropylene
Core, Cage, End Caps	Polypropylene
Gaskets/O-Rings	Ethylene Propylene, Silicone, Buna-N, Neoprene, Teflon®, Viton*
Biosafety	All components meet FDA requirements for food and beverage contact per 21 CFR. All components meet USP Biological Resistivity, <i>in vivo</i> , for Class VI-121° plastics.
Outside Diameter (nominal)	2.7" (6.9 cm)
Lengths (nominal)	10, 20, 30, 40" (25.4, 50.8, 76.2, 102 cm)

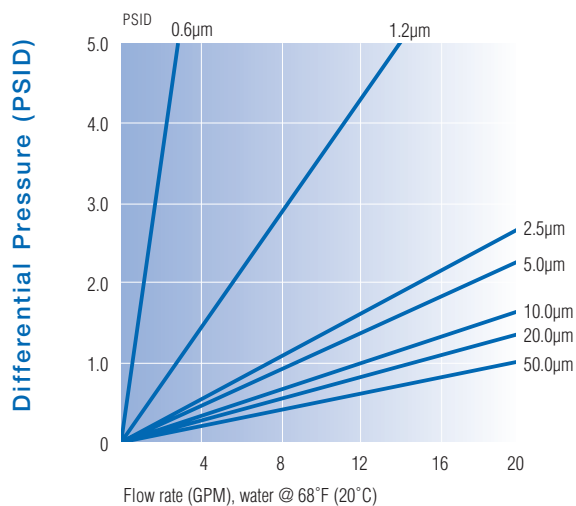
¹ Based on modified ASTM F795 single pass destructive challenge test.

* Viton and Teflon are registered trademarks of E.I. duPont de Nemours and Company.

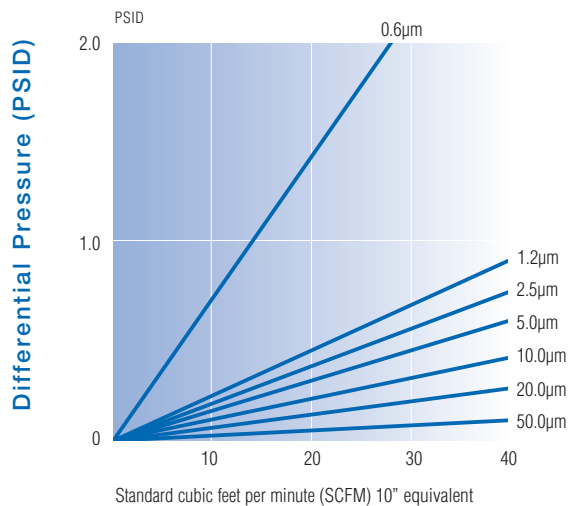
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Flow Rates vs Differential Pressure

Liquid Flow Rates



Air Flow Rates



Cartridge Ordering Information

Cartridge Media Type	Grade	Series	Nominal Length	Cartridge Style	Gasket or O-Ring Material	Utilization
P	006	S	20	3	03	N
Polypropylene	006 = 0.6 µm 012 = 1.2 µm 025 = 2.5 µm 050 = 5.0 µm 100 = 10.0 µm 200 = 20.0 µm 500 = 50.0 µm	B = Beverage E = Electronics S = Standard P = Pharmaceutical	A = 10" B = 20" C = 30" D = 40"	2 = DOE 3 = 222 O-Ring/Flat 4 = Internal 020 Ring/Flat 6 = DOE/Internal 120 Ring 6x = SOE Internal 213 O-Ring 7 = 226 O-Ring/Fin 7a = 226 O-Ring/Flat 8 = 222 O-Ring/Fin	01 = EPR 02 = Neoprene 03 = Silicone 04 = Buna-N 08 = Viton 09 = Teflon Gasket 11 = Teflon/Viton	N = Non-Steam Sterilizable S = Steam Sterilizable

Purolator Advanced Filtration

FPI Division
8314 Tiogawoods Drive
Sacramento, California 95828

Phone: 916-689-2328
Fax: 916-689-1035
E-mail: sales@fpifilters.com
Web: www.fpifilters.com

