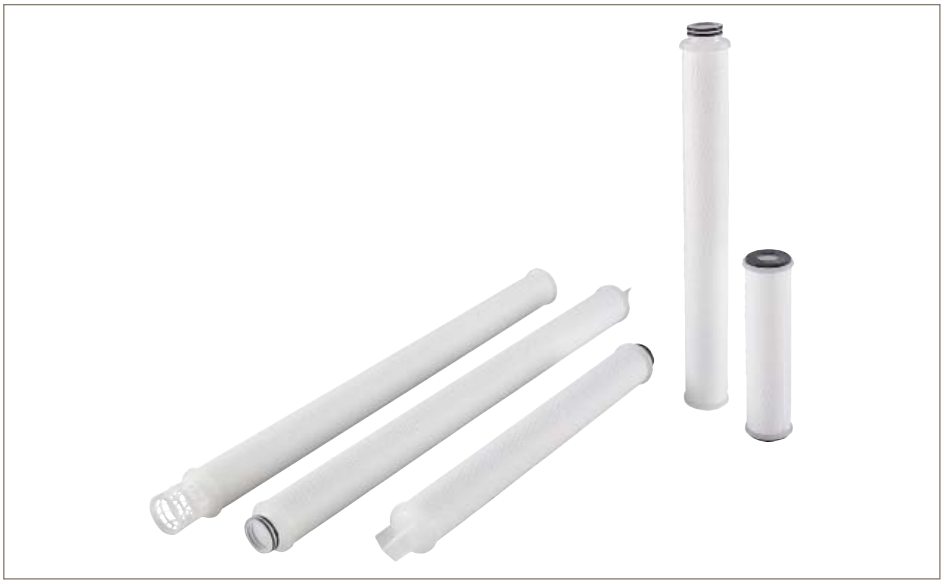
Fulflo® Poly-Mate™ Filter Cartridges

Quality, economical filtration for critical process applications

Parker's Poly-Mate™ Cartridges incorporate a unique combination of polypropylene melt blown and spun-bonded media to provide high surface area, finish-free and non-fiber releasing filtration. All-polypropylene construction maximizes chemical resistance to acids, bases, salts, and most organic solvents.

Poly-Mate™ Pleated Cartridges are available in 0.5µm, 1µm, 5µm, 10µm, 30µm, and 60µm pore sizes (99% removal; ß = 100).



Benefits

- High efficiency rated for critical process applications (99% efficiency)
- High pleated surface area for extended service life, low pressure drop and high flow capacity
- Poly-Mate™ Xtra Duty™ (PXD) cartridge features glass-filled polypropylene core for high temperature and high pressure use with rigid outer cage supporting pleated media in backwash applications
- Optional stainless steel O-ring adapter inserts provide added strength for *in situ* sterilization
- Poly-Mate™ Xtra Duty cartridges are available with backwashable construction, reducing replacement maintenance and cartridge disposal costs
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- One piece, continuous to 40 in length, integrally sealed pleated filter media

Applications

- Disposal Wells
- Photographic
- Wastewater
- High-Technology Coatings
- R.O. Membrane Pre-filtration
- Plating Chemicals
- Fine Chemicals
- Process Water
- Deionized Water

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ENGINEERING YOUR SUCCESS.

Fulflo® Poly-Mate™ Filter Cartridges

SPECIFICATIONS

Materials of Construction

Filter media and support layers
Polypropylene
Surface treatment
None (fusion-sealed), chemically inert and neutral
Media protection
PM – polypropylene netting;
PXD – polypropylene cage
Pleat pack side seal - Fused polypropylene
End caps - Polypropylene
Seals - Buna-N, EPR, Silicone, Viton®, PFA encapsulated Viton® O-rings, Polyethylene foam gaskets

Recommended Operating Conditions

Poly-Mate Cartridges (Std.)
Change Out ΔP - 35psid (2.4bar)
Maximum Temperature - 200°F (93°C)
Maximum Temperature @ 35psid (2.4bar) - 125°F (52°C)
Maximum ΔP @ 70°F (21°C)
60psid (4.1bar)
Maximum ΔP @ 200°F (93°C)
10psid (0.7bar)

Poly-Mate Xtra-Duty Cartridges
Change Out ΔP - 35psid (2.4bar)
Maximum Temperature - 200°F (93°C)
Maximum Temperature @ 35psid (2.4bar) - 200°F (93°C)
Maximum ΔP @ 70°F (21°C)
90psid (6.1bar)
Maximum ΔP @ 200°F (93°C)
35psid (2.4bar)

Performance Attributes

Dimensions

Cartridge Outside Diameter
2 ½ in (63.5 mm)
Cartridge Inside Diameter
DOE – 1 1/16 in (27 mm)
SOE – 1 in. (25.4 mm)

Filtration Ratings

99% at 0.5µm, 1µm, 5µm, 10µm, 30µm, and 60µm pore sizes

Effective Filtration Area

Up to 6.0 ft²/10 in (0.6m²/254 mm)

Recommended Maximum Flow Rate

Maximum 10gpm per 10 in. length

Flow Rate and Pressure Drop Formulas

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

Beta Ratio (ß) =

$$\frac{\text{Upstream Particle Count @ Specified Particle Size and Larger}}{\text{Downstream Particle Count @ Specified Particle Size and Larger}}$$

Percent Removal Efficiency $= \left(\frac{ß-1}{ß}\right) 100$

Performance determined per ASTM F-795-88. Single-Pass Test using AC test dust in water at a flow rate of 3.5gpm per 10 in (13.2 lpm per 254 mm) cartridge.

Notes:

1. **Clean ΔP** is psi differential at start.
2. **Viscosity** is centistokes. Use Conversion Tables for other units.
3. **Flow Factor** is ΔP/GPM at 1cks for 10 in. (or single).
4. **Length Factors** convert flow or DP from 10 in (single length) to required cartridge length.

Liquid Particle Retention Ratings (µm) @ Removal Efficiency of:

Cartridge	ß=5000 99.98%	ß=1000 99.9%	ß=100 99%	ß=50 98%	ß=20 95%	ß=10 90%
PM/PXD005	3	3	0.5	.25	<0.1	<0.1
PM/PXD010	5	4.5	1.0	0.5	0.2	<0.1
PM/PXD050	15	10	4	2.0	0.7	0.25
PM/PXD100	30	28	10	6	3	1.2
PM/PXD300	45	43	30	18	8	4.5
PM/PXD600	95	90	50	40	20	12

Poly-Mate Flow Factors (psid/gpm @ 1 cks)

Rating (µm)	Flow Factor
0.5	0.0900
1.0	0.0530
5.0	0.0290
10.0	0.0068
30.0	0.0048
60.0	0.0030

Poly-Mate Length Factors

Inches	Factor
9	1
10	1
19	2
20	2
24	3
30	3
39	4
40	4

Ordering Information

Cartridge Code	
PM	Standard
PXD	Xtra Duty

Pore Size	
CODE	MICRON
005	0.5
010	1.0
050	5.0
100	10.0
300	30.0
600	60.0

Nominal Length	
CODE	INCHES (MM)
9	9 5/8 (244)
10	9 13/16 (249)
19	19 5/8 (498)
20	19 15/16 (506)
29	29 1/4 (743)
30	30 1/16 (764)
40	40 (1016)

Core	
CODE	MATERIAL
A	Natural Polypropylene (PM core only)
F	Glass-filled polypropylene (PXD core only)
G	304 stainless steel (core only)

Seal Material	
CODE	MATERIAL
P	Polyfoam (DOE gasket only)
E	EPR
N	Buna-N
S	Silicone
T	PFA Encapsulated Viton® (222, 226 O-ring only)*
V	Viton®
X	No seal material

*PFA/Viton® is O-ring only, T is expanded PTFE gaskets

End Cap Configuration	
CODE	DESCRIPTION
AR	020 O-ring/Recessed cap
DO	Double open end (DOE)
DX	Double open end/extended core
LL	120/120 (Filterlite LMO & Nuclepore Polymeric Vessels)**
LR	120 O-ring/Recessed (Nuclepore)**
PR	213 O-ring/Recessed cap (Ametek® & Parker LT Polymeric Vessels) **
TC	222 O-ring/Flat
TF	222 O-ring/Fin
SC	226 O-ring/Flat
SF	226 O-ring/Fin

**Available only in 9 5/8" (-9) and 19 5/8" (-10) lengths

Special Options	
CODE	DESCRIPTION
B	Bubble-point test
R	DI water rinse (5 minutes)
Z6	Individual Poly bag only (PXD only)
Z15	Individual Poly bag 15/ctn. (20", 30", 40") (PXD only)
Z30	Individual Poly bag 30/ctn. (10") (PXD only)

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