Fulflo® MegaBond Plus™ Cartridges

Depth Cartridge for High Dirt-Holding Capacity and Absolute-Rated Filtration Efficiency

Parker's Fulflo® MegaBond Plus™ (MBP) are absolute rated depth cartridges. Using a new innovative manufacturing process, the MBP has higher dirt-holding capacities offering long service life without contaminant migration. The MBP has a fixed core inner structure of thermally bonded continuous microfine polypropylene fibers. The modified outer layer fixed pore structure maximizes the graded density surface area to enhance dirt-holding capacity.

Available in absolute (ß = 5000) ratings of 1, 3, 5, 10, 15, 20, 30, 40, 70, 90 and 120 micron.

Benefits

- Microfine, thermally bonded fiber construction provides superior filtration & often eliminates the need for circulation to achieve product clarity
- Non-fiber-releasing, continuous fiber matrix prevents media migration and ensures consistent production yields and overall quality filtration performance
- No surfactants or binders are present to interrupt product quality or cause foaming
- Double open-end cartridges have polyolefin gaskets thermally bonded to both ends eliminating fluid bypass between the cartridge and the vessel seal
- Superior inter-layer bonding eliminates contaminant unloading and channeling
- Unique outer graded density structure increases dirt holding capacity
- Polypropylene fiber provides broad chemical compatibility for a variety of applications
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- Pore size differentiation is achieved using fibers of differing diameters and maintaining uniform density throughout the cartridge
- Pore sizes do not change as DP increases during service, providing consistent particle retention

Contact Information

Parker-Hannifin Corporation
domnick hunter
Process Filtration - North America
2340 Eastman Avenue
Oxnard, California, USA 93030

toll free +1 877 784 2234
phone +1 805 604 3400
fax +1 805 604 3401
dhpsales.na@parker.com

www.parker.com/processfiltration

Applications

- Photographics
- High Technology Coatings
- DI Water
- Plating Solutions
- Chemical Processing
- Membrane Prefiltration
- Food & Beverage

Parker domnick hunter

ENGINEERING YOUR SUCCESS.

Fulflo® MegaBond Plus™ Cartridges

Specifications

Materials of Construction:

Polypropylene:
Microfiber 100% melt blown construction
Center Support Core/End Caps:
Natural polypropylene
Thermally Bonded Gaskets:
Polyolefin closed cell foam (DOE only)

Maximum Recommended Operating Conditions:

Temperature:
@ 60psid (4.1bar): 80°F (27°C)
@ 35psid (2.4bar): 160°F (71°C)
@ 15psid (1.0bar): 200°F (93°C)
Flow Rate:
5gpm (18.9 lpm) per 10 in length

Recommended Maximum:

Change Out ΔP: 35psi (2.4bar)
Operating Pressure @ Ambient Temperature: 60psid (4.1bar)

Dimensions:

1 in ID x 2-9/16 in OD 10, 20, 30 and 40 in continuous nominal lengths

Absolute Filtration Ratings:

1µm, 3µm, 5µm, 10µm, 15µm, 20µm, 30µm, 40µm, 70µm, 90µm and 120µm

Beta Ratio (ß) =

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

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

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.

MBP Flow Factors (psid/gpm @ 1 cks)

Rating (µm)	Flow Factor
MBP1	2.17
MBP3	1.60
MBP5	0.90
MBP10	0.32
MBP15	0.16
MBP20	0.12
MBP30	0.10
MBP40	0.05
MBP70	<0.05
MBP90	<0.04
MBP120	<0.03

MBP Length Factors

Length (in)	Length Factor
9.75	1.0
10.00	1.0
19.50	2.0
20.00	2.0
29.25	3.0
30.00	3.0
39.00	4.0
40.00	4.0

Flow Rate and Pressure Drop Formulas

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

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

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 ΔP from 10 in (single length) to required cartridge length.

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

Cartridge	ß=5000 Absolute	ß=1000 | 99.0%	ß=100 | 99%	ß=50 | 98%	ß=10 | 90%
MBP1	1	0.9	0.5	0.4	0.2
MBP3	3	2.8	1.9	1.7	0.8
MBP5	5	3.7	2.3	1.6	1.2
MBP10	10	9.1	8.0	7.8	6.7
MBP15	15	12.0	9.6	8.9	7.2
MBP20	20	18.3	13.0	12.5	8.7
MBP30	30	25.0	20.0	18.0	13.0
MBP40	40	35.0	28.0	25.0	18.0
MBP70	70	60.0	48.0	42.0	30.0
MBP90	90	80.0	72.0	63.0	48.0
MBP120	120	105.0	95.0	85.0	70.0

Ordering Information

MBP [ ] **M** [ ] [ ] — [ ] — [ ]

Cartridge Code	
MBP	MegaBond Plus

Micron Rating (Absolute) (µm)
1
3
5
10
15
20
30
40
70
90
120

Nominal Length	
CODE	INCHES
9-4	9¾"
10	10"
19-4	19½"
20	20"
29-4	29¼"
30	30"
39-4	39"
40	40"

Support Construction	
CODE	MATERIAL
N	Polypropylene
G	304 SS (Core Only)

End Cap Configuration			
CODE	DESCRIPTION	CODE	DESCRIPTION
None	Std. Double Open End (DOE) / Polyfoam	SSC	SS inserted 226 O-ring/Closed
AR	020/Flat (Gelman)	SSF	SS inserted 226 O-ring/Fin
DO	DOE	STC	SS inserted 222 O-ring/Closed
DX	DOE with Polypro extender	STF	SS inserted 222 O-ring/Fin
LL	120 O-ring both ends**	TC	222 O-ring/Flat
LR	120 O-ring/Recessed**	TF	222 O-ring/Fin
OB	Std. open end/Polypropylene spring closed end	TX	222 O-ring/Flex Fin
PR	213 O-ring/Recessed**	XA	DOE w/Extended Core
SC	226 O-ring/Flat	XB	Ext. core open end/Polypropylene spring closed end
SF	226 O-ring/Fin		

**Available only in 9¾" (9-4) and 19½" (19-4) lengths.

Seal Material	
CODE	MATERIAL
None	Polyfoam (DOE only)
E	EPR
N	Buna-N
S	Silicone (O-ring only)
T	PFA Encapsulated Viton® (222, 226 O-ring only)
V	Viton®

Specifications are subject to change without notification.
For User Responsibility Statement, see www.parker.com/safety

DS_IP_MegaBond Plus Rev. A