

C-1307

Fulflo® DuraBond™ Cartridges

Economical Filtration With High Strength Thermally Bonded Depth Cartridges

Parker's Fulflo® DuraBond™ Cartridges are the most economical high strength filter cartridges available. Featuring an integral rigid thermally bonded construction, the DuraBond™ provides consistent filtration for a wide variety of fluids. Its fixed pore structure acts as a sieve-like particle "classification" filter for pigmented coatings allowing pigments to pass while stopping large agglomerates.

Fulflo® DuraBond™ Cartridges are available in nominal ratings of 1µm, 3µm, 5µm, 10µm, 25µm, 50µm, 75µm and 100µm.

Benefits

- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Thermally bonded bicomponent fiber matrix provides rigid dimensionally stable construction without fiber migration
- Rigid construction eliminates contaminant unloading and channeling
- Corrugated porous surface maximizes dirt holding capacity
- Silicone free construction will not change coating properties
- FDA grade polypropylene (DOE only) certified to ANSI/NSF61 standard for contact with drinking water components
- Polyolefin construction 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
- DuraBond™ cartridges can be easily disposed by shredding, incinerating or crushing
- DuraBond™ construction provides particle "classification" effect with pigmented coatings
- Double-open-end style is self-sealing without separate gasket material

Applications

- Photographic Chemicals
- DI Water
- Plating Solutions
- Bleach
- R. O. Prefiltration
- Organic Solvents
- Oilfield Fluids
- Membrane Prefiltration
- Industrial Coatings
- Magnetic Coatings
- Potable Water
- Processing Fluids



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Fulflo® DuraBond™ Cartridges

Specifications

Materials of Construction:

Filter Medium: Thermal Bonded bicomponent matrix of polypropylene/polyethylene
 End Caps/Adapters (optional): polyolefin copolymer
 Seal Options: Various; refer to Ordering Information

Dimensions:

1-1/16 in (27mm) ID x 2-7/16 (62mm) in OD
 10, 20, 30, 40, and 50 in continuous nominal lengths

Maximum Recommended Operating Conditions:

Temperature: 175°F (80°C)
 Pressure:
 100 psid (6.8bar) @ 72°F (27°C)
 50 psid (3.4bar) @ 175°F (80°C)
 Flow rate:
 5gpm (18.9 lpm) per 10 in length.
 Changeout ΔP: 30 psi (2.1 bar)

Nominal Filtration Ratings:

(90% efficiency) 1, 3, 5, 10, 25, 50, 75, 100 μm

DBC Flow Factors

Rating (μm)	Aqueous Service PSI/GPM per 10 in Cartridge
DBC1	0.109
DBC3	0.087
DBC5	0.073
DBC10	0.058
DBC25	0.031
DBC50	0.022
DBC75	0.015
DBC100	0.012

DBC 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
50.00	5.0

Flow Rate and Pressure Drop Formulas

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

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

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

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

Cartridge	β = 10 90%	β = 20 95%	β = 100 99%	β = 1000 99.9%
DBC1	1	2	4	5
DBC3	3	4	8	10
DBC5	5	10	16	20
DBC10	10	15	25	30
DBC25	25	30	50	55
DBC50	50	70	80	90
DBC75	75	100	>100	>100
DBC100	100	>100	>100	>100

Beta Ratio (β) = $\frac{\text{Upstream Particle Count @ Specified Particle Size and Larger}}{\text{Downstream Particle Count @ Specified Particle Size and Larger}}$

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

Performance determined per ASTM F-795-88. Single-Pass Test using AC test dust in water at a flow rate of 2.5 gpm per 10 in (9.5 lpm per 254 mm).

Ordering Information

DBC					
Cartridge Code	Micrometer Rating (μm)	Filter Medium	Nominal Length (in)	End Cap Configuration	Seal Material
DBC = DuraBond Cartridge	1 3 5 10 25 50 75 100	M = FDA Grade Polypropylene	Code in mm 9-4 = 9-3/4 248 10 = 10 254 19-4 = 19-1/2 495 20 = 20 508 29-4 = 29-1/4 743 30 = 30 762 39-4 = 39 991 40 = 40 1016 50 = 50 1270	None = DOE (w/o gaskets) AR = 020/Flat (Gelman) DO = Double open end (DOE) LL = 120 O-Ring both ends** LR = 120 O-Ring/Recessed** OB = Std. Open End/Polypro spring closed end PR = 213 O-Ring/Recessed** SC = 226 O-Ring/Flat SF = 226 O-Ring/Fin TC = 222 O-Ring/Flat TF = 222 O-Ring/Fin TX = 222 O-Ring/Flex Fin XA = DOW w/Extended Core XB = Ext. Core Open End Polypro spring closed end	None = No Seal Material (Std. DOE) P = Poly Foam Gaskets w/Collars (DO only) E = EPR N = Buna-N S = Silicone (O-Ring only) T = PFA Encapsulated Viton* (222, 226 O-Ring Only) V = Viton* W = Poly Foam Gaskets without Collars (DO only)

** Available only in 9-3/4" (9-4) and 19-1/2" (19-4) lengths.

Specifications are subject to change without notification.
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