

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	β = 20	β = 100	β = 1000
	90%	95%	99%	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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 SPEC-C1307-Rev. A 01/08



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