Fulflo® DuraBond™ Filter Cartridges

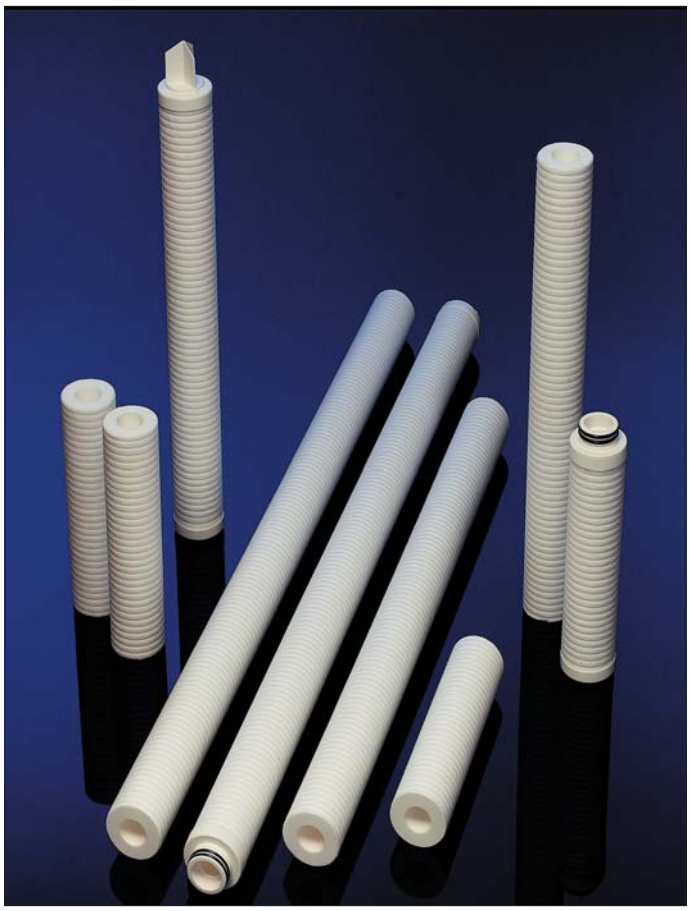
■ Polyolefin

Bonded Depth Series

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.



Applications

- Photographic Chemicals
- DI Water
- Plating Solutions
- R. O. Prefiltration
- Organic Solvents
- Oilfield Fluids
- Cosmetics
- Toiletries
- Food & Beverages
- Membrane Prefiltration
- Chemical Processing Fluids
- Potable Water
- Bleach
- Magnetic Coatings
- Industrial Coatings

Features and 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.

Process Filtration Division

Bulletin C-1307 Eff. 11/98, Rev. 3/04

Specifications

Nominal Filtration Ratings: (90% efficiency)

- 1, 3, 5, 10, 25, 50, 75, 100 µm.

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: 10gpm (38 lpm) per 10 in length.
- Changeout ΔP: 30 psi (2.1 bar)

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

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

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

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).

DBC Flow Factors

Rating *(µm)*	Aqueous Service PSID/ 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 Formulae:

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

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

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 1 cks for 10 in (or single).
4. **Length Factors** convert flow or ΔP from 10 in (single length) to required cartridge length.

Ordering Information

DBC — *Cartridge Code*
DBC = DuraBond Cartridge

10 — *Micrometer Rating (µm)*
1, 3, 5, 10, 25, 50, 75, 100

M — *Filter Medium*
M = FDA Grade Polyolefin

10 — *Nominal Length*

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

TC — *End Cap Configuration*

None	DOE w/o gaskets
AR	020 O-Ring (Recessed)
DO	DOE with gaskets
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 Cap
SF	226 O-Ring/Fin
TC	222 O-Ring/Flat Cap
TF	222 O-Ring/Fin
TX	222 O-Ring/Flex Fin
XA	DOE w/Core Extender
XB	Ext. Core Open End/Polypro Spring Closed End

N — *Seal Material*

None	No Seal Material (Std. DOE)
A	Poly Foam Gaskets w/Collars (DO only)
E	EPR
N	Buna N
S	Silicone
T	PFA Encapsulated Viton* (222.2226 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.

Process Filtration Division

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