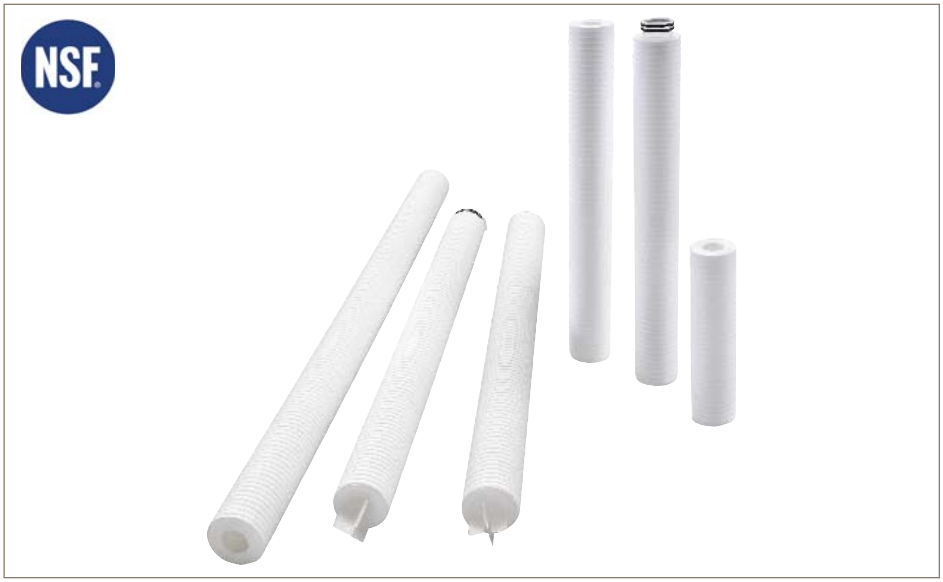
Fulflo® DuraBond™ Cartridges

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.

DuraBond cartridges are available in nominal ratings of 1µm, 3µm, 5µm, 10µm, 25µm, 50µm, 75µm and 100µm.



Contact Information

Parker Hannifin Corporation
Bioscience Division - N.A.
2340 Eastman Avenue
Oxnard, CA 93030

phone +1 805 604 3583
bioscience.na@parker.com

www.parker.com/bioscience

Benefits

- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Thermally bonded bi-component 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
- FDA grade polypropylene (DOE only) certified to ANSI/NSF61 standard for contact with drinking water components
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- Polyolefin construction provides broad chemical compatibility for a variety of applications Easily disposed by shredding, incinerating or crushing
- Construction provides particle "classification" effect with pigmented coatings
- Double-open-end style is self-sealing without separate gasket material
- ISO 9001 registered company

Applications

- Photographic Chemicals
- DI Water
- Plating Solutions
- Bleach
- RO Pre-filtration
- Organic Solvents
- Oil Field Fluids
- Membrane Pre-filtration
- Industrial Coatings
- Magnetic Coatings
- Potable Water
- Process Fluids

Fulflo® DuraBond™ Cartridges

SPECIFICATIONS

Materials of Construction

- Filter Medium:
  Thermal Bonded bi-component 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:
  - 100psid (6.8bar)@72°F (27°C)
  - 50psid (3.4bar)@175°F (80°C)
- Flow rate:
  5gpm (18.9 lpm) per 10 in. length
- Change-out ΔP: 30psi (2.1bar)

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

Flow Rate (gpm):

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

Clean ΔP:

$$\frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

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

Beta Ratio (ß) = Upstream Particle Count @ Specified Particle Size and Larger / Downstream Particle Count @ Specified Particle Size and Larger

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

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

Ordering Information

DBC [ ] **M** [ ] — [ ] — [ ]

Cartridge Code	
DBC	DuraBond

Micron Rating
1
3
5
10
25
50
75
100

Nominal Length		
CODE	IN.	mm
9-4	9-¾	248
10	10	254
19-4	19-½	495
20	20	508
29-4	29-¼	743
30	30	762
39-4	39	991
40	40	1016
50	50	1270

End Cap Configuration	
CODE	DESCRIPTION
None	Double Open End (DOE) w/o gaskets
AR	020 Flat (Gelman)
DO	DOE
LL	120 O-ring both ends**
LR	120 O-ring/Recessed**
OB	Std. open end/Polypropylene spring closed end
PR	213 O-ring/Recessed**
SC	226 O-ring/Flat
SF	226 O-ring/Fin
TB	222 Open end, poly spring closed end
TC	222 O-ring/Flat
TF	222 O-ring/Fin
TX	222 O-ring/Flex fin
XA	DOE w/extended core
XB	Ext. core open end polypropylene spring closed end

Seal Material	
CODE	MATERIAL
None	No Seal Mat. (Std. DOE)
A	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 w/o collars (DO only)

**Available only in 9-¾" (9-4) and 19-½" (19-4) lengths.

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