LENNTECH
info@lenntech.com
www.lenntech.com
Tel. +31-15-261.09.00
Fax. +31-15-261.62.89

Fulflo® Filter Cartridges

■ Phenolic Resin Bonded Cellulosic Media

Pleated Series

Unique Cartridge Construction Improves Particle Retention, Service Life and Flow Rates

Parker Fulflo® Pleated Cellulosic Cartridges meet a broad range of critical filtration applications. Each cartridge in the Fulflo Pleated Cellulosic series is manufactured with premium grade, phenolic impregnated, cellulosic filter media. Phenolic resin locks the cellulosic fibers into a rigid, porous matrix. This structure provides superior particle removal and particle retention performance under the most severe conditions.

Fulflo Pleated Cartridges are available in 2µm, 3µm, 10µm and 30µm pore sizes (99%$^{+}$ removal; ß = 100).

Applications

- Chemical
- Oil Field
- Photographic Film & Paper
- Metal Treatment
- Process Water
- Synthetic Fibers
- Recording Media
- Coatings, Paint, Ink & Resins
- Petroleum
- Process Gas

Features and Benefits

- Premium pleated cellulosic media allow high flow capacity at low pressure drop.
- Available in a variety of cartridge lengths and end cap configurations to fit most industrial housings.
- Phenolic resin impregnated to provide strength, integrity and high contaminant capacity.
- High flow rates permit the use of smaller housings and fewer cartridges.
- Lower ΔP reduces power requirements and pump wear and tear.
- Longer cartridge life reduces frequency of filter change out resulting in less disposal costs, reduced inventory and less process interruptions.

Process Filtration Division

Bulletin C-2020 Effective 4/97

Parker Filtration

Specifications

Filtration Ratings:

- 99%+ at 2µm, 3µm, 10µm and 30µm pore sizes

Materials of Construction:

- Phenolic impregnated cellulosic media
- Polypropylene support
- Stainless steel support (optional)

Recommended Operating Conditions:

- Maximum 7 gpm per 10 in length (23 lpm/254 mm)
- Stainless Steel Support:
  Maximum Temperature: 250°F (121°C)
  Maximum ΔP: 50 psi (3.5 kg/cm²)
  Optimum Change Out ΔP: 35 psi (2.5 km/cm²)
- Polypropylene Support:
  Maximum Temperature @ 10 psid (0.7 km/cm²): 200°F (93°C)
  Maximum Temperature @ 35 psid (2.5 km/cm²): 125°F (52°C)
  Maximum ΔP @ 75°F (24°C): 60 psi (4.2 kg/cm²)
  Change Out ΔP: 35 psi (2.5 km/cm²)

Dimensions:

- Overall Length: See catalog sheet C-2090. SOE fits standard housings with O-ring seals.
- Outside Diameter: 2-1/2 in (63.5 mm)
- Inside Diameter: DOE 1-1/16 in (27 mm); SOE 1 in (25.4 mm)

PCC / PCG Length Factors

Length *(in)*	Length Factor
9	1.0
10	1.0
19	2.0
20	2.0
29	3.0
30	3.0
40	4.0

PCC / PCG Flow Factors (psid/gpm @ 1 cks)

Rating *(µm)*	Flow Factor
2	0.026
3	0.017
10	0.002
30	0.001

Liquid Particle Retention Ratings (µm) at Removal Efficiencies of:

Cartridge	ß=5000 Absolute	ß=1000 99.9%	ß=100 99%	ß=50 98%
PCG 020	10	8.6	1.8	0.9
PCC 3	12	10	3	1.7
PCC 10	22	18	6	3.2
PCC 30	100	85	11	4.5

Flow Rate and Pressure Drop Formulas:

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

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

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

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

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).

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

PCG020 — 10 A N — TC

Cartridge Code (µm)

PCG020 – 2
PCC3 – 3
PCC10 – 10
PCC30 – 30

Nominal Length

(code)	*(in)*	*(mm)*
9	9-5/8	244
10	10	249
19	19-5/8	498
20	20	506
29	29-1/4	743
30	30	764
40	40	1016

Support Construction

A = Polypropylene (DOE/SOE)
G = 304 Stainless Steel (DOE)

Seal Options

E = EPR O-Ring
N = Buna-N O-Ring
S = Silicone O-Ring
V = Viton* O-Ring
A = Polyethylene Foam Gasket (DO, DX Only)

End Cap Options

DO = Double Open End (DOE)
DX = DOE With Core Extender
SC = 226 O-Ring/Cap
SF = 226 O-Ring/Fin
TC = 222 O-Ring/Cap
TF = 222 O-Ring/Fin

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