Fulflo® Metallic Filter Cartridges

High-integrity cartridges for optimized filtration

Fulflo® metallic stainless steel filter cartridges provide optimum filtration for fluids and gases in high temperature and high flow rate applications.

Available in a cylindrical or pleated design, cleanable stainless steel cartridges are the logical choice when natural and synthetic media cartridges cannot meet aggressive process conditions.

Fulflo® reusable 304 and 316 grade stainless steel cartridges offer versatility of choice with fourteen nominal particle removal ratings, six standard lengths and a variety of end configurations and seal materials.

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Benefits

- Temperature capability up to 500° F with synthetic seals; up to 1500°F with NPT connections
- Available in 304 and 316 stainless steel for aggressive chemical compatibility
- Available in fourteen nominal ratings from 2 to 840 microns for a wide range of particle size removal
- Dimensional integrity of stainless steel media accommodates high flow rate/high temperature systems
- Cartridges can be cleaned & reused
- Available with a wide range of grommet and O-ring materials to optimize fluid and temperature compatibility
- Variety of seal configurations allow retrofit in many filter vessel designs
- Pleated surface maximizes filtration area for longer service life
- Plain (cylindrical) surface provides ease of cleaning
- Welded and crimped construction eliminates the need for adhesives which can be a contaminant source and limit temperature range
- Optional perforated stainless steel pleat protectors minimize handling damage
- Meets FDA guidelines for use with potable and edible liquids

Applications

- Heat Transfer
- Hot Melt Processes
- Viscous Fluids
- Hot Wax
- Aggressive Gases
- Polymer Filtration
- High Temperature Processes
- Process Fluids Steam
- Corrosive Fluids
- Catalyst Recovery
- Caustic Cleaning Solutions

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ENGINEERING YOUR SUCCESS.

Fulflo® Metallic Filter Cartridges

SPECIFICATIONS

Materials of Construction:

- Filter Medium: Stainless steel wire cloth
- Structural Components: 100% stainless steel
- Seal Materials:
  - Grommets: Buna-N, Viton®, PTFE, EPDM
  - O-Rings - Buna-N, EPDM, Viton®, PFA encapsulated Viton®
- Construction Method: Welded and crimped (no adhesives)
- Meets FDA guidelines with optional seal materials ("F" Code)

Maximum Recommended Operating Conditions:

- Temperature:
  - 1500ºF (816°C) - NPTF & NPTM styles only
  - 500ºF (260°C) - Any cartridge style with PTFE grommet
  - 400ºF (204°C) - Any cartridge style with Viton® or PFA encapsulated Viton® seal material
  - 300ºF (149°C) - Any cartridge style with EPDM seal material
  - 250ºF (121°C) - Any cartridge style with Buna-N seal material
- Differential Pressure:
  - Standard core: 60psi (4.1bar)
  - High pressure core: 300psi (20.7bar)
- Flow Rate: 10gpm (38 lpm) per 10 in. cartridge
- Change-out ΔP: 35psi (2.4bar)

Particle Removal Ratings (Nominal):
14 ratings from 2 to 840 micrometers

Effective Filtration Area:
Cylindrical
0.5 ft^2/10 in. length (465 cm^2/254mm)
Pleated
1.7 ft^2/10 in. length (1580 cm^2/254 mm)

Dimensions

- Outside Diameter:
  - Cylindrical: 2-½ in (64 mm)
  - Pleated: 2-⅝ in (67 mm)
- Inside Diameter: 1-1/16 in (27 mm)
- Lengths (nominal): 10, 20 and 30 in
- Grommet: 1-1/16 in. (27 mm) ID X 1-7/8 in. (48 mm) OD

Flow Rate and Pressure Drop Formulas

$$\text{Flow Rate (gpm)} = \frac{\text{Clean DP x Length Factor}}{\text{Viscosity x Flow Factor}}$$

$$\text{Clean DP} = \frac{\text{Flow Rate x Viscosity x Flow Factor}}{\text{Length Factor}}$$

Notes:
1. Clean DP is psi differential at start.
2. Viscosity is centistokes. Use Conversion Tables for other units.
3. Flow Factor is DP/GPM at 1cks for 10 in (or single).
4. Length Factors convert flow or DP from 10 in (single length) to required cartridge length.

Removal Rating/Mesh Count/Open Area

Micrometer Rating Nominal | (Absolute)		Mesh Count (per inch)	Percent Open Area
2	9	325 x 2300	N/A
5	14	200 x 1400	N/A
10	18	165 x 1400	N/A
20	32	200 x 600	N/A
40	55	120 x 400	N/A
75	-	190 x 200	35
100	-	30 x 150	31
150	-	90 x 100	33
190	-	70 x 80	35
230	-	50 x 60	41
280	-	40 x 50	35
370	-	40 x 40	36
540	-	30 x 30	45
840	-	20 x 20	52

Ratings from 2 - 40 micrometers are twill dutch weave pattern
Ratings from 75 - 840 micrometers are open square weave pattern

Length Factor Table

Length	Length Factor
9-¾", 10	1
19-½", 20	2
29-¼", 30	3
39, 40	4

Flow Factor Table

Rating	CSS Flow Factor	PSS Flow Factor	Rating	CSS Flow Factor	PSS Flow Factor
2	0.011111	0.003268	150	0.001462	0.000430
5	0.008681	0.002553	190	0.001389	0.000408
10	0.005787	0.001702	230	0.001323	0.000389
20	0.003966	0.001167	280	0.001157	0.000340
40	0.002222	0.000654	370	0.000992	0.000292
75	0.001736	0.000511	540	0.000896	0.000264
100	0.001634	0.000481	840	0.000694	0.000204

Ordering Information

Cartridge Code	
CODE	DESCRIPTION
CSS	Cylindrical Stainless Steel
PSS	Pleated Stainless Steel

Nominal Micrometer Rating (µm)
2
5
10
20
40
75
100
150
190
230
280
370
540
840

Nominal Length		
CODE	INCH	mm
4	4	102
9	9.75	248
10	10	254
19	19.5	495
20	20	508
29.25	29.25	743
30	30	762
40	40	1016

Media | Support Construction	
CODE	DESCRIPTION
G	304 Stainless Steel
S	316 Stainless Steel

Seal Material	
CODE	MATERIAL
E	EPDM
F	PTFE (Grommet only)
N	Buna-N
T	PFA | Viton® (O-ring only)
V	Viton®
X	No seal material (FC, MC style)

End Cap Configuration	
CODE	MATERIAL
DO	Double open end (DOE)
DX	Double open end w/extended core
FC	Single open end w/1" NPTF female connection
MC	Single open end w/ 1" NPTM male
SC	226 O-ring | Flat
TC	222 O-ring | Flat

Special Options	
CODE	DESCRIPTION
H	High pressure core (316 SS)
P	Pleat protector sleeve (316 SS)

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

DS_IP_Metallic Filter Rev. B