

## Superior Industrial Filtration From a Pleated Cartridge Design

Parker Fulflo<sup>®</sup> Flo-Pac<sup>®</sup> Cartridges are the perfect choice for many industrial filtration requirements. Flo-Pac pleated cartridges contain premium grade, phenolic impregnated cellulosic filter media. Parker's line of pleated cartridges is designed for critical filtration applications, providing long service life, high flow rate and low pressure drop.

Flo-Pac Pleated Cartridges are available in 0.5 $\mu$ m, 1 $\mu$ m, 5 $\mu$ m, 10 $\mu$ m, 20 $\mu$ m, 30 $\mu$ m, and 60 $\mu$ m pore sizes (95% removal; ß = 20).

## **Applications**

- Water Soluble Coolants
- Hydraulic Oils
  EDM Dielectric
- Quench Oils
- Fuels
- Lubricating Oils
- EDM Dielectrics
  Rolling Mill Oils
- Rolling will Oils
  Processing Liquids
- Gasoline

## Features and Benefits

- Pleated cellulosic media allow high flow capacity at low pressure drop.
- Available in a variety of sizes and configurations to fit most industrial vessels.
- Phenolic resin impregnated to provide strength, integrity and high contaminant capacity.
- High strength spiral core withstands pressure surges to 100 psid.

# Fulflo<sup>®</sup> Flo-Pac<sup>®</sup> Filter Cartridges

Cellulosic/Phenolic

## **Pleated Series**



- Suitable for operating temperatures to 250°F (121°C).
- Outer sleeve protects the media from damage.
- ETP (Electro-tin-plated) steel metal components for both aqueous and oil-based applications.
- Buna-N gaskets are standard. Other materials are available.

## **Process Filtration Division**

MARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met.



# **Pleated Series**

### Specifications

#### **Filtration Ratings:**

95% at 0.5µm, 1µm, 5µm, 10µm, 20µm, 30µm, and 60µm pore sizes

#### Materials of Construction:

- Filter Media: phenolic impregnated cellulose
- Cores: ETP steel
- End Caps: ETP steel
- Sleeve: 300 series polypropylene 600 & 700 series - ETP steel
- Adhesive: thermosetting PVC
- End Seals: 300 & 700 Series - Buna-N gaskets 600 Series - Buna-N gaskets/ grommets
  - 500 Series fiber gaskets

#### FP Length Factors

| Style | Length<br>Factor |
|-------|------------------|
| FP310 | 1.0              |
| FP320 | 2.0              |
| FP330 | 3.0              |
| FP340 | 4.0              |
| FP518 | 3.3              |
| FP614 | 3.6              |
| FP629 | 7.2              |
| FP644 | 10.8             |
| FP718 | 6.5              |
| FP736 | 13.0             |
| FP754 | 19.5             |

#### Flow Rate and Pressure Drop Formulas:

| Flow Rate ( | (gpm) = | Clean | $\Delta P x$ | Lengt | h Fa | ctor |
|-------------|---------|-------|--------------|-------|------|------|
|             |         |       |              |       | _    |      |

\* Trademark of E. I. duPont de Nemours & Co.

Viscosity x Flow Factor

Clean  $\Delta P$  = Flow Rate x Viscosity x Flow Factor Length Factor

## Ordering Information

#### **Operating Conditions** Temperature: 250°F (121°C)

Maximum Recommended

- Differential Pressure; 70 psi (4.8 bar)
- Change Out ∆P: 35 psid (2.4 bar)
- Flow Rate per Single Length Cartridge: 300 Series 7 gpm 500 Series 50 gpm 600 Series (3-1/2 in ID) 50 gpm 600 Series (1-9/16 in ID) 35 gpm 700 Series 50 gpm

#### **Dimensions:**

- 300 Series -2-1/2 in OD x 1 in ID x 9-5/8 in, 19-3/4 in, 29-1/4 in, 29-5/8 in, 40 in long
- 500 Series -4-1/2 in OD x 1-3/4 in ID x 18 in long
- FP Flow Factors sid/anm @ 1 cks)

| psiu | gpin | e i | URS) |
|------|------|-----|------|
|      |      |     |      |

| Rating<br><i>(µm)</i> | Flow<br>Factor |
|-----------------------|----------------|
| 0.5                   | 0.0260         |
| 1                     | 0.0170         |
| 5                     | 0.0020         |
| 10                    | 0.0018         |
| 20                    | 0.0010         |
| 30                    | 0.0009         |
| 60                    | 0.0005         |

#### 600 Series -6-1/4 in OD x 3-1/12, 1-9/16, in or 1-1/4 in ID x 14-3/8, 29 or 43-3/8 in long

700 Series -6-1/4 in OD x 2-5/8 in or 2-1/8 in ID x 18, 36, or 54 in long

#### Packaging:

- 300 Series -310 - 24/carton (12 lb ≈ shipping weight) 320 - 12/carton (12 lb ≈ shipping weight) 330 - 12/carton (18 lb ≈ shipping weight)
  - 340 12/carton (24 lb ≈ shipping weight)
- 500 Series -518 - 6/carton (14 lb  $\approx$  shipping weight)
- 600 Series -
  - 614 6/carton (20 lb ≈ shipping weight)
  - 629 4/carton (26 lb ≈ shipping weight)
  - 644 4/carton (40 lb ≈ shipping weight)
- 700 Series -
  - 718 6/carton (20 lb  $\approx$  shipping weight)
  - 736 4/carton (26 lb  $\approx$  shipping weight)
  - 754 4/carton (39 lb  $\approx$  shipping weight)

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

| Cartridge | β=5000<br>Absolute | β=1000<br>99.9% | β=100<br>99% | <mark>β=20</mark><br>95% | β=10<br>90% |
|-----------|--------------------|-----------------|--------------|--------------------------|-------------|
| FP-0.5    | 12                 | 10              | 3            | 0.5                      | <0.5        |
| FP-1      | 15                 | 12              | 6            | 1                        | <1.0        |
| FP-5      | 30                 | 20              | 9            | 5                        | 3.5         |
| FP-10     | 50                 | 35              | 18           | 10                       | 7           |
| FP-20     | 90                 | 70              | 40           | 20                       | 12          |
| FP-30     | 100                | 85              | 50           | 30                       | 21          |
| FP-60     | 200                | 150             | 90           | 60                       | 45          |

#### Notes:

1. Clean  $\Delta P$  is <u>PSI</u> differential at start.

- 2. Viscosity is centistokes. Use Conversion Tables for other units.
- 3. Flow Factor is  $\Delta P/GPM$  at 1 cks for 10 in (or single).
- 4. Length Factors convert flow or  $\Delta P$  from 10 in (single length) to required cartridge length.

| FP             | 6   | 14   |  | 5 —                                   | 1   | G   | N   |
|----------------|---|--|--|---------------------------------------|---|---|---|
| Cartridge Code | <br>Outside Diameter  | Length   |  | I<br>Micron Rating (μm)               | Inside Diameter   | Seal Material   | l<br>Body   |
| FP = Flo-Pac®  | $\begin{array}{l} 3 = 2 - 1/2 \text{ in} \\ (300 \text{ Series}) \\ 5 = 4 - 1/2 \text{ in} \\ (500 \text{ Series}) \\ 6 = 6 - 1/4 \text{ in} \\ (600 \text{ Series}) \\ 7 = 6 - 1/4 \text{ in} \\ (700 \text{ Series}) \end{array}$ | (code) (in)        10      9-5/8        14      14-3/8        18      18        20      19-3/4        29      29        29      29-1/4        30      29-5/8        36      36        40      40        44      43-3/8        54      54 | (series)<br>300<br>600<br>700 & 500<br>300<br>300<br>300<br>700<br>300<br>600<br>700 | 0.5<br>1<br>5<br>10<br>20<br>30<br>60 | None = 1 in<br>(300 Series)<br>None = $1-3/4$ in<br>(500 Series)<br>None = $3-1/2$ in,<br>(600 Series)<br>None = $2-5/8$ in,<br>(700 Series)<br>1 = 1-9/16 in<br>(600 Series)<br>8 = 2-1/8 in<br>(700 Series) | None = Buna-N Gaskets<br>A = Vellumoid<br>(300, 600, 700 Series)<br>B = Fiber<br>(500 Series Only)<br>C = Cork<br>(700 Series Only)<br>G = Buna-N Grommets<br>(600 Series 1-9/16 in ID)<br>V = Viton* | None = Metal<br>(500, 600<br>700 series)<br>= Polypro<br>(300 series)<br>M = Metal<br>(300 series)<br>N = No Body |

### Process Filtration Division

**Parker Hannifin Corporation Process Filtration Division** 6640 Intech Boulevard Indianapolis, Indiana 46278 Toll Free 1-888-C-FULFLO (238-5356) Telephone (317) 275-8300 Fax (317) 275-8410 http://www.parker.com



Bulletin C-4015 Page 2 of 2