



EMAIL: FILTRATION@JOHNBROOKS.CA



# HPHG High Flow Filter Cartridges

## Large Geometry Pleated Filters for High Flow

HART HPHG High Flow Series filters feature a larger geometry to handle higher flows with fewer filter elements. The result is much faster, easier filter changeouts. In addition, the inside to outside flow allows for excellent dirt holding capacity, extending time between filter changeouts. Filter housings are also available and because of the filter's high flow and dirt holding capacity, smaller systems are possible, reducing upfront capital costs.

### Product Specifications

**Media:** Microfiberglass

**Support/Cage:** Polyester or polypropylene

**End Caps:** Polyacetal or polypropylene

**Gaskets/O-Rings:**

Buna-N, EPDM, Silicone, Viton

**Micron rating:** 1, 2.5, 4.5, 10, 20 µm

### Dimensions

**Nominal lengths:**

20" 40" 60"

50.8 101.6 152.4 cm

**Outside diameter:** 6.0" (15.2 cm)

**Surface Area:**

24 ft<sup>2</sup> (2.2 m<sup>2</sup>) per 20" element

49 ft<sup>2</sup> (4.6 m<sup>2</sup>) per 40" element

73 ft<sup>2</sup> (6.8 m<sup>2</sup>) per 60" element

### Operating Parameters

**Maximum operating**

**temperature:** 176°F (80°C)

**Maximum differential pressure:**

75 psid @ 70°F (5.2 bar @ 21°C)

30 psid @ 176°F (2.0 bar @ 80°C)

**Maximum reverse pressure:**

40 psid @ 70°F (2.8 bar @ 21°C)

**Recommended change-out**

**pressure:** 35 psid (2.4 bar)

**Maximum flow rates\*:**

60" element up to 500 GPM (1892 lpm)

40" element up to 350 GPM (1325 lpm)

20" element up to 175 GPM (662 lpm)

\*Consult factory for sizing assistance based on particle loads.

### FEATURES & BENEFITS

- Materials of construction allow compatibility with some chemistries not served by all polypropylene elements
- 6" diameter, large geometry for high flows
- Absolute retention ratings from 1 to 20 microns
- Capable of flow rates up to 500 GPM in a single 60" element
- Inside-out flow retains contaminant even during changeout
- Outer cage prevents media extrusion problem experienced with some competitive offerings
- Unique Quad Seal gasket provides maximum seal integrity
- Retrofits competitive high flow filter housings
- Thermally bonded construction

### TYPICAL APPLICATIONS

- Fuel Oil
- Chemicals
- Petrochemicals
- Solvents
- Oil & Gas

## HPHG HIGH FLOW SERIES NOMENCLATURE INFORMATION

Product Series	Hardware Material	Retention Rating (microns)		Length (inches)	Gasket or O-Ring	Packaging	
HPHG Series	-P Polypropylene	-1	-10	-20	B Buna-N	Blank	Individual Box
	-A Acetal Caps Polyster Cage	-2.5	-20	-40	E EPDM	2 pk	2 Pack Box, 60" Only
		-4.5	-60	S Silicone	4 pk	4 Pack Box, 60" Only	
				V Viton			
Example: HPHG-A-2.5-60E							
HPHG	-A	-2.5		-60	E		

## HPHG HIGH FLOW PRESSURE DROP

Micron	Element Pressure Drop psid/gpm			Element Pressure Drop Mbar/M <sup>3</sup> /Hr		
	20"	40"	60"	20"	40"	60"
1	0.0394	0.0197	0.0131	11.9419	5.9709	3.9806
2.5	0.0183	0.0091	0.0061	5.5385	2.7692	1.8462
4.5	0.0144	0.0072	0.0048	4.3549	2.1775	1.4516
10	0.0095	0.0048	0.0032	2.8830	1.4415	0.9610
20	0.0069	0.0035	0.0023	2.0940	1.0470	0.6980

For chemical compatibility, flow rates, and temperature requirements please consult us at 1-877-624-5757.

## REMOVAL EFFICIENCY

Beta Ratio Efficiency	Beta 1000 99.9%	Beta 100 99%	Beta 10 90%
1 µm	1.0	0.6	0.2
2.5 µm	2.5	0.8	0.45
4.5 µm	4.5	4.2	1.0
10 µm	10.0	5.5	3.0
20 µm	20.0	15.0	10.0

$$\text{Beta Ratio} = \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}}$$

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters.

Testing was conducted using the single-pass test method, water at 3 gpm/10" cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.



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