



Graver Technologies

Filtration | Separation | Purification

High Flow GF Series Filter Cartridges

Large Geometry Pleated Filters for High Flow

Graver High Flow GF Series filters feature microfiberglass media in 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 the time between filter changeouts. Filter housings are also available and because of the filters high flow and dirt holding capacity, smaller systems are possible, reducing upfront capital costs.

Features - Benefits

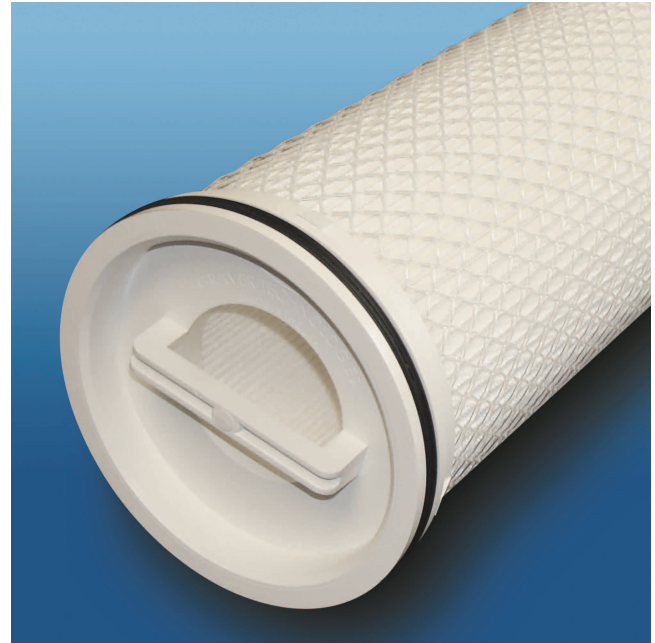
- Materials of construction allow compatibility with some chemistries not served by all polypropylene elements.
- 6" diameter, large geometry for high flows
- Absolute retention ratings from 1 to 20 microns
- Capable of flow rates up to 500 GPM in a single 60" element
- Inside-out flow retains contaminant 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

Product Specifications

Media:	Microfiberglass
Support/Cage:	Polyester or polypropylene
End caps:	Polyacetal or polypropylene
O-Rings:	EPDM, Silicone, Buna-N, Viton
Micron ratings:	1, 2.5, 4.5, 10, 20 μ m

Dimensions

Nominal lengths:	20", 40", 60" (50.8, 101.6, 152.4 cm)
Outside diameter:	6.0" (15.2 cm)
Surface area:	24 ft ² . (2.2 m ²) per 20" element 49 ft ² . (4.6 m ²) per 40" element 73 ft ² . (6.8 m ²) per 60" element



Operating Parameters

Maximum operating temperature:

polyacetal hardware - 70°F @ 75 psid (21°C @ 5.2 bar)
230°F @ 50 psid (110°C @ 3.4 bar)

polypropylene hardware - 77°F @ 50 psid (25°C @ 3.4 bar)
180°F @ 20 psid (82°C @ 1.4 bar)

Recommended changeout

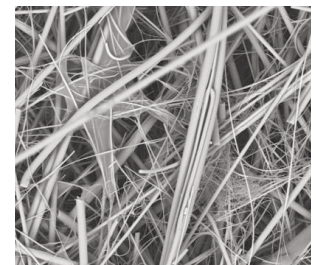
differential pressure: 35 psid (2.4 bar)

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.

Typical Applications

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



High Flow GF Nomenclature Information

High Flow GF	-A	2.5	-60	E
Filter Type High Flow GF Series Filters	Hardware Material P Polypropylene A Polyacetal caps polyester cage	Retention Rating (microns) 1 10 2.5 20	Length (inches) -20 -40 -60	O-Ring S Silicone B Buna-N E EPDM V Viton

Example: HFGF -A2.5-60E

High Flow GF Pressure Drop

Micron	Element Pressure Drop psid/gpm			Element Pressure Drop Mbar/M ³ /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

Note: For chemical compatibility, flow rates, and temperature requirements please consult the factory or your local Graver distributor.

Removal Efficiency

Micron Rating Beta Ratio	99.9% Beta 1000	99% Beta 100	90% Beta 10
1 micron	1	0.6	0.2
2.5 micron	2.5	0.8	10.45
4.5 micron	4.5	42	1
10 micron	10	5.5	3
20 micron	20	15	10

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

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. Contaminant's included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

For more information

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