Graver Technologies

FILTRATION | SEPARATION | PURIFICATION

High Flow RF Series Filter Cartridges

Large Geometry Pleated Filters for High Dirt Loading

Graver High Flow RF Series filter is another in the series of larger geometry filters to handle higher volume applications with fewer filter elements. The result is much faster, easier filter changeouts. In addition, the multi-layer media construction allows for excellent dirt holding capacity, extending the time between filter changeouts. Filter housings are also available and because of the filter's high dirt holding capacity, smaller systems are possible, reducing upfront capital costs.

Product Specifications

Media/Support/Cage: Polypropylene

End Caps: Polypropylene

Gaskets/O-Rings:
Buna-N, EPDM, Silicone,
Teflon Encapsulated Viton

Micron rating:
1, 3, 5, 10, 20, 40, 60, 75, 100 µm

Dimensions

Nominal length:

40"	60"
101.6	*152.4 cm*

Outside diameter: 6.5" (16.5 cm)

Surface Area:
43 ft^2 (4.0 m^2) per 40" element
64 ft^2 (5.9 m^2) per 60" element

Operating Parameters

Maximum operating temperature: 176°F (80°C)

Maximum differential pressure:
60 psid @ 70°F (4.1 bar @ 21°C)
30 psid @ 176°F (2.0 bar @ 80°C)

Maximum reverse pressure:
25 psid @ 70°F (2.0 bar @ 21°C)

Recommended change-out pressure: 35 psid (2.4 bar)

Maximum flow rates*:
Up to 80 GPM (302 lpm) for P2
Up to 500 GPM (1890 lpm) for P30

*Consult factory for sizing assistance based on particle loads.

FEATURES & BENEFITS

- 6.5" diameter, large geometry for high flow rates
- Absolute retention ratings from 1 to 100 microns
- Capable of flow rates up to 80 GPM in the P2 configuration and 500 GPM in the P30 configuration
- Multi-layer pleated construction with optimized surface area
- Retrofits competitive large diameter filter housings utilizing the “740” design or the large diameter 338 o-ring design
- Thermally bonded construction
- All polypropylene construction provides for a high level of chemical compatability

CERTIFICATIONS

- FDA Listed Materials: All materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, and 177.1520, as applicable for food and beverage contact.
- European Directive for Direct Food Contact: European Regulation No. 1935/2004 and European Regulation 10/2011: Tested for migration behavior and is suitable for contact with all kinds of foodstuffs with minimal rinse-up. Pending
- NSF 61: Certified to NSF/ANSI STD 61 for materials requirements only — Component.

TYPICAL APPLICATIONS

- Water Systems
- Chemicals
- Refinery Operations
- Food and Beverage
- Wastewater Processes

HIGH FLOW RF NOMENCLATURE INFORMATION

Product Series	Retention Rating (microns)	Length (inches)	End Configuration	Gasket or O-Ring
HF RF Series	1 40 3 60 5 75 10 100 20	–40 –60	P2 226/Flat Single Open End* P30 338/Flat Single Open End	B Buna-N E EPDM S Silicone T Teflon encap. Viton V Viton
Example: HF RF 5–40P2E				
HF RF	5	–40	P2	E

*Available only as 40" nominal length

HIGH FLOW RF PRESSURE VALUES

Clean Pressure Drop versus Flow at Ambient Temperature — PSID (mbar)

Flow (LPM)	1 µm	3 µm	5 µm	10 µm	20 µm	40 µm	60 µm	75 µm	100 µm
20 GPM (75.7)	0.6 (41)	0.3 (20)	0.2 (13)	0.2 (13)	0.2 (13)	0.2 (13)	0.2 (13)	0.2 (13)	0.1 (7)
40 GPM (151.4)	0.9 (62)	0.6 (41)	0.5 (34)	0.5 (34)	0.5 (34)	0.4 (27)	0.4 (27)	0.35 (24)	0.2 (13)
60 GPM (227.1)	1.6 (110)	1.1 (75)	0.9 (62)	0.9 (62)	0.9 (62)	0.75 (51)	0.75 (51)	0.6 (42)	0.5 (34)
80 GPM (302.8)	2.2 (151)	1.4 (96)	1.2 (82)	1.2 (82)	1.2 (82)	0.9 (62)	0.9 (62)	0.85 (58)	0.75 (51)

REMOVAL EFFICIENCY

Beta Ratio Efficiency	Beta 1000 99.9%	Beta 100 99%	Beta 10 90%
1 µm	1.0	0.6	0.2
3 µm	3.0	2.0	1.5
5 µm	5.0	4.0	3.0
10 µm	10.0	8.5	6.5
20 µm	22.0	19.0	14.0
40 µm	38.0	18.0	15.0
60 µm	60.0	35.0	20.0
75 µm	75.0	48.0	35.0
100 µm	100.0	75.0	45.0

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

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.

FOR MORE INFORMATION **GTX-355 3-19**

Customer Service/Technical Support: 1-888-353-0303
Europe (UK): +44-1424-777791 China: +86-21-5238-6576
Asia: +65-9635-7690

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