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VARAFINE™ VFTR Series Filter Cartridges

For Critical Filtration of Solvents and Aggressive Liquids

- Chemically Resistant PTFE Media
- Absolute Construction With Retention Ratings of 0.05, 0.1, 0.2, 0.45, or 1.0 µm
- Uniform Pore Size Throughout Membrane For High Contaminant Retention Capacity and Flow Rates
- Biologically Inert Media
- Pre-Flushed with 18 Megohm-cm Water to Ensure Fast Rinse-Up
- Engineered Polymer Components for Enhanced Resistance and Purity
- Optional Pre-Wetting in Low TOC, Ultra High Purity DI Water for Quick Rinse-Up

Performance Specifications

Filter Grades (>99.9% Retention Rating by Standard Latex Bead Challenge):
0.05, 0.1, 0.2, 0.45, 1.0 µm

Maximum Differential Pressure:
80 psid (5.5 bar) @ 68°F (20°C)
20 psid (1.4 bar) @ 203°F (95°C)

Recommended Changeout Differential Pressure*:
35 psid (2.4 bar)

Flow Rate (1 psid, 10" equivalent):
0.05 µm: 0.9 gpm @ 70°F (3.41 lpm @ 21°C)
0.1 µm: 1 gpm @ 70°F (3.79 lpm @ 21°C)
0.2 µm: 2 gpm @ 70°F (7.57 lpm @ 21°C)
0.45 µm: 2.5 gpm @ 70°F (5.7 lpm @ 21°C)
1.0 µm: 3 gpm @ 70°F (11.36 lpm @ 21°C)

Chemical Compatibility:
Cartridge resists most acids and bases, pH 1-14, and most oxidizing agents. Consult factory for specific application information.

Toxicity:
All polypropylene cartridge components meet USP, Class VI (121˚C/250˚F) toxicity criteria (gaskets/O-rings excluded).

Sterilization:
Cartridge can be autoclaved at 274˚F (134˚C) for 1 hour.

Integrity Test [in 60/40 Isopropyl alcohol (IPA), DI water]:
Bubble Point: 0.1 µm: 20 psig (1.4 bar)
0.2 µm: 15 psig (1.0 bar)
Diffusion: 0.1 µm: ≤30 ml/min @ 15 psig (1.0 bar)

Product Specifications

Materials of Construction:

Filter Media:	PTFE (polytetrafluoroethylene)
Support Material:	Polypropylene
Hardware:	Polypropylene
Gaskets/O-rings:	Viton[1] A (standard), Silicone Elastomer, Expanded PTFE, White Silicone, FEP Encapsulated Silicone, EPDM, FEP Encapsulated Viton A

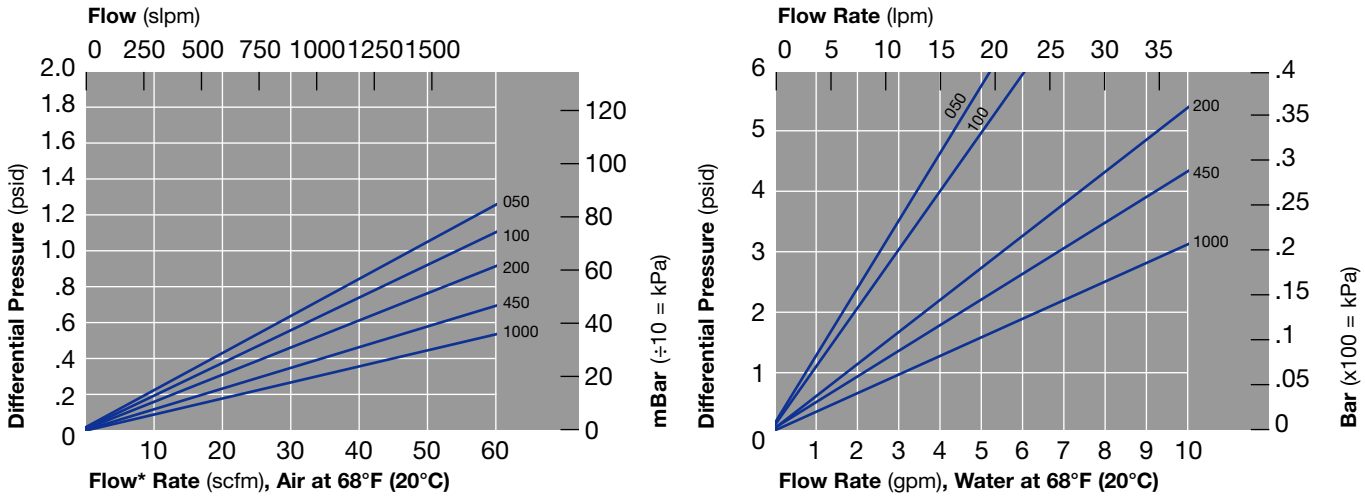
Dimensions (nominal):

Outside Diameter:	2.6" (6.6 cm)
Lengths (tip-to-tip):	4" (10.2 cm), 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)

** Provided that the maximum differential pressure is not exceeded based on temperature limits defined above.*

[1] - Registered trademark of DuPont Dow.

Typical Flow vs. Differential Pressure for Application Sizing



Flow rate is per 10" (25.4 cm) cartridge. For liquids other than water, multiply differential pressure by fluid viscosity (cps).

Prewetting Procedures:

PTFE is a naturally hydrophobic media. If filtering a high surface tension solution, it is necessary to prewet by immersing the VFTR cartridge in a mixture of 60% IPA and 40% DI water for five minutes. If integrity test is required, remove and flow 60% IPA through the cartridge at 1 gpm (3.8 lpm) for five minutes and then proceed with integrity test.

Part Numbers/Ordering Information

VFTR ■ – ● ▼ ◆ – ▮ (e.g. VFTR100–10M3S-PW)

Code ■	Filter Grades**
050	0.05 µm
100	0.1 µm
200	0.2 µm
450	0.45 µm
1000	1.0 µm

Code ●	Cartridge Lengths (nominal)
4	4"
10	10"
20	20"
30	30"
40	40"

Code ▼	End Configurations
M2	SOE flat closed end, fits housings with 020 O-ring post
M3	SOE flat closed end, external 222 O-rings (retrofits other manufacturers' Code 0)***
M5	DOE, internal O-rings (retrofits other manufacturers' DOE internal O-ring style)***
M6	SOE flat closed end, external 226 O-ring (retrofits other manufacturers' Code 6)***
M7	SOE fin end, external 226 O-rings (retrofits other manufacturers' Code 7)***
M8	SOE fin end, external 222 O-rings (retrofits other manufacturers' Code 5)***
M10	DOE, internal O-rings (fits other manufacturers' housings)***
DOE	DOE with elastomer gasket seal and end caps

** 15 psig (1.0 bar) inlet pressure*
*** Based on typical application usage.*
**** For details, contact Pall Corporation.*

Code ◆	Gasket/O-ring Materials
S	Silicone
E	EPDM
V	Viton A (standard O-rings)
T	FEP Encapsulated Silicone (O-rings)
F	FEP Encapsulated Viton A
T	Expanded PTFE (gaskets)

Code ▮	Pre-Wet
Blank	No Pre-wet
PW	Pre-wet option (consult factory for Pre-wet option on 30" and 40" lengths)

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