



## 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<sup>1</sup> A (standard), Silicone Elastomer, Expanded PTFE, White Silicone, FEP Encapsulated Silicone, EPDM, FEP Encapsulated Viton A

#### Dimensions (nominal):

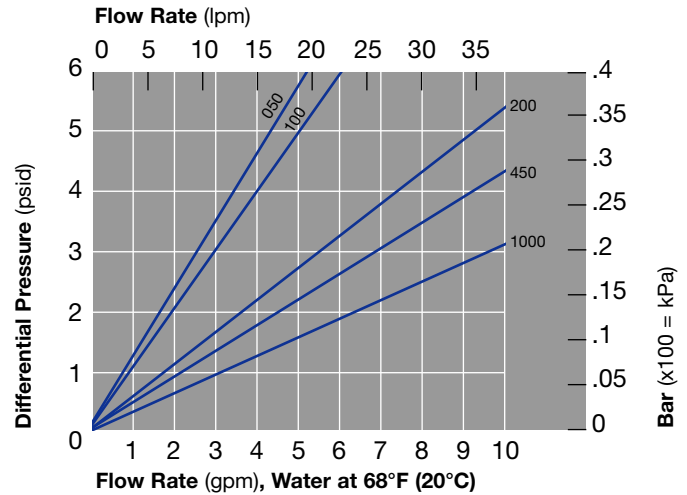
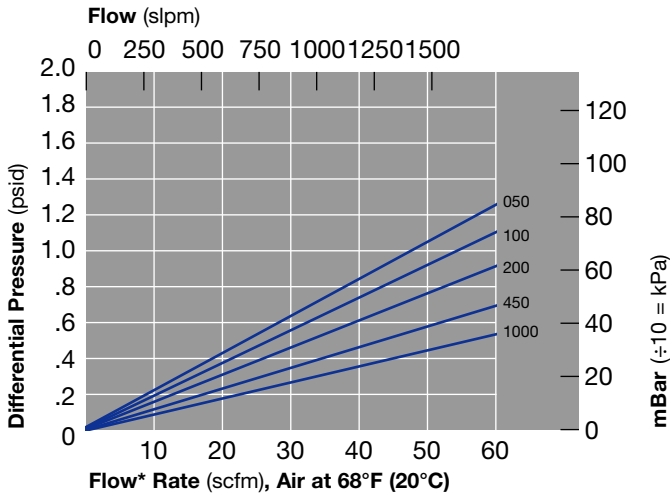
Outside Diameter: 2.6" (6.6 cm)

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.

<sup>1</sup> - 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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