# **High Flow Filter Cartridges & Housings**

REV062025

## Replace your plate & frame or cross-flow\* system with a scaleable High Flow filter system from VA Filtration.

- High flow capability designed to accommodate flow rates of up to 500 gpm with a single 60" filter cartridge.
- Enhance wine flavors and eliminate possible crosscontamination with disposable filter cartridges. \*Filter cartridges are rated (absolute) as small as 0.5 µm
- High quality, highly efficient design.
- Lower capital investment.
- Filter more wine in less time without sacrificing wine quality.
- Replacement media is reasonably priced and easy to install.
- Ease of use and ergonomic design.



# 3M™ High Flow Replacement Filter Cartridge Specifications

#### Materials of construction

Filter media: Each grade of 3M High Flow filter is manufactured from food contact compliant meltblown polypropylene microfiber media, providing high particle removal efficiency with broad chemical compatibility. No adhesives, binders or silicone are used in the manufacturing process. All support layers are constructed with polypropylene.

**O-rings:** O-rings are available in a variety of materials to suit your application including the standard nitrile, ethylene propylene rubber (EPR), silicone and fluorocarbon.

Available lengths (nominal): 10" (254 mm), 40" (1,016 mm) and 60" (1,524 mm)



Interchangeable housing accommodates cartridge lengths (nominal) of:

- 10" (254 mm) 40" (1,016 mm) 60" (1,524 mm)



### **Pricing:**

| Housing     | Height                   | Flow Range    | Price    |
|-------------|--------------------------|---------------|----------|
| VAF-HF10-2  | 10" (254 mm)             | 5gpm - 85gpm  | \$3,900  |
| VAF-HF40-2  | 40" (1,016 mm)           | 5gpm - 350gpm | \$4,750  |
| VAF-HF60-3  | 60" (1,524 mm)           | 5gpm - 500gpm | \$5,150  |
| Accessories |                          |               | Price    |
| VAF-HF10-R  | 10" Replacement column   |               | \$950    |
| VAF-HF40-R  | 40" Replacement column   |               | \$1,500  |
| VAF-HF60-R  | 60" Replacement column   |               | \$1,950  |
| Cartridges  | Rating (Absolute)        |               | Price    |
| Size: 10"   | 0.5, 1, 5, 10, 50, 70 μm |               | \$226 ea |
| Size: 40"   | 0.5, 1, 5, 10, 50, 70 μm |               | \$558 ea |
| Size: 60"   | 0.5, 1, 5, 10, 50, 70 μm |               | \$622 ea |





### **Ordering Guide**

| Model  | Cartridge Length   | Material of construction | Absolute micron rating  | O-ring material   | Packaging          |
|--|--|--------------------------|---|---|--------------------|
| <sup>2</sup> Fluorocarbon O-rings not<br><sup>3</sup> EPR O-rings not for use in<br><sup>4</sup> Nitrile O-rings are not con | 10 – 10" (254 mm) 40 – 40" (1,016 mm) 60 – 60" (1,524 mm)  luorocarbon O-rings are NSF/ANSI/CAN st available in the 0.5 µm High Flow or in the food contact applications uplicant for edible oil and dairy application: applicable for 0.5 µm only | e HFM series filters     | 0005 – 0.5 μm <sup>5</sup> 001 – 1 μm 002 – 2 μm 005 – 5 μm 010 – 10 μm 015 – 15 μm 025 – 25 μm 040 – 40 μm | A – Silicone <sup>1</sup> B – Fluorocarbon <sup>1,2</sup> C – EPR <sup>3</sup> D – Nitrile <sup>1,4</sup> | <b>01</b> - 1 Pack |

#### **Cartridge construction**

Filter micron rating (microns)

HF Series: 0.5, 1, 2, 5, 10, 15, 25, 40, 70 absolute rated HFM Series: 5, 10, 20 μm Absolute, 5 μm Nominal\*

\*Also rated at 70 µm Absolute

Filter media, center core, end caps, outer sleeve

Sealing O-ring options

Nitrile, Silicone, Fluorocarbon and EPR (See product selection table for details)

O-ring size

338 (3.0"/76.2 mm)

#### **Cartridge dimensions**

Inside diameter (nominal) 3" (76.2 mm)

Outside diameter (nominal) 6.5" (165 mm)

Cartridge length (nominal) 10" (254 mm), 40" (1,016 mm), 60" (1,524 mm)

#### **Operating conditions**

Maximum recommended flow rate in water (@20° C)

Maximum continuous operating temperature

Maximum hot water sanitation temperature

Maximum forward differential pressure

Recommended change-out differential pressure

85 gpm (19.3 m3/hr), 350 gpm (80 m3/hr), 500 gpm (113 m3/hr)

160° F (71° C)

185° F (85° C)

50 psid @ 68° F (3.4 bar @ 20° C)

85 gpm (19.3 m3/hr), 350 gpm (80 m3/hr), 500 gpm (113 m3/hr)

#### Microbial Control

The 3M High Flow HF Series 0.5 μm and 1 μm filter media demonstrates excellent microbial reduction as presented below.

| High Flow<br>Media Grade | Microorganism<br>Used for Challenge                         | Challenge Level             | Organisms in Filtrate   | LRV  |
|--------------------------|---|-----------------------------|-------------------------|------|
| 0.5 μm                   | Saccharomyces cerevisae (ATCC-36026)*                       | 1.3 x 107 CFU/cm2 of media  | 0 CFU                   | >8.1 |
| 1 μm                     | Saccharomyces cerevisae<br>(ATCC-36026)*                    | 1.3 x 107 CFU/cm2 of media  | 20 CFU                  | 6.8  |
| 0.5 μm                   | Microspheres as a surrogate for<br>Cryptosporidium Oocyst** | 3,286 microspheres / 100 ml | 9 microspheres / 100 ml | 2.6  |

Challenge conditions used in these tests: \*Microbial concentration 3x105 – 5x105 organisms/ml, Flow Rate 0.25 gpm/ft2 (10 L/min/m2) \*\*Microspheres, Flow Rate 55 gpm / HF10 filter, Terminal Differential Pressure 35 psid

#### Fluid compatibility

| Chemical           | Temperature | Chemical            | Temperature |
|--------------------|-------------|---------------------|-------------|
| Acetic acid 20%    | 71° C       | Hydrogen peroxide   | 38° C       |
| Alkanolamines      | 60° C       | Methyl ethyl ketone | 21° C       |
| Ammonium hydroxide | 71° C       | Mineral oil         | 21° C       |
| Bleach 5.5%        | 49° C       | Nitric acid 20%     | 49° C       |
| Ethylene glycol    | 71° C       | Potassium hydroxide | 60° C       |

**NOTE:** The thermal and chemical resistance data presented in this brochure is for guidance only. Factors such as duration of exposure, O-ring material, fluid concentration and temperature should also be considered. Thermal and chemical resistance should also be considered when choosing all materials exposed to fluids.



