

3M™ High Flow HFM Series Filter Cartridges for Residential/Commercial Applications

3M™ High Flow HFM Series Filter cartridges are high flow capacity, high efficiency, outside to inside flow direction liquid filtration cartridges designed for applications with large flow or contaminant removal requirements.

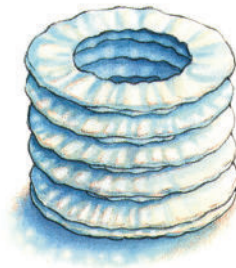
The 3M High Flow HFM series cartridges are for use in filter housings that accept the standard 3M High Flow filter cartridges.

The large diameter, pleated depth media cartridge design permits higher flow rates than standard 2.5" diameter filter cartridges resulting in significantly fewer required filter cartridges for a given flow.

The 5 micron (nominal) rated 3M HFM series cartridges utilize a 3M polypropylene microfiber media specifically designed for use in process fluid applications containing organic and/or biological contaminants. The media design helps prevent premature blinding of the filter's outer surface promoting fuller utilization of the media resulting in an optimum combination of particle removal efficiency and contaminant holding capability.

Graph 1 shows test results from challenging the 3M High Flow HFM series filter cartridge and the standard comparable efficiency 3M High Flow filter cartridge with a surface (lake) water. Surface waters tend to contain high levels of biological and organic contaminants which have a tendency to foul surface filters. The results showed that, on average, the 3M High Flow HFM series filter cartridge provided over twice the lifetime and held approximately five times the contaminant amount (by weight) versus the standard 3M High Flow filter cartridge, while having similar initial particle removal efficiencies for particles larger than 5 micron.

3M microfiber media is pleated in a radial design which optimizes the usable surface area of the filter cartridges. 3M High Flow HFM series cartridges utilize polypropylene end caps, outer sleeve and core to help protect the pleat structure integrity and provide a robust filter construction.



Applications

Hi-rise Apartments/Condominiums
Hotel/Motel
Educational Facilities
Correctional Facilities
Light Manufacturing
Boiler Feed Water
High Capacity RO Prefiltration

Features & Benefits

Higher Flow Capability per Cartridge (vs. conventional 2.5" diameter cartridges)

- Fewer cartridges required, resulting in:
 - Reduced cartridge handling
 - Less individual cartridge seal points reducing chance of fluid bypass

Radial Pleat Design

- High contaminant capacity

Use of Specially Designed 3M Microfiber Filtration Media

- Helps prevent premature media blinding due to organic/biological contaminants
- High particle removal efficiencies throughout filter life

Easy to Use

- No special tools or hardware required for filter change-out

All Polypropylene Filter Construction

- Potable water

FDA Compliant

- All component materials of construction are listed for food contact per FDA 21 CFR Parts 170-199

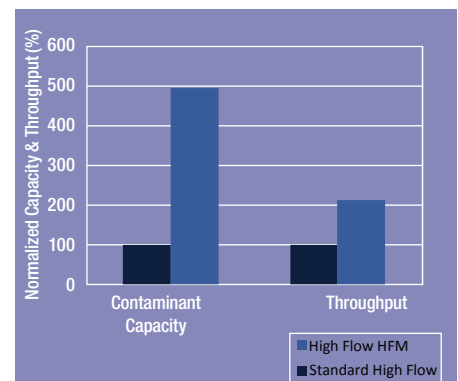


Figure 1: Lake Water Test Results*

* Tests run at the specified maximum flow rate for the filters up to a terminal pressure of 35 psid. Actual filtration performance will depend on the type, size, distribution, and the physical properties of the contaminants as well as flow conditions.

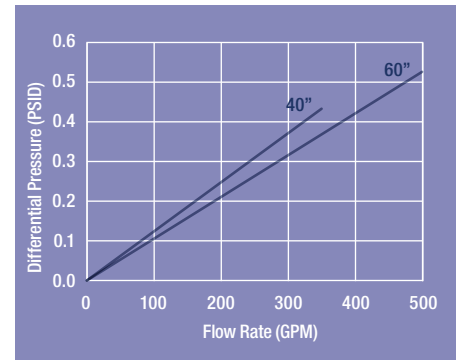


3M™ High Flow HFM Series Cartridge Specifications

Construction	
Filter Housing	3M High Flow Series
Filter Media, Center Core, End Caps, Outer Sleeve	Polypropylene
Sealing O-ring	Nitrile ¹
O-ring Size	338
Operating Conditions	
Maximum Flow Rate	350 gpm (79.5 m ³ /hr) – 40" Length 500 gpm (113.6 m ³ /hr) – 60" Length
Maximum Operating Temperature	160° (71°C)
Maximum Forward Differential Pressure	50 psid @ 68°F (3.4 bar @ 20°C)
Recommended Change-out Differential Pressure	35 psid @ 68° (2.4 bar @ 20°C)
Cartridge Dimensions	
Inside Diameter (nominal)	3.0" (76.2 mm)
Outside Diameter (nominal)	6.0" (152.4 mm)
Length (nominal)	40" (1016 mm) 60" (1524 mm)
Regulatory	
All component materials of construction are listed for food contact per FDA 21 CFR Parts 170-199	

¹ Contact factory regarding availability of other o-ring materials

Graph 1: 40" & 60" 3M High Flow HFM Series



3M™ High Flow HFM Series Cartridge Ordering Guide

Filter Designation	Cartridge Length	Material (Media/Plastic Components)	Removal Rating (Nominal Micron)	O-ring
3M HFM – High Flow HFM Series	40 – 40" 60 – 60"	PP – Polypropylene	N05 – 5µm (nominal)	D – Nitrile

3M ID Information:	
3MHFM40PPN05D	70020315274
3MHFM60PPN05D	70020315282

Product Use:

Many factors beyond 3M Purification Inc.'s (3M's) control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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3M Purification Inc.
400 Research Parkway
Meriden, CT 06450
U.S.A.
Phone (800) 222-7880
Fax (203) 238-8857
www.3Mpurification.com

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