

3M™ High Flow HFR Series Filter Cartridges

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3M™ High Flow HFR Series filter cartridges are high flow capacity, high efficiency, inside to outside flow direction liquid filtration cartridges designed for applications with large flow requirements.

The HFR Series filter cartridges fit into the standard Pall Ultiplex™ HFU filter housings or their equivalent.

The large diameter, pleated depth media cartridge design permits flow rates of up to 500 gpm in a single 60" length cartridge. This results in significantly fewer required filter cartridges for a given flow than standard 2.5" diameter filter cartridges.

3M polypropylene microfiber forms the basis of the filtration media utilized in the HFR Series filter cartridges. 3M's manufacturing processes allow for tightly controlled specifications resulting in a filter media with absolute rated particle retention characteristics.

The 5µm (nominal)/60µm (absolute) rated HFR Series version utilizes a 3M microfiber media specifically designed for use in process water applications containing organic and/or biological contaminants. The media design helps prevent premature blinding of the filter outer surface promoting fuller utilization of the media resulting in an optimum combination of particle removal efficiency and contaminant holding capability.

The HFR Series cartridges utilize polypropylene end caps, outer sleeve and core to protect the pleat structure integrity and provide a robust filter construction.



Features & Benefits

High Flow Capability per Cartridge

- Fewer cartridges required (vs. conventional 2.5" diameter cartridges), resulting in:
 - Reduced cartridge handling
 - Less individual cartridge seal points reducing chance of fluid bypass

Use of 3M Microfiber Filtration Media

- High particle removal efficiencies throughout filter life
- High contaminant capacity

Inside-Outside Flow Path

- Contaminants captured on the inside of filter

All Polypropylene Filter Construction

- Broad chemical compatibility

FDA Compliant

- Compatible in applications requiring direct food contact in food and beverage processing per 21 CFR

Applications

Process Waters

Injection & Produced Waters

Ground/Reclaimed/Waste Waters

Pre-RO Water

Boiler Condensate

Refining (Amine, Final Product...)

Series HFR Filter Specifications

Construction	
Filter Media, Center Core, End Caps, Outer Sleeve	Polypropylene
Sealing O-Ring	Nitrile
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	180°F (82°C)
Maximum Forward Differential Pressure	15 psid @ 180°F (1.0 bar @ 82°C) 25 psid @ 140°F (1.7 bar @ 60°C) 50 psid @ 68°F (3.4 bar @ 20°C)
Recommended Change-out Differential Pressure	35 psid @ 68°F (2.4 bar @ 20°C)
Typical Clean Pressure Drop in Water	0.01 psid/gpm
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	

Series HFR Filter Ordering Guide

Filter Designation	Cartridge Length	Material (Media/ Plastic Components)	Nominal/Absolute Removal Rating (Micron)	O-Ring
HFR - High Flow HFR Series	40 - 40" 60 - 60"	PP - Polypropylene	N05 - 5 µm (nominal) / 60 µm (absolute)	D-Nitrile

3M ID Information:

HFR40PPN05D: 70020294875

HFR60PPN05D: 70020293919

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