

3M™ 740HD Series

Filter Cartridges

The 3M™ 740HD Series filter cartridge is a high capacity, high efficiency, outside to inside flow direction liquid filtration cartridge designed for applications with high contaminant removal requirements.

The 3M 740HD Series filter cartridge is for use in filter housings that accept the standard 3M™ 740 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 740HD Series filter cartridge utilizes 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.

Figure 1 shows test results from challenging the 3M 740HD Series filter media and the standard comparable efficiency 740 Series filter media with a gas processing plant amine solution. Amine solutions can contain high levels of organic deformable contaminants which have a tendency to foul surface filters. The results showed the 3M 740HD Series filter media provided

approximately three times the throughput versus the standard 740 Series filter media.

3M microfiber media is pleated in a radial design which optimizes the usable surface area of the filter cartridges. The 3M 740HD Series filter cartridge utilizes polypropylene end caps, outer sleeve and core to protect the pleat structure integrity and help provide a robust filter construction.



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

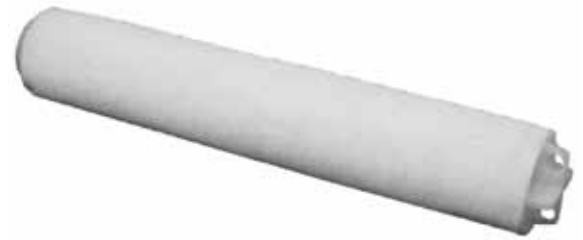
- No special tools or hardware required for filter change-out

All Polypropylene Filter Construction

- Broad chemical compatibility

FDA Compliant

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



Applications

Refining (Amine, Final Product...)

Process Waters

Machine Coolants

Ground/Reclaimed/Waste Waters

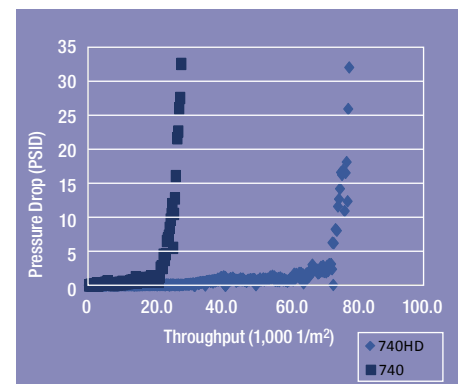


Figure 1: Gas Processing Amine Solution Test Results*

* 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.

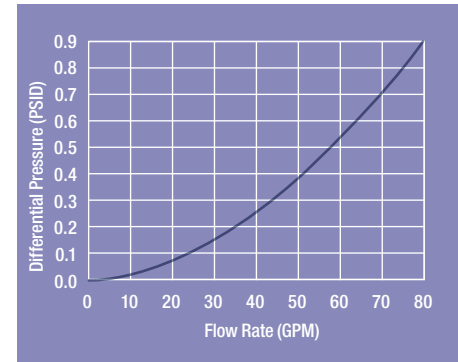


3M™ 740HD Series Filter Cartridge Specifications

Construction	
Filter Housing	Series 740
Filter Media, Center Core, End Caps, Outer Sleeve	Polypropylene
Sealing O-ring	Nitrile ¹
O-ring Size	226
Operating Conditions	
Maximum Flow Rate	80 gpm (18.2 m ³ /hr) – 40" 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)	1.5" (38.1 mm)
Outside Diameter (nominal)	6.0" (152.4 mm)
Length (nominal)	40" (1016 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: 3M™ 740HD Series



3M™ 740HD Series Filter Cartridge Ordering Guide

Filter Designation	Cartridge Length	Material (Media/Plastic Components)	Removal Rating (Nominal Micron)	O-ring
HD – 740HD Series	740 – 40" (740 Style)	PP – Polypropylene	N05 – 5μ (nominal)	D – Nitrile

3M ID Information:

HD740PPN05D	70020283407
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