

Mar Cor Purification

# FiberFlo® Hollow Fiber Capsule Filters



Absolute Performance in Filtration Technology

# FiberFlo Hollow Fiber Capsule Filters

## Bacteria, Particle and Pyrogen Removal

The unique membrane structure of FiberFlo HF capsule filters provides consistent and verifiable pyrogen removal, which is superior to traditional, absolute rated membrane filters. High level endotoxin, bacteria, and spore removal make these point of use filters ideal for a variety of water and process purification applications.

## High Flow Rates

FiberFlo HF capsule filters deliver fine filtration at high flow rates with low pressure drops, performance superior to traditional, pleated membrane capsule filters.

## Longer Lasting

FiberFlo capsules have up to six times the surface area of comparable pleated capsule filters. This larger membrane surface area provides greater capacity and longer life than pleated filters, resulting in lower filter replacement costs.

## Configurations to Fit Your Needs

FiberFlo capsule filters are available in two sizes, five micron ratings, and a variety of endcap styles. Both inline and crossflow configurations are available.

## Quality Assured

Each FiberFlo capsule filter is manufactured to meet medical device quality standards with adherence to QSR manufacturing guidelines. These filters exceed the requirements of USP Class VI Plastics Testing and meet USP XXIII standards for purified water extractables. FiberFlo HF capsule filters are integrity testable by diffusional or forward flow methods.

## Sanitizable

The FiberFlo HF capsule filters with the Polyphen® Polysulfone membrane (FiberFlo 50, 100, 200 & 450) can be autoclaved up to five individual 20 minute cycles at 121°C (250°F) and 15 psig (1 bar). To prevent excessive pressures, do not steam sterilize filters in-line.

The FiberFlo 30 gas and vent capsule filter with the polypropylene membrane cannot be autoclaved.

The FiberFlo HF capsule filters can also be chemically sanitized using a 1% solution of Minncare® Cold Sterilant.

## FiberFlo HF Capsule Filter Features

- Higher flow rates at lower pressure drops
- Extended life—cleanable, sanitizable
- Removes pyrogens\*
- Polyphen® polysulfone filters can be autoclaved
- Quick rinse-up in ultrapure water
- In-situ integrity testable
- Hydrophilic membranes and hydrophobic membranes
- Biocompatible for medical applications

\* FiberFlo 50 and FiberFlo 100 only.



# Proven Technology for Bacteria, Endotoxin and Spore Removal

## FiberFlo Capsule Membrane Selection

### FiberFlo 30

FiberFlo HF 30 offers very fine filtration for gas and venting applications. This polypropylene hollow fiber filter has an absolute pore removal rating of 0.03µm. The hydrophobic hollow fiber membrane repels water, but can be wetted by an aqueous solution with high surface tension if prewetted with alcohol.

### FiberFlo 50

FiberFlo HF 50 offers the highest degree of control of particulates and microorganisms through its absolute pore removal rating of 0.05µm and the retentive characteristics of its Polyphen® polysulfone membrane. It is recommended for the most demanding pyrogen removal applications. FiberFlo HF 50 will remove 100 percent of endotoxin when challenged with a feed concentration of 5.0 EU/ml.\*\*

### FiberFlo 100

FiberFlo HF 100 offers the best balance of flow, pressure, retentive capacity, pyrogen removal and cost. Its absolute pore removal rating of 0.1µm and overall pore structure gives high water flow rates and excellent control of particulates, microorganisms and pyrogens. FiberFlo HF 100 will remove 100 percent of endotoxin when challenged with a feed concentration of 1.0 EU/ml.\*\*

### FiberFlo 200

FiberFlo HF 200 offers maximum flow rates without loss of bacteria retention. Absolute removal of *Brevundimonas diminuta* is a characteristic of this filter. The ability of FiberFlo HF 200 to remove bacteria and particulates gives it performance characteristics unmatched by traditional 0.2 micron pleated membrane filters.

### FiberFlo 450

FiberFlo HF 450 offers high flow rates and high filtration efficiency for clarification and prefiltration applications in biological solutions, ultrapure chemicals and purified water. The 0.45 micron (absolute rating) capsules provide superior particle control and filter life compared to traditional 0.45 micron pleated filters.

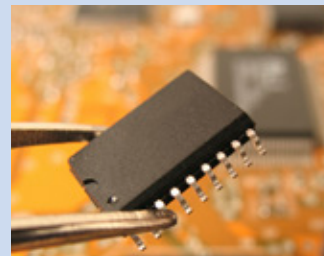
\*\*Test sensitivity of 0.06 EU/ml.

## Suggested Applications



### Medical and Laboratory

- Medical device rinsing
- Hemodialysis water systems
- Medical equipment rinse water



### Industrial

- Semiconductor
- Deionized water
- Industrial process water
- Dilute inorganic chemical solutions



### Pharmaceutical

- Manufacturing
- Serum and blood fractions
- USP purified water
- Ophthalmics
- Growth media
- Fermentation feed stocks



### Food and Beverage

- Distilled spirits
- Bottled water
- Seltzer
- Vinegar
- Food products
- Make-up and rinse waters

# Technical Data

## FiberFlo Hollow Fiber Specifications

FiberFlo	30	50	100	200	450
Pore Size mm	0.03 absolute <sup>1</sup>	0.05 absolute <sup>1</sup>	0.1 absolute <sup>1</sup>	0.2 absolute <sup>1,2</sup>	0.45 absolute <sup>1</sup>
Membrane	Hydrophobic Polypropylene	Hydrophilic Polyphen <sup>®</sup> Polysulfone			
Sanitization	Not Autoclavable	May be autoclaved up to five 20 minute cycles at 121°C (250°F) and 15 psig (1 bar) and/or Chemical sanitization with 1% Minncare <sup>®</sup> Cold Sterilant			
Maximum Differential Pressure	30 PSI (2 Bar)				
Surface Area	M = 2.0 ft <sup>2</sup> , L = 6.0 ft <sup>2</sup>				
Diameter	M = 1", L = 2"				
Nominal Length	M, L = 6.5"				
Case and End Caps	Polycarbonate				
End Seals	Polyurethane				
Extractables	Passes U.S.P. testing for less than 500 ppb when fed U.S.P. purified water.				
Fiber meets all USP-XXIII Class VI criteria, as well as, test standards for tissue cytotoxicity.					
1. As determined by latex bead challenge. Procedure available upon request. 2. As determined by HIMA challenge and latex bead challenge.					

## Ordering Information

### End-fitting options:

Code	Inlet Description	Outlet Description	Filter Type
A	1/4 inch NPT	1/4 inch NPT	Inline
B	3/8 inch NPT	3/8 inch NPT	Inline
D	3/8 inch hose barb	3/8 inch hose barb	Inline
H	Sanitary	Sanitary	Inline
K	1/4 inch NPT	Luer	Cross Flow
L	3/8 inch hose barb	Luer	Cross Flow

## How to determine ordering codes:

Catalog Number M-C-100-K is a 2.0 square foot capsule filter with cross flow design, a 0.10 micron rating, a quarter inch NPT inlet and a Luer outlet.

<b>M</b>	-	<b>C</b>	-	<b>100</b>	-	<b>K</b>
<u>Capsule Size</u> (Membrane Surface Area)		<u>Inline/Cross Flow</u>		<u>Micron Rating</u>		<u>End-Fitting Option</u>
L = 6.0 ft <sup>2</sup> M = 2.0 ft <sup>2</sup>		C = Cross Flow I = Inline		030 = 0.03µM* 050 = 0.05µM 100 = 0.10µM 200 = 0.20µM 450 = 0.45µM		(see chart)

\* Available with hydrophobic polypropylene hollow fibers only.

\*\* Hose barb endcaps are only available on medium size capsule filters.

FiberFlo and POLYPHEN are registered trademarks of MEDIVATOR INC. (formerly known as Minntech Corporation).



Hose Barb\*\*



Sanitary Fitting



MNPT



Mar Cor Purification  
4450 Township Line Road  
Skippack, PA 19474-1429  
Tel: (484) 991-0220  
Toll Free: (800) 346-0365  
Fax: (484) 991-0230

Mar Cor Purification  
14550 28th Avenue North  
Plymouth, MN 55447  
Tel: (484) 991-0220  
Toll Free: (800) 633-3080  
Fax: (763) 210-3868

Mar Cor Purification  
3250 Harvester Road - Unit 6  
Burlington, ON L7N 3W9  
Tel: (905) 639-7025  
Toll Free: (800) 268-5035  
Fax: (905) 639-0425

Mar Cor Purification  
Sourethweg 11  
6422 PC Heerlen  
The Netherlands  
Tel: (+31) 45 5471 471  
Fax: (+31) 45 5429 695

Mar Cor Purification  
1A International  
Business Park, #05-01  
Singapore 609933  
Tel: (+65) 6227 9698  
Fax: (+65) 6225 6848