

# FiberFlo® Hollow Fiber Capsule Filters

## A Breakthrough in Filtration Technology

- ✓ Higher flow rates at lower pressure drops
- ✓ Extended life—cleanable, sanitizable
- ✓ Removes pyrogens\*
- ✓ Autoclavable and steam sterilizable
- ✓ Quick rinse-up in ultrapure water
- ✓ In-situ integrity testable
- ✓ Hydrophilic membranes and hydrophobic membranes
- ✓ Biocompatible for medical applications



# FiberFlo HF Cartridge Filters

- ✓ Fine filtration
- ✓ High flow with low pressure drops
- ✓ Longer filter life

## 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 purification applications.

## 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.

## Easy to Maintain

FiberFlo HF capsule filters can be steam sterilized in-line or autoclaved off-line.

## 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.

## Customized

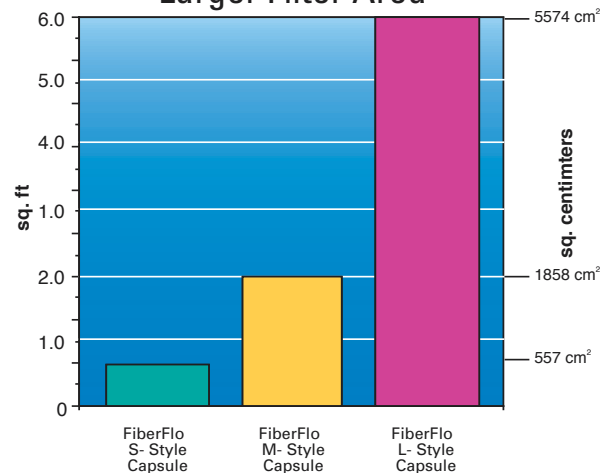
FiberFlo capsule filters are available in three sizes, five micron ratings, and a variety of endcap styles. Both inline and crossflow configurations are available.

## Quality Assured

Minntech Filtration Technologies manufactures FiberFlo capsule filters to 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.



Compact Size—  
Larger Filter Area



\*The pore size of the FiberFlo 450 is not designed to remove pyrogens or all bacteria.

# Proven Technology for Bacteria,

# 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 0.03 $\mu$ m. 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 0.05 $\mu$ m and the retentive characteristics of its Polyphen<sup>®</sup> 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 0.1 $\mu$ m 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 HF 200 will remove 100 percent of endotoxin when challenged with a feed concentration of 0.5 EU/ml.\*\*

## 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



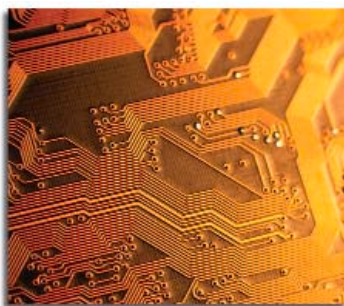
### Medical and Laboratory

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



### Pharmaceutical Manufacturing

- Serum and other blood fractions
- USP purified water
- Ophthalmics
- Buffers
- Growth media
- Fermentation feed stocks
- Diagnostic reagents



### Industrial

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



### Food and Beverage

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

# Endotoxin and Spore Removal



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>2</sup>	0.45 absolute <sup>1</sup>
Membrane	hydrophobic polypropylene	Polyphen® Polysulfone			
Maximum Differential Pressure	30 PSI (2 Bar)				
Surface Area	S = 0.6 ft <sup>2</sup> ; M = 2.0 ft <sup>2</sup> ; L = 6.0 ft <sup>2</sup>				
Diameter	S = 3/4"; M = 1"; L = 2"				
Nominal Length	S, M, L = 6.5"				
Case and End Caps	Polycarbonate				
End Seals	Polyurethane				
Extractables	Passes U.S.P. tests for oxidizable substances and total solids for purified water.				

Fiber meets all USP-XXIII Class VI criteria as well as test standards for tissue cytotoxicity.

- As determined by latex bead challenge. Procedure available upon request.
- As determined by HIMA challenge and latex bead challenge.



Hose Barb



Sanitary Fitting



MNPT

## 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
C	.1/2 inch hose barb	.1/2 inch hose barb	.Inline
D	.3/8 inch hose barb	.3/8 inch hose barb	.Inline
E	.1/4 inch NPT	.1/2 inch hose barb	.Inline
F	.1/4 inch NPT	.3/8 inch hose barb	.Inline
G	.3/8 inch NPT	.1/2 inch hose barb	.Inline
H	.Sanitary	.Sanitary	.Inline
J	.Mini-ISO	.Mini-ISO	.Inline
K	.1/4 inch NPT	.Luer	.Cross Flow
L	.3/8 inch hose barb	.Luer	.Cross Flow
P	.Mini-ISO	.Mini-ISO	.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.

**M - C - 100 - K**

Capsule Size (Membrane Surface Area)	Inline/Cross Flow	Micron Rating	End-Fitting Option (see chart)
L = 6.0 ft <sup>2</sup>	C = Cross Flow	030 = 0.03µM*	
M = 2.0 ft <sup>2</sup>	I = Inline	050 = 0.05µM	
S = 0.6 ft <sup>2</sup>		100 = 0.10µM	
		200 = 0.20µM	
		450 = 0.45µM	

\* available with hydrophobic polypropylene hollow fibers only

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