

## Hydrofil™ Plus

Dual Nylon 6.6 Layer  
Membrane Cartridge  
Filters



Hydrofil™ Plus microbial rated cartridges have been developed and manufactured for the filtration of liquids in the pharmaceutical, biotechnology and other critical applications. Hydrofil™ Plus utilises a naturally hydrophilic Nylon 6.6 membrane with a mirrored asymmetric pore structure. The cartridge's unique built in pre-filtration membrane layer provides longer life and higher throughput.

When combined with quality all-polypropylene components and high integrity manufacturing techniques, the Hydrofil™ Plus filter cartridge is ideally suited to the most demanding process conditions.

Hydrofil™ Plus membrane cartridges are 100% integrity tested during manufacture by the forward flow diffusion test method.

### Typical Applications

- Biopharmaceuticals
- Fermentation
- APIs / LVPs
- Beverages
- Pure water supply

### Ordering Information

Product Code:		1	2	3	4	5	6	7					
<b>1: Membrane</b>		<b>2: Pore rating</b>		<b>3: Version</b>		<b>4: Length (Nominal)</b>		<b>5: End Fitting</b>		<b>6: Seals</b>		<b>7: Additional</b>	
HTP	Hydrofil™ Plus	10	0.1µm	R	Rinsed	1	10" (254mm)	A	Code 3	A	Ethylene Propylene	A	N+U
		20	0.2µm	S	Standard	2	20" (508mm)	B	Code 7	N	Silicone	N	Non-steamable (no insert)
						3	30" (762mm)	C	Code 8	P	Viton®	P	Pharma Grade
						4	40" (1016mm)	F	N SOE	U	Nitrile	U	Unbranded
						5	5" (125mm)	G	G DOE (short)		FEP Encap. Viton®		
								H	G SOE		FEP Encap. Silicone		
								J	216 (218), fin		DOE PTFE		
								K	Code 2				
								L	223, fin (no lugs)				
								M	DOE				
								S	Code 28, fin (3 lugs)				
								T	223, flat (no lugs)				
								U	224, fin				
								V	226, fin				
								W	F20 +Code 7 (SS Core)				
								X	F20 +Code 2 (SS Core)				
								Y	BS832, flat				
								Z	F20 +Code Y (SS Core)				

## Features and Benefits

- Guaranteed microbial ratings
- Excellent chemical compatibility
- Cartridge integrity and low TOC levels
- Suitable for steam sterilising
- Full traceability
- Controlled manufacturing environment

## Specifications

### Materials of Manufacture

Pre-filter membrane:	Nylon
Final membrane:	Nylon
Filter membrane:	Nylon
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Support ring:	Stainless steel

### Cartridge Dimensions (Nominal)

Effective Filtration Area:	0.63m <sup>2</sup> (6.8ft <sup>2</sup> ) per 10" module	
Diameter:	70mm (2.8")	
Length:	1 module:	254mm (10")
	2 modules:	508mm (20")
	3 modules:	762mm (30")
	4 modules:	1016mm (40")

Other size formats (including juniors) are available upon request.

### Cartridge Treatment

Standard:	Cleaned and flushed with pyrogen-free water
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.cm

### Gaskets and O-Rings

FDA approved Ethylene Propylene, FEP encapsulated, Silicone, Viton® or Nitrile

### Maximum Differential Pressure

Normal flow direction at:

20°C (68°F):	6.0bar (87psi)
80°C (176°F):	4.0bar (58psi)
100°C (212°F):	3.0bar (44psi)
120°C (248°F):	2.0bar (29psi)

Reverse flow direction at:

20°C (68°F):	2.1bar (30psi)
80°C (176°F):	1.0bar (15psi)
100°C (212°F):	0.5bar (7psi)

### Operating Temperature

Maximum continuous: 60°C (140°F)

### Sterilisation

*In situ* steam 40 x 25 min cycles at 121°C (250°F).

### Extractables

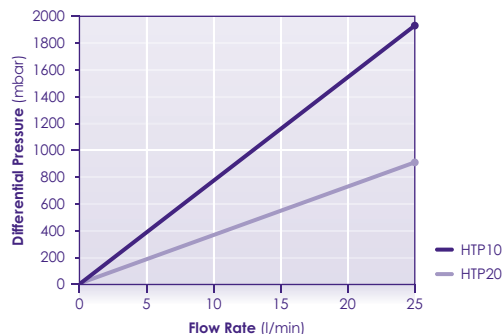
Minimum total extractables. Please refer to the Hydrofil™ Validation Guide.

### Integrity Testing

Each Hydrofil™ Plus module of every cartridge is individually integrity tested using the Diffusive Flow Test, which correlates to the HIMA and ASTM F838-05 bacterial challenge tests. Non-destructive integrity tests, such as Pressure Hold, Diffusive Flow and Bubble Point, can be performed by customers. Please contact us for procedural details.

### Clean Water Flow Rates

- Typical clean water flow rate:  
A 254mm (10") Hydrofil™ Plus single cartridge exhibits the flow-ΔP characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:  
For solutions with a viscosity other than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.



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