



Microfil GP Pleated Glass Fibre Cartridge Filters

Introduction

The Microfiltrex Microfil GP is an absolute rated pleated glass fibre filter cartridge that can be used as both a prefilter and a final filter. Extensive research and testing of diverse glass fibre media has demonstrated the risk of progressive breakdown and fibre release into the filtrate. Microfil GP has been designed to safeguard products by employing a high efficiency melt blown polypropylene layer downstream of the glass fibre media, whilst still offering the benefits of glass fibre media.

Applications

- Prefiltration to extend the life of sterilising membrane filters
- Final filtration for clarifying/brightening
- Bioburden reduction
- Low clean pressure drop applications
- Colloidal reduction in some systems
- Process and DI water systems
- Cosmetics
- Food and beverages
- Pharmaceuticals and bioprocessing
- Fine chemicals
- Air and gas filtration

Benefits

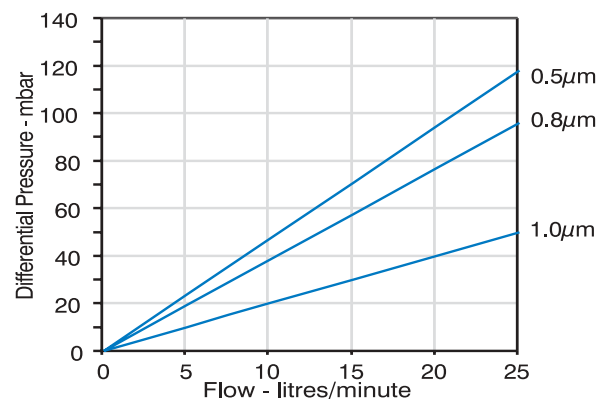
- Excellent fine particle removal due to adsorption and depth filtration mechanisms
- Low clean pressure drop and high flow rates - provides excellent performance
- Exceptionally high void volume - high dirt holding capacity
- Hydrophilic media - wets easily even at sub-micron ratings
- Absolute rated to Beta 5000 - ensures consistent high quality filtration
- FDA approved acrylic binder and polypropylene materials

Range

Microfil GP cartridges are available as single or multiple module units of 5, 10, 20, 30 and 40 inches, in a range of three particle retention ratings: 0.5, 0.8 and 1.0 microns absolute - Beta 5000 (99.98% efficiency).

Designed for use in Microfiltrex filter housings and as direct replacements for existing cartridges, Microfil GP are available with end fittings to suit most hardware installations without modification.

Performance



Test Conditions

Typical Clean Water Flow Rate - Based on a 250mm (10") single module housing exhibiting the differential pressure characteristics indicated above, for solutions with a viscosity of 1 centipoise.

Other Solutions - For solutions with a viscosity greater than 1 centipoise, divide the indicated flow rate by the viscosity in centipoise.

Specifications

Materials of Manufacture

Filter Medium	Borosilicate glass fibre with FDA approved binder and melt blown polypropylene. Downstream laminated polypropylene filter layer is calendered for protection against fibre release
Upstream Irrigation	Spun bonded polypropylene
Downstream Drainage	Spun bonded polypropylene
Inner Core	Polypropylene
Outer Support	Polypropylene
End Fittings	Polypropylene
Construction	Thermal welding

Cartridge Dimensions (Nominal)

Diameter:		70mm (2.8")
Length:	1 Module (Short)	125mm (5")
	1 Module	250mm (10")
	2 Modules	510mm (20")
	3 Modules	760mm (30")
	4 Modules	1020mm (40")

Effective Filtration Area

Absolute Particle Retention Rating (Beta 5000)	EFA (Each 250mm Module)
0.5 micron	0.4m ² (4.4ft ²)
0.8 micron	0.4m ² (4.4ft ²)
1.0 micron	0.4m ² (4.4ft ²)

Cartridge Treatment

Standard	Clean, without further treatment
Flushed	Flushed with pyrogen free water
Rinsed	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.cm



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*The company reserves the right to change specifications without notice.
Freedom from patent restrictions must not be assumed.*

Gaskets and O-rings

Ethylene Propylene, PTFE Encapsulated, Silicone, Viton, Nitrile, or Polypropylene Felt

Maximum Differential Pressure

<i>Normal Flow Direction</i>		
at	20°C (68°F)	5 bar (72lb/in ²)
	80°C (176°F)	4 bar (58lb/in ²)
	100°C (212°F)	3 bar (44lb/in ²)
	120°C (248°F)	1.8 bar (26lb/in ²)

<i>Reverse Flow Direction</i>		
at	20°C (68°F)	2.1 bar (30lb/in ²)
	80°C (176°F)	1.0 bar (15lb/in ²)
	100°C (212°F)	0.5 bar (7lb/in ²)

Maximum Temperature

60°C (140°F) Maximum continuous

Sterilisation

In-situ steam sterilised or autoclaved up to 125°C (257°F). Microfil GP cartridges are compatible with a wide range of sanitising agents.

Biological Safety

All polypropylene materials are FDA approved to 21 CFR 177 - 1520. FDA approved acrylic binder. Conforms to USP Plastics, Class 6.

Quality Assurance

The manufacture of Microfil GP cartridges is subject to rigorous quality assurance procedures and carried out under controlled environmental conditions.

Microfiltrex is quality assessed to ISO 9001 covering all aspects of design, manufacture and quality control.



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