

# Hall Pyke



**Membrane Filtration**

## **Fluorofil™ Plus**

**The SMART choice for filtration**

## Fluorofil™ Plus

### High Flow Sterile Gas Filter with ePTFE Membrane

Fluorofil™ Plus cartridges are manufactured using a highly hydrophobic ePTFE membrane. The enhanced ePTFE membrane offers exceptionally high gas flow rates at low pressure differentials (see graph). Fluorofil™ Plus cartridges are recommended for sterile gas filtration and venting applications. The hydrophobic characteristics of the ePTFE membrane makes the Fluorofil™ Plus filter cartridge particularly suitable for wet gas sterilising applications, such as fermenter air feed.

### Features and Benefits

- **Guaranteed microbial ratings**  
Fluorofil™ Plus cartridges are validated for bacterial removal according to HIMA guidelines and ASTM F838-05, with a log reduction value >7.
- **High Flow ΔP characteristics**  
The unique characteristics of the ePTFE membrane, having higher surface area, combined with the construction of the Fluorofil™ Plus filter cartridge, results in exceptionally high gas flow rates at low pressure differentials. These features result in lower energy consumption and fewer filter cartridges per system.
- **Mechanical strength**  
Fluorofil™ Plus cartridges incorporate a stainless steel central core which provides greater mechanical strength. This allows the filter to be used at higher gas flow rates with low pressure differentials.
- **Cartridge integrity and low TOC levels**  
All Fluorofil™ Plus cartridges are integrity tested and supplied clean, having been flushed with pure water.



### Materials of Manufacture

Filter membrane:	ePTFE	Inner core:	316L Stainless Steel
Membrane support:	Polypropylene	Outer support:	Polypropylene
Irrigation mesh (support):	Polypropylene	End fittings:	Polypropylene
Drainage layer:	Polypropylene	Sealing:	Fusion bonding

### Gaskets and O-Rings

Ethylene Propylene, PTFE encapsulated, Silicone or Nitrile.

### Maximum Differential Pressure

Normal flow direction at:	Reverse flow direction at:
20°C (68°F): 6.0bar (87lb/in2)	20°C (68°F): 2.1bar (30lb/in2)
80°C (176°F): 4.0bar (58lb/in2)	80°C (176°F): 1.0bar (15lb/in2)
100°C (212°F): 3.0bar (43lb/in2)	100°C (212°F): 0.5bar (7lb/in2)
120°C (248°F): 2.0bar (29lb/in2)	
125°C (257°F): 1.5bar (22lb/in2)	

### Operating Temperature

Maximum continuous: 80°C (176°F)

### Sterilisation

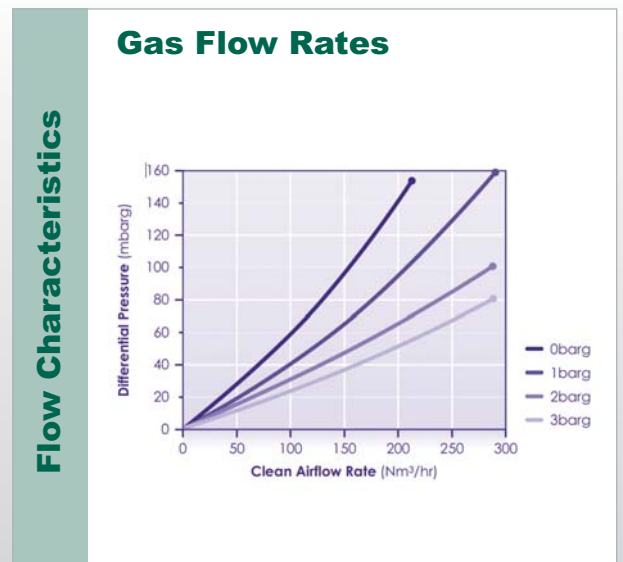
In situ steam 500 x 30 minute cycles at 135°C (275°F).

### Effective Filtration Area

Absolute Microbial Rating	Effective Filtration Area (each 254mm (10") module)
0.2µm	0.8m2 (8.6ft2)

### Applications

- **Sterile process gases**  
The supply of sterile gas for critical applications in the pharmaceutical, biotechnology, food and beverage markets.
- **Sterile vents**  
The safe sterile venting of processing vessels in pharmaceutical, fermentation, and food and beverage processes.
- **Biotechnology**  
The sterile filtration of exhaust gases from biological fermenters.
- **Powder handling and tableting**  
The removal of ultrafine powder particles from compounding environments.



# Hall Pyke



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