Hall Pyke

Membrane Filtration

Biofil™ Plus

The SMART choice for filtration

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Double Layer Polyethersulphone Membrane Cartridge Filters

The Porvair Filtration Group Biofil™ Plus microbial rated cartridge has been developed and manufactured for the filtration of liquids in the pharmaceutical, biotechnology and other critical applications. Biofil™ Plus utilises a naturally hydrophilic polyethersulphone (PES) membrane with a mirrored asymmetric pore structure. The cartridge's unique built in prefiltration membrane layer provides longer life and higher throughput.

Features and Benefits

- Guaranteed microbial ratings
  Biofil™ Plus cartridges are validated for bacterial removal according to HIMA guidelines and ASTM F838-05, with a log reduction value >7. They are therefore suitable for applications requiring sterilising grade filtration.
- Low protein binding
  Biofil™ Plus cartridges have excellent low protein binding characteristics, typically 10 times lower than nylon, 2 times lower than polysulphone and similar to PVDF.
- Will not hydrolyse
- Excellent chemical compatibility
- Cartridge integrity and low TOC levels
  Each Biofil™ Plus module of every cartridge is individually integrity tested. Each complete filter cartridge is flushed with pure water which is inspected daily for pyrogens using the standard LAL test. When required, they can be pulse flushed with 18MΩ.cm pyrogen-free ultra-clean water.
- Suitable for steam sterilising
  Biofil™ Plus cartridges incorporating a stainless steel support ring can be subjected to steam sterilisation at 125°C (257°F) without loss of integrity.

Materials of Manufacture

Prefilter membrane:	Polyethersulphone	Inner core:	Polypropylene
Final membrane:	Polyethersulphone	Outer support:	Polypropylene
Membrane support:	Polypropylene	End fittings:	Polypropylene
Irrigation mesh (support):	Polypropylene	Support ring:	Stainless steel
Drainage layer:	Polypropylene		

Gaskets and O-Rings

FDA approved Ethylene Propylene, PTFE encapsulated, Silicone 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 (43psi)
120°C (248°F): 2.0bar (29psi)

Integrity Testing

Each BiofilTM 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. Procedural details are available from Porvair

Effective Filtration Area

Pore Size Rating	Effective Filtration Area (each 254mm (10") module)
0.2, 0.45 and 0.65µm	0.48m2 (5.2ft2)

Operating Temperature

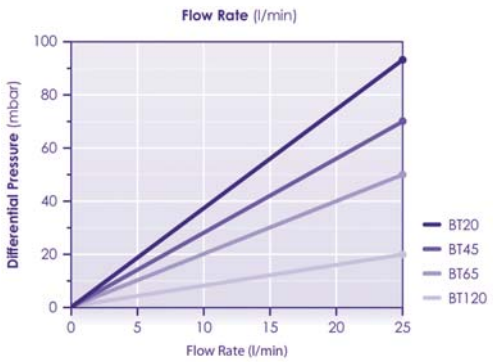
Maximum continuous: 60°C (140°F)

Applications

- Biopharmaceuticals
  For the sterilisation of biological fluids, cell culture media, sera and blood fractionations.
- Fermentation
  For providing sterile feed stock for the production of antibiotics and enzymes.
- Opthalmic solutions
- API's
  For the clarification and sterilisation of a wide range of active pharmaceutical ingredients.
- LVP's
  For final filtration of Total Nutritional Fluids, dextrose, amino acids and saline solutions.
- Beverages

Flow Characteristics

Clean Water Flow Rates



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