

Masterfilter PESV series

The Masterfilter *NanoPes* PESV series cartridges feature a double layer construction of an asymmetric hydrophilic PES membrane and a PVDF nanofiber layer. This membrane is characterized by excellent throughput and higher durability in many beverage filtration applications, such as beer and wine. Consistently higher flow rates and colloidal retention of Masterfilter PESV cartridge filters ensure long shelf life and a compact design of associated filtration systems.

Applications

- Beer
- Wine
- Mineral water
- Soft drinks

Features and Benefits

- Double layer construction
- High colloid retention
- Solid membrane structure
- Low differential pressure
- High throughput
- Extended steam sterilisation capability
- Extended service life
- Available in 0.2, 0.45, 0.65 and 1.2 μm

Materials of Construction

- Membrane: Asymmetric PES
- Pre-filter layer: PVDF nanofiber
- Support layers: Polypropylene
- Inner core: Polypropylene
- Outer cage: Polypropylene
- End caps: Polypropylene
- O-rings: Silicone, EPDM

Operating Parameters

- Max. operating temperature: 90 °C
- Max. differential pressure forward: 4.2 bar at 21 °C, 2.4 bar at 90 °C
- Max. differential pressure reverse: 2.1 bar at 21 °C
- Steam sterilisation: 150 cycles of 30 minutes at 121 °C
- Hot water sanitisation: 150 cycles for 30 minutes at 85 °C
- Filtration area 10" module: 0.85 m²



Quality Assurance

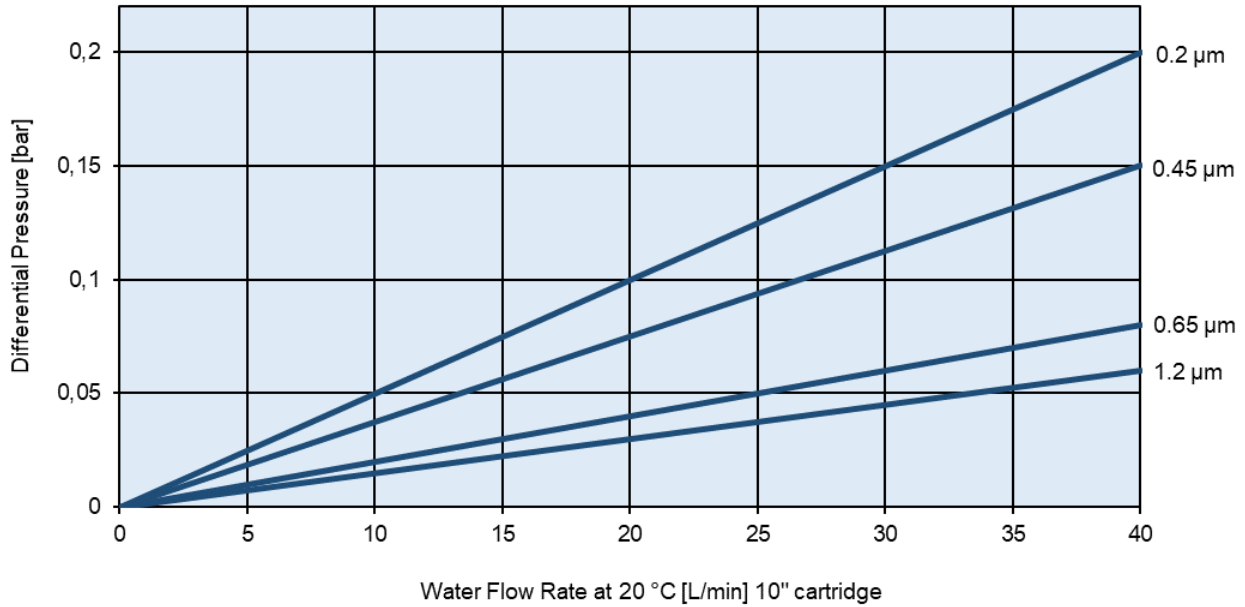
- Tested with *Brevundimonas diminuta* (ATCC 19146) at 10⁷ CFU/cm² (according to ASTM-F838)
- Cartridges are marked with a unique serial number to aid identification and full traceability
- All components meet the requirements of FDA 21 CFR and EU No. 1935/2004 and EU10/2011
- Manufactured under ISO 9001:2015 certified quality management system

Biological Standards

- Component materials toxicity meets the USP <88> tests for Class VI-121°C and ISO 10993 equivalents
- Bacterial endotoxin testing as per LAL test determined by USP <85> ≤ 0.25 EU/mL
- Component materials meet criteria for non-fibre releasing filter as defined in 21 CFR.3 (b) (6)
- Compliant with EC food compliance requirements of EU 1935/2004 and EU directive EU10/2011

Flow Rate Characteristics

Flow Rate Characteristics PESV



Part Numbers

PESV 065 - 10 HSF - S

Code	Removal rating [µm]
020	0.2
045	0.45
065	0.65
120	1.2

Code	Length	
	[mm]	[inch]
05	127	5
10	254	10
20	508	20
30	762	30
40	1016	40

Code	End caps
STC	Sartorius Code 28
HTC	222 O-ring/flat (Code 3)
HSF	226 O-ring/fin (Code 7)
HTF	222 O-ring/fin (Code 8)

Code	O-Ring
S	Silicone
E	EPDM

e.g. part number: PESV-065-10-HSF-S

PESV filter, 0.65 µm, 10" Length, End caps Code 7, Silicone O-rings