

Masterfilter PESA series

The Masterfilter *OptiPes* PESA series cartridges feature a unique single layer, asymmetric hydrophilic polyether sulphone membrane. This membrane is characterized by excellent throughput and higher durability in many applications such as pharmaceutical and biological filtration and beverage filtration such as beer and wine. Higher flow rates than any other sterilizing grade filter cartridge offers, so Masterfilter PESA filter assures thereby the most economic design of filtration systems.

Applications

- Pharmaceuticals and biologicals

Features and Benefits

- Asymmetric Structure - High porosity offering excellent flux rates
- Large filtration area - Longer service life
- Easy wettable material - Repeatability of the integrity test
- Graded density layer media- Full retention of the reference microorganism
- Totally inert materials - Very low absorption

Materials of Construction

- Membrane: Asymmetric PES
- Support layers: Polypropylene
- Inner core: Polypropylene
- Outer cage: Polypropylene
- End caps: Stainless 304
- O-rings: Silicone, EPDM

Operating Parameters

- Max. operating pressure: 6.9 bar at 25 °C, 2.4 bar at 80 °C
- Max. differential pressure forward: 6.9 bar at 25 °C, 2.4 bar at 80 °C
- Max. differential pressure reverse: 3.0 bar at 25 °C, 1.0 bar at 80 °C
- Bubble point: ≤ 3.4 bar, air, 0.22 µm, ≤ 30 ml/min at 2.5 bar, water
- Inline steam sterilisation: 100 cycles for 30 minutes at 135 °C (< 0.3 bar)
- Autoclave: 200 cycles for 30 minutes at 130 °C
- Hot water sanitisation: 50 cycles for 30 minutes at 85 °C
- Filtration area 10" module: 0.58 m²



Quality Assurance

- All materials used in PESA meet the requirements of FDA 21 CFR and EU No. 1935/2004 and EU10/2011

Microbiological Retention

PESA filter (1.2 µm, 0.65 µm, 0.45 µm and 0.2 µm) is an absolute rated filter that is suited for microbial reduction of *Saccharomyces Cerevisiae*, *Brettanomyces Brucellosis* and *B.diminuta*.

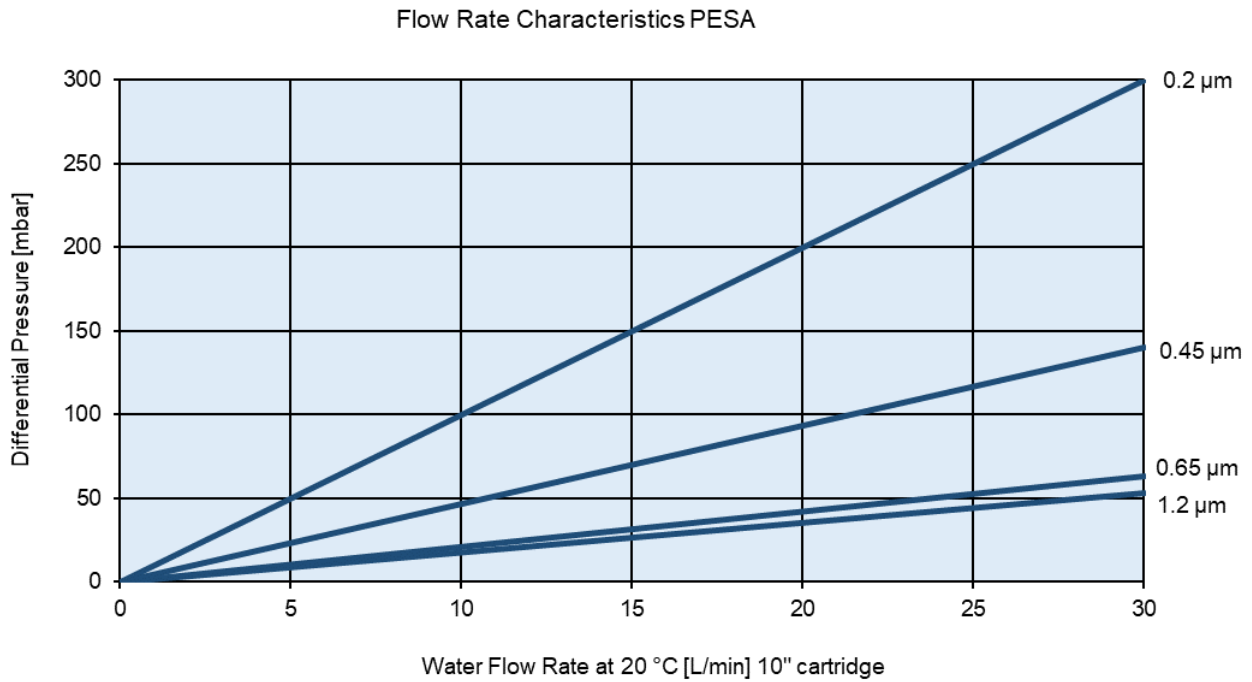
Typical Log Reduction Value (LRV)

0.2 µm	- > 7/cm ² for <i>B. Diminuta</i>
0.45 µm	- > 7/cm ² for <i>Lactobacillus Brevis</i> - > 7/cm ² for <i>Saccharomyces Cerevisiae</i>
0.65 µm	- > 4/cm ² for <i>Lactobacillus Brevis</i> - > 7/cm ² for <i>Saccharomyces Cerevisiae</i>
1.2 µm	- > 7/cm ² for <i>Saccharomyces Cerevisiae</i>

Log Reduction Values are calculated using the following formula:

$$LRV = \log_{10} \left(\frac{\text{total number of organisms entering the filter}}{\text{total number of organisms exiting the filter}} \right)$$

Flow Rate Characteristics



Part Numbers

PESA 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)
STT	126 O-ring (T-code)
HST	MCY 4463 (Code 18)

Code	O-Ring
S	Silicone
E	EPDM

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

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