

**Masterfilter PESA** filter 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.



Features	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

### Quality Assurance

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

### Materials of Construction

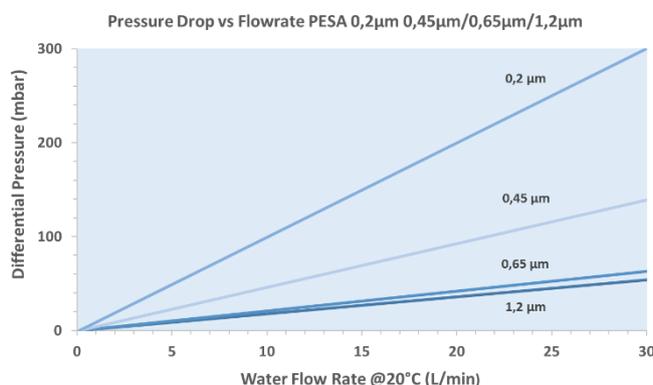
- Membrane:** Asymmetric PES
- Support Layers:** Polypropylene
- Inner Core:** Polypropylene
- Outer Cage:** Polypropylene
- End Caps insert:** Stainless 304

### 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 Reverse 3,0 bar at 25°C 1,0 bar at 80 °C
Bubble point	≤3,4 bar, air, 0,22µm ≤30 ml/min at 2,5 bar, water
Inline steam sterilization:	100 cycles for 30 minutes at 135 °C (<0,3 bar)
Autoclave:	200 cycles for 30 minutes at 130 °C
Hot water sanitization:	50 cycles for 30 min at 85°C

### 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*.



### Effective Filtration Area (EFA)

0.58m<sup>2</sup> /10" (250mm)

### Microbiological Retention

Typical Log Reduction Value (LRV)			
	B. Diminuta	Lactobacillus Brevis	Saccharomyces Cerevisiae
0,2 µm	> 7/cm <sup>2</sup>	N/A	N/A
0,45 µm	N/A	> 7/cm <sup>2</sup>	> 7/cm <sup>2</sup>
0,65 µm	N/A	> 4/cm <sup>2</sup>	> 7/cm <sup>2</sup>
1,2 µm	N/A	N/A	> 7/cm <sup>2</sup>

Log Reduction Values are calculated using the following formula:  $LRV = \log_{10} \left( \frac{\text{total number of organisms entering the filter}}{\text{total number of organism exiting the filter}} \right)$

### Part Numbers

PESA 065 - 10 - HSF - S

Code	Removal rating µm
020	0,20
045	0,45
065	0,65
120	1,20

Code	Length	
	mm	inch
05	65	5
10	254	10
20	508	20
30	762	30
40	1.016	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	116 O-ring
HST	MCY4463 / Sart 15

Code	O-Rings
S	Silicone
E	EPDM

e.g. part number: **PESA065-10-HSF-S**

multi layers PESA filter, 0,65 µm, 10" length, Code 7 end caps, silicone O-rings