

PESS Series

Polyether sulfone cartridges



Masterfilter PESS series

Masterfilter PESS filter cartridges manufactured with perfectly hydrophilic polyether sulfone symmetric membranes are specially designed to provide high flowrate with secure and reliable removal of spoilage microorganisms. Its unique construction structure allows optimal sterilization performances of a wide range of fluids. Good inertia and low protein binding of PESS polyether sulfone membrane ensures perfect transmission of active ingredients.



Applications

- Pharma grade water (PW & UPW)
- Mineral Water, Soft drinks
- Wine, Beer

Features and Benefits

- Low diffusion flow
- Inherently hydrophilic PES membrane
- High surface area provides excellent flow rates and extended service life while maintaining high bacteria removal efficiency
- Low protein binding

Materials of construction

- Membrane: Polyether sulfone membrane
- Support Layers: Polypropylene
- Inner core: Polypropylene
- Outer cage: Polypropylene
- End caps: Polypropylene
- O-rings: Silicone, EPDM

Operating parameters

- Maximum differential pressure:
Forward: 6.9 bar @ 25°C | 4.0 bar @ 60°C | 2.4 bar @ 80°C
Reverse: 3.0 bar @ 25°C | 1.0 bar @ 80°C
- Steam sterilisation: 100 cycles of 30' @ 135°C, maximum allowable pressure drop of <0.3 bar
 - Autoclave: 200 cycles of 30' at 130°C
 - Filtration Area 10" Module: 0,58 m²

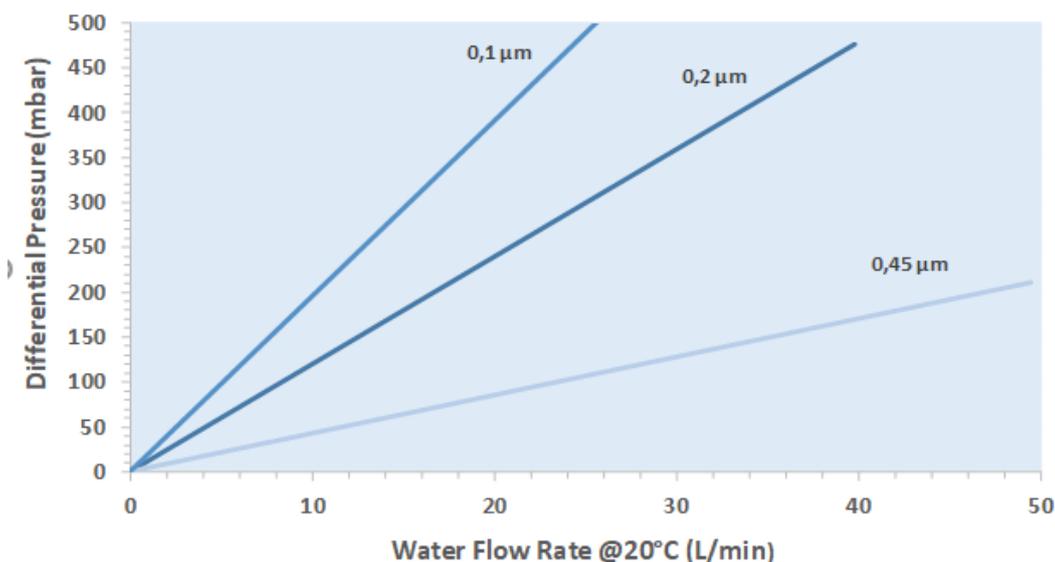
Quality assurance

- Tested with Brevundimonas Diminuta (ATCC 19146) @ 10⁷ CFU/cm² according with ASTM-F838
- Cartridges is marked with unique serial number for identification and traceability
- Manufactured in a facility which adheres to ISO 9001:2015 Practices.
- 100% Integrity testing in manufacturing

Biological standards

- Bacterial Endotoxin: aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP <85>
- Non-fiber releasing: component materials meet the criteria for a “Non-fiber-releasing filter” as defined in 21 CFR 210.3(b)(6)
- Component material toxicity: meet the requirement of USP <87> In Vitro Cytotoxicity Test; meet the criteria of USP <88> Biological Reactivity Test for Class VI-121°C plastics.
- TOC/ Conductivity at 25°C: Autoclaved filter effluent meet the USP <643> for Total Organic Carbon and USP <645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.

Flow Rate Characteristics



Part Numbers

PESS **020** - **10** - **HSF** - **5**

Code	Removal rating µm
010	0.1
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)
HSC	226 O-ring/flat (Code 2)
STZ	Dh Z
CP2	R-2"
CP1	R-1"
HSH	H code
HSU	MCY 1001
SLK	Sealkleen retrofit

Code	O-rings
S	Silicone
E	EPDM
P	PTFE encap Viton

e.g. part number: PESS020-10-HSF-S

Symmetric polyethersulfone PESS membrane filter, 0.2 µm, 10" length, Code 7 end caps, silicone O-rings