

# SKV Series PES Filter Capsules

## Pharmaceutical Capsule filter

Sterlitech SKV Series PES capsule filters are ideal for pharmaceutical applications where superior flow and microbial retention are required. The polyethersulfone (PES) membrane is hydrophilic and intrinsically low protein binding. It has excellent resistance to acids, bases, and oxidizers.

The SKV Series PES capsule filters are available with a selection of housing materials. Standard capsule filters with polypropylene housings and support layers are compatible with autoclave sterilization. Capsule filters with optional high density polyethylene (HDPE) housings and support layers may be sterilized by gamma irradiation. Both options have excellent compatibility with a broad range of liquids.

The capsule filters are provided with built-in bleed valves for simple, efficient venting of trapped air at startup. These are ideal for small to medium volume batches used in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process.

Capsules are rinsed with pyrogen-free purified water to reduce extractables and minimize startup rinse volumes. They are 100% integrity tested to ensure reliable performance straight from the package. For convenience, they may be ordered presterilized in the packaging by ethylene oxide.

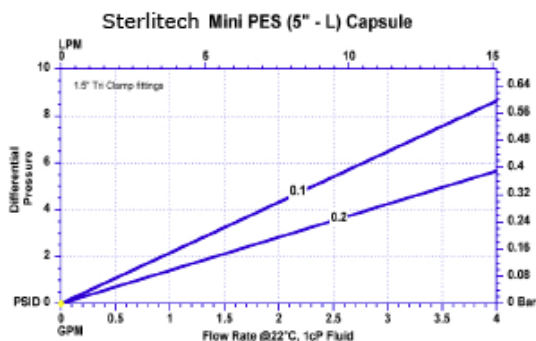
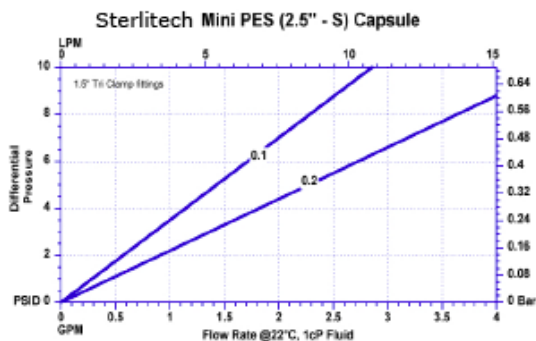
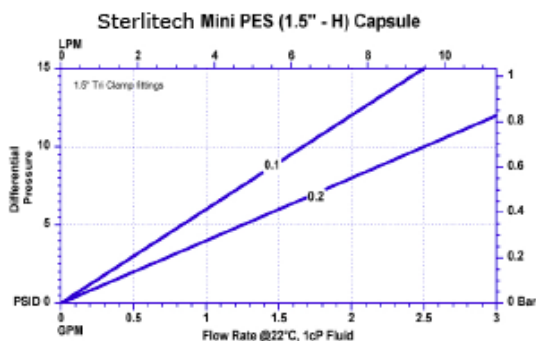


Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale-up processing
Water	Serums

## Specifications

Materials of Construction:	Media: PES (Polyethersulfone) Media Supports, Cage, Core, End Caps: Polypropylene or HDPE Valve O-Rings: Silicon (Standard); Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (128 mm), 2.5 in (155 mm), 5.0 in (210mm), 7.5 in (270mm), 10 in (340mm) Diameter: 2.75 in (70 mm)
Effective Filtration Area:	1.5in: 0.77 ft <sup>2</sup> (720 cm <sup>2</sup> ), 2.5in: 1.48 ft <sup>2</sup> (1380 cm <sup>2</sup> ), 5.0in: 2.8 ft <sup>2</sup> (2600 cm <sup>2</sup> ), 7.5in: 4.3ft <sup>2</sup> (3980cm <sup>2</sup> ), 10in: 5.6 ft <sup>2</sup> (5200 cm <sup>2</sup> )
Operating Conditions:	Max Forward Differential Pressure: Liquid: 5.5 bar (80psi) at 77°F/25°C Gas: 4.1 bar (60psi) at 77°F/25°C Min Burst Pressure: 8.3 bar (120psi) at 77°F/25°C Max Reverse Differential Pressure: 3.0 bar (44psi) at 68°F/20°C Maximum Operating Temperature: 176°F/80°C for polypropylene housings, 140°F/60°C for HDPE housings
Regulatory Compliance:	Filter materials are compliant for food contact under the applicable regulations in 21CFR177. The materials meet the requirements for USP Plastic Class VI.

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Note - Graphs based on Sanitary fittings.

### Specifications

- Bacterial Retention:** Integral 0.2  $\mu\text{m}$  rated filters demonstrate complete retention of *Brevundimonas dimunata* in accordance with ASTM F838-83 methodology.
- Sterilizable:** Polypropylene housing capsule filters can be autoclaved at 121°C for up to 30min - they are not gamma tolerant. Polyethylene housing capsule filters can be gamma irradiation sterilized but not autoclaved.
- Filters must not be in-situ steam sterilized. They can be sanitized by compatible chemical agents or by rinsing with 90°C water for limited time at minimized differential pressure. Allow filters to cool to room temperature before use.
- Bubble Point:** 0.1  $\mu\text{m}$ : 23 psi (0.16 MPa) in 100% IPA  
0.2  $\mu\text{m}$ : 50 psi (0.34 MPa) in purified water
- Bacterial Endotoxin:** Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

### Sterlitech SKV Series PES Filter Capsule (Pharmaceutical grade) Ordering Guide

Sterlitech Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Option
SKV 70mm Diameter Capsule with Bleed Valve	S = PES	004 = 0.04	H = 1.5"	1H = 1/8" Hose Barbs	1H = 1/8" Hose Barbs	<b>Blank</b> = Polypro construction <b>-E</b> = Polyethylene shell and HDPE media support for gamma sterilization <b>-GP</b> = Gamma stable polypropylene shell <b>-FB</b> = Filling Bell* <b>-FC</b> = Filling Bell with Cap* <b>-ETO</b> = Ethylene oxide sterilization <b>-N</b> = No vent or drain fittings <b>-NI</b> = No vent or drain inlet fitting <b>-NO</b> = No vent or drain Outlet fitting
		010 = 0.1	S = 2.5"	1NF = 1/8" FNPT	1NF = 1/8" FNPT	
		020 = 0.2	L = 5"	1Q = 1/8" Male Quick Coupling with Metal Latch	1Q = 1/8" Male Quick Coupling with Metal Latch	
		045 = 0.45	E = 7.5"	1QF = 1/8" Female Quick Coupling with Metal Latch	1QF = 1/8" Female Quick Coupling with Metal Latch	
		065 = 0.65	K = 10"	2H = 1/4" Hose Barbs	2H = 1/4" Hose Barbs	
		080 = 0.8		2N = 1/4" MNPT	2N = 1/4" MNPT	
		120 = 1.2		2NF = 1/4" FNPT	2NF = 1/4" FNPT	
			2Q = 1/4" Male Quick Coupling for Metal Latch	2Q = 1/4" Male Quick Coupling for Metal Latch		
			2QF = 1/4" Female Quick Coupling with Metal Latch	2QF = 1/4" Female Quick Coupling with Metal Latch		
			2QFP = 1/4" Female Quick Coupling w/Plastic Latch	2QFP = 1/4" Female Quick Coupling w/Plastic Latch		
			2QP = 1/4" Male Quick Coupling for Plastic Latch	2QP = 1/4" Male Quick Coupling for Plastic Latch		
			3H = 3/8" Hose Barb	3H = 3/8" Hose Barb		
			3NF = 3/8" FNPT	3NF = 3/8" FNPT		
			4H = 1/2" Hose Barb	4H = 1/2" Hose Barb		
			4N = 1/2" MNPT	4N = 1/2" MNPT		
			4QP = 1/2" Male Quick Coupling for Plastic latch	4QP = 1/2" Male Quick Coupling for Plastic latch		
			MT = 1/2" Tri-clamps	MT = 1/2" Tri-clamps		
			TC = 1-1/2" Tri-clamp	TC = 1-1/2" Tri-clamp		

**Example** - Sterlitech SKV Series Capsule, PES, 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, w/PE Construction, would be **SKVS020STCTC-E**

Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), Link Tech and others. \* - 2H or 3H with filling bell only.