



## SZV Series Dual Layer PES Filter Capsules

SKV Series Dual Layer PES filter capsule with all polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. The PES filter capsules have been specially designed for sterilizing in biopharmaceutical applications. The filters come with pre layer configuration, which increases the filtration volume significantly. The hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is a low protein binding media. The capsules were designed with built-in bleed valves for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes used in production, laboratory, and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. All filter capsules are 100% integrity tested to ensure filter performance.

## Application

Buffers and Media

SVP (Small Volume Parenteral)

Vaccines

Scale up processing

Product Sterilization

Bio Bags

Biologics

Water

Fermentation Broths

Pharmaceuticals

Antibiotics

Serums



SKV Series Capsule  
with 1/4" Hose Barb  
Inlet and Outlet

SKV Series Capsule  
with 1- 1/2" Tri-Clamp  
Inlet and Outlet

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## Technical Data Sheet

### Popular Configuration:

Catalog Number	Micron Rating	Inlet Connection	Outlet Connection	Vent Connection	Sterilization
SKVS045020_TCTC-ETO	0.45 µm / 0.2 µm (Dual Layer)	½" Tri-Clamp	½" Tri-Clamp	Bleed Valve with 1/8" Hose Barb	ETO Sterilized
SKVDS065020_TCTC-ETO	0.65 µm / 0.2 µm (Dual Layer)	½" Tri-Clamp	½" Tri-Clamp	Bleed Valve with 1/8" Hose Barb	ETO Sterilized
SKVS080020_TCTC-ETO	0.8 µm / 0.2 µm (Dual Layer)	½" Tri-Clamp	½" Tri-Clamp	Bleed Valve with 1/8" Hose Barb	ETO Sterilized

- ❖ The blank space is for filter size code. Find the codes below.
- ❖ Find the complete list of available standard inlet and outlet fittings in page 4.

### Filter Size Codes:

Filter Size Code	Filtration area (cm <sup>2</sup> )	Body Length Without Fittings (mm)	Body Diameter (mm)
<b>H</b>	680	56	73
<b>S</b>	1300	84	73
<b>L</b>	2600	141	73
<b>E</b>	3900	210	73
<b>K</b>	5200	265	73

### Materials of Construction

Media: Pharmaceutical Grade PES (Polyethersulfone) Sterilizing Grade - Hydrophilic

Media Supports: Polypropylene

Cage, Core, End Caps: Polypropylene

Valve O-Rings: Silicon (Standard)

Sealing: Thermally End Capping

### Filter Integrity:

The finished product was sampled and shown to exhibit a minimum bubble point (at 22°C ) of 50 psi (3.5 bar) in water.

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*Revolutionary systems for your industry*

## Operating Conditions:

Maximum Forward Differential Pressure: Liquid: 5.5 bar (80psi) at 77°F/25°C

Gas: 4.1 bar (60psi) at 77°F/25°C

Minimum Burst Pressure: 8.3 bar (120psi) at 77°F/25°C

Maximum Forward Differential Pressure: 5 bar (72psi) at 68°F/20°C

Maximum Reverse Differential Pressure: 3.0 bar (44psi) at 68°F/20°C

Maximum Operating Temperature: 176°F/80°C

## Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

## Filter Integrity:

The finished product was sampled and shown to exhibit a bubble point of 3.5 bar (50 psi) using air at 22°C.

## USP Bacterial Endotoxins:

The filters were tested to confirm that an aqueous extraction of this product contains <0.25 EU/ml as determined by the Limulus Amebocyte Lysate (LAL) Test

## USP Conductivity:

Effluent is tested during the manufacturing process and shown to meet the requirements for USP Sterile Water for Injection for conductivity.

## Bacterial Retention:

The filters are quantitatively retentive towards *Brevundimonas diminuta* (ATCC #19146) at a minimum challenge level of  $10^7$  CFU per  $cm^2$  of filtration area, consistent with ASTM F838-05

## Sterilization:

Capsules can be autoclaved 25 times at 125 °C (257°F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194°F) for a limited time (dependent on time and temperature).

*Warning:* The filters cannot be sterilized by steam-in-place (SIP)

## ISO 10993-5 Cytotoxicity:

Extract from this product is non-Cytotoxic

## ASTM Hemolysis:

Extract from this product is non-Hemolytic

## Shelf Life:

The SKV capsules have a shelf life of 3 years from the date of manufacture.

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## Special Configuration:

### Layer Option:

- Single Layer
- Dual Layer

### Micron Rating Option:

- 0.04 Micron
- 0.1 Micron
- 0.2 Micron
- 0.45 Micron
- 0.65 Micron
- 0.8 Micron
- 1.2 Micron

### Seal Option:

- Silicone
- EPDM
- Nitrile
- Viton

### Inlet Fitting Option:

- 1H = 1/8" Hose Barb
- 1Q = 1/8" Male Quick Coupling with Metal Latch
- 2H = 1/4" Hose Barbs
- 2HS = 1/4" to 3/8 " Hose Barb
- 2Q = 1/4" Male Quick Coupling for Metal Latch
- 3H = 3/8" Hose Barb
- 4H = 1/2" Hose Barb
- 4Q = 1/2" Male Quick Coupling for Plastic latch
- 5H = 5/8" Hose Barb
- MT = 1/2" Tri clamps
- TC = 1-1/2" Tri clamp

### Outlet Fitting Option:

- 1H = 1/8" Hose Barb
- 1Q = 1/8" Male Quick Coupling with Metal Latch
- 2H = 1/4" Hose Barbs
- 2HS = 1/4" to 3/8 " Hose Barb
- 2Q = 1/4" Male Quick Coupling for Metal Latch
- 3H = 3/8" Hose Barb
- 4H = 1/2" Hose Barb
- 4Q = 1/2" Male Quick Coupling for Plastic latch
- 5H = 5/8" Hose Barb
- MT = 1/2" Tri clamps
- TC = 1-1/2" Tri clamp

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