

## MKP Series PES Dual Layer Filter Capsules

MKP pharma grade capsules were designed for small-scale filtration, clarification, and filling applications in the pharmaceutical and biotechnology industries worldwide. This family of products is particularly suitable for scale-up testing where a full-size capsule or cartridge would be excessive. They are also very suitable for disposable Bio-bag applications. The all-polypropylene construction provides excellent compatibility with a wide range of chemicals. The capsules are thermally sealed, and 100% integrity tested.

### Application

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

Part# MKPDS065020D3H3H-ETO: MKP Filter Capsule with 3/8" Inlet/outlet connection



## Technical Data Sheet

### Popular Configuration:

Catalog Number	Effective Filtration Area	Inlet Connection	Outlet Connection	Sterilization
MKPDS065020D2H2H-ETO	480cm <sup>2</sup> [74.4 in <sup>2</sup> ]	3/8" Hose Barb	3/8" Hose Barb	Ethylene Oxide (ETO)

### Materials of Construction

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

Media Supports: Polypropylene

Cage, Core, End Caps: Polypropylene

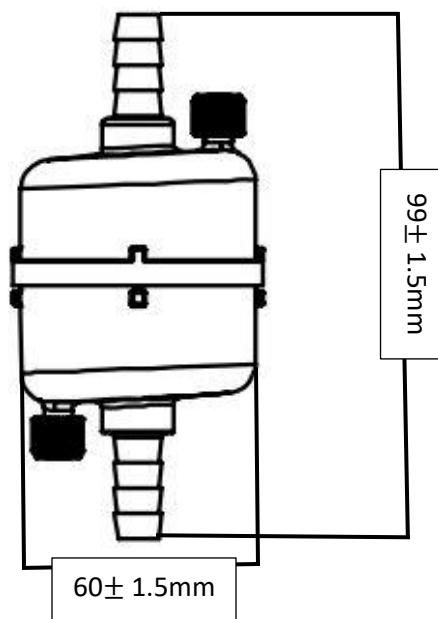
Valve O-Rings: Silicon (Standard)

Sealing: Thermally Bonded

### Micron Rating:

Final Media: 0.2 µm

Asymmetric Pre-Filter: 0.65 µm



### Nominal Dimensions:

Lengths: 3.9" (99mm) with fittings

Diameter: 2.3" (60mm)

### Effective Filtration Area:

480 cm<sup>2</sup> [ 74.4 in<sup>2</sup>] for dual layer membrane



## Volume Filtered:

11.2L – 21.0L

## Allowable Flowrate:

1.0 lpm – 1.85 lpm

## 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: 2.1 bar (30psi) at 68°F/20°C

Maximum Operating Temperature: 176°F/80°C

## Filter Integrity:

The finished product was sampled and shown to exhibit a 60% isopropanol/40% water bubble point of 1.2 bar (17.4 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:

The filters can be autoclaved up to 25 cycles at 125°C (257°F) for 30 minutes.

*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 MKP capsules have a shelf life of 3 years from the date of sterilization



## Special Configuration:

### Layer Option:

- Single Layer
- Dual Layer

### Micron Rating Option:

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

### Seal Option:

- EPDM
- Nitrile
- Viton

### Inlet Fitting Option:

- 1H = 1/8" Hose Barb
- 1Q = 1/8" Male Quick Coupling
- 2H = 1/4" Hose Barb
- 2Q = 1/4" Male Quick Coupling for Metal latch
- 3H = 3/8" Hose Barb
- LF = Female Luer Lock
- MT = 1/2" Tri clamps

### Outlet Fitting Option:

- 1H = 1/8" Hose Barb
- 1Q = 1/8" Male Quick Coupling
- 2H = 1/4" Hose Barb
- 2H-FB = 1/4" Hose Barb with Filling Bell
- 2H -FC = 1/4" Hose barbs with Filling Bell with Cap
- 2Q = 1/4" Male Quick Coupling for Metal latch
- 3H = 3/8" Hose Barb
- LM = Male Luer Lock
- MT = 1/2" Tri clamps

