



International Filter Products

Revolutionary systems for your industry

MZS Series PES Filter Cartridges

The MZS Series Pharmaceutical Grade Cartridges are designed for product sterility, provide excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. MZS Series Pharmaceutical Grade Cartridges have been designed for final filtration in biopharmaceutical applications. The hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. Also, the PES membrane has low protein binding characteristics to maximize yields. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with pyrogen-free water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance and quality. MZS Series Pharmaceutical Grade Cartridges are well-suited for critical applications where superior flow and bacterial retention is required.

Application

- Buffers and Media
- LVP (Large Volume Parenteral)
- Vaccines
- Scale up processing
- Product Sterilization
- Fine Chemicals
- Biologics
- Ultrapure Water
- Fermentation Broths
- Pharmaceuticals
- Antibiotics
- Serums

Part Number: MZXS2074S1-5

MZS- Series PES Cartridge
– 226 O-Rings with Spear
End Connection

Nominal 10-Inch





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Technical Data Sheet

Popular Configuration:

Catalog Number	Micron Rating	Length	End Modification	O-Ring Material	Stainless Steel Insert
MZXS2074S1-PH	0.65 µm / 0.2 µm (Dual Layer)	40-inch	Single Open Ended – 226 O-Rings with Spear	Silicone (Standard)	SS Insert for High Temperature Application
❖ Find the complete list of available standard inlet and outlet fittings in page 5.					

Micron Rating:

Final Media: 0.2 µm PES [Sterilizing Grade Membrane]

Pre-Filter: Highly Asymmetric 0.65 µm PES

Effective Filtration Area:

40-Inch; 30 *ft*² (2.8 *m*²)

Materials of Construction:

Membrane: Pharmaceutical Grade PES (Polyethersulfone) Sterilizing Grade

Membrane Feature: Hydrophilic, Low Protein Binding, High Flow Rate

Media Supports: Polyester (PET)

Shell: Gamma Stable Polypropylene

Cage, Core, End Caps: Nylon

O-Rings: Silicone (Standard)

Sealing: Thermally Bonded

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

Maximum Operating Temperature: 176°F/80°C



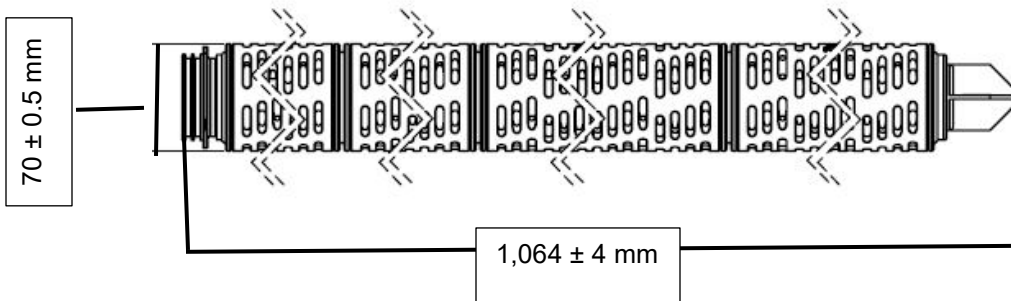


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Nominal Dimension:

Part Number: MZXS2074S1-5



Typical Filtered Volume:

400.0L – 1,500.0L

Filter Integrity:

The finished product was sampled and shown to exhibit a minimum bubble point of ≥ 18 psi (1.2 bar) in 60%IPA / 40% water and ≥ 50 psi (3.5 bar) in DI Water (at 22°C).

Sterilization:

Gamma Irradiation: The filters can be Gamma Sterilized up to 50kGy.

Autoclave: The filters can be autoclaved up to 10 cycles at 125°C (257°F) for 30 minutes.

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

Shelf Life:

The MZS cartridges have a shelf life of 3 years from the date of manufacture.

Regulatory Compliance:



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Category	Standard or Reference Test
Physiochemical	<ul style="list-style-type: none"> • USP Oxidizable Substances • USP <645> Conductivity • USP <643> Non-Volatile Residue • Total Organic Carbon (TOC) Analysis
Cleanliness	<ul style="list-style-type: none"> • USP <85> Bacterial Endotoxin Test • USP <788> Particulate Matter • 21 CFR 210.72 and 2010.3 (b) (6) Fiber Shedding
Biocompatibility	<ul style="list-style-type: none"> • ASTM F756-17 Hemolysis • USP <88> (USP Class VI Plastics) Biological Reactivity Tests, In Vivo • USP <87> / ISO 10993-5, In Vitro Cytotoxicity • 21 CFR 177 FDA Indirect Food Additive
Bacterial Retention	Quantitative retention of 10 ⁷ CFU/cm ² <i>Brevundimonas diminuta</i> per ASTM methodology
USP Bacterial Endotoxins	A representative sample from the lot is tested to confirm that an aqueous extraction of the product contains <0.25 EU/mL as determined by the Limulus Amebocyte Lysate (LAL) Test.
Animal-derived Components	No animal-derived material is intentionally added or used during the manufacture of PureFlo Z Series PES Capsules.
RoHS	Restriction of Hazardous Substances (RoHS 3) Directive 2015/863
REACH	REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) Article 57, Regulation No. 1907/2006)
Traceability	<p>For traceability and easy identification:</p> <ul style="list-style-type: none"> • A Certificate of Conformance is provided with each capsule. • Each filter bag and box are labeled with the product part number, lot number, and identifying characteristics. • Each capsule is engraved and labeled with the product part number, lot number, and identifying characteristics.





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MZS - Series PES Cartridge

(Pharmaceutical Grade)

Ordering Guide



[1]	[2]	[3]	[4]	[5]
Micron Rating [Pre-Filter/Final Filter]	End Modification	Length	O-Ring/Gasket Material	Optional
<ul style="list-style-type: none"> S10 : 0.1 µm S20 : 0.2 µm ZS10 : 0.2/0.1 µm ZS20 : 0.45/0.2 µm XS10 : 0.45/0.1 µm XS20 : 0.65/0.2 µm 	<ul style="list-style-type: none"> 0 : 222 O-Ring Flat 5 : 222 O-Ring Spear 6 : 226 O-Ring Flat 7 : 226 O-Ring Spear 	<ul style="list-style-type: none"> 1 : 10-Inch 2 : 20-Inch 3 : 30-Inch 4 : 40-Inch 5 : 5-Inch 	<ul style="list-style-type: none"> S : Silicone E : EPDM N : Buna-N P : Peroxide Cured EPDM Q : Platinum Cured Silicon T : TEV or FEP Gasket V : Viton 	<ul style="list-style-type: none"> -5 : SS Insert

Example:

MZ2XS2072S1-5

PureFlo MZS Series Cartridge, Highly Asymmetric Dual Layer PES 0.65µm / 0.2µm PES membrane (Sterilizing Grade), 20.0-inch Long, Filtration Area 1.4 m², 226 O-Rings with Spear, Silicone Double O-Rings, Stainless Steel Insert

Part Number

Description



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Special Configuration:

Layer Option:

- Single Layer
- Dual Layer

Micron Rating Option:

- S10 : 0.1 μm
- S20 : 0.2 μm
- ZS10 : 0.2/0.1 μm
- ZS20 : 0.45/0.2 μm
- XS10 : 0.45/0.1 μm
- XS20 : 0.65/0.2 μm

End Modification Option:

- 0 : 222 O-Ring Flat
- 3 : 222 O-Ring w /tabs Spear
- 5 : 222 O-Ring Spear
- 6 : 226 O-Ring Flat
- 7 : 226 O-Ring Spear
- 8 : 223 O-Ring Flat
- F : DOE Flat Gasket
- S : SOE Flat Gasket

O-Ring/Gasket Material Option:

- S : Silicone
- E : EPDM
- N : Buna-N
- P : Peroxide Cured EPDM
- Q : Platinum Cured Silicon
- T : TEV or FEP Gasket
- V : Viton

