

Advantage™ PS Filter Cartridges

■ Polyethersulfone Membrane

Ultra-Pure Membrane Series

High Flow Rate Capability With Polyethersulfone Membrane Filter Cartridges

Ultra-Pure polyethersulfone membrane cartridges provide superior flow rates and stand up to a wide variety of chemicals in applications including chemical, food and beverage, and pharmaceutical. Unique polyethersulfone construction features a high-surface area design which allows for excellent flow rates and high particle removal efficiency. Hydrophilic polyethersulfone membrane cartridges are ready for use and do not require prewetting.

The Ultra-Pure Polyethersulfone Membrane Series is available in 0.1µm, 0.2µm, 0.45µm and 0.65µm pore sizes.

Applications

Food & Beverage

- Bottled Water
- Wine
- Beer
- Process Water
- Vinegar
- Aseptic Packaged Liquids
- Edible Oils

Information Storage

- Optical Disk Manufacturing
- Hard Disk Manufacturing
- Optical Coatings
- Photographic Films

Chemicals

- Bulk Chemicals
- Process Water
- Pharmaceutical Intermediates
- Diagnostics & Reagents
- Electroless Nickel Plating
- Point-of-Use & Distribution



Features and Benefits

Superior Polyethersulfone Membrane Yields Maximum Filtration Results

- High surface area design provides excellent flow rates and life while maintaining high particle removal efficiency.
- Rinsed with 18 megohm-cm UHP water for high purity.
- Excellent resistance to most sanitising agents such as hot water, concentrated hydrogen peroxide and active chlorine compounds.
- Low pressure drops improve filtration efficiency and extend filter life.
- Spunbonded polypropylene support materials eliminate sites for potential shedding and increased particle counts.

Parker's TQM System Assures Consistent Performance and Reliable Filtration

- Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- Integrity-tested and testable *in situ*.
- Thermally welded, eliminating adhesive extractables.
- Biosafe in accordance with USP Class VI-121° Plastics Tests.
- Specifically designed to ensure cleanliness.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.

Process Filtration Division

WARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE. This document and other information from Parker Hannifin Corporation, its subsidiaries and authorised distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Parker
Filtration

Ultra-Pure Membrane Series

Specifications

Materials of Construction:

- Membrane: hydrophilic polyethersulfone
- Membrane Support/Drainage: polypropylene
- Core/Cage: polypropylene
- End Fittings: polyester
- O-Ring Material: various
- Sealing Method: thermal welding

Dimensions:

- Diameter: 2.70 in (68mm)
- Lengths: 10-40 in (250-1020mm)

Surface Area (10 in cartridge):

- Minimum 6.5 ft² (0.6 m²)

Endotoxins:

- < 0.25 EU/ml

Integrity Test:

- Bubble Point (in UHP water):
 - 0.1µm ≥ 70 psig (4.8 bar)
 - 0.2µm ≥ 45 psig (3.1 bar)
 - 0.45µm ≥ 24 psig (1.7 bar)
 - 0.65µm ≥ 16 psig (1.1 bar)
- Diffusion Rate (10 in cartridge):
 - 0.1µm ≥ 50cc/min at 50 psig (3.4 bar)
 - 0.2µm ≥ 50cc/min at 30 psig (2.1 bar)
 - 0.45µm ≥ 50cc/min at 15 psig (1.0 bar)
 - 0.65µm ≥ 50cc/min at 7 psig (0.5 bar)

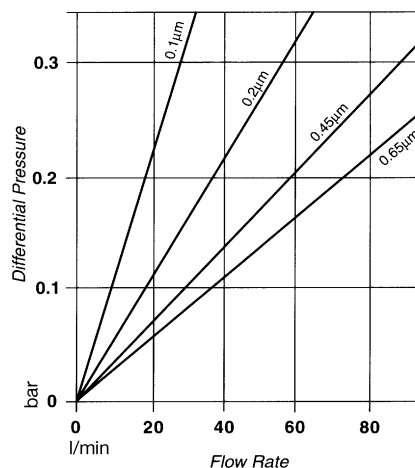
Recommended Operating Conditions:

- Maximum Temperature: 176°F (80°C) @ 30 ΔP (2.1 bar)
- Maximum Differential Pressure:
 - Forward: 70 psi (4.8 bar) @ 77°F (25°C)
 - 30 psi (2.1 bar) @ 176°F (80°C)
 - Reverse: 50 psi (3.4 bar) @ 77°F (25°C)

Sterilization/Sanitization Methods:

- Hot Water: 190°F (88°C)
- Autoclave: 250°F (121°C) for 30 minutes at 15 psi (1.0 bar)
- In situ Steam: 284°F (140°C) for 60 minutes at 15 psi (1.0 bar)
- Chlorine
- Hydrogen Peroxide
- Sodium Hypochlorite
- Sanitizing Agents (see Materials Selection Guide)

Polyethersulfone Cartridges:
Flow rate vs. ΔP for a 1 cps liquid @ 73°F (23°C)**



Flow Factors:

Pore Size (µm)	l/min/ bard	bard/ l/min
0.1	99	0.010
0.2	192	0.005
0.45	301	0.003
0.65	356	0.003

Ordering Information

PS	F	B	10	E	TC	U
Cartridge Code	Pore Size (mm)	Diameter	Length (mm)	O-Ring Material	End Cap Configuration	Grade
PS = Polypropylene/ Polyethersulfone	S = 0.1 F = 0.2 R = 0.45 H = 0.65	inch mm 2.7 68.6	10 = 254 20 = 508 30 = 762 40 = 1016	B = Buna N C = CR 503 D = CR 570 E = EPR L = KR 8201 S = Silicone T = PFA/Viton* V = Viton* X = No O-Ring	SC = 2-226/Flat SF = 2-226/Fin TC = 2-222/Flat TF = 2-222/Fin HH = DOE (Gaskets) AC = 020/Flat (Gelman) LC = 120/Flat (Nuclepore; Gelman G Style) LL = 120/120 (Filterite LMO and Nuclepore Polymeric Housings; Gelman N Style) PC = 213/Flat (Ametek and Parker LT Polymeric Housings; Gelman H Style)	U = Ultra-Pure

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** Consult Process Filtration Division for gas flow data.

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