

amcHydroFlow HP

Cartridges-Modified Polyethersulfone Filters



amcHydroFlow HP cartridge is a precision filter specifically constructed to provide high flow rate and retention. The filter medium is amcAccupor membrane (modified hydrophilic polyethersulfone membrane) developed by AMC for rigorous operating conditions in a variety of filtration applications.

amcHydroFlow HP cartridge is designed for final filtration when absolute retention is required, or prefiltration where highly fine particle removal is desired to protect the final filter.

Each cartridge is flushed with appropriate solvents to provide optimum cleanliness, and integrity tested to verify compliance with established pore size specifications.

amcHydroFlow HP cartridge is compatible with autoclave and in-line steam sterilization, as well as chemical sanitization methods that makes it an ideal microporous membrane cartridge for various applications.

Performance Advantages

Constructed of only two materials, i.e., modified polyethersulfone and polypropylene with no adhesives to ensure lower extractables

All components meet USP Class VI-121°C Plastics Tests for biosafety, and are listed as being acceptable for food contact applications according to the Code of Federal Regulation, Title 21

Provides high flow rate and particle retention

Available in a variety of configurations allowing for easy installation in commonly used filtration systems

100% integrity tested during manufacturing to assure product reliability and quality

Typical Applications

Parenterals, ophthalmics, oral and topical medicines, serum, tissue culture media, wash and rinse water, diagnostic reagents, buffers, vaccines, bottle and vial washers, make-up water

Specifications

Materials of Construction

Filter media: Single layer of pleated amcAccupor membrane (modified hydrophilic PES membrane)

Support Materials: Polypropylene

Structure Components: Polypropylene

Sealing Technology: Thermal Bonding

Dimensions

Nominal Length: 10, 20, 30 and 40 inch
(25.4, 50.8, 76.2 and 101.6 cm)

Diameter: 2.7 inches (6.9 cm)

Nominal Pore Sizes

0.03, 0.1, 0.2, 0.45, 0.65, 0.8, 1.2 μ m

Typical Effective Filtration Area

7 ft² (0.65 m²) per 10 inch

Maximum Operating Temperature

90°C (194°F) at 30 psi (2.1 bar)

(Supported adapters are recommended for applications at elevated temperatures over 60°C)

Sterilization/Sanitization Methods

Chemical: peracetic acid, chlorinated alkaline products, bleach, sulfur dioxide, and hydrogen peroxide at typical sanitization concentrations and temperatures

Hot Water: 88°C (190°F) at 5 psi (0.34 bar)

Autoclave: 121°C (250°F) for 30 minutes up to 50 cycles

In-line Steam: 140°C (284°F) for 60 minutes at 2 psi (0.14 bar) up to 25 cycles

Maximum Differential Forward Pressure

0.03 μ m, 0.1 μ m, 0.2 μ m, 0.45 μ m, 0.65 μ m:

60 psi (4.1 bar) at ambient temperature

0.8 μ m, 1.2 μ m: 50 psi (3.4 bar) at ambient temperature

Maximum Differential Back Pressure

15 psi (1.0 bar) at ambient temperature

Maximum Continuous Pressure

Limited by housing

Recommended Integrity Tests

Minimum Bubble Point:

0.03 μ m: 38 psi (2.7 bar) - ethanol

0.1 μ m: 28 psi (2.0 bar) - ethanol

0.2 μ m: 49 psi (3.4 bar) - water

0.45 μ m: 32 psi (2.3 bar) - water

0.65 μ m: 22 psi (1.5 bar) - water

0.8 μ m: 12 psi (0.8 bar) - water

1.2 μ m: 6 psi (0.4 bar) - water

Diffusional Flow in Water:

Provided separately*

Typical Water Flow Rate

| | |
|----------|---|
| 0.03 µm: | 0.3 gpm/psi/10 inch length (1.7 lpm/0.1 bar/25.4 cm length) |
| 0.1 µm: | 1.2 gpm/psi/10 inch length (6.6 lpm/0.1 bar/25.4 cm length) |
| 0.2 µm: | 3 gpm/psi/10 inch length (16.5 lpm/0.1 bar/25.4 cm length) |
| 0.45 µm: | 5.2 gpm/psi/10 inch length (28.5 lpm/0.1 bar/25.4 cm length) |
| 0.65 µm: | 6.8 gpm/psi/10 inch length (37.4 lpm/0.1 bar/25.4 cm length) |
| 0.8 µm: | 10 gpm/psi/10 inch length (54.9 lpm/0.1 bar/25.4 cm length) |
| 1.2 µm: | 13 gpm/psi/10 inch length (71.5 lpm/0.1 bar/25.4 cm length) |

Oxidizable Substances

Filtrate meets USP XXII requirements for purified water with < 1 L flush after autoclaving

Biosafety

All components meet USP Class VI-121°C Plastics Tests, and are listed as being acceptable for food contact according to the Code of Federal Regulation, Title 21

Endotoxin Level

< 0.25 EU/ml utilizing Limulus Amoebocyte Lysate (LAL) test

Typical Non-Volatile Residue

40 ppm per 10 inch

Typical Resistivity Recovery to 18 Megaohm-cm

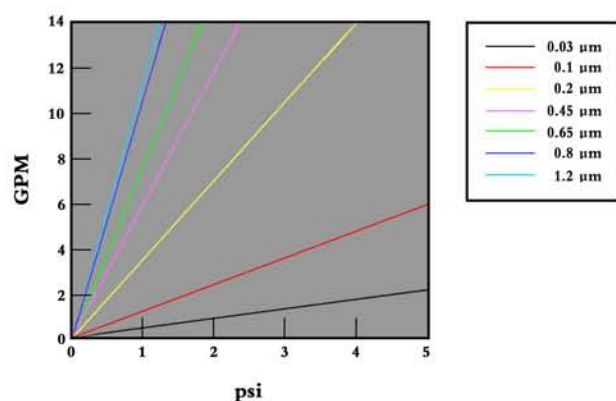
35 gallons (133 L)

Bacterial Retention

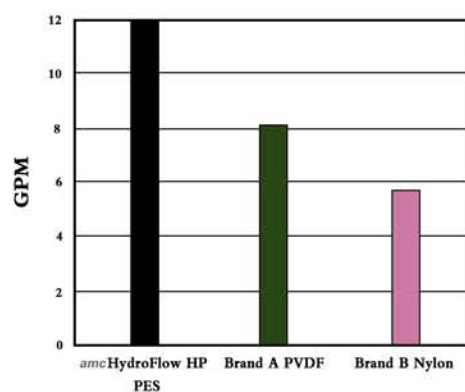
Provided separately*

*For more information, please contact us.

Typical Water Flow Rates (10 inch length)



amcHydroFlow HP Water Flow Rates



Cartridge Type (0.2 µm)

P = 4 psi, 10 inch cartridge at ambient temperature

Cartridges Ordering Information



| | | |
|-------------------------|----|--------------------|
| ■ Rated Pore Size | 03 | 0.03 µm |
| | 10 | 0.1 µm |
| | 20 | 0.2 µm |
| | 45 | 0.45 µm |
| | 65 | 0.65 µm |
| | 80 | 0.8 µm |
| | 12 | 1.2 µm |
| ◆ Nominal Length | 1 | 10 inch (25.4 cm) |
| | 2 | 20 inch (50.8 cm) |
| | 3 | 30 inch (76.2 cm) |
| | 4 | 40 inch (101.6 cm) |
| ▲ Seal Material | S | Silicone |
| | V | Viton |
| | E | Ethylene Propylene |

| | | |
|------------------------------|---|---------------------------------------|
| ● Cartridge Configuration | D | SOE, Flat |
| | F | DOE, Gasket/Gasket 10 inch increments |
| | J | SOE, -222/Flat/SS* |
| | K | SOE, -222/Fin/SS* |
| | M | SOE, -222/Flat |
| | P | SOE, -222/Fin |
| | Q | SOE, -226/Fin |
| | R | SOE, -226/Fin/SS* |
| | V | SOE, -226/Flat |
| | W | SOE, -226/Flat/SS* |

* SS indicates stainless steel supported adapter