

# amcMaxFlow

## Cartridges-Variou Membrane Filters



amcMaxFlow cartridge filters are specifically designed for today's electronics filtration application at point-of-use with excellent flow rate characteristics and particle retention rates. Three different filter elements are available, i.e., modified hydrophilic polyethersulfone, melt blown hydrophobic polypropylene, and unsupported hydrophobic polytetrafluoroethylene to meet various filtration requirements such as filtration of ultrapure water, chemicals, oxidizing agents and organic solvents.

amcMaxFlow cartridge filters having up to 34 square feet of filtration area offer high flow rate and longer service life, particularly suited for users requiring a fewer filter change outs, cleaner water, and chemicals for their applications.

### Performance Advantages

Each cartridge filter is thoroughly flushed with solvent and integrity tested in production to ensure product cleanliness

A variety of retention ratings are available to suit specific application needs

Three different filtration elements to choose from

The increased filtration area of cartridge filter provides higher flow rates in a long-life filter design

### Typical Applications

DI water and applications where weak acids/bases are used

Larger format flat panel displays

Point-of-use and distribution of pure chemicals and solvents

### Specifications

#### Materials of Construction

Filter Media:

amcMaxFlow PES: Pleated single layer of hydrophilic polyethersulfone

amcMaxFlow PES-A: Pleated single layer of proprietary asymmetrical hydrophilic polyethersulfone

amcMaxFlow PP: Pleated multiple layers of hydrophobic melt blown polypropylene

amcMaxFlow PTFE: Pleated single layer of unsupported hydrophobic polytetrafluoroethylene

Support Material: Polypropylene

Structure Components: Polypropylene

Sealing Technology: Thermal bonding

#### Dimensions

Nominal Length: 10 inch (27.0 cm)

Diameter: 132 mm

#### Nominal Pore Size

amcMaxFlow PES: 0.03, 0.1, 0.2, 0.45, 1.2  $\mu$ m

amcMaxFlow PES-A: 0.03, 0.1, 0.2, 0.45, 1.2  $\mu$ m

amcMaxFlow PP: 0.2, 0.45, 1, 3, 5, 10, 30, 60  $\mu$ m

amcMaxFlow PTFE: 0.05, 0.1, 0.2, 0.45, 1, 5  $\mu$ m

### Typical Effective Filtration Area

amcMaxFlow PES: 3.2 m<sup>2</sup>/10 inch

amcMaxFlow PES-A: 3.2 m<sup>2</sup>/10 inch

amcMaxFlow PP: >1.8 m<sup>2</sup>/10 inch

amcMaxFlow PTFE: 3.3 m<sup>2</sup>/10 inch

### Maximum Operating Temperature

80°C at 30 psi (2.1 bar)

### Maximum Differential Pressure

60 psi (4.1 bar) at ambient temperature

### Resistivity Recovery within 18 Mega-ohm

≤120 L/10 inch length (at 1 L/min flow rate)

### Cleanliness

amcMaxFlow PES: <5 particles/mL (>0.2  $\mu$ m particle after 5 minutes 18 m $\Omega$  water flush at 5 L/min flow rate)

amcMaxFlow PES-A: <5 particles/mL (>0.2  $\mu$ m particle after 5 minutes 18 m $\Omega$  water flush at 5 L/min flow rate)

amcMaxFlow PTFE: <10 particles/100 mL (>0.5  $\mu$ m particle after 30 minutes 18 m $\Omega$  water flush at 5 L/min flow rate after alcohol wetting)

### Retention Efficiency

amcMaxFlow PES:

0.03  $\mu$ m: >99.9% (retention of 0.055  $\mu$ m PSL beads)

0.1  $\mu$ m: >99.999% (retention of 0.198  $\mu$ m PSL beads)

0.2  $\mu$ m: >99.999% (retention of 0.460  $\mu$ m PSL beads)

0.45  $\mu$ m: >99.9% (retention of 0.830  $\mu$ m PSL beads)

1.2  $\mu$ m: >99.99% (retention of 2.0  $\mu$ m PSL beads)

amcMaxFlow PES-A:

0.03  $\mu$ m: >99.9% (retention of 0.055  $\mu$ m PSL beads)

0.1  $\mu$ m: >99.999% (retention of 0.198  $\mu$ m PSL beads)

0.2  $\mu$ m: >99.999% (retention of 0.460  $\mu$ m PSL beads)

0.45  $\mu$ m: >99.9% (retention of 0.830  $\mu$ m PSL beads)

1.2  $\mu$ m: >99.99% (retention of 2.0  $\mu$ m PSL beads)

amcMaxFlow PP:

0.2  $\mu$ m: >99% (retention of 0.3  $\mu$ m AC fine dust)

0.45  $\mu$ m: >99% (retention of 0.6  $\mu$ m AC fine dust)

1  $\mu$ m: >99% (retention of 1.5  $\mu$ m AC fine dust)

3  $\mu$ m: >99% (retention of 5  $\mu$ m AC fine dust)

5  $\mu$ m: >99% (retention of 9  $\mu$ m AC fine dust)

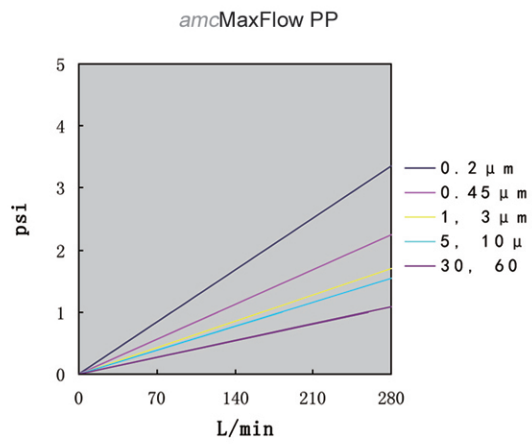
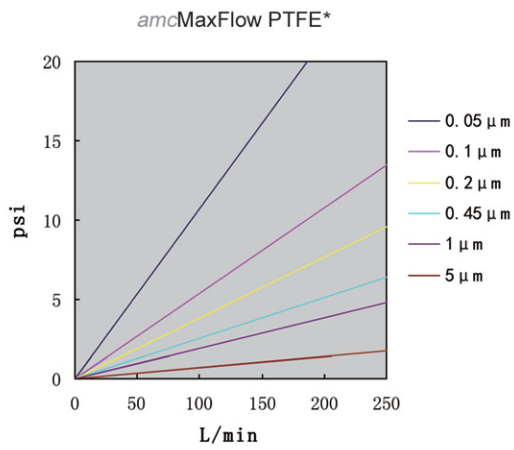
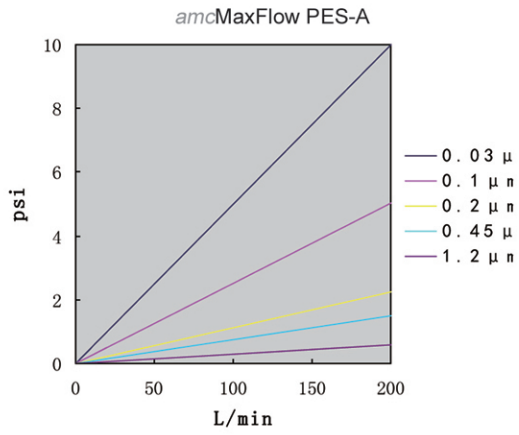
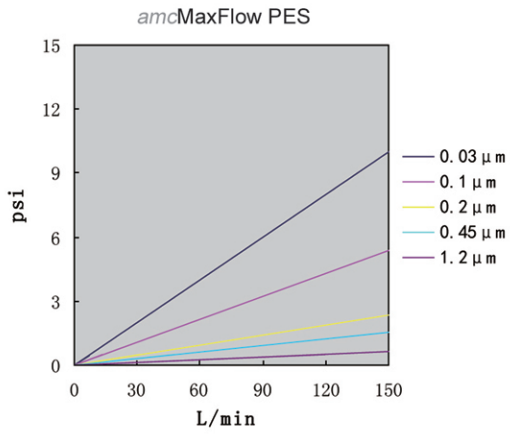
10  $\mu$ m: >99% (retention of 15  $\mu$ m AC fine dust)

30  $\mu$ m: >99% (retention of 40  $\mu$ m AC fine dust)

60  $\mu$ m: >99% (retention of 70  $\mu$ m AC fine dust)

Cartridge Configuration: 334/Flat

Typical Water Flow Rates (10 inch length)



\*After alcohol rinse followed by water flush

**Cartridge Ordering Information**

amcMaxFlow PES	M	F	S	■	■	F	◆	▲
amcMaxFlow PES-A	M	F	A	■	■	F	◆	▲
amcMaxFlow PP	M	F	P	■	■	F	◆	▲
amcMaxFlow PTFE	M	F	T	■	■	F	◆	▲

<b>Rated Pore Size</b>	PES	03	0.03 μm
		10	0.1 μm
		20	0.2 μm
		45	0.45 μm
		12	1.2 μm
	PES-A	03	0.03 μm
		10	0.1 μm
		20	0.2 μm
		45	0.45 μm
		12	1.2 μm
	PP	92	0.2 μm
		94	0.45 μm
		01	1 μm
		03	3 μm
		05	5 μm
		10	10 μm
		30	30 μm
		60	60 μm

PTFE	50	0.05 μm
	10	0.1 μm
	20	0.2 μm
	45	0.45 μm
	01	1 μm
	05	5 μm

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<b>◆ Nominal Length</b>	1	10 inch (27.0 cm)
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<b>▲ Seal Material</b>	S	Silicone
	V	Viton
	E	Ethylene Propylene
	F	FEP Encapsulated