



EMAIL: FILTRATION@JOHNBROOKS.CA



HME Series Filter Cartridges

*Pleated Polyethersulfone (PES) Membrane
for Final Filtration of Ultrapure Water*

Product Specifications

Media: Asymmetric

Polyethersulfone Membrane

Inner core, end caps, cage: Polypropylene

Support layers: Spunbonded Polypropylene

Gaskets/O-Rings:

Buna-N, EPDM, Silicone, Teflon Encapsulated
Viton O-Rings, Viton

Micron ratings: 0.03, 0.1, 0.2, 0.45 μm

Dimensions

Nominal lengths:

9.75" 10" 20" 30" 40"

24.8 25.4 50.8 76.2 101.6 cm

Outside diameter: 2.7" (6.9 cm)

Inside diameter: 1.0" (2.54 cm)

Surface area: 7.6 ft² (0.7 m²) per 10" element

Operating Parameters

Maximum sustained

operating temperature:

176°F (80°C) at 20 psid (1.38 bar)

Maximum differential pressure:

80 psid @ 70°F (4.14 bar @ 21°C)

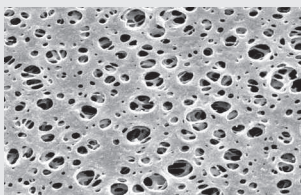
40 psid @ 160°F (2.8 bar @ 71°C)

Maximum reverse differential pressure:

40 psid @ 70°F (2.8 bar @ 21°C)

Recommended change-out pressure:

35 psid (2.4 bar)



HME microelectronics grade cartridges represent our latest development in ultrapure water filtration technology. The filters are inherently hydrophilic and contain no added surfactants or wetting agents that could contaminate pure and ultrapure water streams. The PES membrane offers superior flow characteristics, high contaminant capacity and consistent removal of submicron particles. The cartridges exhibit rapid rinse-up to 18 M Ω -cm resistivity and single digit ppb levels of TOC.

FEATURES & BENEFITS

- Manufactured, flushed, tested and packaged, in an ISO Class 7 Cleanroom Environment.
- Filters are 100% flushed with 18 M Ω -cm DI water and integrity tested.
- Resistivity rinse-up to 18 M Ω -cm and single digit ppb TOC levels with minimal throughput.
- Available in a variety of end cap/adaptor configurations to fit all industry-standard housings.
- Pore size, lot and serial number are stamped on each filter element for identification and traceability.
- Complete qualification guide available.

CERTIFICATIONS

HME filters were tested by outside laboratory, CT Associates in November, 2011 for the following:

- TOC Rinse-up to 0.5 ppb
- Resistivity Rinse-up to 18 M Ω -cm
- Non-Volatile Residue
- Particle Rinse-up
- Trace Metal Extractables
- Anion and Cation Extractables

TYPICAL APPLICATIONS

- DI water
- High purity chemicals

PERFORMANCE SPECIFICATIONS

- Hot DI Water: Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.
- Cleaning/Sanitization: Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.
- Rinse-Up Volumes: Resistivity rinse-up to 18 MΩ-cm: <30 minutes at a flow of 3 gpm per 10" element.
Rinse-up to single digit ppb TOC in <120 minutes at a flow of 3 gpm per 10" element.

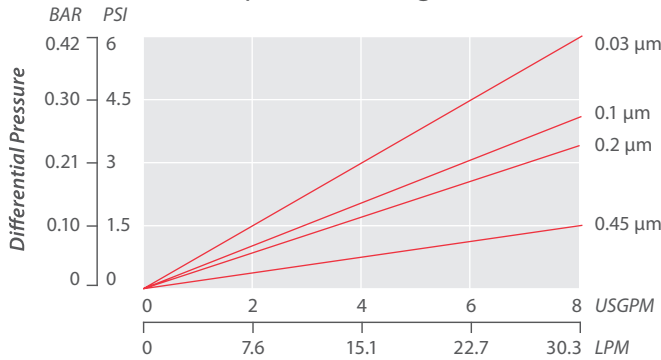
HME NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)		Nominal Length (inches)		End Configuration		Gasket or O-Ring	
HME Series	0.03	0.2	-5	-20	P	Double Open End	B	Buna-N
	0.1	0.45	-9.75*	-30	P2	226/Flat Single Open End	E	EPDM
			-10	-40	P3	222/Flat Single Open End	S	Silicone
					P7	226/Fin Single Open End	T	Teflon encap. Viton (O-Rings only)
				P8	222/Fin Single Open End	V	Viton	
				AM	Single Open End, Internal O-Ring			
				NPC	Double Open End, Internal O-Ring			
Example: HME 0.45-30P8T								
HME	0.45		-30		P8		T	

*Available only for DOE (P) configuration

HME FLOW RATE

Typical Flow Rate Clean Water at Ambient Temperature (per 10" cartridge)



For liquids other than water, multiply pressure drop by the fluid viscosity in centipoise

INTEGRITY TEST SPECIFICATIONS

Minimum Bubble Point values and maximum Diffusive Air Flow (per 10-inch cartridge) values for HME filters wet with water

Pore Size	Diffusive Air Flow
0.03 µm	≤ 50 cc/min @ 50 psig (3.1 bar)
0.1 µm	≤ 50 cc/min @ 40 psig (2.8 bar)
0.2 µm	≤ 35 cc/min @ 30 psig (2.1 bar)
0.45 µm	≤ 35 cc/min @ 20 psig (1.4 bar)



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