



EMAIL: FILTRATION@JOHNBROOKS.CA



### Product Specifications

**Media:** Expanded PTFE Membrane

**Inner core, end caps, cage:** Polypropylene

**Support layers:** Polypropylene

**Gaskets/O-Rings:**

Buna-N, EPDM, Silicone, Teflon (gasket only),  
Teflon Encapsulated Viton (O-Rings only), Viton

**Micron ratings:** 0.2  $\mu\text{m}$

### Dimensions

**Nominal lengths:**

5" 9.75" 10" 20" 30" 40"  
12.7 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:** 7.3 ft<sup>2</sup> (0.68 m<sup>2</sup>) per 10" element

### Operating Parameters

**Maximum operating temperature:**

195°F (90°C)

**Maximum differential pressure:**

75 psid @ 70°F (5.2 bar @ 21°C)

30 psid @ 176°F (2.1 bar @ 80°C)

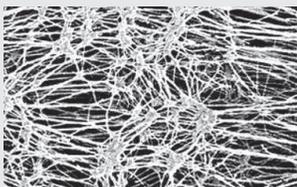
15 psid @ 195°F (1.03 bar @ 95°C)

**Maximum reverse differential pressure:**

40 psid @ 70°F (2.8 bar @ 21°C)

**Recommended change-out pressure:**

35 psid (2.4 bar)



# HMTV Series Filter Cartridges

## *Economical Absolute Rated PTFE Membrane Filter Cartridges*

HMTV cartridge filters are constructed with naturally hydrophobic PTFE membrane and polypropylene support layers and components. The economical PTFE membrane cartridge filter provides superior hydrophobicity as compared to polypropylene filters commonly used in compressed air applications, making it ideally suited for utility as well as tank vent applications, without the higher costs of the typical PTFE filter. Additionally, the filter has been demonstrated to produce sterile air utilizing a bacterial aerosol challenge methodology, emulating the actual removal character of the filter in vent applications.

### FEATURES & BENEFITS

- Single-layer construction provides superior flow rates and minimizes filtration system size
- 100% Flushed with 18 megohm DI water and integrity tested
- Filters are manufactured, flushed, tested and packaged in an ISO Class 7 Cleanroom Environment
- Each filter element stamped with pore size, lot and serial number for identification and traceability
- Demonstrated bacterial removal in air with an aerosol challenge level of 10<sup>7</sup> Brevundimonas diminuta/10" cartridge
- Complete qualification guide available

### CERTIFICATIONS

- USP Class VI: Meets USP Class VI Biological Test for Plastics
- FDA Listed Materials: All materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1550 as applicable for food and beverage contact.

### TYPICAL APPLICATIONS

- Tank Vents
- Aggressive chemicals
- Solvents
- Compressed gases
- Strong acids/bases

### PERFORMANCE SPECIFICATIONS

- Steam/Autoclave: Cartridges will withstand at least 35 steam/autoclave 30 minute cycles @ 275°F (135°C)
- Integrity Test Values: Air Diffusion per 10 inch cartridge wet with 60/40 IPA/water. Contact Graver Technologies for specific method.

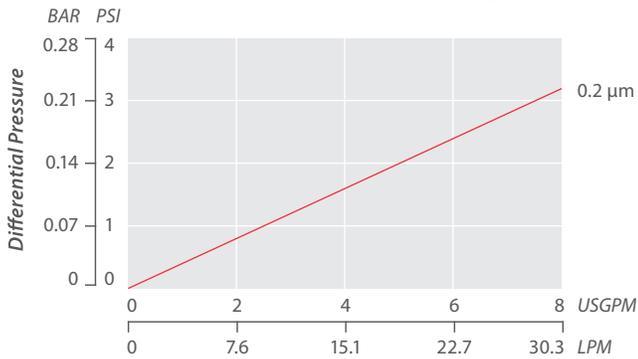
## HMTV NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)	Nominal Length (inches)	End Configuration	Gasket or O-Ring	
HMTV Series	0.2	-5	-20	P Double Open End	B Buna-N
		-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	
Example: HMTV 0.2-20P2S				NPC Double Open End, Internal O-Ring	
HMTV	0.2	-20	P2	S	

\*Available only for DOE (P) configuration

### HMTV 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

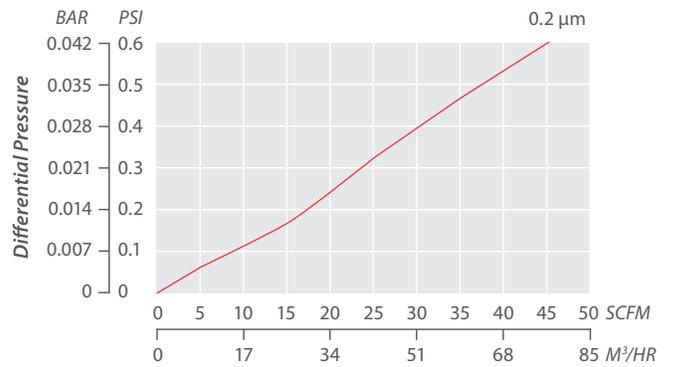
### INTEGRITY TEST SPECIFICATIONS

Air Diffusion per 10-inch cartridge wet with 60/40 IPA/water. Contact Graver Technologies for specific method.

Pore Size	Specification
0.2 $\mu\text{m}$	$\leq 30$ cc/min @ 9 psig (0.6 bar)

### HMTV AIR FLOW RATE

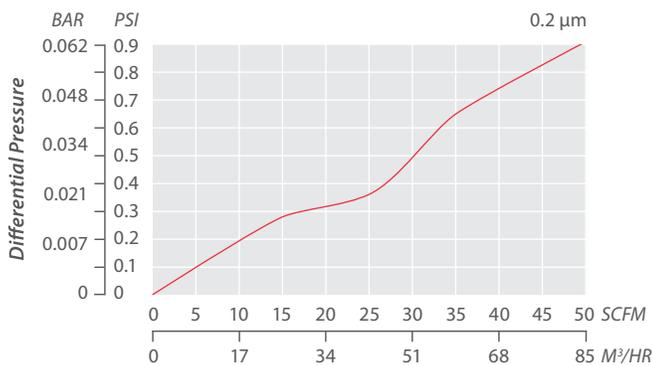
Air Flow Rate (per 10" cartridge)



Test conditions: System pressure at 30 psig, 65°F (18°C)

### HMTV AIR FLOW RATE

Air Flow Rate (per 10" cartridge)



Test conditions: System pressure at <10 psig (vent), 65°F (18°C), outlet open to atmosphere



**SPRAYING  
PUMPING  
FILTERING  
AND VALVES**

**1-877-624-5757**  
**www.johnbrooks.ca**