



## ETM/HT Filters

High Temperature PTFE Membrane



ETM/HT cartridge filters consist of a single layer Polytetrafluoroethylene (PTFE) membrane and are designed with a modified membrane support and hardware material to allow higher operating temperatures (liquid up to 203°F, air and gas up to 221°F). Designed to meet the needs of the electronics and high-purity chemical industries, ETM/HT products are resistant to virtually all chemicals making them very effective in removing particles in gas and non-aqueous liquid applications. They are most often used as final filters at the point-of-use, such as at tools. The ETM/HT can also be ordered pre-wetted with water for use in aqueous solutions. Pore sizes range from 0.05 to 5.0  $\mu\text{m}$ . Each filter is individually tested to ensure integrity.

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company's solution right the first time.

Fine Particle Removal

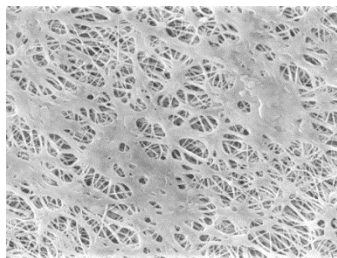
Tank Vent & Process Gas



CARTRIDGES – Nominal Dimensions

Length: 5 to 40 in. (12.7 to 101.6 cm)

Outside Diameter: 2.75 in. (7.0 cm)



ETM/HT filters are recommended for:

- Compressed Air
- Pressurized Gases
- Non-Aqueous Chemicals
- Solvents
- Tank Ventilation

## Maximum Operating Parameters

	CARTRIDGES
<b>Operating Temperature (air/gas)</b>	221 °F (105°C )
<b>Operating Temperature (water)</b>	203 °F at 30 psid (95 °C at 2.07 bard)
<b>Forward Differential Pressure</b>	80 psid at 68 °F (5.52 bard at 20 °C) (Liquid and Gas)
<b>Reverse Differential Pressure</b>	50 psid at 68 °F (3.45 bard at 20 °C)
<b>Recommended Changeout Pressure</b>	35 psid (2.41 bard)

## Sanitization & Sterilization

<b>Filtered Hot Water</b>	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow
<b>Inline Steam</b>	275 °F (135 °C), 30 min, 25+ cycles
<b>Autoclave</b>	250 °F (121 °C), 30 min, 25+ cycles
<b>Chemical Sanitization</b>	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.

## Filtration Area (Nominal)

	CARTRIDGES				
Length	5"	10"	20"	30"	40"
	12.7cm	25.4cm	50.8cm	76.2cm	101.6cm
Area	3.0 ft <sup>2</sup>	7.0 ft <sup>2</sup>	14.0 ft <sup>2</sup>	21.0 ft <sup>2</sup>	28.0 ft <sup>2</sup>
	0.28m <sup>2</sup>	0.65m <sup>2</sup>	1.30m <sup>2</sup>	1.95m <sup>2</sup>	2.60m <sup>2</sup>

## Integrity Testing

PORE SIZE	BUBBLE POINT MINIMUM*	
	PSIG	BARG
μm		
0.05	43	3.0
0.10	22	1.5
0.22	15	1.0
0.45	9	0.62
1.0	6	0.41
3.0	2	0.14
5.0	1	0.07

\* Bubble Point for membrane wetted with 60% IPA / 40% water solution.

## Construction Materials

<b>Filtration Media</b>	Polytetrafluoroethylene (PTFE) Membrane
<b>Media Support</b>	Polypropylene
<b>End Caps, Center Core, Outer Support Cage</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding
<b>O-Rings/Gaskets</b>	Buna, Viton® (or FKM), EPDM, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

## Extractables

ETM/HT filters typically exhibit low levels of non-volatile residues.

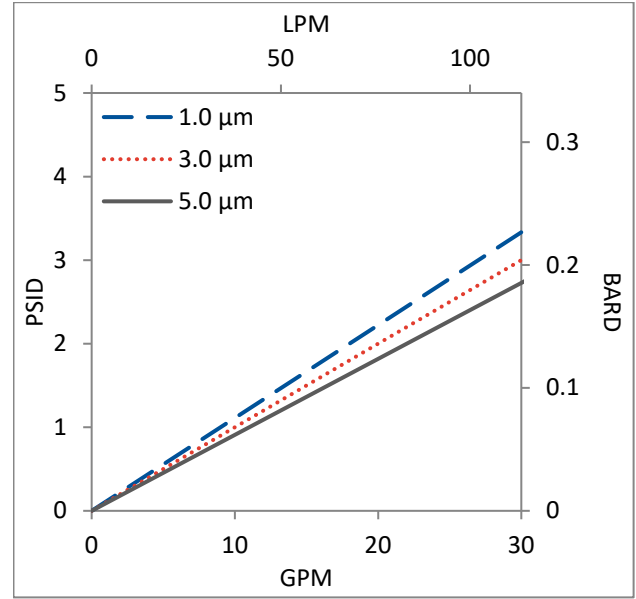
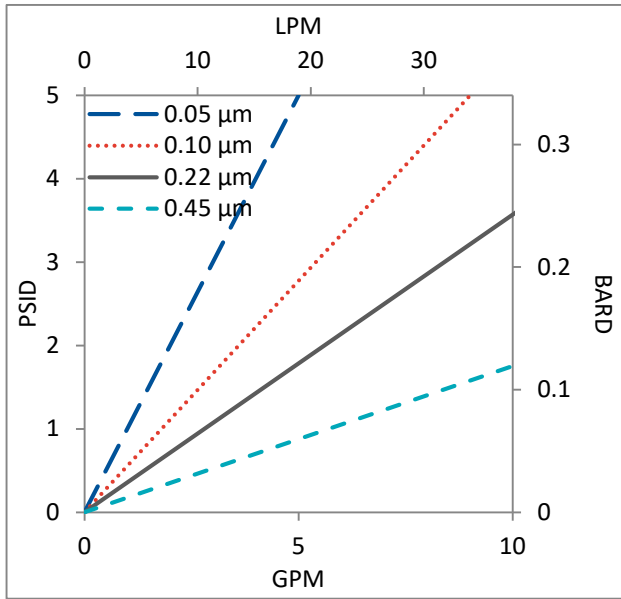
## TOC and Conductivity

ETM/HT filter water effluent conforms with the TOC and water conductivity standards of SEMI Standard F63 after an appropriate flush with ultrapure water.

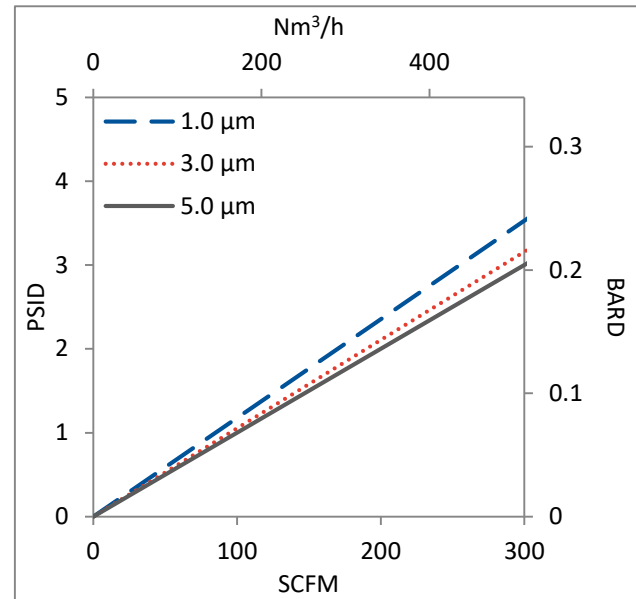
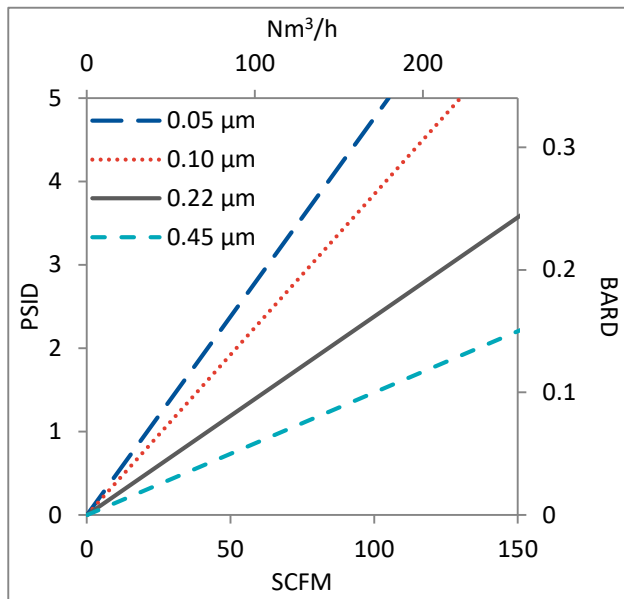
## Non-Fiber Releasing

ETM/HT filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

## Water Flow Rates for ETM/HT Cartridges by Pore Size



## Air Flow Rates for ETM/HT Cartridges by Pore Size



Flow rates for Cartridge filters are per 10-inch length. The test fluid is water or compressed air at ambient temperature.

## ETM/HT Filters Ordering Information

Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:  
call (603) 880-4420 or [contact us here](#).

### Cartridge Filters

ETM			S	OHT			
↑		↑	↑	↑	↑	↑	↑
<b>Pore Size Code</b> -05 = 0.05 µm -10 = 0.10 µm -20 = 0.22 µm -40 = 0.45 µm 1-0 = 1.0 µm 3-0 = 3.0 µm 5-0 = 5.0 µm	<b>Length</b> 05 = 5 in. (12.7 cm) 97 = 9.75 in. (24.8 cm) 01 = 10 in. (25.4 cm) 19 = 19.5 in. (49.5 cm) 02 = 20 in. (50.8 cm) 29 = 29.25 in. (74.3 cm) 03 = 30 in. (76.2 cm) 04 = 40 in. (101.6 cm)	<b>O-Ring/Gasket Code</b> S = Silicone B = Buna V = Viton (or FKM) T = FEP Encapsulated Viton (or FKM) E = EPDM R = FEP Encapsulated Silicone	<b>End Cap Code</b> 0 = Flat Gasket, DOE 2 = 2-222 O-ring/Plug 5 = 2-222 O-ring/Flat 6 = 2-226 O-ring/Flat 8 = 2-222 O-ring/Spear 9 = 2-226 O-ring/Spear				



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