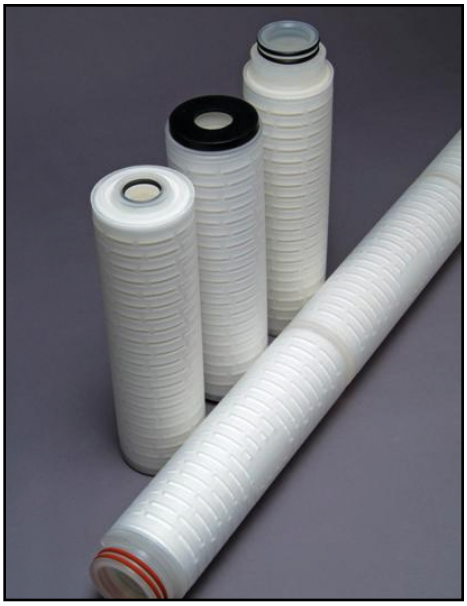
GTM/HT Cartridge Filters

PTFE Membrane

CRITICAL PROCESS FILTRATION, INC.



GTM Filter Cartridges are designed for general purpose use wherever a hydrophobic membrane filter is required. Manufactured with inherently hydrophobic polytetrafluoroethylene (PTFE) membrane, these cartridges are designed for use in the filtration of aggressive solvents, and as compressed gas and vent filters. These cartridges are found in the manufacturing processes of firms in multiple industries that require high quality, cost effective filter technologies. The cartridge surface area, filter core design, pleat configuration, and pleat packing density have been optimized to provide increased cartridge life resulting in lower filtration operating costs.

Construction Materials

Filtration Media	PTFE Membrane (absolute rated)
Media Support	High Temperature Polypropylene
End Caps	High Temperature Polypropylene
Center Core	High Temperature Polypropylene
Outer Support Cage	High Temperature Polypropylene
Sealing Method	Thermal Bonding
O-rings	Buna, Viton® (or FKM), EP, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

Applications

- Compressed Air
- Process Gases
- Solvents
- Tank Vents

Dimensions

Length	5 to 40 in. (12.7 to 101.6 cm) nominal
Outside Diameter	2.75 in. (7.0 cm) nominal
Filtration Area	7.0 ft^2 (0.65 m^2) per 10 in. length

Integrity Test Information

Representative samples from each manufacturing lot are tested for integrity to ensure consistent performance.

Maximum Operating Parameters

Differential Pressure	
• **Forward**	50 psid (3.4 bard) at 20 °C (68 °F)
• **Reverse**	40 psid (2.7 bard) at 20 °C (68 °F)
Maximum Continuous Air Temperature	105 °C (221 °F)

Sanitization/Sterilization

In-line Steam	135 °C (275 °F), 30 min, multiple cycles

For all elevated temperature procedures, a stainless steel support ring is required.

Chemical Sanitization

Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite, and other selected chemicals. (assure chemical solution will wet the hydrophobic membrane for effective sanitization.)

We Do It Right the First Time

We solve filtration challenges where filters are a critical part of your manufacturing process. Our Technical Team works with you to engineer filtration solutions that fit your needs. Then we manufacture the filters in our ISO 9001 certified facility and deliver them fast, so you have the right filters when you need them.

General Service Grade

FDA and EC Compliance

All Critical Process Filtration filters are designed to meet the FDA requirements for processing food and beverage products. The materials used to construct GPS filters are listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440 and 177.2600 as appropriate. Membrane filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

Flow Rate

The Typical Flow Rates table represents typical water flow and air flow rates at 1 psid (69 bard) pressure differential across a single 10 in. cartridge element. The test fluids are water and air at ambient temperature. These values are approximations because of the differences in pressure drop encountered in housings and piping systems. Extrapolation to multiple-length cartridges in multi-round housings can be done for sizing purposes. Exact flow rates will be installation dependent.

Extractables

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

Quality Assurance and Standards

Critical Process Filtration filters are designed for use in cGMP-compliant processes. Our state of the art manufacturing facility and quality management system are certified to meet ISO 9001 standards. Each operation from assembly and test to cleaning, drying, and packaging is done in appropriately rated clean rooms. Each filter is assigned a lot code and serial number to ensure the traceability of manufacturing data and materials. A sophisticated MRP system collects and processes real time data from manufacturing centers and inspection points, allowing quick and easy analysis driving constant improvements in quality.

Typical Flow Rates

Pore Size Rating	0.05 µm	0.1 µm	0.22 µm	0.45 µm	1.0 µm	3.0 µm	5.0 µm
Liquid Flow Rates (gpm)	1.0	1.25	2.8	5.7	9.0	10.0	11.0
Air/Gas Flow Rates (scfm)	> 21	> 26	> 42	> 68	> 85	> 85	> 85

Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, General Service Grade PTFE Membrane, 0.22 Micron Rating (liquid), With SS Support Ring, High Temperature, 20" Length, Silicone O-Rings, 2-222 O-Ring/Flat End Cap Configuration = GTM-20N00002S5.

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Pore Size Code
-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

316 SS Ring
S = Ring

Cartridge Length Code
05 = 4.875 in. (12.4 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)

O-ring/Gasket Code
S = Silicone
B = Buna
E = EP
V = Viton (or FKM)
T = PTFE Gasket or FEP Encapsulated Viton (or FKM) - O-rings
R = FEP Encapsulated Silicone - O-rings only

End Cap Code
0 = Flat Gasket, DOE
1 = Flat Gasket/Plug
2 = 2-222 O-ring/Plug
3 = 213/119 Internal O-ring DOE
4 = 213/119 Internal O-ring/Plug
5 = 2-222 O-ring/Flat
6 = 2-226 O-ring/Flat
7 = 020 O-ring/Plug
8 = 2-222 O-ring/Spear
9 = 2-226 O-ring/Spear
21 = 2-223 O-ring/Flat
22 = 2-223 O-ring/Spear
23 = 2-222 O-ring 3 Tab/Flat
24 = 2-222 O-ring 3 Tab/Spear
25 = Short 2-222/Plug

Request a **QUOTE** from your area representative

CRITICAL PROCESS FILTRATION, INC.

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