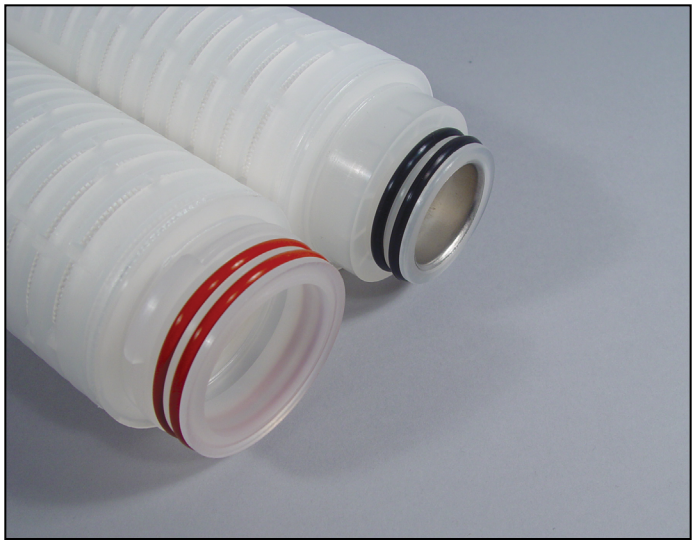
ETM/HT Cartridge Filters

High Temperature PTFE Membrane

CRITICAL PROCESS FILTRATION, INC.



ETM Filter Cartridges are designed to meet the special needs of the electronics and high-purity chemical industries. Polytetrafluoroethylene (PTFE) membrane is resistant to virtually all chemicals. Because of the hydrophobic nature of PTFE, it can also be used to filter process gases. Pre-wetted ETM filters are available for liquids with surface tension too high to wet out PTFE membrane. This membrane will also handle elevated process temperatures in compatible fluids. To minimize extractables, each cartridge module is pulse power flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3 ppb TOC. Each cartridge module is also individually tested for integrity.

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)

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

Applications

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

Integrity Test Specifications

60/40 IPA/Water-wetted membrane

Pore Size (liquid)	Bubble Point
0.05 µm	43 psig (3.0 barg)
0.10 µm	22 psig (1.52 barg)
0.22 µm	15 psig (1.0 barg)
0.45 µm	9 psig (621 mbarg)
1.0 µm	6 psig (414 mbarg)

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)
Recommended Changeout Pressure	35 psid (2.4 bard)

Sanitization/Sterilization

Autoclave	121 °C (250 °F), 30 min, multiple cycles
In-line Steam	135 °C (275 °F), 30 min, multiple cycles

For all elevated temperature procedures above, 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.

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.

Electronics Grade

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.

Extractables

The levels of extractables in aqueous extracts from E-grade filters are below 3ppb of TOC after product rinse during manufacturing. E-grade filters typically exhibit very low levels of non-volatile residues during startup.

Flow Rate

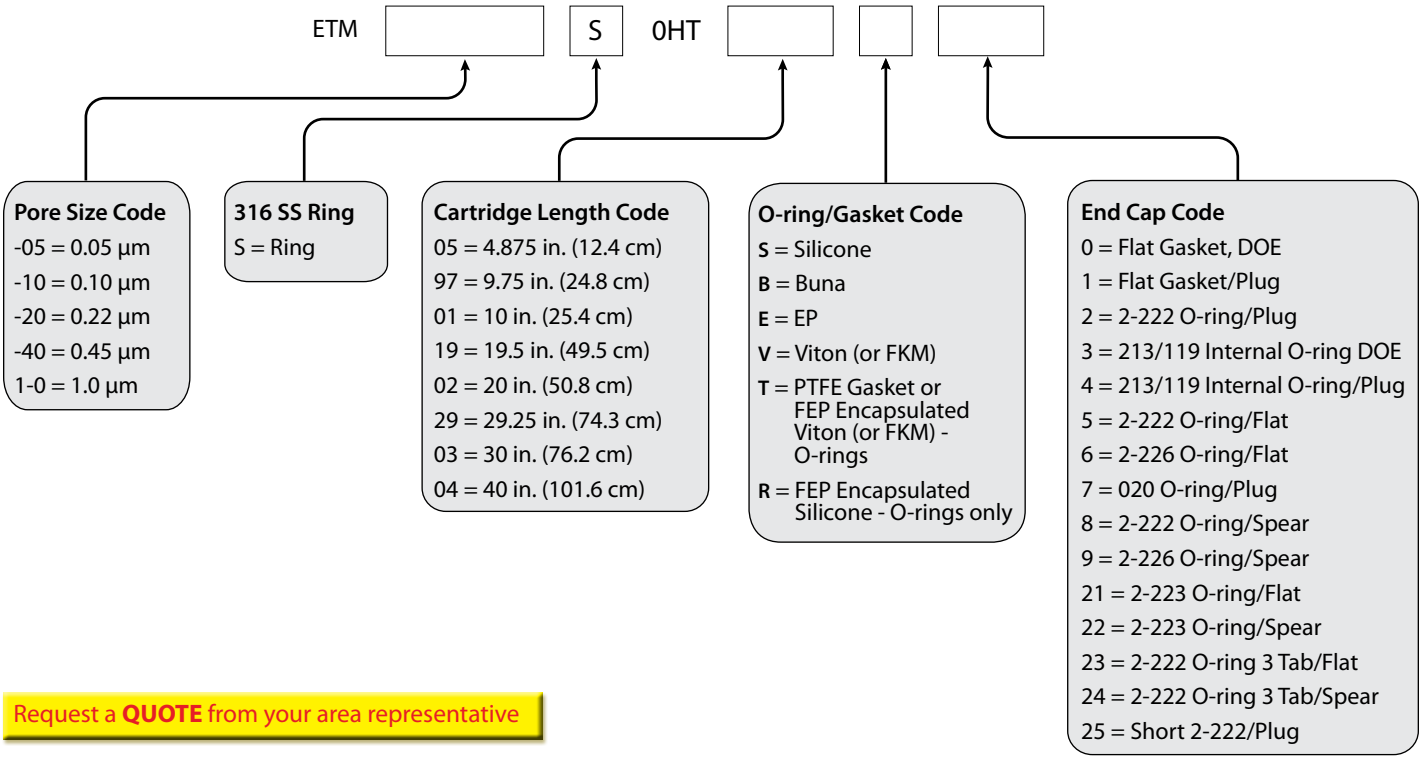
The Typical Flow Rates table represents typical water and air flows at ambient temperature and a 1 psid (69 mbard) pressure differential across a single 10 in. cartridge element. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Typical Flow Rates

Pore Size Rating	0.05 µm	0.1 µm	0.22 µm	0.45 µm	1.0 µm
Liquid Flow Rates (gpm)	1.0	1.8	2.8	5.7	9.0
Air/Gas Flow Rates (scfm)	21	26	42	68	85

Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, Electronics Grade PTFE Membrane, 0.10 Micron Rating, with SS Support Ring, High Temperature, 20" Length, FEP Encapsulated Viton (or FKM) O-Rings, 2-222/Flat End Cap Configuration = ETM-10N00002T5.



Request a **QUOTE** from your area representative

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