# **ETM Capsule Filters**

## PTFE Membrane





#### Optimized for maximum filter life

Designed for filtration of air and process gases

Vent filtration for the protection of tank contents

Final filtration of solvents, alcohols and other non-aqueous liquids

## **Applications**

- ♦ Solvent Filtration
- ♦ Compressed Air Filtration
- ♦ Non-Aqueous Solutions
- ♦ Tank Vents
- Process Gas

ETM capsules are made with highly hydrophobic PTFE membrane. These capsules are designed for use in the filtration of non-aqueous liquids and aggressive solvents. ETM filters are also used as compressed gas filters and vent filters. Each capsule module is individually integrity tested before it is released from manufacture.

The capsule media surface area, filter core design, pleat configuration and pleat packing density are optimized to increase life and lower filtration operating costs.

ETM capsule filters are most often used as final filters for gases and non-aqueous liquids at the point-of-use, such as at tools. They are also ideal for vent filtration to prevent contaminants from reaching solutions in tanks.

## ETM Capsule Filters - Filtration Area

Media	Capsule Length						
	2"	5″	10"	20"	30"		
PTFE Membrane	1.0 ft <sup>2</sup> (930cm <sup>2</sup> )	3.0 ft <sup>2</sup> (2788cm <sup>2</sup> )	7.5 ft <sup>2</sup> (6967cm <sup>2</sup> )	15.0 ft <sup>2</sup> (13934cm <sup>2</sup> )	22.5 ft <sup>2</sup> (20901cm <sup>2</sup> )		

#### Flow Rate / Filtration Area

The following table represents typical air and water flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with 1.0 ft <sup>2</sup> (930 cm<sup>2</sup>) of media with 1/2" FNPT ports. The liquid test fluid is water at ambient temperature. The gas test fluid is compressed air at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Air/Gas Flow Rates			Liquid Flow Rates								
μm	0.05 μm	0.10 μm	0.22 μm	0.45 μm	1.0 µm	μm	0.05 μm	0.10 μm	0.22 μm	0.45 μm	1.0 μm
Rating						Rating					
SCFM	3.0	3.7	5.6	9	11	GPM	0.15	0.25	0.40	0.76	1.2
SCFM	3.0	3.7	3.0	9	''	LPM	0.57	0.95	1.51	2.87	4.54

## **Construction Materials**

Housing	Polypropylene	
Filtration Media	PTFE Membrane	
Media Support	Polypropylene	
End Caps	Polypropylene	
Center Core	Polypropylene	
<b>Outer Support Cage</b>	Polypropylene	
Sealing Method	Thermal Bonding	

# **Maximum Operating Parameters**

<b>Liquid Operational Pressure</b>	80 psi (5.5 bar) at 20 °C (68 °F)	
<b>Gases Operational Pressure</b>	60 psi (4.1 bar) at 20 °C (68 °F)	
Operating Temperature	43 °C (110 °F) at 30 psi (2.1 bar) in water	
Forward Differential Pressure	50 psid (3.4 bard) at 20 °C (68 °F)	
<b>Reverse Differential Pressure</b>	40 psid (2.7 bard) at 20 °C (68 °F)	
Recommended Changeout Pressure	35 psid (2.4 bard)	

## **Integrity Test Specifications**

(per 1.0 ft<sup>2</sup> (930 cm<sup>2</sup>) 60/40 IPA/water wetted membrane)

Pore Size	Bubble Point	
0.05 μm	43 psig (3.0 barg)	
0.10 μm	22 psig (1.5 barg)	
0.22 μm	15 psig (1.0 barg)	
0.45 μm	9 psig (621 mbarg)	
1.0 μm	6 psig (414 mbarg)	

#### Sanitization/Sterilization

**Note** ..... ETM capsules are not to be used in steam.

#### **Extractables**

The levels of extractables in aqueous extracts from E-grade capsule 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.

## Ordering Information

Capsule order number example: Electronics Grade PTFE Membrane, 0.10 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CPETM-10N0001FF.

## **Quality Assurance and Standards**

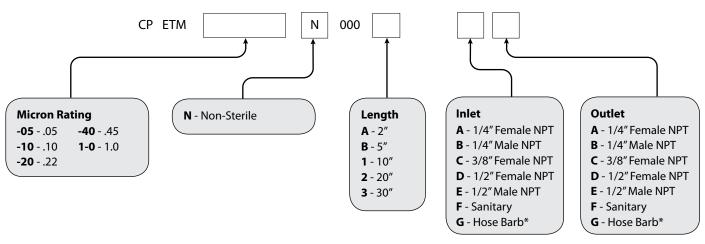
Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and easily analyzed to facilitate improvements in both quality and cost.

The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that networks work stations, manufacturing centers and inspection points. During the manufacturing and inspection processes, data is collected in real time to allow continuous quality monitoring and full traceability of all materials and processes.

Each capsule assembly is integrity tested before release.

#### **Total Performance**

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.



#### Hose Barb Diameter Ranges\*

	Minimum	Maximum
<b>Outer Diameters</b>	11/32" (8.6mm)	9/16" (14.0mm)
Inner Diameters	5/32" (4.0mm)	13/32" (10.5mm)

Request a **QUOTE** from your area representative



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