

# GPM Cartridge Filters

## Polypropylene Membrane



General Service Grade Polypropylene Membrane Filter Cartridges are designed for general purpose use wherever a cost effective, hydrophobic, chemically inert membrane filter is required. Designed to hold the maximum amount of filter media that can be effectively utilized in a cartridge, GPM filters lower the cost of filtration. GPM cartridges are flushed with high purity water to remove potential extraneous manufacturing debris. They are often used in place of PTFE membrane because of the lower cost and low extractables.

### Construction Materials

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

### Applications

- ◆ Solvents
- ◆ Tank Vents
- ◆ Gases
- ◆ Compressed Air

### Dimensions

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

### Integrity Test Information

Samples from each manufacturing lot are tested by water intrusion to ensure consistent performance.

### Maximum Operating Parameters

<b>Differential Pressure</b>	
• Forward	50 psid (3.4 bard) at 20 °C (68 °F)
• Reverse	40 psid (2.7 bard) at 20 °C (68 °F)
<b>Operating Temperature</b>	82 °C (180 °F) at 10 psid (0.69 bard) in water
<b>Recommended Changeout Pressure</b>	35 psid (2.4 bard)

### Sanitization/Sterilization

<b>Autoclave</b>	121 °C (250 °F), 30 min, multiple cycles
<b>In-line Steam</b>	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, paracetic acid, sodium hypochlorite and other selected chemicals.

### 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.

## 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 GPM 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.

## Extractables

GPM filters generally exhibit low levels of non-volatile residues.

## Flow Rate

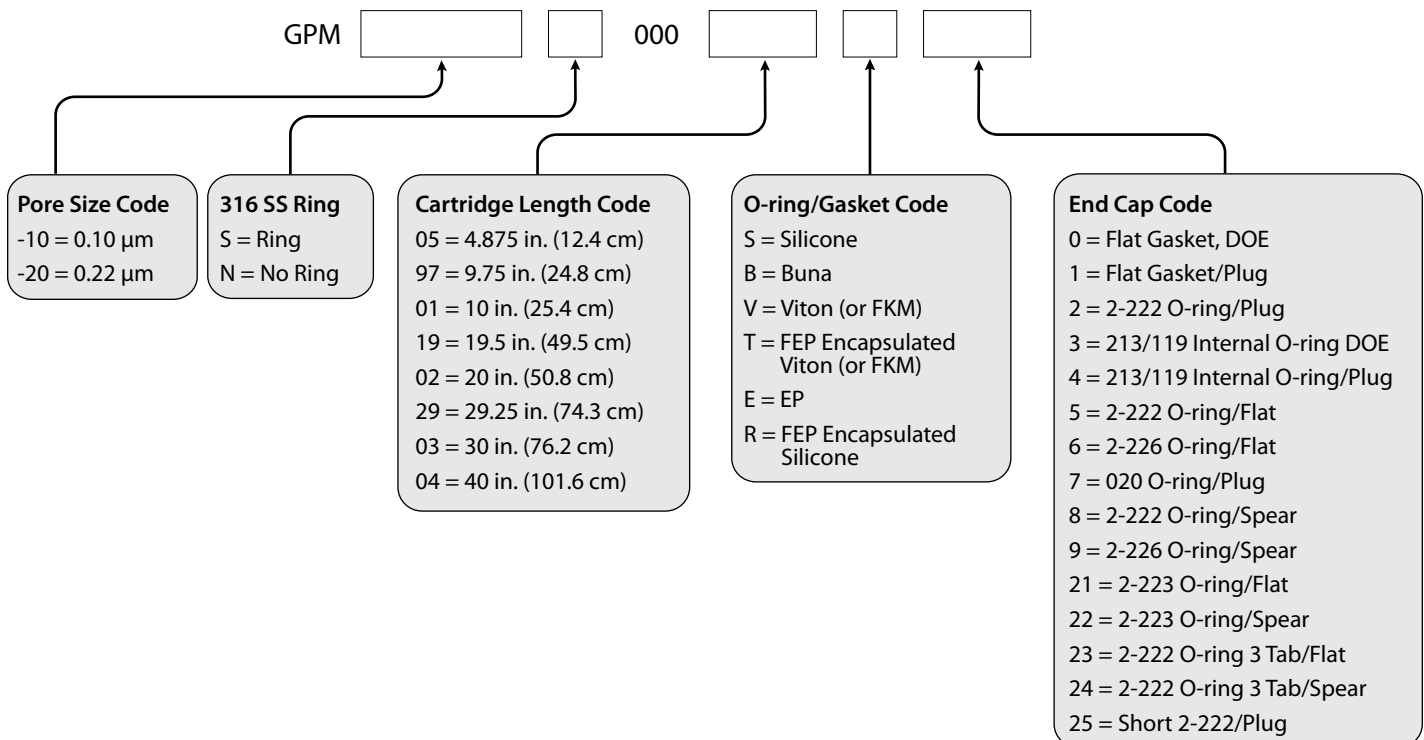
The Typical Flow Rates Table represents typical water and air flows at a 1 psid (69 mbar) pressure differential across a single 10 in. cartridge element. The test fluids are water and air at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable,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

### Typical Flow Rates

Pore Size Rating	0.1 $\mu\text{m}$	0.2 $\mu\text{m}$
<b>Liquid Flow Rates (gpm)</b>	0.75	2.75
<b>Air/Gas Flow Rates (scfm)</b>	> 22	> 32

## Ordering Information

Cartridge order numbers have several variables from pore size to end cap type. For example, General Service Grade Polypropylene Membrane, 0.22 Micron Rating (liquid), No SS Support Ring, 20" Length, Silicone O-Rings, 2-222/Flat End Cap Configuration = GPM-20N00002S5.



The information contained herein is subject to change without notice.

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## Quality Assurance and Standards

Our goal is to ensure our customers the greatest possible value for their filtration dollar. Our state of the art manufacturing facility and quality management system both meet ISO 9001:2008 standards. Each operation from assembly and test to cleaning, drying, and packaging is done in appropriately rated clean rooms. A sophisticated MRP system collects and processes real time data from manufacturing centers and inspection points. This allows variable and attribute data to be quickly and easily analyzed driving constant improvements in both quality and cost.