



Graver Technologies

FILTRATION | SEPARATION | PURIFICATION



# PMG Series Filter Cartridges

## *Glass Fiber Cartridges*

### Product Specifications

**Media:** Borosilicate Microfiberglass  
with Acrylic Binder

**Inner Core:** Polypropylene

**Support Layers:** Polyester

**Cage, End Caps:** Polypropylene

**Gaskets/O-Rings:**

Buna-N, EPDM, Silicone,  
Teflon Encapsulated Viton  
(O-Rings only), Viton

**Micron rating:**

0.45, 1.0\*  $\mu\text{m}$

\*1 micron grade features all FDA listed materials  
of construction

### Dimensions

**Nominal lengths:**

5", 9.75", 10", 19.5", 20", 29.25", 30", 39", 40"  
(12.7, 24.8, 25.4, 49.5, 50.8, 74.3, 76.2,  
99.1, 101.6 cm)

**Outside diameter:** 2.55" (6.48 cm)

**Inside diameter:** 1.0" (2.54 cm)

### Operating Parameters

**Maximum operating**

**temperature:** 176°F (80°C)

**Maximum differential pressure:**

50 psid @ 70°F (3.4 bar @ 21°C)

25 psid @ 176°F (1.7 bar @ 80°C)

**Maximum reverse pressure:**

15 psid @ 70°F (2.8 bar @ 21°C)

**Recommended change-out pressure:**

35 psid (2.4 bar)

This high efficiency, economical filter element is constructed of pleated Borosilicate Microfiberglass media that combines excellent flow rates with exceptional service life to support a wide range of chemical and industrial applications. The nominally-rated borosilicate microfiber depth matrix has a natural positive charge that aids in the retention of negatively charged particulates such as colloidal materials or contaminants that may form haze within a fluid. The depth characteristic of glass media also provides enhanced retention of deformable particles as compared to typical polypropylene media. In addition, the slightly smaller diameter ensures easy retrofit in installed housings designed to accept depth filters.

### FEATURES & BENEFITS

- Available as 0.45 or 1  $\mu\text{m}$  — Broad application range
- Uniform pore size — High removal efficiency
- Long service life — Minimizes maintenance costs
- Fixed pore construction — Eliminates dirt unloading at maximum differential pressure
- Manufactured in continuous lengths up to 40 inches

### TYPICAL APPLICATIONS

- Chemicals
- Blowdown post filter
- Inks
- Oil & Gas
- Cutting oils
- Paints
- Coatings

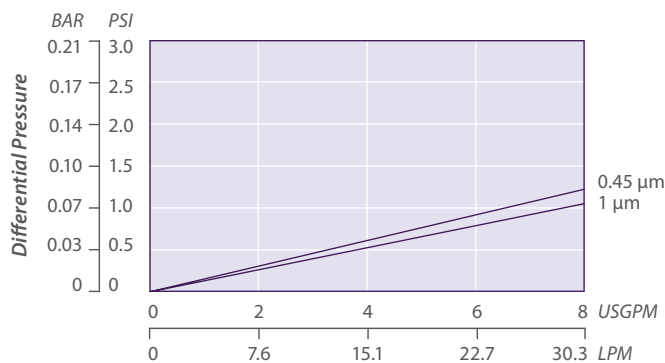
## PMG NOMENCLATURE INFORMATION

Filter Type	Retention Rating (microns)	Nominal Length (inches)		End Configuration		Gasket or O-Ring	
PMG Series	0.45 1	−5	−29.25*	P	Double Open End	B	Buna-N
		−9.75*	−30	P2	226/Flat Single Open End	E	EPDM
		−10	−39*	P3	222/Flat Single Open End	S	Silicone
		−19.5*	−40	P7	226/Fin Single Open End	T	Teflon encap. Viton (O-Rings only)
		−20		P8	222/Fin Single Open End	V	Viton
Example: PMG 1–10P7B							
PMG	3	−10		P7		B	

\*Available only for DOE (P) configuration

## PMG FLOW RATE

Typical Flow Rate Clean Water at Ambient Temperature  
(per 10" cartridge)



For liquids other than water, multiply pressure drop by the fluid viscosity in centipoise

## REMOVAL EFFICIENCY

Beta Ratio Efficiency	Beta 10	Beta 20	Beta 100	Beta 1000	Beta 5000
90%	90%	95%	99%	99.9%	99.98%
0.45 µm	0.45	0.6	0.8	1.8	2.0
1 µm	1.0	1.3	2.0	3.5	4.0

$$\text{Beta Ratio} = \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}}$$

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters.

Testing was conducted using the single-pass test method, water at 2.5 gpm/10" cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

## FOR MORE INFORMATION

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GTX-362 10-21



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