Graver Technologies

FILTRATION | SEPARATION | PURIFICATION

PMA™ Series Filter Cartridges

Product Specifications

Materials of Construction:
Polypropylene

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

Polypropylene micron ratings:
0.2, 0.45, 1.0, 2.5, 5, 10, 25, 50, 100µm

Dimensions

Nominal lengths:

5″	9.75″	10″	20″	30″	40″
(12.7	*24.8*	*25.4*	*50.8*	*76.2*	*101.6 cm)*

Outside diameter: . . . 2.7″ (6.86 cm)

Inside diameter: . . . . . 1.0″ (2.54 cm)

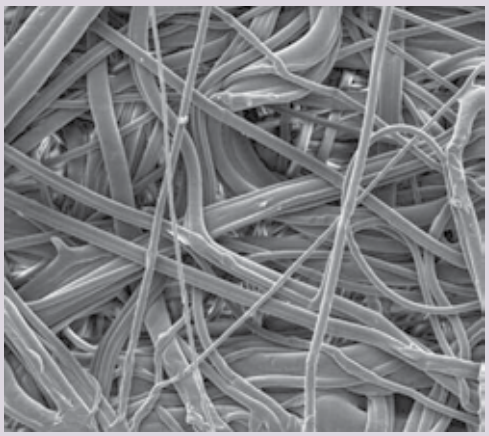
Operating Parameters

Maximum operating temperature:
176 °F (80 °C)

Maximum differential pressure:
75 psid @ 70°F (5.2 bar @ 21°C)
30 psid @ 176°F (2.0 bar @ 80°C)

Maximum reverse pressure:
40 psid @ 70°F (2.8 bar @ 21°C)

Recommended change-out pressure:
35 psid (2.4 bar)



"Absolute" Rated Pleated Filter Cartridges

This all polypropylene filter retains particles with absolute efficiency. Available in a broad range of pore sizes, it is suitable for a wide range of applications. The pleated construction provides a high surface area to offer outstanding overall filtration economy.

Features–Benefits

- Micron ratings from 0.2 to 100 µm– broad application range
- "Absolute" efficiency– rated at 99.98% (Beta 5000)
- Competitive surface area– high flow rates, and long online service– minimize maintenance cost
- Fixed pore structure– eliminates dirt unloading at maximum differential pressure
- Polypropylene construction– inert to many process fluids
- Various gasket/O-ring materials– compatible with a variety of fluids
- Manufactured in continuous lengths up to 40 inches

Certifications

USP Class VI – Meets USP Class VI Biological Test for Plastics.

FDA Listed Materials – All Materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, and 177.1520, as applicable for food and beverage contact.

European Directive for Direct Food Contact – European Regulations No 1935/2004 and European directive 82/711/EEC: Tested for migration behavior in direct food contact. Minimal rinse required for use. Data available upon request.

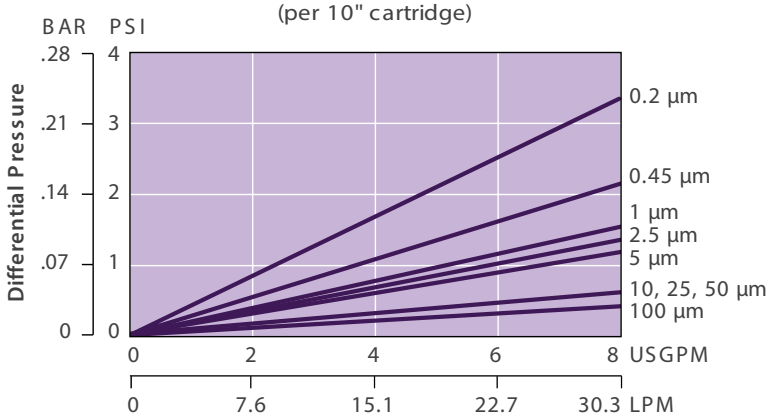
200 LAKE DRIVE, GLASGOW, DE 19702 U.S.A.
302-731-1700 | 800-249-1990 | FAX: 302-369-0938
info@gravertech.com
www.gravertech.com

PMA Nomenclature Information

PMA	2.5	-10	P	V
PMA Series Filter	**Retention Rating (microns)**	**Nominal Length (inches)**	**End Configuration**	**Gasket or O-Ring**
	0.2 **10**	**-5** **-20**	**P** Double Open End	**S** Silicone
	0.45 **25**	**-9.75** **-30**	**P2** 226/Flat Single Open End	**B** Buna-N
	1 **50**	**-10** **-40**	**P3** 222/Flat Single Open End	**E** EPDM
	2.5 **100**		**P7** 226/Fin Single Open End	**V** Viton
	5		**P8** 222/Fin Single Open End	**T** Teflon endcap. Viton (O-Rings only)
Example: PMA 2.5-10PV			**AM** Single open end, internal O-Ring	**T** Teflon gasket

PMA 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 5000 99.98%	Beta 100 99%	Beta 50 98%
0.2 micron	0.20	0.10	0.05
0.45 micron	0.45	0.30	0.20
1 micron	1.0	0.60	0.30
2.5 microns	2.5	2.0	1.5
5 microns	5.0	4.0	3.0
10 microns	10.0	8.0	7.0
25 microns	25.0	19.0	15.0
50 microns	45.0	35.0	28.0
100 microns	–	100.0	85.0

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

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 3 gpm/10" cartridge. Contaminant's included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

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FOR MORE INFORMATION

Customer Service: 1-888-353-0303
Technical Support: 1-800-510-0932
Europe (UK): +44-1424-777791
China: +86-21-5238-6576
Asia: +65-9635-7690

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