



Graver Technologies

Filtration | Separation | Purification

QMA™ Polypropylene Filter Series

“Absolute” Rated High Performance Pleated Polypropylene Filter Cartridge

This filter is constructed with a high surface area melt blown polypropylene media for low initial pressure drop, high dirt holding capacity, and high efficiency performance.

Filter Features–Benefits

- Micron ratings from 0.2 to 20µm – Broad application range
- Meets current USP Class VI biological test for plastics
- “Absolute” Efficiency – Rated at 99.98% (Beta 5000)
- High surface area – High flow rate, and long service life – Minimize maintenance cost
- Fixed Pore construction – Resists dirt unloading at maximum differential pressure
- Polypropylene Construction – Inert to many process fluids
- Various Gasket/O-ring materials – Compatible with many fluids
- Heavy duty molded cage – High structural strength
- Highly consistent melt blown media for consistent performance

Filter Specifications

Construction material:	Polypropylene
Gaskets/O-Rings:	Buna-N, EPR, Silicone, Viton, Teflon Encapsulated Viton (O-Rings only)
Micron ratings:	0.2, 0.45, 1.0, 2.5, 5.0, 10, 20µm

Dimensions and Operating Parameters

Nominal lengths:	9.75" 10", 20", 30", 40" (24.7, 25.4, 50.8, 76.2, 101.6 cm)
Outside diameter:	2.7" (6.86 cm)
Inside diameter:	1.0" (2.54 cm)
Surface area:	up to 7.0 ff
Maximum operating temperature:	176°F (80°C)
Maximum differential pressure:	75 psid @ 70°F (5.2 bar @ 21°C) 40 psid @ 176°F (2.8 bar @ 80°C)

FDA & USP compliance

All polypropylene material used in manufacturing complies with the regulations of the Food and Drug Administration (FDA) title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1630, as applicable for food and beverage contact.



Filter 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
1.0 micron	1.0	0.60	0.30
2.5 microns	2.5	2.0	1.5
5.0 microns	5.0	4.0	3.0
10.0 microns	10.0	8.0	7.0
20.0 microns	20.0	17.0	15.0

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

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.

Applications

- Food & beverage
- Bottled water
- Process water
- Aqueous solutions
- Pharmaceutical
- RO Prefilters
- Chemicals
- Cosmetics
- Ink

QMA Nomenclature Information

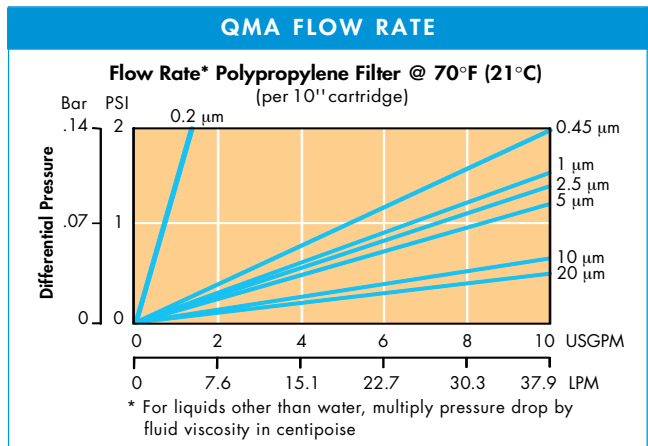
QMA	1	-20	P3	V	-R	-I
Filter Type QMA Series Filters		Nominal Length (inches) -9.75 -10 -20 -30 -40			Pre-Rinse Option -R Factory Pre-Rinse	Insert -I End cap insert for steaming
Retention Rating (microns) 0.2 0.45 1 2.5 5 10 20						
End Configuration P Double Open End P2 226/Flat Single Open End P3 222/Flat Single Open End P7 226/Fin Single Open End P8 222/Fin Single Open End PX Extended Core AM Single open end, internal O-Ring NPC Double open end, internal O-Ring			Gasket or O-Ring S Silicone B Buna-N E EPDM V Viton T Teflon encap. Viton (O-Rings only) Teflon (Gasket only)			

Example: QMA 1-20 P3V-R-I

Performance Specifications

Sanitization

Hot water at 176°F (80°C) at 5 psid (0.35 bar) for 30 min.
 In-line steam at 257°F (125°C) at 1 psid (0.07 bar) for 30 min.
 Autoclavable at 257°F (125°C) for 30 min.



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