Graver Technologies

Filtration | Separation | Purification

QMC™ Series Filter Cartridges

High Efficiency Polypropylene Filter Cartridge

An innovative product manufactured with multiple layers of melt blown polypropylene media. This unique structure allows high flow rates while maintaining low differential pressure and ideal depth filtration characteristics.

Features–Benefits

- Micron ratings from 0.1 to 10 µm – Broad application range
- High Filtration Efficiency – 95%
- Graded pore structure – Multilayer, media for high dirt holding capacity
- 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

Product Specifications

Construction material:	*Polypropylene*
Gaskets/O-Rings:	*Buna-N, EPDM, Silicone, Viton, Teflon Encapsulated Viton (O-Rings only)*
Micron ratings:	*0.1, 0.2, 0.4, 0.6, 1.0, 3.0, 5.0, 10.0 µm*

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

Operating Parameters

Maximum operating temperature:	*176 °F (80°C)*
Maximum differential pressure:	*80 psid @ 70°F (5.5 bar @ 21°C)* *40 psid @ 176°F (2.8 bar @ 80°C)*
Maximum reverse differential pressure:	*40 psid @ 70°F (2.8 bar @ 21°C)*
Recommended change-out pressure:	*35 psid (2.4 bar)*

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.

Certifications

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

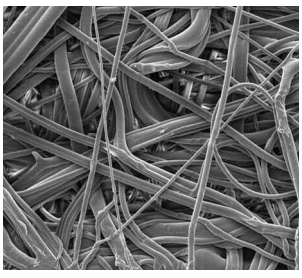
FDA Listed Materials - All Materials comply with FDA Title 21 of the Code of Federal Regulations Sections 174.5, and 177.1520, as applicable for food and beverage contact.

Endotoxin level - Limulus Amebocyte Lysate CB028 test indicated bacterial endotoxins were not present in distilled water at 0.25 EU / ml.

Extractable content - Test indicate that Non-Volatile Residue, Residue on Ignition and Heavy Metals meet USP limits.

Typical Applications

- Food & beverage
- Aqueous solutions
- Chemicals
- Pharmaceuticals
- Cosmetics
- Ultrapure water
- RO Prefilters
- Ink
- DE trap
- Photoresists



QMC Nomenclature Information

QMC	0.6	-10	P2	T
Filter Type QMC Series Filters		**Nominal Length (inches)** **-5** **-9.75** **-10** **-20** **-30** **-40**	**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 endcap. Viton (O-Rings only)

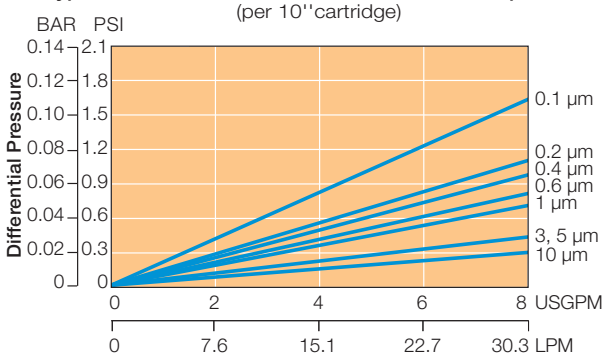
Retention Rating (microns)

0.1	**1**
0.2	**3**
0.45	**5**
0.6	**10**

Example: QMC 0.6-10P2T

QMC 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 100 99%*	*Beta 20 95%*
0.1 micron	*0.8*	*0.1*
0.2 micron	*1.0*	*0.2*
0.4 micron	*2.0*	*0.4*
0.6 micron	*3.0*	*0.6*
1 micron	*6.0*	*1.0*
3 micron	*14*	*3.0*
5 microns	*17*	*5.0*
10 microns	*25*	*10.0*

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

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.

For more information

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