



Graver Technologies

Filtration | Separation | Purification

TPM™ Series Filter Cartridges

Titanium Porous Metal Technology

TPM series filters are porous titanium filters designed for applications involving heat, gases, aggressive chemicals, cryogenics or polymers. Made from titanium powder, that is sintered to form a rugged, fixed pore structure, TPM filters are made to withstand temperature extremes, high pressures and repeated cleaning/backwash cycles. There are no longitudinal seams, for improved mechanical strength and corrosion resistance. TPM filters are produced in a range of configurations and micron ratings to perform in a variety of liquid and gas applications.

Features–Benefits

- Constructed entirely of sintered titanium powder
 - Offers high corrosion resistance
- Cleanable/Backwashable – Allows for re-use
 - Maximum economy
- High Temperature Sintering – No media migration
- Various gasket/O-Ring materials and configurations
 - Easily retrofits most systems

Product Specifications

Media:	Titanium
End caps:	Titanium
Gaskets/O-Rings:	EPR, Buna-N, Viton, Teflon Encapsulated Viton (O-Rings only), Teflon (gasket only)
Micron ratings:	0.5, 2, 5, 10, 15, 35 μ m

Dimensions

Nominal lengths:	10", 20", 30" (25.4, 50.8, 76.2 cm)
Outside diameter:	2.75" (70 mm) or 2.36" (60 mm)

Operating Parameters

Maximum operating	700°F (371°C)*
Maximum differential pressure:	250 psid (17.4 bar) forward 50 psid (3.5 bar) reverse
Recommended change-out pressure:	35 psid (2.4 bar)



Typical Applications

- Corrosive liquids and gases
- Cryogenic fluids
- High viscosity solutions
- Process steam
- High temperature liquids and gases
- Catalyst recovery

TPM Nomenclature Information

TPM	S	10	-30	M1	N
Filter Type TPM Series Filters		Retention Rating (microns)	Nominal Length (inches)	End Configuration	Gasket or O-Ring
Diameter Option		0.5	-10	P Double Open End *	S Silicone
Blank 2.75" diameter		2	-20	P2 226/Flat Single Open End	B Buna-N
S Slim 2.36" diameter		5	-30	P3 222/Flat Single Open End	E EPDM
		10		M1 ¼ Inch MNPT Threads	V Viton
		15		M2 1 Inch MNPT Threads	T Teflon endcap. Viton (O-Rings only)
		35			T Teflon (gasket only)
					N None

Example: TPM S10-30M1N

Removal Efficiency

Beta Ratio Efficiency	Beta 200	Beta 20	Beta 10
	99.5%	95%	90%
0.5 micron	0.5 micron	0.3 micron	0.1 micron
2 microns	2 micron	0.8 micron	0.4 microns
5 microns	5 micron	3 microns	1 microns
10 microns	10 microns	8 microns	5 microns
15 microns	15 microns	12 microns	10 microns
35 microns	35 microns	32 microns	28 microns

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

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. Contaminant's included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

*Note: DOE style is not compatible with SCB housings.

For more information

Graver Technologies Customer Service: **1-888-353-0303**

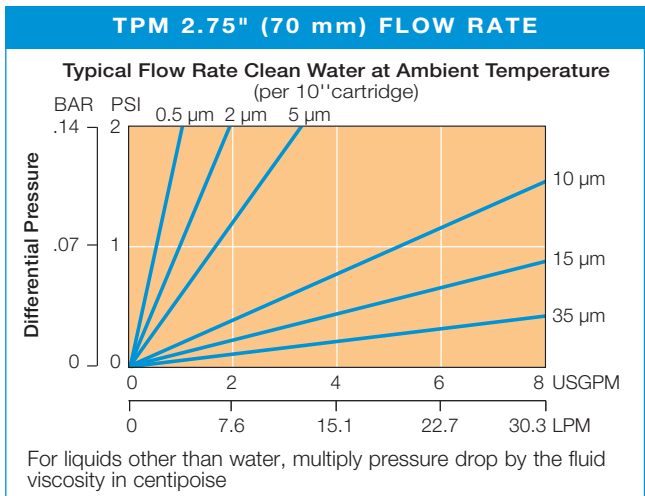
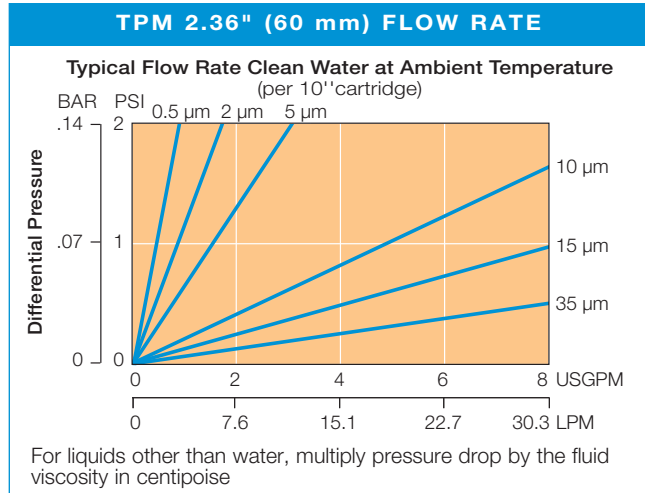
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