Graver Technologies

Filtration | Separation | Purification

TPM™ Titanium Filter Series

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.

Filter 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

Filter Specifications

Media:	*Titanium*
End caps:	*Titanium*
Gasket/O-Rings	*EPR, Buna-N, Viton, Teflon Encapsulated Viton (O-Rings only)*
Dimensions and Operating Parameters	
P (DOE), P2 (226/flat), P3 (222/flat), M1 (3/4'' male NPT), M2 (1'' male NPT)	
Nominal lengths:	*10'', 20'', 30'', (25.4, 50.8, 76.2cm)*
Outside diameter:	*2.75'' (70 mm) or 2.36'' (60 mm)*
Maximum operating temperature:	*700°F (371°C)**
Maximum differential pressure:	*250 psid (17.4 bar) forward 50 psid (3.5 bar) reverse*

* Max temperature applicable to NPT style filters only (No O-Rings or gaskets). Consult Graver Technologies for guidance on specific chemical/temperature compatibility.

Filter Removal Efficiency

Beta Ratio Efficiency	*Beta 200 99.5%*	*Beta 20 95%*	*Beta 10 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*

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

Applications

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

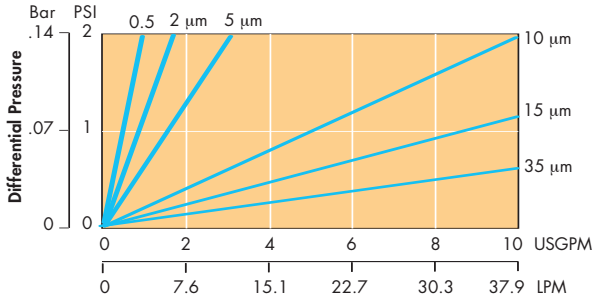
TPM Nomenclature Information

TPM	S	10	-30	M1	N
Filter Type TPM Series Filters		**Retention Rating (microns)** **0.5** **2** **5** **10** **15** **35**	**Nominal Length (inches)** **-10** **-20** **-30**	**End Configuration** **P** Double Open End **P2** 226/Flat Single Open End **P3** 222/Flat Single Open End **M1** 3/4 Inch MNPT Threads **M2** 1 Inch MNPT Threads	**Gasket or O-Ring** **S** Silicone **B** Buna-N **E** EPDM **V** Viton **T** Teflon encap. Viton (O-Rings only) **T** Teflon (Gasket) **N** None

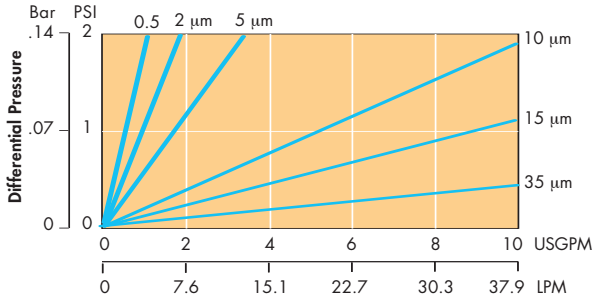
Diameter Option
Blank 2.75" diameter
S Slim 2.36" diameter

Example: TPMS 10-30 M1N

TPM 2.36" (60mm) WATER FLOW RATES



TPM 2.75" (70mm) WATER FLOW RATES



For more information

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