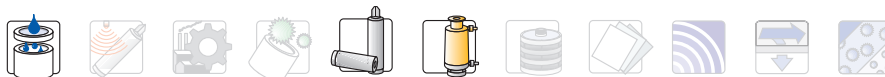


# PMM® Metal Membrane Filter Cartridges

## Pleated Composite Metal Media for High-removal Efficiency



Pall **PMM** metal membrane media combine the best qualities of Pall's **PSS** and **Rigimesh** media by incorporating a thin matrix of ultra-fine stainless steel powders sintered within the pore structures of fine sintered stainless steel woven wire mesh. This combination of technologies enables production of highly permeable metal membranes with greater strength and finer grades than either method alone. **PMM** media can be pleated to form double open-ended (DOE) MBS1000 style membrane filter cartridges with high area and fine ratings making it an excellent choice for steam service and other fine solids recovery/removal applications in both liquid and gas applications.

### Features and Benefits

- All-stainless steel construction
- Controlled and fixed pore size
- High area pleated cartridges
- Efficiencies to 2 µm absolute in liquids
- Ultra-clean steam service
- Efficient cake formation and solids recovery
- Corrosion resistant
- High pressure resistant
- Withstands high reverse-flows
- High-temperature capabilities
- Repeatedly cleanable
- No soluble polymeric extractables
- No unloading or shedding
- Absolute rated for reliable performance
- ISO 9000 Certified Quality System
- Manufactured for use in conformance with cGMP
- FDA-listed materials per 21 CFR

# PMM Metal Membrane Filter Cartridges

## Technical Specifications

### Materials of Construction

<b>Medium</b>	Type 316L stainless steel <sup>(1)</sup>
<b>End Caps</b>	Type 304 stainless steel <sup>(1)</sup>
<b>Gasket</b>	Buna-N (standard) <sup>(2)</sup>

<sup>(1)</sup> Other grades and alloys available.

<sup>(2)</sup> Other polymers available.

### Configuration<sup>(3)</sup>

Double open-ended (DOE), flat gasket seals

<sup>(3)</sup> Single open-ended AB sanitary and threaded styles available.

### Nominal Dimensions

<b>Diameters</b>	2.5 in. (64 mm)
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### Operating Conditions

#### Maximum Differential Pressure and Temperature<sup>(4)</sup>

<b>Forward Flow Direction</b>	8.6 bard (125 psid) to 232 °C (450 °F)
<b>Reverse Flow Direction</b>	0.7 bard (10 psid) to 232 °C (450 °F)

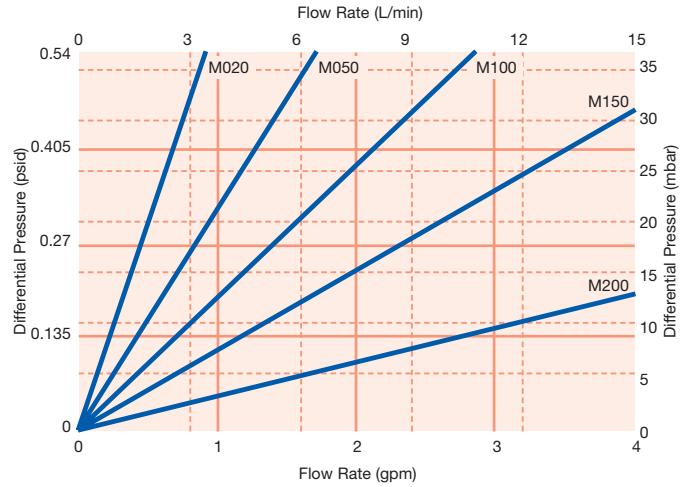
<sup>(4)</sup> Minimum collapse differential pressure. Limit with Buna-N gaskets: 121 °C (250 °F). Other gasket materials to 232 °C (450 °F). For Reinforced for 3.4 bard (50 psid) Reverse Flow option, temperatures to 316 °C (600 °F), or in other alloys to 677 °C (1250 °F), contact your local Pall distributor.

### Recommended Maximum Flow Densities<sup>(5)</sup>

Grade	Aqueous L/min (gal/min)	Air Nm <sup>3</sup> /hr (acfm)
<b>M200</b>	1.4 (0.37)	4.7 (30)
<b>M150</b>	1.1 (0.29)	3.9 (25)
<b>M100</b>	0.4 (0.1)	3.2 (20)
<b>M050</b>	0.3 (0.08)	1.6 (10)
<b>M020</b>	0.3 (0.08)	1.6 (10)

<sup>(5)</sup> Ratings are absolute particulate in liquids and gases. Aqueous (water, 1 cp) and air flows per 10 in. (254 mm) cartridge.

### Typical Liquid Flow Rates<sup>(6)</sup>



<sup>(6)</sup> Typical initial clean medium  $\Delta P$  per 10 in. (254 mm) element, water at 20 °C (68 °F), 1 cp. For assistance in sizing and housing selection, contact your local Pall representative.

### Ordering Information

MBS100							
Code	Nominal Length	Filter Area	Code	Liquid Ratings <sup>(7)</sup>	Gas Ratings <sup>(7)</sup>	Code	Gasket Options
1	10 in. (254 mm)	0.14 m <sup>2</sup> (1.5 ft <sup>2</sup> )	M200	20 $\mu$ m	55 $\mu$ m	H13	Buna-N gaskets (Standard)
2	20 in. (508 mm)	0.28 m <sup>2</sup> (3.0 ft <sup>2</sup> )	M150	15 $\mu$ m	25 $\mu$ m	H	Viton*
3	30 in. (762 mm)	0.42 m <sup>2</sup> (4.5 ft <sup>2</sup> )	M100	10 $\mu$ m	18 $\mu$ m	J	Ethylene Propylene
4	40 in. (1016 mm)	0.56 m <sup>2</sup> (6.0 ft <sup>2</sup> )	M050	5 $\mu$ m	13 $\mu$ m	J7	Ethylene Propylene (Steam Service)
			M020	2 $\mu$ m	2 $\mu$ m		

<sup>(7)</sup> **Liquids:** > 99.98% by mod. OSU-F2 test.  
**Gases:** 100% for hard spherical particles.

Other materials available on request.

\* Viton is a registered trademark of DuPont Dow (non-FDA materials).