



Coalescing Pre-Filter Membranes

PRODUCT FEATURES / BENEFITS

- ◆ Built-In Pre-Filter
- ◆ Up to 70 LPM Flow (2.5 SCFM)
- ◆ 1500 PSIG Max. Pressure Rating on All SS Units
- ◆ Hydrophobic Membrane Bonded to O-Ring for Ease of Service
- ◆ Protect On-Line Analyzers
- ◆ CNG / LNG Sampling Systems
- ◆ Sampling Conditioning

Guardian Membranes are also available with integrated coalescing pre-filters. A 50C-grade element is positioned upstream of the membrane to effectively remove the majority of liquids and particulates, thereby extending membrane life. This all-in-one design minimizes dead volume, conserves panel space, and reduces potential leak points. These combination units are compatible with the same membrane kits used in our standard Guardian models. Corresponding part numbers can be found at the bottom of the attached chart.

Traditional T-Type

The GMS120/122 series features a traditional T-type design with an integrated coalescing pre-filter housed within the assembly. The GMS127G model adds a Pyrex bowl, enabling easy visual inspection of filter condition at a glance. In this series, the membrane is mounted on top with a vertical outlet, which helps maintain membrane cleanliness by promoting drainage.

A key feature of this series is its unique membrane holder plate, designed for easy maintenance. Once the collar is loosened and lifted, the plate slides out from underneath—allowing for quick membrane replacement without the need to disconnect any fittings.



Stainless Steel Model	GMS120	GMS122	GMS127G
Port Size (NPT)	1/8"	1/4"	1/4"
Drain & Sample Port (NPT)	1/8"	1/4"	1/8" / 1/4"
Maximum Pressure (psig)	1500	1500	100
Internal Volume (cc)			
In Sample Chamber - Behind Membrane	0.118	0.118	0.118
Weight of Housing (lbs)	2.0	2.0	2.0
Principle Dimensions: (inch)			
Body Diameter	2.00	2.00	2.00
Overall Length	5.08	5.08	5.52
Space Required to Coalescing Element	2.36	2.36	2.64
Maximum Temp. (300°F) Standard Viton O-Ring	GVGMS120	GVGMS120	GVGMS120
Coalescing Element			
PTFE Membrane Code (1) **Specify: M1 (Low Flow) or M2 (High Flow)	12-57-50C MT.33.□G/50C	12-57-50C MT.33.□G/50C	12-57-50C MT.33.□G/50C
Drawing **For More Detail & Options**	<u>GMS120</u>	<u>GMS122</u>	<u>GMS127G</u>
PTFE Model Max. Pressure: 100 PSIG, Maximum Temp: 250°F	GMS120P	GMS122P	N/A

Notes: (1) Replace the "□" with the flow required. i.e. MT.33.M1G/50C, MT.33.M2G/50C

(*) Internal Volume on the GMS 170: Inlet Side of Element: 3.9; Drain Side of Element: 19.5; Sample Side of Membrane: 0.4

Integral Coalescing High Flow Pre-Filter Membranes

The GMS130 Series builds on the proven design of our GMS120 Series, offering the same functionality with a physically larger membrane and coalescing element. The increased surface area of both components significantly extends service intervals, making it ideal for demanding or continuous sampling applications. By integrating the coalescing filter and membrane into a single assembly, the GMS130 minimizes sample lag time, conserves panel space (one housing instead of two), and reduces the number of potential leak points by limiting connection interfaces.



Stainless Steel Model	GMS130	GMS132	GMS137G	GMS138G
Port Size (NPT)	1/4"	1/2"	1/4"	1/2"
Drain & Sample Port (NPT)	1/4"	1/4"	1/4"	1/4"
Maximum Pressure (psig)	1500	1500	100	100
Internal Volume (cc)				
In Sample Chamber - Behind Membrane	2.2	2.2	2.2	2.2
Weight of Housing (lbs)	9.0	9.0	9.0	9.0
Principle Dimensions: (inch)				
Body Diameter	3.38	3.38	3.38	3.38
Overall Length	5.73	5.73	6.25	6.25
Space Required to Coalescing Element	2.95	2.95	3.15	3.15
Maximum Temp. (300°F) Standard Viton O-Ring	GVGMS130	GVGMS130	GVGMS137	GVGMS137
Coalescing Element PTFE Membrane Code (1) **Specify: M1 (Low Flow) or M2 (High Flow)	25-64-50C MT.61.□G/50C	25-64-50C MT.61.□G/50C	25-64-50C MT.61.□G/50C	25-64-50C MT.61.□G/50C
Drawing **For More Detail & Options**	<u>GMS130</u>	<u>GMS132</u>	<u>GMS137G</u>	<u>GMS138G</u>

Notes: (1) Replace the "□" with the flow required. i.e. MT.61.M1G/50C, MT.61.M2G/50C



Pyrex Bowl For Visual Monitoring

The GMS137G and GMS138G Series are low-pressure variants of the GMS130 Series, designed for applications where visual monitoring is essential. These models utilize the same large membrane and coalescing element as the GMS130 but feature a durable Pyrex® glass bowl for clear, at-a-glance inspection of liquid accumulation.

This design is ideal for systems requiring immediate visual confirmation of filter performance and liquid breakthrough, particularly in low-pressure environments.

Technical Details

Our porous membranes are manufactured from pure PTFE, offering exceptional chemical inertness and extremely low absorption characteristics. Designed for reliability across a wide range of applications, these membranes are available in two standard grades to suit various flow and fluid requirements:

- ♦ **M1 (0.1 micron):** A low-flow membrane ideal for most liquid applications.
- ♦ **M2 (0.8 micron):** A high-flow variant recommended for higher surface tension liquids, enabling faster processing without compromising separation integrity.

Membrane Size	MT.33.M1G	MT.33.M2G
Membrane Type	Low Flow	High Flow
Material	PTFE	PTFE
Diameter (mm)	33	33
Thickness (µm)	152	152
Maximum Temperature (°F)	300	300
Recommended Flow Rate (LPM)	0.35	10
Membrane Micron Size	0.1	0.8

Membrane Size	MT.61.M1G	MT.61.M2G
Membrane Type	Low Flow	High Flow
Material	PTFE	PTFE
Diameter (mm)	61	61
Thickness (µm)	152	152
Maximum Temperature (°F)	300	300
Recommended Flow Rate (LPM)	2	15
Membrane Micron Size	0.1	0.8

The flow rates referenced above are based on a 3 PSID (pounds per square inch differential) across the membrane and are provided for general reference only. While flow can be increased by raising the pressure differential, we do not recommend exceeding 5 PSID, as doing so may compromise membrane integrity.

Membrane Application Guidance

- ♦ **M1 Membrane (0.1 micron):** Ideal for separating most liquids from gas streams.
- ♦ **M2 Membrane (0.8 micron):** Optimized for separating water and other high surface tension liquids from gases.

For best performance and membrane longevity, ensure proper pre-filtration and avoid pressure surges that could stress the membrane structure.