

GASSHIELD® W-SEAL SURFACE MOUNT FILTERS

1.5 nm FILTRATION



GSMM-55 SERIES - STAINLESS STEEL FIBER METAL

DESCRIPTION

Mott High Purity Surface Mount Filters provide 9-log filtration of particles down to 0.0015 μm resulting in particle-free gas and are engineered specifically for Integrated Gas System (IGS) assemblies. These filters offer flow ratings up to 50 slpm and are compatible with most popular compact modular substrate systems. Flow passages are equivalent to 1/4" tubing.



APPLICATIONS

For use with W-Seal 1.125" surface mount gas delivery systems. Compatible with all inert gases and most specialty gases for gas system interfaces specified on process tools, gas cabinets, and valve manifold box installations.

OPERATING CONDITIONS

- » Maximum Operating Pressure: 500 psig (34.5 barg)
- » Maximum Operating Temperature for Inert Gas: 460°C
- » Maximum Differential Pressure: 100 psid (6.9 bar)

MATERIALS

- » Hardware: 316L SS VAR
- » Filter Medium: 316L SS Fiber
- » Wetted Hardware Surface Finish: 5 Ra, Electro-polished

FEATURES	BENEFITS
All-Metal Capabilities	Withstands high temperatures and pressures
All-Welded Construction	No mechanical seals
Standard IGS Interface	Consumes less space than in-line designs. Easy retrofit
Design Flexibility	Wide range of materials, configurations and flow rates
Modular IGS Design	Ease of installation, reduced part variations and inventories

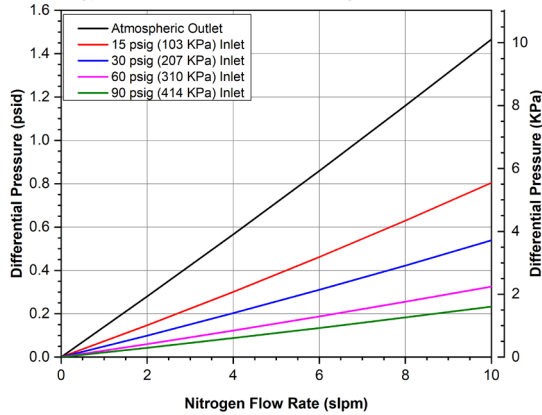
SPECIFICATIONS

Particle Removal Size:	$\geq 0.0015 \mu\text{m}$
Filter Efficiency (Log Reduction Value):	≥ 9 LRV (99.999999% reduction in particles). Confirmed at the most penetrating particle size of 0.08 μm per SEMI F38-0699 test method
Helium Leak Rating:	1×10^{-9} atm cc/sec
Moisture Contribution:	<10 ppb after 1 hour at low-flow ambient purge per SEMI F27 test method
Total Hydrocarbons:	Below detectable limits per SEMASPEC 90120396B test method

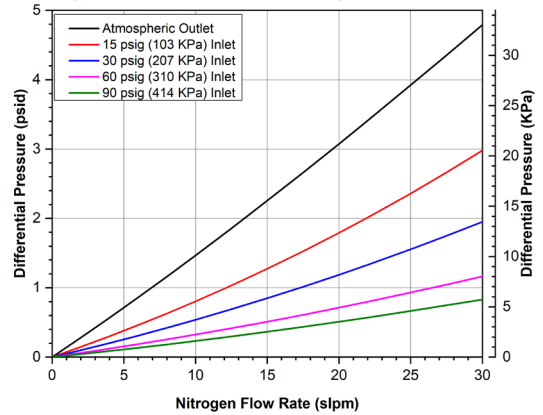
Warranty:
Mott Corporation ("Mott") warrants its GasShield filter will meet the specified retention and media integrity standards for a period of five years from the date of purchase, providing the filter is properly installed and used in accordance with the specified flow, pressure, temperature, and chemical compatibility as published by Mott. Mott will replace or grant a purchase price refund for any GasShield filter which proves defective under the terms of this limited warranty. No other remedies apply. Mott disclaims all other warranties, either expressed or implied, including any warranty of merchantability or fitness for a particular purpose. Mott shall have no liability for consequential incidental, special or punitive damages, lost profits or savings, or damages from lost production or damage to other materials.

FLOW DATA

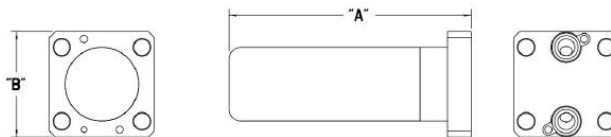
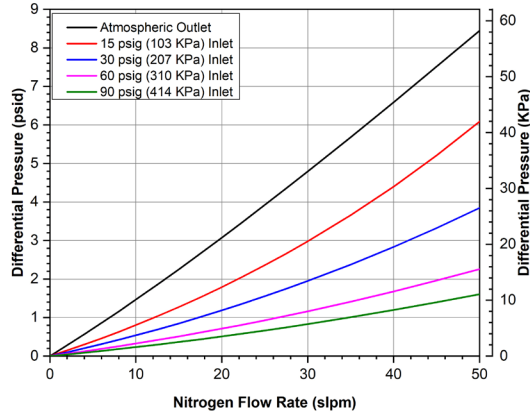
Mott GSMM-55-010-14 Flow Rate vs. Differential Pressure
Typical Flow Curves as a Function of System Pressures



Mott GSMM-55-030-14 Flow Rate vs. Differential Pressure
Typical Flow Curves as a Function of System Pressures



Mott GSMM-55-050-14 Flow Rate vs. Differential Pressure
Typical Flow Curves as a Function of System Pressures



ORDERING INFORMATION

Part Description	Part Number	Fitting Type	Filter Design	Flow Rating (SLPM)	A Inches / mm
GSMM-55-010-14	6813168	W-Seal	1.125"	10	2.5 / 63.5
GSMM-55-030-14	6813169	W-Seal	1.125"	30	2.5 / 63.5
GSMM-55-050-14	6813099	W-Seal	1.125"	50	2.5 / 63.5

*Custom designs and fittings available. Contact a Mott representative for more information.