

Mott High Purity Gas Filter

GasShield® Point-of-Use Series

GSPMV

Penta® Nickel Filter Media



Description

For maximum gas filtration efficiency, strength and reliability, GasShield Penta® all-metal gas filters are ideal for Ultra High Purity (UHP) gas delivery applications. They are offered in all welded 316L stainless steel housings with Mott's patented Penta nickel filter media alloys. They are compatible with most high purity semiconductor process gases. For more point-of-use filter offerings, check out the Mott line of GasShield POU, Sentry and Defender filter lines.

Applications

UHP gas sticks for Semiconductor, LED, Photovoltaic and MEMS Equipment Hookup. UHP filtration in valve manifold boxes, gas cabinets, tool isolation gas boxes, on-board gas delivery boxes or any process requiring ultra high purity particle removal.

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

Materials of Construction

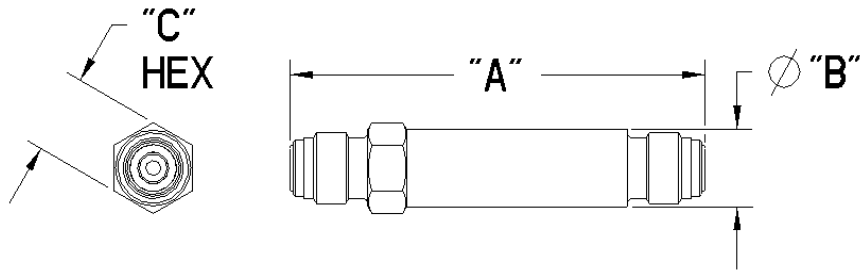
Hardware:	316L SS
Filter Medium:	Penta Nickel
Wetted Hardware Surface Finish:	10 Ra, Electro-polished

Performance Specifications

Rated Flow:	15 slpm
Particle Removal Size:	0.003 µm
Filter Efficiency (Log Reduction Value):	9 LRV (99.9999999% reduction in particles). Confirmed at the most penetrating particle size of 0.08 µm per SEMI F38-0699 test method
Helium Leak Rating:	1 x 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
Particle Shedding:	Zero particle contribution above background (<1 particle/ft ³) per SEMI F43-0308 test method

Operating Conditions

Maximum Operating Pressure:	3750 psig (258.5 barg)
Maximum Operating Temperature for Inert Gas:	450°C
Maximum Differential Pressure:	1000 psid (68.9 bar)



Ordering Information:

Part Description	Part Number	Fitting Type	A Inches/ mm	B Inches/ mm	C Inches/ mm
GSPMVFF11	6812022	1/4 inch Male/Male Face Seal	3.31/84.0	0.61/15.6	0.625/15.8
GSPMVFP11	6812065	1/4 inch Male/Female Face Seal	3.31/84.0	0.61/15.6	0.625/15.8

Mott GSPMV Flow Rate vs. Differential Pressure
Typical Flow Curves as a Function of System Pressures

