

GASSHIELD® SURFACE MOUNTS 0.0015 µm FILTRATION EFFICIENCY

mott
MISSION CRITICAL PRECISION

TEESING

WE MAKE YOUR TECHNOLOGY WORK

GSMM75 - C-SEAL SURFACE MOUNT FILTERS

DESCRIPTION

Mott's GasShield® Surface Mount Filters provide industry leading 0.0015 µm filtration for integrated gas systems used on board semiconductor OEM tools. Mott GasShield® products are compliant with SEMI F86-0304 specifications for dimensions of two port components for 1.5" four fastener surface mount gas distribution systems with the C-seal configuration.

APPLICATIONS

For use with C-seal, 1.5" surface mount modular gas delivery systems. All 316L SS construction provides ultra high purity filtration down to 0.0015 µm. Compatible with all inert gases and most specialty gases.



OPERATING CONDITIONS

- » Maximum Operating Pressure: 1800 psig (124.1 barg)
- » Maximum Operating Temperature for Inert Gas: 460°C
- » Maximum Differential Pressure: 500 psid (34.4 bar)

MATERIALS

- » Hardware: 316L SS, Alloy 22*
- » Filter Medium: Penta® Nickel, 316L SS, Alloy 22*
- » Wetted Hardware Surface Finish: 5 Ra

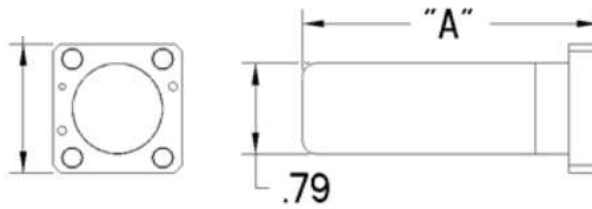
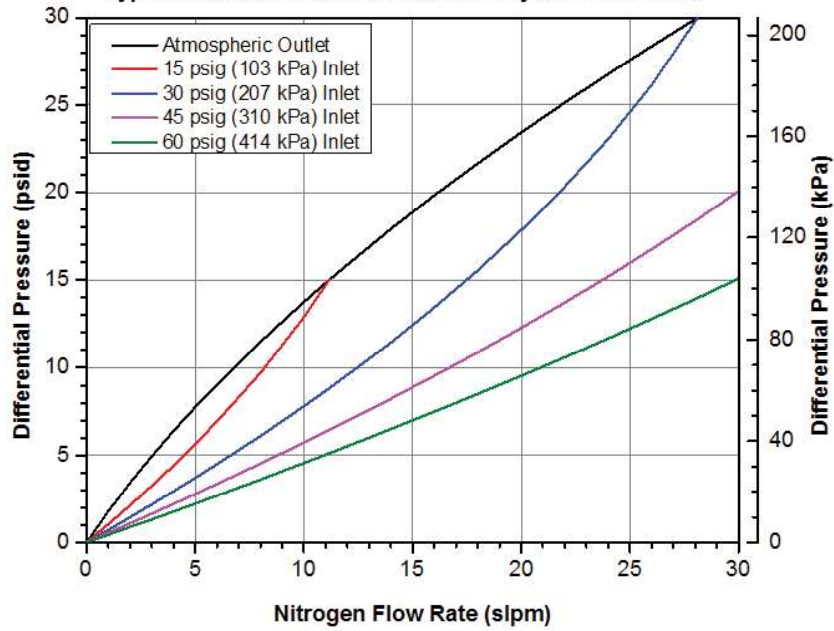
SPECIFICATIONS

| | |
|--|--|
| Particle Removal Size: | ≥ 0.0015 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 |

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.

Mott GSMM-75-010-11 Flow Rate vs. Differential Pressure

Typical Flow Curves as a Function of System Pressures



ORDERING INFORMATION

| Part Description | Part Number (CPN) | Fitting Type | Filter Material | Housing Material | Filter Design | Flow Rating (SLPM) | Overall Height (Inches) |
|------------------|-------------------|--------------|-----------------|------------------|---------------|--------------------|-------------------------|
| GSMM-75-020-12 | 6813032 | C-Seal | Nickel | 316L SS | 1.125" | 20 | 1.6 |
| GSMM-75-030-12 | 6813042 | C-Seal | Nickel | 316L SS | 1.125" | 30 | 2.4 |
| GSMM-75-050-12 | 6813053 | C-Seal | Nickel | 316L SS | 1.125" | 50 | 4.0 |
| GSMM-75-010-11 | 6813054 | C-Seal | 316L SS | 316L SS | 1.125" | 10 | 2.4 |
| GSMM-75-030-11 | 6813055 | C-Seal | 316L SS | 316L SS | 1.125" | 30 | 4.0 |
| GSMM-75-010-33 | 6813056 | C-Seal | Alloy 22* | Alloy 22* | 1.125" | 10 | 2.4 |
| GSMM-75-030-33 | 6813057 | C-Seal | Alloy 22* | Alloy 22* | 1.125" | 30 | 4.9 |
| GSMM-60-010-12 | 6813018 | C-Seal | Nickel | 316L SS | 1.500" | 10 | 1.3 |
| GSMM-60-050-12 | 6813009 | C-Seal | Nickel | 316L SS | 1.500" | 50 | 2.6 |
| GSMM-60-100-12 | 6813004 | C-Seal | Nickel | 316L SS | 1.500" | 100 | 4.5 |
| GSMM-60-010-11 | 6813011 | C-Seal | 316L SS | 316L SS | 1.500" | 10 | 2.2 |
| GSMM-60-020-11 | 6813023 | C-Seal | 316L SS | 316L SS | 1.500" | 20 | 3.2 |
| GSMM-60-075-11 | 6813005 | C-Seal | 316L SS | 316L SS | 1.500" | 75 | 5.8 |
| GSMM-60-010-33 | 6813056 | C-Seal | Alloy 22* | Alloy 22* | 1.500" | 10 | 2.4 |
| GSMM-60-020-33 | 6813039 | C-Seal | Alloy 22* | Alloy 22* | 1.500" | 20 | 3.2 |
| GSMM-60-075-33 | 6813040 | C-Seal | Alloy 22* | Alloy 22* | 1.500" | 75 | 6.1 |

*Alloy 22 or UNS N06022 is a nickel-chromium-molybdenum super-alloy commonly referred to as Hastelloy® C-22®.