

GASSHIELD® POINT-OF-USE GAS FILTERS

1.5 nm FILTRATION

mott
MISSION CRITICAL PRECISION

POU-3H - ALLOY 22* FILTER MEDIA

DESCRIPTION

Mott High Purity Gas Filters provide 9-log filtration of particles down to 0.0015 μm resulting in particle-free gas. For maximum gas filtration efficiency, strength and reliability, GasShield POU all-metal gas filters are ideal for Ultra High Purity (UHP) gas delivery applications. They are compatible with most high purity electronics grade process gases. For more point-of-use filter offerings, check out the Mott line of Penta® nickel media or Defender fiber metal filters.



APPLICATIONS

UHP corrosive gas filtration in the following applications: gas sticks for equipment hookup, valve manifold boxes, gas cabinets, tool isolation gas boxes, and on-board OEM tool gas boxes.

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)

MATERIALS

- » Hardware: Alloy 22*
- » Filter Medium: Alloy 22*
- » Wetted Hardware Surface Finish: 5 Ra

SPECIFICATIONS

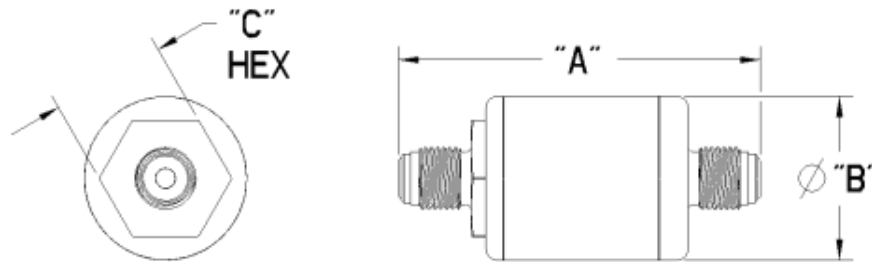
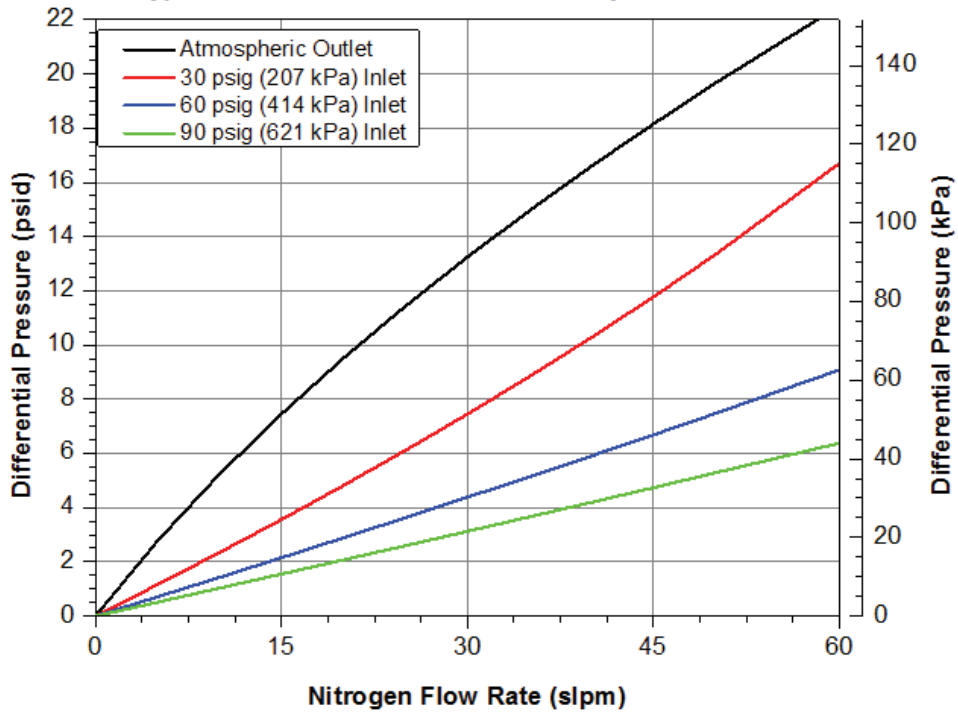
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|--|---|
| Particle Removal Size: | $\geq 0.0015 \mu\text{m}$ |
| Filter Efficiency (Log Reduction Value): | ≥ 9 LRV (99.9999999% reduction in particles). Confirmed at the most penetrating particle size of 0.08 μm per SEMI F38-0699 test method |
| Helium Leak Rating: | 1×10^{-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.

FLOW DATA

Mott POU-3-H Flow Rate vs. Differential Pressure
Typical Flow Curves as a Function of System Pressures



ORDERING INFORMATION

| Part Description | Part Number | Fitting Type | A Inches/mm | B Inches/mm | C Inches/mm |
|------------------|-------------|------------------------------|-------------|-------------|-------------|
| POU-3-HV1 | 6800002 | 1/4 inch Male/Male Face Seal | 3.31/84.0 | 1.50/38.1 | 1.062/26.9 |
| POU-3-HV3 | 6800148 | 1/2 inch Male/Male Face Seal | 3.31/84.0 | 1.50/38.1 | 1.062/26.9 |

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

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