

# Mott High Purity Gas Filter

## GasShield® Point-of-Use Series

### GSP315H3

#### Penta® Nickel Filter Media

# TEESING

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### Description

For high flow 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 Penta Nickel filter media. 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

High Flow Bulk Specialty Gas Supply 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: | 5 Ra, Electro-polished |

### Performance Specifications

|  |   |
|--|---|
| Rated Flow:                              | 120 slpm  |
| Particle Removal Size:                   | 0.003 $\mu$ m   |
| Filter Efficiency (Log Reduction Value): | 9 LRV (99.9999999% reduction in particles). Confirmed at the most penetrating particle size of 0.08 $\mu$ m per SEMI F38-0699 test method |
| Helium Leak Rating:                      | 1 x 10 <sup>-9</sup> atm cc/sec   |
| Moisture Contribution:                   | <10 ppb after 1 hour at low-flow ambient purge per SEMI F27 testing   |
| Total Hydrocarbons:                      | Below detectable limits per SEMASPEC 90120396B test method  |
| Particle Shedding:                       | Zero particle contribution above background. (<1 particle/ft <sup>3</sup> ) per SEMI F43-0308 test method                                 |

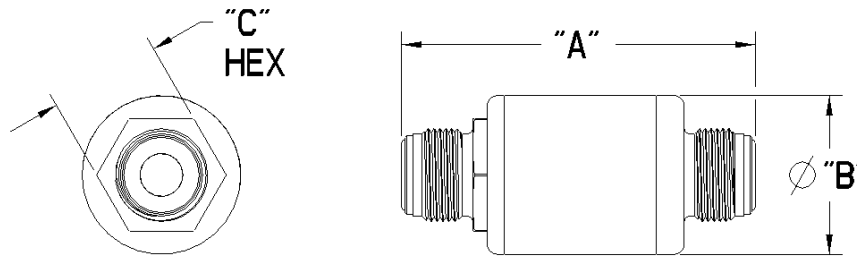
### Operating Conditions

|  |                        |
|--|------------------------|
| Maximum Operating Pressure:                  | 2500 psig (172.5 barg) |
| Maximum Operating Temperature for Inert Gas: | 450°C                  |
| Maximum Differential Pressure:               | 500 psid (34.5 bar)    |

**mott corporation**

84 Spring Lane, Farmington, CT 06032-3159  
860-747-6333 | Fax 860-747-6739 | www.mottcorp.com | Quest@mottcorp.com

WWW.TEESING.COM | TEL +31 70 413 07 50



Ordering Information:

| Part Description | Part Number | Fitting Type                    | A Inches/<br>mm | B Inches/<br>mm | C Inches/<br>mm |
|------------------|-------------|---------------------------------|-----------------|-----------------|-----------------|
| GSP315H3FF11     | 6812037     | 1/4 inch<br>Male/Male Face Seal | 3.31/127        | 1.50/38.1       | 1.062/26.9      |
| GSP315H3FF33     | 6812070     | 1/2 inch<br>Male/Male Face Seal | 3.31/127        | 1.50/38.1       | 1.062/26.9      |

**Mott GSP315H3 Flow Rate vs. Differential Pressure**  
Typical Flow Curves as a Function of System Pressures

