Semiconductor Industry - Gas Filtration Update

You're probably already familiar with Mott – the pioneer of all-metal POU and bulk filters. But you may not have heard about one recent addition to our GasShield® filter line – Defender POU filters. Here's a brief description of what makes this unique filter a great value in providing high strength and high flow, all in the same package.

Mott GasShield® Defender Gas Filters
The all-metal high-flow POU filters from Mott

**Mott strength and quality – with low pressure drop**
Like the rest of the Mott GasShield line, Defender POU filters offer the high strength, long life, and quality inherent in Mott’s all-metal construction – which provides true 9-log filtration. But what makes the Defender series unique is its exceptionally low delta-P in an all-metal design. At a rated flow of 50 slpm, the Defender achieves a differential pressure of less than 4 PSID.

**High performance, with low cost of ownership**
The Defender is ready for use in many semiconductor gas applications with a standard industry footprint of 3.31” (84mm). Two standard configurations
are available, offering a choice of 1/4-inch Face Seal or Tube Stub end fittings. Additional end fittings may be obtained by consulting our factory.

Whatever the configuration you choose, you’re assured of unsurpassed reliability and value. With a 5-year warranty and competitive price, the Defender provides the ultimate in cost of ownership for any stainless steel POU filter on the market today.

### GasShield® Defender POU Filter Specifications

- 316L Stainless Steel Media
- True 9-Log Filtration Efficiency of Particles as Small as 0.003µm; Confirmed at the Most Penetrating Particle Size of 0.08µm
- Operating Temperature up to 450°C (Inert Gases)
- Operating Pressure to 3000 PSIG (206.8 Bar) at 52°C
- 316L VAR Stainless Steel Housing Construction
- 5Ra Surface Finish on Gas Wetted Surfaces
- Electropolished to Meet Industry Specifications
- < 1 Particle/Ft³ Particle Shedding
- Maximum Forward and Reverse Differential Pressure of 1000 PSID (68.9 Bar) @ 52°C
- Manufactured, Cleaned and Packaged in a Class 100 Clean Room
- Total Hydrocarbon Emissions Below Detectable Limits
- Moisture Contribution <10 ppb After One Hour at Low-flow Ambient Purge
- 1 x 10⁻⁹ atm cc/sec Helium Leak Rating

### About Mott High Purity

Mott Corporation was established in 1959 and became the first company to offer all-metal, high-purity filtration to semiconductor manufacturers. Mott’s High Purity Division manufactures all-metal gas filters and systems in configurations ranging from 1 slpm to 200,000 slpm. Materials of construction include nickel, 316LSS and Hastelloy® which provide highly efficient filtration for processes used in the production of integrated circuits.

Mott Corporation manufactures components for the semiconductor market in State-of-the-Art manufacturing facilities located in Farmington, Connecticut. The facilities provide Class 100 environments for the assembly and testing of an entire range of products produced specifically for high purity applications. Mott has full CNC capability for hardware manufacture as well as State-of-the-Art automated test equipment for 100% integrity testing of all components. Welding operations are computer controlled ensuring repeatable precision welds. Visitors are always welcome for tours of our facilities. Contact us at quest@mottcorp.com to schedule a visit.

### For more information

Click here or on the image below to download our 2-page GasShield® Defender Cutsheet. You may also contact us at High Purity Sales, Mott Corporation, 84 Spring Lane, Farmington, CT 06032, 1-860-747-6333 or Toll-Free 1-800-BUY-MOTT. E-mail: quest@mottcorp.com.
AI stainless steel with the strength and longevity of Mott porous metal.

- High strength-to-weight ratio
- Good corrosion resistance
- Easy to machine
- High thermal conductivity
- Widely used in automotive, aerospace, and medical applications
- Suitable for high-temperature environments
- Can be welded and brazed
- Excellent ductility and formability
- Easy to fabricate and assemble