

Mott Utility Line and Bulk Filters.



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The high-strength, highly reliable alternative to fluoropolymer filters.

Mott provides the high-strength, all-metal solution to filtration requirements for utility lines inside the wafer fab, as well as flow streams at the gas pad. Unlike the *Teflon*®-based filters used historically for these applications, Mott's Utility Line and Bulk Filters are not subject to failure caused by high temperatures and pressure spikes. Mott GasShield® Bulk Gas Filters are warranted for 15 years from date of purchase (see back cover for details).

The optimum filtration media.

Mott filters are constructed with a patented sintered nickel porous media that offers unsurpassed filtration characteristics. The media is not susceptible to failure from pressure and flow fluctuations, and is ideally suited to higher temperatures. Such high temperatures can be encountered downstream of a purifier or during a heated dry down of a gas supply system. Like all Mott High Purity filters, the Utility Line and Bulk Filters provide 9-log filtration of particles down to 0.003µm.

In addition, the flow versus differential pressure performance of the filter is equal or superior to the performance of competitive *Teflon*® products on the market today.

9 log reduction value.

- Greater than 99.9999999% removal of all particles down to 0.003µm; confirmed at the most penetrating particle size of 0.08µm.

Consistent operation under challenging conditions.

- Operating temperatures up to 450°C (842°F) (inert gas)
- Total hydrocarbons below detectable limit
- Maximum inlet pressure rated at 300-650 psi
- All units are He leak-rated at maximum 1×10^{-9} atm cc/sec
- Fast dry down achievable to parts per trillion
- Recommended for use with most process gases – 100% PENTA® nickel filter elements are standard. 316L stainless steel media also available.

Rugged, high-quality construction.

- 10 Ra surface finish on all internal wetted hardware components
- Optimized filtration area maintains specified particle retention at controlled pressure drop for greater particle load and increased filter life
- All-welded construction assures elimination of out-gassing due to polymer seats and structures
- Standard fittings in compression, VCR and tube connections. Other fitting types available (consult factory)

Clean start-to-finish packaging.

- Class 100 assembly, welding and testing meet SEMI Standards
- Class 100 clean room double-bagged – internal bag is Nylon 6, outer bag is poly



High strength, high precision.
GasShield® bulk filters consist of manifolded filter elements within 3" or 6" housings – 100% metal construction through-and-through – to sustain high flow rates, high pressures and corrosive gases for many years with 9-log reduction filtration efficiency.

Benefits

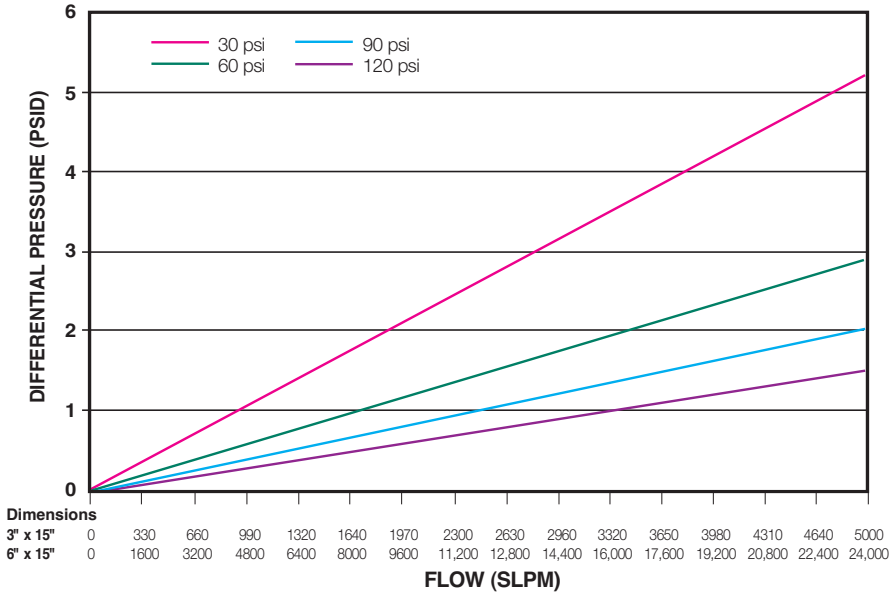
- All-metal construction for high-temperature and pressure capabilities
- All-welded construction eliminates leaky seals
- Fully sintered PENTA® media offers high flow and low differential pressure



Bulk Filters

| Part Description | CPN | Flow SLPM | Fitting Type* | Overall Length (OAL) | Diameter | Max Housing Pressure (PSI) |
|---------------------|---------|-----------|----------------|----------------------|-----------------|----------------------------|
| BGF-310-1TS-N-4M | 6825116 | 4,000 | 1" Tube Stub | 25.17" (63.93 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| BGF-310-1.5TS-N-4M | 6825120 | 4,000 | 1.5" Tube Stub | 24.39" (61.95 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| BGF-310-2TS-N-4M | 6825121 | 4,000 | 2" Tube Stub | 17.95" (45.59 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| BGF-315-1.5TS-N-6M | 6825122 | 6,500 | 1.5" Tube Stub | 29.42" (74.73 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| BGF-315-2TS-N-6M | 6825123 | 6,500 | 2" Tube Stub | 22.98" (58.37 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| BGF-610-1TS-N-19M | 6825313 | 16,000 | 1" Tube Stub | 24.86" (63.14 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |
| BGF-610-1.5TS-N-19M | 6825314 | 16,000 | 1.5" Tube Stub | 24.86" (63.14 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |
| BGF-610-2TS-N-19M | 6825311 | 16,000 | 2" Tube Stub | 24.86" (63.14 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |
| BGF-610-4TS-N-19M | 6825312 | 16,000 | 4" Tube Stub | 18.40" (46.74 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |
| BGF-615-4TS-N-28M | 6825124 | 25,000 | 4" Tube Stub | 23.41" (59.46 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |
| BGF-615-6TS-N-28M | 6825088 | 25,000 | 6" Tube Stub | 28.81" (73.18 cm) | 6.0" (15.24 cm) | 400 (27.6 bar) |

TYPICAL FLOW VS. DIFFERENTIAL PRESSURE CURVE



FILTER SPECIFICATIONS

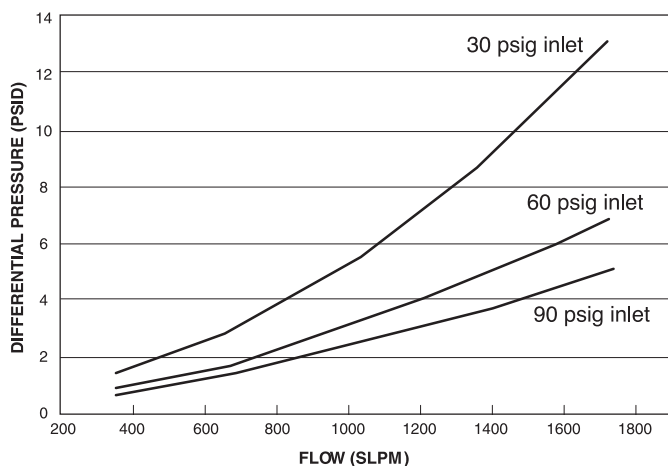
| | |
|---------------------------|-------------------------------------|
| Maximum ΔP | 250 psig (17.23 bar) |
| Helium Leak Rating | 1 x 10 ⁻⁹ atm cc/sec |
| Max Operating Temperature | 450°C (842°F) @ 125 Psig (8.61 bar) |
| Hardware Wetted Surfaces | 10 Ra Electro Polished |
| Housings Material | 316L Stainless Steel |
| Filter Media Alloy | PENTA® Nickel |

* Other Fittings are available. Consult Factory for details.

Utility Line Filters

| Part Description | CPN | Flow SLPM | Fitting Type* | Overall Length (OAL) | Diameter | Max Housing Pressure (PSI) |
|------------------|---------|-----------|------------------|----------------------|----------------|----------------------------|
| GSP1500CC33 | 6825076 | 1,500 | 1/2" Compression | 9.18" (23.32 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500FF33 | 6825075 | 1,500 | 1/2" Face Seal | 8.86" (22.50 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500TT33 | 6825080 | 1,500 | 1/2" Tube Stub | 9.70" (24.64 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500CC44 | 6825082 | 1,500 | 3/4" Compression | 9.71" (24.66 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500FF44 | 6825081 | 1,500 | 3/4" Face Seal | 10.53" (26.75 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500TT44 | 6825085 | 1,500 | 3/4" Tube Stub | 9.78" (24.84 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500FF55 | 6825083 | 1,500 | 1" Face Seal | 10.93" (27.76 cm) | 3.0" (7.62 cm) | 650 (45 bar) |
| GSP1500TT55 | 6825079 | 1,500 | 1" Tube Stub | 9.64" (24.49 cm) | 3.0" (7.62 cm) | 650 (45 bar) |

TYPICAL FLOW VS. DIFFERENTIAL PRESSURE CURVE



FILTER SPECIFICATIONS

| | |
|---------------------------|-------------------------------------|
| Maximum ΔP | 250 psig (17.23 bar) |
| Helium Leak Rating | 1 x 10 ⁻⁹ atm cc/sec |
| Max Operating Temperature | 450°C (842°F) @ 125 Psig (8.61 bar) |
| Hardware Wetted Surfaces | 10 Ra Electro Polished |
| Housings Material | 316L Stainless Steel |
| Filter Media Alloy | PENTA® Nickel |

* Other Fittings are available. Consult Factory for details.

Limited Warranty

Mott Corporation ("Mott") warrants its GasShield® bulk gas filter will meet the specified retention and media integrity standards for a period of fifteen 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 also warrants its utility line filter under those same provisions for a period of five years. 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.

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