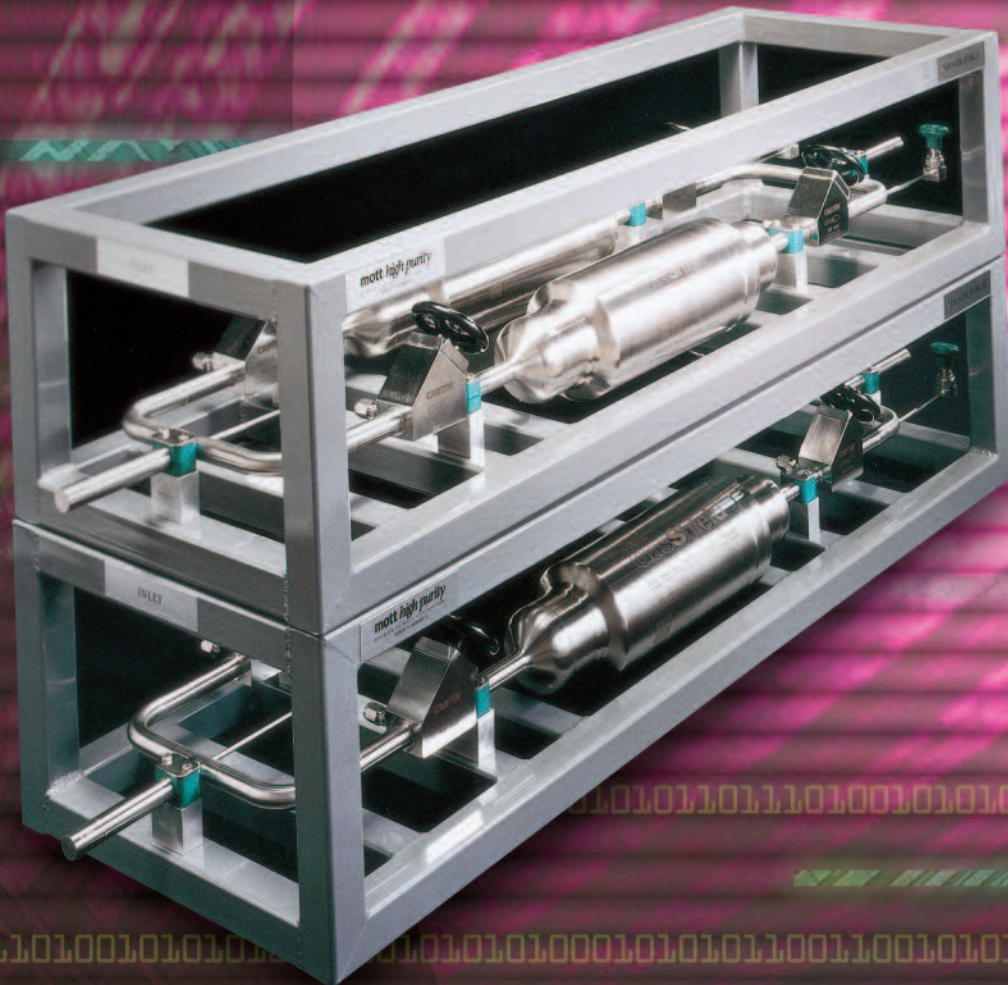


# Mott Utility Line and Bulk Filters.





# Mott Utility Line and Bulk Filters.

## 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*<sup>®</sup>-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<sup>®</sup> 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 0.003 $\mu$ m.

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

## 9 log reduction value.

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

## 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  $1 \times 10^{-9}$  atm cc/sec
- Fast dry down achievable to parts per trillion
- Recommended for use with most process gases – 100% PENTA<sup>®</sup> 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<sup>®</sup> 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

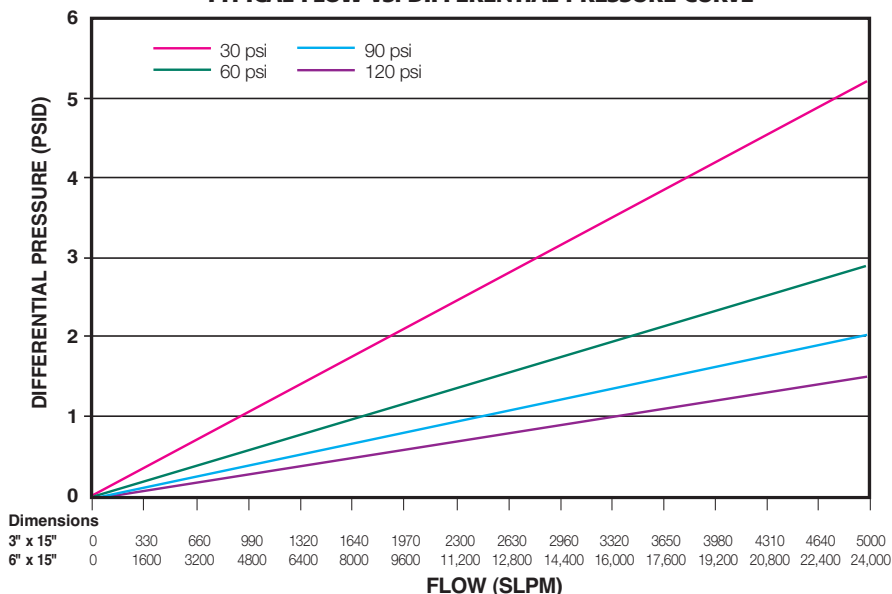
- All-metal construction for high-temperature and pressure capabilities
- All-welded construction eliminates leaky seals
- Fully sintered PENTA<sup>®</sup> media offers high flow and low differential pressure



## 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

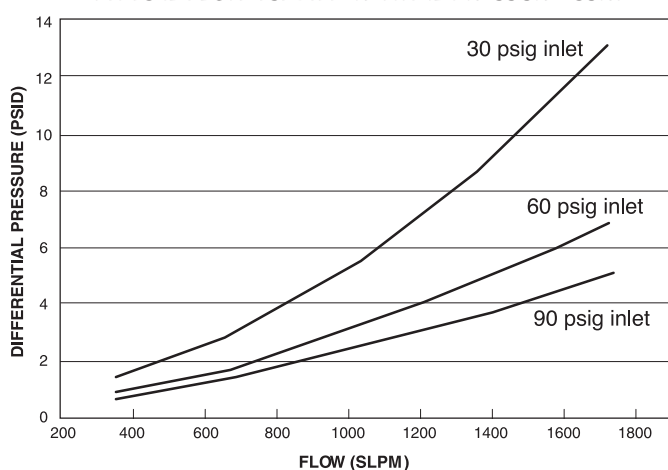
Maximum $\Delta P$	250 psig (17.23 bar)
Helium Leak Rating	1 x 10 <sup>-9</sup> atm cc/sec
Max Operating Temperature	450°C (842°F) @ 125 Psig (8.61 bar)
Hardware Wetted Surfaces	10 Ra Electro Polished
Housings Material	316L Stainless Steel
Filter Media Alloy	PENTA® Nickel

\* 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 $\Delta P$	250 psig (17.23 bar)
Helium Leak Rating	1 x 10 <sup>-9</sup> 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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