

> Mott GasShield® Point-Of-Use Gas Filters



For maximum filtration efficiency, strength and reliability, the GasShield POU filter line is the industry's first and still largest collection of all-metal filters. Which means Mott offers the greatest assurance of having the precise filter you require – whether it's Hastelloy® C-22 to withstand corrosive gases, or Mott PENTA® Nickel to offer ΔPs comparable to Teflon®. Key GasShield POU features include:

9-log Reduction Value

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

High-Performance Operation

- Operating temperatures up to 450°C (inert gas).
- Able to withstand 1000 psi differential (69 bar) pressure @ 20°C.
- All units are He leak-tested to a maximum 1×10^{-9} atm cc/sec.
- Parts per trillion dry down achievable.
- >1 trillion particles retained at the rated flow with zero particles detected downstream of tested filters.
- Particle shedding of <1 particle/ft³ in accordance with SEMI F43.

> high purity products

Rugged, High-Quality Construction

- 5 Ra surface finish on all internal hardware components.
- Media is sintered with no binders or slurry so “the only material of construction of the media is the media.”
- Minimized surface area permits required flow characteristics at >9-log particle retention.
- Filter element is designed to provide required flow at minimal pressure drop while minimizing surface area to provide virtually zero out-gassing.
- All-welded construction eliminates out-gassing which accompanies polymeric filters.

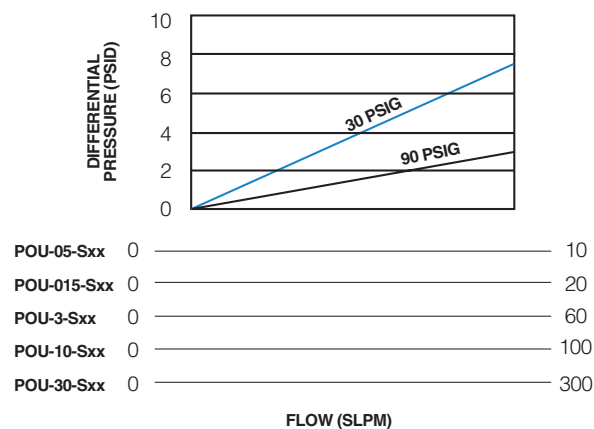
Materials of Construction

- Standard GasShield POU filters are offered with 316L stainless steel porous metal media in 316L VAR/ electropolished stainless steel or nickel housings.
- Mott also offers POU filters made of Hastelloy C-22 for use in corrosive gas applications such as HCl, HBr and WF₆. We are the only filter supplier to the semi-conductor industry to offer filter media and housings in Hastelloy C-22.
- We also manufacture nickel filters capable of filtration at higher flow rates.

Clean Start-to-Finish Packaging

- Preconditioned with clean dry nitrogen.
- Class 100 clean room packaged. Multiple bags to ensure dryness.
- Packaging is designed to maintain the purity of the filter prior to installation.

Typical Reference for Differential Pressure vs. Flow



Note: To find POU filter flow curves, please visit www.mottcorp.com, go to the Resource Center, under Design Tools and click on High Purity Product Spec Sheets.

GasShield® POU Filters

Ordering Information

Mott GasShield POU filters are available in the following standard configurations. Other configurations may be available on special order. Consult the factory.

Part Description	Computer Part No. (CPN*)	Maximum Rated Flow (slpm)	Filter Element Material	Housing Material	Standard Inlet/Outlet Connection**	Maximum Inlet Pressure (psig/bar) at 20°C	Maximum Differential Pressure (psid/bar)	Overall Length (Inches/mm)	Outside Diameter (Inches/mm)
STAINLESS STEEL									
POU-05-SV1	6800017	10	316L SS	316L SS/VAR	1/4" Male Face Seal	3750/258.6	1000/69	3.31/84	0.75/19.05
POU-015-SV1	6800049	30	316L SS	316L SS/VAR	1/4" Male Face Seal	3750/258.6	1000/69	5.00/127	0.75/19.05
POU-015-ST1	6800029	30	316L SS	316L SS/VAR	1/4" Tube Stub	3750/258.6	1000/69	5.00/127	0.75/19.05
POU-3-SV1	6800001	60	316L SS	316L SS/VAR	1/4" Male Face Seal	2500/172.4	1000/69	3.31/84	1.50/38.10
POU-10-SV1	6800003	150	316L SS	316L SS/VAR	1/4" Male Face Seal	2500/172.4	1000/69	5.00/127	1.50/38.10
POU-10-SV2	6800006	150	316L SS	316L SS/VAR	3/8" Male Face Seal	2500/172.4	1000/69	5.00/127	1.50/38.10
POU-30-SV3	6800074	300	316L SS	316 SS/VAR	1/2" Male Face Seal	2500/172.4	1000/69	11.22/285	1.50/38.10
NICKEL									
POU-05-NSV1	6800052	30	Nickel	316L SS/VAR	1/4" Male Face Seal	3750/258.6	1000/69	3.31/84	0.75/19.05
POU-05-NST1	6800070	30	Nickel	316L SS/VAR	1/4" Tube Stub	3750/258.6	1000/69	3.31/84	0.75/19.05
POU-3-NSV1	6800067	100	Nickel	316L SS/VAR	1/4" Male Face Seal	2500/172.4	1000/69	3.31/84	1.50/38.10
HASTELLOY									
POU-05-HV1	6800040	8	Hastelloy C-22	Hastelloy C-22	1/4" Male Face Seal	3750/258.6	1000/69	3.31/84	0.75/19.05
POU-3-HV1	6800002	45	Hastelloy C-22	Hastelloy C-22	1/4" Male Face Seal	3750/258.6	1000/69	3.31/84	1.50/38.10
POU-10-HV1	6800004	100	Hastelloy C-22	Hastelloy C-22	1/4" Male Face Seal	3750/258.6	1000/69	5.00/127	1.50/38.10

*Order by CPN.

**Optional end connections are available on request.

Hastelloy is a registered trademark of Haynes International, Inc.,
Teflon® is a registered trademark of E. I. DuPont Nemours & Co., Inc.

Limited 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.

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