MOTT GAS PURIFIERS
HIGH PURITY POINT-OF-USE SERIES

mott
MISSION CRITICAL PRECISION

INLINE GAS PURIFIERS <100 PPT FOR LOW FLOW RATES

HIGHEST STANDARD OF PURITY

Mott's point-of-use gas purifiers are designed for high purity and ultra high purity applications that require impurity levels in process gases to be 100 parts-per-trillion (PPT) or less. Mott's point-of-use gas purifiers accommodate various flow rates across a variety of different models and uphold the highest standard of purity for gas delivery systems.

APPLICATIONS

» Semiconductor process equipment
» Weld gas/purge gas
» Analytical equipment
» Annealing cover gas
» Solar and energy
» Other emerging technologies

OPTIONS

» Inlet/outlet fittings
» Inlet/outlet valves
» Sub-micron particle filtration
» Competitive length matching

FEATURES

» 316L stainless steel construction
» 1.5 nm outlet filtration
» 316L stainless steel fiber media
» Nominal flow rates to 20 slpm
» Simple installation
» 100% CE certified

OPERATING CONDITIONS

» Max Operating Pressure
250 PSIG (17.24 BAR)
» Typical Operating Temperature Range
0°C-50°C (32°F-120°F)
» Max Operating Temperature
50°C (120°F)
» Nominal Flow Rate
0.3 slpm to 20.0 slpm depending on vessel size
» Max Flow Rate
≤1 slpm to 100 slpm depending on vessel size

SPECIFICATIONS

Material:	316L stainless steel
Flexible Sizes and Configurations:	Inlet/outlet fittings and valves, face-to-face matching available
Filtration:	0.0015 µm standard
Helium Leak Rating:	1 x 10^{-9} atm cc/sec
Outlet Purity:	< 100 PPT (see fill class spec sheet)
Pressure Drop:	< 2 psid
Wetted Hardware Surface:	Electro-polished, < 10Ra, 316L stainless steel
Lifetime	One year given 24/7 operation at nominal flow rate and typical 5N (99.999%) combined inlet impurity

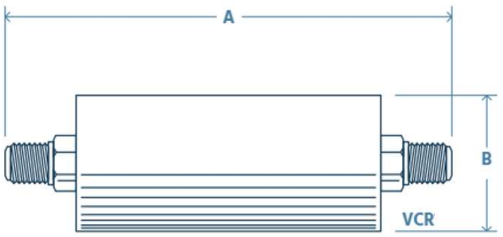
PART DESCRIPTION

Mott Gas Purifier POU Description Example

MGP – 15-045 – IG-101 – 1.5NM - V1 - V

- 15-045: 1.5" OD x 4.5" Lg
- IG-101: Class Code-Inert
- 1.5NM: 1.5 nm Filter
- V1: ¼" VCR
- V: Inlet/Outlet Valves

(-V - Inlet/Outlet Valves Optional)



VCR is a registered trademark of Swagelok Company

SIZES

Point-of-Use Purifiers (POU)					
OAL (A)		Nominal Flow (slpm) / Max Flow (slpm)			
Inch	mm	1" OD (25.4 mm)	1.5" OD (38.1 mm)	2" OD (50.8 mm)	2.5" OD (63.5 mm)
3.3	83.8	0.3 / 1.0	0.5 / 2.5	-	-
4.5	114.3	0.5 / 2.5	1.1 / 6.0	2.0 / 10.0	-
5.0	127.0	0.6 / 3.0	1.4 / 7.5	2.5 / 13.3	4.0 / 20.0
6.3	160.0	-	2.1 / 11.3	4.0 / 20.0	6.0 / 30.0
7.9	200.7	-	-	7.5 / 30.0	8.5 / 45.0
8.2	208.3	-	-	8.0 / 32.5	9.1 / 48.0
10.0	254.0	-	-	-	12.0 / 60.0
12.5	317.5	-	-	-	20.0 / 100.0

» Custom designs and fittings available
» Nominal flow rates and outlet purity are based on 1 year service life at 5Ns inlet purity
» OAL's above based on 1/4" fittings
» Weights range from 1 to 10 lbs based on size and fill material

COMMON FILLS

Class	Gas Type	Gases Purified	Impurities Removed	Purity**	Regen
IG	Inert	N_2, Ar, He, Kr, Ne, Xe	CO, CO_2, H_2, H_20, NMHC, O_2, Acids, Bases, Refractory Compounds, Organics	<100 PPT	Yes*
RG	Hydrogen	H_2, D_2, H_2 Inert Mixtures	CO, CO_2, H_20, NMHC, O_2, Acids, Bases, Refractory Compounds, Organics	<100 PPT	Yes*
AG	Acid/Corrosive	BCl_3, BF_3, CL_2, ClF_3, F_2, HBr, HCl, HF, NF_3, SF_4, WF_6	H_20	<1 PPB	No
HG	Hydride	AsH_3, B_2H_6, CH_4, D.C.S.(SiH_2Cl_2), Ge_2H_6, GeH_4, H_2Se, NH_3, PH_3, SF_6, SiH_2, SiH_4, Si_2H_6, DMHZ, Hydride/Carrier gas mix	CO, CO_2, H_20, O_2, Organics	<1 PPB	No
OG	Oxygen/CDA	O_2, CDA	CO, CO_2, H_2, H_20, THC, NHMC, Amines, NOx, Acids, Bases, Refractory Compounds, Organics	<100 PPT	Yes*
CO2	Carbon Dioxide	CO_2	CO, CO_2, H_2, H_20, NHMC, Amines, NOx, Acids, Bases, Refractory Compounds, Organics	<100 PPT	Yes*

» Other standard and custom fills available to fit application requirements
» Transportation protocols required for dangerous goods

* Factory Regenerable Dependent Upon Mix of Impurity Removals
** Typical Outlet Purity. See Fill Class Spec Sheet.