

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
- » Simple installation

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
0-8 slpm depending on vessel size
- » Max Flow Rate
0-32.5 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

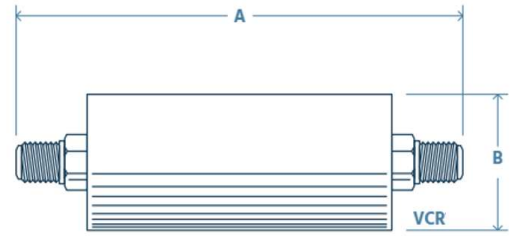
PART DESCRIPTION

Mott Gas Purifier POU Description Example

MGP – 15-045 – IG-101 – 1.5NM – V1

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1.5" OD x 4.5" Lg Class Code-Inert 1.5 nm Filter ¼" VCR



VCR is a registered trademark of Swagelok Company

SIZES

Point-of-Use Purifiers (POU)			
OAL (A)		Nominal Flow (slpm) / Max Flow (slpm)*	
Inch	mm	1.5" OD (38.1 mm)	2" OD (50.8 mm)
3.3	83.8	0.5 / 2.5	-
4.5	114.3	1.1 / 6.0	2.0 / 10.0
5.0	127.0	1.4 / 7.5	2.5 / 13.3
6.3	160.0	2.1 / 11.3	4.0 / 20.0
7.9	200.7	-	7.5 / 30.0
8.2	208.3	-	8.0 / 32.5

» 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 (MVCR x MVCR)

» Valve length for 1/4" fittings = 2.80" / 71.1 mm

» Weights range from 1 to 10 lbs based on size and fill material

* Flow may vary based on fill type and purifier size. Contact us for more information.

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 ₂ O, 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 ₂ O, 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 ₂ O	<1 PPB	No
HG	Hydride	AsH ₃ , B ₂ H ₆ , CH ₄ , D.C.S.(SiH ₂ Cl ₂), Ge ₂ H ₆ , GeH ₄ , H ₂ Se, NH ₃ , PH ₃ , SF ₆ , SiH ₂ , SiH ₄ , Si ₂ H ₆ , DMHZ, Hydride/Carrier gas mix	CO, CO ₂ , H ₂ O, O ₂ , Organics	<1 PPB	No
OG	Oxygen/CDA	O ₂ , CDA	CO, CO ₂ , H ₂ , H ₂ O, THC, NHMC, Amines, NOx, Acids, Bases, Refractory Compounds, Organics	<100 PPT	Yes*
CO2	Carbon Dioxide	CO ₂	CO, H ₂ , H ₂ O, 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.