



SAES Pure Gas

The Technology of Pure Gas

MicroTorr: Point-of-Use Ambient Temperature Purifiers

MicroTorr Purifiers can be tailored to many different customer applications, by combining the model size with a selection of gas-specific purification materials. Optional features include an ultrafine 0.003µm particle filter, inlet/outlet valves, bypass assemblies or custom manifold assemblies.



Model	MC1	MC50	MC190/ MC200	MC400/ MC450	MC500	MC1500	MC3000	MC4500	MC9000	MC14K
Max Flow (slpm)	5	10	50	60	100	250	500	1,000	1,000	2,000
Avg Flow (slpm)	0.5	1.5	5	9	12	40	80	200	300	400

Media	Gases Purified	Impurities removed
202	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, CO ₂ , N ₂ O, D ₂	H ₂ O < 1ppb
203	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, N ₂ O, D ₂	H ₂ O, CO ₂ < 100 ppt; Acids, Organics, Refractory compounds < 1 ppt, Bases < 5 ppt
302	B ₂ H ₆ , BCl ₃ , CClH ₃ , Cl ₂ , CO ₂ , GeCl ₄ , GeH ₄ , H ₂ S, H ₂ Se, HBr, HCl, N ₂ O, NF ₃ , NO, SiCl ₄ , SiF ₄ , SiH ₂ Cl ₂ , SiHCl ₃ , SO ₂ , CHClF ₂ , BF ₃	H ₂ O < 1ppb; Metals removal < 1ppb
403	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, CO ₂	Acids, Organics, Refractory compounds < 1 ppt, Bases < 5 ppt
702	NH ₃ , C ₂ H ₇ N, C ₂ H ₈ N ₂ , C ₂ H ₄ , C ₃ H ₆ , CH ₃ SiH ₃ , GeH ₄ , SF ₆	H ₂ O, O ₂ , CO ₂ , Metals < 1ppb
703	NH ₃	H ₂ O, O ₂ , CO ₂ , NMHCs, Metals < 1ppb
804	CO ₂	H ₂ O, CO, O ₂ , H ₂ < 100 ppt; Acids, Organics, Refractory compounds < 1 ppt, Bases < 5 ppt
902	Ar, He, Kr, N ₂ , Ne, Xe	H ₂ O, CO, CO ₂ , O ₂ , H ₂ < 100 ppt; Acids, Organics, Refractory compounds < 1 ppt, Bases < 5 ppt
904	H ₂ , D ₂	H ₂ O, CO, CO ₂ , O ₂ < 100 ppt; Acids, Organics, Refractory compounds < 1 ppt, Bases < 5 ppt
905	C ₂ F ₆ , C ₂ H ₆ , C ₃ F ₈ , C ₃ H ₈ , C ₂ F ₄ H ₂ , C ₄ F ₈ , C ₄ H ₁₀ , CCl ₄ , CF ₄ , CH ₄ , CHF ₃ , SF ₆	H ₂ O, CO, CO ₂ , O ₂ , H ₂ , NMHCs < 1ppb

Micro-Channel Palladium Hydrogen Purifiers



SAES Pure Gas micro-channel palladium hydrogen purifiers produce the purest hydrogen on the planet. These purifiers use patented micro-channel palladium membrane technology to remove all impurities to part-per-trillion levels. All palladium purifiers provide a durable purifier for any flow and any inlet gas source.

Key Features

- Ultra pure hydrogen from any source
- High flow capacity up to 2,170 slpm (140 Nm³/hr)
- <1 ppb O₂, H₂O, CO₂, CO, N₂, CH₄, NMHC

Palladium Advantages

- Purifies any inlet gas quality
- Only Hydrogen passes through to the pure side
- Every impurity is removed - no exceptions

MonoTorr: Point-of-Use Heated Getter Purifiers



SAES Pure Gas MonoTorr heated getter purifiers are ideal solutions for point-of-use purification where CH₄ or N₂ removal is required. The getter technology allows irreversible chemical absorption of impurities to sub-ppb levels.

Five different sizes are available for flow rates from 1 sccm to 150 slpm.

Gas	Helium / Argon	Nitrogen	Hydrogen
Impurities Removed	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , N ₂ , THC	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , THC	H ₂ O, O ₂ , CO, CO ₂ , N ₂
Flowrates	0 - 100 slpm	0 - 100 slpm	0 - 150 slpm

MegaTorr: Bulk Gas Purifiers

SAES Pure Gas offers an entire line of bulk gas purifiers designed for complete facility-level purification.

Gas	Nitrogen/ Hydrogen	Nitrogen	Hydrogen	Hydrogen	Ammonia	CDA	Helium / Argon	Oxygen	Carbon Dioxide
Model	PS8 / PS7-A	PS9	PS7-H	PS7-PD	PS21	PS22	PS5	PS6	PS31 / PS32 / PS33
Media	Adsorber	Catalyst and Adsorber	Adsorber and Getter	Palladium	Adsorber	Adsorber	Getter	Catalyst and Adsorber	Catalyst and Adsorber
Impurities Removed	H ₂ O, O ₂ , CO, CO ₂ , H ₂	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , CH ₄	H ₂ O, O ₂ , CO, CO ₂ , CH ₄ , N ₂	H ₂ O, O ₂ , CO, CO ₂ , CH ₄ , N ₂ , Inert Gases	H ₂ O, O ₂ , CO ₂ , NMHC	H ₂ O, CO ₂ , Acids, Bases, Organics, Refractory Compounds	H ₂ O, O ₂ , CO, CO ₂ , H ₂ , CH ₄ , N ₂	H ₂ O, CO, CO ₂ , H ₂ , CH ₄	H ₂ O, O ₂ , CO, H ₂ , CH ₄ , Acids, Bases, Organics, Refractory Compounds
Flowrates	0 - 20,000 Nm ³ /hr	0 - 3,000 Nm ³ /hr	0 - 150 Nm ³ /hr	0 - 140 Nm ³ /hr	0 - 50 Nm ³ /hr	0 - 20,000 Nm ³ /hr	0 - 200 Nm ³ /hr	0 - 3,000 Nm ³ /hr	0 - 3,000 Nm ³ /hr



CollectTorr: AMC Sampling Service



The AMC Sampling Service from SAES Pure Gas is an economical way to determine molecular contamination in Nitrogen, CDA or Cleanroom Air.

Detection limits are low Part-Per-Trillion (pptV) for Acids, Bases, Organics, or Refractory Compounds.

Two versions are available:

- Pressurized Gases
- Ambient Air / Cleanroom Air

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