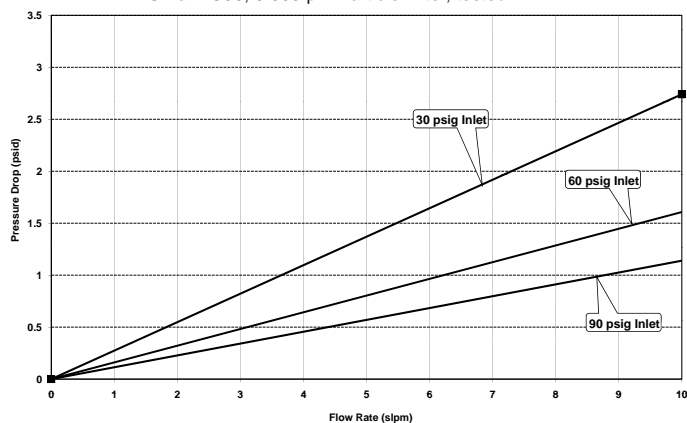


MicroTorr purifiers are the most complete and reliable solution for Point-of-Use (POU) gas purification. Combining model size with a selection of gas-specific purification materials, MicroTorr purifiers can be tailored to many different customer applications, while maintaining impurity removal to Part-Per-Billion (ppbV) levels or better. Optional valves and a 0.003 micron particle filter are available as well as custom subsystem configurations.

Competitive Advantages and Benefits:

- **Reliability.** Uncompromised process consistency and yield improvement.
- **Performance.** State-of-the-art purification technology, low pressure drop, and long lifetimes.
- **Regenerability.** Most MicroTorr media are factory regenerable, minimizing potentially hazardous waste.
- **Quality.** 316L stainless steel, Helium leak checked, pressure tested, and analytical testing to Part-per-Trillion (pptv) levels.
- **Support.** Lifetime estimation and regeneration service available through SAES Pure Gas Sales Network.

Pressure Drop vs. Flow Rate
MC1 & MC50, 0.003 µm Particle Filter, tested in N2



Ordering Information

MC50 - XXX XX

Model

MC50

Media

202, 203, 302, 403,
404, 502, 602, 702,
703, 802, 902, 904,
905, 906

Options

No options
F 0.003µm Particle Filter
V Inlet/Outlet Valves
FV Filter and Valves

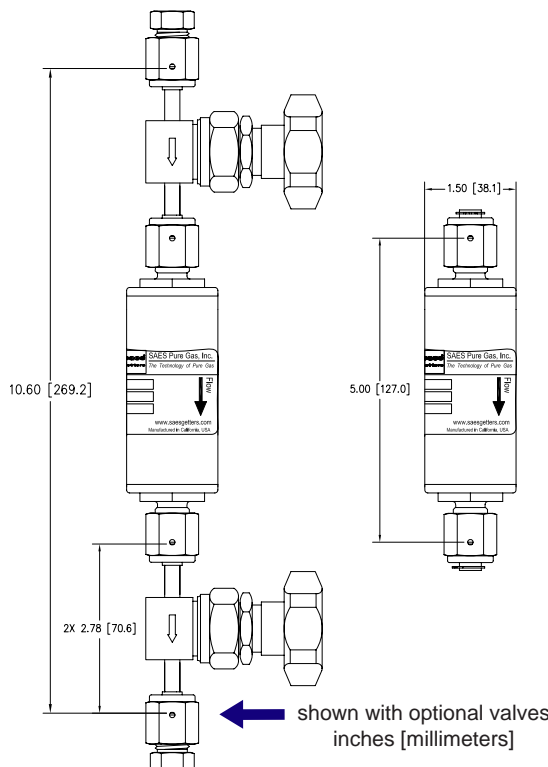
Example: MC50-902F

Model: MC50 Media: 902 Options: 0.003µm Particle Filter



MC50

- **Lifetime**
Consult factory for specific lifetimes
 - **Maximum Flow: 10 slpm†**
 - **Nominal Flow: 1.5 slpm†**
 - **Maximum Pressure: 1000 psig**
- † See reverse for Arsine & Phosphine flowrates



Install Vertically with flow downward in direction of arrow. Consult factory for other mounting options.



Mechanical Specifications

Model	MC50-*F	MC50-*FV
Maximum Flow*	10 slpm†	10 slpm†
Nominal Flow*	1.5 slpm†	1.5 slpm†
Material	Body-316L Stainless Steel	
Filter (Outlet)	Integrated 0.003 micron, metal	
Valves	N/A	1/4" manual
Max Operating Pressure	1000 psig (69 barg) @ 40°C	
Max Temperature Rating	40°C (104°F)	40°C (104°F)
Inlet	1/4" MVCR	1/4" FVCR
Outlet	1/4" MVCR	1/4" FVCR
Length (Face to Face)	5.00"±.03 [127.0mm±0.8]	10.60"±.08 [269.2mm±2.0]
Outside Diameter	1.50" [38.1mm]	1.50" [38.1mm]
Electropolish	Yes	Yes
Leak Rating	1x10 ⁻⁹ atm cc/sec of He	1x10 ⁻⁹ atm cc/sec of He
Weight	0.9 lbs (0.4 kg)	2.9 lbs (1.3 kg)

*The 3 digit number found in the model number equates to the "Media" row in the table below.
 †Flowrates with 502 media: Arsine/Phosphine max= 4.0 slpm, nominal= 1.5 slpm.

Purification and Removal Capabilities

Media	Gases Purified	Impurities Removed	Outlet Performance	Regenerable	Dangerous Goods (DG) Classification
202	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, CO ₂ , N ₂ O, CO, D ₂	H ₂ O	< 1 ppbV	YES	Non-DG
203	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, N ₂ O, CO, D ₂	H ₂ O, CO ₂	< 100 pptV	YES	Non-DG
		Acids, Organics, Refractory Compounds*	< 1 pptV		
		Bases*	< 5 pptV		
302	B ₂ H ₆ , BCl ₃ , BF ₃ , CCl ₄ , 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	H ₂ O	< 1 ppbV	NO	Non-DG
		Metals Removal	< 1 ppbW		
403	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, CO ₂	Acids, Organics, Refractory Compounds*	< 1 pptV	NO	Non-DG
		Bases*	< 5 pptV		
404	Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe, CO ₂ , C ₂ H ₂ , C ₃ H ₆ , C ₂ H ₄ , NH ₃	Organics*	< 1 ppbV	YES	Non-DG
502	PH ₃ , AsH ₃	H ₂ O, O ₂	< 1 ppbV	NO	Non-DG
602	CO	H ₂ O, O ₂ , CO ₂ , Acids, Bases, Organics, Refractories*	< 1 ppbV	NO	DG - UN3089 Class 4.1
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 , H ₂ -SiH ₄ mix, SF ₆	H ₂ O, O ₂ , CO ₂	< 1 ppbV	YES	DG - UN3089 Class 4.1
703	NH ₃	H ₂ O, O ₂ , CO ₂ , NMHCs	< 1 ppbV	YES	DG - UN3089 Class 4.1
802	SiH ₄	H ₂ O, O ₂ , CO, CO ₂ , NMHCs, Sulphur compounds	< 1 ppbV	NO	DG - UN2881 Class 4.2
902	Ar, He, Kr, N ₂ , Ne, Xe	H ₂ O, O ₂ , CO, CO ₂ , H ₂	< 100 pptV	YES	DG - UN2881 Class 4.2
		Acids, Organics, Refractory compounds*	< 1 pptV		
		Bases*	< 5 pptV		
904	H ₂ , H ₂ -Inerts Mix, D ₂	H ₂ O, CO, CO ₂ , O ₂	< 100 pptV	YES	DG - UN2881 Class 4.2
		Acids, Organics, Refractory Compounds*	< 1 pptV		
		Bases*	< 5 pptV		
905	C ₂ F ₆ , C ₂ H ₆ , C ₂ F ₈ , C ₂ 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	< 1 ppbV	YES	DG - UN2881 Class 4.2
906	CDA, O ₂ , N ₂ O	H ₂ O, CO, CO ₂ , NMHCs	< 1 ppbV	YES	Non-DG

*Organic compounds (C>5) measured as Toluene. Acid compounds (SO₂, NO_x, H₂S..) measured as SO₂. Base compounds (NH₃, amines..) measured as NH₃. Silicon/Refractory compounds (HMDSA, HMDSO, TMS) measured as HMDSO

Other Sizes Available

Model Number	MC1	MC50	MC190	MC200	MC400	MC450	MC500	MC700	MC1500	MC2525	MC2550	MC3000	MC4500	MC9000
Maximum Flow (slpm)	5	10	50	50	60	75	100	120	250	300	500	500	1000	1000
Average Flow (slpm)	0.5	1.5	5	5	9	10	12	25	40	80	80	80	200	300