SAES Pure Gas, Inc.
The Technology of Pure Gas
4175 Santa Fe Road, San Luis Obispo, CA 93401
Tel: 1 (805) 541-9299 | Fax: 1 (805) 541-9399

MICRO TORR® Specifications

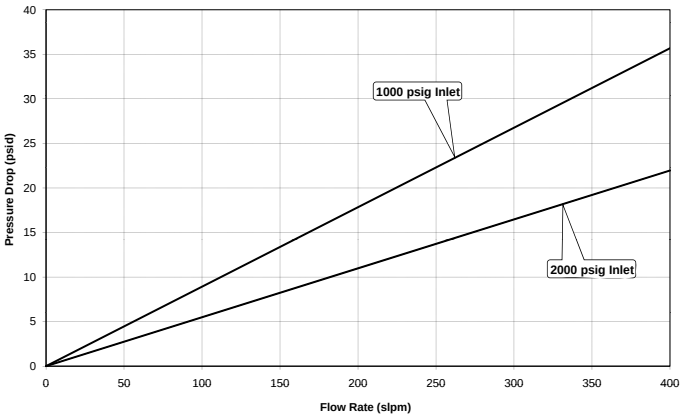
SP70, SP300, SP600

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
SP Series, 0.003 µm Particle Filter, tested in N2



Ordering Information

SPXXX - XXX XX

Model	Media	Options
SP70 SP300 SP600	202, 203, 404, 902, 904, 905, 906	F 0.003µm Particle Filter FV Filter and Valves

Example: SP600-902F
Model: SP600 Media: 902 Options: 0.003µm Particle Filter

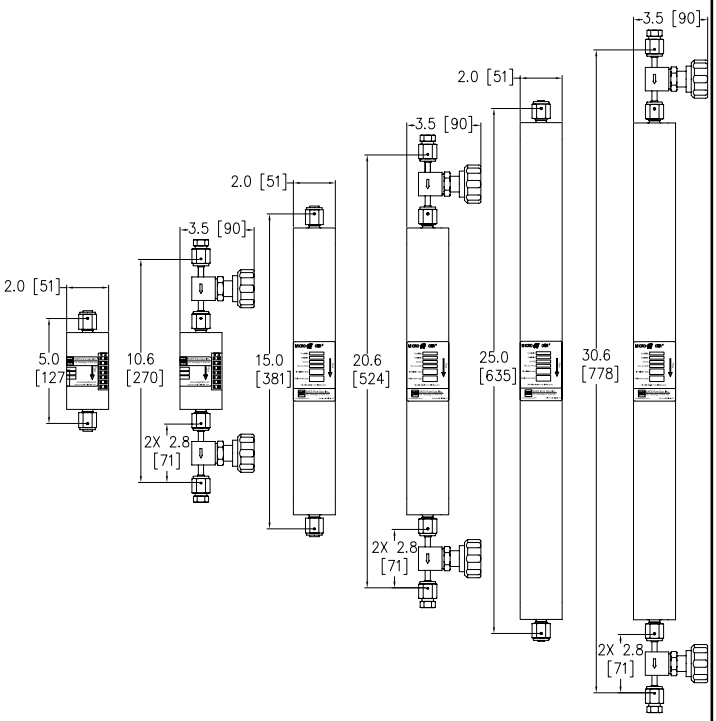
SP70, SP300, SP600

- Lifetime
  Consult factory for specific lifetimes

	SP70	SP300	SP600
Maximum Flow†:	75 slpm	200slpm	400slpm
Nominal Flow:	1.5 slpm	10 slpm	15 slpm

- Maximum Pressure: 3000 psig

†Maximum flowrate at pressure over 2000 psig.
See reverse for more information.



inches [millimeters]

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

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SP70/SP300/SP600

Mechanical Specefications

Model	SP70-*F	SP70-*FV	SP300-*F	SP300-*FV	SP600-*F	SP600-*FV
†Maximum Flow (psig ≤ 2,000)	20 slpm		100 slpm		200 slpm	
†Maximum Flow (psig > 2,000)	40 slpm		200 slpm		400 slpm	
Nominal Flow	1.5 slpm		10 slpm		15 slpm	
Material	Body-316L Stainless Steel		Body-316L Stainless Steel		Body-316L Stainless Steel	
Filter (Outlet)	Integrated - .003 micron metal		Integrated - .003 micron metal		Integrated - .003 micron metal	
Valves	N/A	YES	N/A	YES	N/A	YES
Max Operating Pressure	3000 psig (206.8 barg) @ 40°C		3000 psig (206.8 barg) @ 40°C		3000 psig (206.8 barg) @ 40°C	
Max Temp Rating	40° C (104° F)		40° C (104° F)		40° C (104° F)	
Inlet	1/4" MVCR	1/4" FVCR	1/4" MVCR	1/4" FVCR	1/4" MVCR	1/4" FVCR
Outlet	1/4" MVCR	1/4" FVCR	1/4" MVCR	1/4" FVCR	1/4" MVCR	1/4" FVCR
Length (Face to Face)	5.00"±.05 [127.0mm±1.3]	10.60"±.10 [270.0mm±2.5]	15.00"±.05 [381.0mm±1.3]	20.60"±.10 [524.0mm±2.5]	25.00"±.05 [635.0mm±1.3]	30.60"±.10 [778.0mm±2.5]
Outside Dia (Purifier)	2.00" [50.8mm]	2.00" [50.8mm]	2.00" [50.8mm]	2.00" [50.8mm]	2.00" [50.8mm]	2.00" [50.8mm]
Electropolish	Yes		Yes		Yes	
Leak Rating	1x10-9 atm cc/sec of He		1x10-9 atm cc/sec of He		1x10-9 atm cc/sec of He	
Weight	< 2.3 lbs (< 1.0 kg)	< 4.3 lbs (< 1.9 kg)	6.6 lbs (3.0 kg)	8.6 lbs (3.9 kg)	11.0 lbs (5.0 kg)	13.0 lbs (5.9 kg)

*The 3 digit number found in the model number equates to the “Media” row in the table below.

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_2O, CO, D_2	H_2O	< 1 ppbV	YES	Non-DG
203	Ar, CDA, H_2, He, Kr, N_2, Ne, O_2, Xe, N_2O, CO, D_2	H_2O, CO_2,	< 100 pptV	YES	Non-DG
		Acids, Organics, Refractory Compounds*	< 1 pptV		
		Bases*	< 5 pptV		
404	Ar, CDA, H_2, He, Kr, N_2, Ne, O_2, Xe, CO_2, C_2H_2, C_3H_6, C_2H_4, NH_3	Organics*	< 1 ppbV	YES	Non-DG
902	Ar, He, Kr, N_2, Ne, Xe	H_2O, 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_2O, O_2, CO, CO_2	< 100 pptV	YES	DG - UN2881 Class 4.2
		Acids, Organics, Refractory compounds*	< 1 pptV		
		Bases*	< 5 pptV		
905	C_2F_6, C_2H_6, C_3F_8, C_3H_8, $C_2F_4H_2$, C_4F_8, C_4H_{10}, CCl_4, CF_4, CH_4, CHF_3, SF_6	H_2O, O_2, CO, CO_2, H_2 NMHCs	< 1 ppbV	YES	DG - UN2881 Class 4.2
906	CDA, O_2, N_2O	H_2O, CO, CO_2, NMHCs	< 1 ppbV	YES	Non-DG

*Organic compounds (C>5) measured as Toluene. Acid compounds (SO2, NOx, 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