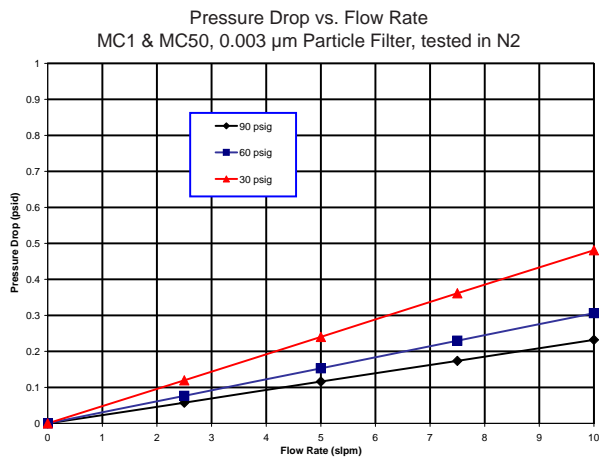


MicroTorr purifiers are the most complete and reliable solution for Point-of-Use (POU) gas purification. Combining model size with a selection of gas-specific purification materials, MicroTorr purifiers can be tailored to many different customer applications, while maintaining impurity removal to Part-Per-Billion (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.



Ordering Information

MC50 - XXX XX

Model

MC50

Media

202, 203, 206, 302,
403, 404, 502, 702,
902, 903, 904, 905,
906

Options

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

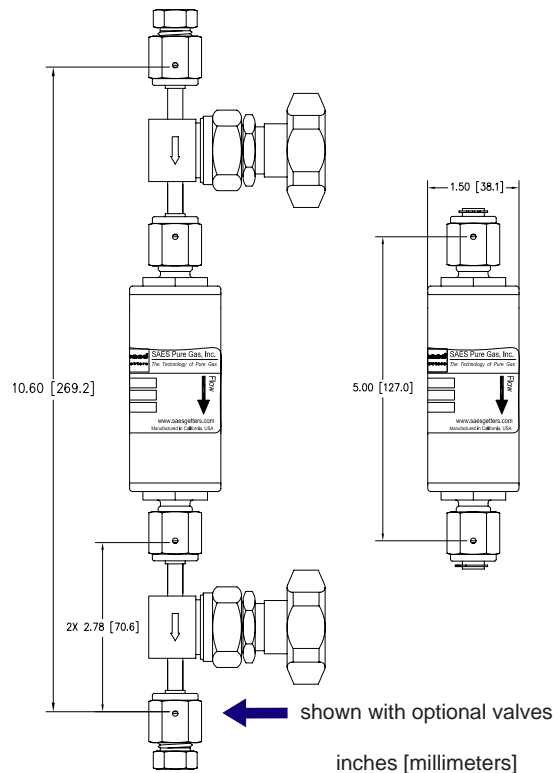
Example: MC50-902F

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





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 | H ₂ O | < 1 ppbV | YES | Non-DG |
| 203 | Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, O ₂ , Xe | H ₂ O, CO ₂ , Acids, Bases, Organics, Refractory Compounds* | < 100 pptV < 10 pptV | YES | Non-DG |
| 206 | CO | H ₂ O | < 1 ppbV | YES | Non-DG |
| 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, NO, SiCl ₄ , SiF ₄ , SiH ₂ Cl ₂ , SiHCl ₃ , SO ₂ | H ₂ O | < 1 ppbV | NO | Non-DG |
| 403 | Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, Xe | Acids, Bases, Organics, Refractory Compounds* | < 1 ppbV | NO | Non-DG |
| 404 | CO ₂ , C ₂ H ₂ , Ar, CDA, H ₂ , He, Kr, N ₂ , Ne, Xe | NMHC | < 1 ppbV | YES | Non-DG |
| 502 | PH ₃ , AsH ₃ | H ₂ O, O ₂ | < 1 ppbV | NO | Non-DG |
| 702 | NH ₃ , C ₂ H ₇ N, C ₂ H ₈ N ₂ | H ₂ O, O ₂ , CO ₂ | < 1 ppbV | YES | DG - UN3089 Class 4.1 |
| 902 | Ar, He, Kr, N ₂ , Ne, Xe | H ₂ O, O ₂ , CO, CO ₂ , H ₂ , NMHC | < 1 ppbV | YES | DG - UN2881 Class 4.2 |
| 903 | Ar, He, Kr, N ₂ , Ne, Xe | H ₂ O, O ₂ , CO, CO ₂ , H ₂ , Acids, Bases, Organics, Refractory Compounds* | < 100 pptV < 10 pptV | YES | DG - UN2881 Class 4.2 |
| 904 | H ₂ | H ₂ O, O ₂ , CO, CO ₂ , NMHC | < 1 ppbV | YES | DG - UN2881 Class 4.2 |
| 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 ₂ H ₁₀ , CCl ₄ , CF ₄ , CH ₄ , CHF ₃ , SF ₆ | H ₂ O, O ₂ , CO, CO ₂ , H ₂ , NMHC | < 1 ppbV | YES | DG - UN2881 Class 4.2 |
| 906 | CDA, O ₂ | H ₂ O, CO, CO ₂ , NMHC | < 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 | MC1500 | MC2525 | MC2550 | MC3000 | MC4500 | MC9000 |
|---------------------|-----|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Maximum Flow (slpm) | 5 | 10 | 50 | 50 | 60 | 75 | 100 | 250 | 300 | 500 | 500 | 1000 | 1000 |
| Average Flow (slpm) | 0.5 | 1.5 | 5 | 5 | 9 | 10 | 12 | 40 | 80 | 80 | 80 | 200 | 300 |