

# SASS / SuperSASS

## Particulate Speciation Samplers

The **SASS** and **SuperSASS** Speciation Samplers from Met One Instruments Powered by Acoem are designed to comply with and exceed EPA Speciation requirements. Two models provide a choice for compliance monitoring: **SASS**, a 5 channel sampling system; and **SuperSASS**, an 8 channel, multiple event sampling system. The **SASS** conforms to original EPA requirements and **SuperSASS** adds benefits suggested by state and local authorities. Both models use concepts pioneered by Met One Instruments, such as the contamination-free canister, solar radiation shield, and modular design. **SASS** and **SuperSASS** not only comply to EPA specifications, they exceed the specifications; as proven in EPA and California Air Resources Board (CARB) field studies.

### SASS Features:

- Portable integrated sampling system.
- Inlet for  $PM_{2.5}$  at 6.7 liter/minute sample rate.
- Solar shield maintains cassettes to  $< 5^{\circ}C$  over ambient temperature.
- Contamination-proof canister = data integrity.
- Multi-cell denuder and multiple filter medias.

### SuperSASS Features:

- All features of the SASS, plus:
- Up to 8 channel operation.
- One- to eight-day sampling, sequential.
- Automatic volumetric flow controllers.
- Each channel operable independently.
- Advanced field audit screens.



### Additional Configurations:

- **CARB/IMPROVE SASS**
  - US EPA CSN and IMPROVE Sampling.
- **I-SASS**
  - Sample  $PM_{10}$ ,  $PM_{2.5}$ , and  $PM_{1}$ .
- **Pesticides Sampler SASS (P-SASS)**
  - Sample on flexible range of filter media.
- **Multi-Media Toxics Sampler SASS (T-SASS)**
  - Formaldehyde, aldehydes, and ketones.

## Specifications

<b>Analytes:</b>	PM2.5: Mass, trace metals, organic carbon, elemental carbon, sulfate, nitrate, other ions, and elements.
<b>Number of Canisters:</b>	SASS = Five (5); SuperSASS = Eight (8) maximum.
<b>Sample Flow Rate:</b>	6.7 LPM, active flow-controlled channels (SASS and SuperSASS). 7 LPM per canister, critical orifice channels (SASS only).
<b>Flow Accuracy:</b>	+0.1 to -0.2 LPM.
<b>Inlet:</b>	Sharp Cut Cyclone (SCC), D50 2.5 µm AED, detachable from canister.
<b>Denuders:</b>	Multi-cell, magnesium oxide, sodium carbonate, citric.
<b>Filter Type:</b>	47mm PTFE disc filters standard. Other filter material types available.
<b>Filter Holder:</b>	Accommodates standard EPA-pattern white Delrin filter cassettes.
<b>Filters per Canister:</b>	One or two in series.
<b>Plenum:</b>	None.
<b>Transport Lines:</b>	None.
<b>Logged Parameters:</b>	Ambient Temperature, °C (-30 to 50). Filter Temperature, °C (-30 to 50). Sample start date and time. Sample stop date and time. Status of sampler, Flags. Volumetric flow rates (LPM). Volume (m <sup>3</sup> /hr).
<b>Logging Interval:</b>	5 minute averaging.
<b>Sample Events:</b>	24-hour samples standard. Programmable start date/time and duration.
<b>Support Stand:</b>	Tripod with platform-mounting feet and mast.
<b>Solar Radiation Shield:</b>	20" Diameter x 12" Height; naturally aspirated.
<b>Control Box:</b>	Weatherproof enclosure: 10" W (25.4 cm) x 11.11" H (28.2 cm) x 6.25" D (15.6 cm).
<b>Input Voltage:</b>	120VAC (optional 220VAC upon request).
<b>Max. Power Consumption:</b>	120VAC, 60 Hz, 3.85A; or 220VAC, 50 Hz, 3.15A. Vacuum diaphragm pump.
<b>Power Supply:</b>	100VAC to 240VAC, 12V, 5.8A, 70W; AC/DC Switching.
<b>Data Collection:</b>	USB data port; Ethernet.
<b>Memory Capacity:</b>	32 Gigabytes
<b>User Interface:</b>	4.75" (11.2 cm) x 6.75" (17.1 cm) color graphic touchscreen.
<b>Ambient Temperature:</b>	-30 to +50°C Temperature sensor in naturally aspirated radiation shield.
<b>Filter Temperature:</b>	-30 to +50°C Temperature sensor at inlet of canister 1 (SASS). -30 to +50°C Temperature sensor at inlet of each canister (SuperSASS).
<b>Deployed Dimensions:</b>	Width: 14.4" (37 cm), Height: 77" (2.0 m), Depth: 14" (36 cm).
<b>Footprint Dimensions:</b>	Width: 23.5" (59.69 cm), Depth: 24.5" (62.23 cm).
<b>Weight:</b>	Sampler: 45 lb (20.4 kg) (without inlet head), Tripod: 10.5 lb (4.8 kg)



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