

SASS 4100 Two-Stage Aerosol Collector

COLLECT: Airborne Pathogens, Virus-Sized Particulates, Bacteria, Spores.



SASS 4100 Two-Stage Aerosol Collector

The SASS 4100 is a highly efficient, two-stage filter-based aerosol collection device. Many applications require the collection and analysis of aerosol particles, ranging from counter-terrorism to epidemiology, medicine, and agriculture. These applications typically involve the monitoring or collection of airborne plant, animal or human pathogens. But aerosol sample analysis is frequently plagued by three problems:

- The targeted pathogen is present at a very low concentration;
- The collection process involves too small an air sample to be statistically valid; and/or
- Available bioassay methods are not sensitive enough.

The SASS 4100 processes over 3500 liters/minute of ambient air that is continuously sampled as a primary air stream. Particulates in this air stream are transferred to a much smaller secondary air stream using centrifugal and virtual impaction principles. Particles are then routed into the secondary flow by forcing primary circuit air to circulate through specially shaped channels where centrifugal force and particle momentum isolate and concentrate the particles. The secondary flow can reach aerosol concentrations that are 4X to 15X higher than in the incoming air. The two-stage sampler amplifies and slows down the captured ambient aerosol particles prior to their collection. This aerosol concentrate is collected by directing the secondary air through an electret bulk filter media; devoid of particles, the secondary air is re-introduced into the primary air flow.

For more technical information visit www.resrchintl.com.

FEATURES

- No moving parts, other than the primary fan
- Minimal maintenance
- Wide operating temperature
- Clog resistant
- Sampled air volume maximized to improve collection statistics
- Organism viability is maximized by using low air flow velocities and a bulk electret filter media

APPLICATION AREAS

- Environmental
- Air quality
- Agriculture
- Public Health
- Medical facilities
- Homeland security
- Military
- Power plants



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Specifications for SASS 4100 Two-Stage Aerosol Collector

Characteristic	Description
Primary airflow	3,600+ liters/min is sampled uniformly from around the concentrator's circumference.
Aerosol collection media	Fibrous electret bulk filter, RI part number 7100-134-230.
Secondary airflow	265 LPM with the electret filter in place.
Air velocity at filter face	3 m/sec. (43.4 mm diameter filter active area).
Filter mount	Hat-shaped fixture that locks onto the device's baseplate
Overall size	38 cm high x 25.4 cm diameter max.
Weight	6.32 kg (13.9 lbs.)
Operating temperature range	-40°C to 60°C
Ingress protection rating	45
Operating life	ECM fan rotor is only moving part. A bearing life of 30,000 hours is expected.
Power consumption	90 watts for ECM drive motor. 100 to 230 VAC lump-in cord AD/DC converter supplied. If operated from DC, please specify DC source voltage of 12, 24 or 28 VDC.
Sound level	72 db-A @ 1 meter radius on inlet equatorial plane.
Mounting	Quick-detach tripod legs; 0.53m to 1.46m adjustable height.
Accessories	<ul style="list-style-type: none"> • Hard shell carrying case. • Electret sample filter assembly

Research International reserves the right to change specifications without prior notice.

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