

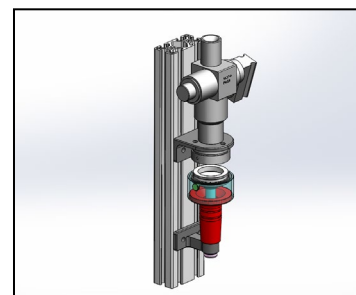
Idonium MPS-2

PM_{2.5} Reference Air Sampler

Idonium™ MPS-2 next generation modular air particulate sampler.

A masterpiece of efficient design, this is the least complex and lowest cost 16.7 L/min PM sampler that meets all U.S. EPA PM_{2.5} Reference Method specifications. It is also absolutely perfect for remote deployment, developing markets, emergencies, and air quality audit sampling applications.

- Our patent-pending internal linear 47mm filter cassette clamp assembly makes this the smallest, lightest, most portable PM sampler available.
- Carefully designed for very low maintenance and simple deployment. Fully modular design for fast, easy repairs.
- Internal cyclone station accommodates 16.7 L/min PM_{2.5} cyclones or WINS Impactors from Alaric or other manufacturers. Most cyclones can be serviced without even being removed from the sampler.
- Configurable for PM₁₀, PM_{2.5}, PM₁, or TSP sampling. The hardware configuration can be recorded in the data files for proper correlation.
- Extremely low vacuum leak potential. The design contains no plastic tubing or hose fittings. Simple leak testing procedure.
- 24V DC system with very low power consumption. Optional battery or solar operation.
- Quiet 50,000 hour rated vacuum pump. The external pump module generates no heat inside the main filter enclosure.
- Mounts to a standard speaker tripod, construction tripod, benchtop, or our optional bolt-down stand.
- Compatible with our standard EPA-pattern PM₁₀ inlet, or PM₁₀ inlets from other manufacturers.



Idonium MPS-2 Sampler Specifications:

Instrument Class:	Single-event gravimetric PM _{2.5} Reference Method 47mm filter sampler.
Design Specifications:	US PM _{2.5} Reference Method 40 CFR Part 50 Appendix L. (EPA designations pending)
Filter Cassette Type:	Uses standard EPA-spec 47mm filter cassettes. PTFE or other sample filters are available.
Airflow Rate:	16.7 L/min (1m ³ /hr) actual (volumetric) airflow rate. Optional 5 L/min operation mode.
Sample Duration:	23 or 24 hour sample periods typical. User programmable for shorter durations.
Enclosure Dimensions:	9"W x 18"H x 10"D inches (23x46x25 cm) main enclosure only.
Weight:	16 lbs (7.2 kg) typical with PM _{2.5} cyclone and PM ₁₀ inlet installed.
Total Installed Height:	2.0 meters from ground to the top of the PM ₁₀ inlet typical.
Enclosure Type:	Solar shielded enclosure with active fan aspiration. Sealed electronics sub-enclosure.
Power Supply:	20V to 24V DC. AC adapter included. Battery or solar power optional.
Power Consumption:	0.8A (19W) typical with pump running. 100mA typical standby.
Primary Air Inlet:	EPA pattern PM ₁₀ inlet is required (sold separately). Optional TSP inlet available.
PM_{2.5} Configuration:	Internal PM _{2.5} WINS Impactor, BGI VSCC-A®, Alaric AE2.5V, or other optional cyclones.
PM₁₀ Configuration:	Optional pass-through tube in the internal cyclone position for PM ₁₀ or TSP operation.
Sensors Included:	Airflow, ambient temperature, barometric pressure, filter temperature, filter pressure.
Vacuum Pump:	24V DC brushless external pump module. 50,000 hour (2 year) minimum rated lifetime.
Flow Data:	Min/Max/Avg flow, temperature, and pressure. Total flow volume and C _v . 5-min flow data.
Sample Data:	Sample start/stop time and duration. Alarm time and type. Inlet configuration. Location.
Data Collection:	.csv files downloaded to USB flash drive, or through DB-9 RS-232 port.
User Interface:	Graphic color display with sealed tactile keypad.



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Idonium MPS-2 Accessories and Options:

The basic MPS-2 air sampler kit does not come with an internal PM_{2.5} cyclone, because of the many options available. Cyclones can be ordered as separate line items as listed below. The sampler is also compatible with Mesa Labs BGI VSCC[®] designated reference method cyclones, and equivalent 16.7 L/min cyclones from other manufacturers. These cyclones should be obtained directly from the manufacturer.

The MPS-2 sampler includes a straight pass-through tube, which must be installed in the internal cyclone position when sampling PM₁₀ or TSP. The external EPA pattern PM₁₀ primary air inlet is listed for sale as a separate line item. The sampler can be used with PM₁₀ inlets from other manufacturers.

The sampler comes with leak testing tools, and one 47mm filter cassette. Mounting tripods or stands can be ordered separately.

Model	Description	Included
PM10L-1	PM ₁₀ Inlet, Louvered EPA Pattern, 16.7 L/min, with shatterproof acrylic water collector	No
PM10L-2	PM ₁₀ Inlet, Louvered EPA Pattern, 16.7 L/min, with glass jar type water collector	No
TSPL-1	TSP Inlet, With Louvered Plate Stack Assembly, 1.25 Inch Socket, Without Water Collector	No
TSPL-2	TSP Inlet, With Louvered Plate Stack Assembly, 1.25 Inch Socket, With Water Collector	No
10285	TSP Inlet, Basic Low-Cost Type, 1.25 Inch Socket.	No
WINS	PM _{2.5} WINS Impactor Inlet, EPA Reference Method, 16.7 L/min	No
AE2.5V	Alaric PM _{2.5} Cyclone Inlet, 16.7 L/min. Matches WINS and <i>Very Sharp Cut Cyclone</i> Cut Point	No
AE2.5S	PM _{2.5} Sharp-Cut Cyclone Inlet, 16.7 L/min, Classic Pattern	No
AE1S	Alaric PM ₁ Sharp-Cut Cyclone Inlet, 16.7 L/min	No
VSCC-A	Mesa Labs BGI PM _{2.5} VSCC [®] Cyclone Inlet, 16.7 L/min. (Obtain directly from Mesa Labs)	No
10106	6.5 Inch Pass-Through Tube, Replaces Internal Cyclone or WINS for PM ₁₀ or TSP Sampling	Yes
FC47	EPA Spec 47mm Filter Cassette, With Transport Can	No
FC47NC	EPA Spec 47mm Filter Cassette, Without Transport Can	One
LTC	Solid Leak Test Cassette Tool Set, 2-Piece Open and Closed Set	No
10050	Air Sampler Leak Test Valve & Flow Meter Adapter, 1.25 Inch Socket, EPA Spec	Yes
10279	Leak Test Bulb Assembly	Yes
10230	Tripod, Basic Speaker Type	No
10278	Tripod, Heavy Duty Survey Type	No
10277	Mounting Pedestal, Adjustable Height Bolt-Down Type	No
10276	Mounting Bracket, Surface Mount Benchtop Type	No