Product Specifications

Single-event particulate matter sampler

Thermo Scientific Partisol 2000-D Dichotomous Air Sampler

Key Features

- U.S. EPA PM-Coarse and PM-2.5 Equivalent Sampler
- Field-proven Partisol Air Sampler platform
- Low maintenance requirements
- Activol flow control
- Modern microprocessor based system
- Uses Partisol-FRM style 47 mm filter cassettes

**Candidate for U.S. EPA PM-10 Equivalent Sampler*

The Thermo Scientific Partisol 2000-D Dichotomous Air Sampler is a single-event particulate matter (PM) sampler that holds two filters for the simultaneous collection of the fine and coarse particles contained in PM-10.

Downstream from the Partisol® 2000-D PM-10 inlet, the unit contains a traditional virtual impactor for separating the coarse particles (2.5 to 10 micron diameter) from the majority of the fine particles (less than 2.5 micron diameter).

Two independent mass flow controllers automatically maintain a constant 16.7 l/min volumetric flow rate through the PM-10 inlet, with a 1.7 l/min volumetric flow rate directed through the coarse particle sample filter and a 15 l/min flow through the fine particle sample filter.

High-quality, molded Partisol-FRM style filter cassettes house the two 47 mm filters used to collect the coarse and fine PM. Both sample filter cassettes are installed in a convenient filter cassette carrier and filter exchange assembly that allows for fast and simple collection filter removal.

The Partisol 2000-D Air Sampler contains an onboard microprocessor system that provides the sampler's operating program and a large internal data storage buffer. A keypad and multi-line display screen provide the interface to the menu-driven software. The Partisol "Dichot" can be programmed to sample for any desired time period with user-defined start and end date/time input. The sampler provides run-time information such as total sample volume and performance diagnostics.

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To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific air quality products.

Thermo Scientific Partisol 2000-D Dichotomous Air Sampler

Sampling Program	The user specifies the starting and ending date and time of sample collection.
	The software stores user default settings to simplify the definition of sampling programs.
Flow Control and Reporting	Air flow through the sampler is provided by a proven low-maintenance vacuum pump.
	Activol flow control system uses mass flow sensors and the measured ambient temperature and pressure to maintain constant volumetric flow rates. System flow rate is 16.7 l/min (1 m^3/h).
Temperature/Pressure Measurements and Control	Measured continuously by an externally-mounted temperature sensor, housed in a solar radiation shield.
	Collection filter temperature is measured continuously within one cm of the center of the 47 mm filter.
	Measured continuously by the built-in sampler.
	The filter compartment is ventilated continuously to maintain filter temperature within 5 °C of the ambient temperature.
Interval Data Storage	One record of interval data is stored every five minutes
	Includes the time and date, five-minute averages of the ambient and filter temperature, ambient pressure, and sample flow rates.
	Interval data recorded continually, even when the unit is not sampling.
	Records may be viewed on the display screen or downloaded directly into a PC using the RS-232 connector.
	The device has a capacity of 12 days of interval data.
Filter Data Storage	One record of filter data is stored for each set of filters exposed in the Partisol Dichotomous Sampler.
	Each record includes a large amount of filter-related information, and exceeds U.S. EPA requirements.
	This includes the filter-based minimums, averages, and maximums
	for temperatures and pressure. Flows are recorded as average flow rates, total volumes and the flows' percentage coefficient of variation. It also includes the largest temperature difference (with time and date stamp) between the ambient and filter temperatures, status condition(s), filter ID information, and a listing of up to 10 power interruptions. The device has a capacity of 25 records of filter data.
Data Output	Display screen, analog output (0-5 Vdc) of status and flow, RS232.
Sample Filter	47 mm diameter, Partisol-FRM style filter cassette
Temperature	-22° F to +122° F (-30° C to 50° C)
Dimensions and Weight	16" (41cm) W x 24" (61cm) H x 13" (33cm) D, inlet system adds 31" to height; 70 lb (32 kg) without inlet
Stand	42" (108cm) W x 32" (82cm) H x 18" (46cm) D
Power Requirements	.2 A @ 120 VAC, 1.1 A @ 240 VAC
Safety and Electrical Designations	CE: 89/336/EEC - Electromagnetic Compatibility (EMC Directive).
	EN 61326:1997 + A1:1998 + A2:2001. 73/23/EEC- Low Voltage Directive (LVD),
	EN 61010-1:2001, UL and CSA equivalent approval.
Approvals and Certifications	U.S. EPA PM-2.5 Equivalent sampler: EQPS-0509-177
	U.S. EPA PM-Coarse Equivalent sampler: EQPS-0509-178
	Candidate for U.S. EPA PM-10 Equivalent sampler

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