

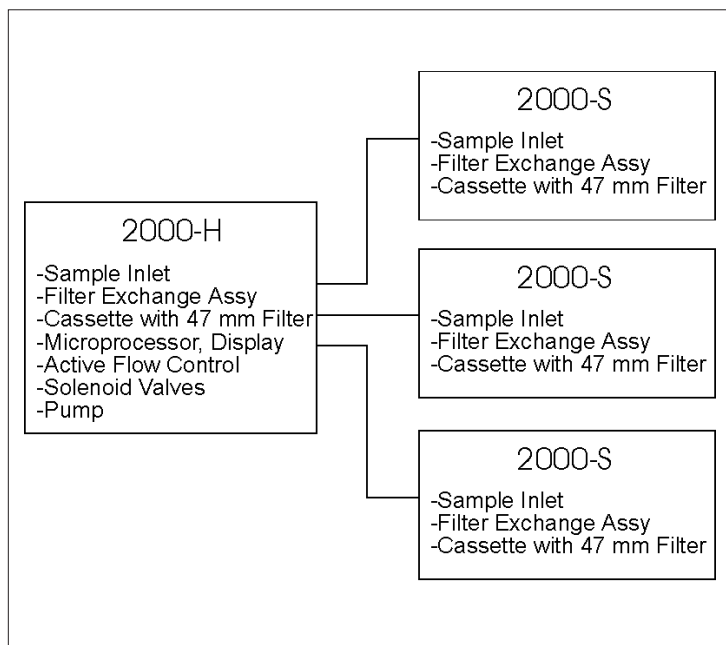
FEATURES SHEET

PARTISOL[®] MODEL 2000 AIR SAMPLER

The Partisol Model 2000 Air Sampler is designed to provide a flexible, cost-effective means of sampling particulate matter on a filter using a PM-10, PM-2.5, PM-1 or TSP inlet. The device has set the standard for high-quality low volume particulate matter sampling. It contains the following features:

- U.S. EPA reference method for PM-10 sampling (RFPS-0694-098), and has demonstrated equivalency with the European PM-10 Norm EN12341 in a report published by the TÜV-Essen.
- Uses standard 47 mm filters, including quartz fiber, Teflon[®]-coated glass fiber and Teflon membrane. These are housed in R&P's molded FRM-style filter cassettes, which are manufactured to high quality standards.
- Filter exchange made easy by quick-exchange mechanism and filter cassettes.
- ActiVol[™] flow control system maintains a constant volumetric flow at the rate specified by the user (5 to 18 l/min) by incorporating a mass flow sensor, ambient temperature sensor and ambient pressure sensor.
- STARNET[™] Hub and Satellite configuration allows up to three low-cost satellite units to be controlled by the hub sampler.
- Selective sampling among the hub and satellite units by wind speed and/or wind direction. An analog input or RS-232 interface can be used to direct the operation of the STARNET system from another device.
- Flow through the hub and satellite units reported in volumetric or standard (mass) terms. The conversion from volumetric to standard units is performed automatically by measuring the ambient temperature and pressure continuously.
- Microprocessor allows for easy setup of sampling program and storage of operating and status data.
- Internal data storage capability retains important operating and status information from the current and previous measurement periods.
- Built-in support for flow audits/calibrations using the Streamline[™] FTS Flow Transfer Standard.

- RS-232 interface for efficient data transfer to a personal computer and for controlling instrument operation. Half-hour summary data of station usage can also be transmitted through this port.
- Easily transportable through compact form factor and lightweight design.
- Low noise—also appropriate for indoor monitoring.
- Low maintenance requirements through the use of durable components and a long-life vacuum pump.
- Only one flow audit/calibration required for four sampling points.
- Supported by Thermo's PC-based RPCOMM communications program for Windows.



The above specifications are subject to change without notice. Partisol is a registered trademark of Thermo Electron Corporation. Starnet and ActiVol are trademarks of Thermo. Streamline is a trademark of Chinook Engineering LLC. U.S. and international patents pending.



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Operating Modes

The Partisol Sampler contains a number of operating modes to match the monitoring needs of the user.

Basic In this mode each collection filter is exposed for one 24-hour period, from midnight to midnight. The user may select a 6-day timing interval to sample every six days without making any keypad entries. Other timing intervals are available from every 2 to 30 days.

Manual In this mode the user can specify which flow channel (hub or one of the satellites) is currently active by pressing function keys in the hub unit.

Time The user can specify for each sampling station (hub or satellite) up to two time intervals each day (for example 9:00 to 12:00 and 18:00 to 22:00) during which a sample is to be collected. A date range is also entered, so that this type of sampling can be performed on either a single day or on a desired number of consecutive days.

In addition, this programming mode makes it possible to perform comparisons between two or more size-selective inlets. When the user sets up the sampler for "time sequenced" operation, the sample stream alternates between two or more sampling stations. For example, the system can be programmed so that the sample stream flows alternately for five minutes through a hub unit equipped with a PM-10 inlet and a satellite equipped with a PM-2.5 inlet.

Meteorology In this mode the user can define under which wind speed and wind direction conditions each sampling station is activated during a selected range of days. A wind vane/anemometer can be purchased from Thermo that connects directly through a special cable to the analog input connector in the back of the hub unit.

Analog Input The Model 2000 sampler's analog input capability allows for remote control through an analog signal generated by an external device such as a data logger or specially-equipped personal computer. By sending the appropriate voltage level to the Partisol Sampler, the external device controls which sampling station is currently active.

Serial Input Using the sampler's two-way RS-232 communication capability, the user can control which sampling station is currently active from a remote device by changing the value of a control variable.