



Innovative Technology for Earth and Space

1450 South Rolling Rd
Baltimore, MD 21227, USA
Phones: (1) 443-543 5016
(1) 410-908 0836

sales@airphoton.com
www.airphoton.com

AirPhoton Automated Filter Sampling Station



Control Box SS4e:
Dimensions: 17" x 12.5" x 9"
Weight: 5.17 kg
Power: < 30W

The AirPhoton Automated Filter Sampling Station is a fully programmable system that collects particulate matter on filters for subsequent analysis. Consisting of a Inlet/Filter unit and a Control Box, the station is designed for compatibility with the AirPhoton 8-slot filter cartridge model FC10. The programmable capability allows flexibility when designing sampling cycles, moving collection from filter slot to filter slot or turning collection on and off at specified times. A total of 8-slots are available before the filter cartridge must be changed. Filter cartridges are portable and can be prepared in the lab and mailed to the sampling station site.

The Inlet/Filter unit employs a PM10 inlet designed to run at up to 5 liters per minute in samples in several filter substrates. The flow rate can be adjusted by a manual valve in the front panel of the instrument. The option exists to separate PM2.5 and coarse mode particulates ($2.5 < d < 10\mu\text{m}$) using Nuclepore® filter separation. Other inlet combinations with PM10, PM4, PM2.5 and PM1 are also available using impactors and cyclones.

The Control Box offers 4 analog inputs for external devices and 1 digital port for communication with other AirPhoton devices, such as the 3-wavelength nephelometer. Filter measurements and forward/back scattering of the particles can be automatically linked in the same data base. Data is stored in removable memory cards, and automatically backed-up internally.

The Inlet/Filter unit and the Control Box are both enclosed in environmentally isolated cases, ready for outdoor deployment in rugged conditions. ***Power input options include: 110/220 VAC 50/60Hz and nominal 12VDC. The design is also compatible with power supplied by solar panels and batteries.***



Multiple Inlet Options



Inlet/Filter unit SS5i:

Box: 12.5" x 15" x 9"

Single or double external inlets

Flow rate: 5lpm

Options: PM10, PM4, PM2.5, PM1

Cyclone available for sharper cutoff sizes.

Second stage optional through Nuclepore® filter

Inlet/Filter unit SS4i:

Box: 14.5" x 15" x 9"

Multiple Internal Inlet

Flow rate: 4 lpm

Cut off size: PM10

Second stage optional

through Nuclepore® filter

AirPhoton 8-slot filter cartridge model FC10



Up to 8 sampling slots

Allows for 2 stages (fine and coarse)

Dimensions: 3" x 6" x 1.25"

Filter diameter: 1"

Weight: ~ 0.6 kg

The AirPhoton 8-slot 1" diameter filter cartridge is a unique design that holds and protects 8 particle sampling filters. This design minimizes the handling of the filters in the field and reduces the frequency of site visits by technicians. Used in conjunction with the AirPhoton Automated Filter Sampling Station, the cartridge can be deployed through 7 sampling cycles and a blank filter (8 sampling cycles are possible upon request) before exchange with a fresh cartridge is necessary. Each of the 8 slots can hold either 1 filter for straightforward measurements of particles of one size, or 2 sequential filters of

different pore sizes for separation of particles by size. Filter cartridges can be shipped easily to sampling sites and for analysis after use.