



## PQ200 PM<sub>2.5</sub> & PM<sub>10</sub> FRM Sampling System



### Applications:

EPA Reference Method for PM<sub>2.5</sub> sampling (Designation No. RFPS-0498-116)  
EPA Reference Method for PM<sub>10</sub> sampling (Designation No. RFPS-1298-125)  
Configurable for PM<sub>1</sub> and Total Suspended Particulates (TSP)  
Approved by the EPA for Use as a Portable Audit Sampler

### Features:

Advanced Flow Control System  
User Friendly Operator Interface  
Data Transfer & Reporting Software  
Interchangeable Components to Suit Application Requirements  
Weatherproof Enclosure  
24 Hour Sampling on Internal Battery

The BGI PQ200 has been specifically designed to meet or exceed the operational requirements of a Reference Method sampling device under 40 CFR Part 50, Appendix L ("Reference Method for the Determination of Fine Particulate Matter as PM<sub>2.5</sub> in the Atmosphere").

The standard PQ200 consists of a PM<sub>10</sub> sample inlet, WINS PM<sub>2.5</sub> impactor, microprocessor controlled sampler, data acquisition module, weatherproof enclosure, and support tripod. The WINS can be easily replaced by an EPA approved sharp cut cyclone (SCC), or completely removed for PM<sub>10</sub> sampling requirements. The internal battery provides the ability of sampling in areas where no line power is available. This power supply may be augmented by external batteries, a solar panel or by an AC adapter.

Particulate matter is collected on to a 47mm Teflon filter, at a volumetric sample rate of 16.7Lpm. Ambient temperature and barometric pressure measurements are made at actual sample conditions. The PQ200 microprocessor and volumetric control system are integrated to maintain a precise sampling flowrate.

Temperatures, barometric pressure, volumetric flow values and instrument status are recorded by the on-board data-logger every five minutes. An RS232 port provides downloading of information plus remote data access. During the data transfer, relevant data such as station number, job code and operator name may be entered.

**Filter Cassettes** - The PQ200 sampling system accommodates two types of FRM sampling cassettes; the standard cassette, which contains a single filter for PM sampling, and a dual cassette supporting two filters, as required by some speciation sampling procedures. Both sampling cassettes are suitable for FRM sampling applications. For leak test requirements, a special cassette with an impermeable membrane and carrier are available.

**Calibration** - An optional Delta-Cal kit has been specifically designed for FRM sampling systems. This audit device provides NIST traceable indication of volumetric flow rate, barometric pressure, ambient temperature and filter temperature, all from one instrument.

**Data Collection** - The data from the PQ200 may be downloaded to any PC though an RS232 communication port. PQ200 Software, included with each sampler, provides a simple means of calculating and reporting values. After filter analysis, the downloaded information may be re-accessed and the program will automatically calculate the concentration to EPA standard conditions. The optional hand-held Datatrans communicator eliminates the need to carry a notebook computer to a sampling site. Datatrans will collect information from up to 20 PQ200 samplers. Upon returning to the office or lab, the data may be downloaded into a computer running the PQ200 software.

**Options & Accessories** - A variety of options are available to enhance the performance of the PQ200 sampling system. These include a solar panel to eliminate a power source and recharging, AC power adapters, several sampling inlet assemblies, external batteries, a dust excluder to minimize deposition on the external surfaces of the filter cassette, and an annular denuder for speciation sampling requirements.