

Portable and Sequential Airborne Particle Counters

BENEFITS

- Track air cleanliness level trends for QA or external customers
- Increase frequency of sampling compared to manual methods
- Monitor samples in several locations with one central sequential system
- Operate continuously, year-round
- Trigger local alarms for high particle counts with sequential manifold systems

Select your optimal sampling method to track cleanliness levels.

Portable particle counters offer operators the flexibility of choosing an appropriate sampling method. Whether operating by a manual, automated or sequential process, portable counters meet budgetary and operational considerations.

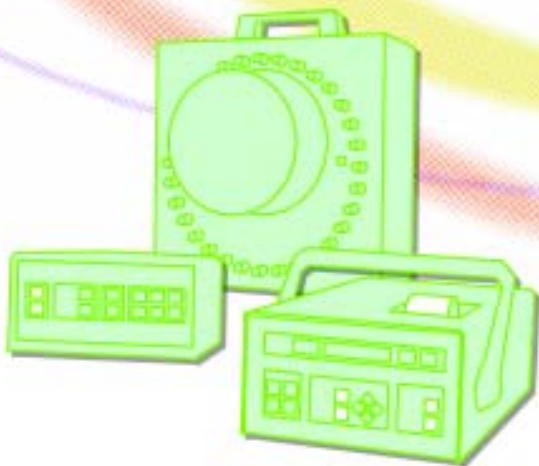
Manual sampling relies on the operator for implementation and placement of the particle counter. Counters can be quickly relocated and used throughout a facility. The operator manages the recording and analysis of data.

Automated counters minimize data variability inherent in manual methods, improving data quantity and quality. Reducing variability makes correlation of particle events or changes in baseline levels possible. More consistent data allows effective process and environmental analysis to support continuous improvement. Trend analysis and records can be confidently used for internal quality control and reports.

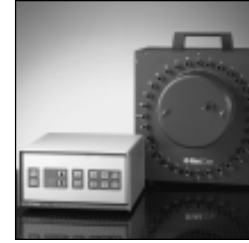
For facilities requiring many different sampling locations, sequential particle sampling offers an effective and economical solution to the need for improved count information. With a sequential system, samples taken automatically from different locations are conveyed via tubing to a central particle counter, eliminating the maintenance and calibration costs associated with multiple counters. Samples taken from the same position every time at consistent intervals generate data that can be used for statistical analysis and decision-making.

APPLICATIONS

General Cleanroom Areas
Laminar Airflow Benches
Duct Supply Networks
Aerospace Operations
Circuit Board Manufacturing



Portable and Sequential Particle Counters



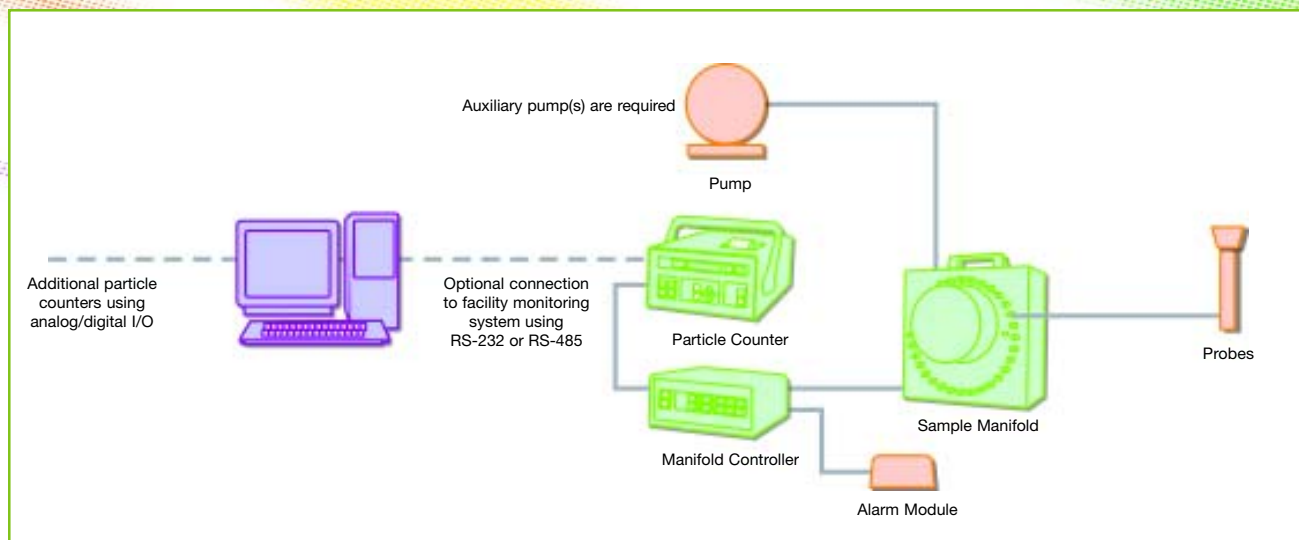
PORTABLE COUNTERS:

Hach Ultra Analytics offers a wide selection of portable particle counters to meet your specific application needs. All portable units come with multiple size channels, superior pump performance and built-in standards that help certify your cleanroom and monitor your process.

SEQUENTIAL MONITORING

SYSTEM: A combination of a single counter (2100, 2200, 2400, 2408) and our manifold Model 2432 provides a complete sequential monitoring system for up to 32 sampling locations. The system can include environmental sensors and will operate standalone or as part of a computer-based monitoring system.

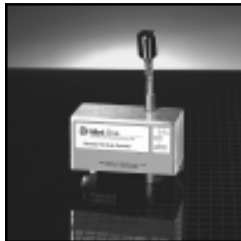
MODEL	A2432
Number of Sampling Ports	32
Communication Protocol	RS-232
Option: Alarm Module	Each alarm module provides contacts for 16 ports and RH/Temp; two alarm modules may be connected for 32-port systems
Programmable Port Sequence	Up to 100 steps
Power	100-120; 220-250
Manifold, Size WxHxD	12 x 12.5 x 16 inches 30.5 x 31.8 x 40.6 cm
Controller, Size WxHxD	9.1 x 4.8 x 8.1 inches 23.1 x 12.2 x 20.6 cm
Manifold, Weight	26.9 lbs (12.2 kg)
Controller, Weight	6.7 lbs (3.1 kg)
Compatibility	2100, 2200, 2400, 2408





MODEL	2100	2200	2400	2408
Smallest Size, μm	0.1	0.2	0.3	0.5
Number of Channels	6	6	2 to 6	2 to 6
Flow Rate, cfm	1	1	1	1
Flow Rate, L/min	28.3	28.3	28.3	28.3
Laser Type	4-port HeNe	2-port HeNe	Long Life Laser Diode	Long Life Laser Diode
Communication Support	RS-232; RS-485	RS-232; RS-485	RS-232; RS-485	RS-232; RS-485
Optional Environmental Probes	RH/Temp Air Velocity special:dP	RH/Temp Air Velocity special:dP	RH/Temp Air Velocity special:dP	RH/Temp Air Velocity special:dP
Coincidence Loss 5% (counts/ft³)	40,000	40,000	400,000	400,000
Display Type/Digits	Red LED; 7	Red LED; 7	Red LED; 7	Red LED; 7
Memory Buffer Records	400	400	400	400
Location Labels	1,000	1,000	1,000	1,000
Printer Support	Built-in or External	Built-in or External	Built-in or External	Built-in or External
Vacuum Source	AC; Oscillating	AC; Oscillating	AC; Oscillating	AC; Oscillating
Size, WxHxD, inches	13.5 x 7.0 x 22	13.5 x 7.0 x 22	11.2 x 6.0 x 18	11.2 x 6.0 x 18
Size, WxHxD, cm	34 x 18 x 57	34 x 18 x 57	28.4 x 15.2 x 45.7	28.4 x 15.2 x 45.7
Weight, lbs/kg	42 lbs (19 kg)	38 lbs (17.2 kg)	24 lbs (10.9 kg)	24 lbs (10.9 kg)
Accessories Included	Isokinetic Probe w/ Tripod Zero Count Filter	Isokinetic Probe w/ Tripod Zero Count Filter	Isokinetic Probe w/ Tripod Zero Count Filter	Isokinetic Probe w/ Tripod Zero Count Filter

Parameters measured for a complete system



ANATEL® TOTAL ORGANIC CARBON ANALYZERS

Monitoring TOC (Total Organic Carbon) indicates the purity of water produced and used for pharmaceutical and electronic manufacturing. Check various points throughout a water system for troubleshooting and diagnostics of deionized water (DI), ultrapure water (UPW), or water for injection (WFI). TOC analyzers allow convenient system suitability testing as required by TOC methods <643> and EP2.2.44 from which results can be calculated and formatted into regulatory reports.

HIAC AND ANATEL LIQUID PARTICLE COUNTERS

Detecting particles in liquids provides information essential in assuring the quality of a product or detecting potentially catastrophic failures in process or mechanical systems. HIAC systems monitor high purity water systems and cleaning systems used to process medical devices. Anatel Ultrapure Laser Particle Counters measure small particles in significantly low particle concentrations, ideal for high-end electronics manufacturing.

MET ONE AIRBORNE PARTICLE COUNTERS

Taking samples and monitoring particles continuously builds confidence in knowing that critical environments meet your regulatory or specified requirements. Met One Air Particle Counters offer two methods superior to random sampling. Sequential sampling uses a single central counter and a manifold system to take counts from the same position every time, eliminating the ambiguous human error factor. Continuous sampling through remote airborne counters, improves the likelihood of recording transient contamination particle events.

ORBISPHERE® GAS ANALYZERS

Measuring dissolved gases accurately and controlling their levels can prove critical to the quality of the end product. Operators can quickly and easily obtain accurate measurements to monitor and control processes in industries as diverse as the beverage, water treatment, semiconductor, chemical, pharmaceutical, and biotechnology industries. Orbisphere's patented electrochemical cell (polarographic) technologies for measuring dissolved gases, including residual levels of oxygen and ozone, are widely recognized as the most accurate and precise available.



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