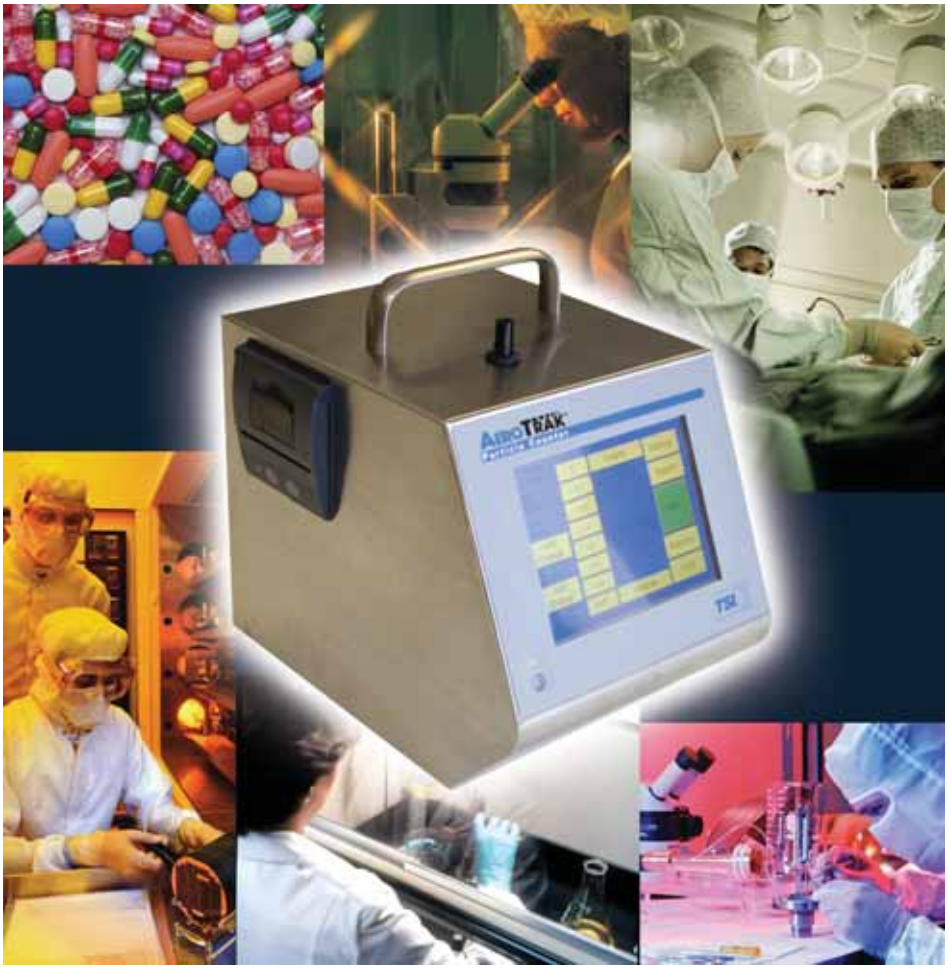
AeroTrak™ Optical Particle Counters



Monitoring and certifying clean environments for quality assurance

TSI®

An optical particle counter ...
from the leader in particle measurement

AeroTrak Optical Particle Counters are the newest members of the most extensive line of particle instruments in the industry.

- **Two models: 1 cfm and 50 lpm**
- **Six user-adjustable bin sizes**
- **Straightforward operation with touch screen control**
- **Data logging of up to 100,000 data points**
- **Lightweight design**
- **Integral thermal printing capability**
- **Optional temperature humidity, and air velocity measurements**
- **Backed by a 3-year warranty and the TSI reputation for quality and service**

Lower Airborne Particle Risk With Confidence

With today's changing technology, there is growing concern about airborne contamination, both from a quality assurance perspective and in terms of the health and safety of individuals. In some cases, existing regulations must be met. Other times, guidelines prescribe best practices, often based on shared experience. Finally, in some situations people have set their own standards for air quality for various reasons and need to assess compliance with their own criteria. In these conditions, accurate particle counting is a necessity.

The AEROTRAK Particle Counter is the newest addition to TSI's family of real-time particle measuring instruments. It joins a full line of instruments, including photometers for mass concentration measurements, condensation particle counters for ultrafine particles, and instruments for nanoparticle surface area measurements. Typical applications include cleanroom certification, indoor environmental research, human exposure assessment, indoor air quality, filter testing, clearance testing, quality assurance and contaminant migration studies.

The AEROTRAK Model 8240 counter is a lightweight (12.8 lbs or 5.8 kg), portable device that operates on AC power or a lithium-ion battery. The 8240 has a 1 cfm (28.3 lpm) flow rate and 6 user-adjustable bin sizes. The Model 8260 has a flow rate of 1.77 cfm (50 lpm). Both instruments feature an integral thermal printer for on-site, hard documentation. More then 100,000 data sets can be stored and downloaded for analysis and reporting using TRAKPRO Data Analysis Software from TSI. AEROTRAK particle counters come with a three-year warranty and meet ISO 14644 and JIS standards.

These particle counters have optional probes for temperature/humidity and for air velocity measurements, allowing multiple measurements in one instrument.

Specifications

AEROTRAK Model 8240 and 8260 Portable Optical Particle Counters

Bin Sizes	0.3 to 10µm, user-adjustable; factory-calibrated at 0.3, 0.5, 1, 3, 5 and 10 microns
Counting Efficiencies	50%±10% at 0.3µm 100% by 0.45µm 50%±20% at all calibration cut sizes Meets or exceeds JIS standards
Zero Count	<1 particle counted in 5 minutes (JIS)
Coincidence Loss	±5% at 400,000 particles/ft^3, Model 8240; ±5% at 250,000 particles/ft^3, Model 8260
Data Logging	More than 100,000 individual sample sets
Flow Rate	
Model 8240	1 cfm (28.3 lpm) ±5% accuracy, internal flow control
Model 8260	1.77 cfm (50 lpm) ±5% accuracy, internal flow control
Display	5.7 in. (14.5 cm) color touch screen
Connectivity	USB compatible
Operating Temperature	41° to 95° F (5° to 35°C)
Storage Temperature	32° to 122° F (0° to 50°C)
AC Power	110 to 260V, 50 to 60Hz
Battery	
Life	8 hours typical use; 3 hours continuous use
Type	Removable Li-ion
Charging	Internal or external, 3.5 hour charging time
Physical Dimensions (L x W x H)	10 in. x 7 in. x 9.5 in. (25.4 cm x 17.8 cm x 24.1 cm)
Weight	
Without Battery	11.8 lb (5.36 kg)
With Battery	12.8 lb (5.82 kg)
Optional Temperature/Humidity Probe	
Temperature	±1°F, 41, to 104°F (±1°C, 5 to 40°C)
Humidity	RH ±5% accuracy, 10 to 90% range
Optional Air Velocity Probe	
Range	0 to 4,000 fpm (0 to 20 m/s)
Accuracy	±5% of reading or 5 fpm (0.025 m/s), whichever is greater
Probe Length Collapsed	11.5 in. (29 cm)
Probe Length Extended	43 in. (109 cm)
Software	TRAKPRO Data Analysis Software
Warranty	3 years

Other Quality Instruments to Complement the TSI Portable Particle Counters

Cleanroom Controls

Quality production requires good manufacturing practices. Ensuring proper differential pressure to prevent the migration of contamination is critical. TSI offers DP-CALC™ Micromanometers for test measurement and verification as well as PRESSURA™ Cleanroom Monitors and Controllers for continuous management of differential pressure.

Ultrafine Particle Measurement

TSI provides a range of condensation particle counters, ranging from the handheld P-TRAK™ Ultrafine Particle Counter to sophisticated research-grade instruments capable of counting particles in the submicron range down to single-digit nanometer diameters.

Ventilation Testing

Airflow and velocity in critical environments must be closely monitored and controlled. TSI has a full line of VELOCICALC™ Air Velocity Meters and ACCUBALANCE™ Air Capture Hoods to adjust and balance volumetric flow rates in clean spaces.

Local Exhaust Ventilation

Some processes and materials require isolation and strict control to prevent contaminant migration. Certification testing of fume hood face velocity can be done with TSI's VELOCICALC Air Velocity Meters. Our EVERWATCH™ Face Velocity Monitors perform continuous fume hood monitoring in critical situations. They detect minor fluctuations in velocity and give visual and audible warning when conditions fall outside the desired range. Our SUREFLOW™ Face Velocity Controllers add a measure of safety by automatically maintaining an optimum face velocity by modulating an exhaust control device.

Filter Leakage Testing

Air filtration systems must be checked to ensure they are properly installed and there are no unwanted frame or gasket leaks. Filters should be checked during commissioning procedures, during re-testing and whenever filters are replaced. Discrete particle counters can scan the surface and perimeter of filter systems.

Air Quality

It is important to ensure that an air handling system is performing as expected. Temperatures should be checked throughout a facility to verify they are within control limits. In addition, humidity should be checked and maintained to ensure levels are within control limits. The Q-TRAK™ Indoor Air Quality Monitor makes these measurements quickly and records data over long periods for subsequent analysis and reporting.

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