P-T_{RAK}™ Ultrafine Particle Counter



Providing a comfortable, safe and healthy indoor environment is a growing concern today and indoor air quality can be one of the toughest challenges. TSI's P-TRAK Ultrafine Particle Counter can help solve some of the most elusive air quality problems faced today.

The Problem

The most persistent air quality complaints are sometimes linked to ultrafine particles. At less than one-tenth of a micron in diameter, these particles are products of combustion or other chemical reactions. They can originate outside or inside building environments, and their sources include vehicle exhaust, stack emissions, industrial processes, battery charging, filter and gasket leaks, smoking, cooking, laundry, cleaning agents and office equipment. Individual sensitivities and reactions to ultrafine particles vary greatly but can be extreme.

The Solution

The P-TRAK Ultrafine Particle Counter utilizes TSI's proven condensation particle counting technology. With this real-time, portable instrument, just follow a pollutant "pathway" to pinpoint its source for repair or other action. These elusive sources are often missed completely when using conventional testing methods.

The very smallest particles are often the ones of greatest concern. With its range of 1 micron down to 0.02 microns, the P-TRAK is designed to detect these small particles. This advanced technology makes the P-TRAK very effective for checking filters, finding gasket leaks and identifying other pollutant pathways. Once found, the sources can be isolated from occupied space.

The Method

The easy-to-use P-TRAK gives fast and reliable realtime results. By taking outside particle counts as reference measurements and setting indoor expectations, the P-TRAK can then be used to quickly locate and zero-in on unexpected levels that may be the origin of complaints. Once a problem is located, take appropriate action and then move on to the next source until the complaints end.



Specifications

P-Trak Model 8525 Ultrafine Particle Counter

Concentration Range0 to 5×10^5 particles/cm³Particle Size Range0.02 to 1 micrometer

Temperature Range

 $\begin{array}{ll} \textbf{Operation} & 32 \text{ to } 100^{\circ}\text{F (0 to } 38^{\circ}\text{C)} \\ \textbf{Storage} & \cancel{-40} \text{ to } 160^{\circ}\text{F (-40 to } 70^{\circ}\text{C)} \\ \end{array}$

Flow Rate

Sample 100 cm³/min

Total 700 cm³/min (nominal)

Power Requirement

Battery type 6 AA alkaline Battery life 6 hrs at 70°F (21°C)

Alcohol Requirement

Type 100% reagent grade isopropyl Hours per charge 8 hours at 70°F (21°C)

RS232 Output Baud rate 9600

RS232 Output Memory

Single points 470

Data logging 1,000 hours at one-minute intervals.

A maximum of 141 separate tests.¹

Size $10.75 \text{ in.} \times 5.5 \text{ in.} \times 5.5 \text{ in.}$ $(27 \text{ cm} \times 14 \text{ cm} \times 14 \text{ cm})$

Weight

Instrument with batteries 3.8 lbs (1.7 kg)
Factory Recalibration Interval One year

Warranty Two years on parts and labor2

Computer Requirements PC with Microsoft Windows® 2000 or XP;

Windows-compatible printer; 5 MB hard disk space; and available RS232 serial port

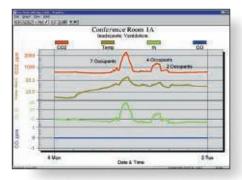
(for downloading)

Specifications are subject to change without notice. Windows is a registered trademark of the Microsoft Corporation.



Description

P-Trak Ultrafine Particle Counter and accessories includes: Telescoping Sample Probe, Shoulder Strap, Inlet Screen, Spare Wicks (2), Alkaline Batteries, Alcohol Fill Capsule with Storage Cap, Reagent Grade Isopropyl Alcohol, Zero Filters (2), Carrying Case, Trakpro™ Software, Computer Cable, Operation and Service Manual, Calibration Certificate, and Two-year Warranty



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 $^{^{\}rm 1}$ The P-Trak will operate with an AC adapter for long periods but the alcohol wick must be resaturated every 8 hours when operating over an extended time.

 $^{^{\}rm 2}$ Warranty repairs returned via overnight carrier at TSI expense.