



Knowledge Beyond Measure.

AeroTrak™ Cleanroom Condensation Particle Counter

Model 9001



The AeroTrak™ 9001 Cleanroom Condensation Particle Counter (CPC) is the only water-based, laminar flow, high flow rate instrument on the market—providing the confidence needed for monitoring critical environments.

Using patented technology, the AeroTrak™ 9001 Cleanroom CPC provides 10 nm sensitivity at a 0.1 CFM (2.83 L/min) flow rate. With an ultra-low false count rate, the AeroTrak 9001 Cleanroom CPC is ideally suited for the low particle concentrations found in ISO Class 1 and Class 2 environments.

TSI® is the world leader in condensation particle counter technology, supplying commercial instruments since 1979. TSI's world-class classifiers and CPCs are used by national and standards labs worldwide. This same technology is used in the AeroTrak 9001 Cleanroom CPC. Backed by a standard one-year warranty and TSI's long-standing reputation for high quality, there is no other CPC like it on the market today that provides the same confidence for monitoring critical environments.

Unlike other high flow rate water-based CPCs, the AeroTrak 9001 Cleanroom CPC does not use turbulent mixing, so it minimizes particle losses and increases counting accuracy. Unlike alcohol or other non-water based CPCs, the AeroTrak 9001 Cleanroom CPC does not introduce chemicals into clean environments.

The AeroTrak 9001 Cleanroom CPC has the same easy-to-use graphics interface as other AeroTrak Particle Counters. Multiple particle counting configurations can be conveniently stored and uploaded as needed.

The AeroTrak 9001 Cleanroom CPC can be used as a standalone particle counter or run continuously, integrated into a facility monitoring system like the TSI® FMS Software. Optionally, the instrument can be interfaced to other systems using the Ethernet interface and Modbus communications.

Features and Benefits

- 10 nm sensitivity
- 0.1 CFM (2.83 l/min) sample flow
- Low false-count rate (< 0.07 count/ft³) provides accurate measurements at low particle concentrations
- Fast response
- Uses Ultra-Pure or DI water as working fluid, keeping alcohol or other chemicals out of the cleanroom
- Data Storage: 250 zones, 999 locations, and 10,000 samples
- USB, USB storage device, and Ethernet data transfer
- External reporting via TrakPro™ Lite Secure Software
- Industry's loudest audible alarm
- Easy, icon-driven touch screen operation
- Allows storage and recall of specific recipes and zone configurations
- Works with optional AeroTrak® 7950 High Pressure Diffuser (HPD) for measurement of high pressure gases (CDA, N₂, AR)
- 316L stainless steel enclosure

TSI®—Providing the confidence needed for monitoring critical environments

- Ultra-low false count rate
- Trusted performance
 - Three detector design ensures reliability
 - Comprehensive self-diagnostics



Specifications

AeroTrak™ Condensation Particle Counter Model 9001

9001	
Particle Size Range	Min. Detectable Particle (D ₅₀) - 10 nm Max. Detectable Particle - 1000 nm
Particle Channel Sizes	Single channel
Counting Efficiency	50% at 10 nm
Concentration Limits	57,000,000 p/Cu. ft @ 10% coincidence
Working Fluid	Ultra-Pure or De-Ionized Water
Light Source	Long life laser diode
Zero Count	<0.07 count/Cu. ft
Flow Rate	0.1 CFM (2.83 L/min)
Sample Tube Extension	Up to 3 ft (1 m) for 10 nm particles
Sampling Modes	Manual, automatic, beep; count or concentration
Sampling Time	1 second to 99 hours
Sampling Frequency	1 to 9999 cycles or continuous
Vacuum Source	Internal pump
Communication Mode	Modbus TCP over Ethernet or USB
Audible Alarm	Built-in; > 85 dBA at 1 m (adjustable)
Alarm Output	Dry contacts, closed when alarm is engaged
Alarm Limits	Programmable
Display	VGA 5.7 in. (14.5 cm) touch screen display
Languages	English, German, French, Spanish, Japanese, Chinese (simplified), Italian
Software	Compatible with TrakPro™ Lite Secure and FMS 5 Software
Unit ID	Configurable IP address
Security	2-level password protection to lock out usage and configuration
Data Storage	250 zones 999 Locations 10,000 sample records including date, time, particle concentration, flow status and instrument status
Data Transfer	Via USB storage device, connection to TrakPro™ Lite Secure Software through Ethernet or USB cable, or optional TSI® FMS Software
Calibration Frequency	Recommended minimum of once per year
Dimension (H x W x D)	22.4 in. x 9.3 in. x 8.6 in. (56.9 cm x 24.6 cm x 21.8 cm) (without water bottle)
Weight	28.5 lbs (13.0 kg)
Power	110 to 240 VAC universal power supply
External Surface	316L Stainless steel
Operating Range	59° to 95° F (15° to 35° C) 0 to 90% RH, non-condensing
Storage Range	-40° to 158° F (-40° to 70° C)
Warranty	One year
Included Accessories	Quick Start Guide, manual on a CD, power supply, purge filter, 2 inlets (barbed inlet and a 3/16 in. OD straight tube connector inlet), water bottle, bracket for water bottle, drain bottle and USB cable
Optional Accessories	AeroTrak™ 7950 High Pressure Diffuser
ISO 14644-14:2016	An assessment, including an agreed upon representative mode of operation, according to ISO 14644-14 showed that the AeroTrak™ 9001 Cleanroom CPC has suitability for use within a cleanroom of ISO Class 3 at 0.1µm

Specifications are subject to change without notice.

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To see our list of patents please visit: www.tsi.com/patents



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