Model 3007 Hand-held Condensation Particle Counter

Our smallest CPC goes where bulky particle counters might not go – or might not go easily.

The smallest member of TSI's Condensation Particle Counter (CPC) family, the Model 3007 is a hand-held instrument for measuring ultrafine particles in mobile applications or remote locations. This highly portable CPC offers:

- Battery-powered operation
- Programmable data-logging capabilities
- Particle size range of 0.01 to >1.0 micrometer
- Concentration range of 0 to 100,000 particles per cubic centimeter
- Built-in LCD display
- RS-232 serial data port

All in a package that weighs only 3.8 pounds! Its small size and ergonomic design make it the best choice for short-term outdoor and indoor air quality monitoring, human epidemiological studies, and mobile aerosol research.

Operation

In general, laminar-flow CPCs operate by drawing an aerosol sample continuously through a heated saturator, in which alcohol is vaporized and diffuses into the sample stream. Together, the aerosol sample and alcohol vapor pass into a cooled condenser where the alcohol vapor becomes supersaturated and ready to condense. Particles present in the sample stream serve as condensation sites for the alcohol vapor. Once condensation begins, particles grow quickly into larger alcohol droplets and pass through an optical detector where they are counted easily.

Applications

TSI is proud to offer the most comprehensive offering of scientific CPCs available anywhere. Building on a tradition of more than 25 years experience, TSI CPCs have become the standard to which all others are compared. General applications for our CPCs include:

- Basic aerosol research
- Indoor air quality measurements
- Filter and air cleaner tests
- Particle shedding and component tests
- Atmospheric and climate studies
- Particle counter calibration
- Combustion and engine exhaust studies
- Inhalation exposure studies
- Particle formation and growth studies
- Health effects studies
- Environmental monitoring
- Nanotechnology research

Ask your TSI representative for information on our other CPCs and recommended applications.

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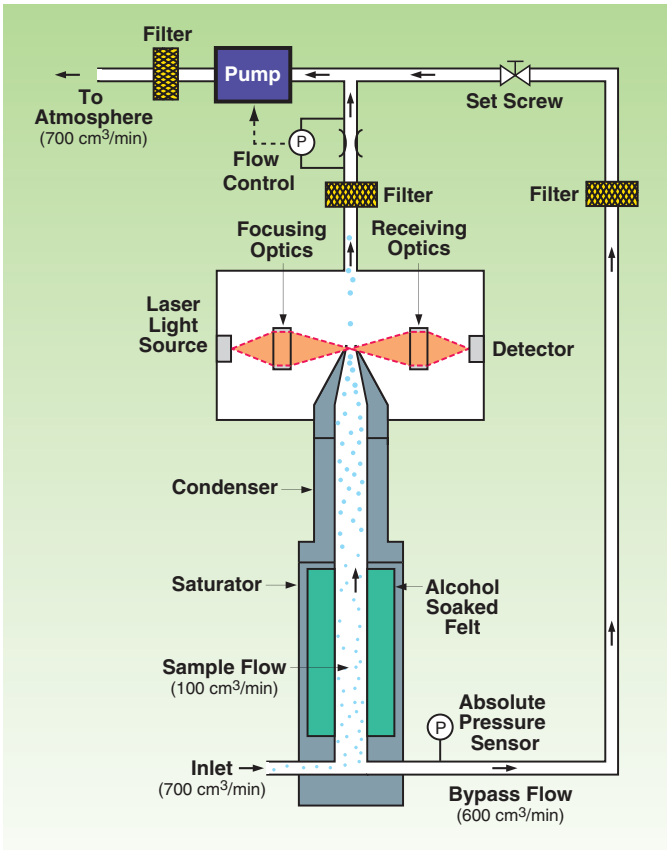
Specifications

Model 3007 Hand-held Condensation Particle Counter

Particle Size Range	0.01 to >1 µm
Concentration Range	0 to 100,000 particles/cm^3
Minimum Displayable Concentration Value	1 particle/cm^3
Concentration Accuracy	±20%
False Background Counts	<0.01 particles/cm^3
Response Time	<9 sec for 95% response
Particle Type	Airborne solids and nonvolatile liquids
Temperature Range	
Operation	50 to 95°F (10 to 35°C)
Storage	-40 to 160°F (-40 to 70°C)
Flow Rate	
Detected Aerosol	100 cm^3/min
Inlet	700 cm^3/min (nominal)
Absolute Pressure Sensor	0 to 1400 mBar
Aerosol Inlet Diameter	1/4-in. O.D.
Power Requirement	
Battery Type	6 AA alkaline or rechargeable
Battery Life	5 hours (alkaline batteries at 21°C)
Alcohol Requirement	
Type	100% reagent-grade isopropyl alcohol
Hours Per Fill	6 hours at 70°F (21°C)
RS-232 Output	Baud rate 9600
Software	Aerosol Instrument Manager® software, CPC Module
Calibration check	Recommended annually
Dimensions (LWH)	
CPC	29.2 cm × 14 cm × 14 cm (11.5 in. × 5.5 in. × 5.5 in.)
Carrying Case	53 cm × 36 cm × 21 cm (21 in. × 14 in. × 8.3 in.)
Weight	
CPC with Batteries	3.8 lbs (1.7 kg)
Instrument with Accessories in Case	16.8 lbs (7.7 kg)

Specifications are subject to change without notice. TSI, the TSI logo, and Aerosol Instrument Manager are trademarks of TSI Incorporated.



TO Order

Hand-held Condensation Particle Counter

Specify	*Description*
3007	CPC and accessories: spare wicks (2), battery holder, alkaline batteries (6 AA), AC adapter, alcohol fill capsule with storage cap, alcohol cartridge, 30-ml bottles reagent-grade isopropyl alcohol, zero filters (2), carrying case, software on CD-ROM, computer cable, operation and service manual, calibration certificate, and one-year warranty