

CI-450 Series Airborne Particle Counters 50 LPM Flow Rate 4-Channels When Accuracy Matters!™



High Accuracy

High Reliability

HEPA Filtered Exhaust

Internal Data Storage

Audible Alarm: Built-in,
Adjustable & Programmable

Touchscreen Display

Internal Thermal Printer

Internal Battery Charger

Smallest Footprint

Clone Settings Unit-to-Unit

Connects to existing network
infrastructure and LIMS
Software.

ISO 21501-4

ISO 14644-1

EU GMP, Annex 1

FS-209E

JIS 9921

21 CFR Part 11

Unsurpassed ease of use and reliability. Seamless stainless steel enclosure simplifies cleaning and sanitation. Lightweight and the industry's smallest 50 LPM footprint allows the device to be easily transported.

Reliability, Accuracy & Support

The **CI-450 Series** of particle counters are engineered and manufactured with only the highest quality materials. This ensures a long product life-cycle, and up to decades of reliable use. Moreover, we provide calibration support services for all our devices over their lifetime. We have built our reputation by providing highly accurate instruments that stand the test of time. Climet internal audits confirm that units returned for calibration have an "In Tolerance" rate of more than 98%. This study includes some units that have been manufactured more than 20 years ago. Simply, Climet particle counters are designed, tested, and calibrated with very tight tolerances to exceed industry standards. Years of count efficiency testing has demonstrated that a properly calibrated Climet particle counter produces good count efficiency even after more than a decade of field operation!

Return On Investment

Not all particle counters are equal. The initial purchase price, cost of calibrations, cost of consumables, out of warranty repairs, and product life-cycle all factor into calculating the Return on Investment. Other intrinsic factors include assurance, reliability, accuracy, application support, and superior customer service. These make Climet the unsurpassed leader in the manufacture of particle counters for cleanroom monitoring, validation, and certification.

Custom Engineered Solutions

If you have a specific technical requirement, please contact us. We specialize in customizing our products to fit your needs.

Applications Include:

Cleanroom Monitoring & Validation
Medical Device Manufacturing
Pharmaceutical Manufacturing
Hospitals
Semiconductor & Disk Drive mfg.

Food & Beverage Processing
Aerospace Assembly
Research & Development
Cosmetic Manufacturing

CLIMET[®]
INSTRUMENTS COMPANY

CI-450 Series Specifications

Configurations	<p>CI-450t = 50 LPM particle counter w/ RS-232 data transfer with HEPA filtered internal exhaust</p> <p>CI-452x = 50 LPM particle counter w/ RS-232 data transfer *</p> <p>CI-453 = 50 LPM particle counter w/ RS-232, Ethernet (http webserver, Modbus and TELNET) *</p> <p>CI-454 = 50 LPM particle counter w/ RS-232, Ethernet and USB data transfer *</p> <p>CI-455 = 50 LPM particle counter w/ RS-232, Wi-Fi (http webserver, Modbus and TELNET) *</p> <p>CI-456 = 50 LPM particle counter w/ RS-232, Wi-Fi and USB data transfer *</p> <p>* All models have HEPA filtered external exhaust except for the CI-450t model.</p>
Performance	<p>Sample Flow Rate: 50 LPM (0.05 cubic meter per minute, or 1.77 cubic feet per minute)</p> <p>Sample Volume: Adjustable in cubic feet, cubic meters, or in liters</p> <p>Sample time to measure a cubic meter : 20 minutes</p> <p>Flow Rate Control: Electronic, automatic closed loop</p> <p>Standard Particle Channel Sizes: 0.3, 0.5, 1.0, 5.0 microns (Other sizes upon request)</p> <p>Concentration Limit: 20,000 particles per liter (20 x 10⁶ particles per cubic meter) (10% coincidence)</p> <p>Resolution: Meets or exceeds requirements of ISO 21501-4 (10% typical)</p> <p>Max. False Count: 4.0 / CM ≥ 0.3 μm (95% UCL) per ISO 21501-4</p> <p>Optics: Rhodium plated metal ellipsoidal mirror</p> <p>Cleaning: Compatible with common cleaning and sterilization procedures, including VHP.</p>
Programming & Memory	<p>Program: Up to 30 user-defined and named programs; containing IDs and settings</p> <p>Memory: 3000 samples: Date, Time, 4 Particle Channels, Flow, ID, Sample Volume</p> <p>Unit ID: User Selectable</p> <p>User ID: Up to 20 users, plus supervisor, with password security</p> <p>Security: Four security levels, with user authentication</p> <p>Location ID: Up to 100 per program; 16 characters.</p> <p>Cloning: All models support Unit-to-Unit, and PC-to-Unit. Cloning via USB flash drive (CI-454 & 56 models).</p>
Included Accessories and Features	<p>All models come with an internal thermal printer, internal battery charger, battery, stainless steel isokinetic probe with 10 feet of tubing, zero count filter, two rolls of paper, cloning cable, IQ/OQ Docs, manual, and external exhaust fitting on appropriate models. Flash drive with USB models.</p>
Electrical	<p>Battery: 9.6 VDC, 12.6 Amp Hour</p> <p>Battery Operation: 5 hours (typical) with continuous sampling</p> <p>Battery Recharge time: 3.5 - 4 hours (built-in charger)</p> <p>Wall Power: Universal 100-240 VAC Input</p>
Dimensions	<p>8.65"(H) x 8.5" (W) x 9.5" (L)* (21.97 cm x 21.6 cm x 24.1 cm)</p> <p>11.0 lb. (4.99Kg) without battery; and 14.25 lb. (6.46 Kg) with battery</p> <p>*without Wi-Fi antenna attached (CI-455 & 56 models)</p>
Environmental	<p>Operating temperature: 0-36° C, 32-97° F</p> <p>0-90% relative humidity, non-condensing</p>

- Light blocking isokinetic probes, probe stands, high pressure diffusers, carrying cases, software, validation documentation, and other accessories sold separately.
- Recommended calibration frequency, every 12 months with monodisperse polystyrene spheres traceable to NIST.

We value the opportunity to work with you. For further technical information and questions, please contact us.

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