CLIMET®

CLIMET INSTRUMENTS COMPANY

CI-x5x Series Portable Particle Counter

CI-150 Series
Airborne Particle Counters
1 CFM 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 1.0 CFM footprint allows the device to be easily transported.

Reliability, Accuracy & Support

The **CI-150 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
Semiconductor & Disk Drive Mfg.
Research & Development
Food & Beverage Processing
Aerospace Assembly
Hospitals
Cosmetic Manufacturing

CLiMET® INSTRUMENTS COMPANY

CI-150 Series Specifications

Configurations	**CI-150t** = 1 CFM particle counter w/ RS-232 data transfer with HEPA filtered internal exhaust **CI-152x** = 1 CFM particle counter w/ RS-232 data transfer * **CI-153** = 1 CFM particle counter w/ RS-232, Ethernet (http webserver, Modbus and TELNET) * **CI-154** = 1 CFM particle counter w/ RS-232, Ethernet and USB data transfer * **CI-155** = 1 CFM particle counter w/ RS-232, Wi-Fi Ethernet (http webserver, Modbus and TELNET) * **CI-156** = 1 CFM particle counter w/ RS-232, Wi-Fi Ethernet and USB data transfer * *** All models have HEPA filtered external exhaust except for the CI-150t model.**
Performance	**Sample Flow Rate:** 1 CFM (0.028 cubic meter per minute, or 28.3 liters per minute) **Sample Volume:** Adjustable in cubic feet, cubic meters, or in liters **Sample time to measure a cubic meter :** 35.3 minutes **Flow Rate Control:** Yes. Electronic, automatic closed loop **HEPA Filtered Exhaust:** Yes, all models certified to ISO Class 3. **Standard Particle Channel Sizes:** *0.3, 0.5, 1.0, 5.0 microns (other sizes upon request)* **Concentration Limit:** 1 x 10^6 particles per cubic foot (35.3 x 10^6 particles per cubic meter) (10% coincidence) **Resolution:** Exceeds requirements of ISO 21501-4 of 15% (4-10% typical) **Count Efficiency:** 50% Count Efficiency exceeds ISO 21501-4 of ±20% (≤±10% typical) 100% Count Efficiency @ ±10% per ISO 21501-4 **Max. False Count:** 7.1 / CM ≥ 0.3 µm (95% UCL) per ISO 21501-4 **Optics:** Rhodium plated metal ellipsoidal mirror (extreme durability and resistant to contamination) **Laser Diode:** Optimal balance of long life, stability and resolution for improved accuracy. **Cleaning:** Compatible with common cleaning and sterilization procedures, including VHP.
Programming & Memory	**Program:** Up to 30 user-defined and named programs; containing IDs and settings **Memory:** 3000 samples: Date, Time, 4 Particle Channels, Flow, ID, Sample Volume **Unit ID:** User Selectable **User ID:** Up to 20 users, plus supervisor, with password security **Security:** Four security levels, with user authentication **Location ID:** Up to 100 per program; 16 characters. **Cloning:** All models support Unit-to-Unit, and PC-to-Unit. Cloning via USB flash drive on CI-154 model.
Included Accessories and Features	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.
Electrical	Battery: 9.6 VDC, 12.6 Amp Hour Battery Operation: 6 hours (typical) with continuous sampling Battery Recharge time: 3.5 - 4 hours (***built-in charger***) Wall Power: Universal 100-240 VAC Input
Dimensions	8.65”(H) x 8.5” (W) x 9.5” (L) (21.97 cm x 21.6 cm x 24.1 cm) 11.0 lb. (4.99Kg) without battery; and 14.25 lb. (6.46 Kg) with battery
Environmental	Operating temperature: 0-36° C, 32-97° F 0-90% relative humidity, non-condensing

- 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.

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	**CI-450t** = 50 LPM particle counter w/ RS-232 data transfer with HEPA filtered internal exhaust **CI-452x** = 50 LPM particle counter w/ RS-232 data transfer * **CI-453** = 50 LPM particle counter w/ RS-232, Ethernet (http webserver, Modbus and TELNET) * **CI-454** = 50 LPM particle counter w/ RS-232, Ethernet and USB data transfer * **CI-455** = 50 LPM particle counter w/ RS-232, Wi-Fi Ethernet (http webserver, Modbus and TELNET) * **CI-456** = 50 LPM particle counter w/ RS-232, Wi-Fi Ethernet and USB data transfer * *** All models have HEPA filtered external exhaust except for the CI-450t model.**
Performance	**Sample Flow Rate:** 50 LPM (0.05 cubic meter per minute, or 1.77 cubic feet per minute) **Sample Volume:** Adjustable in cubic feet, cubic meters, or in liters **Sample time to measure a cubic meter :** 20 minutes **Flow Rate Control:** Yes. Electronic, automatic closed loop **HEPA Filtered Exhaust:** Yes, all models certified to ISO Class 3. **Standard Particle Channel Sizes:** *0.3, 0.5, 1.0, 5.0 microns (Other sizes upon request)* **Concentration Limit:** 20,000 particles per liter (20 x 10^6 particles per cubic meter) (10% coincidence) **Resolution:** Exceeds requirements of ISO 21501-4 of 15% (4-10% typical) **Count Efficiency:** 50% Count Efficiency exceeds ISO 21501-4 of ±20% (≤±10% typical) 100% Count Efficiency @ ±10% per ISO 21501-4 **Max. False Count:** 4.0 / CM ≥ 0.3 µm (95% UCL) per ISO 21501-4 **Optics:** Rhodium plated metal ellipsoidal mirror (extreme durability and resistant to contamination) **Laser Diode:** Optimal balance of long life, stability and resolution for improved accuracy. **Cleaning:** Compatible with common cleaning and sterilization procedures, including VHP.
Programming & Memory	**Program:** Up to 30 user-defined and named programs; containing IDs and settings **Memory:** 3000 samples: Date, Time, 4 Particle Channels, Flow, ID, Sample Volume **Unit ID:** User Selectable **User ID:** Up to 20 users, plus supervisor, with password security **Security:** Four security levels, with user authentication **Location ID:** Up to 100 per program; 16 characters. **Cloning:** All models support Unit-to-Unit, and PC-to-Unit. Cloning via USB flash drive on CI-454 model.
Included Accessories and Features	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.
Electrical	Battery: 9.6 VDC, 12.6 Amp Hour Battery Operation: 5 hours (typical) with continuous sampling Battery Recharge time: 3.5 - 4 hours (***built-in charger***) Wall Power: Universal 100-240 VAC Input
Dimensions	8.65”(H) x 8.5” (W) x 9.5” (L) (21.97 cm x 21.6 cm x 24.1 cm) 11.0 lb. (4.99Kg) without battery; and 14.25 lb. (6.46 Kg) with battery
Environmental	Operating temperature: 0-36° C, 32-97° F 0-90% relative humidity, non-condensing

- 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.

CI-750 Series
Airborne Particle Counters
75 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 75 LPM footprint allows the device to be easily transported.

Reliability, Accuracy & Support

The **CI-750 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
Semiconductor & Disk Drive Mfg.
Research & Development
Food & Beverage Processing
Aerospace Assembly
Hospitals
Cosmetic Manufacturing

CLiMET® INSTRUMENTS COMPANY

CI-750 Series Specifications

Configurations	**CI-750t** = 75 LPM particle counter w/ RS-232 data transfer with HEPA filtered internal exhaust **CI-752x** = 75 LPM particle counter w/ RS-232 data transfer * **CI-753** = 75 LPM particle counter w/ RS-232, Ethernet (http webserver, Modbus and TELNET) * **CI-754** = 75 LPM particle counter w/ RS-232, Ethernet and USB data transfer * **CI-755** = 75 LPM particle counter w/ RS-232, Wi-Fi Ethernet (http webserver, Modbus and TELNET) * **CI-756** = 75 LPM particle counter w/ RS-232, Wi-Fi Ethernet and USB data transfer * *** All models have HEPA filtered external exhaust except for the CI-750t model.**
Performance	**Sample Flow Rate:** 75 LPM (0.075 cubic meter per minute, or 2.65 cubic feet per minute) **Sample Volume:** Adjustable in cubic feet, cubic meters, or in liters **Sample time to measure a cubic meter :** 13.3 minutes **Flow Rate Control:** Yes. Electronic, automatic closed loop. **HEPA Filtered Exhaust:** Yes, all models certified to ISO Class 3. **Standard Particle Channel Sizes:** *0.3, 0.5, 1.0, 5.0 microns (Other sizes upon request)* **Concentration Limit:** 13,300 particles per liter (13.3x 10^6 particles per cubic meter) (10% coincidence) **Resolution:** Exceeds requirements of ISO 21501-4 of 15% (4-10% typical) **Count Efficiency:** 50% Count Efficiency exceeds ISO 21501-4 of ±20% (≤±10% typical) 100% Count Efficiency @ ±10% per ISO 21501-4 **Max. False Count:** 2.7 / CM ≥ 0.3 µm (95% UCL) per ISO 21501-4 **Optics:** Rhodium plated metal ellipsoidal mirror (extreme durability and resistant to contamination) **Laser Diode:** Optimal balance of long life, stability and resolution for improved accuracy. **Cleaning:** Compatible with common cleaning and sterilization procedures, including VHP.
Programming & Memory	**Program:** Up to 30 user-defined and named programs; containing IDs and settings **Memory:** 3000 samples: Date, Time, 4 Particle Channels, Flow, ID, Sample Volume **Unit ID:** User Selectable **User ID:** Up to 20 users, plus supervisor, with password security **Security:** Four security levels, with user authentication **Location ID:** Up to 100 per program; 16 characters. **Cloning:** All models Unit-to-Unit, and PC-to-Unit. Cloning or via USB flash drive (CI-754 model)
Included Accessories and Features	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.
Electrical	Battery: 9.6 VDC, 12.6 Amp Hour Battery Operation: 4 hours (typical) with continuous sampling Battery Recharge time: 3.5 - 4 hours (***built-in charger***) Wall Power: Universal 100-240 VAC Input
Dimensions	8.65”(H) x 8.5” (W) x 9.5” (L) (21.97 cm x 21.6 cm x 24.1 cm) 11.0 lb. (4.99Kg) without battery; and 14.25 lb. (6.46 Kg) with battery
Environmental	Operating temperature: 0-36°C, 32-97°F 0-90% relative humidity, non-condensing

- 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.

CI-1050 Series
Airborne Particle Counters
100 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 100 LPM footprint allows the device to be easily transported.

Reliability, Accuracy & Support

The **CI-1050 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-1050 Series Specifications

Configurations	**CI-1052x** = 100 LPM particle counter w/ RS-232 data transfer **CI-1053** = 100 LPM particle counter w/ RS-232, Ethernet (http webserver, Modbus and TELNET) **CI-1054** = 100 LPM particle counter w/ RS-232, Ethernet and USB data transfer **CI-1055** = 100 LPM particle counter w/ RS-232, Wi-Fi (http webserver, Modbus and TELNET) **CI-1056** = 100 LPM particle counter w/ RS-232, Wi-Fi and USB data transfer
Performance	**Sample Flow Rate:** 100 LPM (0.1 cubic meter per minute, or 3.53 cubic feet per minute) **Sample Volume:** Adjustable in cubic feet, cubic meters, or in liters. **Sample time to measure a cubic meter :** 10 minutes **Flow Rate Control:** Yes. Electronic, automatic closed loop. **HEPA Filtered External Exhaust:** Yes, all models and certified to ISO Class 3. **Standard Particle Channel Sizes:** *0.5, 1.0, 3.0, and 5.0 microns (Other sizes upon request)* **Concentration Limit:** 10,000 particles per liter (10×10^6 particles per cubic meter) (10% coincidence) **Resolution:** Exceeds requirements of ISO 21501-4 of 15% (4-10% typical) **Count Efficiency:** 50% Count Efficiency exceeds ISO 21501-4 of ±20% ($\leq$±10% typical) 100% Count Efficiency @ ±10% per ISO 21501-4 **Max. False Count:** 2.0 / CM > 0.5 µm (95% UCL) per ISO 21501-4 **Optics:** Rhodium plated metal ellipsoidal mirror (extreme durability and resistant to contamination) **Laser Diode:** Optimal balance of long life, stability and resolution for improved accuracy. **Cleaning:** Compatible with common cleaning and sterilization procedures, including VHP.
Programming & Memory	**Program:** Up to 30 user-defined and named programs; containing IDs and settings **Memory:** 3000 samples: Date, Time, 4 Particle Channels, Flow, ID, Sample Volume **Unit ID:** User Selectable **User ID:** Up to 20 users, plus supervisor, with password security **Security:** Four security levels, with user authentication **Location ID:** Up to 100 per program; 16 characters. **Cloning:** All models Unit-to-Unit, and PC-to-Unit. Cloning via USB flash drive (CI-1054 model)
Included Accessories and Features	All models come with an internal thermal printer, internal battery charger, battery, stainless steel isokinetic probe with 6.5 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.
Electrical	Battery: 9.6 VDC, 12.6 Amp Hour **(only one battery needed, and included)** Battery Operation: 3.5 hours (typical) with continuous sampling Battery Recharge time: 3.5 - 4 hours (***built-in charger included.*** An external charger is also sold separately.) Wall Power: Universal 100-240 VAC Input
Dimensions	8.65”(H) x 8.5” (W) x 9.5” (L) (21.97 cm x 21.6 cm x 24.1 cm) 11.0 lb. (4.99Kg) without battery; and 14.25 lb. (6.46 Kg) with battery
Environmental	Operating temperature: 0-36°C, 32-97°F 0-90% relative humidity, non-condensing

- 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.