

## 8506 Handheld Airborne Particle Counter

- Industry's highest concentration of 15,000,000 particles/Ft<sup>3</sup> @ 10% coincidence loss
- Ideal for use in research, industrial health & safety, indoor air quality and cleanroom applications
- >10 hours continuous operation on a fully charged battery
- Industry's first Sleep Mode and Power Conservation Mode with intelligent battery
- The most comprehensive internal self-diagnostics of any handheld particle counter
- Real-Time Meter detects particle contamination sources with visual and audible indication
- Internet of Things (IoT) communication allows for network or cloud-based data options

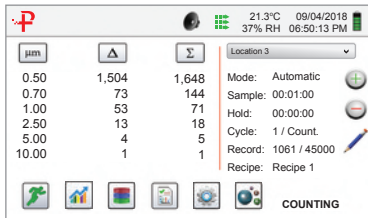


The Particles Plus 8506 Handheld Particle Counter measures 0.5  $\mu\text{m}$  to 25.0  $\mu\text{m}$  with a flow rate of 0.1 CFM (2.83 LPM). Easy to configure, this instrument displays up to 6 user-selectable size channels as well as temperature and relative humidity. View data and generate ISO 14644-1, EU GMP Annex 1 or FS 209E reports on screen or via printer, USB key, real time through its versatile output options, or export to Particles Plus data-download software. Particles Plus counters can be controlled and monitored remotely via web browser. The 8506 mass concentration mode approximates density in  $\mu\text{g}/\text{m}^3$  and allows for density and refractive index corrections to ensure accuracy

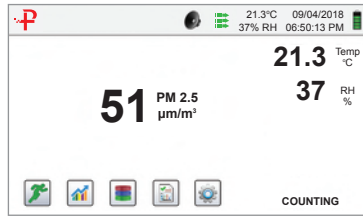
All Particles Plus counters meet ISO 21501-4 and JIS B9921. The 8506 ensures compliance with an on-board pulse height analyzer.

### Features and Benefits

- Measures 0.5 to 25.0  $\mu\text{m}$
- 0.1 CFM (2.83 LPM) flow rate
- Long life laser diode technology
- Measures up to 6 channels of simultaneous data
- Approximates mass concentration in  $\mu\text{g}/\text{m}^3$  with density & refractive index corrections
- Integrated handle for one-handed operation
- Large easy-to-use icon driven color touch screen display
- Temperature and relative humidity probe included
- Stores up to 45,000 sample records, 1,000 sample locations and 50 recipes
- Annotation function allows user to save 32 character notations to a sample record
- Remote diagnostics allows for remote service investigation through the Internet
- Easy configuration and transferable from instrument to instrument
- Connect using Ethernet, USB or (optional) Wireless 802.11 b/g, RS 485 or RS232
- Displays and externally prints reports for ISO 14644-1, EU GMP Annex 1 and FS 209E
- Internal audible alarm with comprehensive alarm management
- User-definable reports including ISO-14644, EU GMP Annex 1, & FS 209E
- User-selectable channel sizes
- Complies with ISO 21501-4 and JIS B9921 standards
- Easy to clean and wipe down with minimal particle traps
- Seamless integration into a facility monitoring system
- Lightweight high-impact injection molded plastic enclosure
- 2 year warranty. Extended warranties available.



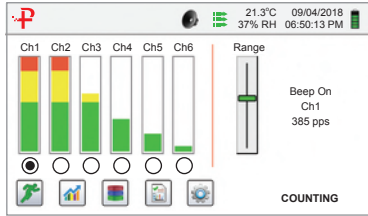
4.3" Color Touch Screen



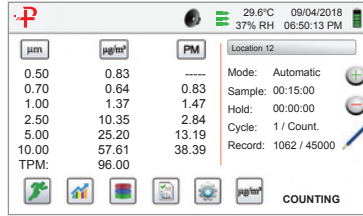
Configurable Environmental Sensor Display



Icon Driven Menus for Ease-of-Use



Real-Time Meter Pinpoints Particle Sources



Simultaneous Display of Multiple PM Sizes



Control, & Manage from a Remote Device

## Specifications

|                             |   |
|-----------------------------|---|
| <b>Model</b>                | <b>8506</b>   |
| Size Range                  | 0.5 to 25.0 µm  |
| Size Channels               | Factory calibrated at 0.5, 0.7, 1.0, 2.5, 5.0, 10.0 µm variable binning   |
| Flow rate                   | 0.1 CFM (2.83 LPM)  |
| Concentration Limit         | 15,000,000 Particles/ft <sup>3</sup> @ 10% coincidence loss   |
| Battery Run Time            | >10 hours continuous operation  |
| Light Source                | Long life laser diode   |
| Counting Efficiency         | 50% @ 0.5 µm; 100% for particles >0.75 µm per JIS   |
| Zero Count                  | <1 count / 5 minutes (<2 particles/ft <sup>3</sup> ) (per ISO 21501-4 & JIS)  |
| Count Modes                 | Real-Time Meter & graph, cumulative/differential count/m <sup>3</sup> & count/ft <sup>3</sup> , and mass concentration (PM)   |
| Count Alarms                | 1 to 9,999,999 counts   |
| Calibration                 | NIST traceable  |
| Display                     | 4.3" (10.9 cm) WQVGA (480x272) color touch screen   |
| Printer (Optional)          | External thermal printer.   |
| Vacuum Source               | Internal pump with automatic flow control   |
| Filtered Exhaust            | Internal HEPA filter  |
| Number of Channels          | 6   |
| Custom Size Channels        | Calibration for custom size channels available  |
| Audible Alarm               | Adjustable built-in alarm   |
| Battery                     | Removable Li-ion  |
| Battery Recharge Time       | 4 hours within instrument (<2 hours with external battery charger)  |
| Reports                     | ISO 14644-1, EU GMP Annex 1, FS 209E  |
| Recipes                     | 50 user-configurable recipes  |
| Communication Modes         | Ethernet and USB  |
| Optional Communication Mode | Wireless 802.11 b/g, RS485 or RS232   |
| Environmental Sensor        | Includes temperature and relative humidity probe 32° to 122°F (0° to 50°C) ±1°F (0.5°C), 15-90% ±2% relative humidity   |
| Alarm                       | Alarms on counts for all particle sizes, low battery, sensor failure, environmental sensors and flow  |
| Standards                   | ISO 21501-4 and JIS B9921   |
| Calibration                 | Recommended minimum once per year   |
| External Surface            | High impact injection molded plastic  |
| Dimensions (L x W x H)      | 10" x 5" x 4.5" (25.4 cm x 12.9 cm x 11.4 cm) includes handle and does not include probes   |
| Weight                      | 2.2 lb (1.0 kg)   |
| Accessories                 | Operating manual on USB flash drive, isokinetic probe, temperature relative humidity sensor, purge filter, battery, data download software, USB cable, power supply & cable |
| Optional Accessories        | Printed manual, carrying case, spare battery, external battery charger, external printer and isokinetic probes, IMS-RT monitoring system                                    |
| Buffer Memory               | 45,000 sample records (rotating buffer) including particle count data, environmental data, locations and times. Scrollable on screen or printout                            |
| Sample Locations            | Up to 1,000 locations 20 characters long  |
| Sample Time                 | 1 second to 99 hours  |
| Power                       | 110 to 240 VAC 50/60 Hz universal in-line power supply  |
| Operating Conditions        | 41° to 104°F (5° to 40°C) / 20% to 95% non-condensing   |
| Storage Conditions          | 32° to 122°F (0° to 50°C) / Up to 98% non-condensing  |
| Warranty                    | 2 Years. Extended warranties available.   |

Patents US 9,140,638, US 9,140,639, US 9,157,847, US 9,158,652, US 9,677,990. Additional Patents Pending.

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