

Airborne Particle Counter ZR-1631/1661

Consistent precision,
extraordinary experience.



Introduction

ZR-1631 and 1661 are new generation of portable particle counters from Junray, the new design brings an unparalleled user experience. It supports simultaneous monitoring of six channels of airborne particles, with high flow control accuracy, provides the ultimate data accuracy. The new user interface provides good interactive experience, it can help you complete the cleanliness testing work conveniently and efficiently.

Features

- 21 CFR Part 11 compliance
- Supports three-level user management and audit trail
- 8-inch color touch screen, fast-response speed software
- Hot-swappable long life lithium batteries
- Supports fingerprint recognition, one touch to login
- Supports voice input and voice reminders
- Colorful light strip notification
- Supports preset schemes and create result reports
- Optional bar code scanner, help to trace test room easier
- Built-in thermal printer supports auto-print
- Calibrated by Junray calibration setup, all values are traceable
- Compact, lightweight, portable and rugged

Applications

- Pharmaceutical and biologicals production
- Food, beverages, and cosmetic production
- Isolator and other controlled environments
- HEPA filter and filter materials production
- HVAC system and filter verification
- Facility cleanliness validation and monitoring

Reference standards

- ISO 14644
- GMP (2022)
- Federal Standard 209E
- Schedule M
- ISO 21501-4:2018
- JIS B 9921:2010

Packing List

- ZR-1631/1661 Host
- Carrying case
- HEPA filter
- Iso kinetic sampling kit
- Conductive silicone rubber tube
- Power adapter
- Documents
- Other accessories



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Benefits

Complete data integrity and traceability



- 21 CFR part 11 compliance, supports three-level user management with assignable authority. Combine with audit trail, provides complete data security and traceability.
- Supports electronic signature, ensure the data reliability.
- Create unmodifiable PDF format result report.



- Users can set fingerprints for rapid login, operation auditable.
- Various communication interfaces allow for connection to MES or printers, enabling real-time data upload.

Efficient and intelligent interaction



- Optional barcode scanner for entering sampling scheme.
- Colorful light strip indicates device status.
- Fast-response speed provides smooth using experience.
- Schemes can be synchronized among multiple devices to ensure uniform standards.



- Voice input and broadcast notifications.

Friendly in-situ application

- Preset ISO/GMP standards, automatic UCL calculation, one touch to create report.
- Show concentrations graph in real-time, the monitoring process is visual. Supports voice, light strip, beep and display multiple notifications and alarm methods.
- Large storage can preset 20,000 scheme information.
- Support up to 2 batteries, hot swapable and long life.



Rugged design and easy to maintain

- High quality wheeled carrying case provides strong protection and good portability.
- SSL 316L enclosure, corrosion-resistant, can be directly wiped with alcohols and other commonly used disinfectants.
- Purge function for rapid self-clean, HEPA-filtered exhaust brings no pollution.
- Self-check the status of key components to provide support for preventive maintenance.



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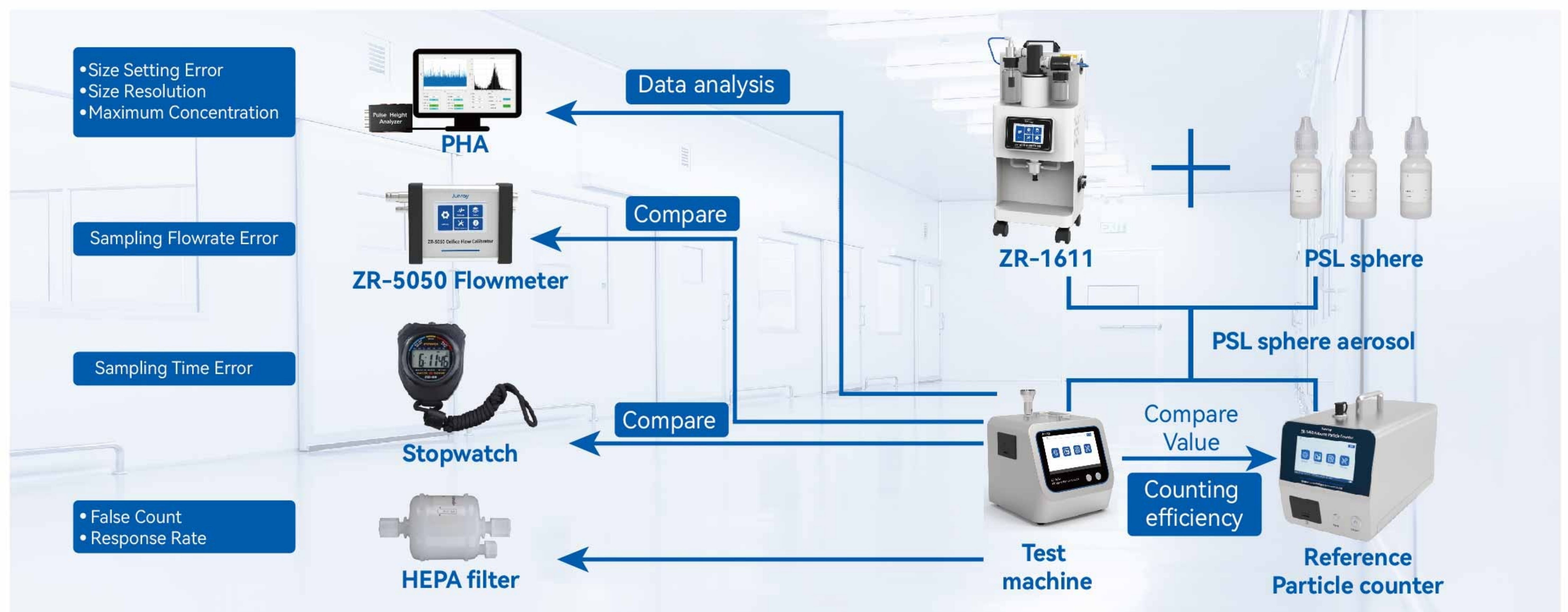
Calibration

Capture every pulse signal made by particle matter
The traceable calibration solution Junray can offer

According to <ISO 21501-4 Determination of particle size distribution — Single particle light interaction method Part 4: Light scattering airborne particle counter for clean spaces>, as a laser-based particle detector, the particle counter should be calibrated using standard particles and will trace to reference particle counters and basic pulse electrical signals.



As a calibrator supplier, Junray could supply a complete calibration solution for particle counters.



Until now, Junray has helped more than 30 ISO 17025 accredited calibration labs established the calibration ability, and we are actively promoting to the global market. Now, Junray particle counter can pass calibration by CNAS, KOLAS, NATA, KazStandard accredited labs.



Service

Focused on particle detection around 20 year, Junray team has rich application experience. We are well aware of industry applications and can provide comprehensive training.

As a manufacturer, we are familiar with every component of the instrument. Whenever you encounter any problem, we can always find the most suitable solution for you.

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Specifications

Parameters	Range	
Model	ZR-1631	ZR-1661
Flowrate	28.3 L/min ±2%	100 L/min ±2%
Channel sizes	0.3, 0.5, 1.0, 3.0, 5.0, 10.0 μm	
Counting efficiency	0.3 μm: 50%±20%, >0.5 μm: 100%±10%	
Size distribution error	0.5 μm and 5 μm channel: <±30%	
Size resolution	0.3μm: <15%	
Repeatability	≤10%FS	
Concentration indication error	0.5 μm channel: ≤±30%FS	
Light source	Laser diode	
Concentration limit	37,000,000 /m3, 10% coincidence loss	17,000,000 /m3, 10% coincidence loss
Zero count	<1 count/5 min	
Preset scheme	20,000 groups 20,000 rooms 20,000 recipes 200,000 locations	
Sampling delay	0~23h59min59s	
Sampling duration	1s~23h59min59s	
Sampling interval	0~23h59min59s	
Sampling cycle	1~1000 times	
Sampling mode	Manual, automatic, cumulative, differential, concentration, count number, UCL calculation, purge, self-clean	
Alarm and notification	Audible and visible: beep, voice, display, multi-color light strip	
Report	Create report complies with ISO, EU GMP, Fed Std etc	
Data export	Built-in thermal printer, support external dot matrix printer, export PDF report and data to USB drive	
Data integrity	3 level user management and audit trail, 21 CFR part 11 compliance	
Display	8-inch color touch screen	
Enclosure material	SSL 316L	
Exhaust filtration	Built-in HEPA filter (>99.97%@0.3 μm)	
Sampling data	Automatically store records; Supports USB flash drive export and embedded printer printing	
Communication	WIFI, Bluetooth, USB, RS485, RS232, RJ45, Analog, 4-20mA input	
Power supply	DC 15V	
Battery	About 8 hours (two batteries), hot swappable	
Noise	≤60 dB(A)	
Language	English and Chinese	
Dimension	(L252×W172×H287) mm	
Weight	About 5.6 kg (without battery), each battery 0.45 kg	
Power consumption	≤ 120W	≤ 180W
Working condition	5~35°C, 5-90% RH no condensation	
Storage condition	-20~50°C, ≤ 95%RH	

Associated device



ZR-G07 Particle Diluter



ZR-G08 High Pressure Diffuser