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Laser Particle Size Analyzer

The laser particle size analyzer utilizes the scattering phenomenon of particles to light, deducing the particle size distribution of the measured particles based on the distribution of scattered light energy. By integrating and optimizing optical, mechanical, electronic, and computer systems, this instrument achieves rapid and accurate measurement of particle size distribution in solid powders or emulsions. It can output the particle size distribution table, distribution curve, average particle size, median diameter, specific surface area, etc., through supporting software. It features intuitiveness, good repeatability, a wide dynamic range, and simple and convenient operation.

Characteristics:

- Automatic testing technology: One-button operation, simple and convenient.
- High-performancelaser: Stable output, good monochromaticity, high efficiency, significantly improving measurement accuracy.
- High-performance stable detectors: Up to 80 (BGD 250) or 92 (BGD 251).
- High-performance software: Accurate testing for samples with single, double, or multiple peaks.
- Comprehensive sample preparation system: Includes automatic circulation, ultrasonic dispersion, stirring, automatic water intake, automatic cleaning, and dry burn prevention, suitable for all samples, ensuring full dispersion and accuracy and repeatability of test results.
- Automatic centering system: Keeps the instrument in optimal condition.
- Fast sampling speed: Large amounts of data effectively reduce the impact of a few abnormal data on repeatability.
- Random function recognition technology and high-speed pre-amplification technology: Maintains stable instrument signals.
- Strict calibration with standard samples before leaving the factory: Ensures accurate and reliable test results.
- Unique negative pressure detection technology: Prevents lens contamination.

Additional Features and Functions of BGD 251 All-in-One Laser Particle Size Analyzer:

- Positive and negative Fourier patented optical path technology + inclined sample cell technology: Enhances measurement range and improves the accuracy and resolution of fine particle measurement.
- Advanced dry sample dispersion system: Sample feeding, air intake, pressure testing, concentration testing, and sample collection are all controlled by a computer, ensuring test stability.
- Refractive index measurement function.
- PQ verification and data diagnostic functions.
- Intelligent dual water level system: Multiple safeguards ensure reliable operation of the instrument.

BGD 250

Solvent-based Circulation
Dispersion Sampling System

BGD 251

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Main Technical Parameters

Ordering Information → Technical Parameters ↓	BGD 250 Laser Particle Size Analyzer	BGD 251 All-in-One Laser Particle Size Analyzer
Measuring Range	0.1-1000μm	0.02-2600μm (Wet) 0.1-2600μm (Dry)
Repeatability	≤1%（standard sample D50）	≤0.5%（standard sample D50）
Accuracy	≤1%（standard sample D50）	≤0.5%（standard sample D50）
Measure Time	≤ 10 s	
Solution	A Grade（JJF 1211-2008，dual-wave、multi-wave）	
Measure Methods	With SOP automatic measuring, automatic centering, automatic cleaning etc.	
Feeding	Automatic wet circulation dispersion sampling system	Automatic wet circulation dispersion sampling system & Automatic dry dispersion sampling system
Automatic Wet Circulation Dispersion Sampling System	◆ Water: 600ml, flow rate 3000-8000ml/min ◆ Solvent: 80 or 200ml, flow rate 1500-4000ml/min ◆ Automatic water intake, automatic cleaning, automatic drainage, overflow protection, etc. ◆ Ultrasonic: 50W adjustable power, with dry burn prevention design ◆ Bottom: Tilted design to prevent particle sedimentation; blade spindle designed to prevent particle aggregation ◆ Dual water level sensors	
Automatic dry dispersion sampling system	---	◆ Dispersion medium: Compressed air or inert gas ◆ Air compressor pressure: 0.1-0.8MPa, continuo-usly adjustable ◆ Gas flow rate: 400-6000L/min ◆ Sample quantity: 0.2g ~ 10g
Detectors	Located in front and side, total 80 purchase	Located front, side and back, total 92 purchase
Laser and lifetime	High-power fiber-optic laser, lifetime > 25000 hours	High-power fiber-optic polarized laser, lifetime >50000 hours
Report Format	PDF、BMP、Word、Excel、JPG	
Optical Path System	Single lens	Positive and negative Fourier, inclined sample cell
Refractive Index	×	✓
Operation System and Interface	Win7/Win10；USB2.0 or 3.0	
Power Supply	100-240VAC，50/60Hz，4A	
Main-body Size and Weight	705mm×318mm×295mm；22kg	705mm×318mm×295mm；23kg
Optional Accessories	BGD 1140 ---- Solvent-based circulation dispersion sampling system(suitable for all organic solvent media, composed of stainless steel, polytetrafluoroethylene, and quartz sample cell, with a volume of 80mL) BGD 1141 --- Wet micro-testing window component (suitable for wet particle size testing of precious samples, with media including solvents, water, oil, etc.)	