

WINNER

Winner Particle Size Analyzer Since 1985

THE LEADER OF PARTICLE TESTING TECHNOLOGY IN CHINA

Jinan Winner Particle Instrument Stock Co., Ltd. is a national high-tech enterprise integrating R&D, production and sales of particle testing related instruments and equipment (Securities Name: "Winner Particles", stock code 430410). Leading by technology research and development, Winner has won the National Key New Product Award, the Gold Award of the First China Science and Technology Expo, the Third Prize of Shandong Science and Technology Progress Award, the National High-tech Enterprise and other honorary titles, and has passed CE, SGS, CNAS, ISO9001 international quality system, National Science and Technology SME Innovation Fund Project and other certification acceptance.

The founder of the company, Professor Zhongjing Ren, is a national expert. Since the beginning of the National Seventh Five-Year Science and Technology Project in 1982, Winner invented the 1st particle size analyzer in China, which made up for the lack of domestic particle size analyzers, and developed and produced various particle size analyzers. It has a history of more than 30 years. By now, There are more than 30 national patents, including laser optical path research and development, particle size distribution testing and dispersion invention technology patents, utility model patent technology and self-owned software calculation patent technology, software copyright, etc.

There are more than 10 kinds of products, laser particle size analyzer, nanometer particle size analyzer, spray particle size analyzer, microscopic image particle size analyzer and online particle size analyzer can test the particle size distribution and image morphology of emulsion, suspension, powder, spray of nanometer and micrometer, and are widely used in a variety of product quality control, product research and development of manufacturers in the industry, as well as material research and development applications of the China National Medical Device Inspection Institute and domestic and foreign universities, Its high quality, strong technical support and services to get good feedback from the users, the China Industry's most innovative strength of the enterprise, The honor of China particle testing technology leader, and the top 50 enterprises in Asia etc.

Survive by quality, develop by innovation, adhere to the product concept of excellence and technology-led, Winner strives to provide customers with more accurate, more stable and durable instruments!

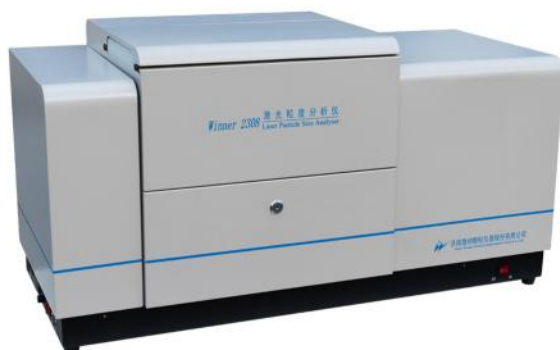


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Winner2308B

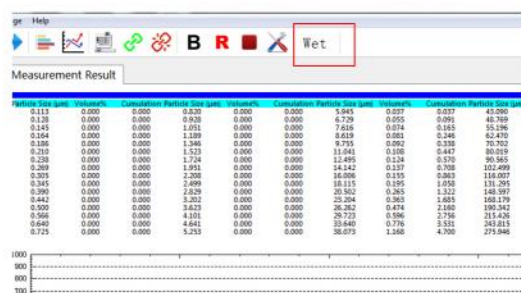
Intelligent Wet and Dry Laser Particle Size Analyzer

Winner2308 intelligent full automatic wet&dry laser particle size analyzer adopt laser diffraction theory(Mie and Fraunhofer diffraction), measure size is from $0.01\mu\text{m}$ to $2000\mu\text{m}$ (dry $0.1\mu\text{m}$ - $2000\mu\text{m}$), Which offer reliable and repeatable particle size analysis for a diverse range of applications.It use dual-beam& multiple spectral detection systems and side light scatter test technology to significantly improve precision and performance of test, It's the prior choice for industrial production quality control departments and research institutions.

Advantages:

● One-click switching mode between dry and wet:

This instrument integrated wet and dry dispersion test in one, successfully resolved the problem of dry and wet technology integration, realize one key to switch.



● Smart operation mode:

With intelligent automatic mode of operation, to achieve a key test, as long as according to the prompt addition of sample, click the "test", all process will be complete automatically,

● Dual optical path design

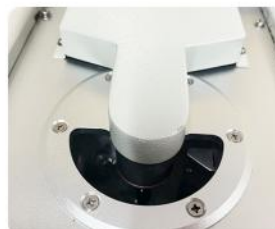
The dual-spectrum design and dual-laser orthogonal light increase the measurement range, and the accuracy reaches $0.01\mu\text{m}$ ~ $2000\mu\text{m}$ (wet method) and 0.1 ~ $2000\mu\text{m}$ (dry method). The high-sensitivity, high-resolution photoelectric probe system ensures the collection of all particle scattered light signals and ensures the accuracy of test data.



● Full built-in Sample Wet and dry dispersion system

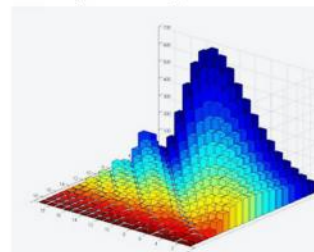
Auto wet dispersion system,set mechanical stirring, ultrasonic dispersion, and circulation path in one,SOP realize one key operation.

For dry dispersion system, Turbulence dispersion patented technology and Normal shock shearing effect, make particles sufficient dispersion,ensure good test.



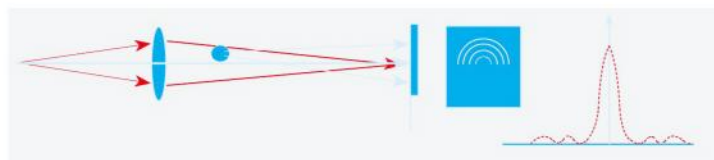
● Advanced optical path design:

Using micro-nano patented concentrated light Fourier transform technology and dual-spectrum optical path design, scattered light is not constrained by the lens aperture.



● Unconstrained free fitting technique:

Using the original unconstrained free fitting technology of Micro-Nano, the particle size analysis is not limited by any function, and can truly reflect the distribution state of particles.



Test principle

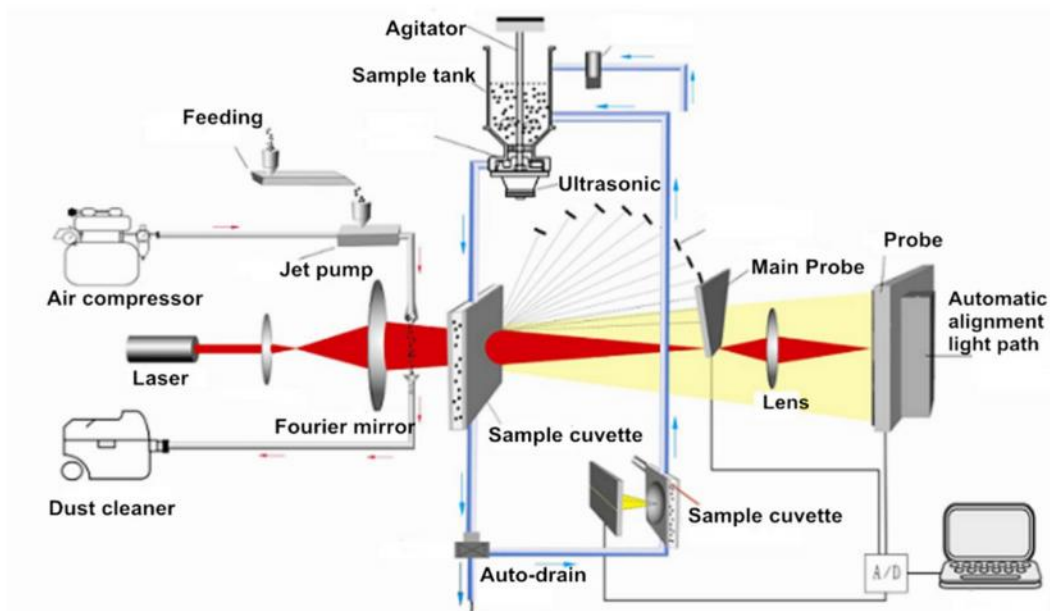


Figure-Winner2308 scheme

Application

Widely used in cement, ceramics, medicines, lotions, paints, dyes, pigments, fillers, chemicals, catalysts, drilling mud, abrasives, lubricants, coal, sediment, dust, cells, bacteria, food additives, pesticides, explosives, graphite, photographic materials, fuel, ink, metal and non-metal powder, calcium carbonate, kaolin, coal slurry and other powdered materials.



Technical parameter:

Model Name		Winner2308B
Principle		Compliance with 21 CFR Part 11 Laser diffraction principle
Analysis		Mie and Fraunhofer scattering
Detector Arrangement		Log-spaced array, test angle from 0.015 degree to 145 degree
Measuring Range		Wet:0.01μm-1200 μm Dry: 0.1μm-1200μm
Silicon Photodetectors		84 pcs
Accuracy error		Wet≤0.5% Dry≤1.0% (CRM D50)
Repeatability error		Wet≤0.5% Dry≤1.0% (CRM D50)
Light source		High performance semiconductor red laser (λ=639nm) P>3.0MW Auxiliary green solid semiconductor laser (λ= 405 nm) P>2.0MW (available)
Optical path Effective focal length		Converging light Fourier transform optical path 500mm
Laser Safety		Class 1
GMP		Optional
Wet dispersion	Ultrasonic	Frequency:40KHz Power:60W, Time: ≥1S Revolutions Speed: 0-3000RPM (Adjustable)
	Stir	Rated Flow:30L/min Rated Power:70W
	Circulate	Prevent water overflow and effectively protect the instrument.
	Water level sensor (UK)	Volume:1000mL
	Sample tank Micro-Sample cuvette	Volume: 10mL (Available)
Dry dispersion		Dry-turbulence dispersion patent technology, normal shock wave shear technique
Feeding Speed		Adjustable (Variable speed knob)
Operation Mode		Full automatic / manual control, freely choose
Dispersion medium		Compressed Air, pressure: 0 to 6 bar
Optical bench alignment system		Full automatic, precision is up to 0.2um
Full Test Speed per time		Wet: <2 Min Dry : <1min Interval time per test result :500ms
Outer dimension		L104cm×W44cm×H54cm
Net Weight		58Kg

Report interpretation

Header section:

Instrument parameters , sample information

Characteristics of particle size:

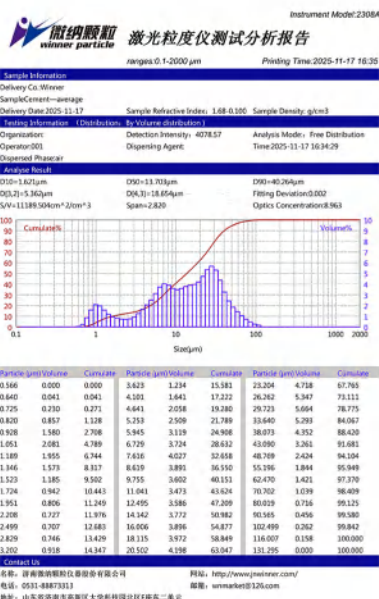
The value of particle size characteristics

Particle size chart:

Cumulative distribution and frequency distribution of particle size. It's corresponding to data of particle size distribution table

Particle size table;

Cumulative distribution and frequency distribution of particle size



Our some customers

1) Institutions of higher learning and research institutes

Peking University, Tsinghua University, Renmin University of China, Zhejiang University, Shandong University, Jiangsu University,
Tianjin University, Australian University, Indian Institute of Technology, Mongolia University, Beihang University, Southeast University,
China Agricultural University, Shanghai Jiaotong University, Xi'an Jiaotong University, Nanjing University,
The University of Hong Kong, University Of Wollongong, Dalian University of Technology, Ocean University of China,
PSG College of Technology, Institute of Engineering Physics, Beijing Institute of Technology,
Shanghai Medical Device Testing Institute, Guangdong Provincial Medical Device Testing Institute, Beijing Medical Device Testing Institute,
Huazhong University of Science and Technology, University of Science and Technology Beijing,
Chinese Academy of Sciences, Institute of Metal Research, etc. Nanjing University of Aeronautics and Astronautics,

2) Industrial enterprises

Shougang Group Co., Ltd., Jiangsu Shagang Group Co., Ltd., Pangang Group Co., Ltd., Shanghai Huayi Polymer Co., Ltd.,
Jiaozuo Qianye Cement Co., Ltd., Shanshui Cement Group Co., Ltd., China National Petroleum Corporation, Shengli Oilfield,
China Ping An Coal Group, BYD Co., Ltd., Tianneng Battery Group Co., Ltd., Chaowei Power Supply Co., Ltd.,
Guangzhou Libai Enterprise Group Co., Ltd., Nippon Paint Co., Ltd., Zhenjiang Titanium Dioxide Co., Ltd.,
Moze biological Co. Ltd., Korea Conformity Laboratories, PPG Powder Coating Co., Ltd.,
Otsuka Pharmaceutical, SIM (USA) INTERNATIONAL INC., Mundipharma. India,
TAIYO INK. Japan, Heraeus. Germany, Osram lighting. Germany,

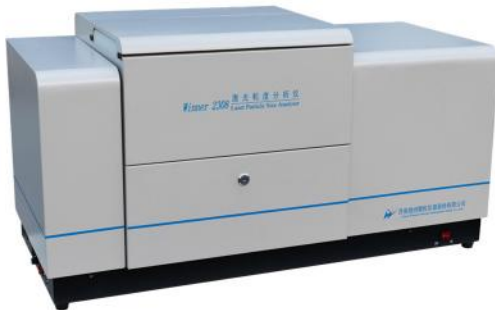


Winner Particle Instrument Quality Assurance

Provide customers with the most professional particle testing solutions

■ Long service time

Laser particle size analyzer, as an analysis instrument, it doesn't have consumable parts except for the stirring parts, it has no transmission parts and no wearing parts; high performance laser, with a long service time of more than 25000 hours, high sensitive photodetectors is a core part, it will not be easily damaged if operated normally; the photodetector array is a key part, as long as it is used properly, it will not be automatically damaged. Therefore, users do not have to worry about the service time of winner instruments at all. According to the customer feedback from Jinan winner return visit, the instrument with the longest service life of the product is more than 15 years.



■ Low failure rate

The after-sales department Jinan Winner has made statistics on the maintenance failures of the sold instruments, and the failure rate of the instruments is within 3%.



■ High industry recognition

After 30 years of technical precipitation, Jinan winner has continuously improved its technology in the R&D and production process of instruments according to the characteristics of different industries. With its excellent product quality and high-quality service, it has been highly recognized by practitioners in the powder industry.

