Introduction Of Intelligent Wet Laser Particle Size Analyzer

Model No.: Winner2005A

Application:

Abrasives, adhesives, agrochemical,barite, Batteries, Bentonite, Boron Carbide, Brucite, Bubble, Calcite, Calcium Carbonate, Carbon Black, Catalysts, Cement, Ceramics, Chemicals, Clay, Coal, Coatings, Corundum, Cosmetics, Diamond Powder, Dolomite, Diatomite,Emulsion, Environmental, Explosives, Ferrite, Flour, Fluorescent, Fluorite, Food & Beverage, Food Additive,Graphite, Grinding, Inks, Kaolin, Medicine, Metal Powder, Mica, Milling, Minerals,Oxides,Paints, Paper, Petrochemical, Pharmaceuticals, Pigments, Plaster, Plastics, Polymers,Quartz,Refractory, Resins, Silica, slurry, Soil Sediments, Starch, Sulfur, Synthetics, Talc, Toners, Tourmaline,Wollastonite, Zeolite, Zirconium Silicate etc etc. Industry.

Main Specifications:

Model Name		Winner2005A / Winner 2005B
Standard		ISO13320-2020，GB/T19077.1-2016，Q/0100JWN001-2013,
Measuring principle		Laser Light Scattering
Analysis		Mie and Fraunhofer scattering
Size range		0.01μm-1000μm
Detectors		87 pcs/Log-spaced array/High sensitive/Photoelectric probe
Accuracy error		<1% (Deviation of D50 on national standard sample)
Repeatability error		<1% (Deviation of D50 on national standard sample)
Laser		High performance Fiber Laser λ = 632.8nm, p>2mW
Wet dispersion	Ultrasonic	Frequency:40KHz Power:60W, Time: ≥1S
	Agitator	Revolutions Speed: 0-3000 RPM (Adjustable)
	Circulation	Centrifugal pump,Rated Flow:8L/min Rated Power:10W
	Sample tank	Volume: 450mL
Operation mode		Manual and Full automatic
Optics		Red light source/Reverse Fourier (convergent beam)
Optical alignment system		Full automatic optical path alignment system
Software function	Analysis mode	Free Distribution, R-R Distribution, Logarithm Normal Distribution, Mesh number classification etc.
	Statistic Method	Volume Distribution, Quantity Distribution
	Statistic Comparison	Several Testing Results of samples Different batches of samples testing result, Samples before and after processing, Test result of samples in different time.
	User-defined Analysis	Figure out percentage according to the particle size Figure out particle size according to the percentage Figure out percentage according to the particle size range Meet demands of representation of particle test in different industries
	Test Report	Word, Excel,JPG, Text and etc.
	Multiple-language Support	Multiple language Support
	Intelligent operation	Automatically control water inflow, dispersion,test and analysis.Better Repeatability after remove human-factor
Testing speed		<2min/time (including all the procedures) fastest measuring time<10S
Running temperature		15 ℃ -35 ℃
Outer dimension		L85cm*W39cm*H45cm
Net weight		40Kg

Main Features:

1,Advanced design of light path:
A patented technique of Fourier transform of converging light released the scattered light at large-scattering-angles from the restriction of the aperture of the Fourier lens. The focal length is reduced to enhance the resolution of the instrument, and ring shaped of multi-element silicon photo-diode ensure gathering all the light signals of particles, highly improve the resolution.

2,Built-in intelligent liquid dispersion units:
We carefully aligned the stirring set-up, the ultrasonic dispersing unit and the sample circulation pipes, and fixed them inside the instrument. Such a built-in design effectively prevents the inhomogeneous dispersion and sedimentation of big particles, which can be observed in the designs that these dispersing units are separated from the instruments, where the sample circulation pipes are therefore too long, The sample will be sufficiently dispersed.

3,Unconstrained free fitting analysis patent techniques:
The particle analysis software uses a unique unconstrained data fitting analysis patent technique that we developed to obtain data of real particle size distribution, this is particularly important for researchers.

4, Modern measurement control:(Intelligent SOP Operation)
Users can perform all measurement procedures by simply operating on the PC and have ideal results in a very short time.

6,User-friendly Operation:
manual mode and the automatic mode, freely choose, to measure according to the sample features. In some conditions (e.g. the sample have unknown features or there are special requirements for the measurements), users can make a test measurement in the manual mode first, and after having an idea of the sample features and the measurement conditions, measure the samples in the automatic mode.

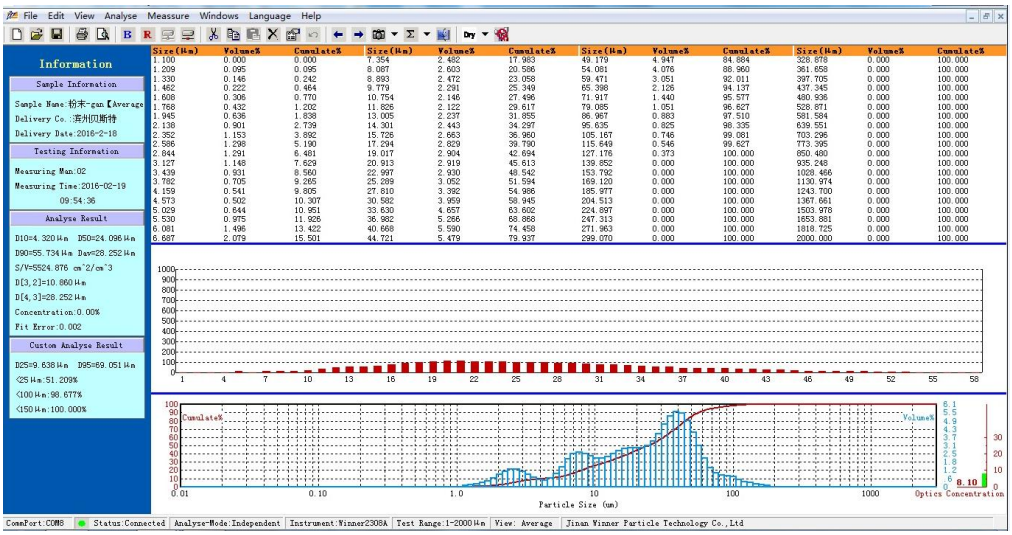
7, Three dimension automatic light path alignment system:
A precise four phase hybrid stepping motor automatically aligns the optical path and can adjust it at any moment, precision is up to 0.1um, This releases users from manual adjusting the optical path and improved accuracy and stability of the measurement results.

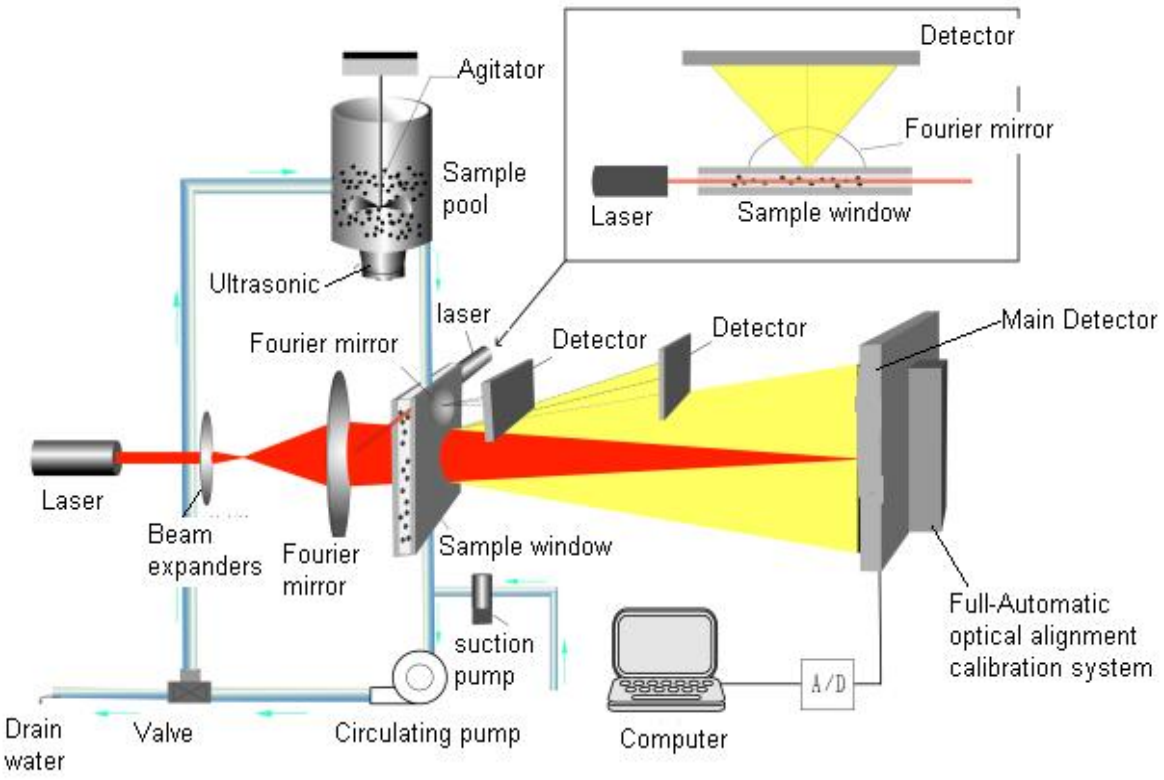
8,Quick measurements:
set “ automatic” mode, all operation procedures are performed automatically,automatic water supply, automatic ultrasonic sample, stirring, circulation,background testing, sample

testing,analysis , draining and cleaning, which significantly reduces the time for measurements, the full process < 2 minutes.

9,Data analysis:
Errors in the data are rejected and the measurement results are automatically processed. Manual data processing is not necessary and the output is more standard.

Ⅱ test analysis view
After testing, if necessary, to select records generated an average result, the system analyzes the formation of the recording. When the automatic mode test, without data processing, forming and maintaining a comprehensive system automatically analyzed test records.





Optical Path scheme

Patents Technology:

- Optical bench design is protected by patent No.- ZL 2014 2 0378380.8,
- Three dimensional-optical bench alignment system is protected by patent No.- ZL 2013 2 0835882.4.
- MIE scattering principle application patent No.- ZL 2013 2 0812021.4.
- Dual laser beam orthogonal application is protected by patent No.-ZL 2007 2 0025702.0
- Wet circulation installation is protected by patent No.-ZL2010 2 0593526.2