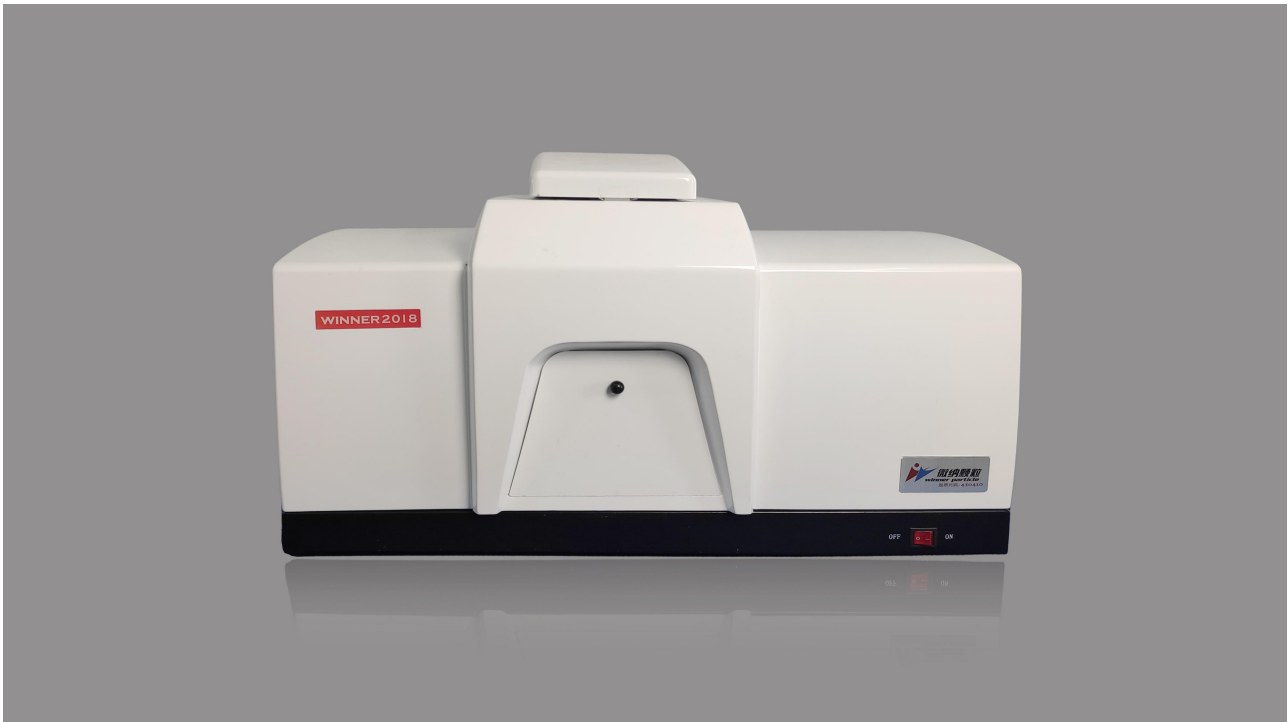


Introduction Of Intelligent Wet Laser Particle Size Analyzer

Model No.: Winner 2018



1. Profile

Winner2018 Automatic laser particle size analyzer, perform auto test, auto alignment, auto water supply, auto drainage, auto bubble removing, auto ultrasonic dispersion, auto cleaning etc., really realize one-key operation. It adopt full built-in sampling system, effectively prevents large particles sedimentation problems in the circulation pipeline, ensure good accuracy. It uses comprehensive Laser diffraction particle size measurement principle with highly sensitive ring-shaped photoelectric detector improving the test accuracy greatly, Original designed unconstrained free fitting software technology, a true reflection of the particle size distribution, to ensure truth and accuracy of the test results, its measuring range is 0.1 micron to 450 micron, more suitable for Testing of materials with narrow particle size distribution.

2. Main Specifications:

Model Name		Winner2018
Standard		ISO13320:2016, GB/T19077.1-2016, Q/0100JWN001-2013
Principle		Laser diffraction principle
Analysis		MIE scattering theory
Measuring Range		0.1 μ m-450 μ m
Channels Number		40 PCS
Accuracy error		<1% (CRM D50)
Repeatability error		<1% (CRM D50)
Light source		High performance Semiconductor Laser ($\lambda= 635\text{nm}$, $P>2\text{MW}$) Lifetime>25000hour
Dispersion Method	Ultrasonic	Frequency:40KHz Power:60W, Time: $\geq 1\text{S}$
	Stir	Revolutions Speed: 0-3000RPM (Adjustable)
	Circulate	Rated Flow:8L/min Rated Power:10W
	Sample Pool	Volume:350mL
	Micro-Sample Pool	Volume: 10mL (Available)
Operation Mode		Full automatic and manual control, freely choose
Report parameter		Particle size distribution table & graph, Average diameter, Median diameter, specific surface area etc.
Optical alignment system		Full automatic
Test Speed		<2mins for each time , classical test speed <15S/time
Environmental Requirement		Temperature: 5-35 $^{\circ}$ C Humidity : < 85%
Volume		L780mm \times W365mm \times H495mm
Net Weight		40Kg

2. Main Features:

1, Unique optical path patent technology, highly improve test resolution. 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 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 techniques:

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

4,Micro sample chamber (optional):

The capacity of the sample chamber is as small as only 10ml. This helps with measuring expensive/precious samples, or samples difficult to be dispersed within medium.

5,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,Fully automatic light path alignment:

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 only take 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.

10, Sample cell automatic ultrasonic cleaning function

Secondary dispersion of easily agglomerated samples ensures the accuracy of test results, and reduces the cleaning times of sample cell to ensure that the sample cell remain clean always.

3. Software Function

1, Analysis Mode

Free Distribution, R-R Distribution, Logarithm Normal Distribution, Mesh number classification etc. meet different demands of particle size statistic in different industries.

2,Statistic Method

Volume Distribution, Quantity Distribution

3,Statistic Comparison

Statistic Several Testing Results to compare and analyze

Get difference by compare test result of different batches of samples, samples before and after processing, and different time.

Have great practical significance to industrial raw materials quality control

4,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.

5,Test Report

Word, Excel,Photo(Bmp), Text etc.

6,Multiple language Support

Chinese&English (Others are available)

7,Intelligent Operation Mode

Automatically control water inflow, dispersion,test and analysis.

Better Repeatability after remove human-factor

4. Laser Particle Size Analyzer Application Field:

Winner2018 is widely used in metallurgy (metal oxides: alumina, aluminum hydroxide, zinc oxide, iron oxide, manganese oxide, lead oxide, etc.), non-minerals (calcium carbonate, talc, kaolin, diatomite, graphite powder, mica powder, nepheline powder, pyrophyllite, etc.), chemical industry (pigment: aluminum silver paste, filler, dye, paint, resin, plastic powder, synthetic rubber, photosensitive material, toner, carbon, ink, explosive, molecular sieve, ink, electronic material, flame retardants, fluorescent powders, foaming agents, silica, microsilica, papermaking: calcium carbonate, kaolin, etc.), pesticides (seed coating agents, powders, suspending agents, pesticides, herbicides, etc.), abrasives (Testing and inspection of powdered materials in industries such as silicon carbide, silicon nitride, emery, white corundum, brown corundum, micropowder, etc.), energy (coal water slurry, power plant desulfurization), environment (water quality, dust) and other industries.