

GaoHong-2308A Intelligent Wet and Dry Laser Particle Size Analyzer



1. Brief introduction:

GaoHong2308A intelligent full automatic wet & dry laser particle size analyzer adopt laser diffraction theory(Mie and Fraunhofer diffraction), measure size is from 0.01 μm to 2000 μm (dry 0.1 μm -2000 μm), 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.

2. Main Specifications:

Model Name		GaoHong2308A
Standard		ISO 13320-1:2009,GB/T19007-2016,Q/0100JWN001-2013 Compliance with 21 CFR Part 11
Principle		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-2000 μm Dry: 0.1μm-2000μm
Silicon Photodetectors		Wet:127 pcs Dry:100 pcs
Accuracy error		Wet<1% Dry<1% (CRM D50)
Repeatability error		Wet<1% Dry<1% (CRM D50)
Light source		High performance semiconductor laser($\lambda = 632.8\text{nm}$ $P > 2.0\text{mw}$) Auxiliary blue semiconductor laser ($\lambda = 405\text{ nm}$ $P > 2.0\text{mw}$)
Laser Safety		Class 1
Wet dispersion	Ultrasonic	Frequency: 40KHz Power: 60W, Time: $\geq 1\text{S}$
	Stir	Revolutions Speed: 0-3000RPM (Adjustable)
	Circulate	Rated Flow: 30L/min Rated Power: 70W
	Sample tank	Volume:1000mL
	Micro-Sample cuvette	Volume: 10mL (Available)
Dry dispersion		Dry-turbulence dispersion patent, 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
Test Speed per time		Wet: <2 Min Dry : <1min Typical measuring time<10S
Outer dimension		L40.94"×W17.32"×H21.26"
Net Weight		70Kg/154.32pound

3. Main Features:

1) Wet and dry sample dispersion system Integrated Design

Winner2308 intelligent laser particle size analyzer which is 1st set laser particle size analyzer integrated wet and dry dispersion test in one in China, it successfully resolved the problem of dry and wet technology integration, realize one key to switch, apply to test all the particle size distribution from 0.01 μ m-2000 μ m particles.

2) Intelligent full automatic operation system and manual operation mode, freely choose.

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, not only reduce the testing workload, but also eliminate the interference of human factors, to further improve the accuracy and authenticity of testing results.

Wet method: A key to complete water-supply, ultrasonic dispersion, circulation, testing, cleaning, data record, data analysis, save and print are automatically completed, only take 2 minutes.

Dry method: A key to complete the dust collecting, air supply, feeding, testing, data processing and other operation, take 1 minute.

3) Stable and unique optical path system patented technology

Converging light Fourier transform path system, enables scattering light be not restricted to the lens aperture limit, and Dual-laser orthogonal light technology make use of the semiconductor auxiliary laser extend the test angle from 0.015 degree to 145 degree, ensure receive all the angles of signals.

4) Automatic Optical path alignment System

The precision of four hybrid stepping motor in the automatic system of optical components, micro precision of 0.1 μ m, the instrument of light path is always at its best to eliminate manually on the light path and the troubles and difficulties but also enhance the accuracy and stability of test results.

5) Full built-in Sample dispersion system.

Auto wet dispersion system, SOP realize one key operation.

set mechanical stirring, ultrasonic dispersion, and circulation path in one, It ensures particles uniform dispersion and distribution, avoids many bad phenomenon, such as uneven distribution of particles, large particles deposit because of the long outer dispersing system tube, and it guarantees the representativeness of test result.

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

6) Instrument Software

Original Unconstrained free fitting patent technology collect scattering data during the measurement process, make particle analysis not be restricted by any functions, truly reflect particles size distribution, The instrument provide high precision data with 10Khz data acquisition time.

4. 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

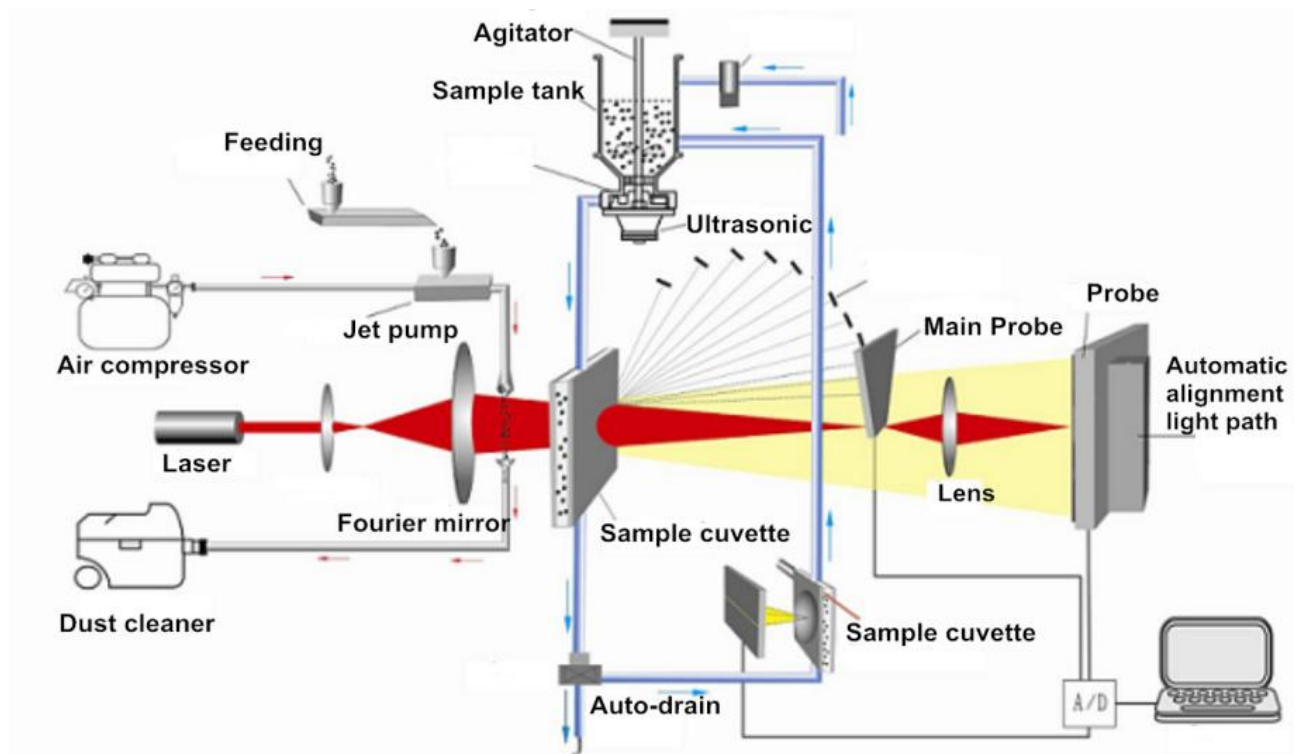


Figure-GaoHong2308 scheme

5. Application:

GaoHong2308 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.

6. Adopt 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.

Dry particle size analyzer full sealed sample cuvette application is protected by patent No.- ZL.2011 20267646.8.

Dual laser beam orthogonal application is protected by patent No.-ZL 2007 2 0025702.0

Powder dispersion pump design application is protected by patent No.-ZL 2007 2 0018648.7

Wet circulation installation is protected by patent No.-ZL2010 2 0593526.2

7. Packing List

Items	Unit	Quantity	Items	Unit	Quantity
Power cable	pcs	2	Quality card	pcs	1
COM cable	pcs	2	medical silica tube	meter	1.5
Oil-free air compressor	set	1	2A fuse	pcs	5
vaccum cleaner connector	pcs	1	15A fuse	pcs	5
vaccum cleaner	set	1	PTFE tape	box	1
PU tube	meter	5	USB transform cable	pcs	2
filter	pcs	1	Silica tube	meter	1.5
wrench 8/10	pcs	1	Brush for sample tank	pcs	2
wrench 17/19	pcs	1	Quartz sample cuvette	pcs	1
sampling spoon	pcs	2	Sample cuvette brush	pcs	2
Balloon for clean dry sample tank	pcs	1	Tool box	pcs	1
Cleaning paper	pcs	3	standard sample D50= 2.1μm	bottle	1
inner hexagon screwdriver	pcs	1	standard sample D50=110μm	bottle	1
small flathead screwdriver 3*75	pcs	1	Manual	pcs	1
Small flathead screwdriver 6*38	pcs	1	Warranty card	pcs	1
flathead screwdriver 5*75	pcs	1	Wrench 5.5/7	pcs	1
Software CD	pcs	1	Winner2308A PSA	pcs	1

GaoHong-2308B Intelligent Wet and Dry Laser Particle Size Analyzer



1. Brief introduction:

GaoHong2308B intelligent full automatic wet&dry laser particle size analyzer adopt full MIE scattering principle, measure size is from 0.01 micron to 1200 micron (dry 0.1-1200 micron), 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.

2. Main Specifications:

Model Name		GaoHong2308B
Standard		ISO13320:2009, GB/T19077-2016, Q/0100JWN001-2013 21CFR part 11
Principle		Laser diffraction principle
Measuring Range		Dry:0.1μm-1200μm Wet:0.01μm-1200μm
Channels Number		Dry:97 pcs Wet:120 pcs
Accuracy error		Wet<0.5%, Dry<1% (CRM D50)
Repeatability error		Wet<0.5%, Dry<1% (CRM D50)
Reproducibility error		Wet<0.5%, Dry<1% (CRM D50)
Light source		High performance semiconductor laser($\lambda= 632.8\text{nm}$ P>2.0mw) Auxiliary blue semiconductor laser ($\lambda= 405\text{ nm}$ P>2.0mw)
Wet Dispersion	Ultrasonic	Frequency:40KHz Power:35W, Time: $\geq 1\text{S}$
	Agitator	Revolutions Speed: 0-3000RPM (Adjustable)
	Circulation	Rated Flow:30L/min Rated Power:70W
	Sample tank	Volume: 1000mL
Operation Mode		Full automatic
Data Acquisition Rate		2KHZ
Optical alignment		Automatic
Test Speed		Wet: <2 Min per time, Dry : <1min per time Fastest measuring speed:10S
Operation environment		Temperature: 5-40°C, humidity: 0-90%
Computer required		Operation system: Windows XP,Win10, Win7 (32 bits/ 64bits), Core i3, 2G, hard disk 160G, USB port 3 pcs, RS232 serial port 1 pcs, D disk
Outer dimension		L36.2"×W17.32"×H19.69 "
Net Weight		58Kg/127.8pound

3. Main Features:

1)Automatic Wet and dry sample dispersion system Integrated Design

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.

2) Intelligent full automatic operation system and manual operation mode, freely choose

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, not only reduce the testing workload, but also eliminate the interference of human factors, to further improve the accuracy and authenticity of testing results.

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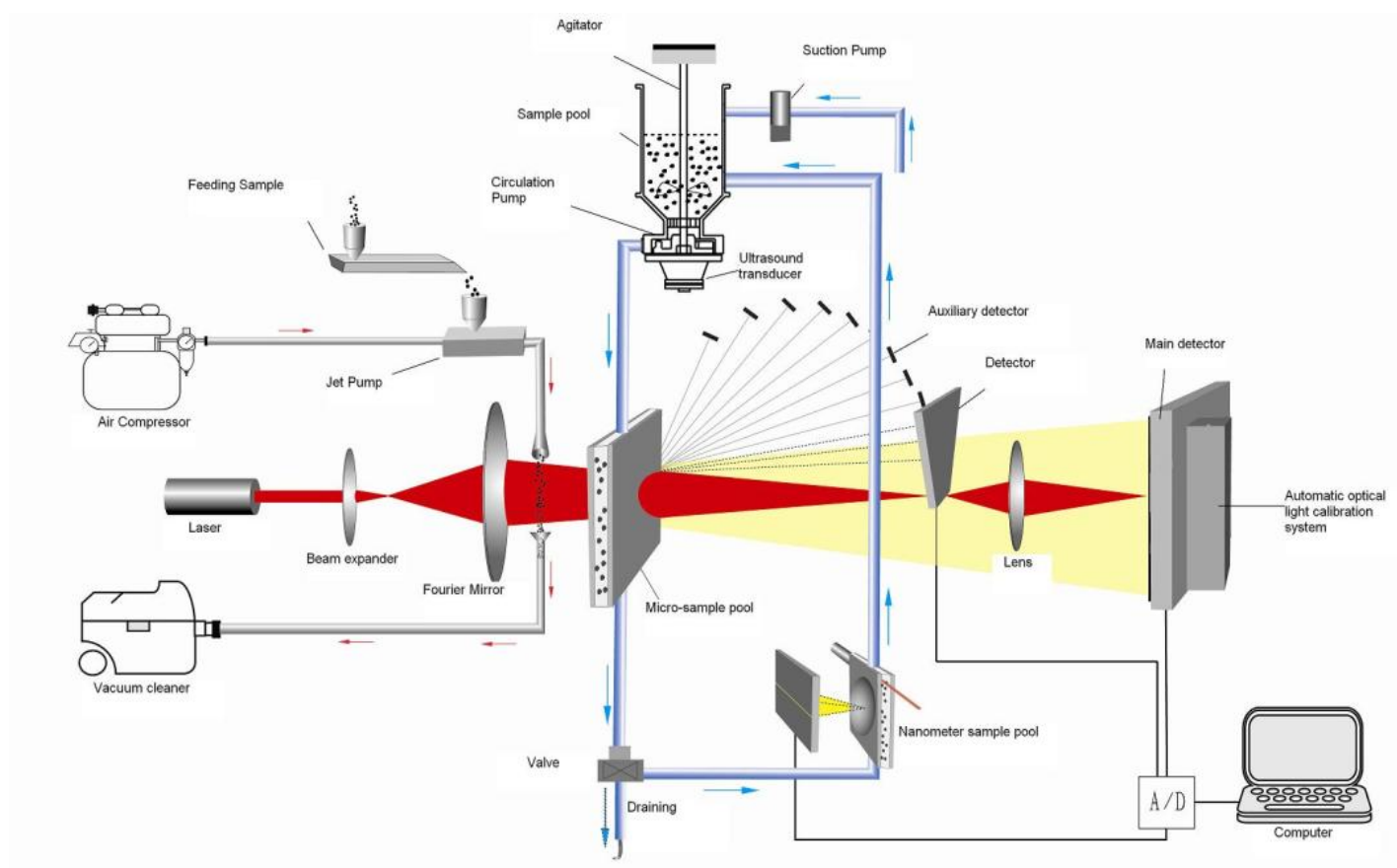
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