

## Quotation of Automatic- Laser Particle Size Analyzer(Wet-type)

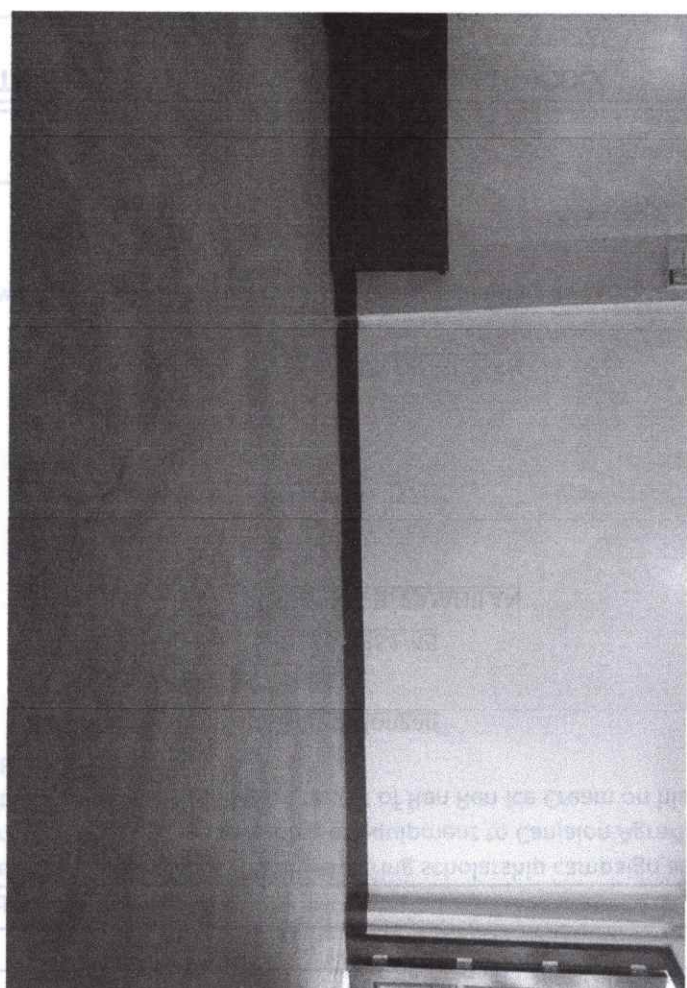
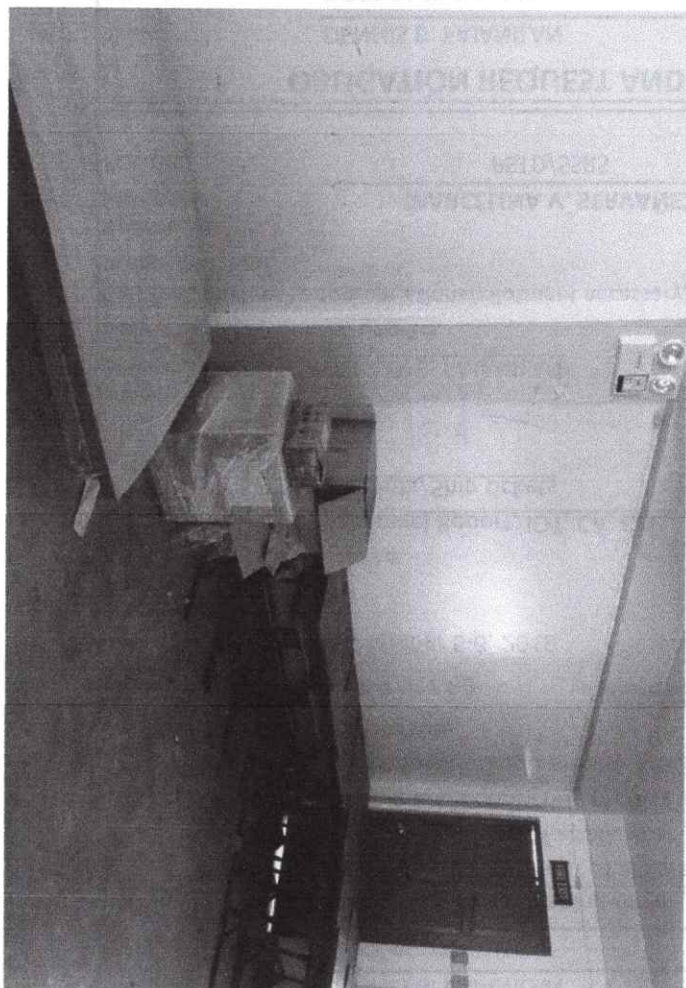
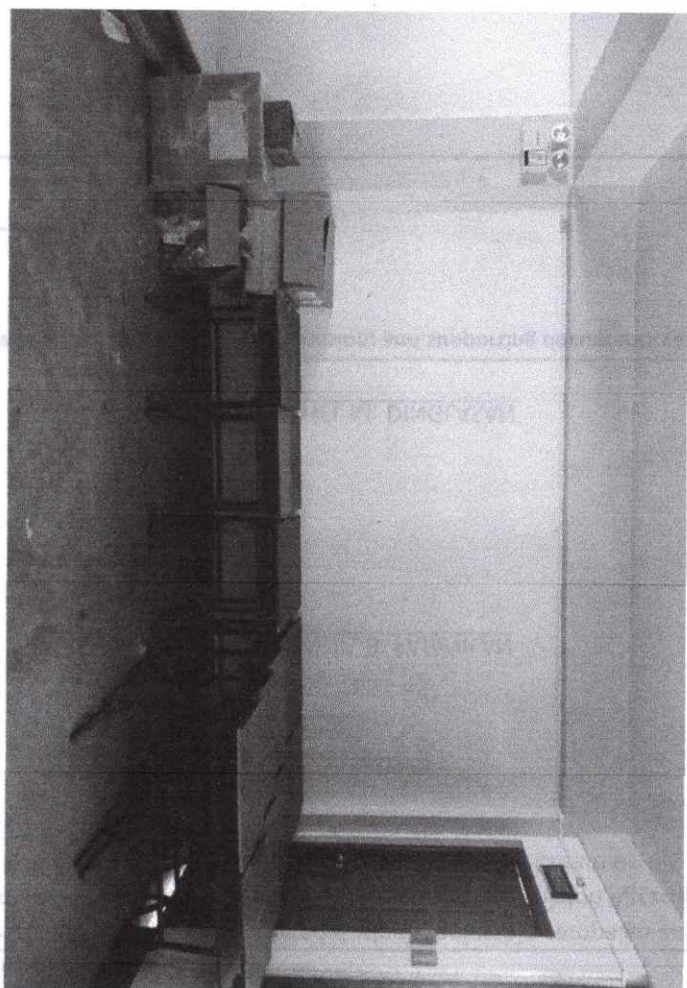
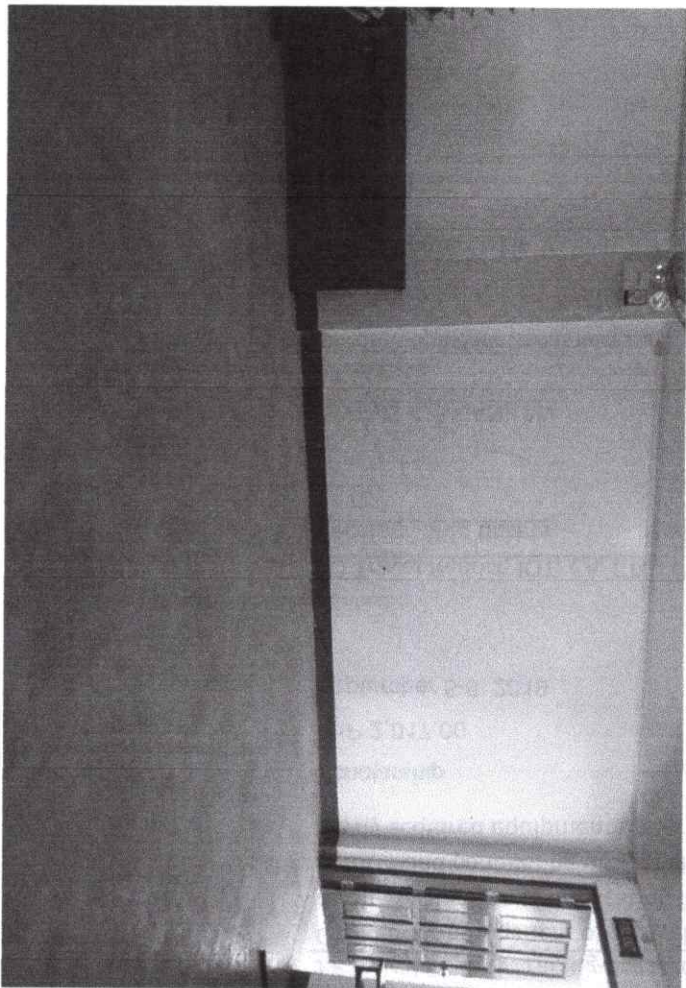
Name	Model	Quantity	Measuring partical size	Total Price (USD)
Automatic-Laser partical size analyzer (wet type)	2000ZDE	1set	0.1-300um	11,785

**P/S, the above price included the following accessories:**

- 1.Power cable 1 pcs,
2. communication wire 2 pcs,
- 3.screwdriver 2 pcs, wrench 4 pcs,
- 4.cleaning paper1 pcs,
- 5.Silicone tube 1 pcs,
- 6.medical silicone tube 1 pcs,
7. nozzle 1 pcs, sample box 1 pcs,
8. 2A insurance tube 5 pcs,
9. sample spoon 2 pcs,
10. brush 2 pcs,
11. tool box 1 pcs,
12. filter tool 1 set,
13. standard sample 1bottle,
14. USB adapter cable 1 pcs









## Introduction:

2000E laser diffraction particle size analyzer is an entry level and high efficient-cost with stable good performance model, working with principle of MIE Scattering to precisely determine the particle size distribution from 0.1 to 300 micrometer. It's classical model, widely used in universities research and company lab research

## Main Specification:

Model Name		2000E
Standard		ISO13320-1:1999, GB/T19077.1-2008, Q/JWN001-2009
Principle		MIE scattering principle
Measuring Range		0.1-300 $\mu$ m
Channels Number		39 PCS
Accuracy error		<1% (National Standard Sample D50 )
Repeatability error		<1% (National Standard Sample D50 )
Light source		High performance He-Ne Laser ( $\lambda$ = 632.8nm, P>2MW) Lifetime>25000hour
Dispersion Method	Ultrasonic	Frequency:40KHz Power:50W, Time: $\geq$ 1S
	Stir	Revolutions Speed: 0-300RPM (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
Output parameter		D10,D50,D90,D100,S/V referent parameters
Optical Calibration System		Full automatic
Test Speed		<2mins per time
Outer dimension		L88cm×W39cm×H46cm
Net Weight		41Kg
Warranty		2 years

## 2,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.

### 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 fitting techniques:

The particle analysis software uses a unique unconstrained data fitting technique that we developed to obtain data of unknown 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:

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. 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.

## 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:

1. Non-metallic powders such as calcium carbonate, talcum powder, kaolin, zirconium silicate, wollastonite, graphite, silica powder, tourmaline, mica, barite, plaster, bentonite, diamond, quartz, diatomite, feldspar, calamite,clay, garnet, vermiculite, Titanium white power, etc.

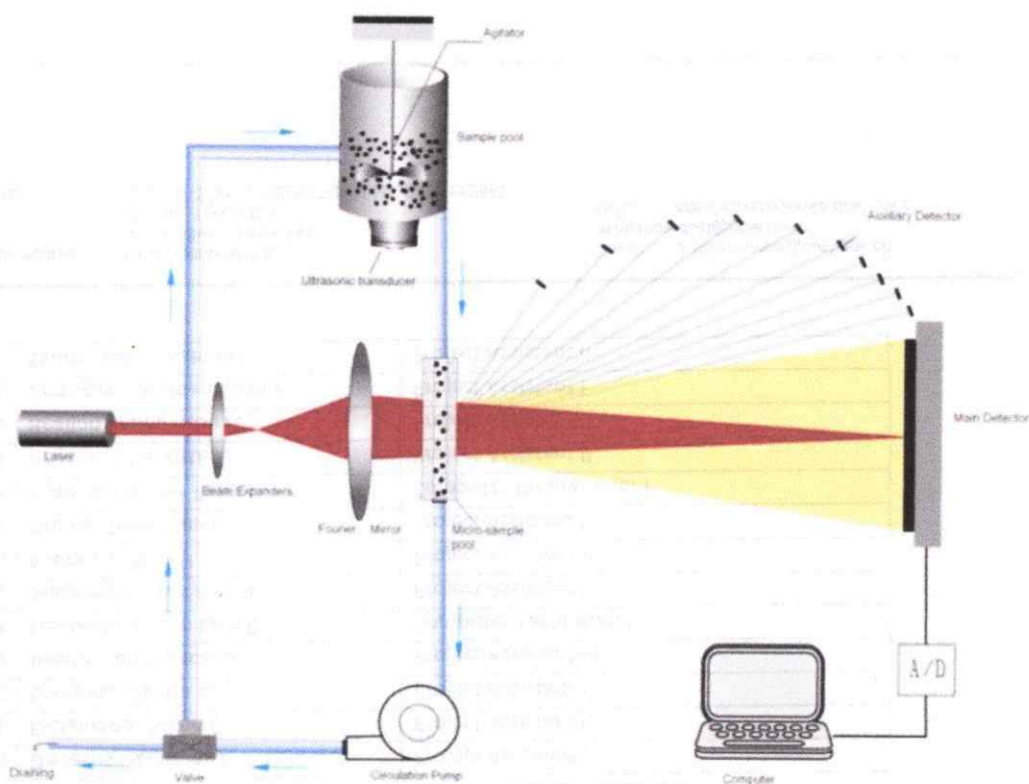
2. Metallic powder such as aluminum powder, iron powder, magnesium powder, molybdenum powder, copper powder, zinc powder, other rare metal power and varied alloy powder, etc.

3. Pharmaceutical, agricultural pesticide, grinding particle, foodstuff, scientific research, teaching, cement, ceramic, glass, chemical industry, military industry, soil, toner,pigment, oil exploration, geological analysis, river silt and electronic particle, etc.

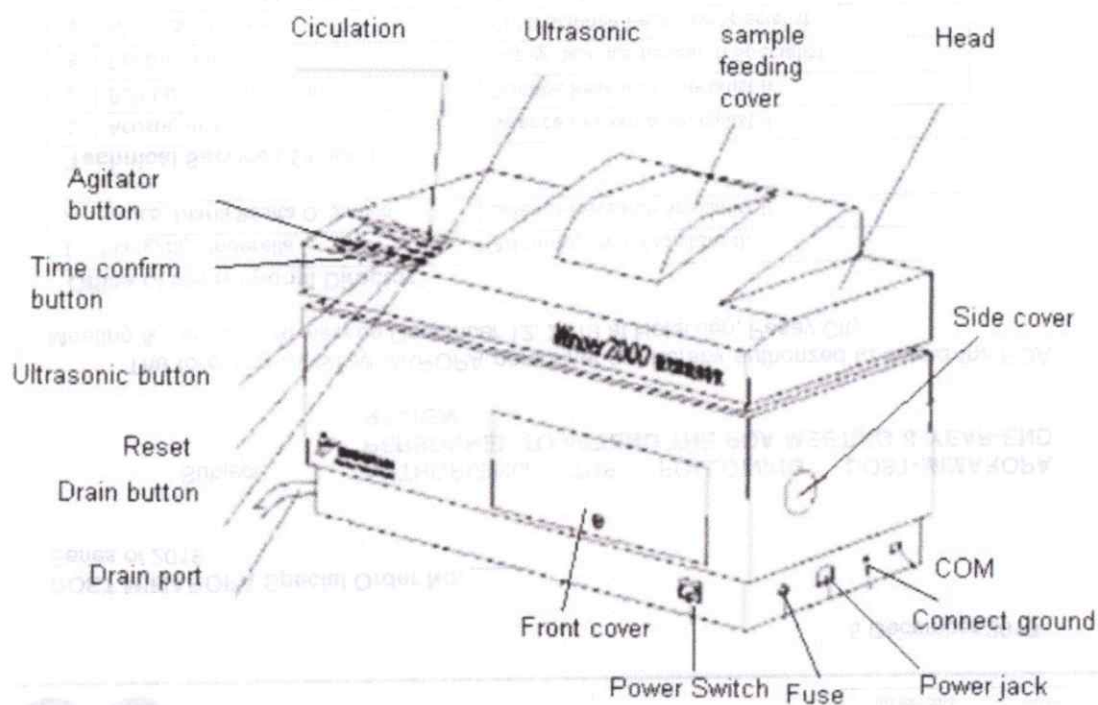
## 5. 2000E Laser Particle Size Analyzer Patents Technology:

- Optical bench design is protected by patent No.- ZL 2014 2 0378380.8,
- MIE scattering principle application patent is protected by patent No.- ZL 20132 0812021.4.
- Wet circulation installation is protected by patent No.-ZL2010 2 0593526.2.

## Instrument scheme:

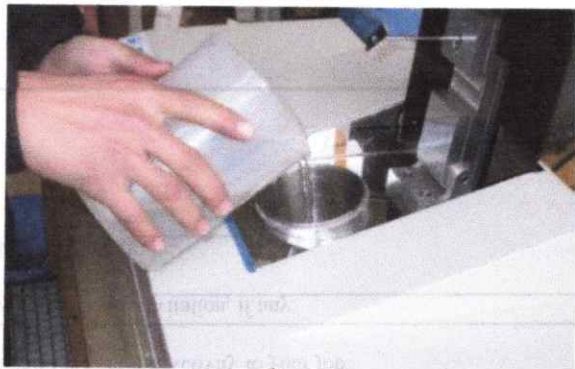


## 2000ZDE Partical size analyzer, computer(optional), printer(optional)





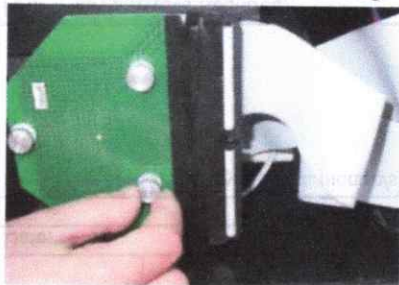
## Light path alignment process



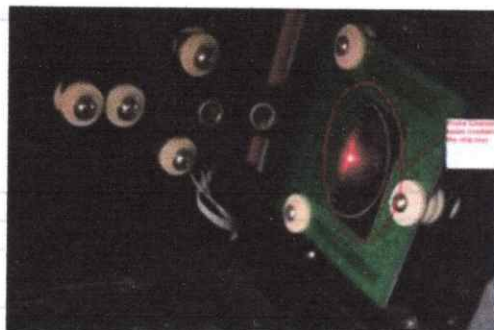
1, add liquid/sample dispersion media, ultrasonic dispersion, agitator, circulation running



2, remove front cover



3, micro-adjust 3 screws of pcb to make laser beam go through the probe pcb hole



Test Range:0.1-300  $\mu$ m

Printing Time:2017/7/21 16:23:05

**Sample Information**

Sample Name:18#2【Average】

Refractive Index:1.64-1.00 100

Delivery Co.:

Delivery Date:2017-7-21

**Testing Information**

UltraSonic Time:50s

Dispersed Phase:

Dispersant:

Measuring Co.:济南微纳

Measuring Man:Z

Measuring Time:2017/7/21 16:21:34

**Analyse Result (Analyse-Mode:Independent Statistics-Mode: By Volume)**

D10=1.407  $\mu$ m

Dav=18.435  $\mu$ m

D[3,2]=4.189  $\mu$ m

D50=12.622  $\mu$ m

S/V=14324.150 cm<sup>2</sup>/cm<sup>3</sup>

D[4,3]=18.435  $\mu$ m

D90=43.824  $\mu$ m

Fit Error:0.003

Optics Concentration:10.45

**Custom Analyse Result**

D25=3.488  $\mu$ m

D97=58.969  $\mu$ m

D98=62.912  $\mu$ m

<5  $\mu$ m:30.144%

<20  $\mu$ m:62.335%

<45  $\mu$ m:90.913%

<50  $\mu$ m:93.602%

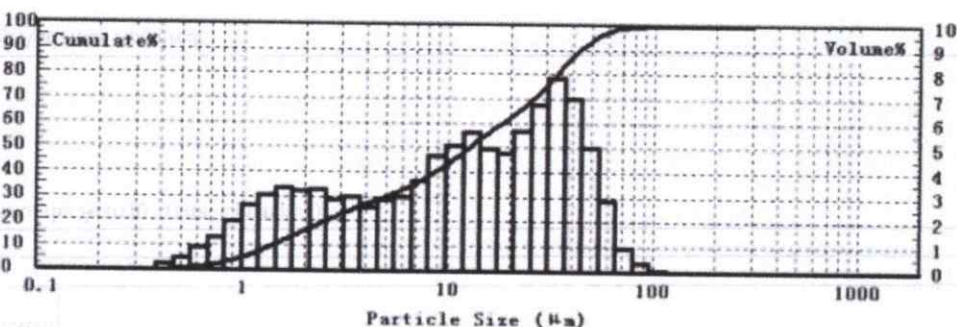
<53  $\mu$ m:95.215%

<75  $\mu$ m:99.291%

<90  $\mu$ m:99.814%

<105  $\mu$ m:99.958%

<150  $\mu$ m:100.000%



Size ( $\mu$ m)	Volume%	Cumulate%	Size ( $\mu$ m)	Volume%	Cumulate%	Size ( $\mu$ m)	Volume%	Cumulate%
0.121	0.000	0.000	1.745	3.365	13.790	25.169	5.859	69.060
0.146	0.000	0.000	2.112	3.201	16.991	30.455	6.793	75.852
0.177	0.000	0.000	2.555	3.312	20.303	36.851	7.842	83.694
0.214	0.000	0.000	3.092	2.809	23.192	44.590	8.998	90.692
0.259	0.000	0.000	3.741	2.975	26.167	53.954	10.035	95.728
0.314	0.000	0.000	4.527	2.556	28.723	65.285	11.074	98.602
0.380	0.000	0.000	5.477	2.852	31.576	78.995	12.072	99.574
0.460	0.224	0.224	6.627	2.997	34.573	95.585	13.061	99.936
0.558	0.451	0.675	8.019	3.661	38.234	115.659	14.050	100.000
0.673	0.869	1.543	9.703	4.670	42.904	139.948	15.040	100.000
0.814	1.280	2.824	11.741	5.082	47.986	169.338	16.030	100.000
0.985	1.946	4.769	14.207	5.640	53.626	204.901	17.020	100.000
1.192	2.599	7.368	17.191	4.971	58.597	247.932	18.010	100.000
1.442	3.058	10.425	20.801	4.804	63.401	300.000	19.000	100.000

**Contact us**

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