

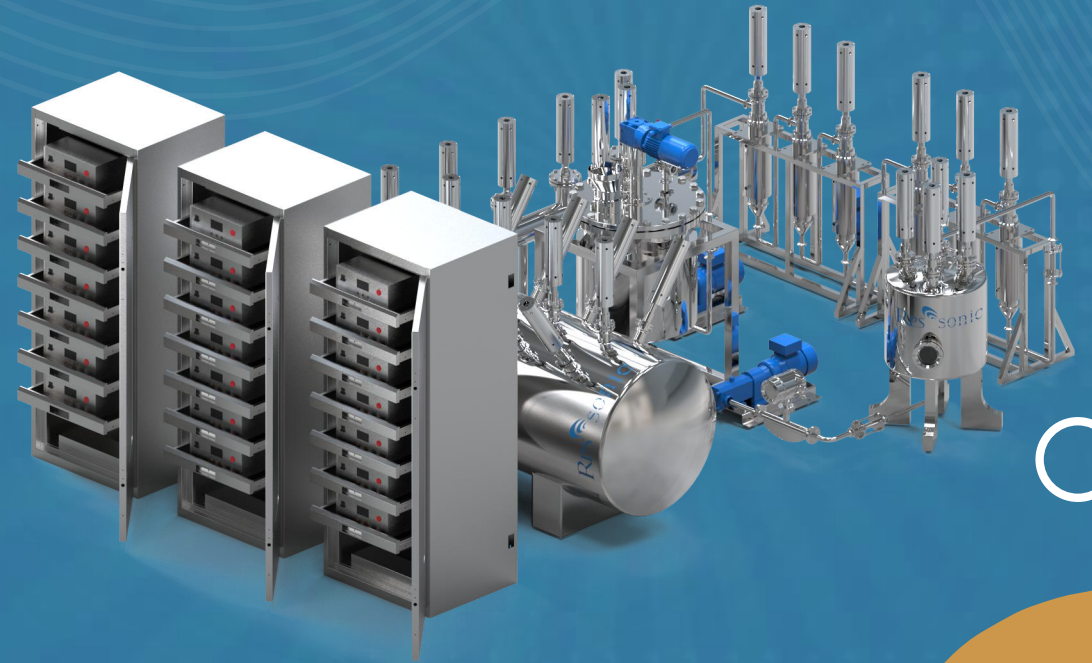
Ultrasonic Homogenizer

Customizable

CATALOG

Hangzhou Lanben Trade Co., Ltd

NO. 608 Golf Road, Dongzhou Street, Fuyang, Hangzhou, Zhejiang province, China



Catalogue

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01

Company Profile



Hangzhou Lanben Trade Co., Ltd

Company Profile

RPS-SONIC is focus on customers needs, exported to more than 30 countries around the world. RPS-SONIC get he trust and praise of many companies with its high-quality and attentive services, it has obtained some long-term and stable overseascustomers.

We provided OEM services for USA & Germany customers for 5 years, We have also established a complete after-saleservice system. We can provide remote guidance and door-to-door services to customers around the world. We believe that our equipment will definitely bring you the best economic effects in production and save more labor costs.



02

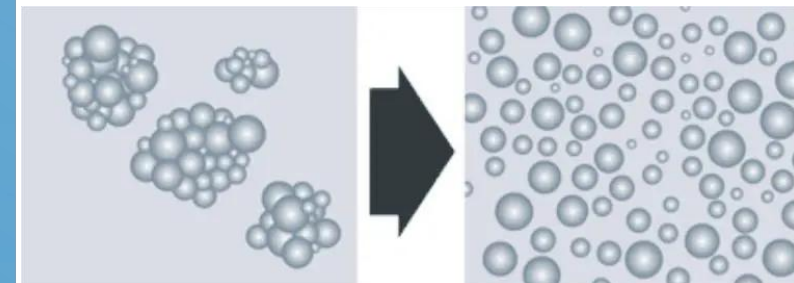
Principles of Ultrasonic



|| Ultrasonic principles

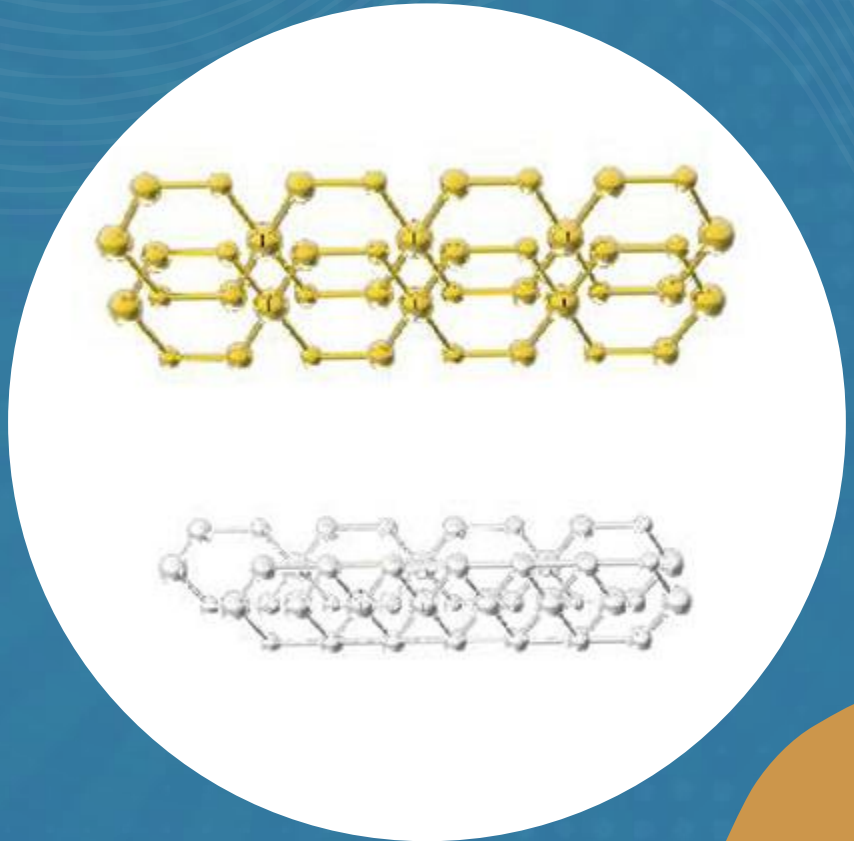
In chemistry, "acoustic cavitation" refers to the formation, growth and implosion of tiny bubbles. Cavitation bubbles are composed of compression and expansion cycles. The compression cycle causes positive pressure in the liquid to push molecules together, while the expansion cycle causes negative pressure to pull molecules apart from each other. Once the bubble grows very rapidly until it can no longer absorb the energy in ultrasonic waves. In this case, the liquid will rush in and the bubble will burst. The entire process disrupts the attraction of molecules in the liquid phase.

The bursting of cavitation bubbles is very rapid. These tiny bubbles formed during the ultrasonic treatment process will increase the temperature of the liquid around the cavity and generate local hotspots. However, this area is so small that the heat dissipates very quickly. On the other hand, a very high pressure, approximately 1,000 atmospheres, is generated during the bubble burst. Although extreme conditions are very limited, ultrasonic treatment can generate extreme physical and chemical conditions in cold liquids.



03

Ultrasonic Applications

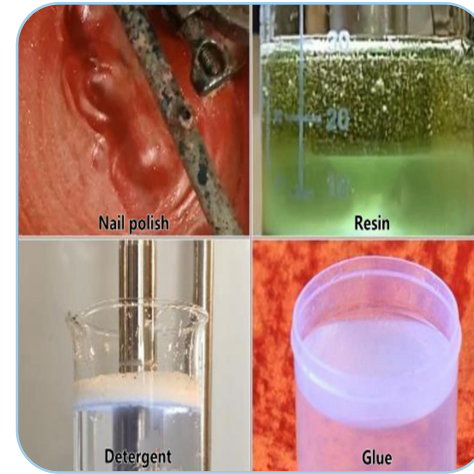


|| Ultrasonic Homogenization

Ultrasonic homogenizers are powerful tools to mix and homogenize solid-liquid and liquid-liquid suspensions. Ultrasonic homogenization is a mechanical process to reduce particles in a liquid so that they become uniformly small and evenly distributed. RPS-SONIC offers powerful ultrasonic homogenizers for application in lab and production Scale.

Advantages of ultrasonic homogenizer

1. Produce small particles / droplets and a narrow distribution curve.
2. Can handle high solid concentrations.
3. Prepare stable suspensions, dispersions and emulsions.
4. Precisely controllable as the important process parameters can be influenced and adjusted.
5. Very effective, energy-efficient, user-friendly and safe to operate.

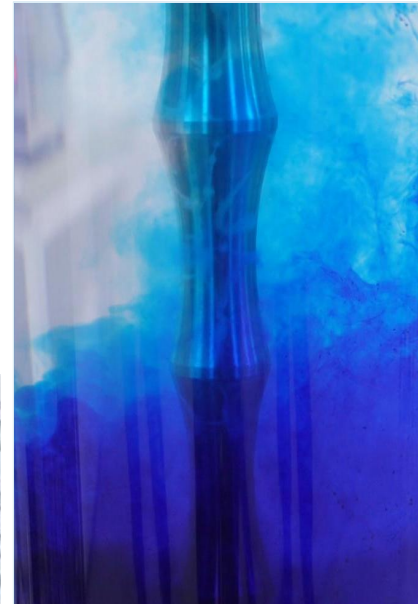
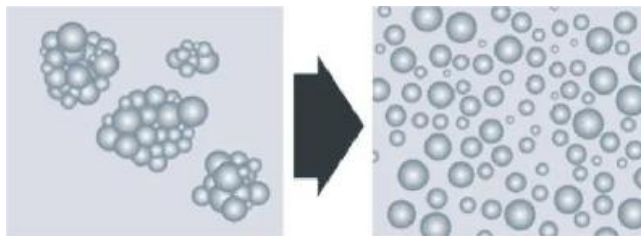


|| Ultrasonic Dispersion

Ultrasonic dispersion is the process to disperse and distribute particles or substances within a liquid medium.

- Nanotechnology: resulting in improved particle size distribution and enhanced properties of nanomaterials.
- Paints and Coatings: ensures color consistency, improved stability, and better coating properties.
- Cosmetics: leading to improved texture, stability, and performance of the final product.
- Chemical Processing: in achieving uniform mixing, particle size reduction, and efficient chemical reactions.

The dispersing and deagglomeration of solids into liquids is an important application of power ultrasound and probe-type sonicators. Ultrasonic cavitation generates extraordinarily high shear that breaks particle agglomerates into single dispersed particles.



|| Ultrasonic Emulsification

Ultrasonic emulsification is the process of mixing two (or more than two) immiscible liquids evenly to form a dispersion system under the action of ultrasonic energy.

Advantages of Ultrasonic Emulsification :

- 1.Improved emulsion stability: resulting in improved emulsion stability and a longer shelf life.
- 2.Energy efficiency: making it a more energy-efficient process.
3. Scalability: making it a versatile process for both laboratory and industrial applications.
- 4.Time-saving: Ultrasonic emulsification can be a very rapid process, with emulsions forming in seconds to minutes.

Ultrasonic emulsification has been used in many fields. Various industrial fields such as petroleum, chemical industry, light industry, textile, medicine, metallurgy, food, papermaking, dyes, etc. have broad application prospects and play a unique role in each field.



Ultrasonic Extraction

Ultrasonic extraction is a process that uses high-frequency sound waves to extract compounds from a variety of materials such as plants, fruits, and vegetables.



Ultrasonic cannabis oil extraction achieves efficient, low-temperature extraction through physical action, with high yield and component integrity, and is one of the preferred technologies for industrial production of cannabinoids

Ultrasonic utilizes the cavitation effect to enhance the extraction efficiency of solvents for target components (tea polyphenols), destroying the cell walls and accelerating the release of tea polyphenols. High efficiency, energy conservation and environmental friendly.



Ultrasonic has significant advantages in the extraction of active ingredients from mushrooms. It can efficiently release bioactive substances such as polysaccharides, polyphenols and triterpenoids, while maintaining their structural integrity.

The herbal medicine extraction Reduce solvent consumption, shorten time, and achieve high extraction rates at lower temperatures without destroying the active ingredients in traditional Chinese medicine.



04

Equipment Introduction



Laboratory Device



Model	RPS-SONO40	RPS-SONO28	RPS-SONO20-500	RPS-SONO20-1000	RPS-SONO20-1500
Input voltage	220/110V,50/60Hz				
Power(kw)	0.3	0.8	0.5	1.0	1.5
Frequency(kHz)	40±0.5	28±0.5	20±0.5	20±0.5	20±0.5
Horn material	Titanium alloy				
Horn diameter	3~16MM	3~16MM	5mm~25mm	18~30mm	18~30mm
Horn length	180mm Standard (Multiples of 90mm)		120mm Standard (Multiples of 60mm)		
Processing volume	5-100ml	50-300ml	100~1000ml	100~2000ml	100~2500ml
Material viscosity	≤2000cp	≤2000cp	≤4300cp	≤6000cp	≤6000cp

Soundproof Laboratory Device



Model	RPS-SONO20-500S	RPS-SONO20-1000S	RPS-SONO20-1500S
Input voltage	220/110V,50/60Hz		
Controller	Digital controller with automatic frequency tracking		
Rated power(kW)	0.5	1.0	1.5
Power adjust	1%-100%		
Frequency(kHz)	20±0.5		
Horn material	Titanium alloy		
Horn diameter	5mm~25mm	18~30mm	18~30mm
Horn length	120mm Standard (Multiples of 60mm)		
Processing volume	100~1000ml	100~2000ml	100~2500ml
Material viscosity	≤4300cp	≤6000cp	≤6000cp
Sound insulation	≤90dB		
Timer	0-999Seconds settable		
Temperature display	0-200°C		

Laboratory Device



Model	RPS-SONO20-2000
Input voltage	220/110V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	2.0
Power adjust	20%-100%
Frequency(kHz)	20±0.5
Horn material	Titanium alloy
Horn diameter	30~50mm
Horn length	177-420mm
Processing volume	2.5-5L
Material viscosity	≤6000cp



Model	RPS-SONO20S
Input voltage	20kHz±0.5
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Flange	Tri-clamp/DN50 flange/customized flange
Operating method	Buttons
Working temperature	≤200°C
Working pressure	≤0.4MPa, can be customized
Processing volume	Above 5L
Material viscosity	≤6000cp

Industrial Device



Model	RPS-SONO20-2000	RPS-SONO20-3000
Input voltage	220/110V,50/60Hz	
Controller	Digital controller with automatic frequency tracking	
Rated power(kW)	2.0	3.0
Power adjust	20%-100%	
Amplitude	30~80μm	
Frequency(kHz)	20±0.5,automatic frequency tracking	
Horn material	Titanium alloy	
Horn diameter	40~50mm	50mm
Horn length	240~490mm, can be customized	
Flange	Tri-clamp/DN50 flange/customized flange	
Operating method	Buttons	
Working temperature	≤200°C	≤200°C
Working pressure	Working pressure	≤0.4MPa, can be customized
Processing volume	Above 5L	Above 10L
Material viscosity	≤6000cp	≤6000cp

Soundproof industrial system



Model	RPS-SONO20-20L
Input voltage	20kHz±0.5
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	2
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	20-40mm
Horn length	270mm
Flange	Tri-clamp/DN50 flange/customized flange
Tank material	Glass
Processing volume	30L,can be customized
Operating method	Buttons
Working temperature	≤200℃
Working pressure	≤0.4MPa, can be customized

Immerson Device-Glass reactor system



Model	RPS-SONO20-30L
Input voltage	20kHz±0.5
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~490mm
Flange	Tri-clamp/DN50 flange/customized flange
Tank material	Glass
Processing volume	30L,can be customized
Blender speed	0~800rpm,optional
Operating method	Buttons
Working temperature	≤200°C
Working pressure	≤0.4MPa, can be customized

Immerson Device-SS304 System



Model	RPS-SONO20-50L
Input voltage	220/380V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3.0
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Flange	Tri-clamp/DN50 flange/customized flange
Temperature control	Temperature control jacket for external temperature control system
Tank material	Acrylic/SUS304L/SUS316L
Processing volume	50L,can be customized
Blender speed	0~800rpm,optional
Operating method	Touch screen or buttons
Working temperature	≤200℃
Working pressure	≤0.4MPa, can be customized

Flow Cell System



Model	RPS-Flowcell-SONO20
Input voltage	220V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80 μ m
Frequency(kHz)	20 \pm 0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	35~50mm
Horn length	405~1500mm,can be customized
Flange	77.5 Tri-clamp/DN50 flange/customized flange
Temperature control	available
Operating method	Buttons
Working temperature	\leq 200 $^{\circ}$ C
Working pressure	\leq 0.4MPa, can be customized
Working method	Circulation working

Flow Cell System



Model	RPS-SONO20-50L
Input voltage	220/380V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3.0
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Peristaltic pump flow rat	20L/Min,optional
Temperature control	Temperature control jacket for external temperature control system
Tank material	Acrylic/SUS304L/SUS316L
Processing volume	20L,can be customized
Blender speed	0~800rpm,optional
Operating method	Touch screen or buttons
Working temperature	≤200℃
Working pressure	≤0.4MPa, can be customized

Flow Cell System



Model	RPS-SONO20-30L
Input voltage	20kHz±0.5
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Flange	Tri-clamp/DN50 flange/customized flange
Temperature control	Temperature control jacket for external temperature control system
Tank material	Acrylic/SUS304L/SUS316L
Processing volume	30L,can be customized
Blender speed	0~800rpm,optional
Operating method	Buttons
Working temperature	≤200°C
Working pressure	≤0.4MPa, can be customized

Flow Cell System



Model	RPS-SONO20-100L
Input voltage	220V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80 μ m
Frequency(kHz)	20 \pm 0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	35~50mm
Horn length	405~1500mm,can be customized
Flange	77.5 Tri-clamp/DN50 flange/customized flange
Temperature control	available
Tank material	SUS 304
Tank volume	100L with mixing motor
Blender speed	0~800rpm,optional
Operating method	Touch screen or buttons
Working temperature	\leq 200 $^{\circ}$ C
Working pressure	\leq 0.4MPa, can be customized
Working method	Circulation working

Flow Cell System



Model	RPS-SONO20/28-10L
Input voltage	220V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80 μ m
Frequency(kHz)	20 \pm 0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	35~50mm
Horn length	405~1500mm,can be customized
Flange	77.5 Tri-clamp/DN50 flange/customized flange
Temperature control	available
Tank material	SUS 304
Tank volume	10L
Operating method	buttons
Working temperature	\leq 200 $^{\circ}$ C
Working pressure	\leq 0.4MPa, can be customized
Working method	Circulation working

Flow Cell System



Model	RPS-Flowcell-SONO20
Input voltage	220V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3
Power adjust	20%~100%
Amplitude	30~80 μ m
Frequency(kHz)	20 \pm 0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	35~50mm
Horn length	405~1500mm,can be customized
Flange	77.5 Tri-clamp/DN50 flange/customized flange
Temperature control	available
Operating method	Buttons
Working temperature	\leq 200 $^{\circ}$ C
Working pressure	\leq 0.4MPa, can be customized
Working method	Circulation working
Sound Enclosure	available
Cooling method	by chiller

Flow Cell Series Connection



Model	RPS-SONO3in1
Input voltage	220/380V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3.0*3
Power adjust	20%~100%
Amplitude	30~100μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Single flow cell flow rate	0~2880L/H
Flow cell pressure against	≤0.4mpa,can be customized
Flow cell material	SUS304L/316L
Sound proof box material	Sheet metal spray coating
Temperature control	Jacket for external temperature control system
Flow rate	Flow meter,Real time digital display
Automation	Optional PLC automation operation

Flow Cell Series Connection



Model	RPS-SONO4in1
Input voltage	220/380V,50/60Hz
Controller	Digital controller with automatic frequency tracking
Rated power(kW)	3.0*4
Power adjust	20%~100%
Amplitude	30~100μm
Frequency(kHz)	20±0.5,automatic frequency tracking
Horn material	Titanium alloy
Horn diameter	40~50mm
Horn length	440~548mm
Single flow cell flow rate	0~2880L/H
Flow cell pressure against	≤0.4mpa,can be customized
Flow cell material	SUS304L/316L
Sound proof box material	Sheet metal spray coating
Temperature control	Jacket for external temperature control system
Flow rate	Flow meter,Real time digital display
Automation	Optional PLC automation operation

05

Certificates





Certificates



Quality Management System Certification To Certify

Hangzhou PowerSonic Equipment Co., Ltd.

Registered Address: Room 206709, 20th Floor, Yandafang Weryuan Building, No. 426 Binwen Road, Puyuan Street, Binjiang District, Hangzhou City, Zhejiang Province

Business Address: No.1028, Erfo Street, FuYang, Hangzhou, Zhejiang, China

Its quality management system has passed the certification review of ASCEM, to meet

GB/T19001-2016 idt ISO9001:2015 Standard

Scope of approval
Ultrasonic transducer, Ultrasonic homogenizer design & assemble

Certificate Number: ASCEM20220218181805
 United code of origin code: 3301920102H31K7XK
 Certificate of the issuance date: 2023.03.16
 Certificate of the effective date: 2023.03.16

The authentication manager: 




The certificate issued by Shanghai Ascend Certification Technical Co., Ltd. The certificate is only valid with related parties when represented. The certified organization must accept all the annual surveillance audit to maintain the validity after the certificate approval date. It is possible to renew if the effectiveness of the certification qualification can be judged as satisfactory according to the certificate surveillance audit report issued by the relevant certification and accreditation organization.

Ascend Certification
Address: 25K Yinyang building No. 30, Xiangqian road, Pudong District, Shanghai, China (two trade area)





CERTIFICATE

CERTIFICATE
Of Conformity
EU Council Directive 2014/30/EU
Electromagnetic Compatibility

Registration No.: AT182505EC000170
Report No.: 182505EC00017001

Applicant : Hangzhou Lanben Trade Co., Ltd.
ROOM 1202C, Building Nature business building, NO.1160 Qiongfeng Street, Furuan subdistrict, Fuyang, Hangzhou, Zhejiang, PRC

Product : Ultrasonic equipment

Identification : Model No. : RPS-W15, RPS-W20, RPS-W25, RPS-W30, RPS-W35, RPS-W40, RPS-C20, RPS-C30, RPS-C35, RPS-C40
Trade Mark : RPS-SONIC
Rating : AC220V-240V, 50HZ/60HZ, 500W

Test Standards : EN 61326-1:2013
EN IEC 61000-3-2:2015
EN 61000-3-3:2015+A1:2019

The certificate of conformity is based on an evaluation of a sample of the above-mentioned product. Technical report and documentation are at the applicant's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex II of Council Directive 2014/30/EU, in its latest amended version, referred to EMC Directive. The certificate does not imply assessment of the production and does not permit the use of Lab's logo. The applicant of the certificate is authorized to use this certificate in connection with EU declaration of conformity to Article 15 of the Directive.

Certified by 
Tom Chen
Manager

Apr. 13, 2020
Date

CE The CE Marking may only be used if all relevant and effective EU Directives are complied with CE

Shenzhen Anbotek Compliance Laboratory Limited
1/F, Building D, Sogood Science and Technology Park, Sannwei community, Hangzhong Street, Bao'an District, Shenzhen, Guangdong, China 518129
Tel: (86)755-2606440 Fax: (86)755-2601472
Http://www.anbotek.com Email: service@anbotek.com



CERTIFICATE

CERTIFICATE
Of Conformity
Low Voltage Directive 2014/35/EU

Registration No.: AT182505C000131
Report No.: 182505C00013101

Applicant : Hangzhou Lanben Trade Co., Ltd.
ROOM 1202C, Building Nature business building, NO.1160 Qiongfeng Street, Furuan subdistrict, Fuyang, Hangzhou, Zhejiang, PRC

Product : Ultrasonic equipment

Model No. : RPS-W15, RPS-W20, RPS-W25, RPS-W30, RPS-W35, RPS-W40, RPS-C20, RPS-C30, RPS-C35, RPS-C40

Trade Mark : RPS-SONIC
Rating : AC220V-240V, 50HZ/60HZ, 500W
Test Standards : EN 61010-1:2010+A1:2019

The certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical report and documentation are at the applicant's disposal. This is to certify that the tested sample is in conformity with Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. The certificate does not imply assessment of the series-production of the product. The applicant of the certificate is authorized to use this certificate in connection with EU declaration of conformity specified in Article 15 and Annex IV of the Directive.

Certified by 
Terry Tian
Manager

Apr. 13, 2020
Date

CE The CE Marking may only be used if all relevant and effective EU Directives are complied with CE

Anbotek (Guangzhou) Compliance Laboratory Limited
Rm 508, Bld 2, No.252, Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China 510662
Tel: (86)20-82675727 Email: service.gd@anbotek.com

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计算机软件著作权登记证书

证书号：软著登字第11662452号

软件名称：超声波伺服切割分析软件 V1.0

著作权人：杭州功律超声波设备有限公司

开发完成日期：2021年03月10日
首次发表日期：2021年03月16日

权利取得方式：原始取得
权利范围：全部权利
登记号：2023SR1075279

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2023年09月15日

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证书号：软著登字第11671085号

软件名称：超声波伺服径向精密焊接管理系统 V1.0

著作权人：杭州功律超声波设备有限公司

开发完成日期：2023年07月13日
首次发表日期：2023年07月19日

权利取得方式：原始取得
权利范围：全部权利
登记号：2023SR1083912

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证书号：软著登字第11668931号

软件名称：超声波雾化器设备智能检测系统 V1.0

著作权人：杭州功律超声波设备有限公司

开发完成日期：2023年05月12日
首次发表日期：2023年05月18日

权利取得方式：原始取得
权利范围：全部权利
登记号：2023SR1081758

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2023年09月15日

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证书号：软著登字第11664623号

软件名称：超声波精密振动焊接管理系统 V1.0

著作权人：杭州功律超声波设备有限公司

开发完成日期：2023年05月12日
首次发表日期：未发表

权利取得方式：原始取得
权利范围：全部权利
登记号：2023SR1077450

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2023年09月15日

Patents





Thank you

Hangzhou Lanben Trade Co., Ltd

NO. 608 Golf Road, Dongzhou Street, Fuyang, Hangzhou,
Zhejiang province, China

