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Ultrasonic Labscale Processor

Product patent ZL201520593797.0

Performance Characteristics

Application: Homogenization, Cleaning, Dispersing & Deagglomeration (e.g. nano particles), Wet-milling & Grinding (e.g. nano materials), Emulsifying, Lysis & Cell Disintegration, Extraction, Sonochemistry.

Effectiveness: High performance ultrasonic device, automatic frequency tuning, amplitude adjustable from 20% to 100%. transducer IP20 grade, titanium probe.



YPS17B-HB



YPS15B-HB



YPS11B-HB

Technical Parameters

Model	YPS17B-HB	YPS15B-HB	YPS11B-HB
Peak Power	1000W	800W	500W
Max Continue output power	700W	500W	200W
Frequency	20KHz	28KHz	35KHz
Amplitude Range	20%-100%		
Maximum volume	2L Glass Beaker / 1 processor		
Handling Capacity	≤5L	≤5L	≤5L
Probe Diameter	Φ10/12/16mm	Φ10/12/14mm	Φ6/10/15mm
Input voltage	200-220V 50/60Hz; single Phase		
material of probe	TC4 Titanium		
Construction	Ultrasonic Processor + Ultrasonic Generator + 2m HF cable		
Items	Soundproof Box		



Ultrasonic sonochemistry equipment

Product patent ZL201510170107.5; ZL201520215434.4

Performance Characteristics

■ **Application:** Homogenization, Cleaning, Dispersing & Deagglomeration (e.g. nano particles), Wet-milling & Grinding (e.g. nano materials), Emulsifying, Lysis & Cell Disintegration, Extraction, Sonochemistry.

■ **Effectiveness:** High performance Ultrasonic device, automatic frequency tuning, amplitude adjustable from 20% to 100%. All results achieved can be scaled up linearly. transducer IP20 grade, titanium probe.



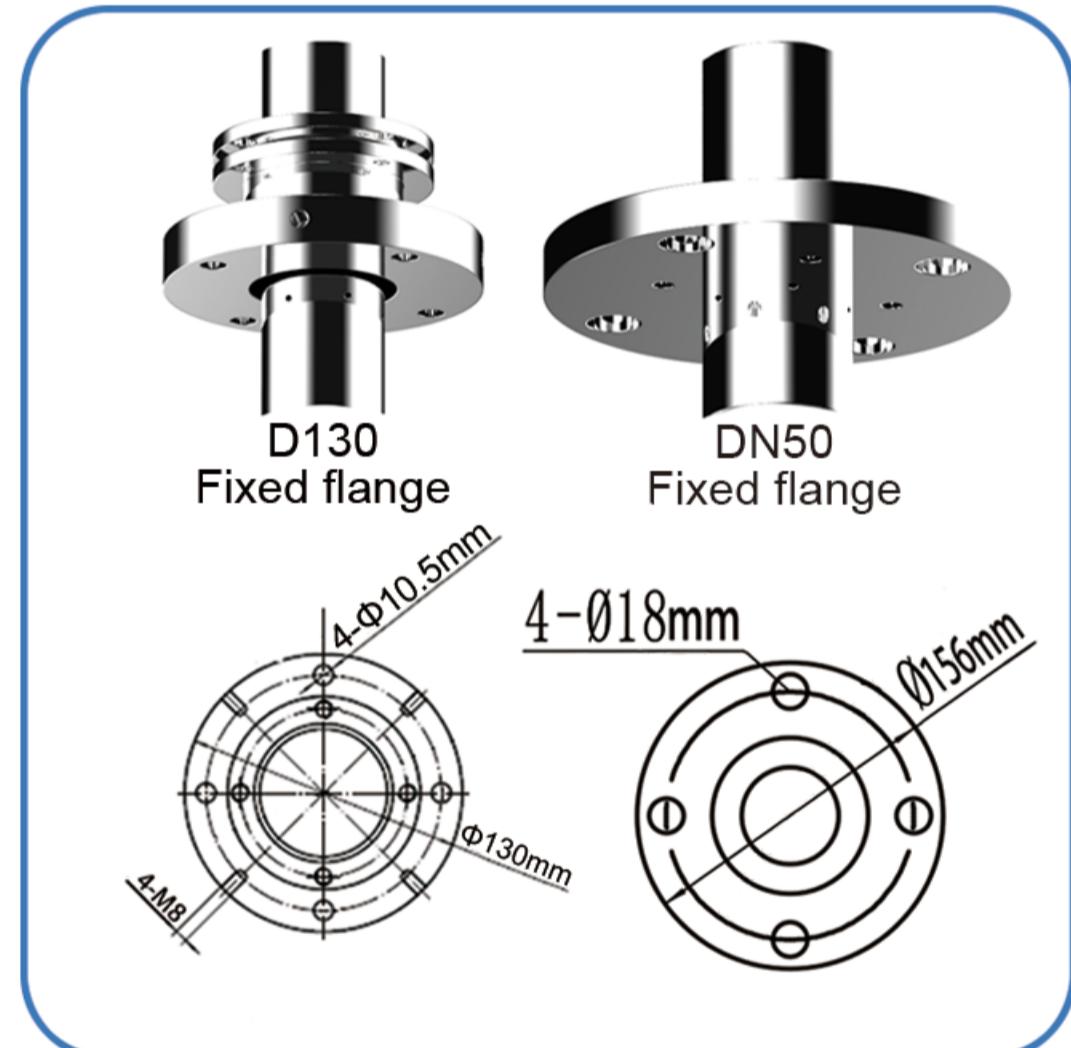
9.0-D2(For MB)



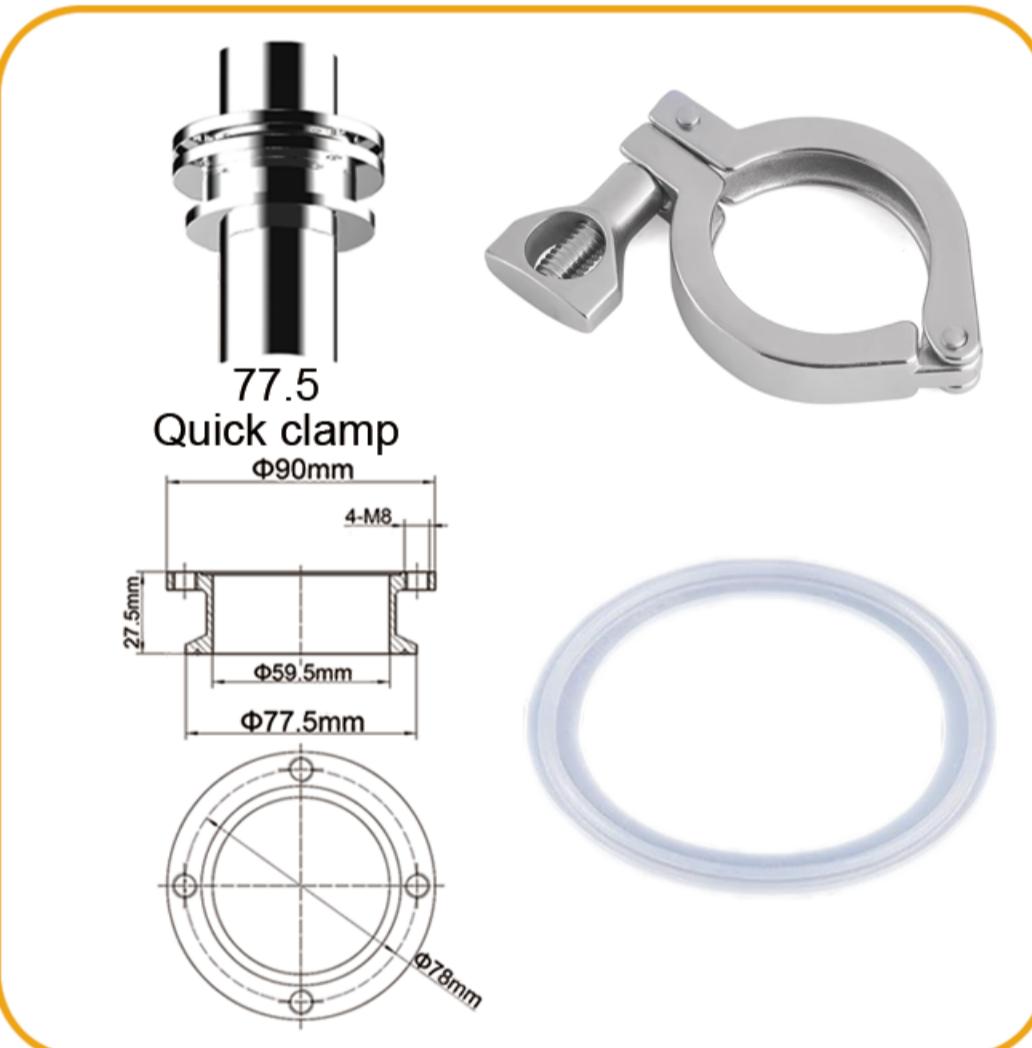
9.0-A6(For HB)



Flange Optional



Fixed flange



Quick Clamp Combo

YPS55B-HB

YPS59B-MB

YPS61B-MB

Model Selection Guidance

Equipment Model	YPS55B-HB	YPS59B-MB	YPS61B-MB
Max Output Power	1000W	2000W	3000W
Max Continue output power	700W	1500W	2500W
Input voltage	200-220V 50/60Hz; single Phase		
Frequency	20KHZ		
Amplitude range	20-100%		
level of protection	IP20		
Capacity	≤10L	≤20L	≤30L
Construction	Ultrasonic Processor + Ultrasonic Generator + 5M HF cable extender+ IP54(processor)+probe+remote control+flange		
Items	extender+ IP54(processor)+probe+remote control+flange		



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Sonochemical Pilot Cycle System

Higher Cost Performance

Product patent ZL201510170107.5
ZL201520215434.4

Performance Characteristics

This series refers to all items on ultrasonic liquid treatment research & test, including effective combination of ultrasonic generator, stainless steel reaction vessel and flow control system. It is able to effectively treat above 5L samples. Configuring the peristaltic pump, temperature detection and pressure detection, so as to better control of the flow direction and flow rate, simulate the on-site operating condition, monitor the system operation and carry out the data collection. The achievements obtained through this system can be easily duplicated to industrial production lines.



Technical Parameters

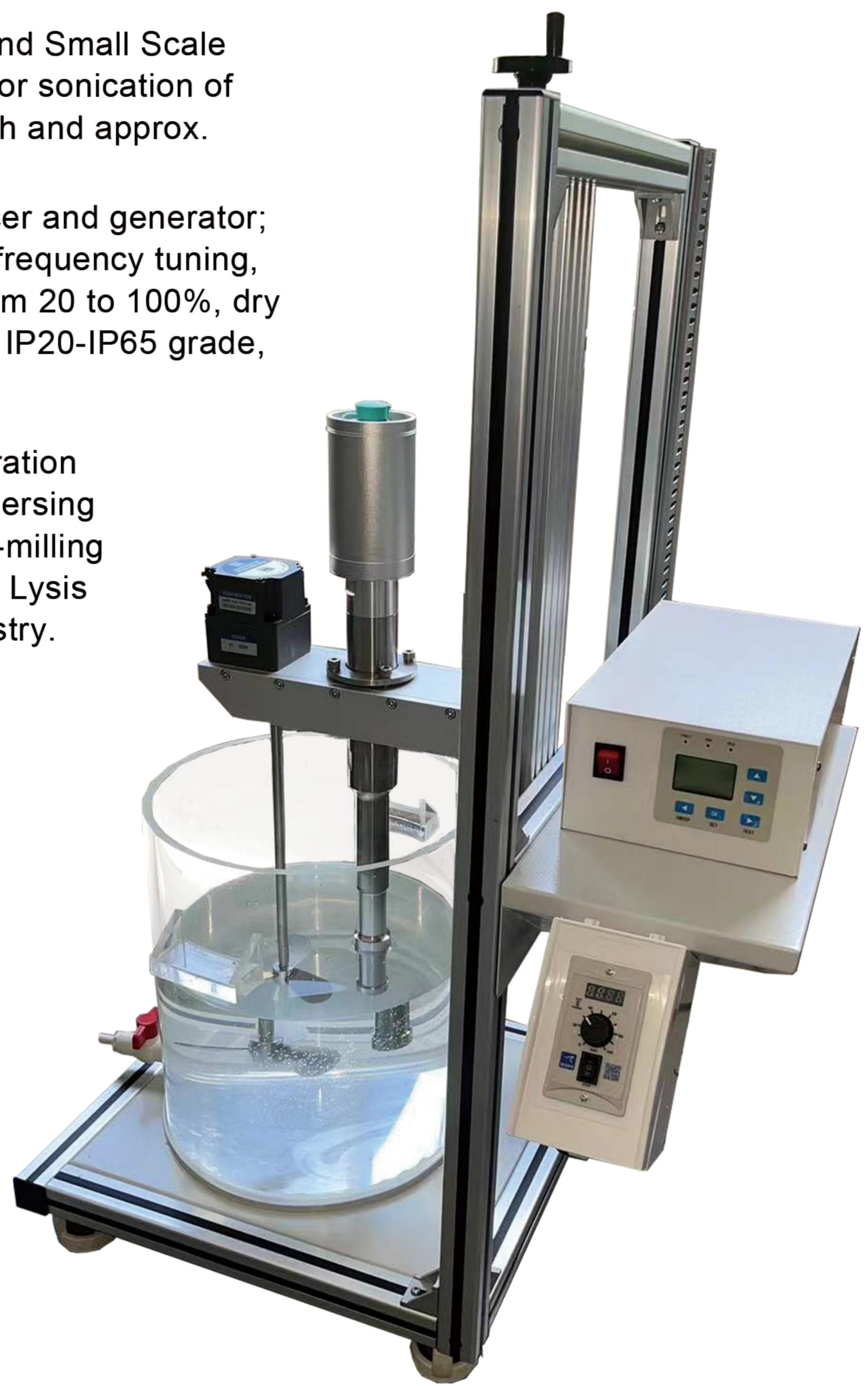
Equipment Model	YPM11B-MB	YPM12B-MB
Frequency	20KHz	
Amplitude/Power Adjustment Range	20%-100%	
Processing Capacity of the Equipment	5L	
Design Temperature	<100°C	
Circulation Speed	0-1t/h	
Outline Dimension	1x1.5x0.5m ³	
Reaction Vessel Material	SS304	SS316
Standard Configuration	YPS61B-MB + Recirculation flow cell	
Optional Configuration	Temperature Sensor + Pressure Sensor+ Solid-liquid mixer + Pump	

Property

■ Industrial Ultrasonic Device for Benchtop and Small Scale Production High-power Ultrasonic processor for sonication of larger volumes from 10L up to 30L in the batch and approx.

■ Ultrasonic processor consisting of transducer and generator; digital control, color touch display, automatic frequency tuning, amplitude 25 micron, amplitude adjustable from 20 to 100%, dry running protected, remote control, transducer IP20-IP65 grade, titanium horn.

■ Homogenization, Dispersing & Deagglomeration (e.g. nano Applications Homogenization, Dispersing & Deagglomeration(e.g. nano particles), Wet-milling & Grinding (e.g. nano materials),Emulsifying, Lysis & Cell Disintegration, Extraction, Sonochemistry.



Technical Parameters

Peak Power	3000W
Max Continue output power	2200W
Frequency	20kHz
Amplitude Range	20%-100%
Input voltage	200-220V 50/60Hz;single Phase
Handling Capacity	30L
Material of probe	Titanium
Standard	Hand lift+Motor stirring(≤600RPS)
Items	Touch screen interface+485(DB15)+IP65



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2 in 1 Ultrasonic recirculation work station

Performance Characteristics

■ YPM11-M018 is a highly integrated ultrasonic dispersion processing system. The main applications of this ultrasonic equipment include homogenization, cleaning, dispersion and deagglomeration (e.g., of nanomaterial particles), emulsification, demulsification and cell breakage, microbial sterilization, plant extraction, and ultrasonic chemistry.

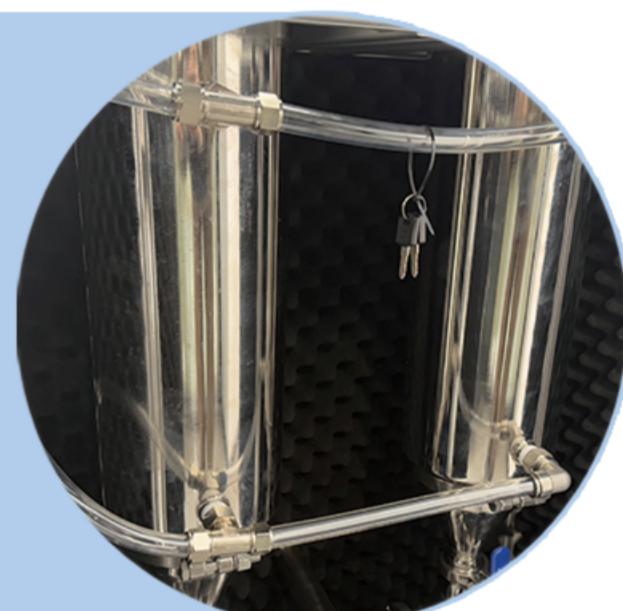
■ The equipment tank is made of stainless steel, equipped with 60L Tank, pump, Temperature detector, reaction kettle with cooling jacket, the equipment is easy to install, small footprint, can be connected to the cooling water, reserved for the discharge port.



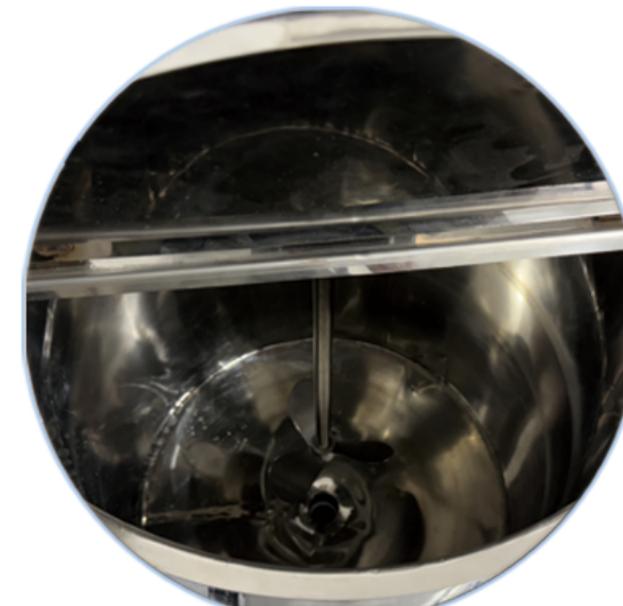
Two sets of high-power poly-energy ultrasound equipment were installed in a cabinet. They are used in two reactors with a capacity of 5 liters (the reactors are connected to each other). The reactors have cooling jackets. The reactors are installed in a noise-reducing cabinet.



The system is equipped with a Temperature detector that displays the current temperature of the material in the pipeline, which is then used in conjunction with external cooling for optimal ultrasonic treatment. Each set of equipment can be started independently and the operating parameters can also be set individually.



Equipped with Pump and Tank, the built-in circulation system can simulate the whole process from laboratory to industrialized production, providing stable and reliable experimental results for later industrialized production.



Technical specifications

Model	YPM11-M018
Max Output Power	6000W
Protect Level	IP20
Amplitude Range	20-100%
Construction	Ultrasonic processor + Ultrasonic generator + Sound Protect Pump + Tank + Temperature detector



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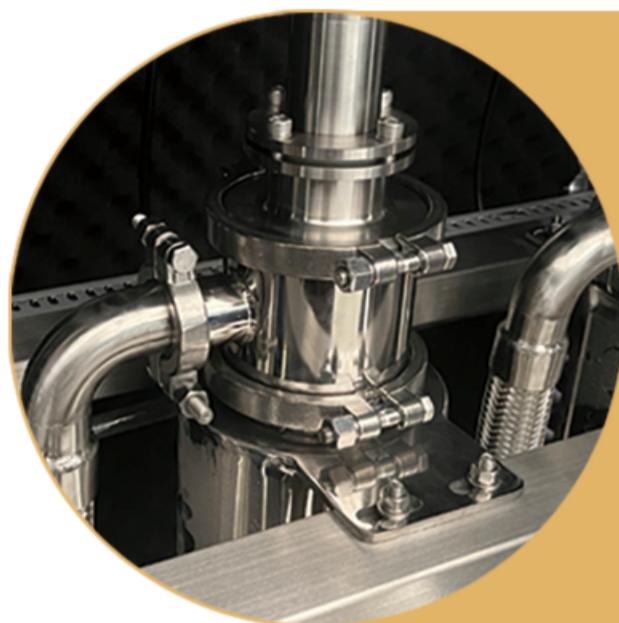
3 in 1 Ultrasonic recirculation setup with flow cell system



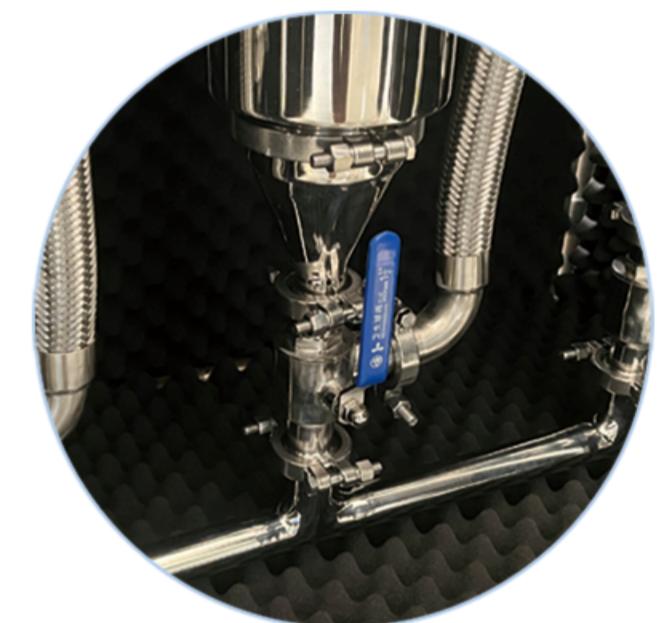
Performance Characteristics

The YPS61B-MB is a robust and reliable system for all kind of ultrasonic liquid processes. Important applications for the ultrasonic processor YPS61B-MB are the breakage (particle size reduction), deagglomeration & dispersion of nano materials, the functionalization of nano particles, emulsification, the production of biofuels (e.g. biodiesel, bioethanol), the formulation of paint & coatings, and various sono-chemical applications (e.g. sono-catalysis, phase transfer catalysis, precipitation, sol-gel routes).

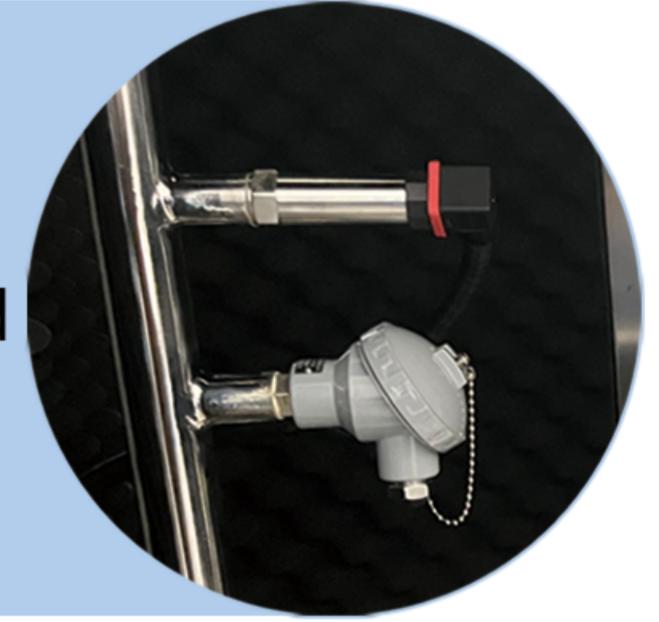
With 3000W ultrasonic power, YPS61B-MB handles easily applications in pilot and large scale. Corresponding ultrasonic processor provide the required intensity of ultrasonic treatment of the liquid. Corresponding flow cells are offered for continuous operation. Sound protection casings complete the ultrasonic system based on YPS61B-MB. The picture above, shows a disintegration system of 3x Ultrasonic Processor . The combined power of 9kW is used for the processing of approx. 1-3m³/hr.



There are three processors in one processing cabinet. They are used in three reactors with a capacity of 5L (the three reactors are interconnected). The reactor has an cooling water jacket. The processor, reactor and liquid pipe are all connected with gaskets and quick clamp.



We installed Pressure sensor, Flow sensor and Temperature sensor in the pipeline, which could transfer the data to PLC and use HMI to setting alarm value to achieve best performance.



Our equipment has a certain noise reduction function, which can reduce the noise during operation to less than 85 decibels. And our devices reserve interfaces for devices such as pumps, filters, heat exchangers and product collection/storage units for easy connection.



Technical specifications

Model	YPM11-M020
Max Output Power	9000W
Protect Level	IP20
Amplitude Range	20-100%
Input voltage	380V/50HZ-60HZ
Construction	Ultrasonic processor + Ultrasonic generator + HMI + PLC + Sound Protect + Enclosure
Items	Pressure sensor + Flow sensor + Temperature sensor + Storage Tank + Blender + Pump
size	805*700*1750(mm)

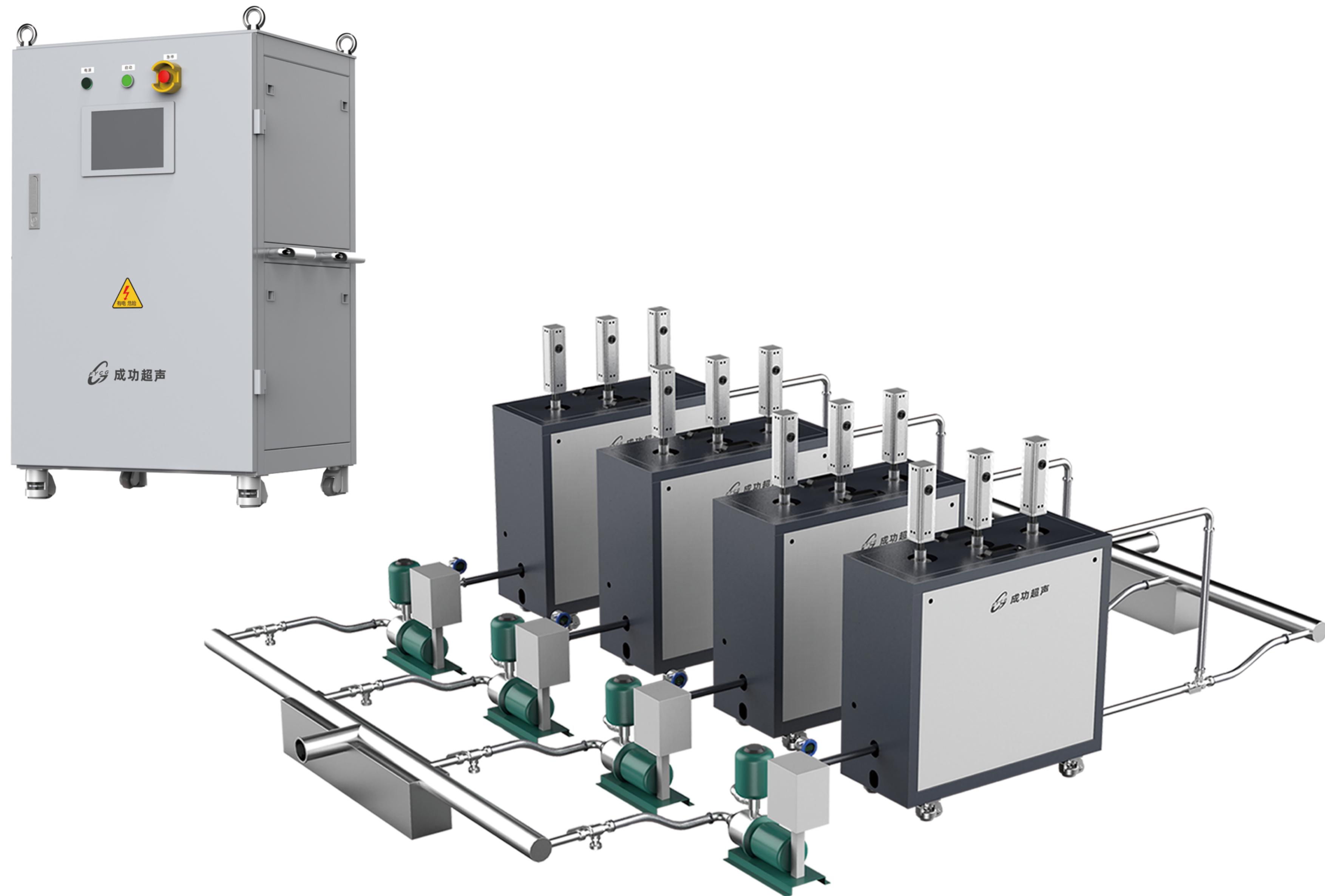


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Sonochemical Production Line

Perfect Combination of Industry and Research

Product patent ZL201510170107.5
ZL201520215434.4



Performance Characteristics

The combined production line is for continuous ultrasonic treatment of liquid materials in flowing state, can control the low(speed) and treatment degree, easy for installation and cleaning. This line can also be equipped with soundproof system and explosion simulation system. According to more than 20 years experience, for different types of application, we will offer the technical support based on the final effect of the industrial production, and we have set up 100 tons and 500 tons Graphene production lines successfully

Model Selection Guidance

Equipment Model	YP-GS10	YP-GS25	YP-GS50	YP-GS100	YP-GS200	YP-GS300
Annual Output of Graphene(8h/day)	10 t	25 t	50 t	100 t	200 t	300 t
Rated Power of One Equipment	3000W/set					
Total Rated Power	18000W=3000Wx6sets	36000W=3000Wx12sets	72000W=3000Wx24sets	144000W=3000Wx48sets	288000W=3000Wx96sets	432000W=3000Wx144sets
Frequency	20KHz±1KHz					
Input Voltage	220V/380Vn50Hz					
Total Installation Area	5 m ²	10 m ²	20 m ²	40 m ²	60 m ²	80 m ²
Features	Adopt the Mod-bus technology based on the network. All operating mode parameters can be remotely controlled by the machine room.					



Three-step Method of Sonochemical Application

Revolutionary Technical Breakthrough

Product patent ZL201410288598.9
ZL201610152950.5

Sound intensity invariance
Technology

Operating Condition
Simulation Technology

Application Derivation
Technology

Production Line equipment

A series of serial parallel structures are used to realize continuous ultrasonic machining of pipeline system. Lots of ultrasonic heads can be work together according to the application of control and effect.



Constant
Sound
Intensity



Lab-scale Equipment

After the ultrasonic treatment (circulated), the experimental results are obtained, compared and analyzed, and then the equipment selection can be carried out according to the best treatment effect.

Constant
Sound
Intensity

Pilot-scale Equipment

The ultrasonic pilot cycle equipment is simulated in Pipeline ultrasonic treatment process, and the key parameters such as amplitude, power, flow rate, temperature and so on in industrial application are obtained by simulating the process of pipeline ultrasonic treatment.

