

HIGH-THROUGHPUT CRYOGENIC GRINDER

Sample Compatibility:

- ◆ Plant Tissues: Roots, Stems, Leaves, Flowers, Fruits, Seeds, etc.
- ◆ Animal Tissues: Brain, Heart, Lungs, Stomach, Liver, Thymus, Kidneys, Intestines, Lymph Nodes, Muscles, Bones, etc.
- ◆ Fungi and Bacteria: Yeast, Escherichia coli (E. coli), etc.
- ◆ Food and Pharmaceuticals: Various types of foods, Tablets, etc.
- ◆ Volatile Samples: Coal, Oil Shale, Wax Products, etc.
- ◆ Plastics and Polymers: PE (Polyethylene), PS (Polystyrene), Textiles, Resins, etc.
- Nucleic Acid/Protein Extraction

Low-temperature sample homogenization effectively inhibits nucleic acid degradation and preserves protein activity.

- Analysis of Pharmacologically Active Compounds

Significant differences often exist between isomers of active pharmaceutical ingredients. Low-temperature homogenization can prevent molecular degradation due to pressure and heat.

- Reduction of Sample Volatility

Low-temperature homogenization significantly reduces sample volatility, preserving sample component content more completely.

- Homogenization of Tough/Rigid Samples

For challenging samples such as highly ductile plastics, high-strength plastics, and resins, low-temperature homogenization greatly enhances grinding effectiveness and efficiency.

Common Accessories (Adapters/Grinding Beads/Grinding Vessels/Filling Gun, etc.)

Specifications

- 24*2ml Standard/24*2ml Cooling
- 48*2ml Standard/48*2ml Cooling
- 64*2ml Standard/64*(0.2~0.5ml) Customized
- 12*5ml Standard/12*5ml Cooling
- 8*10ml Standard/8*15ml Standard
- 4*2ml/8*2ml Grinding Vessel
- 4*5ml/10ml/15ml Grinding Vessel
- 4*15ml PEEK Vessel
- 2*50ml Standard
- 2*25ml/50ml Grinding Vessel/PEEK

*Note: Comes with 24/48/64*2ml adapters, 3mm & 5mm stainless steel or zirconium oxide grinding beads.



Zirconia



Stainless steel



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HIGH-THROUGHPUT CRYOGENIC GRINDER

Technical Parameters	DHFSTPRP-CL24	DHFSTPRP-CL48
Application fields	Organ grinding, homogenization, cell disruption, tissue pulverization, material dispersion, preparation, sample mixing, and oscillation	
Processing capacity	Maximum processing capacity of 24 /48samples in 15 seconds, with integrated compressor cooling	
Compatible sample tubes	24/48*(0.2-0.5ML) /24/48*2ML /6*(7-15)ML /2*25ML /2*50ML	
Display	Touch screen display for convenient and intuitive operation	
Data storage	Can store ten sets of experimental data, with animal heart, spleen, lung, kidney, bone, skin, and hair patterns set according to different experimental samples	
Cycle mode	According to the set experimental parameters, it can cycle continuously between several pre-set parameters, further reducing interference from human factors	
Maximum feeding size	No requirement, adjustable according to the adapter	
Cooling function	Yes, adjustable from -30°C to 37°C	
Temperature control accuracy	+ 0.5°C	
Open lid operation protection	Electromagnetic lock	
Final discharge particle size	~5µm	
Number of grinding platforms	(acceptance of grinding jars) > 2	
Fastening device	with automatic center positioning	
Homogenization speed	0~70 Hz/sec, working time: 0 sec~99 min, user-settable	
Diameter of grinding balls	0.1~30mm	
Material of grinding balls	alloy steel, chrome steel, zirconium oxide, tungsten carbide, quartz sand	
Acceleration	reaches maximum speed within 2 seconds	
Deceleration	reaches minimum speed within 2 seconds	
Noise level	<55db	
Grinding mode	wet grinding, dry grinding, and low-temperature grinding are all possible	
Safety instructions	with automatic center positioning and safety lock during operation for full protection	
Material of grinding kit	hard alloy, polytetrafluoroethylene (Teflon), zirconium oxide	
Dimensions	630*300*480mm	
Weight	58 kg	

FULLY AUTOMATED LIQUID NITROGEN FREEZER MILL



Sample Types for Grinding:

- ◆ Plant Tissues: Roots, stems, leaves, flowers, fruits, seeds, etc.
- ◆ Animal Tissues: Brain, heart, lung, stomach, liver, thymus, kidney, intestine, lymph node, muscle, bone, etc.
- ◆ Fungi and Bacteria: Yeasts, E. coli, etc.
- ◆ Food and Drugs: All kinds of food, tablets, etc.
- ◆ Volatile Samples: Coal, oil shale, wax products, etc.
- ◆ Plastics and Polymers: PE, PS, textiles, resins, etc.

Common Accessories (Adapters/Grinding Beads/Grinding Vessels/Filling Gun, etc.)

Specifications

24*2ml Standard/24*2ml Cooling
48*2ml Standard/48*2ml Cooling
12*5ml Standard/12*5ml Cooling
8*10ml Standard/8*15ml Standard
4*2ml/8*2ml Grinding Vessel
4*5ml/10ml/15ml Grinding Vessel
4*15ml PEEK Vessel
2*50ml Standard
2*25ml/50ml Grinding Vessel/PEEK
*Note: Comes with 24/48/64*2ml adapters, 3mm & 5mm stainless steel or zirconium oxide grinding beads.



Zirconia



Stainless steel



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FULLY AUTOMATED LIQUID NITROGEN FREEZER MILL

Product Introduction

Fully Automated Liquid Nitrogen Freezer Mill / Freezer mill / Freezer Grinder

Compared with other sample preparation methods currently available, the DHFSTPRP-24IN Fully Automated Liquid Nitrogen Freezer Mill has the advantages of wide applicability, high efficiency, and flexibility. The system avoids the many drawbacks of traditional methods such as grinding, homogenization, and ultrasonic treatment, which are laborious, time-consuming, and inefficient. It can efficiently, quickly, and stably lyse and purify nucleic acids and proteins from various types of samples.

Fully Automated Liquid Nitrogen Freezer Mill uses a special vertical up-down integrated vibration mode, which achieves rapid grinding of samples through the high-frequency reciprocal vibration, impact, and shear of grinding beads (zirconia, steel, glass, ceramic). This ensures the samples are fully and uniformly ground, and have better sample repeatability with no cross-contamination between samples.

Technical Parameters	DHFSTPRP-24IN	DHFSTPRP-48N
Model	DHFSTPRP-24IN	DHFSTPRP-48N
Homogenization Speed★	0 to 70 Hz/second, Operating Time: 0 seconds to 999 minutes, User-configurable	
Processing Capacity	Maximum processing of samples within 15 seconds, capable of simultaneously handling 24/48 2ml samples	
Anti-Vibration Principle▲	Innovative DHFSTPRP-1 anti-vibration principle, as well as three-dimensional motion in vertical and horizontal directions, Innovative movement pattern of grinding beads to ensure maximal sample processing and instant pulverization effect.	
Compatible Processing Volume▲	48*(0.2-0.5ML)/48*2ML/24*5ML/12*(7-15)ML/2*25ML/2*50ML and customized	
Data Storage★	Up to ten sets of data can be stored based on different experimental samples, including patterns for animal hearts, spleens, lungs, kidneys, bones, skin, and hair, among others.	
Cycling Mode★	Based on set experimental parameters, cyclic operation between pre-configured parameters to reduce interference from human factors.	
Final Particle Size	~5µm	
Grinding Platform/Securing	≥2, with automatic center positioning	
Grinding Ball Diameter/Material	0.1-30mm, Alloy Steel, Chromium Steel, Zirconia, Tungsten Carbide, Quartz Sand;	
Acceleration/Deceleration	Reaching maximum speed within 2 seconds	
Noise Level	<55db	
Grinding Modes	Wet Grinding, Dry Grinding, Low-Temperature Grinding all available	
Dimensions/Weight	400*340*530mm / 30kg	
Upgradeable Features▲	Capability to upgrade to ultra-low-temperature liquid nitrogen freezing or air cooling refrigeration	

HIGH-THROUGHPUT CRYOGENIC GRINDER

Sample Compatibility:

- ◆ Plant Tissues: Roots, Stems, Leaves, Flowers, Fruits, Seeds, etc.
- ◆ Animal Tissues: Brain, Heart, Lungs, Stomach, Liver, Thymus, Kidneys, Intestines, Lymph Nodes, Muscles, Bones, etc.
- ◆ Fungi and Bacteria: Yeast, Escherichia coli (E. coli), etc.
- ◆ Food and Pharmaceuticals: Various types of foods, Tablets, etc.
- ◆ Volatile Samples: Coal, Oil Shale, Wax Products, etc.
- ◆ Plastics and Polymers: PE (Polyethylene), PS (Polystyrene), Textiles, Resins, etc.

Common Accessories (Adapters/Grinding Beads/Grinding Vessels/Filling Gun, etc.)

Specifications

24*2ml Standard/24*2ml Cooling
 48*2ml Standard/48*2ml Cooling
 64*2ml Standard/64*(0.2~0.5ml) Customized
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 4*2ml/8*2ml Grinding Vessel
 4*5ml/10ml/15ml Grinding Vessel
 4*15ml PEEK Vessel
 2*50ml Standard
 2*25ml/50ml Grinding Vessel/PEEK

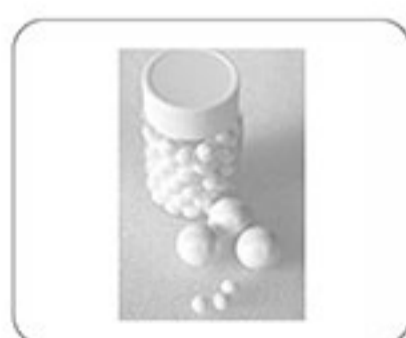
*Note: Comes with 24/48/64*2ml adapters, 3mm & 5mm stainless steel or zirconium oxide grinding beads.



Zirconia



Stainless steel



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HIGH-THROUGHPUT CRYOGENIC GRINDER

Product Introduction

high-throughput cryogenic grinder / Cryo mill / Tissue Homogenizer

Instrument is also known as a Multi-Sample Tissue Grinder, Rapid Tissue Homogenizer, Multi-Sample Tissue Homogenizer, and Rapid Sample Homogenization System.

high-throughput cryogenic grinder is a specialized, fast, efficient, and multi-tube homogenization system. It can extract and purify raw DNA, RNA, and proteins from various sources, including tissues/organs of soil, plants, and animals, as well as bacteria, yeast, fungi, spores, ancient biological specimens, etc. In comparison to existing sample preparation methods, it offers broad applicability, high efficiency, and flexibility. This system eliminates the labor-intensive, time-consuming, and inefficient aspects of traditional methods such as grinding, homogenization, and ultrasonic treatment, enabling efficient, rapid, and stable disruption and purification of nucleic acids and proteins from various types of samples.

Model	DHFSTPRP-24	DHFSTPRP-48	DHFSTPRP-64
Homogenization Speed★	0 to 70 Hz/second, Operating Time: 0 seconds to 999 minutes, User-configurable		
Processing Capacity	Maximum processing of samples within 15 seconds, capable of simultaneously handling 24/48/64 2ml samples		
Anti-Vibration Principle▲	Innovative DHFSTPRP-1 anti-vibration principle, as well as three-dimensional motion in vertical and horizontal directions, Innovative movement pattern of grinding beads to ensure maximal sample processing and instant pulverization effect.		
Compatible Processing Volume▲	64*(0.2-0.5ML)/64*2ML/24*5ML/12*(7-15)ML/2*25ML/2*50ML and customized		
Data Storage★	Up to ten sets of data can be stored based on different experimental samples, including patterns for animal hearts, spleens, lungs, kidneys, bones, skin, and hair, among others.		
Cycling Mode★	Based on set experimental parameters, cyclic operation between pre-configured parameters to reduce interference from human factors.		
Final Particle Size	~5µm		
Grinding Platform/Securing	≥2, with automatic center positioning		
Grinding Ball Diameter/Material	0.1-30mm, Alloy Steel, Chromium Steel, Zirconia, Tungsten Carbide, Quartz Sand;		
Acceleration/Deceleration	Reaching maximum speed within 2 seconds		
Noise Level	<55db		
Grinding Modes	Wet Grinding, Dry Grinding, Low-Temperature Grinding all available		
Dimensions/Weight	400*340*530mm / 30kg		
Upgradeable Features▲	Capability to upgrade to ultra-low-temperature liquid nitrogen freezing or air cooling refrigeration		

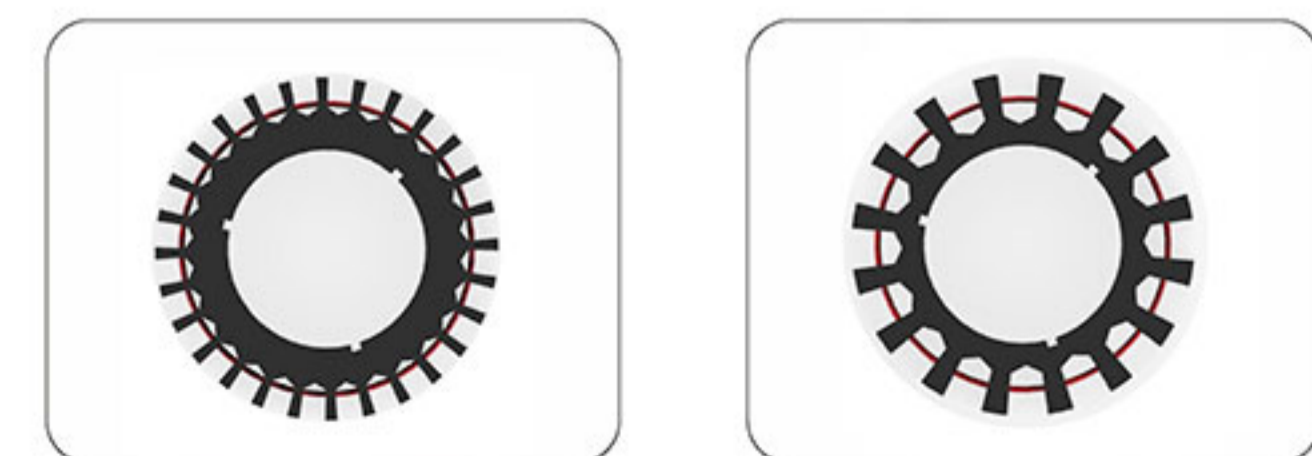
DMR-300 AC 110 ~ 220V Power Supply

Multi Reax | 3D Multi-Point oscillator

- ◆ In order to simplify these processes, we have developed multi-point vortex oscillators, which are widely used in biological experiments, medical and health care, materials industry, food and chemical industry (to list: sodium cyclamate, blood).
- ◆ Food: additive content, organic high-risk substances.
- ◆ Drug analysis: agricultural residues of traditional Chinese medicine and biochemical analysis of western medicine.
- ◆ Detection of agricultural and sideline products: QuEchERS, residues of agricultural products, residues of veterinary food materials.
- ◆ Environmental testing: water quality, soil.

Suitable for various test tubes

It can accommodate 16 bits of tubes with a diameter of 16-32 mm or 28 bits of tubes with a diameter of 9-18 mm, such as thick wall colorimetric tubes, glass pressure resistant tubes, Teflon plug reaction tubes, Nessler colorimetric tubes, centrifuge tubes, plexiglass tubes, high borosilicate tubes, etc. (tubes with buckle covers or screw caps).

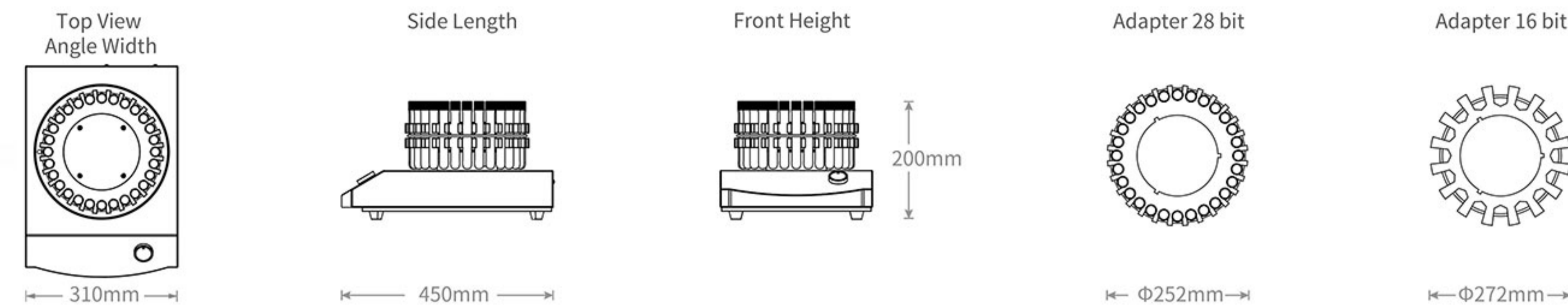
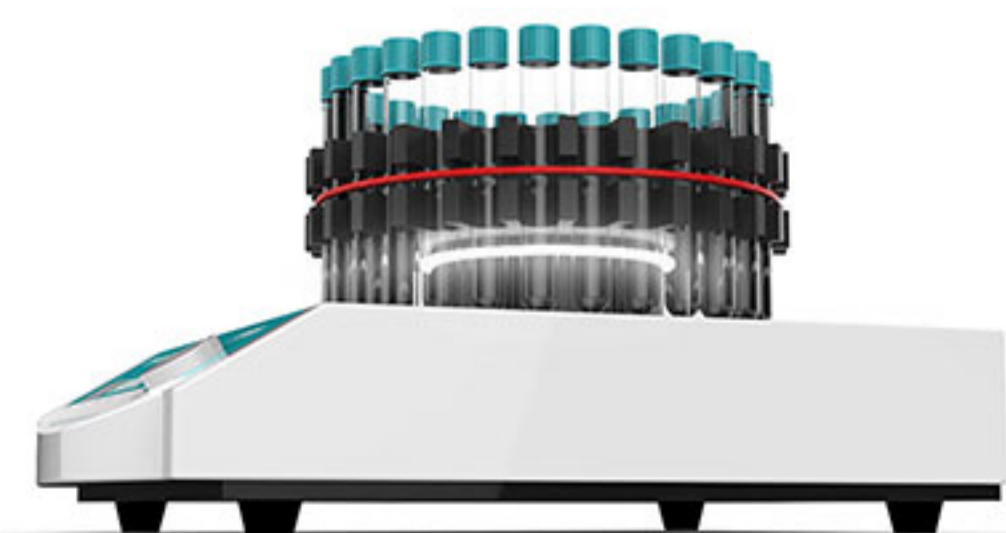


Adapter 28 bit Adapter 16 bit

Elegant Mute



Built in 24V LED Light Strip



Technical Parameters	DMR-200	DMR-300	DMR-400
Control mode	Combination of buttons and knobs		
Display mode	Digital display		
Amplitude	3mm		
Disk size	R50: Inner Φ 14.2cm, Outer Φ 27.2cm, R15: Inner Φ 14.2cm, Outer Φ 25.2cm		
Adapter specifications	Can accommodate 16 tubes with a diameter of 16-32mm (30-50ml)		
	Can accommodate 28 tubes with a diameter of 9-18mm (10-25ml)		
Standard accessories	2 tube clamps		
Rotational speed range	300 ~ 2000rpm	300~3000rpm	300~4000rpm
Output power	120W	150W	180W
Motor type	DC motor (brushless)		
Angle	Three-dimensional		
Motion mode	Automatic reset		
Protection class DIN EN 60529	IP 30		
Timing function	1 ~ 99 hours 59 minutes		
Maximum load	1.8kg		
Operation mode	Timing or continuous		
Allowable environmental conditions	Maximum relative humidity of 80% at 5 ~ 35 °C, Linearly decreasing relative humidity up to 50% at 36 ~ 40 °C		
Size (w/d/h)	310 x 450 x 200 mm		
Weight	17.04 Kg	17.05 Kg	17.06 Kg
Rated voltage	AC110-220V 50/60Hz		



Optional Accessory (Foam Module)

Model	Specifications	Applicable tube
DX4	89x ϕ 5mm	0.2ml
DX5	37x ϕ 6.6mm	0.5ml
DX6	24x ϕ 9.8mm	1.5/2ml
DX7	8x ϕ 14mm	10/15ml
DX8	4x ϕ 26.2mm	50ml
DX9/10	Microplate Tray, used for placing various microplates, deep well plates, etc.	
DX11	Hybrid Test Tube Rack, compatible with 0.2/0.5ml/1.5/2.0ml tubes.	

*Customization available for other tube sizes, such as 100ml test tubes, 250ml conical flasks, etc.



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Product Introduction

Mini Vortexer / Vortex Mixer / Mini mixer

Mini mixer is applied in the fields of life sciences and physicochemical analysis, suitable for short-term (pulse) or long-term continuous operation. It is used for oscillation, mixing, and stirring of samples such as tissues, cells, bacterial solutions, chemical reagents, etc. Various adapters are available for use with 0.2-50ml microcentrifuge tubes and tubes or small containers with a diameter less than 108mm.

- ◆ Compact and miniaturized design, yet powerful in functionality, equipped with shock-absorbing feet for effective vibration isolation, suitable for high-speed operation.
- ◆ Multiple mixing modes available, including pulse mode and continuous running mode.
- ◆ Adjustable speed with a wide range of 0-2800rpm, motor with stepless speed control for smooth low speeds and strong high speeds.
- ◆ Easy installation of vibration modules, stable and reliable product with durable eccentric bearing design.
- ◆ Multiple vibration module adapters available for selection (compatible with Eppendorf tubes and more).

Technical Parameters

Model	DHX-2500	DHX-28
Oscillation Speed	0 ~ 2500rpm	2800rpm
Operation Display	Knob + Pulse Pulse Trigger	
Oscillation Mode	Circular	
Power	60W	5W
Standard Test Tube Rack	Choose any one* Not applicable	
Product Weight	2.4kg	0.5kg
Dimensions	134*156*150mm	98.5*100*66mm
Input Power	AC100-240V / 50-60Hz	

*Instrument Configuration: DHX-2500 comes with a standard head and tray, and an additional selection of one other model of test tube rack.



Optional Accessory (Foam Module)

Model	Specifications	Number of tubes	Module size
T10	5ml	50	245x132x45mm
T15	10ml / 15ml	50	245x132x45mm
T20	20ml	50	245x132x45mm
T29	50ml	15	245x132x45mm
T00	Upper Tray Pad	/	305x178x25mm
T01	Lower Tray Pad	/	305x178x25mm

*Note: All modules are made of sponge material; choose sizes close to the outer diameter of the test tube.



Product Introduction

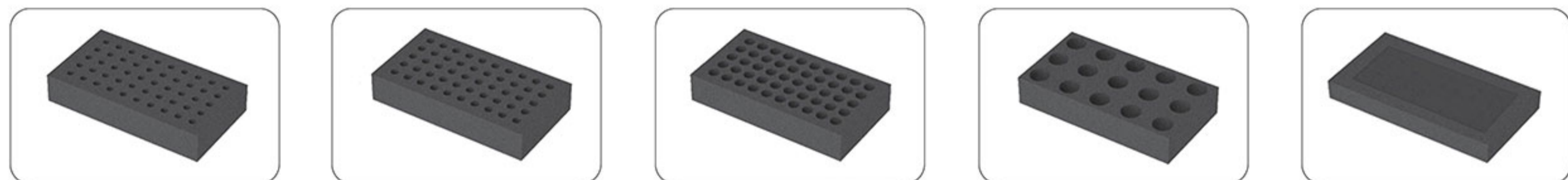
Multi-Tube Vortexer / Vortex Mixer / Programmatic vortexer

Multi-tube vortex shaker (multi-tube vortex mixer/agitator) utilizes a brushless DC motor and microcomputer control technology. The human-machine interface operation mode is simple and user-friendly. By replacing different test tube holder sponges, it can uniformly mix and oscillate various commonly used test tubes, capable of mixing and processing up to 50 samples at a time. It is suitable for applications in fields such as bioprocessing, microbiology, and medical analysis that demand high accuracy and repeatability. It significantly enhances testing efficiency for high-throughput applications in suspension, clinical, environmental, and chemical laboratories.

- ◆ LED display, one-button operation mode, simple and easy to use.
- ◆ Set timing duration from 1 minute to 99 hours and 59 minutes, with automatic sound alert upon completion of the run.
- ◆ Multiple sponge test tube racks to choose from, with wide applications.
- ◆ Soft start, uniform acceleration, effectively preventing sample splashing.
- ◆ Brushless DC motor drive for precise speed, long lifespan, and maintenance-free operation.
- ◆ Capable of processing up to 50 test samples at once, enabling efficient and swift experimentation.
- ◆ Sleek operating panel, accurately controlled by a microprocessor, with LED real-time display of speed and time.
- ◆ User-friendly program design, featuring both pulse and timed operation modes.

Model	DHM-250	DHM-200
Oscillation Speed	500-2500rpm	500-2800rpm
Speed Adjustment	10rpm	
Reciprocation Diameter (Amplitude)	4mm horizontal reciprocation	
Timing Range	0~99h59min	
Speed Adjustment During Operation	Not applicable Supported	
Max Load Capacity	4.5kg	5.0kg
Power	70W	100W
Standard Test Tube Rack	Choose any one	
Completion Sound Alert	Yes	
Tray Size	310x180mm (Length*Width)	
Product Weight	14.9kg	15kg
Dimensions	410*276*432mm (Length*Width*Height)	
Input Power	AC100-240V / 50-60Hz	

*Instrument Configuration: One foam test tube rack (choose any from T10 to T29), one upper tray pad, and one lower tray pad. It is recommended to use the original manufacturer's dedicated test tube rack.



Optional Accessory (Foam Module)

Model	Specifications	Number of tubes	Module size
T10	5ml	50	245x132x45mm
T15	10ml / 15ml	50	245x132x45mm
T20	20ml	50	245x132x45mm
T29	50ml	15	245x132x45mm
T00	Upper Tray Pad	/	305x178x25mm
T01	Lower Tray Pad	/	305x178x25mm

*Note: All modules are made of sponge material; choose sizes close to the outer diameter of the test tube.



Product Introduction

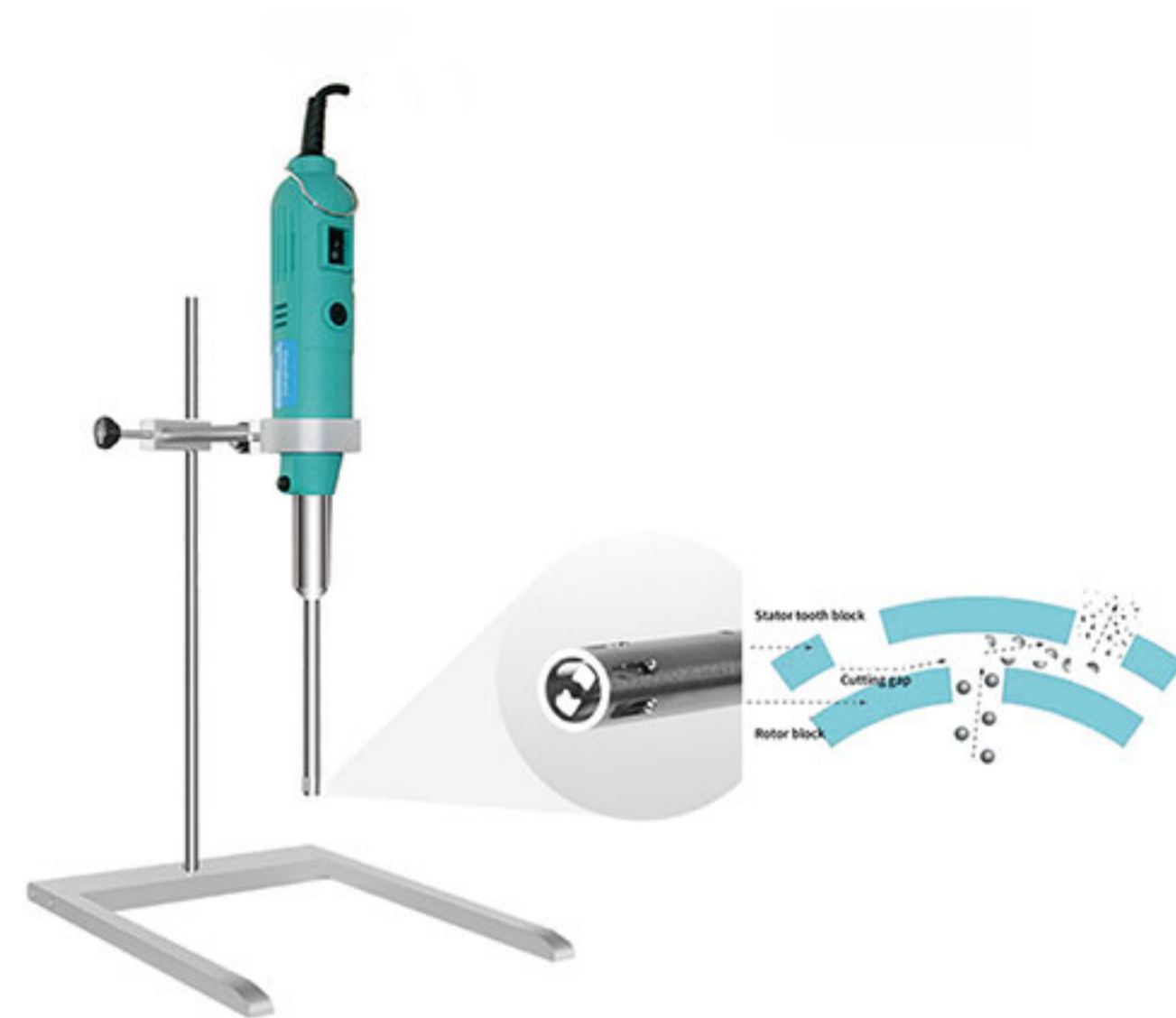
Multi-Tube Vortexer / Vortex Mixer / Programmatic vortexer

DHM-300T programmable multi-tube vortex shaker utilizes a brushless DC motor and microcomputer control technology. Its unique full touch screen operation mode is simple and easy to use. It features built-in constant speed, pulsing, and programming modes. By replacing different test tube holder sponges, it can uniformly cultivate various commonly used test tubes, capable of mixing and processing up to 50 samples at a time. It is suitable for fields such as genetics, diagnostics, biology, microbiology, and medical analysis. It significantly enhances testing efficiency for high-throughput applications in suspension, clinical, environmental, and chemical laboratories.

- ◆ LCD touch screen with graphical display for more intuitive and convenient operation, accurately controlled by a microprocessor.
- ◆ Brushless DC motor drive for precise speed, long lifespan, and maintenance-free operation.
- ◆ Multiple sponge test tube racks to choose from, suitable for a variety of commonly used test tubes, with wide applications.
- ◆ Soft start, uniform acceleration, effectively preventing sample splashing.
- ◆ Capable of processing up to 50 test samples at once, enabling high-throughput experimentation for efficient and quick results.
- ◆ Flexibly set forward and reverse rotation times and total time, with automatic sound alert upon completion of the run.
- ◆ Added pulsing mode with high-speed alternating rotation for enhanced mixing efficiency.
- ◆ Added programming mode for multi-stage processing of special materials, supporting up to 8 segments and allowing for cycle operations.

Model	DHM-250T	DHM-300T
Oscillation Speed	500-2500rpm	300-3000rpm
Speed Setting	1rpm	
Reciprocation Diameter (Amplitude)	4mm horizontal reciprocation	
Timing Range	1~99H59M	
★ Forward/Reverse Time	1~99S	
★ Data Storage	Up to 15 sets	
★ Programming Mode	Up to 8 segments, capable of cycling (1~999 cycles)	
Max Load Capacity	5.0kg	5.0kg
Power	70W	100W
Standard Test Tube Racks	Choose any three	
Tray Size	310x180mm (Length*Width)	
Product Weight	14.9kg	15kg
Dimensions	410*276*432mm (Length*Width*Height)	
Input Power	AC100-240V / 50-60Hz	

*Instrument Configuration: Choose any three foam test tube racks from T10 to T29, with one upper tray pad and one lower tray pad. It is recommended to use the original manufacturer's dedicated test tube racks.



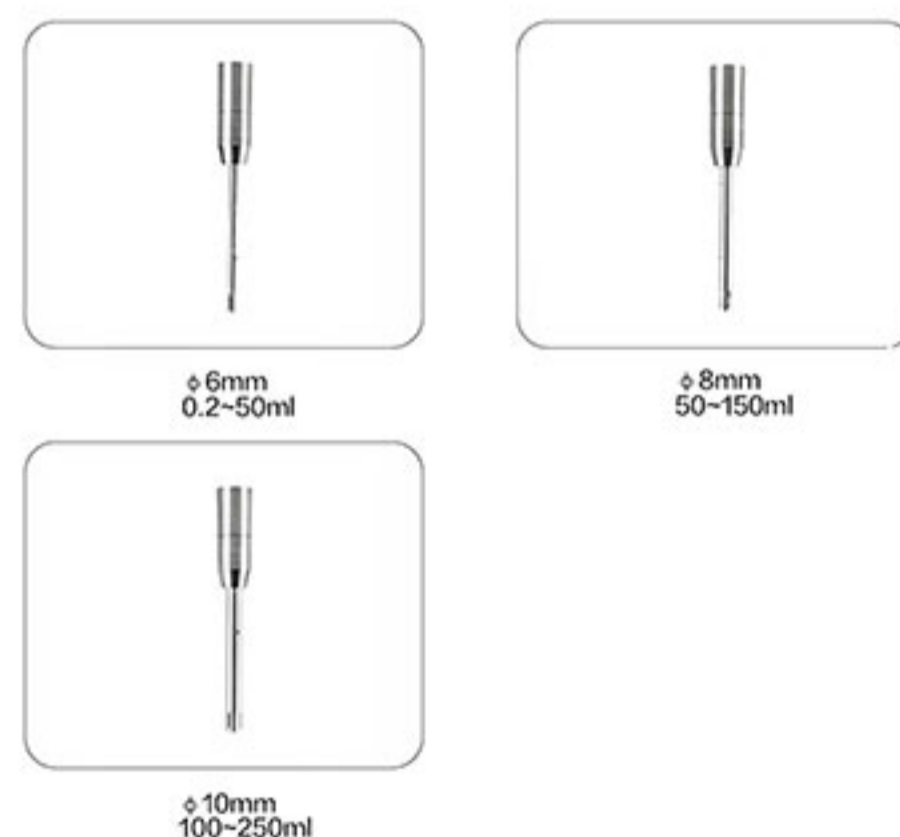
Optional Accessories (H-Type Bracket / Blade Head)

Model	Material	Reference processing volume	Outer Diameter
6G	SUS316L	0.2~50ML	6MM
8G	SUS316L	50~150ML	8MM
10G	SUS316L	100~250ML	10MM

*Dispersion head is made of stainless steel, can be reused, and uses a quick connection method for easy disassembly, replacement, and cleaning.

Optional H-type large bracket (adjustable size, height, angle).

- ◆ Weighing only 1kg, it can be operated by hand, and the motor features stepless speed adjustment.
- ◆ The speed can reach up to 35000rpm, with 7 adjustable levels.
- ◆ The homogenizing blade head is made of SUS316L stainless steel, detachable for easy cleaning.
- ◆ Equipped with a metal hanging clip, it can be temporarily suspended on the lab bench when not in use or after use.
- ◆ Three blade heads of 6mm/8mm/10mm are optional to accommodate different processing volume needs (0.2~250ml), suitable for EP tubes, centrifuge tubes, etc.
- ◆ An optional H-type large bracket with a horseshoe-shaped design is available, allowing size/height/angle adjustments for more efficient and convenient processing.



Product Introduction

Tissue Homogenizer / Tissue Ruptor

Handheld homogenizer is suitable for the mutual mixing, emulsification, and homogenization of liquids, dispersion of solid powders in liquids, crushing and homogenization of animal tissues. This machine utilizes high-speed shearing and dispersion to generate a powerful hydraulic shear effect, allowing materials to be drawn in from the lower end of the rotor and ejected through the stator, with an ergonomic design suitable for handheld operation and easy mobility. The minimum processing volume can be as low as 0.2ml, making it an ideal homogenizer developed for tissue disruption, medical diagnostics, quality supervision testing, trace dispersion, emulsification, and homogenization. It serves as an ideal device for preprocessing trace samples.

Model	DH-S06	DH-S08	DH-S10
Speed Range	5000~35000rpm		
Speed Adjustment	7 levels of equal division adjustable		
Speed Control	Stepless speed adjustment		
Metal Hanging Clip	Yes		
Timer	None		
Standard Blade Heads	6mm	8mm	10mm
Reference Processing Volume	0.2~50ml	50~150ml	100~250ml
Maximum Speed	6m/s	8m/s	10m/s
Optional Blade Heads	6mm	8mm	10mm
Optional Bracket	H-type large bracket (adjustable in size, height, angle)		
Power	145W		
Product Weight	1kg		
Dimensions	185*55mm		
Input Power	110/220V		

*Instrument Configuration: Standard host unit with one blade head, H-type large bracket, other blade heads, and crushing cups need to be selected as optional accessories.

**SLAP TYPE
HOMOGENIZER**



Optional Accessories (Stand / Homogenizing Bag)

Model	Material	Sample	Position Size
DS01	Iron Plate with Plastic Coating	5	280x160x120mm
DS02	Stainless Steel	10	340x210x200mm

- ◆ Large touch screen, microcomputer control, capable of storing 12 sets of working programs, easy operation.
- ◆ Homogenization time and speed are adjustable or fixed, and the homogenizer's front-back distance is adjustable.
- ◆ Standard configuration includes sterile disposable homogenizing bags for hygiene and safety assurance.
- ◆ Fully open door design for easy cleaning. Built-in photoelectric sensor stops operation when the door is opened (anti-pinch function).
- ◆ Removable viewing window, adjustable homogenizing plate, and tempered glass safety door for easy observation and operation.
- ◆ No contact between samples and homogenizer, no system cleaning required if there is no sample leakage.
- ◆ Gentle homogenization startup, voice alarm, contamination-free samples, no damage, no temperature rise, no need for sterilization, no need for dishwashing.



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STERILE
HOMOGENIZER

Product Introduction

Sterile Homogenizer / slap type homogenizer

Slap type homogenizer, it is widely used for homogenization processing of animal tissues, biological samples, etc. It can be applied in various fields including food, pharmaceuticals, cosmetics, clinical research, molecular biology, toxin and bacteria testing. It is particularly suitable for preparing samples for microbiological testing. This device utilizes a stainless steel system to effectively separate solid sample surfaces from microorganisms contained within the sample. The sample is placed in a disposable sterile homogenizing bag, ensuring no contact with the instrument. It features gentle homogenization, contamination-free samples, no damage, no temperature rise, no need for sterilization, and no requirement for dishwashing. It meets the demands for rapid, accurate results with good repeatability. This product is also suitable for homogenizing tumor tissues (such as liver cancer, colorectal cancer, stomach cancer, breast cancer), providing a large number of single cells (up to 2x10⁵ in 2 minutes). When necessary, by extending the homogenization time, soft tissue cell disruption (such as liver) can be achieved.

Model	DH-08S(Standard)	DH-09S(Sterilization)	DH-11L (Heating & Sterilization)
Tapping Speed	3-12 times/second, actual tapping count displayed, system automatically adjusts tapping speed		
Program Segments/Storage	3 groups of multi-segment programming combination		12 groups of multi-segment programming combination
Temperature Control Range	/	/	Room temperature +5~60°C (Maximum 80°C)
Disinfection Function	/		UV pre-disinfection for the working chamber; (Disinfection wavelength: 253.7nm)
Tapping Interval	0-50mm adjustable		
Tapping Housing	Stainless steel + corrosion-resistant coating		
Effective Volume	3-400ml		
Sterile Bags*	17x30cm		
Timing Range	0.1-99 minutes 59 seconds or continuous operation		
Power Rating	200W	200W	500W
Product Weight	18kg	19kg	20kg
Dimensions	420*245*390mm		
Input Voltage	110/220V		

*Instrument Configuration: Comes with 50 standard sterile homogenizing bags (17x30cm) by default, optional accessories include pressure-sealed/fully filtered/half-filtered types.



Model	Tube Diameter	Number of Holes
DT03	10mm	20
DT04	12mm	20
DT05	15mm	12
DT07	20mm	12
DT16	13mm	12
DT17	16mm	12

* Customization of modules and other specifications is available.



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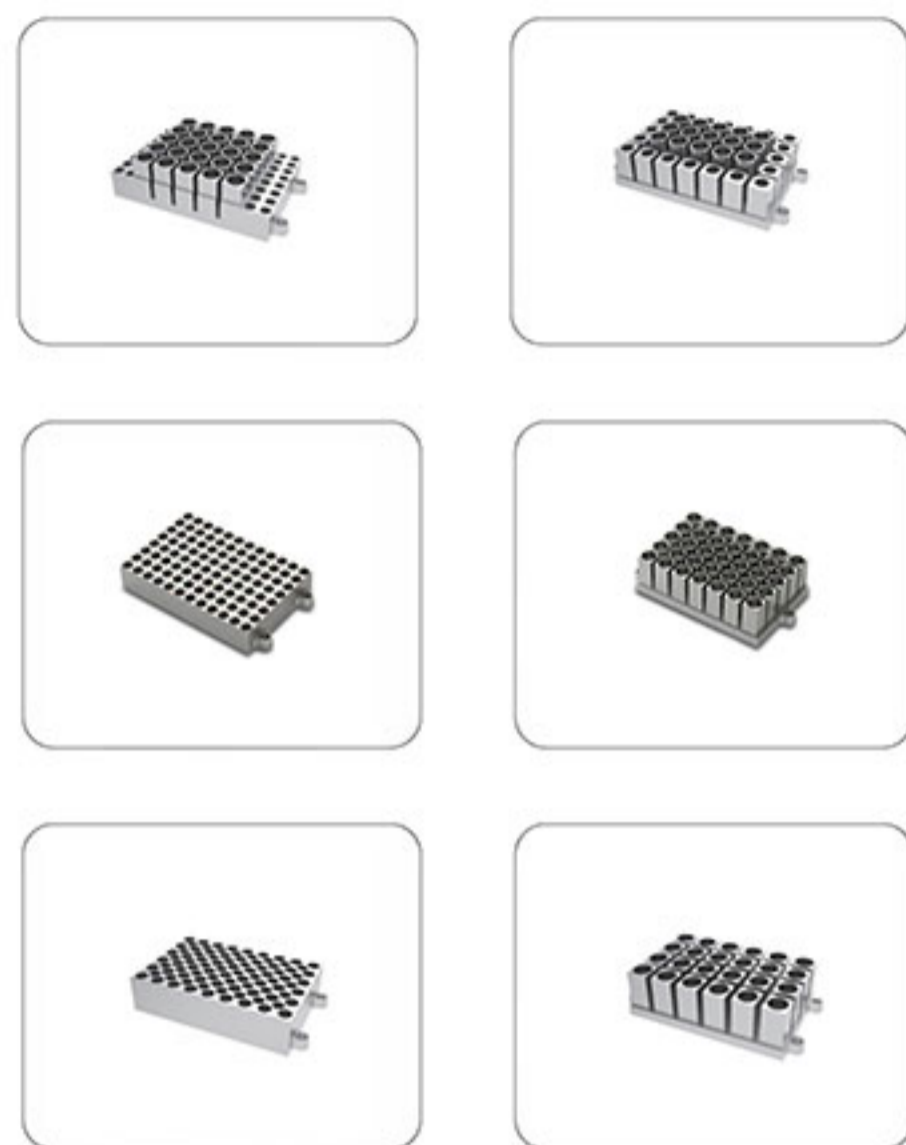
Product Introduction

Nitrogen evaporator / Dry Nitrogen Blower

nitrogen evaporator, also known as a nitrogen concentrator or nitrogen blow-down system, is primarily used for the concentration or preparation of bulk samples under anaerobic conditions. It finds wide application in industries such as pesticide residue analysis, customs inspection, food, environment, pharmaceuticals, and bioproducts. The nitrogen evaporator employs microcomputer control technology and utilizes high-purity aluminum material as the heating medium. This results in fast heating, precise temperature control, and a wide temperature range. The DHN200 model can simultaneously process 12/24 samples, and various other models of nitrogen evaporators are available, including water bath nitrogen evaporators, circular nitrogen evaporators, and visual nitrogen evaporators, giving customers the flexibility to choose according to their needs.

- ◆ Each blowing needle can be independently controlled to avoid cross-contamination.
- ◆ The instrument's chamber height is adjustable, equipped with a standard needle length of 15 centimeters.
- ◆ 12/24 gas channel control switches, saving gas and accommodating different sample containers and positions.
- ◆ When concentrating toxic solvents, the entire system can be placed in a fume hood to reduce hazards.
- ◆ Built-in over-temperature protection device, automatic fault detection, and alarm function for practical convenience.
- ◆ LCD display screen with synchronous temperature display and countdown timer, allowing real-time temperature observation.
- ◆ The dry nitrogen evaporator offers uniform overall temperature and rapid heating.
- ◆ This product can also be used as a regular dry constant temperature device.

Technical Parameters		DHN200-1(12 needles)	DHN200-2(24 needles)	DHN200-2B (Visual)
Model				
Temperature Control Range		Room temperature +5°C to 150°C		
Ramp-up Time		(20°C to 100°C) ≤ 30 minutes		
Temperature Stability		(@40°C) ≤ ±0.5°C; (@120°C) ≤ ±1°C		
Maximum Module Temperature Fluctuation		@40°C ±0.3°C		
Module Temperature Uniformity		≤ ±0.5°C		
Temperature Display Accuracy		0.1°C		
Timing Range		0 to 99 hours 59 minutes		
Lifting Stroke		200mm		
Gas Flow/Pressure		15L/min; 0.1Mpa		
Standard Modules		1 (with 12 blowing needles)	2 (with 24 blowing needles)	1 (with 12 blowing needles)
Power Rating		250W	400W	400W
Product Weight		4.5kg	5.5kg	5.2kg
Dimensions		260*200*540mm	290*220*540mm	290*220*540mm
Programming Function		5 groups		/



Model	Specification
DW30	96×0.2ml Standard Plate
DW31	54×0.5ml Centrifuge Tube
DW32	35×1.5ml Centrifuge Tube
DW33	35×2.0ml Centrifuge Tube
DW34	20×0.5ml + 15×1.5ml Centrifuge Tube
DW35	24×φ12mm Test Tube
DW36	32×0.2ml + 25×1.5ml Centrifuge Tube
DW37	32×0.2ml + 10×0.5ml + 15×1.5/2ml Centrifuge Tube
DW38	103×67×30 (Square Well Module)
DW39	96×0.2ml ELISA Plate (Flat Bottom)
DW40	24×5ml Tube
DW41	12×15ml Tube
DW42	6×50ml Tube
DW43	15×10ml Tube

Product Introduction

Shaking Dry Bath / Cooling Shaking Dry Bath

Shaking Dry Bath (constant temperature shaker, constant temperature incubator, oscillating constant temperature mixer) combines a brushless DC motor and microprocessing technology with intelligent PID control. It quickly maintains stability after reaching the target temperature, reducing waiting time and seamlessly integrating constant temperature and oscillation functions. This effectively shortens experimental operation time, enhancing staff efficiency. It serves as an ideal automated tool for processes such as sample incubation, catalysis, mixing, and preservation.

- ◆ Utilizes metal modules for high temperature uniformity and convenient module replacement.
- ◆ Rapid heating, even heating, precise temperature control, and high stability.
- ◆ Microprocessor control ensures superior temperature stability and uniformity.
- ◆ LCD display provides real-time temperature and speed information.
- ◆ Features short oscillation pulsing function and temperature calibration.
- ◆ Brushless DC motor ensures accurate and minimally fluctuating oscillation speed; supports multi-point cycling.
- ◆ Generates alarm signal upon program completion.
- ◆ Supports power-off recovery function and automatic startup, catering to various user needs.

Model	DHS-100 (Heating)	DHC-100(cooling+Heating)
Temperature Control Range	Room temperature +5°C to 100°C	0°C to 100°C*
Ramp-up Time	≤ 15 minutes (from 25°C to 100°C)	
Ramp-up Time	≤ 25 minutes (from room temperature 30°C to 10°C) below 20°C*	
Temperature Stability	(@40°C to 100°C) ≤ ±0.5°C	
Maximum Module Temperature Fluctuation	@40°C ±0.3°C	
Module Temperature Uniformity	≤ ±0.5°C	
Temperature Display Accuracy	0.1°C	
Timing Range	0 to 99 hours 59 minutes	
Oscillation Speed/Amplitude	200~1800rpm* / 2~3mm	
Power Rating	200W	250W
Product Weight	7.0kg	8.0kg
Dimensions	270*190*170mm	
Programming Function	5 groups	
Input Power	220V	110V/220V

*Instrument Configuration: Default configuration includes 1.5/2ml module, or choose other module sizes.





Model	Tube Diameter	Number of Holes
DT01	6mm	42
DT02	7mm	42
DT03	10mm	20
DT04	12mm	20
DT05	15mm	12
DT06	19mm	12
DT07	20mm	12
DT08	26mm	6
DT09	28mm	4
DT10	40mm	2
DT11	0.2ml (Centrifuge Tube)	48
DT12	0.5ml (Centrifuge Tube)	48
DT13	1.5/2ml (Centrifuge Tube)	24
DT14	0.2ml (PCR Tube)	96
DT15	0.2ml (ELISA Plate)	96

* Also available in 13/16mm tube diameter and 50ml tubes.



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Product Introduction

Dry metal bath

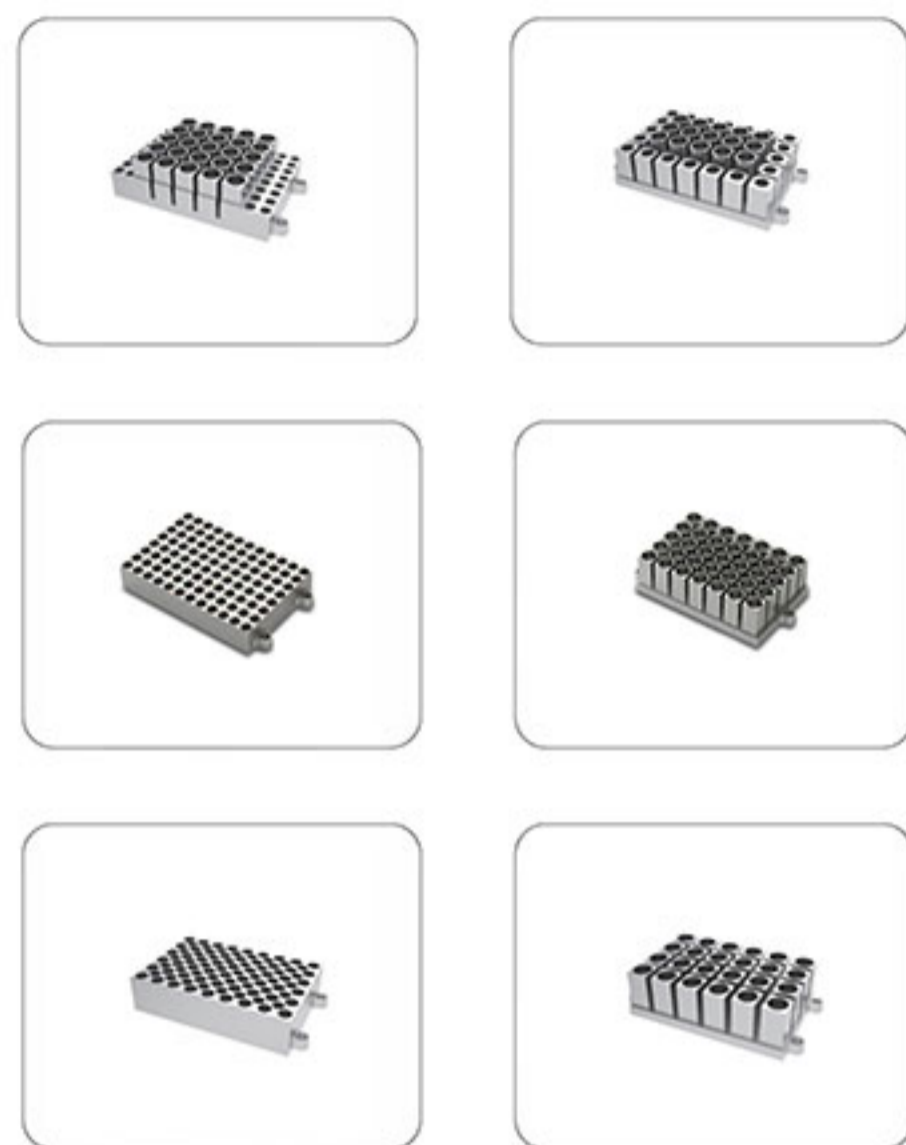
Dry high-temperature metal bath is a microcomputer-controlled constant-temperature metal bath device with high temperature control accuracy and good sample parallelism. It replaces traditional water bath devices and can be widely used for cultivation, preservation, and reactions of various samples. Its applications span across industries such as pharmaceuticals, chemicals, food safety, quality inspection, and the environment.

- ◆ LED display, with functions for displaying set parameter data and current data, providing clear information at a glance.
- ◆ Fast heating speed, even heating, precise temperature control, high stability, low energy consumption, and low noise.
- ◆ Built-in temperature deviation calibration function, automatic fault detection, and buzzer alarm function.
- ◆ Built-in over-temperature protection device for safer and more reliable use, extending machine lifespan.
- ◆ Compact and tightly designed product, occupying a small space range, offering more freedom and convenience.
- ◆ Multiple module options, easy to replace, facilitating cleaning and disinfection for various test tubes.
- ◆ Unique temperature control technology, 5-stage programming (nodes) design, each program stage can be independently activated and deactivated, and can be flexibly combined according to requirements.

Technical Parameters

Model	DH200-1	DH200-2	DH200-4
Temperature Control Range	Room temperature +5°C to 150°C		Room temperature +5°C to 120°C
Ramp-up Time	(20°C to 100°C) ≤ 30 minutes		(20°C to 120°C) ≤ 30 minutes
Temperature Stability	@40°C ≤ ±0.5°C; @120°C ≤ ±1°C		
Maximum Module Temperature Fluctuation	@40°C ±0.3°C		
Module Temperature Uniformity	≤ ±0.5°C		
Temperature Display Accuracy	0.1°C		
Timing Range	0 to 99 hours 59 minutes		
Temperature Setting Range	0°C to 150°C		0°C to 120°C
Standard Modules	1	1/2	2/3/4
Power Rating	250W	400W	600W
Product Weight	4.5kg	5.5kg	8.0kg
Dimensions	260*200*120mm	290*220*120mm	360*220*120mm
Programming Function	5 groups		/
Input Power	220V		110V/220V

*Instrument Configuration: Default configuration includes 1.5/2ml modules, or the option to select other module sizes.



Model	Specification
DW30	96×0.2ml Standard Plate
DW31	54×0.5ml Centrifuge Tube
DW32	35×1.5ml Centrifuge Tube
DW33	35×2.0ml Centrifuge Tube
DW34	20×0.5ml + 15×1.5ml Centrifuge Tube
DW35	24×φ12mm Test Tube
DW36	32×0.2ml + 25×1.5ml Centrifuge Tube
DW37	32×0.2ml + 10×0.5ml + 15×1.5/2ml Centrifuge Tube
DW38	103×67×30 (Square Well Module)
DW39	96×0.2ml ELISA Plate (Flat Bottom)
DW40	24×5ml Tube
DW41	12×15ml Tube
DW42	6×50ml Tube
DW43	15×10ml Tube

*Instrument Configuration: Default configuration includes 1.5/2ml module, or choose other module sizes.



Product Introduction

Thermostat dry bath / thermostatic dry bath

Dry constant temperature metal bath (dry constant temperature apparatus) is a precision temperature control device that employs a microprocessor PID control system. It seamlessly integrates semiconductor cooling and heating functions, significantly reducing experimental operation time. It serves as an ideal automated tool for processes such as sample incubation, catalysis, and preservation. This device features versatile functions including heating, cooling, and custom temperature programming, catering to various user requirements.

- ◆ Innovative custom-designed irregular armor beads with excellent thermal conductivity and fluidity. They do not roll randomly when spilled on the laboratory tabletop, making maintenance convenient.
- ◆ Built-in 5 editable programs, convenient for individual or multiple linked and looped calls
- ◆ PID temperature control technology, precise temperature control, good linearity, ensuring superior temperature stability and uniformity
- ◆ Aluminum alloy module design, high temperature uniformity, easy module replacement
- ◆ Rapid heating, even heating, precise temperature control, high stability
- ◆ LCD liquid crystal display, real-time display of current temperature
- ◆ Temperature calibration function included
- ◆ Alarm prompt upon program completion
- ◆ Optional power-off recovery function, automatic startup function to meet different user needs.

Technical Parameters

Model	DH-10	DH-20
Temperature Control Range	Room temperature +5°C to 100°C	-10°C to 100°C
Ramp-up Time	≤ 15 minutes (from 20°C to 100°C)	
Temperature Stability	(@40°C to 100°C) ≤ ±0.5°C	
Maximum Module Temperature Fluctuation	@40°C ±0.3°C	
Module Temperature Uniformity	≤ ±0.5°C	
Temperature Display Accuracy	0.1°C	
Timing Range	0 to 999 minutes	
Temperature Setting Range	-10°C to 100°C	
Standard Modules	1	
Power Rating	150W	200W
Product Weight	2.5kg	4.5kg
Dimensions	270*190*170mm	
Programming Function	5 groups available	
Input Power	220V	110V/220V



Model	Internal slot size	Armor bead capacity
DB03	300×150×150mm	4L
DB04	300×320×150mm	12L

Model	Module size	Module inner size	Armor bead capacity
DB02	95.5×153×75mm	78×140×70mm	0.50L

- ◆ Innovative custom-designed irregular armor beads with excellent thermal conductivity and fluidity. They do not roll randomly when spilled on the laboratory tabletop, making maintenance convenient.
- ◆ Can be operated continuously for long periods. No need to schedule water bath times. There is no water evaporation during use, eliminating the risk of drying out.
- ◆ Disinfecting the beads with 70% ethanol once a month is sufficient, without the need for disinfectant to clean the bead bath tank.
- ◆ No need for accessories like test tube racks, bottle clips, or floats to secure samples.
- ◆ 5-stage temperature control design with individual activation and deactivation of each stage. It can also be flexibly combined as needed.
- ◆ Energy-saving of over 4 times when set at 65°C, and over 2 times at 37°C. Comes with a standard insulation cover for more even temperature distribution.



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Product Introduction

Dry metal bead bath / Cell culture incubator

Dry constant temperature metal armor bead bath is a microcomputer-controlled constant temperature metal bead bath device, featuring high temperature control accuracy and good sample parallelism. It replaces traditional water bath devices and conventional modular metal baths. It finds wide applications in sample cultivation, cell recovery, preservation, and reactions across various industries, including pharmaceuticals, chemicals, food safety, quality inspection, and the environment.

Lawson Scientific Bead Bath Constant Temperature Chamber (Constant Temperature Metal Bead Bath) features an innovative design distinct from traditional metal baths and water (oil) baths. It employs the newly introduced Beads BATH (armor bead bath tank) and innovative five-sided heating method. This breakthrough surpasses the boiling point limit of water baths (100°C) while avoiding the limitations of traditional metal bath module apertures. It is suitable for a variety of standard laboratory containers such as serum bottles, conical flasks, centrifuge tubes, test tubes, microplates, and slides, accommodating tubes of any shape and volume. The LAWSON constant temperature metal bead bath provides optimal temperature uniformity and accuracy. The compact and lightweight armor bead bath module design reduces the need for different-sized modules in conventional metal baths, providing better service for your laboratory.

Technical Parameters

Model	DHB-706	DHB-714	DHB-200
Temperature Control Range	Room temperature +5°C to 120°C		Room temperature +5°C to 150°C
Ramp-up Time	(20°C to 80°C) ≤ 30 minutes		
Temperature Stability	@37°C ≤ ±0.5°C		@40~80°C ≤ ±0.5°C; @80~120°C ≤ ±1~3°C
Maximum Temperature Fluctuation	@37°C ±0.5°C		@40°C ±0.3°C
Temperature Display Accuracy	0.1°C		
Timing Range	1 to 99 hours 59 minutes		
Temperature Setting Range	0°C to 120°C		0°C to 150°C
Insulation Cover	Yes		No
Inner Chamber Dimensions	300*150*150mm/6L,	300*320*150mm/14L	95.5*153*75mm/0.5L
Power Rating	500W	850W	400W
Product Weight	13.2kg	24.5kg	5.2kg
Dimensions	360*365*250mm	360*535*250mm	290*220*120mm
Programming Function	5-stage, supports multi-node cycles		
Input Power	220V/50Hz		

CONTINUOUS FLOW ULTRASONIC DISRUPTOR



Optional Accessories (Amplitude Bar/Reaction Vessel/Low-Temperature Bath)

* Different specifications of continuous flow reaction vessels, high-capacity stainless steel continuous flow reaction vessels, constant temperature baths, peristaltic pumps, etc.
For detailed configuration plans, please contact our company personnel.

- ◆ Large screen display, intuitive parameter visualization, and convenient touch operation.
- ◆ Versatile functions: Cell disruption, homogenization, separation, extraction, defoaming, cleaning, and accelerating chemical reactions.
- ◆ Alarm functions: Timer, overload, no-load, over-temperature.
- ◆ Customize ultrasonic time, interval time, total time, and power ratio.
- ◆ Easy operation: Central microcomputer control for optimized user interaction.
- ◆ Low noise: Coupled with a soundproof box to minimize noise disturbance.
- ◆ Extended operation time: Supports continuous operation for over 1 hour; Industrial models (3000W/4000W) support continuous ultrasonic function.



CONTINUOUS FLOW ULTRASONIC DISRUPTOR

Product Introduction

Continuous Flow Ultrasonic Disruptor/Crusher

Continuous flow ultrasonic homogenizer features a large screen display and centralized control via a central computer. It is primarily used for dispersing and homogenizing low-viscosity samples. The ultrasonic interval time is adjustable, with power ranging from 1% to 99%, and automatic frequency tracking. Automatic fault alarms are included. The unit employs a dual-cup jacketed design, with the cooling liquid compatible for use with a constant temperature bath. The sample cups and amplitude bars can be accessed on-site for easy loading and unloading. For small capacities, the sample can be removed and used as a regular ultrasonic reaction cup. For processing larger capacities and achieving optimal performance, it is recommended to use a mechanical stirrer for pre-mixing samples when working on a flow basis.

Technical Parameters

Model	DH98-IIIDN-L	DH-ZS3000W	DH-ZS4000W
Ultrasonic Frequency (KHz)	19.5~20.5 (Automatically Tracked)		
Ultrasonic Power (Adjustable)	1200W	3000W	4000W
Duty Cycle	1~99%		
Display/Operation Method	4.5-inch TFT Color Touchscreen		
Standard ultrasonic top	Φ15mm	Φ38mm	Φ40mm(Lengthened)
Optional ultrasonic top	Φ20	Φ20/35/38 /40 (Lengthened)/50mm	Φ20/35/38 /40 (Lengthened)/50mm
Disruption Capacity (ml)*	500~1200	500~3000	500~5000
Standard Reaction Vessels	200ml (Glass), 2000ml (Stainless Steel), 5000ml (Stainless Steel)		
Single Ultrasonic Time	0.1~99.9 seconds		
Single Gap Time	0.1~99.9 seconds		
Total Time	1~99 hours, 59 minutes, 59 seconds		
Temperature Control Range*	0 to 100 degrees Celsius (Low-temperature constant temperature equipment needs to be optionally selected)		
Data Storage	20 sets		
Product Weight	16.0 kg	19.0 kg	21.0 kg
Dimensions	Main Unit 410*225*290mm	510*225*290mm	510*225*290mm
Input Power	220/110V 50/60Hz		

*Note:
For continuous circulation and flow of sample processing, a peristaltic pump needs to be configured.
If sample temperature control is required, optional accessories include low-temperature constant temperature equipment and reaction vessels.



Model	Reference capacity for crushing
Φ2mm	0.1~5ml
Φ3mm	3~10ml
Φ6mm	10~100ml
Φ10mm	30~300ml

Model	Reference capacity for crushing
Φ12mm	50~500ml
Φ15mm	200~700ml
Φ20mm	2000~1000ml
Φ25mm	500~1500ml

* The actual processing capacity is related to the sample capacity ratio, concentration, temperature, state, etc. Please refer to the actual test.

- ◆ Large touchscreen display, intuitive parameter visualization, and convenient operation.
- ◆ Digital circuitry, automatic precise frequency tuning to $\pm 1\text{Hz}$ with real-time display.
- ◆ Equipped with a temperature probe, real-time sample temperature display, and sample temperature protection function.
- ◆ Integrated design with soundproof box, electric lift, optional lighting or sterilization lamp.
- ◆ Versatile application: Customize ultrasonic time, interval time, total time, and power ratio.
- ◆ Alarm functions: Timer, overload, no-load, over-temperature.



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Product Introduction

Ultrasonic homogenizer ultrasonic soundproof box integrated machine is a new compact and aesthetically designed unit that can safely process various organic and inorganic materials, ranging from 250 microliters to 1 liter*. Typical applications include nanotechnology (production of nano-particle materials and graphene dispersions), cell lysis, sample preparation, homogenization, ChIP analysis, emulsification, dispersion, and deagglomeration, as well as applications in the field of sonochemistry processing.

Model	YP-S500	YP-S650	YP-S900	YP-S1200	YP-S1800
Ultrasonic Frequency (KHz)	18~25 (Automatically Tracked)				
Ultrasonic Power (Adjustable)	500W	650W	900W	1200W	1800W
Duty Cycle	1~99%				
Display/Operation Method	8-inch TFT Color Touchscreen				
Standard ultrasonic top	Φ6mm	Φ6mm	Φ10mm	Φ15mm	Φ20mm
Optional ultrasonic top	Φ3/6/10	Φ3/6/10	Φ2/3/6/10/15	Φ2/3/10/12/15	Φ3/6/10/15/20/25
Disruption Capacity (ml)*	0.1~500	0.1~600	0.1~800	20~1000	20~2000
Single Ultrasonic Time	0.1~99.9 seconds				
Single Gap Time	0.1~99.9 seconds				
Total Time	1~99 hours, 59 minutes, 59 seconds				
Temperature Control Function*	Ultrasonic operation will pause when the material temperature reaches the set value, and it will automatically resume ultrasonic operation when the material temperature is 2°C below the set value.				
Incremental Function	Supported				
Data Storage	100 sets				
Product Weight	13.0 kg	13.0 kg	15.0 kg	17 kg	19 kg
Dimensions	Main Unit 280*280*495mm				
Input Power	220/110V 50/60Hz				

*Note:
For processing samples of different capacities, the corresponding amplitude bar needs to be selected; with higher power, thicker amplitude bars can be driven, corresponding to a larger processing capacity. If temperature control of samples is required, optional accessories include low-temperature constant temperature equipment, constant temperature cups, etc.



Model	Reference capacity for crushing
Φ2mm	0.1~5ml
Φ3mm	3~10ml
Φ6mm	10~100ml
Φ10mm	30~300ml

Model	Reference capacity for crushing
Φ12mm	50~500ml
Φ15mm	200~700ml
Φ20mm	2000~1000ml
Φ25mm	500~1500ml

* The actual processing capacity is related to the sample capacity ratio, concentration, temperature, state, etc. Please refer to the actual test.

- ◆ Touchscreen display with intuitive parameters and touch-screen operation
- ◆ Ultrasonic power simulation data waveform/ultrasonic time pulse width data waveform display function
- ◆ Rich functions: cell crushing, homogenization, separation, extraction, defoam, cleaning and accelerating chemical reactions
- ◆ Alarm function: time, overload, idle, overtemperature
- ◆ Customizable settings for ultrasonic time, interval time, total time, power ratio
- ◆ Easy to operate: central microcomputer control, optimized interaction experience
- ◆ Low noise: with soundproof box to eliminate noise
- ◆ Long-lasting operation: supports continuous work for more than 1 hour



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Product Introduction

Ultrasonic processor/tissue homogenizer

- Uses high-intensity ultrasound to create cavitation effects in liquid to ultrasonically treat materials
- Can be used to break down a variety of animal and plant cells, virus cells
- Can be used for emulsification, separation, homogenization, extraction, defoam, digestion, cleaning, accelerating chemical reactions, graphene peeling, and dispersion of nanomaterials
- Widely used in biochemistry, microbiology, pharmaceutical chemistry, surface chemistry, physics, and zoology

Model	DH96-IIN	DH88-IIN	DH92-IIN	DH92-IIDN	DH98-IIIDN	DH99-IIDN
Ultrasonic Frequency (KHz)	20~25 (Automatically Tracked)				19.5~20.5 (Automatically Tracked)	
Ultrasonic Power (Adjustable)	150W	250W	650W	900W	1200W	1800W
Duty Cycle	1~99%					
Standard ultrasonic top	Φ6mm	Φ6mm	Φ6mm	Φ6mm	Φ20mm	Φ22mm
Optional ultrasonic top	Φ2/3/8	Φ2/3/8/10	Φ2/3/8/10/12	Φ2/3/10/12/15	Φ3/6/10/15/22/25	Φ3/6/10/15 /20/25/28
Disruption Capacity (ml)*	0.1~150	0.1~300	0.1~500	1~650	1~1200	1~1500
Single Ultrasonic Time	0.1~99.9 seconds					
Single Gap Time	0.1~99.9 seconds					
Total Time	1~99 hours, 59 minutes, 59 seconds					
Temperature Control Function*	Available (Automatically Pauses Ultrasonic Operation upon Reaching Preset Temperature)					
Optional Functions	Computer Communication + Remote Control + User Password Protection + Data Printing + Automatic Lifting Soundproof Box + Lighting or Sterilization					
Data Storage	20 sets					
Product Weight	16.0 kg	16.0 kg	16.5 kg	17 kg	19 kg	20 kg
Dimensions	Main Unit 410*225*290mm, Small Soundproof Box 470*305*430mm					
Input Power	220/110V 50/60Hz					

*Note:
For processing samples of different capacities, the corresponding amplitude bar needs to be selected; with higher power, thicker amplitude bars can be driven, corresponding to a larger processing capacity. If temperature control of samples is required, optional accessories include low-temperature constant temperature equipment, constant temperature cups, etc.



Model	Reference capacity for crushing
Φ2mm	0.1~5ml
Φ3mm	3~10ml
Φ6mm	10~100ml
Φ10mm	30~300ml

Model	Reference capacity for crushing
Φ12mm	50~500ml
Φ15mm	200~700ml
Φ20mm	2000~1000ml
Φ25mm	500~1500ml

* The actual processing capacity is related to the sample capacity ratio, concentration, temperature, state, etc. Please refer to the actual test.

- ◆ 7-inch touchscreen display with intuitive parameters and touch-screen operation
- ◆ Ultrasonic power simulation data waveform/ultrasonic time pulse width data waveform display function
- ◆ Rich functions: cell crushing, homogenization, separation, extraction, defoam, cleaning and accelerating chemical reactions
- ◆ Alarm function: time, overload, idle, overtemperature
- ◆ Customizable settings for ultrasonic time, interval time, total time, power ratio
- ◆ Easy to operate: central microcomputer control, optimized interaction experience
- ◆ Low noise: with soundproof box to eliminate noise
- ◆ Long-lasting operation: supports continuous work for more than 1 hour



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Product Introduction

Smart ultrasonic disintegrator/tissue homogenizer

- Uses high-intensity ultrasound to create cavitation effects in liquid to ultrasonically treat materials
- Can be used to break down a variety of animal and plant cells, virus cells
- Can be used for emulsification, separation, homogenization, extraction, defoam, digestion, cleaning, accelerating chemical reactions, graphene peeling, and dispersion of nanomaterials
- Widely used in biochemistry, microbiology, pharmaceutical chemistry, surface chemistry, physics, and zoology

Model	DH92-IIIDE	DH98-IIIE	DH98-IIIDE	DH99-IIIDE
Ultrasonic Frequency (KHz)	20~25 (Automatically Tracked)		19.5~20.5 (Automatically Tracked)	
Ultrasonic Power (Adjustable)	650W	1000W	1200W	1800W
Duty Cycle	1~99%			
Standard ultrasonic top	Φ6mm	Φ6mm	Φ20mm	Φ22mm
Optional ultrasonic top	Φ2/3/10/12	Φ2/3/10/12/15	Φ3/6/10/15/22/25	Φ3/6/10/15 /20/25/28
Disruption Capacity (ml)*	0.1~500	1~750	1~1200	1~1500
Single Ultrasonic Time	0.1~99.9 seconds			
Single Gap Time	0.1~99.9 seconds			
Total Time	1~99 hours, 59 minutes, 59 seconds			
Temperature Control Function*	Available (Automatically Pauses Ultrasonic Operation upon Reaching Preset Temperature)			
Optional Functions	Computer Communication + Remote Control + User Password Protection + Data Printing + Automatic Lifting Soundproof Box + Lighting or Sterilization			
Data Storage	20 sets			
Product Weight	16.5 kg	17 kg	19 kg	20 kg
Dimensions	Main Unit 410*225*290mm, Small Soundproof Box 470*305*430mm			
Input Power	220/110V 50/60Hz			

*Note:
For processing samples of different capacities, the corresponding amplitude bar needs to be selected; with higher power, thicker amplitude bars can be driven, corresponding to a larger processing capacity. If temperature control of samples is required, optional accessories include low-temperature constant temperature equipment, constant temperature cups, etc.

**HAND-HELD
ULTRASONIC PROCESSORS**



- ◆ Large touch screen display with intuitive parameters
- ◆ Small and convenient hand-held transducer with point-and-click buttons
- ◆ Rich functions: cell crushing, homogenization, separation, extraction, defoam, cleaning and accelerating chemical reactions
- ◆ Continuous and uninterrupted ultrasonic, automatic frequency tracking, automatic resonance point and power control, no need to manually adjust the energy frequently
- ◆ Can work intermittently or run in idle state, in line with different experimental needs, need to be verified (idle ultrasonic for 10 minutes is qualified)
- ◆ On/off pulse timer, closed loop and open loop can be set from 0.1 second to 99.9 seconds at will, to ensure high-intensity processing of samples
- ◆ Automatic amplitude and pulse compensation function, to ensure that the probe amplitude does not change due to load changes



**HAND-HELD
ULTRASONIC PROCESSORS**

Product Introduction

Handheld ultrasonic processors is a multi-functional and versatile instrument which uses strong ultrasound to produce cavitation effect in liquid to ultrasonically process substances. It can be used to break a variety of animal and plant cells and virus cells, and can also be used for emulsification, separation, homogenization, extraction, defoam, cleaning and accelerating chemical reactions. It is widely used in biochemistry, microbiology, pharmaceutical chemistry, surface chemistry, physics, zoology and other fields. This instrument is suitable for small trials that need to process a large number of samples but small amount, and need to quickly output experimental results.

Model	Reference capacity for crushing
Φ2mm	0.1~5ml
Φ3mm	3~10ml
Φ6mm	20~200ml
Φ8mm	30~300ml

* The actual processing capacity is related to the sample capacity ratio, concentration, temperature, state, etc. Please refer to the actual test.

	Parameters		
Model	UP-150S	UP-250S	UP-400S
Operation mode	Automatic & pulse		
Ultrasonic frequency (kHz)	19~25 (auto tracking)		
Ultrasonic power (W)	150W	250W	400W
Power range (%)	1~100% (continuously adjustable with 1% accuracy)		
Duty cycle (%)	1~99%		
Standard ultrasonic top (mm)	Φ2mm	Φ3mm	Φ6mm
Optional ultrasonic top (mm)	/	Φ2mm	Φ2/3/8mm
Crushing capacity (ml)	0.1~50	0.5-100	0.5-300
Single ultrasonic time (s)	0.1-99.9S		
Single interval time (s)	0.1-99.9S		
Total time (s)	1-9999M59S		
Temperature control function	Optional (auto pause ultrasonic when reaching preset temperature)		
Product weight (kg)	4.2kg	4.2kg	4.5kg
Main unit size (mm)	250*210*110		
Input power (V/Hz)	100~240V 50/60Hz)		

*Notes:
Different amplitude rods are available for different sample capacities. The larger the power, the thicker the amplitude rod can be driven, and the larger the corresponding processing capacity will be. A temperature probe is optional. If you need to control the sample temperature, you can choose to equip it with a low-temperature thermostat, reaction kettle, etc.



Model	Adapter specifications	
0.2ml*8holes	0.5ml*6holes	5ml*3holes
0.5ml*18holes	5ml*18holes	15ml*15holes
	50ml*5holes	
0.5ml*48holes	5ml*18holes	15ml*15holes
	50ml*5holes	250ml*1holes

* The actual processing capacity is related to the sample capacity ratio, concentration, temperature, and state. Please refer to the actual experiment.

1. DNA fragmentation for next-generation sequencing
2. RNA fragmentation
3. Bacterial and cell lysis
4. ChIP assay (chromatin immunoprecipitation)
5. Sample preparation for high-throughput sequencing
6. Membrane protein extraction
7. Homogenization and emulsification
8. Ultrasonic treatment of precious reagents



LAWSON_Chou
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Product Introduction

Non-contact ultrasonic crusher, also known as cup crusher, is used for sterile crushing, and can break chromosomes and cells through centrifuge tubes. It is suitable for ChP, ChP-seq, RNA-seq, chromatin shearing and DNA shearing (for second-generation sequencing). It is tailored for the pretreatment of second-generation sequencing DNA samples and chromatin immunoprecipitation experiment samples. Compared with the traditional probe contact ultrasonic cell crusher, the non-contact sample can be broken in a sealed container, and no infectious flying dust is generated. The ultrasonic probe does not contact the sample, so as to avoid cross-contamination. Non-contact ultrasonic crusher can obtain incomparable quality, efficiency and safety with traditional ultrasonic methods.

It can test multiple samples at the same time, which is efficient; there is no wear or chipping, and each sample is in a separate, fully sealed tube to avoid cross-contamination; a cooling water circulation system can be selected, which is convenient for samples to ultrasonic at 4 °C water bath, the energy distribution is uniform, and the ultrasonic effect is complete; the ultrasonic parameters are set flexibly, the experimental steps are standardized, the ex-

	Technical	Parameters		
Model	LAWSON98-III	LAWSON08-I	LAWSON08-II	
Ultrasound frequency(KHz)	19.5-20.5KHz (auto-tracking)			
Power	12~1200Wauto-adjustment	2200Wauto-adjustment	3200Wauto-adjustment	
Standard adapter	1.5/2ml*4 (holes)	1.5/2ml*16 (holes)	1.5/2ml*32 (holes)	
Optional adapter specifications	0.2ml*8/0.5ml*6 /5ml*3 (holes)	0.5ml*18/5ml*18 /15ml*15/50ml*5 (holes)	0.5ml*48/5ml*18/15ml* 15/50ml*5/250ml*1 (holes)	
Ultrasonic probe	Φ20mm	Φ60mm	Φ70mm	
Single ultrasonic time	0.1-99.9S			
Single gap time	0.1-99.9S			
Total time (ultrasonic + gap)	1-99H59M59S			
Temperature control range:*	0~100°C (optional low-temperature constant)			
Processing chamber ice bath feature	Not Supported	Supported	Supported	
Data storage	20 sets			
Alarm function	Temperature, time, overload, idle, overheat			
Voice alarm and prompt	Yes			
Weight	22kg	26kg	27kg	
Host size	140*330*210 (mm)	410*225*290 (mm)	410*225*290 (mm)	
Input power	110/220V 50/60Hz			

*Note: Temperature probe is optional. For sample temperature control, you may choose to install a low-temperature constant-temperature device.

HIGH-THROUGHPUT CRYOGENIC GRINDER

Product Introduction

high-throughput cryogenic grinder / Cryo mill / Tissue Homogenizer
 DHFSTPRP-CL48 High-throughput cryogenic grinder is a special, fast, high-efficiency, multi-tube homogenization system that extracts and purifies raw DNA, RNA, and proteins from any source, including soil, plant and animal tissues/organs, bacteria, yeast, fungi, spores, and paleontological specimens. High-throughput cryogenic grinder adopts a special vertical up-down integrated vibration mode, which achieves rapid grinding of samples through the high-frequency reciprocating vibration, impact, and shear of grinding beads (zirconia, steel, glass, ceramics). This results in more thorough and uniform grinding of samples, better sample reproducibility, and no cross-contamination between samples.

Sample Compatibility:

- ◆ Plant Tissues: Roots, Stems, Leaves, Flowers, Fruits, Seeds, etc.
- ◆ Animal Tissues: Brain, Heart, Lungs, Stomach, Liver, Thymus, Kidneys, Intestines, Lymph Nodes, Muscles, Bones, etc.
- ◆ Fungi and Bacteria: Yeast, Escherichia coli (E. coli), etc.
- ◆ Food and Pharmaceuticals: Various types of foods, Tablets, etc.
- ◆ Volatile Samples: Coal, Oil Shale, Wax Products, etc.
- ◆ Plastics and Polymers: PE (Polyethylene), PS (Polystyrene), Textiles, Resins, etc.

Common Accessories (Adapters/Grinding Beads/Grinding Vessels/Filling Gun, etc.)

Specifications

24*2ml Standard/24*2ml Cooling
 48*2ml Standard/48*2ml Cooling
 64*2ml Standard/64*(0.2~0.5ml) Customized
 12*5ml Standard/12*5ml Cooling
 8*10ml Standard/8*15ml Standard
 4*2ml/8*2ml Grinding Vessel
 4*5ml/10ml/15ml Grinding Vessel
 4*15ml PEEK Vessel
 2*50ml Standard
 2*25ml/50ml Grinding Vessel/PEEK

*Note: Comes with 24/48/64*2ml adapters, 3mm & 5mm stainless steel or zirconium oxide grinding beads.



Zirconia



Stainless steel



HIGH-THROUGHPUT CRYOGENIC GRINDER

Technical Parameters	
Model	DHFSTPRP-CL64
Application fields	Organ grinding, homogenization, cell disruption, tissue pulverization, material dispersion, preparation, sample mixing, and oscillation
Processing capacity	Maximum processing capacity of 64 samples in 15 seconds, with integrated compressor cooling
Compatible sample tubes	64*(0.2-0.5ML) /64*2ML /6*(7-15)ML /2*25ML /2*50ML, various specifications of grinding tubes can be custom-made
Display	Touch screen display for convenient and intuitive operation
Data storage	Can store ten sets of experimental data, with animal heart, spleen, lung, kidney, bone, skin, and hair patterns set according to different experimental samples
Cycle mode	According to the set experimental parameters, it can cycle continuously between several pre-set parameters, further reducing interference from human factors
Maximum feeding size	No requirement, adjustable according to the adapter
Cooling function	Yes, adjustable from -30°C to 37°C
Temperature control accuracy	+ 0.5°C
Open lid operation protection	Electromagnetic lock
Final discharge particle size	~5µm
Number of grinding platforms	(acceptance of grinding jars) > 2
Fastening device	with automatic center positioning
Homogenization speed	0~70 Hz/sec, working time: 0 sec~99 min, user-settable
Diameter of grinding balls	0.1~30mm
Material of grinding balls	alloy steel, chrome steel, zirconium oxide, tungsten carbide, quartz sand
Acceleration	reaches maximum speed within 2 seconds
Deceleration	reaches minimum speed within 2 seconds
Noise level	<55db
Grinding mode	wet grinding, dry grinding, and low-temperature grinding are all possible
Safety instructions	with automatic center positioning and safety lock during operation for full protection
Material of grinding kit	hard alloy, polytetrafluoroethylene (Teflon), zirconium oxide
Dimensions	630*300*480mm
Weight	58 kg

Product Introduction

Hair homogenizer / fast hair Tissuelyser / portable hair Tissuelyser
 DH-2019 portable rapid hair grinding device utilizes a unique "8"-shaped three-dimensional oscillation mode. Through the high-frequency reciprocating vibration, impact, and shear of grinding beads (zirconia, steel beads, glass beads, ceramic beads), it is suitable not only for fine crushing and fine grinding of hard, semi-hard, and brittle samples but also for soft, elastic, fibrous materials, and more. It rapidly achieves ideal grinding results, ensuring samples are thoroughly and uniformly ground, exhibiting better sample reproducibility, and avoiding cross-contamination between samples. When combined with colloidal gold detection technology after grinding, it enables rapid on-site detection of common drugs (such as morphine, methamphetamine, ketamine, ecstasy, cannabis, etc.) in hair samples.



Product Description:

- ◆ LCD digital display function, adjustable time (3 seconds to 240 seconds) at will.
- ◆ Grinding speed of 5000rpm.
- ◆ The time and speed parameters have self-memory function.
- ◆ It operates in a "8" shaped loop, and the clamp is an effective automatic locking device.
- ◆ There are two choices of metal and plastic clamps. Customers can choose according to experimental conditions.
- ◆ It is designed with safety in mind. During operation, when the mask is opened, the machine stops working to ensure operation safety.
- ◆ Ergonomic design, low noise, and automatic alarm reminder.
- ◆ Easy operation, easy maintenance, and uniform oscillation.



Operation Process

LAWSON can help you easily complete the hair inspection in only **4** steps :

- 

1. When extracting hair samples, disposable gloves should be worn, and scissors should be used to cling to the scalp surface of the extracted person to cut hair with a length of less than 3 cm at the top and back. Hair longer than 3 cm should be cut from the root of the hair.
- 

2. After putting the extracted hair into the kit, put the reagent bottle into the grinder.
- 

3. Adjust the instrument to the best state, and grind the hair according to the set instrument parameters. Take out the hair sample after the instrument stops working.
- 

4. Suck the ground hair solution with a test tube, drop 3-5 drops into the hair detection plate, and observe the changes of the detection plate.

(If two lines of C/T appear at the same time, the sample is negative. Only line C appears, and the test sample is positive. The product can process 12 samples at one time, and the whole process does not exceed 10mins.)

Technical Parameters

Model	DH-2019	DH-2020
Application	Rapid grinding of hair and rapid screening of drug testing, etc.	
Rotational Speed	5000 rpm	6000 rpm
Grinding Mode	Dry grinding, wet grinding	
Display	LCD display (upgradable)	
Processing Capacity	2.0ml*4; can also be adapted to 2ml*3	5ml*2 adapter (with/without edge)
Timing Range	3 seconds to 240 seconds	
Noise	Less than 65dB	
Weight	5kg	
Power	60W	100W
Power Supply	AC 220±20V, 50HZ; DC 24V,5A	
Dimensions	210*240*170 mm	
Weight	5.2Kg	5.3Kg

3D CENTRIFUGAL CRYOGENIC GRINDING MILL

Product Introduction

3D cryogenic grinder / Cryogenic mill

DHCL series cryogenic grinding mill integrates preparation, grinding, freezing, and centrifugation functions. It can also be used as a low-temperature centrifuge. With a maximum speed of 6000rpm, the sample and grinding balls are placed in the grinding mill (equipped with grinding jars or centrifuge tubes/adapters). Under high-frequency oscillation, the grinding balls rapidly collide and friction within the grinding mill, breaking up cells and cell walls of various samples in a very short time, quickly releasing original DNA, RNA, and proteins for subsequent extraction and purification.

Product Features:

○ Flexible parameters:

Microprocessor control allows for customization of various reagent kits, with a 5.7-inch color touch screen and easy program settings (up to 99 programs can be saved).

○ Good stability:

With a unique fastening mechanism, sample tube fixation is more convenient. Program calls are fast, with noise levels ≤ 54 db.

○ Professional and efficient:

Sample fragmentation and lysis time is short, avoiding nucleic acid degradation and protein denaturation, ensuring the integrity of extracted nucleic acids or proteins. Innovative design with low-speed, ultra-long continuous operation function (up to 30min), suitable for whole-genome library construction, cloning, and sequencing.

○ Zero sample contamination:

The operation is fully enclosed, avoiding cross-contamination between samples and external contamination.

○ Integrated preparation:

Unique grinding, freezing, and high-speed centrifugation three-dimensional integration function effectively prevents the reduction of sample biological activity due to heat. The highest centrifugation speed is 6000RPM, eliminating many complex transfer operations, and can also be used as a stand-alone low-temperature centrifuge.

○ High safety and easy maintenance:

Uses a brushless frequency conversion motor that does not produce carbon particles and does not require carbon brush replacement. Long service life, no easily damaged parts, all-stainless steel inner chamber for easier cleaning and disinfection, and no need for dangerous materials such as liquid nitrogen for auxiliary processing.



Zirconia

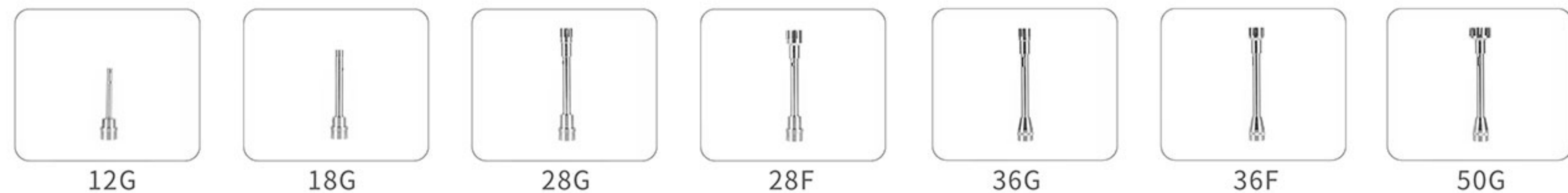


Stainless steel



3D CENTRIFUGAL CRYOGENIC GRINDING MILL

Technical	Parameters
Model	DHCL-6K
Main Purpose	By low-temperature grinding of biological samples, nucleic acid degradation can be effectively inhibited, protein activity can be preserved, and samples can be processed in large quantities. It has the functions of tissue homogenization, grinding, cell disruption, homogenization, material dispersion, preparation, and vibration.
Related Core Technologies	Adopting the "multi-substance grinding and extraction" and "rapid grinding function of cell crushing device" technologies, it can grind and crush any source of samples (including soil, plant and animal tissues/organs, bacteria, yeast, fungi, spores, fossils, etc.). Raw DNA, RNA, and proteins can be extracted and purified, and it can process 24*2ML/12*5ML. It can process 24 samples at the maximum processing capacity within 15 seconds.
Display Method	Touch screen display, user-friendly interactive design, convenient operation, can be operated conveniently and intuitively, with electromagnetic lock function, automatic opening and closing function on the screen, reducing manual operation.
Data Storage	It can store ten sets of experimental data, and according to different experimental samples, it is set with animal heart, spleen, lung, kidney, bone, skin, hair modes. According to the set experimental parameters, it can continuously cycle among several set parameters, further reducing human interference factors.
Homogeneous speed	1-21M/S, working time: 1-9999S, user can set it by themselves.
Safety	The instrument adopts a double-layer shock absorption structure to ensure that the instrument remains stable during high-speed grinding work, does not interfere with external instruments, and ensures the safety of the overall environment.
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, and quartz sand.
Noise level	<54db.
Cooling function	Adopting the "grinding device with freezing function" technology, it can be adjusted from -50°C to room temperature. Temperature control accuracy: $\pm 0.5^\circ\text{C}$. Effectively solve the problem of sample denaturation and agglomeration caused by rapid heating during the grinding process, and improve the success rate.
Automatic centrifugation	Using the "dual-motor rotating centrifugation" technology, with centrifugation function, the highest grinding speed can be set to 6000 revolutions, realizing the integration of grinding and centrifugation.
Grinding method	Wet grinding, dry grinding, and low-temperature grinding are all available.
External dimensions	70*41.5*51cm
Weight	82 kg



CUTTER HEAD MODEL	CONNECTION MODEL	HOST MODEL	OUTPUT POWER	PROCESSING CAPACITY RANGE ML (H2O)	APPLICABLE VISCOSITY CP	LIQUID IMMERSION HEIGHT
12G	BUCKLE			5-800	500	50
18G	BUCKLE			50-2000	2500	60
28G	BUCKLE			80-3000	5000	90
28F	SCREW	DH-F500G/F	500W	80-3000	3000	90
36G	BUCKLE			100-7000	6000	90
36F	SCREW			100-7000	3000	90
50G	SCREW			150-10000	9000	100



- ◆ The driving motor adopts a series-excited micro motor with a large output power and compact structure, designed to be safe and reliable.
- ◆ The contact parts of the working head with the material are all made of stainless steel, with good corrosion resistance.
- ◆ The working head is connected to the driving motor through a coupling, making it easy and flexible to disassemble and assemble.
- ◆ The speed regulating base adopts an infinitely variable speed controller, making it convenient to adjust the speed and ensuring stable operation.
- ◆ Snap-on and threaded cutting heads are optional, with wide applications.

Product Introduction

High-speed homogenizer / High Shear Mixer Homogenizer
 DH-F500 high-speed shearing homogenizer (also known as an electric tissue homogenizer) is suitable for mixing, emulsifying, homogenizing of liquid phases, dispersing solid powders in liquids, and crushing and homogenizing animal tissues. This machine generates a powerful hydraulic shear effect through high-speed shearing and dispersion, drawing material in from the lower end of the rotor and ejecting it through the stator. It features high rotational speed, low noise, and electronic infinitely variable speed control with a constant speed display. Its main characteristic is the specially designed dispersion plate driven at high speed by the motor, which effectively disperses and mixes liquid materials in experiments. The materials in the liquid are mutually rubbed, collided, and repeatedly run irregularly to achieve dispersion and refinement. The maximum processing capacity can reach up to 10L.

Technical Parameters

Model	DH-F500
Processing Capacity	5ml~10L (different work heads required)
Speed	2000-28000rpm
Speed Display	LCD digital display
Speed Control	Stepless speed regulation
Timing Control	6000min
Torque Display	Yes
Contact Material	SS3
Shaft Sleeve Material	PTFE
Standard Work Head Type	Shear teeth
Maximum Working Temperature	120°C
Number of Standard Work Heads	1
Allowable Ambient Temperature	5~40°C
Allowable Relative Humidity	80%
Processing Type	Batch processing
Related Accessories	Work bracket, base
Weight	About 9kg
Voltage	220V/50Hz



Stainless Steel
Viscometer Cup

Glass
Viscometer Cup



LAWSON Chou
WhatsApp

Product Features:

Rotary Viscometer is a rotary viscometer, driven by a motor through a variable speed belt to rotate the rotor at a constant speed. When the rotor rotates in the liquid, the greater the viscosity of the liquid acting on the rotor, the greater the viscous torque; conversely, the smaller the viscosity of the liquid, the smaller the viscous torque. The viscous torque acting on the rotor is detected by a sensor and the viscosity of the measured liquid is obtained by computer processing.

Rotary Viscometer uses microcomputer technology, which can easily set the range (rotor number and speed), digitally process the data detected by the sensor, and display the rotor number, speed, viscosity value of the measured liquid, and its full-range percentage value on the display screen.

DHJ-5S is equipped with four rotors (No.1, 2, 3, 4) and four speed levels (6, 12, 30, 60 rpm), which can be combined into 16 combinations to measure the viscosity of various liquids within the measurement range.

Product Introduction

Rotary viscometer / Rotary Viscosity Meter

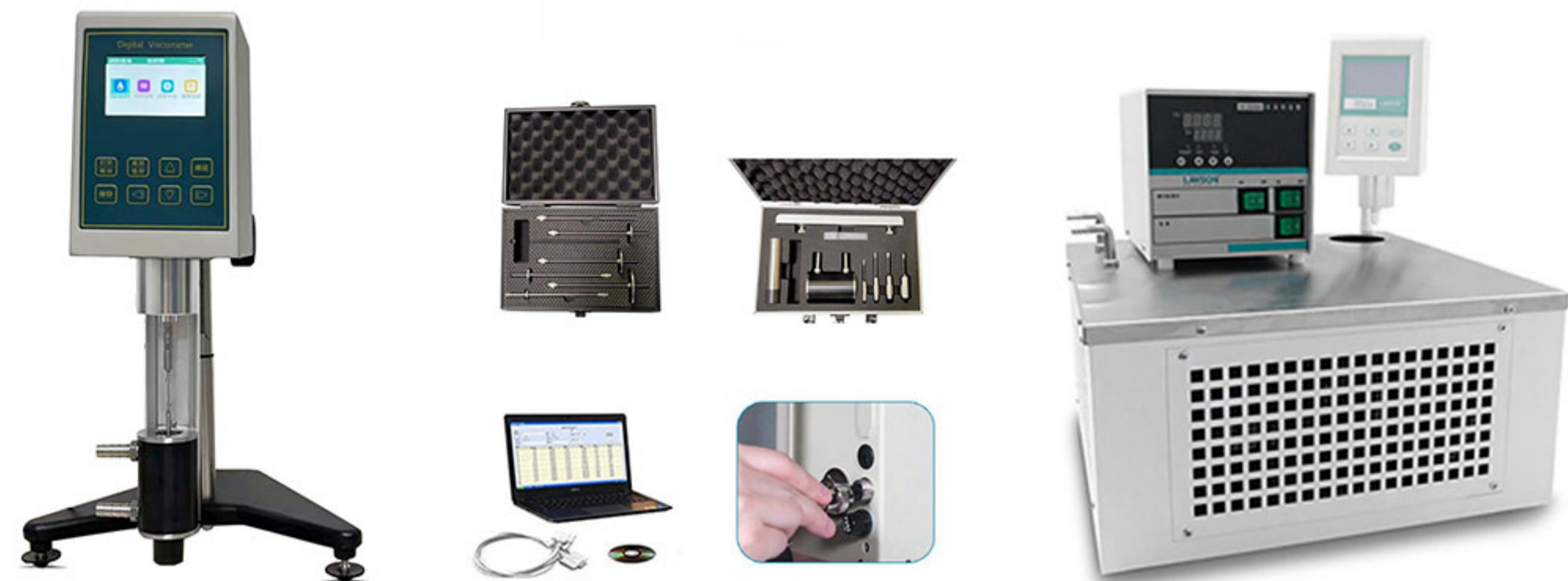
Rotary viscometer features high measurement sensitivity, reliable test results, user-friendly operation, and an elegant design. It is an instrument used to measure the absolute viscosity of Newtonian liquids and the apparent viscosity of non-Newtonian liquids. It finds wide applications in measuring the viscosity of various substances such as oils, paints, plastics, pharmaceuticals, cosmetics, coatings, detergents, and more.

This instrument utilizes microcomputer technology, allowing convenient range setting (rotor type and speed). It digitally processes the data detected by the sensor and displays on the screen the set rotor type, speed, viscosity value of the tested liquid, and its full-scale percentage value during measurement.

This instrument utilizes microcomputer technology, allowing convenient range setting (rotor type and speed). It digitally processes the data detected by the sensor and displays on the screen the set rotor type, speed, viscosity value of the tested liquid, and its full-scale percentage value during measurement.

Technical Parameters

Model	DHJ-5S	DHJ-9S	DHJ-8S
Measurement Range	1 to 100,000 mPa·s		1 to 2,000,000 mPa·s
Rotor Specifications	Rotor 1, 2, 3, 4 (Rotor 0 can be optionally added for measuring low viscosity down to 0.1 mPa·s)*		
Rotor Speed	3/6/12/30/60 RPM		0.3/0.6/1.5/3/6/12/30/60 RPM
Measurement Accuracy	±2% (Newtonian Fluids)		
Auto Mode	Automatically selects appropriate rotor type and speed		
Temperature Display	/	(Standard temperature probe included) /	
Operating Interface Selection	Chinese/English		
Display Mode	LCD numerical display		
Stable Reading Indicator	Vertical bar cursor indicates reading stability when full bars are displayed (should be between 10%-90%, closer to 50% is optimal)		
Operating Environment	Temperature 5°C~35°C, relative humidity not exceeding 80%		
Product Weight	Approximately 6.8 kg		
Dimensions	370*325*280 mm		
Input Power	100~240V		



Product Features:

Viscosity Tester has the characteristics of high measurement sensitivity, reliable test results, easy operation, and beautiful appearance. It is a precision instrument used to measure the absolute viscosity of Newtonian liquids and the apparent relative viscosity of non-Newtonian liquids. It can be widely used in the measurement of various products such as grease, paint, plastic, medicine, food, coatings, adhesives, viscometers, resins, and chemical raw materials.

Viscosity Tester is a digital viscosity meter. The rotor is driven by a motor through a variable speed belt to rotate at a constant speed. When the rotor rotates in the liquid, the liquid will generate a viscosity torque acting on the rotor. The greater the viscosity of the liquid, the greater the viscous torque; conversely, the smaller the viscosity of the liquid, the smaller the viscous torque. The viscous torque acting on the rotor is detected by a sensor and the viscosity of the tested liquid is calculated after being processed by a computer. The instrument comes with 4 types of rotors (No.1, No.2, No.3, No.4) and two speed modes: stepless speed regulation and grade speed regulation. The grade speed regulation has 10 speeds (0.5, 1, 2, 2.5, 4, 5, 10, 20, 50, 100 rpm), which can measure the viscosity values of various liquids within the measurement range. It also has a temperature measurement device, which can display the temperature directly on the screen, and observe the viscosity change caused by temperature change.

Shear force and shear rate can only be displayed when the 0# rotor and small sample adapter are selected.



Stainless Steel Viscometer Cup



Glass Viscometer Cup



LAWSON_Chou WhatsApp

Product Introduction

Viscosity Tester / Digital Viscometer

Viscosity Tester is an upgraded product of our company's digital viscometer. This instrument adopts more advanced mechanical design technology, manufacturing process, and microcomputer control technology. The data acquisition is correct and the display uses a high-resolution TFT display screen, which shows the data clearly and has more comprehensive functions.

This instrument utilizes microcomputer technology, allowing convenient range setting (rotor type and speed). It digitally processes the data detected by the sensor and displays on the screen the set rotor type, speed, viscosity value of the tested liquid, and its full-scale percentage value during measurement.

This precision instrument has the characteristics of high measurement sensitivity, reliable test results, easy operation, and an elegant appearance. It is designed for measuring the absolute viscosity of Newtonian fluids and the apparent relative viscosity of non-Newtonian fluids. It can be widely used in the measurement of products such as oils, paints, plastics, pharmaceuticals, food, coatings, adhesives, glue meters, resins, and chemical raw materials.

Model	LVT-6M	RVT-40M	HBT-320M
Measurement Range	10-600 million cp	10-4000 million cp	10-32000 million cp
Temperature Display	Available		
Viscosity-Temperature Curve	Can output viscosity-temperature time curve		
Rotor Specification	Rotors 1-4# 0# rotor is available for measuring low viscosity down to 0.1 mPa.s with an adapter	R2-R7 rotors	R2-R7 rotors
Rotor Speed	0.1-200 rpm with stepless speed regulation		
Auto Mode	Automatically selects suitable rotor number and speed		
Operation Interface	Chinese/English		
Shear Force Display	Available (only with small sample adapter and 0# rotor)		
Communication/Printing	Available		
Measurement Accuracy	±1% (for Newtonian liquids)		
Operating Environment: Temperature	5°C~35°C, relative humidity: not more than 80%		
Dimensions	370*325*280mm		
Power Supply	AC 220V±10%, 50Hz±10%		
Net Weight	7.2kg		



Product Features:

Viscosity Tester has the characteristics of high measurement sensitivity, reliable test results, easy operation, and beautiful appearance. It is a precision instrument used to measure the absolute viscosity of Newtonian liquids and the apparent relative viscosity of non-Newtonian liquids. It can be widely used in the measurement of various products such as grease, paint, plastic, medicine, food, coatings, adhesives, viscometers, resins, and chemical raw materials.

Viscosity Tester is a digital viscosity meter. The rotor is driven by a motor through a variable speed belt to rotate at a constant speed. When the rotor rotates in the liquid, the liquid will generate a viscosity torque acting on the rotor. The greater the viscosity of the liquid, the greater the viscous torque; conversely, the smaller the viscosity of the liquid, the smaller the viscous torque. The viscous torque acting on the rotor is detected by a sensor and the viscosity of the tested liquid is calculated after being processed by a computer. The instrument comes with 4 types of rotors (No.1, No.2, No.3, No.4) and two speed modes: stepless speed regulation and grade speed regulation. The grade speed regulation has 10 speeds (0.5, 1, 2, 2.5, 4, 5, 10, 20, 50, 100 rpm), which can measure the viscosity values of various liquids within the measurement range. It also has a temperature measurement device, which can display the temperature directly on the screen, and observe the viscosity change caused by temperature change.

Shear force and shear rate can only be displayed when the 0# rotor and small sample adapter are selected.



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Product Introduction

High-temperature viscometer / Megathermal Viscometer

RVT-40M-F300 high-temperature viscometer is an upgraded product of our company's digital viscometer.

High-temperature viscometer adopts more advanced mechanical design technology, manufacturing process, and microcomputer control technology, with accurate data acquisition and a high-resolution TFT display screen for clear data display and more comprehensive functions.

High-temperature viscometer features high measurement sensitivity, reliable test results, easy operation, and an elegant appearance. It is a precision instrument used to measure the absolute viscosity of Newtonian fluids and the apparent relative viscosity of non-Newtonian fluids. It can be widely used in hot melt adhesives, asphalt, paraffin, high polymers, and other products.

Technical Parameters

Model	RVT-40M-F300
Measurement Range	10~320,000,000 cP
Temperature Display	Available
High Temperature Furnace Heating Temperature	Ambient temperature to 300°C
Viscosity-Temperature Curve	Viscosity-temperature time curve can be output
Rotor Specifications	R21-R29 rotors
Rotor Speed	0.1-200 rpm infinitely variable speed
Automatic Mode	Can automatically select appropriate rotor number and speed
Operating Interface Selection	Chinese/English
Shear Force Display	Available
Shear Rate Display	Available (only for small adapter and rotor No.0)
Communication/Printing	Computer interface can be connected to LAWSONSQ software and printer for output
Timed Measurement Function	Can set the time to reach a specified torque, stop time (or directly measure based on the last saved parameters)
Measurement Accuracy	±1% (Newtonian fluid)
Repeatability	Full scale ±0.2%
Working Environment	Temperature 5°C~35°C, relative humidity no more than 80%
Dimensions	370*325*280mm
Power Supply	AC 220V±10% 50Hz±10%
Net Weight	9.2kg

Safety Protection Devices

1. Equipped with power-off protection function
2. Equipped with upper and lower temperature alarm setting function
3. Low water level protection and alarm function
4. Temperature runaway protection and alarm function
5. The heating tube has functions to prevent dry burning and explosion due to low water level.

Optional Features Guide

1. Optional external PT100 temperature sensor with extended length, which can detect and control the temperature of the external system in real-time during external circulation.
2. Optional built-in 1-30 segment temperature control program, which can automatically control the temperature according to the programmed segments and display the set temperature-time program running status in real-time.
3. Optional RS232 or RS485 communication interface, which can easily connect to the upper computer with ModbusRTU communication protocol.
4. Optional design and installation of a magnetic stirring system, which can directly stir the sample in the beaker placed in the constant temperature tank, without the need for an external vertical stirrer. This reduces cumbersome operations and realizes closed processing, while reducing the fog loss generated during the stirring process.
5. Optional built-in cooling coils in the tank body for rapid cooling and control of the exothermic reaction of the system.
6. Optional height-adjustable immersed sample platform, which can easily adjust the liquid level height of the immersed sample.

Elegant Mute



Thermostat | Product Introduction

Thermostatic Bath adopts an international advanced refrigeration system with stable and reliable performance. It has both internal and external circulation functions: the internal circulation function can directly conduct constant temperature testing or testing on test samples or products in the tank, while the external circulation function uses a high-pressure pump to circulate and maintain the temperature of the liquid medium in the tank, increasing the uniformity of the temperature in the tank and reducing temperature fluctuations. The principle is to use the outlet to draw the constant temperature medium in the tank outside through the insulation hose to establish an external constant temperature, providing a constant temperature cooling liquid for testing or production, and creating a liquid environment with uniform and constant temperature. The constant temperature cooling liquid can be circulated and reused. This instrument is widely used in research departments such as petroleum, chemical, electronic instrumentation, physics, chemistry, bioengineering, medicine and health, life sciences, light industry food, physical property testing, and chemical analysis, as well as in higher education institutions, enterprise quality inspection and production departments. It can also provide users with a controlled liquid environment of cold and heat, with uniform and constant temperature, to conduct constant temperature testing or testing on test samples or products, and can serve as a power or cold source for direct heating or cooling, and auxiliary heating or cooling.

Thermostat | Product Features

- ◆ Unique large-screen backlit LCD display, clear and intuitive display of set temperature, actual temperature, and independent control of "heating", "cooling", "internal circulation" and "external circulation" functions and work status information;
- ◆ The control part adopts ABS modular design, with a streamlined overall appearance and exquisite workmanship of the chassis front panel and table top. The unique humanized R-rounded corner design structure can prevent the operator from being accidentally injured by the sharp corners of the chassis. The whole set of packaging adopts molded foam plastic, which is moldable up and down, to avoid damage during transportation;
- ◆ High-performance mixing and circulating motor with low noise, low heat generation, fully enclosed and long service life; using a non-heat-circulating pump to avoid the influence of the traditional water pump's own heat production on the tank temperature field.
- ◆ The tabletop and inner liner are made of 304 stainless steel. In addition, the refrigeration coil has added positioning and surface treatment processes, which can effectively solve the problems of shaking, corrosion, and rust during transportation or use;
- ◆ The motor impeller is fully enclosed to prevent safety hazards; multiple safety protections: heating pipe low liquid level burning protection, alarm with light and sound at the same time;
- ◆ It has power failure protection and over-temperature alarm function, providing multiple safety measures;
- ◆ The fully enclosed compressor unit is used for refrigeration, and the refrigeration system has multiple protection devices such as overheating and overcurrent;
- ◆ The instrument is specially designed with flexible removable door panels on all sides. In order to achieve better cooling effect, after long-term work, it is convenient and simple to clean the dust, without the need for any disassembly tools;
- ◆ The instrument is stable and reliable in operation, easy to operate and safe, and the instrument has temperature calibration and self-tuning functions;
- ◆ The circulation interface and drain outlet all use 304 stainless steel tower joints, which are quick and reliable to install. The drain valve is designed to be hidden and internal, which is beautiful and elegant and can effectively avoid unnecessary damage during shipment or transportation;
- ◆ The instrument is equipped with two-section circulating silicone tubes + insulation sleeve as standard, for customers' flexible use;



Technical Parameters

Model	Temperature Range (°C)	Numerical Display Resolution (°C)	Internal Tank Capacity Length*Width*Height (mm)	Circulation Pump Flow (L/min)	Working Tank Opening (mm)	Total Capacity (L)	Net Weight (kg)	Dimensions Depth*Width*Height (mm)
DC-0506N	-5~100	0.1/0.01	270·200·130	10	180·140	6	29	440·300·750
DC-1006N	-10~100	0.1/0.01	270·200·130	10	180·140	6	29	440·300·750
DC-2006N	-20~100	0.1/0.01	270·200·130	10	180·140	6	29	440·300·750
DC-3006N	-30~100	0.1/0.01	270·200·130	10	180·140	6	37	515·435·820
DC-4006N	-40~100	0.1/0.01	270·200·130	10	180·140	6	38	515·435·820
DC-0510N	-5~100	0.1/0.01	270·200·130	10	180·140	10	30	440·300·750
DC-1010N	-10~100	0.1/0.01	270·200·130	10	180·140	10	30	440·300·750
DC-2010N	-20~100	0.1/0.01	270·200·130	10	180·140	10	30	440·300·750
DC-3010N	-30~100	0.1/0.01	270·200·130	10	180·140	10	39	515·435·820
DC-4010N	-40~100	0.1/0.01	270·200·130	10	180·140	10	40	515·435·820

Technical Parameters

Model	Temperature Range (°C)	Numerical Display Resolution (°C)	Internal Tank Capacity Length*Width*Height (mm)	Circulation Pump Flow (L/min)	Working Tank Opening (mm)	Total Capacity (L)	Net Weight (kg)	Dimensions Depth*Width*Height (mm)
DC-0515N	-5~100	0.1/0.01	300·250·210	10	235·160	15	35	520·380·830
DC-1015N	-10~100	0.1/0.01	300·250·210	10	235·160	15	35	520·380·830
DC-2015N	-20~100	0.1/0.01	300·250·210	10	235·160	15	35	520·380·830
DC-3015N	-30~100	0.1/0.01	300·250·210	10	235·160	15	40	500·400·1000
DC-4015N	-40~100	0.1/0.01	300·250·210	10	235·160	15	40	500·400·1000
DC-0520N	-5~100	0.1/0.01	300·250·270	10	235·160	20	37	520·380·830
DC-1020N	-10~100	0.1/0.01	300·250·270	10	235·160	20	37	520·380·830
DC-2020N	-20~100	0.1/0.01	300·250·270	10	235·160	20	37	520·380·830
DC-3020N	-30~100	0.1/0.01	300·250·270	10	235·160	20	47	500·400·1000
DC-0530N	-5~100	0.1/0.01	400·325·230	10	310·280	30	47	618·540·1090
DC-1030N	-10~100	0.1/0.01	400·325·230	10	310·280	30	47	618·540·1090
DC-2030N	-20~100	0.1/0.01	400·325·230	10	310·280	30	47	618·540·1090
DC-3030N	-30~100	0.1/0.01	400·325·230	10	310·280	30	47	618·540·1090



Thermostatic bath | Product Introduction

CNC Super Thermostatic Bath adopts a microcomputer intelligent control system. It is equipped with a circulating pump that can circulate the thermostatic liquid outside the bath to establish a second constant temperature field. It is widely used in research departments, universities, enterprise quality inspection, and production departments in the fields of petroleum, chemical industry, electronic instruments, physics, chemistry, bioengineering, medical health, life sciences, light industry food, physical property testing, and chemical analysis, providing users with a cold and hot controlled, temperature-uniform and constant liquid environment for work. The fluctuation range can be selected as $\pm 0.05^{\circ}\text{C}$ or $\pm 0.1^{\circ}\text{C}$. The LED double window red-green light dual-color numerical display can also be replaced by a large-screen LCD display. The touch soft keys allow for quick temperature setting and easy operation. The microcomputer corrects the deviation of the temperature measurement value, and the temperature numerical display accuracy can be selected as 0.1°C or 0.01°C . It also has an over-temperature alarm system.

Technical Parameters

Model	Temperature Range (°C)	Numerical Display Resolution (°C)	Internal Tank Capacity Length*Width*Height (mm)	Circulation Pump Flow (L/min)	Working Tank Opening (mm)	Total Capacity (L)	Net Weight (kg)	Dimensions Depth*Width*Height (mm)
DH-5A	RT+5 °C~95 °C	±0.1	240·140·150	0~10	130·130	5	9	380*318*445
DH-15	RT+5 °C~100 °C	±0.1	300·240·200	0~10	235·160	15	12.8	422*348*500
DH-15A	RT+5 °C~200 °C	±0.1	300·240·200	inner loop	235·160	15	12.8	482*375*490
DH-15B	RT+5 °C~200 °C	±0.1	300·240·200	0~10	235·160	15	12.8	482*375*490
DH-20	RT+5 °C~100 °C	±0.1	500·300·150	0~10	310·280	20	15	620*395*445
DH-20A	RT+5 °C~200 °C	±0.1	500·300·150	inner loop	310·280	20	20	620*395*445
DH-20B	RT+5 °C~200 °C	±0.1	500·300·150	0~10	310·280	20	20	620*395*445
DH-25	RT+5 °C~100 °C	±0.1	280·250·300	0~10	235·160	25	20	410*330*600
DH-25A	RT+5 °C~200 °C	±0.1	280·250·300	inner loop	235·160	25	20	450*375*600
DH-25B	RT+5 °C~200 °C	±0.1	280·250·300	0~10	235·160	25	25	450*375*600
DH-30	RT+5 °C~100 °C	±0.1	400·330·230	0~10	310·280	30	25.1	530*450*525
DH-30A	RT+5 °C~200 °C	±0.1	400·330·230	inner loop	310·280	30	30	530*450*525
DH-30B	RT+5 °C~200 °C	±0.1	400·330·230	0~10	310·280	30	30	530*450*525



Product Applications

- **Chemical**
Separation and extraction experiments, condensation, detection of metal elements, constant temperature, chemical synthesis. Equipped with small rotary evaporator, atomic absorption spectrophotometer, double-layer jacketed reactor, etc.
- **Material, Petroleum**
Liquid viscosity measurement, research and development testing, constant temperature, material structure detection. Equipped with viscometer, rheometer, X-ray diffraction spectroscopy, etc.
- **Microbiology**
Brewing, enzyme engineering and environmental constant temperature. Equipped with fermentation tank, etc.
- **Food**
Fat extraction, condensation, determination of protein in food, brewing, research and development testing. Equipped with Soxhlet extractor, Kjeldahl nitrogen analyzer, beer aging tester, etc.
- **General**
Calibration of thermometers, providing heat sources for compound materials, temperature control of chromatographic columns. Equipped with thermometer, vacuum drying oven, gas chromatography analyzer, etc.

High Precision Thermostatic Oil Bath | Product Introduction

high precision oil Bath has features such as temperature uniformity and more precise intelligent temperature control. It is mainly developed as a heating-type experimental instrument for sectors such as scientific research, biology, physics, medicine, and chemical engineering that require high temperature control accuracy. It can also be used for calibration purposes in the production of ordinary thermometers and other temperature measuring instruments.

Product Features

- ◆ Customers can set the parameters to remain unchanged after power outage, and the instrument will automatically start working when powered on;
- ◆ Internal and external circulation can be switched, and pump flow rate can be controlled, suitable for various experimental requirements;
- ◆ Working time can be timed, and the instrument will stop working after the set time is reached;
- ◆ Temperature fluctuation $\pm 0.01^{\circ}\text{C}$;

Technical Parameters

Model	Temperature Range (°C)	Numerical Display Resolution (°C)	Internal Tank Capacity Length*Width*Height (mm)	Circulation Pump Flow (L/min)	Working Tank Opening (mm)	Total Capacity (L)	Net Weight (kg)	Dimensions Depth*Width*Height (mm)
GH-15	RT+5 °C~100 °C	±0.01	300·240·200	0~10	235·160	15	22	482*375*490
GH-15A	RT+5 °C~200 °C	±0.01	300·240·200	inner loop	235·160	15	22	482*375*490
GH-30	RT+5 °C~100 °C	±0.01	400·330·230	0~10	310·280	30	34	605*425*490
GH-30A	RT+5 °C~200 °C	±0.01	400·330·230	inner loop	310·280	30	34	605*425*490

HIGH PRECISION THERMOSTAT BATH



Product Applications

○ Chemical

Separation and extraction experiments, condensation, detection of metal elements, constant temperature, chemical synthesis. Equipped with small rotary evaporator, atomic absorption spectrophotometer, double-layer jacketed reactor, etc.

○ Material, Petroleum

Liquid viscosity measurement, research and development testing, constant temperature, material structure detection. Equipped with viscometer, rheometer, X-ray diffraction spectroscopy, etc.

○ Microbiology

Brewing, enzyme engineering and environmental constant temperature. Equipped with fermentation tank, etc.

○ Food

Fat extraction, condensation, determination of protein in food, brewing, research and development testing. Equipped with Soxhlet extractor, Kjeldahl nitrogen analyzer, beer aging tester, etc.

○ General

Calibration of thermometers, providing heat sources for compound materials, temperature control of chromatographic columns. Equipped with thermometer, vacuum drying oven, gas chromatography analyzer, etc.

High Precision Thermostatic Bath | Product Introduction

Adopts an advanced fluorine-free refrigeration system. This series of instruments has the characteristics of precise temperature control, uniformity of temperature in the bath, and intelligent temperature control. It is mainly developed for low-temperature experimental instruments required by research, biology, physics, medicine, chemical and other departments with high temperature control accuracy requirements. It can also be used for calibration purposes in the manufacturing of ordinary thermometers and other temperature measuring instruments.

Product Features

- ◆ Fully enclosed imported compressor with low noise in the refrigeration system;
- ◆ The system adopts advanced fluorine-free environmental protection refrigeration technology;
- ◆ Customers can set parameters that remain unchanged after power-off, and the instrument defaults to start working when power is on;
- ◆ Working time can be set and the instrument stops working after completion;
- ◆ Internal and external circulation can be switched, pump flow rate can be controlled, suitable for various experimental needs;
- ◆ The refrigeration compressor has automatic protection functions such as overheat and overload;
- ◆ Temperature fluctuation: $\pm 0.01^{\circ}\text{C}$;

Technical Parameters

Model	Temperature Range (°C)	Numerical Display Resolution (°C)	Internal Tank Capacity Length*Width*Height (mm)	Circulation Pump Flow (L/min)	Working Tank Opening (mm)	Total Capacity (L)	Net Weight (kg)	Dimensions Depth*Width*Height (mm)
GDH-2006	-20~100	± 0.01	260·200·140	0~10	180·140	6	26	455*388*845
GDH-4006	-40~100	± 0.01	260·200·140	0~10	180·140	6	35	455*388*845
GDH-2010	-20~100	± 0.01	260·200·200	0~10	180·140	10	27	455*388*845
GDH-2015	-20~100	± 0.01	300·250·200	0~10	235·160	15	32	455*388*845
GDH-0530	-5~100	± 0.01	440·325·200	0~10	310·280	30	44	625*500*900
GDH-2030	-20~100	± 0.01	440·325·200	0~10	310·280	30	47	625*500*900



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

By means of the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, and the ultrasonic wave is radiated into the cleaning solution in the tank through the cleaning tank wall. Due to the radiation of the ultrasonic wave, the microbubbles in the liquid in the tank can rapidly grow and burst under the action of the sound wave. The high-intensity shear force generated by the burst acts on various types of samples, achieving cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion and other effects.



Ultrasonic Cleaner | Product Introduction

In addition to its inherent cleaning function, Ultrasonic cleaner DH-5200D also has multiple functions such as extraction, emulsification, accelerated dissolution, crushing, and dispersion. It is widely used in the manufacturing and maintenance cleaning of industries such as machinery, electronics, plastics, instruments, environmental protection, pharmaceuticals, packaging, military, aerospace, ships, and automobiles. It is also used for cleaning experimental materials such as pipettes and vessels, degassing treatment before chromatography, and cleaning of medical equipment, materials, and utensils. It is suitable for cleaning jewelry, watches, precious metals, gemstones, coins, glasses, and other items.

Product Features

- ◆ Power Failure Protection: Memory function for working parameters in case of power failure
- ◆ Digital Display Screen: Digital display for ultrasonic cleaning time setting and countdown display for working time
- ◆ Adjustable Time: Total working time can be set from 1-600 minutes
- ◆ High-Quality Material: The inner and outer shell of the instrument and the sound-reducing cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Adjustable Time	Drainage	Mesh Basket	Tank (L.W.H)	Packing Size (mm)
DH-50	0.8	40	50	1-120	/	/	145*80*65	230*170*250
DH-50	1.2	40	50	1-120	/	/	145*80*100	230*170*250
DH-80	2	40	80	1-120	/	/	155*140*100	240*230*300
DH-100D	4.5	40	100	1-600	/	Available	300*150*100	400*240*435
DH-120D	3	40	120	1-600	/	Available	240*140*100	325*230*300
DH-120D	5	40	120	1-600	/	Available	240*140*150	325*230*350
DH-3200D	6	40	180	1-999	/	Available	300*155*150	400*240*380



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

By means of the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, and the ultrasonic wave is radiated into the cleaning solution in the tank through the cleaning tank wall. Due to the radiation of the ultrasonic wave, the microbubbles in the liquid in the tank can rapidly grow and burst under the action of the sound wave. The high-intensity shear force generated by the burst acts on various types of samples, achieving cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion and other effects.



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- ◆ Digital Display Screen: Digital display for ultrasonic cleaning time setting and countdown display for working time
- ◆ Adjustable Time: Total working time can be set from 1-600 minutes
- ◆ High-Quality Material: The inner and outer shell of the instrument and the sound-reducing cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Adjustable Time	Drainage	Mesh Basket	Tank (L.W.H)	Packing Size (mm)
DH-50	0.8	40	50	1-120	/	/	145*80*65	230*170*250
DH-5200D	10	40	240	1-999	Available	Available	300*240*150	450*325*375
DH-5200D	10	40	360	1-999	Available	Available	300*240*150	450*325*375
DH-4200D	14.4	40	480	1-999	Available	Available	300*240*200	445*320*460
DH25-12D	22.5	40	600	1-999	Available	Available	500*300*150	640*395*375
DH25-12D	22.5	40	720	1-999	Available	Available	500*300*150	640*395*375
DH-800D	30	40	840	1-999	Available	Available	500*300*200	600*500*375



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

By means of the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, and the ultrasonic wave is radiated into the cleaning solution in the tank through the cleaning tank wall. Due to the radiation of the ultrasonic wave, the microbubbles in the liquid in the tank can rapidly grow and burst under the action of the sound wave. The high-intensity shear force generated by the burst acts on various types of samples, achieving cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion and other effects.



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Ultra Cleaner | Product Introduction

Ultra cleaner Machines DH-100DT utilizes the cavitation effect of ultrasonic waves in cleaning liquids to accelerate the dissolution and removal of dirt, grease, and other contaminants in the holes and blind holes of the cleaned vessels. In addition, the instrument is also suitable for the fields of effective ingredient extraction, extraction, dispersion, and removal of gas from the mobile phase. The instrument has the advantages of fast cleaning speed, good effect, no damage to the surface, and reduced labor intensity.

Product Features

- ◆ Power Failure Protection: Memory function for working parameters in case of power failure
- ◆ Digital Display Screen: Digital display for ultrasonic cleaning time setting and countdown display for working time
- ◆ Adjustable Time: Total working time setting of 1-600 minutes
- ◆ Heating function : Adjustable range from room temperature to 80°C
- ◆ High-Quality Material: The inner and outer shell of the instrument and the sound-reducing cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Adjustable Time	Drainage	Mesh Basket	Tank (L.W.H)	Heating Power(W)	Temperature Adjustable (°C)
DH-100DT	4.5	40	100	1-600	/	Yes	300*150*100	200	Room temperature ~ 80
DH-120DT	3	40	120	1-600	/	Yes	240*140*100	200	Room temperature ~ 80
DH-120DT	5	40	120	1-600	/	Yes	240*140*150	200	Room temperature ~ 80
DH-3200DT	6	40	180	1-999	/	Yes	300*155*150	400	Room temperature ~ 80
DH-5200DT	10	40	240	1-999	Yes	Yes	300*240*150	800	Room temperature ~ 80
DH-5200DT	10	40	360	1-999	Yes	Yes	300*240*150	800	Room temperature ~ 80
DH-4200DT	14.4	40	480	1-999	Yes	Yes	300*240*200	800	Room temperature ~ 80



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

By means of the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, and the ultrasonic wave is radiated into the cleaning solution in the tank through the cleaning tank wall. Due to the radiation of the ultrasonic wave, the microbubbles in the liquid in the tank can rapidly grow and burst under the action of the sound wave. The high-intensity shear force generated by the burst acts on various types of samples, achieving cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion and other effects.



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Ultra Cleaners | Product Introduction

Ultra Cleaners DH-1000DT utilizes the cavitation effect of ultrasonic waves in cleaning liquids to accelerate the dissolution and removal of dirt, grease, and other contaminants in the holes and blind holes of the cleaned vessels. In addition, the instrument is also suitable for the fields of effective ingredient extraction, extraction, dispersion, and removal of gas from the mobile phase. The instrument has the advantages of fast cleaning speed, good effect, no damage to the surface, and reduced labor intensity.

Product Features

- ◆ Power Failure Protection: Memory function for working parameters in case of power failure
- ◆ Digital Display Screen: Digital display for ultrasonic cleaning time setting and countdown display for working time
- ◆ Adjustable Time: Total working time setting of 1-99 minutes
- ◆ Heating function : Adjustable range from room temperature to 80°C
- ◆ High-Quality Material: The inner and outer shell of the instrument and the sound-reducing cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Adjustable Time	Drainage	Mesh Basket	Tank (L.W.H)	Heating Power(W)	Temperature Adjustable (°C)
DH25-12DT	22.5	40	600	1-999	Yes	Yes	500*300*150	1000	Room temperature ~ 80
DH25-12DT	22.5	40	720	1-999	Yes	Yes	500*300*150	1000	Room temperature ~ 80
DH-800DT	30	40	840	1-999	Yes	Yes	600*300*200	1000	Room temperature ~ 80
DH-1000DT	54	40	1000	1-99	Yes	Yes	600*300*300	3000	Room temperature ~ 80
DH-1200DT	70	40	1200	1-99	Yes	Yes	600*400*300	4000	Room temperature ~ 80
DH-1500DT	90	28	1500	1-99	Yes	Yes	600*500*300	4000	Room temperature ~ 80
DH-1800DT	108	28	1800	1-99	Yes	Yes	600*600*300	4000	Room temperature ~ 80



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

By means of the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, and the ultrasonic wave is radiated into the cleaning solution in the tank through the cleaning tank wall. Due to the radiation of the ultrasonic wave, the microbubbles in the liquid in the tank can rapidly grow and burst under the action of the sound wave. The high-intensity shear force generated by the burst acts on various types of samples, achieving cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion and other effects.



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Ultra Cleaners DH-1000DT utilizes the cavitation effect of ultrasonic waves in cleaning liquids to accelerate the dissolution and removal of dirt, grease, and other contaminants in the holes and blind holes of the cleaned vessels. In addition, the instrument is also suitable for the fields of effective ingredient extraction, extraction, dispersion, and removal of gas from the mobile phase. The instrument has the advantages of fast cleaning speed, good effect, no damage to the surface, and reduced labor intensity.

Product Features

- ◆ Power Failure Protection: Memory function for working parameters in case of power failure
- ◆ Digital Display Screen: Digital display for ultrasonic cleaning time setting and countdown display for working time
- ◆ Adjustable Time: Total working time setting of 1-99 minutes
- ◆ Heating function : Adjustable range from room temperature to 80°C
- ◆ High-Quality Material: The inner and outer shell of the instrument and the sound-reducing cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Adjustable Time	Drainage	Mesh Basket	Tank (L.W.H)	Heating Power(W)	Temperature Adjustable (°C)
DH25-12DT	22.5	40	600	1-999	Yes	Yes	500*300*150	1000	Room temperature ~ 80
DH-2000DT	117	28	2000	1-99	Yes	Yes	650*600*300	6000	Room temperature ~ 80
DH-3600DT	135	28	3600	1-99	Yes	Yes	750*600*300	8000	Room temperature ~ 80
DH-6000DT	273	28	6000	1-99	Yes	Yes	1200*650*350	10000	Room temperature ~ 80
DH-8000DT	410	28	8000	1-99	Yes	Yes	1800*650*350	12000	Room temperature ~ 80



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

Through the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, which is then radiated into the cleaning solution in the tank through the tank wall. Due to the radiation of ultrasonic waves, the microbubbles in the liquid in the tank can quickly grow and burst under the action of the sound waves. The high-intensity shear force generated during the bubble collapse acts on various types of samples, achieving the functions of cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion, etc.



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Sonic Cleaners | Product Introduction

Sonic Cleaners DH-3200DTD is mainly used in the fields of regular cleaning, extraction, emulsification, mixing, degassing, dispersion, etc. Its advantages include a large LCD screen displaying adjustable time, power, and temperature, and the instrument has a memory function for working parameters after power-off, making it convenient for direct call-up and data query. It is widely used in laboratories, mechanical and electrical industries, jewelry, dental and medical industries, optics, and other fields.

Product Features

- ◆ Power-off protection: Working parameter power-off memory function
- ◆ Digital display screen: Displays remaining time and actual temperature in the tank
- ◆ Adjustable time: 1-999 min total working time setting
- ◆ Heating function: Adjustable range at room temperature to 80°C
- ◆ Adjustable power: Power 40%-100% adjustable
- ◆ High-quality: material The inner and outer shells and the soundproof cover of the instrument are made of high-quality stainless steel.

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Power Adjustable(W)	Drainage	Mesh Basket	Tank Size (L.W.H)	Heating Power(W)	Temperature Adjustable (°C)
DH-3200DTD	6	40	180	40~100%	/	Yes	300*155*150	400	Room Temp~80
DH-5200DTD	10	40	240	40~100%	Yes	Yes	300*240*150	800	Room Temp~80
DH-5200DTD	10	40	360	40~100%	Yes	Yes	300*240*150	800	Room Temp~80
DH-4200DTD	14.4	40	480	40~100%	Yes	Yes	300*240*200	800	Room Temp~80
DH25-12DTD	22.5	40	600	40~100%	Yes	Yes	500*300*150	1000	Room Temp~80
DH25-12DTD	22.5	40	720	40~100%	Yes	Yes	500*300*150	1000	Room Temp~80
DH-800DTD	30	40	840	40~100%	Yes	Yes	600*300*200	1000	Room Temp~80

**MULTIPLE
ULTRASONIC CLEANER**



Application Fields

- Cleaning of consumables such as glassware, centrifuge tubes; degassing of liquid reagents; sample crushing, homogenization, dispersion
- Thorough cleaning and restoration of watches, precious metals and gems, chains and other jewelry
- Deep cleaning of precision bearings, fuel injectors, metal and plastic workpieces, removal of dust and grease
- Cleaning and disinfection of medical equipment such as surgical and dental instruments
- Removal of oil and dust from optical microscope lenses, camera lenses, and quartz precision glassware

Working Principle

Through the transducer, the acoustic energy of the power ultrasonic source is converted into mechanical vibration, which is then radiated into the cleaning solution in the tank through the tank wall. Due to the radiation of ultrasonic waves, the microbubbles in the liquid in the tank can quickly grow and burst under the action of the sound waves. The high-intensity shear force generated during the bubble collapse acts on various types of samples, achieving the functions of cleaning, extraction, emulsification, accelerated dissolution, pulverization, dispersion, etc.



Multiple Ultrasonic Cleaner | Product Introduction

Multiple Ultrasonic cleaner DH25-12DTS has functions such as cleaning, dispersion extraction, nano preparation, chemical reaction, degassing, de-foaming, emulsification, mixing, etc. It breaks through the traditional cleaning form of a single-frequency machine. By converting between two frequencies of 25KHz and 40KHz, the cleaning object can complete the entire process from rough washing, cleaning, to rinsing in one machine.

Product Features

- ◆ Power-off protection: Memory function for working parameters in case of power failure
- ◆ Digital display screen: Displays remaining time and actual temperature inside the tank
- ◆ Adjustable time: Total working time can be set between 1-999 minutes
- ◆ Heating function: Adjustable temperature range from room temperature to 80°C
- ◆ Adjustable power: Power can be adjusted between 40% to 100%
- ◆ Dual-frequency optional: Selectable frequency conversion between 25KHz and 40KHz (optional 60KHz and 80KHz)
- ◆ High-quality: materials The instrument's inner and outer casing and soundproof cover are made of high-quality stainless steel

Technical Parameters

Model	Capacity (L)	Frequency (KHz)	Ultrasonic Power (W)	Power Adjustable(W)	Drainage	Mesh Basket	Tank Size (L.W.H)	Heating Power(W)	Temperature Adjustable (°C)
DH-3200DTS	6	25/40 or 60/80	180	40~100%	/	Yes	300*155*150	400	Room Temp~80
DH-5200DTS	10	25/40 or 60/80	240	40-100%	Yes	Yes	300*240*150	800	Room Temp~80
DH-5200DTS	10	25/40 or 60/80	360	40-100%	Yes	Yes	300*240*150	800	Room Temp~80
DH-4200DTS	14.4	25/40 or 60/80	480	40-100%	Yes	Yes	300*240*200	800	Room Temp~80
DH25-12DTS	22.5	25/40 or 60/80	600	40-100%	Yes	Yes	500*300*150	1000	Room Temp~80
DH25-12DTS	22.5	25/40 or 60/80	720	40-100%	Yes	Yes	500*300*150	1000	Room Temp~80
DH-800DTS	30	25/40 or 60/80	840	40~100%	Yes	Yes	600*300*200	1000	Room Temp~80



Product Features

- ◆ Uses full-touch screen control and rear projection display technology, easy to operate.
- ◆ Completely replaces alcohol lamps, not affected by safety cabinets/anaerobic chambers, and convenient for sterilizing inoculating loops or needles.
- ◆ The center temperature can reach above 850°C, which can ash microorganisms or bacterial strains.
- ◆ Short sterilization time, 5-7 seconds can achieve sterilization effect.
- ◆ Uses ceramic material to prevent contagious splashing and cross-contamination.
- ◆ Equipped with high and low temperature levels for users to switch flexibly.
- ◆ Equipped with high temperature flicker prompt function.



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Rapid Sterilizer I Product Introduction

Rapid sterilizer is an instrument that uses high-temperature thermal energy for disinfection by heating ceramics through heating wires. It is convenient to use, easy to operate, has no open flames, is not afraid of wind, and is safe to use. It can be widely used in microbiological experiments in environments such as biological safety cabinets, purification workbenches, next to fume hoods, and on mobile carts, and can replace alcohol lamps. It

Technical Parameters

Model	DH-14S	DH-35B
Product number	PM100-S	PM100-B
Maximum temperature in the central area	825°C±50°C	
Maximum sterilization diameter	Φ14	Φ35
Total length of the heating area	150 mm	100 mm
Power supply power	170 W	320 W
Heating temperature	High/low temperature 400/825°C	
Rising time	5-10 min	
Ambient temperature	0-45°C	
Applicable humidity	≤85%	
Dimensions	185*92*200 (H) mm	157*92*215 (H) mm
Net weight	0.86 kg	0.94 kg



Gene Transfer Instrument I Product Introduction

Electroporation can be used to introduce DNA into competent bacteria, animal and plant cells, and yeast cells. Compared with chemical methods, electroporation can achieve higher transformation efficiency. This method has better repeatability than other methods, is easy to operate, saves time, and has high import efficiency. It has become an indispensable basic technology in molecular biology.

The gene delivery system (electroporator) has an integrated design, is easy to operate, and has an intuitive display. The microprocessor-controlled pulse discharge uses a human-machine dialogue interface, which is simple and intuitive to operate, and refines the setting range of capacitance and resistance, making the cell electroporation experiment have a wider range of choices under relevant conditions.

Product Features

- ◆ High transformation efficiency - short transformation time and excellent repeatability;
- ◆ Free storage - can store experimental data (customizable storage);
- ◆ Precise control - uses microprocessor control (pulse discharge);
- ◆ Exquisite design - ultra-compact design simplifies installation and optimizes workspace;
- ◆ Microprocessor control - simple and intuitive operation, and refined setting range of capacitance and resistance.



Technical Parameters

Model	LAWSON-2C
Pulse Form	Exponential Decay
High Voltage Output Voltage	Stored energy voltage can be set freely from 401V to 2500V with an accuracy of 1V.
Low Voltage Output Voltage	Stored energy voltage can be set freely from 10V to 400V with an accuracy of 1V.
High Voltage Capacitance	There are seven settings available: 1μF, 5μF, 25μF, as well as their combinations such as 6μF, 26μF, 30μF, and 31μF. These settings can be adjusted freely.
Low Voltage Stored Energy Capacitance	There are 63 settings available: 25μF, 50μF, 100μF, 200μF, 400μF, 800μF, as well as their combinations such as 125μF, 150μF, 175μF, 200μF, up to 1575μF. The minimum capacitance is 25μF with a step size of 25μF.
Discharge and Connection Resistance	There are 32 settings available: 50Ω (fixed), 50Ω, 100Ω, 200Ω, 400Ω, 800Ω, and ∞, as well as their combinations such as 50Ω, 100Ω, 150Ω, up to 1600Ω. These settings can be adjusted freely. The minimum resistance is 50Ω, and the maximum is 1600Ω, with a step size of 50Ω. There is also an infinite resistance setting available.
Power Supply	Single phase 220V, 50HZ, 200W
Time Constant	With adjustable RC time constant
Main Unit Net Weight / Package Size	12.8kg / 640*380*350 mm

MICRO SPECTROPHOTOMETER



Micro Spectrophotometer | Product Introduction

Nano-D600 micro spectrophotometer is a highly reproducible full-wavelength spectrophotometer that adopts a dual detection mode on the base and cuvette for a wider concentration range of sample testing. It is easy to operate and can be used not only for measuring DNA and RNA purity and concentration, protein concentration, but also for absorbance detection in general substance analysis.



Product Features

- ◆ Intelligent Android operating system, 7-inch capacitive touch screen, multi-touch, dedicated APP software, more intuitive interface, user-friendly design.
- ◆ Cuvette slot for easy detection of bacterial/microbial culture concentration.
- ◆ Only 0.5-2 μ l sample is required for each test. After the measurement is completed, the sample can be recovered for safe research of precious samples.
- ◆ The sample is directly added to the detection platform without dilution. The test can be completed in 6 seconds and the result is directly output as the sample concentration.
- ◆ Xenon flash lamp with a lifespan of 10^9 times (up to 10 years). No preheating is required when starting up, and it can be detected at any time.
- ◆ The sample is directly spotted on the loading platform without dilution. The detectable sample concentration is 50 times higher than that of a conventional UV-visible spectrophotometer, and the result is directly output as the sample concentration without additional calculation.
- ◆ Stable and fast USB data output, convenient for exporting data for analysis.
- ◆ The instrument does not need to be connected to a computer, and the sample detection and data storage can be completed by the instrument alone.
- ◆ Image and table storage formats, table compatible with Excel, convenient for subsequent data processing, supports JPG image export.



Technical Parameters

Model	Nano-D600
Wavelength Range	200-800nm; Cuvette mode (OD600 measurement): 600±8nm
Sample Volume Requirement (Loading Amount)	0.5-2.0ul
Optical Path Length	0.2mm (High Concentration Measurement); 1.0mm (Normal Concentration Measurement)
Light Source	Xenon Flash Lamp
Detector	2048-pixel Linear CCD Array
Wavelength Accuracy	1nm
Wavelength Resolution	≤3nm (FWHM at Hg 546nm)
Absorbance Precision	0.003 Abs
Absorbance Accuracy	1% (7.332 Abs at 260nm)

Technical Parameters

Absorbance Range (Equivalent to 10mm)	0.02-100A; Cuvette mode (OD600 measurement): 0-4A
Test Time	<6S
Nucleic acid detection range	2~5000ng/μl (dsDNA)
OD600 Accuracy	[0,3) ≤ 0.005A+1%; [3,4) ≤ 2%
Data output	USB
Sample pedestal material	Quartz fiber and high-hardness aluminum
Print	Optional thermal printer
Power adapter	12V 4A
Power consumption	48W
Software operating platform	Android system (Chinese/English)
Weight	3.5kg
Dimensions	270*210*196 (WxDxH) mm

NANO SPECTROPHOTOMETER



Nano Spectrophotometer | Product Introduction

Nano-800 Nano Spectrophotometer is a high-reproducibility full-wavelength spectrophotometer that uses a dual-detection mode on both the pedestal and cuvette for a wider concentration range of sample detection. It is easy to operate and can be used not only to measure the purity and concentration of DNA, RNA, and protein, but also for absorbance detection in general substance analysis.



Product Features

- ◆ Uses independently developed light source control algorithm and data acquisition correction algorithm to make data more accurate and stable.
- ◆ Unique motor control technology, using "4" optical path detection mode, with better stability, repeatability, linearity, and larger measurement range.
- ◆ Samples do not need to be diluted, and the concentration range of samples that can be measured is more than 150 times that of conventional UV-visible spectrophotometers.
- Strong repeatability and high linearity.
- ◆ Equipped with an OD600 optical path detection system, which is more convenient for detecting the concentration of bacteria, microorganisms, and other culture media than the cuvette mode.
- ◆ Independently developed Android operating system, 7-inch capacitive touch screen, no need to connect to a computer, can be operated as a standalone device.
- ◆ Easy-to-use data-to-printer options, you can directly print reports through the built-in printer.
- ◆ With fluorescent quantification reagents, it can detect pg-level concentration of dsDNA {Nano-800 exclusive}.



Technical Parameters

Model	Nano-800
Wavelength Range	190nm-900nm
Sample Volume	0.5-2 μ l
Light Source	Xenon lamp
Detector	HAMAMATSU UV-enhanced CMOS linear array sensor
Accuracy of Absorbance	0.002Abs
Precision of Absorbance	\pm 1% (7.332Abs at 260nm)
Range of Absorbance	0.02 - 300A (equivalent to 10mm)
Wavelength Reproducibility	<0.2nm
Nucleic Acid Detection Range	2.0 - 27,500 ng/ μ L dsDNA and 0.06 - 820 mg/mL BSA
Detection Time	<5S

Technical Parameters

Fluorescence Sensitivity	DsDNA: 0.5pg/ul
Fluorescence Linearity	\leq 1.5%
Optical Density Reproducibility	[0,3] \leq 0.5%, [3,4] \leq 0.2%
Optical Density Accuracy	[0,2] \leq 0.005%, [2,3] \leq 1%, [3,4] \leq 2%
Wavelength Accuracy	<1nm
Data Output	USB
Photometric Accuracy	<0.005A or <1%
4-Path Length	0.02mm, 0.05mm {for high concentration measurement}, 0.2mm, 1.0mm {for normal concentration measurement}
Sample Volume Requirement	0.5~2ul
Sample Pedestal Material	Quartz Fiber and High Hardness Aluminum
Print	Built-in Thermal Printer
Power Adapter	24V DC
Power Consumption	25W
Weight	5Kg
Dimensions	200 \times 260 \times 165(W \times D \times H)mm

ULTRA MICRO SPECTROPHOTOMETER



Ultra Micro Spectrophotometer | Product Introduction

Ultra Micro Spectrophotometer is a highly reproducible full-wavelength spectrophotometer that uses a dual detection mode on the pedestal and cuvette for wider concentration range sample detection. It is easy to operate and can be used not only for measuring the purity and concentration of DNA and RNA, measuring protein concentration, but also for absorbance detection in general substance analysis.



Product Features

- ◆ Nano-Plus is a fully wavelength (190-850nm) micro-volume spectrophotometer that does not require a computer for operation.
- ◆ The light source flashes a maximum of three times per measurement, which is much shorter than the hundreds of flashes in traditional detection, increasing the lifespan of the light source.
- ◆ Extending the lifespan of the light source, the low light intensity stimulation enables faster detection of the sample, and makes it less likely for the protein to denature.
- ◆ The unique motor control technology is used, and a three-optical-path detection method is employed, providing more stable stability, repeatability, linearity, and a larger detection range.
- ◆ Samples do not need to be diluted, and the concentration range of the samples that can be measured is more than 150 times that of conventional UV-Vis spectrophotometers.
- ◆ Equipped with an OD600 light path detection system and a cuvette mode, it is convenient for the detection of bacterial and microbial culture concentrations.
- ◆ It adopts a deeply customized Android operating system, a 7-inch capacitive touch screen, and does not require a computer to be connected, so it can be used as a stand-alone device.
- ◆ The simple and user-friendly data printer option allows you to print reports directly through the built-in printer.
- ◆ It uses image and table storage formats, the table is compatible with Excel, making it convenient for subsequent data processing, and it supports JPG image export.
- ◆ The appearance adopts an integrated metal casing, which has a more metallic feel.
- ◆ The mini size of the appearance saves laboratory space.

Technical Parameters

Model	Nano-Plus
Wavelength Range	190-850nm
Sample Volume	0.5-2ul
Light Source	Xenon Lamp
Detector	HAMAMATSU UV-enhanced CMOS linear array sensor
Accuracy of Absorbance	0.003Abs
Precision of Absorbance	±1% (7.332Abs at 260nm)
Range of Absorbance	0.04 - 300A (equivalent to 10mm)
Wavelength Reproducibility	<±0.2nm
Nucleic acid detection range	2-15000 ng/μl (dsDNA)
Detection time	<6s

Technical Parameters

OD600 absorbance range	0~4.000 Abs
OD600 absorbance stability	[0,3)≤0.5%; [3,4)≤2%
OD600 absorbance reproducibility	[0,3)≤0.5%; [3,4)≤2%
OD600 absorbance accuracy	[0,3)≤0.005A+1%; [3,4)≤2%
Data output method	USB
Sample pedestal material	Quartz fiber and high-hardness aluminum
Print	Built-in thermal printer
Power adapter	24V DC
Power consumption	25W
Weight	5kg
Dimensions	200×260×165 (W×D×H) mm



Dry Bath Incubator | Product Introduction

DH-200 dry bath incubator adopts microcomputer control and uses high-purity aluminum material as the conductive medium instead of traditional water bath devices. It has the characteristics of convenient operation, wide temperature control range, and high accuracy. It can be widely used in various biochemical sample incubation processes such as sample preservation and reaction, DNA amplification and pre-denaturation of electrophoresis, serum coagulation, etc.

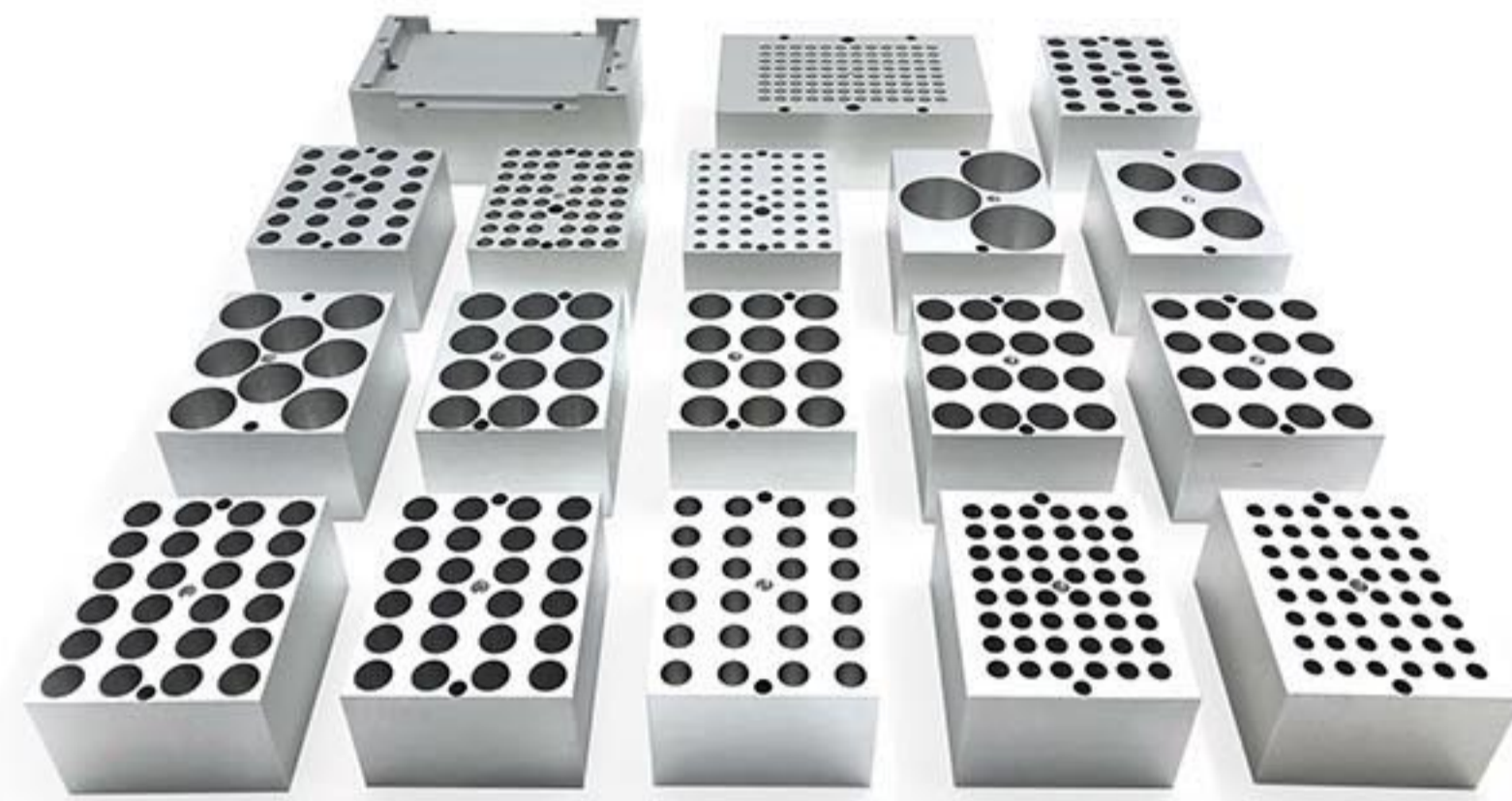


Technical Parameters

Model	Test Tube Diameter	Number of Test Tubes	Module Size
DT01	6mm	42	95.5×76.5×50
DT02	7mm	42	95.5×76.5×50
DT03	10mm	20	95.5×76.5×50
DT04	12mm	24	95.5×76.5×50

Technical Parameters

Model	Test Tube Diameter	Number of Test Tubes	Module Size
DT05	13mm	20	95.5×76.5×50
DT06	15mm	12	95.5×76.5×50
DT07	16mm	12	95.5×76.5×50
DT08	19mm	12	95.5×76.5×50
DT09	20mm	6	95.5×76.5×50
DT10	26mm	6	95.5×76.5×50
DT11	28mm	4	95.5×76.5×50
DT12	40mm	4	95.5×76.5×50
DT13	0.5ml	48	95.5×76.5×50
DT14	1.5ml	24	95.5×76.5×50
DT15	2.0ml	24	95.5×76.5×50
DT16	0.2ml	48	78×114×26
DT17	0.2ml	8-tube strip 96-well standard plate	81×123×19
DT18	0.2ml flat cap	96-well ELISA plate	81×123×19
DT19	Customizable for other specifications		



Product Features

- ◆ Easy-to-use human-computer interface displays real-time operating and setting information, allowing users to observe device status conveniently.
- ◆ Large capacity: for example, DH-200 can hold 96 1.5ml centrifuge tubes simultaneously.
- ◆ Equipped with a blue transparent cover to effectively prevent sample splashing and tube rupture.
- ◆ The constant temperature module is divided into four areas (A, B, C, and D), with independent timing for each area. This allows samples added at different times to be cultured at a constant temperature separately, and each area has an indicator light.
- ◆ Flexible module configuration: four different module sizes can be selected and used simultaneously, or custom sizes can be made according to customer requirements.
- ◆ Intelligent settings: automatic preheating, automatic startup, and automatic recovery after power failure, which many large-capacity metal baths do not have.
- ◆ Rapid temperature increase: the device can reach from 25°C to 100°C within 15 minutes.
- ◆ High accuracy: when the device is at a constant temperature of 37°C, the standard module can be calibrated to control accuracy within 0.2°C.
- ◆ The instrument has a temperature calibration function built-in.
- ◆ Equipped with dual over-temperature protection devices for both software and hardware, making it more reliable to use.

Technical Parameters

Model	DH-200
Temperature Setting Range	0°C~110°C

Technical Parameters

Temperature Control Range	Ambient temperature +5°C~110°C
Timing Range	1-99h59min/∞
Heating Time	≤15min (25°C to 100°C)
Temperature Uniformity	≤±0.2°C (@37°C)
Temperature Display Accuracy	0.1°C
Automatic Preheating	Supported
Independent Timing Function for Each Module	Supported
Auto-Run on Power-On	Supported
Automatic Recovery After Power Failure	Supported
Temperature Display Accuracy	0.1°C
Number of Modules	2~4
Power Supply Voltage	AC110 or 220V/50-60HZ
Maximum Power	500W
Product Size	370*254*178 mm
Product Weight	8.0 kg



Frozen Hair Grinder | Product Introduction

DHFSTPRP-HR24 frozen hair grinder utilizes a special vertical up-and-down integrated vibration mode, which achieves the desired grinding effect quickly through the high-frequency reciprocating vibration, impact, and shear of grinding beads (zirconia, steel, glass, ceramic). This results in samples that are more fully ground, more uniform, with better sample repeatability, and no cross-contamination between samples. Combined with the judicial appraisal technical specification SF/Z JD0107025-2018 "Liquid Chromatography-Tandem Mass Spectrometry Method for the Detection of 15 Drugs and Their Metabolites in Hair", it can quickly detect common drugs (such as heroin, methamphetamine, ketamine, ecstasy, marijuana) in hair on-site. The detection limits for various drugs have reached the requirements of the "Specifications for Hair Sample Testing of Drug-Involved Personnel" issued by the Ministry of Public Security. Since its launch, this product has been widely recognized in the industry and has received multiple innovations, as well as the acceptance report of the Key Laboratory of Toxicological Analysis of the Public Security Ministry of Beijing Public Security Bureau.

This instrument is a recommended product in the judicial appraisal technical specification SF/Z JD0107025-2018 "Liquid Chromatography-Tandem Mass Spectrometry Method for the Detection of 15 Drugs and Their Metabolites in Hair".

Frozen Hair Grinder | Principle Product

After cleaning and frozen grinding, hair samples are extracted using the methanol ultrasound method and detected using liquid chromatography-tandem mass spectrometry with multiple reaction monitoring (MRM) mode. Qualitative analysis is conducted by comparing the retention time, mass spectral characteristic fragment ion peaks, and relative abundance ratios of the ion pairs with those of the parallel blank samples and spiked samples for control purposes.



Product Features

- High efficiency grinding
Simultaneously process 24 hair samples for rapid on-site grinding. The grinding equipment has a built-in program controller, making it easy to operate. It also provides feasible solutions for community drug rehabilitation and special personnel monitoring.
- Low-temperature grinding
The temperature of the frozen grinding can be customized and adjusted to protect the components of the sample at low temperature and avoid destruction of the sample components.
- Professional grinding
The instrument has completed nearly a thousand real sample tests in judicial centers and drug enforcement teams in Beijing, Ningbo, Sichuan, Hunan, Shanghai and other places. The positive detection rate is as high as 99%, effectively avoiding false positive interference caused by drug use.

Product Applications

Sample for Grinding:

- ◆ Plant Tissues: roots, stems, leaves, flowers, fruits, seeds, etc.
- ◆ Animal Tissues: brain, heart, lung, stomach, liver, thymus, kidney, intestine, lymph nodes, muscle, bones, etc.
- ◆ Fungi and Bacteria: yeast, E. coli, etc.
- ◆ Food and Medicine: various food, pills, etc.
- ◆ Volatile Samples: coal, oil shale, wax products, etc.
- ◆ Plastics and Polymers: PE, PS, textiles, resins, etc.

○ Nucleic Acid/Protein Extraction

Low-temperature grinding of samples can effectively inhibit nucleic acid degradation and preserve protein activity.

○ Analysis of Active Pharmaceutical Ingredients

There are often significant differences between isomers of drug active ingredients. Low-temperature grinding can prevent molecular degradation due to pressure and heat.

○ Reducing Sample Volatility

Low-temperature grinding can significantly reduce sample volatility and more completely retain the content of sample components.

○ Grinding Tough/Hard Samples

For hard-to-grind samples such as tough plastics, high-strength plastics, and resins, low-temperature grinding can greatly improve grinding efficiency and effectiveness.

DHFSTPRP-HR24 frozen hair grinder adopts a special vertical up-down integrated vibration mode, which achieves rapid grinding of samples through the high-frequency reciprocating vibration, impact, and shear of grinding beads (zirconia, steel, glass, ceramics). This results in more thorough and uniform grinding of samples, better sample reproducibility, and no cross-contamination between samples.

Grinding Contrast:

The excellent grinding effect of LAWSON grinding instrument



▲ Before and after bone grinding with LAWSON grinding apparatus

▲ Mobile phone keyboard, grinding effect under freeze embrittlement condition



▲ Lapping analysis of fiber sample with KBr particles

▲ Before and after grinding of hair samples using LAWSON grinding apparatus

• LAWSON: More samples grinding contrast effect, welcome to contact us.

Product Applications

Forensic Appraisal Technical Specification SF/Z JD0107025-2018 "Liquid Chromatography-Tandem Mass Spectrometry Detection Method for 15 Drugs and Metabolites in Hair"

1. Sample Preparation

1.1 Case Sample

The hair sample is washed twice with an appropriate amount of water and acetone by shaking, then dried and cut into approximately 1mm segments. The hair segments are then frozen and ground to a powder in a cryogenic grinder. Weigh 20mg of hair powder, add 1.0mL internal standard methoxamine standard working solution (methoxamine 1ng/mL), perform ice bath sonication for 30 minutes, centrifuge, transfer the supernatant, and dry at 60°C with air flow (or a dry nitrogen blower). The residue is re-dissolved with 100µL methanol for instrument analysis.

1.2 Blank Sample

Take 20mg of blank hair sample, add 1.0mL internal standard methoxamine standard working solution (methoxamine 1ng/mL), and follow the same extraction procedure as described in 6.1.1 for case samples.

1.3 Spike Sample

Take 20mg of blank hair sample, add the suspected target compound reference material that appears in the case sample, add 1.0mL internal standard methoxamine standard working solution (methoxamine 1ng/mL), and follow the same extraction procedure as described in 6.1.1 for case samples.

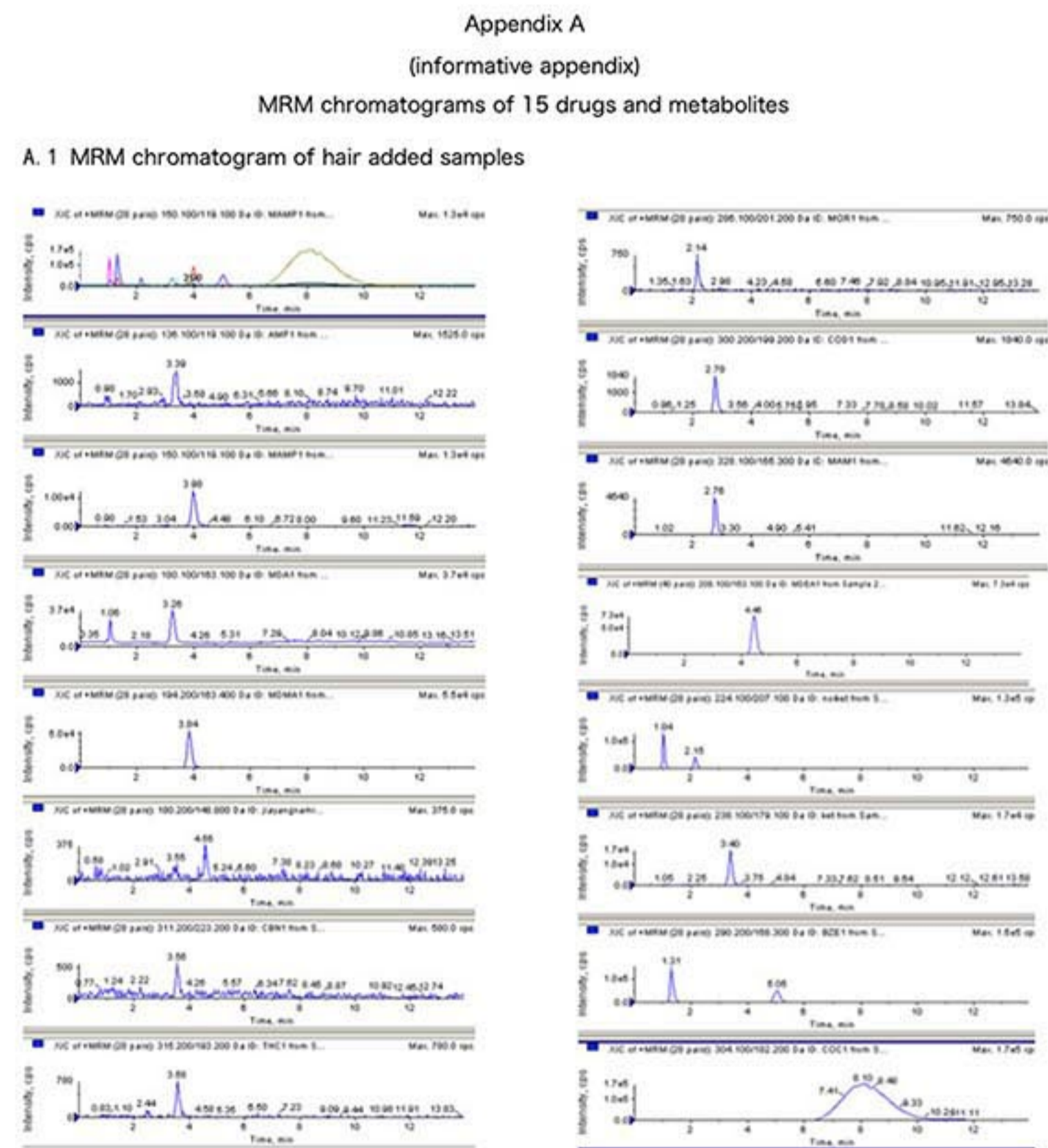


Figure A1 MM Chromatogram of 15 Drugs and Internal Standards in Hair Addition Samples

Product Advantages

Multiple operation, good effect

Highly efficient and fast operation can complete the grinding of 2x24, 2x48, 4x96 samples within 1 minute. It saves time and effort, and has small differences between batches and within batches. The extracted protein has a higher activity and longer nucleic acid fragments.

No cross-contamination

The sample tubes are in a fully enclosed state during the crushing process, and disposable centrifuge tubes and beads can be used. The samples are kept intact in the tubes, avoiding cross-contamination between samples and external contamination.

Easy operation

1. Built-in program controller, which can set parameters such as grinding time and vibration frequency of the rotor; 2. User-friendly operating interface.

Good stability

1. Adopting vertical oscillation mode for more thorough grinding and better stability; 2. During instrument operation, the noise is less than 55dB, which will not interfere with other experiments or instruments.

Convenient for low-temperature operation

When a low-temperature grinding environment is required, the adapter with the sample can be immersed in liquid nitrogen for 1-2 minutes, and then moved to the main unit for quick fixation to start grinding without the need for re-freezing, saving liquid nitrogen.

Good repeatability

Setting the same program for the same tissue sample can obtain the same grinding effect.

The working time is short, and the sample temperature does not rise.



Technical Parameters

Model	DHFSTPRP-HR24
Application Fields	Hair grinder, tissue grinder, homogenization, cell lysis, material dispersion, preparation, sample mixing, oscillation, etc.
Processing Capacity	Maximum processing capacity of 24 samples at the same time within 15 seconds, with built-in compressor for cooling
Compatible Sample Tubes	24*(0.2-0.5mL) /24*2mL /6*(7-15)mL /2*25mL /2*50mL, and various specifications of grinding tubes can be customized
Display	Touch screen display for convenient and intuitive operation
Data Storage	Up to ten sets of experimental data can be stored, and different experimental samples are pre-set such as animal heart, spleen, lung, kidney, bone, skin, hair, etc.
Cycle Mode	According to the set experimental parameters, the device can cycle through several pre-set parameter settings to further reduce human interference
Anti-Vibration Principle	Innovative anti-vibration principle based on the German "schleifen-1" working mode, as well as the innovative three-dimensional motion of the grinding beads in the vertical, horizontal and rocking directions, to ensure maximum sample processing and instant crushing effect
Maximum Feed Size	No specific requirements, can be adjusted according to the adapter
Cooling function	Yes, adjustable from -30°C to 37°C

Technical Parameters

Temperature control accuracy	+0.5°C
Open lid operation protection	Electromagnetic lock
Final particle size	~5µm
Number of grinding platforms	(can accommodate number of grinding jars) > 2
Fastening device	With automatic centering
Homogenization speed	0-70 Hz/second, working time: 0 seconds to 99 minutes, user can set it
Grinding ball diameter	0.1-30mm
Grinding ball material	Alloy steel, chromium steel, zirconia, tungsten carbide, quartz sand
Acceleration/Deceleration	Reaches maximum speed within 2 seconds / Reaches lowest speed within 2 seconds
Noise level	<55db
Grinding mode	Wet grinding, dry grinding, and low temperature grinding are all available
Temperature control	Has the ability to upgrade to ultra-low temperature liquid nitrogen refrigeration or air refrigeration
Adapter material	Polytetrafluoroethylene, alloy steel
Safety instructions	Fastening device with automatic centering, safety lock during operation, full protection
Grinding kit material	Hard alloy, polytetrafluoroethylene (PTFE), zirconia
Dimensions/Weight	630*300*480mm / 58 kg

MINI DRY METAL BATH

Mini dry Metal Bath | Product Introduction

Mini-100T round mini dry metal bath adopts microcomputer control and uses high-purity aluminum material as the thermal medium to replace traditional water bath devices. It is characterized by convenient use, wide temperature control range, and high precision. It can be widely used in various biochemical sample constant temperature incubation processes such as sample preservation and reaction, pre-denaturation of DNA amplification and electrophoresis, serum coagulation, etc. One-click setting of 37°C and 95°C is available.

Product Features

- ◆ Easy-to-use human-computer interface displays real-time operating and setting information, allowing users to observe device status conveniently.
- ◆ Fast heating rate, uniform heating, accurate temperature control, high stability, and low energy consumption.
- ◆ Built-in temperature deviation calibration function, automatic fault detection, and buzzer alarm function.
- ◆ Built-in over-temperature protection device for safer and more reliable use, and longer machine service life.
- ◆ The product is designed to be compact and tight, with a small space occupation range, and a transparent machine cover to reduce experimental errors.
- ◆ Can be set for continuous operation without time limit.



Module Model Selection

Model	Test Tube Diameter	Test Tube Specification	Module Size Bottom	Shape of Hole
MY-A	6.1mm	0.2ml*96	φ104.5*32mm	Cone Bottom
MY-B	8mm	0.5ml*59	φ104.5*32mm	Cone Bottom
MY-C	10.8mm	1.5ml*39	φ104.5*32mm	Cone Bottom
MY-D	10.8mm	2.0ml*39	φ104.5*32mm	Round Bottom
MY-E	13.5mm	5.0ml*18	φ104.5*32mm	Round Bottom
MY-F	8/10.8mm	0.5ml*24+1.5ml*30	φ104.5*32mm	Cone Bottom
MY-G	6.5mm	6mm*59	φ104.5*32mm	Round Bottom
MY-X	Customizable for Other Specifications /	/	/	/

Technical Parameters

Model	Mini-100T
Temperature Control Range	Ambient temperature +5°C to 100°C
Timing Range	1 to 99h59min/∞
Temperature Control Accuracy	≤±0.3°C (@37°C)
Temperature Display Accuracy	0.1°C
Heating Time	≤15min (20°C to 100°C)
Temperature Uniformity	≤±0.5°C (conventional) ≤±0.3°C (@37°C)
Number of Modules	1
Power Supply Voltage	AC110 or 220V/50-60HZ
Maximum Power	150W
Product Size	160*190*130 mm
Product Weight	1.5 kg



Ultra-fine Powder Screening | Product Introduction

The mechanical oscillating sieve analyzer, also known as the test sieve and inspection analysis sieve, is widely used in laboratories, quality inspection departments, and other inspection departments for particle size distribution measurement of granules, powders, and pharmaceutical materials, determination of product impurity content, and determination and analysis of liquid-solid content.

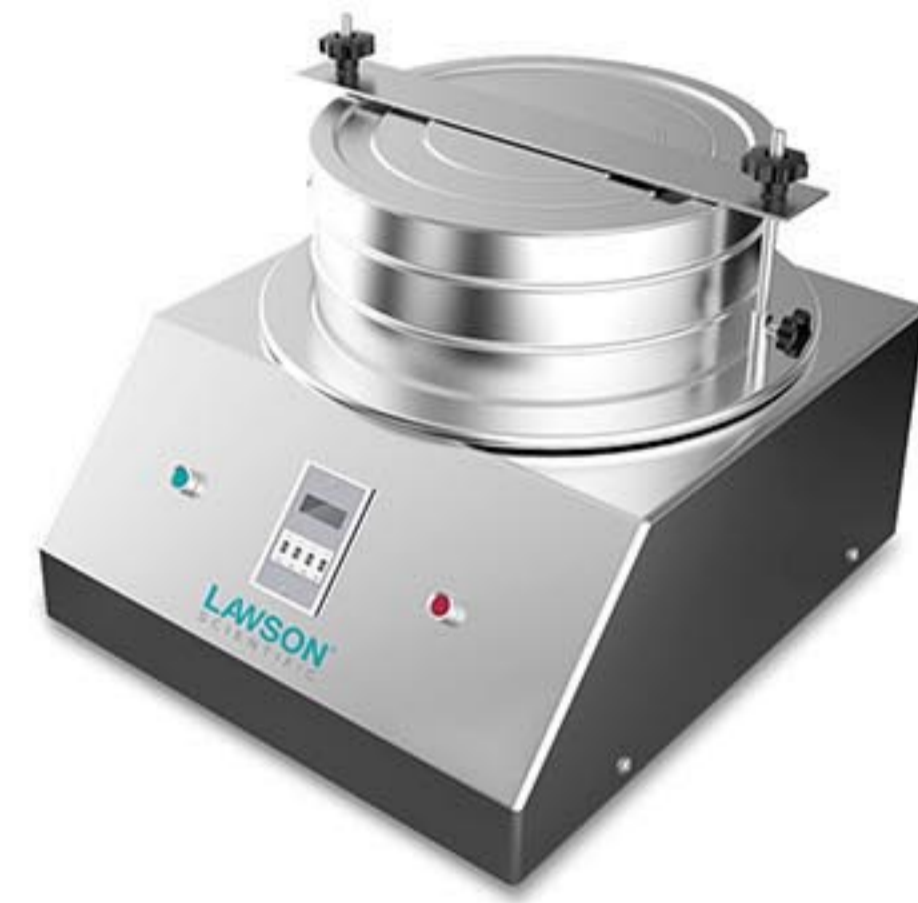
The product has a compact structure, low noise, high efficiency, and accurate precision. It uses a high-quality new type of power generator to generate multi-frequency and high-frequency vibration, which efficiently screens and measures the material. At the same time, the electronic delay timer can be used to achieve different working times according to different materials, minimizing inspection errors, ensuring the consistency of sample analysis data, and making accurate judgments on product quality.



Ultra-fine Powder Screening | Structural Characteristics

The product is characterized by compact structure, low noise, high efficiency, and accurate precision. It adopts a new type of mechanical vibrator and power generator to generate multi-element high-frequency vibration for efficient screening and determination of materials. Therefore, it is also called an inspection sieve. The structure of the test sieve is mainly composed of two parts: the body and the sieve. The sieve machine part is designed and produced by our factory, and the sieve part is produced by China Aerospace Science and Industry Group, a national military enterprise. The standard sieve used by this type of sieve machine is divided into two categories: one is industrial grade that meets national standards, and the other is high-standard sieve used by scientific research institutions and national testing agencies. The industrial-grade sieve with a mesh size of 100 mesh or coarser is made of brass wire mesh mainly because brass has good ductility. For meshes finer than 100 mesh, 304 stainless steel material is used. The test sieve sieve frame adopts the national standard GB/T6003.1-1997 for production, with a basic mesh size of 2.36mm-0.038mm, which complies with international standards ISO3310-1:1990 R20/3, R20, and R40/3 series. The sieve mesh materials are brass, tin bronze, and stainless steel. For meshes ranging from 2.36um to 100um, they are processed by electroplating with nickel, which not only improves the mesh accuracy but also prevents mesh deformation, making them sturdy, wear-resistant, and durable.

1. The sieve (sieve mesh) is easy to replace. This mechanical oscillating sieve analyzer uses layers of sieve meshes stacked on the sieve machine tray. The sieve mesh is pressed tightly using circular handles, fixed handles, pressure heads, cover plates, and other components, making it easy to replace the sieve mesh for analyzing different material sizes.
2. The working time can be adjusted according to different materials through an electronic timer, which minimizes the testing error and ensures the consistency of sample analysis data, making accurate judgments on product quality.
3. Our factory's self-produced vertical vibration motor is used as the excitation source, which has a long service life and reliable quality.
4. The body part of the mechanical oscillating sieve analyzer can be designed as a 304 stainless steel body or a common steel body (polished, spray-painted, or brushed with anti-rust paint) according to user requirements.
5. The sieve (sieve equipment) is designed with national standard 304 stainless steel and meets national standards. The sieve is available in various types according to the material of the sieve surface, such as metal wire woven mesh, metal perforated plate, and electroformed mesh. The sieve is produced in accordance with national standard GB/T6003.1-1997 and meets international standard ISO3310-1:1990. For perforated plate test sieves, the basic mesh size ranges from 32mm to 1mm. For woven mesh test sieves, the basic mesh size ranges from 2.36mm to 0.015mm. For electroformed mesh test sieves, the basic mesh size ranges from 0.50mm to 0.005mm. The sieve frame, sieve cover, and sieve bottom are made of high-quality stainless steel.



Instructions For Use

- ◆ Determine the standard sieve to be used according to the material being tested and the corresponding standards.
- ◆ Stack the standard sieves on the tray holder in order from large to small aperture and from bottom to top, positioning the sieves with grooves or positioning screws.
- ◆ Put the material to be tested into the top standard sieve (or cover the standard sieve cover), and then press the standard sieve with the sieve head fitted on the wire column, and tighten the nut on the wire column to compress the standard sieve. (Note: Apply consistent force on both sides, and then lock the locking screw.)
- ◆ Place the timer switch in the appropriate position (note the instructions for the timer, as different settings require different time settings), then turn on the power switch, and the test sieve starts working.
- ◆ After the mechanical vibration sieve stops working, loosen the nut on the wire column, remove the sieve head, and carefully take out the standard sieve.

Technical Parameters

Model	DHSF-U2
Standard sieve	8 layers
Sieve diameter	Φ300 Φ200 Φ100mm
Screening granularity	0.038-3mm
Noise	≤50db
Feeding amount (per time)	≤200g
Vibration amplitude	≤5mm
Rotation speed	1420r/min
Power	0.125Kw
Total weight	25Kg
Dimensions	360*300*736mm
Voltage	220V

ELECTROMAGNETIC HIGH-FREQUENCY VIBRATING SCREENING MACHINE



Electromagnetic High-frequency Vibrating Screening Machine | Product Introduction

DHSF-200 Electromagnetic high-frequency vibrating screening machine is a new generation of laboratory vibrating sieve. It uses internationally leading technology to produce three-dimensional throwing motion through electromagnetic drive. It is equipped with different sizes of analysis sieves and can meet the particle size classification and measurement of powders, granules, bulk materials, suspensions and other materials. It has the advantages of high measurement accuracy, reproducible screening results, and low noise.

It is widely used in particle analysis in industries such as soil, pharmaceuticals, metallurgy, geology, coal, and grain. The screening results are efficient and reliable, making it an ideal choice for research and development, quality control, and production.



Electromagnetic High-frequency Vibrating Screening Machine | Working Principle

The main body of DHSF-200 Electromagnetic high-frequency vibrating screening machine is composed of an electronically controlled electromagnet, which has a vibration transmission component. This driving component can generate a three-dimensional throwing motion, which allows the sample to be uniformly distributed over the entire screen surface, resulting in a faster and more efficient filtering process, and thus achieving extremely high screening accuracy. At the same time, it brings high load capacity, quiet operation, and high efficiency, which can produce higher separation accuracy in a shorter period of time, and ensure the reproducibility of the screening results.

Table Of Commonly Used Mesh Sizes And Corresponding Micrometers

Mesh Size	Micrometer	Mesh Size	Micrometer
20	850	120	125
25	710	140	106
30	600	170	90
35	500	200	75
40	425	230	63
45	355	270	53
50	300	325	45
60	250	400	38
70	212	450	32
80	180	500	25
100	150	635	20

**ELECTROMAGNETIC HIGH-FREQUENCY
VIBRATING SCREENING MACHINE**



Technical Features

- ◆ Efficient electromagnetic drive, with electronic control of amplitude and frequency
- ◆ Suitable for dry and wet sieving
- ◆ High sieving accuracy and efficiency
- ◆ Quiet instrument operation and easy maintenance
- ◆ Memory storage for 9 sieving programs
- ◆ Adjustable sieving time and vibration frequency
- ◆ Three-dimensional throwing motion ensures uniform sample distribution across entire mesh surface

Technical Parameters

Model	DHSF-200 / DHSF-200H
Sample Characteristics	Powder, loose granules, suspensions
Motion Form	Three-dimensional throwing motion
Time Display	1-99min
Measurement Range	20µm-30mm
Amplitude	0-3mm continuous adjustment
Dry / Wet Screening	Both available
Intermittent Operation	0-99s
Maximum Load	3kg
Maximum Number of Sieves	9
Sieve Material	Stainless steel, nylon
Analytical Sieve Diameter	100/150/200/300 mm
Weight	25 kg
Power Supply	AC 220V±10% 50Hz



Ultrasonic Vibrating Screen | Product Introduction

DH series ultrasonic fine vibration screen is a high-precision and high-stability ultrasonic vibration screening machine developed by Ningbo Luoshang with German technology. It uses the intelligent ultrasonic controller designed by Professor Cui of Shanghai Jiao Tong University, and is assembled with imported original components that are finely tuned and combined, changing the non-adaptability and non-adjustability brought about by a single frequency, and truly achieving the organic combination of CNC and vibration screening. Its performance level reaches and surpasses that of international similar products, completely surpassing domestic products!

DH series ultrasonic fine vibration screen solves the screening difficulties of strong adhesion, easy agglomeration, high static electricity, high fineness, high density, and low bulk density, and has outstanding performance! It achieves a great breakthrough in performance.

Screening accuracy of the DH series ultrasonic fine vibration screen can be improved by 1-100%, and the output can be increased by 1-20 times. It truly meets the industrial production needs above 600 mesh!

Ultrasonic fine vibration screening instrument can be widely used in industries such as pharmaceuticals, metallurgy, chemical industry, mineral processing, and food.



Ultrasonic Vibrating Screen | Working Principle

Ultrasonic fine vibration screen consists of an ultrasonic generator, transducer, resonance ring, resonant screen frame, and vibration platform. For better performance, please use it with matching equipment and do not mix it with other ultrasonic devices.

High-frequency electrical signal generated by the ultrasonic generator is converted into a high-frequency sinusoidal longitudinal oscillation wave by the transducer. These oscillation waves are transmitted to the resonance ring to make it resonate. The resonance ring then uniformly conducts the high-frequency vibration to the entire screen surface. While the material is vibrating at low frequency on the screen, a high-frequency ultrasonic vibration is superimposed to solve the problem of material blockage and improve the screening accuracy and efficiency.

Table Of Commonly Used Mesh Sizes And Corresponding Micrometers

Mesh Size	Micrometer	Mesh Size	Micrometer
20	850	120	125
25	710	140	106
30	600	170	90
35	500	200	75
40	425	230	63
45	355	270	53
50	300	325	45
60	250	400	38
70	212	450	32
80	180	500	25
100	150	635	20



Application Scope

- ◆ Efficient electromagnetic drive, with electronic control of amplitude and frequency
- ◆ Separation, classification, determination of particle size
- ◆ Suitable for dry or wet screening of any freely flowing dispersed material; grading of solid particles
- ◆ Agriculture, soil, coal, synthetic materials, chemicals, geology, metallurgy, building materials, environment, resources, glass, ceramics, biology, etc.
- ◆ Laboratories in industries such as pharmaceuticals, metallurgy, chemicals, mining, and food

Precautions

- ◆ Characteristics of the tested materials. It is usually used to test powdery and granular materials with good fluidity. If the material has certain stickiness, agglomeration, or adsorption, please specify when selecting the appropriate model.
- ◆ The feeding amount is generally within 300g to avoid affecting the screening accuracy due to excessive material.
- ◆ The feeding particle size is generally between 0.038-3mm.

Technical Parameters

Model	DHSF-U1
Output Frequency	30KHz~40KHz
Sieving Machine Power	120W
Ultrasonic Power	30-150W
Sieving Machine Rotation Speed	1440r/min
Sieve Specification	20~1000 mesh
Sieve Diameter	200mm
Sieve Layer	1-7 layers (customized according to customer's requirements)
Total Weight	30kg
Dimensions	330*390*760mm
Operating Temperature	-15°C~65°C
Input Current	0.1A~0.3A
Input Voltage	220±10% 50~60Hz



Product Introduction

LN CryoMill DH-S2020IN instrument, which is a product launched for "small samples".

Cryogenic Milling can quickly and effectively dry or wet grind hard, soft, and elastic samples within 1-3 minutes. It can also achieve the purpose of mixing and homogenizing powder and turbid liquids. It can be used for cryogenic grinding with liquid nitrogen, as well as for biological cell disruption and DNA/RNA extraction. The types of samples that the high-throughput tissue grinder can grind include: plant tissues, animal tissues, cells, bacteria, spores, and yeasts.

The liquid nitrogen grinder first freezes the above-mentioned substances below the embrittlement point, and then is ground to the required fineness in the grinder, and the original ingredients will not be destroyed. In addition, flammable and explosive substances at room temperature can also be crushed at low temperature, and the effect is more significant.



Product Applications

- ◆ 1. High data accuracy and reproducibility
 - 1.1. The sample is always at liquid nitrogen temperature during the grinding process.
 - 1.2. The sample is always at liquid nitrogen temperature during the grinding process.
 - 1.3. The sample bottle is in a fully enclosed state during the crushing process, and the sample is completely kept in the bottle to ensure the control of dangerous and important samples.
 - 1.4. The sample bottle is in a fully enclosed state during the crushing process, and the sample is completely kept in the bottle to ensure the control of dangerous and important samples..
- ◆ 2. Versatility, humanized design.
 - 2.1. Touch screen, can set the grinding time, cycle period, grinding operation frequency and other parameters (optional).
 - 2.2. Removable control panel (optional).
 - 2.3. 10 programs can be stored (optional).
 - 2.4. Suitable for dry and wet grinding of a variety of samples.
 - 2.5. 1.5ML 2ML 5ML 10ML 25ML 50ML and other sample tubes can be installed for sample grinding.
- ◆ 3. Durability.
 - 3.1. There is only one moving part-the collider, which greatly reduces the mechanical stress and prolongs the service life of the equipment.
 - 3.2. Strong technical support: Shanghai Jingxin Company has more than 500 users, professional sample pre-processing equipment production.

Operation steps

- ◆ 1. Manual operation
 - 1.1. Manually immerse the adapter and grinding tank in the liquid nitrogen sample, and quickly cool down to -196 degrees. Prevent sample degradation or change the physical characteristics of the sample.
 - 1.2. Install the adapter and the grinding jar on the grinding machine. Put on the safety cover and lock the safety lock for operation.
- ◆ 2. Automatic operation
 - 1.1. Install the adapter and grinding jar on the grinder. Put on the safety cover and lock the safety lock for operation.
 - 1.2. Open the liquid nitrogen connection device, start the liquid nitrogen delivery/or open the air refrigeration instrument (to achieve 0 degree refrigeration).
 - 1.3. Turn on the liquid nitrogen control switch. After the liquid nitrogen flows into the crushing tank, the temperature is physically cooled. In about a minute, the temperature quickly drops to -192 degrees.
 - 1.4. Turn on the grinding button to operate. It only takes 15 seconds to crush the object instantly.
 - 1.5. The flow of liquid nitrogen can be controlled in the whole process, and it can be charged at any time during the operation.



Technical Parameters

Model	DH-S2020IN
Processing system	It has five major systems, sample grinding system, low temperature conveying system, low temperature control system, circuit control system, and heat preservation system
Application	Biology, food, agriculture, pharmaceuticals, chemical/synthetic materials, engineering/electronics, building materials, glass/ceramics
Automatic filling of liquid nitrogen	The flow of liquid nitrogen can be controlled in the whole process, and it can be charged at any time during the operation
Operation method	Fully automatic
Connection device	With liquid nitrogen connection, automatic transfer from storage system to sample grinding system
Low temperature or liquid nitrogen grinding	Yes, it can be connected to a liquid nitrogen tank (Type II) or an air cooler (Type I)
Shell Design	The shell is all made of hard steel, to avoid having a plastic cover, which affects safety
Sample Features	Hard, medium-hard, soft, brittle, elastic, fibrous
Crushing principle	Low temperature freezing force, mechanical impact force, physical friction force
Temperature range	-196°C-100°C

Technical Parameters

Feed size	≤ 8 mm
Discharge size	0~ 5 μm
Standard machine processing sample size	50ml*2(Can be customized)
Grinding jar size	1.5ml/2ml/5 ml /10ML/ 25 ml / 35 ml / 50 ml.(Can be customized)
Grinding jar placement	It can be done once without the need to repeat the placement twice, extending the working time and affecting the sample temperature
Grinding working speed:Grinding speed	1-70HZ adjustable (30-2100 rpm/100-7000RPM)
Anti-vibration principle	DHFSTPRP-1 anti-vibration principle, as well as a special three-dimensional vibration mode of up and down and left and right shaking, the sample moves in a three-dimensional figure 8 shape in space, which can be suitable for cracking various animal and plant tissues and microorganisms, and extract DNA, RNA and protein conveniently and quickly
Typical liquid nitrogen grinder	15S
Grinding jar material	Stainless steel, PTFE, Teflon, carbide steel, etc.
Grinding Ball Material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Accelerate / Decelerate	Reach maximum speed in 2 seconds / Reach lower speed in 2 seconds
Standard	ISO / CE



Product Introduction

Cryogenic Milling DH-S2010IN instrument, which is a product launched for "small samples".

Cryogenic Milling can quickly and effectively dry or wet grind hard, soft, and elastic samples within 1-3 minutes. It can also achieve the purpose of mixing and homogenizing powder and turbid liquids. It can be used for cryogenic grinding with liquid nitrogen, as well as for biological cell disruption and DNA/RNA extraction.

The types of samples that the high-throughput tissue grinder can grind include: plant tissues, animal tissues, cells, bacteria, spores, and yeasts.



Product Applications

- ◆ 1. Within 1-3 minutes, 24, 48, and 192 samples can be quickly and effectively ground.
- ◆ 2. Closed LN2-system (autofill) for enhanced safety, avoids any contact of the user with LN2.
- ◆ 3. Various centrifuge tubes, PCR tube adapters, or grinding jars of different materials can be selected.
- ◆ 4. 8-shaped vibration, sample grinding without dead corners.
- ◆ 5. Simple and safe operation design.
- ◆ 6. Exquisite and compact appearance.
- ◆ 7. Screw cap grinding jar, sealed and dustproof.
- ◆ 8. Screw cap grinding jar, sealed and dustproof.
- ◆ 9. Suitable for dry and wet grinding of a variety of samples.
- ◆ 10. Programmable cooling and grinding cycles (10 s to 99 min).
- ◆ 11. 3 different grinding modes (dry, wet or cryogenic).
- ◆ 12. 20 SOPs can be stored.
- ◆ 13. Grinding jars of the DH-S2010IN perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.

Function Principle

The grinding jars of the DH-S2010 perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.

The grinding jar is continually cooled with liquid nitrogen from the integrated cooling system before and during the grinding process.



Technical Parameters

Model	DH-S2010IN
Applications	size reduction, mixing, homogenization, cell disruption, cryogenic grinding
Field of application	agriculture, biology, chemistry / plastics, construction materials, engineering / electronics, environment / recycling, food, geology / metallurgy, glass / ceramics, medicine / pharmaceuticals
Feed material	hard, medium-hard, soft, brittle, elastic, fibrous
Size reduction principle	impact, friction
Material feed size	≤8 mm
Final fineness	~ 5 µm
Batch size / feed quantity	max. 2 x 50 ml
No. of grinding stations	2
Setting of vibrational frequency	digital, 0 – 70 Hz (0 – 3000 min ⁻¹)
Typical mean grinding time	30 s – 2 min
Grinding method	Dry grinding/Wet grinding/Cryogenic grinding
Cell disruption with reaction vials	yes, up to 96 x 2.0 ml

Technical Parameters

Self-centering clamping device	yes
Type of grinding jars	screw top design
Material of grinding tools	hardened steel, stainless steel, tungsten carbide, agate, zirconium oxide, PTFE
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Grinding jar sizes	1.5 ml / 5 ml / 10 ml / 25 ml / 35 ml / 50ml
Setting of grinding time	digital, 10 s – 99 min
Storable SOPs	20
Power consumption	150 W
W x H x D closed	380*270*490
Net weight	26kg
Electrical supply data	100-240 V, 50/60 Hz



Product Introduction

Mixer Mill DH-S2010 instrument, which is a product launched for "small samples".

Mixer Mill can quickly and effectively dry or wet grind hard, soft, and elastic samples within 1-3 minutes. It can also achieve the purpose of mixing and homogenizing powder and turbid liquids. It can be used for cryogenic grinding with liquid nitrogen, as well as for biological cell disruption and DNA/RNA extraction.

The types of samples that the high-throughput tissue grinder can grind include: plant tissues, animal tissues, cells, bacteria, spores, and yeasts.



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Product Applications

- ◆ 1. Within 1-3 minutes, 24, 48, and 192 samples can be quickly and effectively ground.
- ◆ 2. By pre-freezing the sample and the grinding tank, you can successfully grind the heat-sensitive and elastic materials, immerse the sample and the LAWSON grinding kit in liquid nitrogen, and quickly fix the grinding tank to start grinding after it is fully frozen.
- ◆ 3. Various centrifuge tubes, PCR tube adapters, or grinding jars of different materials can be selected.
- ◆ 4. 8-shaped vibration, sample grinding without dead corners.
- ◆ 5. Simple and safe operation design.
- ◆ 6. Exquisite and compact appearance.
- ◆ 7. Screw cap grinding jar, sealed and dustproof.
- ◆ 8. Screw cap grinding jar, sealed and dustproof.
- ◆ 9. Suitable for dry and wet grinding of a variety of samples.
- ◆ 10. Separate design, use closed net letter special grinding tank or disposable centrifuge tube to avoid sample cross contamination.
- ◆ 11. 3 different grinding modes (dry, wet or cryogenic).
- ◆ 12. 20 SOPs can be stored.
- ◆ 13. Grinding jars of the DH-S2010 perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.

Function Principle

The grinding jars of the DH-S2010 perform radial oscillations in a horizontal position. The inertia of the grinding balls causes them to impact with high energy on the sample material at the rounded ends of the grinding jars and pulverize it. Also, the movement of the grinding jars combined with the movement of the balls result in the intensive mixing of the sample.

The degree of mixing can be increased even further by using several smaller balls. If several small balls are used (e.g. glass beads) then, for example, biological cells can be disrupted. The large frictional impact effects between the beads ensure effective cell disruption.



Technical Parameters

Model	DH-S2010
Applications	size reduction, mixing, homogenization, cell disruption, cryogenic grinding
Field of application	agriculture, biology, chemistry / plastics, construction materials, engineering / electronics, environment / recycling, food, geology / metallurgy, glass / ceramics, medicine / pharmaceuticals
Feed material	hard, medium-hard, soft, brittle, elastic, fibrous
Size reduction principle	impact, friction
Material feed size	≤8 mm
Final fineness	~ 5 µm
Batch size / feed quantity	max. 2 x 50 ml
No. of grinding stations	2
Setting of vibrational frequency	digital, 0 – 70 Hz (0 – 3000 min ⁻¹)
Typical mean grinding time	30 s – 2 min
Grinding method	Dry grinding/Wet grinding/Cryogenic grinding
Cell disruption with reaction vials	yes, up to 96 x 2.0 ml

Technical Parameters

Self-centering clamping device	yes
Type of grinding jars	screw top design
Material of grinding tools	hardened steel, stainless steel, tungsten carbide, agate, zirconium oxide, PTFE
Grinding ball material	Alloy steel, chrome steel, zirconia, tungsten carbide, quartz sand
Grinding jar sizes	1.5 ml / 5 ml / 10 ml / 25 ml / 35 ml / 50ml
Setting of grinding time	digital, 10 s – 99 min
Storable SOPs	20
Power consumption	150 W
W x H x D closed	380*270*490
Net weight	26kg
Electrical supply data	100-240 V, 50/60 Hz