



## Henan Shuyu Technology Co. 河南蜀豫科技有限公司

Henan Shuyu Technology Co., Ltd. is located in Zhengzhou City, Henan Province, is a dynamic industry

and trade as one of the company, our company can OEM, the company specializes in the production of General laboratory instruments, Optical instruments, Analytical instruments , Agricultural ecological instruments, Life science instruments, Other equipment and consumables

The company has a long history of production, strong

technical force, excellent production equipment, testing equipment, product quality is reliable, stable performance, complete specifications. The company has a long history of production, strong technical force, excellent production equipment, complete testing equipment, reliable product quality, stable performance, complete specifications, and is known for its exquisite design, novel modeling, exquisite craftsmanship, and superior quality



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# Analytical Instrument



## GC-MS 3100 Gas Chromatograph-Mass Spectrometer

- Ion source: E source, independent heating system 120 ~350 controllable.
- Mass number: 1.5amu~1024amu
- Limit of detection: 1pg octafluoronaphthalene S/N 100:1
- Scanning speed: fully adjustable, up to 10,000amu/sec.
- Detector: with high-pressure conversion to play the pole electron multiplier.
- Vacuum system: turbomolecular pump.
- Chromatographic configuration: GC-4000A series, capillary split /non-split sampling system, fully automated gas circuit (EPC) and purge trapping, thermal resolution.
- Used in conjunction with purge and trap, thermal resolver, headspace and other pretreatment equipment for environmental testing; used in conjunction with an autosampler to further increase the degree of automation of the instrument; optional direct injection rod for the direct detection of high boiling point, difficult to vaporize substances.



## GC-MS 3110 Vehicle-Mounted Gas Chromatography-Mass Spectrometer

- High degree of automation, EPC electronic flow control of the gas path.
- Configurable international common spectral library, such as NIST, WILEY, DRUG, etc., to realize automatic and rapid search.
- Respond to on-site emergency monitoring in accordance with the General Technical Requirements for Mobile Laboratory Instruments and Equipment.
- Mass number range: 1.5amu-800amu expandable to 1024amu.
- Mass resolution (defined by half peak width) : 1.5M-2M.
- Scanning speed: fully adjustable, up to 6000amu/sec (digital scanning, 0.1u per step).
- Mass accuracy:  $\pm 0.2u$
- Mass stability:  $\pm 0.15u/24h$
- Sensitivity: 1pg octafluoronaphthalene (S/N>30:1).
- Interface of the coupler: directly connected to the capillary column, ammonia flow rate 1mL/min-vehicle-mounted vibration system design, dedicated gas source, dedicated power supply system.

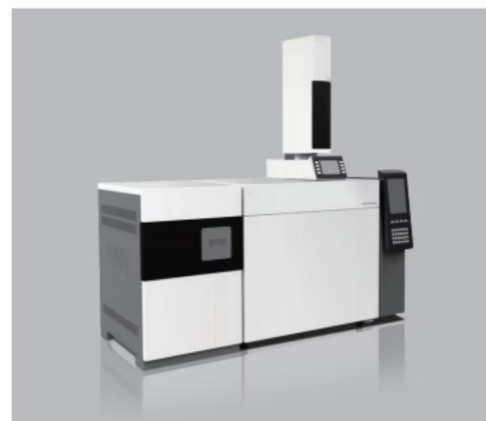


## GCxGC TOF MS Model 3300 Full 2D Gas Chromatography-Time of Flight Mass Spectrometer

-Disturbance elimination modulator develops GCxGC disturbance elimination four-orifice modulator with independent intellectual property rights, which avoids the interference of hot and cold modulators on the market to the column temperature box. This core modulator solves the hot, difficult and key issues in the development of the industry. Independent temperature-controlled dual-column temperature box adopts the structure of independent temperature-controlled dual-column temperature box, which makes the instrument control more flexible and applicable to a wider range, and the technology makes the instrument as a whole has reached the international leading level. Time-of-flight mass analyzer has completely independent intellectual property rights, resolution, sensitivity, acquisition speed have reached the international level, with selective removal of background ions.

-Hardware, software, database interactive integration, to provide a complete solution for the analysis of trace organics in all components and complex matrices.

-Chromatography, modulator, mass spectrometry and electrical components integration, system integration and operation control.



## PTR-QMS 3500 Proton Transfer Reaction Mass Spectrometer

-Low-pressure micro-glow discharge ion source with high electron density, high efficiency, anti-pollution and easy maintenance.

-High-quality quadrupole mass spectrometry system, ensuring stable and reliable data.

-The lowest detection limit can reach tens of pptv.

-Fast online real-time analysis of VOCs.

-High efficiency soft ionization technology, reagent ion purity can reach 99.8% or more.

-Rapid and simple analysis of samples without sample concentration.

-Choice of fixed mass monitoring and full range scanning monitoring two ways.

-Full-parameter auto-tuning program for fast optimization of instrument parameters.

-Fast vacuum valve switching, no need to stop to change the reaction reagents.

-Multi-functional embedded control system is safe and reliable

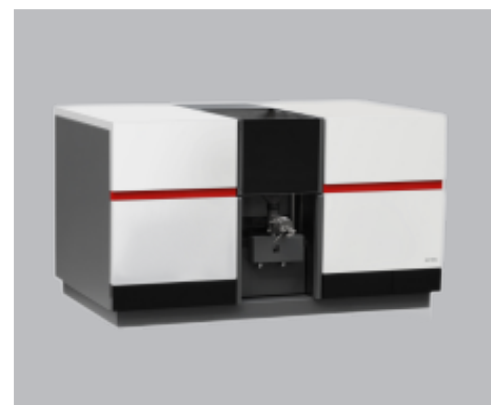
-4~20mA, MODBUS protocol for remote data transmission.

-Compact structure, reliable installation can be used for vehicle, convenient for field monitoring.



## AA-7090 Atomic Absorption Spectrophotometer

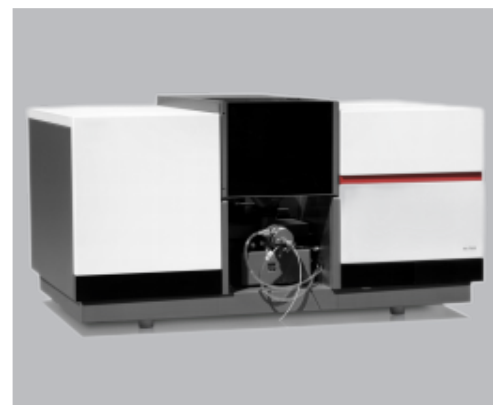
- The original imported transverse heating graphite furnace, the use of longitudinal AC Seeman and deuterium lamp double background correction mode.
- The AC Seeman background correction field is continuously adjustable from 0.6T to 1.1T, which effectively meets the analytical needs of different users.
- The AC Seeman background correction field is continuously adjustable from 0.6T to 1.1T, which effectively reduces the inversion effect on the analytical sensitivity.
- Cross-current Seeman background correction field is continuously adjustable from 0.6T to 1.1T, which effectively reduces the influence of inversion effect on analytical sensitivity.
- Graphite furnace visualization system for better positioning of the injection needle, observation of the sample in the graphite tube and optimization of the graphite furnace temperature program.
- Graphite Furnace Gas Saving Mode maximizes the effective utilization of protective gas, extends gas usage time, and reduces operating costs.
- The graphite furnace is equipped with two protective gas circuits.
- Graphite furnace with dual protective gas circuits to further extend the life of the graphite tube by controlling the internal and auxiliary gas circuits.
- Ink tube life is further extended by controlling the inner and auxiliary gas lines.
- 8 lamp holders with coded lamps for automatic identification of elemental lamps and recording of lamp life.
- Highly automated software for elemental lamp selection, wavelength selection, slit selection, combustion head height and flow rate setting, auto-ignition, atomizer switching, deuterium lamp circuit switching, graphite furnace power switching and other functions.
- Deuterium lamp fine-tuning mechanism, can maximize the deuterium lamp line and elemental lamp line overlap.



Equipped with laughing gas safety lock and related safety mechanism to ensure safer use of laughing gas acetylene flame.

## AA-7050 Atomic Absorption Spectrophotometer

- Automatic turret for 8 lamp holders.
- Burning head automatic lifting, automatic adjustment of flame height.
- Light-controlled temperature increase, maximum temperature increase rate 3000 /s
- Graphite furnace visualization system, greatly simplifying the development of graphite furnace methods.
- Graphite furnace gas saving mode.
- Graphite tube temperature correction.
- Graphite Furnace Dual Internal Gas Circuit, adding an auxiliary gas in addition to the protective gas to help ashing of samples for better results.
- Intelligent frequency conversion, the software can intelligently recognize the power supply frequency, and automatically match to the frequency of work.
- Equipped with multi-element analysis function, can be configured with AS-600 autosampler, to realize the automatic determination of a variety of elements.



## AA-7020 Atomic Absorption Spectrophotometer

-Optical system suspension design, vibration, ambient temperature changes do not affect the stability of the instrument.

-Flame/graphite furnace two seconds to realize automatic fast switching, no need to adjust the optical path after switching.

-Safe and reliable control and alarm devices ensure overcurrent protection of the hollow cathode lamp, gas/protective gas underpressure protection, gas leakage alarm, overheating protection of the graphite furnace, and protection of abnormal flame state, etc., which enhance the safety of the instrument's use.

-It can be equipped with hydride generator, (integrated) auto sampler, laughing gas/acetylene gas system. Optional combustion head automatic lifting, water seal automatic protection function, etc., to ensure the accuracy and reliability of the analysis results.



## AA-7003 Atomic Absorption Spectrophotometer

-All titanium atomized combustion system, corrosion resistance, oxidation resistance, high temperature resistance, long service life, can be added to the laughing gas / acetylene flame system, the expansion of the analysis of more than 30 kinds of high-temperature elements, with the flame emission measurement function.

-Temperature control program: the maximum 20-order heating program; ladder, slope, keep three ways of heating, heating rate 2000 / S.

-Rising temperature mode: power heating, optical heating (optional).



## AA-7001 Atomic Absorption Spectrophotometer

-Advanced Graphite Furnace Power Supply.

-Can be equipped with graphite furnace autosampler, analyzing work more easily.

-Long-life graphite tubes for long-term use at 2000°C.

-Automatic graphite furnace programmed temperature increase, up to 20 steps.

-Unique design of background deduction, so that high salinity, high background samples (such as soy sauce, food, etc.) can also get accurate analytical results.



## GC-4200 Gas Chromatograph

- Operating system developed with Linux kernel.
- Monitoring and control of the instrument can be realized through PC, tablet PC and cell phone.
- Adopting 10-inch color touch screen: beautiful interface, intuitive and convenient finger operation, good interactivity and simplified human-machine interface.
- Liquid autosampling installation platform, compatible with dual-tower autosampler.
- The column temperature box adopts double rear door design, equipped with high-precision temperature control system, which can realize rapid and accurate temperature rise and fall operation, and the temperature control performance reaches the international advanced level.
- New electronic gas control system, equipped with high-precision EPC, can realize the whole EPC control of the whole gas circuit.
- Network communication between the mainframe and computer, more stable and reliable.
- Two liquid autosamplers can be equipped at the same time to realize dual-tower sampling.



## GC-4100 Gas Chromatograph

- The gas circuit realizes high-precision EPC electronic flow control automatically, equipped with inverse control workstation as standard.
- Thermal conductivity detector dead volume is small, fast stabilization time, the use of antioxidant components, the average temperature of the constant hot wire bridge mode power supply, high sensitivity, long service life; six consecutive detection of benzene in toluene, RSD is less than 2.5%, chromatographic half-peak width is narrow.
- Electron capture detector performance has been improved, the micro ECD cell size is small, stable baseline, can be adapted to the capillary column analysis; sensitivity has been significantly improved, the detection limit of up to  $2 \times 10^{-11}$  g/m(Lly-666).



## LC-5510 Liquid Chromatograph

- Double plunger parallel pump, with high-precision steady flow performance, high-pressure infusion pump up to 50 mL/min flow rate.
- Variable wavelength UV detector with microcomputer inverse wavelength scanning.
- Patented pulsation buffer ensures the best pulsation buffer effect.
- Highly efficient on-line degassing device to ensure stable baselines.
- Upgradeable to a binary gradient chromatography system.
- Software programmable for dual-pump gradient elution.
- Equipped with autosampler to improve working efficiency and sampling precision.
- Equipped with autosampler to improve working efficiency and sampling precision. Optional self-developed evaporative light scattering detector that can be used with any brand of liquid phase. Optional fluorescence detector, also compatible with a variety of detectors.



## LC-5520 Liquid Chromatograph

- Patented oscillometric refraction suppression technology for extremely low noise and drift.
- Extra-long 20 mm optical cell for high detection sensitivity. New optical design, concave holographic grating, high stability.
- The three-dimensional column oven makes the installation and replacement of columns more user-friendly, and takes into account the installation needs of semi-preparative columns.
- Advanced semi-conductor cooling for low-temperature separation of biological and pyrolytic samples.
- Rapid interchangeability between analytical and semi-preparative liquid phases.
- Post-column derivatization, compatible with a wide range of detectors.

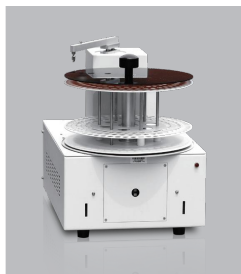


## IC-2800 Ion Chromatograph

- Specially designed continuous automatic regeneration electrochemical suppressor (anionic and cationic) with large suppression capacity, low background conductivity, small dead volume, fast equilibrium, good reproducibility, simple operation, no maintenance and so on.
- Double-plunger, low-pulsation infusion pump made of all PEEK materials, with wide flow rate range and stable operation.
- All PEEK flow system, avoid metal contamination, high pressure resistance, strong acid, alkali and compatible with organic solvents.
- EG-100 Lysate Generator can automatically produce OH<sup>-</sup> and other lysates required for analysis without the need for an additional degassing unit.



## Accessories for Atomic Absorption Spectrophotometers



AS-200 Atomic Absorption  
Flame Autosampler



AS-500 Atomic Absorption  
Graphite Furnace Autosampler



AS-600 type flame graphite  
furnace autosampler all-in-  
one machine



HG-01 Hydride Generator



EW-320AC Oil-Free and Low-  
Noise Air Compressor



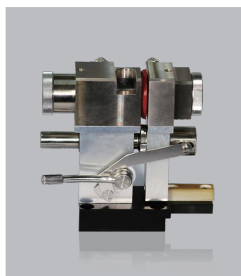
EW-900CH Cooling Water  
Circulating Device



Pure Titanium Burner Head



Elemental Lamp



Furnace

## Gas Chromatograph Accessories



Six-Way Valves /  
Twelve-Way Valves



Filling Columns



Capillary Device



EW-101AG Automatic Air Source





EW-103AG Automatic  
Air Source



EW-300HG  
Hydrogen Generator



EW-500HG  
Hydrogen Generator



EW-501HG  
Hydrogen Generator



EW-301HG  
Hydrogen Generator



EW-3TD Thermal Resolver

## **Ion Chromatograph Accessories**

## **Gas Chromatography-Mass Spectrometer Accessories**



EG-100 Drench Liquid Generator



## **Liquid Chromatograph Accessories**



AS-405 Autosampler



EL-100 Evaporative Light  
Scattering Detector



DM-101 Online Degasser



PCRM-120 Post-Column  
Derivatization Device

# Laboratory Boxes

## Overview of Applications

This product is a specialized device that can be used for bacterial culture and operation in an anaerobic environment. It can cultivate anaerobic organisms that cannot grow in the atmosphere, and it can avoid the danger of death of anaerobic organisms that used to be exposed to oxygen when operated in the atmosphere.

## Structural Features

-The product consists of a culture room, a sampling room, a gas and circuit control system, and a catalytic deoxidizer.

-The product uses advanced scientific means to achieve high precision in anaerobic environment, which is convenient for the operator to operate and cultivate anaerobic bacteria in anaerobic environment.

-The temperature control system adopts microcomputer P.I.D intelligent controller, high-precision digital display, which can correctly and intuitively reflect the actual temperature inside the incubation room, coupled with effective temperature-limiting protection device (over-temperature sound and light alarm), safe and reliable; the incubation room is equipped with lighting and ultraviolet sterilization device, which can kill the harmful bacteria in the dead corners of the room, and can effectively avoid bacterial contamination. The gas circuit device can adjust the flow rate arbitrarily, which can effectively control the input of different flow rates of safety gas. The operation room is made of high quality stainless steel plate. The observation window is made of high strength special glass. Special gloves are used for operation, which are reliable, comfortable, flexible and easy to use, and the operating chamber is equipped with a deoxidizing catalytic converter.



## Technical Parameters

Serial Number	Item	Technical Parameter
1	Model	YQX-II
2	Temperature control range	Room temperature +3-60°C
3	Temperature resolution	0.1°C
4	Temperature fluctuation	±0.2°C
5	Temperature uniformity	±1°C
6	Working power supply	AC 220V 50Hz
7	Power	1500W
8	Working time	1-9999 minutes timer or continuous
9	Workshop size mm	820×550×660
10	Overall dimension mm	1200×730×1360
11	Sampling room anaerobic state time	<5 minutes
12	Time to form anaerobic state in operation room	<1 hour
13	Maintenance time of anaerobic environment	>12 hours when the operation chamber stops replenishing trace gas



WJ-A Series



WJ-B Series

## Overview of Applications

Carbon dioxide incubator is a device for cell, tissue and microorganism cultivation. It simulates the growth environment of living organisms and provides a clean space for in vitro cultivation, with suitable temperature, humidity, CO<sub>2</sub> concentration, acidity and alkalinity (pH) to support the growth of cells and tissues. They are widely used in immunology, oncology, genetics, pathology, cellular dynamics, production of antigens and antibodies, and drug screening.

## Structural Features

- The inner liner is made of 304 mirror stainless steel, with rounded corners for quick cleaning and no dead angle;
- Double-door structure, the outer door using magnetic door seal, sealing effect is good, can reduce the loss of gas in the cavity; with door temperature control and open the door to detect the function, can effectively prevent moisture condensation; inner door is a high-quality toughened glass door, open the outer door can be convenient to observe the sample situation, the inner door opens automatically shut down the fan and stop the heating and gas supply, and effectively prevent the temperature in the cavity and the concentration of CO<sub>2</sub> rushing; the use of humidification tray humidification ( independent humidification tray can be removed or placed according to demand), to provide high humidity sample culture environment; one-piece sample culture environment; one-piece humidification tray can be taken out or put in according to demand, to provide high humidity; one-piece sample culture environment. Humidifying tray (independent humidifying tray can be taken out or put in according to the demand), to provide a high humidity sample culture environment; one-piece perforated shelves with anti-dislodgement and anti-tipping push-pull design, can be disassembled and cleaned without tools.
- Adopts 5-inch high-resolution color touch screen, multi-group data a screen display, easy to operate, with a screen password lock function, Chinese and English interfaces can be selected; with sound, visual alarm function, while the screen menu has the appropriate prompts; intelligent fuzzy PID control, high control accuracy, fixed value and the program is free to set up a multi-segment operation; three levels of authority management function;
- The original imported infrared (IR) CO<sub>2</sub> concentration sensor, infrared dual-beam technology, built-in temperature and pressure compensation, high-temperature-resistant design, long product life.
- Heating system: six-side direct heat, PID. control, each surface of the chamber is efficiently and evenly heated; airflow is gentle to prevent rapid evaporation of the culture medium, improve the temperature recovery speed, to ensure a uniform and stable culture environment;
- Provide one-key UV sterilization function to provide a sterile environment for cell culture.
- Real-time curve view and historical data storage and export function, data storage time 1 minute-999 minutes can be set, up to 180,000 operating data and event records can be stored; data can be viewed, monitored and can be exported through the USB interface, the historical data can not be changed, and the original data can be truly and effectively traced.

## Technical Parameters

Serial Number	Item	Technical Parameters			
1	Model	WJ-80A	NJ-160A	NJ-80B	NJ-160B
2	Volume	80L	160L	90L	180L
3	Control method	P.I.D fuzzy logic control			
4	Heating method	Gas jacket type		Water jacket type	
5	HEAP Filter	optional equipment	optional equipment	standard equipment	standard equipment
6	Temperature control range	Room temperature +5°C-65°C			
7	Temperature display resolution	0.1°C			
8	Temperature fluctuation	±0.1°C (ambient temperature 25°C, set 37°C, no load)			
9	Temperature uniformity	≤0.3°C (ambient temperature 25°C, set 37°C, no load)			
10	CO <sub>2</sub> control range	0-20%			
11	CO <sub>2</sub> control precision	0.1%			
12	CO <sub>2</sub> supply pressure value	Recommended Pressure Reducing Valve Pressure Value 0.05Mpa			
13	Relative humidity	≥90% (humidification by humidifying tray)			
14	Temperature recovery time	≤5min(open the door for 30 seconds, ambient temperature 25°C, set value 37°C)			
15	CO <sub>2</sub> concentration recovery time	5 min(open the door for 30 seconds, set value 5%)			
16	Power consumption	400W	600W	600W	800W
17	Timing range	1 minute-999 hours and 59 minutes can be slowed down			
18	Power supply voltage	AC 220V 50/60HZ			
19	Stainless steel shelf	Standard 2 layers (can be added)			
20	Workshop size mm	400x400x500	500x500x650	445×385×540	545×485×690
21	Overall dimension mm	550x610x810	665x690x960	550×555×870	650×655×1020

# GZX-III Light Incubator Series

## Overview of Applications

This product is suitable for plant seed germination, seedling cultivation, bacteria, microorganisms culture and preservation, small animals, insect rearing; product quality testing and other uses of light, constant temperature experiments, is the biology, medicine, agriculture, animal husbandry, forestry, environmental science and other production and scientific research departments of the ideal test equipment.

## Structural Features

- The inner liner is made of high-quality stainless steel, with corrosion-resistant, acid-resistant, easy to clean, no rust and other characteristics.
- Microcomputer intelligent temperature controller, PID control, stable temperature control, high accuracy, 12-bit LED high brightness digital display, intuitive and clear, with good control and anti-interference ability. Double temperature insurance device: temperature controller with automatic tracking, over-temperature alarm device; once over-temperature immediately cut off the heating system, and at the same time in the working chamber is equipped with a temperature insurance device to ensure the safety of the cultures in the working chamber.
- Unique air duct design in the working chamber, the wind speed is gentle, to ensure the uniformity and accuracy of the temperature inside the box.
- Three-side illumination design, five-level adjustable illumination, simulating the day and night environment.
- Double-door structure: when the outer door is opened, the temperature will not be affected by observing the experimental condition of the working chamber through the inner door made of high-strength tempered glass.
- The height of the shelves in the working room can be adjusted at will.
- The compressor of international famous brand is used, and the environmentally friendly non-fluorocarbon refrigerant.



Fluorine-free and environmentally friendly



Fluorine-free and environmentally friendly

## Technical Parameters

Serial Number	Item	Technical Parameters			
1	Product model	GZX-150BSH-III	GZX-250BSH-III	GZX-300BSH-III	GZX-400BSH-III
2	Volume	150L	250L	300L	400L
3	Heating/cooling method	Stainless steel electric heater / hermetic fluorine-free compressor			
4	Temperature control range	With light 5 °C -60 °C without light 0 °C -60 °C			
5	Temperature resolution	0.1 °C			
6	Temperature fluctuation	± 0.5 °C			
7	Luminance	0-10000Lx	0-15000Lx	0-20000Lx	0-25000Lx
8	Working environment	20±5°C			
9	Number of shelves	3 pieces			
10	Refrigerant	404A(Fluorine-free environmental protection type)			
11	Working time	1-999 minutes or continuous			
12	Power	900W	1000W	1400W	1900W
13	Working power	AC 220V 50Hz			
14	Studio size mm	500×400×800	570×500×850	570×540×950	700×550×1020
15	Exterior size mm	700×625×1470	770×735×1530	780×780×1670	920×825×1770

## Overview of Applications

This product is suitable for seed germination of plants, seedling cultivation, culture and preservation of bacteria and microorganisms, rearing of small animals and insects; quality testing of products and other uses of light, constant temperature and humidity test, which is the ideal test equipment for the production and scientific research departments of biology, medical science, agriculture, animal husbandry, forestry, and environmental science.



Fluorine-free and environmentally friendly

## Structural Features

- The inner liner is made of high-quality mirror stainless steel material, which is corrosion-resistant, acid-resistant, easy to clean and rust-free.
- Microcomputer intelligent temperature controller, P.I.D. control, stable temperature control, high precision, 11-bit LED high-brightness digital display, intuitive and clear, with good control ability and anti-interference ability. Double temperature insurance device: the temperature controller has automatic tracking and over-temperature alarm device; once over-temperature immediately cut off the heating system, at the same time, the temperature insurance device is equipped in the working chamber, which can ensure the safety of the cultures in the working chamber.
- Unique air duct design in the working chamber, with soft wind speed to ensure the temperature uniformity and accuracy inside the chamber.
- Three-side lighting design, five-level adjustable illumination, simulating the day and night environment.
- Double door structure: when the outer door is opened, the temperature and humidity are not affected by observing the experimental situation in the studio through the inner door made of high-strength tempered glass.
- Working room shelves made of stainless steel material, can be adjusted at will height.
- Selecting international famous brand compressor, environmentally friendly non-fluorine refrigerant.

## Technical Parameters

Serial Number	Item	Technical Parameters		
1	Product Model	QHX-250BSH-III	QHX-300BSH-III	QHX400BSH-III
2	Volume	250L	300L	400L
3	Heating/cooling method	Stainless steel electric heater / hermetic fluorine-free compressor		
4	Temperature control range	With light 5°C-50°C Without light 0°C-50°C		
5	Temperature resolution	0.1°C		
6	Temperature fluctuation	±0.5°C(heating operation state)±1°C(cooling operation state)		
7	Humidity control range	50-95% humidity control fluctuation ±5%RH (25°C-40°C)		
8	Humidification mode	External ultrasonic humidifier		
9	Illumination	0-15000Lx	0-20000Lx	0-25000Lx
10	Working environment	20±5°C		
11	Number of partitions	3 pieces		
12	Refrigerant	404A (non-fluorine environmental protection type)		
13	Working time	1-99 hours or continuous		
14	Power	1400W	1750W	1850W
15	Working power supply	AC 220V 50Hz		
16	Workshop size mm	570×500×850	570×540×950	700×550×1020
17	Overall size mm	770×735×1560	780×780×1700	920×825×1800



# SPX-F Biochemical Incubator Series/MJ-F Mold Incubator Series

## Overview of Applications

This product has cold and hot thermostatic control equipment, widely used in medical treatment, drug testing, health epidemic prevention, environmental protection and other scientific research departments. It is a kind of thermostatic equipment for cell, mold, microorganism culture protection and plant cultivation, breeding and other tests.

## Structural Features

-This product is novel and beautiful in shape. Studio is made of high quality 304 stainless steel, four corners arc design, easy to clean; shell made of high quality cold rolled steel plate, surface electrostatic spraying treatment, strong corrosion resistance; double door structure, the inner door is a high quality toughened glass door, you can directly observe the test inside the studio without affecting the internal temperature; unique air duct design, to ensure that the studio temperature uniformity and stability; stainless steel shelves, the height of the freely adjustable. The height of the stainless steel shelf can be adjusted freely.

-True color LCD touch screen, temperature, time real-time display, with man-machine interface, easy to operate, more humanized; can view the instrument history data.

-Adopts intelligent operating system, fuzzy PID intelligent control, fixed value/program multi-run can be set freely. Equipped with large-capacity memory, can store 250,000 data records and 16,000 event records.

-With Chinese and English menu switching function.

-User rights hierarchical management: administrator can create up to 5 sub-users and assign different rights, which can realize multi-level management.

-Automatically record the operation data, operation log and alarm log of the device, and can export the original file or unchangeable PDF file through the instrument U disk interface.



Fluorine-free and environmentally friendly

-Screen password lock function, can prevent non-experimental personnel to operate at will.

-Built-in high brightness LED lighting, UV germicidal lamp (limited to MJ-N series); box with a test hole (50mm), convenient for data verification.

-Frequency conversion refrigeration system, energy saving and power saving, small temperature fluctuation, open the door to recover quickly, and to ensure that the equipment in the non-extreme conditions of long-term frost-free operation; selection of international famous brand compressor, environmentally friendly non-fluorine refrigerant.

-Call recovery mode is optional: stop, restart operation, continue operation.

## Technical Parameters

Serial Number	Item	Technical Parameters			
		SPX-160F	SPX-250F	SPX-350F	SPX-510F
1	Model	MJ-160F	MJ-250F	MJ-350F	MJ-510F
2	Volume	160L	250L	350L	510L
3	Control Method/Program	PID fuzzy logic control fixed value / program control fuzzy operation			
4	Temperature control range	-5°C-70°C(-20°C-100°C can be customized)			
5	Resolution	0.1°C			
6	Temperature fluctuation	≤±0.3°C			
7	Temperature uniformity	≤±0.8°C			
8	Number of stainless steel shelves	Standard 3 layers (can be added)			
9	Wattage	1150W	1380W	1850W	2150W
10	Power supply voltage	AC 220V 50/60Hz			
11	Overall dimensions(mm)	640×745×1470	700×810×1600	750×910×1660	850×990×1810
12	Studio size(mm)	505×420×785	565×485×920	615×585×980	715×665×1070

## Overview of Applications

This product is widely used in medical treatment, drug testing, health epidemic prevention, environmental protection and other scientific research departments. It is a kind of thermostatic equipment for cell, mold, microorganism culture protection and plant cultivation, breeding and other tests.

## Structural Features

- The inner liner material is made of high-quality mirror stainless steel material, which is corrosion-resistant, acid-resistant, easy to clean, not rusty and so on.
- Microcomputer intelligent temperature controller, P.I.D. control, stable temperature control, high precision, 7-bit LED high brightness digital display, intuitive and clear, with good control and anti-interference ability. Double temperature insurance device: temperature controller with automatic tracking, over-temperature alarm device; once over-temperature immediately cut off the heating system, while the temperature insurance device is installed in the working chamber, which can ensure the safety of the cultures in the working chamber.
- Double-door structure: after the outer door is opened, the temperature is not affected by observing the experimental situation of the working room through the inner door made of high-strength tempered glass.
- The working chamber is equipped with fluorescent lamps for lighting; BOD socket (150L and above only); the shelves in the working chamber can be adjusted in height at will.
- Working time setting range: 1 minute-99 hours and 59 minutes.



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## Technical Parameters

Serial Number	Item	Technical Parameters			
1	Product Model	SPX-80BSH-II	SPX-150BSH-II	SPX-250BSH-II	SPX-300BSH-II
2	Volume	80L	150L	250L	300L
3	Heating/cooling method	Stainless steel electric heater / hermetic fluorine-free compressor			
4	Temperature control range	0°C-60°C			
5	Temperature resolution	0.1°C			
6	Temperature fluctuation	±0.5°C(heating operation state)±1.0°C(cooling operation state)			
7	Number of shelves	2 pieces 3 pieces			
8	Refrigerant	R134a (non-fluorine environmental protection type)			
9	Operating time	1 minute-99 hours 59 minutes or continuous			
10	Power	300W	400W	500W	700W
11	Working power supply	AC 220V 50Hz			
12	Workshop size mm	440×320×520	480×390×780	570×500×850	570×540×950
13	Overall dimension mm	570×545×1120	610×625×1435	700×715×1500	700×735×1600

# Constant Temperature (Full Temperature) Culture Shaker Series

## Overview of Applications

Constant temperature culture shaker (also known as constant temperature shaker), widely used in bacterial culture, fermentation, hybridization and biochemical reactions and enzymes, cell tissue research, etc., which have high requirements for temperature and shaking frequency. It has a wide range of applications in biology, medicine, molecular science, pharmaceutical, food, environmental protection and other research fields.

## Structural Features

- Integrates biochemical constant temperature incubator and oscillator into one, featuring multi-purpose, less investment, small area and multi-function.
- Three-dimensional self-balancing eccentric wheel drive mechanism, running more balanced and free.
- Intelligent sound and light alarm, with operating parameters memory storage function, to avoid cumbersome operation.
- Large screen backlit liquid crystal display, can display the set temperature and the actual temperature, accuracy of  $\pm 0.1\text{ }^{\circ}\text{C}$ . Adopt microcomputer intelligent temperature control instrument, P.I.D. control, stable temperature control and high precision.
- High-precision rotational speed control system, the display can directly show the set rotational speed and actual rotational speed, the accuracy is  $\pm 1\text{rpm}$ .
- Equipped with timing function, the incubation time can be set arbitrarily between 1-999.9 hours, the display shows the timing time and the remaining time, and at the end of timing, the equipment automatically stops and issues sound and light alarms. Adopting DC motor, featuring wide speed regulation, constant torque, constant speed and maintenance-free.
- Adopt famous brand non-fluorine compressor (limited to QYC series). The inner liner and rocking plate are made of high-quality mirror stainless steel; various specifications of stainless steel flask clamps can be disassembled and freely combined.



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## Technical Parameters

Serial Number	Item	Technical Parameters				
1	Product Model	KYC-100	CKYC-100B	QYC-200	QYC-2102C	KYC-1102C
2	Rotating frequency	40-300rpm				
3	Frequency Accuracy	$\pm 1\text{rpm}$				
4	Oscillation amplitude	26(mm)				

# Constant Temperature (Full Temperature) Culture Shaker Series

5	Maximum capacity	100ml×9 or 250ml×6	100ml×16 or 250ml×12 or 500ml×9 or 1000ml×4	100ml×20 or 250ml×16 or 500ml×12 or 1000ml×6	100ml×48 or 250ml×30 or 500ml×24	
6	Size of rocker plate mm	290×250	400×370	450×400	500×350	
7	Standard configuration	100ml×9	500ml×3、 250ml×3100ml×8	500ml×3、 250ml×4100ml×1 0	250ml×24	
8	Timing range	1 minute-999.9 hours				
9	Temperature control range	RT+5~60℃		4~60℃	4~60℃	RT+5-60℃
10	Temperature control precision	0.1℃(constant temperature)				
11	Temperature Fluctuation	±0.5℃				
12	Number of shaking boards	1 piece			2 pieces	
13	Workshop size mm	330×300×190	420×450×310	500×450×300	600×460×620mm	
14	Overall dimension mm	540×450×390	620×600×520	740×700×520	700×590×1250mm	
15	Wattage	350W	400W	600W	900W	600W
16	Power supply	AC 220V 50Hz				

# DZF Vacuum Drying Box Series

## Structural characteristics

- Temperature control system adopts microcomputer P.I.D. intelligent controller, digital tube display, after setting the temperature, the instrument controls the heating power required by itself and displays the heating status, precise and stable temperature control, over-temperature audible and visual alarm and automatically cut off the power supply.
- The operation panel is placed in the upper part of the box (6020, 6030, 6050), which is different from the left side of the box, making the operation easy and convenient for observation.
- Observation window adopts double glass, sealed glass door for more than 15mm high-quality tempered glass, the outer layer of 3mm bullet-proof glass.
- The 6050 box door is equipped with a switch tension adjustment device, and the mouth of the working room adopts an integral one-time molding silicone sealing ring.
- The mouth of the working chamber adopts the integral one-time molding silicone sealing ring.
- The inner liner is made of high quality stainless steel material, with corrosion resistance, acid resistance, easy to clean and so on.
- The heaters of 6210, 6090, 6030 and 6020 are located on the shelves in the box, which can greatly reduce the heat loss.



2XZ-2 vacuum pump

2XZ-4 vacuum pump

## Overview of Applications

For various factories and mining enterprises, universities and colleges, scientific research and all kinds of laboratories, etc. in the vacuum conditions of the goods for drying treatment.

## Technical Parameters

Serial Number	Item	Parameters Technical				
		DZF-6020	DZF-6030	DZF-6050	DZF-6090	DZF-6210
1	Product model	DZF-6020	DZF-6030	DZF-6050	DZF-6090	DZF-6210
2	Volume	24.75L	30.72L	52.9L	91.13L	215L
3	Heating method	Stainless steel electric heater				
4	Vacuum degree	<133pa				
5	Temperature control range room temperature	Room temperature +10° C -250° C				
6	Temperature resolution	0.1				
7	Temperature fluctuation	± 0.5				
8	Working time	1-9999 minutes timed or continuous				
9	Power	300W	400W	1400W	1350W	2050W
10	Working power	AC 220V 50Hz				
11	Workshop size mm	300×300×275	320×320×300	415×370×345	450×450×450	560×640×600
12	Exterior size mm	460×430×570	490×500×595	570×510×655	615×590×1270	725×730×1460

# DNP-III Electrothermal Constant Temperature Incubator Series

## Structural characteristics



-Double-door structure: open the door, the inner door is made of high-quality thermal insulation tempered glass, easy to observe the situation inside the working room, and does not affect the internal temperature.

-Double temperature insurance device: temperature controller with automatic tracking, over-temperature alarm device; once the over-temperature immediately cut off the heating system, and at the same time in the working chamber is equipped with a temperature insurance device to ensure the safety of the cultures in the working chamber.

-Microcomputer intelligent temperature control instrument, P.I.D control, with self-tuning function, LED bright digital tube display, clear and intuitive. After setting the temperature, the instrument will judge the power needed for heating and display the heating status, without the disadvantage of temperature overshoot, precise and stable temperature control. With power failure automatic recovery memory function.

-The inner liner is made of high-quality mirror stainless steel, rounded shape, with corrosion resistance, acid resistance, easy to clean and so on.

-Workshop shelves can be adjusted to any height according to the user's needs.

-Working mode: continuous or 1-9999 minutes timer function.

## Overview of Applications

This product is widely used in medical and health care, pharmaceutical industry, biochemistry and agricultural science and other scientific research and industrial production departments for bacterial culture, fermentation and other constant temperature test.

## Technical Parameters

Serial Number	Item	Technical Parameters			
1	Product model	DNP-9052BS-III	DNP-9082BS-III	DNP-9162BS-III	DNP-9272BS-III
2	Volume	50L	80L	160L	270L
3	Heating method	Electric heating wire / three-dimensional heating			
4	Temperature control range	Room temperature +5~65			
5	Temperature resolution	0.1°C			
6	Temperature fluctuation	±0.2°C			
7	Temperature uniformity	±0.5°C			
8	Number of shelves	2 pieces			
9	Working hours	1-9999 minutes or continuous			
10	Power	200W	200W	440W	440W
11	Operating power	AC 220V 50Hz			
12	Studio size mm	350x350x410	400x400x500	500x500x650	600x600x750
13	Overall dimensions in mm	515x515x700	550x570x790	650x670x935	765x770x1035



# GNP-III Waterproof Type Electric Thermostatic Incubator Series



## Structural characteristics

- Double-door structure: open the door, the inner door is made of high quality heat preservation tempered glass, easy to observe the situation inside the studio, and does not affect the internal temperature.
- Water jacket structure (the incubator water jacket is made of high-quality stainless steel material argon arc welding): the temperature is uniform, and the constant temperature can be maintained for a long time after the power failure.
- Double temperature insurance device: temperature controller with automatic tracking, over-temperature alarm device; once over-temperature immediately cut off the heating system, while the temperature insurance device is installed in the working chamber to ensure the safety of cultures in the working chamber.
- Microcomputer intelligent temperature control instrument, PID control, with self-tuning function, LED bright digital tube display, clear and intuitive. After setting the temperature, the meter judges the power needed for heating and displays the heating status, without the disadvantage of overshooting temperature, precise and stable temperature control. With power failure automatic recovery memory function.
- The inner liner is made of high-quality mirror stainless steel, rounded shape, with corrosion resistance, acid resistance, easy to clean and so on.
- Working mode: continuous or 1~9999 minutes timer function.

## Overview of Applications

This product is widely used in medical and health care, pharmaceutical industry, biochemistry and agricultural science and other scientific research and industrial production departments for bacterial culture, fermentation and other constant temperature test.

## Technical Parameters

Serial Number	Item	Technical Parameters			
		GNP-9050BS-III	GNP-9080BS-III	GNP-9160BS-III	GNP-9270BS-III
1	Product model	GNP-9050BS-III	GNP-9080BS-III	GNP-9160BS-III	GNP-9270BS-III
2	Volume	50L	80L	160L	270L
3	Heating method	Electric heating wire / three-dimensional heating			
4	Temperature control range	Room temperature +5~65			
5	Temperature resolution	0.1°C			
6	Temperature fluctuation	±0.2°C			
7	Temperature uniformity	±0.5°C			
8	Number of shelves	2 pieces			
9	Working hours	1-9999 minutes or continuous			
10	Power	500W	800W	1200W	1500W
11	Operating power	AC 220V 50Hz			
12	Studio size mm	350x350x410	400x400x500	500x500x650	600x600x750
13	Overall dimensions in mm	515x515x700	550x580x780	650x680x935	765x750x1035



# DHG-III Electrothermal Constant Temperature DrumDrying Oven Series 200 Degrees

### Overview of Applications

For scientific research units, universities and colleges, medical institutions, industrial and mining enterprises and other units, departments for a variety of tests, such as drying, disinfection, sterilization, curing and other applications.

### Structural characteristics

- Microcomputer intelligent P.I.D. controller, after setting the temperature, the instrument controls the heating power by itself and displays the heating status, the temperature control is accurate and stable.
- Over-temperature sound and light alarm and automatically cut off the heating power.
- Built-in stainless steel shelf, height can be freely adjusted.

Material:

- Box body is made of high-quality cold-rolled steel plate, surface electrostatic spraying, the coating is hard and firm, with strong anti-rust ability. The working chamber is made of high-quality 304 mirror stainless steel, rounded corners inside the box, smooth and smooth, very easy to clean. Shelf bracket can be freely loaded and unloaded.
- Low noise special fan, can be in the high temperature for a long time stable operation; adjustable new air inlet, control the air volume in and out of the box.

### Technical Parameters

Serial Number	Item	Technical Parameters				
		DHG-9033BS-III	DHG-9053BS-III	DHG-9073BS-III	DHG-9143BS-III	DHG-9243BS-III
1	Product Model	DHG-9033BS-III	DHG-9053BS-III	DHG-9073BS-III	DHG-9143BS-III	DHG-9243BS-III
2	Volume	30.4L	51.6L	72L	121L	207L
3	Heating method	Stainless steel electric heaters				
4	Temperature control range	Room temperature +5 °C-200 °C				
5	Temperature resolution	0.1°C				
6	Temperature fluctuation	±0.2°C				
7	Number of shelves	2 pieces				
8	Working hours	1-9999 minutes timed continuous				
9	Power	700W	900W	1050W	1650W	2050W
10	Operating power	AC 220V 50Hz				
11	Studio size mm	320x280x340	380x340x400	450x350x450	550x400x550	600x460x750
12	Overall dimensions in mm	580x450x520	640x505x580	705x520x630	800x580x730	850x630x930

Overview of Applications

This product is used for distillation drying, concentration and constant temperature heating of chemicals, biological manufacturing, checking serum biochemical experiments, constant temperature cultivation as well as for boiling sterilization of syringes and small surgical instruments.

Structural characteristics

The shell of H.SWX series products is made of high-quality cold-rolled steel plate spraying plastic. The inner liner and the upper cover are made of stainless steel plate, and the outer shell is filled with high-quality thermal insulation material between the inner liner, the overall structure is reasonably designed, and the modeling is beautiful and generous. The temperature control system adopts digital microcomputer intelligent control. Strong thermal sensibility, high sensitivity, in the use of the range can be arbitrarily adjusted. The heating device adopts closed heater, directly immersed in the water, less heat loss.DK-8D three-hole electric thermostatic sink shell is made of high-quality cold-rolled steel spray molding. The inner liner and top cover are made of stainless steel, with novel and beautiful modeling; the temperature is controlled independently by three holes; the temperature control instrument adopts high-speed and high-performance CPU processing chip, highly sensitive and high-precision platinum resistance sensor, with sound and light tracking alarm of over-temperature, so that the samples can be reliably protected.



Technical Parameters

Serial Number	Item	Technical Parameters		
1	Product Model	H-SWX-420BS	H-SWX-600BS	DK-8D
2	Volume	11.3L	34.2L	2L×3
3	Heating method	Enclosed stainless steel electric heater		
4	Temperature control range	Room temperature +5°C-100°C		
5	Temperature resolution	0.1°C		
6	Constant temperature fluctuation	±0.5°C		
7	Working time	1-9999 minutes timed or continuous		
8	Power	1000W	1500W	300W×3
9	Working power supply	AC 220V 50Hz		
10	Studio size	420×180×150mm	600×300×190mm	120~55×105mm×3
11	Overall dimension	570×220×275mm	750×345×315mm	480×250×320mm



Overview of Applications

For colleges and universities, industrial and mining enterprises and scientific research units for precision constant temperature and auxiliary heating.

Structural characteristics

- Using one-piece molding stamping stainless steel liner, four corners arc design, easy to liner cleaning work.
- Beaker hole can be arbitrarily changed size, hole cover is made of silicone, anti-scald effect is good, can better protect the glass beaker.
- Microcomputer intelligent temperature control instrument, with setting, measuring temperature double digital display and PLD. self-tuning function, accurate and reliable temperature control.
- Double column 8-hole standard with low water level alarm function.
- Water bath stainless steel cover hole inner diameter of 125mm, silicone cover for the four circles of a cover, each circle of the inner diameter were: 97mm, 77mm, 59mm and 38mm.

Technical Parameters

Serial Number	Item	Technical Parameters			
		HH-S11-2-S	HH-S21-4-S	HH-S21-6-S	HH-S21-8-S
1	Product Model	HH-S11-2-S	HH-S21-4-S	HH-S21-6-S	HH-S21-8-S
2	Heating method	Enclosed stainless steel electric heaters			
3	Temperature control range	Room temperature +5°C-100°C			
4	Temperature resolution	0.1°C			
5	Temperature fluctuation	±0.5°C			
6	Working hours	1-9999 minutes timed or continuous			
7	Power	600W	800W	1200W	1800W
8	Operating power	AC 220V 50Hz			
9	Studio size mm	305×160×140	305×305×140	470×305×140	620×300×140
10	External dimensions mm	450×200×220	450×345×220	620×345×220	780×345×220

# Ultrasonic Device/Crushing Instruments



## Product Introduction

All-in-one series ultrasonic cell crusher (pulverizer) is a new product independently developed by our company. It has full functions, novel appearance and reliable performance. The instrument adopts large screen liquid crystal display; the control adopts centralized control of the central microcomputer, ultrasonic output, gap time, ultrasonic power, temperature can be set arbitrarily, the sample temperature detection and display, automatic frequency tracking, fault automatic alarm.

## Application Areas

Biochemistry, Microbiology, Medicinal Chemistry, Surface Chemistry, Physical Chemistry, Zoology.

## Working Principle

This instrument is a kind of multi-functional and multi-purpose instrument that uses strong ultrasound to produce cavitation effect in liquid and ultrasonic treatment of material, which can be used for crushing of animal and plant tissues, cells, bacteria, bacillus strains, and at the same time, it can be used for emulsifying, separating, dispersing, homogenizing, extracting, degassing, cleaning, and speeding up the chemical reaction, and so on. It is widely used in biochemistry, microbiology, pharmaceutical chemistry, surface chemistry, physical chemistry, zoology and other fields. This machine consists of ultrasonic generator (power supply), transducer assembly and sound-proof box, which is connected by cable.

## Superior Performance

The new all-in-one ultrasonic cell crusher with reliable ultrasonic technology is superior in cell crushing, material dispersion protein extraction DNA fragmentation sample emulsification and so on. It can handle a minimum of 0.1μL and a maximum of 3000ML to meet different experimental needs.

New technology with higher performance: a new generation of ultrasonic generator using integrated digital circuit, its excitation mode of operation, with automatic frequency tracking and automatic power compensation; by the user's feedback ultrasonic operation is stable, the ultrasonic power output is uniform and consistent, the experimental repeatability is good. Experiments have proved that we compared with traditional ultrasound, continuous ultrasound, no-load ultrasound, gap ultrasound, as well as ultrasound probe service life has a certain degree of superiority.

The ultrasonic probe is made of high purity titanium alloy with TC4 material of American standard, probe shape: conical, whip joint shape, wave generation form: vertical ultrasound.

## Manufactured in China

- Appearance design: shell ABS injection molding, streamlined appearance, ergonomic operating platform, the host and soundproof box is integrated, the whole machine is beautiful and generous
- Using digital integrated circuits, the instrument can be no-load ultrasound, continuous ultrasound
- Ultrasonic probe is small and exquisite, transducer using Germany IBDI product piece, high ultrasonic efficiency, not easy to generate heat

- 7-inch TFT medical-grade touch screen, each parameter intuitive display
- Soundproof box intelligent design: different from traditional built-in sandwich soundproof cotton, the box internal PVC soft material, the whole mold manufacturing, experiments no longer need to worry about the solution spilled to the soundproof cotton breeding bacteria, while taking into account a better sound insulation effect
- Configuration of automatic lifting platform, UV sterilization ozone disinfection, lighting and other functions

Product Parameters

Model	XM-650DT	XM-900DT	XM-1000DT	XM-1200DT	XM-1500DT
Output power	65-650W(10-100% adjustable) Note: can be set to step 1%	90-900W(10-100% adjustable) Note: can be set to step 1%	100-1000W(10-100% adjustable) Note: can be set to step 1%	120-1200W(10-100% adjustable) Note: Can be set to step 1%	150-1500W(10-100% adjustable) Note: can be set to step 1%
Working Frequency	20-35KHz frequency automatic tracking				
Processing volume	0.1-500ml (need to choose the corresponding probe)	0.1-800ml (with optional probe)	0.1-900ml (with optional probe)	1-1500ml (with optional probe)	1-2500ml (with optional probe)
Timing	0-9999M99.9S can be set				
Ultrasonic pulse time adjustment	0.1-99.9s adjustable (ultrasonic on/ultrasonic off)				
Temperature control	Sample temperature control (0℃-100℃, optional thermostat)				
Alarm	Fault, Temperature, Time				
Input mode + display mode	7 inch TFT touch control + intuitive true color medical grade resistive screen				
Display content	Frequency, temperature, power and time display				
Protection device	Program automatic error correction, overload, over-temperature protection display				
Password	With user password protection				
The instrument can be equipped with optional amplitude change lever	2、 3、 6、 8、 10、 13	2、 3、 6、 8、 10、 13、 15		3、 6、 10、 13、 15、 20、 22	
Borosilicate thermostatic cups are optional	50ml、 100ml、 250ml、 500 ml	50ml、 100ml、 250ml、 500 ml、 1000 ml			
Power supply AC	220V±5%/50Hz(110V 60Hz can be customized)				

Probe Parameters

Amplitude Transformer mm	2	3	6	8	10	13	15	20	22
Treatment Capacity ml	0.1-5	2-10	10-100	20-150	30-300	50-500	50-800	50-1200	50-1500
power ratio 1-100%	10-45%	10-65%	10-100%	10-100%	10-100%	10-100%	10-100%	10-100%	10-100%

# UVF Liquid Crystal Ultra Silent Series Ultrasonic Cleaner



## Product Introduction

Silent design, completely to solve the user encountered in the use of the pain points and design of an ultra-quiet ultrasound equipment, 40kHz frequency is a high degree of versatility.

## Technical Parameter

Model	Power supply rated voltage	Overall Dimension	Cleaning tank size	Capacity	Ultrasonic input power	Ultrasonic frequency	Heating power	Time range	Temperature range
		Length*Width*Height mm	Length*Width*Height mm	L	W	KHz	W	Min	°C
XM-2200UVF	220V	264×162×242	240x145x100	3.5	100W	40	200	1-999/ Normally Open	RT-80
XM-3200UVF	220V	325x175x292	300x150x150	6	150W	40	200	1-999/ Normally Open	RT-80
XM-5200UVF	220V	328x266x292	300x240x150	10	200W	40	300	1-999/ Normally Open	RT-80
XM-250UVF	220V	328x266x292	300x240x150	10	250W	40	300	1-999/ Normally Open	RT-80
XM-300UVF	220V	328x266x292	300x240x150	10	300W	40	300	1-999/ Normally Open	RT-80
XM-400UVF	220V	355x326x292	330x300x150	15	400W	40	400	1-999/ Normally Open	RT-80
XM-500UVF	220V	530x328x292	500x300x150	22.5	500W	40	500	1-999/ Normally Open	RT-80
XM-600UVF	220V	530x328x292	500x300x150	22.5	600W	40	500	1-999/ Normally Open	RT-80
XM-700UVF	220V	530x328x292	500x300x150	22.5	700W	40	500	1-999/ Normally Open	RT-80
XM-800UVF	220V	530x328x342	500x300x200	30	800W	40	500	1-999/ Normally Open	RT-80



# Liquid Nitrogen Frozen Grinder JXFSTPRP-II Series

## Product Introduction

Microorganisms, rubber, plastics, food, pharmaceuticals, coal, oil shale, wax products, PE, PS, textiles, resins, etc. and substances that are tough and difficult to pulverize at room temperature. Liquid Nitrogen Frozen Grinder is to freeze the above substances below the embrittlement point first, and then grind them to the required fineness in the grinder, and the original components will not be destroyed. In addition, substances that are flammable and explosive at room temperature can also be crushed at low temperature, which has a more significant effect.

## Product Benefits

- Automatic liquid nitrogen delivery system for high safety
- Automatic pre-cooling of sample and grinding tank, low liquid nitrogen consumption.
- Convenient, efficient and fast sample handling
- Samples are always at ultra-low temperature during the grinding process.
- The grinding process is fully enclosed, eliminating sample loss and contamination.

## Application Areas

RNA/DNA detection in biochemistry, analysis of polymer structures, determination of trace elements, food analysis, mineral research, testing of the properties of drugs used as aids in medical and surgical procedures, and identification of textile constituents.



## Comparison Chart



Cowgirls



Plastic



Teeth

## Technical Parameter

Product Name	Automatic Liquid Nitrogen Freezing and Grinding Machine	Semi-Automatic Liquid Nitrogen Freezing and Grinding Machine
Model	JXFSTPRP-II-01	JXFSTPRP-II-02
Sample Characteristics	Hard, medium hard, soft, brittle, elastic, containing fiber	Hard, medium hard, soft, brittle, elastic, containing fiber
Feeding Size	≤8mm	≤8 mm
Discharge Size	0-5μm	0-5μm
Grinding Jar	1.5mL/2mL/5mL/10mL/25mL/50mL, customized	1.5mL/2mL/5mL/10mL/25mL/50mL, customized
Grinding tank material	Stainless steel, PTFE, Teflon, carbide steel, etc	Stainless steel, PTFE, Teflon, carbide steel, etc
Liquid Nitrogen Operation Method	Full-automatic	Semi-automatic

## Product Introduction

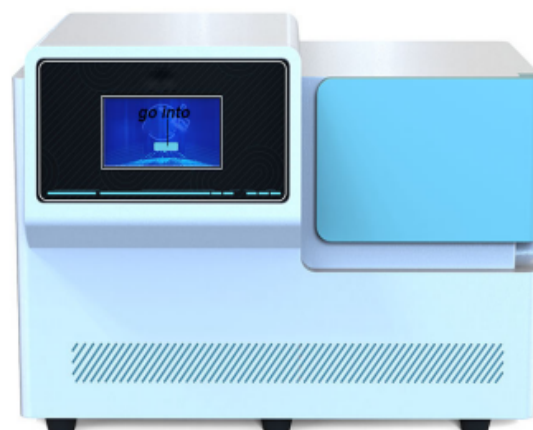
An efficient, fast, cooling grinding system. It can grind, pulverize, mix and cell break samples such as soil, plant and animal tissues/organs, bacteria, yeast, fungi, spores, paleontological specimens, etc. in a very short time.

## Product Benefits

- Highly reproducible grinding results
- Touch screen operation, 20 parameters can be stored
- Effective inhibition of nucleic acid degradation and retention of protein activity.
- Grinding is completely closed, no cross contamination, low noise.
- Easily handle hard-to-grind samples such as high-toughness plastics, high-strength plastics, resins, etc.
- Equipped with safety cover and safety lock, no need to involve liquid nitrogen operation, high safety.

## Application Areas

RNA/DNA detection in biochemistry, analysis of polymer structure, determination of trace elements, food analysis, mineral research, detection of the properties of medicinal and surgical aids, and identification of textile components.



## Comparison Chart



Plastic



Pills



Bones



## Technical Parameter

Compatible Sample Volume	Maximum capacity 50mL steel tank, other specifications adapter according to the host model selection corresponding to a variety of adapters	Final Discharge Size	~5μm
Maximum feed size	No requirement, adjustable according to the adapter	Fastening device	Fastening device with automatic center positioning
Cooling Function	Yes, adjustable from -50°C to room temperature	Grinding method	Wet grinding, dry grinding, low temperature grinding
Lid Opening Method	Intelligent startup	Adapter material	PTFE or alloy steel
Adapter type	0.2mL, 0.5mL, 2mL, 5mL, 10mL, 15mL, 25mL, 50mL, etc	Grinding kit material	Hardened steel, PTFE, Teflon, zirconium oxide

# JX-ZLN Series Vacuum Centrifugal Concentrator

## Product Introduction

Vacuum centrifugal concentration is a process in which a solvent is evaporated to concentrate or dry a biological (non-biological) sample. A combination of centrifugal force, vacuum and heat is used to rapidly evaporate the solvent from the sample to achieve centrifugal concentration of the sample.

## Working Principle

As the pressure decreases, the boiling point of the solvent decreases. When the pressure drops to a certain level, the solvent begins to boil. In order to avoid evaporation and cross-contamination of the sample, high-speed centrifugal spinning technology is used to ensure that the sample in the sample tube will not be sprayed out. The centrifugal chamber has a temperature control module for controlling the temperature inside the centrifugal chamber. Choosing the right temperature can increase the concentration efficiency while keeping the sample safe.

The vacuum pump maintains a high vacuum inside the system, lowering the boiling point of the solvent and accelerating the concentration rate. Solvent vapors are pumped out of the centrifugal chamber by the vacuum pump, and the pumping speed of the vacuum pump will limit the concentration speed, which requires a cold trap that can effectively condense solvent vapors. The cold trap can quickly condense solvent vapors before they reach the vacuum pump, keep the vacuum degree of the whole system, thus accelerating the concentration speed, and protect the vacuum pump from solvent vapors corrosion.

## Product Features

- Magnetic levitation motor: motor with almost no noise, smooth starting, maintenance-free design
- Humanized design: one-key operation, safe and convenient, the operation panel (touch screen/keys) can set the centrifugal speed, running time, heating temperature, and can real-time display of the vacuum value and other parameters
- Less loss: ultra-low temperature concentration, safer samples, no cross-contamination, less sample loss (vacuum holes are designed in the middle of the centrifugal chamber, the pumping airflow will not cause liquid to fly out, avoiding contamination and sample loss).
- High throughput: large capacity, can handle dozens to hundreds of samples at the same time, can provide high volume of small volume sample concentration
- Centrifugal imaging function: enables observation of sample concentration without stopping the machine.
- Practical rotors: a wide range of practical rotor capacities are available for a wide range of scientific applications
- High efficiency and adjustable temperature: High concentration efficiency and high retention of sample activity. The temperature can be set to ensure safe and effective concentration of a wide range of samples.
- High safety: New electromagnetic drive system and corrosion-resistant materials ensure safe operation.

## Application Areas

DNA/RNA research, biochemistry, bioanalysis, immunoscreening, food safety, residue analysis, environmental testing, life sciences, molecular biology, academic research, forensic science, drug analysis, HPLC high-performance liquid chromatography, synthesis and isolation of organic substrates, toxicology identification, forensic identification, SPE solid-phase extraction, and general-purpose laboratory concentration.



# JX-ZLN Series Vacuum Centrifugal Concentrator

## Technical Parameter

Name	JX-ZLN-A	JX-ZLN-AL	JX-ZLN-B	JX-ZLN-C	JX-ZLN-D	JX-ZLN-E	JX-ZLN-EL	JX-ZLN-F
	Basic model (keypad)	Basic model (touch screen)	Freezing model	Regular model	Ultra-low temperature	Acid & Alkali Resistant		Integrated one-piece model
Features	Fully automatic vacuum control system		Low-temperature concentration for safer samples	External vacuum pump (optional built-in vacuum pump)	Cold trap temperature can reach -110°C	Anti-corrosion treatment of the whole machine, acid and alkali resistant, organic solvent resistant design		Maximize space saving: integrated design of built-in vacuum pump and cold trap
Temperature control range	Room temperature~100°C		-10°C~100°C	Room temperature ~100°C	Room temperature ~100°C	Room temperature ~100°C	-10°C~100°C	Room temperature~100°C
Maximum centrifugal force	550xg							
Sample bottle/rotor	60*4ml /32*8ml bottle/132*1.5ml /132*2ml/72*5ml/12*10ml /12*15ml/6*50ml/8*50ml /90*2ml*228*(10ml-15ml)/8*100ml/4*250ml etc. Rotor can be selected (customized)							
Cold trap	Ultra-low temperature (-110°C), other conventional cold traps -50°C/-65°C/-70°C optional							
Ultimate vacuum value	≤0.3mbar							
Timing range	0-99h59min							
Centrifugal imaging function	Yes							
Maximum speed	100-2000r/min							
Power supply	AC220V 50/60Hz 10A							
Noise value	65dB							
Vacuum pump	Optional (variable frequency diaphragm / two-stage rotary vane)							
Program group	9 groups	Earnest can set up a total of 48 groups of programs, can be selected to run 8 groups of programs at the same time for gradient settings						

# JX-CKSM-WK Series Single Cell Suspension Preparation System

## Product Introduction

Temperature-controlled automatic single-cell suspension instrument is a new generation of cell suspension preparation equipment integrating metal bath digestion and gentle shear tissue, applied to flow cytometry/single-cell sequencing/primary cell culture and other experiments, featuring small amount of starting tissue, short time, high cell yield and high cell activity. Adopting international DIN method design, low noise, easy to use, stable performance, the digestion process of the sample is always in a constant temperature.

## Working Principle

Samples are mixed with high-density zirconia shear beads and digestive enzymes, digested at a constant temperature, and the tissues are sheared to obtain a highly concentrated suspension of viable cells. Subsequent steps such as digestion termination, filtration and washing, and erythrocyte lysis if necessary, result in millions to millions of viable cells, with cell yields of over 90% for different tissues.

## Sample Range

- Human and mouse tumor tissue
- Human and mouse normal tissues
- Mammalian soft tissues
- Plant Healing and Root Tip Tissues

## Application Areas

- Oncology Research
- Cardiovascular Research
- Stem Cell Research
- Immunology research
- Neuroscience research

## Product Application

- Single-Cell RNASeq
- Multicolor Flow Cytometry
- Mass Cytometry
- Primary Cell Isolation And Culture
- Cell Therapy CAR-T

## Product Features

- Simple operation, fully automated preparation process, only 30min to obtain a large number of single-cell suspensions
- Automatic temperature control to protect the viability of the sample, the cell activity can reach more than 85%.
- Multiple digestion programs, different programs for different samples, and exclusive kits for different tissues.
- For clinical puncture samples, the utilization rate of the tissue can reach 100%, and the cell yield can reach more than 100,000 cells.
- For primary cell culture samples, complete the process of tissue to single cell within 15min, reduce the time of cell adversity and improve cell survival rate.
- For tissue single-cell sequencing, fast completion of single-cell processing, to obtain high yield and viability of more than 85% of single cells, taking mouse tissue as an example.



# JX-CKSM-WK Series Single Cell Suspension Preparation System

## Technical Parameter

Product Model	JX-CKSM-4WK (Temperature controlled)	JX-CKSM-6WK (Temperature Control)	JX-CKSM-8WK (Temperature control)	JX-CKSM-12WK (Temperature control)	JX-CKSM-48WK (Temperature controlled)
Temperature range	22°C-56°C(Adjustable)				
Sample volume	4*2ml/2*5ml	6*2ml/3*5ml	8*2ml/5*5ml	12*2ml/6*5ml	48*2ml/24*5ml
Stable reproducibility	Same approximation with the same preparation program				
Programs	6 preset programs (upgradeable)				
Noise level	<50dB				
Sample volume rotation speed	5mg-1000mg				
Rotation speed	0-4000 rpm				
Working time	20-300min				
No wearing parts design, electromagnetic locking protection					
Full aluminum alloy CNC inner cavity, durable					



## Basic Introduction

Homogenization is to make the suspension (or emulsion) system in the dispersion of particles, homogenization of the treatment process, this treatment at the same time play a role in reducing the scale of the dispersion and improve the uniformity of distribution of the dispersion.

## Application Areas

- Preparation of fat granules, drug-carrying emulsions, liposomes, nanosuspensions and microcapsules for the pharmaceutical industry.
- Cell fragmentation, extraction and homogenization of intracellular substances for bioengineering products.
- Production and preparation of carbon nanotubes, graphene, conductive and resistive pastes for fine chemicals.
- Homogenization and dispersion of lipid nanoparticles in personal care products.
- Homogenization and emulsification of food and industrial products to improve product stability.



## Working Principle

When the high pressure pump head assembly works, the material will be sucked into the pump cavity through the check valve, and the fluid material will be rowed into very high pressure between the pump cavity and the homogenizing valve seat under the force of the plunger.

High-pressure material through the homogenizing valve assembly, resulting in the following three homogenizing effects:

- ① Shear effect, the gap between the homogenizing valve seat and spool is very small, and it produces shear effect on the material particles.
- ② cavitation effect, high-speed extrusion of the material instantaneous loss of pressure, and ultimately achieve the purpose of homogenizing the material.
- ③ Collision effect, high-speed extrusion of materials with very high speed impact to the collision ring  
Collision, high-speed extruded materials with very high speed impact on the collision ring, resulting in impact crushing

## Product Features

- Structural features: single ceramic plunger drive, precise control of discharge flow. Optional plunger lubrication device, longer sealing life.
- Homogenizing pressure: Maximum design pressure 2000bar/200MPa/29000psi, use sanitary digital diaphragm pressure gauge.
- Homogenizing flow rate: minimum sample size 15ml, especially suitable for expensive pharmaceutical production. Automatic suction without feeding equipment.
- Component technology: homogenizing valve seat assembly can be made of zirconia, tungsten steel, diamond, stellite, etc., single/double-sided processing, double-sided use, double the service life. The secondary valve disperses the emulsification to make the material distribution more uniform and consistent.
- Energy-saving technology: equipment frequency control, access to 220V utility can be used, imported brand components equipment more stable, lower energy consumption, higher energy efficiency ratio.



Technical Paramete

Model	JXNANO-5	JXNANO-15	JXNANO-30	GSL-5	GSL-15	GSL-30
Design Flow Rate (L/H)	5~8	12-15	25-30	5~8	12-15	25-30
Design Maximum Pressure(MPa/bar/psi)	200/2000/29000	200/2000/29000	150/1500/21750	200/2000/29000	200/2000/29000	170/1700/24650
Operating Pressure (MPa/bar/psi)	180/1800/26100	180/1800/26100	120/1200/17400	180/1800/26100	180/1800/26100	150/1500/21750
Operation Mode	Pushbutton			Touch screen/Keypad		
Voltage(V)	220	220	220	220	220	220
Plunger quantity (pcs)	1	1	1	1	1	2
Rated power(KW)	1.5	2.2	2.2	1.5	2.2	3
Main Functions	Homogenization, wall-breaking, refinement (optional chiller temperature control)					
Minimum processing capacity(mL)	15	25	45	15	15	45
Product process viscosity	2000cp					
Maximum feed particle size	≤100μm					
Working Pressure Display	Pressure gauge			Pressure sensor (7-inch touch screen/digital display)		
Control mode	Manual operation					
Maximum product feed temperature	90℃					
Weight (KG)	110	120	150	140	140	/

Centrifuge

# TG16.5 Benchtop High Speed Centrifuge

## Main Technical Parameter

Model	TG16.5
Maximum speed	16500r/min
Maximum relative centrifugal force	23669xg
Maximum capacity	4x100ml
Speed accuracy	±30r/min
Time setting range	1s-99min59s
Noise of the whole machine	<65dB(A)
Power supply	AC220V 50Hz 10A
Power	750W
Dimension(LxWXH)	330mmx420mmx280mm
Packing Size(LxWXH)	430mmx520mmx390mm
Net weight	20Kg



## Product Introduction

Widely used in clinical medicine, biochemistry, genetic engineering, immunology and other fields. It is a necessary instrument for centrifugal separation in all levels of hospitals, scientific research units and colleges and universities.

## Main Technical Performance

- Microcomputer control, DC brushless motor drive, stable operation, low noise, high accuracy of speed.
- Touch panel, programmable operation, host operating parameters can be set according to demand and automatically stored.
- LCD screen display, humanized interface, easy and convenient operation.
- Real-time rpm/RCF reading conversion and setting, convenient and quick.
- Equipped with electronic door lock, with door cover protection, overspeed and other protection functions; fault automatic alarm function, safe and reliable.
- Adopts food-grade silicone rubber monolithic sealing ring, in line with GMP certification. Centrifuge obtains FDA certification.
- With 9 programs of speed up curve/10 programs of speed down curve, speed up/down time can be set as needed.

## Rotor Parameters



Rotor capacity: 12x1.5ml/2.2ml  
Maximum speed: 16500r/min  
Maximum relative centrifugal force: 18930xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 10x5ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 11400xg  
Adapter: 0.5ml, 1.5ml



Rotor capacity: 12x5ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 11400xg  
Adapter: 0.5ml, 1.5ml



Rotor capacity: 12x10ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 14800xg  
Adapter: 1.5ml, 5ml

## Rotor Parameters



Rotor capacity: 8x15ml  
pointed bottom  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 14800xg  
Adapter: 1.5ml, 5ml



Rotor capacity: 6x50ml  
Maximum speed: 11000r/min  
Maximum relative centrifugal force: 13000xg  
Adapter: 15ml, 20ml



Rotor capacity: 4x100ml  
Maximum speed: 10000r/min  
Maximum relative centrifugal force: 11570xg  
Adapter: 10ml, 20ml



Rotor capacity: 2x48-well enzyme marker  
Maximum speed: 3000r/min  
Maximum relative centrifugal force: 1400xg



Rotor capacity: 24x1.5ml/2.2ml  
Maximum speed: 13200r/min  
Maximum relative centrifugal force: 16110xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 36x0.5ml  
Maximum speed: 16000r/min  
Maximum relative centrifugal force: 23669xg



Rotor capacity: 48x0.5ml  
Maximum speed: 16000r/min  
Maximum relative centrifugal force: 23669xg



Rotor capacity: 3PCR strips x 8x0.2ml  
Maximum speed: 15000r/min  
Maximum relative centrifugal force: 13800xg



Rotor capacity: 48x1.5ml/2.2ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 15696xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 4x10ml  
Maximum speed: 6000r/min  
Maximum relative centrifugal force: 3200xg

# TGL-20.5M Benchtop Large-capacity High-speed Refrigerated Centrifuge

## Main Technical Parameter

Model	TGL-20.5M
Maximum speed	20500r/min
Maximum relative centrifugal force	29200xg
Maximum capacity	4×750ml
Speed Accuracy	±10r/min
Time setting range	1min-99hh59min
Temperature setting range	-20℃~+40℃
Temperature control accuracy	±1℃
Compressor	Imported high-performance compressor, environmental protection refrigerant R404a
Noise of the whole machine	<65dB(A)
Power supply	AC220V50Hz20A
Power of the whole machine	1.5kW
Dimension(L×W×H)	734mm×620mm×445mm
Packing Size(L×W×H)	910mm×720mm×620mm
Net weight	100kg



## Product Introduction

Widely used in clinical medicine, biochemistry, genetic engineering, immunology and other fields. It is a necessary instrument for centrifugal separation in hospitals, scientific research units and colleges and universities at all levels.

## Main Technical Performance

- Microcomputer control, high-definition large screen LCD display, intuitive controls to simplify the operation.
- Touch panel, programmable operation, host operating parameters can be set according to demand and automatically stored.
- Adopts food-grade silicone rubber monolithic sealing ring, in line with GMP certification. Centrifuge obtains FDA certification.
- With 9 programs of speed up curve/10 programs of speed down curve, to realize the readings between rpm/RCF conversion and setting, convenient and quick.
- With a number of protection functions such as overspeed, imbalance, over temperature, door cover, etc. to ensure the safety and reliability of the instrument.
- Large-capacity centrifugal chamber, space-saving design, rich rotor specifications, realizing multi-purpose.
- Adopts imported high-performance compressor, non-fluorine refrigerant R404A, after opening the door cover and the machine standby can be delayed off the compressor refrigeration, after closing the door cover can be delayed open the compressor refrigeration, energy-saving and environmentally friendly.

# TGL-20.5M Benchtop Large-capacity High-speed Refrigerated Centrifuge

## Rotor Parameters



Rotor capacity: 12x1.5ml/2.2ml  
Maximum speed: 20500r/min  
Maximum relative centrifugal force: 29200xg  
Adapter: 02ml, 05ml



Rotor capacity: 12x5ml  
Maximum speed: 16500r/min  
Maximum relative centrifugal force: 19175xg  
Adapter: 0.5ml, 1.5ml



Rotor capacity: 6x30ml  
Maximum speed: 15000r/min  
Maximum relative centrifugal force: 23120xg



Rotor capacity: 12x10mV8x15ml pointed bottom  
Maximum speed: 15000r/min  
Maximum relative centrifugal force: 23120xg  
Adapter: 1.5ml, 5ml



Rotor capacity: 6x50ml  
Maximum speed: 13500r/min  
Maximum relative centrifugal force: 19166xg



Rotor capacity: 24x1.5ml/2.2ml  
Maximum speed: 16500r/min  
Maximum relative centrifugal force: 26050xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 6x85ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 15805xg  
Adapter: 50ml, 15ml, 20ml



Rotor capacity: 6x100ml  
Maximum speed: 10000r/min  
Maximum relative centrifugal force: 11960xg  
Adapter: 10ml, 20ml can be customized upon request



Rotor capacity: 48x1.5ml/2.2ml  
Maximum speed: 15500r/min  
Maximum relative centrifugal force: 26307xg  
Adapter: 0.2ml, 0.5ml

# TGL-20.5M Benchtop Large-capacity High-speed Refrigerated Centrifuge

Precision Precision Precision

Laboratory Equipment Manufacturing Specialist



Rotor capacity: 4x750ml  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3780xg



750ml Hanging Cup



750ml centrifuge bottle



4x21x1.5ml



4x24x5ml/7ml vacuum tube



4x37x5ml/7ml release tube



4x20x10ml small cap tube



4x3x100ml



4x14x15ml



4x12x20ml



4x5x50ml



4x15x15ml



4x7x50ml



4x250ml



4x300ml



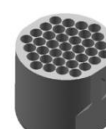
4x500ml



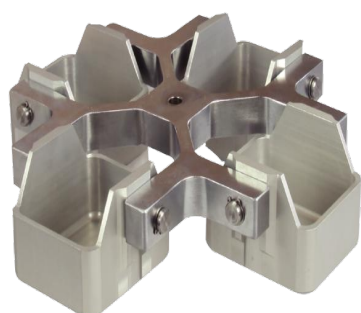
4x2x96 wells  
Enzyme plate hanging basket  
For thickness  $\leq 15.2\text{mm} \times 2$



4 x 24 x 7ml vacuum tubes



4x37x7ml immunization tubes



Rotor capacity: 4x500ml  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3040xg



Square Hanging Basket



4x25x1.5ml



4x28x5ml vacuum tube



4x20x10ml small cap tube



4x10x15ml



4x4x50ml



4x250ml



500ml hanging cup



4x19x5ml/7ml vacuum tubes



4x9x15ml



4x7x20ml



4x14x10ml



500ml centrifuge bottle



4x3x50ml



4x100ml



4x250ml



# TG10K/TD6K/TD4K Mini Centrifuge

## Main Technical Parameter

Model	TG10K	TD6K	TD4K
Input Power	AC 100-250V/50/60Hz		
Input Power	25W	18W	12W
Motor	DC24V/DC permanent magnet motor		
Control mode	PI power direct drive		
Power fuse	PPTC/resettable fuse/no need to replace		
Rotor capacity	Angle rotor: 2ml/1.5ml/0.5ml×8 wells PCR row rotor: 0.2ml×8 wells×4 rows Compound rotor: 1.5ml×6 wells+0.5ml×6 wells+0.2ml×8 wells×2 rows		
Maximum speed	10000r/min	7000r/min	4000r/min
Maximum relative centrifugal force	5610xg	2910xg	990xg
Dimensions: L×W×H	155mm×168mm×118mm		
Weight	1.1kg		
Noise at maximum speed (=)	≤48dB(A)	≤43dB(A)	≤40dB(A)
Maximum acceleration time	≤3s		
Maximum deceleration time	≤3s		
Protection class	IP20		
Permissible ambient temperature/relative humidity	+5-40 Celsius/80%		
Interference suppression standard	EN61010-1,EN 61010-2-020,EN 61326-1,EN 61010-3-2/A2		



## Main Technical Performance

-Adopts advanced and reliable PI high-frequency full-range wide-range power control program, which conforms to AC100-250V/50/60Hz input power supply, and can control the voltage, current, rotational speed and relative centrifugal force more accurately to ensure that its constant speed will not change with the change of voltage or load.

-Unique rotor head snap-in installation design, without any tools that can be convenient to replace the rotor head, so that the experimental staff to replace the rotor head more convenient and fast.

-High-strength host and rotary head material, can resist various chemical corrosion, rotary head with high temperature sterilization function.

-Adopts high-efficiency DC permanent magnet motor, RSS material shock absorption, running more smoothly, the rotating space is 360 ° arc, no angle, small wind resistance, small temperature rise, ultra-quiet.

-Faster acceleration/deceleration rate, in a shorter period of time to complete the experiments required, acceleration within 3 seconds to reach 95% of the rated speed; deceleration of more humanized sub-two, press the door button that is free to stop (≤ 15 seconds), open the cover all open that is, the brakes decelerate (≤ 3 seconds); -Adopt food-grade silicone rubber whole body to reduce the speed of the rotating space.

-Adopt food-grade silicone rubber integral sealing ring, in line with GMP certification. The centrifuge obtains FDA certification.

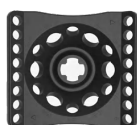
## Rotor Parameters



1.5ml/2ml×8 wells  
PP round/cone bottom  
with cap



0.2ml×8 wells×4 rows  
PP cone bottom with cap



1.5ml×6 wells+0.5ml×6 wells  
+0.2ml×8 wells×2 rows  
PP cone bottom with cap



Adapter 0.5ml×8



Adapter 0.2ml×8

Main Technical Parameter

Model	H18.5B
Maximum speed	18500r/min
Maximum relative centrifugal force	23797×g
Maximum capacity	4×100ml
Speed Accuracy	±10r/min
Timing range	1s-99min59s/1min-99h59min
Noise	<65dB(A)
Power supply	AC 220V 50Hz 10A
Power	700W
Overall Dimension(W×L×H)	340mm×460mm×330mm
Packing size(W×L×H)	440mm×560mm×380mm
Net weight	32kg



Product Introduction

Widely used in clinical medicine, biochemistry, genetic engineering, immunology and other fields. It is the necessary equipment used for centrifuge separation in hospitals at all levels, scientific research units and institutions of higher learning.

Main Technical Performance

- 5 inch HD true color touch screen control, easy to operate, intuitive display, setup parameters and real-time operating parameters can be displayed on the same screen.
- Large capacity data storage in the fault record and other information, can store more than 5000 history records, convenient for users to track the operation of historical data information, can be exported via USB data.
- Users can customize the naming and editing of 99 ladder centrifugation programs, each ladder centrifugation program has a total of 10 segments of centrifugation process, to meet the needs of diversified experiments.
- With program mode, curve mode and preset program calling function, three-level password control function ensures the safety and reliability of the applicable instruments and facilitates fine management. The system can record the speed, temperature and speed curve of the last run.
- With 9 programs of speed up curve and 10 programs of speed down curve, the time of speed up and down can be set according to the need, so that the centrifugal effect can reach the best.
- Part of the rotor can realize fast rise and fall.
- With rotor identification function, 16 different rotors are automatically identified to prevent users from setting wrong rotor number parameters.
- Equipped with adsorption type door lock, easy to close the door cover and lock the centrifugation safely.
- Equipped with various protection functions such as door cover protection and overspeed protection to ensure the safe operation of the instrument.

# H18.5B Benchtop High Speed Centrifuge

## Rotor Parameters



Rotor capacity: 12×1.5ml/2.2ml  
Maximum speed: 18500r/min  
Maximum relative centrifugal force: 23797xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 12×5ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 11400xg  
Adapter: 0.5ml, 1.5ml



Rotor capacity: 10×5ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 11400xg  
Adapter: 0.5ml, 1.5ml



Rotor capacity: 12×10ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 14800xg  
Adapter: 1.5ml, 5ml



Rotor capacity: 8×15ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 14800xg  
Adapter: 1.5ml, 5ml



Rotor capacity: 6×50ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 13000xg  
Adapter: 15ml, 20ml



Rotor capacity: 4×100ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 13000xg  
Adapter: 10ml, 20ml can be customized according to requirements



Rotor capacity: 6×50ml pointed bottom  
Maximum speed: 11000r/min  
Maximum relative centrifugal force: 13000xg  
Adapter: 15ml, 20ml



Rotor capacity: 36×1.5ml/2.2ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 16211xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 24×1.5ml/2.2ml  
Maximum speed: 15000r/min  
Maximum relative centrifugal force: 21083xg  
Adapter: 0.2ml, 0.5ml



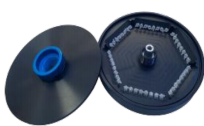
Rotor capacity: 36×0.5ml  
Maximum speed: 16000r/min  
Maximum relative centrifugal force: 23669xg



Rotor capacity: 48×0.5ml  
Maximum speed: 16000r/min  
Maximum relative centrifugal force: 23669xg



Rotor capacity: 48×1.5ml/2.2ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 18525xg  
Adapter: 0.2ml, 0.5ml



Rotor capacity: 6PCR tubes×8×0.2ml  
Maximum speed: 13000r/min  
Maximum relative centrifugal force: 16020xg



Rotor capacity: 2 × 48-well enzyme marker  
Maximum speed: 3000r/min  
Maximum relative centrifugal force: 1400xg



Rotor capacity: 12×15ml  
Maximum speed: 12000r/min  
Maximum relative centrifugal force: 13527xg

# TD5Z Multi-tube Rack Automatic Balancing Centrifuge

## Main Technical Parameter

Model	TD5Z
Maximum speed	5000r/min
Maximum relative centrifugal force	5030xg
Maximum capacity	4x500ml
Speed Accuracy	±10r/min
Time setting range	1min~99min59s
Noise of the whole machine	<65dB(A)
Power supply	AC220V 50Hz 10A
Power of the whole machine	750W
Dimension(LxWxH)	465mmx560mmx380mm
Packing Size(LxWXH)	560mmx650mmx470mm
Net weight	51kg



## Product Introduction

It is widely used in clinical medicine, biochemistry, genetic engineering, immunology and other fields. It is a necessary instrument for centrifugal separation in hospitals at all levels, scientific research units and institutions of higher learning.

## Main Technical Performance

- Microcomputer control, large torque AC frequency conversion motor drive, stable operation, low noise, high speed accuracy.
- Touch panel, programmable and storing user's commonly used programs, convenient for users to call at any time.
- Large LCD screen, humanized interface, easy and convenient operation.
- Real-time RPM/RCF reading conversion and setting, convenient and quick.
- Unique air inlet and exhaust system to ensure the temperature rise of the specimen and low noise of the whole machine.
- Equipped with electronic feedback door lock to realize automatic door opening, safe and reliable.
- With multiple protection and self-diagnosis functions such as unbalance, overspeed, door lock, over-current and over-voltage.
- Adopts international advanced foam sealing ring for better sealing and sound insulation.
- The centrifuge obtains U.S. FDA certification.
- Optional three-axis gyro imbalance detector, with high sensitivity of imbalance detection, high reliability of detection, can be adjusted according to the different centrifuge damper detection control valve, fast response speed, can be adjusted on-line valve, easy to adjust, long service life, good performance of shock and vibration resistance and other advantages.

# TD5Z Multi-tube Rack Automatic Balancing Centrifuge

## Rotor Parameters



Square Hanging Basket



4x25x1.5ml



4x28x5ml vacuum tube



4x4x50ml



4x20x10m  
small cap tubes



4x10x15ml



4x250ml



500ml hanging cup



4x19x5ml/7ml  
vacuum tubes



4x9x15ml



4x7x20ml



4x14x10ml



500ml centrifuge bottle



4x3x50ml



4x100ml



4x250ml



4x18x1.5ml

Rotor capacity: 4x500ml

Maximum speed: 4000r/min

Maximum relative centrifugal  
force: 3040xg



4x14x5ml7ml  
vacuum tube/airtight  
hanging cups



4x19x5m/7ml  
Vacuum tube/gastight  
hanging cup



4x24x7ml  
Vacuum tube



Enzyme plate hanging basket  
4X2X96 wells  
Suitable for thickness  $\leq 15.5\text{mm} \times 2$



250ml Hanging Cup



4x9x1.5ml



4x7x5ml



4x9x5/7ml  
vacuum tube



4x7x10ml  
small cap tube



250ml centrifuge bottle



4x5x15ml



4x4x20ml



4x50ml



4x100ml

Rotor capacity: 4x250ml

Maximum speed: 4000r/min

Maximum relative centrifugal  
force: 3200xg



# TD5Z Multi-tube Rack Automatic Balancing Centrifuge



Rotor capacity: 4x500ml(tip)  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3310xg



500ml test cup  
4x500ml tip bottom



4x500ml tip



4x250ml tip



4x4x50ml tip



4x7x15ml tip



Rotor capacity: 4x250ml(tip)  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3310xg



250ml test cup  
4x250ml tip bottom



4x50ml tip



4x4x15ml tip



Rotor capacity: 8x50ml  
Maximum speed: 5000r/min  
Maximum relative centrifugal force: 5030xg  
Adapter: 8x2x1.5ml  
Adapter: 8x5ml/7ml Vacuum Tube  
Adapter: 8x5ml  
Adapter: 8x10ml  
Adapter: 8x15ml  
Adapter: 8x20ml



4x2x50ml tube rack



Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3200xg



Adapter: 4x4x15ml tube racks  
Adapter: 1.5ml  
Adapter: 5ml  
Adapter: 5ml/7ml Vacuum Tube

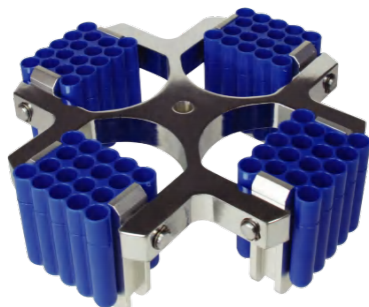


4x6x15ml tube rack  
Adapter: 1.5ml  
Adapter: 5ml  
Adapter: 5ml/7ml Vacuum Tubes



4x8x15ml tube rack  
Adapter: 1.5ml  
Adapter: 5ml  
Adapter: 5ml/7ml Vacuum Tubes

# TD5Z Multi-tube Rack Automatic Balancing Centrifuge



Rotor capacity: 4x18x7ml(72 wells)/decap (optional)  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3200xg



4x18x7ml  
hanging basket



Rotor capacity: 2x2x96 wells  
Maximum speed: 4000r/min  
Maximum relative centrifugal force: 2200xg



2x2x96 wells  
Enzyme plate hanging  
Suitable for thickness  $\leq 70\text{mm}$



Maximum speed: 4000r/min  
Maximum relative centrifugal force: 3200xg



4x12x7ml  
decap (optional)



4x6x15ml  
hanging basket



4x9x15ml  
hanging basket



4x9x7ml  
decap hanging basket



4x50ml  
hanging basket



4x2x50ml  
hanging basket



4x100ml  
hanging basket



# Microscopy

## Main Technical Performance

-Compact appearance, equipped with large field of view eyepieces and achromatic objective lenses, large and clear field of view.  
-Coarse and fine adjustment coaxial focusing mechanism, coarse and loose adjustable, with locking and limiting device, fine movement grid value: 2μm.  
3W LED illumination, pre-centered, continuously adjustable brightness, orthogonal fluorescence microscope.

## Product Introduction

Biological microscope series ML11 is equipped with achromatic objective lens and large field of view eyepiece, featuring clear imaging, wide field of view, easy operation, etc. It can be widely used in biology, industry, agriculture and other fields, and is an ideal instrument for teaching, scientific research and other units.



## Main Technical Parameter

Item	Specifications
Eyepieces	WF10X/18
Eyepiece barrel	30°tilt, hinged trinocular viewing head, pupil distance adjustment: 50mm-75mm, single side visual adjustment, fixed beam splitting ratio R:T:80:20
	30°tilt, hinged binocular viewing head, pupil distance adjustment: 50mm-75mm, unilateral visual adjustment (optional)
Objective	Achromatic Objective 4X/0.10, working distance: 37.5mm
	Achromatic objective lens 10X/0.25, working distance: 6.55mm
	Objective achromatic objective 40X/0.65, working distance: 0.669mm
	Achromatic objective 100X/1.25, working distance: 0.198mm
Objective converter	Internal positioning four-hole converter
Carrier stage	155mmx142mm double-layer composite mechanical moving platform, moving range: 76mmX50mm; accuracy 0.1mm
Focusing Mechanism	Low hand coarse and micro coaxial, coarse adjustment stroke 25mm, micro-adjustment accuracy 0.002mm, with anti-slip adjustment elastic device and mechanical upper limit device
Transmitted Illumination System	3W LED illumination, pre-centered, brightness continuously adjustable
	Abbe type condenser, numerical aperture N.A. 1.25, with variable aperture diaphragm
Camera interface	1XC (0.5X optional)
Power cord	External wide voltage adapter, input 100V-240V-AC50/60HZ, output DC12V2A

## Product Introduction

- Optional eyepieces, objective lenses and spotting lenses increase the flexibility of the microscope.
- Expandability, can meet the bright field, fluorescence, phase contrast, dark field, DIC and other observation modes.
- High-power broad-spectrum LED fluorescent illumination system, high-intensity fluorescence brightness, to meet the demand for long life.
- Also suitable for traditional imported mercury lamp light source, can be installed with 6 fluorescent filter blocks.
- Coaxial coarse/fine focus knob can be operated from the left or right side. A limit device eliminates the risk of damage to the objective lens due to improper operation.
- Light intensity manager can pre-set the brightness level, eliminating the need to manually adjust the intensity of each objective lens, humanized design, easy to operate, high efficiency.



## Main Technical Performance

Research grade orthogonal fluorescence microscope MF43-N adopts excellent infinite optical system, 6-hole carousel fluorescence module design, fluorescence replacement and removal of convenient, independent and easy to replace the desired fluorescence excitation block, “one machine, multi-color” from now on is not a dream. Fluorescence can be selected from a wide variety of high brightness, wide range of applications, can be expanded in the field of FISH, FRET, CTC detection field. Superior optics combined with true-color LED illumination enables first-class color reproduction. Efficient and compact frame design has low power consumption and high expressiveness to meet various functional needs. The Falling Fluorescence Microscope System adopts a modular design concept that allows safe and quick adjustment of the illumination system and switching of the fluorescent filter assembly. Equipped with flat-field semi-complex achromatic fluorescence objective lens and large field of view eyepiece, it is applied to fluorescence microscopic observation in the fields of biopharmaceuticals, medical testing, disease prevention, etc., and can also be used for microscopic observation in pathology and cytology.

## Main Technical Parameter

Item	Specifications
Eyepieces	Large Field of View 10X/25,Diopter Adjustable
Eyepiece Barrel	Hinged Trinocular Viewing Barrel, High Eye Point, 30° Tilt, Pupil Adjustment 50-75mm
Converter	5-aperture objective converter
Carrier stage	Highly abrasion-resistant ceramic-covered carrier stage with right-hand, low-position coaxial drive selector, stroke: 80mm x 50mm, 1mm/space, accuracy 0.1mm
Transmission illumination system	Warm-white LEDs, continuously adjustable in brightness
	Abbey Spotting Scope, N.A.1.1

## Main Technical Parameter

Flat-field semi-complex objective	Standard:	Optional:
	M-UPLFLN 4X/0.13;WD:17.15mm	M-UPLFLN 20X
	M-UPLFLN 10X/0.3;WD:7.68mm	Plan Fluor 4X/10X
	M-UPLFLN 40X/0.75;WD:0.78mm	Plan Fluor 20X/40X
	M-UPLFLN 100X/1.30 Oil;WD:0.15mm	Plan Fluor 100X Oil
Falling-fluorescence Illumination System	Multi-band LED light source MG-100 (standard); mercury lamp (optional)	
	MG-100 power control box	
	Vacant falling fluorescence illuminator FL-43 (6-hole turntable)	
	Excitation block	Bands
	FB-U-M	EX:375/30nm;DM:415nm;EM:460/50nm
	FB-B-M	EX:475/30nm;DM:505nm;EM:530/40nm
	FB-Y-M	EX:560/40nm;DM:600nm;EM:610nmLP