



# PRODUCT CATALOG





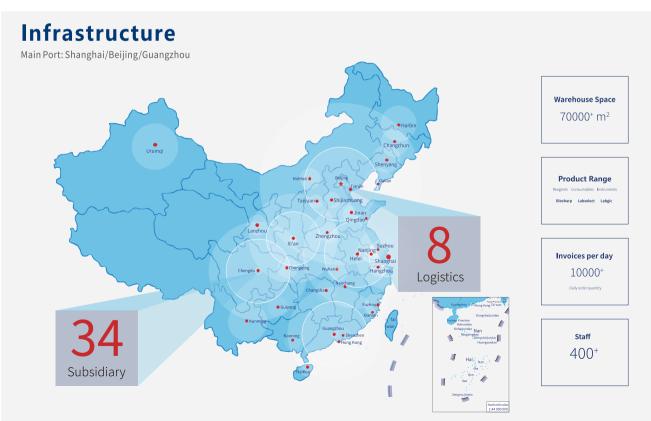


# **Company Profile**

Labgic technology is an innovative enterprise engaged in developing and sales of laboratory products. Since established, we are dedicated to provide premium products and service, consistent to the finest standards in this field.

For nearly two decades, we have gained enormous amount of knowledge and experiences in life science area. Especially after the integration of excellent resources such as technology, products, storage and marketing channels, we had established good reputation in China. Biosharp, Labselect and Labgic are three brands under Labgic company, which belong to different categories in laboratory products. Diverse products and services make our products acknowledged and accepted by more and more users. We, Labgic, will continue to adhere to customer demand as the core to provide one-stop service for different types of customers and deliver high-quality service and strong support for our partners.







# **Our Brands**





















# INTRODUCTION

Welcome to the latest Labgic product catalog.

Labgic, same as the company name, is the brand for instruments launched in 2018. Labgic brand has been focusing on the innovation of scientific research instruments, aiming to supply high-quality, easy-to-use laboratory instruments. Products cover Molecular Biology, Microbiology and Cell Biology and well accepted by dealers and end users.

Labgic product range including LED/UV Transilluminator, Shaker, Electronic Balance, Thermal Cycler, Water Bath and other instruments for life science, chemical and analytical files. Labgic has always been adhering to the concept of "Quality First, Service First", constantly innovating, and striving to develop more reliable and cost-effective scientific research instruments for customers!



# PRODUCT CATALOG



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### **Blue LED Transilluminator**

BL-15 Blue LED transilluminator adopts imported LED blue light excitation light source with long service life, and creatively adds adjustable light intensity function to ensure the display strip brightness is moderate to the maximum extent. It is used to clearly observe nucleic acid and protein in dyed gel, cut gel, and replace traditional ultraviolet transmission instrument.

### **Features**

- Bilateral LED illumination, improve the observational and imaging quality
- Compact sealing structure design ensures that the cutting operation and the cleaning and cutting platform are free of leakage
- Blue light source good for 100,000 hours
- No risk of UV damage for high quality work experience
- Gel-cutting knife can cut out the target from the gel for further experiment
- With over temperature protection function, over 55°C automatic power-off protection
- Mini size, saves lab space





Model	BL-15
Dimensions	210×210×42 mm
Gel viewing dimensions	160×70 mm
Voltage	DC24V1A
LED arrangement mode	Bilateral LED module
LED life (h)	100,000
Emission maxima	470nm
Working temperature	RT~40°C
Filter type	Amber filter



### **Blue LED Transilluminator**

BL-20 is an extraordinary blue light LED transilluminator for the detection of nucleic acids or protein under non-UV conditions. The wavelength of the special blue LED lights is 470 nm hence no damage to your nucleic acids or protein and suitable for the common nucleic acid dyes. Since UV is not used, there is no need for any special personal eye or skin protection. An amber filter, on hinges, is lowered into position once your gel is mounted. The instrument is widely used in scientific research institutions and enterprises involved in molecular biology, molecular genetics, medicine and health, biological products, agriculture and other life science research fields.

### **Features**

- Bottom-up LED illumination, improve the observational and imaging quality
- Compact sealing structure design ensures that the cutting operation and the cleaning and cutting platform are free of leakage
- Blue light source good for 30,000 hours
- No risk of UV damage for high quality work experience
- Gel-cutting knife can cut out the target from the gel for further experiment
- A mini darkroom for viewing gel or photographing









### Contens

- 1 BL-20 Blue LED transilluminator
- 2 Power cord
- ③ Gel-Cutting knife and replacement blade
- 4 Mini darkroom





Model	BL-20
Dimensions	265×195×40 mm
Gel viewing dimensions	200×120 mm
Voltage	100-240Vac
Current	1.0A
LED source	Built-in blue light LED module
LED life	>30,000h
Emission maxima	470nm
Store temperature	25°C
Working temperature	RT~ 40°C
Automatic power-off	5min
Filter type	Amber filter



### **UV Transilluminator**

UV transilluminator is mainly used to observe the result of nucleic acid (DNA/RNA) gel electrophoresis and gel cutting operation. It can be widely used in scientific research institutions and enterprises in the fields of molecular biology, molecular genetics, medicine and health, biological products, agriculture and other research institutes and enterprises in the field of life science research.

### **Features**

- The special UV filter glass has good permeability to specific wavelength UV, which can ensure higher detection sensitivity and enhance the signal capture capability of the weak band
- Reasonable structural design and high-quality UV lamp ensure uniform UV light intensity in the detection area of the UV transmission table
- Single wavelength standard 302nm UV lamp, and 254nm/365nm lamp multiple wavelengths or combinations can be selected to match the gel observation of different dyes. Users can choose UV lamps with different wavelengths according to the experiment need
- Compact sealing structure design ensures that the cutting operation and the cleaning and cutting platform are free of leakage, which greatly reduces the possibility of gel contamination and internal damage caused by leakage, and greatly improves the service life of the ultraviolet cutting instrument
- Humanized design of the whole machine, the UV protection board can be stepless adjust at 0°-180°, to ensure the best protection of ultraviolet light, and does not affect the observation
- Self-contained fan cooling device, extend the service life of the machine



UV-15
302nm(Standard)
197×147 (mm)
>1500 h
AC 220V 50Hz
8W×6
W335×D280×H137 (mm)
5.4 kg



# **pH Meter**

LPH-A pH meter is an analytical instrument that measure the hydrogen-ion activity in water-based solutions, indicating its acidity or alkalinity expressed as pH. It is widely used in various fields such as universities, environmental protection, pharmacy, food, agriculture, hygiene, geological prospecting, metallurgy, and ocean.







### Characteristic

- Fully automatic or manual temperature compensation
- Support 1~5 calibration points storage
- Auto identify built-in 4 buffer groups
- Fully automatic display slope and usage status
- One-key Calibration
- Stabilization icon indicates the reading has stabilized
- Synchronously display pH, temperature and buffers value
- Reading measurement value directly by pH or mV



### **Features**

- Press "Mode" key to switch between pH and mV
- Auto buffers recognition by pressing CAL key
- One-click output data to PC or printer
- Auto display slope and usage status
- Data function allows users to record, review and preserve
- Measuring results

	Model	LPH-A					
Grade		0.01					
	Measurement mod	pH/mV(ORP)					
	Meas. range	0~16pH					
рН	Resolution	0.01pH					
	Accuracy	±0.01pH					
	Meas. range	-1999.9~1999.9mV					
mV	Resolution	0.1mV					
	Accuracy	$\pm 1$ mV( $\pm 0.05$ %F.S)					
	Meas. range	-30.0~105°C(ACT/MTC)					
Temp	Resolution	0.1°C					
	Accuracy	±0.2°C					
Calibration		Support auto temperature compensation. Built-in 4 groups $\&18$ kinds of buffers, auto recognition. Support 1~5 points CAL					
	Memory	500 measurements					
	Data transfer	RS232, Optional with printer					
	Power	9~12V					
	pH input	BNc,Impedance >3×10 n					
TEMP input		Cinch, NTC 30KQ					
Ending mode		Automatic/Manual optional					
	Standard solutions	pH4.01, PH6.86, pH9.18 (buffers)+ 3mol/L KCI ( protective solution )					
	Housing dimension	250×165×65 mm					

# **YDS-BS** (transport storage series)

The transport storage series liquid nitrogen biological container series are economical small liquid nitrogen biological container designed specifically for biological samples static storage and for transporting biological samples. The series is made of high strength lightweight aluminum alloy, containing multi-layer insulation to make the product safe, lightweight and efficient, and it has a variety of accessories optional.

### **Features**

- High strength, light weight and small size aluminum structure
- Equipped with belt
- Ultra low evaporation loss
- Large straw capacity
- Vials tube is optional
- Lockable lid is optional to prevent unauthorized open
- Level monitoring system is optional
- Roller base is optional
- Liquid nitrogen pump is optional
- Five years vacuum warranty









Model	YDS-20BS	YDS-30BS	YDS-35BS	YDS-50BS
Capacity (L)	20	30	35	50
Weight empty (kg)	9.4	12.9	14.6	17.2
Neck opening (mm)	50	50	50	50
Outer diameter (mm)	394	462	461	462
Overall height (mm)	671	705	748	810
Static holding time (day)	101	159	179	213
Canister height (mm)	120	120	120	120
Number of canisters (ea)	6	6	6	6
Cover plug	1	1	1	1
Lockable lid	1	1	1	1
PU bag	1	1	1	1
Roller base		Optional accessories	Optional accessories	Optional accessories





# **YDS-S** (static storage series)

Static storage series of liquid nitrogen biological container is an economical small liguid nitrogen tank for laboratory use. It is specially designed for biological samples that need long term static storage. This series is made of high strength and light weight aluminium with multi layer and super-strong insulation layer. It realizes the safety, lightness and efficiency of the product, and has a variety of accessories to choose from.

### **Features**

- High strength, light weight and small size aluminum structure
- Equipped with belt
- Ultra low evaporation loss
- Large straw capacity
- Vials tube is optional
- Lockable lid is optional to prevent unauthorized open
- Level monitoring system is optional
- Roller base is optional
- Liquid nitrogen pump is optional
- Five years vacuum warranty





120mm/276mm



Model	YDS-2-30S	YDS-2-35S	YDS-3S	YDS-6S	YDS-10S	YDS-10-80S	YDS-15S	YDS-20S	YDS-30S	YDS-35S	YDS-35-80S
Capacity (L)	2	2	3	6	10	10	15	20	31.5	35	35
Weight empty (kg)	2.8	2.6	3.1	4.8	6.1	6.2	8.5	9.5	12.9	14.2	14.5
Neck opening (mm)	30	35	50	50	50	80	50	50	50	50	80
Outer diameter (mm)	223	204	223	300	300	300	394	394	462	462	462
Overall height (mm)	399	428	435	482	552	557	591	672	705	749	753
Static holding time (day)	28	24	26	52	86	48	134	168	254	286	159
Canister height (mm)	120	120	120	120	120	120	120	120	120	120	120
Number of canisters (ea)	3	3	6	6	6	6	6	6	6	6	6
Cover plug	1	1	1	1	1	1	1	1	1	1	1
Lockable lid	1	1	1	1	1	1	1	1	1	1	1
PU bag	1		1	1	1	1	1	1	1	1	1
Roller base	_	_			_			_	Optional accessories	Optional accessories	Optional accessories

Model	YDS-13-LS	YDS-25-LS	YDS-30-80-LS	YDS-47-127-10TS
Capacity (L)	13	25	30	47
Weight empty (kg)	6.3	10.7	13	18.2
Neck opening (mm)	50	50	80	127
Outer diameter (mm)	310	394	462	508
Overall height (mm)	623	700	709	718
Static holding time (day)	109	180	147	130
Canister height (mm)	276	276	276	276
Number of canisters (ea)	6	6	6	10
Cover plug	1	1	1	1
Lockable lid	1	1	1	1
PU bag	1	1	1	
Roller base		_	Optional accessories	Optional accessories



# YDS-FS (wide neck series)

Wide neck laboratory series liquid nitrogen biological container combines the advantages of low liquid nitrogen consumption and medium storage capacity. It has the advantages of light weight, less space occupation and high efficiency storage of large sample freezing. It can meet the different needs of laboratory professionals. All models include freeze shelves and PC freeze boxes to ensure easy storage of samples.

### **Features**

- Durable aluminum structure
- Equipped with racks and vial boxes
- Large capacity, low liquid nitrogen consumption
- Lockable lid is optional, to keep the safety of samples

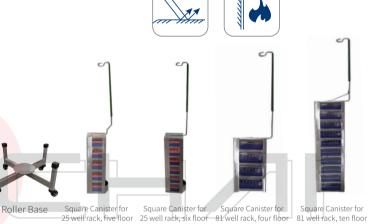
Lockable Lid

Cover plug

- Level monitoring system is optional
- Roller base is optional







### Specifications

25 well rack 81 well rack

Model	YDS-10-125-FS	YDS-30-125-FS	YDS-35-125-FS	YDS-50B-125-FS	YDS-65-216-FS	YDS-95-216-FS	YDS-115-216-FS	YDS-145-216-FS	YDS-175-216-FS
Capacity (L)	10	30	35	50	65	95	115	145	175
Neck opening (mm)	125	125	125	125	216	216	216	216	216
Outer diameter (mm)	300	462	462	462	681	681	681	681	681
Overall height (mm)	62.5	704	748	818	712	774	712	946	1060
Weight empty (kg)	6.3	13	14.6	17.3	38.3	41.3	38.3	48.9	53.8
Static holding time (day)	24	90	97	110	83	105	83	154	186
Number of canisters (ea)	1	6	6	6	6	6	6	6	6
Capacity of per racks(ea)	5×5	5×5	5×5	5×5	9×9	9×9	9×9	9×9	9×9
Number of racks (ea)	4	24	30	36	24	30	36	48	60
Cover plug	1	1	1	1	1	1	1	1	1
Lockable lid	1	1	1	1	1	1	1	1	1
PU bag		1	1	1	_				
Roller base	_	Optional accessories							



# **Roller Base**

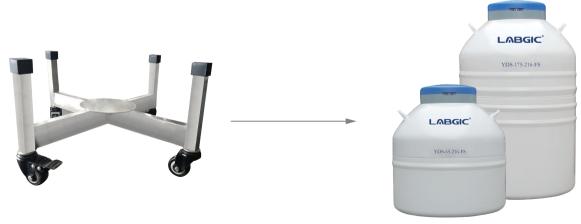
Sturdy, stainless steel materials, four-wheel dolly allows safe and easy movement of liquid nitrogen biological container. Choose from two sizes to fit different volumes of container.











YSC-175-4W fit 65L/175L container



### **Semi-automated Plate Sealer**

The Semi-automated Plate Sealer is used for sealing a wide variety of microplates (Elisa, cell culture, PCR and deep-well plates) to store samples, prevent evaporation and minimize contamination. It is applicable for a variety of heat seals, meeting any laboratory application, including PCR, fluorescence, long term storage. A plate sensing system allows to provide uniform force, transferring heat evenly to the sealing surface whether using PCR plates or deep-well plates.

### **Features**

- Rapid heating (reaching 170°C in 300 seconds)
- Precise temperature, timing and pressure for consistent sealing
- Applicable for different micro plates and heat seals
- If a hand or objects stuck in the drawer when it's moving, the drawer motor will reverse automatically. This feature prevent both user and the unit from injury
- When the unit is inactive for 60min, it will switch into stand-by mode. Then the temperature will be reduced to 60°C to save power
- When the unit is inactive for 120min, it will switch into Power-Save mode. The
  display and heating element will be switched off. The user can awaken the unit by
  pressing any button
- Special and smart design on the drawer, it can be detached from the main device, easy to clean
- Compact footprint: only 178mm wide ×370mm depth







Model	SPM-01
Display	OLED
Sealing temperature	80°C~200°C
Temperature accuracy	1°C
Sealing time	0.5s~9.9s, Time accuracy 0.1s
Power	300W
Dimension(D×W×H)mm	(D×W×H)370mm×178mm×330mm
Weight(kg)	11.46kg





# **PCR Strip and Plate Capper**

The capper function is professionally designed for 8-tube PCR and 96 well plate sealing. The 8-strip cap or sealing film is flattened down by a constant and stable pressure, which solves the problem of cross-contamination caused by manual capping, leakage, and volatile phenomena, and experiments caused by uneven effects. The problem of poor repeatability also solves the practical problem of difficult capping and slow capping. Suitable for 0.1mL, 0.2mL PCR tube strips, and can complete twelve 8-strip caps work at one time. Uniform pressure capping firm, uniform effect. In addition, 96 microporous plates (no-skirt or semi-skirt) can be sealed with adhesive film, transparent film and pressure sensitive film with this instrument.





Model	L-PCC-96
Capping speed	<4S
Power	80W
Dimension (mm)	310×225×300mm(L×W×H)
Weight	13kg
Voltage	AC220V/50Hz
Capacity	0.1/0.2mL 8-strip tube or 96 well plate
Operating mode	Automatic entry and exit



# Handheld Homogenizer

The mini homogenizer TH-Mini is hand-held designed. It is smart and light, easy to operate. With DC motor to drive the grinding pestle, configure 1.5mL centrifugal tube, efficiently grind trace tissue. The grinding pestle is light and reusable, convenient to be dismantled.

### **Applications**

- Suitable for grinding various plant tissue sample such as root, stem, leaf, flower, fruit, seed, etc
- Suitable for grinding various animal tissue sample such as cerebrum, heart, lung, stomach, liver
- Thymus, kidney,intestine, lymphonodus, muscle, skeleton, etc
- Suitable for homogenate



### **Features**

- Light and easy to operate
- Use micro DC motor for grinding trace tissue, grinding microstructure, short time and quick effect
- Grinding pestle is light and reusable, suitable for various sterile ways,convenient to be dismantled



### **Specifications**

Model	TH-Mini
Speed range	13000rpm fixed speed
Working noise	50dB
Battery non-loaded working time	2 hours (ldle)
Battery charging time	≥2 hours
Voltage	2.4V
Battery	AA battery×2
Dimension(W×D×H)	135mm ×143mm×25mm
Net weight	0.15kg



# **Grinding Pestle**

Suitable for grinding various plant and animal tissue sample such as root, stem, leaf, flower, fruit, seed, cerebrum, heart, lung, etc.

Model	TH-Mini-SP	TH-Mini-PP
Material	Stainless steel	Plastic



# **Benchtop Homogenizer**

Benchtop homogenizer is a fast high-throughput homogenizer, combines the functions of grinding, cracking, homogenization as one. It is through the three-dimensional high-speed vibration, grinding beads (glass beads, ceramic beads, steel balls, etc.) beating, to achieve the sample grinding, cracking and homogenizing purpose. It can effectively homogenize plant and animal tissues, bacteria, fungi and other samples. It is very effective for the samples difficult to be processed by general instruments, such as spores, hair, bone, feces, soil and so on. With the relevant kit, it can quickly, efficiently, stably and batch extract DNA/RNA/ protein from the samples, and retain the integrity of these biomolecules.

### **Features**

- Exquisite design, stable body, man-machine angle design, easy to operate
- Adopting 4.3-inch color screen, display parameters of the indicators, parameter setting is convenient and fast
- Precise setting of homogeneous time and running speed, the program built-in 10 groups of commonly used parameter Settings, one key call, convenient and fast. Different materials can be selected for different samples grinding bead and corresponding procedures
- Up to 24 2mL/1.5mL samples can be processed simultaneously. Good homogenization effect, time-saving and efficient, not only save time and labor, but also smaller differences between batches and batches
- A separate crushing tube is used for each sample to prevent cross contamination
- A variety of materials and diameters of grinding beads are available for different types of samples
- Most samples can be homogenized and the integrity of biomolecules (DNA, RNA, proteins) and drug molecules can be preserved



### **Operation conditions**

- Ambient temperature: :5°C~45°C
- Relative humidity:≤70%
- Power: AC100~240V 50/60Hz

### Specifications

Model	SCIENT L-BH-A C	
Oscillation speed	2460~6000rpm (Increment in 10rpm)	
Operation time	1s~90s, Increment in 1s	
Interval time	1s~90s, Increment in 1s	
Cycle index	10	
Stored program	10	
Sample capacity	24 pcs 2mL/1.5mL grinding tube	
Acceleration time	<7s @6000rpm	
Deceleration time	<7s @6000rpm	
Noise level	<75db	
Max.input power	500W	
Input power	AC100~240V, 50/60Hz	
Dimension (W $\times$ D $\times$ H)	W.300mm×D.350mm×H.300mm	
Net weight	28kg	

### Accessories

Model	Sample tube	Metal bead	Zirconium bead	Zirconium bead	Glass bead	Glass bead	Glass bead
Size	2.0mL	Ф3	Ф3	Ф1.5	Ф3	Ф1.2	Ф0.5
Quantity	50pcs	150pcs	150pcs	100g	150pcs	100g	100g



# **Automatic Capping Device**

CTS-S is an intelligent automatic lid opening/closing device widely used in hospital clinical laboratories and research lab. The infrared sensor is used to judge the position of the sample tube in real time and send out the instruction signal of opening and closing the cover. The tube cover can be automatically identified and clamped by the device to complete the switch cover action. This action only takes 3 seconds.

### **Features**

- Most specifications of screw storage tube are available
- Infrared induction triggers automatic intelligent switch cover operation to reduce cross contamination
- Efficient and convenient: 96 tube can be complete switch caps and filling operation in ten minutes
- Can be operated with one hand, only take 3 seconds
- The device screen has counting display and zero clearing function



Model	CTS-S	
Dimensions (mm)	180×150×380mm	
Weight	5kg	
Applicable scope	Diameter: 16-32mm	
Clamping force	Maximum: 30N	
Torque	Maximum: 0.6Nm	
Start mode	Auto-induction or pedal control	



# **Shaker for Microplate (two plates)**

Shaker for Microplates is a high speed shaker with direct brushless DC motor and microprocessor controlled technique, specifically for Elisa plate and cell culture plate. One-click operation mode that enables the user easy to set parameters. which can carry the most 2 pcs Elisa plates (96/384wells) or cell culture plates (24/48/96 wells).

### **Features**

- LCD real-time display system status and parameters
- Timer from 0 to 99h59min
- Support 2 standard microplates and deep well plates
- Brushless DC motor, low noise, small interference, free maintenance
- The built-in status indicator allows the user to quickly get the status of the device
- When timing ends, system will make an alarm voice automatically
- Automatic fault detection and buzzer alarm function
- With special fixing way, install and disassemble the plates quickly, don't need the additional tool



cifications		
Model	L-MPS-S	
Time range	1min~99h59min/∞	
Shaking speed	200~2000rpm	
Orbit	3mm	
Speed step value	10rpm	
With status indicator light	Yes	
Power	45W	
Power supply	DC24V/2A	
Dimension (mm)	294×200×107	
Capacity	2 pcs standard microplate	
Weight(kg)	3.8kg	



# **Shaker for Microplate (four plates)**

Shaker for Microplates is a high speed shaker with direct brushless DC motor and microprocessor controlled technique, specifically for Elisa plate and cell culture plate. One-click operation mode that enables the user easy to set parameters, which can carry the most 4pcs Elisa plates (96/384wells) or cell culture plates (24/48/96 wells).

### **Features**

- LCD real-time display system status and parameters
- Equipment is stable and reliable for long time operation with high quality power switch
- One-click operation mode, easy to use
- With any setting incubation time from 0 to 100 hours, when control time ends, equipment will automatically make alarm voice
- Automatic fault detection and buzzer alarm function



### **Operation conditions**

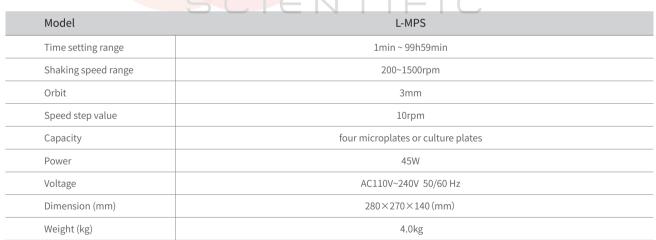
- Ambient temperature: 0°C~35°C
- Relative humidity: ≤70%
- Power supply: AC220V, 50-60Hz













## Thermo Shaker (with heating lid)

Thermo Shaker (with heating lid) is a multipurpose thermostatic shaker controlled by brushless DC motor. Its PID intelligent temperature control technology ensures the temperature accuracy, automatically adjusts the heating rate and reduces waiting time. Heating lid independent temperature control function can effectively prevent the phenomenon of evaporation and tube burst, and greatly improve the temperature uniformity in the test tube. It is the ideal automation tool for sample incubation, catalysis, blending and preservation.

### **Features**

- LCD display. It is easy to setup and use
- Accurate temperature control, high stability
- Heating lid independent temperature control function can effectively prevent the phenomenon of evaporation and tube burst, and greatly improve the temperature uniformity in the test tube
- Built-in fan reduces sample cooling time
- Optional blocks are available for common laboratory tubes and plates. Custom blocks are also available upon request
- Brushless DC Motor: noiseless long service life maintenance-free
- Automatic preheating function
- Auto resume to run after power failure
- Automatic running function
- Built-in temperature calibration function
- Built-in over-heating protection device, safe and reliable



### **Optional block**

Model	Capacity	Temp range	Max Speed
MD30	0.2mL 96 well PCR Plate	RT.+5°C~105°C	2500rpm
MD31	54×0.5mL centrifuge tube	RT.+5°C~105°C	2500rpm
MD32	35×1.5mL centrifuge tube	RT.+5°C~105°C	2500rpm
MD33	35×2.0mL centrifuge tube	RT.+5°C~105°C	2500rpm
MD34	20×1.5mL centrifuge tube +15×0.5mL centrifuge tube	RT.+5°C~105°C	2500rpm

Model	L-HVI	Auto fan function	YES
Temp. setting range	0°C~105°C	Program number	10programs(S0~S9)
Temp. control range	RT.+5°C~105°C	Multi point running	Yes (Max 5points)
Time range	1sec ~ 99min59sec /1min ~ 99h59min/∞	Multi cycle	Yes (Max 99times)
Temp accuracy	≤ ± 0.3°C*	Auto heating	YES
Display accuracy	0.1°C	Auto constant temp. at the end of run	YES
Temp uniformity	≤ ± 0.3°C*	Heating lid mode	Automatic / Manual
Speed range	200~3000rpm	Auto running	YES
Orbit	2mm	Auto resume to run	YES
Heating time	≤10min (from 25°C to 100°C)	Delay timing function	YES
Fan cooling time	≤12min (from 100°C to 37°C)	Capacity	according to the block
Heating lid temp. setting range	OFF/AUTO/0°C~110°C	Power supply	335W
Heating lid temp. control range	RT.+5°C~110°C	Voltage	AC220V/50-60HZ
Heating lid heating time	≤10min (from 25°C to 110°C)	Fuse	250V 3A Φ5×20
Heating lid independent	YES	Dimension (mm)	296×212×164mm
temp. control function	YES	Weight (kg)	6.9kg



# **Hybridization Instrument Incubater**

The Hybridization Instrument can be setting constant temperature and time. Instead of manual operation experiment, the accuracy of experiment is higher and result is more reliable than traditional manual experiment. Hybridization and degeneration can be operated at same time, which reduces experimental procedure and improves efficiency and accuracy of operation.

### **Features**

- Full touch screen operation, simple interface
- Chinese and English language is available
- Auto resume to run after power failure
- Auto cooling after running over
- Auto preheating
- High precise temperature control, low fluctuation
- Deal with 12 slides
- Support 105 custom programs stored functions
- Three operation modes: Integrated denaturation & hybridization, hybridization, multi-step operation



Model	L-I\$H	
Temperature control range	RT+5°C~100°C	
Temperature set range	0°C~100°C	
Time range	1min ~ 99h59min	
Accuracy of temperature	≤ ± 1°C	
Uniformity temperature	≤ ± 1°C	
Heating time	≤2min (from 37°C to 95°C)	
Cooling time	≤6min (from 95°C to 45°C)	
Capacity	12 slide	
Power	350W	
Fuse	250V 3A Φ5×20	
Dimension(mm)	440×220×120 mm	
Weight	4.5kg	



### **Multi-tube Vortexer**

Multi-tube Vortexer is with technique of brushless DC motor and microprocessor controlled technique. Unique knob operation is easy to use. It can maximum process 50 samples at once. A variety of test tube foams can be selected to meet the mixing needs of different test tubes. It can be widely used in the biotechnology, microbiology, medical analysis and other industries.

### **Features**

- LED displays time and shaking speed
- Easy to operate with one-touch knob
- 1min~99h59min time range, automatic warning sound when finish working
- A variety of test tube foam racks for option to meet the mixing needs of different test tubes
- Soft start, uniform acceleration, effectively avoid samples splashing
- Brushless DC motor: precise shaking speed, long service life maintenance-free
- Process up to 50 samples at a time to make the experiment more convenient and efficient
- Microprocessor control, simple operation panel, LED displays for speed and time
- Humanized program design, built-in timing/short mix/pulse operation modes



### **Specifications**

Model	MTV-600	
Speed range	500~2500rpm	
Orbit	4mm	
Time setting range	1mih ~ 99h59min	
Max load	SCIENT 4.5kg C	
Power supply	70W	
Dimension (mm)	410×276×432mm	
Weight	20kg	
Ambient temperature	0°C ~ 50°C	
Relative humidity	≤70%	
Power supply	AC100~ 240V 50/60Hz	

### **Optional racks**

Model	Dimension of rack	Outer diameter of tube
MS200-T10	50×¢10mm	¢ 9~ ¢ 10mm
MS200-T12	50×¢12mm	¢ 11~ ¢ 13mm
MS200-T15	50×¢15mm	¢ 14~ ¢ 17mm
MS200-T20	50×¢20mm	¢ 18~ ¢ 21mm
MS200-T25	15×¢25mm	¢ 24~ ¢ 27mm
MS200-T29	15×¢29mm	¢ 28~ ¢ 32mm



# **Incubator for Microplates (two plates)**

Incubator for microplates is a kind of microprocessor controlled and PID controlled incubator. It has many features like small size, light weight, no pollution; temperature and time LCD displayed, elegant appearance, simple operation. Mainly used in Elisa plates (96/384 wells) or 96 wells tissue culture plates for samples cultivation of incubation at a proper temperature.

### **Features**

- LCD real-time display system status and parameter values
- Equipment is stable and reliable for long time operation with high quality switch power
- It is easy to operate with one-touch knob
- With power recovery function, when power recovers after outage, equipment can be continuous to run according to the original process
- Microprocessor controlled, temperature controlled with good liner, small fluctuations
- With any setting incubation time from 0 to 100 hours, when time control ends, equipment will automatically make alarm voice
- Double heating system ensures the stability of incubation
- Low noise and maintenance-free with brushless DC motor (L-MPI-S-A)









### Normal operation conditions

- Ambient temperature: 0°C~35°C
- Relative humidity: ≤70%
- Power supply: AC220V, 50-60Hz

Model	L-MPI-A	L-MPI-S-A
Temperature control range	RT +5°C ~80°C	RT +5°C ~80°C
Fime setting range	1min ~ 99h59min	1min ~ 99h59min
Shaking speed range		200~1600rpm
Temp. accuracy	≤ ± 0.5 °C	≤ ± 0.5 °C
Display accuracy	0.1 °C	0.1 °C
Temp. uniformity	≤ ± 0.5 °C	≤ ± 0.5 °C
Heating time	≤10min (from RT to 80°C)	≤10min (from RT to 80°C)
Capacity	two microplates or culture plates	two microplates or culture plates
Heating	Heating film	Heating film
Power	120W	150W
/oltage	AC220V/50-60HZ	AC220V/50-60HZ
Dimension (mm)	280×270×140 (mm)	280×270×140 (mm)
Weight(kg)	4kg	7kg





# **Incubator for Microplates (four plates)**

Incubator for Microplates with PID fuzzy control technology can be accurate to ensure that the temperature control precision and automatically adjust the heating rate, reduce waiting time. It is the ideal lab instrument for samples hatching, catalytic reaction process of preserving, blending, save and etc.

### **Features**

- Easy to set up and use, all information real-time display and showing set up operation, convenient to observe equipment running status
- Supports standard microplates and deep well plates
- Automatic preheating function
- Automatic power recovery function
- Temperature calibration function
- Built-in software and hardware over temperature protection device, will use more reliable

# O O O O

### Normal operation conditions

- Ambient temperature: 0°C~35°C
- Relative humidity: ≤70%
- Power supply: AC220V, 50-60Hz



Model	L-MPI-B	L-MPI-S-B
Temperature control range	RT+5°C ~80°C	RT+5°C ~80°C
Time setting range	1min ~ 99h59min	1min ~ 99h59min
Shaking speed range		300~1350rpm
Temp. accuracy	≤ ± 0.5 °C	≤ ± 0.5 °C
Display accuracy	0.1 °C	0.1 °C
Temp. uniformity	≤ ± 0.5 °C	≤ ± 0.5 °C
Heating time	≤10min (from 25°C to 80°C)	≤10min (from 25°C to 80°C)
Auto preheating	YES	YES
Auto resume to run	YES	YES
Capacity	four microplates or deep well plates	four microplates or deep well plates
Power	300W	300W
Voltage	AC220V,50-60HZ	AC220V,50-60HZ
Dimension(mm)	340×320×200 (mm)	340×320×200 (mm)
Weight(kg)	6.5kg	9.5kg

<sup>\*</sup> Test condition: 25°C $\pm$ 2°C, use mercurial thermometer, accuracy is  $\pm$ 0.1°C.



# Thermo Shaker for Microplate (six plates)

Thermo Shaker for Microplates is a multipurpose thermostatic shaker controlled by brushless DC motor. Its PID intelligent temperature control technology ensures the temperature accuracy, automatically adjusts the heating rate and reduces waiting time. Independent timing function allows timing a single plate, that increases flexibility in processing multiple batches. Wrap-around heating lid design reduces thermal edge effects. It is the ideal automation tool for sample incubation, catalysis, blending and preservation.

### **Features**

- LCD display. It is easy to setup and use
- Support 6 standard microplates and deep well plates
- Support 6 plates timing independently
- With a wrap-around heating lid design, two options for heating lid temperature control: automatic or manual
- Support multi points running function
- Automatic preheating function
- Automatic power recovery function
- Automatic fan function
- Temperature calibration function
- Brushless DC motor, low noise, small interference, free maintenance
- Built-in software and hardware over temperature protection device



Model	L-MPI-S-C	Auto resume to run	Yes
Temp setting range	0°C~100°C	Auto fan function	Yes
Temp control range	RT+5°C~100°C	Independent timing function	Yes
Time range	1min ~ 99h59min/∞	Heating lid temp. control mode	Automatic / Manual
Temp accuracy	≤±0.5°C@37°C	Multi point running	Yes (Max. 5points)
Display accuracy	0.1°C	Multi cycle	Yes (Max. 99times)
Speed range	200~1600rpm	Capacity	6 pcs microplate or Deep well plate
Orbit	3mm	Power supply	480W
Heating time	≤20min (from 25°C to 100°C)	Voltage	AC220V/50-60HZ
Auto preheating	Yes	Fuse	250V 3A Φ5×20
Preheating setting range	37°C~100°C	Dimension(mm)	481×346×228mm
Pause function	Yes	Weight	15kg



# L-VM-Mini Vortex Mixer

L-VM-MINI vortex mixer is equipped with a upgraded brushless DC motor, allowing 4000rpm at full speed for vigorous and powerful mixing action. Plus, 5 seconds rapid mixing, mixing test tubes up to 50mL. This mini vortex shaker provides bigger area to contact with the mixing bottle, fits various types of containers.

Easy one-handed touch operation, the vortex mixer starts working when slight pressure is applied to the center of the silicon cap. Low activation force, easy for repetitive and continuous mixing.



Model	E-VM-MINI
Operation Mode	Touch Operation
Voltage	100-240V 50/60HZ
Motor Power	5W
Material	ABS Plastic + Silicone
Mixing Speed	4000rpm (Fixed)
Max. Mixing Capacity	50mL
Motor Type	Brushless DC Motor
Type of Movement	Orbital
Orbital Diameter	20 mm
Protction class	IP42
Permissible Ambient Temperature	41°F-104°F / 5°C-40°C
Permissible Relative Humidity	0.8
Weight	0.83 lbs / 380g
Size	3.9"×3.9"×2.8" / 10×10×7 cm



### **L-VM-B Vortex Mixer**

The vortex mixer adopts international advanced design concepts and manufacturing technologies, and has the advantages of smooth and beautiful appearance, compact and firm structure, high versatility, simple operation and other advantages. The device is very suitable for the necessary conventional instruments for fixing, shaking and mixing various reagents, solutions and chemicals.

### **Features**

- Touch and continuous operations
- Speed range of 200-3000rpm
- Convenient and fast photoelectric induction technology
- Used for various mixing applications with optional adapters
- LCD display for speed and time adjustment.
- High quality wear-resistent rubber feet for stability to the work surface and prevent the unit from movement



### **Accessories**

Model	Description	
VM-B-1	Standard top for <Ø50mm tubes and small vessels	
VM-B-2	Platform pad for <Ø99mm tubes and small vessels	
VM-B-3	Top plate (round) with 14-well tube adapters(Ø10mm)	
Specifications	RICHAI	
Model	L-VM-B	
Input power	AC100-250V/50/60Hz	
Output power [w]	20W	
Motor / drive method	dc24v permanent magnet motor / direct drive	
control method	pwm stepless frequency conversion	
Operation method	Jog: photoelectric sensor / continuous	
Power fuse	pptc / resetable fuse / no need to replace	
Speed range [r / min.]	200-3,000r/min.	
Oscillation mode	circumference	
Speed function / display	LCD	
Time function / display	Digital timing 1s-999min. Countdown, jog positive timing /highlight LCD	
Circumference diameter[mm]	4.5	
Weight [kg]	3.5	
Size: length × width × height [mm]	130×150×125mm	
Noise at maximum speed	≤45dB(A)	
Fastest acceleration time	<3s	
Fastest deceleration time	≤3s	



### **Orbital Shaker-incubator**

Orbital Shaker-incubator is a compact bench-top Shaker-Incubator used for mixing of biological liquids as well as for incubation and cultivation of biological liquids according to the operator set program. Seven interchangeable platforms allow it mix and culture samples in flask, petri dish, tubes, Elisa plates, and etc. Built-in microprocessor thermo controller provides constant temperature control in the incubator chamber. It is extremely easy to operate, with very straightforward setup of temperature, speed and time.

### **Features**

- Instantly display operation information(time, temperature and speed) on the LCD screen
- Gentle and reliable shaking with direct brushless DC motor
- Running safely —heating and shaking will be automatically stopped once the lid is open
- Seven interchangeable platforms can be chosen for variety demands
- Auto restart in case of power failure
- Over-heating protection device is included
- Built-in temperature calibration function
- Compact, only 421mm×320mm(D×W)









### **Specifications**

Model	L-ST20	Internal chamber height	182mm
Temperature setting range	0°C~60°C	Load capacity	4.0kg
Temperature control range	RT.+5°C ~60°C	Heating time	≤15min (from 25°C to 60°C)
Time range	1min ~ 99h59min/∞	Auto resume to run	YES
Temp. accuracy	≤±0.5°C (@37°C)	Lid open-Auto stop	YES
Display accuracy	0.1°C	Power	350W
Temp. uniformity	≤±0.5°C (@37°C)	Voltage	AC220V/50-60HZ
Shaking range	50~300rpm	Fuse	250V 3A Φ5×20
Orbit	20mm	Dimension (mm)	421×320×338mm
Platform dimension	230×230mm	Weight(kg)	18.5kg

### **Optional accessories**

Model	Description
L-PF-1	Platform with clamps for 5×250mL conical flask
L-PF-2	Platform with clamps for 9×100mL conical flask
L-PF-3	Platform with clamps for 10×50mL tube
L-PF-4	Platform with clamps for 18×15mL tube
L-PF-5	Platform with spring holder
L-PF-6	Platform for 4 Elisa plates or deep-well plates
L-PF-7	Flat platform for 5 petri dishes



### **Orbital Shaker-incubator**

Orbital Shaker-incubator, combining shaker and incubator, is a compact bench-top shaking incubator used for mixing of biological liquids as well as for incubation and cultivation of biological liquids. Interchangeable platforms allow it mix and culture samples in flask, petri dish, tubes and etc. Built-in microprocessor thermo controller provides constant temperature control in the incubator chamber. It is extremely easy to operate, with very straightforward setup of temperature, speed and time.

### **Features**

- Instantly display operation information(time, temperature and speed) on the LCD screen
- Gentle and reliable shaking with direct brushless DC motor
- Running safely —heating and shaking will be automatically stopped once the lid is open
- Seven interchangeable platforms can be chosen for variety demands
- Auto restart in case of power failure
- Over-heating protection device is included









### **Specifications**

Model	L-ST30	Internal chamber height	325mm
Temperature setting range	0°C~60°C	Load capacity	10.0kg
Temperature control range	RT.+5°C ~60°C	Heating time	≤20min (from 25°C to 60°C)
Time range	1min ~ 99h59min/∞	Auto resume to run	YES
Temp. accuracy	≤±0.5°C (@37°C)	Lid open-Auto stop	YES
Display accuracy	0.1°C	Power	600W
Temp. uniformity	≤±0.5°C (@37°C)	Voltage	AC220V/50-60HZ
Shaking range	50~250rpm	Fuse	250V 3A Φ5×20
Orbit	20mm	Dimension(mm)	632×502×512mm
Platform dimension	350×350mm	Weight(kg)	41kg

### **Optional accessories**

Model	Description	
L-ST30-T1	Platform with clamps for 9×250mL conical flask	
L-ST30-T2	Platform with clamps for 25×100mL conical flask	
L-ST30-T3	Flat platform for 16 petri dishes	
L-ST30-T4	Platform with spring holder	



# **Sample Concentrator**

L-TSC-A serials sample concentrator is with microprocessor controlled and PID fuzzy controlled technique. Instead of traditional water bath device, the heat-conducting medium is high purity aluminum. The test tubes are held in a block, and blowing a large number of samples at one time. It can used in residue analysis, commodity inspection, food, environment, pharmacy and biological product and other industries.

### **Features**

- High precision and wide range of temp. control
- Blowing a large number of samples at a time
- Blowing each sample independently
- Amount of airflow can be adjusted
- Easy operation, safe and reliable to use







Model	L-TSC-A1	L-TSC-A2	
Temp range	RT.+5°C -160°C		
Temp accuracy	±0.5°C(@40°C)		
Temp accuracy	±1°C(0	@120°C)	
Temp uniformity	±0	).5°C	
Display accuracy	0.	1°C	
Time range	1-99h5	9min/∞	
Heating time	≤15min (from 25°C to 160°C)		
Needle length	150mm		
Max gas usage	15L/min		
M	0.02Mpa (Gas pin≤ 16pcs)		
Max gas pressure	0.05Mpa (Gas pin>16pcs)		
Block qty	1 2		
Max power	300W 500W		
Voltage	AC220V or AC110V/50~60Hz		
Size	260×220×450mm		
Weight	7.0kg 7.5kg		







Model	Tube diameter	Tube quantity
TSC-A-MD01	10mm	24
TSC-A-MD02	12mm	24
TSC-A-MD03	13mm	24
TSC-A-MD04	15mm	16
TSC-A-MD05	16mm	16
TSC-A-MD06	19mm	12
TSC-A-MD07	20mm	12
TSC-A-MD08	26mm	8
TSC-A-MD09	28mm	4
TSC-A-MD10	40mm	3
TSC-A-MD11	1.5mL centrifuge tube	24
TSC-A-MD12	2.0mL centrifuge tube	24
TSC-A-MD13	Gas adjuster	/



# **Sample Concentrator**

L-TSC-B serials sample concentrator is with microprocessor controlled and PID fuzzy controlled technique. Instead of traditional water bath device, the heat-conducting medium is high purity aluminum. The test tubes are held in a block, and blowing a large number of samples at one time. It can used in residue analysis, commodity inspection, food, environment, pharmacy and biological product and other industries.

### **Features**

- High precision and wide range of temp. control
- Blowing a large number of samples at a time
- Blowing each sample independently
- Amount of airflow can be adjusted
- Easy operation, safe and reliable to use







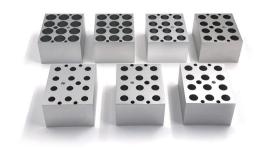


### **Specifications**

Model	L-TSC-B1	L-TSC-B2	
Temp range	RT.+5°C -160°C		
Temp accuracy	±0.5°C	(@40°C)	
Temp accuracy	±1°C(@	0120°C)	
Temp uniformity	±0.	.5°C	
Display accuracy	0.1	.°C	
Time range	1-99h59	9min/∞	
Heating time	≤15min(from 25°C to 160°C)		
Needle length	150mm		
Max gas usage	15L/min		
Marrana	0.02Mpa(Gas pin≤ 16pcs)		
Max gas pressure	0.05Mpa(Gas pin>1pcs)		
Block qty	1 2		
Max power	300W 500W		
	AC220V or AC110V/50~60Hz		
Voltage	AC220V or AC110V /50~60Hz		
Size	260×220×450mm		
Weight	7.0kg 7.5kg		

### **Product accessories**

Model	Tube diameter	Tube quantity	
TSC-B-MD01	10mm	12	
TSC-B-MD02	12mm	12	
TSC-B-MD03	13mm	12	
TSC-B-MD04	15mm	12	
TSC-B-MD05	16mm	12	
TSC-B-MD06	19mm	12	
TSC-B-MD07	20mm	12	
TSC-A-MD13	Gas adjuster	/	





# **Thermostat Water Bath**

The Thermostat Water Bath is designed to guarantee superior accuracy and performance in a compact footprint. With multiple sizes to choose from, there is a myself Bath to fit every lab. The different models include easy to use controls, allowing the user to digitally select and monitor settings. Adjustable in 0.1°C increments, the temperature is shown on a large, 3-digit LED display. The lid's gabled design will divert condensation to the front and back of the tank, away from samples. High efficiency insulation maintains temperature stability and uniformity within the bath, while keeping the housing cool to the touch.



### **Features**

- Digital set-up for temperature and time with independent LED display
- Microprocessor control, uniform temperature control, high precision
- Easy-to-clean stainless steel inner tank, with unique sealing structure to avoid water leakage
- The side of the tank is equipped with an independent drain, which can easily drain the sewage after cleaning
- Built-in water level detection device to prevent the danger of dry burning
- Over-heating protection device is included



Model	LWB-B-2L	LWB-B-2SL	LWB-B-5L
Tank capacity	2L	2L	5L
Dimension of inner	150×135×150mm	300×150×65mm	300×150×150mm
Material of inner	Stainless steel	Stainless steel	Stainless steel
Circulating pump	No	No	No
Temp. control range	RT+5°C-100°C	RT+5°C-100°C	RT+5°C-100°C
Temp. accuracy	±0.5°C (in 60°C)	±0.5°C (in 60°C)	±0.5°C (in 60°C)
Temp. uniformity	±0.5°C (in 60°C)	±0.5°C (in 60°C)	±0.5°C (in 60°C)
Display accuracy	±0.1°C	±0.1°C	±0.1°C
Heating time	30 minutes (from RT to 95°C)	30 minutes (from RT to 95°C)	40 minutes (from RT to 95°C)
Heating power	250W	600W	600W
Total power	260W	610W	650W
Over-heating protection	YES	YES	YES
Accommodation mode	Push-button	Push-button	Push-button
Drain	YES	YES	YES
Working temperature	5-40°C	5-40°C	5-40°C
Protection class	IP21	IP21	IP21
Voltage	110-120V, 60Hz/200-220V, 50Hz	110-120V, 60Hz/200-220V, 50Hz	110-120V, 60Hz/200-220V, 50Hz
Dimension(mm)	315×237×285mm	462×242×268mm	462×342×268mm
Weight(kg)	4kg	4kg	6.5kg



# **Thermostat Water Bath** (with circulating pump)

The Thermostat Water Bath is designed to guarantee superior accuracy and performance in a compact footprint. With multiple sizes to choose from, there is a myself Bath to fit every lab. The different models include easy to use controls, allowing the user to digitally select and monitor settings. Adjustable in 0.1°C increments, the temperature is shown on a large, 3-digit LED display. The built-in circulating pump ensures that the water temperature remains uniform. The lid's gabled design will divert condensation to the front and back of the tank, away from samples. High efficiency insulation maintains temperature stability and uniformity within the bath, while keeping the housing cool to the touch.



### **Features**

- Digital set-up for temperature and time with independent LED display
- Microprocessor control, uniform temperature control, high precision
- Easy-to-clean stainless steel inner tank, with unique sealing structure to avoid water leakage
- The side of the tank is equipped with an independent drain, which can easily drain the sewage after cleaning
- Built-in water level detection device to prevent the danger of dry burning
- Over-heating protection device is included



Model	LWB-A-10L	LWB-A-20L	LWB-A-28L	
Tank capacity	10L	20L	281	
Dimension of inner		495×300×150mm		
	300×235×150mm		495×300×200mm	
Material of inner	Stainless steel	Stainless steel	Stainless steel	
Circulating pump	YES	YES	YES	
Temp. control range	RT+5°C-100°C	RT+5°C-100°C	RT+5°C-100°C	
Temp. accuracy	±0.5°C (in 60°C)	±0.5°C (in 60°C)	±0.5°C (in 60°C)	
Temp. uniformity	±0.5°C (in 60°C)	±0.5°C (in 60°C)	±0.5°C (in 60°C)	
Display accuracy	±0.1°C	±0.1°C	±0.1℃	
Heating time	40 minutes (from RT to 95°C)	60 minutes (from RT to 95°C)	60 minutes (from RT to 95°C)	
Heating power	1000W	1500W	1500W	
Total power	1050W	1550W	1550W	
Over-heating protection	YES	YES	YES	
Accommodation mode	Push-button	Push-button	Push-button	
Drain	YES	YES	YES	
Working temperature	5-40°C	5-40°C	5-40°C	
Protection class	IP21	IP21	IP21	
Voltage	110-120V, 60Hz/200-220V, 50Hz	110-120V, 60Hz/200-220V, 50Hz	110-120V, 60Hz/200-220V, 50Hz	
Dimension(mm)	465×332×287mm	682×390×322mm	678×390×350mm	
Weight(kg)	10kg	13kg	15kg	



### **Water Bath**

It is suitable for distillation, drying, concentration and constant temperature heating of chemicals and biological products, serum examination and biochemical experiments, constant temperature culture and boiling disinfection of syringes and small surgical instruments. Product introduction.

### **Features**

- LCD display, easy observation
- Microcomputer control (with timing function), it can accurately and visually reflect the actual temperature inside the incubator
- Over heating alarm system, safe and reliable
- UV Sterilizer, effectively prevent bacterial contamination
- Switch control, can easily adjust the flow and input any necessary gas
- Stainless steel cultivation and operation room, transparent impact-resistant glass front window for easy observation
- Latex gloves, comfortable and easy to use
- Double inside incubabor, can put more petri dishes
- Equipped with leakage protection
- Using high-efficiency palladium catalyst to keep the oxygen concentration without frequent activation
- Full-automatic control for gas replacement in operation room and sample room, can set oxygen percentage
- With positive pressure and negative pressure protection system
- Automatic vacuum pumping and pressure maintaining for sampling and aisle room
- Sample transfer: 40 pcs of 90mm plates can be transferred at a time
- Unique oil bottle type pressure relief design, protects internal positive pressure and prevents air leakage
- Equipped with leakage protection



Model	LWB-320	LWB-315	LWB-005	LWB-003	
Temperature range	RT+5~100	RT+5~100	RT+5~95	RT+5~95	
Temperature fluctuation	±0.5				
Temperature uniformity	±0.5				
Power supply	220V/50Hz				
Power rating	2000±10%	1500±10%	500±10%	300±10%	
Chamber size (W×D×H)cm	60×30×15	42×18×11	60×30×15	42×18×11	
Package size (W×D×H)cm	74×38×39	58×27×26	75×38×37	57×26×27	
Volume(L)	27	8	27	8	



## **Thermostat Water Bath**

The Thermostat Water Bath is a temperature-controlled thermostat bath equipment. This durable and dependable water bath comes with a variety of safety and convenience features. It has a unique lid design that allows condensation to drain back into the tank without spilling onto the work area. High efficiency insulation maintains temperature stability and uniformity within the bath, while keeping the housing cool to the touch.

### **Features**

- Digital set-up for temperature and time with independent LED display
- Microprocessor control, uniform temperature control, high precision
- Easy-to-clean stainless steel inner tank, with unique sealing structure to avoid water leakage
- The side of the tank is equipped with an independent drain, which can easily drain the sewage after cleaning
- Built-in water level detection device to prevent the danger of dry burning





### **Specifications**

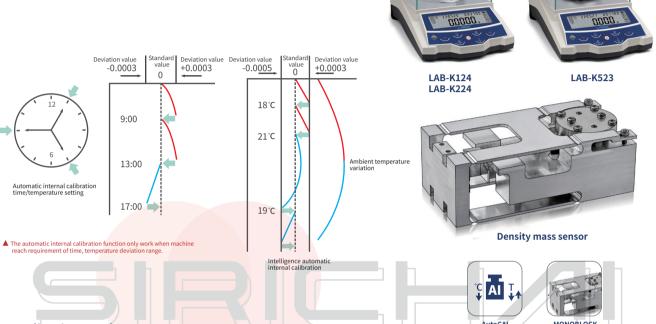
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Model	LWB2L-1	LWB2L-2	LWB2L-3	LWB5L-1		
Temp. setting range		0°C~1	.00°C			
Temp. control range		RT+5°C	~100°C			
Timing range		1min ~ 99h59min/∞				
Temp. accuracy		≤±0.3°C@37°C				
Display accuracy		0.1°C				
Temp. uniformity	≤±0.3°C@37°C					
Heating time	≤ 30minutes (25°C-100°C) *					
Tank capacity	2L	2L×2	2L×3	5L		
Working area	125×100×115mm	125×100×115mm×2	125×100×115mm×3	263×120×115mm		
Power	300W	600W	900W	900W		
Voltage	AC220V/50-60HZ	AC220V/50-60HZ	AC220V/50-60HZ	AC220V/50-60HZ		
Fuse	250V 3A Φ5×20	250V 3A Φ5×20	250V 3A Φ5×20	250V 3A Φ5×20		
Dimension(mm)	206×254×310mm	397×254×310mm	588×254×310mm	355×263×309mm		
Weight(kg)	2.2kg	5.5kg	8.5kg	5.1kg		



# **Analytical Balance**

LAB-K series using new numberic mainboard: multiple mainboard technology, higher integration project. LAB-K series balance has many different application, multiple intelligent anti-shock technology, temperature compensation with whole range, multipoint linearity calibration and so on. Highly compatible software program widely satisfy user's advanced request of high precision balance.



### **Application mode**

- Percentage Weighing
- With density determination
- With dynamic weighing function
- Selectable weighing and count mode
- Pricing function
- High-low weighing function
- Gross/Net/Tare weight weighing
- Peak holding function
- Accumulate function

### **Features**

- Super Monoblock sensor
- Set internal calibration according to use-set temperature
- Real-time temperature compensation
- Seven level anti-vibration adjustable
- VATN Backlit LCD Display
- Weighing stableness time adjustable
- More than 20unit shield: g, mg, ct, kg...
- Default weighing mode automatically

- Date, time and temperature setting
- With carrying handle and rear tool box
- With underhook for below weighing
- Measurements are directly readable on PC
- Antistatic glass draftshield
- Overload protection
- RS232 and USB port to communicate with external equipment

Model	Capacity	Readability	Repeatability	Linearity	Pan size	Housing	Warm-up time
LAB-K124	120g		101	100	+00		60.00
LAB-K224	220g	0.1mg	±0.1mg	±0.2mg	Ф90mm	295×205×320mm	60-90min
LAB-K523	520g	1mg	±1mg	±2mg	Ф108mm		30-60min



# **Auto Dual-range Balance**

LAB-Y serials are excellent products which are made by higher level technology of 0.001g-0.1g accuracy. It has firmly iron shell, transparent and beautiful glass windproof which is not used in same level product. It has quick response, high sensitivity and stability.









LAB-Y123

LAB-Y622 LAB-Y1202

LAB-Y2202





LAB-Y223







LAB-Y1201

LAB-Y3201

CAL SENSOR

## **Application mode**

### Percentage Weighing

- With density determination
- With dynamic weighing function
- Selectable weighing and count mode
- Pricing function
- High-low weighing function
- Gross/Net/Tare weight weighing
- Peak holding function
- Accumulate function

### **Features**

- Loadcell Sensor
- Mostly Auto dual range/dual precision
- External Calibration
- Real-time temperature compensation
- Seven level anti-vibration adjustable
- Anti-static mental shell
- VATN Backlit LCD Display
- Weighing stableness time adjustable

- More than 20unit shield: g, kg, ct...
- Default weighing mode automatically
- Date, time and temperature setting
- With carrying handle
- RS232 to communicate with PC and printer
- Measurements are directly readable on PC
- Optional with underhook
- Optional with rechargeable battery

Model	Capacity/Readability	Repeatability	Linearity	Pan size	Housing	Warm-up time
LAB-Y123	120g/0.001g + 220g/0.005g	±0.002/±0.005g	+0.002/+0.005~	Ф90mm	295×208×305mm	
LAB-Y223	220g/0.001g + 320g/0.005g	±0.002/±0.005g	±0.002/±0.005g	Ψ90ΠΠΠ	293 \ 208 \ 30311111	
LAB-Y622	620g/0.01g + 1200g/0.05g	±0.01/±0.05~	+0.02/+0.05~	Ф133mm		
LAB-Y1202	1200g/0.01g + 2200g/0.05g	±0.01/±0.05g	±0.02/±0.05g	ФТЭЭШШ	295×208×305mm	10-20min
LAB-Y2202	2200g/0.01g + 3200g/0.05g	±0.02/±0.05g	±0.03/±0.1g	156×156mm		
LAB-Y1201	1200g/0.1g + 2200g/0.2g			Ф133mm		
LAB-Y3201	3200g/0.1g + 5200g/0.2g	±0.1/±0.2g	±0.2/±0.2g	160 × 160 mm	295×208×88mm	
LAB-Y6201	6200g/0.1g + 10000g/0.2g			168×168mm		



# **Standard Precision Scale**

LAB-P series lead the economic balance. The delicacy construction, innovative design, advanced technology, stable operation and easy to maintain make LAB-P series the most cost-effective series.

## **Application mode**

- Percentage weighing
- Selectable weighing and count mode

#### **Features**

- Loadcell sensor
- External calibration
- Weighing stableness time adjustable
- 9unit shield: g, ct, lb, oz...
- Overload protection
- Optional with external display
- Optional with underhook
- Optional with rechargeable battery





LAB-P502 LAB-P1002



LAB-P1201 LAB-P3001 LAB-P6001

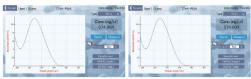
Model	Capacity	Readability	Repeatability	Linearity	Pan size	Housing	Warm-up time
LAB-P502	500g						
LAB-P1002	1000g	0.01g	±0.01g	±0.02g	Ф128mm		
LAB-P1201	1200g				Ф128mm	260×175×60mm	10-20min
LAB-P3001	3000g	0.1g	±0.1g	±0.2g	145 × 160		
LAB-P6001	6000g				145×160mm		



# **Ultra-micro Ultraviolet-visible Spectrophotometer**

Ultra-micro ultraviolet-visible spectrophotometer is a full-wavelength ultra-micro ultraviolet-visible spectrophotometer, the micro detection mode can be used to detect nucleic acids, micro nucleic acid arrays, pure protein detection, labeled protein detection, protein quantitative detection, microbial cell culture detection and regular full-wavelength scanning.

# Display interface



#### **Features**

- By forming a liquid column, the sample required for one test is as low as 0.5μL, and the trace amount is detected, saving precious samples
- The detection concentration range is wide, and commonly used samples can be detected without dilution
- The machine does not need to be warmed up, it can be detected after starting up, and the single detection time is about 5 seconds, and the detection is fast
- Built-in software, easy and fast to operate, software running fast and stable, no delay, provide a stable user experience
- Small size, easy to carry, very suitable for field testing
- Can record all the data that the user tests, and has screenshot function, convenient for users to export precious data or delete data at any time. More than 10,000 data can be stored
- It can be quickly upgraded by U disk, which is convenient for the instrument to update the software
- With user management system, multi-user independent detection, independent management of data
- High-definition 7-inch display screen, using capacitance touch screen, full touch operation, can sense the touch of laboratory gloves, longer service life and better experience
- Has power-on self-test function, it can quickly and accurately judge whether there are impurities in the detection platform when the machine is started up
- The material of the sample detection platform is stainless steel and quartz optical fiber, high strength and anti-corrosion
- Support colonies (OD600) detection, and the detection of colonies can be carried out in both cuvette and micro mode, which meets the different detection needs of users
- USB can be connected to a printer, the output data is more intuitive and convenient

# Operating conditions

• Ambient temperature: 4°C~45°C

• Recommended ambient temperature: 15°C~35°C

The relative humidity:≤70%Power supply: DC12V 5A



Model	L-SP-A	Light absorption accuracy	0.002Abs (1mm)
Test sample capacity	0.5~2μL	Absorbance accuracy	1%(0.76Abs at 256nm)
Light source	xenon lamp	Detection concentration range	2~15000ng/μL(dsDNA)
Detector	2048 linear CCD array	Sample base material	304 stainless steel and quartz optical fiber
Optical path	≤0.7mm	Measure time	about 5s
Wavelength range	200~850nm	Power	20W
Wavelength accuracy	1nm	Power adapter	12V , 5A
Wavelength resolution	≤2nm	Dimensions	W.197×D.327×H.181mm
Light absorption range	0.04~300Abs (10mm)	Weight	3.1kg



# **Ultra-micro Ultraviolet-visible Spectrophotometer**

Ultra-micro ultraviolet-visible spectrophotometer is a full-wavelength ultra-micro ultraviolet-visible spectrophotometer, the micro detection mode can be used to detect nucleic acids, micro nucleic acid arrays, pure protein detection, labeled protein detection, protein quantitative detection, microbial cell culture detection and regular full-wavelength scanning. In the cuvette detection mode, nucleic acids, proteins, and microbial cells can be measured cultivation and kinetic testing.



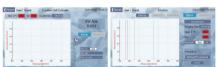
#### **Features**

- By forming a liquid column, the sample required for one test is as low as 0.5μL, and the trace amount is detected, saving precious samples
- The detection concentration range is wide, and commonly used samples can be detected without dilution
- The machine does not need to be warmed up, it can be detected after starting up, and the single detection time is about 5 seconds, and the detection is fast
- Built-in software, easy and fast to operate, software running fast and stable, no delay, provide a stable user experience
- Small size, easy to carry, very suitable for field testing
- Can record all the data that the user tests, and has screenshot function, convenient for users to export precious data or delete data at any time. More than 10,000 data can be stored
- It can be quickly upgraded by U disk, which is convenient for the instrument to update the software
- With user management system, multi-user independent detection, independent management of data
- High-definition 7-inch display screen, using capacitance touch screen, full touch operation, can sense the touch of laboratory gloves, longer service life and better experience
- Has power-on self-test function, it can quickly and accurately judge whether there are impurities in the detection platform when the machine is started up
- The material of the sample detection platform is stainless steel and quartz optical fiber, high strength and anti-corrosion
- With cuvette measurement function, the cuvette measurement provides stirring and heating auxiliary functions at the same time, which makes the cuvette detection more powerful and uses more detection scenarios
- Support kinetic detection, kinetic detection provides users with an intuitive absorbance change curve, user-defined wavelength points to view the relationship between absorbance changes over time, and 100 kinetic programs can be built-in
- Support colonies (OD600) detection, and the detection of colonies can be carried out in both cuvette and micro mode, which meets the different detection needs of users
- The cuvette measuring hole has a dust-proof design, which can effectively prevent inaccurate measurement due to dust accumulation
- USB can be connected to a printer, the output data is more intuitive and convenient

## **Operating conditions**

- Ambient temperature: 4°C~45°C
- Recommended ambient temperature: 15°C~35°C
- The relative humidity: ≤70%
- Power supply: DC12V 5A

## Display interface



Model	L-SP-B	Cuvette specifications	L.12.5×W.12.5×H.45mm
Test sample capacity	0.5~2μL	Cuvette optical path length	10, 5, 2, 1mm
Light source	xenon lamp	Cuvette light speed height	6mm
Detector	2048 linear CCD array	Heating range of cuvette	37±0.5°C
Optical path	≤0.7mm	Stirring speed of cuvette	high/low mode
Wavelength range	200~850nm	Detection concentration range of cuvette	0.2~750ng/μL(dsDNA)
Wavelength accuracy	1nm	Light absorption range of cuvette	0.004~25Abs (10mm)
Wavelength resolution	≤2nm	Measure time	about 5s
Light absorption range	0.04~300Abs (10mm)	Power	20W
Light absorption accuracy	0.002Abs (1mm)	Power adapter	12V,5A
Absorbance accuracy	1%(0.76Abs at 256nm)	Dimensions	W.197×D.327×H.181mm
Detection concentration range	2~15000ng/μL(dsDNA)	Weight	3.1kg
Sample base material	304 stainless steel and quartz optical fiber		



# **Ultra-micro Ultraviolet-visible Spectrophotometer**

Ultra-micro ultraviolet-visible spectrophotometer is a full-wavelength ultra-micro ultraviolet-visible spectrophotometer, the micro detection mode can be used to detect nucleic acids, micro nucleic acid arrays, pure protein detection, labeled protein detection, protein quantitative detection, microbial cell culture detection and regular full-wavelength scanning. In the cuvette detection mode, nucleic acids, proteins, and microbial cells can be measured Cultivation and kinetic testing. Fluorescence detection module can carry out fluorescence quantification of nucleic acid. It detects the concentration of target molecules by detecting their fluorescence intensity after the combination of fluorescent dyes with specific target molecules. It is used to detect samples of low concentration with high accuracy. Fluorescence detection is suitable for the detection of trace samples, which are usually ultra-low concentration samples that cannot be measured by photometer.



#### **Features**

- By forming a liquid column, the sample required for one test is as low as 0.5μL, and the trace amount is detected, saving precious samples
- The detection concentration range is wide, and commonly used samples can be detected without dilution
- The machine does not need to be warmed up, it can be detected after starting up, and the single detection time is about 5 seconds, and the detection is fast
- Built-in software, easy and fast to operate, software running fast and stable, no delay, provide a stable user experience
- Small size, easy to carry, very suitable for field testing
- Can record all the data that the user tests, and has screenshot function, convenient for users to export precious data or delete data at any time. More than 10,000 data can be stored
- It can be quickly upgraded by U disk, which is convenient for the instrument to update the software
- With user management system, multi-user independent detection, independent management of data
- High-definition 7-inch display screen, using capacitance touch screen, full touch operation, can sense the touch of laboratory gloves, longer service life and better experience
- Has power-on self-test function, it can quickly and accurately judge whether there are impurities in the detection platform when the machine is started up
- The material of the sample detection platform is stainless steel and quartz optical fiber, high strength and anti-corrosion
- With cuvette measurement function, the cuvette measurement provides stirring and heating auxiliary functions at the same time, which makes the cuvette detection more powerful and uses more detection scenarios
- Support kinetic detection, kinetic detection provides users with an intuitive absorbance change curve, user-defined wavelength points to view the relation ship between absorbance changes over time, and 100 kinetic programs can be built-in
- Support colonies (OD600) detection, and the detection of colonies can be carried out in both cuvette and micro mode, which meets the different detection needs of users
- $\bullet \ \, \text{The cuvette measuring hole has a dust-proof design, which can effectively prevent inaccurate measurement due to dust accumulation}$
- USB can be connected to a printer, the output data is more intuitive and convenient
- $\bullet \ \ \text{Support fluorescence detection, suitable for ultra-low concentration samples}$

### **Operating conditions**

- Ambient temperature: 4°C~45°C
- Recommended ambient temperature: 15°C~35°C
- The relative humidity:≤70%
- Power supply: DC12V 5A

### Display interface



Model	L-SP-C	Absorbance accuracy	1%(0.76Abs at 256nm)
Test sample capacity	sample capacity 0.5~2µL Detection concentration range of nucleic acid		2~15000ng/μL(dsDNA)
Light source	xenon lamp	Detection concentration range of protein	0.06~450mg/mL(BSA)
Detector	2048 linear CCD array	Sample base material	304 stainless steel and quartz optical fiber
Optical path	≤0.7mm	Measure time	about 5s
Wavelength range	200~850nm	Power	20W
Wavelength accuracy	1nm	Power adapter	12V , 5A
Wavelength resolution	≤2nm	Dimensions	W.197×D.327×H.181mm
Light absorption range	0.04~300Abs (10mm)	Weight	3.1kg
Light absorption accuracy	0.002Abs (1mm)		



# **Visible Spectrophotometer**

The visible spectrophotometer is designed to meet high requirement for precision measurement in the research and production of organic chemistry, biochemistry, medical testing, food testing, environmental protection, water testing industry, etc. The latest ARM system and long optical system ensure high accuracy and good stability of the instrument. They are the best choice of high quality spectrophotometer.

### Characteristic

- Adopt high resolution (1024×768) lattice 7-inch color touch LCD display, friendly and simple operation interface
- Supports cloud storage function, which can easily realize wechat scanning, convenient for customers' application scenarios
- Adopts "shining holographic grating" high resolution C-T monochromator, and adopts 24-bit high precision AD chip, makes the economical instrument with low stray light (less than 0.1T%), high precision and high stability (0.002A)
- Powerful storage capacity, can store 500 data, 30 working curves, convenient for customers to use
- Equipped with USB interface, WIFI module and Bluetooth module. Can realize wireless Bluetooth printing; The data exported from USB flash drive can be directly opened and edited by EXCEL, which is convenient for customers
- Automatic wavelength setting, automatic light switching settings, connected to the
  computer software, can achieve wavelength scanning, dynamic determination, quantita
  tive determination, nucleic acid determination, wavelength superposition, integral
  derivative and other advanced functions





Model	LV-S0302T	LV-S1004T
Optical system	Single beam, Gra	ating 1200 lines/mm
WIFI	Sta	ndard
IoT software	Sta	ndard
Detector	lmported sili	con photodiode
Wavelength range	190-	1100nm
Spectral bandwidth	2.0nm	4.0nm
Wavelength accuracy	±(	).3nm
Wavelength repeatability	≤0.1nm	≤0.5nm
Wavelength setting	Auto	omatic
Display	High resolution 1024×768 touch screen, 7 inches	
Photometric range	0-200%T, -0.3-3.0	A, 0-9999C (0-9999F)
Stray light	≤0.1%T	≤0.2%T
Stability	0.001A(500nm,3min)	0.002A(500nm,2min)
Noise	0.15%T	0.2%T
Light source	Automatic, 340	mm(configurable)
Output	USB&E	Bluetooth



# **UV-Vis Spectrophotometer**

The UV-Vis spectrophotometer is designed to meet high requirement for precision measurement in the research and production of organic chemistry, biochemistry, medical testing, food testing, environmental protection, water testing industry, etc. The latest ARM system and long optical system ensure high accuracy and good stability of the instrument. They are the best choice of high quality spectrophotometer.

#### Characteristic

- Adopt high resolution (1024×768) lattice 7-inch color touch LCD display, friendly and simple operation interface
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- Powerful storage capacity, can store 500 data, 30 working curves, convenient for customers to use
- Equipped with USB interface, WIFI module and Bluetooth module. Can realize wireless Bluetooth printing; The data exported from USB flash drive can be directly opened and edited by EXCEL, which is convenient for customers
- Automatic wavelength setting, automatic light switching settings, connected to the
  computer software, can achieve wavelength scanning, dynamic determination,
  quantitative determination, nucleic acid determination, wavelength superposition,
  integral derivative and other advanced functions





loT software	Single beam, Grating 1200 lines/mm Standard Standard Imported silicon photodiode 190-1100nm		
	Standard Imported silicon photodiode		
IoT software Detector	Imported silicon photodiode		
Detector	<u> </u>		
	100 1100nm		
Wavelength range	130-110011111		
Spectral bandwidth 2.0nm	4.0nm		
Wavelength accuracy	±0.3nm		
Wavelength repeatability ≤0.1nm	≤0.5nm		
Wavelength setting	Automatic		
Display High r	High resolution 1024×768 touch screen, 7 inches		
Photometric range	0-200%T, -0.3-3.0A, 0-9999C (0-9999F)		
Stray light ≤0.1%T	≤0.2%T		
Stability 0.001A(500nm,3m	min) 0.002A(500nm,2mi		
Noise 0.15%T	0.2%T		
Light source	Automatic, 340mm(configurable)		
Output	USB&Bluetooth		



# **Double-Beam UV-Vis Spectrophotometer**

The UV-Vis spectrophotometer is designed to meet high requirement for precision measurement in the research and production of organic chemistry, biochemistry, medical testing, food testing, environmental protection, water testing industry, etc. The latest ARM system and long optical system ensure high accuracy and good stability of the instrument. They are the best choice of high quality spectrophotometer.



### Characteristic

- 7 inches LCD Color Touch Screen and windows Graphic interface
- Powerful functions like Photometric measurement, Quantitative measurement, Kinetics, Spectrum scan, DNA Protein test, Multi-wavelength test, etc
- Advanced 32 bit Cortex\_M3 processor, the main frequency reaches 120M
- Socket type deuterium and tungsten lamp can make lamps switching without optics debugging and easy to be replaced
- The USB port can be used for data transfer, which is easily exported to Excel forfurther processing, analysis and storage
- Extensive accessories are optional, such as auto 8-cell holder, peltier/sipper system, reflection accessories, 21 CFR compliant software, etc

#### **Specifications** Model LUV-T0302T Double beam, Grating 1200 lines/mm Optical system 190-1100nm Wavelength range Spectral bandwidth 2.0nm Wavelength accuracy $\pm$ 0.3nm Wavelength repeatability ≤0.1nm Display LCD color touch screen, 7 inches Photometric range 0-200%T, -0.3-3.0A, 0-9999C (0-9999F) Stray light 420nm≤0.1%T, 220nm,340 nm≤0.05%T Baseline flatness $\pm 0.001 Abs$ Noise 0%≤0.05%T,100%≤0.1%T Light source Deuterium&Tungsten lamp Output USB/RS232 Net weight 21kg 580×450×215mm Dimension Power AC 220V/50Hz



# **All-in-one Centrifugal Mixer**

#### **Features**

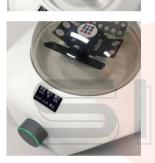
- Combine centrifuging and mixing in one-step, greatly improve the efficiency of PCR experiments
- Exquisite appearance drill-cut design high quality
- Graded locking smooth operation, small size and portable
- Integrated pallet design, good uniformity between tubes, stable baseline in PCR
- Compound knob, easy to use start/stop combo button
- Low noise operation, automatically operation and reliable













# Data presentation

Detection of HBV DNA with qPCR assay, 75iU/T, 8T(25μL)

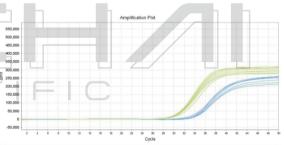


Fig.1 Amplification results of sample centrifuged without mixing



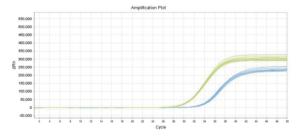


Fig.2 Amplification results of sample centrifuged and mixed by L-CM-MINI (running 10 cycles)

Detection template	Parameter	Centrifuged without mixing	centrifuged and mixed 10 cycles
HBV	CT value (average)	32.17	31.60
	CV	1.37%	0.31%
MLN	CT value (average)	29.75	29.44
IVILIN	CV	0.82%	0.36%



# **Centrifuge for Microplate**

Centrifuge for microplate is designed for quick spins of samples in PCR plates. Primarily designed for use with 96- or 384-well and small capacity microplates, it accommodates full-skirted, semi-skirted and non-skirted styles.

#### **Features**

- Easy to use, real-time display of all operating information
- DC brushless motor, low noise, small interference, maintenance-free
- Automatically stop running when opening the cap
- Support countdown mode.
- Fast acceleration from standstill to maximum speed in just 10 sec
- Braking time is short, from the highest speed to a complete standstill in just 4 sec









- Ambient temperature: 0°C ~ 35°C
- Relative humidity: ≤70%
- Mains connection: AC110~220V/50-60Hz





Model	CF2800M
Rotating speed	2200~2800rpm
Timer range	15s~1min59s
Max (RCF)	550xg
Acceleration time	≤10 sec (0 to 2800rpm)
Braking time	≤4 Sec (2800rpm to 0)
Lid open-auto stop	YES
Short run	YES
Capacity	2 PCR plates
Power	45W
Voltage	AC110~220V/50-60HZ
Fuse	250V/3A Φ5×20
Dimension	260×240×226mm
Weight	3.3kg





# **Low Speed Centrifuges**

#### **Features**

- Microprocessor control, simple operation panel, LED displays for various parameters
- Independent control knobs for adjusting parameters, voice prompt
- Air design ensure low noise and slow temperature rise
- Equipped with AC motor and frequency converter, maintenance free, accurate speed control
- Support short Run mode, inching operation is available
- Parameters can be changed during operation without stopping
- Two timing methods are available: countdown after start or countdown after reaching the set speed
- Acceleration/ deceleration in 10 steps, up to 15 program storage capacity according to experimental needs
- All steel construction, stainless steel inner chamber
- Dual door interlock design for safety



### Standard accessories





Model	L-CM-1019
Max. speed	5000rpm
Max. RCF	3494xg
Max rotor capacity	24×Blood collection tubes
Noise level	≤55dB(A)
Speed accuracy	±20rpm
Run time	00:00:01~99:59:59 (hh:mm:ss)
Rotor heating temperature	<10°C (20min)
Dimension	505×375×335mm(W×D×H)
Weight	30kg
Power	300W
Voltage	AC 220V±22V 50Hz±1Hz
Fuse	Φ5×20 10A



# **Low Speed Centrifuges**

#### **Features**

- Microprocessor control, simple operation panel, LED displays for various parameters
- Independent control knobs for adjusting parameters, voice prompt
- Air design ensure low noise and slow temperature rise
- Equipped with AC motor and frequency converter, maintenance free, accurate speed control
- Support short Run mode, inching operation is available
- Parameters can be changed during operation without stopping
- Two timing methods are available: countdown after start or countdown after reaching the set speed
- Acceleration/ deceleration in 10 steps, up to 15 program storage capacity according to experimental needs
- All steel construction, stainless steel inner chamber
- Dual door interlock design for safety



# Standard accessories



## **Optional accessories**



Model	L-CM-1020
Max. speed	6000rpm
Max. RCF	5000xg
Max rotor capacity	4×100mL
Noise level	≤55Db(A)
Speed accuracy	±20rpm
Run time	1s~99min59s
Rotor heating temperature	<10°C (20min)
Dimension	580×430×375mm(W×D×H)
Weight	46kg
Power	450W
Voltage	AC 220V±22V 50Hz±1Hz
Fuse	Φ5×20 10A

# **Large Capacity Centrifuge**



# **Low Speed Refrigerated Centrifuges**

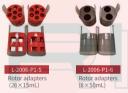
#### **Features**

- Microprocessor control, simple operation panel, LED displays for various parameters
- Independent control knobs for adjusting parameters, voice prompt
- Advanced fluorine free refrigerant, low carbon and environmental protection
- Precooling, the compressor will automatically start cooling as long as the set temperature is lower than the ambient temperature
- Equipped with AC motor and frequency converter, maintenance free, accurate speed control
- Support short Run mode, inching operation is available
- Parameters can be changed during operation without stopping
- Two timing methods are available: countdown after start or countdown after reaching
- Acceleration/ deceleration in 10 steps, up to 15 program storage capacity according to experimental needs
- All steel construction, stainless steel inner chamber
- Dual door interlock design for safety



### Standard accessories









## **Specifications**

Model	L-CM-2006
Max. speed	6000rpm
Max. RCF	5000xg
Max rotor capacity	4×300mL
Noise level	≤58dB(A)
Speed accuracy	±20rpm
Temperature range	-20°C~40°C
Temperature accuracy	±1°C
Run Time	00:00:01~99:59:59 (hh:mm:ss)
Dimension	690×530×850mm(W×D×H)
Weight	130kg
Power	1200W
Voltage	AC 220V±22V 50Hz±1Hz
Fuse	Ф6×30 15А Ф6×30 10А

## Optional accessories























# **High Speed Centrifuges**

#### **Features**

- Microprocessor control, simple operation panel, LED displays for various parameters
- Independent control knobs for adjusting parameters, voice prompt
- Air design ensure low noise and slow temperature rise
- Equipped with AC motor and frequency converter, maintenance free, accurate speed control
- Support short Run mode, inching operation is available
- Parameters can be changed during operation without stopping
- Two timing methods are available: countdown after start or countdown after reaching the set speed
- Acceleration/ deceleration in 10 steps, up to 15 program storage capacity according to experimental needs
- All steel construction, stainless steel inner chamber
- Dual door interlock design for safety



## **Optional accessories**



Model	L-CM-3018
Max. speed	21000rpm
Max. RCF	24042xg
Max rotor capacity	6×100mL
Noise level	≤55dB(A)
Speed accuracy	±10rpm
Acceleration/ Braking time	≤18s (0~21000rpm)
Rotor heating temperature	<10°C (centrifuge 20min)
Run time	00:00:01~99:59:59 (hh:mm:ss)
Dimension	$515 \times 370 \times 365 \text{mm}(W \times D \times H)$
Weight	43kg
Power	550W
Voltage	AC 220V±22V 50Hz±1Hz
Fuse	Ф5×20 10A



# **High Speed Refrigerated Centrifuges**

#### **Features**

- Microprocessor control, simple operation panel, LED displays for various parameters
- Independent control knobs for adjusting parameters, voice prompt
- Advanced fluorine free refrigerant, low carbon and environmental protection
- Precooling, the compressor will automatically start cooling as long as the set temperature is lower than the ambient temperature
- Equipped with AC motor and frequency converter, maintenance free, accurate speed control
- Support short Run mode, inching operation is available
- Parameters can be changed during operation without stopping
- Two timing methods are available: countdown after start or countdown after reaching the set speed
- Acceleration/ deceleration in 10 steps, up to 15 program storage capacity according to experimental needs
- All steel construction, stainless steel inner chamber
- Dual door interlock design for safety



## **Optional accessories**



Model	L-CM-4019
Max. speed	23000rpm
Max. RCF	33097×g
Max rotor capacity	6×100mL
Noise level	≤55dB(A)
Speed accuracy	±10rpm
Acceleration/ Braking time	≤18s (0~23000rpm)
Temperature range	-20°C~40°C
Temperature accuracy	±1°C
Run time	00:00:01~99:59:59 (hh:mm:ss)
Dimension	620×580×410mm(W×D×H)
Weight	120kg
Power	1200W
Voltage	AC 220V±22V 50Hz±1Hz
Fuse	Φ6×30 10Α Φ6×30 15Α



# **Loop Sterilizer**

Loop sterilizers are designed to sterilize metal inoculating loops and needles without using an open flame. With an electric heat source, these devices eliminate any hazards common with gas and open flames making the environment safer for personnel. The features prevent infectious spatter and cross-contamination. Infrared sterilization methods are ideal for use in anaerobic chambers. Loop sterilizers also can disinfect other non-sharp laboratory tools such as pipettes and other glass instruments used in quality control or research.

#### **Features**

- Sterilization of inoculating loops, tweezers and small instruments within seconds
- No gas, no open flame
- The perfect solution if an open flame should be avoided or gas cartridges etc. are not available
- Sterilization temperature 900 1300°C
- Reaches the safe working temperature of 900 1,300 °C within the split of a second
- Start is generated by an infra-red sensor, which allows for efficient one-handed operation
- Automatic stop after the Sterilization is finished
- Used with standard electrical power
- Economical, low-cost operation









Model	LS1300
Heat source	IR-Halogen lamp
Heating temperature	900-1300°C
Chamber	quartz glass
Chamber size	Ø15×100mm
Automatic stop	7 sec.
IR sensor	Yes
Power supply	220-240V 50/60Hz
Power	600W
Protection class	IP20
Dimension (mm)	150(width) × 210(depth) × 200 (height)
Weight	2.5kg
Permissible ambient temperature and humidity	5-40°C, 80%RH



# **Colony Counter**

Colony counter is a kind of semi-automatic bacterial examination instrument with digital display. It is composed of counter, probe pen and counting pool. The counter is manufactured in integrated circuit design. Black depth background type counting pool, using energy-saving ring light side lighting, colony contrast clearly. According to the rule of bacterial count inspection, the instrument display is designed to be three digits. When the number of colony growth in a culture dish exceeds 999, the test sample should be diluted and redone to ensure the accuracy of count. This instrument can reduce the Labor intensity of the experimental personnel, improve the work efficiency and work quality. Products are widely used in food, beverages, drugs, biological products, sanitary products, drinking water, industrial waste water, clinical samples in the detection of bacterial count. It is a necessary instrument for all levels of health and epidemic prevention stations, environmental monitoring stations, food safety, hospitals, biological products institutes, drug control institutes, food factories, daily chemical factories, universities, scientific research institutions and laboratories.

### **Application mode**

Percentage weighing
Selectable weighing and count mode

#### **Features**

- Loadcell sensor
- External calibration
- Weighing stableness time adjustable
- 9unit shield: g, ct, lb, oz...
- Overload protection
- Optional with external display
- Optional with underhook
- Optional with rechargeable battery



Model	L-JL	L-JL1	L-JL2
Counter capacity		0-999	
Led lamp power	SCIENTIMEIC		
Magnifying power	5-10 times		
Charging function	NO	NO	YES
Charging standby time	NO	NO	A month
Sound off	NO	YES	YES
Supply voltage	DC12V		
Counting pool size	ф110ММ		
Colony pen	Two		
Overall size	230×230×90MM		
Weight	2kg		









# **Petri Dish Spreader**

This product is designed for manual spreading of agar plate in petri dish, which is mainly used in the fields of molecular biology and microbiology.

### **Features**

- Manual operation, easy to control
- Antiskid design, easy to handle
- Double sides usable, two work spaces in one device
- Compatible with different sizes of petri dish









## Operation

Place culture plate on the suitable work space, add sample and rotate the work platform to spread evenly with the L-spreader.



Model	DS-M
Petri dish size (Φ)	90-150mm
Rotate mode	Manual
Work plate	2 Sides
Dimensions (Φ×H)	160×50 mm
Weight	~2.4kg



# **Automatic Microplate Washer**

Microplate washer is an automatic plate washer for washing 96-well microplate which has the residue left from test, in order to lower the deviation during the test procedures. This apparatus is widely applied in the testing areas such as science research laboratories, Inspection bureaus, Agriculture and livestock industries. Feed and food companies etc.











### **Features**

- With low liquid residue ≤ 0.65 µL, efficiently eliminate the high background signal to ensure a more reliable analyzing result
- 7"HD color screen display with full capacitive touch functionality. Intuitive and convenient operation with user-friendly humanmachine interaction
- It can proceed the soak and vibration simultaneously to make a thorough soak
- Low vibration noise with 3 linear vibration plate strengths level include high, medium and low
- With the function of automatic rinse, built-in filter in the washing bottles pipeline, efficiently avoid the blocking the pipeline
- With aspirate modes of Single-point, two-point and multi-point. It can do the cleaning thoroughly
- Single row, cross row and whole plate washing can be set
- Pipeline flushing and distilled water washing functions can be set, flushing time can be adjusted
- With pause function, you can continue to complete the rest of washing procedures
- Washing bottle has liquid level monitoring function, can keep monitoring the status of liquid level
- Alarm function to avoid the washing liquid used up or waste liquid from overflow
- 500 user's plate-wash program storage capacity, support 99times recycle
- Available for washing heads of 8,12, double-row needles, washing heads can be disassembled to clean up
- Suitable for the washing of flat bottom, U-shaped bottom, V-shaped bottom, C-shaped bottom of various specifications
- The position of washing heads could be adjusted to 0.1mm, suitable for various 96-well microplates
- Pipeline Connections adopt Snap-on button, easy to assemble
- Operating can be processed by USB type mouse, support program's input, output and system updating

Model	L-WM-A	Liquid aspirate mode	Single-point, two-point and multi-point
Washing heads	1×8,2×8,1×12	Liquid injection coefficient	0~2.0
Bottles	3×2L Washing bottle and 1×4L waste liquid bottle	Washing channel	Yes
Plate	96-well plate	Washing liquid deficiency alarm	Yes
Plate types	Flat, U, V, C bottom	Waste liquid overflow alarm	Yes
Liquid injection accuracy	≤2%@300μL	Waste liquid emission	Yes
Liquid injection precision	CV≤1.5@300μL	Program storage quantity	500 (U disk large capacity stock)
Residual liquid	≤0.65μL (Average in each well)	Communication port	USB2.0, LAN
Washing volume	50μL~2000uL step in 50μL	Input voltage	AC 220V 50/60Hz
Washing times	1~99	Fuse	250V, 5A Φ5×20
Soaking and shaking time	0-99:59m:s	Dimension(mm)	350×475×180
Shaking speed	Off, Low, Medium, High	Weight	11.5kg
Liquid aspirate time	0~99.9s		





# **Electrophoresis Power Supply**

#### **Features**

- Constant voltage output, constant current out, constant power output
- Time-set function, automatic switch between constant voltage and constant current in case of exceeding set value
- Automatic non-load detecting, automatic protection of short circuit, automatic recording
- 192×64 LCD extra-big screen
- Skid-resistance leg of box



### **Specifications**

Мо	odel	LP-300V	LP-600V	
Current	Range	5-400mA	1-1200mA	
Current	Resolution	1mA	1mA	
Voltage	Range	10-300V	5-600V	
voitage	Resolution	1V	1V	
Power	Range 5-75W		1-500W	
Tower	Resolution	1W	1W	
Time	e range	1min-99h59min		
Dime	ension	308×242×100mm (L×W×H)		
Weig	ght	2kg 2.6kg		

# L-HET-7MN Mini Horizontal Electrophoresis Cell

L-HET-7MN Mini Horizontal Electrophoresis Cell is mainly used for quick electrophoresis of small amount of agarose gel of DNA and RNA, whose special-used gel casting bench and the tray with ear-shaped structure are convenient to be used. The instrument mainly consists of gel tray, lower body, upper body, gel-making kit, comb etc. The gel size consists of  $7 \times 10$  cm and  $7 \times 7$  cm.

### **Features**

- Available with 7×10cm, 7×7cm or with both gel trays
- Run up to 32 samples
- Economic low buffer volumes and gel
- Small lab bench footprint



Model	L-HET-7MN		
Gel size	7×10cm、7×7cm		
Combs	0.75mm:9/16-well;1.0mm:9/16-well;1.5mm:9/16-well		
Volume	260mL		
Dimensions	260×110×80mm(L×W×H)		
Weight	1.5kg		



# L-HET-13MD Midi Horizontal Electrophoresis Cell

L-HET-13MD Midi Horizontal Electrophoresis Cell equipped with the function of adding sample by pipette is mainly used for electrophoresis of the agarose gel of DNA and RNA, whose special-used gel casting bench and flexible combination of tray with ear-shaped structure are convenient to be used. It can conduct the experiment of 96-hole PCR sample electrophoresis with different volume of agarose and size like  $6.5 \times 6.5$  cm,  $6.5 \times 13$  cm,  $13 \times 6.5$  cm,  $13 \times 13$  cm etc. The instrument mainly consists of gel tray, lower body, upper body, gel-making kit, comb etc.

### **Features**

- Available with  $6.5 \times 6.5$  cm,  $6.5 \times 13$  cm,  $13 \times 6.5$  cm,  $13 \times 13$  cm gel trays
- Run up to 108 samples
- Economic low buffer volumes and gel
- Ideal for extended separations
- Multichannel pipette compatible combs for speed loading

### **Specifications**

L-HET-13MD		
6.5×6.5 cm, 6.5×13 cm, 13×6.5 cm, 13×13 cm		
0.75mm:7+7/14-well、9+9/19-well;1.0mm:12+12/27-well;1.5mm:7+7/14-well、9+9/19-well;2.0mm:3+2/3+3-well		
1000mL		
300×170×80mm(L×W×H)		
2kg		

# L-VET-TRANS2 Mini Vertical Blot Cell

L-VET-TRANS2 accommodates 2 blot clips, uses for blotting protein and RNA sample in the polyacrylamide and agarose gel.Cooling unit belongs to the standard accessories of L-VET-TRANS2, which after being freezed to absorb the heat generated during the operation of blotting. The built-in cooling unit avoids the trouble of connection and the cost of installing the external cooling-recycling system. Other features include easy-to-use lock mechanism installed in gel clamp, gel clamp with color marker, direction positioning, special-designed plug-in-out mechanism. All these features make the L-VET-TRANS2 a perfect electrophoresis system that is easy to use.

#### **Features**

- Ideal for wet electroblotting of proteins Western blotting
- Up to 2 gel blot clips utilised at any time
- Complete run-time flexibility from overnight to as short as a couple of hours
- Cooling unit for environmentally friendly low cost cooling during high-intensity transfers

Model	L-VET-TRANS2	Cooling unit	Polyethylene and cold storage agent
Electrophoresis core	Polycarbonate	Gel clamp size	10 cm×11 cm
Gel sandwich clamp	Polycarbonate	Maximum gel size	7.5 cm×10 cm
Electrophoresis electrode	Platinum wire (made from platinum ingot)	Buffer volume (with cooling unit)	850 mL
Buffer tank and upper lid	Polycarbonate	Buffer volume (without cooling unit)	650 mL



# L-VET-MINI Mini Vertical Electrophoresis Cell

L-VET-MINI Mini Vertical Electrophoresis Cell is used to run pre-casting gel and hand-casting gel, at most 4 pieces of gels are available simultaneously. It is compatible with 1-D and 2-D electrophoresis application. The gel-making frame and spacer glass plate make the activity of hand-casting gel simple and avoid the leakage.

#### **Features**

- Can run one to four precast or handcast mini gels in less than 1 hours
- Gaskets seal tightly to ensure leak-free casting
- Side-by-side casting stand: allows access to both gels simultaneously, and a spring-loaded lever creates a tight seal against the thermoplastic rubber gasket
- Casting frames with simple cam closure provide precision alignment on any flat surface



Model	L-VET-MINI2	L-VET-MINI4	
Number of gels	1-2 gels	1-4 gels	
Thickness of gels	1.0mm (Standard)	、0.75mm、1.5mm	
Glass plate size	100×83mm		
Gel size	83×73mm		
Combs	1.0mm:10、15-well (Standard);0.75mm:10、15-well;1.5mm:10、15-well		
Dimensions	180×120×160mm (L×W×H)		

# **Electrophoresis System**



# Package

Model	Name	Packaging
810103032	Vertical Electrophoresis Cell Module	1 set
810103003	Comb, 1.0mm, 10 wells	Pkg of 5
810103004	Comb, 1.0mm, 15 wells	Pkg of 5
810103005	Comb, 0.75mm, 10 wells	Pkg of 5
810103006	Comb, 0.75mm, 15 wells	Pkg of 5
810103007	Comb, 1.5mm, 10 wells	Pkg of 5
810103008	Comb, 1.5mm, 15 wells	Pkg of 5
810103009	Spacer Plate, 0.75mm	Pkg of 5
810103010	Spacer Plate, 1.0mm	Pkg of 5
810103011	Spacer Plate, 1.5mm	Pkg of 5
810103012	Short Plate	Pkg of 10
810103013	Casting Stand	Pkg of 1
810103014	Casting Frame	Pkg of 1
810103016	Casting Stand Gaskets	Pkg of 5
810103017	Gaskets	Pkg of 2
810103019	Electrode Assembly	Pkg of 1
810103020	Companion Running Module	Pkg of 1
810103021	Buffer Dams	Pkg of 1
810103022	Gel Releasers	Pkg of 5
810103023	Sample Loading Guide	Pkg of 1
810100002	Lid with Power Cables	Pkg of 1
810100003	Tank	Pkg of 1
810100001	Power Cables	Pkg of 1



# **Magnetic Stirrer**

Magnetic stirrer is a laboratory instrument for liquid mixing. It is mainly used to stir low-viscosity liquid or solid-liquid mixture. The basic principle is to employ a rotating magnetic field to cause a stir bar immersed in a liquid to spin very quickly, thus stirring it.





Model	L-MS-MINIA	L-MS-MINIB		
Product voltage	110-220	DV AC to 12V DC		
Motor type	Brus	shless Motor		
Motor power		5W		
Control method	К	nob type		
Working plate	120	0×120mm		
Maximum stirring volume	SCICNITI	5L		
Speed range	500-3000rpm	350-2000rpm		
Speed display	Infinite Display	LED Display		
Dimension	146×	156×45mm		
Gross/Net weight	450g/650g			
Working temperature	5-40°C			
Working humidity		80%		



## **Ultrasonic Cleaner**

Ultrasonic washing machine is extensively used in hospitals, pharmaceutical industry, schools, research and development institutes, petrochemical industry, chemical, light industry, metallurgy, mechanics, transportation, and national defense and other industries, is ideal, high efficiency, high precision washing machine for deep washing of instrument, apparatus, electronic devices, electric circuit panel, semi-conduct silicon pieces, magnetic material, electroplate parts, hardware, optical lens and components, audio magnetic heads, terylene filter cores, spinnerets, latex moulds, medical apparatuses, glassware, bijouterie, horologe components, precision hardware, bearings, grease nozzles, oil pumps, mechanic components and parts with complex structures and shapes, especially for deep holes, blind holes and rough surfaces. With matching washing agent, washing effect will be better.

Super-audio electric signal created by ultrasonic wave from washing machine will transfer into mechanic vibration of same frequency through piezoelectric inversion effect of energy converter, and radiate forward in washing solvent in the form of vertical super-audio waves (vertical super-audio waves transmit interactively in minus pressure area and positive pressure), create tens of thousand of small bubbles, which explodes cyclically; these bubbles take into form and grow in minus pressure area, and close rapidly in positive pressure area, i. e. transiently explode, which will attack surface, apertures, cavities and other fine part of articles to be washed, and so that dirt on such articles are peeled off (this is "cavity effect" of ultrasonic washing machine) and surfaces of articles can be cleaned.





### **Specifications**

Model	L-UC-3L	L-UC-6L	L-UC-10L	L-UC-15L	L-UC-22L
Inner tank	240×140×100mm	300×150×150mm	300×240×150mm	300×240×200mm	500×300×150mm
Volume	3L	6L	10L	14.4L	22.5L
Frequency	40KHz	40KHz	40KHz	40KHz	40KHz
Power	120W	180W	240W	480W	600W
Power adjust.	/	40-99%	40-99%	40-99%	40-99%
Heat. power	200W	400W	800W	800W	1000W
Adjustable temp	RT~80°C	RT~80°C	RT~80°C	RT~80°C	RT~80°C
Adjustable time	1-99min	1-999min	1-999min	1-999min	1-999min
Basket	YES	YES	YES	YES	YES
Cover	YES	YES	YES	YES	YES
Drain	/	/	YES	YES	YES

Note: internal barrel and external shell are made of high quality stainless steel



# **Microplate Reader**

Microplate Reader is a professional instrument for reading and analyzing the results of enzyme-linked immunosorbent assay (Elisa). The enzyme-linked immunosorbent reaction is carried out by an enzyme-catalyzed chromogenic substrate coupled to an antigen or antibody. The reaction result is displayed in color. The concentration of the antibody or antigen to be tested in the sample can be judged by the absorbance value, absorbance, negative and positive etc.

This product is widely used in the application of biology, agricultural science, food and environmental science, especially in recent years, due to the application of a large number of ELISA kits, so that the application of enzyme label instrument is more and more extensive.

#### **Features**

- Using 10-inch high-resolution LCD capacitive touch screen, no need keyboard, simple and intuitive operation, easy to use
- Visual layout, humanized design, fast and intuitive standard blank, sample, negative and positive control and quality control, support multi-value control, convenient and practical
- 13-channel high-precision optical fiber measurement system, accurate and automatic positioning of the center of the enzyme label hole
- With a reference optical path system, the detection results are more stable and accurate
- 8-position filter wheel with 4 filters as standard, other filters are optional
- The built-in software can realize the detection of kinetics, standard curve, qualitative and quality control; the software includes program generation and storage, as well as detection data storage functions, with large storage capacity; powerful curve fitting, kinetic analysis and reporting functions
- The energy-saving design of the light source maximizes the life of the light source
- Has the function of self-checking and diagnosing the optical path, mechanical movement, etc
- With vibration plate function, the vibration plate time and speed are adjustable
- Single-wavelength, dual-wavelength detection, fast detection speed
- Can connect the U disk to output data, or connect to the printer to print data directly
- Built-in incubation function, the incubation temperature range is room temperature 4°C~ 65°C

Model	L-MR-A	Sensitivity/Detector	≥ 0.01Abs/photodiode
Display	10 inch high resolution capacitive touch screen	Absorbance range	0.000-4.000Abs
Light source	6V 10W halogen lamp	Measuring speed	5s, 96-well plate, fast measurement mode Single wavelength<7s/96 holes, dual wavelength<15s/96 holes, accurate mode
Wavelength range	340-750 nm	Absorbance repeatability (450nm)	[0,3Abs]CV≤0.3% [3,4Abs]CV≤1%
Filter bandwidth	8-10 nm	Absorbance accuracy (450nm)	[0.000,2.000Abs]≤±0.005Abs; [2.000-3.000Abs]≤±1%; [3.000~4.000Abs]≤±1.5%
Filter	8-bit filter wheel, 4 standard filters: 405nm, 450nm, 492nm, 630nm, other filters are optional. Up to eight filters can be loaded	Linear range (450)	R <sup>2</sup> ≥0.995[0.000-3.000Ab]
Wavelength accuracy	≤±2nm	Number of program storage	5000pcs (support U disk mass storage)
Resolution	0.001Abs	Interface USB	Connect the Printer and U Disk
Ambient temperature	4°C~45°C	Relative humidity	€70%
Incubation temp. range	RT+4°C~60°C	Voltage	100-220VAC 2.3A 50/60Hz
Temp. accuracy	@37°C:±0.5°C	Fuse	250V, 2A Φ5×20

# **Electric Thermostatic Drying Oven**



# **DOA Series Forced Air Drying Oven**

The product is used for drying, baking, melting wax and sterilization in industrial and mining enterprises, laboratories and scientific research institutions.

#### **Features**

- Horizontal forced air type, good temperature uniformity
- Microprocessor controller(with temperature correction and timing function), accurate and reliable
- Large LCD screen display
- High quality stainless steel chamber, removable shelf, easy-to-clean
- Equipped with multiple sets of heaters
- Adopt temperature selection switch which can select the grade according to the heating speed and operating temperature
- Silicon sealing ring for reliable sealing
- Equipped with leakage protection
- Equipped with spare temperature control which ensures the product work normally even the main temp.control failed
- Optional printer or RS485 interface which can print or connect computer for remote control and alarm
- Anti-hot handle







LABGIC

Model	Volume (L)	Chamber size (W×D×H)cm	Exterior size (W×D×H)cm	Power rating (W)	Temp.range (°C)	Shelf Std./Max	Power supply	Shape
DOA-43H	43	35×35×35	64×50×60	1300	RT+5~300	2/4	AC 220V 50HZ	Benchtop
DOA-81H	81	45×40×45	73×53×69	2000	RT+5~300	2/6	AC 220V 50HZ	Benchtop
DOA-138H	138	50×50×55	78×69×80	2500	RT+5~300	3/7	AC 220V 50HZ	Benchtop
DOA-252H	252	60×60×70	88×73×95	3500	RT+5~300	3/10	AC 220V 50HZ	Benchtop
DOA-25L	25	30×30×28	58×50×45	320	RT+5~200	2/4	AC 220V 50HZ	Benchtop
DOA-54L	54	42×37×35	71×56×42	600	RT+5~200	2/5	AC 220V 50HZ	Benchtop
DOA-32HS	32	30×30×35	45×47×70	950	RT+5~300	2/5	AC 220V 50HZ	Vertical
DOA-72HS	72	40×40×45	55×60×80	1400	RT+5~300	2/7	AC 220V 50HZ	Vertical
DOA-136HS	136	45×55×55	64×73×90	2000	RT+5~300	3/8	AC 220V 50HZ	Vertical
DOA-225HS	225	50×60×75	69×77×114	2600	RT+5~300	3/11	AC 220V 50HZ	Vertical
DOA-429HS	429	60×55×130	78×71×170	3500	RT+5∼300	4/6	AC 380V 50HZ	Vertical



# **DO Series Electric Thermostatic Drying Oven**

The product is used for drying, baking, melting wax and sterilization in industrial and mining enterprises, laboratories and scientific research institutions.

#### **Features**

- The studio made of stainless steel plate is safe, convenient, novel and beautiful in shape
- Microcomputer intelligent temperature controller is used to control the temperature, setting and measuring the temperature are LCD display, tempera ture control is accurate and reliable
- Multiple sets of heaters
- Fitted with leakage protector
- Equipped with auxiliary temperature control to ensure that the product will work properly even if the main temperature control is out of control
- Convenient air inlet switch, reasonable air duct structure, uniform temperature in the working room
- The housing is made of high-quality sheet steel
- Exterior door with square viewing window



Model	DO-35	DO-45	DO-50	DO-60		
Volume (L)	43	81	138	252		
Temp.range (°C)		Room temperat	ure+10°C -300°C			
Temp.resolution (°C)	SC					
Temperature fluctuation (°C)		±	:1			
Temperature uniformity (°C)		Not higher than the highest temperature ±3.5%				
Power supply		Alternating cur	rent220V,50HZ			
Exterior size(L $\times$ W $\times$ H)cm	64×50×60	73×53×69	78×69×80	88×73×95		
Chamber size( $L \times W \times H$ )cm	35×35×35	35×35×35 45×40×45 50×50×55 60×60×70				
Rated power (W)	1300	2000	2500	3500		
Shelf (Block)	2	2	2	2		







# **VDO Series Drying Oven (vacuum oven)**

The product is suitable for industrial and mining enterprises, medical colleges, scientific research institutions under vacuum conditions for drying, heating Treatment and other tests, designed for drying heat-sensitive, easily decomposed and easily oxidized items, can fill the studio with inert gas, Especially for some complex components of the articles can be fast drying.



### **Features**

- Microprocessor controller with LCD display, more accurate and reliable
- Polished stainless steel chamber, durable and easy to clean
- Tempered, bullet-proof double glass door ensure the safety of operator and clear observation of the chamber
- Door tightness can be adjusted, silicon sealing. To keep vacuum states in the chamber, can fill working chamber with inert gas (inflation pressure ≤ 0.1 MPa)
- Storage, heating, testing and drying can be performed in the environment without oxygen or in an inert atmosphere. It will not cause oxidation
- Equipped with leakage protection



Model	VDO-42	VDO-30	VDO-45	VDO-56	VDO-75
Power rating (KW)	1.4	0.5	1.6	2.2	5.5
Power supply			AC 220V, 50Hz		
Temperature range (°C)	RT+10~250	RT+10~200	RT+10~200	RT+10~200	RT+10~200
Temperature fluctuation (°C)			±1		
Display resolution (°C)			0.1		
Vacuum pressure			<133 Pa		
Volume(L)	54	25	91	215	1007
Chamber size (W×D×H)cm	42×35×37	30×30×28	45×45×45	56×60×64	75.5×116×115
Package size ((W×D×H)cm	82×70×69	70×64×60	78×76×163	89×92×193	120×145×200
Shelf	2	1	2	3	5



# **DAS Series Hot Air Sterilizer**

The use of high temperature and dry heat has oxidation, protein denaturation and dielectric concentration on microorganisms, which mainly destroys cell protoplasm through oxidation and causes microbial death, so all microorganisms can be killed within a certain heating time.

### **Features**

- Precision: High precision microcomputer liquid crystal display temperature controller, temperature control is accurate and reliable
- Rapid: heating up fast, forced convection, dry hot air directly through the hot object, drying, disinfection time is significantly shortened
- Safety: two sets of over-temperature protection system are adopted, which will automatically interrupt when exceeding the limit, to ensure the safety of personnel and instruments, and installed leakage protector
- Convenient: can be set from the instrument timing, shelf position can be moved, easy to clean the box, easy to use



Model	DAS-30	DAS-42	DAS-45	DAS-50	DAS-60
Volume(L)	25	54	81	138	252
Temp. range			RT+10~250		
Temp.resolution/Fluctuation degree			0.1°C/±1°C		
Ambient temperature			+5~40		
Power (W)	650	1000	1500	1600	2450
Chamber size(mm)	300×300×280	420×370×350	450×400×450	500×500×550	600×600×700
Exterior size(mm)	580×500×450	710×560×530	730×530×690	780×530×800	880×730×950
Shelf	2pcs	2pcs	2pcs	3pcs	3pcs
Timing range	1~9999min				
Voltage	220V, 50HZ				
Temp. stability			±1°C		







# **Heating Incubator**

Electrothermal constant temperature cell incubator is suitable for medical and health, pharmaceutical industry, biochemistry and agricultural science and other scientific research and industrial production departments] for bacterial culture, breeding, fermentation and other constant temperature tests.

#### **Features**

- Unique air duct structure, good temperature uniformity
- The use of new microcomputer intelligent temperature controller, high precision, no overshoot, large screen LCD display, multiple groups of data in one screen display. With temperature correction function, timing function, easy to use, more user-friendly design
- The housing is made of high quality steel plate
- The inner corner adopts arc transition design, which is convenient for cleaning in the box. The high quality stainless steel is adopted, and the shelf support can be used Free handling
- Silicone rubber sealing ring, good sealing performance. The outer door is provided with an observation window, which can directly observe the situation in the working room
- Fitted with leakage protector
- Auxiliary temperature controller is installed to ensure that the product will work properly even if the main temperature control is out of contr





Model	Volume(L)	Tem. range	Chamber size (W×D×H)cm	Exterior size ((W×D×H)cm	Shelf (Std./Max)	Power rating (W)	Net/Gross weight (kg)
HI-43D	43	RT+5°C~80°C	35×35×35	63×52×60	2/4	450	40/60
HI-81D	81	RT+5°C~80°C	45×40×45	73×53×69	2/6	700	50/75
HI-138D	138	RT+5°C~80°C	50×50×55	78×63×80	2/7	850	75/110
HI-252D	252	RT+5°C~80°C	60×60×70	88×73×95	2/10	1200	100/140
HI-20V	20	RT+5°C~66°C	25×25×32	38×36×63	2/4	150	25/30
HI-30V	30	RT+5°C~66°C	30×30×35	43×41×65	2/5	180	28/34
HI-50V	50	RT+5°C~66°C	35×35×41	48×46×73	2/6	250	32/38
HI-80V	80	RT+5°C~66°C	40×40×50	53×51×81	2/7	300	45/55
HI-160V	160	RT+5°C∼66°C	50×50×65	63×61×97	3/10	450	65/78
HI-270V	270	RT+5°C~66°C	60×60×75	73×71×107	3/11	600	88/105



# **Shaking Incubator (benchtop)**

SI series of thermostatic table used in health care, pharmaceutical industry, biological chemistry, industrial production and agricultural science, etc. The research department does cell culture, fermentation, hybridization, enzyme and cell tissue research.

#### **Features**

- Set constant temperature incubator and oscillator in one, saving space covers a small area, more functions less investment, special glass can be large Windows, luxury and beautiful shape
- The case is made of ABS engineering plastic/metal case, and the studio is made of mirror stainless steel chamber components
- Large, backlit LCD display that displays temperature and speed separately
- With running parameter memory function, avoid tedious operation and password lock, prevent human misoperation
- With call recovery function, not affected by power interruption, the device can automatically resume operation according to the original program
- With the door stop protection device, to protect the safety of objects and equipped with high strength gas pull rod, easy to open the door
- Brushless DC motor, more stable, more reliable
- Fitted with leakage protector (metal case only)







Model	SI295D	S1400D	SI450D		
Shaking speed (rpm)	20-300				
Speed accuracy (rpm)		±1			
Swing amplitude (mm)		Ф26			
Standard configuration	100mL×9	50mL×4,100mL×4,250mL×3,500mL×3	50mL×5, 100mL×5, 250mL×4, 500mL×3		
Maximum capacity	50mL×12 or 100mL×9 or 250mL×9	50mL×20 or 100mL×16 or 250mL×12 or 500mL×9	100mL×20 or 250mL×16 or 500mL×12 or 1000mL×5 or 2000mL×4		
Tray included	1				
Tray size (mm)	295×253	400×370	400×370		
Timing range		1-9999min			
Temperature range (°C)	RT+5~60	RT+5~60	10~60 (Cooling)		
Temperature accuracy (°C)	±0.1	±0.1	±0.1		
Temperature uniformity (°C)	±1	±1	±1		
Display		LCD			
Studio volume (W×D×H)mm	320×295×190 (18L)	440×405×270 (48L)	480×450×320 (69L)		
Exterior size(W×D×H)mm	440×410×390	600×580×510	780×750×570		
Power rating	220W 320W 580W		580W		
Power supply		AC 220~240V, 50~60Hz			



# **Shaking Incubator (horizontal type)**

SI series of thermostatic table used in health care, pharmaceutical industry, biological chemistry, industrial production and agricultural science, etc. The research department does cell culture, fermentation, hybridization, enzyme and cell tissue research.

#### **Features**

- Set constant temperature incubator and oscillator in one, saving space covers a small area, more functions less investment, special glass can be large Windows, luxury and beautiful shape
- The shell is made of high quality steel plate, mirror stainless steel chamber components
- Large-screen backlit LCD display, which can display temperature and speed separately, with timing function
- With running parameter memory function, avoid tedious operation and password lock, prevent human misoperation
- With call recovery function, not affected by power interruption, the device can automatically resume operation according to the original program
- With the door stop protection device, to protect the safety of objects and equipped with high strength gas pull rod, easy to open the door
- Brushless DC motor, more stable and reliable
- With ultraviolet sterilization and disinfection function





Model	SI500F SI2000F			
Shaking speed (rpm)	20-300			
Speed accuracy (rpm)	±	:1		
Swing amplitude (mm)	Ф	26		
Standard configuration	500mL×28	2000mL×12		
Maximum capacity	250mL×36 or 500mL×28 or 1000mL×18	1000mL×18 or 2000mL×12 or 3000mL×8 or 5000mL×6		
Tray size (mm)	9202	×510		
Timing range	1~999	99min		
Temperature range (°C)	4-60 (C	cooling)		
Temperature accuracy (°C)	±0.1			
Temperature uniformity (°C)	±	:1		
Display	LC	CD		
Tray Included		1		
Exterior size(W×D×H)mm	120×740×800	120×740×1000		
Net weight(kg)	174 183			
Power rating (W)	866	951		
Volume W×D×H(mm)	970×565×280 (153L)	970×565×480 (263L)		
Power supply	AC220V±10	0%, 50-60Hz		



# **Shaking Incubator (vertical)**

SI series of thermostatic table used in health care, pharmaceutical industry, biological chemistry, industrial production and agricultural science, etc. The research department does cell culture, fermentation, hybridization, enzyme and cell tissue research.

#### **Features**

- Integrated with incubator and shaker to save space and cost
- High quality steel shell, polished stainless steel chamber
- Unique slope design panel with large LCD display, better visual effect
- With operation data memory and password locking function to eliminate faulty operation
- Auto-recovery after power outage or crash as originally programmed, avoiding data loss.
- When the measured temperature deviates from set temperature by 3°C(can be set arbitrarily) will automatically stop heating and send out audible and visual alarms
- Equipped with strong and fast refrigeration system for instant cooling requirements , automatic defrost
- The most advanced large torque motor to ensure continuous work without maintenance
- With large view window and built-in lighting for easy observation
- Equipped with leakage protection





Model	SI500A (Single door)	SI740B (Double door)	SI970B (Double door)
Shaking speed (rpm)	SCIE	40-300	
Speed accuracy (rpm)	±1		
Swing amplitude (mm)	Ф26		
Standard configuration	250mL×36/layer	250mL×35 or500mL×24/layer	250mL×45 or 500mL×37/layer
Maximum capacity	100mL×56 or 250mL×36 or 500mL×24 or 1000mL×6	250mL×70 or 500mL×48 or 1000mL×24	250mL×90 or 500mL×74 or 1000mL×36 or 5000mL×8
Tray included	2		
Tray size (mm)	500×350	740×460	970×760
Power rating (W)	550	750	1420
Temperature range (°C)	4-60	4-60	4-60
Temperature accuracy (°C)	±0.1		
Temperature uniformity (°C))	±1		
Timing range	1-9999min		
Display	LCD		
Power supply	AC220V~240V±10%,50~60HZ		
Volume W×D×H(mm)	66×44×65 (188L)	84×52×64(280L)	109.5×62.5×85(582L)
Exterior size(W×D×H)mm	70×56×126	95×70×126	120×82×160



# **Stacked Shaker Incubator**

SI series of thermostatic table used in health care, pharmaceutical industry, biological chemistry, industrial production and agricultural science, etc. The research department does cell culture, fermentation, hybridization, enzyme and cell tissue research.

#### **Features**

- Three-layer superimposed combination provides maximum space for users with minimum floor space
- PID microcomputer intelligent temperature control instrument, accurate temperature control
- Three dimensional integrated partial three-wheel drive, smooth, stable, durable and reliable operation
- With overtemperature alarm function and abnormal situation automatic power off function
- With power failure recovery function, avoid data loss caused by power failure or crash
- Streamlined appearance, not only beautiful and generous, but also convenient to clean, not easy to breed bacteria; The inner lining is made of mirror stainless steel, anti-corrosion; The shell is sprayed with electrostatic plastic
- With an observation window, convenient at any time without opening the door to observe the internal situation of the box
- Each layer is independently controlled, and each layer can operate at the same time under different temperature and speed, or run one layer, two layer or three layers as required
- Humanized design, the next two layers for the flip door, the third layer for the flip door; Shake plate can be freely drawn, convenient installation Discharge flask
- Equipped with high quality servo motor, precise control speed, high speed performance, strong stability
- Selected imported high quality compressor, non-fluorine refrigerant for environmental protection, low noise, good refrigeration effect, to ensure the equipment at low temperature for a long time stable operation
- Large-screen LCD display, menu-type operation interface, easy to understand, easy to operate
- The operation interface is encrypted and locked to prevent repeated operations and misoperations
- Humanized design of open cover stop function, more safe and convenient use
- It has the function of ultraviolet sterilization

Model	SI770S
Shaking speed (rpm)	60-280
Speed accuracy (rpm)	±1
Swing amplitude (mm)	Ф28
Maximum capacity	250mL×36 or 500mL×24 or 1000mL×15 or 2000mL×10
Tray size (mm)	770×450
Timing range	0~9999min
Temperature range (°C)	4~60°C (Ambient temperature : 25°C)
Temperature accuracy (°C)	±0.1°C (Under constant temperature)
Temperature uniformity (°C)	±1
Display	LCD
Tray Included	1
Exterior size(W×D×H)mm	1200×670×2100 (mm)
Power rating (W)	2700
Power supply	AC220V±10%, 50 HZ







Anaerobic incubator is a special device that can be used for bacterial culture and operation in anaerobic environment. It can provide strict anaerobic state, constant temperature culture conditions and a systematic and scientific working area. In this device, anaerobic organisms that are difficult to grow can be cultivated, and the risk of death caused by contact with oxygen during operation in the atmosphere in the past can be avoided. Therefore, this device is an ideal equipment for anaerobic biological detection and scientific research.



#### **Features**

- Use scientific means to achieve the anaerobic environment of high precision, good constability, constant temperature, easy for the operator to operate in the anaerobic environment and anaerobic bacteria culture
- The anaerobic incubator is controlled by microcomputer with large screen and true color touch screen, which is newly developed by our company control the temperature and gas of the incubator directly, safe and reliable. It has the characteristics of simple, intuitive and convenient operation
- The system uses PLC as the core controller, supplemented by high precision temperature sensor, oxygen sensor, temperature control mold block, analog module, high control precision, good stability, high safety; Humanized man-machine interface, convenient operators to process data real-time monitoring
- Oxygen sensor can observe the oxygen concentration status in the operating room at any time (oxygen concentration can be switched to % or PPM Function)
- There is a deaerator in the operating room
- With USB port, the memory can store data for 6 months
- The box is equipped with ultraviolet sterilization lamp, gas filtered into the box, can effectively avoid bacterial pollution
- Gas path device, the use of light touch switch control solenoid valve, can be arbitrary accurate adjustment of flow, can input a variety of required gas
- The incubator is designed with double door widening, which changes the phenomenon that when the single door is opened, it will touch the front window of the operation room. The widening can place more petri dishes
- Culture room and operation room are made of stainless steel plate, smooth and elegant, anticorrosive and durable
- The front window of the operation room is made of thickened transparent impact-resistant special glass plate. The operation and use of special gloves are reliable, comfortable, flexible and easy to use
- Fitted with leakage protector

Model	AI-TS-5
Anaerobic state formation time of sampling chamber	<5minutes
Anaerobic time is formed in the operating room	< 1 hour
Anaerobic environment maintenance time	Operating room in the case of no supplement of trace gas mixture > 13 hours
Temperature control range for culture room (°C)	Room temperature +3~60
Culture room temperature fluctuation (°C)	<±0.3
Culture room temperature uniformity (°C)	<±1
Temperature resolution	0.1°C
Timing function	1~9999min
Power supply	220V,50HZ/600W
Culture room size (cm) W×D×H	30×19×29
Operation room size (cm) W×D×H	82×66×67
Overall dimension (cm) W×D×H	126×73×138



Anaerobic incubator is a special device that can be used for bacterial culture and operation in anaerobic environment. It can provide strict anaerobic state, constant temperature culture conditions and a systematic and scientific working area. In this device, anaerobic organisms that are difficult to grow can be cultivated, and the risk of death caused by contact with oxygen during operation in the atmosphere in the past can be avoided. Therefore, this device is an ideal equipment for anaerobic biological detection and scientific research.



#### **Features**

- The 7 "large screen real color touch screen microcomputer control type, can accurately and intuitively control the incubator temperature and other parameters. This system uses PLC as the core controller, supplemented by high precision temperature sensor, oxygen sensor, temperature control module, analog module, high control precision, good stability, high safety; Humanized man-machine interface, convenient operators to process data real-time monitoring
- Imported oxygen sensor is adopted, and the oxygen content of the operating room is directly displayed on the touch screen, which is convenient to observe whether the internal anaerobic state is reached
- Can do anaerobic culture, can do microculture (oxygen concentration: 0-10%)
- With USB port, the memory can store data for 6 months
- Anaerobic in the sampling room and anaerobic in the operating room are one-button automatic gas replacement
- Oxygen content can be set
- The see-through window cover can be removed as a whole to facilitate the placement of larger instruments or thorough cleaning
- The operating room is equipped with ultraviolet bactericidal lamps, which can effectively avoid bacterial contamination
- Standard lighting and power sockets
- A deoxygenated catalytic unit is installed in the operating room, and a high efficiency palladium catalyst is used to avoid frequent activation
- Gas displacement in the operating room adopts fully automatic control technology, with positive and negative pressure protection
- The sampling (aisle) room has the function of automatic vacuuming and pressure preservation
- Sample transfer: In and out of the ship, the first gas exchange is carried out before entering the incubator. 40 90mm plates can be transferred at a time, which is not only the access channel for operation, but also can be used to transfer plates
- Unique oil bottle type pressure relief brake design, protect the internal positive pressure, prevent air leakage, prevent the positive pressure to break the glove
- Fitted with leakage protector
- Oil-free vacuum pump

AI-TS-S10
<10minutes
≤70minutes
Operating room in the case of no supplement of trace gas mixture > 13 hours
Room temperature +3~60
<±0.3
<±1
1~9999min
220V,50HZ/600W
95×68×75
140×73×137
Oxygen content in the operating room < 0.1%
Vacuum + gas replacement (nitrogen + mixture)
Sampling room anaerobic, operating room anaerobic are one key automatic gas replacement
42×30×50
27.5×29.5



Anaerobic incubator is a special device that can be used for bacterial culture and operation in anaerobic environment. It can provide strict anaerobic state, constant temperature culture conditions and a systematic and scientific working area. In this device, anaerobic organisms that are difficult to grow can be cultivated, and the risk of death caused by contact with oxygen during operation in the atmosphere in the past can be avoided. Therefore, this device is an ideal equipment for anaerobic biological detection and scientific research.



#### **Features**

- The 7 "large screen real color touch screen microcomputer control type, can accurately and intuitively control the incubator temperature and other parameters. This system uses PLC as the core controller, supplemented by high precision temperature sensor, oxygen sensor, temperature control module, analog module, high control precision, good stability, high safety; Humanized man-machine interface, convenient operators to process data real-time monitoring
- Imported oxygen sensor is adopted, and the oxygen content of the operating room is directly displayed on the touch screen, which is convenient to observe whether the internal anaerobic state is reached
- Can do anaerobic culture, can do microculture (oxygen concentration: 0-10%)
- With USB port, the memory can store data for 6 months
- Anaerobic in the sampling room and anaerobic in the operating room are one-button automatic gas replacement
- Oxygen content can be set
- The see-through window cover can be removed as a whole to facilitate the placement of larger instruments or thorough cleaning
- The operating room is equipped with ultraviolet bactericidal lamps, which can effectively avoid bacterial contamination
- Standard lighting and power sockets
- A deoxygenated catalytic unit is installed in the operating room, and a high efficiency palladium catalyst is used to avoid frequent activation
- Gas displacement in the operating room adopts fully automatic control technology, with positive and negative pressure protection
- The sampling (aisle) room has the function of automatic vacuuming and pressure preservation
- Sample transfer: In and out of the ship, the first gas exchange is carried out before entering the incubator. 40 90mm plates can be transferred at a time, which is not only the access channel for operation, but also can be used to transfer plates
- Unique oil bottle type pressure relief brake design, protect the internal positive pressure, prevent air leakage, prevent the positive pressure to break the glove
- Fitted with leakage protector
- Oil-free vacuum pump

Model	AI-TS-10
Anaerobic state formation time of sampling chamber	<10minutes
Anaerobic time is formed in the operating room	≤1 hour
Anaerobic environment maintenance time	Operating room in the case of no supplement of trace gas mixture > 13 hours
Temperature control range for culture room (°C)	Room temperature +3~60
Culture room temperature fluctuation (°C)	<±0.3
Culture room temperature uniformity (°C)	<±1
Temperature resolution	0.1°C
Timing function	1~9999min
Power supply	220V,50HZ/600W
Culture room size (cm) W×D×H	30×19×29
Operation room size (cm) W×D×H	82×66×67
Overall dimension (cm) W×D×H	126×73×138
Anaerobic class	Oxygen content in the operating room<0.1%
The sampling chamber forms an anaerobic mode	Vacuum + gas replacement (nitrogen + mixture)
Anaerobic formation control mode	Sampling room anaerobic, operating room anaerobic are one key automatic gas replacement



Anaerobic incubator is a special device that can be used for bacterial culture and operation in anaerobic environment. It can provide strict anaerobic state, constant temperature culture conditions and a systematic and scientific working area. In this device, anaerobic organisms that are difficult to grow can be cultivated, and the risk of death caused by contact with oxygen during operation in the atmosphere in the past can be avoided. Therefore, this device is an ideal equipment for anaerobic biological detection and scientific research.

#### **Features**

- Use scientific means to achieve the anaerobic environment of high precision, good constability, constant temperature, easy for the operator to operate in the anaerobic environment and anaerobic bacteria culture
- Temperature control using LCD large screen display, high precision microcomputer control (with timing) can accurately and intuitively reflect the actual temperature in the box, coupled with effective temperature limit protection, safe and reliable
- The box is equipped with ultraviolet sterilization lamp, gas filtered into the box, can effectively avoid bacterial pollution
- Gas path device, the use of light touch switch control solenoid valve, can be arbitrary accurate adjustment of flow, can input a variety of required gas
- The incubator is designed with double door widening, which changes the phenomenon that when the single door is opened, it will touch the front window of the operation room. The widening can place more petri dishes
- Culture room and operation room are made of stainless steel plate, smooth and elegant, anticorrosive and durable
- The front window of the operation room is made of thickened transparent impact-resistant special glass plate. The operation and use of special gloves are reliable, comfortable, flexible and easy to use
- There is a deaerator in the operating room
- Fitted with leakage protector







Model	AI-LCD-5
Anaerobic state formation time of sampling chamber	<5minutes
Anaerobic time is formed in the operating room	≤1hour
Anaerobic environment maintenance time	Operating room in the case of no supplement of trace gas mixture > 13 hours
Temperature control range for culture room (°C)	Room temperature +3~60
Culture room temperature fluctuation (°C)	<±0.3
Culture room temperature uniformity (°C)	<±1
Temperature resolution	0.1°C
Timing function	1~9999min
Power supply	220V,50HZ/600W
Culture room size (cm) W×D×H	30×19×29
Operation room size (cm) W×D×H	82×66×67
Overall dimension (cm) $W \times D \times H$	126×73×138



# **Anaerobic Culture System**

Anaerobic incubator is a special device that can be used for bacterial culture and operation in an anaerobic environment, The anaerobic state of the cell, constant temperature culture conditions and a systematic and scientific working area, the device, can cultivate difficult growth of anaerobic organisms, but also to avoid the past anaerobic organisms in the atmosphere when operating in contact with oxygen and death risk, so the device is an ideal anaerobic biological detection and scientific research equipment.

#### **Features**

- Can do anaerobic culture, can do micro-oxygen culture (oxygen concentration: 0-10%)
- Color touch screen, multifunctional PLC intelligent control, more gas saving
- Anaerobic in the sampling room and anaerobic in the operating room are one-button automatic gas replacement
- Oxygen content can be set
- Sample transfer: In and out of the ship, the first gas exchange is carried out before entering the incubator. 40 90mm plates can be transferred at a time, which is not only the access channel for operation, but also can be used to transfer plates
- Vacuum pumping and nitrogen filling are controlled by panel switch. External vacuum pump is standard
- High efficiency palladium catalyst, no need for frequent activation, oxygen concentration less than 0.1%
- Detoxification system, using ultraviolet sterilization lamp and high temperature to detoxify
- Gas path replacement adopts automatic control technology with positive pressure and negative pressure protection
- It can control CO<sub>2</sub>, humidity and temperature
- Unique oil bottle type pressure relief brake design protects internal positive pressure and prevents air leakage
- A number of low pressure, over temperature safety protection devices
- The front cover can be removed as a whole to facilitate placing larger instruments or thorough cleaning, with a standard power socket
- The touch screen directly displays the oxygen content of the operating room, which is convenient to observe whether the internal anaerobic state is reached
- Comfortable and reliable gloves, easy to use (optional bare hand operating system, comfortable operation, will not cause skin allergy)
- Oil-free vacuum pump

Model	AW-TS-5			
Incubator use temperature control range (°C)	Room temperature+3~60			
Incubator temperature uniformity (°C)	<±1			
Incubator temperature fluctuation (°C)	<±0.3			
Anaerobic class	Oxygen content in the operating room < 0.1%			
Anaerobic state formation time of sampling chamber	<5minutes			
The sampling chamber forms an anaerobic mode	Vacuum + gas replacement (nitrogen + mixture)			
Anaerobic state formation time in the operating chamber	< 70 minutes			
Anaerobic mode is formed in the operating room	Vacuum + gas replacement (nitrogen + mixture) + micro-flow mixture supplement and control			
Anaerobic environment maintenance time in operating room	Operating room in the case of no supplement of trace gas mixture > 13 hours			
Anaerobic formation control mode	Sampling room anaerobic, operating room anaerobic are one key automatic gas replacement			
CO <sub>2</sub> concentration control range	0~20% imported infrared sensor ${\rm CO_2}$ control accuracy $\pm 0.1\%$			
Humidity control range	50~90%RH			
Humidity fluctuation	±3%RH			
Power supply	220V,50HZ / 1500 W			
Shell material	All 304 stainless steel			
The size of incubator is (cm) $W \times D \times H$	42×30×50 can hold 100 90mm plates			
Incubator internal volume (L)	63			
Sampling chamber size (cm) $W \times D \times H$	40×33×32			
Sampling chamber channel size (cm) W×H	27.5×29.5			
Operating room dimensions (cm) $W \times D \times H$	95×68×75			
Overall dimension (cm) W×D×H	140×73×137			



# **COI Series CO<sub>2</sub> Incubator**

CO<sub>2</sub> Incubator is widely used in modern medicine, biology, chemistry and agriculture science for the culture of biological cells, tissues and bacterial.

#### **Features**

- Water jacket type or air jacket type structure, the studio is made of high-quality stainless steel plate and equipped with air duct, equipped with a fan to form a forced convection, improve the temperature uniformity in the box and the balance of CO<sub>2</sub> concentration
- Temperature control, using microcomputer data analysis and intelligent P.I.D control, its high precision, strong anti-interference ability. And three probes are used to control box temperature, water temperature and door temperature respectively, so that the studio temperature accuracy is high and the fluctuation is small (two probes are used to control box temperature and door temperature respectively)
- Light touch adjustment switch, light and flexible. Display and set parameters are digital display, each working state has LED indication
- With a variety of protection functions such as overtemperature, water shortage and gas loss, to ensure the safe operation of the equipment
- Use sterile gas filters and UV sterilizing lamps to reduce pollution
- Natural evaporation humidification, so that the working room to maintain good humidity
- The ratio of CO<sub>2</sub> gas and air can be arbitrarily selected according to the need, the
  direct reading glass rotor flowmeter with needle valve, small and beautiful,
  accurate scale





Model	COI-80 COI-160				
Chamber volume (L)	80	160			
Temperature range (°C)	RT+3~60				
Temperature stability (°C)	<b>≤</b> ±	0.2			
Temperature uniformity (°C)	<b>≤</b> ±	0.3			
CO <sub>2</sub> range	0~2	20%			
CO <sub>2</sub> control accuracy	± 0.1%(Impo	orted sensor)			
Humidity method	Natural va	porization			
Power supply	AC220\	/,50HZ			
Power rating (W)	600W	900W			
Chamber size (W $\times$ D $\times$ H)cm	40×40×50	50×50×65			
Exterior size ((W×D×H)cm	57×59×93	69×69×103			
Package szie(W×D×H)cm	75×69×112	85×75×125			
Net/Gross weight (kg)	555/85	75/110			
Shelf(Std/Max)	2 /9	3/13			



# **COI-P Series CO<sub>2</sub> Incubator**

CO<sub>2</sub> Incubator is widely used in modern medicine, biology,chemistry and agriculture science for the culture of biological cells, tissues and bacterial.

#### **Features**

- Water jacket type or air jacket type structure, the studio is made of high-quality stainless steel plate and equipped with air duct, equipped with a fan to form a forced convection, improve the temperature uniformity in the box and the balance of CO<sub>2</sub> concentration
- When the door is opened, the fan and CO<sub>2</sub> will be automatically closed Intake valve, and stop heating, in order to reduce air entry caused by pollution
- Temperature control, using microcomputer data analysis and intelligent P.I.D control, its high precision, strong anti-interference ability. And three probes are used to control box temperature, water temperature and door temperature respectively, so that the studio temperature accuracy is high and the fluctuation is small (two probes are used to control box temperature and door temperature respectively)
- Light touch adjustment switch, light and flexible. Display and set parameters are digital display, each working state has LED indication
- It has multiple protection functions such as overtemperature and gas cut-off to ensure the safe operation of the equipment
- Use sterile gas filters and UV sterilizing lamps to reduce pollution
- Natural evaporation humidification, so that the working room to maintain good humidity
- ${}^{ullet}$  CO $_2$  detection adopts imported first-class infrared waveguide patent and gold-plated probe to ensure the accuracy of measurement data. The concentration of CO $_2$  in the working room can be arbitrarily set within the range of 0  $\sim$  20%, and the control is based on microcomputer data analysis and intelligent P.I.D control. And with over concentration, concentration rise over flow and gas out alarm





Model	COI-80P	COI-160P			
Chamber volume (L)	80	160			
Temperature range (°C)	RT+3~60				
Temperature stability (°C)	≤±	=0.2			
Temperature uniformity (°C)	≤±	=0.3			
Timing range	1∼9999min or	without timing			
CO <sub>2</sub> range	0~20%				
Humidity method	Natural va	porization			
Power supply	AC220'	V,50HZ			
Power rating (W)	600	900			
Chamber size (W×D×H)cm	40×40×50	50×50×65			
Exterior size ((W×D×H)cm	57×59×93	69×69×103			
Shelf(Std/Max)	2 /9	3/13			



## **BCI Series Biochemical Incubator**

Biochemical incubator is suitable for environmental protection, health and epidemic prevention, drug testing, agricultural livestock, aquatic products and other scientific research, colleges and production departments. It is a special thermostatic equipment for water analysis and BOD determination, cultivation, preservation, plant cultivation and breeding of bacteria, molds and microorganisms.

#### **Features**

- Imported compressor, automatic control for hot and cold
- Microprocessor temperature control with large LCD display, high precision
- Polished stainless steel chamber, moveable shelves can be freely adjusted, easy for cleaning
- Equipped with power supply outlet and lamp inside
- The chamber equipped with fan for forced convection
- The surface coated, good appearance and maintenance
- Double door design, the inner door is made of tempered glass for easy observation, magnetic sealing design for outer door, good sealing
- Equipped with leakage protection
- Equipped with spare temperature control which ensures the product work normally even the main temperature control failed(for heating)



Model	BCI-80	BCI-150	BCI-200	BCI-250	BCI-300	BCI-400
Chamber volume (L)	80	150	200	250	300	400
Temperature range			0~6	50 °C		
Display resolution			0.1	. °C		
Temperature stability			Heating:±0.5°C	C;Cooling:±1°C		
Temperature uniformity			±.	1°C		
Timing range			1~999	99min		
Power rating (W)	180	250	300	350	400	550
Refrigerant			R1	34a		
Power supply			220±10	%V,50Hz		
Continuous operation			Long continu	ous operation		
Chamber size(W×D×H)cm	40×37×55	45×42×85	45×45×100	48×49×107	52×50×117	58×54×127
Exterior size(W $\times$ D $\times$ H)cm	54×59×107	59×64×137	59×66×152	62×70×159	66×71×169	72×75×179
Shelf(Std/Max)	2/8	3/13	3/15	3/16	3/18	3/20



## **BCI-C Series Biochemical Incubator**

Biochemical incubator is suitable for environmental protection, health and epidemic prevention, drug testing, agricultural livestock, aquatic products and other scientific research, colleges and production departments. It is a special thermostatic equipment for water analysis and BOD determination, cultivation, preservation, plant cultivation and breeding of bacteria, molds and microorganisms.

#### **Features**

- Imported compressor, automatic control for hot and cold
- Microprocessor temperature control with large LCD display, high precision
- Polished stainless steel chamber, moveable shelves can be freely adjusted, easy for cleaning
- Equipped with power supply outlet and lamp inside
- The chamber equipped with fan for forced convection
- The surface coated, good appearance and maintenance
- Double door design, the inner door is made of tempered glass for easy observation, magnetic sealing design for outer door, good sealing
- Equipped with leakage protection
- Equipped with spare temperature control which ensures the product work normally even the main temperature control failed(for heating)
- RS485 connector, temperature and time data can be displayed on computer and print



Model	BCI-175C	BCI-275C	BCI-375C	BCI-475C	BCI-800C	BCI-1075C
Chamber volume (L)	175	275	375	475	800	1075
Temperature range			-10-	75°C		
Display resolution			0.3	1°C		
Temperature stability			±0	.5°C		
Temperature uniformity			±.	1°C		
Timing range			0~99h	59min		
Power rating (W)	800	1000	1250	1300	2300	2300
Refrigerant			R1	34a		
Power supply			AC 220V±10	%,50Hz±2%		
Continuous operation			Long continu	ous operation		
Exterior size(W $\times$ D $\times$ H)cm	63×72×170.5	77×74×171	78×87×191.5	88×87×199.5	110×93×217	101×90×224
Chamber size(W $\times$ D $\times$ H)cm	45×42×93	58×51×93.5	59×55×116	70×55×125	96.5×61×137	95×70×160
Shelf(Std/Max)	3/8	3/8	3/10	3/12	3/13	3/14



# THC-W Series Constant Temperature and Humidity Box (internal humidification)

The product has a precise temperature and humidity control system, it provides various environmental simulation conditions required for industrial research, biotechnology testing, so it can be widely used in drug, textile, food processing and other asepsis test, stability check and industrial products of raw material performance, product packaging, product life and other tests.

#### **Features**

- Large-screen LCD display, multiple groups of data in one screen display, menu type operation interface, simple to understand, easy to operate
- Temperature and humidity control using the new digital display multi-segment program control technology, high precision, no overshoot
- The program has 99 cycles, each cycle is divided into 30 segments, each segment of 99 hours and 99 minutes cycle steps, can meet almost all the complex experimental process
- When the temperature exceeds the limit, the operation will be automatically interrupted, and the audible and visual alarm will prompt the operator to ensure the safe operation of the experiment without accidents
- The box structure adopts curved arc design, with novel and beautiful shape
- The studio is made of mirror stainless steel plate, the shelf can be adjusted height and free assembly, easy to clean the work room
- The surface of the outer box is sprayed with plastic, the whole machine is beautiful and reasonable, easy to use and maintain
- The door of the incubator is designed as a double door, the inner door is made of toughened glass, which can directly observe the situation in the working room. The outer door is sealed with magnetic door, which has good sealing
- Adopt international brand (Danfoss) compressor, 275 and above models with dual refrigeration system
- Adopt JAKEL tube flow circulating fan, with unique design of air duct structure, to create a good air circulation system, effectively ensure the temperature uniformity in the box
- Adopt imported brand humidity sensor, self-designed electric heat pipe humidification system, effectively
  ensure humidity deviation
- Fitted with leakage protector
- An auxiliary temperature controller is installed to ensure that the product will work even if the main temperature control is out of control (for heating)
- With USB interface, can be connected to printer or computer, can record the temperature parameter changes
- UV sterilization device

Model	THC-175W	THC-275W	THC-375W	THC-475W	THC-800W		
Chamber volume (L)	175	275	375	475	800		
Temperature range			0~65 °C				
Display resolution			1°C				
Temperature stability		Low to	emp.:±1°C , High temp.:	±0.5°C			
Temperature uniformity			±1°C				
Humidity range			40~90%RH				
Power consumption (W)	1600	1600 1800 2200 2250 4000					
Refrigerant			R134a				
Electricity			220V±10%,50Hz±2%				
Continuous running time		It can	run continuously for a lo	ng time			
Exterior size(W×D×H)cm	63×72×170.5	77×74×171	78×87×191.5	88×87×199.5	110×93×217		
Chamber size(W×D×H)cm	45×42×93	58×51×93.5	59×55×116	70×55×125	96.5×61×137		
Shelf(Std/Max)	3/8	3/8	3/10	3/12	3/13		



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  ensure humidity deviation
- Fitted with leakage protector
- An auxiliary temperature controller is installed to ensure that the product will work even if the main temperature control is out of control (for heating)
- With USB interface, can be connected to printer or computer, can record the temperature parameter changes
- UV sterilization device

Model	THC-175	THC-275	THC-375	THC-475	THC-800	THC-1075
Chamber volume (L)	175	275	375	475	800	1075
Temperature range			0~6	55 °C		
Display resolution			1	°C		
Temperature stability			Low temp.:±1°C,	High temp.: ±0.5°C		
Temperature uniformity			±	1 °C		
Humidity range			30~9	5%RH		
Power consumption (W)	1600	1800	2200	2250	4000	4000
Refrigerant			R1	34a		
Electricity			220V±10%	,50Hz±2%		
Continuous running time			It can run continuc	ously for a long time		
Exterior size(W $\times$ D $\times$ H)cm	63×72×170.5	77×74×171	78×87×191.5	88×87×199.5	110×93×217	101×90×224
Chamber size( $W \times D \times H$ )cm	45×42×93	58×51×93.5	59×55×116	70×55×125	96.5×61×137	95×70×160
Shelf(Std/Max)	3/8	3/8	3/10	3/12	3/13	3/14





## **Artificial Climate Box**

The artificial climate box is suitable for plant growth and tissue culture, seed germination, seedling cultivation, microbial culture experiment; The rearing of small insects; BOD measurement of water quality monitoring; Aging and service life test of medicinal materials, wood, building materials, as well as other uses of light, constant temperature, humidity more ideal test equipment.

#### **Features**

- The box structure adopts curved arc design, with novel and beautiful shape
- The use of fluorine-free imported compressor, 275 and above models are dual refrigeration system
- Adopt mirror stainless steel inner liner, four corners semi-arc transition, no tools can be removed the inner partition or partition strip. Easy to disinfect and clean the studio
- Can simulate nature's daytime and nighttime temperature changes, and can also simulate nature's multi-directional light source
- User-set parameters can be automatically stored in case of power failure, and the original program can be run after power supply
- Program controls temperature, humidity, illumination, time and heating rate, and can be controlled by 30 step program to make the complex test process is simplified to realize automatic control and operation
- When the artificial climate box fails, the LCD screen will show fault information, and the operation fault is clear at a glance
- Independent temperature limit alarm system, and sound and light alarm to remind the operator to ensure safe operation without accidents
- The temperature is too high or too low
- Fitted with leakage protector
- An auxiliary temperature controller is installed to ensure that the product will work even if the main temperature control is out of control (needle convection heating)
- With USB interface, can be connected to printer or computer, can record the change of parameters





Model	LCC-175	LCC-275	LCC-375	LCC-475	LCC-800	LCC-800S	LCC-1075	LCC-1075S	LCC-1675S
Chamber volume(L)	175	275	375	475	800	800	1075	1075	1675
Temperature range	With light: 10 $\sim$ 55°C Without light: 5 $\sim$ 55°C								
Temperature stability	±1°C								
Display resolution	0.1℃								
Temperature uniformity	±1.5℃								
Humidity range	30~95%RH								
Humidity deviation	±3%RH								
light intensity(LX)	0~12000	0~20000	0~25000	0~30000	0~30000	0~30000	0~30000	0~30000	0~30000
Program control	Separately set for temperature and light, can set 30-segment program, each section can be set from 1 to 99 hours								
Power rating(W)	1650	2200	2700	2900	4200	4200	4200	4200	4200
Power supply	AC220V, 50HZ								
Working	Long continuous operation								
Exterior size(W $\times$ D $\times$ H)cm	63×72×170.5	77×74×171	78×87×191.5	88×87×199.5	110×93×217	141.8×78.1×195	101×90×224	141.8×95.1×195	162.5×122×204
Chamber size(W $\times$ D $\times$ H)cm	45×42×93	58×51×93.5	59×55×116	70×55×125	96.5×61×137	126×50×127.5	95×70×160	126×67×127.5	146×85×135
Shelf (Std/Max)	3/16	3/16	3/21	3/22	3/22	6/18 (3 layers 6 pieces)	3/22	6/18 (3 layers 6 pieces)	6/18 (3 layers 6 pieces)

# **Medicine Stability Testing Chamber**

# **Medicine Stability Testing Chamber**

Drug stability test is a scientific method to create a long-term stable temperature, humidity and light environment for drug failure evaluation. It is suitable for pharmaceutical enterprises to accelerate the test of drugs and new drugs, long-term test, high humidity test and strong light exposure test. It is the best choice for pharmaceutical enterprises to carry out drug stability test.



#### **Features**

- An auxiliary temperature controller is installed to ensure that the product will work even if the main temperature control is out of control (for heating)
- The operation display is mounted on the door, which is convenient for the operator to observe and operate
- Large LCD touch screen (or large-screen LCD). Multiple groups of data in one screen display, menu operation interface, touch operation, make the
  operation more simple and clear
- Temperature and humidity control using the latest digital display multi-segment program control technology, high precision, no overshoot. With multiple programs, multiple cycles of the program, each cycle is divided into 30 sections, each section of 99 hours and 99 minutes of cycle steps, almost can meet all the complex experimental process
- Adopt imported brand humidity sensor, independently design water tank electric heating pipe humidification system, effectively ensure humidity accuracy
- PID control mode, temperature control, humidity control accurate fluctuation is small, menu operation page, simple to understand, easy to operate
- When the temperature exceeds the limit, the operation will be automatically interrupted and the operator will be alerted by sound and light alarm. Ensure the safe operation of the experiment without accidents
- It is equipped with a micro needle printer, which can actually record and print the current operating parameters of the equipment at any time according to customer requirements
- The box structure adopts curved arc design, with novel and beautiful shape
- Dual cooling system for models 275 and above
- The box and studio are designed with circular structure and are made of high quality antibacterial stainless steel with rounded edges
- The smooth surface of Easy to clean and maintain perfect cleanliness
- The studio is made of mirrored stainless steel panels with adjustable height and free assembly of shelves
- The working room is equipped with sterilization lamp, which is convenient for sterilization in the working room
- The surface of the outer box is sprayed with plastic, the whole machine is beautiful and reasonable, easy to use and maintain
- The door of the incubator is designed as a double door, and the inner door is toughened glass, which can directly observe the culture in the working room. The outer door is sealed by magnetic door with good sealing
- Adopt international brand (Danfoss) compressor
- This product is manufactured in accordance with the following standard pharmacopoeia Guidelines for drug stability testing
- Adopt JAKEL tube flow circulating fan, with unique design of air duct structure, to create a good air circulation system, effectively ensure the temperature uniformity in the box
- Safety device: inner box temperature protection, compressor overcurrent protection, compressor overpressure protection, water shortage protection, heater overheating protection, sound and light alarm when failure occurs
- · With USB interface, can be connected to printer or computer, can record the change of parameters

Model	MSC-175LC/ MSC-175TS	MSC-275LC-D/ MSC-275TS-D	MSC-375LC-D/ MSC-375TS-D	MSC-475LC-D/ MSC-475TS-D	MSC-800LC-D/ MSC-800TS-D	MSC-1075LC-D/ MSC-1075TS-D	
Power rating(W)	1650	2200	2700	2900	4000	4000	
Chamber volume(L)	175	275	375	475	800	1075	
Chamber size(W×D×H)mm	450×420×930	580×510×935	590×550×1160	700×550×1250	965×610×1370	950×700×1600	
Exterior size (W×D×H)cm	630×720×1705	770×740×1710	780×870×1915	880×870×1995	1100×930×2170	1010×900×2240	
Pallet (standard) /Maximum quantity	3/8	3/8	3/10	3/12	3/13	3/14	
Embedded printer	Standard arrangement						
Safety device	Compressor overheating protection, fan overheating protection, over temperature protection, compressor overpressure protection, overload protection, water shortage protection						



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- Safety device: inner box temperature protection, compressor overcurrent protection, compressor overpressure protection, water shortage protection, heater overheating protection, sound and light alarm when failure occurs
- With USB interface, can be connected to printer or computer, can record the change of parameters

Model	MGC-175LC/ MGC-175TS	MGC-275LC-D/ MGC-275TS-D	MGC-375LC-D/ MGC-375TS-D	MGC-475LC-D/ MGC-475TS-D	MGC-800LC-D/ MGC-800TS-D	MGC-800DLC-D/ MGC-800DTS-D	MGC-1075LC-D/ MGC-1075TS-D	MGC-1075DLC-D/ MGC-1075DTS-D
Power rating(W)	1650	2200	2700	2900	4200	4200	4200	4200
Chamber volume(L)	175	275	375	475	800	800	1075	1075
Chamber size(W $\times$ D $\times$ H)mm	450×420×930	580×510×935	590×550×1160	700×550×1250	965×610×1370	1260×500×1275	950×700×1600	1260×670×1275
Exterior size (W×D×H)cm	630×720×1705	770×740×1710	780×870×1915	880×870×1995	110×930×2170	1418×781×1950	1010×900×2240	1418×951×1950
Pallet (standard) /Maximum quantity	3/8	3/8	3/10	3/12	3/13	6/18 (3 layers 6 pieces)	3/14	6/18 (3 layers 6 pieces)
Embedded printer	Standard arrangement							
Safety device	Compressor overheating protection, fan overheating protection, over temperature protection, compressor overpressure protection, overload protection, water shortage protection.							



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