



OVENS & FURNACE /

INCUBATOR /

SHAKER & SHANKING INCUBATOR /

DISTILLATION & STIRRING /

FREEZER & REFRIGERATORS /

BIO SAFETY CABINET /



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AVAILABLE FOR ALL OVENS AND INCUBATORS



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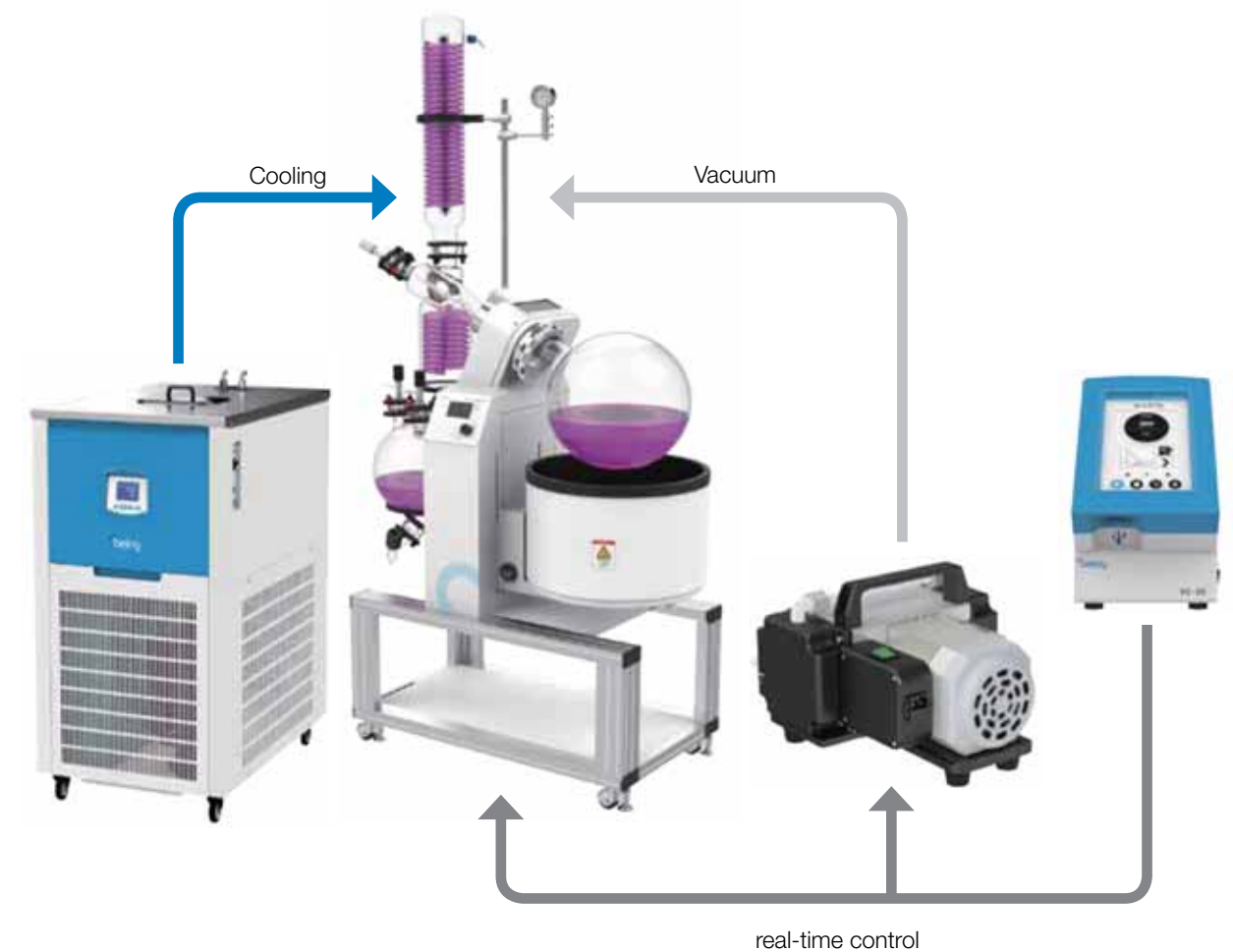
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Rotary Evaporator Package



Natural Convection Oven

The high temperature drying oven provides a stable high temperature environment through precise temperature control, which enables drying and disinfection of glassware, solid objects, solid materials, process equipment, etc. In this type of oven the temperature distribution is based on warm air moving upwards (see diagram). There is no fan that actively distributes the air inside the chamber. The benefit of this technology is very low air turbulences for gentle drying and heating.

Vacuum Oven

The vacuum oven maintains a certain degree of vacuum in the tank, lowers the boiling point, and can also be supplied with an inert gas. It is specially designed for the heat-sensitive, easy-decomposing and drying of easily oxidizable substances. It has a fast drying speed, low pollution and will not be dried, are widely used in pharmaceutical, food, chemical, electronics and other industries.

Intelligent

- It provides two options: colorful touch screen controller and LCD controller. It is easy to operate. (Professional type LCD controller)
- With preset power on, standby and shutdown functions.
- Parameters such as multi-stage temperature, circulating wind speed, time and heating rate can be set and programmed at the same time, simplifying the complicated test process and realizing automatic control and operation.

specialization

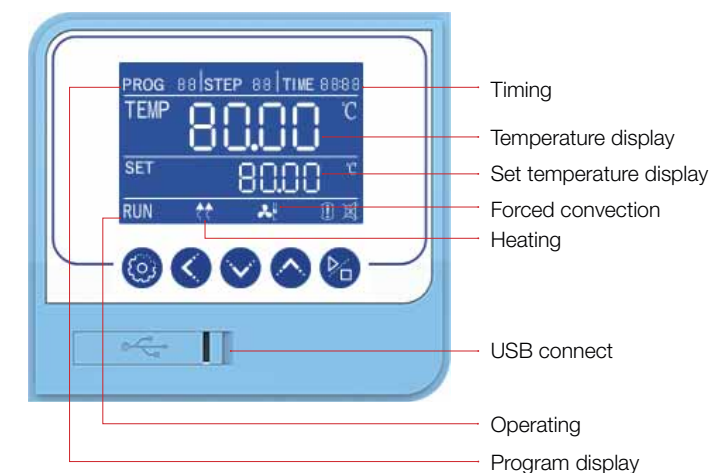
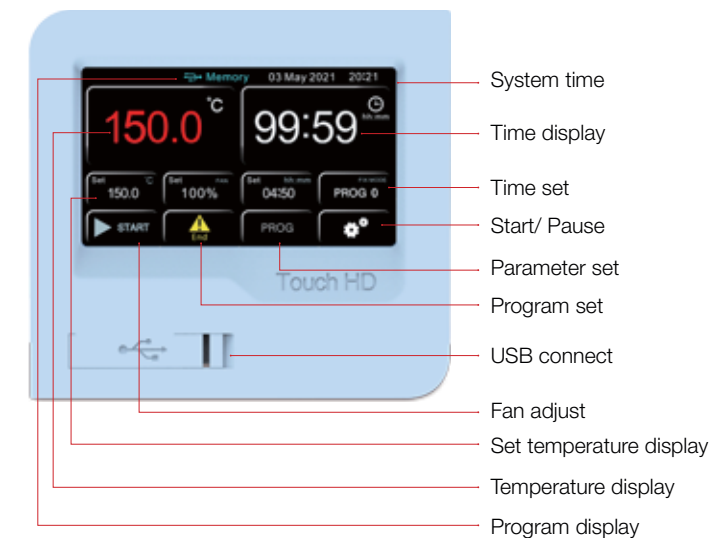
- Tested and manufactured using the international DIN-12880-2007 standard.
- Provide professional temperature control, high temperature control accuracy and small temperature uniformity error.
- Adopt Environmental Design to effectively prevent heat loss, and the heating power is reduced by 20% compared with the traditional design.
- Stackable to save lab space.

safety

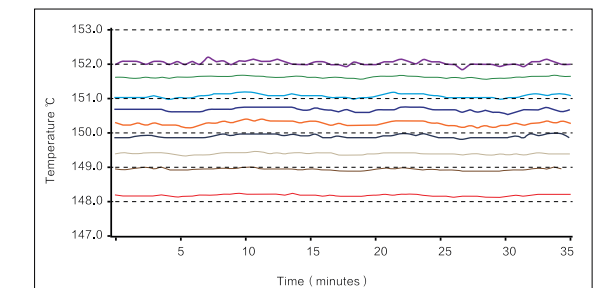
- **Protection of equipment:** The second set of temperature limit alarm system conforms to international standards. When the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off, and the sound and light alarm reminds the operator. Ensure that the equipment operates safely without accidents.
- **Protection of key components:** The key electrical components are equipped with over-current, over-temperature, overload and other safety protection to prevent accidental equipment.
- **Protection of the sample:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, and the sound and light will remind the operator to protect the sample from normal test without accident.
- **Protection for users:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Provide fault information:** When the device fails, the display will display fault information to ensure that the fault information is clear at a glance.



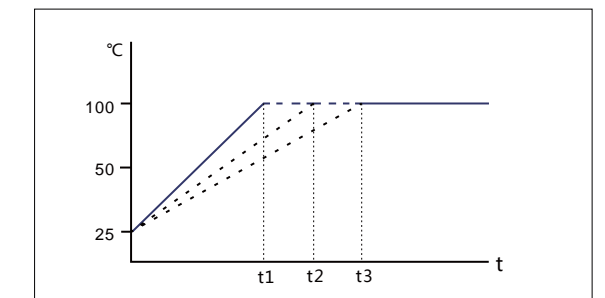
Colorful intelligent touch screen



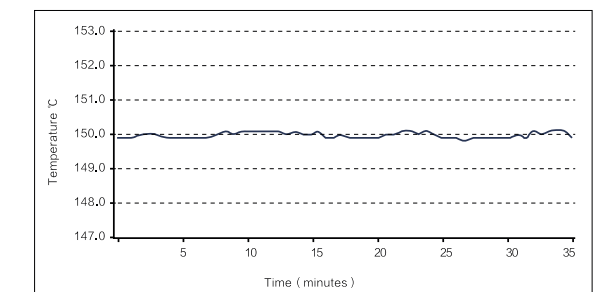
Precise temperature control



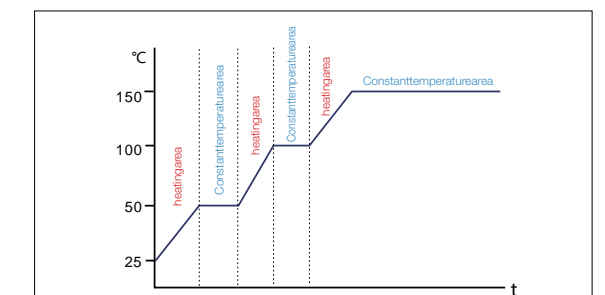
The uniformity of the temperature inside the drying chamber is $\leq \pm 2^\circ\text{C}$, so that all samples are heated evenly (BO-F series).
The uniformity of the temperature inside the drying chamber is $\leq \pm 2.5^\circ\text{C}$, so that all samples are heated evenly (BO-N series).
Note: The stability and uniformity are the result under steady state.



Program control mode, linear temperature rise control.



The temperature fluctuation inside the drying chamber is $\pm 0.3^\circ\text{C}$, which ensures the stability of the experiment.



Program control mode, Step heating control.

Oven / Forced Air Oven



Advanced Color Intelligent Touch Screen Control

- 4.3 inch touch screen, intelligent touch control, real-time display of parameters, simple and convenient operation.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Professional LCD Controller (L Series)

- Intelligent program control with high brightness LCD screen, button operation and real-time display of parameters.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Energy saving design

- Comprehensive safety performance design to prevent high energy consumption. New synthetic silicon sealing strip is used to prevent heat loss and prolong the life of heating elements. Compared with traditional equipment, thermal power is reduced by 25%.



Exhaust regulator (BO-F Series)

- The size of the valve opening can be adjusted arbitrarily according to the actual situation.
- Air valve adjustment can improve the ventilation efficiency of drying box and prevent excessive heat loss and also improve the uniformity of temperature.



Temperature test hole

- External detection sensor can real-time detect the temperature inside the box through the test hole to ensure the accuracy of the temperature inside the box.

Sample temperature detection

- Temperature sensors can be selected to monitor the temperature of samples in real time so as to make the temperature more real and reliable.
- Control system linkage to achieve the purpose of automatic drying. (option)



Circulating Fan (BO-F Series)

- Forced convection fan, large impeller fan design, good temperature Uniformity. The fan power is multi-stage adjustable to provide the right airflow for you.
- The fan power can be adjusted to improve the operation efficiency of the equipment and the service life of the motor. The service life of the motor can be increased by 30%.



Stainless steel inner liner

- 304 stainless steel, mirror polishing, strong anti-corruption ability.
- Large arc angle design, no dead angle, easy cleaning and maintenance.



Professional anti-slid and anti-overturning shelf design

- Shelf has anti-inclination function to avoid falling off when shelf is pulled out.
- Shelf has anti-lock function, the shelf will be locked when it is pulled out half, so as to avoid the loss caused by the direct slide of the shelf.



Oven / Forced Air Oven

Humanized design

- With reservation and timing functions, there is no need to wait, which effectively improves the efficiency of the experiment.
- Available in Chinese and English menus to meet different language needs, with °C / °F conversion.
- The height of the shelf is adjustable to meet different cultivation needs.
- Professional stacking foot design, the machine can be stacked, saving lab space and improving the use efficiency (same specification).

Safty

- **Protection on instruments:** Comply international standard secondary temp limiting alarm system, when the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off with sound and light alarm, ensure operating is safe without any accident.
- **Protection on key components:** Key components are equipped with over-current, over-temperature, overload and other safety protection to prevent accident.
- **Protection on samples:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, with sound and light alarm to remind the operator to protect the sample from normal test without accident.
- **Protection on operato:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Breakdown message provided:** When the instrument breakdown, the message will shown on the screen to help operator clearly check.

Convenient data processing

- The touch screen type standard with a USB interface, which can record the change status of the temperature parameters.
- The LCD screen is option for USB interface.
- It can be equipped with RS232 data interface, which can realize remote control of the machine through software (option);
- RS-232 and USB can be selected one of them.



Oven / Forced Air Oven

Technical parameters

Model	BO-30F BO-30FL	BO-50F BO-50FL	BO-120F BO-120FL	BO-200F BO-200FL	BO-400F BO-400FL
Capacity (L)	35L	59L	115L	234L	400L
Temp Range	RT+10°C – 200°C (MAX 300°C)				
Display Resolution	0.1°C				
Uniformity at 100°C	±2.0°C				
Heated to 100°C	25mins				
Standard Max number of shelves	2 (5)	2 (9)	2 (12)	2 (16)	3 (22)
Max load per shelf	20Kg				
NW	43Kg	51Kg	83Kg	112Kg	210Kg
Timing Range	1 – 5999mins				
Interior Dimension WxDxH(mm)	320x350x320	400x360x415	520x485x530	650x555x650	1000x560x800
Exterior Dimension WxDxH(mm)	610x550x540	690x560x640	810x685x755	940x750x875	1285x750x1060
Electrical Requirement	AC220V,50Hz				
Power Consumption	900W	1100W	2050W	2500W	3100W

BO-F series touch screen controller

BO-FL series LCD controller

Oven / Natural Convection

Technical parameters

Model	BO-30N BO-30NL	BO-50N BO-50NL	BO-115N BO-115NL	BO-200N BO-200NL
Capacity (L)	34L	54L	124L	222L
Temp Range	RT+10°C – 200°C (MAX 300°C)			
Display Resolution	0.1°C			
Uniformity at 100°C	±2.5°C			
Heated to 100°C	25mins			
Standard Max number of shelves	2 (5)	2 (6)	2 (10)	2 (16)
Max load per shelf	20Kg			
NW	43Kg	45Kg	74Kg	103Kg
Timing Range	1 – 5999mins			
Interior Dimension WxDxH(mm)	320x300x360	400x330x415	520x450x530	650x500x685
Exterior Dimension WxDxH(mm)	610x520x580	690x468x640	810x590x755	940x658x910
Electrical Requirement	AC220V,50Hz			
Power Consumption	850W	1050W	1950W	2250W

BO-N series touch screen controller

BO-NL series LCD controller

※ The outer dimensions do not include hinges, handles, gauges, wires, etc., and the internal dimensions do not include the duct section.

※ All test data are tested in a 25°C environment.

※ If the maximum temperature is to reach 300°C , please note in advance before ordering.

Vacuum Oven



Advanced Color Intelligent Touch Screen Control

- 4.3 inch touch screen, intelligent touch control, real-time display of parameters, simple and convenient operation.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Professional LCD Controller (L Series)

- Intelligent program control with high brightness LCD screen, button operation and real-time display of parameters.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Intelligent solenoid valve

- Vacuum exhaust pipe adopts solenoid valve automatic control, which is more convenient, labor-saving and safer than mechanical control valve.
- Joint control of solenoid valve and vacuum pump, solenoid valve opening vacuum pump can automatically open, solenoid valve closing vacuum pump can automatically close, avoiding the possibility of errors in operation.
- The inert gas intake pipeline is controlled by solenoid valve, which is easy to operate and safe.



Bundled heating technology

- The shelf is tightly combined with the inner gallbladder with large angle, large contact area, high thermal conductivity and good temperature uniformity, which is 40% higher than that of the traditional way and 50% higher than that of the box.
- The height of shelf is adjustable, it can be used for drying different sizes of articles and materials, and it is easy to operate.



Stainless steel inner liner

- The liner is made of 304 stainless steel, sandblasted and has good heat resistance. Strong corrosion resistance, ensuring durability and easy cleaning.
- The shelf is made of aluminum, sandblasted, and has a large contact area. High thermal conductivity, 40% higher heat transfer efficiency than conventional methods.
- The number of shelves is optional, and the number of shelves can be increased as needed to improve the efficiency of vacuum box use.

⑤

Large View Window

- Large viewing angle window is adopted to make the objects in the working room clear at a glance.
- Tempered and bullet-proof double-layer glass is used in the visible window, which has strong pressure resistance and is safe and reliable.
- The visible window has LED light source to observe the drying condition of the object in the box more clearly.(option)

⑥

Special Power Supply for Vacuum Pump

- With special power supply jack for vacuum pump and linkage control with solenoid valve, the vacuum pump can start automatically when the solenoid valve is opened. When the solenoid valve is closed, the vacuum pump can be automatically closed. The operation is simple and convenient, and there will be no misoperation. It is safe and reliable.

⑦

Inert Gas Intake Valve

- With inert gas inlet to meet the needs of special materials demand for inert gas drying.



Vacuum Oven

Humanized design

- With reservation and timing functions, there is no need to wait, which effectively improves the efficiency of the experiment.
- Available in Chinese and English menus to meet different language needs, with °C / °F conversion.
- The machine above 90L has moving casters for flexible and convenient movement.
- The door is closed and elastically adjustable, and the integrated molded silicone rubber door seal ring ensures the vacuum inside the box.

Safty

- **Protection on instruments:** Comply international standard secondary temp limiting alarm system, when the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off with sound and light alarm, ensure operating is safe without any accident.
- **Protection on key components:** Key components are equipped with over-current, over-temperature, overload and other safety protection to prevent accident.
- **Protection on samples:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, with sound and light alarm to remind the operator to protect the sample from normal test without accident.
- **Protection on operato:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Breakdown message provided:** When the instrument breakdown, the message will shown on the screen to help operator clearly check.

Convenient data processing

- The touch screen type standard with a USB interface, which can record the change status of the temperature parameters.
- The LCD screen is option for USB interface.
- It can be equipped with RS232 data interface, which can realize remote control of the machine through software (option).
- RS-232 and USB can be selected one of them.

Technical parameters

Model	BV-20 BV-20L	BV-50 BV-50L	BV-90 BV-90L	BV-120 BV-120L	BV-210 BV-210L
Capacity (L)	24L	51L	91L	125L	216L
Temp Range	RT+10°C – 200°C				
Temperature Accuracy	±1°C				
Display Resolution	0.1°C				
Max degree of vacuum	99Pa				
Standard Max number of shelves	2 (3)	2 (5)	2 (6)	2 (10)	2 (13)
Max load per shelf	20Kg				
Interior Material	304 stainless steel				
Interior Dimension WxDxH(mm)	300x300x275	415x370x345	450x450x450	500x500x500	600x600x600
Exterior Dimension WxDxH(mm)	445x505x590	580x594x670	610x721x774	660x824x774	760x874x924
NW	60Kg	95Kg	145Kg	175Kg	245Kg
Inert gas air inlet	standard				
Electrical Requirement	AC220V/50Hz				
Power Consumption	700W	1400W	2000W	2400W	2800W

BV- series touch screen controller BV-L series LCD controller

※ The outer dimensions do not include hinges, handles, gauges, wires, etc., and the internal dimensions do not include the duct section.

※ All test data are tested in a 25°C environment.

Option-Vacuum Pump

Low noise, high efficiency

- Two-stage vacuum pump control technology with lower noise, higher vacuum, higher pumping efficiency, for BV series , The vacuum drying time is around 2-4 mins.

Clean and reliable

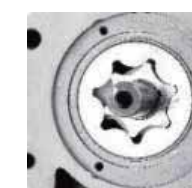
- Double anti-return oil structure to more reliably protect the vacuum system from oil pollution after shutdown.
- It adopts imported German oil seal and seals with fluororubber material to improve corrosion resistance and prevent oil leakage.
- Adopting the aviation technology bushing treatment process, the life of the exhaust valve piece reaches 10 billion times.
- It adopts high-quality materials such as vacuum pump oil imported from Japan, which makes the operation more reliable and has a longer service life.



Gas ballast



Auto antisuck back valve



Gear pump



Integrated pump body structure

Technical parameters

Vacuum oven model	Capacity(L)	Degree of vacuum	Vacuum pump model	Type	Flow of Vacuum pump	Time
BV-20	24	133Pa	VRD-8	two-stage pump	2L/S	1min
BV-50	51	133Pa	VRD-8		2L/S	1min
BV-90	91	133Pa	VRD-16		4L/S	2min
BV-120	125	133Pa	VRD-16		4L/S	3min
BV-210	216	133Pa	VRD-24		6L/S	4min

Technical parameters

Model	VRD-4	VRD-8	VRD-16	VRD-24	
Displacement speed	50Hz m3/h(L/s)	4(1.1)	8(2.2)	16(4.4)	24(6.6)
	60Hz m3/h(L/s)	4.8(1.3)	9.6(2.6)	19.2(5.2)	28.8(7.9)
Ultimate partial pressure gas ballast close	5x10 – 2Pa	5x10 – 2Pa	4x10 – 2Pa	4x10 – 2Pa	
Ultimate total pressure gas ballast close	5x10 – 1Pa	5x10 – 1Pa	4x10 – 1Pa	4x10 – 1Pa	
Ultimate total pressure gas ballast open	10 Pa	10 Pa	8x10 – 1Pa	8x10 – 1Pa	
Power supply	Single/Three-Ph				
Power rating	0.4/0.37kW	0.4/0.37kW	0.55kW	0.75 kW	
Level of protection	IP44				
Intake and exhaust	KF16/25	KF16/25	KF25	KF25/40	
Oil capacity	0.6 – 1.0 L	0.6 – 1.0L	0.9 – 1.5L	1.3 – 2.0 L	
Motor speed(50/60Hz)	1440 /1720 rpm				
Ambient temperature	10 – 40°C				
Noise level(50Hz)	≤ 52dB	≤ 52dB	≤ 58dB	≤ 58dB	
Weight	19 kg	21 kg	30 kg	35 kg	
Dimension(LxWxH)mm	440x144x217	440x144x217	530x188x272	567x188x272	

Muffle Furnace

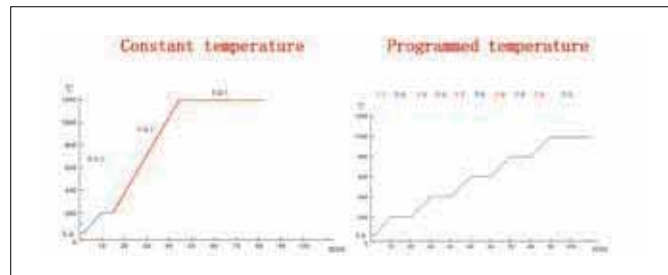
High quality electric furnace wire and alumina ceramic fiber insulation material provides efficient and reliable high-temperature heat treatment solutions for quenching, annealing, tempering of small steel parts which applied in industrial and mining enterprises, universities and research institutes; it can also be used as pre-treatment for sintering, ashing analysis, etc. of metal, stone tools and ceramics.

Features

- The structural design and safety meet international electrical safety standards.
- Microcomputer PID controller, easy to operate, accurate and reliable temperature control.
- Programming setting function with 7 periods and 9 steps for each period, which means there are 63 programmable steps in total.
- High quality heating elements has higher aging resistance, corrosion-resistant ceramic fiber furnace with light weight, they're built with long-life.
- The chimney ensures the combustion is more complete.
- Housing made of sheets of cold-rolled steel finish by powder coated.
- Present start and off function according customer requirement.
- Lightweight door design makes opening and closing door safe and easy.

Safety

- Low noise cooling fan, adjust the external temperature of the furnace body.
- Over-current, over-voltage, overheat and various safety measures to ensure safety.
- The safety switch will automatic shutdown when door open ensures the safety of the operator.
- Ceramic fiber furnace insulation material with good heat insulation effect, low temperature on shell surface.



Programmed temperature and constant temperature curve graph



High quality electric furnace wire



Ceramic fiber furnace



Specifications

Model		BWF-11/02	BWF-11/07	BWF-11/12	BWF-12/02	BWF-12/07	BWF-12/12
Chamber Volume(L)		2L	7L	12L	2L	7L	12L
Temperature	Maximum(°C)	1100			1200		
	Working(°C)	1000			1100		
Preset start and off		√			√		
Programmable Controller		√			√		
Datalogging		USB (option)					
Sensor		Type K thermocouple					
Insulation material		Alumina ceramic fiber					
Heating	Element	Fe-Cr-Al					
	Time(mins)	35 – 65			30 – 52		
Interior Dimension (WxDxH)mm		120×200×80	200×300×120	300×200×200	120×200×80	200×300×120	300×200×200
External Dimension (WxDxH)mm		380×495×584	460×650×674	490 ×690×730	380×495×584	460×650×674	490×690×730
Safety	Chimney	√			√		
	Over-current protector	√			√		
	Power failure memory	√			√		
	Anti-scalding protection	√			√		
N/W(Kg)		35	45	67	35	45	67
Power Consumption (Kw)		1.5	3	4	1.5	3	4
Power Supply		220V 50/60HZ 1P					

Specifications

Model		BWF-11/02N	BWF-11/07N	BWF-11/16N	BWF-12/02N	BWF-12/07N	BWF-12/16N
Chamber Volume(L)		2L	7L	16L	2L	7L	16L
Temperature	Maximum(°C)	1100			1200		
	Working(°C)	1000			1100		
Preset start and off		√					
Programmable Controller		√					
Datalogging		USB (option)					
Sensor		Type K thermocouple					
Insulation material		Alumina ceramic fiber					
Heating	Element	Fe-Cr-Al					
	Time(mins)	35 – 65			30 – 52		
Interior Dimension (WxDxH)mm		120×200 ×80	200×300×120	250×400×160	120×200×80	200×300×120	250×400×160
External Dimension (WxDxH)mm		380×495×584	460×650×674	550×800×710	380×495×584	460×650×674	550×800×710
Safety	Chimney	√			√		
	Over-current protector	√			√		
	Power failure memory	√			√		
	Anti-scalding protection	√			√		
Power Consumption (Kw)		2.5	4	8	2.5	5	10
Power Supply		220V 50/60HZ 1P		380V 50/60HZ 3P	220V 50/60HZ 1P		380V 50/60HZ 3P

Cooling Incubator

The cooling incubator has both cooling and heating functions, the lowest temperature can reach -10°C , the temperature stabilization time is short, and the temperature control precision is high. For the storage of culture media, serum, medicines, microbial culture, environmental testing, etc., it is environmental protection, sanitation and epidemic prevention, drug testing, farm animals, water Ideal thermostatic equipment for research institutes.

Heating Incubator – natural convection

The heating incubator provides stable and controllable temperature environment through precise temperature control. It adopts natural convection mode, stable airflow and small temperature fluctuation. It is widely used in bacterial culture, fermentation, breeding, constant temperature culture and other tests.

Heating Incubator – forced convection

The heating incubator provides stable and controllable temperature environment through precise temperature control. It adopts forced convection mode, full airflow exchange, good temperature uniformity and small fluctuation. It is widely used in bacterial culture, fermentation, breeding, constant temperature culture and other tests.

Intelligent

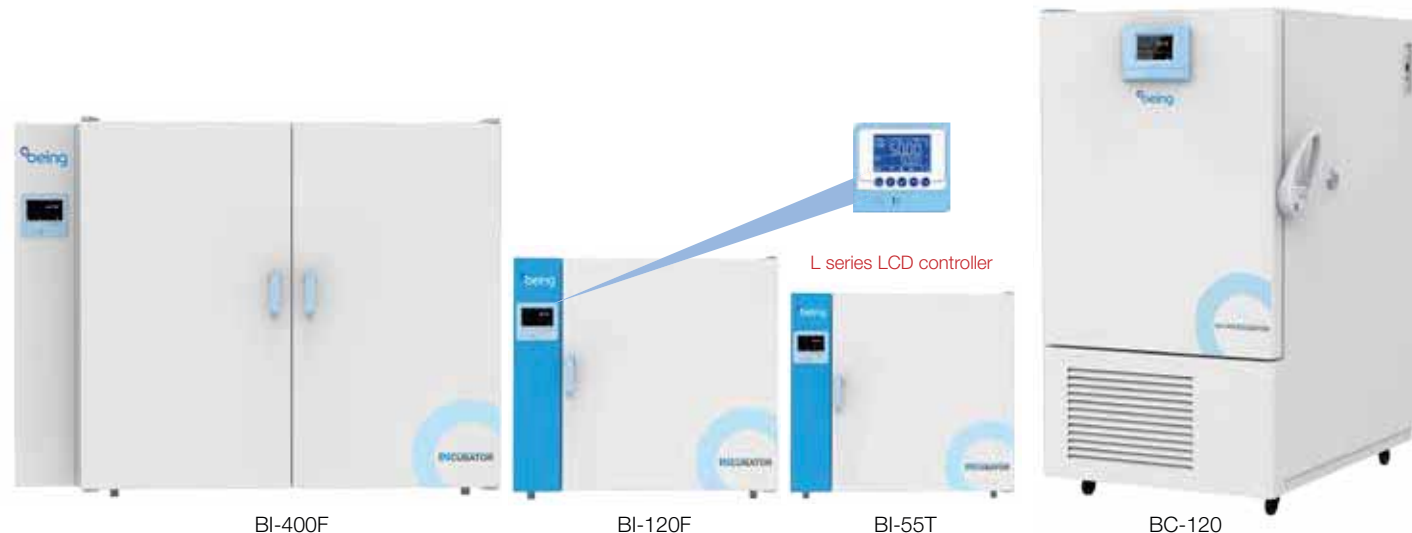
- It provides two options: colorful touch screen controller and LCD controller. It is easy to operate. (Professional type LCD controller)
- With preset power on, standby and shutdown functions.
- Parameters such as multi-stage temperature, circulating wind speed, time and heating rate can be set and programmed at the same time, simplifying the complicated test process and realizing automatic control and operation.

Specialization

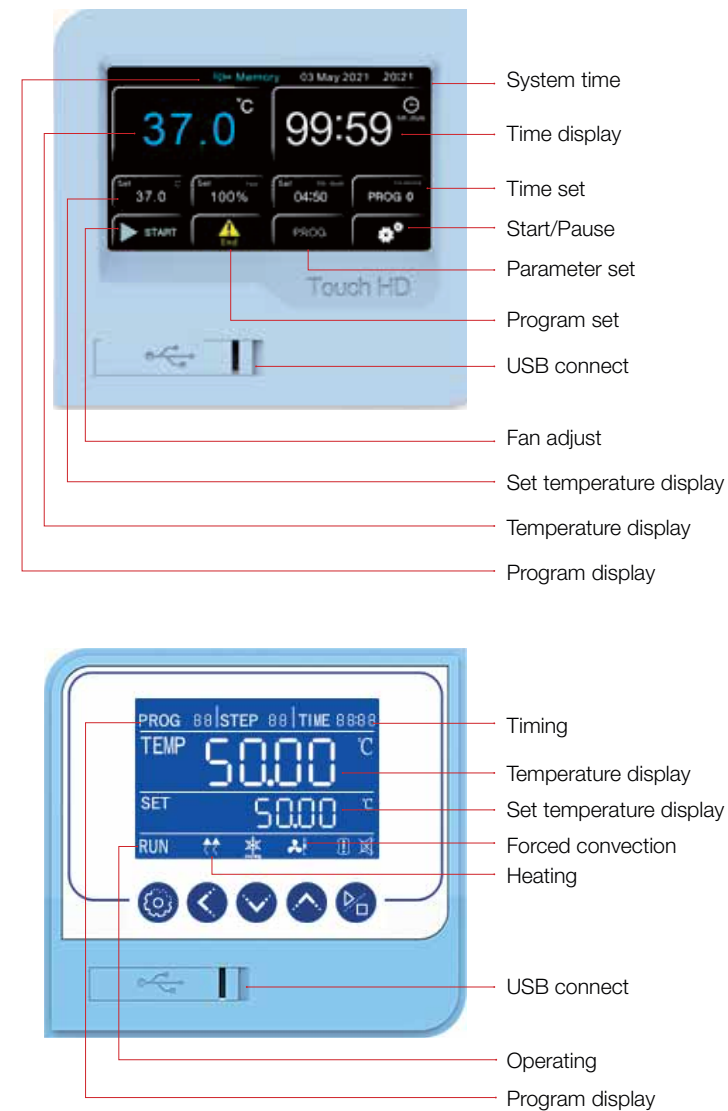
- Tested and manufactured using the international DIN-12880-2007 standard.
- Provide professional temperature control, high temperature control accuracy and small temperature uniformity error.
- The sample can be viewed through the internal glass door without affecting the temperature inside the box (option)
- Stackable to save lab space.
- Flexible shelf design for efficient use of interior space.

Safety

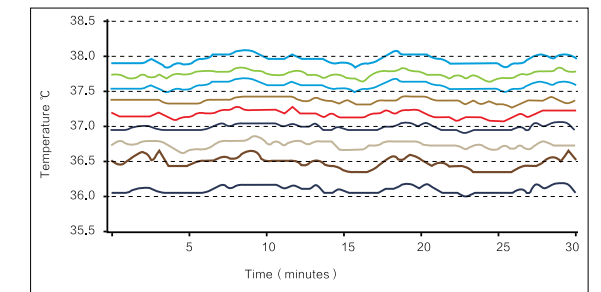
- **Protection of equipment:** The second set of temperature limit alarm system conforms to international standards. When the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off, and the sound and light alarm reminds the operator. Ensure that the equipment operates safely without accidents.
- **Protection of key components:** The key electrical components are equipped with over-current, over-temperature, overload and other safety protection to prevent accidental equipment.
- **Protection of the sample:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, and the sound and light will remind the operator to protect the sample from normal test without accident.
- **Protection for users:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Provide fault information:** When the device fails, the display will display fault information to ensure that the fault information is clear at a glance.



Colorful intelligent touch screen

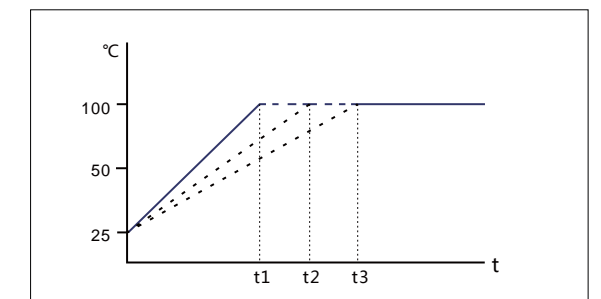


Precise temperature control

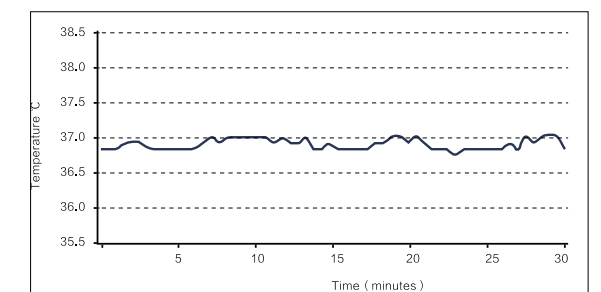


The uniformity of the temperature inside the incubator chamber is $\leq \pm 1.0^{\circ}\text{C}$, so that all samples are heated evenly.

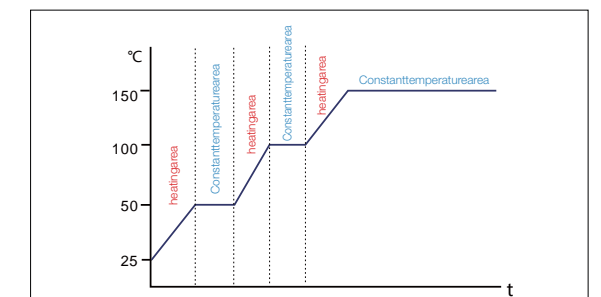
Note: The stability and uniformity are the result under steady state.



Program control mode, linear temperature rise control.



Temperature fluctuation inside the incubator chamber is $\pm 0.2^{\circ}\text{C}$, which ensures the stability of the experiment.



Program control mode, Step heating control.

Cooling Incubator (BC/BJ series)



Professional LCD Controller (L Series)

- Intelligent program control with high brightness LCD screen, button operation and real-time display of parameters.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Advanced Color Intelligent Touch Screen Control

- 5.0 inch touch screen, intelligent touch control, real-time display of parameters, simple and convenient operation.
- Quick setting of temperature, time and other parameters can be carried out. It has the function of program setting.
- It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.
- With touch screen automatic locking function to prevent non-related personnel from disoperation.



Professional duct design

- With a unique duct design, the use of large impeller fans, fast temperature rise and fall, stable temperature control, good temperature uniformity.
- The circulating fan has adjustable speed, middle and low grades, so as to avoid the volatilization of samples due to excessive air flow during the test.
- Famous brand fan, high efficiency, low noise, energy saving and environmental protection.



Stainless steel inner liner

- 304 stainless steel, mirror polishing, strong anti-corruption ability.
- Large arc angle design, no dead angle, easy cleaning and maintenance.



Refrigeration system

- International brand compressors, with high refrigeration efficiency and low noise, shorten cooling time by 40% compared with traditional cryogenic equipment, save energy and protect environment.
- Minimum temperature up to - 10°C , with refrigeration and heating functions.
- Automatic switching of refrigeration and heating, high control accuracy and fast temperature stability.

No overturning system

- Wire shelves with no overturning system to always operate safely.



Ultraviolet sterilization system (option)

- Ultraviolet lamp is located on the upper wall of the box body. It can disinfect the box body regularly and kill the plankton bacteria in the circulating air of the box body effectively so as to prevent the pollution during cell culture.



Reserved test hole

- External detection sensor can real-time detect the temperature inside the box through the test hole to ensure that the temperature inside the box is accurate and reliable.



Cooling Incubator

Humanized design

- With casters, flexible and convenient to move.
- With reservation and timing functions, there is no need to wait, which effectively improves the efficiency of the experiment.
- Available in Chinese and English menus to meet different language needs, with °C / °F conversion.

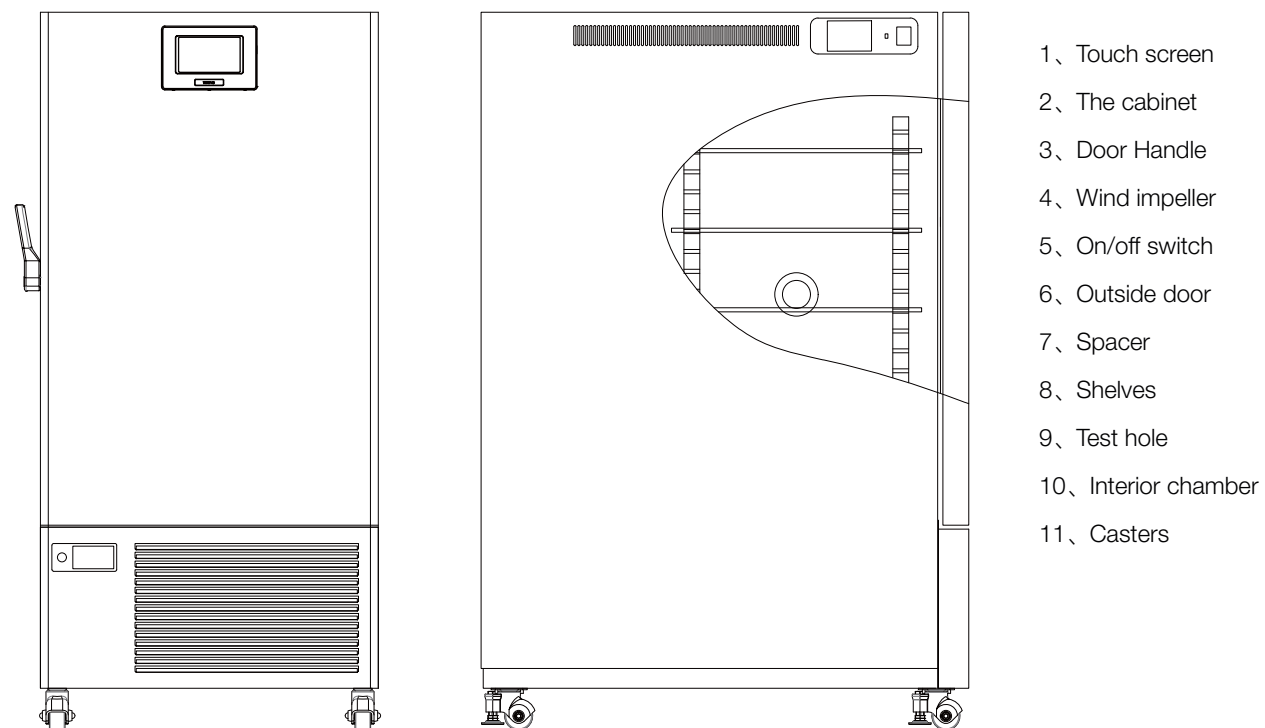
Safty

- **Protection on instruments:** Comply international standard secondary temp limiting alarm system. When the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off with sound and light alarm, ensure operating is safe without any accident.
- **Protection on key components:** Key components are equipped with over-current, over-temperature, overload and other safety protection to prevent accident.
- **Protection on samples:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, with sound and light alarm to remind the operator to protect the sample from normal test without accident.
- **Protection on operator:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Breakdown message provided:** When the instrument breakdown, the message will shown on the screen to help operator clearly check.

Convenient data processing

- The touch screen type standard with a USB interface, which can record the change status of the temperature parameters. The LCD screen is option for USB interface.
- It can be equipped with RS232 data interface, which can realize remote control of the machine through software (option).
- RS-232 and USB can be selected one of them.

Cooling incubator Structure diagram



Cooling Incubator

Technical parameters

Model	BC-60 BC-60L	BJ-60 BJ-60L	BC-120 BC-120L	BJ-120 BJ-120L	BC-250 BC-250L	BJ-250 BJ-250L	BC-500 BC-500L	BJ-500 BJ-500L
Capacity (L)	68L		120L		252L		495L	
Temp Range	-10 – 80°C							
Display Resolution	0.1°C							
Uniformity	±1.0°C							
Timing Range	1 – 5999mins							
Max number of shelves	2(10)		3(14)		3(16)		4(16)	
Max load per shelf	20Kg							
NW	85Kg		100Kg		120Kg		220Kg	
Interior Dimension WxDxH(mm)	400x380x450		500x400x600		550x600x750		670x725x1020	
Exterior Dimension WxDxH(mm)	545x670x1000		645x690x1150		695x890x1300		850x1095x1935	
Electrical Requirement	AC220V/50Hz							
Power Consumption	1300W		1500W		1700W		2250W	
UV lamp	option	standard	option	standard	option	standard	option	standard

BC/BJ series touch screen controller
 BC series Cooling incubator

BC/BJ-L series LCD controller
 BJ series Cooling incubator with UV lamp

Heating Incubator



Professional LCD Controller (L Series)

- Intelligent program control with high brightness LCD screen, button operation and real-time display of parameters.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.



Advanced Color Intelligent Touch Screen Control

- 4.3 inch touch screen, intelligent touch control, real-time display of parameters, simple and convenient operation.
- Quick setting of temperature, time and other parameters can be carried out.
- It has the function of program setting. It can be programmed in 7 segments, 63 steps, 9 steps and 1-99 hours and 59 minutes per segment.
- With touch screen automatic locking function to prevent non-related personnel from disoperation.



No overturning system

- Wire shelves with no overturning system to always operate safely.



Professional duct design

- With a unique duct design, the use of large impeller fans, fast temperature rise and fall, stable temperature control, good temperature uniformity.
- The circulating fan has adjustable speed, middle and low grades, so as to avoid the volatilization of samples due to excessive air flow during the test.
- Famous brand fan, high efficiency, low noise, energy saving and environmental protection.



Ultraviolet sterilization system (option)

- Ultraviolet lamp is located on the upper wall of the box body. It can disinfect the box body regularly and kill the plankton bacteria in the circulating air of the box body effectively so as to prevent the pollution during cell culture.

Stainless steel inner liner

- 304 stainless steel, mirror polishing, strong anti-corruption ability.
- Large arc angle design, no dead angle, easy cleaning and maintenance.



Sample temperature sensor (optional)

- Optional sample temperature sensor, real-time detection of sample temperature, so that the temperature is more real and reliable.

Double Convection Model

- Fan power can be adjusted from 0% (equivalent to natural convection) - 100% four gears, which can meet the training requirements of different airflow.



Temperature test hole

- External detection sensor can real-time detect the temperature inside the box through the test hole to ensure that the temperature inside the box is accurate and reliable.



Temperature limit alarm system

- When the temperature control system is out of control and the temperature exceeds the limit temperature, the heating is automatically interrupted to ensure the safety of testing.



Heating Incubator

Humanized design

- Adopting direct heating system, the heating speed is fast and the control precision is high.
- PID control technology, high control precision and small temperature fluctuation.
- Available in Chinese and English menus to meet different language needs, with °C / °F conversion.
- The height of the shelf is adjustable to meet different cultivation needs.
- Professional stacking foot design, the machine can be stacked, saving lab space and improving the use efficiency (same specification).

Convenient data processing

- The touch screen type standard with a USB interface, which can record the change status of the temperature parameters. The LCD screen is option for USB interface.
- It can be equipped with RS232 data interface, which can realize remote control of the machine through software (option).
- RS-232 and USB can be selected one of them.

Safty

- **Protection on instruments:** Comply international standard secondary temp limiting alarm system. When the heating is out of control or exceeds the maximum limit temperature, the heating is automatically cut off with sound and light alarm, ensure operating is safe without any accident.
- **Protection on key components:** Key components are equipped with over-current, over-temperature, overload and other safety protection to prevent accident.
- **Protection on samples:** When the temperature inside the box is higher or lower than the set temperature, the alarm will start to cut off the heater, with sound and light alarm to remind the operator to protect the sample from normal test without accident.
- **Protection on operator:** The cabinet and door are specially insulated to make the surface temperature of the cabinet low, ensuring the operator's safety and no accidents.
- **Breakdown message provided:** When the instrument breakdown, the message will shown on the screen to help operator clearly check.



Technical parameters (Natural Convection)

Model	BI-35T BI-35TL	BI-55T BI-55TL	BI-120T BI-120TL	BI-200T BI-200TL
Capacity (L)	34L	54L	124L	222L
Temp Range	RT+5 – 80°C			
Stability	±0.2°C			
Uniformity(at 37°C)	±0.8°C			
Display Resolution	0.1°C			
Max number of shelves	2(5)	2(6)	2(10)	2(16)
Max load per shelf	20Kg			
NW	44Kg	53Kg	79Kg	108Kg
Timing Range	1 – 5999mins			
Interior Dimension WxDxH(mm)	320x340x320	400x360x380	520x480x490	650x540x650
Exterior Dimension WxDxH(mm)	610x520x580	690x468x640	810x588x755	940x658x910
Electrical Requirement	AC220V,50Hz			
Power Consumption	250W	300W	550W	700W

BI-T series touch screen controller

BI-TL series LCD controller

Technical parameters (Air Forced)

Model	BI-35F BI-35FL	BI-55F BI-55FL	BI-120F BI-120FL	BI-200F BI-200FL	BI-400F BI-400FL
Capacity (L)	35L	67L	146L	253L	420L
Temp Range	RT+5 – 80°C				
Stability	±0.2°C				
Uniformity(at 37°C)	±0.8°C				
Display Resolution	0.1°C				
Max number of shelves	2(5)	2(9)	2(12)	2(16)	2(23)
Max load per shelf	20Kg				
NW	48Kg	56Kg	82Kg	119Kg	160Kg
Timing Range	1 – 5999mins				
Interior Dimension WxDxH(mm)	320x390x320	400x405x415	520x510x530	650x600x650	1000x530x800
Exterior Dimension WxDxH(mm)	610x550x545	690x560x640	810x685x755	940x755x875	1285x750x980
Electrical Requirement	AC220V,50Hz				
Power Consumption	300W	350W	600W	700W	1000W

BI-F series touch screen controller

BI-FL series LCD controller

※ The outer dimensions do not include hinges, handles, gauges, wires, etc., and the internal dimensions do not include the duct section.

※ All test data are tested in a 25°C environment.

Air jacket CO₂ incubator

BIO-RHP series/BPN-CRH series

Water jacket CO₂ incubator

BIO-RWP series

Precision temperature control (37%)

+

Stable CO₂ concentration control (5%)

+

+

Saturated humidity environment (≥95%)

+

Effective microbial contamination prevention

Technical Specifications



Basic Research



Cell Biology



Biotechnology



Clinical University Hospital



Organizational Engineering



IVF

Being CO₂ incubator family

Model	Heating way	CO ₂ control way	Controller	Sterilization way
CRH	Air jacket heat	Infrared sensor	LCD with button	Ultraviolet ray + HEPA
RHP	Air jacket heat	Infrared sensor	Touch screen	90°C high temp. and high humidity + HEPA
RWP	Water jacket heat	Infrared sensor	Touch screen	Ultraviolet ray + HEPA

BPN-

Chamber volume 40L\50L\60L\80L\150L\170L\190L\240L

Friendly and simply operation interface (touch screen)

Main interface

On time display

- Chamber temp. real value
- Chamber temp. set value
- CO₂ real value
- CO₂ set value

Curve display interface

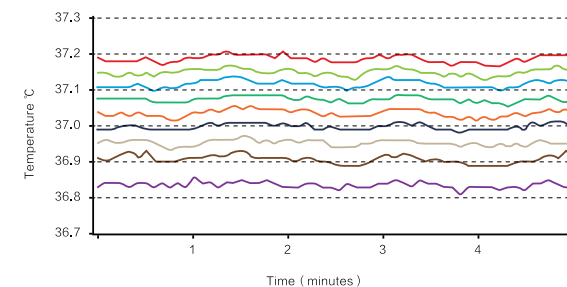
- Temp. display value
- Temp. set value
- CO₂ display value
- CO₂ set value
- Humidity display value (option)
- Open and close door status curve
- CO₂ curve
- Temp. curve
- Humidity curve

Sterilization set

- Screen lock
- Main screen
- System setting
- Sterilization setting
- Curve display
- Message
- Abnormal alarm
- Door status
- USB
- Alarm message
- Fan status
- Printer
- UV light

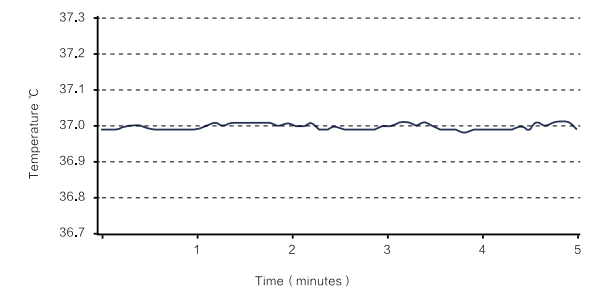
It can display on time performance curve. You can check the temp., humidity and CO₂ concentration three group curves changes at the same time. And abnormal alarm and door open or close message.

Accuracy temperature control system



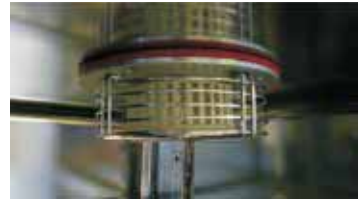
Temp. in the chamber temp. uniformity $\pm 0.2^{\circ}\text{C}$, all the samples are universal heating.

Note: Curve and uniformity are tested when the temp. in chamber are stable.



Temp. in the incubator temp. wave is $\pm 0.1^{\circ}\text{C}$

BIO-RHP/RWP series CO₂ incubator



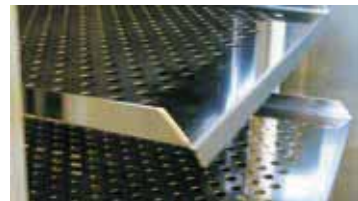
Intelligent air cycle system

- The power of cycle fan can be adjustable. When the temperature in the chamber is stable, the fan speed will be lowered down, it is adjusted to the speed that suitable for cell growth and avoid the samples vapor due to too much air.
- Temperature, CO₂ concentration and temp. uniformity are improved by cycle fan.



Door control switch

- When the incubator is working and user open the inner glass door, CO₂ incubator will pause heating ,CO₂ gas inlet and cycle fan working automatically.



Shelves

- Easy-to-install and dismantle stainless steel shelf system that also prevents slippage.
- According to different chamber volume, the shelves heights can be easily adjusted or increased.
- Prevent slippage design When the experimenters place a large number of cell culture bottles or petri dishes and draw the shelves half out of the chamber, the shelves still can keep level to prevent the culture fluid overflow.



Integral internal chamber

- Stainless steel chamber 100% sunken corner, no dead angle and facilitate the experimenter's clean.
- Chamber and shelves are stainless steel by special electroplating treatment, it avoid corrosion and easy to clean and sterilization. No dead corner prevents microorganisms contamination.



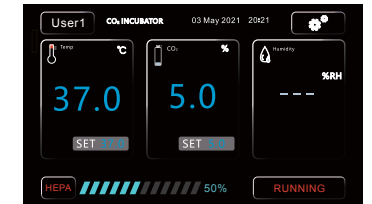
No water tray humidity providing design

- The machine outer high inside low structure can allow water go into chamber directly then no need for experimenter place water tray. It can ensure max square water evaporator and ensure chamber inside related humidity is more than 95%.The incubator inside humidity saturated fast, it avoid the sample dehydration.



Test hole(Option)

- It facilitate experiment operation and test temperature, achieving integrity of the experiment.
- When the incubators inside needs auxiliary equipments, the electric wires or control wires can go through the test hole to inside the chamber, then it doesn't need to guide the wires from the door and affect the whole chamber seal.



Multi-intelligent detection system

- Replace traditional button operation to touch screen interface.
- It can display on time performance curve. You can check the temp., humidity (option) and CO₂ concentration three group curves changes at the same time. And abnormal alarm and door open or close message.
- With various alarms for example: Door unsealed, over or low temp. alarms, over or low CO₂ concentration alarms, high temperature sterilization alarm, sensor broken etc.
- RS-485 can be installed for long distance remote control. (Options)

Door grooved handle

- Experimenter can easily open or close door because the grooved handle, it is easy to clean.

Magnetic door gasket

- Outer door uses magnetic door seal, inner glass door and chamber use silicone rubber seal, it ensures inside fully seal.

Heated outer door

- The outer door is heated to prevent condensed water from the glass door. It facilitates observe the experiment process, also it avoid the biological pollution possibility due to the condensed water from the inner glass door.

Inner glass door

- This door is convenient for experiment observe.The back of glass door has door switch.When the glass door open, the machine can cut down heating and air inlet valve and close the cycle fan.It prevents temp. CO₂ concentration out of control.

HEPA filter (Only applied for RHP/RWP)

A. HEPA efficient filters

- The CO₂ gas quality is a important factor to judge cell culture in the CO₂ incubator. HEPA high efficient filters can filter bacteria and dust in the air. It eliminates cross contamination from outer air to incubator chamber air and keep the chamber inside aseptic. Close the door for 5 min, inside air can fast resume to hundred grade clean. HEPA air filter is easy to disassemble without any special instruments.



B. Microbe HEPA filter

- CO₂ access port equips micro biological HEPA filter, it can filters diameter ≥0.3um Particles like CO₂ gas bacteria and dust, the efficient reaches to 99.99%.

C. CO₂ inlet control system

- We supply pressure release valve together with the equipment. It can control the pressure stable.
- The system has pressure protection function, it prevents over pressure or low pressure to the pipes that affect stable gas supply.



BIO-RHP Air jacket CO₂ incubator touch screen type

Intelligent touch screen controller

- Replace traditional button operation to touch screen interface.
- It can display on time performance curve. You can check the temp., humidity (option) and CO₂ concentration three group curves changes at the same time. And abnormal alarm and door open or close message.
- When parameters are set, the controller will lock the screen automatically, it avoid unauthorized person wrong operation on the machine.
- 72 hours machine performance inquiry, it is convenient for user to check abnormal situation and track historical running information.
- RS-485 communication port as options can be remote control on computer for monitoring the running and start or close the machine.



CO₂ concentration sensor

- You may need to open door frequently during experiment, infrared sensor is the best choice under this circumstances. Our infrared sensor is very sensitive to CO₂ concentration varies and it will be not affected by inside of incubator chamber conditions, measured accurately. It doesn't like traditional thermal probe that will be sensitive to chamber temp., and humidity that lead to incorrect CO₂ concentration data.
- If open the door for 30s and close the door, within 3 min the CO₂ concentration can resume to the set value 5%. Even if there are many people use the same machine and frequently open and close door, the inside chamber can still maintain CO₂ concentration stable and uniform.

Temperature control and monitoring system

A. Incubator temperature control system

- PT100 temp. sensor keeps inside chamber temperature accurate. It can adjust the heating power according to the temp. differences between actual temp. in the chamber and set temp. to make sure temp. in the chamber is accurate. It can resume experiment temp. in 3 min after user open and close door to take samples.

B. Door heating system

- Outer door ring has heating function. The temperature of door ring will be a little bit higher than temp. in the chamber to prevent condensed water coming from the inner glass door. It facilitates observe the experiment process, also it avoid the biological pollution possibility due to the condensed water from the inner glass door.

C. Environment temp. detect system

- Independent environment temp. detector, it can automatically adjust the CO₂ incubator heating system according to experiment environment temp. varies, in this case, over temp. in the chamber will not happen.

D. Over temp. protection system

- It is an independent backup temp. control system besides the CO₂ incubator temp. control system. When the incubator temp. control system failed and caused temp. lose control, the chamber temp. reaches to the over temp. limiter set value, over temp. protection system will cut down the heating and alarm audible with light.

E. Power off alarm system

- Detect the power supply real time. When power off, the incubator will alarm audible with light to avoid any loss due to power shortages.



Sterilization system

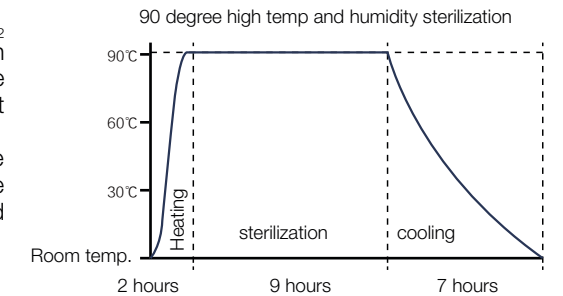
Ultraviolet sterilization(Option)

- The ultraviolet lamp is placed at the back top of the chamber. It can sterilize the chamber regularly. It kills chamber recycle air bacteria and float bacteria from water tray or slop water in the bottom, effectively prevent pollution during cell culture period.

Sterilization system

A. 90 degree high temp. high humidity sterilization system (RHP)

- It can thoroughly sterilize the chamber (Including temp. sensor, CO₂ concentration sensor, fan, shelves and brackets etc) with high temp and high humidity. It eliminates bacteria, mold, mycoplasma etc microbiology those will pollute the microorganisms cell culture and provides a safe experiment environment.
- Simple operation: The user just press the sterilization start button on the control panel, the sterilization system starts to thoroughly sterilize the chamber (Including temp. sensor, CO₂ concentration sensor, fan, shelves and brackets etc)
- The whole sterilization cycle is shorten to 18 hours.



Safe Functions

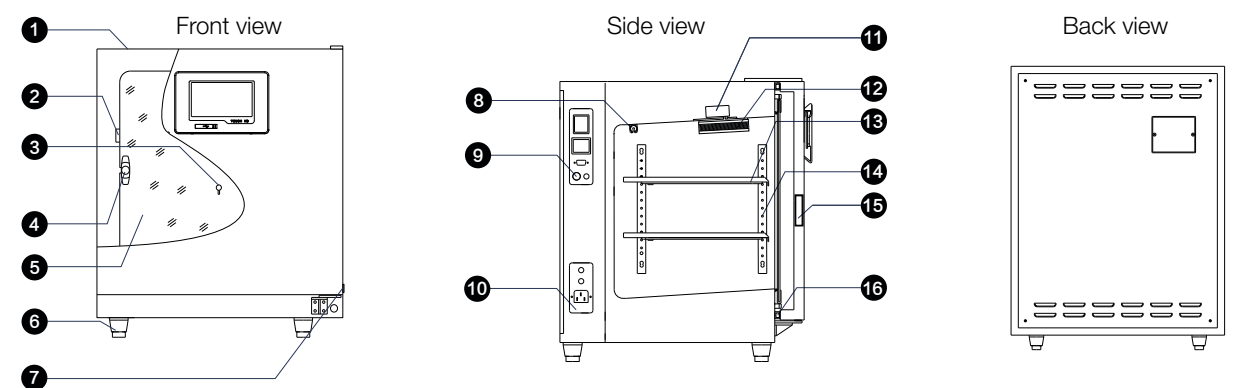
- High and low temp. and over temp. alarm
- Chamber sensor failure alarm
- Independent temp. limiter alarm
- Door open too long alarm
- CO₂ condensation too high or too low alarm
- Power off alarm
- Door temp. sensor failure alarm
- Disinfection and sterilization status reminder
- Over temp sensor failure alarm

Technical parameter

Model	BIO-40RHP	BIO-80RHP	BIO-150RHP	BIO-190RHP	BIO-240RHP
Electrical requirement	AC220V/50Hz				
Input power	350W	450W	700W	900W	1000W
Heating power	Air jacket micro computer PID control				
Temp. control range	RT+5 – 50°C				
Work environment temp	+5 – 30°C				
Temp. accuracy	±0.1°C				
CO ₂ control range	0 – 20%				
CO ₂ control accuracy	±0.1% (IR sensor)				
CO ₂ restore time	(Door open 30s, recovery to 5%) ≤ 3min				
Temp. restore time	(Door open 30s, recovery to 37°C) ≤ 8min				
Related humidity	Nature vaporate > 95% (Can equip with related humidity digital display)				
Volume	40L	80L	150L	190L	240L
Chamber size WxDxH(mm)	400×286×350	400×450×500	480×530×610	520×530×690	600×630×670
Overall size WxDxH(mm)	590×440×576	590×687×790	670×770×880	708×710×1030	790×840×940
Standard shelves qty	2pcs		3 pcs		
Sterilization	90 degree centigrade and UV sterilization		90 degree centigrade and UV sterilization + HEPA high efficient filter		

Nature evaporate>95%

CO₂ incubator structure



1. Outer 2. Door switch 3. Test hole 4. Glass door knob 5. Glass door 6. Adjustable feet 7. Door open collision block 8. Ultraviolet lamp 9. CO₂ switch box 10. Main power input 11. Fan 12. HEPA 13. Shelves 14. Adjustable shelf holder 15. Door handle 16. Magnetic door seal

BIO-RWP series water jacket CO₂ incubator touch screen

Water jacket CO₂ incubator is designed for long time stable culture. The control temp. is stable and accurate, suitable for the microorganisms culture with long cycle and not need to open door often.

Intelligent touch screen controller

- Replace traditional button operation to touch screen interface.
- It can display on time performance curve. You can check the temp., humidity (option) and CO₂ concentration three group curves changes at the same time. And abnormal alarm and door open or close message.
- When parameters are set, the controller will lock the screen automatically, it avoid unauthorized person wrong operation on the machine.
- 72 hours machine performance inquiry, it is convenient for user to check abnormal situation and track historical running information.
- RS-485 communication port as options can be remote control on computer for monitoring the running and start or close the machine.

CO₂ concentration sensor

- You may need to open door frequently during experiment, infrared sensor is the best choice under this circumstances. Our infrared sensor is very sensitive to CO₂ concentration varies and it will be not affected by inside of incubator chamber conditions, measured accurately. It doesn't like traditional thermal probe that will be sensitive to chamber temp., and humidity that lead to incorrect CO₂ concentration data.
- If open the door for 30s and close the door, within 3 min the CO₂ concentration can resume to the set value 5%. Even if there are many people use the same machine and frequently open and close door, the inside chamber can still maintain CO₂ concentration stable and uniform.

Temperature control and monitoring system

A. Incubator temperature control system

- PT100 temp. sensor keeps inside chamber temperature accurate. It can adjust the heating power according to the temp. differences between actual temp. in the chamber and set temp. to make sure temp. in the chamber is accurate. It can resume experiment temp. in 3 min after user open and close door to take samples.

B. Water jacket heating system

- Water jacket heating method to ensure working chamber temperature is uniform, when it is power off, the chamber can maintain the temp. for a long time.

C. Door heating system

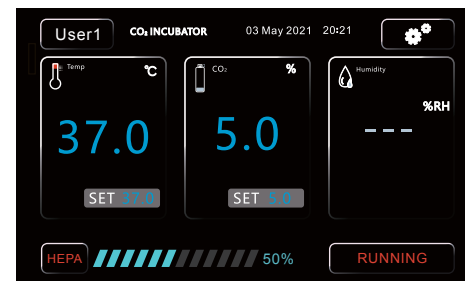
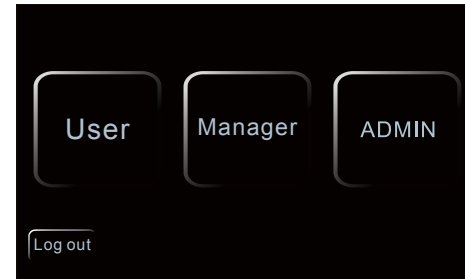
- Outer door ring has heating function. The temperature of door ring will be a little bit higher than temp. in the chamber to prevent condensed water coming from the inner glass door. It facilitates observe the experiment process, also it avoid the biological pollution possibility due to the condensed water from the inner glass door.

D. Over temp. protection system

- It is an independent backup temp. control system besides the CO₂ incubator temp. control system. When the incubator temp. control system failed and caused temp. lose control, the chamber temp. reaches to the over temp. limiter set value, over temp. protection system will cut down the heating and alarm audible with light.

Documentation and failure diagnostic display (Option)

- All data can be stored through RS485 port, if any failures, user can read the diagnostic message and data from computer at any time.



Pollution proof control

A. Ultraviolet sterilization

- The ultraviolet lamp is placed at the back top of the chamber. It can sterilize the chamber regularly. It kills chamber recycle air bacteria and float bacteria from water tray or slop water in the bottom, effectively prevent pollution during cell culture period.

B. HEPA efficient filters

- The CO₂ gas quality is a important factor to judge cell culture in the CO₂ incubator. HEPA high efficient filters can filter bacteria and dust in the air. It eliminates cross contamination from outer air to incubator chamber air and keep the chamber inside aseptic. Close the door for 5 min, inside air can fast resume to hundred grade clean. HEPA air filter is easy to disassemble without any special instruments.

C. Micro biological HEPA filter

- CO₂ access port equips micro biological HEPA filter, it can filters diameter ≥0.3um Particles like CO₂ gas bacteria and dust, the efficient reaches to 99.99%.



Microbe filter



HEPA efficient filter

Cycle fan speed adjustable automatically

- Cycle fan speed can be adjusted automatically. When chamber temp. is stable, the fan speed will be lower down, the speed will be adjusted to a suitable speed that the cell can growth. It avoids the fast fan speed that evaporating the samples.

CO₂ inlet control system

- We supply pressure release valve together with the equipment. It can control the pressure stable.
- The system has pressure protection function, it prevents over pressure or low pressure to the pipes.

Safe Functions

- High and low temp. and over temp. alarm
- Door temp. sensor failure alarm
- CO₂ condensation too high or too low alarm
- Door open too long alarm
- Chamber sensor failure alarm
- Over temp sensor failure alarm
- Independent temp. limiter alarm
- Disinfection and sterilization status reminder

Technical parameter

Model	BIO-60RWP	BIO-170RWP	BIO-240RWP
Electrical requirement	AC220V/50Hz		
Input power	500W	700W	1000W
Heating power	Water jacke		
Temp. control range	RT+5 – 50°C		
Work environment temp	+5 – 30°C		
Temp. accuracy	±0.1°C		
CO ₂ control range	0 – 20%		
CO ₂ control accuracy	±0.1% (IR sensor)		
CO ₂ restore time	(Door open 30s, recovery to 5%) ≤3min		
Temp. restore time	(Door open 30s, recovery to 37°C) ≤ 8min		
Related humidity	Nature vaporate > 95% (Can equip with related humidity digital display)		
Volume	60L	170L	240L
Chamber size W×D×H(mm)	380×290×550	530×460×720	600×520×780
Overall size W×D×H(mm)	534×530×790	684×700×960	754×760×1020
Standard shelves qty	2pcs	3 pcs	
Sterilization	UV sterilization+HEPA sterilization		

Note: All parameters are measured at 25°C

BPN-CRH series air jacket CO₂ incubator LCD type

LCD screen controller

- LCD screen, micro computer PID control that can display temp. CO₂ concentration, related humidity, operation failure reminder and menu operation are easily to observe and use.

CO₂ concentration sensor

- You may need to open door frequently during experiment, infrared sensor is the best choice under this circumstances. Our infrared sensor is very sensitive to CO₂ concentration varies and it will be not affected by inside of incubator chamber conditions, measured accurately. It doesn't like traditional thermal probe that will be sensitive to chamber temp., and humidity that lead to incorrect CO₂ concentration data.
- If open the door for 30s and close the door, within 3 min the CO₂ concentration can resume to the set value 5%. Even if there are many people use the same machine and frequently open and close door, the inside chamber can still maintain CO₂ concentration stable and uniform.

Temperature control and monitoring system

A. Incubator temperature control system

- PT100 temp. sensor keeps inside chamber temperature accurate. It can adjust the heating power according to the temp. differences between actual temp. in the chamber and set temp. to make sure temp. in the chamber is accurate. It can resume experiment temp. in 3 min after user open and close door to take samples.

B. Door heating system

- Outer door ring has heating function. The temperature of door ring will be a little bit higher than temp. in the chamber to prevent condensed water coming from the inner glass door. It facilitates observe the experiment process, also it avoid the biological pollution possibility due to the condensed water from the inner glass door.

C. Over temp. protection system

- It is an independent backup temp. control system besides the CO₂ incubator temp. control system. When the incubator temp. control system failed and caused temp. lose control, the chamber temp. reaches to the over temp. limiter set value, over temp. protection system will cut down the heating and alarm audible with light.

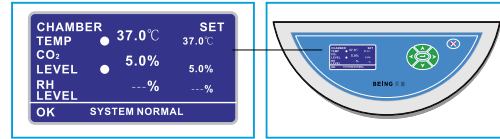
Pollution proof control

A. 90 degree high temp. high humidity sterilization system (RHP)

- It can thoroughly sterilize the chamber (including temp. sensor, CO₂ concentration sensor, fan, shelves and brackets etc) with high temp and high humidity. It eliminates bacteria, mold, mycoplasma etc microbiology those will pollute the microorganisms cell culture and provides a safe experiment environment.

B. HEPA efficient filters

- The CO₂ gas quality is a important factor to judge cell culture in the CO₂ incubator. HEPA high efficient filters can filter bacteria and dust in the air. It eliminates cross contamination from outer air to incubator chamber air and keep the chamber inside aseptic. Close the door for 5 min, inside air can fast resume to hundred grade clean. HEPA air filter is easy to disassemble without any special instruments. C. Micro biological HEPA filter.
- CO₂ access port equips micro biological HEPA filter, it can filters diameter ≥0.3um Particles like CO₂ gas bacteria and dust, the efficient reaches to 99.99%.



Cycle fan speed adjustable automatically

- Cycle fan speed can be adjusted automatically. When chamber temp. is stable, the fan speed will be lower down, the speed will be adjusted to a suitable speed that the cell can growth. It avoids the fast fan speed that evaporating the samples.

CO₂ inlet control system

- We supply pressure release valve together with the equipment. It can control the pressure stable.
- The system has pressure protection function, it prevents over pressure or low pressure to the pipes.

Safe Functions

- High and low temp. and over temp. alarm
- Door temp. sensor failure alarm
- CO₂ condensation too high or too low alarm
- Door open too long alarm
- Chamber sensor failure alarm
- Over temp sensor failure alarm
- Independent temp. limiter alarm
- Disinfection and sterilization status reminder

Documentation and failure diagnostic display (Option)

- All data can be stored through RS485 port, if any failures, user can read the diagnostic message and data from computer at any time.

Technical parameter

Model	BPN-40CRH	BPN-80CRH	BPN-150CRH	BPN-190CRH	BPN-240CRH
Electrical requirement	AC220V/50Hz				
Input power	350W	500W	750W	750W	950W
Heating power	Air jacket micro computer PID contro				
Temp. control range	RT+5 – 50℃				
Work environment temp	+5 – 30℃				
Temp. accuracy	±0.1℃				
CO ₂ control range	0 – 20%				
CO ₂ control accuracy	±0.1% (IR sensor)				
CO ₂ restore time	(Door open 30s, recovery to 5%) ≤3min				
Temp. restore time	(Door open 30s, recovery to 37℃) ≤ 8min				
Related humidity	Nature vaporate > 95% (Can equip with related humidity digital display)				
Volume	40L	80L	155L	190L	240L
Chamber size W×D×H(mm)	400×286×350	400×450×500	480×530×610	520×530×390	600×630×670
Overall size W×D×H(mm)	590×440×576	590×687×790	670×767×880	708×710×1030	790×837×940
Standard shelves qty	2pcs		3 pcs		
Sterilization	UV sterilization+HEPA filter				

Note: All parameters are measured at 25℃

Being brief introduction

Being is Yiheng instruments high-end brand, specialized in providing general lab equipments like high performance dry oven, vacuum oven, CO₂ incubator, low temp. incubator, thermostat incubator, constant humidity chamber, drug stabilization chamber, shaker, orbital shaker etc. Devote to provide user intelligent, professional, humanized lab instruments, which meets modern laboratory high-end application.

Orbital shaker and shaker incubator Intelligent

Colorful touch screen or LCD controller, menu type operation interface makes operation simple and easily. With preset start, standby and end function. Multi phase temp. speed, time and heating etc parameters can be set and programmable at the same time, simplified complicated experiments process. With App running control and monitoring function.

Profession

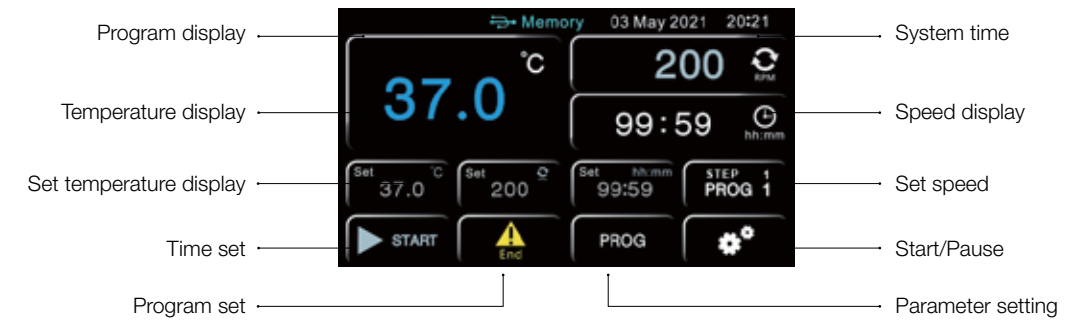
- Adopt international standard DIN-12880-2007 test and manufacturing.
- Offer temp. shake speed, timer control and working chamber temperature is uniform.
- Observe the samples through glass windows, which would not affect working chamber temperature.
- Shake speed can be controlled to ensure liquid won't be out to damage the instruments.
- Uninterrupted running: Low heat DC motor, large start torque, wide speed adjustment, free maintenance.

Safety

- **Protection on instruments:** Comply international standard secondary temp. limiter alarm system, alert the operator with sound and light alarms, ensure operator is safe without any accident.
- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
- **Protection on samples:** Working chamber temperature higher or lower the set temp., alarm starter cut down the heater, alert the operator with sound and light alarms.
- **Protection on operator:** Cabinet and door is special designed for insulation, low heat of cabinet body, ensure operator use instrument without burnt.
- **Breakdown message provided:** When the instrument breakdown, the breakdown messages show on the screen to help operator easily check.



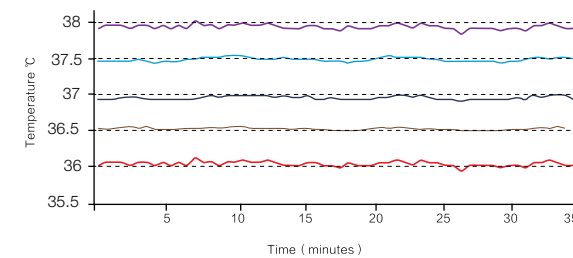
Colorful intelligent touch screen



LCD screen controller professional type

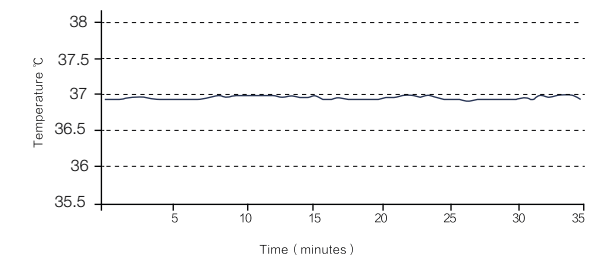


Precise temperature control



Shaker inner chamber temp. uniformity $\leq \pm 1^\circ\text{C}$ to ensure all samples temp. are uniform.

Note: Temp. accuracy and uniformity should be tested in stable status.



Shaker inside chamber temp. accuracy is $\pm 0.1^\circ\text{C}$, ensure the experiment stable.

Orbital Shaker

Application

Orbital shaker controls the orbital movements frequency to make material dissolution, liquid mixing, microbial culture and plant tissue culture circulate in experimental container. It is widely used in plants incubate, fermentation, hybridization, bacterial culture, biochemical reactions, enzyme and tissue research or small production of biological samples.

Feature

- Adopt single-axis drive and balancing technology, smooth running, low consumption and low noise.
- Micro-computer control frequency and time, built in power off protection, it can resume work after normal power supply.
- Large LCD screen can display frequency and time, menu operate interface, easily to understand.
- 24V DC control guaranty safety use.
- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.
- Adjustable motor start-up torque to avoid over load samples that can not start the instrument.
- Vibration imbalance detection. When shaker vibrates fiercely, the instrument stops automatically and smoothly.
- Many kinds of clamps and racks for selection, and the change of these parts are very easily, improve work efficient.
- Programmable controller can simplified the experiment process, realize automatically control and running.
- RS-232 and USB can be selected one of them, connect with computer, instruments can be monitored the time, alarm and rotation speed.



LCD screen

Safety

- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
- **Breakdown message provided:** When the instrument breakdown, the breakdown messages show on the screen to help operator easily check.



Orbital Shaker

Technical parameters

Model	BS-1	BS-2	BS-3	BS-15	BS-25	BS-35
Speed range	40 – 250rpm	40 – 300rpm		40 – 500rpm		
Frequency accuracy	±1rpm					
Amplitude	20mm			4mm	5mm	5mm
Max loading capacity	2000ml	4000ml	9000ml	2000ml	4000ml	9000ml
Display	LCD screen					
Timer	1 – 99h59min					
Platform sizes (mm)	250x250	350x350	450x450	250x250	350x350	450x450
Overall size WxDxH (mm)	290x375x110	390x495x125	490x605x137	290x375x110	390x495x125	490x605x137
Rated power	60W					
N.W	20 Kg	30Kg	40 Kg	20 Kg	30Kg	40 Kg
Powder requirement	AC220V/50Hz					
Standard configuration	250mlx8pcs	250mlx13pcs	250mlx18pcs	250mlx8pcs	250mlx13pcs	250mlx18pcs

Shaker Incubator



Colorful intelligent touch screen

Application

Shaker incubator combines incubator and shaker functions together, it provides accurate temp. control, realizes shake incubating and meet bacterium, microbe suspension incubate requirements. It is ideal instruments for Cell culture, fermentation, biochemistry, water quality analysis, plant cultivation and breeding.

Technical breakthroughs

Unique air flow technology

- Adopts continuous flow fan technology, air stability, no turbulence, temperature is uniform.
- Cycle fan speed can be automatically controlled, it can avoid the samples volatile too fast due to cycle fan is too fast.

Patented single-axis drive technology

- Patented single-axis drive and balancing technology, running stable, low noise and low consumption.

Pneumatic support technology

- Adopts pneumatic support, transparent cover height can be adjustable to any position, convenient the operation.

Large screen LCD display

- Colorful touch screen can continuously, accurately and real-time display temp, rotation speed and work time. The menu operation interface is easy to understand.

Technical features

Humanization design

- Combine incubator, shaker functions together with small space.
- Patented overall design, transparent big view windows, dynamic master the culture effect.
- With reserve test hole, outer sensors can access to test the inner cabinet temperature (option)
- Shaking platform and chamber are made of stainless steel, anti-corrosion and easy to clean.
- Standard configuration is universal clamp, it can used for different vessel with different volume.

Uninterrupted performance guaranty

- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.

Safety

- **Protection on instruments:** Comply international standard secondary temp. limiter alarm system, alert the operator with sound and light alarms, ensure operator is safe without any accident.
- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
- **Protection on samples:** Working chamber temperature higher or lower the set temp., alarm starter cut down the heater, alert the operator with sound and light alarms.
- **Protection on operator:** Cabinet and door is special designed for insulation, low heat of cabinet body, ensure operator use instrument without burnt.
- **Breakdown message provided:** When the instrument breakdown, the breakdown messages show on the screen to help operator easily check.

Convenient data process

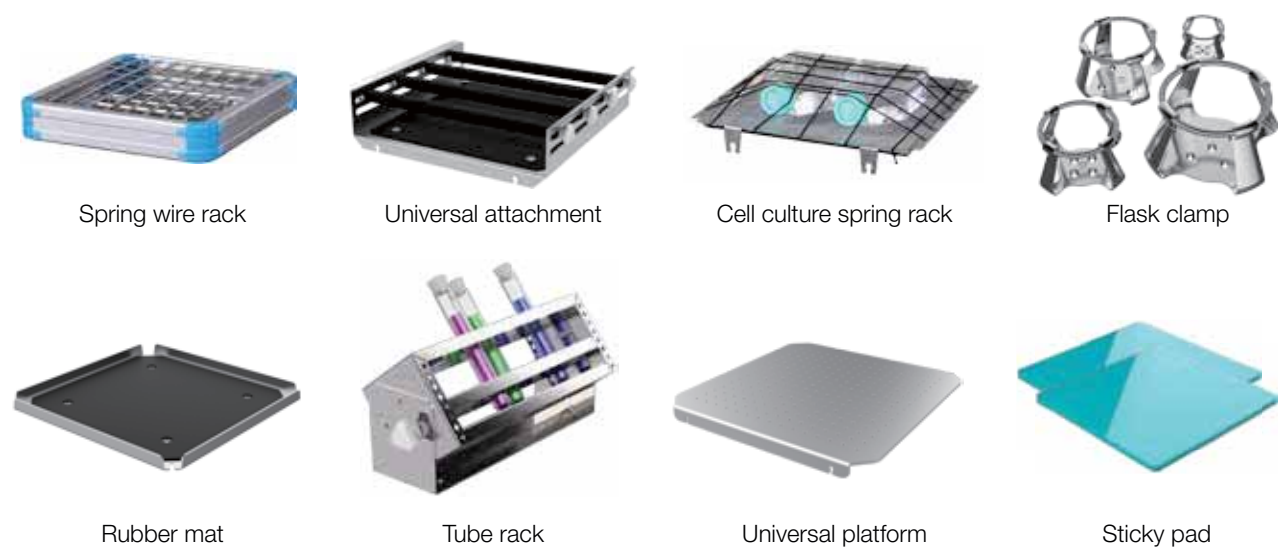
- Equip with USB as options, record temp. parameter changes (option)
- Equip with RS232 data interface, through software to remote control machine performance (option)
- Above two options can be selected only one.

Shaker Incubator

Technical parameters

Model	BSI-1	BSI-2	BSI-3	BSI-3C	BSI-15	BSI-25	BSI-35	BSI-35C
Temp. range	RT+5 – 65°C		4 – 65°C		RT+5 – 65°C			4 – 65°C
Temp. control accuracy	0.1°C							
Speed range	40 – 250rpm	40 – 300rpm			40 – 500rpm			
Frequency accuracy	±1rpm							
Platform size(mm)	250×250	350×350	450×450	450×450	250×250	350×350	450×450	450×450
Inside height (mm)	195	265	330	330	195	265	330	330
Overall size W×D×H(mm)	390×590×370	490×690×450	590×825×550	590×975×550	390×590×370	490×690×450	590×825×550	590×975×550
N.W	32 Kg	42 Kg	52 Kg	75 Kg	32 Kg	42 Kg	52 Kg	75 Kg
Amplitude	20mm				4mm	5mm	5mm	5mm
Running time	1 – 99h59min							
Powder requirement	AC220V/50Hz							
Rated power	450W	650W	1000W	1300W	450W	650W	1000W	1300W
Standard configuration	250ml×8pcs	250ml×13pcs	250ml×18pcs	250ml×18pcs	250ml×8pcs	250ml×13pcs	250ml×18pcs	250ml×18pcs

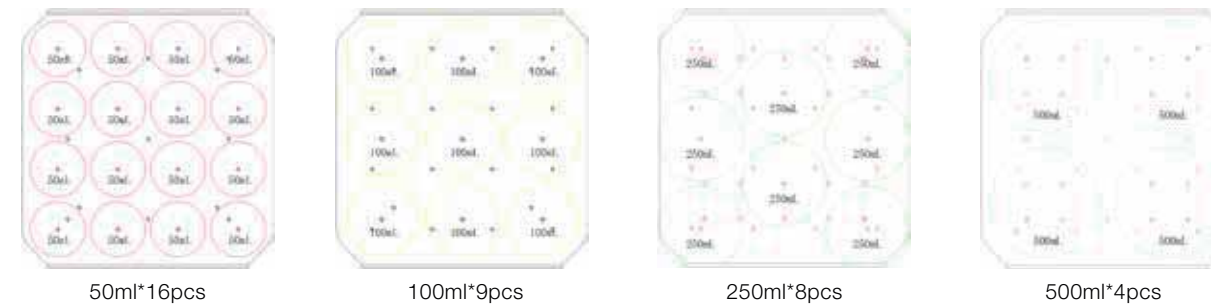
Orbital shaker & Shaker incubator accessories and configuration



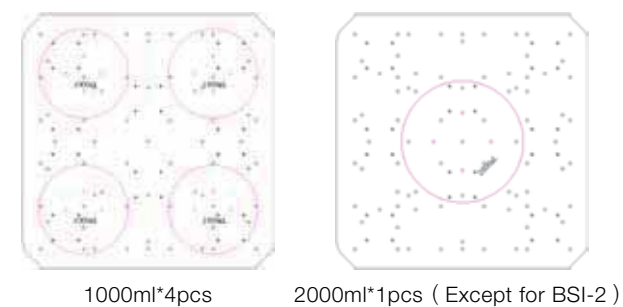
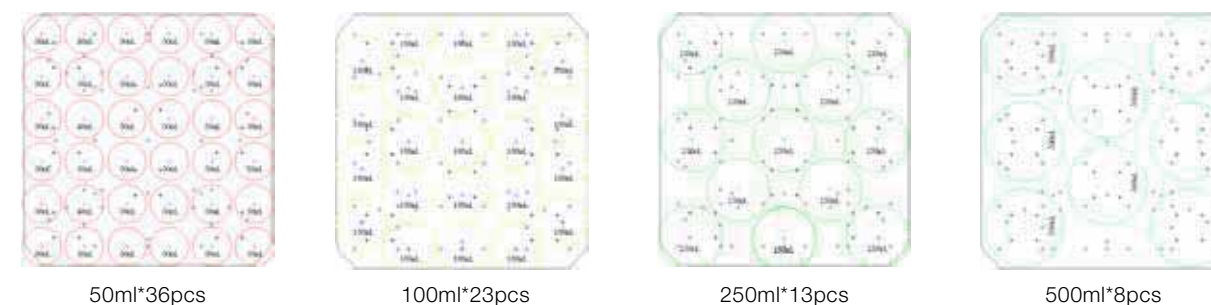
Model		BS-1	BS-2	BS-3	BSI-1	BSI-2	BSI-3
Universal Platform WxD(mm)	250x250	√			√		
	350x350		√			√	
	450x450			√			√
Spring Wire Rack WxD(mm)	250x250	√			√		
	350x350		√			√	
	450x450			√			√
Universal Attachment WxDxH(mm)	250x250x85	√			√		
	350x350x100		√			√	
	450x450x100			√			√
Cell Culture Spring Rack WxD(mm)	250x250	√			√		
	350x350		√			√	
	450x450			√			√
Rubber Mat WxD(mm)	250x250	√			√		
	350x350		√			√	
	450x450			√			√
Individual Flask Clamps (mm)	50ml	16	36	49	16	36	49
	100ml	9	23	36	9	23	36
	250ml	8	13	18	5	13	18
	500ml	4	8	16	4	8	16
	1000ml	-	4	9	-	4	9
	2000ml	-	1	4	-	-	4
Test Tube Rack	Φ8mmx105						
	Φ10mmx72						
	Φ12mmx72						
	Φ14mmx42						
	Φ17mmx26	2	3	4	2	3	4
	Φ25mmx14						
	Φ30mmx12						
	Φ35mmx10						
Φ50mmx4							
Sticky Pad WxD(mm)	140x140	1	4	9	1	4	9

Flask clamp placement diagram

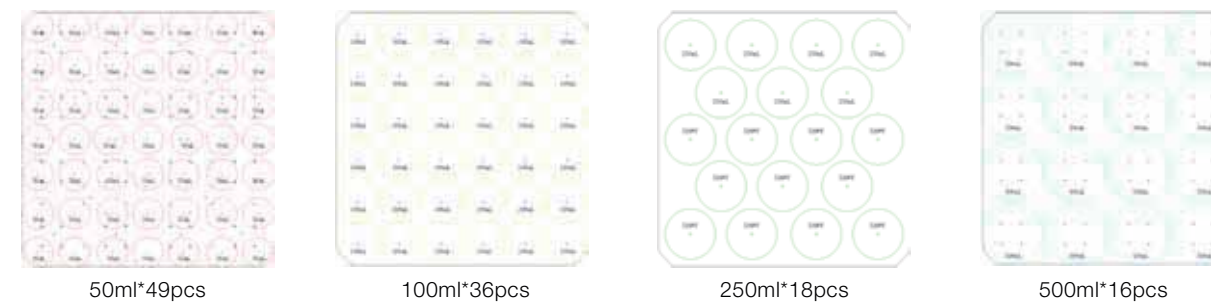
BS-1/BSI-1



BS-2/BSI-2



BS-3/BSI-3



Chest Type Shaker Incubator



Colorful intelligent touch screen

Application

Floor standing Shaker incubator combines incubator and shaker functions together, it uses new outlook design with big touch screen,. Adopt the latest technology of motor driven system, large torque, stable work, low noise and fast heat dissipation and long lifetime. It is widely used Cell culture, fermentation, biochemistry, enzyme research experiment or medium production experiment. Especially suitable for medium production, it solves the user's problem by advanced design and high precise manufacturing art craft.

Product features

Colorful intelligent touch screen control

- Adopt 4.3 inches touch screen , intelligent touch screen control, parameters real time display, operation easily.
- Temp, rotation speed and time etc parameters fast setting.

Humanization design

- Combine incubator, shaker functions together with small space, huge capacity.
- Colorful touch screen controller, menu operation interface, multi data display at one screen, easily to observe and operate.
- Silent running.
- Fluorine-free design, environmental friendly.
- Big transparent big view windows, platform and chamber are made of stainless steel, anti-corrosion and easy to clean.

Quality guaranty

- User's set parameters can be stored automatically when power off suddenly, and it resume last program settings when power on.
- PID microcomputer control temp. and shake frequency with timer.
- Compressor and cycle fan etc key components are reliable suppliers, environmental non-free refrigerants.

Uninterrupted performance guaranty

- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.

Three-eccentric axis balance drive

- Three-eccentric axis balance drive ensures all samples in the shaker platform movements at the same rotation frequency. Durable structure guarantees the shaker incubator can work properly no matter full load or high speed working.

Convenient data process

- Equip with USB as options, record temp. parameter changes (option)
- Equip with RS232 data interface, through software to remote control machine performance (option)
- Above two options can be selected only one.

Safety

- **Protection on instruments:** Comply international standard secondary temp. limiter alarm system, alert the operator with sound and light alarms, ensure operator is safe without any accident.
- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
- **Protection on samples:** Working chamber temperature higher or lower the set temp., alarm starter cut down the heater, alert the operator with sound and light alarms.
- **Protection on operator:** Cabinet and door is special designed for insulation, low heat of cabinet body, ensure operator use instrument without burnt.
- **Breakdown message provided:** When the instrument breakdown, the breakdown messages show on the screen to help operator easily check.

Multi-segment programmable control

- Multi-segment temp., speed, time program at the same time. It has normal mode or programmable mode for running. Preset parameter and work data can be shown at the same time. It simplified complicated culture requirements and realize auto control and run.

Feature extension(option)

- CO₂ concentration monitor and control.
- Lighting control.
- Humidity monitor and control.

Chest Type Shaker Incubator



USB interface



PU foamed handle



25mm test hole



304 mirror stainless steel



Pneumatic gas spring holder



Pressure balance hole

Technical parameters

Model	BSI-21	BSI-31	BSI-21C	BSI-31C
Power supplies	AC220V 50HZ			
Speed range	40 – 300 rpm			
Amplitude	26mm			
Control temp. range	RT+5 – 80°C		4 – 80°C	
Temp. resolution	0.1°C			
Timer range	1 – 99h59min			
Rated power	1050W		1300W	
Platform size (mm)	750×460	920×500	750×460	920×500
Overall size W×D×H (mm)	1060×680×910	1200×730×930	1060×680×910	1200×730×930
Standard configuration	250ml×28	250ml×45	250ml×28	250ml×45

With "C" means the model with refrigeration function

Max. flask clamps can be placed (single layer)

Flask (pcs)	Model	BSI-21 BSI-21C	BSI-31 BSI-31C
	50 ml	82	116
100 ml	50	66	
250 ml	28	45	
500 ml	23	28	
1000 ml	15	18	
2000 ml	8	13	

Shaker Incubator



Application

Widely used in cell culture, fermentation, hybridization, biochemistry and cell tissue research with high temperature and concussion frequency. It can culture microbial cells and various type of bacteria in static and movement, especially suitable for laboratory pilot production.

Product features

Colorful intelligent touch screen control

- Adopt 4.3 inches touch screen , intelligent touch screen control, parameters real time display, operation easily.
- Temp., rotation speed and time etc parameters fast setting.

Humanization design

- Combine incubator, shaker functions together with small space, huge capacity.
- Colorful touch screen controller, menu operation interface, multi datas display at one screen, easily to observe and operate.
- Fluorine free design.
- Large toughened glass windows provides users observe the samples status with good insulation when instruments working.
- Various kinds of clamps and racks for selection, easily change racks and clamps improve work efficient.
- Inner chamber, shaker platform and shelves are made of 304 stainless steel
- On the left of chamber is placed with 50mm test hole.

Quality guaranty

- User's set parameters can be stored automatically when power off suddenly, and it resume last program settings when power on.
- PID microcomputer control temp. and shake frequency with timer.
- Compressor and cycle fan etc key components are reliable suppliers, environmental non-free refrigerants.

Uninterrupted performance guaranty

- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.

Safety

- **Protection on instruments:** Comply international standard secondary temp. limiter alarm system, alert the operator with sound and light alarms, ensure operator is safe without any accident.
- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
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Three-eccentric axis balance drive

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Multi-segment programmable control

- Multi-segment temp., speed, time program at the same time. It has normal mode or programmable mode for running. Preset parameter and work data can be shown at the same time. It simplified complicated culture requirements and realize auto control and run.

Feature extension(Option)

- CO₂ concentration monitor and control.
- Lighting control(Stimulate the nature growth environment)
- Humidity monitor and control.

Shaker Incubator

Technical parameters

Model	BSI-9	BSI-9C	BSI-30	BSI-30C
Power supplies	AC220V 50HZ			
Speed range	40 – 300rpm			
Amplitude	20mm			
Control temp. range	RT+5 – 65°C	4 – 65°C	RT+5 – 65°C	4 – 65°C
Temp. resolution	0.1°C			
Uniformity(at 37°C)	± 0.5°C			
Timer range	0 – 99h59min			
Platform size (mm)	400x340	400x340	500x420	500x420
Overall size WxDxH (mm)	635x714x1055	635x714x1055	725x720x1150	725x720x1150
Rated power	750W	950W	1100W	1300W

Max. flask clamps can be placed (single layer)

Model		BSI-9 BSI-9C	BSI-30 BSI-30C
Flask (pcs)	50 mL	29	55
	100 mL	18	30
	250 mL	11	20
	500 mL	7	12
	1000 mL	4	10
	2000 mL	-	6

Large Vertical Shaker Incubator



Application

Widely used in cell culture, fermentation, hybridization, biochemistry and cell tissue research with high temperature and concussion frequency. It can culture microbial cells and various type of bacteria in static and movement, especially suitable for laboratory pilot production.

Product features

Colorful intelligent touch screen control

- Adopt 4.3 inches touch screen, intelligent touch screen control, parameters real time display, operation easily.
- Temp., rotation speed and time etc parameters fast setting.

Humanization design

- Combine incubator, shaker functions together with small space, huge capacity.
- Colorful touch screen controller, menu operation interface, multi datas display at one screen, easily to observe and operate.
- Fluorine free design.
- Large toughened glass windows provides users observe the samples status with good insulation when instruments working.
- Various kinds of clamps and racks for selection, easily change racks and clamps improve work efficient.
- Inner chamber, shaker platform and shelves are made of 304 stainless steel.
- On the left of chamber is placed with 50mm test hole.
- Quality assurance.

Quality guaranty

- User's set parameters can be stored automatically when power off suddenly, and it resume last program settings when power on.
- PID microcomputer control temp. and shake frequency with timer.
- Compressor and cycle fan etc key components are reliable suppliers, environmental non-free refrigerants.

Uninterrupted performance guaranty

- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.

Safety

- **Protection on instruments:** Comply international standard secondary temp. limiter alarm system, alert the operator with sound and light alarms, ensure operator is safe without any accident.
- **Protection on key components:** Key components have over current, over temp., over load etc safety protection, it can prevent instruments accidents without precautions.
- **Protection on samples:** Working chamber temperature higher or lower the set temp., alarm starter cut down the heater, alert the operator with sound and light alarms.
- **Protection on operator:** Cabinet and door is special designed for insulation, low heat of cabinet body, ensure operator use instrument without burnt.
- **Breakdown message provided:** When the instrument breakdown, the breakdown messages show on the screen to help operator easily check.

Large Vertical Shaker Incubator

Technical parameters

Model	BSI-52	BSI-52C	BSI-72	BSI-72C
Speed range	40 – 300rpm			
Frequency accuracy	±1rpm			
Amplitude	26mm			
Control temp. range	RT+5 – 65℃	4 – 65℃	RT+5 – 65℃	4 – 65℃
Temp. resolution	±0.1℃			
Temp. uniformity	at 37℃±0.8℃			
Timer range	0 – 99h59min			
Shelves size (mm)	750×460 (double shelves)		920×500 (double shelves)	
Overall size W×D×H (mm)	1030×875×1370		1200×875×1370	
Rated power	1900W	2250W	1900W	2250W
Standard configuration	250mL×56pcs		250mL×90pcs	

Note: If racks and clamps need to be made to customers requirements, the physical loading quantity is subject to customer requirements.

Max. flask clamps can be placed (single layer)

Model		Large vertical shaker incubator		Small vertical shaker incubator	
		BSI-52 BSI-52C	BSI-72 BSI-72C	BSI-9 BSI-9C	BSI-30 BSI-30C
Flask (pcs)	50 mL	82	116	29	37
	100 mL	50	66	18	22
	250 mL	28	45	11	14
	500 mL	23	28	7	10
	1000 mL	12	18	4	6
	2000 mL	6	10	-	-

Shaker



Application

Being shaker incubator adopts new outlook, large LCD screen, latest technology of motor driven system, Large torque, stable operation, low noise, fast heat dissipation and long service life. It is widely used in cell culture, fermentation, hybridization, biochemistry and enzyme research etc that need shaker function in laboratory experiment or pilot experiment.

Features

Colorful intelligent touch screen control

- Adopt 4.3 inches touch screen, intelligent touch screen control, parameters real time display, operation easily.
- Temp., rotation speed and time etc parameters fast setting.

Humanization design

- Silent working.
- Colorful touch screen display, multi data display at one screen, easily to observe and operate.
- Platform is stainless steel, easy to detach and clean.
- Various kinds of clamps and racks for selection, easily change racks and clamps improve work efficient.

Quality guaranty

- User's set parameters can be stored automatically when power off suddenly, and it resume last program settings when power on.
- PID microcomputer control temp. and shake frequency with timer, it starts shake gently to prevent liquid coming out from the vessels and stop the machine working.
- With rotation speed monitoring circuit. When the instrument detects rotation speed is too fast or too slow, it can stop shaking to ensure no accident occur.

Uninterrupted performance guaranty

- Brushless DC motor, large start torque, wide speed adjustment, free maintenance.

Three-eccentric axis balance drive

- Three-eccentric axis balance drive ensures all samples in the shaker platform movements at the same rotation frequency. Durable structure guarantees the shaker incubator can work properly no matter full load or high speed working.

Multi-segment programmable control

- Multi-segment temp., speed, time program at the same time. It has normal mode or programmable mode for running. Preset parameter and work data can be shown at the same time. It simplified complicated culture requirements and realize auto control and run.

Convenient data process

- Equip with USB as options, record temp. parameter changes (option)
- Equip with RS232 data interface, through software to remote control machine performance (option)
- Above two options can be selected only one.

Shaker

Technical parameters

Model	BS-21 Single shelf	BS-22 Double shelves	BS-31 Single shelf	BS-32 Double shelves
Range speed	40 – 300rpm			
Amplitude	26mm			
Timer range	1 – 99h59min			
Max load	250ml×48pcs or 500ml×30pcs or 1000ml×20pcs or 2000ml×12pcs (single shelf)		250ml×63pcs or 500ml×35pcs or 1000ml×35pcs or 2000ml×16pcs (single shelf)	
Platform size (mm)	800×600		920×640	
Platform quantity	1pcs	2pcs	1pcs	2pcs
Overall size W×D×H(mm)	895×740×460	895×740×900	1115×835×460	1115×835×900
Rated power	250W			
Power supplies	AC220V 50HZ			
Standard configuration	500ml×30pcs (single shelf)		1000ml×35pcs (single shelf)	

Rotary Evaporator



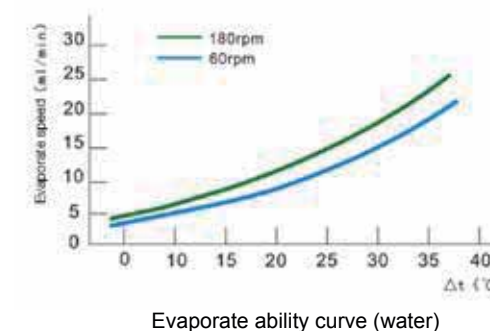
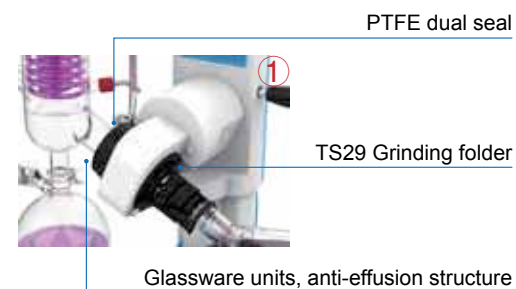
Rotary Evaporator

Rotary evaporators (also known as “Rotovaps”) are mainly used for distillations/separation applications often used for medicinal chemistry, pharmaceutical, chromatography, and petrochemical fields. In summary the system works by increasing the rate of evaporation of the solvent by

- (1) Reducing the pressure to lower the solvent boiling point
- (2) Rotating the sample to increase the effective surface area
- (3) Heating the solution
- (4) Then the evaporated solvent then condenses in a cooled glass condenser.

BEING Rotary Evaporator Features

- Simple design for one handed operation manually or automatically.
- A unique PTFE sealing system provides exceptional thermostability, minimizes corrosion, and helps to ensure day in day out headache free operation.
- Our Bath offers a dual heating mode for water and oil with overheat protection.
- PID controller offers easy input of parameters and large LCD display for easy viewing.
- Vacuum regulator available.

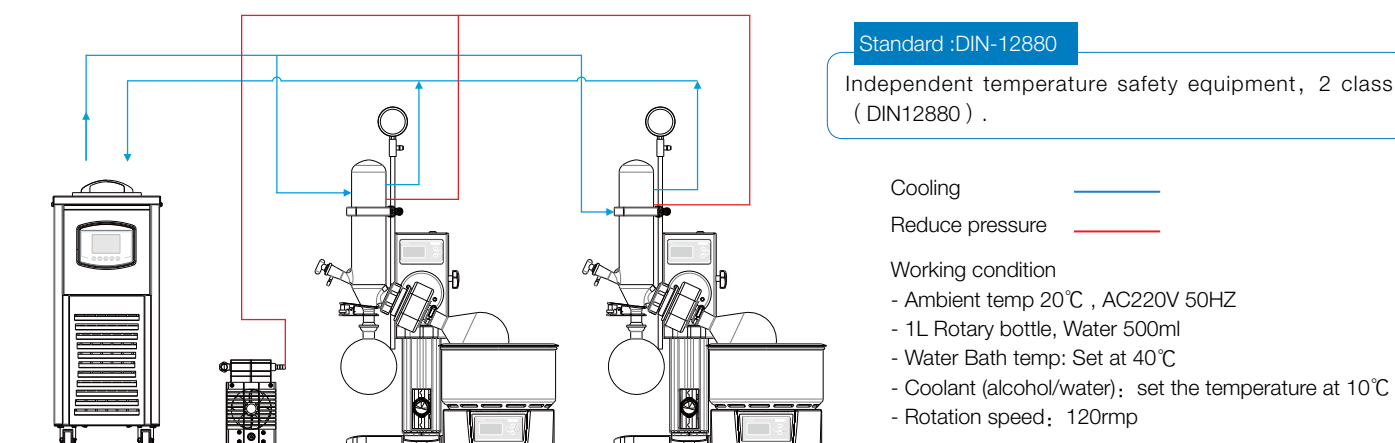


Technical parameters

Model	RV-21M	RV-21A	RV-31A
Rotation speed	20 – 300rpm		
Water bath temperature range	Water: RT+5 – 99°C , Oil: RT+5 – 180°C (Option)		
Evaporating speed	22ml/min		
Ultimate vacuum	8mbar		
Speed setting	LCD display with knob		
Lifting mode	Manual	automatic	
Motor function	N / A	DC brushless motor	
Main motor DC brushless	DC brushless motor		
Condenser	Condensate Area 0.15m ² , 1L Rotary Bottle, 1L Collecting Bottle, TS29 / 38 Bottle Clamp		
Rotary flask	1L	1L	3L
Vacuum seal	PTFE		
Interior wather bath size	φ 230mm x130mm		
Water bath material	SS304 with PTFE coated		
Heating power	1000W		
Temperature range	5 – 35°C		
Electrical input	220V 50/60Hz		



High efficiency can be cycle used for two Rotary Evaporators



Rotary Evaporator



Technical parameters

Model		RV-5A	RV-10A	RV-20A	RV-50A
Size		5L	10L	20L	50L
Performance	Rotation speed (rpm)	20 – 140	20 – 130	20 – 130	20 – 110
	Evaporate rate (Max. L/h)	2	3.5	4	9
	Ultimate degree(mbar)	8mbar			
	Temperature rate(°C)	Water: RT+5 – 99°C , Oil: RT+5 – 180°C (option)			
	Temperature stability (°C)	±1			
Function	Controller	PID controller			
	Safety	1.Over current protection 2. Over temp. protection 3. Power interruption alarm 4. Anti-dry protection			
	Display	LCD screen			
	Lift mode	Moto lift			
	Power (W)	2300	3300	4300	5300
	Condensation area(M ²)	0.28	0.49	1.29	1.75
	Capability of rotatory bottle	5L	10L	20L	50L
	Capability of collecting bottle	3L	5L	10L	20L
	Sealing gasket	PTFE and Teflon Coating			
	Lifting distance(mm)	150	170	170	260
Bracket		No	Aluminum alloy bracket		
Water Bath	Dimension(mm)	Diameter 280×175	Diameter 365×225	Diameter 445×250	Diameter 552×320
	Material	SS304 with PTFE coated			
Interface size	Condenser barb size(mm)	14	18		
	Exterior dimension (including glasswares) W×D×H(mm)	860×410×1120	1100×540×2060	1200×570×2060	1300×610×2150
Power		220V 50HZ			
Ambient temperature		10 – 35°C			

Features

Controller

- Scheduled operation
- Rpm set/ display
- Temperature set/ display
- Running status

Rotating: Up, Down, Heating

One-button operation:

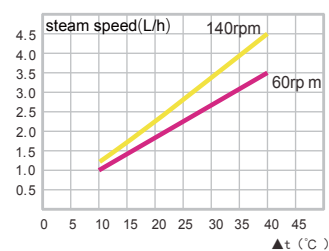
- Long press to lift or lower the bath
- Press to heat the bath
- Press to start/ stop rotating

Turn left/ right to control

Press to confirm

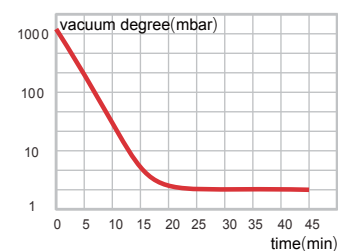
Evaporating ability

Ambient temperature: 20°C
 ▲t means: the difference between steam and water bath



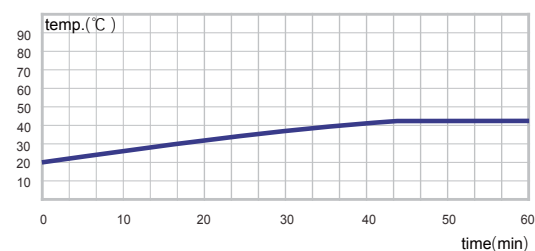
Vacuum degree

Vacuum pump required
 Flow rate: 50L/min



Water bath heating

Ambient temp.: 20°C
 Medium: Water
 Power: 220V 50HZ
 Set: 80°C



Vacuum Controller

The VC-50 vacuum controller is based on vacuum applications and provides solutions for all vacuum processes, suitable for various industries such as chemical, pharmaceutical, petrochemical and material industries.

Covers all common vacuum processes

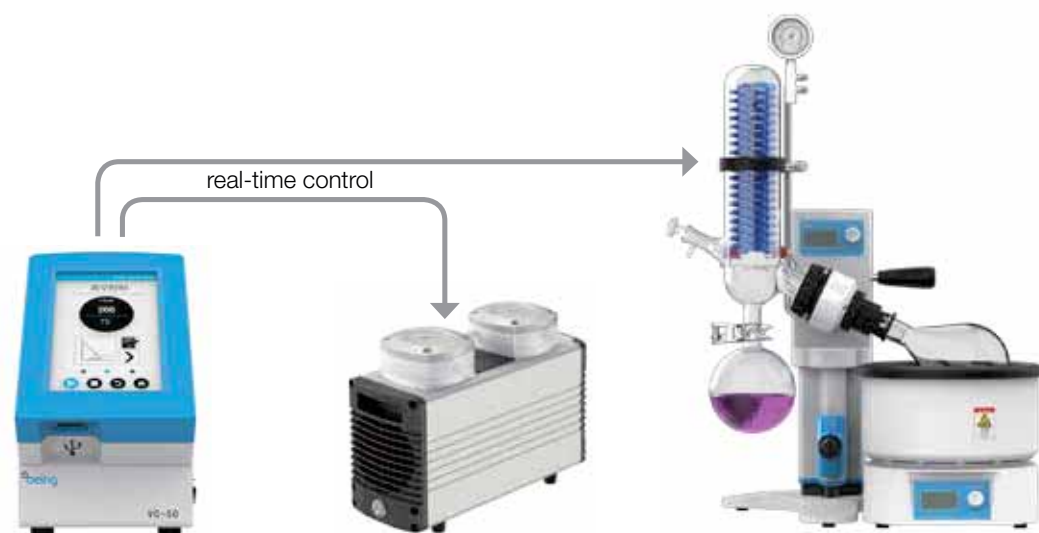
- The VC-50 vacuum controller can be used not only with V series corrosion resistant diaphragm pumps, but also in laboratory vacuum systems for all applications.

Chemical resistant

- Like the V series corrosion resistant diaphragm pumps, the VC-50 vacuum controller is made of PTFE and the electrical switch housing is corrosion resistant, making it perfectly suited for corrosive environments.

Advantages

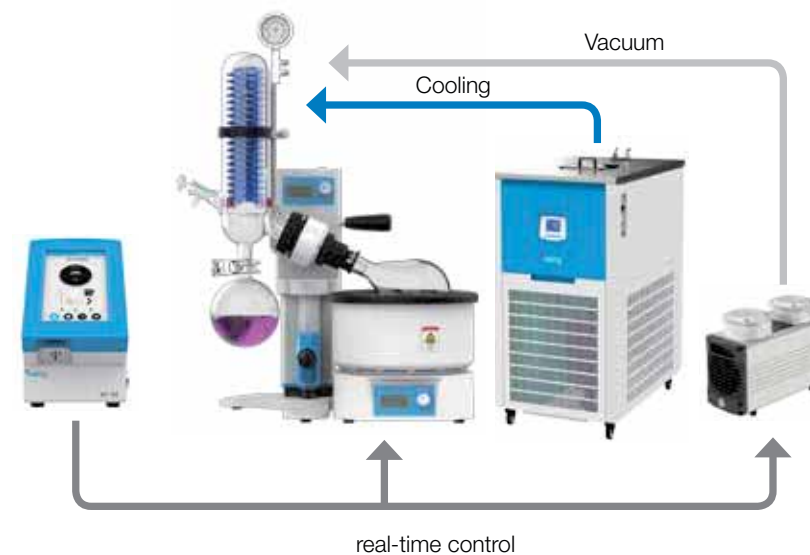
- Precise control of the vacuum level, ensuring long-term stable operation of the vacuum system.
- Significantly shortens the experimental time and ensures efficient operation of the sample in a weak boiling state.
- Automated process operation, end of set-up, no guarding.
- Reduction of sample foaming and boiling, reducing the risk of sample loss.
- The ability to detect the initial boiling point of an unknown solvent, control and maintain of a stable pressure.



Specification

Model	VC-50
Control range	0 - 760mm Hg (Torr), 0 - 1013 hPa (Mbar)
Measuring principle	Ceramic diaphragm (alumina), capacitive, gas type independent, absolute pressure
Measuring range	0 - 800mm Hg (Torr), 0 - 1066 hPa (Mbar)
Control mode	Fixed value automatic control, preset program automatic control (Solenoid valve switch)
Screen display	LCD
Steam measurement range	-20 – 150°C (Steam temperature sensor connected)
Vacuum connector	8mm PTFE joint
Ambient temperature (operating)	10 – 40°C
Shell material	Chemical corrosion-resistant plastic housing
Dimension (LxWxH)	190x105x180mm

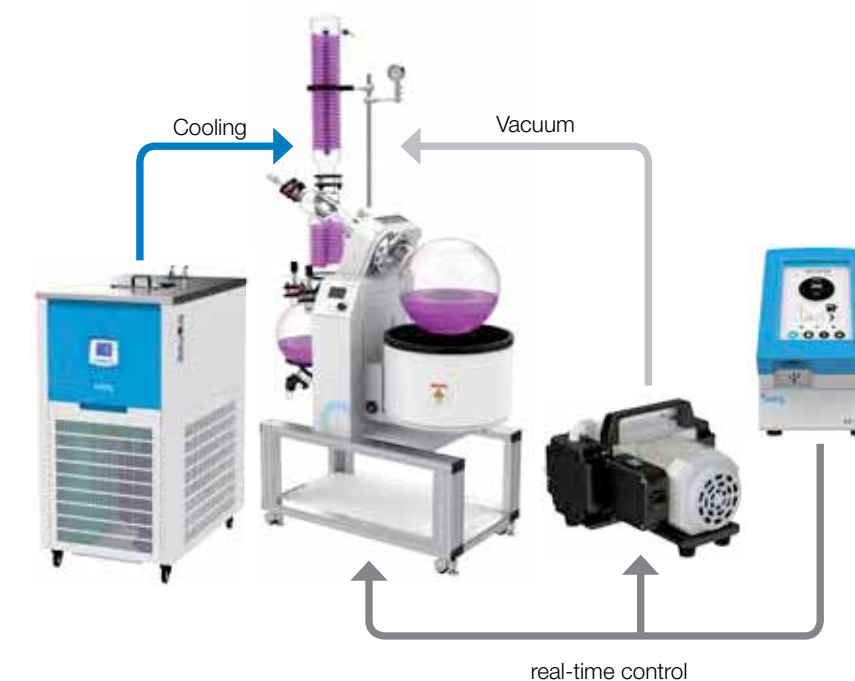
2L Rotary Evaporator Package



Rotary Evaporator	Recirculating Chiller	Diaphragm Vacuum Pump Anticorrosion	Vacuum Controller
RV-21M	BR-03	V-20	VC-50
RV-21A	BR-05	V-40	
RV-31A	(for 2 units)	(for 2 units)	

5L – 50L Rotary Evaporator Package

Rotary Evaporator	Recirculating Chiller	Diaphragm Vacuum Pump Anticorrosion	Vacuum Controller
RV-05A	BR-05	V-20	VC-50
RV-10A	BR-10	V-40	
RV-20A	BR-20	V-65	-
RV-50A	BR-50	V-135	



Recirculating Chiller

Temperature control, incubation, material testing, corrosion testing, cell culture, tissue research, rotary evaporator/orbital agitation at variable speeds to affect the growth of cell cultures.

Features

- P.I.D temperature controller provides accurate and reliable temperature control.
- Large LCD display screen and interface provides for user-friendly operation.
- Preset On/Off function.
- Independent circulating pump switch for easy starting/stopping the cycle.
- Easy to set Adjustable Timer. (1 minute to 5,999 minutes)
- Maintenance-free operation with easy to clean surface.
- Both heater and bath chamber are made of corrosion-resistant stainless steel.
- No angle in bath chamber, easy to clean.
- Uniquely designed heating method can up to 80 °C .(BR-H series)
- Programming setting function with 7 periods and 9 steps for each period, which means. there are 63 programmable steps in total. (BR-H series)

Safety

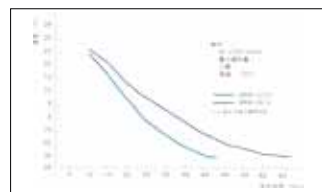
- Temperature deviation alarm.
- Over current protection.
- Independent Over-temperature protection meets DIN 12880 International standard requirements.
- Liquid level display window, through which you can intuitively observe the liquid level in the tank.

Option

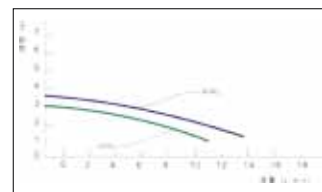
- Available RS-485 or USB ports for data collection.



Control panel



Cooling curve



Head / Flow curve



Specification

Product Name	Cooling recirculating chiller				
Model	BR-03	BR-05	BR-10	BR-20	BR-50
Storage tank maximum capacity (L)	5	8	15.5	30	62
Temperature range	-20 – 20°C				
Temperature accuracy	±2°C				
Cooling capacity at 10°C (W)	530	600	1500	2500	4000
Refrigerant	R404A		R410A		
Security features	Delay, leakage, overcurrent, overvoltage				
Total power (W)	550	600	1300	1600	2400
Power requirements	AC220V/ 50HZ				
Pump power	30		60		550
Pump flow max. (L / min)	6		17		30
Maximum head (m)	9		15		25
Inlet/Outlet pipe diameter (mm)	φ 10			φ 12	
Weight	32	41	60	76	126
Liquid storage	3.5	5.2	13	25	52
Noise level	≤45		≤55	≤65	≤75
Dimensions WxDxH(mm) (include caster)	210x410x511	310x445x570	400x500x739	450x600x821	560x845x850

Specification

Product Name	Cooling / Heating recirculating chiller				
Model	BR-03H	BR-05H	BR-10H	BR-20H	BR-50H
Storage tank maximum capacity (L)	5	8	15.5	30	62
Temperature range	-20 – 80°C				
Temperature accuracy	±0.5°C				
Cooling capacity at 10°C (W)	530	800	1500	2500	4000
Refrigerant	R404A		R410A		
Security features	Delay, leakage, overcurrent, overvoltage				
Total power (W)	1100	1350	2500	3000	4300
Power requirements	AC220V/ 50HZ				
Pump power	30		60		550
Pump flow max. (L / min)	6		17		30
Maximum head (m)	9		15		25
Inlet/Outlet pipe diameter (mm)	φ 10			φ 12	
Weight	32	41	60	76	126
Liquid storage	3.5	5.2	13	25	52
Noise level	≤45		≤55	≤65	≤75
Dimensions WxDxH(mm) (include caster)	210x410x511	310x445x570	400x500x739	450x600x821	560x845x850

Diaphragm Vacuum Pump Anticorrosion



V-20



V-40F



V-65

Summary

V series diaphragm vacuum pump anticorrosion is a medium for the gas two-stage pump, all with the gas contact part, are PTFE (PTFE) material, corrosion resistance, wide range of applications, can completely replace the water circulation pump, Suitable for chemical, pharmaceutical, petrochemical and other industries on the treatment of corrosive gases, such as filtration, vacuum distillation, rotary evaporation, vacuum concentration, centrifugal concentration, solid phase extraction and so on.

Features

Anti-strong chemical corrosion

- Anticorrosion vacuum pump using a special diaphragm (diaphragm surface composite PTFE coating) and pump head design, including all joints and piping to ensure that the contact with the gas part of the imported PTFE material, so resistant to most of the corrosive gas; at the same time electrical switches and shells are also anti-corrosion treatment, especially for the transmission mechanism and the circuit part of the use of corrosion-resistant materials to form a confined space, and the external environment completely isolated, so that the vacuum pump is not only corrosive media, but also perfect for corrosive environment, completely solve the vacuum pump chemical corrosion problems.

No pollution, maintenance

- Diaphragm vacuum pump can be fully recovered solvent to eliminate toxic and harmful organic solvents on the environment pollution and operation and the health of nearby people, even if the mixed solvent can be highly recyclable; diaphragm pump is a dry oil-free dry pump, so that the laboratory becomes clean and quiet, the user does not need regular cleaning, changeover, change the water and other maintenance work, the diaphragm vacuum pump to do 100% maintenance-free.

Low noise, low vibration

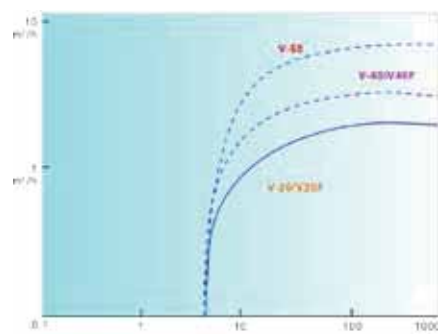
- Anticorrosion vacuum pump using electric direct drive power transmission, no intermediate transmission parts, coupled with the diaphragm low stroke, low noise characteristics, so the product noise can be maintained at 70dB below.

Overheat protection

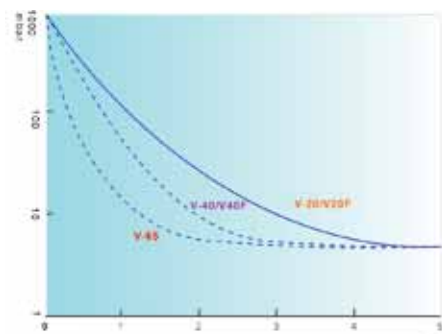
- All V series are equipped with temperature protection switch, when the body when the temperature is too high will automatically shut down, wait for the temperature after cooling and then start to ensure the stability of the system work and security.

Vaccum Performance

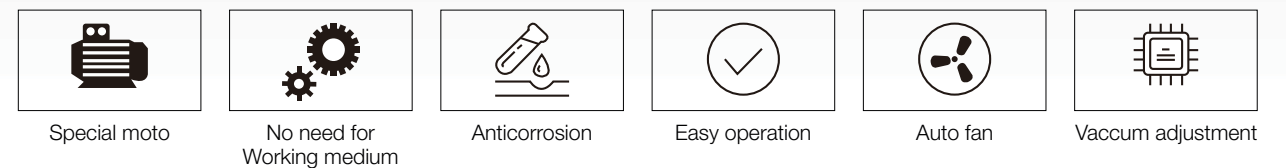
V Series no load



V Series with 10L vaccum oven



Application



Specification

Model	V-20	V-40	V-65	V-135	V-20F	V-40F
Maximum flow	20 L/min	35L/min	65L/min	125L/min	20 L/min	35L/min
Pump head type	Two - stage pump					
Ultimate vacuum	8 mbar					
Maximum operating pressure	1 bar					
Vacuum adjustment	No				Yes, display real vaccum degree	
Interface specification	10 mm		12mm		10 mm	
Pump head material	PTFE					
Composite diaphragm material	PTFE					
Valve material	FFPM					
Working system	Continuously working					
Environmental relative humidity	< 80%RH					
Medium and ambient temperature	5 °C - 40 °C					
Speed	1450RPM					
Interior dimension WxDxH(mm)	165×315×210	170×330×210	240×290×355	380×300×200	175×315×275	180×330×275
Power consumption	120W	240W	400W	600W	120W	240W
Electrical requirement	AC 220V 50HZ					

Cold Trap Bath



Summary

In vacuum applications, a cold trap is a device that condenses all vapors (except the permanent gases) into a liquid or solid. The main purpose is to prevent vapors being produced by an experiment from entering the vacuum pump where they would condense and contaminate it. Cold traps can also cool surfaces or baffles to prevent oil vapors flowing from a pump into a chamber. In such a case, a baffle or section of pipe containing a number of cooled vanes, will be attached to the inlet of an existing pumping system.

Features

Improve pump working efficiency

- The low temperature of the cold trap can condense the water vapor directly in the cold trap, thus greatly improving the working efficiency of the vacuum pump.

Protect vacuum pump

- Pumps that use oil either as their working fluid (diffusion pumps), or as their lubricant (mechanical rotary pumps), are often the sources of contamination in vacuum systems. Placing a cold trap at the mouth of such a pump greatly lowers the risk that oil vapors will back stream into the cavity.

LCD PID controller

- P.I.D temperature controller provides accurate and reliable temperature control.
- Large LCD display screen and interface provides for user-friendly operation.

Energy conservation and environmental protection

- Non-freon refrigeration improve cooling efficiency, lower noise, longer life time ensures the stability for long time running.

Safety

- Temperature deviation alarm.
- Compressor over current, over heat, over load protection.

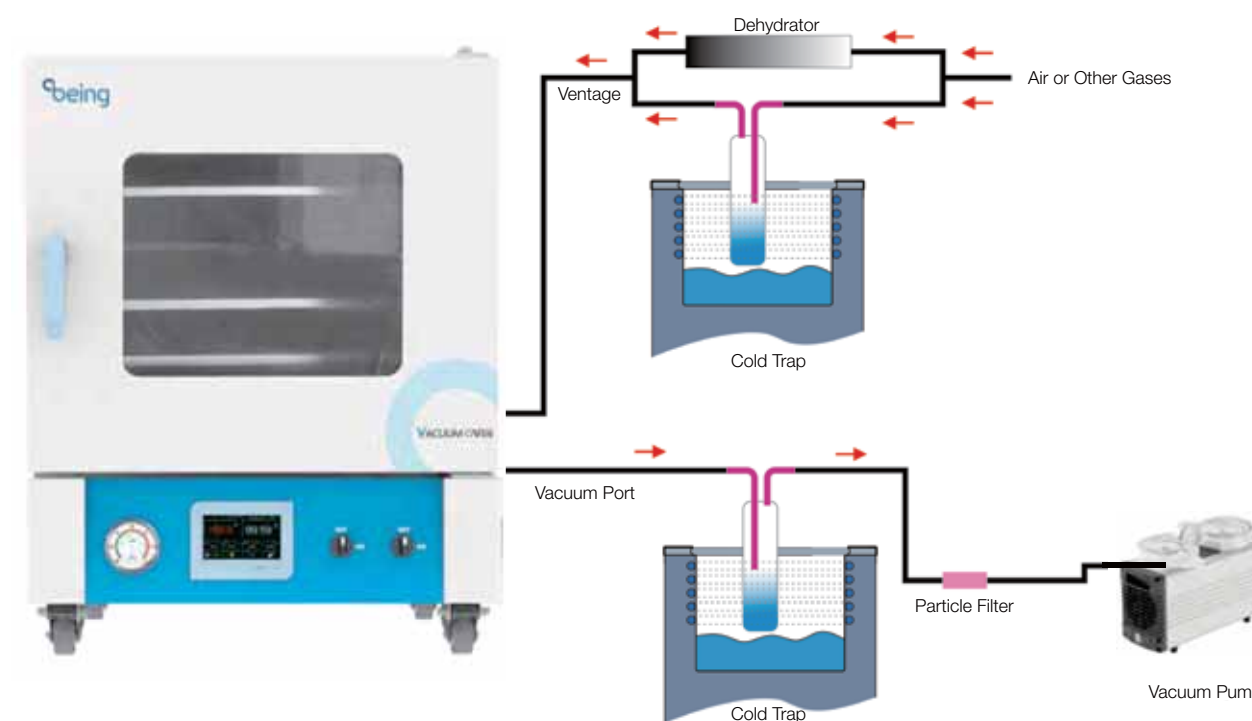
Design with

- 3 glass trap installation.
- Upside opened glass trap.
- Easy internal observation with PC Transparent Cover.
- Drain valve for easy discharge of collected liquid.
- S304 internal bath can be used to do water or ethanol cooling experiments. If equipped with glass condenser, it also can be used to deal with acid or organic solvents.

Option

- RS 485 connector and USB connector can connect computer to save the data.

Cold Trap Diagram



Specification

Model	BCT-05B	BCT-05D
Collection methods	Immersion of Glass Condenser	
Collection amount	Max.0.5Kg	Max.0.4Kg
Lowest temp	- 40°C	- 80°C
Safety function	Delayed Start of Compressor, Leakage, Overcurrent, Overvoltage Protection	
Refrigerating capacity	Air Cooling 150W R404A	Air Cooling 55W R404A, R23
Cover interface material	Import PC	
Tank interior dimension(mm)	φ 220mm×180mm	
Capacity(L)	5L	
PC capping diameter	φ 50.3mm 3 holes	
Condenser diameter	φ 10mm (Match the Diaphragm Pump)	
Interior dimension W×D×H(mm)	315×500×570	500×600×640
Power	850W	1300W
Electrical requirement	220V/50Hz	

Water Bath



water level sensor



Holed bottom plate

Suitable for direct heating and auxiliary heating of biological, chemical, physical, plant, chemical and other experimental samples. Routine laboratory temperature control, Escherichia coli detection, sample thawing, bacterial detection, incubation microbial experiments, cell culture, food testing pretreatment, etc.

Features

- PID temperature controller, large LCD display screen and interface provides for user-friendly operation.
- Easy to set Adjustable Timer. (1 minute to 5,999 minutes)
- Built-in circulating water pump to ensure uniform upper and lower temperature of bath lotion. (only for BW-22P)
- Maintenance-free operation with easy to clean surface.
- Both heater and bath chamber are made of corrosion-resistant stainless steel.
- No angle in bath chamber, easy to clean.
- The standard stainless-steel bottom plate, helps prevents direct contact by accessories and tubes to heating element and sensors.
- Drain valve makes emptying of bath water fast and easy for cleaning and moving.

Safety

- Preset On/Off function.
- Built-in power interruption protection function, automatic run after power interruption.
- Independent Over-temperature protection meets DIN 12880 International standard requirements.
- Temperature deviation alarm.
- Over current protection alarm.

Option

- Available RS-485 or USB ports for data collection.

Specification

Model	BW-5	BW-12	BW-22	BW-22P
Power requirements	AC220V 50HZ			
Power (W)	500W	800W	1000W	
Temperature range	RT+5 – 100°C			
Temperature fluctuation	±0.2°C			
Temperature resolution	0.1°C			
Chamber volume	5L	12L	22L	
Internal dimension W×D×H(mm)	280×130×150	305×150×240	505×150×330	
External dimension W×D×H(mm)	345×200×340	353×340×265	558×340×342	
Timer	1 – 5999min			
Net weight	5 Kg	12 Kg	18 Kg	19 Kg
Porous cover(lid)	2 - hole	4 - hole	6 - hole	6 - hole

Note: BW-22P built-in circulating water pump



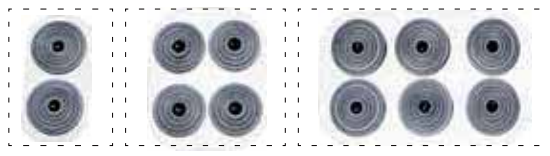
BW-05



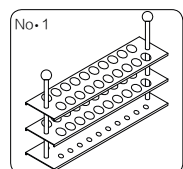
BW-12



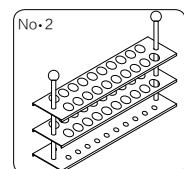
BW-22/22P



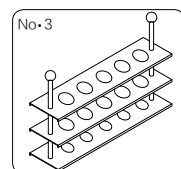
Porous cover(lid)



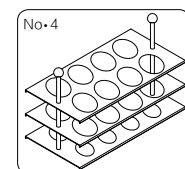
Φ 13mm×20
one module



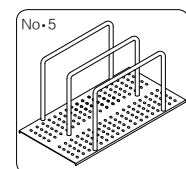
Φ 18mm×20
one module



Φ 31mm×5
one module



Φ 56mm×8
three modules



For blood bags
three modules

Circulating Bath (Heating)



Provided for precise and constant temperature and auxiliary heating in colleges industrial and mining enterprises and scientific research departments. It is suitable for the temperature control of electronic components, material test, chemical synthesis and process.

Features

- Microprocessor temperature controller with LCD screen ensures precise and reliable control, easy to operate.
- No angle in bath chamber, easy to clean.
- With interface to external water bath.
- Easy to set adjustable timer. (1 minute to 5,999 minutes)
- Maintenance-free operation with easy to clean surface.
- Both heater and bath chamber are made of corrosion-resistant stainless steel.
- Drain valve makes emptying of bath water fast and easy for cleaning and moving.
- Programming setting function with 7 periods and 9 steps for each period, which means there are 63 programmable steps in total.

Safety

- Audible and visible alarm for temperature and water level.
- Preset On/Off function.
- Built-in power interruption protection function, automatic run after power interruption.
- Heater alarm, sensor alarm, upper and lower temperature alarm.
- Temperature deviation alarm.
- Over current protection alarm.

Option

- Available RS-485 or USB ports for data collection.

Specification

Model	Temperature range	Precision	Liquid tank opening depth (mm)	Chamber volume	Power requirements	Pump (flux)	Power Consumption
BP-5H	RT+5 – 150°C	±0.1	150×160/150	6.7L	AC220V 50HZ	8L/min	1050W
BP-13H	RT+5 – 150°C	±0.1	240×170/150	10.9L		8L/min	1050W
BP-19H	RT+5 – 150°C	±0.1	330×300/150	22.5L		8L/min	1050W
BP-31H	RT+5 – 150°C	±0.2	240×170/240	14.5L		8L/min	1050W



BP-5



BP-13H
BP-19H



BP-31

Circulating Bath (Cooling and Heating)



Provided for precise and constant temperature and auxiliary heating in colleges industrial and mining enterprises and scientific research departments.

Features

- Microprocessor temperature controller with LCD screen ensures precise and reliable control, easy to operate.
- No angle in bath chamber, easy to clean.
- Programming setting function with 7 periods and 9 steps for each period, which means there are 63 programmable steps in total.
- R134a refrigerant.
- With interface to external water bath.
- Easy to set adjustable timer. (1 minute to 5,999 minutes)
- Maintenance-free operation with easy to clean surface.
- Both heater and bath chamber are made of corrosion-resistant stainless steel.
- Drain valve makes emptying of bath water fast and easy for cleaning and moving.

Safety

- Audible and visible alarm for temperature and water level.
- Heater alarm, sensor alarm, upper and lower temperature alarm.
- Preset On/Off function.
- Built-in power interruption protection function, automatic run after power interruption.
- Temperature deviation alarm.
- Over current protection alarm.

Option

- Available RS-485 or USB ports for data collection.

Specification

Model	BP-05L	BP-05A	BP-05B	BP-13L	BP-13A	BP-13B
Temperature range	-10 – 100°C	-20 – 100°C	-40 – 100°C	-10 – 100°C	-20 – 100°C	-40 – 100°C
Precision	±0.2					
Liquid tank opening/depth (mm)	150×160/150	150×160/150	150×160/150	240×170/200	240×170/200	240×170/200
Chamber volume	4.5L	4.5L	4.5L	13L	13L	13L
Power requirements	AC220V 50HZ					
Pump (flux)	8L/min	8L/min	8L/min	8L/min	8L/min	8L/min
Power consumption	2300W	2300W	3150W	2300W	2300W	3100W

Shaking Water Bath



Widely applicable for laboratory researches on bacteria cultivation, fermentation, hybridization, chemical and biochemical reaction, enzymes and tissues research, which have a high requirement on precision of shaking speed and temperature.

Features

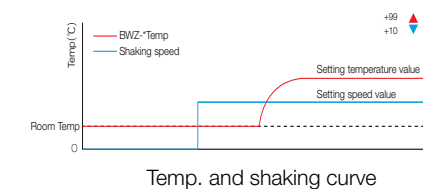
- Microprocessor temperature controller with LCD screen ensures precise and reliable control, easy to operate.
- Both heater and bath chamber are made of corrosion-resistant stainless steel.
- No angle in bath chamber, easy to clean.
- Programming setting function with 7 periods and 9 steps for each period, which means there are 63 programmable steps in total.
- Easy to set adjustable timer. (1 minute to 5,999 minutes)
- Maintenance-free operation with easy to clean surface.
- Drain valve makes emptying of bath water fast and easy for cleaning and moving.

Safety

- Audible and visible alarm for temperature and water level.
- Heater alarm, sensor alarm, upper and lower temperature alarm.
- Preset On/Off function.
- Built-in power interruption protection function, automatic run after power interruption.
- Temperature deviation alarm.
- Over current protection alarm.

Option

- Available RS-485 or USB ports for data collection.



Specification

Model	BWZ-10	BWZ-30
Temperature range	RT+5 – 99°C	
Display resolution	0.1°C	
Temperature uniformity (at 37°C)	±0.5°C	
Shaking speed range	30 – 180 rpm	
Amplitude	30mm (Standard) or 40mm (Option)	
Interior dimension W×D×H(mm)	438×310×250	618×310×250
Exterior dimension W×D×H(mm)	643×350×353	823×350×355
Chamber volume	33L	47L
Power requirements	AC220V 50HZ	
Power consumption	1250W	1650W

Magnetic Stirrer (Ceramic platform)



Magnetic stirrer to measure liquid temp.

Hot plate

Application

Magnetic stirrer is working by micromotors driving high temperature-resistant, powerful magnets rotating, create rotating magnetic field to lead the agitator in the container to stir, mix or assist heating the liquid in the container so that the solution can be fully mixed at the set temperature. It can be widely used in biological, pharmaceutical and chemical fields.

Features

- LCD screen, menu operation interface, temp, rotation speed and count down timer etc parameters display at one screen. It is easy to understand and operate.
- Micro computer control assures the speed remains stable with constantly changing stirring viscosity.
- Aluminium die-cast housing cover, high temperature-resistant and anti-corrosion, easy to clean.
- Platform is made of one molding ceramic materials. It has both good thermal effect, but also have corrosion resistance, smooth platform is easy to clean, no contaminants stay.
- Large output torque, suitable for mixing low viscosity large capacity or high viscosity small capacity liquid.(Different types of different capacities)
- There is a corrosion-resistant guide groove above the control panel, even if the liquid overflows during stirring, it doesn't cause damage to the electronics in the agitator.
- Brushless DC motor, work more stably, long life and control more accurate.

Safety protection

- Temperature deviation protection: A/BT series measured temperature over set temperature certain value(3°C – 30°C), it stops heating.
- Over-temp. protection: When platform temp is over Max. set temp, it stops heating power.
- Anti-hot warning light: High temperature indication: when platform temp. is over 55°C, indication light flash to remind user can't touch the platform.
- Special protection: Anti-hot cover (option)

Ceramic magnetic stirrer classification

- Constant temp. magnetic stirrer: AT series with outer temp. sensor, it can detect and control liquid temp. in the container, precise and reliable.
- Heating magnetic stirrer: BT series platform temp. max reach 400°C
- Magnetic stirrer: CT series no heating function, only stir.

Magnetic Stirrer (Ceramic platform)

Technical parameters

Model	BM-09A5T	BM-09A12T	BM-09B5T	BM-09B15T	BM-09C15T
Max mix capacity	5	12	5	15	15
Speed range	200 – 1600rpm (2000 option)				
Heating power	800W	950W	800W	950W	—
Input power	850W	1000W	850W	1000W	50W
Solution control temp.	RT+5 – 200°C		—		—
Platform control temp.	—		RT+5 – 320°C		—
Control temp accuracy	±0.3°C		±0.5°C		—
Platform size(mm)	180×180				
Overall size W×D×H(mm)	210×330×130				
Net weight	5Kg	5Kg	4.5Kg	4.5Kg	4Kg

Note: Measured by H₂O, the viscosity of the liquid will vary from stirring capacity.

Magnetic Stirrer



Magnetic stirrer to measure liquid temp.



Hot plate

Application

The magnetic stirrer rotates the rotor through the rotation of the base, realizes the mixing of the liquid and solid mixture. During stirring, it comes with platform heating, which control temp stable and speed up the rate of mixing or solid solution, and improve the reaction speed of chemical experiments. It is widely used in biology, medicine, chemistry and other fields.

Features

- LCD screen, menu operation interface, temp, rotation speed and count down timer etc parameters display at one screen. It is easy to understand and operate.
- Micro computer control assures the speed remains stable with constantly changing stirring viscosity.
- Stirring speed is controlled and stable, it can fast achieve liquid mixing and solution and solid mixture mixing .
- Aluminium die-cast housing cover, high temperature-resistant and anti-corrosion, easy to clean.
- Platform is made of one molding aluminium alloy materials. It has both good thermal effect, but also have corrosion resistance, smooth platform is easy to clean, no contaminants stay.
- Large output torque, suitable for mixing low viscosity large capacity or high viscosity small capacity liquid.(Different types of different capacities)
- There is a corrosion-resistant guide groove above the control panel, even if the liquid overflows during stirring, it doesn't cause damage to the electronics in the agitator.

Safety protection

- Temperature deviation protection: A/B series measured temperature over set temperature certain value(3°C – 30°C), it stops heating.
- Over-temp. protection: When platform temp is over Max. set temp, it stops heating power.
- Anti-hot warning light High temperature indication : when platform temp. is over 55°C , indication light flash to remind user can't touch the platform.
- Special protection: Anti- hot cover (option)

Ceramic magnetic stirrer classification

- Constant temp. magnetic stirrer: A series with outer temp. sensor, it can detects and controls liquid temp. in the container, precise and reliable.
- Heating magnetic stirrer: B series platform temp. max reach 400°C

Magnetic Stirrer

Technical parameters

Model	BM-07A3	BM-09A5	BM-09A12	BM-07B3	BM-09B5	BM-09B15
Max mix capacity	3	5	12	3	5	15
Speed range	200 – 1600rpm (2000 option)					
Heating power	450W	550W	650W	400W	550W	650W
Input power	500W	600W	750W	500W	600W	750W
Solution control temp.	RT+5 – 200°C			—		
Platform control temp.	—			RT+5 – 320°C		
Control temp accuracy	±0.3°C			±0.5°C		
Platform size (mm)	130×130	180×180	180×180	130×130	180×180	180×180
Overall size W×D×H (mm)	150×250×110	210×330×130	210×330×130	150×250×110	210×330×130	210×330×130
Net weight	4Kg	5Kg	5Kg	3.5Kg	4.5Kg	4.5Kg

Note: Measured by H₂O, the viscosity of the liquid will vary from stirring capacity.

Magnetic Stirrer (Round platform)



Magnetic stirrer to measure liquid temp.



Hot plate

Application

Magnetic stirrer is working by micromotors driving high temperature-resistant, powerful magnets rotating, create rotating magnetic field to lead the agitator in the container to stir, mix or assist heating the liquid in the container so that the solution can be fully mixed at the set temperature. It can be widely used in biological, pharmaceutical and chemical fields.

Features

- LCD screen, menu operation interface, temp, rotation speed and count down timer etc parameters display at one screen. It is easy to understand and operate.
- Micro computer control assures the speed remains stable with constantly changing stirring viscosity.
- Stirring speed is controlled and stable, it can fast achieve liquid mixing and solution and solid mixture mixing .
- Aluminium die-cast housing cover, high temperature-resistant and anti-corrosion, easy to clean.
- Platform is made of one molding aluminium alloy materials. It has both good thermal effect, but also have corrosion resistance, smooth platform is easy to clean, no contaminants stay.
- Large output torque, suitable for mixing low viscosity large capacity or high viscosity small capacity liquid.(Different types of different capacities)
- There is a corrosion-resistant guide groove above the control panel, even if the liquid overflows during stirring, it doesn't cause damage to the electronics in the agitator.

Safety protection

- Temperature deviation protection: A/B series measured temperature over set temperature certain value(3°C – 30°C), it stops heating.
- Over-temp. protection: When platform temp is over Max. set temp, it stops heating power.
- Anti-hot warning light High temperature indication : when platform temp. is over 55°C , indication light flash to remind user can't touch the platform.
- Special protection: Anti- hot cover (option)

Ceramic magnetic stirrer classification

- Constant temp. magnetic stirrer: A series with outer temp. sensor, it can detects and controls liquid temp. in the container, precise and reliable.
- Heating magnetic stirrer: B series platform temp. max reach 400°C
- Magnetic stirrer: C series no heating function, only stir.

Magnetic Stirrer (Round platform)

Technical parameters

Model	BM-08A3	BM-08B3	BM-08C5
Max mix capacity	3		5
Speed range	200 – 1600rpm (2000 option)		
Heating power	550W		—
Input power	600W		50W
Solution control temp.	RT+5 – 200°C	—	—
Platform control temp.	—	RT+5 – 320°C	—
Control temp accuracy	±0.3°C	±0.5°C	—
Platform size (mm)	Φ 145		
Overall size WxDxH(mm)	150x250x130		
Net weight	4Kg	3.5Kg	

Note: Measured by H₂O, the viscosity of the liquid will vary from stirring capacity.

-86°C Ultra Low Temperature Freezer

Application

- Offers optimal temperature conditions that needed in the medical and laboratory fields.
- Suitable for scientific research institutes, metal processing, biological engineering, blood stations, hospitals, health and epidemic prevention systems, university laboratories, military enterprises, etc.

Limits of Authority Management

- According to the needs of equipment management, different user permission of the freezer controller can be allocated to three levels: administrator, operator and visitor.

Technical Features

- The frame consists of white coated antibacterial sheet steel, to ensure durable and corrosion resistant.
- Freezer inner side is made of SS304, allowing the perfect and easy cleaning.
- Easily to install or uninstall shelves, and the height of shelves can be adjusted in order to fit different size storage.
- 126mm Non HCFC polyurethane insulation foam, independent inner door and multi-layer sealing gasket can minimize the loss of refrigeration capacity.
- Fixable castors are designed for easily relocation.
- User friendly touch screen offers at a glance any control and command function, also allowing a quick access to any recorded data and working status.
- Already passed CE and RoHS certification.



Hinge :
Detachable inner door hinge for easy disassembly and replacement

Inner door magnet :
Strong magnetic magne to ensure optimal sealing of door to freezer

Temperature sensor :
Fixed Temperature sensor position to ensure accuracy ; protection box to ensure the distance between sample and temperature sensor.

Racks:
Proper size racks to maximize space usage.

Shelves:
Adjustable and removable stainless steel shelves easy for setting different samples and clean the chamber; max. load 50Kg each

Options



Standard racks & boxes, one-stop equipment

Extra interior chamber temperature probe



LN₂/CO₂ backup system
Easy temperatures set to start or stop backup system

Manual and Auto models available

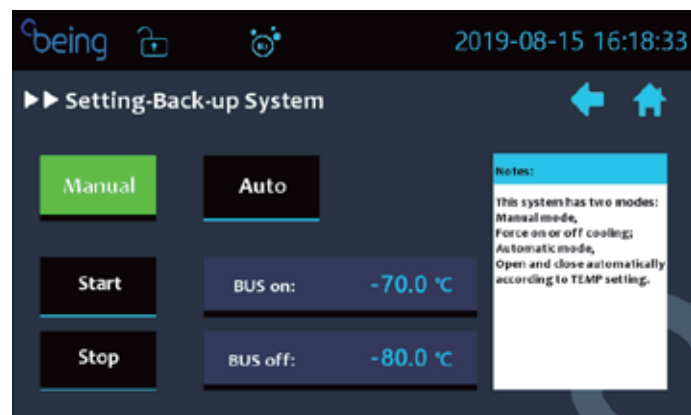


Chart recorder
≥7 days' data can be stored



Voltage stabilizer



Power input
160V-250V

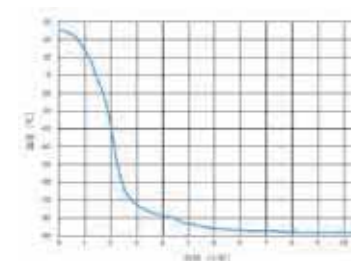
Power output
220V ~ ±4%

Over voltage
246V±4V

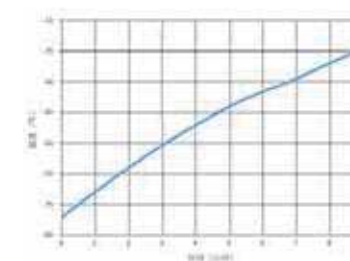
Action ≤6S

Technical Specifications

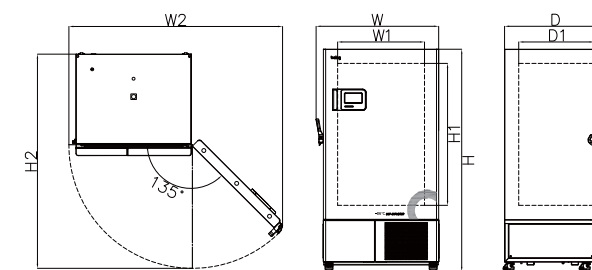
Model	BDW-86L390	BDW-86L490	BDW-86L650	BDW-86L770
Temperature range [°C]	-50 -- -86			
Nominal capacity [Liters]	390	490	650	770
Exterior dimensions [mm] W x D x H	909 x 797 x 1990	909 x 929 x 1990	1091 x 929 x 1990	1091 x 1053 x 1990
Interior dimensions [mm] W1 x D1 x H1	589 x 505 x 1310	589 x 637 x 1310	780 x 637 x 1310	780 x 760 x 1310
Door opening [mm] W2 x H2	589 x 1310	589 x 1310	780 x 1310	780 x 1310
Insulation thickness [mm]	126			
Exterior finishing	White plastic coated galvanised steel			
Interior finishing	Stainless steel			
Inner door	4			
Shelves	3			
Levels	4			
Racks [boxes]	16 (240)	16 (320)	20 (400)	20 (500)
Ring latch hole	Yes			
Mechanical lock	Yes			
Data logger	Yes			
Battery	Yes			
Interior chamber temperature probe	Yes			
Vent port	Yes			
Gasket heating	Yes			
Controller type	Touch screen			
Refrigerant type	Non HCFC			
Voltage/Frequency [V / Hz]	AC220 / 50			
Power [W]	1500			1800
Net Weight [kg]	318	332	410	490
High condenser temperature alarm	Yes			
Power failure alarm	Yes			
Temperature sensor failure alarm	Yes			
Low battery alarm	Yes			
High / Low temperature alarm	Yes			
Door open alarm	Yes			
Sound pressure [dB]	≤ 53			
Cooling time [h]	≤ 6			≤ 8
Temperature uniformity [°C]	≤ 6			
Certification	CE / RoHS			



Temperature Decrease Curve



Temperature Rise After Power Off



Outline & Door Opening Dimension

-86°C Chest Ultra Low Temperature Freezer

Application

- Offers optimal temperature conditions that needed in the medical and laboratory fields.
- Suitable for scientific research institutes, metal processing, biological engineering, blood stations, hospitals, health and epidemic prevention systems, university laboratories, military enterprises, etc.

Limits of Authority Management

- According to the needs of equipment management, different user permission of the freezer controller can be allocated to three levels: administrator, operator and visitor.



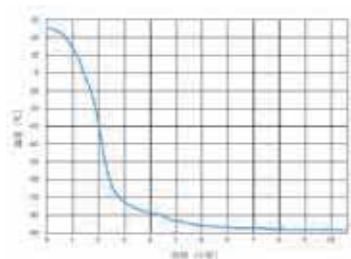
Side installed door opening air spring, can limit the door opening range, in order to convenient the operation of different height operator. When the door was closed, it moving slowly to avoid safety risk of extrusion and collision.



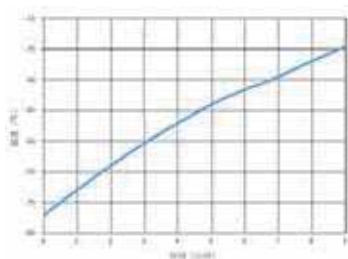
The position of temperature sensor was fixed, and installed with protection cage to keep distance between storage and chamber wall, in order to ensure the measurement accuracy.



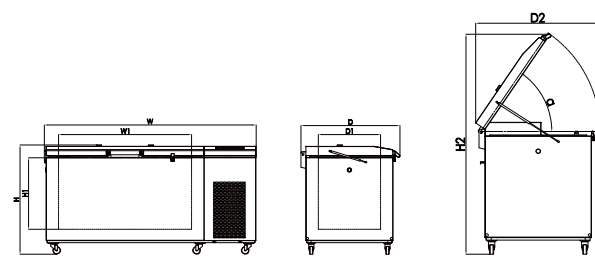
Equipped with mechanical lock, to ensure the safety of storage.



Temperature Decrease Curve



Temperature Rise After Power Off



Outline & Door Opening Dimension

Technical Features

- The frame consists of white coated antibacterial sheet steel, to ensure durable and corrosion resistant.
- Freezer inner side is made of SS304, allowing the perfect and easy cleaning.
- Easily to install or uninstall shelves, and the height of shelves can be adjusted in order to fit different size storage.
- 126mm Non HCFC polyurethane insulation foamd and multi-layer sealing gasket can minimize the loss of refrigeration capacity.
- PU Castorsis silent and fixable, convenient to move and relocate.
- User friendly touch screen offers at a glance any control and command function, also allowing a quick access to any recorded data and working status.
- Good temperature uniformity.

Technical Specifications

Model	BDW-86W480	BDW-86W650
Temperature range [°C]	-50 -- -86	
Nominal capacity [Liters]	480	650
Exterior dimensions [mm] W x D x H	2050 x 956 x 1135	2050 x 1147 x 1135
Interior dimensions [mm] W1 x D1 x H1	1310 x 589 x 637	1310 x 780 x 637
Door opening [mm] W2 x H2	956 x 1135	1147 x 1135
Insulation thickness [mm]	126	
Exterior finishing	White plastic coated galvanised steel	
Interior finishing	Stainless steel	
Mechanical lock	Yes	
Data logger	Yes	
Battery	Yes	
Interior chamber temperature probe	Yes	
Vent port	Yes	
Gasket heating	Yes	
Controller type	Touch screen	
Refrigerant type	Non HCFC	
Voltage/Frequency [V/Hz]	AC220/50	
Power [W]	1130	
Net Weight [kg]	350	420
High condenser temperature alarm	Yes	
Power failure alarm	Yes	
Temperature sensor failure alarm	Yes	
Low battery alarm	Yes	
High / Low temperature alarm	Yes	
Door open alarm	Yes	
Sound pressure [dBA]	≤53	
Cooling time [h]	≤5	
Temperature uniformity [°C]	≤3	

-40°C Low Temperature Freezer

Applications

Medical, Reagents, Biological, Vaccine, Suitable for Medical, Electronics, Chemicals, R&D, University Research, Food Process.



BDW-40L320



BDW-40L260



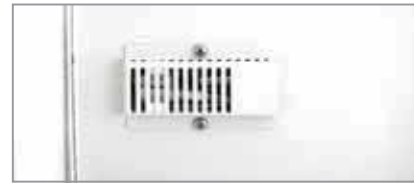
Magnetic door seal to ensure optimal sealing of door to fridge.



With sturdy aluminum alloy hinge.



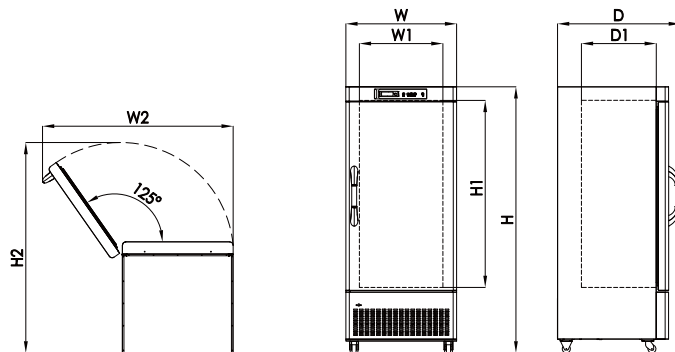
Independent inner doors to minimize cold air leakage.



Temperature sensor with protective cover to prevent contact with fridge or product.



Strong Magnet to ensure independent inner doors are fully sealed.



Outline & Door Opening Dimension

Cooling System

- With stable and consistent internal cabinet temperature, Fast temp recovery after opening and closing the door.
- Temp. Range: -30°C - -40°C
- With 80mm thick polyurethane foam insulation.
- Evaporator copper tube embedded in foam layer to prevent corrosion and to ensure heat transferring efficiency.
- Special designed compact finned condenser for better efficiency.
- Independent inner door to minimize leakage of cold air, ensuring uniform temperature within the refrigerator.

Safety

- Magnetic sealed door automatically closes to ensure and heightens the refrigeration performance and operational reliability.
- Password protected control setting to prevent any unnecessary operating parameters from being modified Sturdy and durable overall frame structure.
- Antibacterial powdered inner and outer surface.
- Refrigeration system uses highly efficient and environmental friendly fluorine-free refrigerant.
- Controller equipped with rechargeable backup battery, which can display the main information such as alarm and internal temperature of the cabinet when the main power is cut off.
- Built-in mechanical lock to ensure safety of stored items.
- Built-in Castors for easy relocation when needed.
- Safe mode activates in the event of temperature sensor failure, ensuring the safe storage of items in the box.

Temperature control and safety monitoring

- Temp. Accuracy 0.1°C
- Alarm mode: buzzer and flashing lights.
- Digital temperature display.
- High and Low temp. alarm.
- Alarm when doors are opened after an extended period of time.
- Power failure alarm.
- Record displays Date, Time, Min and Max Temp.
- Controller displays real-time temperature and alarm codes for easy use.

Easy Operation

- Standard testing ports on right side for easy access to external test tools.
- Castors wheels for ease of maneuvering.
- Door frame can be heated to reduce condensation.
- Adjustable shelvings.
- Dip-treated shelf, effective in preventing rust and corrosion.
- Buzzing alarm can also be set to mute if required.
- Backup battery is charged while the refrigerator is in operation and its reusable characteristics minimize the adverse effects on the environment.
- Displays real time operating status of refrigerator on large screen of the controller for easy of reading.

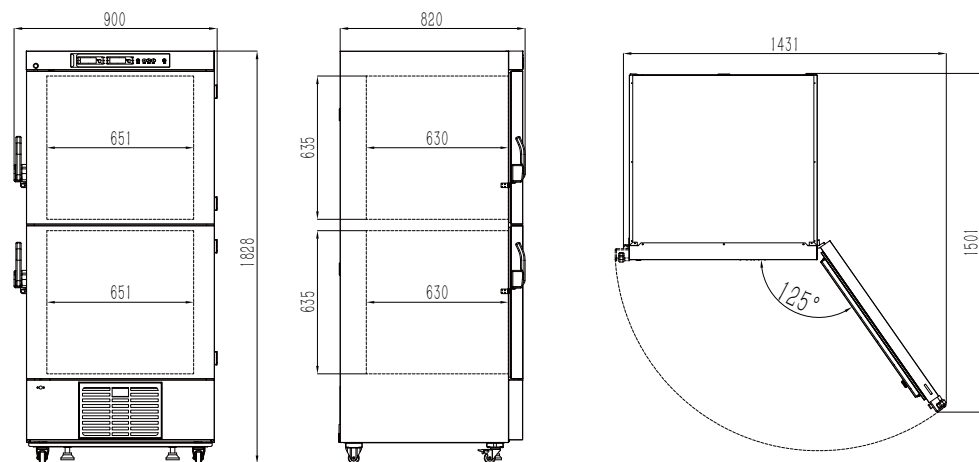
Technical Specifications

Model	BDW-40L260	BDW-40L320
Temperature range [°C]	-30 - -40	
Effective volume [Liters]	260	320
Exterior dimensions W x D x H [mm]	673 x 747 x 1630	673 x 747 x 1886
Interior dimensions W1 x D1 x H1 [mm]	508 x 455 x 1137	508 x 455 x 1393
Door opening W2 x H2 [mm]	1159 x 1158	1159 x 1158
Insulation thickness [mm]	80	
Exterior finishing	White plastic coated galvanised steel	
Interior finishing	White plastic coated galvanised steel	
Inner doors	4	5
Shelves	3	4
Levels	4	5
Mechanical lock	Yes	
Battery	Yes	
Interior chamber temperature probe	Yes	
Gasket heating	Yes	
Controller type	Digital screen	
Refrigerant type	HC	
Voltage/Frequency [V / Hz]	AC220 / 50	
Power [W]	300	
Net Weight [kg]	98.5	113
Power failure alarm	Yes	
Temperature sensor failure alarm	Yes	
High / Low temperature alarm	Yes	
Door open alarm	Yes	
Temperature resolution [°C]	0.1	
Temperature uniformity [°C]	≤6	
Cooling Time [h]	≤4.1	
Certification	CE / RoHS	

-20°C – -40°C Low Temperature Freezer

Applications

Medical, Reagents, Biological, Vaccine, Suitable for Medical, Electronics, Chemicals, R&D, University Research, Food Process.



Outline & Door Opening Dimension

Cooling System

- Temperature Range: : -20°C - -40°C .
- Microprocessing controller, LED display, temperature adjustment and display accuracy is 0.1°C .
- The outer door adopts unique sealing structure, which can ensure the freezer with good sealing and heat preservation performance.
- The upper and lower storage spaces with two completely independent cooling system, temperature control and display.
- Compressors are efficient and reliable.

Safety

- Build-in back-up battery to display temperature and alarm information for up to 8 hours, if AC power is failure.
- With high/low temperature alarm, sensor failure alarm, power failure alarm, door ajar alarm. Two ways of alarm: visual and audible.
- The handle has a padlock hole that can be used to provide an extra protection of security for storage.
- Button on the control panel can be locked to avoid setting parameters being changed due to misoperation.
- With compressor delay start protection function when power off restart.

Technical Specifications

Model	BDW-40L530D
Temperature Range [°C]	-20 – -40
Effective Capacity [Liters]	265 × 2
Insulation Thickness [mm]	95
Exterior dimensions W x D x H [mm]	900 x 820 x 1828
Up chamber Interior dimensions W1 x D1 x H1 [mm]	651 x 630 x 635
Down chamber Interior dimensions W1 x D1 x H1 [mm]	651 x 630 x 635
Door opening W2 x H2 [mm]	1431 x 1501
Exterior Finishing	White Plastic Coated Galvanised Steel
Interior Finishing	
Levels	3 × 2
Drawers	3 × 3 × 2
Mechanical Lock	Yes
Battery	Yes
Temperature Sensor in Chamber	Yes
Gasket Heating	Yes
Controller Type	Digital Screen
Refrigerant	HC
Voltage/Frequency [V / Hz]	AC220 / 50
Rated Power [W]	340
Net Weight [kg]	160
Power Failure Alarm	Yes
Temperature Sensor Failure Alarm	Yes
High/Low Temperature Alarm	Yes
Door Ajar Alarm	Yes
Temperature Resolution [°C]	0.1
Temperature Uniformity [°C]	≤6
Pull Down Time [h]	≤4.1

- Efficient and environmentally friendly HC refrigerant is used.
- Build-in mechanical lock to ensure the safety of storage.
- Safe mode will be ran automatically in case of sensor failure to ensure the temperature for storage.

Easy Operation

- Door frame can be heated to avoid condensation.
- Standard testing ports for easy access to external test tools.
- Buzzer alarm can also be set to mute if required.
- Standard drawer, easy to storage and management.
- The bottom is provided with leveling feet to ensure the levelness of the freezer body during installation.
- In case of failure, the control screen displays real-time temperature and corresponding alarm code, which is convenient for trouble shooting.
- The specially designed handle can balance the pressure difference between inside and outside the chamber while pulling, to ensure outer door can be opened easily and smoothly.

-25°C Low Temperature Freezer

Applications

Medical, Reagents, Biological, Vaccine, Blood Samples; Suitable for Medical, Electronics, Chemicals, R&D, University Research, Food Process.



BDW-25L320



BDW-25L260



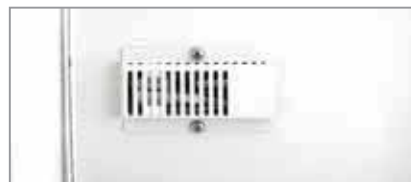
Magnetic door seal to ensure optimal sealing of door to fridge.



With sturdy aluminum alloy hinge.



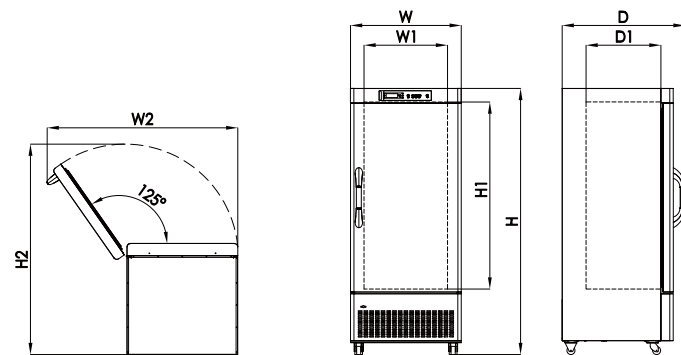
Independent inner doors to minimize cold air leakage.



Temperature sensor with protective cover to prevent contact with fridge or product.



Strong Magnet to ensure independent inner doors are fully sealed.



Outline & Door Opening Dimension

Cooling System

- With stable and consistent internal cabinet temperature, Fast temp recovery after opening and closing the door.
- Temp. Range: - 10°C - - 25°C
- With 80mm thick polyurethane foam insulation.
- Evaporator copper tube embedded in foam layer to prevent corrosion and to ensure heat transferring efficiency.
- Special designed compact finned condenser for better efficiency.
- Independent inner door to minimize leakage of cold air, ensuring uniform temperature within the refrigerator.

Safety

- Magnetic sealed door automatically closes to ensure and heightens the refrigeration performance and operational reliability.
- Password protected control setting to prevent any unnecessary operating parameters from being modified Sturdy and durable overall frame structure.
- Antibacterial powdered inner and outer surface.
- Refrigeration system uses highly efficient and environmental friendly fluorine-free refrigerant.
- Controller equipped with rechargeable backup battery, which can display the main information such as alarm and internal temperature of the cabinet when the main power is cut off.
- Built-in mechanical lock to ensure safety of stored items.
- Built-in Castors for easy relocation when needed.
- Safe mode activates in the event of temperature sensor failure, ensuring the safe storage of items in the box.

Temperature control and safety monitoring

- Temp. Accuracy 0.1°C
- Alarm mode: buzzer and flashing lights.
- Digital temperature display.
- High and Low temp. alarm
- Alarm when doors are opened after an extended period of time
- Power failure alarm.
- Record displays Date, Time, Min and Max Temp.
- Controller displays real-time temperature and alarm codes for easy use.

Easy Operation

- Standard testing ports on right side for easy access to external test tools.
- Castors wheels for ease of maneuvering.
- Door frame can be heated to reduce condensation.
- Adjustable shelvings.
- Dip-treated shelf, effective in preventing rust and corrosion.
- Buzzing alarm can also be set to mute if required.
- Backup battery is charged while the refrigerator is in operation and its reusable characteristics minimize the adverse effects on the environment.
- Displays real time operating status of refrigerator on large screen of the controller for easy of reading.

Technical Specifications

Model	BDW-25L260	BDW-25L320
Temperature range [°C]	-10 – -25	
Effective volume [Liters]	260	320
Exterior dimensions W x D x H [mm]	673 x 747 x 1630	673 x 747 x 1886
Interior dimensions W1 x D1 x H1 [mm]	508 x 455 x 1137	508 x 455 x 1393
Door opening W2 x H2 [mm]	1159 x 1158	1159 x 1158
Insulation thickness [mm]	80	
Exterior finishing	White plastic coated galvanised steel	
Interior finishing	White plastic coated galvanised steel	
Inner doors	4	5
Shelves	3	4
Levels	4	5
Mechanical lock	Yes	
Battery	Yes	
Interior chamber temperature probe	Yes	
Controller type	Digital screen	
Refrigerant type	HC	
Voltage/Frequency [V / Hz]	AC220 / 50	
Power [W]	280	
Net Weight [kg]	98.5	113
Power failure alarm	Yes	
Temperature sensor failure alarm	Yes	
High / Low temperature alarm	Yes	
Door open alarm	Yes	
Temperature resolution [°C]	0.1	
Temperature uniformity [°C]	≤4	
Cooling Time [h]	≤2.6	
Certification	CE / RoHS	

2°C – 8°C Refrigerator

Applications

Medical, Reagents, Biological, Vaccine, Blood Samples; Suitable for Medical, Electronics, Chemicals, R&D, University Research, Food Process.



Wide double layer window for easy observation



BYC-5L60



BYC-5L656
BYC-5L1000



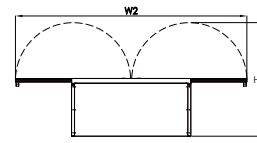
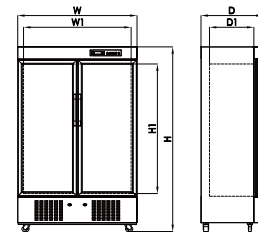
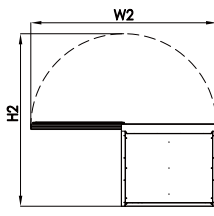
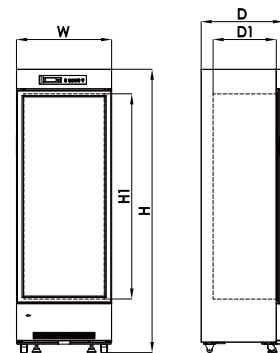
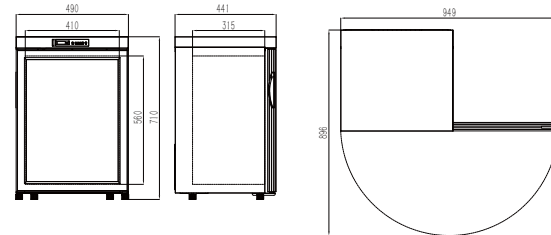
BYC-5L230
BYC-5L310



Adjustable shelves



Strong mechanical convention to ensure better temperature uniformity



Outline & Door Opening Dimension

Cooling System

- With stable and consistent internal cabinet temperature, Fast temp recovery after opening and closing the door.
- Temp. Range: 2 - 8°C
- With 50-60mm thick polyurethane foam insulation.
- Evaporator copper tube embedded in foam layer to prevent corrosion and to ensure heat transferring efficiency.
- Special designed compact finned condenser for better efficiency.
- Independent inner door to minimize leakage of cold air, ensuring uniform temperature within the refrigerator.

Safety

- Magnetic sealed door automatically closes to ensure and heightens the refrigeration performance and operational reliability.
- Password protected control setting to prevent any unnecessary operating parameters from being modified
- Sturdy and durable overall frame structure.
- Antibacterial powdered inner and outer surface.
- Refrigeration system uses highly efficient and environmental friendly fluorine-free refrigerant.
- Controller equipped with rechargeable backup battery, which displays the main information such as alarm and internal temperature of the cabinet when the main power is cut off.
- Built-in mechanical lock to ensure safety of stored items.
- Built-in Castors for easy relocation when needed.
- Safe mode activates in the event of temperature sensor failure, ensuring the safe storage of items in the box.

Temperature control and safety monitoring

- Temperature stability $\pm 1.5^\circ\text{C}$
- Temp. Accuracy 0.1°C
- Alarm mode: buzzer and flashing lights.
- Digital temperature display.
- High and Low temp. alarm.
- Alarm when doors are opened after an extended period of time.
- Power failure alarm.
- Record displays Date, Time, Min and Max Temp.
- Controller displays real-time temperature and alarm codes for easy use.

Easy Operation

- Writable tag on each level.
- Wide double layer window for easy observation.
- LED lamp power switch together with control panel.
- Standard testing ports on right side for easy access to external test tools.
- Castors wheels for ease of maneuvering.
- Adjustable shelvings.
- Dip-treated shelf, effective in preventing rust and corrosion.
- Buzzing alarm can also be set to mute if required.
- Backup battery is charged while the refrigerator is in operation and its reusable characteristics minimize the adverse effects on the environment.
- Displays real time operating status of refrigerator on large screen of the controller for easy of reading.

Technical Specifications

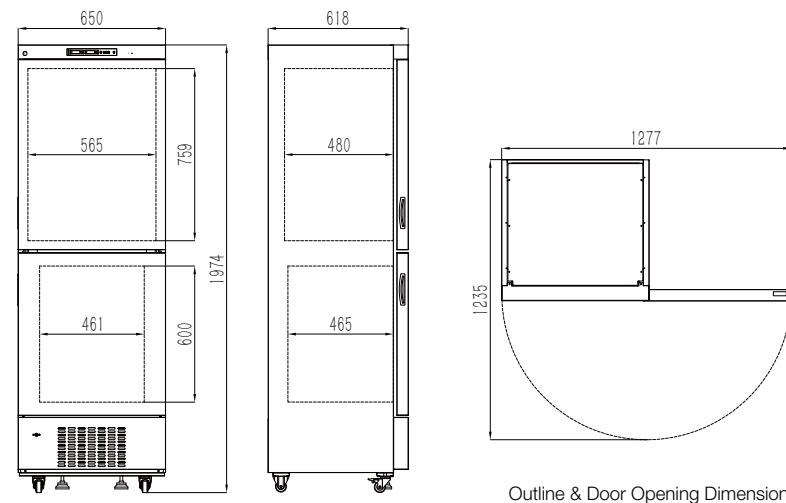
Model	BYC-5L60	BYC-5L230	BYC-5L310	BYC-5L656	BYC-5L1000
Temperature range [°C]	2 - 8				
Effective volume [Liters]	60	230	310	656	1000
Exterior dimensions W x D x H [mm]	490 x 441 x 710	625 x 594 x 1707	640 x 553 x 1880	1220 x 642 x 1885	1220 x 872 x 1885
Interior dimensions W1 x D1 x H1 [mm]	410 x 315 x 560	534 x 406 x 1150	540 x 425 x 1380	1100 x 454 x 1325	1100 x 684 x 1325
Door opening W2 x H2 [mm]	949 x 896	1219 x 1152	1250 x 1160	2367 x 1160	2367 x 1390
Insulation thickness [mm]	40	45	50	60	
Exterior finishing	White plastic coated galvanised steel				
Interior finishing	White plastic coated galvanised steel				
Shelves	2	4	5	10	10
Levels	3	4	5	10	10
Mechanical lock	Yes				
Battery	Yes				
Interior chamber temperature probe	Yes				
Controller type	LED				
Refrigerant type	HC				
Voltage/Frequency [V / Hz]	AC220 / 50				
Power [W]	72	140	215	310	310
Net Weight [kg]	33	73	92.5	158	207
Power failure alarm	Yes				
Temperature sensor failure alarm	Yes				
High / Low temperature alarm	Yes				
Door ajar alarm	Yes				
Temperature resolution [°C]	0.1				
Temperature uniformity [°C]	≤ 2				
Cooling Time [h]	≤ 0.8				
Certification	-	-	CE / RoHS		

2°C – 8°C / -10°C – -25°C Refrigerator

Application

Suitable for pharmacy, pharmaceutical factory, hospital, clinic, disease control and prevention center, it is a professional equipment for refrigerating medicine.

Suitable for hospital, disease control and prevention center, electronics, chemicals, R&D, laboratory, food processing. Can be used for electronics, chemicals, R&D, laboratory of university, food processing. Also can be used to store biological product, reagent, vaccine, etc.



Cooling System

- Temperature Range: 2°C -8°C , -10°C --25°C .
- Microprocessing controller, LED display, temperature adjustment and display accuracy is 0.1°C .
- The outer door adopts unique sealing structure, which can ensure the freezer with good sealing and heat preservation performance.
- The upper and lower storage spaces with two completely independent cooling system, temperature control and display.
- The refrigerator adopts fan motor with more safe and can keep lubrication permanently, so it can be used longer.
- The forced air cooling circulation of the refrigerator can keep the temperature inside the chamber stable and unified, also can make the temperature quickly recover after outer door closed.
- Compressors are efficient and reliable.

Safety

- Build-in back-up battery to display temperature and alarm information for up to 8 hours, if AC power is failure.
- With high/low temperature alarm, sensor failure alarm, power failure alarm, door ajar alarm. Two ways of alarm: visual and audible.
- Button on the control panel can be locked to avoid setting parameters being changed due to misoperation.

- With compressor delay start protection function when power off restart.
- Efficient and environmentally friendly HC refrigerant is used.
- Build-in mechanical lock to ensure the safety of storage.
- Safe mode will be ran automatically in case of sensor failure to ensure the temperature for storage.

Easy Operation

- Buzzing alarm can also be set to mute if required.
- Standard testing ports for easy access to external test tools.
- Standard drawer and basket, easy to storage and management.
- The freezer has two storage spaces with different temperature ranges, up and down.
- The bottom is provided with leveling feet to ensure the levelness of the freezer body during installation.
- In case of failure, the control screen displays real-time temperature and corresponding alarm code, which is convenient for trouble shooting.

Technical Specifications

Model	BDW-25L300RF
Temperature Range [°C]	R: 2 – 8; F: -10 – -25
Effective Capacity [Liters]	R: 200; F: 100
Exterior Dimensions [mm] W x D x H	650 x 618 x 1974
Interior Dimensions [mm] W1 x D1 x H1	R: 565 x 480 x 759 F: 461 x 465 x 600
Door Opening [mm] W2 x H2	1277 x 1235
Insulation Thickness [mm]	40 / 90
Exterior Finishing	White Plastic Coated Galvanised Steel
Interior Finishing	Blister
Shelves	2
Drawers	3
Levels	6
Mechanical Lock	Yes
Battery	Yes
Temperature Sensor in Chamber	Yes
Controller Type	Digital Screen
Refrigerant	HC
Voltage/Frequency [V / Hz]	AC220 / 50
Rated Power [W]	330
Net Weight [kg]	100
Power Failure Alarm	Yes
Temperature Sensor Failure Alarm	Yes
High/Low Temperature Alarm	Yes
Door Ajar Alarm	Yes
Temperature Resolution [°C]	0.1
Temperature Uniformity [°C]	≤2 / ≤4
Pull Down Time [h]	≤0.8 / ≤2.6

Clean Bench BCV

General information

BEING provides high-quality, safe vertical laminar clean benches. BEING's clean benches suck air from the room or hall space, transfer the air through a HEPA filter using a fan, and then clean the bench area with filtered air.

- Reservation on / off control for fan & UV light
- High quality, quiet fan
- Universal electrical outlet
- An additional pre-filter below work surface helps capture large particles and prolongs HEPA filter life
- Stable laminar air flow, from 0.30m/s to 0.50m/s
- Realtime display air speed, time and the status of HEPA filter
- Cumulative running time of HEPA filter
- Power socket installed inside for ease power access
- Audio and visual alarm for filter failure
- Access password
- Interlocking control between ultraviolet ray light and interior light



BCV-3S1

Technical Specifications

Spec/Model	BCV-3S1	BCV-4S1	BCV-5S1	BCV-6S1
Num. of operator	one people one side	one people one side	two people one side	two people one side
Laminar Flow	Vertical			
Cleanliness	ISO class 5, ISO - 14644-1			
CFU	≤0.5/Dish*h (φ 90mm petri dish)			
Air Velocity	0.30 – 0.50m/s			
Noise	≤62dB			
Vibration	≤3μm	≤4μm	≤4um	≤4μm
Illumination	≥900Lx			
Power input	AC220V/50Hz			
Peak power	250VA	500VA	500VA	750VA
Internal Work Area W x D x H(mm)	920×620×645	1220×620×645	1520×620×645	1820×620×645
External Dimensions W x D x H(mm)	1060×720×1745	1360×720×1745	1660×720×1745	1960×720×1745

Life Science Products

Biological Safety Cabinet

Applications

Three protection: operator, sample and environment.

Airflow system: 70% air recirculation, 30% air exhaust.

A2 cabinet is suitable for working with microbiological research in the absence of volatile or toxic chemicals and radionuclide.



Microprocessor Controller

- Large LCD display, the right place and angled down for easy reach & viewing.
- Real-time monitoring, display all safety information on one screen.
- Real-time monitoring of hepa filter status. Display sound and light alarm about failure, pre-failure, damaged.



EC Fan

- High efficiency and energy saving with 30%-60% energy savings compared to AC motor.
- The automatic resistance compensation function can provide safe air velocity even when the filter resistance increases by 300%.



HEPA Filter

- Filtration efficiency >99.99% @ 0.3µm.
- Cleanliness ISO class 5.
- UPLA filter is optional.



Internal Working Area

- Three sides of the inner wall shape a large arc design, easy to clean.
- A special negative pressure design prevents contaminants from escaping up the side wall into the operator's environment.
- Paper collectors prevent the high maintenance costs associated with paper waste inhalation.
- Easy to remove working surface and support, easy to clean drain tray.



Ergonomic Design

- 5° backward-slanted safety grade glass provides more comfortable viewing.
- Raised arm rest help prevent grille blockig.
- Sash is designed for easy operation with single hand.
- Backlight lighting design reduces operator visual fatigue.



Technical Specifications

Model	BBC-3S1	BBC-4S1	BBC-5S1	BBC-6S1
Internal Dimensions (WxDxH) mm	920x580x655	1220x580x655	1520x580x655	1820x580x655
External Dimensions (WxDxH) mm	1040x810x2100	1340x810x2100	1640x810x2100	1940x810x2100
Downflow Velocity	0.33m/s			
Inflow Velocity	0.53m/s			
Working Access Opening Height	200mm			
Opening MAX.	500mm			
HEPA Filter Typical Efficiency	99.995% @ 0.3µm			
Noise	<65dB			
Fluorescent Lamp Intensity	>900Lux			
UV Lamp	20W	30W	40W	40W
Voltage	220V/50Hz			
Power Consumption	1300VA	1400VA	1500VA	1600VA
Net Weight	225kg	265kg	305kg	345kg
Shipping Weight	295kg	335kg	395kg	445kg
Shipping Dimensions (WxDxH) mm	1210x935x1870	1510x935x1810	1810x935x1810	2110x935x1810