Rotary Evaporator

Recirculating Chiller

Diaphragm Vacuum Pump

Cold Trap Bath

Water Bath

Circulating Bath

Shaking Water Bath

being
bluepard instruments

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being Professional Instrument Supplier

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

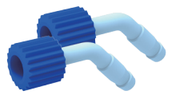
- Simple design for one handed operation manually or automatically.
- A unique PTFE sealing system provides exceptional thermostability, minimizes corrosion, and helps to ensure day in day out headache free operation.
- Our Bath offers a dual heating mode for water and oil with overheat protection.
-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

Double temperature protection

② PTFE dual seal

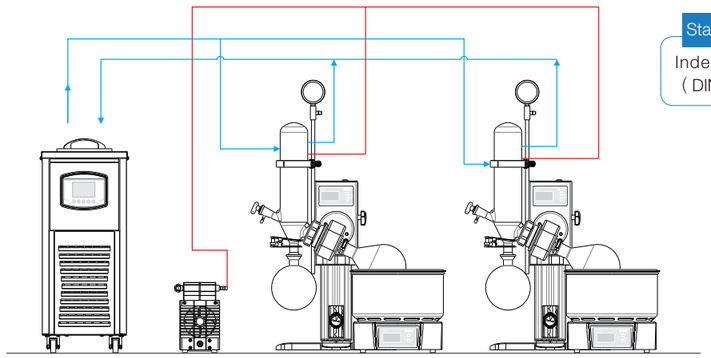
④ Clamp

③ M14 threaded fittings for chiller



⑤ Independent temperature limit controller

High efficiency can be cycle used for two Rotary Evaporators



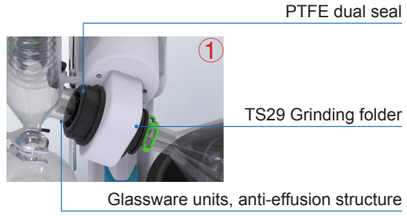
Standard :DIN-12880

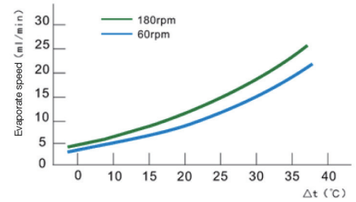
Independent temperature safety equipment，2 class（DIN12880）.

Cooling ——

Reduce pressure ——

Working condition
- Ambient temp 20℃ , AC220V 50HZ
- 1L Rotary bottle, Water 500ml
- Water Bath temp: Set at 40℃
- Coolant (alcohol/water)：set the temperature at 10℃
- Rotation speed：120rmp





Evaporate ability curve (water)

Technical parameters

Model		RV-21M	RV-21A
Performance	Rotation speed	20-180rpm	
	Water bath temperature range	Water: RT+5~99℃ , Oil: RT+5~180℃ (Option)	
	Evaporating speed	22ml/min	
	Ultimate vacuum	8mbar	
Features	Speed setting	LCD display with knob	
	Lifting mode	Manual	automatic
	Motor function	N/A	DC brushless motor
Structure and composition	Main motor DC brushless	DC brushless motor	
	Condenser	Snake Condensate Condensate Area 0.15m^2, 1L Rotary Bottle, 1L Collecting Bottle, TS29 / 38 Bottle Clamp, Ball Face S35 / 20	
	Vacuum seal	PTFE and Teflon Coating	
Heating bath	Interior wather bath size	ϕ230mmx130mm	
	Water bath material	Stainless steel Corrosion resistant coating	
	Heating power	1000W	
Temperature range		5~35℃	
Electrical input		220V 50/60Hz	

Rotary Evaporator

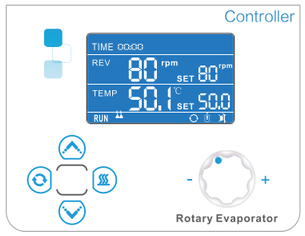

RV-5A


RV-10A

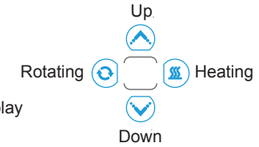

RV-20A


RV-50A

Features

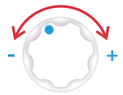


- Scheduled operation
- Rpm set/ display
- Temperature set/ display
- Running status



One-button operation

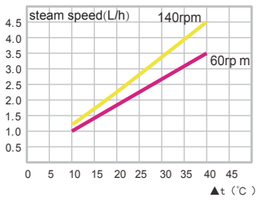
- Long press to lift or lower the bath
- Press to heat the bath
- Press to start/ stop rotating



- Turn left/ right to control
- Press to confirm

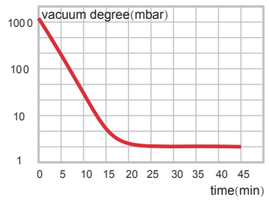
■ Evaporating ability

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



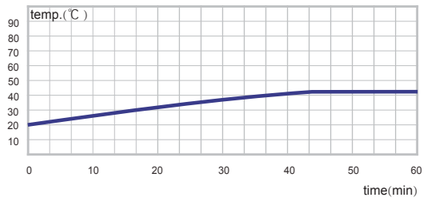
■ Vacuum degree

Vacuum pump required
Flow rate:50L/min



■ Water bath heating

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



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(℃)	Water: RT+5~99℃， Oil: RT+5~180℃ (Option)			
	Temperature stability (℃)	±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	Auto 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	SUS304 Water Bath + PTFE Teflon coating			
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℃			

Recirculating Chiller

Control panel

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

Features

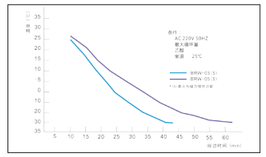
- P.I.D temperature controller provides accurate and reliable temperature control.
- Large LCD display screen and interface provides for user-friendly operation.
- Preset On/Off function.
- Independent circulating pump switch for easy starting/stopping the cycle.
- Easy to set Adjustable Timer. (1 minute 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

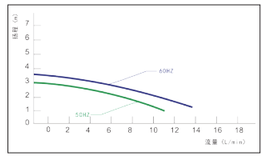
- Temperature deviation alarm.
- Over current protection.
- Independent Over-temperature protection meets DIN 12880 International standard requirements.
- Liquid level display window, through which you can intuitively observe the liquid level in the tank.

Option

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



Cooling curve



Head / Flow curve

Specification

Product Name	cooling recirculating chiller			
Model	BR-03A BR-03B BR-03C	BR-05A BR-05B BR-05C	BR-10A BR-10B BR-10C	BR-20A BR-20B BR-20C
Storage tank maximum capacity (L)	3	5	10	20
Temperature range	A：-20~20℃；B：-30~20℃；C：-40~20℃			
Ambient temperature range	+5~30℃			
Temperature accuracy	±0.5℃		±2℃	
Cooling capacity at 20°C (kw)	1.5	1.95	2.2	3.52
Cooling capacity at 0°C (kw)	1.05	1.2	1.76	2.96
Cooling capacity at -20°C (kw)	0.45	0.65	1	1.3
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power (W)	1000 1000 1300	1350 1350 1500	2400 2400 2600	3300 3300 3500
Power requirements	AC220V±10%/50HZ			
Pump flow max. (L / min)	8		17	
Maximum head (m)	1.5		2.5	
Inlet/Outlet pipe diameter (mm)	ϕ16		ϕ20	
Noise level	≤45		≤55	
Liquid tank opening / depth (mm)	ϕ180×120	ϕ220×180	ϕ250×250	ϕ300×300
Dimensions W×D×H(mm) (include caster)	250×480×585	315×540×625	400×590×790	430×600×840

Specification

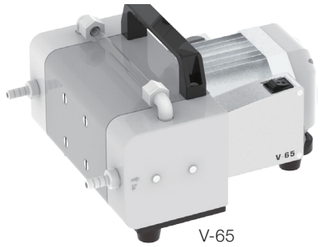
Product Name	cooling/heating recirculating chiller			
Model	BR-03HA BR-03HB BR-03HC	BR-05HA BR-05HB BR-05HC	BR-10HA BR-10HB BR-10HC	BR-20HA BR-20HB BR-20HC
Storage tank maximum capacity (L)	3	5	10	20
Temperature range	A：-20~40℃；B：-30~40℃；C：-40~40℃			
Ambient temperature range	+5~30℃			
Temperature accuracy	±0.3℃			
Cooling capacity at 20°C (kw)	1.5	1.95	2.2	3.52
Cooling capacity at 0°C (kw)	1.05	1.2	1.76	2.96
Cooling capacity at -20°C (kw)	0.45	0.65	1	1.3
Refrigerant	R404A			
Security features	Delay, leakage, overcurrent, overvoltage			
Total power (W)	1500 1500 1800	1600 1600 1750	2900 2900 3100	3800 3800 4000
Heating power (W)	550	750	1400	2000
Power requirements	AC220V±10%/50HZ			
Pump flow max. (L / min)	8		17	
Maximum head (m)	1.5		2.5	
Inlet/Outlet pipe diameter (mm)	ϕ16		ϕ20	
Noise level	≤45		≤55	
Liquid tank opening / depth (mm)	ϕ180×120	ϕ220×180	ϕ250×250	ϕ300×300
Dimensions W×D×H(mm) (include caster)	250×480×585	315×540×625	400×590×790	430×600×840

Note: The Temperature range can extend to 80 °C

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

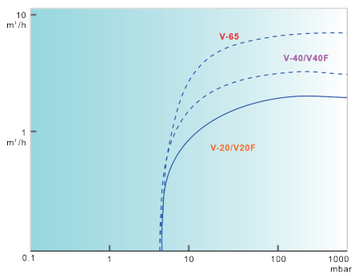
- Anticorrosion vacuum pump using electric Direct drive power transmission, no intermediate transmission parts, coupled with the diaphragm low stroke, low noise characteristics, so the product noise can be maintained at 70dB below.

Overheat protection

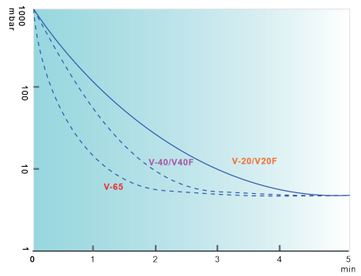
- All V series are equipped with temperature protection switch, when the body When the temperature is too high will automatically shut down, wait for the temperature after cooling and then start to ensure the stability of the system work and security.

Vaccum Performance

V Series no load



V Series with 10L vaccum oven



Application

Specification

Model	V-20	V-40	V-65	V-20F	V-40F
Maximum flow	20 L/min	35L/min	65L/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	
Clean / Dry valve	Yes			No	
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 ℃ ~ 40 ℃				
Speed	1450RPM				
Interior dimension WxDxH(mm)	165×315×210	170×330×210	240×290×355	175×315×275	180×330×275
Power consumption	120W	240W	400W	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. Clod 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.

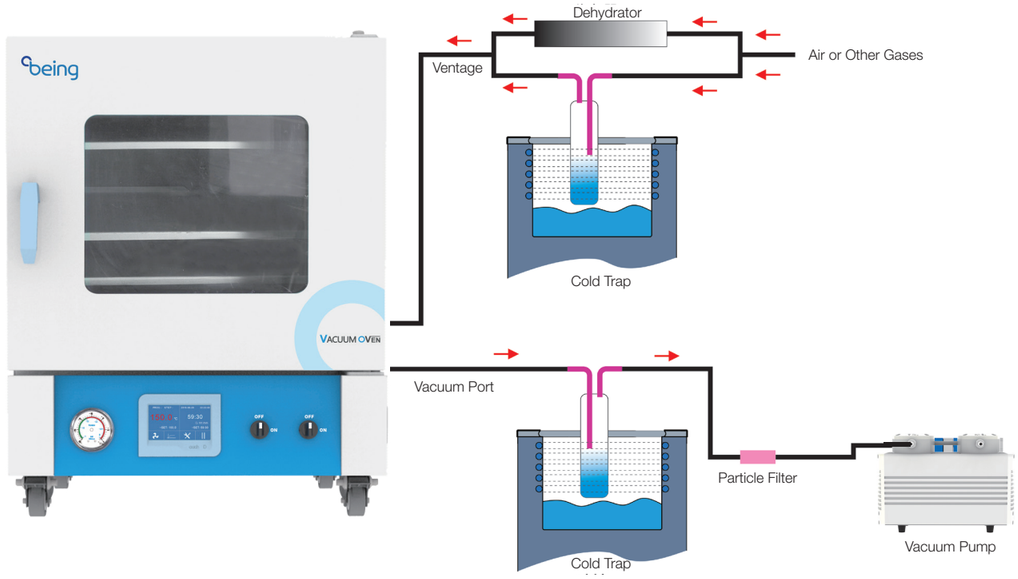
Design with

- 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℃	-80℃
Safety function	Delayed Start of Compressor, Leakage, Overcurrent, Overvoltage Protection	
Refrigerating capacity	Air Cooling 400W R404A	Air Cooling 400W R404A，R23
Cover interface material	Import PC	
Tank interior dimension（mm） Capacity（L）	ϕ220mm×180mm 6.8L	
PC capping diameter	ϕ50.3mm 3 holes	
Condenser diameter	ϕ10mm（Match the Diaphragm Pump）	
Interior dimension W×D×H(mm)	315×500×570	500×600×710
Power	115V/60Hz/850W	115V/60Hz/1300W

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.

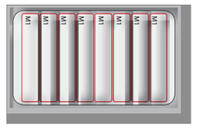
Specification

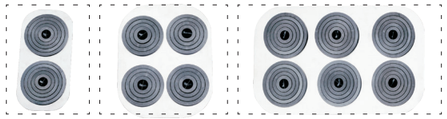
Model	BW-5	BW-12	BW-22	BW-22P
Power requirements	AC220V 50HZ			
Power (W)	500W	800W	1000W	
Temperature range	RT+5 ~ 100℃			
Temperature fluctuation	±0.2℃			
Temperature resolution	0.1℃			
Chamber volume	5L	12L	22L	
Internal dimension W×D×H(mm)	280×130×150	305×150×240	505×150×330	
External dimension W×D×H(mm)	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

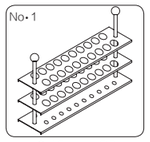
Note: BW-22P built-in circulating water pump


BW-05

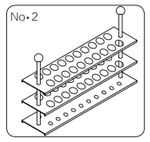

BW-12


BW-22/22P

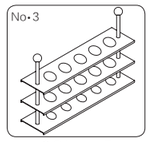

Porous cover(lid)



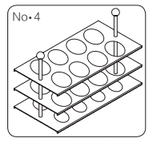
Φ13mm×20



Φ18mm×20



Φ31mm×5



Φ56mm×8

For blood bags

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℃	±0.1	150×160/150	6.7L	AC220V 50HZ	8L/min	1050W
BP-13H	RT+5 ~ 150℃	±0.1	240×170/150	10.9L		8L/min	1050W
BP-19H	RT+5 ~ 150℃	±0.1	330×300/150	22.5L		8L/min	1050W
BP-31H	RT+5 ~ 150℃	±0.2	240×170/200	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.

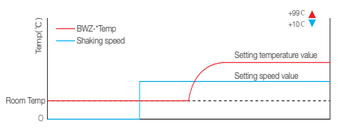
Option

- 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℃	-20～100℃	-40～100℃	-10～100℃	-20～100℃	-40～100℃
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



Temp. and shaking curve

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℃	
Display resolution	0.1℃	
Temperature uniformity	±1℃	
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