Water Bath (Low Constant Temp.)

BB301/401/601

Operating temp. range: -30~+80°C | Temp. distribution accuracy: ±0.3°C | Bath capacity: 6L BB301 / 13L BB401 / 26L BB601

Low constant temp. water bath with precision accuracy of ±0.1°C under -30°C+80°C.

Operation and functions

- Precise temperature control accuracy of ±0.1°C.
- Can easily operate the water valve to switch internal and external circulations.
- Adjustable shelf plate height up to 3 sections.
- Fixed temperature, auto stop and auto start operations with auxiliary functions such as RS485 communication function and temp. output terminal (4~20mA).

6L BB301 | 13L BB401 | 26L BB601

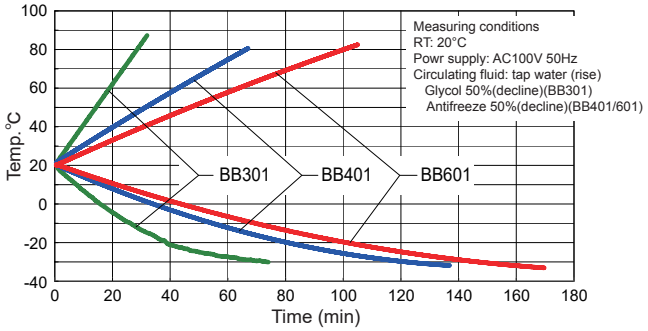
Specifications

Product code		221590	221620	221621
Model		**BB301**	**BB401**	**BB601**
Operating temperature range*1		-30~+80°C (when the chiller is set below 40°C)		
Temperature control accuracy / Temp. fluctuation*1		±0.1°C (JTM K05) at 20°C	±0.1°C (JTM K05) 1.2°C (JIS) at 20°C	±0.1°C (JTM K05) 1.4°C (JIS) at 20°C
Temperature distribution accuracy / Temp. gradient*1		±0.3°C (JTM K05) at 20°C	±0.3°C (JTM K05) 1.0°C (JIS) at 20°C	±0.3°C (JTM K05) 1.8°C (JIS) at 20°C
Temperature indicating unit		0.1°C		
Cooling capacity*1		Approx. 420W (361Kcal/h), at fluid temp.15°C	Approx. 475W (408 Kcal/h), at fluid temp.15°C	Approx. 750W (645Kcal/h), at fluid temp.15°C
Temperature control		PID control		
Operation function		Fixed temp., Auto stop , Auto start operations		
Sensor		Double sensor: Pt100Ω (Temp. controller) + K Thermocouple (Overheat prevention device)		
Temperature setting / Display		Digital setting / Digital display		
Refrigerator / Refrigerant		Air cooling 300W / R404A	Air cooling 350W / R404A	Air cooling 600W / R404A
Circulation ability (50/60Hz)	Max. flow	2.8/3.2L/min.		
	Max. lift	1.1/1.4m		
Heater		850W		1.2KW
External circulation nozzle		O.D.10.5mm of water outlet and return port		
Operating ambient temp. range		5~30°C		
Safety device		Self-diagnosis function, Over-current leakage breaker, Refrigerator overload relay, Refrigerator pressure detection, Float switch to prevent empty boiling, Delay timer function to protect the refrigerator, Automatic overheat prevention function, Key lock function, Overheat prevention device		
Other functions		Drain cock, Condenser filter, RS485 external communication function, Temperature output terminal (4-20 mA), Refrigerator pressure indicator, Calibration offset function, power failure compensation function		
Bath dimensions		W150×D300×H170mm	W250×D315×H190mm	W330×D435×H200mm
Bath effective dimensions		W120×D140×H140mm	W220×D150×H160mm	W300×D285×H170mm
Bath capacity		6L	13L	26L
External dimensions*2		W434×D472×H883mm	W420×D550×885Hmm	440×650×885
Power supply (50/60Hz)		AC220V 6A Single phase with step-down transformer	AC220V 6A Single phase with step-down transformer	AC220V 10A Single phase with step-down transformer
Weight		Approx. 46kg	Approx. 65kg	Approx. 80kg
Accessories		0.5m Drain hose (1 pc.), 0.5m Overflow hose (1 pc.), Top cover (1 pc.), Shelf plate (1 pc.)		

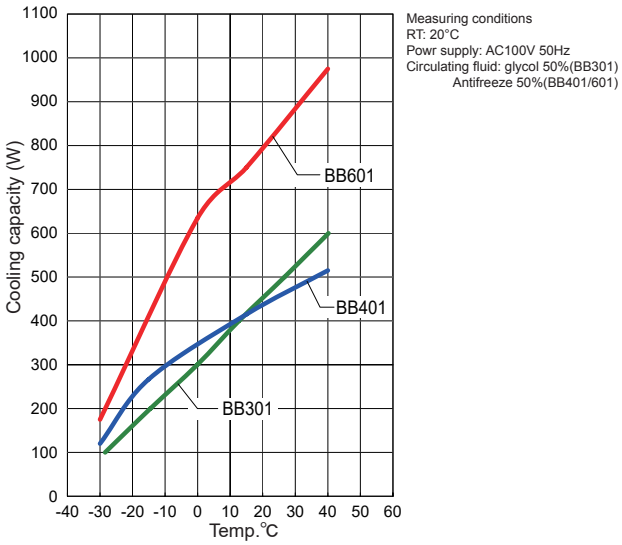
*1 Performance data is based on room temperature of 20°C with no load and rated power supply voltage of 50Hz. The performance will vary depending on the ambient temperature and operating conditions.
*2 Do not include protrusions.
The length of the power cord is about 2m outside the unit.

Heating/cooling·cooling capacity curve·flow/lift curve

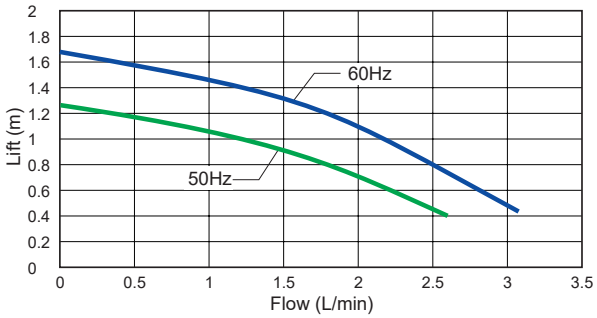
Heating/Cooling curve



Cooling capacity curve



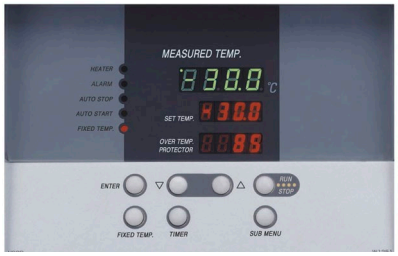
Flow / Lift curve



Optional items

Description	Specifications	Product code
External communication adapter	RS485－RS232C conversion	281387
Shelf for BB301	With 4 shelf supports	221583
Shelf for BB401	With 4 shelf supports	221584
Shelf for BB601	With 4 shelf supports	221585
Holder for fixing casters	Set of 4 pcs.	221440

Control Panel



Back view

- A water stop valve is installed on the discharge side, so external circulation can be changed with one touch. Nozzle dia.10.5Φ.
- RS485 external communication
- Temp. output terminal

Sample case

Max. quantity of erlenmeyer flask

Model	300mL	500mL	1000mL
BB301	1 pcs.	1 pcs.	--
BB401	3 pcs.	2 pcs.	1 pcs.
BB601	9 pcs.	5 pcs.	4 pcs.

Dimensions (mm)