

## Constant Low Temp. Water Baths | Standard

## BB311C/411C/611C

Temp. control range -30~+80°C

Temp. distribution accuracy ±0.3°C

Internal capacity 6L 13L 26L

**Constant low temperature water baths that can adjust from -30~+80°C with an accuracy of ±0.1°C.**

### Features

- Capable of achieving temperature adjustment precision of ±0.1°C.
- Extend the use of the water bath itself while ensuring effective space inside the bath.
- Equipped with external circulation function.
- Switching between internal and external circulation can be easily achieved with a simple operation of the water valve.
- Shelf height can be adjusted in 3 segments, allowing even small containers to be used.
- Primarily operates with automatic stop and automatic start functions, with RS485 communication function, temperature output terminal (4~20mA) as standard features.

### Features

- Self-diagnostic function, leakage circuit breaker to prevent overcurrent, pressure detection for the refrigeration unit, anti-dry heating float switch, overload protection relay for the refrigeration unit, delayed function for refrigeration unit protection.



### Specifications

Model		BB311C	BB411C	BB611C	
Performance	Operating temp. range	-30~80°C			
	Temp. adjusting accuracy	±0.1°C			
	Temp. distribution accuracy	±0.3°C			
	Temp. unit	0.1°C			
Composition	Cooling capacity	Approx. 420W (361Kcal/h), at liquid temp. 15°C	Approx. 510W (439Kcal/h), at liquid temp. 15°C	Approx. 730W (628Kcal/h), at liquid temp. 15°C	
	Temp. control	PID control			
	Operation functions	Fixed operation, automatic stop operation, automatic start operation			
	Temp. sensor	Temperature regulator: Pt thermal resistor, for overheat protection: K-type thermocouple			
	Temp. setting, display	Digital setting, digital display			
	Refrigerator, refrigerant	Air cooling			
		300W, R404A	350W, R404A	600W, R404A	
	Device circulation capacity (50/60Hz)	Max. flow rate	2.8/3.2l/min (jet stirring)		
		Max. lift head	1.1/1.4m		
	Heater	Stainless steel heating pipe 850W		1.2KW	
	Cooling pipe	Nickel-plated copper			
	External circulation port	Both the outlet and return ports have an outer diameter of 11mm			
	Operating ambient temp. range	5~30°C			
Safety device	Self-diagnosis function, overload protection relay for the refrigeration unit, pressure detection for the refrigeration unit, anti-dry heating float switch, delay function for refrigeration unit protection, key lock function, automatic overheating protection function, leakage protection switches for over-current, overheating protector				
Other functions	Water valve, condenser filter, RS485 communication function, temperature output terminal (4~20mA), refrigeration unit pressure indicator, deviation correction function, power failure compensation function				
Specification	Water bath dimensions (W×D×H mm)	150×300×170	250×315×190	330×435×200	
	Effective water bath dimensions (W×D×H mm)	120×140×140	220×150×160	300×285×170	
	Internal bath capacity	6L	13L	26L	
	External dimensions (W×D×H mm)	395×520×880	420×550×880	440×650×880	
	Power supply (50/60Hz)	AC220V 7A		AC220V 10A	
	Weight	Approx. 46kg	Approx. 53kg	Approx. 70kg	
Accessories	Top cover, drainage pipe, overflow pipe, shelf				

1 Sterilizers

2 Granulation and Spray Dryers

3 Muffle Furnaces

4 Ovens

5 Incubators

6 Plasma Equipment

7 Water Purifiers

8 Baths

9 Water Circulators

10 Rotary Evaporators

11 Freeze Dryers &amp; Cold Traps

12 Stirrers &amp; Shakers

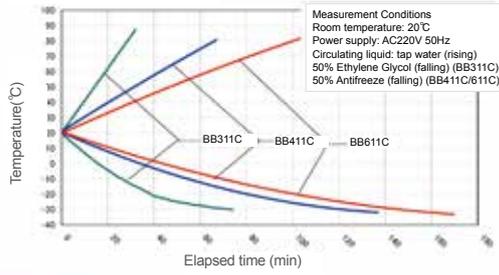
13 Washers

14 Analysis and Test Devices

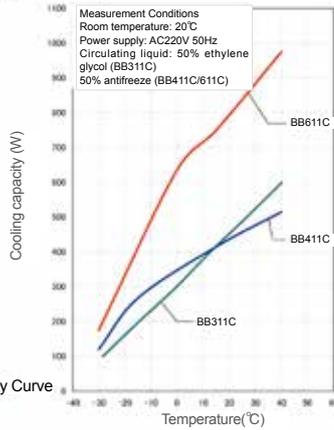
15 Options

Heating/Cooling · Cooling Capacity Curve · Flow/Head Curve

Heating Cooling Curve

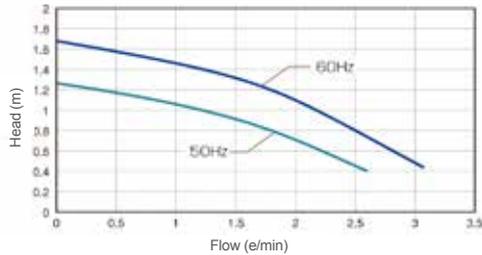


Cooling Capacity Curve



Cooling Capacity Curve

Flow/Head Curve



Control panel



Back side



- Due to the setting of a shut-off valve on the discharge side, external circulation can be switched quickly with a quick-connection. The nozzle diameter is  $\Phi 10.5\text{mm}$ .
- RS485 external communication
- Temperature output terminal

Usage cases



Sterilizers	1
Granulation and Spray Dryers	2
Muffle Furnaces	3
Ovens	4
Incubators	5
Plasma Equipment	6
Water Purifiers	7
<b>Baths</b>	<b>8</b>
Water Circulators	9
Rotary Evaporators	10
Freeze Dryers & Cold Traps	11
Stirrers & Shakers	12
Washers	13
Analysis and Test Devices	14
Options	15