

SINCE 1889



# Shaking Water Bath Incubator

BT101/311

Two new models are available of the popular series that combines a constant temperature water bath and a shaking mechanism. Ideal not only for culture but also for reaction and dissolution.

Equipped with a shaking rack

Equipped with drainage



## Excellent temperature distribution

A high temperature distribution of  $\pm 0.1^{\circ}\text{C}$  can be obtained in the tank due to the jet flow agitation function by the pump. It can be used as a highly accurate constant temperature water bath bath even when shaking is not used.

## Variable shaking width and shaking frequency

Shaking width can be set within the range of 10~40mm and shaking frequency of 20~160 times/min.

## Equipped with safety functions as standard

Equipped as standard with safety functions such as automatic overheat protection, temperature sensor error, and overcurrent leakage breaker. It can be used safely.

## A full range of options

The top cover (optional) is useful for long-time use to increase heat retention and prevent water evaporation. Output system options such as external communication, temperature output, time up output, and external alarm are also available.



## Improved operability

Easy operation with the latest VS6 controller



To set the shaking frequency, simply turn the knob.

## Specifications

Model		BT101	BT311	
Product code		221204	221205	
Method		Reciprocating horizontal shaking, Stirring by pump		
Performance	Temp. control range	Room temp. +5°C to 80°C (when the top cover is attached)		
	Temp. control accuracy / Temp. fluctuation	±0.02 to 0.08°C / 0.3°C JIS		
	Temp. distribution accuracy / Temp. gradient	±0.1°C / 1.5°C JIS		
	Max. temp. reaching time	Approx. 95 min. room temp. 23°C	Approx. 120 min. room temp. 23°C	
	Shaking frequency	20 to 160 times/min		
	Shaking width	10~40mm, variable		
Configuration	Heater	1.2kW	2.5kW	
	Stirring pump	6W	10W	
	Shaking motor	25W	40W	
Safety function		Self-diagnosis function (automatic overheat protection, temp. sensor error, heater disconnection, SSR short-circuit, main relay failure, memory error, internal communication error, measurement temp. error, abnormality of empty heating) / Overheat protector / Overcurrent leakage breaker		
Controller	Controller type	VS6 type, PID control		
	Operation function	Fixed temp. operation, auto stop operation, auto start operation, quick auto stop operation		
	Additional functions	Calibration offset function / Set value lock function / Power failure recovery mode selection function		
	Sensor	Pt resistance thermometer Pt100Ω (for temp. control) / K thermocouple (for overheat protection)		
Standard	Number of test tube / flask	Test tube	Diameter 16.5 mm, applicable length 150 to 200 mm (JIS) 130 pcs.	260 pcs.
		Flask	Round, Erlenmeyer flask 100/300/500mL 12/5/3 pcs.	24/10/6 pcs.
	External dimensions	W579×H414×D325mm		W809×H414×D325mm
	Bath capacity (when full of water)	Approx. 19L		Approx. 34L
	Power source (50/60Hz)	AC220V Single phase with step-down transformer		
	Weight	Approx. 27kg		Approx. 48kg
Accessories	Shaking rack	1 pc.		2 pcs.
	Rack dimensions (effective dimensions)	290×220×170mm (268×200×150mm)		
		Drainage cap, Drainage hose (assembled), Spanner		

## Optional Items

	Product name	Model	Product code	Supported	
				BT101	BT311
Option	Bath top cover	OBT10	221380	●	-
		OBT30	221382	-	●
Factory-installed option	External communication adapter (RS485-USB conversion)	OA017	281146	●	●
	External alarm terminal (RS485)	OA049	281269	●	-
		OA053	281273	-	●
	External alarm terminal	OA050	281270	●	-
		OA054	281274	-	●
	Time up output terminal	OA051	281271	●	-
		OA055	281275	-	●
	Temp. output terminal	OA052	281272	●	-
OA056		281276	-	●	