

Constant Temperature Immersion Type Controller "Thermomate"  
**BF201/401/501/601**



BF201/401/501/601

Model			
201	401	501	601
Operating temp. range			
Room Temp. +5deg.C to 80deg.C		Room Temp. +5deg.C to 180deg.C	

- Immersion Type Water Bath's Temp. Controller.
- Various Functions from "Fixed Temp. Operation" to "Programmable Operation".
- Data Output, External Communication, etc. are available as Option.
- Testing Bath BY100 (Polypropylene, for water) is included as standard.

## ■ Specifications

Type	Basic Type		Multi Function Type		Oil/Water Compatible Type
Model	BF201	BF401	BF501		BF601
<b>Performance</b>					
Temp. Setting Range	-20.0 to 90deg.C*2				0 to 200deg.C
Operating Temp. Range	Room Temp. +5 to 80deg.C*3				Room Temp. +5 to 180deg.C*4
Temp. Control Accuracy	±0.05/0.1deg.C(at37/80deg.C)*3	±0.02 to 0.05deg.C(at37/80deg.C)*3			±0.05 to 0.2deg.C (at40/180deg.C)*4
<b>Components</b>					
Stirrer	Propeller Stirring	Water Jet Stirring			Propeller Stirring
Heater	Stainless Pipe Heater				
	1.0kW				1.2kW
Temp. Control System	PID Control by Micro Computer				
Temp. Setting	Digital Setting by Key				
Temp. Display	Digital Display by Green LED				
	Min. Digit Indication: 0.1deg.C				Min. Digit Indication: 1deg.C
	Setting Temp./ Measured Temp. Changeable	Indicated on Main Indicator(Sub-indicator: Indicate Setting Temp.)			
Timer	Nil	1min. to 99h.59min. or 100h. to 999h.			
Timer Resolution	Nil	1min. or 1h.			
Operating Function	Fixed Operation	Fixed Operation: Setting Temp., Quick Auto Stop Program Operation: 1 to 3 Pattern, (Max. 10 Segment Pattern) Repeat Operation: Auto Start			
Additional Function	Temp. Pre-setting (Memory/Recall 10 Temp.)	Temp. Pre-setting (Memory/Recall 10 Temp.), Timer (to 49,999h.), Key Lock, Calibration offset, Power failure recovery mode			
	N/A	N/A	Temp. Output, External Alarm Output, Time-up Output, External Communication Function (RS422A)		N/A
Heater Circuit Control	Triac Zero-cross Type				
Sensor	Platinum resistance temperature detector (Pt100Ω)				
<b>Safety Device</b>					
Safety Countermeasure	Shelf Diagnosis Function (Automatic Overheat Prevention, Abnormal Temp. Sensor, Heater, Triac, Relay), Circuit Protector, Float Type Empty Boiling Preventor, Independent Overheat Prevention Device				
Accessories	Testing Bath Model BY100 (Polypropylene)				
<b>Standard</b>					
External Dimension	W140 x D138 x H312mm				
Clamp Available Thickness	Max. 35mm				
Power Source	AC 100V 50/60Hz 11A				AC100V 50/60Hz 13A
Weight	Approx. 4kg				

\*1 Conditions: Temp. and Humidity 23 deg.C+/-5 deg.C, 65%RH+/-20% (no load)

\*2 If you want to control at Room Temp. +5 or lower, please use with Cooling unit (Example, Model: BE201F)

\*3 Condition: Testing Bath BY100, Water

\*4 Condition: Testing Bath BZ100D, Silicon Oil Stickiness 50cst (Set over 81deg.C, Silicon Oil is necessary)

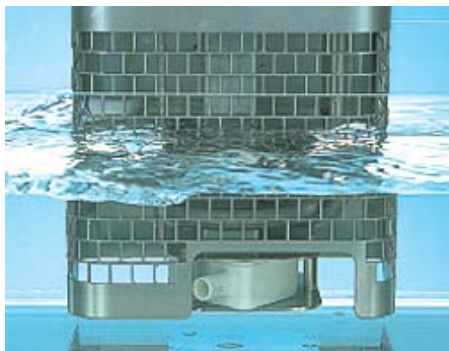
## ■ Control panel



BF201

BF401/501/601

■ Water Jet Stirring



■ Function Chart

Model	BF201	BF401	BF501	BF601
Digital Setting/Display	●	●	●	●
Temp. Pre-setting	●	●	●	●
Programming Function	-	●	●	●
Water Jet Strength Changeable Function	-	●	●	-
Propeller Stirring	●	-	-	●
External Output, Communication Function, etc.	-	-	●	-
Oil Temp. Control	-	-	-	●

■ Easy to Bring



■ Overheat Prevention Device



■ Sample set (Low Temp.)



BF201  
+ BZ100D (Bath, Stainless)  
+ BE201F (Neocool Dip)

■ Sample set (Shaking Bath)



BF401  
+ BW400 (Shaking Bath, Stainless)

■ Optional items (BF201/401/501/601)



Level Controller



Cooling Pile



External Circulation Nozzle



Bath Cover

Product Name	Option Model	Main Unit Model No.	Item Code	Specification
Level Controller (Automatic Water Supplier)	OBF10	BF series	221570	Water Supply by Direct Connected Tap Water Type (Electromagnetic Valve Open/Close Type), Fix to Testing Bath by Clamp
Cooling Pipe	OBJ10	BF series	221572	SUS304, O.D.φ10mm with Neo Plane Hose 3m (φ13 x φ9)
Bath Cover	OBI11	BF series	221578	Stainless Cover for Testing Bath Model: BY100 (This Cover couldn't be operated with Automatic Water Supplier, External Circulation Nozzle and Cooling Pipe.)
External Circulation Nozzle	OBG10	BF401/BF501	221573	Neo Plane Hose I.D. 9mm 3m, Flow Rate: Approx. 8L/min., Lift: Approx. 1.8m
External Communication Adapter set	OBF12	BF series	221871	USB-RS485 adapter, USB cable, RS485 connection cable

■ Optional items (Testing Bath) (BF201/401/501/601)



Material	Model	Item Code	Bath Internal Size (W x D x H)	Capacity	Operating Temp. Range
Stainless	BZ100	221820	230 x 390 x 150mm	12L	Up to +200deg.C
	BZ100D	221821	240 x 300 x 200mm	13L	
	BZ200	221822	300 x 500 x 150mm	20L	
	BZ300	221823	300 x 500 x 200mm	27L	
Polypropylene	BY100	221824	327 x 185 x 156mm	8L	-5 to +80deg.C
	BY200	221825	300 x 455 x 160mm	18L	
Acryl	BX100	221826	230 x 390 x 150mm	12L	Up to 50deg.C (for Water Only)
	BX100D	221827	240 x 300 x 200mm	13L	
	BX200	221828	300 x 500 x 150mm	20L	