

WATER BATHS CONSTANT TEMPERATURE & IMMERSIBLE DEVICES



- Standard Water Baths
- Shaking Water Baths
- Immersible Circulators

- Stirrer Compatible Water Baths
- Multi-position Water Baths
- Immersible Coolers

Water Baths

Water Bath Type	Temperature Range	Capacity (Approx. L)	Type*	Regulation Accuracy	Model No.	
Standard	Ambient +5°C ~ boiling	8	A	±3 at 70°C	TBS221AA	Economically priced models suitable for a variety of applications.
		12	A	±3 at 70°C	TBS271AA	
			D	±0.5 at 70°C	TBS271DA	
Stirrer Compatible	Ambient +5°C ~ 90°C	3.8	A	±3 at 60°C	TBS181SA	Specially built to be used with our line of magnetic stirrers. High capacity, lightweight, and easy to operate.
		8	A	±3 at 60°C	TBS221SA	
		12	A	±3 at 60°C	TBS271SA	
	Ambient +7°C ~ 80°C	16	D	±0.5 at 50°C	TBS451PA	
Multi-Position**	Ambient +5°C ~ boiling	12 (6 pos.)	A	±3 at 70°C	TBM106AA	Best for repetitive applications. Baths include ring lids and clamping assembly convenient for re-use.
		9 (8 pos.)	A	±3 at 70°C	TBM204AA	
		14 (12 pos.)	A	±3 at 70°C	TBM206AA	
		29 (24 pos.)	A	±3 at 70°C	TBM212AA	
Shaking	Ambient +5°C ~ 70°C	14	A	±3°C	TBK202AA	Incubate samples at a constant temperature with a gentle or vigorous shaking motion.
			D	±0.1 to ±0.2°C	TBK202DA	
		25	D	±0.1 to ±0.2°C	TBK602DA	

*For "Temperature regulation type", A = Liquid expansion thermostat/Dial control (Analog),
D = PID microprocessor control (Digital)

**Multi-Position series include ring lids and clamp sets that accommodate flasks per the number of positions listed. The bath can be used for any general application by simply removing the lid.

Immersion Devices

	Temperature Range*	Type	Regulation Accuracy**	Model No.	
Constant Temperature Circulators	20°C ~ 70°C	A	±0.2 to ±0.4°C	TBA081BA	Choose from a wide variety of immersion circulators. Options include: analog/digital thermostat control, propeller or jet circulation system, etc. Low-priced stainless steel, polypropylene, and acrylic tanks available to suit your needs.
		A	±0.2 to ±0.4°C	TBA081AA	
	0°C ~ 70°C	D	±0.05 to ±0.2°C	TBA082DA	
		A	±0.1 to ±0.2°C	TBP102BA	
	0°C ~ 100°C	D	±0.2 to ±0.4°C	TBA103DA	
	-30°C ~ 100°C	D	±0.05 to ±0.2°C	TBP105DA	
D		±0.03 to ±0.1°C	TBP105RA		
Immersion Coolers	-20°C ~ Ambient	A	--	TBC120AA	For lowering bath temperature below ambient room temperature. Compatible with some constant temperature immersion circulators.
		D	±0.5°C	TBC120DA	
	-25°C ~ Ambient	A	--	TBC230AA	
		D	±0.5°C	TBC230DA	
	-30°C to Ambient	A	--	TBC370AA	
		D	±0.5°C	TBC370DA	

*Temperature range for immersion circulators is from ambient +5°C, but can be extended to lower temperatures when used with compatible immersion type coolers.

**For Immersion Coolers, this feature is "Temperature Sensitivity".

STANDARD WATER BATHS

TBS221AA, TBS271AA, TBS271DA

Features

- Safety features include empty bath automatic shut-off and overheating breaker.
- Choose from a variety of optional lid types to best suit your application.
- Check current and set temperature on the digital display (Model TBS271DA).

Model	TBS221AA	TBS271AA	TBS271DA
Temperature Range	Room temperature+5°C ~ boiling		
Temperature Control Accuracy	±3°C at 70°C		±0.5°C at 70°C
Temperature Distribution	±5°C at 70°C		±5°C at 70°C
Heat-up Time (20°C to Boiling)	Approx. 45min.	Approx. 55min.	
Temperature Regulation	Liquid expansion thermostat		PID control
Heating Element	SUS316L 800W	SUS316L 1.2kW	
Interior	Stainless steel (SUS304)		
Exterior	Baked-on melamine finish on galvanized steel		
Overall Dimensions (WxDxH, in mm)	310x390x240	360x440x240	370x440x310
Internal Dimensions (WxDxH, in mm)	220x220x170	270x270x170	
Capacity (Approx. L)	8L	12 L	
Weight (Approx. kg)	7kg	8kg	9kg
Standard Accessories	Shelf (1), Support Rod (1), Clamp (1) Thermometer (1)*, Fitting (1)		
Optional Accessories	Basket Lid	ø40, 56, 72, 95mm TBP000630	--
	Ring Lid	ø45, 75, 105, 135mm TBP000620	ø45, 75, 105, 135, 165, 195, 225mm TBP000640

*Thermometer not included with TBS271DA

TBS271AA+Ring Lid



TBS271DA



TBS221AA+Basket Lid



WATER BATHS FOR MAGNETIC STIRRERS

TBS181SA, TBS221SA, TBS271SA

Features

- Simple setup; liquid expansion type thermostat .
- Easy to grip handles and efficient design.
- Use as a water bath, stirrer bath, or heat evaporator.
- Bath components incorporate durable stainless steel construction.
- Digital display, circulation system, and overheating breaker (TBS451PA)

Model	TBS181SA	TBS221SA	TBS271SA	TBS451PA*
Temperature Range	Ambient room temperature+5 ~ 90°C			Ambient+7~80°C
Temperature Control Accuracy	±3°C at 60°C			±0.5°C at 50°C
Temperature Distribution	±5°C at 60°C			±1.5°C at 50°C
Heat-up Time (20 ~ 90°C)	Approx. 50min.	Approx. 60min.	Approx. 70min.	Approx. 100min. (20 ~ 80°C)
Temperature Regulation	Liquid expansion thermostat			PID control
Heating Element	SUS316L 600W	SUS316L 800W	SUS316L 1.2kW	SUS316L 1kW
Interior	Stainless steel (SUS304)			
Overall Dimensions (WxDxH, in mm)	235x240x120	275x280x170	325x330x170	560x320x275
Internal Dimensions (WxDxH, in mm)	180x180x120	220x220x170	270x270x170	450x307x100
Capacity (Approx. L)	3.8L	8L	12L	16L
Weight (Approx. kg)	1.8kg	3kg	3.5kg	9.5kg
Standard Accessories	Shelf (1), Thermometer (1)			--
Compatible Stirrers (By model, sold separately)	SRS311AA/316AA, SRS311HA/316HA	SRS710AA, SRS710HA		SRS261PA

*TBS451PA uses a propeller type circulation system. Cover and ring lids (6 sets) are available as TB000650.



TBS181SA



TBS221SA+SRS710AA

MULTI-POSITION WATER BATHS

TBM106AA, TBM204AA, TBM206AA, TBM212AA

Features

- Convenient storage on backside of the unit for holding circular lids.
- Bath cover and concentric ring lids can be removed with ease: remove to accommodate large and irregularly-shaped vessels
- Several standard safety features included in all models.
- Tub, heating element, and accessories incorporate durable stainless steel construction.

Model	TBM106AA	TBM204AA	TBM206AA	TBM212AA
Temperature Range	Ambient room temperature+5°C ~ boiling			
Temperature Control Accuracy	±3°C at 70°C			
Temperature Distribution	±5°C at 70°C			
Heat-up Time (20°C to boiling)	Approx. 35min.	Approx. 35min.	Approx. 45min.	Approx. 60min.
Temperature Regulation	Liquid expansion thermostat			
Heating Element	SUS316L 1.4kW	SUS316L 1.2kW	SUS316L 1.4kW	SUS316L 4kW
Interior	Stainless steel (SUS304)			
Exterior	Baked-on melamine finish on galvanized steel			
Positions	1 row, 6 pos.	2 rows, 4 pos.	2 rows, 6 pos.	2 rows, 12 pos.
Lid Diameter	Large: ø115mm, Medium: ø85mm, Small: ø55mm			
Overall Dimensions (WxDxH, in mm)	930x290x210	450x420x210	630x420x210	1050x435x260
Internal Dimensions (WxDxH, in mm)	830x150x100	325x300x100	500x300x100	920x320x100
Capacity (Approx. L)	12L	9L	14L	29L
Weight (Approx. kg)	14kg	11kg	14.5kg	25kg
Standard Accessories	Bath cover (1), Shelf (1), Ring lids (1 set), Support rod (2), Fittings (1 set), Crossbar (1), Clamps (1 set), Thermometer (1)			

*Please contact us for additional information regarding optional accessories.



TBM206AA



TBM212AA

SHAKING WATER BATHS

TBK202AA, TBK202DA, TBK602DA

Features

- Uses accurate and easy to set PID thermostat (TBK202DA/602DA).
- Smooth shaking motion anywhere from 20 to 160 rpm.
- Compact design suitable for bench tops.
- Safety features include empty bath automatic shut-off, overheating and short circuit breakers; TBK602DA & TBK202DA also include a self-diagnostic program.

Model	TBK202AA	TBK202DA	TBK602DA
Temperature Range	Ambient room temperature+5°C ~ 70°C		
Temperature Control Accuracy	±3°C	±0.1°C ~ ±0.2°C	
Heat-up Time (20°C to boiling)	Approx. 50min. (for 8 L water)		Approx. 90min. (for 15 L water)
Shake Rate	20 ~ 160 rpm, continuously variable		
Shaking width	30mm		35mm
Temperature Regulation	Liquid expansion thermostat	PID control by microprocessor	
Heating Element	SUS316L 900W		SUS316L 1.3kW
Circulation System	--	Magnetic pump system	
Interior	Stainless steel (SUS304)		
Exterior	Baked-on melamine finish on galvanized steel		
Overall Dimensions(WxDxH, in mm)	350x540x350		835x350x350
Internal Dimensions(WxDxH, in mm)	250x335x170		600x250x170
Rack size (WxD, in mm)	225x255		255x225 (x2 racks)
Maximum Number of Vessels (pcs./rack)	ø11mm test tube: 168 (x2 for TBK602DA) 100mL erlenmeyer flask: 8 (x2 for TBK602DA) 300mL erlenmeyer flask: 6 (x2 for TBK602DA)		
Capacity (Approx. L)	14L		25L
Weight (Approx. kg)	20kg		30kg
Standard Accessories	Thermometer, Rack (x2 for TBK602DA)		



Rack



TBK202AA

TBK202DA



TBK602DA

CONSTANT TEMPERATURE UNITS

TBA081BA, TBA081AA, TBA082DA, TBP102BA



Features

- Design allows these units to be used with compact water baths. (minimum depth of 140 mm is required)
- Each model is economically priced.
- A variety of safety features insure that samples and water bath will be protected from unexpected changes in heating conditions.

Model	TBA081BA	TBA081AA	TBA082DA	TBP102BA
Programmable Range*	20 ~ 70°C		0 ~ 70°C	
Temp. Control Range	Ambient room temperature+5 ~ 70°C			
Accuracy	±0.2 ~ ±0.4°C		±0.05 ~ ±0.2°C	±0.1 ~ ±0.2°C
Temperature Regulation	Liquid expansion thermostat		PID control	Thermostat
Temperature Adjustment	Analog (Dial)		Digital	Analog (Dial)
Temperature Display	--	--	Digital (1/10 C)	--
Heating Element	800 W			1 kW
Circulator Type	Propeller type			Jet type**
Clamping Width	--	8-40 mm		--
Overall Dimensions (WxDxH, in mm)	105x350x205	130x200x250	130x200x240	105x400x235
	(Includes heating element height)			
Weight (Approx. kg)	2.5 kg	3 kg	2.8 kg	4 kg
Standard Accessories	Thermometer (1)		--	Thermometer (1)

*Max. flow rate 2.5 L/min, Max. output 1m (60 Hz)

**For operation below ambient temperature, please use in combination with immersible cooling unit (sold separately).

CONSTANT TEMPERATURE UNITS

TBA103DA, TBP105DA, TBP127DA

Features

- Easy to read backlit LCD display; clear commands and quick setup
- Self-diagnostics program and a variety of safety features insure that samples and water bath will be protected from sudden unexpected in heating conditions
- Display/keyboard panel swivels 180 degrees allowing freedom in mounting location.

Model	TBA103DA	TBP105DA	TBP127DA
Programmable Range*	0 ~ 100°C	-30 ~ 100°C	0 ~ 180°C
Temp. Control Range	Ambient temperature+5 ~ 100°C		Amb.+5 ~ 180°C
Accuracy	±0.2 ~ ±0.4°C	±0.05 ~ ±0.2°C	±0.05 ~ ±0.4°C
Pump Ability	Maximum Flow Rate	--	10L/min (60 Hz)
	Maximum Output	--	1.8 (60 Hz)
Temperature Regulation	PID control		
Temperature Adjustment	10-key digital entry and display		
Timer Function	Auto-shutoff; Max. time: 11 hr. 59 min. 59 sec.		
Heating Element	1 kW		1.2 kW
Circulator Type	Propeller type	Jet type	
Clamping Width	8-40 mm		
Overall Dimensions (WxDxH, in mm)	140x235x440 (includes heating element height)		
Weight (Approx. kg)	5 kg		6 kg

*For operation below ambient temperature, please use in combination with immersible cooling unit (sold separately).

Optional Accessories

Accessory Description	Model	Max. Temperature	Size
Acrylic water Bath	TB000170	For use up to 50°C	400x300x200
Polypropylene	TB000150	For use up to 70°C	460x305x160
Stainless Steel	TB000160	For use up to 180°C	450x300x155
Stainless Steel	TB000180	For use up to 180°C	500x300x200
Lids for TB000180	TB000190	Set of 4	



Display panel pivots for easy viewing



TBA103DA



TBP105RA+TB000180
+TBP000190

IMMERSION TYPE COOLERS

TBC120AA, TBC120DA, TBC230AA, TBC230DA, TBC370AA, TBC370DA

Features

- Easy to operate TBC-DA digital series features high accuracy temperature control (to about $\pm 0.5^{\circ}\text{C}$).
- Digital models feature immersible temperature sensor as a standard accessory.
- Compact design suitable for benchtops; easy to move.
- Compatible for use with constant temperature immersion units (TBA and TBP series) for increased accuracy in temperature regulation
- Flexible cooling element is suitable for a variety of containers.

Model	TBC120AA	TBC120DA	TBC230AA	TBC230DA	TBC370AA	TBC370DA
Operating Range	-20°C ~ Ambient Room Temp.		-25°C ~ Ambient Room Temp.		-30°C ~ Ambient Room Temp.	
Refrigerating Ability	120W at 0°C		228W at 0°C		374W at 0°C	
Temperature Regulation	--	Digital Pt 100Ω	--	Digital Pt 100Ω	--	Digital Pt 100Ω
Temperature Sensitivity	--	$\pm 0.5^{\circ}\text{C}$	--	$\pm 0.5^{\circ}\text{C}$	--	$\pm 0.5^{\circ}\text{C}$
Refrigerating Unit	75W		140W		300W	
Cooling Element (narrow type)	Flexible SUS $\phi 15 \times 500$ mm		Flexible SUS $\phi 15 \times 600$ mm		Flexible SUS $\phi 15 \times 1000$ mm	
Overall Dimensions (WxDxH, in mm)	260X400X250					
Weight (Approx. kg)	15				20	
Standard Accessories	--	Fixed Sensor	--	Fixed Sensor	--	Fixed Sensor



Optional Accessories - Wide-type Spiral Cooling Element

Compatible Model	Size
TBC120AA/DA, TBC230AA/DA	$\phi 60 \times 150$ mm
TBC370AA/DA	$\phi 60 \times 180$ mm

Please specify if you would like the the "wide type" cooling element when ordering.

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