

# Baths & Circulators

## Shaking & Heating Baths

### Reciprocal shaking & heating baths.

All **BS Models** feature rapid and accurate shaking by adopting silent and anti-vibration BLDC (Brushless DC) motors. And their precise and constant temperature control provides ideal sample incubation conditions suitable for DNA, tissue, or cell culture applications.

#### Operating Features

- +5°C above room temperature to 100°C.
- Microprocessor PID control / auto tuning / calibration.
- Digital timer for delayed ON / OFF. (from 1 min to 99 hr 59 min)
- Protection against over-temperature.
- Digital LED display. (0.1°C and 1 rpm resolution)
- Splash-proof keypad.

#### Constructional Features

- Separate control keys for shaker mechanism allowing the unit also to be used as a constant temperature bath.
- Minimal shock to the samples thanks to the shaker's gentle start feature.
- Multiple LED displays for setting various values.
- Isolated design of agitator, heater, and sensor by a baffle plate to minimize the turbulence in the bath fluid and also to protect users and samples against direct contact.
- Removable shaking carriage designed for external assembly avoiding direct contact with the bath fluid.
- Minimization of the liquid loss and dripping of the bath liquid into the samples thanks to the included gable cover.
- Included SUS 304 spring wire rack with double-two-tier providing various ways of glassware settings.



#### BS-31 with the included Gable Cover and Spring Wire Rack

- Included Accessories**
- Stainless steel Gable Cover
  - Spring Wire Rack
- Optional Accessories**
- Universal Platform, Dedicated Platform, Flask Clamps, etc
  - Test Tube Racks
- ☛ see page 21

#### Specifications & Ordering Information



Model		BS-06	BS-11	BS-21	BS-31
Bath Volume (L / cu ft)		17 / 0.6	25 / 0.9	37 / 1.3	55 / 1.9
Working Temperature Range (°C / °F)		Amb. +5 to 100 / Amb. +9 to 212			
Temperature Stability <sup>1)</sup> (±°C / °F)		0.2 / 0.36			
Shaking System	Motion / Speed Range (RPM)	Reciprocating / 20 to 180			
	Recip Stroke Length (mm / inch)	25, 30, 35 / 1.0, 1.2, 1.4 Available - Standard 30 / 1.2			
Dimension	Bath Opening /Depth (WxL, D) (mm / inch)	199x300, 235 / 7.8x11.8, 9.3	319x300, 235 / 12.6x11.8, 9.3	479x300, 235 / 18.9x11.8, 9.3	629x350, 235 / 24.8x13.8, 9.3
	Overall (WxLxH) (mm / inch)	430x440x355 / 16.9x17.3x14	550x440x355 / 21.7x17.3x14	710x440x355 / 28x17.3x14.3	860x490x355 / 33.9x19.3x14
	Net Weight (kg / lbs)	26 / 57	30 / 66	35 / 77	42 / 93
Electrical Requirements (230V, 60Hz)		3.7A	4.6A	8.9A	8.9A
Cat. No.		AAH44061K	AAH44111K	AAH44211K	AAH44311K
Electrical Requirements (230V, 50Hz)		3.7A	4.6A	8.9A	8.9A
Cat. No.		AAH44062K	AAH44112K	AAH44212K	AAH44312K
Electrical Requirements (120V, 60Hz)		7.1A	8.8A	-	-
Cat. No.		AAH44063U	AAH44113U	-	-

※ BS-21 and BS-31 Models are available ONLY for 230V.

1) Technical data according to DIN 12876.

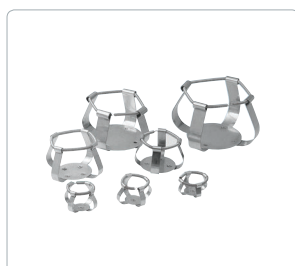
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## Accessories & Options

### for Shaking & Heating Baths



Universal Platforms



Flask Clamps



Dedicated Platforms



Test Tube Racks

### ► Universal Platforms & Flask Clamps

The universal platforms provide flexibility for mixing different size test tubes and glassware on a single platform. Various clamps or racks can be interchanged or added easily using mounting holes on the platform. (only for BS Models)

Model		BS-06	BS-11	BS-21	BS-31
Universal Platform	Cat. No.	AAA44521	AAA44522	AAA44523	AAA44524
Flask Clamps		Erlenmeyer Flask Size			
	AAA23550	Max. mountable flask clamps			
	AAA23551	9	12	20	32
	AAA23552	3	9	15	24
	AAA23552	2	4	8	12
	AAA23556	2	4	8	12
	AAA23553	2	4	6	12
AAA23554	1	2	4	6	
AAA23555	-	1	2	3	
AAA23557	-	1	1	2	

◊ 2 and 2.8L flasks must be used due to height restrictions, respectively.

\* Flask clamps for universal platforms are sold separately.

### ► Dedicated Platforms

When using glassware of the same size, dedicated platforms with preinstalled 250 mL or 500 mL clamps provide maximum capacity for each platform size. If you need to use different size glassware, purchase other suitable clamps separately. (only for BS Models)

Cat. No.	Description	Suitable for
AAA44531	Universal Platform with 250mL flask clamps 2ea	BS-06
AAA44532	Universal Platform with 500mL flask clamps 2ea	
AAA44541	Universal Platform with 250mL flask clamps 4ea	
AAA44542	Universal Platform with 500mL flask clamps 4ea	BS-11
AAA44551	Universal Platform with 250mL flask clamps 8ea	
AAA44552	Universal Platform with 500mL flask clamps 6ea	BS-21
AAA44561	Universal Platform with 250mL flask clamps 12ea	
AAA44562	Universal Platform with 500mL flask clamps 12ea	

\* Dedicated platforms are sold with maximum number of flask clamps preinstalled.

### ► Test Tube Racks

Highly durable stainless steel test tube racks feature adjustable angle and tube height support without requiring any base plate. You can easily mount and release test tube racks.

Cat. No.	Description	Insert Capacity of Racks*			
		BS-06	BS-11	BS-21	BS-31
AAA44581	for 86 Test Tubes	1EA	2EA	3EA	4EA
AAA44582	for 86 Test Tubes				
AAA44583	for 58 Test Tubes				
AAA44585	for 32 Test Tubes				
AAA44586	for 19 Test Tubes				

\* No declination.

\* Customized accessories to meet your specific requirements can be also provided. For inquiries, please contact your dealer.