

Baths & Circulators

Economy Heating Baths.
Heating Baths.
Viscometer Heating Baths.

Shaking Heating Baths.
Heating Baths Circulators.
Refrigerated & Heating Bath Circulators.

Selection Guide

Heating Baths

Description	Working Temp. Range [°C/°F]	Bath Volume [L/cu ft]	Temperature Stability [±°C/°F]	Page
Economy - Analog type	BW-05B	Amb. +7 to 100	3.5 / 0.1	10
	BW-10B	/ Amb. +12.6 to 212	11.5 / 0.4	
	BW-20B		20.0 / 0.7	
Economy - Digital type	BW-05E	Amb. +5 to 100	3.5 / 0.1	10
	BW-10E	/ Amb. +9 to 212	11.5 / 0.4	
	BW-20E		20.0 / 0.7	
Economy - Dual type	BW-0505D	Amb. +5 to 100 / Amb. +9 to 212	3.5 & 3.5 / 0.1 & 0.1	10
	BW-0510D		3.5 & 11.5 / 0.1 & 0.4	
	BW-1010D		11.5 & 11.5 / 0.4 & 0.4	
	BW-1020D		11.5 & 20.0 / 0.4 & 0.7	
General Purpose	BW-05G	Amb. +5 to 100 / Amb. +9 to 212	5.0 / 0.2	12
	BW-10G		10.0 / 0.4	
	BW-20G		20.0 / 0.7	
Shaking	BS-06	Amb. +5 to 100 / Amb. +9 to 212	17.0 / 0.6	13
	BS-11		25.0 / 0.9	
	BS-21		37.0 / 1.3	
Viscometer	VB-25G	Amb. +5 to 150 / Amb. +9 to 302	25.0 / 0.9	14
	VB-40G		40.0 / 1.4	
			0.1 / 0.18	

Bath Circulators

Description	Working Temp. Range [°C/°F]	Bath Volume [L/cu ft]	Temperature Stability [±°C/°F]	Page
Heating	CW-05G	5.0 / 0.2	0.05 / 0.09	15
	CW-10G	10.0 / 0.4	0.05 / 0.09	
	CW-20G	20.0 / 0.7	0.1 / 0.18	
	CW-30G	30.0 / 1.1	0.1 / 0.18	
Refrigerated & Heating (to -25°C)	RW-0525G	5.0 / 0.2	0.05 / 0.09	16
	RW-1025G	10.0 / 0.4	0.05 / 0.09	
	RW-2025G	20.0 / 0.7	0.05 / 0.09	
	RW-3025G	30.0 / 1.1	0.08 / 0.14	
Refrigerated & Heating (to -35°C)	RW-0540G	5.0 / 0.2	0.05 / 0.09	16
	RW-1040G	10.0 / 0.4	0.05 / 0.09	
	RW-2040G	20.0 / 0.7	0.05 / 0.09	
	RW-0540G	30.0 / 1.1	0.08 / 0.14	

Cold Trap Bath

Description		Working Temp. Range [°C/°F]	Bath Volume [L/cu ft]	Page
Cold Trap	CTB-10	Down to -40/-40	4.8 / 0.17	18

Accessories & Options

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for Shaking Heating Baths	19

General Applications

General applications	Baths & Circulators		
	BW-Series	BS-Series	CW, RW-Series
Bacteriological Examinations	•		•
Coagulation Tests	•		•
Coliform Determinations		•	•
Crude Oil Research	•		•
Cytochemistry Examinations	•		
Demulsibility Research	•		•
Enzyme Studies			•
Food Processing QC	•	•	
Genetic Studies	•	•	•
Hormone Studies	•	•	
Immunological Research	•	•	•
Incubation for Microbiological Assays	•	•	•
Molecular Biology	•	•	•
Protein Studies	•		•
Serological tests	•	•	•
Thawing Cryopreservation Vials	•		
Tissue Culture Studies	•	•	•
Virology Research	•	•	•
Warming Reagents	•		•
Water Quality Research	•	•	•

Heating Bath Circulators (Combined)

- Clinical chemistry and analytics / external temperature control application for measuring cells, photometers, refractometers, polarimeters, rotary viscometers.

Refrigerated & Heating Bath Circulators (Combined)

- Routine laboratory temperature applications / external temperature control application for measuring cells, photometers, refractometers, polarimeters, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers.

*General purpose use and storage applications.

Technical Benefits

Safety functions

- 1) Self-protecting cut-off function and signal:
 - For over temperature, automated cut the power supply for heater and controller orderly before the unit shuts down.
 - 2 separated over-current fuses for user safety.
- 2) Time setting function for automated run / off:
 - Integrated time setting: Delayed ON / OFF. (from 1 min to 99 hr 59 min)
 - Operating settable function: After a power interruption, select automated run or manual run.
- 3) Low fluid level and dry-running protection:
 - Intermittent tone rings and optical signal alarm displays on the control panels.
 - Heating element automatically stop soon after alarm ringing to protect operators and samples.

* Except for BW-B/E/D series.

Optimum control performance

- 1) Professional control electronics and program control:
 - Microprocessor PID temperature control with very simple calibration and auto-tuning features.
 - Frequently use 3 different temperatures memorable for convenient use.
 - Selectable measuring temperature in °C or °F.
- 2) Applicable control display considering MMI (Man Machine Interface) network system:
 - Very similar key arrangement throughout all products.
 - Splash-proof / easy-to-clean keypads and clear LED displays.
 - A speed lock key prevents accidental resetting of parameters.

* Except for BW-B/E/D series.

Ideal construction

- 1) High quality 304 stainless steel interior bath and dirt-repellent powder coating external surface.
- 2) All wetted parts are made of stainless steel, providing resistance against all usual bath fluids.
- 3) Leak-proof, corrosion-resistant, seamless, deep-drawn and rounded corner baths for easy cleaning.



Economy Heating Baths

Economical water bath series with complete temperature maintenance!

Especially BW-E/ D series has provided patented *agitating system* that makes better temperature stability. A wide range of choice from analog or digital control, even mix & match sizes of dual bath models.



BW-10B with test tube rack



BW-10E with gable cover



BW-0510D with open-rings cover

Operating features for BW-B (Analog models)

- +7°C above room temperature to 100°C.
- PID temperature control.
- Over-temperature limiter, alarm indication.
- Analog dialed indication with fine adjustment.

Operating features for BW-E/ D (Digital models)

- +5°C above room temperature to 100°C.
- PID temperature control.
- Over-temperature limiter, alarm indication.
- Digital LED display readout of temperature and setpoint to 0.1°C.

Constructional features

- Low-profile baths with front slope-panel controls provide easier access and safe operation.
- Additional inner circulating system by equipped agitator. (BW-E/ D series)
- Dual bath models features individually temperature controller chambers. (BW- D series)
- Various accessories - gable and flat covers, test tube and spring wire racks, half-shelf adjusters etc. (optional)
* All accessories for dual baths (BW-D series) refer to BW-E/ B series accessories options per each bath size.
(Ex. Each of gable covers for BW-0510D are same as one cover for BW-05E/ B and the other cover for BW-10E/ B)

Optional Accessories

- Transparent polypropylene gable / Stainless steel flat / Open-rings covers.
- Test tube racks, Spring wire racks, Half-shelf adjusters.

➡ see page 20-21

Economy Heating Baths

Specifications & Ordering Informations



Model		BW-05B		BW-10B		BW-20B	
Bath volume (L / cu ft)		3.5 / 0.1		11.5 / 0.4		20.0 / 0.7	
Working Temperature Range (°C / °F)		Amb. +7 to 100 / Amb. +12.6 to 212					
Temperature Stability ¹⁾ (± °C / °F)		0.5 / 0.9					
Dimensions	Bath opening/depth (W×L, D) (mm / inch)	240×136, 115 / 9.4×5.4, 4.5		300×240, 165 / 11.8×9.5, 6.5		498×300, 165 / 19.6x11.8, 6.5	
	Overall/with gable cover (W×L×H, H) (mm / inch)	303×242×245, 380 / 11.9×9.5×9.6, 15.0		357×330×290, 425 / 14.1×13.0×11.4, 16.7		564×392×290, 430 / 22.2×15.4×11.6, 17.0	
	Net weight (kg / lbs)	6.5 / 14.3		10.0 / 22.0		18.5 / 40.8	
Electrical Requirements (230V)		60Hz, 3.0A 50Hz, 3.0A		60Hz, 4.3A 50Hz, 4.3A		60Hz, 8.7A 50Hz, 8.7A	
Cat. No.		AAH46011K	AAH46012K	AAH46021K	AAH46022K	AAH46031K	AAH46032K
Electrical Requirements (120V)		60Hz, 5.8A		60Hz, 8.3A		60Hz, 8.3A	
Cat. No.		AAH46013U		AAH46023U		AAH46033U	

1) Technical data. (according to DIN 12876)

Specifications & Ordering Informations



Model		BW-05E		BW-10E		BW-20E	
Bath volume (L / cu ft)		3.5 / 0.1		11.5 / 0.4		20.0 / 0.7	
Working Temperature Range (°C / °F)		Amb. +5 to 100 / Amb. +9 to 212					
Temperature Stability ¹⁾ (± °C / °F)		0.3 / 0.54					
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	240×136, 115 / 9.4×5.4, 4.5		300×240, 165 / 11.8×9.5, 6.5		498×300, 165 / 19.6×11.8, 6.5	
	Overall/with gable cover (W×L×H, H) (mm / inch)	303×242×245, 380 / 11.9×9.5×9.6, 15.0		357×330×290, 425 / 14.1×13.0×11.4, 16.7		564×392×290, 430 / 22.2×15.4×11.6, 17.0	
	Net weight (kg / lbs)	6.5 / 14.3		10.0 / 22.0		18.5 / 40.8	
Electrical Requirements (230V)		60Hz, 3.0A 50Hz, 3.0A		60Hz, 4.3A 50Hz, 4.3A		60Hz, 8.7A 50Hz, 8.7A	
Cat. No.		AAH45011K	AAH45012K	AAH45021K	AAH45022K	AAH45031K	AAH45032K
Electrical Requirements (120V)		60Hz, 5.8A		60Hz, 8.3A		60Hz, 8.3A	
Cat. No.		AAH45013U		AAH45023U		AAH45033U	

1) Technical data. (according to DIN 12876)

Specifications & Ordering Informations



Model		BW-0505D		BW-0510D		BW-1010D		BW-1020D	
Bath volume (L / cu ft)		3.5 & 3.5 / 0.1 & 0.1		3.5 & 11.5 / 0.1 & 0.4		11.5 & 11.5 / 0.4 & 0.4		11.5 & 20.0 / 0.4 & 0.7	
Working Temperature Range (°C / °F)		Amb. +5 to 100 / Amb. +9 to 212							
Temperature Stability ¹⁾ (± °C / °F)		0.3 / 0.54							
Dimensions	Bath opening / depth (W×L, D & W×L, D) (mm / inch)	240×136, 115 Per chamber	240×136, 115 & 300×240, 165	300×240, 165 Per chamber	300×240, 165 & 498×300, 165				
		/ 9.4×5.4, 4.5 Per chamber	/ 9.4×5.4, 4.5 & 11.8×9.5, 6.5	/ 11.8×9.5, 6.5 Per chamber	/ 11.8×9.5, 6.5 & 19.6×11.8, 6.5				
	Overall / with gable cover (W×L, D & W×L, D) (mm / inch)	590×242×245, 380 / 23.2×9.5×9.6, 15.0	570×332×295, 430 / 22.4×13.1×11.6, 17.0	590×389×295, 430 / 23.2×15.3×11.6, 17.0	848×389×295, 430 / 33.4×15.3×11.6, 17.0				
	Net weight (kg / lbs)	11.5 / 25.4	18.0 / 39.7	19.5 / 43.0	25.0 / 55.1				
Electrical Requirements (230V, 60Hz)		3.0 & 3.0A	3.0 & 4.3A	4.3 & 4.3A	4.3 & 8.7A				
Cat. No.		AAH47011K	AAH47021K	AAH47031K	AAH47041K				
Electrical Requirements (230V, 50Hz)		3.0 & 3.0A	3.0 & 4.3A	4.3 & 4.3A	4.3 & 8.7A				
Cat. No.		AAH47012K	AAH47022K	AAH47032K	AAH47042K				
Electrical Requirements (120V, 60Hz)		5.8 & 5.8A	5.8 & 8.3A	8.3 & 8.3A	8.3 & 8.3A				
Cat. No.		AAH47013U	AAH47023U	AAH47033U	AAH47043U				

1) Technical data. (according to DIN 12876)

Heating Baths

Excellent temperature performance heating water baths for general-purpose applications.

BW-G series features Microprocessor PID controls to guarantee exceptional temperature Variation and exclusive timer, programming function for critical research, quality control and regulatory testing!



BW-05G included SUS cover

- Included Accessories**
- Stainless steel flat type cover.
- Optional Accessories**
- Open-rings covers.
 - Test tube racks, Spring wire racks, Half-shelf adjusters.
- ➔ see page 20-21

Operating features

- +5°C above room temperature to 100°C.
- Microprocess PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min, delayed ON / OFF.
- Over-temperature limiter and low fluid level protection.
- 3 different temperature values memorable without auto-tuning.
- Digital LED display (0.1°C resolution) with splash-proof keypads.

Constructional features

- Stainless steel bath allows to use with water or other bath fluids, such as silicone fluids.
- User-friendly low-profile baths design with easy-to-operate digital controller with 2 display.
- Dry-running protection; automated heating element cut-off and audible and visual warning.
- Bottom baffle plate screens heater and sensor to protect sample and operators from direct contact.

Specifications & Ordering Informations



Model		BW-05G	BW-10G	BW-20G
Bath volume (L / cu ft)		5 / 0.2	10 / 0.4	20 / 0.7
Working Temperature Range (°C / °F)		Amb. +5 to 100 / Amb. +9 to 212		
Temperature Stability ¹⁾ (±°C / °F)		0.2 / 0.36		
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	231×150, 160 / 9.1×5.9, 6.3	285×211, 180 / 11.2×8.3, 7.1	345×290, 200 / 13.6×11.4, 7.9
	Overall / with gable cover (W×L×H) (mm / inch)	355×260×334 / 14.0×10.2×13.1	410×311×354 / 16.1×12.2×14.0	471×390×374 / 18.5×15.4×14.7
	Net weight (kg / lbs)	10.0 / 22.0	14.0 / 31.0	18.0 / 40.0
Electrical Requirements (230V)		50 / 60Hz, 3.0A	50 / 60Hz, 4.4A	50 / 60Hz, 8.7A
Cat. No.		AAH41405K	AAH41415K	AAH41425K
Electrical Requirements (120V)		50 / 60Hz, 5.8A	50 / 60Hz, 8.3A	50 / 60Hz, 8.3A
Cat. No.		AAH41406U	AAH41416U	AAH41426U

1) Technical data (according to DIN 12880)

Shaking Heating Baths

Reciprocal shaking heating baths.

BS series features more accurate shaking rapidly thanks to noiseless and anti-vibration **Brushless DC motor**. The constant temperature performance keeps samples incubated, ideal for DNA, and tissue or cell culture applications.

Operating features

- +5°C above room temperature to 100°C.
- Microprocess PID control / built-in Calibration.
- Digital timer: 1 min to 99 hr 59 min, delayed ON / OFF.
- Independent over-temperature limiter.
- Digital LED display (0.1°C / 1 rpm resolution) with splash-proof keypads.

Constructional features

- Shaker mechanism has its own control key, so the unit can be used as constant temperature baths.
- Gently start shaking to minimize shock on the test samples.
- Multi-LED display for adjustment of actual value, setpoint temperatures and shaking frequency.
- Baffle plate screens circulating pump, heater and sensor to minimize shaking bath fluids and protect sample and operators from direct contact.
- Shaking carriage is removable and can be assembled outside the bath; no direct contact with the bath fluid.
- Included bath cover prevents liquid losses, the gable type roof ensures no-dripping into the test samples directly.
- Included SUS 304 spring wire rack consists double column for various setting of glassware.



BS-31 included gable cover and spring wire rack

- | | |
|--|---|
| Included Accessories | <ul style="list-style-type: none"> • Stainless steel gable type cover. • Spring wire racks. |
| Optional Accessories
see page 19 | <ul style="list-style-type: none"> • Universal platform, Dedicated platform, Flask clamps. • Test tube racks. |

Specifications & Ordering Informations



Model		BS-06	BS-11	BS-21	BS-31
Bath volume (L / cu ft)		17.0 / 0.6	25.0 / 0.9	37.0 / 1.3	55.0 / 1.9
Working Temperature Range [°C / °F]		Amb. +5 to 100 / Amb. +9 to 212			
Temperature Stability ¹⁾ [±°C / °F]		0.2 / 0.36			
Shaking system	Motion, frequency (RPM)	Reciprocating, 20 to 180			
	Recip stroke length (mm / inch)	25, 30, 35 / 1.0, 1.2, 1.4 Available - Standard 30 / 1.2			
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	109×243, 235 / 4.3×9.6, 9.3	229×243, 235 / 9.0×9.6, 9.3	389×243, 235 / 15.3×9.6, 9.3	670×350, 235 / 21.2×11.5, 9.3
	Overall (W×L×H) (mm / inch)	430×440×355 / 16.9×17.3×14.0	550×440×355 / 21.7×17.3×14.0	710×440×355 / 28.0×17.3×14.3	860×490×355 / 33.9×19.3×14.0
	Net weight (kg / lbs)	26.0 / 57.0	30.0 / 66.0	35.0 / 77.0	42.0 / 93.0
	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	AAH44133U	-	-

※ BS-21,31 are provided ONLY for 230 voltage.

1) Technical data. (according to DIN 12876)

Viscometer Heating Baths

Ultra precise temperature control with excellent visibility!

VB-G series maintains temperatures $\pm 0.02^{\circ}\text{C}$ between ambient $+5^{\circ}\text{C}$ and 150°C , meeting ASTM D445 precision specification for kinematic viscosity measurement using glass capillary viscometers.



VB-40G included SUS covers

- Included Accessories**
- Stainless steel covers for holes in the top.
 - Cooling coil.
- Optional Accessories**
- Tube holders for 2 openings viscometer glass tube.
(Max. 5 holders for VB-25G/
Max. 8 holders for VB-40G)
 - Cooling circulators.
- 🔍 see page 21

Operating features

- $+5^{\circ}\text{C}$ Above room temperature to 150°C .
- Microprocess PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min, delayed ON / OFF.
- Over-temperature limiter and low fluid level protection.
- 3 different temperature values memorable without auto-tuning.
- Digital LED display with splash-proof keypads.
(0.01°C resolution at $0\sim 99.9^{\circ}\text{C}$ / 0.1°C resolution at $100\sim 150^{\circ}\text{C}$)
- RS-232 interface available.

Constructional features

- Double tempered safety glass windows in front and rear well ensures excellent visibility.
- Baffle plate screens circulating pump, heater and sensor to minimize shaking bath fluids and protect sample and operators from direct contact.
- A vane type stirrer makes powerful circulation for creating an optimal temperature variation.
- Included stainless steel cooling coil allows to work at temperatures below or slightly above ambient.
(Use of optional cooling circulator allows to work at temperatures from 10°C / 50°F)
- $\varnothing 51.0\text{mm}$ holes for suspending glass capillary viscometers tubes and a $\varnothing 12.6\text{mm}$ hole for thermometer.

Specifications & Ordering Informations



Model		VB-25G		VB-40G	
Bath volume (L / cu ft)		25.0 / 0.9		40.0 / 1.4	
Working Temperature Range ²⁾ (°C / °F)		Amb. +5 to 150 / Amb. +9 to 302			
Temperature Stability ¹⁾ (±°C / °F)		0.05 / 0.09		0.1 / 0.18	
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	145×265, 368 / 5.7×10.4, 14.5		295×265, 368 / 11.6×10.4, 14.5	
	Cover lids / Hole for thermometer (mm)	5ea / Ø51.0, 1ea / Ø12.6		8ea / Ø51.0, 1ea / Ø12.6	
	Overall (W×L×H) (mm / inch)	492×374×547 / 19.4×14.7×21.5		642×374×547 / 25.3×14.7×21.5	
	Net weight (kg / lbs)	28.0 / 61.7		37.0 / 81.6	
Electrical Requirements (230V)		60Hz, 13.0A	50Hz, 13.0A	60Hz, 13.0A	50Hz, 13.0A
Cat. No.		AAH43301K	AAH43302K	AAH43401K	AAH43402K

* VB-25G, 40G series are provided ONLY for 230 voltage.

1) Technical data. (according to DIN 12876)

2) If you want to operate the unit below Amb. $+5^{\circ}\text{C}$ (Amb. $+9^{\circ}\text{F}$), the optional cooling circulator must be used with.
In that case, the temperature range can be from $+10^{\circ}\text{C}$ ($+50^{\circ}\text{F}$). Ordering information - refer to P.17

Heating Bath Circulators

External and internal circulating with powerful pumping capacity.

CW-G series is designed for controlling temperature in external instrumentation, or for immersion application. Pump pressure is adjustable in five stages and all models come with built-in tap water cooling coil.

Operating features

- +5°C above room temperature to 150°C.
- Microprocess PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min, delayed ON / OFF.
- Over-temperature limiter and low fluid level protection.
- 3 different temperature values memorable without auto-tuning.
- Digital LED display (0.1°C resolution) with splash-proof keypads.
- RS-232 interface available.

Constructional features

- Exclusive variable-speed pump to liquid viscosity for accurate, stable, and efficient temperature management.
(1 to 3 steps of pump for internal circulation / 4 and 5 steps for external circulation)
- Powerful pressure and suction pumps provide contrast pressure and flow rate over the full temperature range.
- Baffle plate screens circulating pump, heater and sensor to minimize shaking bath fluids and protect sample and operators from direct contact.
- Dry-running protection; automated heating element cut-off and audible and visual warning.
- Seamless stainless steel tank with a reservoir drain that resists corrosion and make cleaning easy.
- Space saving design uses minimal bench space.



CW-05G included SUS covers

- Included Accessories**
- Stainless steel flat type cover.
 - One 30cm (1 ft) length and Ø12mm of silicone rubber tubing.
- Optional Accessories**
- Suction function for pump.
 - Test tube racks, Spring wire racks.
- 🔍 see page 20-21

Specifications & Ordering Informations



Model		CW-05G	CW-10G	CW-20G	CW-30G
Bath volume (L / cu ft)		5.0 / 0.2	10.0 / 0.4	20.0 / 0.7	30.0 / 1.1
Working Temperature Range ²⁾ (°C / °F)		Amb. +5 to 150 / Amb. +9 to 302			
Temperature Stability ¹⁾ (±°C / °F)		0.05 / 0.09	0.05 / 0.09	0.1 / 0.18	0.1 / 0.18
Pump	Max. pressure, max. flow rate	5.9 PSI (406.8 millibar), 7.4 gallons / minute (28.0 liters / minute)			
	Max. suction flow rate	2.6 gallons / minute (10.0 liters / minute)			
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	150×99, 160 / 5.9×3.9, 6.3	211×154, 180 / 8.3×6.1, 7.1	290×214, 200 / 11.4×8.4, 7.9	300×264, 230 / 11.8×10.4, 9.0
	Overall (W×L×H) (mm / inch)	220×395×424 / 8.7×15.6×16.7	281×450×444 / 11.1×17.7×17.5	360×510×464 / 14.2×20.1×18.3	370×560×494 / 14.6×22.0×19.4
	Net weight (kg / lbs)	12.5 / 27.6	15.0 / 33.0	17.5 / 38.6	19.5 / 43.0
Electrical Requirements (230V)		50 / 60Hz, 4.5A	50 / 60Hz, 6.7A	50 / 60Hz, 8.8A	50 / 60Hz, 8.8A
Cat. No.		AAH52305K	AAH52315K	AAH52325K	AAH52335K
Electrical Requirements (120V)		50 / 60Hz, 8.6A	50 / 60Hz, 8.6A	50 / 60Hz, 8.6A	50 / 60Hz, 8.6A
Cat. No.		AAH52306U	AAH52316U	AAH52326U	AAH52336U

1) Technical data. (according to DIN 12876)

2) If you operate the unit in 1 to 3 steps of pump, the temperature range can be from Amb. +5°C but in 4 and 5 steps, the range will be from Amb. +15°C.

Refrigerated & Heating Bath Circulators

Rapid heating and cooling throughout the entire temperature range!

RW-G series has powerful circulation pump for external and internal circulating. The temperatures can be down to maximum -35°C that maintain and control accurate low temperatures for use with *Refractometers* and *Viscometers*.



Operating features

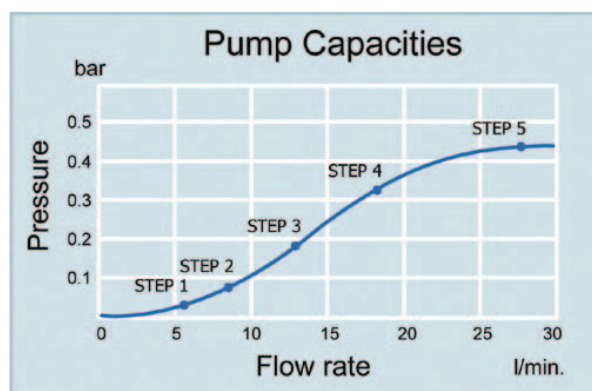
- -25°C to 150°C for RW-25G / -35°C to 150°C for RW-40G.
- Microprocess PID control / Auto-tuning / Calibration.
- Digital timer: 1 min to 99 hr 59 min, delayed ON / OFF.
- Over-temperature limiter and low fluid level protection.
- 3 different temperature values memorable without auto-tuning.
- Digital LED display (0.1°C resolution) with splash-proof keypads.
- RS-232 interface available.

Constructional features

- Turbulence reduced five-speed duplex pump and built-in cooling coil let you use in open or closed bath applications. (1 to 3 steps of pump for internal circulation / 4 and 5 steps for external circulation)
- Baffle plate screens circulating pump, heater and sensor to minimize shaking bath fluids and protect sample and operators from direct contact.
- Dry-running protection; automated heating element cut-off and audible and visual warning.
- Seamless stainless steel tank with a reservoir drain that resists corrosion and make cleaning easy.
- Use CFC-free refrigerant R-134A, R-404A and double service valve to prevent the leakage of refrigerant.
- Quick-release front grille for easy condenser cleaning and space saving design uses minimal bench space.

RW-0525G included SUS covers

- Included Accessories**
- Stainless steel flat type cover.
 - One 30cm (1 ft) length and \varnothing 12mm of silicone rubber tubing.
- Optional Accessories**
- Additional suction function.
 - Test tube racks, Spring wire racks.
- see page 20-21



* Applicable for CW-G, RW-25G, RW-40G series.
* Bath fluid : Water (on the normal temperature)

Refrigerated & Heating Bath Circulators

Specifications & Ordering Informations

RW-25G models for temperature range of -25°C to 150°C



Model		RW-0525G	RW-1025G	RW-2025G	RW-3025G
Bath volume (L / cu ft)		5.0 / 0.2	10.0 / 0.4	20.0 / 0.7	30.0 / 1.1
Working Temperature Range ¹⁾ (°C / °F)		-25 to 150 / -13 to 302			
Temperature Stability ¹⁾ (± °C / °F)		0.05 / 0.09	0.05 / 0.09	0.05 / 0.09	0.08 / 0.14
Cooling capacity	at -20°C (-4°F), W	30	50	260	390
	at 0°C (+32°F), W	230	250	410	570
	at +20°C (68°F), W	320	380	560	680
	Refrigerator	1 / 3 LBP, R-134A	1 / 3 LBP, R-404A	1 / 2 LBP, R-404A	3 / 4 LBP, R-404A
Pump	Max. pressure, max. flow rate	5.9 PSI (406.8 millibar), 7.4 gallons/minute (28.0 liters / minute)			
	Max. suction flow rate ²⁾	2.6 gallons / minute (10.0 liters / minute)			
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	150×99, 160 / 5.9×3.9, 6.3	211×154, 180 / 8.3×6.1, 7.1	290×214, 200 / 11.4×8.4, 7.9	300×264, 230 / 11.8×10.4, 9.0
	Overall (W×L×H) (mm / inch)	302×438×690 / 11.9×17.2×27.2	360×490×780 / 14.2×19.3×30.7	380×560×825 / 15.0×22.0×32.5	440×620×895 / 17.3×24.4×35.2
	Net weight (kg / lbs)	37.0 / 81.6	44.0 / 97.0	60.0 / 132.2	67.0 / 147.7
Electrical Requirements (230V, 60Hz)		7.0A	9.2A	12.8A	13.8A
Cat. No.		AAH57001K	AAH57011K	AAH57021K	AAH57031K
Electrical Requirements (230V, 50Hz)		7.0A	9.2A	12.8A	13.8A
Cat. No.		AAH57002K	AAH57012K	AAH57022K	AAH57032K
Electrical Requirements (120V, 60Hz)		12.6A	12.6A	-	-
Cat. No.		AAH57003U	AAH57013U	-	-

* RW-2025G, 3025G are provided ONLY for 230 voltage.

1) Technical data. (according to DIN 12876)

2) The cooling capacity is measured on a 220V/ 60Hz electrical condition.

3) The additional suction function is optional.

Specifications & Ordering Informations

RW-40G models for temperature range of -35°C to 150°C



Model		RW-0540G	RW-1040G	RW-2040G	RW-3040G
Bath volume (L / cu ft)		5.0 / 0.2	10.0 / 0.4	20.0 / 0.7	30.0 / 1.1
Working Temperature Range ¹⁾ (°C / °F)		-35 to 150 / -31 to 302			
Temperature Stability ¹⁾ (± °C / °F)		0.05 / 0.09	0.05 / 0.09	0.05 / 0.09	0.08 / 0.14
Cooling capacity	at -20°C (-4°F), W	80	150	400	440
	at 0°C (+32°F), W	150	330	660	700
	at +20°C (68°F), W	280	450	800	880
	Refrigerator	1 / 2 LBP, R-404A	1 / 2 LBP, R-404A	3 / 4 LBP, R-404A	1 LBP, R-404A
Pump	Max. pressure, max. flow rate	5.9 PSI (406.8 millibar), 7.4 gallons / minute (28.0 liters / minute)			
	Max. suction flow rate ²⁾	2.6 gallons / minute (10.0 liters / minute)			
Dimensions	Bath opening / depth (W×L, D) (mm / inch)	150×99, 160 / 5.9×3.9, 6.3	211×154, 180 / 8.3×6.1, 7.1	290×214, 200 / 11.4×8.4, 7.9	300×264, 230 / 11.8×10.4, 9.0
	Overall (W×L×H) (mm / inch)	302×438×690 / 11.9×17.2×27.2	360×490×780 / 14.2×19.3×30.7	380×560×825 / 15.0×22.0×32.5	440×620×895 / 17.3×24.4×35.2
	Net weight (kg / lbs)	38.0 / 83.8	44.0 / 97.0	60.0 / 132.2	67.0 / 147.7
Electrical Requirements (230V, 60Hz)		8.5A	10.7A	13.8A	14.8A
Cat. No.		AAH57101K	AAH57111K	AAH57121K	AAH57131K
Electrical Requirements (230V, 50Hz)		8.5A	10.7A	13.8A	14.8A
Cat. No.		AAH57102K	AAH57112K	AAH57122K	AAH57132K

* RW-0540G, 1040G, 2040G, 3040G series are provided ONLY for 230 voltage.

1) Technical data. (according to DIN 12876)

2) The cooling capacity is measured on a 220V/ 60Hz electrical condition.

3) The additional suction function is optional.

Cold Trap Bath

Digital temperature display.
Effective moisture capture.
Useful for exceptional cooling system.



CTB-10

Included Accessories • U-type glass traps 2EA.

Features

- The temperature can be indicated by LED digits.
- Glass trap can be connected.
- Over Current Breaker, Complete Safety Devices.
- 2 glass traps are supplied as standard.
- Condenser can be cleaned easily by opening front cover.
- Realized constructive precision, little noise, small size of the body.
- Dissolving system for ice or solid matter stuck on the bath.
- Durable Stainless Steel Bath.
- Transparent acrylic lid with glass trap to check condensate level in the trap.

Standard Accessories



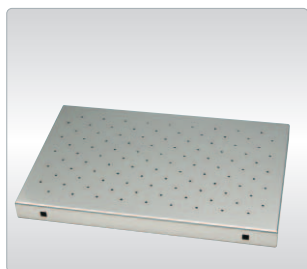
Model	Description	Cat. No.
Related accessory	U-type Glass Trap	AAA62501

Specifications

Specifications		CTB - 10
Temperature Range (°C / °F)		Down to -40 / -40
Material	Bath external	Stainless steel, 1.2t, double painted & baked
	Bath up desk	Stainless steel, 1.5t
	Insulation	Polyurethane foam(30mm)
	Refrigerator	1 / 2 HP, R-404A(LBP)
Dimensions	Volume (L / cu ft)	4.8 / 0.17
	Bath (Ø×H, mm)	Dia, 210×204 / 8.3×8
	Overall (W×D×H) (mm / inch)	360×465×555 / 14.1×18.3×21.9
	Net weight (kg / lbs)	46 / 101.4
Electrical Requirements		230V, 60Hz
Cat. No.		AAH62011K
Electrical Requirements		230V, 50Hz
Cat. No.		AAH62012K

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. Available variety size of clamps for Erlenmeyer flasks. (only for BS series)

		BS-06	BS-11	BS-21	BS-31
Universal platform Cat. No.		AAA44521	AAA44522	AAA44523	AAA44524
Max. mountable flask clamps*					
Cat. No.	Erlenmeyer flask size				
AAA23550	for 50mL	9	12	20	32
AAA23551	for 100mL	3	9	15	24
AAA23552	for 250ml	2	4	8	12
AAA23556	for 300mL	2	4	8	12
AAA23553	for 500ml	2	4	6	12
AAA23554	for 1L	1	2	4	6
AAA23555	for 2L ◇	-	1	2	3
AAA23557	for 2.8L ◇	-	1	1	2

◇ 2 and 2.8L flasks must be used with opening the bath cover by height problem.

* Flask clamps for Universal platform are each sold separately.

Dedicated platforms

If using a single flask size only, the dedicated platforms provide maximum capacity, and come with clamps installed. Provided standard clamp sizes are 250mL and 500mL, but possibly provide the other size of clamps also. (only for BS series)

Cat. No.	Description
AAA44531	An universal platform for BS-06 with 250mL flask clamps 2ea on
AAA44532	An universal platform for BS-06 with 500mL flask clamps 2ea on
AAA44541	An universal platform for BS-11 with 250mL flask clamps 4ea on
AAA44542	An universal platform for BS-11 with 500mL flask clamps 4ea on
AAA44551	An universal platform for BS-21 with 250mL flask clamps 8ea on
AAA44552	An universal platform for BS-21 with 500mL flask clamps 6ea on
AAA44561	An universal platform for BS-31 with 250mL flask clamps 12ea on
AAA44562	An universal platform for BS-31 with 500mL flask clamps 12ea on

※ A dedicated platform is sold with setting each max. mountable amount of flask clamps on.

Test tube racks

Highly durable stainless steel racks with adjustable angle and tube height support. Do not need any other base plates to use it, simply release and mount racks directly.

Cat. No.		Description	Insert capacity of racks*			
AAA44581	for 86 test tubes	8mm dia. [0.3"]	BS-06 1EA	BS-11 2EA	BS-21 3EA	BS-31 4EA
AAA44582	for 86 test tubes	10mm dia. [0.4"]				
AAA44583	for 58 test tubes	12mm dia. [0.5"]				
AAA44585	for 32 test tubes	16mm dia. [0.6"]				
AAA44586	for 19 test tubes	25mm dia. [1.0"]				

* No declination

※ In addition to providing standard accessories, we will manufacture customized accessories to meet your specific requirements. Contact us for details.

Accessories & Options

for Baths & Bath Circulators



Transparent polypropylene gable covers



Stainless steel flat covers



Open-rings Covers

Transparent polypropylene gable type covers

Prevent liquid loss due to evaporation, protect samples from contamination. Made of transparent polypropylene to allow to observe the samples and gable type roof accommodates glassware of varying height. (only for BW-E/ B/ D series)

Cat. No.	Description	Suitable for
AAA45531	Transparent polypropylene gable type	BW-05E / BW-05B
AAA45532	Transparent polypropylene gable type	BW-10E / BW-10B
AAA45533	Transparent polypropylene gable type	BW-20E / BW-20B

Stainless steel flat type covers

Made of stainless steel to prevent from occurring corrosion and rust. (only for BW-E/ B/ D series)

Cat. No.	Description	Suitable for
AAA45541	Stainless steel flat type	BW-05E / BW-05B
AAA45542	Stainless steel flat type	BW-10E / BW-10B
AAA45543	Stainless steel flat type	BW-20E / BW-20B

Open-rings covers

Beakers or Erlenmeyer flasks can be placed directly onto the perforated stainless steel half-shelf adjuster or water tank bottom. Adjustable rings size for each glassware to minimize liquid losses due to evaporation. (only for BW-E/ B/ D and BW-G series)

Cat. No.	Description	Suitable for
AAA45521	with 2 openings 80mm dia. [3.1"]	BW-05E / BW-05B
AAA45524	with 1 opening 110mm dia. [4.3"]	
AAA45522	with 4 openings 80mm dia. [3.1"]	
AAA45525	with 2 openings 110mm dia. [4.3"]	BW-10E / BW-10B
AAA45526	with 1 opening 185mm dia. [7.3"]	
AAA45523	with 8 openings 80mm dia. [3.1"]	
AAA45527	with 6 openings 110mm dia. [4.3"]	BW-20E / BW-20B
AAA45528	with 2 openings 185mm dia. [7.3"]	
AAA41561	with 2 openings 80mm dia. [3.1"]	
AAA41564	with 1 opening 110mm dia. [4.3"]	BW-05G
AAA41562	with 4 openings 80mm dia. [3.1"]	
AAA41565	with 2 openings 110mm dia. [4.3"]	
AAA41566	with 1 opening 185mm dia. [7.3"]	BW-10G
AAA41563	with 6 openings 80mm dia. [3.1"]	
AAA41567	with 4 openings 110mm dia. [4.3"]	
AAA41568	with 1 opening 185mm dia. [7.3"]	BW-20G

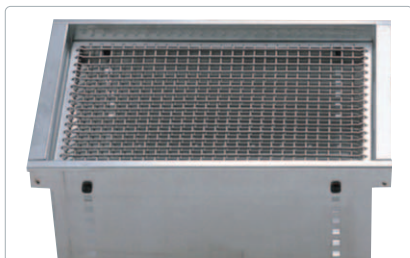
Test tube racks

Highly durable stainless steel racks with adjustable angle and tube height support. Do not need any other base plates to use it, simply release and mount racks directly.

Cat. No.	Description	Insert capacity of racks*		
AAA44581	for 86 test tubes 8mm dia. [0.3"]	BW-05E BW-05B	BW-10G CW-20G, 30G RW-2025G, 2040G, 3025G, 3040G	BW-20G
AAA44582	for 86 test tubes 10mm dia. [0.4"]			
AAA44583	for 58 test tubes 12mm dia. [0.5"]			
AAA44585	for 32 test tubes 16mm dia. [0.6"]			
AAA44586	for 19 test tubes 25mm dia. [1.0"]	1EA	2EA	3EA
AAA41531	for 50 test tubes 8mm dia. [0.3"]			
AAA41532	for 50 test tubes 10mm dia. [0.4"]			
AAA41533	for 33 test tubes 12mm dia. [0.5"]			
AAA41535	for 16 test tubes 16mm dia. [0.6"]			
AAA41539	for 10 test tubes 25mm dia. [1.0"]	BW-10E BW-10B	BW-05G CW-10G RW-1025G, 1040G	1EA
AAA45551	for 176 test tubes 8mm dia. [0.3"]			
AAA45552	for 176 test tubes 10mm dia. [0.4"]			
AAA45554	for 84 test tubes 12mm dia. [0.5"]			
AAA45556	for 68 test tubes 16mm dia. [0.6"]	1EA	2EA	3EA
AAA45561	for 33 test tubes 25mm dia. [1.0"]			

Accessories & Options

for Baths & Bath Circulators



Spring wire racks



Half-shelf adjusters



Suction function for pumps

Spring wire racks

Ideal for holding a wide variety of tubes, flasks, and other glassware. All components are made of stainless steel. (for all models)

Cat. No.	Suitable for
AAA45502	BW-10E/ BW-10B
AAA45503	BW-20E/ BW-20B
AAA41502	BW-10G
AAA41503	BW-20G
AAA51522	CW-20G/ RW-2025G, 2040G
AAA51523	CW-30G/ RW-3025G, 3040G

Suction function for pumps*

Additional suction function for powerful external/ internal circulating. Maximum suction flow rate is 10.0 liters per minute. (only for CW-G and RW-G series)

Cat. No.	Suitable for
52503	CW-05G/ RW-0525G, 0540G
52513	CW-10G/ RW-1025G, 1040G
52523	CW-20G/ RW-2025G, 2040G
52533	CW-30G/ RW-3025G, 3040G

* The additional suction function is needed to have a prior request.

Half-shelf adjusters

Stainless steel perforated sample tray shelf with adjustable height support prevents leaks and guard against rust and contamination Putting flat bottom glassware on the shelf without insert. (only for BW-E/ B/ D and BW-G series)

Cat. No.	Suitable for
AAA45511	BW-05E/ BW-05B
AAA45512	BW-10E/ BW-10B
AAA45513	BW-20E/ BW-20B
AAA41551	BW-05G
AAA41552	BW-10G
AAA41553	BW-20G

for Viscometer Heating Baths

Viscometer tube holders

Holders for 2 openings viscometer glass tube, made of thermal endurance material: Bakelite. (only for VB series)

Cat. No.	Suitable for
AAA43501	VB-25G (need Max. 5 holders)
	VB-40G (need Max. 8 holders)



Viscometer tube holders

Cooling circulators for visco baths

The temperature range of viscometer baths series can be from +10°C (+50°F) when be used with the additional cooling circulators. (only for VB series)

Cat. No.	Suitable for	Cooling circulators *
AAH57011K	VB-25G (230V, 60Hz)	RW-1025G (230V, 60Hz)
AAH57012K	VB-25G (230V, 50Hz)	RW-1025G (230V, 50Hz)
AAH57021K	VB-40G (230V, 60Hz)	RW-2025G (230V, 60Hz)
AAH57022K	VB-40G (230V, 50Hz)	RW-2025G (230V, 50Hz)

* Refer to P.16-17 for more specific information of the cooling circulators.