

Shaker

Open-air Shakers

(Dual-action/General/Advanced Models)

Mini Shaker

Microplate Shaker

Rocking Shaker

Waving Shaker

Heating Shaker

Separatory Funnel Shaker

» General Applications

Shakers

General mixing, Drug analysis, ELISA, Enzyme immunoassays, Staining and Destaining, Protein synthesis.

Heating Shaker

Useful for a variety of molecular biology applications.

Separatory Funnel Shaker

Intensive vertical reciprocating agitation for quick solvent extraction.



Product name		Open-air Shakers (Dual-action Model)	Open-air Shakers (General Model)	Open-air Shakers (Advanced Model)
Model		OS	OS	SKC
Platform size (WxD, mm)		320x260, 350x350	450x450, 755x520	580x520, 660x520, 755x520, 885x520
RPM control	Motion	Orbital, Reciprocating	Orbital	Orbital
	Amplitude size (mm)	12.7, 19.1, 25.4	19.1, 25.4, 50.8	19.1, 25.4, 50.8
	Speed range (rpm)	20 to 500	20 to 500 ¹⁾	30 to 500
Control	PID feedback control	0	0	0
	Timer	Wait off	Wait off	Wait on/off
	Program function	-	-	0
	Computer interface	RS-232 port, USB port	RS-232 port, USB port	-
Safety	Over current limit	0	0	0
	Auto-run (power failure)	0	0	-
	Shaking speed deviation limit	0	0	-
	Automatic shaking speed adjustment	0	0	0

1) Max. and Min. rpm is dependable by amplitude size.

2) Max. rpm is dependable by loaded block.

» Technical Benefits

Shaker (OS / SKC)

Performance

- Incomparable 500 rpm even with heavy workload.
- Microprocessor PID control ensuring consistent shaking motion and precision accuracy.
- Smooth start and smooth stop function for pleasant test environment.
- In case of excessive workload, it automatically controls the shaking speed to the optimum rpm before safety system activation not to stop the operation in the middle of the test.

Convenience

- Easy maintenance design.
 - Corrosion resistant stainless steel platform. (Optional)
 - Waterproof designed control panel.
- RS-232 port and USB port for simple external control and data collection. (for OS)

Safety

- Patented CLS-CS(Custom Logical Safe Control System)
 - Protection system against overcurrent and stalled platform check.
 - Automatic Run or Manual Run after power interruption.
- Real time shaking speed deviation alarm (for OS).

Shaker (CMS / CPS / CRS / CWS)

Performance

- Microprocessor PID control ensuring consistent shaking motion and precision accuracy.
- Smooth start and smooth stop function for pleasant test environment.

Convenience

- Bright VFD display with responsive touch buttons.
 - One-touch timer for time-dependent shaking operations.
- Compact and lightweight design allowing for use inside chambers.

Safety

- Patented CLS-CS (Custom Logical Safe Control System)
 - Protection system against overcurrent.

Mini Shaker	Microplate Shaker	Rocking Shaker	Waving Shaker	Heating Shaker	Separatory Funnel Shaker
CMS-350	CPS-350	CRS-350	CWS-350	CBS-350	RS-1
250×250	269×185 (Tray)	276×276 (dimpled mat)	276×276 (dimpled mat)	-	6 funnel holders
Oribital	Oribital	Rocking	Waving	Oribital	Vertical reciprocating
13	3	Adjustable tilt 7° to 13°	Adjustable tilt 0° to 13°	2	40
50 to 300	150 to 1200	5 to 100	8 to 100	150 to 1500 ²⁾	50 to 300
0	0	0	0	0	-
Wait off	Wait off	Wait off	Wait off	Wait on/off	Wait off
-	-	-	-	0	-
-	-	-	-	-	-
0	0	0	0	0	0
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Shaker Series

Lab Companion's wide ranged shakers are covering almost all of your applications. Find a shaker suitable for your needs.





Performance

- Dual-action shaking motion: Orbital / Reciprocating.
- Microprocessor PID control / Shaking speed calibration.
- Competitive high shaking speed up to 500 rpm.
- Shaking motion in various amplitude.
 - 12.7mm or 19.1mm for OS-2000
 - 19.1mm or 25.4mm for OS-3000
- Wide speed range even with heavy workload.
 - Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion.
- Best effort run function intelligently manages its rpm to keep shaking even workload is out of its capacity.
- Pleasant test environment by the smooth acceleration and deceleration control.
- Low-profile design minimizes vibration or sliding caused by the high speed shaking motion.

Convenience

- User friendly control panel.
 - Lab Companion's unique VFD-bright, clear, easy to read.
 - Durable membrane touch switch and control knob.
- Easy-set digital timer. (1 min. to 999 hr. 59 min.)
- Repetitive task can be easily performed as the platform stops where it starts.
 - Stopping the shaking platform always at the same position is highly beneficial for automated dosing or sampling process.
- Speed is basically set and displayed in increments of 1 rpm. Also speed increment interval can be set among 1, 5, 10 rpm according to users preference.
- RS-232 port and USB port for external control and data collection.

Safety

- Automatic run after power interruption.
- Shaking speed deviation alarm.
- Over-current protection, Stalled platform check.

Dual-action benchtop platform shakers accommodate flask up to 6L.

The most versatile shakers at a reasonable price offer an ideal solution for your mixing needs.



OS-3000

with optional dedicated platform

- Optional accessories** see page 150-151
- Rubber mats, Universal attachments
 - Funnel clamps, Test tube racks

Control panel



Model		OS-2000	OS-3000
Shaking system	Motion type	Orbital or Reciprocating motion selectable	
	Amplitude size (mm / inch, dia.)	12.7, 19.1 / 0.5, 0.8 (standard 19.1 / 0.75)	19.1, 25.4 / 0.8, 1 (standard 19.1 / 0.75)
	Speed range ²⁾ (rpm)	20 to 500	
	Accuracy	±1 % of set speed (≥100rpm) / ±1 (≤100rpm)	
	Timer	1 min. to 999 hr. 59 min.	
Max. load (kg / lbs)		10 / 22.0 at 500 rpm in orbital shaking motion 8.5 / 18.7 at 500 in reciprocating shaking motion	
Dimension	Platform (WxD) (mm / inch)	320×260 / 12.6×10.2	350×350 / 13.8×13.8
	Body (WxDxH) (mm/inch) ¹⁾	354×388×146 / 13.9×15.3×5.7	409×508×141 / 16.1×20×5.6
	Net weight (Kg / lbs)	22 / 48.5	28 / 61.7
Electrical requirements (230V, 50 / 60Hz)		0.3A	0.3A
Cat. No.		AAH3D1115K	AAH3D1215K
Electrical requirements (120V, 50 / 60Hz)		0.6A	0.6A
Cat. No.		AAH3D1165U	AAH3D1265U

1) Main body dimension without accessories.

2) In case of operating at high speed (350 to 500 rpm), it is recommended to use optional attachments to be fixed on the working surface.

* FDA establishment registered company. FDA listed products.

Open-air Shakers (General)

Powerful driving system with a durable body structure increases shaking capacity.

Suitable for larger or heavier workloads requiring accurate and reproducible results.



OS-4000 / OS-7100

with optional accessories

Optional accessories
see page 150-151

- Dedicated platforms, Universal platforms
- Flask clamps, Test tube racks



Various accessories installable



Control panel



Computer interface



Performance

- Microprocessor PID control.
 - Intelligent speed controller enables reproducible results.
- Shaking speed calibration enables matching the displayed rpm to the reference point.
- Competitive high shaking speed up to 500 rpm.
- Orbital shaking motion in various diameter.
 - 19.1mm or 25.4mm for OS-4000
 - 25.4mm for OS-7100
 - 50.8mm for OS-7200
- Wide speed range even with heavy workload.
 - Ideal DD(Direct Drive) Brushless Motor and triple cam system support heavy load, quiet, maintenance free operation and deliver high torque at high speeds and smooth rotation. (for OS-7100/7200)
 - Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion. (for OS-4000)
- Best effort run function intelligently manages its rpm to keep shaking even workload is out of its capacity.
 - Automatic shaking speed adjustment in case of excessive workload such as unbalanced load placement, unusual vibrations caused from unstable floor or external shock.
- Pleasant test environment by the smooth acceleration and deceleration control.
 - Smooth start and smooth stop function prevent chemical spills from flasks or test tubes.
- Low-profile design minimizes vibration or sliding caused by the high speed shaking motion.

Convenience

- User friendly control panel.
 - Lab Companion's unique VFD-bright, clear, easy to read.
 - Durable membrane touch switch and control knob.
- Easy-set digital timer. (1 min. to 999 hr. 59 min.)
- Repetitive task can be easily performed as the platform stops where it starts.
 - Stopping the shaking platform always at the same position is highly beneficial for automated dosing or sampling process.
- Speed is basically set and displayed in increments of 1 rpm. Also speed increment interval can be set among 1, 5, 10 rpm according to users preference.
- Built-in RS-232 port and USB port for external control and data collection.
- Variety of accessories are available to meet application demands.

Safety

- Automatic run after power interruption.
- Shaking speed deviation alarm.
- Over-current protection, Stalled platform check. (stalled platform check is for OS-4000)

Model		OS-4000		OS-7100	OS-7200
Control system		PID feedback control			
Display		VFD			
Shaking system	Motion type	Orbital			
	Amplitude size (mm / inch, dia.)	19.1 / 0.75 (standard)	25.4 / 1 (adjustable)	25.4 / 1	50.8 / 2
	Speed range ²⁾ (rpm)	20 to 500	20 to 450	30 to 500	30 to 300
	Accuracy	±1% of set speed (≥100rpm) / ±1 (≤100rpm)			
	Timer	1 min. to 999 hr. 59 min.			
Max. load (kg / lbs)		14 / 30.9 at 500 rpm 21 / 46.3 at 400 rpm	10 / 22.0 at 450 rpm 21 / 46.3 at 300 rpm	10 / 22.0 at 500 rpm 25 / 55.1 at 400 rpm	23 / 50.7 at 300 rpm 35 / 77.2 at 200 rpm
Dimension	Platform (WxD) (mm / inch)	450×450 / 17.7×17.7		755×520 / 29.6×20.5	
	Body ¹⁾ (WxDxH) (mm/inch)	510×632×156 / 20.1×24.9×6.1		755×627×151 / 29.7×24.7×5.9	
	Net weight (Kg / lbs)	43 / 94.8		117 / 257.9	
Electrical requirements (230V, 50 / 60Hz)		0.3A		0.4A	
Cat. No.		AAH3D1315K		AAH3D1415K	AAH3D1515K
Electrical requirements (120V, 50 / 60Hz)		0.6A		0.8A	
Cat. No.		AAH3D1365U		AAH3D1465U	AAH3D1565U

1) Main body dimension without accessories.

2) In case of operating at high speed (350 to 500 rpm), it is recommended to use optional attachments to be fixed on the working surface.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* CSA for OS-4000. * FDA establishment registered company. FDA listed products.

Open-air Shakers (Advanced)

Innovative triple-cam shaking mechanism with offering reliable performance across a wide speed range.

Specially designed to carry out heavy-duty and trouble-free operations continuously.



SKC - 7075

with optional slide type dedicated platform

Optional accessories see page 152

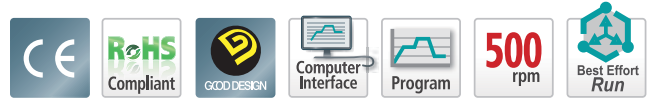
- Dual universal platforms, Rubber mats, Universal attachments
- Flask clamps, Funnel clamps, Test tube racks, Spring wire racks

Control panel

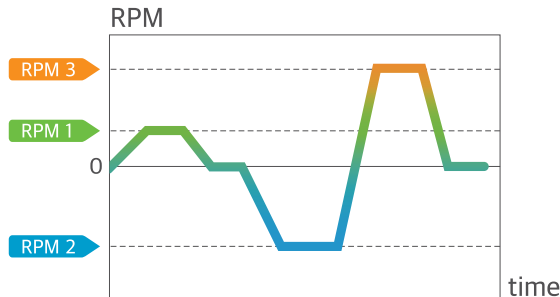


Slide type universal platform (optional)





Progressive program operation



Programming parameters			
Max. number of segments in one(1) pattern (cycle)		20	
Max. number of patterns (cycle) saved		20	
Shaking motion - Forward & Backward, Pause	Time	1min. to 99hr. 59min.	
	rpm	30 to 500	

Performance

- Microprocessor PID control maintaining constant speed
- Competitive high shaking speed up to 500 rpm.
- Orbital shaking motion in various diameter.
 - 19mm for SKC-6075/7075
 - 25mm for SKC-6100/7100
 - 50mm for SKC-6200/7200
- Wide speed range even with heavy workload.
 - Ideal DD(Direct Drive) Brushless Motor and triple cam system support heavy load, quiet, maintenance free operation and deliver high torque at high speeds and smooth rotation.

- Best effort run function intelligently manages its rpm to keep shaking even workload is out of its capacity.
- Automatic shaking speed adjustment in case of excessive workload such as unbalanced load placement, unusual vibrations caused from unstable floor or external shock.
- Pleasant test environment by the smooth acceleration and deceleration control.
 - Smooth start and smooth stop function prevent chemical spills from flasks or test tubes.
- Exceptional low-profile design (only 12cm from bottom to platform) minimizes vibration or sliding caused by the high speed shaking motion.

Convenience

- User friendly control panel.
 - Lab Companion's unique VFD-bright, clear, easy to read.
 - Durable membrane touch switch and control knob.
- Easy-exchangeable slide type universal platform reduces physical fatigue when handling the heavy load samples. (optional)
- Repetitive task can be easily performed as the platform stops where it starts.
 - Stopping the shaking platform always at the same position is highly beneficial for automated dosing or sampling process.
- Variety of accessories are available to meet application demands.

Safety

- Shaking speed deviation alarm.
- Over-current protection.

Model		SKC-6075	SKC-6100	SKC-6200	SKC-7075	SKC-7100	SKC-7200
Control system		PID feedback control					
Display		VFD					
Shaking system	Motion type	Orbital					
	Amplitude size (mm / inch, dia)	19 / 0.75	25 / 1	50 / 2	19 / 0.75	25 / 1	50 / 2
	Speed range ²⁾ (rpm)	30 to 500					
	Accuracy at 100 rpm	±1					
Dimension	Platform (WxD) (mm / inch)	Small	580×520 / 22.8×20.5			755×520 / 29.7×20.5	
		Large	660×520 / 26×20.5			885×520 / 34.8×20.5	
	Body ¹⁾ (WxDxH) (mm / inch)	582.8×618 ×122.2			754.8×662×122.2		
		22.9×24.3×4.8			29.7×26.1×4.8		
Net weight (kg / lbs)		65 / 143.3			75 / 165.4		
Electric requirements (230V, 50 / 60Hz)		0.4A					
Cat. No.		AAH30105K	AAH30115K	AAH30125K	AAH30205K	AAH30215K	AAH30225K
Electric requirements (120V, 60Hz)		0.8A					
Cat. No.		AAH30106U	AAH30116U	AAH30126U	AAH30206U	AAH30216U	AAH30226U

1) Main body dimension without accessories.

2) In case of operating at high speed (350 to 500 rpm), it is recommended to use optional attachments to be fixed on the working surface.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* FDA establishment registered company. FDA listed products.

Mini Shaker



Compact and lightweight design for space saving and portability with real-time responsive speed control knob.



CMS-350

with optional universal platform, flask clamp

Optional accessories see page 150-153

- Spring wire racks, Microplate tray
- Test tube racks, Funnel clamps

Performance

- Suitable for low rpm sensitive applications.
 - Hybridization, immunocytochemistry, gel staining/destaining, and other bioscience applications.
- Microprocessor PID control.
- Wide speed range from 50 to 300 rpm.
- Orbital shaking motion in 13mm diameter.
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion.

Convenience

- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- One-touch timer for time-dependent shaking operation. (1 min. to 99 hr. 59 min.)
- Removable tray for easy transport of well-plates (max. 6 ea) and dishes. (optional)
- Compact and lightweight design allow for use in cold rooms or incubators.
- Variety of accessories are available to meet application demands.

Safety

- Self-diagnostic function identifying errors.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Over-current protection.

Model		CMS-350
Control system		PID feedback control
Display		VFD
Shaking system	Motion type	Orbital
	Speed range (rpm)	50 to 300
	Accuracy at 100 rpm	±5
	Timer	1min. to 99hr. 59min.
	Orbit size (mm / inch, dia)	13 / 0.51
Max. load (kg / lbs)		up to 5.2 / 11.46
Dimension	Tray (WxD) (mm / inch)	276×276 / 10.87×10.87
	Platform (WxD) (mm / inch)	250×250 / 9.8×9.8
	Body ¹⁾ (WxDxH) (mm / inch)	249×325×109 / 9.8×12.8×4.3
	Net weight (kg / lbs)	8 / 17.6
Electrical requirements		AC 100 ~ 240 V, 50 / 60 Hz
Cat. No.	KR Plug	AAH3B1115K
	US Plug	AAH3B1115U

1) Main body dimension without accessories.
 * Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).
 * FDA establishment registered company. FDA listed products.



Performance

- Optimally designed to shake four microplates simultaneously.
- Ideal for applications that demand precise and repeatable mixing.
- Microprocessor PID control.
- Wide speed range from 150 to 1,200 rpm
- Orbital shaking motion in 3mm diameter.
- Smooth start feature to avoid sample contamination.
- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion.

Convenience

- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- One-touch timer for time-dependent shaking operation. (1 min. to 99 hr. 59 min.)
- Compact and lightweight design allow for use in cold rooms or incubators.
- Variety of accessories are available to meet application demands.
 - Optional tube racks also available for 1.5ml micro-tubes, 15ml conical tubes, and 50ml conical tubes.

Safety

- Self-diagnostic function identifying errors.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Over-current protection.

Fitted with 4 microplates and wider speed range to accommodate various sample testing.



CPS-350

with optional micro-tube rack

Optional accessories • Conical tube racks (1.5ml, 15ml, 50ml)
see page 153

Model		CPS-350
Control system		PID feedback control
Display		VFD
Shaking system	Motion type	Orbital
	Speed range (rpm)	150 to 1,200
	Accuracy at 500 rpm	±15
	Timer	1 min. to 99hr. 59min.
	Orbit size (mm / inch, dia)	3 / 0.12
	Max. load (kg / lbs)	4 / 8.8
Dimension	Tray (WxD) (mm / inch)	269×185 / 10.6×7.3
	Body ¹⁾ (WxDxH) (mm / inch)	269×325×128 / 10.6×12.8×5.0
	Net weight (kg / lbs)	7.7 / 17
Electrical requirements		AC 100 ~ 240 V, 50/60 Hz
Cat. No.	KR Plug	AAH3C1115K
	US Plug	AAH3C1115U

1) Main body dimension without accessories.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* FDA establishment registered company. FDA listed products.

Rocking Shaker



Adjustable tilt angle and precise digital speed control providing desired rocking motion.



Performance

- Microprocessor PID control.
- Digital speed control providing gentle to vigorous motion.
 - Rocking shaker: 5 to 100 rpm
- Easy to adjust tilt angle.
 - Rocking shaker: 7 to 13°
- Smooth, quiet, uniform, and yet powerful shaking motion.

Convenience

- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- One-touch timer for time-dependent shaking operation. (1 min. to 99 hr. 59 min.)
- Compact and lightweight design allow for use in cold rooms or incubators.
- Three types of removable tray for easy transport of well-plates, test tubes, etc. (standard dimpled mat, and optional rubber mat and universal harness)
- Variety of accessories are available to meet application demands.
 - Accommodates to be used in a variety of test tube size, beakers, vials, micro-well plates, culture dishes, plastic/glass trays.

CRS-350

- Standard accessories**
- Dimpled mat (tray, silicone pad)
 - Rubber bands (2ea)

- Optional accessories**
see page 153
- Rubber mat (tray, sticky pad)
 - Universal harness (tray, sticky pad, 6 rubber bands)

Safety

- Self-diagnostic function identifying errors.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Over-current protection.

Model		CRS-350
Control system		PID feedback control
Display		VFD
Shaking system	Motion type	Rocking
	Speed range (rpm)	5 to 100
	Accuracy at 100 rpm	±5
	Tilt angle	7 to 13°
	Max. load (kg / lbs)	5 / 11.02
Material	Dimpled mat (standard)	PP (polypropylene), Silicone
	Body	PP (polypropylene)
Dimension	Tray (WxD) (mm / inch)	276×276 / 10.87×10.87
	Body ¹⁾ (WxDxH) (mm / inch)	249×325×138 / 9.8×12.8×5.4
	Net weight (kg / lbs)	3.7 / 8.16
Electrical requirements		AC 100 ~ 240 V, 50/60 Hz
Cat. No.	KR Plug	AAH391115K
	US Plug	AAH391115U

1) Main body dimension without accessories.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* FDA establishment registered company. FDA listed products.



Performance

- Microprocessor PID control.
- Digital speed control providing gentle to vigorous motion.
 - Waving shaker: 8 to 100 rpm
- Easy to adjust tilt angle.
 - Waving shaker: 0 to 13°
- Smooth, quiet, uniform, and yet powerful shaking motion.

Convenience

- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- One-touch timer for time-dependent shaking operation. (1 min. to 99 hr. 59 min.)
- Compact and lightweight design allow for use in cold rooms or incubators.
- Three types of removable tray for easy transport of well-plates, test tubes, etc. (standard dimpled mat, and optional rubber mat and universal harness)
- Variety of accessories are available to meet application demands.
 - Accommodates to be used in a variety of test tube size, beakers, vials, micro-well plates, culture dishes, plastic/glass trays.

Enhanced conveniences for tilt adjustment, removable tray, and digital control.



Safety

- Self-diagnostic function identifying errors.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Over-current protection.

CWS-350

Standard accessories

- Dimpled mat (tray, silicone pad)
- Rubber bands (2ea)

Optional accessories

see page 153

- Rubber mat (tray, sticky pad)
- Universal harness (tray, sticky pad, 6 rubber bands)

Model		CWS-350
Control system		PID feedback control
Display		VFD
Shaking system	Motion type	Waving
	Speed range (rpm)	8 to 100
	Accuracy at 100 rpm	±5
	Tilt angle	0 to 13°
	Max. load (kg / lbs)	5 / 11.02
Material	Dimpled mat (standard)	PP(polypropylene), Silicone
	Body	PP(polypropylene)
Dimension	Tray (W×D) (mm / inch)	276×276 / 10.87×10.87
	Body ¹⁾ (W×D×H) (mm / inch)	249×325×138 / 9.8×12.8×5.4
	Net weight (kg / lbs)	3.7 / 8.16
Electrical requirements		AC 100 ~ 240 V, 50/60 Hz
Cat. No.	KR Plug	AAH381115K
	US Plug	AAH381115U

1) Main body dimension without accessories.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* FDA establishment registered company. FDA listed products.

Heating Shaker



Useful for a variety of molecular biology applications.

Interval mix function in program mode can be properly set according to user's experimental conditions.



CBS-350

with optional tube block

Optional accessories • 96-well tube block set with cover
see page 153 • Tube block set with cover

Performance

- Microprocessor PID control ensuring consistent shaking motion and precision accuracy.
- Wide speed range from 150 to 1500 rpm (block dependent)
- Automatic temperature calibration.

Convenience

- Bright VFD display with responsive touch buttons.
- Memory function of programs allowing relevant parameters (such as temp., rpm, time) of each program step to be stored.
 - Up to 10 programs allowed for memory storage.
 - Up to 10 steps allowed for each program.
 - Interval mix function (continuous switching between shaking and phasing)
- Advanced dual wait on/off timer modes.
 - User can set timer to start immediately after the timer setting or only after reaching the set temp.
- Optimal heat transfer is achieved by the tight coupling design of the main body and the corrosion-resistant anodized aluminum blocks.

Safety

- Self-diagnostic function identifying errors.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Low-profile design with rubber feet for minimal vibration and noise.
- Over-current protection.

Model		CBS-350	
Control		PID feedback control	
Display		VFD (0.1°C resolution)	
Temperature	Range (°C / °F)	Amb. +5 to 100 / 41 to 212	
	Fluctuation at 80°C (±°C / °F)	0.5 / 0.9	
	Variation at 80°C (±°C / °F)	0.15 / 0.27	
	Heating power (W)	360	
Safety	Over temp.	Heating plate	
	Over current	PCB	
Shaking system (WxDxH)	Motion type	Orbital	
	Speed range (rpm)	96-well tube block	150 to 1500
		0.5mL tube block	150 to 1000
		1.5mL tube block	150 to 1000
		15mL tube block	150 to 900
		Ø12 tube block	150 to 850
		Ø13 tube block	150 to 850
Orbit size (mm / inch, dia.)	2 / 0.08		
Dimension (WxDxH)	Body ¹⁾ (mm/inch)	249 x 325 x 120 / 9.8 x 12.8 x 4.7	
	Net weight (Kg / lbs)	8.3 / 18.3	
Electrical requirements (230V,50Hz/60Hz)		1.7A	
Cat. No.		AAHJ4015K	
Electrical requirements (120V,60Hz)		3.4A	
Cat. No.		AAHJ4013U	

1) Main body dimension without accessories.

* Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

* FDA establishment registered company. FDA listed products.

Performance

- Shaking up to 10 samples in identical conditions for any series or comparative protocols in chemistry, biotech, and medical labs.
- Wide speed range from 50 to 300 rpm is suitable for most applications.
- Vertical reciprocating motion with maximum stroke length of 40mm.

Convenience

- Digital LED speed display.
- Simple and quick control panel.
- Quick adjustable timer for time-dependent shaking operation. (1 min. to 60m.)
- Easily adjustable funnel holders accommodate various capacity of funnels.

Safety

- Audible alarm and automatic shut down at the end of each shaking session.
- Over-current protection.

Intensive vertical reciprocating agitation for quick solvent extraction.



RS-1

Standard accessories • Funnel holders (6ea)

Max. funnel capacity (per each side)

Capacity	Round type funnel	Slim type funnel
under 500ml	3 to 5	5
500ml	3	3
1L	-	3



Information of accessories

Max. 5 funnel holders can be installed on each side of the unit.

Cat. No.	Description
AAA32501	Funnel holder (1ea)

Model		RS-1
Shaking system	Motion type	Vertical reciprocating
	Speed range (rpm)	50 to 300
	Timer	60 min or continuous operation
	Vertical stroke length (mm / inch)	40 / 1.6
Dimension	Exterior (WxDxH) (mm / inch)	445×730×505 / 17.5×28.7×19.9
	Max. load per each side (kg / lbs)	3 / 6.6
	Net weight (Kg / lbs)	53 / 116.8
Electrical requirements (230V)		50Hz, 0.4A 60Hz, 0.4A
Cat. No.		AAH32012K AAH32015K

- * Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).
- * FDA establishment registered company. FDA listed products.

Accessories & Options

for Open-air Shakers (OS models) / Mini Shaker



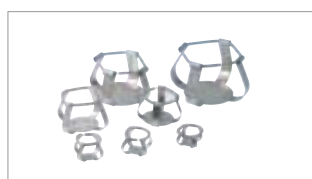
Universal platforms (OS models)



Universal platform (CMS-350)



Test tube racks



Flask clamps (stainless steel)



Flask clamps (plastic)



Funnel clamps



Microplate holders

Description		OS-2000	OS-3000	OS-4000	OS-7100 OS-7200	CMS-350
Cat.No.	Universal platform	AAA3A501-V2	AAA23501-V3	AAA23502-V3	AAA23503-V3	AAA3B501
-	Erlenmeyer flask size	Max. mountable flask clamps				
AAA23550	for 50 ml	20	36	49	88	16
AAA23551	for 100 ml	16	28	39	68	9
AAA23552	for 250 ml	8	14	24	39	9
AAA23556	for 300 ml	8	14	24	39	9
AAA23553	for 500 ml	6	10	16	28	5
AAA23554	for 1L	3	6	9	18	4
AAA23555	for 2L	-	4	6	11	1
AAA23557	for 2.8L	-	3	5	8	-
AAA23558	for 4L	-	1	4	6	-
AAA23559	for 6L	-	1	3	5	-
-	Erlenmeyer flask size	Max. mountable flask clamps				
AAA30570	for 50 ml	20	36	49	88	16
AAA30571	for 100 ~ 125 ml	12	19	29	48	9
AAA30572	for 200 ml	8	13	21	35	9
AAA30573	for 250 ml	8	13	19	35	9
AAA30574	for 300 ml	6	12	19	35	9
AAA30575	for 500 ml	6	9	12	24	5
AAA30576	for 1L	3	5	9	12	4
AAA30577	for 2L	-	4	5	8	1
-	Separating funnel size	Max. mountable funnel clamps				
AAA23562	for 250 ml	4	4	6	15	3
AAA23563	for 500 ml	3	3	4	10	2
AAA23564	for 1L	3	3	3	7	2
AAA23565	for 2L	-	2	2	5	-
-	Test tube size	Mountable capacity of racks				
AAA23581	for 86 test tubes, ø8"	2	2	4	7	2
AAA23582	for 86 test tubes, ø10"					
AAA23583	for 58 test tubes, ø12"					
AAA23584	for 58 test tubes, ø14"					
AAA23585	for 32 test tubes, ø17"					
AAA23586	for 19 test tubes, ø25"					
AAA23587	for 10 test tubes, ø30"					
AAA23594	for 10 test tubes, ø35"					
AAA23593	for 4 test tubes, ø50"					
-		Max. mountable microplate holders				
AAA23654	Single	6	8	15	25	6
AAA23651	Tower	4	6	10	21	6
AAA23652	Flat A (large)	-	-	2	4	-
AAA23653	Flat B (small)	1	2	3	6	-

1) No declination.

* Above accessories need to be mounted on a universal platform which is sold separately.

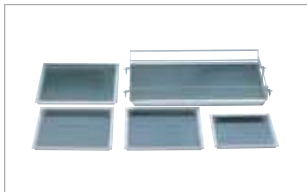
for Open-air Shakers (OS models) / Mini Shaker



Dedicated platform



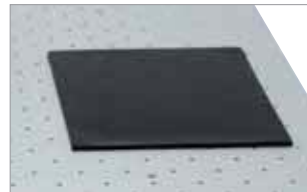
Spring wire racks



Rubber mats



Universal attachment



Lab sticker (200x200, mm)



Stage rack (OS models)



Rubber mat (CMS-350)



Dual stacking tray



Large tray

Description		OS-3000	OS-4000	OS-7100 OS-7200
Dedicated platform	Universal platform +250ml flask clamps	AAA23611-V1	AAA23621-V1	AAA23634
	No. of flask clamps	14	24	39
	Universal platform +500ml flask clamps	AAA23613-V1	AAA23622-V1	AAA23635
	No. of flask clamps	10	16	28

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

Description		OS-2000	OS-3000	OS-4000	OS-7100 OS-7200	CMS-350
Spring wire racks	-	AAA3A521	AAA31521-V1	AAA31522-V1	AAA23514	AAA3B511
	Erlenmeyer flask size	Max. inserting flasks				
	for 50 ml	15	16	25	45	15
	for 100 ml	9	9	16	28	9
	for 250 ml	4	4	9	18	4
	for 300 ml	4	4	9	18	4
	for 500 ml	4	4	5	15	4
	for 1L	2	2	4	10	2
	for 2L	-	1	2	6	-
for 2.8L	-	1	2	4	-	
Rubber mat	AAA3A531-V1	AAA31531	AAA31532	AAA23534	AAA38501	
Universal attachments	AAA3A511-V1	AAA23511-V1	AAA23512-V1	AAA23505	AAA3B521	
Lab sticker	AAA30551					
Dimpled mat	AAA3A532	-	-	-	AAA38502	
Microplate tray	Dual stacking	AAA3A541	-	-	-	AAA3B531
	Large tray	AAA3A542	-	-	-	AAA3B532
Stage racks	4 stage rack	-	AAA31541-V1	AAA31542-V1	AAA31702-V1	-
	3 stage rack	-	-	-	AAA31703-V1	-

Accessories & Options

for Open-air Shakers (SKC models)



Universal platforms



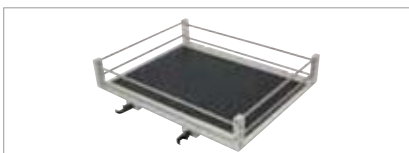
Dual universal platforms



Spring wire racks
(two tier rack with flexible crossed spring)



Universal attachments



Rubber mats



Weight increaser

Cat.No.	Description	SKC - 6000 models		SKC - 7000 models	
		Small	Large	Small	Large
Universal platform	Single	AAA30501	AAA30503	AAA30502	AAA30504
	Dual ¹⁾	-	-	AAA30541	AAA30542
-	Erlenmeyer flask size	Max. mountable flask clamps			
AAA23550	for 50 ml	84	96	108	126
AAA23551	for 100 ml	54	66	108 per each step	126 per each step
AAA23552	for 250 ml	33	39	72	84
AAA23556	for 300 ml	28	32	72 per each step	84 per each step
AAA23553	for 500 ml	20	24	42	51
AAA23554	for 1L	14	16	42 per each step	51 per each step
AAA23555	for 2L	8	11	36	40
AAA23557	for 2.8L	6	7	27	30
AAA23558	for 4L	4	6	18	20
AAA23559	for 6L	3	4	12	13
-	Erlenmeyer flask size	Max. mountable flask clamps			
AAA30570	for 50 ml	56	64	72	80
AAA30571	for 100 ~ 125 ml	42	48	54	60
AAA30572	for 200 ml	25	39	30	32
AAA30573	for 250 ml	25	30	30	32
AAA30574	for 300 ml	25	30	30	32
AAA30575	for 500 ml	20	20	24	28
AAA30576	for 1L	10	12	12	15
AAA30577	for 2L	6	6	6	9
-	Separating funnel size	Max. mountable funnel clamps			
AAA23562	for 250 ml	14	16	18	20
AAA23563	for 500 ml	9	10	11	14
AAA23564	for 1L	7	8	9	12
AAA23565	for 2L	5	6	7	8
-	Test tube size	Mountable capacity of racks			
AAA23581	for 86 test tubes, ø8"	8	9	9	12
AAA23582	for 86 test tubes, ø10"				
AAA23583	for 58 test tubes, ø12"				
AAA23584	for 58 test tubes, ø14"				
AAA23585	for 32 test tubes, ø16"				
AAA23586	for 19 test tubes, ø25"				
AAA23594	for 10 test tubes, ø35"				
-	Holder type	Max. mountable microplate holders			
AAA23654	Single	20	23	25	28
AAA23651	Tower	16	19	22	25
AAA23652	Flat A(large)	3	4	4	5
AAA23653	Flat B(small)	4	5	6	7

1) Universal platform attachments are mounted on the dual universal platform, Under the dual universal platform are mounted only 50ml, 100ml 250ml
- Refer to the above chart (Distance between platforms is 175mm).

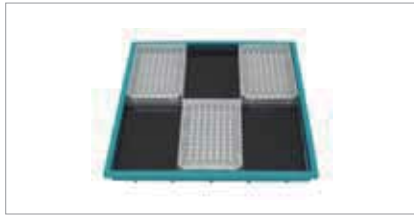
2) No declination

* Above accessories need to be mounted on a universal platform which is sold separately.

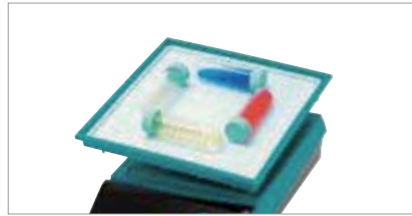
Description	SKC - 6000 models		SKC - 7000 models	
	Small	Large	Small	Large
Spring wire rack	AAA30521	AAA30522	AAA30523	AAA30524
Universal attachment	AAA30511	AAA30512	AAA30513	AAA30514
Rubber mat	AAA30531	AAA30532	AAA30533	AAA30534

Description	SKC - 6000 models		SKC - 7000 models	
	Small	Large	Small	Large
Lab Sticker	AAA30551			
Weight increaser	AAA30562		AAA30561	

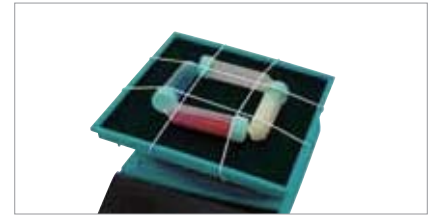
for Rocking Shaker / Waving Shaker / Mini Shaker



Rubber mat



Dimpled mat



Universal harness

Cat. No.	Description	Component
AAA38501	Rubber mat	Tray, Sticky pad
AAA38502	Dimpled mat	Tray, Silicone pad
AAA38503	Universal harness	Tray, Sticky pad, Rubber band (6ea)

for Microplate Shaker



1.5ml Micro-tube rack



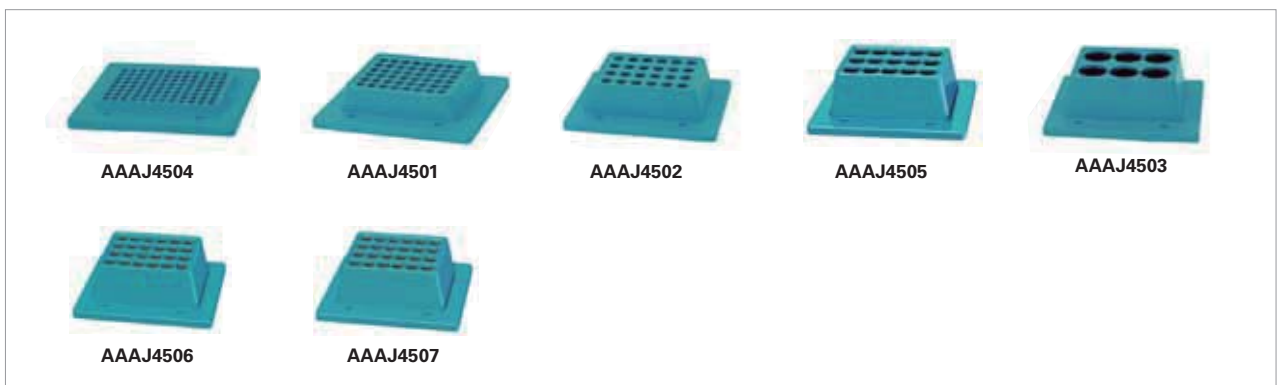
15ml Conical tube rack



50ml Conical tube rack

Cat. No.	Description	Max. mountable tube
AAAJ2311	1.5ml Micro-tube rack with cap	80 (5 x 16)
CPS0011	15ml Conical tube rack	30 (3 x 10)
CPS0012	50ml Conical tube rack	12 (2 x 6)

for Heating Shaker



Cat. No.	Description	Max. mountable tube
AAAJ4504	96-well Tube block with cover	0.2ml x 96 holes (micro tube)
AAAJ4501	0.5ml Tube block with cover	0.5ml x 48 holes (micro tube)
AAAJ4502	1.5ml Tube block with cover	1.5ml x 24 holes (micro tube)
AAAJ4505	15ml Tube block with cover	15ml x 15holes (centrifuge tube)
AAAJ4503	50ml Tube block with cover	50ml x 6 holes (centrifuge tube)
AAAJ4506	ø12 Tube block with cover	ø12 x 24holes
AAAJ4507	ø13 Tube block with cover	ø13 x 24holes