

Shakers

SELECTION GUIDE

- Advanced Orbital Shakers
- Dual-action Shakers
- Economy Shakers
- Mini Shaker
- Microplate Shaker
- Rocking Shaker
- Waving Shaker
- Heating Shaker
- Separatory Funnel Shaker

Shakers

Description			Speed Range (RPM)	Maximum Amplitude Size (mm / inch, dia)	Net Weight (kg/lbs)	Page
Benchtop Models - Open-air	Advanced Orbital Shakers	SKC-6075	30 to 500	19 / 0.75	65 / 143.3	126
		SKC-6100		25 / 1		
		SKC-6200		50 / 2		
		SKC-7075		19 / 0.75	75 / 165.4	
		SKC-7100		25 / 01		
		SKC-7200		50 / 2		
	Dual-action Shakers	SK-300	10 to 300	40 / 1.6	24 / 52.9	128
		SK-600			29 / 63.9	
		SK-71		70 / 2.4	50 / 110.2	
	Economy Shakers	SKF-2025	10 to 500	7 / 0.25	20 / 44.1	129
		SKF-2050	10 to 400	13 / 0.5		
		SKF-2075	10 to 300	19 / 0.75		
		SKF-2025R	10 to 450	7 / 0.25		
		SKF-2050R	10 to 350	13 / 0.5		
		SKF-2075R	10 to 250	19 / 0.75		
		SKF-3050	10 to 400	13 / 0.5	24 / 52.9	
		SKF-3075	10 to 300	19 / 0.75		
		SKF-3100	10 to 300	25 / 1		
		SKF-3050R	10 to 350	13 / 0.5		
		SKF-3075R	10 to 250	19 / 0.75		
		SKF-3100R	10 to 250	25 / 1		
	Mini Shaker	CMS-350	50 to 300	13 / 0.5	8 / 17.6	130
	Microplate Shakers	CPS-350	150 to 1200	3 / 0.1	7.7 / 17	131
	Rocking Shaker	CRS-350	5 to 100	(Tilt 7~13° adjustable)	3.7 / 8.16	132
	Waving Shaker	CWS-350	8 to 100	(Tilt 0~13° adjustable)	3.7 / 8.16	133

Heating Shaker

Description			Speed Range (RPM)	Temperature Range (°C/°F)	Net Weight (kg/lbs)	Page
Benchtop Models - Open-air	Heating Shaker	CBS-350	150 to 1500*	Amb. +5 to 100 / Amb. 41 to 212	8.3 / 18.3	134

* Speed range from 150 to max. 1500rpm according to the choice of interchangeable block.

Separatory Funnel Shakers

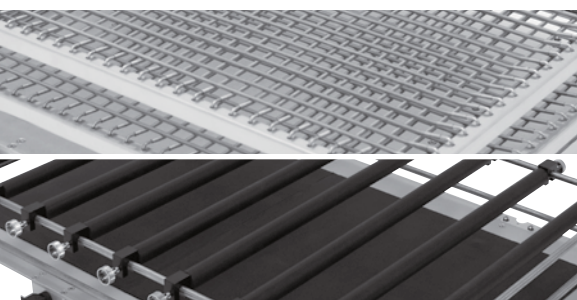
Description			Speed Range (RPM)	Vertical Stroke Length (mm / inch)	Net Weight (kg/lbs)	Page
Benchtop Type	Separatory Funnel Shaker	RS-1	50 to 300	40 / 1.6	24 / 52.9	135

Accessories & Options

Description	Page
for Shakers	136-139



GENERAL APPLICATIONS



General Applications	Open-air and Separatory Funnel Shakers					
	SKC	SK, SKF	RS	CMS/CPS	CBS	CRS/CWS
Bacterial Suspensions	•	•			•	
Cell Culture	•	•		•	•	•
Diagnostic Tests		•		•	•	•
Drug Analysis	•	•	•	•	•	•
ELISA	•	•		•	•	•
Environmental Technology (waste water and soil analysis)	•	•	•		•	
Enzyme Immunoassays	•	•		•	•	•
Extraction Procedures	•	•		•	•	•
General Mixing	•	•	•	•	•	•
Hemolyzing Blood Separation		•	•	•	•	•
Hybridization	•	•		•	•	•
Inorganic Solvent Extraction			•			
Soil Compound Extraction			•			
Solubility Studies	•	•	•		•	
Solvent Extraction for Water Quality Analysis			•			
Staining and Destaining	•	•		•		•
Preparation for Metal Analysis			•			
Pharmaceutical Profiling	•	•	•	•	•	•
Protein Synthesis	•	•		•	•	•

* Above listed applications are for general purpose use.

TECHNICAL BENEFITS

Safety Features

- 1) Automatic power cut-off in case of over current.
- 2) User settable operation mode after power interruption: either Automatic Run or Manual Run. (only SKC models)
- 3) Special acceleration and deceleration circuitry. (except for RS, CPS, CMS, CWS, CBS, CRS models):
 - Stopping the shaking table always at the center using a position sensor.
 - Smooth start and smooth stop preventing chemical spills from flasks or test tubes.
- 4) Automatic adjusted shaking speed when load imbalance or unusual vibration is detected by the sensor. (only SKC models)
- 5) Over heat protection. : mechanical and electric circuits. (only CBS models)

Optimum Control Features

- 1) Microprocessor PID control.
 - 2) Wide speed range suitable for most applications.
 - 3) Self-diagnostic function identifying errors. (audible and visible alarms)
 - 4) Diverse shaking features.
 - Dual shaking actions: orbital and reciprocating. (only SK models)
 - Multi-function shaking system.
 - Time.
- | | SK | SKF | SKC |
|--------------|----|-----|-----|
| Wait ON | - | • | • |
| Wait OFF | • | • | • |
| Program Save | - | - | • |
- 5) Intuitive, splash-proof, and easy to clean control panel.
 - Bright LED displays with touch-sensitive keypad. (for SK and SKF models)
 - Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive buttons and a dial knob. (for SKC, CMS, CPS, CBS, CWS, CRS, and CBS models)
 - 6) Audible alarm at the end of each shaking session. (for RS models)

Constructional Features

- 1) Low-profile design minimizing vibration or sliding caused by the high speed shaking motion.
- 2) Smooth, quiet, and uniform shaking motion thanks to the maintenance-free BLDC motor which also supports high-speed applications and heavy workloads. (except for SKC, CWS, CRS models)
- 3) Innovative and durable triple-cam shaking mechanism. (SKC models)
- 4) Dirt-repellent external surface with power coating.
- 5) DD(Direct drive) motor allows the shaker to hold heavy loads, is quiet, high rpm, and durable. (SKC models)
- 6) Wide range of accessories.

Shakers

Shakers - Open - Air



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For further information on Jeio Tech's Shaker products
Information is readily available on our website.



CE Certification without CBS-350



Shakers Shaking System

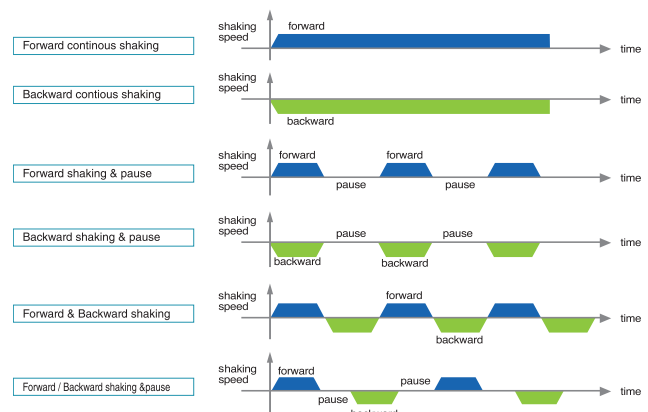
Dual-action Shaking System

All SK, SI, and IS shaking units are dual-action. The user is able to select between orbital and reciprocating shaking motion. Simply change the type of shaking motion by changing the way the platform is connected.



Multi-function Shaking System

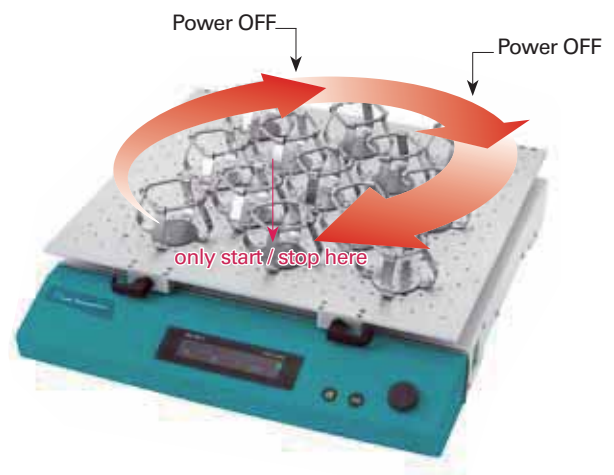
Intensive multi-function shaking system surpasses all the previous levels of shaker units. Mix and match clockwise, counterclockwise, start, and stop motions.
(Making 6 possible combinations - only for SKC, SK, SKF models)



Convenient and Unique Shaking Functions

This unique shaker stops and starts at the always same position. This shaker is beneficial for semi-automated dosing or sampling of samples. Select between clockwise and counterclockwise shaking motion. (only for SKC, SK, SKF models)

- These durable shaking systems are able to function stably at low rpm settings. (between 10-25rpm) Usually the SK models-10rpm (SKC models-30rpm) setting is great for low damage biological mixing tests and cell cultivation.



Shakers

Advanced Orbital Shakers



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For further information on Jeio Tech's Shaker products
Information is readily available on our website.



SKC - 7075

Optional Accessories
➤ see page 138

- Universal Platforms, Dual Universal Platforms
- Rubber Mats, Universal Attachments
- Flask Clamps, Funnel Clamps
- Test Tube Racks, Spring Wire Racks, Half Spring Wire Racks
- Microplate Holders
- Lab Sticker

SKC Control Display



Shakers

Advanced orbital Shakers

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.

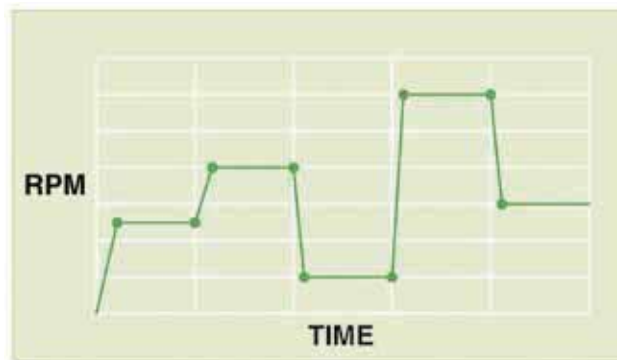
► Constructional Features

- Ideal DD(Direct Drive) Brushless Motor and triple cam system support heavy loads, quiet (beltless, brushless, and gearless), maintenance free, and delivers high torque at high speeds, smooth rotation.
- Special acceleration and deceleration circuitry:
 - Stopping the shaking table always at the same position allowing for automated dosing or sampling.
 - Providing smooth start and smooth stop preventing chemical spills from flasks or test tubes.
- Low-profile design (122 mm high) minimizing vibration or sliding caused by the high speed shaking motion.
- Chemicals-resistant and durable construction.
- Dirt-repellent external surface with power coating.
- Convenient universal platform exchange sliding.
- Various accessories.

► Operating Features

- Microprocessor PID control maintaining constant speed.
- Wide speed range: 30 to 500 rpm
- Digital timer with Delayed ON/OFF function: ranging from 1min to 99 hr 59 min.
- Intuitive, splash-proof, and easy-to-clean control panel with a vivid and colorful vacuum fluorescent display (VFD), touch-sensitive buttons, and a dial knob.
- Automatic adjusted shaking speed when load imbalance or unusual vibration is detected by the sensor.

► Progressive Program Operation



Programming parameters

Maximum Number of segments in one(1) pattern(Cycle)	20	
Maximum Number of Patterns(Cycle) saved	20	
Shaking Motion	Time	1min to 99hr 59min
- Forward & Backward, Pause	RPM	30 to 500

- Adopted bright VFD display, and capacitive touch sensor button.
- Digital timer: 1min 99hr 59min, delayed ON / OFF.

► Specifications & Ordering Information



Model			SKC-6075	SKC-6100	SKC-6200	SKC-7075	SKC-7100	SKC-7200
Control System			Feedback control PID					
Display			VFD					
Shaking System	Motion Type		Orbital					
	Speed Range ¹⁾ (RPM)		30 to 500					
	Accuracy at 100 RPM		±1					
	Amplitude Size (mm / inch, dia)		19 / 0.75	25 / 1	50 / 2	19 / 0.75	25 / 1	50 / 2
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		
	Overall (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, 50 / 60Hz)			0.8A					
Cat. No.			AAH30106U	AAH30116U	AAH30126U	AAH30206U	AAH30216U	AAH30226U

1) When operating at high speed (350 ~ 500 rpm), it should be recommended to use an optional attachment to be fixed on the floor of the working place.

Dual-action benchtop platform shakers for up to 6L flasks.

Orbital or reciprocating shaking action over a wide speed range (10 to 300 rpm) offering an ideal solution for your mixing needs.



SK-300

Optional Accessories see page 136-137

- Universal / Dedicated Platforms, Rubber Mats, Universal Attachments
- Flask Clamps, Funnel Clamps
- Test Tube Racks, Spring Wire Racks
- Microplate Holders
- Lab Sticker
- Stage Rack (max. 4 stages)

Operating Features

- Microprocessor PID control.
- Wide speed range: 10 ~ 300 rpm
- Dual shaking actions: orbital or reciprocating
- Additional shaking modes: Forward (clockwise rotation), Backward (counterclockwise rotation), and Pause.
- Multi-step Programming of Shaking Operations:
 - Run time: 10 sec to 999 hr 59 min 59 sec.
 - Forward/Backward/Pause modes: 10 sec to 59 min 59 sec.
- Maximum orbit diameter.
 - 40mm (1.6") for SK-300, 600
 - 70mm (2.8") for SK-71
- Bright LED displays with touch-sensitive keypad.

Constructional Features

- Equipped with a maintenance-free direct drive BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion required for high-speed applications and heavy workloads.
- Special acceleration and deceleration circuitry:
 - Stopping the shaking table always at the same position allowing for automated dosing or sampling.
 - Providing smooth start and smooth stop preventing chemical spills from flasks or test tubes.
- Low-profile design minimizing vibration or sliding caused by the high speed shaking motion.
- Chemicals-resistant and durable construction.
- Various accessories.

Specifications & Ordering Information



Model		SK-300	SK-600	SK-71
Shaking System	Motion Type	Orbital or Reciprocating motion selectable		
	Speed Range (RPM)	10 to 300		
	Timer	Run time: 10 sec to 999 hr 59 min 59 sec Forward & Backward, Pause : 10 sec to 59 min 59 sec		
	Amplitude Size (mm / inch, dia.)	20, 30, 40 / 0.8, 1.2, 1.6 Available - Standard 30 / 1.2		30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2
	Recip Stroke Length (mm / inch)	20, 30, 40 / 0.8, 1.2, 1.6 Available - Standard 30 / 1.2		30, 40, 50, 60, 70 / 1.2, 1.6, 2, 2.4, 2.8 Available - Standard 30 / 1.2
Dimension	Platform (WxD) (mm / inch)	350x350 / 13.8x13.8	450x450 / 17.7x17.7	755x481 / 29.7x18.9
	Overall (WxDxH) (mm/inch)	410x490x150 / 16.1x19.3x5.9	510x595x150 / 20.1x23.4x5.9	820x610x166 / 32.3x24x6.5
	Net Weight (Kg / lbs)	24 / 52.9	29 / 63.9	50 / 110.2
Electrical Requirements (230V, 50 / 60Hz)		0.2A	0.2A	0.2A
Cat. No.		AAH31105K	AAH31205K	AAH31305K
Electrical Requirements (120V, 50 / 60Hz)		0.4A	0.4A	0.4A
Cat. No.		AAH31106U	AAH31206U	AAH31306U

Shakers

Economy Shakers

Compact, affordable, and yet versatile shakers with interchangeable platform design.

Two types of shaking motions (orbital or reciprocating), four types of an orbit or reciprocating lengths. The compact and interchangeable platform design accommodates various types and sizes of vessels and suitable for use in chambers.



SKF-2075

Optional Accessories
 see page 136-137

- Universal Attachment, Spring wire Rack, Rubber Mat
- Dimpled Mat, Dual Stacking Tray, Large Tray (for SKF-2000 Models only)

Wide selective models

- A wide selection of models to choose by:
 - Shaking motion: orbital or reciprocating.
 - Maximum speed: 250, 300, 350, 400, 450, 500 rpm
 - Amplitude: 7, 13, 19, 25 mm / 0.25, 0.5, 0.75, 1.0

Operating Features

- Microprocessor PID control.
- Additional shaking modes: (only for Orbital model)
 - Forward (clockwise rotation)
 - Backward (counterclockwise rotation)
 - Pause
- Multi-step Programming of Shaking Operations:
 - Delayed On/Off Timer: 10 sec to 999 hr 59 min 59 sec.
 - Forward/Backward/Pause: 10 sec to 59 min 59 sec.
- Bright LED displays with touch-sensitive keypad.
- Various optional accessories to accommodate diverse lab ware.

Specifications & Ordering Information



Model		SKF-2025	SKF-2050	SKF-2075	SKF-2025R	SKF-2050R	SKF-2075R
Shaking System	Motion Type	Orbital			Reciprocating		
	Speed Range (RPM)	10 to 500	10 to 400	10 to 300	10 to 450	10 to 350	10 to 250
	Accuracy at 100 RPM	± 2					
	Timer	Delay On / Off Time : 10 sec to 999 hr 59 min Forward & Backward, Pause : 10 sec to 59 min 59 sec					
	Amplitude Size (mm / inch)	7 / 0.25	13 / 0.5	19 / 0.75	7 / 0.25	13 / 0.5	19 / 0.75
Dimension	Platform (WxD) (mm / inch)	320x260 / 12.6x10.2					
	Overall (WxDxH) (mm / Inch)	355x375x140 / 14x14.8x5.5					
	NetWeight (kg / lbs)	20 / 44.1					
Electrical Requirements (230V, 50/60Hz)		0.2 A	0.2 A	0.2 A	0.2 A	0.2 A	0.2 A
Cat. No.		AAH3A105K	AAH3A115K	AAH3A125K	AAH3A205K	AAH3A215K	AAH3A225K
Electrical Requirements (120V, 50/60Hz)		0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A
Cat. No.		AAH3A106U	AAH3A116U	AAH3A126U	AAH3A206U	AAH3A216U	AAH3A226U

Model		SKF-3050	SKF-3075	SKF-3100	SKF-3050R	SKF-3075R	SKF-3100R
Shaking System	Motion Type	Orbital			Reciprocating		
	Speed Range (RPM)	10 to 400	10 to 300	10 to 300	10 to 350	10 to 250	10 to 250
	Accuracy at 100 RPM	± 2					
	Timer	Delay On / Off Time : 10 sec to 999 hr 59 min Forward & Backward, Pause : 10 sec to 59 min 59 sec					
	Amplitude Size (mm / inch)	13 / 0.5	19 / 0.75	25 / 1	13 / 0.5	19 / 0.75	25 / 1
Dimension	Platform (WxD) (mm / inch)	350x350 / 13.8x13.8					
	Overall (WxDxH) (mm / Inch)	410x490x140 / 16.1x19.3x5.5					
	NetWeight (kg / lbs)	24 / 52.9					
Electrical Requirements (230V, 50/60Hz)		0.2 A	0.2 A	0.2 A	0.2 A	0.2 A	0.2 A
Cat. No.		AAH3A305K	AAH3A315K	AAH3A325K	AAH3A405K	AAH3A415K	AAH3A425K
Electrical Requirements (120V, 50/60Hz)		0.4 A	0.4 A	0.4 A	0.4 A	0.4 A	0.4 A
Cat. No.		AAH3A306U	AAH3A316U	AAH3A326U	AAH3A406U	AAH3A416U	AAH3A426U

※ Permissible environmental conditions: temperature (4-40°C) and relative humidity (up to 80%).

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

Ideal for hybridization, immunocytochemistry, gel staining/destaining, and other bioscience applications.



CMS-350

Optional Accessories

☛ see page 136-137

- Rubber Mat (Tray, Sticky pad)
- Flask Clamps, Funnel Clamps
- Test Tube Racks, Spring Wire Racks
- Microplate Holders
- Universal Platform
- Universal Attachments

Operating Features

- Microprocessor PID control.
- Suitable for low rpm sensitive applications.
- Speed range: 50 ~ 300 rpm
- One-touch timer for time-dependent shaking operations : 1 min to 99 hour 59 min.
- Orbit size: 13mm dia. (0.51" dia.)
- Digital VFD display for speed and shaking motion.

Constructional Features

- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion.
- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- Compact and lightweight design allowing for use inside chambers.
- Removable tray for easy transport of well-plates (Max. 6 ea) and dishes. (optional)
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Various accessories.

Specifications & Ordering Information



Model		CMS-350
Control System		Feedback control PID
Display		VFD
Shaking System	Motion Type	Orbital
	Speed Range (RPM)	50 to 300
	Accuracy at 100 RPM	±5
	Timer	1 min. to 99hrs. 59min.
	Orbit Size (mm / inch, dia)	13 / 0.51
Dimension	Max. Load (kg / lbs)	up to 4 / 8.81
	Tray (WxD) (mm / inch)	276×276 / 10.87×10.87
	Platform (WxD) (mm / inch)	250×250 / 9.8×9.8
	Overall (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

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

Shakers

Microplate Shaker

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

Optimally designed to shake four microplates simultaneously, this Microplate Shaker is ideal for applications that demand precise and repeatable mixing.



CPS-350

Optional Accessories • Micro-Tube Rack with Cap
 • see page 139 • Conical Tube Racks

Operating Features

- Microprocessor PID control.
- One-touch timer for time-dependent shaking operations : 1 min to 99 hour 59 min.
- Smooth start feature to avoid sample contamination.
- Timer range: 1 min to 99 hour 59 min.
- Orbital size: 3 mm (0.12")
 - Automatic shut down: Overload (max. load: 4kg)
- Digital VFD display for speed and shaking motion.

Constructional Features

- Equipped with a maintenance-free BLDC motor to generate smooth, quiet, uniform, and yet powerful shaking motion.
- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- Compact and lightweight design allowing for use inside chambers.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Various accessories.
 - Optional tube racks also available for 1.5ml microtubes, 15ml conical tubes, and 50ml conical tubes.

Specifications & Ordering Information



Model		CPS-350
Control System		Feedback control PID
Display		VFD
Shaking System	Motion Type	Orbital
	Speed Range (RPM)	150 to 1,200
	Accuracy at 500 RPM	± 15
	Timer	1min. to 99hrs. 59min.
	Orbit Size (mm / inch, dia)	3 / 0.12
	Max. Load (kg / lbs)	4 / 8.8
Dimension	Tray (WxD) (mm /inch)	267×185 / 10.5×7.3
	Overall (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

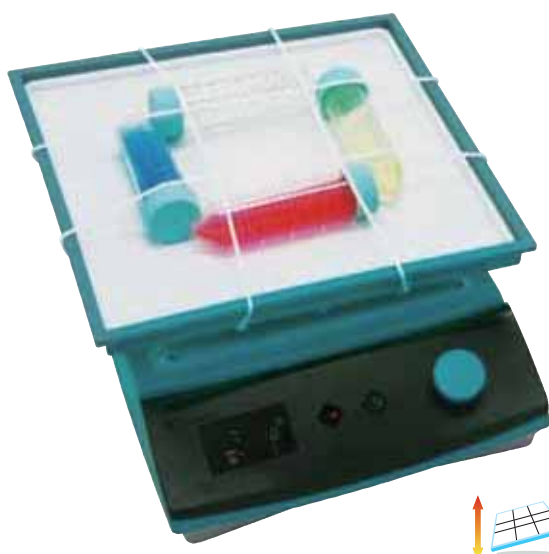
※ Permissible environmental conditions: temperature (5-40°C) and relative humidity (up to 80%).

Shakers

Rocking Shaker

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

Designed for time-dependent and low rpm sensitive applications such as ELISA, enzyme immunoassays, protein synthesis, hybridization staining/destaining gels, pharmaceutical profiling, etc.



CRS-350

- Included Accessories**
- Dimpled Mat (Tray, Silicone pad)
 - 2 Rubber Bands
- Optional Accessories**
- Rubber Mat (Tray, Sticky pad)
 - Universal Harness (Tray, Sticky pad, 6 Rubber bands)
- ☛ see page 139

Operating Features

- 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°
- One-touch timer range: 1 min to 99 hr 59 min.

Constructional Features

- Smooth, quiet, uniform, and yet powerful shaking motion.
- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- Compact and lightweight design allowing for use inside chambers.
- Three types of removable tray for easy transport of well-plates, test tubes, etc.
 - (included Dimpled mat, and optional Rubber mat, Universal harness)

Specifications & Ordering Information



Model		CRS-350
Control System		Feedback control with PID
Display		VFD
Shaking System	MotionType	Rocking type
	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
	Overall (WxDxH) (mm / inch) ¹⁾	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 unit dimension without Tray.

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

Shakers

Waving Shaker

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

Accommodates to be used in a variety of test tube size, beakers, vials, micro-well plates, culture dishes, plastic/glass trays.



Operating Features

- 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°
- One-touch timer range: 1 min to 99 hr 59 min.

Constructional Features

- Smooth, quiet, uniform, and yet powerful shaking motion.
- Vivid and colorful vacuum fluorescent display (VFD) with touch-sensitive keypad.
- Compact and lightweight design allowing for use inside chambers.
- Three types of removable tray for easy transport of well-plates, test tubes, etc.
 - (included Dimpled mat, and optional Rubber mat, Universal harness)

CWS-350

- Included Accessories**
- Dimpled Mat (Tray, Silicone pad)
 - 2 Rubber Bands
- Optional Accessories**
- Rubber Mat (Tray, Sticky pad)
 - Universal Harness (Tray, Sticky pad, 6 Rubber bands)
- ☛ see page 139

Specifications & Ordering Information



Model		CWS-350
Control System		Feedback control with PID
Display		VFD
Shaking System	MotionType	Waving Type
	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
	Overall (W×D×H) (mm / inch) ¹⁾	249×325×139 / 9.8×12.8×5.5
	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 unit dimension without Tray.

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

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

Optional Accessories
 • see page 139

- 96-Well Tube Block Set with Covers
- 0.5mL / 1.5mL / 50mL Tube Block Set with Covers

Operating Features

- Microprocessor PID control ensuring consistent shaking motion and precision accuracy.
- Speed range from 150 to max. of 1500 rpm (depend on a choice of interchangeable blocks)
- Simple temperature calibration.
- Memory function of programmed protocols allowing relevant parameters (such as temp., rpm, time) of each protocol step to be stored.
 - Up to 10 protocols allowed for memory storage.
 - Up to 10 steps allowed for each protocol.
 - Interval Mix function (continuous switching between shaking and phasing)
- Two types of timer modes:
 - Timer 1 starts immediately after the timer setting.
 - Timer 2 starts only after reaching the set temp.

Constructional Features

- Bright VFD display with responsive touch buttons.
- Its polypropylene main body is highly chemical-resistant and easy-to-clean.
- Optimal heat transfer is achieved by the tight coupling design of the main body and the corrosion-resistant anodized aluminum blocks.
- Low-profile design with rubber feet for minimal vibration and noise.

Specifications & Ordering Information



Model		CBS-350	
Control		Feedback control PID	
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	
		PCB	
	Over Current	Current limit protection	
Shaking System Dimension (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
		50mL tube block	150 to 800
	Orbit Size (mm / inch, dia.)	2 / 0.08	
Dimension (WxDxH)	Overall (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	

※ Above specs can be changed without prior notice.

Shakers

Separatory Funnel Shaker

Intensive vertical reciprocating agitation for quick solvent extraction.

Shaking up to 6 samples in identical conditions for any series or comparative protocols in chemistry, biotech, and medical labs.



Features

- Vertical reciprocating motion with maximum stroke length of 40mm. (1.6")
- Easy to operate.
- Wide speed range (50 to 300 rpm) suitable for most applications.
- Timer range: 0 to 60 min / continuous
- Digital LED speed indicator.
- Audible alarm and automatic shut down at the end of each shaking session.
- Easily adjustable funnel holders.
- Maximum number of funnels installable : 10 (up to 5 holders per each side)

RS-1

Included Accessories • Funnel Holder 6 Sets
(ordering information - Cat. No.: AAA32501)

* Funnel Capacities (per each side)

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

Specifications & Ordering Information

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	Overall (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

Shakers

Accessories & Options

for Dual-action & Economy & Mini Shakers



Universal Platforms
(SK, SKF)



Universal Platform
(CMS-350)



Test Tube Racks



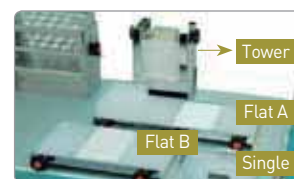
Flask Clamps (stainless steel)



Flask Clamps (plastic)



Funnel Clamps



Microplate Holders

Description			SK-300	SK-600	SK-71	SKF-2000 Models	SKF-3000 Models	CMS-350
Universal Platform	Cat. No.		AAA31501-V1	AAA31502-V1	AAA23503-V1	AAA3A501	AAA31501-V1	AAA3B501
Flask Clamps (stainless steel)		Erlenmeyer Flask Size	Max. Mountable Flask Clamps					
	AAA23550	for 50 mL	36	55	99	21	36	16
	AAA23551	for 100 mL	28	44	74	14	28	9
	AAA23552	for 250 mL	13	24	39	8	13	9
	AAA23556	for 300 mL	13	24	39	8	13	9
	AAA23553	for 500 mL	10	16	25	5	10	5
	AAA23554	for 1L	5	8	14	3	5	4
	AAA23555	for 2L	4	5	9	-	4	1
	AAA23557	for 2.8L	2	4	6	-	2	-
AAA23558	for 4L	1	2	4	-	-	-	
AAA23559	for 6L	1	2	4	-	-	-	
Flask Clamps (plastic)		Erlenmeyer Flask Size	Max. Mountable Flask Clamps					
	AAA30570	for 50 mL	28	39	65	16	28	16
	AAA30571	for 100 ~ 125 mL	16	29	52	12	16	9
	AAA30572	for 200 mL	13	25	33	8	13	9
	AAA30573	for 250 mL	12	20	33	6	12	9
	AAA30574	for 300 mL	12	16	33	6	12	9
	AAA30575	for 500 mL	9	12	20	4	9	5
	AAA30576	for 1L	5	9	12	2	5	4
	AAA30577	for 2L	4	5	6	-	4	1
Funnel Clamps		Separating Funnel Size	Max. Mountable Funnel Clamps					
	AAA23562	for 250 mL	4	6	11	4	4	3
	AAA23563	for 500 mL	3	4	9	3	3	2
	AAA23564	for 1L	2	3	5	2	2	2
	AAA23565	for 2L	1	2	4	-	1	-
Test Tube Racks ¹⁾		Mountable Capacity of Racks						
	AAA23581	for 86 Test Tubes, ø8mm	2	4	6	2	2	2
	AAA23582	for 86 Test Tubes, ø10mm						
	AAA23583	for 58 Test Tubes, ø12mm						
	AAA23584	for 58 Test Tubes, ø14mm						
	AAA23585	for 32 test tubes, Ø17mm						
	AAA23586	for 19 test tubes, Ø25mm						
	AAA23587	for 10 test tubes, Ø30mm						
	AAA23594	for 10 test tubes, Ø35mm						
AAA23593	for 4 test tubes, Ø50mm							
Microplate Holders			Max. Mountable Microplate Holders					
	AAA23654	Single	8	15	25	6	8	6
	AAA23651	Tower	6	10	16	4	6	6
	AAA23652	Flat A(large)	-	2	3	-	-	-
	AAA23653	Flat B(small)	2	3	5	1	2	-

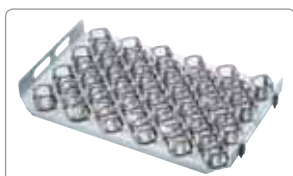
¹⁾ No declination.

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

Shakers

Accessories & Options

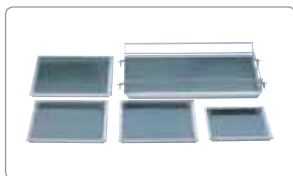
for Dual-action & Economy & Mini Shakers



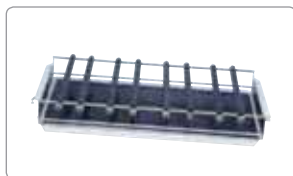
➤ Dedicated Platform



➤ Spring Wire Racks



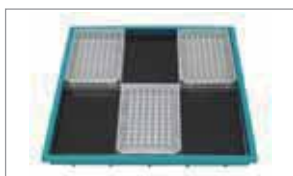
➤ Rubber Mats (SK, SKF)



➤ Universal Attachment



➤ Lab Sticker (200x200, mm)



➤ Rubber Mat (CMS-350)



➤ Dual Stacking Tray



➤ Large Tray



➤ Stage Rack (SK Models)

Description			SK-300	SK-600	SK-71
Dedicated Platform	Cat. No.	Universal Platform +250mL Flask Clamps	AAA31551	AAA31561	AAA23631
		No. of Flask Clamps	13	24	39
		Universal Platform +500mL Flask Clamps	AAA31552	AAA31562	AAA23632
		No. of Flask Clamps	10	16	25

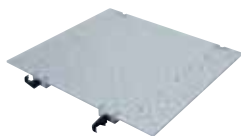
※ A dedicated platform is sold with setting each max. mountable amount of flask clamps on.

Description			SK-300	SK-600	SK-71	SKF-2000 Models	SKF-3000 Models	CMS-350
Spring Wire Racks	Cat. No.		AAA31521-V1	AAA31522-V1	AAA23523-V1	AAA3A521	AAA31521-V1	AAA3B511
		Erlenmeyer Flask Size	Max. Inserting Flasks					
		for 50 mL	16	25	40	15	16	15
		for 100 mL	9	16	28	9	9	9
		for 250 mL	4	9	15	4	4	4
		for 300 mL	4	9	15	4	4	4
		for 500 mL	4	5	10	4	4	4
		for 1L	2	4	8	2	2	2
		for 2L	1	2	4	-	1	-
		for 2.8L	1	2	4	-	1	-
Rubber Mat	Cat. No.		AAA31531	AAA31532	AAA23533	AAA3A531	AAA31531	AAA3B501
Universal Attachments			AAA31511	AAA31512	AAA31513	AAA3A511	AAA31511	AAA3B521
Lab Sticker			AAA30551					
Dimpled Mat			-	-	-	AAA3A532	-	AAA3B502
Microlpate Tray		Dual Stacking	-	-	-	AAA3A541	-	AAA3B531
		Large Tray	-	-	-	AAA3A542	-	AAA3B532
Stage Racks		2 stage Rack	-	-	AAA31701	-	-	-
		4 stage Rack	AAA31541	AAA31542	AAA31702	-	-	-

Shakers

Accessories & Options

for Advanced Orbital Shakers



Universal Platforms



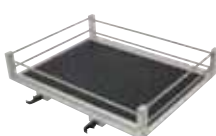
Dual Universal Platforms



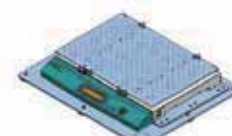
Spring Wire Racks



Universal Attachments



Rubber Mats



Weight Increaser

Description			SKC - 6000 Models		SKC - 7000 Models	
			small	large	small	large
Universal Platform	Cat. No.	Single Dual ¹⁾	AAA30501	AAA30503	AAA30502	AAA30504
		Erlenmeyer Flask Size	-	-	AAA30541	AAA30542
Flask Clamps			Max. Mountable Flask Clamps			
	AAA23550	for 50 mL	84	96	108	126
					108 per each step	126 per each step
	AAA23551	for 100 mL	54	66	72	84
					72 per each step	84 per each step
	AAA23552	for 250 mL	33	39	42	51
					42 per each step	51 per each step
	AAA23556	for 300 mL	33	39	36	40
	AAA23553	for 500 mL	20	24	27	30
	AAA23554	for 1L	14	16	18	20
AAA23555	for 2L	8	11	12	13	
AAA23557	for 2.8L	6	8	9	11	
AAA23558	for 4L	4	6	8	9	
AAA23559	for 6L	3	4	6	7	
Flask Clamps (plastic)		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	
Funnel Clamps		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 Racks ²⁾			Mountable Capacity of Racks			
	AAA23581	for 86 Test Tubes, ø8mm	8	9	9	12
	AAA23582	for 86 Test Tubes, ø10mm				
	AAA23583	for 58 Test Tubes, ø12mm				
	AAA23584	for 58 Test Tubes, ø14mm				
	AAA23585	for 32 Test Tubes, ø16mm				
	AAA23586	for 19 Test Tubes, ø25mm				
AAA23594	for 10 Test Tubes, ø35mm					
Microplate Holders			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

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

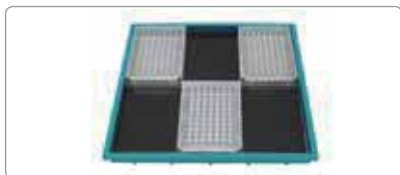
Description	SKC - 6000 Models		SKC - 7000 Models	
	small	large	small	large
Lab Sticker	AAA30551			
Weight increaser	AAA30562		AAA30561	

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

Shakers

Accessories & Options

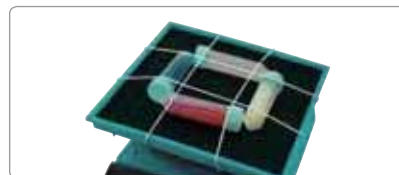
for Rocking & Waving Shaker



❖ Rubber Mat



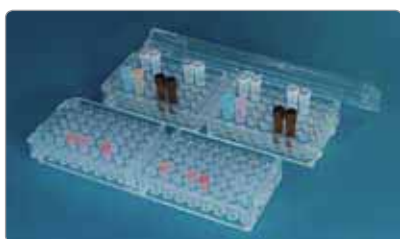
❖ Dimpled Mat



❖ 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 Shakers



❖ 96-well Tube Block Set with Cover



❖ 0.5mL Tube Block Set with Cover



❖ 1.5mL Tube Block Set with Cover



❖ 50mL Tube Block Set with Cover

Cat. No.	Description	Max. Mountable Tube
AAAJ4504	96-well Tube Block Set with Cover	0.2mL x 96 holes (microtube)
AAAJ4501	0.5mL Tube Block Set with Cover	0.5mL x 48 holes (microtube)
AAAJ4502	1.5mL Tube Block Set with Cover	1.5mL x 24 holes (microtube)
AAAJ4503	50mL Tube Block Set with Cover	50mL x 6 holes (centrifuge tube)