

Shaker



General Application

General mixing, drug analysis, ELISA, enzyme immunoassay, dyeing, and bleaching of samples, protein synthesis.

	Description	Motion Type	Max. Speed (rpm)	Max. Platform Size (mm)	250 ml Flask Capacity	Model	Page
General type	Dual Action	Orbital / Reciprocal	500	320 x 260	8	OS-2000	114
			500	350 x 350	14	OS-3000	114
			500	450 x 450	24	OS-4000	114
	General	Orbital	500	755 x 520	39	OS-7100	114
			300	755 x 520	39	OS-7200	114
	Program	Orbital	500	885 x 520	102	SKC	116
Compact	Orbital	300	276 x 276	9	CMS	118	
Type by usages	Microplate	Orbital	1200	267 x 185	N/A	CPS	119
	Rocking	Rocking	100	276 x 276	N/A	CRS	120
	Waving	Waving	100	276 x 276	N/A	CWS	120
	Funnel	Reciprocal	300	Funnel 500 ml x 10 ea		RS-2	121
	Rotating	Rotating	70	1.5 ml Tube x 120ea (When double disks are stacked)		CRT	122

※ The contents of the above and the contents of this catalog may differ depending on the specific model and conditions of use. For the information about the features and specifications that applying to each models, please check the information on the corresponding page of each models.

 Satisfaction with the requirements of European regulations and guidelines.	 Certification of conformity of electricity, gas, etc. in accordance with the safety standards of Canada and USA.	 Real-time equipment monitoring and control system using mobile app.
 Registered patent based on JEIO TECH's proprietary technology.	 Recognized as an excellent design product by the Ministry of Commerce, Industry, and Energy.	 Compliance with Guidelines for Restriction of Hazardous Substances Use.
 Possible to set end time or start time of device operation.	 PC communication via RS-232 / RS-485 / USB port.	 Selectable shaking motion either orbital or reciprocal motion.
 Orbital motion.	 Rocking motion.	 Waving motion.
 Vertical reciprocal motion.	 Reciprocal motion in inclined up to 20°.	 Mixing through 360 degree rotation.
 It memorizes the state of power failure and operates automatically when power is restored.	 5 year warranty for direct drive motor.	 2 year warranty free A/S.



Shaking speed of 500rpm with the world highest levels Powerful Shaking & Flexible Amplitude

- > **Primarily 500rpm shaking speed in Korea**
Reliable shaking operation at high speed by allowing stable 500rpm control.
- > **Precise control technology allows for stable control**
Precise speed control in all shaking areas by adopting control system developed using Lab Companion's own technology.
- > **Specialized shaking mechanism (Lab Companion's patent)**
 - BLDC motor and belt system applied to small model enables compact and strong shaking ability.
 - The medium and large class model DD motor and triple cam system allow for stable shaking of high load samples.
- > **Increased efficiency with diverse shaking radius**
Four kinds of shaking radius (amplitude) are applied to provide a suitable shaking environment.
- > **Orbital/reciprocal shaking with dual action**
Rotational shaking and reciprocal shaking are selectively used in one shaker. (OS-2000, 3000, 4000)
- > **Intuitive and convenient operation**
 - Large clear VFD panel provides intuitive operation information for all devices.
 - Smooth and comfortable control knob for easy and convenient operation.

※ Some of the above contents are limited to specific models.



Intuitive checking of device operation information.



USB & RS-232 Support.



Various accessories provided according to the sample.



Provides functionality that is practically necessary for users Lab Companion's Shaker with useful aggregated functions

- > **Convenient setting by changing rpm in real time**

Set the appropriate rpm while checking the actual speed of sample shaking.
- > **DD motor of outstanding durability (OS-7000, SKC)**

Applied a direct drive motor that has outstanding durability, a 5-year warranty for the motor.
- > **Remote monitoring service (only OS)**

Monitor and control equipment remotely through a mobile application anytime and anywhere. (option)
- > **Computer interface environment**

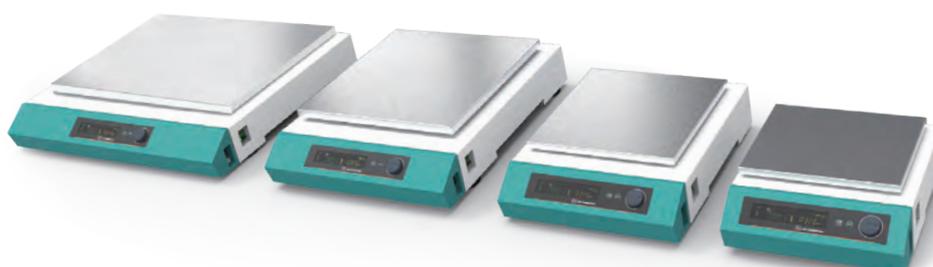
USB, RS-232 connection and dedicated software provide convenient device operation and data accumulation/management function.
- > **Count-down timer for accurate operation**

Count-down timer that can be set up to 999 hours and 59 minutes for convenient use.
- > **Prepared for unexpected power shutdown**

Auto-run function that automatically restarts to the normal state immediately in the event of sudden power failure.
- > **Real-time monitoring of rpm error**

Prevents experiment errors through user notification when the actual rpm differs from the set rpm.
- > **Prevention of malfunction with motor self-protection function**

Motor operation is controlled if overcurrent occurs in the circuit configuration with the motor self-protection function.



Shaker

Dual action / General type

Optimal model configuration with powerful performance

Structural Functional Features

- World Class, up to 500rpm.
- **OS-2000, 3000, and 4000 models**
Application of BLDC motor & belt system selectable orbital/reciprocal motion.
Compact and powerful shaking.
- **OS-7000 model**
Application of DD motor & triple cam system stable shaking ability. (registration KR 10-1678160)
- Stable shaking with low center of gravity structure.
- Powder coating applied to outer surface for reinforced corrosion resistance.
- Structure prevents the sample from flowing into the inside.
- Applied a direct drive motor that has outstanding durability, a 5-year warranty for the motor.

Use Convenience Features

- Accurate shaking with PID feedback control.
- Precision control with rpm calibration function.
- Stable control system even at low-speed agitation.
- Count-down timer. (up to 999 hours and 59 minutes)
- Intuitive and useful real-time rpm changes.
- Soft start and stop shaking function.
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)
- The user can select a clockwise / counterclockwise rotation
- Usable when ambient temperature is at least 4°C.
- Various accessories depending on sample containers.
- Possible to stop the equipment at the same position.

Smart Self-diagnosis

- Real-time self-diagnostics to check equipment for abnormal conditions.
- Alarm from monitoring actual rpm error relative to the set rpm.
- When device instability occurs. (high rpm, overload, weight imbalance, etc.)
- Detects abnormal conditions relating to the platform on which the sample is placed and stops the operation. (except for OS-7000 series)
- Automatic restart in the event of sudden power loss.

Optimized Rational Model Configuration

- Wide range of models from small to large type.
- 10 - 500 rpm for all applications.
- Applies four different shaking diameters. (amplitudes)
- Provides four sizes of platform models.
- Dual Action model. (orbital/reciprocal motion)
- Accessories for shared use.



OS-3000

with Universal Platform, Flask Clamp (option)



- Displays sets rpm and actual rpm simultaneously.
- Provides all information on equipment operation.
- Convenient operation with shaking start/stop button.
- Convenient operation by changing rpm with control knob.
- Clear display. (clear VFD)



Remote control and monitoring via mobile app.



Heavy Duty Holder (Option) for large capacity shaking

- Shaking up to 50L carboy on OS-7100 / 7200 models.
- Select 20L / 50L Holder Sponge depending on the amount of shaking.

Controllable rpm according to water weight

Model	Holder sponge	Water weight (L)					
		0	10	20	30	40	50
OS-7100 (rpm)	20L x 2	300	280	180	160	160	-
	50L x 1	300	190	150	130	130	130
OS-7200 (rpm)	20L x 2	210	180	160	150	150	-
	50L x 1	210	140	120	110	100	100

Cat.No	Description
AAA3D501	Heavy duty holder for OS-7000 series
AAA3D502	Heavy duty holder sponge (Φ376mm x 1hole) for 50L Carboy
AAA3D503	Heavy duty holder sponge (Φ290mm x 2hole) for 20L Carboy
AAAJ3031	20L Carboy (260 x 317 x 539mm)



OS-7100

with Heavy duty holder (option) +
1 hole-Heavy duty holder sponge (option)



OS-7100

with Heavy duty holder (option) +
2-hole Heavy duty holder sponge (option)

Specification

Model	OS-2000	OS-3000	OS-4000	OS-7100	OS-7200
Shaking system					
Motion type	Dual Action (Orbital/Reciprocal)	Dual Action (Orbital/Reciprocal)	Dual Action (Orbital/Reciprocal)	Orbital	Orbital
Speed range (rpm)	20 to 500	20 to 500	20 to 500 (Orbital) / 20 to 450 (Reciprocal)	30 to 500	30 to 300
Max. speed per permissible load ¹⁾	500rpm (max. 10 kg) 300rpm (max. 16 kg)	500rpm (max. 10 kg) 300rpm (max. 18 kg)	Orbital: 500 (max. 14kg), 400 (max. 10kg) Recipro.: 450 (max. 10kg), 300 (max. 21 kg)	500rpm (max. 10 kg) 400rpm (max. 30 kg)	300rpm (max. 23 kg) 250rpm (max. 35 kg)
Amplitude size (mm / inch, dia.)	19.1 / 0.8 (12.7 / 0.5 available)	19.1 / 0.8 (25.4 / 1 available)	19.1 / 0.75 (default) 25.4 / 1 (available)	25.4 / 1	50.8 / 2
Speed stability ²⁾ (rpm, %)	±1	±1	±1	±1	±1
Timer (count-down)	999hr 59min	999hr 59min	999hr 59min	999hr 59min	999hr 59min
Dimension					
Platform (W x D, mm / inch)	320 x 260 / 12.6 x 10.2	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	755 x 520 / 29.6 x 20.5	
Body (W x D x H, mm/inch)	354 x 388 x 146 / 13.9 x 15.3 x 5.7	409 x 508 x 141 / 16.1 x 20 x 5.6	510 x 632 x 156 / 20.1 x 24.9 x 6.1	755 x 627 x 151 / 29.7 x 24.7 x 5.9	
Net weight (Kg / lbs)	22 / 48.5	28 / 61.7	43 / 94.8	117 / 257.9	
Electrical requirements (230V, 50/60Hz, A)					
Cat. No.	AAH3D1115K	AAH3D1215K	AAH3D1315K	AAH3D1415K	AAH3D1515K
Electrical requirements (120V, 60Hz, A)					
Cat. No.	AAH3D1165U	AAH3D1265U	AAH3D1365U	AAH3D1465U	AAH3D1565U

1) In Orbital Shaking mode, Regarding the maximum controllable rpm and amplitude by weight, the measurement is performed based on the default value.
2) Actual rpm allowable error for set rpm (1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm)

Accessories Page 124

Universal Platform, Spring Wire Rack, Dedicated Platforms, Rubber Mat, Universal Attachment, Lab Sticker, Microplate Tray, Stage Rack, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder, LC Green Box

Shaker

Program type

Program operation and maximum sample loading

▣ Structural Functional Features

- Standard 350rpm, Maximum 500rpm. (option)
- Application of DD motor & triple cam system stable shaking ability. (registration KR 10-1678160)
- Provides the widest platform size model.
- Up to 102 pieces of 250ml flasks can be mounted at once. (when using dual platform.)
- Dual platform mountable. (SKC-7000) (only flasks less than 250ml can be mounted on the bottom part)
- Provided Maximum 50.8mm shaking radius model.
- Convenient platform detachment system.
- Stable shaking with low center of gravity structure.
- Corrosion-resistant outer surface with powder coating and PP material.
- Structure prevents the sample from flowing into the inside.
- Model awarded Good Design certification.
- Applied a direct drive motor that has outstanding durability, a 5-year warranty for the motor.

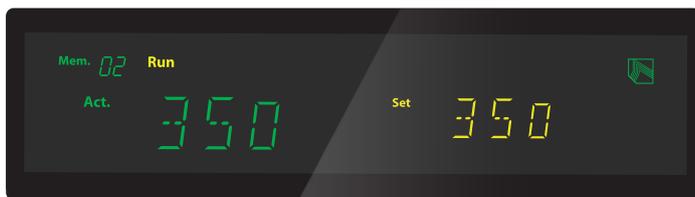


SKC-6000 Series

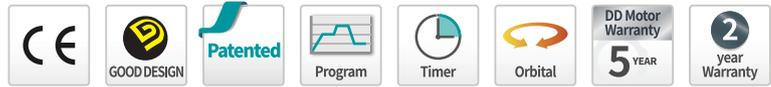
with Universal Platform, Flask Clamp, Test Tube Rack (option)

▣ Use Convenience Features

- Accurate shaking with PID feedback control.
- Provides Quick, Timer, and Program modes.
- Wait On/Off timer. (up to 99 hours 59 minutes)
- More reliable shaking simulation by clockwise / counterclockwise rotation.
- Stable control system even at low-speed agitation.
- Soft start and stop shaking function.
- Easy to use with fast acceleration/deceleration function.
- Possible to stop the equipment at the same position.
- Automatic rpm adjustment in case of instability.
- Equipment stoppage and alarm in case of abnormal shock.



- Displays sets rpm and actual rpm simultaneously.
- Provides all information on equipment operation.
- Convenient operation with shaking start/stop button.
- Convenient operation by changing rpm with control knob.
- Clear display. (clear VFD)

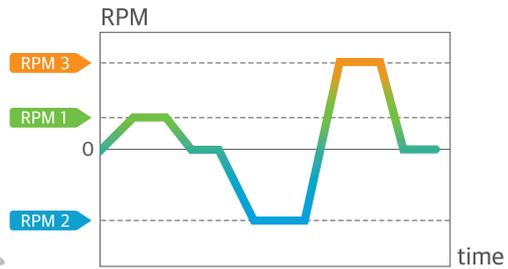


Outstanding Safety

- Alarm occurs when the current rpm differs from the set rpm.
- Over-current protection.

Differentiated Program Operation

- 20 patterns can be saved.
- 20 segments can be set per pattern.
- Time, rpm, and orbital direction can be set for each segment.
- Includes up to 99 repeat operations.



SKC-7000 Series

with Universal Platform, Flask Clamp (option)

Specification

Model	SKC-6075	SKC-6100	SKC-6200	SKC-7075	SKC-7100	SKC-7200
Shaking system						
Motion type	Orbital	Orbital	Orbital	Orbital	Orbital	Orbital
Speed range (rpm) ¹⁾	30 to 500					
Max. speed per permissible load ²⁾	350rpm (max. 13kg) 310rpm (max. 28kg)	340rpm (max. 13kg) 260rpm (max. 28kg)	250rpm (max. 13kg) 200rpm (max. 28kg)	350rpm (max. 13kg) 310rpm (max. 28kg)	340rpm (max. 13kg) 260rpm (max. 28kg)	250rpm (max. 13kg) 200rpm (max. 28kg)
Amplitude size (mm / inch, dia)	19 / 0.75	25 / 1	50 / 2	19 / 0.75	25 / 1	50 / 2
Speed stability ³⁾ (rpm, %)	±1	±1	±1	±1	±1	±1
Timer (wait on/off)	99hr 59min					
Dimension						
Platform (Small, W x D, mm / inch)	580 x 520 / 22.8 x 20.5			755 x 520 / 29.7 x 20.5		
Platform (Large, W x D, mm / inch)	660 x 520 / 26 x 20.5			885 x 520 / 34.8 x 20.5		
Exterior (W x D x H, mm / inch)	582.8 x 618 x 122.2 / 22.9 x 24.3 x 4.8			754.8 x 662 x 122.2 / 29.7 x 26.1 x 4.8		
Net weight (kg / lbs)	65 / 143.3	65 / 143.3	65 / 143.3	75 / 165.4	75 / 165.4	75 / 165.4
Electric requirements (230V, 50/60Hz, A)						
Cat. No.	AAH30105K	AAH30115K	AAH30125K	AAH30205K	AAH30215K	AAH30225K
Electric requirements (120V, 60Hz, A)						
Cat. No.	AAH30106U	AAH30116U	AAH30126U	AAH30206U	AAH30216U	AAH30226U

1) 350 to 500rpm applies when separately purchased options are mounted.

2) The maximum controllable rpm by weight in Orbital Shaking mode. Maximum rpm that can be controlled according to increase in Orbital Shaking mode

3) Actual rpm allowable error for set rpm (1rpm if setting is less than 100rpm, ±1% if setting is higher than 100rpm)

Accessories Page 124

Universal Platform, Spring Wire Rack, Rubber Mat, Universal Attachment, Lab Sticker, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder

Shaker Compact type



Compact Mini Shaker for easy use

Structural Functional Features

- Max. rpm of 300 is suitable for life science experiments sensitive to low rpm such as hybridization and immunocytochemistry.
- Orbital motion with shaking radius of 13 mm.
- Stable control up to 4 kg.
- It can be used mounted nine 250ml flasks.
- Count-down timer. (up to 99 hours and 59 minutes)
- Displays the elapsed time.
- Various accessories are available.

Use Convenience Features

- It can be used in a temperature chamber such as cold room or incubator because it can be used at ambient temperatures between 2°C and 60°C.
- Small size and light weight provide good mobility and usability in various laboratory environments and experiment requirements.
- Accurate shaking control according to sample weight with PID feedback control.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Displays the set rpm and actual rpm simultaneously, and displays timer operation information.



CMS-350

with Universal Platform, Flask Clamp (option)

Outstanding Safety

- Self-checks for errors.
- Body made from PP material with excellent chemical resistance.
- Protected from overcurrent.

Specification

Model	CMS-350	
Shaking system		
Motion type	Orbital	
Speed range (rpm)	50 to 300	
Rpm control at 100rpm (\pm rpm)	5	
Orbit size (mm / inch, dia)	13	
Timer	Run time : 1min ~ 99hr 59min	
Dimension		
Tray (W x D, mm / inch)	276 x 276 / 10.87 x 10.87	
Platform (W x D, mm / inch)	250 x 250 / 9.8 x 9.8	
Body ¹⁾ (W x D x H, mm / inch)	249 x 325 x 109 / 9.8 x 12.8 x 4.3	
Net weight (kg / lbs)	8 / 17.6	
Electrical requirements		
AC 100 ~ 240V, 50/60Hz, 0.1A		
Cat. No.	KR Plug	AAH3B1115K
	US Plug	AAH3B1115U

※ When operating at room temperature after use at low temperature, it may be affected by condensation. We recommend that you turn on the power after leaving at room temperature for a while.

1) Main body dimension without accessories

Accessories Page 124

Universal Platform, Spring Wire Rack, Rubber Mat, Universal Attachment, Lab Sticker, Flask Clamp, Funnel Clamp, Test Tube Rack, Microplate Holder

Microplate Shaker



Exclusive Shaker for microplates and tubes

Structural Functional Features

- Suitable for sample mixing with microplate, micro-tube and conical-tube at a maximum rpm of 1200.
- Orbital motion with shaking radius of 3 mm.
- Smooth shaking start control.
- Count-down timer. (up to 99 hours and 59 minutes)
- Displays the elapsed time.
- Various tube rack accessories.

Use Convenience Features

- It can be used in a temperature chamber such as cold room or incubator because it can be used at ambient temperatures between 2°C and 60°C.
- Small size and light weight provide good mobility and usability in various laboratory environments and experiment requirements.
- Accurate shaking control according to sample weight with PID feedback control.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Displays the set rpm and actual rpm simultaneously, and displays timer operation information.



CPS-350

Outstanding Safety

- Self-checks for errors.
- Body made from PP material with excellent chemical resistance.
- Protected from overcurrent.

Specification

Model	CPS-350	
Shaking system		
Motion type	Orbital	
Speed range (rpm) with 4 Microplates	150 to 1200	
Orbit size (mm / inch, dia)	3 / 0.12	
Speed control	Feedback control	
Timer	Run time : 1min ~ 99hr 59min	
Dimension		
Tray (W x D) (mm /inch)	269 x 185 / 10.6 x 7.3	
Body ¹⁾ (W x D x H) (mm /inch)	269 x 325 x 128 / 10.6 x 12.8 x 5.0	
Net weight (kg / lbs)	7.7 / 17	
Electrical requirements		AC 100 ~ 240V, 50/60Hz, 0.1A
Cat. No.	KR Plug	AAH3C1115K
	US Plug	AAH3C1115U

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1) Including tray

Accessories



1.5 ml Micro-tube Rack



15 ml Conical Tube Rack



50 ml Conical Tube Rack

Cat. No.	Description	Max. mountable tube
AAAJ2311	1.5 ml Micro-tube rack	80 (5 x 16)
00CPS0000011	15 ml Conical tube rack	30 (3 x 10)
00CPS0000012	50 ml Conical tube rack	12 (2 x 6)

Rocking / Waving Shaker



Optimized rocking / waving shaker

Structural Functional Features

- Easily adjustable operating angle to optimize according to application.
- Provides speeds up to 100rpm.
- Provides stable control at low speeds.
- 6 micro-plates can be mounted.
- Convenient tray structure for easy mounting and removal.
- Count-down timer. (up to 99 hours and 59 minutes)
- Displays the elapsed time.

Use Convenience Features

- User can easily adjust the operating angle to optimize according to application.
- It can be used in a temperature chamber such as cold room or incubator because it can be used at ambient temperatures between 2°C and 60°C.
- Small size and light weight provide good mobility and usability in various laboratory environments and experiment requirements.
- Accurate shaking control according to sample weight with PID feedback control.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Displays the set rpm and actual rpm simultaneously, and displays timer operation information.

Outstanding Safety

- Self-checks for errors.
- Body made from PP material with excellent chemical resistance.
- Protected from overcurrent.



CWS-350

with Dimpled Mat (standard)



Rocking
(CRS-350 Model)



Waving
(CWS-350 Model)

Specification

Model	CRS-350	CWS-350	
Shaking system			
Motion type	Rocking	Waving	
Speed range (rpm)	5 to 100	8 to 100	
Rpm control at 100rpm (± rpm)	5	5	
Adjustable tilt	7 ~ 13°	0 ~ 13°	
Timer	Run time : 1min ~ 99hr	Run time : 1min ~ 99hr	
Dimension			
Tray (W x D, mm / inch)	276 x 276 / 10.87 x 10.87	276 x 276 / 10.87 x 10.87	
Body ¹⁾ (W x D x H, mm / inch)	276 x 334 x 164 / 10.8 x 13.1 x 6.4	276 x 334 x 164 / 10.8 x 13.1 x 6.4	
Net weight (kg / lbs)	3.7 / 8.16	3.7 / 8.16	
Electrical requirements			
	AC 100 ~ 240V, 50/60Hz, 0.1A	AC 100 ~ 240V, 50/60Hz, 0.1A	
Cat. No.	KR Plug	AAH391115K	AAH381115K
	US Plug	AAH391115U	AAH381115U

※ When operating at room temperature after use at low temperature, it may be affected by condensation. We recommend that you turn on the power after leaving at room temperature for a while.

1) Main body dimension without accessories

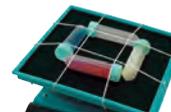
Accessories



Rubber Mat



Dimpled Mat



Universal Harness

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

Funnel Shaker



Powerful up-down reciprocal motion

Structural Functional Features

- Vertical reciprocation at a maximum of 300 rpm.
- 40 mm stroke length.
- Adjustable shake tilt (0~20°) to achieve high mixing efficiency at low rpm.
- Count-down timer. (up to 999 hours and 59 minutes)
- 5kg on one side, 10kg in total.
- Convenient holder height adjustment.
- Stable device structure at high speeds.

Use Convenience Features

- Digitally displays up-down reciprocal motion and it's easy to adjust speed with dial.
- Easy to detach separated funnel, maximizing convenience for repeat users.
- Adjustable height of funnel holder makes it possible to mount funnels of various sizes. (up to 2L)
- 4 holders are provided as basic, 10 holders can be mounted in maximum when it adds. (option, but the available mounted quantities are depends on the funnel size.)
- Monitor via mobile app anytime, anywhere with LC Connected. (mobile monitoring system) (when purchased LC GreenBox)

Outstanding Safety

- Alarms occur when there is a deviation between set rpm and actual rpm.
- Over-current protection.
- Optimized balance design to use in stable even when samples are installed at one side or tilted reciprocal motion.
- Automatic restart in the event of sudden power loss.



RS-2

with Holders 4ea (standard), Holders 2ea (option)



Up to 5 holders may be installed on each side.



Tilt angle adjustment from 0 to 20° for maximum mixing efficiency.

Specification

Model	RS-2
Shaking system	
Motion type	Vertical & Inclined reciprocating (0 ~ 20°)
Speed range (rpm)	Vertical 30 to 300 / Inclined 30 to 250
Speed accuracy at 100rpm (± rpm)	1
Amplitude, recip. stroke length (mm / inch)	40 / 1.6
Timer	999hr 59 min
Dimension	
Exterior (W x D x H, mm / inch)	600 x 460 x 470 / 23.6 x 18.1 x 18.5
Minimum required space considering 20° tilt	900 x 460 x 670 / 35.4 x 18.1 x 26.3
Max. load per each side (kg / lbs)	5 / 11
Net weight (kg / lbs)	52 / 114.6
Electrical data & Ordering No.	
230V, 50/60Hz, A	0.4
Cat. No.	AAH32025K
120V, 60Hz, A	0.7
Cat. No.	AAH32023U

Maximum number of installed funnels (per side)

Funnel Capacity	Round type	Cylindrical type
Less than 500 mL	3-5ea	3-5ea
500 mL	3ea	3ea
1L	3ea	3ea
2L	2ea	2ea

Accessories

Cat. No.	Description
AAA32502	Funnel holder
AAHQ1011K	LC GreenBox

Rotator

Optimal model configuration with powerful performance

Structural Functional Features

- Easily adjustable angle up to 90°.
- Provides a wide range of rpm speeds. (2 to 70rpm)
- Provides smooth and stable control even at low speeds.
- Stable control up to 4 kg.
- Count-down timer. (up to 99 hours and 59 minutes)
- Displays the elapsed time.
- The structure of minimizing vibration and movement.

Use Convenience Features

- Possible to combine various accessories in one body.
- Easy disk removal.
- Up to 60 pieces mountable (total 120 pieces) based on 1.5ml tube per one disk when 2-stage disk loading.
- Easy to operate with clear VFD display, touch keys and control knobs.
- Displays set rpm and actual rpm simultaneously.

Outstanding Safety

- Self-checks for errors.
- Body made from PP material with excellent chemical resistance.
- Over-current protection.



CRT-350

with Disk, 1.5 ml Tube Holder (option)



Adjustable angle up to 90°



Easy angle adjustment

Specification

Model	CRT-350
Shaking system	
Speed range (rpm)	2 to 70
Angle	0 to 90°
Timer	Run time : 1min ~ 99hr 59min
Dimension	
Exterior with disk (option) (W x D x H) (mm / inch)	320 x 325 x 463 / 12.6 x 12.8 x 18.2
Net weight with disk (option) (kg / lbs)	7.5 / 16.5
Electrical requirements	
AC 100 to 240V, 50/60Hz, 0.1A	
Cat. No.	
KR plug	AAH3E115K
US plug	AAH3E115U



Number of tubes used at the same time when double disks are stacked.

Tube	Quantity
1.5 ml	120
5 ml	36
15 ml	36
50 ml	24



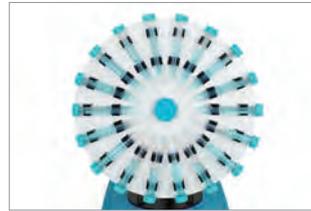
Accessories



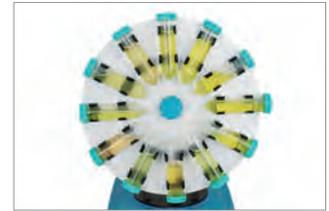
1.5 ml (Ø 10 mm)
Tube holder



5 ml (Ø 12 mm)
Tube holder



15 ml (Ø 16.5 mm)
Tube holder



50 ml (Ø 29 mm)
Tube holder



Disk for flask clamp



Flask clamp (plastic)



Flask clamp (stainless steel)



Post (use for double disk loading)

Tube Holder

Description	Max. Mountable Tube	Cat. No.
1.5 ml (Ø 10 mm)	60	AAA3E501
5 ml (Ø 12 mm)	18	AAA3E502
15 ml (Ø 16.5 mm)	18	AAA3E503
50 ml (Ø 29 mm)	12	AAA3E504

Erlenmeyer Flask Clamp Holder

Description	Max. Mountable Tube		Cat. No.
Disk for flask clamp	N/A		AAA3E511
Flask clamp (Stainless steel)	50 ml	13	AAA23550
	100 ml	8	AAA23551
	300 ml	6	AAA23556
Flask clamp (Plastic)	50 ml	13	AAA30570
	100 ml~125 ml	8	AAA30571
	300 ml	6	AAA30574



Post for double stacking

Description	Cat. No.
Post	AAA3E521

Accessories for Shaker

Universal Platform



Universal Platform

Basic accessories required to use separated funnels, erlenmeyer flask, test tube, etc.



Dual Universal Platform

Maximum sample loading possible with two-stage structure. (SKC-7000 series model exclusively)

Accessories for Universal Platform



Flask Clamp (STS / Plastic)

Erlenmeyer flask mounting (50ml – 6L)
High-strength spring maintains excellent clamping.



Starter Kit

Consisting of plastic clamps that are commonly used on Universal Platforms. 50ml, 100ml, 250ml, 500ml, 1L, 2L.



Funnel Clamp

Separated funnel mounting (250ml - 2L)
Easy detachment and stable clamping.



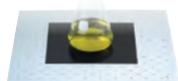
Test Tube Rack

Test tube mounting (Ø8 mm - Ø35 mm)
Easily adjustable angle.



Microplate Holder

Various configurations for microplate
Single, Tower, Flat A (Large), Flat B (Small)



Lab Sticker

Excellent adhesion at 200mm x 200mm size, applied to petri dishes, culture bottles, etc.
Temp. Range (°C): 15-60 Max. Speed (rpm): 250

LC Connected



LC GreenBox

Real-time monitoring of device operation via mobile app.
Up to 4 devices can be connected.

Set Accessories



Spring Wire Rack, Half Spring Wire Rack

Available to load various sample container shapes.
For SKC-7000, half type can be used that providing both a universal platform and spring wire rack.



Dedicated Platform

Accessories (250 ml, 500 ml) installed on platform with maximum quantity of flask clamps.



Rubber Mat

Convenient for use with culture bottles and petri dishes with rubber plate to prevent slipping on the floor.



Universal Attachment

Floor rubber plate and adjustable clamping rod make it a convenient structure for a wide range of applications.



Microplate Tray (Dual Stacking Tray)

Dual stacking structure for microplate allows for excellent space utilization.



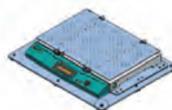
Microplate Tray (Large Tray)

The tray for microplates with anti-slip rubber plate on the bottom. (OS-2000, CMS-350)



Stage Rack

The rack maximizes space efficiency by stacking up to four shakers.
(OS-2000/4000/7000)



Weight Increaser

Accessories allowing for use of SKC series shaker up to 500rpm.

Starter Kit

Description	Composition of Clamp	Cat. No.
Starter Kit I	50 ml (2), 100 ml (2), 250 ml (4), 500 ml (4), 1L (2), 2L (2)	AAA30581
Starter Kit II	50 ml (3), 100 ml (3), 250 ml (6), 500 ml (6)	AAA30582

Description	OS-2000	OS-3000	OS-4000	OS-7000 Series	SKC-6000 Series	SKC-7000 Series	CMS-350
Spring Wire Rack (Half)	-	-	-	-	-	AAA30525 ¹⁾ AAA30526 ²⁾	-
Dedicated Platforms (250 mL)	-	AAA23611-V1	AAA23621-V1	AAA23634	-	-	-
Dedicated Platforms (500 mL)	-	AAA23613-V1	AAA23622-V1	AAA23635	-	-	-
Rubber Mat	AAA3A531-V1	AAA23531-V1	AAA23532-V1	AAA23534	AAA30531 ¹⁾ AAA30532 ²⁾	AAA30533 ¹⁾ AAA30534 ²⁾	AAA38501
Universal Attachment	AAA3A511-V1	AAA23511-V1	AAA23512-V1	AAA23505	AAA30511 ¹⁾ AAA30512 ²⁾	AAA30513 ¹⁾ AAA30514 ²⁾	AAA3B521
Lab Sticker	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551	AAA30551
Microplate Tray	Dual Stacking	AAA3A541	-	-	-	-	AAA3B531
	Large Tray	AAA3A542	-	-	-	-	AAA3B532
Stage Rack	4 Stages	-	AAA31541-V1	AAA31542-V1	AAA31702-V1	-	-
	3 Stages	-	-	-	AAA31703-V1	-	-
Weight Increaser	-	-	-	-	AAA30562	AAA30562	AAA30561

1) Small Size
2) Large Size

Description	Model	OS-2000	OS-3000	OS-4000	OS-7000 Series	SKC-6000 Series		SKC-7000 series		CMS-350	
	Platform Size (mm / inch)	320 x 260 / 13.8 x 10.2	350 x 350 / 13.8 x 13.8	450 x 450 / 17.7 x 17.7	755 x 520 / 29.7 x 20.5	580 x 520 / 22.8 x 20.5 (Small)	660 x 520 / 25 x 20.5 (Large)	755 x 520 / 29.7 x 20.5 (Small)	885 x 520 / 34.8 x 20.5 (Large)	276 x 276 / 10.9 x 10.9	
Universal Platform	Cat. No.	AAA3A501-V2	AAA23501-V3	AAA23502-V3	AAA23503-V3	AAA30501	AAA30503	AAA30502¹⁾ AAA30541²⁾	AAA30504¹⁾ AAA30542²⁾	AAA3B501	
Flask Clamp for Erlenmeyer Flask (Stainless steel)⁴⁾	50 mL	AAA23550	20	36	49	88	84	96	108 (216) ³⁾	126 (252) ³⁾	16
	100 mL	AAA23551	16	28	39	68	54	66	72 (144) ³⁾	84 (168) ³⁾	9
	250 mL	AAA23552	8	14	24	39	33	39	42 (84) ³⁾	51 (102) ³⁾	9
	300 mL	AAA23556	8	14	24	39	28	32	36	40	9
	500 mL	AAA23553	6	10	16	28	20	24	27	30	5
	1 L	AAA23554	3	6	9	18	14	16	18	20	4
	2 L	AAA23555	-	4	6	11	8	11	12	13	1
	2.8 L	AAA23557	-	3	5	8	6	7	9	11	-
	4 L	AAA23558	-	1	4	6	4	6	8	9	-
6 L	AAA23559	-	1	3	5	3	4	6	7	-	
Flask Clamp for Erlenmeyer Flask (Plastic)⁵⁾	50 mL	AAA30570	20	36	49	88	56	64	72	80	16
	100~125 mL	AAA30571	12	19	29	48	42	48	54	60	9
	200 mL	AAA30572	8	13	21	35	25	39	30	32	9
	250 mL	AAA30573	8	13	19	35	25	30	30	32	9
	300 mL	AAA30574	6	12	19	35	25	30	30	32	9
	500 mL ⁶⁾	AAA30575	6	9	12	24	20	20	24	28	5
	1 L ⁶⁾	AAA30576	3	5	9	12	10	12	12	15	4
2 L ⁶⁾	AAA30577	-	4	5	8	6	6	6	9	1	
Funnel Clamp	250 mL	AAA23562	4	4	6	15	14	16	18	20	3
	500 mL	AAA23563	3	3	4	10	9	10	11	14	2
	1 L	AAA23564	3	3	3	7	7	8	9	12	2
	2 L	AAA23565	-	2	2	5	5	6	7	8	-
Test Tube Rack⁴⁾	Ø8 mm (86ea)	AAA23581	2	2	4	7	8	9	9	12	2
	Ø10 mm (86ea)	AAA23582	2	2	4	7	8	9	9	12	2
	Ø12 mm (58ea)	AAA23583	2	2	4	7	8	9	9	12	2
	Ø14 mm (58ea)	AAA23584	2	2	4	7	8	9	9	12	2
	Ø17 mm (32ea)	AAA23585	2	2	4	7	8	9	9	12	2
	Ø25 mm (19ea)	AAA23586	2	2	4	7	8	9	9	12	2
	Ø35 mm (10ea)	AAA23594	2	2	4	7	8	9	9	12	2
Microplate Holder⁴⁾	Single	AAA23654	6	8	15	25	20	23	25	28	6
	Tower	AAA23651	4	6	10	21	16	19	22	25	6
	Flat A (Large)	AAA23652	-	-	2	4	3	4	4	5	-
	Flat B (Small)	AAA23653	1	2	3	6	4	5	6	7	-

1) Single platform installed in SKC-7000

2) Dual platform installed in SKC-7000, only flasks less than 250ml can be installed on the lower platform. (Height of lower platform is about 175mm)

3) The numbers in parentheses indicate the maximum number of 250ml flasks that can be installed when Dual Platform is mounted.

4) Maximum quantity that can be mounted on each platform (For test tube rack, it is the maximum quantity when the rack is not to be tilted)

5) In the case of plastic flask clamps mounting, deformation may occur at temperatures over 40°C. Stainless steel flask clamps are recommended when using in a high temperature environment.

6) Possible to use under 300rpm

Spring Wire Rack	OS-2000	OS-3000	OS-4000	OS-7000 Series	SKC-6000 Series		SKC-7000 Series		CMS-350	
					Small	Large	Small	Large		
Spring Wire Rack (Cat. No.)	AAA3A521	AAA31521-V1	AAA31522-V1	AAA23514	AAA30521	AAA30522	AAA30523	AAA30524	AAA3B511	
Quantity of Erlenmeyer Flask	50 mL	15	16	25	45	30	35	45	50	15
	100 mL	9	9	16	28	20	24	28	32	9
	250 mL	4	4	9	18	12	15	18	21	4
	300 mL	4	4	9	18	12	15	18	21	4
	500 mL	4	4	5	15	9	12	15	18	4
	1 L	2	2	4	10	6	8	10	12	2
	2 L	-	1	2	6	4	5	6	7	-
2.8 L	-	1	2	4	3	3	4	5	-	

LC GreenBox

Description	OS-2000	OS-3000	OS-4000	OS-7000 Series
LC GreenBox	AAHQ1011K	AAHQ1011K	AAHQ1011K	AAHQ1011K