## **Open-air Shakers** (Dual-action)



### 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

<b>Optional accessories</b>	• Rubber mats, Universal attachments
see page 150-151	<ul> <li>Funnel clamps, Test tube racks</li> </ul>

#### Control panel



Model		OS-2000	OS-3000		
Motion type		Orbital or Reciprocating motion selectable			
Challin a	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)		
system	Speed range <sup>2)</sup> (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			
Platform (W×D) (mm / inch)	Platform (W×D) (mm / inch)	320×260 / 12.6×10.2	350×350 / 13.8×13.8		
Dimension	Body (W×D×H) (mm/inch) 1)	354x388x146/ 13.9x15.3x5.7	409x508x141/ 16.1x20x5.6		
	Net weight (Kg / Ibs)	22 / 48.5	28 / 61.7		
Electrical rec	uirements (230V, 50 / 60Hz)	0.3A	0.3A		
Cat. No.		AAH3D1115K	AAH3D1215K		
Electrical requirements (120V, 50 / 60Hz)		0.6A	0.6A		
Cat. No.		AAH3D1165U	AAH3D1265U		

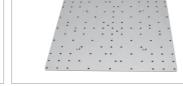
1) Main body dimension without accessories.

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.

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





Universal platform (CMS-350)

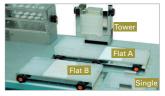


Universal platforms (OS models)









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.	Unive	rsal platform	AAA3A501-V2	AAA23501-V3	AAA23502-V3	AAA23503-V3	AAA3B501
-		Erlenmeyer flask size	er flask size Max. mountable flask clamps				
AAA23550		for 50 ml	20	36	49	88	16
AAA23551	Flask clamps (Stainless steel)	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 fla	sk clamps			
AAA30570	Flask	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	clamps	for 250 ml	8	13	19	35	9
AAA30574	(plastic)	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 fu	nnel clamps			
AAA23562		for 250 ml	4	4	6	15	3
AAA23563	Funnel	for 500 ml	3	3	4	10	2
AAA23564	clamps	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, ø8mm	. ,				
AAA23582		for 86 test tubes, ø10mm		2	4	7	2
AAA23583		for 58 test tubes, ø12mm	2				
AAA23584	Test Tube Racks <sup>1)</sup>	for 58 test tubes, ø14mm					
AAA23585	Test lube hacks"	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					
-			Max. mountable microplate holders				
AAA23654		Single	6	8	15	25	6
AAA23651	Microplate holders	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

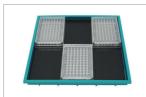




Dedicated platform



Rubber mats (SK, SKF)



Rubber mat (CMS-350)



Universal attachment

Spring wire racks



Dual stacking tray



Lab sticker (200x200, mm)





Stage rack (OS models)

	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

Large tray

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

Des	cription	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	-	