



ORBITAL SHAKER

ORBITAL SHAKER

Our product is an accurately designed, microprocessor controlled with double Decker platform to save your valuable lab space. Three eccentric shaft balancing drive ensures shaking with uniform speed. Speed adjustment settings permit both gentle and vigorous shaking. Varieties of platforms are available for different glassware and vessels. Used in Stability, Dissolution Studies, Liquid Extractions, Protein Precipitation, Small Peptide Synthesis, Dilutions. Also known as Laboratory Orbital Shaker.

300 ORBITAL SHAKER



- Compact space-saving design fits easily in incubator and refrigerator
- Simultaneous display of speed, timer and operating mode
- Brushless DC motor ensures maintenance-free, reliable and quiet operation
- Electronic time switching clock controls time or continuous operation mode
- RS232 interface enables data logging & computer control
- Over speed detection and protection
- Accommodate a variety of platforms, non-slip rubber mat, conical flasks and other sample containers

SPECIFICATIONS

Model	BSOT-302	BSOT-303
Speed Range	100-350 rpm (Linear) 100-800 (orbital)	100-350 rpm (Linear) 100-500 (orbital)
Temperature	4-40°C	
Permissible Ambient Temperature	5-40°C	
Shaking Orbit	4 mm	10 mm
Permissible Relative Humidity	80.00%	
Timing Range	1-1199 min	
Motion	Orbital/Linear	
Motor rating Input [W]	28	
Motor rating output [W]	15	
Maximum Load Capacity	2.5 kg	7.5 kg
Operation	Continuous/Timed	
Overall Dimension	340x300x100 mm	420x370x100 mm
Display	LCD	
Weight	8.1 kg	13.5 kg
Power	30 W	
Power Supply	100-240 V, 50/60 Hz	



BSOT-302



BSOT-303

400 ORBITAL SHAKER



Microprocessor control with simultaneous display of time and speed
 Compact space-saving design fits easily in incubator and refrigerator
 Brushless DC motor ensures maintenance-free, reliable and quiet operation
 Adjustable speed control provides gentle to vigorous agitation
 Multi-functional shaking system
 Audio alarm signals program completion
 Accommodate a variety of platforms, non-slip rubber mat, conical flasks and other sample containers

SPECIFICATIONS

Model	BSOT-401	BSOT-402	BSOT-403
Speed Range	50-250 rpm	50-300 rpm	50-250 rpm
Temperature	Ambient +5-40°C		
Shaking Orbit	20 mm	10 mm	10, 15, 20 mm available (15mm by default)
Timing Range	1 min~99 h 59 min		
Motion	Orbital		
Maximum Load Capacity	2.5 kg	3 kg	8 kg
Operation	Continuous/Timed		
Overall Dimension	280x270x110 mm		320x350x145 mm
Display	LED		
Weight	7.2 kg		17.5 kg
Power	50 W	51 W	-
Power Supply	AC90~240V, 50/60Hz, 2A	AC100~240 V, 50/60 Hz, 2A	AC90~240 V, 50/60 Hz, 2A
Platform Dimension	-	-	270x240 mm



BSOT-401



BSOT-402



BSOT-403

BSOR-101 ORBITAL SHAKER



Microprocessor PID controller, with timing function, resume operation automatically if power off unexpectedly.

DC Brushless motor, wide speed control with long using life, maintenance free.

Speed controller ensures smooth start /stop which can prevent the liquid spill to damage the equipment.

LCD display for time and speed

Stainless-steel plate, easy clean and assemble.

Overspeed alarm

Wide range of clamps for using with a variety of vessels

Optional programmable controller.

SPECIFICATIONS

Model	BSOR-101
Speed Range	40~300 rpm
Maximum Configuration	250x48 pcs or 500 mlx30 pcs or 1000 mlx20 pcs or 2000 ml x 12 pcs or 5000 ml x 5 pcs (every desk)
Shaking Speed Accuracy	±1 rpm
Timing Range	0~99: 59H
Motion	Orbital
Amplitude	35 mm
Operation	Continuous/Timed
Tray	1 Layer
Platform Dimension	800x600 mm
Overall Dimension	895x740x460mm
Display	LCD
Power	250 W
Power Supply	AC220V±10% 50Hz±2%

100 ORBITAL SHAKER



Microprocessor controller with timer function for reliable temperature control

Brushless DC motor ensures maintenance-free, reliable and quiet operation

Easy to clean stainless steel platform

Unique speed monitoring circuit design

Three eccentric shaft balancing drive to ensure uniform sample shaking speed

Menu-driven easy to use interface

Available in monolayer

Slow start up function prevents liquid spillage

Data retrieval on power failure

SPECIFICATIONS

Model	BSOR-102	BSOR-107	BSOR-108
Speed Range	20-300 rpm		
Maximum Configuration	250x63 pcs or 500 mlx35 pcs or 1000 mlx35 pcs or 2000 ml x 16 pcs (every desk)	250x48 pcs or 500 mlx30 pcs or 1000 mlx20 pcs or 2000 ml x 12 pcs (every desk)	250x63pcs or 500 mlx35 pcs or 1000 mlx35 pcs or 2000 ml x 16 pcs (every desk)
Temperature	4-65°C	RT +5-65°C	4-65°C
Shaking Speed Accuracy	±1 rpm		
Shaking Orbit	30/50 mm		
Timing Range	0~55 h		
Motion	Orbital		
Operation	Continuous/Timed		
Shelve	1	2	
Platform Dimension	920x640 mm	800x600 mm	920x640 mm
Overall Dimension	1060x850x680 mm	900x680x680 mm	1060x850x680 mm
Display	LCD		
Power	400 W		
Standard Configuration	500 mlx60pcs		
Power Supply	AC220V±10% 50Hz±2%		



BSOR-102



BSOR-107



BSOR-108

100 ORBITAL SHAKER



PID microprocessor control.

Advanced unishaft drive, low noise.

Eight self-compiled programs, with different speed and time setting.

Automatic operation, auto-stop, timing, time display, parameters memory and recovery function.

Independent over-speed audio and visual alarm, independent leakage protection device.

Automatic power-off protection system when the motor is overheating and temperature is out of control.

SPECIFICATIONS

Model	BSOR-103	BSOR-104	BSOR-105	BSOR-106
Speed Range	50~300 rpm	50~250 rpm	50~300 rpm	50~250 rpm

Maximum Configuration	250 mlx54 or 500 mlx35 or 1000 mlx24 or 5000 mlx6		250 mlx96 or 500 mlx60 or 1000 mlx40 or 5000 mlx15	
Shaking Speed Accuracy	±1 rpm			
Timing Range	0~500 h			
Motion	Orbital			
Vibrational Amplitude (mm)	Φ50 mm	Φ100 mm	Φ50 mm	Φ100 mm
Circulation Mode	Natural convection	-	-	-
Drive Mode	Unishaft drive	-	-	-
External Material	Cold-rolled steel with anti-bacterial power coating			
Platform Dimension	840x620 mm		1108x740 mm	
Overall Dimension	900x650x480 mm		1210x775x480 mm	
Package Dimension	1000x750x630 mm		1310x875x630 mm	
Weight	250 kg	300 kg	305 kg	
Power	150 W		280 W	
Standard Configuration	250 mlx54		250 mlx96	
Power Supply	AC110V/220V±10%,50/60Hz			



BSOR-103



BSOR-104



BSOR-105



BSOR-106

100 ORBITAL SHAKER



PID controller.

Soft shaking mode, stable and reliable operation.

Eight self-compiled programs, with different speed and time setting.

Automatic operation, auto-stop, timing, time display, parameters memory and recovery function.

Automatic power-off protection system when the motor is overheating and temperature is out of control.

SPECIFICATIONS

Model	BSOR-109	BSOR-110	BSOR-111	BSOR-112
Speed Range	50~300 rpm		50~250 rpm	
Maximum Configuration	250 mlx108 or 500 mlx70 or 1000 mlx48	250 mlx192 or 500 mlx120 or 1000 mlx80	250 mlx300 or 500 mlx216 or 1000 mlx112	250 mlx450 or 500 mlx324 or 1000 mlx168
Shaking Speed Accuracy	±1 rpm			
Timing Range	0~500 h			

Motion	Orbital			
Vibrational Amplitude (mm)	Φ50 mm			
Circulation Mode	Natural convection			
Drive Mode	Unishaft drive		Multi-dimensional driving	
Shaking Plate Quantity	2 pcs		4 pcs	6 pcs
External Material	Cold-rolled steel with anti-bacterial power coating			
Platform Dimension	840x620 mm	1108x740 mm	1080x680 mm	
Overall Dimension	910x680x820 mm	1270x810x425 mm	1590x1120x950 mm	1470x1110x1320 mm
Package Dimension	1010x780x970 mm	1370x910x575 mm	1690x1220x1000 mm	1570x1210x1470 mm
Display	LCD			
Weight	305 kg	557 kg	830 kg	950 kg
Power	280 W		750 W	1100 W
Standard Configuration	250 mlx54, 500 mlx35	250 mlx86, 500 mlx60	250 mlx150, 500 mlx108	250 mlx225, 500 mlx162
Power Supply	AC110V/220V±10%,50/60Hz			



BSOR-109



BSOR-110



BSOR-111



BSOR-112

BSOT-601 ORBITAL SHAKER



Microprocessor PID controller, with timing function

Stainless-steel or alnico plate, non-eroding and easy clean

DC Brushless motor with long using life, wide speed control with long using life, wide speed control

The alarm will get off when the real shaking speed is 10% different with setting value, and motor will stop automatically

Speed controller ensures smooth start /stop which can prevent the liquid spill to damage the equipment LCD screen, programmable controller. (18periods with temperature, speed and timing) and over-temperature alarm

SPECIFICATIONS

Model	BSOT-601
Speed Range	50-250 rpm
Temperature	No heating function
Shaking Orbit	10 mm
Timing Range	0~5999 min
Motion	Orbital
Operation	Continuous/Timed

Platform Dimension	280x270 mm
Power	60 W
Platform optional	Universal platform or Spring wire racks (Default)
Power Supply	220V, 50Hz

600 ORBITAL SHAKER



Microprocessor PID controller, with timing function

Stainless-steel or alnico plate, non-eroding and easy clean

DC Brushless motor with long using life, wide speed control with long using life, wide speed control

The alarm will get off when the real shaking speed is 10% different with setting value, and motor will stop automatically

Speed controller ensures smooth start /stop which can prevent the liquid spill to damage the equipment

LCD screen, programmable controller. (18periods with temperature, speed and timing) and over-temperature alarm

SPECIFICATIONS

Model	BSOT-602	BSOT-603	BSOT-604
Speed Range	50-250 rpm	40-300 rpm	
Temperature	No heating function		
Shaking Orbit	20 mm	10 mm	20 mm
Timing Range	0~5999 min		
Motion	Orbital		
Operation	Continuous/Timed		
Platform Dimension	280x270 mm	350x260 mm	400x340 mm
Power	60 W		
Platform optional	Universal platform or Spring wire racks (Default)		
Power Supply	220V, 50Hz		

Model	BSOT-605	BSOT-606	BSOT-607
Speed Range	40-300 rpm	20-250 rpm	
Temperature	No heating function	RT 5-100°C	
Shaking Orbit	20 mm		
Timing Range	0~5999 min		
Motion	Orbital		
Operation	Continuous/Timed		
Platform Dimension	450x450 mm	350x260 mm	380x340 mm
Power	60 W	350 W	400 W
Platform optional	Universal platform or Spring wire racks (Default)	Spring wire racks	
Power Supply	220V, 50Hz		



BSOT-602



BSOT-603



BSOT-604



BSOT-605



BSOT-606



BSOT-607

200 ORBITAL SHAKER



Microprocessor control with simultaneous display of time and speed
 Brushless DC motor ensures maintenance-free, reliable and quiet operation
 Adjustable speed control provides gentle to vigorous agitation
 Audio alarm signals program completion
 Accommodate a variety of platforms, non-slip rubber mat, conical flasks and other sample containers

SPECIFICATIONS

Model	BSOT-201	BSOT-202	BSOT-203
Speed Range	50-350 rpm	50-300 rpm	50-250 rpm
Shaking Orbit	10 mm	20 mm	30 mm
Timing Range	1 min~99 h 59 min		
Maximum Load Capacity	3 kg		
Dimension	W.284 x D.264 x H.108mm		
Fuse Protector	250 V, 1 A, φ5x20		
Weight	5.6 kg		
Power	50 W		
Power Supply	AC100-230V, 60Hz		

OPTIONAL ACCESSORIES

Accessory Code	Name	Description	For Models
2001406006	Platform 4	flat platform with non-slip rubber mat	BSOT-201
2001406007	Platform 4A	double deck flat platform with non-slip rubber mat	BSOT-201
2001406008	Platform 100	platform with clamps for flasks 100-150 ml	BSOT-201
2001406009	Platform 250	platform with clamps for flasks 250-300 ml	BSOT-201
2001406010	Platform 12	universal platform with adjustable bars	BSOT-201
2001406011	Platform 260	universal platform with springs	BSOT-201
2001406012	Platform GS	used in the platform PP-4 or PP-4A	BSOT-201
2001407006	Platform 4	flat platform with non-slip rubber mat	BSOT-202
2001407007	Platform 4A	double deck flat platform with non-slip rubber mat	BSOT-202
2001407008	Platform 100	platform with clamps for flasks 100-150 ml	BSOT-202
2001407009	Platform 250	platform with clamps for flasks 250-300 ml	BSOT-202
2001407010	Platform 12	universal platform with adjustable bars	BSOT-202
2001407011	Platform 260	universal platform with springs	BSOT-202
2001407012	Platform GS	used in the platform PP-4 or PP-4A	BSOT-202
2001408006	Platform 4	flat platform with non-slip rubber mat	BSOT-203
2001408007	Platform 4A	double deck flat platform with non-slip rubber mat	BSOT-203
2001408008	Platform 100	platform with clamps for flasks 100-150 ml	BSOT-203
2001408009	Platform 250	platform with clamps for flasks 250-300 ml	BSOT-203
2001408010	Platform 12	universal platform with adjustable bars	BSOT-203
2001408011	Platform 260	universal platform with springs	BSOT-203
2001408012	Platform GS	used in the platform PP-4 or PP-4A	BSOT-203



BSOT-201



BSOT-202



BSOT-203

BSOT-204 EXTREME ENVIRONMENT SHAKER



Shaker is controlled by a ribbon cable.

The controller can be fixed on the incubator or placed on the workbench.

Large platform design, many samples can be placed, strong load-bearing capacity.

SPECIFICATIONS

Model	BSOT-204
Speed Range	50~300 rpm
Timing Range	1 min~99 h 59 min
Digital Display	Time/speed display
Radius of gyration	10 mm
Max Load Capacity	2.5 Kgs
Motor Parameters	Brushless DC motor
Platform Dimension	330 mmx430 mm
Beep Alarm	Yes
Voltage	100~240V AC 0.75A 50/60 Hz
Power	30 W
Fuse	250 V,1 A,φ5x20
Controller size	W.220xD.132xH.64 mm
Shaker size	W.270xD.320xH.112 mm
Net Weight	8 kgs

OPTIONAL ACCESSORIES

Accessory Code	Name	Description
2001409006	Platform A	flat platform with rubber mat
2001409007	Platform B	platform with clamps for flasks 250-300 ml*12
2001409008	Platform C	platform with clamps for flasks 100-150 ml*20
2001409009	Platform D	universal platform with springs

200 DECOLORIZATION SHAKER



Compact appearance, space saving, powerful function and strong compatibility.
Suction cup type machine feet, super shockproof, high speed of range 0~300 rpm and smooth, no noise.
large platform design, placing more samples, strong load capacity.

SPECIFICATIONS

Model	BSOT-205	BSOT-206
Speed Range	0~300 rpm	50~300 rpm
Radius of gyration	10 mm	
Max Load Capacity	3 Kgs	
Motor Parameters	DC motor stepless speed regulation	DC external rotor motor

Platform Dimension	330x430 mm	
Beep Alarm	No	Yes
Voltage	AC110/220 V,50/60 Hz	AC110/220V,50/60 Hz
Power	25 W	30 W
Fuse	250V,1A,φ5x20	250 V,1 A,φ5x20
Overall Dimension	W.330xD.490xH.145 mm	
Net Weight	9.5 kgs	9.8 kgs
Timing Range	-	1 min~99 h 59 min
Digital Display	-	Time/speed display

OPTIONAL ACCESSORIES

Accessory Code	Name	Description	For Models
2001410006	Platform A	flat platform with rubber mat	BSOT-205
2001410007	Platform B	platform with clamps for flasks 250-300 ml*12	BSOT-205
2001410008	Platform C	platform with clamps for flasks 100-150 ml*20	BSOT-205
2001410009	Platform D	universal platform with springs	BSOT-205
2001411006	Platform A	flat platform with rubber mat	BSOT-206
2001411007	Platform B	platform with clamps for flasks 250-300 ml*12	BSOT-206
2001411008	Platform C	platform with clamps for flasks 100-150 ml*20	BSOT-206
2001411009	Platform D	universal platform with springs	BSOT-206



BSOT-205



BSOT-206

BSOT-207 DECOLORIZATION SHAKER



Compact appearance, space saving, powerful function and strong compatibility. Suction cup type machine feet, super shockproof, high speed of range 50~300 rpm and smooth, no noise.

SPECIFICATIONS

Model	BSOT-207
Speed Range	50~300 rpm
Timing Range	1 min~99 h 59 min
Digital Display	Time/speed display
Radius of gyration	10 mm
Max Load Capacity	3 Kgs
Motor Parameters	DC brushless motor
Platform Dimension	330x430 mm
Beep Alarm	Yes
Voltage	AC110/220V,50/60 Hz
Power	30 W
Fuse	250 V,1 A,φ5x20
Overall Dimension	W.330xD.490xH.145 mm
Net Weight	10 kgs

OPTIONAL ACCESSORIES

Accessory Code	Name	Description
2001412006	Platform A	flat platform with rubber mat
2001412007	Platform B	platform with clamps for flasks 250-300 ml*12
2001412008	Platform C	platform with clamps for flasks 100-150 ml*20
2001412009	Platform D	universal platform with springs

BSOT-208 3D SHAKER



Real-time speed display and timing display, convenient and intuitive. Can be set to run continuously from time to time.

With a timing alarm system, when the program is finished, there will be a buzzer prompt.

Speed is adjustable, the speed range is 5 ~ 80rpm.

Special movement structure, strong bearing capacity and low running noise

SPECIFICATIONS

Model	BSOT-208
Speed Range	5~80 rpm
Timing Range	0~99 h 59 min
Angle of inclination	16°
Operation mode	Timing/continuous operation
Maximum load	2.5 kg

Power	35 W
Fuse	250 V,1 A,φ5x20
Voltage	AC110~230V,50/60 Hz
Overall Dimension	W.368xD.228xH.206 mm
Net weight	5.2 kg

OPTIONAL ACCESSORIES

Accessory Code	Name	Description
2001413006	Container Platform A	500 ml flask x 4
2001413007	Container Platform B	250 ml flask x 5
2001413008	Container Platform C	100 ml flask x 9
2001413009	Container Platform D	culture plate x 2
2001413010	Non-slip Pad	
2001413011	Convex Pad	

1600 ORBITAL SHAKER



Adopt single-axis drive and balancing technology, smooth running, low consumption and low noise

Micro-computer control frequency and time, built in power off protection, it can resume work after normal power supply

Large LCD screen can display frequency and time, menu operate interface, easily to understand

24V DC control guaranty safety use

Brushless DC motor, large start torque, wide speed adjustment, free maintenance

Adjustable motor start-up torque to avoid over load samples that can not start the instrument

Vibration imbalance detection. When shaker vibrates fiercely, the instrument stops automatically and smoothly

Many kinds of clamps and racks for selection, and the change of these parts are very easily, improve work efficient

Programmable controller can simplified the experiment process, realize automatically control and running

RS-232 and USB can be selected one of them, connect with computer, instruments can be monitored the time, alarm and rotation speed

SPECIFICATIONS

Model	BSOT-1601	BSOT-1602	BSOT-1603
Speed Range	40-250 rpm	40-300 rpm	
Frequency accuracy	±1rpm		
Amplitude	20 mm		4 mm
Max loading capacity	2000 ml	4000 ml	9000 ml
Display	LCD Screen		
Timer	1 - 99h59min		
Platform Dimension	250x250 mm	350x350 mm	450x450 mm
Overall Dimension	290Wx375Dx110H mm	390Wx495Dx125H mm	490Wx605Dx137H mm
Rated power	60 W		

N.W	20 Kg	30 Kg	40 Kg
Power requirement	AC 220 V / 50 Hz		
Standard configuration	250mlx8pcs	250mlx13pcs	250mlx18pcs
Model	BSOT-1604	BSOT-1605	BSOT-1606
Speed Range	40-500 rpm		
Frequency accuracy	±1rpm		
Amplitude	5 mm		
Max loading capacity	2000 ml	4000 ml	9000 ml
Display	LCD Screen		
Timer	1 - 99h59min		
Platform Dimension	250x250 mm	350x350 mm	450x450 mm
Overall Dimension	290Wx375Dx110H mm	390Wx495Dx125H mm	490Wx605Dx137H mm
Rated power	60 W		
N.W	20 Kg	30 Kg	40 Kg
Power requirement	AC 220 V / 50 Hz		
Standard configuration	250mlx8pcs	250mlx13pcs	251mlx18pcs



BSOT-1601



BSOT-1602



BSOT-1603



BSOT-1604



BSOT-1605



BSOT-1606



Biolab Scientific Ltd.

3660 Midland Avenue, Suite 300, Toronto, Ontario M1V 0B8, Canada

Email: info@biolabscientific.com | Website: www.biolabscientific.com