

# PSU-10i, Orbital Shaker

Shaker **PSU-10i** provides regulated orbital motion of the platform and is designed for use both in small specialized biotechnological laboratories and in large multidisciplinary laboratories: a choice of five (5) interchangeable platforms provides the possibility of performing various procedures and techniques.

Shaker **PSU-10i** incorporates a direct drive system, a brushless motor with a guaranteed service life up to 35,000 hours and an automatic loading balancing system. These innovations allow for continuous mixing up to 7 days, ensure reliable, trouble-free operation for more than 2 years and significantly expand the range of the device performance in both high and low limits.

The unit is designed for operation in cold rooms. incubators (excluding CO<sub>2</sub> incubators) and closed laboratory rooms at ambient temperature from +4°C to +40°C in a non-condensing atmosphere and maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.





## PSU-20i, Orbital Shaker

Shaker **PSU-20i** provides three motion types: orbital, reciprocal and vibrating, which can be performed separately, pairwise and sequentially in repeated cycles. Shaker is designed for applications both in small specialized laboratories and in large multidisciplinary laboratories. PSU-20i is an ideal instrument for laboratories conducting research in biopharmaceutics and biomedicine.

Shaker PSU-20i is noiseless and reliable in operation, incorporates a direct drive system and brushless motor with a guaranteed service life up to 35,000 working hours. The use of direct drive and brushless motor allows for continuous mixing up to 7 days and ensures reliable operation for more than 2 years.

A choice of nine (9) different interchangeable platforms provides possibility of performing various procedures and techniques. Special attention should be paid to a multilevel platform, which allows accommodation of a large number of various microplates, Petri dishes, cultural bags and other low containers.

The unit is designed for operation in cold rooms, incubators (excluding CO2 incubators) and closed laboratory rooms at ambient temperature from +4°C to +40°C in a non-condensing atmosphere and maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.







Multi-rotation

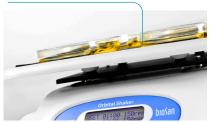


# PSU-10i and PSU-20i, Orbital Shakers

	PSU-10i	PSU-20i	
Speed control range *	50-450* rpm (increment 10 rpm)	20-250* rpm (increment 5 rpm)	
Digital speed control	+		
Max. continuous operation time	168 hrs.		
Orbit	10 mm	20 mm	
Digital time setting	1 min96 hrs./non-stop		
Maximum load	3 kg	8 kg	
Overall dimensions (W $\times$ D $\times$ H)	220×205×90 mm	410×410×130 mm	
Weight	3.4 kg	11.7 kg	
Input current/power consumption	12 V, 800 mA/9.6 W 12 V, 3.2 A/40 W		
External power supply	Input AC 100-240 V, 50/60 Hz; Output DC 12 V		

<sup>\* —</sup> max. speed depends on the load and vessels' shape

#### Platform Bio PP-4 for PSU-10i



Platform for PSU-20i PP-20/4



Platform Bio PP-4 for PSU-10i



Platform P-6/250 for PSU-10i



#### **ORDERING INFORMATION:**

**PSU-10i,** shaker without platform **PSU-20i,** shaker without platform

Cat. number

BS-010144-AAN BS-010145-ACI

PSU-20i motion types	Description	Speed range	Turning angle	Motion timer*	Digital time setting
<b>1 ○</b> Orbital	Orbital motion with an option of shifting direction	20-250 rpm	_	0-250 sec	
2 Reciprocal	Orbital motion with shifting direction of rotation	20-250 rpm	0-360° (30° increment)	0-250 sec	1 min96 hrs. (increment 1 min.) or non–stop
<b>3</b> Sibrating	High speed, low amplitude motion	_	0-5° (1° increment)	0-5 sec	

<sup>\* —</sup> for switching to the next motion in the cycle



## Platforms for PSU-10i and ES-20

Platform	Description	Dimensions	Working Area	Cat. Number
① UP-12 Used on PSU-10i, ES-20	Universal platform with adjustable bars for different types of flasks, bottles and beakers with silicone mat	285 × 220 × 40 mm	270 × 195 × 40 mm	BS-010108-AK
② Bio PP-4 Used on PSU-10i	Flat platform with silicone mat for Petri dishes, culture flasks, agglutination cards	255×255 mm	230×230 mm	BS-010116-AK
3 PP-4 Used on ES-20	Metallic flat platform with silicone mat for Petri dishes, culture flasks, agglutination cards	220×220 mm	215×215 mm	BS-010108-BK
<b>♦ P-12/100</b> Used on PSU-10i, ES-20	Platform with clamps for flasks, 100–150 ml (12 places)	250×190 mm	250×190 mm	BS-010108-EK
§ P-6/250 Used on PSU-10i, ES-20	Platform with clamps for flasks, 250–300 ml (6 places)	250×190 mm	250×190 mm	BS-010108-DK
<b>© P-16/88</b> Used on PSU-10i, ES-20	Platform with spring holders for up to 88 tubes up to 30 mm diameter (e. g. 10 ml, 15 ml, 50 ml tubes)	275×205×75 mm	275×205×75 mm	BS-010116-BK



## Platforms for PSU-20i and ES-20/60

Platform	Description	Dimensions	Working Area	Cat. number
① UP-330 Used on PSU-20i	Universal platform with adjustable bars for different types of flasks, beakers	345×430×105 mm	300 × 400 × 80 mm	BS-010145-AK
<b>2 P-30/100</b> Used on PSU-20i, ES-20/60	Platform with 30 clamps for 100-150 ml flasks	360×400 mm	360×400 mm	BS-010135-BK
<b>3 P-16/250</b> Used on PSU-20i, ES-20/60	Platform with 16 clamps for 250-300 ml flasks	360×400 mm	360×400 mm	BS-010135-CK
<b>④ P-9/500</b> Used on PSU-20i, ES-20/60	Platform with 9 clamps for 500 ml flasks	360×400 mm	360×400 mm	BS-010135-AK
<b>§ P-6/1000</b> Used on PSU-20i, ES-20/60	Platform with 6 clamps for 1000 ml flasks	360×400 mm	360×400 mm	BS-010135-DK
<b>6 PP-400</b> Used on ES-20/60	Flat platform with non–slip silicone mat	360×400 mm	400×360 mm	BS-010135-FK
7 UP-168 Used on PSU-20i, ES-20/60	Universal platform for different flasks (Clamps ordered separately)	360 × 400 mm	360 × 400 mm	BS-010135-JK
## FC-100	Clamp for 100, 250, 500, 1000 ml flask (for UP-168)	Ø 65mm Ø 85mm Ø105mm Ø130mm		BS-010126-HK BS-010126-JK BS-010126-LK BS-010126-IK
8.4 PP-20/4 Used on PSU-20i	Four-level flat platform with non– slip rubber mat	380 × 480 × 510 mm	365 × 465 × 510 mm	BS-010126-EK
<b>3 PP-20/3</b> Used on PSU-20i	Three-level flat platform with non- slip rubber mat	380×480×340 mm	365 × 465 × 340 mm	BS-010126-DK
PP-20/2 Used on PSU-20i	Two-level flat platform with non– slip rubber mat	380 × 480 × 170 mm	365 × 465 × 170 mm	BS-010126-CK
Used on PSU-20i	One-level flat platform with non– slip rubber mat	380 × 480 mm	365 × 465 mm	BS-010126-BK