Biosan SIA., Ratsupites 7, build. 2, Riga, LV-1067, Latvia, Phone: +371 674 261 37, Fax: +371 674 281 01,
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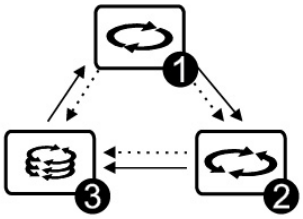
# PSU-20i, Multi-functional Orbital Shaker

Premium Product Class

Medical–Biological Research & Technologies

## DESCRIPTION

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.
Shaker can be used in cold rooms or incubators, operating at ambient temperature range +4°C to +40°C.

| Motion types | Description | Speed range | Turning angle | Motion timer * | General operation timer (1 min step) |
|---|---|---|---|---|---|
| 1 Orbital | Simple orbital motion with an option of shifting direction (clockwise/ anticlockwise) after set time | 20–250 rpm | — | 0–250 sec | 1 min–96 hrs |
| 2 Reciprocal | Orbital motion with shifting direction of rotation | 20–250 rpm | 0°–360° (30° increment) | 0–250 sec | 1 min–96 hrs |
| 3 Vibrating | High speed, low amplitude motion | — | 0°–5° (1° increment) | 0–5 sec | 1 min–96 hrs |

** for switching to the next motion in the cycle*

## SPECIFICATION

| | |
|---|---|
| Speed control range | 20-250* RPM (increment 5 rpm)<br>* max. speed depends on the load and vessels' shape |
| Digital speed control | + |
| Maximum continuous operation time | 168 hrs |
| Orbit | 20 mm |
| Digital time setting | 1 min–96 hrs / non–stop (increment 1 min) |
| Maximum load | 8 kg |
| Overall dimensions (W×D×H) | 410x410x130 mm |
| Weight | 11.7 kg |
| Input current/power consumption | 12 V, 3.2 A / 40 W |
| External power supply | Input AC 100–240 V; 50/60 Hz;<br>Output DC 12 V |

## CAT. NR.

| | |
|---|---|
| | PSU-20i with external power supply unit w-out platform |
| BS-010145-ACI | 230VAC 50/60Hz Euro plug |
| BS-010145-ACQ | 230VAC 50/60Hz UK plug |
| BS-010145-AC4 | 230VAC 50/60Hz AU plug |
| BS-010145-ACJ | 100VAC 50/60Hz US plug |
| BS-010145-ACJ | 120VAC 60Hz US plug |
| ---------- | **Optional accessories** |
| BS-010135-DK | Platform P-6/1000 |
| BS-010135-AK | Platform P-9/500 |
| BS-010135-CK | Platform P-16/250 |
| BS-010135-BK | Platform P-30/100 |

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| | |
|---|---|
| BS-010135-JK | Platform UP-168 |
| BS-010126-HK | FC-100, clamp 100ml |
| BS-010126-JK | FC-250, clamp 250ml |
| BS-010126-LK | FC-500, clamp 500ml |
| BS-010126-IK | FC-1000, clamp 1000ml |
| BS-010126-NK | FC-2000, clamp 2000ml |
| ---------- | |
| BS-010145-AK | Platform UP-330 |
| BS-010145-BK | HB-330 additional holding bar for UP-330 |
| ---------- | |
| BS-010126-BK | Platform PP-20 |
| BS-010126-CK | Platform PP-20-2 |
| BS-010126-DK | Platform PP-20-3 |
| BS-010126-EK | Platform PP-20-4 |
| ---------- | |
| BS-010145-CK | IQ OQ document |
| BS-010145-DK | PQ document |

## ACCESSORIES

**P-6/1000**
Platform with 6 clamps for 1000 ml flasks (360x400 mm)

**P-9/500**
Platform with 9 clamps for 500 ml flasks (360x400 mm)

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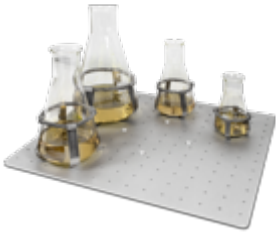
**P-16/250**
Platform with 16 clamps for 250 ml flasks (360x400 mm)

**P-30/100**
Platform with 30 clamps for 100 ml flasks (360x400 mm)



**UP-168**
Universal platform with clamps can accommodate flasks or bottles of different volume sizes. Clamps are not included with platform and need to be ordered separately. (360x400 mm)

**FC-100, FC-250, FC-500, FC-1000, FC-2000**
Clamp for
100 ml - Ø65 mm,
250 ml - Ø85 mm,
500 ml - Ø105 mm,
1000 ml - Ø130 mm,
2000 ml - Ø166 mm
flask (for UP-168)

**UP-330**
Universal platform with adjustable bars can accommodate laboratory glassware of different shapes (345x430x105 mm)

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**HB-330**
Additional holding bar for UP-330

**PP-20 --- PP-20-4**
Flat platform with non-slip rubber mat can accommodate various low profile containers (380x480x170/340/510 mm)