

# ES-20/80, Orbital Shaker-Incubator

## DESCRIPTION

ES-20/80 shaker-incubator for biotechnological and pharmaceutical laboratories is a professional category equipment. The typical applications include - microbial and cell culture cultivation, protein expression, solubility studies, general mixing, as well as other various applications in the fields of biology and chemistry.

The unit is equipped with a newly developed triple eccentric mechanism for platform motion that provides supreme balancing characteristics, superior reliability and quiet operation. The achieved stability of the unit during vigorous mixing allows for stacking installation of up to 3 units which enables to save space. The new display and easy to use user interface provide a clear and intuitive control of parameters and also allow data logging, storage and display over time. Additional features like out of balance sensor and automatic thermostat failure detection make this shaker-incubator an advanced and safe product. Bluetooth connectivity to PC allows for data management, data logging, parameter control and profiling in the included software.

A built-in heat-resistant brushless fan provides precise temperature distribution inside the chamber (from 5 °C above ambient up to +80 °C). Additionally, excellent sample temperature uniformity of  $\pm 0.3$  °C at 37 °C is achieved. The inner chamber is made of stainless steel. State-of-the-art motor, thermal insulation materials and parameter PID control decrease the energy consumption and make the shaker-incubator highly energy efficient despite its relatively large size.



## CAT. NUMBER

Software included, without platform	Software included, without platform
BS-010167-A05	230VAC 50/60Hz Euro plug
BS-010167-A06	230VAC 50/60Hz UK plug
BS-010167-A07	230VAC 50/60Hz AU plug
please, inquire	100VAC 50/60Hz US plug
BS-010167-AK	IQ OQ document
BS-010167-BK	PQ document

## SPECIFICATIONS

Temperature setting range	+25°C... +80°C
Temperature control range	5°C above ambient... +80°C
Speed control range	50–400 rpm (increment 10 rpm)
Temperature setting resolution	0.1°C
Temperature stability	±0.1°C
Temperature accuracy at +37°C	±0.1°C
Temperature uniformity at +37°C	±0.3°C
Orbit	20 mm
Display	TFT, 5 inches
Digital time setting	1 min–96 hrs / non–stop (1 min increment)
Timer sound signal	+
Maximum load	10.6 kg
PC system requirements	Intel/AMD Processor, 1 GB RAM, Windows Vista/7/8/8.1/10/11, USB, Bluetooth
Dimensions of the inner chamber	460 × 400 × 310 mm
Overall dimensions (W×D×H)	620 × 530 × 510 mm
Weight	48 kg
Power consumption (230V / 120 V)	500 W (2.2 A) / -
Nominal operating voltage	230 V, 50/60 Hz

## ACCESSORIES



**PP-400**  
BS-010135-FK  
platform

Flat platform with non-slip silicone mat can accommodate various low profile containers.



**HSP-6/1000**  
BS-010167-LK  
platform

Platform with tight fit clamps for flasks.



**HSP-9/500**  
BS-010167-NK  
platform

Platform with tight fit clamps for flasks.



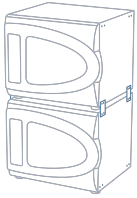
**HSP-16/250**  
BS-010167-MK  
platform

Platform with tight fit clamps for flasks.

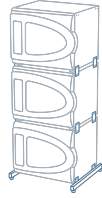


**HSP-30/100**  
BS-010167-KK  
platform

Platform with tight fit clamps for flasks.



Stacking kit for 2 × ES-20/80 | ES-20/80C  
BS-010167-OK



Stacking kit for 3 × ES-20/80 | ES-20/80C  
BS-010167-PK



Bluetooth adapter  
BS-010425-FK  
Bluetooth adapter



UP-168  
BS-010135-JK  
platform  
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.



SPML  
BS-010135-MK  
double-sided adhesive strips  
Double-sided adhesive strips. SPML is compatible with UP-168 platform, that fits both on PSU-20i orbital shaker and in ES-20/60, ES-20/80 Shakers-Incubators.



TR-44/15  
BS-010135-LK  
rack

Adjustable angle test tube rack for UP-168



TR-21/50  
BS-010135-KK  
rack

Adjustable angle test tube rack for UP-168



HSC-50  
BS-010167-DK  
clamp

Tight fit clamp 50 ml - Ø50 mm for UP-168



HSC-100  
BS-010167-EK  
clam

Tight fit clamp 100 ml - Ø65 mm for UP-168



HSC-250  
BS-010167-FK  
clamp

Tight fit clamp 250 ml - Ø85 mm for UP-168



HSC-500  
BS-010167-JK  
clamp

Tight fit clamp 500 ml - Ø105 mm for UP-168



HSC-1000  
BS-010167-IK  
clamp

Tight fit clamp 1000 ml - Ø130 mm for UP-168