

## ES-20/80C, Orbital Shaker-Incubator with cooling

### DESCRIPTION

ES-20/80C 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.

It is the new version with integrated cooling capability of highly successful shaker-incubator ES 20/80. 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 allows for 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 combination of an electric heating element and a built-in heat-resistant brushless fan provides precise temperature distribution inside the chamber from 10 °C below ambient up to +80 °C. Cooling of the chamber is provided by additional Peltier modules allowing to cool until -10 °C from the ambient temperature. Additionally, an excellent sample temperature uniformity of  $\pm 0.3$  °C at 37 °C is achieved.



### CAT. NUMBER

Software included, without platform

Software included, without platform

## SPECIFICATIONS

Temperature setting range	+4°C... +80°C
Temperature control range	10°C below 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, 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.



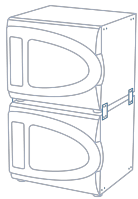
**HSP-16/250**  
BS-010167-MK  
platform

Platform with tight fit clamps for flasks.

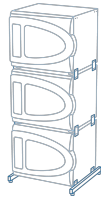


**HSP-30/100**  
BS-010167-KK  
platform

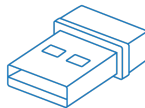
Platform with tight fit clamps for flasks.



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



Stacking kit for 3 × ES-20/80  
S-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.



TR-44/15  
BS-010135-LK  
rack

Adjustable angle test tube rack  
for UP-168



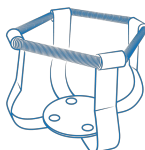
TR-21/50  
BS-010135-KK  
rack

Adjustable angle test tube rack  
for UP-168



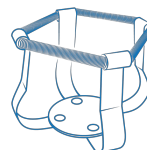
HSC-50  
BS-010167-DK  
clamp

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



HSC-100  
BS-010167-EK  
clamp

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