

## 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 a dedicated software that can be requested separately.

A built-in heat-resistant brushless fan provides precise temperature distribution inside the chamber (from 10 °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 PIDcontrol decrease the energy consumption and make the shaker-incubator highly energy efficient despite its relatively large size.

### SPECIFICATION

Speed control range	50-400 rpm (increment 10 rpm)
Temperature setting range	+25°C... +80°C
Temperature setting resolution	0.1°C
Temperature stability	$\pm 0.1$ °C
Temperature accuracy at +37°C	$\pm 0.1$ °C
Temperature uniformity at +37°C	$\pm 0.3$ °C
Maximum load	10.6 kg
Orbit	20 mm
Digital time setting	1 min-96 hrs / non-stop (1 min increment)
Display	TFT, 5 inches
Overall dimensions (WxDxH)	620 x 530 x 510 mm
Dimensions of the inner chamber	460 x 350 x 400 mm



### CAT. NR.

	ES-20/80 w-out platform, incl. power plug
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	120VAC 50/60Hz US plug
-----	<b>Optional accessories</b>
BS-010167-LK	Platform HSP-6/1000
BS-010167-NK	Platform HSP-9/500
BS-010167-MK	Platform HSP-16/250
BS-010167-KK	Platform HSP-30/100
BS-010135-FK	Platform PP-400 with silicone mat
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BS-010135-JK	Platform UP-168
BS-010167-DK	HSC-50, clamp 50ml
BS-010167-EK	HSC-100, clamp 100ml
BS-010167-FK	HSC-250, clamp 250ml
BS-010167-JK	HSC-500, clamp 500ml
BS-010167-IK	HSC-1000, clamp 1000ml
BS-010135-KK	TR-21/50, test tube rack, 50ml
BS-010135-LK	TR-44/15, test tube rack, 15ml
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BS-010167-CK	PC software and Bluetooth adapter for ES-20/80
BS-010167-OK	Stacking kit for 2x ES-20/80
S-010167-PK	Stacking kit for 3x ES-20/80

## ES-20/80, Orbital Shaker-Incubator



Weight	48 kg
Nominal operating voltage	230 V, 50/60 Hz
Power consumption (230V / 120 V)	500 W (2.2 A)

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BS-010167-AK	IQ OQ document
BS-010167-BK	PQ document

### ACCESSORIES



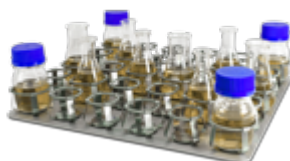
**HSP-6/1000**  
Platform with 6 tight fit clamps for 1000 ml flasks (360x400 mm)



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



**HSP-16/250**  
Platform with 16 tight fit clamps for 250-300 ml flasks (360x400 mm)



**HSP-30/100**  
Platform with 30 tight fit clamps for 100-150 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)

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### **HSC-50, HSC-100, HSC-250, HSC-500, HSC-1000**

Tight fit clamp for  
50 ml - Ø50 mm,  
100 ml - Ø65 mm,  
250 ml - Ø85 mm,  
500 ml - Ø105 mm,  
1000 ml - Ø130 mm  
flask (for UP-168)



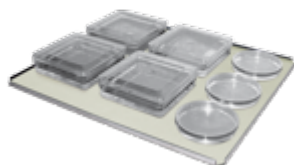
### **TR-21/50**

Adjustable angle test tube rack for up to 21 tubes 50 ml (for UP-168)



### **TR-44/15**

Adjustable angle test tube rack for up to 44 tubes 15 ml (for UP-168)



### **PP-400**

Flat platform with non-slip silicone mat can accommodate various low profile containers (360x400 mm)