

## BOECO ORBITAL SHAKER INCUBATOR ES-20/80

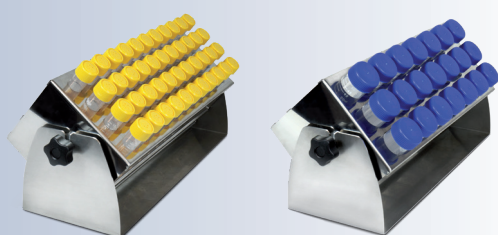
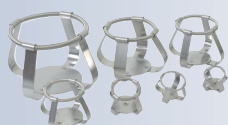
Our BOECO ES-20/80 shaker-incubator for biotechnological and pharmaceutical laboratories is a professional category equipment. The typical applications include microbiological and cell culture cultivation, protein expression, solubility studies, general mixing, as well as other various applications in 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 PID-control 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)
Digital time setting	1 min–96 hrs / non-stop (1 min increment)
Maximum continuous operation time	30 days
Maximum load	10,6 kg
Orbit	20 mm
Stacking	up to 3
Display	TFT
Data transfer	Bluetooth
Temperature setting range	+25°C... +80°C (increment 0,1°C)
Temperature control range	10°C above ambient... +80°C
Sample temperature uniformity	$\pm 0,3$ °C at 37°C
Temperature precision	$\pm 0,1$ °C at 37°C
Temperature accuracy	$\pm 0,1$ °C at 37°C
Sample temperature stability	$\pm 0,1$ °C at 37°C
Heat up time to max. temperature	75 min
Overall dimensions (WxDxH)	620 x 530 x 510 mm
Dimensions of the inner chamber	460 x 350 x 400 mm
Weight	48 kg
Nominal operating voltage	230 V, 50/60 Hz or 120 V, 50/60 Hz
Power consumption	230 V / 450 W (2 A) 120 V / 450 W (4.5 A)



Code	Description
BOE 8086000	Orbital Shaker Incubator ES 20/80 230V, 50/60Hz, without platform
BOE 8086100	Orbital Shaker Incubator ES 20/80 120V, 50/60Hz, without platform

### Accessories

Code	Description
BOE 8086400	Platform PP-400 360 x 400 mm with silicone mat
BOE 8080005	Universal tray platform 360 x 360 mm clamps have to be ordered separately
BOE 8082003	Tight fit clamp, 100 ml max.: 25 pcs.
BOE 8082004	Tight fit clamp, 250 ml max.: 16 pcs.
BOE 8082005	Tight fit clamp, 500 ml max.: 9 pcs.
BOE 8082006	Tight fit clamp, 1000 ml max.: 9 pcs.
BOE 8082007	Tight fit clamp, 2000 ml max.: 4 pcs.
BOE 8086015	Test tube rack TR-44/15 for 44 x 15 ml tubes
BOE 8086050	Test tube rack TR-21/50 for 21 x 50 ml tubes