

# ES-20/60, Orbital Shaker-Incubator

## DESCRIPTION

Orbital Shaker-Incubator ES-20/60 for biotechnological and pharmaceutical laboratories is a professional category equipment designed for cultivation of microorganisms and eukaryotic cells including animal, plant and insect cells. It is also possible to cultivate thermophilic bacteria in ES-20/60 shaker-incubator.

Shaker is equipped with a direct-drive mechanism for platform motion. It provides reliable and stable operation for the long term experiments needed for cell growth.

Shaker-Incubator ES-20/60 provides smooth or intensive mixing in flasks installed on the platform.

Built-in noiseless thermoresistant brushless fan provides precise temperature distribution inside the chamber (adjustable for up to +80°C). The inner chamber is made of stainless steel. State-of-the-art motor, newest thermal insulation materials, soft-start of the platform motion and temperature PID-control decrease the energy consumption and make the Shaker-Incubator highly energy efficient despite its relatively large size.



## SPECIFICATIONS

Temperature setting range	+25°C... +80°C
Temperature control range	10°C above ambient... +80°C
Speed control range	50–250 rpm (increment 10 rpm)
Temperature stability	±0.5°C
Temperature setting resolution	0.1°C
Temperature accuracy at +37°C	±2°C
Temperature uniformity at +37°C	±2°C
Orbit	20 mm
Display	LCD, 2 × 16 signs
Digital time setting	1 min–96 hrs / non-stop (1 min increment)
Timer sound signal	+
Maximum load	8 kg
Maximum continuous operation time	30 days
Dimensions of the inner chamber	460 × 400 × 310 mm
Overall dimensions (W×D×H)	590 × 525 × 510 mm
Weight	41.1 kg
Power consumption (230V / 120 V)	450 W (2 A) / 450 W (4.5 A)
Nominal operating voltage	230 V, 50/60 Hz or 120 V, 50/60 Hz

## CAT. NUMBER

Without platform	Without platform
BS-010135-AAA	230VAC 50/60Hz Euro plug
BS-010135-AAB	230VAC 50/60Hz UK plug
BS-010135-AA3	230VAC 50/60Hz AU plug
BS-010135-AAC	120VAC 60Hz US plug
please, inquire	100VAC 50/60Hz US plug
BS-010135-HK	IQ OQ document
BS-010135-IK	PQ document

ACCESSORIES



**P-30/100**  
BS-010135-BK  
platform

Platform with clamps for flasks.



**P-16/250**  
BS-010135-CK  
platform

Platform with clamps for flasks.



**P-9/500**  
BS-010135-AK  
platform

Platform with clamps for flasks.



**P-6/1000**  
BS-010135-DK  
platform

Platform with clamps for flasks.



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

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



**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**



**FC-50**  
BS-010126-MK  
clamp

Clamp 50 ml - Ø50 mm for **UP-168**



**FC-100**  
BS-010126-HK  
clamp

Clamp 100 ml - Ø65 mm for **UP-168**



**FC-250**  
BS-010126-JK  
clamp

Clamp 250 ml - Ø85 mm for **UP-168**



**FC-500**  
BS-010126-LK  
clamp

Clamp 500 ml - Ø105 mm for **UP-168**



**FC-1000**  
BS-010126-IK  
clamp

Clamp 1000 ml - Ø130 mm for **UP-168**