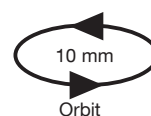


# ES-20 compact shaker-incubator

## ES-20 compact shaker-incubator

Versatile and programmable bench-top orbital shaker-incubator for mixing and incubating biological cultures and samples in a variety of flasks and vessels.

- Digital control of time, temperature and shaking speed for accuracy and repeatability
- Variable speed: 50 to 250rpm
- Temperature setting range: +25°C to 42°C
- Load up to 2.5kg
- Interchangeable platforms for shaking/incubating different vessels\*



ES-20 shaking incubator with PUP-12 universal platform shown (order platform separately)

Simple to programme time, temperature and shaking speed using clear 2-line, 16 character LCD.

Robust, compact construction with clear 7mm thick Plexiglass® panels.

Option of five easily interchangeable platforms for a wide range of applications\*.

Temperature control by microprocessor plus forced heated air circulation ensures a constant and even temperature within the chamber.

Designed for easy assembly/disassembly – easy to move from one location to another. Comes flat packed - no special tools required.

Equipped with direct drive shaking system for reliable, long-term operation.



\* supplied without platform, please order separately.

### Applications:

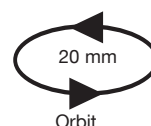
- Life-sciences - suitable for growing cell cultures in flasks, extracting tissue samples at physiological temperatures, sample preparation processes, mixing of biological liquids as well as the incubation and cultivation of biological liquids, growing e-coli, bioluminescence preparation

# ES-80 Shaker-incubator

## ES-80 shaker-incubator

Stable and reliable with programmable time, temperature and shaking speed. This orbital shaker-incubator is ideal for vigorous or even mixing and incubation of samples in a variety of flasks and vessels.

- **Digital control of time, temperature and shaking speed for accuracy and repeatability**
- **Variable speed: 50 to 250rpm**
- **Temperature setting range: +25°C to 80°C**
- **Load up to 8kg**
- **Interchangeable platforms for shaking/incubating different vessels**



ES-80 shaking incubator with P9-500 platform shown (order platform separately)

Simple to programme time, temperature and shaking speed using clear 2-line, 16 character LCD.

Robust, compact construction with stainless steel inside chamber.

Option of five easily interchangeable platforms for a wide range of applications.

State of the art motor, thermal insulation materials and temperature PID-control decreases the energy consumption - preserves the environment.

Temperature control by microprocessor plus forced heated air circulation ensures a constant and even temperature within the chamber.

'Soft start' and stop protects samples.

Equipped with direct drive shaking system for reliable, long-term operation



\* supplied without platform, please order separately


### Applications:

- Life-sciences - cultivation of micro-organisms, cells and eukaryotic cells including animal, plant and insect cells, long-term cell growth projects, more vigorous shaking possible allowing other sample preparation processes including tissue sample extraction at physiological temperatures and up to 80°C, solubility studies, cell culture, staining/destaining, extraction procedures, gel washing, plasmid purification, bacterial suspension, hybridisation, protein expression in bacteria

## Orbital shaker-incubators » Technical specifications and accessories

## Orbital shaking incubators – Technical specifications

• = optional

		ES-20	ES-80
		 <p>h: 435mm d: 340mm w: 340mm weight: 13.2kg</p>	 <p>h: 510mm d: 525mm w: 590mm weight: 41.1kg</p>
Speed range	rpm	50 to 250	
Stability	±°C	0.5	
Orbit	mm	10	20
Temperature setting range	°C	+25 to 42	+25 to 80
Temperature setting resolution	°C	0.1	0.1
Continuous operation		30 days (720 hours)	30 days (720 hours)
Timer		1 min to 96 hours	
Load capacity	kg	2.5	8
Internal working dimensions (with installed platform) (d x w x h)	mm	260 x 300 x 250	450 x 390 x 300
Display		2 line, 16 character LCD	2 line, 16 character LCD
Nominal operating voltage	V	120 or 230 (50/60Hz)	230 (50-60Hz)
Power consumption	W	160 (0.7A)/170 (1.6A)	450 (2A)

## Accessories

<b>P12-100</b> Platform with clamps for 12 x 100-150ml flasks/beakers Dimensions: 250 x 190mm		•	–
<b>PP4</b> Flat platform with non-slip rubber mat for Petri dishes and culture flasks Dimensions: 219 x 219mm		•	–
<b>P6-250</b> Platform with clamps for 6 x 250-300ml flasks/beakers Dimensions: 250 x 190mm		•	–
<b>PUP-12</b> Universal platform, with adjustable bars. Dimensions: 270 x 195mm HB-200 extra holding bars		•	–
<b>P16-88</b> Platform with spring holders for up to 88 tubes, 30mm diameter		•	–
<b>PP-400</b> Flat platform with non-slip rubber mat (360 x 400mm)		–	•
<b>P30-100</b> Platform with clamps for 30 x 100-150ml flasks		–	•
<b>P16-250</b> Platform with clamps for 16 x 250-300ml flasks		–	•
<b>P9-500</b> Platform with clamps for 9 x 500ml flasks		–	•
<b>P6-1000</b> Platform with clamps for 6 x 1000ml flasks		–	•