



OS-20 ILLUSTRATED WITH
PP-4 PLATFORM

BOECO UNIVERSAL ORBITAL SHAKER OS-20

Compact, low-profile, orbital laboratory shaker for versatile applications in the fields of biotechnology, microbiology and medical diagnostics. The OS-20 provides gentle rotational mixing and precise circulation at each point of the platform. Variable digital displayed speed control from 50-250 rpm. Digital timer for setting a time interval and continuous operation.

Specification:

| | |
|-------------------|----------------------------------------|
| Kind of motion: | orbital |
| Orbit size: | 20 mm |
| Speed regulation: | 50 - 250 rpm |
| Speed display: | digital (LED) |
| Timer: | from 1 min to 999 min / continuous |
| Time display: | digital (LED) |
| Max. load: | 2,5 kg excl. attachment |
| Power: | 12 V. DC 2,0A (External power adapter) |
| Overall size : | 265 x 270 x 70 mm (w/o attachment) |
| Weight: | 3,2 kg. |

Code

BOE 8059000

Description

Universal Orbital Shaker OS-20, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)



PSU-10i ILLUSTRATED WITH
UP-12 PLATFORM

BOECO UNIVERSAL ORBITAL SHAKER PSU-10i

Equipped with the direct drive system and brushless motor, our compact, powerful and quiet microprocessor controlled orbital laboratory shaker for many general purpose shaking applications. Speed and time setting are easy and during operation the LCD status display clearly indicates both set and actual speed, plus set and elapsed time.

Specification:

| | |
|-------------------|----------------------------------------|
| Kind of motion: | orbital |
| Orbit size: | 10 mm |
| Speed regulation: | 50 - 450 rpm |
| Speed display: | digital (LCD) |
| Timer: | from 1 min to 96 hours / continuous |
| Time display: | digital (LCD) |
| Max. load: | 3 kg excl. attachment |
| Power: | 12 V. DC 2,0A (External power adapter) |
| Overall size: | 220 x 205 x 90 mm (w/o attachment) |
| Weight: | 3,4 kg |

Code

BOE 8069200

Description

Universal Orbital Shaker PSU-10i, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

ACCESSORIES FOR OS-20 AND PSU-10i

PLATFORM PP-4

Code

BOE 8059001

Description

Dish platform PP-4 with silicone mat for Petri dishes, culture flasks etc. 235 x 235 mm

PLATFORM UP-12

BOE 8059002

Universal platform UP-12 for all kind of flasks 285 x 215 mm, stainless steel with variable clamping rolls and silicone mat.

PLATFORM P-6/250

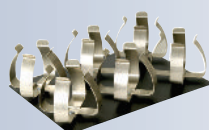
BOE 8059003

Numbers of flasks at the platform
100- 150 ml flasks max 12-9 pieces
200- 250 ml flasks max 6-4 pieces
500-1000 ml flasks max 4-2 pieces

PLATFORM P-12/100

BOE 8059004

Platform P-6/250 with fixed clamps for 6 flasks 250/300 ml, 250 x 190 mm
Platform P-12/100 with fixed clamps for 12 flasks 100/150 ml, 250 x 190 mm



BOECO PROGRAMMABLE ORBITAL SHAKER PSU-15i

The PSU-15i belongs to a generation of multifunctional mixing devices: The design, direct drive system, brushless motor (service life up to 35000 hours) and automatic loading balancing system make the PSU-15i even more reliable especially for the long non-stop operation. The PSU-15i has a microprocessor control which allows real-time program correction, indication of set and actual speed, angle and time, operation timer in the display.

1. Orbital motion



simple even circular motion - common type of motion used in shakers. Adjustable speed from 20 to 250 rpm.

2. Reciprocal motion



vertical rotation with changing direction of rotation. Adjustable turning angle (from 0° to 360°, increment 30°) sets the limits for this type of motion. The speed is the same as set for rotational motion (from 20 to 250 rpm).

3. Vortex motion of the platform (vibration)



intensive mixing of samples at high speed with small amplitude - Vortex motion. Adjustable turning angle of 0° to 5° (increment 1°)

Specification:

| | |
|------------------------------|-------------------------------------|
| Kind of motion: | orbital |
| Orbit size: | 20 mm |
| Speed regulation: | 20 - 250 rpm |
| Speed display: | digital (LCD) |
| Timer: | from 1 min to 96 hours / continuous |
| Time display: | digital (LCD) |
| Max. load: | 8 kg |
| Continuous operation time: | max 168 hrs. |
| Power (external): | DC 12 V. 3,2 A |
| Overall size (w/o platform): | 410 x 410 x 130 mm |
| weight: | 11,7 kg |

Code

Description

| | |
|-------------|----------------------------------------------------------------|
| BOE 8079000 | Orbital Shaker PSU-15i, 100-240VAC/12DC 4,16A without platform |
|-------------|----------------------------------------------------------------|

Accessories

Code

Description

| | |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BOE 8079010 | Universal platform UP-330 for all kind of flasks 430 x 330 mm, stainless steel with 4 variable clamping rolls and rubber mat. |
| BOE 8080011 | Flat platform PP-20, 480 x 380 mm |
| BOE 8080012 | 4 level platform PP-20-4, 480 x 380 x 170 mm Distance between platforms: 170 mm Total height: 510 mm |
| BOE 8080005 | Universal tray platform, 360 x 360 mm with holes to accommodate clamps for Erlenmeyer flasks, separating funnels and test tube racks Clamps have to be ordered separately |
| BOE 8081001 | Spring clamp, 25 ml max.: 36 pcs. |
| BOE 8081002 | Spring clamp, 50 ml max.: 36 pcs. |
| BOE 8081003 | Spring clamp, 100 ml max.: 25 pcs. |
| BOE 8081004 | Spring clamp, 250 ml max.: 16 pcs. |
| BOE 8081005 | Spring clamp, 500 ml max.: 9 pcs. |
| BOE 8081006 | Spring clamp, 1000 ml max.: 9 pcs. |
| BOE 8081007 | Spring clamp, 2000 ml max.: 4 pcs. |
| BOE 8081009 | Holding device for Separating funnels 250-1000 ml |



PSU-15i WITH PLATFORM UP-330



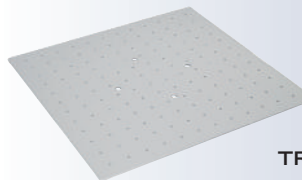
PSU-15i WITH TRAY PLATFORM



PP-20



PP-20-4



TRAY PLATFORM



SPRING CLAMPS



HOLDING DEVICE FOR SEPARATING FUNNELS

Available Q3/2018 !



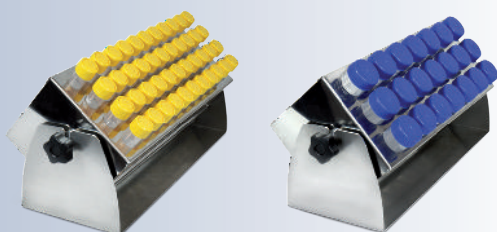
BOECO ORBITAL SHAKER INCUBATOR ES-20/80

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 ± 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 8081003 | Spring clamp, 100 ml max.: 25 pcs. |
| BOE 8081004 | Spring clamp, 250 ml max.: 16 pcs. |
| BOE 8081005 | Spring clamp, 500 ml max.: 9 pcs. |
| BOE 8081006 | Spring clamp, 1000 ml max.: 9 pcs. |
| BOE 8081007 | Spring 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 |