

SHAKER AND STIRRER

BOECO VORTEX MIXER V1 PLUS

Vortex mixer V1 plus with variable speed control. Continuous operation as well as with automatic starter, triggered by pressing the attachment. Incl. standard attachment for test tubes up to 20 mm ø.



V1 PLUS

Specification:

Kind of motion:	orbital, 4 mm
Speed range:	300 - 3000 rpm.
Time of acceleration:	3 sec.
Tube's capacity:	1,5-50ml
Speed display:	scale (min/max)
Switch:	touch / continuous mode
Overall size:	80 x 140 x 70 mm
Weight:	0,9 kg
Power:	12 V, 1,5A 18W (External power adapter)

Code

BOE 8055000

Description

Vortex mixer V1plus, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

Available Q1/2015 !



V2H

BOECO VORTEX MIXER V2H

Heavy Vortex mixer with brushless motor, digital display and optional attachments.

Specification:

Motor:	brushless DC motor
Kind of motion:	orbital, 4 mm
Speed range:	300 - 4200 rpm. / speed accuracy: ± 10 rpm
Max loading capacity:	500 g
Display:	digital speed / time setting
Switch:	ON / OFF/ Touch
Pulse mode (default):	vibration for 5 secs than pause for 5 secs.
Pulse mode (programm):	vibration time & pause time can be defined by user between 1 to 99 secs.
Timer	1 to 999 mins. & continuous mode
Overall size:	205 x 136 x 138,5 mm
Weight:	2,8 kg
Power:	external power adapter, 1,6A

Code

BOE 8062000

Description

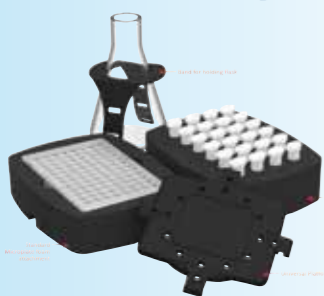
Vortex mixer V2H, with standard Vortex cup

BOE 8062001

Microplate/Microtube (20x1,5/2,0ml) attachment

BOE 8062003

Erlenmeyer flask attachment



BOECO SUNFLOWER MINI-SHAKER 3D

Mini-Shaker 3D with adjustable speed and constant angle of mixing. Very small and ideal for private diagnostics. Incl. black non-slip rubber mat.

Specification:

Kind of motion:	three-dimensional orbital movement
Angle:	7°
Speed range:	10 - 30 rpm
Speed display:	scale (min/max)
Platform size:	200 x 200 mm
Overall size:	85 x 150 x 80 mm
Max Loading:	500 g
Weight:	1,0 kg
Power:	12 V, 300 mA (External power adapter)

Code

BOE 8058000

Description

Sunflower Mini Shaker 3D, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

BOE 8050200

Dimpled mat



3D

DIMPLED MAT

BOECO MAGNETIC STIRRER MMS 3000

Motor drive magnetic stirrer, with stainless steel plate and speed regulation up to 3000 rpm. An optional to be ordered detachable support rod allows to fix different sensors (temperature, pH etc. inside the Liquid).

Specification:

Speed range:	0 - 3000 1/min
Max. stirring volume:	up to 20,0 L
Platform size:	160 mm diam.
Platform material:	stainless steel
Support rod height:	320 mm
Overall size:	185 x 230 x 80 mm
Weight:	1,5 kg
Power:	12 V, 1,5A 18W (External power adapter)

Code

BOE 8056500

Description

Magnetic stirrer MMS-3000, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

BOE 8056501

Detachable support rod



MMS 3000



BOECO MAGNETIC STIRRER WITH HOTPLATE MSH 130

Motor drive Magnetic stirrer with aluminum hot plate for simultaneously stirring and heating of chemical reagents. „Hot-Surface“ alert indicator light when the plate temperature exceeds 60°C

Specification:

Speed range:	250 - 1500 1/min
Max- plate temp.:	370 C°.
Max. stirring volume:	Up to 5,0 L
Hot Platform size:	130 mm diameter
Hot Platform material:	Aluminium
Control:	Thermostatic
Overall size:	173 (w) x 281 (d) x 101 (h) mm
Heating power:	220 Watts
Weight:	3,1 kg

Code

BOE 8013000

Description

Magnetic stirrer with hotplate MSH 130,220V

BOE 8013100

Magnetic stirrer with hotplate MSH 130,110V



MSH 130

BOECO MAGNETIC STIRRER WITH HOTPLATE MSH 420

Motor drive Magnetic stirrer with all in one glass-ceramic hot plate for simultaneously stirring and heating of chemical reagents.

The Glass-ceramic top plate is easy to clean, chemical-resistant, corrosion-resistant and scratch resistant.

The MSH 420 provides LED Indicators for Power, Heating and Stirring.

Specification:

Speed range:	60 - 1110 1/min
Temperature regulation:	ambient temperature to 450 C°.
Max. stirring volume:	up to 15,0 l
Hot Platform size:	200 x 200 mm
Hot Platform material:	glass-ceramic
“Hot Top” indicator:	a “Hot” light illuminates if the temperature on the hot plate exceeds 55°C
Over-Heat protection:	The heating power will cutoff in abnormal situations by limiting top plate temperature to 550 °C and light flash
Overall size:	320 (w) x 210 (d) x 105 (h) mm
Heating power:	750 Watts
Weight:	3,6 kg

Code

BOE 8054000

Description

Magnetic stirrer with hotplate MSH 420, 220V

BOE 8054100

Magnetic stirrer with hotplate MSH 420, 110V



MSH 420

OVERHEAD STIRRER

BOECO OVERHEAD STIRRER OSD-20

- ▶ With digital display
- ▶ Robust, slimline, ergonomic design
- ▶ With constant power-drive
- ▶ Two speed ranges for universal use from 60-2.000 rpm
- ▶ Push-through agitator shafts (only when stationary)

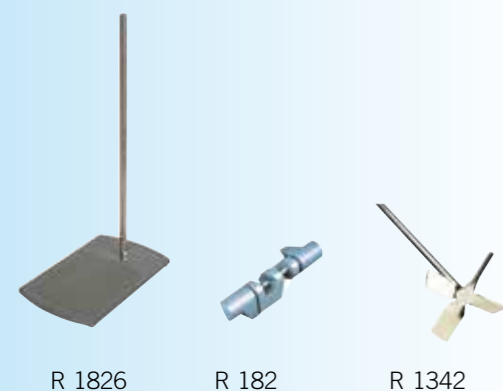
Technical details

Stirring quantity (H ₂ O):	20 L
Max. viscosity:	10.000 mPas
Motor rating input/output:	70 / 35 W
Output at stirring shaft:	26 W
Max. ON-time	100%
Max. torque at chuck (100rpm)	150 Ncm
Speed range I (50 Hz)	60 - 500 rpm
Speed range II (50 Hz)	240 - 2.000 rpm
Speed display:	digital
Chuck range:	0,5 - 10 mm
Diameter:	13 mm
Length of extension arm:	160 mm
Protection class:	IP 20
(acc. to DIN EN 60529)	
Dimensions in mm (WxDxH):	88 x 212 x 294
Net weight:	approx. 3,1 kg

The OSD-20 conforms to the CE mark and all relevant EC standards and DIN norms and has been manufactured under ISO 9001:2000

Code	Description
BOE 8901160	BOECO overhead stirrer OSD-20, 220-240V, 50/60 Hz, Euro plug, package , incl. Plate stand R 1826, Boss head clamp R 182 and Propeller stirrer R 1342
BOE 8901162	BOECO overhead stirrer OSD-20, 220-240V, 50/60 Hz, UK plug, package , incl. Plate stand R 1826, Boss head clamp R 182 and Propeller stirrer R 1342
BOE 8901161	BOECO overhead stirrer OSD-20, 115 V, 50/60 Hz, US plug, package , incl. Plate stand R 1826, Boss head clamp R 182 and Propeller stirrer R 1342

ACCESSORIES INCLUDED:



R 1826

R 182

R 1342

BOECO OVERHEAD STIRRER OSD-20

BOECO ROTARY VISCOMETER BRV 3000

is a rotational viscometer for fast determination of viscosity as specified in ISO 2555 and other ASTM norms. The BRV 3000 offers viscosity measurements which are 100 % compatible with Brookfield method and permits to carry out comparative measurements in accordance to recognized standards in quality control laboratories.

Viscometers are present in different industrial sectors - chemical, food, pharmaceutical, cosmetic and print industry - to measure viscosity beneath others of products like: adhesives, paints and coatings, inks, dairy products, hot wax, solvents, paper, pulp, gel, asphalt, chocolate, varnish, oils.

The BRV 3000 comes with under- and over range warning signal, RS 232 interface, temperature probe (PT 100) and has a digital display for direct reading of the following parameters:

Speed selected:	RPM
Spindle used:	Spindle Reference
Dynamic viscosity:	mPas or CP
Full scale percentage:	%
Sample temperature:	°C or °F
Auto range to display viscosity limits:	mPas or CP

Two different versions are available "L" for low to medium viscosity and "R" for medium to high viscosity.

They will be supplied with PC based Software "ViscosoftBasic", which allows to download data directly from the Viscometer. Measured values are shown in a chart and can be saved in Excel format for posterior evaluation.

Scope of Delivery:

The BRV 3000 is supplied as a complete system in a very robust carrying case, incl. stand, a complete set of standard spindles with storage rack (4 spindles with version L and 6 spindles with version R), spindle guard, temperature sensor, Viscosoft Basic Software, calibration certificate and user manual.

Code	Description
BOE 8803001	BOECO BRV 3000 Rotary Viscometer L Version - for low to medium viscosity 3 - 2.000.000 mPas in 76 ranges 19 speeds with 4 spindles. 100-240V, 50-60HZ
BOE 8803003	BOECO BRV 3000 Rotary Viscometer R Version - for medium to high viscosity 20 - 13.000.000 mPas in 114 ranges 19 speeds with 6 spindles. 100-240V, 50-60HZ

Optional accessories:

BOE 8803007	Special Spindel R1 applicable to version R. It allows to extend the lower viscosity limit: 5 - 33.000 mPas/cP
BOE 8803100	Adapter for low viscosity materials incl. coaxial spindle
BOE 8803110	Adapter for low viscosity materials with integrated temperature sensor
BOE 8803200	Adapter for small sample volumes
BOE 8803210	Adapter for small sample volumes with integrated temperature sensor
BOE 8803202	Special Spindel Set V1 L (TL5-TL7) for adapter for small sample volumes
BOE 8803203	Special Spindel Set V1 R (TR8-TR11) for adapter for small sample volumes
BOE 8803201	Adapter for helicoidal movement





MR-1

BOECO MINI-ROCKER SHAKER MR-1

provides gentle rocking motion. It is perfect for soft mixing of biological components. Incl. black non-slip rubber mat

Specification:

Kind of motion:	rocking with fixed 7° angle
Speed range:	7,5 - 30 rpm
Speed display:	scale (min/max)
Timer:	digital, 1 min - 23h 59min
Platform size:	200 x 200 mm
Overall size:	220 x 205 x 120 mm
Max Loading:	500 g
Weight:	1,6 kg
Power:	12 V. 500 mA (External power adapter)

Code	Description
BOE 8058500	MR-1, Mini-rocker Shaker, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

BOECO ROTATOR MULTI BIO RS-24

is a intelligent rotator for soft mixing microtubes and vacutainers. The BioRotator RS-Multi provides 3 types of motion, which can be used separately (except for vortex mode, which works in conjunction with reciprocal motion mode) and consecutively in a cycle:

1. Orbital motion

simple even circular motion - common type of motion used in Rotators. Adjustable speed from 5 to 30 rpm.

2. Reciprocal motion

vertical rotation with changing direction of rotation. Adjustable turning angle (from 15° to 90°, increment 15°) sets the limits for this type of motion. The speed is the same as set for rotational motion (from 5 to 30 rpm). In this type of motion there is a pause function (from 0 to 5 sec., increment 1 sec.) settable in the Vortex/pause mode.

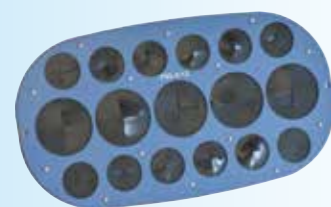
3. Vortex motion

intensive mixing of samples at high speed with small amplitude - Vortex motion. The vortex mode is necessary for intensive mixing in and it is provided to decrease adhesion of solutions with tube surface, which is especially important for conducting microquantity research when the sample weight may be equal to the adhesion force. The vortex mode has an adjustable turning angle of 0° to 5° (increment 1°) and the timer has a pause function from 0 to 5 sec., increment 1 sec.)

Specification:

Standard platform capacity:	26 (Microtubes and vacutainers)
Power (external):	12 V. 500 mA
Size:	365 mm x 195 mm x 155 mm
Weight:	1,8 kg

Code	Description
BOE 8073000	Rotator Multi Bio RS-24, with platform PRS-26 AC Adapter 100-240V with Multi plug (EU, US, UK, AU)
BOE 8073002	Platform PRS-5/12 (5 x 30 mm diam. and 12 x 15 mm diam.)

ROTATOR
MULTI BIO RS-24

PRS-5/12

BOECO ROTATOR BIO RS-24

Mini-rotator with vertical rotation of the platform for soft mixing of test tubes, microtubes and vacutainers.

Incl. Standard platform PRS-22 for 22 tubes up to 15 mm diam.

Specification:

Speed range:	5 - 30 1/min
Digital Timer:	from 1 min to 23 h 59 min
Overall size:	310 x 110 x 175 mm
Weight:	1,5 kg
Power:	12 V. 500 mA (External power adapter)

Code	Description
BOE 8024000	Rotator Bio RS-24, with platform PRS-22, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)
BOE 8073001	Platform PRS-4/12 (4x30 mm diam and 12x15 mm)



RS-24

BOECO MICROTITER PLATE SHAKER PSU-2T PLUS

Specially designed for medical diagnostic. Orbital shaking platform IPP-2 with a holding mechanism for 2 standard microtiter plates. The variable speed control provides a optimally adapted speed range from 150 to 1000 rpm with an orbit of 2 mm.

Specification:

Orbit size:	2 mm
Speed range:	150 - 1000 1/min
Speed display:	scale (min/max)
Timer:	digital, 1 min - 23h 59min
Overall size:	220 x 205 x 90 mm
Weight:	2,5 kg
Power:	12 V. 500 mA (External power adapter)

Code	Description
BOE 8052000	Microtiter Plate Shaker PSU-2T plus, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)
BOE 8052002	Platform IPP-4 for 4 Microtiter Plates



PSU-2T PLUS



BOECO MICROPLATE INCUBATOR SHAKER PST-60 HL

The PST-60 HL shakers provide orbital shaking of the samples and have a heating platform for 2 x 96 or 4 x 96 wells microplates and an upper heating lid. The display indicates simultaneous set and actual time, temperature and shaking speed. The PST-60 HL are ideal for a variety of cytochemistry, immunochemistry, biochemistry and research applications.

Specification:

Temperature regulation range:	25°C 60°C	
Accuracy:	± 0,1 °C	
Temp. Uniformity over the platform:	± 0,2 °C	
Time of thermoblock heating from RT till 37°C:	15 - 20 min.	
Orbit :	2 mm	
Speed regulation:	250 -1200 rpm / increment 10 rpm	
Timer with sound signal:	0 min - 96 hrs, increment 1 min	
Power (external) :	DC 12 V. 4,16 A	
Platform dimensions:	PST-60 HL 250 x 150 mm	PST-60 HL 4 210 x 290
Number of microplates:	2	4
Size :	270x260x125 mm	380x390x140mm
Weight incl. power supply :	6,0 kg	9,0 kg

Code	Description
BOE 8072000	Microplate Incubator Shaker PST-60 HL, for 2 plates, AC 100-240V, 50/60 Hz
BOE 8072040	Microplate Incubator Shake PST-60 HL 4, for 4 plates, AC 100V-240V, 50/60 Hz

PST-60 HL
PLUSPST-60 HL 4
PLUS

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:	12VDC 500 mA (External power adapter)
Overall size :	265 x 270 x 70 mm (w/o attachment)
weight:	3,9 kg.

Code	Description
BOE 8059000	Universal Orbital Shaker OS-20, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

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:	12V. AC 1000 mA (External power adapter)
Overall size:	270 x 260 x 85 mm (w/o attachment)
weight:	3 kg

Code	Description
BOE 8069200	Universal Orbital Shaker PSU-10i, AC Adapter 100-240V with Multi plug (EU, US, UK, AU)

ACCESSORIES FOR OS-20 AND PSU-10i

Code	Description
BOE 8059001	Dish platform PP-4 with rubber mat for petri dishes, culture flasks etc. 235 x 235 mm
BOE 8059002	Universal platform UP-12 for all kind of flasks 285 x 215 mm, stainless steel with variable clamping rolls and rubber mat. 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
BOE 8059003	Platform P-6/250 with fixed clamps for 6 flasks 250/300 ml., 250 x 190 mm
BOE 8059004	Platform P-12/100 with fixed clamps for 12 flasks 100/150 ml., 250 x 190 mm



PLATFORM P-6/250



PLATFORM P-12/100

BOECO PROGRAMMABLE ORBITAL SHAKER PSU-15i

The PSU-15i belongs to a new generation of multifunctional mixing devices: The new design, direct drive system, brushless motor (service life up to 35000 hours) and automatic loading balancing system make the new 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 30 to 250 rpm.



2. Reciprocal motion

vertical rotation with changing direction of rotation. Adjustable turning angle (from 15° 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. 4,1 A
Overall size (w/o platform):	410 x 410 x 130 mm
weight:	14 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	Tray platform made out of Aluminium, 360 x 360 mm with holes to accommodate clamps for Erlenmeyer flasks, separating funnels and test tube racks
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
BOE 8081103	Erlenmeyer clamp, plastic, 100 ml max.: 16 pcs.
BOE 8081104	Erlenmeyer clamp, plastic, 250 ml max.: 9 pcs.
BOE 8081105	Erlenmeyer clamp, plastic, 500 ml max.: 9 pcs.
BOE 8081106	Erlenmeyer clamp, plastic, 1000 ml max.: 5 pcs.



PSU-15i WITH PLATFORM UP-330



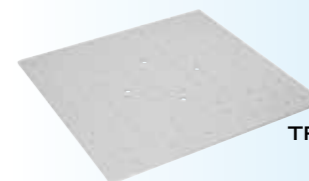
PSU-15i WITH TRAY PLATFORM



PP-20



PP-20-4



TRAY PLATFORM



SPRING CLAMPS / ERLLENMEYER CLAMPS

HOLDING DEVICE FOR
SEPARATING FUNNELS