

Multi-Rotators

MULTI-SHAKERS AND MULTI-ROTATORS PROVIDE SEVERAL MOTION TYPES IN ONE INSTRUMENT substantially increasing the options and effectiveness of sample preparation for the examined materials and allow adjusting the mixing procedure according to individual tasks.

Multi-Shakers (Multi-Rotators) can be used for variety of applications in modern life science laboratories: for hybridization reactions, cell growing, gel washing, soft extraction and homogenisation of biological components in solutions, in diffusion processes.

Multi Bio RS-24, Programmable rotator

Multi-Rotator **Multi Bio RS-24** is an ideal instrument for small laboratories.

Standard platform of **Multi Bio RS-24** can accommodate 22 tubes up to 15 mm diameter (1.5ml, 2ml, 15ml tubes). Optional combined platform **PRS-4/12**: 4 tubes up to 30 mm diameter (50ml tubes) and 12 tubes up to 15 mm diameter (1.5ml, 2ml, 15ml tubes).

Several options in 1 instrument: 1. **Rotation**, 2. **Reciprocal rotation**, 3. **Vibro**.

Specifications:

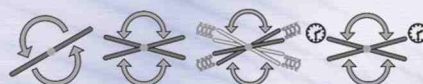
- Speed range of vertical and reciprocal rotation mode 5 - 30 RPM
- Timer of vertical and reciprocal rotation mode 0 - 250 s
- Turning angle of reciprocal rotation mode 15 - 90° (increment 15°)
- Turning angle of vibro mode 0 - 5° (increment 1°)
- Pause/Vibro timer 0, 1, 2, ... 5 s
- General timer of device operation 1 min - 24 hours (increment 1 min)
- Maximum loading 0.4 kg
- Overall dimensions 310x110x175 mm
- Weight, not more 1.8 kg
- Power supply External power supply: DC 12V, 500 mA

Underway is improved version **Multi RS-24N** with advanced specifications: speed range 1-250 RPM (increment 1 RPM), turning angle step (reciprocating and vibro motion) - 1 degree.

Catalogue number

Multi Bio RS-24 with platform PRS-22	BS-010117-AAG
PRS-4/22	BS-010117-AK

Multi Bio RS-24



Multi Rotation



PRS-4/12



PRS-22

Multi RS-60, Programmable rotator

It is more efficient to use **Multi RS-60** in the analytic laboratories with higher capacity.

Several options in 1 instrument: 1. **Rotation**, 2. **Reciprocal rotation**, 3. **Vibro**.

Specifications:

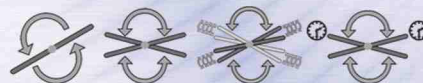
- Speed range of vertical and reciprocal rotation mode 5 - 60 RPM
- Timer of vertical and reciprocal rotation mode 0 - 250 s
- Turning angle of reciprocal rotation mode 15 - 90° (increment 15°)
- Turning angle of vibro mode 0 - 5° (increment 1°)
- Pause/Vibro timer 0, 1, 2, ... 5 s
- General timer of device operation 1 min - 24 hours (increment 1 min)
- Maximum loading 0.8 kg
- Overall dimensions 430x230x230 mm
- Weight, not more 3.7 kg
- Power supply External power supply: DC 12V, 4, 16 A

Underway is improved version **Multi RS-60N** with advanced specifications: speed range 1-250 RPM (increment 1 RPM), turning angle step (reciprocating and vibro motion) - 1 degree.

Catalogue number

Multi Bio RS-60 with platform PRS-48	BS-010118-AAI
PRS-8/22	BS-010118-AK
PRS-14	BS-010118-BK

Multi RS-60



Multi Rotation



PRS-14



PRS-48



PRS-8/22

Standard platform:

- **PRS-48** 48 tubes up to 15mm diameter (1.5ml, 2ml, 15ml tubes),

Optional platform:

- **PRS-8/22** 8 tubes up to 30 mm diameter (50ml tubes) and 22 tubes up to 15 mm diameter (1.5ml, 2ml, 15ml tubes),
- **PRS-14** 14 tubes up to 30 mm diameter (50ml tubes),

Multi Bio 3D, Programmable "3D Sunflower" Shaker

Microprocessor control on **Multi Bio 3D** allows realizing not only (1) orbital 3D rotation of the platform, but also (2) reciprocal 3D motion (ping-pong type) and (3) soft vibrating rocking. These 3 motions can be used separately, in combinations by two, and in cycles for consecutive realization of three motions.

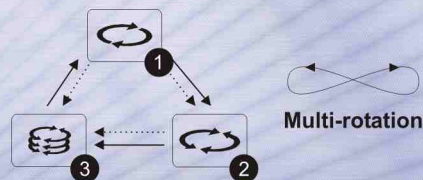
Specifications:

- Speed range (Orbital and reciprocating motion) 5 - 30 RPM
- Turning angle (Reciprocating motion) 0° - 360° (increment 30°)
- Turning angle (Vibro motion) 0° - 6° (increment 1°)
- Platform tilt angle 7°
- Platform working area 200x200 mm
- Orbit diameter 22 mm
- Timer for Orbital and reciprocating motion 0 - 250 sec
- Timer for Vibro motion 0 - 5 sec
- Number of cycle repetitions 0 - 125 times
- Maximum loading 1 kg
- Optional adapter **TP-26** for 26 tubes (up to 11 mm diameter) (see photo on page 5)
- Overall dimensions 235x235x140 mm
- Weight, not more 2 kg
- Power supply External power supply: DC 12V, 500 mA

Underway is improved version Multi Bio 3D-N with advanced specifications: speed range 1-250 RPM (increment 1 RPM).

Catalogue number	
Multi Bio 3D with standard platform	BS-010125-AAG
TP-26	BS-010105-AK

Multi Bio 3D



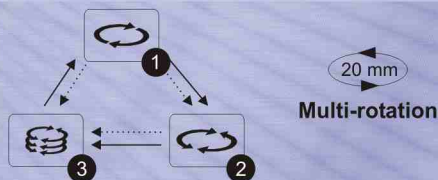
Orbital Multi-Shaker Multi PSU -20

Multi PSU-20 is an orbital shaker that belongs to the new generation of multi-functional mixing devices. It is an ideal instrument for different biopharmaceutical and biomedical profile laboratories.

Specifications:

- Extremely quiet and reliable shaker that can provide stable continuous mixing up to 7 daysnights.
- Powerful - for loads up to 8 kg. Universal detachable platform **UP-400** can accommodate laboratory glassware of different shape. Two fixation levels are provided for low and high glassware. Platform size 460x400 mm. Optional flat platform **PP-20** with a non-slip rubber mat can accommodate different low profile containers. Multi level variant is possible (up to 4 levels). Platform size 480x380 mm
- Safe and energy efficient - powered by external power supply (DC 12V, 4.16A)
- Easy to use and setup-microprocessor control allows making corrections in the program without stopping operation.
- Multifunctionality provides three motion types, that can be realized separately, in combinations of two and all three consequently in repeatable cycle.
- Overall dimensions 485x520x140 mm
- Weight, not more 13.5 kg
- Power supply External power supply: DC 12V, 4.16A

Multi PSU-20



PP-20-4



Operating Modes

1. Orbital motion	2. Reciprocating rotation motion	3. Vibration mode
Simple orbital motion with an option of shifting direction (clockwise/anti-clockwise) after set time	Orbital motion with shifting direction of rotation	High speed, low amplitude motion
Regulated speed 20 - 250 RPM Motion timer 0 - 250 s (for switching to the next motion in the cycle or for changing direction on the opposite) General operation timer 1 min - 96 hours (increment 1 min)	Regulated speed 20 - 250 RPM (same as in Orbital motion) Motion timer 0 - 250 s (for switching to the next motion in the cycle) Regulated turning angle 0° - 360° (Increment 30°) General operation timer 1 min - 96 hours (increment 1 min)	Regulated turning angle 0° - 5° (increment 1°). Motion timer 0 - 5 s (for switching to the next motion in the cycle) General operation timer 1 min - 96 hours (Increment 1 min)

Catalogue number			
Multi PSU-20 without platform	BS-010126-AAI	PP-20-2	BS-010126-CK
UP-400	BS-010126-AK	PP-20-3	BS-010126-DK
PP-20	BS-010126-BK	PP-20-4	BS-010126-EK