

Shakers, Mixers and Rockers

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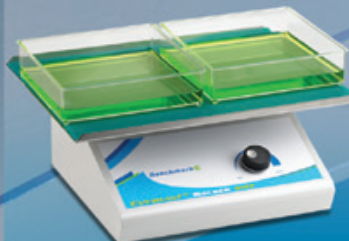
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NEW! www.BenchMotion.com

Visit BenchMotion.com for a video representation of all of Benchmark's available shaking motions.



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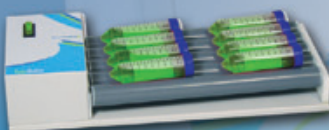
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Tube Roller™ Tube and Bottle Rollers



Vornado™ Miniature Vortex Mixer



VORNADO™
MINIATURE VORTEX MIXER

- + Powerful vortexing, for tubes up to 50ml
- + Insta-Touch™ pressure activated operation
- + "Mini" sized, less than 4" wide



Insta-Touch™ pressure activation



Extremely compact

Powerful is the best word to describe this *mini* vortexer. With a 4mm orbit and fixed speed of 2,800rpm, the Vornado instantly vortexes even the largest samples, including nearly full 50 ml tubes. Despite its powerful motor, the Vornado has a footprint of less than 4x4 inches, allowing it to fit on the most crowded bench.

Insta-Touch operation means that the motor is automatically activated with slight pressure on the center of the cup head. Operation is smooth, quiet and efficient. When pressure is removed, operation of the motor ceases.

The Vornado's unique head design prevents liquids from entering the housing, prolonging motor life. The unit is available with five different color cup heads.

Technical Data:

Speed:	2,800rpm (fixed)
Motor Activation:	Touch
Orbit:	4mm
Dimensions: (W x D x H)	3.7 x 3.9 x 2.6 in. 9.4 x 9.9 x 6.6 cm
Operating Temp. Range:	+4°C to +45°C
Weight:	1 lb (0.4kg)
Electrical:	Universal Voltage 100 to 240V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BV101*	Vornado Miniature Vortex Mixer, gray cup head
BV101-B*	Vornado Miniature Vortex Mixer, blue cup head
BV101-G*	Vornado Miniature Vortex Mixer, green cup head
BV101-P*	Vornado Miniature Vortex Mixer, purple cup head
BV101-R*	Vornado Miniature Vortex Mixer, red cup head



*Includes US plug. For EU plug, please add (-E).



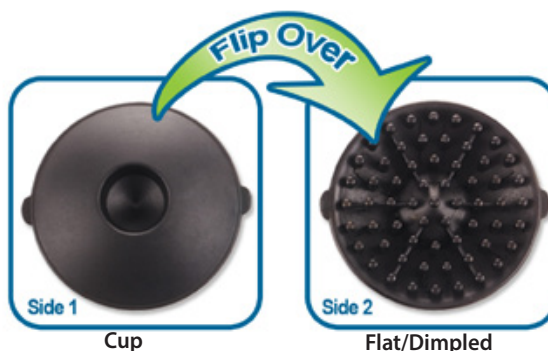
BenchMixer™ Vortex Mixers

BenchMixer™ V2

- ✚ Reversible top: Use "Cup" or "Flat/Dimpled" Surface
- ✚ Powerful motor for INSTANT vortexing
- ✚ Q-Drive™ dynamic balancing system
- ✚ Variable speed with touch or continuous operation



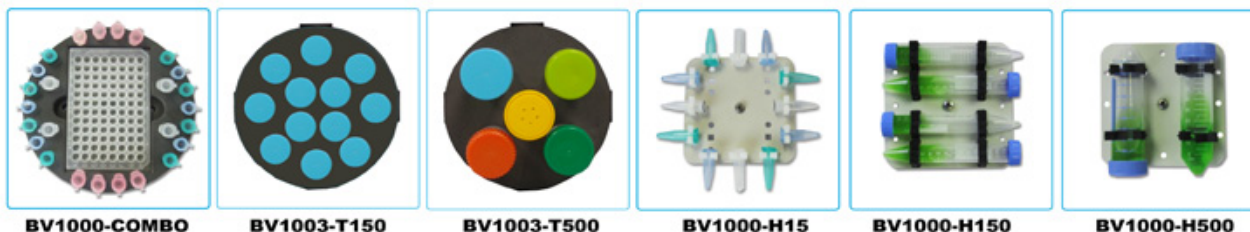
Reversible Top



The BenchMixer™ V2 utilizes a smooth and powerful mixing technology similar to the original BenchMixer, with the advantage of a uniquely designed reversible rubber head that can be attached to the mixer in two orientations. For the vortexing of single tubes, the cupped surface would generally be preferred. However, for applications requiring a flat/dimpled surface for mixing uniquely shaped vessels (or a handful of multiple test-tubes), the head can easily be flipped over and reattached in reverse orientation.

Like the original BenchMixer, the drive system is balanced with Q-Drive™ technology, providing a smooth vortexing action, while minimizing noise and excessive vibration. This results in quieter, more efficient and longer lasting operation. With a maximum speed up to 3,200 rpm, the mixer provides an instant vortex of even the largest sample sizes, including full 50ml tubes.

Available Accessories:



Technical Data:

Speed Range:	200 to 3,200 rpm
Operating Modes:	Touch or continuous
Orbit:	3mm
Operating Temp. Range:	+4° C to +45°C
Dimensions: (W x D x H)	5 x 6.3 x 6.7 in.* 13 x 16 x 17 cm
Weight:	8.4 lbs (3.8kg)
Electrical:	115V, 60Hz or 230V, 50Hz/60Hz, 180W
Warranty:	2 Years

*Dimensions of BV1000 model: 5.2 x 6.7 x 6.7 in. / 13 x 17 x 17 cm

Ordering Information:

Item No.	Description:
BV1003*	BenchMixer V2 Vortexer (with reversible head)
BV1000*	BenchMixer Vortexer (original) with standard cup head
BV1000-FLAT	Optional 3 in. flat head attachment (for BV1000 only)
BV1000-COMBO	Optional combination head for tubes and microplates (38x1.5/2.0ml & 28 x 0.5ml or one microplate)
BV1003-T150	Optional head for 12 x 15ml tubes (BV1003 only)
BV1003-T500	Optional head for 5 x 50ml tubes (BV1003 only)
BV1000-H15	Optional head for 12 x 1.5/2.0ml, horizontal
BV1000-H150	Optional head for 4 x 15ml tubes, horizontal
BV1000-H500	Optional head for 2 x 50ml tubes, horizontal



*115V with US plug. For 230V/50Hz with EU plug, please add (-E). For 230V/60Hz with EU plug, please add (-E2).

Mortexer™ Vortex Mixer



MORTEXER™
MORE Power, MORE Flexibility... MORE Vortexer!

- The only vortexer available with **Multi-Head™**
- Powerful motor for **INSTANT** vortexing
- **Q-Drive™** dynamic balancing system
- Variable speed from 200 to 3,200 rpm



Unique Multi-Head allows for standard vortexing, **PLUS** holds up to 8 microtubes

Available Accessories:



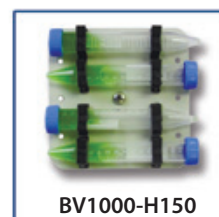
BV1000-FLAT



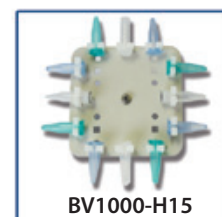
BV1000-COMBO



BV1000-H500



BV1000-H150



BV1000-H15

The Mortexer™ is MORE than your standard vortex mixer. The unique design of the Multi-Head™ (included) features a traditional cup head for general purpose mixing, plus holds up to eight microcentrifuge tubes. The drive system is balanced with Q-Drive™ technology, providing a smooth vortexing action, while minimizing noise and excessive vibration. This results in quieter, more efficient and longer lasting operation.

Other features include: "no-walk" suction feet, cold room/incubator compatibility and spill-proof electronic controls.

Technical Data:

Speed Range:	200 to 3,200 rpm
Operating Modes:	Touch or continuous
Orbit:	3mm
Operating Temp. Range:	+4° C to +45°C
Dimensions: (W x D x H)	5 x 6.3 x 6.7 in. 13 x 16 x 17 cm
Weight:	8.4 lbs (3.8kg)
Electrical:	115V, 60Hz or 230V, 50Hz*, 180W
Warranty:	2 Years

*230V, 60Hz available upon request

Ordering Information:

Item No.	Description:
BV1005*	Mortexer Vortex Mixer (with Multi-Head)
BV1000-FLAT	Optional 3 inch flat head attachment
BV1000-COMBO	Optional combination head for tubes and microplates (38x1.5/2.0ml & 28 x 0.5ml or one microplate)
BV1000-H15	Optional head for 12 x 1.5/2.0ml, horizontal
BV1000-H150	Optional head for 4 x 15ml tubes, horizontal
BV1000-H500	Optional head for 2 x 50ml tubes, horizontal

*115V with US plug. For 230V/50Hz with EU plug, please add (-E).
For 230V/60Hz with EU plug, please add (-E2).



BenchMixer™ XL Multi-Tube Vortex Mixer



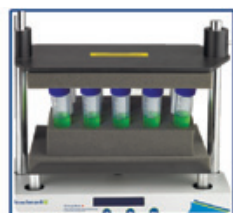
BENCHMIXER™ XL
MULTI-TUBE VORTEXER

- + Hands free, high capacity vortexing
- + Up to 2500rpm, a true vortex in every tube
- + Pulsing function for interval vortexing
- + Wide assortment of accessories for a variety of tubes and plates
- + Suitable for use with QuEChERS

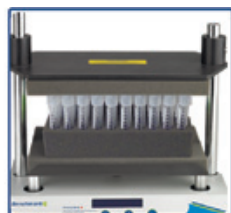
Available Accessories:



50 x 1.5/2.0ml



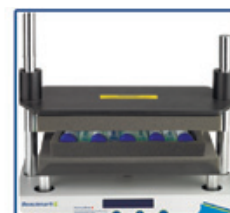
15 x 50ml



50 x 5 or 7ml



3 x microplates



9 x 50ml Horizontal
QuEChERS

The BenchMixer™ XL is a heavy duty vortex mixer designed for hands-free mixing in tubes, flasks, vials or cylinders. It is ideal for the QuEChERS pesticide analysis method and is instantly adaptable to an exceptionally broad range of vessels, racks and applications (horizontal or vertical). The precisely balanced drive system includes an oversized motor that delivers accurate, reproducible speeds up to 2,500rpm with rattle-free operation and minimal vibration. The programmable pulsing function allows for time specific interval mixing, increasing agitation.

The 7x12 inch platform accommodates a wide variety of standard, pre-drilled tube racks (a complete listing can be found in the ordering information section below). Additionally, BenchMixer XL can easily be adapted to almost any type of vessel commonly found in the laboratory.

Using BenchMixer XL is easy; after loading the sample rack and tightening the locking knobs, select the desired speed and run time on the large digital control panel. Then, simply press "Start" and the BenchMixer XL will perform unattended mixing for up to 100 hours.

BenchMixer XL's large capacity and adaptability make it an ideal choice for the medium to high throughput laboratory.

Technical Data:

Speed Range:	500 to 2500 rpm
Orbit:	3.6mm
Timer	1 min. to 99hr 59 min.
Platform Dimensions:	12 x 7 in. / 30 x 17.8 cm
Dimensions: (W x D x H)	15 x 9.2 x 16.5 in. 38.5 x 23.5 x 42 cm
Weight:	29 lbs (13kg)
Electrical:	Universal Voltage 100 to 240V, 50-60Hz, 60W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BV1010**	BenchMixer XL Multi-Tube Vortexer, includes 50 x 12mm tube rack
BV1010-TST**	BenchMixer XLQ QuEChERS Shaker/Vortexer with racks for 7 x 50ml tubes held horizontally, 50 x 15ml and 50 x 1.5/2.0ml tubes (vertical)
BV1010-05	Tube Rack (PP*), 96 x 0.5ml (Ø8mm)
BV1010-1520	Tube Rack (EVA*), 50 x 1.5/2.0ml (Ø10mm)
BV1010-12	Tube Rack (EVA*), 50 x 12mm (included)
BV1010-13	Tube Rack (EVA*), 50 x 13mm
BV1010-150	Tube Rack (EVA*), 50 x 15ml (Ø16.5mm)
BV1010-500	Tube Rack (EVA*), 15 x 50ml (Ø29mm)
BV1010-25	Tube Rack (EVA*), 15 x 25mm
BV1010-50H	Tube Rack (EVA*), 9 x 50ml Horizontal (QuEChERS)

*EVA: Ethyl Vinyl Acetate / PP: Polypropylene

**Includes US plug. For EU plug, please add (-E).

TubeRocker™ Fixed Speed Rocker (2D)



CE

- Ideal for tube sizes 1.5ml to 50ml
- Grooved mat properly secures tubes without the need for any tools, clamps or hardware

Technical Data:

Speed Range:	Fixed, 24 rpm (230V: 20 rpm)
Tilt Angle:	±30°
Platform Size:	12 x 4.5 in. / 30 x 11.4 cm
Load Capacity:	5 lbs (2.3kg)
Operating Temp. Range:	+4° C to +45° C
Dimensions: (W x D x H)	13.3 x 5.5 x 4 in. / 33.6 x 13.5 x 10 cm
Weight:	4 lbs (1.8kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
M2100*	TubeRocker with grooved mat

*115V with US plug. For 230V (EU plug), please add (-E).



8 x 50ml



15 x 15ml



15 x Blood Collection Tubes
(5ml, 7ml, 10ml or 15ml)



30 x 1.5/2.0ml



BenchBlotter™ Fixed Speed Rocker (2D)



CE



BR1000 with BR1000-STACK

- Gentle mixing for blot washing and gel staining
- Optional dual platform doubles work surface

Technical Data:

Speed Range:	Fixed, 12 rpm Fixed, 10 rpm (230V)
Tilt Angle:	±8°
Platform Size:	12 x 12 in. / 30 x 30 cm
Load Capacity:	5 lbs (2.3kg)
Operating Temp. Range:	+4° C to +45° C
Dimensions: (W x D x H)	13.5 x 12 x 4.7 in. 34 x 30 x 12 cm
Stacking Clearance:	3 in. / 7.6 cm
Weight:	6.5 lbs (3kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BR1000*	BenchBlotter Platform Rocker with flat mat
BR1000-STACK	Optional stacking platform with flat mat
BR1000-DIMPLED	Optional dimpled mat
B0718	Bungee cord, used for securing vessels, pack of 4

*115V with US plug. For 230V (EU plug), please add (-E).



BenchRocker™ 2D Variable Speed Rocker (2D)



- Adjustable tilt & speed for a wide range of applications
- Large 14x12" work surface
- Safe for incubator or cold room use

The BenchRocker 2D is designed to provide the precise speeds and tilt angles required for a broad range of molecular and biological mixing applications. The user can adjust both parameters to match the vessel size and the volume of liquid being mixed, yielding optimum results.

Technical Data:

Speed Range:	Variable, 2 to 30 rpm
Tilt Angle:	Variable, 0° to ± 30°
Platform Size:	14 x 12 in. / 35 x 30 cm
Load Capacity:	8 lbs (3.6kg)
Operating Temp. Range:	+4° C to +45° C
Dimensions: (W x D x H)	14 x 12 x 8 in. 35 x 30 x 20 cm
Stacking Clearance:	3 in. / 7.6 cm
Weight:	7.5 lbs (3.4kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

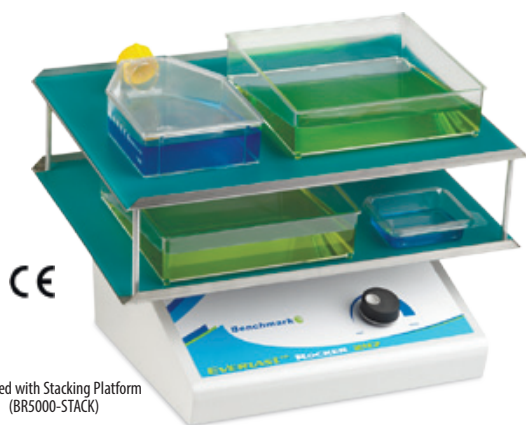
Ordering Information:

Item No.	Description:
BR2000*	BenchRocker™ 2D Rocker with flat mat
BR2000-STACK	Optional stacking platform (3") with flat mat
BR1000-DIMPLED	Optional dimpled mat
B0718	Bungee cord, used for securing vessels, pack of 4
BR2000-SP	STACK-PLUS Extender set, adds 1.25" clearance to stacking platform

*115V with US plug. For 230V (EU plug), please add (-E).



Everlast™ 247 Heavy Duty - Variable Speed Rocker (2D)



Pictured with Stacking Platform (BR5000-STACK)

- Everlast™ 5 year warranty
- Extra-large, stainless steel 16x12" surface
- 12 lb load capacity
- Safe for incubator or cold room use

With an unprecedented 5 year limited warranty, Benchmark's Everlast 247 Rocker is built to last. Twenty four hours a day, seven days a week . . . No problem! The powerful motor and heavy duty drive system remain reliable and consistent, even under constant usage in a cold room (min. 0°C) or incubator (max. 65°C).

Technical Data:

Speed Range:	Variable, 3 to 80 rpm
Tilt Angle:	Variable, 0° to ± 20°
Platform Size:	16 x 12 in. / 40.5 x 30 cm
Load Capacity:	12 lbs (5.45kg)
Operating Temp. Range:	+0° C to +65° C
Dimensions: (W x D x H)	16 x 13 x 6 in. 40.5 x 33 x 15.25 cm
Stacking Clearance:	3.5 in. / 8.9cm
Weight:	20 lbs (9kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	5 Years

Ordering Information:

Item No.	Description:
BR5000*	Everlast™ 247 Rocker with flat mat
BR5000-STACK	Optional stacking platform with flat mat with 3.5" clearance
B0718	Bungee cord, used for securing vessels, pack of 4

*115V with US plug. For 230V (EU plug), please add (-E).

BlotBoy™ Low Speed Gyrotory Rockers (3D)



- Optimized speed & tilt for blotting, washing and staining
- Tri-directional motion for thorough, gentle mixing
- Cold room and incubator safe

Modeled after our popular BioMixer™ series of “nutating” shakers, these platform rockers provide the perfect 3-dimensional motion for all blot related applications. Their tilt angle and speed have been optimally set for gentle, but thorough mixing in gel trays, boxes and other flat vessels.

Technical Data:

Speed Range:	Fixed, 12 rpm (230V: 10rpm)
Tilt Angle:	Fixed, ±8°
Platform Size (B3D1008):	10.5 x 7.5 in. / 27 x 19 cm
Platform Size (B3D1308):	12 x 12 in. / 30 x 30 cm
Load Capacity:	4 lbs (1.8kg)
Operating Temp. Range:	+4° C to +50° C
Dimensions: (W x D x H)	10.5 x 7.5 x 8 in. / 27 x 19 x 20 cm 12 x 12 x 8 in. / 30 x 30 x 20 cm
Weight:	4.4 lb s (2kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
B3D1008*	Mini BlotBoy with flat mat (10.5 x 7.5")*
B3D1308*	BlotBoy with flat mat (12 x 12")*
B3D-DIMPLED	Dimpled mat (10.5 x 7.5") for B3D1008
BR1000-DIMPLED	Dimpled mat (12 x 12") for B3D1308
B0718	Bungee cord, used for securing vessels, pack of 4

*115V with US plug. For 230V (EU plug), please add (-E).



BioMixer™ Nutating Mixer (3D)



- Includes dimpled mat; perfect for mixing blood & centrifuge tubes
- Tri-directional motion for thorough, uniform mixing

These multi-functional shakers provide a 3-dimensional “nutating” motion for thorough, foam-free mixing in blood and centrifuge tubes, as well as in a variety of flat vessels.

Technical Data:

Speed Range:	Fixed, 24 rpm (230V: 20rpm)
Tilt Angle:	Fixed, ±20°
Platform Size: (B3D1020):	10.5 x 7.5 in. / 27 x 19 cm
Platform Size: (B3D1320):	12 x 12 in. / 30 x 30 cm
Load Capacity:	4 lbs (1.8kg)
Operating Temp. Range:	+4 °C to +50°C
Dimensions (W x D x H)	Mini BioMixer: 10.5 x 7.5 x 8 in. / 27 x 19 x 20 cm BioMixer: 12 x 12 x 8 in. / 30 x 30 x 20 cm
Weight:	4.4 lb s (2kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
B3D1020*	Mini BioMixer with dimpled mat (10.5x7.5")
B3D1320*	BioMixer with dimpled mat (12x12")
B3D-FLAT	Flat mat (10.5 x 7.5") for B3D1020
BR1000-FLAT	Flat mat (12 x 12") for B3D1320
B0718	Bungee cord, used for securing vessels, pack of 4



BenchRocker™ 3D Gyrotory Rocker (3D)



Optional Stacking Platform (clearance: 3")

with
**INSTA
TILT™**

- + Adjustable speed & tilt for a wide range of applications
- + Large 12x12" work surface
- + Insta-TILT™ technology for instant adjustment of tilt angle
- + Cold room and incubator safe

The BenchRocker 3D is designed to provide the precise speeds and tilt angles required for a broad range of molecular and biological mixing applications. The user can adjust both parameters to match the vessel size and the volume of liquid being mixed, yielding optimum results. Proprietary Insta-Tilt™ technology means no tools, no disassembly. *Simply grip the platform with two hands and move to the desired position.*

This model includes both flat and dimpled (autoclavable) mats for mixing a wide variety of tubes and other vessels. A stacking platform can be purchased as an accessory, effectively doubling the usable surface area.

BenchRocker 3D features a maintenance free, brushless motor, capable of loads up to 5 lbs and is safe for use in cold rooms and incubators.

Technical Data:

Speed Range:	Variable, 2 to 30 rpm
Tilt Angle:	Variable, 0 to $\pm 30^\circ$
Platform Size:	12 x 12 in. / 30 x 30 cm
Load Capacity:	5 lbs (2.3kg)
Operating Temp. Range:	+4°C to +45°C
Dimensions: (W x D x H)	12 x 12 x 8 in. 30 x 30 x 20 cm
Stacking Clearance:	3 in. / 7.6 cm
Weight:	7.5 lb s (3.4kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
B3D2300*	BenchRocker 3D with flat and dimpled mats (12x12")
BR1000-STACK	Stacking platform (3" clearance) with flat mat (12x12")
BR1000-STACK-D	Stacking platform (3" clearance) with dimpled mat (12x12")
B0718	Bungee cord, used for securing vessels, pack of 4
BR2000-SP	STACK-PLUS Extender set, adds 1.25" clearance to stacking platform

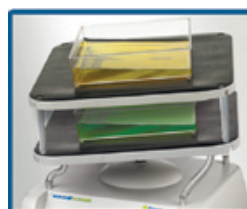
*115V with US plug. For 230V (EU plug), please add (-E).

BenchWaver™ Undulating Rocker (3D)



BENCHWAVER™

- Undulating, 3-dimensional motion
- Adjustable speed and tilt
- Large, 13 inch platform
- Ideal for staining, washing and general mixing



B3D5000 with B3D5000-STK



B3D5000 with B3D5000-DIMP

The BenchWaver™ combines the basic rocking motion of traditional platform rockers with the circular motion of an orbital shaker. This combination is ideal for generating the optimum 3-dimensional “undulating” motion commonly preferred for molecular biology applications.

The tilt angle is instantly adjustable (no tools or disassembly required) from 0 to 10° and the mixing speed can be adjusted from 5 to 105 rpm, using the large, user-friendly LCD control panel. Combined control of both parameters (tilt and speed) makes the BenchWaver a versatile workhorse that can provide anything from gentle, slow moving waves to a rapid, more vigorous motion. Additionally, time of operation can be selected from 1 minute up to 99 hours or for continuous operation.

The large 13.5 x 13 inch platform is supplied complete with a non-slip, rubber mat. An optional stacking platform is available for users requiring additional mixing capacity. BenchWaver is a reliable and versatile instrument and can be used in refrigerated or incubated environments from 2° to 60°C.

Technical Data:

Speed Range:	Variable, 5 to 105 rpm
Tilt Angle:	Variable, 0 to ± 10°
Platform Size:	13.5 x 13 in. / 34 x 33 cm
Load Capacity:	20 lbs (9kg)
Operating Temp. Range:	+4°C to +60°C
Dimensions: (W x D x H)	13 x 13.5 x 9.75 in. 33 x 34 x 24.75 cm
Stacking Clearance:	4.5 in. / 7.6 cm
Weight:	12 lbs (5.5kg)
Electrical:	Universal Voltage: 100 to 240V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
B3D5000*	BenchWaver with platform and flat mat
B3D5000-STK	Optional stacking platform (4.5" clearance) with flat mat (13.5x13")
B3D5000-DIMP	Optional dimpled mat (13.5x13")

*Includes US plug. For EU plug, please add (-E).



Orbi-Blotter™ Low Speed Orbital Shaker

ORBi-Blotter™



- + Gentle orbital motion for gel applications
- + Large 14 x 12 in. work surface
- + Incubator and cold room safe
- + Variable speed control, 3 to 70 rpm

The Orbi-Blotter™ features a gentle orbital motion with speed control down to as little as 3 rpm, making it the ideal orbital choice for low speed applications, such as blotting, washing, staining/destaining, etc. A large 14x12 in. work surface is included along with a non-slip rubber mat for holding trays, dishes, plates and other flat vessels.

An optional stacking platform can be purchased as an accessory, effectively doubling the usable work surface. The maintenance free, brushless motor is capable of loads up to 4kg and is safe for use in cold rooms and incubators.

Technical Data:

Speed Range:	Variable, 3 to 70 rpm
Motion / Orbit:	Orbital / 19mm
Load Capacity:	3 x 2L or 9 lbs (4kg)
Platform Size:	14 x 12 in. / 35 x 30 cm
Operating Temp. Range:	+4°C to +45°C
Dimensions: (W x D x H)	14 x 12 x 8 in. 35.5 x 30.5 x 20 cm
Stacking Clearance:	3 in. / 7.6 cm
Weight:	7.5 lbs (3.4kg)
Electrical:	115 or 230V, 50-60Hz, 50W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BT30*	Orbi-Blotter™ Low Speed Orbital Shaker
BR2000-STACK	Stacking platform with 14 x 12" flat mat (3" clearance)
BR2000-SP	STACK-PLUS Extender set, adds 1.25" clearance to stacking platform

*115V with US plug. For 230v (EU plug), please add (-E).

See Pg. 58-59

Shaking Incubators

INCU-SHAKER™ Series



- + Exceptional temperature uniformity
- + Three models,
Incu-Shaker Mini: Up to 5 x 500ml (or 2 x 1L)
Incu-Shaker 10L: Up to 5 x 2L
Incu-Shaker 10LR: Up to 5 x 2L (with cooling)
- + Exchange flask clamps in one second with MAGic Clamp™ magnetic system

Orbi-Shaker™ JR. Orbital Shaker



CE



BT300-RP

- + Horizontally circular 19mm orbit for aeration and mixing
- + Extremely compact, perfect for low to medium capacity applications
- + Instantly exchange flask clamps with MAGIC Clamp™ accessories



Technical Data:

Speed Range:	Variable, 50 to 300 rpm
Speed Increment:	10 rpm
Motion / Orbit:	Orbital / 19mm
Load Capacity:	4 x 1L or 9 lbs (4kg)
Platform Size:	
Standard (included):	9.5 x 8 in. / 24 x 20 cm
MAGic Clamp (universal):	11.5 x 9.5 in. / 29 x 24 cm
Operating Temp. Range:	+4°C to +65°C
Timer:	1 min. to 99hr, 59 min. / continuous
Dimensions: (W x D x H)	13.1 x 11.7 x 4.7 in. / 33.3 x 29.8 x 12 cm
Weight:	12 lbs (5.5kg)
Electrical:	Universal Voltage 100 - 240V, 50-60Hz, 250W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BT302*	Orbi-Shaker JR. with flat mat platform (9.5 x 8 in.)
H1000-MR**	MAGic Clamp™ universal platform for flasks and tubes
BT300-RB	Adjustable spring bar platform for unique vessel types

*Includes US plug. For EU plug, please add (-E).

**Flask clamps and tube racks sold separately, see pg. 25 for a complete listing.

Orbi-Shaker™ Orbital Shaker



CE

- + High capacity, 9 x 500ml, 5 x 1L or 2 x 2L
- + Circular 19mm orbit for aeration and mixing
- + Instantly exchange flask clamps with MAGIC Clamp™ accessories



Ordering Information:

Item No.	Description:
BT3001*	Orbi-Shaker with flat mat platform (13 x 12 in.)
BT3000-MR**	MAGic Clamp™ universal platform for flasks and tubes
H1000-P-SP	Universal spring platform for unique vessel types
H1000-P-MP	Dedicated platform for 4 x microplates

*115V with US plug. For 230v (EU plug), please add (-E).

**Flask clamps and tube racks sold separately, see pg. 29 for a complete listing.

Technical Data:

Speed Range:	Variable, 30 to 300 rpm
Speed Increment:	1 rpm
Motion / Orbit:	Orbital / 19mm
Load Capacity:	5x1L or 14 lbs (6.4kg)
Timer:	1 min. to 99 hr / continuous
Platform Size: (W x D x H)	
Standard (included):	13 x 12 in. / 33 x 30 cm
MAGic Clamp (universal):	14 x 12 in. / 35 x 30 cm
Operating Temp. Range:	+4°C to +65°C
Dimensions: (W x D x H)	11 x 16.2 x 3 in. / 28 x 41 x 7.5 cm
Weight:	25 lbs (11.5kg)
Electrical:	115 or 230V, 50-60Hz, 200W
Warranty:	2 Years



Orbi-Shaker™ XL High Capacity Orbital Shaker



CE

with
**MAGic
CLAMP**
PATENTED

- + High capacity, benchtop model
- + Circular 19mm orbit for aeration and mixing
- + Instantly exchange flask clamps with MAGic Clamp™ accessories

Technical Data:

Speed Range:	Variable, 30 to 300 rpm
Speed Increment:	1 rpm
Motion / Orbit:	Orbital / 19mm
Load Capacity:	5 x 2L or 9 x 1L / 65 lbs (30kg)
Platform Size:	18 x 18 in. / 45 x 45 cm
Timer:	1 min. to 99 hr / Continuous
Operating Temp. Range:	+4°C to +65°C
Dimensions (W x D x H):	18.5 x 21.25 x 5 in. / 47 x 54 x 12.5 cm
Weight:	64 lbs (29kg)
Electrical:	120 or 230V, 50-60Hz
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BT1011*	Orbi-Shaker XL with flat mat platform (18 x 18 in.)
H1010-MR**	MAGic Clamp™ platform for flasks & tubes (18 x 18 in.)
H1010-P-SP	Universal spring platform for unique vessel types
H1010-P-MP	Dedicated platform for 6 x microplates

*115V with US plug. For 230v (EU plug), please add (-E).

**Flask clamps and tube racks sold separately, see page 29 for a complete listing.



Orbi-Shaker™ MP Microplate Shaker



CE

- + Digital speed control up to 1,500rpm
- + 3mm orbit for thorough mixing in microplates
- + Includes platform for up to four microplates
- + Mix up to 80 microtubes with optional adapter

Technical Data:

Speed Range:	200 to 1,500 rpm
Orbit:	3mm
Max. Capacity:	Up to 4 microplates
Operating Temp. Range:	+4 °C to +65° C
Dimensions: (W x D x H):	13.1 x 11.7 x 4.7 in. 33.3 x 29.8 x 12 cm
Timer:	1 min. to 99 hour / cont.
Weight:	12 lbs (5.5kg)
Electrical:	Universal Voltage 100-240V, 50-60Hz, 250W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BT1502*	Orbi-Shaker™ MP microplate shaker, includes platform for 4 microplates
BT1500-A1520	Optional adapter, 20 x 1.5/2.0ml for microplate shakers
BT1500-A05	Optional adapter, 20 x 0.5ml for microplate shakers

*Includes US plug. For EU plug, please add (-E).

Orbi-Shaker™ CO₂ All Environment Shakers



ORBI-SHAKER™ CO₂ Remote Controlled, All Environment Shakers

- Designed to fit and maximize capacity in most CO₂ incubators and chambers
- Remote controlled, adjust settings without disturbing the CO₂ environment
- Instantly exchange flask clamps with MAGIC Clamp™ accessories



The new Orbi-Shaker CO₂ series is designed for shaking, mixing & aeration applications in extreme environments, including CO₂ incubators. It can withstand temperatures from 0 to 65°C and humidity levels up to 100%.



Remote controller adjusts shaker settings from outside of the chamber and magnetically attaches to most incubators

To avoid contamination, unintentional release of gas or deviations from protocol, all settings are adjusted via the included remote control module. This module can be stored outside of the chamber and connects to the shaker via a flat (1mm thickness) cable, that easily passes through a port or underneath an incubator door without compromising the seal. This allows for user adjustment of run time or mixing speed without opening the chamber door(s).

The instrument is supplied with a non-slip rubber mat platform. In addition, convenient MAGIC Clamp™ platforms (of multiple sizes) are also available for use with Erlenmeyer flasks and test tube racks. The unique magnetic attachment method has been widely recognized as the easiest way to instantly change between flask clamps of different sizes.

Compatibility Chart:	Thermo® HeraCell™ 160	240	New Brunswick™ Galaxy® 541i	Galaxy® 170	Shel Lab® 142L & 167L	Nuair™ 4750, 4850, 4950, 5800	Fisher® IsoTemp™ 184	VWR® Symphony™ 5.3A	8.5A	N/A	Not Compatible
Orbi-Shaker CO ₂ (14 x 12" platform)	●	●	●	●	●	●	●	●	●	●	Compatible
Orbi-Shaker CO ₂ XL (16 x 16.5" platform)	●	●	N/A	●	●	●	●	●	●	●	Compatible
Orbi-Shaker CO ₂ XL (18 x 18" platform)	N/A	●	N/A	N/A	●	●	●	N/A	●	●	Compatible Maximizes Capacity

Technical Data:

Speed Range:	Variable, 30 to 300 rpm
Speed Increment:	1 rpm
Motion / Orbit:	Orbital / 19mm
Max. Capacity (BT4000):	1 x 2L or 5 x 1L
Max. Capacity (BT4010):	5 x 2L or 9 x 1L
Timer:	1 min. to 99 hr / Continuous
Platform Dimensions:	
BT4000 (included):	13 x 12 in. / 33 x 30 cm
BT4010 (included):	16 x 16.5 in. / 40 x 42.5 cm
Operating Temp. Range:	0°C to +65°C
Dimensions: W x D x H	
BT4000 Shaker:	11.9 x 13.4 x 3.5 in. / 30 x 34 x 9 cm
BT4010 Shaker:	17 x 18 x 5 in. / 43 x 45.75 x 12.7 cm
Weight (BT4001):	25 lbs, (11.5kg)
Weight (BT4011):	50lbs (23kg)
Cord Length:	60.5 in. / 154 cm
Electrical:	120 or 230V, 50-60Hz, 600W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
BT4001*	Orbi-Shaker CO ₂ w/ flat mat platform (13 x 12 in.)
BT4011*	Orbi-Shaker CO ₂ XL w/ flat mat platform (16 x 16.5 in.)
MAGIC™ Clamp Universal Platforms for flask clamps & tube racks**	
BT3000-MR	MAGIC Clamp™ platform (14x12 in.) for BT4000
BT4010-MR	MAGIC Clamp™ platform (16x16.5 in.) for BT4010
H1010-MR	MAGIC Clamp™ platform (18x18 in.) for BT4010
Additional Platforms:	
H1000-P-SP	Universal spring platform for unique vessel types
H1000-P-MP	Dedicated platform for 4 x microplates

*115V with US plug. For 230v (EU plug), please add (-E).

**Flask clamps and tube racks sold separately, see page 29 for a complete listing.



Video Demonstration



H1000-MR-CMB Adjustable flask clamp, accepts 125ml, 250ml and 500ml Erlenmeyer flasks.
(For a video demonstration, scan the QR code above.)



Maximum Flask Capacity with MAGic Clamp Platforms

Item No.	Description:	Platform H1000-MR	Platform BT3000-MR	Platform H1010-MR
		Available For Orbi-Shaker JR.	Available For Models Orbi-Shaker & Orbi-Shaker CO ₂	Available For Orbi-Shaker XL (CO ₂)
H1000-MR-CMB	NEW! Adjustable flask clamp, accepts 125, 250 & 500ml Erlenmeyer flasks	12 / 8 / 5	20 / 14 / 9	36 / 25 / 16
H1000-MR-50	Flask clamp, 50ml Erlenmeyer flask	20	30	49
H1000-MR-125	Flask clamp, 125ml Erlenmeyer flask	12	20	36
H1000-MR-250	Flask clamp, 250ml Erlenmeyer flask	8	14	25
H1000-MR-500	Flask clamp, 500ml Erlenmeyer flask	5	9	16
H1000-MR-1000	Flask clamp, 1L Erlenmeyer flask	4	5	9
H1000-MR-2000	Flask clamp, 2L Erlenmeyer flask	1	2	5
H1000-MR-3000	Flask clamp, 3L (or 2.8L) Fernbach flask	N/A	1	4

Maximum Capacity for MAGic Clamp Platforms (Test Tube / Microplate Racks)

Item No.	Description:	Platform H1000-MR	Platform BT3000-MR	Platform H1010-MR
		Available For Orbi-Shaker JR.	Available For Models Orbi-Shaker & Orbi-Shaker CO ₂	Available For Orbi-Shaker XL (CO ₂)
H1000-MR-T15	Tube Rack, 15ml conical tubes, 32 x 15ml	2	3	8
H1000-MR-T50	Tube Rack, 50ml conical tubes, 15 x 50ml	2	3	8
H1000-MR-1550	Combi-Tube Rack, 30 x 15ml & 20 x 50ml tubes	2	2	4
H1000-MR-T600	Tube/Bottle Rack, 4 x 500/600ml conical bottles	1	2	4
H1000-MR-T15H	Tube rack, 12 x 1.5/2.0ml tubes, horizontal	2	4	6
H1000-MR-T150H	Tube rack, 4 x 15ml tubes, horizontal	4	6	8
H1000-MR-T500H	Tube rack, 2 x 50ml tubes, horizontal	4	6	8
H1000-MR-MP	Plate rack, holds one microplate	4	6	8
H1000-MR-TSR	Angled tube rack holder (with adjustable tilt)	2	6	8

Roto-Mini™ Rotating Mixers



Roto-Mini™

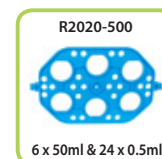
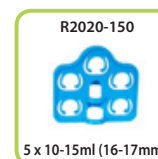
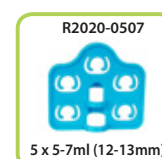


Roto-Mini™ PLUS

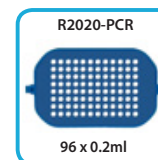
Roto-Mini™

- + Includes tube holders for common tube sizes
- + Available with variable speed control and advanced shaking/mixing modes:
 - + Mix (Oscillating)
 - + Pause
 - + Rock
- + Also offered with incubation (See Page 57)

Included Tube Holders:



Optional Tube Holders:



Benchmark's new Roto-Mini series of rotating mixers provides a wide range of mixing capabilities, suitable for an array of laboratory applications including resuspension, protein binding, nucleic acid purification, histochemistry, hybridization etc. The mixers include interchangeable tube holders for accomodating all common tube sizes from 0.5ml to 50ml, and the motion can be adjusted from vertical (end over end) mixing, to horizontal (rolling or hybridization style) mixing.

Roto-Mini rotators are available in the "Plus" configuration. The Plus models provide the following additional features:

Variable speed:	5 to 70rpm
"Mix" function:	Rotating in combination w/ oscillations (increased mixing)
"Pause" function:	Rotating with intermittent "stops" during rotation
"Rock" function:	Back and forth, gentle rocking motion (see-saw)

The Plus models also offer an additional rocking platform (4.5 x 3 in.), as well as a 96 x 0.2ml tube/strip/plate holder for mixing PCR vessels in the "Mix" (oscillating) mode

Technical Data:

Speed Range: R2020:	24rpm
R2024:	5 to 70rpm
Mixing Modes: R2020:	N/A
R2024:	Mix, Pause & Rock
Max Capacity: (R2020/R2024)	1.5/2.0ml: 44 15ml: 20 50ml: 6
Dimensions (R2020/R2024)	10.8 x 6 x 6.5 in / 41 x 13.7 x 19.9cm
Weight:	3 lbs/1.4 kg
Electrical: R2020 R2024	115 or 230V, 50-60Hz, 0.5A Universal Voltage 100 to 240V, 50-60Hz, 0.5A
Warranty:	2 Years

Ordering Information:

Item No.	Description:
R2020*	Roto-Mini Rotator with tube holders
R2024*	Roto-Mini Plus, Variable Speed Rotator with tube holders
<u>Tube Holder Accessories</u>	
R2020-1520	Tube holder, 11 x 1.5/2.0ml, 2/pk (1 pack included)
R2020-0507	Tube holder, 5 x 5-7ml, 2/pk (1 pack included)
R2020-150	Tube holder, 5 x 10-15ml, 2/pk (1 pack included)
R2020-500	Tube holder, 6 x 50ml, 1 each (included)
R2020-PCR	Tube holder, 96 x 0.2ml, 12 x PCR strips or one PCR plate**
R2020-RP	Mini rocking platform with rubber mat, 4.5 x 3 in. **

*115V with US plug. For 230v (EU plug), please add (-E).

**Accessories are recommended for "Plus" models (R2024) only



Roto-Bot™ Programmable Rotating Mixers



Roto-Bot™ PROGRAMMABLE ROTATOR

- Advanced programming with a wide variety of rotational modes
- Set for full 360° rotation, or interrupt rotations with pausing and mixing intervals
- Slow rotating to vigorous mixing
- Accepts tubes from 1.5 to 50ml
- Optional rocking platform



Motion Mode Chart:

F1	F2	F3	F4	F5	F6	F7	F8	F9	--	C1 C2	PP*	Key:

The Roto-Bot™ Rotating Mixers feature advanced programming options that far surpass that of the traditional laboratory rotator. With digital speed control and more than 10 operating modes, the Roto-Bot can be selected to perform a wide variety of rotating, mixing and vibrating actions. In addition, these actions can be combined in succession using the C1 and C2 “Custom Modes”, providing the user with a nearly infinite level of programming.

The Roto-Bot and Roto-Bot Mini each include an assortment of vertical tube holders. The Mini model is supplied with holders for 12 x 1.5ml tubes, 2 x 15ml & 2 x 50ml tubes; the standard model, 30 x 1.5/2.0ml, 8 x 15ml & 2 x 50ml tubes. For higher capacity applications, more of these holders can be purchased as accessories. The unique, sliding attachment allows for quick and easy changing of tube holders. For rocking applications, a platform with a non-slip mat is available. Once attached, simply select the “PP” mode to activate the rocking mode.

Tube Holder Capacity & Ordering Information:					
Item Number:	R4040-1520	R4040-150	R4040-500	R4040-HZ15	R4040-HZ50
Description:	6 x 1.5ml	1 x 15ml	1 x 50ml	6 x 15ml	6 x 50ml
Tube Diameter:	10 to 13mm	16 to 17mm	28 to 30mm	16 to 17mm	28 to 30mm
Orientation:	Dual*	Vertical	Vertical	Horizontal	Horizontal
Holder Capacity (Mini/Standard):	10 / 16	10 / 22	6 / 12	1 / 2	1 / 2
Tube Capacity (Mini/Standard):	60 / 96	10 / 22	6 / 12	6 / 12	6 / 12
Package Unit:	Pack of 2	Pack of 2	Pack of 2	1 ea.	1 ea.

* The unique, dual attachment points of the 6 x 1.5ml holder allow for mixing in both the vertical and horizontal orientation.

Technical Data:

Speed Range:	1 to 80rpm
Capacity (R4040):	6 x 50ml, 10 x 15ml or 60 x 1.5ml
Capacity (R4045):	12 x 50ml, 22 x 15ml or 84 x 1.5ml
Timer:	1 sec. to 99 hours 59 min. / Cont.
Dimensions (R4040)	11.4 x 5.4 x 7.8 in / 29 x 13.7 x 19.9cm
W x D x H (R4045)	16.1 x 5.4 x 7.8 in / 41 x 13.7 x 19.9cm
Operating Temp. Range:	+2°C to +70°C
Weight:	4 lbs/1.8 kg (R4040) / 5 lbs/2.27kg (R4045)
Electrical:	Universal Voltage 100 to 240V, 50-60Hz, 3A
Warranty:	2 Years

Ordering Information:

Item No.	Description:
R4040*	Roto-Bot Mini with tube holder starter set Includes 6x1.5ml holders (2ea.), 1x15ml holder (2ea.) & 1x50ml holder (2ea.)
R4045*	Roto-Bot with tube holder starter set Includes 6x1.5ml holders (5ea.), 1x15ml holder (8ea.) & 1x50ml holder (2ea.)
R4040-RP	Rocking Platform (w/ flat mat) for R4040, 6 x 5.5 in
R4045-RP2	Rocking Platform (w/ flat mat) for R4040, 6 x 10 in.

*Includes US plug. For EU plug, please add (-E).

Benchmark™ Rotating Mixer

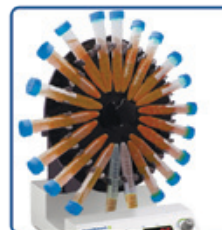


- ✚ Adjustable speed and tilt
- ✚ Reversing mode for increased agitation
- ✚ Cold room and incubator safe
- ✚ Includes three rotisseries for all common tube sizes

Included Rotisseries:



48 x 1.5/2.0ml
(48 x 10-14mm Ø tubes)



20 x 15ml
(20 x 15-20mm Ø tubes)



12 x 50ml
(12 x 25-35mm Ø tubes)

The Benchmark Rotating Mixer provides gentle to vigorous mixing of laboratory samples up to 50ml. With adjustable speed control and tilt angle, the Rotating Mixer is ideal for a variety of applications, from mixing blood samples to the preparation of homogenous dispersions.

Three rotisserie tube holders are included for mixing all common laboratory sample tubes and each individual tube holder is constructed of rubber coated steel to provide a secure grip, preventing any "wobble" or loosening during mixing at high speeds.

A unique reversing mode is selectable for more intense mixing. In reversing mode, the mixer rotates for up to 360° then stops and rotates in the reverse direction. This back and forth motion occurs repeatedly until the set time has expired.

With included accessories and unique mixing options, Benchmark's Rotating Mixer offers increased flexibility that is not commonly found with traditional laboratory rotators.

Technical Data:

Speed:	1 to 40rpm
Tilt Angle:	0 to 90° (vertical to horizontal)
Capacity:	12x50ml, 20x15ml or 48x2.0ml
Timer:	1 sec. to 9 hrs or continuous
Exterior Dimensions: (W x D x H)	8.25 x 10.5 x 12.5 in. 21 x 27 x 32 cm
Operating Temp. Range:	+4° to +65°C
Weight:	7 lbs (3.2kg)
Electrical:	Universal Voltage 100 to 240V, 50-60Hz, 25W
Warranty:	2 Years

Ordering Information:

Item No.	Description:
R5010*	Benchmark Rotating Mixer, Includes three rotisserie tube holders for 1.5/2.0, 15 and 50ml tubes

*Includes US plug. For EU plug, please add (-E).

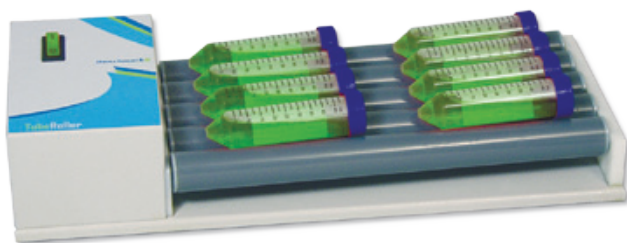


TubeRoller Tilting Tube & Bottle Roller

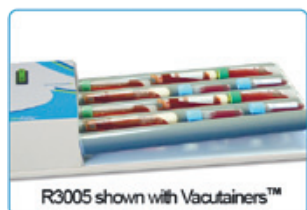


R3010

- + Gentle rolling motion
- + Smooth 5° tilting motion
- + Accepts tubes and bottles from 8mm to 200mm



R3005



R3005 shown with Vacutainers™



R3005 shown with 15ml conical tubes

Benchmark TubeRollers are designed for the gentle, thorough mixing of a variety of containers, including Vacutainers™, bottles, test tubes, centrifuge tubes and roller bottles. Both models (5 roller and 10 roller) operate at a constant 38rpm, chosen as the optimum speed for the broadest range of mixing requirements.

As the roller mechanism rotates through each complete revolution, the right side of each roller is gently elevated approximately 0.5 in (13mm) and returns to the horizontal starting position. This additional, gentle up/down motion provides a “wave” effect and guarantees that the entire sample is subjected to complete, thorough mixing, end to end. This built in tilt feature provides a level of homogeneous mixing uniformity that can not be matched by any stationary roller apparatus.

From blood collection tubes to roller bottles, Benchmark TubeRollers are the ideal choice for research, clinical laboratories and doctors’ offices.

Technical Data:

Speed:	Fixed, 38 rpm (±10%)	
Motion:	Simultaneous roll & tilt (±5°)	
Operating Temp:	4°C to 40°C	
Individual Roller Dims:	1.2 x 12.5 in. / 3 x 32cm	
Vessels Accepted:	8mm to 200mm diameter	
Roller Spacing:	5mm, on 35mm centers	
Electrical:	115 or 230V, 50-60Hz, 50W	
Warranty:	2 Years	
Load Capacity:	2kg	4kg
	R3005	R3010
Number of Rollers:	5	10
Dimensions (W x D x H):	18 x 7 x 3.5 in. 45 x 18 x 9 cm	18 x 14 x 3.5 in. 45 x 36 x 9 cm
Weight:	11 lbs (5kg)	17.6 lbs (8kg)

Typical Sample Load Capacity:

Vessel	R3005	R3010
12 x 75mm tubes	12	26
16 x 100mm tubes	8	18
16 x 125mm tubes	8	18
15ml screw cap tubes	8	18
50ml screw cap tubes	8	18
850cm² roller bottles	1	2

Ordering Information:

Item No.	Description:
R3005*	TubeRoller with 5 rollers
R3010*	TubeRoller with 10 rollers

*115V with US plug. For 230V (EU plug), please add (-E).

Benchmotion™ Shaker Selection App

BenchMotion Shaker Selection App



Simply download the app on your phone or mobile device, or visit www.benchmotion.com to view a video demonstration showing all of the shaking motions available from Benchmark Scientific. Once the preferred motion is identified, click or touch on the “see details” option to quickly navigate your way to the most appropriate model(s) for your application.

Additional Apps from Benchmark

