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Shaker

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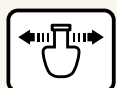
NEW

Wide variety of Shakers with Excellent Quietness and Various Shaking motions

Wide variety of Shaking methods are available to support all shaking applications in R & D and Inspection. Most models are with Power saving of less than 1 A!!

		Page	Model	Size	Features
NEXT	Micro Mixer E-022	P.062	E-022	Bench-top Small	<ul style="list-style-type: none"> •Optimum for Stirring of 96-well plates and Microtubes •Stabilized stirring by the range switching in Low/High speed •The rack for Microtube is available as an option
			EVR-034		<ul style="list-style-type: none"> •Suitable for stirring of 96-well plates and Microtubes
Constant temperature Incubator shaker	MaxMixer series (With New Max drive)	P.063	EVR-032	Bench-top Small	<ul style="list-style-type: none"> •Suitable for stirring of Centrifuge tubes and Microtubes
			EVR-104		<ul style="list-style-type: none"> •Suitable for stirring of Centrifuge tubes and Microtubes
			CS-LR		<ul style="list-style-type: none"> •Enables Stable operation under high humidity •Standard platform with anti-bacterial processing •Operation unit can be installed outside the cabinet (cable 2 m)
Shaker for High humidity	Cell shaker CS-LR	P.064	Mix-VR2	Bench-top Small	<ul style="list-style-type: none"> •High-speed orbital shaking •Can be used even in +4°C inside refrigerators
			Mix-EVR2		<ul style="list-style-type: none"> •Intense shaking, like Vortex mixer •Can be used even in +4°C inside refrigerators
			Shake-LR/LR2		<ul style="list-style-type: none"> •Switchable Reciprocal and Orbital shaking •Can be used even in +4°C inside refrigerators
Bench-top shakers	In vitro shaker series	P.068	Shake-XR/XR2	Bench-top Small	<ul style="list-style-type: none"> •Swing in figure 8 •Can be used even in +4°C inside refrigerators
			Wave-PR/PR2		<ul style="list-style-type: none"> •Mild shaking (Wave shaking) •Can be used even in +4°C inside refrigerators
		P.070	Wave-SI/SI2		<ul style="list-style-type: none"> •Seesaw shaking •Can be used even in +4°C inside refrigerators
			Wave-SI slim		<ul style="list-style-type: none"> •Optimum for Stirring of 96-well plates and Microtubes •Stabilized stirring by the range switching in Low/High speed •The rack for Microtube is available as an option
Shaker for Well plates and Microtubes	Micro Mixer	P.073	E-36	Bench-top Middle	<ul style="list-style-type: none"> •Optimum for Stirring of 96-well plates and Microtubes •Stabilized stirring by the range switching in Low/High speed •The rack for Microtube is available as an option
		P.074	NR-1		<ul style="list-style-type: none"> •Reciprocal shaking of Test tubes and Shake flasks
		P.076	NR-10		<ul style="list-style-type: none"> •Orbital shaking mainly for Erlenmeyer flasks
		P.074	NR-2		<ul style="list-style-type: none"> •Switchable Reciprocal/Orbital shaking
		P.076	NR-20		<ul style="list-style-type: none"> •Reciprocal/Orbital and Figure 8
		P.074	NR-3		<ul style="list-style-type: none"> •Switchable Reciprocal/Orbital, Shaking platform drawer lever •Shaking width can be 10 mm to 50 mm by stepless •Digital setting and display for IQ/OQ.
		P.076	NR-30		<ul style="list-style-type: none"> •Vertical shaking and Horizontal shaking •The start time of shaking and the intermittent shaking can be set by the timer.
		P.076	NR-80		<ul style="list-style-type: none"> •Dedicated for Vertical shaking. The capacity is doubled SR-2ES •The start time of shaking and the intermittent shaking can be set by the timer.
Shakers	NR series (Small/Middle/Large)	P.078	NR-150N	Large (Two-tier)	<ul style="list-style-type: none"> •Six (6) majonia tubes can be shaken at once. •The Shaking duration can be set as desired by the timer. •Transparent resin cover to prevent scattering of chemical solution
			Double platform NR-150		<ul style="list-style-type: none"> •Horizontal shaking of 50 mL Disposable centrifuge tube Capacity Max. 96 pcs •Matched to the shaking function required in the extraction process of official method. •Equipped with ON/OFF Timer to improve work efficiency
		P.080	SR-2ES	Middle	<ul style="list-style-type: none"> •Dedicated for Reciprocal shaking, 50 mm shaking width •Shaking platform (Optional): 4 types, Capacity: 1 L Erlenmeyer flask × 6 pcs •Three timer operation function (When the timer function is not being used, it can count the time.)
P.082	SR-2EW	<ul style="list-style-type: none"> •Capacity: 2 pcs for 5 L/6 pcs for 2 L •Max. load 10 kg, Energy-saving 70 Wh, with Timer 			
Strong shakers	Strong shaker (For separatory funnel) (For mojonnier tube)	P.083	SR-10	Large	<ul style="list-style-type: none"> •Capacity: 6 pcs for 5 L/14 pcs for 2 L •Dedicate for Polyethylene jars •Capacity and Max. load is doubled for TS-10N •Max. load 20 kg, Energy-saving 70 Wh, with Timer
			SR-1D		<ul style="list-style-type: none"> •Capacity: 2 pcs for 5 L/6 pcs for 2 L •Max. load 10 kg, Energy-saving 70 Wh, with Timer
	Shaker for Food inspection pretreatment	P.084	SR-10		<ul style="list-style-type: none"> •Capacity: 2 pcs for 5 L/6 pcs for 2 L •Max. load 10 kg, Energy-saving 70 Wh, with Timer
			SR-1D		<ul style="list-style-type: none"> •Capacity: 6 pcs for 5 L/14 pcs for 2 L •Dedicate for Polyethylene jars •Capacity and Max. load is doubled for TS-10N •Max. load 20 kg, Energy-saving 70 Wh, with Timer
Reciprocal shaker	P.085	TS-10N	Large	<ul style="list-style-type: none"> •Capacity: 2 pcs for 5 L/6 pcs for 2 L •Max. load 10 kg, Energy-saving 70 Wh, with Timer 	
		TS-20N		<ul style="list-style-type: none"> •Capacity: 6 pcs for 5 L/14 pcs for 2 L •Dedicate for Polyethylene jars •Capacity and Max. load is doubled for TS-10N •Max. load 20 kg, Energy-saving 70 Wh, with Timer 	
Elution testing shaker	P.086	TS-10N	Large	<ul style="list-style-type: none"> •Capacity: 2 pcs for 5 L/6 pcs for 2 L •Max. load 10 kg, Energy-saving 70 Wh, with Timer 	
		TS-20N		<ul style="list-style-type: none"> •Capacity: 6 pcs for 5 L/14 pcs for 2 L •Dedicate for Polyethylene jars •Capacity and Max. load is doubled for TS-10N •Max. load 20 kg, Energy-saving 70 Wh, with Timer 	

NEW



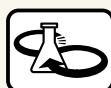
Reciprocal (Horizontal)

Reciprocate motion horizontally. Suitable for Test tubes, Centrifuge tubes, Sakaguchi flasks, PE bottles, etc.



Orbital

Circular motion horizontally. Suitable for Cultivation with Erlenmeyer flasks.



Swing in figure 8

Swing in figure 8 motion that horizontally passes through the center point. Vertical and Horizontal waves occur alternately and enables uniform shaking.



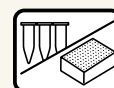
Wave shaking

The liquid moves in a downward angle using the center of the shaking table as a fulcrum.



Seesaw shaking

Seesaw motion. Optimal for gently spreading liquid to every corner of plastic containers.



Horizontal eccentric shaking

Fast motion. Shakes Delicate vessels such as Microtubes and well plates.



Reciprocal (Vertical)

Reciprocate motion vertically. Suitable for Shaking Separatory funnel intensely.

	Applications	Shaking motion	Shaking speed/width/angle range	Page
	<ul style="list-style-type: none"> Promotion of Eenzyme digestion of mouse tail, etc. Promotion of ELISA reaction, Biopanning etc. Plasmid DNA extraction 		300 to 2500 r/min	P.062
	<ul style="list-style-type: none"> Shaking culture of Deep well plates and Microtubes ELISA and Phage display Enzyme digestion, Biodegradability testing, etc. 	 	200 to 1600 r/min	P.063
	<ul style="list-style-type: none"> Shaking culture of Animal cells inside CO₂ incubator Shaking culture mildly of Stem cells such as iPS cells Shaking under high humidity environment such as Growth chambers 	 	15 to 200 r/min 25 mm (can be changed to 20mm)	P.066
	<ul style="list-style-type: none"> 6 to 24-hole plates or Thickly test tubes, etc. Dissolution, Extraction, Mixing 		50 to 500 r/min 10 mm	P.064
	<ul style="list-style-type: none"> Stirring of Microtubes, 96-hole plates, Vials, etc. ELISA and culture. Dissolution, Extraction, Mixing 		250 to 2500 r/min 2 mm	P.068
	<ul style="list-style-type: none"> Erlenmeyer flasks, Centrifuge tubes, Color comparison tubes, etc. Cultivation, Extraction 	 	15 to 160 r/min 25mm	P.068
	<ul style="list-style-type: none"> Trays, Erlenmeyer flasks, TC flasks, etc. Dispersion, Trypsinization 		15 to 100 r/min 20mm	P.070
	<ul style="list-style-type: none"> Mild shaking of Centrifuge tubes and Large-size trays Staining/Decolorization, ImmunoPrecipitation, Western Blotting, Trypsin, etc. 		5 to 50 r/min 2° to 6°	P.070
	<ul style="list-style-type: none"> Mild shaking of Petri dish and Plastic containers, etc. Staining/Decolorization, ImmunoPrecipitation, Western Blotting, Trypsin, etc. 		5 to 50 r/min 2° to 10° 10 to 60 r/min 6°	P.070
	<ul style="list-style-type: none"> Promotion of Eenzyme digestion of mouse tail, etc. Promotion of ELISA reaction, Biopanning, etc. Plasmid DNA extraction 		Range switching: 300 to 1000 r/min (LOW) 1200 to 2500 r/min (HIGH)	P.073
				P.074
				P.076
	<ul style="list-style-type: none"> Shaking culture of Microbes inside Incubators, etc. Shaking culture of Algae, etc. inside Incubators with LED irradiation Staining/Decolorization of Gels and Membranes 		20 to 200 r/min 10 to 40 mm	P.074
				P.076
				P.076
	<ul style="list-style-type: none"> Shaking culture of Microbes inside Incubators, etc. Shaking culture of Algae, etc. inside Incubators with LED irradiation Staining/Decolorization of Membranes and Gels, Dispersion 	 		P.076
	<ul style="list-style-type: none"> Shaking culture of Microbes inside Incubators, etc. Shaking culture of Algae, etc. inside Incubators with LED irradiation Various Dissolution/Elution testing 	 	25 to 250 r/min 10 to 50 mm 25 to 160 r/min 10 to 50 mm	P.078
	<ul style="list-style-type: none"> Liquid extraction of analysis samples such as residual pesticides and soil components Pretreatment of Solid phase extraction of analytical sample Various mixing-stirring, etc. 	 	Vertical: 100 to 300 r/min Horizontal: 50 to 300 r/min 40 mm	P.080
		 	50 to 300 r/min 40 mm	P.080
	<ul style="list-style-type: none"> Fat extraction testing using majonia tube 		Horizontal: 50 to 300 r/min 40 mm	P.082
	<ul style="list-style-type: none"> Extraction in food allergen testing with official method Elution in pesticide residue inspection in food Applications that require shaking of a large amount of centrifuge tubes 		50 to 250 r/min 45 mm	P.083
	<ul style="list-style-type: none"> Preparation of reagents and samples for analysis Shaking culture of Microorganisms inside Incubator Various mixing-stirring, etc. 		50 to 250 r/min 50 mm	P.084
	<ul style="list-style-type: none"> Elution of metals contained from soil and industrial waste Extraction of analytical samples with Polyethylene jars Various mixing-stirring, etc. 		50 to 250 r/min 45 mm	P.085
			25 to 200 r/min 10 to 50 mm	P.086

Constant temperature incubator shaker
OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electroporation apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

NEW

Micro Mixer E-022

*Stirs 96-well plates and Microtubes securely.
Simple and Easy-to-use for each operation.*

•High-end model with temp. control --> P.022



TAITEC's New Brand
[NEXT]



E-022 with Microtube rack
(Optional)



E-022 with Shaking platform for Well plates
(Option *2 sets can be fixed in standard while
other options are available.)

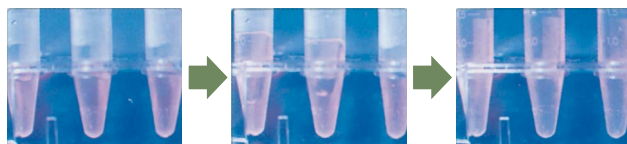
Please prepare an electrical adapter compatible with your country for use.

Model	E-022
Shaking motion	Horizontal eccentric shaking (S-Max drive)
Shaking speed	300 to 2500 r/min
Speed display/Setting	Digital display/Input
Platform dimensions	270 x 96 mm (inside)
Ambient temp. range	+4°C to +40°C
Suitable Tubes/Plates	Microtubes (Optional racks below required) Well plates (2 sets can be fixed in standard) (*)
Safety devices/functions	Fuse, Overvoltage/overcurrent protection, Nonvolatile memory error, Speed limit error, Display/measuring range error, Motor overload
Dimensions (WxDxH)	300 x 200 x 105 mm
Weight	Approx. 6 kg
Standard accessories	Power cord x1 pc, Fuse (with built-in Fuse Holder) x1 pc
Power supply	AC 100 to 240 V

(*) Well plate can be mounted directly in the standard while Optional shaking platform for well plates (WP-9602, see bottom right) The state of stirring in Microtubes is recommended to hold them securely.

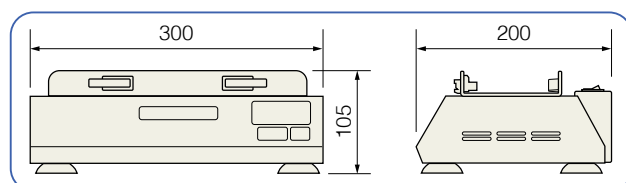
Features for Horizontal eccentric shaking

Horizontal eccentric shaking is a method designed where multiple parallel microtubes are evenly hung for a stirring effect similar to Test tube mixers in which the tubes are stirred one by one. Optimum for 0.5/1.5 mL Microtubes as well as for 96-well Microplates and Deep well plates.



The state of stirring in Microtubes

Dimensions



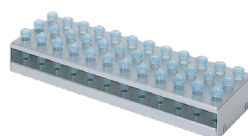
Features

- Optimum for Stirring of 96-well plates and Microtubes
- The rack for Microtubes is available as an option

Applications

- Promotion of Enzyme digestion of mouse tail, etc.
- Promotion of ELISA reaction, Biopanning, etc.
- Plasmid DNA extraction

Optional: Microtube racks, etc.



EM-1036



WP-9602



EM-1524



EM-0524



EM-1515

Product Name/Model	Capacity of vessels/Remarks
Microtube rack EM-0836	0.5 mL x 36 Dimension: 262 x 82 x 32H mm
Microtube rack EM-1036	1.5 mL x 36 Dimension: 262 x 82 x 32H mm
Shaking platform for well plate WP-9602	For 2 pcs of Deep well plates, or Microplate that cannot be fixed with standard platforms. Remove the standard platform to replace it.
Microtube rack EM-0524 (*)	0.5 mL x 24 Dimension: 126 x 86 x 28.5H mm
Microtube rack EM-1524 (*)	1.5/2.0 mL x 24 Dimension: 126 x 86 x 40.5H mm
Microtube rack EM-1515 (*), (*2)	5.0 mL x 12 Dimension: 126 x 86 x 55.5H mm

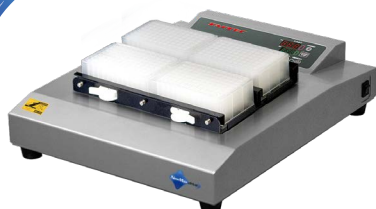
(*) WP-9602 is required for installation. Please use two of these Microtube racks in combination.

(*2) For the 5.0 mL tubes, Axygen and other types are compatible, but Eppendorf type is not.

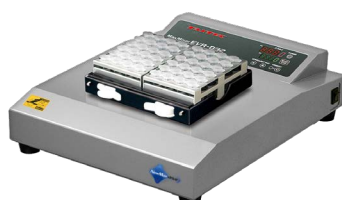
MaxMixer EVR-034/032/104

Powerful, uniform, and Quiet. Our proprietary technology New Max drive enables an outstanding stirring effectiveness for 96-well plate, Microtubes, and Disposable centrifuge tubes.

•Experiment data --> P.024



EVR-034
with Deep well plate



EVR-032
with Microtube rack (Optional)



EVR-104
with Shaking platform (Optional)

Features

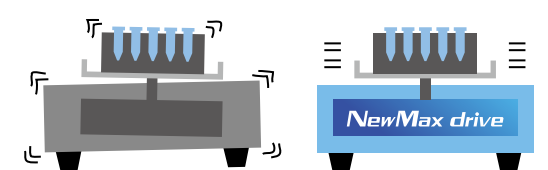
- Suitable for stirring of 96-well plates and Microtubes [Model: 034 and 032]
- Suitable for stirring of Centrifuge tubes [Model: 104]
- Handy flat simply body design for use

Our proprietary technology New Max drive enables great stirring effectiveness to prevent wobbling.

A shaker can synergistically generate the wobble by its vibration and the wobbling of the platform by inertia. The wobble can sometimes decrease the effectiveness of shaking and stirring. The New Max drive can realize less wobbling of the Shaker. For example, we obtained dramatic effectiveness in which the variation between wells in the cultivation by using well plate rack improved (see page 024).

Applications

- Shaking culture of Deep well plates and Microtubes
- Antibody reaction in ELISA and Phage display
- Enzyme digestion, Biodegradability testing, etc.



Capacity	Well plate (*) rack x4 Microtube rack x4	Well plate (*) x 2 Microtube rack x 2	1.5 or 2.0 mL microtube rack and 15 mL or 50 mL disposable centrifuge tube by changing the platform
Model	EVR-034	EVR-032	EVR-104
Shaking motion/speed	Horizontal eccentric shaking, 200 to 1600 r/min		Orbital, 50 to 500 r/min
Platform dimensions	-		240 x 220 mm
Ambient temp. range	+5°C to +40°C		
Other functions	Shaking speed displayed digitally, Memory function of shaking speed x1		
Safety devices/functions	Fuse, Motor overload/overvoltage protection, Speed limit error, Memory error		
Dimensions (WxDxH)	342 x 405 x 100 mm	302 x 365 x 100 mm	342 x 405 x 100 mm
Weight	Approx. 10 kg	Approx. 7 kg	Approx. 10 kg
Power supply	AC100V-240V/0.5A (universal power supply)		
Standard accessories	-		Sticky sheet x 1 pc (*)

(*) Equipped with the platform for Well plate. Since it is designed for 96-well plate, the stirring effectiveness will be different when using different well sizes such as 24-well and 384-well plates.
 (**) Make the shaking speed below 100 r/min with tall vessels.

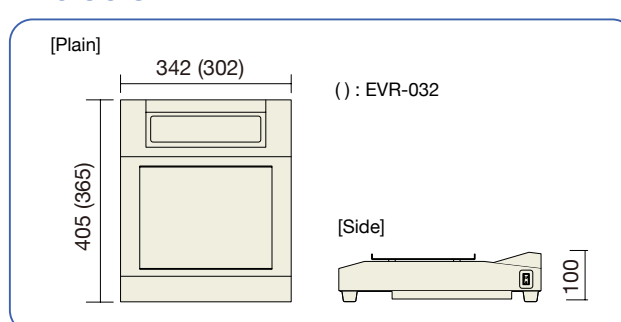
Optional accessories

Product Name/Model	Capacity of vessels
Microtube rack EM-0524	0.5 mL Microtube x 24
Microtube rack EM-1524	1.5/2.0 mL Microtube x 24
Microtube rack EM-1515 (*)	5 mL tube x 12

(*) For the 5.0 mL tubes, Axygen and other types are compatible, but Eppendorf type is not.
 •The Microtube rack is for 03 models (034/032) and the shaking platform is for 10 models (104).

Product Name/Model	Capacity of vessels
Shaking platform for 1.5 mL Microtubes VBR-1140	1.5/2.0 mL Microtube x 40
Horizontal shaking platform for 15 mL centrifuge tubes VBR-1816	15 mL disposable tube x 16
Horizontal shaking platform for 50 mL centrifuge tubes VBR-3508	50 mL disposable tube x 8

Dimensions



NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

NEW

In vitro shaker 2 Mix-EVR2/VR2

Compact sized and easy to use for bench tops and inside refrigerators. Especially designed for fine and intense shaking. Various options enable high performance in Mixing and Extraction.

•High-end model with improved uniformity and stability --> P.063 •CO₂ Incubators that can be inside this unit --> P.154-156

Features

- High-speed orbital shaking [VR2]
- Intense shaking, like Vortex mixer [EVR2]
- Can be used even inside refrigerators with 4°C [All models]
- Digital display and settings are standardized, Optional functions are also available [VR2/EVR2]



Mix-EVR2

4 pcs of well plates can be fixed in standard



Applications

- 6 to 24-hole plates or Thickly test tubes, etc. [VR2]
- Stirring of Microtubes, 96-hole plates, Vials, etc. [EVR2]
- Dissolution, Extraction, Mixing [All models], ELISA, and Cultivation [EVR2]



Mix-VR2

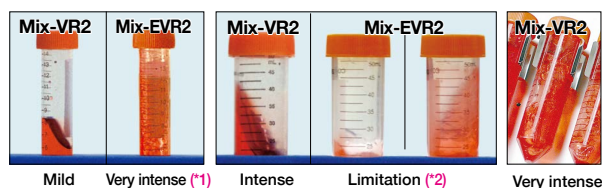
Optional shaking platform not included



Model	Mix-EVR2	Mix-VR2
Shaking motion	Horizontal eccentric shaking	Orbital shaking
Shaking speed/width	250 to 2500 r/min (*1), 2 mm	50 to 500 r/min (*1), 10 mm
Platform dimensions	- (*2)	300 × 200 mm
Ambient temp. range	0°C to +50°C	
Maximum load	Approx. 2 kg (Optional platform and vessel holders are not included.)	
Speed display/Setting	Digital display/Input	
Option① Timer operation function	Available as option •Timer mode (1 min to 99 h 59 min) *When the timer function is not being used, it can count the time. •ON-OFF •OFF-ON •ON-OFF-ON (Repeat)	•Integral timer display (0 to 99 h 59 min or after: 100 h to 9999 h)
Option② Transmission output	Available as an optional •Additional transmission output (1-5V) terminal	
Safety devices/functions	Current limiter, Internal overheat detection, Fuse	
Dimensions (WxDxH)	300 × 235 × 152 mm	300 × 235 × 149 mm
Weight	Approx. 6.5 kg	Approx. 12.2 kg
Power supply	AC100V-240V/0.5A (universal power supply)	

(*1)The maximum value may not be met depending on the optional platforms and vessels. (*2)Equipped with platform for 4 pcs of well plate as standard. Optional shaking platform can be used by replacing the base.

The stirring forces of Mix-VR2 and Mix-EVR2



(*1)The stirring can be suppressed so that the samples do not stick to the lid depending on the speed and liquid volume.
(*2)The sticking to the lid cannot be prevented at "Very intense" near the max speed.

	Suitable Well plates and Microtubes		
Mix-VR2	6 well (Up to 200 r/min)	12 well (Up to 300 r/min)	24 well (Up to 400 r/min)
Mix-EVR2	96 well (Up to 1000 r/min)	96 well DWP (Up to 2000 r/min)	0.5 to 2 mL Microtube

Directions of vessels	Vertical		Horizontal	
	Diameter		Length	
Size of Vessels	Above φ20 mm	Below φ20 mm	110 to 240 mm	Below 110 mm
Mix-VR2	Intense	Mild (Less than 20% Liquid volume)	Slightly intense	Very intense
Mix-EVR2	Limitation	Very intense	Unsuitable	Slightly intense

USER'S VOICE

It is important to know the features and specs in order to use it well.



Additional optional functions (For VR2/EVR2)

Option①: Timer operation function

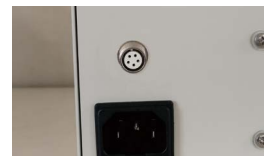
The shaker can be "stopped" by turning it ON-OFF after the set time has elapsed and "started" by turning it OFF-ON. In addition, the operation can be "stopped and started repeatedly" by pressing ON-OFF-ON, thus preventing sedimentation of samples in the vessel and enabling work to proceed when the user is absent, such as after returning home or doing other work. While the timer operation function is not used, it can count the time.



Mix-EVR2 + Option①

Option②: Transmission output terminal extension

Attach a female terminal on the back of the main unit that can be connected to a recorder, etc. From the terminal, the signal 1 to 5 [V] is output, which is corresponding respectively to the speed display of 0 to 2500 [r/min] for Mix-EVR2 and 0 to 500 [r/min] for Mix-VR2. Since it can be connected to a recorder, etc., it is recommended for customers who need to record the operation of equipment used in the work process.



A connector for connection is included. Connect to the signal wiring (AWG22 to 24) from the target device.

Optional shaking platform

Sticky sheet (VR2/EVR2)

A non-slip sheet that used placing on the platform. Adhesion that is weakened with dust and dirt can be recovered by washing with water.

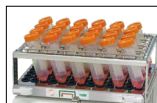


Model	ST-2030
Applicable models	Mix-VR2/EVR2 (VR standard platform required in EVR2/EVR) (*)
Dimension	195 × 295 × 2H mm

(*) Up to 100 r/min in VR2 and only Tray or Dishes in EVR2.

Spring net shaking platform (VR2)

This enables various shaped vessels to be fixed on the platform. Spring net can be added with SP2030 (see P.069).



Model	MR-2030
Applicable models	Mix-VR2 (Below 350 mm/min)
Dimension/ Capacity	200 × 300 × 95H mm Up to 24 pcs when 50 mL Disposable centrifuge tube.

Microtube rack (EVR2)

Equipped with a non-slip foot to make it easy to use as a Lab top tube stand. Two types are available.



Model	EM-0524	Vessels/Capacity	0.5 mL × 24
Applicable models	Mix-EVR2		
Model	EM-1524	Vessels/Capacity	1.5 mL × 24
Applicable models	Mix-EVR2		

Universal shaking platform (VR2)

Clamps for Erlenmeyer flask and Horizontal clamps for Centrifuge tubes are to be fixed on the platform.



Model	MT-2030
Applicable models/Dimension	Mix-VR2 , 200 × 300 × 23H mm

Clamp for Erlenmeyer flask (VR2)

Mounted on MT-2030 for use.

Model	CF-0100	CF-0250	CF-0300	CF-0500
Vessels/Capacity	100 mL × 12	250 mL × 6	300 mL × 6	500 mL × 3

Tilted clamp shaking platform (VR2/EVR2)

This is for Centrifuge tubes. Remove the standard platform to replace it.



Model	ML-2030
Applicable models/ Dimension	Mix-VR2/EVR2 , 256 × 300 × 30H mm, Angle 5°

Vertical holding shaking platform (VR2/EVR2)

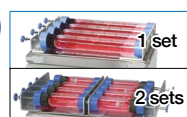
This is for Test tube rack and Shaking platforms for Test tubes/Centrifuge tubes. Remove the standard platform to replace it.



Model	ER-2300
Applicable models/ Dimension	Mix-VR2/EVR2 , 180 (Inside dimension) × 201 × 27H mm

Horizontal clamp for Centrifuge tube (VR2)

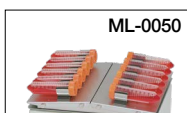
This securely holds the Centrifuge tube, Stopped test tube, or Water-compliant 100 mL Color comparison tube. Optimal for Extraction experiment. Mounted on MT-2030 for use.



Model	AT-0004
Vessels Diameter	10 to 37 mm, 4 pcs in 1 set
Capacity	With 1 set: Vessels with 75 to 240 mm in length such as 100 mL Color comparison tube. With 2 sets: Vessels with 75 to 110 mm in length such as 50 mL Centrifuge tube.

Tilted clamps for Centrifuge tubes (VR2/EVR2)

Holders that strongly stir Disposable centrifuge tubes. The stirring effect can be obtained with large volumes of liquid even though the MT-2030 has a 5° angle.

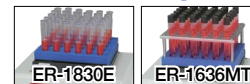


Model	ML-0015
Applicable models	Mix-EVR2
Capacity	Vessels with φ16.5 to 20 mm and approx. 150 mm in length (15 mL Disposal centrifuge tubes) × 20 pcs

Model	ML-0050
Applicable models	Mix-VR2
Capacity	Vessels with φ28 to 35 mm and approx. 150 mm in length (50 mL Disposal centrifuge tubes) × 12 pcs

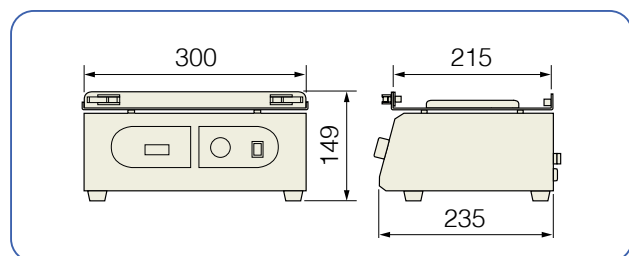
Test tube rack and Rack for Test tube/Centrifuge tube

Racks that stir Test tubes and Centrifuge tubes vertically. Recommended to make the liquid volume less than 50%.

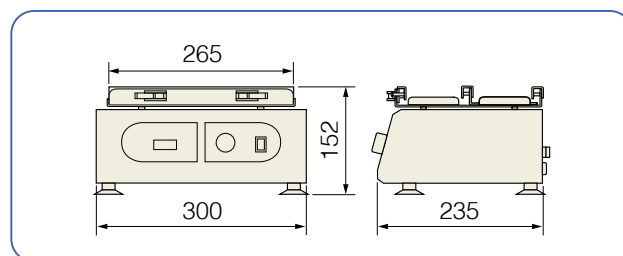


Model	ER-1830E	ER-1636MT	50 mL Centrifuge tube rack
Applicable models	Mix-EVR2	Mix-EVR2	Mix-VR2
Capacity	φ18 mm Test tube × 30	φ16.5 mm Test tube or Disposable Centrifuge tube for 15 mL × 36	Disposable Centrifuge tube for 50 mL × 16

Dimensions Mix-VR2



Dimensions Mix-EVR2



NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

Cell shaker CS-LR

Enables Stable operation under high humidity in CO₂ incubator, etc. with high waterproof performance. The low calorific value has uninfluential effect on inside temp.

•CO₂ Incubators that can be inside this unit --> P.048-049



CS-LR with Shaking platform MT-3636



CS-LR with Two-tier shaking platform WR-2030

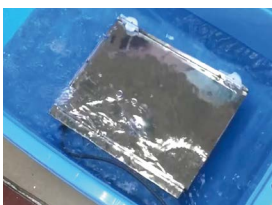


CS-LR with Universal shaking platform MT-2030

Model	CS-LR
Shaking motion	Switchable Reciprocal/Orbital shaking
Shaking speed	15 to 200 r/min
Shaking width	25 mm (can be changed to 20 mm) (*)
Platform dimensions	300 × 200 mm
Ambient temp./Humidity	0°C to +50°C/Up to 95%
Maximum load	Approx. 3 kg (Optional platforms and vessel holders are included)
Dimensions (W×D×H)	Main unit: 300 × 240 × 129 mm Controller: 125 × 30 × 70 mm
Weight	Main unit: Approx. 7 kg/Controller: Approx. 0.5 kg
Power supply	AC100V-240V/1A (AC Adapter)

(*)Ask our/TAITEC distributor if you would like to change.

High waterproof withstands submergence test



It has high waterproof performance that passed the submersion test for 30 minutes and running test for 5 minutes in the performance test is at development.

*The test not guaranteed for use in water.

Separated controller



Enables to control shaking speed etc. remotely without installation from the unit (Cable 2 m). Because of this, the operation part is not adversely affected in a harsh environment such as a low temperature incubator or high humidity in a CO₂ Incubator.

Features

- Enables Stable operation under high humidity in CO₂ Incubator, etc. with high waterproof performance
- Standard platform with anti-bacterial processing
- Operation unit can be installed outside the cabinet (cable 2 m)

Applications

- Shaking culture of Animal cells inside CO₂ incubator
- Shaking culture mildly of Stem cells such as iPS cells
- Shaking under high humidity environment such as Growth chambers

Switchable Reciprocal/Orbital shaking according to the shape of vessels

The shaking motion can be switched between reciprocal shaking at low speed for Petri dishes and orbital shaking for Erlenmeyer flasks. It shakes accurately even at low speed.

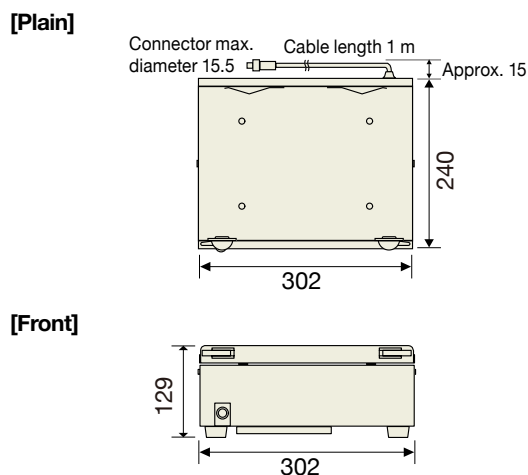
As the speed of the shaking gradually rises from a low speed, it becomes effective on reducing stress on the samples.

Clean stainless steel exterior and antibacterially processed platform

The exterior is made of clean stainless steel. Plus the platform is processed with antibacterial processing with KENIFINE that drastically suppresses the growth of bacteria/alga/mold/virus when the culture medium is spilled or water droplets are adhered.

*KENIFINE is made by Kobe Steel, Ltd. (Japanese corporation). Compared to conventional inorganic antimicrobial materials, this antimicrobial coating technology is not only antimicrobial, but also antifungal, antialgal, and antiviral, and has excellent durability.

Dimensions



*Orbital dimensions of movable part (at shaking width of 25 mm): 328 × 257

*Installation dimensions including cables: 328 × 276

*For more detailed installation dimensions, see the right.

Cell shaker CS-LR Optional accesories

Optional accesories: Shaking platform (for details, see below and P.069)

Product Name/Model	Example of Capacity
Universal shaking platform MT-2030 (*1)	100 mL Erlenmeyer flask × 12, 250 mL × 6, 300 mL × 6, 500 mL × 3
Universal shaking platform for CS-LR MT-3636 (*1), (*2)	100/200/250 mL Erlenmeyer flask × 18, 300/500 mL × 9, 1 L × 5
Two-tier shaking platform WR-2030 (*3)	6 cm dish × 24 50 mL TC flask × 12
Large-size shaking platform WR-3636LR	6 cm dish × 36 40 mL TC flask × 28
Spring net shaking platform MR-2030	50 mL disposable centrifuge tube × 24

(*1)Clamps are available as an option. (*2)MT-3636 is a specifically designed platform for CS-LR. Be sure to use below 160 r/min. (*3)Sticky sheet ST-2030 (Optional) is required to prevent slipping. •Optional shaking platforms are not processed with antibacterially processing.

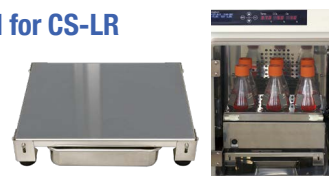
Optional accesories: Clamps (Mounted on the Universal shaking platform)

Model	CF-0100	CF-0250	CF-0300	CF-0500
Erlenmeyer flasks	100 mL	250 mL	300 mL	500 mL

Optional accessory: Stand for CS-LR

Model CS-3024
The stand for CS-LR can be placed to straddle the Humidity Pan inside MG-71 series.

•It does not come with the Humidity Pan.



CS-LR Reference Materials

Reference for shaking motion, vessels, and shaking width

Reciprocation in test tubes or TC flasks, Shaking width according to the vessel

Moderate defrosting and suspension with a shaking width of 25 mm

Spring net shaking platform MR-2030

Shaking width of 20 mm facilitates gas displacement.

Shaking platform including the Sticky sheets, such as Sticky sheet ST-2030, is recommended.

Orbital shaking for flasks and well plates, Shaking width depending on the vessel

Seed culture in 250 mL flasks with 25 mm shaking width

Universal shaking platform MT-2030 + 6 × Clamps CF-0250

Two-tier shaking platform WR-2030

Recommended to use the two-tier shaking platform WR-2030 and large-sized shaking platform WR-3636LR, that include Sticky sheet ST-2030 or other Sticky sheet

Shaking width of 20 mm, Screening and organoid culture in 6 wells



Shaking width of 25 mm, Culturer of 9 pcs of 500 mL flasks

CS-LR Claw Clamp Shaking Table MT-3636 + Claw Clamp CF-0500 × 9

Universal shaking platform dedicated for CS-LR, which is optimal for shaking a large number of Erlenmeyer flasks stably (Clamps are optional). Use it at 160 r/min or less. Shaking platform dimensions: 360 × 360 mm

Reference material for placing in the incubator chamber

[Plain]

To prevent contact with cables, a minimum of 280 mm should be secured.

To prevent contact by shaking, ensure a minimum of 330 mm.

[Front]

400 mm or more for a 500 mL flask

At least 360 mm for 250 mL flask

Stand for CS-LR CS-3024

Approx. 140 mm

Approx. 180 mm

129 mm

Max. 58 mm

Height adjustable from 31 to 45 mm

About 30 mm to take out

NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

In vitro shaker Shake-LR/XR, In vitro shaker 2 Shake-LR2/XR2

Compact sized and easy to use for bench tops and inside refrigerators. Can shake the samples largely and securely. Wide range of options for various applications.

•CO₂ Incubators that can be inside this unit --> P.154-156

Features

- Switchable Reciprocal and Orbital shaking [LR/LR2]
- Swing in figure 8 [XR/XR2]
- Can be used even inside refrigerators with 4°C [All models]
- Digital display and settings are standardized, Optional functions are also available [LR2/XR2]

Applications

- Erlenmeyer flasks, Centrifuge tubes, Color comparison tubes, etc. [LR/LR2]
- Trays, Erlenmeyer flasks, TC flasks, etc. [XR/XR2]
- Cultivation, Extraction [LR/LR2], Dispersion, and Trypsinization [XR/XR2]



Shake-LR



Shake-LR2



Shake-XR



Shake-XR2

Optional shaking platform not included

Model	Shake-LR	Shake-LR2	Shake-XR	Shake-XR2
Shaking motion	Switchable Reciprocal/Orbital shaking		Swing in figure 8	
Shaking speed/width	15 to 160 r/min (*), 25 mm		15 to 100 r/min* (*), 20 mm *One (1) figure-8 motion per 1 r/min	
Platform dimensions	300 x 200 mm			
Ambient temp. range	0°C to 50°C			
Maximum load	Approx. 2 kg (Optional platform and vessel holders are not included)			
Speed display/Setting	- / Volume adjustment	Digital display/Input		- / Volume adjustment
Option① Timer operation function	Not available	Available as an option • Timer mode (1 min to 99 h 59 min) * When the timer function is not being used, it can count the time. • ON-OFF • OFF-ON • ON-OFF-ON (Repeat) • Integral timer display (0 to 99 h 59 min or after: 100 h to 9999 h)	Not available	Available as an option • Timer mode (1 min to 99 h 59 min) * When the timer function is not being used, it can count the time. • ON-OFF • OFF-ON • ON-OFF-ON (Repeat) • Integral timer display (0 to 99 h 59 min or after: 100 h to 9999 h)
Option② Transmission output	Not available	Available as an option • Additional transmission output (1-5 V) terminal	Not available	Available as an option • Additional transmission output (1-5 V) terminal
Safety devices/functions	Current limiter, Internal overheat detection, Fuse			
Dimensions (WxDxH)	300 x 270 x 152 mm		300 x 235 x 155 mm	
Weight	Approx. 7.8 kg		Approx. 7.7 kg	
Power supply	AC100V/0.5A (Need a step-down transformer)	AC100V-240V/0.5A (universal power supply)		AC100V-240V/0.5A (universal power supply)

(*The maximum value may not be met depending on the optional platforms and vessels.

The features of Swing in figure 8 and the shaker that can swing in figure 8

Vertical and Horizontal waves occur alternately in the figure 8. In shaking the gel, the efficiency of dye decolorization is heightened as the solution moves firmly while the gel stays at any position (①). The wider the vertical and horizontal waves alternately occur, the easier the vessels can be checked (②). In Erlenmeyer flasks, high aeration and dispersion efficiency like motion of liquid in the shaking flasks can be obtained (③, 50/100/150 mL in 500 mL from the left).



USER'S VOICE

I think there should be some effective applications for figure 8 other than this. Also, I am interested in the High-end model NR-80 with more capacity than that of Shaker-XR/XR2.



← NR-80 (P.076)
6 pcs of 500 mL Erlenmeyer flask, Switchable Reciprocal/Orbital, and Figure 8

Additional optional functions (For LR2/XR2)

Option①: Timer operation function

The shaker can be "stopped" by turning it ON-OFF after the set time has elapsed and "started" by turning it OFF-ON. In addition, the operation can be "stopped and started repeatedly" by pressing ON-OFF-ON, thus preventing sedimentation of samples in the vessel and enabling work to proceed when the user is absent, such as after returning home or doing other work. While the timer operation function is not used, it can count the time.



Shake-LR2 + Option①

Option②: Transmission output terminal extension

Attach a female terminal on the back of the main unit that can be connected to a recorder, etc. From the terminal, the signal 1 to 5 [V] is output, which is corresponding respectively to the speed display of 0 to 160 [r/min] for Shake-LR2 and 0 to 100 [r/min] for Shake-XR2. Since it can be connected to a recorder, etc., it is recommended for customers who need to record the operation of equipment used in the work process.



Option② Transmission output terminal



A connector for connection is included. Connect to the signal wiring (AWG22 to 24) from the target device.

Optional shaking platform

Sticky sheet (LR/LR2/XR/XR2)

A white-colored non-slip sheet that is used by placing it on the platform. Eco-friendly special silicon material is adopted. Adhesion is weakened with dust and dirt can be recovered by washing with water.



Model	ST-2030
Applicable models	Shake-LR/LR2/XR/XR2
Dimension	195 × 295 × 2H mm

•Use below 100 r/min (or any speed the vessels not fallen) with Shake-LR/LR2.

Two-tier shaking platform (LR/LR2/XR/XR2)

It is designed to be fixed on the top of the platform, making it two-tiered. Convenient to stain multiple Electrophoresis gel. Comes with 1 pc of Sticky sheet ST-2030.



Model	WR-2030
Applicable models	Shake-LR/LR2/XR/XR2
Dimension	204 × 304 × 168H mm

•Use below 100 r/min (or any speed the vessels not fallen) with Shake-LR/LR2. •Maximum load should be 1.2 kg when using this. •Purchase separately ST-2030 as necessary.

Spring net shaking platform (LR/LR2)

Convenient when shaking different sizes of vessels together. Tilt the vessels slightly with approx. 20% of the liquid volume.



Model	MR-2030
Applicable models	Suitable for Shake-LR/LR2
Dim./Cap.	W 200 × D 300 × H 95 mm, Up to 24 pcs when 50 mL Disposable centrifuge tube

•It can be also mounted to Shake-XR/XR2.
•Recommended to use with Conical bottom centrifuge tube.

Double spring net for MR-2030 (additional option)

This doubles the spring net of MR-2030. Enhances the fixed accuracy with this when using vessels that cannot be dropped into the bottom hole.



Model	SP-2030
Dimension	200 × 300 × 12H mm

•Be careful in the shaking speed when [if] the spring net is doubled.

Universal shaking platform (LR/LR2/XR/XR2)

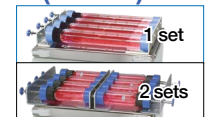
This is required when using the clamps for Erlenmeyer flasks or Centrifuge tubes. Be sure use the clamps so that the vessels can be fixed.



Model	MT-2030
Applicable models	Shake-LR/LR2/XR/XR2
Dimension	200 × 300 × 23H mm

Horizontal clamp for Centrifuge tube (LR/LR2)

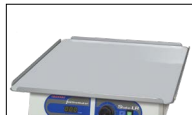
This makes Centrifuge tubes, Stopped test tubes, or Water-compliant 100 mL Color comparison tubes securely fixed. Optimal for Extraction experiment. Mounted on MT-2030 for use.



Model	AT-0004
Vessels	Diameter 10 to 37 mm, 4 pcs in 1 set
Capacity	With 1 set: Vessels with 75 to 240 mm in length such as 100 mL Color comparison tubes. With 2 sets: Vessels with 75 to 110 mm in length such as 50 mL Centrifuge tubes.

Large-sized shaking platform (LR/LR2/XR/XR2)

Large sized culture trays and TC flasks can be mounted. 1 pc of Sticky sheet is included and can be replaced by removing Standard platform.



Model	WR-3636LR (For Shake-LR/LR2)
Model	WR-3636 (For Shake-XR/XR2)
Dimension	364 × 364 × 12H mm

•Use below 100 r/min (or any speed the vessels not fallen).

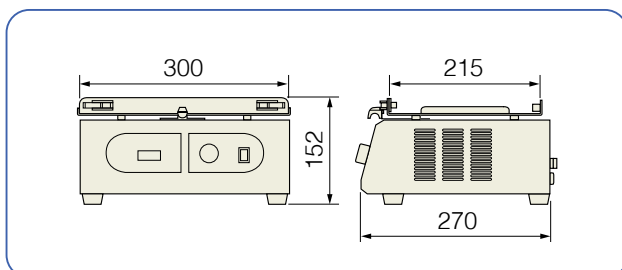
Clamps for Erlenmeyer flasks (LR/LR2/XR/XR2)

Mounted on MT-2030 for use.

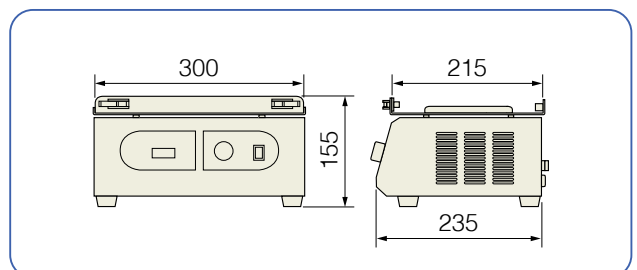


Model	CF-0100	CF-0250	CF-0300	CF-0500
Vessels	100 mL	250 mL	300 mL	500 mL
Capacity	12 pcs	6 pcs	6 pcs	3 pcs

Dimensions Shake-LR/LR2



Dimensions Shake-XR/XR2



NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

In vitro shaker Wave-PR/SI/SI slim, In vitro shaker 2 Wave-PR2/SI2

Compact sized and easy to use for bench tops and inside refrigerators. The mild shaking as if shaken by hand. Optimum for Immuno Precipitation and Western Blotting at a low-temperature room.

•CO₂ Incubators that can be inside this unit --> P.154-156

Features

- Mild shaking (Wave shaking) [PR/PR2]
- Seesaw shaking [SI/SI2/SI slim]
- Can be used even inside refrigerators with 4°C [All models]
- Digital display and settings are standardized, Optional functions are also available [PR2/SI2]

Applications

- Mild shaking of Centrifuge tubes and Large-size trays [PR/PR2]
- Mild shaking of Petri dish and Plastic containers, etc. [SI/SI2/SI slim]
- Staining/Decolorization, ImmunoPrecipitation, Western Blotting, and Trypsin, etc.

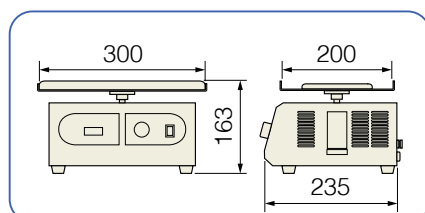


A Sticky sheet is included, but other parts are optional.

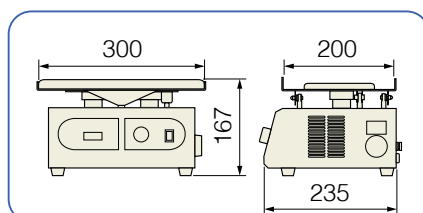
Model	Wave-PR	Wave-PR2	Wave-SI	Wave-SI2	Wave-SI slim
Shaking motion	Wave shaking (Mild shaking)		Seesaw shaking		
Speed/Angle range (*1)	5 to 50 r/min, 2 to 6°		5 to 50 r/min, 2 to 10°		10 to 60 r/min, 6° (fixed)
Platform dimensions	300 x 200 mm				180 x 120 mm
Ambient temp. range	0°C to 50°C				
Maximum load	Approx. 2 kg (SI slim: Approx. 1 kg *Optional platform and vessel holders are not included)				
Speed display/Setting	- / Volume adjustment	Digital display/Input	- / Volume adjustment	Digital display/Input	-
Option① Timer operation function	Not available	Available as an option •Timer mode (1 min to 99 h 59 min) * When the timer function is not being used, it can count the time. •ON-OFF •OFF-ON •ON-OFF-ON (Repeat) •Integral timer display (0 to 99 h 59 min or after: 100 h to 9999 h)	Not available	Available as an option •Timer mode (1 min to 99 h 59 min) * When the timer function is not being used, it can count the time. •ON-OFF •OFF-ON •ON-OFF-ON (Repeat) •Integral timer display (0 to 99 h 59 min or after: 100 h to 9999 h)	Not available
Option② Transmission output	Not available	Available as an option •Additional transmission output (1-5 V) terminal	Not available	Available as an option •Additional transmission output (1-5 V) terminal	Not available
Safety devices/functions	Motor protection circuit at overload, Fuse				
Dimensions (WxDxH)	300 x 235 x 163 mm		300 x 235 x 167 mm		180 x 130 x 110 mm
Weight	Approx. 5.1 kg		Approx. 5.5 kg		Approx. 1.8 kg
Power supply	AC100V/0.5A (Need a step-down transformer)	AC100V-240V/0.5A (universal power supply)	AC100V/0.5A (Need a step-down transformer)	AC100V-240V/0.5A (universal power supply)	AC100V/0.5A (Need a step-down transformer)
Standard accessories	Sticky sheet (ST-2030 for SI/PR, Dedicated type for SI slim) x 1 pc (*2)				

(*1)The maximum value may not be met depending on the optional platforms and vessels. (*2)Shaking platforms and vessel holders are also available as an option except SI slim (see the right figure).

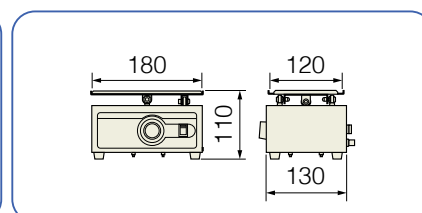
Dimensions Wave-PR/PR2



Dimensions Wave-SI/SI2



Dimensions Wave-SI slim



Additional optional functions (For PR2/SI2)

Option①: Timer operation function

The shaker can be "stopped" by turning it ON-OFF after the set time has elapsed and "started" by turning it OFF-ON. In addition, the operation can be "stopped and started repeatedly" by pressing ON-OFF-ON, thus preventing sedimentation of samples in the vessel and enabling work to proceed when the user is absent, such as after returning home or doing other work.

While the timer operation function is not used, it can count the time.

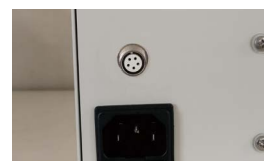


Wave-SI2 + Option①

Option②: Transmission output terminal extension

Attach a female terminal on the back of the main unit that can be connected to a recorder, etc.

From the terminal, the signal 1 to 5 [V] is output, which is corresponding to the speed display of 0 to 50 [r/min] for Wave-PR2/SI2. Since it can be connected to a recorder, etc., it is recommended for customers who need to record the operation of equipment used in the work process.



A connector for connection is included. Connect to the signal wiring (AWG22 to 24) from the target device.

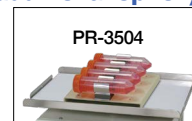
Optional shaking platform

Sticky sheet (PR/PR2/SI/SI2) ←.....→ Centrifuge tube holder for ST-2030 (additional option)

A white-colored non-slip sheet that is used by placing it on the platform. Eco-friendly special silicon material is adopted. Adhesion is weakened with dust and dirt can be recovered by washing with water.



Holder for Disposable centrifuge tubes, etc. that are placed on sticky sheets for use. Can place one. Recommended to place in the direction of photo.



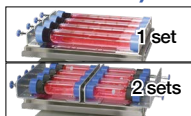
Model	ST-2030
Applicable models	Comes in Wave-PR/PR2/SI/SI2
Dimension	195 × 295 × 2H mm

•Use any speed and angle where the vessels do not fall.

Model	PR-1808	PR-3504
Applicable models	Suitable for Wave-SI/SI2	Wave-PR/PR2/SI/SI2
Vessels/ Capacity	Vessels with ϕ 16.5 to 20 mm and approx. 150 mm in length (15 mL Disposal centrifuge tubes) × 8 pcs	Vessels with ϕ 29 to 35 mm and approx. 150 mm in length (50 mL Disposal centrifuge tubes) × 4 pcs

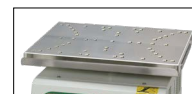
Horizontal clamp for Centrifuge tube (PR/PR2/SI/SI2) ←...▶

This securely holds the Centrifuge tube, Stopped test tube, or Water-compliant 100 mL Color comparison tube. Optimal for Extraction experiment. Mounted on MT-2030 for use.



Universal shaking platform (PR/PR2/SI/SI2)

This is required when using Horizontal clamps for Centrifuge tubes on the left. Be sure to use the clamps so that the vessels can be securely held.



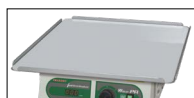
Model	AT-0004
Vessels	Diameter 10 to 37 mm, 4 pcs in 1 set
Capacity	With 1 set: Vessels with 75 to 240 mm in length such as 100 mL Color comparison tube. (*) With 2 sets: Vessels with 75 to 110 mm in length such as 50 mL Centrifuge tube.

(*)Vessels longer than 110 mm are recommended for use in Wave-SI/SI2.

Model	MT-2030
Applicable models	Wave-PR/PR2/SI/SI2
Dimension	200 × 300 × 23H mm

Large-sized shaking platform (PR/PR2/SI/SI2)

Large sized culture trays and TC flasks can be mounted. Comes with 1 pc Dedicated Sticky sheet. Remove the standard platform to replace it.



Two-tier shaking platform (SI/SI2)

It is designed to be fixed on the top of the platform, making it two-tiered. Convenient to stain multiple Electrophoresis gel. Convenient to stain Mini Gel. Comes with 1 pc of Sticky sheet ST-2030.



Model	WR-3636
Dimension	364 × 364 × 12H mm

•Use any speed and angle where the vessels do not fall.

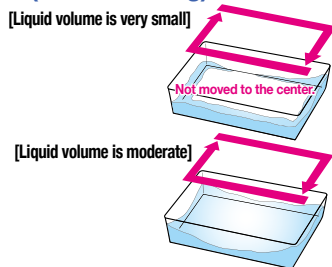
Model	WR-2030
Applicable models	Suitable for Wave-SI/SI2
Dimension	204 × 304 × 168H mm

•Use any speed and angle where the vessels do not fall. •Maximum load should be 1.2 kg when using this.

Features for Wave-PR/PR2 (Wave shaking) and Wave-SI/SI2 (Seesaw shaking)

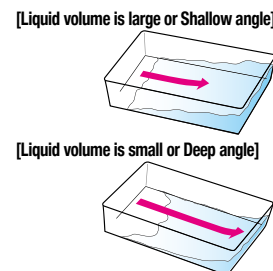
Wave-PR/PR2

Wave-PR/PR2 (Wave shaking) has less variation in the motion that enables constant mild stirring. Please note that when a liquid volume is very small compared to the capacity of container/tray, the liquid may not move to the center of the tray.



Wave-SI/SI2

By making the longitudinal direction of the tray inclined and reducing the liquid volume, the momentum and distance of liquid can be gained. Also, even if the liquid volume is small, it can be spread all over the container/tray. Please note that when shaking thin samples such as PAGE, the gel might be rounded at the end of the plates depending on the tilt angle.



The angles of platform for Wave-PR/PR2 and Wave-SI/SI2

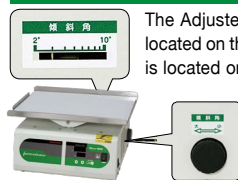
Wave-PR/PR2

The Indicator and Adjuster for the tilt angle are located on the right. 2° to 6° can be adjusted horizontally.



Wave-SI/SI2

The Adjuster for the tilt angle is located on the right and Indicator is located on the back. 2° to 10° can be adjusted horizontally.



Wave-SI slim

The body is about half the size of the Wave-SI, but the platform size is the same for 1 pc of Well plate. The tilt angle is fixed at 6°.



NEW

Constant-temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant-temperature Chambers

Centrifugal Concentrators Cold Trap

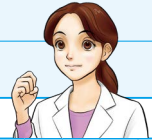
Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water-circulating system [Chilled]

Appendix

Date	Author
Title	



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- NEW
- Constant temperature incubator shaker OD Monitor
- For cell culture related products
- Shaker
- Mixer Rotator Stirrer
- Bead beater homogenizer Ultrasonic homogenizer
- Aluminum block Bath Mini-size Bath
- Water bath Shaking Water bath Immersion cooler
- Hybridization Incubator Consistent temperature Chambers
- Centrifugal Concentrators Cold Trap
- Freeze dryers
- Substrate Electrophoresis apparatus Blotting device for hybridization
- Constant temperature water circulating system [Chiller]
- Appendix

Shakers

NR-1

SR-2EW

CS-LR

Micro Mixer E-36

Stirs 96-well plates and Microtubes securely. The stirring speed is 300 to 2500 r/min. Simple and Easy-to-use for the operation.

•High-end model with high stability and uniformity --> P.062

Features

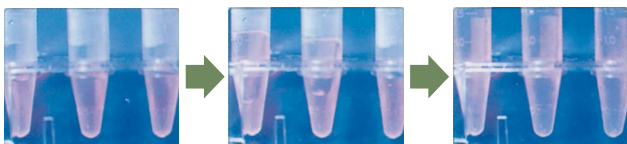
- Optimum for Stirring of 96-well plates and Microtubes
- Stabilized stirring by the range switching in Low/High speed
- The rack for Microtubes is available as an option

Applications

- Promotion of Eenzyme digestion of mouse tail, etc.
- Promotion of ELISA reaction, Biopanning, etc.
- Plasmid DNA extraction

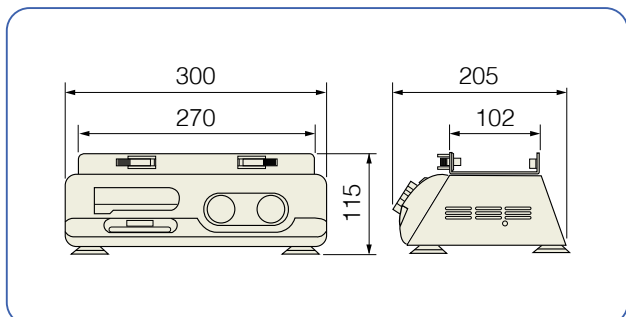
Features for Horizontal eccentric shaking

Horizontal eccentric shaking is a method designed where multiple parallel microtubes are evenly hung for a stirring effect similar to Test tube mixers in which the tubes are stirred one by one. Optimum for 0.5/1.5 mL Microtubes as well as for 96-well Microplates and Deep well plates.



The state of stirring in Microtubes

Dimensions



E-36 with Microtube rack (Optional)

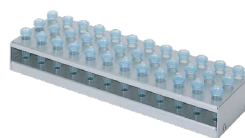


E-36 with Shaking platform for Well plates (Option *2 sets can be fixed in standard while other options are available)

Model	E-36
Shaking motion	Horizontal eccentric shaking
Shaking speed	300 to 2500 r/min
Platform dimensions	270 × 96 mm (inside)
Suitable Tubes/Plates	Microtubes (Optional racks below required) Well plates (2 sets can be fixed in standard) (*)
Timer	60-min Timer for the operation
Dimensions (WxDxH)	300 × 205 × 115 mm
Weight	Approx. 5 kg
Power supply	AC100V/0.5A (Need a step-down transformer)

(*)Well plate can be mounted directly in the standard while Optional shaking platform for well plates (WP-9602). The state of stirring in Microtubes is recommended to hold them securely.

Optional: Microtube racks, etc.



EM-1036



WP-9602

Product Name/Model	Capacity of vessels/Remarks
Microtube rack EM-0836	0.5 mL × 36 Dimension: 262 × 82 × 32H mm
Microtube rack EM-1036	1.5 mL × 36 Dimension: 262 × 82 × 32H mm
Shaking platform for well plate WP-9602	For 2 pcs of Microplate that cannot be fixed with Deep well plates or standard platforms. Remove the standard platform to replace it.

NEW

Constant temperature incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

Reciprocal shaker NR-1, Rotary shaker NR-2, Double shaker NR-3

Compact sized easy to use for bench tops and inside Incubators.
3 models: Reciprocal, Orbital, Switchable Reciprocal shaking.
Options are compatible with those of Bioshaker (Small sized).

- "Bioshaker BR-21/22/23 with temp. control" series --> P.027
- OD-Monitors measuring turbidity while shaking --> P.042 to 043

Other platforms can be used with each model in combinations other than the combination shown below.



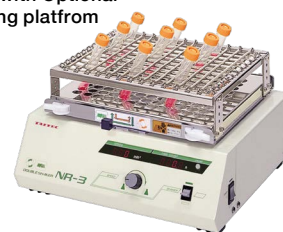
NR-1 with Optional shaking platform



NR-2 with Optional shaking platform



NR-3 with Optional shaking platform

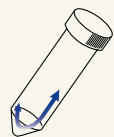


Features

- Reciprocal shaking of Test tubes and Shake flasks [NR-1]
- Orbital shaking of mainly Erlenmeyer flasks [NR-2]
- Switchable Reciprocal/Orbital shaking [NR-3]

Compatibility of Reciprocal shaking and Vessels

Reciprocal shaking is suitable for Test tubes and Shake flasks. In shaking culture with Shake flasks, adjust the flow rate to 1/2 of the capacity so that the liquid can be moved properly.



Movement of liquid in Reciprocating shaking (left: Centrifuge tube, right: Shake flask)

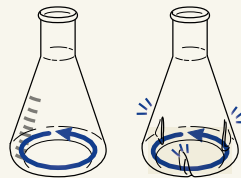
Shaking width is more important rather than shaking speed so that the liquid moves like the figure in shaking flasks. The shaking width can be adjusted in NR-1/2/3.

Applications

- Shaking culture of Microbes inside Incubators, etc.
- Shaking culture of Algae, etc. inside Incubator with LED irradiation
- Staining/Decolorization of Gels and Membranes

Compatibility of Orbital shaking and Vessels

Orbital shaking is suitable for Erlenmeyer flasks. In shaking culture with Erlenmeyer flasks, adjust the flow rate between 1/5 to 1/3 of the capacity so that the liquid can be moved properly.



Movement of liquid inside Erlenmeyer flasks in Orbital shaking.

The baffled Erlenmeyer flask (right) has good aeration but is prone to bubbles, so the applications are limited.

Model	NR-1	NR-2	NR-3
Shaking motion	Reciprocal shaking	Orbital shaking	Switchable Reciprocal/Orbital shaking
Shaking speed	20 to 200 r/min		
Shaking width	10 to 40 mm, Stepless (Default: 25 mm)		
Platform dimensions and Capacity	290 x 250 mm Erlenmeyer flask 500 mL x 4, 3 L x 1		
Maximum load	Approx. 5 kg (Shaking platform and vessel holders are included)		
Shaking duration integrator	0.1 h to 999.9 h (Automatic resetting function)		
Safety devices/functions	Motor protection circuit at overload, Fuse		
Dimensions (WxDxH)/Weight	355 x 355 x 160 mm, Approx. 13 kg		
Power supply	AC100V/AC220V-240V/0.5A (built-in down transformer)		

Related products: OD-Monitor series and Small-sized incubator

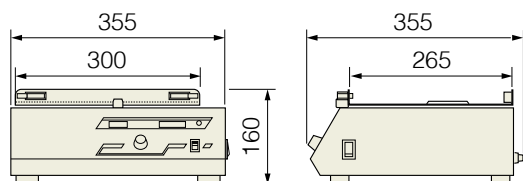


Can be combined with the "ODMonitor series (P.042 to 043) that can automatically measure the turbidity of culture liquid (OD₆₀₀) without stopping shaking culture. Prepare the universal shaking platform and clamps when combining.



Can be put on the lowest shelf of "In vitro Box iB-130" (P.154) for use. *No adverse effects from vibration verified. This is an energy-saving small-size incubator that can control the temp. below RT. Very useful if no incubation room is available where culturing or incubation that requires low temp.


Dimensions (Each model is the same)



Optional accessories and Capacity of Vessels

• Small size incubator "in vitro box iB-130" --> P.154

Spring net shaking platform and Capacity of Vessels


Model	MR-2925			
	Vessels can be easily mounted on regardless of its shapes. It can be used by removing some springs and changing the height of spring net as necessary. Universal shaking platform (w/o Clamp *It is optional) recommended if vessel should be tightly held.			
Spring net Pitch	20 mm			
Spring net tier(s)	1 tier (Height is changeable.)			
Dimension	290 × 250 × 108H mm			
Weight	Approx. 1.1 kg			
Capacity of Vessel	φ16 mm test tubes (*)	50 (*)	Erlenmeyer flasks 250mL	5
	Disposable Centrifuge tubes for 50 mL	20 (*)	Erlenmeyer flasks 300 mL	5
	Erlenmeyer flasks 50 mL	20	Erlenmeyer flasks 500 mL	4
	Erlenmeyer flasks 100 mL	10	Erlenmeyer flasks 1 L	2
	Erlenmeyer flasks 200 mL	9	Erlenmeyer flasks 2 L	1

(*) When below φ16 mm test tubes, fix the test tube stand (incl. φ16 mm) whole with the spring net.

(*) The number when the Angle rack is tilted 45°.

• Be careful when using Shake flask (Sakaguchi flask) as it is fragile. Usage with MR-2925 in NR-1/2/3 is not recommended. Please use with the following MT-2925.

Universal shaking platform and Capacity of Flasks

Model	MT-2925			
	It is used together Clamps, Angle racks and "OD-Monitor" series (Clamps of Erlenmeyer flask and Shake flask are available). It can hold flasks tightly than Spring shaking platform.			
Dimension	290 × 250 × 23H mm			
Weight	Approx. 0.9 kg			
Capacity of Vessels	Erlenmeyer flasks 50 mL	20	Erlenmeyer flasks 500 mL	4
	Erlenmeyer flasks 100 mL	10	Erlenmeyer flasks 1 L	2
	Erlenmeyer flasks 200 mL	9	Erlenmeyer flasks 2 L	1
	Erlenmeyer flasks 250 mL	5	Erlenmeyer flasks 3 L	1
	Erlenmeyer flasks 300 mL	5	Sakaguchi flasks 500 mL	4

Angle rack for Test tube (Mounted on MT-2925 for use.)


Model	AT-1250	AT-1620	AT-1650	AT-1820
Capacity	φ12 mm × 50	φ16.5 mm × 20	φ16.5 mm × 50	φ18 mm × 20
Qty. of mounting on MT-2925	2 (*)	2 (*)	2 (*)	2 (*)
Dimension (mm)	250 × 100 × 95H	285 × 70 × 80H	286 × 110 × 100H	320 × 70 × 80H
Weight	Approx. 0.8 kg	Approx. 0.6 kg	Approx. 0.9 kg	Approx. 0.7 kg

(*) The qty. when Angle rack with 160 mm test tube is tilted 45°.

Angle rack for Disposable Centrifuge tubes (Mounted on MT-2925 for use.)

Model	AT-3518
Capacity	50 mL × 18
Qty. of mounting on MT-2925	2 (When Angle rack is tilted 45°)
Dimension/Weight	285 × 110 × 102H mm, Approx. 0.8 kg
Remarks	Be sure to use below 50°C.

Sticky sheet shaking platform

Model	SR-2925
	Flat bottoms such as Erlenmeyer flasks and Petri dishes can be held simply by placing them on the platform. The decrease of adhesive force by dirt can be recovered by washing with water and drying it.
Max. shaking speed	100 r/min
Dimension/Weight	290 × 250 × 30H mm, Approx. 1.1 kg
Standard accessories	Sticky sheet × 1 pc



Sticky sheet

Sticky sheet (ST-2925) above is also available and sold separately.

Model	ST-2925
Dimension	290 × 250 mm

(*) Up to 2 L of Erlenmeyer flask can be used with the NR-1/2/3 series.

Clamps (Mounted on MT-2925 and AF-2070 for use.)

Shape	Vessels/Capacity	Model	
	Erlenmeyer flasks	50 mL	CF-0050
		100 mL	CF-0100
		200 mL	CF-0200
		250 mL	CF-0250
		300 mL	CF-0300
		500 mL	CF-0500
		1 L	CF-1000
		2 L	CF-2000
	Sakaguchi flasks	3 L	CF-3000
		500 mL	SF-0500

MT-2925 with multiple clamps mounted.



Angle rack for Erlenmeyer flasks

(Mounted on MT-2925 *Clamps required for use)

Model	AF-2070	AF-2570
Capacity	50 mL: 4 pcs, 100 mL: 3 pcs, 200 to 300 mL: 2 pcs, 500 mL: 1 pc	50 mL: 5 pcs, 100 mL: 4 pcs, 200 mL: 3 pcs, 250 to 500 mL: 2 pcs
Qty. of mounting on MT-2925	2 pcs (*)	2 pcs (*)
Dimension	250 × 110 × 50H mm	300 × 110 × 50H mm
Weight	Approx. 0.8 kg	Approx. 0.9 kg

(*) When Angle rack tilted 30°

Tube holders (Mounted on MT-2925 for use.)

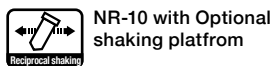
Model	M-0150	Tube holder M-0015
	M-0150	For 1.5/2.0 mL Microtubes and Micro Vials, 3 sets × 8 racks
	M-0500	
Tube holder M-0015		
Tube holder M-0150	Disposable Centrifuge tube for 15 mL 3 sets × 6 racks (*)	Tube holder M-0500
		Disposable Centrifuge tube for 50 mL 3 sets × 4 racks (*)

(*) Up to 3 sets can be mounted on MT-2925 in NR-1/2/3 series. The vessel tips will protrude from MT-2925 when 3 pcs are attached. Thus, be sure not to make them hit the surroundings during shaking.

Reciprocal shaker NR-10, Rotary shaker NR-20, Double shaker NR-30, & Triple shaker NR-80

The versatile shaker with simple operation. Reciprocal, Orbital, Switchable Reciproca/Orbitall shaking, and Swing in figure 8. Options are compatible with those of Bioshaker® (Middle size).

- "Bioshaker BR-40/41/42/43 with temp. control" series --> P.029
- "In vitro Shake-LR/XR" equipped with Swing in figure 8 --> P.068



NR-10 with Optional shaking platform



NR-20 with Optional shaking platform



NR-30 with Optional shaking platform



NR-80 with Optional shaking platform



Features

- Reciprocal shaking of Test tubes and Shake flasks [NR-10]
- Orbital shaking of mainly Erlenmeyer flasks [NR-20]
- Reciprocal/Orbital shaking [NR-30], Reciprocal/Orbital and Figure 8 [NR-80]

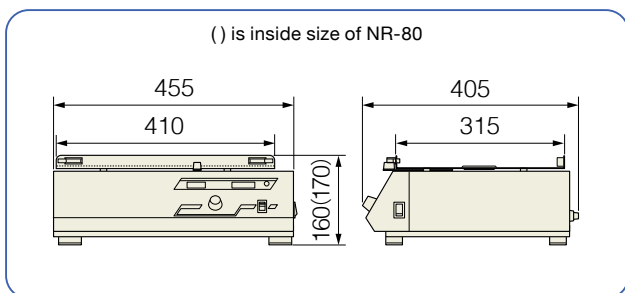
Applications

- Shaking culture of Microbes inside Incubators, etc.
- Shaking culture of Algae, etc. inside Incubators with LED irradiation
- Staining/Decolorization of Gels, Membranes and Dispersion [NR-80]

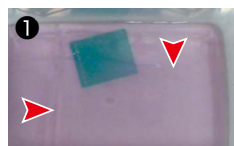
Model	NR-10	NR-20	NR-30	NR-80
Shaking motion	Reciprocal	Orbital	Switchable Reciprocal/Orbital	Reciprocal/Orbital/Figure 8
Shaking speed	20 to 200 r/min (*)			
Shaking width	10 to 40 mm, Stepless (Default: 25 mm)			
Platform dimensions and Capacity	400 x 300 mm Erlenmeyer flask 500 mL x 6, 3 L x 2			
Maximum load	Approx. 8 kg (Shaking platform and vessel holders are included)			
Shaking duration integrator	0.1 h to 999.9 h (Automatic resetting function)			
Safety devices/functions	Motor protection circuit at overload, Fuse			
Dimensions (WxDxH)	455 x 405 x 160 mm (NR-80: 170 mm)			
Weight	Approx. 17 kg			Approx. 18 kg
Power supply	AC100V/AC220V-240V/0.5A (built-in down transformer)			

(*)One motion per 2 r/min in the figure 8. One motion per 1 r/min in the figure 8 for "Shake-XR/XR2" (Page 68), dedicated for figure 8.

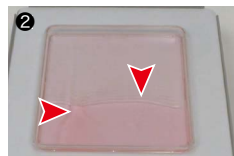
Dimensions (Each model is the same)



The features of Swing in figure 8 and the shaker that can swing in figure 8



Vertical and Horizontal waves occur alternately in the figure 8. In shaking the gel, the efficiency of dye decolorization is heightened as the solution moves firmly while the gel stays at any position (1).



The wider vertical and horizontal waves alternately are, the easier the vessels can be checked (2).



In Erlenmeyer flasks, high aeration and dispersion efficiency like motion of liquid in the shaking flasks can be obtained (3), 50/100/150 mL in 500 mL from the left).

USER'S VOICE

The figure-8 shaker has also been tested for dispersion in stem cell culture. There is also a smaller figure-8 shaker, the Shake-XR.




◀ Shake-XR/XR2
*Dedicated for Figure 8 (Page 68)
3 pcs of 500 mL Erlenmeyer flask,
Various options

NEW
Constant temperature incubator shaker
OD Monitor
For cell culture related products
Shaker
Mixer
Rotator
Stirrer
Bead beater
homogenizer
Ultrasonic homogenizer
Aluminum block bath
Mini-size Bath
Water bath
Shaking Water bath
Immersion cooler
Hybridization incubator
Constant temperature chambers
Centrifugal concentrators
Cold Trap
Freeze dryers
Submarine electrophoresis apparatus
Blotting device for hybridization
Constant temperature water circulating system [chiller]
Appendix

Optional accessories and Capacity of Vessels


•OD-Monitor Turbidimeter while shaking --> P.042 to 043
 •Middle size incubator "in vitro box iB-230" --> P.154

Spring net shaking platform and Capacity of Vessels

Model	MR-4030			
	Vessels can be easily mounted on regardless of its shapes. It can be used by removing some springs and changing the height of the spring net as necessary. Universal shaking platform (w/o Clamp *It is optional) recommended if vessel should be tightly held.			
Spring net Pitch	20 mm			
Spring net tier(s)	2 tier (Height is changeable.)			
Dimension	400 × 300 × 108H mm			
Weight	Approx. 3.3 kg			
Capacity of Vessels	φ16 mm test tubes (*1)	96 (*2)	Erlenmeyer flasks 250 mL	9
	Disposable Centrifuge tube for 50 mL	48 (*2)	Erlenmeyer flasks 300 mL	9
	Erlenmeyer flasks 50 mL	24	Erlenmeyer flasks 500 mL	6
	Erlenmeyer flasks 100 mL	20	Erlenmeyer flasks 1 L	3
	Erlenmeyer flasks 200 mL	12	Erlenmeyer flasks 2 L	2

(*1)When below φ16mm test tubes, fix the test tube stand (incl. φ16mm) whole with the spring net.
 (*2)The number is when Angle rack is tilted 45°.
 •Due to the instability of Shake flasks (Sakaguchi flasks), use of MR-4030 with NR-10/20/30/80 is not recommended. Instead, use the MT-4030.

Universal shaking platform and Capacity of Flasks


Model	MT-4030			
	It is used together Clamps, Angle racks and "OD-Monitor" series (Clamps of Erlenmeyer flasks and Shake flask are available). It can hold flasks tightly than Spring shaking platform.			
Dimension	400 × 300 × 23H mm			
Weight	Approx. 1.4 kg			
Capacity of Vessel	Erlenmeyer flasks 50 mL	35	Erlenmeyer flasks 500 mL	6
	Erlenmeyer flasks 100 mL	18	Erlenmeyer flasks 1 L	4
	Erlenmeyer flasks 200 mL	12	Erlenmeyer flasks 2 L	2
	Erlenmeyer flasks 250 mL	9	Erlenmeyer flasks 3 L	2
	Erlenmeyer flasks 300 mL	9	Sakaguchi flasks 500 mL	6

Angle rack for Test tube (Mounted on MT-4030 for use)

Model	AT-1250	AT-1620	AT-1650	AT-1820
Capacity	φ12 mm × 50	φ16.5 mm × 20	φ16.5 mm × 50	φ18 mm × 20
Qty. of mounting on MT-4030	2 (*)	3 (*)	2 (*)	3 (*)
Dimension (mm)	250 × 100 × 95H	285 × 70 × 80H	286 × 110 × 100H	320 × 70 × 80H
Weight	Approx. 0.8 kg	Approx. 0.6 kg	Approx. 0.9 kg	Approx. 0.7 kg




(*The number is when Angle rack with 160 mm test tube tilted 45°.

Tube holder (Mounted on MT-4030 for use)

	Tube holder M-0015
M-0150	For 1.5/2.0 mL Microtubes and Micro Vials, 3 sets × 8 racks
M-0500	
M-0015	
Tube holder M-0150	Tube holder M-0500
Disposable Centrifuge tube for 15 mL 3 sets × 6 racks (*)	Disposable Centrifuge tube for 50 mL 3 sets × 4 racks (*)

(*Up to 3 sets can be mounted on MT-4030 in NR-10/20/30/80 series. The vessel tips will protrude from MT-4030 when 4 pcs are attached. Thus, be sure not to make them hit the surroundings during shaking.

Sticky sheet shaking platform

Model	SR-4030	SR-4030W	SR-4030S
	Flat bottoms such as Erlenmeyer flasks and Petri dishes can be held simply by placing them on the platform. The decrease of an adhesive force by dirt can be recovered by washing with water and drying it.		
	This is a 2-stage sticky sheet shaking platform. The height can be adjusted to 4 levels. (Please note the shaking speed and container weight as the center of gravity is higher.)		A set of sticky sheet and shaking platform more powerful than SR-4030. If the container has a flat bottom, such as a Erlenmeyer flasks or culture bottle, it can be simply fixed/hold in place by simply placing it. (*2)
Max. shaking speed (*1)	100 r/min	100 r/min	200 r/min
Dimension	400 × 300 × 30H mm	400 × 300 × 220H mm	390 × 300 mm
Standard accessories	Sticky sheet × 1 pc	Sticky sheet × 2 pcs	Strong sticky sheet × 1 pc

*Sheet color may vary from photo.

(*1)Depending on the sample volume and the condition of the shaker, the container may topple over even within the above values. The above speeds should be considered as a guide only.



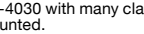
(*2)Because of the strong adhesive strength of this product, petri dishes and well plates are not suitable because the lid will open when peeling off.

Sticky sheet, Clamp belts

Sticky sheet (ST-4030) above is also available and sold separately.

Model	ST-4030	ST-4030S
Dimension	400 × 300 mm	390 × 300 mm

Clamps (Mounted on MT-4030 and AF-2070/2570 for use.)

Shape	Vessels/Capacity	Model
	50 mL	CF-0050
	100 mL	CF-0100
	200 mL	CF-0200
	250 mL	CF-0250
	300 mL	CF-0300
	500 mL	CF-0500
	1 L	CF-1000
	2 L	CF-2000
	3 L	CF-3000
	500 mL	SF-0500

Above, 300 mL Clamps comes with Spring and 500 mL comes with Octagonal rubber sheet

MT-4030 with many clamps mounted.

Angle rack for Erlenmeyer flask (Mounted on MT-4030 *Clamps required)

Model	AF-2070	AF-2570
Capacity	50 mL: 4 pcs, 100 mL: 3pcs, 200 to 300 mL: 2 pcs, 500 mL: 1 pc	50 mL: 5 pcs, 100 mL: 4 pcs, 200 mL: 3 pcs, 250 to 500 mL: 2 pcs
Qty. of mounting on MT-4030	2 (*)	2 (*)
Dimension	250 × 110 × 50H mm	300 × 110 × 50H mm
Weight	Approx. 0.8 kg	Approx. 0.9 kg

(*When Angle rack is tilted 30°

Angle rack for Disposable Centrifuge tube (Mounted on MT-4030 for use)

Model	AT-3518
Capacity	50 mL × 18
Qty. of mounting on MT-4030	2 (When Angle rack is tilted 45°)
Dimension/Weight	285 × 110 × 102H mm, Approx. 0.8 kg
Remarks	Be sure to use below 50°C.



NEW

Double shaker NR-150N/Two-tier platform NR-150N

Being placed on the floor for use. Switchable Reciprocal/Orbital shaking. The capacity doubles in Two-tier platform. The adjustable shaking width can effectively stir large Erlenmeyer flasks and Shake flasks.

- "Bioshaker BR-300LF with temp. control" series/"Bioshaker Double platform BR-300LF" series --> P.033
- OD-Monitor Turbidimeter while shaking --> P.042 to 043



Double shaker NR-150N with Clamps (optional)



Two-tier platform shaker NR-150N with Clamps (optional)



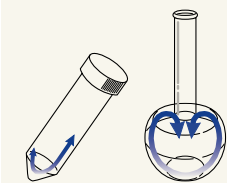
Shaking motion switching lever



Shaking platform drawer lever

Compatibility of Reciprocal shaking and Vessels

Reciprocal shaking is suitable for Test tubes and Shake flasks. In shaking culture with Shake flasks, adjust the flow rate to 1/2 of the capacity so that the liquid can be moved properly.

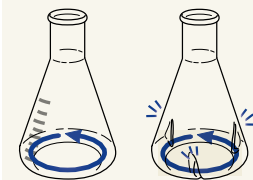


Movement of liquid in Reciprocating shaking (left: Centrifuge tube, right: Shake flask)

Shaking width is more important rather than shaking speed so that the liquid moves like the figure in shaking flasks. The shaking width can be adjusted in NR-150N.

Compatibility of Orbital shaking and Vessels

Orbital shaking is suitable for Erlenmeyer flasks. In shaking culture with Erlenmeyer flasks, adjust the flow rate between 1/5 to 1/3 of the capacity so that the liquid can be moved properly.



Movement of liquid inside Erlenmeyer flasks in Orbital shaking

The baffled Erlenmeyer flask (right) has good aeration but is prone to bubbles so the applications are limited.

LED mounting bracket is used on the shaking platform.



× Number of pcs that are required

- + Up to 4 LED units
- + Controllable controller
- + Mounting bracket, shaking platform

Light irradiation can be supported by adding an LED irradiation unit & controller, mounting brackets, and a spring net shaking platform to the above shaking platform.

*Choose LC-LED-CON4 as the controller for the LED light irradiation unit, which can control up to 4 LEDs at the same output (%).

Features

- Switchable Reciprocal/Orbital, Shaking platform drawer lever
- Shaking width can be 10 mm to 50 mm by stepless
- Digital settings and display for IQ/OQ

Applications

- Shaking culture of Microbes inside Incubators, etc.
- Shaking culture of Algae, etc. inside Incubators with LED irradiation
- Various Dissolution/Elution testing

Newly equipped timer enables accurate control of shaking time.



Timer setting area Shaking setting area

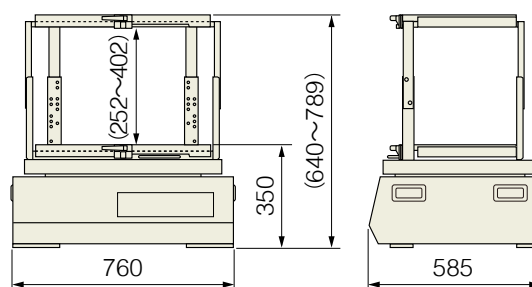
Equipped with the same timer as the environmental shaker series. Digital settings and display for IQ, OQ, and calibration. Memory for speed setting allows switching between different speeds with a single button.

Model	NR-150N	Two-tier platform NR-150N
Shaking motion	Reciprocal/Orbital	
Shaking speed	25 to 250 r/min	25 to 160 r/min
Shaking width	10 to 50 mm, Stepless (Default: 25 mm)	
Platform dimensions and Capacity	600 × 400 mm, Erlenmeyer flask 500 mL × 15 (Two-tier platform 30 pcs), 5 L × 3	
Maximum load	Approx. 26 kg (Shaking platform and vessel holders are included) (*1)	
Shaking duration integrator	Shaking duration integrator Timer function (setting/display: 1 min to 99 h 59 min) *When the timer function is not being used, it can count the time. •ON-END •OFF-ON •OFF-ON-END	
Safety devices/functions	Motor protection circuit at overload, Fuse	
Dimensions (WxDxH)	760 × 585 × 350 mm	760 × 585 × 789 mm (*2)
Weight	Approx. 70 kg	Approx. 83 kg
Power supply	AC100V-240V/0.5A (universal power supply)	
Standard accessories	Universal shaking platform MT-6040C × 1 set (Two-tier platform: 2 sets), Spacer × 4 pcs (1 mm thick × 2 pcs and 2 mm thick × 2 pcs), Slip prevention sheet × 4 pcs	

(*1)When the clamps are attached to the platform of NR-150N, the max. load of NR-150N is approx. 19 kg and that of Two-tier platform is approx 10 kg. (*2)The height is maximum value (Upper platform height can be adjusted.)


Dimensions

() is the maximum size of Two-tier platform shaker NR-150N




Optional accessories and Capacity of Vessels

Universal shaking platform and Capacity of Flasks

Model	MT-6040C			
	It is used together with Optional Clamps, Angle Racks, and "OD-Monitor" series. 2 sets are used with Double shaking platform type (Standard accessories).			
Dimension/Weight	600 × 400 × 42H mm, Approx. 7 kg			
Capacity of Vessels	Erlenmeyer flasks 50 mL	70	Erlenmeyer flasks 2 L	6
	Erlenmeyer flasks 100 mL	35	Erlenmeyer flasks 3 L	4
	Erlenmeyer flasks 200 mL	28	Erlenmeyer flasks 5 L/Disposable 3&5 L	3
	Erlenmeyer flasks 250 mL	21	Sakaguchi flasks 500 mL	15
	Erlenmeyer flasks 300 mL	21	Sakaguchi flasks 1 L	9
	Erlenmeyer flasks 500 mL	15	Sakaguchi flasks 2 L	6
	Erlenmeyer flasks 1 L	9	Sakaguchi flasks 3 L	4
	Capacity in Two-tier shaking platform type			
Capacity of Vessels (two tiers in total)	Erlenmeyer flasks 50 mL	140	Erlenmeyer flasks 2 L (*)	6
	Erlenmeyer flasks 100 mL	70	Erlenmeyer flasks 3 L (*)	4
	Erlenmeyer flasks 200 mL	56	Erlenmeyer flasks 5 L/Disposable 3&5 L (*)	3
	Erlenmeyer flasks 250 mL	42	Sakaguchi flasks 500 mL	30
	Erlenmeyer flasks 300 mL	42	Sakaguchi flasks 1 L (*)	9
	Erlenmeyer flasks 500 mL	30	Sakaguchi flasks 2 L (*)	6
	Erlenmeyer flasks 1 L	18	Sakaguchi flasks 3 L (*)	4

(*) It cannot be used in the upper platform. Sakaguchi flask 3 L with height 370H mm assumed for use.
 • Place the vessels (samples) so that the upper load is lighter than the lower load.



Spring net shaking platform and Capacity of Vessels (Mounted on MT-6040C for use)

Model	MR-4030L		
	The usable Shaking platform that Vessels can be easily mounted on regardless its shapes. Fixed with the screws on Platform MT-6040C for using. Up to 2 sets can be mounted. (See Left figure.) 4 sets in total can be mounted on Two-tier platforms.		
Spring net Pitch	20 mm		
Spring net tier(s)	2 tiers (Height is changeable.)		
Dimension/Weight	400 × 300 × 108H mm, Approx. 2 kg		
Capacity of Vessels (*)	φ16 mm test tubes (*)	96 pcs (When 2 sets mounted: 2 × 96 = 196 pcs) × 2 tiers	
	Disposable Centrifuge tube for 50 mL (*)	48 pcs (When 2 sets mounted: 2 × 48 = 96 pcs) × 2 tiers	
	Erlenmeyer flasks	50 mL	24 pcs (When 2 sets mounted: 2 × 24 = 48 pcs) × 2 tiers
		100 mL	20 pcs (When 2 sets mounted: 2 × 20 = 40 pcs) × 2 tiers
		200 mL	12 pcs (When 2 sets mounted: 2 × 12 = 24 pcs) × 2 tiers
		250 mL	9 pcs (When 2 sets mounted: 2 × 9 = 18 pcs) × 2 tiers
		300 mL	9 pcs (When 2 sets mounted: 2 × 9 = 18 pcs) × 2 tiers
		500 mL	6 pcs (When 2 sets mounted: 2 × 6 = 12 pcs) × 2 tiers
		1 L (*)	3 pcs (When 2 sets mounted: 3 × 2 = 6 pcs) × 2 tiers
	2 L (*)	2 pcs (When 2 sets mounted: 2 × 2 = 4 pcs)	
3 L (*)	1 pc (When 2 sets mounted: 2 × 1 = 2 pcs)		
Sakaguchi flask 500 mL	6 pcs (When 2 sets mounted: 2 × 6 = 12 pcs) × 2 tiers		

(*) The number is when Angle rack is tilted 45°. When below φ16 mm test tubes, fix the test tube stand (incl. φ16 mm) whole with the spring net. (**) Note: The kinds (size) of fixable vessels will be less than those of Universal shaking platforms. (***) It cannot be used in the upper platform.


• Place the vessels (samples) so that the upper load is lighter than the lower load.

Clamps (Mounted on MT-6040C and AF-2070/2570 for use)

	Vessels/Volume	Model
 Above, 300 mL Clamps comes with Spring and 500 mL comes with Octagonal rubber sheet.	50 mL	CF-0050
	100 mL	CF-0100
	200 mL	CF-0200
	250 mL	CF-0250
	300 mL	CF-0300
	500 mL	CF-0500
	1 L	CF-1000
	2 L (*)	CF-2000
	3 L (*)	CF-3000
	5 L (*)	CF-5000
 MT-6040C with multiple clamps mounted.	3&5 L (**)	CF-3000DSP
	500 mL	SF-0500
	1 L (*)	SF-1000
	2 L (*)	SF-2000
	3 L (*)	SF-3000


(*) It cannot be used in the upper platform and can be used on the lower platform when the upper is removed. (**) For Disposable Erlenmeyer flasks (Corning 3 L and Thomson 5 L).

Angle rack for Test tubes (Mounted on MT-6040C for use)


Model	AT-1250	AT-1620	AT-1650	AT-1820	
	Capacity	φ12 mm × 50	φ16.5 mm × 20	φ16.5 mm × 50	φ18 mm × 20
AT-1250	Qty. of mounting on MT-6040C	4 (*) × 2 tiers	5 (*) × 2 tiers	4 (*) × 2 tiers	5 (*) × 2 tiers
	Dimension (mm)	250 × 100 × 95H	285 × 70 × 80H	286 × 110 × 100H	320 × 70 × 80H
	Weight	Approx. 0.8 kg	Approx. 0.6 kg	Approx. 0.9 kg	Approx. 0.7 kg

(*) The qty. is when Angle rack with 160 mm test tube is tilted 45°.

Angle rack for Disposable Centrifuge tube (Mounted on MT-6040C for use)

Model	AT-3518	
	Capacity	50 mL × 18
AT-3518	Qty. of mounting on MT-6040C	44 (When Angle rack is tilted 45°) × 2 tiers
	Dimension/Weight	285 × 110 × 102H mm, Approx. 0.8 kg
	Remarks	Be sure to use below 50°C.

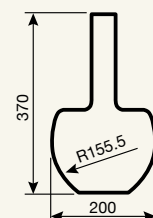
Angle rack for Erlenmeyer flasks (Mounted on MT-6040C *Clamps required)

Model	AF-2070	AF-2570	
	Capacity	50 mL: 4 pcs, 100 mL: 3 pcs, 200 to 300 mL: 2 pcs, 500 mL: 1 pc	50 mL: 5 pcs, 100 mL: 4 pcs, 200 mL: 3 pcs, 250 to 500 mL: 2 pcs
AF-2070	Qty. of mounting on MT-6040C	4 (*) × 2 tiers	4 (*) × 2 tiers
	Dimension	250 × 110 × 50H mm	300 × 110 × 50H mm
	Weight	Approx. 0.8 kg	Approx. 0.9 kg

(*) When Angle rack is tilted 30°

3 L Shake flasks (for reference)

The 3 L Shake flask (Sakaguchi flask) does not seem to be distributed as a standard product at present. For reference, here are the dimensions we measured before. We use these dimensions as the basis for determining whether or not the flask will fit into our two-tier shakers or constant temperature incubator shakers. The height is only slightly higher than that of the 2 L (353H mm).



NEW

Constant-temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electroporation apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

Strong shaker SR-2ES/2EW

Shakes Separatory funnels vertically and powerfully with energy savings. Compatible with other vessels. Low noise with our proprietary "Silent swing mechanism".

•Optimum for Soil elution testing, Soil harmful metals contained testing "Elution testing Shaker TS-20N" --> P.086



SR-2ES
Example of using
Horizontal shaking



SR-2ES
with Separatory funnel
shaking platform (Optional)

SR-2EW
with Separatory funnel
shaking platform (Optional)



Features

- Vertical shaking and Horizontal shaking [SR-2ES]
- Dedicated for Vertical shaking, The capacity doubles with SR-2ES [SR-2EW]
- The start time of shaking and the intermittent shaking can be set by the timer

Applications

- Liquid extraction of analysis samples such as residual pesticides and soil components
- Pretreatment of Solid phase extraction of analytical sample
- Various mixing-stirring, etc.

Advanced user-friendly 3 kinds of digital timers

Equipped "ON-END timer" which ends the shaking time at the set time, "OFF-ON timer" which sets the starting time of the shaking and "OFF-ON-END timer" which sets the start and end time of the shaking. Both setting time and elapsed time are displayed during the timer operation and you can pause the shaking by switching off the shaking. When the timer is not being used, the elapsed time is displayed, and you can always check shaking time.

Newly designed operation panel

Smooth speed setting by inputting your target speed directly.



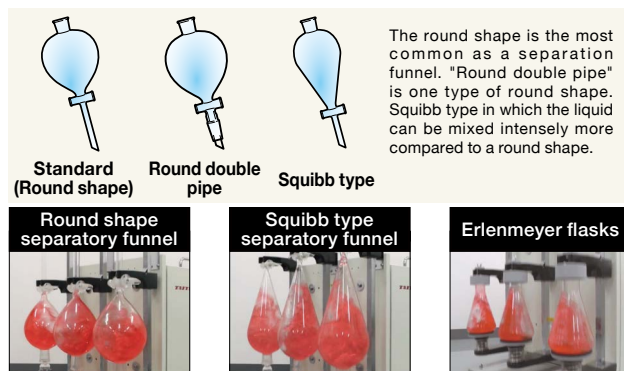
SR-2DW
(Conventional machine)



SR-2EW

Shakeable separatory funnels and vessels

3 types of separatory funnels are available. The holders that can fit to each is prepared. Erlenmeyer flasks, Centrifuge tubes, and Polyethylene bottles (Ask us for details) can be shaken with it.



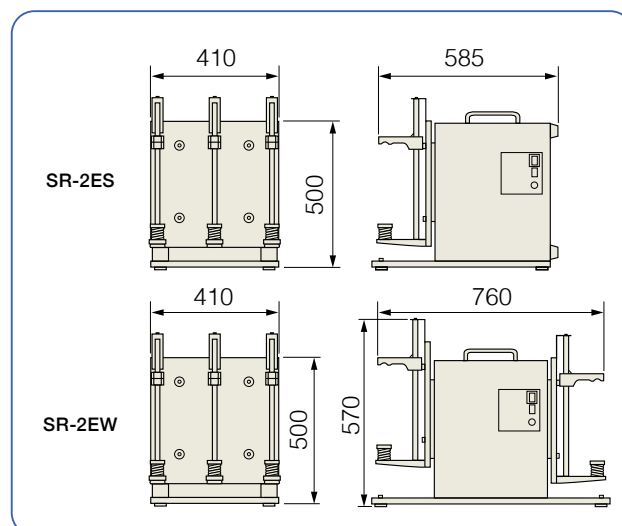
Model	SR-2ES	SR-2EW
Shaking motion	Reciprocal (Vertical and Horizontal)	Reciprocal (Vertical)
Shaking speed	Vertical: 100 to 300 r/min (*1) Horizontal: 50 to 300 r/min	50 to 300 r/min (*2)
Amplitude	40 mm	
Capacity	3 pcs of Up to 1 L Separatory funnel (SR-2EW 6 pcs) (*3)	
Maximum load	Approx. 7.5 kg (Shaking platform is included)	One side: Approx. 7.5 kg (Shaking platform is included)
Timer	Timer function (setting/display: 1 min to 99 h 59 min) * When the timer function is not being used, it can count the time. •ON-END •OFF-ON •OFF-ON-END Integral timer 0 to 99 h 59 min or after: 100 h to 9999 h	
Speed display	Digital	
Safety devices/functions	Motor protection circuit at overload, Fuse	
Dimensions (WxDxH)	410 × 585 × 500 mm	410 × 760 × 500 mm
Weight	Approx. 49 kg	Approx. 57 kg
Power supply	AC100V/AC220V-240V/1.2A (built-in down transformer)	

(*1) May not be smoothly shaken at 50 to 99 r/min. (*2) The shaker works when the platform-forms are mounted on both side but while not work when the platform is mounted on only one side. (*3) The shaking platform is sold separately. The vessels that can be used for vertical shaking and horizontal shaking differ (the separatory funnel is for vertical shaking only). For details, the capacity, and other shaking platforms, please see the right page.

Transmission output is possible










The available speed signal output from 4 to 20 mA makes it possible to connect to a recorder, etc. It is recommended for customers who need data in the working process.

Dimensions












Optional accessories and Capacity of Vessels

Separatory funnel shaking platform (For Standard type 1L /Squibb type 1L×3)

Model	Capacity of Vessel	Applicable models
HE-3 for SR-2  *Vessels are not included. Weight: Approx. 4.5kg	 Standard (Round shape) 50mL~1L : 3 2L : 2(*)	 Squibb type 50mL~1L : 3 SR-2DS/ES SR-2DW/EW 
	 Standard (Round shape) Round double pipe 200mL~1L : 3 2L : 2(*)	
HE-3W for SR-2 	 Standard (Round shape) Round double pipe 200mL~1L : 3 2L : 2(*)	 Squibb type Round double pipe 200mL~1L : 3 Reciprocal (Vertical)
	 Squibb type Round double pipe 200mL~1L : 3	

(*) Up to 1 pc for liquid 1 L and up to 3 pcs for less than liquid 500 mL can be at-tached when 2 L is used.
 •In SR-2EW, mount and use one separatory funnel shaking platform of the same type.
 •The number of racks is limited by size and weight of separatory funnel, e.g. HE-3 equipped with 3 holders whereas up to 2 pcs be limitly attached when 2 L round type separatory funnel. Be sure not attach the separatory funnel to the center holder.

Separatory funnel shaking platform (For Standard type 200mL/Squibb type 300mL×5)





Model	Capacity of Vessel	Applicable models
HE-5 for SR-2  *Vessels are not included. Weight: Approx. 5.6kg	 Standard (Round shape) 50mL~200mL : 5 300mL~500mL : 3 1L, 2L(*) : 2(*)	 Squibb type 50mL~300mL : 5 500mL : 3 1L : 2(*) SR-2DS/ES SR-2DW/EW 
	 Standard (Round shape) Round double pipe 200mL : 5 300mL~500mL : 3 1L, 2L(*) : 2(*)	
HE-5W for SR-2 	 Standard (Round shape) Round double pipe 200mL : 5 300mL~500mL : 3 1L, 2L(*) : 2(*)	 Squibb type Round double pipe 200mL~300mL : 5 500mL : 3 1L : 2(*) Reciprocal (Vertical)
	 Squibb type Round double pipe 200mL~300mL : 5 500mL : 3 1L : 2(*)	

(*) Up to 1 pc for liquid 1 L and up to 2 pcs for less than liquid 500 mL can be at-tached when 2 L is used.
 •In SR-2EW, mount and use one separatory funnel shaking platform of the same type.



Holders

Model	Capacity of Vessel/Weight
Holders for HE-3/HE-5	Standard (Round shape) 100mL~2L Squibb type 100mL~1L Weight: Approx. 0.8kg
Holders for HE-3W/HE-5W	Standard (Round shape) 200mL~2L Squibb type 200mL~1L Weight: Approx. 0.8kg

Shaking platform for Erlenmeyer flasks and other vessels





Model	Capacity of Vessel/Dimension/Weight	Applicable models
Test tube rack shaking platform A shaking platform for SR-2 	Stopped test tube stand (φ18 mm 50 pcs) can be placed 2 sets horizontally. Weight : Approx. 2.6kg Dimension : 410×300×100Hmm	SR-2DS/ES 
Erlenmeyer flask shaking platform B shaking platform for SR-2 	50mL : 30 100mL : 20 200~300mL : 12 500mL : 6 1L : 4 Weight : Approx. 2.6kg Dimension : 410×300×100Hmm	
Spring net shaking platform E shaking platform for SR-2 	This enables various shaped vessels to be fixed on the platform. Horizontal shaking in SR-2ES Below 160 r/min Weight : Approx. 2.5kg Dimension : 410×300×100Hmm	

Test tube/Centrifuge tube shaking platform(For HE-3)





Model	Capacity of Vessel/Dimension/Weight	Applicable models
Test tube shaking platform C half shaking platform for SR-2 	Up to 10 pcs of Stopped test tube and Centrifuge tube (φ10 to 37 mm × 100 to 120 Lmm in length) can be set. Weight : Approx. 2.4kg Dimension: 408×250mm ※HE-3 is required for installation (HE-5 Unusable)	SR-2DS/ES SR-2DW/EW 

*HE-3 and Vessels are not included.

Adapters(For HE-3,HE-5)




Model	Capacity of Vessel	Applicable models
Adapter for Flask 	φ10~35mm ~300mL Erlenmeyer flask ~200mL Messzylinder	SR-2DS/ES SR-2DW/EW + HE-3 or HE-5
B adapter for Flask 	φ38~55mm Plastic bottle GL-45 screw cap bottle	
Plastic bottle adapter (for SR-2) 	φ55~106mm For 2 L and 3 L Plastic bottle	Except HE-3W HE-5W

Separatory funnel shaking platform (For Squibb type 2L)





Model	Capacity of Vessel/Weight	Applicable models
FU-2S 	Standard (Round shape) 100mL~2L : 2 Squibb type 100mL~2L : 2 Weight: Approx. 4kg	SR-2DS/ES SR-2DW/EW
FU-3S 	Standard (Round shape) 100mL~2L : 3 Squibb type 2L : 2 Weight: Approx. 5kg	
Holders for FU-2S/FU-3S	Capacity of Vessel: See the above for details. Weight: 1.1kg	

*Use the product so that the combined load with the container does not exceed 7.5kg.

Separatory funnel shaking platform (For Standard type 3L)

Model	Capacity of Vessel/Dimension/Weight	Applicable models
FU-1R 	Standard (Round shape) 100mL~3L : 1 Squibb type 100mL~2L : 1 Weight: Approx 5kg	SR-2DS/ES SR-2DW/EW 
Holders for FU-1R	Capacity of Vessel: See the above for details. Weight: 1.7kg	

Test tube/Centrifuge tube shaking platform

Model	Capacity of Vessel/Dimension/Weight	Applicable models
Test tube shaking platform C shaking platform for SR-2 	φ10 to 35 mm Stopped test tube can be set. Test tube length 45 mm to 145 mm, Max. weight of vessels 100 g, Max. 20 pcs (*) Horizontal shaking in SR-2ES Vertical shaking in SR-2EW Weight: Approx. 4.2kg Dimension: 465×408mm	SR-2DS/ES SR-2DW/EW 
	Test tube length 150 mm to 265 mm, Max. weight of vessels 250 g, Max. 10 pcs (*) Up to 200 r/min. Horizontal shaking in SR-2ES Below 200 r/min Weight: Approx. 4.2kg Dimension: 465×408mm	SR-2DS/ES 

NEW

Constant-temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant-temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electroporation apparatus Blotting device for hybridization

Constant-temperature water circulating system (Chilled)

Appendix

Mojonnier tube shaker SR-2ES with M Shaking platform

Special example of SR-2ES Shaking table

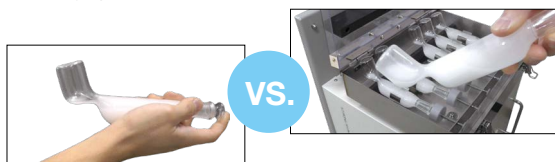
This is a shaking table for vessels used in lipid extractions in Japan. The shaking table is designed to avoid the unevenness that occurs when shaking by hand.



Mojonnier tube x 6 pcs

The comparison test for Shaking tube by hand versus Shaker with tubes

Put 100 g of sample into each Mojonnier tube. Compared the amount of fat extraction between Shaking tube by hand to Shaker with tubes for 1 min. As a result, we verified that the Shaker with tubes can equally be used compared to Shaking a tube by hand.
*The shaking speed for Shaker with tubes was 240 r/min.



Samples	Lipid	
	Shaking tube by hand	Shaker with tubes
Premix powder (1)	7.3	7.5
Premix powder (2)	2.2	2.4
Donut	17.8	17.6
Pasta sauce	30.1	28.2
Flour	5.8	6.1
Dough	2.1	2.1

Features

- For shaking non-straight vessels such as normal test tubes and centrifuge tubes by fixing them in place

Applications

- Fat extraction testing using majonia tubes

Model	SR-2ES with M Shaking platform (M Shaking platform for SR-2 and SR-2ES)	
M Shaking platform for SR-2	Capacity	Mojonnier tube x 6 pcs
	Weight	Approx. 5 kg
	Dimensions (WxDxH)	373 x 408 x 106 mm (Protrusions are not included)
Strong Shaker SR-2ES	Shaking motion	Reciprocal (Vertical and Horizontal)
	Shaking speed	50 to 300 r/min (Horizontal shaking)
	Amplitude	40 mm
	Maximum load	Approx. 7.5 kg (Shaking platform is included)
	Timer	Digital ON/OFF Timer (1 min to 99 h 59 min)
	Speed display	Digital
	Safety devices/functions	Motor protection circuit at overload, Fuse
	Dimensions (WxDxH)	410 x 585 x 500 mm
	Weight	Approx. 49 kg
	Power supply	AC100V/AC220V-240V/1.2A (built-in down transformer)
Dimensions (WxDxH)/Weight	436 x 540 x 585 mm, Approx. 54 kg	

Platforms for SR-2 series

Enables installation in a stable condition

It is easy to change and move the installation location. When in use, the adjusters can be used to hold the shaker securely in place.

Recommended for customers who cannot install directly on the floor for operational or administrative reasons.

Product Name/Model	Platform dedicated to SR-1/2S (*) SR-FK600	Platform dedicated to SR-2W SR-FK800
Dimension	600 x 450 x 408H mm	800 x 450 x 408H mm

(*) Up to 200 r/min in Horizontal shaking.



Shaking machine for mass processing of centrifuge tubes SR-10

Shaking machine for mass agitation and suspension of identical vessels under the same conditions. The SR-10 can shake up to 32 disposable 50 mL centrifuge tubes in one standard shaking table and up to 96 containers by stacking the shaking tables in three levels.

•A few Centrifuge tubes are shaken horizontally. --> P.068 •A few Centrifuge tubes are stirred intensely. --> P.064

Features

- Horizontal shaking of 50 mL Disposable centrifuge tube, Capacity Max. 96 pcs
- Equipped with an ON/OFF Timer to improve work efficiency

Applications

- Elution in pesticide residue inspection in food
- Applications that require shaking of a large amount of centrifuge tubes

Digital ON/OFF timer that improves reproducibility

Equipped with an ON/OFF timer that can be set as desired for start time and finish time. During timer operation, both preset time and elapsed time are displayed, and the shaking can be paused by turning OFF the shaking. Also, the preset time and elapsed time can always be monitored even if timer is not used (The notification function by buzzer).

Optional accessory: shaking platform (for addition)

Product Name/Model	Remarks
C shaking platform for SR-10	50 mL disposable centrifuge tube × 32 Dimension: 680 × 310 mm

Custom-made shaking platforms are available

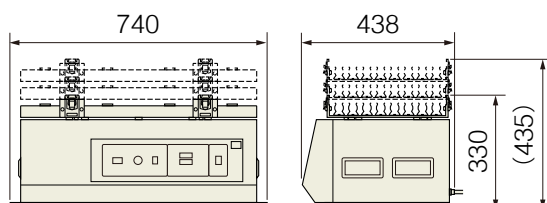
We can provide Custom-made shaking platforms such as a large test tube rack (Stoppered test tube inside). Ask us for details.



Example of Large test tube rack (Stoppered test tube inside)

Dimensions

() is the height of Three-tier platform shaker SR-10



SR-10 with 2-tier platform

Shaking tables can be customised

Shaking tables can be customised to process large quantities of specific containers.

Please contact us for details.

USER'S VOICE

A food ingredient that contains allergen is called Specific raw material. The number of Specific raw materials has been increased year after year. Hence, this shaker for food inspection pretreatment will be further active in the field from now onward!



Model	SR-10
Shaking motion	Reciprocal shaking
Shaking speed	50 to 250 r/min
Amplitude	45 mm
Capacity	32 pcs of Disposable centrifuge tube for 50 mL (Max. 96 pcs by adding shaking platforms)
Maximum load	Approx. 10 kg (Shaking platforms are not included)
Timer	Digital ON/OFF Timer (1 min to 99 h 59 min)
Speed display	Digital
Safety devices/functions	Motor protection circuit at overload, Fuse
Dimensions (W×D×H)	740 × 438 × 330 mm (1-tier platform *Height 435 mm at 3-tier platform)
Weight	Approx. 70 kg
Power supply	AC100V/AC220V-240V/1A (built-in down transformer)
Standard accessories	C Shaking platform for SR-10 × 1 pc (*)

(*)Up to 3 sets of C Shaking platforms can be added to this unit.

NEW

Constant-temperature incubator-shaker
OD Monitor

For cell culture related products

Shaker

Mixer
Rotator
StirrerBead beater
homogenizer
Ultrasonic
homogenizerAluminum
block Bath
Mini-size BathWater bath
Shaking Water bath
Immersion coolerHybridization
Incubator
Constant-temperature
ChambersCentrifugal
Concentrators
Cold Trap

Freeze dryers

Submarine
Electrophoresis apparatus
Blotting device for
hybridizationConstant-temperature
water circulating
system [Chilled]

Appendix

NEW

Reciprocal shaker SR-1D

Compatible with Test tubes and Erlenmeyer flasks. Shakes strongly with 50 mm shaking width. It is equipped with 3 kinds of timer functions.

•Compatible in Shaking platform "Shaker for Elution testing TS-10N" --> P.085

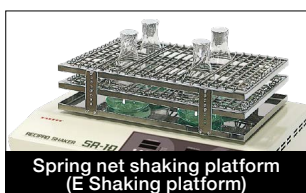
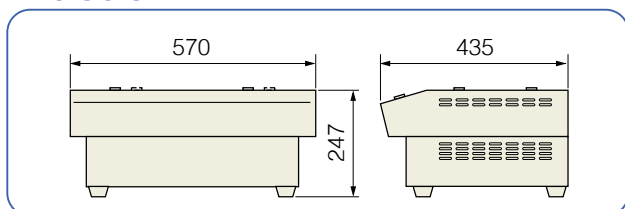


SR-1D with Test tube rack shaking platform (Optional)

Model	SR-1D
Shaking motion	Reciprocal shaking
Shaking speed	50 to 250 r/min (*)
Amplitude	50 mm
Maximum load	Approx. 7 kg (Shaking platform is included)
Timer	Timer function (setting/display: 1 min to 99 h 59 min) •ON-END •OFF-ON •OFF-ON-END Integral timer (when the timer function is not being used) 0 to 99 h 59 min or after: 100 h to 9999 h
Speed display	Digital
Safety devices/functions	Motor protection circuit at overload, Fuse
Dimensions (W×D×H)	570 × 435 × 247 mm
Weight	Approx. 45 kg
Power supply	AC 100V/1.5 A(Need a step-down transformer)
Standard accessories	Fuse × 1 pc

(*)Make the shaking speed below 160 r/min when using the Spring net shaking platform (E Shaking platform).

Dimensions



Spring net shaking platform (E Shaking platform)

Various shaped vessels can be placed thanks to the spring net. (There is a speed limitation for using it)

Model	Remarks
E Shaking platform for SR-1 (*)	460 × 300 × 120H mm, about 2.7 kg

(*)Be sure to use below 160 r/min.

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TATEC [General Catalog]

Features

- Dedicated for Reciprocal shaking, 50 mm shaking width
- Shaking platform (option) 4 types, Capacity: 1 L Erlenmeyer flask × 6 pcs
- Equipped with 3 kinds of timer functions and an integral timer
- Speed signal transmission output (4 to 20 mA) is available as an option

Applications

- Preparation of reagents and samples for analysis
- Shaking culture of Microorganisms inside the constant temp. room
- Various mixing-stirring, etc.

Optional Shaking platform (4 types in total)

Shaking platform is not included. Please purchase one of the following together.



Test tube rack shaking platform (A Shaking platform)

2 sets of commercial test stand for 50 test tubes with $\phi 18$ mm stoppers can be fixed by laying them horizontally.



Test tube shaking platform (C Shaking platform)

Up to 24 pcs of Stopped test stand for 50 test tubes with $\phi 18$ mm stoppers can be fixed by laying them horizontally.

Model	Remarks
A Shaking platform for SR-1	470 (W *inside) × 300 (D) × 100 (H) mm, Approx. 2.8 kg
C Shaking platform for SR-1	680 × 375 mm, Approx. 4.8 kg



Flask shaking platform (B Shaking platform)

Capacity: 1 L × 6 pcs (Standard). The vessel size and capacity can be changed by adding the press bars.



Vessel press bar (long/Short) for B Shaking platform

Capacity of Erlenmeyer flasks for B shaking platform, Additional number of Press bars

Flask Volume	Number of Flasks (long/short)	Number of Press Bars (long/short)
50 mL	40 pcs (long 6, short 10)	300 mL: 15 pcs (long 2, short 4)
100 mL	24 pcs (long 4, short 6)	500 mL: 8 pcs (short 2)
200 mL	15 pcs (long 2, short 4)	1 L: 6 pcs (unnecessary)

Product name/Model	Remarks
B Shaking platform for SR-1	Vessel press bars (long 6 pcs/short 4 pcs) included (*), 470 (W *inside) × 300 (D) × 100 (H) mm, Approx. 2.8 kg
Vessel press bar (long) for SR-1	For B Shaking platform additionally. $\phi 6$ mm × 505 mm
Vessel press bar (short) for SR-1	B Shaking platform additionally. $\phi 6$ mm × 335 mm

(*)Additional Vessel press bars may be required due to the capacity. See the above for details.

Elution testing shaker TS-10N

Optimum for Soil elution testing, Soil harmful metals contained testing, and the leaching operation of harmful metals contained from industrial waste.

•Compatible in Shaking platform "Reciprocal shaker SR-1D" --> P.084

Features

- Powerful shaking of Polyethylene jars, Capacity: 2 pcs for 5 L/6 pcs for 2 L (See below)
- Max. load 10 kg, Energy-saving 70 Wh, with Timer
- Speed signal transmission output (1 to 5 V) is available as an option

Applications

- Harmful metals contained from soil and industrial waste
- Extraction of analytical samples with Polyethylene jars
- Various mixing-stirring, etc.

Capacity/Volume for Polyethylene jars

(The number of capacities has been changed for shipments from the second half of 2013.)

Placement	Volume and Capacity				
	5 L	3 L	2 L	1 L	500 mL
Horizontally	2 pcs (*1)	4 pcs	6 pcs (*1)	9 pcs	21 pcs (*1)
	-	-	-	1 L	500 mL
Vertically	-	-	-	10 pcs (*1)	12 pcs (*2)
	-	-	2 L	1 L	500 mL
Vertically (Below 200 r/min)	-	-	6 pcs (*1)	12 pcs (*1)	20 pcs (*3)

(*1)Addition of Vessel press bars (1 pc/short) is required. (*2)Addition of Vessel press bars (4 pcs/short) is required. (*3)Addition of Vessel press bars (3 pcs/short) is required.

•In all cases, use within the maximum load.

Leaching operation of heavy metals, etc. in soil harmful metals contained testing and TS-10N

① Mix 6 g or more of sample and solvent at a ratio of 3% by weight to volume. The Vessel is made of polyethylene or one that does not adsorb and elute the target substance and has a volume at least 1.5 times that of the solvent.

Size and capacity when installed horizontally at 1/2 volume of working volume

5 L	3 L	2 L	1 L
4 pcs	6 pcs	10 pcs	21 pcs

*Use vessels made by SUNPLATEC (1 L and 2 L: quick bottles, 3 L and 5 L: PE wide-mouth bottles). Please adjust the number of vessels according to the amount of solution.

*When installing and using the above number of pcs, please make sure that the weight is within the maximum load.

② Continuous shaking for 2 hours at 200 r/min and 4 to 5 cm shaking width at room temperature and normal pressure

--> The timer function of the TS-10N also contributes to the reproducibility of shaking time.

Optional: Vessel press bars (for addition) and Shaking platform for SR-1

Shaking platforms for TS-10N are compatible with A/B/C/E shaking platform for SR-1D. (Replace it by removing the standard platform)

Model	Remarks
Vessel press bar (long) for TS-10	Please purchase any as necessary referring to the above capacity.
Vessel press bar (short) for TS-10	
A shaking platform for SR-1	Test tube rack shaking platform
B shaking platform for SR-1	Flask shaking platform
C shaking platform for SR-1	Test tube shaking platform
E shaking platform for SR-1	Spring net shaking platform



TS-10N with Polyethylene jar

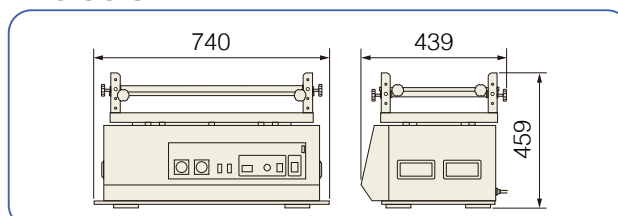
Model	TS-10N
Shaking motion	Reciprocal shaking
Shaking speed/Amplitude	50 to 250 r/min, 45 mm
Capacity	Polyethylene jar: Max. 2 pcs for 5 L/Max. 6 pcs for 2 L (See left figure)
Maximum load	Approx. 10 kg (Shaking platform and Vessel press bars are not included)
Timer	Timer operation function (1min to 99 h 59 min) (*When the timer function is not being used, it can count the time.) •ON-END •OFF-ON •OFF-ON-END Integral timer display 0 to 99 h 59 min or after: 100 h to 9999 h
Speed display/Setting	Digital display/Input
Safety devices/functions	Motor protection circuit at overload, Fuse
Dimensions (WxDxH)	740 × 439 × 459 mm (*)
Weight	Approx. 70 kg
Power supply	AC100V-240V/1A (universal power supply)
Standard accessories	Vessel press bars (long 3/short 3) for TS-10, Adjustment screwdriver for Timer × 1 pc

(*)External dimensions have been changed for shipments from the second half of 2013 (for accommodation of polyethylene jars and the change in the capacity of vessels).

Transmission output is possible

The available speed signal output from 1 to 5 V makes it possible to connect to a recorder, etc. It is recommended for customers who need data in the working process.

Dimensions



NEW

Constant-temperature incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant-temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Submarine Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water-circulating system [Chilled]

Appendix

Elution testing shaker TS-20N

Suitable for Soil elution testing, Soil harmful metals contained testing, and the leaching operation of harmful metals contained from industrial waste.

• "Planetary centrifugal stirrer for volatile substance elution GR-5" --> P.096



TS-20 with Polyethylene jar (horizontal placement)

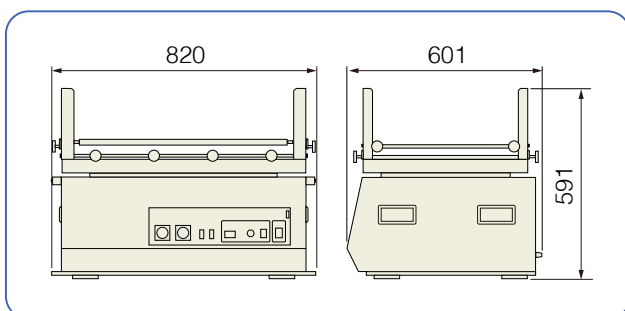
Model	TS-20N
Shaking motion	Reciprocal shaking
Shaking speed/width	25 to 200 r/min, 10 to 50 mm, Stepless (Default: 45 mm) (*1)
Capacity	Polyethylene jar: Max. 6 pcs for 5 L/Max. 14 pcs for 2 L (See right figure)
Maximum load	Approx. 20 kg (Shaking platform and Vessel press bars are not included)
Timer	Timer operation function (1 min to 99 h 59 min) (*When the timer function is not being used, it can count the time.) •ON-END •OFF-ON •OFF-ON-END Integral timer display 1 to 99 h 59 min or after: 100 h to 9999 h
Speed display/Setting	Digital display/Input
Safety devices/functions	Motor protection circuit at overload, Fuse
Dimensions (WxDxH)	820 × 601 × 591 mm (*2)
Weight	Approx. 100 kg
Power supply	AC100V-240V/1A (universal power supply)
Standard accessories	Vessel press bars (long 4/short 4) for TS-20, Adjustment screwdriver for Timer × 1 pc

(*1) Please ask us to adjust the shaking width. (*2) External dimensions have been changed for shipments from the second half of 2013 (for accommodation of polyethylene jars and the change in the capacity of vessels).

Optional: Vessel press bars (for addition)

Product Name/Model	Remarks
Vessel press bar (long) for TS-20	Please purchase any as necessary referring to the upper right capacity.
Vessel press bar (short) for TS-20	

Dimensions



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TATEC [General Catalog]

Features

- Powerful shaking of Polyethylene jars, Capacity: 6 pcs for 5 L/14 pcs for 2 L (See below)
- Dedicate for Polyethylene jars. Capacity and Max. load double those of TS-10N
- Max. load 20 kg, Energy-saving 70 Wh, with Timer

Applications

- Harmful metals contained from soil and industrial waste
- Extraction of analytical samples with Polyethylene jars
- Various mixing-stirring, etc.

Capacity for Polyethylene jars

(The number of capacities has been changed for shipments from the second half of 2013.)

Placement	Volume and Capacity				
	Horizontally	5 L	3 L	2 L	1 L
Vertically	5 L	3 L	2 L	1 L	500 mL
	6 pcs (*1)	8 pcs (*2)	12 pcs (*2)	20 pcs (*3)	30 pcs

(*1) The addition of Vessel press bars (4 pcs/short) is required. (*2) The addition of Vessel press bars (6 pcs/short) is required. (*3) The addition of Vessel press bars (8 pcs/short) is required.

*In all cases, use within the maximum load.

Leaching operation of heavy metals, etc. in soil harmful metals contained testing and TS-20N

① Mix 6 g or more of sample and solvent at a ratio of 3% by weight to volume. The Vessel is made of polyethylene or one that does not adsorb and elute the target substance and has a volume at least 1.5 times that of the solvent.

Size and capacity when installed horizontally at 1/2 volume of working volume

5 L	3 L	2 L	1 L
8 pcs	10 pcs	20 pcs	36 pcs

*Use vessels made by SUNPLATEC (1 L and 2 L: quick bottles, 3 L and 5 L: PE wide-mouth bottles). Please adjust the number of vessels according to the amount of solution.

*When installing and using the above number of pcs, please make sure that the weight is within the maximum load.

② Continuous shaking for 2 hours at 200 r/min and 4 to 5 cm shaking width at room temperature and normal pressure

--> The timer function of the TS-20N also contributes to the reproducibility of shaking time.

Transmission output is possible

The available speed signal output from 1 to 5 V makes it possible to connect to a recorder, etc. It is recommended for customers who need data in the working process.