

NEW

Swing incubator SW-060

NEW

Dry thermo unit DTU-R  
Cool thermo unit CTU-R

Strong shaker SR-2ES/2EW

NEW

Maximizer MBR-022R/K

Bioshaker GBR-200/GBR-300

NEW

Micro mixer E-022

NEW

Rotator RT-025R/050R



TAITEC's new brand  
NEXT



- 01 Interview with the developer
- 03 TAITEC's new brand NEXT
- 05 Constant temperature incubator shaker
- 06 Non-contact turbidimeter for Shaking culture
- 07 Large size constant temperature incubator shaker
- 08 Bench-top shakers / Shakers(Middle size)
- 09 Strong shaker

- Strong shaker for Separatory funnel/Bead beater homogenizers 10
- Aluminum block Bath / Minisize Bath 11
- Centrifugal Concentrators / Freeze dryers 12
- Shakers for High humidity / CO2 incubator 13
- Automatic Manipulator/Microscopic observation system 14
- Incubation monitoring system 14
- EGG INSPECTOR 15



# TAITEC





## From TAITEC's R&D office



### TAITEC has launched a new brand – the NEXT Series! Sustainable initiatives: low vibration, low noise, and low power consumption

TAITEC has rolled out eight models all at once under a new brand called the NEXT series. The NEXT series is a redesigned version of our long-established best-selling models with a unified appearance while achieving simple usability and stable drive, including lowering vibration and power consumption. For example, simultaneously operating all the eight products shown in the photo below requires an operating current of only about 1.2 A (120 Wh)\*. These products are capable of cooling to below room temperature by employing Peltier elements and do not use CFC.

The NEXT series is designed to use the minimum amount of electrical power needed for its applications in research processes. It has a drastically reduced power consumption, thanks to the removal of complex setting operations as well as a reduction in the number of main components.

▶ Each product in the series is described on pages 03 to 04.

\*The value measured under stabilized operation and frequent use







## Interview with the developer Chief technical officer of the NEXT series Managing Director Masahira Araki

The NEXT series is designed particularly with the stability and quietness of its main units in mind. The MBR-022R/K and E-022 are equipped with a newly developed mechanism that stabilizes these models even when multiple units are installed on a narrow shelf.

One of the most important things for experimental equipment is a secure long-term use. All the models are tested through continuous operation to make sure that they can operate safely. Please use our new products, which we developed with great care.



The operating current is being measured with the eight models in use.

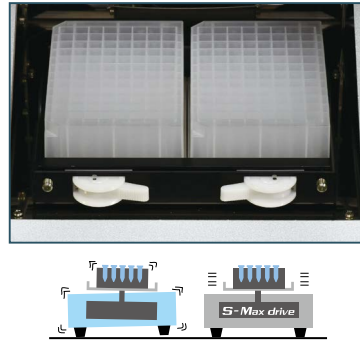
## ■ New mechanism to greatly reduce noise and stabilize the equipment, achieving a more than 50% reduction in vibration levels.

Constant temperature incubator shaker MBR-022R/K and shaker for well plates and microtubes E-022 ▶ P.03

The S-Max drive is our newly developed mechanism that uses a special rubber and a crankshaft structure to make it possible to improve the accuracy of vibration speed and reduce vertical wobble.

It prevents the main unit of the equipment from moving due to vibration during operation while achieving quietness.

The results of a vibration measurement of the main unit showed a 50% or higher reduction as compared with existing models.



## ■ Digital setting and display of speed/temperature, facilitating periodical calibration.

All models ▶ P. 03 to 04

All models in the NEXT series have digital settings and a digital display. For example, the E-022 is the successor model to E-36, which is our bestseller bench-top shaker for well plates and microtubes that has enjoyed patronage for 30 years. In addition to using the new mechanism to improve stability and quietness as described above, all models facilitate periodical calibration by digitizing the setting and display of speed, which existing models adjust with a dial.



## ■ Energy-saving CFC-free Peltier-cooling models.

Constant temperature incubator shaker MBR-022R, aluminum block bath CTU-R, constant temperature swing incubator SW-060 ▶ P. 03 to 04

Some models in this series are capable of cooling to below room temperature by employing Peltier elements to achieve electronic heating and cooling, so they are CFC-free and energy-saving. They also eliminate the need for complicated gas leak inspections and collection procedures.



## ■ Non-direct drive stabilizing rotation from low to high speed. Operation is automatically stopped when the equipment falls over.

Rotator RT-025R/050R ▶ P. 04

The non-direct drive structure, which reduces load using its gear between the rotating and motor shafts, allows stable rotation from low to high speed and improves quietness and durability. Also, the rotator has a safety function to stop rotation when it cannot keep itself horizontal.



## Maximizer MBR-022R/K

This maximizer is optimal for small-diameter vessels such as well plates, microtubes, and vials. The R type can adjust the temperature to below the room temperature. It is suitable for applications that require multi-specimen processing or high-speed micro vibration.

**Well plate × 2, Microtube rack (24 pcs) × 2**



MBR-022R

MBR-022K

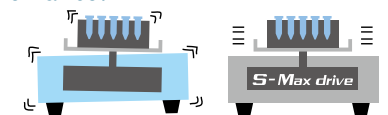
Model	MBR-022R	MBR-022K
Temperature range	+15°C to +60°C	RT +7°C to +60°C
Temp. control accuracy	±0.5°C to 1.0°C	
Shaking motion	Horizontal eccentric vibration (S-Max drive)	
Vibration speed	300 to 2500r/min	
Ambient temp. range	+5°C to +30°C	
Heating/cooling method	Peltier element	Heater unit (for heating only)
Dimensions(W x D x H)	244×417×240Hmm	244×392×240Hmm
Weight	Approx. 15 kg	Approx. 13 kg
Power supply	AC100V-240V	
Standard accessories	Power cable ×1pc, plate adapter×1pc, fuse×1pc, drain tray×1pc	

• This product is designed with a shaking mechanism suitable for 96-well plates, and the stirring efficiency will vary when it is used with other well plates such as those with 24 or 384 wells.

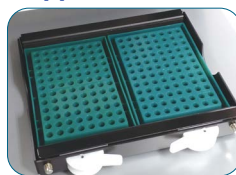
● The new mechanism realizing highly stable stirring effect.



Our newly developed S-Max drive mechanism greatly reduces instability of the main body. It is stable and do not move around even if multiple units are installed on narrow shelves. Compared with a conventional model, M•BR-022UP, the vibration rate of the main body is reduced by more than 50%.



● Applicable vessels



When shaking non-skirted PCR plates or semi-skirted well plates, you can use off-the-shelf tube racks for stirring. The vibration speed should be up to 1200 r/min when using them.

(\*) Semi-skirted low-profile types cannot be used in this combination.



EM-1524

● Option: microtube rack

Model	Capacity of Vessels / Dimensions
EM-0524	0.5mL×24 / 126×86×28.5Hmm
EM-1524	1.5/2.0mL×24 / 126×86×40.5Hmm
EM-1515	5.0mL×12 / 126×86×55.5Hmm

• 0.5 and 1.5 mL microtubes should be Eppendorf tubes.

## Micro mixer E-022

The micro mixer ensures stirring in 96-well plates or microtubes. It is a simple and easy-to-use well plate/tube mixer. Significantly quiet and stabilized with the new mechanism.

**Two well plates can be fixed as standard, and an option is also available. For details, see below.**

● Shaking by horizontal eccentric vibration

Horizontal eccentric vibration is a method to equally exert stirring effects similar to those of a test tube mixer (which stirs the contents of handheld vessels one by one) on multiple microtubes placed in parallel.

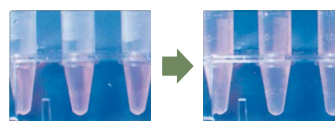
The horizontal eccentric vibration provided by this product is optimized for 0.5/1.5 mL microtubes and is also effective at stirring in 96-well microplates or 96-deep well plates.



Usage example of a shaking platform for well plates (option)  
(Two well plates can be fixed as standard, and an option is also available. For details, see below.)



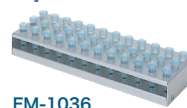
Usage example of a microtube rack (option)



Stirring in microtubes



● Option: microtube rack



EM-1036



EM-0524



EM-1515

Model	E-022
Shaking motion	Horizontal eccentric vibration (S-Max drive)
Vibration speed	300 to 2500r/min
Platform dimensions	270 × 96 mm (inner dims.)
Ambient temp. range	+4°C to +40°C
Applicable vessels	Microtubes (The option below is required. For the number of tubes, see below.) Well plates (Two plates can be fixed as standard.) (*)
Main unit dimensions (W x D x H)	300×200×105Hmm
Weight	Approx. 6 kg
Power supply	AC100V-240V
Standard accessories	Power cord×1 pc, Fuse (with built-in Fuse Holder)×1 pc

(\*) Well plates can be directly fixed on the platform, but it may be impossible to fix them properly, depending on their manufacturer or model number. To fix them more securely, it is recommended to use a shaking platform for well plates (WP-9602). (The platform is required for deep well plates.)

Model	Capacity of Vessels / Dimensions
EM-0836	0.5mL×36 / 262×82×32Hmm
EM-1036	1.5mL×36 / 262×82×32Hmm
EM-0524 (*)	0.5mL×24 / 126×86×28.5Hmm
EM-1524 (*)	1.5/2.0mL×24 / 126×86×40.5Hmm
EM-1515 (*) (*2)	5.0mL×12 / 126×86×55.5Hmm

(\*) Fixing this microtube rack requires a WP-9602. Use two units of the microtube rack in combination.

(\*2) Suitable for the Watson 5 mL tubes and similar products, but not for the Eppendorf tubes.

● Option: Shaking platform for well plates

Model	Capacity of Vessels / Dimensions
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.



# Rotator RT-025R / 050R

Inverting stir of Microtubes and centrifuge tubes. Rotates test tubes and vials.  
 Suitable for ImmunoPrecipitation and cultivation in a low temperature room and incubator.  
 The non-direct drive allows stable rotation from low to high speed.



Usage example of a RT-025R vessel holder (option)

### Optional accessory: vessel holder for RT-025R/050R



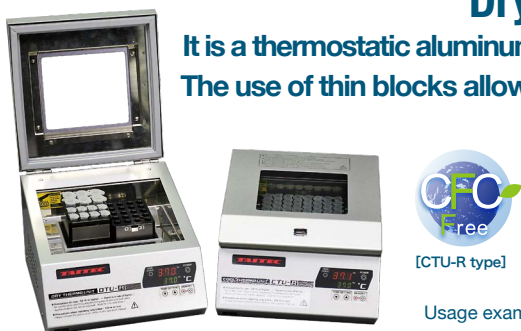
A special holder suitable for specific vessels can also be produced.

Model	RT-025R	RT-050R
Rotational speed	2 to 25 r/min	5 to 50 r/min
Ambient temp. range	+4°C to +40°C	
Drive system	Non-direct drive	
Safety devices	Fuse (3A), overvoltage/overcurrent protection, fall stop function	
Dimensions(WxDx H)/Weight	200×265×266Hmm /Approx. 3.5 kg	
Power supply	AC100V-240V	
Standard accessories	Fuse (with built-in Fuse Holder)×1 pc, Power cord×1 pc	

Model	Vessels/Capacity/Remarks	Number of holders fixed
SE-0108R	1.5/2.0 mL microtube × 24 [inversion stirring]	Up to 2 pieces
SE-1800R	15 mL tube (φ17 × 120 Lmm) × 16 [inversion stirring]	
SE-3500R	50 mL tube (φ29 × 115 Lmm) × 8 [inversion stirring]	
SA-1811R	φ 18 mm × 110 mm test tube × 41 [rotation]	1 piece
SD-2550R	φ25 mm × 110 mm test tube × 24 [rotation]	

## Dry thermo unit DTU-R / Cool thermo unit CTU-R

It is a thermostatic aluminum block bath for heating or cooling microtubes, centrifuge tubes, etc.  
 The use of thin blocks allows quick temperature transition. The coolable type is free from CFC.



DTU-R

CTU-R



[CTU-R type]

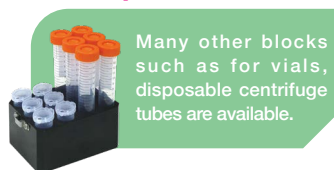
Usage example of an aluminum block (option)

B-0648

B-1120A

B-0696

96 pcs × 0.1/0.2 mL



Model	DTU-R	CTU-R
Ambient temperature	+5 to +30°C	
Temperature range	RT +5°C to +105°C	0°C to +105°C
Temp. control accuracy	±0.1 to 0.2°C	
Heating/cooling method	Heater, Heat dissipation by fan	Peltier element
Dimensions(W x D x H)/Weight	244 × 285 × 180 H mm/approx. 6 kg (DTU-R), approx. 5.5 kg (CTU-R)	
Power supply	AC100V-240V	
Standard accessories	Power cable, hook handle, fuse (built-in fuse holder)	

### Optional parts: half block for micro vials

Model	Capacity	Hole depth	Dimensions / remarks
B-0648	0.1/0.2 mL × 48 pcs (8-Tube Strip)	15mm	67.5×93×35Hmm
B-1120A	1.5 mL × 20 pcs	34mm	Some tubes may not adhere. Self-standing tubes cannot be used.
B-1120B	2.0 mL × 20 pcs	34mm	

### Optional parts: full block for microtubes

Model	Capacity	Hole depth	Dimensions
B-0696	0.1/0.2 mL × 96 pcs or PCR plate × 1 pc	14mm	135.5×93×35.5Hmm

## Swing incubator SW-060 & Hybridization Incubator HB-80N/100N

Peltier element controlled; Freon-free, high-precision constant temperature shaker is suitable for your various incubation purposes. You can choose from four types of shaking options that are easily changeable.  
 Stackable up to three combined with HB series, exclusive to heating purpose.



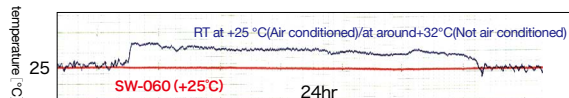
From the top, SW-060, HB-80N, HB-100N.  
 The height is only 135cm after stacked three units.

### optional accessories



Other racks for reciprocating and bottles are also available.

●Temperature stability of inside the chamber at +25°C setting under changeable RT.



Model	SW-060	HB-80N	HB-100N
Temperature range	+15°C to +60°C (RT -10°C to RT +35°C)	RT 8°C above to 80°C	RT 8°C above to 80°C
Temp. control accuracy	±0.1 to 0.2°C		
Shaking motion /Shaking speed	The following shaking motions are available by replacing the shaking kit (optional):Seesaw, reciprocating, rotation (bottle rotation and microtube inversion stirring) 5 to 60 r/min		
Heating/cooling method	Peltier element: 300 W	Heater(300W), no cooling function	
Platform effective dims.	260×230mm		
Dimensions(WxDxH) /Weight	425×465×445Hmm /Approx. 32 kg	425×445×445Hmm /Approx. 30 kg	
Power supply	AC100V-240V	AC100V/3.5A (Need a step-down transformer)	



## Bioshaker BR-21/22/23 Series

It can be stacked up to two levels, a size of easy to place both on and under the laboratory table.

Its programming function also allows it to keep certain temperature after stopped shaking.

**Capacity: Erlenmeyer flask 500mL x 4 pcs, 2L x 1 pc**



Its compact size can be placed under and on the Lab bench. (Photo shows BR-23FP and the optional spring net shaking platform)



Lift-up door allows for good visibility inside the chamber. (Photo shows BR-23UM and the optional spring net shaking platform)



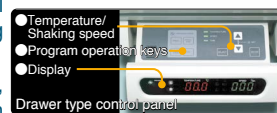
### ● Compact design and Stackable

Its compact size can be placed under the Lab bench. It is stackable up to Two levels with "Stackable base (Optional)." The Lift-up door type is only for the upper of stacked units). Excellent performance for microbial cultures thanks to the shaking speed Max. 300 r/min even 200 r/min at the upper of stacked units.

### ● Sliding retractable control panel

The sliding retractable control panel allows for space saving and excellent operability.

The settings for Temperature, Shaking speed, and Operation program are easy to perform.



Temperature range	FP type: 15°C to 60°C			UM type: 5°C above RT to 70°C			FH type: 5°C above RT to 100°C		
Model	BR-21FP	BR-22FP	BR-23FP	BR-21UM	BR-22UM	BR-23UM	BR-21FH	BR-22FH	BR-23FH
Shaking motion	Reciprocal	Orbital	Reciprocal/Orbital	Reciprocal	Orbital	Reciprocal/Orbital	Reciprocal	Orbital	Reciprocal/Orbital
Speed range/Shaking width	20 to 300r/min (200r/min at the upper of stacked units), 25mm								
Door type	Single swing door (Leftward open)			Swing lift-up door			Single swing door (Leftward open)		
Heating Cooling method	Peltier element (70w x 4)			Heater only(350w), no cooling function					
Program functions	1 program, 9 segments: Temp., Shaking speed and time/per segment (Setting range: 00h00min to 99h59min), Temp. gradient function								
Dimensions (W x D x H)	437×585×545Hmm			422×550×540Hmm			437×550×545Hmm		
Power supply	AC100V/5A (Need a step-down transformer)								
Standard accessories	Drain nozzle x1pc, Drain hose x1pc								

## Bioshaker BR-40/41/42/43/53 Series

Widely used for Cultivation of microbes such as Yeasts, E. coli, etc. that require temp. control and shaking. You can choose your best model such as CFC-free 53FP and 43FH for high temperatures depending on your requirements.

**Capacity: Erlenmeyer flask 500mL x 6 pcs, 5L x 1 pc**



BR-41/42/43 series



BR-53FP



BR-40LF+BR-43FL

### ● Single swing door (Leftward open) for easy shading

The front door opens to the left, but it can be changed to open to the right for your convenience with the "LR Select Door" (distributor will make the change, please contact us).

Combined with two-tiered stacking, it contributes to space saving (optional stackable base is required; the Lift-up door type is only for the upper of stacked units). Excellent performance for microbial cultures thanks to the shaking speed of Max. 300 r/min as well as 200 r/min at the upper of stacked units. Except for 40LF, the program function is also available.

Temperature range	4°C to 70°C				15°C to 55°C	5°C above RT to 70°C			5°C above RT to 100°C
Model	BR-40LF	BR-41FL	BR-42FL	BR-43FL	BR-53FP	BR-41FM	BR-42FM	BR-43FM	BR-43FH
Shaking motion	Reciprocal/Orbital	Reciprocal	Orbital	Reciprocal/Orbital	Reciprocal/Orbital	Reciprocal	Orbital	Reciprocal/Orbital	Reciprocal/Orbital
Speed range	20 to 200r/min (200r/min at the upper of stacked units)								
Door type	Swing lift-up door	Single swing door (Leftward open, Can be changed to rightward open)							
Heating method	Heater 500W	Heater 800W			Heater 800W				
Cooling method	Compressor 75W	Compressor 140W			Peltier element		-		
Timer/Program functions	BR-40LF (Timer): Temp. transition time and ON-OFF changeover (Non-functional by only temp. transition time *e.g.: Shaking at 37°C --> Shaking stop at 4°C.) BR-41/42/43/53 (Program): 1 program, 9 segments: Temp., Shaking speed and time/per segment (Setting range: 00 h 00 min to 99 h 59 min), Temp. gradient function (*)								
Dimensions (W x D x H)	586×630×679Hmm		600×732×643Hmm						
Power supply	AC100V/9A (Need a step-down transformer)		AC100V/12A (Need a step-down transformer)			AC100V/AC220-240V/7A		AC100V/9A (Need a step-down transformer)	
Standard accessories	Drain-reception plastic bottle with hose x1pc (BR-40LF)								



# Constant temperature incubator shaker (Options)

## Options for the compact BR (BR-21/22/23) series

Model	MR-2925
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Vessels can be easily mounted on regardless of its shape. 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) is recommended if vessel should be tightly held.

**Erlenmeyer flask 100 mL × 10pcs**  
**Erlenmeyer flask 250 mL × 5 pcs**

Model	MT-2925
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It is used together with Clamps, Angle racks and "OD-Monitor" series (Clamps of Erlenmeyer flask and Shake flask are available). It can hold flasks tightly compared to the Spring shaking platform.

## Options for the medium size BR (BR-40/41/42/43/53) series

Model	MR-4030
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Vessels can be easily mounted on regardless of its shape. It can be used by removing some springs and changing the height of the spring net as necessary.

Universal shaking platform recommended for 5 L Erlenmeyer flask or 1 to 2 L Shake flask.

**Erlenmeyer flask 500 mL × 6 pcs**  
**Erlenmeyer flask 1L × 3 pcs**

Model	MT-4030
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MT-4030 is used together Clamps, Angle racks and "OD-Monitor" series. In MT-4430 the mounting position for Flasks are fixed and the capacity (Num. of flasks) is larger than that of MT-4030.

It can hold flasks tightly compared to the Spring net shaking platform.

## Common Options for BR series

**Clamps** (Mounted on Shaking platforms and Angle rack for Erlenmeyer flasks for use)



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



MT-4030 with Multiple clamps mounted



Clamps for Sakaguchi flask and Sakaguchi flask

Erlenmeyer flask	Model	Mounting qty on MT-2925	Mounting qty on MT-4030
Erlenmeyer flask 50mL	CF-0050	20	35
Erlenmeyer flask 100mL	CF-0100	10	18
Erlenmeyer flask 200mL	CF-0200	9	12
Erlenmeyer flask 250mL	CF-0250	5	9
Erlenmeyer flask 300mL	CF-0300	5	9
Erlenmeyer flask 500mL	CF-0500	4	6
Erlenmeyer flask 1 L	CF-1000	2	4
Erlenmeyer flask 2 L	CF-2000	1	2
Sakaguchi flask	Model		
Sakaguchi flask 500 mL	SF-0500	3	6

\*Up to 2 L sets of Erlenmeyer flask can be used in BR-21/22/23 series and BR-40LF.

A wide variety of shaking tables (sold separately) are available!



## OD-Monitor A&S/C&T

The industry's first Non-contact turbidimeter realizes to measure the turbidity of sample at OD<sub>600</sub> while shaking. Operated with Bioshaker (Incubator shaker) in combination.

**A&S for small Erlenmeyer flasks and C&T for test tubes.**



For 100-500mL flask

OD-Monitor A&S connected to 2 sets of ODSensor-S



For Test tube

OD-Monitor C&T

OD BOX can record up to 360 points.

(Point=Total measured time ÷ Measurement interval)

The acquired data can be stored in a USB and output to PC In TXT format of CSV.

The turbidity is 0 at the start of measurement and display measured values.

It measures turbidity based on the size of E. coli, you need to correct the turbidity of targeted bacteria by spectrophotometer.

BR series	Shaking platform	Sensor-S	Sensor-L	Sensor-T <sup>(*)</sup>
BR-21/22/23 Series	MT-2925	3	1	2 (16 pcs, 2 Boxes)
BR-40 <sup>(*)</sup> /41/42/43/53	MT-4030	5	2	3 (24 pcs, 3 Boxes)
BR-180 <sup>(*)</sup> /G-BR	MT-7050	16 (2 Boxes)	5 (2 Boxes)	12 (96 pcs, 12 Boxes)
BR-3000 Series	MT-8060	20 (3 Boxes)	8 (2 Boxes)	14 (112 pcs, 14 Boxes)

(\*)At 45° angle. (\*\*)Up to 2 L of Erlenmeyer flask can be used with the BR-40LF. (\*\*\*)Excluding BR-180LF-70RT.

Model	OD-Monitor A&S	OD-Monitor C&T
Measurement method/range	Light transmission, 0.00 to 2.55 (OD600) /15 to 50°C	
Vessel and Fluid volume	Vessel: Glass Erlenmeyer flask Size: 100/200/300/500mL Fluid volume: 20/40/60/100mL	Vessel: Glass Test tube Size: φ16.5/18.0mL Fluid volume: 5mL or 10mL
Shaking conditions/ Measurement channel	Orbital shaking A&S equipped with 1 channel per 1 set of ODSensor. Some number of ODSensor should be required depending on the number of samples.	Reciprocal shaking C&T equipped with 8 channels per 1 set of ODSensor can be connected with only 1 set of ODBOX.
The capacity of ODSensor in Bioshaker BR-series.	BR-22/23 : Sensor-S 3 sets BR-40/42/43/53 : 5 sets G - BR : 16 sets = 2 x A&S	BR-21/23 : 2 sets = 2 x C&T BR-40/41/43/53 : 3 sets = 3 x C&T G - BR : 12 sets = 12 x C&T
Other functions	Alarm for specific value at OD, Transformation to Spectrophotometer in measurement value, USB flash drive (CSV file)	

(\*)Clamps are not included.



OD-Monitor A&S+BR-43LF



OD-Monitor C&T+BR-23FP



# Bioshaker GBR-200/GBR-300

Enables to use widely for Cultivation of microbes such as Yeasts, E. coli, etc. that require temp. control and shaking. High-end model that features for stackable, wide range of temp. range, and speed. Cut power consumption by 75% with the conventional one!

**Capacity: Erlenmeyer flask 500 mL × 24 pcs, 5 L × 4 pcs**



Stackable up to Two levels



GBR-300+BR-53P

• **The top board can be practically used for Lab bench.**

Adopted the same material of Lab bench top board. The top board height is almost the same that of Lab bench.

It is not suitable for precision work, but it can be used as an auxiliary Lab bench.



• **Swing lift-up door and Stackable up to Two levels.**

Swing lift-up door and Stackable up to Two levels contribute space-saving while keeping large capacity. It can be shaken up to 300 r/min (200 r/min at the upper of stacked units) that is optimum for shaking culture.



Model	GBR-200	GBR-300
Shaking motion/ Temperature range	Switchable Reciprocal/Orbital shaking /4°C to 80°C	
Speed range	25 to 200r/min	25 to 300r/min (200r/min at the upper of stacked units)
Platform size/Capacity	700 x 500mm (Max. inside height: 385mm), Erlenmeyer flask 500mLx24, 5Lx4	
Heating/Cooling method	Heater 700W/Compressor 125W	
Program functions	1 pattern, 9 segments (4 combinations can be saved); Temp., Shaking speed and Time/per segment (Setting range: 00h00min to 99h59min), Wait function	
Dimensions (W x D x H)	1200 x 800 x 810Hmm (Including Top board: 1200 x 750 x 25mm)	
Power supply	AC100V/AC220-240V/12A (built-in down transformer)	

Standard accessories Universal shaking platform MT-7050 x1 pc, 2 types Spacer x 2 pcs, Fixing bracket for stackable

(\*)Clamps are not included.

## LED irradiation unit



By adding an LED irradiation unit & controller, a mounting bracket for a large sized BR, and a Spring net shaking platform to the Universal shaking platform included with the equipment, it can be used for light irradiation from the bottom.

\*Select LC-LED-CON4 as the controller for the LED irradiation unit, which can control 1 to 4 pcs at the same output (%).

# Bioshaker BR-3300 Series

Enables to use widely for Cultivation of microbes such as Yeast, E.Coli. etc. that require temp. control. Double platform realizes Double capacity.

**Capacity: Erlenmeyer flask 500 mL × 32 pcs,  
64 pcs for double platform**

• **The large double platform with maximum capacity is further doubled. Renewed and improved usability of conventional models.**

This is TAITEC's largest capacity Bioshaker that has undergone continuous improvement. In addition to switching between Reciprocal/ Orbital shaking, the shaking width can be finely adjusted for optimum shaking effects according to the type of microbes and vessel size. Variations include a double platform for mass cultivation, a top board made of the same material as the laboratory bench on which lightweight equipment and items can be placed, and a safety door lock to prevent accidental opening.



BR-3300  
One-tier platform

BR-3300SW  
Two-tier platform

Number of Shaking platform	Single			Double	
	BR-3300	BR-3300B	BR-3300S	BR-3300W	
Model	BR-3300	BR-3300B	BR-3300S	BR-3300W	
Eco-Drive	●	●	●	●	
Top board (Experimental bench/deck)	×	●	●	×	
Safety door lock	×	×	●	×	
Notification when door opens	×	×	●	×	
Operating temperature range (*1)	4°C to 70°C		4°C to 60°C	4°C to 70°C	
Speed range (*2)	25 to 250r/min		30 to 250r/min	25 to 160r/min	
Shaking motion/width/Door type	Switchable Reciprocal/Horizontal shaking, 10 to 50mm (stepless), Double swing door				
Program function	4 programs, 9 segments per 1 program, Setting contents (*3): Temperature, Shaking speed/time per 1 segment, Wait function (Setting range: 00h00min to 99h59min)				
Platform size/Capacity	800 × 600mm (maximum inside effective height: 601mm) Erlenmeyer flask: 32 for 500mL, 6 for 5L			800×600mm (Container size for per platform: up to 1L Erlenmeyer flask and 500mL shake flask) Erlenmeyer flask: 64 for 500mL, 36 for 1L	
Dimensions (W × D × H)	1327×835×1234Hmm	1327×835×1256Hmm		1327×835×1234Hmm	
Power supply	AC100V/AC220-240V/12A (built-in down transformer)				
Standard accessories	Universal shaking platform MT-8060A x1 pc, Vibration absorbing padx 4 pcs, Spacer x 4 pcs			Universal shaking platform MT-8060A x2 pcs, Vibration absorbing padx 4 pcs, Spacerx 4 pcs, Hexagonal bar spannerx 4 pcs	



Chamber of 3300W

(\*1) When using please set a temperature of +10.0 °C or lower, keep the ambient temperature at +30 °C or lower. The specifications of this product describe the performance values according to the measurement method established by our company. Please contact us if you would like to validation for shaking and temperature accuracy. (\*2) The numerical value are common for Reciprocal/Horizontal shaking. (\*3) A weight function is the function that shakes it after the chamber reached setting temperature and can start. This product does not have a temperature gradient function.

Compact sized easy to use for bench tops and inside refrigerators. Wide range of options for various applications. Enables to shake the samples largely and securely (LR2/XR2). Especially designed for fine and intense shaking (VR2/EVR2). The mild shaking as if shaken by hand (PR2/SI2).



Shake-LR2 with Optional shaking platform MT-2030 and Clamps



Mix-EVR2  
4 x Well plates can be mounted in the standard



Wave-PR2 with stick sheet



Spring net shaking platform

Tilted clamps for Centrifuge tubes

Large-sized shaking platform

Model	Shake-LR2	Shake-XR2	Mix-VR2	Mix-EVR2	Wave-PR2	Wave-SI2
Shaking motion	Switchable Reciprocal/Orbital shaking	Swing in figure 8	Orbital shaking	Horizontal eccentric shaking	Wave-shaped shaking	Seesaw shaking
Shaking speed/width <sup>(*)</sup>	15 to 160r/min, 25mm	15 to 100r/min, 20mm <sup>(*)</sup>	50 to 500r/min, 10 mm	250 to 2500r/min, 2 mm	5 to 50r/min, 2 to 6°	5 to 50r/min, 2 to 10°
Platform dimensions	300x200mm		300x200mm	— <sup>(*)</sup>	300x200mm	
Ambient temp. range	0°C to 50°C					
Maximum load	Approx. 2kg (Optional platform and vessel holders not included)					
Dimensions (W x D x H)	300x270x152Hmm	300x235x155Hmm	300x235x149Hmm	300x235x152Hmm	300x235x163Hmm	300x235x167Hmm
Weight	Approx. 7.8kg	Approx. 7.7kg	Approx. 12.2kg,	Approx. 6.5kg	Approx. 5.1kg	Approx. 5.5kg
Power supply	AC100V-240V/0.5A (universal power supply)					
Standard accessories	—	—	—	(4 x Well plates can be mounted in the standard) <sup>(*)</sup>	1 x Stich sheet (ST-2030 for SI/PR) <sup>(*)</sup>	

(\*) The maximum value might not meet depending optional platforms and vessels. (\*\*) One (1) motion per 1r/min (\*\*) Equipped with platform for 4pcs of well plate as standard. (\*\*) Shaking platform and vessel holder are option.

## 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/Orbital shaking and Swing in figure 8. Options are compatible with those of BioshakerR (Middle size).

NR-30 with Optional shaking platform



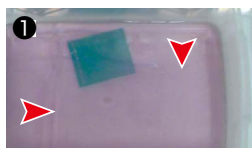
NR-80 with Optional shaking platform



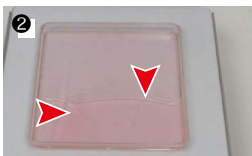
Model	NR-10	NR-20	NR-30	NR-80
Shaking motion	Reciprocal	Orbital	Switchable Reciprocal/Orbital	Reciprocal/Orbital/ Figure 8
Shaking speed	20 to 200r/min <sup>(*)</sup>			
Shaking width	10 to 40mm, Stepless (Default: 25mm)			
Platform dimensions and Capacity	400 x 300mm Erlenmeyer flask 500mL x 6, 3L x 2			
Maximum load	Approx. 8kg (Shaking platform and vessel holders included)			
Dimensions (W x D x H)	455 x 405 x 160Hmm (NR-80: 170Hmm)			
Weight	Approx. 17kg		Approx. 18kg	
Power supply	AC100V/AC220-240V/0.5A (built-in down transformer)			

(\*) One motion per 2r/min in the figure 8.

### •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 alternatingly 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).

### •Optional accessories



Spring net shaking platform



Universal shaking platform and Clamps



Stick sheet shaking platform

Product Name / Model	Remarks
Spring net shaking platform MR-4030	φ16 mm test tubes x96 (The number is when Angle rack tilted 45°) Disposable Centrifuge tube for 50 mL x48 (The number is when Angle rack tilted 45°) Erlenmeyer flasks 100mL x20, 300mL x9, 500mL x6, 1L x3, 2L x2
Universal shaking platform MT-4030	It can hold flasks tightly than Spring shaking platform. Clamps are available as an option.
Strong sticky sheet shaking platform SR-4030S	If the vessel has a flat bottom, such as an Erlenmeyer flask or a medium bottle, it can be fixed/held simply by placing it on the surface. Max. shaking speed: 200 r/min <sup>(*)</sup>

(\*) Since the adhesive strength of this product is strong, Petri dishes and well plates are not suitable because the lid will open when peeling off.



## Reciprocal shaker SR-1D

Compatible with Test tubes and Erlenmeyer flasks.  
Shakes strongly with 50 mm shaking width.



SR-1D with Test tube shaking platform  
(C Shaking platform)

The photo is with a shaking rack for strong horizontal shaking of glass vessels used in analytical pretreatment. Available in a wide range of containers in combination with a variety of shaking racks.

Model	SR-1D
Shaking motion	Reciprocal shaking
Shaking speed/amplitude	50 to 250r/min, 50mm
Maximum load	Approx. 7kg (Shaking platform included)
Dimensions (W x D x H)	570×435×247Hmm
Weight/Power supply	Approx. 45kg, AC100V-240V/1.5A (universal power supply)

### ●Optional Shaking platform (Can also be used in TS-10N) Test tube shaking platform (C Shaking platform)



Up to 24 pcs of Stoppered test tube and Centrifuge tubes of  $\phi$  10 to 35 mm × 100 to 120 mm (length) can be mounted.

Reference Materials: Capacity of water-compliant Color comparison tubes

Vessels	Qty. of mounting on C Shaking platform
25 to 120Lmm	24pcs
121 to 240Lmm	16pcs
241 to 580Lmm	8pcs

### 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. You can also shake screw cap bottles using a commercially available fixed sponge. (Please contact us for details.)

## Elution testing shaker TS-10N/20N

TS-10N accommodates 10 x 2L plastic bottle (1/2 volume). TS-20N accommodates double the number of TS-10N.



The photo shows an example of 500mL wide-mouthed plastic bottle placed horizontally. This is a large-capacity type shaker for mass processing by disposal plastic bottles.

Model	TS-10N	TS-20N
Shaking motion	Reciprocal shaking	
Shaking speed/amplitude	50 to 250r/min, 45mm	25 to 200r/min, 10 to 50mm, Stepless (Default: 45mm) <sup>(*)</sup>
Maximum load	Approx. 10kg	Approx. 20kg
Dimensions (W x D x H)	740×439×459Hmm	820×601×591Hmm
Weight	Approx. 70kg	Approx. 100kg
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	Vessel press bars (long 4/short 4) for TS-20, Adjustment screwdriver for Timer × 1 pc

<sup>(\*)</sup>Please ask us to adjust the amplitude.

●More convenient and higher repeatability by its digital timer  
More convenient and higher repeatability by its digital timer SR-1D, TS-10N/20N, SR-2ES/2EW has the same timer operation in common.

The operation is unified so that shaking and stopping are repeated, and shaking a fixed time, such as shaking for 2 hours after the set time.



Timer setting area Shaking setting area

### ●Capacity/Volume for Polyethylene jars(Horizontally)

Polyethylene jars	Size and capacity when installed horizontally at 1/2 volume of working volume			
	5L	3L	2L	1L
TS-10N	4pcs	6pcs	10pcs	21pcs
TS-20N	8pcs	10pcs	20pcs	36pcs

<sup>\*</sup>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.

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



You can check the real shaking on You Tube and Taitec Online!



# Strong shaker SR-2ES/2EW

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



Single side  
Both vertical  
and horizontal



Both sides  
Vertical only



The separating funnel holder is engineered to make it extremely easy to fasten.

Perform horizontal shaking when it is turned by 90° and laid on its side.

SR-2ES

SR-2EW

Model	SR-2ES	SR-2EW
Shaking motion	Reciprocal (Vertical and Horizontal)	Reciprocal (Vertical)
Shaking speed	Vertical: 100 to 300r/min (*1) Horizontal: 50 to 300r/min	50 to 300r/min (*2)
Shaking amplitude	40mm	
Capacity	3pcs of Up to 1L Separatory funnel (SR-2EW 6pcs)	
Timer	Digital ON/OFF Timer (1min to 99h59min)	

Dimensions (W x D x H)	410 x 585 x 500Hmm	410 x 760 x 500Hmm
Weight	Approx. 49kg	Approx. 57kg
Power supply	AC100V/AC220-240V/1.2A (built-in down transformer)	

(\*1) May not be smoothly shaken at 50 to 99 r/min. (\*2) The shaker works when the platforms are mounted on both side but while not work when the platform is mounted on only one side.

## Optional accessories

A shaking platform for SR-2



A shaking platform for SR-2



Product Name / Model	Capacity of Vessel/Remarks	Applicable to:
Test tube rack shaking platform/A shaking platform for SR-2	Stoppered test tube stand (φ18 mm 50pcs) can be placed 2 set horizontally.	SR-2ES
Test tube shaking platform/C shaking platform for SR-2	φ10 to 35mm Stoppered test tube can be set. Test tube length 45mm to 145mm:Max. 20pcs Test tube length 150mm to 265mm:Max. 10pcs Up to 200 r/min.	SR-2ES /2EW

## Separatory funnel shaking platform (For Vertical shaking in SR-2EW/2ES)

Model	Standard (Round shape)	Squibb type	Capacity
HE-3 for SR-2	50mL to 1L	50mL to 1L	3
	2L	—	2
HE-5 for SR-2	50mL to 200mL	50mL to 200mL	5
	300mL to 500mL	300mL to 500mL	3
	1L, 2L (*)	1L	2 (*)

(\*1) Up to 1 pc for liquid 1 L and up to 2 pcs for less than liquid 500 mL can be at-attached when 2 L is used.  
 ● In SR-2EW, mount and use two separatory funnel shaking platform of the same type.  
 ● The vessels other than these described cannot be used. Contact us for a vessel other than these.  
 ● 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 limitedly attached when 2 L round type separatory funnel. Be sure not attach the separatory funnel to the center holder.  
 ● The holders are individually sold (below). ● The platform of former model SR-2S, 2DS/2W, 2DW can also be used.

Right are the optional rack and adaptor can be used with HE-3 attached.

C half shaking platform for SR-2



B adapter for Flask

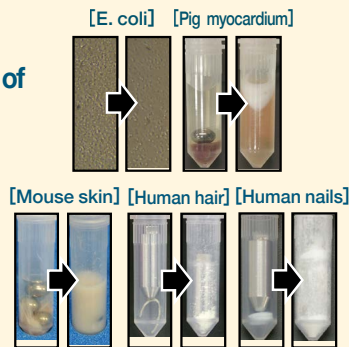
Product Name / Model	Capacity of Vessel/Remarks	Applicable to:
Test tube shaking platform/C half shaking platform for SR-2	Up to 10 pcs of Stoppered test tube and Centrifuge tube (φ10 to 37 mm x 100 to 120 Lmm in length) can be set.	SR-2ES/2EW
B adapter for Flask	Plastic bottle, GL-45 screw cap bottle, Bottle for water quality inspection Upper retainer for φ38 to 55 mm available as an option.	+HE-3

## Beads Crusher μT-12

Strong crushing by High speed pendular swinging for various samples. Up to 12 tubes of 2 mL Microtubes, 5 mL can also be used.



μT-12 with Optional Microtube holders



## Beads Crusher μT-01/01N

Strong crushing and High stability using High speed pendular swinging. For one simple 2 mL Microtube.



μT-01

μT-01N

Model	μT-12	μT-01	μT-01N
Shaking speed	1800 to 3200 r/min (8-step setting) (*1)	2500 to 4600 r/min (6-step setting) (*4)	2000 to 4600 r/min (Stepless setting: per 100 r/min) (*4)
Capacity	1.5/2.0 mL Screw cap microtube: Max. 12 pcs (*2) 5.0 mL Screw cap tube: Max. 2 pcs (*3)	1.5/2.0 mL Screw cap microtube Outer diameter below 11 mm of the body of Microtubes can be used	
Timer	1 to 300 seconds (Per 1 second setting. Up to 2 parameter settings can be memorized)	6-step setting (5, 10, 15, 30, 45, 60 seconds)	No Timer
Memory			1 x Setting
Dimensions(W x D x H)/Weight	310 x 400 x 200Hmm, Approx. 15 kg	175 x 280 x 160Hmm, Approx. 5 kg	
Power supply	AC100V-240V/4A (universal power supply)	AC100V-240V/0.5A (universal power supply)	

(\*1) Set below 2500 r/min and within 30 seconds when using Metal crusher and 5 mL Tubes. (\*2) Refer Recommended Microtubes. For details, please visit our website. Maximum 12 pcs when using Metal crusher. (\*3) OSP Transport Tube 5 mL (580-GRD-Q) is recommended. (\*4) Set below 4000 r/min and 15 seconds when using Metal crusher. ● Stainless steel beads and Metal/Zirconia crusher are available as an option. Marketed Glass and Zirconia beads can be used.

## Optional parts



TH-0206



TH-0203



TH-0501EP

Model	Product Name/Model
TH-0206	1.5/2.0 mL Screw cap Microtube 6 pcs-Holder
TH-0203	1.5/2.0 mL Screw cap Microtube 3 pcs-Holder for cold storage
TH-0501EP	5.0 mL Screw cap Microtube Holder for Eppendorf
Mixed Stainless beads	φ2 pcs/20 g, 3 pcs/40 g, 4 pcs/40 g, 5 pcs/50 g
Metal crusher	2 mL Microtube (Conical bottom) 6 pcs



# Dry Thermo Unit DTU-Mini/Cool Thermo Unit CTU-Mini

Fast temp. transition with thin block. Cooled-type CTU with CFC-free.



Heating

DTU-Mini



[CTU-Mini]

Heating  
Cooling

CTU-Mini



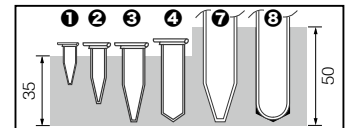
Mini models accommodate one optional half-block up to 48xPCR tubes of 0.1/0.2mL.

### Optional parts

Half block for Microtubes			
Model	Capacity	Hole depth	Dimensions/Remarks
①B-0648	0.1/0.2 mL x 48 pcs (8-Tube Strip)	15mm	67.5 x 93 x 35H mm (Φ50H mm) Some tubes may not be closely contacted to the holes depending on those sizes. Self-stand tubes cannot be used.
②B-0835	0.5 mL x 35 pcs	24.5mm	
③B-1120A	1.5 mL x 20 pcs	34mm	
④B-1120B	2.0 mL x 20 pcs	34mm	
⑤B-1515	5.0 mL x 6 pcs + 1.5 mL x 8 pcs	48mm 34mm	
Half block for Micro Vials			
⑥B-1220	1.5/2.0 mL x 20 pcs	25mm	67.5x93x35Hmm
Half block for Disposable centrifuges			
⑦B-1612L (*1)	15 mL x 12 pcs(*2)	48mm	67.5x93x50Hmm
Half block for Test tubes			
⑧B-1712L (*1)	φ16.5 mm x 12 pcs	48mm	67.5x93x50Hmm
Half block for Microplate (for Mini)			
⑨B-0001	Flat bottom x 1 pc (*3)	—	77x116x39Hmm

(\*1)The hood cannot be closed during use, and the specifications of the temperature range and temperature control accuracy may not be met. (\*2)Eppendorf Safe-Lock Tubes can be used. (\*3)The temperature transfer is inferior in Round bottom Microplates.

The hole shape and fit condition of each vessel are as the figure below. Each hole shape almost fits the vessel shape except for ③. In ⑦ 15 mL and 5 mL Centrifuge tubes fit in around 5 mL the scale marked.



Model	DTU-Mini	CTU-Mini
Temperature range (*1)	3°C above Room temperature to 95°C above Room temperature	30°C below Room temperature to 85°C above Room temperature
Temp. control accuracy (*1)	±0.1°C to ±0.2°C (Set per 0.1°C)	
Capacity	Half block x 1 pc	

Heating/Cooling method	Heater, Heat dissipation by fan	Peltier element
Dimensions(W x D x H)/Weight	128 x 215 x 190 Hmm, Approx. 1.6 kg (Block is not included)	
Power supply	AC100V-240V/1.5A (universal power supply)	

(\*1)The specifications may not be met when the hood is open and/or ambient 30°C.

## e-Bucket series/WTB

CFC-free Minisize Bath that can easily heat and cool Microtubes, etc. on bench top. User-oriented Miracle beads bath and aluminum block.

[EIB/ECB/ETB/EFBN/WTB]



Model	EIB	ECB	EHB	ETB	EFBN	WTB
Temperature range	3°C (Fixed)	3°C to 20°C (*1)	Around 30°C to 70°C (*1,2,3)	3°C to 70°C (*1,2,3)	-10°C to 20°C (*4)	4°C to 70°C
Temp. control accuracy	Below ±1°C					
Standard Bath	Miracle beads bath (BMB-17)		Hetero block (BAL-8148)		-	-
Temp. Display	Digital					
Cooling/Heating method	Cooling with Peltier element		Heater	Heating/Cooling with Peltier element	Cooling with Peltier element	Cooling/Heating with with Peltier element
Safe devices/ protections	Fuse, Overheat/Overcurrent/Overvoltage protection WTB only : Sample protection (High/Low temp.), Non-volatile memory error, Sensor error, Automatic tuning error, Alarm setting error					
Dimensions (W x D x H)	170 x 240 x 220Hmm					240 x 370 x 216 Hmm (Lid is not included),
Weight	Main unit: Approx. 2.2 kg + Miracle beads bath Approx. 1.8 kg		Main unit: Approx. 2.2 kg + Hetero block Approx. 1.2 kg		Main unit: Approx. 2.2 kg + Aluminium block	Approx. 9 kg
Power supply	AC100V-240V/1A (universal power supply)					AC100V/4A(Need a step-down transformer)
Applicable Bath/Block	Miracle beads bath, Hetero block, Dual side block				4 kinds of Block	Miracle beads bath, Hetero block, Dual side block, Deep block *2 pcs can be put in each.

(\*1) The specifications may not be met the ambient temp. above 30°C or below 5°C. (\*2)Miracle beads cannot be stably used over 50°C. The specifications may not be met below 20°C.

(\*3) When used as a water bath (eb-ShakerUnit used with) in EHB, the upper limit temp. is up to 50°C and ETB is up to 55°C. (ambient temp. 5°C to 30°C) (\*4) The specifications may not be met the ambient temp. above 35°C or below 5°C

## Spin Dryer Mini VC-15SP

Compact-size Centrifugal Concentrator is easy to use with Benchtops. Optimal for concentration in Microtubes or Vials. For drying after Ethanol precipitation, VC-15SP with a built-in pump.



VC-15SP

Model	VC-15SP	System example Trap set for a small amount of water and ethanol
Temperature range	Approx. 55°C when the Heater is turned on	VC-15SP
Rotational speed	Approx. 2000 r/min (fixed)	15A (Rotor for 1.5 mL x 12 pcs and 0.2 mL x 32 pcs)
Vacuum release	Manual	VA-250F (Cold Trap)
Timer	~ 60 min (Analog)	NF-025 (Lid with nozzles)
Vacuum Pump	Built-in, Approx. -80 kPa, to -4 L/min (Another pump can be used) (*)	DTU-20 (Vacuum pump)
Suction nozzle outer dia	Pisco φ8 mm	
Dimensions (W x D x H)	171 x 236 x 175 Hmm	
Power supply	AC100V/1A (Need a step-down transformer)	

(\*) When using an external pump, the Diaphragm vacuum pump (displacement up to 50 L/min) is recommended.  
 •VC-15SP is limited to a total fluid volume of 2 mL.

### •Optional parts

Model	Vessels and Capacity	Approx. treatment capacity
15A	Microtubes: 1.5/2.0 mL x 12 pcs + 0.2 mL x 32 pcs (included in VC-15SP)	12mL
15B	Microtubes: 1.5/2.0 mL x 12 pcs + 0.5 mL x 24 pcs	12mL
15C	Microtubes: 1.5/2.0 mL x 20 pcs	20mL
15D	Micro vials: 1.5/2.0 mL x 12 pcs (*)	12mL
15E	Microtubes: 5 mL x 6 pcs (Screw cap type is not suitable.)	15mL

(\*) Custom-made rotors, such as the rotors for 4 mL crimp vials are available as an option. Ask us for details.

## Spin Dryer Lite VC-36R

Microtubes, Vials, Test tubes, and Disposable centrifuge tubes can be used.



VC-36R



40 x 2.0ml microtubes

Model	VC-36R	Example of VC-36R System
Temperature range	4°C to 70°C (Settable temp. range 0°C to 70°C) (*)	VC-36R
Rotational speed	300 to 2000 r/min (*)	36A (Microtube: 1.5/2.0 mL x 40 pcs)
Vacuum release	Timer automatic release (also Manual)	VA-250F (Cold Trap)
Timer	1 min to 99 h 59 min (Digital)	GC-035 (Glass condenser)
Vacuum gauge	0 to -0.1 MPa (Bourdon tube)	DTC-60 (Vacuum pump)
Suction nozzle outer dia.	Rc 1/2 (φ13.8 mm)	
Sterilization filter	0.2 μm	
Dimensions(WxDxH)	310x380x343Hmm	System Stand G-type
Power supply (*)	AC100V/2.7A /Max.10A(Need a step-down transformer)	

(\*) Cooling water circulation unit is required separately for use below room temp.  
 (2) VC-36R: Max. 440 x g. Reference value in the Outer perimeter of the 36R Rotor.  
 (3) The current will increase according to the use of the Pump interlocking outlet.  
 • The Diaphragm-type Vacuum pump (DTU-20/DTC-60, etc.) or Dry scroll type with chemical resistant (VU-100HC, etc.) is recommended for use. Besides, the Oil-sealed rotary vacuum pump is required for Lyophilization.

## Freeze Dryer VD-250R/550R/800R

Suitable to use at Laboratories for R&D. Wide variety of options are available to correspond to various vessels. Cold trapped water can be easily removed by rapid thawing.



Model	VD-250R	VD-550R	VD-800R
Cooling temperature	-45°C (at no load) (*)	-75°C (at no load) (*)	
Trapping volume	Approx. 500 mL/time	Approx. 1000 mL/time	Approx. 2000 mL/time
Volume inside chamber	Approx. 4 L (Inner dia. 160 x 205 mm)	Approx. 4 L (Inner dia. 160 x 205 mm)	Approx. 11.7 L (Inner dia. 210 x 345 mm)
Compressor	250W	250 W x2 (Cascade refrigerating system)	400 W x2 (Cascade refrigerating system)
Recommended vacuum pump	Oil-sealed Rotary Vacuum pump (Ultimate pressure below 50 Pa, Displacement above 100 L/min)		
Vacuum hose connection port	Outer dia. φ22 mm (Rc 3/8 Thread on inner surface, Convertible to different dia.)		
Dimensions (W x D x H)	375x420x525Hmm	380x500x805Hmm	490x600x805Hmm
Power supply	AC100V/6A /Max.15A (Need a step-down transformer)	AC100V/9A /Max.19A (Need a step-down transformer)	AC100V/13A /Max.30A (Need a step-down transformer)
System example	System example ①	System example ②	System example ③
Features	For the connection of the Freeze-dried Bottle to Multiple tubes, it is used by placing Microtubes or other vessels inside the bottle.	It enables Vacuum/Lyophilize sample slices with multiple dishes by connecting the Drying Chamber to Multiple tubes.	Large capacity enables Mass processing with Eggplant-shaped flasks..
combined with	2-Port multiple tube MP-020 Vacuum pump GCD-051XA Freeze-dried Bottle FB-4015 x 2 pcs	2-Port multiple tube MP-020 Drying Chamber DC-280 Vacuum pump GCD-051 System stand C-type	8-Port multiple tube MP-080 Vacuum pump GCD-136XA

(\*) The value under ambient temperature 5°C to 35°C. •The Vacuum gauge and Solenoid valve are not operated unless the operation switch of service outlet for pump turned on. The power supply from the switchboard is recommended at the interlocking.

### •Ultimate vacuum range display function

Displays Atmospheric pressure range/Vacuum drying range/ Lyophilization range in order with the LED when decompression starts to notify the progress of decompression. When the pump is changed, the setting can be changed according to the pump capacity.



## Cell shaker CS-LR

Enables Stable operation under high humidity in CO<sub>2</sub> Incubator etc. as the high waterproof. The low calorific value has uninfluential effect on inside temp.  
**Erlenmeyer flask 500mL x 9**



CS-LR with Shaking platform  
MT-3636

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

### High waterproof with stands submergence test



It has high waterproof performance that passed the submergence 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.

Model	CS-LR
Shaking motion	Switchable Reciprocal/Orbital shaking
Shaking speed/width	15 to 200r/min, 25mm (can be changed to 20mm) (*)
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 x D x H)	Main unit: 300x240x129Hmm/Controller: 125 x 30 x 70Hmm
Weight	Main unit: Approx. 7kg/Controller: Approx. 0.5kg
Power supply	AC100V-240V/1A (AC Adapter)

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

### Optional accesories: Shaking platform

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

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

Appearance in the chamber  
CS-LR with Universal  
shaking platform



## Prescyto MG-71C/71M

Product name	CO <sub>2</sub> incubator	Multi-gas incubator
Model	MG-71C	MG-71M
Temperature range/accuracy	RT 5°C above to 50°C, ±0.2°C (*)	
Gas control range	CO <sub>2</sub> : Atmospheric concentration to 20% (Set in 0.1%) (*) 2	CO <sub>2</sub> : Atmospheric concentration to 20% (Set in 0.1%) (*) 2 O <sub>2</sub> : 1% to 20% (Set in 0.1%) (*) 3
Inner Dimensions (W x D x H)/Chamber volume	Chamber: 354 x 425 x 418Hmm, Approx. 53 L	
Example of Capacity	Per shelf: Petri Dish φ35 mm x 49, Well plate x6, 25 cm2 of TC flask x14	
Dimensions(W x D x H)/Weight	476 x 578 x 638Hmm, Approx. 51 kg	
Power supply	AC100V/3.5A/Max.6.5A (Need a step-down transformer)	

(\*)1The value at the ambient temperature 25°C and operation temperature 37°C/CO<sub>2</sub> 5%. (\*)2Measured by Infrared type CO<sub>2</sub> sensor. (\*)3Measured by Zirconia type oxygen sensor.

## Large size CO<sub>2</sub> Incubator MG-2000C

Available for CF40/CellSTACK® 4x2. Easy to put in and out by exclusive wagon.



### About the wagon for stack plates



The wagon can be equipped 4x40layers stack plates. Upper wagon slides into the chamber. MG-2000C can accommodate 2 wagons, a total of 8 stack plates.

Model	MG-2000C
Chamber size/M3	1120x1410x1343Hmm, approx..1,900L
Outside dimension	1200x1500x1897Hmm
Temp.range/Accuracy	Temp. range: Ambient+5°C ~ +45°C Accuracy: ±0.5°C(at 37°C)
Heating method	Air jacket (4 sides inside chamber)
CO <sub>2</sub> sensor	IR
CO <sub>2</sub> range	0.0 ~ 20.0%(by0.1%)
Air circulation	By inside fan (equipped HEPA filter)
Operation	LCD touch panel
Display	Temp., CO <sub>2</sub> (by LCD panel)
Analog output(4 ~ 20mA)	Temperature, CO <sub>2</sub> concentration
Digital output	Temp. error, CO <sub>2</sub> error, Opened door error
Power supply	AC220V,7A
Required gas supply	CO <sub>2</sub> gas

## Automatic Manipulator WAS-107L(R)

A dedicated manipulator for handling multi-layer incubators.



Manufactured by SHIKOKU INSTRUMENTATION CO.,LTD.

Trolley is included

With this equipment, shaking, stirring and liquid handling can be performed simultaneously in multiple stackable cell culture vessels.

※Cell Factory™, CellSTACK®, HYPERStack®

This equipment can mount up to 4 pieces of 40( or 52) layers stackable cell culture vessels.

Options can be added :Mounting 8 stackable cell culture vessels (10 layer Cell Factory™, 10 layer CellSTACK® ,or 36 layer HYPERStack®) at maximum.

Model	WAS-107L(R)
Dimension(WxDxH)	1,600x1,500x1,650 (1,850 at maximum) mm
Weight	1,070kg (Without a cart)
Allowable load (static load)	200kg(Including vessels and upper parts of a cart)
Required power supply	3 phase AC 200 ~ 230V 50/60Hz 9kVA (AC380 ~ 440V option)

## Microscopic observation system WAS-100B



The device can

- observe each layer with stackable cell culture vessels.
- observe cells state from 50x to 400x.
- observe 80% area of the vessel base from bottom to the 3rd layer.
- be easily operated many action by touch monitor.
- save observed data on built-in PC, and analyze it.
- display enlarged image on the monitor.
- be installed in a small space. (Installation area : W1,250mm xD810mm)

Manufactured by SHIKOKU INSTRUMENTATION CO.,LTD.

Model	WAS-100B
Available vessels	Stackable cell culture vessels • Cell Factory™ made by Thermo Scientific™ (1 ~ 40 layer, or height 800mm at maximum) • CellSTACK® made by Corning® (1 ~ 40 layer, or height 800mm at maximum)
Microscope	Camera : Digital microscope 2M pixel Lens : from x50 to x400 Light : Metal halide lamp 21W
Monitor	LCD monitor, 21 inch
Required power supply	1 phase AC200V 50/60Hz 3kVA(at maximum)
Required compressed air supply	0.5kPa, (suction) if possible, isn't indispensable
Materials	SUS304 mainly

## Incubation monitoring system

This system captures cultured images of cells automatically and observes them without taking out a stack plate (Cell Factory™/Cell STACK®) from an incubator. It is also possible to count the number of cells (number of colonies) and measure the cell density in the captured cells.



### ● Features

- A cultured image of cells is automatically captured at set intervals (ex. 1 hour) and stored in PC.
  - Possible to check and analyze captured cell images.
- It is also possible to count the number of cells (number of colonies) and measure the cell density in the captured cells.
- When reached to the set number of cells or cell density, it alarms you by email.
  - The scanner and PC are wirelessly connected (Wi-Fi) so that you become free from wiring work.

Model	Incubation monitoring system	Remarks
Measurable container	Cell Factory™ / Cell STACK®	
Capturing range	A part of the lowermost stage of the stack plate	See Figure 2-1
Real-time observation	Observe any preferred position within the range of observation.	
Automatic capturing	Capture 24 images at set intervals	See Figure 2-2
Browsing the captured images	Browsing the captured cell images	
Analyzing captured images	Teaching Cell Images Count cell numbers and measure cell occupied area rate.	iPS cells are available. To measure the number of colonies, etc.



Figure1 Wagon equipped cell scanners.

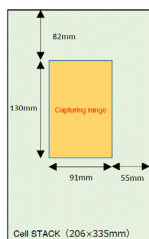


Figure 2-1 Capturing range

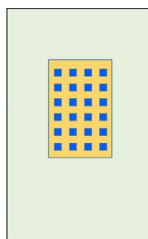


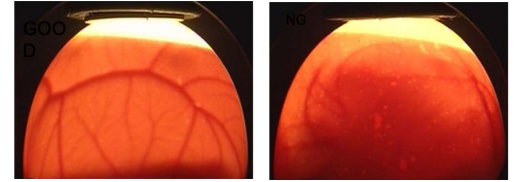
Figure 2-2 Automatic Recording Area

The monitoring system is designed and manufactured by SHIKOKU INSTRUMENTATION CO.,LTD.



# EGG INSPECTOR VAS-153

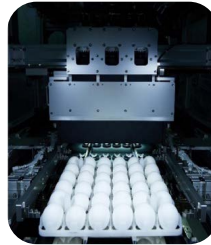
The machine checks growth progress of fertilized eggs which incubate influenza viruses and removes the eggs not suitable for vaccine production. It contributes to labor saving by improving inspection accuracy and processing speed drastically!!



It removes the underdeveloped eggs by capturing the inside of fertilized eggs by CCD cameras. Available to inspect up to 32,000 eggs per hour.

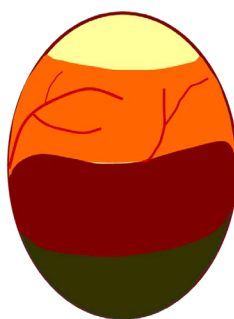
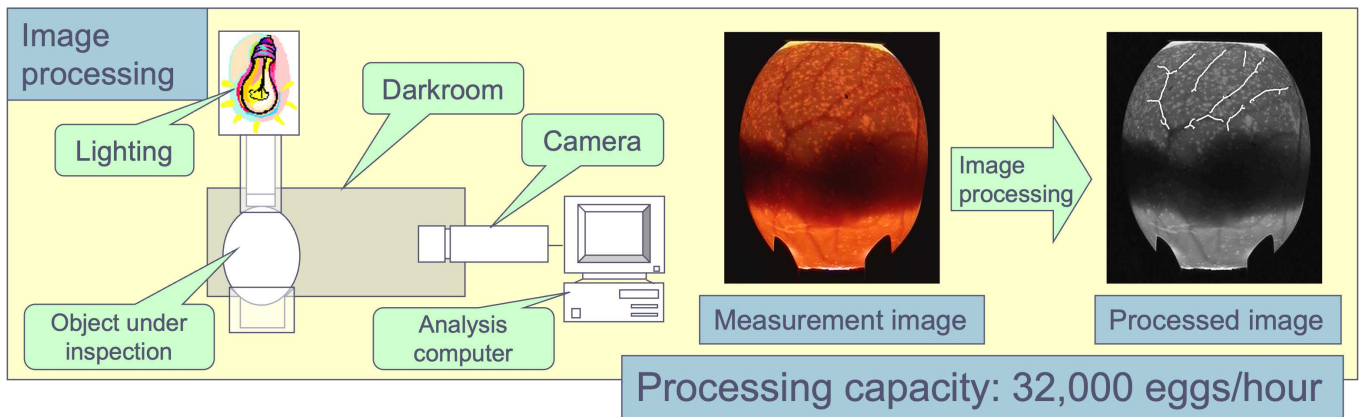
Manufactured by SHIKOKU INSTRUMENTATION CO.,LTD.

It captures the eggs from four directions by 18 cameras, inspecting a tray of 6x6 on 6 stages. Comply with formaldehyde removing agent.

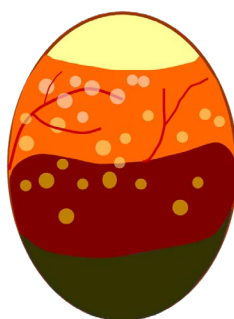


Model	VAS-153
Body size(L x W x H)	5,200(L) x 1,400(W) x 2,340(H)mm
Weight	approx.1,500kg
Main material Component	SUS304,Welding flames structure
Power supply	three-phase 5-wire type AC380V 50Hz/10kVA
Air supply	2 systems: 0.5MPa 90L/min or over x 2

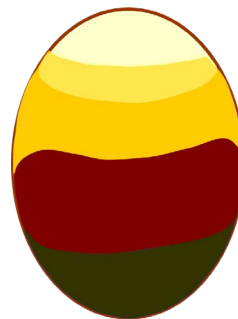
## Development inspection device for fertilized eggs



Normal eggs



Dead egg



Poorly developed egg

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