

# 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!

•Dimensions --> P.046 •OD-Monitor Turbidimeter while shaking --> P.042-043 •LED irradiation unit --> P.045

## Features

- Max. speed 200 r/min (GBR-200) and 300 r/min (GBR-300)
- For as a laboratory bench, Stackable up to Two levels
- Capacity: Erlenmeyer flask 500 mL × 24 pcs, 5 L × 4 pcs  
Details of optional parts and capacity --> P.036/039

## Applications

- Cultivation of microbes such as E. coli, etc.
- Cultivation of Thermophile and Hybridization
- Cultivation of Yeasts, Psychrophiles, and Insect cells

### 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.



### Contributes to saving energy

When set above 10°C above RT, the compressor will not run, while the heater runs for temp. control that is energy saving. It cuts power consumption by 75% with the conventional one!



Stackable up to Two levels

### 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.



### Optional parts: Junction pipe



Model	JCP-3687
Applications	This part is used to provide a communication hole to the outside for the main unit (no lid). It is used to pass sensors, tubes, etc. through the main unit. It is not recommended to put electrical equipment inside the main unit. Use at temperatures below +50°C.

Model	GBR-200	GBR-300
Shaking motion	Switchable Reciprocal/Orbital shaking	
Temperature range	+4°C to +80°C	
Temp. control accuracy (*1)	±0.3°C to ±1.0°C	
Speed range (*2)	25 to 200 r/min	25 to 300 r/min (200 r/min at the upper of stacked units)
Shaking width	Switchable 25/50 mm (Default: 25 mm)	
Platform size/Capacity	700 × 500 mm (Max. inside height: 385 mm), Erlenmeyer flask 500 mL × 24, 5 L × 4	
Door type	Swing lift-up door	
Maximum load	approx. 10 kg (Platform not included)	
Ambient temp. range (*1)	+5°C to +35°C	
Heating/Cooling method	Heater 700 W/Compressor 125 W	
Program functions	1 pattern, 9 segments (4 combinations can be saved): Temp., Shaking speed and Time/per segment (Setting range: 00 h 00 min to 99 h 59 min), Wait function (*3)	
Safety devices/functions	Leakage/Overcurrent breaker, Compressor overheating cut-off circuit, Alarm of abnormal sample temp. (Set as desired), Overload/Overvoltage protection, Fuse, Current limiter, Detecting the door opening and closing, Self-diagnosis function for temperature sensor error, Nonvolatile memory error, Breaking device when motor runaway, Self-check/lamp of filter	
Dimensions (W × D × H)/Weight	1200 (*4) × 800 × 810 mm (Including Top board: 1200 × 750 × 25 mm), Approx. 235 kg	
Power supply	AC100V/AC220V-240V/12A (built-in down transformer)	
Standard accessories	Universal shaking platform MT-7050 × 1 pc (*5), 2 types Spacer × 2 pcs, Fixing bracket for stackable (*6)	

(\*1)The temp. of defrost function is not included. Also, the specifications may not be met outside of the ambient temperature range. (\*2)There is a limitation depending on the volume of vessels and the shaking width. See P.040. (\*3)Shaking will start when reaching the preset temp. (\*4)Approximately 1800 mm when a delivery cart (not included) is installed. (\*5)Clamps are not included. (\*6)Included when stacking is desired. •Temp. range and Temp. stability may not be able to meet the specs when it is frozen by continuous operation. Required to defrost it regularly. •Due to the large size and weight of this product, transportation and installation costs will be charged separately.

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 [Chilled]

Appendix

# 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

Vessels	Model
50 mL	<b>CF-0050</b>
100 mL [Disposable flasks] Corning Disposable 125 mL Thermo Fisher Disposable 125 mL (*)	<b>CF-0100</b>
200 mL [Disposable flasks] Thomson Disposable 250 mL (*)	<b>CF-0200</b>
250 mL [Disposable flasks] Corning Disposable 250 mL Thermo Fisher Disposable 250 mL (*) Thomson Disposable 250 mL (*)	<b>CF-0250</b>
300 mL	<b>CF-0300</b>
500 mL [Disposable flasks] Corning Disposable 500 mL Thermo Fisher Disposable 500 mL (*) Thomson Disposable 500 mL (*, 3)	<b>CF-0500</b>
1 L [Disposable flasks] Corning Disposable 1 L Thermo Fisher Disposable 1 L (*) Thomson Disposable 1.5 L (*, 2), 1.6 L (*, 3)	<b>CF-1000</b>
2 L [Disposable flasks] Corning Disposable 2 L Thermo Fisher Disposable 2 L (*) Thomson Disposable 2.5 L (*, 2), 2.8 L (*, 3)	<b>CF-2000</b>
3 L	<b>CF-3000</b>
5 L	<b>CF-5000</b>
[Disposable flasks] Corning Disposable 3 L Thermo Fisher Disposable 5 L (*)	<b>CF-3000DSP</b>
500 mL	<b>SF-0500</b>
1 L	<b>SF-1000</b>
2 L	<b>SF-2000</b>
3 L	<b>SF-3000</b>

•Up to 2 L sets of Erlenmeyer flask can be used in BR-21/22/23 series and BR-40LF.  
(\*)Thermo Fisher PETG Erlenmeyer flask 411X-0125/0250/0500/1000/2000 type (2)Thomson Ultra Yield flask (3)Thomson Optimum Growth flask

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



### Tube holder M-0015

3 sets × 8 racks for 1.5/2.0 mL Microtube and Micro Vial

### 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 two can be attached to MT-2925 for BR-21/22/23 series. (If three are installed, the tip of the vessels will protrude from MT-2925 and may hit the inside of the chamber during shaking.)

## Angle rack for Erlenmeyer flasks

(Mounted on Shaking platforms \*Clamps required)

Model	AF-2070	AF-2570
Capacity	50 mL: 4, 100 mL: 3, 200 to 300 mL: 2, 500 mL: 1	50 mL: 5, 100 mL: 4, 200 mL: 3, 250 to 500 mL: 2
AF-2070		
Mounting qty on MT-2925	2 (*)	-
Mounting qty on MT-4030	2 (*)	2 (*)
Mounting qty on MT-6040E	4 (*)	4 (*)
Mounting qty on MT-7050	4 (*)	4 (*)
Mounting qty on MT-8060A	10 (*)	5 (*)
External dimension	250 × 110 × 50H mm	300 × 110 × 50H mm
Weight	Apporx. 0.8 kg	Apporx. 0.9 kg

(\*)The qty when Angle rack is tilted 30°.

## Angle rack for Disposable Centrifuge tubess

(Mounted on Shaking platforms for use)

Model	AT-3518
Capacity	50 mL × 18
Mounting qty on MT-2925	1
Mounting qty on MT-4030	2 (When Angle rack is tilted 45°)
Mounting qty on MT-6040E	4 (When Angle rack is tilted 45°)
Mounting qty on MT-7050	4 (When Angle rack is tilted 45°)
Mounting qty on MT-8060A	8 (When Angle rack is tilted 45°)
External dimension/Weight	285 × 110 × 102H mm, Apporx. 0.8 kg
Remarks	Be sure to use below 50°C.

## Angle rack for Test tubes

(Mounted on Shaking platforms 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				
Mounting qty on MT-2925	1	2	1	-
Mounting qty on MT-4030	2	3	2	3
Mounting qty on MT-6040E	4	6	4	5
Mounting qty on MT-7050	4	6	4	6
Mounting qty on MT-8060A	10	16	8	6
External dimension (mm)	250 × 100 × 95H	285 × 70 × 80H	286 × 110 × 100H	320 × 70 × 80H
Weight	Apporx. 0.8 kg	Apporx. 0.6 kg	Apporx. 0.9 kg	Apporx. 0.7 kg

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

### The mounting direction of Angle rack.


The tilt direction of Angle rack should be mounted orthogonal to the shaking direction (direction of shaking efficiency decreases) when reciprocating due to the inside dimension of the chamber.

AT-3518



# Options for large size BR (BR-180/300/3300/G-BR) series

## Spring net shaking platform and Capacity/Qty of Vessels (Mounted on Shaking platform for use)


Model	MR-4030L
	The usable Shaking platform where Vessels can be easily mounted on regardless of its shape. Fixed with the screws to Platform MT-7050 for using. (Not used with BR-180LF-70RT) •MT-6040E: Up to 2 pcs per one sheet •MT-7050: Up to 2 pcs per one sheet •MT-8060A: Up to 4 pcs per one sheet.
4 pcs installed on MT-8060A	
Spring net Pitch	20 mm
Spring net stage	2 stage (Height is changeable.)
External dimension/Weight	400 × 300 × 108H mm, Approx. 2 kg

(\*)The Capacity/Qty of vessels are less than those of Universal platform. The capacity is doubled in the double platform. (\*\*)The qty when Angle rack is tilted 45°. φ16 mm or less test tube should be fixed with the stand per net.

Mounting Qty of MR-4030L		1	2	4	
Capacity of Vessels (*)	Erlenmeyer flask	φ16 mm test tubes (**)	96 pcs	192 pcs	384 pcs
		Disposable Centrifuge tube for 50 mL (**)	48 pcs	96 pcs	192 pcs
		50 mL	24 pcs	48 pcs	96 pcs
		100 mL	20 pcs	40 pcs	80 pcs
		200 mL	12 pcs	24 pcs	48 pcs
		250 mL	9 pcs	18 pcs	36 pcs
		300 mL	9 pcs	18 pcs	36 pcs
		500 mL	6 pcs	12 pcs	24 pcs
		1 L	3 pcs	6 pcs	12 pcs
			Sakaguchi flask 500 mL	6 pcs	12 pcs

## Shaking platform and Capacity/Qty of Flasks


### For BR-180LF, GBR-200/300

Model	MT-7050			
	It is used together with Clamps, Angle racks and "ODMonitor" series (Clamps of Erlenmeyer flasks and Sakaguchi flasks are available). It can hold flasks tightly compared to Spring shaking platform.			
External dimension/Weight	700 × 500 × 22H mm, Apporx. 6 kg			
Capacity of Flask	Erlenmeyer flask 50 mL	96	Erlenmeyer flask 2 L	8
	Erlenmeyer flask 100 mL	48	Erlenmeyer flask 3 L	6
	Erlenmeyer flask 200 mL	35	Erlenmeyer flask 5 L/Disposable 3&5 L	4/5
	Erlenmeyer flask 250 mL	28	Sakaguchi flask 500 mL	18
	Erlenmeyer flask 300 mL	28	Sakaguchi flask 1 L	12
	Erlenmeyer flask 500 mL	24	Sakaguchi flask 2 L	6
	Erlenmeyer flask 1 L	13	Sakaguchi flask 3 L	5


### For BR-180LF-70RT

Model	MT-6848 (for 70RT, Pre-assembled)
	Designed for BR-180LF-70RT. Fixed with Optional clamps. Not equipped with a Drawer mechanism due to being designed for High load.
External dimension/Weight	680 × 480 × 22H mm, Apporx. 5.2 kg
Capacity	same as MT-7050 (see left)

### For BR-3300 Series

Model	MT-8060A			
	It is used together with Optional Clamps, Angle racks, and "OD-Monitor" series. 2 sets used with Double shaking platform type (included in BR-3000LF). The old MT-8060 (before the lever puller type) is also available.			
External dimension/Weight	800 × 600 × 45H mm, Apporx. 9 kg			
Capacity of Flask	Erlenmeyer flask 50 mL	98	Erlenmeyer flask 2 L	12
	Erlenmeyer flask 100 mL	72	Erlenmeyer flask 3 L	9
	Erlenmeyer flask 200 mL	63	Erlenmeyer flask 5 L/Disposable 3&5 L	6/7
	Erlenmeyer flask 250 mL	46	Sakaguchi flask 500 mL	27
	Erlenmeyer flask 300 mL	46	Sakaguchi flask 1 L	18
	Erlenmeyer flask 500 mL	32	Sakaguchi flask 2 L	12
	Erlenmeyer flask 1 L	18	Sakaguchi flask 3 L	9

### For BR-300LF, Double platform BR-300LF

Model	MT-6040E			
	It is used together with Clamps, Angle racks and "ODMonitor" series. The old MT-6040A (before the lever puller type) is also available.			
External dimension/Weight	600 × 400 × 42H mm, Apporx. 4 kg			
Capacity of Flask	Erlenmeyer flask 50 mL	70	Erlenmeyer flask 2 L	6
	Erlenmeyer flask 100 mL	35	Erlenmeyer flask 3 L	4
	Erlenmeyer flask 200 mL	28	Erlenmeyer flask 5 L and Disposable 3&5 L	3
	Erlenmeyer flask 250 mL	21	Sakaguchi flask 500 mL	15
	Erlenmeyer flask 300 mL	21	Sakaguchi flask 1 L	9
	Erlenmeyer flask 500 mL	15	Sakaguchi flask 2 L	6
	Erlenmeyer flask 1 L	9	Sakaguchi flask 3 L	4
<b>Total capacity in the Double platform</b>				
Capacity of Flask (Two stages in total)	Erlenmeyer flask 50 mL	140	Erlenmeyer flask 2 L (*)	6
	Erlenmeyer flask 100 mL	70	Erlenmeyer flask 3 L (*)	4
	Erlenmeyer flask 200 mL	56	Erlenmeyer flask 5 L and Disposable 3&5 L (*)	3
	Erlenmeyer flask 250 mL	42	Sakaguchi flask 500 mL	30
	Erlenmeyer flask 300 mL	42	Sakaguchi flask 1 L (*)	9
	Erlenmeyer flask 500 mL	30	Sakaguchi flask 2 L (*)	6
	Erlenmeyer flask 1 L	18	Sakaguchi flask 3 L (*)	4

(\*)It cannot be used on the upper platform but it can be used on the lower platform when the upper is removed.

Total capacity in the Double platform				
Capacity of Flask (Two stages in total)	Erlenmeyer flask 50 mL	196	Erlenmeyer flask 2 L (*)	12
	Erlenmeyer flask 100 mL	144	Erlenmeyer flask 3 L (*)	9
	Erlenmeyer flask 200 mL	126	Erlenmeyer flask 5 L and Disposable 3&5 L (*)	6/7
	Erlenmeyer flask 250 mL	92	Sakaguchi flask 500 mL	54
	Erlenmeyer flask 300 mL	92	Sakaguchi flask 1 L (*)	18
	Erlenmeyer flask 500 mL	64	Sakaguchi flask 2 L (*)	12
	Erlenmeyer flask 1 L	36	Sakaguchi flask 3 L (*)	9

(\*)It cannot be used on the upper platform but it can be used on the lower platform when the upper is removed.

## Optional parts: LED light illumination unit mounting bracket

Model	LC-0950BR
External dimension/Weight	Mounting brackets for attaching the LED irradiation unit (LC-450EXP) to the Universal shaking platform MT-6040/7050/8060 for large size BRs. One set is required per one LED irradiation unit.



## About delivery cart

With the exception of BR-180LF, carts are attached to both sides of the main unit of the large size BR for delivery. This is not an accessory and will be collected after delivery.

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