## Bioshaker BR-300LF/Double platform BR-300LF

Enables to use widely for Cultivation of microbes such as Yeasts, E. coli, etc. that require temp. control and shaking. Equipped with double platform, the capacity is doubled with BR-300LF (Single platform).

•Dimensions --> P.046 •OD-Monitor Turbidimeter while shaking --> P.042-043 •Double Shaker NR-150N --> P.078

## **Features**

- Wide temperature range from 4°C to 70°C
- Shaking width adjustable in stepless between 10 mm to 50 mm
- •BR-300LF: Erlenmeyer flask 500 mL × 15 pcs Double platform BR-300LF: Erlenmeyer flask 500 mL × 30 pcs Details of optional parts and capacity --> P.036/039

## **Applications**

- Cultivation of microbes such as E. coli, etc.
- Cultivation of Yeasts, Psychrophiles, and Insect cells
- The other samples that require shaking and temp. control

## **Long-selling Large sized Bioshakers**

Widely used for Cultivation of microbes such as Yeasts, E. coli, etc. that require temp. control and shaking. Large Bioshakers are long time sellers because of the continued improvements such as the Shaking platform drawer lever. Universal shaking platform is included, and a Spring net shaking platform is also available (sold separately).

### **Double platform realizes twice the capacity with BR-300LF** (Single platform)

The capacity (Up to 1 liter Erlenmeyer flask) is doubled with BR-300LF (Single platform). Note: The upper platform should be removed when above 2 L Erlenmeyer flask and IL Shake flask are placed. (Ask us for details).



BR-300LF



Double platform BR-300LF

### Shaking platforms are available in a wide variety of drawer-type variations

The current model has a shaking platform that can be easily pulled out. This allows for easy replacement of Vessel holders, etc.



Model	BR-300LF	Double platform BR-300LF	
Temperature range	+4°C to +70°C		
Temp. control accuracy (*1)	±0.3°C to ±1.0°C		
Shaking motion	Switchable Reciprocal/Orbital shaking		
Speed range	25 to 250 r/min	25 to 160 r/min	
Shaking width	10 to 50 mm (stepless)		
Platform size/Capacity	600 × 400 mm (Max. inside height: 575 mm), Erlenmeyer flask 500 mL × 15, 5 L × 3	$600\times400$ mm (Capable/Max. vessel size: Up to 1 L Erlenmeyer flask and 500 mL Shake flask), Erlenmeyer flask 500 mL $\times$ 30, 1 L $\times$ 18	
Door type	Single swing door (Leftward open)		
Maximum load	Approx. 10 kg (Platform not included)	Approx. 10 kg/per platform (Platform not included)	
Ambient temp. range (*1)	+5°C to +35°C		
Display (Temp./Speed)	Digital display (Switchable Set temp./Chamber temp.)		
Heating/Cooling method	Heater 700 W/Compressor 125 W		
Other functions	Shaking duration integrator (0.1 h to 999.9 h, with Automatic resetting function), Remote temperature settings (Requires optional program unit for use), Chamber lamp		
Safety devices/functions	Leakage/Overcurrent breaker, Compressor overheating cut-off circuit, Alarm of abnormal sample temp. (Set as desired), High/Low temp., Display of deviation from set value (upper/lower limit), Self-diagnosis function for temperature sensor error		
Dimensions (W × D × H)/Weight	t 1110 (*2) × 682 × 1120 mm, Approx. 210 kg 1100 (*2) × 682 × 1120 mm, Approx. 220 kg		
Power supply	AC100V/AC220V-240V/11A (built-in down transformer)		
Standard accessories	Universal shaking platform MT-6040E ×1 pc("3), Vibration absorbing padx 4 pcs, Spacer× 4 pcs, Drain-reception plastic bottle×1 pc (With hose)  Universal shaking platform MT-6040E × 2 pcs("3), 4 × Vibration absorbing pad × 4 pcs, Spacer× 4 pcs, Drain-reception plastic bottle (With hose) × 1 pc		

<sup>1)</sup>The temp. of the defrost function is not included. Also, the specifications may not be met outside the ambient temperature range. (2)Approx. 1600 mm when a delivery cart (not included) is installed

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(3)Clamps are not included.

(4)Clamps are not included.

(5)Clamps are not included.

(6)Clamps are not included.

(7)Clamps are not included.

(8)Clamps are not included.

(9)Clamps are no

## **Common Options for BR series**

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







MT-4030 with Multiple clamps mounted



Clamps for Sakaguchi flask and Sakaguchi flask

Ve	ssels	Model
	50 mL	CF-0050
	100 mL [Disposable flasks] Corning Disposable 125 mL Thermo Fisher Disposable 125 mL (*1)	CF-0100
	200 mL [Disposable flasks] Thomson Disposable 250 mL (*2)	CF-0200
Erlenmeyer	250 mL [Disposable flasks] Corning Disposable 250 mL Thermo Fisher Disposable 250 mL (*1) Thomson Disposable 250 mL (*3)	CF-0250
flask	300 mL	CF-0300
Erlenmeyer flasks (glass, unless otherwise noted)	500 mL [Disposable flasks] Corning Disposable 500 mL Thermo Fisher Disposable 500 mL (*1) Thomson Disposable 500 mL (*2, 3)	CF-0500
	1 L [Disposable flasks] Corning Disposable 1 L Thermo Fisher Disposable 1 L (*1) Thomson Disposable 1.5 L (*2), 1.6 L (*3)	CF-1000
oted)	2 L [Disposable flasks] Corning Disposable 2 L Thermo Fisher Disposable 2 L (*1) Thomson Disposable 2.5 L (*2), 2.8 L (*3)	CF-2000
	3 L	CF-3000
	5 L	CF-5000
	[Disposable flasks] Corning Disposable 3 L Thermo Fisher Disposable 5 L (*3)	CF-3000DSP
Sa	500 mL	SF-0500
kagu	1L	SF-1000
Sakaguchi flask	2 L	SF-2000
ask	3 L	SF-3000

<sup>•</sup>Up to 2 L sets of Erlenmeyer flask can be used in BR-21/22/23 series and BR-40LF.

(\*1)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

#### **Tube holder M-0500**

Disposable Centrifuge tube for 50 mL

#### **Angle rack for Erlenmeyer flasks**

(Mounted on Shaking platforms \*Clamps required)

1	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 (*)
12.1	Mounting qty on MT-6040E	4 (*)	4 (*)
	Mounting qty on MT-7050	4 (*)	4 (*)
	Mounting qty on MT-8060A	10 (*)	5 (*)
MT-4030 with Angle racks	External dimension	250 × 110 × 50H mm	300 × 110 × 50H mm
mounted.	Weight	Apporx. 0.8 kg	Apporx. 0.9 kg

<sup>(\*)</sup>The qty when Angle rack is tilted 30°.

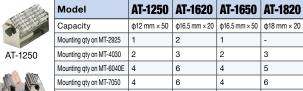
## **Angle rack for Disposable Centrifuge tubess**

(Mounted on Shaking platforms for use)

	Model	AT-3518
	Capacity	50 mL × 18
	Mounting qty on MT-2925	1
2	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, Approx. 0.8 kg
	Remarks	Be sure to use below 50°C.

## **Angle rack for Test tubes**

(Mounted on Shaking platforms for use)



MT-4030 Angle ra

_	Mounting qty on M1-6040E	4	ь	4	5
	Mounting qty on MT-7050	4	6	4	6
	Mounting qty on MT-8060A	10	16	8	6
with	External dimension (mm)	250 × 100 × 95H	285 × 70 × 80H	286 × 110 × 100H	320 × 70 × 80H
ed.	Weight	Apporx. 0.8 kg	Apporx. 0.6 kg	Apporx. 0.9 kg	Apporx. 0.7 kg

<sup>•</sup>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.



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<sup>(&</sup>quot;)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.)

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

### Spring net shaking platform and Capacity/Qty of Vessels

Model		MR-2925			
		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.			
Spr	ing net Pitch	20 mm			
Spring net stage		1 stage (Height is changeable.)			
Ext	ernal dimension	290 × 250 × 108H mm			
We	ight	Apporx. 1.1 kg			
0	φ16 mm test tubes (*1)	50 (*2)	Erlenmeyer flask 300 mL	5	
apa	Disposable Centrifuge tube for 50 mL	20 (*2)	Erlenmeyer flask 500 mL	4	
city	Erlenmeyer flask 50 mL	20	Erlenmeyer flask 1 L	2	
of /	Erlenmeyer flask 100 mL	10	Erlenmeyer flask 2 L	1	
Capacity of Vessel	Erlenmeyer flask 200 mL	9	Sakaguchi flask 500 mL (*3)	2	
<u>0</u>	Erlenmeyer flask 250 mL	5			

(\*1)\phi16 mm or less should be with the stand to be mounted on in Spring net. (\*2)The qty when Angle rack is tilted 45°. (\*3)Be careful when using Shake flasks as they are fragile.

### 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 decreasing an adhesive force by dirt can be recovered by washing with water and drying it.
Max. shaking speed	100 r/min
External dimension/Weight	290 × 250 × 30H mm / Apporx. 1.1 kg
Standard accessories	Sticky sheet × 1

#### Sticky sheet

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

Model	ST-2925
External dimension	290 × 250 mm

<sup>•</sup>Up to 2 L of Erlenmeyer flask can be used with the BR-21/22/23 series

### Universal shaking platform and Capacity/Qty of Flasks

Model		MT-2925		
		It is used together with Clamps, Angle racks and "ODMonitor" series (Clamps of Erlenmeyer flask and Shake flask are available). It can hold flasks tightly compared to the Spring shaking platform.		
Exte	ernal dimension	290 × 250 × 23H mm		
Weig	ght	Apporx. 0.9 kg		
Ce	Erlenmeyer flask 50 mL	20	Erlenmeyer flask 500 mL	4
ıpac	Erlenmeyer flask 100 mL	10	Erlenmeyer flask 1 L	2
ity c	Erlenmeyer flask 200 mL	9	Erlenmeyer flask 2 L	1
Capacity of Flask	Erlenmeyer flask 250 mL	5	Sakaguchi flask 500 mL	3
ask	Erlenmeyer flask 300 mL	5		

### Other optional accessories

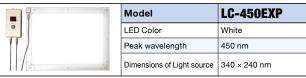
Shading plate for BR SB-3625	Stackable base STB-4842	Inner rack RSB-3430
B1 23F4		
Shade plate for small BR (front door type) doors. Easy to attach and detach with magnet type. The surface can be used as a white board, and magnets can be affixed. 360 × 250 × 10H mm.  (BR should be used at temperatures below 70°C when mounted).	The fixing tool that prevents slippage when the stackable base is in use (Required when stacked)	It can be installed to the upper of the chamber. The height of space that the sample is placed differs depending on the mounting position.

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

Stackable base (The fixing tool for Two stages.)

Stackable base A	STB-6070	STB-6070S
For stacking of BR-40LF + BR-41/42/43/53	For two-tier stacking of BR-41/42/43/53	For small size BR (21/22/23) + medium size BR (41/42/43/53)

## LED irradiation unit (Mounted to MR-4030 and RSB-3424LED for use)



•See details on P.045. Optional controller (LC-LED-CON1 for 1 unit or LC-LED-CON4 for 1 to 4 units) is required.

## **Inner rack**

#### **RSB-5032**

It can be installed to the upper chamber. The Maximum load is 1 kg.



### Mounting bracket for LED top irradiation

#### RSB-3424LED

Mounting brackets for attaching the LED irradiation unit (LC-450EXP) to the inside top surface of the BR-41/42/43/53 series chamber. Use it when you want to irradiate light from the top surface. The height can be adjusted to 4 levels.



LED irradiation unit installed on the upper surface of the chamber

- •The space height from the LED panel to the bottom of the shaking platform varies depending on the rail mounting position.

  •After installation, be sure to check that the LED panel does not collide with the vessel to be shaken.