

Bioshaker BR-40/41/42/43 Series

Widely used for Cultivation of microbes such as Yeasts, E. coli, etc. that require temp. control and shaking. Sufficient capacity, Space saving, and High versatility.

- Dimensions --> P.046 •OD-Monitor Turbidimeter while shaking --> P.042-043 •LED irradiation unit --> P.045
- Without temp. control "NR-10/20/30" --> P.076

Features

- 8 models" can be selected by temp. range and shaking motion
- Stackable up to Two levels, Platform can be changed
- Capacity : Erlenmeyer flask 500 mL × 8 pcs, 5 L × 1 pc

Details of optional parts and capacity --> P.036-038

Applications

- Cultivation of microbes such as E. Coli, etc.
- Cultivation of Yeasts and Insect cells (LF/FL)
- Cultivation of Thermophile and Hybridization (FH)

Lift-up door offers allows good visibility inside the chamber (BR-40LF)



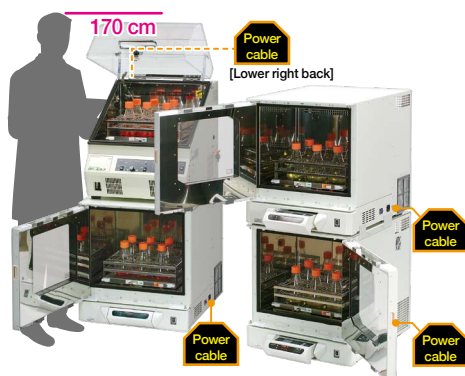
Single swing door (Leftward open) for easy shading
BR-40/41/42/43 series

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 (see P.040) is also available.

LED irradiation unit is available as an option.

LED (Light emitting diode) irradiation unit is available as an option. Good effect on photosynthesis. *Recommended to use with Small and Medium sized unit (See 45 page for details)



Temperature range	For low to medium temperatures, +4°C to +70°C				For medium temperatures, +5°C above RT to +70°C			For medium to high temperatures, +5°C above RT to +100°C
Model	BR-40LF	BR-41FL	BR-42FL	BR-43FL	BR-41FM	BR-42FM	BR-43FM	BR-43FH
Shaking motion	Reciprocal/ Orbital	Reciprocal	Orbital	Reciprocal/ Orbital	Reciprocal	Orbital	Reciprocal/ Orbital	Reciprocal/Orbital
Temp. control accuracy (*1)	±0.3 to ±1.0°C							
Speed range	20 to 200 r/min	20 to 300 r/min (200 r/min at the upper of stacked units)						
Shaking width	10 to 40 mm	25 mm						
Capacity	Universal shaking platform MT-4430: Erlenmeyer flask 500 mL × 8, Universal shaking platform MT-4030: Erlenmeyer flask 5 L × 1 *BR-40LF: 2 L × 2 (*2)							
Door type	Swing lift-up door	Single swing door (Leftward open, Can be changed to rightward open) (*3)						
Maximum load	approx. 7 kg (Platform and Vessel holder included)							
Ambient temp. range	+5°C to +30°C	+5°C to +35°C						
Heating method	Heater 500 W	Heater 800 W						
Cooling method	Compressor 75 W	Compressor 140 W			-			
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 (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 (*4)							
Safety devices/ functions	Leakage/Overcurrent breaker, Fuse, High temp, Alarm of abnormal sample temp. (Set as desired), Detecting the door opening and closing, Self-diagnosis function for sensor error, Motor current limiter, Compressor overheating cut-off circuit (BR-40LF and FL)							
Dimensions (W × D × H)	586 × 630 × 679 mm	600 × 732 × 643 mm						
Weight	Approx. 70 kg	Approx. 95 kg	Approx. 98 kg		Approx. 77 kg	Approx. 80 kg		Approx. 81 kg
Power supply	AC100V/9A (Need a step-down transformer)	AC100V/12A (Need a step-down transformer)			AC100V/9A (Need a step-down transformer)			
Standard accessories	Drain-reception plastic bottle with hose ×1pc (BR-40LF)							

(*1) The temp. of defrost function that just starting is not included. Also, the specifications may not be met outside of the ambient temperature range. (*2) Maximum inside height are 331 mm (40LF) and 350 mm (41/42/43).

(*3) Distributor can make necessary changes. (*4) The transfer time of temperature can be set up. (Within the capabilities, Cannot be set for Step 1)

•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.

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

•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 (*)Thomson Ultra Yield flask (*)Thomson Optimum Growth flask

Tube holders (Mounted on MT-2925 for use)



M-0015

Tube holder M-0150

Disposable Centrifuge tube for 15 mL
3 sets × 6 racks (*)

Tube holder M-0015

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

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)



AF-2070



MT-4030 with Angle racks mounted.

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
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, Approx. 0.8 kg
Remarks	Be sure to use below 50°C.

Angle rack for Test tubes

(Mounted on Shaking platforms for use)



AT-1250



MT-4030 with Angle racks mounted.

Model	AT-1250	AT-1620	AT-1650	AT-1820
Capacity	φ12 mm × 50	φ16.5 mm × 20	φ16.5 mm × 50	φ18 mm × 20
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



NEW



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

Spring net shaking platform and Capacity/Qty of Vessels

Model	MR-4030			
		<p>Vessels can be easily mounted on regardless of its shape.</p> <p>It can be used by removing some springs and changing the height of the spring net as necessary.</p> <p>Universal shaking platform recommended for 5 L Erlenmeyer flask or 1 to 2 L Shake flask.</p>		
Spring net Pitch		20 mm		
Spring net stage		2 stages (Height is changeable.)		
External dimension/Weight		400 × 300 × 108H mm, Apporx. 3.3 kg		
Capacity of Vessel	φ16 mm test tubes (*1)	96 (*2)	Erlenmeyer flask 300 mL	9
	Disposable Centrifuge tube for 50 mL	48 (*2)	Erlenmeyer flask 500 mL	6
	Erlenmeyer flask 50 mL	24	Erlenmeyer flask 1 L	3
	Erlenmeyer flask 100 mL	20	Erlenmeyer flask 3 L	2
	Erlenmeyer flask 200 mL	12	Erlenmeyer flask 3 L (*3)	1
	Erlenmeyer flask 250 mL	9	Sakaguchi flask 500 mL	6


(*1) φ16 mm or less should be used with the stand to be mounted on Spring net. (*2) The qty when Angle rack is tilted 45°. (*3) It cannot be used with BR-40LF.

Shaking platforms and Capacity of Flasks


Model	MT-4030/MT-4430			
<div></div> <div>MT-4030</div>	<p>MT-4030 is used together Clamps, Angle racks and "OD-Monitor" series (P.042-043). 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.</p>			
<div></div> <div>MT-4430</div>				
External dimension /Weight		400/440 × 300 × 23H mm, Approx. 1.4 kg		
Capacity of Flask	Erlenmeyer flask 50 mL	35/ -	Erlenmeyer flask 2 L	2/ -
	Erlenmeyer flask 100 mL	18/ -	Erlenmeyer flask 3 L (*1)	2/ -
	Erlenmeyer flask 200 mL	12/ -	Erlenmeyer flask 5L (*1) (*2)	1/ -
	Erlenmeyer flask 250 mL	9/12	Sakaguchi flask 500 mL	6/ -
	Erlenmeyer flask 300 mL	9/12	Sakaguchi flask 1 L	4/ -
	Erlenmeyer flask 500 mL	6/ 8	Sakaguchi flask 2 L	2/ -
	Erlenmeyer flask 1 L	4/ 6		

(*1) It cannot be used with BR-40LF. (*2) The height is up to 350 mm.


Shading plate

Model	SB-5338	
	Description	Shade plate for BR-41/42/43/53 series doors. Shades external light to the inside of the chamber. Easy to attach and detach with a magnet. The surface can be used as a white board, and notes can be written or erased, or magnets can be attached. (BR should be used at temperatures below 70°C when installed.)
	External dimension/Weight	530 × 380 × 10H mm, 1.53 kg

Junction pipe

Model	JCP-3657	
	Description	The pipe (w/o Lid) for connection to the outside. It is for installing such as the sensor of recorder inside the chamber. Electrical equipment should not be placed inside the chamber. Be sure to use below 50°C.

Sticky sheet shaking platform

Model	SR-4030
	<p>Flat bottoms such as Erlenmeyer flasks and Petri dishes can be held simply by placing them on the platform.</p> <p>The decreasing an adhesive force by dirt can be recovered by washing with water and drying it.</p>
Max. shaking speed	100 r/min
External dimension/Weight	400 × 300 × 30H mm, Apporx. 1.7 kg
Standard accessories	Sticky sheet ST-4030 ×1 pc


Sticky sheet

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

Model	ST-4030
External dimension	400 × 300 mm

•Up to 2 L of Erlenmeyer flask can be used with the BR-40LF.


Sticky sheet shaking platform (Double)

Model	SR-4030W
	Double Sticky sheet shaking platform. The height can be adjusted to 4 levels. Two Sticky sheets ST-4030 are included.
Max. shaking speed	100 r/min
External dimension	400 × 300 × 220H mm
Standard accessories	Sticky sheet ST-4030 × 2

•The center of gravity of the shaking platform (shaker) is higher due to the double design. When the set speed is reached, be sure to check that there is nothing wrong with the sample vessel or the main unit of the shaker, and then leave the area.

•When using a medium-sized BR, placing the sample vessel near the air outlet on the back of the chamber may cause direct exposure to the stirring air. This may cause the temperature of the sample solution to be higher than the set temperature in the chamber, and the accuracy of the temperature in the chamber may be more erratic than usual. Please be careful.

Strong Sticky sheet shaking platform

Model	SR-4030S
	<p>Stronger adhesion than the Sticky sheet ST-4030. 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. (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.) The adhesive strength of the sheet, which is weakened by dirt, can be restored by washing with water and drying.</p> <p>(*) Depending on the vessel used, the amount of sample, and the condition of the shaker, there is a possibility that the vessel may topple over even within the following values. Please consider the following speeds as a guide. This product is a simple vessel holder. If you want to prevent the vessels from tipping over, please consider using a Clamp or Universal shaking platform corresponding to the size of the vessel.</p>
Max. shaking speed	200 r/min (*)
External dimension/Weight	400 × 300 × 30H mm, Approx. 1.8 kg
Temperature range	4°C to 40°C

Stronger adhesion than the Sticky sheet ST-4030. 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. (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.) The adhesive strength of the sheet, which is weakened by dirt, can be restored by washing with water and drying.

(*) Depending on the vessel used, the amount of sample, and the condition of the shaker, there is a possibility that the vessel may topple over even within the following values. Please consider the following speeds as a guide. This product is a simple vessel holder. If you want to prevent the vessels from tipping over, please consider using a Clamp or Universal shaking platform corresponding to the size of the vessel.

Optional parts: Strong Sticky sheet

Model	ST-4030S
External dimension/Weight	390 × 300 mm, Approx. 0.4 kg