

Bioshaker BR-180LF/BR-180LF-70RT

Split doors enable to take large vessels in and out easily. Can be modified to Forced ventilation system of carbon dioxide. Shaking width 70mm has an effective on the cultivation of Actinomycete (BR-180LF-70RT).

Dimensions --> P.038 OD-Monitor Turbidimeter while shaking --> P.034 Forced ventilation system of carbon dioxide --> P.046



BR-180LF



BR-180LF-70RT

Features

- Max. speed 400r/min.
- Split doors enable easy to take large vessels.
- Capacity : Erlenmeyer flask 500mL x 24 pcs, 5L x 4 pcs



Easy to take large vessels in and out.

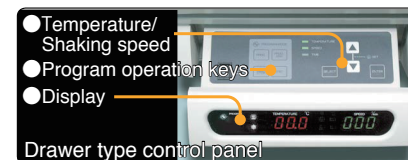
"Clamshell split door" enable to take large vessels in and out easily. Equipped casters enable easy to move (BR-180LF). The Max. speed 400r/min. 70RT (orbital shaking/shaking width 70mm) can be shaken up to 250r/min that is optimum for especially Cultivation of microbe with Erlenmeyer flask.

Applications

- Cultivation of E.Coli and yeast
- Cultivation of Actinomycete (70RT)

Sliding retractable control panel

Setting for Temperature, Shaking speed and Operation program with simply.



Model	BR-180LF	BR-180LF-70RT
Shaking motion	Switchable Reciprocal/Orbital shaking	Orbital shaking
Temperature range	4°C to 70°C	4°C to 70°C
Temp. control accuracy (*1)	±0.3°C to ±1.0°C	
Speed range (*2)	25 to 250 r/min, 25 to 400r/min at 25mm/orbital	25 to 250r/min
Shaking width	Switchable 25/50mm (Default: 25mm)	70mm
Platform size/Capacity	700 x 500mm (Max. inside height: 420mm), Erlenmeyer flask 500mLx24, 5Lx4	680 x 480mm (Max. inside height: 420mm), Erlenmeyer flask 500mLx24, 5Lx4
Door type	Clamshell split door (Divided into Upper and Lower, Upward opening and Front opening)	
Maximum load	approx. 10kg (Platform not included)	
Ambient temp. range (*1)	5°C to 30°C	
Heating/Cooling method	Heater 700W/Compressor 125W	
Program functions	1 program, 9 segments (4 combinations can be saved): Temp., Shaking speed and Time/per segment (Setting range: 00h00min to 99h59min), Temp. gradient 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	
Dimensions (W x D x H)/Weight	1110 x 716 x 990mm, Approx. 180kg	1110 x 716 x 930mm, Approx. 190kg
Power supply	AC220 to 240V/12A	AC220 to 240V/12A
Standard accessories	1 x Universal shaking platform MT-7050 (LF)/MT-6848 (LF-70RT) (*4), 1 x Drip tray (LF)/Drain-reception plastic bottle with hose (LF-70RT), 4 x Vibration absorbing pad, 4 x Spacer (LF-70RT)	

(*1)The temp. of defrost function just run is not included.



(*2)There is the limitation depending the volume of vessels and the shaking diameter. See the figure "Note" on the right page.

(*3)The transfer time of temperature can be set up. (*4)Clamps not included.


•Temp. range and Temp. stability may not be meet the specs when frost by continuous operation. Required to defrost it regularly.

Optional accessories and Capacity/Qty of Vessels

Shaking platform and Capacity/Qty of Flasks

Model	MT-7050 (Refer MT-6848 below for 70RT.)			
	It is used together Clamps, Angle racks and "OD-Monitor" series (Clamps of Erlenmeyer flask and Sakaguchi flask available). It can hold flasks tightly than Spring shaking platform.			
External dimension / Weight	700x500x22Hmm, Apporx.6kg			
Capacity of Flask	Erlenmeyer flask 50mL	96	Erlenmeyer flask 2L	8
	Erlenmeyer flask 100mL	48	Erlenmeyer flask 3L	6
	Erlenmeyer flask 200mL	35	Erlenmeyer flask 5L / Disposable 3&5L	4/5
	Erlenmeyer flask 250mL	28	Sakaguchi flask 500mL	18
	Erlenmeyer flask 300mL	28	Sakaguchi flask 1L	12
	Erlenmeyer flask 500mL	24	Sakaguchi flask 2L	6
	Erlenmeyer flask 1L	13	Sakaguchi flask 3L	5
	Model	MT-6848 (for 70RT, Pre-assembled)		
	Designed for BR-180LF-70RT. Fixed with Optional clamps. Not equipped with Drawer mechanism due to designed for High load.			
External dimension / Weight	680x480x22Hmm, Apporx.5.2kg			
Capacity	same as MT-7050 (see above)			

Spring net shaking platform and Capacity/Qty of Vessels (Mounted on MT-7050 for use)

Model	MR-4030L (Not used with 70RT)		
	The usable Shaking platform that Vessels can be easily mounted on regardless its shapes. Fixed with the screws to Platform MT-7050 for using. Up to Two sets can be mounted. (See Left figure.)		
Spring net Pitch	20mm		
Spring net stage	2 stage (Height is changeable.)		
External dimension / Weight	400x300x108Hmm, Apporx.2kg		
Capacity of Vessels (※)	Erlenmeyer flask	φ16 mm test tubes (*1)	96pcs (When Two sets mounted: 2 x 96 = 192pcs).
		Disposable Centrifuge tube for 50 mL (*1)	48pcs (When Two sets mounted: 2 x 48 = 96pcs).
	Sakaguchi flask	50mL	24pcs (When Two sets mounted: 2 x 24 = 48pcs).
		100mL	20pcs (When Two sets mounted: 2 x 20 = 40pcs).
		200mL	12pcs (When Two sets mounted: 2 x 12 = 24pcs).
		250mL	9pcs (When Two sets mounted: 2 x 9 = 18pcs).
		300mL	9pcs (When Two sets mounted: 2 x 9 = 18pcs).
		500mL	6pcs (When Two sets mounted: 2 x 6 = 12pcs).
		1L	3pcs (When Two sets mounted: 2 x 3 = 6pcs).
	2L	2pcs (When Two sets mounted: 2 x 2 = 4pcs).	
3L	1pcs (When Two sets mounted: 2 x 1 = 2pcs).		
Sakaguchi flask 500mL	6pcs (When Two sets mounted: 2 x 6 = 12pcs).		

(*1)The qty when Angle rack tilted 45°. φ16mm or less test tube should fixed with the stand per net.
 (*2)The Capacity/Qty of vessels are less than those of Universal platform.

Machine height of BR-180LF and BR-180LF-70RT




BR-180LF-70RT equipped with Vibration absorbing pad but not casters and adjusters unlike BR-180RT. Due to it the height is slightly lower than BR-180LF.

[Note] limitation of Shaking speed by Shaking width and Vessel sizes. (70RT)


Shaking width / Shaking motion	70mm, Orbital
~500mL	250r/min
1L	250r/min
2L	200r/min
3L	160r/min
5L	150r/min

Clamps (Mounted on MT-7050/6848 and AF-2070/2570 for use.)

Vessels / Capacity	Model	
	50mL	CF-0050
100mL	CF-0100	
200mL	CF-0200	
250mL	CF-0250	
300mL	CF-0300	
500mL	CF-0500	
1L	CF-1000	
2L	CF-2000	
3L	CF-3000	
5L	CF-5000	
3&5L (*)	CF-3000DSP	
Sakaguchi flask	500mL	SF-0500
	1L	SF-1000
	2L	SF-2000
3L	SF-3000	



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




 MT-7050 with multiple clamps mounted.

(*)For Disposable Erlenmeyer flasks (Coming 3L and Thomson 5L).

Angle rack for Test tubes (Mounted on MT-7050 for use)

Model	AT-1250	AT-1620	AT-1650	AT-1820
Capacity	φ12mm x50	φ16.5mm x20	φ16.5mm x50	φ18mm x20
Mounting qty on MT-7050	4 (*)	6 (*)	4 (*)	6 (*)
External dimension (mm)	250x100x95H	285x70x80H	286x110x100H	320x70x80H
Weight	Apporx.0.8kg	Apporx.0.6kg	Apporx.0.9kg	Apporx.0.7kg




 AT-1250

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

•It cannot be used with BR-180LF-70RT.

Angle rack for Disposable Centrifuge tubes (Mounted on MT-7050 for use)


Model	AT-3518
Capacity	50mLx18
Mounting qty on MT-7050	4 (When Angle rack tilted 45°)
External dimension / Weight	285x110x102Hmm, Apporx.0.8kg
Remarks	Be sure to be used below 50°C.



•It cannot be used with BR-180LF-70RT.

Angle rack for Erlenmeyer flask (Mounted on MT-7050 / Need Clamps)

Model	AF-2070	AF-2570
Capacity	50mL:4, 100mL:3, 200 to 300mL:2, 500mL:1	50mL:5, 100mL:4, 200mL:3, 250 to 500mL:2
Mounting qty on MT-7050	4 (*1)	4 (*1)
External dimension	250x110x50Hmm	300x110x50Hmm
Weight	Apporx.0.8kg	Apporx.0.9kg



 AF-2070

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

•Clamps are available as an option.
 •It cannot be used with BR-180LF-70RT.

[Note] limitation of Shaking speed by Shaking width and Vessel sizes. (BR-180LF)

Shaking motion	25mm			50mm			
	Recip- rocal	Orbital		Reciprocal		Orbital	
r/min	250	250	400	200	250	200	250
~500mL	○	○	○	○	○	○	○
1L	○	○	x	○	○	○	○
2L	○	○	x	○	x	○	○
3L	○	○	x	○	x	○	x
5L	○	○	x	○	x	170r/min	x