

## Bioshaker BR-53FP

**Peltier cooling with CFC-free. Temperature range ensures 15°C to 55°C. Cut power consumption by 80% with the conventional one.**



### USER'S VOICE

CFC-free relieves us from the gas leakage and the procedures for disposal. We should apply for "Subsidy scheme for energy efficiency".



### Features

- Peltier cooling with CFC-free. Battery friendly.
- Capacity : Erlenmeyer flask 500mL x 8 pcs, 5L x 1 pc
- Stackable to two levels. Wide variation platforms available as an option.

### Applications

- Cultivation of microbes such as Yeast, Insect cell, E.Coli. etc.
- Cultivation of Protein expression vector for E.coli.
- Food testing system and inspection for QC.

### Peltier cooling with CFC-free.

Cut power consumption by 80% compared with the conventional one (100r/min at 37°C). Energy saving with 7A. CFC-free relieves you from the gas leakage and the procedures for disposal.

Model	Size	Power supply	Power consumption
BR-23FP	Small	5A	80Wh (at +37°C, 100r/min)
<b>BR-53FP</b>	<b>Medium</b>	<b>7A</b>	<b>90Wh (at +37°C, 100r/min)</b>
BR-43FL	Medium	12A	510Wh (at +37°C, 100r/min)

### Open rightward and leftward "Double hinged door"

Open rightward and leftward "Double hinged door" without caring about a place of installation.

### Detachable shaking platform. Wide variation available.

Comes with Spring net shaking platform. Others such as Universal shaking platforms available as an option.

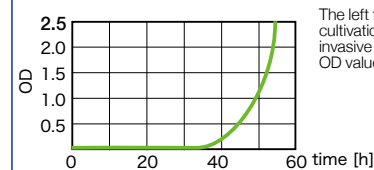
### Stackable to two levels

Different temperature can be set respectively upper unit and lower unit for instance, which contribute a space saving.

### The front panel in black has improved the high-visibility on the display.

The temp. range 5°C to 55°C works well for general cultivation. The program function enables to correspond to the various protocols such as the temp. range can be changed to another one after shaking. Temp. control is stable thanks to Peltier cooling.

### Enables the culture at normal temp.



The left figure shows a test result for cultivation of E coli measured by Non-invasive turbidity meter. Cell growth reached OD value 2.5 (Upper limit) in 55 hours.

Model	BR-53FP
Temperature range (*1)	15°C to 55°C
Shaking motion	Switchable Reciprocal/Orbital shaking
Temp. control accuracy	±0.3°C
Speed range/Shaking width	20 to 300r/min (200r/min at the upper of stacked units ) / 25mm
Capacity	Universal shaking platform MT-4430: Erlenmeyer flask 500mLx8 pcs Universal shaking platform MT-4030: Erlenmeyer flask 500mLx6 or 5L x 1
Door type	Double hinged door (Rightward/Leftward open)
Maximum load	Approx. 7 kg (Platform included)
Ambient temp. range (*2)	5°C to 30°C
Heating method	Peltier element
Program functions	1 program, 9 segments: Temp., Shaking speed and time/per segment (Setting range: 00h00min to 99h59min), Temp. gradient function (*3)
Safety devices/functions	Leakage/Overcurrent breaker, Fuse, Alarm of abnormal sample temp. (Set as desired), Detecting the door opening and closing, Self-diagnosis function for sensor error, Motor current limiter
Dimensions (W x D x H)/Weight	600 x 686 x 643mm, Approx. 86 kg (Platform included)
Power supply	AC100V to 240V/7A
Standard accessories	1 x Power cable, 1 x Spring net shaking platform (MR-4030)

(\*1) The value at 25°C of the rear surface intake temp. (\*2) Dew condensation (\*3)The transfer time of temperature can be set up.

### External output compatible with Pharmaceutical validation (Customization).

Customized external output for Pharmaceutical validation available.

- Temperature output
- Speed output
- Collectively signal output when safety device activated.

### Optional parts: Inner rack

#### RSB-5032

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




### Optional parts: Stackable base

#### STB-6070

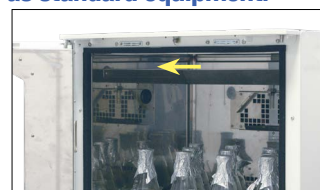
The fixing tool for Two levels.

### Shaking platform and Capacity/Qty of Flasks

Model	MT-4430	
	The universal platform for 250mL to 1L. The capacity (Num. of flasks) is larger than that of shaking platform MT-4030. It can hold flasks tightly than shaking platform MR-4030	
External dimension / Weight	440x300x23Hmm, Apporx.1.4kg	
Capacity of Flask	Erlenmeyer flask 250mL	12
	Erlenmeyer flask 300mL	12
	Erlenmeyer flask 500mL	8
	Erlenmeyer flask 1L	6

### Connection holes included as standard equipment.

Equipped with Connection holes for installing such as the sensor of recorder inside the chamber. It is used with Junction pipe (Option).



### Optional parts: Junction pipe

#### JCP-3657

The pipe (w/o Lid) for connection to the outside. Be sure be used below 50°C. (\*)



(\*)Electrical equipment should not be placed inside the chamber.

### Optional parts: Clamps

Mounted on Platforms MT-4030/4430 and Angle racks AF-2070/2570 for use.

Vessels / Capacity	Model	
	50mL	<b>CF-0050</b>
100mL	<b>CF-0100</b>	
200mL	<b>CF-0200</b>	
250mL	<b>CF-0250</b>	
300mL	<b>CF-0300</b>	
500mL	<b>CF-0500</b>	
1L	<b>CF-1000</b>	
2L	<b>CF-2000</b>	
3L	<b>CF-3000</b>	
5L	<b>CF-5000</b>	
Sakaguchi flask	500mL	<b>SF-0500</b>
	1L	<b>SF-1000</b>
	2L	<b>SF-2000</b>
Medium bottle	250mL	<b>MF-0250</b>

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

MT-4030 with Multiple clamps mounted.

Other optional accessories are compatible with BR-4X series. -->P.023

## Example of customization for BP-53FR Customized model "Equipped with HEPA (High efficiency particulate air) filter for CPC (Cell Processing Center)".



Stackable up to Two levels

### Supply record of EU-GMP (European Union Good Manufacturing Practice) Grade B cleanrooms.

HEPA filter removes the particle in exhaust wind. Supplied to EU-GMP (European Union Good Manufacturing Practice) Grade B clean rooms that requires Strict cleanliness.

Model	BR-53FP-CM
Temp. control accuracy (*1)	18°C to 50°C
Shaking motion	Switchable Reciprocal/Orbital shaking
Temp. control accuracy	±0.5°C
Speed range/Shaking width	20 to 300r/min, 25mm
HEPA Filter	Accumulation rate: Above 99.99% for above 0.3µm particle
Door type	Double hinged door (Rightward/Leftward open)
Maximum load	Approx. 7 kg (Platform included)
Ambient temp. range (*2)	18°C to 25°C
Dimensions (W x D x H)/Weight	625 x 890 x 650mm, Approx. 108 kg
Power supply	AC100V or 220 to 240V/7A

(\*1) The value at 25°C of the rear surface intake temp. (\*2) Dew condensation.

● Protuberances not included in Dimensions. ● Vessels of photo not included.