

Bioshaker GBR-200/GBR-300

Enables to use widely for Cultivation of microbes such as Yeast, E.Coli. etc. that require temp. control. 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.038 OD-Monitor Turbidimeter while shaking --> P.034 LED Light irradiation unit --> P.037



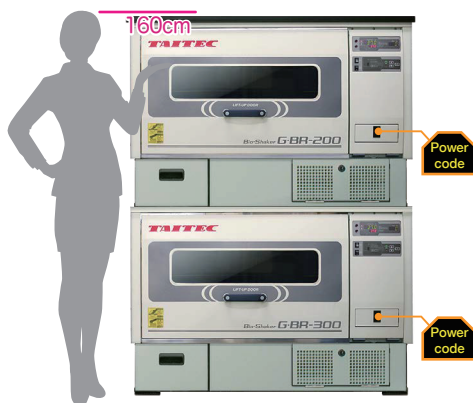
Stackable up to Two levels

Features

- Max. speed 200r/min (GBR-200) and 300r/min (GBR-300)
- Capacity : Erlenmeyer flask 500mL x 24 pcs, 5L x 4 pcs
- For as a laboratory bench. Stackable up to Two stage.

Applications

- Cultivation of microbes such as E.Coli. etc.
- Cultivation of Yeast, Psychrophile and Insect cell
- Cultivation of Thermophile and Hybridization (FH).



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 300r/min (200r/min at the upper of stacked units) that is optimum for shaking culture.



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.



Contributes save energy.

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

| 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 200r/min | 25 to 300r/min (200r/min at the upper of stacked units) |
| Shaking width | Switchable 25/50mm (Default: 25mm) | |
| Platform size/Capacity | 700 x 500mm (Max. inside height: 385mm), Erlenmeyer flask 500mLx24, 5Lx4 | |
| Door type | Swing lift-up door | |
| Maximum load | approx. 10kg (Platform not included) | |
| Ambient temp. range (*1) | 5°C to 30°C | |
| Heating/Cooling method | Heater 700W/Compressor 125W | |
| Other functions | 1 pattern, 9 segments (4 combinations can be saved): Temp., Shaking speed and Time/per segment (Setting range: 00h00min to 99h59min), 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 x D x H)/Weight | 1200 x 800 x 810mm (Including Top board: 1200 x 750 x 25mm), Approx.235kg | |
| Power supply | AC100V/12A | |
| Standard accessories | 1 x Universal shaking platform MT-7050 (*4), 2 x 2 types Spacer, 2 x Fixing bracket for stackable (*4) | |

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

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

(*3)Shaking will start when reaching the preset temp. (*4)It comes with by the request at order.


(*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.


Constant temperature incubator shaker OD-Monitor
CO₂ incubator shaker
Shaker
Mixer Rotator Stirrer
Bead beater homogenizer Ultrasonic homogenizer
Aluminum block bath Minimize bath
Water bath Shaking water bath Immersion cooler
Hybridization oven Constant temperature chamber
Centrifugal concentrator Cold trap
Freeze dryer
Electrophoresis and Blotting apparatus
Constant temperature water circulating system [Chiller]

Optional accessories and Capacity/Qty of Vessels

Shaking platform and Capacity/Qty of Flasks


| Model | MT-7050 | | | |
|---|--|----|--------------------------------------|-----|
|  | It is used together Clamps, Angle racks and "OD-Monitor" series (Clamps of Erlenmeyer flask and Sakaguchi flask are 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 / Disposable3&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 |

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

| Model | MR-4030L | | |
|---|---|---|---|
|  | 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 dimensions / Weight | 400x300x108Hmm, Apporx.2kg | | |
| Capacity of Vessels (*) | Erlenmeyer flask | φ16 mm test tubes (*) | 96pcs (When Two sets mounted: 2 x 96 = 192pcs). |
| | | Disposable Centrifuge tube for 50 mL (*) | 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.

Junction pipe

| Model | JCP-3687 | |
|---|-----------------------------|---|
|  | 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. |
| Remarks | Be sure be used below 50°C. | |

Clamps (Mounted on MT-7050 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 (Corning 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 |

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

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

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

Angle rack for Erlenmeyer flasks (Mounted on MT-7050 for use)

| 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 (*) | 4 (*) |
| External dimension | 250x110x50Hmm | 300x110x50Hmm |
| Weight | Apporx.0.8kg | Apporx.0.9kg |

(*)The qty when Angle rack tilted 30°.*Clamps are available as an option.

[Note] limitation of Shaking speed by Shaking width and Vessel sizes.

| Shaking width | 25mm | | | | 50mm | | | |
|---------------|------------|-----|---------|-----|------------|-----|----------|-----|
| | Reciprocal | | Orbital | | Reciprocal | | Orbital | |
| r/min | 200 | 300 | 200 | 300 | 200 | 300 | 200 | 300 |
| ~500mL | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 1L | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 2L | ○ | ○ | ○ | ○ | ○ | x | ○ | ○ |
| 3L | ○ | ○ | ○ | ○ | ○ | x | ○ | x |
| 5L | ○ | ○ | ○ | ○ | 170r/min | x | 170r/min | x |