


## 9

## Hybridization Incubator Constant temperature Chambers

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NEW

**Swing incubator SW-060**



**NEXT**

The multi-purpose constant-temperature incubator is free from CFC and has high accuracy and saves energy. Various types of incubation are possible, as well as room-temperature thawing of samples and reagents.

Page	Model	Features	Applications
P.150	SW-060	<ul style="list-style-type: none"> <li>•CFC Free by Electronic heating and cooling with Peltier element</li> <li>•Excellent Storage temp. stability, Energy saving, and Low vibration</li> <li>•Four stirring methods for vessels with the easily replaceable platform</li> </ul>	<ul style="list-style-type: none"> <li>•Various Hybridizations</li> <li>•Thawing at room temp. of samples and reagents</li> <li>•Stain and destain of gel, enzyme reaction</li> </ul>

**Hybridization Incubator HB-80N**




**Hybridization Oven**

Compatible with four kinds of stirring methods for various vessels by changing between five kinds of Kits.

Page	Model	Features	Applications
P.151	HB-80N	<ul style="list-style-type: none"> <li>•Four stirring methods for vessels with easily replaceable platform</li> <li>•The height of 135 cm when stacked in Three levels</li> </ul>	<ul style="list-style-type: none"> <li>•Various Hybridizations</li> <li>•Decoloration of Gel and Membrane</li> <li>•Cultivation of Enzyme reaction and Thermophilic bacteria at High temp.</li> </ul>
	HB-100N		

**Hybridization Incubator HB-100N**



High quality and Energy saving Refrigerator or Incubator. Flagship Small/Middle-size Constant temp. chambers.

**In vitro Box iB-130**



**Small size**

Page	Model	Features	Applications
P.154	iB-130	<ul style="list-style-type: none"> <li>•The interior and exterior are made mostly of stainless steel, High quality Constant temp. Chamber</li> <li>•Possible for operation of small devices inside the chamber</li> </ul>	<ul style="list-style-type: none"> <li>•Storage of Samples and Reagents</li> <li>•Cultivation and Immunoprecipitation by placing on a Shaker or Rotator</li> </ul>
	iB-230	<ul style="list-style-type: none"> <li>•The interior and exterior are made mostly of stainless steel, High quality Constant temp. Chamber</li> <li>•Possible for operation of small devices inside the chamber</li> <li>•Three position temp. control method is adopted</li> </ul>	<ul style="list-style-type: none"> <li>•Storage of Samples and Reagents</li> <li>•Cultivation and Immunoprecipitation by placing on a Shaker or Rotator</li> <li>•Protein Purification by placing on a Chromatographic Column and Pump</li> </ul>

**In vitro Box iB-230**




**Middle size**

The double glass door with both heat insulation and visibility that makes it easy to use. The chromatographic column rack is available as an option.

Page	Model	Features	Applications
P.155	M-210FD	<ul style="list-style-type: none"> <li>•The interior and exterior are made mostly of stainless steel</li> <li>•Possible for operation of small devices inside the chamber</li> </ul>	<ul style="list-style-type: none"> <li>•Storage of Samples and Reagents</li> <li>•Cultivation and Immunoprecipitation by placing on a Shaker or Rotator</li> </ul>

**Incubation Box M-210FD**




**Middle size**

The double glass door with both heat insulation and visibility. Stores Samples and Reagents on shelves and holds the Chromatographic column that utilizes a large capacity.

Page	Model	Features	Applications
P.156	M-600FD	<ul style="list-style-type: none"> <li>•The interior and exterior are made mostly of stainless steel</li> <li>•Comes with a shelf net and a Chromatographic column rack (holders)</li> <li>•Possible for operation of small devices inside the chamber</li> </ul>	<ul style="list-style-type: none"> <li>•Temperature control of Chromatographic column</li> <li>•Storage of Samples and Reagents</li> <li>•Cultivation and Immunoprecipitation by placing on a Shaker or Rotator</li> </ul>

**Incubation Box M-600FD**



**Large size**

The LED irradiation unit can be mounted. (M-210FD/600FD)

By combination of optional LED irradiation unit (LC-450EXP) and LED mounting bracket (LC-1250SB), it can be used for culturing algae and plant cells that require photosynthesis.



Mounting example of the LED irradiation unit

Temperature range	Temp. control accuracy	Shaking motion	Shaking speed	Page
•+15°C to +60°C (10°C below RT to +35°C above RT)	•±0.1°C to 0.2°C	•Seesaw •Reciprocal •Rotation (Bottle rotated and Inversion stirring of Microtubes)	•5 to 60 r/min	<b>P.150</b>

Temperature range	Temp. control accuracy	Shaking motion	Shaking speed	Page
•8°C above RT to +80°C	•±0.1°C to 0.2°C	•Seesaw •Reciprocal •Rotation (Bottle rotated and Inversion stirring of Microtubes)	•5 to 60 r/min	<b>P.151</b>
•8°C above RT to +100°C				

Temperature range	Temp. control accuracy	Irradiation-type	Chamber volume	Page
•+3°C to +45°C	•±1.0°C to 2.0°C	-	•Approx. 90 L	<b>P.154</b>
			•Approx. 230 L	

Temperature range	Temp. control accuracy	Irradiation-type	Chamber volume	Page
•0°C to +45°C	•Up to ±2.0°C	•The LED irradiation unit can be mounted.	•Approx. 392 L	<b>P.155</b>

Temperature range	Temp. control accuracy	Irradiation-type	Chamber volume	Page
•0°C to +45°C	•Up to ±2.0°C	•The LED irradiation unit can be mounted.	•Approx. 642 L	<b>P.156</b>



Optional LED irradiation unit LC-450EXP and controller LC-LED-CON1 --> **P.045**

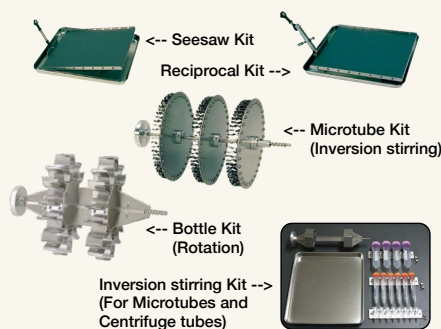
### Stackable up to Three levels

Stackable up to Three levels in the HB series that enables powerful support for saving Lab space. Multiple persons can use simultaneously by exchanging Kits. Mass processing by using Bottle kits in a limited space can be realized. SW-060, HB-80N and HB-100N are stacked as shown. The height is 135 cm when the Three levels are stacked.



### Use among four kinds of stirring methods for various vessels by changing between five kinds of Kits

Changing Shaking Kits can allow you to perform "Seesaw shaking/Reciprocal shaking/Orbital shaking". "Rotation" is applied for the Bottle Kit and the inversion stirring of Microtubes. The replacement of Kits is very easy with no tools required.



### Possible for operation of small devices inside the chamber

When combined with a small shaker or Rotator, the scope of experiment will widen. Also, it is equipped with an outlet inside the chamber for operation of devices and the power cord can be drawn from outside through a Connecting hole (Each device is verified for operating inside the chamber by TAITEC).



Connecting hole

### Various mechanisms that can increase usability and an option

Equipped with functions/mechanisms such as door locking and air volume control for stirring air inside the chamber.



Door lock (iB-130/230)



Air flow Control (iB-130)



Drip tray (Built-in among some models)



Optional: Automatic condensation water evaporation unit M-EU55 (for M-210FD/600FD)

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix



NEW

# Swing incubator SW-060

The swing incubator is free from CFC, has high accuracy and saves energy. It is a multi-purpose constant-temperature incubator with the temperature range from +15°C to +60°C.

•Optional accessories and options --> P.151 to 152 •Electrophoresis and Blotting device --> P.186 to 189



TAITEC's New Brand  
[NEXT]



Example of using the seesaw kit  
(sold separately)

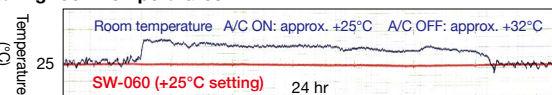
Please prepare an electrical adapter compatible with your country for use.

## CFC-free high-accuracy constant-temperature Peltier incubator

This machine is a multi-purpose constant-temperature incubator with a shaking mechanism built in a constant-temperature chamber that incorporates a high-accuracy temperature distribution mechanism. It is capable of heating and cooling from +15°C to +60°C using a Peltier element. It can be used in various types of incubation and culture, defrosting of samples, etc.

\* HB-80N (up to +80°C) and 100N (up to +100°C), shown on the right-hand page, are available for higher-temperature applications.

### ■ Stability of internal temperature of SW-060 (+25°C setting) under fluctuating room temperatures



## Simple operation panel, easy operation



Simple and easy-to-understand operation panel. Just press the Up/Down buttons to set the temperature and shaking speed, and the machine is ready for use. The shaking platform can be easily set/changed (see the right page).

Model	SW-060
Temperature range (°)	+15°C to +60°C (RT-10°C to RT+35°C)
Temp. control accuracy (°)	±0.1°C to 0.2°C
Shaking motion	Seesaw, Reciprocal, and Rotation (Bottle rotation and Inversion stirring of Microtubes) by changing to the Optional Shaking Kit
Shaking speed	5 to 60 r/min
Platform effective dim.	260 × 230 mm
Temp./Speed display	Digital
Heating/Cooling method	Peltier element: 300 W
Circulating method inside the chamber	Flow-type
Safe devices/protections	Fuse, High temperature, Overvoltage protection, Temperature abnormality diagnosis, Braking when hood is open, Motor overload/overload protection, Temp. controller self-diagnosis function, Sensor error display
Dimensions (W×D×H)	425 × 465 × 445 mm
Weight	Approx. 32 kg
Power supply	AC 100 to 240 V
Standard accessories	Power cable×1 pc, fuse×1 pc, Stackable bracket×1 pc

(°) Values for when the ambient temperature is around +25°C.

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**TAITEC** [General Catalog]

## Features

- CFC Free by Electronic heating and cooling with Peltier element
- Excellent Storage temp. stability, Energy saving, and Low vibration
- Four stirring methods for vessels with the easily replaceable platform

## Applications

- Various Hybridizations
- Thawing at room temp. of samples and reagents
- Stain and destain of gel, enzyme reaction



### TAITEC VOICE

Low vibration because no refrigerator is used.  
It can be used for constant temperature thawing of delicate solvents.

## Stackable up to Three levels (Common in SW/HB series)

Up to three units of the SW/HB series can be stacked during use to strongly support space savings in laboratories. This makes it possible for more than one person to use the devices simultaneously by replacing the kit or to process a large number of samples in a limited space by using a bottle kit.

Stacking example: Even when three units are stacked, their height is around 135 cm.



Refer to P.151 to 152 for the optional accessories and options

Constant-temperature incubator/shaker  
OD Monitor

For cell culture related products

Shaker

Mixer  
Rotator  
Stirrer

Bead beater  
homogenizer  
Ultrasonic  
homogenizer

Aluminum  
block Bath  
Mini-size Bath

Water bath  
Shaking Water bath  
Immersion cooler

Hybridization  
Incubator  
Constant-temperature  
Chambers

Centrifugal  
Concentrators  
Cold Trap

Freeze dryers

Substrate  
Electrophoresis apparatus  
Blotting device for  
hybridization

Constant-temperature  
water circulating  
system [Chiller]

Appendix

# Hybridization Incubator HB-80N/HB-100N

Enables the use of four kinds of stirring methods for various vessels by the easily replaceable shaking platform. The two models with different temp. are for heating only. Stackable and saves space.

- Bioshaker for High temp. Small size --> P.027, Middle size --> P.029 •Shaking water bath for High temp. --> P.136
- Electrophoresis and Blotting device --> P.186 to 189 •Optional accessories --> P.152

## Features

- Four stirring methods for vessels with the easily replaceable platform
- Stackable up to Three levels, The height is 135 cm when stacked in Three levels
- HB-80N up to 80°C and HB-100N up to 100°C

## Applications

- Various Hybridizations
- Decoloration of Gel and Membrane
- Cultivation of Enzyme reaction and Thermophilic bacteria at High temp.

## 2-action Kit exchanging (Common in SW/HB series)



Reciprocal/Seesaw Kit

Fix the platform at the bottom and insert the drive shaft into the two holes on left side.

See 1264 on page 152

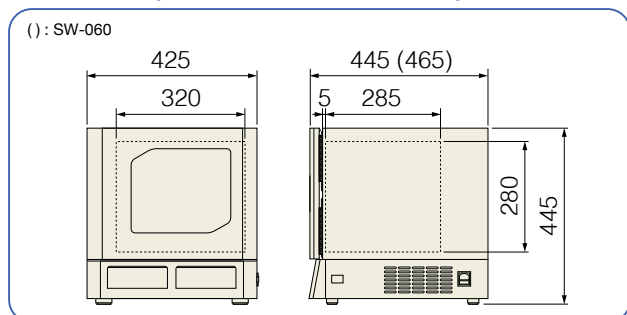


Bottle/Microtube Kit

Insert the shaft into the hole on right side and adjust the disk of shaft to the disk on left side.

See 567 on page 152

## Dimensions (Common in SW/HB series)



Optional Seesaw Kit inside HB-80N



Optional Bottle Kit inside HB-100N

## Renewal and unification of operation panel with 80N/100N

TAITEC's long-selling hybridization oven, HB series. The operation panels of the 80N and 100N have been renewed and unified. Two models are available for heating only: HB-80N for up to +80°C, and HB-100N for up to +100°C.

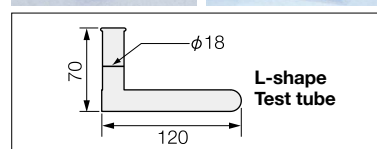
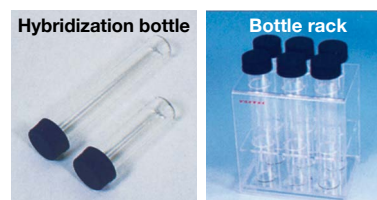
Model	HB-80N	HB-100N
Temperature range	+8°C above RT to +80°C	+8°C above RT to +100°C
Temp. control accuracy (°)	±0.1°C to 0.2°C	
Shaking motion	Seesaw, Reciprocal, and Rotation (Bottle rotation and Inversion stirring of Microtubes) by changing to the Optional Shaking Kit	
Shaking speed	5 to 60 r/min	
Platform effective dim.	260 × 230 mm	
Temp./Speed display	Digital	
Heater	300 W	
Circulating method inside the chamber	Flow-type	Semi-Air jacket and Flow-type
Safe devices/protections	Fuse, Heater overheat double safety device, Motor overload stop, Temp. controller error self-diagnosis, Sensor error display, Abnormal vibration diagnosis function	
Dimensions (W×D×H)	425 × 445 × 445 mm	
Weight	Approx. 30 kg	
Power supply	AC100V/3.5A (Need a step-down transformer)	
Standard accessories	Power cable×1 pc, Stackable bracket×1 pc	

(°)The value under ambient temperature around 25°C.

## Optional accessories of SW/HB series: L-shape Test tube, Hybridization bottle, etc. (See page 152 for other optional accessories and options.)

Product name/Model	Remarks	Qty
<b>Hybridization bottle (small) BT-3515</b>	Inner diameter φ33 × 150 mm (Cap is not included)	1 pc
<b>Hybridization bottle (large) BT-3525</b>	Inner diameter φ33 × 250 mm (Cap is not included)	1 pc
<b>Nylon mesh sheet 230</b>	230 × 230 mm (°)	5 pcs
<b>Bottle rack BL-4106</b>	Acrylic-made Stand for 6 pcs of Bottles	1 pc
<b>Bottle rack BL-4108</b>	Acrylic-made Stand for 8 pcs of Bottles	1 pc
<b>L-shape Test tube (10 pcs included)</b>	Inner diameter φ33 × 120 × 70 mm with Rim	10 pcs

(°)Used as a spacer between membranes. Used by cutting it any size.



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[ General Catalog ] **TAITEC**

NEW

Constant-temperature Incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant-temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water-circulating system [Chilled]

Appendix

## SW/HB Series optional accessories

- Main unit of SW/HB Series --> P.150/151
- Monode Shaking with L-shape Test tube in Shaking Water bath --> P.137/141

### ● Seesaw Shaking such as Hybridization Bag and L-shape Test tube



① Seesaw Kit



② Seesaw Kit + Monod Shaking platform

Enables Seesaw Shaking. The moving distance of the liquid of Seesaw Shaking is larger than that of Reciprocal Shaking when the same size. Seesaw Shaking is better than Reciprocal Shaking when Hybridization Bag used. L-shape Test tube (sold separately) can be combined with the Monod Shaking Platform (sold separately).

### ● Rotation of Hybridization Bottles

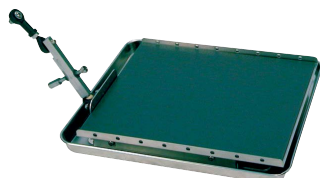


⑤ Bottle Kit

8 pcs of Optional Hybridization Bottle (small/large) can be attached.

Even Commercial vessels that can be attached if the diameter and length can fit.

### ● Reciprocal Shaking with Plastic containers and Petri dishes



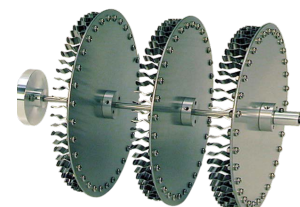
③ Reciprocal Kit



④ Reciprocal Kit + Reciprocal Multistage Shaking platform

Enables versatile Reciprocal Shaking. Can be widely used for Plastic containers and Petri dishes, etc. It can be combined with the Multistage Shaking platform (sold separately) that enables the processing of multiple samples simultaneously.

### ● Inversion stirring of Microtubes



⑥ Microtube Kit

Up to 96 pcs of Commercial 1.5/2.0 mL Microtubes can be attached. Microtubes will be fixed in the direction of the Inversion stirring.

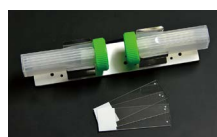
### ● Inversion stirring and Rotation of Micro Vials and Disposable Centrifuge tubes

#### ⑦ Inversion stirring Kit

(Vessels are not included.)



The Set includes a Rotary shaft and 3 types of Tube holders (for 50 mL Disposable Centrifuge tube × 4 pcs, for 15 mL Disposable Centrifuge tubes × 6 pcs, and for Micro Vials × 8 pcs that fit to diameter of 1.5/2.0 mL Microtubes; Each 3 tubes) and a Tray. As the nails of holder can be attached by changing the direction by 90°, "in situ Hybridization", it can also be done by setting the 50 mL Disposable Centrifuge tube-sized Slide glass vessels in direction of the rotation as shown in the figure below.



The nails can be attached by changing the direction. (Vessels and Slide glass are not included.)



Shaking Kit		
Product name	Model	Vessels/Capacity/Shaking angle, etc.
① Seesaw Kit	<b>S-2623</b>	Plastic container, Hybrid Bag, etc. Angle: 4-step variation 7/8/11/15°
② Seesaw Kit + Monode Shaking platform	<b>S-2623 + MD-1818</b>	Dedicated for L-shape Test tubes (See page 150), 16 pcs (2-row × 8 pcs) Angle: 4-step variation 7/8/11/15°
③ Reciprocal Kit	<b>R-2623</b>	Plastic containers, Petri dishes, etc. Shaking width: 4-step variation 18/25/30/40 mm
④ Reciprocal Kit + Reciprocal Multistage Shaking platform	<b>R-2623 + WR-2520</b>	Plastic containers, Petri dishes, etc. Shaking width: 4-step variation 18/25/30/40 mm
⑤ Bottle Kit	<b>B-4008</b>	Bottle × 8 pcs In large sized Membranes, curl it off and put it in.
⑥ Microtube Kit	<b>M-1596</b>	1.5/2.0 mL Microtube × 96 pcs (32 pcs × 3) (Tubes can easily be attached just by pinching it to the claw.)
⑦ Inversion stirring Kit (*)	<b>M-4000</b>	Rotary shaft, Tray, M-0500 (for 4 pcs of 50 mL Disposable Centrifuge tube: 3 pcs) [M-0150 (for 15 mL Disposable Centrifuge tube × 6 pcs: 3 pcs)] [M-0015 (for 1.5/2.0 mL Microtubes, etc. × 8 pcs: 3 pcs)]. Up to 6 pcs of Tube holders can be attached on the rotating shaft when there is no interference with the vessels.

(\*) Additional Tube holders are sold separately. [M-0500 (for 4 pcs of 50 mL Disposable Centrifuge tube: 3 pcs)] [M-0150 (for 15 mL Disposable Centrifuge tube × 6 pcs: 3 pcs)] [M-0015 (for 1.5/2.0 mL Microtubes, etc. × 8 pcs: 3 pcs)]. Up to 6 pcs of Tube holders can be attached on the rotating shaft when there is no interference with the vessels.

NEW

Constant temperature incubator shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Consistent temperature Chambers

Centrifugal Concentrator Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant temperature water circulating system [Chiller]

Appendix





# In vitro Box iB-130/iB-230

**High quality and Energy saving Refrigerator Incubator. Flagship Small/Middle-size Constant temp. chambers. Possible for operation of small devices inside the chamber.**

• Benchtop Compact Shakers --> P.064-065, 068-071 • Small-size Shakers "NR-1/2/3" --> P.074, Middle-size Shakers "NR-10/20/30" --> P.076  
• Small-size Rotary Incubator (Rotator) --> P.090-092



Devices in the chamber are not included.



**Connecting hole**  
There are holes on both sides of the body for sensors, liquid delivery through tubes, etc.



**Drip tray**  
Comes with a Drip tray for condensation water. Put under the unit.



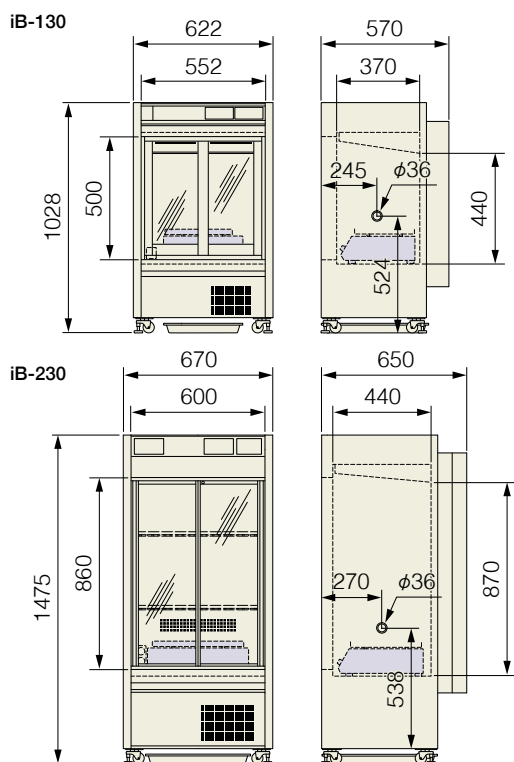
**Door lock**  
The door can be locked with the provided key.



**Air flow Control**  
Strengthen it when there is a lot of condensation and Weaken it when the sample is dry (iB-130).

## Dimensions

The gray parts in the figure show the Shaker NR-1/2/3 in iB-130 and the Shaker NR-10/20/30 in iB-230. Reference for when placing inside the chamber.



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## Features

- The interior and exterior are made mostly of stainless steel, High quality Constant temp. Chamber
- Possible for operation of small devices inside the chamber
- Three position temp. control method is adopted [iB-230]

## Applications

- Storage of Samples and Reagents
- Cultivation and Immunoprecipitation by placing on a Shaker or Rotator
- Protein Purification by placing on a Chromatographic Column and Pump [iB-230]

Model	iB-130	iB-230
Temperature range (*1)	+3°C to +45°C	
Temp. control accuracy (*2)	±1.0°C to 2.0°C	
Chamber volume	Approx. 90 L	Approx. 230 L
Heater/Compressor	500 W/80 W	700 W/130 W
Outlet inside chamber	1-Socket × 1 (3 A)	2-Sockets × 1 (3 A in total)
Connecting hole	On both sides (Each $\phi 36$ mm) the Lid is included.	
Circulating method inside the chamber	Forced circulating-type (Manually adjustable on the operation part in iB-130 (*3))	
Num. of Shelf/Allowable weight	1 level/35 kg (Equal weight)	2 levels/60 kg each (Equal weight)
Interior/Exterior material	Stainless steel (SUS304) except for some parts	
Safe devices/protections	Overload relay, Temp. sensor error diagnosis, Temp. range over alarm, Memory error alarm, and Compressor High temp. cut circuit	
Dimensions inside chamber (W×D×H)	552 × 370 × 440 mm	600 × 440 × 870 mm
Int. Dimension (W×D×H)	622 × 570 × 1028 mm	670 × 650 × 1475 mm
Weight	Approx. 60 kg	Approx. 90 kg
Power supply (*4)	AC100V/8A /Max.11A (Need a step-down transformer)	
Standard accessories	Shelf (iB230: 2 Shelves) × 1 pc, Pallet × 1 pc, Drip tray × 1 pc, Door key (iB230: 2 Door keys) × 1 pc	

(\*1)Defrosting is required once a week when continuous operation at 3°C in iB-130.

(\*2)Useable ambient temperature 5°C to 30°C. The accuracy does not include the fluctuations when switching the solenoid valve is not included.

(\*3)Strengthen it when there is a lot of condensation and Weaken it when the sample is dry.

(\*4)When the outlet inside the chamber is used, the power will increase according to the power supply capacity of the device used.

• 1 set of Shaker NR-1/2/3 can be put on the bottom of the chamber in iB-130 and 1 set of Shaker NR-1/2/3 can be put on the bottom of the chamber in iB-230. There is a limitation on the shaking speed for use. Described for details in the manual of these products. Any devices that do not generate large vibrations such as a Rotator or Seesaw shaker can be used on the shelf (Each device is verified for operating inside the chamber by TAITEC).

## Optional accessories

Product	Remarks
<b>Shelf Set for iB-130</b>	Shelves and Shelf holders for iB-130 : 1 set
<b>Shelf Set for iB-230</b>	Shelves and Shelf holders for iB-230 : 1 set
<b>LED irradiation unit LC-450EXP (*)</b>	LED Color: White, Peak wavelength: 450 nm Photon flux density: approx. 310 $\mu\text{mol}$ Dimensions of LED light source: 340 × 240 mm
<b>Dedicated controller LC-LED-CON1 (*)</b>	Dimming method: PWM method Controllable range: control in 1% increments, 10 to 100%
<b>LED irradiation unit mounting bracket LC-1250SB</b>	Brackets for mounting and fixing the LED irradiation unit to the shelf.

(\*See page 45 for details. •The number of mounting is up to 2 pcs in iB-130 and up to 3 pcs in iB-230 for practical use.

NEW

Constant temperature incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Shaking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electrophoresis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chiller]

Appendix



# Incubation Box M-210FD

**Constant temperature Chamber having the double glass door with both heat insulation and visibility that makes it easy to use. Enables the operation of small devices inside the chamber. Chromatographic column rack is available as an option.**

•LED irradiation unit --> P.045 •Benchtop Compact Shakers --> P.064-065, P.068-071 •Small-size Rotary Incubator (Rotator) --> P.090-092

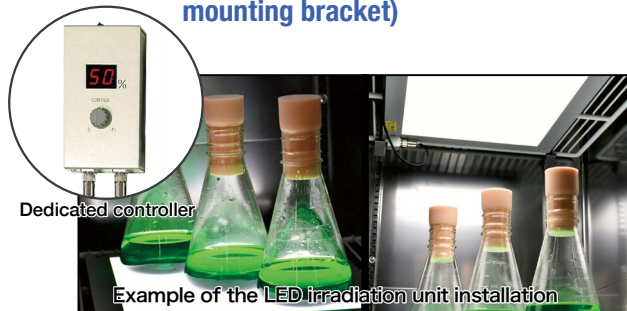
## Features

- The interior and exterior are made mostly of stainless steel
- Possible for operation of small devices inside the chamber
- Chromatographic column rack is available

## Applications

- Storage of Samples and Reagents
- Cultivation and Immunoprecipitation by placing on a Shaker or Rotator
- Temperature control of Chromatographic column (Optional)

### Installation of LED irradiation unit (Requirement: mounting bracket)



Combined with the optional LED irradiation unit (LC-450EXP), dedicated controller, and mounting bracket (LC-1250SB), it can be used for culturing algae and plant cells that require photosynthesis.

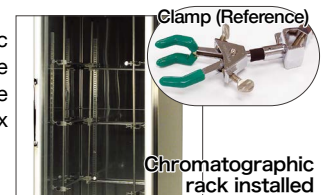
<b>Model</b>	<b>M-210FD</b>
Temperature range	0°C to +45°C
Temp. control accuracy	Up to 2.0°C (*1, 2, 3)
Chamber volume	Approx. 392 L
Heater	200 W
Compressor	200 W (Automatic defrosting function, ON/OFF can be arbitrary turned)
Outlet inside the chamber/Connecting hole	Outlet: 2-Socket x 1 (Drip-proof-type, 5 A in total) Connecting hole: Left side (φ36 mm)
Circulating method inside the chamber	Circulating by fan motors
Num. of Shelf/Allowable weight	3 levels/50 kg each (Equal weight)
Interior/Exterior material	Stainless steel (except for some part)
Dimensions inside the chamber (WxDxH)	494 x 650 x 1428 mm
Int. Dimension (WxDxH)	600 x 800 x 1905 mm
Weight	Approx. 103 kg
Power supply(*4)	AC100V/7A /Max.12A (Need a step-down transformer)
Standard accessories/Others	Shelf x 3 pcs, Pallet x 1 pc, Drip tray x 1 pc, Drainage trap on the bottom

(\*1)The value under ambient temperature 25°C. Useable ambient temperature is 5°C to 30°C.  
 (\*2)If the set temperature in the chamber is higher than 5°C above the room temperature, turn the REF. switch OFF. If the set temperature in the chamber is 5°C or lower than the room temperature, turn the HEAT switch OFF.  
 (\*3)Temperature change immediately after operating the defrosting function is not taken into account.  
 (\*4)When the outlet inside the chamber is used, the power will increase according to the power supply capacity of the device used.

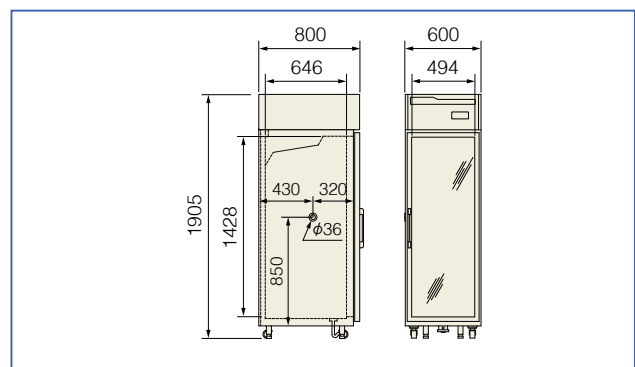


### Fixing the Chromatography column to the Chromatographic stand (sold separately)

The optional Chromatographic column rack consists of only the self-supporting column. Prepare Clamps, etc. separately to fix the Chromatographic column.



### Dimensions



### Optional accessories

Product	Remarks
<b>LED irradiation unit LC-450EXP (*)</b>	LED Color: White, Peak wavelength: 450 nm Photon flux density: approx. 310 μmol Dimensions of LED light source: 340 x 240 mm
<b>Dedicated controller LC-LED-CON1 (*)</b>	Dimming method: PWM method Controllable range: control in 1% increments, 10 to 100%
<b>LED irradiation unit mounting bracket LC-1250SB</b>	Brackets for mounting and fixing the LED irradiation unit to the shelf
<b>Chromatographic Rack for M-210FD</b>	Holders that install the Clamps to fix the Chromatographic column. Prepare the Clamps separately.
<b>Automatic condensation water evaporation unit M-EU55</b>	This unit is used to remove condensation water generated inside the M-210/600FD. Install the unit under the main unit and connect it to the drainage trap.

(\*)See page 45 for details.

NEW

Constant temperature Incubator/shaker OD Monitor

For cell culture related products

Shaker

Mixer Rotator Stirrer

Bead beater homogenizer Ultrasonic homogenizer

Aluminum block Bath Mini-size Bath

Water bath Spiking Water bath Immersion cooler

Hybridization Incubator Constant temperature Chambers

Centrifugal Concentrators Cold Trap

Freeze dryers

Substrate Electroporosis apparatus Blotting device for hybridization

Constant-temperature water circulating system [Chilled]

Appendix

# Incubation Box M-600FD

*The double glass door with both heat insulation and visibility. As a refrigerator, it can be used for storage of samples and reagents, and temperature control of the Chromatographic column. Possible for operation of small devices inside the chamber.*

•Benchtop Compact Shakers --> P.064-065, P.068-071 •Small-size Rotary Incubator (Rotator) --> P.090-092



## Possible for operation of small devices such as shakers inside the chamber

When combined with a Shaker or Rotator, the scope of experiment will widen. It is equipped with an outlet inside the chamber for operation of devices and the power cord can be drawn from outside through a Connecting hole (For fast shaking with a reciprocal or orbital shaker, install the shaker at the bottom).

Model	M-600FD
Temperature range	0°C to +45°C
Temp. control accuracy	Up to 2.0°C (*1, 2, 3)
Chamber volume	Approx. 642 L
Temp. display/Temp. setting method	Digital display/UP/DOWN method
Heater	200 W, ON/OFF can be arbitrary turned.
Compressor	200 W (R-134a), ON/OFF can be arbitrary turned.
Outlet inside chamber/ Connecting hole	Outlet: 2-Socket × 1 (Drip-proof-type, 5 A in total) Left side (φ36 mm)
Circulating method inside the chamber	Circulating by fan motors
Num. of Shelf/Allowable weight	2 rows × 3 levels/50 kg each (Equal weight)
Interior/Exterior material	Stainless steel (except for some part)
Safe devices	Thermostat, Earth leakage breaker
Dimensions inside chamber (W×D×H)	798 × 650 × 1428 mm
Int. Dimension (W×D×H)/Weight	900 × 800 × 1905 mm/Approx. 120 kg
Power supply(*4)	AC100V/7A /Max.12A (Need a step-down transformer)
Standard accessories/Others	Shelf × 6 pcs, Pallet × 2 pcs, Drip tray × 1 pc, and Drainage trap on the bottom

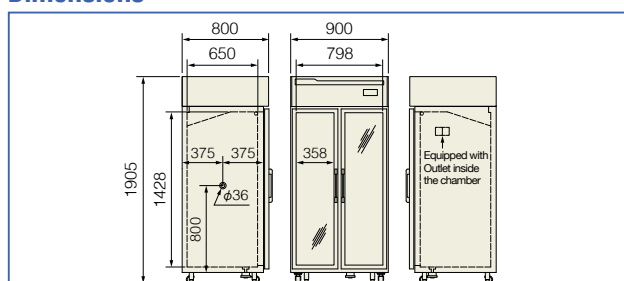
(\*1) The value under ambient temperature 25°C. Useable ambient temperature is 5°C to 30°C.

(\*2) If the set temperature in the chamber is higher than 5°C above the room temperature, turn the REF. switch OFF. If the set temperature in the chamber is 5°C or lower than the room temperature, turn the HEAT switch OFF.

(\*3) Temperature change immediately after operating the defrosting function is not taken into account.

(\*4) When the outlet inside the chamber is used, the power will increase according to the power supply capacity of the device used

## Dimensions



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**TATEC** [ General Catalog ]

## Features

- The interior and exterior are made mostly of stainless steel
- Comes with a Shelf net and a Chromatographic column rack (holders)
- Possible for operation of small devices inside the chamber

## Applications

- Temperature control of Chromatographic column using the optional Chromatographic column rack (holders)
- Storage of Samples and Reagents
- Cultivation and Immunoprecipitation by placing on a Shaker or Rotator

## Automatic condensation water evaporation unit M-EU55



This unit is used to remove condensation water generated inside the M-210/600FD. Install the unit under the main unit and connect it to the drainage trap.



Example of a combination with the M-600FD

Model	Automatic condensation water evaporation unit M-EU55
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## Mounting example of the LED irradiation unit

Product	Use it for culturing algae and plant cells that require photosynthesis.
<b>LED irradiation unit LC-450EXP (*1)</b>	
<b>Dedicated controller LC-LED-CON1 (*1)</b>	
<b>LED irradiation unit mounting bracket LC-1250SB (*2)</b>	

(\*1) See page 45 for details.

(\*2) Brackets for mounting and fixing the LED irradiation unit to the shelf.

## Chromatographic Rack for M-600FD



This product consists of only the self-supporting column. Prepare Clamps, etc. separately to fix the Chromatographic column.



Model	Chromatographic Rack for M-600FD
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