

# Low Temperature Incubator (Programmable)

Forced Convection Circulation

## IN604/604W/804

Operating temp. range -10°C~+50°C

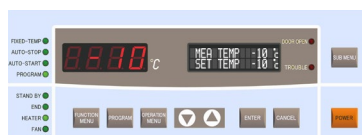
Temp. distribution accuracy ±1.0°C (at 37°C)

Internal capacity 143L IN604/604W 286L IN804

### Best selling machines for low temperature tests and environmental tests.

- Applicable for a wide variety of applications from various constant temperature tests to environmental tests
- High accuracy temperature control and temperature distribution
- Designed with a large dual glass door and inner door that forms a triplex glass door for improved heat retention (IN604W)
- Optional slide shaker table available to put it and take out sample easily (IN604W)
- Interior light for better sample visibility (IN604W)
- Inner glass door keeps temperature stable during sample observation

### Control Panel



### Specifications

| Product code                                  | 211289   | 211290   | 211280                        |
|---|--|--|-------------------------------|
| Model   | IN604  | IN604W   | IN804                         |
| System  | Forced convection circulation  |  |                               |
| Operating temperature range                   | -10°C~+50°C  |  |                               |
| Temperature adjustment range                  | ±0.3°C (Refrigerator is in continuous operation)<br>±1.0°C (Refrigerator is in cycle operation)  |  |                               |
| Temperature distribution accuracy*1           | ±1.0°C(at 37°C refrigerator is in continuous operation)  |  |                               |
| Time to attain the max. temperature*1         | 20~50°C Approx. 20min  |  | 20~50°C Approx. 30min         |
| Time to attain the lowest temperature*1       | 20~ -10°C Approx. 45min  | 20~ -10°C Approx. 55min.                             | 20~ -10°C Approx. 65min       |
| Interior material                             | Stainless steel plate  |  |                               |
| Exterior material                             | Chrome free electronic galvanized plated steel plate Chemical proof baking finish  |  |                               |
| Observation window                            | -  | W516 x H416 mm                                       | -                             |
| Heat insulator                                | Styrene foam (non-freon)   |  |                               |
| Refrigerator cooling medium / Operating range | R134A / 44°C or less   |  | R404A / 44°C or less          |
| Defrosting mechanism                          | Manual ON / auto OFF, Cycle operation, Timer operation   |  |                               |
| Blower fan                                    | Axial flow fan   |  |                               |
| Heater  | Iron-chrome wire heater: 550W  |  | Iron-chrome wire heater: 750W |
| Sensor  | Double sensor: Platinum resistance temperature detector :Pt100Ω(temperature controller), K-thermocouple (Overheat preventive device)   |  |                               |
| Cable port                                    | I.D.: 32 mm (right side)   | I.D.: 50 mm (right side)                             | I.D.: 32 mm (right side)      |
| Room light / service outlet                   | -  | Fluorescent lamp: 10W / 5A with a grounding terminal | -                             |
| Temperature control system                    | PID control  |  |                               |
| Temperature setting system                    | Digital setting system with UP/DOWN keys   |  |                               |
| Temp. display / information display           | 4-digit LED digital display / Fluorescent tube display   |  |                               |
| Timer / timer resolution                      | 0~999hrs 59min/1min  |  |                               |
| Operation functions                           | Fixed temperature, Program operation, Auto stop, Auto start  |  |                               |
| Program mode                                  | Up to 32 steps, Repeat, Gradient operation   |  |                               |
| Additional functions                          | Timer function (Accumulated time to 49,999 hrs, Calibration offset function, Clock display)  |  |                               |
| Safety device                                 | Self diagnostic function (Temp. sensor error, Heater disconnection, SSR short-circuit, Main relay error, Automatic overheat prevention function), Key lock, Over current ELB, Independent overheat preventive device |  |                               |
| Internal dimensions                           | W600×D477×H500mm   |  | W600×D477×H1,000mm            |
| External dimensions*2                         | W710×D645×H913mm   |  | 710×D645×H1,630 mm            |
| Internal capacity                             | 143L   |  | 286L                          |
| Shelf plate load                              | 15 kg / pc.  |  |                               |
| Shelf rest step number / pitch                | 13 steps / 30 mm   |  | 23 steps/30 mm                |
| Power supply (50/60Hz)                        | AC115V / AC220V Single phase   |  |                               |
| Weight  | Approx. 89 kg  |  | Approx.120 kg                 |
| Accessories                                   | Shelf / shelf support  | Stainless steel punched metal 3 pcs. / 6 pcs.        |                               |
|   | Door keys  | -  | 2 keys                        |

\*1 Conditions: temperature and humidity: 23°C±5°C, 65%RH±20% (no load)

\*2 Do not include protrusions

Forced convection  
circulation

Cable hole

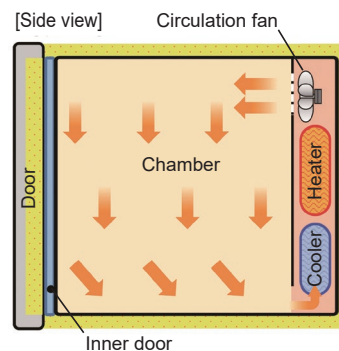
Self-diagnosis

Independent  
overheat protector

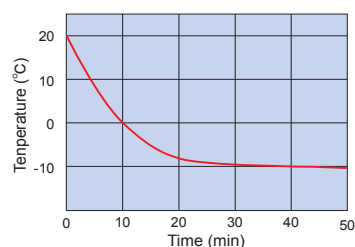
Key lock

Overcurrent  
ELB

## Method



## Temperature Drop Curve (IN604)



## Interior



IN604W with MK161 shaker



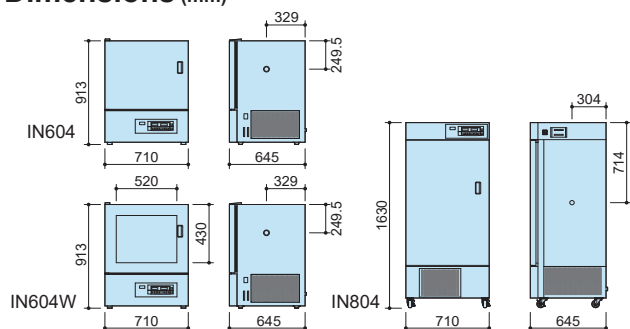
IN604

## Interior Light

IN604W



## Dimensions (mm)



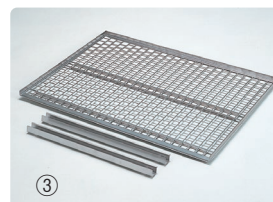
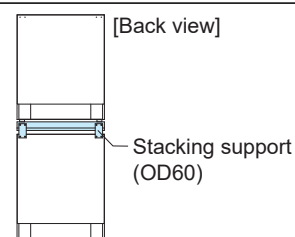
## Optional items

| No. | Description   | Model      | Product code |
|-----|---|------------|--------------|
| ①   | Stand   | IN604/604W | ON61 211856  |
| ②   | Stacking support  | IN604/604W | OD60 212823  |
| ③   | Stainless punching metal shelf (with bracket 2 pcs.)<br>(Loading up to 15 kg/shelf) | All models | - 211221     |
| ④   | Stainless wire shelf (with bracket 2 pcs.)<br>(Loading up to 20 kg/shelf)           | IN604/604W | - 211898     |
| ⑤   | Stainless wire shelf (with bracket 2 pcs.)<br>(Loading up to 20 kg/shelf)           | IN804      | - 212918     |
| ⑥   | *External communication Function (RS422A)   | All models | - 281166     |
| ⑦   | *External communication Adapter<br>(Changeable to RS232C)                           | All models | - 281167     |
| ⑧   | *Temperature output terminal  | All models | - 281168     |
| ⑨   | *External alarm terminal  | All models | - 281169     |
| ⑩   | *Time-up output terminal  | All models | - 281170     |
| ⑪   | Shaker setting stage with slide rail  | IN604W     | - 211318     |
| ⑫   | Drain water tray  | All models | - 213466     |

\* Please specify when ordering main unit.



②



③

Stainless punching metal shelf  
(with bracket 2pcs)



④

Stainless wire shelf  
(with bracket 2pcs)