DAIHAN Scientific

Incubators



BOD Incubators "ThermoStable™ IR-250"



Shaking

Incubators, Gravity Air "ThermoStable™ SIG-105"



Incubators, Forced-air "ThermoStable™ IF-105"





Gravity-air7

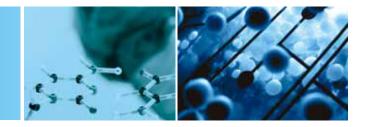
, Multi-room, Forced-air 11

, Front Door-type 27 , Bench Top-type 29

Heating Block/Dry Bath Incubator13Humidity/Temp./Test Chamber17Low Temp.(B.O.D)General-type21

Maximum Convenience by Advanced Digital Technology

Features of DAIHAN Incubators



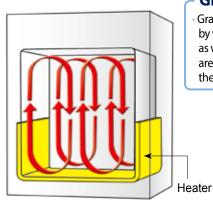
High Performance Heating Mechanism of DAIHAN accomplishing world's best temperature accuracy and uniformity

The new types of Incubator of DAIHAN are outfitted with high performance heating mechanism that is optimized respectively for capacity of chamber, power of heating element and air circulation type (Gravity Convection or Forced Convection).

The temperature displayed on the controller is accurately consistent with the actual temperature in the very center of the chamber or the average temperature in the entire area of the chamber, which maintains precisely within fluctuation specification. In addition, the temperature in the entire area of the chamber shows a very high stability keeping within a very slight variation specification in terms of temperature uniformity. Simultaneously, through the optimization of Fuzzy-PID controller, the 'heat-up time' to reach the Set Temperature after operating and the 'recovery time' to get back to the set temperature after opening and closing of the door are very short.

The newly developed high performance heating mechanism has achieved high degree of temperature accuracy and uniformity in the chamber. This is achieved by the heating elements installed on three sides - that is, the left, right and bottom parts of a chamber - which directly heat the stainless-steel chamber. This either enhances its material thermal conductivity to maximum (in case of the Incubator) or the heated air from the pre-heating zone in air-jacket type that is built in the three sides outside a chamber circulates first (in case of the Oven).

Incubators

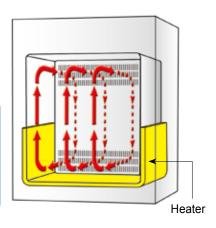


Gravity-air

Gravity convection is to be supplemented and maximized by way of forming radiant and conductive heat on the bottom as well as both sides of the chamber, while heating elements are fitted closely to the three sides outside the chamber by the steel structure of 1.5mm in thickness.

Forced-air

The same heating structure as Gravity Air-Flow model.
Installs an air-flow room with a fan built in the back side of the chamber to achieve effective forced convection.
Achieves high temperature uniformity and minimizes mutual contamination between samples by maintaining air flow in forced convection to top.



High Performance Heating Mechanism

The world's best performance and quality coming true via innovative heating mechanism !!

>> Minimum | Fluctuation !

Minimization of Fluctuation in Temperature

Variation !

Minimization of spatial variation in temperature inside the chamber

Heat-up Time!

Minimization of reaching the set temperature

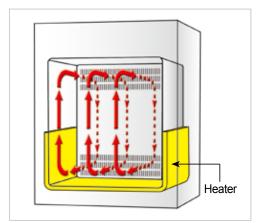
Overshoot!

Minimization of overshooting at the time of reaching the set temperature

DAIHAN-brand[®] Forced-air Incubators "ThermoStableTM IF", 3-Side Heating Zone, 50-/105-/155 Lit. With $2 \times$ Wire Shelves/Digital PID Control/Jog-Dial & Push Button/Digital LCD/Backlight/Certi. & Traceability, up to 70°C, \pm 0.2°C



"ThermoStable™IF-105", Forced-air Incubator



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.

- Made in Korea
 UL / CUL Certified
 CE Certified
 with Certificate & Traceability : Controlled by Serial Number,
- Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Flow by Forced-air Mechanism
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Patented Jog-Dial Control System
- GD(Good Design)-mark PL (Product Liability) Insurance
- * Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- * Optimized Air Flow by Forced-air Mechanism
- * Digital PID Control System Implementing Superior Temperature Accuracy
- * New Jog-Dial with Push Button * Compact New Body Design
- * 2 ea of PE-coated steel Wire Shelves Included
- * Alarm Function : Error status and Timer-end
- * RS232C Interface for Monitoring and Controlling with PC
- * Ambient to 70 $^\circ C$ of Temp. Range, Fluctuation of \pm 0.2 $^\circ C$ at 37 $^\circ C$, \pm 0.3 $^\circ C$ at 50 $^\circ C$
- * Storage Function of Temperature and Timer setting values
- * Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
- * Corrosion Resistant 304 Stainless-steel Chamber
- * Incubator Temperature & Incubator Current Protection, Sensor Error Detection

Specification

| Spec. Model | | ThermoStable™ IF-50 | ThermoStable™ IF-105 | ThermoStable™ IF-155 | | |
|---------------------------------------------------------------|---------------|-----------------------------------------------------------------------------|-----------------------------|-------------------------|--|--|
| Capacity | | 50 Lit. | 105 Lit. | 155 Lit. | | |
| Dimension | Interior (mm) | 370×350×419 | 485×410×533 | 550×475×600 | | |
| (w×d×h) | Exterior (mm) | 518×637×700 | 635×695×841 | 700×760×906 | | |
| Heater Power | | 200W | 300W | 400W | | |
| | Range | Ro | om Temp. +5℃ to 70 | ℃ 0°C | | |
| | Fluctuation | \pm 0.2 °C at 37 °C, \pm 0.3 °C at 50 °C | | | | |
| Temp. | Variation | ± 0.5℃ at 37℃, ± 0.4℃ at 37℃, | | | | |
| | Variation | ± 0.9℃ at 50℃ | ± 0.9℃ at 50℃ ± 0.7℃ at 50℃ | | | |
| | Sensor | | PT 100 | | | |
| Control Resolution | | | ±0.1℃ | | | |
| Heat-up Time | | 17 min. to 37℃, | | to 37℃, | | |
| - | | 28 min. to 50 ℃ | 30 min. | to 50 ℃ | | |
| Recovery Time | | | 3 min. to 37 ℃, | | | |
| (Door open 30sec) | | | 4 min. to 50 ℃ | | | |
| Controller | | | ontrol by Advanced M | | | |
| D0000 David | | Jog-Dial with Push Button Available to connect with PC | | | | |
| RS232 Port | | Digital LCD with Back Light | | | | |
| Display | | 99hr 59 min (delay/continuous function) | | | | |
| Timer | Internal | | | | | |
| Matarial | Internal | Stainless-steel (#304) | | | | |
| Material | External | Powder Coated steel | | | | |
| | Inner Door | Inner Tempered Glass Door 2ea of PE-coated steel Wire Shelves included, | | | | |
| Shelves | | Load per Shelf : 16 kg | | | | |
| Ventilation | | 1ea of Ventilation hole with Stainless steel Cap, Hole Diameter 40mm | | | | |
| Circulation | | Forced-air Type | | | | |
| Safety device | | Over Temp. and Over Current Protector, Sensor Error Detector | | | | |
| | | UL/CUL Certified, CE Certified, GD-mark | | | | |
| Others | | Storage Function(Temp. and Time) | | | | |
| | | Locking Mode(Jog-Dial Input Disabled) Alarm (Error Status and Timer-end) | | | | |
| Not Moist (kg) | | 46 | Error Status and Tim 66 | er-ena) 81 | | |
| Net Weight (kg) | (mm) | 40 628×752×775 | 00 710×731×1,018 | 81 731×810×1,018 | | |
| Packing Size (w×d×h) (mm) | | | , | , | | |
| Shipping Weight (kg) | | 58 | 74 | 92 | | |
| Power Consumption | | 216.3 W | 302.9 W | 438.1 W | | |
| Energy Consumption, at 37 °C | | 28 Wh | 43 Wh | 58 Wh | | |
| , at 50℃ | | 84 Wh 129 Wh 145 Wh | | | | |
| Electrical Reqts. • Other Specifications are available upo | | 120 | /, 60Hz or 230V, 50/6 | ouHz | | |

<Continued From...DAIHAN-brand[®] Forced-air Incubators "ThermoStable™ IF">

Ordering Information

| DH.WIF03050 | Incubator, Forced, 230V, 50 Lit, "ThermoStable IF-50" |
|-------------|-------------------------------------------------------|
| DH.WIF03105 | , 105 Lit, "ThermoStable IF-105" |
| DH.WIF03155 | , 155 Lit, "ThermoStable IF-155" |

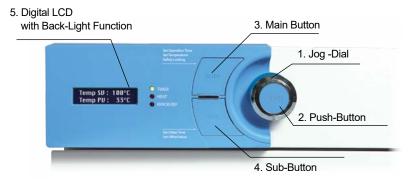
Spare PE-coated Steel Wire Shelves

| DH.WIG11050 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, |
|-------------|------------------------------------------------------------|
| | " IGS050" , w340×d310mm |
| DH.WIG11105 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, |
| | " IGS105" , w455×d375mm |
| DH.WIG11155 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, |
| | " IGS155" , w520×d440mm |

Optional Stainless-steel Wire Shelves

| DH.WON11050 | Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, |
|-------------|------------------------------------------------------------|
| | " ONS050" , w340×d310mm |
| DH.WON11105 | Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, |
| | " ONS105" , w455×d375mm |
| DH.WON11155 | Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, |
| | " ONS155" , w520×d440mm |

>> New Jog-Dial Controller



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.

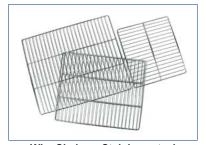




"ThermoStable IF-105", Forced-air Incubator



Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)



WiseRemote Control Software :

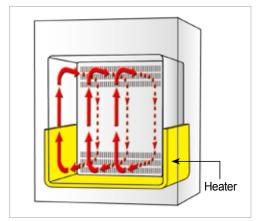
Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

* You can Download this Software at DAIHAN-Sci.com Shopping-mall

DAIHAN-brand[®] SMART Forced-air Incubators "ThermoStable[™] SIF", 50-/105-/155 Lit, 3-Side Heating Zone with Smart-Lab[™] Controller/4" Full Touch Screen/Fuzzy-PID Control/2 × Wire Shelves/Certi. & Traceability, up to 70°C, ±0.2°C



"ThermoStable™ SIF-105", SMART Forced-air Incubator



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.



Display of Smart-Lab[™] Controller

Made in Korea

- UL/CUL Certified CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Flow by Forced-air Mechanism
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Smart-Lab[™] Controller ■ GD(Good Design)-mark
 - PL(Product Liability) Insurance
- * Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp, Germination, and so on
- * Optimized Air Flow by Forced-air Mechanism
- * Ergonomic Design 4["] Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- * WiRe[™] App Service.
- * Automatic Data Recording * Self-Diagnostic Function * Internet Connectivity with WiFi
- * Variable Program Setting for Multiple Patterns with Multiple Segments
- * The Recorded Data Could be transferred to PC by USB memory
- * Compact New Body Design * Controller SW can be upgraded through USB port.
- * 2ea of PE-coated steel Wire Shelves Included
- * RS232C Interface for Monitoring and Controlling with PC
- * Ambient to 70 $^\circ$ C of Temp. Range, Fluctuation of \pm 0.2 $^\circ$ C at 37 $^\circ$ C, \pm 0.3 $^\circ$ C at 50 $^\circ$ C
- * Corrosion Resistant 304 Stainless-steel Chamber
- * Incubator Temperature & Incubator Current Protection, Sensor Error Detection

Specification

| Spec. Model | | ThermoStable™ SIF-50 | ThermoStable™ SIF-105 | ThermoStable™ SIF-155 | | |
|----------------------|---------------|-------------------------------------------------------------------------|--------------------------|--------------------------|--|--|
| Capacity | | 50 Lit. | 105 Lit. | 155 Lit. | | |
| Dimension | Interior (mm) | 370×350×419 | 485×410×533 | 550×475×600 | | |
| (w×d×h) | Exterior (mm) | 518×637×700 | 635×695×841 | 700×760×906 | | |
| Heater Power | | 200W | 300W | 400W | | |
| | Range | Ro | om Temp. +5℃ to 70 | 3 (| | |
| | Fluctuation | \pm 0.2 °C at 37 °C, \pm 0.3 °C at 50 °C | | | | |
| Temp. | Variation | ± 0.5℃ at 37℃, ± 0.9℃ at 50℃ ± 0.7℃ at 50℃ | | | | |
| | Sanaar | ± 0.9℃ at 50℃ | PT 100 | | | |
| Control Decolution | Sensor | | | | | |
| Control Resolution | | ±0.1℃ 17 min. to 37℃. 17 min. to 37℃. | | | | |
| Heat-up Time | | 17 min. to 37℃, 28 min. to 50℃ | 30 min. | | | |
| Recovery Time | | | 3 min. to 37℃, | | | |
| (Door open 30sec) | | 4 min. to 50 °C | | | | |
| Controller | | Smart-Lab™ Controller | | | | |
| RS232 | | Port Available to connect with PC | | | | |
| Display | | 4"Full Touch Screen TFT LCD | | | | |
| Timer | | 99hr 59 n | nin (delay/continuous | function) | | |
| Internal | | | Stainless-steel (#304) | | | |
| Material | External | Powder Coated steel | | | | |
| | Inner Door | Inner Tempered Glass Door | | | | |
| Shelves | | 2ea of PE-coated steel Wire Shelves included, Load per Shelf : 16 kg | | | | |
| Ventilation | | 1ea of Ventilation hole with Stainless steel Cap, Hole Diameter 40mm | | | | |
| Circulation | | Forced-air Type | | | | |
| Safety device | | Over Temp. and Over Current Protector, Sensor Error Detector | | | | |
| • | | UL/CUL Certified, CE Certified, GD-mark | | | | |
| Others | | Storage Function (Temp. and Time) | | | | |
| | | Alarm (Error Status and Timer-end) | | | | |
| Net Weight (kg) | | 46 | 66 | 81 | | |
| Packing Size (w×d> | ,, , | 628×752×775 | 710×731×1,018 | 731×810×1,018 | | |
| Shipping Weight (kg) | | 58 | 74 | 92 | | |
| Power Consumption | | 216.3 W | 302.9 W | 438.1 W | | |
| Energy Consumptio | | 28 Wh | 43 Wh | 58 Wh | | |
| , at 50 ℃ | | 84 Wh | 129 Wh | 145 Wh | | |
| Electrical Reqts. | | 120V, 60Hz or 230V, 50/60Hz | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] SMART Forced-air Incubators "ThermoStable[™] SIF">

Ordering Information

| DH.SWIF03050 | Incubator, Forced, 230V, 50 Lit, "ThermoStable SIF-50" |
|--------------|--------------------------------------------------------|
| DH.SWIF03105 | , 105 Lit, "ThermoStable SIF-105" |
| DH.SWIF03155 | , 155 Lit, "ThermoStable SIF-155" |

Spare PE-coated Steel Wire Shelves

| DH.WIG11050 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, |
|-------------|------------------------------------------------------------|
| | " IGS050" , w340×d310mm |
| DH.WIG11105 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, |
| | " IGS105" , w455×d375mm |
| DH.WIG11155 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, |
| | " IGS155" , w520×d440mm |

Optional Stainless-steel Wire Shelves

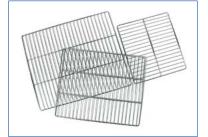
| DH.WON11050 | Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, |
|-------------|------------------------------------------------------------|
| | " ONS050" , w340×d310mm |
| DH.WON11105 | Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, |
| | " ONS105" , w455×d375mm |
| DH.WON11155 | Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, |
| | " ONS155" , w520×d440mm |



"ThermoStable SIF-105", SMART Forced-air Incubator

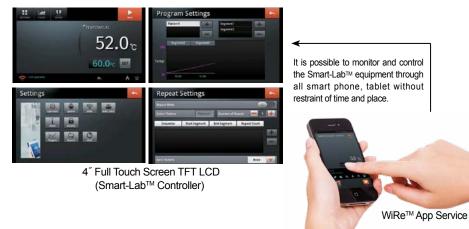


Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)

>> DAIHAN WiRe[™] App Service

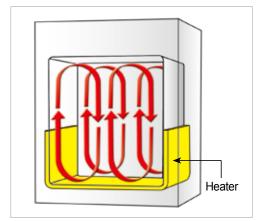


Controlled by Smart-Phone

DAIHAN-brand[®] Gravity-air Incubators "ThermoStableTM IG", 3-Side Heating Zone, 32-/50-/105-/155 Lit. with $2 \times$ Wire Shelves/Digital PID Control,/Jog-Dial & Push Button/Digital LCD & Backlight/Certi. & Traceability, up to 70° C, $\pm 0.2^{\circ}$ C



"ThermoStable™IG-105", Gravity-air Incubator



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.

- Made in Korea

 UL/CUL Certified
 CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Circulation by Gravity-air preventing Cross Contamination of Samples
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Patented Jog-Dial Control System
- GD(Good Design)-mark PL (Product Liability) Insurance
- * Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- * Optimized Air Circulation by Gravity-air preventing Cross Contamination of Samples
- * Digital PID Control System Implementing Superior Temperature Accuracy
- * New Jog-Dial with Push Button * Compact New Body Design
- * 2 ea of PE-coated Steel Wire Shelves included
- * RS232C Interface for Monitoring and Controlling with PC
- * Ambient to 70 $^\circ$ C of Temp. Range, Fluctuation of \pm 0.2 $^\circ$ C at 37 $^\circ$ C, \pm 0.3 $^\circ$ C at 50 $^\circ$ C
- * Alarm Function : Error status and Timer-end
- * Storage Function of Temperature and Timer setting values
- * Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be disabled)
- * Corrosion Resistant 304 Stainless-steel Chamber
- * Incubator Temperature & Incubator Current Protection, Sensor Error Detection

Specification

| Spec. Model | | ThermoStable™ IG-32 | ThermoStable™ IG-50 | ThermoStable™ IG-105 | ThermoStable™ IG-155 | |
|---------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------|-------------------------------------|--|
| Capacity | | 32 Lit. | 50 Lit. | 105 Lit. | 155 Lit. | |
| Dimension | Interior (mm) | 312×290×360 | 370×350×420 | 485×410×535 | 550×475×600 | |
| (w×d×h) | Exterior (mm) | 458×477×624 | 518×537×701 | 635×595×841 | 700×660×906 | |
| Heater Powe | r | 150W | 200W | 300W | 400W | |
| | Range | | Range Room Te | mp. +5 ℃ to 70 ℃ | | |
| Temp. | Fluctuation | \pm 0.2 °C at 37 °C, \pm 0.3 °C at 50 °C | | | | |
| iemp. | Variation | \pm 0.6 °C at 37 °C, \pm 1.0 °C at 50 °C | | | | |
| | Sensor | | PT | 100 | | |
| Control Reso | olution | | ±0 | .1℃ | | |
| Heat-up Time | 9 | | 25 min. to 37 ℃, 40 min. to 50 ℃ | | 30 min. to 37 ℃, 40 min. to 50 ℃ | |
| Recovery Tir | | | to 37 ℃ | | to 37 ℃ | |
| (Door open 3 | Osec) | | to 50 ℃ | - | to 50℃ | |
| Controller | | Digital PID Control by Advanced Microprocessor Jog-Dial with Push Button | | | | |
| RS232 | | Available to connect with PC | | | | |
| Display | | Digital LCD with Back Light | | | | |
| Timer | | 99hr 59 min (delay/continuous function) | | | | |
| | Internal | Stainless-steel (#304) | | | | |
| Material | External | Powder Coated steel | | | | |
| | Inner Door | Inner Tempered Glass Door | | | | |
| Shelves | | 2ea of PE-coated Steel Wire Shelves included, Load per Shelf : 16 kg | | | | |
| Ventilation | | 1ea of Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm | | | | |
| Circulation | | Gravity-air Type | | | | |
| Safety device | 9 | Over Temp. and Over Current Protector, Sensor Error Detector | | | | |
| Others | | UL/CUL Certified, CE Certified, GD-mark Storage Function (Temp. and Time) Locking Mode (Jog-Dial Input Disabled) Alarm (Error Status and Timer-end) | | | | |
| Net Weight (kg) | | 32 | 40 | 59 | 71 | |
| Packing Size (w×d×h) (mm) | | 568×592×698 | 628×652×775 | 731×710×1,018 | 796×775×1,083 | |
| Shipping Weight (kg) | | 39 | 53 | 67 | 78 | |
| Power Consumption | | 159 W | 169.9 W | 292.9 W | 420.5 W | |
| Energy Cons | sumption, at 37°C | 34 Wh | 41 Wh | 63 Wh | 99 Wh | |
| , at 50℃ | | 81 Wh | 103 Wh | 152 Wh | 212 Wh | |
| Electrical Reqts. | | | | 230V, 50/60Hz | | |
| * Other Specifi | cations are availab | le upon Customer | s Request. | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] Gravity-air Incubators "ThermoStable™ IG">

Ordering Information

| DH.WIG03032 | Incubator, Gravity, 230V, 32 Lit, "ThermoSatble IG-32" |
|-------------|--------------------------------------------------------|
| DH.WIG03050 | , 50 Lit, "ThermoSatble IG-50" |
| DH.WIG03105 | , 105 Lit, "ThermoSatble IG-105" |
| DH.WIG03155 | , 155 Lit, "ThermoSatble IG-155" |

Spare PE-coated Steel Wire Shelves

| DH.WIG11032 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 32 Lit, "IGS032", w280 × d260mm |
|-----------------|---------------------------------------------------------------------------------------|
| DH.WIG11050 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, "IGS050". w340 × d310mm |
| DH.WIG11105 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, "IGS105", w455 × d375mm |
| DH.WIG11155 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, "IGS155", w520 × d440mm |
| Optional Stainl | less-steel Wire Shelves |
| DH.WIG12032 | Wire Shelf, Stainless-steel, with 2 Brackets, for 32 Lit, "IGSN032", w280 × d260mm |
| DH.WON11050 | Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, |

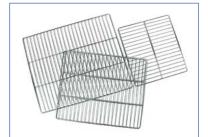
| DII.WORTIOOU | |
|--------------|------------------------------------------------------------|
| | " ONS050" , w340×d310mm |
| DH.WON11105 | Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, |
| | " ONS105" , w455×d375mm |
| DH.WON11155 | Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, |
| | " ONS155 ", w520×d440mm |



"ThermoStable IG-105", Gravity-air Incubator



Wire Shelves, PE-coated Steel (Included)



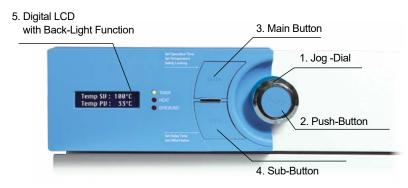
Wire Shelves, Stainless-steel (Optional)



WiseRemote Control Software : Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

* You can Download this Software at DAIHAN-Sci.com Shopping-mall

>> New Jog-Dial Controller



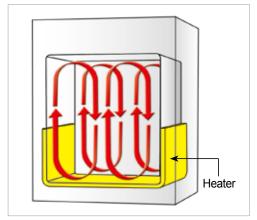
- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.



DAIHAN-brand[®] SMART Gravity-air Incubators "ThermoStable[™] SIG", 3-Side Heating Zone, 32-/50-/105-/155 Lit. with Smart-Lab[™] Controller/4" Full Touch Screen/Fuzzy-PID Control/2×Wire Shelves/Certi. & Traceability, up to 70°C, ±0.2°C



"ThermoStable™ SIG-105", SMART Gravity-air Incubator



3-Side Heating Zone : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism.



Display of Smart-Lab[™] Controller

Made in Korea

- UL/CUL Certified CE Certified ■ with Certificate & Traceability : Controlled by Serial Number,
 - Certificate, Delivery-information, and Traceable Data Base System
- Optimized Air Circulation by Natural Flow preventing Cross Contamination of Samples
- 3-Side Heating Mechanism : The Best Temp. Uniformity & Accuracy by High Performance Heating Mechanism
- Smart-Lab[™] Controller
- PL(Product Liability) Insurance ■ GD(Good Design)-mark
- * Various Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temp., Germination, and so on
- * Optimized Air Circulation by Natural Flow preventing Cross Contamination of Samples
- * Ergonomic Design 4["] Full Touch Screen TFT LCD(Smart-Lab™ Controller) * Automatic Data Recording
- * WiRe[™]App Service.
- * Self-Diagnostic Function * 2ea of PE-coated steel Wire Shelves Included
- * Variable Program Setting for Multiple Patterns with Multiple Segments
- * The Recorded Data could be transferred to PC by USB memory
- * Controller SW can be upgraded through USB port.
- * Internet Connectivity with WiFi * Compact New Body Design
- * RS232C Interface for Monitoring and Controlling with PC
- * Ambient to 70 $^\circ$ C of Temp. Range, Fluctuation of \pm 0.2 $^\circ$ C at 37 $^\circ$ C, \pm 0.3 $^\circ$ C at 50 $^\circ$ C
- * Corrosion Resistant 304 Stainless-steel Chamber
- * Over Temperature & Over Current Protection, Sensor Error Detection

Specification

| Spec. Model | | ThermoStable™ SIG-32 | ThermoStable™ SIG-50 | ThermoStable™ SIG-105 | ThermoStable™ SIG-155 | |
|------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|--|
| Capacity | | 32 Lit. | 50 Lit. | 105 Lit. | 155 Lit. | |
| Dimension | Interior (mm) | 312×290×360 | 312×290×360 370×350×420 4 | | 550×475×600 | |
| (w×d×h) | Exterior (mm) | 458×477×624 | 518×537×701 | 635×595×841 | 700×660×906 | |
| Heater Powe | r | 150W | 200W 300W | | 400W | |
| Range | | Room Temp. +5℃ to 70℃ | | | | |
| T | Fluctuation | \pm 0.2 °C at 37 °C, \pm 0.3 °C at 50 °C | | | | |
| Temp. | Variation | | ± 0.6℃ at 37℃, | ± 1.0℃ at 50℃ | | |
| | Sensor | | PT | 100 | | |
| Control Reso | lution | | ±0 | .1°C | | |
| Heat-up Time |) | | 25 min. to 37℃, 40 min. to 50℃ | | 30 min. to 37 ℃, 40 min. to 50 ℃ | |
| Recovery Time (Door open 30sec) | | - | to 37℃ to 50℃ | 10 min. to 37 ℃ 15 min. to 50 ℃ | | |
| Controller | · · | | Smart-Lab [⊤] | [™] Controller | | |
| RS232 | | | Available to co | onnect with PC | | |
| Display | | 4"Full Touch Screen TFT LCD | | | | |
| Timer | | 99hr 59 min (delay/continuous function) | | | | |
| Internal | | Stainless-steel (#304) | | | | |
| Material | External | Powder Coated steel | | | | |
| | Inner Door | Inner Tempered Glass Door | | | | |
| Shelves | | 2ea of PE-coated steel Wire Shelves included, Load per Shelf : 16 kg | | | | |
| Ventilation | | 1ea of Ventilation hole with Stainless-steel Cap, Hole Diameter 40mm | | | | |
| Circulation | | Gravity-air Type | | | | |
| Safety device |) | Over Temp. and Over Current Protector, Sensor Error Detector | | | | |
| Others | | UL/CUL Certified, CE Certified, GD-mark Storage Function (Temp. and Time) Alarm (Error Status and Timer-end) | | | e) | |
| Net Weight (kg) | | 32 | 40 | 59 | 71 | |
| Packing Size (w×d×h) (mm) | | 568×592×698 | 628×652×775 | 731×710×1,018 | 796×775×1,083 | |
| Shipping Weight (kg) | | 39 | 53 | 67 | 78 | |
| Power Consumption | | 159 W | 169.9 W | 292.9 W | 420.5 W | |
| Energy Cons | umption, at 37°C | 34 Wh | 41 Wh | 63 Wh | 99 Wh | |
| , at 50℃ | | 81 Wh | 103 Wh | 152 Wh | 212 Wh | |
| Electrical Reqts. | | 120V, 60Hz or 230V, 50/60Hz | | | | |
| * Other Specifi | cations are availabl | e upon Customer' | s Request | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] SMART Gravity-air Incubators "ThermoStable[™] SIG">

Ordering Information

| DH.SWIG03032 | Incubator, Gravity, 230V, 32 Lit, "ThermoStable SIG-32" |
|--------------|---------------------------------------------------------|
| DH.SWIG03050 | , 50 Lit, "ThermoStable SIG-50" |
| DH.SWIG03105 | , 105 Lit, "ThermoStable SIG-105" |
| DH.SWIG03155 | , 155 Lit, "ThermoStable SIG-155" |

Spare PE-coated Steel Wire Shelves

| DH.WIG11032 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 32 Lit, | | |
|--------------------------------------|------------------------------------------------------------|--|--|
| | " IGS032" , w280 × d260mm | | |
| DH.WIG11050 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 50 Lit, | | |
| | " IGS050" , w340×d310mm | | |
| DH.WIG11105 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 105 Lit, | | |
| | " IGS105" , w455×d375mm | | |
| DH.WIG11155 | Wire Shelf, PE-coated Steel, with 2 Brackets, for 155 Lit, | | |
| | " IGS155" , w520×d440mm | | |
| Ontional Stainlass staal Wine Shakes | | | |

Optional Stainless-steel Wire Shelves

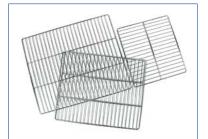
| DH.WIG12032 | Wire Shelf, Stainless-steel, with 2 Brackets, for 32 Lit, |
|-------------|------------------------------------------------------------|
| | " IGSN032" , w280×d260mm |
| DH.WON11050 | Wire Shelf, Stainless-steel, with 2 Brackets, for 50 Lit, |
| | " ONS050" , w340×d310mm |
| DH.WON11105 | Wire Shelf, Stainless-steel, with 2 Brackets, for 105 Lit, |
| | " ONS105 ", w455×d375mm |
| DH.WON11155 | Wire Shelf, Stainless-steel, with 2 Brackets, for 155 Lit, |
| | " ONS155" , w520×d440mm |
| | |



"ThermoStable SIG-105", SMART Gravity-air Incubator



Wire Shelves, PE-coated Steel (Included)



Wire Shelves, Stainless-steel (Optional)

>> DAIHAN WiRe[™] App Service



Controlled by Smart-Phone

DAIHAN-brand[®] Multi-Room Incubator "WIM", Forced-air, 125 Lit \times 4 Rooms, with Certi. & Traceability with 8 \times Wire Shelves, Digital Fuzzy Control, Independent Chamber Control, Max. Temp. Uniformity & Accuracy, up to 70 °C



(1) Multi-Room Incubator, Forced-air, "WIM-R4"

- Made in Korea UL/CUL Certified CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System 1/10251 if Denivery Each Observation and Indenived Part
- 4×125Lit Rooms : Each Chamber has an Independent Fuzzy Controller for Different Temperature and Time Control
- Patented Jog-Shuttle Control System
 PL(Product Liability) Insurance
- * Variable Application : Microorganism Culture, Animal & Plant Cell Culture, Constant Temperature and Germination
- * Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
- * High-Quality LCD with Back-Light Function
- * Forced-air Flow by Silent Fan Motor Implements the Highest Uniformity of Temperature in Each Chamber
- * Stainless-steel Chamber and PE-coated Shelves (2ea for Each Chamber) Corrosion Resistance
- * Inner Tempered Glass Door Enables an User to Observe the Samples without Interruption of Incubation
- * Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
- * Storage Function for Set Values of Temperature and Time
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

Specification

| Spec. Model | | (1) "WIM-4" | (2) "WIM-R4" | (3) "WIM-RL4" with illumination |
|------------------------------------|---------------|-------------------------------------------------------------------|------------------------------------|---------------------------------|
| Temp. Range | | R/T +5℃~ 70℃ | 0℃ to 70℃ | 0℃ to 70℃ |
| Circulation | | F | Forced-air(Blower FAN |) |
| Capacity | | | 125 Lit.×4 Rooms | |
| Illumination | | No | ne | FRL 36W×2 (×4 Rooms) |
| | Accuracy | | ±0.2℃ at 37℃ | |
| Temp. | Uniformity | ±0.3℃ at 37℃, ±0.7℃ at 50℃ ±0.5℃ | | at 37℃ |
| | Sensor | | PT100 | |
| Heat-up Time | | 15 min. to 37 ℃ 30 min. to 50 ℃ | 20 min. 30 min. | |
| Recovery Time (Door open 30sec) | | 8 min. to 37 ℃ 10 min. to 50 ℃ | 10 min. to 50 ℃ 12 min. to 50 ℃ | |
| Heating Power/Consumption | | 500 W×4ea | 650 W×4ea | |
| Compressor | | None | 1/4 HP (×4 Rooms) | |
| Timer & Alarm | | 99hr 59min (with delay | y / Continuous run.), Err | or status & Timer-end |
| Display | | Digital I | LCD with Back-Light F | unction |
| Controller | | Digital Fuzzy Contr | oller with Jog-Shuttle Sv | witch (Turn & Push) |
| Inner Door | | with 4ea | of Inner Tempered Gla | ass Door |
| Shelves | | Included 8ea of PE- | coated steel Shelves | (2ea×4 Chambers) |
| Permitted Total | Load | Total Load 128 kg (16kg×8 Shelves) | | |
| Safety Circuit | | Over Temp. and Over Current Protector, Sensor Error Detector | | |
| Material | | Internal : Stainless-steel (#304), External : Powder Coated steel | | |
| Dimension | Interior (mm) | 500×5 | 500×h500 mm (× 4 F | Rooms) |
| (w×d×h) | Exterior (mm) | 1 | ,655×845×h1,710 mr | n |
| Net Weight | | 343kg 350kg | | |
| Packing Size (w×d×h) (mm) | | | 1,900×1,050×1,950 | |
| Gross Weight | | 441 kg | 450 |) kg |
| Power Consumption | | 2.6 kW | 4.5 kW | 4.8 kW |
| Power Supply* | | 1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz | 1 Phase AC 120V, 60F or 3 F | lz or AC 230V,50/60Hz Phase |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand® Multi-Room Incubator "WIM">

Ordering Information

(1) "WIM-4" with 125 Lit × 4 Rooms, Ambient +5 °C ~70 °C DH.WIM04125 Multi-Room Incubator, 230V, "WIM-4"

(2) "WIM-R4" with 125 Lit \times 4 Rooms, $0 \sim 70$ °C

DH.WIM14125 Multi-Room Incubator, 230V, "WIM-R4"

DH.WIM16125 , 3Phase, "WIM-R4"

(3) "WIM-RL4" with 125 Lit \times 4 Rooms & Illumination, $0 \sim 70^{\circ}$ C

, 3Phase, "WIM-RL4"

DH.WIM24125 Multi-Room Incubator, 230V, "WIM-RL4"

DH.WIM26125

Spare PE-coated Steel Wire Shelves

DH.WIM34125 Wire Shelf, PE-coated steel, with 2 Brackets, "IMS125" w470×d480mm, for "WIM" 4-Room Incubators

Optional Stainless-steel Wire Shelves

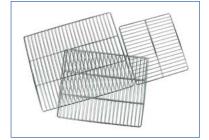
DH.WIM34126 Wire Shelf, Stainless-steel, with 2 Brackets, "IMS126", w470×d480mm, for "WIM" 4-Room Incubators



Multi-Room Incubator, Forced Convection Type "WIM-R4"



Wire Shelves, PE-coated steel (Included)



Wire Shelves, Stainless-steel (Optional)

DAIHAN-brand[®] *New*-generation Compact-size Heating Block/Dry Bath Incubator "MaXtable[™] H20" with Large LCD display, Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, up to 150°C, ±0.1°C



Heating Block/Dry Bath "MaXtable™ H20-set"



New Generation Controller of "MaXtable™ H20"



Included Block (3) "BLC 548" 48holes for 1.5/2ml & Removal Tool

Made in Korea PL(Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-functional Dry Block Heater Ergonomic Design
- Patented Jog-Dial and Main Touch Button Best Durability, Best Mobility, Best Convenient to Operate. with Large Back-Light LCD
- With a Screw-type Block Removal Tool ; Convenient Handling
- * High-performance Molded Heater ensures Best Temperature Accuracy.
- * Internal Bath Material (PPS) ensures Best Heat Insulation * Rapid heat up time.
- * Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
- * Precise Temperature Control : ±0.1℃ at 37℃, ±0.2℃ at 90℃, ±0.4℃ at 135℃
- * User Self-Compensation Function to offset between Actual and Displayed Temperature. (\pm 10.0 $^{\circ}$ C)
- * Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
- * Storage Function of Temperature and Timer setting values
- * Convenient integral timer for time-sensitive incubations
- * Alarm Function : Error Status and Timer-end
- * Easy to Read, Wide LCD Screen * Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)
- * Easily calibrated for accurate temperature control and display

Specifications & Ordering information

| <u>.</u> | | | | |
|-------------------|----------------|-----------------------------------------------------------------------|---------------------------------------------|--|
| Spec. | Model | "MaXtable™ H20" | "MaXtable™ H20-set" | |
| Spec. | | (Only Unit) | (included Standard Block) | |
| Controller | | Single Digital F | Single Digital Fuzzy Controller | |
| Useful Block | | Interchangeable Block(90×12 | 20 	imes h60mm) for Various Tubes | |
| included Standa | ard Block | None(Only Heating Block Unit) | 48 holes \times for 1.5/ 2ml Centri. Tube | |
| Heater | | Molded He | ater(300W) | |
| Dimension(mm) |) & Weight(kg) | Unit : 178×226×h138 | , Block : 90 $	imes$ 120 $	imes$ h60 | |
| Temp. Range, & | Accuracy | Ambient +5°C to 150°C, ±0.1°C at 37°C, ±0.2°C at 90°C, ±0.4°C at 135° | | |
| Heat-Up Speed | & Sensor | Approx. 5°C/min, PT100 | | |
| Safety Circuit | | Over Temp. and Over Current Protector, Sensor Error Detector | | |
| Timer with Alarm | | 99hr 59min, Alarm (Error Status and Timer - end) | | |
| Display | | Digital LCD with B | ack-Light Function | |
| Material | | Unit : PPS & BAS(HF380), Block : Anodized Aluminum | | |
| Included Standa | ard Acce. | Block Extraction Tool | | |
| Packing Size & | Gross Weight | 230×290×h245 mm, 2.2 kg | 230×355×h245 mm, 3.5 kg | |
| Power Consumption | | 300 W | | |
| Electric Reqts. | | 1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz | | |
| 0-4 N- | 230V | DH.WHB02000 | DH.WHB02100 | |
| Cat. No. | | · | • | |
| Price, Each. ₩ | | | | |
| | | | | |

* Other Specifications are available upon Customer's Request.

Optional Interchangeable Anodized Aluminum Blocks (90 × 120 × h60mm) **DH.WHB510596** (1) for 0.2ml PCR Tube. ($\phi 6 \times h16$ mm) \times 96 holes. "**BLC596**"

| 10 2 4 5 5 VV 885 12 6 0 | DH.WHB510570 (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, "BLC570" DH.WHB511548 (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, "BLC548" (* included in the "H20-Set") |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | |
| | DH.WHB521535 (6) for φ15mm Test Tube, (φ15×h47mm)×30 holes, "BLT535" DH.WHB521628 (7) for φ16.5mm Test Tube, (φ16.5×h47mm)×24 holes, "BLT628" DH.WHB521828 (8) for φ18mm Test Tube, (φ18×h47mm)×24 holes, "BLT828" |
| California California California | DH.WHB531515 (9) for 15ml Conical Tube, (Φ16×h47mm)×15 holes, "BLC515" DH.WHB535008 (10) for 50ml Conical Tube, (Φ28.7×h47mm)×8 holes, "BLC008" |
| (4) (5) (6 | DH.WHB500102 (11) Spare ; Block Removal Tool, Easy Handling |
| | |

DAIHAN-brand[®] High-performance Heating Block/Dry Bath Incubator "HB-96D", Heating, Dual-type with Fuzzy Control, Molded Heater, Modular Anodized Aluminum Blocks, Acrylic Lid, Touch-button Controller, up to 150° C, $\pm 0.1^{\circ}$ C



Heating Block/Dry Bath, Dual Control System "HB-96D-set"



Included Anodized Aluminum Block & Tong

Made in Korea CE Certified PL (Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-functional Dry Block Heater
- Dual Controller & Block
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- * Ideal for Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures
- * Precise Temperature Control : \pm 0.1 $^\circ$ at 37 $^\circ$ C, \pm 0.2 $^\circ$ C at 90 $^\circ$ C, \pm 0.4 $^\circ$ C at 135 $^\circ$ C
- * User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0 °C)
- * Over Temperature & Over Current Protection and Sensor Error Detection
- * Digital Timer Included : up to 99hr 59min (Operation Time + Delay Time)
- * Storage Function of Temperature and Timer setting values * Modular Block
- * Alarm Function : Error Status and Timer-end * Various kind of Blocks are offered (Optional)
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)
- * The Block Extraction Tongs and Included for Easy Handling

Specifications & Ordering information

| Spec. | Model | "HB-96D" (Only Unit) | "HB-96D-set" (included Standard Block) | |
|-----------------------------|-----------|---------------------------------------------------------------------------------|--------------------------------------------------------|--|
| Controller | | Dual Digital Fuzzy Controller | | |
| Useful Block | | Interchangeable Block(90×120×h60mm) for Various Tubes | | |
| included Standa | ard Block | None(Only Heating Block Unit) | 2×48 holes \times for 1.5/ 2ml Centri. Tube | |
| Heater | | Molded Heate | r(300W)×2ea | |
| Dimension(mm) | | Unit : 285×250×h155, Blo | ock : (90×120×h60)×2ea | |
| Temp. Range, & Accuracy | | Ambient $+5^{\circ}$ C to 150° C, $\pm 0.1^{\circ}$ C at 37 | °C, \pm 0.2°C at 90°C, \pm 0.4°C at 135°C | |
| Heat-Up Speed & Sensor | | Approx. 5°C/min, PT100 | | |
| Safety Circuit | | Over Temp. and Over Current Protector, Sensor Error Detector | | |
| Timer with Alarm | | 99hr 59min, Alarm (Error Status and Timer - end) | | |
| Display | | Digital LCD with Back-Light Function | | |
| Material | | Unit : Stainless-steel (# 304) & Powder Coated steel, Block : Anodized Aluminum | | |
| Included Standa | ard Acce. | Block Tongs "BLE101" and Block Cover | | |
| Packing Size & Gross Weight | | 400×270×h200 mm, 6 kg | | |
| Power Consumption | | 600 W | | |
| Electric Reqts. | | 1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz | | |
| Cat. No. | 230V | DH.WHB00198 | DH.WHB00199 | |
| | | | | |

* Other Specifications are available upon Customer's Request.

Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)

| LA PROVIDE | V7 385 | 12 0000 | DH.WHB510596 DH.WHB510570 DH.WHB511548 | (1) for 0.2ml PCR Tube, (φ6×h16mm)×96 holes, "BLC596" (2) for 0.5ml Centri. Tube, (φ7.7×h29.5mm)×63 holes, "BLC570" (3) for 1.5/2ml Centri. Tube, (φ11×h35mm)×48 holes, "BLC548" (* included in the "HB-96D-Set") |
|------------|--------|---------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) | (2) | (3) | DH.WHB521248 DH.WHB521335 DH.WHB521535 | (4) for φ12mm Test Tube, (φ12×h35mm)×48 holes, "BLT248" (5) for φ13mm Test Tube, (φ13×h47mm)×30 holes, "BLT335" (6) for φ15mm Test Tube, (φ15×h47mm)×30 holes, "BLT535" |
| 1990 | | | DH.WHB521628 DH.WHB521828 | (7) for ϕ 16.5mm Test Tube, (ϕ 16.5 × h47mm) × 24 holes, " BLT628 " (8) for ϕ 18mm Test Tube, (ϕ 18 × h47mm) × 24 holes, " BLT828 " |
| (4) | (5) | (6) | DH.WHB531515 DH.WHB535008 DH.WHB500101 | (9) for 15ml Conical Tube, (Φ16×h47mm)×15 holes, "BLC515" (10) for 50ml Conical Tube, (Φ28.7×h47mm)×8 holes, "BLC008" (11) Spare ; Block Extraction Tongs, "BLE101" |
| (7) | | (9) | (10) | (11) |

DAIHAN-brand[®] High-performance Heating Block/Dry Bath Incubator-Heating & Cooling "HB-R48"

with Digital PID Control, Acrylic Lid, Precise Temperature Control, Modular Anodized Aluminum Block, $-5^{\circ}C \sim 95^{\circ}C$, $\pm 0.1^{\circ}C$ Peltier Cooling System, Digital Timer & PID Control System, Interchangeable Blocks,



"HB - R48-Set" with Block "BLC548" for 1.5/2ml Centrifuge Tube \times 48 holes



Included Anodized Aluminum Block & Tong

Made in Korea CE Certified PL(Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Designed for Multi-Function : Enzyme Reactions, Inactivation of Sera, Incubation and Other Laboratory Procedures.
- Patented Jog-Shuttle Control System and Digital LCD with Back-Light Function
- \ast User Self-Compensation Function to offset between Actual and Displayed Temperature. (±10.0 $^\circ\text{C}$)
- * Storage Function of Temperature and Timer setting values
- * Locking Mode Supported for Experimental Safety (Input to Jog-Shuttle can be Disabled)

Specifications & Ordering information

| Spec. | Model | "HB-R48" (Only Unit) | "HB-R48-set" (included Standard Block) | |
|----------------------------|---------------------|--------------------------------------------------------------|---------------------------------------------|--|
| Controlle | r | Digital Fuzzy Controller | | |
| Useful Blo | ock | Interchangeable Block(90×12 | 0×h60mm) for Various Tubes | |
| included | Standard Block | None(Only Heating Block Unit) | 48 holes \times for 1.5/ 2ml Centri. Tube | |
| Dimensio | n : Unit & Block | 185×230×h220mm, a | and 90 $	imes$ 120 $	imes$ h60mm | |
| Cooling | | Two Peltie | r Modules | |
| Cool-Dow | n Speed | 2.3 °C/min. between 95 °C to 25 °C, | , 0.5℃/min. between 25℃ to -5℃ | |
| Heater and Sensor | | 300W (Molded | Heater), PT100 | |
| Temp. Range, & Accuracy | | $-5^\circ C$ to 95 $^\circ C$, and $\pm 0.1^\circ C$ | C at 37℃, ±0.2℃ at 90℃ | |
| Heat-Up Speed | | Approx. 5 °C/min | | |
| Safety Device | | Over Temp. and Over Current Protector, Sensor Error Detector | | |
| Timer with Alarm | | 99hr 59min, Alarm (Error Status and Timer - end) | | |
| Display | | Digital LCD with Back-Light Function | | |
| Material | Internal & External | Stainless steel (#304), and Powder Coated steel | | |
| Wateria | Block | Anodized Aluminum | | |
| Included 8 | Standard Acce. | Block Tongs "BLE101" and Block Cover | | |
| Packing Size, Gross Weight | | 350×220×h310mm, 9 kg | | |
| Power Consumption | | 450 W | | |
| Electric Reqts. | | 1 Phase, AC 120V, 60H | z or AC 230V, 50 / 60Hz | |
| Cat. No. | 230V | DH.WHB00248 | DH.WHB00249 | |
| Cat. NO. | | | | |

* Other Specifications are available upon Customer's Request.

Optional Interchangeable Anodized Aluminum Blocks (90 × 120 × h60mm)

| W st a co | DH.WHB510596 DH.WHB510570 DH.WHB511548 | (1) for 0.2ml PCR Tube, (<i>Φ</i>6×h16mm)×96 holes, "BLC596" (2) for 0.5ml Centri. Tube, (<i>Φ</i>7.7×h29.5mm)×63 holes, "BLC570" (3) for 1.5/2ml Centri. Tube, (<i>Φ</i>11×h35mm)×48 holes, "BLC548" (* included in the "HB-R48-Set") |
|-------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | DH.WHB521248 DH.WHB521335 DH.WHB521535 | (4) for ϕ 12mm Test Tube, (ϕ 12×h35mm)×48 holes, " BLT248 " (5) for ϕ 13mm Test Tube, (ϕ 13×h47mm)×30 holes, " BLT335 " (6) for ϕ 15mm Test Tube, (ϕ 15×h47mm)×30 holes, " BLT535 " |
| With Wards | DH.WHB521628 DH.WHB521828 DH.WHB531515 DH.WHB535008 | (7) for Φ16.5mm Test Tube, (Φ16.5×h47mm)×24 holes, "BLT628" (8) for Φ18mm Test Tube, (Φ18×h47mm)×24 holes, "BLT828" (9) for 15ml Conical Tube, (Φ16×h47mm)×15 holes, "BLC515" (10) for 50ml Conical Tube, (Φ28.7×h47mm)×8 holes, "BLC008" |
| (4) (5) (6) | DH.WHB500101 | (11) Spare ; Block Extraction Tongs, "BLE101" |
| | (10) | (11) |

DAIHAN-brand[®] Interchangeable Blocks, for Heating Block/Dry Bath, Anodized Aluminum, $90 \times 120 \times h60$ mm Ideal for Various Tubes, Conical- or Round-Bottom Holes,



(1) "BLC596" For 0.2ml PCR Tube, $(\phi 6 \times h16mm) \times 96$ holes, Conical Bottom Holes



(2) "BLC570" For 0.5ml Centrifuge Tube. (\$\phi_7.7 \times h29.5mm) \times 63 holes Conical Bottom Holes



(3) "BLC548" For 1.5/2ml Centrifuge Tube. $(\phi 11 \times h36mm) \times 48$ holes, Conical Bottom Holes (Included in the Package-Set)



(4) "BLT248" For ϕ 12mm Tube. $(\phi 12 \times h35 mm) \times 48$ holes, Round Bottom Holes



(5) "BLT335" For ϕ 13mm Tube. $(\phi 13 \times h47 mm) \times 30$ holes, Round Bottom Holes



For 15ml Conical Tube. $(\phi 16 \times h47 mm) \times 15$ holes,



(6) "BLT535" For ϕ 15mm Tube. $(\phi 15 \times h47 mm) \times 30$ holes,. **Round Bottom Holes**



(7) "BLT628" For ϕ 16.5mm Tube. $(\phi 16.5 \times h47 \text{mm}) \times 24 \text{ holes},$ Round Bottom Holes



(8) "BLT828" For ϕ 18mm Tube. $(\phi 18 \times h47 mm) \times 24$ holes, Round Bottom Holes



Conical Bottom Holes



(10) "BLC008" For 50ml Conical Tube. $(\phi 28.7 \times h47 mm) \times 8$ holes, Conical Bottom Holes

Ordering Information

Optional Interchangeable Anodized Aluminum Blocks (90×120×h60mm)

| DH.WHB510596 | (1) Block, for 0.2ml PCR Tube, (ϕ 6×h16mm)×96 holes, " BLC596 " |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DH.WHB510570 DH.WHB511548 | (2) Block, for 0.5ml Centrifuge Tube, (ϕ 7.7×h29.5mm)×63 holes, " BLC570 " (3) , for 1.5/2ml Centrifuge Tube, (ϕ 11×h35mm)×48 holes, " BLC548 " |
| DH.WHB521248 DH.WHB521335 DH.WHB521535 DH.WHB521628 DH.WHB521828 | (4) Block, for <i>Φ</i> 12mm Test Tube, (<i>Φ</i> 12×h35mm)×48 holes, "BLT248" (5) , for <i>Φ</i> 13mm Test Tube, (<i>Φ</i> 13×h47mm)×30 holes, "BLT335" (6) , for <i>Φ</i> 15mm Test Tube, (<i>Φ</i> 15×h47mm)×30 holes, "BLT535" (7) , for <i>Φ</i> 16.5mm Test Tube, (<i>Φ</i> 16.5×h47mm)×24 holes, "BLT628" (8) , for <i>Φ</i> 18mm Test Tube, (<i>Φ</i> 18×h47mm)×24 holes, "BLT828" |
| DH.WHB531515 DH.WHB535008 | (9) Block, for 15ml Conical Tube, (Φ16×h47mm)×15 holes, "BLC515" (10) , for 50ml Conical Tube, (Φ28.7×h47mm)×8 holes, "BLC008" |

DAIHAN-brand[®] General Purpose SMART Temp./Humidity Chamber "ThermoStable[™] STH-E", 155-/305-/420-/800-Lit with Smart-Lab[™] System, Water Tank, Touch-Screen LCD, CFC-Free, -20°C~80°C ±0.3°C, up to 95% RH,



SMART Temp./Humidity Chamber "ThermoStable™ STH-E"

Made in Korea

- PL(Product Liability) Insurance ■ with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Economical & Practical Type ■ CFC Free Refrigerant (R-404A)
- Smart-Lab[™] Controller : Controlled by Smart-Phone
 - Ergonomic 7" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- WiRe[™] App Service.
- Internet Connectivity with WiFi

- Min-/Max-Temperature Memory

- Automatic Data Recording
- Self-Diagnostic Function - Push Alarm Service to Smart Phone : Power-/Temperature-/Door Open-Error Status
- Built in USB port for Data Download and Program Upgrade
- Interactive Temperature Graph - Password Protected Setting
- Digital Calibration(Offset Function)
- Door Ajar and Power Failure Alarm
 - Program Function
- * Low Water Level Alarm Lamp
- * Temperature range from -20°C to 80°C, Relative Humidity from 30% to 95% RH
- * Inner Tempered Glass Door with Silicon Packing
- * RS232 Interface for Remote Monitoring and Controlling with PC (Standard)
- * Temperature & Humidity Recorder(6 Channels & 2Pens) and RS232C Communication Interface (Optional)
- * The Powerful and Silent Dual Fan Motor Assures Temperature Uniformity by Strong Air Circulation * Over Temperature and Over Current Protection for User Safety
- Specifications & Ordering information

| Spec. Model | | ThermoStable™ STH-E155 | ThermoStable™ STH-E305 | ThermoStable™ STH-E420 | ThermoStable™ STH-E800 | | |
|-----------------------------------------------------|---------------|----------------------------------------------------------------------------|---------------------------------|-----------------------------------|---------------------------|--|--|
| Capacity | | 155 Lit. | 305 Lit. | 420 Lit. | 800 Lit. | | |
| Temp. | Range | | − 20 °C ~ +80°C | | | | |
| iemp. | Accuracy | | ±0.3℃ (Stat | oility ±1.0 ℃) | | | |
| Humidity | Range | | 30% ~ 95% RH | | | | |
| Turniaity | Accuracy | | \pm 2% (Stabil | ity \pm 3% RH) | | | |
| Dimension | Interior (mm) | $505 \times 505 \times 610$ | $620\!\times\!620\!\times\!800$ | $750\!\times\!660\!\times\!850$ | 1000×800×1000 | | |
| (w×d×h) | Exterior (mm) | 745 	imes 920 	imes 1645 | 820×1290×1720 | $990\!\times\!1075\!\times\!1885$ | 1200×1100×1920 | | |
| Heater | for Temp. | 1.5 kW | 2.0 kW | 2.2 kW | 2.5 kW | | |
| nealei | for Humi. | 2.0 kW | 3.0 kW | 3.0 kW | 3.0 kW | | |
| Compressor | | 7/8HP | 1.5 HP | 1.5 HP | 3 HP | | |
| Refrigerant | | CF | C-Free(R-404A) | Refrigeration System | em | | |
| Controller & Display | | Smart-Lab Controller, 7" Full Touch Screen TFT LCD | | | | | |
| Program Fun | iction | Multiple Programs(Patterns by multiple Segments) Supported | | | | | |
| Sensor | | PT100 & Capacitive Sensor | | | | | |
| Material | Internal | Stainless-steel (# 304) | | | | | |
| Wateria | External | Powder Coated steel | | | | | |
| Shelves | | 3ea of Perforated Stainless steel Shelves of Adjustable Position | | | | | |
| Safety Device | e | Hi-Low Temp. Protector, Over Current & Leakage Breaker, Water Level Sensor | | | | | |
| Others | | PL(Product Liability) Insurance | | | | | |
| Net Weight | | 290 kg | 309 kg | 378 kg | 558 kg | | |
| Packing Dimension ($w \times d \times h$) (cm) | | 99×112×185 | 122×122×205 | 128×128×216 | 149×132×220 | | |
| Gross Weigh | t | 355 kg | 369 kg | 478 kg | 678 kg | | |
| Power Consumption | | 4.4 kW | 5.7 kW | 6.3 kW | 8.2 kW | | |
| Electric Reqts. | | 1 Phase AC | C 120V, 60Hz or A | C 230V, 50/60Hz | or 3 Phase | | |
| | 230V | DH.STHE0155 | DH.STHE0305 | DH.STHE0420 | DH.STHE0800 | | |
| Cat. No. | | - | | | 1 | | |
| | 3Phase | DH.STHE5155 | DH.STHE5305 | DH.STHE5420 | DH.STHE5800 | | |

* Other Specifications are available upon Customer's Request.

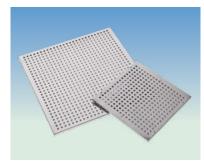
<Continued From... DAIHAN-brand[®] General Purpose SMART Temp./Humidity Chamber "ThermoStable™ STH-E">

Spare Perforated Stainless-steel Shelves

| DH.WTH11155 | Perforated Shelf, Stainless-steel, "THS1155" , for 155 Lit, w470×d480mm |
|-------------|--------------------------------------------------------------------------------|
| DH.WTH11305 | , " THS1305 ", for 305 Lit, w590×d580mm |
| DH.WTH11420 | , " THS1420", for 420 Lit, w720×d640mm |
| DH.WTH11800 | , "THS1800", for 800 Lit, w970×d980mm |

Optional Temp & Humidity Recorder and Chart Paper

| DH.WTH05100 | Temperature & Humidity Recorder, "WTH5100" |
|-------------|--------------------------------------------|
| DH.WTH05105 | Chart Paper, "WTH5105", 33 Days |



Perforated Stainless-steel Shelves (Included)



Temp. & Humidity Recorder 6 Channel 2 Pens (WTH5100) (Optional)

>>> DAIHAN WiRe[™] App Service



WiRe[™] App Service Controlled by Smart-Phone DAIHAN-brand[®] SMART Precise Temp./Humidity Chamber "ThermoStable[™] STH", 155-/305-/420-/800-Lit with Smart-Lab[™], Auto Supplement Water Tank, Touch-Screen LCD, CFC-Free, -40°C/-20°C to 100°C, up to 98% RH



SMART Precise Temp. / Humidity Chamber "ThermoStable™ STH-155"

Made in Korea PL(Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- CFC Free Refrigerant (R-404A)
- Smart-Lab[™] Controller : Controlled by Smart-Phone
 - Ergonomic 7" Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- WiRe[™] App Service. - Self-Diagnostic Function
- Internet Connectivity with WiFi

- Interactive Temperature Graph

* Low Water Level Alarm System

- Automatic Data Recording
- Push Alarm Service to Smart Phone : Power-/Temperature-/Door Open-Error Status - Built in USB port for Data Download and Program Upgrade
- Password Protected Setting
- Digital Calibration(Offset Function)
- Min-/Max-Temperature Memory
- Door Ajar and Power Failure Alarm - Program Function
- * Precise Temperature Control (-40 °C/-20 °C to 100 °C) and Humidity (30% to 98% Relative Humidity)
- * Electronic Humidity Sensor has Excellent Response Time and Durability.
- * CFC-Free Refrigerant (R-404A)
- * Easy and Safety Door Lock
- * The Powerful and Silent Dual Fan Motor Assures Temperature Uniformity by Strong Air Circulation (2~4pcs)
- * Large Clear Viewing Window with Membrane Heating Element (Moisture-Proof)
- * Sliding Water Supply Tank : Auto Water Supplementing System
- * Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking
- * RS232C Interface for Remote Monitoring and Controlling with PC (Standard)
- * 6 Channels & 2 Pens Temperature & Humidity Recorder(Optional)

Specification

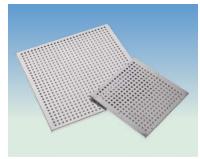
| Spec. | Model | ThermoStable™ STH-155 | ThermoStable™ STH-305 | ThermoStable™ STH-420 | ThermoStable™ STH-800 | |
|-------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------------|--|
| Temp. Range | | | -20℃ to | o 100℃ | | |
| Humidity Rar | nge | | 30% to 9 | 98% RH | | |
| Compressor | | 7/8HP | 1.5HP | 1.5HP | 3HP | |
| Llastan | for Temp. | 1.5 kW | 2.0 kW | 2.2 kW | 2.5 kW | |
| Heater | for Humi. | 2.0 kW | 3.0 kW | 3.0 kW | 3.0 kW | |
| Spec. | Model | ThermoStable™ STH-L155 | ThermoStable™ STH-L305 | ThermoStable™ STH-L420 | ThermoStable™ STH-L800 | |
| Temp./Humid | lity Range | | -40 °C to 100 °C / | 30% to 98% RH | | |
| Compressor | | 1.5HP | 2 HP | 3HP | 4HP | |
| Heater | for Temp. | 1.5 kW | 2.0 kW | 2.2 kW | 2.5 kW | |
| Heater | for Humi. | 2.0 kW | 3.0 kW | 3.0 kW | 3.0 kW | |
| Dimension | Interior (mm) | 505×505×610 | 620×620×800 | 700×700×820 | 1,000×800×1,000 | |
| (w×d×h) | Exterior (mm) | 1,100×960×1,550 | 1,310×1,080×1,765 | 1,390×1,135×1,690 | 1,570×1,245×2,060 | |
| Capacity | | 155 Lit. | 305 Lit. | 420 Lit. | 800 Lit. | |
| Refrigerant | | CF | C-Free(R-404A) | Refrigeration Sys | tem | |
| T | Accuracy | ±0.3°C | | | | |
| Temp. | Stability | ± 0.3℃ | | | | |
| Humidity Accuracy Stability | | | ±0.3 | % RH | | |
| | | | ±0.3% R | H at 70% | | |
| Heat-up Time | | | 35 min (-20 | ℃ to 80℃) | | |
| Cool-down Time | | 45 min (+20℃ to -20℃) | | | | |
| Controller & Display | | Smart-Lab Controller, 7" Full Touch Screen TFT LCD | | | | |
| Program Fun | iction | Multiple Programs(Patterns by multiple Segments) Supported | | | | |
| Sensor | | PT100 & Capacitive Sensor | | | | |
| | Internal | Stainless-steel (# 304) | | | | |
| Material | External | | Powder Co | bated steel | | |
| Shelves | | 3ea of Perforat | ed Stainless stee | I Shelves of Adju | stable Position | |
| Safety Device | | Over Temp. and Over Current Protector, Sensor Error and Low Level Detector, Leakage Breaker | | | | |
| Others | | | PL(Product Lial | oility) Insurance | - | |
| Packing Dimension (w×d×h) (cm) | | 134×116×175 | 152×125×207 | 160×130×202 | 178×141×237 | |
| Gross Weight | | 353 kg | 369 kg | 478 kg | 678 kg | |
| Dever Ore | | 4.7 kW | 5.7 kW | 6.3 kW | 9 kW | |
| Power Consumption | | 6.2 kW | 7.9 kW | 9.9 kW | 12.7 kW | |
| Electric Reqts. | | 1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase | | | | |
| Other Specifications are available upon Customer's Request. | | | | | | |

<Continued From... DAIHAN-brand[®] SMART Precise Temp./Humidity Chamber, "ThermoStable™ STH">

Ordering Information

(1) Programmable Temp./Humidity Chamber, 1 Phase

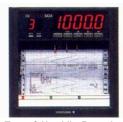
| DH.STH01155 | Temp. / Humidity Chamber, " STH-155 ", −20℃ to 100℃, 155 Lit, 230V |
|-------------|----------------------------------------------------------------------------------|
| DH.STH01305 | , " STH-305 ", −20℃ to 100℃, 305 Lit, 230V |
| DH.STH01420 | , " STH-420 ", −20℃ to 100℃, 420 Lit, 230V |
| DH.STH01800 | , " STH-800 ", −20℃ to 100℃, 800 Lit, 230V |
| DH.STH02155 | Temp. / Humidity Chamber, "STH-L155", −40 ℃ to 100 ℃, 155Lit, 230V |
| DH.STH02305 | , "STH-L305", −40 ℃ to 100 ℃, 305Lit, 230V |
| DH.STH02420 | , "STH-L420", −40 ℃ to 100 ℃, 420Lit, 230V |
| DH.STH02800 | , "STH-L800", −40 ℃ to 100 ℃, 800Lit, 230V |



Perforated Stainless-steel Shelves (Included)



Auto Water Supplementing System



Temp. & Humidity Recorder 6 Channel 2 Pens(WTH5100) (Optional)

(2) Programmable Temp./Humidity Chamber, 3Phase, for Customizing

| DH.STH07155 | Temp. / Humidity Chamber, "STH-155" , −20℃ to 100℃, 155 Lit. |
|-------------|-----------------------------------------------------------------------|
| DH.STH07305 | , "STH-305" , −20℃ to 100℃, 305 Lit. |
| DH.STH07420 | , "STH-420" , −20℃ to 100℃, 420 Lit. |
| DH.STH07800 | , "STH-800" , −20℃ to 100℃, 800 Lit. |
| DH.STH08155 | Temp. / Humidity Chamber, "STH-L155" , -40°C to 100°C, 155Lit. |
| DH.STH08305 | , "STH-L305" , -40°C to 100°C, 305Lit. |
| DH.STH08420 | , "STH-L420" , -40°C to 100°C, 420Lit. |
| DH.STH08800 | , "STH-L800" , -40°C to 100°C, 800Lit. |

Spare Perforated Stainless-steel Shelves

| DH.WTH11155 | Perforated Shelf, Stainless-steel, "THS1155", for 155 Lit, w470×d480mm |
|-------------|------------------------------------------------------------------------|
| DH.WTH11305 | , " THS1305", for 305 Lit, w590×d580mm |
| DH.WTH11420 | , " THS1420", for 420 Lit, w720×d640mm |
| DH.WTH11800 | , "THS1800", for 800 Lit, w970×d980mm |
| | |

| Optional lemp & Humidity Recorder and Chart Paper | | | | |
|---------------------------------------------------|--------------------------------------------|--|--|--|
| DH.WTH05100 | Temperature & Humidity Recorder, "WTH5100" | | | |
| DH.WTH05105 | Chart Paper, "WTH5105", 33 Days | | | |

>> DAIHAN WiRe[™] App Service



Full Touch Screen TFT LCD (Smart-Lab[™] Controller)

It is possible to monitor and control

the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

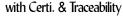
Controlled by Smart-Phone



WiRe[™] App Service

Distributed By: 📌 Pacific Laboratory Products | Free Call: 1800 723 405 | Ph: (03) 9845 0300 | e-mail: sales@pacificlab.com.au | www.pacificlab.com.au

DAIHAN-brand[®] Low Temperature(B.O.D) Incubators "ThermoStableTM IR", 150-/250-/420-/700-Lit with $3 \times$ Wire Shelves, Digital PID Control, CFC-free Refrigeration(R-404A) System, Forced-air, $0 \sim 60^{\circ}$ C, $\pm 0.2^{\circ}$ C





Low Temperature(B.O.D) Incubator "ThermoStable™ IR-150"



WiseRemote Control Software : Connection of Temperature Devices with Interface RS232C to a PC

- Export Recorded Data(Excel Spreadsheet) * You can Download this Software at
- DAIHAN-Sci.com Shopping-mall

- Made in Korea UL / CUL Certified CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Intelligent Control of Refrigerator for Preventing Overload of Compressor
- CFC-free (R-404A) Refrigeration System
- Digital PID Control System Implementing Superior Temperature Accuracy
- Patented Jog-Dial Control System
 PL(Product Liability) Insurance
- * Variable Application : Animal & Plant Cell Culture, Constant Temperature, Germination Test, BOD Test, and so on
- * RS232C Interface for Monitoring and Controlling with PC
- * Superior Temperature Uniformity by Forced-air
- * Stainless steel Chamber and PE-coated Shelves
- * Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
- * Storage Function : Alarm & Timer * Back-Light LCD
- * Locking Mode Supported for Experimental Safety (Input to Jog-Dial can be Disabled)
- * CFC-free (R-404A) Refrigeration System. * Compact New Body Design

Specifications & Ordering information

| Spec. | Model | ThermoStable™ IR-150 | ThermoStable™ IR-250 | ThermoStable™ IR-420 | ThermoStable™ IR-700 |
|---------------------------|----------------|---------------------------------------------------------------------|-------------------------------|----------------------------------|-------------------------|
| Capacity | | 150 Lit. | 250 Lit. | 420 Lit. | 700 Lit. |
| Air Flow-type |) | | Forced- | air Type | |
| Temp. Range | & Accuracy | | 0°C∼60°C,± | 0.2℃ at 37℃ | |
| Temp. Unifor | mity & Sensor | ±0.5°C | ວ at 37 °C, ±1.4 °C | at 50℃, PT100 | Sensor |
| Heat-up Time |) | 20 min. to 37 ℃ 20 min. to 50 ℃ | | 35 min. to 37℃ 35 min. to 50℃ | |
| Recovery Tir | | 10 min. | | 12 min. | |
| (Door open 3 | / | 12 min. | | 15 min. | |
| - | er/Consumption | 700 W | 1 kW | 1.2 kW | 2 kW |
| Compressor | | 1/4HP | 1/3HP | 1/2HP | 1/2HP |
| Compressor Control | | | U | preventing Overlo | |
| Refrigerant | | | , , | Refrigeration Syst | |
| Timer & Alar | n | 99hr 59min (with delay / Continuous run.), Error status & Timer-end | | | |
| Display | | Digital LCD with Back Light | | | |
| Controller | | Digital PID C | ontroller with Jog | -Shuttle Switch (| Turn & Push) |
| Inner Door | | wit | th 1ea of Inner Te | mpered Glass Do | or |
| Shelves | | Included 3ea of PE-coated steel Shelves | | | |
| Permitted To | tal Load | Total Load : 48 kg (16kg×3 Shelves) | | | |
| Safety Circui | t | Over Temp. and Over Current Protector, Sensor Error Detector | | | |
| Material | | Internal : Stainless-steel (#304), External : Powder Coated steel | | | |
| Dimension | Interior (mm) | 505×505×610 | $505 \times 505 \times 1,000$ | 705×605×1,000 | 800×700×1,250 |
| (w×d×h) | Exterior (mm) | 640×832×1,313 | 640×832×1,703 | 840×932×1,753 | 935×1,027×2,000 |
| Net Weight | | 118 kg | 157 kg | 202 kg | 234 kg |
| Packing Size (w×d×h) (mm) | | 900×1,000×1,650 | 900×1,000×2,040 | 1,100×1,100×2,140 | 1,220×1,220×2,260 |
| & Gross Weight | | 191 kg | 217 kg | 277 kg | 313 kg |
| Power Consumption | | 1.6 kW | 1.8 kW | 2.3 kW | 2.4 kW |
| Electric Reqts. | | 1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz | | | |
| Cat. No. | 230V | DH.WIR03150 | DH.WIR03250 | DH.WIR03420 | DH.WIR03700 |

* Other Specifications are available upon Customer's Request.

<Continued From... DAIHAN-brand[®] Low Temperature(B.O.D) Incubators "ThermoStable™ IR">

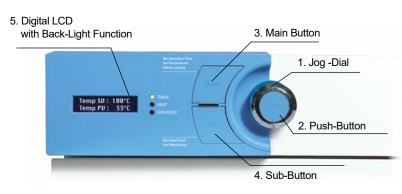
Spare PE-coated Steel Wire Shelves

| DH.WIR11150 | Wire Shelf, PE Coated steel, "IRS150", w470 × d480mm, for "IR-150", "IR-250" |
|-------------|--------------------------------------------------------------------------------------|
| DH.WIR11420 | Wire Shelf, PE Coated steel, " IRS420 ", w675 × d585mm, for " IR-420 " |
| DH.WIR11700 | , " IRS700 ", w770 × d680mm, for " IR-700 " |

Optional Stainless-steel Wire Shelves

| DH.WIR21150 | (1) Wire Shelf, Stainless-steel, "IRU150", w470×d480mm, |
|-------------|----------------------------------------------------------------------|
| | for " IR-150 ", " IR-250 " |
| DH.WIR21420 | (1) Wire Shelf, Stainless-steel, "IRU420", w675×d585mm, for "IR-420" |
| DH.WIR21700 | , " IRU700 ", w770×d680mm, for " IR-700 " |

>> New Jog-Dial Controller



- Provides the user interface with an ergonomic design for users to operate in an easy and convenient way.
- A new 2-way Jog-Dial Knob (Jog Dial + Push Button) and presents excellent durability and mobility.
- High-quality LCD with Back-light function.
- A durable Main Button and a Sub Button that features superb and user-friendly operation.

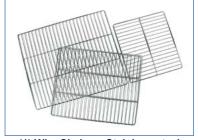




Low Temperature(B.O.D) Incubator "ThermoStable IR-150"



Wire Shelves, PE Coated steel (Included)



(1) Wire Shelves, Stainless-steel (Optional)

DAIHAN-brand[®] SMART Low Temperature(B.O.D) Incubators "ThermoStable™ SIR", 150-/250-/420-/700-Lit with Smart-Lab™ Controller, 4" Full Touch Screen, Fuzzy-PID Control, CFC-free(R-404A), 0~60°C, ±0.2°C, with Certi. & Traceability



SMART Low Temperature(B.O.D) Incubator "ThermoStable™ SIR-150"



Display of Smart-Lab[™] Controller

- Made in Korea UL / CUL Certified CE Certified
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Intelligent Control of Refrigerator for Preventing Overload of Compressor
- CFC-free (R-404A) Refrigeration System
- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Smart-Lab[™] Controller PL (Product Liability) Insurance
- * Variable Application : Animal & Plant Cell Culture, Constant Temperature, Germination Test, BOD Test, and so on
- * Ergonomic Design 4["] Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- * WiRe[™] App Service. * Automatic Data Recording
- * Self-Diagnostic Function
- * Compact New Body Design * Variable Program Setting for Multiple Patterns with Multiple Segments
- * The Recorded Data could be transferred to PC by USB memory
- * Controller SW can be upgraded through USB port.
- * Internet Connectivity with WiFi
- * RS232C Interface for Monitoring and Controlling with PC
- * Superior Temperature Uniformity by Forced Convection
- * Stainless steel Chamber and PE-coated Shelves
- * Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking.
- * CFC-free (R-404A) Refrigeration System.

Specifications & Ordering information

| Spec. Model | | ThermoStable™ SIR-150 | ThermoStable™ SIR-250 | ThermoStable™ SIR-420 | ThermoStable™ SIR-700 |
|---------------------------|----------------|---------------------------------------------------------------------|--------------------------|------------------------------------|--------------------------|
| Capacity | | 150 Lit. | 250 Lit. | 420 Lit. | 700 Lit. |
| Air Flow-type |) | | Forced- | air Type | |
| Temp. Range | & Accuracy | | 0℃~60℃,± | 0.2℃ at 37℃ | |
| Temp. Unifor | mity & Sensor | ±0.5°C | ວ at 37 °C, ±1.4 °C | at 50℃, PT100 | Sensor |
| Heat-up Time |) | 20 min. to 37 ℃ 20 min. to 50 ℃ | | 35 min. to 37 ℃ 35 min. to 50 ℃ | |
| Recovery Tin | | 10 min. | | 12 min. | |
| (Door open 3 | | 12 min. | | 15 min. | |
| | er/Consumption | 700 W | 1 kW | 1.2 kW | 2 kW |
| Compressor | | 1/4HP | 1/3HP | 1/2HP | 1/2HP |
| Compressor Control | | Intelligent Control | of Refrigerator for | preventing Overlo | ad of Compressor |
| Refrigerant | | CF | C-Free(R-404A) I | Refrigeration Syst | em |
| Timer & Aları | n | 99hr 59min (with delay / Continuous run.), Error status & Timer-end | | | |
| Display | | | 4"Full Touch Se | creen TFT LCD | |
| Controller | | | Smart-LabT | M Controller | |
| Inner Door | | wit | th 1ea of Inner Te | mpered Glass Do | or |
| Shelves | | Inc | luded 3ea of PE- | coated steel Shel | ves |
| Permitted | | Total I | oad Total Load : 4 | 18 kg (16kg $	imes$ 3 Sh | elves) |
| Safety Circui | t | Over Temp. and Over Current Protector, Sensor Error Detector | | | |
| Material | | Internal : Stainless-steel (# 304), External : Powder Coated steel | | | |
| Dimension | Interior (mm) | 505×505×610 | 505×505×1,000 | 705×605×1,000 | 800×700×1,250 |
| (w×d×h) | Exterior (mm) | 640×832×1,313 | 640×832×1,703 | 840×932×1,753 | 935×1,027×2,000 |
| Net Weight | | 118 kg | 157 kg | 202 kg | 234 kg |
| Packing Size (w×d×h) (mm) | | 900×1,000×1,650 | 900×1,000×2,040 | 1,100×1,100×2,140 | 1,220×1,220×2,260 |
| & Gross Weight | | 191 kg | 217 kg | 277 kg | 313 kg |
| Power Consumption | | 1.6 kW | 1.8 kW | 2.3 kW | 2.4 kW |
| Electric Reqts. | | 1 Phase | , AC 120 V, 60 H | z or AC 230 V, 50 |) / 60 Hz |
| Cat. No. | 230V | DH.SWIR03150 | DH.SWIR03250 | DH.SWIR03420 | DH.SWIR03700 |
| Gal. NO. | | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From... DAIHAN-brand[®] SMART Low Temperature(B.O.D) Incubators "ThermoStable™ SIR">

Spare PE-coated Steel Wire Shelves

| DH.WIR11150 | Wire Shelf, PE Coated steel, "IRS150", w470 × d480mm, for "SIR-150", "SIR-250" |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
| DH.WIR11420 DH.WIR11700 | Wire Shelf, PE Coated steel, "IRS420", w675 \times d585mm, for "SIR-420" , "IRS700", w770 \times d680mm, for "SIR-700" |

Optional Stainless-steel Wire Shelves

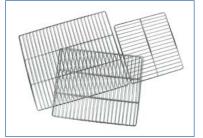
| DH.WIR21150 | (1) Wire Shelf, Stainless-steel, "IRU150", w470×d480mm, |
|-------------|-----------------------------------------------------------------------|
| | for "SIR-150", "SIR-250" |
| DH.WIR21420 | (1) Wire Shelf, Stainless-steel, "IRU420", w675×d585mm, for "SIR-420" |
| DH.WIR21700 | , "IRU700", w770×d680mm, for "SIR-700" |



SMART Low Temperature(B.O.D) Incubator "ThermoStable SIR-150"



Wire Shelves, PE Coated steel (Included)



(1) Wire Shelves, Stainless-steel (Optional)

>> DAIHAN WiRe[™] App Service



4[″] Full Touch Screen TFT LCD (Smart-Lab[™] Controller)

It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.



Controlled by Smart-Phone

DAIHAN-brand[®] SMART Plant Growth Chamber "ThermoStable[™] GC", Smart-Lab[™] System, 432-/864-Lit. with Smart-Lab[™] Controller, CFC-Free, 0~12,000 - or 15,000-Lux, 30~95% RH, 10~60°C, with Certi. & Traceability



(1) SMART Plant Growth Chamber "ThermoStable™ GC-450"



Main Display of Smart-Lab™ Controller



Graph Display of Smart-Lab™ Controller



Program Set Display of Smart-Lab[™] Controller

- Made in Korea CE Certified PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Suitable for Plant Growth, Stability, Product Self-life QC Testing
- Ergonomic Screen Design 7[~] Full Touch Screen TFT LCD (Smart-Lab[™] Controller) : Controlled by Smart-Phone
- WiRe[™]App Service. Automatic Data Recording
- Self-Diagnostic Function
- Variable Program Setting for Multiple Patterns with Multiple Segments
- The Recorded Data could be transferred to PC by USB memory
- Controller SW can be upgraded through USB port.
- * Inner Tempered Glass Door with Silicone Packing offers easy Observation without Door Opening
- * Humidity Control by Capacitive Humidity Sensor provides Accurate Control from 30 to 95%RH
 * Smart-Lab™ Controller Provides Precise Temperature, Relative Humidity and Illumination Control
- Maintain Uniformity and Accuracy of Growth Circumstance
- * 3-/4- Side Light Bank System : Intensity of Light is controlled by 8-levels and Displayed on LCD
- * Over Temperature & Over Current Protection, Sensor Error Detection, Leakage Breaking

Specification

| Spec. | Model | (1) "ThermoStable™ GC-450" | (2) "ThermoStable™ GC-1000" | | | | |
|-----------------------------------|------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--|--|--|--|
| Capacity | | 432 Lit. | 864 Lit. | | | | |
| | Range & Variation | 10℃ ~ 60℃, ±1℃ at 20℃ | | | | | |
| Temp. | Fluctuation | | at 25℃ (0% light intensity) 25℃ (100% light intensity) | | | | |
| | Range & Variation | 30% ~ 95% RH, ±3% at 60℃ | | | | | |
| Humidity | Fluctuation | ±1% | | | | | |
| | Humidifier | Evaporation by | Fan with Heater | | | | |
| | Range | 0 to 12,000 Lux | 0 to 15,000 Lux | | | | |
| Illumination | Lamp | FPL 55W×14 | FPL 55W×28 | | | | |
| | Bank | 3 Side | Walls | | | | |
| Temp. & Humidi | ty Sensor | Temp. : PT100, Humid | ity : Capacitive Sensor | | | | |
| Heat-up Time (u | p to 37°C) | 11 min. (0 % illumination) / | 9 min. (100 % illumination) | | | | |
| Cool-down Time | e (down to 10°C) | 13 min. (0 % illumination) / | 15 min. (100 % illumination) | | | | |
| Temp. Recovery (After Door was | , opened for 30sec) | 3 min. at 10℃, 1 min. at 37℃ (0 % illumination) 5 min. at 10℃, 1min. at 37℃ (100 % illumination) | | | | | |
| Heating Power | for Temp. | 1.5 kW | 3.0 kW | | | | |
| /Consumption | for Humi. | 1.5 kW | 3.0 kW | | | | |
| Compressor | | 1/2HP | 1HP | | | | |
| Refrigerant | | CFC-Free(R-404A) Refrigeration System | | | | | |
| Display | | 7"Full Touch Screen TFT LC | CD (Smart-Lab [™] Controller) | | | | |
| Controller | | Smart-Lab [⊤] | [™] Controller | | | | |
| Program Functi | on | | 20 Patterns, 1,200 Segments k : 7 steps | | | | |
| Door | Internal | Tempered Safety Glass with Silicon Packing | | | | | |
| Door | External | 3-Side Magnetic Packing Door with Light Bank | | | | | |
| Shelves | | 4×PE-coated Steel Shelves | 8×PE-coated Steel Shelves | | | | |
| Permitted Total | Load | 64 kg (16kg×4 Shelves) | 128 kg (16kg×8 Shelves) | | | | |
| Safety Circuit | | Over Temp Protector, Over Current & Leakage Breaker | | | | | |
| Material | | Internal : Stainless-steel (#304 |), External : Power Coated steel | | | | |
| Dimension | Interior (mm) | 650×700×1,050 | 1,200×790×1,050 | | | | |
| (w×d×h) | Exterior (mm) | 850×1,090×1,965 | 1,400×1,150×1,965 | | | | |
| Packing Size & | Gross Weight | 1,400×1,220×h2,210mm, 435 kg | 1,600×1,500×h2,200mm, 585 kg | | | | |
| Power Consum | ption | 4.8 kW | 6.5 kW | | | | |
| Power Supply* | | 1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase | | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] SMART Plant Growth Chamber "ThermoStable™ GC">

Ordering Information

(1) 432 Lit Plant Growth Chamber "ThermoStable™ GC-450", 0~12,000 Lux

 DH.SWGC00450*
 Plant Growth Chamber, 230V, "ThermoStable GC-450"

 DH.SWGC50450*
 , 120V, "ThermoStable GC-450"

 DH.SWGC60450*
 , 3 Phase, "ThermoStable GC-450"

(2) 864 Lit Plant Growth Chamber "ThermoStable™ GC-1000", 0~15,000 Lux

 DH.SWGC01000*
 Plant Growth Chamber, 230V, "ThermoStable GC-1000"

 DH.SWGC61000*
 , 3 Phase, "ThermoStable GC-1000"

 *-marks : Included Water Tank(with Silicon Tube) and Lux Meter

Spare Wire Shelves, PE Coated steel

 DH.WGC10450
 Wire Shelf, PE Coated, w640 × d620mm, "GCS450", for 432Lit.

 DH.WGC11000
 , w580 × d620mm, "GCS1000", for 864Lit.

>> DAIHAN WiRe™ App Service



7[″] Full Touch Screen TFT LCD (Smart-Lab[™] Controller) It is possible to monitor and control the Smart-Lab™ equipment through all smart phone, tablet without restraint of time and place.

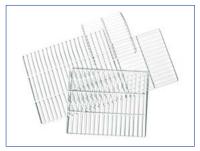


Will Composition

Controlled by Smart-Phone



(1) SMART Plant Growth Chamber "ThermoStable™ GC-450"



Wire Shelves, PE-coated steel (Included)



Water Tank/Silicon Tube/Lux Meter (Included)

DAIHAN-brand[®] Precise Shaking Incubators "ThermoStable[™] IS-30", Front Door-type, up to 60°C, ±0.2°C with Universal Platform, Fuzzy Control, Orbital Motion, Advanced Shaking Mechanism, Precise Speed Control, 30~250 rpm Universal Platform



(a) Room Temp. +5 ℃~ +60 ℃, with Universal Platform "ThermoStable™ IS-30"



(b) +10 ℃~+60 ℃, with Universal Platform "ThermoStable™ IS-30R"

Made in Korea
CE Certified
PL (Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System
- * Useful for Biological Cultures under various Temperature
- * Precise Temperature Control by Digital Fuzzy Controller, up to 60 °C
- * Digital Timer Function : 99 hours 59 minutes
- * Front Door and Sliding Platform Provides Easy Loading and Handling of Samples
- * Digital LCD with Back-Light Function
- * Stabilized Orbital Motion
- * RS232C Interface for Monitoring and Controlling with PC.
- * Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- * Minimum Noise and No Vibration.
- * Accommodate Flasks up to 1,000ml
- * Universal Spring Rack for Various Shapes/Size of Flasks (Optional)
- * Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- * Over Temperature & Over Current Protection and Leakage Breaking.

Specifications & Ordering information

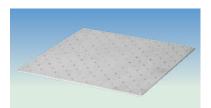
| Spec. Model | | | (a) "ThermoStable™ IS-30" (b) "ThermoStable™ I | | | | | |
|------------------|-----------|--------|-------------------------------------------------------------------|------------------------------------------------------------------------------|--|--|--|--|
| Temp. Range | | | Room Temp. +5 ℃ ~ 60 ℃ 10 ℃ ~ 60 ℃ | | | | | |
| Temp. Accuracy | & Unifor | mity | Accuracy : ±0.2℃ at 37℃, | Uniformity : ±0.5℃ at 37℃ | | | | |
| Capacity | | | 127 | Zit. | | | | |
| Temp. Sensor | | | PT100 | Sensor | | | | |
| Heater | | | 600 W | 800 W | | | | |
| Compressor | | | None | 1/4 HP | | | | |
| Compressor Co | ontrol | | None | Intelligent Control of Refrigerator for preventing Overload of Compressor | | | | |
| Refrigerant | | | None | CFC-Free(404A) Refrigeration System | | | | |
| Shaking Speed | & Stroke | | 30 ~ 250 rpm, 25r | mm Orbital Motion | | | | |
| Timer & Alarm | | | 99hr 59min (with Continuous run.), Error status & Timer-end | | | | | |
| Display | | | Digital LCD with Back-Light Function | | | | | |
| Controller | | | Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) | | | | | |
| Platform | | | Included Universal Platform for Various Shapes & Sizes of Flasks | | | | | |
| Optional Flask I | lolder | | Durable & Flexible Plastic F | Flask Holder (up to 1000ml) | | | | |
| Available Max. | for 50~10 | 0ml | Available 35 ea Flask Holder, for 50~100ml Flask | | | | | |
| Capacity of | for 200~3 | 00ml | Available 16 ea Flask Holder, for 200~300ml Flask | | | | | |
| Flask Holder | for 500~1 | ,000ml | Available 12 ea Flask Hold | der, for 500~1,000ml Flask | | | | |
| Safety Circuit | | | Over Temp./ Current Pro | otector, Leakage Breaker | | | | |
| Material | | | Internal : Stainless-steel (#304), External : Powder Coated steel | | | | | |
| Dimension | | | Internal : $570 \times 465 \times h470$ mm, | External : 916×730×h683mm | | | | |
| Packing Size (w | | nm) | 1,050×900 |)×h900mm | | | | |
| & Gross Weight | | | 146 kg | 156 kg | | | | |
| Power Consum | ption | | 600 W 1.3 kW | | | | | |
| Electrical Reqts | - | | 1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz | | | | | |
| | 60Hz | 230V | DH.WIS00230 | DH.WIS01230 | | | | |
| Cat. No. | 00112 | | | | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] Precise Shaking Incubators "ThermoStable™ IS-30">

Optional Platform/Spring Rack/Flask Holders

| DH.WIS504630 DH.WIS504530 | (1) Universal Platform, w485×h405mm, "SP630", for "IS-30(R)" (2) Universal Spring Rack w498×d408×h135mm, "SR530", for "IS-30(R)" |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DH.WIS504030 | (3) ABS Flask Holder, for 50~100ml Flask, "FH100", for "SHO", "SHR" and "IS" |
| DH.WIS504035 | (4) ABS Flask Holder, for 200~300ml Flask, "FH250", for "SHO", "SHR" and "IS" |
| DH.WIS504040 | (5) ABS Flask Holder, for 500~1000ml Flask, "FH500", for "SHO", "SHR" and "IS" |
| DH.WIS600100 | (6) STS Wire Spring Flask Holder, for 100ml Flask, "FHS100", for "SHO", "SHR" and "IS" |
| DH.WIS600250 | (7) STS Wire Spring Flask Holder, for 250ml Flask, "FHS250", for "SHO", "SHR" and "IS" |
| DH.WIS600500 | (8) STS Wire Spring Flask Holder, for 500ml Flask, "FHS500", for "SHO", "SHR" and "IS" |
| DH.WIS601000 | (9) STS Wire Spring Flask Holder, for 1000ml Flask, "FHS1000", for "SHO", "SHR" and "IS" |



(1) Universal Platform "SP630" (Included)



(2) Universal Spring Rack "SR530" (Optional)



ABS Flask Holders (Optional)



STS Wire Spring Flask Holder (Optional)



WiseRemote Control Software :

Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

* You can Download this Software at DAIHAN-Sci.com Shopping-mall

DAIHAN-brand[®] Precise Shaking Incubators "ThermoStable[™] IS-20", BenchTop-type, up to 60°C, ±0.2°C with Universal Platform, Fuzzy Control, Orbital Motion, Advanced Shaking Mechanism, Precise Speed Control, 30~250 rpm



(a) Room Temp. +5℃~ +60℃, with Universal Platform "ThermoStable™ IS-20"



(b) +10 ℃~+60 ℃, with Universal Platform "ThermoStable™ IS-20R"

Universal Platform

- Made in Korea CE Certified PL(Product Liability) Insurance
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System
- * Useful for Biological Cultures under various Temperature
- * Precise Temperature Control by Digital Fuzzy Controller, up to 60°C
- * Digital Timer Function : 99 hours 59 minutes
- * Minimum Noise and No Vibration
- * Digital LCD with Back-Light Function
- * Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- * Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- * Over Temperature & Over Current Protection, Sensor Error Detection and Leakage Breaking
- * Accommodate Flasks up to 1,000ml
- * Stabilized Orbital Motion
- * RS232C Interface for Monitoring and Controlling with PC
- * Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)

Specifications & Ordering information

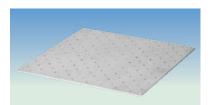
| Spec. Model | | | (a) "ThermoStable [™] IS-20" (b) "ThermoStable [™] IS | | | | | |
|-------------------|-----------|--------|-------------------------------------------------------------------------|------------------------------------------------------------------------------|--|--|--|--|
| Temp. Range | | | Room Temp. +5℃ ~ 60℃ 10℃ ~ 60℃ | | | | | |
| Temp. Accuracy | & Unifor | nity | Accuracy : ±0.2℃ at 37℃, | Uniformity : ±0.5℃ at 37℃ | | | | |
| Capacity | | | 101Lit. | | | | | |
| Temp. Sensor | | | PT100 Sensor | | | | | |
| Heater | | | 500 W 700 W | | | | | |
| Compressor | | | None | 1/4 HP | | | | |
| Compressor Co | ntrol | | None | Intelligent Control of Refrigerator for preventing Overload of Compressor | | | | |
| Refrigerant | | | None | CFC-Free(404A) Refrigeration System | | | | |
| Shaking Speed | & Stroke | | 30 ~ 250 rpm, 25r | mm Orbital Motion | | | | |
| Timer & Alarm | | | 99hr 59min (with Continuous | run.), Error status & Timer-end | | | | |
| Display | | | Digital LCD with Back-Light Function | | | | | |
| Controller | | | Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) | | | | | |
| Room Lamp | | | 60W Kryp | oton Lamp | | | | |
| Platform | | | Included Universal Platform for V | arious Shapes & Sizes of Flasks | | | | |
| Optional Flask H | lolder | | Durable & Flexible Plastic | Flask Holder (up to 1000ml) | | | | |
| Available Max. | for 50~10 | 0ml | Available 32 ea Flask Holder, for 50~100ml Flask | | | | | |
| Capacity of | for 200~3 | | Available 20 ea Flask Ho | Ider, for 200~300ml Flask | | | | |
| Flask Holder | for 500~1 | ,000ml | Available 16 ea Flask Hold | der, for 500~1,000ml Flask | | | | |
| Safety Circuit | | | | kage Breaker, Sensor Error Detector | | | | |
| Material | | | Internal : Stainless-steel (#304), External : Powder Coated steel | | | | | |
| Dimension | | | Internal : $530 \times 530 \times h350$ mm, | External : 575×855×h850mm | | | | |
| Packing Size (w | ,, | nm) | 1,000×800 | ×h1,100mm | | | | |
| & Gross Weight | | | 147 kg | 150 kg | | | | |
| Power Consumption | | | 500 W 1.2 kW | | | | | |
| Electrical Reqts | • | | 1 Phase, AC 120 V, 60 H | z or AC 230 V, 50 / 60 Hz | | | | |
| | 60Hz | 230V | DH.WIS00220 | DH.WIS01220 | | | | |
| Cat. No. | 00112 | | | | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] Precise Shaking Incubators, "ThermoStable™ IS-20">

Optional Platform/Spring Rack/Flask Holders

| DH.WIS504600 DH.WIS504500 | (1) Universal Platform, w478×h478mm, "SP600", for "IS-20(R)" (2) Universal Spring Rack w483×d483×h135mm, "SR500", for "IS-20(R)" |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DH.WIS504030 | (3) ABS Flask Holder, for 50~100ml Flask, "FH100", for "SHO", "SHR" and "IS" |
| DH.WIS504035 | (4) ABS Flask Holder, for 200~300ml Flask, "FH250", for "SHO", "SHR" and "IS" |
| DH.WIS504040 | (5) ABS Flask Holder, for 500~1000ml Flask, "FH500", for "SHO", "SHR" and "IS" |
| DH.WIS600100 | (6) STS Wire Spring Flask Holder, for 100ml Flask, "FHS100", for "SHO", "SHR" and "IS" |
| DH.WIS600250 | (7) STS Wire Spring Flask Holder, for 250ml Flask, "FHS250", for "SHO", "SHR" and "IS" |
| DH.WIS600500 | (8) STS Wire Spring Flask Holder, for 500ml Flask, "FHS500", for "SHO", "SHR" and "IS" |
| DH.WIS601000 | (9) STS Wire Spring Flask Holder, for 1000ml Flask, "FHS1000", for "SHO", "SHR" and "IS" |



(1) Universal Platform "SP600" (Included)



(2) Universal Spring Rack "SR500" (Optional)



ABS Flask Holders (Optional)



STS Wire Spring Flask Holder (Optional)



WiseRemote Control Software : Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

* You can Download this Software at DAIHAN-Sci.com Shopping-mall

DAIHAN-brand[®] Precise Shaking Incubators "ThermoStable[™] IS-10", Top Door-type, Orbital Motion with Universal Platform, Fuzzy Control, with or without illuminators & Recorder, up to 60°C, ±0.2°C, 30~250 rpm Universal Platform with Certi. & Traceability



(a) Room Temp. +5℃~60℃, With Universal Platform "ThermoStable™ IS-10"



(b) 10 ℃~60 ℃, With Universal Platform "ThermoStable™ IS-10R"

universal hadoffit with certi. & naccaointy

- Made in Korea
 CE Certified
 PL (Product Liability) Insurance
 with Certificate & Traceability : Controlled by Serial Number,
- Certificate, Delivery-information, and Traceable Data Base System
- Useful for Biological Cultures under various Temperature
- Patented Jog-Shuttle Control System
- $*\, \text{Precise}$ Temperature Control by Digital Fuzzy Controller, up to 60 $^\circ\!\!\!\!C$
- * Digital LCD with Back-Light Function
- * Minimum Noise and No Vibration
- * Advanced Shaking Mechanism Provides Quiet Shaking and Precise Speed Control
- * Automatic Stop of Shaking, Heating and Refrigeration when a Door opens
- * Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)
- * RS232C Interface for Monitoring and Controlling with PC

Specifications & Ordering information

| Spec. | Spec. Model | | (a) ThermoStable™ IS-10 | (c) ThermoStable™ IS-10RL | | | | |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------|--------|--------------------------------------------------------------|------------------------------|--------------------------|--|--|--|
| Illumination Sys | stem | | No | one | FPL 55W×4ea | | | |
| Temp. Range | | | R/T +5℃ ~ 60℃ | 10 ℃ · | ~ 60°C | | | |
| Temp. Accuracy | & Unifor | nity | Accuracy : ±0.2 | ℃ at 37℃, Uniformity | : ± 0.5℃ at 37℃ | | | |
| Capacity | | | | 229Lit. | | | | |
| Temp. Sensor | | | | PT100 Sensor | | | | |
| Heater | | | 800 W | 1 kW | 1.2 kW | | | |
| Compressor | | | None | 1/3 | BHP | | | |
| Compressor Co | ssor Control None Intelligent Control of Refrigerator for Overload of Compresso | | | | | | | |
| Refrigerant | | | CFC-Fre | e (404A) Refrigeration | n System | | | |
| Shaking Speed | & Stroke | | 30 ~ 2 | 50 rpm, 25mm Orbital | Motion | | | |
| Timer & Alarm 99hr 59min (with Continuous run.), Error statu | | | | | status & Timer-end | | | |
| Display | | | Digital LCD with Back-Light Function | | | | | |
| Controller | | | Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) | | | | | |
| Room Lamp | | | Krypton La | amp, 60W | None | | | |
| Platform | | | Included Universal P | latform for Various Sha | pes & Sizes of Flasks | | | |
| Optional Flask I | lolder | | Durable & Flexit | ole Plastic Flask Holde | er (up to 1000ml) | | | |
| Available Max. | for 50~10 | 0ml | Available 68 e | ea Flask Holder, for 50 | ~100ml Flask | | | |
| Capacity of | for 200~3 | 00ml | Available 36 ea Flask Holder, for 200~300ml Flask | | | | | |
| Flask Holder | for 500~1 | ,000ml | Available 21 ea | Flask Holder, for 500 | ~1,000ml Flask | | | |
| Safety Circuit | | | Over Temp./ Current Pr | rotector, Leakage Breake | r, Sensor Error Detector | | | |
| Material | | | Internal : Stainless-st | eel (#304), External : | Powder Coated steel | | | |
| Dimension | | | Internal: 750×720× | h400mm, External : 1, | 065×900×h980mm | | | |
| Packing Size (w | ,, | nm) | 1,2 | 220×1,060×h1,200n | าท | | | |
| & Gross Weight | | | 231 kg | 238 kg | 238 kg | | | |
| Power Consumption | | | 800 W | 1.8 kW | 2.1 kW | | | |
| Electrical Reqts. | | | 1 Phase, AC 1 | 20 V, 60 Hz or AC 23 | 0 V, 50 / 60 Hz | | | |
| | 60Hz | 230V | DH.WIS00210 | DH.WIS04210 | DH.WIS05210 | | | |
| Cat. No. | L | | - | | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand[®] Precise Shaking Incubators "ThermoStable™ IS-10">

Optional Platform/Spring Rack/Flask Holders/Recorders

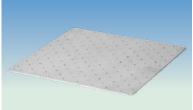
| DH.WIS504510 | (1) Universal Spring Rack, w693×d653×h135mm, "SR510", for "IS-10(R/RL)" |
|--------------|----------------------------------------------------------------------------------------------------------------|
| DH.WIS504610 | (2) Universal Platform, w688 × h648mm, "SP610", for "IS-10(R/RL)" |
| DH.WIS504030 | (3) ABS Flask Holder, for 50~100ml Flask, "FH100", for "SHO", "SHR" and "IS" |
| DH.WIS504035 | (4) ABS Flask Holder, for 200~300ml Flask, "FH250", for "SHO", "SHR" and "IS" |
| DH.WIS504040 | (5) ABS Flask Holder, for 500~1000ml Flask, "FH500", for "SHO", "SHR" and "IS" |
| DH.WIS600100 | (6) STS Wire Spring Flask Holder, for 100ml Flask, "FHS100", for "SHO", "SHR" and "IS" |
| DH.WIS600250 | (7) STS Wire Spring Flask Holder, for 250ml Flask, "FHS250", for "SHO", "SHR" and "IS" |
| DH.WIS600500 | (8) STS Wire Spring Flask Holder, for 500ml Flask, "FHS500", for "SHO", "SHR" and "IS" |
| DH.WIS601000 | (9) STS Wire Spring Flask Holder, for 1000ml Flask, "FHS1000", for "SHO", "SHR" and "IS" |
| DH.WTH05100 | (10) Temperature Recorder, with 6ea Ribbon Cassette & Chart Paper LED, 6ch/10sec, 144×144×h233mm, "WTH5105" |
| DH.WTH05108 | Ribbon Cassette, 6 Colors, "WTH5108" |
| DH.WTH05105 | Chart Paper, w100mm×L10m, 33 Days, "WTH5105" |



(c) 10 ℃~60 ℃, with Universal Platform & Illumination System "ThermoStable IS-10RL"



(1) Universal Spring Rack "SR510" (Optional)



(2) Universal Platform "SP610" (Included)



STS Wire Spring Flask Holder (Optional)



(10) Temperature Recorder : with 6ea Ribbon Cassette and Chart Paper



ABS Flask Holders (Optional)



WiseRemote Control Software : Connection of Temperature Devices with Interface RS232C to a PC Export Recorded Data(Excel Spreadsheet)

 You can Download this Software at DAIHAN-Sci.com Shopping-mall DAIHAN-brand[®] Multi-Stack Refrigerated Shaking Incubator "WIS-ML", Orbital Motion, with 2-/4-Universal Platform with Universal Platform, Digital Fuzzy Control, 2 or 4 Independent Shaking Speed Control, 10~60°C, 30~250 rpm, 2-/4-Stacks 2-/4-Universal Platform



Multi-Stack Refrigerated Shaking Incubator with 4× Universal Platform "WIS-ML04"

Made in Korea CE Certified PL (Product Liability) Insurance

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Excellent for Multi-use and wide range of Sample Testing under various Temperature
- Patented Jog-Shuttle Control System
- * Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- * Intelligent Control of Refrigerator for Preventing Overload of Compressor
- * High-Quality LCD with Back-Light Function Used
- * 10~60 $^\circ C$ Range, Accuracy of \pm 0.1 $^\circ C$
- * Advanced Shaking Mechanism provides Quiet Shaking and Precise Speed Control
- * Space Saving Design for Large Quantity Samples with 2 or 4 Independent Shaking Speed Controller
- * Automatic Stop of Shaking, Heating and Refrigeration when the Door is Opened
- * RS232C Interface for Monitoring and Controlling with PC
- * Over Temperature & Over Current Protection and Sensor Error Detection
- * Including Universal Platform for Various Shapes and Sizes of Flasks
- * Universal Spring Rack for Various Shapes/Sizes of Flasks (Optional)

Specifications & Ordering information

| Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. Capacity of Flask Holder for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask for 50~100ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (#304), External : Powder Coated steel Dimension (w × d × h) Internal (mm) 700 × 700 × 1,400 700 × 700 × 1,790 Packing Size (w × d × h) (mm) & Gross Weight 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 | Spec. Model | | (a) "WIS-ML02" | (b) "WIS-ML04" | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------|------------------------------------------------------------------|---------------------------------------------------------|-------|--|--|--|
| Temp. Uniformity & Sensor ±1.0°C at 37°C, PT100 Sensor Heater 1.5 kW 1.8 kW Compressor 1/2HP 3/4HP Compressor Control Intelligent Control of Refrigerator for Preventing Overload of Compressor Refrigerant CFC-Free(404A) Refrigeration System Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Tum+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Plate Size w700 × d600mm Plate Size Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask for 200~300ml Available 21 ea Flask Holder, for 50~1,000ml Flask for 500~100ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 (w × d × h) External (mm) 1,290 × 850 × 1,445< | Shaking Stacks | | | | | | | |
| Heater 1.5 kW 1.8 kW Compressor 1/2HP 3/4HP Compressor Control Intelligent Control of Refrigerator for Preventing Overload of Compressor Refrigerant CFC-Free(404A) Refrigeration System Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Plate Size Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gpacity of Flask Holder for 200~300ml Available 36 ea Flask Holder, for 500~100ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,290 × 2,350 Binension (w × d × h) 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 & Gross Weight 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 | Temp. Range & | Accuracy | 10°C~60°C, ± | 0.2℃ at 37℃ | | | | |
| Compressor 1/2HP 3/4HP Compressor Control Intelligent Control of Refrigerator for Preventing Overload of Compressor Refrigerant CFC-Free(404A) Refrigeration System Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 36 ea Flask Holder, for 50~100ml Flask Gafety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Wx d × h) External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 397 kg 555 kg | Temp. Uniformit | y & Sensor | ±1.0℃ at 37℃ | , PT100 Sensor | | | | |
| Compressor Control Intelligent Control of Refrigerator for Preventing Overload of Compressor Refrigerant CFC-Free(404A) Refrigeration System Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 36 ea Flask Holder, for 50~100ml Flask Gafety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Wx d × h) External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 397 kg 555 kg | Heater | | 1.5 kW | 1.8 kW | | | | |
| CFC-Free(404A) Refrigeration System Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Plate Size Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Flask Holder Durable & Flexible Plastic Flask Holder, for 50~100ml Flask Optional Flask Holder Durable & Flexible Plastic Flask Holder, for 50~100ml Flask Available Max. for 50~100ml Available 36 ea Flask Holder, for 500~1,000ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (# 304), External : Powder Coated steel Dimension 1,500 × 1,200 × 1,790 <td cols<="" th=""><th>Compressor</th><th></th><th>1/2HP</th><th>3/4HP</th></td> | <th>Compressor</th> <th></th> <th>1/2HP</th> <th>3/4HP</th> | Compressor | | 1/2HP | 3/4HP | | | |
| Shaking Speed & Stroke 30 ~ 250 rpm, 25mm Orbital Motion Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Tum+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gapacity of Flask Holder for 50~100ml Available 36 ea Flask Holder, for 500~1,000ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Wx d × h) External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 397 kg 555 kg | Compressor Co | ntrol | Intelligent Control of Refrigerator for | Preventing Overload of Compressor | | | | |
| Timer & Alarm 99hr 59min (with Continuous run.), Error status & Timer-end Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Plate Size 0000 × 0600mm Plate Size 0000 × 0000ml Available 68 ea Flask Holder, for 500~100ml Flask for 500~1000ml Available 21 ea Flask Holder, for 500~1,000ml Flask for 500~1000ml Flask Holder 00000 × 0000 × 1,000 Material Internal (mm) 700 × 700 × 1,100 Dimension Internal (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 <t< th=""><th>Refrigerant</th><th></th><th>CFC-Free(404A) R</th><th>efrigeration System</th></t<> | Refrigerant | | CFC-Free(404A) R | efrigeration System | | | | |
| Display Digital LCD with Back-Light Function Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gapacity of Flask Holder for 500~100ml Available 36 ea Flask Holder, for 500~1,000ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Dimension (w × d × h) Internal (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 & Gross Weight 397 kg 555 kg | Shaking Speed | & Stroke | 30 ~ 250 rpm, 25r | mm Orbital Motion | | | | |
| Controller Digital Fuzzy Controller with Jog-Shuttle Switch (Tum+Push) Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gapacity of Flask Holder for 50~100ml Available 36 ea Flask Holder, for 200~300ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 (w × d × h) External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 397 kg 555 kg | Timer & Alarm | | 99hr 59min (with Continuous r | run.), Error status & Timer-end | | | | |
| Door Magnetic Packing Door with Pair Glass Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gapacity of Flask Holder for 50~100ml Available 36 ea Flask Holder, for 200~300ml Flask Flask Holder Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Dimension (w × d × h) External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) 397 kg 555 kg | Display | | Digital LCD with B | ack-Light Function | | | | |
| Plate Size w700 × d600mm Plate Size w700 × d600mm Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask Gapacity of Flask Holder for 50~100ml Available 36 ea Flask Holder, for 200~300ml Flask For 200~300ml Available 36 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (# 304), External : Powder Coated steel Dimension (w × d × h) Internal (mm) 7:00 × 7:00 × 1;100 7:00 × 7:00 × 1;790 Packing Size (w × d × h) (mm) 1;500 × 1;200 × 1;750 1;500 × 1;200 × 2;350 & Gross Weight 397 kg 5:55 kg | Controller | | Digital Fuzzy Controller with Jo | og-Shuttle Switch (Turn+Push) | | | | |
| Platform Included Universal Platform for Various Shapes & Sizes of Flasks Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. Capacity of Flask Holder for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask for 500~1000ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 External (mm) 1,290 × 850 × 1,445 1,290 × 850 × 2,125 Packing Size (w × d × h) (mm) & Gross Weight 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 | Door | | Magnetic Packing D | Door with Pair Glass | | | | |
| Optional Flask Holder Durable & Flexible Plastic Flask Holder (up to 1000ml) Available Max. Capacity of Flask Holder for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask for 50~100ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (#304), External : Powder Coated steel Dimension (w × d × h) Internal (mm) 700 × 700 × 1,400 700 × 700 × 1,790 Packing Size (w × d × h) (mm) & Gross Weight 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 | Plate Size | | w700×d600mm | | | | | |
| Available Max. Capacity of Flask Holder for 50~100ml Available 68 ea Flask Holder, for 50~100ml Flask for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask for 500~1000ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (#304), External : Powder Coated steel Dimension (w × d × h) Internal (mm) 700 × 700 × 1,100 700 × 700 × 1,790 Packing Size (w × d × h) (mm) & Gross Weight 1,500 × 1,200 × 1,750 1,500 × 1,200 × 2,350 397 kg | Platform | | Included Universal Platform for Various Shapes & Sizes of Flasks | | | | | |
| For autobe max. for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask Gapacity of Flask Holder for 200~300ml Available 36 ea Flask Holder, for 200~300ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700×700×1,100 700×700×1,790 Dimension (w×d×h) Internal (mm) 1,290×850×1,445 1,290×850×2,125 Packing Size (w×d×h) (mm) & Gross Weight 1,500×1,200×1,750 1,500×1,200×2,350 | Optional Flask H | lolder | Durable & Flexible Plastic Flask Holder (up to 1000ml) | | | | | |
| Flask Holder for 500~1000ml Available 21 ea Flask Holder, for 500~1,000ml Flask Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal : Stainless-steel (#304), External : Powder Coated steel Dimension (w×d×h) Internal (mm) 700×700×1,100 700×700×1,790 Packing Size (w×d×h) (mm) & Gross Weight 1,500×1,200×1,750 1,500×1,200×2,350 397 kg 555 kg | Available Max. | for 50~100ml | | | | | | |
| Safety Circuit Over Temp./ Current Protector, Sensor Error Detector Material Internal (mm) 700×700×1,100 700×700×1,790 Dimension (w×d×h) Internal (mm) 700×700×1,445 1,290×850×2,125 Packing Size (w×d×h) (mm) & Gross Weight 1,500×1,200×1,750 1,500×1,200×2,350 | | for 200~300ml | Available 36 ea Flask Ho | lder, for 200~300ml Flask | | | | |
| Material Internal : Stainless-steel (#304), External : Powder Coated steel Dimension (w×d×h) Internal (mm) 700×700×1,100 700×700×1,790 External (mm) 1,290×850×1,445 1,290×850×2,125 Packing Size (w×d×h) (mm) & Gross Weight 1,500×1,200×1,750 1,500×1,200×2,350 | Flask Holder | for 500~1000ml | | | | | | |
| Dimension (w×d×h) Internal (mm) 700×700×1,100 700×700×1,790 External (mm) 1,290×850×1,445 1,290×850×2,125 Packing Size (w×d×h) (mm) & Gross Weight 1,500×1,200×1,750 1,500×1,200×2,350 397 kg 555 kg | Safety Circuit | | Over Temp./ Current Prote | ctor, Sensor Error Detector | | | | |
| (w×d×h) External (mm) 1,290×850×1,445 1,290×850×2,125 Packing Size (w×d×h) (mm) 1,500×1,200×1,750 1,500×1,200×2,350 & Gross Weight 397 kg 555 kg | Material | | Internal : Stainless-steel (#304), External : Powder Coated ste | | | | | |
| Packing Size (w×d×h) (mm) 1,500×1,200×1,750 1,500×1,200×2,350 & Gross Weight 397 kg 555 kg | Dimension | Internal (mm) | 700×700×1,100 | 700×700×1,790 | | | | |
| & Gross Weight 397 kg 555 kg | (w×d×h) | External (mm) | 1,290×850×1,445 | 1,290×850×2,125 | | | | |
| | • • | ,,,, | 1,500×1,200×1,750 | 1,500×1,200×2,350 | | | | |
| | & Gross Weight | | 397 kg | 555 kg | | | | |
| Power Consumption 2.4 kVV 3.2 kVV | Power Consum | ption | 2.4 kW | 3.2 kW | | | | |
| Electrical Regts. 1 Phase, AC 120V, 60Hz or AC 230V, 50/60Hz 1 Phase AC 120V, 60Hz or AC 230' 50/60Hz or 3 Phase | Electrical Reqts. | | | 1 Phase AC 120V, 60Hz or AC 230V, 50/60Hz or 3 Phase | | | | |
| 230V DH.WIS05002 DH.WIS05004 | | 230V | DH.WIS05002 | DH.WIS05004 | | | | |
| Cat. No. | Cat. No. | | | | | | | |
| 3Phase - DH.WIS03004 | | 3Phase | - | DH.WIS03004 | | | | |

* Other Specifications are available upon Customer's Request.

<Continued From...DAIHAN-brand® Multi-Stack Refrigerated Shaking Incubator "WIS-ML">

Optional Platform/Spring Rack/Flask Holders

| DH.WIS504620 DH.WIS504520 | (1) Universal Platform, w645×h645mm, "SP620", for "WIS-ML02/04" (2) Universal Spring Rack, w653×d653×h135mm, "SR520", for "WIS-ML02/04" |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DH.WIS504030 | (3) ABS Flask Holder, for 50~100ml Flask, "FH100", for "SHO", "SHR" and "IS" |
| DH.WIS504035 | (4) ABS Flask Holder, for 200~300ml Flask, "FH250", for "SHO", "SHR" and "IS" |
| DH.WIS504040 | (5) ABS Flask Holder, for 500~1000ml Flask, "FH500", for "SHO", "SHR" and "IS" |
| DH.WIS600100 | (6) STS Wire Spring Flask Holder, for 100ml Flask, "FHS100", for "SHO", "SHR" and "IS" |
| DH.WIS600250 | (7) STS Wire Spring Flask Holder, for 250ml Flask, "FHS250", for "SHO", "SHR" and "IS" |
| DH.WIS600500 | (8) STS Wire Spring Flask Holder, for 500ml Flask, "FHS500", for "SHO", "SHR" and "IS" |
| DH.WIS601000 | (9) STS Wire Spring Flask Holder, for 1000ml Flask, "FHS1000", |
| | for "SHO", "SHR" and "IS" |



Multi-Stack Refrigerated Shaking Incubator with 4×Universal Platform "WIS-ML04"



STS Wire Spring Flask Holder (Optional)

Notes

| | |
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