05. INCUBATOR

Gravity Incubator -Feature

Incubator is a basic piece lab equipment suitable for stagnant incubation and storage of tests requiring a specific range of temperatures for a specific period of time. In accordance to this, our Incubators can maintain a uniform range of temperatures for a certain set period.
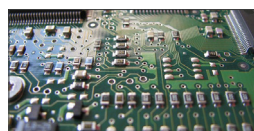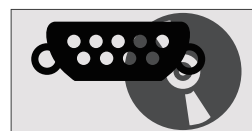
Uniformity sheet

Temp uniformity less than ±1.5℃ at Operation Temp 38℃
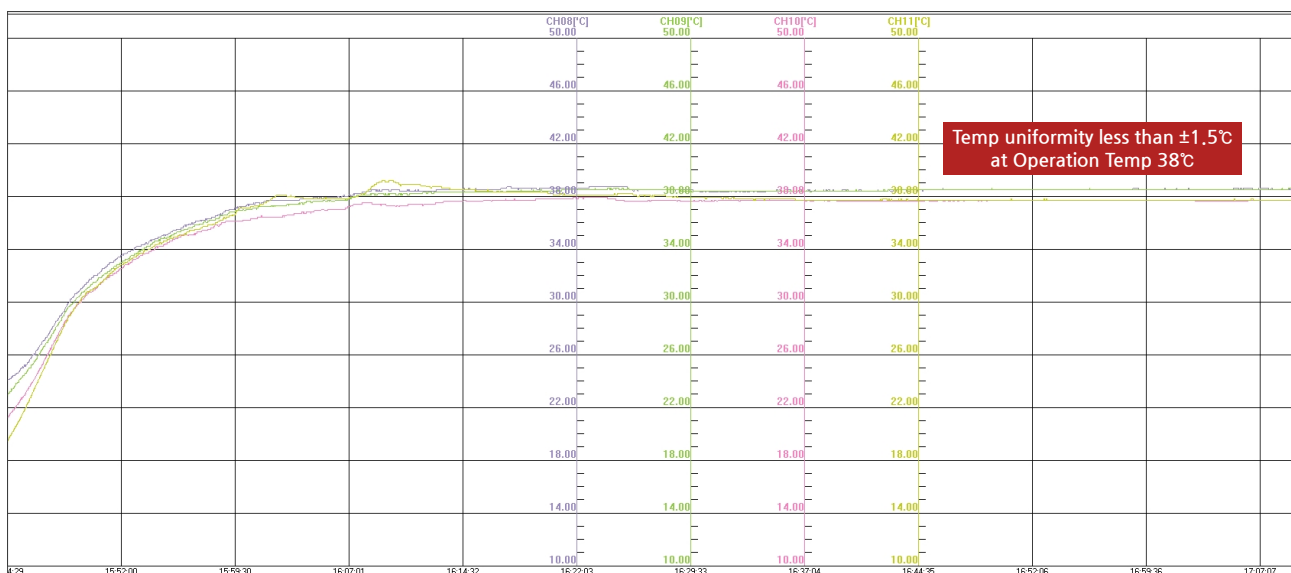
Feature
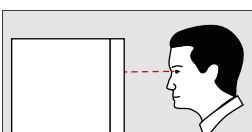

Stainless steel

Accurate temp control

RS-485

Digital PID controller

Inner glass door

Comfortable display at eye level

Gravity Incubator

CE

Model	SH-CH-54G	SH-CH-88G	SH-CH-150G
Air Circulation Type	Natural		
Temp Range	Ambient +5℃ to 70℃ (Ambient + 9℉ to 158℉)		
Temp Control	Microprocessor PID Controller		
Time Range	00.00 to 99HR 59MIN(MIN SEC) Selectable Digital Display		
Temp Accuracy & Stability	±0.1℃		
Capa	54 L	88 L	150 L
Dimension Internal (W×D×H)	360x360x420mm	420x420x500mm	500x500x600mm
	14.17x16.54x16.54''	16.54x16.54x19.69''	19.69x19.69x23.62
Dimension External (L×W×H)	490x475x665mm	550x550x755mm	630x630x850mm
	19.29x18.70x26.18''	21.65x21.65x29.72''	24.80x24.80x33.46
Weight	30 Kg	33 Kg	47 Kg
Material Internal	Stainless Steel		
Material External	Steel Plate with Powder Heating Coated		
Shelves	2 Supplied (10 Maximum)	2 Supplied (10 Maximum)	2 Supplied (10 Maximum)
Heater	300 W	400 W	400 W
Electrical Requirements 120V ,50/60Hz, 1Φ	2.5 A	3.3 A	3.3 A
Cat. No.	CH54G120	CH88G120	CH150G120
Electrical Requirements 230V ,50/60Hz, 1Φ	1.3 A	1.7 A	1.7 A
Cat. No.	CH54G230	CH88G230	CH150G230

. **Accessory**
-Movable Epoxy Coated Wire Shelves 2EA

. **Safety Device**
-Automatic reset function incoming power cut
-Electric leakage breaker
-Over temp function

Refrigerated Incubator -Feature

This version of incubator comes with a high-powered refigeration compressor. Its cooling temperatures ranges from -5°C to 60°C. It is designed to conduct separated tests in high or low temperature. It is also capable of minimizing adjustment period from low to high or vice versa.

Uniformity sheet

Got Temp Stabilization in 8 Min
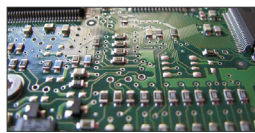
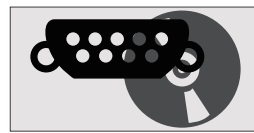Temp uniformity less than ±0.5℃ at Operation Temp 25℃
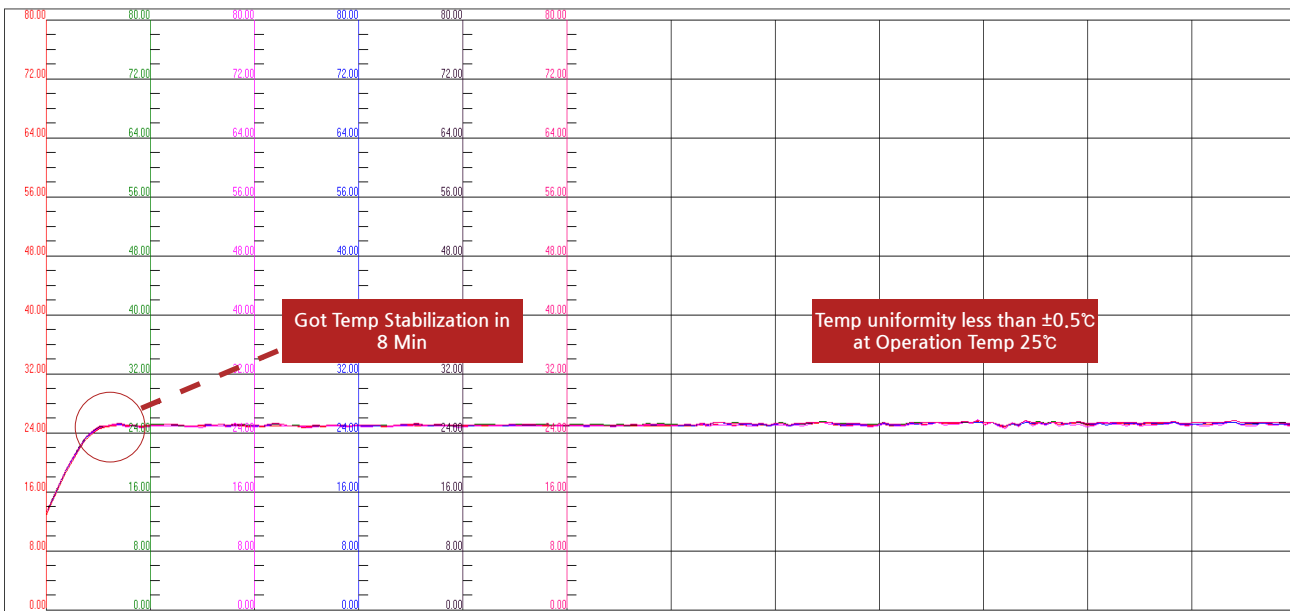
Feature
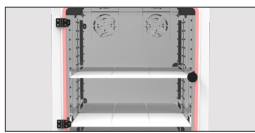
Stainless steel

Accurate temp control
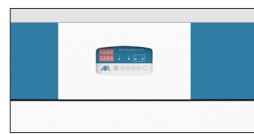

RS-485 or RS-232C interface
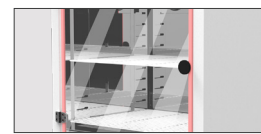

Water proof socket

Leveling caster

Safety devices

Digital controller

Inner glass door

Refrigerated Incubator

CE

Model	SH-CH-54R	SH-CH-149R	SH-CH-250R	SH-CH-480R
Air Circulation Type	Forced			
Temp Range	Ambient -25℃ to 60℃ (Ambient -45℉ to 140℉) (Low limit -5℃)			
Temp Control	Microprocessor PID Controller			
Time Range	00.00 to 99HR 59MIN (MIN SEC) Selectable Digital Display			
Temp Accuracy & Stability	±0.1℃			
Temp Uniformity	±0.5℃			
Capa	54 L	150 L	250 L	480 L
Dimension Internal (W×D×H)	380x340x420mm	555x450x600mm	700x450x800mm	800x600x1000mm
	14.96x13.39x16.54''	21.85x17.72x23.62''	27.56x17.72x31.50''	31.50x23.62x39.37''
Dimension External (W×D×H)	540x650x1170mm	715x760x1350mm	860x760x1590mm	975x960x1935mm
	21.26x25.59x46.06''	28.15x29.92x53.14''	33.86x29.92x62.59''	38.39x37.80x76.18''
Weight	82 Kg	117.2 Kg	156 Kg	195 kg
Material Internal	Stainless Steel			
Material External	Steel Plate with Powder Heating Coated			
Shelves	2 Supplied (12 Maximum)	2 Supplied (17 Maximum)	2 Supplied (24 Maximum)	2 Supplied (31 Maximum)
Water Proof Socket	8A / 1EA	7A / 1EA	6A / 1EA	4A / 1EA
Heater	800 W	1000 W	1200 W	1800 W
Electrical Requirements 230V ,50/60Hz, 1Φ	3.6 A	4.6 A	5.6 A	8.3 A
Cat. No. 50Hz (60Hz)	CH54R230-50 (CH54R230-60)	CH149R230-50 (CH149R230-60)	CH250R230-50 (CH250R230-60)	CH480R230-50 (CH480R230-60)

- **Accessory**
  -Movable Epoxy Coated Wire Shelves 2EA

- **Option**
  -Programmable controller
  -Digital recorder
  -2CH Hybrid recorder
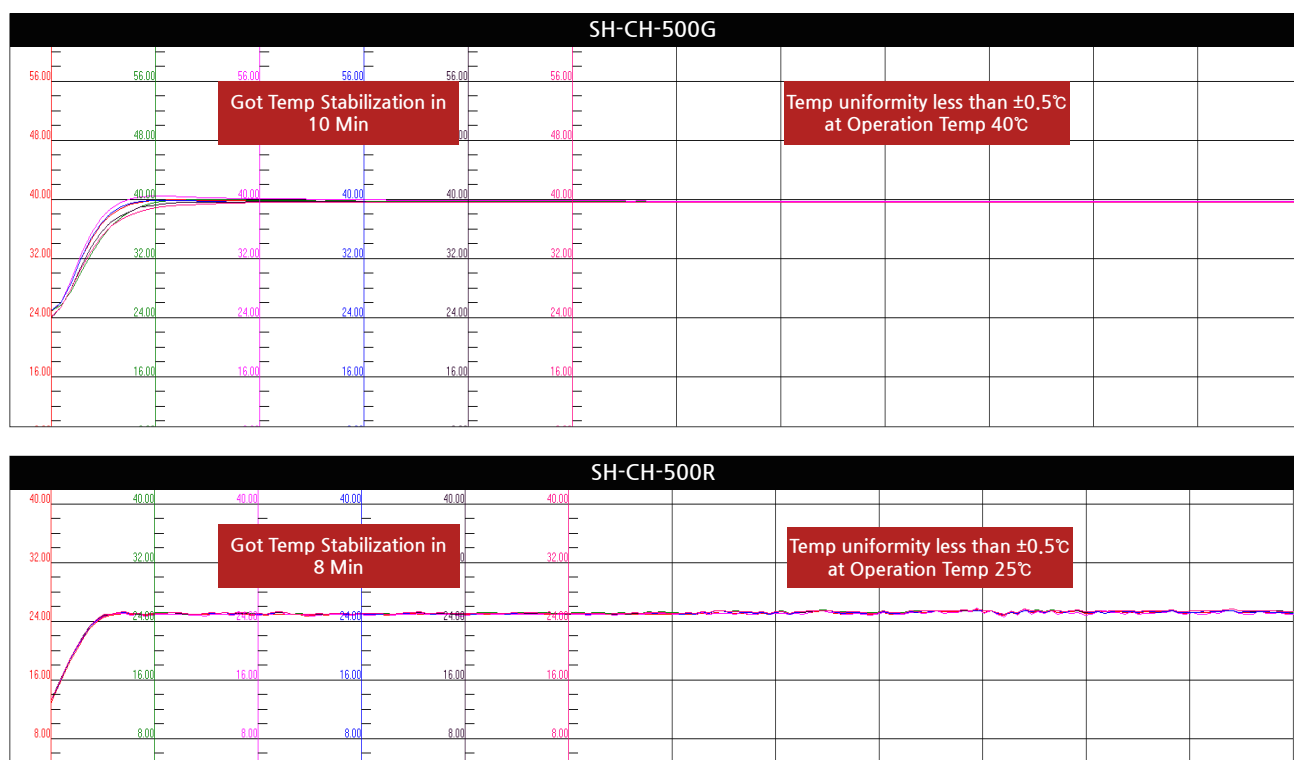 -RS-485 interface
  -RS-232C interface

- **Safety Device**
  -Automatic reset function incoming power cut
  -Buzzer on when set time arrived
  -Door open alarm
  -Electric leakage breaker
  -Over temp controller
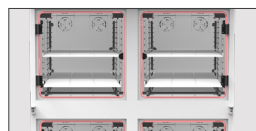 -Refrigerator over load protection

4-Chamber Incubator -Feature

For efficient space usage and increased productivity level, we provide a 4-room chamber model that can be controlled independently. The user can set four different temperatures into these four different compartments and have independent processes inside each of these four chambers at the same time.

Uniformity sheet

SH-CH-500G

Got Temp Stabilization in 10 Min

Temp uniformity less than ±0.5℃ at Operation Temp 40℃

SH-CH-500R

Got Temp Stabilization in 8 Min

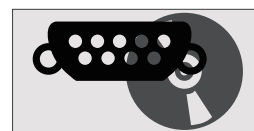Temp uniformity less than ±0.5℃ at Operation Temp 25℃

Feature

Stainless steel

Accurate temp control

RS-485 or RS-232C interface

Leveling caster

Safety devices

Digital PID controller

Water proof sockt

4-Chamber Incubator

CE
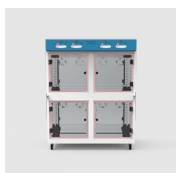
Model	SH-CH-500G	SH-CH-500R
Air Circulation Type	Forced	
Temp Range	Ambient + 5℃ to 70℃ Ambient + 9℉ to 158℉	Ambient -30℃ to 60℃ (Low limit -10℃) Ambient -54℉ to 140℉
Temp Control	Microprocessor PID Controller	
Time Range	00.00 to 99HR 59MIN (MIN SEC) Selectable Digital Display	
Temp Accuracy & Stability	±0.1℃	
Temp Uniformity	±0.5℃	
Capa	125L x 4 Chambers, Total 500L	
Dimension Internal (W×D×H)	500x500x500mm x 4 Chambers	
	19.69x19.69x19.69'' x 4 Chambers	
Dimension External (W×D×H)	1275x695x1575mm	1545x860x1775mm
	50.19x27.36x62.00''	60.82x33.85x69.88''
Weight	250 Kg	290 Kg
Material Internal	Stainless Steel	
Material External	Steel Plate with Powder Heating Coated	
Shelves	2 Supplied / Chamber, total 8EA (15EA / Chamber, total 60EA, Maximum)	
Water Proof Socket	N/A	1EA x 1 Room=4EA, (7A / 1EA)
Refrigerator Compressor	N/A	1/4HP x 4 EA
Heater	2 KW	4 KW
Electrical Requirements 230V ,50/60Hz, 1Φ	9 A	22 A
Cat. No. 50Hz (60Hz)	CH500G-50 (CH500G-60)	CH500R-50 (CH500R-60)

• Accessory

-Movable Epoxy Coated Wire Shelves
(2EA /Chamber, total 8EA)

• Option

-Programmable Controller
-Digital Recorder
-2CH Hybrid Recorder
-RS-485 interface
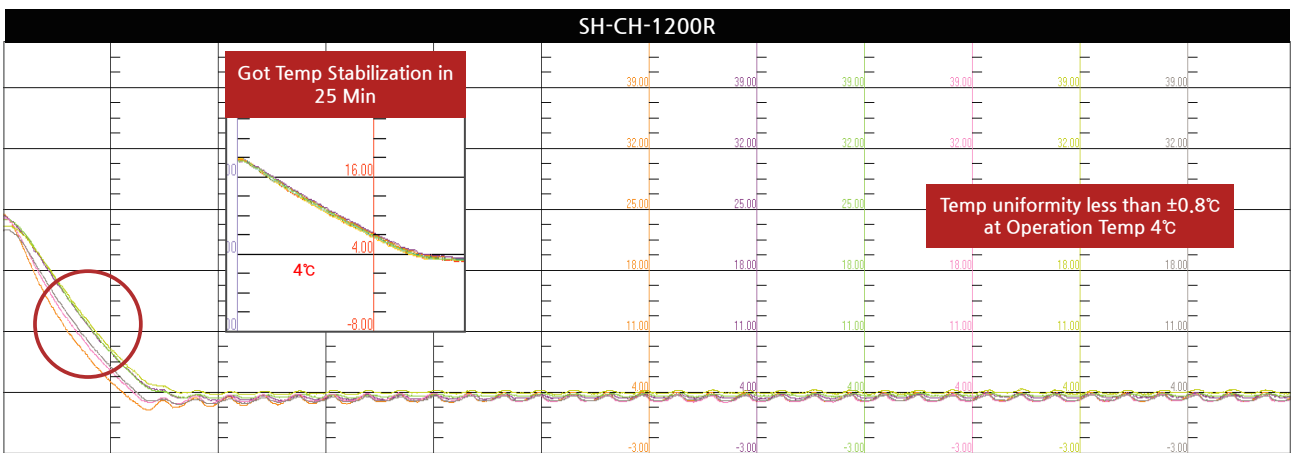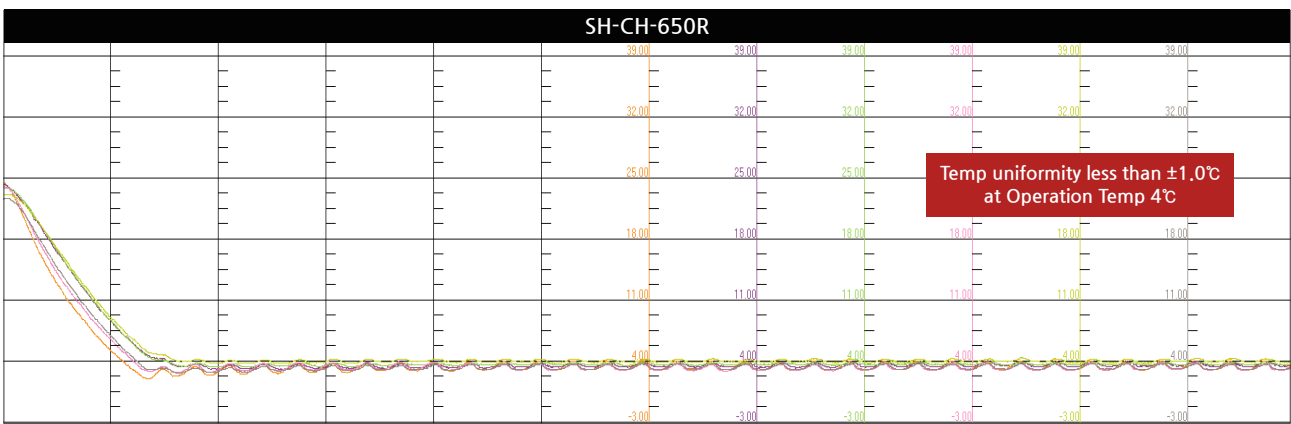-RS-232C interface

• Safety Device

-Automatic reset function incoming power cut
-Buzzer on when set time arrived
-Door open alarm
-Electric leakage breaker
-Over temp function
-Refrigerator over load protection
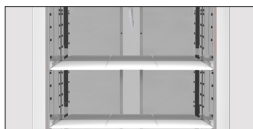
Cold Lab Chamber -Feature

Cold lab chamber is a lab equipment which is necessary when keeping reagent or testing sample in a low temperature.
SH Scientific's cold lab chamber supports temperature from 0℃ to 10℃ and provides sophisticated and stable temperature control performed by heater controlling method.

Uniformity sheet

SH-CH-650R

Temp uniformity less than ±1.0℃ at Operation Temp 4℃

SH-CH-1200R

Got Temp Stabilization in 25 Min

4℃

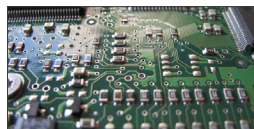Temp uniformity less than ±0.8℃ at Operation Temp 4℃
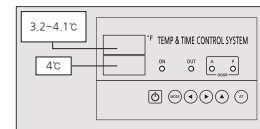
Feature

Stainless steel

Accurate temp control

Water proof socket

Stable temperature control

Caster

Super cool down

Digital PID controller

RS-485 interface
or
RS-232C interface

Cold Lab Chamber

CE

Model	SH-CH-650R	SH-CH-1200R
Air Circulation Type	Forced	
Temp Range	0℃ to 10℃ (32℉ to 50℉)	
Temp Control	Microprocessor PID Controller	
Time Range	00.00 to 99HR 59MIN (MIN SEC) Selectable Digital Display	
Temp Accuracy & Stability	±0.1℃	
Capa	620 L	1200 L
Dimension Internal (W×D×H)	645x700x1364mm	1330x720x1380mm
	25.39x27.55x53.70''	52.36x28.34x54.33''
Dimension External (W×D×H)	720x840x2085mm	1420x855x2092mm
	28.34x33.07x82.08''	55.90x33.66x82.36''
Weight	120 Kg	220 Kg
Material Internal	Stainless Steel	
Material External	Steel Plate with Powder Heating Coated	
Shelves	4 Supplied (34 Maximum)	8 Supplied (70 Maximum)
Water Proof Socket	120V: Total 8A, 230V: Total 12A / 2EA	120V: Total 4A, 230V: Total 9A / 3EA
Refrigerator Compressor	1/3HP	3/4HP
Electrical Requirements 120V, 50/60Hz, 1Φ	6 A	11 A
Cat. No.	CH650R120-50(CH650R120-50-60)	CH1200R120-50(CH1200R120-60)
Electrical Requirements 230V, 50/60Hz, 1Φ	3 A	6 A
Cat. No. 50Hz (60Hz)	CH650R230-50(CH650R230-60)	CH1200R230-50(CH1200R23--60)

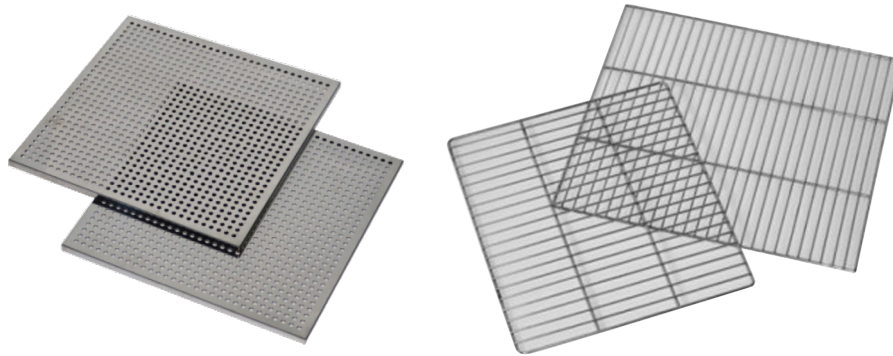**. Accessory**
-Movable Epoxy Coated Wire Shelves

. Option
-Digital Recorder
-2CH Hybrid Recorder
-RS-485 interface
-RS-232C interface

. Safety Device
-Automatic reset function incoming power cut
-Buzzer on when set time arrived
-Door open alarm
-Electric leakage breaker

Shelves Detail

Catalog No.	Type	DIMENSION (WxDxH)	Weight	Material	Applicable Model
CHWS54	WIRE PLATE	350x315x8mm 13.78x12.40x0.31''	0.5 Kg	Steel With Epoxy Coated	SH-CH-54G, R
CHPS54	PUNCH PLATE	350x315x17mm 13.78x12.40x0.67''	0.9 Kg	Stainless Steel	
CHWS100	WIRE PLATE	450x375x8mm 17.72x14.76x0.31''	0.7 Kg	Steel With Epoxy Coated	SH-CH-100G
CHPS100	PUNCH PLATE	450x375x17mm 17.72x14.76x0.67''	1.4 Kg	Stainless Steel	
CHWS149	WIRE PLATE	525x425x8mm 20.67x16.73x0.31''	0.9 Kg	Steel With Epoxy Coated	SH-CH-149G, R
CHPS149	PUNCH PLATE	525x425x17mm 20.67x16.73x0.67''	1.8 Kg	Stainless Steel	
CHWS250	WIRE PLATE	670x425x8mm 26.38x16.73x0.31''	1.5 Kg	Steel With Epoxy Coated	SH-CH-250G, R
CHPS250	PUNCH PLATE	670x425x17mm 26.38x16.73x0.67''	2.8 Kg	Stainless Steel	
CHPS480	PUNCH PLATE	770x575x17mm 30.31x22.64x0.67''	3.8 Kg	Stainless Steel	SH-CH-480R
CHWS500	WIRE PLATE	470x475x8mm 18.50x18.70x0.31''	0.9 Kg	Steel With Epoxy Coated	SH-CH-500G, R
CHPS500	PUNCH PLATE	470x475x17mm 18.50x18.70x0.67''	1.8 Kg	Stainless Steel	
CHWS650	WIRE PLATE	615x620x8mm 24.21x24.41x0.31''	2 Kg	Steel With Epoxy Coated	SH-CH-650R
CHWS1200	WIRE PLATE	645x564x8mm 25.39x22.20x0.31''	1.9 Kg	Steel With Epoxy Coated	SH-CH-1200R

CO$_2$ Incubator

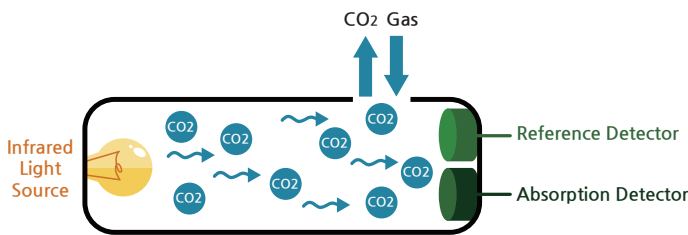CO$_2$ incubator is a key equipment for immunology, oncology genetics and bioengineering. It provides a reliable microprocessor controller to ensure the accuracy and uniformity of temperature and CO$_2$ concentration. Advanced sterilization technology has been applied to keep the experiment from being polluted.

〈CI-191C〉

Feature

· Dual Wave length NDIR provides the precise and reliable CO$_2$ detection.

CO$_2$ Gas

Infrared Light Source

CO2 CO2 CO2 CO2 CO2 CO2 CO2 CO2 CO2

Reference Detector

Absorption Detector

NDIR CO$_2$(Dual Wavelength Type) Sensor

A Non-dispersive infrared sensor is used in gas analysis to determine the gas concentration. It is particularly used for the feature that gas moleculars in asymmetry or more than 3 atomic structures absorbe their own energy selectively. With Dual Wavelength detectors(Reference, Absorption), it provides the precise CO$_2$ detection and stable durability.

Adjustable footings
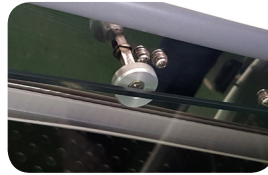
Connecting plate
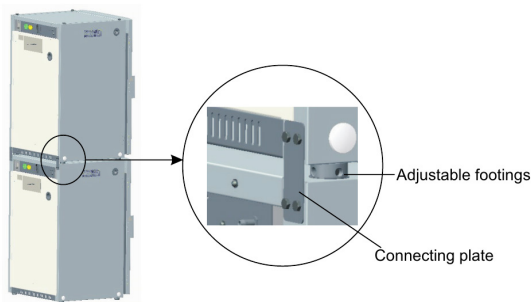
· Stackable units to save space.

· Temperature control on the door prevents condensation.

• Audible and visual alarm at over limit status.

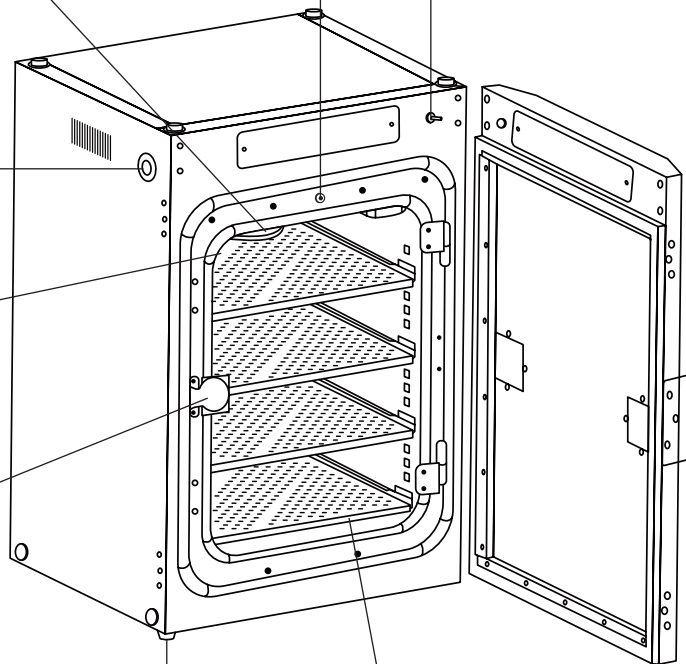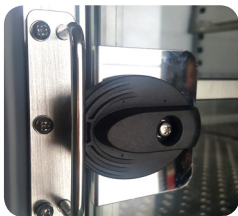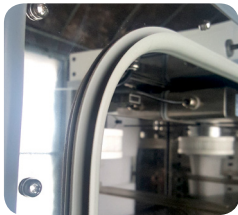• HEPA air filtration provides class 100 air purification.

• Inner Glass Door Sensor

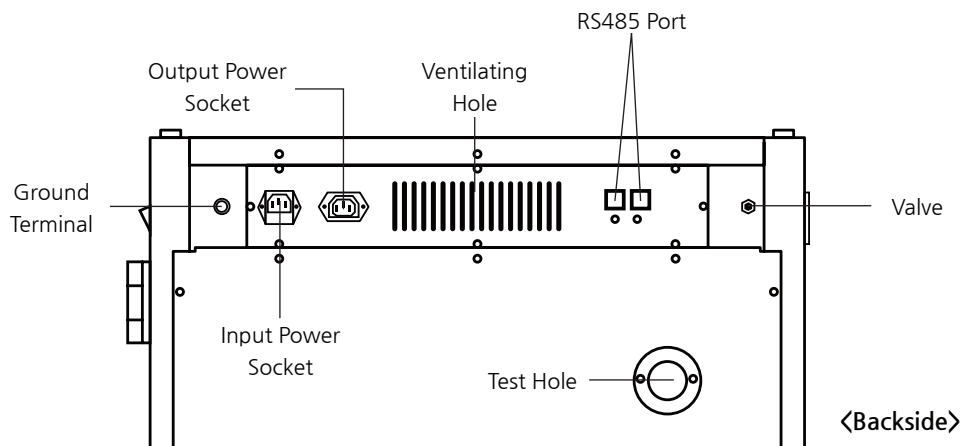• Out Door Glass Door Sensor

Sample Hole

Sample Hole

• Perfect leakage prevention by Inner glass door handle and Sealing Gasket.

• Mirror grade stainless steel chamber with round corner for easy clean up.

Leveling Foot

Tray

RS485 Port

Output Power Socket

Ventilating Hole

Ground Terminal

Valve

Input Power Socket

Test Hole

〈Backside〉

Model	CI-191C
Capa	191 L
Temp. Range	Ambient +5°C~60°C
Temp Uniformity	±0.3℃ (@37°C)
Temp. Accuracy	0.1℃
CO_2 Sensor	IR
CO_2 Range	0~20%
CO_2 Control Accuarcy	±0.1%
CO_2 Detector	Dual wavelength NDIR
Recover Time after Open Door on Temp.	≤6min (@37℃)
Recover Time after Open Door 30s on CO_2	≤6min (@5%)
Volume of Humidity Pan	3 L
Insulation	Dry-Wall
Relative Humidity	>95% @37°C
Dimension External (W×D×H)	670x705x1010mm
	26.38x27.76x39.76''
Chamber Dimensions (W×D×H)	540x510x705mm
	21.26x20.08x27.76''
Shelves	4 Supplied
Weight	125kg
Sterilization	140°C (High Temp)
HEPA Filter	Yes
CO_2 Regulator	Yes
Power Supply	220V, 60Hz

. Standard Accessory

Humidifying Pan x1, CO_2 Gas Tube 1Roll
Inlet HEPA Filter x1, Main HEPA Filter x1, CO_2 Regulator x1

〈Humidifying Pan〉   〈CO_2 Gas Tube〉   〈Inlet HEPA Filter〉   〈Main HEPA Filter〉   〈CO_2 Regulator〉

. Option

Automatic CO_2 Gas Cylinder Switchover System

Valve A
Filter
Pressure relief valve
Valve B
CO2 gas cylinder
CO2 gas cylinder