Your Haier Biomedical Partner

Qingdao Haier Biomedical Co., Ltd.

No.280 Feng Yuan Road, High-tech Zone,
Qingdao, 266111, P.R. China
E-mail: inquiry@haierbiomedical.com
Website: www.haiermedical.com

Haier Biomedical International | Haier Biomedical International | @haiermedicalint | Haier Biomedical International | Haier Biomedical International

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Haier Biomedical
Intelligent Protection of Life Science

Microbiological Culture Solutions

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Water Jacketed CO_2 Incubator

A water-jacketed CO_2 incubator is a laboratory culture device specifically designed for culturing cells and tissues. It is widely used in fields such as cell biology, molecular biology, immunology, bioengineering, and drug development. Its excellent heat preservation performance and temperature control ability make it especially suitable for applications in the fields of assisted reproduction and genetics.

Innovative Design

To cultivate with a high survival rate

Accurate control of temperature and concentration to optimize the cell growth environment.

A more reliable environment

Multiple air circulation filtration technology creates a Class 100 clean environment inside the cabinet.

Full process monitoring

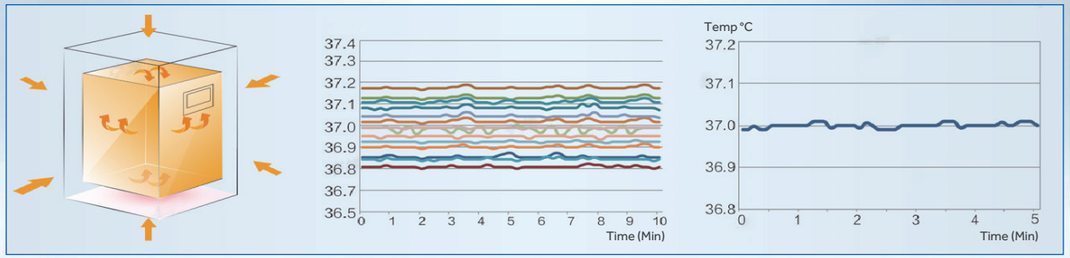
A comprehensive and improved safety alarm system.
Water level alarm inside the box, audible and visual alarm reminder; Temperature, CO_2 concentration, O_2 concentration exceeded alarm level and door open timeout and other alarm functions; Optional IoT.

Product Advantages

Optimize the cell growth environment and precisely control the temperature and concentration.

Precisely control the temperature to safeguard the experimental results

Based on the principle of fuzzy PID control, using water jacketed heating and outer door heating, the temperature is precisely controlled within the fluctuation range of ±0.1°C, and the temperature uniformity is ≤ ±0.2°C to ensure the normal growth of cells throughout the life cycle.



Schematic diagram of water jacketed heating and outer door heating

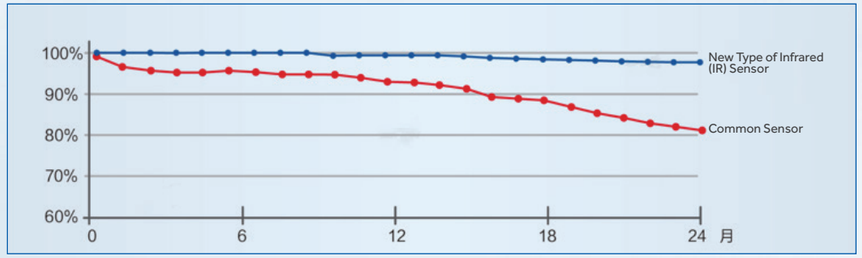
The uniformity of 27 test points is less than ±0.2°C

The fluctuation degree at the center point is less than ±0.1°C

Note: The above data were measured at a set temperature of 37°C and an ambient temperature of 22±3°C

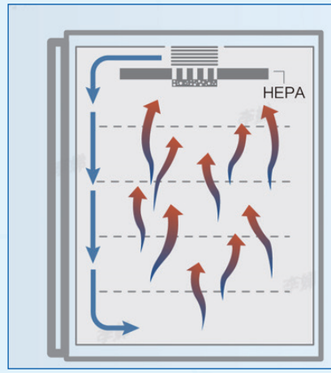
Precise CO_2 concentration control, no calibration required for daily use

- Using a new type of IR sensor that can withstand high temperatures of 100°C, based on the NDIR measurement principle, and using a silicon MEMS emitter with a service life of up to 15 years.
- With built-in temperature and humidity compensation to reduce the influence of humidity and temperature, no need to recalibrate after high-temperature sterilization.
- Using five-point calibration has higher measurement accuracy, sensitivity, accuracy, and small drift, and the measurement offset is less than 0.3% within 2 years.

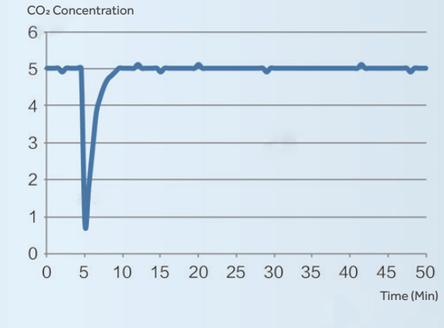


The rapid recovery system of the environment inside the cabinet

Using active airflow control technology, based on the principle of fuzzy PID control, after opening the door for 30 seconds, the CO_2 concentration can quickly return to the set state within 3 minutes. Even if multiple people share one CO_2 incubator and open and close the door frequently, it can still ensure the stability and uniformity inside the cabinet.



A schematic diagram of the purification airflow



The CO_2 concentration recovery curve (with the door open for 30 seconds)

Precise O_2 concentration control to meet more incubator requirements (optional)

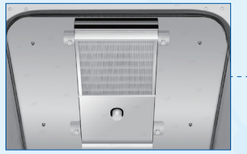
Using a ZrO_2 sensor to achieve control of the oxygen concentration, with an oxygen control range of 1 to 21% and a control accuracy of 0.1%. After opening the door for 30 seconds, it only takes 12 minutes for the O_2 to recover to 5% and 24 minutes to recover to 1%.

A Class 100 clean environment inside the cabinet

Multiple air filtration technologies with a filtration efficiency of up to 99.99%

- The HEPA filtration system ensures that the air quality inside the enclosure reaches Class 100 within 5 minutes after the door is closed.
- The inlet filter can capture particles larger than or equal to 0.2um with a filtration efficiency of 99.99%.

The three-layer thermal stability design of the water jacketed interlayer



The real-time air purification circulation system inside the cabinet

Heating the outer door to prevent condensation on the inner door

Water jacketed technology for longer insulation time

Power outage insulation: within 1 hour of power outage, the temperature ≤1°C; within 10 hours of power outage, the temperature ≤ 7°C

Water Jacketed CO_2 Incubator

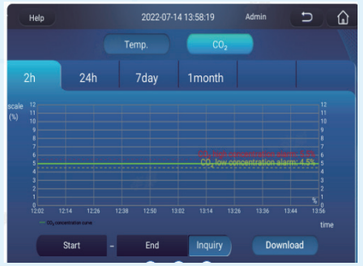
Seamless one-piece stainless steel inner tank for easy cleaning with no dead corner

The working chamber is made of mirror stainless steel, with a seamless one-piece inner tank and a large rounded corner and easy-to-remove bracket design.

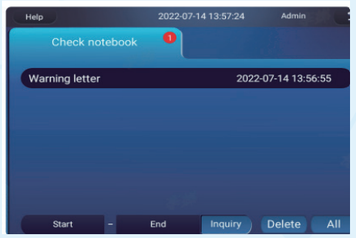
A complete safety alarm system and flexible and convenient interface operation.

- A comprehensive and improved safety alarm system water level alarm inside the cabinet, audible and visual alarm reminder; Temperature, CO_2 concentration, O_2 concentration exceeded alarm level and door open timeout and other alarm functions; Optional IoT.
- Standard 7-inch trouch screen, even wearing rubber gloves can be quickly recognized.
- The status data is clear at a glance: normal operating parameters are displayed in green; abnormal operating parameters are displayed in red for warning.

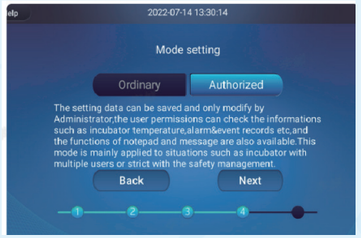
Home screen red warning



Real-time viewing of operating data



Announcement function designed for multiple persons to use the same incubator making it clear to all users on important matters



Operation mode clear management authority: three-levels of authority to ensure the security of data

Specification Data

Model	Volume (L)	External Dimensions (W*D*H)	Internal Dimensions (W*D*H)	Net Weight/ Gross Weight (kg)	Shelf Dimensions (W*D)(mm)	Shelf Qty Standard/Max	The Humidity Control Range	Temperature Sensor
HCP-188W	185	680*635*998	540*506*679	120/140	473*445	4/17	93%RH±2.5	PT1000

The Temperature Control Range	Temperature Fluctuation	Temperature Uniformity	Power Outage Insulation
Ambient temperature +3~55℃	±0.1℃	±0.2℃	within 1 hour of power outage, the temperature ≤1℃; within 10 hours of power outage, the temperature ≤ 7℃

Temperature Control Mode	CO_2 Sensor	CO_2 Control Range	CO_2 Control Accuracy
water jacketed	IR	0-20%	0.1%

Accessories

Optional List	Functional Description
Three-Gas Incubator	Control the oxygen concentration to achieve a hypoxic / hyperoxic culture environment
IoT	Remote monitoring of equipment operating status
4/8 Inner Door	Reduces the impact of opening the door on the environment inside the box and reduces air consumption
Pressure Reducing Valve	Reduce the outlet pressure of the gas cylinder to the operating pressure range of the machine to ensure stable operation
Cylinder Changer (2in1/4in1)	Connect two or four gas cylinders simultaneously to achieve uninterrupted gas supply and reduce the frequency of gas cylinder replacement
Electromagnetic Lock	Private use to avoid cross-disturbance, can not open the door during sterilization
Humidity Display	Humidity display real-time display of humidity environment inside the box
4-20mA	Temperature/concentration and other signals are transmitted, solving many problems such as signal interference in long-wire transmission
Shelve	Increase the number of cultured samples; Various materials available: 304/316/single mirror/double mirror
Heightening Stand	Keeping away from ground contamination
Removable Bottom Frame / Wheeled Trolley	Prevents bacterial contamination of the floor, easy to move position, height can be customized

CO_2 Incubator

Haier Biomedical CO_2 incubator with 180°C dry heat sterilisation provides a safe and secure reproducible growth environment for cell cultures.

HCP-80 (B) HCP-168 (B) HCP-258 (B)

IR Sensitive Control of CO_2 Concentration

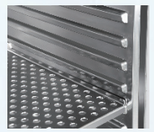
The new IR sensor with high temperature resistance of 190°C is based on the NDIR measurement principle and uses a silicon MEMS transmitter to replace the traditional light source. It can withstand more than 300 dry heat sterilization cycles with a service life of up to 15 years and control accuracy of ±0.1%. German IR infrared sensing technology, zero drift, without need for calibration, drift less than 0.3% within 2 years

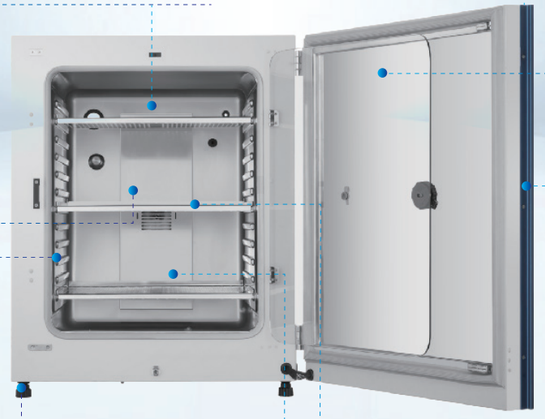
7-inch Touchscreen

Displays CO_2 concentration and temperature data in real time. 15 years of data can be exported via USB

6-sided heating sketch

304 Stainless Interior





Inner Door

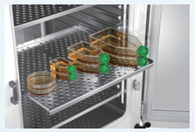
The door ensures the inside of the cabinet is sealed

Outer Door

The heated outer door prevents the condensation of the inner door

Internal Partition

Safety anti-slip design of pull out shelves



Adjustable Feet

It can be double stacked

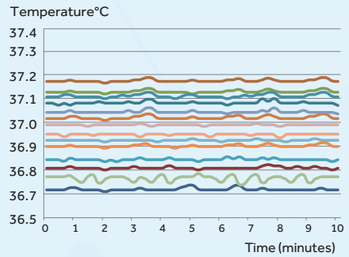
180°C Dry-heat Sterilization

All internal components do not need to be disassembled and do not need separate autoclave sterilization to prevent secondary pollution. Cleaning consumables are not needed, one-button sterilization. The unit can withstand sterilization at 180°C with no disassembly and no manual calibration

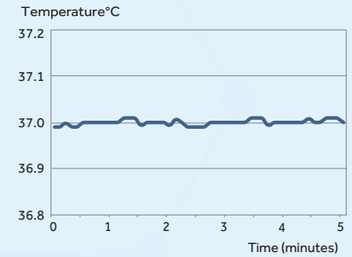
Follow the QR code and learn more about the CO_2 Incubator from Haier Biomedical

Precise and Accurate Temperature Control

Controls the temperature precisely, within ±0.1°C, with six-sided heating based on the fuzzy PID control principle, to provide a stable temperature to ensure the normal growth of cells throughout their life cycle.



Uniformity of 27 measuring points <±0.3°C

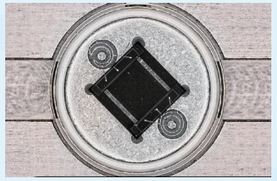


Central consistency point <±0.1°C

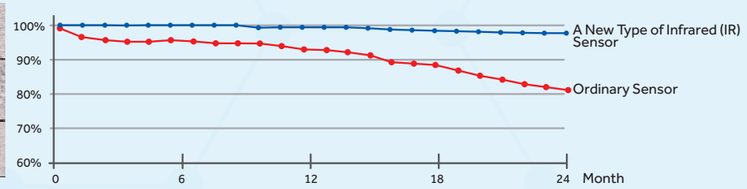
Note: The above data were measured at a set temperature of 37°C and an ambient temperature of 22±3°C

Precise CO_2 Concentration Using New IR Sensor Control Technology

Haier Biomedical's new IR Sensor technology uses NDIR measurement principles and withstands high temperatures of 190°C. The silicon MEMS transmitter can carry out more than 300 dry heat sterilization cycles to extend the service life to 15 years. Built-in temperature and humidity compensation technology reduces the impact of changes in humidity and temperature without the need for calibration after the high temperature sterilization. Five point calibration yields a higher measuring accuracy, sensitivity with less drift.



Silicon-based mems transmitter



Sketch of drift less than 0.3%

Fast Environment Recovery for Optimal Cell Growth

Adopting active air flow control technology, and based on the fuzzy PID control principle, the parameters can be restored without overshoot. After opening the door for 30 seconds, the temperature and CO_2 concentration can be quickly restored within 4 minutes. Even if multiple users share a CO_2 incubator and frequently open and close the door, the stability and uniformity of the incubator can be ensured.

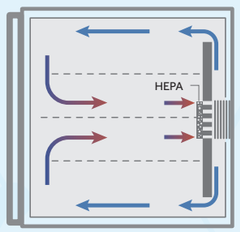
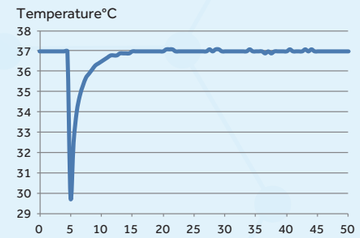
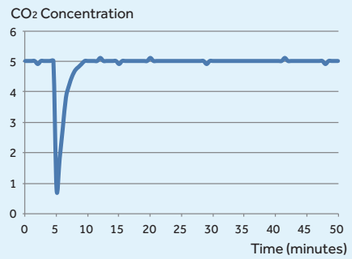


Illustration of purified airflow



Temperature recovery curve (door open for 30s)



CO_2 concentration recovery curve (door open for 30s)

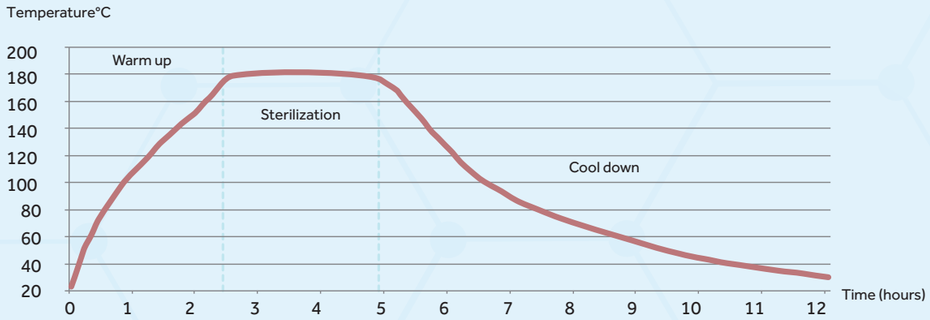
CO_2 Incubator

180°C Dry-Heat Sterilization Technology Minimises Contamination

Easy and effective sterilization of microorganisms including bacteria, fungi and microplasma with strong resistance, at 180°C high temperatures without the need for consumables. Simply press the "sterilization key" to activate and complete the sterilization process automatically in just 12 hours.

Delivers sterility level within the chamber of all surfaces to meet WS/T367-2012 standards.

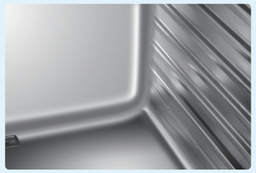
All components are sterilized during the process, there is no need to dissemble internal components (including CO_2 sensors) and decontaminate separately, thus avoiding secondary pollution.



High Efficiency Microbial Filter

The CO_2 inlet is equipped with a high-efficiency microbial filter, with 99.99% filtration efficiency for particles larger than or equal to 0.2μm in diameter. It can effectively filter bacteria and dust particles in the CO_2 gas line to ensure the safety of experimental results.

Seamless Stainless Steel Inner Chamber Easy to Clean



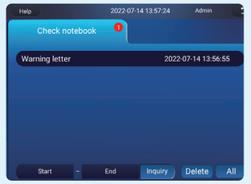
The working chamber is plasma electro polished, stamped stainless steel with wide-arc. Bracketless shelving design ensures that it is quick and easy to clean.

Interactive Intelligent Display with Easy Touch Operation

Touch-sensitive screen with rapid sensing even in rubber gloves. Green indicates normal operational parameters, while a red warning display indicates abnormal, making it easy to view data at a glance. A red warning display and audible buzzer will alarm when water level is low.

Home screen red warning.

Real-time display of operation data & real-time display of temperature, for CO_2 concentration and O_2 concentration, and the data during the culture cycle can be viewed at any time.



Announcement function designed for multiple persons to use the same incubator making it clear to all users on important matters.

Operation mode clear management authority: three-levels of authority to ensure the security of data.

Real-time Monitoring

An IoT module with multi-screen interface provides real-time uploaded parameters, operation parameters, operation curves, records and event records through the IoT cloud platform. The operation of the incubator can be monitored anytime and anywhere through a computer terminal. Alarm function and service function are available through a one-button touch.

Anti-Condensation Heating System to Reduce Pollution Risk

The door on the CO_2 incubator radiates heat to the inner glass door, effectively preventing the glass door from forming condensation.

The possibility of microbial contamination caused by the condensate water is eliminated.

Intelligent Control of Circulating Air Maintains Uniformity

Automatically adjusts the circulation of the air flow, optimising the air flow to avoid air volatilization of samples and ensuring proper uniformity throughout the chamber.

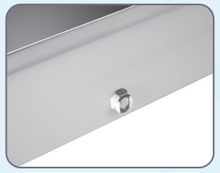
Comprehensive Safety Alarm System

The system ensures the safety of experiments and processes by utilizing an independent temperature alarm system, including a sound light and remote reminder.

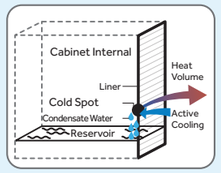
Other alarms include CO_2 concentration, door ajar and water shortage.

CO_2 Incubator

Safe anti-slip design with pull out shelves.



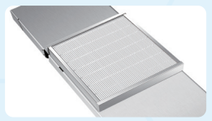
Drainage design



Active heat pipe condensation technology with any condensation directly returning to the reservoir.

Data traceable for 15 years with large storage capacity and data exportable through USB.

The Quality of ISO Class 5 Clean Room Can Ensure a Better Cell Growth Environment



The optional HEPA high-efficiency filtration system combined with the unique air duct circulation design can continuously filter pollutants (biological pollutants and suspended particles) in the cabinet, ensuring that the incubator can reach the ISO class 5 clean room within 5 minutes after the external door is closed, which is equivalent to the class 100 environment of the 209 E standard of the united states

Optional Accessories

Name	Material Description
Oxygen Module	Zirconia O_2 sensor, control accuracy: 0.1%; control range: 1-21% or 5-90%
3 Inner Door (for HCP-168/B)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
6 Inner Door (for HCP-168/B)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
8 Inner Door (for HCP-258/B)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
Water Tray	Provides different bottom humidification methods
Roller Base	Easy to move, prevent the ground bacteria contamination
HEPA Filter	Ensure the cleanliness of the cabinet, suitable for users who open and close the door frequently; After opening the door for 30 seconds, the air inside the cabinet can be passed through HEPA filters within 5 minutes and reach ISO 5 clean room quality
Pressure Reducing Valve	Suitable for users with cylinder gas supply
Shelf	Increase the number of samples cultured 4 materials: SUS304 single mirror surface SUS304 double mirror surface tempering glass Pure copper
Humidity Display (for HCP-168/B)	Real time monitoring of humidity inside the box
Cylinder Switching	Supports switching between multiple steel cylinders to ensure uninterrupted air intake into the incubator
Electromagnetic Lock (HCP-168/B)	Important tests can be dedicated by dedicated personnel to ensure test safety
Heightening Stand	Keeping away from ground contamination
4-20mA	The analog acquisition interface for carbon dioxide and oxygen concentrations Multiple incubators can have the temperatures and carbon dioxide concentration data of all the incubators monitored at one computer terminal
Liner	SUS 304 SUS 316 Pure copper

Specifications

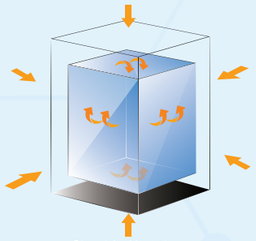
Model			HCP-80	HCP-80B	HCP-168	HCP-168B	HCP-258	HCP-258B
Type			Air Jacket					
Construction	Chamber Volume (L/Cu.Ft)		80/2.8		170/6.0		258/9.1	
	Interior Chamber		304 Stainless Steel					
	Exterior Chamber		Cold-Rolled Steel Powder Coated					
	Access Port		/		42mm Diameter		35mm Diameter	
	Data Outputs		Remote Alarm Contacts, USB					
Dimensions	Net/Gross Weight (approx)	kg	75/95		95/130		110/155	
		lbs	165/209		209.4/286.6		243/341	
	Interior Dimensions (W*D*H)	mm	400*420*490		490*560*650		570*610*745	
		in	15.7*16.5*19.3		19.3*22*25.6		22.4*24.0*29.3	
	Exterior Dimensions (W*D*H)	mm	625*684*735		714*812*887		794*867*985	
		in	24.6*26.9*28.5		28.1*32*34.9		31.3*34.1*38.8	
	Packing Dimensions (W*D*H)	mm	700*770*910		800*890*1050		870*950*1150	
		in	27.6*30.3*35.8		31.5*35.0*41.3		34.2*37.4*45.3	
Shelves	Dimensions (W*D)	mm	380*300		473*434		550*484	
	Number Standard/Maximum		3/8		3/11		3/13	
	Max.Load Per Shelf/Total Load	kg	15/45					
	Construction		Perforated, Adjustable					
Electrical	Rated Voltage Power Supply (V/hz)		220-240/50/60	115/60	220-240/50/60	115/60	220-240/50/60	115/60
	Nominal Consumption (kw) (Steri-Run)		0.08 (0.85)	0.08 (0.75)	0.095 (1.3)	0.095 (1.1)	0.12 (1.35)	0.12 (1.2)
	Sterilization Power (W)		850	750	1300	1100	1350	1200
Control	Controller		Microprocessor					
	Display		7 "LCD Screen					
CO_2	Control Accuracy		0.1%					
	Range		0-20%					
	Alarm Range		±0.5%					
	Inlet Pressure		12-17psi (0.8-1.2 Bar)					
	Gas Purity		min.99.5% or Medical Quaity					
	CO_2 Inlet		1/4" Hose (Barbed)					
	Senser		IR					
	Recovery Time ** (after 30s door opening, 98% from initial value) Min		4					
	CO_2 Inlet Filter (μm)		0.2					
Alarms	High/Low Temperature		Y					
	Remote Alarm		Y					
	Sensor Error		Y					
	Excessive CO_2 Concentration		Y					
	Water Shortage Reminder		Y					
	Door Ajar		Y					
Temperature Parameter	Control Accuracy (°C)		0.1					
	Range		Ambient Temperature+3-55°C					
	Uniformity (°C) @ 37°C		±0.3					
	Ambient Range (°C)		18-32					
	Temperature Fluctuations (°C) @ 37°C		±0.1					
	Senser		2*PT1000					
	Recovery Time *** (after 30s door opening, 98% from initial value) Min		4					
Sterilization Cycle	Cycle Temperature		180°C Dry-Heat Sterilization					
	Cycle Duration		Under 12 Hours					
Humidity	RH		93% ± 3% @ 37°C					
	Humidity Reservoir		Max.1.75L/Min 0.5L		Max.3.5L/Min 0.5L		Max.5.5L/Min 0.5L	
Optional	HEPA Filter		Y		Y		Y	
	Pressure Reducing Valve		Y		Y		Y	
	4-20mA		Y		Y		Y	
	The Cylinder Switch		Y		Y		Y	
	Shelf		Y		Y		Y	
	Water Tray		Y		Y		Y	
	3 Inner Door		N		Y		N	
	6 Inner Door		N		Y		N	
	8 Inner Door		N		N		Y	
	Roller Base		Y		Y		Y	
	Pure Copper Inner Liner		Y		Y		Y	
	Pure Copper Shelf		Y		Y		Y	
	Humidity Display		N		Y		N	
	Oxygen Module		Y		Y		Y	
	Electromagnetic Lock		N		Y		N	
	Heightening Stand		Y		Y		Y	
	IoT		Y		Y		Y	
Others	Certification		CE	UL	CE	UL	CE	UL

CO_2 Incubator

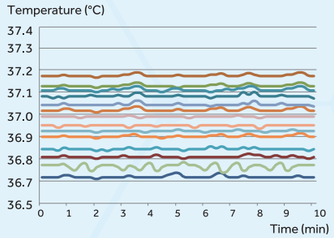
HCP-80E HCP-168E HCP-258E

Precise and Accurate Temperature Control

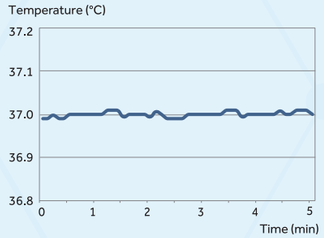
Controls the temperature precisely, within ±0.1°C, with six-sided heating based on the fuzzy PID control principle, to provide a stable temperature to ensure the normal growth of cells throughout their life cycle.



Six-sided heating



Uniformity of 27measuring points<±0.3°C

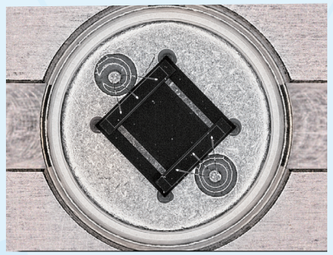


Central consistency point<±0.1°C

Note: The above data were measured at a set temperature of 37°C and an ambient temperature of 22±3°C

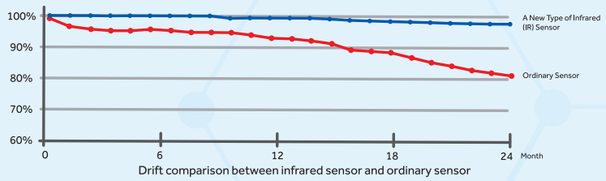
Precise CO_2 Concentration Using New IR Sensor Control Technology

Haier Biomedical's new IR Sensor technology uses NDIR measurement principles and withstands high temperature of 100°C. The silicon MEMS transmitter can carry out more than 300 dry heat sterilization cycles to extend the service life to 15 years. Built-in temperature and humidity compensation technology reduce the impact of changes in humidity and temperature without the need for calibration after the high temperature sterilization. Five points calibration yields a higher measuring accuracy, sensitivity with less drift (less than 3% within 2 years).



Silicon-based mems transmitter

Infrared (IR) sensor



Drift comparison between infrared sensor and ordinary sensor

*The equipment is tested by Haier in a controlled environment. Haier does not guarantee that the results of field tests under different conditions will be consistent. The test model is HCP-168E

Fast Environment Recovery for Optimal Cell Growth

Adopting active air flow control technology, based on the fuzzy PID control principle, the parameters can be restored without overshoot. After opening the door for 30 seconds, the temperature and CO_2 concentration can be quickly restored within 4 minutes. Even if multiple users share a CO_2 incubator and frequently open and close the door, the stability and uniformity of the incubator can be ensured.

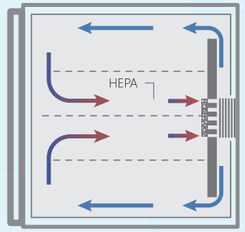
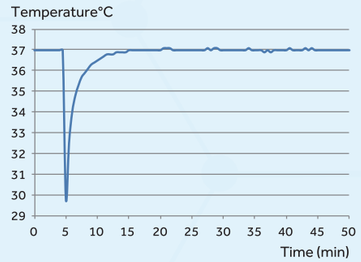
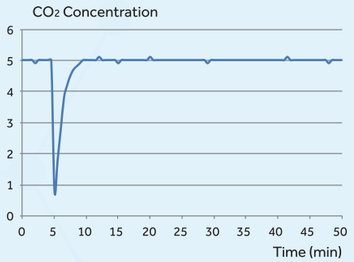


Illustration of purified airflow



Temperature recovery curve (door open for 30s)



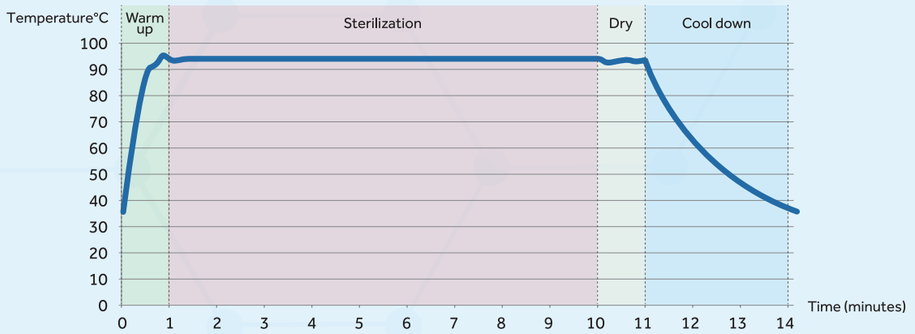
CO_2 concentration recovery curve (door open for 30s)

90°C Moist Heat Sterilization Technology

Effective sterilization of microorganisms including bacillus and spores with strong resistance, at 90°C under moist heat, without the need for consumables. Simply press the "sterilization button", to activate and complete the sterilization process automatically in 14 hours.

Delivers sterility level within the chamber of all surfaces to meet WS/T367-2012 standards.

All components are sterilized during the process, there is no need to dissemble internal components (including CO_2 sensors) and decontaminate separately, thus avoiding secondary pollution.



Sterilization Temperature Profile

Forty-seven points were tested in the working chamber, including glass inner doors and partitions. All regions reached 90°C and maintained for 9 hours.

*The equipment is tested by Haier in a controlled environment. Haier does not guarantee that the results of field tests under different conditions will be consistent. The test model is HCP-168E

CO_2 Incubator

Air Jacketed With Six-sides Heating Design

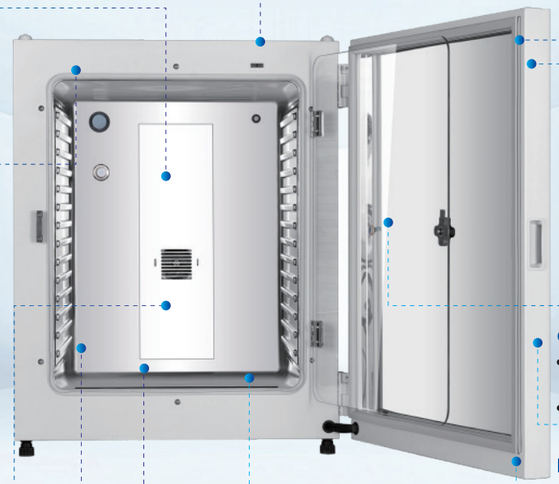
- Fast temperature recovery and superior temperature uniformity
- High temperature sterilization can ensure that the temperature of each surface can reach 90℃

Co_2 Sensor

- The new IR sensor with high temperature resistance of 100℃, can withstand more than 300 high heat sterilization cycles
- Based on the NDIR measurement principle and uses a silicon MEMS transmitter to replace the traditional light source
- Zero drift and without need for calibration

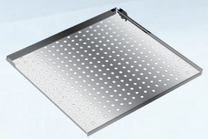
Door Switch

When the door opens, heating, air intake and fan automatically stop to minimize the risk of cross contamination



Partition

- Anti-slip design
- High levelness ensures uniform growth of adherent cells
- Mirror stainless steel to ensure high surface cleanliness, easy to clean



Air Flow System

The air flow circulation ensures proper uniformity throughout the chamber

Integrated Liner

Integral design, large arc design, easy to clean

Inner Door

- Tempered glass provides easy observation of sample growth
- Three/six inner doors optional

Operation Panel

- 4-inch LCD screen, vivid display and easy operation
- Abnormal operation sound and light alarm to ensure sample safety
- Running data can be traced, large capacity storage, data can be exported through USB

Test Hole

Providing access for convenient measurement of internal statistics

Outer Door

- Prevents the condensation of the inner door
- Left/right hand door optional

Inner and Outer Door Seal

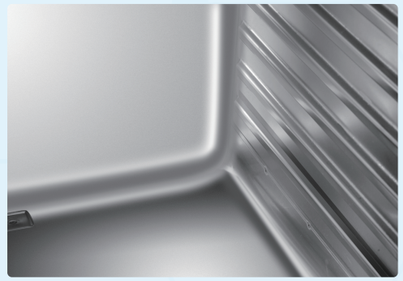
- Silicone material, prevent aging after heating
- Close the inner cavity to ensure the cleanliness and uniformity of the inner chamber

Bottom Reservoir Humidification

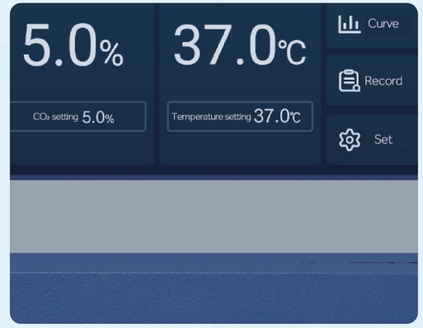
- Reservoir humidification method, no water tray, easy to clean, avoid breeding bacteria
- Large evaporation area and fast humidity recovery

Seamless Stainless Steel Inner Chamber Easy to Clean

The working chamber is plasma electro polished, stamped stainless steel with wide-arc. Bracketless shelving design ensures that it is quick and easy to clean.



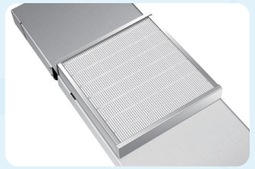
Innovative Design with Attention to Detail



Safe anti-slip design of pull-out shelves.

Data traceable for 15 years with large storage capacity and data exportable through USB.

The Quality of ISO Class 5 Clean Room Can Ensure a Better Cell Growth Environment

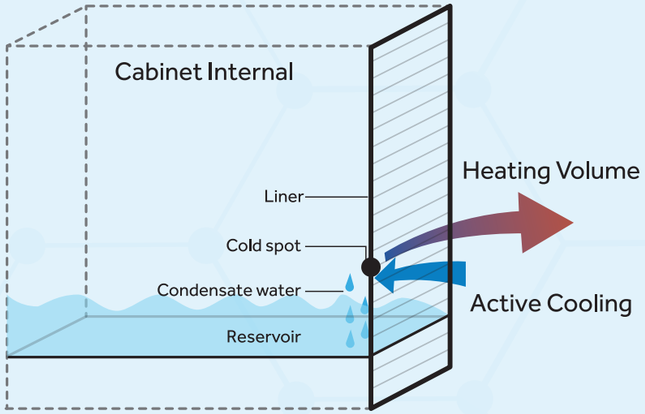


The optional HEPA high-efficiency filtration system combined with the unique air duct circulation design can continuously filter pollutants (biological pollutants and suspended particles) in the cabinet, ensuring that the incubator can reach the ISO class 5 clean room within 5 minutes after the external door is closed, which is equivalent to the class 100 environment of the 209 E standard of the united states

CO_2 Incubator

Reservoir Humidification Without Condensation

Active heat pipe condensation technology with condensate water directly returns to the reservoir, to ensure no condensation.



Optional Accessories

Name	Material Description
Oxygen Module	Zirconia O_2 sensor, control accuracy: 0.1%; control range: 1-21% or 5-90%
3 Inner Door (for HCP-168E)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
6 Inner Door (for HCP-168E)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
8 Inner Door (for HCP-258E)	Reduce the temperature, humidity and carbon dioxide concentration in the box after opening the door, and minimize the mutual influence of multiple cultures
Water Tray	Provides different bottom humidification methods
Roller Base	Easy to move, prevent the ground bacteria contamination
HEPA Filter	Ensure the cleanliness of the cabinet, suitable for users who open and close the door frequently; After opening the door for 30 seconds, the air inside the cabinet can be passed through HEPA filters within 5 minutes and reach ISO 5 clean room quality
Pressure Reducing Valve	Suitable for users with cylinder gas supply
Shelf	Increase the number of samples cultured 4 materials: SUS304 single mirror surface SUS304 double mirror surface tempering glass Pure copper
Cylinder Switching	Supports switching between multiple steel cylinders to ensure uninterrupted air intake into the incubator
Heightening Stand	Keeping away from ground contamination
4-20mA	The analog acquisition interface for carbon dioxide and oxygen concentrations Multiple incubators can have the temperatures and carbon dioxide concentration data of all the incubators monitored at one computer terminal
Liner	SUS 304 SUS 316 Pure copper

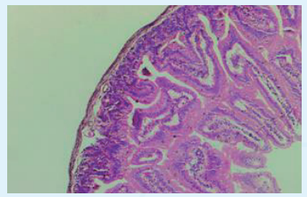
Specifications

Model			HCP-80E	HCP-168E	HCP-258E
Type				Air Jacket	
Construction	Chamber Volume (L/Cu.Ft)		80/2.8	170/6.0	258/9.1
	Interior Chamber			304 Stainless Steel	
	Exterior Chamber			Cold-Rolled Steel Powder Coated	
	Access Port		/	42mm Diameter	35mm Diameter
	Data Outputs			Remote Alarm Contacts, USB	
Dimensions	Net/Gross Weight (approx)	kg	75/90	95/125	110/150
		lbs	165/198	209.4/275	243/330
	Interior Dimensions (W*D*H)	mm	400*420*490	490*560*650	570*610*745
		in	15.7*16.5*19.3	19.3*22*25.6	22.4*24.0*29.3
	Exterior Dimensions (W*D*H)	mm	625*684*735	714*812*887	794*867*985
		in	24.6*26.9*28.5	28.1*32*34.9	31.3*34.1*38.8
	Packing Dimensions (W*D*H)	mm	700*770*910	800*890*1050	870*950*1150
		in	27.6*30.3*35.8	31.5*35.0*41.3	34.2*37.4*45.3
Shelves	Dimensions (W*D)	mm	380*300	473*434	550*484
	Number Standard/Maximum		3/8	3/11	3/13
	Max.Load Per Shelf/Total Load	kg		15/45	
	Construction			Perforated, Adjustable	
Electrical	Rated Voltage Power Supply (V/hz)		220-240/50/60	220-240/50/60	220-240/50/60
	Nominal Consumption (kw) (Steri-Run)		0.08 (1.0)	0.095 (1.5)	0.12 (1.8)
	Sterilization Power (W)		1000	1500	1800
Control	Controller			Microprocessor	
	Display			4 inch LED Button Screen	
CO_2	Control Accuracy			0.10%	
	Range			0-20%	
	Alarm Range			±0.5%	
	Inlet Pressure			12-17PSI (0.8-1.2bar)	
	Gas Purity			Min.99.5% or Medical Quaity	
	CO_2 Inlet			1/8" Hose (Barbed)	
	Senser			IR	
	Recovery Time ** (after 30s door opening, 98% from initial value) Min			4	
	CO_2 Inlet Filter (μm)			<0.2	
Alarms	High/Low Temperature			Y	
	Remote Alarm			Y	
	Sensor Error			Y	
	Excessive CO_2 Concentration			Y	
	Water Shortage Reminder			N	
	Door Ajar			Y	
Temperature Parameter	Control Accuracy (℃)			0.1	
	Range			Ambient Temperature+3-55℃	
	Uniformity			±0.3	
	Ambient Range (℃)			18-34	
	Temperature Fluctuations (℃)			±0.1	
	Senser			1*PT1000	
	Recovery Time *** (after 30s door opening, 98% from initial value) Min			4	
Sterilization Cycle	Cycle Temperature			90℃ Moist Heat Sterilization	
	Cycle Duration			Under 14 Hours	
Humidity	RH			93% ± 3% @ 37℃	
	Humidity Reservoir		Max.1.75L/Min 0.5L	Max.3.5L/Min 0.5L	Max.5.5L/Min 0.5L
Optional	HEPA Filter		Y	Y	Y
	Pressure Reducing Valve		Y	Y	Y
	4-20mA		Y	Y	Y
	The Cylinder Switch		Y	Y	Y
	Shelf		Y	Y	Y
	Water Tray		Y	Y	Y
	3 Inner Door		N	Y	N
	6 Inner Door		N	Y	N
	8 Inner Door		N	N	Y
	Roller Base		Y	Y	Y
	Pure Copper Inner Liner		Y	Y	Y
	Pure Copper Shelf		Y	Y	Y
	Humidity Display		N	N	N
	Oxygen Module		Y	Y	Y
	Electromagnetic Lock		N	N	N
	Heightening Stand		Y	Y	Y
	IoT		Y	Y	Y
Others	Certification		CE	CE	CE

Standard Incubator

Scope of Application

The solution is widely used in bacteria, fungi and other microorganism cultures; as well as enzyme digestion reaction, ligation reaction, embedded incubation and other related constant temperature experiments.



Embedded incubation

Bacteria

Fungus

HZP-168 HFP-80

Product Advantages

Personalized interface, easy to link

Equipped with USB and RS485 interfaces to meet the different needs of users to transfer data

Multiple protection benefits for increased security

Overheat protection (OPT), over current protection (FU), sensor error detection, independent temperature limit, compliance with DIN 12880 requirements and EU 3.1 safety level. Sound, light and remote alarms (optional) which guarantee experiment safety. Multiple alarms, such as over temperature alarm, high and low temperature alarm, door ajar, and sensor error alarm

Data traceability

Data traceable up to 15 years with base storage 8GB and data exportable through USB

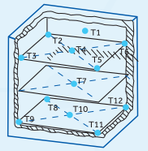
High thermal insulation performance, energy saving and environmental protection

The unit is manufactured with aluminum foil insulation cotton, which improves the overall insulation performance and reduces energy consumption, lowering costs while also being environmentally friendly

Fuzzy PID Control Technology

HZP-168
Natural Convection

HFP-80
Forced Convection



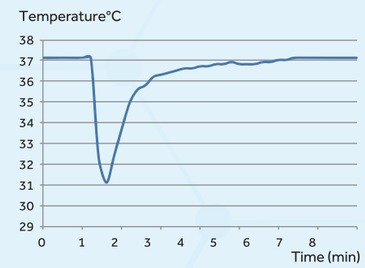
ASTM standard,
12 points testing

Based on PID control principle, manufactured with U-shaped 3-sided heating to achieve superior temperature control and uniformity control.

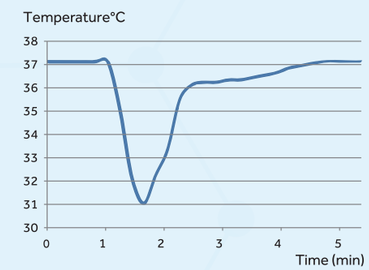
Rapid Recovery After Door Open

Rapid warming: the temperature inside the unit quickly recovers after opening the door to reduce the influence of temperature fluctuation on the sample.

The temperature rise curve to 37°C after opening the door for 30 sec at 22°C ambient temperature



HZP-168

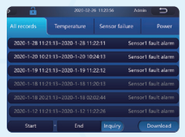


HFP-80

Convenient and Intelligent Management at a Glance

7-inch touchscreen, easy to operate and sensitive, it can respond quickly even when wearing rubber gloves.

Real-time display of temperature data, one-touch to review previous data.



Records abnormal information in real time, eliminating any hidden abnormalities which ensures the culturing is more secure.

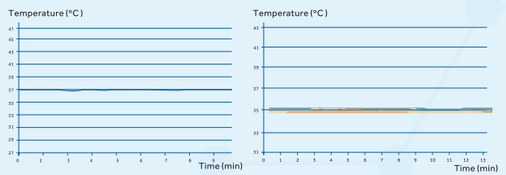
Multiple operating modes.

The program can be edited and set at any number of segments to meet the needs of various detection tests.

Standard Incubator

Precise Temperature Control, Energy-efficient and Environment-friendly

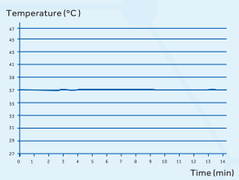
An energy-efficient model with superior control and heating mechanisms, high-quality insulation material and cabinet structure to ensure heating requirements are met while keeping power consumption to a minimum.



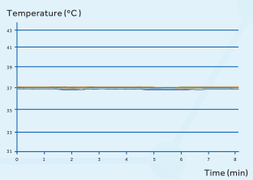
Temperature fluctuation ±0.1°C (37°C)

Temperature uniformity ±0.5°C (37°C)

HZP-168



Temperature fluctuation ±0.1°C (37°C)



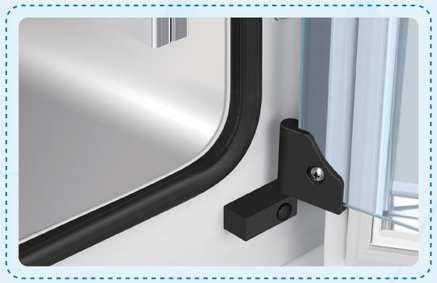
Temperature uniformity ±0.3°C (37°C)

HFP-80

Optional IoT Technology for Real-time Remote Monitoring

Through the mobile app, the status of the incubator can be checked in real time, and information such as temperature alarm, sensor error alarm and door ajar can be controlled with one button, which provides more security for the experiment process.

Pictures in Details



Seamless, curved internal chamber for easy cleaning and decontamination.

Standard independent intelligent temperature safety controller to ensure experimental safety; RS485 achieves seamless IoT data connection.

Product Parameters

Model			HFP-80	HZP-168
Performance	Temperature Sensor		PT100	PT100
	Control Accuracy	°C	±0.1	±0.1
	Control Range	°C	RT+5~105	RT+5~105
	Temperature Fluctuation (37°C)	°C	±0.1	±0.1
	Temperature Uniformity (37°C)	°C	±0.3 at 37	±0.5 at 37
	Recovery Time After Open Door for 30s (37°C)	min	2.5	5
Control	Heating Mode		Direct Heating	Direct Heating
	Control Principle		Fuzzy PID	Fuzzy PID
	Display		7" LCD Touchscreen	7" LCD Touchscreen
Electrical	Power Supply (V/Hz)		220-240~50/60	220-240~50/60
	Power (W)		510	640
Dimensions	Capacity (L/Cu.Ft)		80/2.8	168/5.9
	Net/Gross Weight	Kg	72/80	99/110
		lbs	158.4/176	217.8/242
	Interior Dimension (W*D*H)	mm	400*400*480	490*550*626
		in	15.7*15.7*18.9	19.3*21.7*24.6
	Exterior Dimension (W*D*H)	mm	560*662*870	650*782*1028
		in	22.0*26.1*34.3	25.6*30.8*40.5
	Packing Dimension (W*D*H)	mm	720*770*1060	800*900*1200
		in	28.3*30.2*41.6	31.4*35.4*47.2
	Shelves		2/12	2/17
	Shelf Capacity	Kg	20	20
	Partition Spacing	mm	20	20
Alarms	High/Low Temperature		Y	Y
	Over-temperature Protection		Y	Y
	Sensor Error		Y	Y
	Door Ajar		Y	Y
	End of Program		Y	Y
	Alarm Mode		Sound and Light / Buzzer	Sound and Light / Buzzer
Accessories	Mechanical Independent Temperature Limiting Switch		Y	Y
	RS485		Y	Y
	USB		Y	Y
	IoT Module		Optional	Optional
Certification	CE		Y	Y

Standard Incubator

Scope of Application

Widely used in medical and health, pharmaceutical, biochemistry, and agricultural science sectors for bacterial culture, fermentation, and constant temperature tests. It can be used for the culture and determination of microorganisms like bacteria, molds, fungi (e.g. Staphylococcus aureus, Streptococcus, Escherichia coli), food and beverage testing, and preheating of cell culture equipment.

HFP-168E

HZP-80E

Product Advantages

Multiple Security Protection
Multiple protection systems such as overheating, overcurrent, and independent temperature limiting; overtemperature, high and low temperature and other smart alarms for safety

High Thermal Insulation Performance
Superior insulation that improves chamber stability and reduces heat load output to the laboratory and operating power consumption, that lowers operating costs

4-inch Display Screen
The real-time display of the set temperature and running temperature makes the operation more convenient

Smart IoT Module (optional)
The status of the incubator can be checked in real-time

Broad Temperature Range
Temperatures from 5°C above ambient up to 105°C

Ergonomic Design
Efficient utilization of interior with flexible shelf system

100°C Decontamination
The disinfection routine at 100 °C minimizes the risk of contamination

4-inch LCD screen with simple operation and clear display

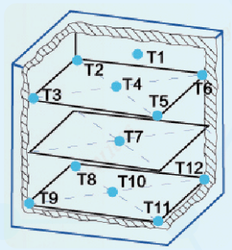
Smooth inner chamber with easy to clean rounded corners

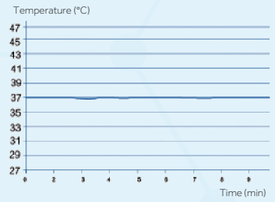
Standard independent intelligent temperature safety controller to ensure experimental safety

Adjustable feet for easy positioning and levelling

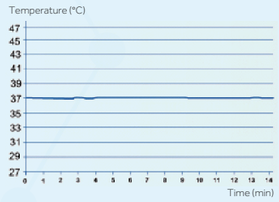
Precise Temperature Control

Vaildated through ASTM standard 12 points temperature detection method, the incubator can achieve high-precision temperature control with a temperature fluctuation of only ± 0.1°C





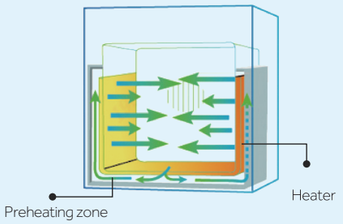
Temperature fluctuations±0.1°C
(HZP-80E)



Temperature fluctuations ±0.1°C
(HFP-168E)

Rapid Temperature Recovery After Door Open

The U-shaped 3- sided heating design enables the incubator to heat up quickly. After opening the door for 30 seconds, the temperature inside the chamber recovers to the set value within 3 minutes, significantly reducing the impact of temperature fluctuations on the experiments



Standard Incubator

Product Parameters

Model			HZP-80E	HFP-168E
Performance	Temperature Sensor		PT100	PT100
	Control Accuracy	℃	±0.1	±0.1
	Control Range	℃	RT+5~105	RT+5~105
	Temperature Fluctuation (37℃)	℃	±0.1	±0.1
	Temperature Uniformity (37℃)	℃	±0.5 at 37	±0.3 at 37
	Recovery Time After Open Door for 30s (37℃)	min	5	2.5
Control	Heating Mode		Direct Heating	Direct Heating
	Control Principle		Fuzzy PID	Fuzzy PID
	Display		4 inch LCD screen	4 inch LCD screen
Electrical	Power Supply (V/Hz)		220-240~50/60	220-240~50/60
	Power (W)		350	520
Dimensions	Capacity (L/Cu.Ft)		80/2.8	168/5.9
	Net/Gross Weight	Kg	72/80	99/110
		lbs	158.4/176	217.8/242
	Interior Dimension (W*D*H)	mm	400*400*480	490*560*630
		in	15.7*15.7*18.9	19.3*21.7*24.6
	Exterior Dimension (W*D*H)	mm	560*620*870	650*780*1028
		in	22.0*26.1*34.3	25.6*30.8*40.5
	Packing Dimension (W*D*H)	mm	720*770*1060	800*900*1200
		in	28.3*30.2*41.6	31.4*35.4*47.2
	Shelves qty (standard/max.)		2/12	2/17
	Max. load per shelf	Kg	20	20
	Partition Spacing	mm	20	20
Alarms	High/Low Temperature		Y	Y
	Over-temperature Protection		Y	Y
	Sensor Error		N	N
	Door Ajar		Y	Y
	End of Program		Y	Y
	Alarm Mode		Sound and Light/Buzzer	Sound and Light / Buzzer
Accessories	Mechanical Independent Temperature Limiting Switch		Y	Y
	RS485		Optional	Optional
	USB		N	N
	IoT Module		Optional	Optional
Certification	CE		N	N

Climate Chamber

Drug stability tests, cosmetic stability tests, food shelf life tests, electronic components aging tests, packaging material stability tests.

HHS-256/756/506

Product Advantages

Silent
Semiconductor technology ensures low vibration and noise output with no pollution into the environment

Water-saving
Intelligent control of PTC humidification, daily water consumption of 120-320ml, no need to recycle waste water, saving space
* test condition: 40℃, 75%rh

Precise control
Accurate temperature and humidity control, long-term stability, 40 ℃ temperature uniformity ±0.5℃ and central temperature fluctuation ±0.2℃, 75% humidity fluctuation ±1%
* Ambient temp. 22℃, ambient humidity 40% RH

Power saving
Semiconductor technology means the daily power consumption is as low as 5kWh; 90% more energy efficient than compressor technologies

Climate Chamber

Product Parts

HHS-756

Product Features

Multiple protection protocols - equipped with delay start, high/low temperature and light intensity protection in line with DIN12880 requirement for over/under temperature protection

High precision temperature sensor, dual PT1000 sensors for more accurate temperature control

Optional electromagnetic lock, suitable for multiple users with independent management for safety

Microprocessor control system

- PID control principle, 10-inch touch screen, temperature control precision 0.1°C, humidity control precision 0.1%, temperature range 5-70°C, humidity range 10%-90%
- USB, RS485 interface as standard
- Temperature alarm, humidity alarm, door alarm, sensor alarm and water shortage warning
- Display temperature, humidity and ambient temperature; users can query the historical curve

Expandable large capacity data storage, the touchscreen memory can be expanded to 64GB, storing up to 15 years data which can be exported via a USB

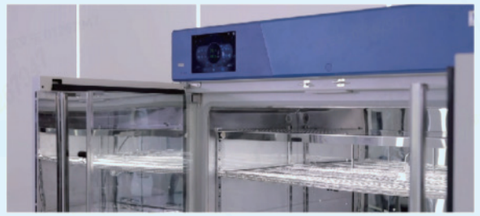
An access port with a diameter of 35mm on the left side of the cabinet to facilitate independent testing of temperature and humidity

High insulating performance polythene foam provides excellent insulation and stable cabinet temperatures reducing energy consumption

High precision capacitive humidity sensor

International Quality Assurance

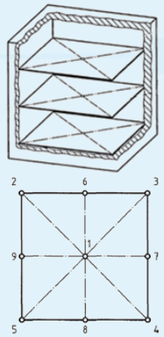
With ICH-compliant Light Source and Light-dose Control (optional)



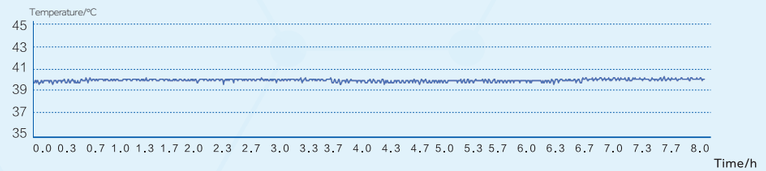
ICH compliant illumination for photo-stability testing [0~10000LUX， UV-A 320~400nm, 0~1.1W/m²]

Positionable illumination cassetes with ICH-compliant UV/Vis-light source Independent light-dose control of UV-A and visible light with sensors

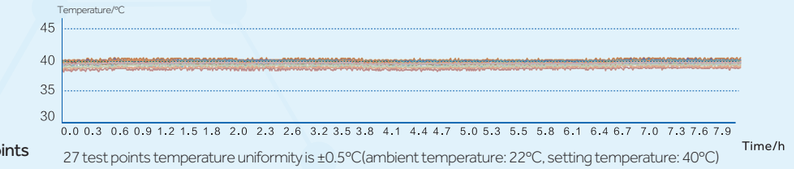
Accurate Temperature Control



DIN12880 standard 27 test points



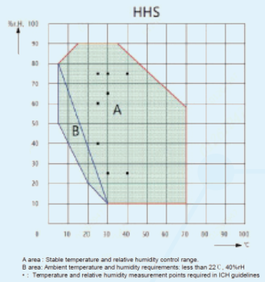
Central point temperature fluctuation within ±0.2°C (ambient temperature: 22°C, setting temperature: 40°C)

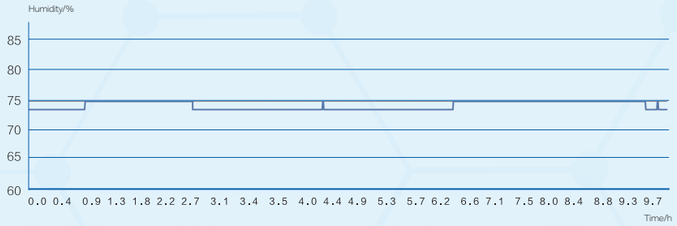


27 test points temperature uniformity is ±0.5°C(ambient temperature: 22°C, setting temperature: 40°C)

Climate Chamber

Accurate Humidity Control





Humidity fluctuation ±1%rh: Accurate temperature control (ambient temperature: 22°C, ambient humidity: 40%rh, setting temperature: 40°C, setting humidity: 75%rh)

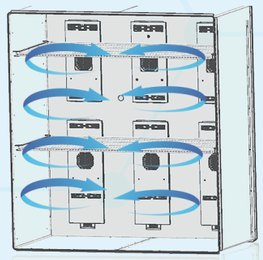
• There shall be some gap around the product, and there must be no less than 150cm gap on the back side, so as to facilitate heat dissipation of semiconductor and cut off the power supply in case of emergency;

• Sample dehumidification is not applicable, which may cause humidity deviation from the initial setup;

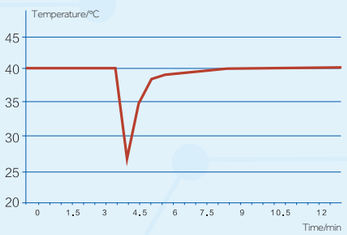
• The ambient temperature changes may cause the temperature and humidity to fluctuate beyond the limit;

• In area B, ensure that the ambient temperature is less than 22°C and the ambient humidity is less than 40%Rh. If the ambient temperature exceeds the range, the humidity may deviate from the setup.

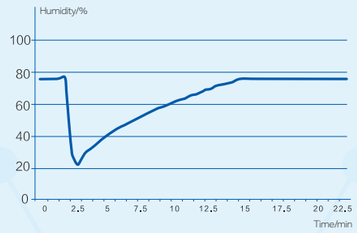
Internal Cabinet Environment Quick Recovery System



Professional air duct design, ensuring temperature and humidity uniformity



The time required for temperature to return to to 40°C after 30s door opening is <4 minutes



The time required for humidity recovery to 75% after opening door for 30s is <14 minutes

Intelligent Management

Convenient and intelligent management to improve working efficiency

• The intelligent 10-inch touchscreen controller is easy to operate and sensitive to touch, even in rubber gloves. The PID control algorithm ensures the accuracy of temperature control

• Data and multi-user authority management and permissions conforms to FDA 21 CFR Part 11

• Unlimited programs with infinite humidity and temperature settings to allow users to customise to their needs

High quality manufacture and reliable operation

Capacitive humidity sensor, long-term operating reliability

- Interference-free humidity data collection.
- Long-term reliability without the need for calibration.
- High precision ±0.1%.
- Anti-condensation design for more accurate humidity monitoring

High precision temperature sensor, accurate and reliable

- Adopts PT1000 temperature sensors for accurate, stable and repeatable measurement without deviation.
- Dual sensors further improve accuracy.

Semi-conductor cooling, superior energy-saving and mute effect

- Semiconductor thermocouple consists of N-shape semiconductor and P-shape semiconductor.

Intelligent control, ensures temperature and humidity accuracy

Intelligent control PTC humidification, energy-saving and water-saving

The temperature and purity of vapour is accurately controlled by the intelligent water supply system and ceramic high-temperature heating apparatus.

Intelligent dehumidification, accurate humidity control

Semi-conductor intelligent dehumidification system accurately controls heating and cooling, matching with humidity control.

Climate Chamber

Specifications

	Model		HHS-256	HHS-506	HHS-756
Construction	Chamber Volume (L)		256L	506L	756L
	Interior Chamber		stainless steel	stainless steel	stainless steel
	Exterior Chamber		Galvanized Sheet Powder Coating	Galvanized Sheet Powder Coating	Galvanized Sheet Powder Coating
	Access Port		35mm Diameter	35mm Diameter	35mm Diameter
Dimensions	Net/Gross Weight	kg	175/188	225/260	280/328
	Interior Dimensions (W*D*H)	mm	650*570*700	740*570*1200	1100*570*1200
	Exterior Dimensions (W*D*H)	mm	835*905*1190	930*905*1690	1290*905*1690
	Packing Dimensions (W*D*H)	mm	1030*955*1280	1110*955*1780	1380*955*1780
Shelves	Dimension / mm (W*D)		597*531	687*531	1048*531
	Shelves qty (standard/max.)		2/16	2/31	2/31
	Max. load per shelf	kg	20	20	20
	Structure		Slide Rail, Adjustable	Slide Rail, Adjustable	Slide Rail, Adjustable
Electrical	Voltage / Frequency (V/Hz)		220-240~50/60	220-240~50/60	220-240~50/60
	Power (W)		750	1100	1760
	DayConsumptionat25℃& 40%RH (kw·h)		4.6	5.4	5.6
Control	Controller		The Microprocessor	The Microprocessor	The Microprocessor
	Display		10" Smart LCD Screen	10" Smart LCD Screen	10" Smart LCD Screen
The Temperature Parameter	The Set Range (˚C)		without Humidity without Light: 5-70℃ with Humidity without Light: 5-70℃ with Humidity with Light: 15-60℃	without Humidity without Light: 5-70℃ with Humidity without Light: 5-70℃ with Humidity with Light: 15-60℃	without Humidity without Light: 5-70℃ with Humidity without Light: 5-70℃ with Humidity with Light: 15-60℃
	Control Precision (˚C)		±0.1	±0.1	±0.1
	Temperature Uniformity at 25˚C		±0.5	±0.5	±0.5
	Temperature Fluctuation at 25˚C		±0.2	±0.2	±0.2
	The Sensor		PT1000	PT1000	PT1000
	Rate of Temperature Rise (˚C / min)		1	0.8	0.6
	30 Seconds Recovery Time After Door Opening at 40˚C (min)		3	3.8	5
Humidity Parameter	Humidity Setting Range (% RH)		10~90	10~90	10~90
	Humidity Setting Accuracy (% RH)		0.1	0.1	0.1
	Humidity Fluctuation at 25˚C & 60% RH (% RH)		±1	±1	±1
	Daily Water Consumption (ml)		120	240	320
Optional	Electromagnetic lock (password)		Y	Y	Y
	Printer		Y	Y	Y
	ICH compliant illumination for photo-stability testing [lx]		0~10000	0~10000	0~10000
	ICH compliant illumination for photo-stability testing [W/m2]		0~1.1	0~1.1	0~1.1
Standard	Remote Alarm Interface		Y	Y	Y
	RS485		Y	Y	Y
	Water Level Alarm		Y	Y	Y
Others	Certification		CE	CE	CE

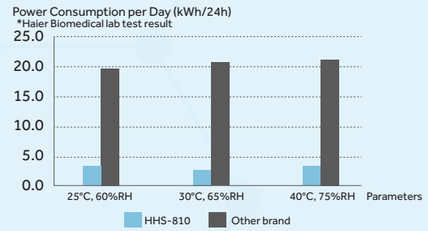
Drug stability testing, food shelf-life testing, electronic component aging testing, microbiological research, sample storage.

HHS-500/810/1060

Product Advantages

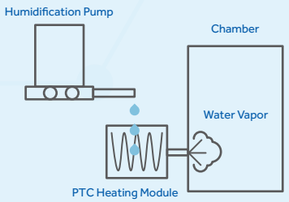
ART Intelligent Sensing and Control Technology

Intelligent dynamic control to optimize refrigerant levels, prevent evaporator frosting, and deliver excellent energy efficiency.



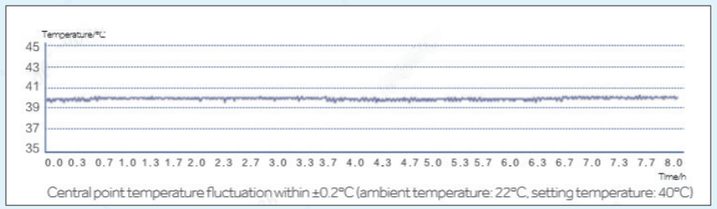
Preheats and vaporizes water droplets. Water consumption < 320 ml per day

Latest high-temperature steam injection humidification technology. Conserve both energy and water. Reduce the need for frequent water refills.



Intelligent fuzzy algorithm. Temperature fluctuation of ±0.2°C

Intelligent temperature control system. PT100 temperature sensor. Precise regulation. Temperature fluctuation of ±0.2°C.

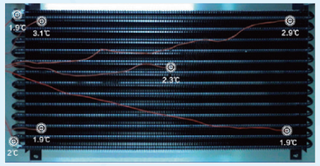


Central point temperature fluctuation within ±0.2°C (ambient temperature: 22°C, setting temperature: 40°C)

Climate Chamber

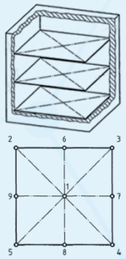
Dual evaporator system ensures a frost-free environment at a stable 4°C

Dual evaporators operate independently. Intelligent defrosting. Consistent frost-free operation and a stable internal temperature as low as 4°C.

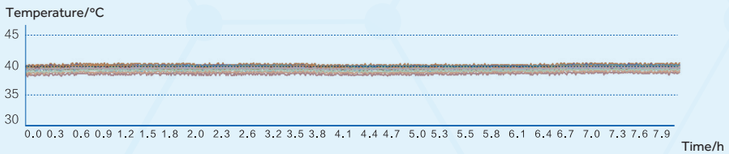


Circulating air flow system. Temperature uniformity ±0.5°C

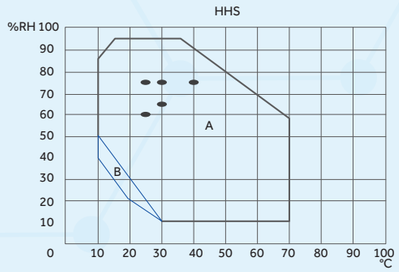
10 adjustable wind speed levels. Pre-mixed and split-flow circulation system. Lattice-type airflow structure.Temperature uniformity ±0.5°C.



DIN12880 standard
27 test points



27 test points temperature uniformity is ±0.5°C(ambient temperature: 22°C, setting temperature: 40°C)



A: Stable humidity and relative humidity control range

B: Environmental temperature and humidity below 22°C and 40%RH

• Temperature and humidity measurement standards meet those outlined in the ICH guidelines

Imported humidity sensor with a wide humidity range of 10%RH–95%RH

A wider range of humidity control to accommodate even the most stringent testing requirements.

There needs to be some clearance around the product, and the clearance on the back should be no less than 150 cm to facilitate heat dissipation and cut off the power supply in case of an emergency;

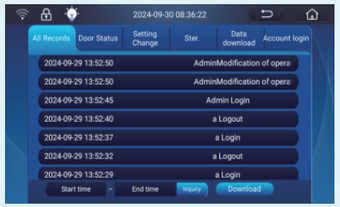
• Sample dehumidification is not applicable, which may cause the humidity to deviate from the initial setting;

• Changes in the ambient temperature may cause the temperature and humidity to fluctuate beyond the limit;

• In Area B, make sure the ambient temperature is lower than 22°C and the ambient humidity is less than 40% Rh.

If the ambient temperature exceeds the range, the humidity may deviate from the setting.

Safe and traceable. Data can be traced for up to 15 years.

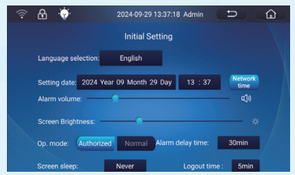


8G data storage. Store and track data for up to 15 years.

Optional IoT module. Real-time monitoring of equipment operational status.

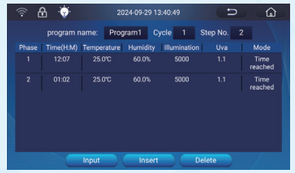
User-Friendly Design

• 7-inch LCD touch screen for easy operation.
PID control algorithm ensures precise temperature control.

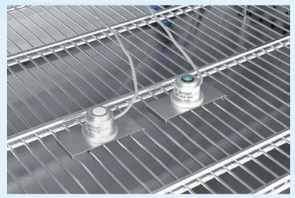


• Compliant with GMP requirements, meeting audit trail

Multi-level user management system for safety and compliance. Electronic signature and records meet US FDA PART11 certification requirements.

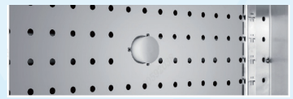


• Programmable mode up to 50 segments and 99 cycles. Simplify temperature and humidity settings for diverse testing and detection needs.



• UV sensor & illuminance sensor

ICH Q1B-compliant illumination for photostability testing [0–10000 lux, UV-A 320–400 nm, 0–1.1 W/m] Positionable illumination cassettes with ICH-compliant UV/Vis-light sources. Independent light-dose control for UV-A and visible light with sensor.



• Observation test hole

Equipped with a 35-mm diameter test hole on the left side of the chamber, allowing easy observation and recording of the test conditions inside to meet various testing requirements.

• Optional lock module

Provides two secure unlocking options: electromagnetic and mechanical locks to ensure the safety of test samples.

Climate Chamber

Specifications

Model			HHS-500	HHS-810	HHS-1060
Construction	Chamber Volume (L)		515	810	1070
	Interior Chamber		Stainless Steel	Stainless Steel	Stainless Steel
	Exterior Chamber		Coated Cold Rolled Steel	Coated Cold Rolled Steel	Coated Cold Rolled Steel
	Access Port		35mm Diameter	35mm Diameter	35mm Diameter
Dimensions	Net/Gross Weight	kg	248/305	320/383	360/430
		lbs	546.75/672.41	705.48/844.37	793.66/947.99
	Interior Dimensions (W*D*H)	mm	650*630*1260	1100*590*1260	1350*630*1260
		in	25.61*24.82*49.64	43.34*23.25*49.64	53.19*24.82*49.64
	Exterior Dimensions (W*D*H)	mm	1300*1000*1858	1380*1050*1858	1750*1000*1858
		in	51.22*39.40*73.21	54.37*41.37*72.89	68.95*39.40*73.21
	Packing Dimensions (W*D*H)	mm	1080*1060*1990	1495*1010*1990	1780*1050*1990
		in	42.55*41.76*78.41	58.9*39.79*78.41	70.13*41.37*78.41
	Container Load (20'/40'/40'H)		10/22/22	7/15/15	6/13/13
Shelves	Dimension (W*D)(mm)		598*528	1048*528	1298*528
	Shelves qty (standard/max.)		2	2/16	2
	Max. load per shelf		45	45	45
	Structure		Slide Rail, Adjustable	Slide Rail, Adjustable	Slide Rail, Adjustable
Electrical	Voltage/ Frequency (V/Hz)		220-240/50/60	220-240/50/60	220-240/50/60
	Power (W)		2000	2000	2600
	Daily Consumption at 25℃ & 40%RH (kWh)		4.3	4.3	6.5
Control	Controller		Microprocessor	Microprocessor	Microprocessor
	Display		7 "LCD Screen	7 "LCD Screen	7 "LCD Screen
Temperature Parameter	Setting Range (℃)		without Humidity without Light: 0-70℃ with Humidity without Light: 10-70℃ with Humidity with Light: 10-60℃	without Humidity without Light: 0-70℃ with Humidity without Light: 10-70℃ with Humidity with Light: 10-60℃	without Humidity without Light: 0-70℃ with Humidity without Light: 10-70℃ with Humidity with Light: 10-60℃
	Control Precision (℃)		±0.1	±0.1	±0.1
	Temperature Uniformity at 25℃		±0.5	±0.5	±0.5
	Temperature Fluctuation at 25℃		±0.2	±0.2	±0.2
	Sensor		PT100*1	PT100*1	PT100*1
	30 Seconds Recovery Time after Door Opening at 40℃ (min)		≤4min	≤4min	≤4min
Humidity Parameter	Humidity Setting Range (%RH)		10~95	10~95	10~95
	Humidity Setting Accuracy (%RH)		0.1	0.1	0.1
	Humidity Fluctuation at 40℃ & 75%RH (%RH)		±2	±2	±2
	Daily Water Consumption (ml)		240	320	400
Optional	Electromagnetic Lock (Password)		Y	Y	Y
	Printer		Y	Y	Y
	IoT Module		Y	Y	Y
Standard	Remote Alarm Interface		Y	Y	Y
	RS485		Y	Y	Y
	Water Level Alarm		Y	Y	Y

Cooled Incubator

Scope of Application

The equipment finds extensive use across variety of settings, including the scientific research institutions, university laboratories and production departments, in the realms of environmental conservation, public health and epidemic prevention, agriculture and animal husbandry, drug testing, and aquatic industries. It is highly specialized in cultivation, enabling it to meet the cultivation and preservation of most bacteria, molds, and microorganisms, as well as to serve purposes such as water analysis and biochemical oxygen demand (BOD) determination, and it can also conduct darkroom cultivation of plant tissues.

HSP-260

HSP-160

Product Advantages

Temperature Range
The temperature control ranges from 0˚C to +70˚C regardless of ambient conditions

Multiple Operating Modes
Meet a variety of experimental requirements.

Safe and Stable
Multiple protection systems such as overheating, overcurrent, and independent temperature limiting; overtemperature, high and low temperature and other smart alarms for safety

Smart IoT (Optional)
7-inch intelligent touchscreen with optional IoT technology for real-time checking the operating status via mobile phones or PC, simple and reliable

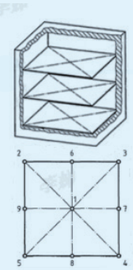
Data Traceability
Data traceable up to 15 years with base storage 8GB and data exportable through USB

High Thermal Insulation Performance, Energy Saving and Environmental Protection
The chamber features a two doors (one inner door ;another is outer door) configuration and utilizes separate inner liner foam to enhance thermal insulation performance, reduces energy consumption, while also being environmentally friendly

Cooled Incubator

Fuzzy PID Control Technology

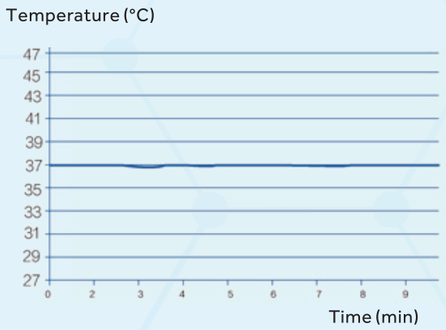
Based on the principle of fuzzy PID control, this product achieves high-precision temperature control. Referring to the DIN 12880 standard, with 27-point testing, the temperature fluctuation is ±0.2°C (@37°C, ambient temperature 22°C).

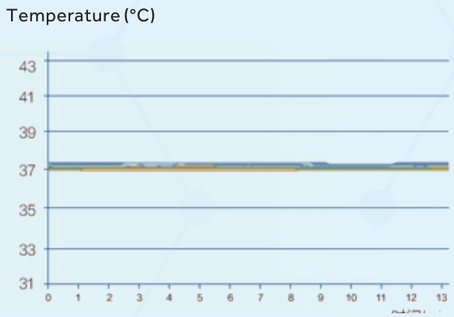


DIN12880 standard 27 test points

Precise Temperature Control, Energy Efficiency, and Eco-friendly

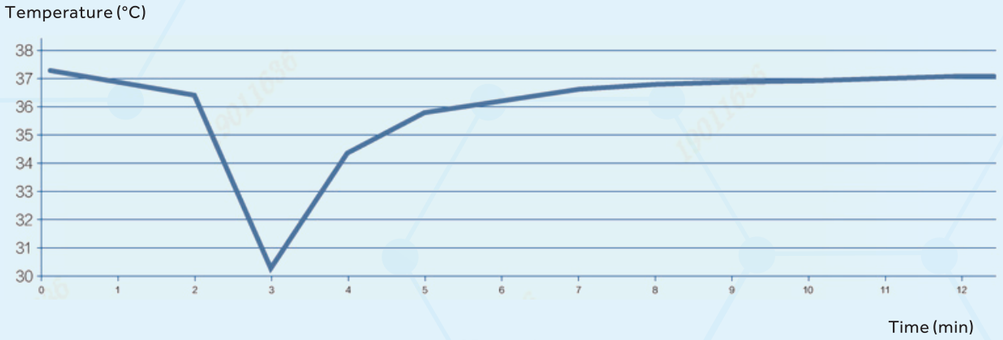
High-quality insulation materials, and professional air duct design to ensure precise temperature control while keeping power consumption to a minimum





Rapid Temperature Recovery After Door Opening

Fast recovery: the temperature inside the unit quickly recovers after opening the door to reduce the influence of temperature fluctuation on the sample



HSP-160/260

Product Parameters

Model			HSP-160	HSP-260
Performance	Temperature Sensor		PT100	PT100
	Control Accuracy	°C	±0.1	±0.1
	Control Range	°C	0~70	0~70
	Temperature Fluctuation (37°C)	°C	±0.2	±0.2
	Temperature Uniformity (37°C)	°C	±0.6 at 37°C	±0.6 at 37°C
	Recovery Time After Open Door for 30s (37°C)Restore to 98%	min	7	7
Control	Heating Mode		Direct heating	Direct heating
	Control Principle		Fuzzy PID	Fuzzy PID
	Display		7" LCD Touchscreen	7" LCD Touchscreen
Electrical	Power Supply (V/Hz)		220-240V~50/60Hz	220-240V~50/60Hz
	Power (W)		1760	1870
Construction	Capacity (L/Cu.Ft)		160/5.7	260/9.2
	Net/Gross Weight	kg	105/135	125/165
		lbs	231.49/297.62	275.58/363.76
	Interior Dimension (W*D*H)	mm	520*568*610	520*568*1000
		in	20.47*22.36*24.02	20.47*22.36*39.37
	Exterior Dimension (W*D*H)	mm	640*800*1255	640*800*1650
		in	25.2*31.5*49.4	25.2*31.5*65.0
	Packing Dimension (W*D*H)	mm	745*865*1440	745*865*1835
		in	29.33*34.06*56.69	29.33*34.06*72.24
	Container load (20'/40'/40'H)		12/28/28	12/28/28
	Shelves qty (standard/max.)		3/7	4/11
	Max. load per shelf	kg	15	15
Alarms	High/Low Temperature		Y	Y
	Over-temperature Protection		Y	Y
	Sensor Error		Y	Y
	Door Ajar		Y	Y
	End of program		Y	Y
	Alarm Mode		Sound and Light / Buzzer	Sound and Light / Buzzer
Accessories	Mechanical Independent Temperature Limiting Switch		Y	Y
	RS485		Y	Y
	USB		Y	Y
Optional	Electromagnetic lock(password)		Y	Y
	Printer		Y	Y
	UV-lamp		Y	Y
	IoT Module		Y	Y
Certification	CE		Y	Y
Cooling Mode	Refrigerant		R134a	R134a

- The power includes a reserved 1000W for the BOD socket;
- The temperature will return to 98% of the set value after opening the door;
- When the set temperature is less than 20°C, the temperature may fluctuate during the default low-temperature automatic defrosting of the device, which is a normal phenomenon. Do not use it beyond the working environment range.

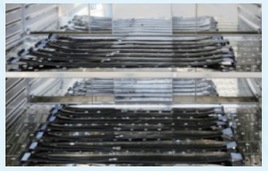
Drying Oven

Scope of Application

Typically used for drying and sterilization of laboratory consumables, instruments and samples; as well as heating and curing, drying and dehydration, heat removal, moisture content determination of materials and samples in the fields of medicine, chemical industry, agricultural products. Other uses include, high temperature heat resistance tests and thermal aging tests of rubber, plastic products and electrical insulation materials. The solution is widely used in medical, enterprise, universities, scientific research institutions, environmental monitoring centers, pharmaceutical, food and drug quality monitoring centers and other related industries.

Laboratory consumables

Instruments



Thermal aging test

HFS-160 HZS-60

Product Advantages

High thermal insulation performance, energy saving and environmental protection
Environmentally-friendly aluminium foil cotton insulation provides excellent insulation performance to reduce energy consumption and lower running costs.

Personalized interface, easy to transfer data
Equipped with USB and RS485 interfaces to better meet the different needs of users for transfer data.

Precise high temperature control
Superior preheating technology with an innovative air duct structure.

Safe and stable
Multiple safety protection features.

Multiple safety protections
Overheat protection (OPT), over current protection (FU), sensor error detection, independent temperature limit, compliance with DIN 12880 requirements and EU 3.1 safety level. Sound,light and remote alarms guarantee experiment safety.

Scalable bulk data storage
The touch-screen can be increased to 64GB with capacity to store 15 years' data. The data can be exported using a USB flash drive.

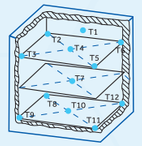
Smart interface
7-inch intelligent touchscreen with optional IoT technology for real-time remote monitoring via an app.

Operation mode
Four operation modes for multiple temperature requirements.

PID Control Technology

HFS-160
Forced convection

HZS-60
Natural convection

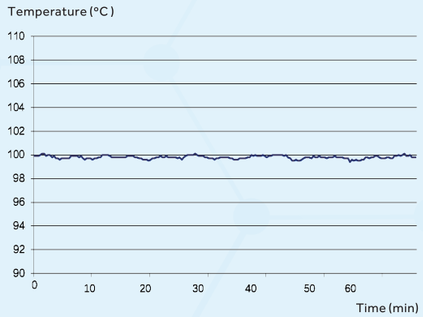


ASTM standard,
12 points testing

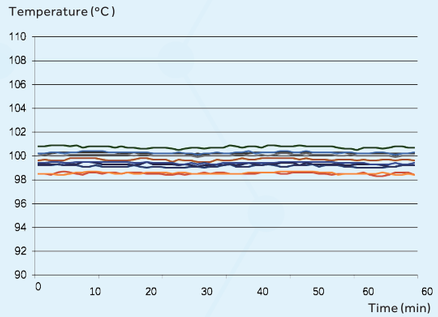
Based on PID control principle, manufactured with U-shaped 3-sided heating to achieve superior temperature control and uniformity control.

Precise Temperature Control, Energy-efficient and Quiet

High performance 3-sided heating and professional air duct design, high-quality fan components and insulation materials ensures precise temperature control while keeping power consumption to minimum.

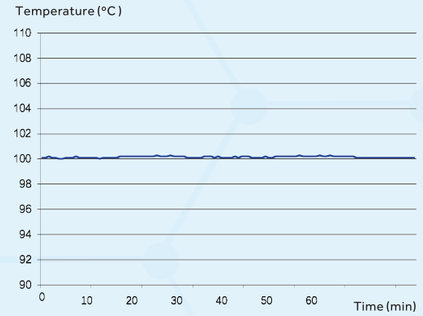


Temperature fluctuation ±0.3°C (100°C)

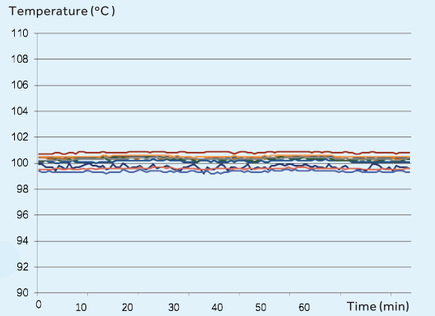


Temperature uniformity ±2°C (100°C)

HFS-160



Temperature fluctuation ±0.2°C (100°C)



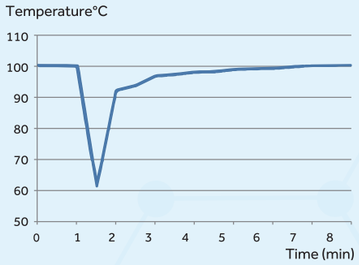
Temperature uniformity ±1.5°C (100°C)

HZS-60

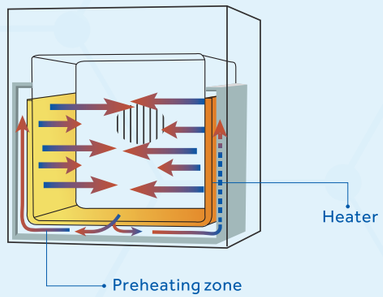
Drying Oven

Rapid Recovery After Door Open

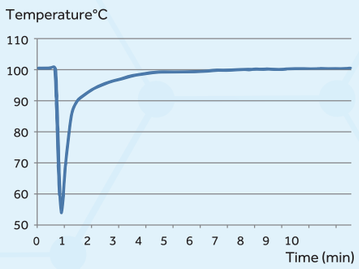
The temperature inside the unit quickly recovers after opening the door without overshoot.



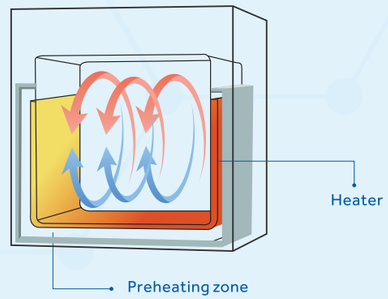
Temperature recovery curve to 100°C after opening the door for 30s



HFS-160



Temperature recovery curve to 100°C after opening the door for 30s

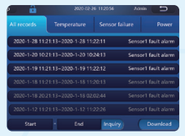


HZS-60

Convenient and Intelligent Management at a Glance

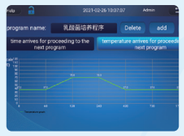
7-inch touchscreen, easy to operate and sensitive, it can respond quickly even when wearing rubber gloves.

Real-time display of temperature data, one-touch to review previous data.



Records abnormal information in real time, to eliminate hidden errors.

Multiple operating modes.

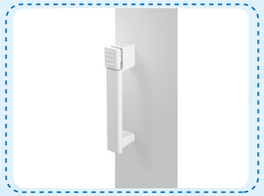


The program can be edited and set at any number of segments to meet the needs of various detection tests.

Optional IoT Technology for Real-time Remote Monitoring

The status of the dry chamber can be checked in real time, and information such as temperature abnormal alarm,sensor error alarm and door ajar can be controlled with one button, which provides more security for the experiment process.

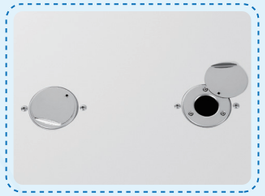
Pictures in Details



Ergonomic self-locking handle, firm and durable, easy to use.

Large arc angle 304 mirror stainless steel inner liner, easy to clean.

Standard independent intelligent temperature safety controller to ensure experimental safety.



It is equipped with portholes to facilitate external equipment monitoring to record the experimental process.

Drying Oven

Product Parameters

Model			HZS-60	HFS-160
Performance	Control Accuracy	℃	±0.1	±0.1
	Control Range	℃	RT+10~200	RT+10~200
	Temperature Fluctuation	℃	±0.2 at 100	±0.2 at 100
			±0.3 at 150	±0.3 at 150
	Temperature Uniformity	℃	±1.5 at 100	±1.2 at 100
			±2.5 at 150	±2 at 150
	Heating Rate (Ambient 22℃)		40 min to 100℃	20 min to 100℃
			50 min to 150℃	30 min to 150℃
	Recovery Time After Open Door for 30s		9 min to 100℃	4 min to 100℃
			20 min to 150℃	5 min to 150℃
Control	Heating Mode		Pre-Heating Air Jacket Type	Pre-Heating Air Jacket Type
	Control Principle		Fuzzy PID	Fuzzy PID
	Display		7" LCD Touchscreen	7" LCD Touchscreen
Electrical	Power Supply (V/Hz)		220-240~50/60	220-240~50/60
	Power (W)		900	2500
Dimensions	Capacity (L/Cu.Ft)		60/2.1	160/5.7
	Net/Gross Weight	Kg	77/85	113/125
		lbs	169.4.4/187	248.6/275
	Interior Dimension (W*D*H)	mm	370*385*420	550*492*600
		in	14.6*15.2*16.5	21.7*19.4*23.7
	Exterior Dimension (W*D*H)	mm	572*719*792	752*809*973
		in	22.5*28.3*31.2	29.6*31.9*38.3
	Packing Dimension (W*D*H)	mm	730*830*970	910*920*1140
		in	28.6*32.6*38.1	35.7*36.2*44.8
	Shelves (Standard/Maximum)		2/9	2/15
	Shelves Dimensions (W*D)		340*345	520*445
	Max. load per shelf	Kg	20	20
	Partition Spacing	mm	20	20
Alarms	Temperature Control Failure		Y	Y
	Timer End		Y	Y
	Sensor Error		Y	Y
	Door Ajar		Y	Y
	End of Program		Y	Y
	Alarm Mode		Sound and Light / Buzzer	Sound and Light / Buzzer
Accessories	Mechanical Independent Temperature Limiting Switch		Y	Y
	Air Vents		Y	Y
	Porthole		Y	Y
	Observation Window		/	Y
	RS485		Y	Y
	USB		Y	Y
	IoT Module		Optional	Optional
Certification	CE		Y	Y

Scope of Application

Typically used for drying and sterilization of laboratory consumables, instruments and samples as well as heating and curing, drying and dehydration, heat removal, moisture content determination of materials and samples. The solution is widely used in medical, enterprise, universities, scientific research institutions, environmental monitoring centers, pharmaceutical, food and drug quality monitoring centers and other related industries.

HZS-160E HFS-60E

Product Advantages

Wide Temperature Range
Operating from 10°C above ambient temperature up to 250°C

PID Control Technology
Ensures superior temperature and uniformity control

Smart IoT Module (optional)
Through the mobile app, the status of the drying oven can be checked in real time

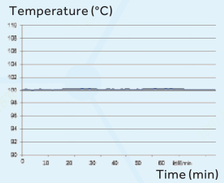
4-inch Display Screen
Intuitive user interface and easy-to-read display

Multiple Safety Protections
Multiple protection systems such as overheating, overcurrent, and independent temperature limiting; overtemperature, high and low temperature and other alarms for safety

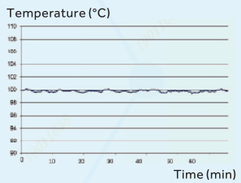
Innovative Air Duct Structure
Improved level of temperature uniformity inside the chamber as good as ±2°C at 100°C (HFS-60E)

Precise Temperature Control

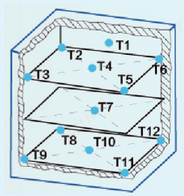
Based on the principle of fuzzy PID control, the product achieves high-precision temperature control. The temperature fluctuation measured using the ASTM standard 12 points temperature detection method is less than 0.3° C. (Test environment temperature 22° C, set temperature 100°C)



Temperature fluctuations±0.2°C (HFS-60E)



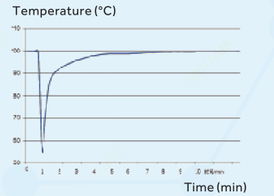
Temperature fluctuations±0.1°C (HZS-160E)



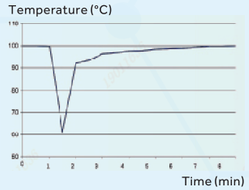
Drying Oven

Rapid Temperature Recovery After Door Opening

The U-shaped 3- sided heating system provides a continuous source of power for quick temperature recovery when opening the door, and high-performance insulation materials reduces heat loss



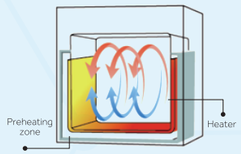
Temperature recovery curve to 100°C after opening the door for 30s (HFS-60E)



Temperature recovery curve to 100°C after opening the door for 30s (HZS-168E)

Air Jacket Heating Without Overshoot of Temperature

By adopting pre-heated air jacket heating (HFS-60E), the temperature remains stable and recovers quickly without any overshoot, enabling precise temperature control across the entire range of temperature segments, and enhancing the temperature uniformity of the chamber



4-inch LCD screen with simple operation and clear display

New ergonomic handle design

Smooth inner chamber with easy to clean rounded corners

Standard independent intelligent temperature safety controller to ensure experimental safety

Multiple shelves of adjustable height

Adjustable feet for easy positioning and leveling

Product Parameters

	Model		HFS-60E	HZS-160E
Performance	Control Accuracy	℃	±0.1	±0.1
	Control Range	℃	RT+10~250	RT+10~250
	Temperature Fluctuation	℃	±0.2 at 100	±0.2 at 100
			±0.3 at 150	±0.3 at 150
	Temperature Uniformity	℃	±1.2 at 100	±1.5 at 100
			±2 at 150	±2.5 at 150
	Heating Rate (Ambient 22°C)		20 min to 100°C	40 min to 100°C
			30 min to 150°C	50 min to 150°C
	Recovery Time After Open Door for 30s		4 min to 100°C	9 min to 100°C
			5 min to 150°C	20 min to 150°C
Control	Heating Mode		Pre-Heating Air Jacket Type	Pre-Heating Air Jacket Type
	Control Principle		Fuzzy PID	Fuzzy PID
	Display		4 inch LCD	4 inch LCD
Electrical	Power Supply (V/Hz)		220-240~50/60	220-240~50/60
	Power (W)		900	1900
Dimensions	Capacity (L/Cu.Ft)		60/2.1	160/5.7
	Net/Gross Weight	Kg	72/80	99/110
		lbs	158/176	217.8/242
	Interior Dimension (W*D*H)	mm	370*385*420	550*492*600
		in	14.6*15.2*16.5	21.7*19.4*23.7
	Exterior Dimension (W*D*H)	mm	572*719*792	752*809*973
		in	22.5*28.3*31.2	29.6*31.9*38.3
	Packing Dimension (W*D*H)	mm	730*800*970	920*890*1150
		in	28.6*32.6*38.1	36.2*35*45.2
	Shelves (Standard/Maximum)		2/9	2/15
	Shelves Dimensions (W*D)		340*345	520*445
	Max. load per shelf	Kg	20	20
	Partition Spacing	mm	20	20
Alarms	Temperature Control Failure		Y	Y
	Timer End		Y	Y
	Sensor Error		N	N
	Door Ajar		Y	Y
	End of Program		Y	Y
	Alarm Mode		Sound and Light / Buzzer	Sound and Light / Buzzer
Accessories	Mechanical Independent Temperature Limiting Switch		Y	Y
	Air Vents		Y	Y
	Porthole		Y	Y
	Observation Window		N	N
	RS485		Optional	Optional
	USB		N	N
	IoT Module		Optional	Optional
Certification	CE		N	N