Haier

Thermostatic incubator
Operation Manual

Model
HFP-80
HFP-168
HFP-258
HZP-80
HZP-168
HZP-258

- Please read this manual carefully before use
- The company reserves the right to interpret the instruction manual
- Please keep it together with the invoice after reading
- In case of any update of product technology or software, no prior notice will be provided.
- Please refer to the appearance of actual product

Contents

Safety precautions

Dear Haier Users:

Greetings! Thank you for using the thermostatic incubator from Haier. In order to ensure that you can better read this manual and use this product, and to prevent the occurrence of personal injury and damage to articles, please be sure to carefully read and abide by the contents marked with the following symbols in this manual. For ease of reading, the thermostatic incubator is referred to as the incubator hereunder.

Safety label

Caution Hot Electric shock Grounding

Safety warning

In all cases marked ⚠, documents need to be consulted in order to clarify the nature of the potential hazard and any countermeasures that must be taken.

Warning Failure to observe the warning symbol may lead to serious casualties.

Attention Failure to comply with the instructions under the symbol of Caution may result in casualties or damage to the drying box and related property losses.

Act or operation that must be prohibited.

Act or operation that must be observed.

- It is very important to read the product manual when using the machine for the first time, because the protection provided by the equipment may be damaged if the equipment is not used in the way specified in the manual;
- The installation and maintenance of the incubator can only be done by the professional technicians or authorized after-sales maintenance personnel of Haier, otherwise it may lead to an electric shock or fire;
- The incubator must be firmly secured on a solid flat surface. If it is not secured firmly or placed improperly, the incubator will tip over or cause injury to any personnel;
- The incubator can only be operated by the trained and authorized personnel;
- The special power supply indicated on nameplate of the incubator shall be used, or it may cause a fire or electric shock;
- If the voltage is lower than 198V or higher than 242V, an automatic voltage regulator shall be added. The voltage shall meet the service requirements.
- If the power cord needs to be extended, cross-sectional area of the extended cord shall not be less than $2mm^2$ and the length shall not be longer than 3m, otherwise it may cause a fire or electric shock.
- Power cord of the incubator is equipped with a three-pin (grounding) plug that matches the standard 10A three-pin (grounding) socket. Under no circumstances should you cut or remove the grounding pin of the power cable. Make sure that the power plug and socket are tightly, firmly and reliably plugged, otherwise it may cause a fire.
- Use the power socket with a grounding wire to prevent electric shock. If the power socket is not grounded, the ground wire must be installed by a professional technician.
- If the gas or any other flammable gas leaks, it is necessary to close the valve where the gas leaks from, and open the doors and windows to vent the gas. Do not plug or unplug power plug of the incubator, otherwise it may cause an explosion or fire;

- When unplugging the incubator from the power socket, the power plug shall be tightly held without pulling wire of the power plug. If the wire is pulled by hand, it may cause an electric shock or fire due to short circuit;
- If the incubator does not work properly, please pull out the power plug. The continued working under abnormal conditions may cause an electric shock or fire;
- Before any repair or maintenance of the incubator, power supply of the incubator shall be disconnected to prevent an electric shock or any personal injury;
- Drugs or suspended particles in and around the incubator shall not be inhaled during maintenance. Otherwise, it may be harmful to health;
- When the tissue containing virus, bacteria and others which are harmful to human body is cultivated, please use it in the safe area with corresponding preventive measures. If it is used improperly, it may cause harm to human health or the environment;
- If the incubator will not be used for a long period of time, the power plug shall be pulled out to prevent electric shock, electric leakage or fire due to aging of the power cord;
- If the incubator is left unused in an unsupervised area for a long period of time, please make sure that the incubator is not accessible to children and that the door is not completely closed.
- Scrapping and disposal of the incubator shall be carried out by relevant personnel. The freezer door shall be removed to prevent accidents such as suffocation.
- When the incubator is restarted in case of any power failure or after the power is turned off, settings of the incubator shall be checked; A change in the settings will likely result in a change in results of the culture;
- Gloves shall be worn during maintenance to avoid contact with sharp edges or corners, resulting in injuries;
- When handling the incubator, care shall be taken not to be tripped by the incubator to prevent the incubator from being damaged or any personnel from being injured;
- There shall be no obstacles around the incubator to keep the ventilation unobstructed;
- The tissues, materials, or liquid substances that are likely to burn or have the potential to explode shall not be used because the vapors or explosion fragments they give off may release toxic substances;
- The incubator shall not be placed in a humid location or the location which is vulnerable to water splashing, or the electric leakage or electric shock may be caused due to degraded insulation.
- Water shall not be poured directly on the incubator, or it will cause electric shock or short circuit;
- Any container filled with water or any heavy object shall not be placed on the incubator. If the item falls off, it may cause personal injuries, and outflow of water will degrade the insulation, causing electric leakage or electric shock;
- The incubator shall not be grounded via the gas pipe, power supply pipe, telephone wire or lightning rod. Such grounding may cause an electric shock or other hazards;
- Do not touch any electrical parts (e.g. power plug) or any switch of the incubator with wet hands, otherwise it may cause an electric shock;
- The user is not allowed to disassemble, repair or modify the incubator at its own discretion. Otherwise the fire or personnel injuries may be caused due to improper operation;
- Flammable and explosive hazardous articles or volatile substances shall not be placed in the incubator, nor shall flammable sprays be used near the incubator, otherwise it may cause an explosion or fire;
- Plastic bags shall not be placed in the locations where children can reach them, because they may cause choking accidents;
- Do not climb to the incubator or place any item on the incubator, otherwise the incubator may tip over and cause injury to people or damage to the incubator;
- The metal objects, such as nails or iron wires, shall not be inserted into any orifice or gap of the incubator or any air outlet for internal air circulation, otherwise the electric shock or injuries will be resulted from contacting of the such objects with the moving parts;
- Please do not pull or carry the incubator from the door handle, in order to prevent the incubator from being damaged or any personnel from being injured;
- Do not use any electrical appliances in working chamber of the incubator, except for the types recommended by the manufacturer;

Precautions for use

•Structure and composition: This product is composed of the incubator body, heating system, control system (including the alarm system) and the shelves whose spacing can be adjusted at will.

•Displayed temperature of the incubator is temperature value of the temperature sensor inside the incubator. Although sometimes the temperature displayed may differ from the actual value in center of the incubator, it will gradually approach the true temperature.

•The incubator shall be cleaned with a diluted neutral detergent. The brushes, acids, gasoline, soap powder, polishing powder, or hot water shall not be used to clean the incubator. Such materials may damage the painted surface and the plastic and rubber parts. Be careful not to wipe plastic and rubber parts with volatile solvents such as gasoline.

•The stainless steel parts inside the incubator are not acid-resistant, so please take precautions against corrosion. Never put any acid medium in the oven!

•When the incubator will not be used for a long period of time, the power shall be cut off.

•Each time when accessing samples, please try to minimize the time of opening the door, so as not to cause great fluctuations in the temperature and humidity of the incubator.

•Temperature in the oven will rise sharply in a short period of time if the door is opened and then closed, which is a normal phenomenon. The situation will be restored within 10 minutes after closing of door.

• A certain gap shall be kept around the product, and there must be a gap of no less than 50cm on the right side, so that the power can be easily cut off in case of any emergency.

•After each test of the product, water on wall of the working chamber shall be dried to avoid the growth of miscellaneous bacteria.

• Basic performances claimed in electromagnetic compatibility tests: basic performance of the incubator shall be normal running of the heating system to achieve temperature control function in the incubator; normal running of the data recording system to achieve the function of data recording transmission; normal running of the electronic door lock (if any) to achieve corresponding functions; and sound buzzing or text display on screen in case of any alarm.

• EMC requirements:

a) The equipment complies with the emission and immunity requirements specified in EN 61326-1;

b) The device is designed and tested according to Class A device in CISPR:11. This device may cause radio interference in the home environment, so protective measures shall be taken;

c) It is suggested to evaluate the electromagnetic environment prior to the use of the device;

d) Use of the device near strong radiation sources (such as unshielded video sources) is prohibited, otherwise normal working of the device may be interfered;

Product introduction

1. Intended use

   This product is a precise laboratory instrument which is applicable for the culture of biological cells, tissues and bacteria in biological experiments; the fuzzy PID control algorithm is used to control various parameters of the incubator precisely, so as to maximize the success rate and efficiency for culture of the biological cells and tissues, etc. There are no absolute contraindications to the product.

   ⚠Attention The incubator shall not be used beyond intended performance of the product.

2. Product classification

   •This series of products are the direct-heated incubator.

3. Parameter control

   •The product is used to provide a temperature which ranges from RT (room temperature) +5℃ to 105℃; And, computer control, digital display of temperature parameters. The temperature is displayed with an accuracy of 0.1℃ .

4. Product structure

   •The incubator is a platform frame structure; the control circuit is located at upper part of the incubator, the main power switch at right side which is opposite to the incubator; and the 7in. color touch screen is located just above the incubator door;

   •The microcomputer control of temperature control circuit, automatic adjustment characteristics, temperature out-of-control alarm and other functions, and the adoption of high-precision temperature sensor greatly improve the control accuracy and reliability; This product is equipped with the RS485 communication interface, because of which the remote control is available;

   •A dual-door structure is adopted. The outer door is provided with the heating function to ensure no condensation and temperature uniformity on the inner glass door, so as to facilitate observation of the product. At the same time, the incubator body behind the glass door is provided with a door control switch. When the glass door is opened for 30s, an alarm will be given automatically;

   •Two layers of PTFE and PVC sealing strips ensure sealing performance of the product;

5. Safety system

   •Multiple fault alarms: high/low temperature alarm, overtemperature alarm, program end delayed door closing alarm;

   •Multiple alarm modes: buzzer sound alarm, touch screen display alarm;

   • All independent components are safely grounded.

6. Humanized design

   •Friendly touch interface that responds sensitively to finger movements when wearing rubber gloves;

   •Bulletin design, paperless office message notepad function, safe running mode;

   •Large arc-shaped four corners of liner and integrated stamping structure ensuring complete cleaning without any dead corners;

   •Convenient drainage design;

   •Integrated anti-off shelf design; adjustable horizontal base;

   •Large capacity data storage with up to 15 years of data traceability;

Due to the need for improvement of the product, the Haier thermostatic incubator you got may not be completely consistent with the illustration in the manual. We sincerely apologize for that. The instructions are subject to change without prior notice.

Product installation

Product unpacking and handling

•The packing straps shall be cut off with an appropriate unpacking tool, such as scissors or wallpaper knife, and then the outer packing case shall be lifted vertically and removed horizontally; the accessories shall then be checked for completeness.

Attention Appearance of the device shall not be bruised or scratched, so at least two adults shall be responsible for unpacking for safety.

•Due to the heavy mass of the device itself, appropriate mechanical handling tools shall be used.

Attention If manual handling is used, it should be noted that four adults (at least two) shall work together to lift bottom of the device vertically and then synchronously move it horizontally to the location where the device is stored. During handling, it is strictly prohibited to apply any pressure on outer door of the device, or the door body will fall off.

Installation Environment

•Ambient temperature: 18℃~30℃;

•Ambient humidity: ≤80%Rh;

•Atmospheric pressure: 86kPa ~ 106kPa;

•There is no strong vibration and corrosive gas around;

•Direct exposure to sunlight or other cold and hot sources shall be avoided;

•There are no corrosive substances and high concentration dust around the incubator;

•Power supply voltage: AC 220V±22V;

•Voltage frequency: 50Hz±1Hz;

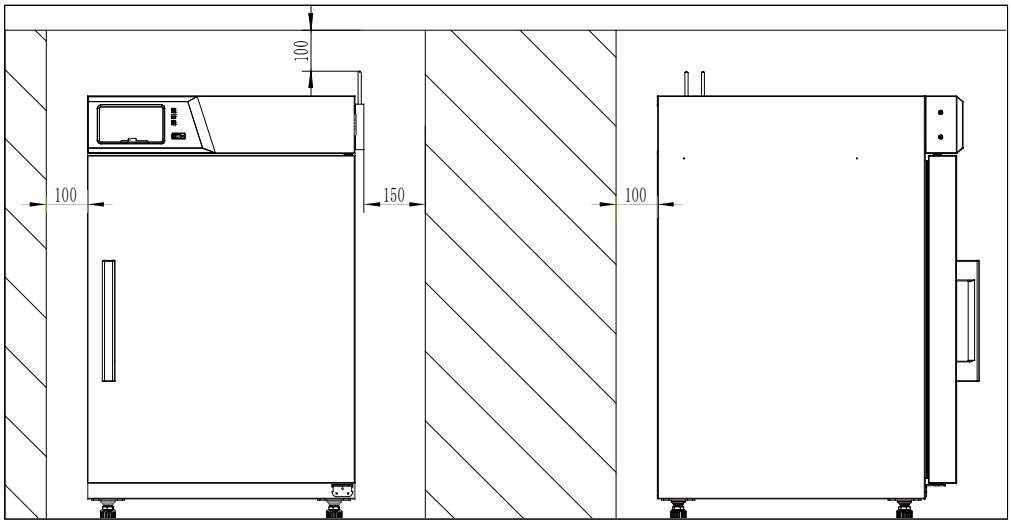
Warning •The incubator shall not be placed and operated in a place without ventilation. If there are several incubators in the same room or the incubators are located on ground floor of the laboratory, auxiliary ventilation may be required.

Attention •When the incubator is used beyond working environment of the product, its expected performance cannot be guaranteed.

Spacing

•The incubator shall have a certain safe distance from the adjacent wall/object, as shown in the figure below.

Attention The pressure compensating orifice on rear wall shall not be blocked. The device shall not be placed at a location where it is difficult to operate the disconnecting device.



Connection of main power supply

•Before connecting the main power supply, it is necessary to ensure that the power matches the power consumption indicated on the nameplate. The power supply specifications of the device are specified as follows:

Power supply voltage: AC 220V±22V;

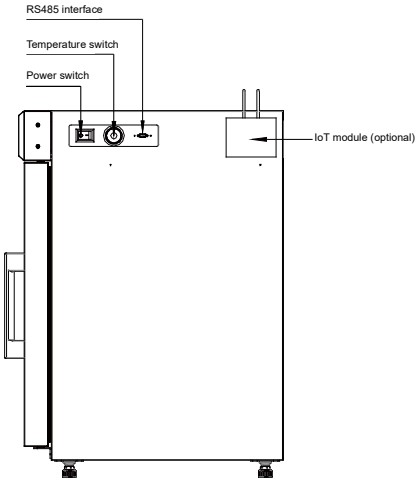
Voltage frequency: 50Hz±1Hz;

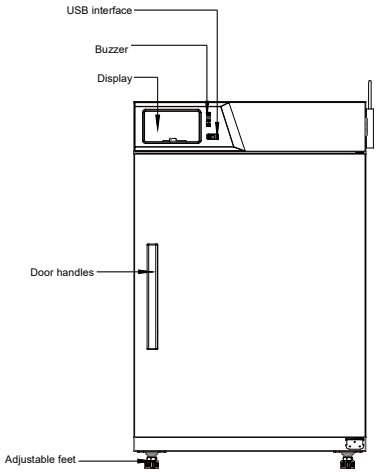
•There is a grounded power cable on accessories of the incubator. It is necessary to insert quick connector of the power cable into the interface (opposite to the drying oven) at the lower right corner of the electric control box on the back of the incubator.

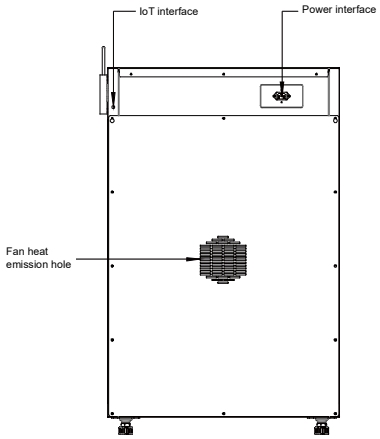
⚠Warning The power cable shall be inserted in place. The power cable connector of the incubator has a self-locking structure. The main power supply device shall be well grounded, so as to ensure that the power cable of the incubator is well grounded after connection.

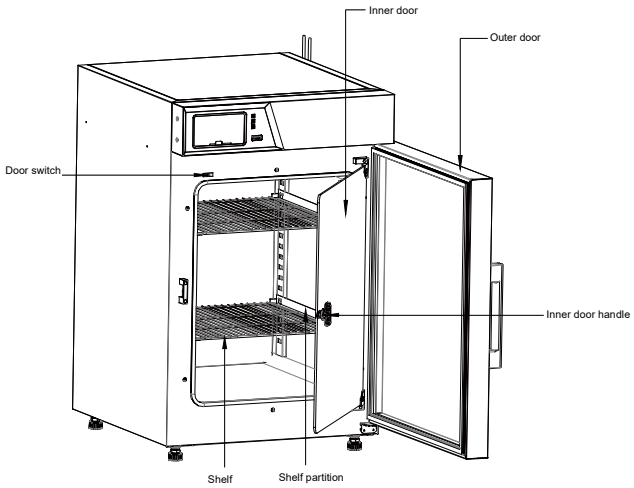
Name of each part • Control panel

Name of each part









Debugging and use

Preparation before use

•Ambient temperature of the area where the incubator is placed shall be at least 3~5℃ lower than the control temperature;

•Always keep the outer door and glass door open;

Power on

•Connect with the main power supply;

•Turn on the main power switch;

⚠Attention It is necessary to pay attention to pressing direction of the main power switch and to press it to the end to ensure that the power is connected.

Initial settings for first power on

•Language: select the required display language according to needs;

•Network: search the networks and connect to the wireless network;

•Time: you can set the time manually, or synchronize with the network time (such as by connecting to the network);

•Temperature scale: Select the temperature scale ℃ or ℉ according to needs;

•Modes: Select management modes according to needs. Anyone is accessible to settings and viewing of parameters in the ordinary mode, while only the administrator can set the parameters in authorization mode;

•Password: Set the administrator password for rights management; (please remember your password. If you forget your password, please contact Haier's technical support.)

Language selection interface

Network setting interface

Time and temperature scale setting interface

Mode setting interface

Password setting interface

Home page

After the initial settings, enter the home page interface.

1. Running records: time records and alarm records generated during running of the incubator;
2. Running data: the running curve of working space parameters during running of the incubator;
3.Set: basic settings of the incubator;
4. Program setting: The incubator will run according to the set program;
5. Start: click to enable heating of electric heating wires after setting of parameters or the program;
6. Mute: click to cancel the buzzer alarm (the buzzer alarm will continue after the set time is exceeded);
7. Heating: after the heating wire starts to heat, the icon will be in red;
8. Fan: click the to enter the speed setting interface;
9. Message notepad bulletin: click the to enter the message notepad bulletin interface;

Operating steps:

1. Select running mode of the device (from fixed mode/appointment fixed mode/program mode/ appointment program mode, the fixed mode is selected by default); path: Set - Device Running

2. Temperature setting: If the fixed mode/appointment fixed mode is selected, click Set - Parameter Settings to set the temperature; if the appointment mode/appointment fixed mode is selected, click “Program Settings” to edit the program;

3. Click⏵to run.

Set

Users can set the parameters in two ways

•Click the parameters displayed on the home page interface directly to enter settings of corresponding parameters;

•Click the “Set” icon to enter the setting interface, and then select “Parameter Settings” to enter setting of corresponding parameters;

•The default setting temperature is 37.0℃ ;

A.1 Parameter setting interface

•Set temperature scale: Select the temperature scale (℃ or ℉);

•Set temperature value: 15℃~105℃, the default is 37℃;

•High temperature alarm value: set temperature value +0.5℃ ~ set temperature value +5℃, the default is +0.5℃;

•Low temperature alarm value: set temperature value -0.5℃~ set temperature value -5℃, the default is -0.5℃;

•Overtemperature protection value: set temperature value +5℃~120℃, the default is +5℃;

•When the +- is pressed, the value will change by 0.1 when it is pressed simply, and will change by 1 when it is pressed and held. The value can also be clicked to enter manually;

•Click the circle in the center of the main interface to enter the interface directly;

•The changes will take effect after clicking "Save Changes";

•Manual mode enabling: adjust the control speed manually;

•Manual mode disenabling: default speed of the fan is 100%;

•After setting, click "Save Changes" to take them into effect.

•Actual temperature = set temperature + calibration temperature;

•The calibration value can only be changed by +- and cannot be entered manually; the value will change by 0.1 when it is pressed simply, and +- cannot be pressed and held;

•Temperature calibration range: -20℃~20℃;

•The changes will take effect after clicking "Save Changes";

A.2 Device running

Users should first select the running mode before running according to the requirements. The default running mode of the system is fixed mode. There are 4 running modes in total, and one of them must be selected before running;

Set path: Main interface - Set - Device Running

A. Fixed mode: the device runs for a fixed period of time or indefinitely according to the set constant temperature;

B. Appointed fixed mode: to enable appointment countdown before activation of the fixed mode;

C. Program mode: users edit the program to be run by themselves according to their needs;

D. Appointed program mode: to enable appointment countdown before activation of the program mode;

A.2.1 Fixed mode

•You can select in a range of (0-999) hours (0-59) minutes. When 0 hour and 0 minute is selected, the fixed mode will continue to run endlessly. At the end of the running, the fixed time duration will be cleared to zero. When the running is stopped manually, the fixed time duration will not be cleared to zero;

•If the temperature is changed during endless running of the device, it will continue to run at the changed temperature by default;

•When the device is running for a fixed duration, change of the temperature/time duration is not allowed. If any change is necessary, change shall be made after clicking “Stop Running”, the device will run for the changed time duration at the changed temperature;

•If “Stop” is clicked without making any change when the device runs for a fixed period of time, it will continue to run for a fixed period of time after startup;

•If change of the running mode is prohibited during running of the device, it is necessary to click “Stop” first if you want to change the mode; after the mode is changed, the fixed duration will be cleared to zero;

•If the power supply fails when the device runs for fixed time and the interrupted device is still in running state, the current temperature and fixed time will be executed again after power restoration;

•After the running in fixed mode ends, a window will be popped out to hint and the buzzer will sound;

•The settings will take effect after clicking "Save";

A.2.2 Appointment fixed mode

•An appointment can be made for the fixed mode, and time of appointment ranges within (0-999) hours (0-59) minutes. At the end of running, the appointment time/fixed time are cleared to zero;

•After clicking “Start”, it is forbidden to change the running mode. If you want to change the running mode, you need to click “Stop Running”; after the mode is changed, the fixed time/appointment time that is originally set will be cleared to zero;

•After the running starts, it is forbidden to change the temperature/appointment time/fixed time, whereas it is allowed to change the high and low temperature alarm/overtemperature protection, etc.;

•If you click "Stop" during running of the appointment time to change any parameter, the device will continue to execute the remaining appointment time and the set temperature/fixed time;

•If you click "Stop" to change any parameter after running of the appointment time ends, the appointment time will be cleared to zero, and the temperature/fixed time after the change will be executed directly after clicking “Start”;

•If you click "Stop" during running without changing any parameter, the running will be continued after startup;

•If the power supply fails when the device runs for fixed time and the interrupted device is still in running state, the fixed time and temperature that is set will be executed again after power restoration;

•After the running in appointment fixed mode ends, a window will be popped out to hint and the buzzer will sound;

•The settings will take effect after clicking "Save";

A.2.3 Program mode

•During running of program mode, any editing, deletion and other operations on program segments/ subprogram segments in any form are prohibited;

•If you click "Pause" during running of program mode without making any changes, current subprogram segment will be run continuously after startup; if any change is made, all program segments will be run again;

•If change of running mode is prohibited during running of the device and it is necessary to change the running mode, click Stop Running;

•If the power supply fails when the device is in running program mode and the interrupted device is still in running state, current subprogram segment will be run again after power restoration;

•After the running in program mode ends, a window will be popped out to hint and the buzzer will sound;

•The settings will take effect after clicking "Save";

A.2.4 Appointment program mode

•Program appointment mode; An appointment can be made for the program mode, and time of appointment ranges within (0-999) hours (0-59) minutes; At the end of appointment time or the mode is changed, the appointment time will be cleared to zero;

•Change of the mode is prohibited during running of the device. If any change is necessary, click to stop running. The appointment time will be cleared to zero after any change is made;

•During running of the device, any editing, deletion and other operations on program segments/subprogram segments in any form are prohibited;

•During running of the appointment time, you can click “Pause” to change any parameters; if no change is made to the appointment time, the remaining appointment time will be run continuously; whereas, if any change is made to the appointment time, the changed appointment time will be rerun;

•During running of the program segments, you can click “Pause” to change any parameters; after startup,the device will rerun the program segments that are set;

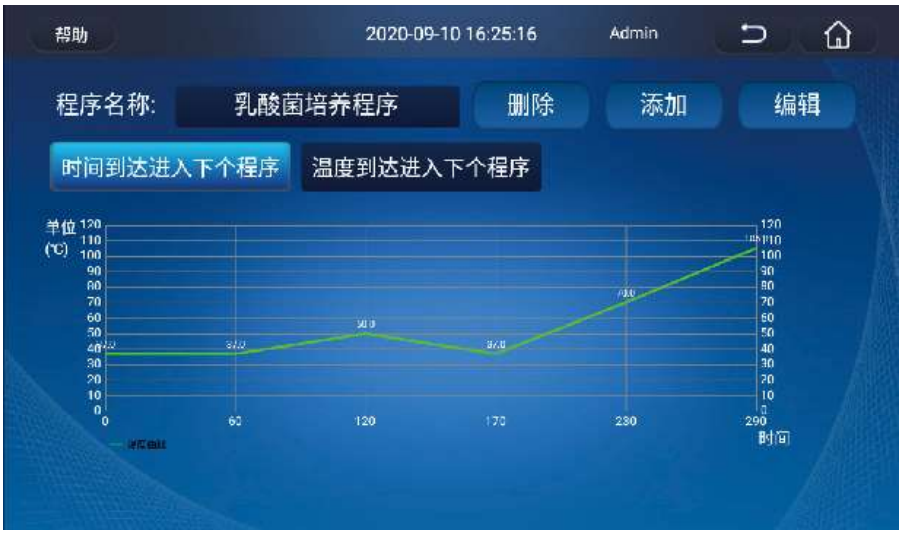
•If the power supply fails during running of the appointment duration and the interrupted device is still in running state, the device will run until the appointment duration ends by default and the program segment will be started after power restoration;

•After the running in appointment program mode ends, a window will be popped out to hint and the buzzer will sound;

•The settings will take effect after clicking "Save";

A.3 Program settings

Click “Program Settings” on the main interface to enter the setting interface



Program setting running mode:

(1) Ensure that the device is in standby state;

(2) Mode selection: Set-Device Running-Program Mode/Appointment Program Mode;

(3) Edit or select the required program segments;

(4) Return to the main interface and click the “Run” button. Then, the device starts to run.

A.4 Basic settings

Users can click the "Basic Settings" in the "Parameter Setting" interface to set language, time, alarm volume and so on of the incubator

•Change language: select the appropriate language from the drop-down menu;

•Time setting: set the time from the drop-down menu;

•Alarm volume: in case of an alarm, the buzzer will prompt, and the alarm volume can be adjusted;

•Running mode: select the common mode or authorization mode according to specific needs;

•Buzzer alarm delay time: in case of a buzzer alarm, click the mute button on main interface. If cause of the alarm still exists after delay time of the buzzer alarm, the buzzer alarm will continue;

•Key volume: to adjust volume of the key.

•Screen brightness: to adjust the display brightness of the screen.

•Screen sleep: it is recommended to set the screen sleep time according to the operating time, which can prolong service life of the touch screen;

•Lock screen time: if nothing is done during the lock screen time, the screen will go to sleep

⚠Attention •All changes will take effect after clicking “Save”.

Message, notepad, bulletin

Click the home page to enter the message, notepad, bulletin page:

•New message: different authorized users can send messages between each other by creating new messages;

•Message mailbox: if there are any unread messages after the user logs in, the number of unread messages will be highlighted both on the homepage icon and at the upper right corner of the message mailbox;

•Notepad: It is used for recording. Notepad is open in normal mode and is accessible to anyone. In authorization mode, the users who log in can only view their own records.

•Bulletin: It is available for multiple users to post things that rest of the users shall be reminded of to the home page. After the screen sleeps and then is clicked, the bulletin interface will appear first, and then the home page interface will be entered into.

Alarm

Alarm type

Alarm type	Phenomenon	Alarm indication	Buzzer alarm
High temperature alarm	Interior temperature > set temperature +0.5℃ or set limit	Parameters are shown in red	Pulsed sound alarm
Low temperature alarm	Interior temperature < set temperature -0.5℃ or set limit	Parameters are shown in red	Pulsed sound alarm
Overtemperature alarm	Interior temperature> overtemperature protection limit	Parameters are shown in red	Pulsed sound alarm
Door opening alarm	It takes more than 30S to open the door	The alarm flashes during the set alarm time	A pulsed sound alarm is given within the set alarm time
Program running end alarm	Running of the set program ends	Parameters are shown in red	Pulsed sound alarm
The sensor works abnormally	The temperature sensor fails	The alarm flashes	Pulsed sound alarm

Alarm restoration

This series of incubator has automatic alarm recovery function:

•In the case of an alarm, press the mute button on the main interface to stop the buzzer alarm;

•If cause of the alarm still exists, the buzzer alarm will restore automatically after the buzzer alarm delay time is exceeded.

Cleaning and sterilization

Cleaning

Some parts of the incubator are made of plastic. Plastics can be dissolved by solvents. Strong acids or corrosive solutions can brittle plastics.

Do not use the solvents containing hydrocarbons, solvents containing more than 10% alcohol, strong acids, corrosive solutions to clean plastic parts and surfaces.

Do not spray any detergent or other liquids on the touch screen and the electric control box on back of the incubator. During cleaning, be sure that no water will enter into the electrical parts.

If you have any doubt about the compatibility of disinfectants or cleaning agents with equipment parts or materials contained in the equipment, please consult Haier or an agent designated by Haier.

1. Cleaning of external surfaces
   - •Thoroughly remove the dirt, residues and sediments with warm water and detergent solution;
   - •Wipe the surfaces with a piece of clean cloth and clear water;
   - •Thoroughly dry the surfaces with a piece of clean cloth.
2. Cleaning of display screen
   - •Clean the display with a piece of 100% microfiber dry cloth!

⚠Attention Do not spray or wipe the display with detergent.

Disinfection and sterilization

1. Pollution control processes
   - •When the incubator is used, users shall develop corresponding pollution control processes compatible with the incubator according to following requirements.
2. Wiping/spraying disinfection (manual wiping/spray disinfection is divided into three stages):

   a) Advance disinfection

   •Wipe/spray disinfectant on interior surfaces of the working chamber;

   •Disinfect interior of the working chamber and shelf surfaces fully with disinfectant as specified by disinfectant manufacturer.

   b) Cleaning

   •Thoroughly remove the dirt, residues and sediments with warm water and detergent solution;

   •Wipe the surfaces with a piece of clean cloth and clear water;

   •Drain the water from the sink;

   •Thoroughly dry the working chamber and shelf surfaces with a piece of clean cloth;

   c) Final disinfection

   •Wipe/spray disinfectant on removed shelves and duct panels, and thoroughly disinfect them in accordance with instructions of the disinfectant manufacturer;

   •Dry surfaces of the shelves and duct plates with a piece of clean cloth;

   •Reinstall the shelves and duct panel;

Warning Disinfection with alcohol!

a) The disinfectants with an alcohol content of more than 10% will form a flammable and explosive gas mixture when being combined with the air;

b) When any of the such disinfectants is used, open flame or high temperature environment shall be avoided during disinfection;

c) Such disinfectants shall be used in well-ventilated rooms;

d) After the disinfectant reaction is completed, the disinfected parts shall be wiped clean;

e) The safety regulations shall be followed, in order to avoid the fire and explosion hazards caused by alcohol-based disinfectants.

Attention Chlorine-containing disinfectants!

The chlorine-containing disinfectants can corrode the stainless steel.

Only the disinfectants that do not corrode the stainless steel shall be used.

Warning Electric shock!

Contacting with a current-carrying component may result in a life-threatening electric shock.

Before cleaning and disinfecting, disconnect the incubator from the power supply!

a) Turn off the incubator by the power switch;

b) Pull out the power plug to prevent accidental connection;

c) Make sure that the incubator is powered off;

Warning Health hazards!

Surfaces of the working chamber may be contaminated. Contacting with the contaminated cleaning fluid may cause infection. The disinfectants may contain harmful substances.

During cleaning and disinfecting, be sure to follow the safety instructions and health regulations!

a) Wear safety gloves;

b) Wear safety goggles;

c) Wear a mask and other cavity and respiratory system protection devices to protect your mucous membranes against irritation;

d) Follow the safety instructions of disinfectant manufacturers and health authorities.

Scheduled maintenance

The expected service life of this series of incubators is 10 years. During the expected service life, please follow the following scheduled maintenance advices:

•It is recommended that the incubator shall be subjected to a routine inspection once a year to ensure operating accuracy and working safety of the incubator. Each incubator has undergone strict ex-factory debugging and inspection, in order to ensure high accuracy of the culture environment parameters. If you also want the incubator to work at the highest accuracy, please contact the engineer of Haier;

•Every week, users need to check if:

a) Sealing strip of the double-layer door works well;

b) Connection of power cord is in good contact

⚠Warning During daily repair and maintenance, only Haier or the organization designated by Haier can inspect or provide the parts necessary for maintenance of the incubator;

•The user shall clean and disinfect the incubator before notifying the maintenance engineer;

•Haier reserves the right to update and improve the incubator;

Q&A

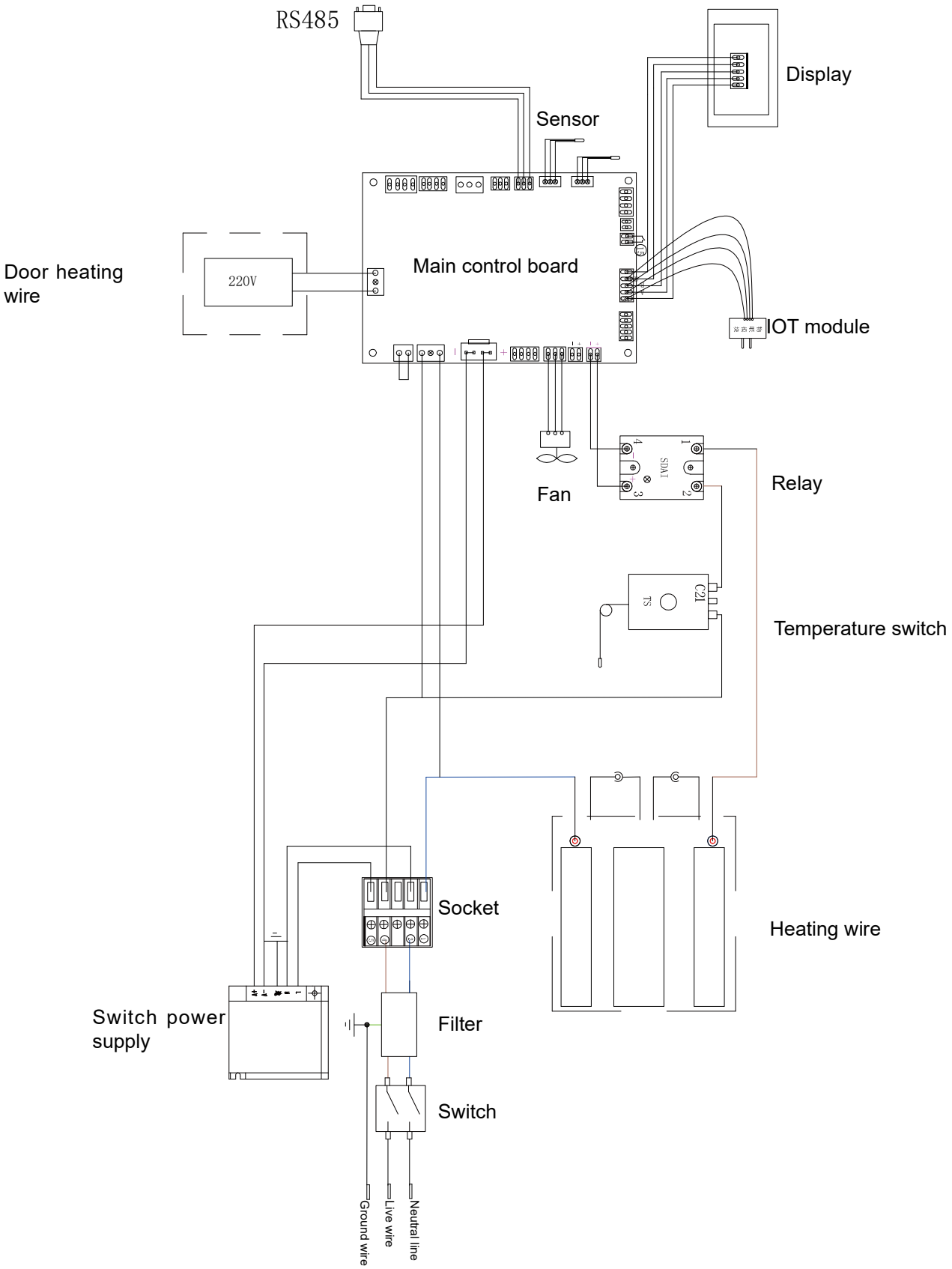
Any question during use? If you suspect that something is wrong with the incubator? Please read here first. The content of this chapter is to answer various possible fault phenomena and provide solutions.

If the problem still cannot be solved after such operation, please call the after-sales service department of Haier.

Do not repair or disassemble the incubator by yourself.

malfunction	Troubleshooting
The incubator does not work	The power switch is turned on, and the cables and wires are connected in place
	Whether the contact between plug and socket is bad
	Whether the input power supply is energized
The incubator does not heat	Check setting values
	Check operating mode of the equipment
There is a lot of condensed water on the glass door	Check that the outer door is closed

Wiring diagram



Specifications • packing list

Specification

Classification	Name	HFP-80 HZP-80	HFP-168 HZP-168	HFP-258 HZP-258
Structure	Volume (L)	80	170	258
	Interior material	Plasma electro-polished 304 stainless steel		
	External material	Powder coated galvanized zinc plate		
Dimensions	Product dimensions (Width × Depth × Height) mm	560×662×870	650×782×1028	744×840×1104
	Working chamber dimensions (Width × Depth × Height) mm	400×400×480	490×550×626	584×610×774
Shelf	Shelf dimensions (Width x depth) mm	380×300	470×455	567×484
	Quantity: standard/max.	2/12	2/17	2/21
Temperature parameters	Temperature control range	Room temperature+5℃ ~105℃		
	Temperature fluctuation at 37℃	±0.1℃		
	Temperature uniformity at 37℃	±0.3℃	±0.6℃	±0.8℃
	Type of temperature sensor	PT100		
Electrical parameters	Power supply	220V~/50Hz		
	Power (W)	350W	530W	710W
Expected service life/date of manufacture		10 years/see product bar code		

Note: The sterilization power is the maximum rated power; the company focuses on technological innovation, so the product parameters are subject to change without prior notice.

Packing list

Name	HFP-80/HZP-80	HFP-168/HZP-168	HFP-258/HZP-258
Shelf	2	2	2
Power cord	1	1	1
Power cord bracket	1	1	1
Instruction manual	1	1	1
Warranty certificate	1	1	1
Brochure	1	1	1
Plastic bag	1	1	1
Installation and debugging confirmation letter	1	1	1

Warranty description

Dear honored users:

Thank you for using the thermostatic incubator from Haier. According to the Law of the People's Republic of China on the Protection of Consumers Rights and Interests and the relevant provisions of the Provisions on Liability for Repair and Replacement of Partial Commodities issued by the State Bureau of Technical Supervision and the Bureau of Finance, our company will provide you with the following services based on this warranty certificate and invoice:

1. Free repair for the whole machine for three years (except for vulnerable parts and consumables such as battery/display screen/filter).

2. The following circumstances are not included in the free service scope, but paid repair and life service can be provided:

[A]. Fail to present warranty certificate and invoice;

[B]. Alteration of invoices;

[C]. Damage caused by unexpected factors or improper use;

[D]. Damage caused by self repair without consent from this company;

[E]. After the validity period of three guarantees (for repair, replacement, and compensation of faulty products), it can still be used after repair.

3. The validity period of the three guarantees shall be calculated from the date of invoicing by deducting the time due to repair and waiting time since there is no spare part available.

Within the validity period of the Three Guarantees, the consumer can handle the repair, replacement or return of goods based on the invoice and voucher of Three Guarantees.

For products with expired warranty period, Haier (Group) service personnel can provide paid door-to-door services, and the paid costs (charges for expired warranty) include labor costs and parts costs. All fees charged from user shall be according to the unified charging standard of Haier as presented by the maintenance staff, and the service staff shall issue the invoice, otherwise the user can refuse to pay the charges. Please pay attention to the barcode on the machine. The maintenance staff shall scan the barcode as a maintenance credential every time when they provide the door-to-door service to ensure that an accurate maintenance file can be established.

You are welcome to supervise our services. If any of our service commitments is not fully implemented, please call our national unified customer service number 4006 99 2017 to complain.

For more products, please visit Haier biomedical official website (www.haierbiomedical.com)

Scan the QR code and follow the WeChat official account

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.