# SWIMMING POOL HEAT PUMP UNIT

## Installation & Instruction Manual

oasis X

X 9 | X 13

oasis heat pumps

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# 1. PREFACE

To provide our customers with quality, reliability and versatility, this product has been made to strict production standards. This manual includes all the necessary information about installation, debugging, discharging and maintenance. Please read this manual carefully before you open or maintain the unit. The manufacture of this product will not be held responsible if someone is injured or the unit is damaged, as a result of improper installation, debugging, or unnecessary maintenance. It is vital that the instructions within this manual are adhered to at all times. The unit must be installed by qualified personnel.

The unit can only be repaired by qualified installer centre, personnel or an authorised dealer.
Maintenance and operation must be carried out according to the recommended time and frequency, as stated in this manual.

Use genuine standard spare parts only.
Failure to comply with these recommendations will invalidate the warranty.

Swimming Pool Heat Pump Unit heats the swimming pool water and keeps the temperature constant.
For split type unit, the indoor unit can be Discretely hidden or semi-hidden to suit a luxury house.

Our heat pump has following characteristics:

***1 Durable***
The heat exchanger is made of PVC & Copper Nickle tube which can withstand prolonged exposure to swimming pool water.

***2 Installation flexibility***
The unit can be installed outdoors or indoors.

***3 Quiet operation***
The unit comprises an efficient rotary/ scroll compressor and a low-noise fan motor, which guarantees its quiet operation.

***4 Advanced controlling***
The unit includes micro-computer controlling, allowing all operation parameters to be set. Operation status can be displayed on the LCD wire controller. Remote controller can be chosen as future option.

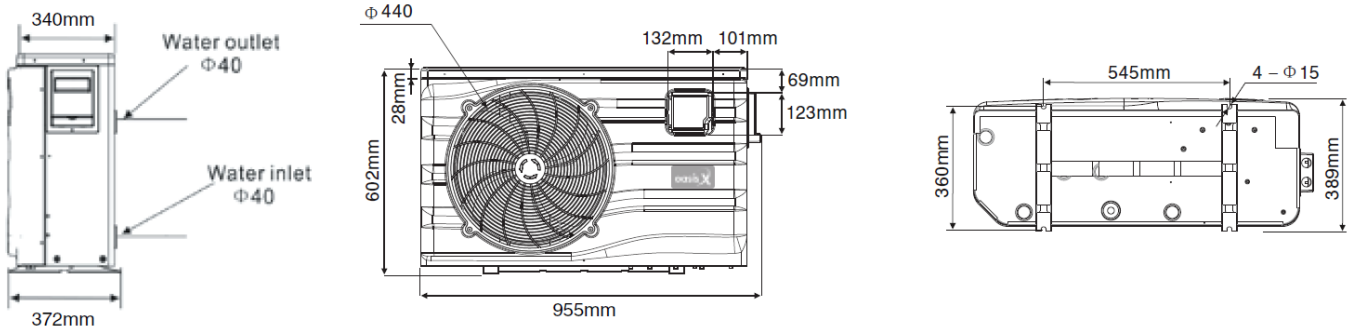
# 2. SPECIFICATION

## 2.1 Performance data of Swimming Pool Heat Pump Unit

*** REFRIGERANT: R410A

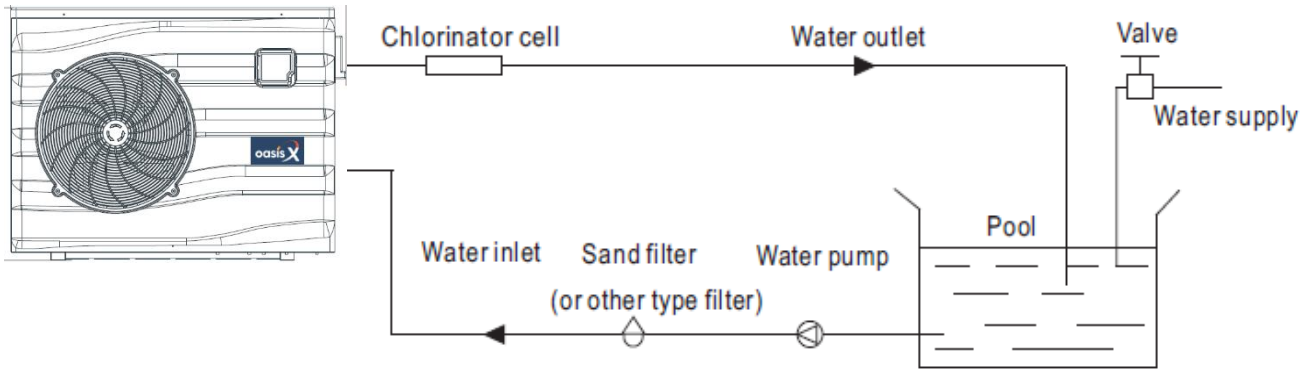
| Model | | Oasis X 9 | Oasis X 13 |
|---|---|---|---|
| **Performance Condition: Air 27°C / Water 26°C** | | | |
| Heating Capacity | kW | 8.47 | 13 |
| Running Current | A | 6.5 | 8.7 |
| **Performance Condition: Air 19°C / Water 26°C** | | | |
| Heating Capacity | kW | 7.7 | 10 |
| Heating Power Input | kW | 1.47 | 1.9 |
| | | | |
| Cooling Capacity | kW | 4.3 | 5.4 |
| Cooling Power Input | kW | 2.0 | 2.2 |
| Running Current | A | 6.5 | 8.7 |
| Power Supply | V/Ph/Hz | 10 AMP Plug | 10 AMP Plug |
| Compressor Quantity | | 1 | 1 |
| Compressor | | Rotary | Rotary |
| Fan Quantity | | 1 | 1 |
| Fan Power Input | W | 90 | 120 |
| Fan Rotate Speed | RPM | 850 | 850 |
| Fan Direction | | Horizontal | Horizontal |
| Noise dB(A) | | 42 | 54 |
| Water Connection | Mm | 40 | 40 |
| Water Flow Volume | l/m | 50 | 75 |
| Water Pressure Drop (max) | kPa | 3.2 | 3.5 |
| Unit Shipping Dimensions (L/W/H) | Mm | 1040 x 415 x 615 | 1040 x 415 x 615 |
| Net / Shipping Weight | kg | 51/60 | 55/65 |

## 2.2 The dimensions for Swimming Pool Heat Pump Unit



# 3. INSTALLATION AND CONNECTION

## 3.1 Installation illustration




Installation items:

The factory only provides the main unit and the water unit; the other items in the illustration are necessary spare parts for the water system, that provided by users or the installer.

Attention:

Please follow these steps when using for the first time

1. Open valve and charge water.
2. Make sure that the pump and the water-in pipe have been filled with water.
3. Close the valve and start the unit.

ATTN: It is necessary that the water-in pipe is higher than the pool surface.

# 3. INSTALLATION AND CONNECTION

## 3.2 Swimming Pool Heat Pumps Location

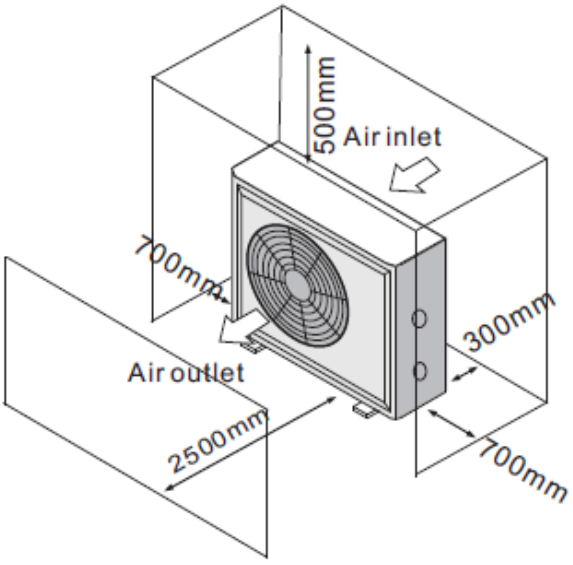
The unit will perform well in any outdoor location provided that the following three factors are presented:

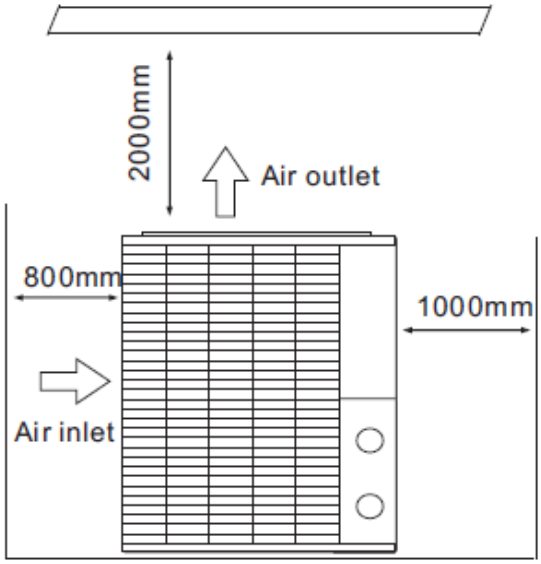
**1. Fresh Air** **2. Electricity** **3. Pool filter piping**

The unit may be installed virtually anywhere outdoors. For indoor pools please consult the supplier. Unlike a gas heater, it has no draft or pilot light problem in a windy area.

DO NOT place the unit in an enclosed area with a limited air volume, where the units discharge air will be re-circulated.

DO NOT place the unit to shrubs which can block air inlet. These locations deny the unit of a continuous source of fresh air which reduces it efficiency and may prevent adequate heat delivery.




## 3.3 How Close to Your Pool?

Normally, the pool heat pump is installed within 7.5 metres of the pool. The longer the distance from the pool, the greater the heat loss from the piping. For the most part, the piping is buried. Therefore, the heat loss is minimal for runs of up to15 meters (15 meters to and from the pump = 30 meters total), unless the ground is wet, or the water table is high. A very rough estimate of heat loss per 30 meters is 0.6 kW-hour, (2000BTU) for every 5 ℃ difference in temperature between the pool water and the ground surrounding the pipe, which translates to about 3% to 5% increase in run time.

# 3. INSTALLATION AND CONNECTION

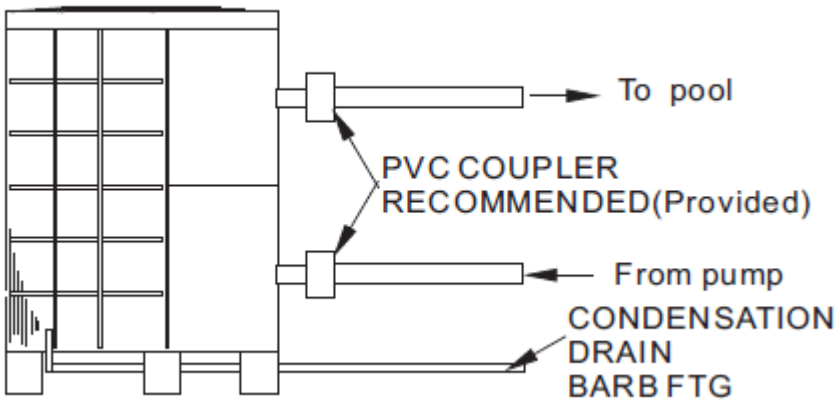
## 3.4 Swimming Pool Heat Pumps Plumbing

The Swimming Pool Heat Pumps exclusive rated flow titanium heat exchanger requires no special plumbing arrangements except bypass (please set the flow rate according to the nameplate). The water pressure drop is less than 10kPa at max. Flow rate. Since there is no residual heat or flame Temperatures, the unit does not need copper heat sink piping. PVC pipe can be run straight into the unit.

Location: Connect the unit in the pool pump discharge (return) line downstream of all filter and pool pumps, and upstream of any chlorinators, ozonators or chemical pumps.

Standard model have slip glue fittings which accept 32mm or 50 mm PVC pipe for connection to the pool or spa filtration piping. By using a 50 NB to 40NB you can plumb 40NB.

Give serious consideration to adding a quick coupler fitting at the unit inlet and outlet to allow easy draining of unit for winterizing and to provide easier access should servicing be required.




Condensation: Since the Heat pump cools down the air about 4 -5℃, water may condense on the fins of the horseshoe shaped evaporator. If the relative humidity is very high, this could be as much as several litres an hour. The water will run down the fins into the basepan and drain out through the barbed plastic condensation drain fitting on the side of the basepan.
This fitting is designed to accept 20mm clear vinyl tubing which can be pushed on by hand and run to a suitable drain. It is easy to mistake the condensation for a water leak inside the unit.

NB: A quick way to verify that the water is condensation is to shut off the unit and keep the pool pump running. If the water stops running out of the basepan, it is condensation. AN EVEN QUICKER WAY IS to TEST THE DRAIN WATER FOR CHLORINE - if the is no chlorine present, then it's condensation

# 3. INSTALLATION AND CONNECTION

## 3.5 Swimming Pool Heat Pumps Electrical Wiring

NOTE: Although the unit heat exchanger is electrically isolated from the rest of the unit, it simply prevents the flow of electricity to or from the pool water. Grounding the unit is still required to protect you against short circuits inside the unit. Bonding is also required.

The unit has a separate molded-in junction box with a standard electrical conduit nipple already in place. Just remove the screws and the front panel, feed your supply lines in through the conduit nipple and wire-nut the electric supply wires to the three connections already in the junction box (four connections if three phase). To complete electrical hook-up, connect Heat Pump by electrical conduit, UF cable or other suitable means as specified (as permitted by local electrical authorities) to a dedicated AC power supply branch circuit equipped with a **D Curve** circuit breaker, disconnect or time delay fuse protection.

Disconnect - A disconnect means (circuit breaker, fused or un-fused switch) should be located within sight of and readily accessible from the unit, this is common practice on commercial and residential air conditioners and heat pumps. It prevents remotely-energizing unattended equipment and permits turning off power at the unit while the unit is being serviced.

## 3.6 Initial start-up of the Unit

NOTE- In order for the unit to heat the pool or spa, the filter pump must be running to circulate water through the heat exchanger.

Start-up Procedure - After installation is completed, you should follow these steps:

1. Turn on your filter pump. Check for water leaks and verify flow to and from the pool.

2. Turn on the electrical power supply to the unit, then press the key ON/OFF of wire controller, it should start in several seconds.

3. After running a few minutes make sure the air leaving the top(side) of the unit is cooler (Between 5-10 °C)

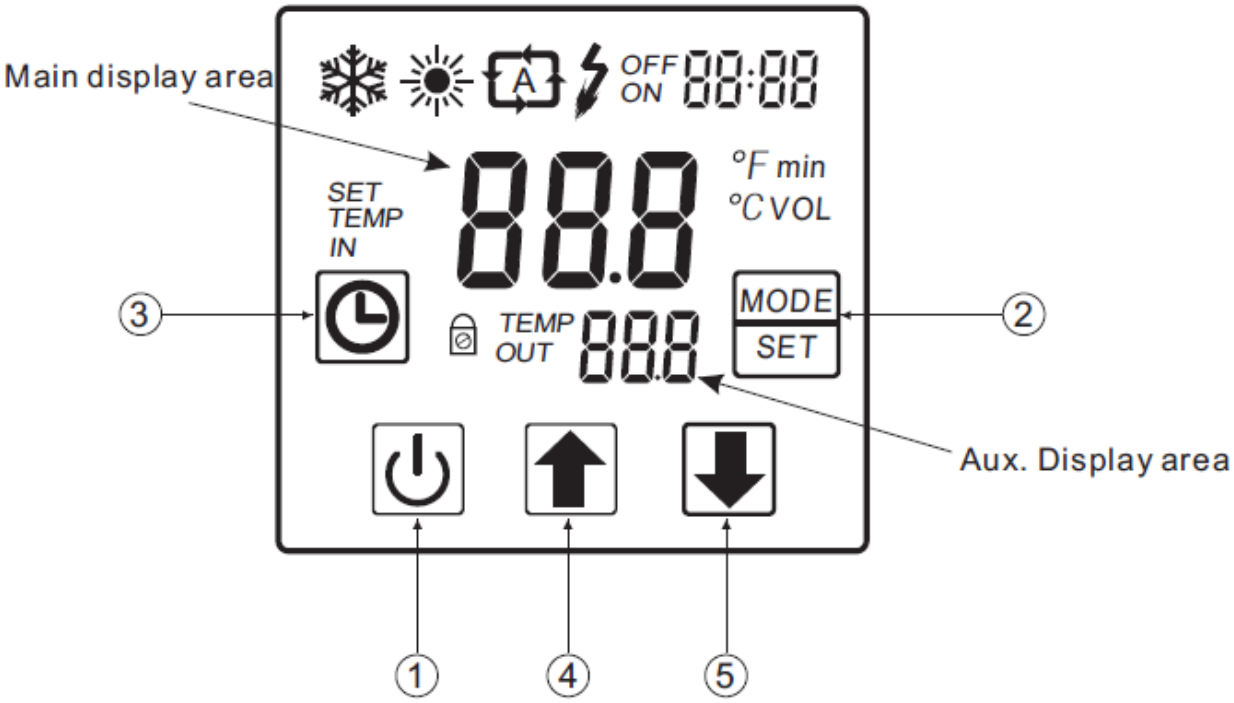
4. With the unit operating turn the filter pump off. The unit should also turn off automatically,

5. Allow the unit and pool pump to run 24 hours per day until desired pool water temperature is reached. When the water-in temperature reach setting, the unit just shuts off. The unit will now automatically restart (if your pool pump is running) when the pool temperature drops more than 2°C below set temperature.

Time Delay- The unit is equipped with a 3-minute built-in solid state restart delay included to protect control circuit components and to eliminate restart cycling and contactor chatter.
This time delay will automatically restart the unit approximately 3 minutes after each control circuit interruption. Even a brief power interruption will activate the solid state 3-minute restart delay and prevent the unit from starting until the 5-minute countdown is completed.
Power interruptions during the delay period will have no effect on the 3-minute countdown.

# 4. USAGE AND OPERATION

4.1 Function of controller




1）Button function

| NO | Symbol | Name | Function |
|---|---|---|---|
| ① | | On/off | Press this button can start up or shut down the unit, cancel the current operation or back to the upper interface |
| ② | MODE SET | Mode | Press this button can switch modes or save parameter setting. |
| ③ | | Clock | Press this button can set the clock and timer |
| ④ | | Up | Press this button can move up or increase parameter value. |
| ⑤ | | Down | Press this button can move down or decrease the parameter value. |

# 4.USAGE AND OPERATION

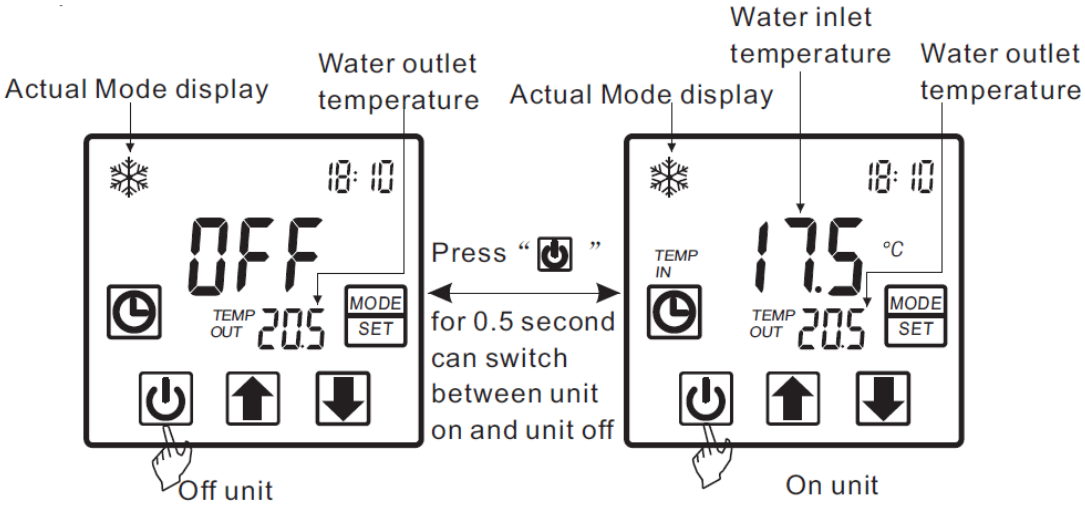
| Symbol | Meaning | Function |
|---|---|---|
|  | Cooling | It is showed when the unit in cooling mode. |
|  | Heating | It is showed when the unit in heating mode and flashed in defrosting. |
|  | Automatic | It is showed when the unit in automatic mode. |
|  | Electric – heating | It is showed when the unit in electric-heating mode. (Swimming pool unit without this display） |
| *ON* | Timer on | It is showed when the unit sets the timer on |
| *OFF* | Timer off | It is showed when the unit sets the timer off |
| *IN* | Inlet water | It is showed when the main display area gives the inlet water temperature.(measured value) |
| *OUT* | Outlet water | It is showed when the AUX display area gives the outlet water temperature.(measured value) |
| *TEMP* | Temperature | It is showed when the main/ AUX display area gives temperature |
| *VOL* | Flow | It is showed when the main display area gives the water flow value |
| *Min* | Minute | It is showed when the main display area gives minute value |
| *°F* | Fahrenheit | It is showed when the main/AUX display area gives Fahrenheit value |
| *°C* | Centigrade | It is showed when the main/AUX display area gives centigrade value |
| *SET* | Parameter setting | It is showed when the parameter can be setted |
|  | Lock | It is showed when the keyboard is locked. |

# 4. USAGE AND OPERATION

## 4.2 The controller usage

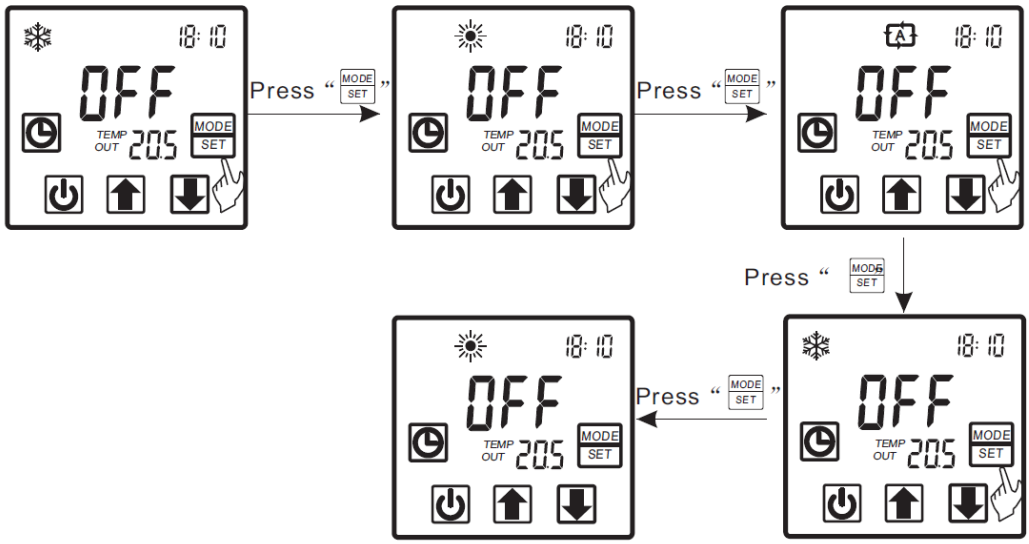
*4.2.A - Starting up and shutting down*

In the off interface, press" " for 0.5s can start up the unit, and aux. display-area shows water outlet temperature; In the running interface, press" " for 0.5s can shut down the unit and aux. display-area shows “OFF”.
Attention: the operation of Starting up and shutting down can only be done in the main interface.
For example:




*4.2.B - Modes switching*

If it is cold/ heat unit, in the main interface, you can switch different modes of cooling, heating, auto mode by pressing “ MODE SET ”.
Attention：The modes switching is useless if the unit you buy is single-cold/ single-heat unit.
For example:



# 4. USAGE AND OPERATION

*4.2.C - Temperature setting*

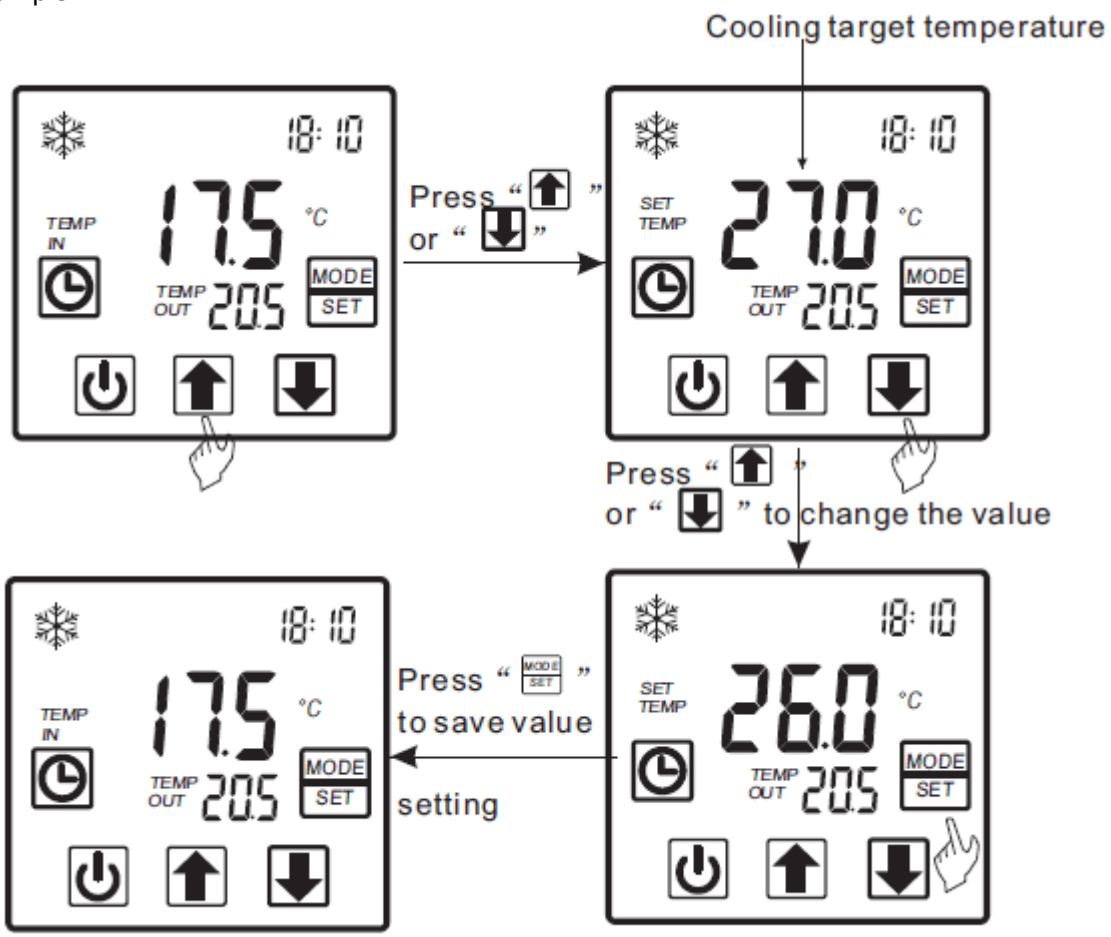
In the main interface, press " ▲ " or " ▼ " and the current mode target-temperature flashes, then press " ▲ " to increase the temp.value, or press " ▼ " to decrease it.

Press " MODE SET " can save setting parameter and back to the main interface ;

Press " ⏻ " cannot save setting parameter but back to the main interface ;

Attention : If there is no operation for 5s, system would remember parameter setting and back to the main interface.

For example:



# 4. USAGE AND OPERATION

*4.2.D - Clock setting*

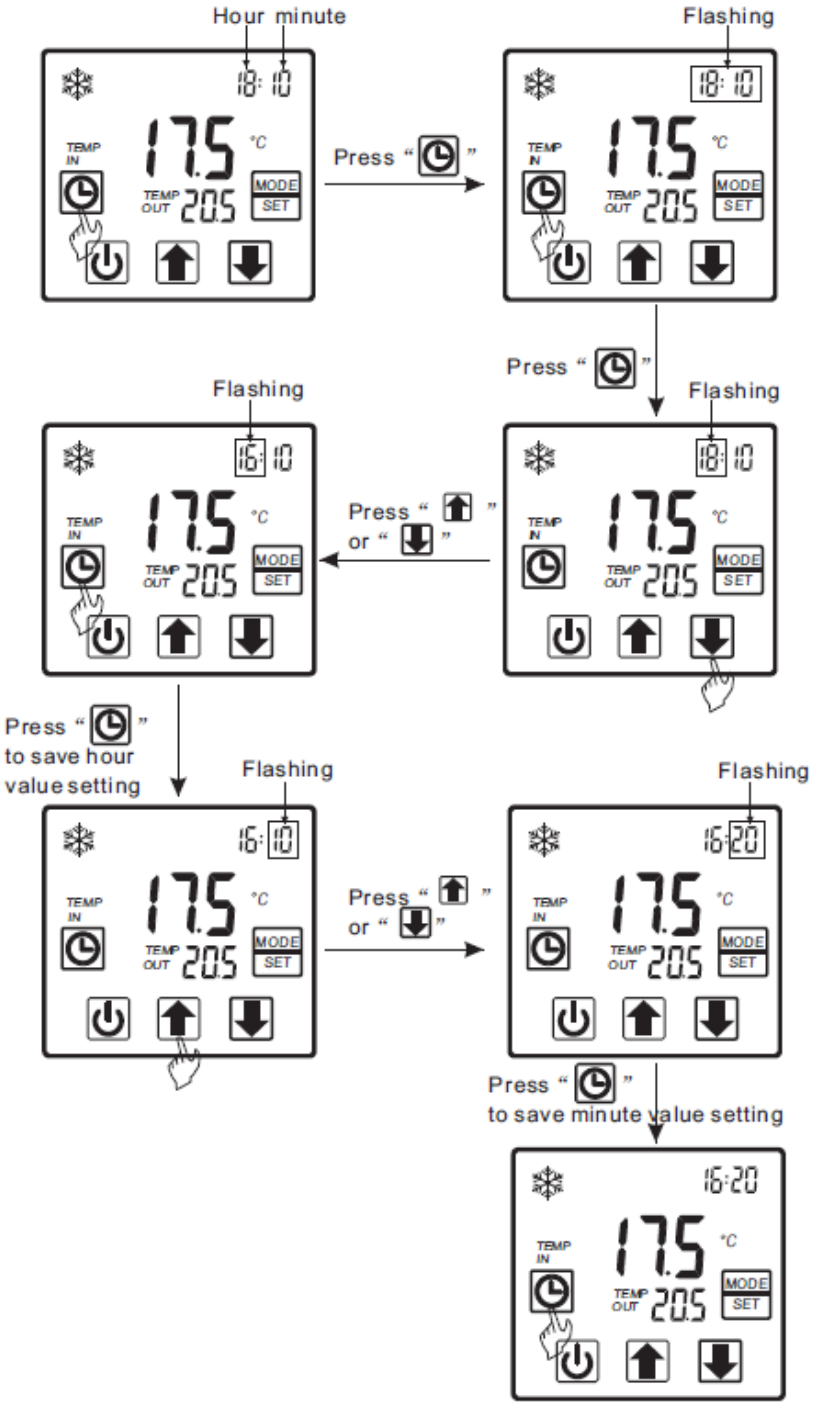
In the main interface, press " " twice, Hours start to flashing , and press " " to increase value or press " " to decrease value, and press ""to save setting ;

At the same time, minute start to flashing , press " " to increase value or press " " to decrease value, and press " " to save setting.

Press " " cannot save setting parameter and back to main interface.

Attention : If there is no operation for 5s system will remember parameter setting and back to the main interface.

For example :



# 4. USAGE AND OPERATION

*4.2.E - Timer setting*

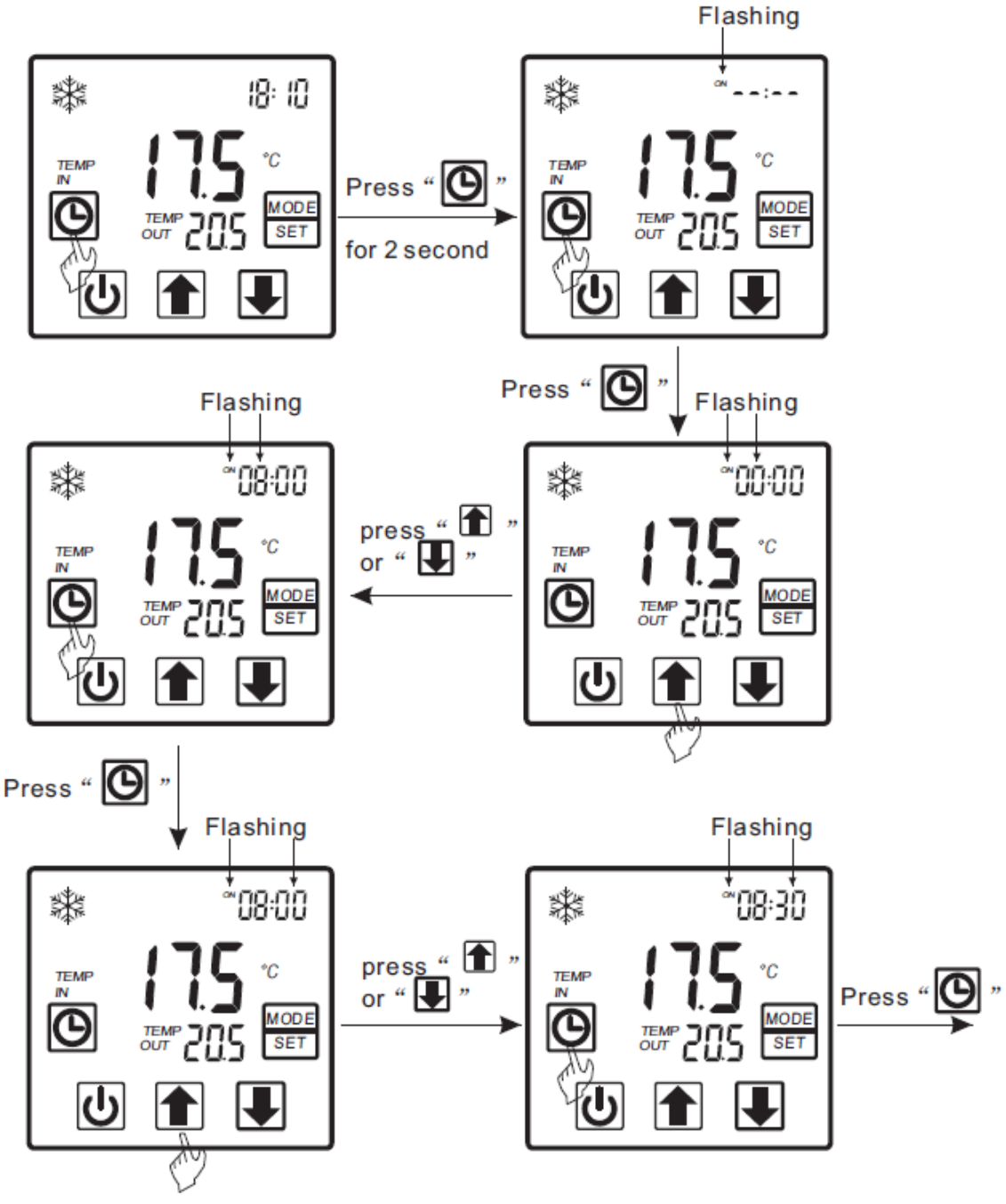
In the main interface， press “ ” hold on 2 seconds and "on" is flashing, at this time, you can set the timer on（means the unit timer is on）， then press “ ” again and hold on 2 seconds and "off" is flashes you can set the timer off（means the unit timer is off）.

If you want to cancel the timer off, In the "off" flashing interface， press “ ” to cancel

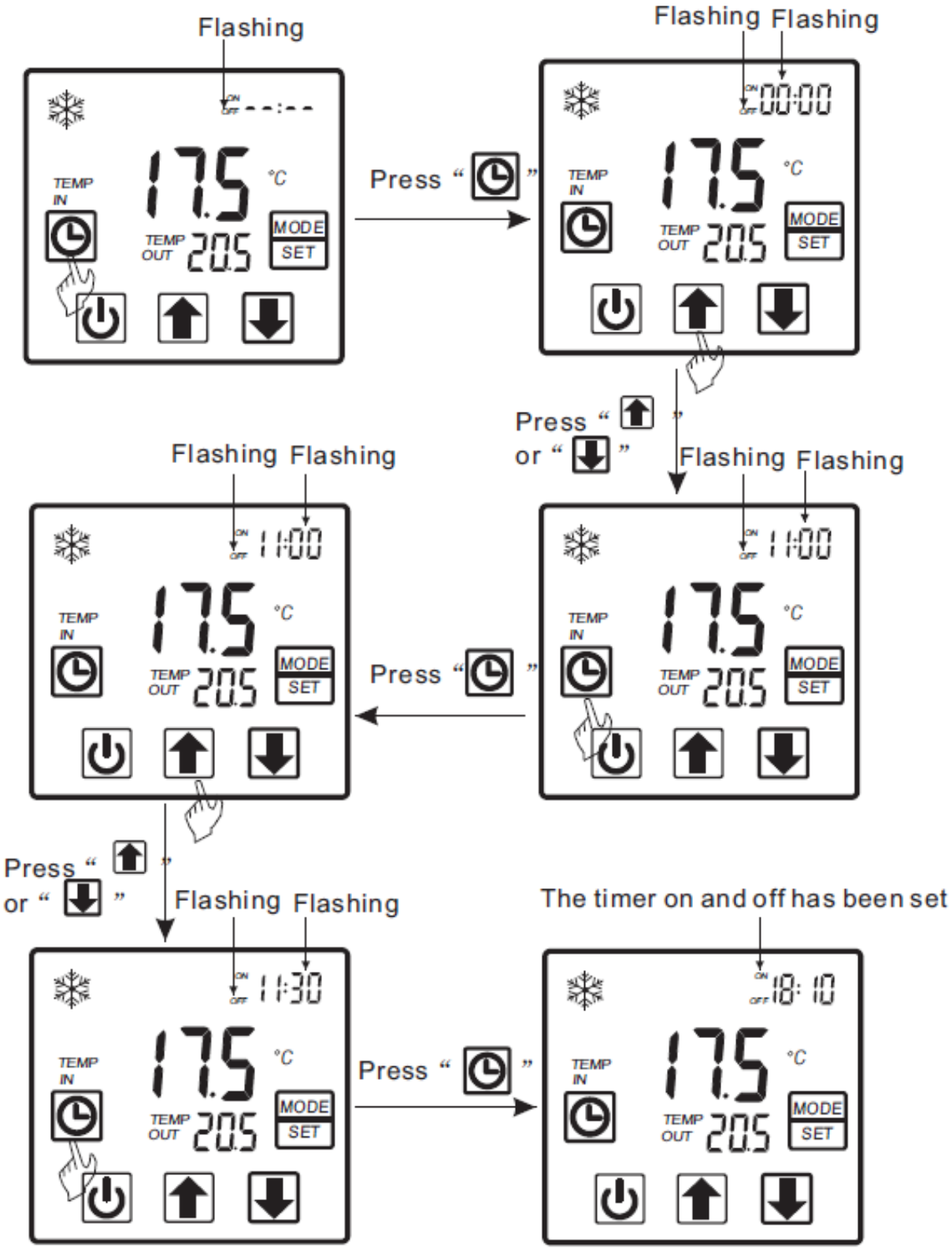
Attention：

1) If there is no operation for 5s， system will remember clock setting and back to the main interface.

2) By pressing " " till the "off" flashing, you can set the timer off without timer on.



# 4. USAGE AND OPERATION

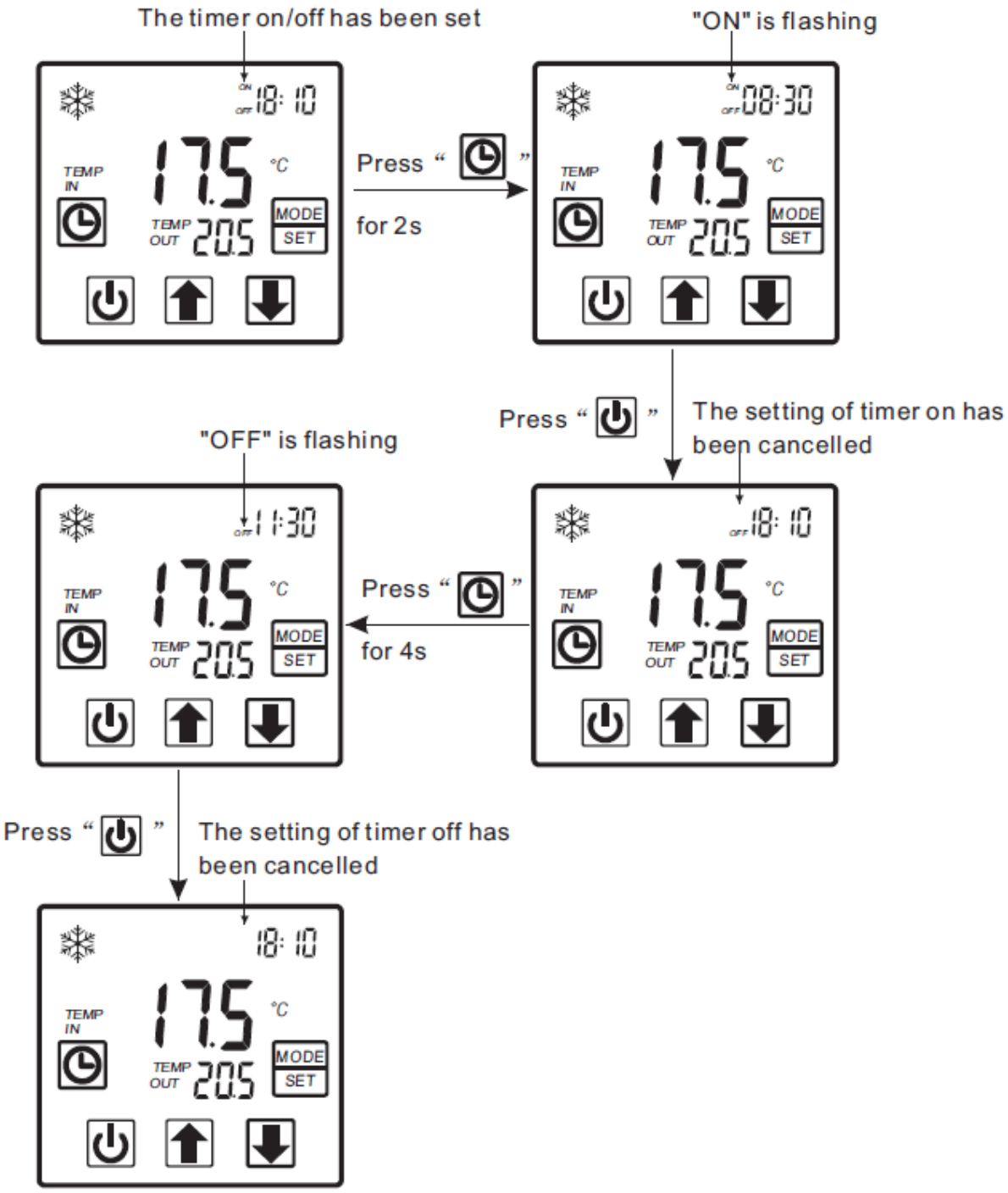


# 4. USAGE AND OPERATION

*4.2.F - Cancel the timer setting*

Press “ ” for 2s and "ON" is flashing, at this time, press “ ” to cancel the setting of timer on; It is the same way to cancel the setting of timer off.

For example：



# 4. USAGE AND OPERATION

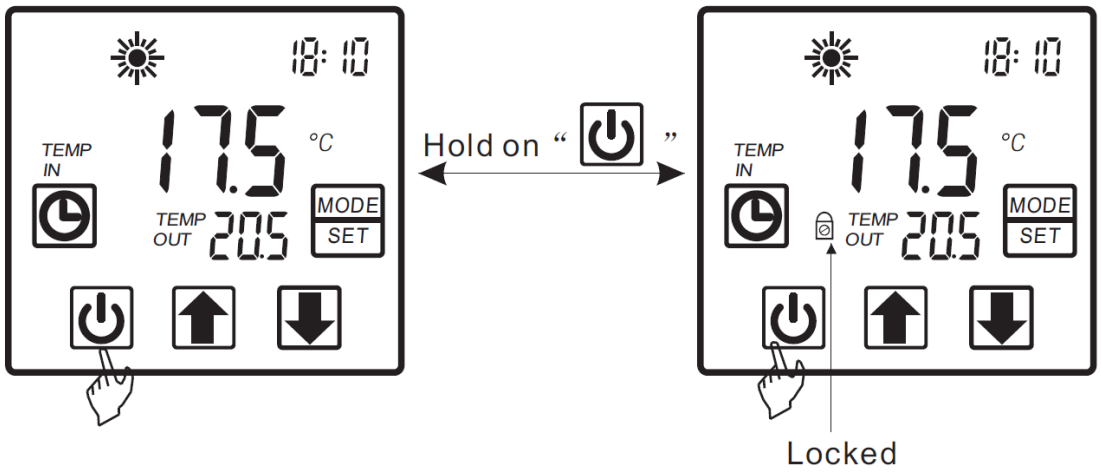
*4.2.G - Keyboard lock*

To avoid mis-operation, please lock the controller after parameter setting.

At the main interface, press " ⏻ " for 5 seconds, the keyboard will be locked.

When the keyboard is locked, press " ⏻ " for 5 seconds, the keyboard will be unlocked.

NOTES: When the unit is in alarming state, the key lock can be removed automatically.

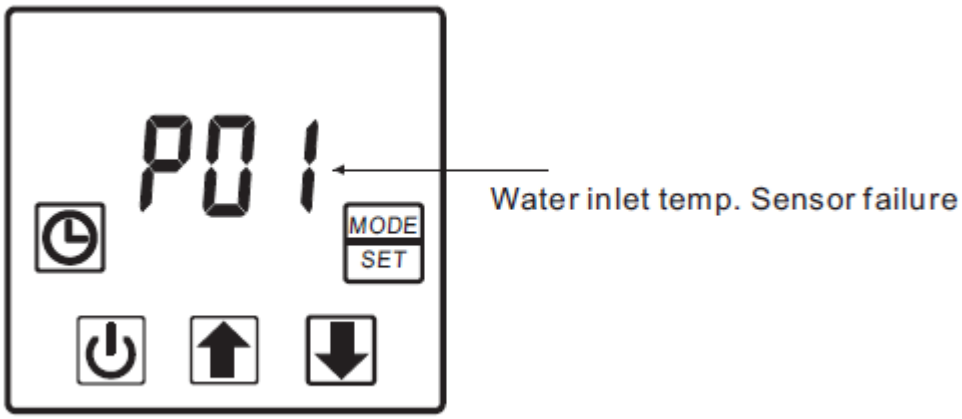



*4.2.H - Malfunction display*

There will be malfunction code showing on the controller screen when relative malfunction occurs.

You can refer to the malfunction table to find out the failure cause and solution.

For example ：



# 4. USAGE AND OPERATION

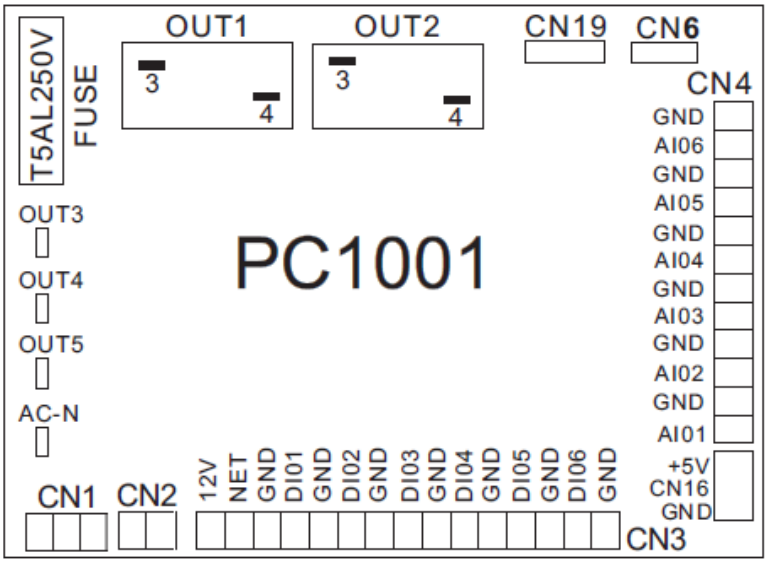
## 4.3 Parameter table

| Meaning | Default | Remark |
|---|---|---|
| Heating inlet target temp. | 28°C | Adjustable |
| Cooling inlet target temp. | 28°C | Adjustable |
| Auto inlet target temp. | 27°C | Adjustable |

The wire controller can display the temperature unit as "℉" or "℃" according to the unit Model you bought.

## 4.4 Wiring diagram

Connection of PCB illustration




Connections explanation：

| No. | Symbol | Meaning | No. | Symbol | Meaning |
|---|---|---|---|---|---|
| 1 | OUT1 | Compressor of system1（220-230VAC） | *13* | DI06 GND | No use |
| 2 | OUT2 | Water pump（220-230VAC | *14* | AI01 GND | Suction temp.(input) |
| 3 | OUT3 | 4way valve （220-230VAC） | 15 | AI02 GND | Water in temp.(input) |
| 4 | OUT4 | High speed of fan motor（220-230VAC） | 16 | AI03 GND | Water out temp.(input) |
| *5* | OUT5 | Low speed of fan motor（220-230VAC） | 17 | AI04 GND | Temp. Of coil ( input) |
| *6* | AC-N | Neutral wire | 18 | AI05 GND | Ambient temp.(input) |
| *7* | NET GND 12V | Wire controller | 19 | AI06 GND | Adjustable fan speed/Exhuast temp. |
| *8* | DI01 GND | On/Off Switch(input)(no use) | 20 | CN1 | Primary transformer |
| *9* | DI02 GND | Flow switch (input)( normal close) | 21 | CN2 | Secondary transformer |
| *10* | DI03 GND | Low pressure protect | 22 | CN6 | Without use |
| *11* | DI04 GND | High pressure protect | 23 | CN19 | Electronic expansion valve |
| *12* | DI05 GND | No use | 24 | 5V CN16 GND | Flow meter |

# 5. MAINTENANCE AND INSPECTION

## 5.1 Maintenance

- Check the water supply device and the release often. You should avoid the condition of no water or air entering into system, as this will influence unit's performance and reliability.
  You should clear the pool/spa filter regularly to avoid damage to the unit as a result of the dirty of clogged filter.

- The area around the unit should be dry, clean and well ventilated. Clean the side heating exchanger regularly to maintain good heat exchange as conserve energy.

- The operation pressure of the refrigerant system should only be serviced by a certified Technician

- Check the power supply and cable connection often. Should the unit begin to operate abnormally, switch it off and contact the qualified technician.

- Discharge all water in the water pump and water system, so that freezing of the water in the pump or water system does not occur. You should discharge the water at the bottom of water pump if the unit will not be used for an extended period. You should check the unit thoroughly and fill the system with water fully before using it for the first time.

# 5. MAINTENANCE AND INSPECTION

## 5.2 Trouble Shooting Guide

| Malfunction | Display | Cause | Solution |
|---|---|---|---|
| Water inlet temp. Sensor failure | P01 | The water inlet temp. Sensor is open or short circuit | Check or change the water inlet temp. Sensor |
| Water outlet temp. Sensor failure | P02 | The water outlet temp. sensor is open or short circuit | Check or change the water outlet temp. Sensor |
| Ambient temp. Sensor failure | P04 | The ambient temp. sensor is open or short circuit | Check or change the ambient temp. Sensor |
| Pipe temp. Sensor failure | P05 | The pipe temp. sensor is open or short circuit | Check or change the pipe temp. Sensor |
| Evaporator temp.Sensor failure | P07 | The evaporator temp. Sensor is open or short circuit | Check or change the evaporator temp. Sensor |
| High pressure protect | E01 | The exhaust pressure is high, high pressure switch action | Check high pressure switch and cooling return circuit |
| Low pressure protect | E02 | The suction pressure is low, Low pressure switch action | Check low pressure switch and cooling return circuit |
| Flow switch failure | E03 | No water or litter water in water system | Check the flow volume, water pump is failure or not |
| Temp. is too much different between water-inlet and outlet | E06 | Water flow volume not enough, Water system pressure difference is small | Check the flow volume, water system is jammed or not |
| Antifreezing under cooling mode | E07 | Water flow volume not enough | Check the flow volume, water system is jammed or not |
| The primary anti-freezing protection start. | E19 | Ambient temperature is too low | |
| The second anti-freezing protection start | E29 | Ambient temperature is too low | |
| Communication failure | E08 | Communication failure between remote wire controller and main board | Check the wire connection between remote wire controller and main board |

# 6.APPENDIX

## 6.1 Caution & Warning

1. The unit can only be repaired by qualified installer centre personnel or an authorised dealer. （for Europe market）
2. This appliance can used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
3. Please make sure that the unit and power connection have good earthing, otherwise may cause electrical shock.
4. If the supply cord is damaged, it must be replaced by the manufacturer or our service agent or similarly qualified person in order to avoid a hazard.
5. Directive 2002/96/EC (WEEE):
   The symbol depicting a crossed-out waste bin that is underneath the appliance indicates that this product, at the end of its useful life, must be handled separately from domestic waste, must be taken to a recycling centre for electric and electronic devices or handed back to the dealer when purchasing an equivalent appliance.
6. Directive 2002/95/EC (RoHs): This product is compliant with directive 2002/95/EC (RoHs) concerning restrictions for the use of harmful substances in electric and electronic devices.
7. The unit CANNOT be installed near the flammable gas. Once there is any leakage of the gas, fire can be occur
8. Make sure that there is circuit breaker for the unit, lack of circuit breaker can lead to electrical shock or fire.
9. The heat pump located inside the unit is equipped with an over-load protection system. It does not allow for the unit to start for at least 3 minutes from a previous stoppage.
10. The unit can only be repaired by the qualified personnel of an installer centre or an authorized dealer. （ for North America market）
11. Installation must be performed in accordance with the NEC/CEC by authorized person only. （for North America market）
12. USE SUPPLY WIRES SUITABLE FOR 75℃.
13. Caution: Single wall heat exchanger, not suitable for potable water connection.
14. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

**Notes on environmental protection.**

15. This product may be at the end of his life rather than the normal household waste will be sonderm at a collection point for the recycling of electrical and electronic equipment will be delivered. The symbol on the product, the instruction manual or packaging recalls.
16. The materials are recycled, according to their identification. With the reuse of recycling or other forms of recovery of waste afford a important contribution to protect our environment.
17. Please ask at the municipal disposal of the competent authority.

# 6.APPENDIX

## 6.2 Cable specification

1. Single phase unit

| Nameplate maximum current | Phase line | Earth line | MCB | Creepage protector | Signal line |
|---|---|---|---|---|---|
| No more than 10A | 2×1.5mm² | 1.5mm² | 20A | 30mA less than 0.1 sec | n×0.5mm² |
| 10~16A | 2×2.5mm² | 2.5mm² | 32A | 30mA less than 0.1 sec | |
| 16~25A | 2×4mm² | 4mm² | 40A | 30mA less than 0.1 sec | |
| 25~32A | 2×6mm² | 6mm² | 40A | 30mA less than 0.1 sec | |
| 32~40A | 2×10mm² | 10mm² | 63A | 30mA less than 0.1 sec | |
| 40~63A | 2×16mm² | 16mm² | 80A | 30mA less than 0.1 sec | |
| 63~75A | 2×25mm² | 25mm² | 100A | 30mA less than 0.1 sec | |
| 75~101A | 2×25mm² | 25mm² | 125A | 30mA less than 0.1 sec | |
| 101~123A | 2×35mm² | 35mm² | 160A | 30mA less than 0.1 sec | |
| 123~148A | 2×50mm² | 50mm² | 225A | 30mA less than 0.1 sec | |
| 148~186A | 2×70mm² | 70mm² | 250A | 30mA less than 0.1 sec | |
| 186~224A | 2×95mm² | 95mm² | 280A | 30mA less than 0.1 sec | |

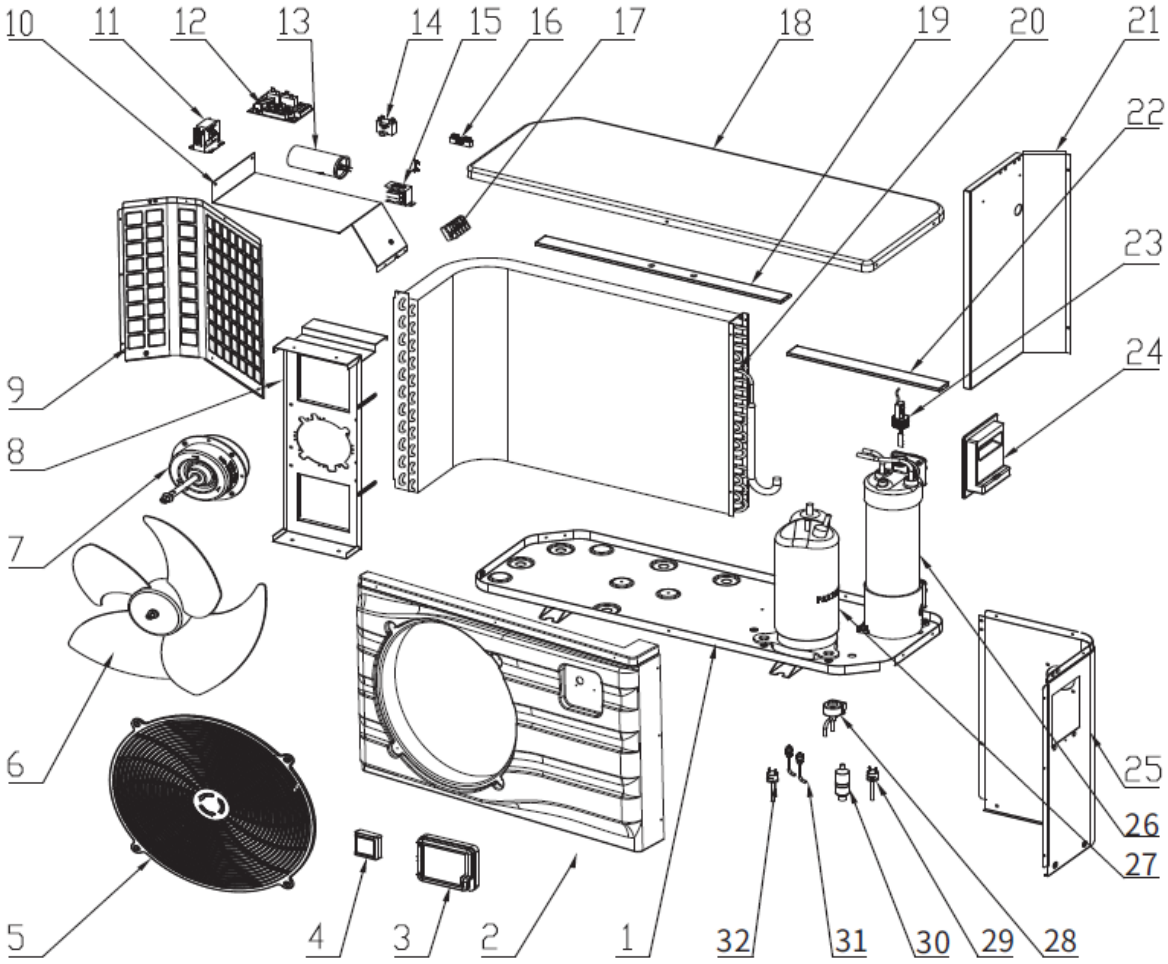
2. Three phase unit

| Nameplate maximum current | Phase line | Earth line | MCB | Creepage protector | Signal line |
|---|---|---|---|---|---|
| No more than 10A | 3×1.5mm² | 1.5mm² | 20A | 30mA less than 0.1 sec | n×0.5mm² |
| 10~16A | 3×2.5mm² | 2.5mm² | 32A | 30mA less than 0.1 sec | |
| 16~25A | 3×4mm² | 4mm² | 40A | 30mA less than 0.1 sec | |
| 25~32A | 3×6mm² | 6mm² | 40A | 30mA less than 0.1 sec | |
| 32~40A | 3×10mm² | 10mm² | 63A | 30mA less than 0.1 sec | |
| 40~63A | 3×16mm² | 16mm² | 80A | 30mA less than 0.1 sec | |
| 63~75A | 3×25mm² | 25mm² | 100A | 30mA less than 0.1 sec | |
| 75~101A | 3×25mm² | 25mm² | 125A | 30mA less than 0.1 sec | |
| 101~123A | 3×35mm² | 35mm² | 160A | 30mA less than 0.1 sec | |
| 123~148A | 3×50mm² | 50mm² | 225A | 30mA less than 0.1 sec | |
| 148~186A | 3×70mm² | 70mm² | 250A | 30mA less than 0.1 sec | |
| 186~224A | 3×95mm² | 95mm² | 280A | 30mA less than 0.1 sec | |

When the unit will be installed at outdoor, please use the cable which can against UV.

# 6.APPENDIX

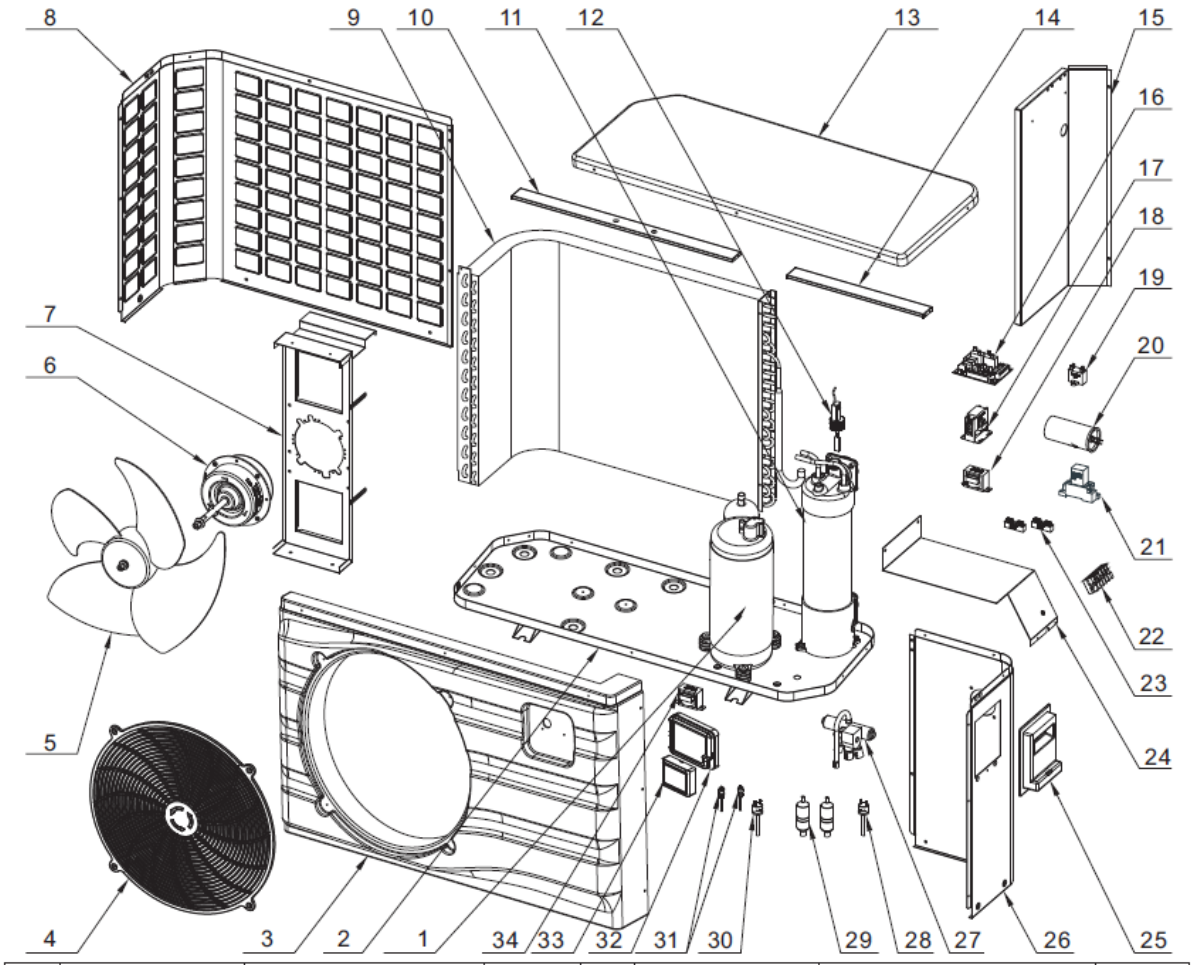
## 6.4 Explosive view of the X 9 unit




| NO. | Code | Part name | Note | NO. | Code | Part name | Note |
|---|---|---|---|---|---|---|---|
| 1 | 32012-210275 | Chassis assembly | 1 | 22 | 32012-210224 | Top support plate 1 | 1 |
| 2 | 32008-220044 | Front box | 1 | 23 | 20000-360005 | Flow switch | 1 |
| 3 | 20000-220068 | waterproof box | 1 | 24 | 20000-220249 | Junction box | 1 |
| 4 | 72200086 | CM106 | 1 | 25 | 32012-210273 | Right side panel | 1 |
| 5 | 20000-220188 | Plastic fan net | 1 | 26 | 32012-120061 | Titanium tube heat exchanger | 1 |
| 6 | 3500-2701 | Axial fan blade | 1 | 27 | 20000-110135 | compressor | 1 |
| 7 | 3404-3301 | Axial flow motor | 1 | 28 | 2001-1418 | Four-way valve | 1 |
| 8 | 32012-210229 | Motor bracket assembly | 1 | 29 | 20000-360157 | Pressure Switch | 1 |
| 9 | 32012-210274 | Back network | 1 | 30 | 2004-1446 | filter | 2 |
| 10 | 32012-210228 | Electrical box | 1 | 31 | 20000-140150 | Needle valve | 2 |
| 11 | 20000-360297 | Relay | 1 | 32 | 2001-3605 | Pressure Switch | 1 |
| 12 | 72200118 | PC1001 | 1 | | | | |
| 13 | 2000-3510 | Press capacitor | 1 | | | | |
| 14 | 2000-3506 | Fan capacitor | 1 | | | | |
| 15 | 20000-370006 | Power Transformers | 1 | | | | |
| 16 | 2000-3909 | 2-position terminal block | 2 | | | | |
| 17 | 2000-3933 | 3-position terminal block | 1 | | | | |
| 18 | 32012-210340 | Top cover | 1 | | | | |
| 19 | 32012-210225 | Top support plate 2 | 1 | | | | |
| 20 | 32008-120049 | Finned heat exchanger | 1 | | | | |
| 21 | 32012-210227 | Middle partition | 1 | | | | |

# 6.APPENDIX

6.5 Explosive view of the X 13 unit




| No. | Code | Name | Quantity | No. | Code | Name | Quantity |
|---|---|---|---|---|---|---|---|
| 1 | 20000-110231 | Compressor | 1 | 19 | 2000-3501 | Fan motor capacitor | 1 |
| 2 | 32012-210275 | Chassis | 1 | 20 | 2000-3510 | Compressor capacitor | 1 |
| 3 | 32012-210339 | Front panel | 1 | 21 | 2001-3630 | Auxiliary relay | 1 |
| 4 | 20000-220188 | Fan motor net | 1 | 22 | 2000-3933 | Terminal-3 | 1 |
| 5 | 3500-2701 | Axial fan | 1 | 23 | 2000-3909 | Terminal-2 | 2 |
| 6 | 3404-3301 | Fan motor | 1 | 24 | 32012-210228 | Electrical box | 1 |
| 7 | 32012-210229 | Fan motor holder | 1 | 25 | 20000-220247 | Handle | 1 |
| 8 | 32012-210274 | Left panel | 1 | 26 | 32012-210273 | Right panel | 1 |
| 9 | 32012-120153 | Evaporator | 1 | 27 | 2004-1437 | 4-way reverse valve | 1 |
| 10 | 32012-210225 | Supporting panel | 1 | 28 | 20000-360157 | Pressure switch | 1 |
| 11 | 32012-120141 | Titanium heat exchanger | 1 | 29 | 2004-1444 | Filter | 2 |
| 12 | 20000-360005 | Water flow switch | 1 | 30 | 2001-3605 | Pressure switch | 1 |
| 13 | 32012-210340 | Top cover | 1 | 31 | 20000-140150 | Needle valve | 2 |
| 14 | 32012-210224 | Supporting panel | 1 | 32 | 20000-220068 | Waterproof cover | 1 |
| 15 | 32012-210227 | Middle panel | 1 | 33 | 72200086 | LCD | 1 |
| 16 | 72200118 | Pc1001 PCB controller | 1 | 34 | 20000-370003 | Transformer | 1 |
| 17 | 20000-360297 | Relay | 1 | | | | |
| 18 | 20000-370002 | Transformer | 1 | | | | |

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