SWIMMING POOL HEAT PUMP UNIT

Installation & Instruction Manual

CONTENTS

1. PREFACE

In order 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 manufacturer 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 center 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 spa water and keeps the temperature constant.

This type of pump has the following characteristics:

1. Durable

Withstand prolonged exposure to corrosives such as chlorine. The heat exchanger is made of pvc & titanium tube which can .

2. Installation flexibility

The unit can be installed outside or inside of the Spa.

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 wire controller.

2.SPECIFICATION

2.1 Performance data of Swimming Pool Heat Pump Unit

REFRIGERANT :R407C

Unit	Model	Oasis C8b	Oasis C13b	Oasis H13b
Heating Capacity	kW	8.8	13.2	13.2
	BTU/h	30000	45000	45000
Heating Power Input	kW	1.7	2.6	2.6
Running Current	A	7.7	11.8	11.8
Power Supply		230V~/50Hz	230V~/50Hz	230V~/50Hz
Compressor Quantity		1	1	1
Compressor		rotary	Rotary	Rotary
Fan Quantity		1	1	1
Fan Power Input	W	120	120	120
Fan Rotate Speed	RPM	850	850	850
Fan Direction		horizontal	Horizontal	Horizontal
Noise	dB(A)	51	54	54
Water Connection	inch	1.5	1.5	1.5
Water Flow Volume	m^3/h	3.0	4.5	4.5
Water Pressure Drop(max)	kPa	10	10	10
Unit Net Dimensions(L/W/H)	mm	1000×420×650	1000×420×650	1000×420×650
Unit Shipping Dimensions(L/W/H)	mm	1060×440×710	1060×440×710	1060×440×710
Net Weight	kg	60	65	65
Shipping Weight	kg	67	72	72

REFRIGERANT :R407C

Unit	Model	Oasis C17b	Oasis H17b	Oasis C25b
Heating Capacity	kW	17.5	17.5	25
	BTU/h	60000	60000	90000
Heating Power Input	kW	3.5	3.5	5.0
Running Current	A	15.9	15.9	22.7
Power Supply		230V~/50Hz	230V~/50Hz	230V~/50Hz
Compressor Quantity		1	1	1
Compressor		Scroll	Scroll	Scroll
Fan Quantity		1	1	2
Fan Power Input	W	120	120	120×2
Fan Rotate Speed	RPM	850	850	850
Fan Direction		Horizontal	Horizontal	Horizontal
Noise	dB(A)	54	54	56
Water Connection	inch	1.5	1.5	1.5
Water Flow Volume	m^3/h	6.0	6.0	9.0
Water Pressure Drop(max)	kPa	10	10	12
Unit Net Dimensions(L/W/H)	mm	1120×470×850	1120×470×850	1120×470×1240
Unit Shipping Dimensions(L/W/H)	mm	1200×480×1010	1200×480×970	1200×490×1380
Net Weight	kg	100	100	132
Shipping Weight	kg	108	108	145

2.SPECIFICATION

2.1 Performance data of Swimming Pool Heat Pump Unit

REFRIGERANT :R407C

Unit	Model	Oasis C25Tb	Oasis C35T-Vb
Heating Capacity	kW	25	35
	BTU/h	90000	120000
Heating Power Input	kW	5.0	7.1
Running Current	A	8.3	12.7
Power Supply		380V/3N~/50Hz	380V/3N~/50Hz
Compressor Quantity		1	2
Compressor		Scroll	Scroll
Fan Quantity		2	2
Fan Power Input	W	120×2	200×2
Fan Rotate Speed	RPM	850	850
Fan Direction		Horizontal	Horizontal
Noise	dB(A)	56	61
Water Connection	inch	1.5	2.0
Water Flow Volume	m^3/ h	9.0	12
Water Pressure Drop(max)	kPa	12	15
Unit Net Dimensions(L/W/H)	mm	1120×470×1240	1490×735×1130
Unit Shipping Dimensions(L/W/H)	mm	1200×490×1380	1520×790×1340
Net Weight	kg	130	244
Shipping Weight	kg	140	284

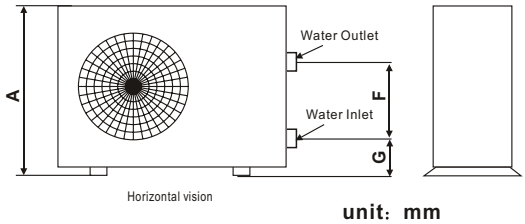
REFRIGERANT :R410A

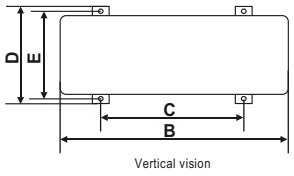
Unit	Model	EH9b	Oasis C21b	Oasis C50T-Vb
Heating Capacity	kW	9.2	22	55
	BTU/h	31400	75000	187000
Heating Power Input	kW	1.65	4.25	11.6
Running Current	A	7.50	19.32	20.7
Power Supply		230V～/50Hz	230V~/50Hz	380V/3N~/50Hz
Compressor Quantity		1	1	2
Compressor		rotary	Scroll	Scroll
Fan Quantity		1	2	2
Fan Power Input	W	120	120×2	390×2
Fan Rotate Speed	RPM	850	850	900
Fan Direction		horizontal	Horizontal	Horizontal
Noise	dB(A)	51	56	61
Water Connection	inch	1.5	1.5	2.0
Water Flow Volume	m^3/ h	3.0	7.5	19.5
Water Pressure Drop(max)	kPa	10	12	15
Unit Net Dimensions(L/W/H)	mm	1002×455×658	1120×470×1240	1490×735×1130
Unit Shipping Dimensions(L/W/H)	mm	1130×470×695	1200×490×1410	1520×790×1340
Net Weight	kg	61	135	300
Shipping Weight	kg	71	152	325

2.SPECIFICATION

2.2 The dimensions for Swimming Pool Heat Pump Unit

Models: Oasis C8b/Oasis C13b/Oasis H13b/Oasis C17b/Oasis H17b

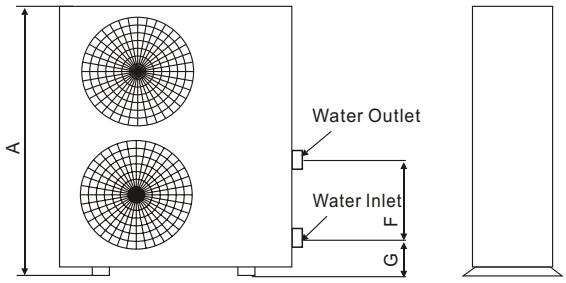


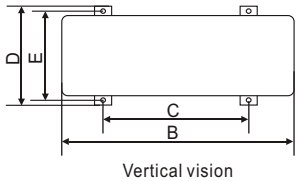


unit：mm

TYPE / SIZE	Oasis C8b/C13b/H13b	Oasis C17b/H17b
A	650	850
B	1000	1120
C	700	720
D	420	470
E	400	440
F	255	400
G	101	97

Models: Oasis C21b/Oasis C25b/Oasis C25Tb



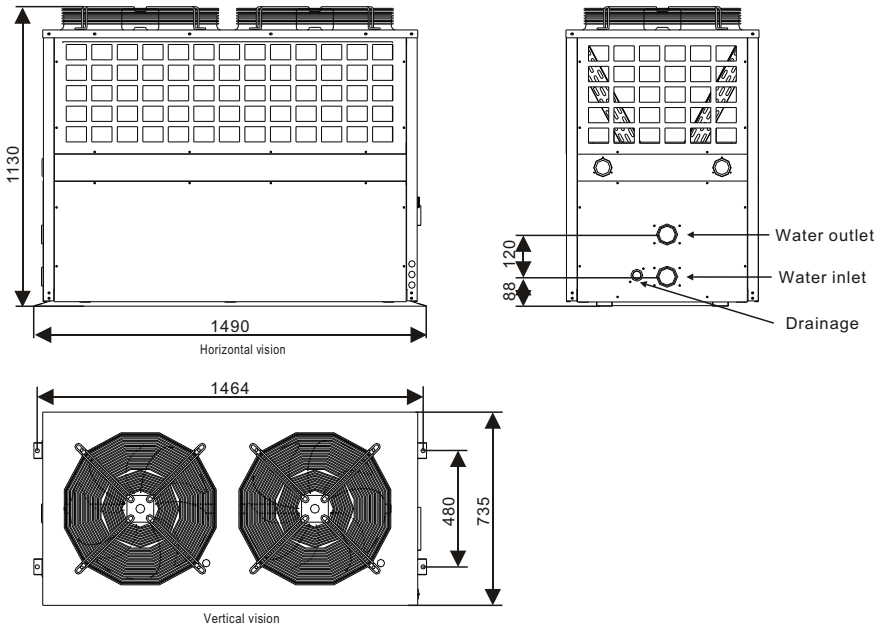


Unit mm

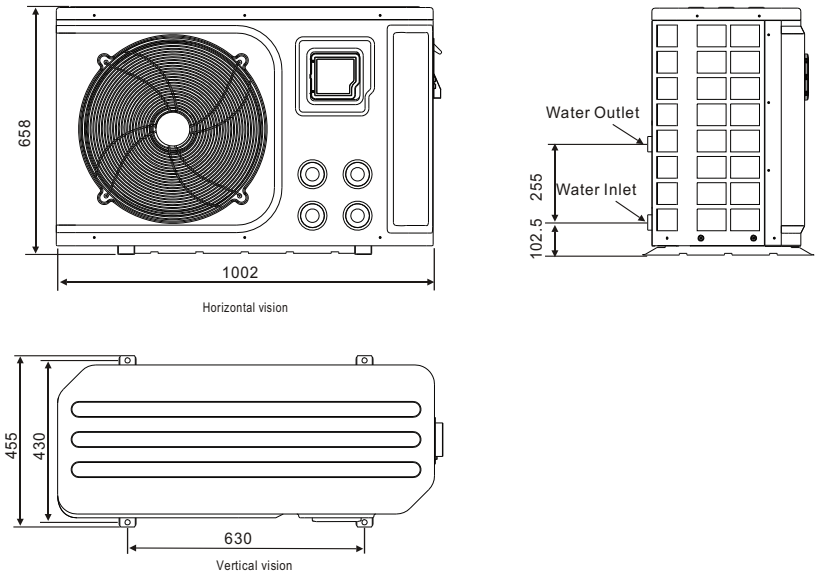
SIZE / TYPE	Oasis C21b/C25b/C25Tb
A	1240
B	1120
C	720
D	470
E	440
F	475
G	95

2.SPECIFICATION

Models: Oasis C35T-Vb/Oasis C50T-Vb

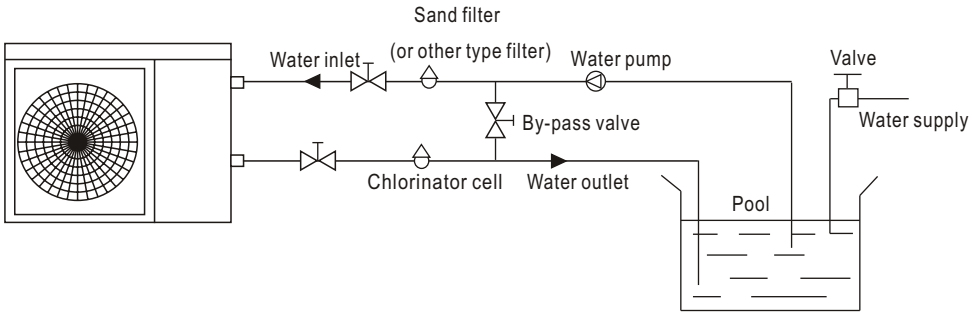


Models: EH9b



3.INSTALLATION AND CONNECTION

3.1 Installation illustration



Installation items:

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

Special Notes:

If the heat pump is used to heat the spa, then the parts will not strictly like what shown as above, please make sure the water loop is clear and enough.

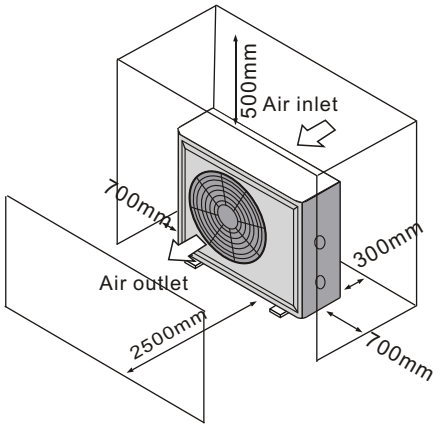
3.INSTALLATION AND CONNECTION

3.2 Spa Heat Pumps Location

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

1. Fresh Air - 2. Electricity - 3. filter piping

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 spa?

Normally, the longer the distance from the spa, the greater the heat loss from the piping. It is recommended to install the heat pump near the spa.

3.INSTALLATION AND CONNECTION

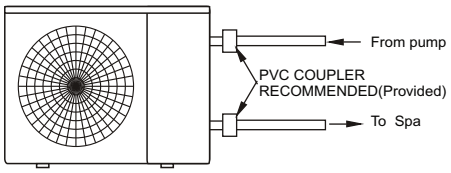
3.4 Spa Heat Pumps Plumbing

The Spa 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 40mm NB PVC pipe for connection to the pool or spa filtration piping. By using a 50 NB to 40NB you can plumb 50NB PVC piping straight into the unit.

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.



Horizontal vision

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 3/4" 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 Spa 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 hookup, 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 the proper 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 uni, 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 startup 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.

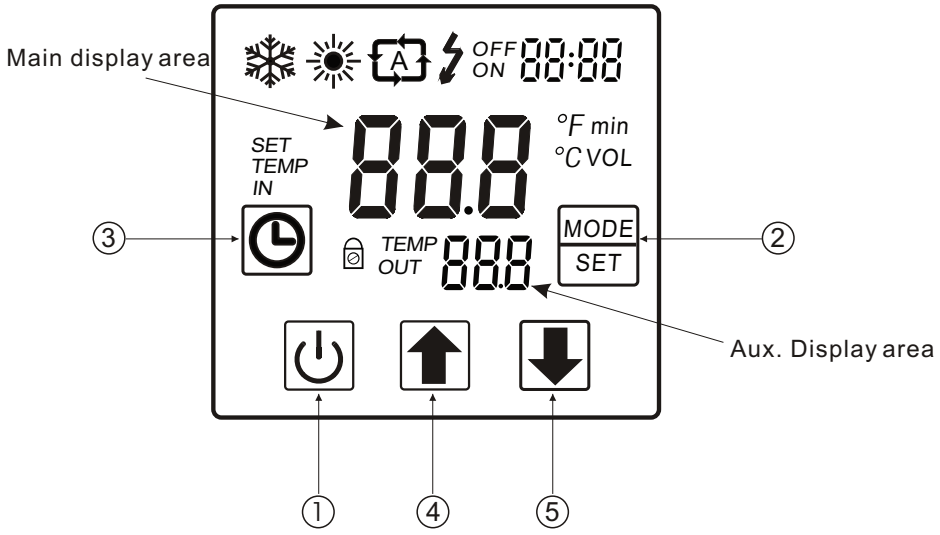
Start up Procedure - After installation is completed, you should follow these steps:
1. Turn on your filter pump. Check for water leaks and verify flow to and from the pool.
2. Turn on the electrical power supply to the unit, then press the key ON/OFF of wire controller, It should start in several seconds.
3. After running a few minutes make sure the air leaving the top(side) of the unit is cooler(Between 5-10 ℃)
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 (as long as your pool pump is running)when the pool temperature drops more than 2℃ below set temperature.

Water Flow Switch - the unit is equipped with a flow switch that turns it on when the pool pump is running and shuts it off when the pump shuts off. This switch is the same type used in all gas pool heaters and is factory adjusted for normal pool installations. If the pool water level is more than a few feet above or below the thermostat knob of the unit, your dealer may need to adjust it at initial startup.

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.

4. USAGE AND OPERATION

4.1Function of wire 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

2）Display function

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.
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.

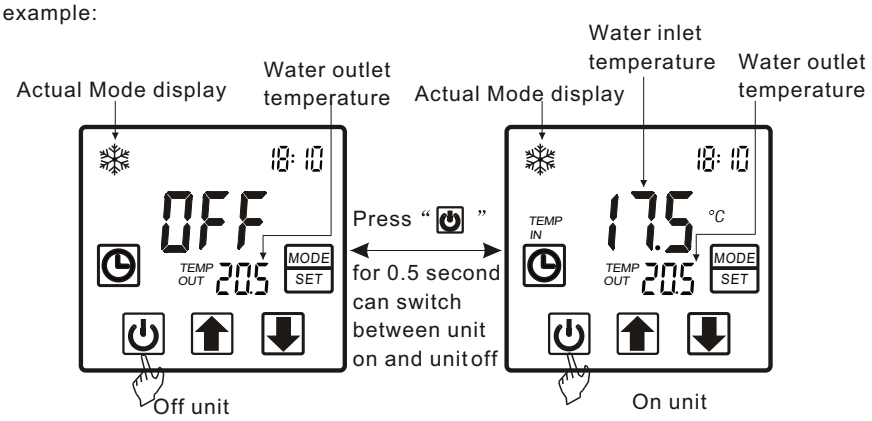
4. USAGE AND OPERATION

4.2 The controller usage

1）Starting up and shutting down

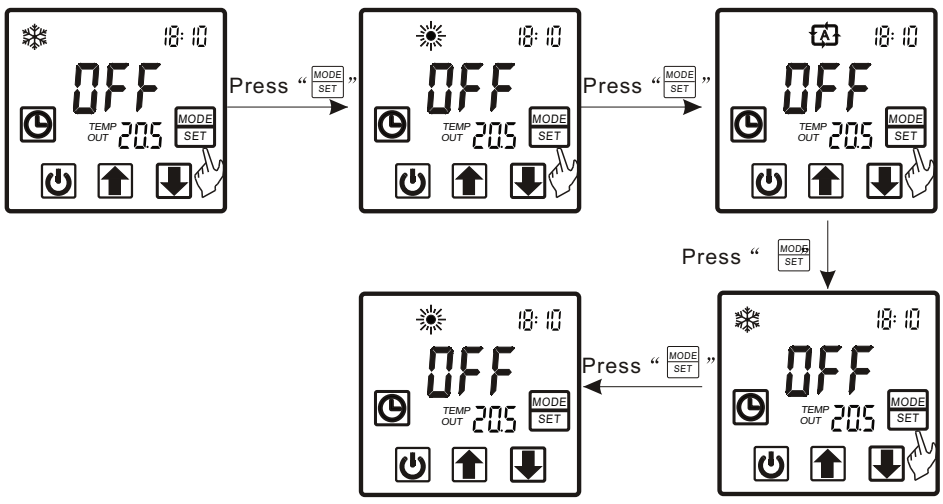
In the off interface, press" ⏻ " for 0.5s can start up the unit, and aux. display-area shows water outlet temperature; In the running interface, press" ⏻ "for 0.5s can shut down the unit and aux. display-area shows "OFF".

Attention: the operation of Starting up and shutting down can only be done in the main interface.
For example:



2） 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 " ; If it is cold/heat and electric heat unit, in the main interface, you can switch different modes of cooling, heating, auto mode, electric heating mode, heating and electric heating modes 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

3） Temperature setting

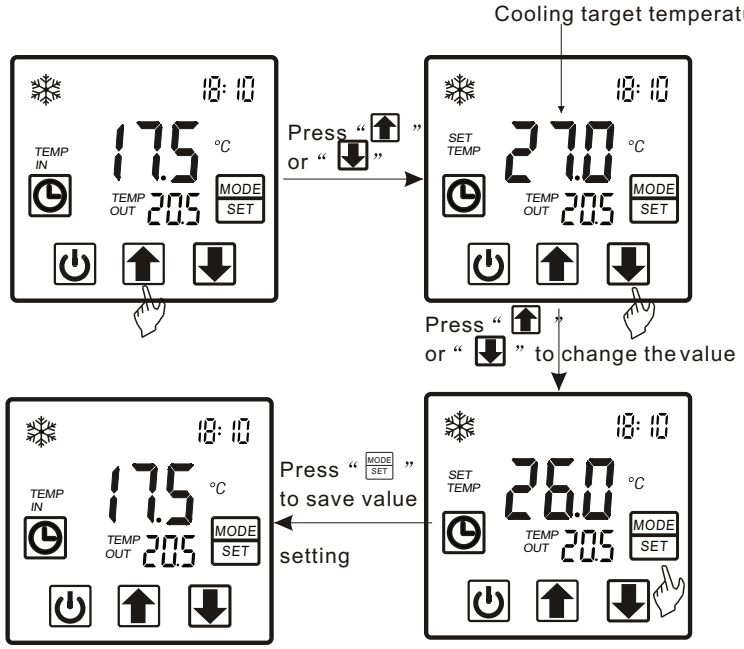
In the main interface，press “ ” or “ ” and the current mode target-temperature flashes, then press “ ” to increase the temp.value, or press “ ” to decrease it.

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

Press “ ” can not 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） 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;

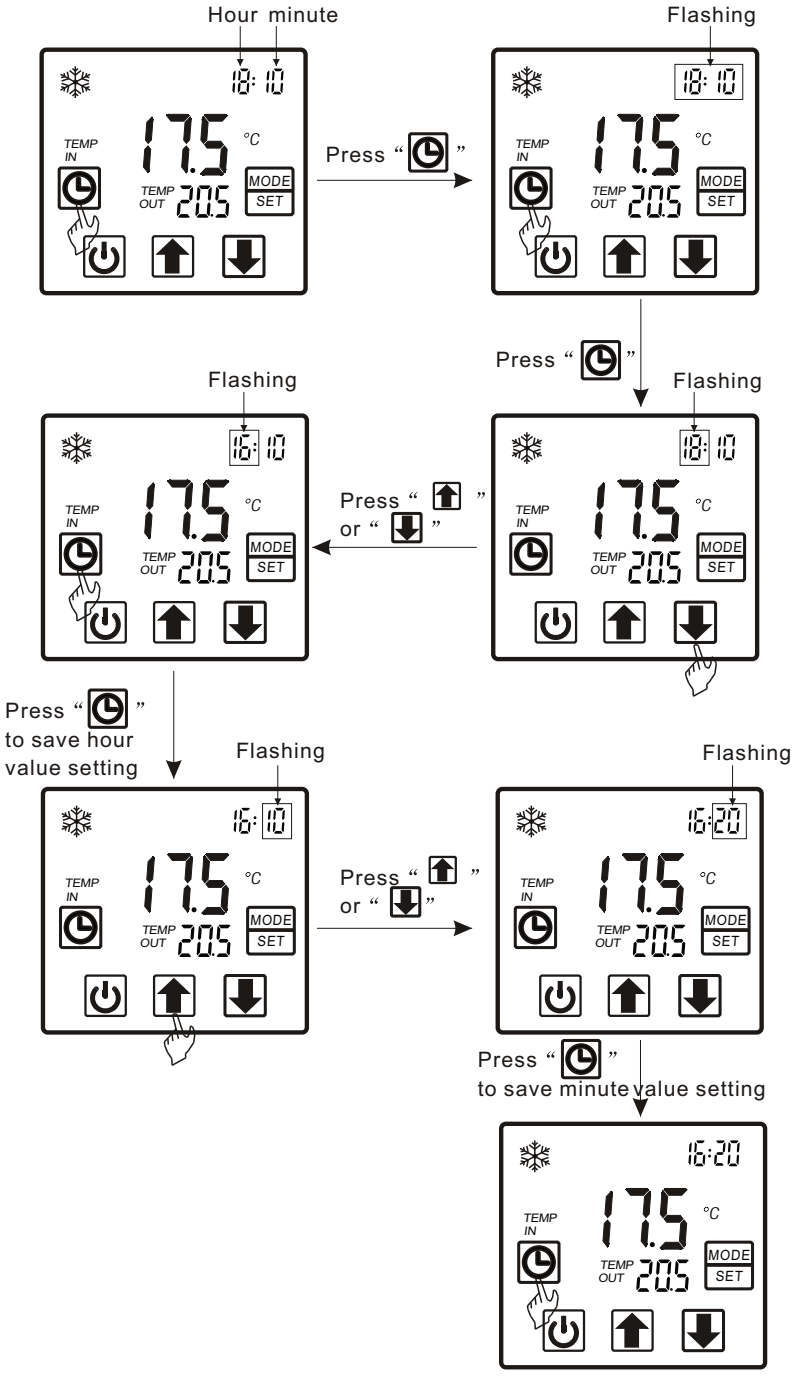
At the same time, minute start to flashing，press “ ” to increase value or press “ ” to decrease value，and press “ ” to save setting.

Press “ ” can not 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. USAGE AND OPERATION

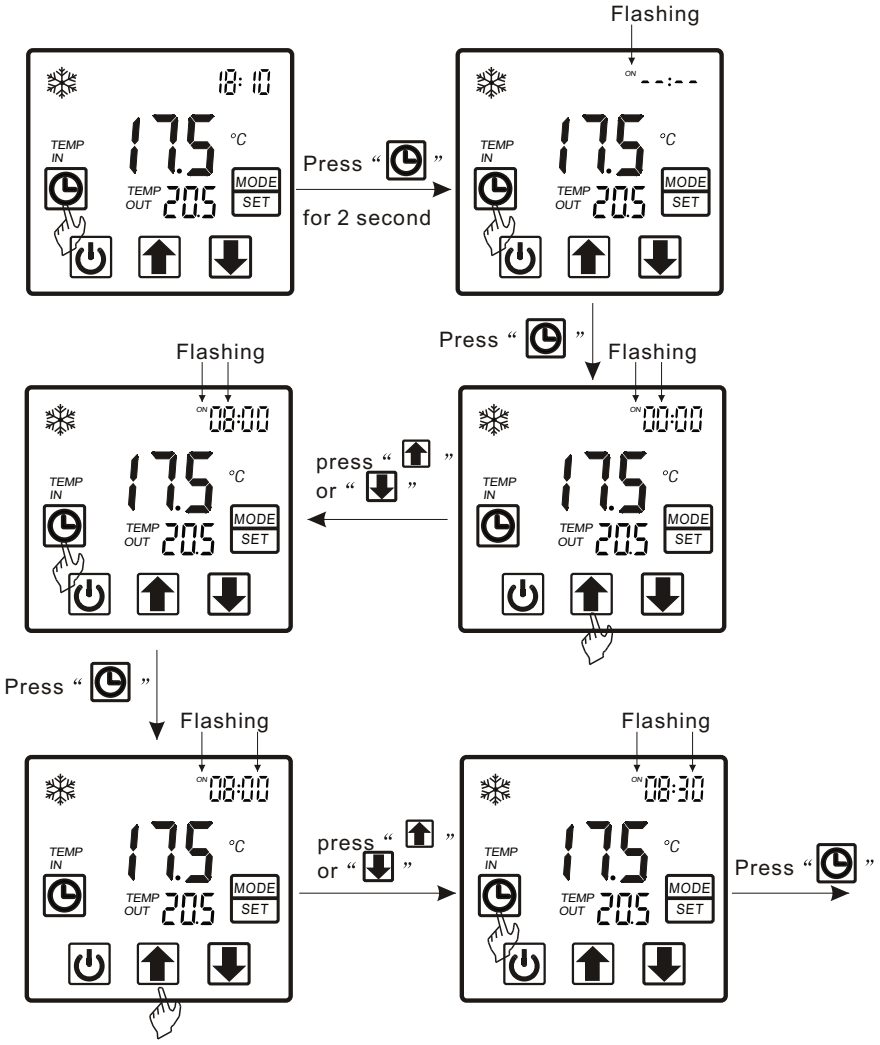
5） Timer setting

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）.

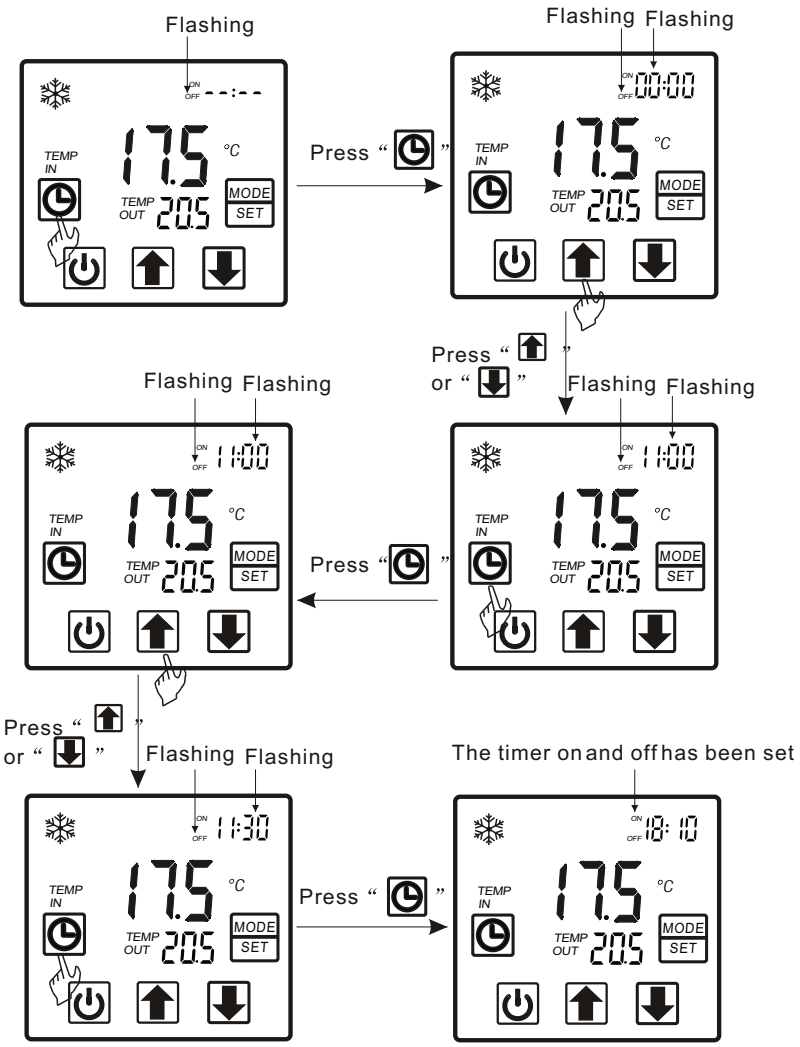
If you want cancel the timer off, In the "off" flashing interface, press “ ” to cancel

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

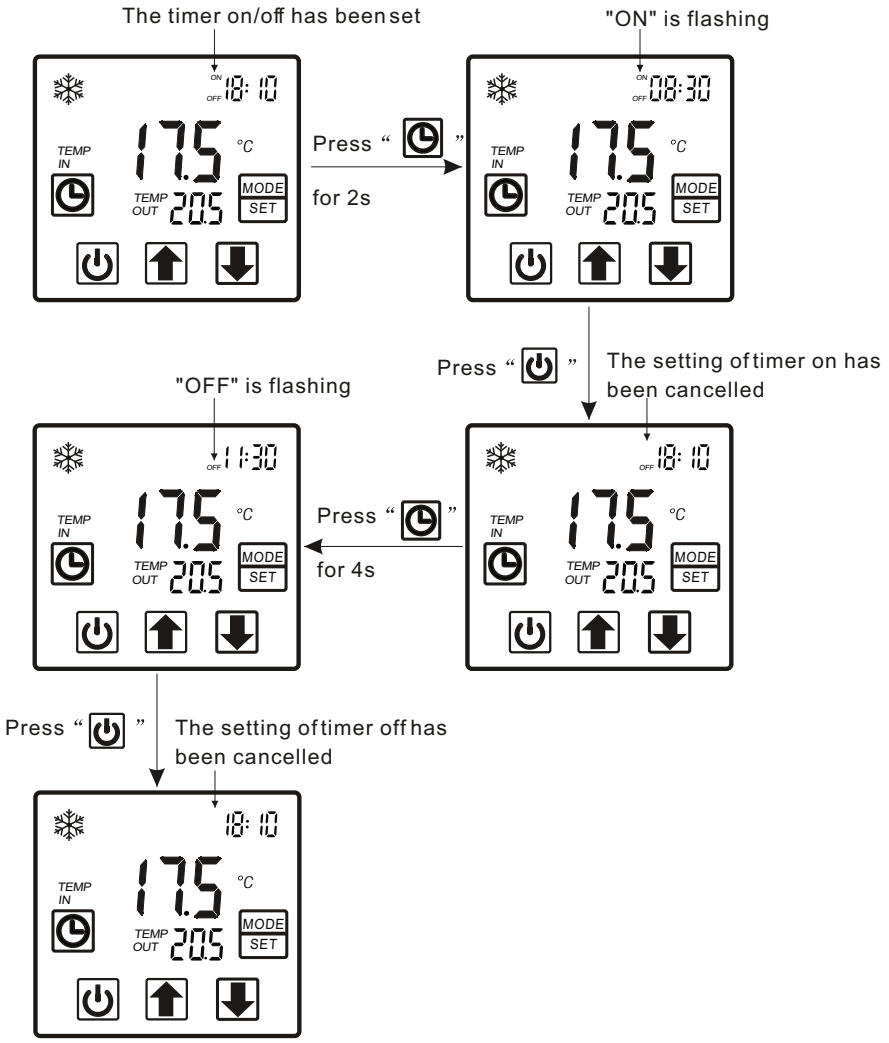


4. USAGE AND OPERATION

6） 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 .

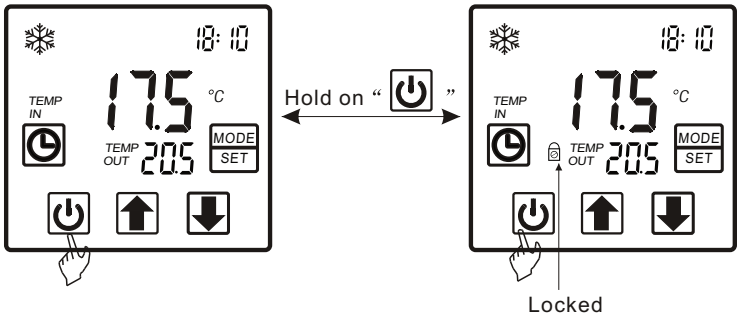
For example:



4. USAGE AND OPERATION

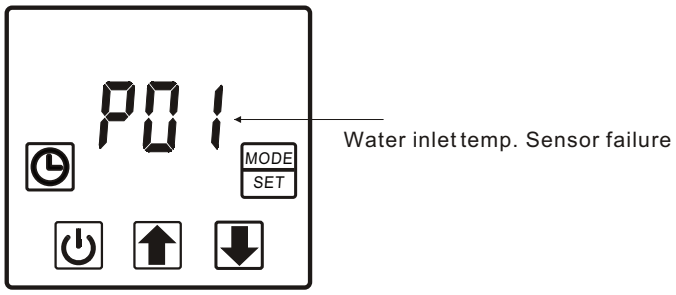
7） Keyboard lock

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 automaticly.



8） 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:



4.3. Parameter table

Meaning	Default	Remark
Heating inlet target temp.	28℃	Adjustable
Cooling inlet target temp.	28℃	Adjustable
Auto inlet target temp.	27℃	Adjustable

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 your certified 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 of time. You should check the unit thoroughly and fill the system with water fully before using it for the first time after a prolonged period of no usage.

5. MAINTENANCE AND INSPECTION

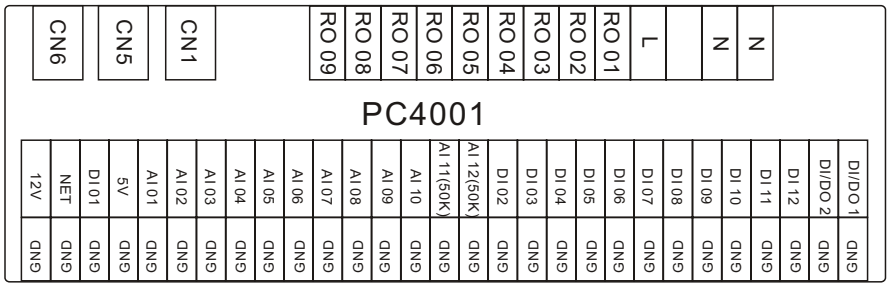
5.2 Malfunction table

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

malfunction	display	Indicator	Reason	resolution
Power on		Off		
Normal working		On		
Inlet temp. Sensor failure	P01	1 On 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Outlet temp. Sensor failure	P02	2 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Recovery temp. Sensor failure	P033	3 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Ambient temp. Sensor failure	P04	4 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Coil 1 temp. Sensorfailure	P15	5 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Coil 2 temp. Sensorfailure	P25	5 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Suction 1 temp. Sensorfailure	P17	7 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Suction 1 temp. Sensorfailure	P27	7 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Discharge 1 temp. Sensorfailure	P181	8 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Discharge 2 temp. Sensorfailure	P182	8 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Antifreezing 1 temp. Sensor failure	P19	9 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
Antifreezing 2 temp. Sensor failure	P29	9 on 1 off	The temp. Sensor is brokenor short circuit	Check or change the temp. Sensor
High pressure1 protection	E11	11 on 1 off	The high-preesure switch is broken	Check the pressure switchand cold circuit
High pressure2 protection	E21	11 on 1 off	The high-preesure switch is broken	Check the pressure switchand cold circuit
Low pressure1 protection	E12	12 on 1 off	The low-preesure switch is broken	Check the pressure switchand cold circuit
Low pressure2 protection	E22	12 on 1 off	The low-preesure switch is broken	Check the pressure switchand cold circuit
Heat source side water flow failure	E031	13 on 1 off	No water/little water in water system	Check the pipe waterflow and water pump
The use side water flow failure	E032	13 on 1 off	No water/little water in water system	Check the pipe waterflow and water pump
water flow over-low failure	E035	13 on 1 off	No water/little water in water system	Check the pipe waterflow and water pump
Elctrical-heat over heat failure	E04	14 on 1 off	Electrical-heat is over heat	Check or change electrical-heat
Compressor 1 overload failure	E101	21 on 1 off	Compressor is overload	Check the compressor functionality
Compressor 2 overload failure	E201	21 on 1 off	Compressor is overload	Check the compressor functionality
Water-inlet and outlet temp. difference	E06	16 on 1 off	Water flow is notenough and low differential pressure	Check the pipe waterflow and whether water system is jammed ornot
The system 1use side antifreezing protection	E171	17 on 1 off	Water flow is notenough	Check the pipe waterflow and whether water system is jammed ornot
The system 2 useside antifreezing protection	E271	17 on 1 off	Water flow is notenough	Check the pipe waterflow and whether water system is jammed ornot
The system 1heat source side antifreezing protection	E172	17 on 1 off	Water flow is notenough	Check the pipe waterflow and whether water system is jammed ornot
The system 2 heatsource side antifreezing protection	E272	17 on 1 off	Water flow is notenough	Check the pipe waterflow and whether water system is jammed ornot
The primary anti-freezing protection	E19	19 on 1 off	The ambient temp. Is low	/
The secondary anti-freezing protection	E29	19 on 1 off	The ambient temp. Is low	/
Discharge Temp.Of system 1 is too high	P182	8 on 1 off	The compressor is overload	Check the compressor functionality
Discharge Temp.Of system 2 is too high	P282	8 on 1 off	The compressor is overload	Check the compressor functionality
System protection	E05	8 on 1 off	The protection system is failure	Check each protection pointof the system
Defrosting		Flashing	/	/
Communication failure	E08	/	Communication failure between wire controller and main board	Check the wire connection between remote wire controller andmain board

6. APPENDIX

6.1 Connection of PCB illustration



6.2 Connections explanation：

NO.	Symbol	Meaning	NO.	Symbol	Meaning
1	AC-L	Live line	21	DI 07	Water flow switch protection input
2	AC-N	Null line	22	DI 08	Electric heater overload protection input
3	RO 01	Compressor 1 output(220VAC)	23	DI 09	Compressor 1 overload protection input
4	RO 02	Compressor 2 output(220VAC)	24	DI 10	Compressor 2 overload protection input
5	RO 03	High speed of fan output(220VAC)	25	DI 11	System protection input
6	RO 04	Low speed of fan output(220VAC)	26	DI 12	Emergency switch input
7	RO 05	Water pump output(220VAC)	27	AI 01	Water input temperature input
8	RO 06	4-way valve output(220VAC)	28	AI 02	Water output temperature output
9	RO 07	Electric heater output(250VAC)	29	AI 03	System 1 fan coil temperature input
10	RO 08	Spray valve output(220VAC)	30	AI 04	System 2 fan coil temperature input
11	RO 09	Alarm system output(220VAC)	31	AI 05	Ambient temperature input
12	DI/DO 1	Mode indicator output	32	AI 06	System 1 antifreeze temperature input
13	DI/DO 2	Emergency switch output	33	AI 07	System 1 antifreeze temperature input
14	DI 01	Flow rate input	34	AI 08	System 1 suction temperature input
15	DI 02	System 1 high pressure protection input	35	AI 09	System 2 suction temperature input
16	DI 03	System 1 low pressure protection input	36	AI 10	No use
17	DI 04	System 2 high pressure protection input	37	AI 11(50K)	System 1 discharging temperature input
18	DI 05	System 2 low pressure protection input	38	AI 12(50K)	System 2 discharging temperature input
19	NET GND 12V	Connecting to the remote controller	39	CN1	System 2 electric expansion valve output
20	DI 06	Phase sequence protection	40	CN6	System 1 electric expansion valve output

6. APPENDIX

6.3 Caution & Warning

1. The unit can only be repaired by qualified installer centre personnel or an authorised dealer.（for Europe market）
2. This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.（for Europe market）
   Children should be supervised to ensure that they do not play with the appliance.
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 center 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.

6. APPENDIX

6.4 Cable specification

1. Single phase unit

Nameplate maximum current	Phase line	Earth line	MCB	Creepage protector	Signal line
No more than 13A	2 1.5mm^2	1.5mm^2	20A	30mA less than 0.1 sec	n 0.5mm^2
13~25A	2 4mm^2	1.5mm^2	40A	30mA less than 0.1 sec	
25~30A	2 6mm^2	4mm^2	40A	30mA less than 0.1 sec	
30~40A	2 10mm^2	6mm^2	63A	30mA less than 0.1 sec	
40~55A	2 16mm^2	10mm^2	80A	30mA less than 0.1 sec	
55~70A	2 25mm^2	16mm^2	100A	30mA less than 0.1 sec	

2. Three phase unit

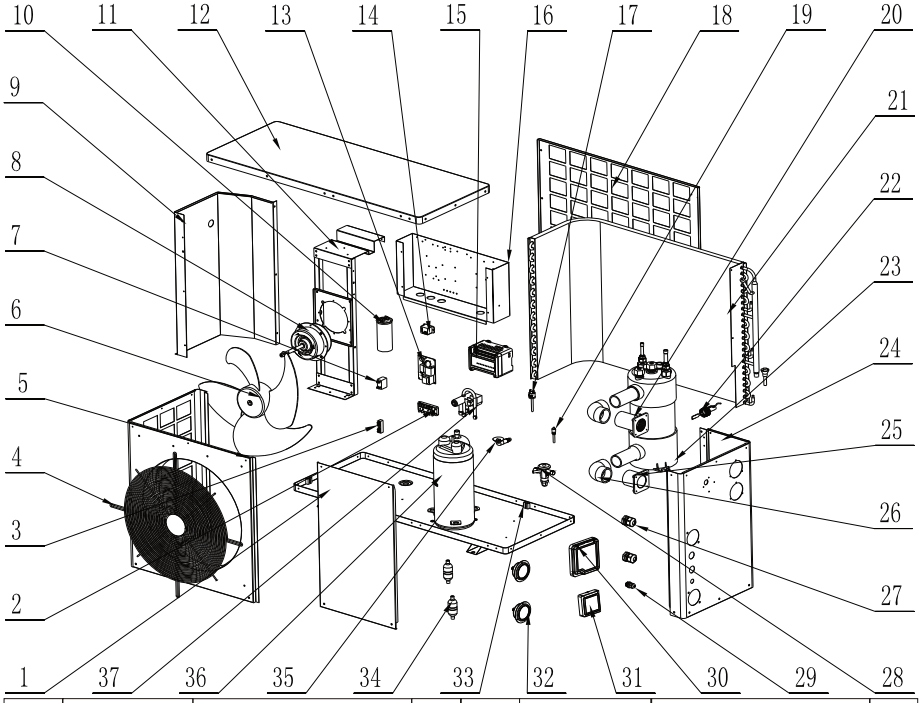
Nameplate maximum current	Phase line	Neutral line	Earth line	MCB	Creepage protector	Signal line
No more than 13A	3 1.5mm^2	1.5mm^2	1.5mm^2	20A	30mA less than 0.1 sec	n 0.5mm^2
13~25A	3 4mm^2	4mm^2	1.5mm^2	40A	30mA less than 0.1 sec	
25~30A	3 6mm^2	4mm^2	4mm^2	40A	30mA less than 0.1 sec	
30~40A	3 10mm^2	4mm^2	6mm^2	63A	30mA less than 0.1 sec	
40~55A	3 16mm^2	4mm^2	10mm^2	80A	30mA less than 0.1 sec	
55~70A	3 25mm^2	4mm^2	16mm^2	100A	30mA less than 0.1 sec	

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

6. APPENDIX

6.5 Explosive view of the unit

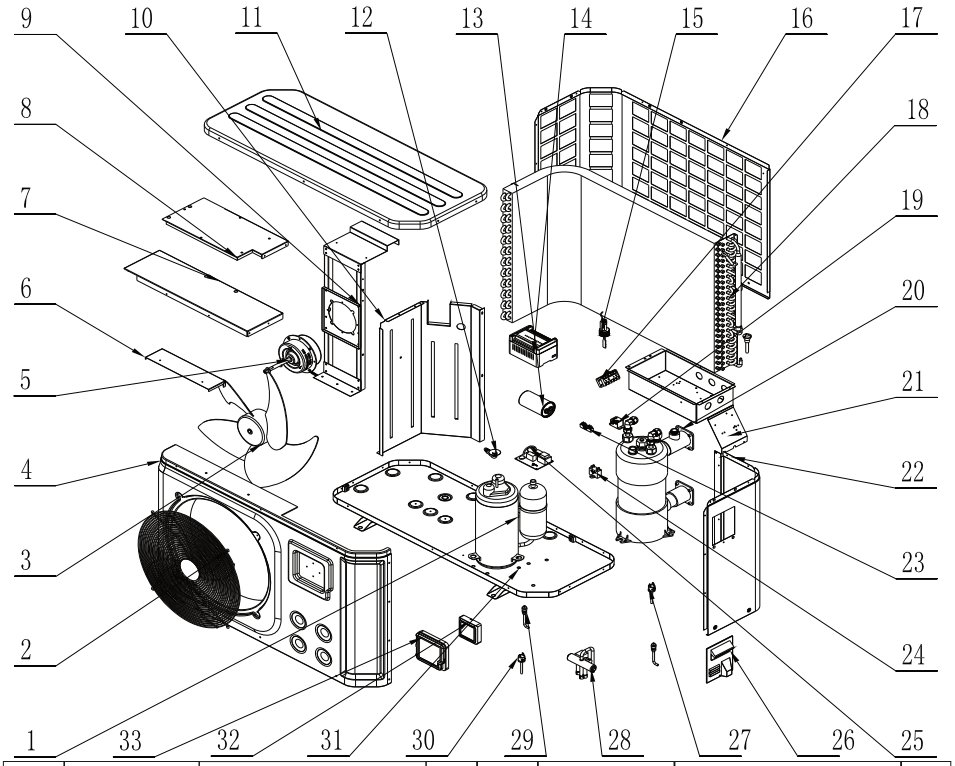
1)、MODEL: Oasis C8b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	3512-2158	front right panel		20	2001-2225	female branch tee	
2	4000-3901	5-Terminal		21	3406-1204	condenser	
3	2000-3909	2-Terminal		22	20000-360005	water flow switch	
4	3512-2152	protect net		23	3508-1218	heat exchanger	
5	3512-2175	front panel		24	32012-210143	right panel	
6	3500-2701	fan blade		25	2003-1379	Φ50 connector	
7	2000-3501	fan motor capacitor		26	2001-1359	PVC elbow	
8	3404-3301	fan motor		27	2000-2249	wire fixer	
9	3508-2178	middle panel		28	2002-1444	Thermostatic expansion valve	
10	2000-3510	Comp. capacitor		29	2000-2250	wire fixer	
11	3512-2126	fan motor bracket		30	20000-220068	water proof cover	
12	3512-2155	top cover		31	95005-310156	wire controller	
13	2000-3115	soft start PCB		32	2000-2802	pressure meter	
14	2000-3619	relay		33	32008-210032	chassis	
15	95005-310114	Pc4001 controller		34	2000-1406	filter	
16	32008-210009	Controlling box		35	3400-2203	Drainage pipe fittings	
17	2000-3603	pressure switch		36	2000-1125	compressor	
18	3512-2121	back net		37	2000-1429	4-way valve	
19	20000-140003	needle valve					

6. APPENDIX

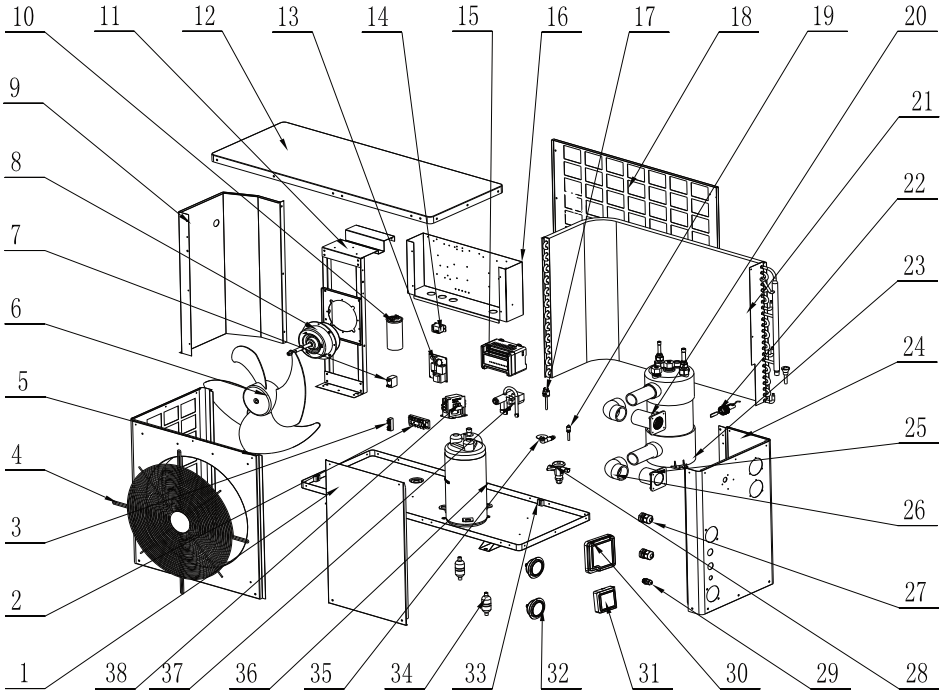
2）、MODEL: EH9b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	2001-1116	Compressor		18	3406-1204	condenser	
2	32012-210080	protect net		19	2000-3619	relay	
3	3500-2701	fan blade		20	32008-120007	heat exchanger	
4	32008-220040	front panel		21	32012-210078	control box	
5	3404-3301	fan motor		22	32008-210109	right panel	
6	32008-210069	front support panel		23	2000-3909	2-terminal	
7	32012-210077	support panel		24	2000-3501	fan motor capacitor	
8	32012-210079	cover for control box		25	2000-3115	soft start PCB	
9	32012-210075	fan motor bracket		26	3404-2126	plastic cover	
10	32012-210076	middle panel		27	2001-3605	pressure switch	
11	32012-220031	top cover		28	2001-1418	4-way valve	
12	3400-2203	connector		29	20000-140150	needle valve	
13	2000-3505	compressor capacitor		30	2000-3603	pressure switch	
14	95005-310114	Pc4001 controller		31	32008-210103	chassis	
15	20000-360005	water flow switch		32	95005-310156	wire controller	
16	32008-210101	left panel		33	20000-220068	water proof cover	
17	4000-3901	5-terminal					

6. APPENDIX

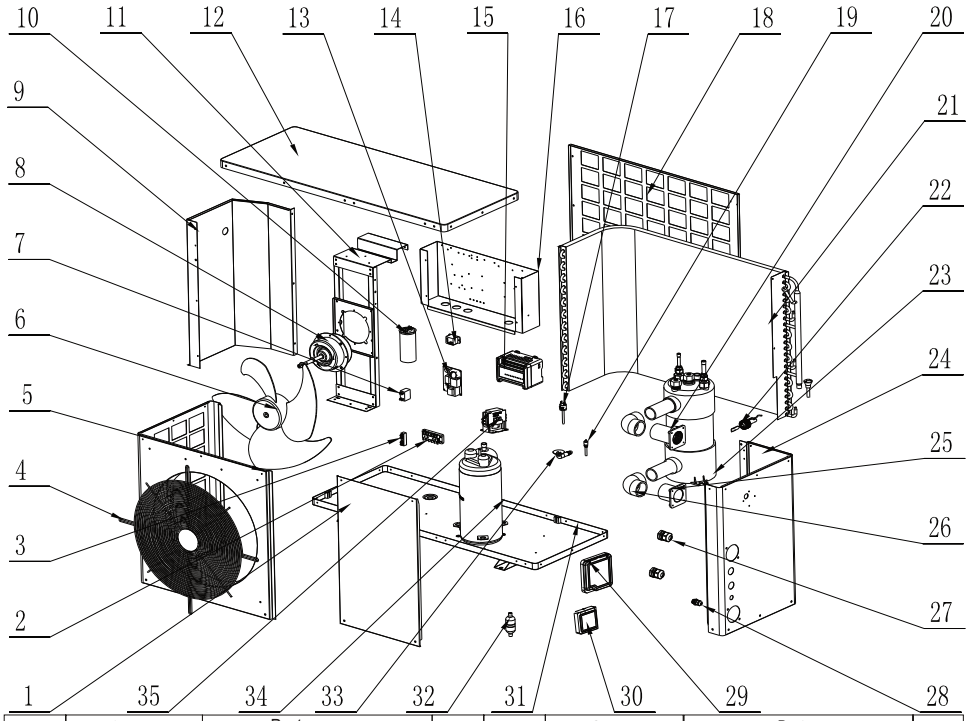
3)、MODEL: Oasis C13b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	3512-2158	front right panel		20	2001-2225	female branch tee	
2	4000-3901	5-Terminal		21	3407-1202	condenser	
3	2000-3909	2-Terminal		22	20000-360005	water flow switch	
4	3512-2152	protect net		23	3512-1218	heat exchanger	
5	3512-2175	front panel		24	32012-210143	right panel	
6	3500-2701	fan blade		25	2003-1379	Φ50 connector	
7	2000-3501	fan motor capacitor		26	2001-1359	PVC elbow	
8	3404-3301	fan motor		27	2000-2249	wire fixer	
9	3508-2178	middle panel		28	2002-1444	Thermostatic expansion valve	
10	2000-3502	Comp. capacitor		29	2000-2250	wire fixer	
11	3512-2126	fan motor bracket		30	20000-220068	water proof cover	
12	3512-2155	top cover		31	95005-310156	wire controller	
13	2000-3116	soft start PCB		32	2000-2802	pressure meter	
14	2000-3619	relay		33	32008-210032	chassis	
15	95005-310114	Pc4001 controller		34	2000-1406	filter	
16	32008-210009	Controlling box		35	3400-2203	Drainage pipe fittings	
17	2000-3603	pressure switch		36	2000-1139	compressor	
18	3512-2121	back net		37	2000-1401	4-way valve	
19	20000-140003	needle valve		38	20000-360006	AC contactor	

6. APPENDIX

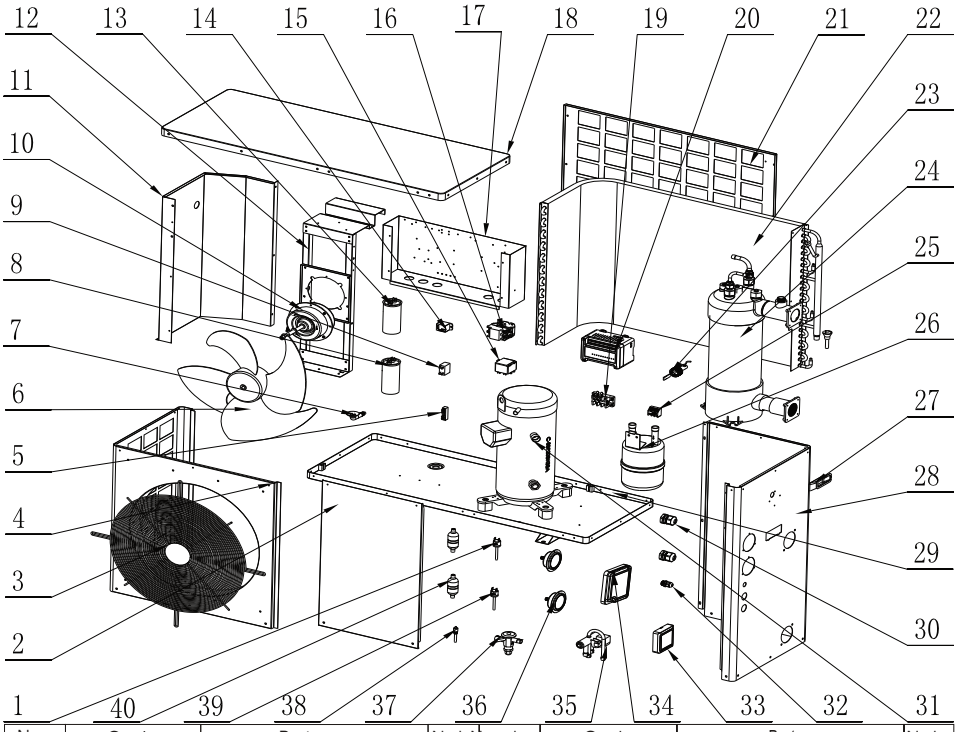
4）、MODEL: Oasis H13b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	3512-2158	front right panel		19	20000-140003	needle valve	
2	4000-3901	5-Terminal		20	2001-2225	female branch tee	
3	2000-3909	2-Terminal		21	3407-1202	condenser	
4	3512-2152	protect net		22	20000-360005	water flow switch	
5	3512-2175	front panel		23	3512-1218	heat exchanger	
6	3500-2701	fan blade		24	32012-210191	right panel	
7	2000-3501	fan motor capacitor		25	2003-1379	Φ50 connector	
8	3404-3301	fan motor		26	2001-1359	PVC elbow	
9	3508-2178	middle panel		27	2000-2249	wire fixer	
10	2000-3502	Comp. capacitance		28	2000-2250	wire fixer	
11	3512-2126	fan motor bracket		29	20000-220068	water proof cover	
12	3512-2155	top cover		30	95005-310156	wire controller	
13	2000-3116	soft start PCB		31	32008-210032	chassis	
14	2000-3619	relay		32	2000-1497	filter	
15	95005-310114	Pc4001 controller		33	3400-2203	Drainage pipe fittings	
16	32008-210009	Controlling box		34	2000-1139	compressor	
17	2000-3603	pressure switch		35	20000-360006	AC contactor	
18	3512-2121	back net					

6. APPENDIX

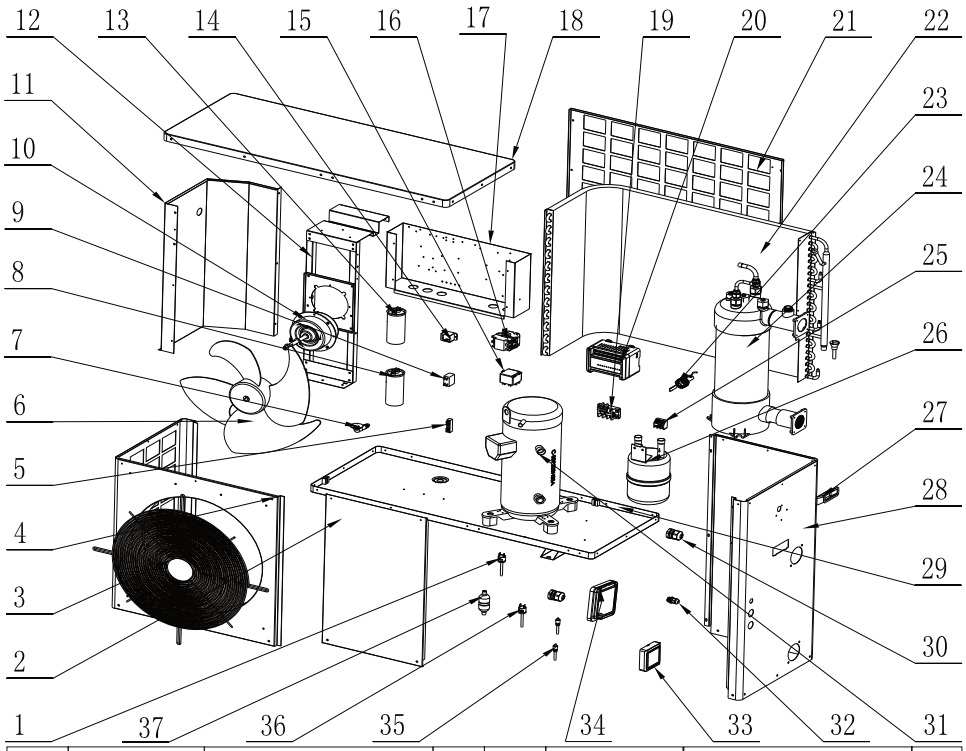
5)、MODEL: Oasis C17b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	2000-3602	pressure switch		21	3509-2158	back net	
2	3509-2156	front-right panel		22	35012-120001	condenser	
3	3512-2152	protect net		23	20000-360005	water flow switch	
4	3509-2194	front panel		24	3509-1210	heat exchanger	
5	2000-3909	2-terminal		25	2000-3933	3-terminal	
6	3500-2701	fan blade		26	2000-1440	Gas-Liquid Separators	
7	3400-2203	Drainage pipe fittings		27	20001-220001	handle	
8	2000-3510	compressor capacitor		28	32009-210133	right panel	
9	2000-3501	fan motor capacitor		29	32009-210033	chassis	
10	3404-3301	fan motor		30	2000-2249	wire fixer	
11	3509-2164	middle panel		31	2000-1196	compressor	
12	3509-2117	fan motor bracket		32	2000-2250	wire fixer	
13	2000-3524	compressor capacitor		33	95005-310156	wire controller	
14	2000-3619	relay		34	20000-220068	water proof cover	
15	2000-3676	start relay		35	2001-1491	4-way valve	
16	20000-360007	AC contactor		36	2000-2802	pressure meter	
17	5512-2123	control box		37	2002-1417	thermostatic expansion valve	
18	3509-2155	top cover		38	20000-140003	needle valve	
19	2000-3920	3-terminal		39	2000-3603	pressure switch	
20	95005-310114	Pc4001 controller		40	2000-1406	filter	

6. APPENDIX

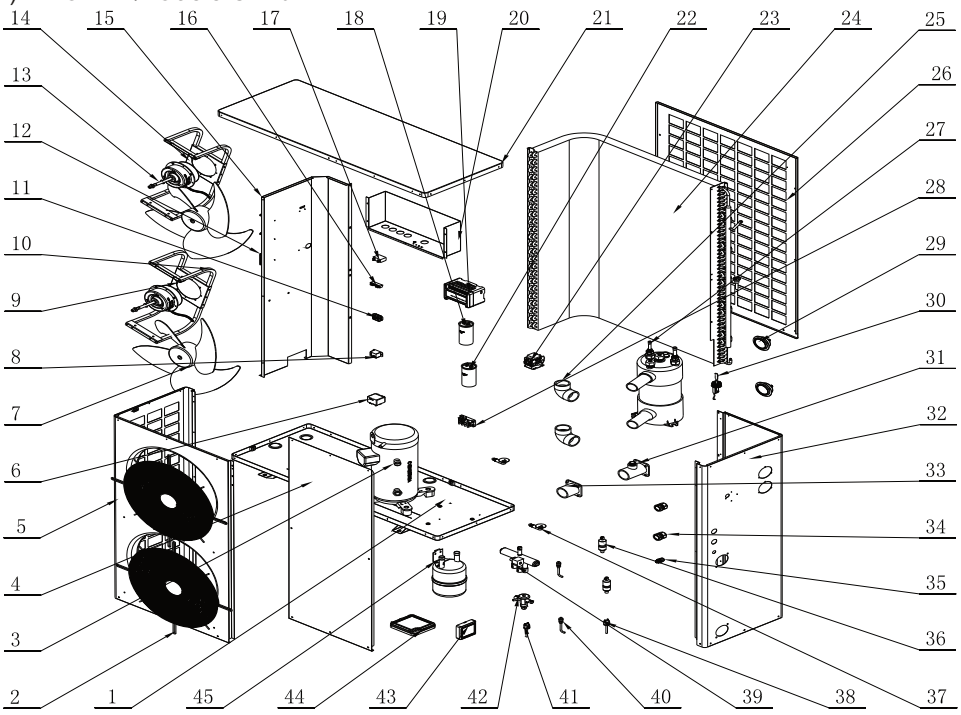
6）、MODEL: Oasis H17b



No.	Code	Part name	Note	Number	Code	Part name	Note
1	2000-3602	pressure switch		20	95005-310114	Pc4001 controller	
2	3509-2156	front-right panel		21	3509-2158	back net	
3	3512-2152	protect net		22	35012-120001	condenser	
4	3509-2194	front panel		23	20000-360005	water flow switch	
5	2000-3909	2-terminal		24	3509-1210	heat exchanger	
6	3500-2701	fan blade		25	2000-3933	3-terminal	
7	3400-2203	Drainage pipe fittings		26	2000-1440	Gas-Liquid Separators	
8	2000-3510	compressor capacitor		27	20001-220001	handle	
9	2000-3501	fan motor capacitor		28	32009-210158	right panel	
10	3404-3301	fan motor		29	32009-210033	chassis	
11	3509-2164	middle panel		30	2000-2249	wire fixer	
12	3509-2117	fan motor bracket		31	2000-1196	compressor	
13	2000-3524	compressor capacitor		32	2000-2250	wire fixer	
14	2000-3619	relay		33	95005-310156	wire controller	
15	2000-3676	start relay		34	20000-220068	water proof cover	
16	20000-360007	AC contactor		35	2000-1404	needle valve	
17	5512-2123	control box		36	2000-3603	pressure switch	
18	3509-2155	top cover		37	2000-1498	filter	
19	2000-3920	3-terminal					

6. APPENDIX

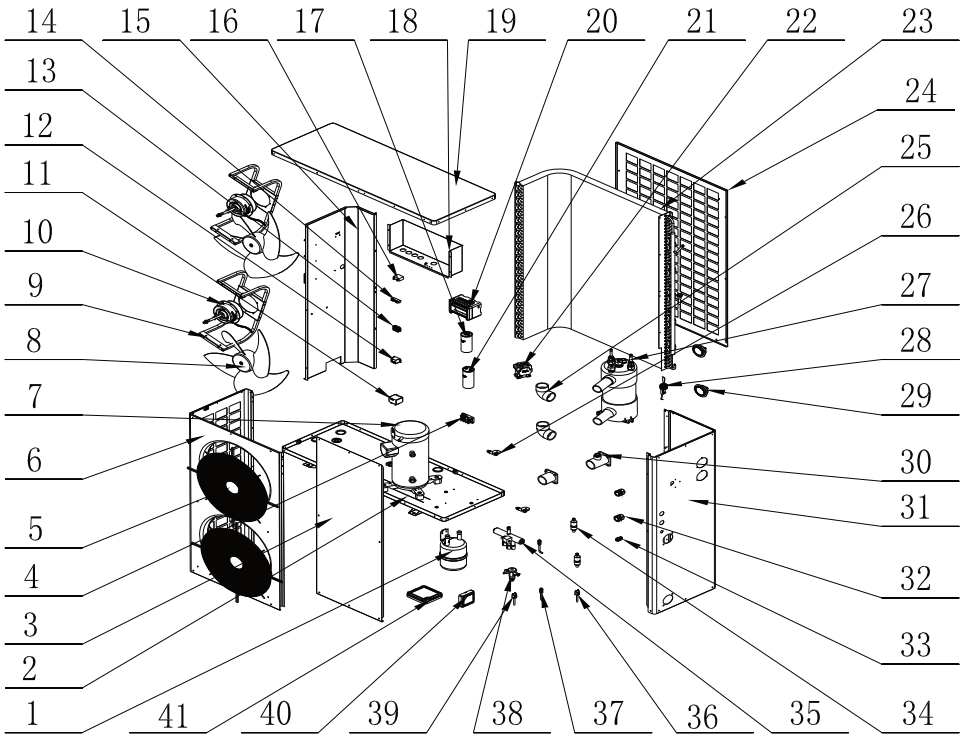
7)、MODEL: Oasis C21b



No.	Code	Part name		NO.	Code	Part name	
1	32018-210012	chassis		24	35018-120003	condenser	
2	3512-2152	protect net		25	2001-1359	PVC elbow	
3	20000-110112	compressor		26	3518-2107	back net	
4	3518-2155	front-right panel		27	3518-1202	heat exchanger	
5	3518-2173	front panel		28	2000-3920	3-terminal	
6	2000-3676	start relay		29	2000-2802	pressure meter	
7	3500-2701	fan blade		30	20000-360005	water flow switch	
8	2000-3619	relay		31	2001-2225	female branch tee	
9	3404-3301	fan motor		32	32018-210058	right panel	
10	3536-2120	fan motor bracket		33	2003-1379	Φ50 connector	
11	2000-3933	3-terminal		34	2000-2249	wire fixer	
12	3518-2152	middle panel		35	2000-2250	wire fixer	
13	3404-3301	fan motor		36	2004-1444	filter	
14	3536-2120	fan motor bracket		37	3400-2203	drainage pipe fittings	
15	3518-2152	middle panel		38	2000-3603	pressure switch	
16	2000-3909	2-terminal		39	2001-1491	4-way valve	
17	2000-3501	fan motor capacitor		40	20000-140150	needle valve	
18	2000-3524	compressor capacitor		41	2001-3605	pressure switch	
19	95005-310114	Pc4001 controller		42	20000-140021	Thermostatic expansion valve	
20	32018-210025	control box		43	95005-310156	wire controller	
21	3518-2153	top cover		44	20000-220068	water prrof cover	
22	2000-3510	compressor capacitor		45	2000-1440	Gas-Liquid Separators	
23	20000-36007	AC contactor					

6. APPENDIX

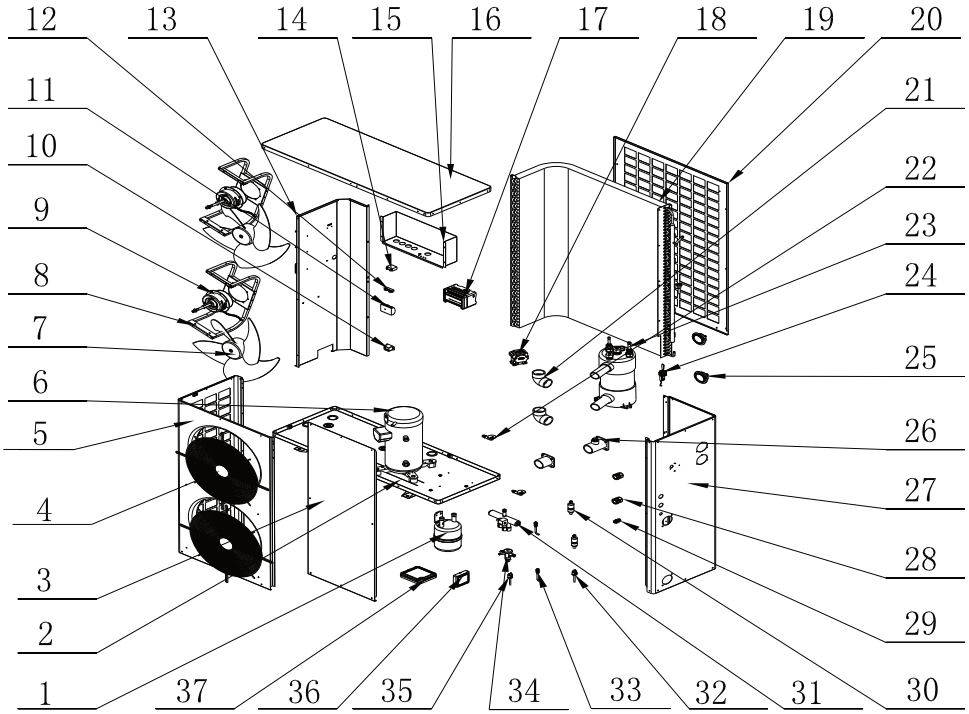
8）、MODEL: Oasis C25b



No.	Code	Part name		NO.	Code	Part name	
1	2000-1440	liquid-gas separator		22	20000-360007	single phase AC contactor	
2	32018-210012	Chassis		23	35018-120003	condenser	
3	3518-2155	right panel		24	3518-2107	back net	
4	2000-3920	3-points terminal		25	2001-1359	PVC elbow	
5	3512-2152	fan-guard		26	3400-2203	Drain water connector	
6	3518-2173	front panel		27	3518-1202	heat exchanger	
7	20000-110119	compressor		28	20000-360005	water flow switch	
8	3500-2701	fan		29	2000-2802	pressure gage	
9	3536-2120	fan motor support		30	2001-2225	3-way valve	
10	3404-3301	fan motor		31	32019-210003	right panel	
11	2000-3676	start relay		32	2000-2249	water proof sheath	
12	2000-3619	relay		33	2000-2250	water proof sheath	
13	2000-3933	3-points terminal		34	2000-1406	filter	
14	2000-3909	2-points terminal		35	2001-1491	4-way valve	
15	3518-2152	middle panel		36	2000-3603	pressure gage	
16	2000-3501	fan motor capacitor		37	20000-140003	needle valve	
17	2000-3524	compressor capacitor		38	2002-1417	TX valve	
18	32018-210025	electrical box		39	2000-3602	pressure switch	
19	3518-2153	top cover		40	95005-310156	LCD wire controller	
20	95005-310114	Pc4001		41	20000-220068	water proof box	
21	2000-3527	compressor capacitor					

6. APPENDIX

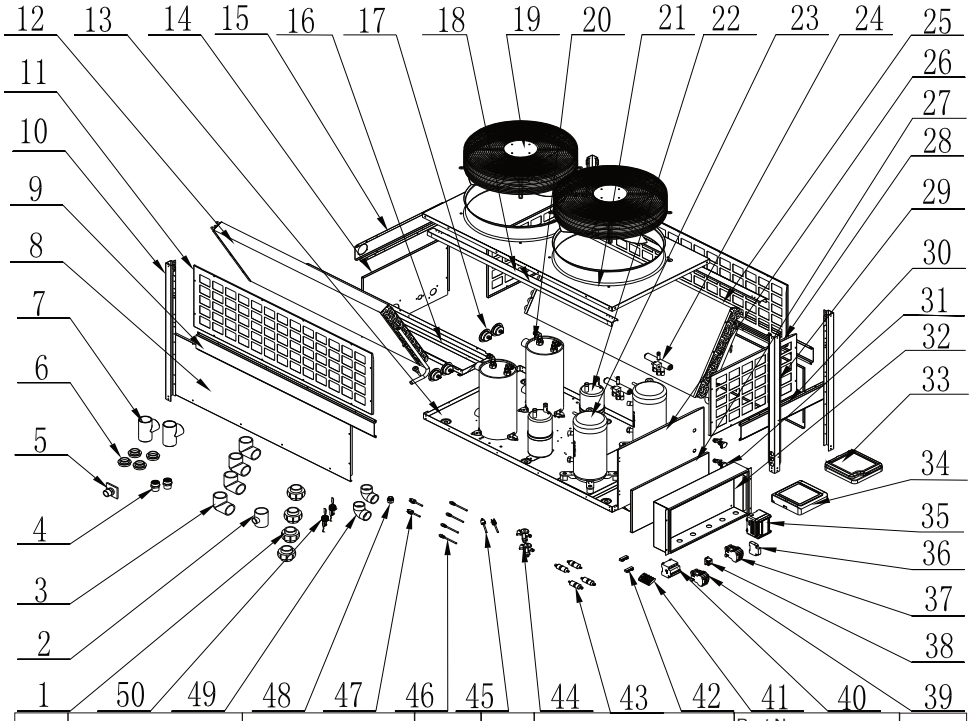
5)、MODEL: Oasis C25Tb



No.	Code	Part name		NO.	Code	Part name	
1	2000-1440	liquid-gas separator		20	3518-2107	back net	
2	32018-210012	Chassis		21	2001-1359	PVC elbow	
3	3518-2155	front panel		22	3400-2203	drain water connector	
4	3512-2152	fan guard		23	3518-1202	heat exchanger	
5	3518-2173	front panel		24	20000-360005	water flow switch	
6	2000-1135	compressor		25	2000-2802	pressure gage	
7	3500-2701	fan		26	2001-2225	3-way valve	
8	3536-2120	fan motor support		27	32019-210003	right panel	
9	3404-3301	fan motor		28	2000-2249	water proof sheath	
10	2000-3619	relay		29	2000-2250	water proof sheath	
11	2000-3902	5-points terminal		30	2000-1406	filter	
12	2000-3909	2-points terminal		31	2001-1491	4-way valve	
13	3518-2152	middle panel		32	2000-3603	pressure switch	
14	2000-3501	fan motor capacitor		33	2000-1404	needle valve	
15	32018-210025	electrical box		34	2002-1417	TX valve	
16	3518-2153	top cover		35	2000-3602	pressure switch	
17	95005-310114	Pc4001		36	95005-310156	LCD wire controller	
18	2000-3653	AC contactor		37	20000-220068	water proof box	
19	35018-120003	condenser					

6. APPENDIX

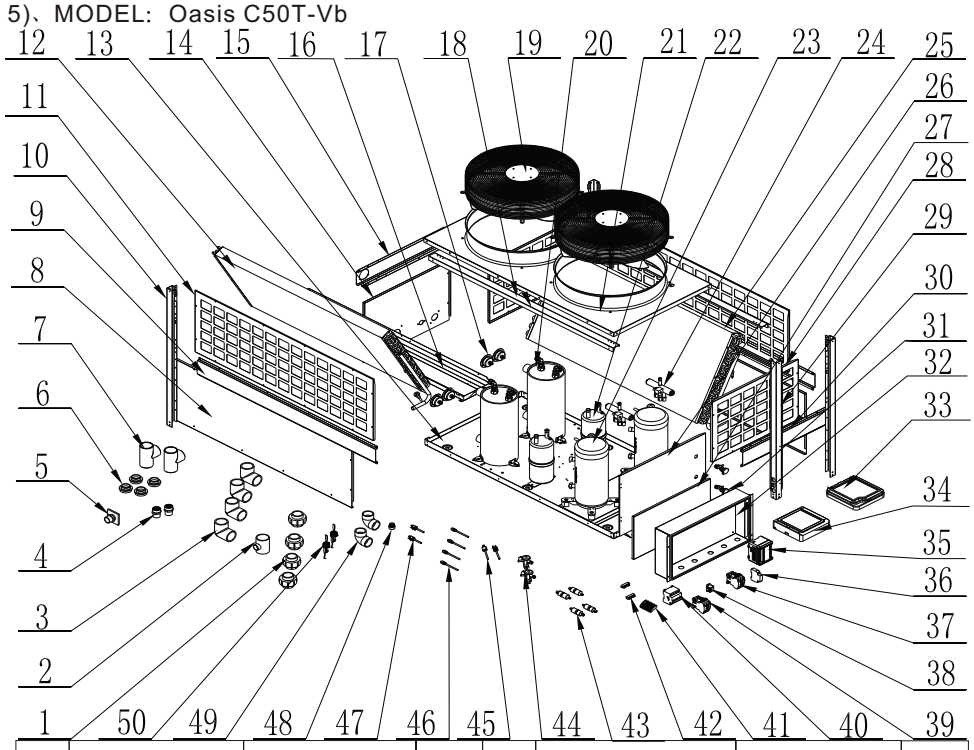
6）、MODEL: Oasis C35T-Vb



NO.	Part Note	PartName		NO.	Part Code	Part Name	
1	2001-1355	pipe connector		26	32006-210047	electrical box cover	
2	2002-1342	PVC 3-way valve		27	35005-210012	scale board	
3	2002-1348	PVC elbow		28	35005-210017	left panel	
4	2002-1383	PVC pipe		29	35005-210002	left post	
5	2004-1303	PVC fixed plate		30	35005-210006	left beam	
6	2002-1337	PVC adapter bonnet		31	4000-7707	electrical box door	
7	2002-1339	PVC 3-way valve		32	35005-210010	electrical box	
8	32006-210044	front-down panel		33	20000-220068	water proof box	
9	32006-210010	front beam		34	95005-310156	LCD wire controller	
10	35005-210003	right post		35	95005-310114	Pc4001	
11	32006-210012	front-up panel		36	20000-360023	3-phase AC inspector	
12	32006-120006	right-condenser		37	2001-3602	AC contactor	
13	32006-210009	chassis		38	2000-3619	relay	
14	32006-210014	right panel		39	2000-3653	AC contactor	
15	35006-210026	right beam		40	2000-3680	circuit breaker	
16	35005-210013	water collector		41	2000-3902	5-points terminal	
17	2000-2802	pressure gage		42	2000-3909	2-points terminal	
18	35005-210016	support beam		43	2000-1406	filter	
19	20000-330005	fan motor		44	2002-1417	TX valve	
20	32004-120001	heat exchanger		45	2000-3603	pressure switch	
21	35005-210009	top cover		46	2000-1404	needle valve	
22	3505-1405	liquid-gas separator		47	2000-3602	pressure switch	
23	2000-1141	compressor		48	2005-1360	PVC adapter bonnet	
24	2001-1491	4-way valve		49	2001-1359	PVC elbow	
25	32006-120005	left condenser		50	20000-360005	water flow switch	

6. APPENDIX

5)、MODEL: Oasis C50T-Vb



NO.	Note	PartName		NO.	Part Code	Part Name	
1	2001-1355	pipe connector		26	32006-210047	electrical box cover	
2	2002-1342	PVC 3-way valve		27	35005-210012	scale board	
3	2002-1348	PVC elbow		28	35005-210017	left panel	
4	2002-1383	PVC pipe		29	35005-210002	left post	
5	2004-1303	PVC fixed plate		30	35005-210006	left beam	
6	2002-1337	PVC adapter bonnet		31	4000-7707	electrical box door	
7	2002-1339	PVC 3-way valve		32	35005-210010	electrical box	
8	32006-210044	front-down panel		33	20000-220068	water proof box	
9	32006-210010	front beam		34	95005-310156	LCD wire controller	
10	35005-210003	right post		35	95005-310114	Pc4001	
11	32006-210012	front-up panel		36	20000-360023	3-phase AC inspector	
12	32006-120006	right-condenser		37	2001-3602	AC contactor	
13	32006-210009	chassis		38	2000-3619	relay	
14	32006-210014	right panel		39	2000-3653	AC contactor	
15	35006-210026	right beam		40	2000-3680	circuit breaker	
16	35005-210013	water collector		41	2000-3902	5-points terminal	
17	2000-2802	pressure gage		42	2000-3909	2-points terminal	
18	35005-210016	support beam		43	2004-1444	filter	
19	20000-330005	fan motor		44	20000-140043	TX valve	
20	35006-120009	heat exchanger		45	2000-3603	pressure switch	
21	35005-210009	top cover		46	20000-140153	needle valve	
22	3505-1405	liquid-gas separator		47	2001-3605	pressure switch	
23	2001-1138	compressor		48	2005-1360	PVC adapter bonnet	
24	2001-1491	4-way valve		49	2001-1359	PVC elbow	
25	32006-120005	left condenser		50	20000-360005	water flow switch	

Code：20120807-0001