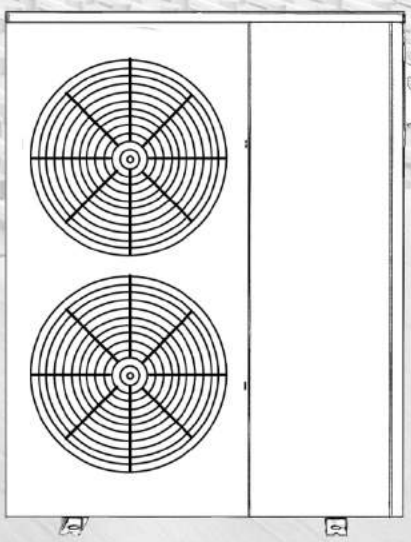
USER MANUAL



Air Source Heat Pump Expert

IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment ,turn OFF and ISOLATE power supply.

⚠ WARNING ⚠

Read and follow all instructions in this owner' s manual and on the equipment.failure to follow inistructions can cause severe injury and /or death

CAUTION & WARNING

⚠ **WARNING** - The unit can only be repaired by qualified installer centre personnel or an authorised dealer.

⚠ **WARNING** - This appliance is not intended for use by persons (including children from 8 years and above) 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. Children should be supervised to ensure that they do not play with the appliance.Cleaning and user maintenance shall not be made by children without supervision.

⚠ **WARNING** - Please make sure that the unit and power connection have good earthing, otherwise may cause electrical shock.

⚠ **WARNING** - 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.

⚠ **WARNING** - Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

⚠ **WARNING** - The unit CANNOT be installed near the flammable gas. Once there is any leakage of the gas, fire can be occur.Do not pierce or burn the appliance,otherwise the refrigerant will leak, leading to fire or explosion.Be aware that refrigerants may not contain an odour, please observe whether the refrigerant leaks carefully.

⚠ **WARNING** - The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation. And the room must be no continuously operating ignition sources
(for example: open flames, an operating gas appliance or an operating electric heater.)
The appliance shall be stored so as to prevent mechanical damage from occurring.

IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment ,turn OFF and ISOLATE power supply.

⚠ **WARNING** - The refrigerant used in the appliance is inflammable and explosive. Protective measures shall be taken when installing, repairing and cleaning. Open flames or an operating electric heater must be prohibited at the work site and well ventilation shall be maintained to prevent the accumulation of refrigerant in case of leakage.

In case of refrigerant leakage:

(1) Turn off the power, remove the potential ignition source, evacuate the personnel and stay away from the scene.

(2) Emergency area shall be set within 20m away from the site, and irrelevant personnel are strictly prohibited to enter.

(3) After the danger is eliminated, open the ventilation facilities to remove the leakage point and the surrounding residual refrigerant.

⚠ **CAUTION - No ignition sources**

No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of nstallation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

⚠ **CAUTION - Ventilated area**

Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

⚠ **CAUTION - Removal and evacuation**

When breaking into the refrigerant circuit to make repairs – or for any other purpose conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration.

The following procedure shall be adhered to:

- remove refrigerant;
- purge the circuit with inert gas;
- evacuate;
- purge again with inert gas;
- open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders.

The system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times.

Compressed air or oxygen shall not be used for this task.Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system.When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipework are to take place.
Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

⚠ **CAUTION - Charging procedures**

In addition to conventional charging procedures, the following requirements shall be followed.
- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigeration system.

Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

CONTENT

1.PREFACE

Thanks for using air source heat pump water heater! Please read this manual carefully before installation and operation. There are information for installation, operation. maintenance,commissioning.

High design and production standard make sure air source heat pump water heater running safely and efficient as well as excellent reliability and adaptability.

We will not responsible for any loss caused by any nonstandard operation.

The machine should be installed by qualified professional personnel and must be connected according to the circuit diagram on the machine. The following items should be focused.

1. Before installation, please confirm if your local voltage is match with the voltage showed on the machine's nameplate and if the carrying capacity of the power supply, wires and sockets are suitable for this machine's input power.

2. Users are not allowed to change the power cord or socket. Wiring work must be carried out by a qualified electrician and ensure that the metal part of the machine has a good grounding. Changing the ground mode is strictly forbidden.

3. After the completion of the construction of all wiring work, please make sure to recheck everything is well before power on.

4. Installing the machine in the place which the combustible gas may leak is strictly forbidden.

5. Do not put your hands or foreign objects into the air outlet of heat pump unit, otherwise, it will be dangerous to the people and equipment

6. In order to obtain a better energy-saving effect, the unit should be installed in a place with well-ventilated.

7. Water used for this machine must be accordance with the national standard of living water, otherwise, if the machine is damaged, we will not assume any responsibility.

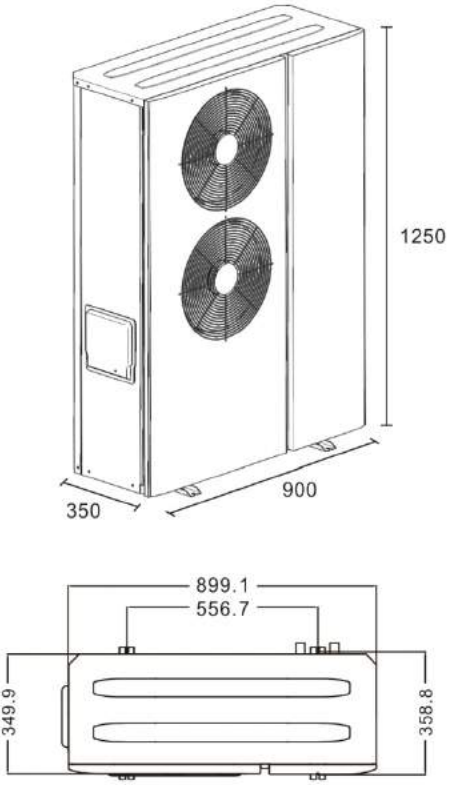
2.SPEAITICATIONS

2.1 Dimensions for the All In One Heat Pump unit.

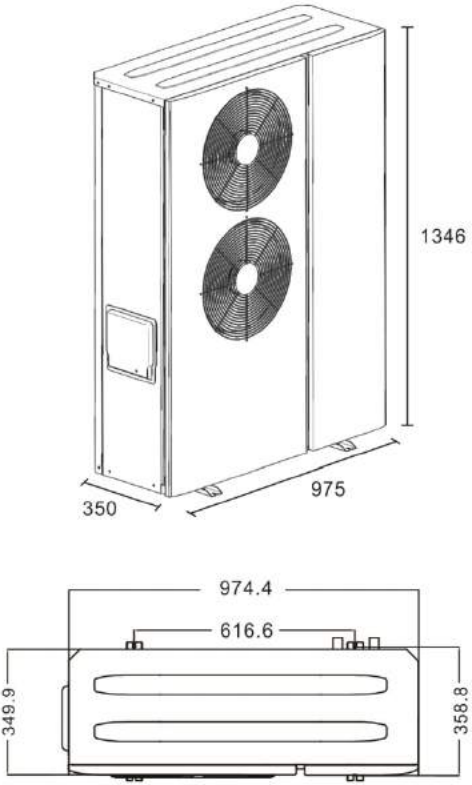
Model	Net Size	Power Source	Refrigerant
NL-B245II/R32	900*350*1250 mm	220V-240V/ Inverter	R32/1300g
NL-B345II/R32	975*350*1346 mm	220V-240V/ Inverter	R32/1800g

2.2 Appearance

Model: NL-B245II/R32



Model: NL-B345II/R32



2.3 Attention

Please read the manual carefully before installation and using. It included all information related to correct installation, debugging, operation, and maintenance.

Following the design standard strictly under producing, which can make sure the unit stay in safe, high quality state, and provide high reliability and excellent adaptation.

We assume no responsibility to any personal harm or machine damage which caused by improper debugging, unnecessary maintenance, non-compliance to manual and guidance.

The maximum water temperature is 65℃, When you use the water, please adjust the water temperature to an appropriate temperature (The most comfortable water temperature for body is 38-42℃, if the water temp above 50℃, there will be danger of burns!)

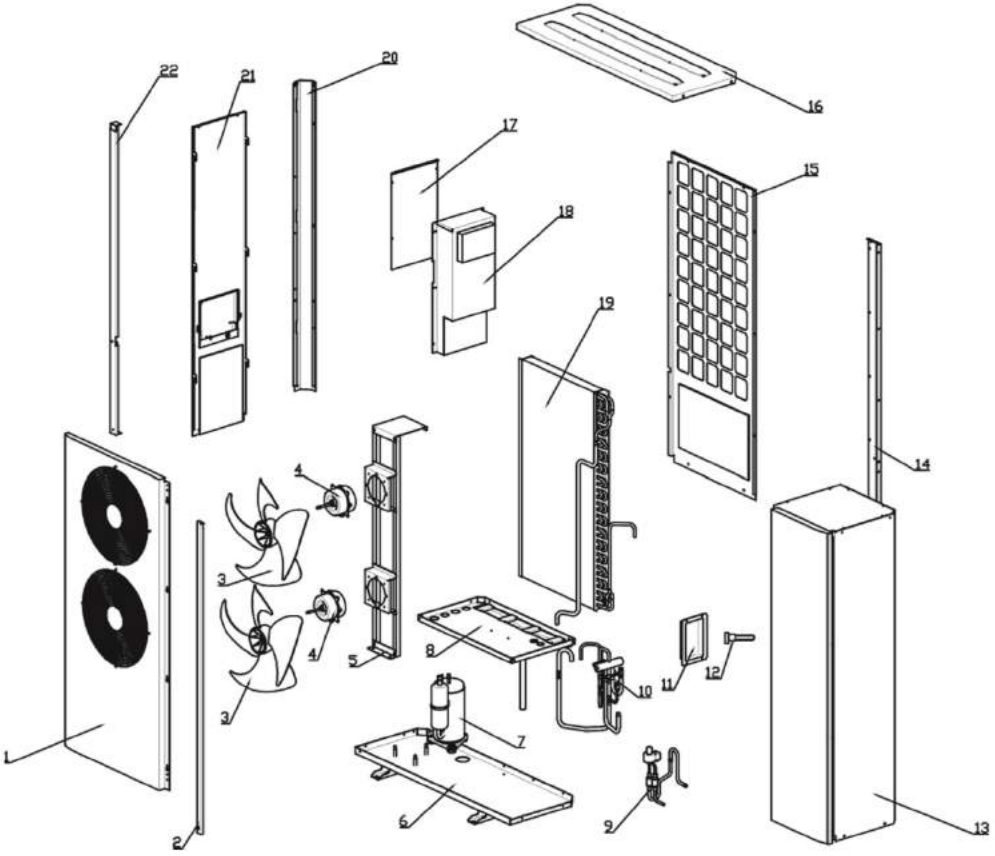
If the unit power off, please discharge all the water inside the unit to avoid heat exchanger frozen in winer. Otherwise, no guarantee within warranty

2.4 Performance Data

Series	New Polar X DC Inverter Heat Pump	
Model	NL-B245II/R32	NL-B345II/R32
Rated heating capacity	3.0~8.5 kW	5.0~12.5 kW
Rated hot water capacity	3.0~8.0 kW	5.0~12.0 kW
Rated cooling capacity	2.5~5.0 kW	4.0~7.0 kW
Heating power input	1.0~2.5 kW	1.5~4.0 kW
Hot water power input	1.0~2.5 kW	1.5~4.0 kW
Cooling power input	1.0~2.2 kW	1.5~3.5 kW
Power source	220V~240V/1N	220V~240V/1N
Rated of waterproof	IPX4	IPX4
Rated water flow	1.5 m^3/h	1.8 m^3/h
Refrigeration and volume	R32 / 1300g	R32 / 1800g
Compressor	Mitsubishi	Mitsubishi
Form	Double-rotor type	Double-rotor type
Water tank heat exchanger size	70L	80L
Water tank working pressure	≤0.8MPa	≤0.8MPa
Refrigerant system working pressure	≤4. 2MPa	≤4. 2MPa
Net size	900*350*1250 mm	975*350*1346 mm
Net Weight	90kg	110kg
Water inlet diameter	DN20	DN20
Water outlet diameter	DN20	DN20
Max input current	19.2A	25A
Power line standard	≥3x4. 0mm^2	≥3x4. 0mm^2

2.5 Exploded diagram and parts list

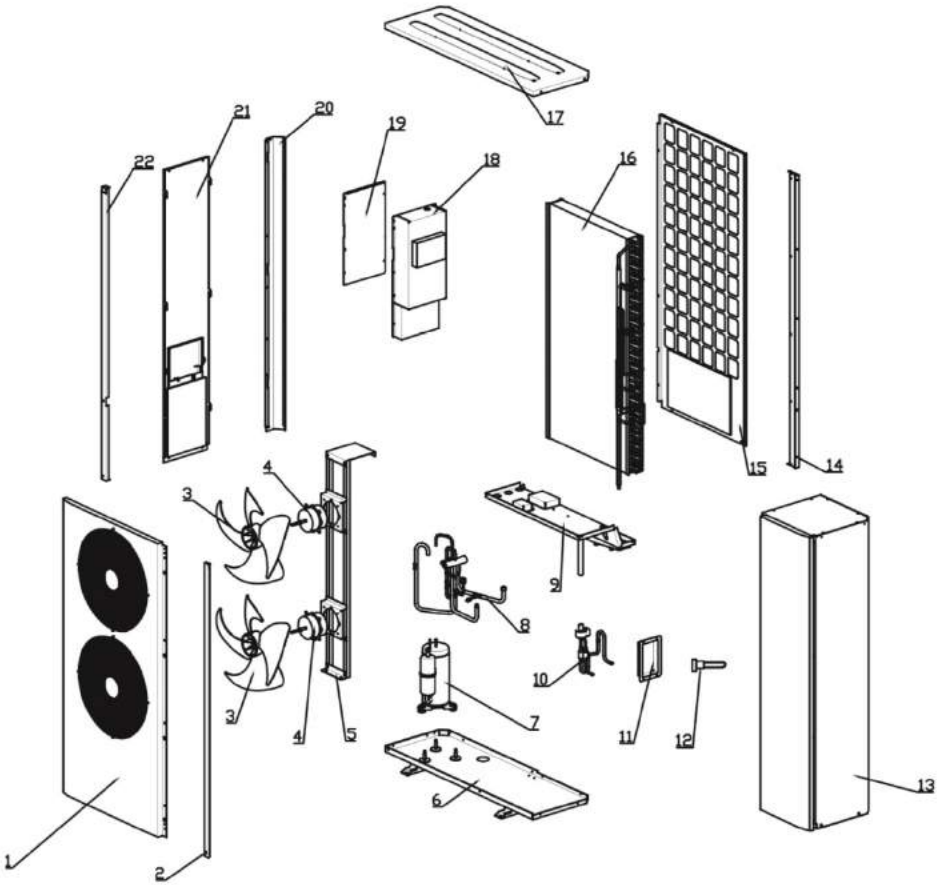
Model: NL-B245II/R32



SN	PART NAME	QUANTITY
1	Front panel module	1
2	Plastic stripe	1
3	Fan blade	2
4	Fan motor	2
5	Fan motor bracket	1
6	Chassis module	1
7	Compressor	1
8	Water pan	1
9	Electronic expansion valve	1
10	Four-way valve module	1
11	Heating element cover	1

SN	PART NAME	QUANTITY
12	Heating element	1
13	Water tank module	1
14	Evaporator sealer	1
15	Back panel	1
16	Top panel	1
17	Electrical control cover	1
18	Electrical control module	1
19	Evaporator	1
20	Back-left stand	1
21	Left panel	1
22	Front-left stand	1

Model: NL-B345II/R32



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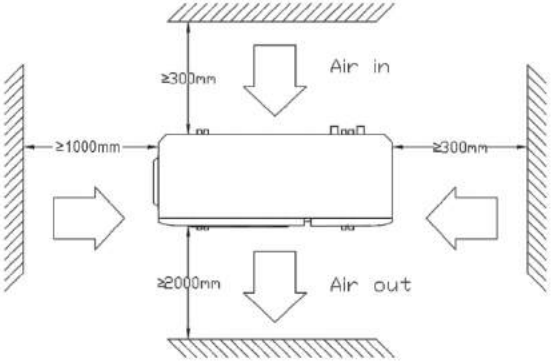
18	Electrical control module	1
19	Electrical control cover	1
20	Back-left stand	1
21	Left panel	1
22	Front-left stand	1

3.INSTALLATION AND CONNECTION

3.1 Installation location

1) The place should have enough space for installation & maintenance.
2) None block to the air inlet and outlet and none strong wind or hurricane could reach.
3) The place should well-ventilate, solid, there should be no extra running noise or vibration noise after loading the unit.
4) The place which has enough space for air outlet, which doesn't have combustible gas leakage.
5) Snow shelter is needed in winter.
6) The place should convenient for wiring and plumbing work
7)Typhoon protection &lightning protection must be done when loading a unit on the roof.
8) There should be drainage channel around the unit for drain condensate water.
9)The place should have enough space for installation & maintenance.
10) Don't install controller in bathroom, otherwise, it may affect the unit running if get humid.
11) Enough space around the unit, like this:



Attention
Units would have faulty Installed in the following places:
1) The place has cutting oil or other mineral oil.
2) The place closes to the sea or has much salty air
3) The place has much sulfur gases, acidic or alkaline corrosive gas, such as the hot spring
area.
4)The place has strong electromagnetic wave or the factory with serious power supply voltage fluctuation.
5) The place is full of oil and gas and oil slick, such as kitchen.

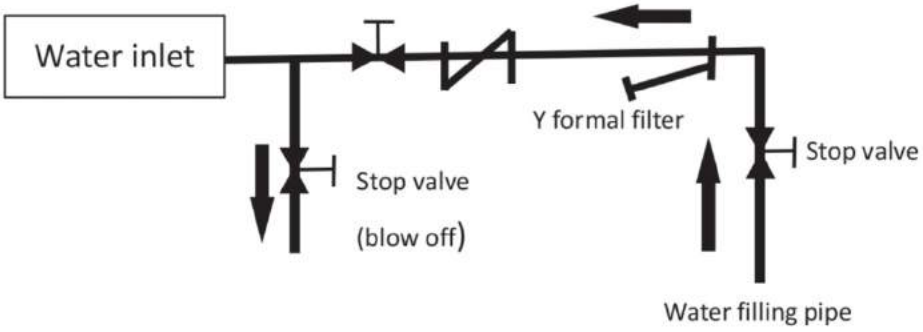
Unit's installation foundation

The installation foundation of heat pump can be concrete, steel structure, or design a flat foundation structure according to unit weight, please see the data in the manual, anti-vibration rubber should be taken into account, and the unit should be fixed firmly by expansion blots, then adjusting horizontal installation to decrease it's inclination (<2 degrees). And water drainage should be available near the installation located for draining water in an effective way.

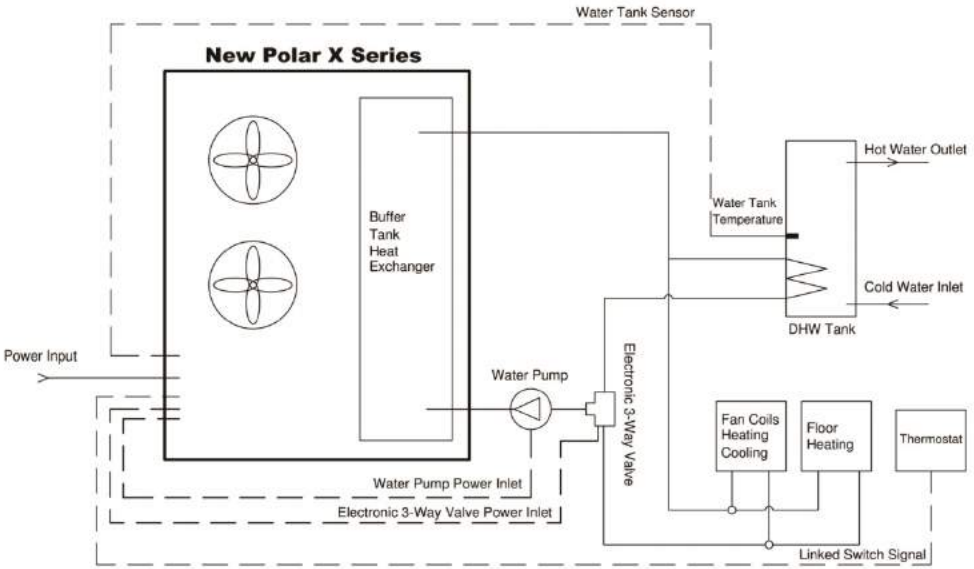
Safety relief valve installation requirement

1) Safety relief valve should install on the inlet of the water tank.
2) The drain pipe of safety relief valve should keep open with atmosphere.
3) Safety relief valve should work regularly, so as to get rid of the calcium carbonate and to approval the device hasn't block
4) The drain pipe of safety relief should keep continuous downward and install in a frostless environment.

3.2 Pressure reducing and check valve



3.3 Piping installation requirement



Piping installed regutrement

1) Select the pipe mateial, the choice of stainless steel, brass, plastic hot water pipes, hot water PPR tubes meet national health and safety standards, heat-resistant, antirust and Difficult to furring

2) Drain and overflow pipes,installed in the gutter or drain place to convenient drainage.

3) Unit and plumbing connections place must be installed stop valve or removable union, when maintenance use.

4) Water piping arrangement is reasonable, minimize bending,and reduce the resistance of the water system.

5) System - fill water pipes, hot water supply pipe connection is completed, pipe connections must be rigor, increase water pressure test, and drain, to ensure that the system clean. Passing the test no leakage, then pack of pipes and valves on the heat preservation layer (Including water pipes and valves)

6) Unit water supply port must be installed filter (in accordance with the requirements of the rate water flow).

7) Circulation pipe selection: one unit's circulating pipe diameter can't less than in and out water pipe diameter, should use the circulating pipe diameter as in and out water pipe diameter.

8) Metal pipes must be used for more than 50mm thickness of the glass fiber or high density.

3.4 Electrical Connection

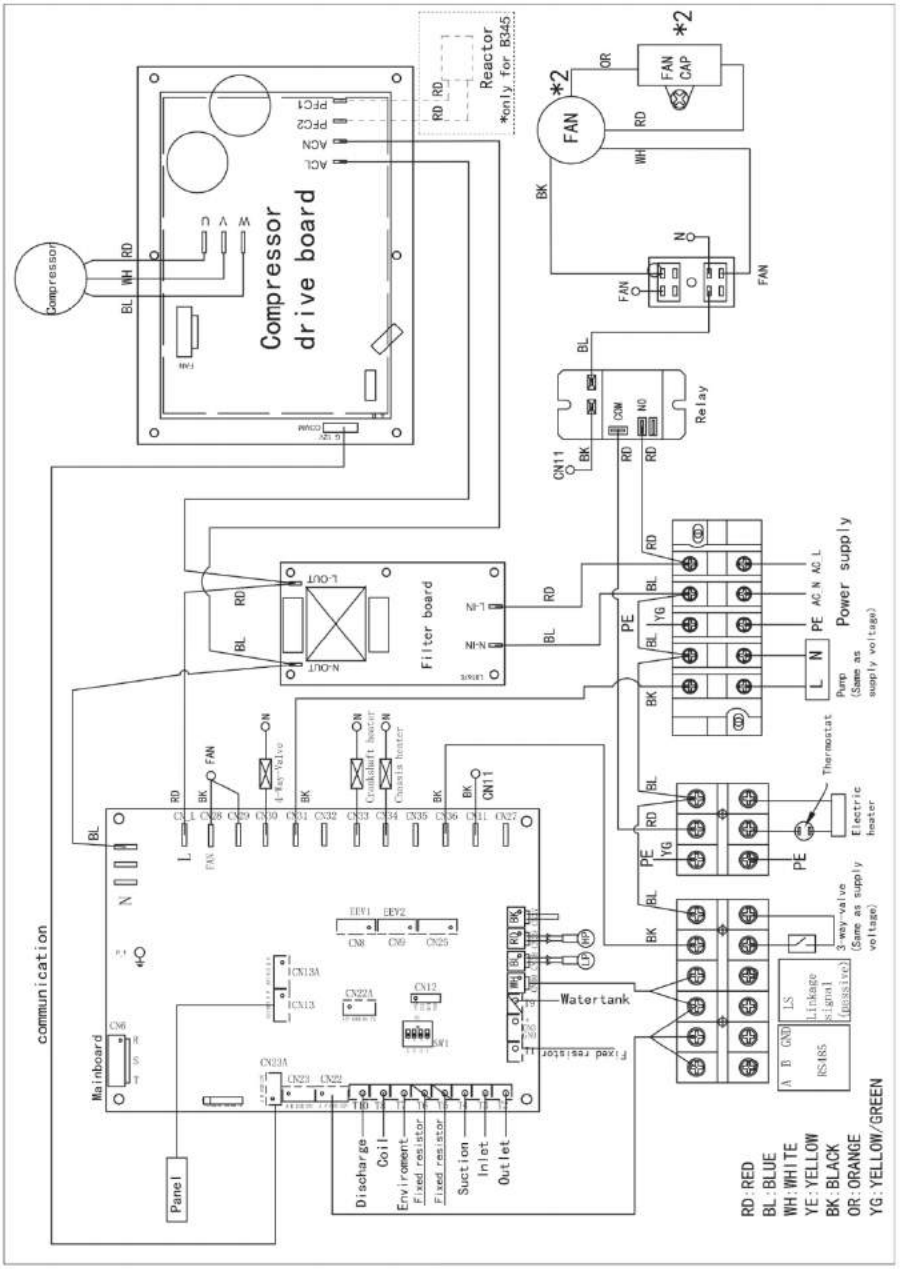
Attention

- Before installation, please confirm whether your local voltage is match with the voltage showed on the machine's nameplate and whether the carrying capacity of the power supply, wires and sockets are suitable for this machine's input power.
- Require insurance tube: IEC regulations fuse rated current can be 90% - 100% of rated nameplate maximum current, the maximum non-fusing current overload is 150% of the nameplate rated maximum power current;
- Outdoors power lines should not be lighter than polychloroprene sheathed flexible cord(In IEC 60245 with No. 57 line);power line specifications according to the nameplate rated maximum current selection,as follows□

The minimum conductor cross-section		
Rated current/A	cross-section/mm	A. The length of the wire and the wire protective sleeve is less than 2m that can use this type of wire.
≤0.2	tinsel cord*	
>0.2&≤3	0.5a	
>3&≤6	0.75b	
>6&≤10	1.0(0.75)b	B. Wire length is no more than 2m, the portable appliance values in parentheses can be used.
>10&≤16	1.5(1.0)	
>16&≤25	2.5	
>25&≤32	4	
>32&≤40	6	
>40&≤63	10	

- Users are not allowed to change the power cord or socket. Wiring work must be carried out by a qualified electrician and ensure that the metal part of the machine has a good grounding. Changing the ground mode is strictly forbidden.
- After the completion of the construction of all wiring work, please make sure to recheck everything is well before power on.
- Installing the machine in the warehouse which the combustible gas may leak is strictly forbidden.
- Do not put your hands or foreign objects into the air outlet of heat pump unit, otherwise, it will be dangerous to the people and equipment.
- In order to obtain a better energy- saving effect, the unit should be installed in a place with good air circulation.
- Water used for this machine must be accordance with the national standard of living water, otherwise, if the machine is damaged, we will not assume any responsibility
- When do power connection must be equipped with all-pole disconnect device and leakage protection device which match the unit and have at least 3mm contact opening distance from power; If the power cord is damaged, in order to avoid dangerous, must be replaced by a professional manufacturer, its service department or similar departments.

3.5 Electric wiring diagram



3.6 Initial start-up of the unit

Check before operating

A. Trial running must after all the instal lation is completed.

B. Please confirm the following matters before the trial operation, put " √ "in the boxes after confirmation:

Unit is installed correctly	☐	Power supply meets unit's rated need	☐
Piping and wiring correct	☐	Unit air inlet/outlet well-ventilated	☐
Drain off water well	☐	Leakage protective device act effectively	☐
Pipe insulation is perfect	☐	Grounding wire connected correctly	☐

C.All wiring and piping construction work is completed, after carefully checking everything then can switch on and the water tank fill with water.

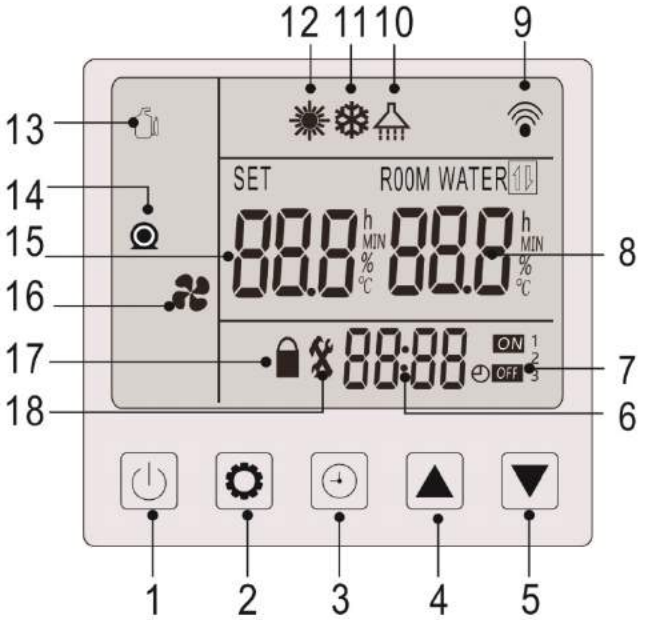
D. Let the piping and water tank's air drain, click "on/off" button on the control panel, unit will accord to the set temperature operation.

E. Trial run to be checked:

- ◆ Operation panel 's function keys are normal or not
- ◆ The indicator is normal or not;
- ◆ The whole circulating hot water system whether there is water leakage;
- ◆ The condensed water discharge is normal or not;
- ◆ Unit's gas system pressure is normal or not (according to the water temperature detect high, low pressure)
- ◆ Whether there is abnormal sound and vibration in unit running state;
- ◆ The wind, sound and condensed water from unit whether effect to neighborhood;
- ◆ Whether there is leakage of refrigerant.

4.USER INTERFACE

4.1 Display interface



#	Description	#	Description
1	ON/OFF	10	Hot water mode
2	Set	11	Cooling mode
3	Time	12	Heating mode
4	Up	13	Compressor indicator
5	Down	14	Water pump indicator
6	Time display	15	Mode
7	Timer ON/OFF	16	Fan indicator
8	Temperature display	17	Lock
9	Wifi indicator	18	Fault indicator

4.2 General funtions

Key unlock

- If there is no operation within 1min, the screen will be locked and the key operation is invalid. Screen will display "🔒"
- When the screen is locked, long press ⏻ for 5 seconds to unlock the screen.

Turn on/off

- In unlocked state, long press ⏻ for 1 second to switch on / off.

Mode selection

- In the main interface,press ⚙ to switch modes of the unit:

  Cooling mode ❄ / Heating mode ✹ / Hot water mode 🚿

  Heating+hot water mode ✹ 🚿 / Cooling+hot water mode ❄ 🚿

  In the main interface, long press ⚙ for 3 seconds to enter the use parameter setting interface.

4.3 Temperature adjustment

- The temperature can be set only when the machine is turned on.

- In the main interface of heating, cooling and hot water mode press ▲ and ▼ to set the temperature of the current mode.

- In the main interface of heating + hot water mode, press ▲ and ▼, ✹ icon flashes,combine ▲ and ▼ to set the heating temperature adjustment.Then press ⚙ ,switch to 🚿 icon flashes,combine ▲ and ▼ to set the hot water temperature adjustment.

- In the main interface of cooling + hot water mode, press ▲ and ▼, ✹ icon flashes,combine ▲ and ▼ to set the cooling temperature adjustment.Then press ⚙ ,switch to 🚿 icon flashes,combine ▲ and ▼ to set the hot water temperature adjustment.

4.4 User parameter query and setting

- In the main interface, long press [O] for 3 seconds to enter the user parameter query interface,press [▲] or [▼] to query each parameter.

- In the user parameter query interface, select a parameter,press [O] to enter the setting interface of the current user parameter, the parameter becomes flashing,press [▲] or [▼] can modify the current user parameter value, Then press [O] to confirm the change of the parameter value and return to the parameter query state. (Note: In the query state, the parameter does not flash; in the setting state, the parameter flashes.)

- In the user parameter query or user parameter setting interface, if there is no key operation for 30 seconds, the changed parameter value will be automatically saved, and the user parameter query interface or user parameter setting interface will be exited, and return to the main interface,or press [⏻] can also directly return to the main interface.

4.5 Real-time clock settings

- In the main interface, press [⏲] to enter the real-time clock setting interface, the clock hour and minute flash together.

- In the real-time clock setting interface, press [⏲] the number of the hours part will flash, and the minutes part will stop flashing.Then press [▲] or [▼] to set the hour of the real-time clock.

- When the hour part is set, press [⏲] again,the number of the minutes part will flash, and the hour part will stop flashing.Then press [▲] or [▼] to set the minute of the real-time clock.

- When the minute part is set,press [⏲] again,to confirm the real-time clock setting and return to the main interface.

- In the real-time clock setting interface,press [⏲] ,confirm the current real-time clock setting value and return to the main interface.

- In the real-time clock setting interface, if there is no key operation for 30 seconds, the current real-time clock setting value will be confirmed and the main interface will be returned.

4.6 Timing on/off time setting

- In the main interface, long press ⊙ for 5 seconds to enter the timing on / off setting state, combine ▲ or ▼ , to set on / off timing time of 1, 2, and 3 groups.
- When entering the timing time setting interface, timing group 1 flashes(there are 3 timing groups 1, 2, and 3 in this line controller).
- When the group 1 flashes,press ⊙ to enter the hour setting of "Timer on"with group 1, and hour digits flashes,press ▲ or ▼ to set the hour of "Timer on"for group 1.
- After setting the hour of "Timer On", press ⊙ again to enter the minute setting of "Timer On",the minute digits flashes,press ▲ or ▼ to set the minute of "Timer On"for group 1.
- After setting the hour and minute of "Timer On"with group 1,press again ⊙ ,to enter the setting of "Timer off"for group 1. The setting method is the same as above.
- After setting of "Timer Off",Press ⊙ again,to confirm the"Timer On/Off"of currecnt group.Then press ▲ or ▼ , to enter the next group of "Timer On/ Off". The same setting method as above group 1.
- If the timer group is valid, the group number will display in the main interface.
- In one timer group, it's invalid if "Timer On" and "Timer Off" are the same.
- In the group timer interface, currently setting will be saved and return to the main interface automatically, if there is no key operation for 30 seconds.
- In the group timer interface, press ⊙ , then confirm current setting and return to main interface.

5.APPENDIX

5.1 Parameter table

- Unit temperature status query comparison table (Users can query,long press ▲ to enter directly,press ▲ and ▼ to turn pages up and down for query)

Parameter number	Description	Remarks
T1	Heat exchanger temperature	
T2	Outlet water temperature	
T3	Inlet water temperature	
T4	Return air temperature	
T5	spare	
T6	spare	
T7	Outdoor ambient temperature	
T8	Outdoor coil temperature	
T9	Water tank temperature	
T10	Exhaust temperature	
T11	Engineering parameters	
Ft	Target frequency	
Fr	Actual frequency	
1F	Opening degree of main circuit electronic expansion valve	
2F	reserve	
od	reserve	
Pr	Wind speed of outdoor fan	
dF	Defrosting state	
OIL	Oil return status	
r1	Crankshaft electric heating switch	
r2	Chassis electric heating switch	
r3	Internal electromechanical heating switch	
STF	Four way valve switch	
HF	spare	
PF	spare	
PTF	spare	
Pu	Water pump switch	
AH	AC fan high gear switch	
AL	AC fan low gear switch	
dcU	DC bus voltage (V)	
dcC	Inverter compressor current (A)	
AcU	Input voltage (V)	
AcC	Input current (A)	
HE1	Fault code history	
HE2	Fault code history	
HE3	Fault code history	
HE4	Fault code history	
Pr	spare	
Sr	spare	

- Unit user parameter comparison table (users can query,long press ⚙ for 3 seconds to enter directly, press ▲ and ▼ to turn pages up and down for query)

Parameter number	Parameter name	Adjustment ranger20	Factory default value
L0	Setting value of heating startup difference	2℃~18℃	5℃
L1	Heating set target temperature value	20℃~55℃	40℃
L2	Setting value of cooling startup difference	8℃~30℃	2℃
L3	Cooling set target temperature value	-30℃~35℃	12℃
L4	spare	2℃~18℃	5℃
L5	spare	ON: OF:	OF
L6	Hot water startup return difference setting value	2℃~18℃	5℃
L7	Hot water set target temperature value	20℃~50℃	45℃

5.2 Error code table

Code	Error description	Code	Error description
E01	Exhaust temperature fault	P19	Compressor current protection
E05	Coil temperature fault	P23	When defrosting, low outlet water temperature protection
E09	Return air temperature fault	P24	Fan overload protection
E13	Refrigeration coil temperature fault	P25	Low ambient temperature protection
E17		P26	Outlet water temperature over / under protection
E18	Outlet water temperature fault	P27	Shutdown protection for excessive temperature of outdoor cooling coil
E19	Water inlet temperature fault		
E20	Hot water tank temperature fault	r01	Module board fault
E21	Communication failure	r02	Compressor start failure
E22	Ambient temperature fault	r03	Compressor speed feedback abnormal
E23	Time limited locking machine	r04	Emergency stop
E24	Indoor temperature fault	r05	IPM module overheating protection

Code	Fault description	Code	Fault description
E25	Water flow switch failure	r06	Overcurrent protection
E26	Communication failure between adapter board and outdoor board	r07	U-phase overcurrent protection
E27	Communication failure between outdoor board and drive board	r08	V-phase overcurrent protection
E28	Conversion board / wire controller EEPROM error indication	r09	W-phase overcurrent protection
P01	Water flow protection	r10	DC voltage overvoltage protection
P02	High pressure protection	r11	DC voltage undervoltage protection
P06	Low pressure protection	r14	W phase error protection
P10	Low voltage protection	r15	U phase offset fault
P11	High exhaust temperature protection	r16	V phase offset fault
P15	Protection against excessive inlet and outlet water temperature difference	r17	W phase offset fault
P16	Refrigeration undercooling protection	r18	Compressor stall protection
P17	Standby antifreeze protection	r19	Compressor speed abnormal protection
P18	Electric heating overheating protection	r20	Compressor rotor stuck fault
E29 /r25	Fluorine deficiency	r21	Partial PFC overcurrent protection
E30 /r26	Perfluoride	r22	Partial PFC overvoltage protection
E31 /r27	External dialing code selection machine type error	r23	Partial PFC under current protection
E32 /r28	Economizer outlet temperature sensor failure	r24	Partial PFC check AC voltage frequency error
E33 /r29	Economizer inlet temperature sensor failure		
E34 /r30	High pressure sensor failure		

5.3 Error code table

phenomenon	reason	check	clear
The machine doesnot work, operation panel with a display But cannot be Switched button is failure	1: Operation panel line not connected 2: Operation board is broken 3: Disturbed 4: Voltage Low; 5: The electronic control board is broken	1 Check the line; 2: Alternative Method 3: Check the source of interference 4: Check the line voltage; 5: Alternative Method	1: Connect the line; 2: Change operation panel; 3: Eliminate interference source replace line (with shield) 4: Transformation of the line orincrease Regulators 5: Change electronic control board
Then machine does not work operation panel display	1.Transformer is broken; 2.Operation plate line not connected; 3.Operation board is broken; 4.The electronic control board is broken Disturbed	1.Measuring with a multimeter 2.Check the line 3.Alternative Method 4.Alternative method 5.Check the interference lines have unshielded cable or not	1. Replace the transformer 2. Soldering iron 3. Change the Control Panel 4. Change electronic control 5.Eliminate interference source replace line. (with shield)
Fan does not work,and with out supply input	1. Power outages 2. Circuit breaker 3. The electronic control board is broken (no output) Transformer is broken	1. Measuring line voltage 2. Measuring line 3. Measure the output voltage 4. Measuring winding, measuring the output voltage	1. Wait to restore power 2. Connect the line 3. Change electric boards 4. Change transformers
Fan does not work , capacitor is broken	1.Capacity becomes smaller 2.Open circuit 3.Short circuit	1. Check the capacity of the capacitor 2. Measuring with a multimeter 3.Measuring with a multimeter	1.Change capacitor 2.Change capacitor 3.Change capacitor
Fan does not work, motor breaks down	The motor winding road blocking,short circuit,ground wiring	1.measuring	1. Change motor
Compressor does not work the compressor terminals without power(electric control panels no voltage output)	1. No Power 2. Set the temperature lower than the water temperature 3. The electronic control board is broken 4. Transformer is broken 5. Power outages	1. Check the operation panel 2. Check the set temperature 3. Alternative Method 4. Alternative Method 5. Measuring line voltage	1. Power on 2. Reset 3. Change electronic control board is broken 4. Change transformers 5.Wait to restore power

Compressor does not work, when the type of external overlo-ad protection	1.Capacitors is broken 2. External overload is broken	1.Check the capacity of the capacitor 2.Measure the resistance protection	1.Change capacitor 2. Change overload protection
Compressor does not work, when the type of inside overlo-ad protection	1. Too little refrigerant 2. Low voltage 3. The compressor Compressor short of engine oil,wide noise, temperature rise quick	1.measured pressure, current,water tempera-ture parameter 2.Measuring Voltage 3.Measuring pressure, current,water tempera-ture parameter Listen ti the noise,mea-sured compressor tem-perature	1. Charging refrigerant 2. Transform line or increase 3. Parallel capacitance rushed to open,add frozen oil 4.Add frozen oil
Fan does not work,and with out supply input	1. Power outages 2. Circuit breaker 3. The electronic control board is broken (no output) Transformer is broken	1. Measuring line voltage 2. Measuring line 3. Measure the output voltage 4. Measuring winding, measuring the output voltage	1. Wait to restore power 2. Connect the line 3. Change electric boards 4. Change transformers
Unit does not defrost,defrost effect poor	1.Defrost temperature sensor fault 2.Defrost temperature sensor loose 3.Defrost temperature sensor is installed at no frost place 4.Defrost condition take too long time 5.Defrost condition setting inappropriate 6.Four-way valve does not operate the four-way valve coil is broken	1. Check the defrosting sensor connection 2. Check the defrosting sensor connection 3. Inspection 4. Check of frost detection time 5. Defrost temperature set point is too high 6. Measuring winding 7. Knocking four-way valve 8. Touch four-valve-pipe temperature,measuring the current/pressure and other parameters; 9.Forced defrost,to see whether the electronic control board has electrical output	1. Replace the sensor 2. Replace the sensor 3. Adjust the mounting position 4. Reset the time 5. Adjust the tempera-ture point 6. Rep;ace the coil 7. Replacing the four-way valve 8. Replace the four-way valve 9.Replace the control board