Air Energy Heat Pump
All-in-One Hot Water Unit
《Installation and Use Instructions》

Content

Warning. The terminology of this mark indicates that "improper handling may lead to serious safety accidents and even personal injury".

Note. The terminology of this mark indicates that "improper handling may result in personal injury, machine damage or operational failure".

I. For users and installers

Dear user: First of all, thank you for choosing to use our energy saving products, we will be happy to serve you!

Before installing and using this product, please read this instruction manual in detail, otherwise it may lead to damage to the equipment or personal injury to the operator and damage to the user's property.

This manual provides the information necessary for proper installation, commissioning, use and maintenance. The company accepts no liability for injury to persons or damage to the machine caused by improper installation and commissioning, unnecessary maintenance, failure to comply with the provisions of this manual or instructions.

If you require technical advice when reading this manual, please contact the Company or your local agent.

1. Notes for installation

①Before installing the water heater, please make sure that the grid voltage in your area meets the requirements for the use of the water heater, and that the power supply capacity or through-load capacity meets the safety requirements for use under the maximum power of the unit, as detailed in the nameplate.

②The water heater must be fitted with an electric leakage protection device and installed correctly. Please refer to the wiring diagram for electrical wiring.

③The unit must be reliably grounded, and it is strictly forbidden to use the unit without reliable grounding. It is strictly forbidden to connect the grounding wire to the zero wire or tap water pipe.

④The water source used by this unit requires the use of tap water. If groundwater or other water sources are used, our professional technicians must be consulted first, and the water source must be softened or precipitated and filtered before installation and use.

⑤ For better energy efficiency, the main unit should be installed in an environment with good air circulation. Do not install the unit in a place where there are obstacles or other places that are not conducive to the operation of the unit.

6) Do not install the unit in a place where maintenance is difficult. Do not install the unit in a place where combustible gas leakage or corrosive gas may occur.

(7) The power supply wiring and electrical wiring of the unit should be installed in accordance with the national wiring rules.

③The hot and cold water mixing taps are used at each water point of the domestic hot water pipe network to facilitate the adjustment of water temperature.

2. Instructions for use

①If the power supply device is damaged, to avoid danger, it must be replaced by the manufacturer or the maintenance department or similar professionals.

②If the unit is faulty, please contact professional maintenance personnel or notify our company to send after-sales personnel to repair it in time. Do not repair the unit by yourself or ask non-professional personnel to repair the unit. Do not disassemble the unit at will if there is a fault.

③If you need to provide after-sales service, please make sure to provide the product warranty card and the barcode of the unit that comes with it.

(4) Non-professional technicians must not adjust the switches, valves, controllers and other parts of the internal or external pipelines of the unit.

⑤ The maximum water temperature of the unit can reach 75°C. Hot water above 52°C can cause burns, and hot water in the tank can only be used after mixing with cold water. (In order to ensure energy-saving effect and prolong the service life of the main unit, it is recommended that the temperature of the water tank be set at 55°C or below.

3. Precautions for use

①Do not insert your hand or any tools into the heat pump unit to avoid accidents or damage to the unit by touching the fan.

②Do not close the water inlet and outlet valves at the same time to prevent the water in the closed pressure tank from forming a negative pressure when the temperature drops and cools, causing damage to the tank due to negative pressure absorption.

③The safety valve of the water tank inlet should be cleaned regularly to remove calcium carbonate deposits and to prove that the device is not blocked.

④When the unit is powered off for a long period of time in winter, the water in the water circuit system may expand and crack the heat exchanger , pipes or water tank when it freezes. Therefore, when the temperature is close to or below 0°C, the unit will automatically activate the anti-freeze function, so do not leave the unit without power for a long time. If the unit is not used for a long time, the power supply must be cut off, the valves must be closed and the water in the unit's water system must be drained to prevent the water from freezing and cracking the heat exchanger, pipes or water tank. When the unit is used again, the valves should be restored to their initial position and the water in the tank should be refilled.

⑤ The water inlet pipe of the water tank must be installed with a removable filter, please clean it regularly according to the local water quality and actual use (generally once every 2-3 months) (the first use of the water tank is recommended to rinse the water tank liner 1-3 times first). When the tank is cleaned, open the drainage pipe at the bottom of the tank to drain.

4.Safety precaution

Explanation of symbols	**Danger** 	**When used incorrectly, it can cause a dangerous situation which may result in personal injury or personal death.**

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	Note 	**When used incorrectly, it can cause a dangerous situation which may lead to damage or accelerated damage to the equipment.** Even precautions may lead to dangerous situations due to changes in circumstances.
Installation		**Please install on a non-flammable plate such as metal and mount securely to avoid dropping due to vibration.**
		**Please take care to eliminate static electricity, do not install with electricity, and do not forcefully damage the components.** **Do not expose the motherboard panel to direct sunlight, rain, complex magnetic interference environment.** **Do not expose to corrosive or contaminated gases, such as sulphide gas, salt spray.** **Make sure that the temperature of the electrical box is between -20 ° C and +50 ° C, and add an exhaust fan if necessary.**
Connections		**Make sure that the power input is OFF.** **Please make sure that the electrical staff is wired safely.** **The input is a passive switch signal, do not connect to the power supply.** **Please pay attention to lightning strikes, and pay attention to good grounding of the water tank and main unit when installing on the roof.**
		**Please observe the principle of separation of strong and weak electricity.** **Please use conductors that comply with the technical specifications.** **Please use a parallel grounding method, with the thickest possible earth wire.** **Please tighten the terminals or inserts to prevent arcing of the gap and damage to the device.。**
Setting parameters		**Set the relevant parameters, as per machine configuration, to ensure proper machine operation** **Set the relevant jumper/extractor switches as per machine configuration to ensure proper machine operation**
Operation		**Confirm that the wiring is correct before inputting power.** **Ensure that the ambient conditions and supply voltage are within the permitted conditions before switching on the machine for operation.** **Do not check signals during operation.** **Do not change the parameter settings at will during operation.** **Do not get too close to the machine during operation.**

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Maintenance **Checking**	 	**If you have any repair needs, please contact the manufacturer of the equipment, do not repair it yourself.** **Do not pull or twist the power cable, communication cable or probe cable to avoid serious malfunction.** **Do not touch the motherboard components directly with your hands to avoid damage to the components by static electricity.** **The display of the in-line controller is a glass product, so pay attention to protection to avoid breakage and damage.**
Other		**In the desktop simulation debugging motherboard, there is a risk of electric shock, injury, pay attention to the safe operation.** **If the line controller is a touch screen please use your fingers to touch lightly, do not press hard or hard objects to knock.**

II. Introduction of product

1. Unit characteristics

①Safe and reliable

Air energy heat pump water heater is the use of electricity, but not the use of electricity directly heated hot water production device, the safety factor is improved. It does not have electric water heaters, gas water heaters in the use of easy electric shock, flammable, explosive, easy poisoning and other safety problems, is today's more safe and reliable hot water supply equipment.

②High efficiency and power saving

The air energy heat pump water heater obtains a large amount of free heat energy from the air, and the electricity consumed is only the energy required by the compressor to carry the air and sunlight energy, so it provides the same amount of hot water, and its electricity consumption is only about one quarter of the traditional electric water heater, which can save the user a large amount of electricity costs.

③Green

The air energy heat pump water heater uses three clean energy sources: solar energy, air heat and electricity, without the environmental pollution caused by the use of fossil fuels such as oil, coal and gas. It does not emit harmful gases during the working process, so users do not have to worry about human health even if they are bathing in a confined space.

④All-weather use

Air source heat pump water heaters are not affected by bad weather such as cloud and rain, and can be used 24 hours a day, making up for the shortcomings of the general solar energy affected by the weather environment, which cannot guarantee the supply of hot water at any time 365 days a year. It is also installed with a precise water temperature control system to ensure a constant water temperature in the bathing process.

⑤ Long lasting and durable

Air source heat pump water heaters use compressors, four-way valves and other major spare parts produced by world-renowned manufacturers of high-quality products, the shell of stainless steel or corrosion-resistant sprayed steel, thus ensuring the quality of the product and its service life of more than ten years, much higher than the service life of other types of water heaters.

⑥Easy installation

Air source heat pump water heater is easy to install without environmental restrictions, can be installed on the roof, balcony, garage or basement and other well-ventilated places do not require dedicated supervision, do not need to set up a special room, low maintenance costs.

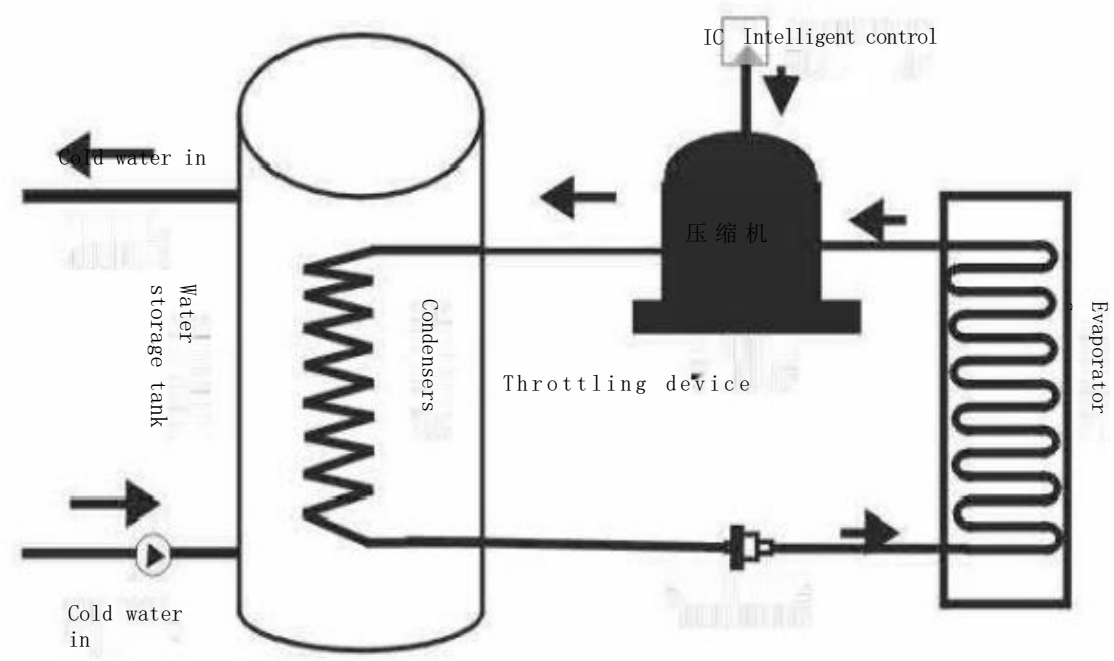
(7) Wide range of applications

Air source heat pump water heaters are available in different capacities to meet the needs of villas, ordinary families, factories, schools, hotels, restaurants, hospitals, beauty salons, laundries, bathing centres and other places to provide users with a constant source of hot water for living and production.

2. Unit composition and working principle

The air source heat pump water heater is composed of two parts: the main unit, the water tank and the related connecting pipelines and control devices. The air source heat pump system uses the special physical properties of the airtight material (refrigerant), through the material changes in the material, the use of heat exchangers from the air to absorb heat energy, the release of heat energy in water, that is, the compressor from the evaporator inhalation of low-temperature low-pressure gas refrigerant, by doing work to compress the refrigerant into high-temperature high-pressure gas, high-temperature high-pressure gas into the condenser and water exchange heat, condensing in the condenser into a low-temperature liquid and release The high temperature and high pressure gas enters the condenser and exchanges heat with the water, condenses into a low temperature liquid in the condenser and releases a large amount of heat, the water absorbs the heat released and the temperature rises continuously, then the high pressure and low temperature liquid is throttled and depressurised, in the evaporator through the fan, it absorbs the heat from the surrounding air and evaporates into a low pressure gas and is then sucked into the compressor and compressed, so on and so forth, so that the heat energy in the air is continuously transferred to the water to produce hot water. As the compressor consumes one share of electricity, it can promote the transfer of 2 to 4 parts of heat energy, so it is more energy efficient than traditional water heaters.

3.Schematic diagram of the working principle of a heat pump system



This air energy heat pump water heating unit is manufactured in accordance with the following national standards.

◆**GB/T 23137-2008** Heat pump water heaters for domestic and similar purposes

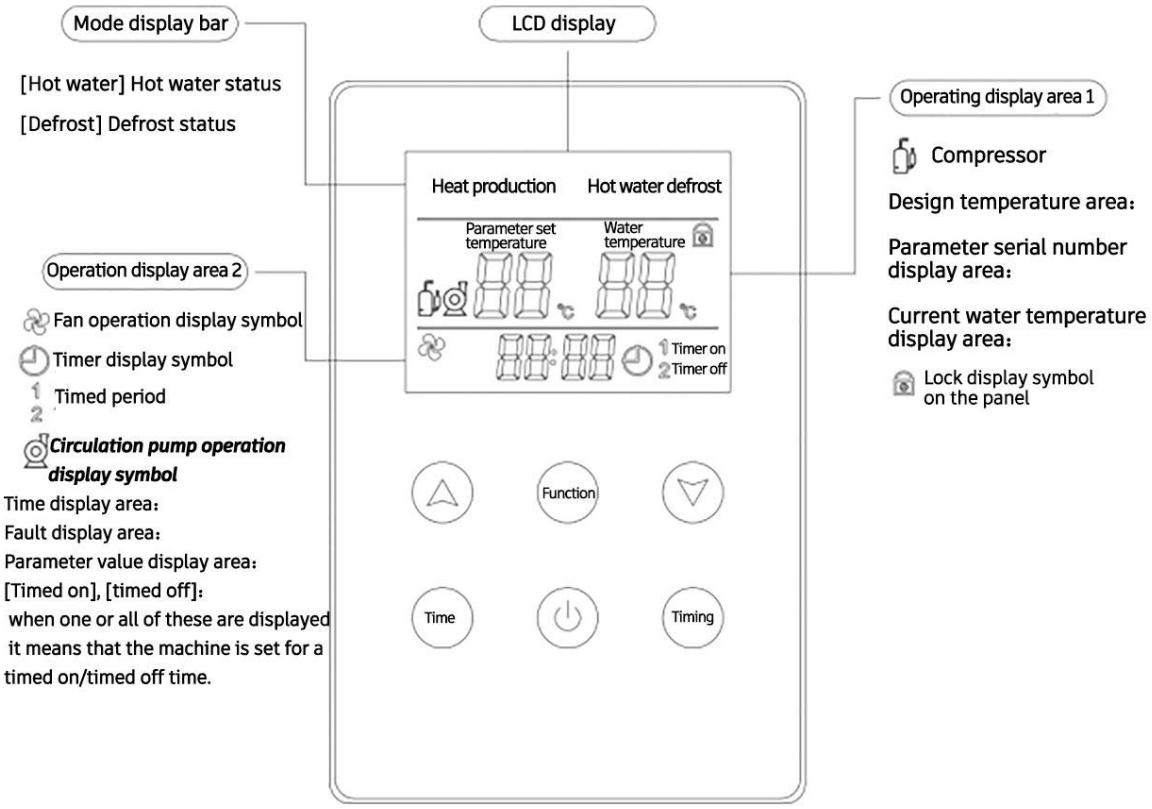
◆**GB4706 . 1-2005** General requirements for the safety of electrical appliances for household and similar purposes

◆**GB4706.32-2004** Special requirements for the safety of heat pumps, air conditioners and dehumidifiers for household and similar use appliances

◆**GB4706. 12-2006** Special requirements for the safety of storage water heaters for household and similar use appliances

III.Operating instructions for the controller

1. Interface description



2. Instructions for operating the controller

[On/Off] key

In the power on state, press this key to enter the power off. LCD screen displays: water temperature, clock, timing status.

In the off state, press this key to enter the on state. The LCD screen displays: water temperature, clock, timer status, working status, set temperature, running status and the corresponding symbols.

Lock key/unlock function, press and hold the on/off key for 3 seconds.

[Increase], [Decrease] key

This key allows for parameter enquiry, parameter setting, clock adjustment, timing adjustment and temperature setting.

When there is no setting, press the [Increment] key, then the water temperature setting temperature increases.

When there is no setting, press the [Decrease] key, then the water temperature setting temperature decreases.

[Time] key

Press this key to enter the clock setting state, the clock "hour" flashing display, press [increase], [decrease] to adjust the "hour", then press [time] to confirm the "hour" setting into Minute" setting, "minute" flashing display, press [increment], [decrement] key to adjust the "minute", then press [time] to confirm the "minute" setting "minutes" setting and exit the clock setting.

[Timer] key

Up to 2 timer periods can be set.

Setting Timer

Under the main interface, press this key to enter the timer time period selection, time period "1" blinks, press [Increase] or [Decrease] to select time period "1" or "2", then press [Timer] to confirm the time period selection. At this time "Timer On" blinks, press [Increment] or [Decrement] to select "Timer On" or "Timer Off", then press [Timer] to determine the timer selection, at this time "hour" blinks, press [increase] or [decrease] to set "hour", then press [timer] to determine the hour setting, then "minute" blinks, press [increase] or [decrease] to adjust the minute time, then press Timing] to determine the timing settings and exit, if the timing settings are successful, the lower right of the LCD screen displays the time period and timing status.

Cancel Timing

First press [Timing] key to enter the timer setting state, press [Increment] or [Decrement] to select the time period "1" or "2" to be cancelled, then press [Time] key to cancel the timer on and timer off setting of this period.

[Enquiry] key

Go to ---- Press the [Enquiry] key to enter the parameter enquiry state.

Display ---- set temperature area display query code, the clock display area code parameters, press【increase】, 【decrease】 can change the display parameter items.

Exit ---- Press the [Enquiry] key or no operation key for more than 120 seconds to exit the parameter enquiry.

Forced fluorine collection - Press and hold the [Increment] key for more than 8 seconds to enter forced fluorine collection and the "hot water" symbol will flash.

Forced defrost - Press and hold the [Decrease] key for more than 8 seconds, the system enters into defrost operation.

3. Unit parameter search (Table 1)

Parameter code	Code Meaning	Notes
A1	Coil temperature	
A2	Return air temperature	
A3	Exhaust air temperature	
A4	Ambient temperature	
A5	Discharge temperature	No such temperature display--
A6	Tank temperature	
A7	Reserved	
A8	Input status	Indicates the state of the switch signal
A9	Expansion valve opening	The actual value is this value*10
Er	Fault code display	0 is no fault, not 0 is a fault code, see table 2 for details
AA	Main board version number	
AB	Reserved	
AC	Communication status	When the number jumps, it means that the mot herboard and panel communication is normal
AD	Time limit	This value is 0 when the unlimited time functio n, the actual time limit time for this value * 10 days

Communication failure, the motherboard indicator light is always on, the motherboard automatically runs according to factory default values, the unit does not stop.

If the line controller is switched off, the main board indicator light flashes continuously and the unit stops and does not work. The main board is faulty (see Table 2 for details)

4. Unit system failure (Table 2)

Code	Cause of failure	Entry requirements	Note
3E	Water flow switch disconnection	Water flow switch disconnection	
5E	High voltage protection	High voltage protective switch disconnected	
6E	Low voltage protection	Low voltage protection switch disconnected	
9E	Communication failure	Abnormal communication between the main board and the line controller	
11E	Time limit protection	Trial period expired	You need to consult the manufacturer and enter the correct code to unlock it
12E	High exhaust gas temperature protection	Exhaust gas temperature exceeds exhaust gas temperature protection value (setting parameter L7)	
15E	Water tank temperature sensor fault	Sensor short-circuit or disconnection	R25=5.0KΩ, B25-50=3470K
16E	Coil temperature sensor fault	Sensor short-circuit or disconnection	R25=5.0KΩ, B25-50=3470K
18E	Exhaust air temperature sensor fault	Sensor short-circuit or disconnection	R25=50.0KΩ, B25-50=3950K
21E	Ambient temperature sensor fault	Sensor short-circuit or disconnection	R25=5.0KΩ, B25-50=3470K
29E	Fault in return air temperature sensor	Sensor short-circuit or disconnection	R25=5.0KΩ, B25-50=3470K
38E	Water tank 0 degree protection	Water tank temperature ≤ 0℃	
39E	Panel EEPROM error	Water flow switch disconnection	Factory parameter settings must be restored

5. Unit parameter setting

5.1 Unit factory parameter setting

Enter----Press and hold the [Enquiry] and [Minus] keys successively for more than 5 seconds

Change----set the temperature area to display the parameter setting item and the time area to display the parameter value. Press [Increase] or [Decrease] to change the serial number of the display parameter setting, first press [Query] to determine the modification, then press [Increase] or [Decrease] to change the par

ameter value, then press [Query] to save the setting parameter value, if the operation is successful then the buzzer will sound double.

Exit---Press the [Switch] key or no key operation for more than 30 seconds to exit the parameter setting.

5.2 Factory parameter setting (Table 3)

No.	Parameter Meaning	Default Value	Adjustment Range	Note
L1	Hot water temperature compensation	2℃	-5℃～15℃	
L2	Return Differential Temperature	5℃	1℃～15℃	
L3	This item remains unused	61	25～80	
L4	Hot water maximum setting temperature	60℃	30～80	
L5	Electrically heated external ambient temperature T electric	7	0～40	
L6	Electrically heated temperature difference TD	5	2～20	
L7	Compressor discharge temperature protection	115	100～130	
L8	Low pressure switch detection delay time	5	1～15	
H1	Frosting interval time	45	20～60	
H2	Defrosting condition temperature	-1	-5～5	
H3	Defrost run time	6	3～15	
H4	Frost end temperature	15	5～25	
H5	Ambient temperature outside frost	15	0～20	
P1	Electronic expansion valve operation interval	30	20～90	
P2	Electronic expansion valve superheat	2	-9～10	
P3	Electronic expansion valve second highest exhaust temperature	92	80～110	
P4	Electronic expansion valve defrost opening	42	10～46	The actual number of pulses is the set value x 10
P5	Electronic expansion valve minimum opening	15	10～20	The actual number of pulses is the set value x 10
P6	Electronic expansion valve high temperature superheat	-4	-15～10	
P7	Electronic expansion valve full opening pulse number	48	45～60	The actual number of pulses is the set value x 10
P8	Initial value of hot water electronic expansion valve	35	15～46	The actual number of pulses is the set value x 10
P9	This item is reserved unused	35	10～46	The actual number of pulses is the set value x 10
PA	Electronic expansion valve high exhaust temperature	100	90～120	
PB	Electronic expansion valve high return temperature	24	15～40	

PC	Electronic expansion valve low return temperature	-26	-30～-10	
PD	Differential return temperature for PA, PB, PC items	2	1～10	
PE	Electronic expansion valve high ambient temperature	26	15～45	
PF	Electronic expansion valve high water tank temperature	52	35～80	
b1	Insufficient water flow temperature difference protection	15	5～50	
b2	This parameter is reserved	10	1～84	
b3	This item is reserved and not used	75	55～90	
b4	This item is reserved unused	5	-9～10	
b5	Motherboard type	0	0～5	0 Main board selection, 1 Basic, 2 With expansion valve, 3 With water pump, 4 With expansion valve and water pump, 5 Water source unit
b6	This item is reserved and not used	1	1～15	
b7	This item is reserved for unused	42	20～80	
b8	This item remains unused	25	10～50	
F1	High voltage protection with or without selection	1	0～1	0 for [none], 1 for [yes]
F2	Low voltage protection selected or not	1	0～1	0 for [none], 1 for [yes]
F3	Reserved	1	0～1	
F4	Exhaust gas sensor with or without selection	1	0～1	0 for [none], 1 for [yes]
F5	Electronic expansion valve mode selection	1	0～1	0 for [Manual], 1 for [Auto]
F6	Water flow switch with or without selection	1	0～1	0 for [none], 1 for [yes]
F7	Power-down memory function with or without selection	1	0～1	0 for [none], 1 for [yes]
F8	Electric heating with or without selection	1	0～1	0 for [none], 1 for [yes]

5.3 Restore factory factory parameters

If you have inadvertently set the parameters incorrectly, you will need to restore the factory settings. The method is as follows.

Press the [Enquiry] and [Timer] keys at the same time for more than 5 seconds to hear two "ticks" to restore the factory settings

IV. Installation instructions

When the main machine is installed on the ground, the footing should be raised to prevent water from entering the book during the heavy rainy season.

◆The installation place shall conform to the permission of the building structure load-bearing, and shall not affect the structural safety, and shall not increase the noise and vibration.

◆The location should be chosen to avoid the danger of typhoons and earthquakes, and installation in the air should be avoided as far as possible to prevent serious accidents caused by falling machines

◆The hot water machine should be installed as close to the main water point as possible to reduce the heat loss of the pipeline.

◆The water tank should be placed as much as possible in the place where the environmental frustration is above 0℃, and can be installed indoors or outdoors, or placed on the roof of the building.

Installation Notes.

- 1、 User water pressure should be greater than 0.2MPa, less than 0.6MPa.
- 2、To prevent damage to equipment caused by excessive water pressure, a safety valve (pressure release device) must be installed at the cold water inlet of the water tank, less than 0.7MPa.
- 3、The drainage pipe connected to the safety valve when the tank is installed should be installed in a continuous downward manner in a frost-free environment, and the drainage pipe should be kept connected to the atmosphere so that water can flow out smoothly from the drainage pipe of the safety valve.
- 4、When the tank is installed at a high level, in order to prevent the use of hot water when the water stops flowing backwards or when the inlet water is turned off, which causes the problem of negative pressure in the liner to suck out, a "negative pressure valve" must be installed, the machine configuration of the negative pressure valve can not be removed.
- 5、In order to avoid water overflow, to the user caused unnecessary losses, the machine installation area should be in the waterproof ground and to prevent the water flow of the sealed water area, and must have a floor drain or drainage outlet. Water tank installation should be avoided in stairwells, high floors, passages and rooms on the first floor mezzanine and other areas where water overflow is likely to cause additional losses.
- 6、A removable filter must be installed at the water inlet pipe of the tank.
- 7、 The main unit must be mounted on a solid base or frame with reliable measures to prevent fastener failure. The unit is installed upright and bolted at the bottom to ensure that the whole unit is installed upright and firm (not tilted) to ensure smooth operation.
- 8、construction is complete, must be carefully checked for errors, and ensure that the water tank is filled with water before the power is connected for commissioning.

VI. Maintenance

The air energy heat pump water heater is a highly automated equipment, the use of the unit should be regularly checked the status of the unit. If the unit can be maintained and serviced effectively for a long time, the operational reliability and service life of the unit will be better.

1. When using and maintaining the unit, the user should pay attention to the fact that all safety protection devices in the unit are set before leaving the factory and should not be adjusted by the user.

2.Check the power supply of the unit and the electrical system regularly to see whether the electrical components are moving abnormally, if so, they should be repaired and replaced in time.

3.Check frequently whether the water replenishment of the water system, the safety valve of the water tank and the exhaust device work normally, so as to avoid the reduction of the water circulation volume caused by the air entering the system, which will affect the heat production of the unit and the reliability of the unit operation.

4. Check whether the water pipes and water pipes are leaking according to the head.

5.The area around the unit should be kept clean and dry and well ventilated. Regularly clean the air-side heat exchanger to maintain a good heat exchange effect.

6.Check the working condition of each part of the unit regularly, check whether there is oil at the joints of the pipeline and the filling valve in the unit, and ensure that there is no leakage of refrigerant in the unit.

7. Please do not pile up miscellaneous objects around the unit to avoid blocking the air inlet and outlet. The surrounding area of the unit should be kept clean, dry and well ventilated.

8.If the downtime is long, the water in the pipeline of the unit should be discharged and the power supply should be cut off and the protective cover should be set, and a comprehensive inspection of the system should be carried out before starting the machine.

9.the host condenser cleaning, the machine can be used 50 ℃ -60 ℃, concentration of 15% of the hot phosphoric acid liquid cleaning condenser. When cleaning, start circulating water pump cleaning 3 minutes, and finally rinse with tap water 3 times, the pipeline is installed with a tee interface, in order to be ready for cleaning according to the pipe, cleaning with a silk plug to seal an interface. It is forbidden to use corrosive cleaning liquid to clean the condenser.

10. the water tank in the use of general time after (generally 3-6 months, depending on the local water quality) need to clear the scale in the tank, the

VII.Common faults and troubleshooting methods

1. Common faults and troubleshooting methods

Please contact a service professional if you find problems during use. The troubleshooting methods in the table below are for maintenance reference only.

Failure phenomena	reason	Treatment
No display on the line controller	1. faulty external power supply and poor contact between plug and socket	Check whether the external power supply and socket are powered and whether the plug is in good contact with the socket
	2. Loose internal wiring	Check the internal wiring
	3. Plug leakage protector action	Find the cause, reset after normal
	4. Two-core signal line broken or short-circuited	Replace the signal cable
	5. Damage to the line controller or main control board	Replace the line controller or main control board
Compressor does not work	1.Compressor start capacitor damaged	Replace capacitor
	2. Compressor overload protection	Start after automatic reset (need to check cause)
	3. Compressor damaged	Replace compressor
	4. Main control board damaged	Replace main control board
High pressure protection	1.Pressure switch malfunction	Replace pressure switch
	2.Temperature setting too high	Lower the set water temperature
	3.Fluorine system blockage	Re-vacuum and fill with refrigerant after system cleaning
	4.Low water level of water tank	Top up water level
	5. Water tank coil scaling	Check the water tank and clean the coils
Water heater works normally, but water temperature is low	1. cold water replenishment after a large amount of hot water.	Normal, please wait
	2. Evaporator is blocked away by dust, less over air volume	Clean evaporator
	3. Mismatch of defrosting time due to low temperature	Reset defrost time and temperature
	4. Leakage of the system work	Refill the working medium

2. Method of refilling refrigerant in the operating condition of the unit

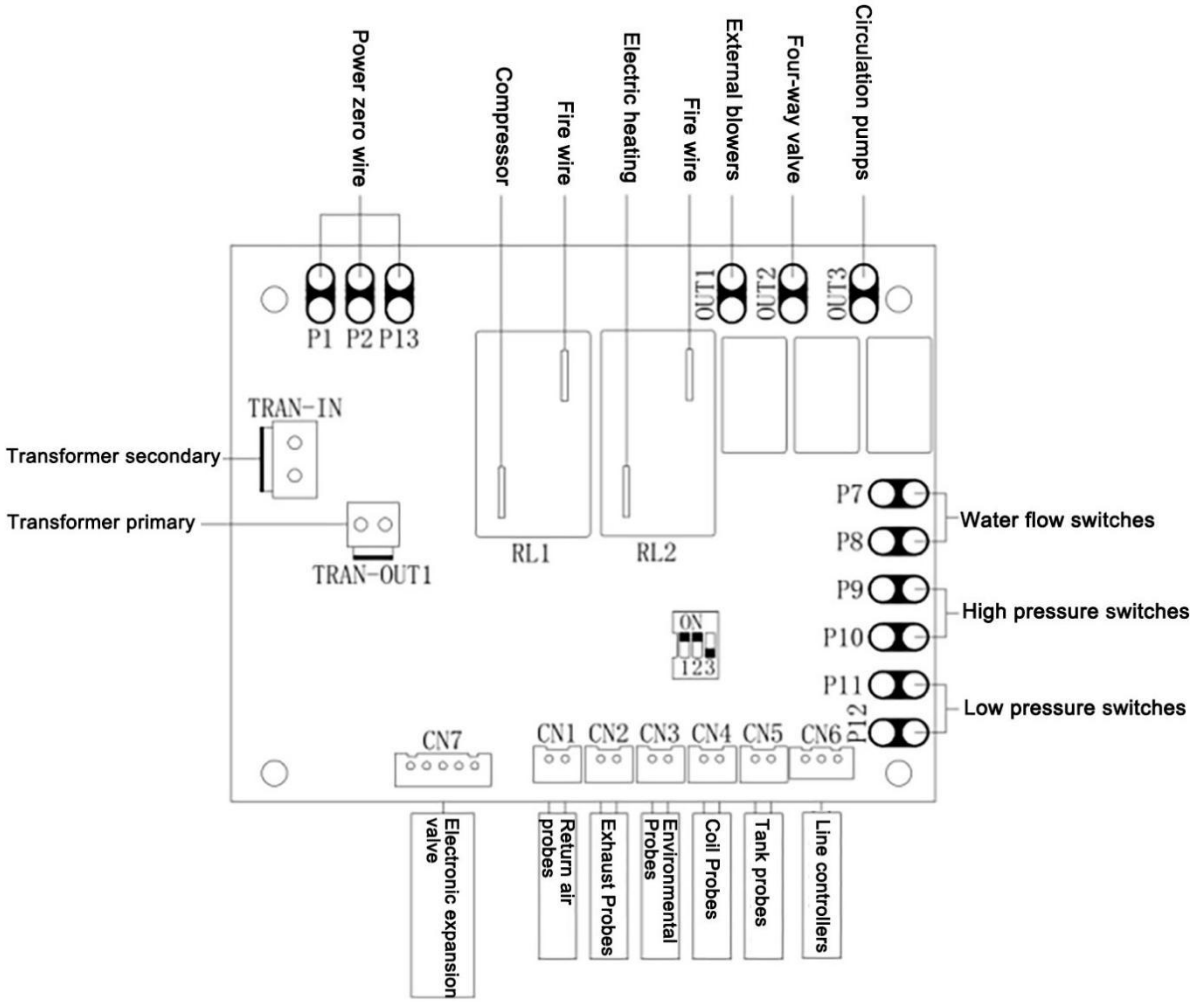
①In the power-on state, press and hold the [increase] key for more than 8 seconds to enter the forced fluorine collection, the "hot water" symbol flashes, indicating that the system enters reverse refrigeration mode operation, at this time the fan blows hot air.

② connect the middle hose of the refrigerant meter to the refrigerant bottle (the refrigerant liquid must be placed upside down, at a height not lower than the middle of the main engine), and the blue hose with thimble of the low-pressure meter is connected to the maintenance port of the unit, slightly rotating a circle to hang it (note that it should not be tightened so as not to leak out the refrigerant inside the unit). Open the valve of the refrigerant bottle and the valve next to

the low pressure gauge to empty the hose properly (about 5 seconds), when you can see white gas coming out of the hose port hanging on the access port, tighten the interface. Close the valve next to the low pressure gauge.

③ Observe whether the low pressure gauge pressure is normal, open the valve next to the low pressure gauge in an appropriate amount and slowly replenish the refrigerant until the low pressure pressure pressure and the current of the main unit are normal.

3. Circuit board diagram



Note：

The company reserves the right to make design improvements or technical changes, and the customer in the manual is subject to change without notice.

If the parameters of the purchased unit are not in accordance with this manual, please refer to the actual unit purchased and its nameplate.