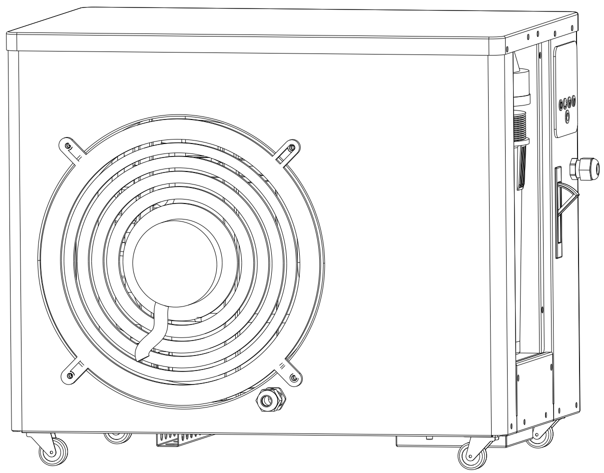
Installation and Use Manual



Please read this manual carefully before using

Introduction

Dear users: Thank you very much for choosing our energy saving products!We will be happy to serve you! Please read the instructions carefully before installing and using the product. Otherwise, the equipment may be damaged or the operator may be injured or injured. Installation and maintenance work. It must be operated by professional and technical personnel who have rich experience in installation and maintenance of this model. In case of property damage or casualties caused by violation of this requirement, our company. Will not accept any liability.

In order for you to enjoy the service within the warranty period, please strictly follow the requirements of this manual when using the heat pump unit: when reading this manual, if you need techn ical advice, please contact the company or local agent.

A． Execute the startup and shutdown sequence according to the prescribed procedure every day.

B． Record unit operating parameters at certain intervals.

C． Check whether the pressure of the unit is within the normal range through the pressure gauge display on the unit.

D． Check whether the appearance of the unit is intact, the surrounding environment is clean and dry, and the ventilation is good, and the components (water pump, compressor, etc.) operate normally.

E． Attention should be paid to any shutdown failure and the reasons should be analyzed. Before notifying the company for processing, analysis in conjunction with the troubleshooting help of this manual may help resolve the problem.

Scheduled maintenance

Caution: In order to prevent casualties due to contact with moving parts or contact with live parts, disconnect the main power supply and hang a clear no-closing sign at the switch position before maintenance inspection!

Periodic maintenance includes weekly, monthly, quarterly, and annual maintenance. According to the following contents, customers develop a scientificegular maintenance plan and carefully implement it, which can play a very important role in preventing problems.

6.1 Routine Maintenance

This section describes the preventive maintenance and breakdown repair of the unit. Correct maintenance and timely maintenance are conducive to ensuring that the unit is always in the best condition, maintaining the highest efficiency, and extending the life of the unit. Maintenance refers to the preventive maintenance of the unit, and repair refers to the repair of the faulty unit.

You are advised to formulate equipment maintenance regulations according to the requirements in this section, and appoint qualified equipment management engineers and dedicated unit operators to perform routine and periodic maintenance.

Caution: Unit repairs resulting from incorrect maintenance during the unit warranty period will result in additional costs for the user.

The most basic work of unit maintenance and maintenance is to record the operating parameters of the unit at an appropriate time interval every day (such as one hour) and fill in the unit operating parameter table. The true and complete operation parameter record helps to analyze the possible development trend of the unit operation, and helps to timely discover and predict the problems that may occur in the unit, so as to prevent them from happening.

For example, through the analysis and comparison of the operation records of one month, it may be found that the difference between the coil temperature of the unit and the ambient temperature has a trend of increasing. This trend indicates that the fins of the unit have scale or dirty blockage, or the ventilation is poor, and personnel should be arranged to check and maintain in time.

Note: It is very useful to keep a record of the parameters of the normal operation of the unit during commissioning. This record can be used as a benchmark to compare with subsequent operation records to find the trend of the problem.

6.2 Maintenance

Notice

A. When installing the air source pool unit, please check whether the specifications and capacity of the power supply meet the requirements of the pool machine according to the nameplate of the unit.

B. The power supply of the air source pool unit must be connected with a leakage protection switch, and the leakage protection switch capacity should be greater than the maximum electricity flow of the air source heat pump unit.

C. The air source pool unit must have good grounding (grounding resistance $\leqslant 0.1\Omega$) and reliable lightning protection.

D. The air source pool unit must be installed in an outdoor ventilated, easy to install and maintain the site.

E. The air source pool unit will produce conde nsate water during operation, drainage pipes and exhaust valves should be designed and installed to ensure that the condensate is discharged in time.

F. The air source pool unit must be installed before the water inlet filter, and please remove the air in the tube before use.

G. The air source pool machine product is a pressure unit with strong air tightness, which needs to be careful in the process of transportation and hoisting, and can not roll, collide, shake and stack.

H. For your safety, do not modify the air source heat pump unit.

I. It is strictly prohibited to insert any tools or hard objects into the air source pool unit, so as not to damage the unit or cause accidents due to collision with the wind blade or evaporator.

J. Do not use the air source pool unit in the state of removing the barrier or sheet metal and other protective devices, so as to avoid accidents or unit failures.

K. When the unit is flooded, please contact the factory or local dealers immediately, must be checked by technicians before re use the pool unit.

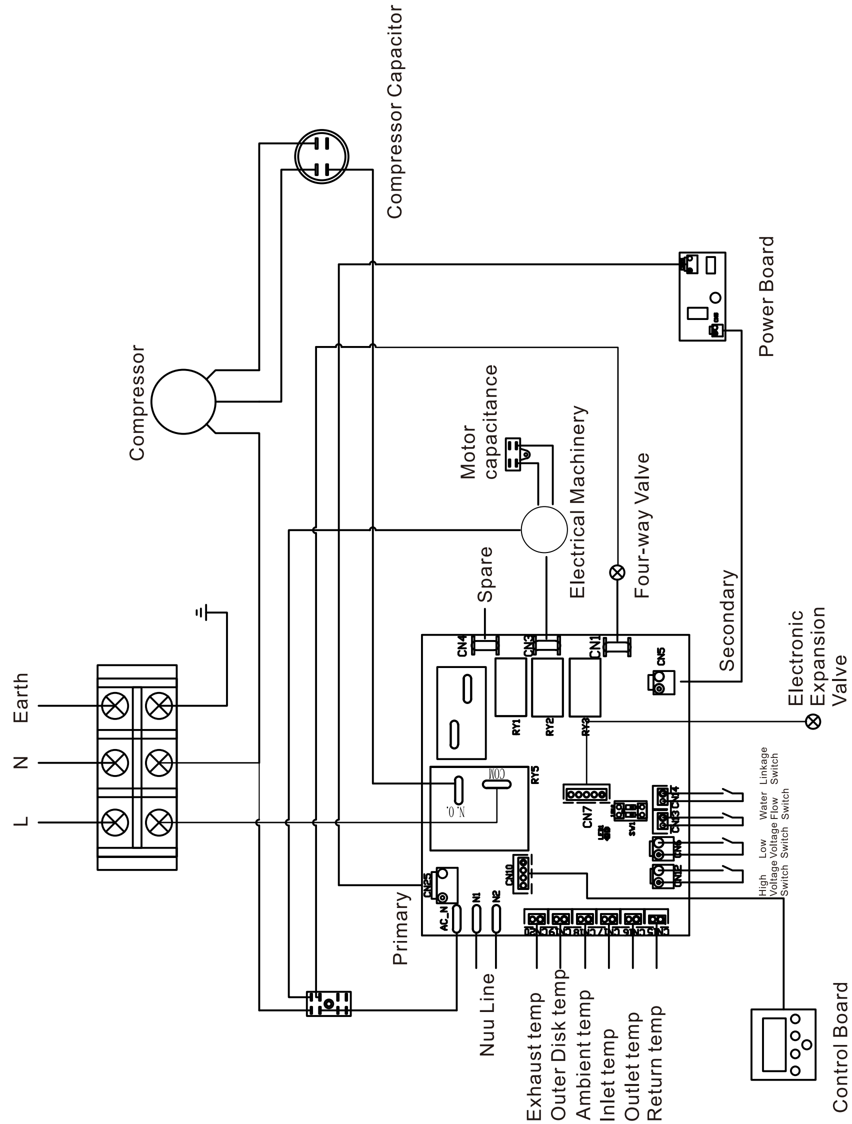
L. Personnel without professional qualifications shall not adjust the switches, valves, controllers and other components inside the unit.

1. Product introduction

1.1 Unit Features

A. Safe and reliable: the air source pool unit uses electric energy, but does not directly use electric energy to further improve the safety factor of direct heating of water, is today's more safe and reliable supply equipment.

B. Green environmental protection: air source pool unit is the use of airenergy and electricity three clean sources, will not cause environmental pollution, it does not emit harmful gases during the working process, users do not have to



6. Maintenance and maintenance

Fault code	Fault description	Remarks
E01	Exhaust temperature fault	
E05	The temperature of the coil is faulty	
E09	The return temperature is faulty	
E19	Inlet temperature fault	
E18	Outlet temperature fault	
E21	The communication with the indoor unit fails	
E22	Ambient temperature fault	
P01	Water flow switch fault	
P02	High voltage protection	
P06	Low pressure protection	
P11	High exhaust temperature protection	
P15	Inlet and outlet water temperature difference is too large protection	
P16	Refrigeration under cooling protection	
P17	Standby anti freezing protection	
P25	Ring temperature protection	
P26	The heating water temperature is too high	
P27	Cooling outer coil over temperature protection	

5.Electrical control board wiring diagram

worry about human health problems.

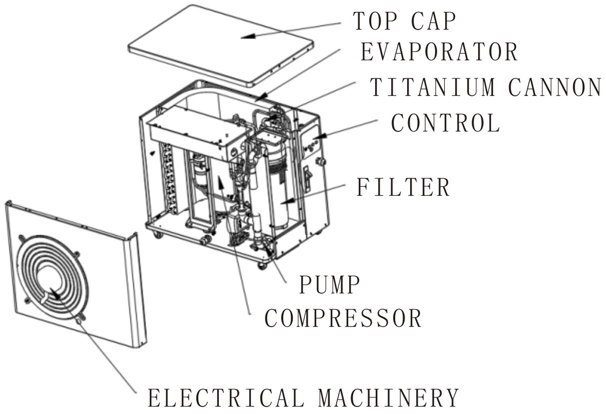
C. Durable: air source pool unit compressor, four-way valve and other main parts are made of high quality products produced by well known manufacturers at home and abroad, air source heat pump water heater adopts high quality copper tube condenser, corrosion resistance, unit panel adopts corrosion resistance, ultra thick stainless steel or sprayed steel plate, thus ensuring product quality and service life.

D. Easy installation: the air source pool unit can be installed in any place that can be load-bearing, well ventilated and easy to maintain.

E. Ultra-quiet: Fans with specially designed blades not only save energy, but also help reduce operating noise by 20%.

F. Soft start: when the machine is started, its soft start technology avoids sudden fluctuations in the power supply, thus protecting the circuit.

1.2 Product structure



2. Installation item

2.1 Transport and Installation Environment requirements

The unit has been strictly packaged and strictly inspected before leaving the factory to ensure that the unit reaches the destination under normal conditions. The installer, porter and loader should protect the unit to prevent damage to the unit due to unreasonable operation. Special attention should be paid to avoid collision of diagonal valves, pipelines and other parts to avoid refrigerant leakage.

The unit should be kept level when moving, do not tilt. The crane can be used, and the bottom earhole with the hoisting mark must be used when using the crane. The contact part of the sling and the unit should be isolated by supports. People are absolutely not allowed to stand at the bottom of the unit when hoisting. If the vertical lifting conditions are not available, the horizontal rolling method can be used, that is, the jack will lift the two ends to a certain height, put the pad roll under the unit sliding pad support, roll the unit into place, and then take the sliding pad. When the horizontal rolling method is used to move the unit, the force can only act on the frame or the sliding pad. The unit can be installed on a wellventilated ground or a suitable roof, and away from the boiler flue and the air environment that will corrode aluminum, copper and other metals. If the unit is located in an area accessible to unauthorized personnel, isolation measures, such as protective barriers, should be taken.

2.2 Operating Principle

The operation principle of the air source pool machine group: The outer wall of the bathtub is covered with a heat exchanger, through which the heat exchanger conducts heat with the surface of the bathtub, the heat produced by the air source heat pump is

press the "+" key for 3 seconds to enter, and then press the "+" key and "-" key for up and down page query)

Parameter NO.	Parameter name
T1	Exhaust temperature
T2	Return temperature
T3	Inletwater temperature
T4	Outlet water temperature
T5	Outdoor coil temperature
T6	Outdoor ambient temperature
1F	Opening of the main electronic expansion valve
OD	Outdoor operating mode
OF	Outdoor fan speed
DF	Defrosting condition
STF	Four-way valve switch
PU	Pump switch
HE1	Fault code history
HE2	Fault code history
HE3	Fault code history
HE4	Fault code history
Pr	Master control protocol versio
Sr	Master control software version

4.4.2 Unit fault code display table
(fault display on line controller display)

3.37 APP Interface Requirements

At the same time, press the function key + Up key to enter the WIFI pairing mode

Tuya APP

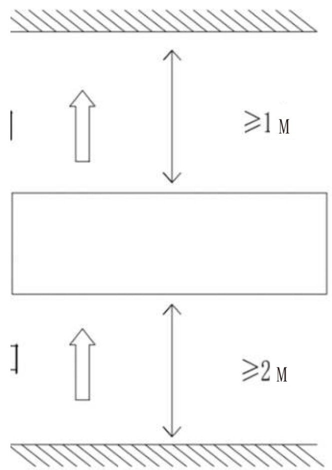
4. Unit parameter comparison table

4.4.1 Unit temperature status query table (Users can query, long

transferred to the bathtub. The air source heat pump has a four-way valve reversing function, and the heat exchanger on the outer wall of the bathtub can produce heat as well as cooling.

After adding water to the pool (about 60%－80% of the water), set the water temperature, start the power button, and the machine starts to run.

See "Installation Diagram" for the installation method of air source pool unit.



Installation Diagram

2.3 Electrical and gas wiring of swimming pool

The pool unit comes with an electric control box with standard appliances and power cord terminals. Remove the front panel, connect the power cable through the cable hole to the wiring terminal in the electridabox, and connect other lines according to the circuit diagram. Check whether the electrical system is consistent with the unit.

The power system of this unit: 220V/50HZ power cord connected to the air source pool unit should be selected according to the maximum current on the nameplate. The total power supply must be equipped with a certain margin, and the recommended value is more than 1.5 times the unit parameter. The carrying capacity of the power supply cable (wire) should be slightly greater than the maximum operating current of the unit, and the impact of the working environment should be considered. The electric control box is equipped with ground wire and automatic circuit breaker measures, which must be equipped with the user's own power supply. High-current units should be powered by dual power supplies, but the two power supply lines must be equal in diameter and belong to the same brand. To prevent corrosion and overheating of terminal connections, all power cables must be copper. The control cable and power cable should be laid separately and equipped with protective tubes to prevent the power cable from interfering with the control cable. The unit enclosure must be reliably grounded. In addition, in order to avoid control errors during field wiring, the-low voltage control line (24V) should not be threaded in the same wire tube with a voltage higher than 24V.

3. Unit commissioning and operation control

3.1 Air source pool electrical gas connection

A. The power cord specifications should be selected according to the maximum power of the unit and consider more than 1.5 times the margin.

B. The power supply connected with the unit should be installed with an all-pole disconnection device and leakage protection device.

the system confirms the timing time and returns to the main screen.

On the timing screen, press the Switch key to confirm the current timing time and return to the main screen.

3.35 Lock and Unlock

If the unit does not have any input operation for 60 seconds, the display screen of the wire controller will enter the sleep state, and the screen will automatically lock, and the "lock key" icon on the screen will light up.

In the lock state, click any key to light up the screen, long press the "switch" key for 5 seconds, after the buzzer beep, release the lock key, and the "lock key" icon is turned off.

3.3.6 Restoring System Parameters to Factory Defaults (Available Only in Shutdown State)

On the main screen of the shutdown state, hold down the Switch key +-key for 5 seconds to restore the values of the unit user parameters and factory parameters to the default values of the factory parameters.

In the shutdown state, hold down the on key, + key,and -key for 3 seconds to reset the main control.

Timing key again, and the digits in the minute part of the timed startup time blink. Press the + key or – key at this time, and you can set the timed startup minutes for agroup.

After setting the time for starting a group, press the time key again to enter the time setting for shutting down a group. The setting method is the same as the above.

After the scheduled shutdown time is set, press the timing key again to confirm that the set timing time of the current group is saved. Press + or—to enter the next set of timing time Settings. The setting method is the same as that of timing 1.

If the timing group is valid, the serial number of the timing group is displayed on the home screen.

In a set of timing time Settings, if the scheduled startup time and the scheduled shutdown time are the same, the scheduled on/off time of the group is invalid.

When timing segment 1 or 2 blinks, hold down the mode key for 3 seconds to confirm the current timing time and blink the timing switch icon.

When timing segment 1 or 2 blinks and the timing switch icon is displayed, hold down the mode key for 3 seconds to disable the current timing time and the timing switch icon is not displayed.

If nooperation is performed on the timing screen for 30 seconds,

C. For the safety of personnel and heat pump units, the unit should be reliably grounded (grounding resistance <0.12) and ensure that there are reliable lightning protection measures.

3.2 Interface Control

Display key pattern

3.3 Bywire operation

To switch modes, tap the Function key to switch between the heating, automatic and cooling modes.

Heating mode:  The icon lights up.

Automatic mode:  The icon lights up.

Cooling mode:  The icon lights up.

Function or mode key: 

Timing key: 

"+" key: 

"–" key: 

On/Off key: 

3.3.1 Setting the Temperature Setting

On the startup home screen, press  or press  to adjust the set temperature.

3.3.2 Querying and Setting User Parameters (can be set on or off)

On the home screen, hold down Function for 3 seconds to enter the screen for querying user parameters. You can press + or– to query user parameters.

On the User parameter query screen, select a parameter and press Function to enter the screen for setting the current user parameter. When the parameter blinks, press + or – to modify the current user parameter. Then press Function to confirm the parameter change and return to the parameter query state. (Note: The parameter does not blink in the query state; In the Settings state, the parameter blinks.

In the user parameter query or user parameter setting screen, if no key is pressed for 30 consecutive seconds, the changed parameter values are automatically saved, exit the user parameter query screen or user parameter setting screen, and return to the main screen, or press the on/Off button to directly return to the main screen.

3.3.3 Realtime Clock Settings

On the home screen, hold down Timing for 5 seconds to enter the real-time clock setting screen. The clock hour and minute blink together.

On the real time Clock setting screen, press Timing. The number in the hour part blinks, and the number in the minute part blinks. Press + or –to set the time of the realtime clock.

After the hour part is set, press Timing again. The number in the minute part blinks, and the number in the hour part stops blinking. Press + or –to set the minute of the real time clock.

After the minute part is set, press Timing to confirm the realtime clock setting and return to the main screen.

On the real time Clock setting screen, press the Switch key to confirm the current real-time clock setting value and return to the main screen.

If no key is pressed for 30 seconds on the realtime Clock setting screen, the system confirms the current real time clock setting value and returns to the home screen.

3.3.4 Setting the scheduled On/Off Time

On the home screen, tap Timing to enter the screen for setting a timing group.

When the timing time setting screen is displayed, timing group 1 blinks. The wire controller has 1 and 2 timing time groups.

When segment 1 is blinking, press Timing key to enter the screen for setting the hour part of the timed startup time for group 1. When the number of the hour part of the timed startup time is blinking, press + or –to set the hour part of the timed startup time for group 1.

After setting the hour part of the timed startup time, press the

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Statement
To maintain compliance with FCC'S RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm between the radiator and your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.