



HH Series Air Source Heat Pump

Floor heating and Air-con Unit

Installation and Instruction Manual

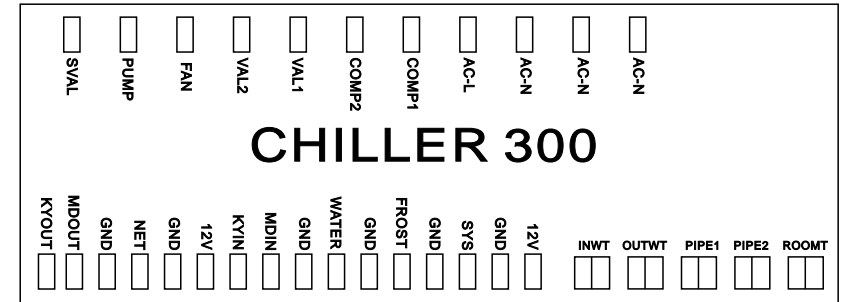


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Appendix

Appendix 6: Connections code of the main PCB



Connections explanation

| No. | symbol | meaning | No. | symbol | meaning |
|-----|-----------|--------------------------------------|-----|-------------|---------------------------------------|
| 1 | SVAL | Electromagnetism 3 way valve£220VAC£ | 12 | NET GND 12V | Remote controller |
| 2 | PUMP | Water source water pump£220VAC£ | 13 | KYIN GND | On/Off Switch(High OFF, Low ON) |
| 3 | FAN | Fan output£220VAC£ | 14 | MDIN GND | Mode (High Cooling, Low Heating) |
| 4 | UPUM | Using side water pump£220VAC£ | 15 | WATER GND | Flow switch protection (Normal close) |
| 5 | VAL1 | 4way valve of system£220VAC£ | 16 | FROST GND | Defrost signal |
| 6 | COMP2 | Compressor of system 2£220VAC£ | 17 | SYS GND 12V | System Protection (Normal close) |
| 7 | COMP1 | Compressor of system 1£220VAC£ | 18 | ROOMT | Ambient Temp. |
| 8 | AC-L | Fire wire | 19 | PIPE2 | Hot water Temp. |
| 9 | AC-N | Neutral Wire | 20 | PIPE1 | Water source Temp. |
| 10 | KYOUT GND | Switch on/off£high OFF, low ON£ | 21 | OUTWT | Using side outlet water Temp. |
| 11 | MDOUT GND | Mode£high cooling, low heating£ | 22 | INTWT | Using side inlet water Temp. |

Appendix5: The unit's parameter

Please set according the below table:

| Digit | meaning | default | Adjust (yes/no) |
|-------|------------|---------|-----------------|
| 00 | COOL TEMP. | 12 | yes |
| 01 | HEAT TEMP. | 40 | yes |
| 02 | DEF. CYC | 45M | No use |
| 03 | DEF. IN | -7 | No use |
| 04 | DEF. OUT | 13 | No use |
| 05 | DEF. TIME | 8M | No use |
| 06 | SYSTEM | 1/2 | yes |
| 07 | SAVE | YES/NO | yes |
| 08 | TYPE | C/H | yes |
| 09 | PUMP | NORMAL | yes |

Notice: Above data setting 00 is relevant to cooling mode only. All other data (ie 01-08) is relevant to heating. The users can change the parameters according to their needs. If it is water cooled water chiller heat pump, the parameter (ie 02-05) is not effective.

*Remark:

Parameter 06:

1£the unit has 1 system£

2£the unit has 2 systems; j

Parameter 07:

NO£the unit can not restart automatically£

YES£the unit can restart automatically; j

Parameter 08:

C£the mode of the unit is cooling only£

C/H£the mode of the unit is heat pump£

C/H/E£the mode of the unit is auxiliary electrical heating; j

H£the mode of the unit is heating only.

Parameter 09:

NORMAL: always open.

SPECIAL: 60 seconds start before compressors starting.

30 seconds stop after compressors stopping.

■ In order to provide the customers with high quality, strong reliability and good versatility product, this heat pump is produced by strict design and manufacture standards.

This manual includes all the necessary information about installation, debugging, discharging and maintenance. Please read this manual carefully before you open or maintain the unit.

The manufacture of this product will not be held responsible if someone is injured or the unit is damaged, as a result of improper installation, debugging, unnecessary maintenance which is not in line with this manual.

The unit must be installed by qualified personnel.

■ It is vital that the below instructions are adhered to at all times to keep the warranty.

jThe unit can only be opened or repaired by qualified installer or an authorised dealer.

jMaintenance and operation must be carried out according to the recommended time and frequency, as stated in this manual.

jUse genuine standard spare parts only.

Failure to comply with these recommendations will invalidate the warranty.

■ Air source water chiller and heat pump is a kind of high efficiency, energy saving and environment friendly equipment, which is mainly used for house warming. It can work with any kind of indoor unit such fan coil, radiator, or floor heating pipe, by provide warm or hot water. One unit of monobloc heat pump can also work with several indoor units.

The air source water heat pump unit is designed to have heat recovery by using super heater which can provide hot water for sanitary purpose.

This series of heat pump unit owns following features:

1 Advanced controlling

The PC microcomputer based controller is available for the users to review or set the running parameters of the heat pump. Centralized controlling system can control several units by PC.

2 Nice appearance

The heat pump is designed with beautiful looking. The monobloc one has the water pump included which is very easy for installation.

3 Flexible installation

The unit has smart structure with compact body, just simple outdoor installation is needed.

4 Quiet running

High quality and efficient compressor, fan and water pump is used to ensure the low noise level with insulation.

5 Good heat exchange rate

The heat pump unit use special designed heat exchanger to enhance whole efficiency.



6 Large working range

This series of heat pump is designed to work under different working conditions as low as -15 degrees for heating.




Safety Precaution

To prevent the users and others from the harm of this unit, and avoid damage on the unit or other property, and use the heat pump properly, please read this manual carefully and understand the following information correctly.

Mark Notes

| Mark | Meaning |
|---|---|
|  WARNING | A wrong operation may lead to death or heavy injury on people. |
|  ATTENTION | A wrong operation may lead to harm on people or loss of material. |

Icon notes

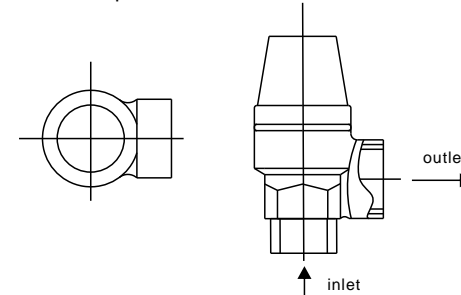
| Icon | Meaning |
|---|--|
|  | Prohibition. What is prohibited will be nearby this icon |
|  | Compulsory implement. The listed action need to be taken. |
|  | ATTENTION (include WARNING) Please pay attention to what is indicated. |

Appendix

Appendix 3£

The installation explanation of the leakage pressure valve.

- 1 The action pressure of leakage pressure valve is more than 3bar (valve is open) but the pressure can not be adjusted.
- 2 The valve will open automatically to make sure that the water loop of air-con system is safe when the water pressure in the backwater side is higher than the set pressure.

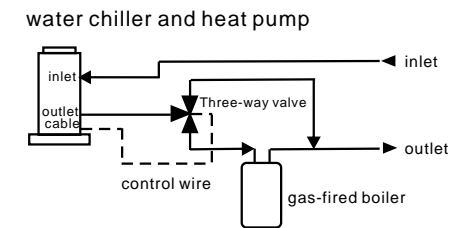


Appendix 4£ The way of assistant heat source connection

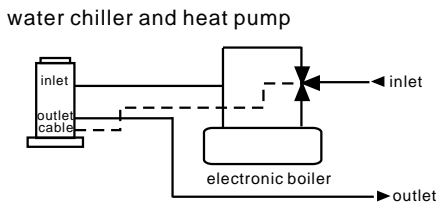
Unit provides the connection of assistant heat source which can not be only for gas-fired boiler, but also for electronic boiler or warm-net pipe for city accordingly.

The way to the connection is as follows:

- 1£ water chiller and heat pump + assistant gas-fired boiler



- 2£ water chiller and heat pump + assistant electronic boiler



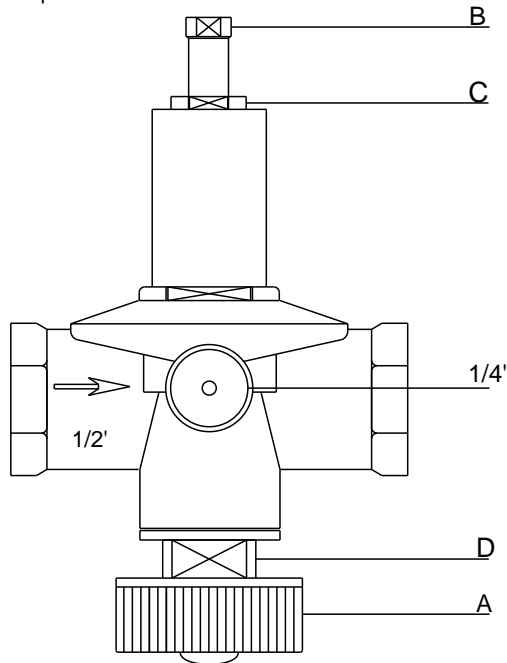
Appendix

Appendix 2£

The installation explanation of automatic filled-water



- 1 When automatic filled-water valve is installed,the arrowhead orientation of inlet water must accord with the orientation of valve ;
- 2 Automatic filled-water has been adjusted in advance to 1.5bar£
- 3 If readjust the pressure of inlet water,please operate as follows£
 - * open the screw cap£C££
 - * If reduce the pressure of water supply,pease unscrew the pressure to adjust the screw(B)£
 - * If increase the pressure of waer supply,please screw down the pressure to adjust the screw (B)£
- 4 When the system need fill water at first,wrest the handle(A) of filled-water.Then the handle(A) can return(close) when the system is full of water.
- 5 Automatic filled-water Valve need clean in a periodic time and then you must close the tap, unscrew the plug(D),remove the inside filter net.Please assemble them again after cleaning.



NOTICE£There are two connections for water pressure meter in the central section of automatic filled-water,where the water pressure meter can be connected directly and display the set pressure.The screw cap(C) must be tweaked after adjusting the filled-water pressure.






Safety Precaution

Warning




| Installation | Meaning |
|--|---|
|  Professional installer is required. | The heat pump must be installed by qualified personals, to avoid improper installation which can lead to water leakage, electrical shock or fire. |
|  Earthing is required | Please make sure that the unit and power connection have good earthing, otherwise may cause electrical shock. |





| Operation | Meaning |
|---|--|
|  PROHIBITION | DO NOT put fingers or others into the fans and evaporator of the unit, otherwise harm may be occurred. |
|  Shut off the power | When there is something wrong or strange smell, the power supply need to be shut off to stop the unit. Continue to run may cause electrical short or fire. |

| Move and repair | Meaning |
|--|--|
|  Entrust | When the heat pump need to be moved or installed again, please entrust dealer or qualified person to carry it out. Improper installation will lead to water leakage, electrical shock, injury or fire. |
|  Entrust | It is prohibited to repair the unit by the user himself, otherwise electrical shock or fire may be occur. |
|  Prohibit | When the heat pump need to be repaired, please entrust dealer or qualified person to carry it out. Improper movement or repair on the unit will lead to water leakage, electrical shock, injury or fire. |

Safety Precaution

ATTENTION

| Installation | Meaning |
|---|---|
|  Installation Place | The unit CANNOT be installed near the flammable gas. Once there is any leakage of the gas, fire can be occur. |
|  Fix the unit | Make sure that the basement of the heat pump is strong enough, to avoid any decline or fall down of the unit |
|  Need circuit breaker | Make sure that there is circuit breaker for the unit, lack of circuit breaker can lead to electrical shock or fire. |

| Operation | Meaning |
|--|--|
|  Check the installation basement | Please check the installation basement in a period (one month), to avoid any decline or damage on the basement, which may hurt people or damage the unit |
|  Switch off the power | Please switch off the power for clean or maintenance. |
|  Prohibition | It is prohibited to use copper or iron as fuse. The right fuse must be fixed by electrician for the heat pump. |
|  Prohibition | It is prohibited to spray the flammable gas to the heat pump, as it may cause fire. |

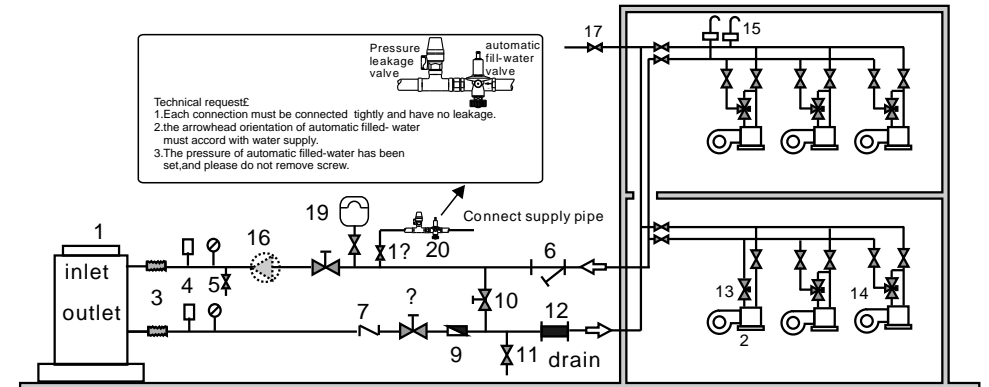
Appendix

Appendix 1 Install sketch map

● Especial installation (expandable water tank)

Legend explanation

- | | |
|------------------------------|--|
| 1 main unit | 17 ball valve |
| 2 fan coil | 18 ball valve |
| 3 rubber flexible connection | 19 the close and expandable water tank |
| 4 thermometer | 20 automatically filled-water |
| 5 pressure meter | |
| 6 filter similar as "Y" | |
| 7 check valve | |
| 8 ball valve | |
| 9 flow meter | |
| 10 bypass valve | |
| 11 drain | |
| 12 filter | |
| 13 two-way valve | |
| 14 three-way valve | |
| 15 automatic ventilation | |
| 16 water pump | |



Installation request:

- The factory only offers main unit (0 and 1) in the legend, and the other modules which are indispensable fittings, are provided by users or installation company.
- The unit which of code contains the letter "B", has water pump inside and need not install water pump outside £16£
- Automatic ventilation £15£ is installed on the top point of the water system;
- The quantity proportion of two-way valve £13£ and three-way valve £14£ is referred to the technical regulation, and there is three-way valve installed on the farthest place of water system.
- The ball valve (17) is used when it is swashed, filled water in the water system and so on.

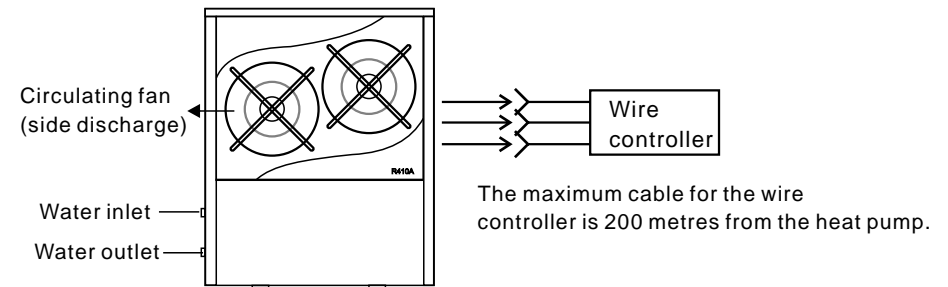
Maintenance

3) Look over and clear the failure according to below information.

| Failure | Possible causes for the failure | Solutions |
|---|---|---|
| Heat pump cannot be started | <ol style="list-style-type: none"> 1 Wrong power supply 2 power supply cable loose 3 circuit breaker open | <ol style="list-style-type: none"> 1 shut off the power and check power supply; 2 check power cable and make right connection 3 check for the cause and replace the fuse or circuit breaker |
| Water pump is running with high noise or without water | <ol style="list-style-type: none"> 1 lack of water in the piping 2 much air in the water loop 3 water valves closed 4 dirt and block on the water filter | <ol style="list-style-type: none"> 1 check the water supply and charge water to the piping; 2 discharge the air in the water loop; 3 open the valves in water loop; 4 clean the water filter. |
| Heat pump capacity is low, compressor do not stop | <ol style="list-style-type: none"> 1 lack of refrigerant; 2 bad insulation on water pipe; 3 low heat exchange rate on air side exchanger; 4 lack of water flow | <ol style="list-style-type: none"> 1 check for the gas leakage and recharge the refrigerant; 2 make good insulation on water pipe; 3 clean the air side heat exchanger; 4 clean the water filter |
| High compressor exhaust | <ol style="list-style-type: none"> 1 too much refrigerant 2 low heat exchange rate on air side exchanger | <ol style="list-style-type: none"> 1 discharge the redundant gas 2 clean the air side heat exchanger |
| Low pressure problem of the system | <ol style="list-style-type: none"> 1 lack of gas 2 block on filter or capillary | <ol style="list-style-type: none"> 1 check the gas leakage and recharge freon; 2 replace filter or capillary; |
| Compressor do not run | <ol style="list-style-type: none"> 1 power supply failure 2 compressor contactor broken 3 power cable loose 4 protection on compressor 5 wrong setting on return water temp. 6 lack of water flow | <ol style="list-style-type: none"> 1 check off the power supply; 2 replace compressor contactor; 3 tighten the power cable; 4 check the compressor exhaust temp.; 5 reset the return water temp.; 6 clean the water filter and discharge the air in water loop. |
| High noise of compressor | <ol style="list-style-type: none"> 1 liquid refrigerant goes into compressor 2 compressor failure | <ol style="list-style-type: none"> 1 bad evaporation, check the cause for bad evaporation and get rid of this; 2 use new compressor; |
| Fan do not run | <ol style="list-style-type: none"> 1 failure on fan relay 2 fan motor broken | <ol style="list-style-type: none"> 1 replace the fan relay; 2 replace fan motor. |
| The compressor runs but heat pump has not heating or cooling capacity | <ol style="list-style-type: none"> 1 no gas in the heat pump; 2 heat exchanger broken; 3 compressor failure. | <ol style="list-style-type: none"> 1 check system leakage and recharge refrigerant; 2 find out the cause and replace the heat exchanger; 3 replace compressor. |
| Low outlet water temperature | <ol style="list-style-type: none"> 1 low water flow rate; 2 low setting for the desired water temp.; | <ol style="list-style-type: none"> 1 clean the water filter and discharge the air in water loop. 2 reset the desired water temperature. |
| Low water flow protection | <ol style="list-style-type: none"> 1 lack of water in the system; 2 failure on flow switch | <ol style="list-style-type: none"> 1 clean the water filter and discharge the air in water loop. 2 replace the flow switch. |

Specification

1 Appearance and structure of the unit



Specification

2. The data of unit

| Unit Model | | HH13 | HH17 | HH251 |
|----------------------------------|-------------------|------------------------------|------------|---------------|
| Cooling Capacity | kW | 10.0 | 13.5 | 19.5 |
| | Btu/h | 34000 | 46000 | 67000 |
| Heating capacity | kW | 13.0 | 17.0 | 25.0 |
| | Btu/h | 44000 | 60000 | 85000 |
| Cooling Power Input | kW | 3.5 | 4.7 | 7.0 |
| Heating Power Input | kW | 3.1 | 4.1 | 6.0 |
| Running Current(Cooling/Heating) | A | 15.2/13.5 | 20.4/17.8 | 12.1/10.3 |
| Power Supply | | 230V~/50Hz | 230V~/50Hz | 380V/3N~/50Hz |
| Compressor Quantity | | 2 | 2 | 3 |
| Compressor | | Rotary | Rotary | Rotary |
| Fan Quantity | | 2 | 2 | 2 |
| Fan Power Input | W | 120j2 | 120j2 | 200j2 |
| Fan rotate speed | RPM | 850 | 850 | 750 |
| Noise | dB(A) | 56 | 56 | 59 |
| Hot water volume | L/h | 40 | 57 | 57 |
| Water Pump Input | kW | 0.2 | 0.2 | 0.75 |
| Water head | m | 10 | 10 | 24 |
| Water Connection | inch | 1 | 1 | 1.5 |
| Water Flow Volume | m ³ /h | 1.7 | 2.8 | 3.8 |
| Water Pressure Drop | kPa | 34 | 34 | 36 |
| Unit Net Dimensions(L/W/H) | mm | See the drawing of the units | | |
| Unit Shipping Dimensions(L/W/H) | mm | see package label | | |
| Net Weight | kg | see nameplate | | |
| Shipping Weight | kg | see package label | | |

Cooling: Ambient temperature:35j/24j,Inter/outlet water temperature:12j/7j

Heating: Ambient temperature:7j/6j,Inter/outlet water temperature:30j/35j

(Above information just for your reference, Please subject to nameplate on the unit)

Maintenance

2. Ordinary malfunctions and solution

(1) According to failure code of the controller,we can judge and solute the failure.

| Malfunction | Running lamp | Reason | Resolution |
|------------------------------|--------------|---|--|
| WATER IN | 1 Flash | The sensor is open or short circuit | Check or change the sensor |
| WATER OUT | 2 Flash | The sensor is open or short circuit | Check or change the sensor |
| PIPE TEMP.1 | 3 Flash | The sensor is open or short circuit | Check or change the sensor |
| PIPE TEMP.2 | 4 Flash | The sensor is open or short circuit | Check or change the sensor |
| AMBIENT TEMP. | 5 Flash | The sensor is open or short circuit | Check or change the sensor |
| TEMP. DIFFERENCE PROTECT | light | Water flow volume not enough,water pressure difference is too low | Check the water flow volume, or system obstruction. |
| FROSTBITE 1 | light | Ambient or inlet water temp. is too low | |
| FROSTBITE 2 | light | Ambient or inlet water temp. is too lower | |
| SYSTEM 1 | 6 Flash | System1 protection was failed | Check each protection point of system1 remove the malfunction according to System Protection Board malfunction table) |
| SYSTEM 2 | 7 Flash | System2 protection was failed | Check each protection point of system2 remove the malfunction according to System Protection Board malfunction table) |
| WATER FLOW | 8 Flash | No water/little water in water system. | Check the water flow volume, water pump is failure or not |
| POWER PHASE (SYSTEM PROTECT) | 9 Flash | Wrong connections or lack of connection | Check connections of power cable |
| TEMP. DIFFERENCE ERROR | 10 Flash | Water flow rate not enough | Check the water flow rate, or water system is jammed or not |
| COMMUNICATION | Flash | Wire controller and The PCB connection failure | Check the wire connection |

(2) You can judge and remove the malfunctions according to the malfunction code display on the PROTECT 300(only for 3 phase units)

| Display | Name | reason | Action | Recover (yes or no) | revolution |
|---------|------------------------------------|---|----------------------|---------------------|--|
| 1 | Cooling water freezing | Cooling water temp. too low after tube outlet | Unit stops and alarm | Yes | Check water flow volume |
| 2 | Cooling water antifreezing failure | Cooling water temp. after tube inlet too low | Unit stops and alarm | Yes | Check the water system |
| 3 | Low pressure | Low pressure switch action | Unit stops and alarm | Yes | Check through the pressure switch and return system |
| 4 | Compressor exhaust temp. too high | Compressor exhaust temp.too high | Unit stops and alarm | Yes | Check through the refrigerant system |
| 5 | Over-current on compressor | Current through compressor too heavy | Unit stops and alarm | Yes | Check through the power supply for compressor or short circuit |
| 6 | High pressure | High pressure switch action | Unit stops and alarm | Yes | Check through the pressure switch and return system |
| 7 | Temp. sensor before tube failure | Temp. Sensor open or short circuit | Unit stops and alarm | Yes | Check and renew the sensor |
| 8 | Tube outlet temp. sensor failure | Temp. Sensor open or short circuit | Unit stops and alarm | Yes | Check and renew the sensor |
| 9 | Exhaust temp. sensor failure | Temp. Sensor open or short circuit | Unit stops and alarm | Yes | Check and renew the sensor |
| E | Power supply wrong connection | Wrong connection or lack of connection | Unit stops and alarm | Yes | Check the connections |

Maintenance

1 Maintenance

- Check the water supply and air vent frequently, to avoid lack of water or air in the water loop. Clean the water filter in a certain period to keep good water quality. Lack of water and dirty water can damage the unit. The heat pump will start the water pump per 72 hours when it is not running, to avoid freezing.
 - Keep the unit in a place which is dry and clean, and has good ventilation. Clean the heat exchanger in 1 or 2 month and keep good heat exchange rate and save energy.
 - Check each part of the unit and the pressure of the system. Replace the failure part if there is any, and recharge the refrigerant if it is needed.
 - Check the power supply and the electrical system, make sure the electrical components are good, the wiring is well. If there is any part failed with wrong action or smell, please replace in time.
 - If the heat pump is not used for a long time, please drain out all the water in the unit and seal the unit to keep it good. Please drain the water from the lowest point of the heat exchanger to avoid freezing in winter. Water recharge and full inspection on the heat pump is needed before it is restarted.
 - Please drain out the water in the super heater of the heat pump unit in winter, when the super heater is not used.
 - The water loop of the heat pump MUST be protected from freezing in winter time. Please pay attention to below suggestions. Nonobservance on below suggestion will invalid the warranty for the heat pump.
- (1) Please do not shut off the power supply to the heat pump in winter. When the air temperature is below 0 °C, if the inlet water temperature is above 2 °C and below 4 °C, the water pump will start for freezing protect, if the inlet water is lower than 2 °C, the heat pump will run for heating.
- (2) Use anti-freezing liquid (glycol water)
- 1) look for below table for the volume of the glycol water
 - 2) the glycol water can be added into the system from the expansion tank of the water loop.

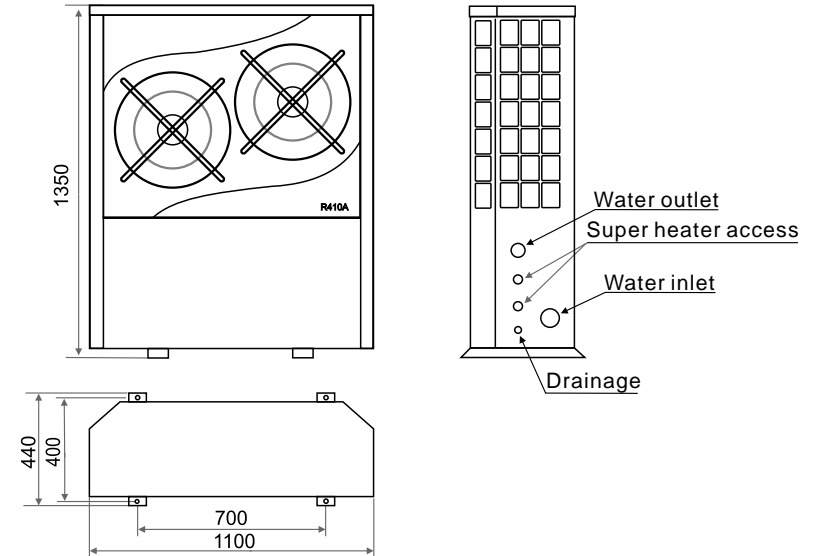
| Glycol percentage % | 10 | 20 | 30 | 40 | 50 |
|--------------------------------------|-------|-------|-------|-------|-------|
| ambient temp. (°C) | -3 | -8 | -14 | -22 | -33 |
| cooling/heating capacity fluctuation | 0.991 | 0.982 | 0.972 | 0.961 | 0.946 |
| power input fluctuation | 0.996 | 0.992 | 0.986 | 0.976 | 0.966 |
| water flow fluctuation | 1.013 | 1.040 | 1.074 | 1.121 | 1.178 |
| water drop fluctuation | 1.070 | 1.129 | 1.181 | 1.263 | 1.308 |

Note: if the glycol water is too much, the water flow and water pump will be influenced and the heat exchange rate will be decreased. This table is for reference, please use anti-freezing water according to the real condition of the local climate.

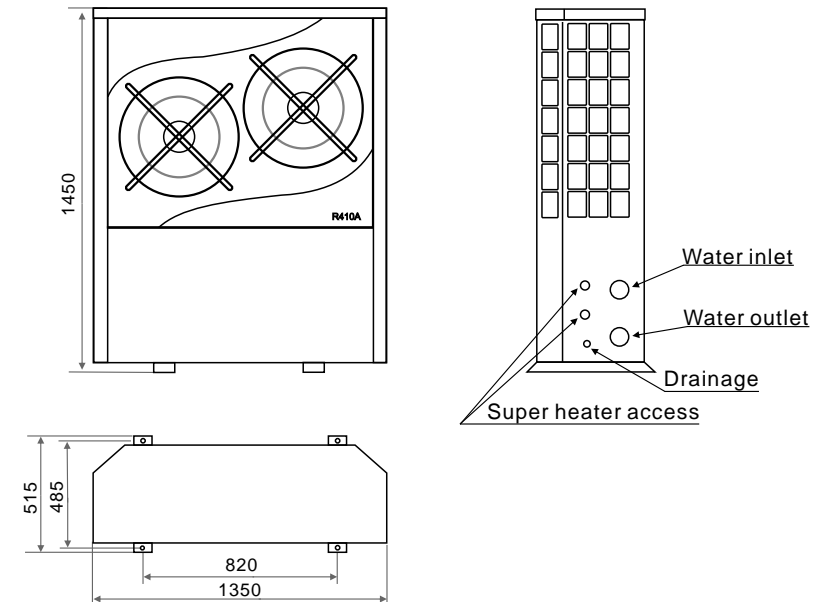
Specification

3 Unit dimension

Models: HH13
HH17



Models: HH251



Usage

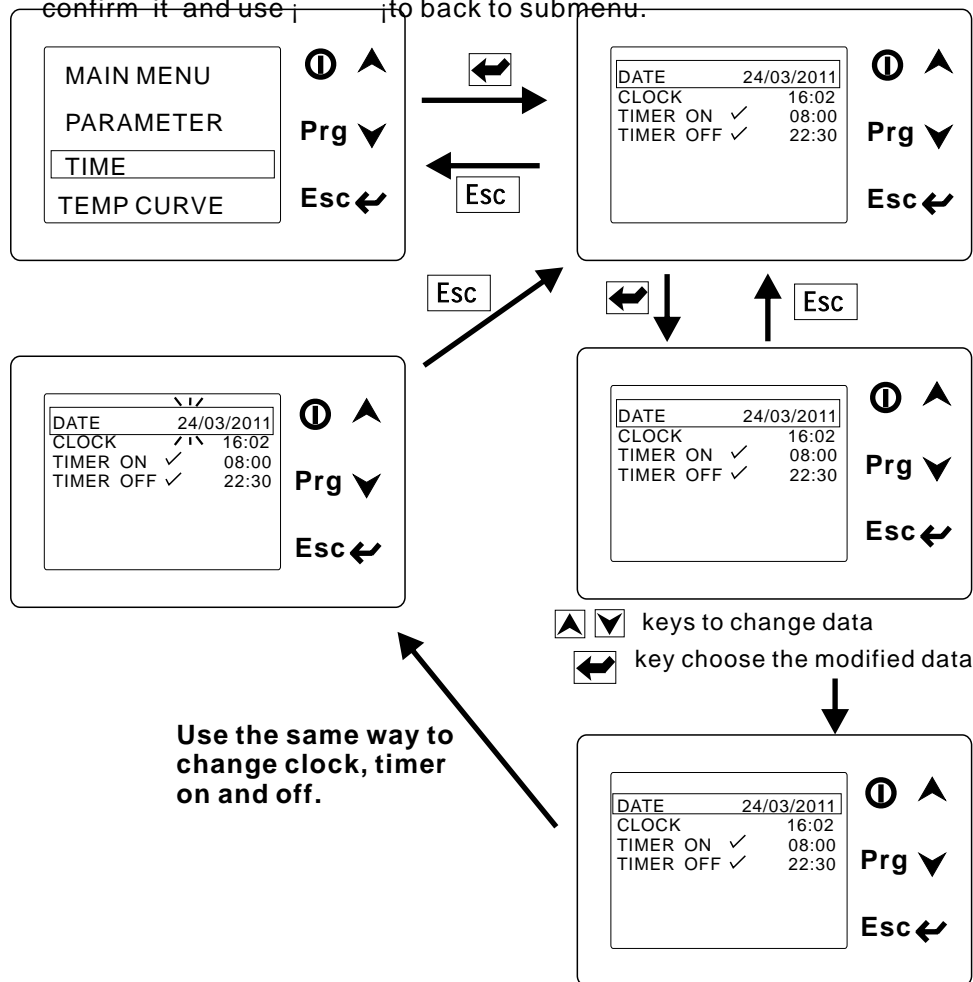
e) Time setting

When standby, press **Prg** key to enter into menu surface.

Then, press **▲▼** to select time setting mode and the **↔** key to begin time setting. You can use this key **↔** to change parameter.

The same way for modify the parameter. Press this **↔** again to

confirm it and use **↔** to back to submenu.



Installation

2 Choose a right heat pump unit

- 2.1 Based on the local climate condition, construction features and insulation level, calculate the required cooling(heating) capacity per square meter.
- 2.2 Conclude the total capacity which will be needed by the construction.
- 2.3 According to the total capacity needed, choose the right model by consulting the heat pump features as below:

● Heat pump features

Cooling only unit: chilled water outlet temp. at 5-15, maximum ambient temp. at 43.

Heating and Cooling unit: for cooling chilled water outlet temp. at 5-15, maximum ambient temp. at 43. For heating, warm water inlet temp. at 40-50, minimum ambient temp. at -10.

● Unit application

Air source water chiller and heat pump is used for house, office, hotel, and so forth, which need heating or cooling separately, with each area need to be controlled.

3 Installation place

- The unit can be installed on any place outdoor which can carry heavy machine such as terrace, housetop, ground and so on.
- The location must have good ventilation.
- The place is free from heat radiation and other fire flame.
- A pall is needed in winter to protect the heat pump from snow.
- There must be not obstacles near the air inlet and outlet of the heat pump.
- A place which is free from strong air blowing.
- There must be water channel around the heat pump to drain the condensing water .
- There must be enough space around the unit for maintenance.

4 Installation method

The heat pump can be installed onto the concrete basement by expansion screws, or onto a steel frame with rubber feet which can be placed on the ground or housetop. Make sure that the unit is placed horizontally.

Installation

5 Water loop connection

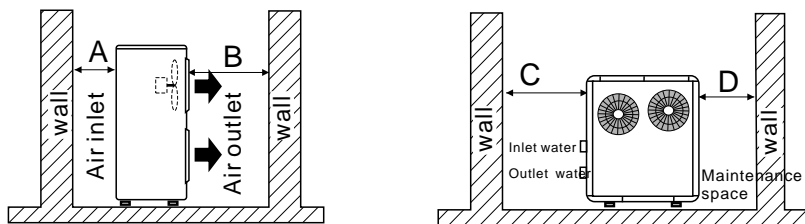
Please pay attention to below matters when the water pipe is connected:

- Try to reduce the resistance to the water from the piping.
- The piping must be clear and free from dirty and blocks. Water leakage test must be carried out to ensure there is no water leaking. And then the insulation can be made.
- Attention that the pipe must be tested by pressure separately. DO NOT test it together with the heat pump.
- There must be expansion tank on the top point of the water loop, and the water level in the tank must be at least 0.5 meter higher than the top point of the water loop.
- The flow switch is installed inside of the heat pump, check to ensure that the wiring and action of the switch is normal and controlled by the controller.
- Try to avoid air stayed inside of the water pipe, and there must be air vent on the top point of the water loop.
- There must be thermometer and pressure meter at the water inlet and outlet, for easy inspection during running.

6 Power supply connection

- Open the front panel, and open the power supply access.
- The power supply must go through the wire access and be connected to the power supply terminals in the controlling box. Then connect the 3-signal wire plugs of the wire controller and main controller.
- If the outside water pump is needed, please insert the power supply wire into the wire access also and connect to the water pump terminals.
- If an additional auxiliary heater is need to be controlled by the heat pump controller, the relay (or power) of the aux-heater must be connected to the relevant output of the controller.

7 Location of the unit



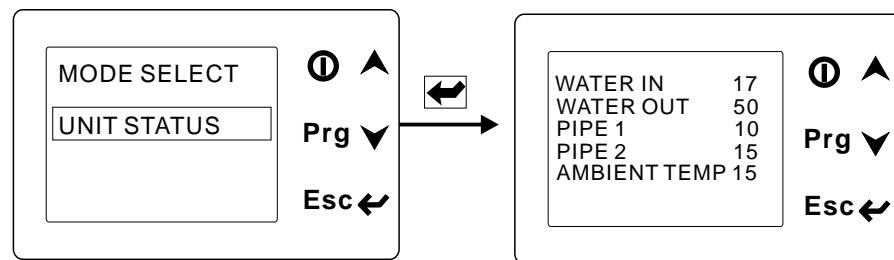
ATTENTION

Requirement :

A>500mm ; B>1500mm ;

C>1000mm ; D>500mm.

Usage

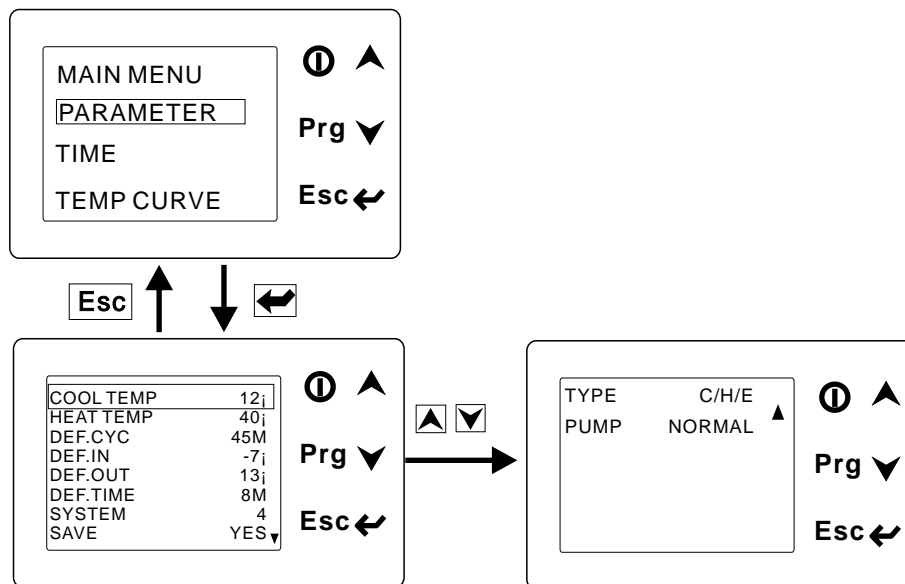


d) Parameter

When standby, press the **Prg** key to enter into menu surface.

Then, press the **▲▼** key to select parameter setting and the **↵** key to begin setting. You can use this key **▲▼** to change parameter.

And the same way for more time parameter. Press this **Esc** again to confirm it and use the **↵** key to back to submenu.



Usage

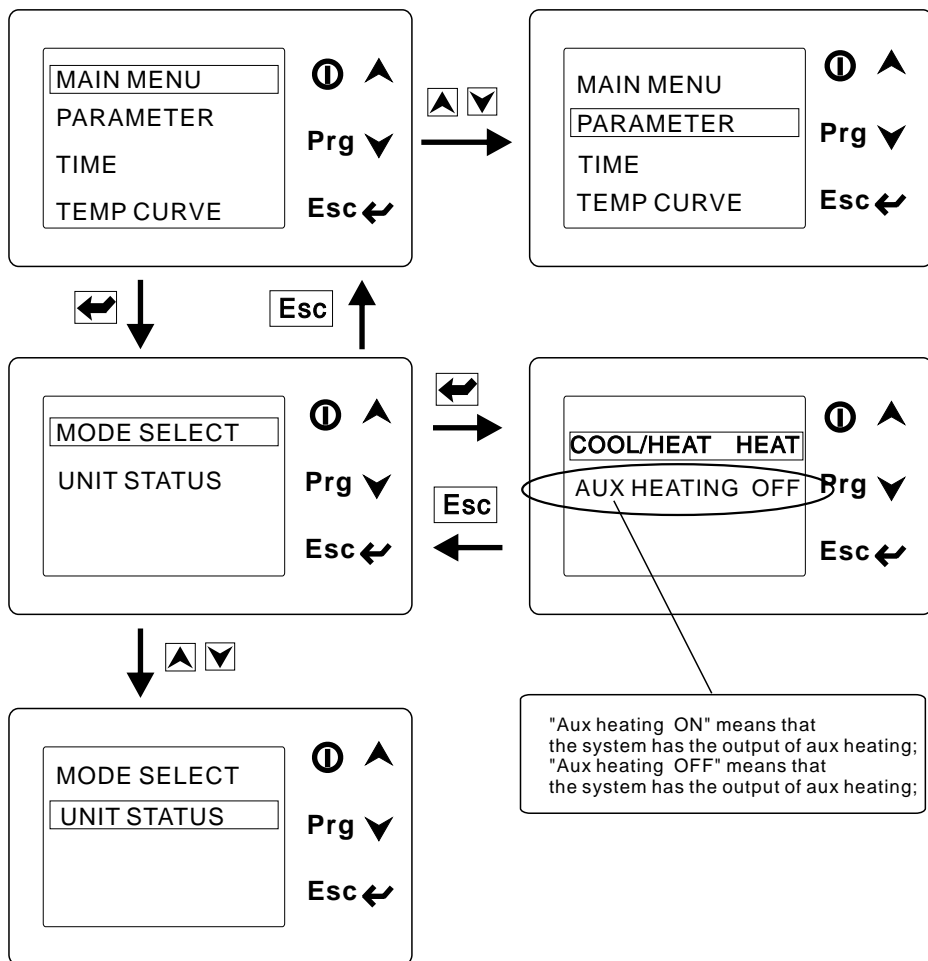
c) Main menu

When it is running, press the **Prg** key to enter into menu surface.

Then press the **▲▼** key to enter into main menu.

And press the **←** key to enter the next menu.

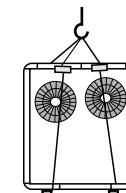
At last, pressing the **Esc** key can come back to the front page.



Installation

8 Transit

When the unit need to be hung up during installation, a 8 meters cable is needed, and there must be soft material between the cable and the unit to prevent damage to the heat pump cabinet. (See picture 1)



Picture 1



WARNING

DO NOT touch the heat exchanger of the heat pump with fingers or other objects!

9 Trial Running

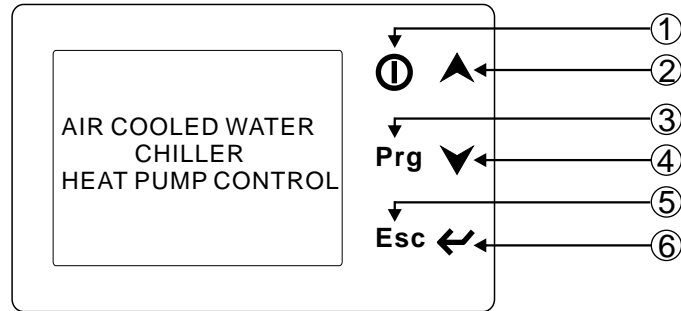
Inspection before trial running

- Check the indoor unit, and make sure that the pipe connection is right and the relevant valves are open .
- Check the water loop, to ensure that the water inside of the expansion tank is enough, the water supply is good, the water loop is full of water and without any air. Also make sure there is good insulation for the water pipe.
- Check the electrical wiring. Make sure that the power voltage is normal, the screws are fastened, the wiring is made in line with the diagram, and the earthing is connected.
- Check the heat pump unit including all of the screws and parts of the heat pump to see if they are in good order. When power on, review the indicator on the controller to see if there is any failure indication. The gas gauge can be connected to the check valve to see the high pressure(or low pressure) of the system during trial running.

Trial running

- Start the heat pump by press " ▲ or ▼ " key on the controller. Check whether the water pump is running, if it runs normally there will be 0.2 MPa on the water pressure meter.
- When the water pump runs for 1 minutes, the compressor will start. Hear whether there is strange sound from the compressor. If abnormal sound occurs please stop the unit and check the compressor. If the compressor runs well please look for the pressure meter of the refrigerant.
- Then check whether the power input and running current is in line with the manual. If not please stop and check.
- Adjust the valves on the water loop, to make sure that the hot(cool) water supply to each door is good and meet the requirement of heating(or cooling).
- Review whether the outlet water temperature is stable.
- The parameters of the controller are set by the factory, it is not allowed to change then by user himself.

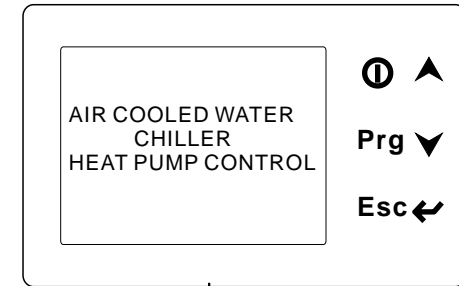
1) Wire controller functions instruction



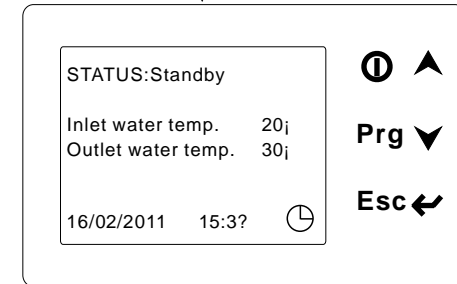
- ① **Switch Key**
Press this key to switch on/off
- ② ④ **Up/down Key**
Press this key to read parameters in any state in standby or power off.
Press this key to change the parameter in setting state.
- ③ **Menu Key**
You can press this key to enter into menu surface when power on or in standby.
- ⑤ **Exit**
Press this key to confirm the parameter in setting state.
When in other states, you can press this key to return to the former surface.
- ⑥ **Enter Key**
Press up/down key to enter into parameter roll, then press enter key to go into parameter list and change the data.

2) How to use the remote controller

a) when power on, it shows:



10 seconds latter, the standby interface occurs.



b) After press " ① ", the unit will run.
The display is as follows

UNIT STATUS£
Defrost-Cooling-Heating-Standby

