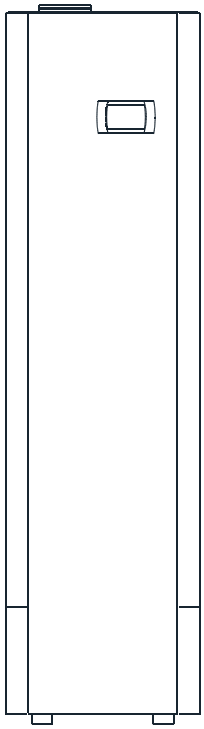
INDOL

COMPACT

Air source hot water heat pump

Operation & Installation Manual

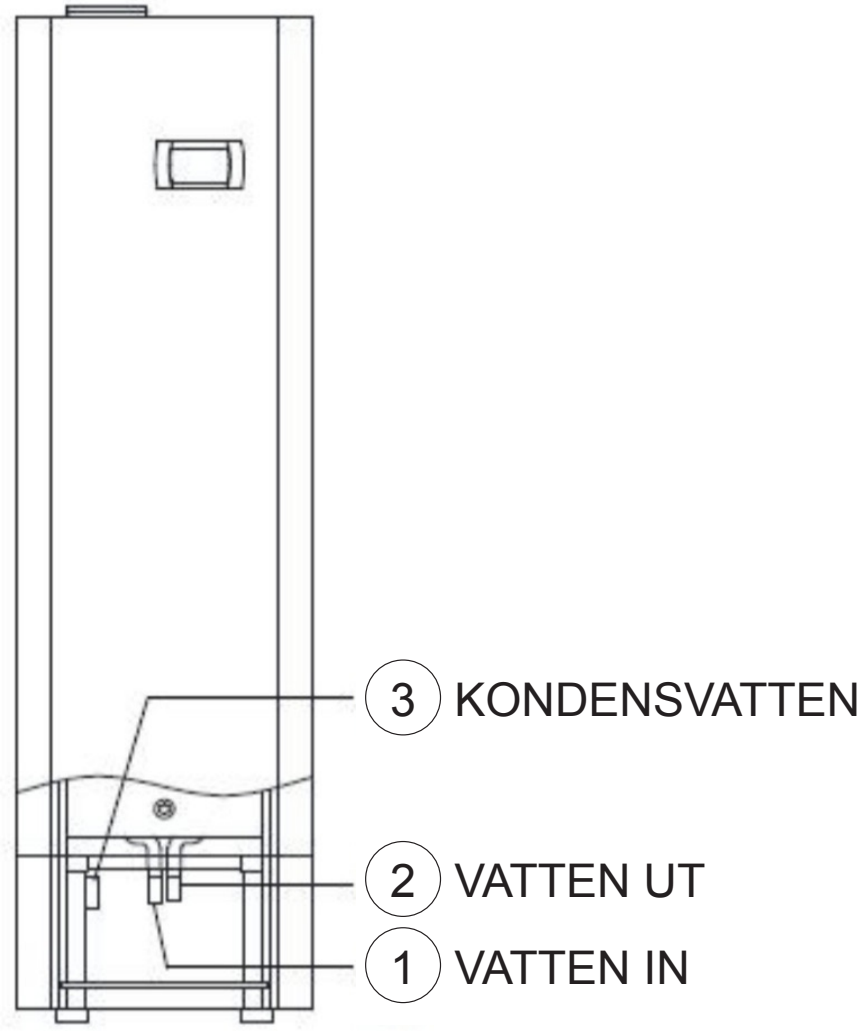


OBS!
SE SIDA 2 FÖR VIKTIG INFORMATION INNAN DU KOPPLAR IN DIN PRODUKT

OBS!!
NEDAN ÄR KORREKT INKOPPLING FÖR INDOL COMPACT 200A++
(oavsett vad märkning på rören visar så ska nedan följas).

Vissa produkter har tyvärr blivit felmärkta på anslutningarna.
De ska inte följas utan detta gäller:
Anslut inkommande vatten till Compact 200A++ på det vänstra röret framifrån sett (nr 1)
Anslut det utgående varmvatten till huset på det högra röret framifrån sett (nr 2).
Anslut ett rör eller slang på nr 3 och led till ett avlopp. Det är kondensvatten från värmepumpen.

OBS!
GLÖM EJ ATT MONTERA SÄKERHETSVENTIL!
(medföljer ej)



Preface

- 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.

- When install the unit and connect the pipe, please carry it out strictly according to the manual.

- Once finish the installation and connection, please make everything ok before power on the unit.

- The installer should explain to the user how to operate and maintain the unit according to the manual, when the unit is installed. And ask the user to read the manual carefully, keep the manual and do the operation in strict accordance with the Manual.

- 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.

- It is vital that the below instructions are adhered to at all times to keep the warranty.
  ---Maintenance and operation must be carried out according to the recommended time and frequency, as stated in this manual.
  ---Failure to comply with these recommendations will invalidate the warranty.

- The manual will be changed if there is any improvement on the unit, there will not be advance notice.

Content

1.Safety Precaution

Safety Precaution

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

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

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.

1.The hurt means no need to be in hospital and cure for a long time, it's injury, burn and get an electric shock.
2.The material lost means property and datum lost.

Installation warning

Professional installer is required	The heat pump must be installed by qualified personnel, 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.
Concentration limits	When install the unit in a small room, please take some measures to prevent the asphyxia caused by the leakage of refrigerant. Please consult the dealer for concrete measures.

1.Safety precaution

 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 warning

 Prohibition	Do not put fingers or others into the fans. Children should be supervised to ensure that they do not play with the appliance.
 Shut off the power	When there is something wrong or strange smell, the power supply need to be shut off to stop the unit.

Move and repair

 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.
 Prohibition	It is prohibited to repair the unit by the user himself, otherwise electrical shock or fire may be occur.
 Entrust	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.

Operation attention

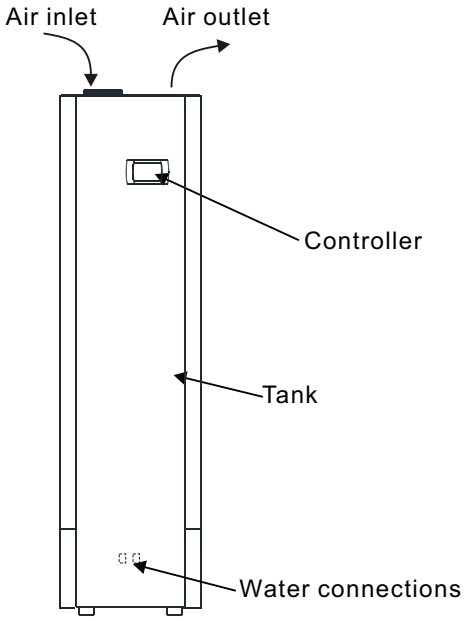
 Check the install placement	The unit must be installed indoor, and the ambient temperature must be over 0¡æif do not use the unit for a long time and the environment temperature is below 0¡æ please drain the water in the tank to prevent
 Shut off the power	When do the clean, must stop the unit and shut off the power, if do not stop the unit, it will cause hurt by the high speed running fan.
 Prohibit	Please use the suitable fuse. If use copper or iron, it will cause failure, even the fire.
 Prohibit	Forbid spraying the flammable aerosols to the unit, otherwise it will cause the fire.

Usage warning

 Usage warning	This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance .Cleaning and user maintenance shall not be made by children without supervision.

2.Specs

2.1 Appearance



2.2 Characteristic

- good looking and efficient

  Attractive design allows the unit to be placed in the open in finished utility spaces and basements, reducing the cost of remodelling; depending on external condition the cost of operation can be 25% of that of an electric water heater, and can be used in locations unsuitable for solar hot water heating.

- environmentally friendly and safer

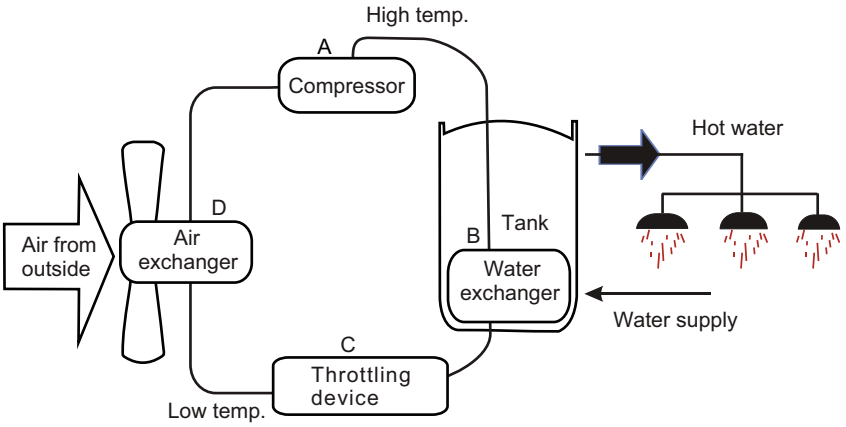
  Produces no harmful gas locally from the combustion of oil, coal, or natural gas; free of potential hazards from carbon monoxide, it also can avoid electrical contact with water, and does not provide an open flame, making the device more suitable for installation.

- easy to operate and multiple heat sources

  Contains a timer for start and stop, and an adjustment dial for easy setting of the water temperature; depending upon the location of the air exchanger , heat may be taken from the outside environment , from a sun porch or attic space, or from hot areas in light industrial environments.

2. Specs

2.3 principle



System Principle:

① Refrigerant is compressed into vapor with high temperature and high pressure when it goes through the compressor.

② On the discharge side of the compressor, the now hot and highly pressurized vapor is cooled down through the heat exchange with the water in the tank until it condenses into a high pressure, moderate temperature liquid.

③ Then the pressure of the liqiud refrigerant drops as it passes throttling device.

④ Finally, refrigerant absorbs heat from the surrounding air and evaporates into vapor with low temperature and low pressure and then it goes into compressor again.

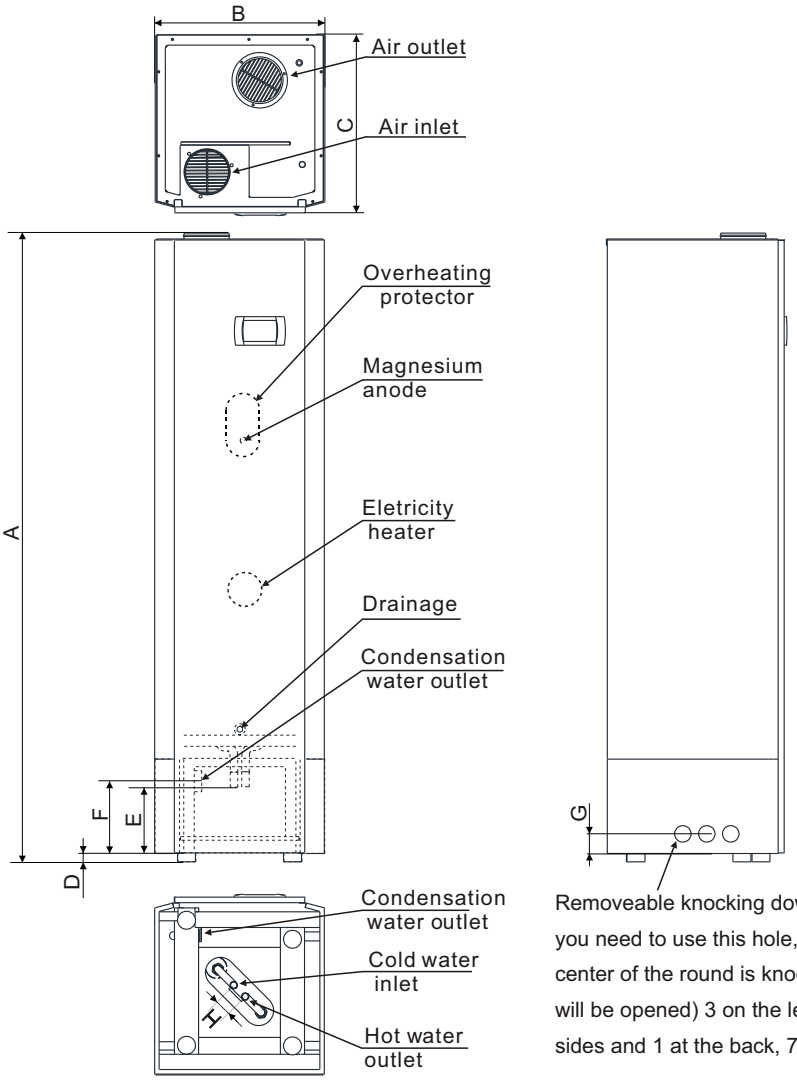
⑤ The cooled surrounding air could be blew to the rooms which needs fresh cooled air.

2.Specs

2.4 Dimensions

Unit：mm

Dimention \ Model	Indol Compact 200A++
A	2100
B	566
C	590
D	30
E	230
F	240
G	65
H	55



Removeable knocking down hole (when you need to use this hole, as soon as the center of the round is knocked, the hole will be opened) 3 on the left and right sides and 1 at the back, 7 in total.

2.Specs

2.5 Performance Parameter

Model		Indol Compact 200A++
Heating capacity	kW	1.8
Water tank capacity	L	200
Power input	kW	0.46
Running current	A	2.0
Power supply		230V~/50Hz
Compressor Number		1
Compressor		rotary
Rated outlet water Temp.	¡æ	55
Air volume	m3/h	350
Air pressure	Pa	40
Duct diameter	mm	Φ150
Water inlet/outlet size	inch	3/4
*Auxiliary E-heater	kW	1.5
Net dimensions	mm	566×590×2100
Shipping dimensions	mm	640×680×2100
Net weight	kg	126
Shipping weight	kg	142

Measurement conditions:
Instant heating: Ambient temperature 15℃/13℃, Water inlet 15℃, Water outlet. 45℃

Work range:
(1) Ambient temperature is 0-40℃
(2) The max temperature of water tank is 60℃

Operating parameters

The range of the operating water temperatures: 9~60℃

The range of the operating water pressures: 0.15~0.7MPa

3.Function Presentation

1.Function Presentation

Heating capacity

The unit absorbs energy from outside and releases the heat according to the heat exchanger, if the environment temperature is low, the heating capacity will be attenuation.

3 minutes protection

When the unit stop, if you restart the unit or turn on the manual switch, the unit will not run in 3 minutes, it's the protection for the compressor.

Defrosting

Under the heating mode, the unit will defrost automatic to make sure the heating efficiency (it will last 2-10 minutes).

Working condition

In order to use the unit correctly, please run the unit at environment temperature 0-40℃. The unit includes sophisticated electronic devices, prohibited to use water from lake, untreated river water and groundwater!

Power off

If the power supply is off, the unit will stop running. If the running unit is disturbed by lightening, car radio, power grid fluctuations please cut off the manual power switch , and then power on, press the on / off button.

Water pressure protection

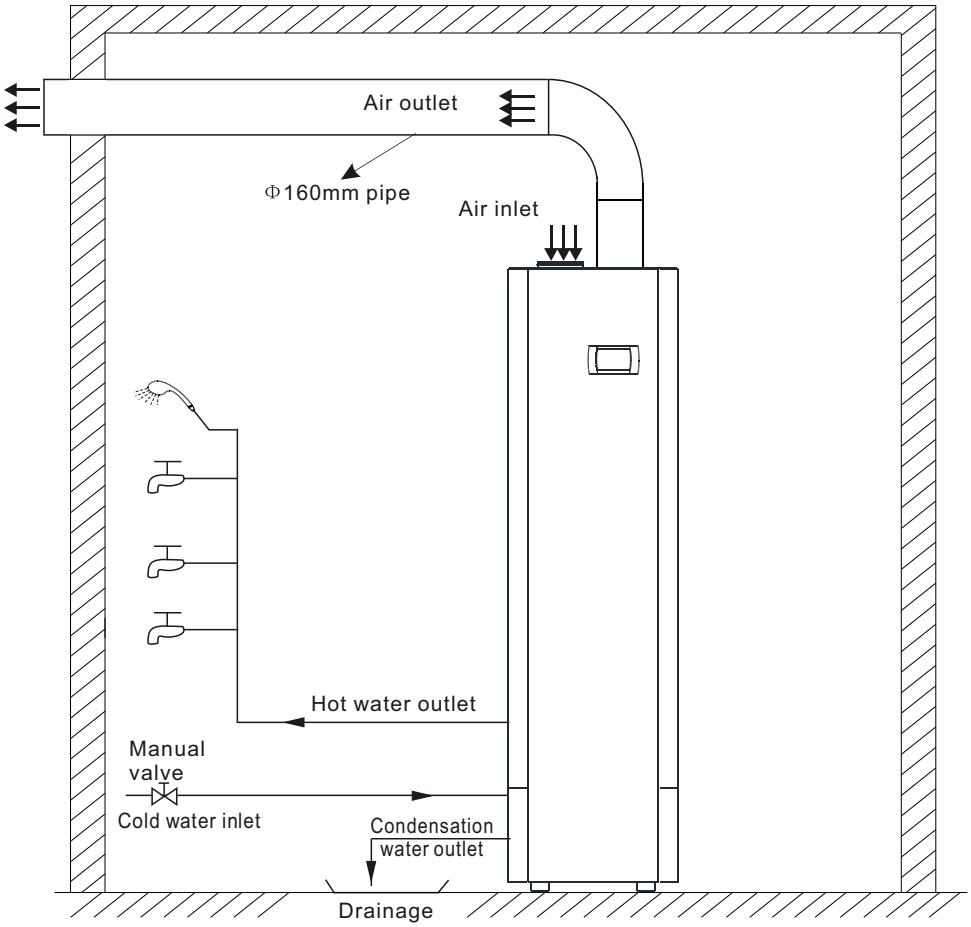
In the water system will be installed the Pressure release valve.When the tank pressure reach 0.7MPa,The Pressure release valve to open sluice。

Keep power on

Always ensure that the unit is powered on, you can turn off the unit, but can not power off. If you want to power off the unit, must drain out the water in the tank.

4. Installation

4.1 Installation Sketch Map



NOTE! A safety valve **MUST** be installed on water inlet!

4.Installation

4.2 Choose the Suitable Unit

Notice: The choice is just for reference, please choose the unit according to native environment and custom.

4.3 Deposited and Transportation

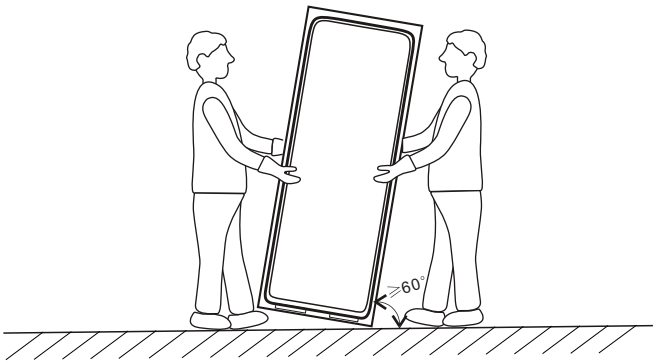
As a rule, the unit is to be stored and/or transported in its shipping container in upright position and without water charge. For a transport over short distance, and provided due care is exercised, an inclination angle of up to 30 degree is permitted. Both during transport and storage, ambient temperatures of 0℃ to +43℃ are permissible.

4.4.1 Transport using a forklift

When transported by a fork lift, the unit must remain mounted on the pallet. The lifting rate should be kept to a minimum. Due to its top-heaviness, the unit must be secured against tipping over. To prevent any damage, the unit must be placed on a level surface!

4.4.2 Manual transport

For the manual transport, the wooden pallet can be used for bottom part. Using ropes or carrying straps, a second or third handling configuration is possible. With this type of handling, care must be taken that the max. Permissible inclination angle of 60 degree is not exceeded. If transport in an inclined position cannot be avoided, the unit should be taken into operation one hour after it has been moved into final position.



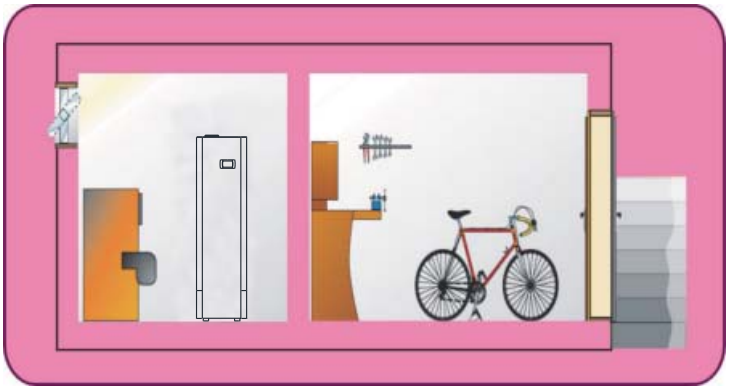
CAUTION：High center of gravity, low overturning moment!

4.Installation

4.5 Installation Position

(1) Waste heat is useful heat (see picture below)

The standard heat exchanger of the hot-water heat pump enables direct connection to a second heat generator, e.g. a solar heating system or a boiler.

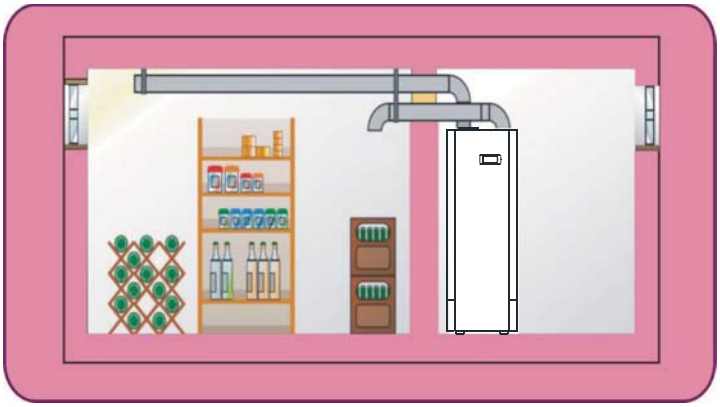


(2) Dehumidification in the recirculating air mode (see picture below)

Dehumidified air in the laundry room supports laundry drying and prevents moisture-induced damage.

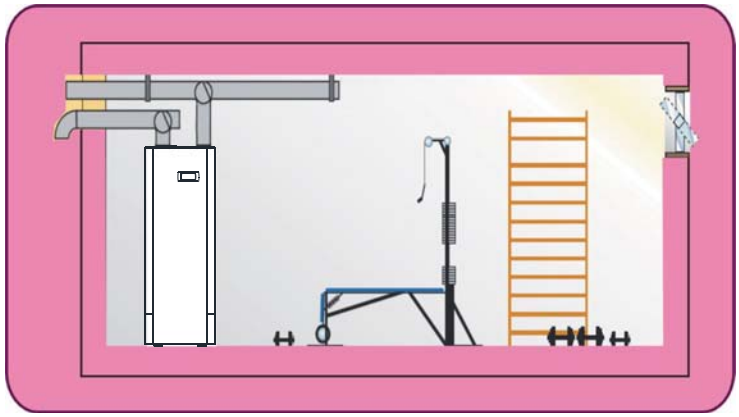
(3) Cooling in the recirculating air mode (see picture below)

The room air is extracted from the storage room or a wine cellar, subsequently cooled and dehumidified in the heat pump and finally re-introduced into the room. Recreation rooms, boiler rooms or utility rooms are ideal installation sites. The air ducts leading through warm sections must be insulated to prevent the formation of condensation.



(4) variable change over of intake air (see picture below)

A duct system with integrated bypass flaps allows for variable utilization of the heat contained in the outside air or room air for the production of hot water.



Installation attentions

1. Choose the right path to move the unit;
2. Try to move the unit as original case;
3. If the unit installed in the building of the metal part, it must work for electrical insulation and comply with the relevant technical standards of electrical equipment.
4. The unit does not include any duct pipe, the customer also can install the duct pipe during the installation if needed.

4.Installation

4.5 Water Loop Connection

Pay attention to these points when connect the water loop pipe:

- Try to reduce the water loop resistance;
- Make sure there is nothing in the pipe and the water loop is smooth, check the pipe carefully to see if there is any leak, then pack the pipe with the insulation.
- Install the one way valve and safety valve in the water circulation system. The one way valve is to be operated regularly to remove lime deposits and to verify that it is not blocked.
- The nominal pipe widths of the field-installed sanitary installations must be selected on the basis of the available water pressure and the expected pressure drop within the piping system. The water-side installation has to be executed in compliance with DIN 1988(in case of excessive water pipe pressure, a pressure relief valve is to be provided!)
- The water pipes may be of the rigid of flexible type to prevent corrosion damage.
- When installing the pipework on the customer's site, any contamination of the piping system must be avoided(pipes may have to be flushed prior to the connection of the unit).
- The water may drip from the discharge pipe of the pressure-relief device and that this pipe must be left open to the atmosphere.

4.6 Wire Connection

- There is wire at the bottom of the unit, it's for power supply of the unit. The spec of the wire is 1.5mm^2.
- There must be a switch when connect the unit to power system.
- 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.

4.7 Trial Running

4.8.1 Inspection before trial running

- Check the water in the tank and the water pipe connection.
- Check the power system£ºmake sure the power supply is normal and the wire connection is
- Check the unit: make sure everything is ok before power on the unit, check the light on the wire controller when the unit runs.

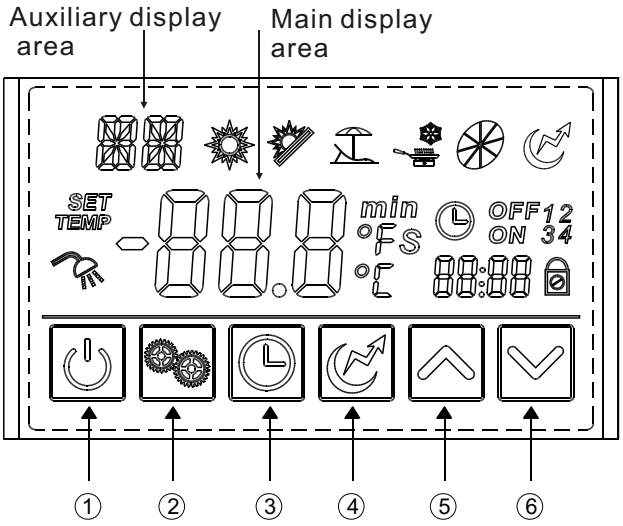
4.8.2 Trial running

- Use the wire controller to start the unit;
- Listen to the unit carefully when power on the unit, power off the unit at once when you heard deviant noise;
- Measure the water temp. to check the undulation of the water temp.;
- When the parameter has been set, the user can't change the parameter optionally, ask for professional person to change the parameter.

5. Usage

5.1 The function diagram of the wire controller

1.Function of wire controller



1£ ©unction of key

NO.	Button	Name	Function
①		ON/OFF	Turn on/off the unit.
②		Mode	Switch unit running modes or save setting parameters.
③		Clock	Set the clock or the timer.
④		Electric Heater	Turn on/off the electric heater or switch fan modes.
⑤		Up	Move up or increase parameter values.
⑥		Down	Move down or decrease parameter values.

5. Usage

Status icon	Name	What it means
	Heating	Shows that the unit is in heating mode. Heatpump+Electric heater
	ECO heating	Shows that the unit is in ECO heating mode. Heatpump only(saves most energy)
	Vacation	Shows that the unit is in vacation mode.
	Fan	Shows that the fan is on and the speed of the fan.
	Electric heater	Shows that the electric heater is on.
	Set temperature achieved	Shows that the water temperature has reached the target point and the unit shut off automatically.
TEMP	Temperature	Shows that the temperature is non-adjustable (measured value).
ON	Timer & ON	Shows that the unit will be turned on by the timer automatically.
OFF	Timer & OFF	Shows that the unit will be turned off by the timer automatically.
min	Minute	Shows that the main display area displays the minute.
S	Second	Shows that the main display area displays the second.
℃	Centigrade	Shows that the temperature in Main display area or Auxiliary display area is in ℃.
℉	Fahrenheit	Shows that the temperature in Main display area or Auxiliary display area is in ℉.
	Lock	Shows that the keyboard is locked.

5. Usage

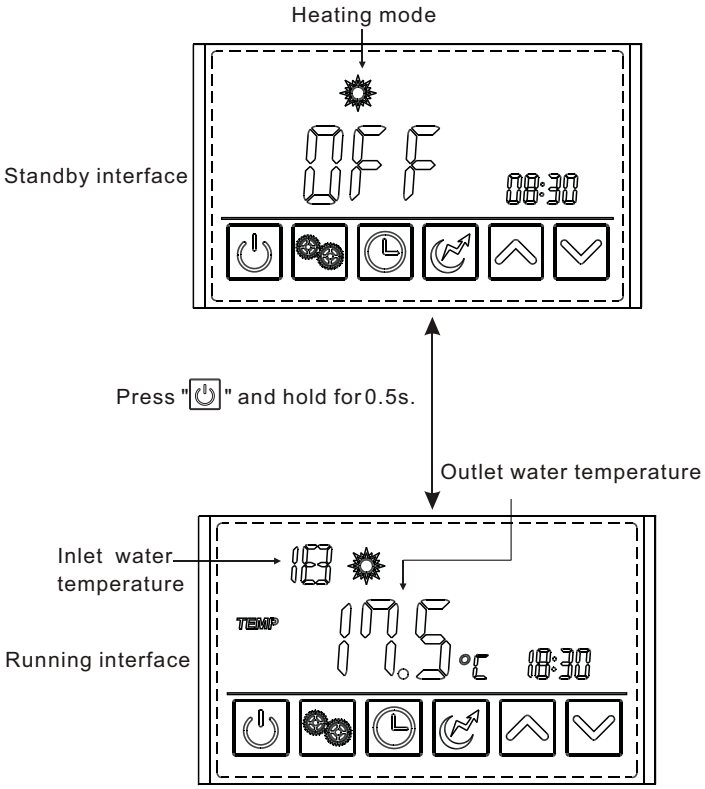
2.Usage of wire controller

2.1 Turn ON/OFF the unit

Press "⏻" and hold for 0.5s in the standby interface of the wire controller to turn on the unit and at this time the main display area shows the water outlet temperature.

Press "⏻" and hold for 0.5s in the running interface of the wire controller to turn off the unit and at this time the main display area shows OFF.

Note: The ON/OFF button can only be used to turn on/off the unit in standby or running interface of the wire controller.

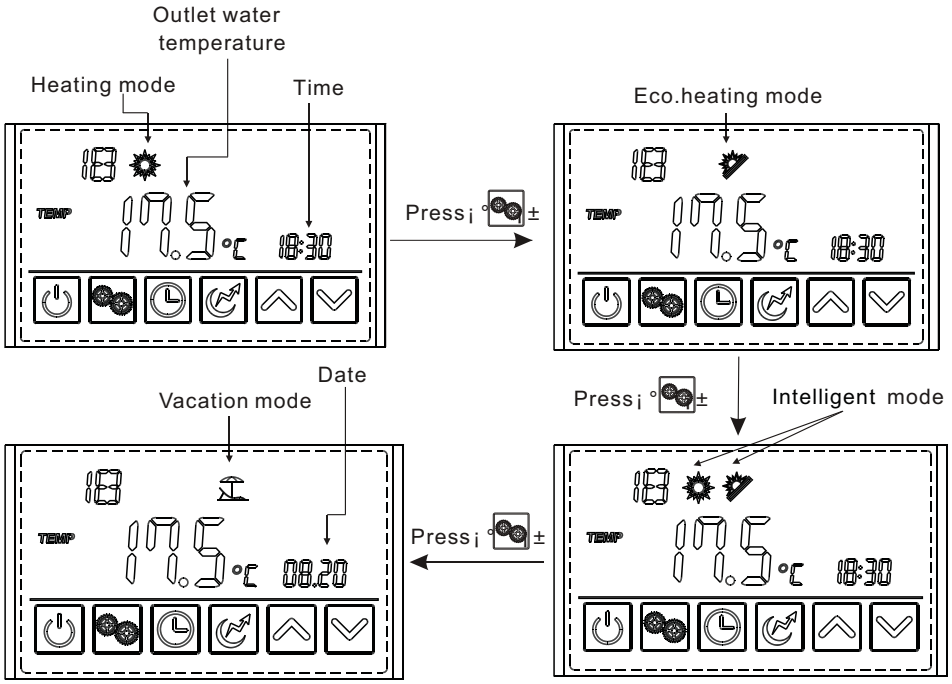


2.2 Mode selection

Press "⚙" to select the mode from Heating ,Eco.heating ,Intelligent , Vacation in the standby or running interface.

For example:

5. Usage

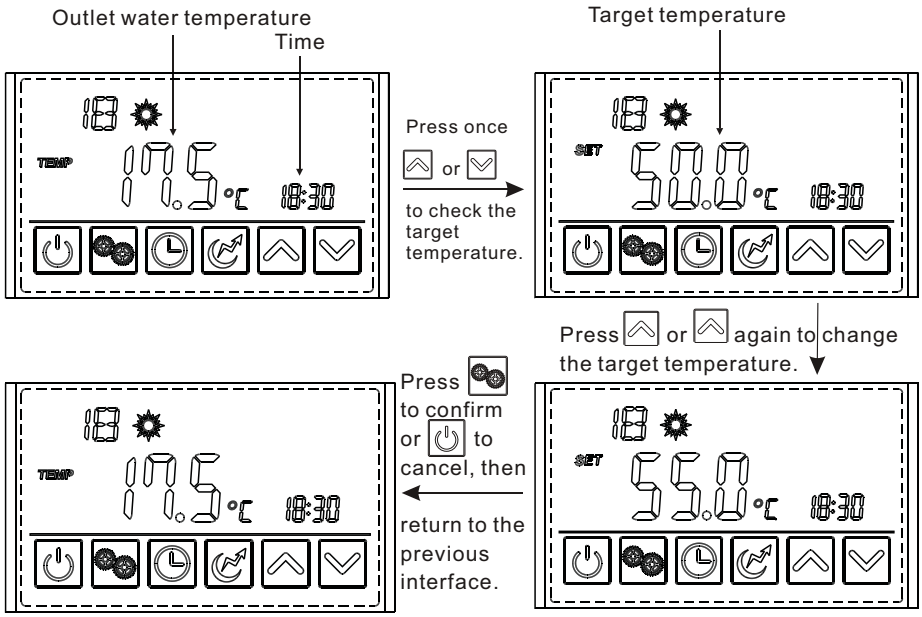


2.3 Target temperature checking and setting

In the standby or running interface, press "" or "" once to check the target temperature of the outlet water. Press "" or "" again to change the target temperature. After making the changes to the parameter, press "" to confirm or "" to cancel the changes, then return to the previous interface. If no operations are performed on the keypad for 5s, the controller exits the parameter modification menu by timeout and the changes are confirmed.

Example: Change the target temperature from 50 to 55.5 when the actual outlet water temperature is 18¡æ

5. Usage



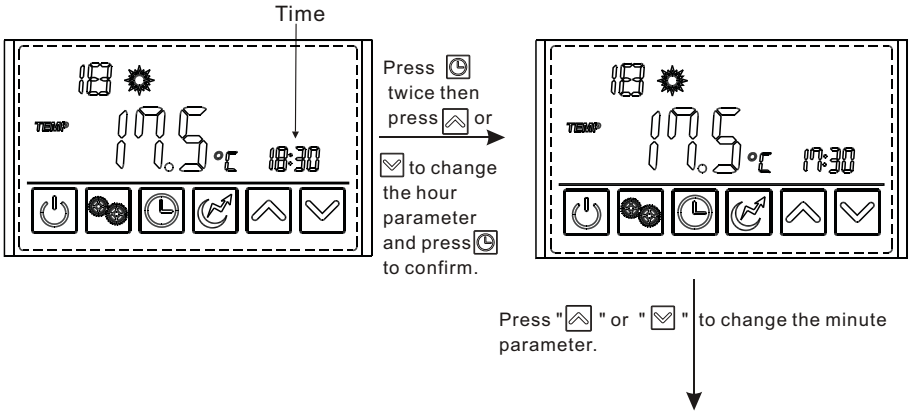
2.4 Time setting

In the standby or running interface, do as follows to set the time when in heating mode. When press "" once, the time parameter will flash. When press "" again, the hour parameter will flash then press "" or "" to change it. After making the changes to the parameter, press"" to confirm, then change the minute parameter as well as the date parameter in the same way.

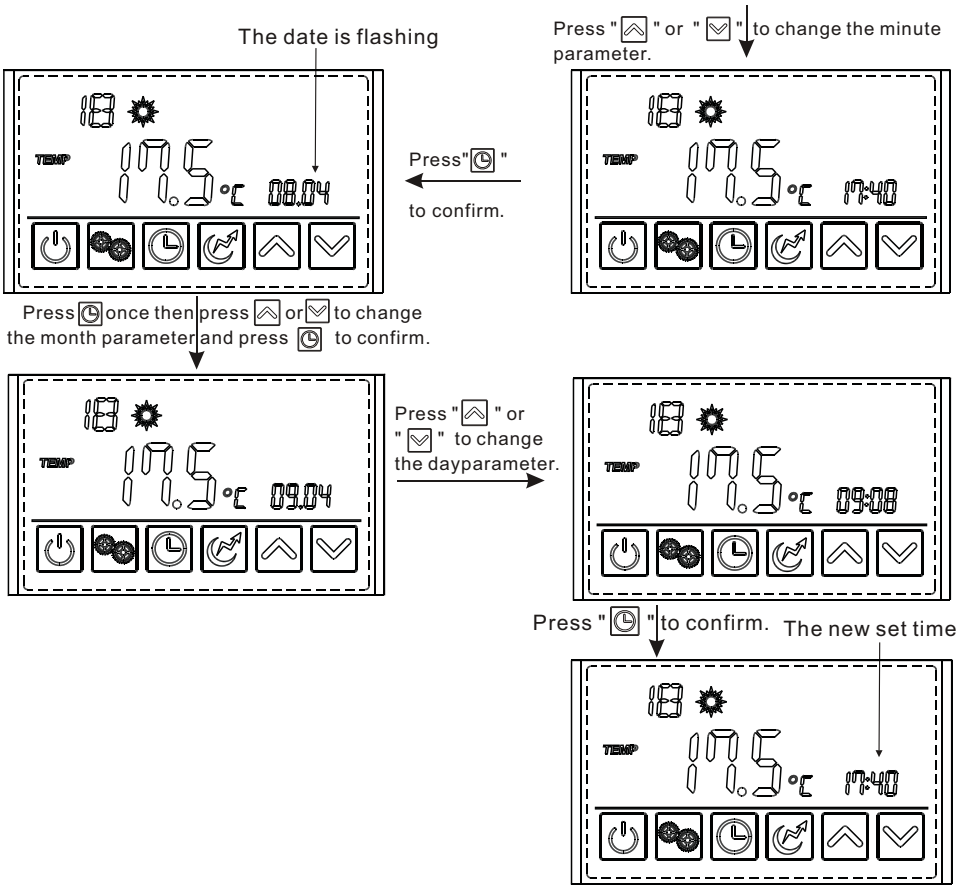
If no operations are performed on the keypad for 10s, the controller exits the parameter modification menu by timeout and the changes are confirmed.

Note: Set the date in the same way when in vacation mode.

Example: Change the time and date from 18:30 on August 4th to 17:40 on September 8th.



5. Usage



2.5 Timer setting

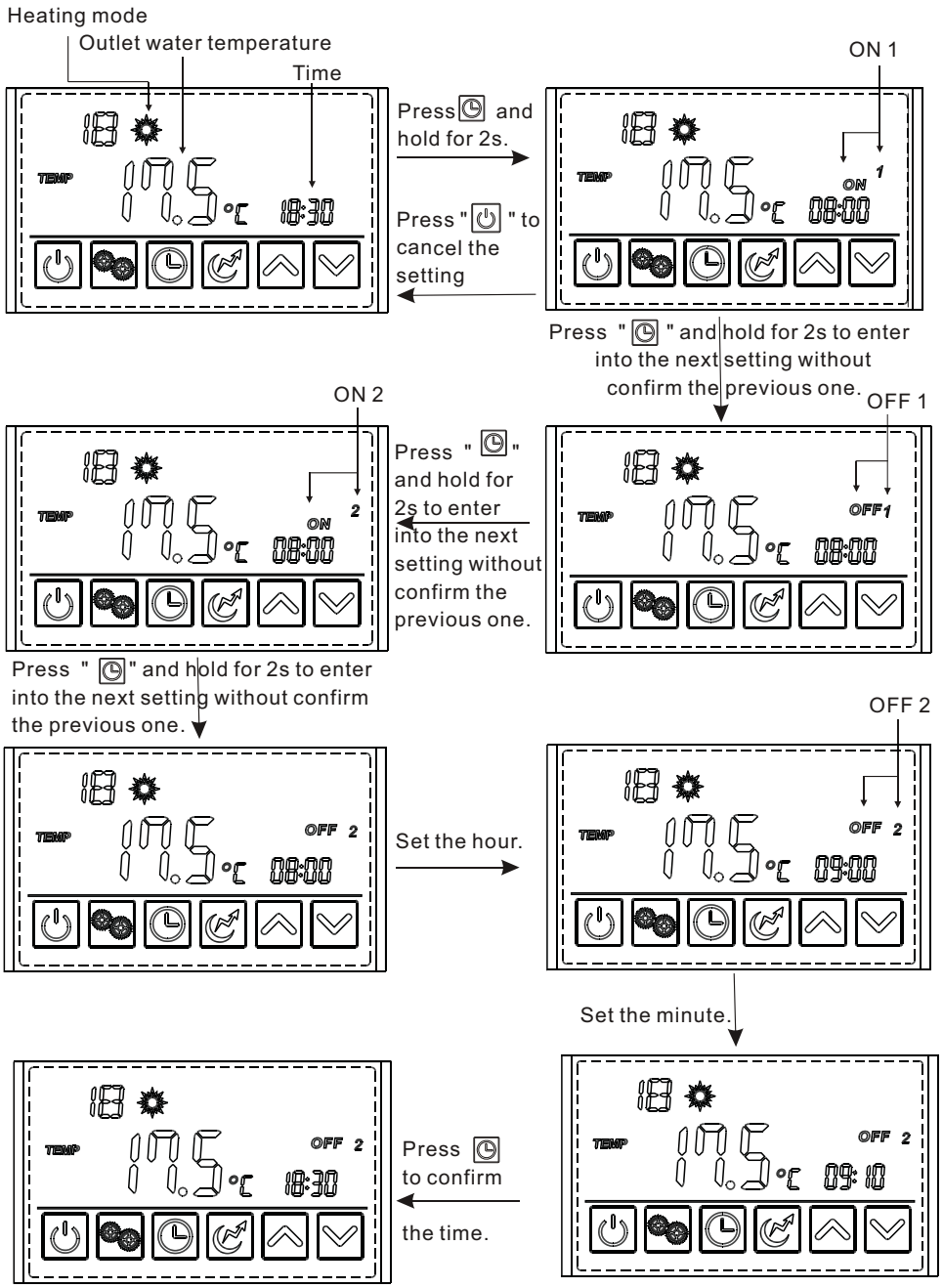
2.5.1 Under the standard mode, economic mode, intelligent mode, you can enter the timer setting.

Press " " and hold for 2s, the "ON "and " 1 " will flash, and then you can set the turn on time of timer1 as the 2.4 clock setting show. After finishing, " OFF " and " 1 " will flash, that means you can set the turn off time of timer1. The "ON "and " 2 " will flash after finishing the timer1 setting, you can set the turn on time of timer2. After finishing, the" OFF "and " 2" will flash, and then you can set the turn off time of timer2. Press " " again to save and back to the interface. If you don't need to set the timer2, you can press the " " to save after finishing the timer1 setting. You will find the " ON "and " 2 " flash. No operation for 5s, the program will back to the interface automatically.

Note: When press " " and hold for 2s, the " ON " and "1 " will flash. It is not necessary for you to set the turn on time of the timer1. You can sequentially to press " " for 2s to enter to the turn off time of timer1. So does the timer2. Or press " " or " " to circularly display.

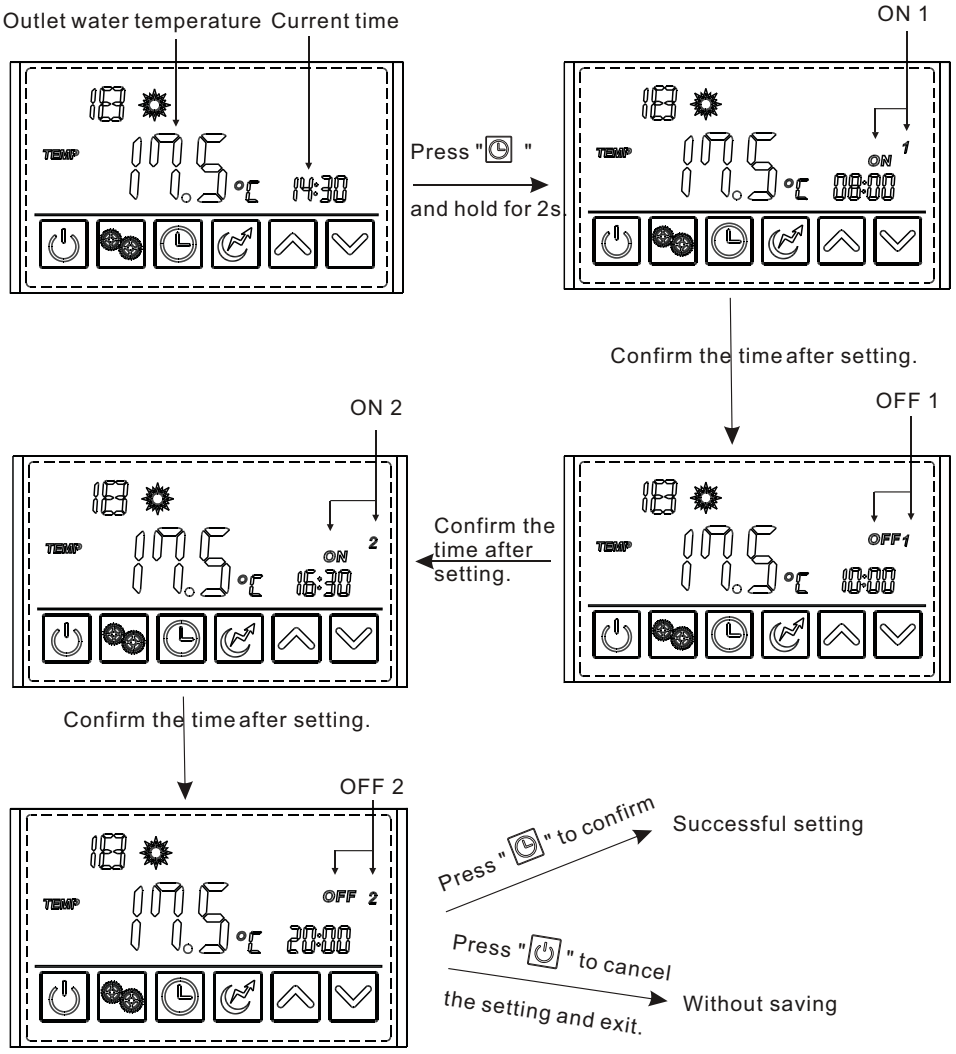
Timer Cancel: Press " " and hold for 2s to enter into the interface, and then press " " to cancel all the operation. Please see the following picture for more details.

5. Usage


Heating mode
Outlet water temperature
Time
Press and hold for 2s.
Press " " to cancel the setting
ON 1
Press " " and hold for 2s to enter into the next setting without confirm the previous one.
OFF 1
ON 2
Press " " and hold for 2s to enter into the next setting without confirm the previous one.
Press " " and hold for 2s to enter into the next setting without confirm the previous one.
OFF 2
Set the hour.
Set the minute.
Press to confirm
the time.

5. Usage

Example: **Running period 1**: 8:00~10:00; **Running period 2**: 16:30~20:00.

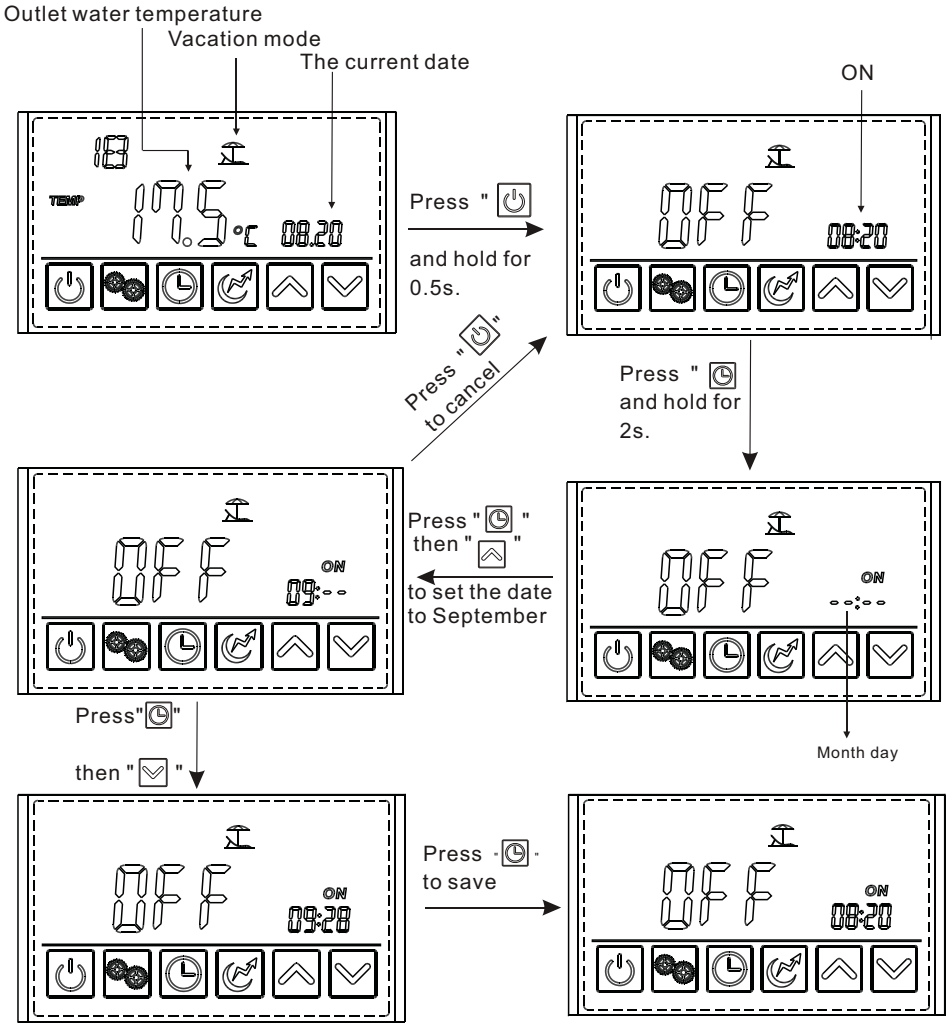


5. Usage

2.5.2 In the vocation mode

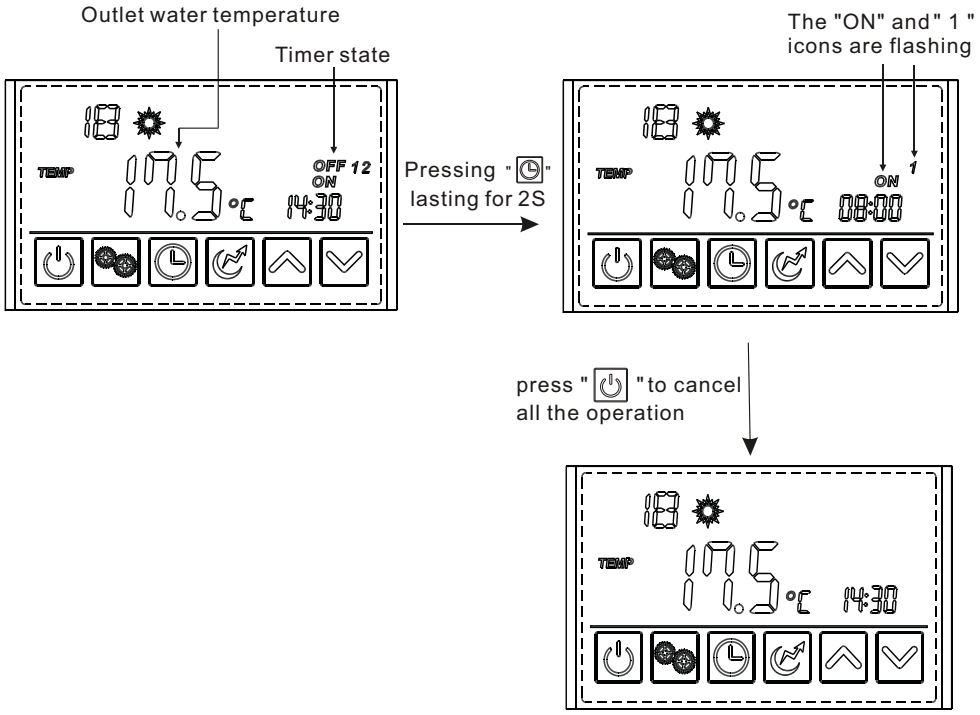
Press " " and hold for 2s to enter into the timer setting interface. The symbol "ON" and the date parameter are flashing at this time. Then set the date in the same way as "2.4 ".

Example: Set the start-up date on September 28.(Note:Turn off the unit before going out.)



5. Usage

2.5.3 If you want to cancel the timer setting ,follow this below

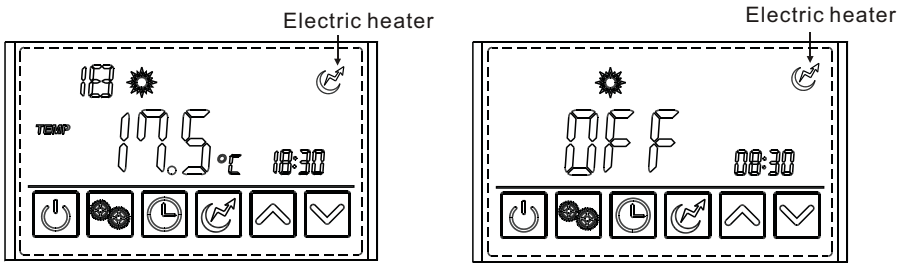


5. Usage

2.6 Electric heater setting

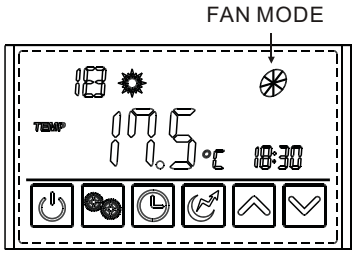
The electric heater can be turned on when the unit is heating or standby.

Press " " once to turn on the electric heater and press " " again to shut it off .



2.7 Fan mode setting

Press " " and hold for 2s for the first time to change the fan mode to low speed running and the fan will run at low speed when the unit target temperature is reached. Press " " and hold for 2s again to change the fan mode to high speed running and the fan will run at high speed when the unit target temperature is reached. Press " " and hold for 2s for the third time to change the fan mode to shut-down and the fan will stop running when the unit target temperature is reached.



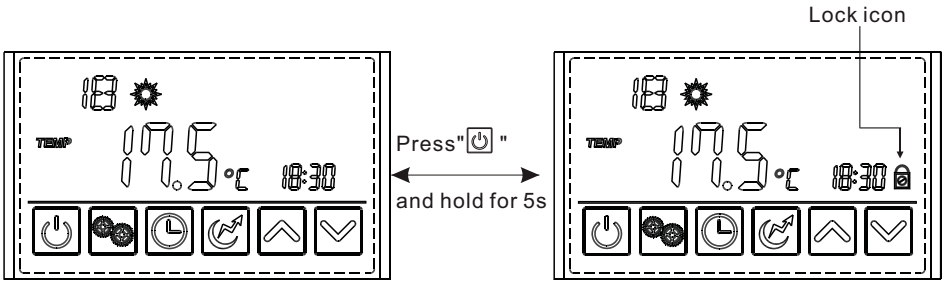
Definition of the fan icon

1. (Running) : shows that the fan is running at high speed
2. (Running): shows that the fan is running at low speed.
3. Fan icon disappears: shows that the fan is shut off.
4. (Static) : shows that the fan will run at high speed when target setting temperature is reached.
5. (Static) : shows that the fan will run at low speed when target setting temperature is reached.

5. Usage

2.8 Keyboard locking

Press "⏻" and hold for 5s once to lock the keyboard. Press "⏻" and hold for 5s again to unlock the keyboard.



6.Maintenance and Repair

6.1 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.
- Don't power off the unit when you use it in continuity, or the water in the pipe will freeze and split the pipe. We will not answer for this damage.
- Check magnesium anode every 12 months and replace as soon as possible if needed.

7.Appendix

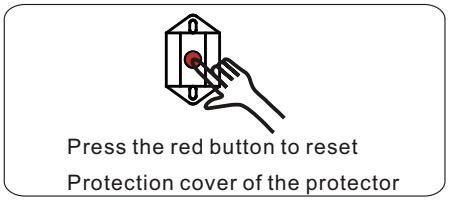
6.2 Trouble Shooting

For any malfunctions, please refer to the table below:

Malfunction	Display	Canse	Solution
Bottom water temp. Failure	P01	The water bottom temp. Sensor is open or short circuit	Check or change the water bottom temp. Sensor
Top tank water temp. Failure	P02	The water top tank temp. sensor is open or short circuit	Check or change the water top tank temp. Sensor
Ambient temp. Failure	P04	The ambient temp. sensor is open or short circuit	Check or change the ambient temp. Sensor
Coil temp. Failure	P05	The pipe temp. sensor is open or short circuit	Check or change the pipe temp. Sensor
Refrigerant absorb temp. Failure	P07	The evaporator temp. Sensor is open or short circuit	Check or change the evaporator temp. Sensor
Anti-freeze temp. Failure	P09	The anti-freeze temp. Sensor is open or short circuit	Check or change the anti-freeze temp. Sensor
Solar temp. Failure	P034	The solar temp. Sensor is open or short circuit	Check or change the solar temp. Sensor
High pressure protection	E01	The exhaust pressure is high , high pressure switch action	Check high pressure switch and cooling return circuit
Low pressure protection	E02	The suction pressure is low, Low pressure switch action	Check low pressure switch and cooling return circuit
Water flow failure	E03	No water or litter water in water system	Check the flow volume ,water pump is failure or not
Electric-heater overheat protection	E04	Water flow volume not enough, Water system pressure difference is small	Check the flow volume, water system is jammed or not
Anti-freeze protection	E07	Water flow volume not enough, Water system pressure difference is small	Check the flow volume, water system is jammed or not
Communication failure	E08	Wired remote control with master signal failure	Check the connection line between the wired remote control and motherboard
Winter frost protection	E09	Ambient temperature is too low	

7.Appendix1. Use for overheating protector

Overheating protector is used to prevent safety accident caused by water temperature inside the tank too high in case that the heat pump controller is out of control. When the temperature inside the tank reaches the action value of the protector, the power supply will be cut off. It has to be reset manually so that the unit returns to normal. The operation in detail is as following:



Press the red button to reset

Protection cover of the protector

Warning

- Be careful of electric shock when you press red button.

Code:20201120-0001

Tack för att du valde Indol!
Thank you for choosing Indol!

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