ACCORRONI E. G.

Climate Technology

Swimming Pool Heat Pump

TCPO 07 - TCPO 09 - TCPO 11

Operation and Installation Manual

TECHNICAL INFORMATION

TCPO 07 - TCPO 09 - TCPO 11

TABLE OF CONTENT

READ THIS MANUAL CAREFULLY BEFORE STARTING UP THE UNIT. DO NOT THROW IT AWAY.

KEEP IT IN YOUR FILES FOR FUTURE REFERENCE.

BEFORE OPERATING THE UNIT, MAKE SURE THE INSTALLATION HAS BEEN CARRIED OUT CORRECTLY BY A PROFESSIONAL DEALER. IF YOU FEEL UNSURE ABOUT OPERATION, CONTACT YOUR DEALER FOR ADVICE AND INFORMATION.

INTRODUCTION

This manual

This manual includes the necessary information about the unit. Please read this manual carefully before you use and maintain the unit.

The unit

The swimming pool heat pump is one of the most economical systems to heat the swimming pool efficiently. Using the free renewable energy from the air and the earth it delivers up to five times more energy in heating than a traditional heating system such as gas boiler or electric heater. So you will save 4/5 cost of the traditional heating. The swimming pool heat pump lengthens your swimming season and gives you comfort at high level. You could enjoy swimming not only in summer, but also in spring, autumn and even winter time.

- ✧ **Ecological and economical heating**
  By making use of the renewable energy in the outside air, it consumes much less energy with low carbon emission. Use environment friendly advanced refrigerant R410A which has no effect on Ozone.

- ✧ **Titanium heat exchanger**
  Advanced titanium heat exchanger guarantees long life span of heat pump free from corrosion and rust. By using of titanium heat exchanger the heat pump could be applied with all types of water treatment such as chlorinate, iodine, bromine and salt water.

- ✧ **Multiple functions**
  - Cooling and heating functions available;
  - Auto operation, Auto-restart, Auto defrost
  - Timer on/off: no human attendance is required
  - Wide ambient working condition: -7°C to 43°C

- ✧ **Reliable operation**
  To guarantee the stable running and increase the suability of the unit multiple protection devices have been set into pool heat pump which include insufficient water flow protection, high/low pressure protection, overload protection, compressor protection.

- ✧ **Safe use**
  The swimming pool heat pump works without oil, gas or other hazardous substance which avoid potential risk that goes together. Moreover no gas connection or a fuel tank is needed. No risk of intoxication, smell or pollution from leakage.

- ✧ **Self-diagnosis**

When there is malfunction, the swimming pool heat pump will make self-diagnosis by displaying error code from the control panel. The problem could be found out at a glance.

SAFETY INSTRUCTIONS

To prevent injury to the user, other people, or property damage, the following instructions must be followed. Incorrect operation due to ignoring of instructions may cause harm or damage.

Install the unit only when it complies with local regulations, by-laws and standards. Check the main voltage and frequency. This unit is only suitable for earthed sockets, connection voltage 220 – 240 V ~ / 50Hz.

The following safety precautions should always be taken into account:

- Be sure to read the following WARNING before installing the unit.
- Be sure to observe the cautions specified here as they include important items related to safety.
- After reading these instructions, be sure to keep it in a handy place for future reference.

⚠ WARNING

Do not install the unit yourself.
Incorrect installation could cause injury due to fire, electric shock, the unit falling or leakage of water. Consult the dealer from whom you purchased the unit or a specialized installer.

Install the unit securely in a place.

When insufficiently installed, the unit could fall causing injury. When installing the unit in a small room, please take measures (like sufficient ventilation) to prevent the asphyxia caused by the leakage of refrigerant.

Use the specified electrical wires and attach the wires firmly to the terminal board (connection in such a way that the stress of the wires is not applied to the sections).
Incorrect connection and fixing could cause a fire.

Be sure to use the provided or specified parts for the installation work.
The use of defective parts could cause an injury due to possible fire, electric shocks, the unit falling etc.

Perform the installation securely and please refer to the installation instructions.
Incorrect installation could cause an injury due to possible fire, electric shocks, the unit falling, leakage of water etc.

Perform electrical work according to the installation manual and be sure to use a dedicated

section.

If the capacity of the power circuit is insufficient or there is an incomplete electrical circuit, it could result in a fire or an electric shock.

The unit must always have an earthed connection.

If the power supply is not earthed, you may not connect the unit.

Never use an extension cable to connect the unit to the electric power supply.

If there is no suitable, earthed wall socket available, have one installed by a recognized electrician.

Do not move/repair the unit yourself.
Before proceeding with any maintenance, service or repair work, the product must be isolated from the mains electrical supply. Only qualified personnel should carry out these tasks. Improper movement or repair on the unit could lead to water leakage, electrical shock, injury or fire.

CAUTION

Do not install the unit in a place where there is a chance of flammable gas leaks.

If there is a gas leak and gas accumulates in the area surrounding the unit, it could cause an explosion.

Perform the drainage/piping work according to the installation instruction.

If there is a defect in the drainage/piping work, water could leak from the unit and household goods could get wet and be damaged.

Do not clean the unit when the power is 'ON'.

Always shut 'OFF' the power when cleaning or servicing the unit. If not, it could cause an injury due to the high speed running fan or an electrical shock.

Do not continue to run the unit when there is something wrong or there is a strange smell.

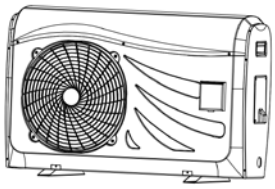
The power supply needs to be shut 'OFF' to stop the unit; otherwise this may cause an electrical shock or fire.

Do not put your fingers or others into the fan, or evaporator.

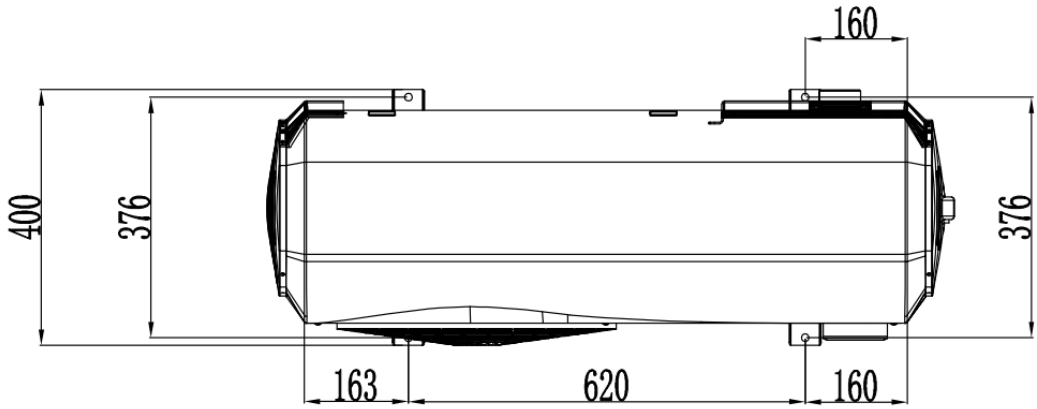
The ventilator runs at high speed, it could cause serious injury.

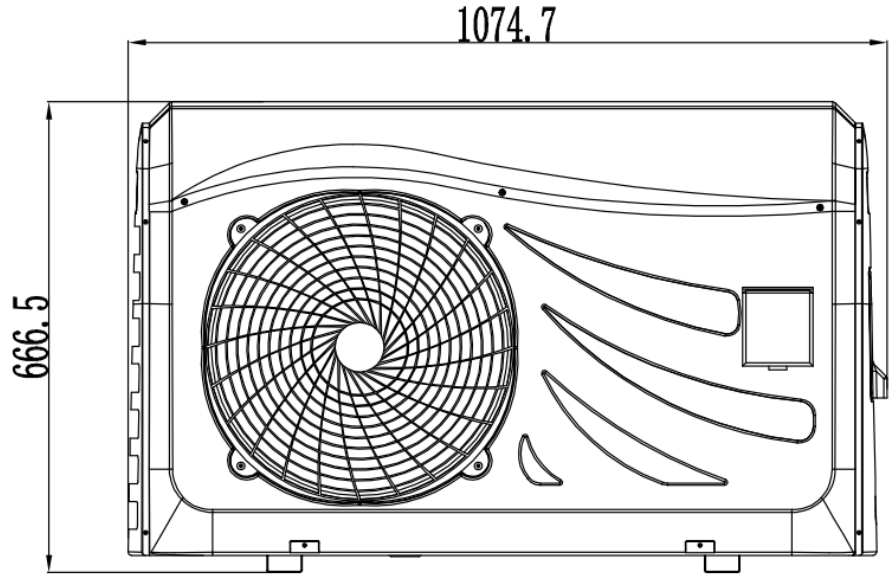
ITEMS INSIDE PRODUCT BOX

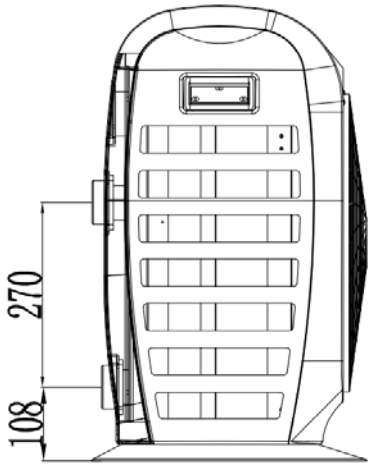
Before starting the installation, please make sure that all parts are found inside the box.

The Unit Box		
Item	**Image**	**Quantity**
Swimming pool heat pump		1
Operation and Installation Manual		1

OVERVIEW OF THE UNIT
Unit Dimension （mm）







INSTALLATION

Installation information

The following information given here is not an instruction, but simply meant to give the user a better understanding of the installation.

Condition of installation

The following information given here is not an instruction, but simply meant to give the user a better understanding of the installation.

Installation place

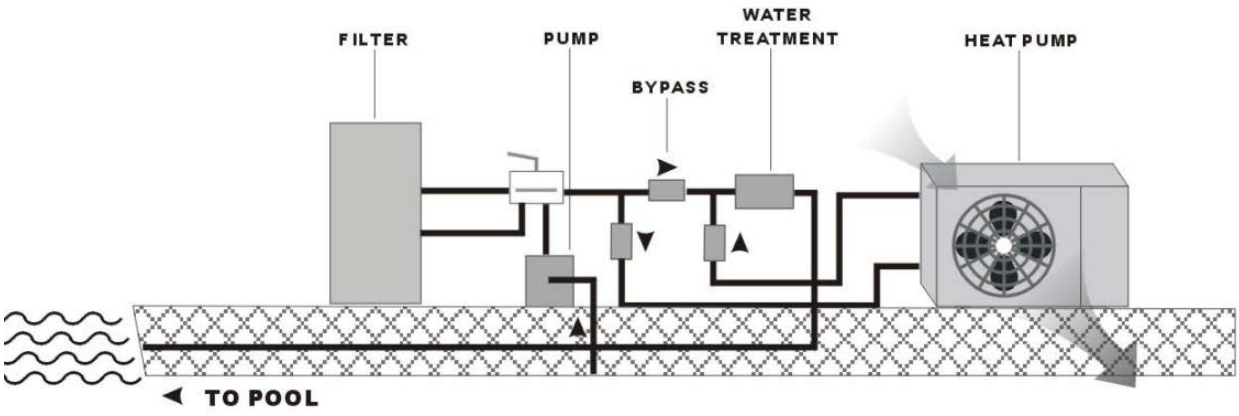
Install the swimming pool heat pump on a flat, horizontal, and stable surface. Maintain 1 M of open space in front of the discharge grids and 3 M on the outlet side of the ventilator. And reserve enough space to allow access to temperature controller.
Make sure that the discharged air will not be breathed in.

To perfect your installation

--Avoid directing the flow of ventilated air towards a sensitive noise zone, such as room window.
--Avoid positioning pool heat pump on a surface that can transmit vibrations to dwelling.
--Try to avoid placing appliance under a tree or exposed to water or mud, which would be likely to complicate maintenance.

Water connection

The heat pump is connected to a filtration circuit with a by-pass.
It is imperative that the by-pass is placed after the pump and the filter.
The by-pass generally consists of 3 valves.
This makes it possible to regulate the water flow which passes through the heat pump and to isolate the heat pump completely for any maintenance work, without cutting the flow of filtered water.



If your installation is equipped of a water treatment with product adductions (chlorine, brominates, salt…) the by-pass must be installed before the water treatment, with a non-return valve between the by-pass and water treatment.

Electrical connection

Electrical supply must correspond to that indicated on the appliance.
Connection cables have to be sized according to appliance power and installation requirements.
Please refer to below table:

Heat pump	Cable size
TCPO 7 01 G	3x2.5mm^2
TCPO 9 01 G	3x4.0mm^2
TCPO 11 01 G	3x6.0mm^2

These data are only indication, you must ask an electrician to determine the exact data for your pool installation.
Use the cable glands and grommets provided inside the heat pump to route cables.

Trial running

After connecting water to the pool system, complete with a suitable by-pass and electrical connections by a qualified engineer.

Be sure that:

1) Appliance is horizontal and on a firm base.
2) Water circuit is well connected (no leaks and no chance of injury due to badly fitted hydraulic couplings).
3) Electrical circuit is well connected (all cables tightened correctly at terminals and intermediate circuit breaker), insulated and earthed correctly.
4) The installation requirements described previously are strictly adhered to.

ATTENTION: THE HEAT PUMP ONLY FUNCTIONS WHEN WATER FLOW IS PRESENT.

Initial Start up

Start the heat pump following every point in the below order:

- Open all by-pass valves
- Start pool system pump
- Turn on pool heat pump
- Set regulation

To set the regulator, slowly close off the middle bypass valve until the gauge at the back of heat pump reads between 23 - 25 kg/cm2.

Select heat or cool mode and then set temperature. If set on heat mode the air flow leaving the front of the heat pump should feel cool and if set on cool mode the air flow leaving the front of the heat pump should feel warm.

With the heat pump operating turn the filter pump off. The unit should also turn off automatically. This should display an error message because the water flow has been interrupted. When filter pump

is turned on the heat pump will also turn on after a few minutes and resume normal operation. Press the up or down button to cancel the error message displayed.

OPERATING THE UNIT

Operating the unit comes down to operating the digital controller.

⚠ NEVER LET THE DIGITAL CONTROLLER GET WET. THIS MAY CAUSE AN ELECTRIC SHOCK OR FIRE.

⚠ NEVER PRESS THE BUTTONS OF THE DIGITAL CONTROLLER WITH A HARD, POINTED OBJECT. THIS MAY DAMAGE THE DIGITAL CONTROLLER.

⚠ NEVER INSPECT OR SERVICE THE DIGITAL CONTROLLER YOURSELF, ASK A QUALIFIED SERVICE PERSON TO DO THIS.

Features and functions

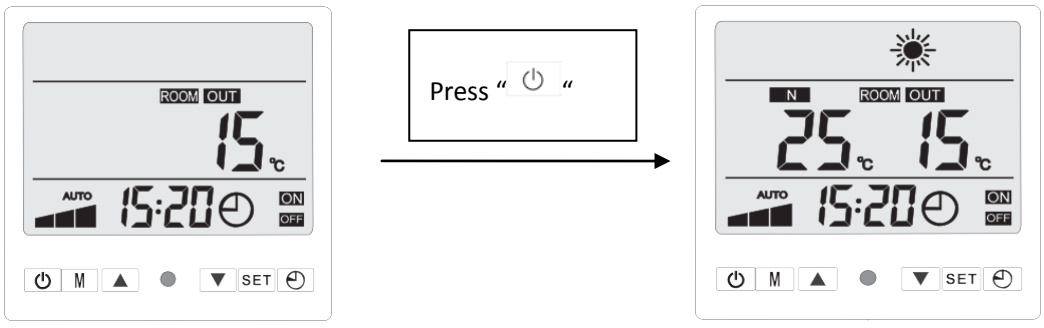
Basic controller functions

The basic controller functions are:

- Turning the heat pump 'ON'/'OFF'.
- 24 hours real time clock.
- Timer 'ON' and timer 'OFF'.
- Parameter adjustment

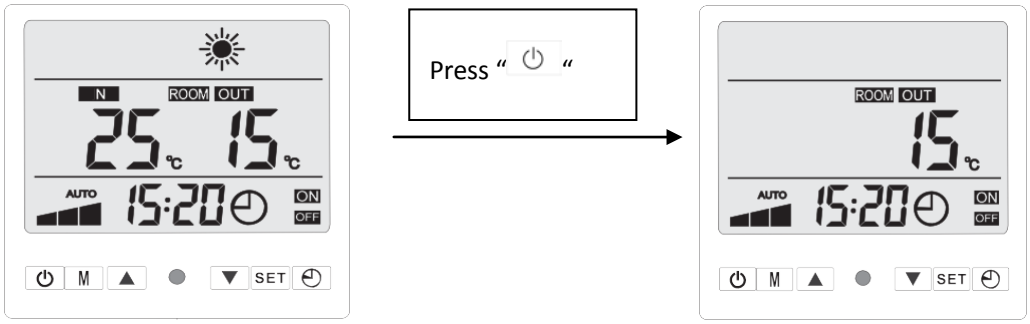
1、 Power on/off

(1)Power on: with the power off, press" ⏻ "key



Power off Power on

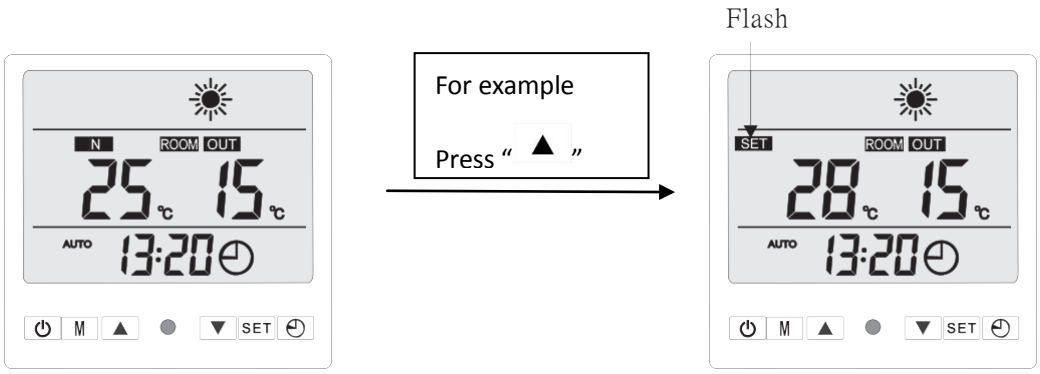
（2）Power off： with the power on，press” ⏻ ”key



Power on　　Power off

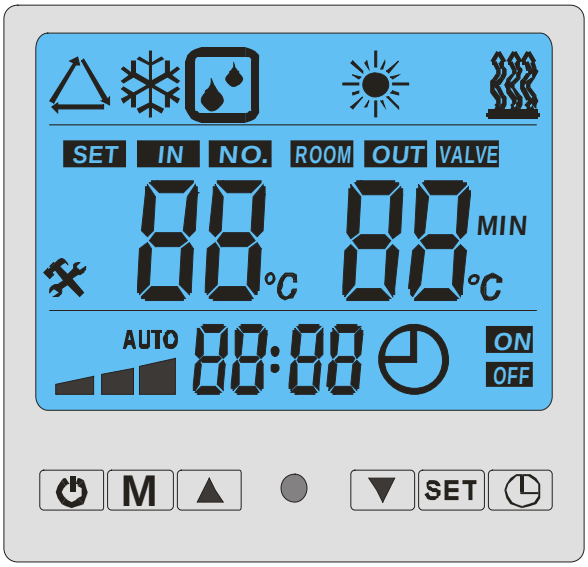
2、Temperature setting

With power on, by adjust or by increase or decrease the set temperature



Initial state

Controller Operation



Introduction for the keys

ON/OFF

Press it to switch on or off heat pump.

MODE SELECTION

Press it to select the mode. The sequence is: automatic-cooling -heating.

During parameter setting, press it to adjust parameters;

During clock and timer setting, press it to choose the hour value or minute value.

UP AND DOWN

Press them to adjust the value of water temperature, clock, timer, parameters;

During failure checking and p arameter checking, press any of them to exit checking.

SETTING AND CONFIRM

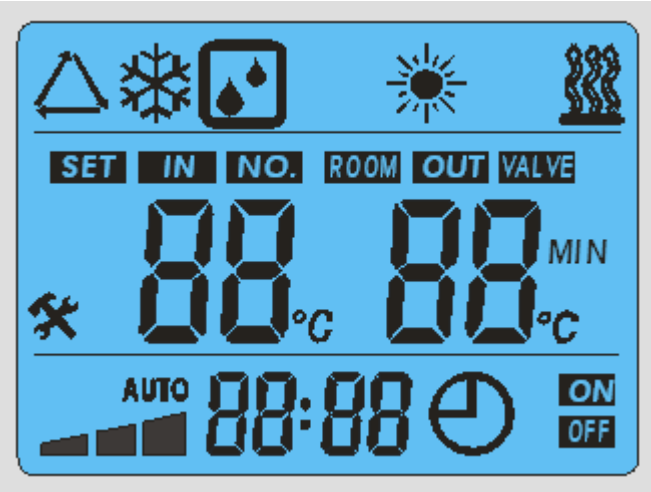
Long press it for more than 6 seconds, you can check and adjust the parameters. Press the UP/DOWN key to exit operation.

When a failure occurs, press it for no more than 2 seconds, you can check the failure code. Press it again you can check the other failure code if more than one occurs. Press the UP/DOWN key to exit checking.

CLOCK AND TIMER KEY

Press it to set clock and timer. Detailed operation will be described in following pages.During parameter setting, press it to change the rolling direction of parameters.

Controller Operation



Top area

△ Automatic mode symbol.

❄ Cooling mode symbol.

☀ Heating mode symbol.

Middle area

SET Temperature setting symbol, the figure under is the temperature value.

IN Inlet water temperature symbol, the figure under is the temperature value.

NO. Parameter number symbol, the figure under is the parameter number .

ROOM OUT Outdoor ambient temperature symbol, the figure under is the temperature value.

VALUE Parameter value symbol, the figure under is the parameter value.

Failure symbol.

Bottom area

ON Turning on timer symbol. It appears when setting turn on timer.

OFF Turning off timer symbol. It appears when setting turn off timer.

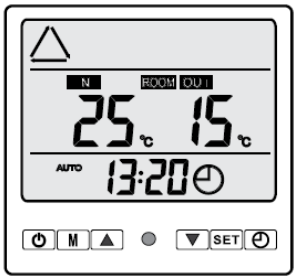
Clock symbol. It appears when setting time.

AUTO Timer circulation symbol.

Timer number symbol. The number of segments represents the number of timer.

How to use the mode

Before setting your temperature, you must first choose a mode operation for your remote control

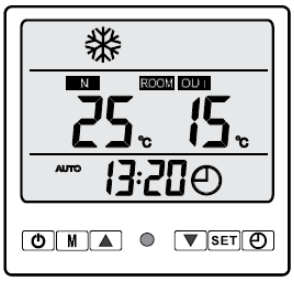


Automatic mode (hot, cold)

Select△for the Auto mode

In this mode, the heat pump will automatically change to heating or cooling your pool (depending on the actual temperature) to reach the desired temperature.

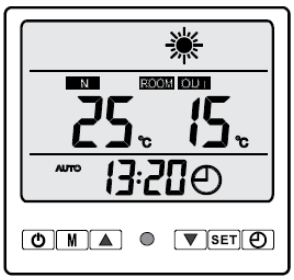
No electric heating.



Cooling mode

Select ❄ for the cooling mode

In this mode, the heat pump will cooling the water in your pool .



Heating mode

Select☀ for the heating mode

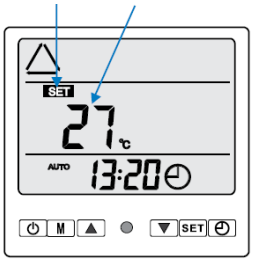
In this mode, the heat pump will heating the water in your pool .

HOW TO USE THE AUTOMATIC MODE

CAUTION: Before you begin, make sure the filter pump is in a state of operation.
Step 1: Press ⏻ once to turn on your pump.
Step 2:Press M to select from one mode to the other until you see the Automatic mode.
Step 3: Use ▲ or ▼ to select the desired temperature (8-40 ° C).

Example
If you chose the value 27 ° C, the screen will display:

Flash Requested temp.



Once the symbol SET stops flashing, the requested temperature will be validated and up to the temperature of the water current (in our example 25 °).
Your screen will display:

Current ambient temp.

Current water temp.

Good to know about the operation of the automatic mode

Automatic Cooling:
When the temperature of the incoming water is greater than or equal to the required temperature + (X +2) ° C, the compressor will enter cooling mode. The compressor stops when the temperature of the incoming water will be equal to the required temperature.

Automatic heating:
When the water temperature is less than or equal to the required temperature-X° C，the compressor will enter heating mode. The compressor stops when the temperature of the incoming water will be equal to the required temperature.

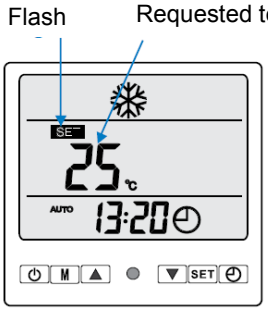
Attention : Following the selection of heating or cooling mode, the current program can not be changed in 10 minutes.

Directions for setting range X and Y
X: parameter adjust from 2 ° to 10 ° C, the default setting is 3 ° C
Y: parameter adjust from 0 ° to 6 ° C, the default setting is 0 °

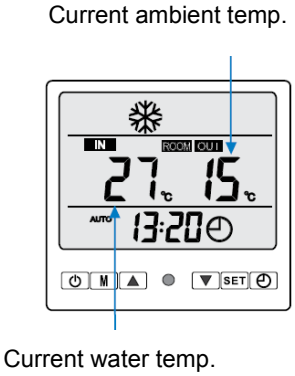
HOW TO USE THE COOLING MODE

CAUTION: Before you begin, make sure the filter pump is in a state ofoperation.
Step 1: Press ⏻ once to turn on your pump.
Step 2:Press M to select from one mode to the other until you see the Cooling mode.
Step 3: Use ▲ or ▼ to select the desired temperature (8-28° C).

Example
If you chose the value 25 ° C, the screen will display:



Once the symbol SET stops flashing, there quested temperature will be validated and up to the temperature of the water current (in our example 27 °).
Your screen will display:



Good to know about the operation of the cooling mode

When the temperature of the incoming water is greater than or equal to the required temperature + X ° C, the compressor will enter cool down mode. The compressor stops when the temperature of the incoming water is less than or equal to the required temperature.

Directions for setting range X and Y
X: parameter adjust from 2 ° to 10 ° C, the default setting is 3 ° C
Y: parameter adjust from 0 ° to 6 ° C, the default setting is 0 °

HOW TO USE THE HEATING MODE

CAUTION: Before you begin, make sure the filter pump is in a state ofoperation.

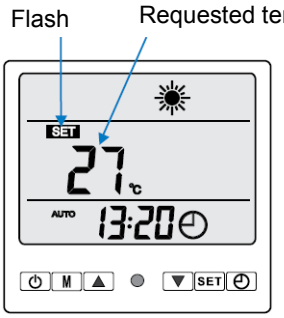
Step 1: Press ⏻ once to turn on your pump.

Step 2:Press M to select from one mode to the other until you see the Heatling mode.

Step 3: Use ▲ or ▼ to select the desired temperature (15-40° C).

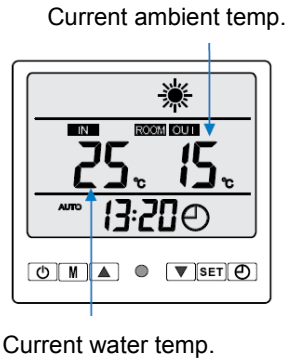
Example

If you chose the value 27 ° C, the screen will display:



Once the symbol SET stops flashing, there quested temperature will be validated and up to the temperature of the water current (in our example 25 °).

Your screen will display:



Good to know about the operation of the heating mode

When the temperature of the incoming water is less than or equal to the required temperature -X ° C, the compressor will start in heating mode. The compressor stops when the temperature incoming water is greater than or equal to the required temperature + Y ° C.

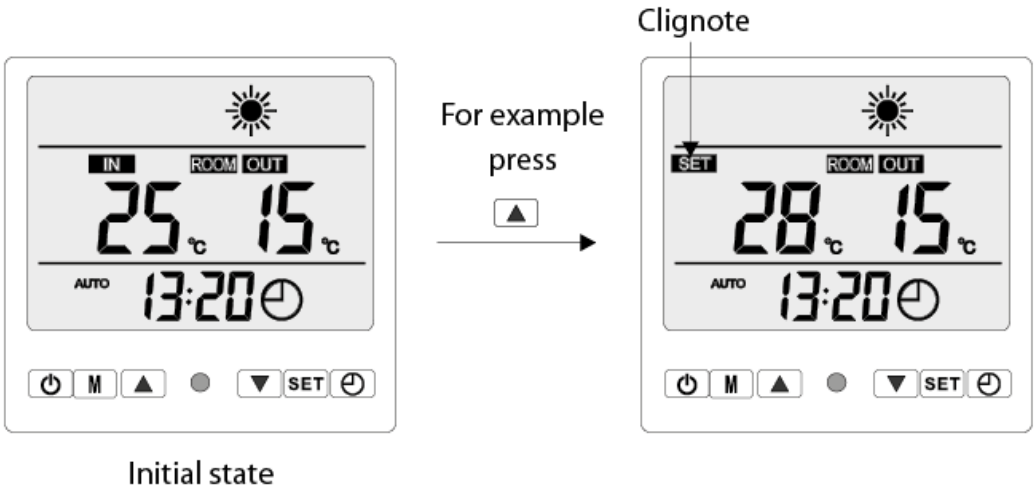
Directions for setting range X and Y

X: parameter adjust from 2 ° to 10 ° C, the default setting is 3 ° C

Y: parameter adjust from 0 ° to 6 ° C, the default setting is 0 °

Water temperature setting

When the heat pump is switched on, just press ▲ or ▼ to adjust water temperature.



Initial state

Clock setting M SET

Set the system time according to the local time as follows:

Step 1:press to start clock setting, the symbol flashes.

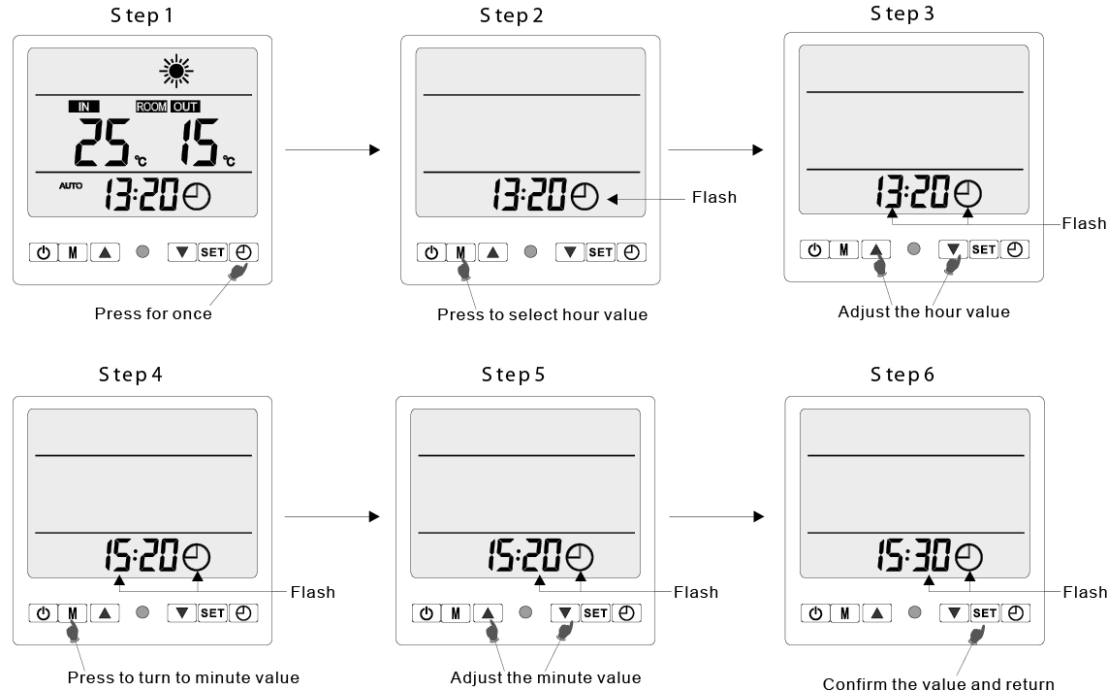
Step 2:press M to select hour and the corresponding value flashes.

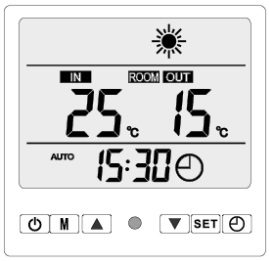
Step 3:press ▲ or ▼ to adjust the hour value.

Step 4:press M to select minute and the corresponding value flashes.

Step 5:press ▲ or ▼ to adjust the minute value.

Step 6:press SET to confirm the value.





ON/OFF timer setting

With this function ,the heat pump can turn on or turn off automatically at the set time.

ON/OFF timer setting as follows:

Step 1:press twice to start ON time setting.

Step 2:press M to select hour and the corresponding value flashes.

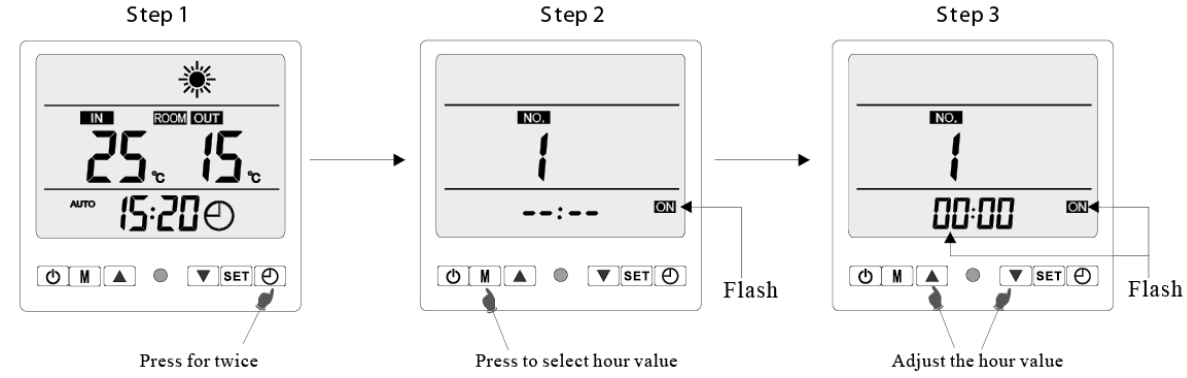
Step 3:press or to adjust the hour value.

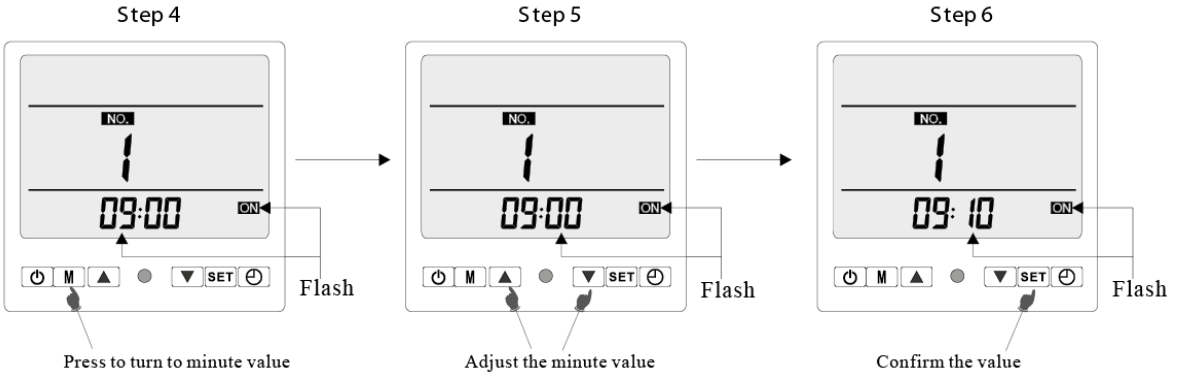
Step 4:press M to select minute and the corresponding value flashes.

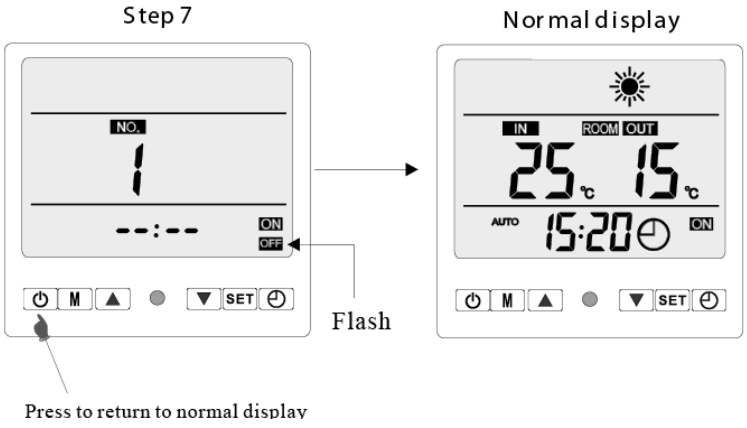
Step 5:press or to adjust the minute value.

Step 6:press SET to confirm the value.

Step 7:press to return to normal display.







How to set an OFF time point

OFF timer setting

Step 1:press for 3 times to start OFF time setting.

Step 2:press M to select hour and the corresponding value flashes.

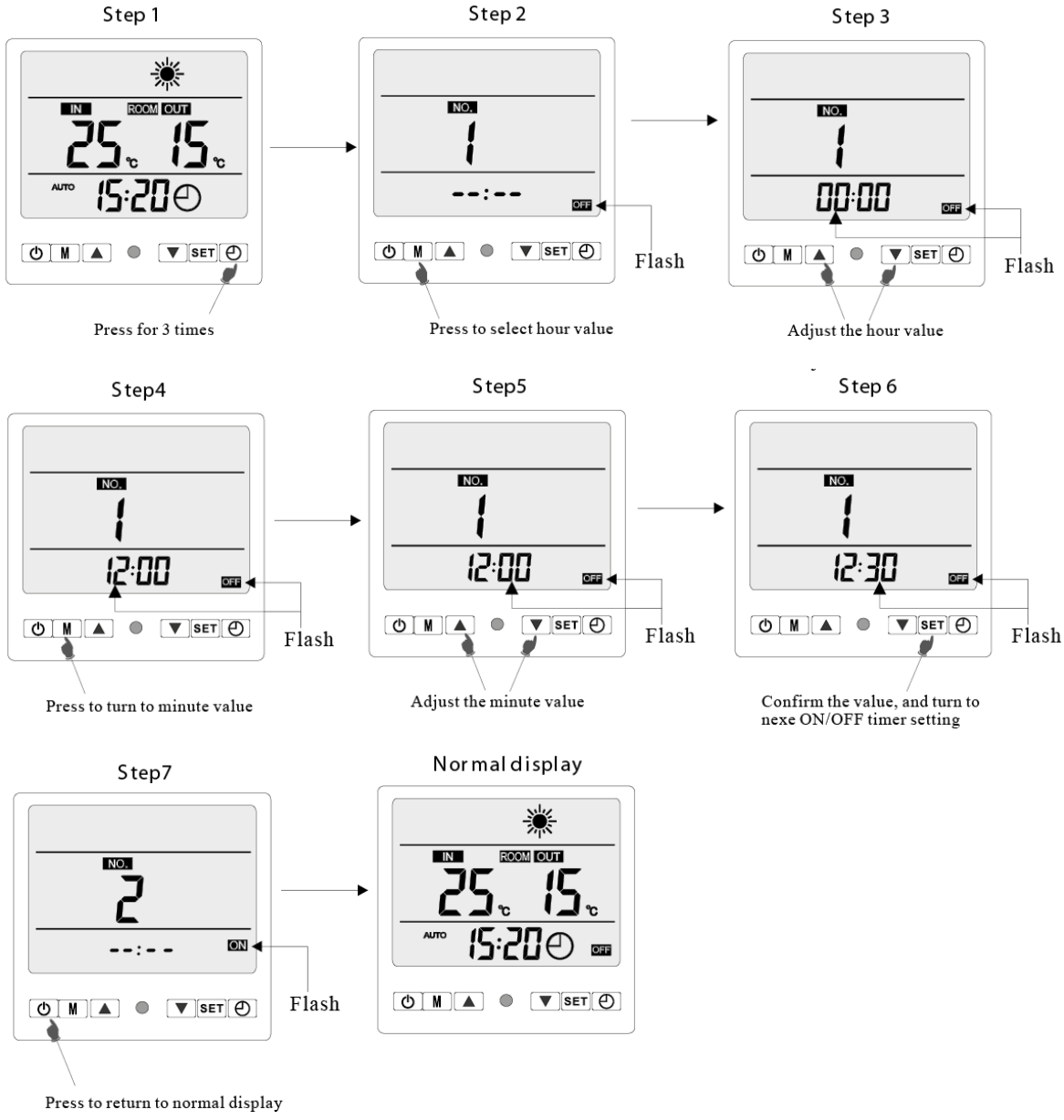
Step 3:press ▲ or ▼ to adjust the hour value.

Step 4:press M to select minute and the corresponding value flashes.

Step 5:press ▲ or ▼ to adjust the minute value.

Step 6:press SET to confirm the value.

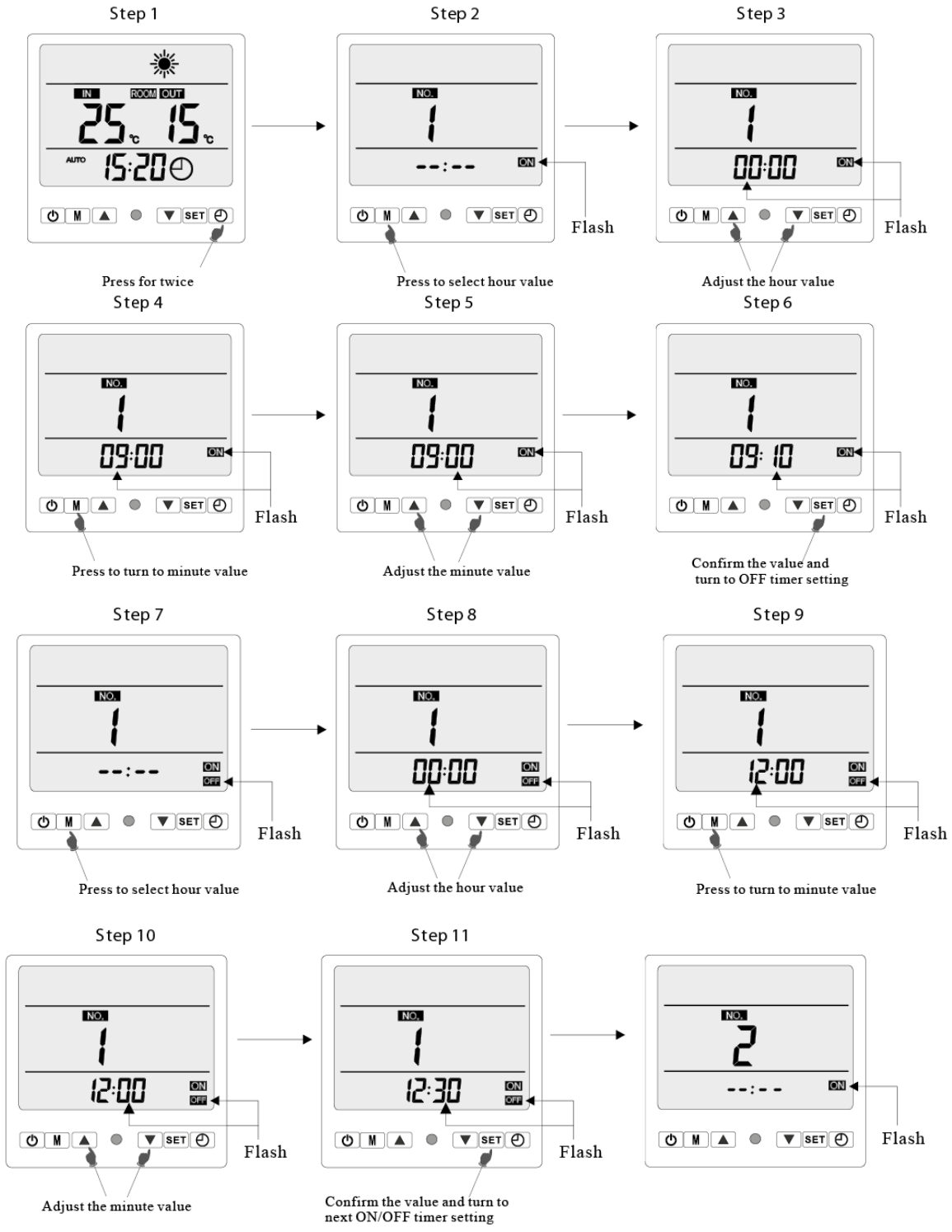
Step 7:press to return to normal display.



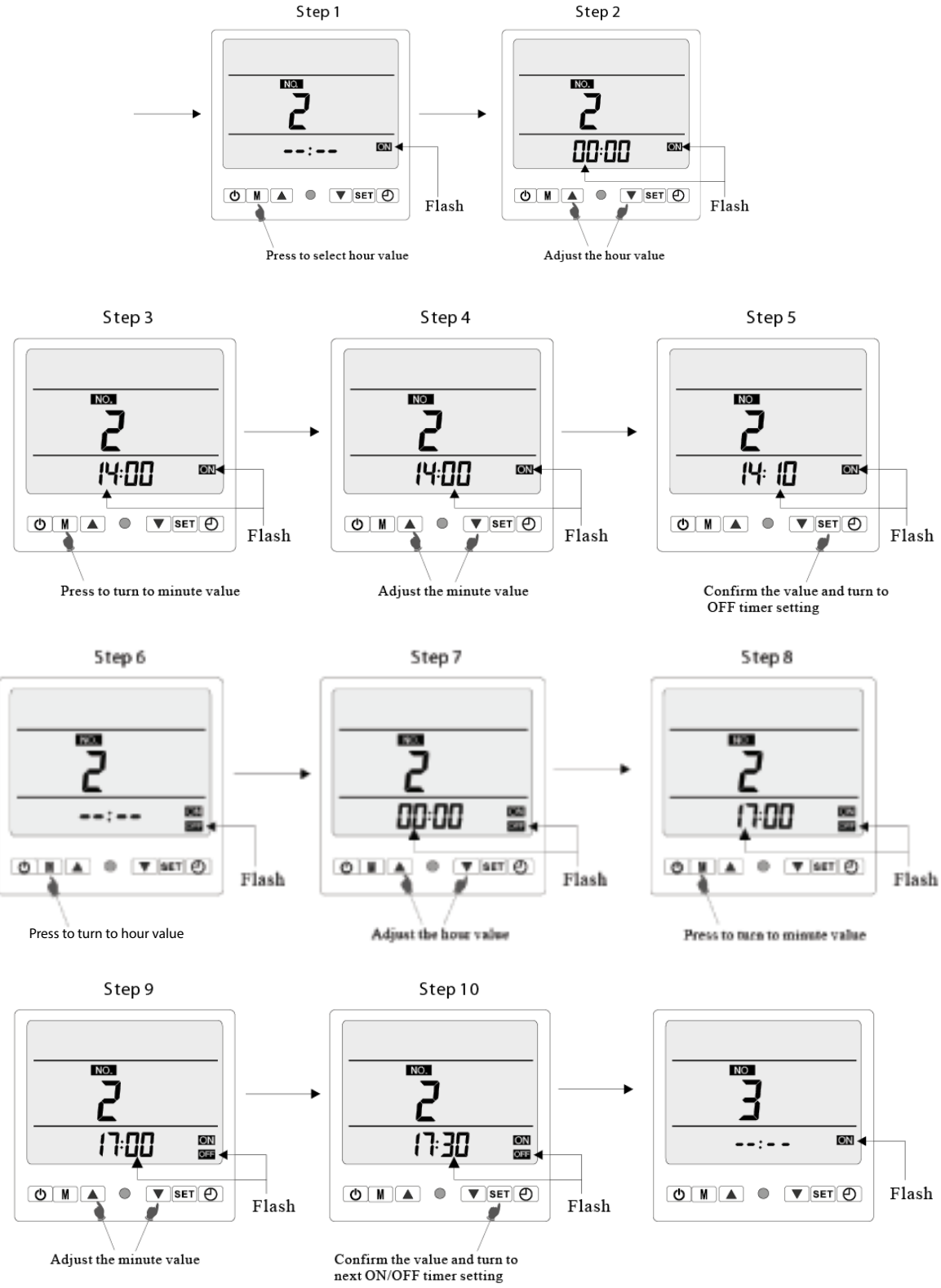
Totally 3 ON/OFF timer can be set. And they can be applied to use for every day or only one day. In timer setting status, the figure below NO represents the timer sequence. If it shows “--:--”on bottom, it means timer invalid.

Below examples show hot to set heat pump to switch on at 9:10 and switch off at 12:30, and switch on again at 14:10 and switch off at 17:30 and switch on again at 19:10 and switch off at 23:30.

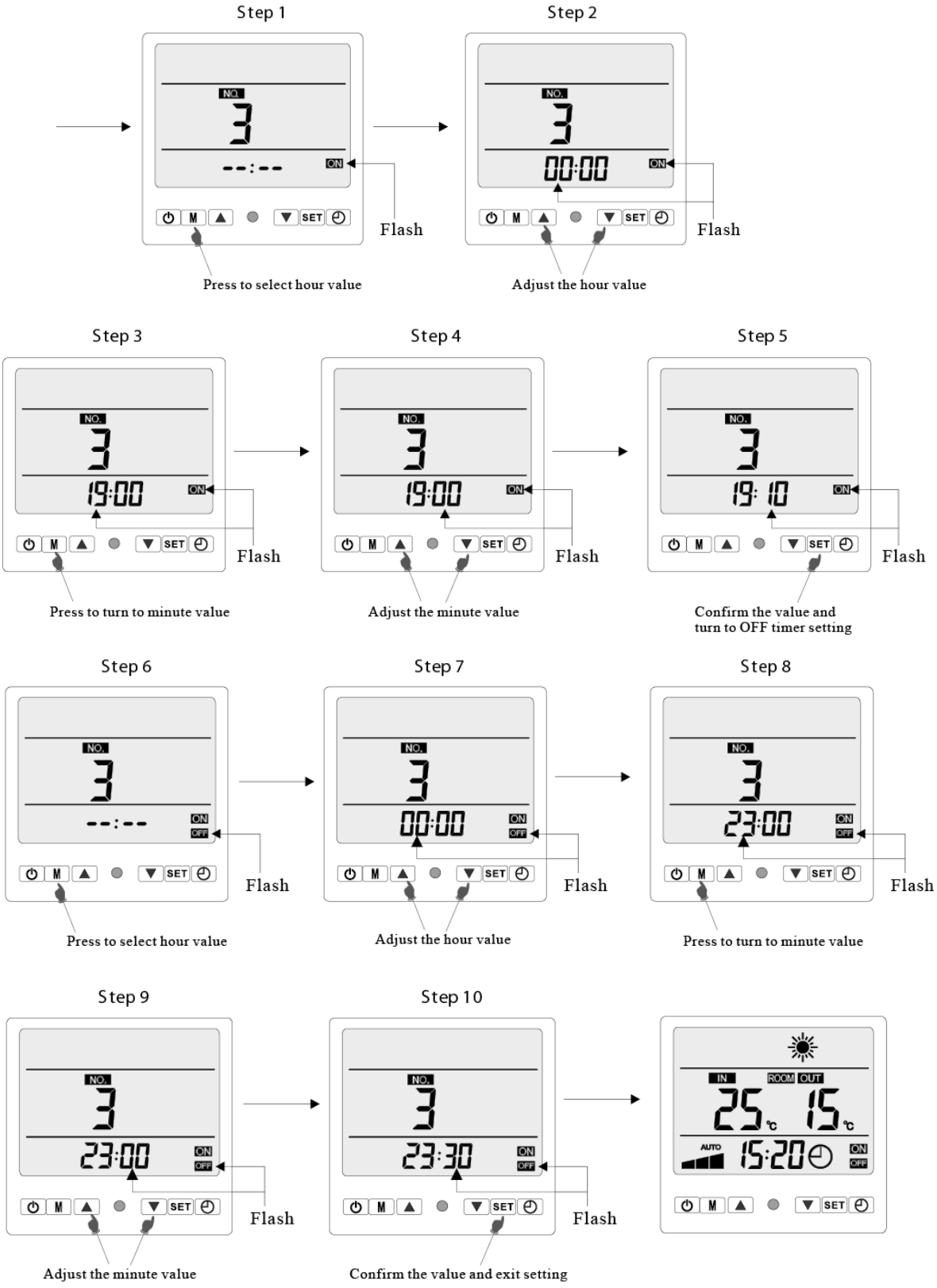
The 1st ON/OFF time setting:



The 2nd ON/OFF timer setting:

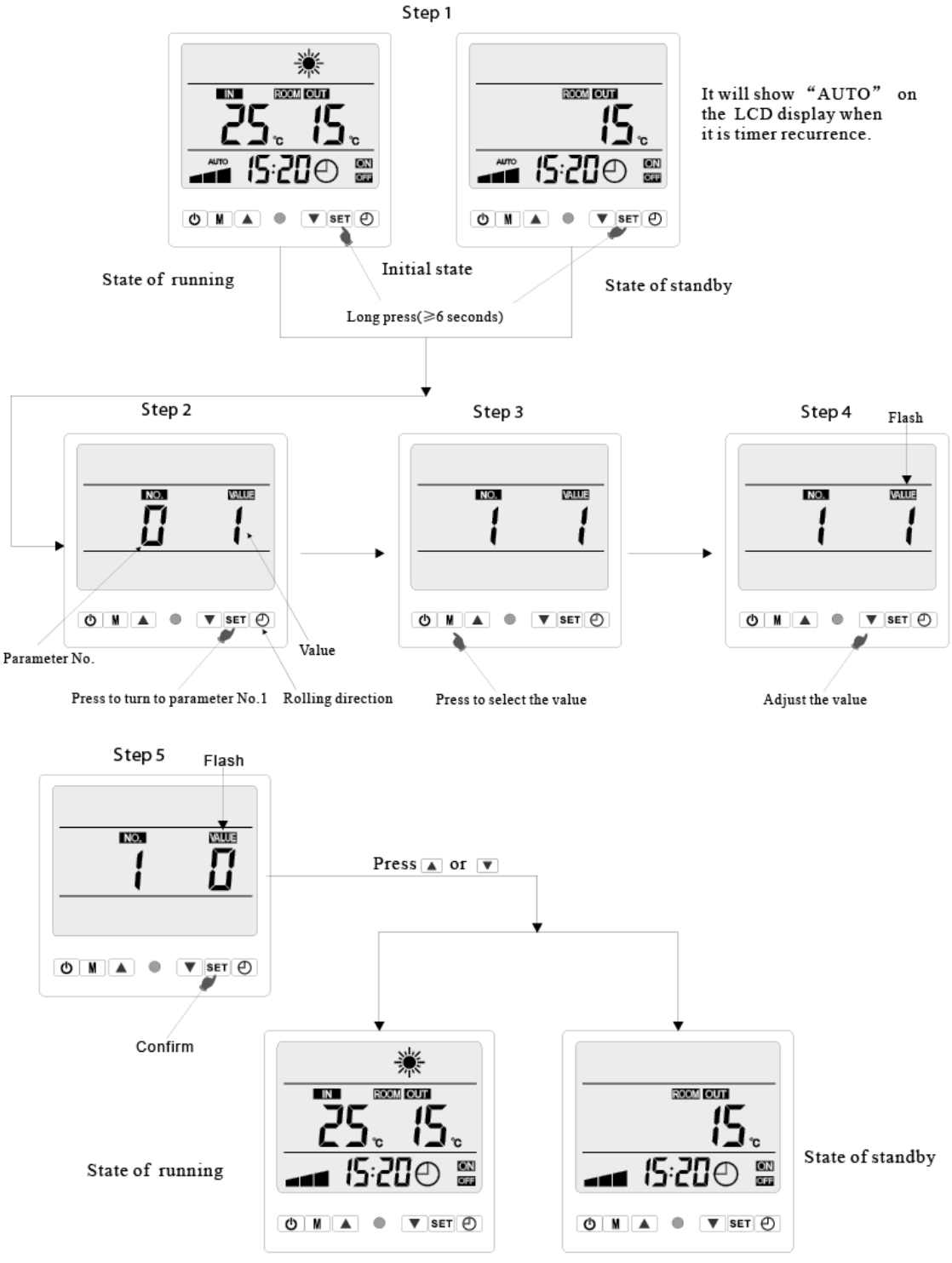


The 3rd ON/OFF timer setting



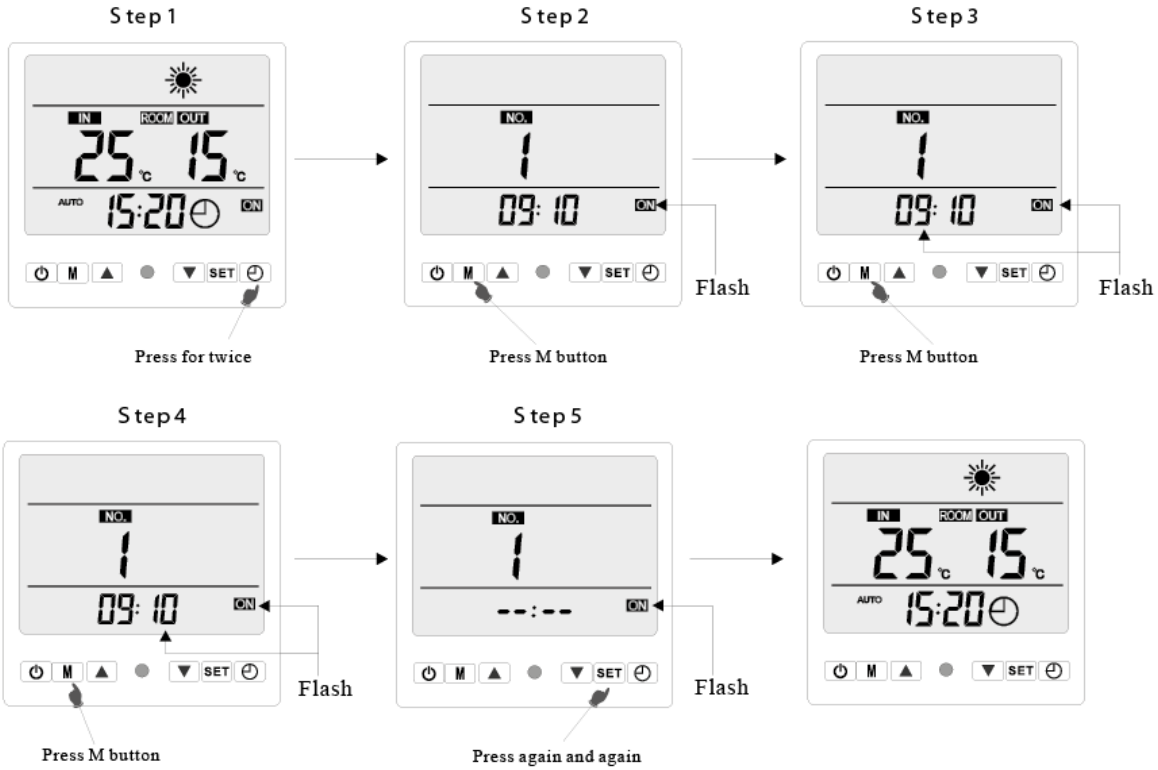
Timer mode setting

The default mode is timer recurrence. Please refer to following steps to set one-day timer



Timer cancelling

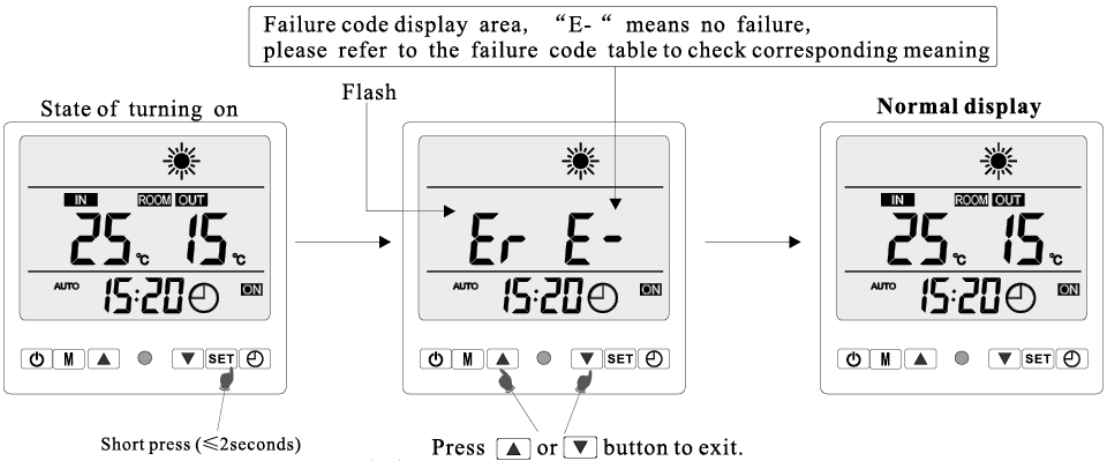
To cancel the timer, please refer to the instruction for timer setting and set it to be “--:--”via the M key. Please check below example for cancelling timer.

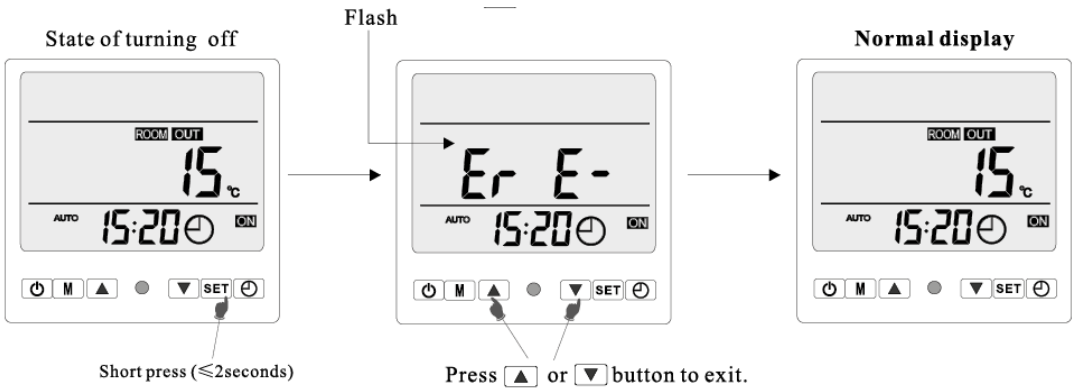


Failure Code Checking

When a failure occurs, it will show failure symbol on the screen. Press SET (≤2seconds) you can check the failure code. You can press it again to check another failure code if more than one occurs.

Press ▲ or ▼ to exit.





Common failures and maintenance

	Failure	Possible reasons	Correction methods
P3	Inlet water temp sensor failure	1) sensor open circuit 2) sensor shot circuit 3) Main PCB damaged	1) Check the sensor connection 2) Replace the sensor 3) Replace the main PCB
P4	Outlet water temp sensor failure	Same as above	Same as above
P1	Coil temp sensor failure	Same as above	Same as above
P7	Ambient temp sensor failure	Same as above	Same as above
P2	Discharge air sensor failure	Same as above	Same as above
P8	Too low outlet water temp protection for cooling mode	1) Too low water flow rate 2) Too low inlet water temp 3) Main PCB damaged	1) Check the water filter and water circuit (no block) 2) Adjust the setting temp to normal working range 3) Replace the main PCB
PC	First step anti-freeze protection in Winter	The protection occurred when ambient temp too low and unit is standby	No correction needed
PC	Second step anti-freeze protection in Winter		
E4	High pressure protection	1) Too small cooling water flow rate or a high temp 2) The uncompressed gas in refrigerant system 3) Overcharge refrigerant 4) Too high setting water temp 5) Bad connect of pressure switch 6) The pressure switch failure 7) Main PCB damaged	1) Check if the water pump works in good condition or adjust water control valve 2) Discharge and them recharge the refrigerant 3) Discharge some refrigerant 4) Set lower water temp 5) Reconnect the switch 6) Replace the pressure switch 7) Replace the PCB
P9	Low pressure protection	1) Too less refrigerant 2) Capillary block 3) Bad connect of pressure switch 4) The pressure switch failure 5) Main PCB damaged	1) Add some refrigerant 2) Replace the capillary 3) Reconnect the switch 4) Replace the pressure switch 5) Replace the PCB
Pd	Water flow switch failure	1) Too low water flow 2) Water flow switch damaged 3) Main PCB damaged	1) Check the water pump, if needed replace one 2) Check if the supplement is ok 3) Replace the water flow switch 4) Replace the PCB
P6	Too big inlet/outlet water temp difference for cooling mode	1) Too low water flow 2) Main PCB damaged	1) Check the water filter and water circuit (no block) 2) Replace the PCB
E3	Too high discharge air temp protection	1) Too less refrigerant 2) Similar possible reasons as E4	1) Add some refrigerant 2) Similar corrections as E4
E8	Communication failure between PCB and	1) Communication failure	1) Check the connection wiring/ports

	wired control	2) Wired control damaged 3) Main PCB damaged	between controller and PCB 2) Replace the controller 3) Replace the main PCB

Maintenance & Troubleshooting

Parameter checking and adjustment

The system parameters can be checked and adjusted via the controller. But they should not be changed casually, especially by house owners.

This operation is reserved to facilitate future service and maintenance. All parameters should not be changed casually, especially by house owners!

How to check and adjust parameters:

Step 1long press SET more than 6 seconds to enter parameter checking mode.

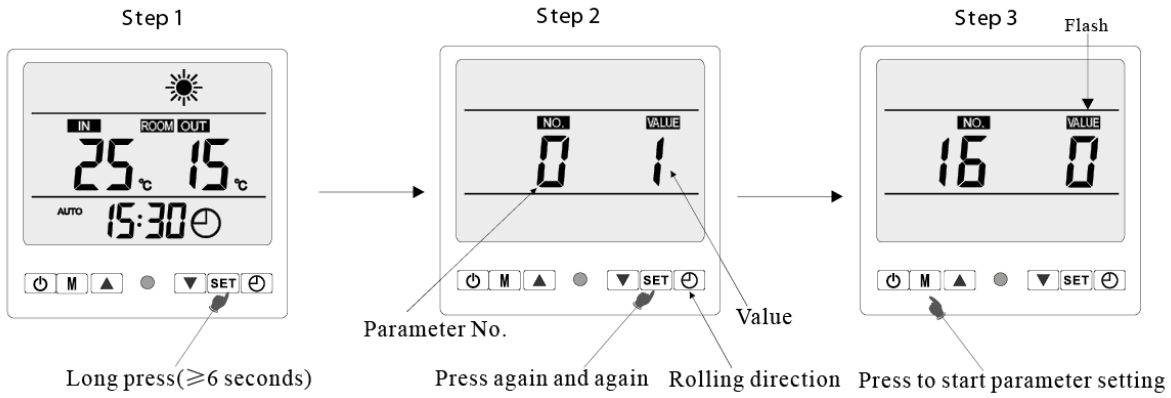
Step 2: short press SET to chose parameter that needs adjusting .

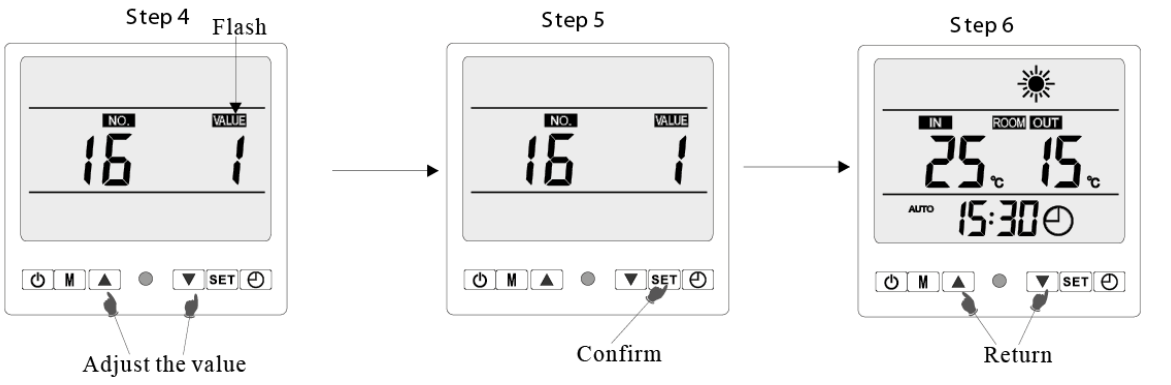
Step 3:press M to start parameter setting and the parameter flashes.

Step 4:press ▲ and ▼ to adjust the value

Step 5:press SET to confirm the value

Step 6:press ▲ and ▼ to return to normal display.





PARAMETER CHECKING AND ADJUSTMENT

Parameter list

Some parameters can be checked and adjusted by the controller. Below is the parameter list.

No	Parameter Name	Range	Default	Remark
0	Memory function if power off	0 (no) \ 1 (yes)	1	Adjustable
1	Timer cycle (every day or once)	0 (once) \ 1 (every day)	1	Adjustable
2	X (Temp. difference between compressor start inlet water temp. and setting water temp.)	2-10°C	3	Adjustable
3	Y (Temp. difference between compressor stop inlet water temp. and setting water temp.)	0-3°C	0	Adjustable
4	The interval for defrosting	30-90Min	40Min	Adjustable
5	Defrosting entry coil temperature	-30°C ~ 0°C ("-" and "°C" not display)	-7°C (only display “7”)	Adjustable
6	Defrosting-off coil temp.	2-30°C	20°C	Adjustable
7	Defrosting max. lasting time	0-15Min	8Min	Adjustable
8	Compressor exhaust gas protection	90-120°C	118°C	Adjustable
9	Setting temp. upper limit	40-65°C	40	Unvalid
10	Water pump running mode	0 (Special) \ 1 (Normal)	1	Adjustable
11	Pump-off time after reaching setting water temp.	3-20MIN	15	Adjustable
12	Second anti-freezing mode	0 (HP)	0	Unadjustable
13	Unit mode selection	0 (cooling only) \ 1 (cooling and heating) \ 2 (heating only)	1	Adjustable
14	Inlet water temp.	-9~99°C		Real test value
15	Outlet water temp.	-9~99°C		Real test value
16	Coil temp.	-9~99°C		Real test value
17	Exhaust gas temp.	0~127°C		Real test value
18	Ambient air temp.	-9~99°C		Real test value

Notes: As only 2 number digits available for control display, the display will have some change if over 2 digits, for example "108" will display as "A8", "118" will display "B8", and "128" will display “C8”.

Remark: the machine off code

1. Power off meet set temperature	8. Exhaust air temp. is too high, then stop the machine
2. Meet set temperature	9. Low-pressure switch cutting
3. Water-switch breakdown	10. High-pressure switch cutting
4. Antifreeze finishing then stop the machine	11. Water-temp. resistance’s breakdown
5. Defrosting preparation	12. Pipe-temp. resistance’s breakdown
6. Defrosting off	13. Ambient temp. resistance’s breakdown
7. Mode change	

MAINTENANCE THE UNIT

To protect the paintwork, avoid leaning or putting objects on the device. External heat pump parts can be wiped with a damp cloth and domestic cleaner. (Attention: Never use cleaning agents containing sand, soda, acid or chloride as these can damage the surfaces.)

To prevent faults due to sediments in the titanium heat exchanger of the heat pump, ensure that the heat exchanger cannot be contaminated (water treatment and filter system necessary). In the even that operating malfunctions due to contamination still occur, the system should be cleaned as described below. (Warning: the fins on the finned tube heat exchanger are sharp-edged -- danger of being cut!)

Cleaning the pipe system in the heat exchanger
Contamination in the pipes and heat exchanger can reduce the performance of the heat pump's titanium heat exchanger. If this is the case, the pipe system and heat exchanger must be cleaned by a technician.
Use only pressurized drinking water for cleaning.

Cleaning the air system
The finned heat exchanger, ventilator and condensate outflow should be cleaned of contaminants (leaves, twigs, etc.) before each new heating period. These types of contaminants can be manually removed using compressed air or by flushing with clean water.
It may be necessary to remove the device cover and air inlet grid first.

Attention: Before opening the device, ensure that all circuits are isolated from the power supply.

To prevent the evaporator and the condensate tray from being damaged, do not use hard or sharp objects for cleaning.
Under extreme weather conditions (e.g. snow drifts), ice may form on the air intake and exhaust air outlet grids. If this happens, the ice must be removed in the vicinity of the air intake and exhaust air outlet grids to ensure that the minimum air flow rate is maintained.

Winter Shutdown/Lay-up
If there is a chance of frost after the bathing-season has ended when the swimming pool heating is switched off and the external temperature is expected to drop below the operating limit, the water circuit of the heat pump should be completely drained. Otherwise, suitable constructional measures should be taken by the customer to protect the heat pump against damage from frost.

Attention: The warranty does not cover damage caused by inadequate lay-up measures during the winter.

TROUBLESHOOTING

This section provides useful information for diagnosing and correcting certain troubles which may occur. Before starting the troubleshooting procedure, carry out a thorough visual inspection of the unit and look for obvious defects such as loose connections or defective wiring.
Before contacting your local dealer, read this chapter carefully, it will save you time and money.

⚠ WHEN CARRYING OUT AN INSPECTION ON THE SWITCH BOX OF THE UNIT, ALWAYS MAKE SURE THAT THE MAIN SWITCH OF THE UNIT IS SWITCHED 'OFF'.

The guidelines below might help to solve your problem. If you cannot solve the problem, consult your installer/local dealer.

The heat pump will not run.
Please check whether:

- There is supply voltage (tripped fuse, power failure).
- The operating switch on the wired controller is switched on, and whether the correct set point temperature has been set.

The set temperature level cannot be reached.
Please check whether:

- The permissible operating conditions for the heat pump have been adhered to (air temperatures too high or too low).
- The air inlet or outlet area is blocked, restricted or very dirty.
- There are closed valves or stop-cocks in the water pipes.

The scheduled timer does work but the programmed actions are executed at the wrong time(e.g. 1 hour too late or too early).
Please check whether:

- The clock and the day of the week are set correctly, adjust if necessary.

If you cannot correct the fault yourself, please contact your after-sales service technician. Work on the heat pump may only be carried out by authorized and qualified after-sales service technicians.

ENVIRONMENTAL INFORMATION

This equipment contains fluorinated greenhouse gases covered by the Kyoto Protocol. It should only be serviced or dismantled by professional trained personnel.

This equipment contains R410A refrigerant in the amount as stated in the specification. Do not vent R410A into the atmosphere: R410A, is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 1975.

DISPOSAL REQUIREMENTS

Dismantling of the unit, treatment of the refrigerant, of oil and of other parts must be done in accordance with relevant local and national legislation.

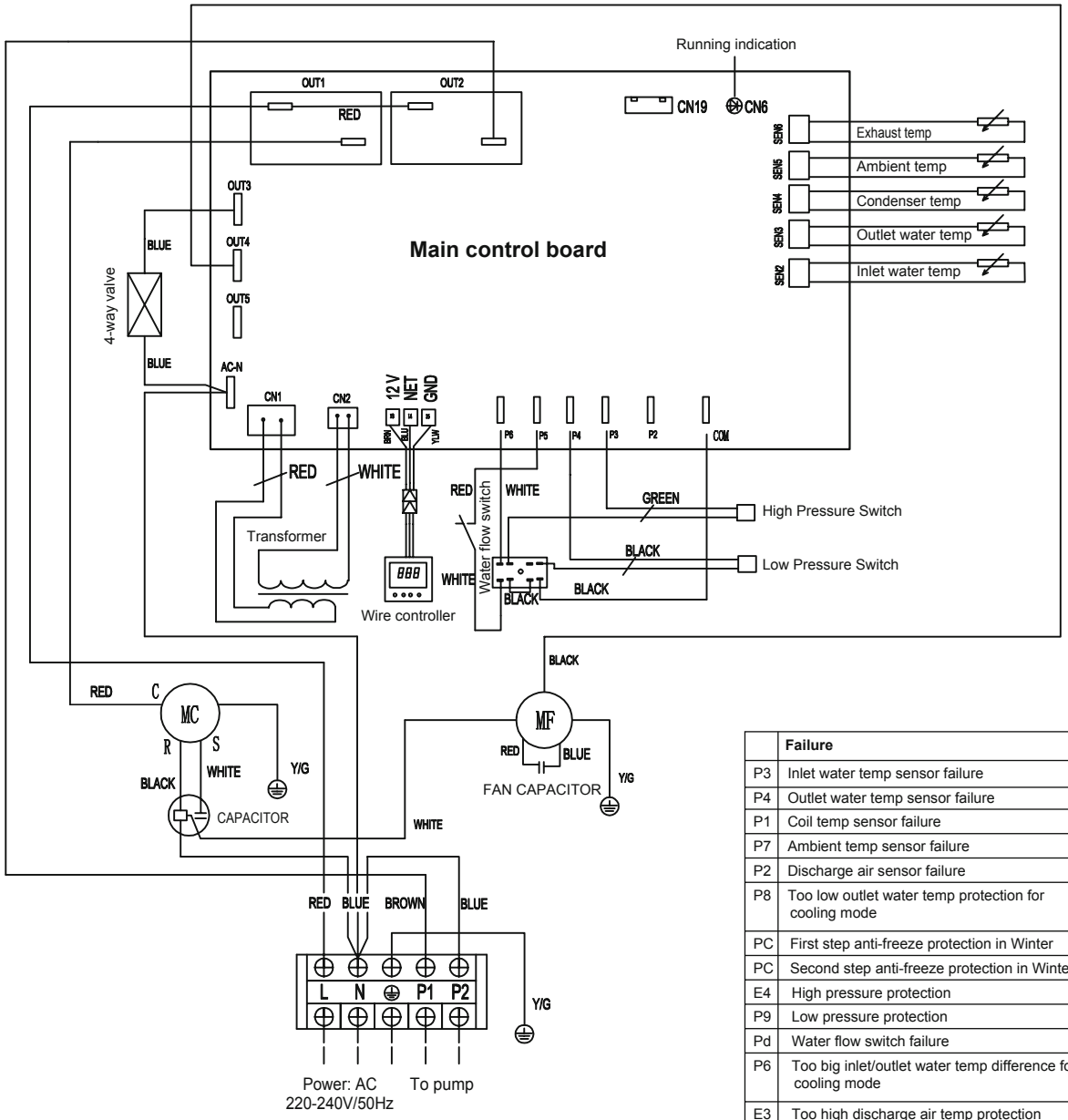
Your product is marked with this symbol. This means that electrical and electronic products shall not be mixed with unsorted household waste.

Do not try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and other parts must be done by a qualified installer in accordance with relevant local and national legislation.
Units must be treated at a specialized treatment facility for re-use, recycling and recovery.
By ensuring that this product is disposed off correctly, you will help to prevent potential negative consequences for the environment and human health. Please contact the installer or local authority for more information.

WIRING DIAGRAM

Please refer to the wiring diagram on the electric box.

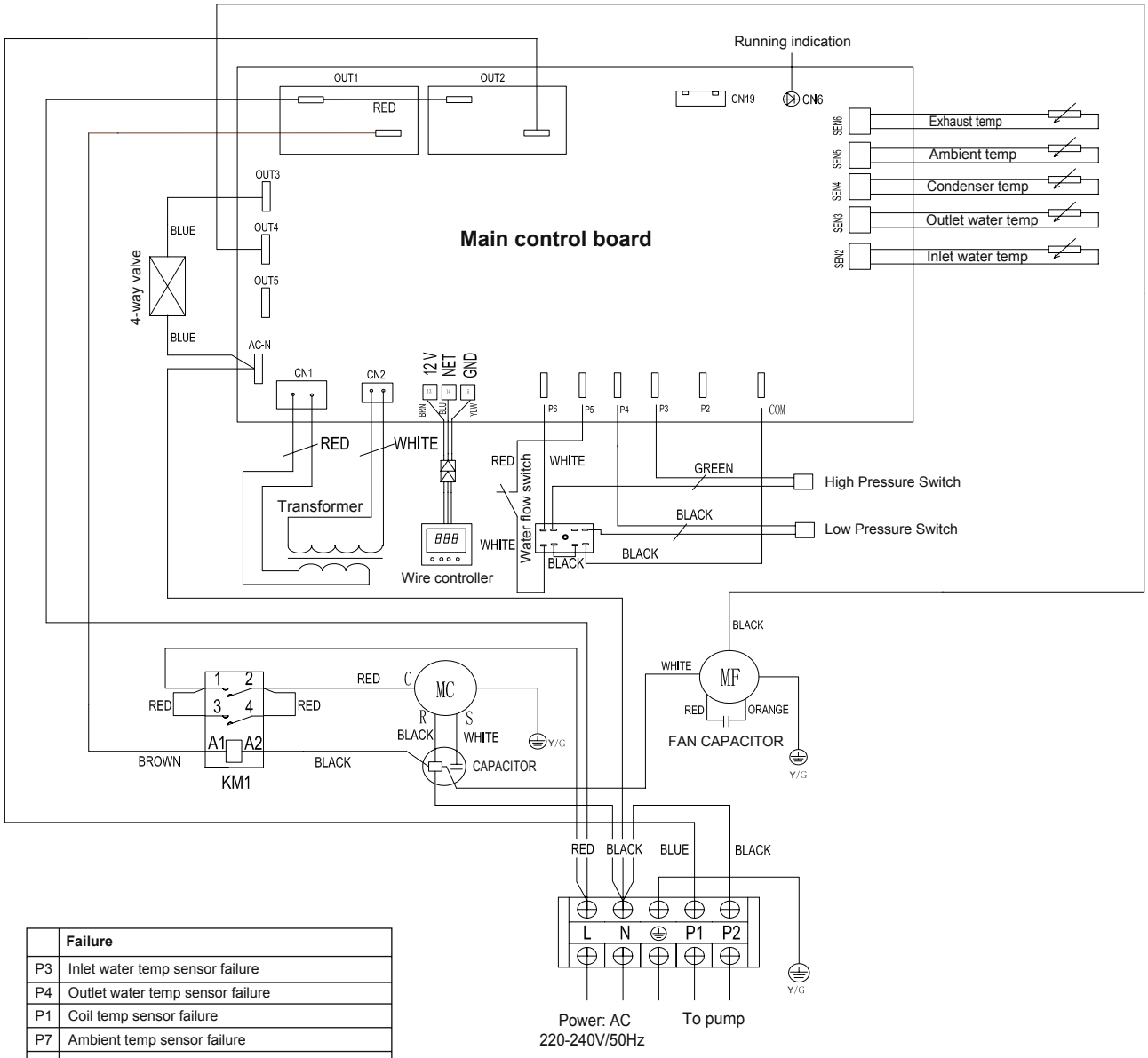
Model: **TCPO 07 01 G**



	Failure
P3	Inlet water temp sensor failure
P4	Outlet water temp sensor failure
P1	Coil temp sensor failure
P7	Ambient temp sensor failure
P2	Discharge air sensor failure
P8	Too low outlet water temp protection for cooling mode
PC	First step anti-freeze protection in Winter
PC	Second step anti-freeze protection in Winter
E4	High pressure protection
P9	Low pressure protection
Pd	Water flow switch failure
P6	Too big inlet/outlet water temp difference for cooling mode
E3	Too high discharge air temp protection
E6	Over heat protection
E8	Communication failure between PCB and wired control

CODE: 802000600086

Model: **TCPO 09 01 G** - **TCPO 11 01 G**

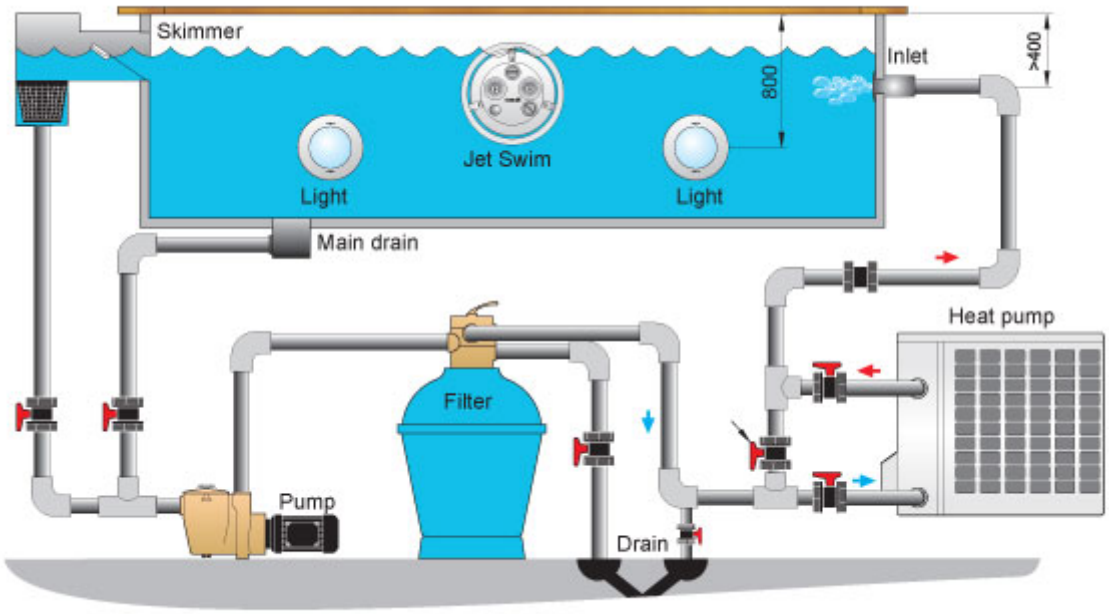


	Failure
P3	Inlet water temp sensor failure
P4	Outlet water temp sensor failure
P1	Coil temp sensor failure
P7	Ambient temp sensor failure
P2	Discharge air sensor failure
P8	Too low outlet water temp protection for cooling mode
PC	First step anti-freeze protection in Winter
PC	Second step anti-freeze protection in Winter
E4	High pressure protection
P9	Low pressure protection
Pd	Water flow switch failure
P6	Too big inlet/outlet water temp difference for cooling mode
E3	Too high discharge air temp protection
E6	Over heat protection
E8	Communication failure between PCB and wired control

CODE: 860000000003

TECHNICAL SPECIFICATIONS

MODEL		TCPO 07 01 G	TCPO 09 01 G	TCPO 11 01 G
Air 15°C Water 13° (Inlet)	Heating capacity (KW)	6.95	8.98	10.99
	Power input (KW)	1.11	1.44	1.80
	Current (A)	5.12	6.60	9.10
	COP	6.26	6.24	6.11
Air 15°C Water 26°C (Inlet)	Heating capacity (KW)	6.29	8.28	10.18
	Power input (KW)	1.28	1.69	2.08
	Current (A)	5.85	7.69	9.92
	COP	4.91	4.90	4.89
Air 20°C Water 24°C (Inlet)	Heating capacity (KW)	6.98	9.04	11.20
	Power input (KW)	1.20	1.55	1.94
	Current (A)	5.48	6.96	9.33
	COP	5.81	5.82	5.76
Air 24°C Water 27°C (Inlet)	Heating capacity (KW)	8.51	11.06	13.55
	Power input (KW)	1.41	1.82	2.25
	Current (A)	6.63	8.55	9.89
	COP	6.04	6.08	6.02
Air 35°C Water 27°C (Inlet)	Cooling capacity (KW	4.86	7.36	8.79
	Power input (A)	1.68	2.47	3.03
	Current (A)	7.66	11.29	13.20
	EER	2.91	2.98	2.90
Power supply		220-240V / 50Hz		
Max. power input (KW)		2.60	3.52	4.80
Max. current (A)		11.2	15.4	21
Water flow (m^3/h)		3.10	3.95	4.80
Inner diameter of water pipes (mm)		50	50	50
Refrigerant type		R410A		
Min. pressure / Max. pressure		1.5/4.15Mpa	1.5/4.15Mpa	1.5/4.15Mpa
Package dimensions (mm)		1110*410*812.5	1110*410*812.5	1110*410*812.5
Unit dimensions (mm)		1075*400*667	1075*400*667	1075*400*667
Net weight (kg)		49 kg	54 kg	61 kg
Gross weight (kg)		64	69	76
Noise level		32dB(A)	33dB(A)	34dB(A)
Noise at 1 m		<52	<53	<54
Noise at 4 m		<40	<41	<42
Noise at 10 m		<32	<33	<34
Compressor brand		Toshiba	Toshiba	Toshiba
Compressor type		Rotary	Rotary	Rotary
Operating temperature range		-7°C~43°C	-7°C~43°C	-7°C~43°C
Water proof level		IPX4	IPX4	IPX4



R410
OZONE FRIENDLY

MATERIAL DURABLE

SILENT EFFICIENCY

EASY CONTROL

NOTES

NOTES

Due to on-going technological development of the products by the manufacturer, we reserve the right to vary the technical specifications at any time without notice.

A causa della continua evoluzione tecnologica dei prodotti, ci riserviamo il diritto di variare le specifiche tecniche in qualsiasi momento e senza darne preavviso.

Avec le souci d'améliorer sa production, le constructeur se rèserve le droit de modifier les spécifications techniques des produits sans préavis.

A2B ACCORRONI E.G. srl

Via d'Ancona, 37 60027 Osimo (AN) Italy

Tel. +39.071723991

*www.*accorroni.it