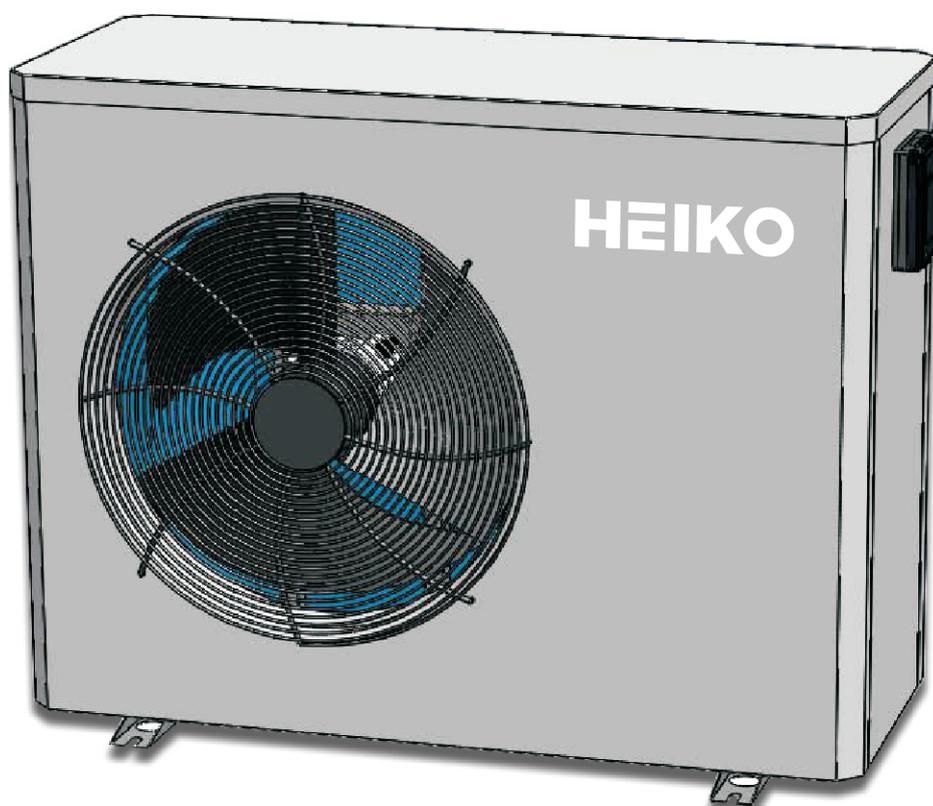


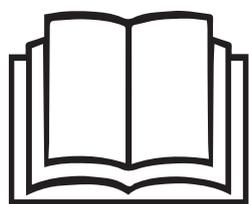
HEIKO

R32

User manual of the heat pump **HEIKO POOL**



**Before operating this product, please read this manual carefully
and keep it for future reference.**



Thank you for choosing our quality product. Please read this instruction sheet carefully before use and follow the sheet to operate the unit in order to prevent damages on the device or injuries to staff.

Specifications are subject to change without notice for further improvement. Please refer to the name plate on the unit for updated specifications.

In cold weather (below 0 °C), when the unit is no longer needed, do drain out all the water inside the system.

This heat pump swimming pool heater captures heat from the air and moves it to your pool water. It is a cost-effective, high efficient way of heating your pool and spa. The unit can be used widely in different applications for places such as hotel, Sauna center, baths, school, family, beauty&hair-dressing saloon and villa etc.

The unit should not be placed in an airtight place, like the basement or the garage. It is recommended to have the unit away from other home appliance, to avoid electromagnetic interference. Working temperature range of this unit is -7°C~43°C. The highest output water Temp can be 40°C.

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This heat pump contains a flammable refrigerant R32.

Any intervention on the refrigerant circuit is prohibited without a valid authorization.

Before working on the refrigerant circuit, the following precautions are necessary for safe work.

1. Work procedure

The work must be carried out according to a controlled procedure, in order to minimize the risk of presence of flammable gases or vapors during the execution of the works.

2. General work area

All persons in the area must be informed of the nature of the work in progress. Avoid working in a confined area. The area around the work area should be divided, secured and special attention should be paid to nearby sources of flame or heat.

3. Verification of the presence of refrigerant

The area should be checked with a suitable refrigerant detector before and during work to ensure that there is no potentially flammable gas. Make sure that the leak detection equipment used is suitable for flammable refrigerants, ie it does not produce sparks, is properly sealed or has internal safety.

4. Presence of fire extinguisher

If hot work is to be performed on the refrigeration equipment or any associated part, appropriate fire extinguishing equipment must be available. Install a dry powder or CO2 fire extinguisher near the work area.

5. No source of flame, heat or spark

It is totally forbidden to use a source of heat, flame or spark in the direct vicinity of one or more parts or pipes containing or having contained a flammable refrigerant. All sources of ignition, including smoking, must be sufficiently far from the place of installation, repair, removal and disposal, during which time a flammable refrigerant may be released into the surrounding area. Before starting work, the environment of the equipment should be checked to ensure that there is no risk of flammability. «No smoking» signs must be posted.

6. Ventilated area

Make sure the area is in the open air or is properly ventilated before working on the system or performing hot work. Some ventilation must be maintained during the duration of the work.

7. Controls of refrigeration equipment

When electrical components are replaced, they must be suitable for the intended purpose and the appropriate specifications. Only the parts of the manufacturer can be used. If in doubt, consult the technical service of the manufacturer.

The following controls should be applied to installations using flammable refrigerants:

- The size of the load is in accordance with the size of the room in which the rooms containing the refrigerant are installed;
- Ventilation and air vents work properly and are not obstructed;
- If an indirect refrigeration circuit is used, the secondary circuit must also be checked.
- The marking on the equipment remains visible and legible. Illegible marks and signs must be corrected;
- Refrigeration pipes or components are installed in a position where they are unlikely to be exposed to a substance that could corrode components containing refrigerant

8. Verification of electrical appliances

Repair and maintenance of electrical components must include initial safety checks and component inspection procedures. If there is a defect that could compromise safety, no power supply should be connected to the circuit until the problem is resolved.

Initial security checks must include:

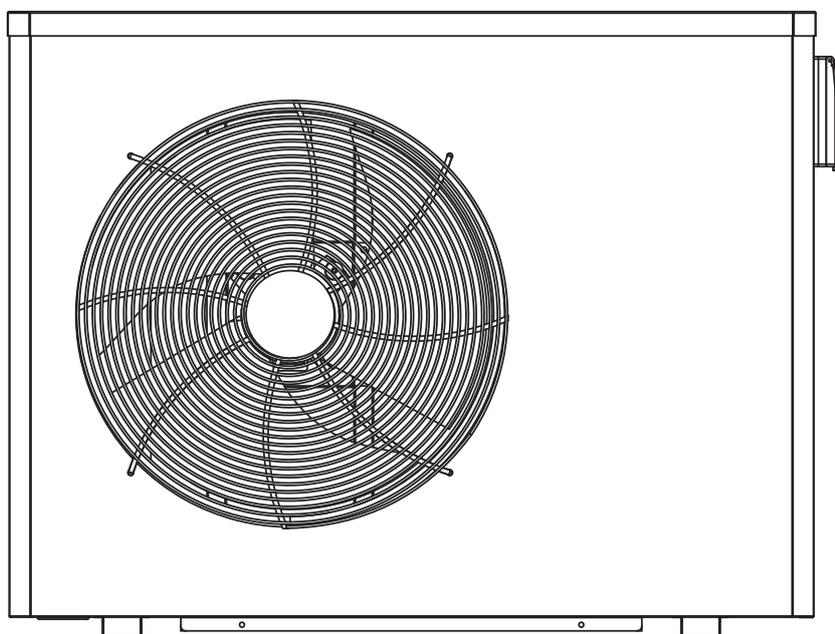
- That the capacitors are discharged: this must be done in a safe way to avoid the possibility of sparks;
- No electrical components or wiring are exposed during loading, recovery or purging of the refrigerant gas system;
- There is continuity of grounding.

Dear Customer,

Thank you for your purchase and for your confidence in our products.

These are the result of many years of research in the field of design and production of heat pumps for swimming pools. Our aim is to provide you with an exceptional high performance quality product.

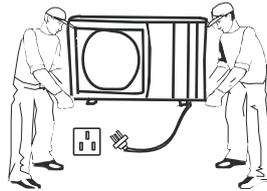
We have produced this manual with the utmost care so that you get maximum benefit from your heat pump.



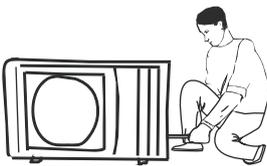
1. Safety Precautions



This appliance is not intended for use by persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.



Make sure the power supply to the heat pump unit is off before any operations are done on the unit. When the power cord gets loose or is damaged, always get a qualified person to fix it.

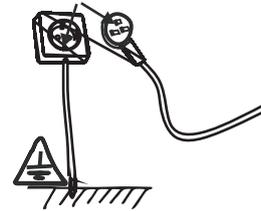


The installation, dismantlement and maintenance of the unit must be performed by qualified personnel. It is forbidden to do any changes to the structure of the unit. Otherwise injury of person or unit damage might happen.

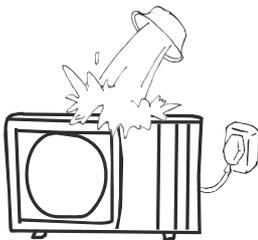


Be sure to read this manual before use.

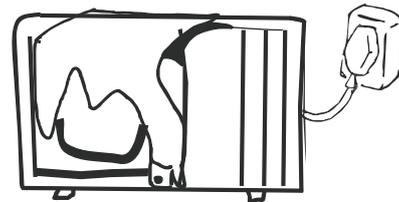
Ground wire



The power supply to the unit must be grounded.

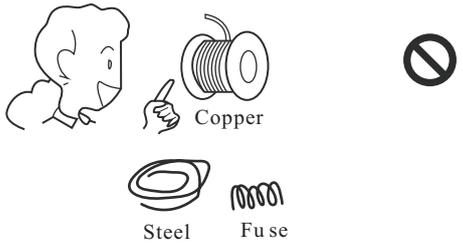


Water or any kind of liquid is strictly forbidden to be poured into the product, or it may cause creepage or breakdown of the product.



When running the unit, never cover the product with clothes, plastic cloth or any other material that block ventilation on the product, which will lead to low efficiency or even non-operation of this unit.

1. Safety Precautions

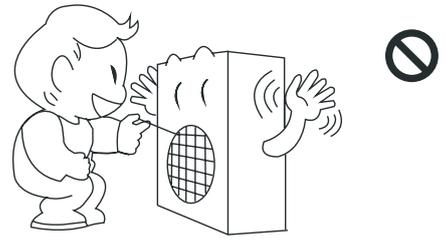


Copper
Steel Fuse

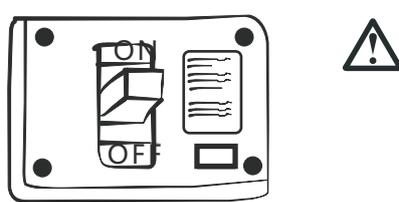
Please select the correct fuse or breaker as per recommended. Steel wire or copper wire cannot be used as substitute for fuse or breaker. Otherwise, damages maybe caused.



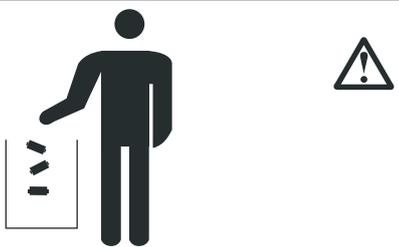
When the power cord gets loose or is damaged, always get a qualified person to fix it.



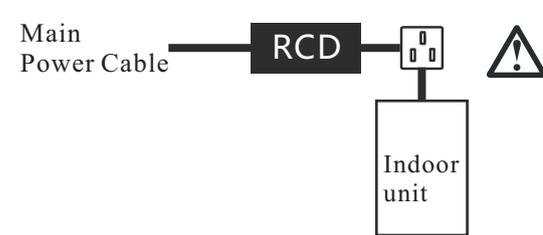
Do not touch the air outlet rill when fan motor is running.



It is mandatory to use a suitable circuit breaker for the heat pump and make sure power supply to the heater corresponds to the specifications. Otherwise the unit might be damaged.

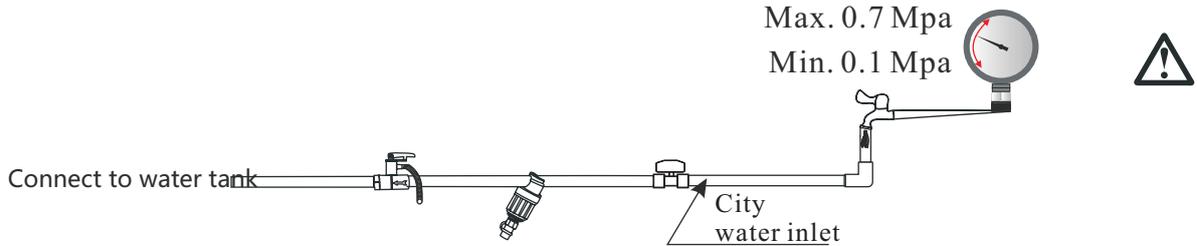


Disposal of Scrap Batteries --- Please discard the batteries as sorted municipal waste at the accessible collection point.



Main Power Cable RCD Indoor unit

Installation of a residual current device (RCD) having a rated residual operating current not exceeding 30 mA is advisable.

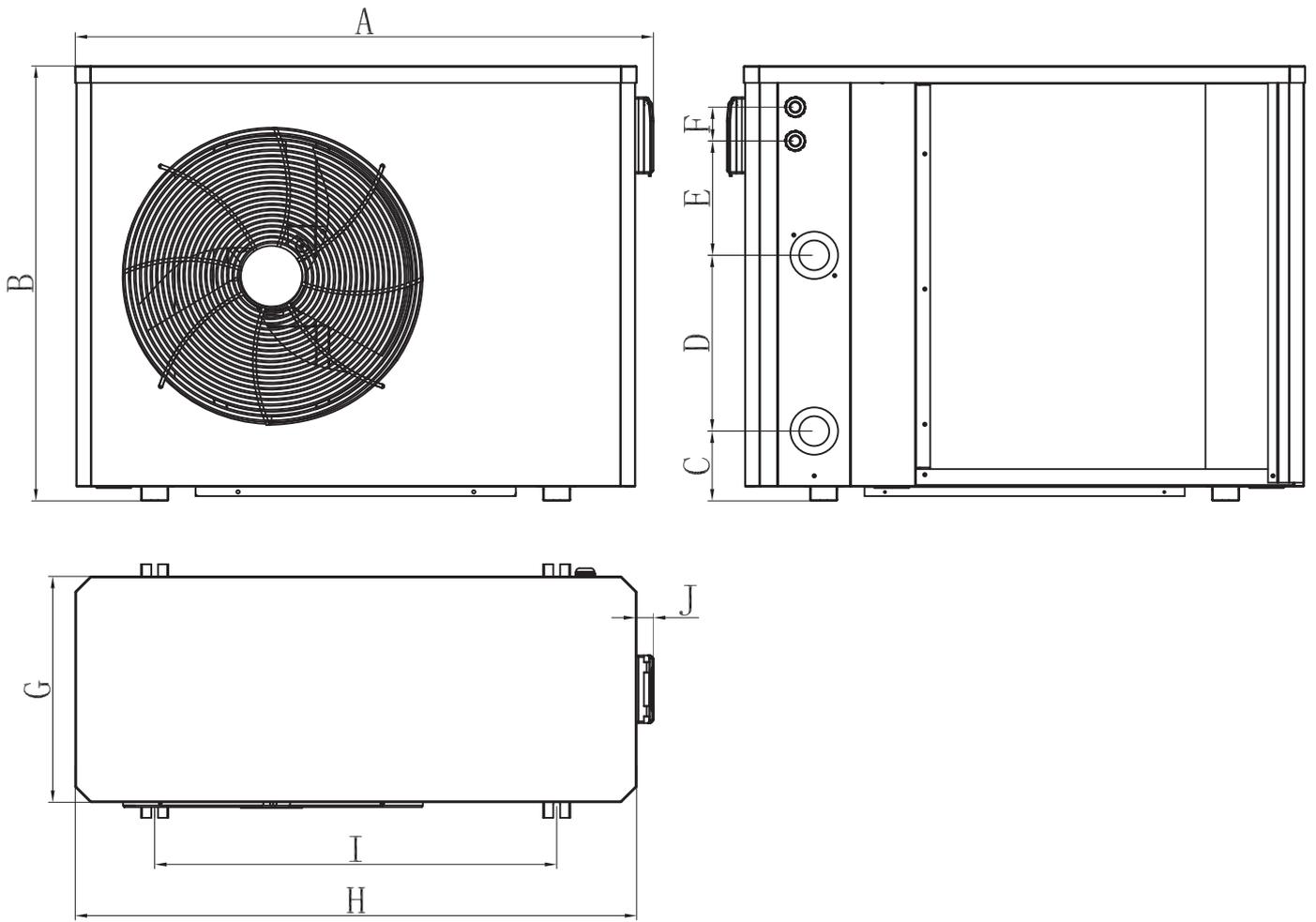


Max. 0.7 Mpa
Min. 0.1 Mpa

Connect to water tank City water inlet

The maximum inlet water pressure, in pascals: 0.7Mpa.
The minimum inlet water pressure, in pascals, if this is necessary for the correct operation of the appliance: 0.1Mpa.

2.Outlines and Dimensions



	A	B	C	D	E	F	G	H	I	J
Heiko Pool 5	849	643	103	260	169	50	334	824	590	24
Heiko Pool 7										
Heiko Pool 9										
Heiko Pool 11	932	643	93	330	80	50	334	908	593	24
Heiko Pool 15	1129	743	93	350	169	50	354	1104	790	24

3. Specification

Test conditions	HEIKO POOL 5	HEIKO POOL 7	HEIKO POOL 9	HEIKO POOL 11	HEIKO POOL 15	
Air ⁽¹⁾ 26°C Water ⁽²⁾ 26°C	Heating power (kW)	7.20~2.04	9.50~2.30	13.0~2.35	14.70~2.50	19.8~2.77
	Power in mode Silence (kW)	3.74~2.04	4.90~2.20	6.50~2.35	7.35~2.50	10.80~2.77
	Consumption (kW)	1.14~0.15	1.48~0.16	2.06~0.14	2.33~0.15	3.19~0.17
	Consumption in Silence (kW)	0.41~0.15	0.49~0.16	0.66~0.14	0.75~0.15	1.10~0.17
	COP (Coeff. of performance)	13.60~6.30	14.00~6.40	16.40~6.30	16.50~6.30	16.70~6.20
Air ⁽¹⁾ 15°C Water ⁽²⁾ 26°C	Heating power (kW)	5.40~1.40	6.70~1.50	8.70~1.70	10.80~1.90	14.70~2.15
	Power in mode Silence (kW)	2.80~1.40	3.65~1.50	4.53~1.70	5.45~1.90	7.40~2.15
	Consumption (kW)	1.15~0.22	1.49~0.23	1.89~0.22	2.35~0.25	3.20~0.27
	Consumption in Silence (kW)	0.44~0.22	0.57~0.23	0.69~0.22	0.84~0.25	1.12~0.27
	COP (Coeff. of performance)	6.50~4.70	6.60~4.50	7.80~4.60	7.70~4.60	7.90~4.60
Air ⁽¹⁾ 35°C Water ⁽²⁾ 27°C	Cooling capacity (kW)	3.34	4.30	5.40	6.80	8.90
	Consumption (kW)	0.83	1.10	1.32	1.67	2.20
	EER (Coeff. of performance)	4.01	3.90	4.10	4.08	4.05
Air ⁽¹⁾ 15°C Water ⁽²⁾ 26°C MODE FIX	Heating power (kW)	5.40	6.70	8.70	10.80	14.70
	Consumption (kW)	1.15	1.49	1.89	2.35	3.20
	COP (Coeff. of performance)	4.70	4.50	4.60	4.60	4.60
Maximum power (kW)	1.7	1.8	2.6	3.2	3.9	
Maximum current (A)	8	9	13	16	17	
Electricity supply	220~240V / 50Hz					
Protection	IPX4					
Heating temperature range	15°C~40°C					
Cooling temperature range	8°C~28°C					
Operating temperature range	-7°C~43°C					
Unit dimensions L x W x H (mm)	848*375*643			932*375*643	1129*395*743	
Unit weight (kg)	41.5	43	47.5	54.5	68	
Sound pressure level at 1 m (dBA) ⁽³⁾	37~50	37~51	38~52	40~54	40~54	
Sound pressure level at 10 m (dBA) ⁽³⁾	19~29	19~30	21~31	23~34	23~34	
Hydraulic connection (mm)	PVC 50mm					
Heat exchanger	Titanium Heat Exchanger					
Min./Max. water flow rate (m ³ /h)	2~4	3~4	3.5~6	4.5~7	6.5~9	
Compressor	GMCC	GMCC	GMCC	MITSUBISHI	GMCC	
Compressor type	Hermetic Rotary DC Inverter Compressor					
Refrigerant	R32					
Refrigerant Amount (kg)	0.3	0.45	0.6	0.65	1	
Fan motor	DC Fan Motor					
Load loss (mCE)	1.1	1.1	1.1	1.1	1.1	
Max. pool volume (m ³) ⁽⁴⁾	15~30	22~43	30~56	34~68	45~85	
Remote control	LCD Controller					
Mode	Normal / Silent					

The technical specifications of our heat pumps are provided for information purposes only. We reserve the right to make changes without prior notice.

¹ Ambient air temperature

² Initial water temperature

³ Noise at 1 m, at 4 m and at 10 m in accordance with Directives EN ISO 3741 and EN ISO 354

⁴ Calculated for an in-ground private swimming pool covered with a bubble cover.

4. System and main components

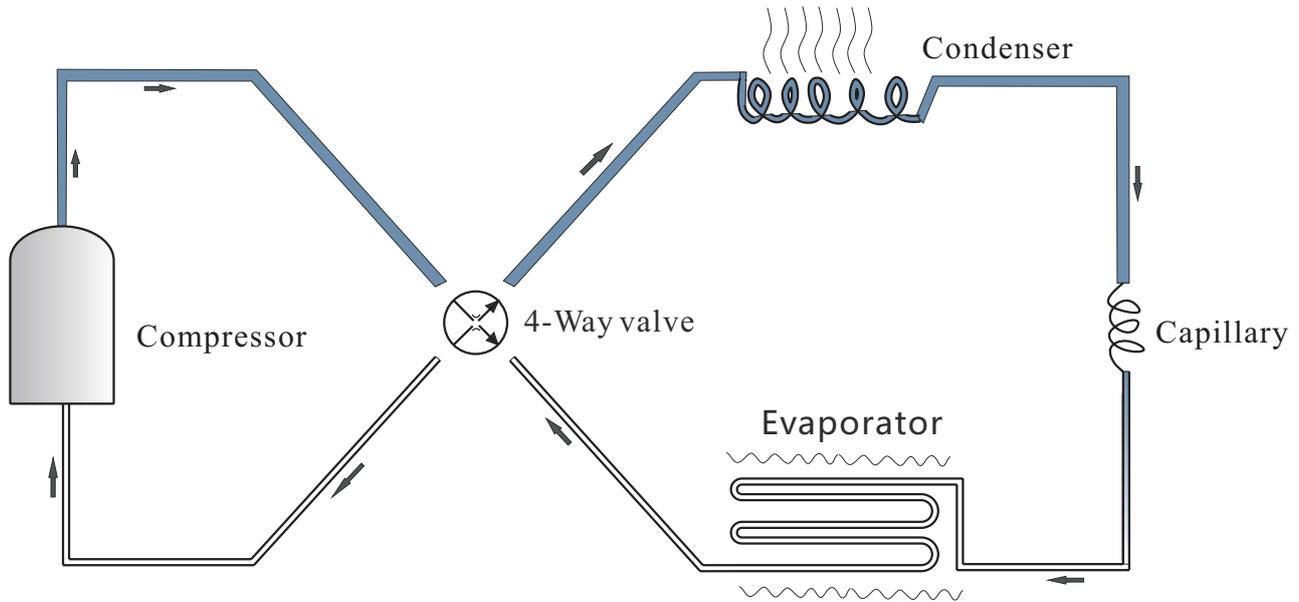


Figure 2-1

The working fluid, in its gaseous state, is pressurized and circulated through the system by a compressor. On the discharge side of the compressor, the hot and highly pressurized gas is cooled in a heat exchanger, called a condenser, until it condenses into a high pressure, moderate temperature liquid. The condensed liquid then passes through a capillary tube, or possibly a work-extracting device such as a turbine. This device is the evaporator where the refrigerant evaporates into a gas via heat absorption. The refrigerant then returns to the compressor and the cycle is repeated.

5. Installation



WARNING: Installation must be carried out by a qualified engineer.

This section is provided for information purposes only and must be checked and adapted if necessary according to the actual installation conditions.

5.1 Pre-requirements

Equipment necessary for the installation of your heat pump:

Power supply cable suitable for the unit's power requirements.

A By-Pass kit and an assembly of PVC tubing suitable for your installation as well as stripper, PVC adhesive and sandpaper.

A set of wall plugs and expansion screws suitable to attach the unit to your support.

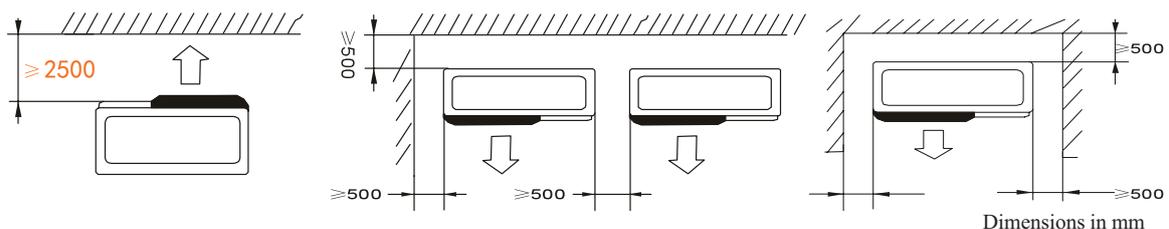
We recommend that you connect the unit to your installation by means of flexible PVC pipes in order to reduce the transmission of vibrations.

Suitable fastening studs may be used to raise the unit.

5.2 Location

Please comply with the following rules concerning the choice of heat pump location.

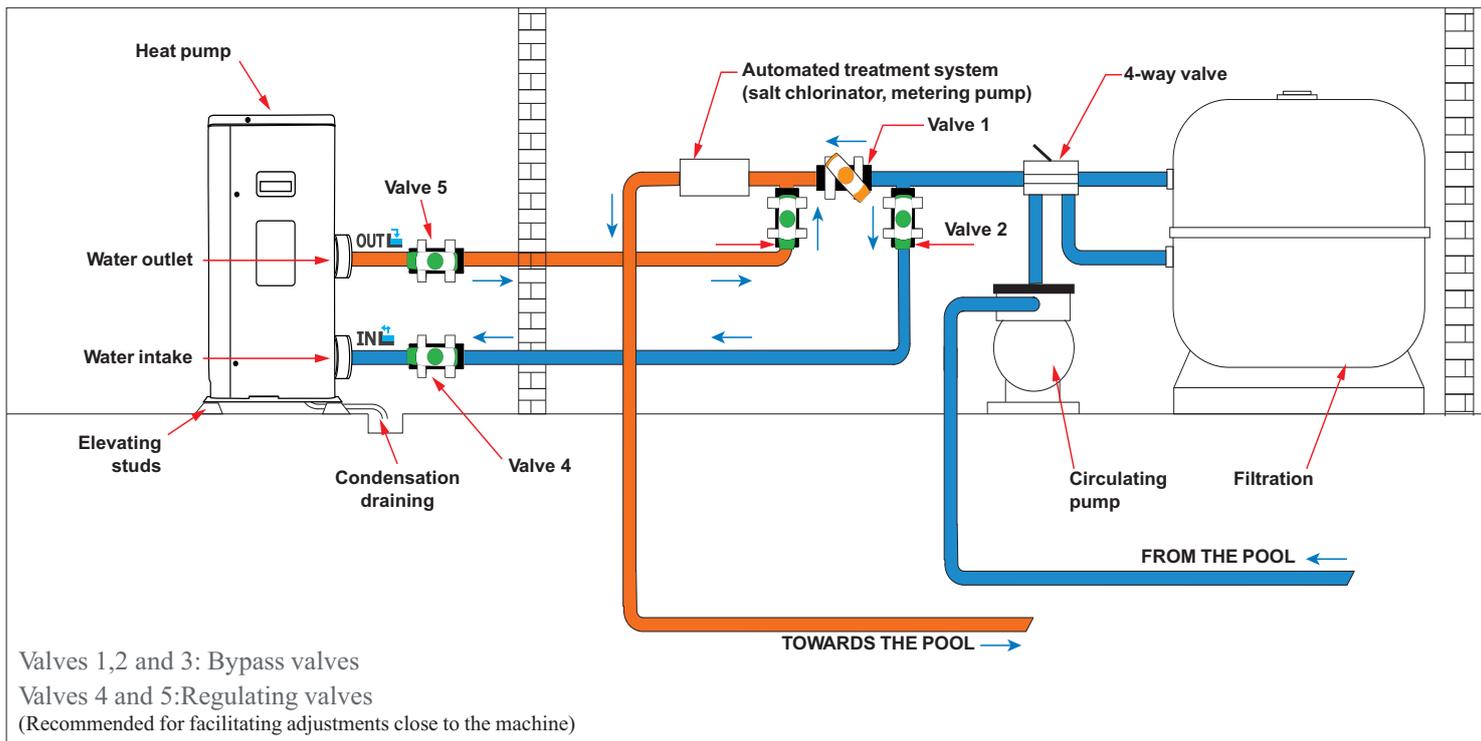
1. The unit's future location must be easily accessible for convenient operation and maintenance.
2. It must be installed on the ground, fixed ideally on a level concrete floor. Ensure that the floor is sufficiently stable and can support the weight of the unit.
3. A water drainage device must be provided close to the unit in order to protect the area where it is installed.
4. If necessary, the unit may be raised by using suitable mounting pads designed to support its weight.
5. Check that the unit is properly ventilated, that the air outlet is not facing the windows of neighbouring buildings and that the exhaust air cannot return. In addition, provide sufficient space around the unit for servicing and maintenance operations.
6. The unit must not be installed in an area exposed to oil, flammable gases, corrosive products, sulphurous compounds or close to high frequency equipment.
7. To prevent mud splashes, do not install the unit near a road or track.
8. To avoid causing nuisance to neighbours, make sure the unit is installed so that it is positioned towards the area that is least sensitive to noise.
9. Keep the unit as much as possible out of the reach of children.



**Place nothing less than one meter in front of the heat pump.
Leave 50 cm of empty space around the sides and rear of the heat pump.
Do not leave any obstacle above or in front of the unit!**

5. Installation

5.3 Installation layout



Key



Half-open valve



Open valve

5.4 Connecting the condensation draining kit

While operating, the heat pump is subject to condensation. This will result in a more or less large run-off of water, depending on the degree of humidity. To channel this flow, we recommend that you install the condensation drainage kit.

How do you install the condensation drainage kit?

Install the heat pump, raising it at least 10 cm with solid water-resistant pads, then connect the drainage pipe to the opening located under the pump.

5.5 Installing the unit on noise-damping supports

In order to minimise the noise pollution associated with heat pump vibrations, it can be positioned on vibration absorbing pads.

To do this, you simply have to position a pad between each of the unit's feet and its support, and then fix the heat pump to the support with suitable screws.

5. Installation

WARNING: Installation must be carried out by a qualified engineer.

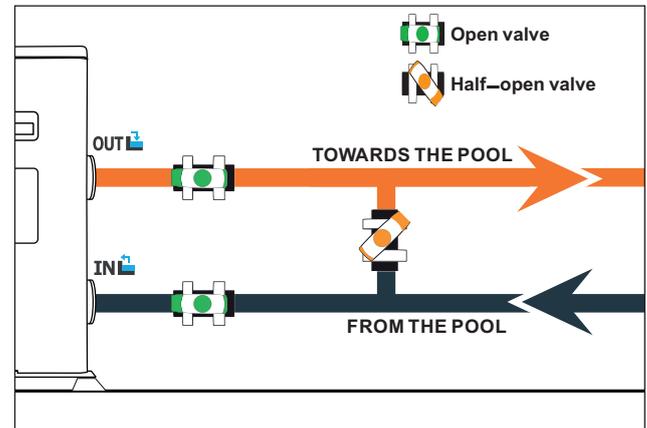
This section is provided for information purposes only and must be checked and adapted if necessary according to the actual installation conditions.

5.6 Hydraulic connection

By-Pass assembly

The heat pump must be connected to the pool by means of a By-Pass assembly.

A By-Pass is an assembly consisting of 3 valves that regulate the flow circulating in the heat pump. During maintenance operations, the By-Pass permits the heat pump to be isolated from the system without interrupting your installation.

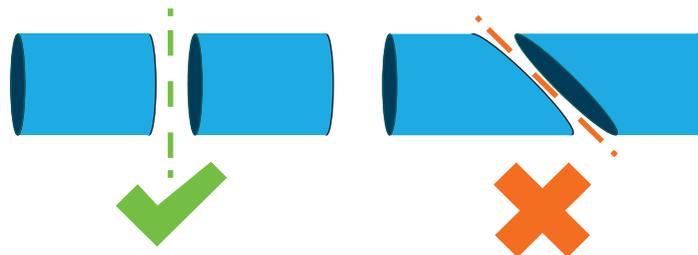


Making a hydraulic connection with the By-Pass kit

WARNING: Do not run water through the hydraulic circuit for 2 hours after applying the adhesive.

Step 1: Take the necessary steps to cut your pipes.

Step 2: Make a straight perpendicular cut through the PVC pipes with a saw.



Step 3: Assemble your hydraulic circuit without connecting it in order to check that it perfectly fits your installation, then dismantle the pipes to be connected.

Step 4: Chamfer the ends of the cut pipes with sandpaper.

Step 5: Apply stripper to the ends of the pipes to be connected.

Step 6: Apply the adhesive in the same place.

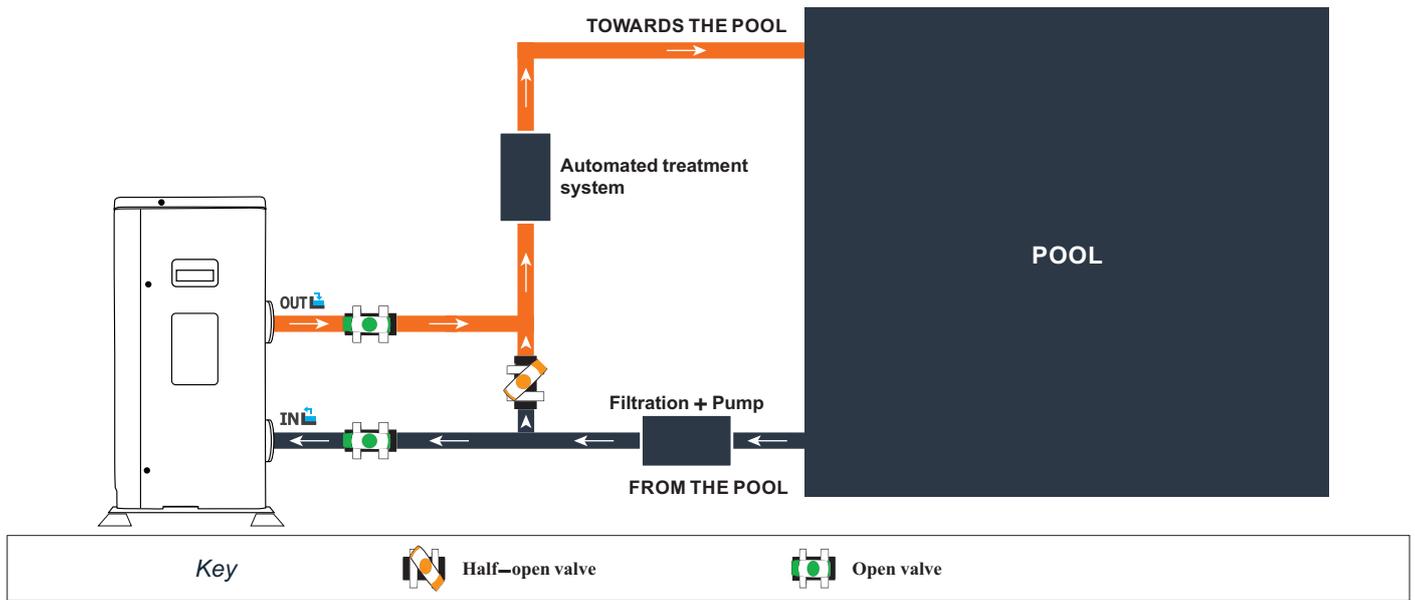
Step 7: Assemble the pipes.

Step 7: Clean of any adhesive remaining on the PVC.

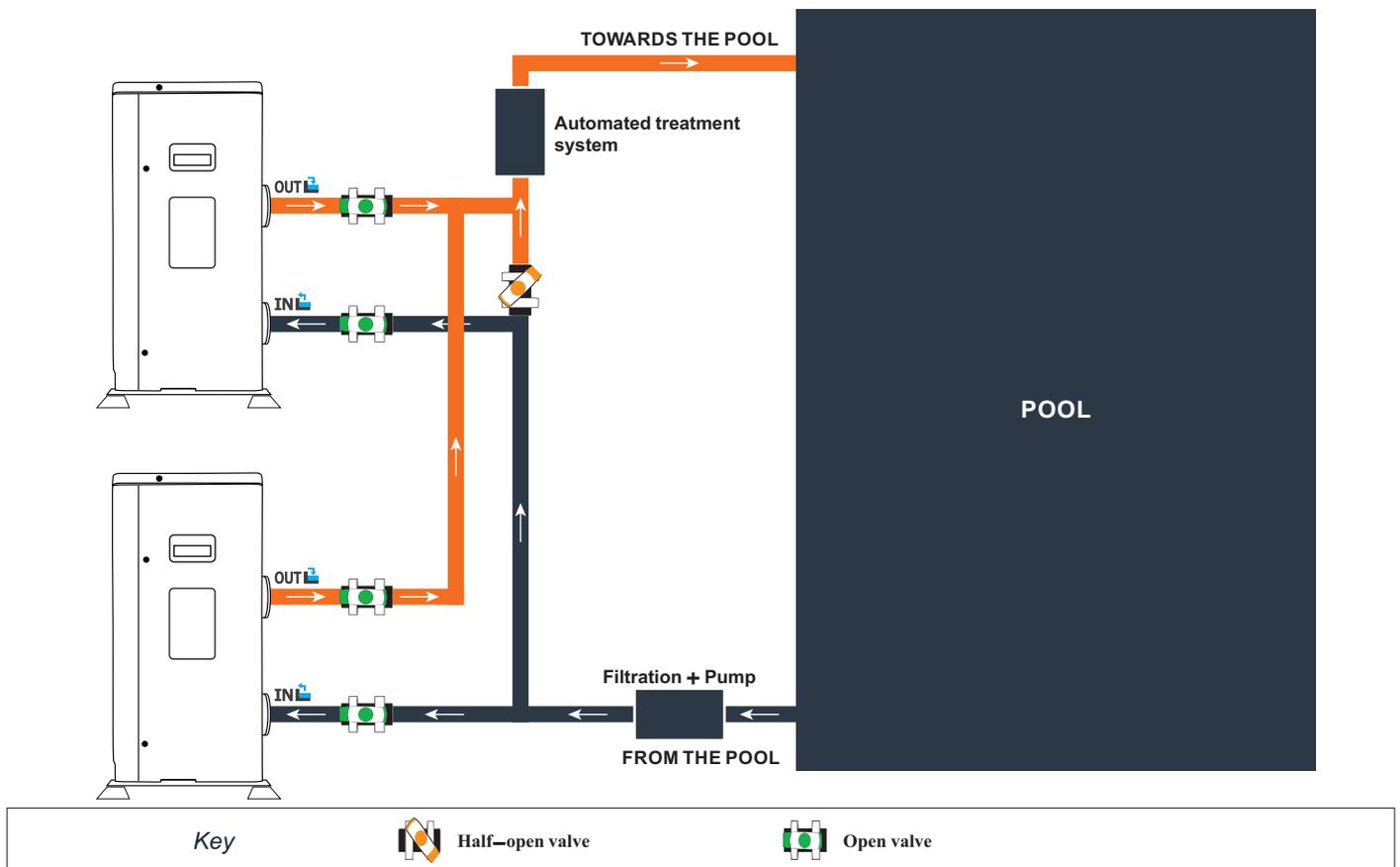
Step 8: Leave to dry for at least 2 hours before putting the hydraulic circuit into water.

5. Installation

By-Pass assembly for one heat pump



By-Pass assembly for more than one heat pump



The filter located upstream of the heat pump must be regularly cleared so that the water in the system is clean, thus avoiding the operational problems associated with dirt or clogging in the filter.

5. Installation

WARNING: Installation must be carried out by a qualified engineer.

This section is provided for information purposes only and must be checked and adapted if necessary according to the actual installation conditions.

5.7 Electrical installation

To function safely and maintain the integrity of your electrical system, the unit must be connected to a general electricity supply in accordance with the following regulations:

Upstream, the general electricity supply must be protected by a 30 mA differential switch.

The heat pump must be connected to a suitable D-curve circuit breaker (see table below) in accordance with current standards and regulations in the country where the system is installed.

The electricity supply cable must be adapted to match the unit's rated power and the length of wiring required by the installation (see table below). The cable must be suitable for outdoor use.

For a three-phase system, it is essential to connect the phases in the correct sequence. If the phases are inverted, the heat pump's compressor will not work.

In places open to the public, it is mandatory to install an emergency stop button close to the heat pump.

Models	Electricity supply	Max. current	Cable diameter	Protection Thermal-magnetic (D curve) protection
HEIKO POOL 5	1-phase 220-240V/1N~50Hz	8	RO2V 3x2.5 mm ²	16A
HEIKO POOL 7		9	RO2V 3x2.5 mm ²	16A
HEIKO POOL 9		13	RO2V 3x2.5 mm ²	16A
HEIKO POOL 11	1-phase 220-240V/1N~50Hz	16	RO2V 3x4 mm ²	20A
HEIKO POOL 15		17	RO2V 3x4 mm ²	20A

1 Cable cross-section suitable for max. length 10 metres. For longer than 10 metres, consult an electrician.

5. Installation

5.8 Electrical connection



WARNING: The heat pump's power supply MUST be disconnected before any operation.

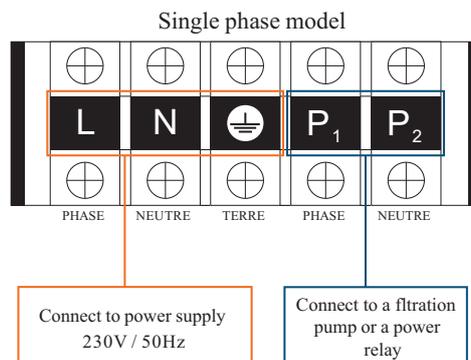
Please comply with the following instructions to electrically connect the heat pump.

Step 1: Detach the electrical side panel with a screwdriver to access the electrical terminal block.

Step 2: Insert the cable into the heat pump unit by passing it through the opening provided for that purpose.

Step 3: Connect the power supply cable to the terminal block in accordance with the diagram below.

Step 4: Carefully close the heat pump panel.



Servo-control of circulating pump

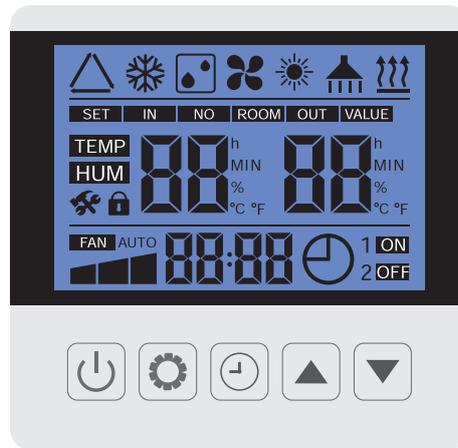
Depending on the type of installation, you can also connect a circulating pump to terminals P1 and P2 so that this operates in tandem with the heat pump.



WARNING: Servo-control of a pump whose power exceeds 5A (1000W) requires the use of a power relay.

6. Use

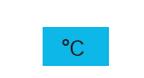
6.1 Wired remote control



6.2 Control box displays



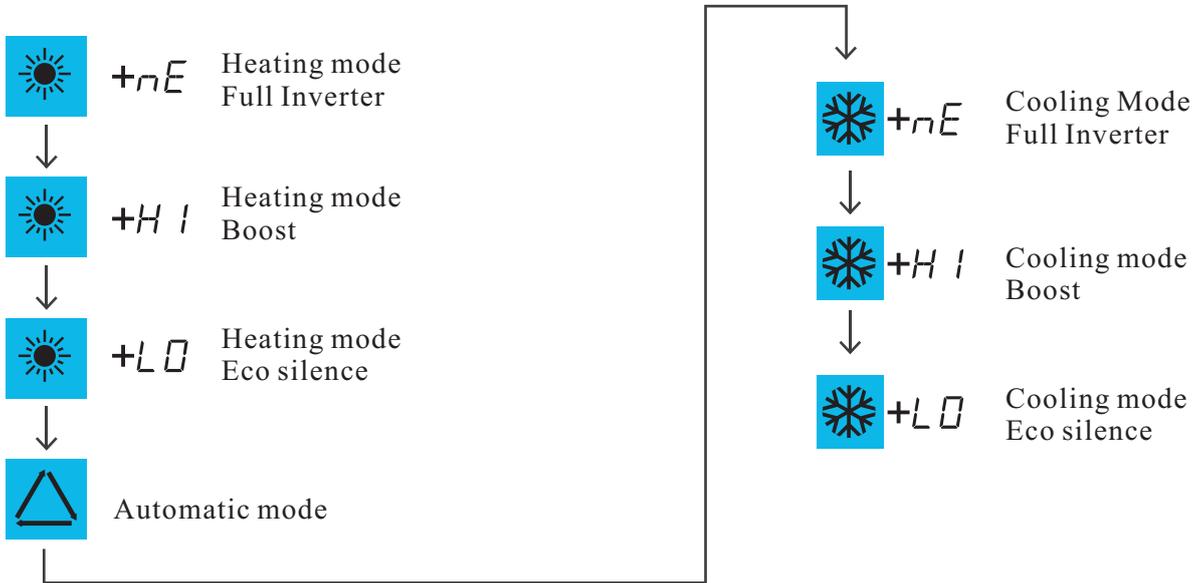
Before starting, ensure that the filtration pump is working and that water is circulating through the heat pump.

	+nE	Cooling mode Full Inverter		Speed compressor
	+nE	Heating Mode Full Inverter		Fan speed
		Automatic mode Full Inverter		inlet water temperature
	+H I	Heating Mode boost		Parameters menu
	+H I	Cooling boost		Temperature unit
	+L O	Heating Mode Eco Silence		Clock
	+L O	Cooling Eco Silence		Clock programming
		Defrost		Keypad lock
		Temperature setting		Programming On Off
		Setpoint and water inlet temperature		

6. Use

6.3 Operating mode selector

Push on  to change the operating mode. The different modes appear in the following order:



6.4 Temperature setting

Once the control panel is unlocked, press to  and  to set and modify the value, press SET to confirm the value.

Press to  to confirm the parameters.

6.5 Parameter checking and setting

Step1: To enter the verification parameters, Keep pressing  press for 3 seconds, then scroll through the parameters with the buttons  and .

Parameters checking in annex.

WARNING:



When the cooling mode switches to heating mode or vice-versa, the heat pump will restart after 10 minutes. When the incoming water temperature is less than or equal to the required temperature (setpoint temperature - 1°C), the heat pump will switch to heating mode. The compressor will stop when the temperature of the incoming water is greater than or equal to the required temperature (setpoint temperature + 1°C).

6. Use

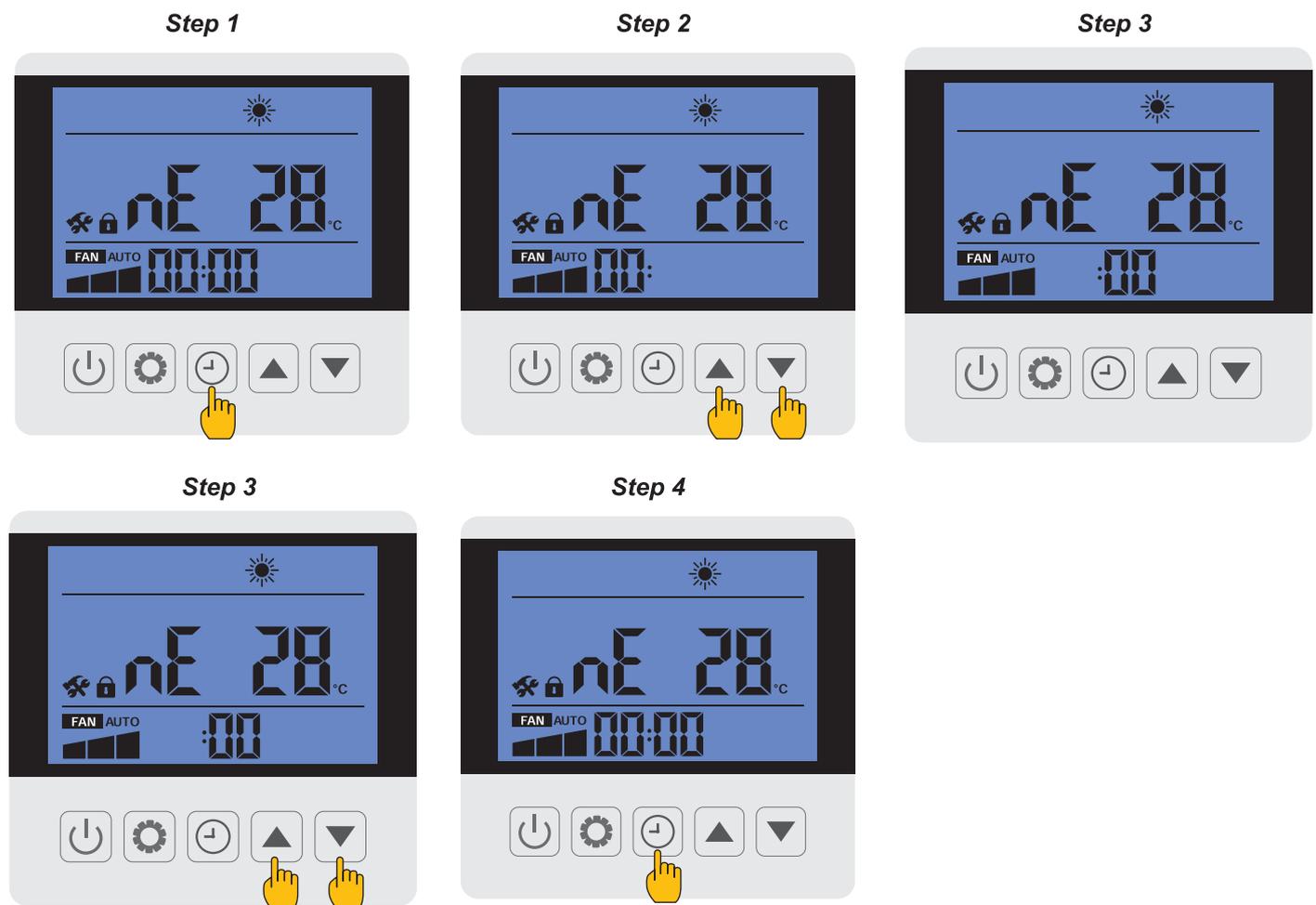
6.6 Setting the clock

Step 1 : Press 5s to  to enter current time setting.

Step 2 : Press to , the hours are blinking, push to  and  to adjust the hours.

Step 3 : Press to , the minutes are blinking, push to  and  to adjust the hours.

Step 4 : Press to , to validate and return to the main screen.



Attention

 **WARNING: When the cooling mode switches to heating mode or vice-versa, the heat pump will restart after 10 minutes.**

When the incoming water temperature is higher or equal to the required temperature (setpoint temperature +1°C), the heat pump will switch to cooling mode. The compressor will stop when the temperature of the incoming water is less than or equal to the required temperature (setpoint temperature-1°C).

6. Use

6.7 Programming Start/Stop

This function is for programming the Start/Stop timing. You can programme up to 3 different Start/Stop timings. Setting is as follows:

Step 1 : Push to  to enter into timer functions.

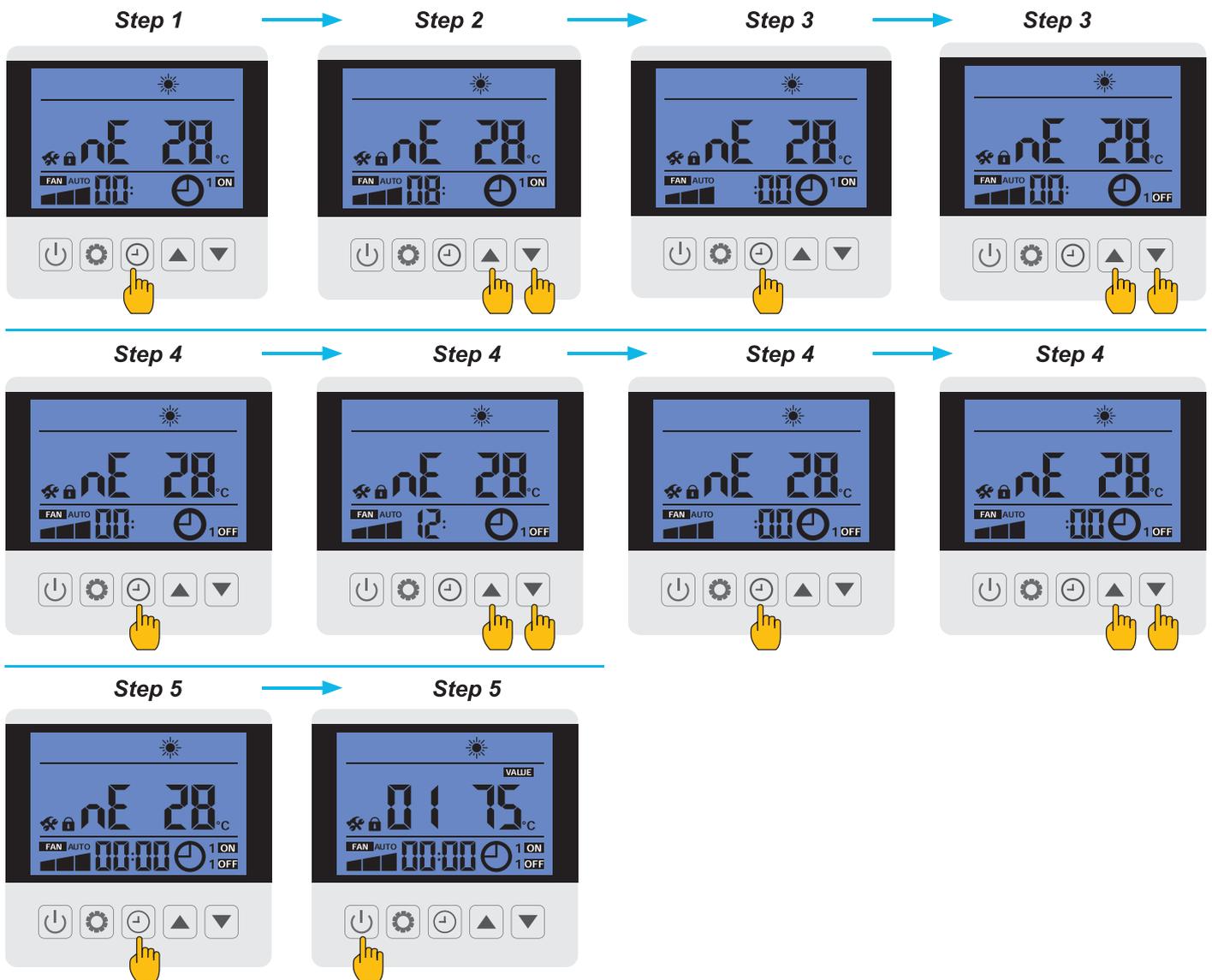
Step 2 : Timer 1 blinking, press  to enter timer ON 1 hour setting, press  and  to modify the value of starting hours.

Step 3 : press  key again, minute are blinking, then press  and  to modify the value of starting minutes.

Step 4 : Press  again to modify timer OFF, same way as upon.

Step 5 : Press  again to confirm Timer ON/OFF.

Step 6 : Press  and  to set timer ON OFF 2 setting.



6.8 Key lock and unlock

To unlock the control panel, press the  button for 5 seconds

If no action has been taken on the control unit for 60 seconds, the control panel will lock.

6. Use

6.9 system parameter query



WARNING : This operation is used to assist servicing and future repairs.
The default settings should only be modified by an experienced professional person.



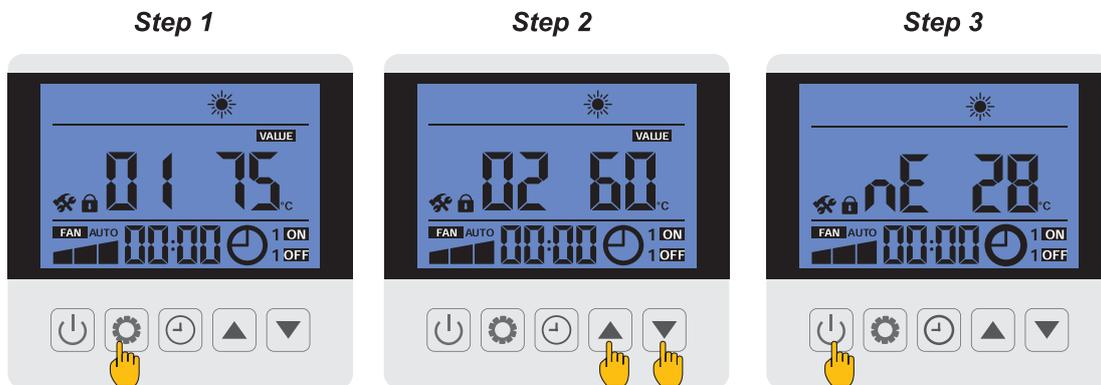
WARNING : Any change to the reserved settings will automatically void the warranty.

The status values can be checked via the remote control by following these steps

Step 1 : Keep pressing 3 s until you enter the settings.

Step 2 : Press and to check the status values.

Step 3 : Press to return to the main screen.



Status values table in annex

6.10 Manufacturer parameter query



WARNING : This operation is used to assist servicing and future repairs.
The default settings should only be modified by an experienced professional person.



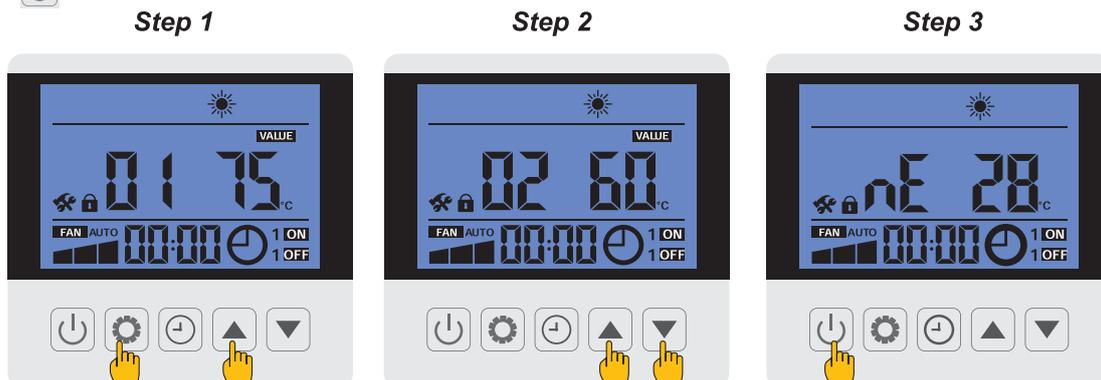
WARNING : Any change to the reserved settings will automatically void the warranty.

The status values can be checked via the remote control by following these steps

Step 1 : Keep pressing + 3 s until you enter the settings, then enter the password 1688.

Step 2 : Press and to check the status values.

Step 3 : Press to return to the main screen.



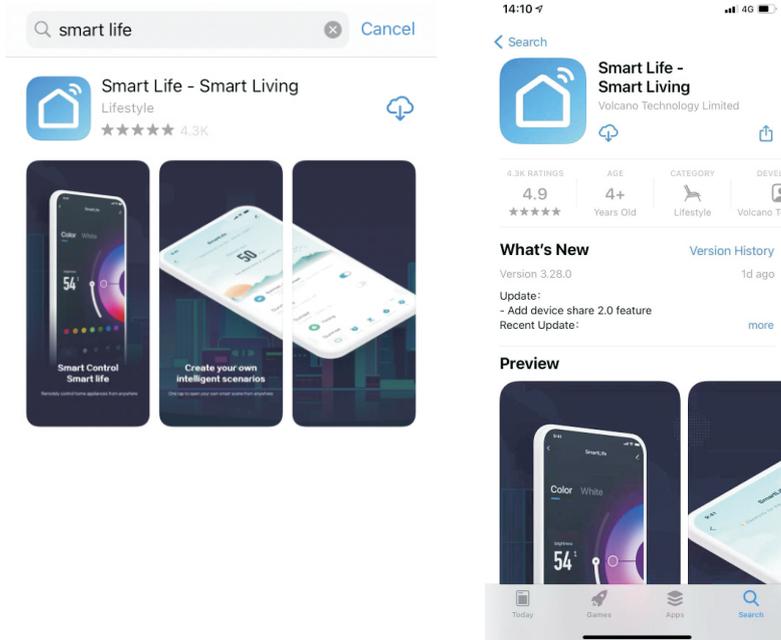
Status values table in annex

6. Use

6.11 WiFi

1.Download and install APP:

Search “Smart Life” in APP store,download and install it “



Or scan the code to enter a website and download it (available for Android and IOS)



Start up APP

After installation, click the icon “



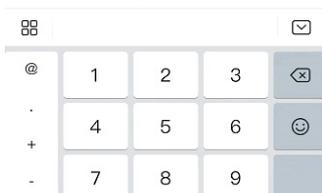
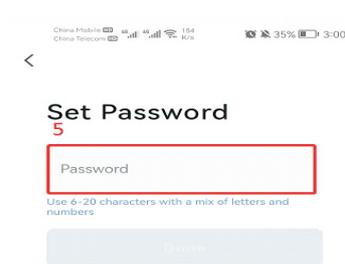
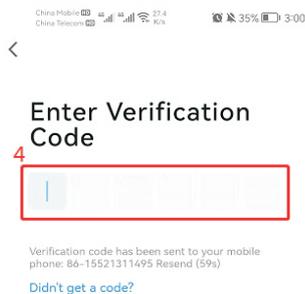
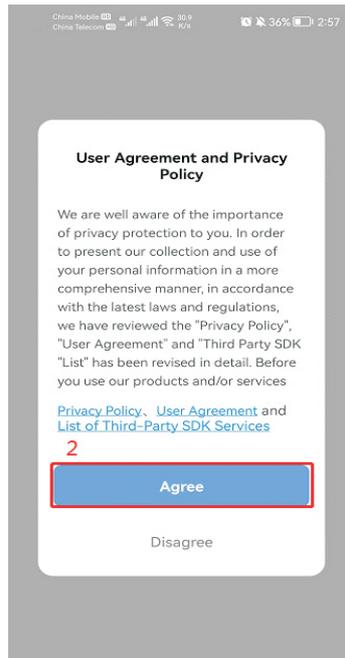
Smart life

6. Use

2.Registration

If you don't have an account, please create a new account as follows:

1. Sign up;
2. Choose "Agree";
3. Enter mobile number or email address;
4. "Get Verification Code", then enter the verification code received by email or phone to validate your account;
5. Set password;
6. Click "Done".

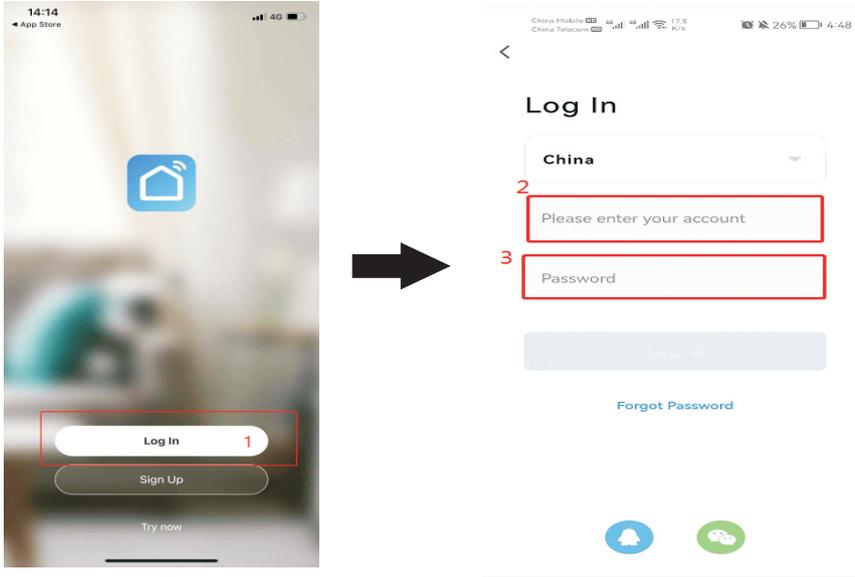


6. Use

3. Log in

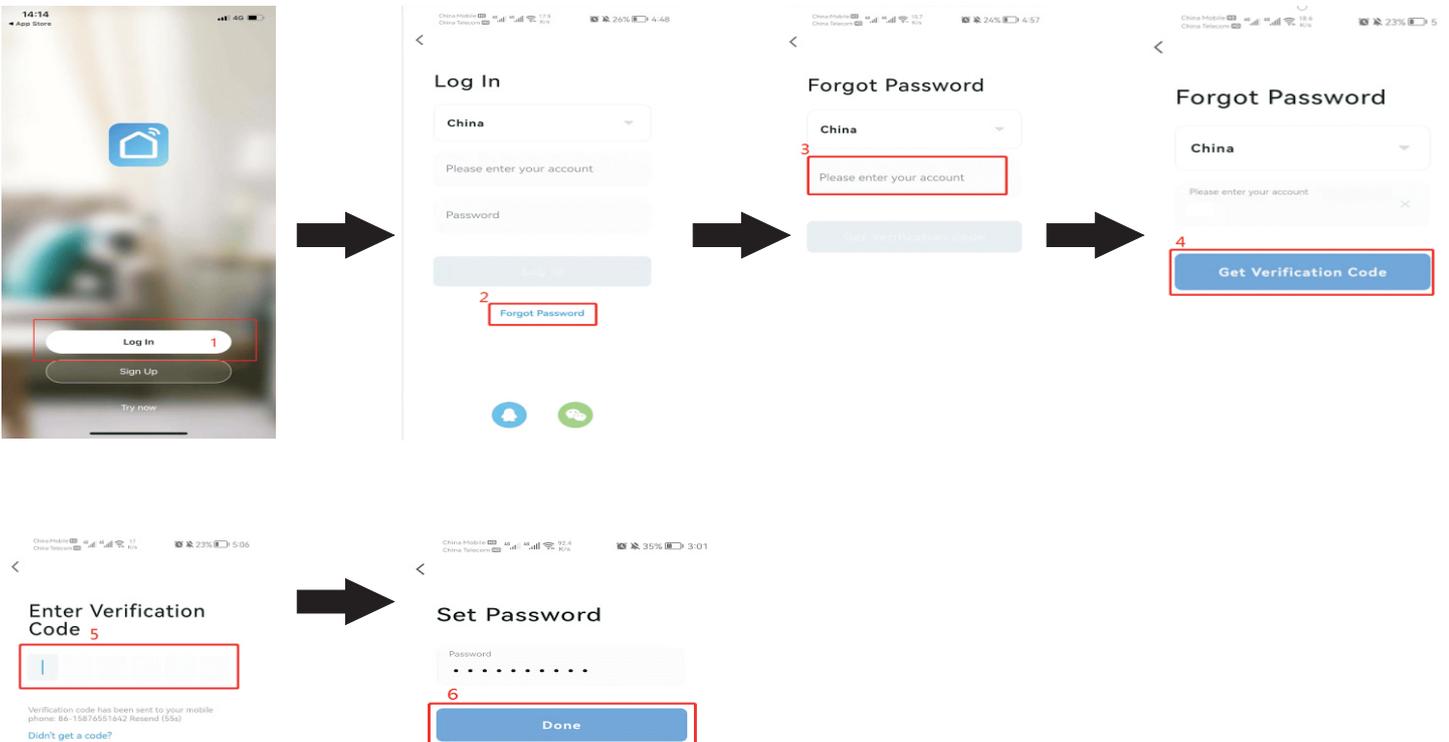
3.1 If you have existing account, please log in as follows:

1. Click “Log In”,
- 2/3. Enter “account” and “password”, then click “Log In”



3.2 If the password is forgotten, please set a new password as follows:

1. Log in;
2. Forgot Password;
3. Enter your account;
4. Get verification code;
5. Enter verification code you get from email or mobile phone;
6. Set a new password.

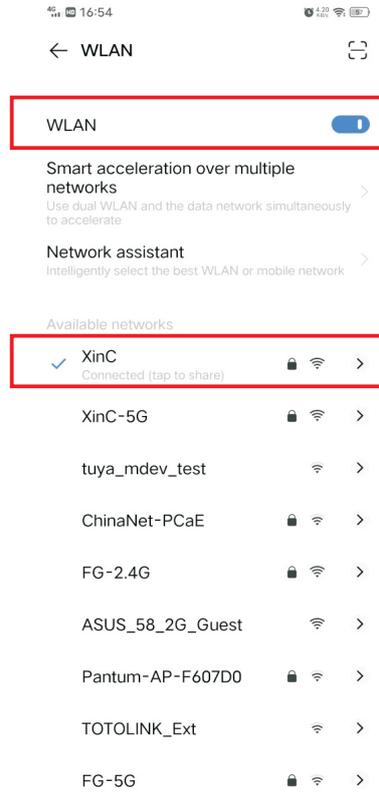


6. Use

4. Connect heat pump to APP in default WIFI mode:

WIFI connection

Step 1: Connect mobile phone to available WIFI in the house, for example “XinC” as below:

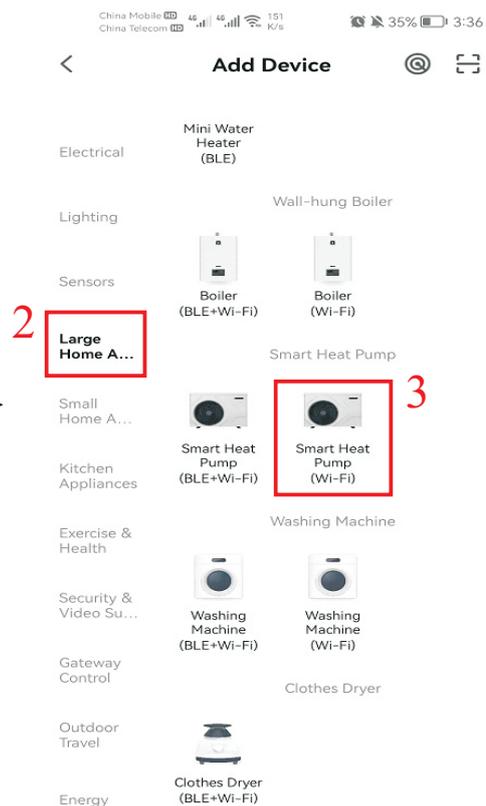
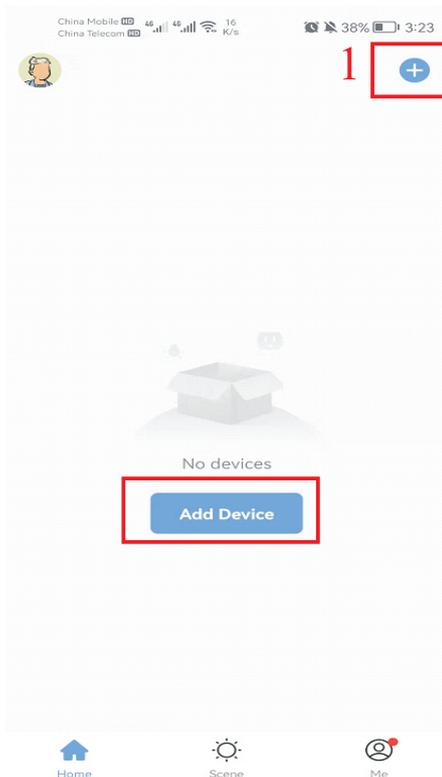


Step 2:

Open “Smart life” APP, and log in,

1. Click “+” or “Add Device”,

2/3. Choose “Large Home” and click “Smart Heat Pump (Wi-Fi)”

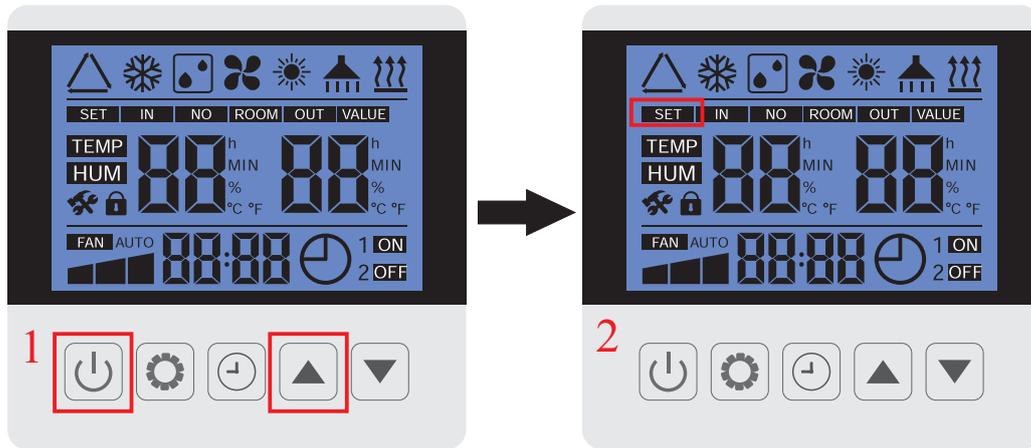


6. Use

Step 3:

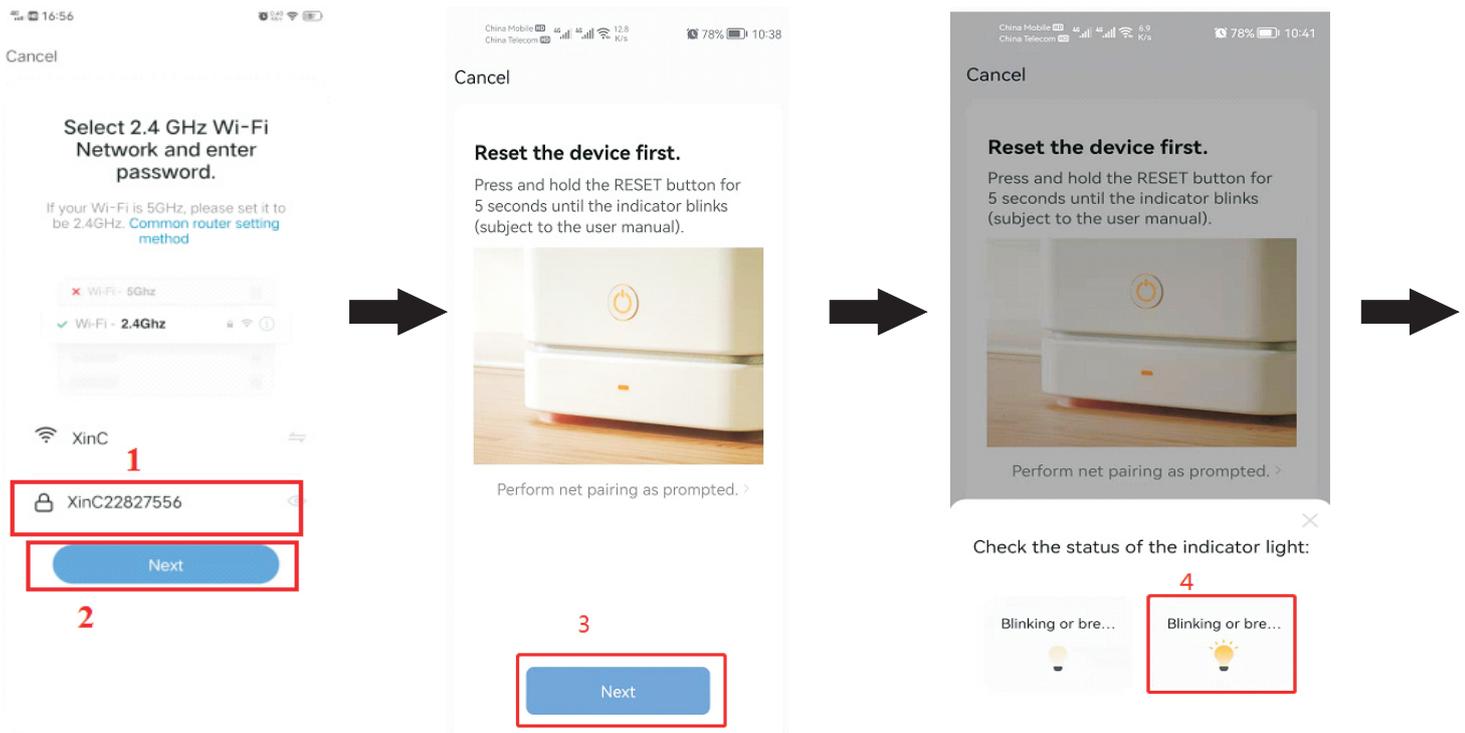
1. Select WIFI network, choose the same WIFI as mobile phone is connecting (For example XinC), and enter correct password;
2. Click “Next”;
3. Reset the device first.

On operation panel, press “” + “” at the same time for 5 seconds, to enter “default WIFI mode”, “SET” will blink, the heat pump is ready to be paired;

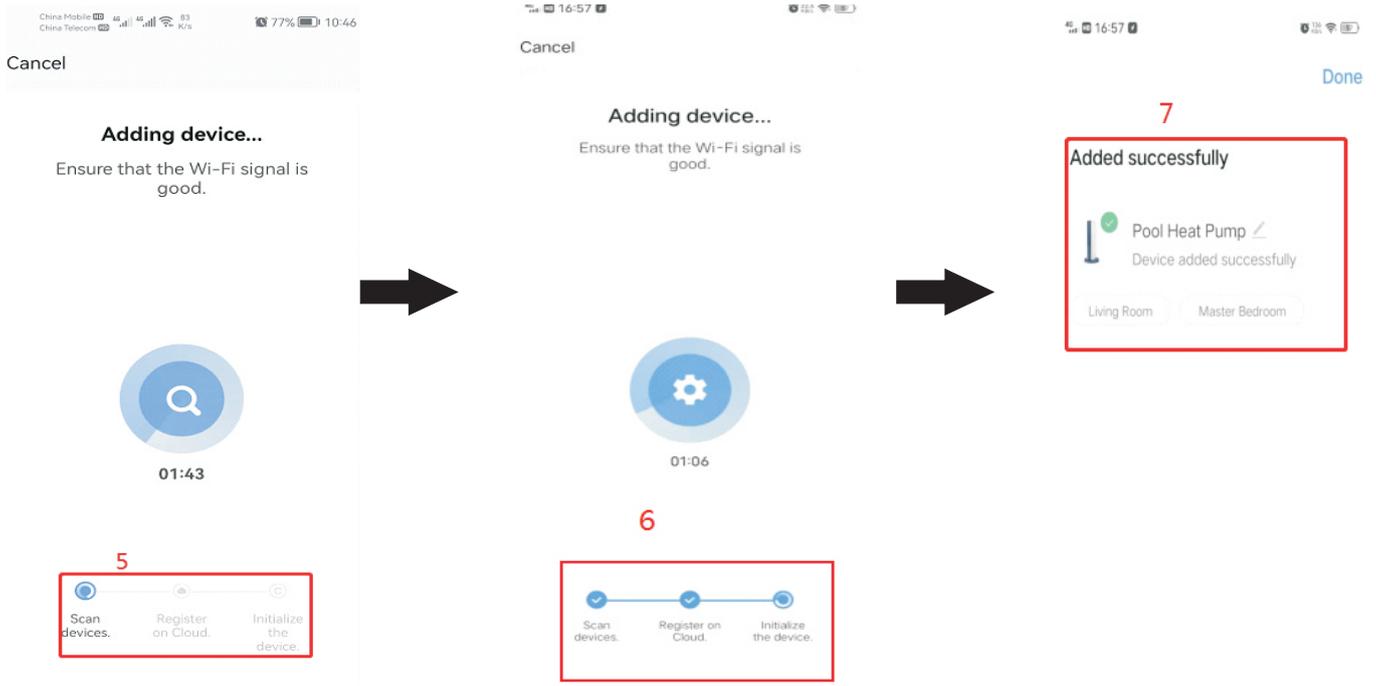


And click “Next” on APP.

4. Check the status of the indicator light (“SET” blinks on operation panel), and Click “Blinking”;
5. Scan devices and Adding it;
6. “Scan devices”, “Register on cloud”, “Initialize the device” will be done automatically.
7. The system shows the device is added successfully.



6. Use

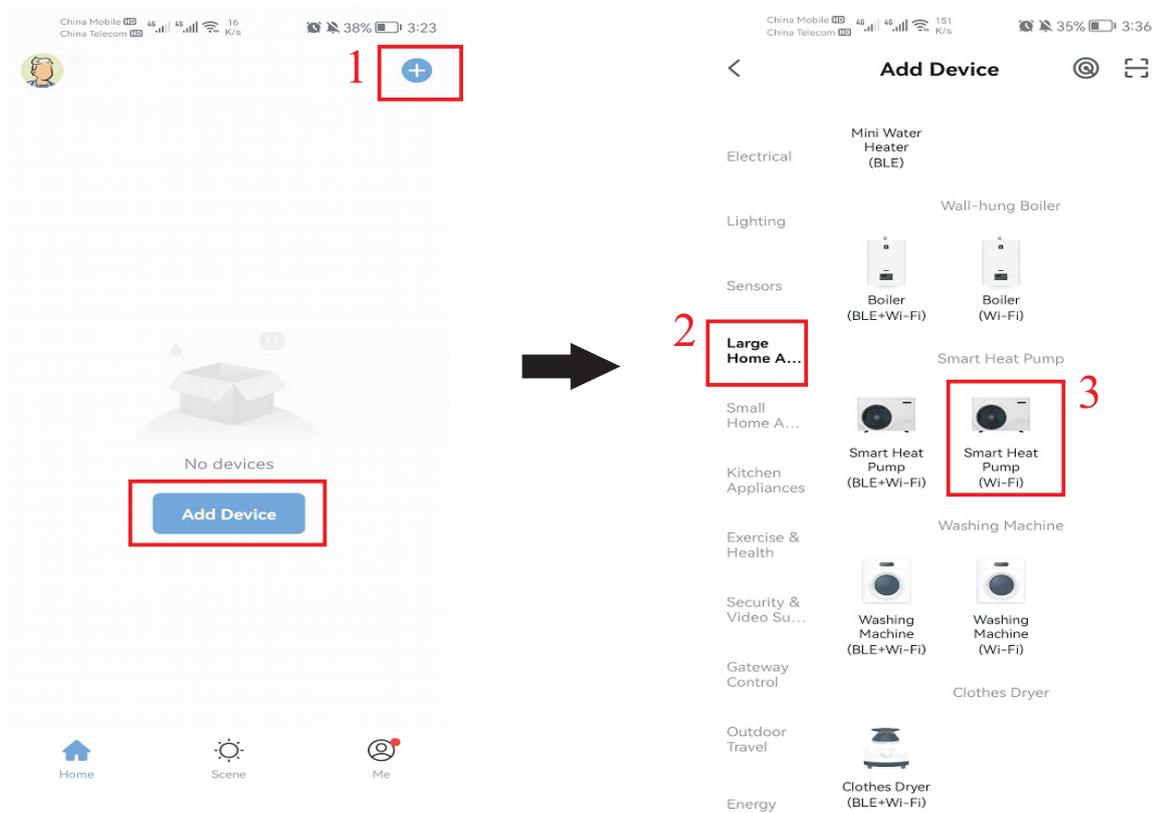


5. Connect heat pump to APP in hot spot mode

Step 1: Open “Smart life” APP, and log in,

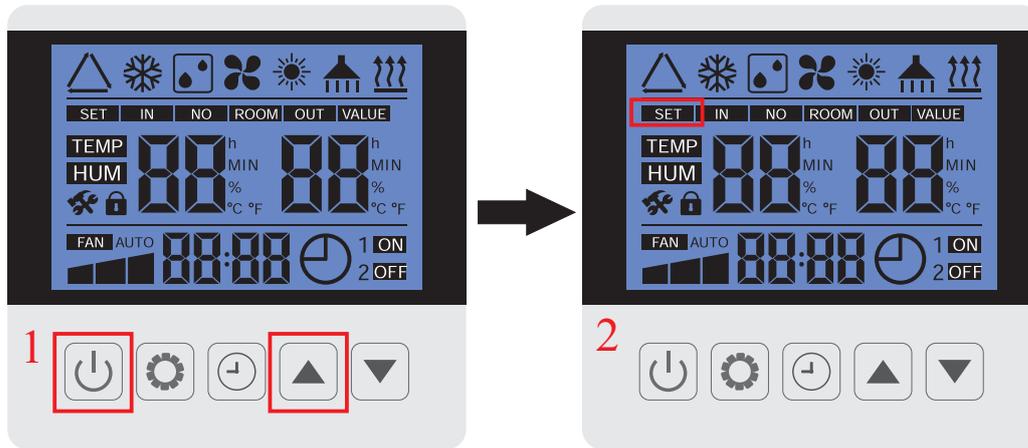
1. Click “+” or “Add Device”,

2/3. Choose “Large Home Appliances” and click “Smart Heat Pump (Wi-Fi)”



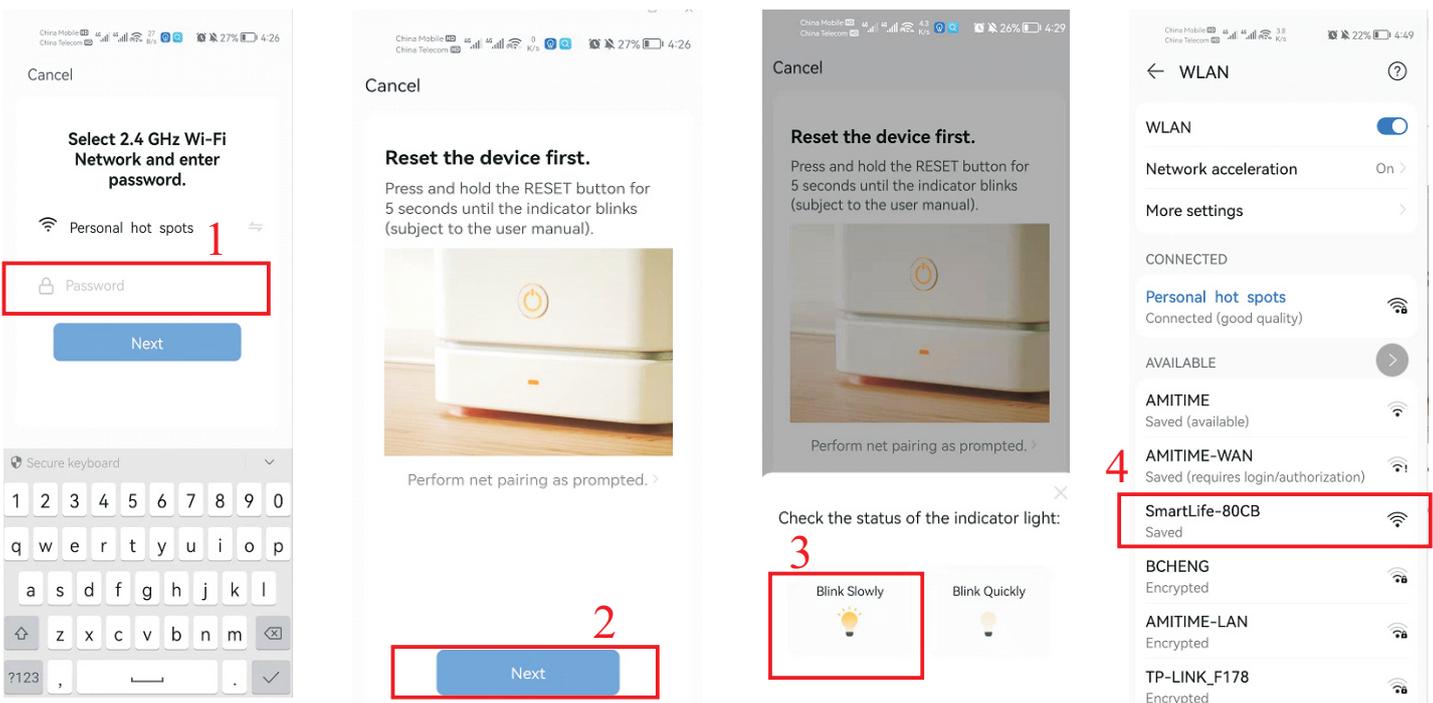
6. Use

Step 2:

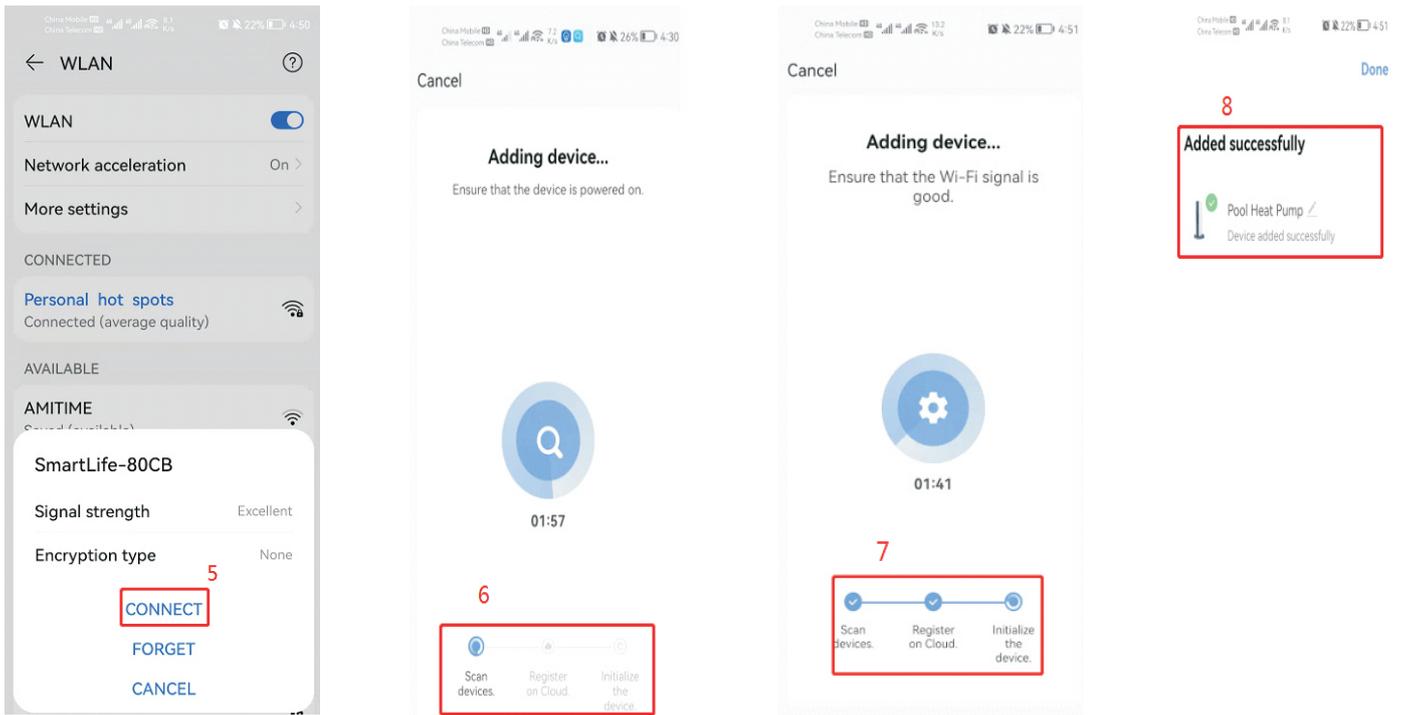
1. Select WIFI network as the hot spot from mobile phone, and enter correct password. Then click “Next”.
2. Reset the device first on the operation panel.
 1. Press “

And click “Next” on APP.

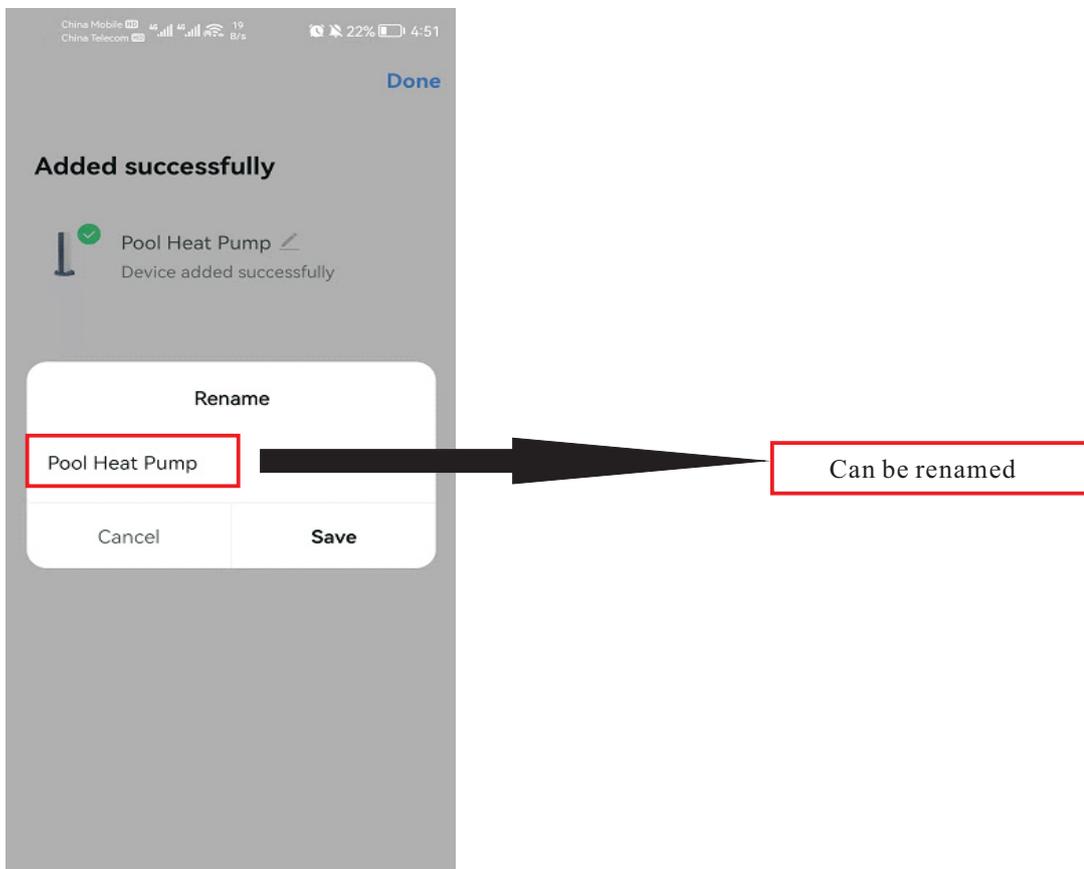
3. Check the status of the indicator light (“SET” blinks on operation panel), and Click “Blink slowly”;
4. Enter WIFI connection of mobile phone, and find SmartLife-XXX, such as:SmartLife-80CB,
5. Click “CONNECT”, and return to “Smart Life” APP;
6. APP will scan devices and Adding it;
7. “Scan devices”, “Register on cloud”, “Initialize the device” will be done automatically.
8. The system shows the device is added successfully.



6. Use



After the device is added, Click  , you can rename the device.

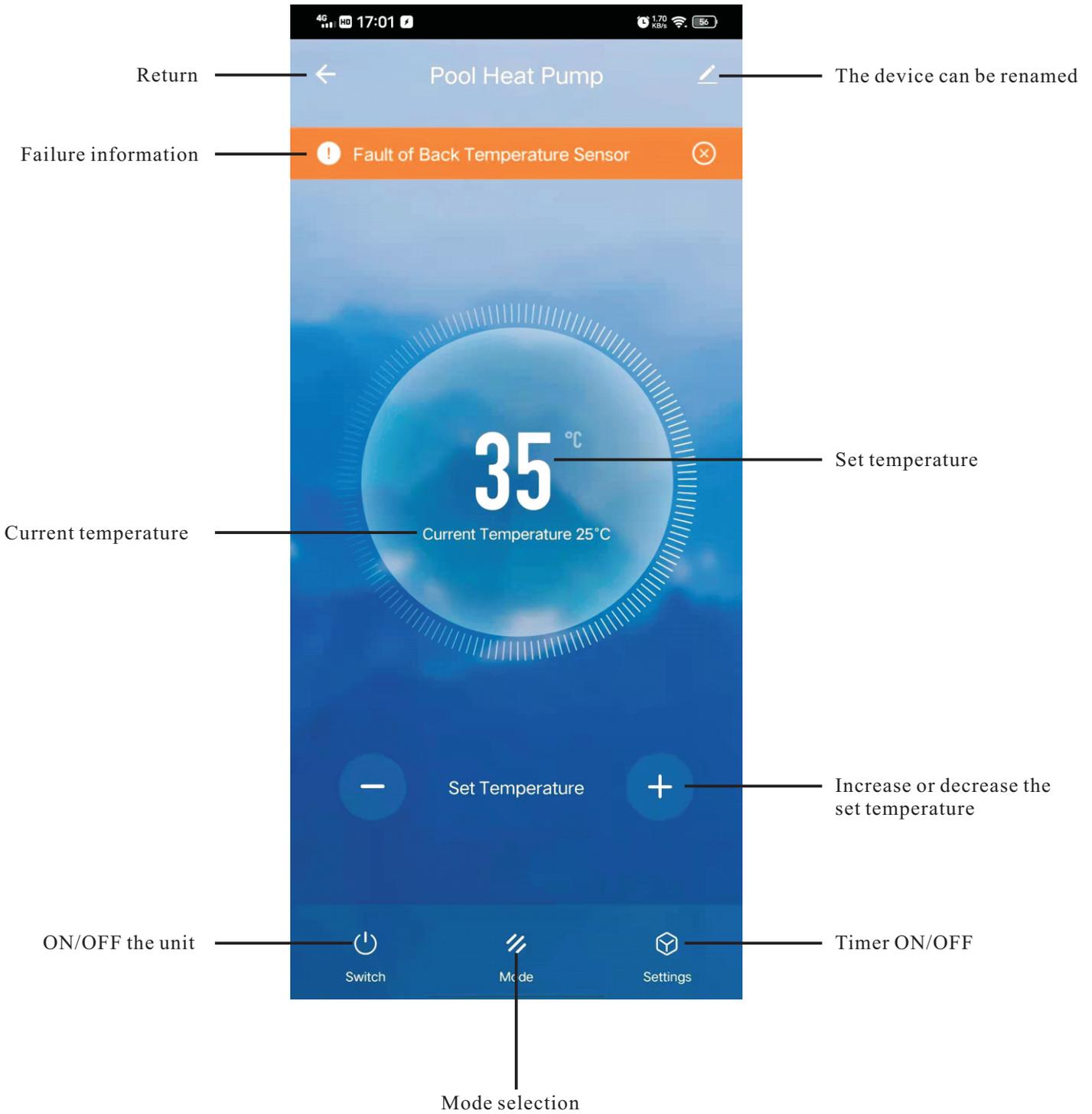


If the connection is failed, please try it again.

6. Use

6. Operation of APP

After the heat pump is bounded, on the main interface, click “Pool Heat Pump” to operate it.

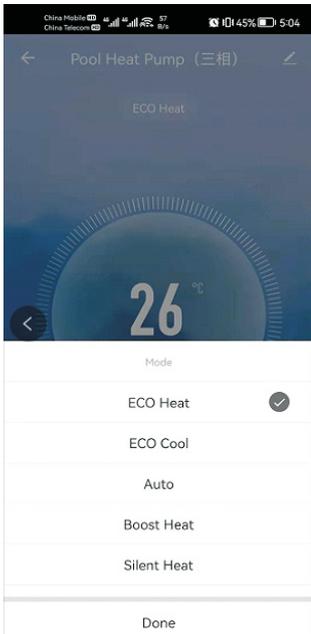


6. Use

6.1 Press “Switch”, to turn on or off the unit;

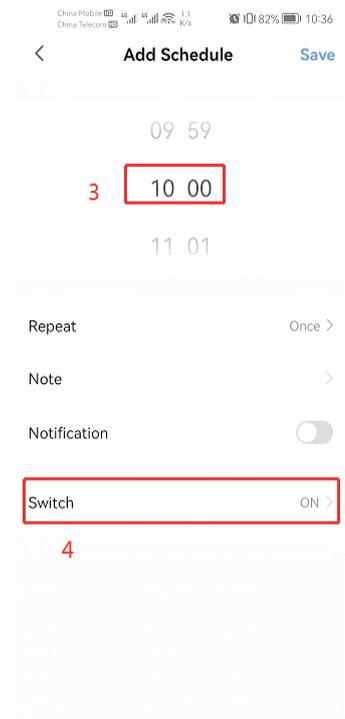
6.2 Press “+” or “-”, to increase or decrease the set temperature;

6.3 Press “Mode” to choose the mode among “Eco Heat”, “Eco Cool”, “Auto”, “Boost Heat” and “Silent Heat”.

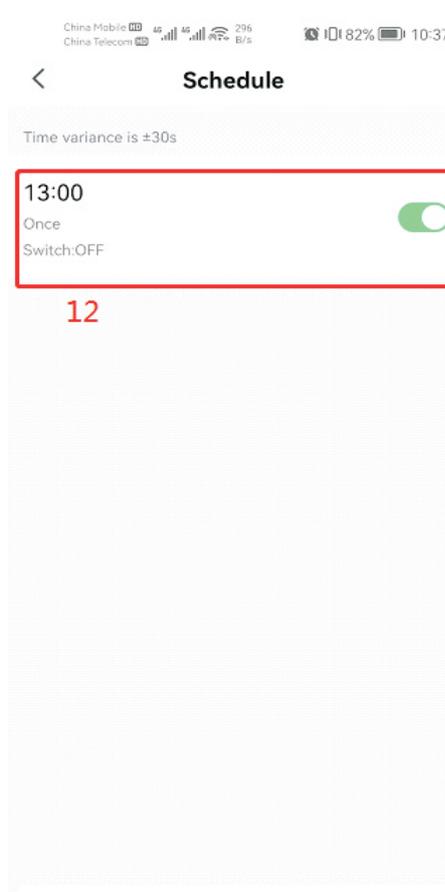
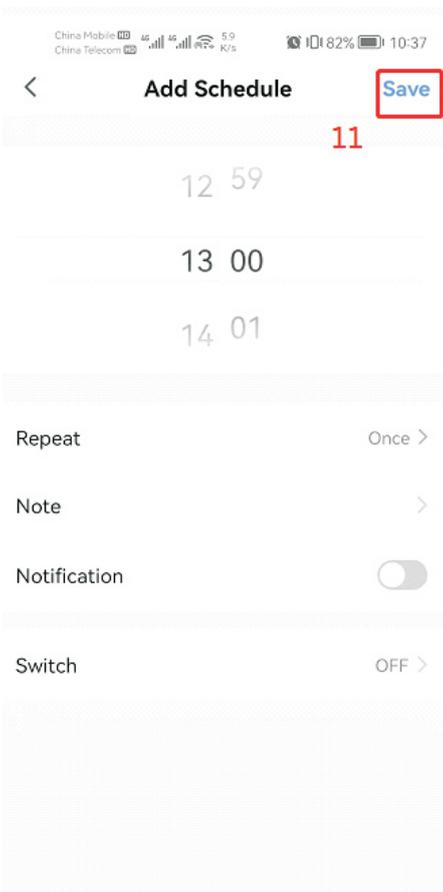
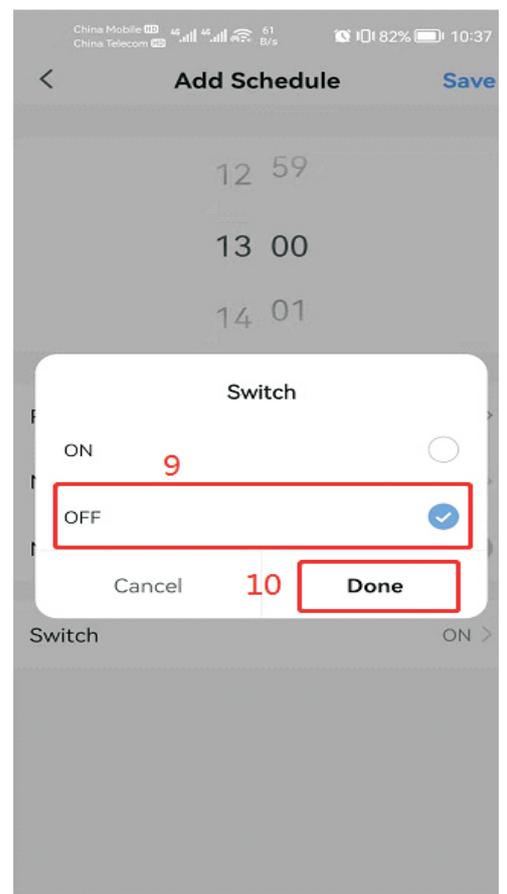
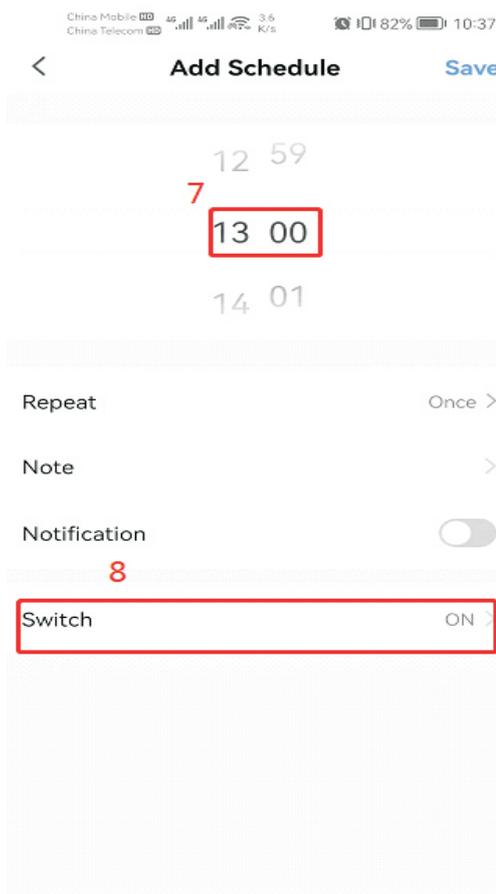
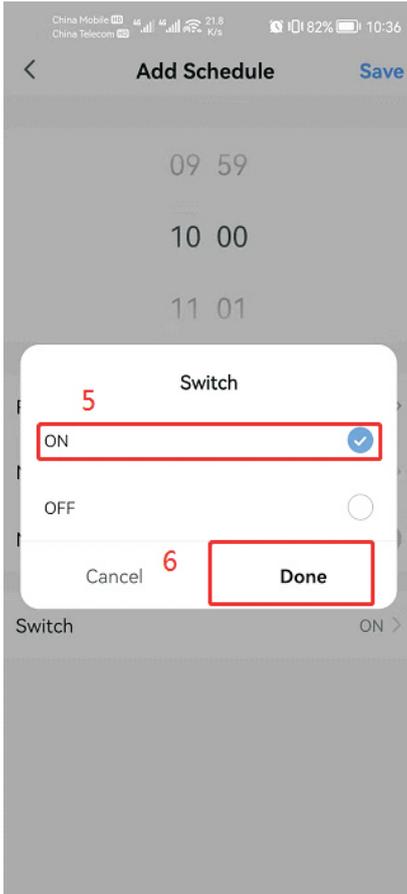


6.4 Timer ON/OFF:

1. Press “Settings”;
2. Press “Add”;
- 3.4. Choose a time when the unit starts, click “Switch”-- “ON”;
- 5/6. After choose Switch ON, press “Done”;
- 7/8. Choose a time when the unit stops, click “Switch”-- “OFF”;
- 9/10. After choose Switch OFF, press “Done”;
11. Press “Save” to save the setting;
12. The timer is set successfully.



6. Use



7. Operation

7.1 Operation

Conditions of use

For the heat pump to operate normally, the ambient air temperature must be between -7°C and 43°C.

Recommendations prior to start-up

Before activating the heat pump, please:

Check that the unit is firmly secured and stable.

Check that the gauge indicates a pressure greater than 80 psi.

Check that the electrical wiring is properly connected to the terminals.

Check the earthing.

Check that the hydraulic connections are tight and that there is no leakage of water.

Check that the water is circulating correctly in the heat pump and that the flow rate is adequate.

Remove any unnecessary object or tool from around the unit.

Operation

1. Activate the unit's power supply protection (differential switch and circuit-breaker).
2. Activate the circulating pump if it is not servo-controlled.
3. Check the By-Pass opening and the control valves.
4. Activate the heat pump by pressing once on 
5. Adjust the remote control clock.
6. Select the required temperature by using one of the remote control's mode.
7. The heat pump's compressor will start up after a few moments.

All you have to do now is wait until the required temperature is reached.



WARNING: Under normal conditions, a suitable heat pump can heat the water in a swimming pool by 1°C to 2°C per day. It is therefore quite normal to not feel any temperature difference in the system when the heat pump is working. A heated pool must be covered to avoid any loss of heat.

7.2 Servo-control of circulating pump

If you have connected a circulating pump to terminals P1 and P2, it is automatically electrically powered when the heat pump operates.

7. Operation

7.3 Using the pressure gauge

The gauge is for monitoring the pressure of the refrigerant contained in the heat pump. The values it indicates can vary considerably, depending on the climate, temperature and atmospheric pressure.

When the heat pump is in operation:

The gauge's needle indicates the refrigerant pressure. Mean operating range between 250 and 400 PSI, depending on the ambient temperature and atmospheric pressure.

When the heat pump is shut down:

The needle indicates the same value as the ambient temperature (within a few degrees) and the corresponding atmospheric pressure (between 150 and 350 PSI maximum).

If left unused for a long period of time:

Check the pressure gauge before starting up the heat pump. It must indicate at least 80 PSI.

If the pressure goes down too much, the heat pump will display an error message and automatically go into 'safe' mode.

This means that there has been a leakage of refrigerant and that you must call a qualified technician to replace it.

7.4 Antifreeze protection



WARNING: For the antifreeze system to work, the heat pump must be powered and the circulating pump activated. If the circulating pump is servo-controlled by the heat pump, it will be automatically activated.

When the heat pump is on standby, the system monitors the ambient temperature and the water temperature in order to activate the antifreeze programme if required.

The antifreeze programme is automatically activated when the ambient temperature or the temperature of the water is less than 2°C and when the heat pump has been shut down for more than 120 minutes.

When the antifreeze programme is running, the heat pump activates its compressor and the circulating pump so as to reheat the water until the water temperature exceeds 2°C.

The heat pump automatically leaves the antifreeze mode when the ambient temperature is greater than or equal to 2°C or when the heat pump is activated by the user.

8. Maintenance and servicing

8.1 Maintenance and servicing



WARNING: Before undertaking maintenance work on the unit, ensure that you have disconnected the electrical power supply.

Cleaning

The heat pump's casing must be cleaned with a damp cloth. The use of detergents or other household products could damage the surface of the casing and affect its properties.

The evaporator at the rear of the heat pump must be carefully cleaned with a vacuum cleaner and soft brush attachment.

Annual maintenance

The following operations must be undertaken by a qualified person at least once a year:

Carry out safety checks.

Check the integrity of the electrical wiring.

Check the earthing connections.

Monitor the state of the pressure gauge and the presence of refrigerant.

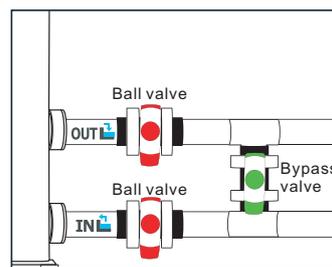
8.2 Winter storage

In the winter months when the ambient temperature is lower than 3°C, a shut-down heat pump must be winterised to avoid any frost damage.



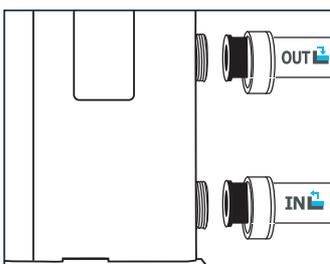
Step 1

Disconnect the heat pump from the power supply.



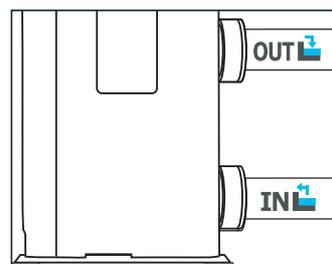
Step 2

Step 2: Open the By-Pass valve. Close the inlet and outlet valves.



Step 3

Unscrew the drain plug and water pipes in order to drain any water from the heat pump.



Step 4

Screw back the drain plug and pipes or block them with rags so as to prevent any foreign bodies from getting into the circuit. Finally, protect the pump with its winter storage cover.



If a circulating pump is servo-controlled by the heat pump, drain this also.

9. Repairs



WARNING: Under normal conditions, a suitable heat pump can heat the water in a swimming pool by 1°C to 2°C per day. It is therefore quite normal to not feel any temperature difference in the system when the heat pump is working.

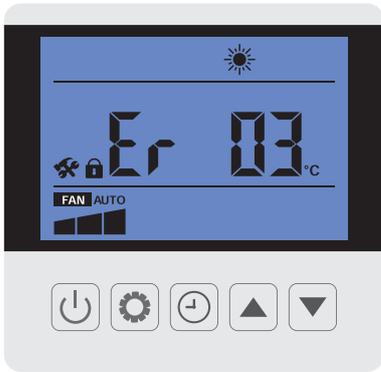
A heated pool must be covered to avoid any loss of heat.

9.1 Breakdowns and faults

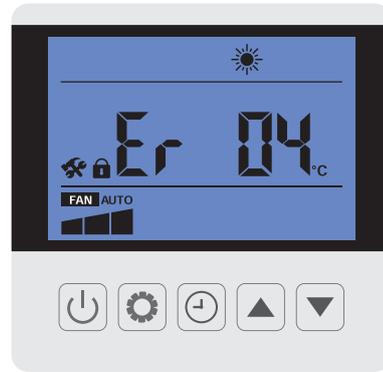
In the event of a problem, the heat pump's screen displays a fault symbol E_r instead of temperature indications. Please consult the table opposite to find the possible causes of a fault and the actions to be taken.

Fault code examples:

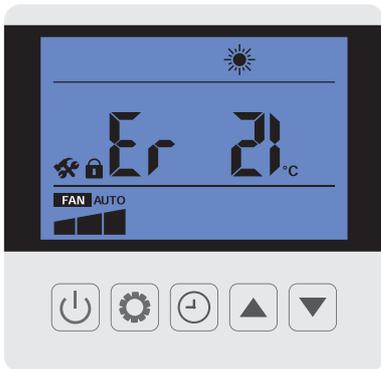
Fault code 03



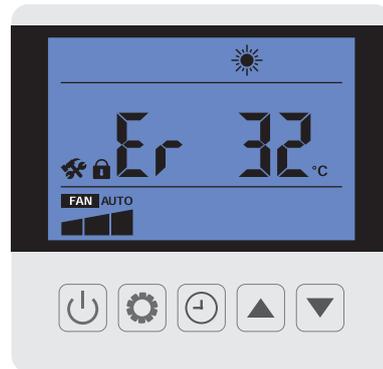
Fault code 04



Fault code 21



Fault code 32



9. Repairs

9.2 List of faults

Error list					
Error Code	Failure	Status of Unit	Course	Solution	
Er 03	FLO	Flow switch protection	Unit stops	1.Flow switch failed	1.Replace flow switch
				2.Insufficient water flow rate	2.Check water pump and water system
Er 18	AL 01	Discharge temperature sensor failure	Unit stops if Er 18 happens 3 times in 60min.	Sensor failed	Replace the failed sensor
Er 29	AL 02	Suction temperature sensor failure	Unit keeps works	Sensor failed	Replace the failed sensor
Er 15	AL 03	Water inlet temperature sensor failure	Unit stops	Sensor failed	Replace the failed sensor
Er 27	AL 04	Water outlet temperature sensor failure	Unit stops	Sensor failed	Replace the failed sensor
Er 16	AL 05	Coil temperature sensor failure	Unit stops	Sensor failed	Replace the failed sensor
Er 21	AL 06	Ambient temperature sensor failure	Unit stops	Sensor failed	Replace the failed sensor
Er 09	AL 07	Communication failure (operation panel)	Unit is locked.	1.Communication cable failed	1.Check or replace communication cable
				2.Operation panel failed	2.Reset system by repowering. If not OK, replace operation panel.
Er 99	AL 08	EEPROM failure	Unit is locked.	1.Control board failed	1.Replace control board
				2.EEPROM failed	2.Refresh EEPROM
Er 34	AL 09	Fan motor failure	Unit stops	1.Fan motor failed	1.Replace fan motor
				2.Control board failed	2.Replace control board
				3.Fan blade got stuck or broken	3.Check or replace fan blade
Er 05	AL 11	High pressure protection	Unit stops. Water pump runs (for first two cycles).	1.Refrigerant system got blocked (check EEV and piping)	At first two cycles, error can be cleared in 3min and unit works again.
				2.Fan not working or failed	
				3.Leakage of refrigerant	
				4.Pressure switch failed	
Er 05	AL 11	High pressure protection (happened 3 times)	Unit stops (only recover by repowering)		1. Check refrigerant system (if there is any leakage of refrigerant or system got blocked) 2.Check fan motor and evaporator coil (if it got blocked) 3.Check pressure switch and replace it if it failed.
Er 06	AL 12	Low pressure protection	Unit stops. Water pump runs (for first two cycles).	1.Refrigerant system got blocked (check EEV and piping)	At first two cycles, error can be cleared in 3min and unit works again.
				2.Fan not working or failed	
				3.Leakage of refrigerant	
				4.Pressure switch failed	
Er 06	AL 12	Low pressure protection (happened 3 times)	Unit stops (only recover by repowering)		1. Check refrigerant system (if there is any leakage of refrigerant or system got blocked) 2.Check fan motor 3.Check pressure switch and replace it if it failed.
Er 13	AL 14	Ambient temperature out of working range	Unit stops	1.Out of working range	1.Stop the unit
				2.Ambient temperature sensor failed or stays too close to heat exchanger	2.Replace sensor or correct position of ambient temperature sensor
Er 11	AL 15	Too high delta T between inlet/outlet water temperature	Unit stops	Insufficient water flow rate	At first two cycles, error can be cleared in 3min and unit works again.

9. Repairs

Error list					
Error Code		Failure	Status of Unit	Course	Solution
Er 11	AL 15	Too high delta T between inlet/outlet water temperature (happened 3 times)	Unit stops	Insufficient water flow rate	Recover by repowering. Check water system and water pump
Er 14	AL 17	Anti-freezing protection in cooling	Unit stops. Water pump runs.	1. Leakage of refrigerant	1. Check if there is any leakage point
				2. Insufficient water flow rate	2. Check water system and water pump
				3. Refrigerant system got blocked	3. Check EEV and piping of refrigerant system
				4. Insufficient air flow	4. Check fan motor and evaporator coil (if it got blocked)
Er 12	AL 18	Too high discharge temperature	Unit stops	1. Leakage of refrigerant	1. Check if there is any leakage point
				2. Insufficient water flow rate	2. Check water system and water pump
				3. Refrigerant system got blocked	3. Check EEV and piping of refrigerant system
				4. Discharge temperature sensor failed	4. Replace discharge temperature sensor
				5. Insufficient air flow	5. Check fan motor and evaporator coil (if it got blocked)
E20 264	AL 19	Too high/low input voltage	Unit stops		Check input voltage
E20 260	AL 20	Too high/low input current	Unit stops		Check input voltage
E20 16	AL 21	DC voltage protection	Unit stops	Input voltage too low or PFC module failure	Check input voltage and PFC module
Er 35	AL 22	AC current protection	Unit stops	1. The speed of compressor is too high	1. This protection will be recovered automatically.
				2. Water temp is too high	2. Check water pump and openings of Bypass inlet/outlet valves
				3. Ambient temp is too high. Air volume is too low.	3. Check if the fan is working properly and if air inlet is blocked
E20 01	AL 23	IPM module protection (over current)	Unit stops	IPM module failure	Replace the inverter module
E20 288	AL 24	IPM module protection (overheating)	Unit stops	Fan motor failure or air duct blocked	Check fan motor and air duct
E20 02	AL 25	Compressor driver protection	Unit stops	Compressor driver failed	Check wiring and replace compressor driver if needed
Er 10	AL 28	Communication failure (compressor driver and main control board)	Unit stops	1. Bad connection	1. Check wiring connections between PCB and inverter module
				2. Defective inverter module	2. Replace inverter module
				3. Defective PCB	3. Replace PCB
Er 04	AL 29	Anti-freezing protection (in standby mode)	Unit stops	Normal system protection	This protection will be cleared automatically.
Er 32	AL 30	Water outlet temperature too high (in heating mode)	Unit stops	Insufficient water flow	Check water flow rate, water pump and water system
Er 33	AL 31	Outdoor coil temperature too high (in cooling mode)	Unit stops. Water pump runs.	Fan motor failure or air duct blocked	Check fan motor and air duct
Er 42	AL 32	Indoor coil temperature sensor failure	Unit stops	Coil temperature sensor failed	Check indoor coil sensor (at titanium heat exchanger) and replace it if it failed

10. Annex

10.1 Parameter checking

To enter the verification parameters, Keep pressing  press for 3 seconds, then scroll through the parameters with the buttons  and .

Code	Name	Note
T1	Air discharge temp.	
T2	Air suction temp.	
T3	Inlet water temp.	
T4	Outlet water temp.	
T5	Outdoor coil temp.	
T6	Outdoor ambient temp.	
T7	IPM temp.	
T8	Indoor coil temp.	
T9	Reserve	
T10	Reserve	
T11	Reserve	
Ft	Target frequency	
Fr	Current frequency	
1F	Main EEV opening	
2F	Auxiliary EEV opening	
od	Operation mode	1:cooling 4:heating
Pr	Fan speed	AC -1:H 2:M 3:L DC-value*10
dF	Defrosting condition	
OIL	Oil return situation	
r1	Reserve	
r2	Bottom heater switch	
r3	Reserve	
STF	4way valve switch	
HF	Reserve	
PF	Reserve	
PTF	Reserve	
Pu	Water pump switch	
AH	AC fan H speed switch	
Ad	AC fan M speed switch	
AL	AC fan L speed switch	
dcU	DC bus voltage	
dcC	Inverter compressor current (A)	
AcU	Input voltage	
AcC	Input current	
HE1	History error code	
HE2	History error code	
HE3	History error code	
HE4	History error code	
Pr	Protocol version	
Sr	Software version	

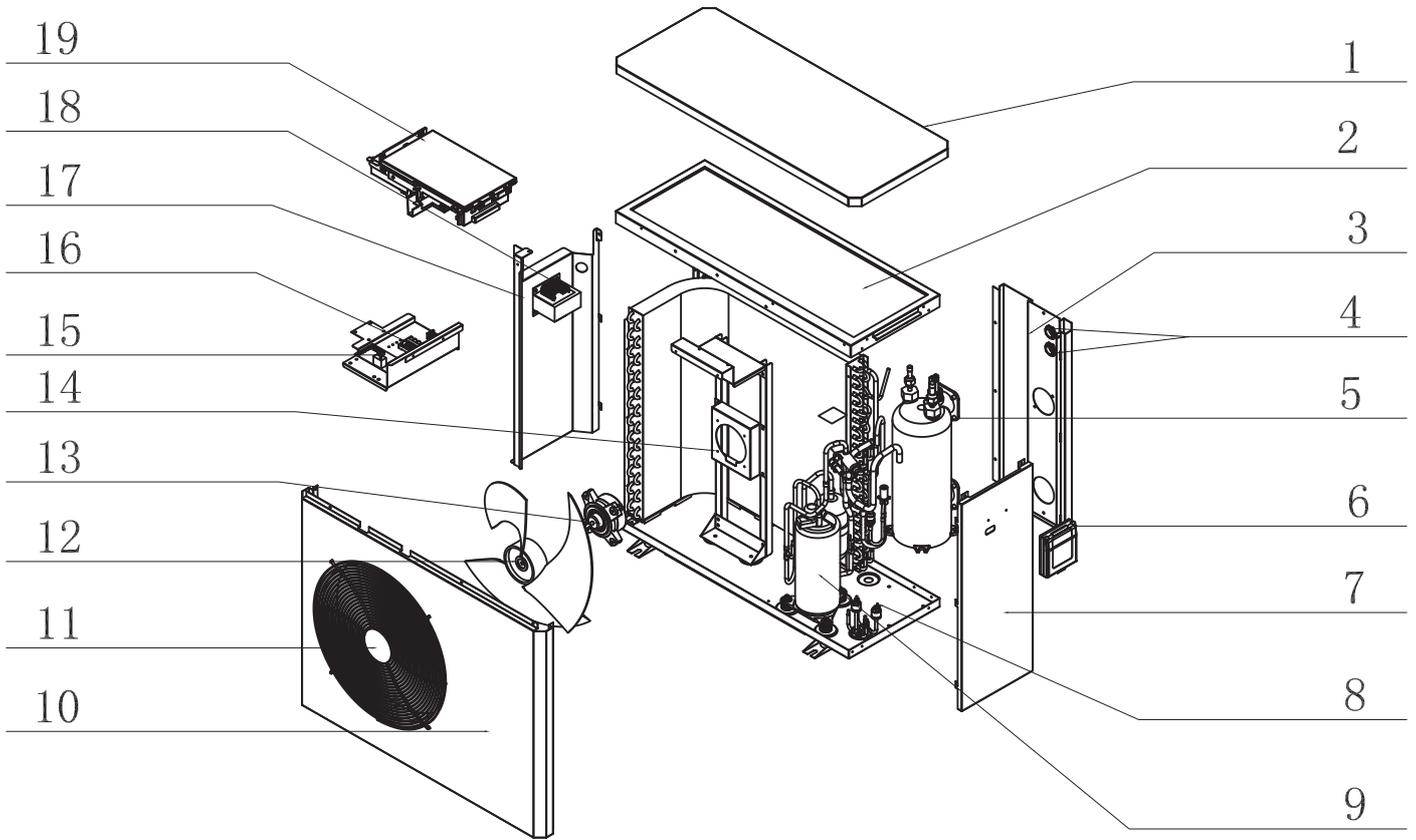
10. Annex

10.2 System parameter query

Keep pressing  3 s until you enter the settings.

Code	Name	Range	Default
L0	Water pump working mode	0: ON constantly 1: OFF 60s after compressor of,Pump ON 5 min Per L1 min.	1
L1	Water pump working period	In standby mode,water pump work 5min per L1 min, L1=3~180	30
L2	Timer setting	0: Timer function OFF 1: Timer function ON	1
L3	Power OFF remember function	0=OFF 1=ON	1
L4	Background light setting	0:No background light 1:light ON constantly 2:light on if operating, light of if no operation	2
L5	Unit operation mode	Range :0-3 0=Heating only 1=Cooling only 2=Heating&cooling 3=Cooling/heating/auto/quick heating/Silence heating mode/quick cooling/ silence cooling mode	3

11.Exploded View



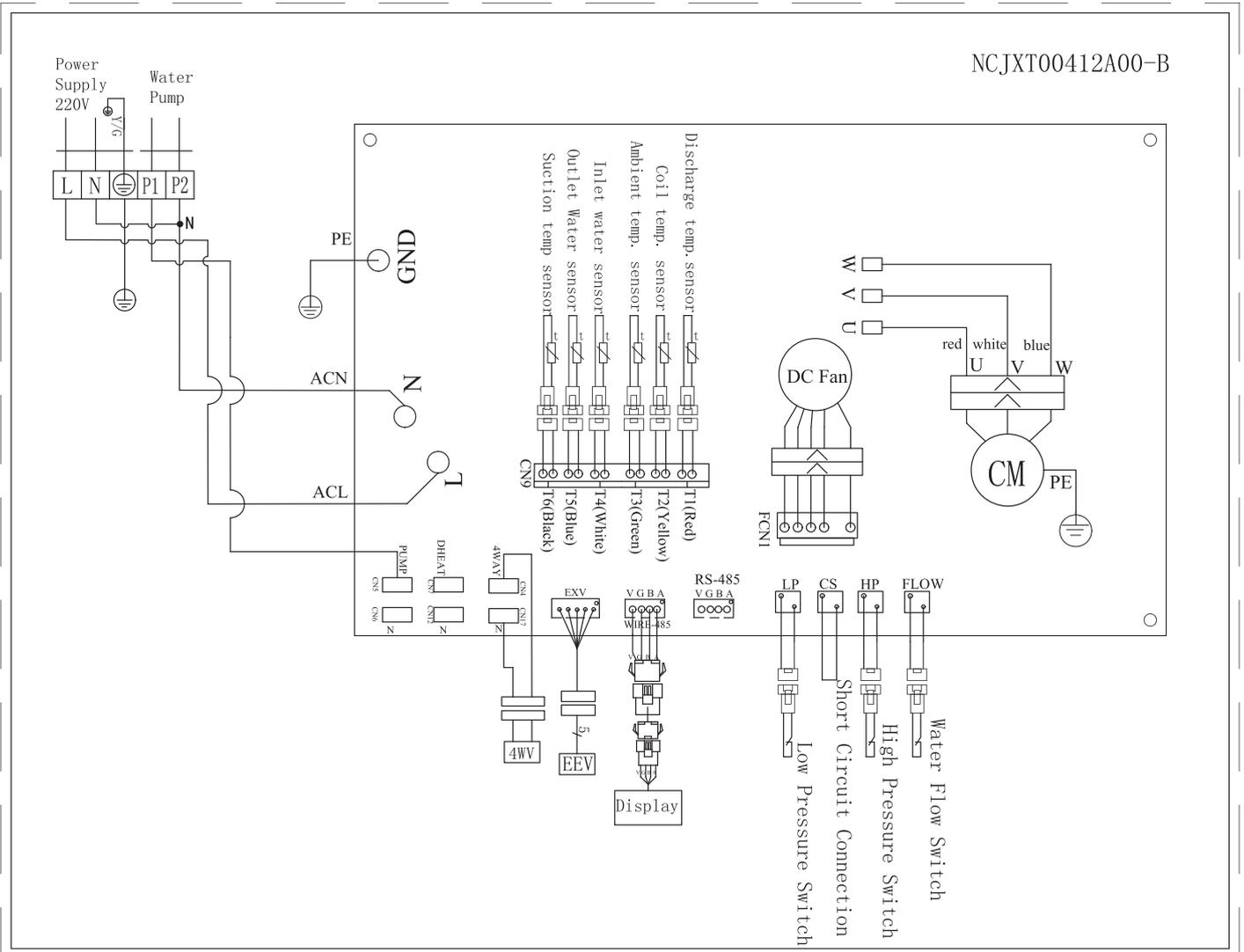
S.N	Part Name	S.N	Part Name	S.N	Part Name
1	Top panel	8	Service valve	15	Control board
2	Top bracket	9	Compressor	16	Terminal block
3	Back panel	10	Front panel	17	Bulkhead
4	Cable gland	11	Fan guard	18	Reactor
5	Titanium pipe heat exchanger	12	Fan blade	19	Controller
6	Wired controller	13	DC fan motor		
7	Side panel	14	Fan motor bracket		

12. Wiring Diagram

HEIKO POOL 5

HEIKO POOL 7

HEIKO POOL 9



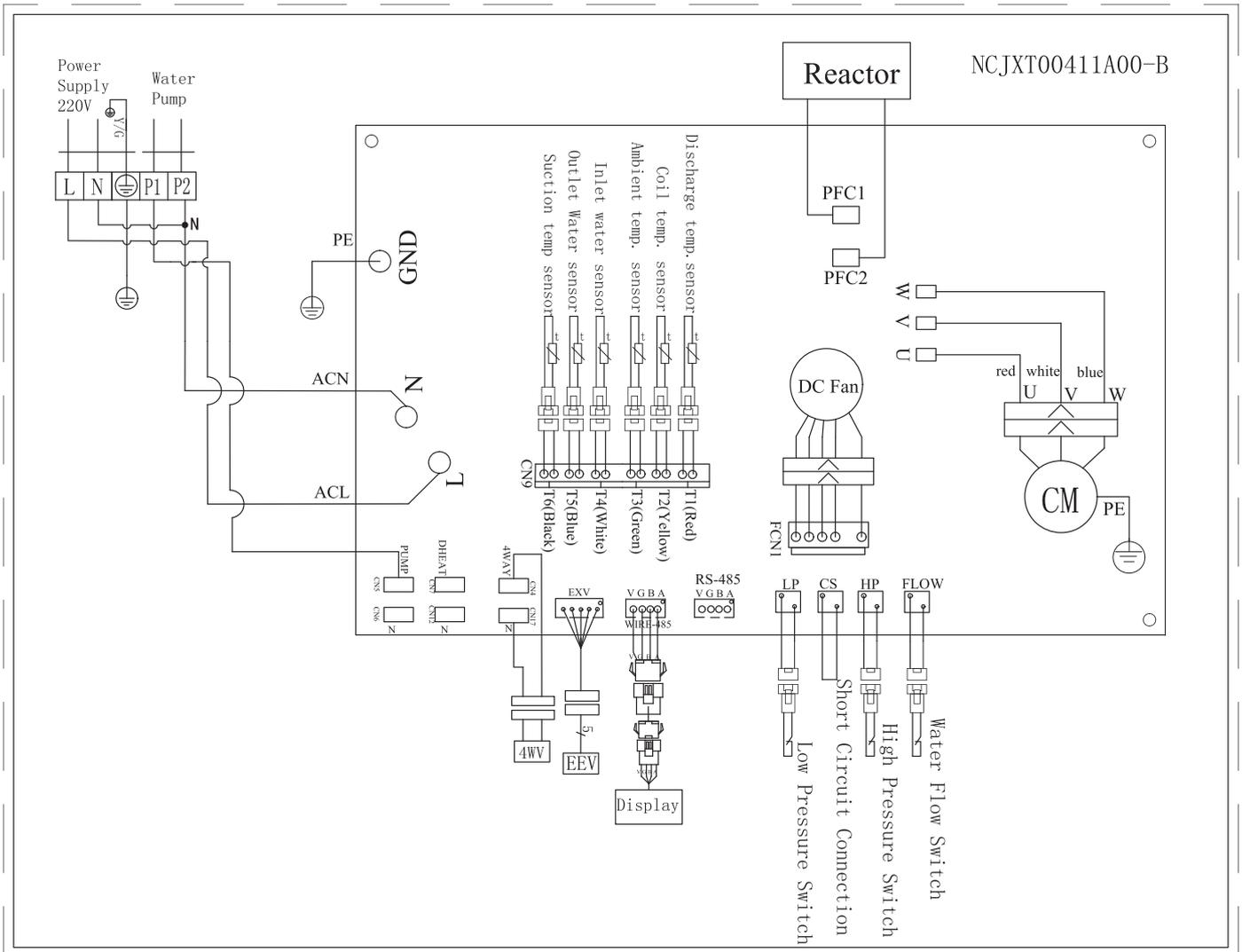
TAKE CARE!

The specifications are subject to change without prior notice.

For actual specifications of the unit, please refer to the specification stickers on the unit.

12. Wiring Diagram

HEIKO POOL 11
HEIKO POOL 15



TAKE CARE!

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