Cool Energy inverPool Swimming Pool Series R32 Heat Pump Water Heaters Version 6.7



# **Installation and Users Guide**

### IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS

**RETAIN FOR FUTURE REFERENCE** 

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#### HEALTH AND SAFETY INFORMATION

#### **INFORMATION FOR INSTALLER AND SERVICE ENGINEERS**

Under the Consumer Protection Act 1987 and the Health and Safety at Work Act 1974, it is required to provide information on substances hazardous to health (COSHH Regulations 1998). Cool Energy takes every reasonable care to ensure that these products are designed and constructed to meet these general safety requirements, provided they are properly installed and used.

To fulfil this requirement, products are comprehensively tested and examined before dispatch. When working on the appliance, it is the responsibility of the user/engineer to ensure that any necessary personal protective clothing or equipment is worn when appropriate for parts, which could be considered hazardous or harmful.

This appliance may contain some of the items below:

#### Refrigerants

The appliance contains R32 refrigerant which is flammable.

If installed and used correctly there is no danger of explosion or combustion.

When handling, avoid inhalation and contact with the skin and eyes. Suitable personal protective equipment (PPE) must be worn (gloves, overalls, eye protection) and a comprehensive first aid kit (containing eyewash) should be easily available.

Site engineers should have a certificate of competence and should know and understand the properties and hazards before handling liquid refrigerants.

When the appliance has come to the end of its life span, an approved engineer must dispose of the equipment and refrigerants in accordance with the EU laws.

Seek urgent medical attention if in haled or digested. Exposure to eyes and skin should be followed by immediate cleansing of the affected areas and medical attention if necessary.

#### Insulation

Fibre insulation may be irritating to the skin, eyes, nose, and throat. When handling, avoid inhalation and contact with the eyes. Use disposable gloves, facemasks, and eye protection. After handling, wash hands and other exposed parts. When disposing, reduce dust with water spray and ensure all parts are securely wrapped.

#### **Glue, Sealants and Paints**

Glue, sealants, and paints are used in this appliance and present no known hazards when used in the manner of which they are intended.

#### Oils

The compressor contains FV50S oil within the refrigeration system. The compressor itself is hermetically sealed, and this cannot be repaired.

### **Manual Handling**

Air Source Heat Pumps are by nature bulky and heavy items. Please pay attention to the weight of the unit before attempting to move it. It may be necessary to use lifting aids to ensure safe manual handling to avoid injury.

The weight of the heat pumps can be found on data sheets, packaging and product data badges



Lift correctly



### **Transport of Heat Pump**

When transporting your heat pump, it's important to keep it upright.

The refrigeration system inside contains oil, gas and liquids which can be disturbed when moving your heat pump. If at any stage during transporting your unit, it is inclined more than a 45° angle, it's important to leave the unit upright for at least 4 hours to allow the refrigeration system to stabilise again before use.





- Installation of the appliance must only be carried out by persons with suitable competence.
- Do not attempt to modify, repair or service the appliance yourself.
- Do not insert body parts or any other items into the air inlet or outlet.
- Do not start or stop the unit by removing the power cable; always use the controls and switches provided.
- If installed outside, ensure the appliance is protected from prolonged exposure to large quantities of water.
- Do not operate the unit or the programmer with wet fingers.
- Keep the programmer unit of out of reach of children.
- The electrical supply must be isolated during a heightened risk of lightning strikes.
- Do not attempt to move the appliance once it is installed; this must be carried out by a qualified engineer.
- Isolate the electrical supply to the appliance if an odour presents, or scorching is detected.
- Only use this appliance for the purpose intended.
- Ensure the area around the appliance is clean, well-ventilated, and kept free of all obstructions.
- Do not keep items on top of the appliance or use it to support other appliances.
- Do not under any circumstances stand on the appliance.
- Isolate the electrical supply to the appliance if it is to be switched off for a period of more than two months.
- Periodically check the condition of any supports for deterioration.
- Do not wash the unit with water, alcohol, benzene, thinner, glass cleaner or powders.
- During cleaning, isolate the electrical supply to the appliance.

### Section 1

### Introduction

#### **Product Overview**

Cool Energy Swimming Pool Heat Pumps transfer heat from the ambient air to water, providing high-temperature hot water up to 40°C. The unique Cool Energy inverPool heat hump is widely used for heating Swimming Pools, Spa's, Hot Tubs, Koi Ponds and more.

With our innovative & advanced technology, the inverPool range of heat pumps can operate very well down to -25°C ambient temperature with high output temperatures up to 40°C. Compared with traditional Electric, Oil or Gas boilers, Cool Energy heat pumps produces up to 50% less CO<sup>2</sup> whilst saves up to 80% on running costs. Cool Energy heat pumps are not only highly efficient, but also easy to install and safe to operate.

#### **General Features**

- 1. Low running costs and high efficiency.
  - A high coefficient of performance (COP) of up to 16, results in lower running costs compared with traditional ASHP technology.
  - No immersion heater supplement is required.
- 2. Reduced Capital Costs.
  - Simple installation
  - Compatible with any standard pool pump and filter arrangement.
- 3. A digital Wi-Fi controller is incorporated to maintain the desired water temperature.
- 4. Long-life and corrosion resistant composite cabinet stands up to severe climates.
- 5. The latest DC Inverter compressor technology ensures outstanding performance, ultraenergy efficiency, durability, and quiet operation.
- 6. Self-diagnostic control panel monitors and troubleshoots heat pump operations to ensure safe and reliable operations.
- 7. Ultra-Quiet DC Fan
- 8. 3 x Intelligent Running modes Silent Mode, Smart Mode & Powerful Mode
- 9. Separate isolated electrical compartment prevents internal corrosion and extends heat pump life.
- 10. The heat pump can operate down to ambient air temperature of –25°C.

### Section 2

### Installation

The following general information describes how to install the air source heat pump.

*Note:* Before installing this product, read and follow all warning notices and instructions. Only a qualified / competent person should install the heat pump.

#### Materials needed for Installation:

The following items are needed and are to be supplied by the installer for *all* heat pump installations:

- 1. Plumbing fittings.
- 2. Level surface with provision for condensate drainage.
- 3. Suitable anti-vibration feet.
- 4. Ensure that a suitable electrical supply cable is provided. See the rating plate on the heat pump for electrical specifications. Please take a note of the specific current rating. No junction box is needed at the heat pump; Connections are made inside of the heat pump electrical compartment. Conduit may be attached directly to the heat pump casing.
- 5. It is advised to use PVC conduit for the electrical supply cables.
- 6. Ensure correctly sized pipe work to obtain minimum water flow rates required.
- 7. A filter on the water inlet to the heat pump is required. (Normally part of the pool filtration system)
- 8. The plumbing should be insulated to reduce heat losses.

**Note:** We recommend installing a bypass and shut-off valves on the inlet and outlet water connections for ease of serviceability.

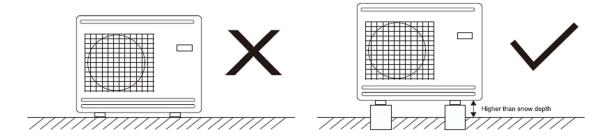
**Note:** For detailed specifications of the units please refer to name plate on the units. Correct installation is required to ensure safe operation. The requirements for Cool Energy heat pumps include the following:

- 1. Appropriate site location and clearances.
- 2. Wiring to conform to 18<sup>th</sup> edition wiring regulations.
- 3. Adequate water flow. (See Page 31.)

This manual provides the information needed to meet these requirements. Review all application and installation procedures completely before continuing the installation.

#### Installation of Outdoor Unit

The heat pump should be installed on a solid level base that can take the weight, preferably a concrete foundation. If concrete slabs are used, they must rest on asphalt or shingle.



The heat pump should not be positioned next to sensitive walls, for example, next to a bedroom. Also ensure that the placement does not inconvenience the neighbours. The heat pumps must not be placed so that recirculation of the outdoor air can occur; this causes lower output and impaired efficiency.

Large amounts of condensation water as well as melted waters from defrosting can be produced. Condensation water must be led off to a drain, soakaway or similar.

The outdoor unit should be installed in a ventilated place, with enough space for air inlet and outlet, while without thermal radiation or other heat source. The air outlet should not be against the wind.

Generally, horizontal air flow type heat pump does not generally need sheltering. The structure design has protected all internal components against rain and sunshine. A shelter is necessary to avoid snow burying the heat pump in heavy snow areas.

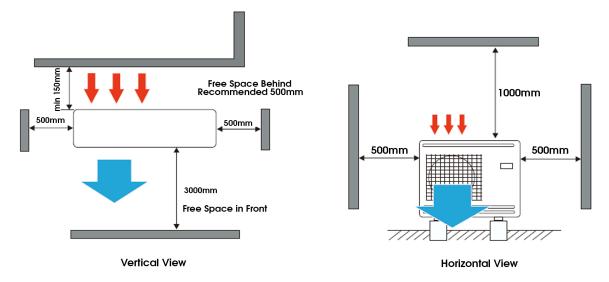
Please make sure the standardized voltage 220V-240V is available to the single-phase heat pumps (380-415v for three phase models), otherwise the performance would be influenced and could affect your warranty.

The foundation of the heat pump can be a cement or steel structure. Anti-vibration rubber feet and a flat foundation are generally required. The foundation structure can be flexibly designed according to the working weight of the heat pump. (Please see the technical data in this manual.)

Water drainage should be available near the installation location for draining water in an effective way. Do not install the heat pump in a place where there is polluting or corrosive materials like oil, flammable and explosive gas and sulphide ect. Keep it far away from sands, falling leaves and area with high-frequency equipment.

Installation on a balcony or on a roof-top must be in accordance with the allowable stress of the building structure.

The installation space should be referred as follows:

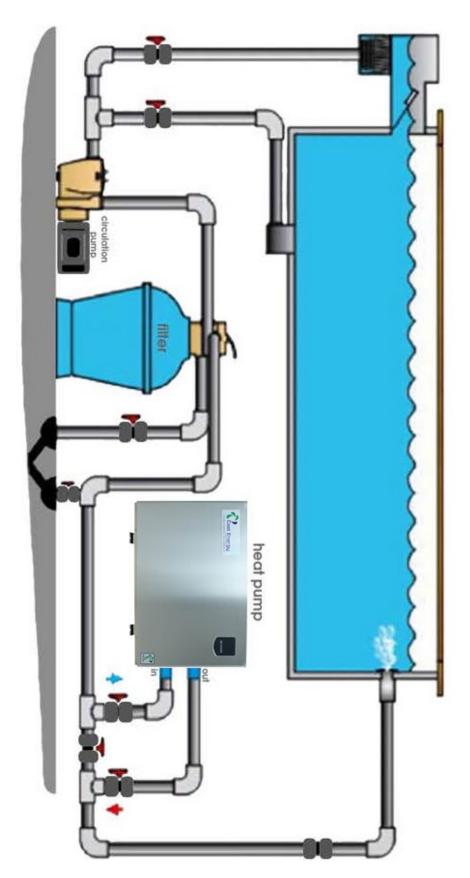


Intake and outlet should not be obstructed. The wall the unit is to be mounted on should be strong enough to bear the weight and vibrations of the unit.

Allow for proper clearances around the unit. Location should allow easy access for maintenance.

For any further guidance on heat pump installations for planning purposes, please consult the latest version of the MCS guidelines or your local authority.

#### Example Installation Method:



Water Connections

#### Water connections at the heat pump

ABS / PVC pipe fittings are recommended to be installed on the flow and return connections.



50mm female fittings are provided which can be adapted to 1  $\%^{\prime\prime}$  if required.

The water inlet and outlet connections to the heat pump, are made by 2 x ABS flanged couplers (provided).

**CAUTION** – Make sure that the required water flow rates can be maintained at all times.

#### **Plumbing Installation Requirements**

- 1. Water pressure should not exceed 3 Bar.
- 2. Each part connected to the unit needs to be connected with method of loose jointing and installed with intermediate valves.
- 3. Ensure that all plumbing has been properly flushed and tested. (See Page 31.)
- 4. All pipelines and pipe fittings must be insulated to prevent heat losses.
- 5. Install a drain valve at the lowest point of the system to enable the system to be drained fully.
- 6. In order to reduce the back pressure, the pipes should be installed horizontally.
- 7. Minimum flow rates detailed on the date badge must be maintained and could void warranty and damage unit if they are not.

#### **Electrical Connections**

WARNING – Risk of electrical shock or electrocution.

Ensure that all high voltage circuits are disconnected before commencing heat pump installation. Contact with these circuits could result in death or serious injury to users, installers or others.

**CAUTION** – Label all wires prior to disconnection when servicing the heat pump. Wiring errors can cause improper and dangerous operation. Check and ensure proper operation after servicing.

#### **General Information**

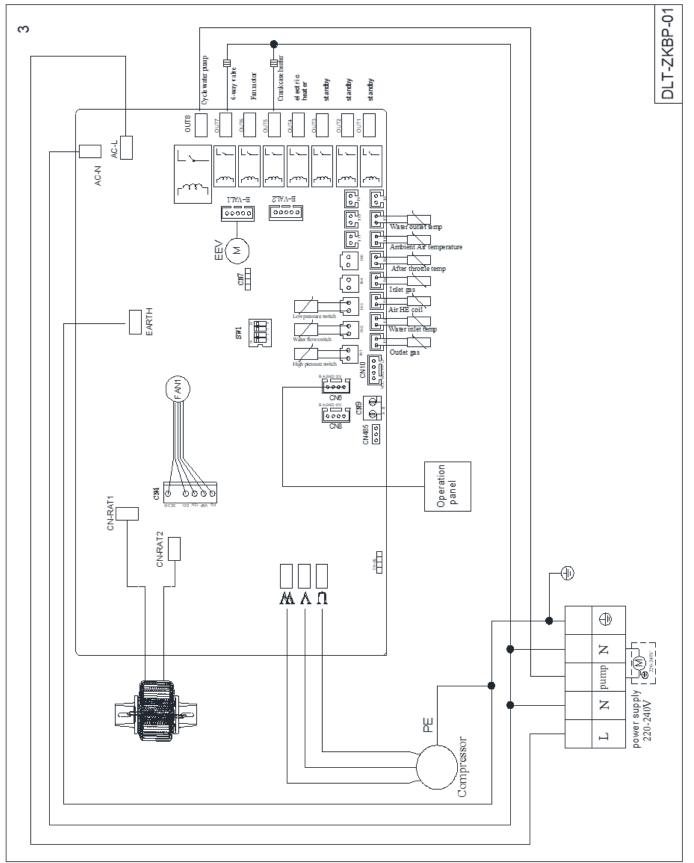
Wiring connections must be done according to the wiring diagram found on the inside of the heat pump access panel or see addendum A for reference.

The heat pumps must also be earthed. A ground lug is provided on the inside of the heat pump electrical compartment.

#### **Circuit Breaker Sizing:**

CE-iVP6	-	10a Type C MCB / RCBO
CE-iVP10	-	16a Type C MCB / RCBO
CE-iVP32	_	32a Type C MCB / RCBO
CE-iVP55-3PH	-	20a Type C MCB / RCBO

### Wiring Diagram:



#### **Power Supply**

- 1. If the supply voltage is too low or too high, it can cause damage and/or result in unstable operation of the heat pump unit, due to high in rush currents on start up.
- 2. The minimum starting voltage should be above 90% of rated voltage. The acceptable operating voltage range should be within ±10% of the rated voltage. When heat pump units are installed in parallel, ensure that the voltage difference, between these units, is within ±2% of each other. The voltage difference between phases of a three-phase power supply should be within ±2%.
- Ensure the cable specifications meet the correct requirements for the specific installation. The distance between the installation site and the mains power supply will affect the cable thickness. Follow the 17<sup>th</sup> edition wiring regulations to select the cables, circuit breakers and circuit breakers.

#### **Earthing and Over Current Protection**

In order to prevent electrical shock in case of leakage from unit, install the heat pump according to current electrical wiring regulations.

- 1. Do not frequently interrupt the voltage supply to the heat pump as this may result in a shorter life expectance of the heat pump.
- 2. When installing over current protection, ensure that the correct current rating is met for this specific installation.
- 3. The compressor, fan coil unit and heat pump water pump all have AC- contactors and thermo relay protection. Therefore, in the process of installation and debugging, firstly measure each of the components' current, and then adjust the current protection range of the thermo relays.

### Section 3

### **Operating Your Heat Pump**

#### **Cool Energy User-Friendly Interface Controller**

#### **General Instructions**

The Cool Energy inverPool operation panel features:

- 1. Touch keys for higher operating sensitivity and unlimited key operations.
- 2. Minimal electromagnetic susceptibility and interference.
- 3. Stylish appearance of easy viewing purposes.

#### **Controller Panel**



#### **Keys Explanation:**

#### **Icons:**

	Heating mode 🌞 / Silent Mode 🙆 / Smart Mode 💹 / Strong Mode 💽
	/Cooling mode 💥 / Defrosting Mode 🗱 (Flashing) / Wi-Fi 🛜 / Alarm 👫 /
	Screen Lock
Butte	ons:

## Power Button () / Mode Key / Plus Key + / Minus Key / Settings Key

#### **Controller Set-Up**

1. (b) power button:

Short press of power key can be used to exit current menu and return to the main screen.

When in the main interface, long press (U) for 3 seconds to turn heat pump on or off.



In the power-on state, long press of key for 3 seconds to switch between heating and cooling mode.



When heat pump is powered on, in the main interface, single press of (+) key to adjust the current mode set temperature higher.



When heat pump is powered on, in the main interface, single press of key to adjust the current mode set temperature lower.

#### 5. Status Interface:

In the main interface, long press of the - key for 3 seconds to enter the unit status parameter interface. Then use the + & - keys to scroll through the readings.

Press wey to exit menu.

Code	Description	Display range
A01	Inlet water temperature	-30~99°C
A02	Outlet temperature	-30~99°C
A03	Ambient temperature	-30~99°C
A04	Exhaust gas	0~125°C
	temperature	
A05	Return air temperature	-30~99°C
A06	Outer coil temperature	-30~99°C
A07	Inner coil temperature	-30~99°C
A08	Main expansion valve	
	opening	
A09	Enthalpy expansion	
	valve opening	
A10	Compressor current	
A11	Heat sink temperature	
A12	DC bus voltage value	
A13	Actual speed of	
	compressor	
A14	DC fan 1 speed	
A15	DC fan 2 speed	(If fitted)

#### 6. Clock setting:

Long press of & + together for 3 seconds to enter the clock setting mode. First, the hour digit flashes, indicating that the hour value of the current time can be adjusted using the + & keys. Each time you press the + key, the hour increases by one, and each time you press the , the hour decreases by one. If you hold down the + or keys for a long time, the hour will automatically increase or decrease rapidly. After setting the hour value, press the button again. The minute digit now flashes, indicating that the minute value of the current time can be adjusted by the + & buttons.

After setting the minute value, press the key again to end clock setting.

#### 7. Timer setting:

Long press the	key for 3	seconds to	enter the	timing	settings.
----------------	-----------	------------	-----------	--------	-----------

Enter the	timing	settings:
-----------	--------	-----------

"Time On 1" will be displayed, the clock "Hour" flashes, and the hours can be set with + & - keys. Press the key again to switch to the clock "minutes" and use the + & - keys to

set the minutes.

Press the key again to switch and switch to the "timing off 1" setting. The clock

"hour" flashes, and the hours can be set with the + & - keys. Press the key again to switch to the clock to "minutes", with the + & - keys you can set the

minutes.

Other time periods can be set as above.

Press the key to exit & confirm.

The main interface will now display the current number of set time periods.

#### Cancel timer setting:

Set both power-on times and power-off times to the same value 00:00. The timing setting of the current time setting is then cancelled.

#### 8. Forced defrosting:

In the event of an unusual amount of ice build up on the heat pump, a forced defrost can be run to melt the ice and return to normal operation.

Press the  $\boxed{M}$  &  $\boxed{-}$  keys together to enter the forced defrost mode.

When entering the defrost, the \* icon will flash on the display.

#### 9. Frequency mode switching:

When the unit is first powered on form the mains supply, press the key to switch the frequency mode: **Silent**, **Smart**, or **Strong** mode.

**Silent mode:** will always try and operate at the lowest possible compressor frequency and fan speed to meet the required setpoint.

**Smart mode:** will automatically adjust the compressor frequency and fan speed to achieve the most efficient operating parameters.

**Strong mode:** will reach the setpoint as quickly as possible with the full compressor frequency and fan speed.

#### 10. Celsius & Fahrenheit switch:

When heat pump is switched on but powered off on the controller. Press both (() & together for 3 seconds to switch between Celsius & Fahrenheit.

#### 11. Unlock / lock screen:

On the main screen, press and hold the + & - keys for 3 seconds to unlock / lock the screen.

#### 12. Manual Auxiliary heating function:

On the main screen, press + key for 3 seconds to manually turn on/off the auxiliary heating function. (This will only work if you have connected another heat source to the Aux Heating Terminal).

#### Wi-Fi Settings:

Press the + & M keys at the same time for 3 seconds to enter the "default mode" network configuration, the convil flash quickly when this mode is entered. Press the - & C keys at the same time for 3 seconds to enter the "compatibility mode" network configuration, the conversion flashes slowly when

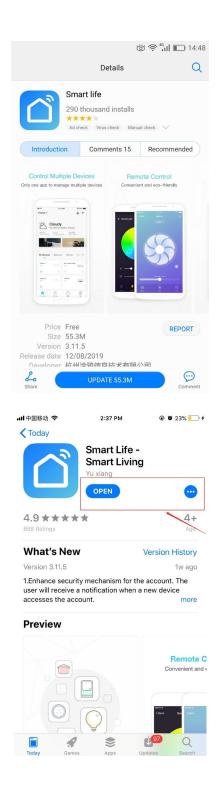
this mode is entered.

#### 1. APP download and install

Scan QR code with browser  $(\, {\rm for} \, {\rm both} \, {\rm Android} \, {\rm and} \, {\rm iOS})$ 



Android System



**IOS System** 

#### 2. Start the APP

After the installation, click the  $\Box$  icon on the device to start the app.



#### 3. Register and Login

#### **Register:**

Users without account can apply by clicking the "Register" function on the login page: Register, Agree the privacy policy, Enter the mobile number, Get the

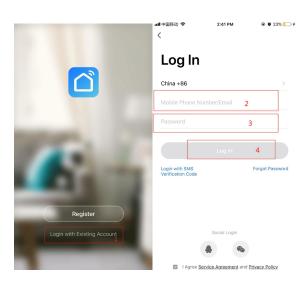
verification code, Enter the verification code, Set the password, Complete, as shown in the following figure:

	G App Store जा। 🗢 2:39 PM @	B 🖉 23% 💽 -	<del>,</del>		
	Register		・III 中国移动 <i>ବ</i> く	3:18 PM	8 7 8 55%
	China +86	>	Set Pa	ssword	
	Mobile Phone Number/Email 2				4
Contraction of the second			Password contains and digits	6 to 20 characters, inc	luding letters
the second s	Get Verification Code	3			
No. The					
Register 1			q w e	rtyu	i o p
Login with Existing Account			a s d	f g h	jkl
			☆ z x	c v b	n m 💌
	I Agree Service Agreement and Privacy	v Policy	.?123	space	Done

After registration, you need to create a family: family management, family adding, family name setting, location setting, room adding, complete. The sequence as follows:

2		⊎ +	Cancel Edit Family Info	4 <sup>Done</sup>
			Family Name+ Enter family name 2	
			Family Location Set location 3	>
			Rooms with Smart Devices:	
			Living Room	0
			Master Bedroom	0
No	devices, please add		Second Bedroom	0
	Add Device		Dining Room	0
			Kitchen	0
			Study Room	0
			Add Room	
			You can change room settings anytime.	
<b>A</b>	-Ò- Smart	Ø 1		

You can login directly if you have a Smart life account, the sequence as follows:



After creating a family or login, enter the Smart Life App.

### 4. Wi-Fi module pairing

#### Step 1.

Within 10s after turning on mains power to the heat pump press and hold the 0, + & 0 keys at the same time for 5 seconds to enter the pairing mode. The 0 icon flashes indicating it is ready to be paired to the app.

(Note, after 3 minutes. The ricon will stop flashing and if the heat pump hasn't been paired in this time, the process will need to be repeated.)

#### Step 2.

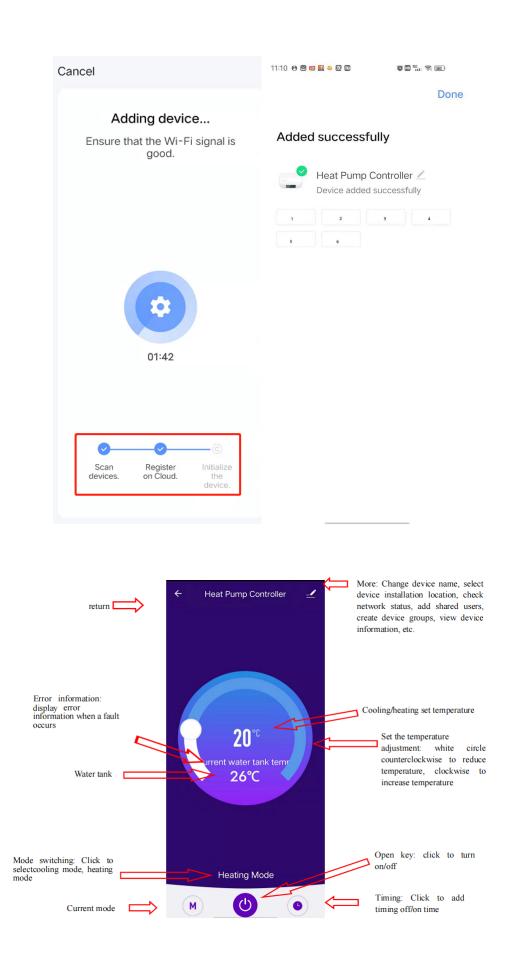
Open the "Smart Life" app, log in to your account. Click the "+" icon in the upper right corner or "Add Device" in the interface to enter the device type selection, select "Air Conditioner" in the "Large Home Appliances Section" click to Add Device.

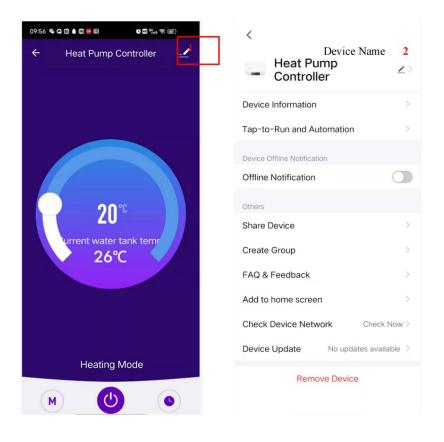
Ⅲ中国移动 令 我的家 ~	2:45 PM		ull中国移动 令 く Add	2 d Manually	:46 РМ Search for Dev	● 🕫 🛪 👅 58% 💻 vice 🖂
÷Ŏ:	Welcome Home Set your home location for more in		Electrical Engineering Lighting			-
All Devices	No devices, please add	2	Lighting Large Home Appliance 3 Small Home Appliance Kitchen Appliance Security & Sensor Exercise & Health Others	Vertilation System	Air 4 Conditioner	Refrigerator
Home	-ḋ- Smart	© Me				

Enter the home Wi-Fi password that the mobile phone is connected too. (This must be consistent with the Wi-Fi connected to the mobile phone and the WIFI must be 2.4G WiFi network).

ull 中国移动 🗢	2:47 PM	@ 🕫 🖉 58% 💻 .	ul 中国移动 🗢	2:47 PM	@ 🕈 🖉 58% 🛑	ull 中国移动 🗢	2:49 PM	@ 💅 🖉 57% 📒
<	Add Device	AP Mode	<	Add Device		<	Add Device	
	evice e device and confi r light blinks rapid		Enter	Wi-Fi Pass	sword	Place your	ecting router, mobile phone lose as possible	, and
	• (1)		Only 2.4 GH	z Wi-Fi networks are s	upported		80%	
Confir	Help m indicator rapidly	/ blink 1	Passw	ord 2	ange Network	F	Device found legister Device to Smar litializing device	t Cloud

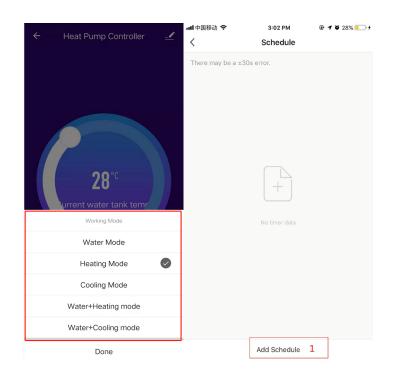
After automatic process "Add device successful" will be shown. You can change the name of the device and choose the installation location. Click "finish" to enter to Operation Interface of the device.





The heat pump can be renamed in here and shared to other users if needed.

09:56 % Q 전 🗍 🖸 😇 🗐 🛛 🍪 🛱 % 💷 %	<	Share Device
← Heat Pump Controller 🛃	Heat Pump Controller ∠>	Heat Pump Controller has not been shared
	Device Information	
	Tap-to-Run and Automation	
	Device Offline Notification	
	Offline Notification	
20℃	Others	Device is not shared, add an account to share it
urrent water tank temr	Share Device	
<b>26℃</b>	Create Group	
	FAQ & Feedback	
	Add to home screen	
	Check Device Network Check Now >	
Water Mode	Device Update No updates available >	
M ()	Remove Device	Add Sharing 3



#### **App Timer setting**

Click " • " on the main interface of the device and enter the timing setting interface. As shown in the figure below, click Add Timing. Enter the timing settings, sliding up and down hours/minutes to set the required times.

1 00 AM   2 01 AM   3 02 PM   2: hour 4 03   5 04   09 3: minute   5 04   9 9	배 中国移动 🗢	3:02 P	M (	🕈 🍯 28% 🚺 🕂
1 00 AM   2 01 AM   3 02 PM   2: hour 4 03 3: minute   5 04 04   04 05 3: minute	<	Add Sche	edule	6 Save
	2: hour	1 00   2 01   3 02   4 03   5 04	PM	
ON/OFF 5 ON >	Repeat		4	Once >
	ON/OFF		5	ON >

### Remove device from Wi-Fi Network

If you need to remove the device from your network or pair to a new one, press + and  $\boxed{M}$  together for 5 seconds, the device is removed and re-entered into the pairing mode. The  $\boxed{m}$  icon flashes for 3 min to be re-paired to a new network.

### Section 4

#### Commissioning

- Ensure all pipes have been flushed with cleaner and are free of debris.
- Water flow should be checked either by a flow metering device either fitted permanently or temporarily to the system. Or measuring the temperature differential between the flow and return pipes when the heat pump is running. The temperature differential should not exceed 5 degrees C. The heat pump itself does also incorporate a flow switch on the return pipe. If a low flow condition is detected, an alarm will be displayed on the controller and will not reset until the flow has been restored.
- Visually check installation to ensure all pipework is complete and insulation is applied where required
- Check all electrical connections have been made and tested according to BS7671:2018
- Ensure all system filters are free from debris
- Check all air has been vented from the system
- Activate the heat pump with the controller screen
- Allow heat pump to reach set temperatures for application
- Ensure heat pump settings are correct according to the factory defaults provided in Section 3.
- Set timeclocks and temperature settings to optimise efficiency for homeowner
- Fill in benchmark form with the installation details (p33)
- Demonstrate the system to the homeowner

#### Service & Maintenance – Service Engineer

#### **Inspection and Service**

Cool Energy air source heat pumps are designed and built to provide long life and performance, when installed and operated properly under normal conditions. Periodic inspections are important to keep your heat pump running safely and efficiently.

The basic requirements are:

- Clean the outdoor heat exchanger
- Straighten any evaporator fins with a fin comb if required
- Visual inspection for oil or leaks
- Check the integrity of the pipework insulation
- Check for loose electrical connections
- Check heat pump control settings are correct for best performance
- Check system controls are set for best performance
- Check compressor operating current
- Complete service record (p34)

#### **Homeowner Inspection**

Cool Energy recommends that inspections on heat pumps are done frequently,

especially after abnormal weather conditions. The following basic guidelines are suggested for your inspection:

- 1. Make sure the front of the unit is accessible for service.
- 2. Keep the top and surrounding areas of the heat pump clear of all debris.
- 3. Keep all plants and shrubs trimmed and away from the heat pump especially the area around the fan.
- 4. Keep lawn sprinklers from spraying on the heat pump to prevent corrosion and damage.
- 5. Ensure that the earth wire is always properly connected.
- 6. A water filter must be installed and maintained.
- 7. All the safety protection devices have been set up; please refrain from changing these settings. If any changes are needed, please contact our support team.
- 8. If the heat pump is installed under roof without a gutter, ensure that all measures are taken to prevent excessive water from entering the unit.
  - 8. Do not use this heat pump if any electrical part has been in contact with water. Contact an authorized service technician.

#### Troubleshooting

Use the following troubleshooting information to resolve issues with your heat pump.

#### **WARNING — RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.**



Ensure that all high voltage circuits are disconnected before commencing heat pump installation maintenance. Contact with these circuits could result in death or serious injury to users, installers or others.

- Keep your hands and hair clear of the fan blades to avoid injury.
- **DO NOT** attempt to adjust or service the unit without consulting your authorized installer/agent.
- **PLEASE** read the complete Installation and/or User's Guide before attempting to operate service or adjust the heater.
- Your heat pump is equipped with an intelligent control system

It will try and overcome any problem by itself and automatically recovers from most fault conditions as well as power outages. If for any reason an alarm code, **don't worry!** -It will only display Alarm codes if it has shut down to protect itself from damage. Normally it will be something very simple such as low water flow or a blocked filter.

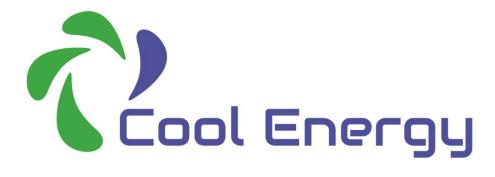
#### SERVICE RECORD

It is recommended that your heating system is serviced regularly and that the appropriate Service Interval Record is completed.

#### Service Provider

Before completing the appropriate Service Record below, please ensure you have carried out the service as described in the manufacturer's instructions. Always use the manufacturer's specified spare part when replacing controls.

SERVICE 01	Date:	SERVICE 02	Date:		
Engineer name:		Engineer name:			
Company name:		Company name:			
Telephone No:		Telephone No:			
Operative ID No:		Operative ID No:			
Comments:		Comments:			
Signature		Signature			
SERVICE 03	Date:	SERVICE 04	Date:		
Engineer name:		Engineer name:			
Company name:		Company name:			
Telephone No: Operative ID No:		Telephone No: Operative ID No:			
Comments:					
		Comments:			
Signature		Signature			
		1 -			
SERVICE 05	Date:	SERVICE 06	Date:		
Engineer name:		Engineer name:			
Company name:		Company name:			
Telephone No:		Telephone No:			
Operative ID No:		Operative ID No:			
Comments:		Comments:			
Signature		Signature			
SERVICE 07	Date:	SERVICE 08	Date:		
Engineer name:		Engineer name:			
Company name:		Company name:			
Telephone No:		Telephone No:			
Operative ID No:		Operative ID No:			
Comments:		Comments:			
		L			
Signature		Signature			
SERVICE 09	Date:	SERVICE 10	Date:		
Engineer name:		Engineer name:			
Company name:		Company name:			
Telephone No:		Telephone No:			
Operative ID No:		Operative ID No:			
Comments:		Comments:			
		[			
Signature		Signature			



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