Eco Full Inverter
Swimming Pool Heat Pump

-Installation and Operation Manual-

EFI Series Heat Pumps

THANK YOU

Dear Customer,

Thank you for choosing our products and greatly we appreciate your confidence in us!

These are the ECO **Full Inverter** Swimming Pool Heat Pumps for heating or cooling your pool and extending your swimming season.

This is a special Pool heat pumps which has been designed to be as Eco friendly as possible, using market leading technology and experience.

The EFI is a smart heat pump which controls how to heat your pool most efficiently and maintain pool temperature, thanks to the full inverter technology.

Our goal is to provide you with an exceptional high performance quality product.

We have produced this manual to assist you in getting the get maximum benefit and use from your heat pump.

Please read carefully

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User Manual for APP 27

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 heater or electric element 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 a high level. You could enjoy swimming not only in summer, but also in the spring, autumn and even through the winter season.

- **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 R32 which has little to no effect on Ozone.

- **Titanium heat exchanger**
  Advanced titanium heat exchanger ensures a 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 chlorine, mineral, bromine and salt water pools and spas.

- **Multiple functions**
  - Cooling and heating ,Auto functions available;
  - Auto operation, Auto-restart, Auto defrost
  - Timer on/off: no human attendance is required
  - Wide ambient working condition: -15°C to 46°C

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

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

- **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 be referring to the troubleshooting section of this manual.

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).

Unit must be installed according to AS/NZS 3000:2018 wiring rules and the electrical connection must be complete by a licensed electrician. Incorrect connection and fixing could cause a fire.

Perform electrical work according to the installation manual and be sure to use a suitable circuit. 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 and damage to the unit.

The unit must always have an earthed connection.
Never use an extension cable to connect the unit to the electric power supply.

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.

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.

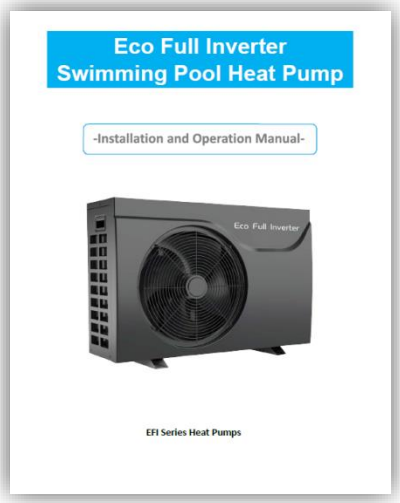
Do not clean the unit when the power is 'ON'.
Always shut 'OFF' the power when cleaning or servicing the unit. If not, it could cause an injury due to the high speed running fan or an electrical shock.

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 other items into the fan or evaporator.
The ventilator runs at high speed, it could cause serious injury.

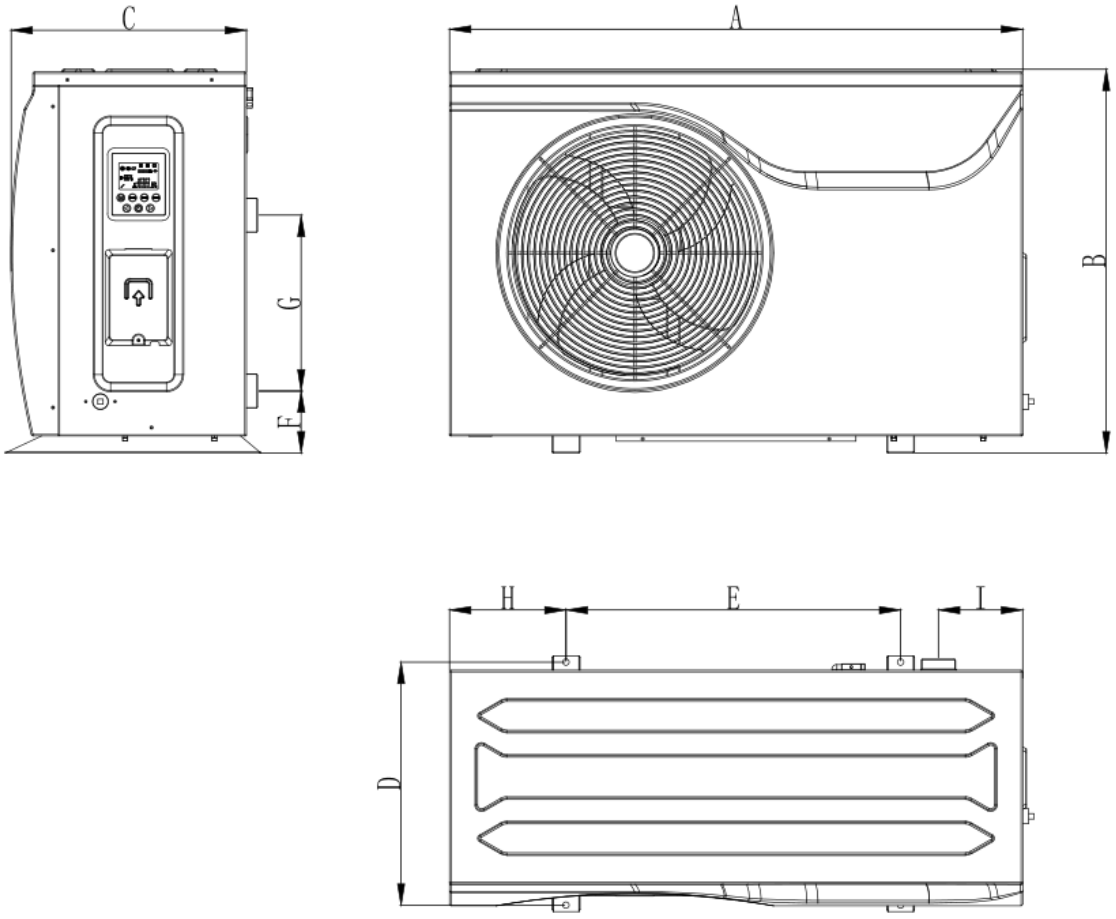
ITEMS INSIDE PRODUCT BOX

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

The Unit Box		
Item	**Image**	**Quantity**
Eco Full Inverter Swimming pool heat pump		1
Installation and Operation Manual		1
Barrel Unions (40mm)		2
Winter Cover		1
Rubber foots for anti-vibration		4
Water Drainage Pipe		1

OVERVIEW OF THE UNIT

Unit Dimension



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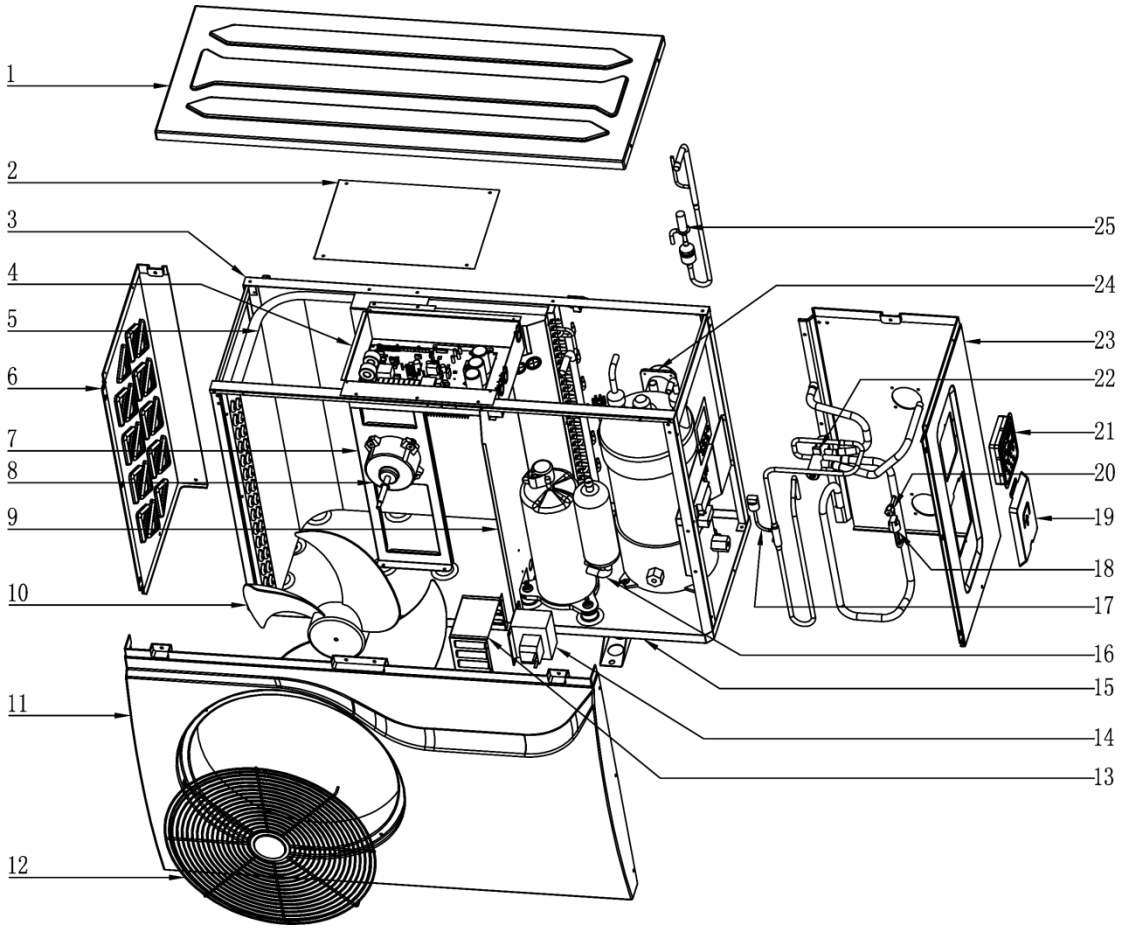
MODEL	EFI 14	EFI 17	EFI 23
A	986	986	1076
B	668	668	720
C	366	366	442
D	405	405	456
E	608	608	628
F	106	106	116
G	380	380	330
H	189	189	219
I	123	123	158

Explode View



No.	Name	No.	Name
1	Top Cover	14	Reactance
2	Electric box cover	15	Bottom Panel component
3	Support frame	16	Inverter compressor
4	Electronic control components	17	High-pressure valve
5	Fin heat exchanger	18	Low-pressure switch
6	Left panel	19	Power waterproof cover
7	Motor bracket	20	Needle valve
8	DC fan motor	21	Controller
9	Middle panel	22	Four-way valve
10	Fan	23	Right panel
11	Front Panel	24	Titanium tube heat exchanger
12	Discharge grill	25	Electronic expansion valve
13	Reactance waterproof box		

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.

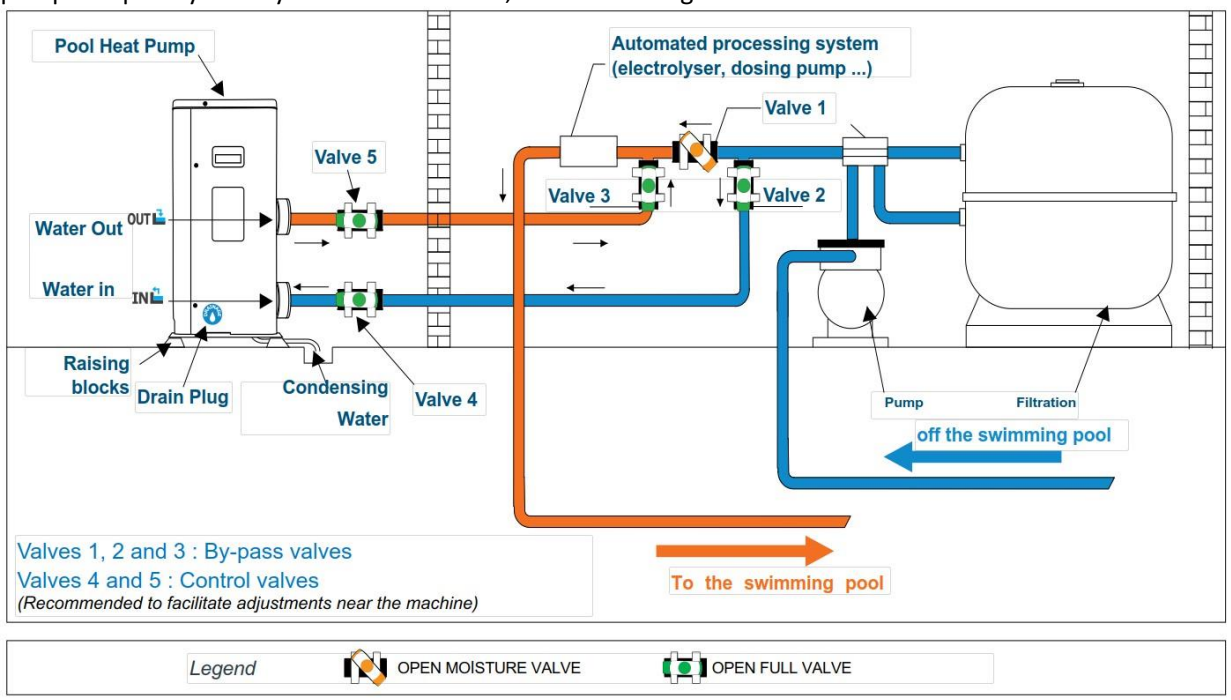
--Try to avoid placing appliance under a tree or exposed to water or mud, which would be likely to complicate maintenance.

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.



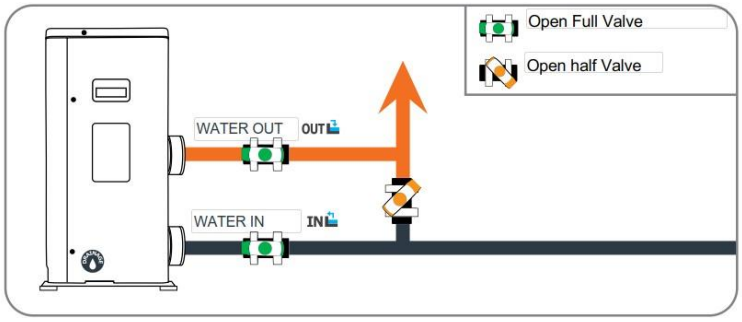
To channel condensation flows, we recommend that you install our condensate drain kit. For this purpose the heat pump must be raised by at least 10 cm.

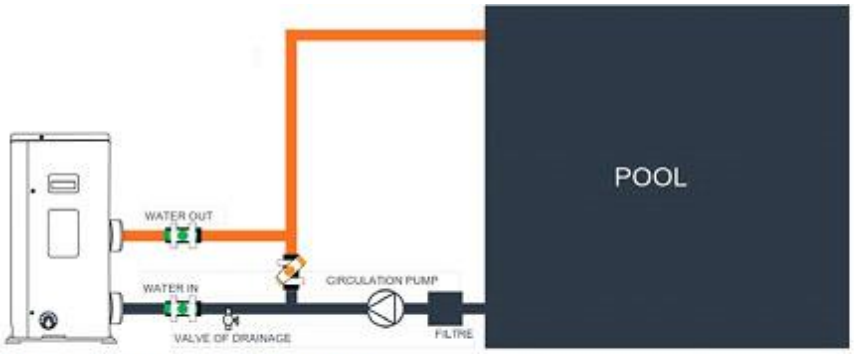
How to install the condensate drain kit?

1. Install your heat pump by raising it by at least 10 cm using solid, moisture-resistant studs.
2. Connect the exhaust hose to the drain hole located underneath the heat pump.

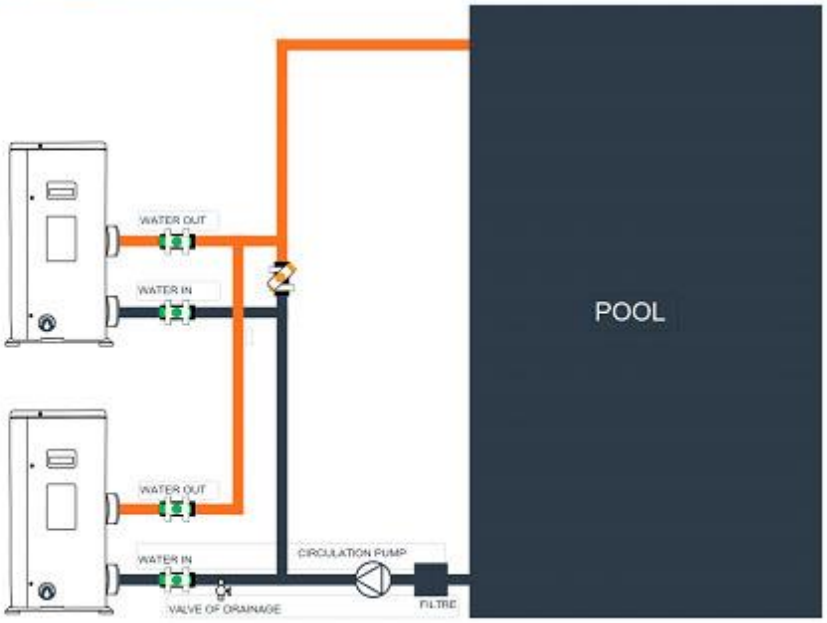
Hydraulic Connection

We recommend that you only half open your intermediate valve to avoid excessive pressure on your heat pump (see diagram).
If your setting is correct, the pressure gauge of your heat pump will be in working order.





SERIAL INSTALLATION DIAGRAM



The filter must be cleaned regularly to ensure that the water in the system is clean and to avoid any problems related to dirt or clogging of the filter.

Electrical connection

Electrical supply must correspond to that indicated on the appliance.
Unit must be earthed
Wiring must be completed by a licensed electrician
Set leakage protector according to local code

Connection cables have to be sized according to appliance power and installation requirements. Please refer to below table:

Heat pump	Cable size
EFI 14	3x2.5mm^2/AWG 14
EFI 17	3x2.5mm^2/AWG 14
EFI 23	3x4.0mm^2/AWG 12

The above wiring information is to be used as a guide only. Electrical connection must be made in accordance with **AS/NZS 3000:2018 wiring rules.**

Use the cable glands and grommets provided inside the heat pump to route cables.

If the length of your cable is more than 10 meters, we advise you to seek advice from a professional.
A voltage variation of ± 10% during operation is acceptable.
The power supply lines must be securely fastened.
The cable must be suitable for outdoor use.

Step 1 : Dismantle the side electrical panel with a turn-Nevis to access the electrical terminal block.
Step 2 : Insert the cable into the heat pump unit inPassing through the opening provided for this purpose.
Step 3 : Attach the cable to the terminal according to EN (single-Phased) or A / B / C / N (three-phase).
Step 4 : Close the heat pump panel carefully by replacing the screws.
Step 5 : Properly connect the signal cable terminals to the central control box.

Trial running

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

Be sure that:

1) Appliance is horizontal and on a firm base.
2) Water circuit is well connected (no leaks)
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.

Then you can start up the heat pump following every point in the below order:

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

OPERATING THE UNIT

Operating the unit comes down to operating the digital controller.

⚠ ALWAYS ENSURE CONTROLLER IS DRY TO TOUCH.

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

THIS MAY DAMAGE THE DIGITAL CONTROLLER.

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

Controller Instruction

1. General

Input Voltage:DC12V RS485
Communication
Short-Press for 1~5seconds,Long-Press for 5seconds.
No Button press for more than 30s,controller surface will exit to original normal. User can operate the controller only when the creen is light on.
Back light of Screen is orange,characters and symbols are black.
Operation temperature range for controller is -30～70℃。

2. Dial Set

On the back of controller board,there are 4 dials:

DP1	DP2	DP3	DP4
ON for beep sound	ON for sound when water flow warning	ON for back light on always	ON for self-diagonise status
OFF for no beep sound	OFF for no sound when water flow warning	OFF for back light on for 30s	OFF for normal

3. Display and Operation Surface

Display Instruction

1. Instruction for Buttons

Start on/off:Short-press to turn.Also user can press this button to exit when they finish setting or checking

Running Modes:Short-Press to turn.Long-Press to into menu option

Increase:Tempreature set + or previous one

Decrease:Temperature set - or next one

Boost Running mode:Short-press to enter into

Smart Running mode:Short-press to enter into

Silent Running mode:Short-press to enter in

2. Intructions for Display Symbols

: Heating Pool mode

: Cooling Pool mode

: Auto run mode

: Boost run mode

: Smart run mode

: Silent run mode

188 %: Heat Pump output capacity in actual time

: wifi function

INL: Water in Temperature

OUTL: Water out Temperature

: Error Warning

3. Instruction for special display

When turn off the heat pump,screen only shows the last running symbol and 188 % data shows 0. When heat pump has error warning,symbol displays and twinkles, water in area 188 displays P or E, water out area 288 displays Error code.

Instruction for Function

1. Switch Modes

When heat pump is on,short-press to switch Heat/Cool/Auto,each mode is available for selecting Boost/Smart/Silent three modes.

2. Set Temperature

When heat pump is on,short-press or into water temperature setting surface. Water in area 888. temperature value twinkles,press or to select value,press to confirm and exit current setting.No any set up after 30 seconds,the controller will save the last setting and go back to original surface.

3. Set Parameter

When heat pump is on,Long-press into memu, 188 % displays Parameter Query,press or select among Parameter Query/Parameter Setting/Debugging Status/History Fault.Short-press to confirm your selction and switch to 188 ,press or select, 288 displays the value.

When on status of Parameter Setting , and display two“88”,it is asking you to enter your password, press and to select, press to confirm.When password is right, displays Parameter No. Displays related parameter value.

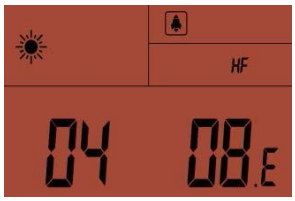
When on status of Debugging , displays the Number, 01 water pump debugging, 02 testing mode, and displays ON or Off. The related mode symbol twinkles after entering into testing mode.

Display on each status:

Parameter Query

Parameter Setting

Debugging Status



Error Query

Note：Value twinkles,means it is available for changing,or in verse

Function Diagnosis

When Heat Pump is off,Dial 4 switches to 1, give the heat pump power into status of function diagnosis automatically.

Then dispaly will show each symbol and change every 1 second.

PARAMETER CHECKING AND ADUSTMENT

Parameter list

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

No.	Name	Instruction
1	Compressor running Frequency	Current hz
2	EEV Open degree	Current Value/5
3	Ambient Temperature	Current ℃
4	Outlet Water Temp.	Current ℃
5	Exhaust gas Temp.	Current ℃
6	Return gas Temp.	Current ℃
7	Coil Temp.	Current ℃
8	4-way Valve outlet Temp.	Current ℃
9	Water Circulaton Pump	0-off；1-on
10	4-way Valve Status	0-off；1-on
11	Standby	/
12	Standby	/
13	Standby	/
14	Standby	/
15	Standby	/
16	Running Current of Compressor	Current*10
17	Voltage	Current/10
18	Standby	/
19	Standby	/
20	Standby	/
21	Fan speed	Current/10

Malfunctioning of the unit and maintenance

When an error occurs or the protection mode is set automatically, the circuit board and thewired controller will both display the errormessage.

Error	Meaning	Analysis	Diagnosis	Solution
P01	Water Flow failure	1. No water flow; 2. Flow switch failure; 3. Water system block.	1.Check if water in valve is closed or no water in; 2.Check if flow switch is blocked or damaged; 3.Check if"Y"Shape filter blocked.	1. Open the valve; 2. Change a new flow switch; 3.Clean or change a newfilter.
P02	High pressure protection	1.Water flow is too small 2.High-pressure switch is damaged; 3.Refrigerant system block; 4.EEV deadlock.	1.Check if water flow is not enough or water pump flow is not enough; 2.Check if high-pressure switch is off; 3.Check if refrigerant system is blocked; 4.When heat pump is off and turn the heat pump on and off to check if EEV can be listenned by sound of reset.	1.Reinject water or change to a new pump of larger water flow; Change a new high-pressure switch; 3.Change a new filter; 4.Change a new EEV

P03	Low pressure protection	1.Lack of gas; 2.Refrigerant system block; 3.Exceed heat pump operation range.	1.Check if gas system is leaking; 2.Check if filter is blocked; 3.Check ambient Temp. and water temp. is over limitation.	1.Amend the leakage and reinject the gas; 2.change a new filter.
P04	T3 Coil over heat protection	1.Heat Pump fan blowing area is blocked; 2.Evaporator is blocked; 3.T3 coil sensor position was changed.	1.Check if the blowing area is open; 2.Check if the evaporator is blocked; 3.Check if the coil snesor resistance value is correct.	1.Put away the blow area; 2.Clean the evaporator; 3.Change a new sensor.
P05	Exhausting gas temperature protection	1Lack of gas; 2.sensor position was changed.	1.Ceheck if refrigerant system is leaking; 2.Check if the snesor resistance value is correct.	1.Amend the leakage and reinject the gas; 2.Change a new sensor.
P06	Outlet water temperature anti-freezing protection	1. lower water flow; 2. heat exchanger blocked; 3. Y-shaped filter blocked; 4. Overlow load.	1. check if air exists in water system; 2.Plate heat exchanger if blocked; 3. check if Y-shaped filter has block; 4. check design of indoor water system if reasonable,if have water bypass.	1.If drain valve has problem,change a new one; 2.Blow plate heat exchanger with water or high-pressure gas through reverse direction; 3.Clean Y-shaped filter; 4.Water system must have bypass.
P07	Pipe temperature anti-freezing protection	1. sytem lack of gas; 2. water sytem has block; 3. cooling system has block.	1. Check system if any leakage; 2. Check Y-shaped filter has block; 3. Check if cooling system filter has block.	1.Fix leakage and re-charge gas； 2.Clean Y-shaped filter； 2.Change filter.
P08	High-pressue 2 protection	High pressure switch 2 cuts	Check if high pressure switch 2 cuts under unit OFF condition	Change high pressure switch 2
E01	Controller communication failure	Communication cable cuts	Check communication cable if cut	Change connection cable or re-connect
E02	TP1 exhaust gas temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E03	T3 coil temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E04	T4 ambient temperature sensor failure	Ensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E05	T5 liquid gas temperature sensor	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E06	TH return gas temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E07	TW water tank temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E08	T6 inlet water temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E09	T7 outlet water temperature sensor failure	sensor temperature deviation or cuts	Check sensor resistance value or if sensor cuts	Change sensor or re-connect cable
E10	Controller and Drive PCB Communicate failure	Communication cable cuts	Check communication cable if cut	Change connection cable or re-connect

E11	reserved	
E12	reserved	
E13	reserved	
E14	reserved	
E15	DC main cable voltage exra low	
E16	DC main cable voltage exra high	
E17	AC current protection (input side)	
E18	IPM module abnormity	
E19	PFC abnormity	
E20	Compressor start failure	
E21	Compressor lack-phase	
E22	IPM module reset	
E23	Compressor over-current	
E24	PFC module extra high temperature	
E25	Current detection Circuit failure	
E26	out of step	Wiring eror or IPM moudule invalid
E27	PFC module temperature sensor abnormity	Check if wiring error Re-connect cable or change IPMmudule
E28	communication failure	
E29	IPM module extra high temperature	
E30	IPM module temperature sensor failure	
E31	reserved	
E32	IPM adjustment data	
E33	IPM adjustment data	
E34	AC input voltage abnomity	
E35	IPM adjustment data	
E36	Reserved	
E37	IPM module current frequence limits	
E38	IPM module voltage frequence	

	limits	
E51	Failure of Fan motor drive	

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 swimming 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 R32 refrigerant in the amount as stated in the specification. Do not vent R32 into the atmosphere: R32, is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 675.

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.

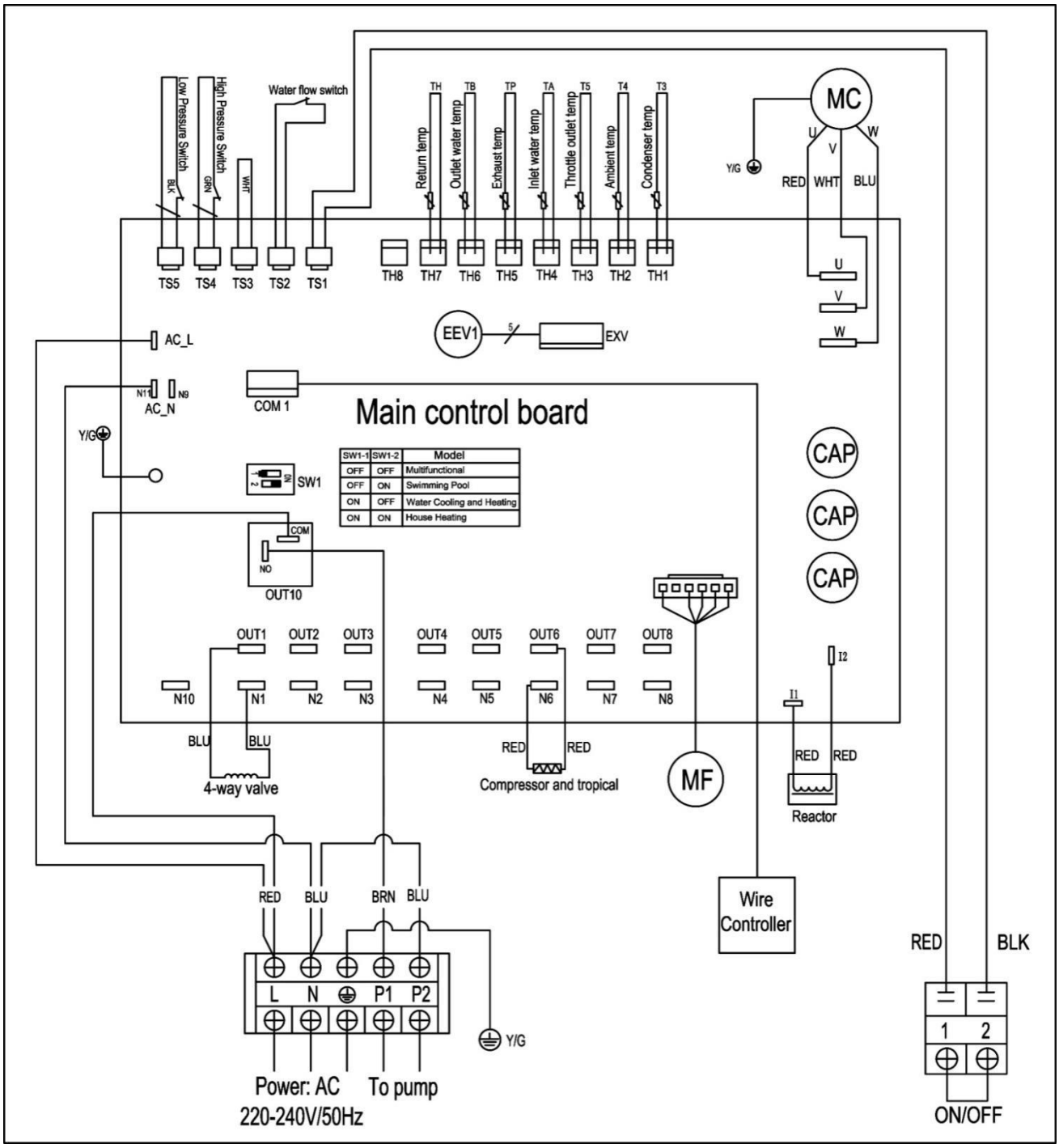
Do not try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and other parts must be done by a qualified installer in accordance with relevant local and national legislation.

Units must be treated at a specialized treatment facility for re-use, recycling and recovery. By ensuring that this product is disposed of 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:

EFI 14/17/23



Specification

Model		EFI 14	EFI 17	EFI 23
Heating Capacity (kW)		14.3	17.4	23.2
Advised Pool Volume (m3)		30-50	40-60	60 -80
Working Air Temp		-7℃ ~ 43℃		
Performance Condition Air 26℃ Water 26℃, Humidty 80%				
Heating Capacity (kW)		14.3	17.4	23.2
C.O.P		14.62	14.5	14.5
C.O.P in Smart Mode		7.69	7.5	7.63
Performance Condition Air 15℃ Water 26℃, Humidty 70%				
Heating Capacity (kW)		10.65	13	17.34
C.O.P		4.9 ~7.6	4.85 ~ 7.44	4.80 - 7.50
C.O.P in Smart Mode		5.76	5.71	5.65
Max input power (KW) at 15℃		0.38 ~ 2.17	0.47 ~ 2.64	0.61 - 3.60
Unit Specs				
Power Supply		240v~/ 50Hz/1PH		
Max Current (A)		9.6	13.77	18.36
Advised Water Flow LPM		85 - 115	100 - 135	200 -250
Refrigerant	Type	R32		
	Charged(kg)	1.5	1.6	1.8
Water Connection		50mm		
Compressor Brand		Toshiba		
Compressor Type		Rotary DC Inverter		
Sound Pressure 1m dB (A)		38.5 ~ 48.6	41.5 ~ 52.5	44.2 - 54.5
Sound Pressure 10m dB (A)		20.8 ~ 28.6	23.0 ~ 31.8	24.3 - 33.4
Unit Weight(kg)		46	50	70
Unit Dimensions(mm)		986 x 356 x 668	986 x 356 x 668	1076 x 426 x 720
Package Dimensions(mm)		1080 x 435 x 800	1080 x 435 x 800	1161 x 490 x 855

Recycling

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 R32 refrigerant in the amount as stated in the specification. Do not vent R32A into the atmosphere: R32, is a fluorinated greenhouse gas with a Global Warming Potential (GWP) = 2088.

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.

YOU HAVE THREE SOLUTIONS:

1.Disposing of it at your local recycling centre

2.Giving it to a social service organisation for it to be repaired and put back into circulation.

3.Returning it to the heat pump distributor against a new purchase.

User Manual for APP

Application –
EFI Full Inverter Series

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PLEASE DO NOT THROW IT AWAY. KEEP IT IN YOUR FILES FOR FUTURE REFERENCE.

Download the APP

Method 1

Android system: Scan the QR code through Browser of Android system. Download the APP and install it.

ISO system: Scan the QR code to download the APP and install it.

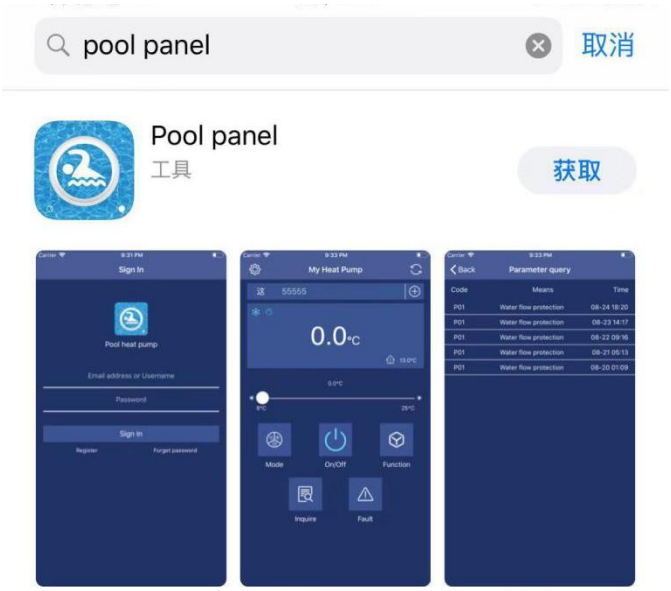
Method 2

Android system: Please browse the internet site

http:/47.254.152.109:8080/scadaiot/downFile/execute.do

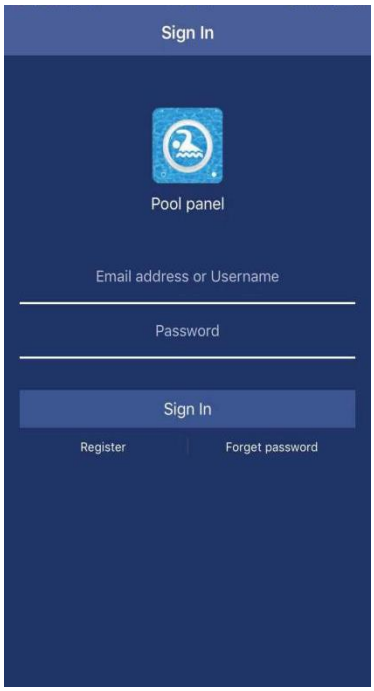
with Browser of Android system to download the APP and install it.

ISO system: Please search the Pool panel APP in APP store, and install it.

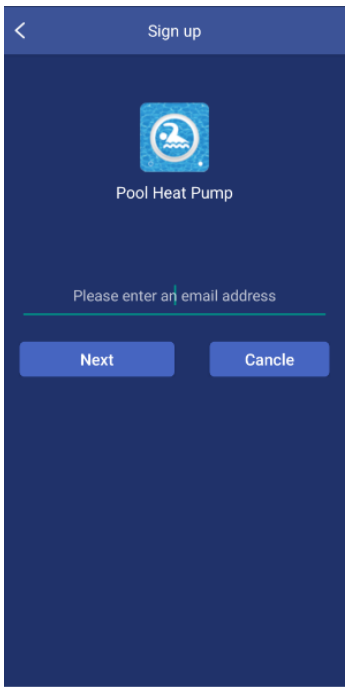


Register

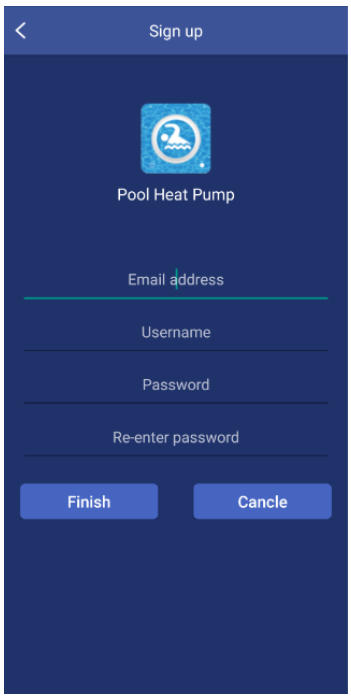
Please confirm mobile is already connected to the valid Wi-Fi.
Open the APP.



Please press ***Register*** to sign up first time.



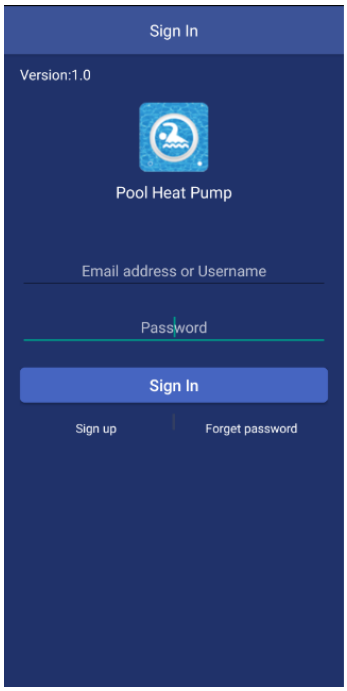
Type your email address, and press ***Next***.



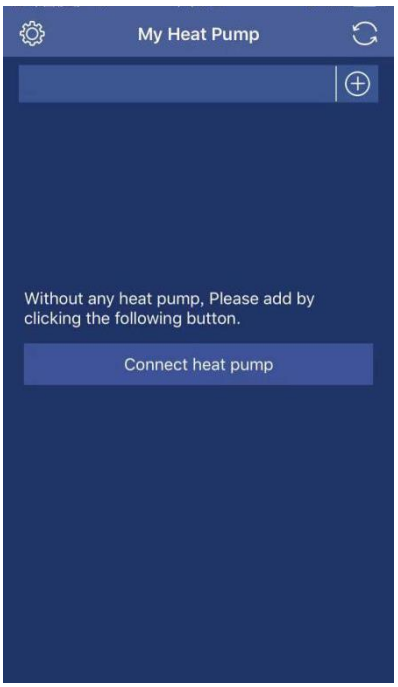
Please input all the items including Email address, Username, Password and Password confirm, and press ***Finish*** for sign-up. After sign up successfully, the interface will change to Log in interface automatically.

Notes: The password should be only combined with alphabet and numbers.

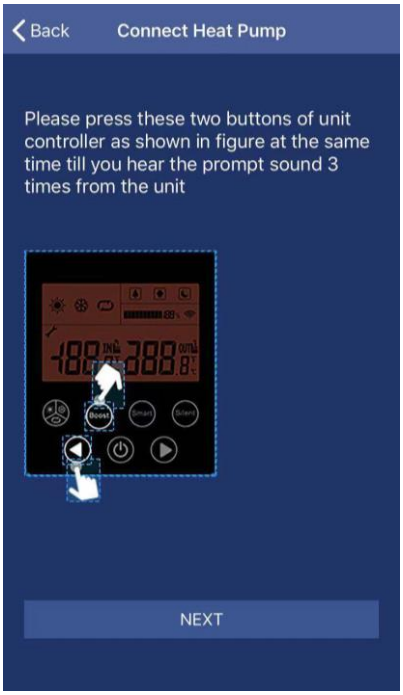
Configuration of APP



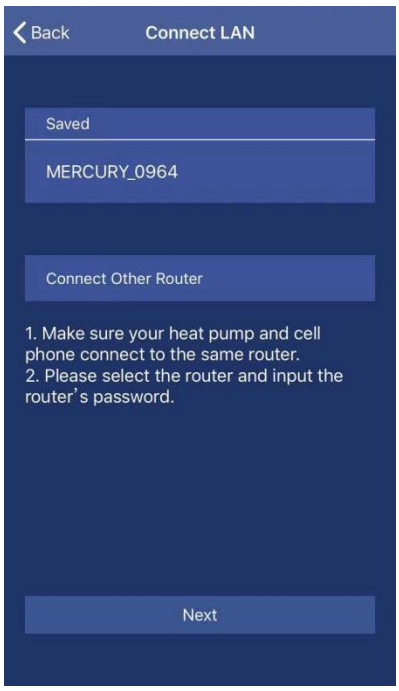
Input Email address or Username, password and press ***Sign in*** button.



Press button ***Connect heat pump***, and the interface will be change to next interface.

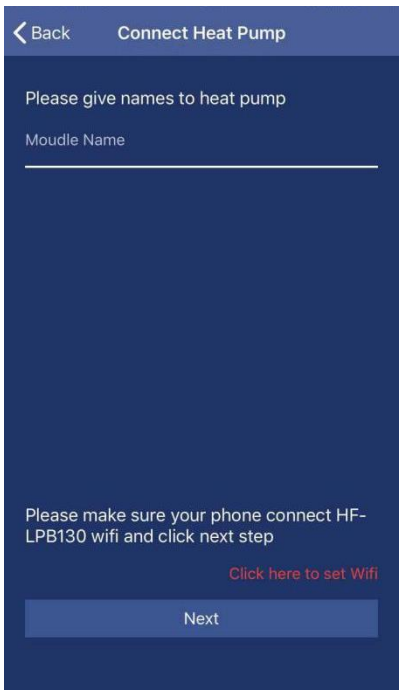


According to the introduction in the interface, please operate. After the heat pump unit setting, please press ***Next***.

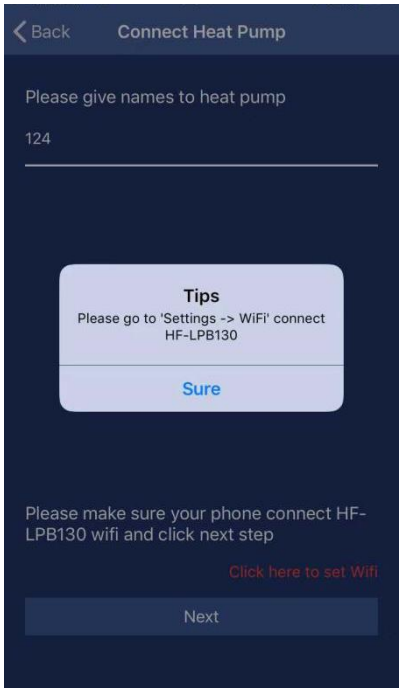


Please in this interface, select your router in your home LAN.

Input your router's password, and please click ***Binding*** and ***Next***.



In this interface, first, please give your heat pump names as you want. Press the button ***click here to set Wi-Fi***.

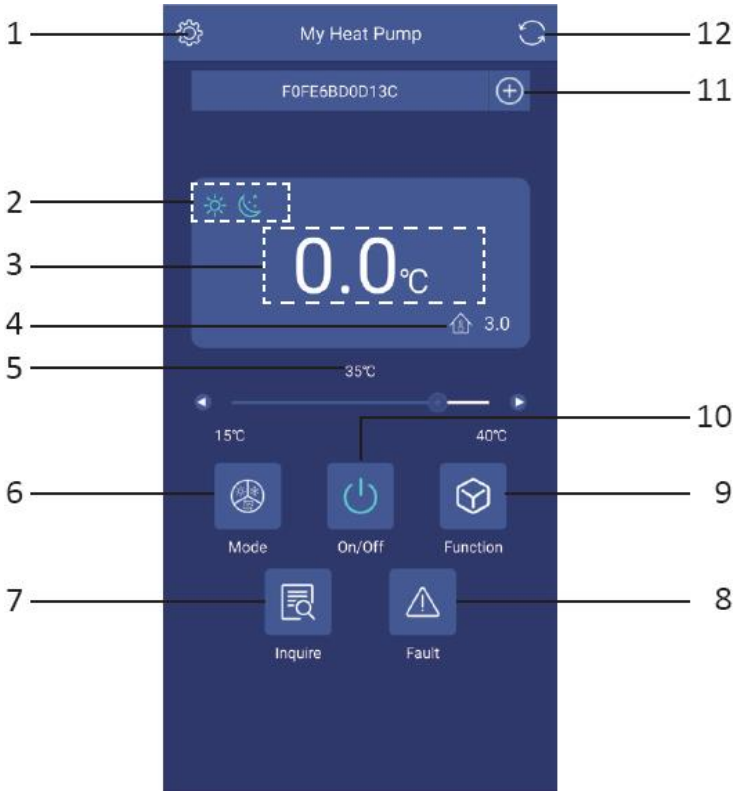


For Android system, the interface will directly skip to setting menu of mobile to select HF-LPB130.

For ISO system, please manually enter the setting menu of mobile to select HF-LPB130. Till now, the connection is finished between mobile and heat pump unit successfully; the interface will be change to main user interface.

Operation of APP

Main icons and functions

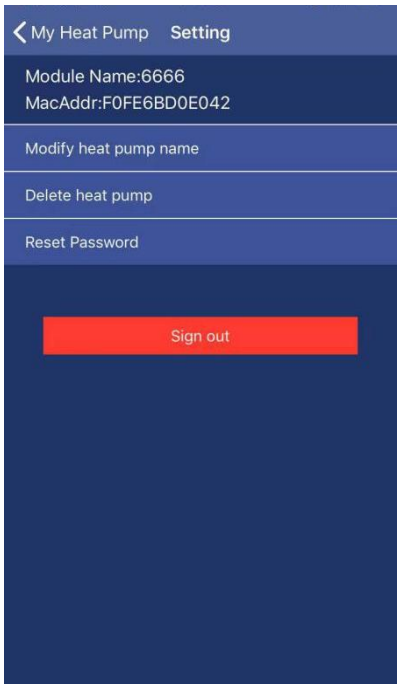


1	Setting button
2	Operating mode and function icon
3	Setting temperature icon
4	Ambient temperature
5	Temperature setting bar
6	Mode setting button
7	Inquire button
8	Fault button
9	Function setting button
10	On/Off button
11	Add heat pump unit button
12	Refresh button

Button introductions

1. Setting

Press ***Setting*** button, the interface will be changed to setting interface as following picture.



Through this interface,

a. The name of heat pump unit which is connected with your mobile APP can be changed.
b. Delete heat pump unit which is already added in your APP.
c. Reset the APP password.
d. Sign out the APP.

2. On/Off button

Press On/Off button under the status of unit stand-by, the unit will be run. During the unit runs, press this button, and the unit will be stopped.

3. Mode setting button

This button is used to select the operating mode which includes Auto, Cooling and Heating. Once press it, the interface will be enter mode selection interface. In this interface, you can set cooling mode, heating mode or auto mode. After selection, press ***Confirm*** to confirm.

After set the operating mode, in the icon area of mode will display your selection in the left side of the screen.

Cooling mode Heating mode Auto mode

4. Function setting button

This button is used to select the operating function which includes boost, smart and silence mode. Once press it, the interface will be enter mode selection interface. In this interface, you can set boost mode, smart mode or silence mode. After selection, please press ***Confirm*** to confirm.

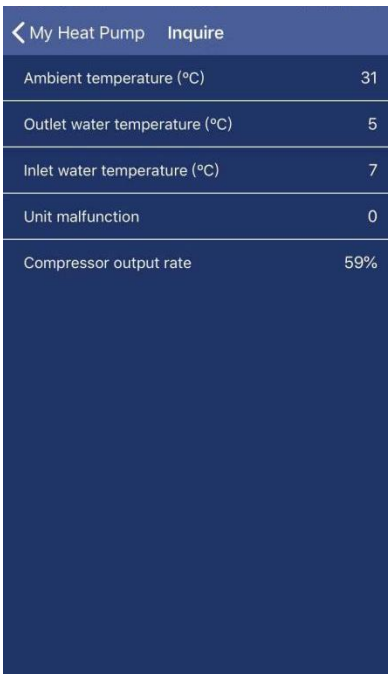
After set the function mode, in the icon area of mode will display your selection in the left side of the screen.

Silence mode Smart mode Boost mode

5. Inquire button

Press Inquire button, the inquire interface will be displayed. From this interface, the following current parameter of the heat pump unit will be displayed.

a. Ambient temperature;
b. Outlet water temperature;
c. Inlet water temperature;
d. Unit malfunction state;
e. Compressor output rate.

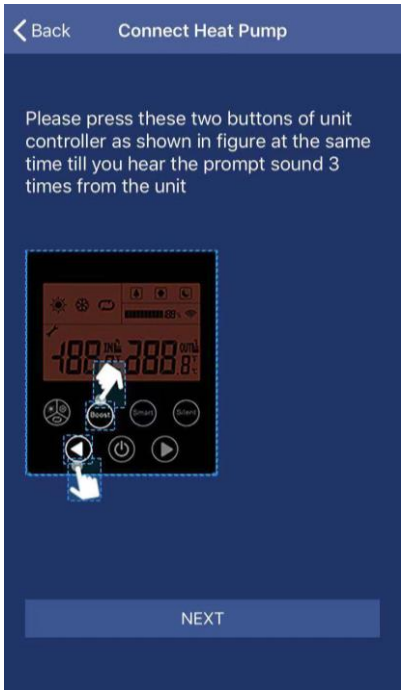


6. Fault button

Press ***Fault*** button, and the fault records include history and current error or protection codes will be displayed.

7. Add heat pump unit

Press this button, and the interface will be changed to add new unit interface as the following picture.



Please repeat previous introduction finish the following steps.

8. Refresh button

Press this button, the displayed current setting temperature and ambient temperature in screen will be refreshed.

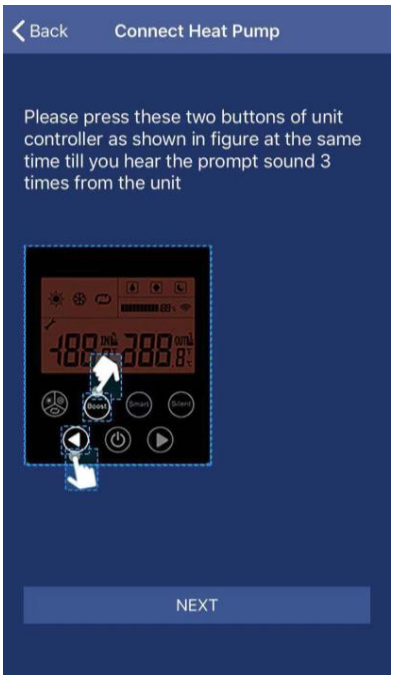
9.

Temperature setting bar

By finger, slide the slider along the temperature bar to set the required temperature. At the same time, the displayed temperature value above the temperature bar will be changed following different locations of the slider.

Tips:

1. If the heat pump unit is already set with Android or ISO system, you want to change ISO or Android system mobile phone, and please following steps:
   a. Press the adjustment buttons (◀and▶) of heat pump controller at the same time till you hear the prompt sound.
   b. Please set the APP and the heat pump again follow previous steps.



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