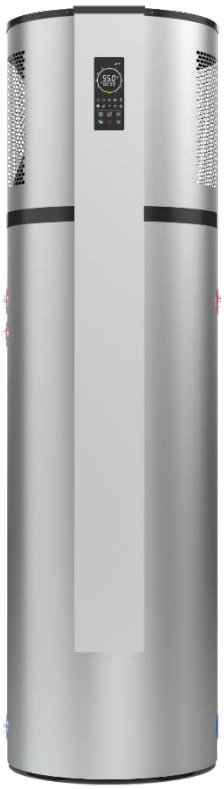
Evo315-C

Installation & Operation Manual

Contents

1. Introduction

This manual contains all the necessary information in regard to the installation, troubleshooting, operation and maintenance of this unit. Ensure instructions in this manual are adhered to at all times. Failing to comply with these recommendations will invalidate the warranty. This manual and all others are available for download on our website.

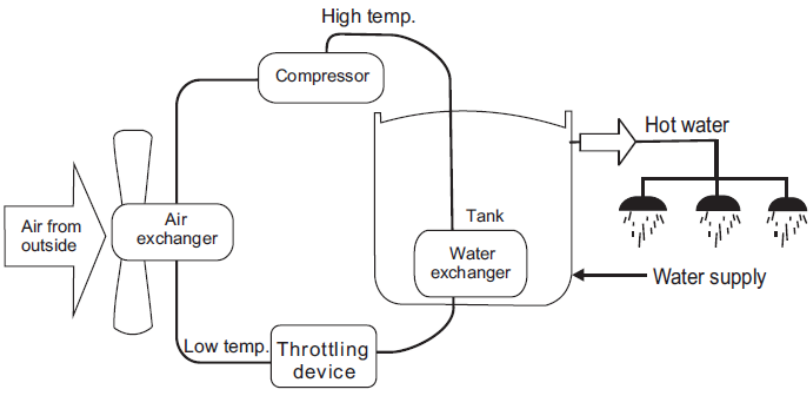


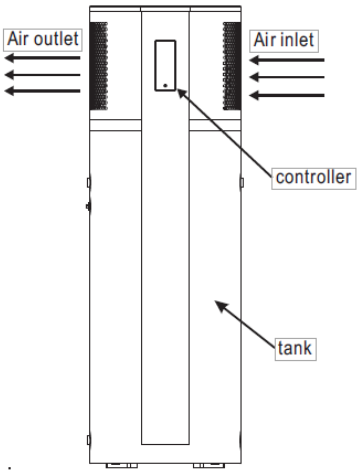
- When installing the Evo315-C, follow all instructions as documented in this manual.
- Once the installation is complete, check that all connections are secure before the power is turned on.
- The installer is to explain to the end user how to operate and maintain the unit in accordance with this instruction manual.
- Evo Industries Australia Pty Ltd will not be held responsible for any damages or injuries caused by the incorrect installation of this hot water system.
- A maintenance programme must be carried out as recommended in this manual to ensure ongoing reliability.
- Failure to comply with these recommendations could void the warranty and cause injury or death.
- Due to continuous product improvement, this manual may be subject to change without prior notice.

2. Unit Specifications

2.1 How it Works

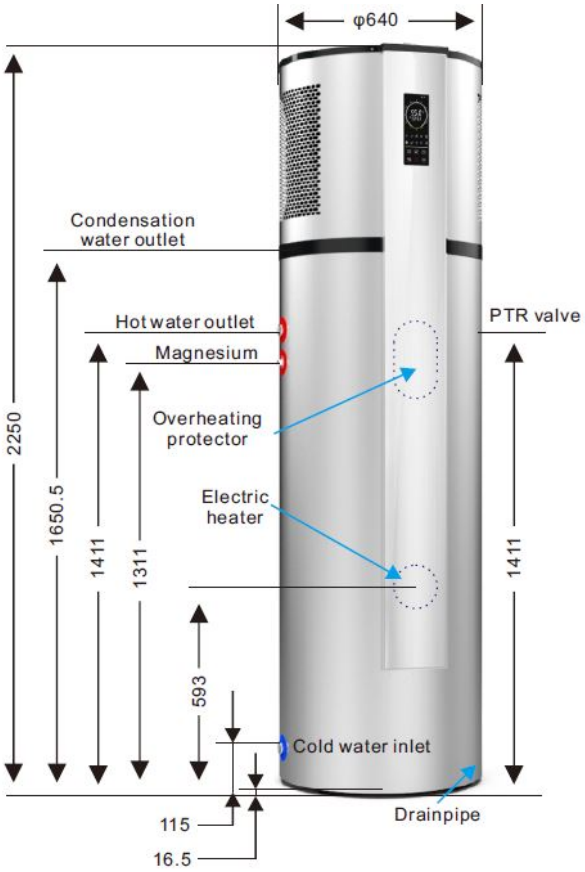
- Refrigerant is compressed into vapor with high temperature and high pressure when it goes through the compressor.
- On the discharge side of the compressor, the now hot and highly pressurized vapor is cooled down through the heat exchange with the water in the tank until it condenses into a high pressure, moderate temperature liquid.
- The pressure of the liquid refrigerant drops as it passes the throttling device.
- Finally, the refrigerant absorbs the heat from the surrounding air and evaporates into vapor with low temperature and low pressure, where it then it goes into the compressor again.





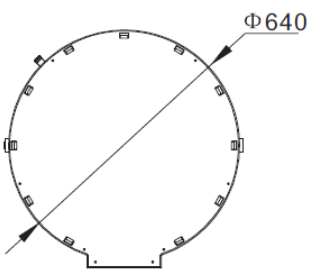
2.2 Dimensions

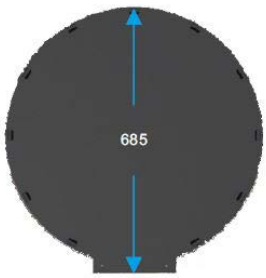
Unit: mm



Dimensions (mm)

Height	2250
Condensation water outlet	1650.5
Height to water outlet	1411
Height to magnesium	1311
Height to electric heater	593
Height to water inlet	115
Height to PTR valve	1411
Diameter	φ640





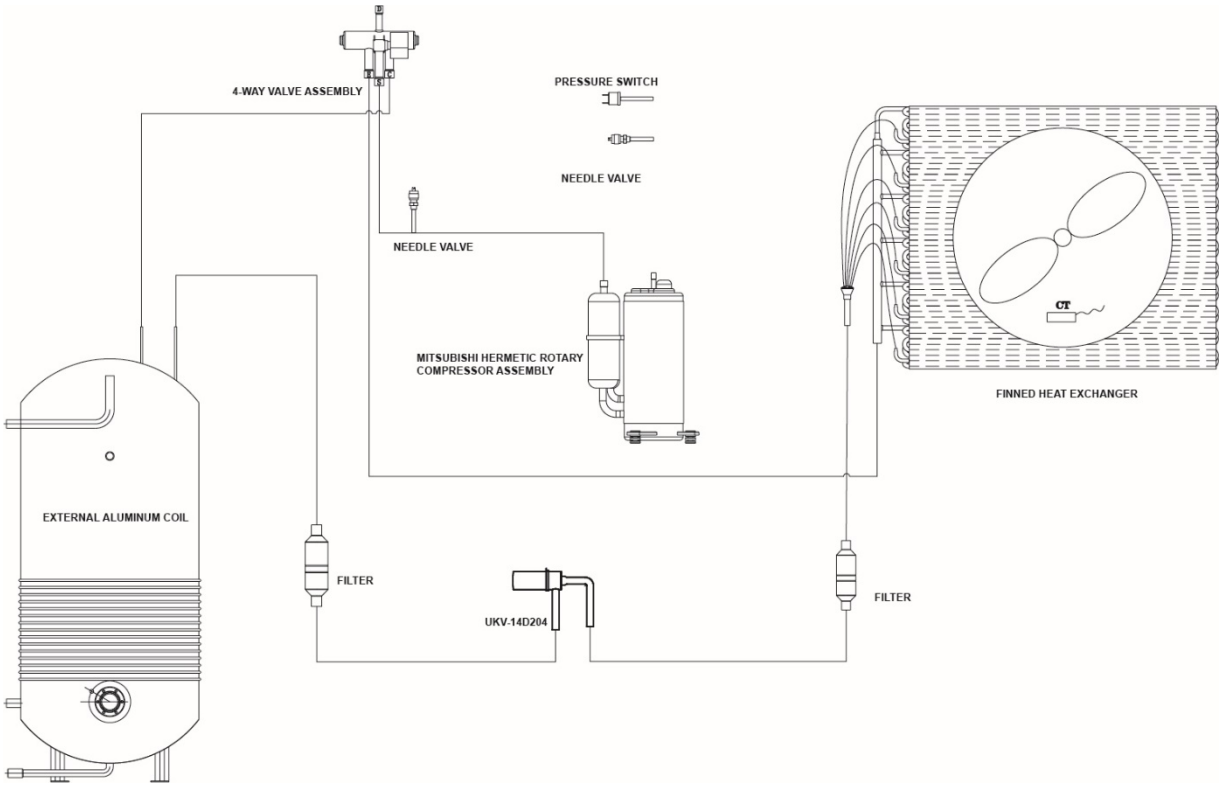
2.3 Technical Data

Model		Evo315-C
Heating capacity	kW	6.0
Water tank capacity	L	315
Power input	kW	1.46
Running current	A	6.08
Power Supply		220-240V~/50Hz
Compressor Number		1
Compressor		Rotary
Rated outlet water temp.	Deg C	60
Noise	dB(A)	52
Water inlet/outlet size	inch	¾
*Auxiliary E-heater	kW	4.8k
Net dimensions	mm	See the drawing
Shipping Dimensions	mm	See package label
Net Weight	kg	See nameplate
Shipping weight	kg	See package label

Measurement conditions:
Instant heating: Ambient temperature 20°C/15°C, water inlet 15°C, water outlet 55°C.
Highest setting temperature: 75°C
Working Temp Range: Ambient temperature is -5°C to 43°C (Heat Pump)
Operating parameters: The range of the operating water pressures: 0.15~0.85MPa

Freeze Protection
The Evo315-C has a freeze protection system which will protect the unit from damage by preventing ice forming in the waterways in freezing conditions.

2.4 System Diagram



3. Safety Instructions

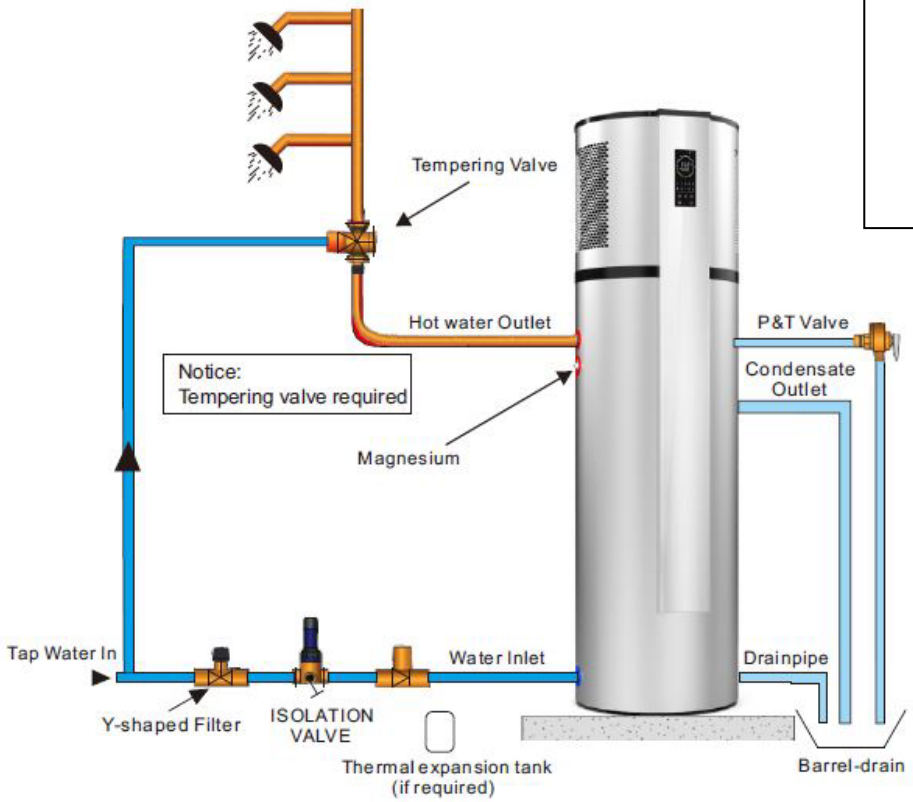
- ✓ A qualified technician is required to install, relocate the unit if required and for all repairs.
- ✓ Good earthing is required for both the unit and power connections to prevent electrical shock.
- ✓ Ensure that there are no leaks on both the plumbing and drainage fittings.
- ✓ The unit must not be installed near flammable gas or have flammable aerosols sprayed in the vicinity.
- ✓ The base that the unit is installed on must be level and stable.
- ✓ A circuit breaker is required to be installed with this unit.
- ✓ Fingers and objects must not be placed into the fan of the unit. Children should be kept clear of the appliance.
- ✓ In the event of the unit malfunctioning, shut off the power supply and contact your supplier or EvoHeat.
- ✓ Power the unit off during cleaning.
- ✓ The unit produces hot water and will also have hot fittings, therefore should not be touched to avoid injury.
- ✓ To reduce the risk of excessive pressures and temperatures in this water heater, install temperature and pressure protective equipment required by local codes. A combination temperature and pressure relief valve must be certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSIZ21.22. This valve must be marked with a maximum set pressure not to exceed the marked maximum working pressure of the water heater. Install the valve into an opening provided and marked for this purpose in the water heater. Install the P&T Valve or provide tubing so that any discharge from the valve exits only within 6 Inches above, or at any distance below, the structural floor, and does not contact any live electrical part. The discharge opening must not be blocked or reduced in size under any circumstances.
- ✓ Hydrogen gas is produced in a hot water system served by this heater that has not been used for a long period of time (2 weeks or more). Hydrogen gas is extremely flammable. To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. When hydrogen is present, there will probably be an unusual sound such as air escaping through the pipe as the water begins to flow.
- ✓ There should be no smoking or open flame near the faucet at the time it is open.
- ✓ The appliance is fitted with a means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III conditions. These means must be incorporated in the fixed wiring in accordance with the wiring rules.

4. Installation

4.1 Pipeline Connection

Note: A pressure releasing valve is to be fitted in the installation.

Spec of the P&T Valve:
- Pressure: 0.85MP
- Temperature: 99



Installation of the water inlet or outlet pipes: The specification of the water inlet and outlet threat is BSP3/4(internal thread). Pipes must be heat-resistant and durable.

Installation of the pipe for P&T valve: The spec of the valve connecting thread is BSP3/4(internal thread). After installation, it must be confirmed that the drainpipe outlet is exposed in the air. When the flexible drainpipe is joined to the pressure relief orifice of this valve, you must ensure that the flexible drainpipe is pointing downwards and exposed in the air.

ATTENTION

The P&T valve attached with the unit must be installed. Failure to do so will cause damage to the unit and possible personal injury.

Do not use stainless steel fittings to connect directly with other metals to prevent galvanic corrosion.

Drain the water tank through the drain valve at the bottom part of the unit.

Do not dismantle the P&T Valve.

Do not block off the drainpipe as it may cause an explosion or injury.

4.2 Handling & Transportation

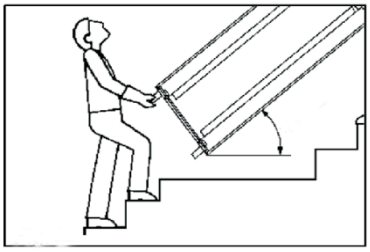
As a rule, the unit should be stored and/or transported in its shipping container in an upright position and without water charge. For transport over short distances, and provided due care is exercised, an inclination angle of up to 30 degrees is permitted. During transport and storage, ambient temperatures of 0 to 40 degrees Celsius are permissible.

Forklift Transportation

When transported by a forklift, the unit must remain mounted on the pallet. The lifting speed should be kept to a minimum. Due to its top heaviness the unit must be secured against tipping over. To prevent any damage or injury, the unit must be placed on a level surface.

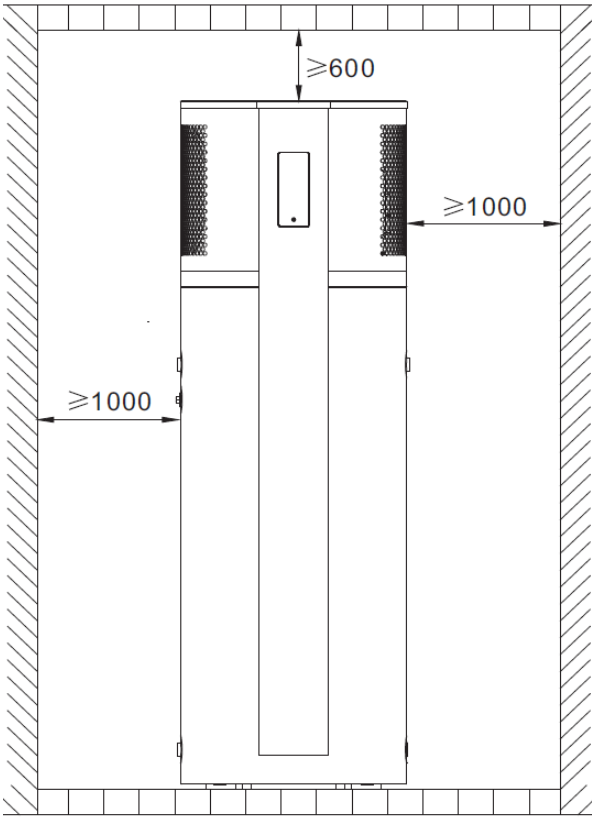
Manual Transportation

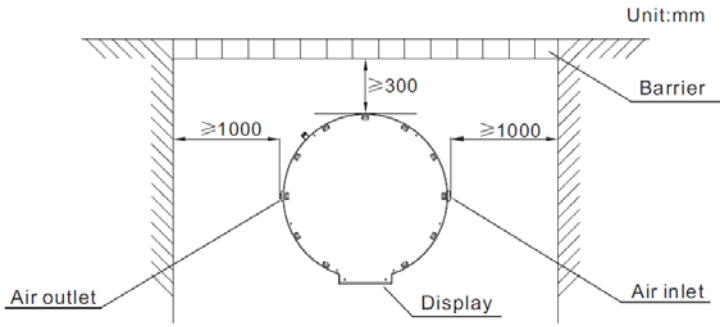
For manual transport, the unit can be placed on a wooden pallet. Using ropes or carrying straps, a second or third handling configuration is possible. With this type of handling, care must be taken that the maximum permissible inclination angle of 60 degrees is not exceeded. If transport in an inclined position cannot be avoided, the unit should be left to rest at least one hour after it has been moved into final position before operation.



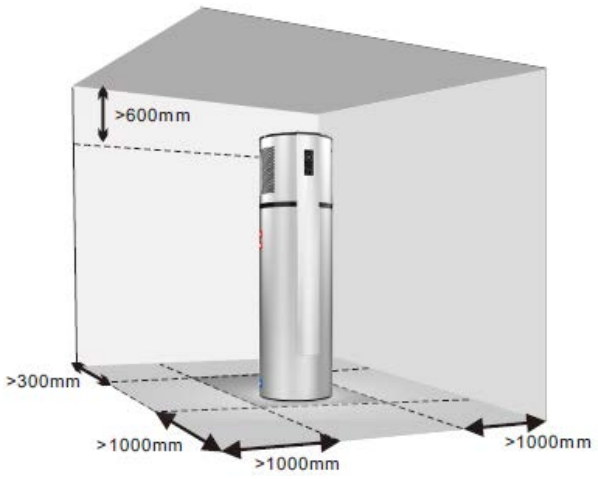
CAUTION: High centre of gravity, place on a level surface!

4.3 Location of Install & Minimum Clearances

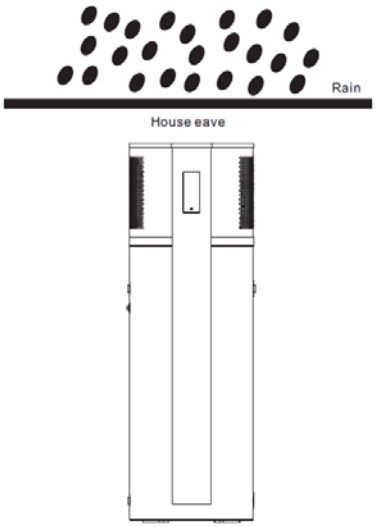




CAUTION: The installation must comply with AS/NZS 3500.4
The minimum space of installation is 11 cubic metres.



The Evo315-C is designed for external installation; however, if possible, installing the system under the house eaves or in a sheltered environment may help prolong the life of the system.



1. The unit must be installed, operated and maintained in good order and accordance with these instructions.
2. If the water supply exceeds rated pressure a pressure reducing valve is to be fitted.
3. Water may discharge from the drainpipe and this must be left open to the atmosphere.
4. The pressure relief valve must be operated at least every 6 months to ensure correct operation. The drainpipe from this valve should not allow water to collect in pipework.
5. Facilities for draining and filling the unit must be provided to maintenance. Drain points must be at the lowest point of the system.
6. Check before installation that your water pressure is within required limits. Use a filter and pressure relief valve on the inlet as required. A water softening device will also be required in hard water areas.
7. This heat pump must be installed by a licensed contractor. Do not attempt to install yourself if you are not qualified. The Evo315-C must be installed to conform to all relevant Australian Standards and Industry Codes including but not limited to:
   a. Electrical and Electrical Safety
   b. Plumbing and Hot Water Storage
   c. Heat Pump Installation and Operation

Installation must also comply with any local, state or federal codes at the installation site. Failure to comply can void your warranty, damage your unit and cause possible injury or death. Plumbing must comply with AS/NZS3500.4

4.3.1 Indoor Installation Recommendations

- Heat pumps operate most efficiently with warmer air temperatures, and the outlet air from the unit will always be colder than the inlet air. Therefore, it is advisable to install the unit so it receives the warmest air temperatures possible and that the cold air is not able to recirculate back into the unit.
- The unit may be able to be installed in an unventilated room exceeding 25m^3 in volume.
- Venting of cold air is always advisable to prevent the air temperature dropping and lowering the efficiency of the unit.
- Think of the unit as a 3kW air conditioner for the effect it will have on a closed room.

TO COOL THE ROOM USING THE EVO315-C

Install the unit so the outlet from the heat pump is blowing INTO the room. The room MUST have some form of air outlet otherwise the performance of the unit will suffer significantly.

TO MAINTAIN THE ROOM AT NORMAL TEMPS USING THE EVO315-C

Install the unit so the outlet from the heat pump is blowing OUTSIDE the room. The room MUST have some form of air inlet otherwise the performance of the unit will suffer significantly.

4.4 Cable Connection

The power cable is stored in the back of the unit, it's for power supply of the unit.

The unit requires an isolating switch as required by local laws. If the power cord is damaged, it must be replaced by a qualified electrician.

4.5 Filling the Tank

Open a hot water tap inside the house. Open the cold-water inlet valve into the Evo315-C to fill the tank. When water begins flowing out of the hot water tap inside the premises, turn off the hot water tap.

4.6 Initial Start-up of the Unit

Pre-Inspection

Check the water supply to the tank and pipe connections for possible leaks.
Check that the following devices are installed and operating correctly:

- Drainpipes
- P&T Valve
- Filter on inlet
- Water softening and pressure reducing devices if required.

Check that all power connections are secure before switching on.
Check that the installation space is adequate.

Trial Operation

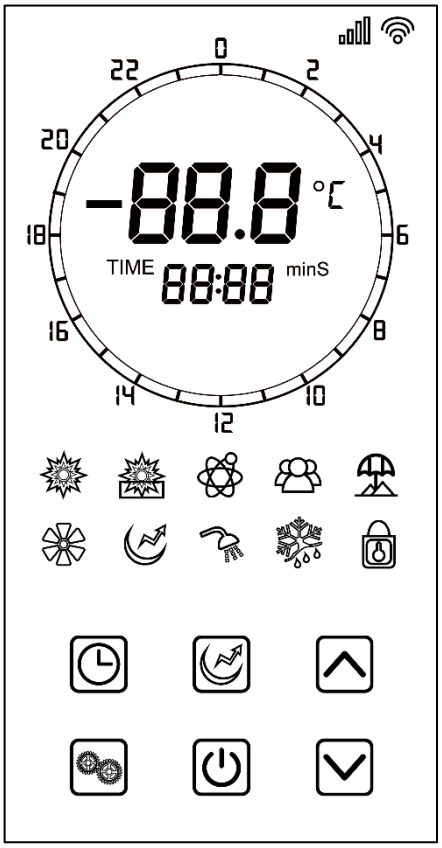
Switch on the unit by using the controller.

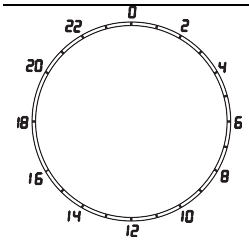
In the case of any unusual noises, switch the power off and consult your provider.

The parameters have been pre-set to a temperature of 60 degrees. Check that the unit is operating by looking for an increase in water temperature over time.

5. Operation

5.1 Main Controller Interface



ICON	NAME	FUNCTION
	ON/OFF	Turn the unit on or off.
	UP	Select options to increase values
	DOWN	Select options to decrease values
	CLOCK	Set the clock or the timer.
	HYDROBOOST	Turn on/off the electric heater
	MODE	Switch unit running modes or save setting parameters
	**TOUCH TIMING**	Touch setting timing

Icon	Name	Meaning	Icon	Name	Meaning
	Heating Mode	Enable heating mode		**Lock**	Keyboard is locked
	Eco Heating Mode	Enable Eco heating mode		**DTU**	State of DTU connection
	Intelligent Mode	Enable intelligent mode		**Wi-Fi**	State of Wi-Fi connection *Only available as an optional upgrade
	High Requirement Mode	Enable High requirement mode	TIME	**Time**	Time is displayed
	Vacation Mode	Enable Vacation mode	DOWN	**Lower tank temperature**	Temperature of the lower tank
	Fan	Fan is on	SET	**Parameter setting**	Parameter is adjustable
	Hydroboost	The Hydroboost setting is on	min	**Minute**	Minute value is being set
	Set Temperature Reached	Set temperature has been reached and the unit will shut off automatically	s	**Second**	Second value is being set
	Defrost	The unit is defrosting			

5.2 Functions of the Controller

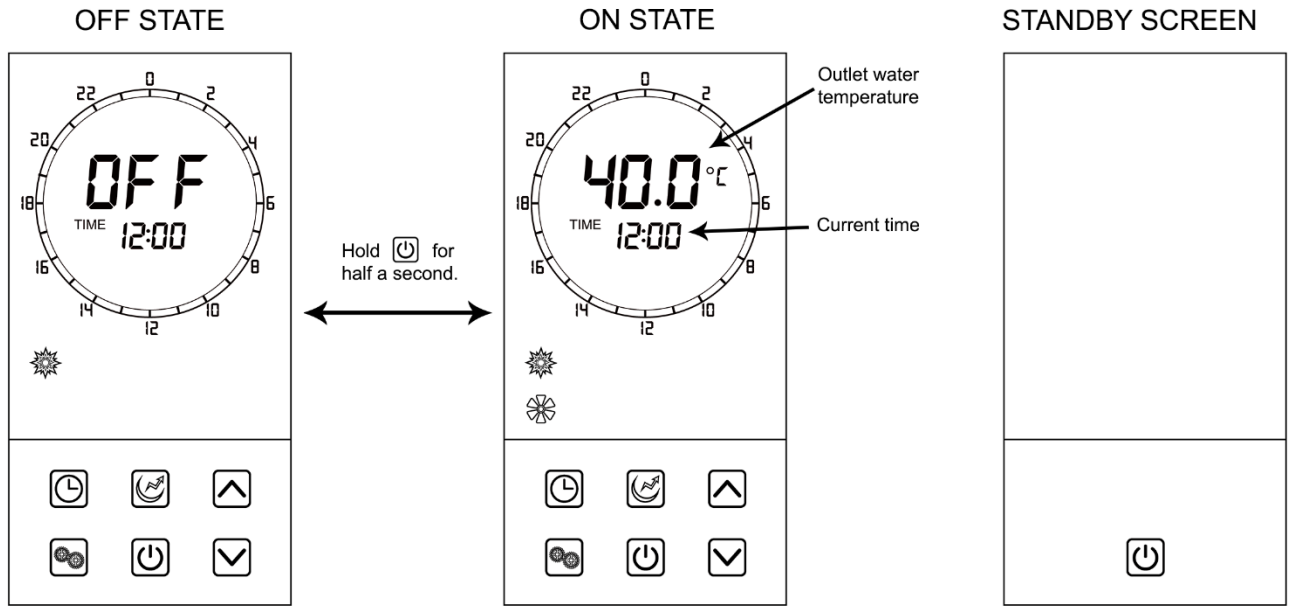
5.2.1 Turning the Unit ON & OFF

Press and hold for 0.5 seconds in the standby screen of the controller to turn the unit on. The main display will now show the water outlet temperature.

Press and hold for 0.5 seconds in the running screen of the controller to turn the unit off. The main display will now show “OFF”.

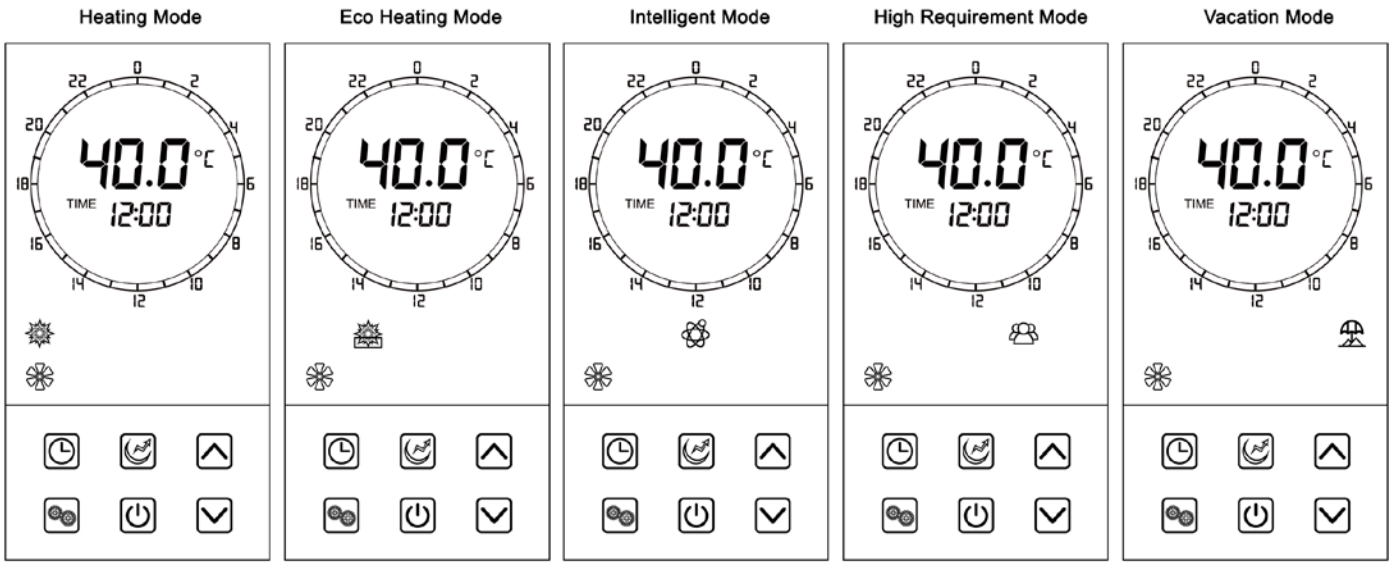
The unit will dim the screen and display the standby screen when the controller has not been touched for a minute. Touch the power button to wake it.

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



5.2.2 Mode Selection

From the running screen, press to select one of the modes: Heating, Eco Heating, Intelligent, High requirement, Vacation.



Press to alternate between different modes.

5.2.3 Target Temperature Checking & Setting

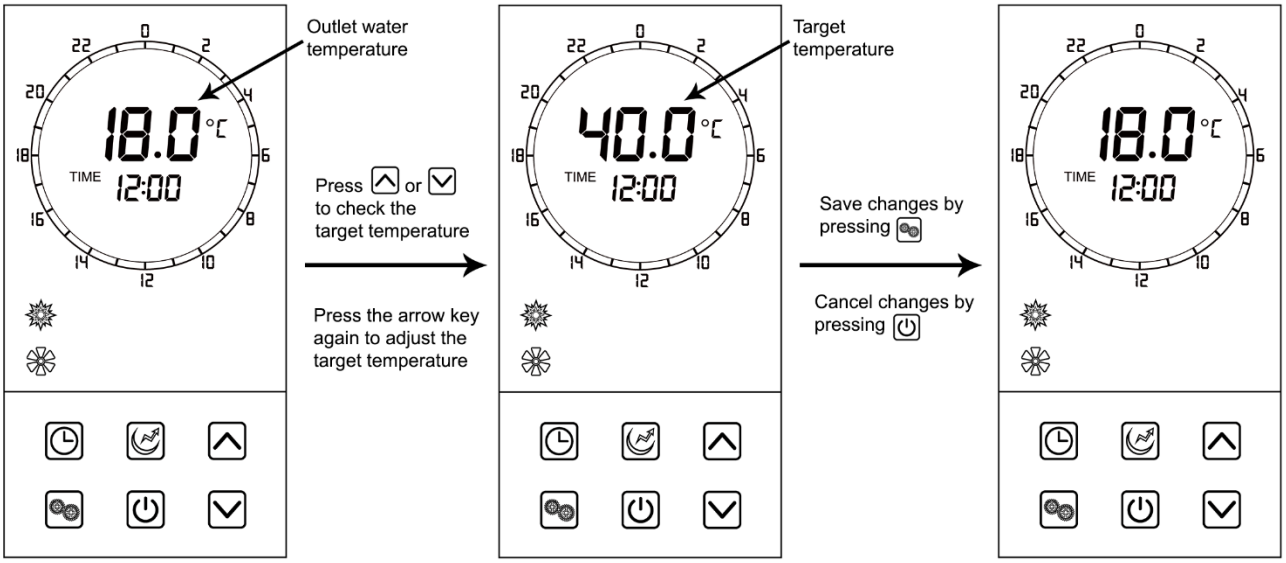
In the standby or running interface, press or once to check the target temperature of the outlet water.

Press or again to change the target temperature.

After making changes to the desired temperature, press to confirm or to cancel, then return to the previous screen.

If the keypad is left idle for 5 seconds, the controller will exit the menu automatically and apply any changes that were made.

Example: The target temperature is 40°C, the actual outlet water temperature is 18°C.



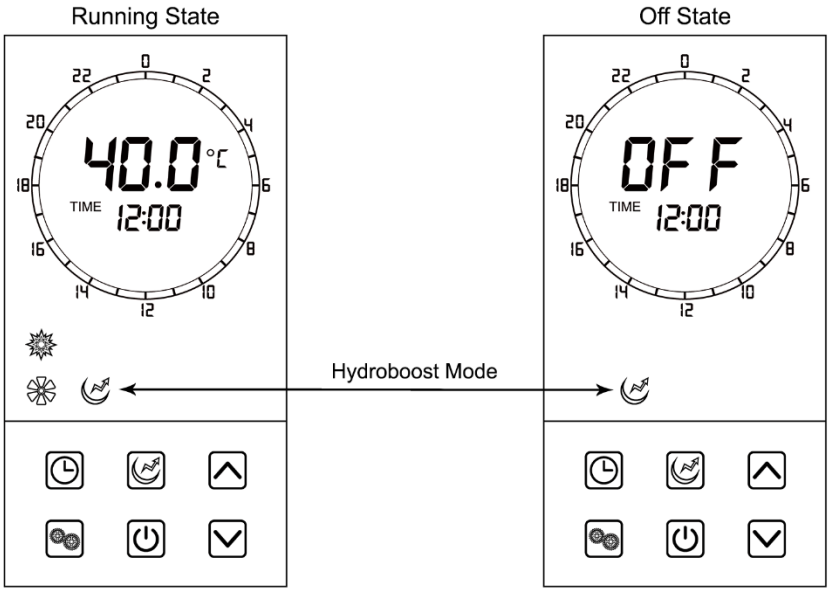
5.2.4 Hydro Boost Setting

The hydro boost setting (also known as Electric Heater) can be turned on when the unit is heating or in standby mode.

Press " " once to turn on hydro boost and press " " again to shut it off.

When the is unit off, press " " to turn on the hydro boost mode. At this time, the " " will light up. The main display area alternate 2S shows "OFF" and outlet water temperature.

Press " " again to turn off the electric heating mode, the main display will display " OFF "



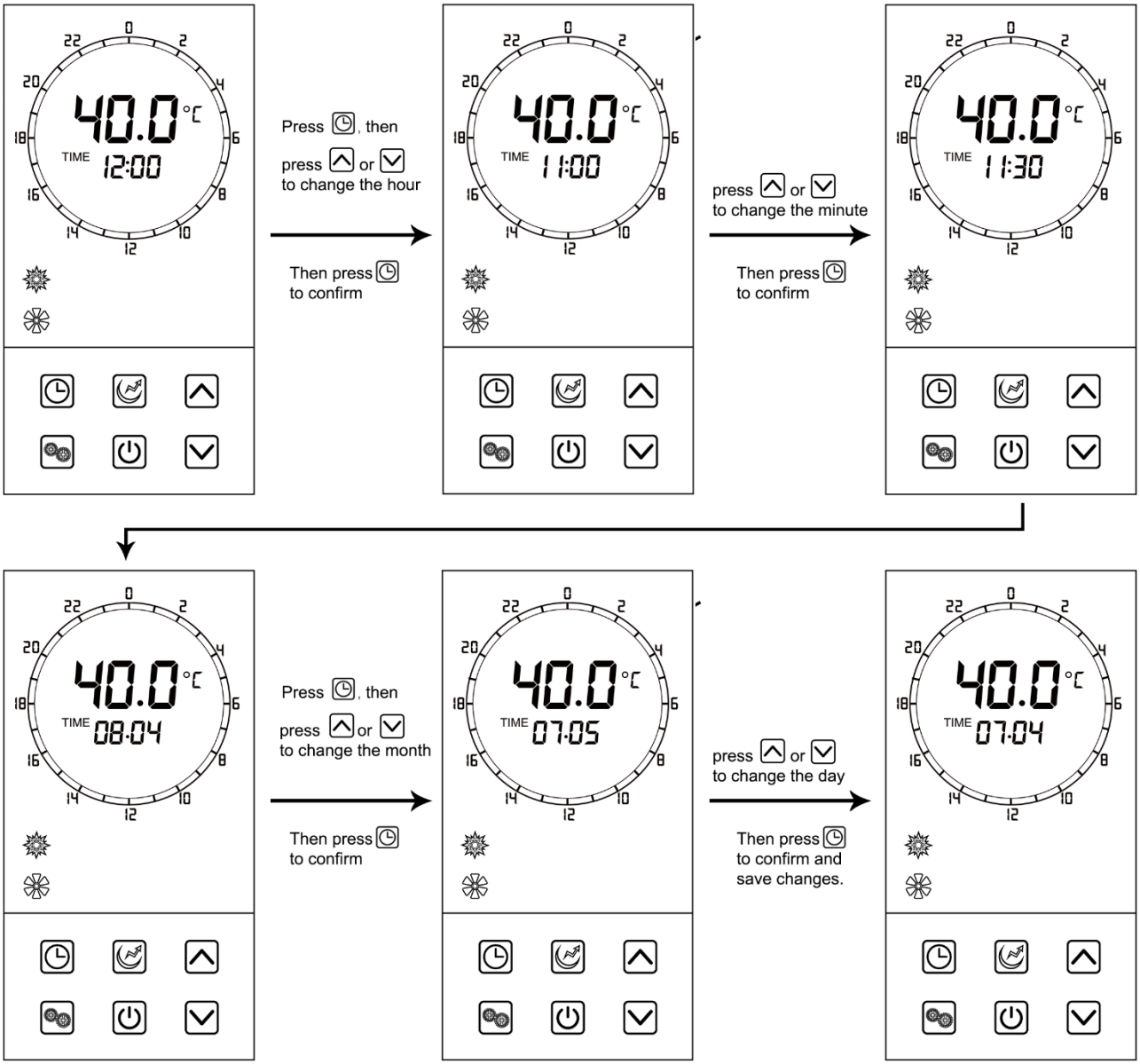
5.2.5 Setting the Time and Date

In the standby or running interface, press once, the hour digit will flash.

Press the or to change the hour setting, then press to confirm.

Press the or to change the minute setting, then press to confirm.

During the process, you can press at anytime and the system will exit the operation without saving.



5.2.6 Setting the Timer

Timer settings can be set in standard mode, economic mode, auto mode and fast heating mode. Note: there are two types of timing settings: touch and button. The unit will run during the lit time periods and stop on the dim areas.

Touch

Press and hold for 2 seconds (the timer display will flash)

When the timer display flashes, choose your start-up time (A) and end time (B).

Press to save the setting and exit back to the main interface.

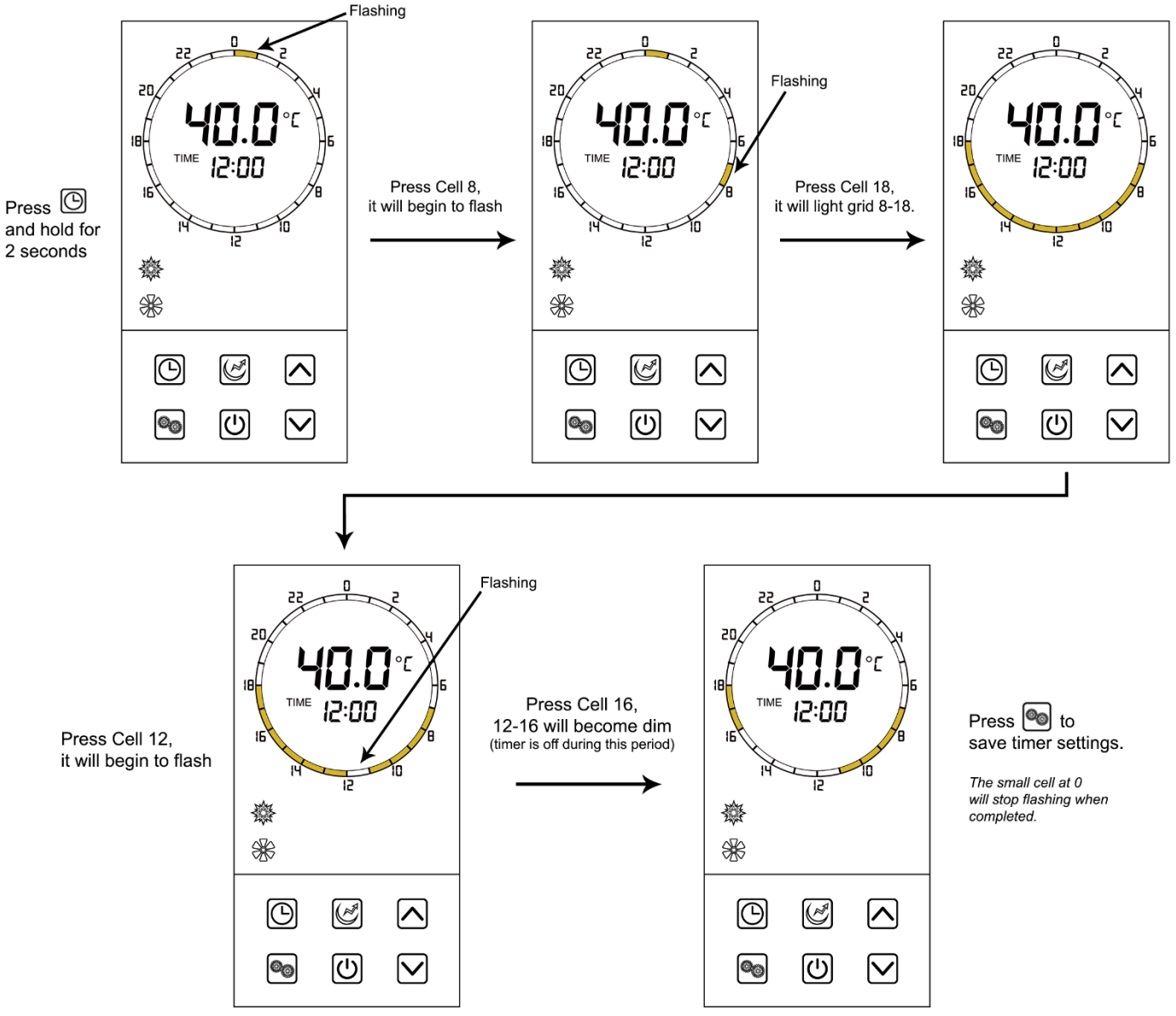
Button

Press and hold for 2 seconds (the timer display will flash)

When the timer display flashes, choose the start-up time (C) and end time (D) by pressing or and .

Press to save the setting and exit back to the main interface.

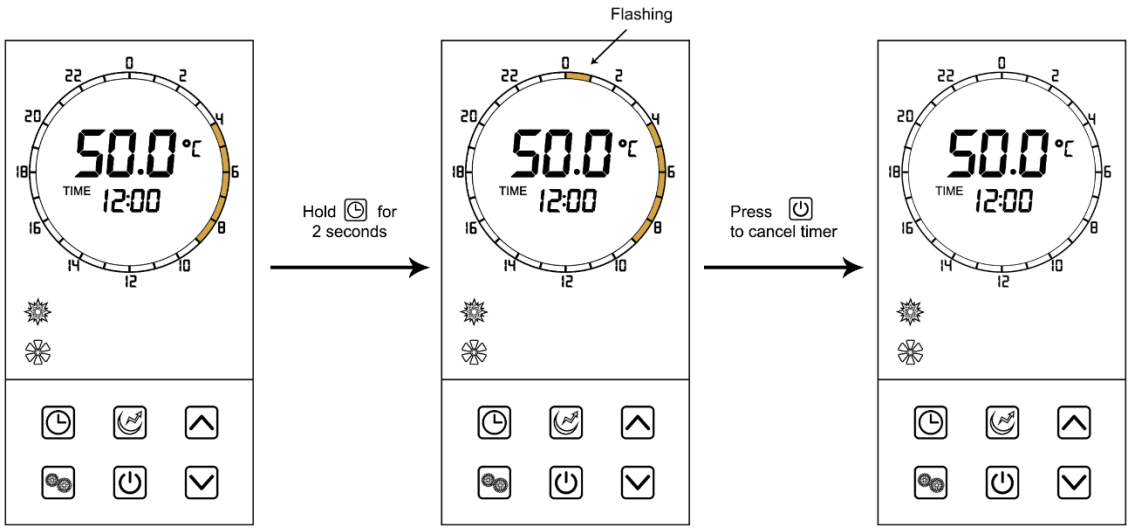
Example: Setting the unit to run from 7-11am & 4pm-6pm using Touch mode.



5.2.7 Cancelling the Timer

To cancel a timer once it has been set, hold down the CLOCK button for 2 seconds until the timer display begins flashing (as you would set the timer).

Press the POWER button while the timer is flashing to cancel it. The yellow timing periods will disappear when the timer has been cancelled.



5.2.8 Vacation Mode

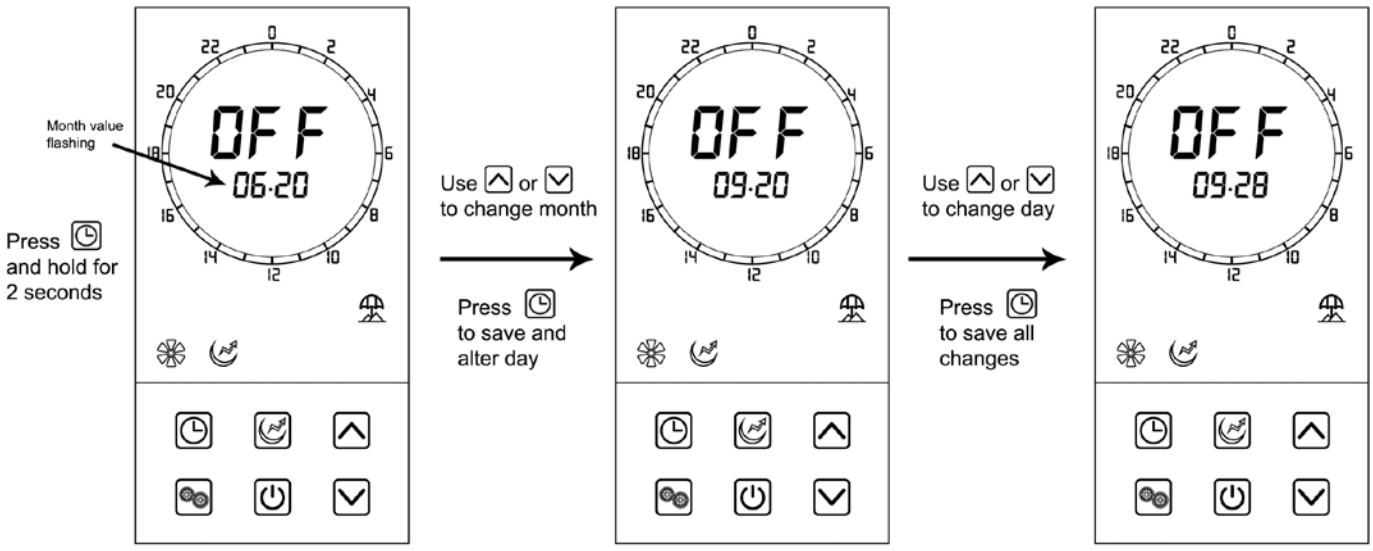
Ensure the unit is '**OFF**' before setting vacation mode. The date you set in this mode will determine what date the unit starts back up.

After selecting vacation mode, press and hold for 2 seconds, the 'month' value will begin to flash in the display area. Press the UP or DOWN arrows to display the desired month, then press to confirm and move to altering the 'day' value.

The 'day' value will flash when it is selected, use the arrow keys to select your desired start day, then press to save all changes and exit back to the main interface.

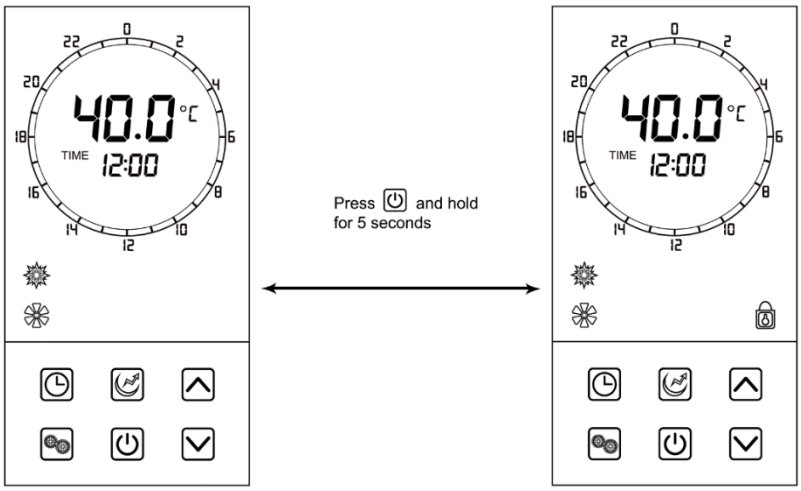
Note: Format is mm/dd

Example: The unit will start up on September the 28th.



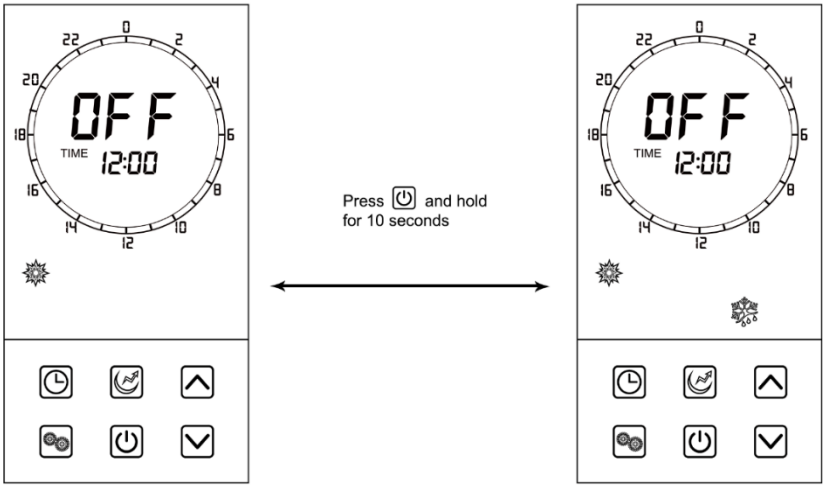
5.2.9 Keyboard Locking

Press and hold for 5s to lock the keyboard. To unlock, press and hold for 5s again.



5.2.10 Force Defrosting

In the shutdown state, press for 10 seconds to enable the forced defrosting function. The defrosting symbol will light up. Press for 10 seconds again to exit the forced defrosting function.

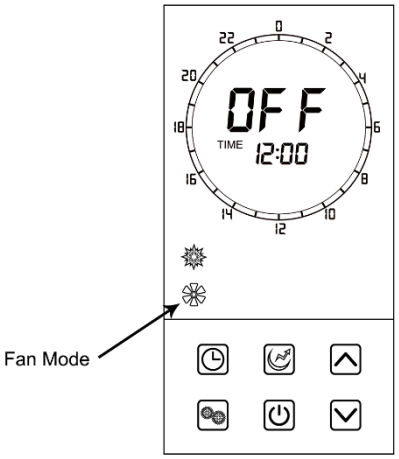


5.2.11 Fan/Ventilation Function

The fan speed ***(High Speed, Low Speed or Off)*** can be controlled by the fan mode on the controller.
Note: when the compressor is on, the fan will always run at high speed.

When the parameter HO2 is set to 1, press the for 2s.

Once you hear a beep you can set the ventilation mode. Press for 2s, this will change the fan speed. Continue to press for 2s until you reach your preferred speed.



<u>Fan mode symbols:</u>

High Speed

Low speed

Fan icon disappears: off

Note: When H02 is set to 0, there is no ventilation function.

6. Troubleshooting

6.1 Parameters Explained

No.	Meaning	Range	Default value	Details
Hardware parameters				
/01	The usage of the O05 port	0/2	0	0-Low speed / 2-Solar water pump
/02	High temperature disinfection target temperature	0/2/3	0	0-No output / 2-Solar water pump / 3- Solar drain valve
Defrost parameters				
D01	Heating enter defrosting coil temp value	-30~0	-3	
D02	Heating exit defrosting coil temp value	0~30	13	
D03	Heating defrost cycle	30~90min	45min	
D04	Heating the maximum defrosting time	1~20min	8min	
D05	Heating the minimum defrosting time	0~D04	3min	
D06	Heating the minimum defrosting time	0~2	0	0-Standard / 1-Economic / 2-Intelligent
D07	Intelligent defrost temperature conversion point	-10~20	4	
High temperature disinfection parameters				
G01	High temperature disinfection target temp	30~70	60	
G02	High temperature disinfection running time	0~90min	0min	When G02= 0, no high temperature disinfection function
G03	High temperature disinfection startup time	0~23H	0h	
G04	High temperature disinfection cycle	7~99Days	7	
EEV parameters				
E01	EEV adjustment mode	0/1	1	0- Manual / 1- Auto
E02	EEV target overheat temp	- 20~20	5	
E03	EEV initial steps	0~500	240	
E04	EEV minimum steps	0~500	80	
E05	Defrosting EEV steps	0~500	480	
System parameters				
H01	Whether enable the power down memory function	0/1	1	0-No / 1-Yes
H03	Heat source mode	0	0	
H07	Fahrenheit / Celsius	0/1	0	0-Celsius / 1-Fahrenheit
H30	Unit address	4(1~255)	0	
H31	Remote control mode	0/1	0	0-Centralized control / 1-DTU&WIFI
H32	Status parameter feedback to cloud cycle	1~255min	0	
H98	Type of unit parameter	2/3	0	2-0*08 / 3-0*18
H99	Main display temp showing adjustment	0/1	0	0-No / 1-Yes
Solar water pump parameters				
N01	Which temp sensor used for controlling the solar water pump	0/1	0	0-Water tank bottom temp sensor 1-Water tank top temp sensor
N02	The maximum running time of the solar water pump	1~30min	15min	
N03	The solar water pump startup return difference	0~20	5	
N04	Whether enable the night cooling mode	0/1	0	0-No / 1-Yes
N05	Cooling function startup time	0~23h	0h	
N06	Cooling function shutdown time	0~23h	6h	
N07	Night cooling startup temp	40~90	70	
N08	Night cooling shutdown temp	1~40	10	
N09	Solar drain valve temp setting value	50~90	68	
N10	Solar water pump shutdown temp setting value	50~90		
N11	Whether enable the independent solar control function	0 / 1	0	0-Disable / 1-Enable

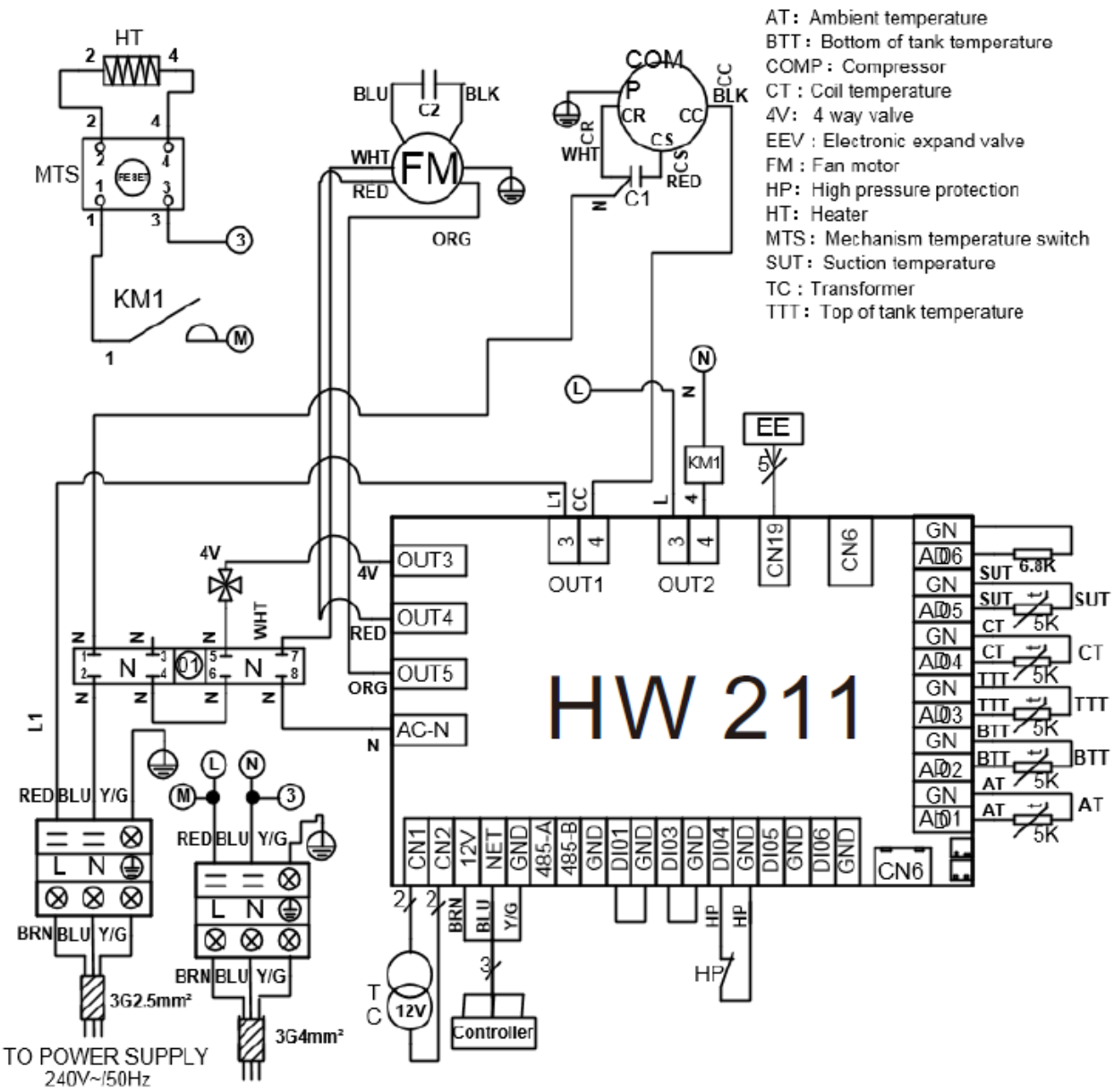
Temperature parameters				
R01	Hot water target temp setting value	38~75	55	
R03	Heating, the lower temp return difference setting value	1~20	5	
R04	Whether enable the electric heater independent setting value	0 / 1	0	0-Disable / 1-Enable
R05	Electric heating temp setting value	30~90	55	
R06	Electric heat startup delay	0~450min	200min	
R07	Whether the electric heater replace the compressor	0 / 1	1	0-No / 1-Yes
R08	Electric heater replace the compressor ambient temp	-20~10	-5	
R09	Electric heater zero delay startup ambient temp	0~30	5	
R10	Electric heater delay startup ambient temp	10~40	25	
R12	The compressor force to shutdown temp	-30~-5	-15	
R14	Replacement value of external heat source target temperature	10~60	45	
R15	The compressor limit temp under high ambient temp	55~80	78	
R17	Whether enable the top temp sensor for controlling the compressor startup	0 / 1	0	0-Disable / 1-Enable
R18	Heating, the top temp return difference setting value	1~20	1	
R19	The compressor shutdown ambient temp 1	30~90	65	
R20	The compressor shutdown ambient temp 2	30~90	55	
Timing parameters				
L01	Whether enable the vacation mode	0 / 1	0	0-Disable / 1-Enable
L02	The vacation mode: Year	0~99Y	0	
L03	The vacation mode: Month	0~12M	0	
L04	The vacation mode: Day	0~31D	0	
L05	Whether enable the timing on/off function	0 / 1	0	0-Disable / 1-Enable
L06	Timing on period 1: Hour	0~23h	0	
L07	Timing on period 1: Minute	0~59min	0	
L08	Timing off period 1: Hour	0~23h	0	
L09	Timing off period 1: Minute	0~59min	0	
L10	Timing on period 2: Hour	0~23h	0	
L11	Timing on period 2: Minute	0~59min	0	
L12	Timing off period 2: Hour	0~23h	0	
L13	Timing off period 2: Minute	0~59min	0	
Switch status parameters				
S01	Remote on/off switch	CL / OP	Close	
S03	Low pressure protection switch	CL / OP	Close	
S04	High pressure protection switch	CL / OP	Close	
S05	Time-lapse signal switch	CL / OP	Open	
S06	External setting switch	CL / OP	Open	
Temperature status parameters				
T01	Ambient temp	-30~93	/	
T02	Water tank bottom temp	-30~93	/	
T03	Water tank top temp	-30~93	/	
T04	Coil temp	-30~93	/	
T05	Suction temp	-30~93	/	
T06	Solar control temp	-30~93	/	
T10	App/wire controller display temp	-30~93	/	
T20	Enter parameter over-range protection times	0~65535	/	
T21	Memory chip EEPROM storage times	0~30000	/	

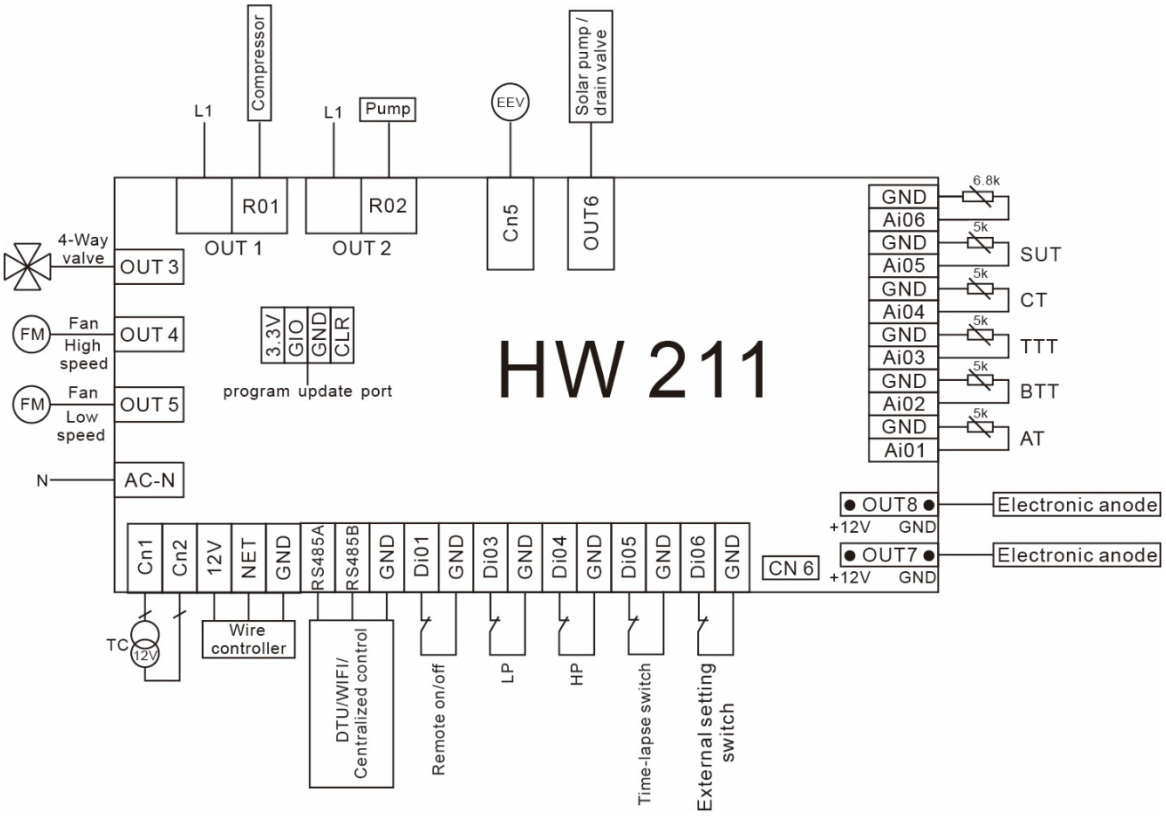
6.2 Error Codes

Malfunction	Display	Cause	Solution
Bottom water temp. sensor failure	P01	1. Check connection between the sensor to the PC board. 2. Check the resistance of the sensor, if the resistance is greater than 500k or less than 100 this means the sensor is broken and will need to be replaced.	
Top tank water temp. sensor failure	P02		
Ambient temp. sensor failure	P04		
Coil temp. sensor failure	P05		
Suction temp. sensor failure	P07		
Solar control temp. sensor failure	P034		
High pressure protection	E01	1. Check if the inlet/outlet water temp. difference is too high 2. Check the water flow 3. The target temp. setting needs to be reduced if it is too high 4. Check the high-pressure switch. If the switch is open when the connection is closed, replace it.	
Low pressure protection	E02	1. Check if the system is leaking 2. Check the low pressure switch 3. Ensure the installation location allows for heat dissipation 4. Check the fan motor 5. Ensure the throttling device is not stuck 6. If all above are as normal, replace the PC board	
Communication failure	E08	1. Check the connection between the wired controller and PC board 2. Replace the wire controller 3. Replace the PC board	
Anti-freeze protection in winter	E09	1. Check that the high and low pressure switches are working normally 2. Check both the water tank lower temp. sensor & ambient temp. sensor to see if they are working normally 3. See if the lower temperature of the tank is lower than 10, and the ambient temp is lower than 0 degrees.	

7. Appendix

7.1 Wiring Diagram & PCB Board



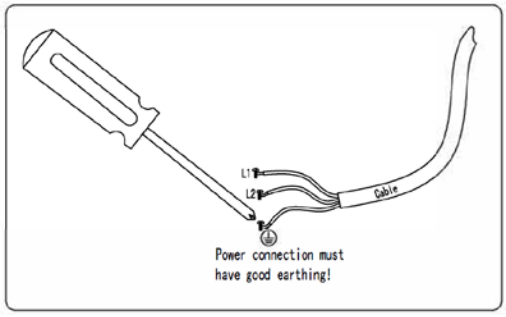


Interface No	Name	Terminal No.	Function
O01	Compressor	OUT1	Control compressor on/off output
O02	Electric heater	OUT2	Control electric heater on/off output
O03	Four way valve	OUT3	Four way valve relay control output port
O04	Fan motor high speed	OUT4	Control fan motor high speed output
O05	Fan motor low speed	OUT5	Control fan motor low speed output
O06	Solar drain valve	OUT6	solar drain valve relay control output port
O10	Electronic anode	OUT7	Control the electronic anode output
O11	Electronic anode	OUT8	Control the electronic anode output
S01	Remote on/off	DI 01	Remote control the unit on/off
S03	Low pressure switch	DI 03	System protection,system high pressure alarm
S04	High pressure switch	DI 04	System protection,system low pressure alarm
S05	Time-lapse switch	DI 05	For testing use
S06	External setting switch	DI 06	Reserved
T01	Ambient temperature	AI 01	Detect the ambient temp
T02	Water tank bottom temperature	AI 02	Detect the water tank bottom temp
T03	Water tank top temperature	AI 03	Detect the water tank top temp
T04	Coil temperature	AI 04	Detect the coil temp
T05	Suction temperature	AI 05	Detect the suction temp
T06	Solar temperature	AI 06	Detect the solar temp
	Wire controller	(V NE G)	Connection between wire controller and PCB board
	DTU/WIFI/ Centralized control	(A B G)	Connect with DTU /Wifi /Centralized control
	Electronic expansion valve	CN 5	Connect with electronic expansion valve

7.2 Exploded Parts View

No.	Material Code	Material name	Specification
1	40000-240061	Bottom foam	Foam Φ542 white
2	38000-220079	Nozzle Decorative Cover	Positioning of 38 High 28 PE Tube Head
3	20000-220165	02 Electric Heating Covers	Round 130*37 Flame Retardant ABS+PC Grey (RAL7001)
4	80500016	Electric heating tube	4.8kW 240V G1 "Stainless Steel External Thread
5	38000-220079	Nozzle Decorative Cover	Positioning of 38 High 28 PE Tube Head
6	40000-220060	05 Electric Heating Covers	Runway-shaped 200 x 140 x 35.5 Flame Retardant PC 940A-116 Grey (RAL7001)
7	20000-130193	P&T valve	PTR20 R3/4"*Rp3/4"internal and external threaded brass
8	83400054	Foam guide ring	450 * 450 * 183 smooth black EPP foam
9	80704838	Fan Fixed Plate	Galvanized sheet 1.0 Black finish 9005
10	38000-270001	Motor blade	364*115 Axial Flow Fan Motor
11	20000-330443	Alternating current dynamo	YDK40-6N
12	80702659	Motor bracket	Galvanized sheet 1.2 Black finish 9005
13	80900421	KP cover	640*22 ABS Black Gloss 9005 Plastic Absorption
14	80708081	KP Top Cover	Galvanized sheet 0.8 gray-white matte 9006
15	80704839	Fan top cover	Galvanized sheet 1.0 Black finish 9005
16	80704842	Front Aluminum Alloy Plate	Aluminum alloy plate 1.8 length 1860 width 200
17	80600553	Finned heat exchanger	473 x 546 x 7 x 5 piece spacing 1.6
18	80100110	Compressor and its accessories	WHP06000BSX-C8DU
19	20000-140456	Electronic expansion valve	DPF(TS1)1.65C-07
20	38004-220020	640 water pan	Φ640ABS Black (RAL9011) Injection Molding
21	20000-360051	Mechanical Temperature Controller for Water Tank	KSD301C C-207R 85 C 45A (RoHS)
22	72200315	Wire controller	
23	80708083	Electrical Box Covers	DX51D+Z80 t0.8 black 9005
24	70201187	Electrical Box	
25	20000-260028	Water tank foot	Horseshoe-shaped 140 x 63 x 16.5 black rubber belt groove
26	2000-1445	Filter	Φ9.7-Φ6.5(Φ19) T2Y2
27	40000-210372	640 floor	Galvanized sheet 650 x 650 x 1.2 (shear angle)
28	20000-210293	Front panel connection plate	Galvanized sheet 1.0 sliver gray finish 9007
29	80600882	Tank liner 315L	Φ542 enamel water tank G1 screw heating 4.8kw Thickness 2.5 End Cover Thickness 3.0
30	80708079	Galvanized Shell	Φ640 x 1633 x 0.5 gray-white matte 9006

7.3 Earthing Methodology



7.4 Use of the P&T Valve

The P&T valve is used to prevent the temperature or pressure becoming too high inside the tank. When the temperature or pressure reaches the set value, the valve will open automatically so as to force the pressure or temperature to decrease.

The handle of the safety valve should be tested once every six months so as to remove the calcium carbonate deposits and guarantee there is no blockage in the device. Take care to avoid burns for the temperature of the discharging water is very high.

Vent pipes should be thermally insulated to prevent safety risks caused by freezing pipes in winter.

P&T Valve model: PTR-20. Action temperature: 99°C, action pressure: 0.85MPa

Note: Failure to operate the relief valve easing gear at least once every six months way result in the water heater exploding. Continuous leakage of water from the valve may indicate a problem with the water heater.

7.5 Using the Overheating Protector

The operation of the thermal cut-out indicates a possibly dangerous situation. Do not reset the thermal cut-out until the water heater has been serviced by a qualified technician. The overheating protector is used to turn the power off, preventing the water being heated too hot. To return the unit to its normal operational status it will have to be reset manually. Please contact EvoHeat for a service if this occurs.

loosen the screws and open the cover

Press the red button to reset

OPERATION DETAILS

To access the overheat protector the front dark grey controller panel must be removed.

Remove the 3 screws on the front panel and push the front cover upwards.

Then remove the screws covering the overheat protector panel as below:

7.6 Draining the Water Tank

1. Cut out the water supply connection between the tap water supply and the tank by closing the corresponding valve.

2. Open the hot water outlet and open the drain outlet valve at the same time.

3. The water in the tank will be drained out through the drain outlet.

CAUTION: THE WATER FROM THE HOT WATER TAP AND THE DRAIN PLUG MAY BE HOT. BE CAREFUL OF BURNS AND SCALDS. WEAR PROTECTIVE CLOTHING

8. Maintenance

Your Evo315-C will operate most efficiently if regularly inspected as part of your home maintenance schedule.

MINOR ANNUAL MAINTENANCE

It is recommended that the minor maintenance be performed every 12 months by the dwelling occupant.
The minor maintenance includes:

- Operate the easing lever on the temperature pressure relief valve. It is very important you raise and lower the lever gently. Exercise care to avoid any splashing of water, as water discharged from the drain line will be hot. Stand clear of the drain lines point of discharge when operating the valve's lever.
- Operate the easing level on the expansion control valve (if fitted). It is very important you raise and lower the lever gently.
- Conduct a visual inspection of all plumbing and electrical connections.
- Check the condensate drain line to ensure it is not blocked.
- Check that air vents are not blocked or obstructed, and if necessary clean with a damp cloth or air blower.
- Conduct a general external clean of the unit with a damp cloth.

MAJOR FIVE YEAR SERVICE

It is recommended a major five (5) year service be conducted on the Evo315-C.
Warning: Servicing of a water heater must only be carried out by qualified EvoHeat personnel. Phone EvoHeat Service on 1300 859 933 for our closest Accredited Service Agent.

Note: The five-year service and routine replacement of any components such as the anode and relief valve(s) are not included in the EvoHeat warranty. Only genuine replacement parts should be used on this water heater.

The major service includes the following actions:

- Replace the temperature limiting valve.
- Replace the temperature pressure relief valve.
- Inspect the anode and if required, replace the anode. If the anode is not replaced, it should be replaced within three years of this service.
- Check the heating cycle of the unit.
- Visually check the unit for any potential problems.
- Inspect the plumbing and electrical all connections.
- Check the condensate on drain line to ensure it is not blocked.

Note: The water heater may need to be drained during this service. After the completion of the service, the water heater will take some time to reheat the water. Depending upon the power supply connect on, hot water may not be available until the next day.

9. Warranty

Please refer to the EvoHeat website for warranty details

- Australia: www.evoheat.com.au
- South East Asia: www.evoheat.com.sg

1. Warranty terms are from date of purchase.

2. This warranty excludes any defect or injury caused by or resulting from misuse, abuse, neglect, accidental damage, improper voltage, vermin infestation, incompetent installation, any fault not attributable to faulty manufacture or parts, any modifications which affect the reliability or performance of the unit.

3. This warranty does not cover the following:

    a. Natural Disasters (hail, lightening, flood, fire etc.)
    b. Rust or damage to paintwork caused by a corrosive atmosphere
    c. When serviced by an unauthorized person without the permission of Evo Industries
    d. When a unit is installed by an unqualified person
    e. Where a unit is incorrectly installed
    f. When failure occurs due to improper or faulty installation
    g. Failure due to improper maintenance (refer Operating Instructions)
    h. 'No Fault Found' service calls where the perceived problem is explained within the
    i. Costs associated with delivery, handling, freighting, or damage to the product in transit.

4. If warranty service is required you should:

    a. contact Evo Industries Australia on 1300 859 933 or via our Contact page on our web site
    b. provide a copy of your receipt as proof of purchase
    c. have completed the online warranty registration or provide a completed warranty card.

5. Onsite technical service is available within the normal operating area of your Evo Industries authorized Service Centre. Service outside this area will incur a traveling fee.

6. Unless otherwise specified to the purchaser, the benefits conferred by this express warranty and additional to all other conditions, warranties, rights and remedies expressed or implied by the Trade Practices Act 1974 and similar consumer protection provisions contained in legislation of the States and Territories and all other obligations and liabilities on the part of the manufacturer or supplier and nothing contained herein shall restrict or modify such rights, remedies, obligations or liabilities.

Warranty Registration

EvoHeat highly recommend customers to complete their warranty details online to ensure efficient warranty claim processing.

To register your warranty, scan our QR Code or head to our website and fill in the Warranty Registration Form: https://evoheat.com.au/warranty-registration/