EVO HEAT

www.evoheat.com.au

HOT H_2O TECHNOLOGY

EVO 270 MANUAL

Installation & Operation

Read this manual carefully before installing or operating this unit

Contents

1. Preface

This manual includes all the necessary information regarding the installation, operation and maintenance of the Evo 270. Please take the time to read and understand the contents of the manual before operating and installing the unit.

The EVO 270 is the next evolution in water heating, with advanced energy efficiency technologies and built in smart features to ensure you're provided with clean, safe, and economical hot water all year round. Unlike traditional hot water systems that use 1kW of energy to produce 1kW of heat, the EVO 270 utilises that very same 1kW of energy and heat pump technology to generate 4kW of heat – saving you up to 75% of your hot water costs!

- When installing the Evo 270, 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. Safety Precautions

To prevent personal injury and avoid causing damage to the unit, be sure to read the information documented below.

Icon	Meaning
WARNING	Failure to pay attention to this may lead to serious injury or death.
ATTENTION	Failure to pay attention to this may lead to injury or loss of material.

Icon	Meaning
	Prohibited (Next to this icon)
	Compulsory - The listed action must be implemented.
	Please pay attention to what is indicated.

Professional installer required	The heat pump must be installed by qualified persons. Improper installation could result in electrical shock /water leakage or fire.
Earthing is required	Please ensure that the unit and power connections have a good earth. Failure to do this may cause electrical shock.
Check drainage fittings	Before installation, make sure there are no leaks on the plumbing and drainage fittings.

Installation position	The unit MUST NOT be installed near flammable gas.
Fixing the unit	Ensure that the base you are installing on is level and stable.
Circuit breaker required	This unit requires a circuit breaker. failure to do so could result in an electrical shock or fire.

 Prohibited	Do not put fingers or any other objects into the fan. Children should be kept clear of this appliance.
 Shut off the power	In the event of a unit malfunction please shut the power off and contact your service engineer.

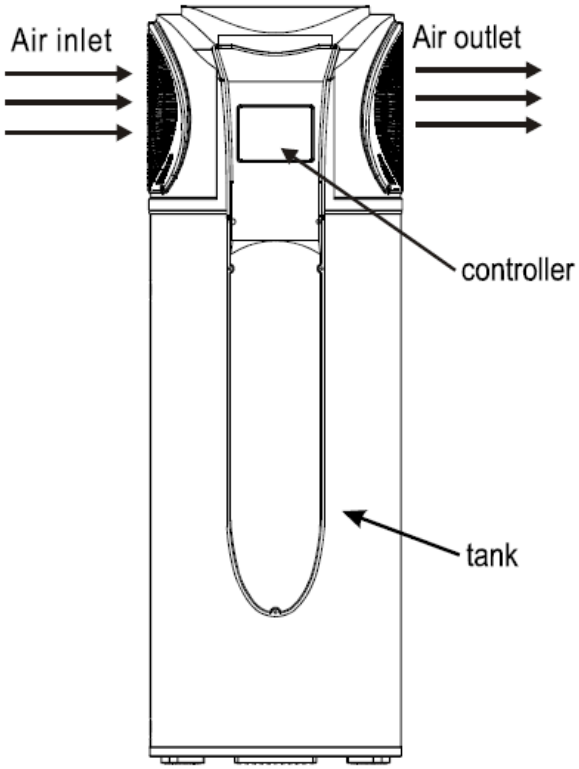
 Important	If the heat pump needs to be relocated or installed again, only use an authorised dealer or qualified persons.
 Prohibited	It is prohibited for the end user to repair the unit . Failure to use a qualified technician may lead to serious injury and/or damage to the unit.
 Important	Should the heat pump need to be repaired, only use an authorised dealer or qualified technician.

 Shut off the power	Turn the power off before cleaning the unit.
 Prohibited	Do not spay flammable aerosols onto the unit, as this could result in a fire.

 Usage warning	Danger - High temperature water and hot fittings. Do not touch. Setting the water temperature too high can cause burns and scalds. Do not attempt to repair yourself - contact Evoheat for advice.

3. Specifications

3.1 Appearance



Picture 1

3.2 Characteristics

Smart and Efficient

The operational costs can be up to 75% less than that of an electric water heater, and can be installed in locations which are unsuitable for solar hot water heating.

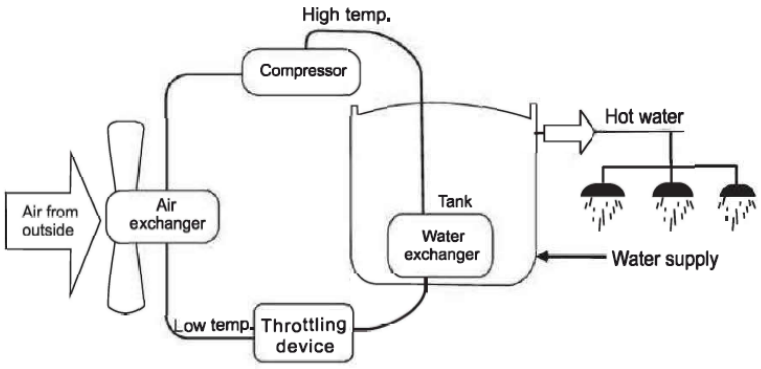
Safe and Environmentally Friendly

Produce no harmful gases along with no open flames, making the unit safe to work with when installing.

Easy to Operate

Featuring an easy to use timer for both start and stop operations, with a controller to set the desired water temperature.

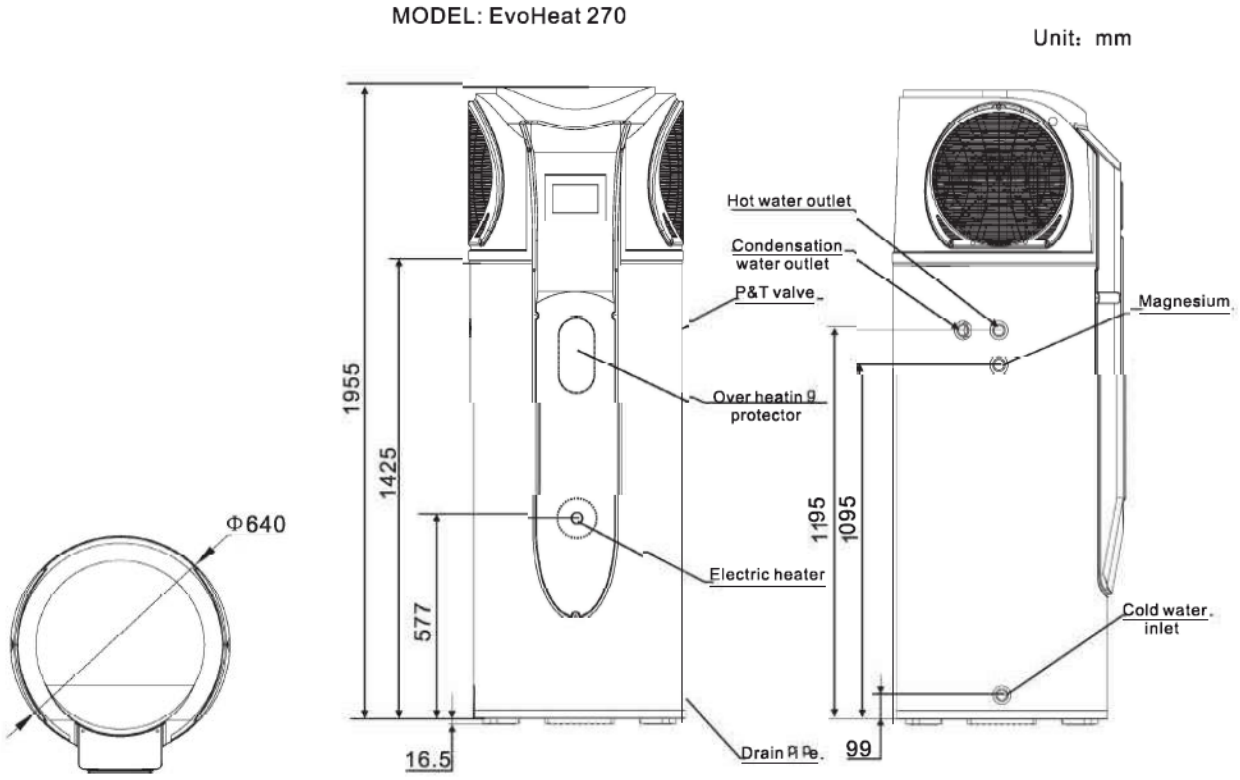
3.3 Operational Principle



System Principle:

- 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.
- Then 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, and then it goes into the compressor again.
- The cooled surrounding air could be blown to rooms which need fresh, cooled air.

3.4 Dimensions



3.5 Technical Data

Model		Evo 270
Heating capacity	kW	3.4 Heat Pump
Water tank capacity		270
Power input	kW	0.94 Heat Pump
Running current	A	3.92 Heat Pump + 6.5 Hydroboost
Power Supply		240V~/50Hz
Compressor Number		1
Compressor		Rotary
Rated outlet water temp.	Deg C	55
Air Volume	m^3/h	450
Noise	dB(A)	49
Water inlet/outlet size	inch	¾
*Hydroboost power heat	kW	1.5
Net dimensions	mm	See the drawing
Shipping Dimensions	mm	720x760x2040
Net Weight	kg	135
Shipping weight	kg	175

Measurement conditions:
Instant heating: Ambient temperature 15DB/13WB, Water inlet 15 Water outlet 45

Working Temp Range

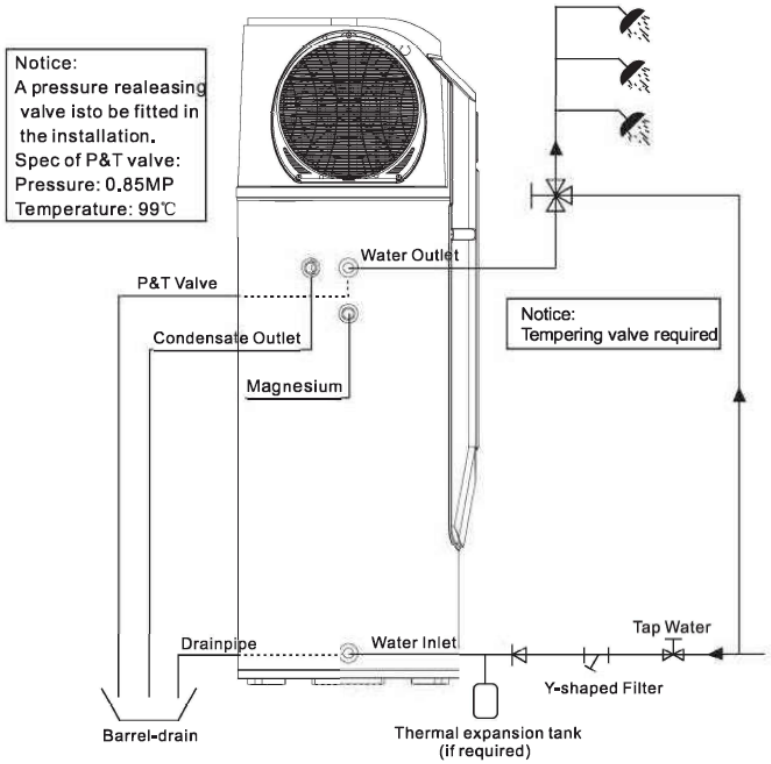
1) Ambient temperature is -7deg to 43deg (Heat Pump)
2) The max temperature of water tank is 70

Operating parameters

The range of the operating water pressures: 0.15~0.7MPa

4. Installation

4.1 Pipeline Connection Sketch



Pipeline connection explanation

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.

4.2 Handling and Transportation

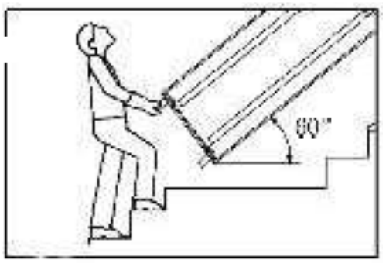
As a rule, the unit should be stored and/or transported in its shipping container in an upright position and without water charge. For transport over short distances, and provided due care is exercised, an inclination angle of up to 30 degrees is permitted. During transport and storage, ambient temperatures of -10 to +60degrees celcius are permissible.

4.2.1 Transport Using a Forklift

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.

4.2.2 Manual Transport

For the manual transport, the wooden pallet can be used for the bottom part. Using ropes of 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.



Picture 5

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

4.3 Recommended Household Size

The below recommendations are based on heat pump only mode.

Higher occupancy levels are able to be achieved with the Hydroboost heater activated.

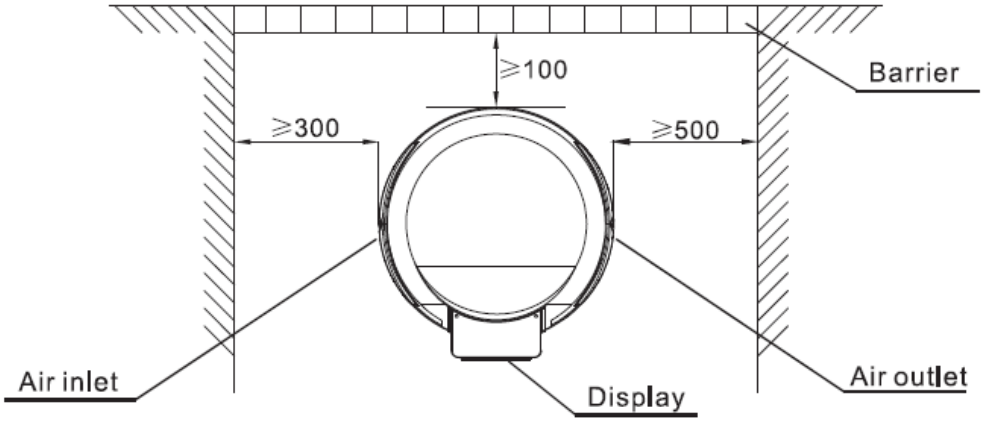
Household Size	Model
Up to 6 People	Evo 270

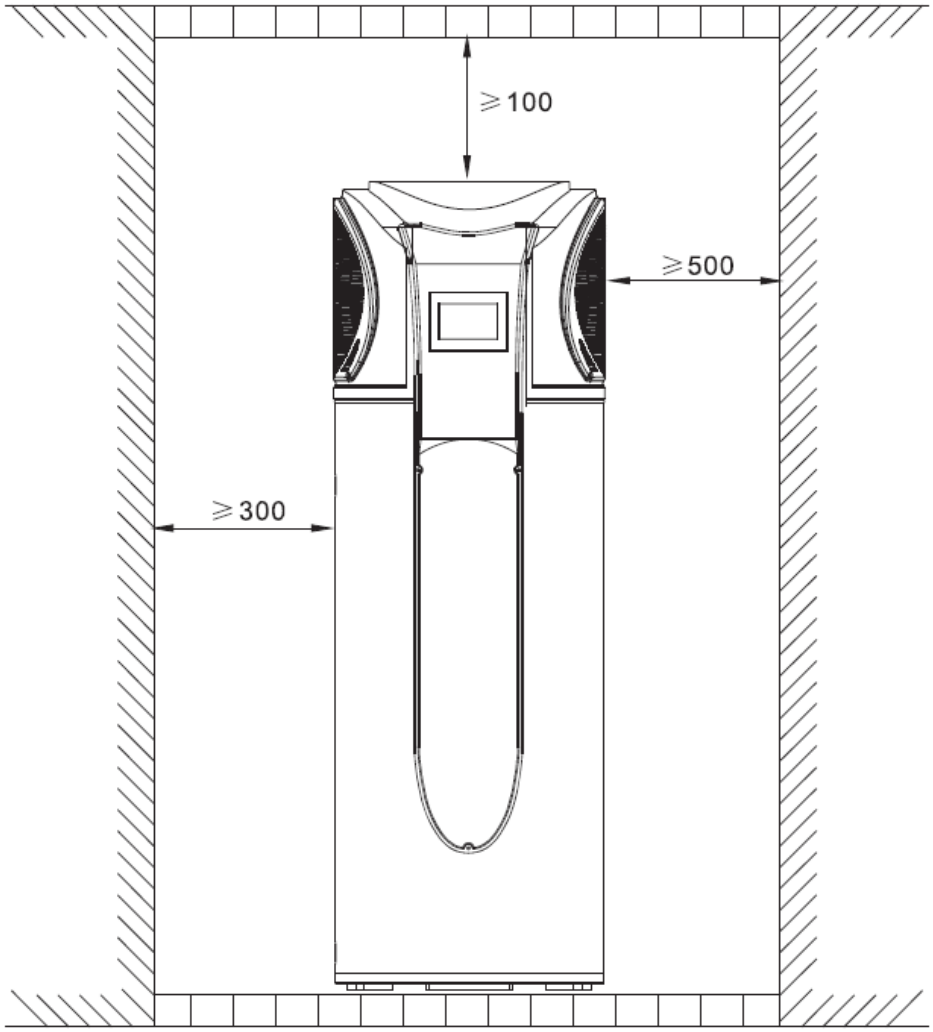
Notice: High usage of hot water and other factors could affect this recommendation. Please consult your supplier if you have special requirements.

4.4 Installation Clearances

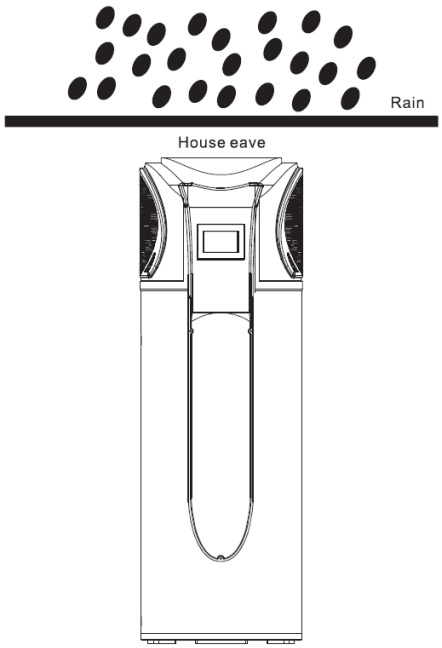
Before installation, ensure that you leave the space as shown for maintenance.

Unit:mm





The Evo 270 is designed for external installation; however if possible, installing the system under the house eave 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 drain pipe 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 drain pipe 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 Evo 270 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

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 25m3 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 EVO 270
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 EVO 270
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.

4.5 Cable Connection

The power cable is stored in the back of the unit, its for power supply of the unit. The spec of the cable is AWG12.

The unit required an isolating switch as required by local laws.

If the power cord is damaged, it must be replaced by a qualified electrician.

4.5.1 Filling the Tank

Open a hot water tap inside the house

Open the cold-water inlet valve into the Evo 270 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 Trial Operation

4.6.1 Inspection Before Trial Operation

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

- Drain pipes
- 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.

4.6.2 Trial Operation

Switch on the unit using the controller.

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

The parameters have been pre-set to a temperature off 55 degrees. Check that the unit is operating by looking for an increase in water temperature over time.

5. Operation

HEATING CAPACITY
In low ambient conditions the heating output decreases.

3 MIN SAFETY PROTECT
If the unit stops and you restart the unit or turn it on manually, the unit will not start to run again for approximately 3 minutes. This is a protection feature to safe guard the compressor.

DEFROSTING
In heating mode the unit will defrost automatically, maximising the heating efficiency (lasting 2-10 minutes). The fan motor will stop running whilst the unit is defrosting.

WORKING CONDITIONS
In order to use the unit correctly, please run the unit at enviornemtn temperatre -7 → -43 →

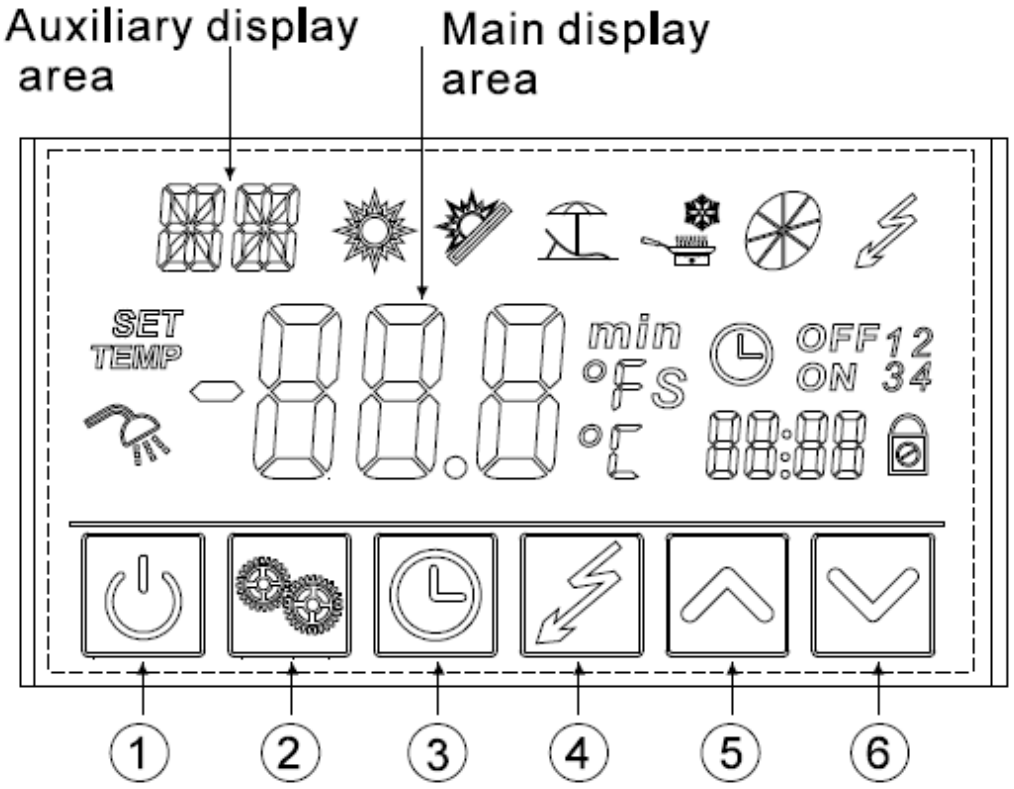
The unit includes sophisticated electronic devices, do nut use water from a lake, untreated river water, groundwater and other unsafe water sources!

OVERHEATING PROTECTION
When the water temperature reaches 75°C, the power of the unit will be cut and must be manually reset.

WATER TEMPERATURE OR PRESSURE PROTECTION
A P&T valve MUST be installed in the tank. When the tahnk pressure reaches 0.85MPa or when the tank temperature reaches 93°C, the P&T valve will open automatically so as to reduce the pressure or temperature decrease.

SANITECH HIGH TEMP SANITIZATION
The Evo 270 is fitted with Sanitech. The Sanitech system will heat the tank water to 70°C for one 30 minute period every week at midnight. Please be aware of very high temperature water outlet at this time.

5.1 Controller Button Descriptions



NO.	Button	Name	Function
①		ON/OFF	Turn on/off the unit.
②		Mode	Switch unit running modes or save setting parameters.
③		Clock	Set the clock or the timer.
④		Electric Heater	Turn on/off the electric heater or switch fan modes.
⑤		Up	Move up or increase parameter values.
⑥		Down	Move down or decrease parameter values.

5.2 Icon Descriptions

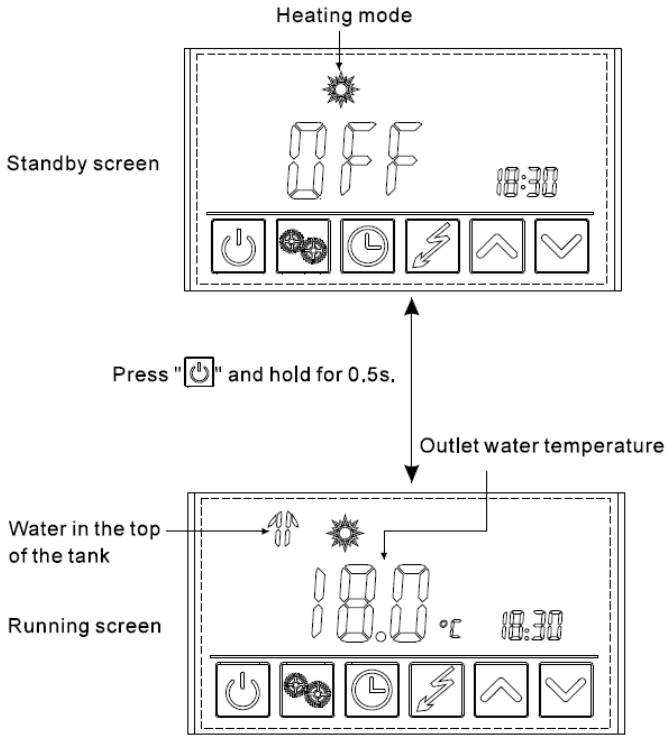
Status icon	Name	What it means
	Heating	Shows that the unit is in heating mode.
	heating.Eco	Shows that the unit is in eco.heating mode.
	Vacation	Shows that the unit is in vacation mode.
	Cooling	Shows that the unit is in cooling mode.
	Fan	Shows that the fan is on and the speed of the fan.
	Hydroboost heater	Shows that the Hydroboost electric heater is on.
	Set temperature achieved	Shows that the water temperature has reached the target point and the unit shut off automatically.
SET	Parameter setting	Shows that the parameter is adjustable.
TEMP	Temperature	Shows that the temperature is non-adjustable (measured value).
ON	Timer & ON	Shows that the unit will be turned on by the timer automatically.
OFF	Timer & OFF	Shows that the unit will be turned off by the timer automatically.
min	Minute	Shows that the main display area displays the minute.
S	Second	Shows that the main display area displays the second.
℃	Centigrade	Shows that the temperature in Main display area or Auxiliary display area is in celcius.
℉	Fahrenheit	Shows that the temperature in Main display area or Auxiliary display area is in farenheight.
	Lock	Shows that the keyboard is locked.

5.3 Turning the Unit ON and OFF

Press "⏻" and hold for 0.5s in the standby screen of the wire controller to turn on the unit. The main display now shows the water outlet temperature.

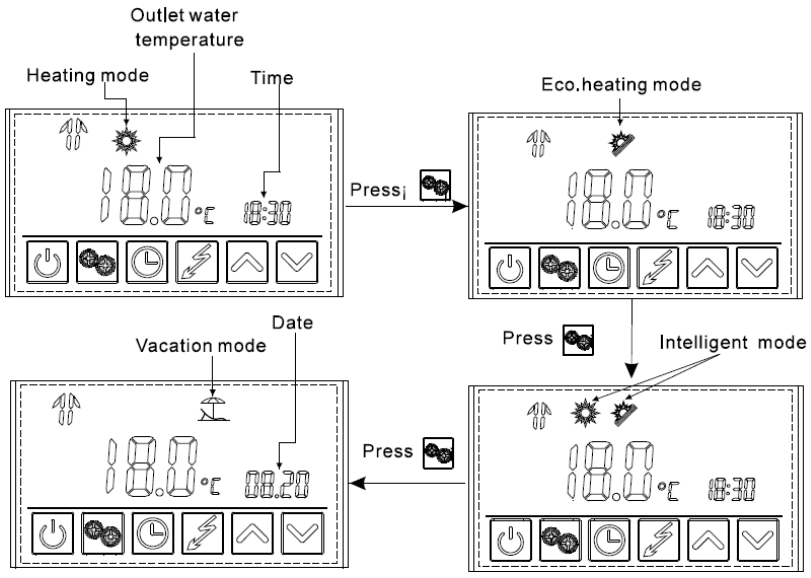
Press "⏻" and hold for 0.5s in the running screen of the wire controller to turn off the unit. The main display now shows OFF.

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



5.4 Mode Selection

Press " " to select the mode from Heating ,Eco.heating ,Intelligent , Vacation in standby or running



Mode Descriptions

Eco Mode

This mode does not use the Hydropower element boost and is the most economical mode. Start with this mode initially and if you encounter water which is cold or warm switch to Intelligent mode.

Intelligent Mode

This mode analyses ambient temperature at 10am each day and decides the best operating mode from Eco or Heating.

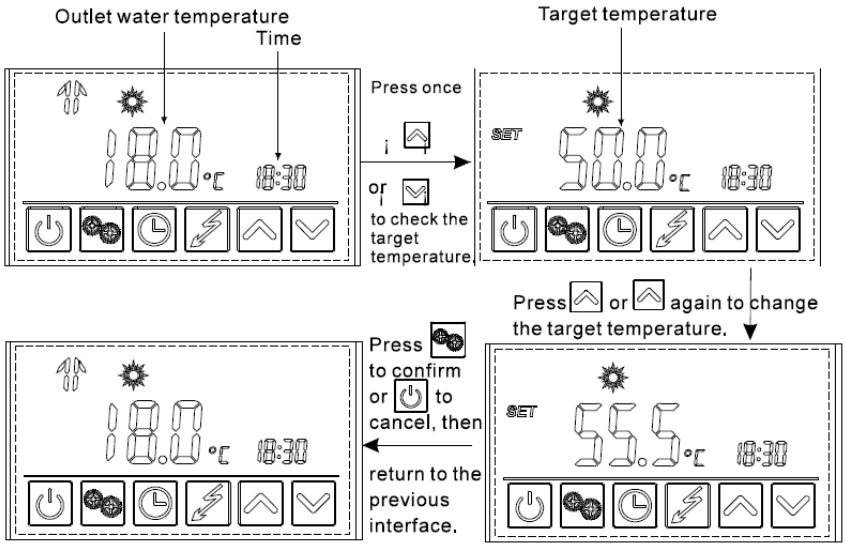
Heating Mode

This mode uses the heat pump as the main heat source. The Hydroboost starts after a 40min delay to give high recovery rates. Use this mode if you have very high hot water usage. The Hydroboost start times and temps are all fully customisable.

You can also manually switch on the Hydroboost element at any time by pressing the Hydroboost button on the controller.
Setting the timer to allow the unit to run for longer periods will also help to ensure you never run out of hot water.

5.5 Target Temperature Checking and 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 the changes to the parameter, press "●" to confirm or "⏻" to cancel the changes, then return to the previous interface. If no operations are performed on the keypad for 5s, the controller exits the parameter modification menu by timeout and the changes are confirmed.
Example: Change the target temperature from 50deg to 55.5deg when the actual outlet water temperature is 18deg.

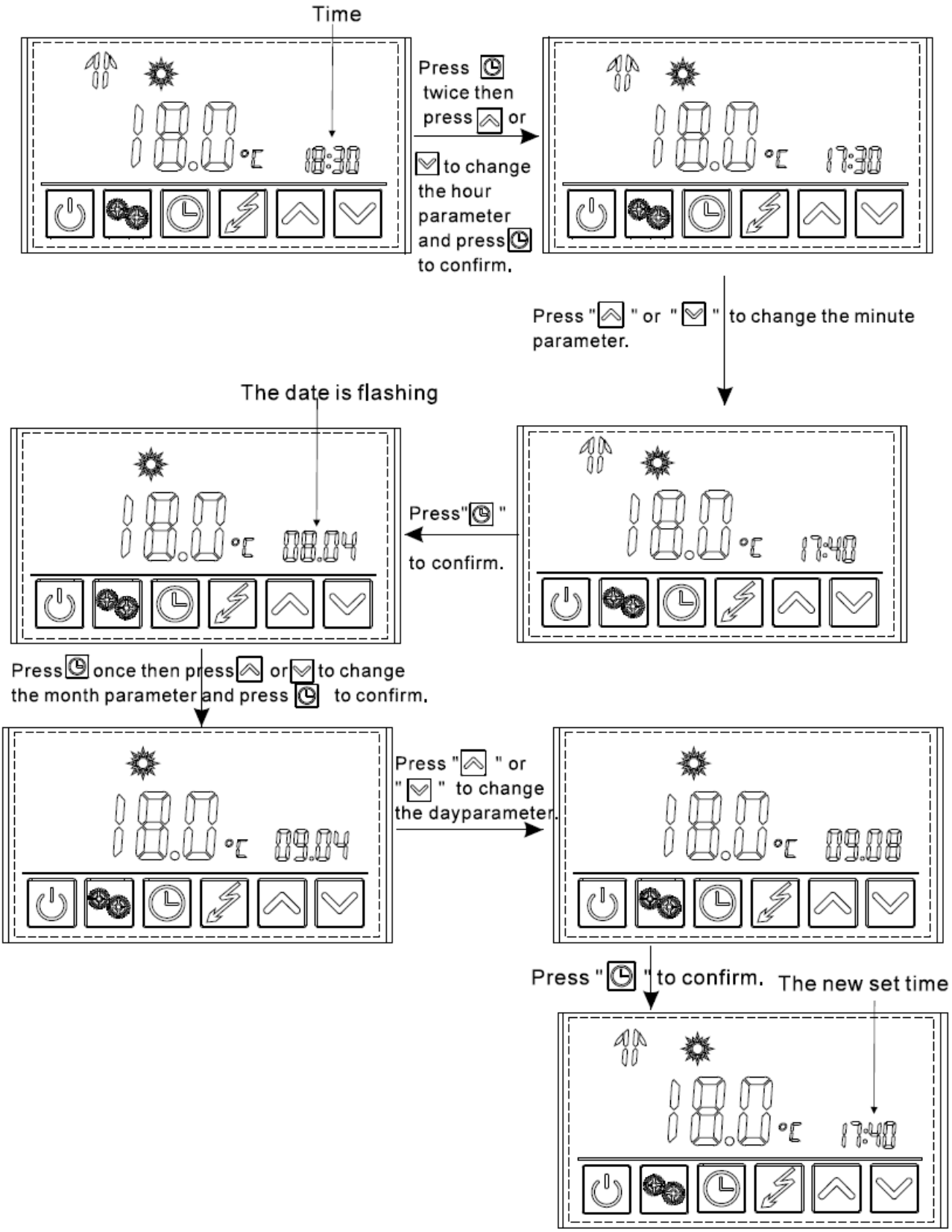


5.6 Time Setting

In the standby or running interface, do as follows to set the time when in heating mode. When press "🕒" once, the time parameter will flash. When press "🕒" again, the hour parameter will flash then press "▲" or "▼" to change it. After making the changes to the parameter, press"⏻" to confirm, then change the minute parameter as well as the date parameter in the same way.
If no operations are performed on the keypad for 10s, the controller exits the parameter modification menu by timeout and the changes are confirmed.

Note: Set the date in the same way when in vacation mode.

Example: Change the time and date from 18:30 on August 4th to 17:40 on September 8th.



5.7 Timer Setting

5.7.1 In the heating mode, two running periods can be set.

Press "⏲" and hold for 2s to enter into the timer setting interface.

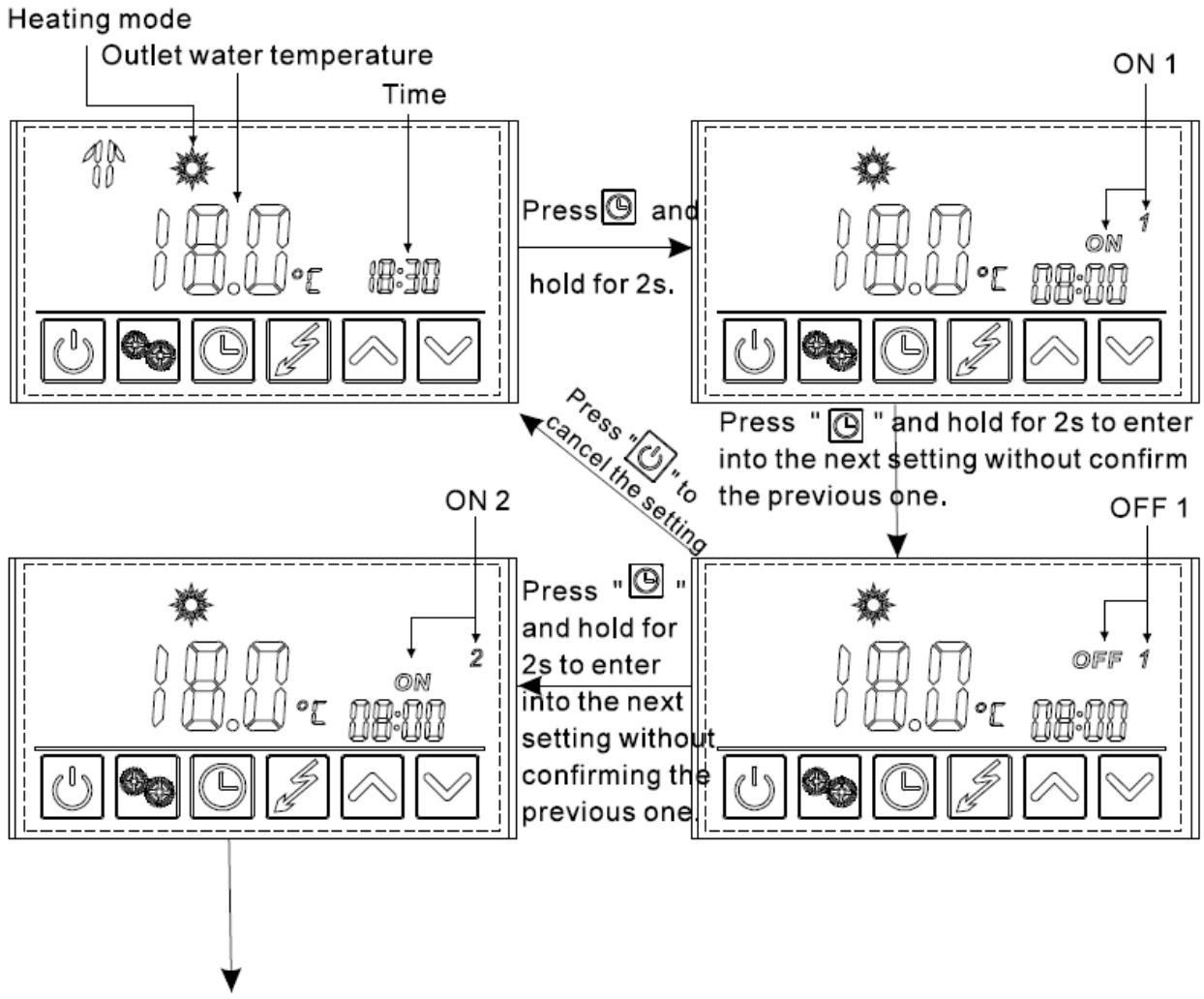
Running period 1: The symbol "ON 1" on the right side of the interface and the time parameter flash at this time. Press "⏲" again and the hour parameter flashes. Set the time and confirm. Then "OFF 1" and the time parameter flash. Set the time following the previous steps.

Running period 2: After **Running period 1** is set, the controller will enter into the **Running period 2** setting interface. Set the start-up and shut-down time in the same way as **Running period 1**.

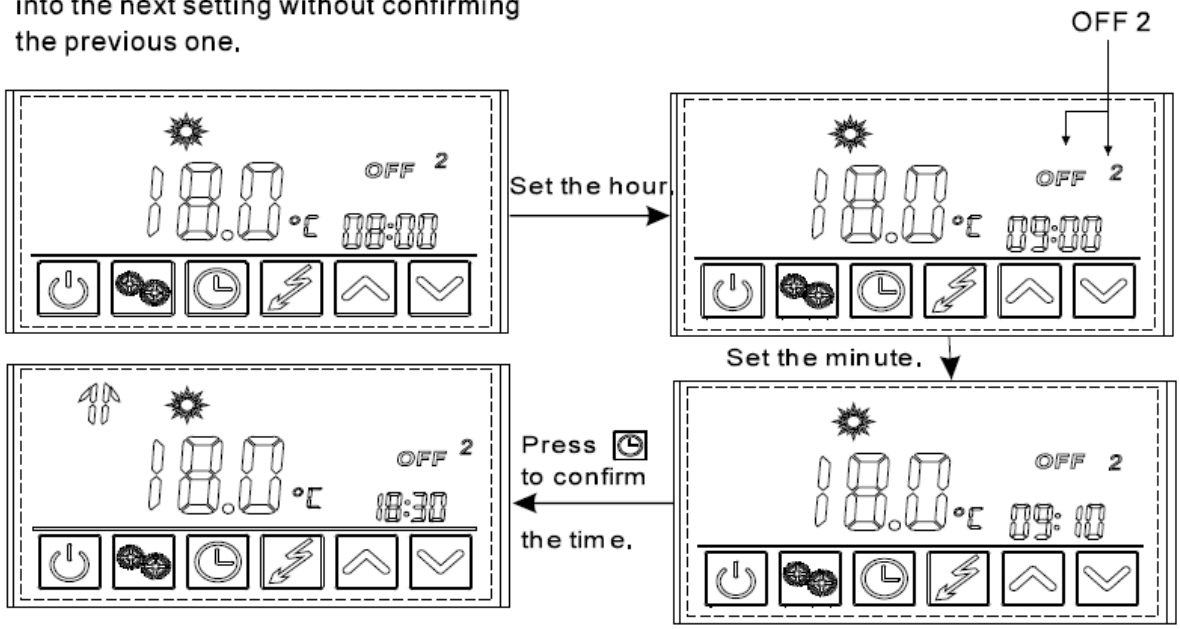
Press "⏻" to cancel any modifications during the setting.

Press "⏲" and hold for 2s twice to set the "OFF 1" time directly or press "▲" "▼" when the unit is already running.

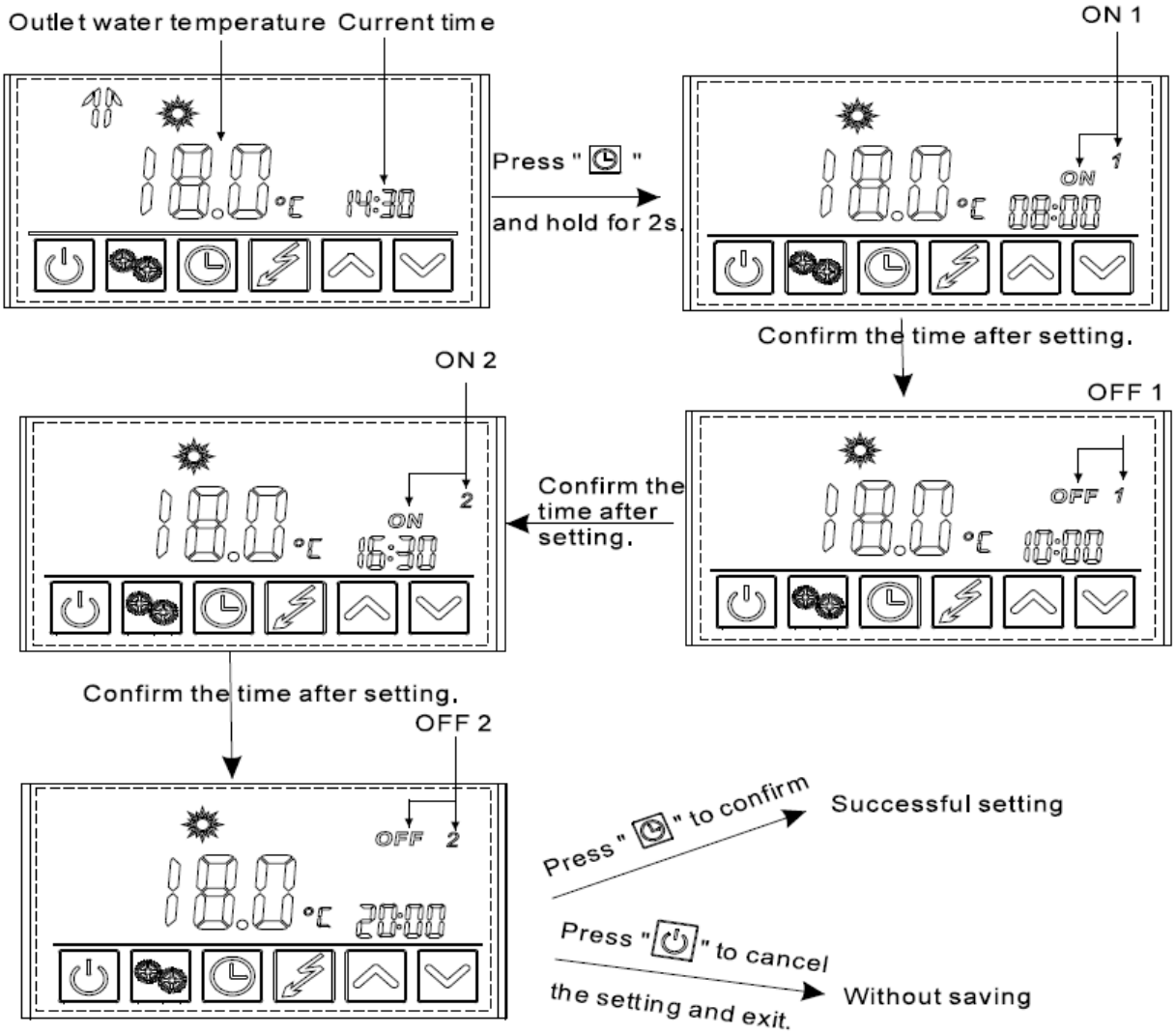
Press "⏲" cancel the setting when the hour parameter is flashing.



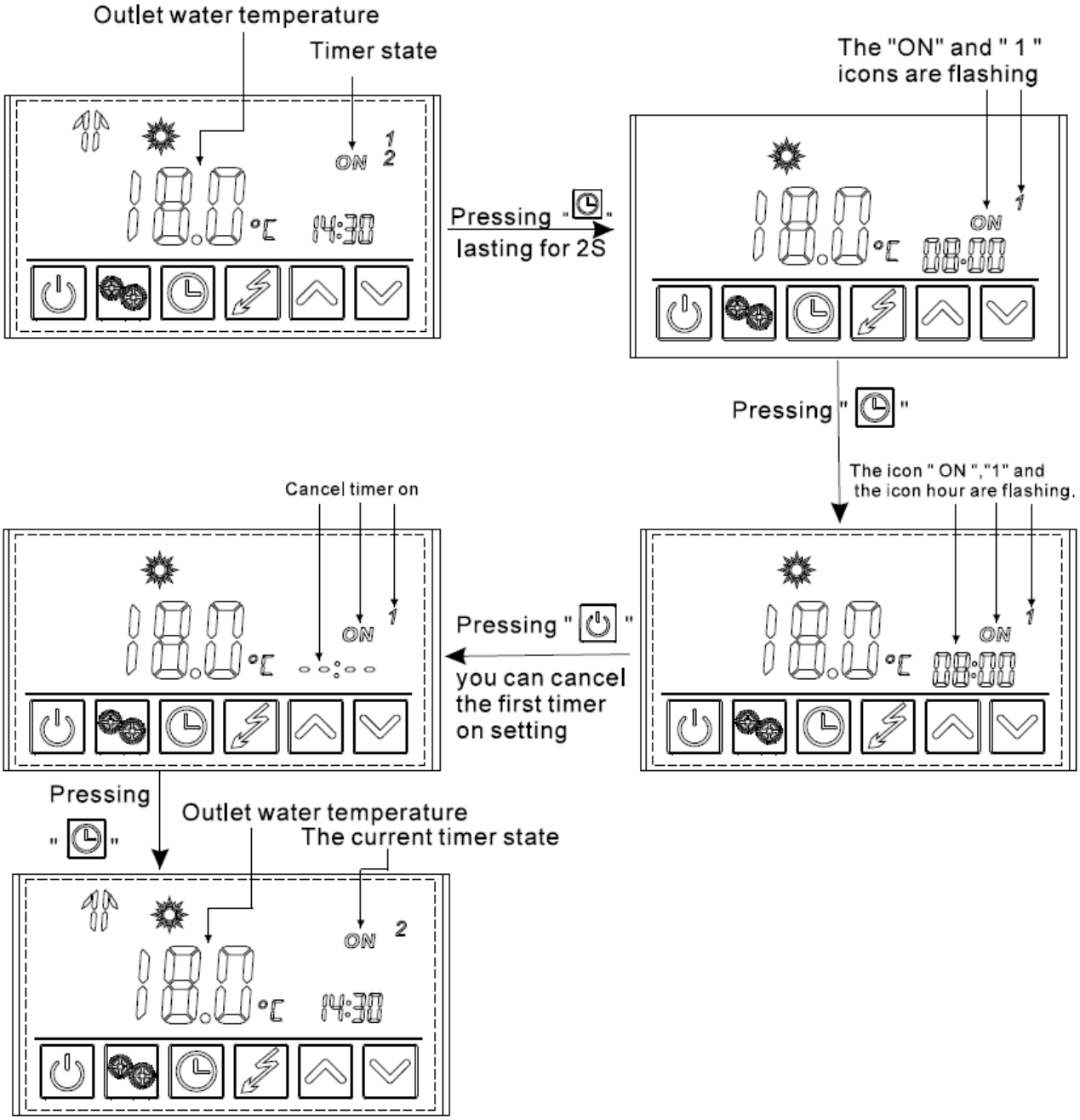
Press " " and hold for 2s to enter into the next setting without confirming the previous one.



Example: **Running period 1**: 8:00~10:00; **Running period 2**: 16:30~22:00.



If you want to cancel the timer setting ,follow this below

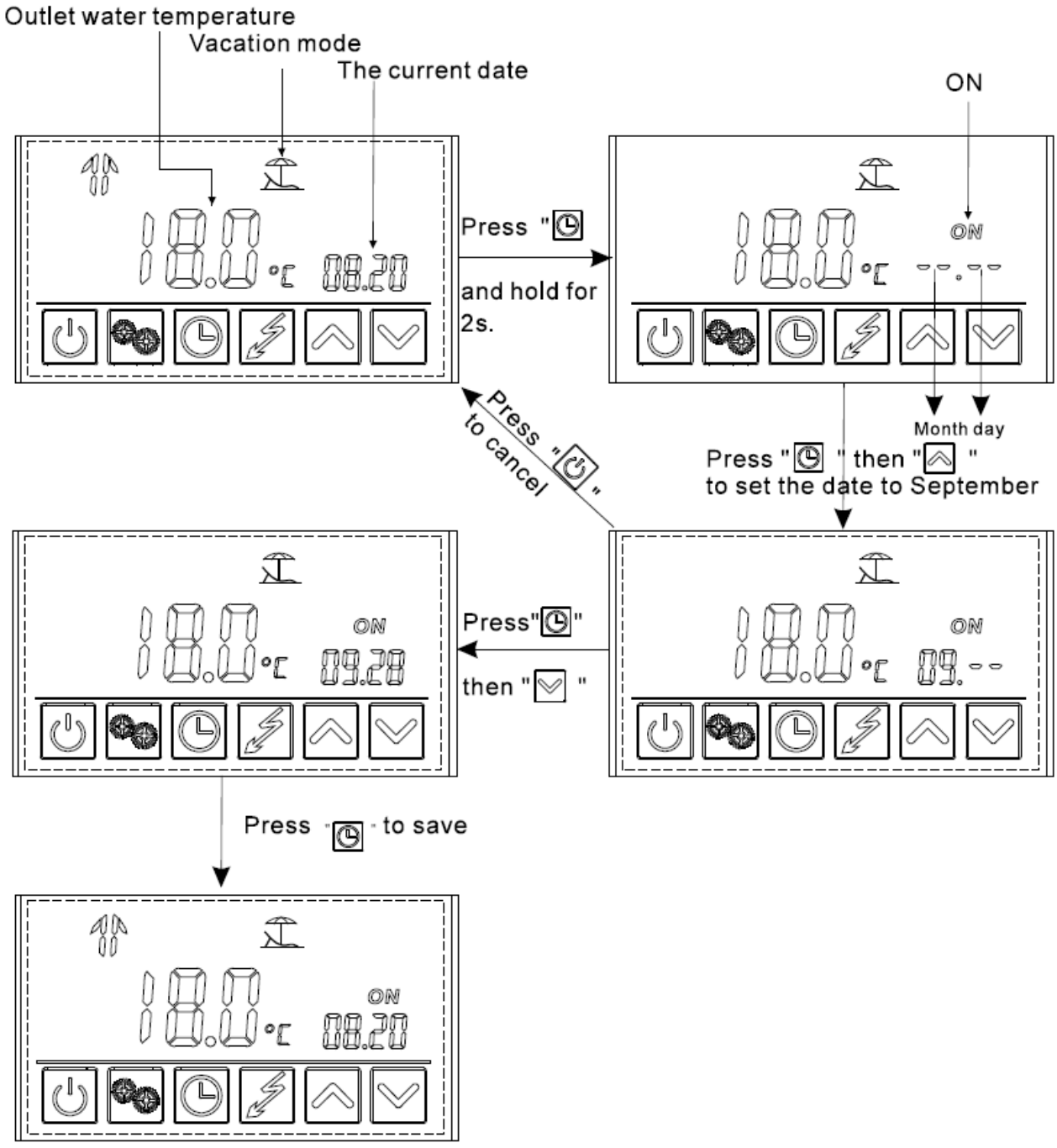


5.8 Vacation Mode

Press "⏲" and hold for 2s to enter into the timer setting interface. The symbol "ON " and the date parameter are flashing at this time. Then set the date in the same way as "2.6 ".

Example: Set the start-up date on September 28.(Note:Turn off the unit before.)

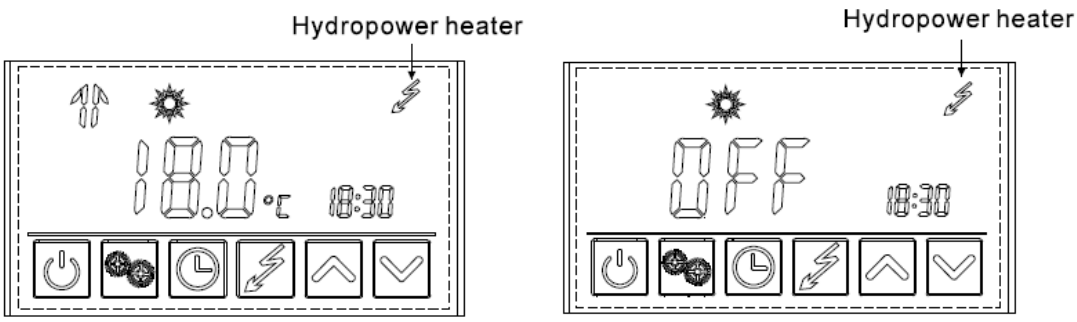
Note:



5.9 Hydropower Heater Setting

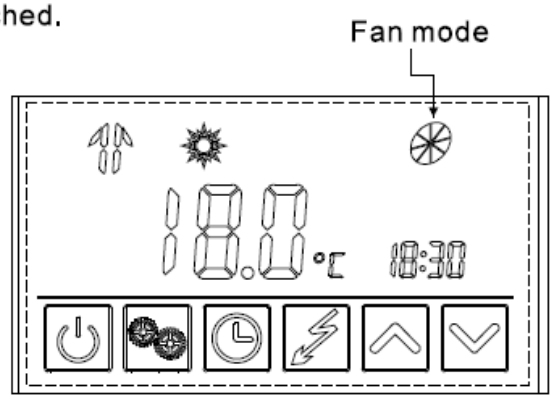
The Hydroboost heater can be turned on when the unit is heating or standby.

Press " " once to turn on the Hydroboost heater and press " " again to shut it off .



5.10 Fan Mode Setting

Press " " and hold for 2s for the first time to change the fan mode to low speed running and the fan will run at low speed when the unit target temperature is reached. Press " " and hold for 2s again to change the fan mode to high speed running and the fan will run at high speed when the unit target temperature is reached. Press " " and hold for 2s for the third time to change the fan mode to shut-down and the fan will stop running when the unit target temperature is reached.



Definition of the fan icon

1. (Running) : shows that the fan is running at high speed
2. (Running): shows that the fan is running at low speed.
3. Fan icon disappears: shows that the fan is shut off.
4. (Static) : shows that the fan will run at high speed when target setting temperature is reached.
5. (Static) : shows that the fan will run at low speed when target setting temperature is reached.

5.11 Adjusting the Hydro Power Booster

If the delivery of hot water is not adequate due to high water usage or continued low ambient temps the Hydro Power Boost system can be adjusted to ensure a steady supply of hot water.

Press "⚙" and hold for 10s once to access the parameter menus. When the screen shows 000 press the up/down arrow keys until 022 is displayed and then press "⚙" Settings key. Using the up/down arrow keys to navigate to the correct parameter value in the table below and press the Settings key to open that paramater value.

Change the value using the up/down arrow keys and then press the Settings key to save the new value. Press the On/Off key to exit the parameter menu.

⚠ ***Changing values in other parameters than shown below could affect the performance and warranty of the 270 and is not advised unlessinstructed by an Evo technician.***

Description	Parameter	Default	Range
Enable adjusting set point of Hydro Power	r04	0	0-No/1-Yes
Hydro Power set point	r05	55deg	30~90deg
Hydro power startup delay	r06	200min	0~450min
Hydro Power to replace heat pump	r07	0	0-No/1-Yes
Ambient temp when Hydro Power replaces heat pump	r08	-5deg	-20~10deg
Ambient temp for Hydro Power to start without delay	r09	10deg	0~30deg
Ambient temp for Hydro Power to start with delay	r10	25deg	10~40deg

5.12 Adjusting the Sanitech System

Follow the same steps as with the Hydro Power Booster above but adjust parameters starting with "g".

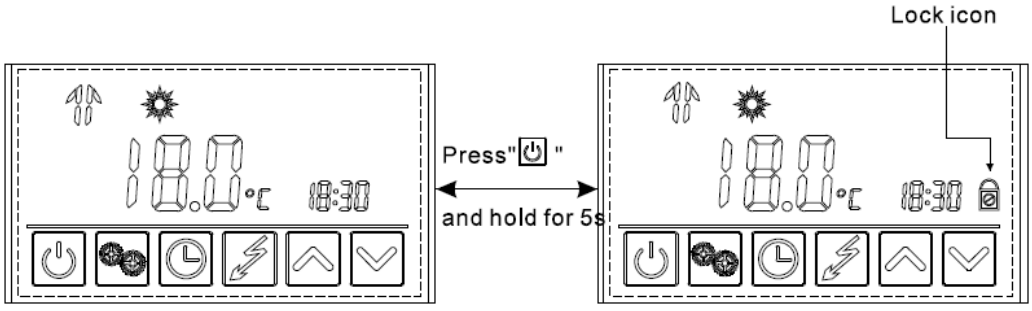
To disable the Sanitech feature simply adjust the Sanitech target temperature (g01) to a figure below the normal water storage temperature (generally 50 degrees or lower).

⚠ ***Changing these settings may lower or disable the 270's ability to ensure your water is free from bacteria.***

Description	Parameter	Default	Range
Sanitech target temperature	g01	70deg	30~70deg
Sanitech temp hold time	g02	30min	0~90min
Sanitech start time (24hr clock)	g03	0hrs	0~23hrs
Sanitech Operation Cycle	g04	7 Days	7~99Days

5.13 Keyboard Locking

Press "⏻" and hold for 5s once to lock the keyboard. Press "⏻" and hold for 5s again to unlock the keyboard.



6. Maintenance and Repair

6.1 Maintenance

Your Evo 270 will operate most efficiently if regular inspected as part of your home maintenance schedule.

MINOR ANNUAL MAINTENANCE

It is recommended that the minor maintenance be performed ever 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 Evo 270.
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 replaces, 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 connect ons.
- 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.

6.2 Troubleshooting Guide

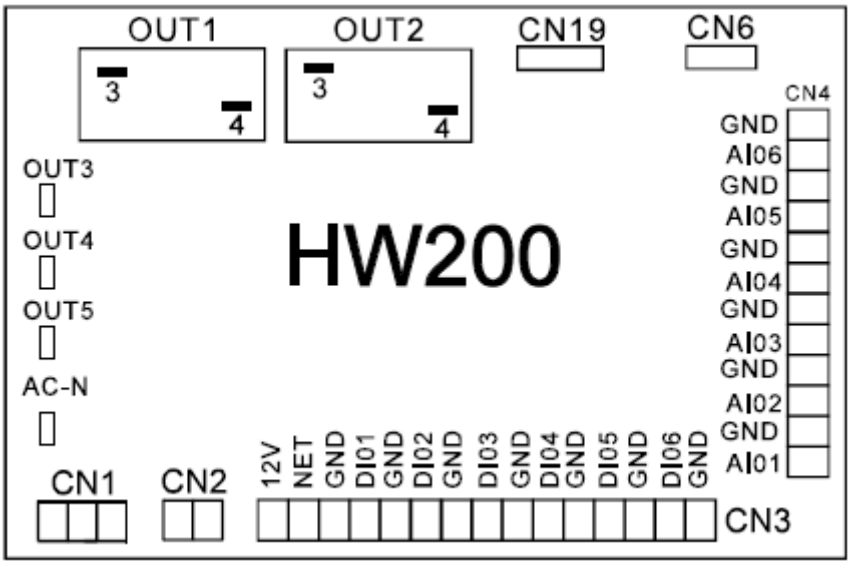
Malfunction	Display	Cause	Solution
Bottom water temp. failure	P01	The water bottom temp. sensor is open or short circuit.	Check or change the water bottom temp. sensor
Top tank water temp. failure	P02	The water top tank temp. sensor is open or short circuit	Check or change the water top tank temp. sensor
Ambient temp. failure	P04	The ambient temp. sensor is open or short circuit	Check or change the ambient temp. sensor
Coil temp. failure	P05	The pipe temp. sensor is open or short circuit	Check or change the pipe temp. sensor
Refrigerant absorb temp. failure	P07	The evaporator temp. sensor is open or short circuit	Check or change the evaporator temp. sensor
Anti-freeze temp. failure	P09	The anti-freeze temp. sensor is open or short circuit	Check or change the anti-freeze temp. sensor
High pressure protection	E01	The exhaust pressure is high, high pressure switch action	Check high pressure switch and cooling return circuit
Low pressure protection	E02	The suction pressure is low, low pressure switch action	Check low pressure switch and cooling return circuit
Water flow failure	E03	No water or litter water in water system	Water, check for flow volume pump failure
Electric-heater overheat protection	E04	Water flow volume not enough, water system pressure difference is small	Water, check if the flow volume system is jammed
Anti-freeze protection	E07	Water flow volume not enough, water system pressure difference is small	Water, check if the flow volume system is jammed
Anti-freeze protect level 1	E19	Ambient temperature is too low	
Anti-freeze protect level 2	E29	Ambient temperature is too low	

7. Appendix

7.1 Unit Parameters

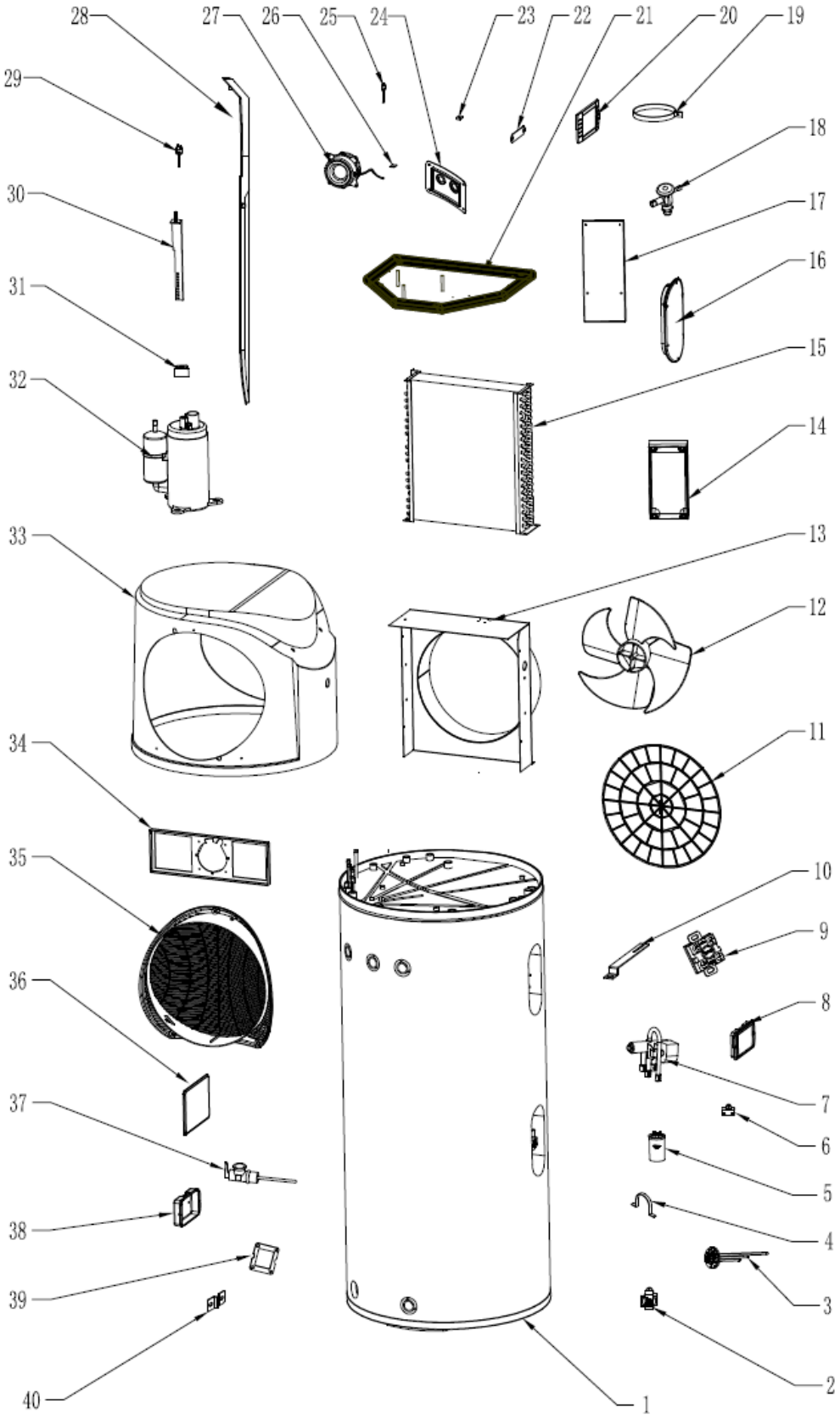
Definition	Default	Note
Target Temperature	55	Adjustable

7.2 PCB Description



NO.	Symbol	The Definition of the Ports
1	OUT1	Compressor (output)(220-240VAC)
2	OUT2	Heater (output)220-240VAC
3	OUT3	Four way valve (output)(220-240VAC)
4	OUT4	High speed fan/ Source pump (output)220-240VAC
5	OUT5	Low speed fan/ circulate pump/ collar pump/ recovery pump/ cooling (output)(220-240VAC)
6	AC-N	Ground
7	NET GND 12V	Remote controller
8	DI01 GND	Remote ON/OFF
9	DI02 GND	Over heat protection
10	DI03 GND	Low pressure protection
11	DI04 GND	High pressure protection
12	DI05 GND	(SPARE)
13	DI06 GND	Flow switch protection
14	AI01 GND	Ambient temp. sensor (input)
15	AI02 GND	Tank of bottom temp. sensor (input)
16	AI03 GND	Tank of top temp. sensor (input)
17	AI04 GND	Coil temp. sensor/ Anti-freeze sensor (input)
18	AI05 GND	Suction temp. sensor (input)
19	AI06 GND	Solar temp. Sensor (input)
20	CN6	Running indication/ circulate pump/ solar pump

7.3 Detailed Parts Overview



Number	Material Code	Material Name	Specification	Remark
1	68016-040052	Water tank 270LD	270LD, ¦640, double pipes	
2	20000-370006	Transformer for the power supply	41X26.5F red VH-3	
3	20000-000032	Electric heater	1.5KW	
4	2000-2118	Retainer for capacitor (180 J)	Galvanized sheet 0.8/CY 30-35uF	
5	2000-3504	Compressor capacitor	CBB65-35¦F/450V	Diameter 55*85
6	2000-3506	Fan capacitor	CBB61-2¦F/450V	
7	2001-1418	4-way valve	SHF-7H-34U/C02C00S/STF-0218G R410A	
8	2001-2265	Transparent cover for the controller	For DZ controller	
9	20000-360040	Mechanical temperature controller	66TM 85 degree	
10	38004-210013	Pull rod	295¡45¡30	
11	38016-220006	Strainer	¦404 PP injection molding	
12	2000-2706	Axial flow fan	¦365¡113	
13	38016-210019	Air outlet vent component	Assembled component	
14	2001-2262	Plastic waterproof box	11-58240¡120¡90mm	
15	38016-120029	Evaporator	¦7.94 copper pipe	Q design
16	20000-220093	Cover	ABS white Material	
17	38016-21 0030	Support for the electrical box	Galvanized sheet 1.0	L design
18	20000-140216	Thermostatic expansion valve	TDEN1 0.9TR 3.8kW	
19	38017-210024	Retainer	Galvanized sheet 2.0, black	
20	2001-2264	Decorative cover for the controller	For DZ controller	
21	38016-210018	Chassis design	Galvanized sheet 1.2	
22	38017-210010	Fixed plate for the electrical box	Galvanized sheet 1.2	
23	20000-880032	Magnet	Magnet in opposition	
24	20000-220130	Cover plate for the wires	ABS grey colour code RAL7016	
25	2000-1404	Needle point valve	High or low pressure	
26	20000-880050	Retainer for the magnet	15¡24¡1.0	
27	20000-330087	Axial flow motor	GAL6P28A-KWDB	Galanz
28	38017-220047	M design decorative plate	ABS blister plastic component	
29	2000-3607	Press switch	2.1 MPa/1.7MPa	
30	38016-21 0024	Pull rod for the compressor	Galvanized sheet 3.0	
31	2000-2654	Rubber feet	¦25¡20	
32	20000-110108	Compressor(H74)	WHP03970BSV	
33	38016-220008	Top cover	ABS ¦640 grey matte surface	
34	38016-21 0020	Support for motor	Galvanized sheet 1.2	
35	38016-220005	Air outlet vent net	ABS injection moulding	
36	38017-220023	Cover plate for the wire controller	ABS injection mould parts	
37	20000-130143	P&T valve	6' female thread 6' male thread brass	
38	20000-220091	Back cover for the controller	For mounted to the unit	
39	38017-210009	Fixed plate	Galvanized sheet 1.0	
40	38017-210055	Retainer for the temperature sensor	Galvanized sheet 0.8	

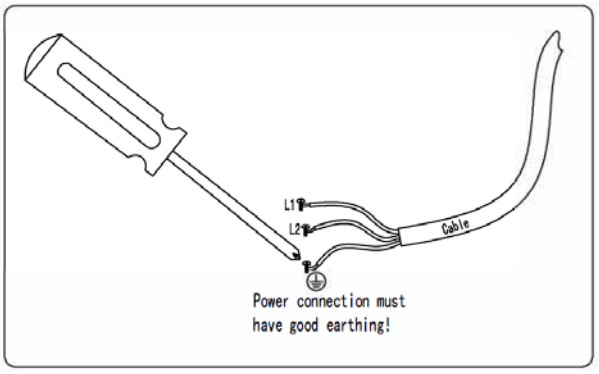
7.4 Caution

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, AS1357.1. 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.

7.5 Earthing Methodology



7.6 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.

7.7 Use of the Overheating Protector

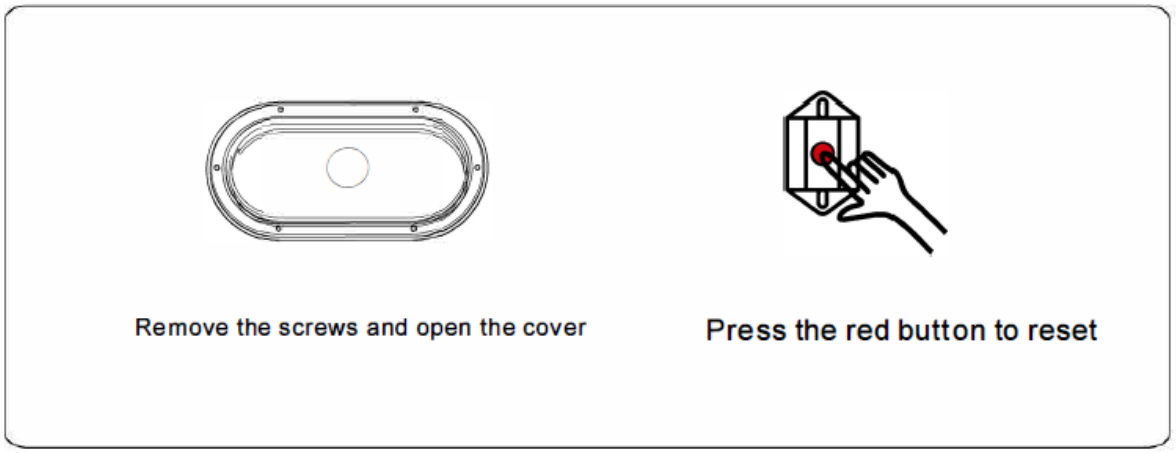
The overheating protector is used to turn the power off, preventing the hot water from being heated too high. To return the unit to its normal operational status it will have to be re set manually. Please contact EvoHeat for a service if this occurs.

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:



7.8 Draining the Water Tank

1. Close the cold-water inlet valve into the Evo 270.

2. Open a hot water tap inside the premises.

3. Undo the drain plug on the base of the unit to drain the water from the system.

CAUTION. THE WATER FROM THE HOT WATER TAP AND THE DRAIN PLUG WILL BE HOT. BECAREFUL OF BURNS AND SCALDS. WEAR PROTECTIVE CLOTHING

EVO270 HOT WATER HEAT PUMP WARRANTY

1. The tank is guaranteed for a period of five (5) years from the date of purchase when installed in a domestic premises and in accordance with the instruction manual.

2. The compressor is guaranteed for two (2) years from the date of purchase.

3. All other parts are guaranteed for two (2) years from the date of purchase

4. This warranty covers all labour for twelve (12) months from the date of purchase

Note: no warranty is given in relation to components not supplied with the EVO270, for example tempering valves and cold water valve assemblies used by the installer.

How to make a claim under warranty:
EvoHeat have a comprehensive network of authorised specialist service agents. If warranty service is required you should:

a. contact EvoHeat on 1300 859 933, info@evoheat.com.au or via our 'Contact Us' page on our web site at www.evoheat.com.au/contactus

b. provide a copy of your receipt as proof of purchase

c. have completed the online warranty registration

To successfully make a claim, EvoHeat must be advised of the serial number. Failure to advise the serial number, may delay the service request and or prevent the service request from being processed.

EvoHeat encourage customers to complete their warranty details online at the time of purchase at https://evoheat.com.au/warranty-registration to ensure efficient warranty claim processing.

Note: service call outs outside of normal business hours and metro areas may incur an additional call out fee.

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

This warranty does not cover the following:

- Natural disasters (hail, lightning, flood etc)
- Rust or damage to paintwork
- When the unit is installed by an unqualified person/technician
- When serviced by an unauthorized person/ technician without the permission of EvoHeat
- Where the unit is incorrectly installed
- When the failure occurs due to improper or faulty installation
- Failure due to improper maintenance (refer to manual)
- 'No fault found' service calls where the perceived problem is explained in the manual
- Costs associated with delivery, handling, freighting, or damage to the product in transit.

Disclaimer: details outlined in this 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.