



# INSTALLATION MANUAL    180L / 270L





## Important Information

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- This manual includes all the necessary information regarding the Installation and maintenance of this product. Please take the time to read it through before operating.
- When Installing the hot water cylinder, please follow the Instructions as documented in this manual.
- Once the Installation is complete, check that all connections are secure and the unit is full before the power is turned On.
- The installer is to explain to the end user how to operate and maintain the unit in accordance to this Instruction manual.
- iStore will not be held responsible for any damages or injuries caused by the incorrect Installation of this hot water system.
- It is important that the installation and operational instructions laid out in this manual are strictly adhered to.
- A maintenance programme must be carried out as recommended in this manual. Failure to comply with these recommendations will void the warranty.
- This manual could be subject to change without prior notice, if it is felt that product improvements are to be carried out.



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# Safety Precautions





To prevent personal injury and avoid causing damage to the unit, please take the time to read the information documented in this manual.

| ICON   | DESCRIPTION  |
|--|--|
| <br>WARNING   | A wrong operation may lead to serious injury or death    |
| <br>ATTENTION | A wrong operation may lead to injury or loss of material |




| ICON  | DESCRIPTION                                      |
|---|--|
|    | Prohibited (Next to this icon)                   |
|   | Compulsory - The listed action shall be followed |
|  | Please pay attention to what is indicated        |





## INSTALLATION WARNING

|   |  |
|---|--|
|  | The iStore must be installed by qualified persons. Improper installation could result in electrical shock /water leakage or fire |
|  | Before installation, check the unit for any damage   |
|  | Please ensure that the unit and power connections have a good earth. Failure to do this may cause an electrical shock            |
|  | Do not drill any holes or screws into the outer casing. Drilling of any holes will void the warranty                             |




# Safety Precautions

|  |   |
|--|---|
| <br>Unit Location     | The unit CANNOT be installed near flammable gas.  |
| <br>Unit Placement    | Ensure that the position of the unit is level and in accordance with AS/NZ 3500.4                                   |
| <br>Dedicated Circuit | This unit requires a circuit breaker and AC isolator. Failure to do so could result in an electrical shock or fire. |


## INSTALLATION WARNING

|   |  |
|---|--|
| <br>Safety Warning | Do not put fingers or any other objects into the fans. Children should be kept clear of this appliance.                          |
| <br>Shut Off Power | In the event the iStore has a major malfunction, please shut the power off and contact your iStore installer or iStore directly. |

## RE-LOCATION OR REPAIR

|   |  |
|---|--|
| <br>Important  | If the iStore needs to be relocated or installed again, only use an authorised dealer or qualified persons.  |
| <br>Prohibited | It is prohibited for the end user to repair the unit themselves, unless qualified. Failure to do so may lead to serious injury or, and damage to the unit. |
| <br>Important  | Should the iStore need to be repaired, only use an authorised dealer or qualified persons.   |

## CLEANING WARNING

|   |   |
|---|---|
| <br>Shut Off Power | Under no circumstances should water be sprayed directly into the unit when cleaning. Only external surfaces to be cleaned with a soft rag by non-qualified persons. |
|---|---|

## Functionality WARNING

|  |  |
|--|--|
| <br>DANGER - High Temperature |  |
|--|--|

## How it works

1. A fan draws in air, containing heat energy, across the evaporator
2. The evaporator turns the liquid refrigerant into a gas
3. The compressor pressurises the refrigerant into a hot gas
4. The hot gas inside the condenser coil heats the water inside the coil-wrapped tank
5. The refrigerant reverts back to a liquid after heating the water and continues to the evaporator for the process to start again
6. The cycle continues until the set target temperature is achieved.

As water is used in the home, the cycle will restart once the temperature in the tank as dropped 11 degrees below the target temperature.

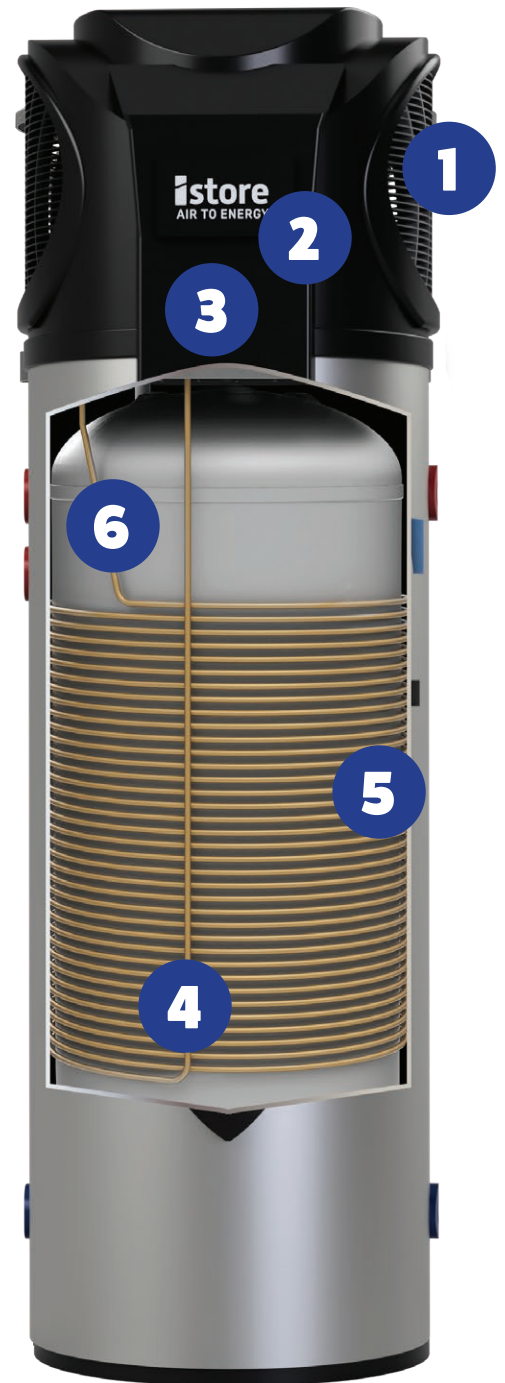
### Electrical Connection:

Please check the electrical specification table. Under no circumstances shall the electrical lead be converted to a 3 pin plug and connected to a General Power Outlet (GPO). An approved AC Isolator shall be installed within 1m of the unit.

### 500kPa Pressure Reduction Valve:

Pressure Reduction Valve (PRV 500) - A pressure reduction valve of 500kPa maximum must be fitted immediately downstream of the cold water non-return isolation valve. Failure to install a pressure reduction valve will void the warranty. Please note cold water supply line to the tempering valve must be run after the PRV to ensure equal supply pressure to the tempering valve. This valve is not required shall a 500kPa PRV be installed at the water main supply to the property.

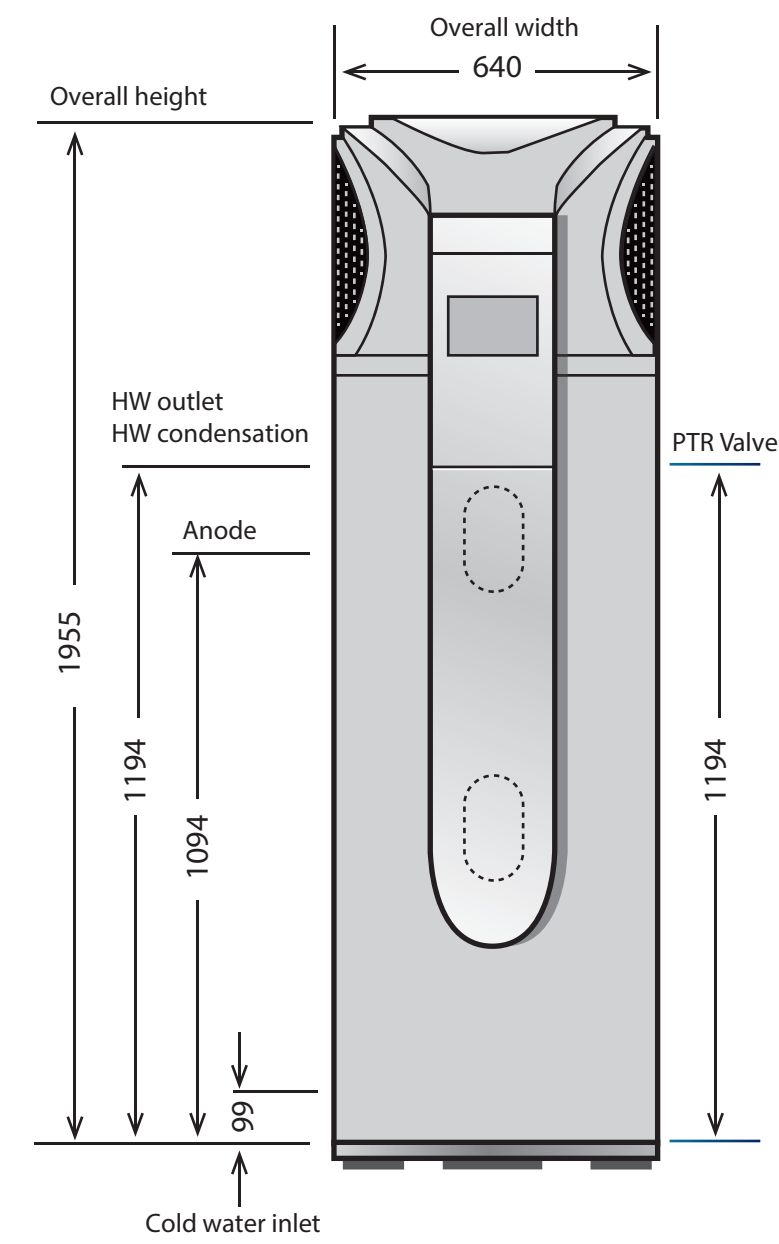
**Note:** In SA, WA & QLD (and some other areas of other states subject to local authority regulations) it is a requirement that an expansion control valve be fitted between the non-return isolating valve and the water heater.



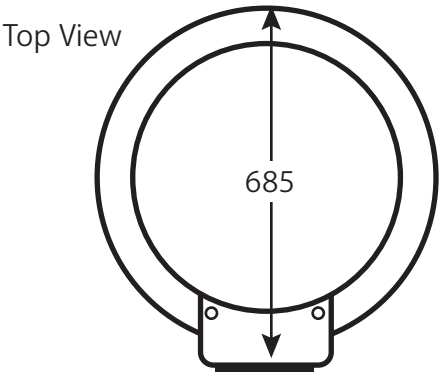
# Specifications

## 2.1 Dimensions 270L

Unit: mm



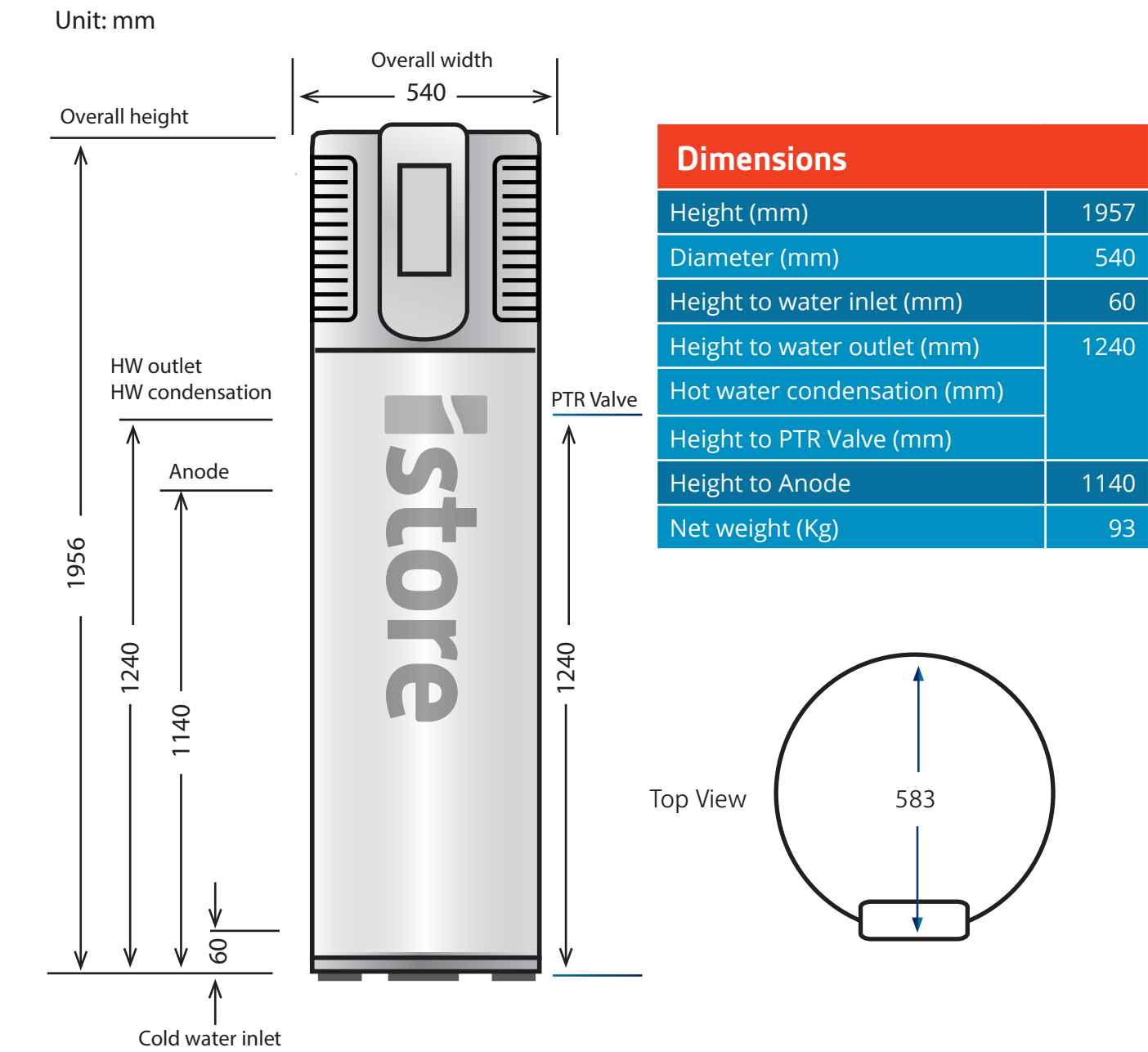
| Dimensions                  |      |
|-----------------------------|------|
| Height (mm)                 | 1955 |
| Diameter (mm)               | 640  |
| Height to water inlet (mm)  | 99   |
| Height to water outlet (mm) | 1194 |
| Hot water condensation (mm) |      |
| Height to PTR Valve (mm)    |      |
| Height to Anode             | 1094 |
| Net weight (Kg)             | 157  |



270L iStore

# Specifications

## 2.2 Dimensions 180L



180L iStore



# Specifications

## 2.3 Performance Parameters

|                            | Value             | 180L   | 270L    |
|----------------------------|-------------------|--------|---------|
| Heating capacity           | kW                | 1.7    | 3.6     |
| Water tank capacity        | L                 | 180    | 270     |
| Compressor power input     | kW                | 0.43   | 0.94    |
| Compressor running current | A                 | 1.8    | 5.9     |
| Power supply               | V                 | 240    | 240     |
| Compressor number          | Quantity          | 1      | 1       |
| Compressor                 | Type              | Rotary | Rotary  |
| Rated outlet water Temp.   | C                 | 60     | 60      |
| Air volume                 | m <sup>3</sup> /h | 700    | 450     |
| Noise                      | dB(A)             | 45 @1m | 48 @ 1m |
| Water inlet/outlet size    | inch              | 3/4    | 3/4     |
| Auxiliary e-heater         | kW                | 1.5    | 1.5     |
| Rated Power Input          | kW                | 2.2    | 3.1     |
| Rated Current Input        | A                 | 9.2    | 13      |

### Working Range

- Operating water pressure 0.15 to 0.7MPa
- Ambient temperature is -5~43° C (compressor)
- The max temperature of water tank is 75° C
- Maximum inlet water pressure is 500kPa
- PTR Valve setting is 850kPa
- ECV Valve setting is 700kPa (if required)

#### Hot and Cold Water Connections

All plumbing connections must be performed by a licensed plumber in accordance with local authority regulations.

The cold water inlet connection to the storage tank is 3/4 FI. All pipes and valves must be insulated as per the current AS/NZ 3500.4 Section 8.2. The cold water inlet requires the following valve train please refer to system diagram page for correct installation.

- Approved isolating/non return valve
- 500 kPa Pressure Reduction Valve (PRV) valve
- 700 kPa Expansion Control Valve (ECV)

The maximum inlet water pressure rating is 750kPa. Cold water supply pressures exceeding 500kPa a 500kPa Pressure Reduction valve shall be installed immediately downstream from the Duo valve.

The hot water outlet from the tank is 3/4 inch FI. All hot water pipes must be insulated by UV stable & appropriately rated insulation.

# Safety Features

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## Smart Screen Lock

To prevent unwanted changes to your iStore settings. The Smart Screen will automatically lock after 15 seconds.

## Start up delay protection

If the unit stops and you re start the unit or turn it on by the manual switch, the unit will not start to run again for approx 3 minutes. This is a protection feature to safeguard the compressor.

## Defrost mode

In the heating mode the unit will defrost automatically, maximizing 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 operate the unit at ambient temperature of -7° ~ 50° Celsius.

## Thermal cut-off safety device

If the water temperature reaches 85° C, the power of unit will be cut off (refer to manual to reset).

## Pressure Temperature Relief Valve (PTR)

An 850kPa, 10kW and 99°C PTR valve is used on the iStore water tank, which is located on the side of the water tank and is essential for its safe operation. The PTR valve is designed to allow 3-5% of total tank volume to discharge during heating to allow for hot water expansion. Water may drip from the discharge pipe of the pressure-relief valve. The discharge pipe must be left open to the atmosphere under all circumstances. PTR Valve the discharge pipe shall be installed downwards and with discharge pipes in a frost free environment. Refer page 12 for how to connect. Seal the thread with approved sealant such as Teflon tape and screw the valve into the correct opening and leave the valve outlet pointing downwards. The discharge pipe diameter is permitted to be run in 15mm copper providing the length of discharge pipe does not exceed 9m.



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

## Condensation

During normal operation, condensation occurs from the transfer of air across the evaporator coil. This process is drawing humidity from the air and creates condensation/water droplets on the coils, which in turn is captured in the fully moulded condensate tray and discharged through the condensate drain line. In locations with humidity greater than 80%, up-to 5 litres per day can be expected under normal operating conditions.

# HOT WATER CAN CAUSE SERIOUS INJURY



**WARNING - Hot Water is dangerous!** As a safety precaution, young children should always be supervised around hot water fixtures

As modern hot water systems can generate water temperature in excess of 50°C, regulations require that an approved solar rated tempering valve shall be installed in accordance with the valve manufacturer's instructions. This is required to prevent water temperatures supplied to the house exceeding a preset safe maximum. The tempering valve is connected to the hot water outlet lines. The valve must be fitted by an authorised plumber at the time of installation or in retrofitting to existing systems.

Care should be taken to avoid coming into contact with any pipe work or fixtures associated with the water heater collector flow and return lines.

All iStore hot water systems must be installed by an authorized plumber. All installation work must meet local authority standards, Australian standard (AS 3500.4) and the National Plumbing Code along with local electrical regulations. Where required, the relevant electrical and plumbing work will need to be certified to the satisfaction of local regulatory authorities.

If the water heater is left unused for two weeks or more, a small quantity of hydrogen gas (which is HIGHLY flammable) may accumulate in the top water cylinder. To dissipate this gas safely it is recommended that a sink or bath hot tap be turned on to dispel a couple of litres of water. During this procedure there should be no smoking, open flames or any electrical appliances such as washing machines or dish washers operating nearby. If Hydrogen is discharged through the tap, it will make a sound like air escaping.

## Important information

THIS WATER HEATER IS ONLY INTENDED TO BE OPERATED BY PERSONS WHO HAVE THE EXPERIENCE OR THE KNOWLEDGE AND THE CAPABILITIES TO DO SO. THIS WATER HEATER IS NOT INTENDED TO BE OPERATED BY PERSONS WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES IE: THE INFIRM AND CHILDREN.

CHECK THE WATER TEMPERATURE BEFORE USE, SUCH AS WHEN ENTERING A SHOWER OR FILLING A BATH OR BASIN, TO ENSURE IT SUITABLE FOR THE APPLICATION AND WILL NOT CAUSE SCALD INJURY.

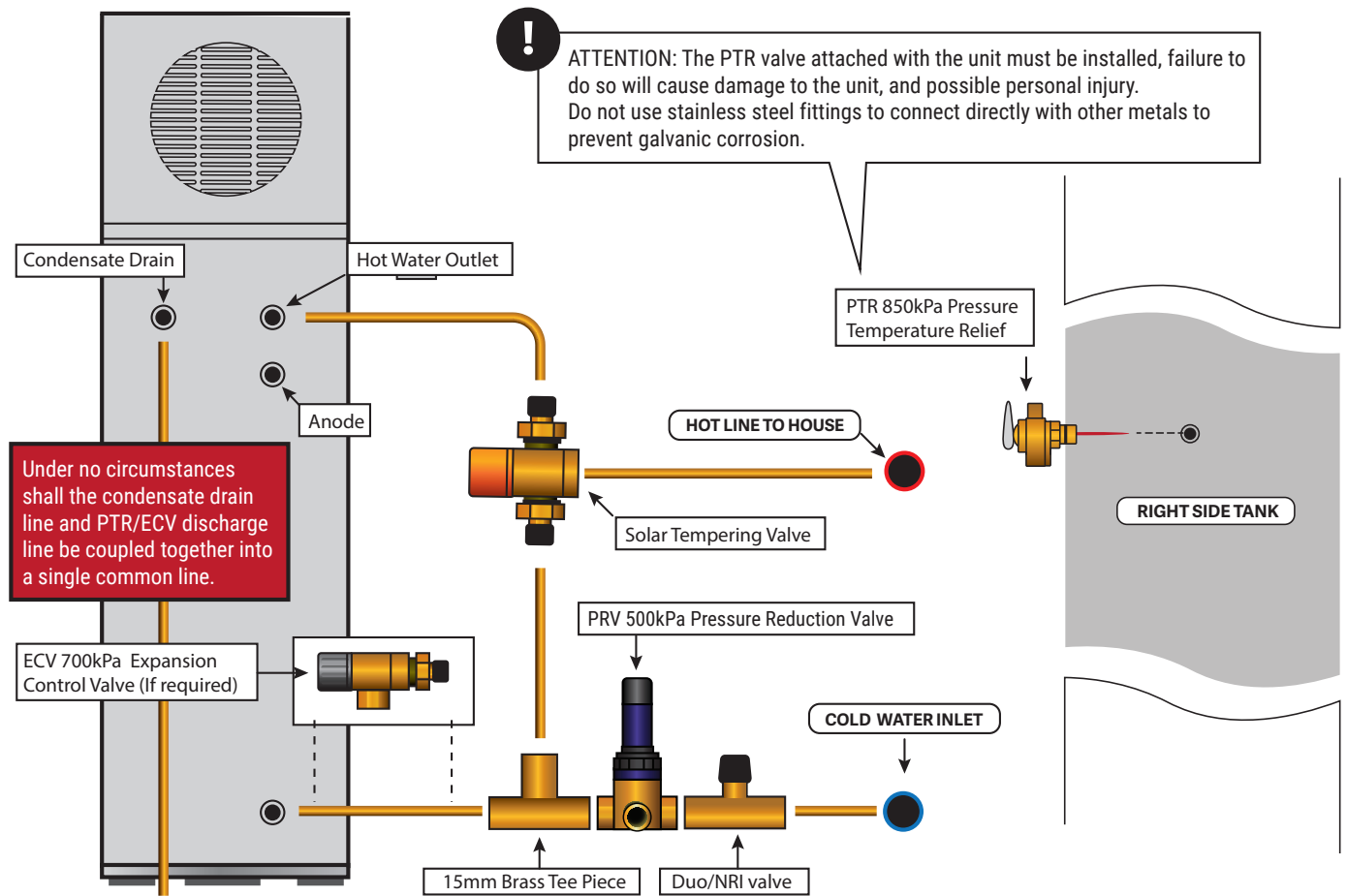
THIS WATER HEATER USES 240V AC POWER FOR THE ELECTRICALLY OPERATED COMPONENTS.

THE REMOVAL OR ATTEMPTED ALTERATION OF ANY ELECTRICAL COMPONENT MUST BE CONDUCTED BY A QUALIFIED ELECTRICAL SERVICE PERSON.

FOR CONTINUED SAFETY OF THIS APPLIANCE, IT MUST BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

# Installation

## 4.1 Installation Diagram - Left Hand Install



### Important information

- The specification of the water inlet and outlet thread is RBSP3/4 (internal thread)
- The specification of the PTR valve connecting thread is RBSP3/4 (internal thread)
- The specification of the anode and the drain port is GBSP3/4 (internal thread)
- Condensate port connection thread is BSP1/2 (internal thread)
- Condensate drain shall discharge to an approved discharge point

### Filling and commissioning the iStore Hot Water System

1. Turn on the cold water supply to the tank and open a hot water tap preferably laundry tap without filter as existing sediment may partially block pre-existing water saving devices.
2. Leave tap open until all air is bled, then turn off hot water tap.
3. Activate PTR Valve (Pressure relief valve) to ensure system is fully bled of all air.
4. Once the system is fully pressurised with water, thoroughly check all fittings, connections and pipework for water leaks.

# Installation

## 4.2 Transportation

As a rule, the unit is to be stored and/or transported in its shipping container in the upright position and without water charge. For transport over short distance, and provided due care is exercised, an inclination angle of up to 30 degree is permitted. Both during transport and storage, ambient temperatures of  $-5^{\circ}$  to  $50^{\circ}$  are permissible.

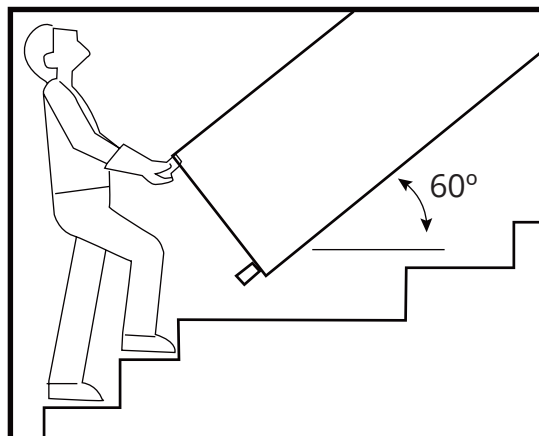
### Transport using a forklift

When transported by a fork lift, the unit must remain mounted on the pallet. The lifting rate should be kept to a minimum. Due to its top-heaviness, the unit must be secured against tipping over. To prevent any damage, the unit must be placed on a level surface!

### Manual transport

For the manual transport, the wooden pallet can be used for bottom part. Using ropes or carrying straps, a second or third handling configuration is possible. With this type of handling, care must be taken that the max. Permissible inclination angle of 60 degree is not exceeded. If transport in an inclined position cannot be avoided, the unit should be placed into operation one hour after it has been moved into final position.

The unit should not be laid flat during vehicle transportation.

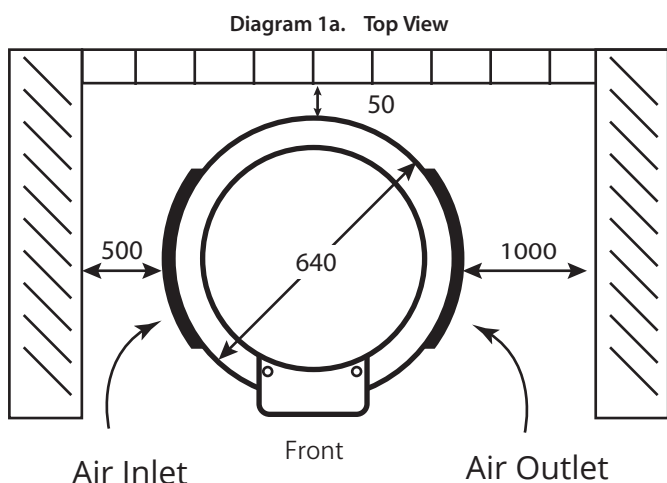


**CAUTION: TOP HEAVY. HIGH CENTRE OF GRAVITY**

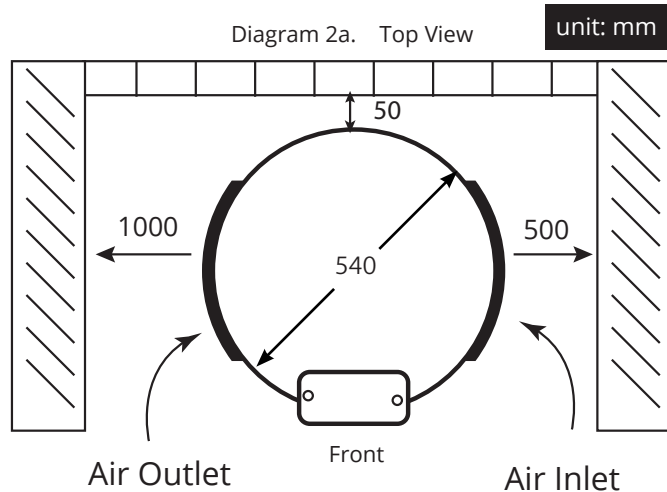
# Installation

## 4.3 Installation space

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



**270L iStore**

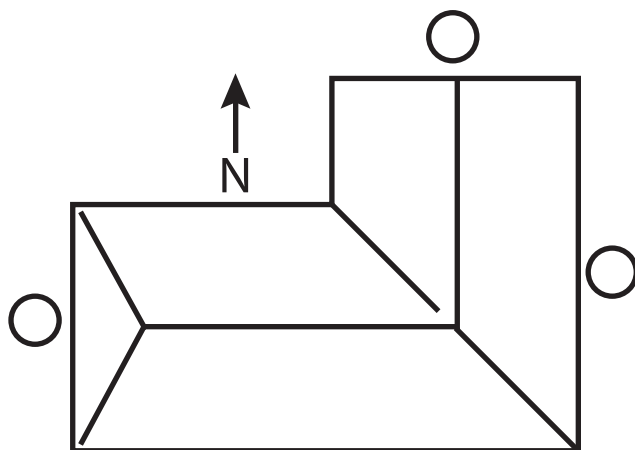


**180L iStore**

unit: mm

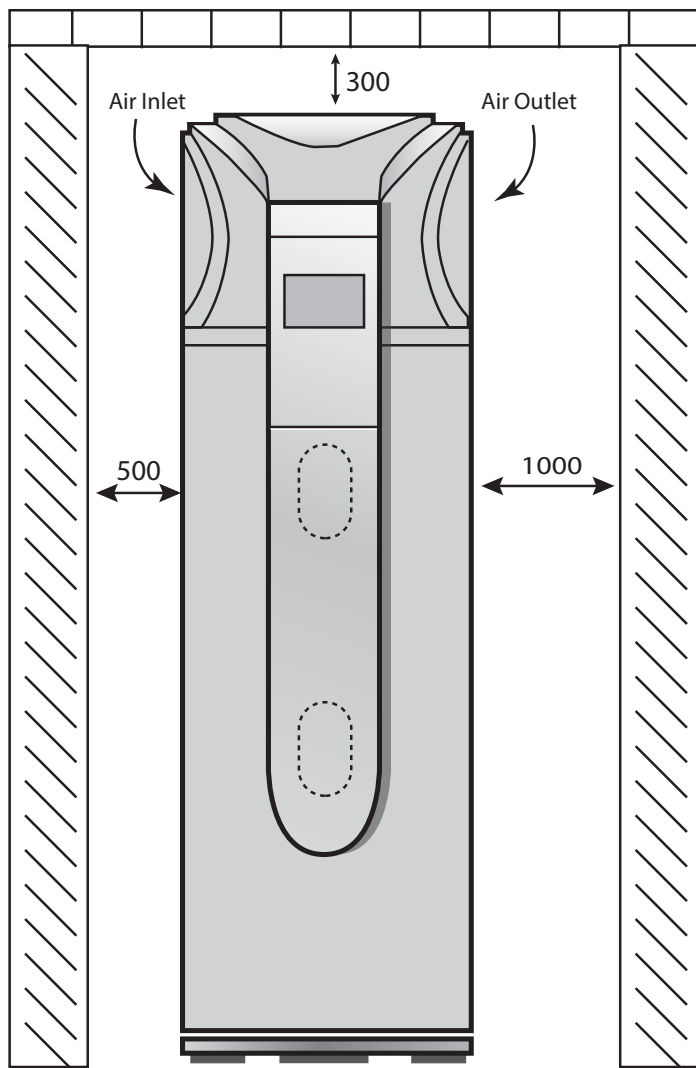
## Tank Location

- Place tank on level surface and in accordance with building and plumbing codes
- Avoid positioning near bedrooms or neighbours bedrooms
- Optimum performance for tank location is North, West or East side of the building
- Ensure the minimum space between the unit and walls and objects are per specifications illustrated in Diagram 1a/2a and Diagram 1b/2b.
- Unit shall be located as close as possible to the most frequently used hot water outlet



# Installation

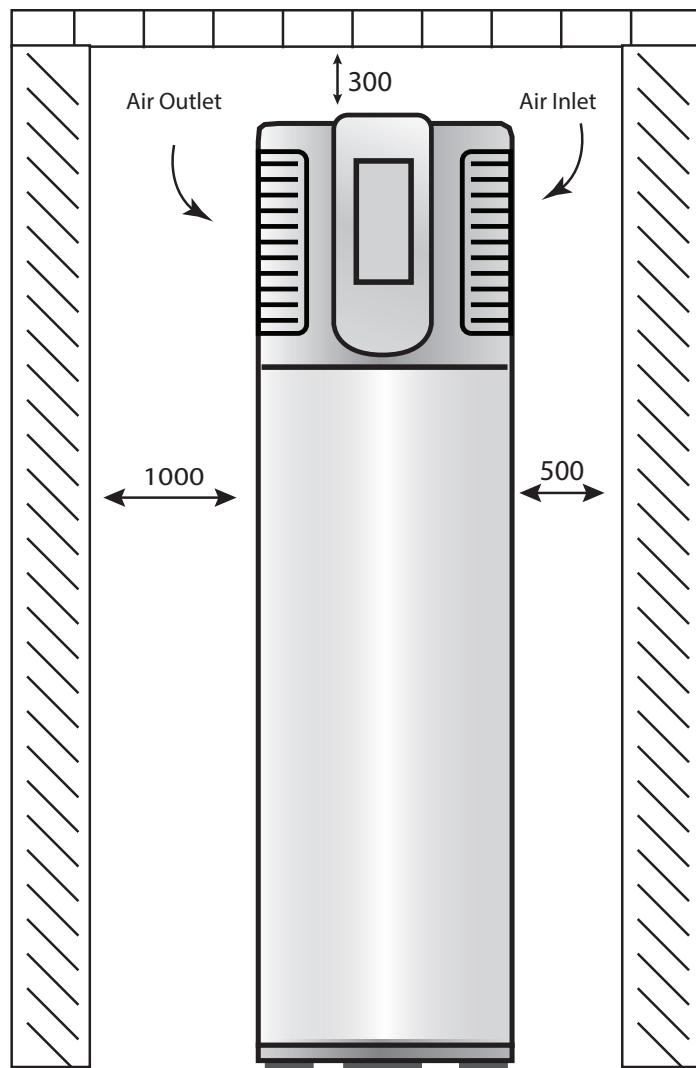
Diagram 1b. Front View



**270L iStore**

Diagram2b. Front View

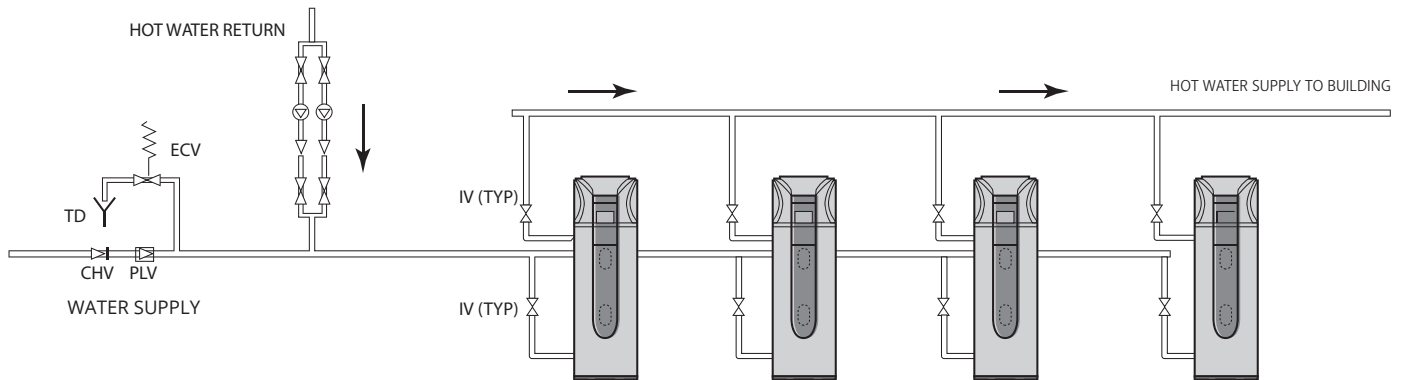
unit: mm



**180L iStore**

# Installation

## 4.5 Multi-system configuration



### Cable connection

- This unit requires an isolating switch as required by local by laws
- If the power cord is damaged, It must be replaced by a qualified electrician
- Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules
- Local codes including but not limited to AS/NZS 3000 must be adhered to for all electrical work and be undertaken by a licenced electrician

### Inspection before trial running

- Make sure the unit is full of water
- Check the water supply to the tank and pipe connections for possible leaks
- Check that all power connections are secure before switching on

### Trial running

- Switch on the unit using the controller
- In the case of any unusual noise, switch the power off and consult your iStore technician
- The parameters have been pre set to a temperature of 60 degrees

### Seismic restraints

- Where required the unit must be braced with with seismic restraints according to local standards. Only applicable in earth-quake zones

### Air Flow

- The i-store requires a minimum of 120 cubic meters of natural ventilation to operate efficiently
- An example would be an area of 8.0m x 6.3m x 2.4m (a large double garage or open space under a home)
- External installation is the preferred method to capture the warm ambient air temperature Air discharge will always be cold
- If unit is being installed internally, provision for fresh air to be introduced shall be provided 450 / 700 m<sup>3</sup>/h minimum requirement



# Intelligent Operating Modes

---



## **Economic Heating Mode**

Most efficient setting as water will be heated via the compressor only. The electric element can be activated manually whilst in economic heating mode for faster recovery of water.



## **Hybrid Heating Mode**

When quick recovery is required, this mode will activate the compressor & electric element for fastest recovery. Hybrid Heating Mode is designed when short term rapid water heating is required ie: Additional guests in the home or quick recovery is required after large hot water use such as a bath or spa. Once the target temperature is reached in this mode, the system will automatically reset to Economic Heating Mode as the default setting.



## **Electric Element Heating Mode**

The electric element will heat the water to the pre-set temperature and turn off once this is reached. The electric element heating mode is classified as a one-shot boost and will automatically turn off once the target temperature is reached. You can activate the electric element in any of the above operating models.



## **Vacation Mode**

For use when away on holidays, enter the date of your return and the smart iStore will not use energy while you're away & prior to your return. Vacation mode reduces energy consumption.

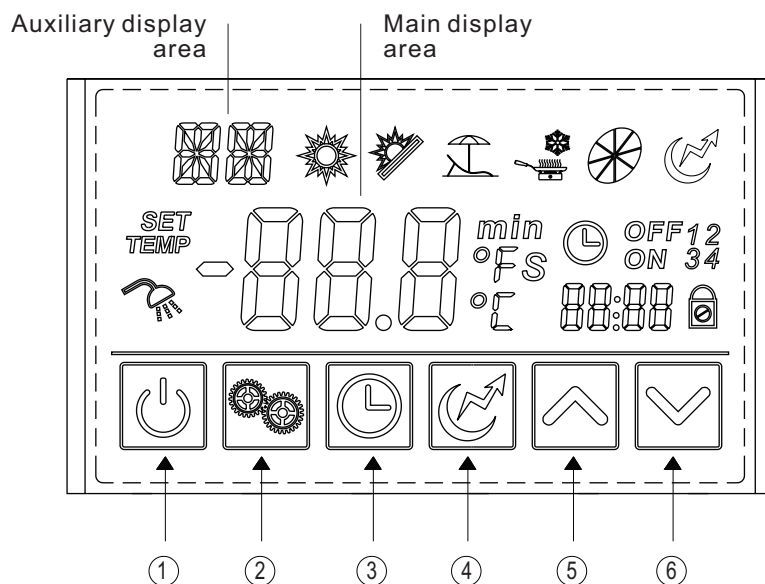


## **Intelligent Mode**

The iStore will monitor and evaluate the ambient temperature and automatically select Economic Heating Mode or Hybrid Heating Mode.

# Functionality

## 5.1 The function diagram of the LED display












### Function of key

| 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.               |




Important - If the iStore display does not detect activity for 15 seconds the screen will automatically lock to prevent any unwanted changes. To unlock the screen, simply press and hold the power button for 5 seconds.


# Functionality

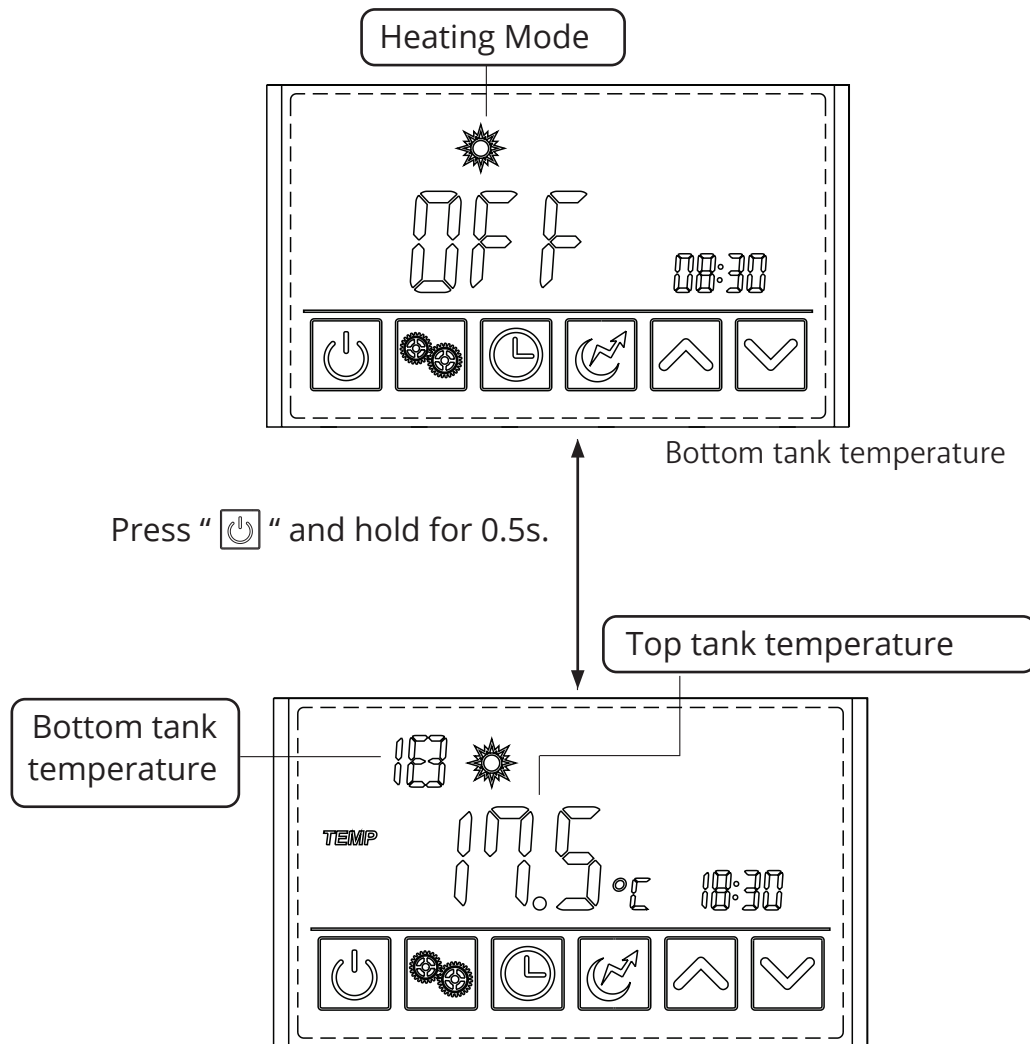
| Status icon   | Name               | What it means  |
|---|--------------------|--|
|    | Hybrid Heating     | Shows that the unit is in hybrid heating mode.   |
|    | Eco Mode           | Shows that the unit is in eco heating mode.  |
|    | Vacation           | Shows that the unit is in vacation mode.   |
|    | Fan                | Shows that the fan is on and the speed of the fan.   |
|    | Electric heater    | Shows that the electric heater is on.  |
|    | Set temp. achieved | Shows that the water temperature has reached the target point and the unit shut off automatically. |
| <i>SET</i>  | Parameter setting  | Shows that the parameter is adjustable.  |
| <i>TEMP</i>   | Temperature        | Shows that the temperature is non-adjustable (measured value).                                     |
|  | Timer & ON         | Shows that the unit will be turned on by the timer automatically.                                  |
|  | Timer & OFF        | Shows that the unit will be turned off by the timer automatically.                                 |
| <i>min</i>  | Minute             | Shows that the main display area displays the minute.  |
| <i>S</i>  | Second             | Shows that the main display area displays the second.  |
| <i>°C</i>   | Centigrade         | Shows that the temperature in Main display area or Auxiliary display area is in C                  |
| <i>°F</i>   | Fahrenheit         | Shows that the temperature in Main display area or Auxiliary display area is in F                  |
|  | Lock               | Shows that the keyboard is locked.   |

# Functionality


## Turn ON/OFF the unit

Press “” and hold for 0.5s and the LED display will turn on the unit and at this time the main display area shows the water outlet temperature.

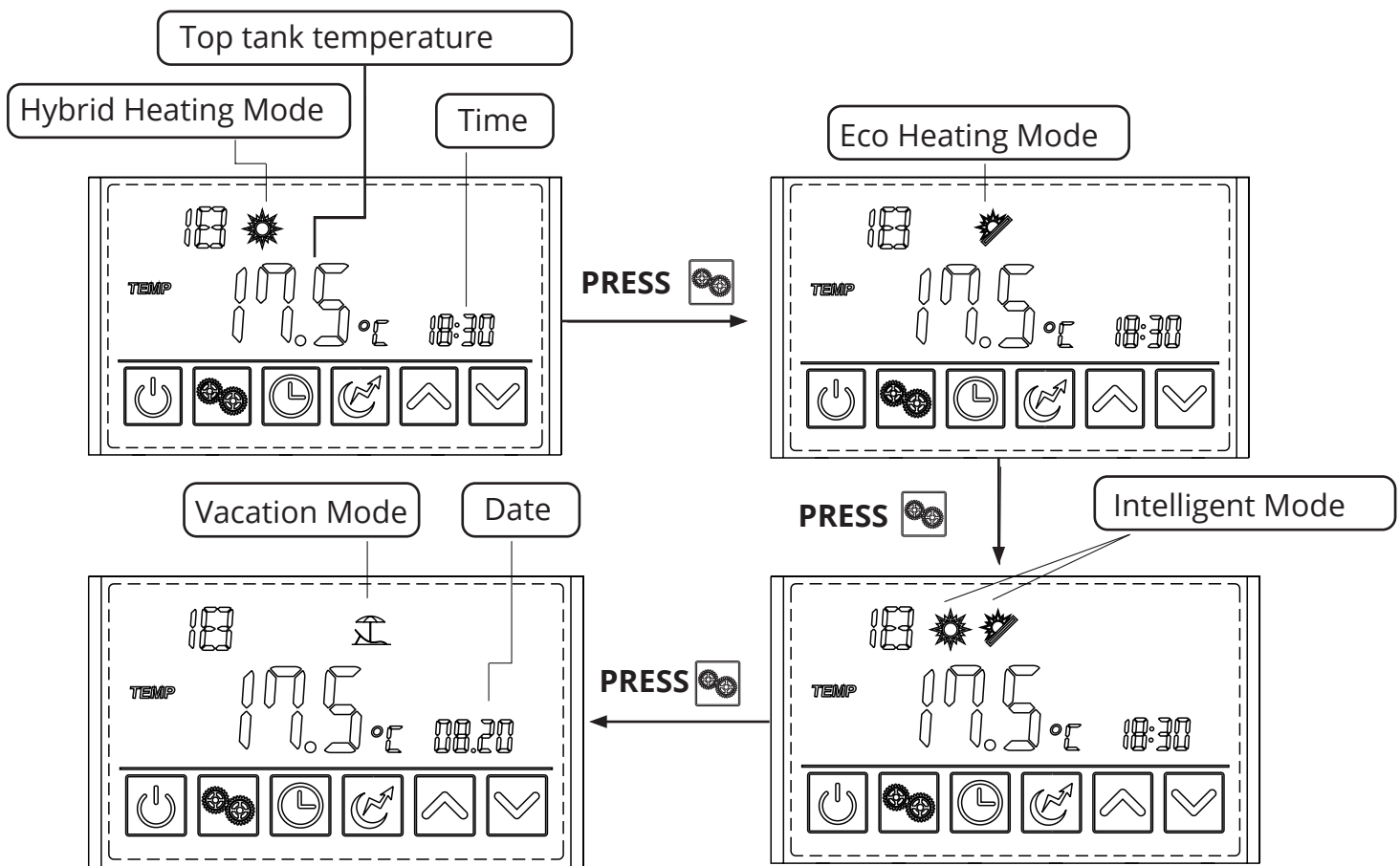
Press “” and hold for 0.5s in the running interface and the LED display will turn off the unit and at this time the main display area shows OFF.



## Mode selection

Press “” to select the modes including Hybrid Heating, Eco Mode, Intelligent and Vacation in the standby or running interface.

# Functionality



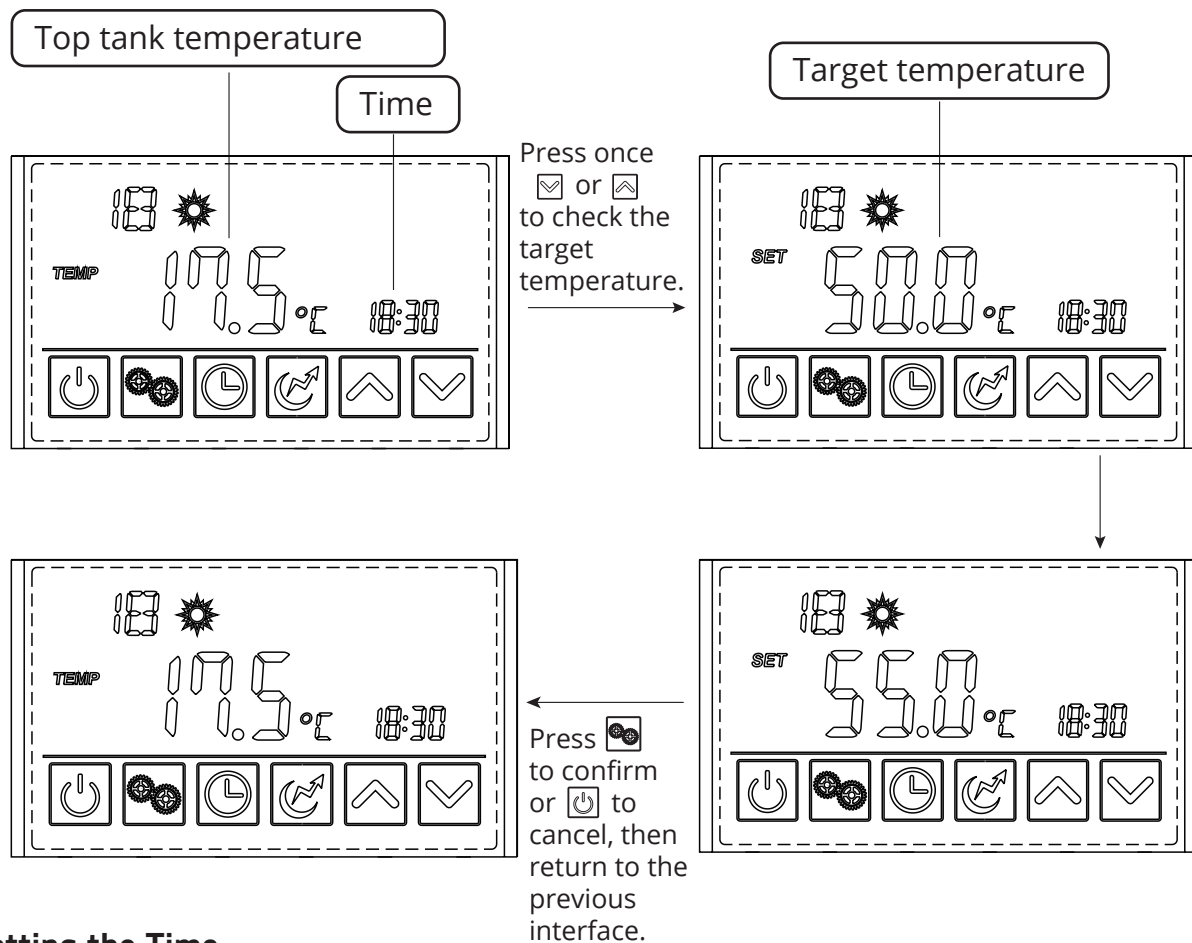
## Target temperature checking and settings

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 55° to 60° when the actual outlet water temperature is 18°.

iStore strongly recommends that 60° C is the default setting for optimal hot water delivery.

# Functionality

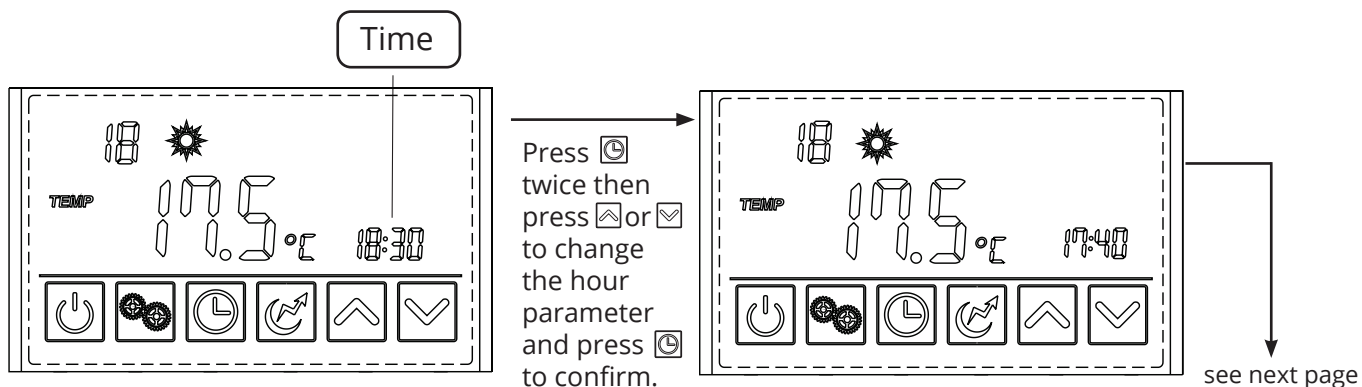


## 5.2 Setting the Time

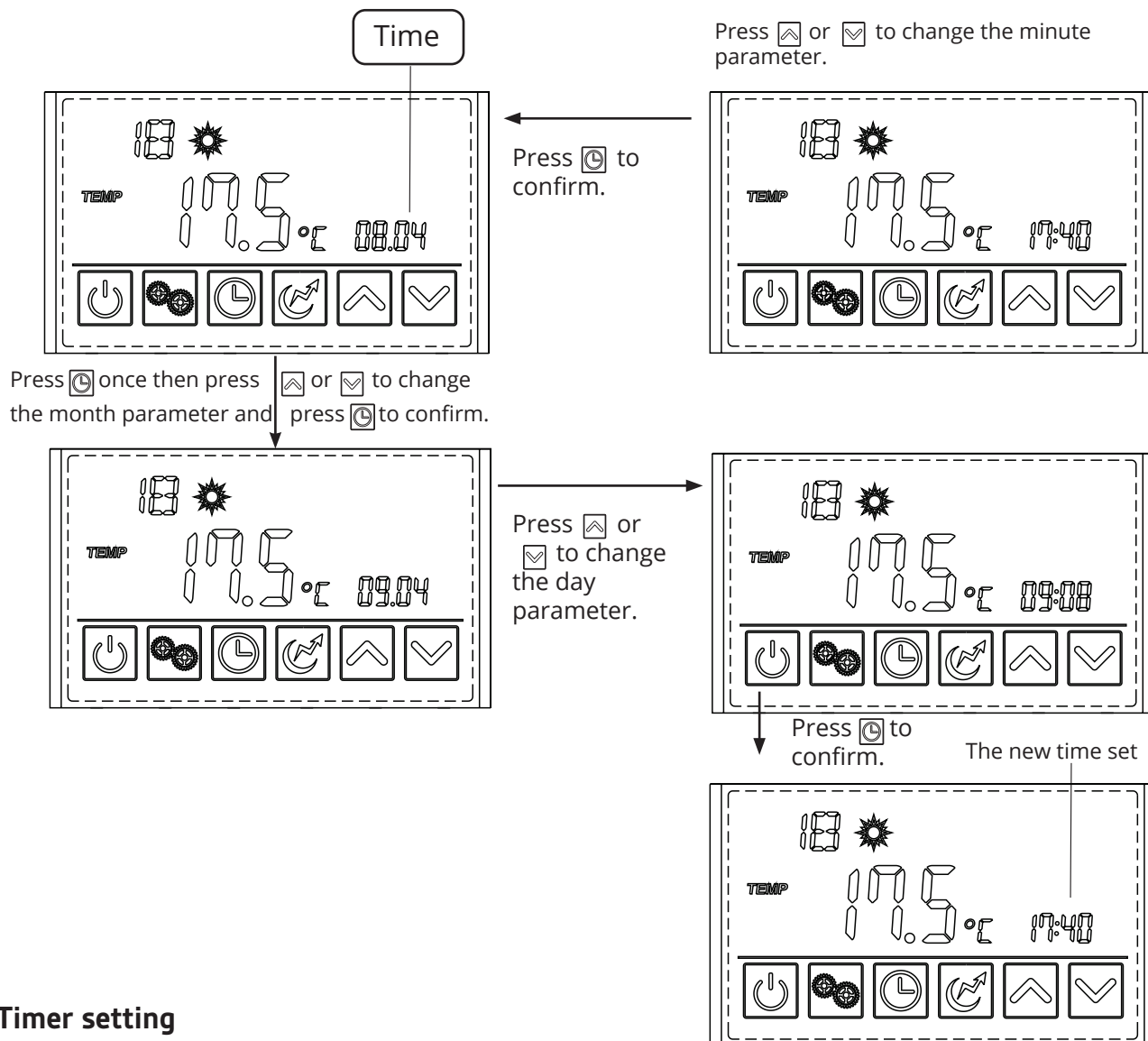
To the set the time of day press " " once, the time parameter will flash. When pressing " " again, the hour parameter will flash then press " " or " " to change it. After making the changes to the parameter, press " " to confirm, then change the minute parameter as well as the date parameter in the same way. If no operations are performed on the keypad for 10 seconds, 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.



## 5.2 Setting the Time



## Timer setting

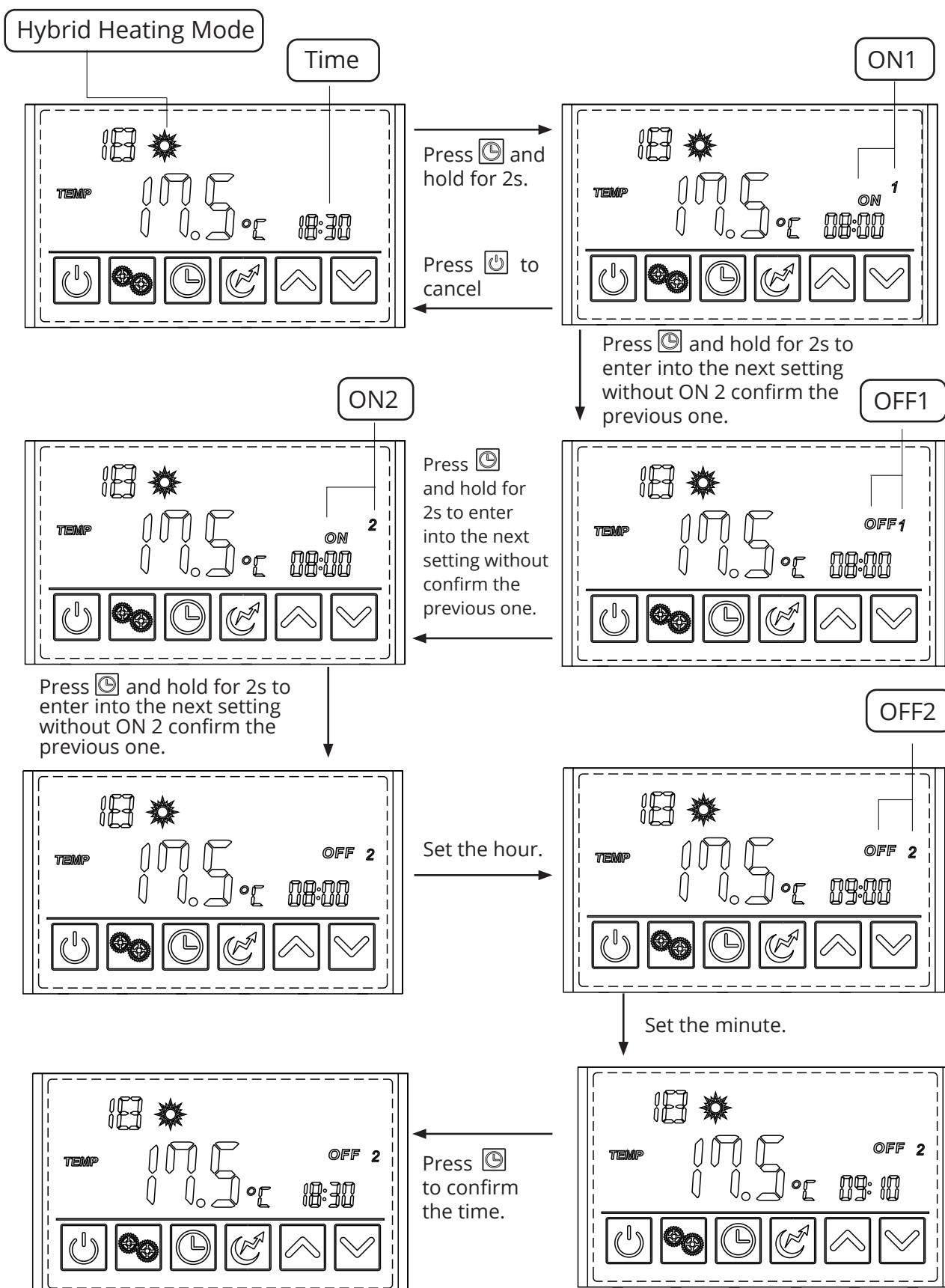
**Under the Hybrid Mode, Eco Mode, Intelligent Mode, you can enter the timer setting.**

Press " " and hold for 2s, the "ON " and " 1 " will flash, and then you can set the turn on time of timer1. After finishing, " OFF " and " 1 " will flash, that means you can set the turn off time of timer1. The "ON " and " 2 " will flash after finishing the timer1 setting, you can set the turn on time of timer2. After finishing, the " OFF " and " 2 " will flash, and then you can set the turn off time of timer2. Press " " again to save and back to the interface. If you don't need to set the timer2, you can press the " " to save after finishing the timer1 setting. You will find the " ON " and " 2 " flash. No operation for 5s, the program will back to the interface automatically.

**Note:** When press " " and hold for 2s, the " ON " and " 1 " will flash. It is not necessary for you to set the turn on time of the timer1. You can sequentially press " " for 2s to enter to the turn off time of timer1. So does the timer2. Or press " " or " " to circularly display.

**Timer Cancel:** Press " " and hold for 2s to enter into the interface, and then press " " to cancel all the operation. Please see the following picture for more details.

# Functionality

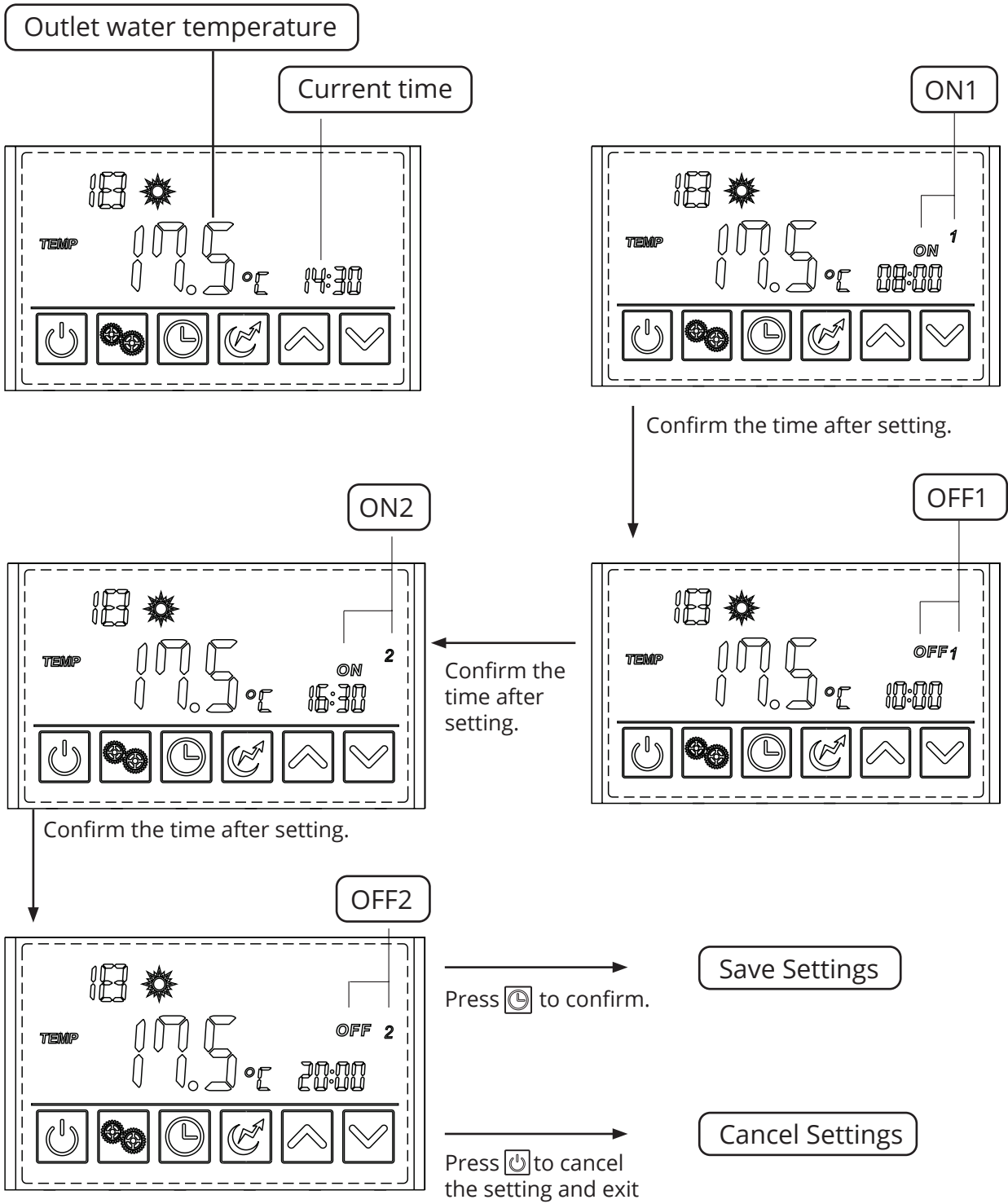




# Functionality

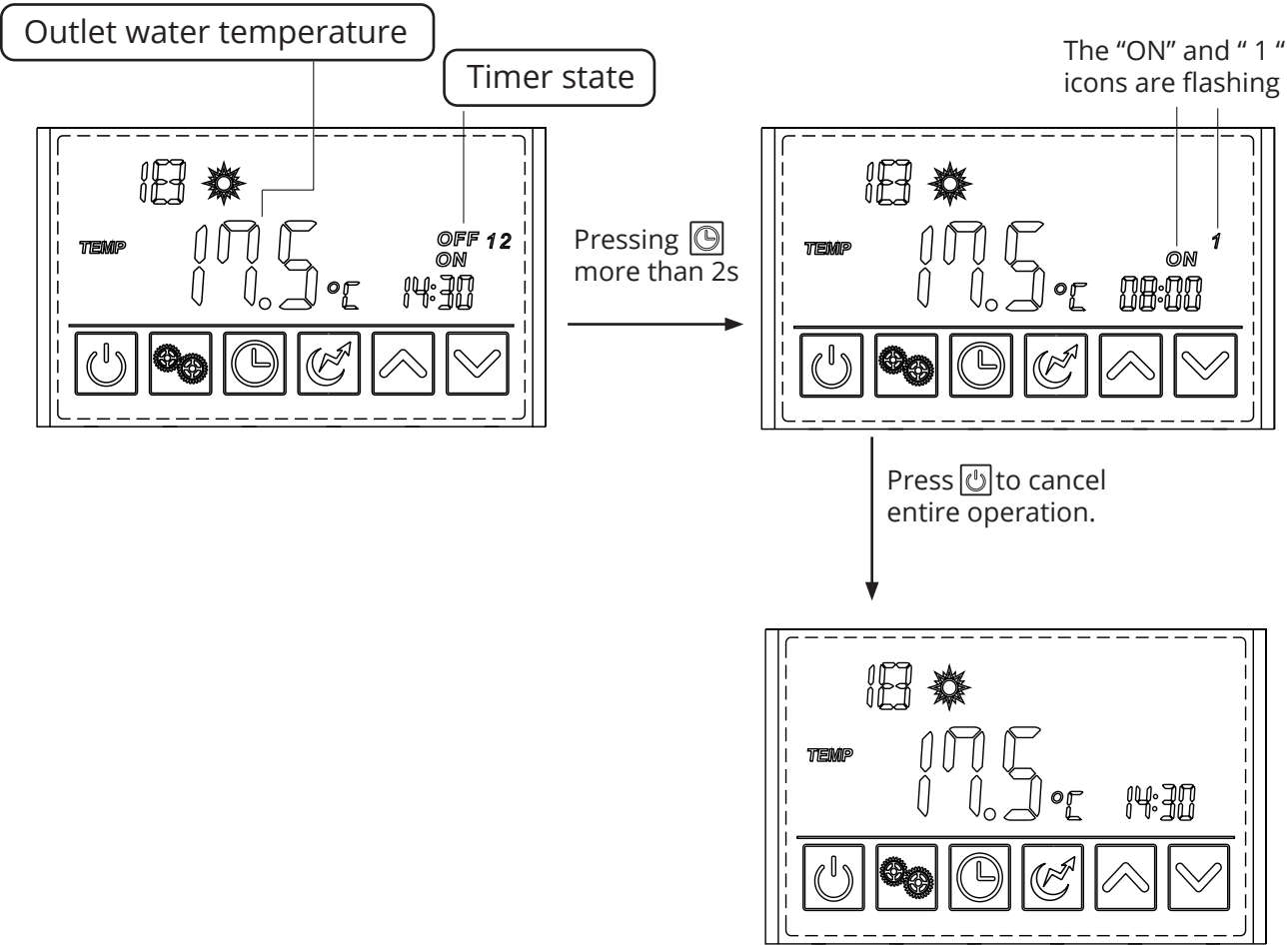


**EXAMPLE ONLY:** Running period 1: 8:00~10:00; Running period 2: 16:30~20:00.




# Functionality

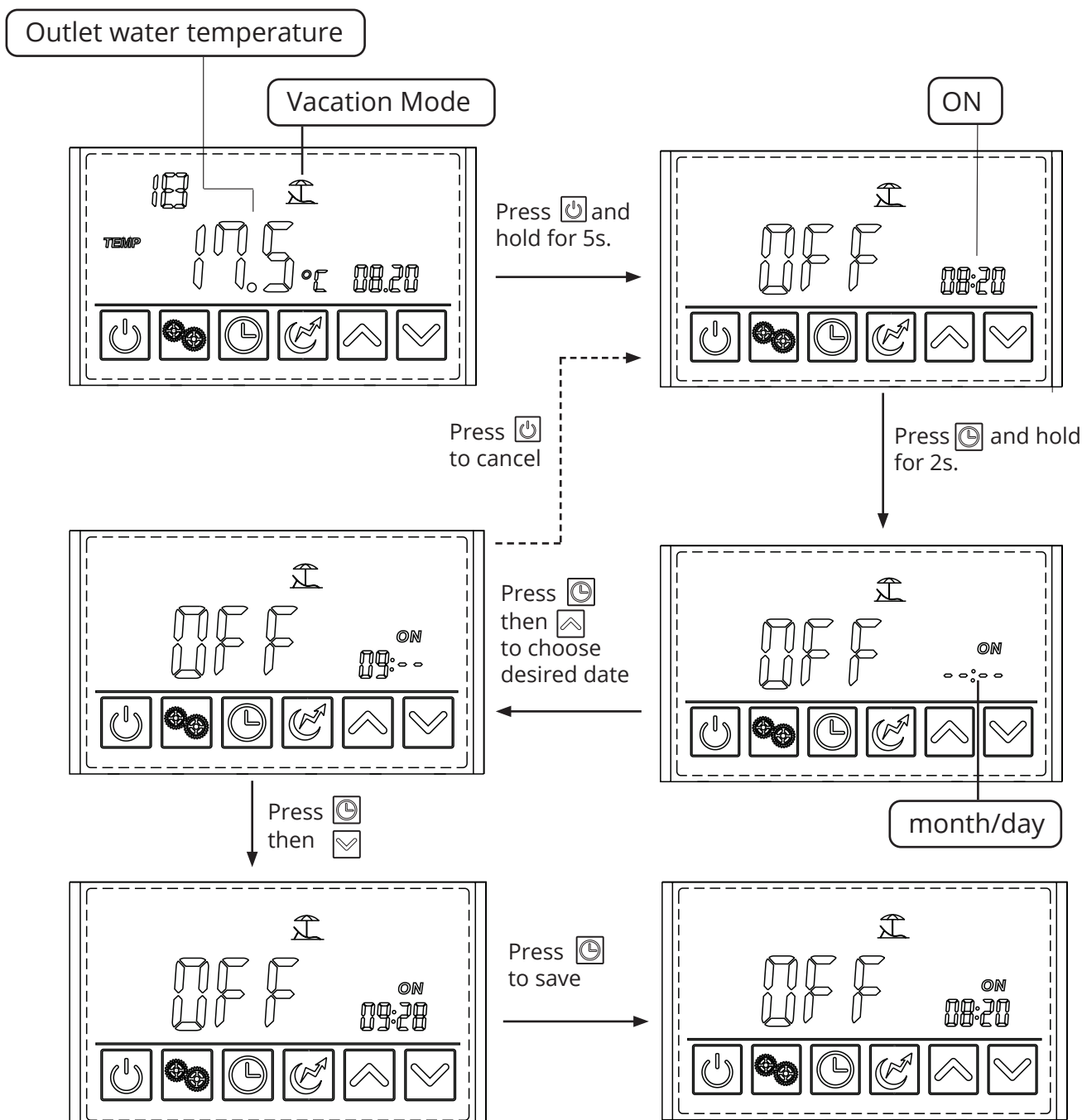
## Cancelling the Timer Setting



# Functionality

## In the Vacation Mode

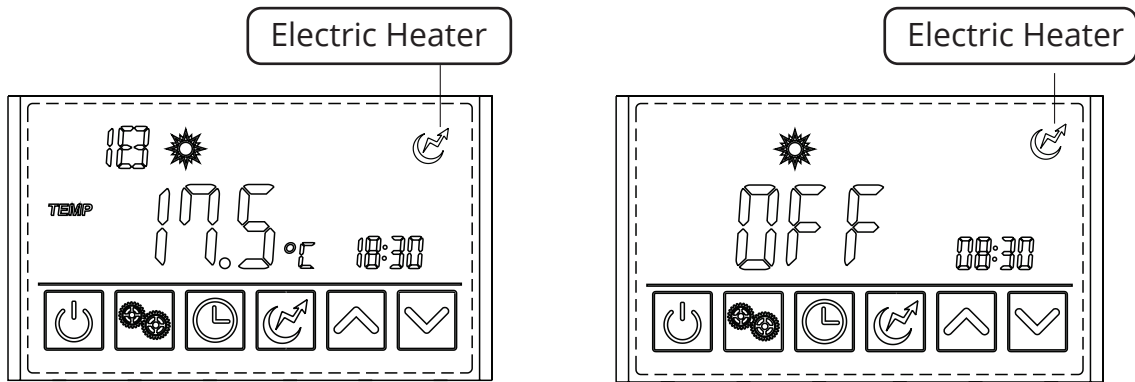
Press  and hold for 2s to enter into the timer setting interface. The symbol “ON ” and the date parameter are flashing at this time. Then set the date in the same way as time of day setting. Refer to page 12.



# Functionality

## Electric heater setting

The electric heater can be turned on when the unit is heating or standby.  
Press "🔥" once to turn on the electric heater and press "🔥" again to shut it off.



# Maintenance and Repair

## 6.1 Typical failure and solutions

Maintenance of the system is very easy and includes the following tasks:

| Malfunction                         | Display | Problem   | 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                               |
| Solar temp. Failure                 | P034    | The solar temp. Sensor is open or short circuit                         | Check or change the solar 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     | Water supply turned off or possible valve blockage on Cold Water Supply | Release PTR Valve to check if water is in cylinder                         |
| Electric-heater overheat protection | E04     | Water flow volume not enough. Water system pressure difference is small | Check the flow volume,water system is jammed or not                        |
| Anti-freeze protection              | E07     | Water flow volume not enough. Water system pressure difference is small | Check the flow volume,water system is jammed or not                        |
| Communication failure               | E08     | Wired remote control with master signal failure                         | Check the connection line between the wired remote control and motherboard |
| Winter frost protection             | E09     | Ambient temperature is too low  |  |

### How to drain the water heater

Warning: Before commencing this procedure, ensure that building occupants are notified to stay clear of the iStore system components and building perimeter as steam or hot water may be discharged from pipes or components

1. Turn off the electricity supply and tag out
2. Close the cold-water mains supply via the Isolation Valve
3. Release pressure from the system by activating the PTR valve and leave open by location the lever in the centre position
4. Locate drain port at the bottom of the tank and unscrew the plug.
5. The system will now drain all water

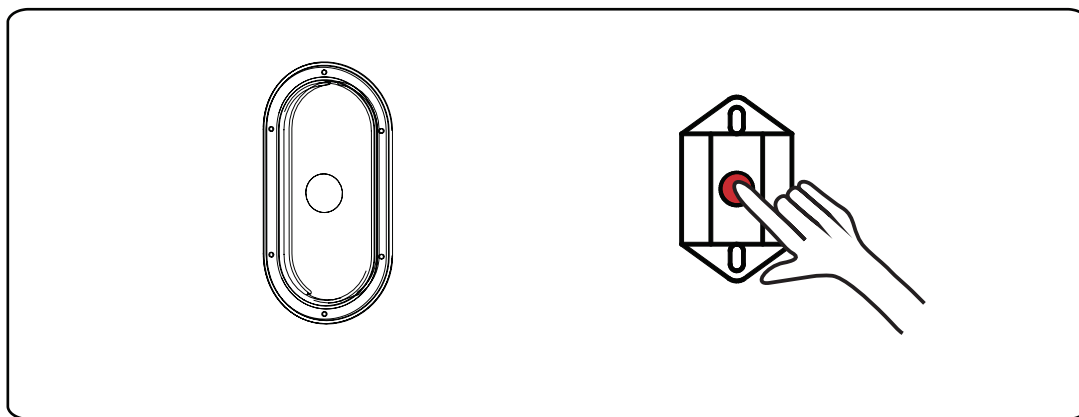
Note: At this stage the water heater can be flushed by removing the hot water outlet connection and hosing out any debris that may be present.

# Appendix

## Use of the overheating protector

The overheating protector is used to turn the power off, preventing the water from being heated too high. To return the unit to its normal operational status it will have to be re set manually by qualified personel.

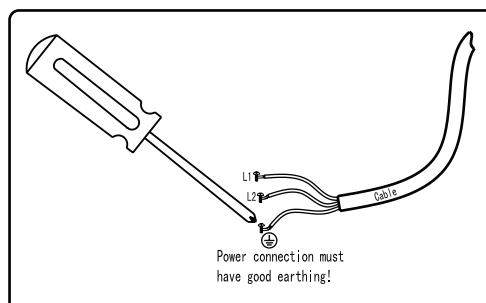
The thermal cut-out is pre-installed in the system, no on-site installation or commissioning is required. The recommended factory setting is 60° Celsius to prevent the thermal cut-out from operating. The thermal cut-out operation temperature is 85° Celsius.



loosen the screws and open the cover

Push the red button

## Earthing



# Trouble Shooting

| PROBLEM   | SOURCE  | EXPLANATION   |
|---|---|---|
| Water not as hot as previous hot water system                   | Tempering Valve installed   | A tempering valve must be installed on every solar hot water system. Tempering valves will mix water down to 50°C.  |
| No Power at Screen  | Circuit breaker turned off<br>AC Isolator Turned Off<br>Power surge                       | Check Circuit breaker in meter box<br>Check AC Isolator in on position<br>Contact iStore  |
| No Hot Water - 1  | Faulty Tempering Valve  | Pull PTR lever and check if water is hot. If water is hot, contact a licensed plumber to replace tempering valve.   |
| No Hot Water – 2  | Off-Peak Tariff   | Check screen to see if power is available during your nominated off-peak tariff heating times. Refer to your electricity distributor should power not be available from off-peak supply   |
| No Hot Water – 3  | Timer not set correctly   | Ensure that timer is set to heat to your hot water demands. A secondary heating cycle maybe required if large hot water demand is used twice per day. Refer above instructions for timer settings   |
| Luke Warm Hot Water - 1   | Tempering Valve   | Tempering valve not mixing water correctly. Contact a licensed plumber to inspect / replace the valve   |
| Luke Warm Hot Water – 2   | Excessive Hot Water load  | Unexpected additional hot water load. Plan hot water usage to be staggered, not continuous consumption. Wait for system to re-heat. Increase timer setting if in use. Utilise hybrid mode to decrease re-heating time.  |
| Overflow pipe is dripping                                       | Pressure Temperature Relief Valve (PTR) / Expansion Control Valve (ECV) where applicable. | An 850kPa and 99°C PTR valve is used on the iStore water tank, which is located on the side of the water tank and is essential for its safe operation. The PTR valve is designed to allow 3-5% of total tank volume to discharge during heating to allow for hot water expansion.                     |
| Water pressure is slightly lower than previous hot water system | Pressure Reduction Valve (PRV)  | A pressure reduction valve has been installed to limit the inlet pressure to your new iStore Water Heater. This device regulates the incoming pressure & increases life of the cylinder. This device will also protect your cylinder if the mains pressure is increased by the local water authority. |

# Terms and Conditions of Warranty

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1. For all warranty issues please call iStore on 1300 552 619 or [info@istore.net.au](mailto:info@istore.net.au)
2. This Warranty is effective for all iStore Hot Water Systems manufactured and installed after 1 November 2012.
3. If the customer has not paid in full for the iStore Hot Water System then this Warranty does not apply.
4. iStore Hot Water System and its components are covered by a warranty against defective factory parts or workmanship from the date the iStore Hot Water System is installed for the relevant period for such component as outlined in Table 1 - Warranty Periods. If the date of installation is unknown, the Warranty commences one (1) Month after the date of manufacture.
5. This Warranty is for normal domestic use of the iStore Hot Water system only.
6. To the extent a claim falls under the "Parts Only" Warranty Period the Warranty covers the replacement only of such failed component in the iStore Hot Water System free of charge. Subject to an area within a 30-kilometre radius of the iStore Branch or Authorised Distributor from where the unit was purchased. Customers outside this area will be subject to any freight costs and any travelling charges incurred by the iStore representative carrying out the rectification. "Parts Only" Warranty period excludes labour.
7. To the extent a claim falls under the "Parts and Labour" Warranty Period, the Warranty covers the repair and/or replacement of such failed component in the iStore Hot Water System and any associated labour costs free of charge. Subject to an area within a 30-kilometre radius of the iStore Branch or Authorised Distributor from where the unit was purchased. Customers outside this area will be subject to any freight costs and any travelling charges incurred by the iStore representative carrying out the rectification.
8. The decision to repair or replace the component the subject of the Warranty will be entirely at the discretion of iStore.
9. Where a iStore Hot Water System or a component thereto is repaired or replaced by iStore, the balance of any original Warranty Period will remain effective. The repaired or replaced part does not carry any additional warranty period.
10. Upon installation of the iStore Hot Water System, it is the consumer's responsibility to register their warranty on-line [www.istore.net.au/warranty-registration](http://www.istore.net.au/warranty-registration). Consumer must provide the following detail - home owners detail, product model number, product installation date, product serial numbers, licensed plumber contact details. Once you have successfully completed the on-line registration form, you will be notified of successful warranty registration. If you do not have access to the internet, please contact iStore on 1300 552 619 to register your warranty. To be eligible to make a claim under this warranty, consumer must register their warranty within 6 weeks of the installation.
11. The iStore Hot Water System must be installed in accordance with iStore's installation instructions, and all relevant local, state and national statutory requirements, including but not limited to, AS3500,4 & 5, AS5601, AS3000 and AS2712.
12. Installation must be completed by licensed plumbers and electricians that are licensed in the State or Territory in which the installation is completed. Installation must include all relevant



# Terms and Conditions of Warranty

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valves as required by federal/state regulations & shall incorporate a 500kPa Pressure Reduction Valve. Installation of a Pressure Limiting Valve does not comply with manufactures installation instructions. Failure to incorporate a 500kPa Pressure Reduction Valve will void this warranty.

13. The electrical system components must be installed in a domestic application and connected to a 240V power supply by a qualified electrician in accordance with AS3000.
14. iStore reserves the right to alter the design, components or construction to its iStore Hot Water System. Such alterations shall not constitute a defect in design or construction under this Warranty. See Warranty Table on next page.
15. Any claim under this Warranty must include full details of the defect and/or damage to the iStore System. All claims must be made within one (1) month of detection of the defect.
16. Dated proof of purchase is required prior to commencement of any work under this Warranty. This Warranty does not apply to any defects or damage NOT due to faulty factory parts or workmanship including, but not limited to, defects or damage caused by or resulting from: (a) accidental damage, storm damage, vandalism, failure due to misuse or abuse, or neglect of any kind; (b) incorrect or improper installation of the iStore Hot Water System, including but not limited to, installation otherwise than in accordance with the instructions contained in the installation manual supplied by iStore or incorrect system selection; (c) alteration or repair of the iStore Hot Water System other than by a licensed plumber/electrician/refrigeration mechanic or by an approved iStore agent; (d) attachment of any parts or accessories other than those manufactured or approved by iStore; (e) freezing in regions with minimum temperatures below -10°C; (f) the power supply to the iStore Hot Water System being cut; (g) power surges; (h) animals, birds and/or rodents; (i) excessive water pressure, negative pressure (partial vacuum), excessive temperature, corrosive atmosphere, faulty plumbing and/or electrical wiring; (j) sludge/sediment as a result of connection to a water supply from unfiltered or treated sources i.e. spring, dam, bore, river or town supply from a bore; (k) contamination and corrosion from particles in the water supply; (l) serial tags/stickers on any of the components being removed or defaced; (m) the iStore Hot Water System being relocated from its original point of installation; (n) the water stored in the cylinder exceeding at any time the following levels: (o) If penetrations are made through the tank skin by the installer, warranty will be void immediately; (p) Damage caused by transport; (q) if the system has been re-installed at a location other than the original location.

|                         |                       |
|-------------------------|-----------------------|
| Total hardness          | 200 mg/litre or p.p.m |
| Total dissolved solids  | 600 mg/litre or p.p.m |
| Electrical conductivity | 850 $\mu$ S/cm        |
| Chloride                | 250 mg/litre or p.p.m |
| Magnesium               | 10 mg/litre or p.p.m  |
| Sodium                  | 150 mg/litre or p.p.m |
| pH                      | Min 6.5 to Max 8.5    |

# Terms and Conditions of Warranty

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17. iStore does not warrant any work conducted by a third-party installer of the iStore Hot Water System.
18. This Warranty only applies to the iStore Hot Water System and its components and does not cover any plumbing or electrical associated parts, including but not limited to any parts supplied by any person installing the iStore Hot Water System.
19. To the extent permitted by law, iStore shall not be liable under this Warranty for any consequential loss or damage or any incidental expenses resulting from any breach of this warranty, including but not limited to, claims for damage to buildings, roofs, ceilings, walls, foundations, gardens, personal belonging or household effects, fixtures and fittings. Or any other consequential loss, damage or inconvenience, either directly or indirectly due to leakage from the iStore Hot Water System or any other matter related to the system or its operation.
20. The benefits conferred by this Warranty are in addition to all other rights and remedies in respect of the iStore Hot Water System, which the purchaser has under the Competition and Consumer Act 2010 and consumer protection legislation of the States and Territories. Nothing in this Warranty has the effect of excluding, restricting or modifying those rights.
21. Goods presented for repair may be replaced by refurbished goods of same type rather than being repaired. Refurbished parts may be used to repair/replace the goods.
22. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
23. iStore strongly recommends that the consumer update their household insurance policy.

## Component Warranty Table

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| COMPONENT  | WARRANTY PERIOD<br>(Parts Only) | WARRANTY PERIOD<br>(Parts and Labour) |
|--|---------------------------------|---------------------------------------|
| iStore Glass Lined Tank (Does not include element, thermostat, PTR Valve or sacrificial anode) | 5 years                         | 5 year                                |
| Refrigeration  | 5 years                         | 5 years                               |
| Electrical (controller and sensor leads)   | 5 years                         | 5 years                               |
| Sacrificial Anode & PTR valve  | 1 year                          | 1 year                                |
| Air Filters & Consumable Items   | 1 year                          | 1 year                                |