

# 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 Installation 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 |




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





## INSTALLATION WARNING

|   |  |
|---|--|
|  | The iStore shall be installed in strict accordance with local wiring regulations and equipped with a power supply containing a ground/earth conductor.   |
|  | The iStore is not intended for use by children, or persons with reduced physical sensory or mental capabilities, lacking relevant skill or experience, without suitable supervision.   |
|  | The iStore must be installed by a licensed trade person and in accordance with: <ul style="list-style-type: none"> <li>• This Installation manual</li> <li>• AS/NZS 3500.4 - "National Plumbing and Drainage Code Hot Water Supply Systems-Acceptable Solutions"</li> <li>• AS/NZS 3000 - Wiring Rules</li> <li>• Local authority regulations</li> <li>• BCA - Building Codes of Australia</li> <li>• All local Occupational Health and Safety (OH&amp;S) Regulations</li> </ul> |
|  | 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>Electrical Connection | In accordance with AS/NZS 3000 Wiring Rules this unit requires an appropriately sized circuit and protection to meet the demand of the chosen size unit. Refer to the Rated Current Input in section 2.3 page 9 and/or the tank label. |


## 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 |

## RELOCATION 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

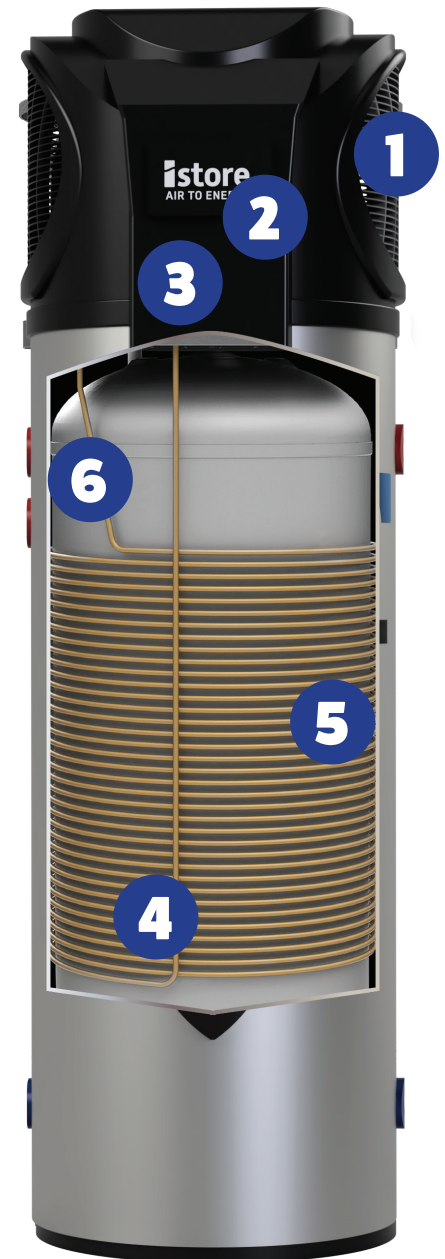
|   |                           |
|---|---------------------------|
|  | DANGER - High Temperature |
|---|---------------------------|

# iStore Basics

## 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 lower section of the tank has dropped 11 degrees below the target temperature.



### Electrical Connection:

The installation of the iStore must strictly follow the AS/NZS 3000 wiring rules and local wiring regulations, ensuring that a licensed electrician deems the circuit suitable. Adequate overload protection and a residual current device of appropriate size should be installed. Offpeak and controlled load circuits are acceptable as long as there is a manual override option for maintenance and support during business hours.

### 500kPa Pressure Reduction Valve:

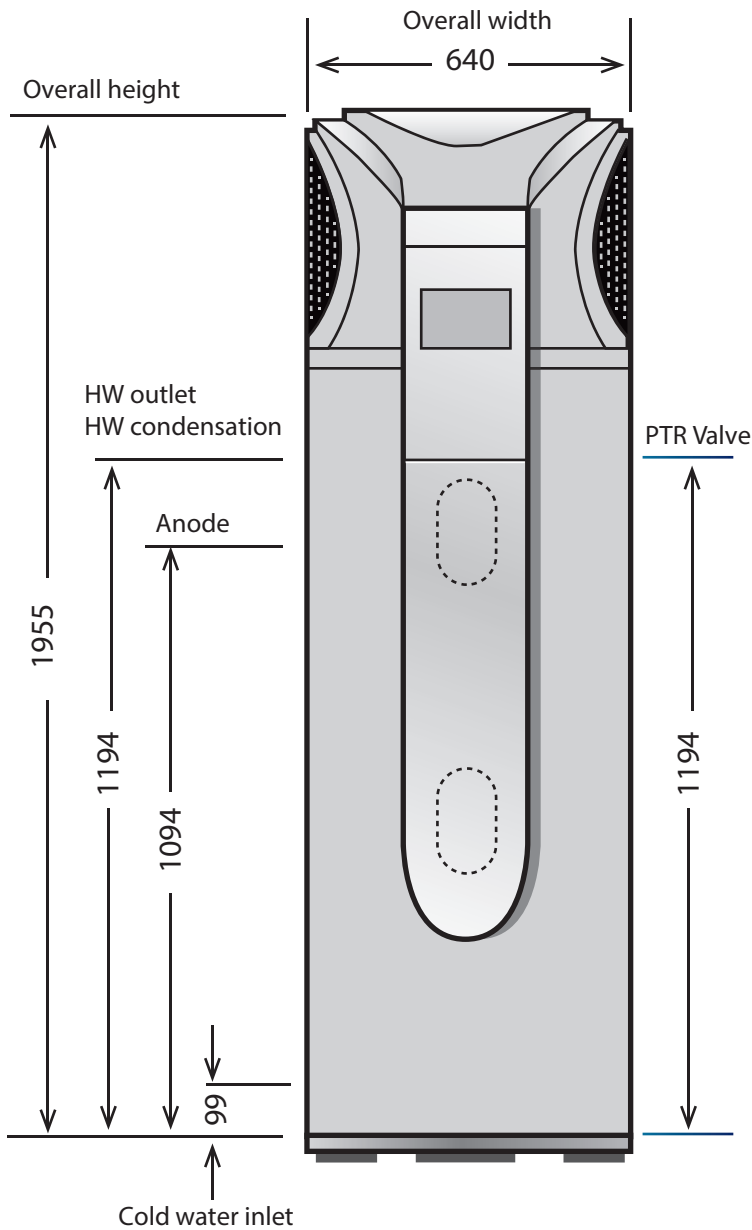
Pressure Reduction Valve (PRV 500) - A pressure reduction valve of 500kPa maximum must be fitted immediately downstream of the cold water non-return isolation valve. Failure to install a pressure reduction valve will void the warranty. Please note cold water supply line to the tempering valve must be 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.

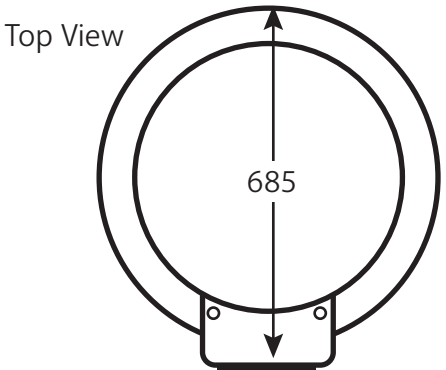
# Specifications

## 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)             | 130  |

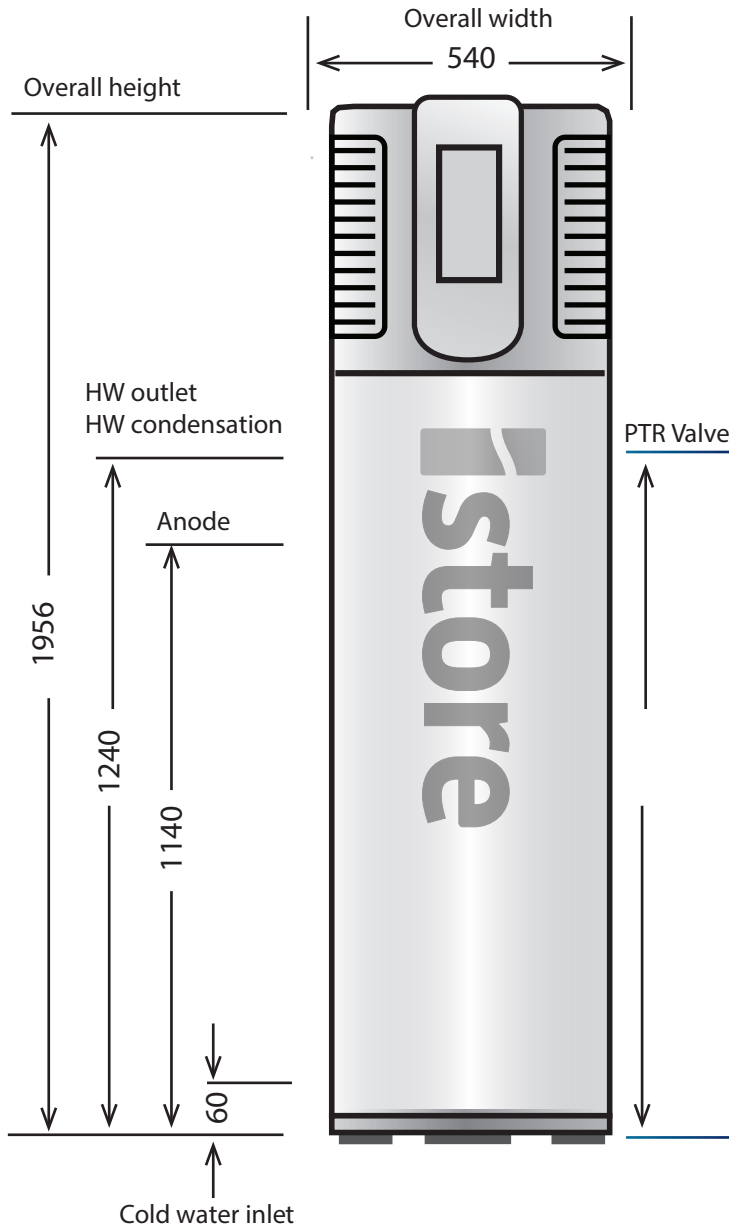


# 270L iStore

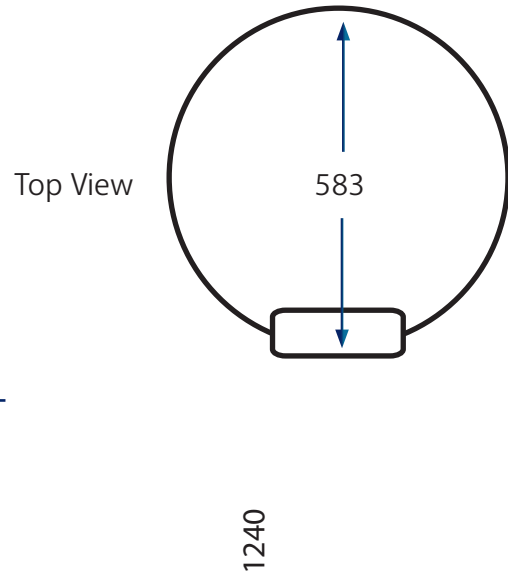
# Specifications

## 2.2 Dimensions 180L

Unit: mm



| Dimensions                  |      |
|-----------------------------|------|
| Height (mm)                 | 1957 |
| Diameter (mm)               | 540  |
| Height to water inlet (mm)  | 60   |
| Height to water outlet (mm) | 1240 |
| Hot water condensation (mm) |      |
| Height to PTR Valve (mm)    |      |
| Height to Anode             | 1140 |
| Net weight (Kg)             | 93   |



# 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    | 3.9     |
| 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 3 minutes.

## Start up delay protection

If the unit stops and you restart 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  $-7^{\circ}$  ~  $50^{\circ}$  Celsius.

## Thermal cut-off safety device

If the water temperature reaches  $85^{\circ}$  C, the power of unit will be cut off (refer to manual to reset).

## Pressure Temperature Relief Valve (PTR)

An 850kPa, 10kW and  $99^{\circ}$ 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 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

**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 I.E. THE INFIRM AND CHILDREN.**

As solar water heaters 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.

**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.**

Hot water systems can store water at temperatures that can cause scalding. Water temperatures over 50°C can scald and care needs to be taken to ensure that injuries do not occur through incorrect use of your water heater.

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.



## **GENERAL SAFETY INSTRUCTIONS**

**The installation of the iStore solar hot water systems requires the expertise of a licensed professional. The installation process must adhere to the guidelines set forth in the National Plumbing code (AS/NZS 3500.4), Australian Electrical Wiring Rules (AS/NZS 3000), as well as all applicable local plumbing and electrical regulations.**

The electrically operated components of this water heater operate on 240v AC power.

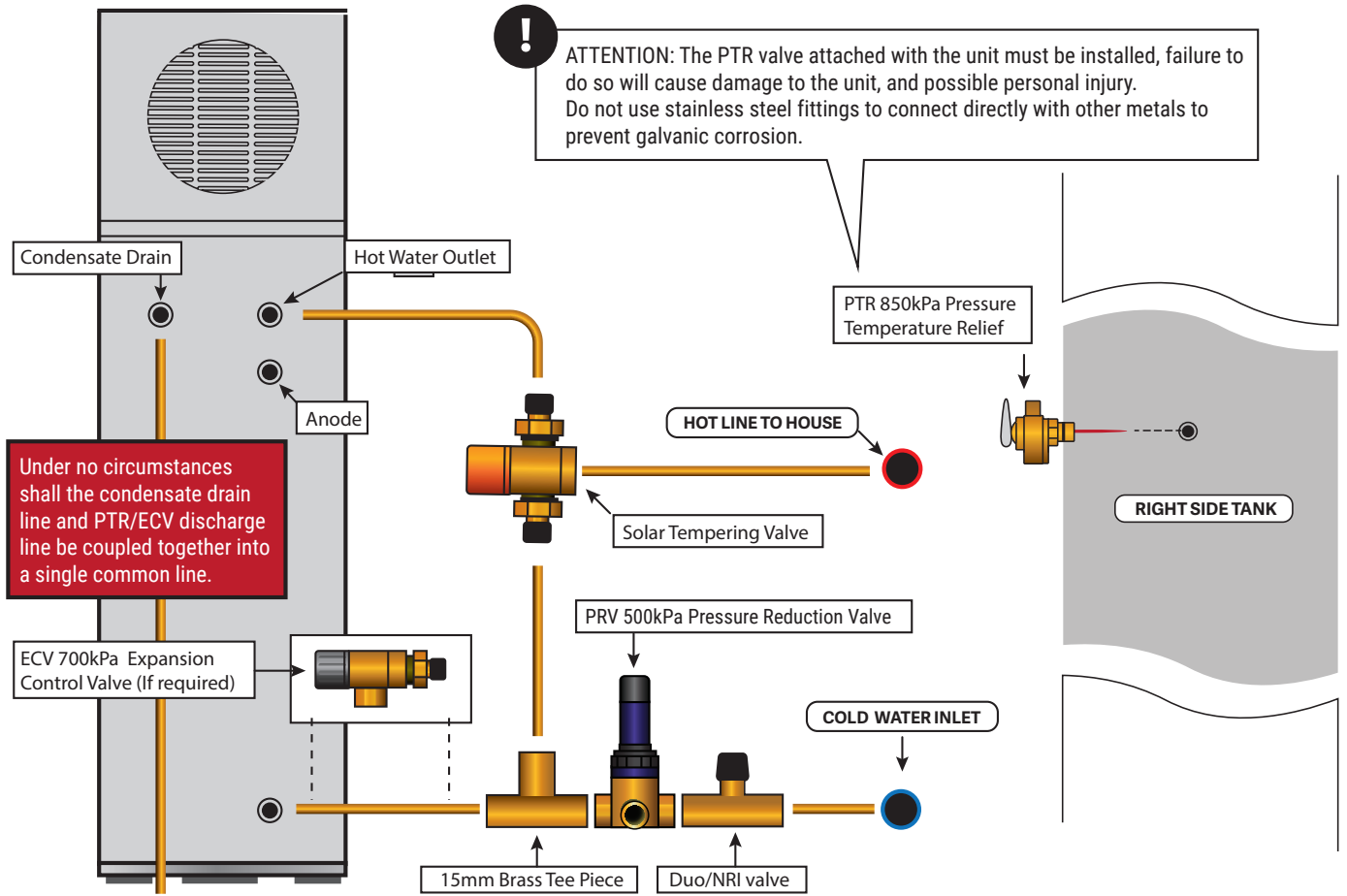
The removal or attempted alteration of any electrical component must be conducted by a qualified electrical service person.

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

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.

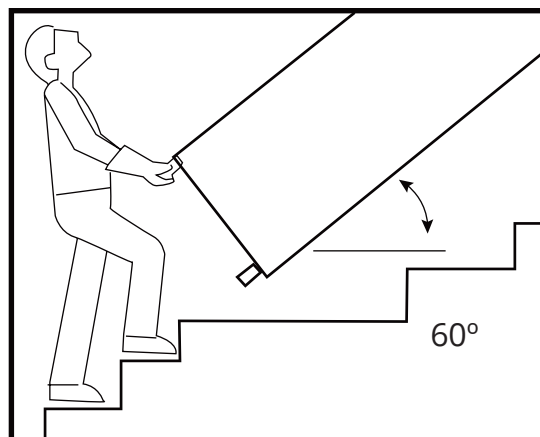
### Transport Using a Forklift

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.



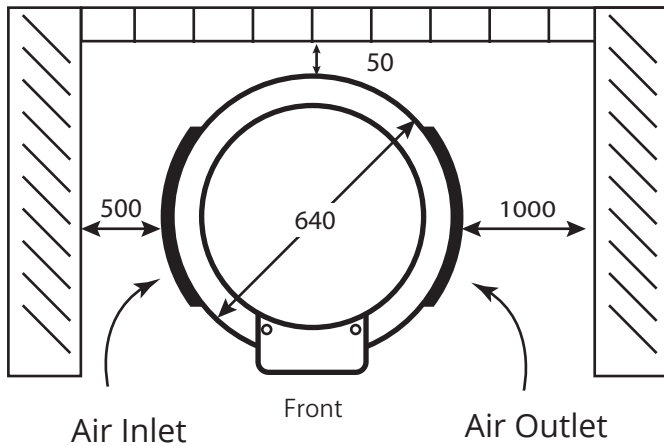
**CAUTION: TOP HEAVY. HIGH CENTRE OF GRAVITY**

# Installation

## 4.3 Installation Space

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

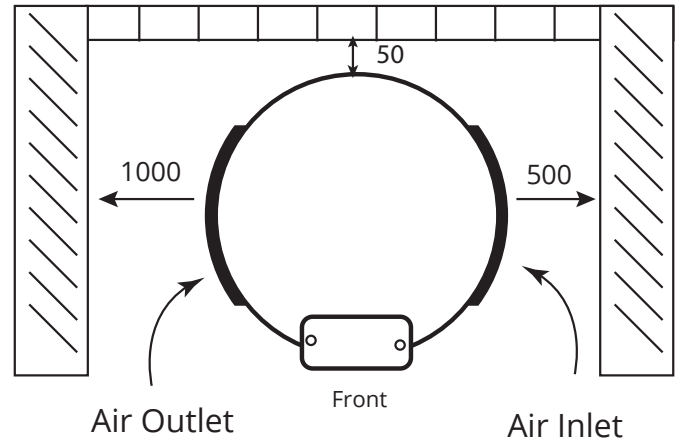
Diagram 1a. Top View



**270L iStore**

Diagram 2a. Top View

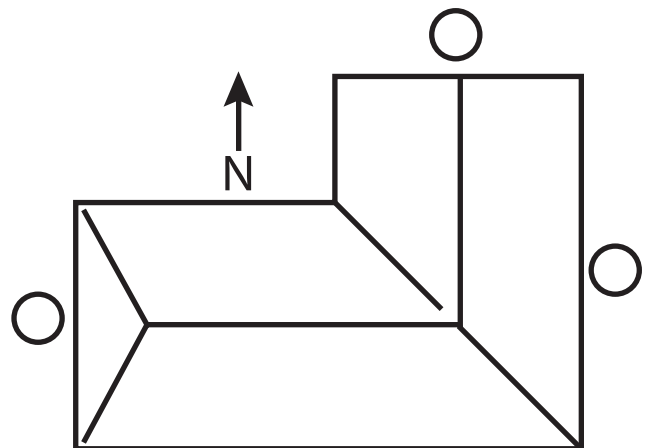
unit: mm



**180L iStore**

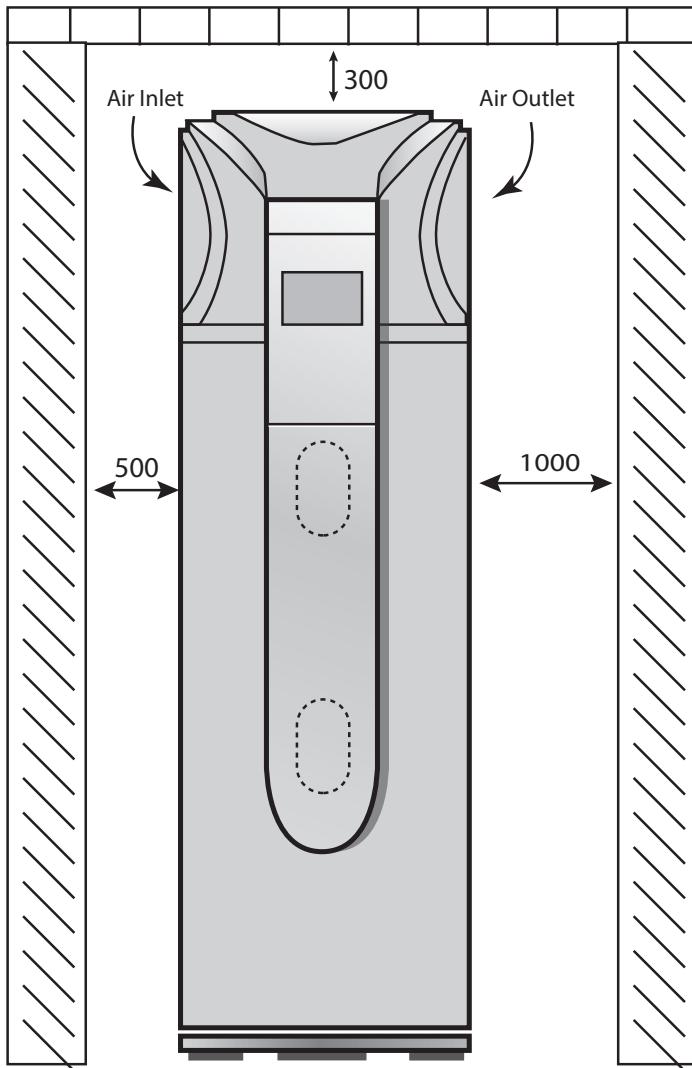
## Tank Location

- 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

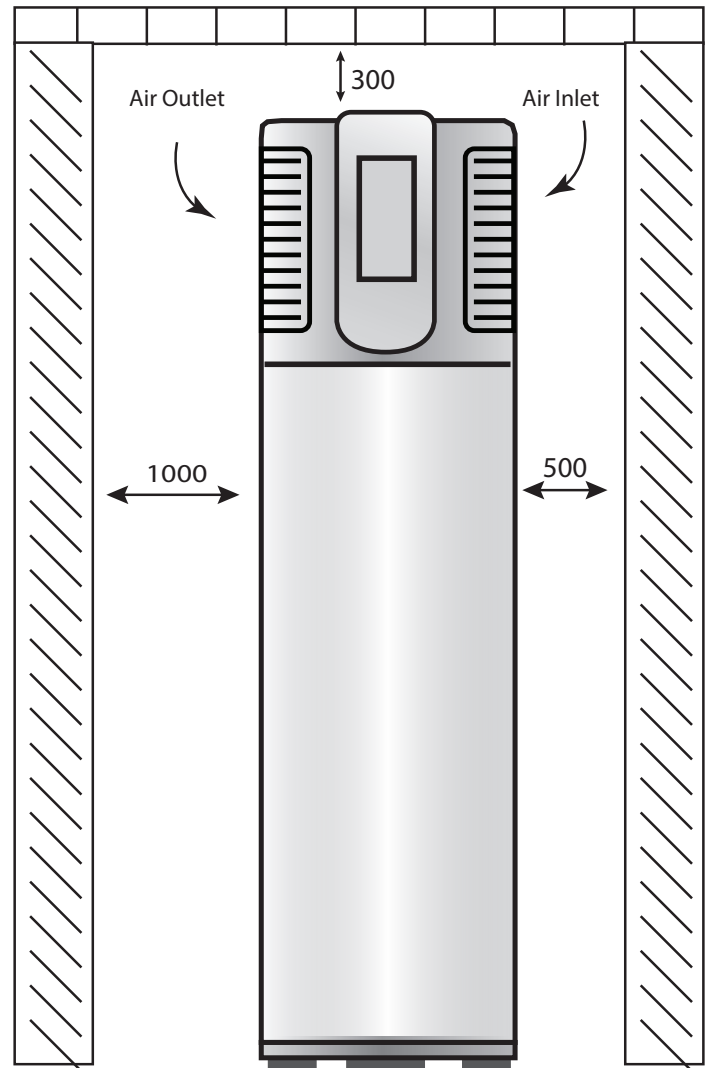
Diagram 1b. Front View



**270L iStore**

Diagram 2b. Front View

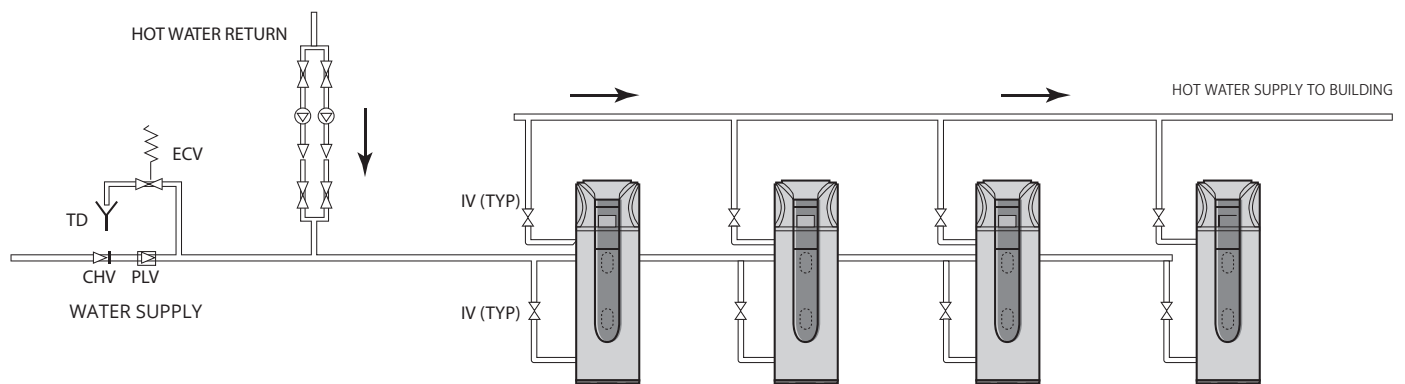
unit: mm



**180L iStore**

# Installation

## 4.5 Multi-System Configuration



### Cable Connection

- This unit requires an isolating point 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 preset 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 iStore 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 m3/h minimum requirement



# Intelligent Operating Modes

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The Federal Government Clean Energy Regulator specifies how the iStore compressor hot water systems must operate in Australia and as such how the computer control operates. Intelligent and Hybrid modes are for overseas models and effectively overridden to Economic (ECO) mode in Australia.



## **Economic Heating Mode (ECO)**

For Australian conditions ECO mode is the most appropriate, the onboard computer always monitors the surrounding temperature, incoming water and outgoing water, heat transfer capabilities and adjusts its operation to suit.



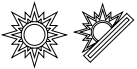
## **Vacation Mode**

For use when away on holidays, enter the date of your return and the smart iStore will reduce usage to the government mandated weekly disinfect cycle only. Vacation mode reduces energy consumption while you are away.



## **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.



## **Intelligent Mode** - (overseas models)



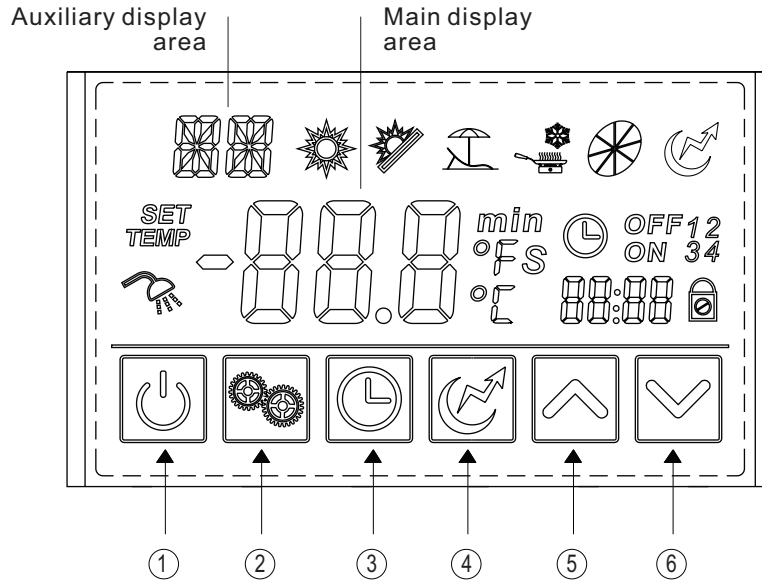
## **Hybrid Heating Mode** - (overseas models)

### Did you know?

The energy efficient iStore is fast becoming one of the most popular ways of heating your homes hot water. iStore's technology has been around for decades. The refrigeration industry has been utilising this incredibly efficient form of producing heating capacity ever since the first refrigerant gas was developed way back in 1928.

# 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


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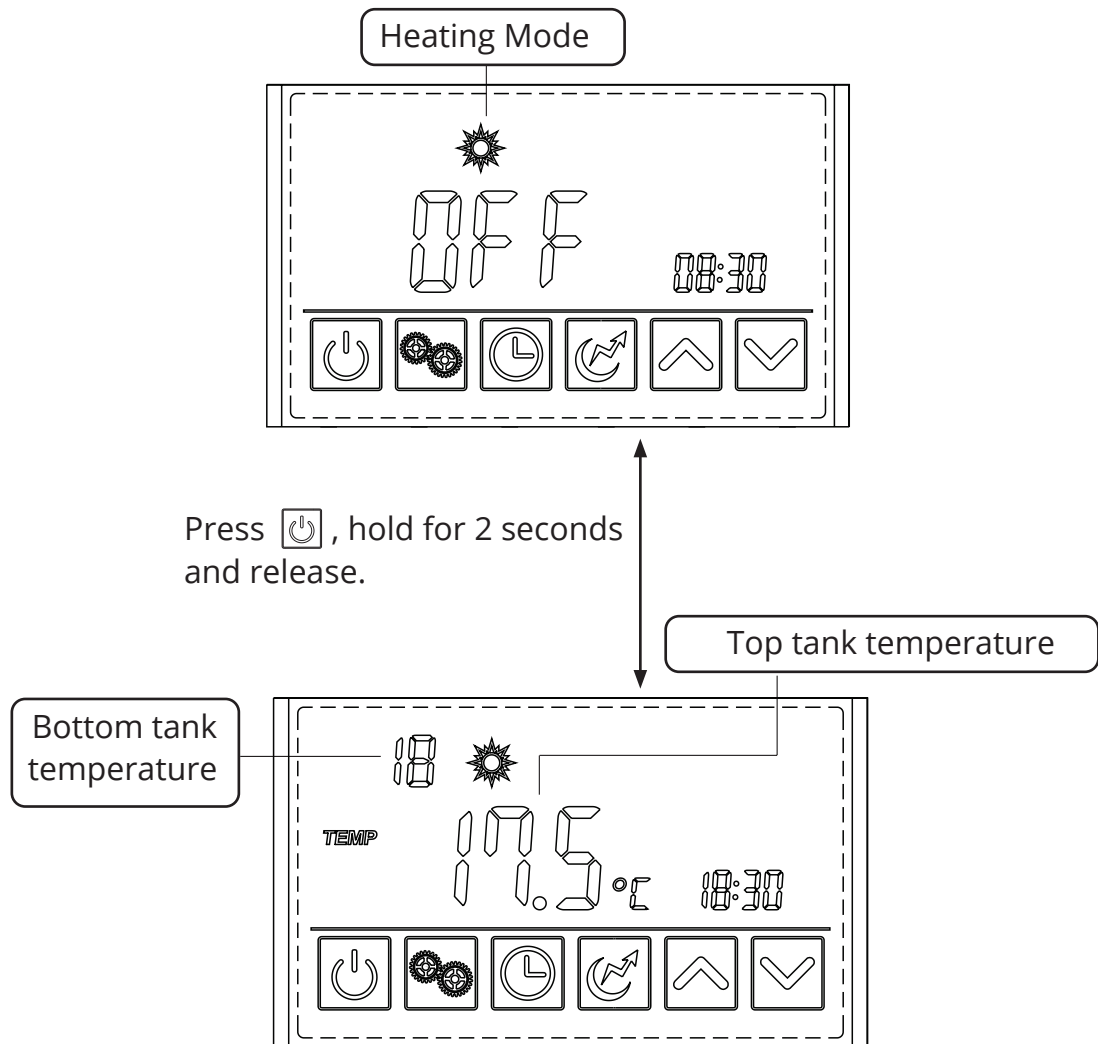
| Status icon   | Name               | What it means  |
|---|--------------------|--|
|    | Hybrid Heating     | Shows that the unit is in Hybrid Heating mode.   |
|    | Eco Mode           | Shows that the unit is in Eco Heating mode.  |
|    | Vacation           | Shows that the unit is in Vacation 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 , hold for 2 seconds and release, the unit will turn on and the LED will display the internal water temperatures.

Press , hold for 2 seconds and release, the unit will turn off and the LED will display the OFF status.

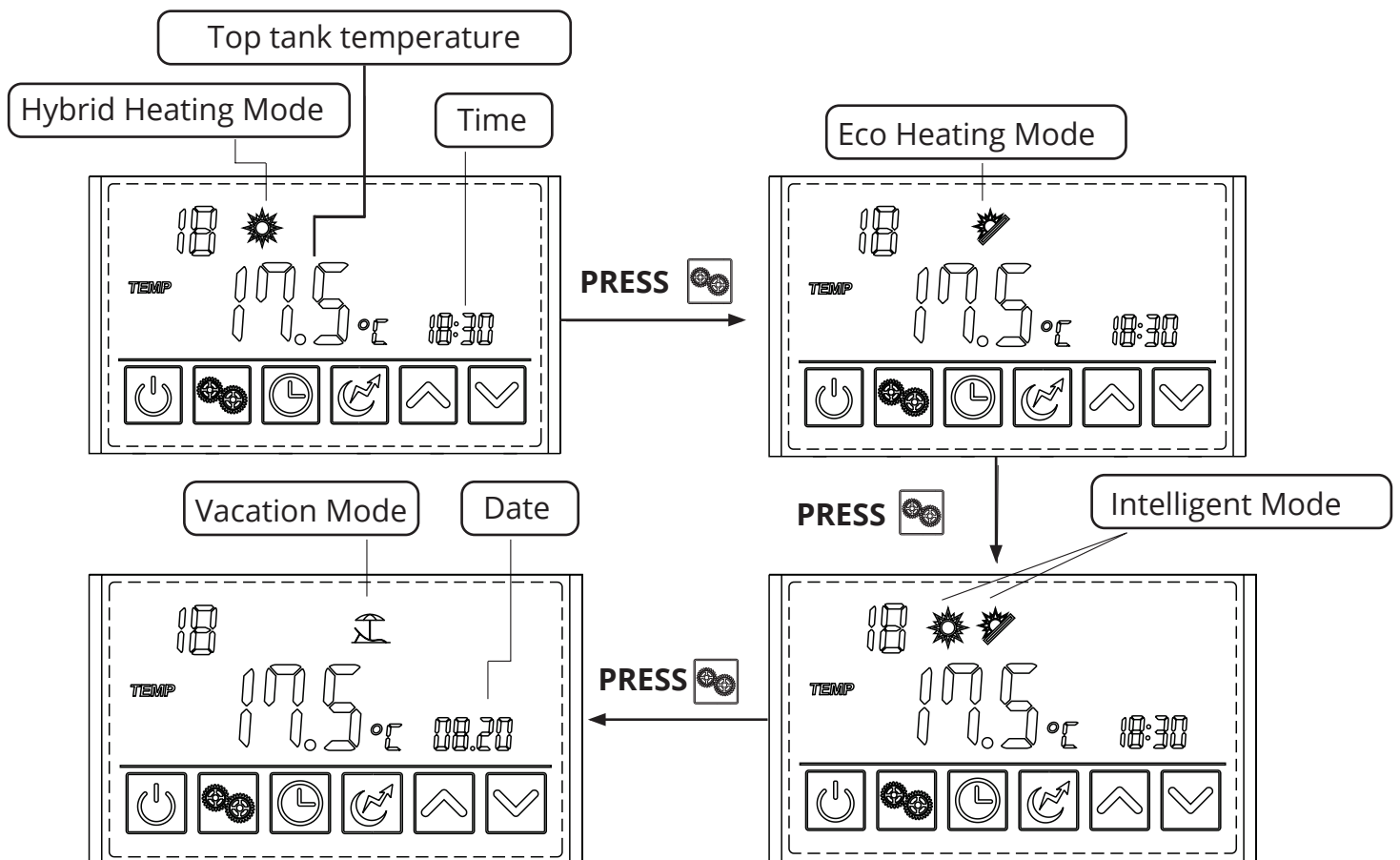


# Functionality

## Mode selection

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

- ! The Federal Government Clean Energy Regulator specifies how the iStore compressor hot water systems must operate in Australia and as such how the computer control operates. Intelligent and Hybrid modes are for overseas models and effectively overridden to Economic (ECO) mode in Australia.



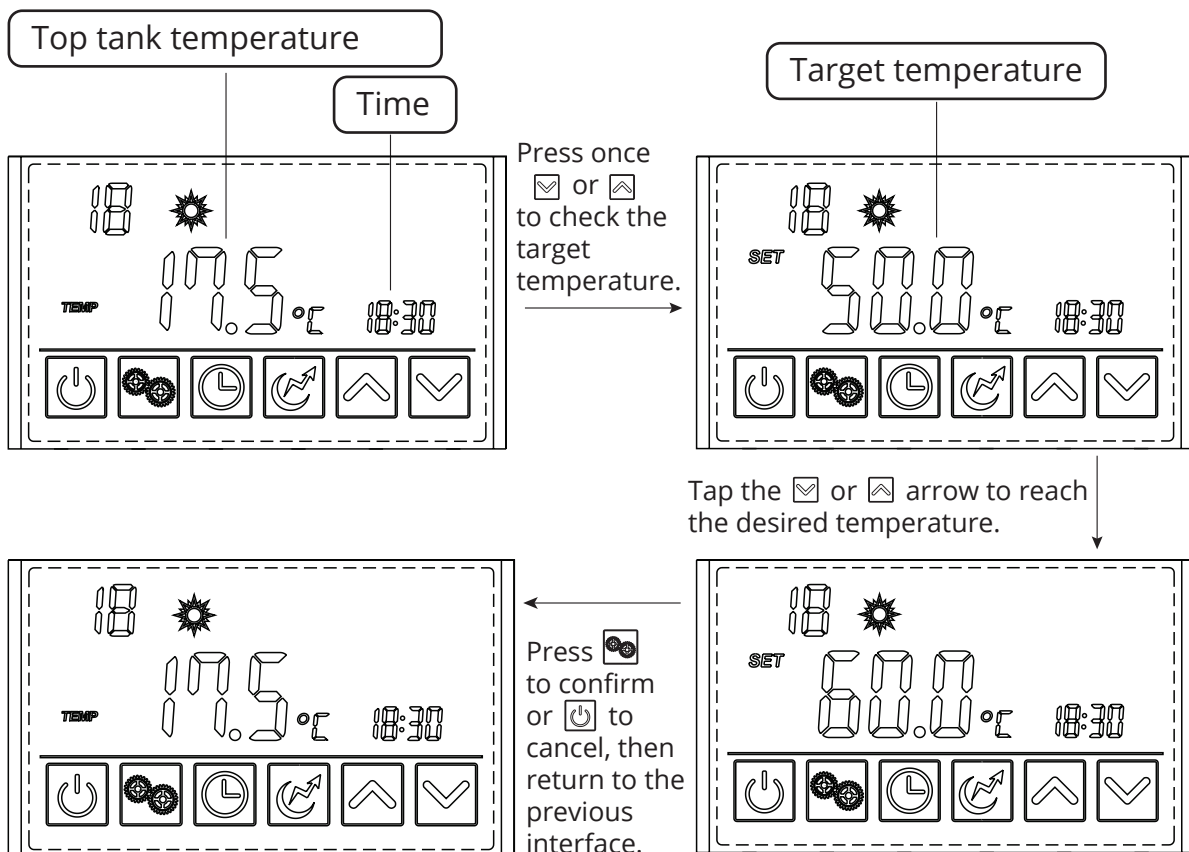
# Functionality

## 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.

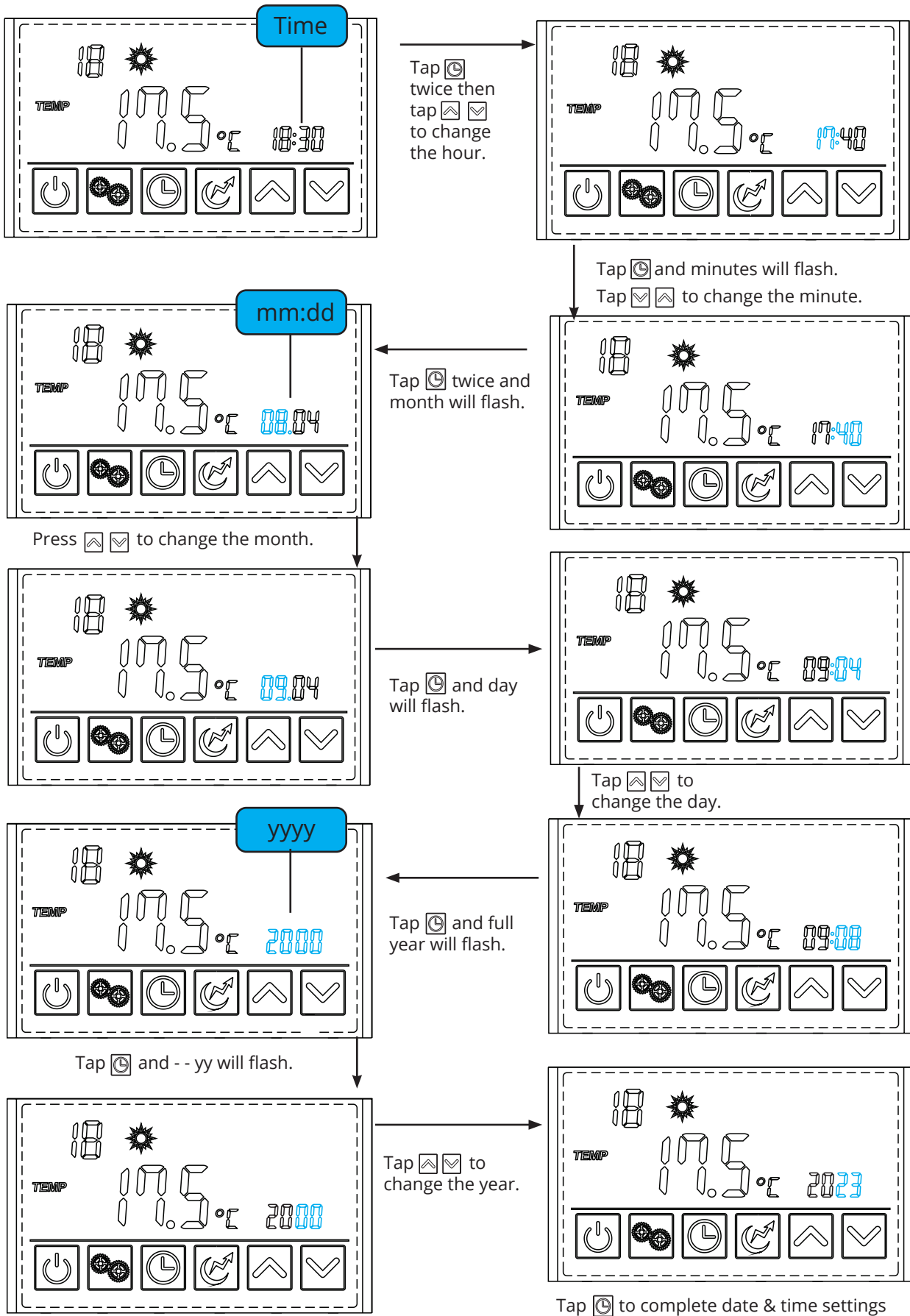
**Example:** Change the target temperature from 50° to 60° when the actual top tank temperature is 17.5°.

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



# Functionality

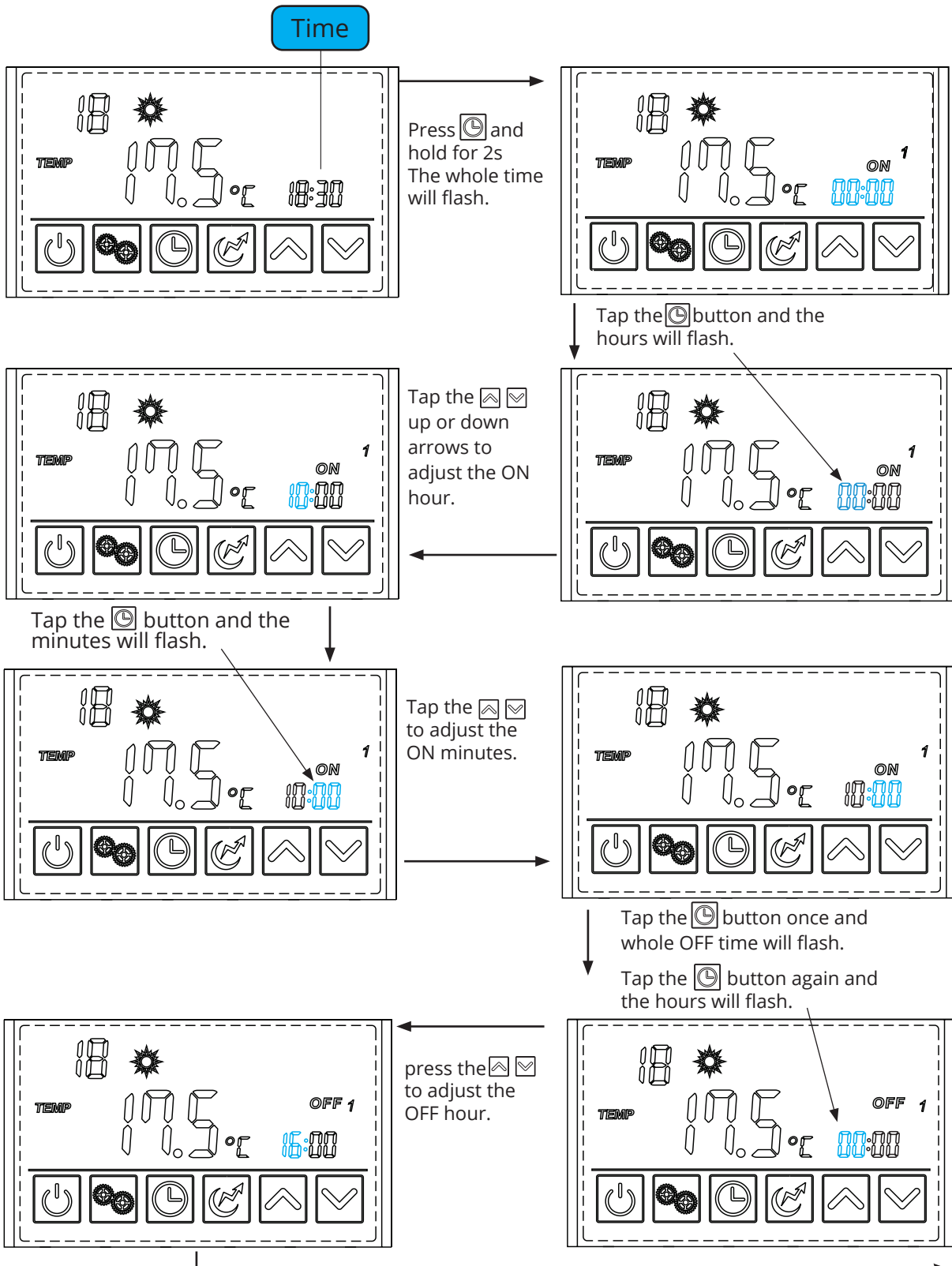
**Setting the Time** Example: Change the time and date from 18:30 on August 4th to 17:40 on September 8th.



# Functionality

## Timer setting (All modes except Vacation mode)

**!** NOTE: A timer is not mandatory for the iStore operation. Factors such as household demand, time of use, individual supplier peak and offpeak electricity rates, solar panel Feed In Tarrif rates all may influence what heating schedule best suits a household.



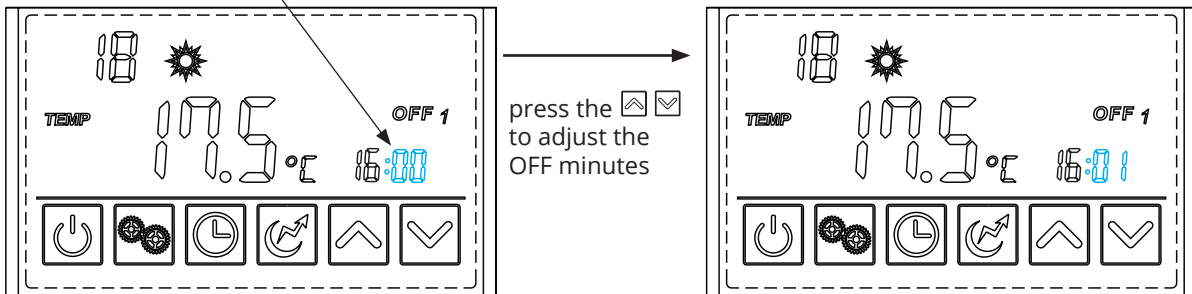
see next page



# Functionality

continued  
←

Tap the  button and the minutes will flash



**!** NOTE: IF YOU ONLY REQUIRE 1 TIMER THEN YOU MAY LET THE TIMER FUNCTION TIMEOUT AND THE SECOND TIMER WILL REMAIN BLANK WITH "--:--" VALUES.

If you require a second timer then tap the clock button again and step through setting the ON 2 and Off 2 times in the same manner as described above.

## **!** Important Information

For units manufactured from January 2023 ignores timers with the same start and end time, that is 00:00 on through 00:00 off will not activate as 12:00 on thru 12:00 off will also not activate.

On and off times should have differing minutes also to ensure the desired period is achieved.

For example for a full daytime timer a start of 10:00 on thru 16:00 should have the minute increased to 16:01 to confirm the timer window operation.

For units manufactured prior to January 2023 do not set the second timer to 00:00 ON and 00:00 OFF as the unit will commence heating at midnight every second night.

# Functionality

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## Timer setting summary

All modes except Vacation mode.

Press and hold the  button 2 seconds, the "ON" and "1" will flash,

### ON 1

tap the  and the hour value will flash, adjust the hour up or down with the   buttons

tap the  again and the minute value will flash, adjust the minute up or down with the   buttons

### OFF 1

tap the  again and the full hh:mm will flash,

tap the  again and the hour value will flash, adjust the hour up or down with the   buttons



tap the  again and the minute value will flash, adjust the minute up or down with the   buttons

**NOTE: IF A SECOND TIMERS IS NOT REQUIRED ALLOW THE LCD TO TIME OUT AT THIS POINT**


### ON 2




tap the  again and the full hh:mm will flash,



tap the  again and the hour value will flash, adjust the hour up or down with the   buttons

tap the  again and the minute value will flash, adjust the minute up or down with the   buttons

### OFF 2

tap the  again and the full hh:mm will flash,

tap the  again and the hour value will flash, adjust the hour up or down with the   buttons

tap the  again and the minute value will flash, adjust the minute up or down with the   buttons

tap the  again and the LCD will return to ON 1, allow the LCD to time out at this point.

When the LCD returns to the default state the display will indicate whether 1 or 2 timers are set just above the digital clock, eg

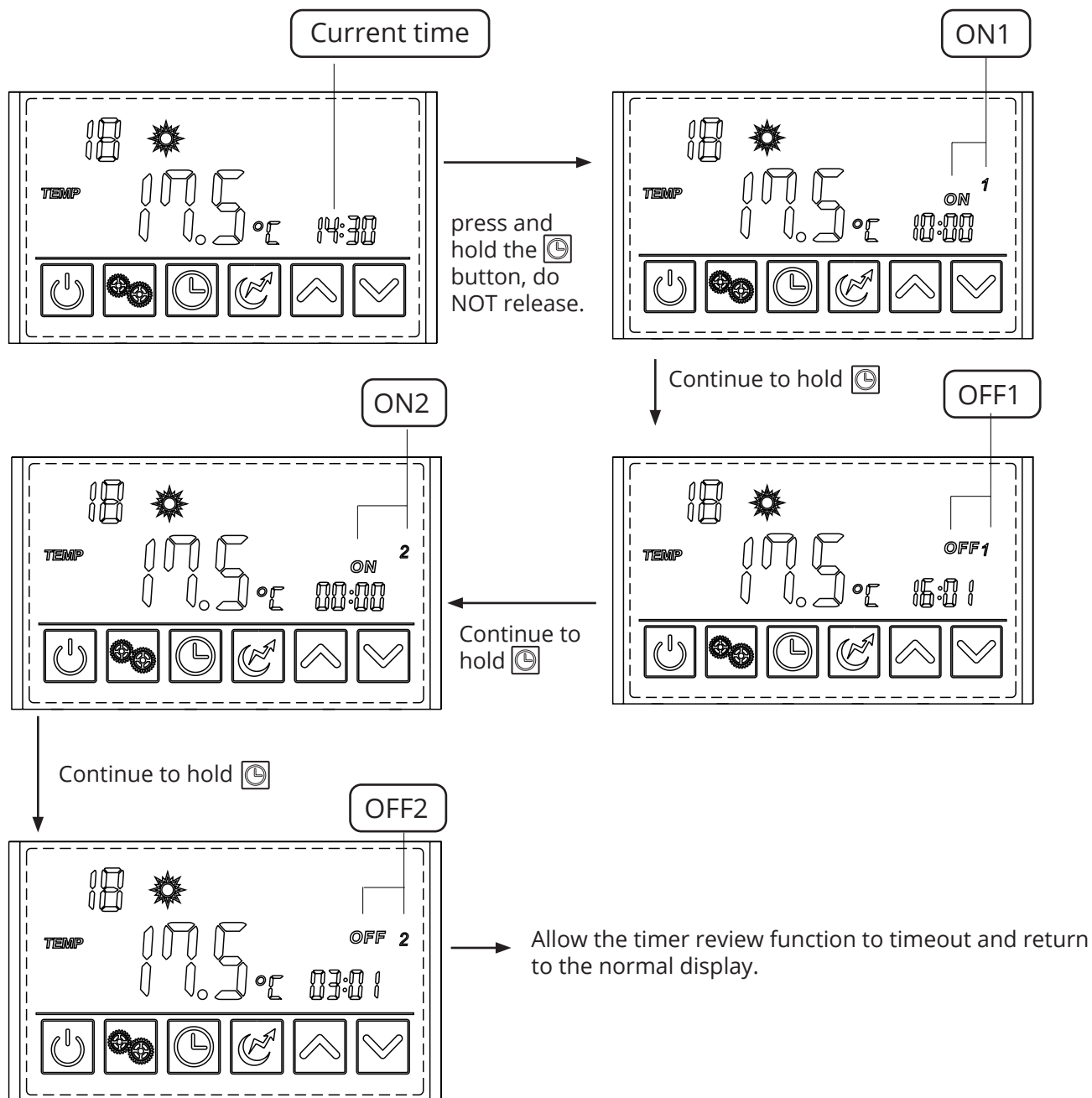
1 timer **OFF1**  
**ON**      2 timers **OFF1 2**  
**ON**

# Functionality



**EXAMPLE ONLY:** *Running period 1: 10:00 ~ 16:01; Running period 2: 00:00 ~ 03:01.*

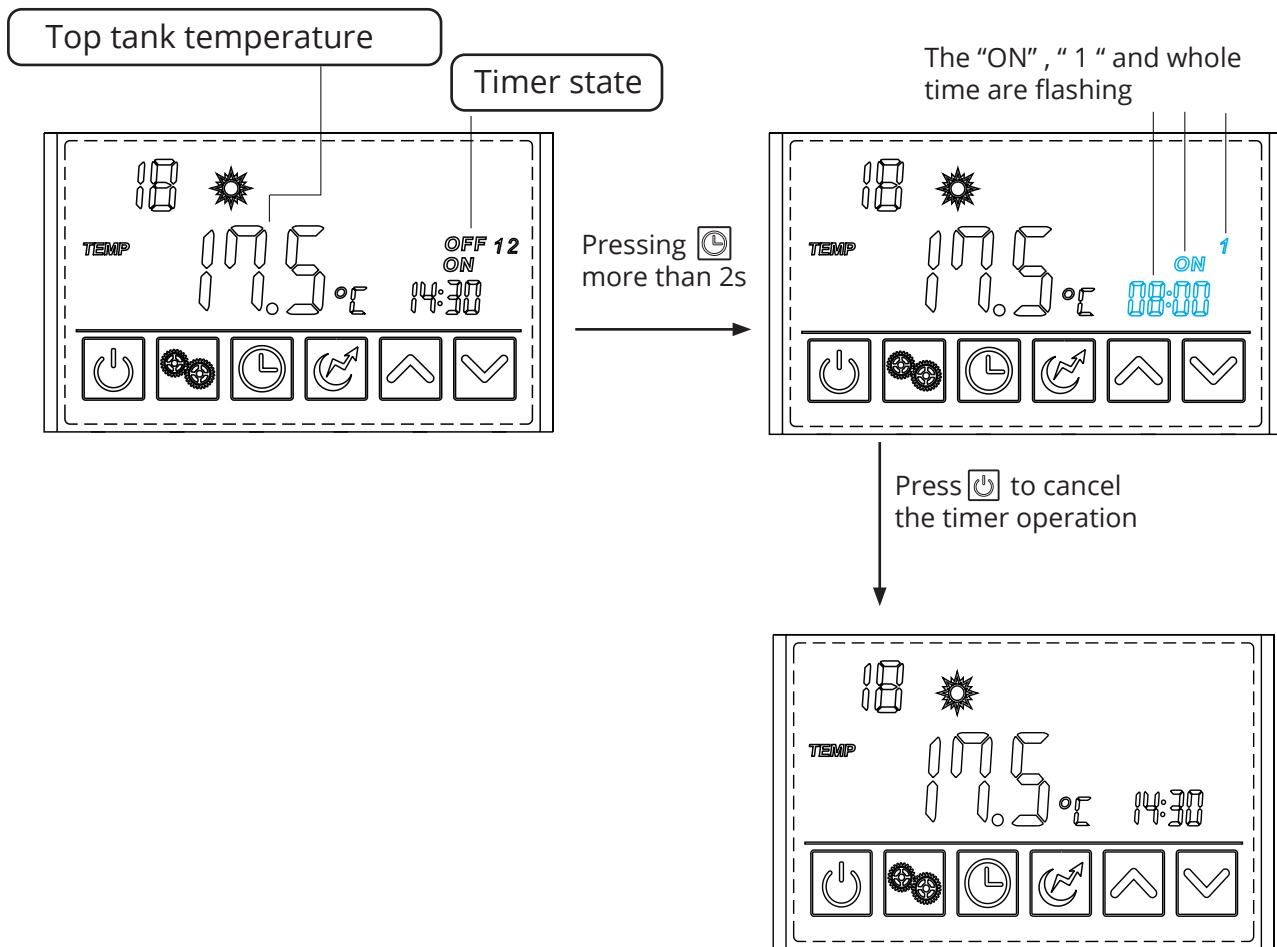
To review the timers press and hold button, do not release, the LCD will display each of the four ON and OFF times in order. Release the button after review and let the LCD time out.



**NOTE:** Do not set the second timer to 00:00 ON and 00:00 OFF as the unit will commence heating at midnight every second night. To leave the second time off simply allow the timer setting to timeout after setting the first timer end time.



# Functionality

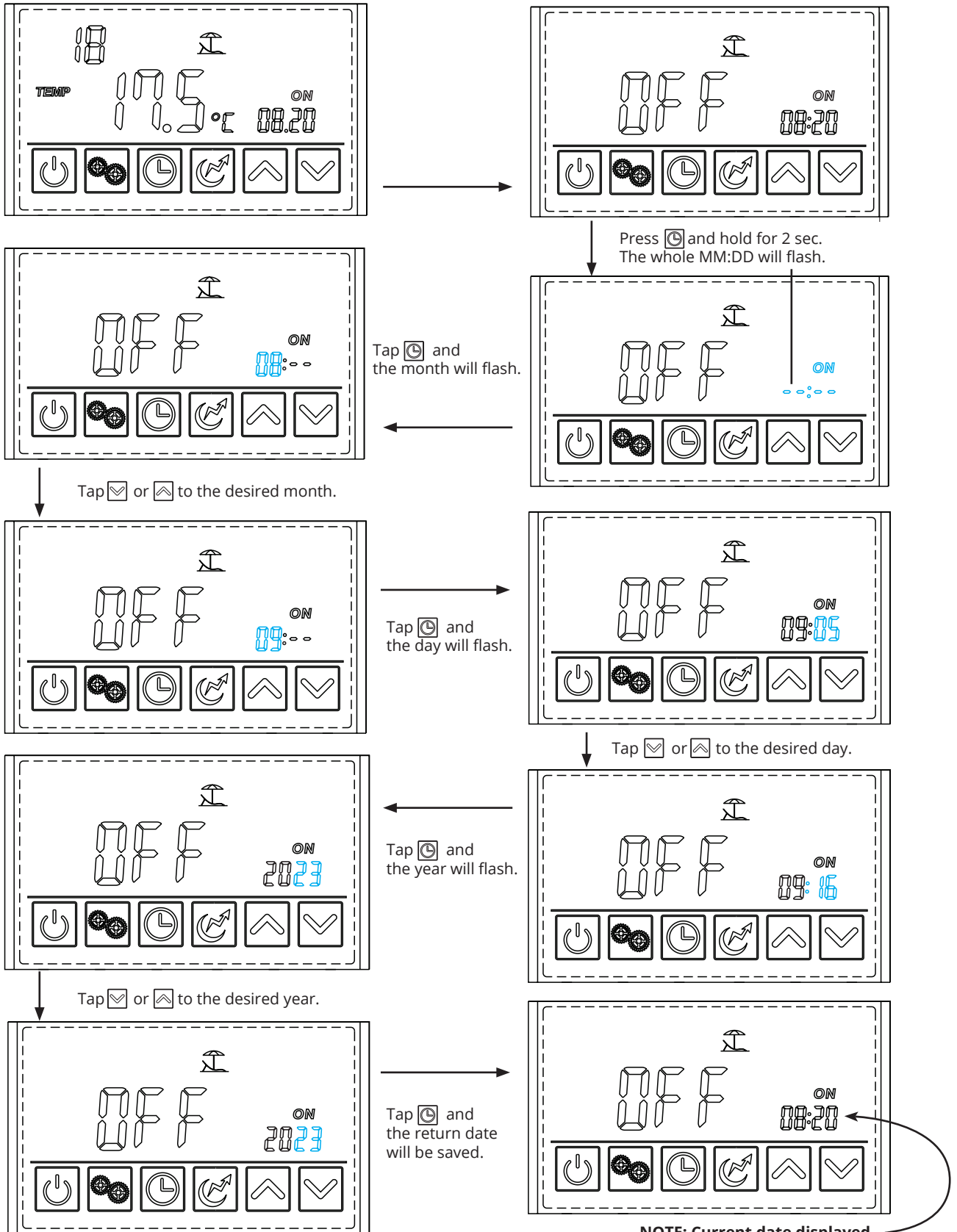
## Canceling the Timer Setting



# Functionality

## Vacation Mode (Setting the date of your return from your vacation)


**!** IMPORTANT: To enter vacation mode firstly press the  until the vacation icon is displayed. Press and hold the  for 2 seconds then release to turn the unit OFF.

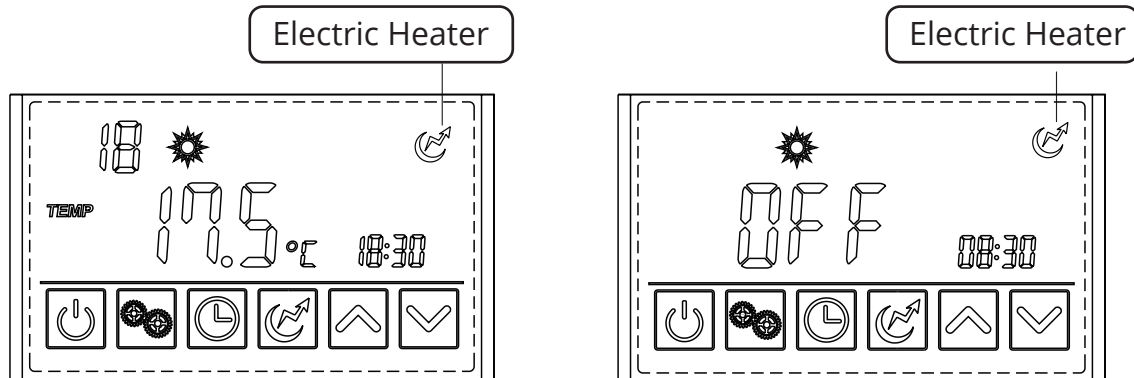


# Functionality

## 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

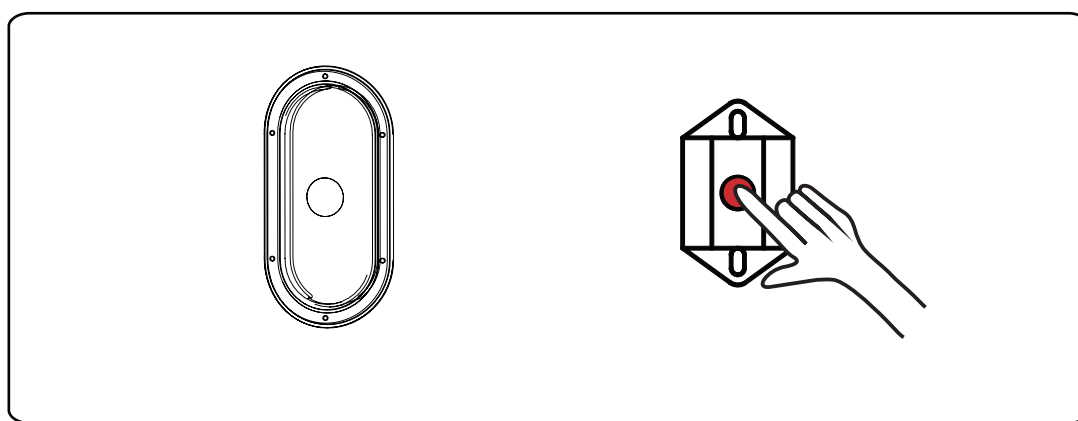
Note: At this stage the water heater can be flushed by removing the hot water outlet connection and hosing out any debris that may be present.

# 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 reset manually by qualified personnel.

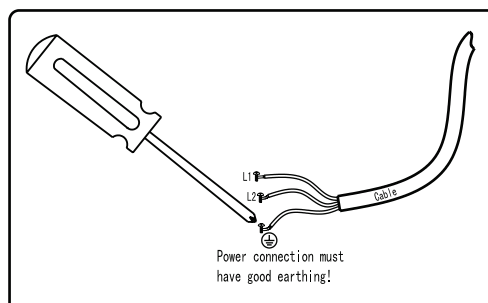
The thermal cut-out is pre-installed in the system, no on-site installation or commissioning is required. The recommended factory setting is 60° Celsius to prevent the thermal cut-out from operating. The thermal cut-out operation temperature is 85° Celsius.



Loosen the screws and open the cover

Push the red button

## Earthing





# Troubleshooting

| 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 1st October 2022.
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 µS/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

This Warranty is effective for all iStore Hot Water Systems manufactured and installed after 1st October 2022.

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| COMPONENT                                | WARRANTY PERIOD<br>(Parts Only) | WARRANTY PERIOD<br>(Parts and Labour) |
|--|---------------------------------|---------------------------------------|
| iStore Glass Lined Tank                  | 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                                |
| Consumable Items                         | 1 year                          | 1 year                                |