



**EarthSaveProducts**  
Renewable Energy Solutions

## Glass Thermovec

### Installation and Maintenance Manual



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## 1. Preface

Thank you for choosing Earth Save Products Limited's Glass Thermovec. Please read this installation and maintenance manual carefully before attempting to install, use or maintain your Thermovec. Your Thermovec must be installed by a suitably qualified and experienced technician to ensure that it is installed safely and correct and also to comply with warranty requirements. Likewise, in the unlikely event of a repair being necessary, it should only be carried out by a qualified technician using genuine spare parts supplied by Earth Save Products Limited. Your Thermovec must be installed, used and maintained in accordance with these instructions to ensure safety and comply with warranty requirements.

Once your Thermovec is installed, these instructions should be kept in a safe place for reference. A replacement can be obtained from Earth Save Products Limited.

## Safety Precautions

To ensure the safe operation of your Thermovec please note the following:

Symbols used:

Symbol	Meaning
	Caution
	Compulsory
	Prohibited

Installation		Installation must be carried out by a qualified technician due to risk of leakage, electrical shock or fire.
		The Thermovec must be correctly earthed due to risk of electrical shock and installed to comply will all electrical regulations
		Ensure that the wall on which the Thermovec is to be mounted is structurally sound and can take the weight of the unit
		The Thermovec must be connected to the power supply via a fused spur with a correctly rated fuse
		If you need your Thermovec moved, a qualified technician must be engaged to do so

Using the Thermovec		Do not put fingers or any object into any opening in the Thermovec
		If your Thermovec emits unusual odours or sounds, turn the unit off immediately and seek advice from your installer or ESP Ltd
		Switch off your Thermovec before cleaning the case or the filters
		Switch off your Thermovec before carrying out any maintenance
		Do not modify or change any of the internal devices without consulting ESP Ltd.



### General Precautions:

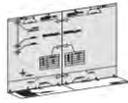
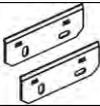
Some basic safety rules should be followed when using any product that uses electricity and water, such as:

- Do not touch the appliance with wet skin.
- Turn off the unit before cleaning it.
- Do not damage or modify the power supply cord.
- Do not place anything on the Thermovec nor climb upon it.
- Ensure that all packing materials are disposed of safely and/or recycled.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Specifications.

Packing List.

Thermovec 	Installation Template 	Manual 	Screw Cap  X 2	Remote 
Mounting Brackets 	Wall Plugs 	Screws 	Condensate Drain Pipe 	Feet 

Parameters

Unit Model	Units	ESP VFC 2.55G	ESP VFC 3.95G	ESP VFC 5.75G	ESP VFC 7.2G	ESP VFC 9.4G
Heating Capacity①	W	2550	3950	5750	7200	9400
Water flow rate①	m <sup>3</sup> /h	0.22	0.34	0.49	0.62	0.81
Pressure drop①	kPa	10.6	12.2	26.2	27.5	28.2
Heating capacity②	W	1350	2500	3350	4300	5200
Water flow rate②	m <sup>3</sup> /h	0.23	0.43	0.58	0.74	0.89
Pressure drop②	kPa	10.8	13.1	27.5	27.9	28.5
Cooling capacity③	W	1000	1900	2500	3500	4350
Water flow rate③	m <sup>3</sup> /h	0.17	0.33	0.43	0.60	0.75
Pressure drop③	kPa	11.1	13.3	27.7	28.3	30.6
Air volume	m <sup>3</sup> /h	160	320	460	580	650
Noise pressure at max air flow	dB(A)	30	32	37	39	41
Noise pressure at min air flow	dB(A)	24	27	28	28	30
Power Supply	V/Hz	220-240V~/50Hz				
Power Input	W	15	20	23	25	32
Water In/Out tapping size	inch	3/4	3/4	3/4	3/4	3/4
Condensate Drain size	mm	16	16	16	16	16
Net Dimensions(L/W/H)	mm	See below				
Shipping Dimensions(L/W/H)	mm	See package label				
Net weight	kg	See nameplate				

Gross weight	kg	See package label
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Notes

1. Supply flow temperature of 70°C, return temperature of 60°C and 20°C ambient air temperature.
2. Supply flow temperature of 50°C, return temperature of 45°C and 20°C ambient air temperature.
3. Supply flow temperature of 7°C, return temperature of 13°C and 27°C ambient air temperature.
- 4.Noise level is measured in the standard anechoic chamber <17dB(A)
5. Above data is subject to change without prior notification.

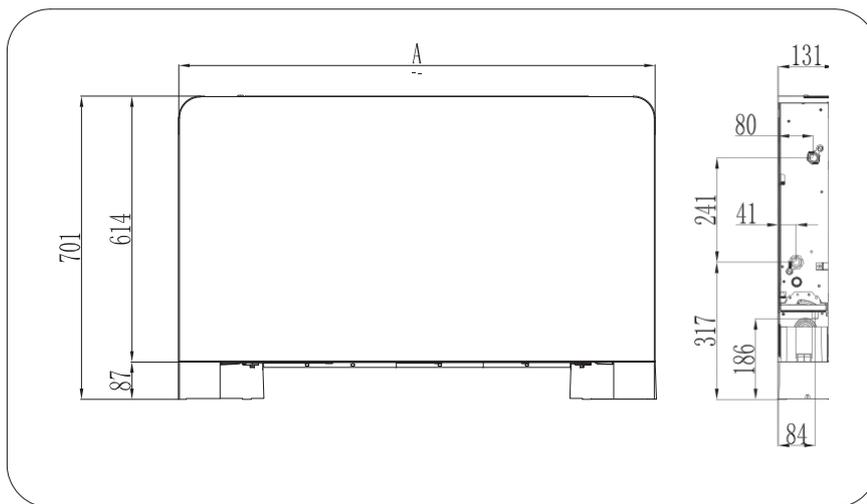
Working conditions

Heating ambient temperature: 5-29°C, flow water temperature: 35-70°C.

Cooling ambient temperature: 9-35°C, return water temperature: 5-20°C.

Dimensions

3.3.1 Product model: VFC 2.55/3.95/5.75/7.2/9.4G

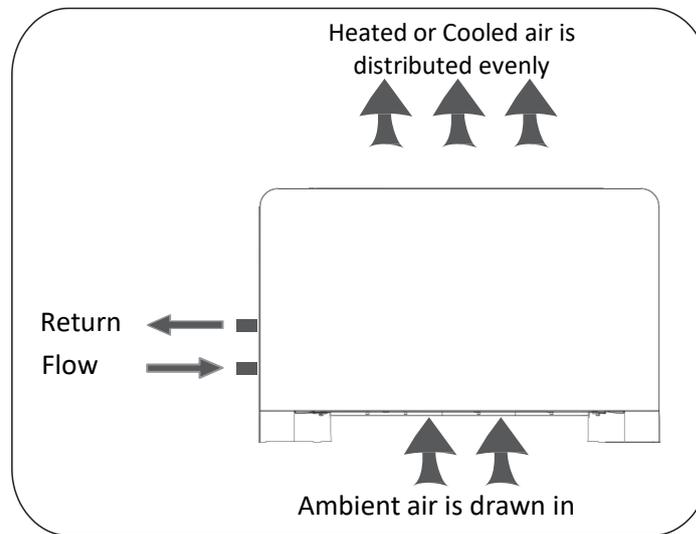


Unit Model	VFC2.55G	VFC 3.95G	VFC5.75G	VFC 7.2G	VFC 9. 4G
A	695	895	1095	1295	1495

## How it works

The Thermovec is supplied by hot or cold water from your ASHP. It draws air in from the room in which it is installed, blows that air over a heat exchanger and exhausts the air into that room. The temperature of the room is controlled by the Thermovec and the water flow is controlled by a three-way valve. The air is distributed across the room in a much more efficient manner than a traditional radiator.

Note: if the Thermovec is used for cooling, the condensate drain must be connected.



## Unit characteristics:

### Whisper Technology

The use of a cross-flow fan combined with wind-guiding technology make the Thermovec quiet as a whisper.

### Slimline

The Thermovec is only 130mm thick – thinner than traditional radiators of similar output saving space.

### Elegant Design

The rounded and clean outline ensures that the Thermovec will blend into any room.

### Easy to use

With a simplified control menu, the Thermovec can be controlled via the touch-screen panel or the remote control. Note: if you are using a high-temperature source, the Thermovec should be controlled with the remote control because the glass whole unit can achieve a temperature of up to 70°C to the touch.

## Installation

### Installation precautions

To ensure that the installation is performed correctly and safely and to conform to the warranty conditions the Thermovec must be installed by a suitably qualified technician and in accordance with this manual.

The electrical aspects of the installation must be carried out in accordance with current regulations. The Thermovec must be correctly earthed.

The unit must be installed in a position that allows routine maintenance such as cleaning the filter.

## Positioning the unit

Avoid installing the unit in proximity to other heat sources, in direct sunlight, in damp areas or where it is likely to come into contact with water. Areas contaminated with combustible fumes and high frequency radio signals should also be avoided.

Ensure that:

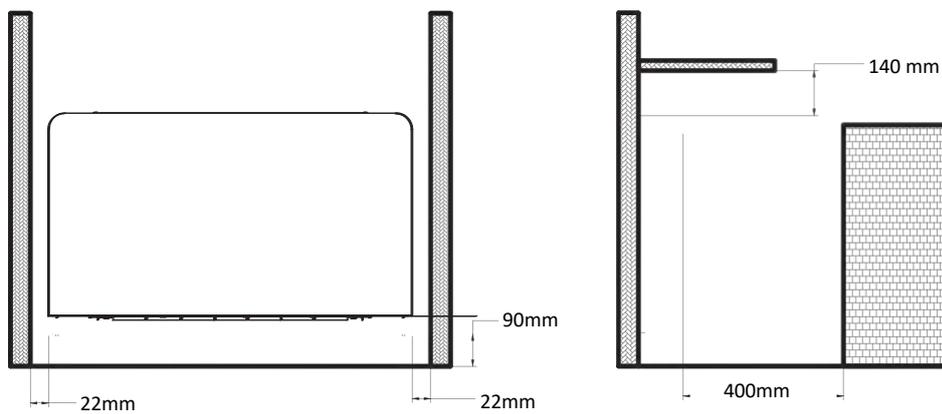
The wall on which the unit is to be installed is strong enough to support the weight. You are not going to drill through wires, pipes or anything else important when securing the brackets.

The mounting wall is perfectly flat.

There is nothing to interfere with the airflow around the Thermovec (see below).

If using the Thermovec for cooling, the condensate drain can be routed satisfactorily.

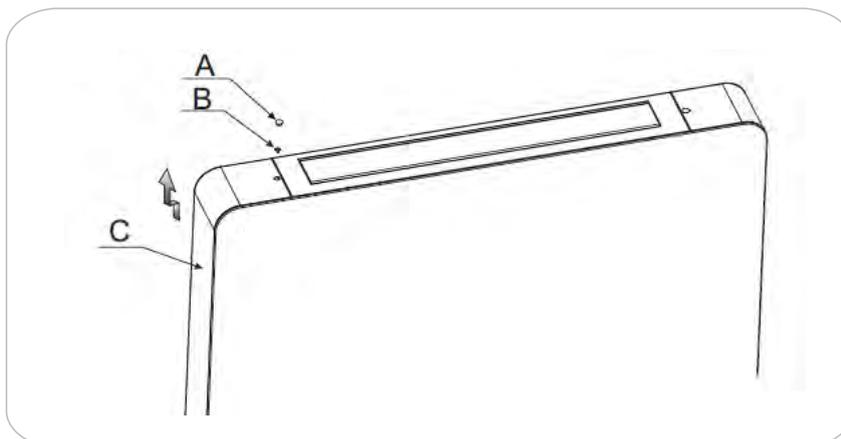
## Minimum Clearances:



## Installation

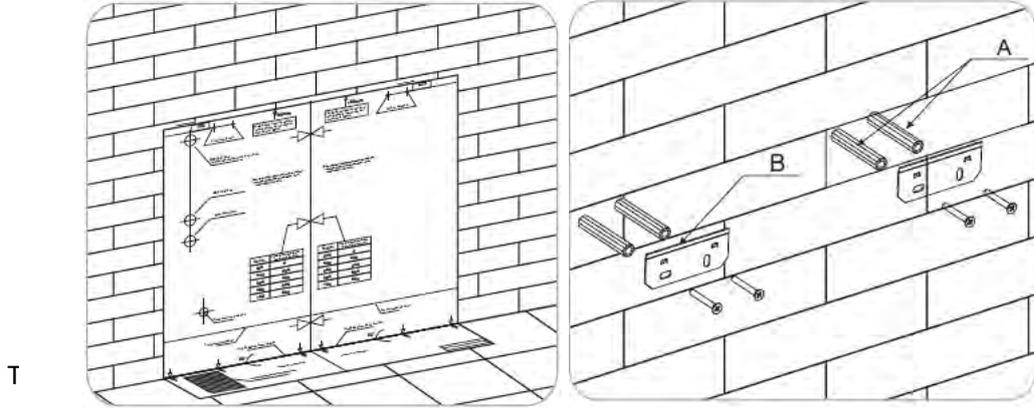
### Side opening

Lift the screw cap (A) and undo the screw (B) beneath it. Move the side panel (C) slightly and lift it out.



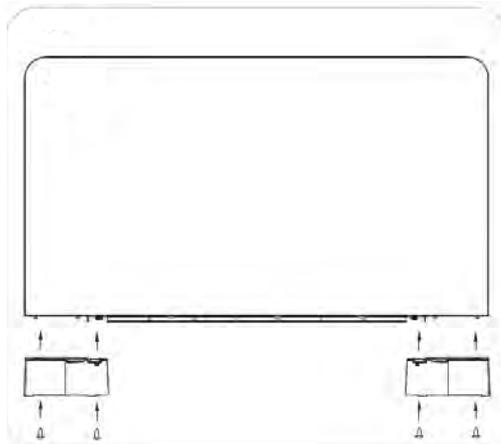
## Mounting the Thermovec

Using the paper template, trace the position of the bracket holes.

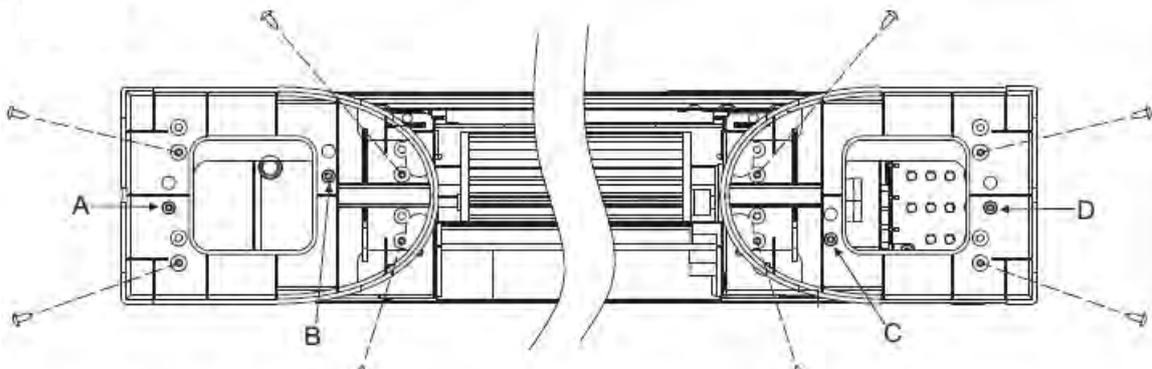


If you are going to use the Thermovec feet, they must be attached before installation as shown in the following two diagrams.

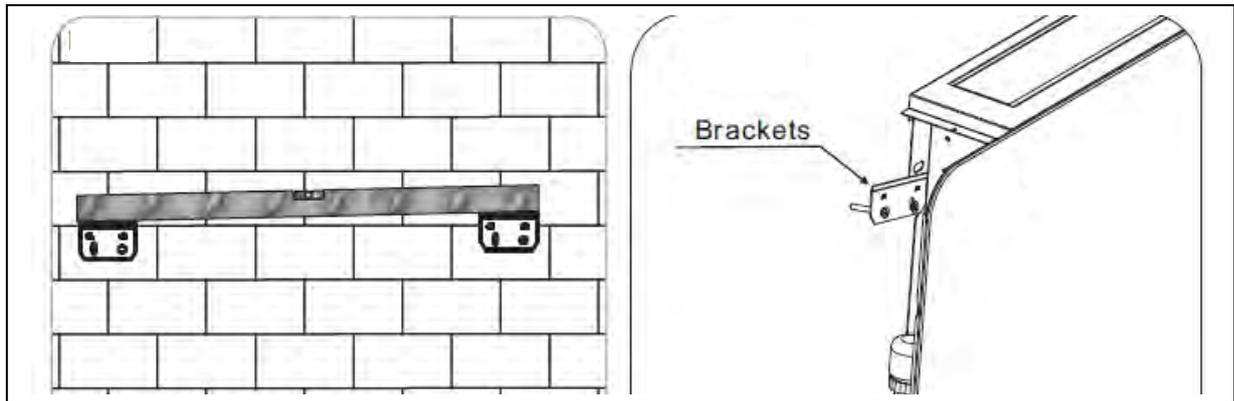
First, lay the unit down carefully to protect both the Thermovec and the surface on which it is placed. Line up both feet with the four screw holes for each foot.



Next, using the 8 screws provided attach the feet securely, taking care not to over tighten the screws.

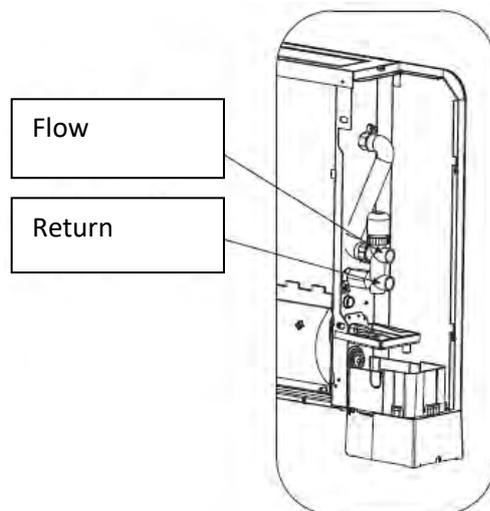


Fix the two brackets to the wall using suitable fixings: the supplied wall plugs are only suitable for certain types of walls. Do not tighten until final adjustment to 'level' has been made and checked.

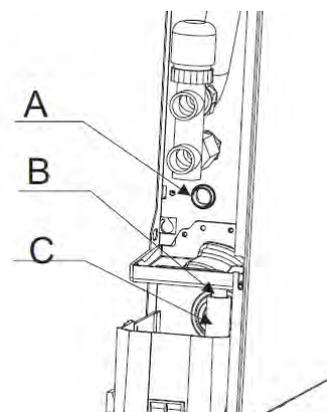


### Connecting the Pipework.

The distribution pipework should be hot flushed and pressure tested before the Thermovec is connected. The distribution pipework should be designed to reduce resistance and automatic air bleed valve incorporated at key points. The flow and return should then be connected to the 3-way valve as shown (Thermovec shown from the back of the unit)

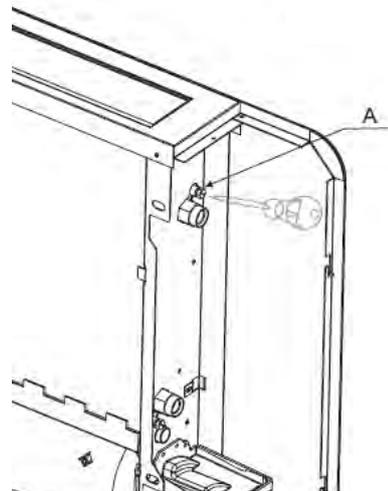


If the Thermovec is to be used for cooling, a condensate drain pipe must be fitted to take resulting condensate away from the unit and dispose of it safely. The condensate will drip from aperture A, collect in tray B and the pipe should be connected at C. If the pipe is to be connected to a drain, a waterless trap should be used.



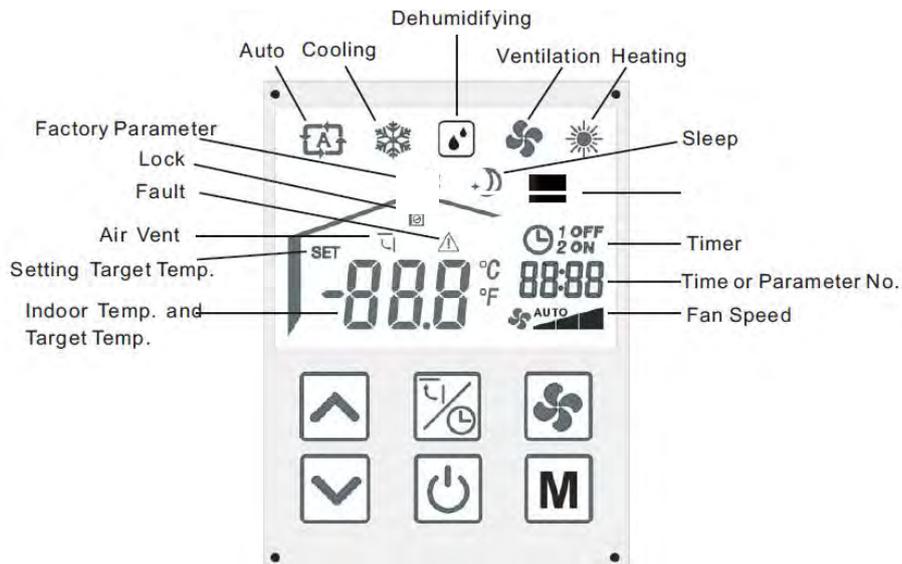
## Bleeding the Thermovec

The Thermovec must be bled before power is applied i.e. before it is switched on. Use a screwdriver to open the bleed valve on the side of the Thermovec until all air is expelled from the unit then close the valve again taking care not to over-tighten it. It is recommended that each Thermovec be bled again one it has been running for a few hours. If the unit is powered-up before it is bled, the 3-way valve will have closed and it must be opened manually.



## Using the Thermovec

### The Control Panel – what the symbol mean



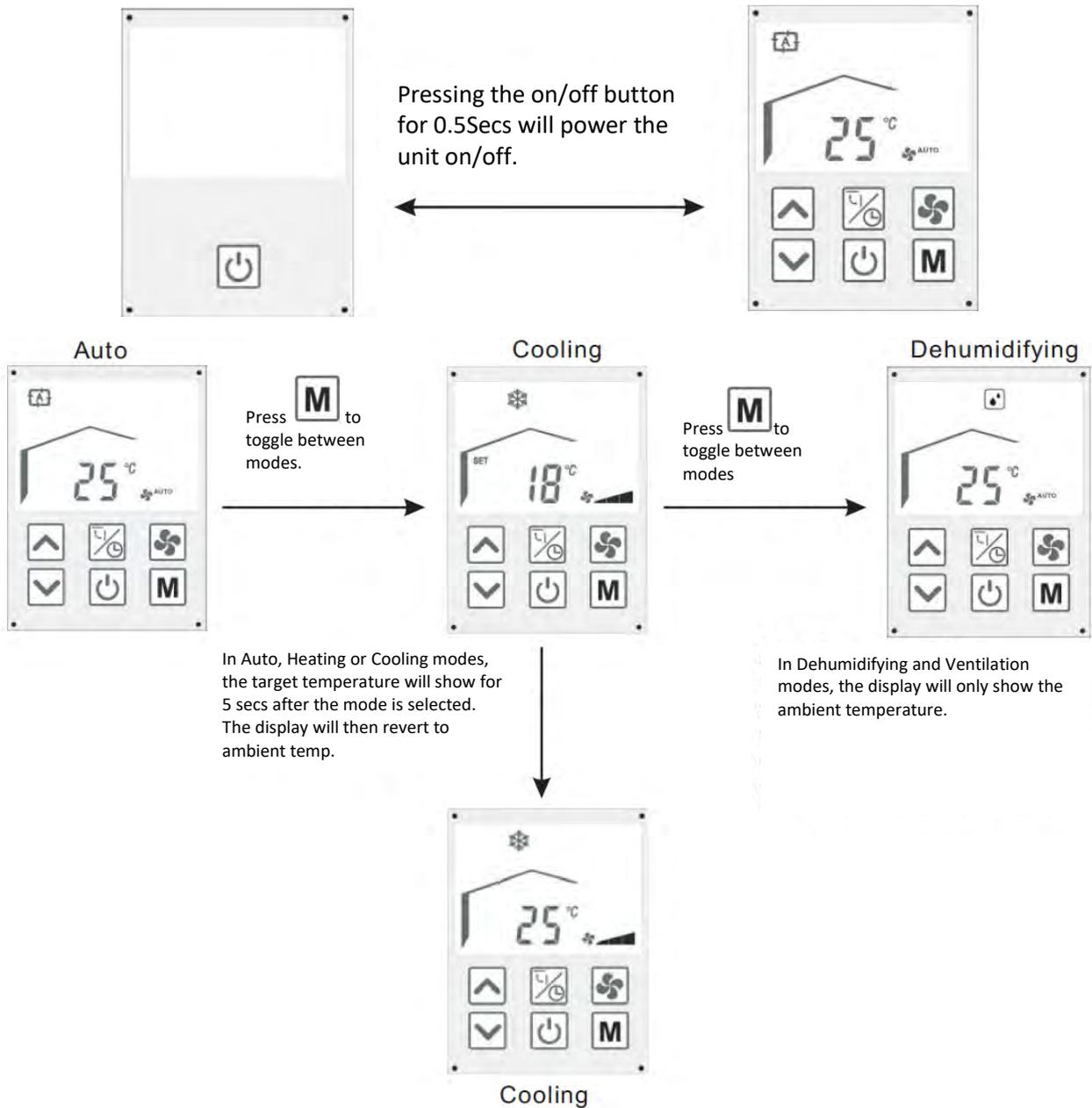
	Power on/off. Also used to cancel an action or to return to the previous menu
	Air Vent or Time. Used to display time settings, set the timer and to turn the air vent on or off.
	Fan Speed. Used to set the fan speed.
	Up. Used to increase a value or to go up a menu level.
	Down. Used to decrease a value or to go down a menu level.

<b>M</b>	Mode. Used to toggle between modes.
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Note: If no button has been pressed for 1 min, the control panel will be hidden. Simply touch the control panel area to display the controls.

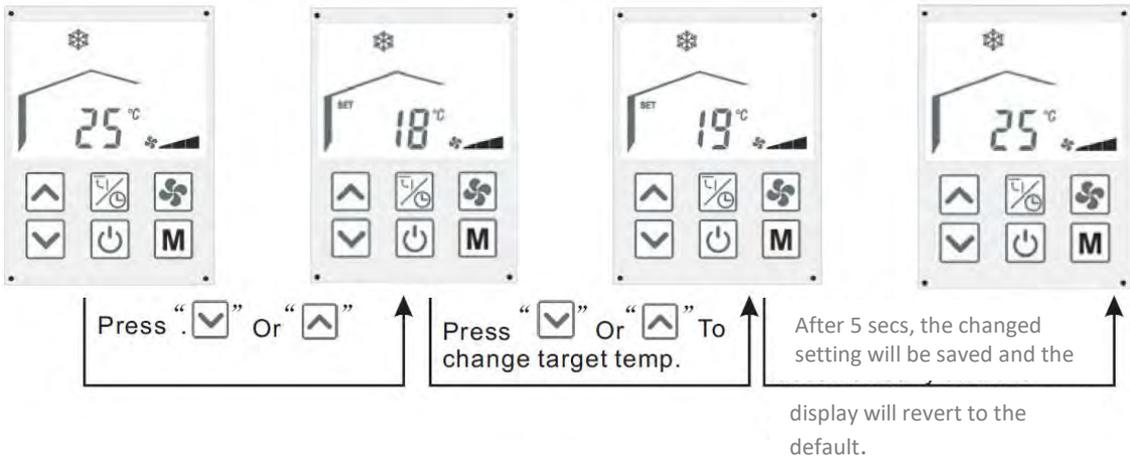
### Using the Control Panel

#### Turning the Thermovec on/Off



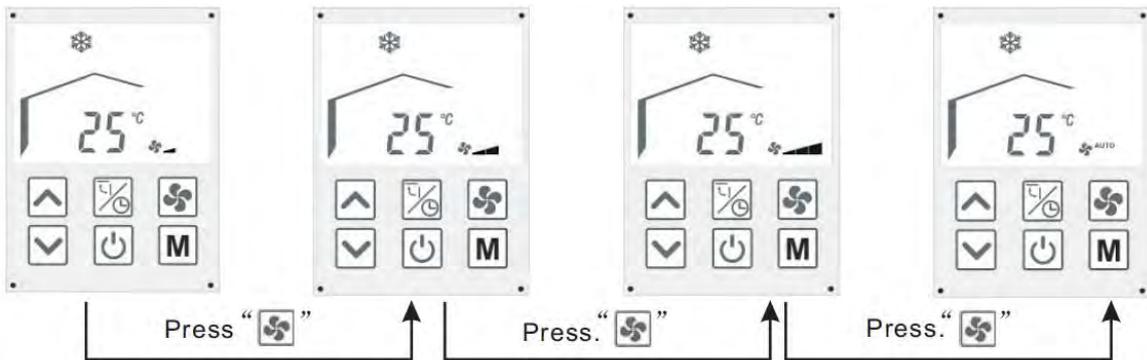
#### Changing the Target Temperature

To Change the target temperature, simply press the up or down buttons once, then use the up or down buttons to select the required temperature. Once you have done so, the display will return to the default display and save the target temperature after 5 Secs:

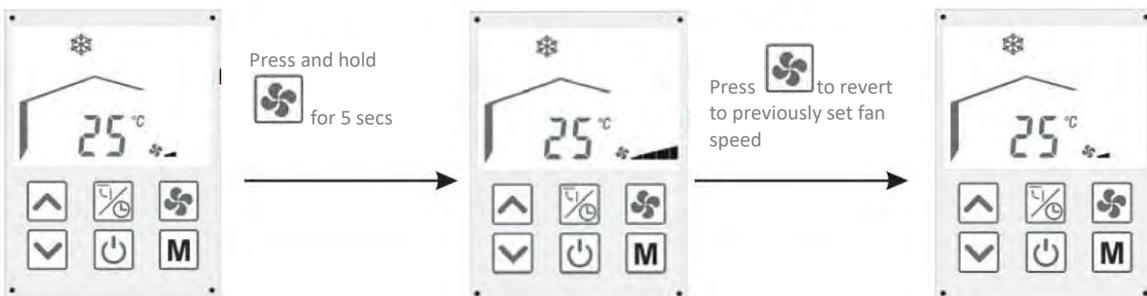


### Changing the Fan Speed

To change the fan speed, simply press the fan speed button to toggle between 3 fan speed or ‘auto’. For ‘boost mode’, press and hold the fan speed button for 5 seconds. In boost mode, press the fan speed button once to revert to the previously set fan speed:



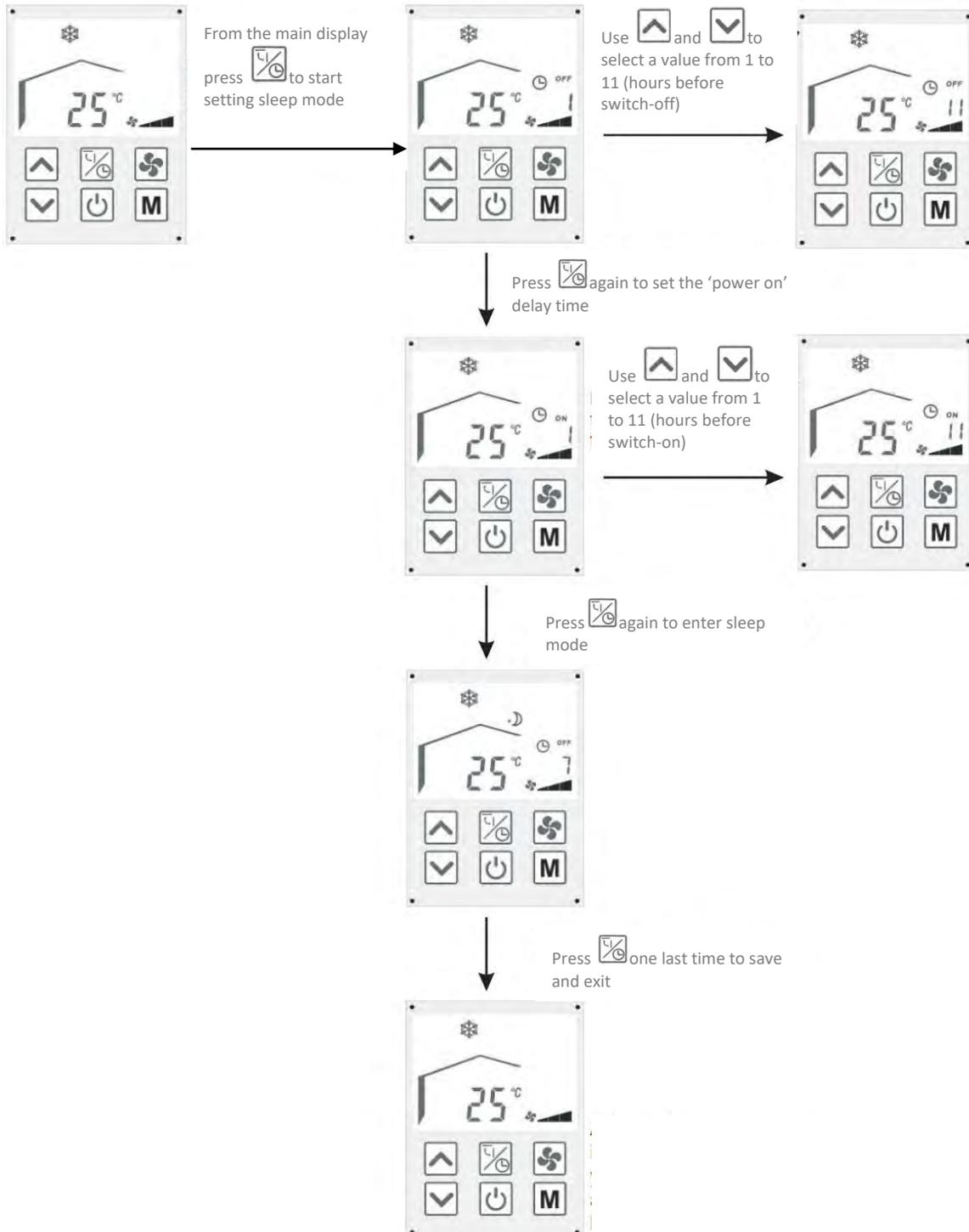
To Switch on Boost mode:



Please note that the fan speed in Auto and Dehumidifying modes will be set automatically and cannot be altered.

## Setting the Sleep Mode

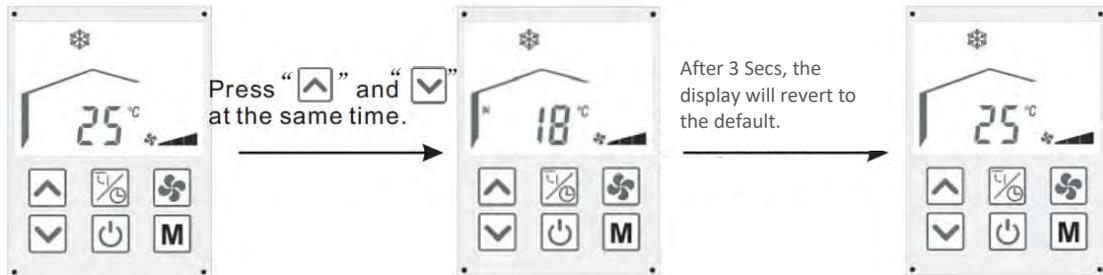
Sleep mode can be used to turn the Thermovec off after a period from 1-11 hours then back on again after a period of 1-11 hours:



Note, if no button is pressed for 5 secs at any time during the setting process, whatever settings have been made will be saved and the display will return to the default display

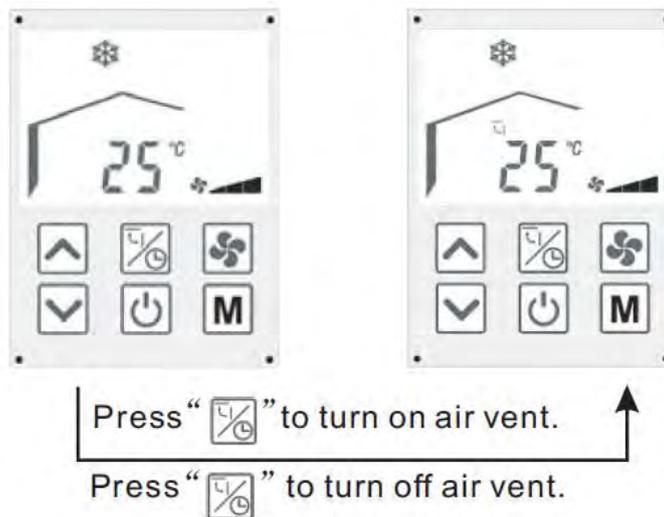
### Checking the Coil temperature

To check the coil temperature, press the  and  buttons simultaneously. This will display the coil temperature for 3 secs before the display reverts to the default display. This is for information only and cannot be changed.



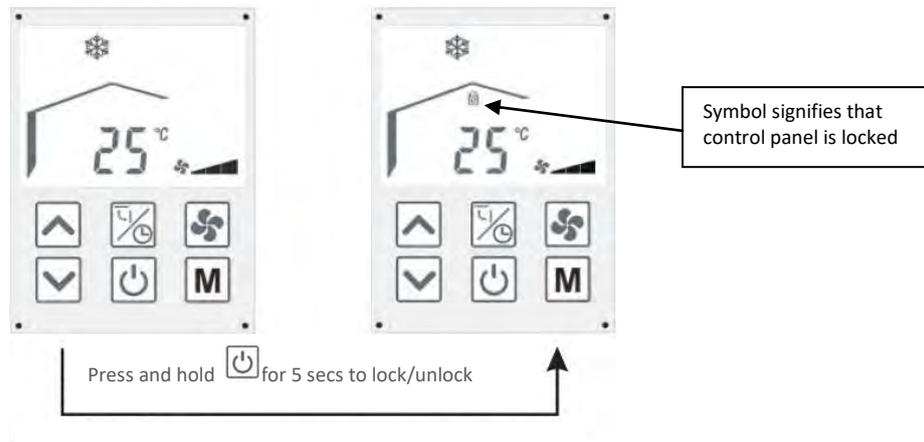
### Turning the Air Vent on/off.

To turn the air vent on/off simply press the  button:



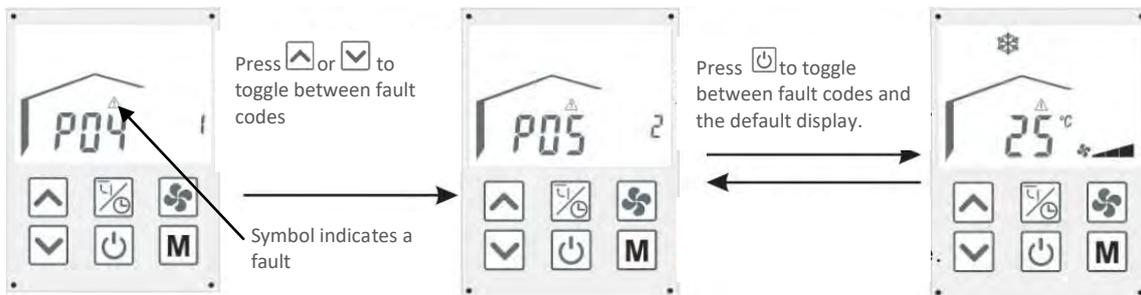
### Locking the Control Panel

To lock the control panel, press and hold the power button for 5 seconds. Repeat to unlock the panel:



### Fault Display

In the unlikely event that your Thermovec develops a fault, it will be displayed as a code. Pressing the up or down buttons will toggle through the codes and the power button will return you to the main display:

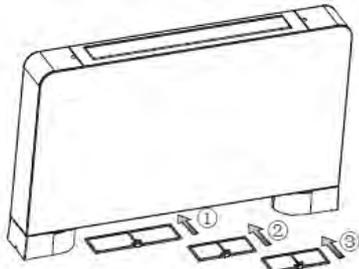


### Fault Codes

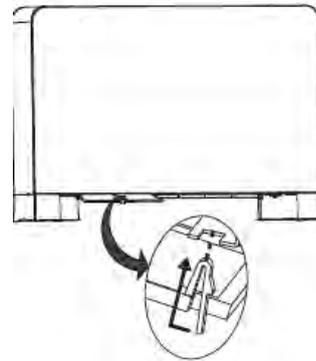
Code	Fault	Cause	Remedy
P4	Ambient Temperature Sensor	Ambient Temperature Sensor failed or open circuit.	Check or replace sensor.
P5	Coil Temperature Sensor	Coil Temperature Sensor failed or open circuit	Check or replace sensor.
E0	Motor Feedback Signal	Motor or signal wire failure.	Check motor and signal wire. Replace as necessary
E8	Communications	Communication fault.	Check the control wires.

## Cleaning and Maintenance.

There is very little to be done to maintain the Thermovec. Please turn the unit off before cleaning it and use a clean, damp cloth but no abrasives or solvents as these could damage the finish. The three filters underneath the unit should be cleaned periodically by removing them, rinsing them under clean running water, drying and replacing them:



Filter replacement order



When removing the filters, treat the catches gently as they do not require much pressure and the lugs can be broken. To replace, locate carefully in the square apertures.

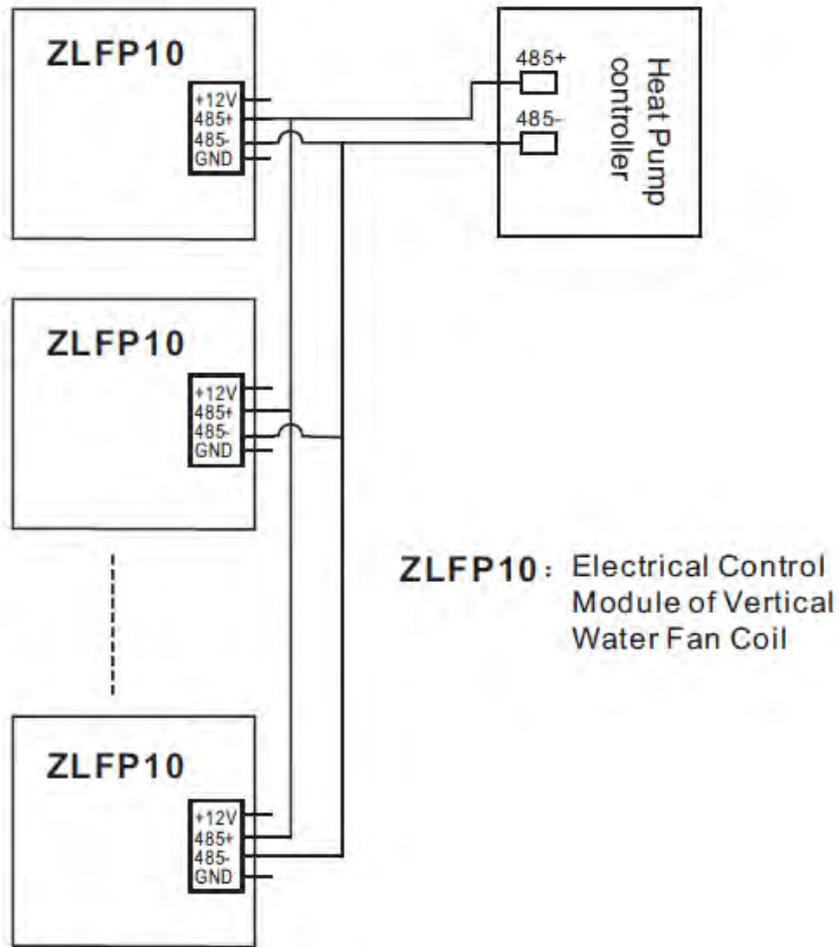
Any repairs should be undertaken by qualified technicians using genuine spare parts supplied by Earth Save Products Ltd. Should a leak develop, the unit should be switched off and advice sought from your installer or the ESP Ltd Technical Department.

## Correct Disposal of this product

This product should not be disposed of with other household waste but recycled in accordance with current Government policy.

## Wiring Details

Thermovecs can be connected together and incorporated into a building management system:



## PCB I/O Ports

