



# FlexTherm Eco G1



**ENG** Installation and operating instruction

**Content**

- 1. Introduction ..... 4**
  - 1.1 General ..... 4
  - 1.2 Symbols used ..... 4
  - 1.3 Abbreviations ..... 4
  - 1.4 Responsibilities ..... 4
- 2. Safety ..... 6**
  - 2.1 Advantages of FlexTherm Eco compact heat storage ..... 7
- 3. Technical specifications ..... 8**
  - 3.1 Pressure Loss Characteristic ..... 9
- 4. FlexTherm Eco Controller .....10**
  - 4.1 Description ..... 10
  - 4.2 PCB identification ..... 10
  - 4.3 Installer settings ..... 11
- 5. Design of cold and hot water supplies .....12**
  - 5.1 General requirements ..... 12
  - 5.2 Water distribution network design ..... 12
  - 5.3 Hot water circuit including water safety device ..... 12
  - 5.4 Hard water areas ..... 12
- 6. Installation Guidelines .....13**
  - 6.1 General wiring recommendations ..... 13
  - 6.2 FlexTherm Eco E storage ..... 13
    - 6.2.1 Mains cold water and hot water supplies ..... 13
- 7. Electrical wiring .....14**
- 8. Flextherm Eco + PV Power Diverter .....15**
  - 8.1 FlexTherm Eco Controller Settings ..... 15
  - 8.2 Applicability ..... 15
  - 8.3 PV Diverter Configuration ..... 15
- 9. Commissioning .....17**
  - 9.1 General ..... 17
  - 9.2 Pre-commissioning checklist ..... 17
  - 9.3 Commissioning process ..... 17
- 10. Maintenance .....19**
- 11. Troubleshooting .....19**
- 12. Decommissioning & disposal .....20**
  - 12.1 Decommissioning ..... 20
  - 12.2 Disposal ..... 20

## 1. Introduction

### 1.1 General

The following instructions provide guidance for the installer and user of FlexTherm Eco G1.

The installation must be carried out by a competent installer in accordance with local codes and regulations for plumbing, electrical installations and potable water supply.



**CAUTION**

Do not tilt the product more than 45 degrees during the transportation or installation process.

### 1.2 Symbols used

In these instructions the following symbols are being used to draw the user's attention to information of particular importance.



**DANGER**

Indicates a hazardous situation that, if not avoided, will result in death or serious injury.



**WARNING**

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



**CAUTION**

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury or material damage.

**Notice:** Signals information that is considered important but not hazard related.

### 1.3 Abbreviations

The following abbreviations are used in the manual,

- BERV – Back-Expansion Relief Valve
- DSR – Demand Side Response
- PCBA – Printed Circuit Board Assembly
- PCM – Phase Change Material
- PRV – Pressure Reducing Valve
- VIP – Vacuum Insulation Panel

### 1.4 Responsibilities

#### Manufacturer's Responsibilities

Our products are manufactured in compliance with the requirements of applicable EU & UK laws and regulations. More information can be found in the Declaration of Conformity supplied with the Heat Battery.

As an innovative company committed to achieving net zero, Sunamp continuously improves its products, which means that all specifications and other information stated in this manual are subject to change without prior notice.

Our liability as the manufacturer may not be invoked in the following cases:

- Failure to abide by the instructions on using the Heat Battery.
- Faulty or insufficient maintenance of system components protecting the Heat Battery.
- Failure to abide by the instructions on installing the Heat Battery.

### Installer's Responsibilities

The installer is responsible for the installation and the commissioning of the Heat Battery. The installer must:

- Ensure they are suitably qualified for the level of plumbing and electrical work required for the installation of this Heat Battery.
- Read, understand and follow the instructions given in the manuals provided with the Heat Battery.
- Comply with the prevailing legislation and standards when carrying out the installation.
- Perform the initial start-up and carry out any checks necessary.
- Complete the commissioning procedure and checklist in this manual.
- Explain the installation to the user.
- If maintenance on system components is necessary, warn the user of the requirement to check the system components to maintain the system in good working order.
- Give all the instruction manuals to the user.

### User's Responsibilities

To achieve optimum operation and longevity of the Heat Battery, the user must adhere to the following instructions:

- Read and follow the instructions provided in the manuals provided with the Heat Battery.
- Call on qualified professionals to carry out installation, initial start-up and commissioning.
- Ask your installer to explain your installation to you.
- Ensure that system components are maintained as necessary.
- Keep the instruction manuals in good condition and close to the Heat Battery.



#### **CAUTION**

Children shall not play with the Heat Battery.  
Cleaning and user maintenance shall not be made by children.  
Children must be supervised to ensure they do not play with the Heat Battery.

## 2. Safety

The FlexTherm Eco range of advanced and compact heat storage uses Phase Change Materials (PCMs) to store heat for producing hot water. Flamco heat storage can be classified as primary thermal because the hot water is heated instantaneously on demand by transferring heat from the PCM to the mains water flowing through it.



The pipe connections and the construction of a FlexTherm Eco range of storage are shown in the figure above. The phase change material (PCM) and the heat exchangers are housed in a sealed enclosure called ‘The Cell’. Although the Cell is sealed, the pressure inside the Cell is around the ambient atmospheric pressure i.e. about 1.0 bar absolute. The Cell is insulated using highly efficient vacuum insulation panels. The outer case and hydraulic and electrical connections are designed so that multiple stores can be connected either in series or parallel.

The FlexTherm Eco range of heat stores have two independent hydraulic circuits for hot water preparation. The heat is transferred between the PCM and the high power (HPC) and the low power (LPC) hydronic circuits by means of an integrated heat exchanger inside the Cell.

The heat stores are fitted with temperature sensors for measuring the charge state and for controlling their operation when connected to the controller. All standard models of the FlexTherm Eco range of heat stores are supplied with PCM58 which has a phase transition temperature of 58 °C.

The heat stores models covered by this document are listed in table 1.1. This document does not cover sizing, selection, configuration or design of the heating and hot water system in a building. It only covers installation and commissioning of the selected compact heat storage for hot water preparation.

Generic range	Description	Models
FlexTherm Eco E	These heat stores are heated by internal electric heating elements only and therefore these heat stores are equivalent to Direct vented or unvented hot water cylinders	FlexTherm Eco 3E, FlexTherm Eco 6E, FlexTherm Eco 9E

Table 2.1: FlexTherm Eco Range of heat storage

## 2.1 Advantages of FlexTherm Eco compact heat storage

The main benefits of the FlexTherm Eco compact heat storage compared with traditional hot water cylinders and hot water only thermal stores are:

- a. The heat is stored in the Phase Change Material and therefore the water content in the storage is less than 11 Litres and the hot water is heated instantaneously on demand. Therefore:
  - Easy installation because of low expansion volume.
  - The risk of legionella build-up inside the store is eliminated, as there is no stagnation and the store is constantly pasteurised.
- b. Quicker and less costly installation.
- c. Better insulation and no mandatory annual maintenance or inspections mean lower running costs than comparative electric storage water heaters.
- d. Operational needs: Smaller space, typically 2 – 3 times smaller than the equivalent hot water cylinders and clean installation.

### 3. Technical specifications

Flamco compact heat stores are supplied with PCM58 and an integrated electrical heating element. The discharge temperature from these standard compact heat storage models can be up to 75°C when fully charged and should therefore be fitted with a thermostatic blending valve set to 55°C.

The overall dimensions and weights of the compact heat storage models in the FlexTherm Eco range are listed in table 2.1 and their technical specification is listed in table 2.2. The pressure loss characteristics of the compact heat storage are tabulated in tables 2.3a, 2.3b, 2.3c.

**Table 3.1. Overall dimensions and weights of FlexTherm Eco compact heat storage range**

	Overall dimensions [mm]			Net weight
	Width	Depth	Height	[kg]
FlexTherm Eco 3E	365	575	440	70
FlexTherm Eco 6E	365	575	640	125
FlexTherm Eco 9E	365	575	870	175

**Table 3.2: Technical specification of FlexTherm Eco heat storage range**

		Size 3	Size 6	Size 9
Storage capacity – Standard storage with PCM58 <sup>[1]</sup>	[kWh]	3.5	7.0	10.5
Water content – Low power circuit (LPC)	[L]	1.3	2.4	3.5
Water content – High power circuit (HPC)	[L]	2.3	4.5	6.8
Equivalent hot water cylinder size <sup>[2]</sup>	[L]	71	142	212
V <sub>40°</sub> Volume of hot water available at 40°C <sup>[3]</sup>	[L]	85	185	300
• Heat loss rate	[kWh/24h]	0.48	0.67	0.77
• Heat loss rate	[W]	20.0	28.1	32.1
• ErP Rating class – Hot water storage vessel	[ - ]	C	C	C
Recommended maximum HW flow rate	[L/min]	6	15	20
Minimum cold water supply pressure at inlet to the heat storage	[bar] [MPa]	1.50 0.15	1.50 0.15	1.50 0.15
Maximum working pressure: High power (HPC) and Low power (LPC) circuits	[bar] [MPa]	10.0 1.0	10.0 1.0	10.0 1.0
Hot water outlet temperature at design flow rate <sup>[4]</sup>	[°C]	55	55	55
Heat storage controller		16	16	16
• Electric heater supply rating at 230V, AC, 50Hz <sup>[5]</sup>	[A]	5	<1	<1
• Standby power consumption – All models	[W]	2,800	2,800	2,800
• Power rating of the heater at 230V, AC, 50Hz ('e' models only)	[W]			

- 1) Storage operating as hot water heaters. Charged to 75 °C and then discharged using mains cold water at 10 °C until the hot water outlet temperature dropped to 40 °C.
- 2) Calculated from the storage capacity of the heat storage and assuming that the hot water cylinder thermostat is set at 60 °C, mains cold water inlet temperature is at 10 °C and the stored energy utilisation factor of cylinder is 0.85.
- 3) Calculated from the storage capacity of the heat storage.
- 4) Recommended setting for the hot water thermostatic blending valve.
- 5) Power supply for the standby electric heater via local 2-pole isolator – Only for FlexTherm Eco E type of heat storage.

### 3.1 Pressure Loss Characteristic

**Table 3.1a: Pressure loss characteristic of FlexTherm Eco 3E storage**

Flow rate		Low power circuit (LPC)		High power circuit (HPC)		HPC & LPC Circuits in parallel	
[l/s]	[m <sup>3</sup> /h]	[bar]	[kPa]	[bar]	[kPa]	[bar]	[kPa]
0.10	0.360	0.049	4.920	0.016	1.572	0.006	0.640
0.20	0.720	0.197	19.680	0.063	6.289	0.026	2.560
0.30	1.080	0.443	44.280	0.142	14.151	0.058	5.760
0.40	1.440	0.787	78.721	0.252	25.157	0.102	10.240

**Table 3.1b: Pressure loss characteristic of FlexTherm Eco 6E storage**

Flow rate		Low power circuit (LPC)		High power circuit (HPC)		HPC & LPC Circuits in parallel	
[l/s]	[m <sup>3</sup> /h]	[bar]	[kPa]	[bar]	[kPa]	[bar]	[kPa]
0.10	0.360	0.082	8.228	0.023	2.335	0.010	1.000
0.20	0.720	0.329	32.914	0.093	9.339	0.040	4.000
0.30	1.080	0.741	74.056	0.210	21.013	0.090	9.000
0.40	1.440	1.317	131.655	0.374	37.357	0.160	16.000

**Table 3.1c: Pressure loss characteristic of FlexTherm Eco 9E storage**

Flow rate		Low power circuit (LPC)		High power circuit (HPC)		HPC & LPC Circuits in parallel	
[l/s]	[m <sup>3</sup> /h]	[bar]	[kPa]	[bar]	[kPa]	[bar]	[kPa]
0.10	0.360	0.114	11.405	0.034	3.405	0.014	1.424
0.20	0.720	0.456	45.620	0.136	13.619	0.057	5.695
0.30	1.080	1.026	102.644	0.306	30.643	0.128	12.814
0.40	1.440	1.825	182.478	0.545	54.477	0.228	22.781

## 4. FlexTherm Eco Controller

### 4.1 Description

The FlexTherm Eco controller is housed in the unit. The controller parameters can be changed on-site.



Figure 4.1: Controller in FlexTherm Eco Units

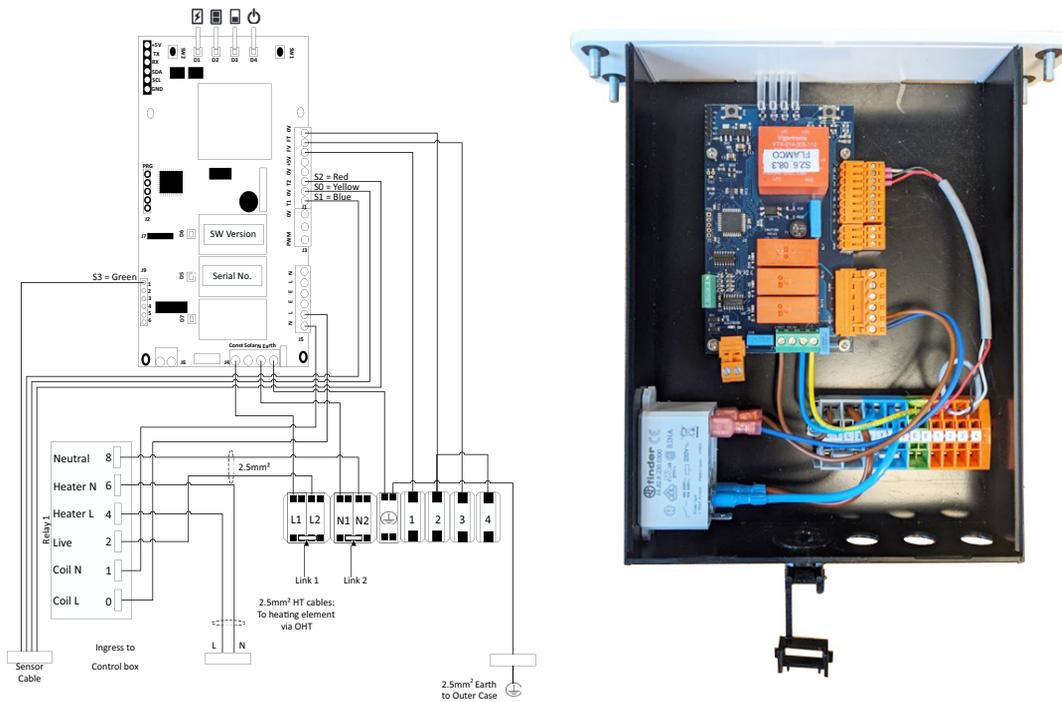
### 4.2 PCB identification

Location of the switches and LEDs is shown in the figure below. Wiring connections for remote control input are shown, using the 4-way plug in connector.

#### Standard Configuration

Flextherm Eco controller\*

**Note:** This controller has been shipped with all Flamco Flextherm Eco products from serial # 5204 onwards. The following advice relates to these products only. For products with a grey controller case please refer to the older version of this manual.



**Table 4.1: Controller connections**

5V input/output 2	J1.6 (FV)	Connect to GND for timed boost (user switch)
5V input/output 1	J1.7 (FT)	Connect to GND to command element on (PV inverter)
GND	J1.8 (0V)	Ground for i/o signals

### 4.3 Installer settings

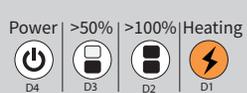
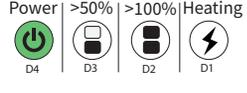
#### Options

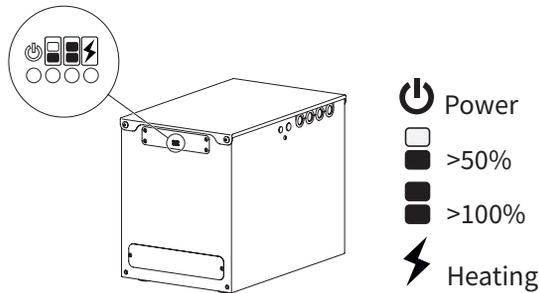
Depending on the application, different options may be selected.

Holding switch SW1 down will show the current setting on the 4 LEDs. Holding this switch down for longer than 5 seconds will cause the LEDs to cycle. Release switch SW1 when the wanted LED is illuminated, and this choice will be stored.

Please note: The setting for SW2 should always be in Mode 0, meaning that no LEDs are illuminated. This can be checked by shortly holding SW2 to show the current mode or by holding SW2 for longer than 5 seconds to cycle through the modes (release when no LEDs are illuminated).

**Table 4.2: Controller options and explanation**

LED #	LED Colour/ Symbol	Option Description	Explanation
None		Normal mode	This is the standard operational mode and is suitable for most applications.
D1		Deep discharge mode	In this mode the FlexTherm Eco E will call for heat once it has been almost completely depleted. This mode can be used e.g. when used as a pre-heat to a combi-boiler. Note: Using this mode in an electric stand-alone installation can lead to poor service.
D4		Timer/Boost function mode	In this mode the Flextherm Eco E will only recharge if the circuit on terminals 3/4 is closed (and remains closed while charging) or if the boost button is engaged.



## 5. Design of cold and hot water supplies

### 5.1 General requirements

- a. Minimum dynamic mains water supply pressure = 1.5 bar
- b. Maximum dynamic mains water supply pressure = 10.0 bar
- c. Mains cold and hot water pipe sizes maximum 22 mm OD copper
- d. Expansion vessel charge pressure (If fitted) = Incoming mains pressure (bar)

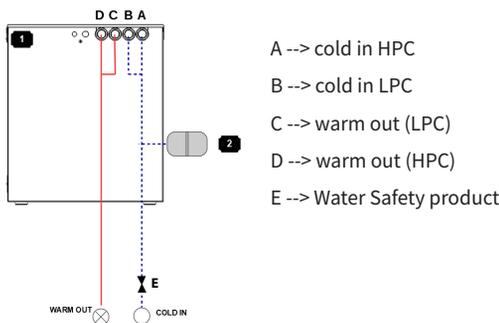
**Important:** Although the FlexTherm Eco is designed for **1.0 MPa (10 bar)** maximum working pressure, it is recommended than **0.5MPa (5 bar)**, a approved pressure regulator set 0.5MPa (5 bar) should be fitted.

### 5.2 Water distribution network design

- a. The water distribution network should be sized and designed to comply with the requirements of the relevant sections of EN1717.

### 5.3 Hot water circuit including water safety device

#### Hot water circuit including recommended components



Allowed Water Safety product		Art.nr.	Expansion vessel	Art.nr.
France	Flexbrane	28360	Flexofit Super 1/2	24980
United Kingdom	Prescor PRV	27467	Airfix P	24900
Netherlands	Prescor IC	27190	Flexofit Super 1/2	24980
Finland	Prescor IC	27190	Flexofit Super 1/2	24980
Belgium	Prescor IC	27190	Flexofit Super 1/2	24980
Germany	Prescor B	27111	Airfix P	24850
Czech Rep.	Prescor IC	27190	Flexofit Super 1/2	24980
Slovakia	Prescor IC	27190	Flexofit Super 1/2	24980

### 5.4 Hard water areas

In hard water areas where mains water hardness can exceed 150 ppm Total Hardness, you must install a scale reducing device in the cold water supply to the heat storage to reduce the rate of accumulation of limescale.

Water hardness (German scale)	< 8,4 °dH
Water hardness (American scale)	< 150 ppm
Water hardness (French scale)	< 15 °fH

## 6. Installation Guidelines

### 6.1 General wiring recommendations

- a) The heat storage must be earthed.
- b) The point of connection to the mains should be readily accessible and adjacent to the heat storage installation.
- c) See for general installation “Quick start guide “ FlexTherm Eco
- d) Every FlexTherm Eco E unit is equipped with an automatic thermal cut-out (manual reset) to protect the heating element from overheating.

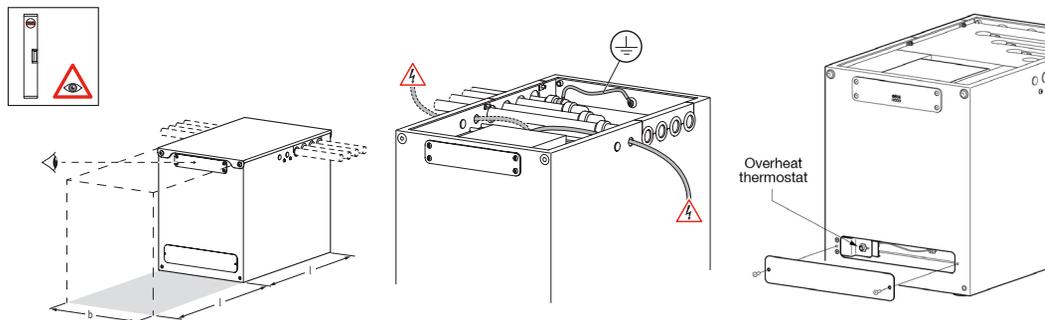


Figure 6.1: FlexTherm Eco direct electrically heated battery

### 6.2 FlexTherm Eco E storage

#### 6.2.1 Mains cold water and hot water supplies

The FlexTherm Eco E heat stores are designed for producing hot water in dwellings and are heated directly by electricity. Therefore, these heat stores are equivalent to direct electrically heated hot water cylinders. The general requirements for designing hot water network are given in section 4 of this document.

- a. Pipe connections – All model in this range: 22mm OD copper.
- b. Both heat exchangers must be connected and filled with water during the application, see also section 4.
- c. For minimum and maximum working pressures see technical section and section 4.1.

## 7. Electrical wiring

The heat storage are supplied with a FlexTherm Eco internal controller.

Please contact Flamco if your application is not covered and you are not sure how to proceed.

Mains supply – Electric storage water heater

Run and connect mains power supply cable (16A, minimum 2.5mm<sup>2</sup> CSA) from the local 2-pole isolator to the heat storage controller as shown in figure 6.1.

Brown (Live):	Terminal L1 (Live)
Blue (Neutral):	Terminal N1 (Neutral)
Green/Yellow (Earth):	Terminal E (Earth)
	Terminal 1 - boost switch
	Terminal 2 - 0V
	Terminal 3 - PV command signal switch
	Terminal 4 - 0V

Figure 7.1: Wiring for electric storage water heater applications

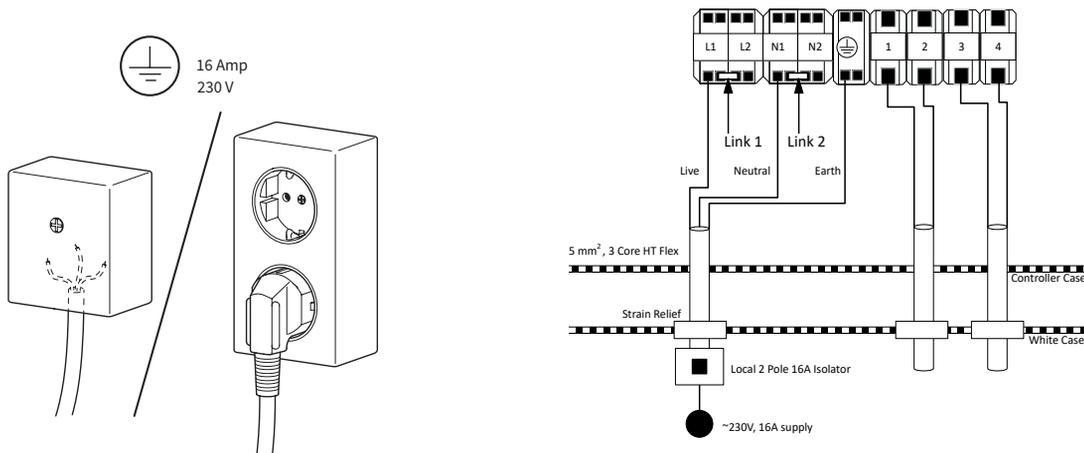


Figure 7.1: Wiring for electric storage water heater applications

## 8. Flextherm Eco + PV Power Diverter

### Controller configuration, settings & applicability

#### 8.1 FlexTherm Eco Controller Settings

Program (SW2): 1    Power >50% >100% Heating  
 Option (SW1): 0    D4 D3 D2 D1

#### 8.2 Applicability

The following controller configuration applies to Flextherm Eco products from serial no. 5204 only. Units with a lower serial no. (grey controller) can not be adapted in this way.

The Flextherm Eco is only compatible with modulating AC power diverters. Modulating DC power diverters are NOT compatible with the product and their use poses a fire risk.

#### 8.3 PV Diverter Configuration

**Note:** This controller has been shipped with all Flamco Flextherm Eco products from serial # 5204 onwards. The following advice relates to these products only.

**Warning!**

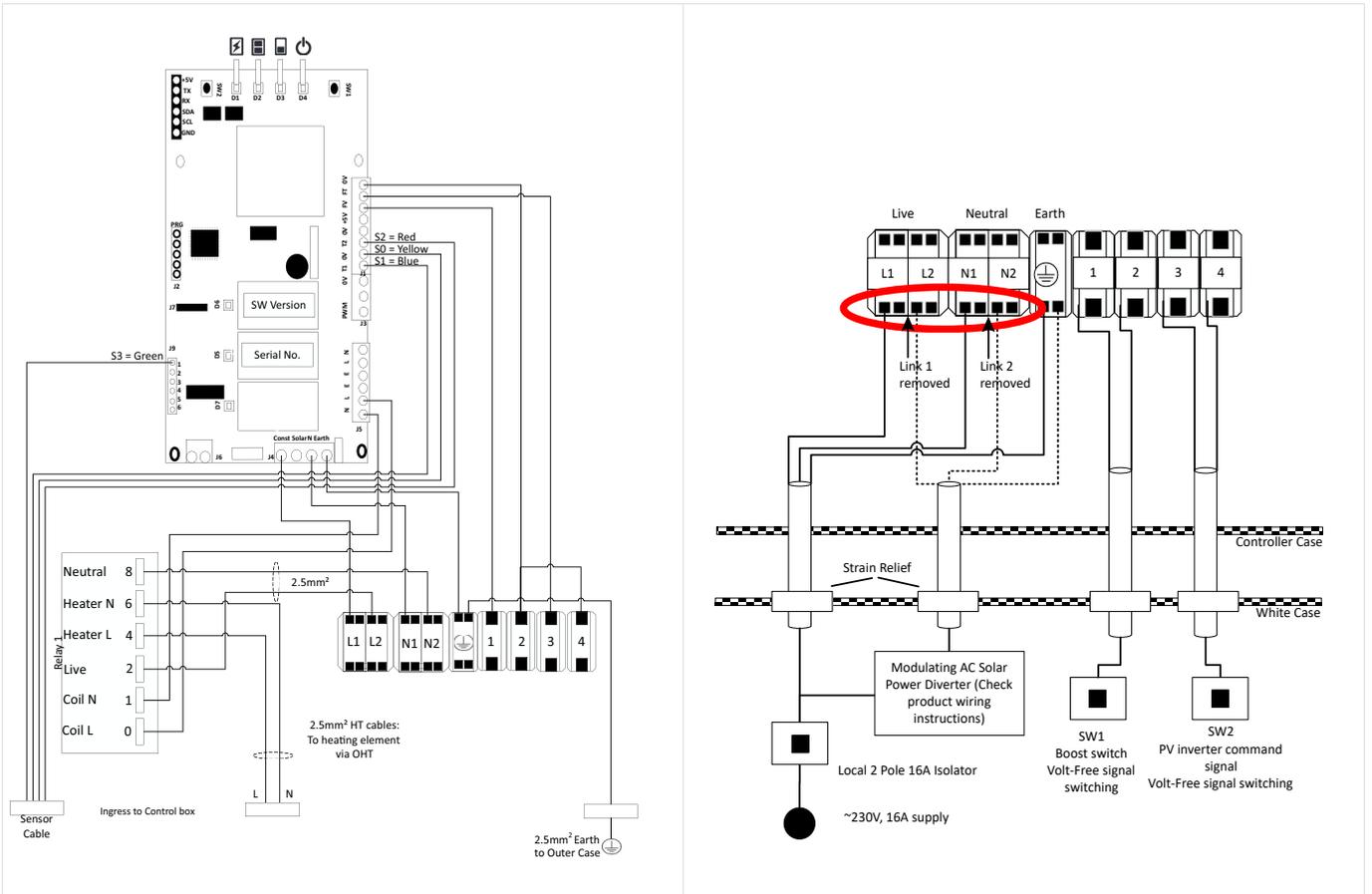
Only modulating AC power diverters can be used with this appliance.

To install a Flamco Flextherm Eco E heat store with a PV Diverter, separate the live and neutral going to the heating element and the controller by removing Link 1 and Link 2 as highlighted in the graphic below. Follow the wiring instructions provided below and in the power diverter manual.

- Any power diverter used with the Flextherm Eco E should:
- Enable the setting of boost times to charge the Flextherm Eco E when there was not enough sun during the day.
  - Allow cycling of the heating element by not switching off supply immediately when demand is interrupted (also known as Hot Cancel Delay) to allow the Flextherm Eco E to clear its cold start routine if necessary.

Products which do not have these functions may result in unsatisfactory user experience.




**WARNING**

To prevent the hazard of dual supply to the heat battery, the constant live to the controller and the Power Diverter must come from the same circuit breaker, allowing to isolate both sources of power to the FlexTherm Eco E at the same time. Modulating AC (from Power Diverter OUT to heating element. Constant AC supply to PCB and Power Diverter IN.

## 9. Commissioning

### 9.1 General



#### CAUTION

Before commissioning the Heat Battery, first check that you have properly reviewed the previous sections, particularly regarding Heat Battery specifications as well as location, electrical supply and water supply requirements.



#### CAUTION

The Heat Battery and its associated pipework **MUST** be filled and fully vented in both Primary and Secondary circuits before the Heat Battery power supply is switched on.

### 9.2 Pre-commissioning checklist

- Check all packaging material has been removed.
- Check all components are clean and undamaged.
- Adjust PRV on Cold Mains Supply if the Pressure exceeds 5 Bar (0.5MPa).
- f present, adjust the flow regulator valve to within the maximum recommended flow rate for the Heat Battery size installed.
- f required, adjust the Auto-bypass valve on the primary circuit to the recommended flow rate for the Heat Battery size installed.

### 9.3 Commissioning process

1. Check that the temperature sensor of the Heat Battery has not become dislodged during transport and is fully inserted into its pocket. The white marker should be sitting on top of the blue cable gland.
2. Turn on the water supply and check that there are no leaks
3. Fully open any hot water taps in the dwelling and allow it to run for a **minimum time of 2 minutes**. This is for any air to leave the system. This may vary depending on Heat Battery model size.

#### Notice

For larger models such as the FlexTherm Eco G1 the minimum flush time should be increased to 4 minutes.

4. Switch on the power supply to the Heat Battery, External Heat Source and solar power diversion controller (if fitted).
5. Check the front of the Heat Battery to ensure that the “power” LED is lit (see Figure 10 & Table 7).
6. Apply the relevant DHW settings for the External Heat Source (For settings for compatible heat pumps, please check D0086).
7. Observe on the External Heat Source controller interface if the DHW demand has been activated and the External Heat Source Diverter Valve has moved into DHW position.
8. If present, press the BOOST button on the solar power diversion controller to start charging the Heat Battery. The operation of the External Heat Source in DHW mode, will be paused and the Heat Battery heating element will engage, observe if the “heating element” LED is lit (see Figure 10 & Table 7).
9. Allow the Heat Battery to charge for approximately 30 minutes with the hot water tap closed.
10. If using the heating element for charging, eg when using a PV key, please note that on first charge or when the Heat Battery has been switched off and cooled down the heating element will cycle ON and OFF for up to one hour, depending on the Heat Battery size. This is normal operation. If heating element cycling persists for more than one hour.
  - a. If fitted with a Solar Power Diverter, please apply a setting to ensure that the Heat Battery does not stop charging while it is cycling during start up. Please refer to the Solar Power Diverter Manual.
11. After 30 minutes open the hot water tap/s and check for hot water.
12. Adjust the Hot Water Tempering Valve if installed, so that the output temperature is 45°C to 55°C.

13. Check hot water temperature at all hot water outlets in the dwelling with the customer and advise on temperature settings.
14. Ensure that the Heat Battery charges to half charge and that there are no lights flashing (which may otherwise indicate an error).
15. If the Heat Battery is fitted with a Solar Power Diverter - Pre-planned Boost times should be set on the Solar Power Diverter, the information on how these are set can be found in the relevant section of the Solar Power Diverter manual. These depend on the end user usage type of the system.
16. Once the installation is finished, please carry out the following steps:
  - Explain to the customer / end user all safety precautions.
  - Fill in and return the Commissioning certificate provided with the Heat Battery. These documents MUST be completed and returned to Sunamp after the installation to obtain the extended warranty.
  - Leave all product information and literature with the customer / end user.
  - It's the responsibility of the end user to supply this manual to any other subsequent users.

### **Final Fit After Commissioning:**

Commissioning instructions are provided in this Section 7 of the manual. Follow the instructions below after commissioning.

- Cut the 32mm thick insulation layer to suit the tube and cable entries. This layer has several perforations for guidance. This can be done with a sharp knife or scissors. Please DO NOT cut inside the Heat Battery and near the Vacuum Insulation panels located at the side of the Heat Battery.
- Re-place the newly cut 32mm thick insulation layer nesting the insulation around the tube work and cables. Makes sure the main and signal cables sit above this layer.
- Re-place the top layer 10mm layer of insulation.
- Re-place the lid, aligning the rear pins with the slots in the rear of the unit, slide back, fit the 2 x M5 button head cap screws using 3mm hex head.
- Fix any Energy labels provided in the document pack to product main body.

## 10. Maintenance



### CAUTION

Where undertaking maintenance, repairs or removals, ensure that the system is first dis-connected from the electrical and/or water supply.

- In areas where the mains water hardness can exceed 150 ppm Total Hardness and a scale-reducing device has been fitted, the service and maintenance requirements of this device (especially re-fill requirements) need to be adhered to.
- The air pressure in the expansion vessel should be checked every 2-3 years and topped up if necessary. Please refer to the expansion vessel manufacturer's instructions.
- Except as identified above, the Heat Battery does NOT require any regular maintenance.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. Please refer to the Electrical wiring sections.

## 11. Troubleshooting

Fault	Possible Cause(s)	Possible Solution
<b>The Heat Battery does not deliver hot water after installation</b>	Issue with External Heat Source	Refer to External Heat Source manual. If using a FlexTherm Eco G1, the DSR/ Boost or back-up switch can be used to supply hot water in this instance. If using a FlexTherm Eco G1 with Solar Diversion Control, the boost button on the solar power diverter will activate the heating element inside the Heat Battery (given there are no issues with the power supply to the Heat Battery or Solar Power Diverter). Please note this will result in higher electricity costs if this is activated in a continuous mode.
	Heat Battery not powered or not powered correctly	Check wiring and power supply to Heat Battery and rectify where necessary
	Solar Power Diverter not powered or not powered correctly (please note this ONLY applies if Heat Battery installed with a Solar Power Diverter)	Check wiring and power supply to Solar Power Diverter and rectify if necessary.
	Non-self-resetting thermal cut-out has tripped	Make sure the Heat Battery is full of water and purge if necessary: <ol style="list-style-type: none"> <li>1. Disconnect the power supply</li> <li>2. Open the electrical cover at the base of the Heat Battery (Figure 1 -RHS image)</li> <li>3. Reset the non-self-resetting thermal cut-out on Left Hand side of the panel.</li> <li>4. Check if the temperature sensor is fully inserted in the Heat Battery (Section 7.3)</li> <li>5. Reassemble the Heat Battery, and</li> <li>6. Reconnect the supply.</li> </ol> <b>If the problem persists, please contact Flamco.</b>
<b>LED D4 (power symbol) is rapidly flashing</b>	Temperature sensor string is faulty	Check that the sensor cable is properly connected to the PCBA and that the connector block or screw terminal is making good contact. <b>If the problem persists, please contact Flamco.</b>
<b>The flowrate from the Heat Battery is lower than expected</b>	Air might still be trapped in the system	Check that the mains supply valve is fully opened. Make sure the Heat Battery is fully de-aired and purge if necessary.
	Incoming water pressure is too low	Measure the incoming pressure from the mains supply and <b>contact Flamco.</b>

Table 8. Troubleshooting of FlexTherm Eco G1

## 12. Decommissioning & disposal

### 12.1 Decommissioning

To successfully decommission the Heat Battery, please carry out the following steps:

1. Switch off all Electrical Power Supplies to the Heat Battery.
2. If Heat Battery is charged and no leaks are present, cool down the Heat Battery by flowing cold water through, until the temperature at the Outlet side is equal to the temperature at the Inlet.
3. Isolate the Cold Mains Supply to the Heat Battery.
4. Open the hot water taps to drain the secondary circuit system and release the pressure in the pipe work.
5. Drain the primary circuit that is connected to the External Heat Source.
6. Remove all electrical cables and connections from the Heat Battery controller.
7. Remove all pipework from the Heat Battery connections, using appropriate tools and methods. Cap pipework if it cannot be removed from the Heat Battery connections.
8. Ensure that the Heat Battery is left to cool for at least 60 minutes after completion of step 2 before moving it.

### 12.2 Disposal



This symbol on the Heat Battery and accompanying documents means the Heat Battery should not be mixed with general household waste at the end of its life.

For proper treatment, recovery and recycling, please take the Heat Battery to designated collection points where it will be accepted free of charge at the end of its life.

Disposing of this Heat Battery correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

## Contact

### The Netherlands

hydronic flow control  
+31 (0)36 52 62 300  
info@flamcogroup.com  
www.flamcogroup.com

### Belgium

hydronic flow control  
+32 2 371 01 67  
info@flamco.be

### Denmark

Flamco Denmark  
+45 44 94 02 07  
info@flamco.dk

### France

hydronic flow control  
+33 4 78 78 16 00  
info@flamco.fr

### Hungary

Flamco Kft  
+36 23 880981  
info@flamco.hu

### Russian Federation

ООО „Майбес РУС“  
+7 495 727 20 26  
moscow@meibes.ru

### Switzerland

Flamco AG  
+41 41 854 30 50  
info@flamco.ch

### China

Flamco Heating Accessories  
(Changshu) Ltd, Co.  
+86 512 528 417 31  
yecho@flamco.com.cn

### Estonia

Flamco Baltic  
+372 568 838 38  
info@flamco.ee

### Germany

Meibes System-Technik GmbH  
+49 342 927 130  
info@meibes.com

### Italy

Flamco Italy  
+39 030 258 6005  
flamco-italia@flamcogroup.com

### Slovakia

Flamco SK s.r.o.  
+421 475 634 043  
info@meibes.sk

### United Arab Emirates

Flamco Middle East  
+971 4 8819540  
info@flamco-gulf.com

### Czech Republic

Flamco CZ s.r.o.  
+420 284 00 10 81  
info@meibes.cz

### Finland

Flamco Finland  
+358 10 320 99 90  
info@flamco.fi

### Germany

Flamco GmbH  
+49 2104 80006 20  
info@flamco.de

### Poland

Flamco Meibes Sp. z o.o.  
+48 65 529 49 89  
info@flamco.pl

### Sweden

Flamco Sverige  
+46 50 042 89 95  
vvs@flamco.se

### United Kingdom

Flamco Limited  
+44 17 447 447 44  
info@flamco.co.uk

**Flamco B.V.**  
Fort Blauwkapel 1  
1358 DB Almere  
the Netherlands  
+31 (0)36 52 62 300  
info@flamco.nl  
[www.flamcogroup.com](http://www.flamcogroup.com)

Man\_FlamcomatPU\_eng\_2023-08

Copyright Flamco B.V., Almere, the Netherlands. No part of this publication may be reproduced or published in any way without explicit permission and mention of the source. The data listed are solely applicable to Flamco products. Flamco B.V. shall accept no liability whatsoever for incorrect use, application or interpretation of the technical information. Flamco B.V. reserves the right to make technical alterations.