Glow-worm

System Installation

multi-zone heating

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INTRODUCTION

1 Instructions guidance

1.1 Product documentation

The instructions are an integral part of the system appliances and must be handed to the user on completion of the installation in order to comply with the current regulation.

- Carefully read the manual, to understand all the information to enable safe installation, use and servicing. No liability can be accepted in the event of damage for not complying with the guidance in this instruction manual.

These instructions consist of, Installation, Servicing, Fault Finding. The instructions are an integral part of the appliance and must be handed to the user on completion of the installation.

1.2 Associated documents

- Systempro Control unit installation instructions
- Climapro$_2$ RF programmable Room thermostat user and installation instructions
- Boiler use and installation instructions
- Wireless outdoor sensor installation instructions

1.3 Explanation of symbols

DANGER: Risk of injuries.

DANGER: Risk of electric shock.

ATTENTION: Risk of damage to the appliance or to its surroundings.

IMPORTANT: Important information.

1.4 Guarantee registration

We recommend you complete and return as soon as possible your guarantee registration card. If your guarantee registration card is missing you can obtain a copy or record your registration by telephoning the Glow-worm Customer Service number 01773 596510.

2 System description

2.1 Concept of operation with 2 heating zones

The system consists of the following components:

- 2 port valves for zoning,
- A boiler,
- The Systempro control unit,
- Climapro$_2$ RF wireless programmable room thermostats,
- A wireless photovoltaic outdoor sensor

2.2 Concept of operation with 3 heating zones

The system consists of the following components:

- 2 port valves for zoning,
- A boiler,
- The Systempro control unit,
- Climapro$_2$ RF wireless programmable room thermostats,
- A wireless photovoltaic outdoor sensor

2.3 The following option may be added to the system:

- A domestic hot water cylinder.

2.4 Summary of installation diagram

Multi-zone heating

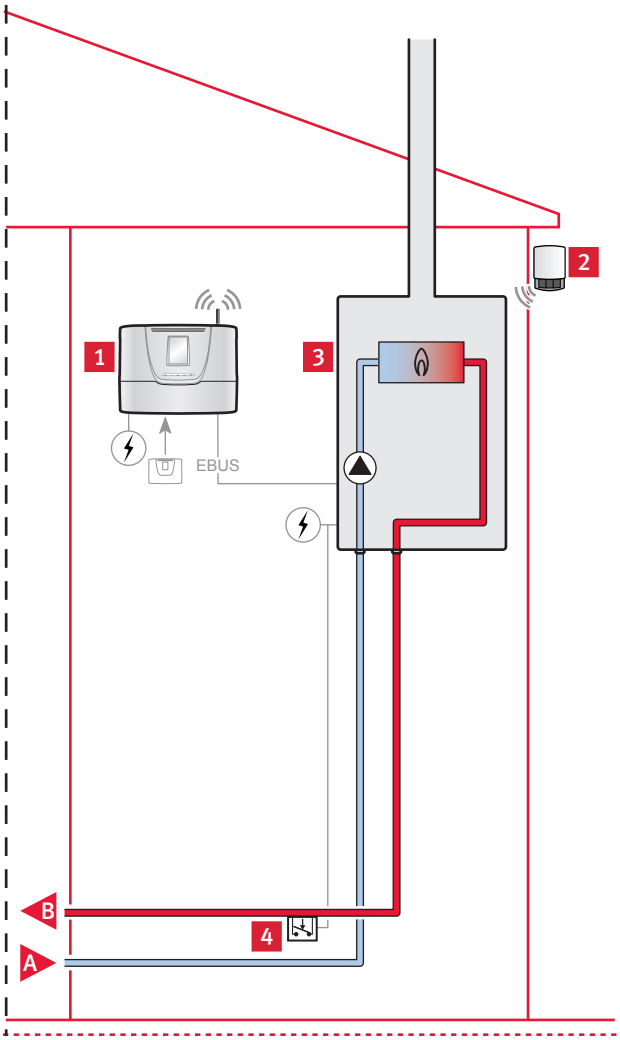
		Diagram
Boiler	eBus	8

Ultracom hxi is NOT compatible with Systempro for multi zone heating

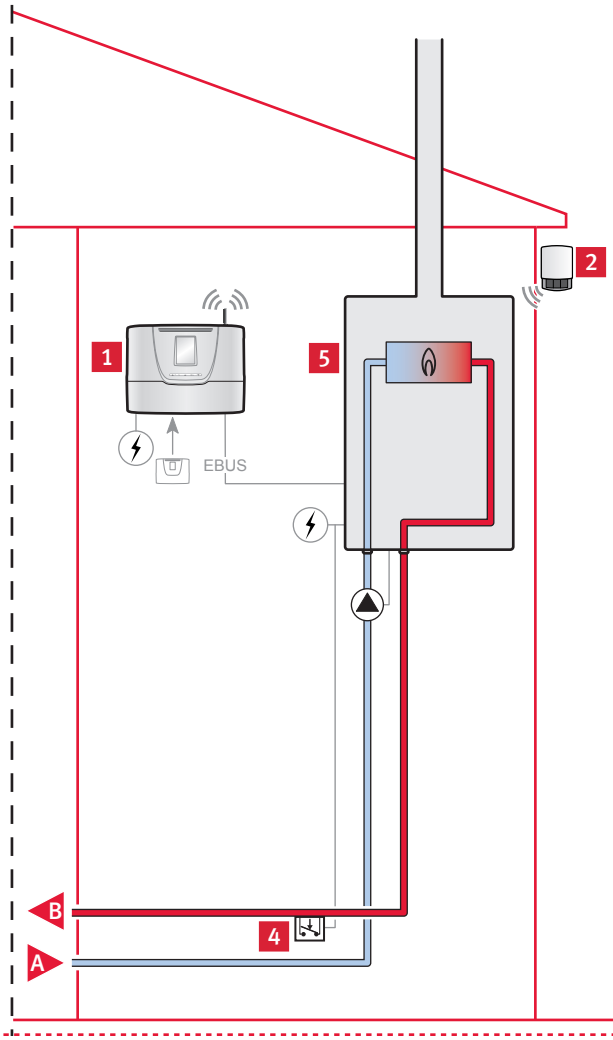
EN

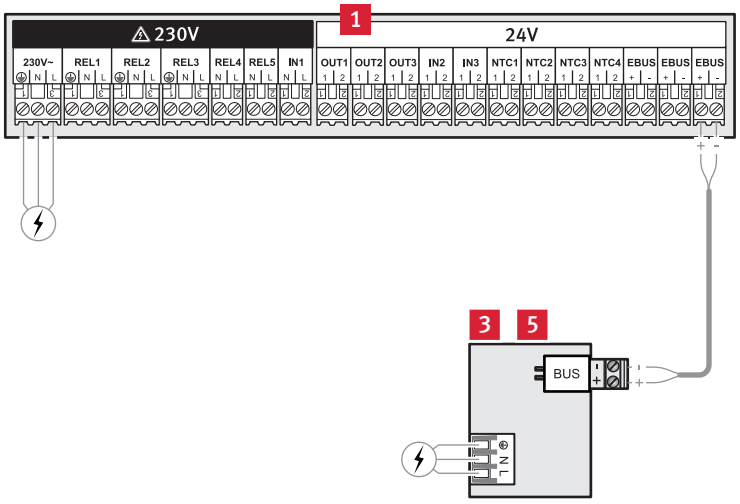
2.5 Diagram 8 : boiler eBus

EBus Boiler



EBus open vent Boiler





Key

1 Systempro control unit
2 Wireless outdoor sensor
3 EBus boiler
4 Overheating safety (not supplied)
5 EBus open vent boiler

Ultracom hxi is NOT compatible with Systempro for multi zone heating

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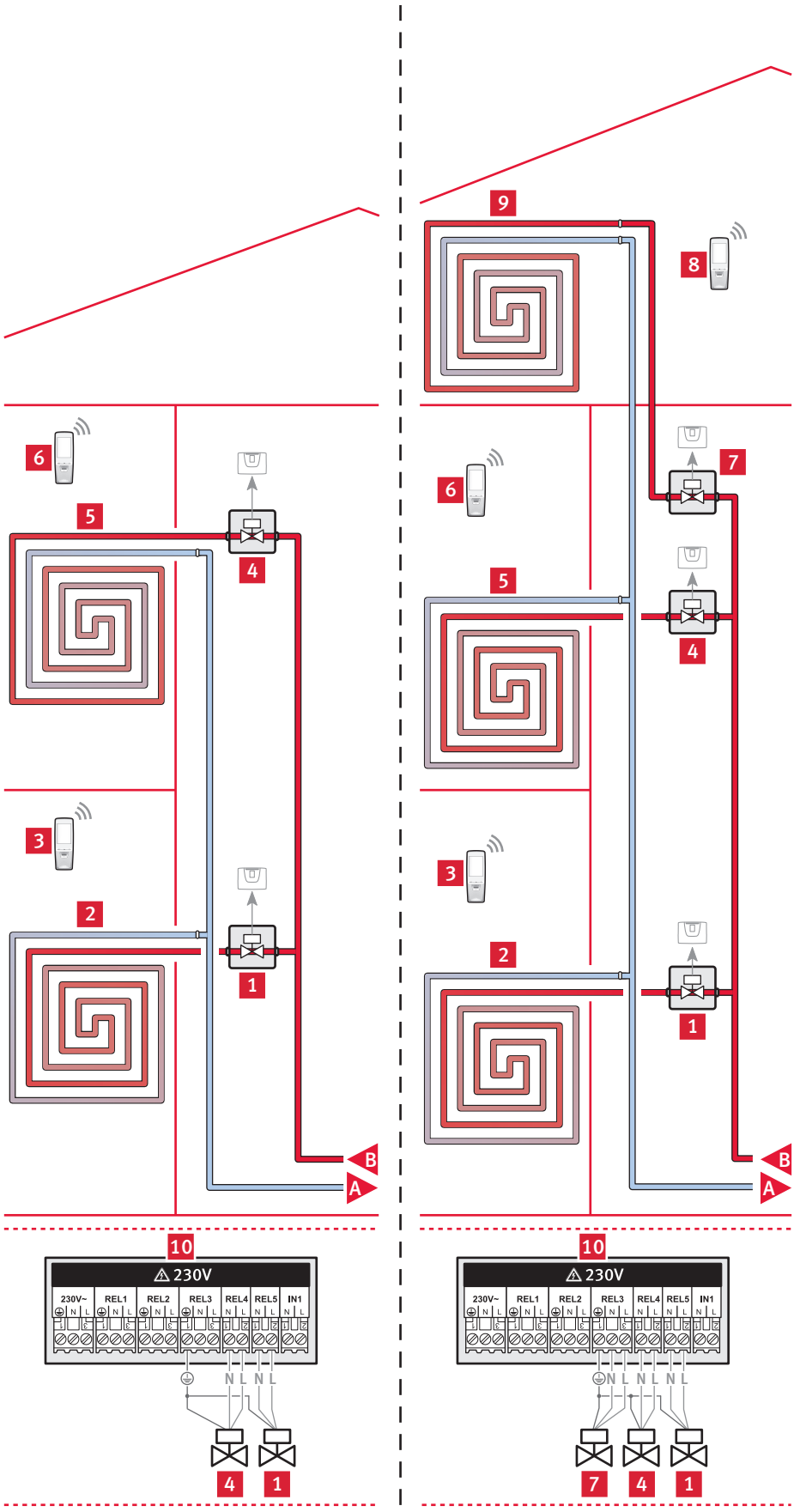
2.6 Example installation with multi-zone heating option

2 zone low temperature or high temperature heating

3 zone low temperature or high temperature heating



Key

1	2 port valve "heating zone 1"
2	Heating circuit zone 1
3	Climapro$_2$ RF programmable wireless room thermostat "zone 1"
4	2 port valve "heating zone 2"
5	Heating circuit zone 2
6	Climapro$_2$ RF programmable wireless room thermostat "zone 2"
7	2 port valve "heating zone 3"
8	Climapro$_2$ RF programmable wireless room thermostat "zone 3"
9	Heating circuit zone 3
10	Systempro control unit
A	Heating circuit return
B	Heating circuit flow

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The max. components connected Rel1 + Rel2 + Rel3 must not exceed 1 kW, each connector can support 500W max.

Application conditions

- The Systempro control unit manages up to 3 heating zones and one domestic hot water zone.
- Each wireless room thermostat can control a heating zone.

Use 0.75 mm² section cables for the electrical connections to the control unit.

Control unit settings

Description of main settings	Setting
Diagram no.	8
multi-zone heating type	2 zones (1st case) 3 zones (2nd case)
Installation option: Domestic Hot Water cylinder	Off/On
Heating curves	0.1 - 4.0
Max. heating flow temperature for the low temperature zone	T < 40°C
Max. heating flow temperature for the high temperature zone	T < 70°C

2 port valve electrical connections

- **When the 2 port valve is connected to REL3:**

• Connect the neutral wire (blue) of the valve to the “N” of the REL3 connector.

• Connect the live wire (brown) of the valve to the “L” of the REL3 connector.

• Connect the earth wire (yellow/green) of the valve to the earth of the REL3 connector.

• Electrically insulate the red and grey wires of the valve as they are not used.

- **When the 2 port valve is connected to REL4 or 5:**

• Connect the neutral wire (blue) of the valve to the “N” and the live wire (brown) of the valve to the “L” of the REL4 or 5 connector.

• Connect the earth wire (yellow/green) of the valve to the earth of the REL3 connector.

• Electrically insulate the red and grey wires of the valve as they are not used.

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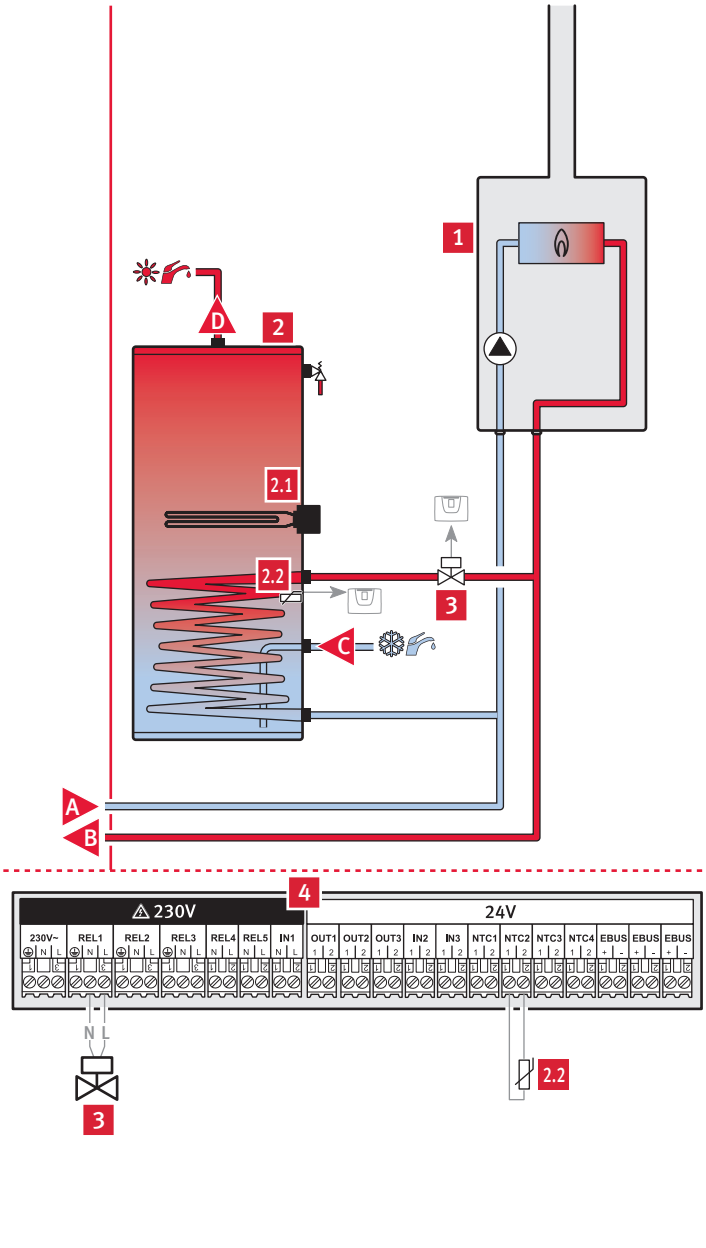
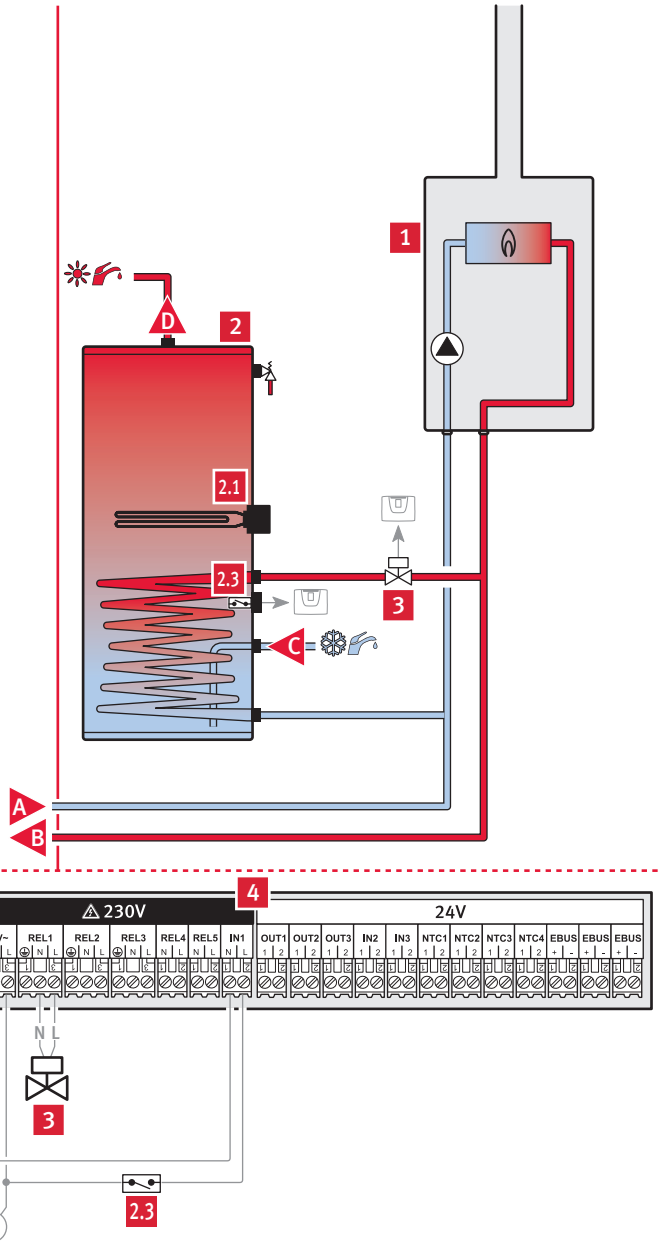
2.7 Example of system installation with the domestic hot water cylinder option

DHW cylinder with NTC



DHW cylinder with thermostat



Key

1 Boiler
2 Domestic hot water cylinder
2.1 Electrical back-up heater (following dhw cylinder)
2.2 Domestic hot water NTC
2.3 Domestic hot water thermostat
3 Domestic hot water cylinder 2 port valve
4 Systempro control unit

A Heating circuit return
B Heating circuit flow
C Cold water supply
D Domestic hot water flow

Application conditions

- The hot water and heating can operate in parallel.

The cylinder thermostat circuit remains live when Systempro is switched off. Isolate the supply at the fused spur before carrying out any work on Systempro

Control unit settings

Description of main settings	Setting
Installation option: Domestic Hot Water cylinder	On
The type of tank	NTC sensor (1NTC) or Thermostat (1Therm)

EN

INSTALLATION

Fill the heating circuit using the "Filling" mode when commissioning the control unit. "Filling" mode ensures filling by automatically opening all of the circuit. Refer to the chapter "Commissioning the Systempro control unit ▸ Commissioning ▸ Filling the heating circuit".

3 Configuring the installation

- Enter the installer code 96 into the Systempro control unit.
- Refer to the "System description" section for your diagram number.

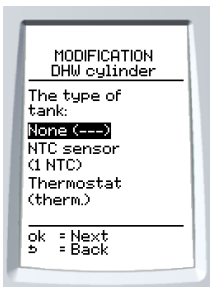
1 Choose diagram number.

2 Select number of heating zones present on the system.

- Z20 kit = Two heating zone valves
- Z11 kit = not available
- Z30 kit = Three heating zone valves

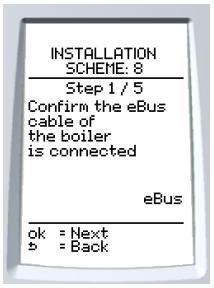
3 Select **DHW cylinder** on the screen, if the option is installed.

3.1 Select the corresponding DHW cylinder.



4 The control unit summarizes your installation.

5 Check the connections you made to the control unit.



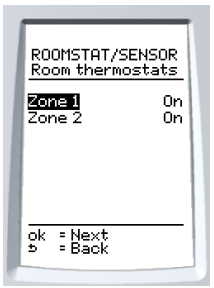
4 "Thermostat / sensor" menu

4.1 Thermostat(s)

1 Select **Rmstat/sensor** on the screen.

2 Select **Roomstat(s)** on the screen.

3 Select the area controlled by the room thermostat.



4 Via the room thermostat installer menu, select › RF › pairing.

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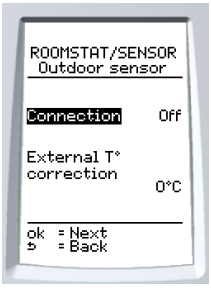
4.2 Outdoor sensor

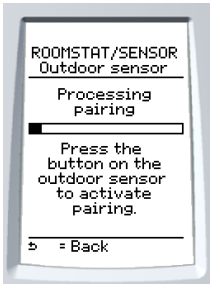
1 Select **Rmstat/sensor** on the screen.

2 Select **Outdoor sensor** on the screen.

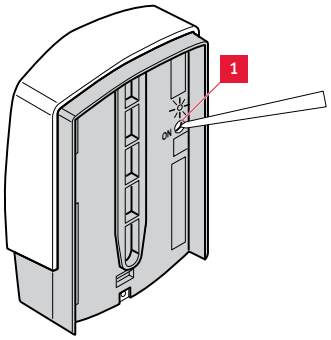
3 Select **Connection** on the screen.



4 Press the button on the outdoor sensor to connect.



The outdoor sensor is operational after 24h of exposure to light and will therefore not function immediately after being unpacked.



Key
1 Outdoor sensor button

The External T°C Correction allows you to correct the temperature measured by the outdoor sensor (+/- 5 ° C, at intervals of 1 ° C - factory setting: 0).

5 Self check

Do not modify the cables when connected to the mains.

The automatic test allows you to check EBUS inputs, NTC inputs, the RF connection with the room thermostat, the outdoor sensor radio connection.

The other connections are not tested and should be visually inspected during installation or configuration modifications..

1 Select **Self check** on the screen.

2 The automatic test will start.

- If the connection is correct, the message "OK" appears opposite the component.
- If the connection is not correct, the message "Not OK" appears opposite the component.
  In this case, check the connections (wired and wireless) .

6 Settings

This menu allows you to adjust different functions in accordance with the connected appliances and to reset all the parameters.

The maximum heating output temperature must be adjusted in accordance with the characteristics of your installation.

6.1 Heating

1 Select **Settings** on the screen.

2 Select **Heating** on the screen.

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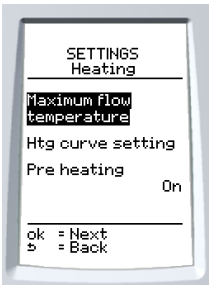
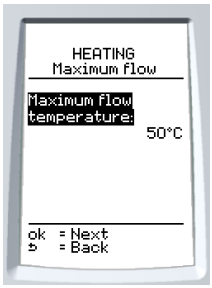
6.1.1 Max. heating flow temperature

Ensure that the heating curve setting is compatible with the installation.

3 Select max. heating flow T° on the screen.



4 Adjust the installation's max. heating flow temperature.

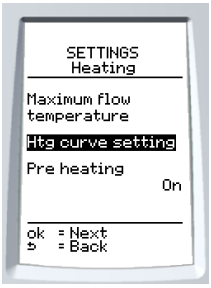


6.1.2 Heating curve

The following menu allows you to select the heating curve (value adjustable between 0.2 and 4 - factory setting: 0.5), which allows you to obtain the maximum heating demand for the usual minimum outdoor temperature for the region in which the sensor is installed.

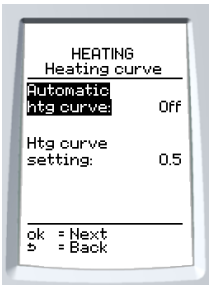
The automatic heating curve function continually and automatically seeks the most suitable value to ensure your comfort and the efficiency of your heating system. The optimum value is obtained approximately 24 hours after the system is started. It is recommended to activate this function.

1 Select **Htg curve settings** on the screen.

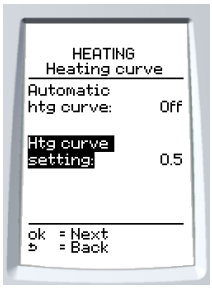


2A With **Automatic htg curve** activated.

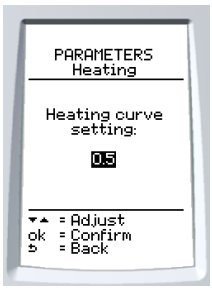
2B With the **Automatic htg curve** deactivated, you must choose a heating curve.



2B.1 Select **Htg curve setting** on the screen.

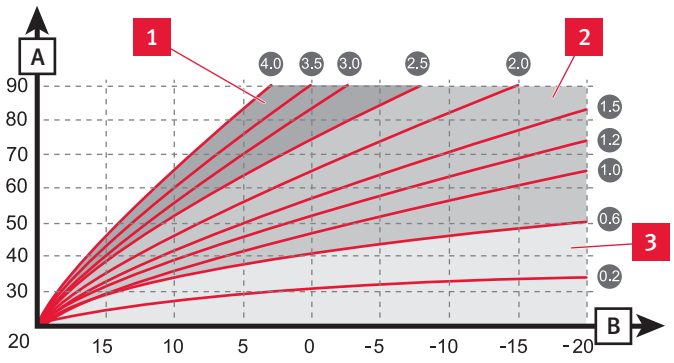


2B.2 Choose the heating curve (see curve and explanations after).



Ensure that the heating curve setting is compatible with the installation.

Heating curve



Key

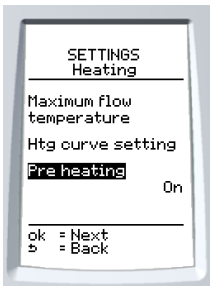
1 Older properties with radiators
2 Standard/modern house with radiators
3 Highly insulated modern house with low temperature radiators or underfloor heating

A Heating flow temperature (°C)
B External temperature

6.1.3 Pre heating

The control unit manages the heating by anticipating the change in temperature setting between two programmed time ranges. This function allows it to reach the programmed temperature more rapidly (factory setting: active). It acts at the first morning setting change for each zone.

1 Select **Pre heating** on the screen.



2 Confirm your choice.

EN

6.2 Domestic hot water

1 Select **Hot water** on the screen.

2 Set max.Domestic Hot Water temperature.

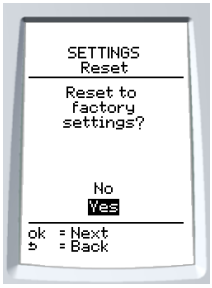
6.3 Resetting parameters

This feature allows you to reset the parameters of the control unit (factory setting).

The resetting of factory settings is irreversible. Any customised configuration of the control unit will be lost.

1 Select **Settings reset** on the screen.

2 Confirm your choice.



7 Commissioning

This menu allows you to carry out the necessary operations on the appliances following installation.

1 Select **Commissioning** on the screen.

7.1 Filling the heating circuit

The Systempro control unit is used to open the valves of each zone during filling, if more than one heating zone is installed.

1 Select **Fill htg circuit** on the screen

2 Activate **Begin filling procedure.**

- Refer to the boiler instructions for filling the boiler.

7.2 Venting the heating circuit

Venting of the heating circuit enables the purging of any air in the heating circuit.

- Open the different heating circuit air vent.

1 Select **Air venting** on the screen.

2 Select **Vent heating circuit** on the screen.

When venting is complete, close the different heating circuit air vent.

8 Status reports

This menu enables real-time access to:

- the status of the appliances responding to a request (ON/OFF)
- the information available from the appliances (temperature, pressure, flow, ...),
- register of last 5 faults recorded for each appliance (failure code and description)
- resetting the fault report.

EN

Information on the boiler

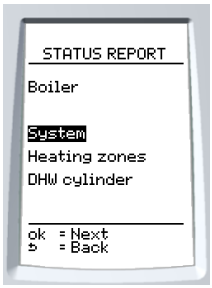
1 Select **Status reports** on the screen.

2 Select **Boiler** on the screen.

System information

1 Select **Status reports** on the screen.

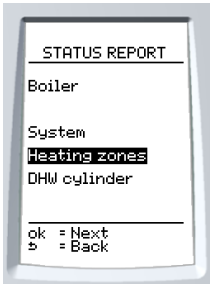
2 Select **System** on the screen.



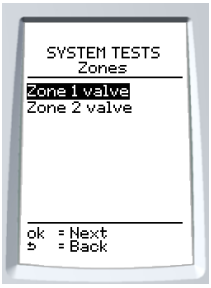
Information on heating zone

1 Select **Status reports** on the screen.

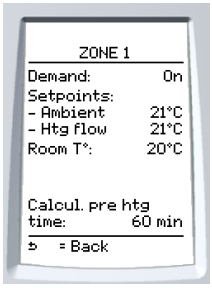
2 Select **Heating zone** on the screen.



3 Select the zone you want to consult.



4 Consult the heating zones information.

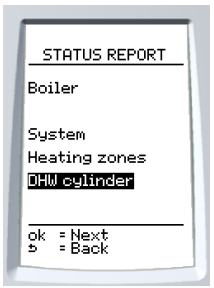


Information about the domestic hot water cylinder option

This menu is only available if you have chosen the domestic hot water cylinder option.

1 Select **Status reports** on the screen.

2 Select **DHW cylinder** on the screen.



9 Re-check and restart

- Once the system is installed, check the operation of each appliance.
- Start the system to ensure that any adjustments operate correctly and check that the appliances operate safely.
- Reset the fault reports for all appliances. To do this, refer to the "Component info." section.
- Check the water-tightness of the appliances and eliminate any leaks.
- Check the entire control and safety system, settings and operation.
- Start the "Self check" procedure to test the system connections.

10 User information

At the end of the installation, the installer must:

- explain the operation of the appliances and its safety devices to the user, if necessary provide a demonstration and answer any questions;
- hand over to the user all the required documentation, fill in the documents where necessary;
- advise the user of the precautions necessary to prevent damage to the system, appliances and the building;
- remind the user to service the appliances annually.

The user shall not interfere with or adjust sealed components.

Any servicing must be carried out by a competent person approved at the time by the Health and Safety Executive

EN

MAINTENANCE

11 Trouble-shooting

11.1 Fault diagnosis

- The following checks should be performed before proceeding onto specific diagnostics:

- Make sure that the electricity supply has not been interrupted and that the appliance is connected correctly.

- Ensure that the isolating valves are open.

- Check that all external controls are connected correctly.

11.2 System fault codes

The faults described in this chapter should be carried out by a qualified engineer and if needed by the After Sales Service.

- Refer to the instructions for each element making up the system for their fault codes.

Fault codes	Description	Cause	Solution
001	Failure in Ebus communication between with the boiler	The boiler is not connected to the control unit. The cable polarity is reversed. The boiler is off.	Check that the boiler is connected to the control unit. Check the connection's + / - polarity. Ensure that there is no interruption to the electricity network and that the boiler is properly connected and turned on.
014	Domestic water tank temperature sensor failure (open circuit)	The sensor is defective or not properly connected to the control unit.	Check the sensor's connections. Verify that the position and the operation of the sensor are correct. Check the sensor's resistance.
015	Domestic water tank temperature sensor failure (short circuit)	The sensor is shorted.	
021	Pressure too low <0.5 bar	There is a leak in the heating circuit.The venting was not carried out correctly.	Check that there are no leaks. Drain the heating circuit. Remove air. Fill the installation.
030	Failure in communication with the zone 1 wireless room thermostat.	The room thermostat is too far from the control unit. There is a problem with the batteries in room thermostat.	Check the RF signal quality via the Climapro$_2$ RF installer menu. Check the location of the thermostat. Check that the thermostat's batteries are installed in their compartment. Make sure the battery polarity is not reversed. Make sure the batteries are not dead. If so, replace them with new batteries
031	Failure in communication with the zone 2 wireless room thermostat.		
032	Failure in communication with the zone 3 wireless room thermostat.		
036	Failure in communication with the wireless outdoor sensor	The wireless outdoor sensor is too far from the control unit.	Check the location of the outdoor sensor. Check that the sensor's power supply is correctly provided by a photovoltaic cell.

12 Servicing

- Consult each of the system component's instructions for more information about the corresponding maintenance operations.

EN

13 Control unit maintenance menu

- Enter the installer maintenance access code (35) into the control unit.

13.1 Test menu

This menu allows you to test the operation of all appliances and the system (boiler, HP, zone valves,) present in the installation.

Boiler test

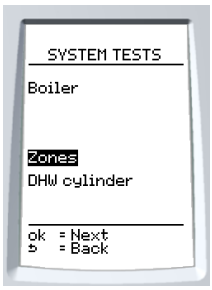
1 Select **System tests** on the screen.

2 Select **Boiler** on the screen.

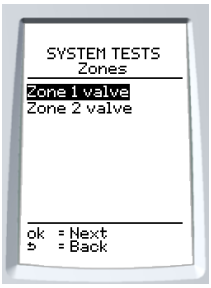
Heating zones test

1 Select **System tests** on the screen.

2 Select **Zones** on the screen.



3 Activate the multi-zone kit valve for each zone.



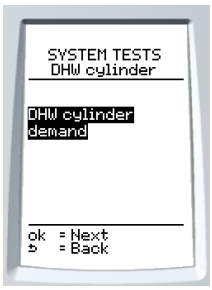
DHW cylinder test

The domestic hot water cylinder test is only possible if you have selected the domestic hot water cylinder option.

1 Select **System tests** on the screen.

2 Select **DHW cylinder** on the screen.

3 Perform a domestic hot water cylinder heat demand.



13.2 Aftersales information

This menu provides access to Aftersales Service information.

1 Select **Parameters** on the screen.

2 Select **After sales info** on the screen.

3 Display or modify the following information:

- date of last access to installer menus,
- the name of the company which provides the after sales service if entered,
- the telephone number of the company which provides the after sales service if entered.

EN

Subject to engineering changes

0020137044_00 - 09/11

GLOW-WORM

Nottingham Road,
Belper, Derbyshire.
DE56 1JT

www.glow-worm.co.uk

Because of our constant endeavour for improvement, details may vary slightly from those shown in these instructions.

Glow-worm