

C 340



Installation and User Manual

High-efficiency floor-standing gas boiler

C 340 - C 640

Diematic Evolution

SCB-01

SCB-10

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1 Safety

1.1 General safety instructions

1.1.1 For the installer



Danger

If you smell gas:

1. Do not use naked flames, do not smoke and do not operate electrical contacts or switches (doorbell, lighting, motor, lift etc.).
2. Shut off the gas supply.
3. Open the windows.
4. Trace possible leaks and seal them off immediately.
5. If the leak is upstream of the gas meter, notify the gas company.



Danger

If you smell flue gases:

1. Switch the boiler off.
2. Open the windows.
3. Trace possible leaks and seal them off immediately.



Caution

After maintenance or repair work, check the entire heating installation to ensure that there are no leaks.

1.1.2 For the end user



Danger

If you smell gas:

1. Do not use naked flames, do not smoke and do not operate electrical contacts or switches (doorbell, lighting, motor, lift etc.).
2. Shut off the gas supply.
3. Open the windows.
4. Evacuate the property.
5. Contact a qualified installer.



Danger

If you smell flue gases:

1. Switch the boiler off.
2. Open the windows.
3. Evacuate the property.
4. Contact a qualified installer.



Warning

Do not touch the flue gas pipes. Depending on the boiler settings, the temperature of the flue gas pipes can rise to over 60°C.



Warning

Do not touch radiators for long periods. Depending on the boiler settings, the temperature of the radiators can rise to over 60°C.



Warning

Be careful when using the domestic hot water. Depending on the boiler settings, the temperature of domestic hot water can rise to over 65°C.



Warning

The use of the boiler and the installation by you as the end-user must be limited to the operations described in this manual. All other actions may only be undertaken by a qualified fitter/engineer.



Warning

The condensate drain must not be modified or sealed. If a condensate neutralisation system is used, the system must be cleaned regularly in accordance with the instructions provided by the manufacturer.



Caution

Ensure that the boiler is regularly serviced. Contact a qualified installer or arrange a maintenance contract for the servicing of the boiler.



Caution

Only genuine spare parts may be used.



Important

Regularly check for the presence of water and pressure in the heating installation.

1.2 Recommendations



Danger

This appliance can be used by children aged eight and above and people with a physical, sensory or mental disability, or with a lack of experience and knowledge, provided they are supervised and instructed in how to use the appliance in a safe manner and understand the associated dangers. Children must not be allowed to play with the appliance. Cleaning and user maintenance should not be carried out by children without adult supervision.



Warning

Installation and maintenance of the boiler must be carried out by a qualified installer in accordance with local and national regulations.



Warning

The installation and maintenance of the boiler must be undertaken by a qualified installer in accordance with the information in the supplied manual, doing otherwise may result in dangerous situations and/or bodily injury.



Warning

Removal and disposal of the boiler must be carried out by a qualified installer in accordance with local and national regulations.



Warning

If the mains lead is damaged, it must be replaced by the original manufacturer, the manufacturer's dealer or another suitably skilled person to prevent hazardous situations from arising.

**Warning**

Always disconnect the mains supply and close the main gas tap when working on the boiler.

**Warning**

Check the entire system for leaks after maintenance and servicing work.

**Danger**

For safety reasons, we recommend fitting smoke alarms at suitable places and a CO detector near the appliance.

**Caution**

- Make sure the boiler can be reached at all times.
- The boiler must be installed in a frost-free area.
- If the power cord is permanently connected, you must always install a main bipolar switch with an opening gap of at least 3 mm (EN 60335-1).
- Drain the boiler and central heating system if you are not going to use your home for a long time and there is a chance of frost.
- The frost protection does not work if the boiler is out of operation.
- The boiler protection only protects the boiler, not the system.
- Check the water pressure in the system regularly. If the water pressure is lower than 0.8 bar, the system must be topped up (recommended water pressure between 1.5 and 2.0 bar).

**Important**

Keep this document near to the boiler.

**Important**

Only remove the casing for maintenance and repair operations. Refit all panels when maintenance work and servicing are complete.

**Important**

Instruction and warning labels must never be removed or covered and must be clearly legible throughout the entire service life of the boiler. Damaged or illegible instructions and warning stickers must be replaced immediately.

**Important**

Modifications to the boiler require the written approval of **De Dietrich**.

1.3 Liabilities

1.3.1 Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various Directives applicable. They are therefore delivered with the **CE** marking and any documents necessary. In the interests of the quality of our products, we strive constantly to improve them. We therefore reserve the right to modify the specifications given in this document.

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

- Failure to abide by the instructions on installing and maintaining the appliance.
- Failure to abide by the instructions on using the appliance.
- Faulty or insufficient maintenance of the appliance.

1.3.2 Installer's liability

The installer is responsible for the installation and initial commissioning of the appliance. The installer must observe the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Install the appliance in compliance with prevailing legislation and standards.
- Carry out initial commissioning and any checks necessary.
- Explain the installation to the user.
- If maintenance is necessary, warn the user of the obligation to check the appliance and keep it in good working order.
- Give all the instruction manuals to the user.

1.3.3 User's liability

To guarantee optimum operation of the system, you must abide by the following instructions:

- Read and follow the instructions given in the manuals provided with the appliance.
- Call on a qualified professional to carry out installation and initial commissioning.
- Get your installer to explain your installation to you.
- Have the required inspections and maintenance carried out by a qualified installer.
- Keep the instruction manuals in good condition close to the appliance.

2 About this manual

2.1 Symbols used in the manual

This manual contains special instructions, marked with specific symbols. Please pay extra attention when these symbols are used.

**Danger**

Risk of dangerous situations that may result in serious personal injury.

**Danger of electric shock**

Risk of electric shock that may result in serious personal injury.

**Warning**

Risk of dangerous situations that may result in minor personal injury.

**Caution**

Risk of material damage.

**Important**

Please note: important information.

**See**

Reference to other manuals or pages in this manual.

3 Description of the product

3.1 Boiler types

The following boiler types are available:

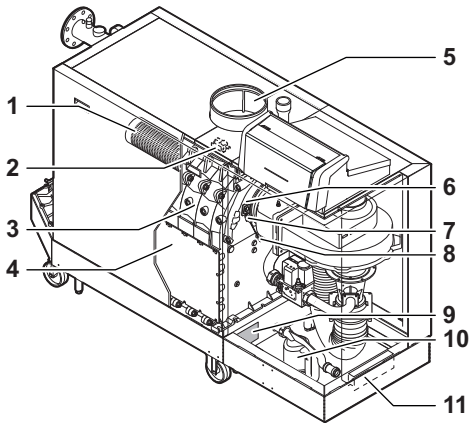
Tab.1 Boiler types

Name	Output ⁽¹⁾	Heat exchanger size
C 340 280	279 kW	5 sections
C 340 350	350 kW	6 sections
C 340 430	425 kW	7 sections
C 340 500	497 kW	8 sections
C 340 570	574 kW	9 sections
C 340 650	652 kW	10 sections
C 640 560	558 kW	2 x 5 sections
C 640 700	701 kW	2 x 6 sections
C 640 860	849 kW	2 x 7 sections
C 640 1000	994 kW	2 x 8 sections
C 640 1140	1147 kW	2 x 9 sections
C 640 1300	1303 kW	2 x 10 sections

(1) Nominal output $P_{nc} 50/30$ °C

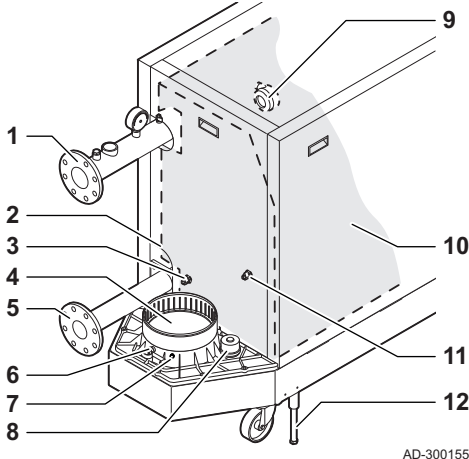
3.2 Main components

Fig.1 General - front



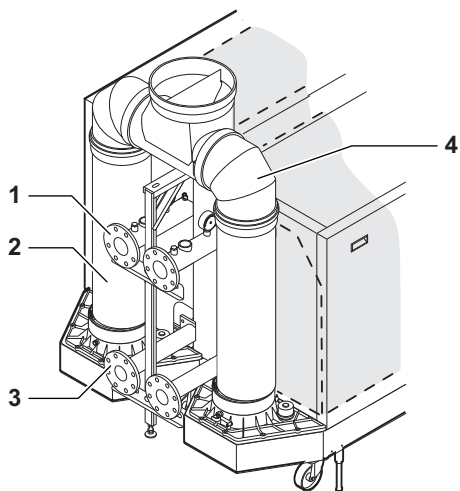
- 1 Burner
- 2 Ignition / ionisation transformer
- 3 Heat exchanger
- 4 Inspection hatch
- 5 Air inlet connection
- 6 Flame inspection glass
- 7 Ignition / ionisation electrode
- 8 Heat exchanger temperature sensor
- 9 Data plate
- 10 Siphon
- 11 Document holder

Fig.2 C 340 - back



- 1 Flow connection
- 2 Second return connection
- 3 Return temperature sensor (when no second return is fitted)
- 4 Flue gas outlet connection
- 5 Return connection
- 6 Flue gas measuring point
- 7 Flue gas temperature sensor
- 8 Condensate collector cap
- 9 Air pressure differential switch
- 10 Heat exchanger insulation kit (optional)
- 11 Return temperature sensor (when a second return is fitted)
- 12 Levelling foot

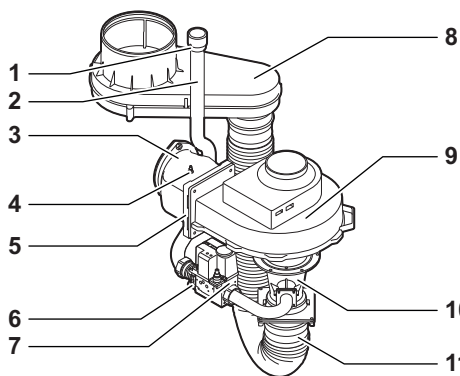
Fig.3 C 640 - back



AD-3001554-01

- 1 Flow connection
- 2 Flue gas outlet
- 3 Return connection
- 4 Flue gas collector

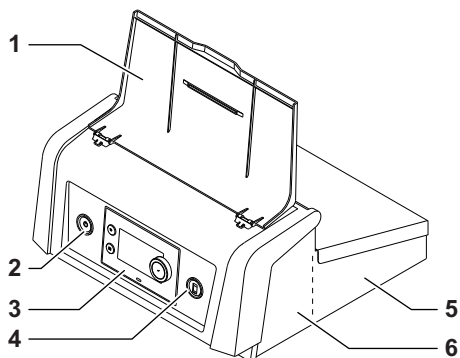
Fig.4 Gas - air unit



AD-3001555-01

- 1 Gas pressure measuring point
- 2 Gas supply tube
- 3 Gas - air connection piece
- 4 Pressure measurement point
- 5 Non-return valve
- 6 Gas filter
- 7 Gas valve
- 8 Air box
- 9 Fan
- 10 Venturi
- 11 Air supply hose

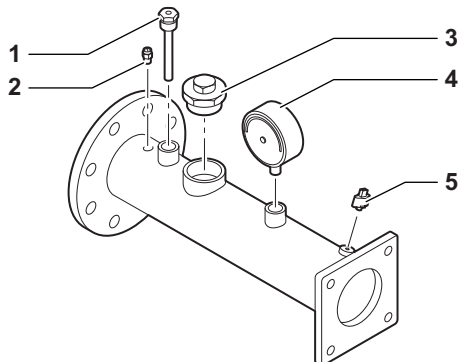
Fig.5 Control box



AD-3001556-01

- 1 Display cover
- 2 Power button
- 3 Control panel
- 4 Service connector
- 5 Control box rear part - for expansion PCBs with wire connections
- 6 Control box front part - for the control unit and connectivity expansion PCBs

Fig.6 Flow pipe

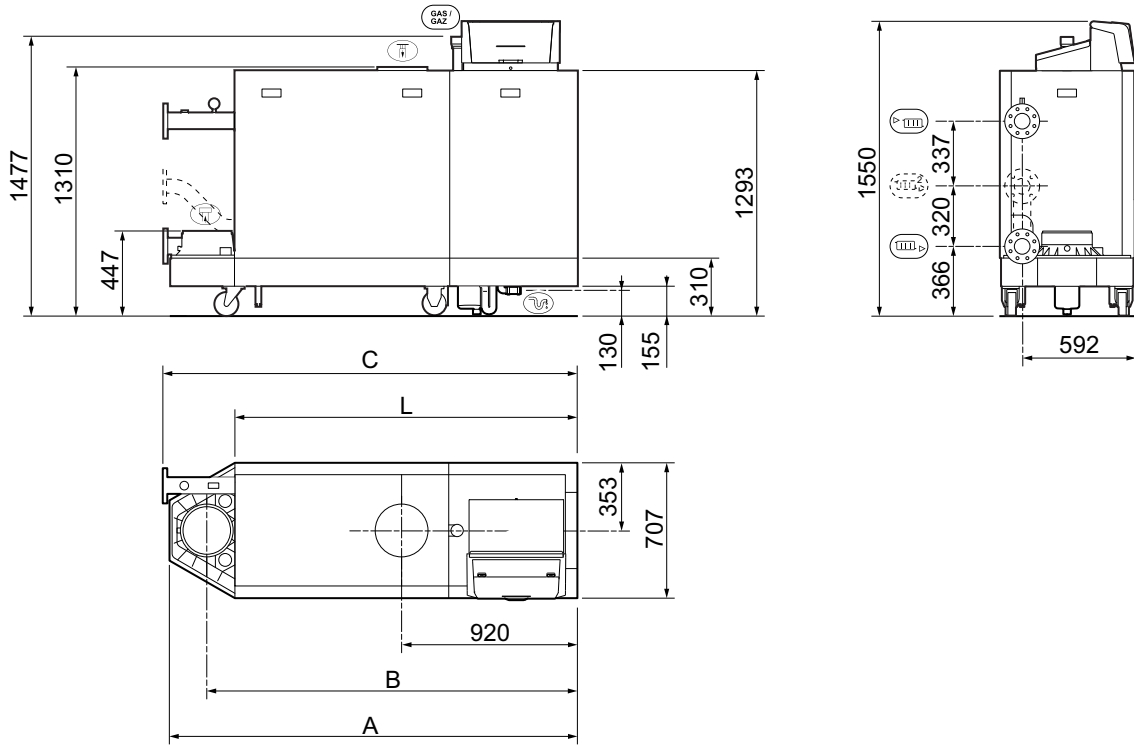


AD-3001557-01

- 1 Temperature sensor (external control) immersion tube (1/2")
- 2 Air vent (1/8")
- 3 Safety valve connection (1 1/2")
- 4 Pressure gauge (1/2")
- 5 Flow temperature sensor (M6)

3.3 Dimensions and connections C 340

Fig.7 Dimensions C 340



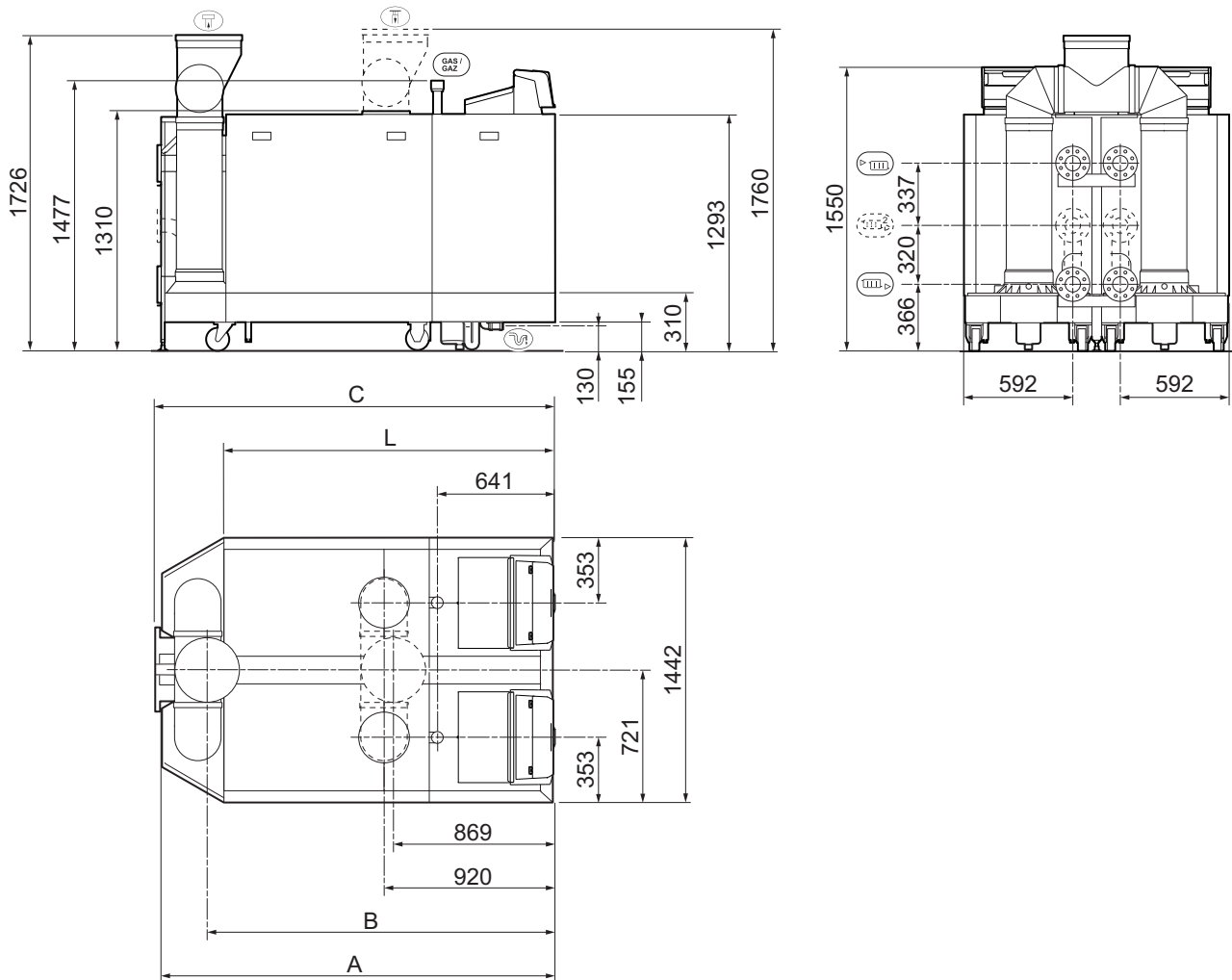
AD-3001442-02

	C 340	280 350 430	500 570 650
A	Base length	1833 mm	2142 mm
B	Flue gas outlet centre dimension	1635 mm	1944 mm
C	Total length	1862 mm	2172 mm
L	Casing length	1490 mm	1800 mm
(1)	Central heating circuit flow	Flange DN 80 PN10	Flange DN 80 PN10
(1)	Central heating circuit return	Flange DN 80 PN10 ⁽¹⁾	Flange DN 80 PN10 ⁽¹⁾
	Gas connection	G2"	G2"
	Condensation outlet	Ø 32 mm (internal)	Ø 32 mm (internal)
	Flue gas outlet	Ø 250 mm	Ø 250 mm
	Air supply	Ø 250 mm	Ø 250 mm
2	Second return (optional)	Flange DN 65 PN10	Flange DN 65 PN10

(1) The inner bore of the return flange is DN65.

3.4 Dimensions and connections C 640

Fig.8 Dimensions C 640



AD-3001443-02

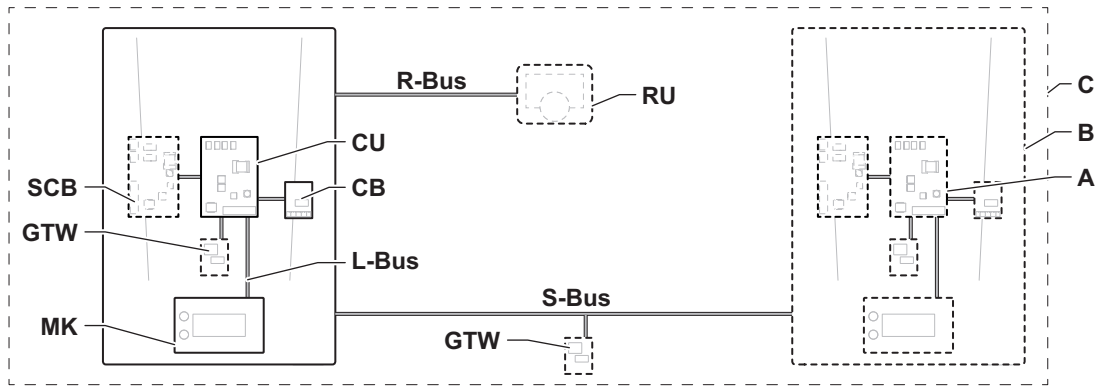
	C 640	560 700 860	1000 1140 1300
A	Base length	1833 mm	2142 mm
B	Flue gas outlet centre dimension	1582 mm	1892 mm
C	Total length	1862 mm	2172 mm
L	Casing length	1490 mm	1800 mm
▶ (III)	Central heating circuit flow	Flange DN 80 PN10	Flange DN 80 PN10
(III) ▶	Central heating circuit return	Flange DN 80 PN10 ⁽¹⁾	Flange DN 80 PN10 ⁽¹⁾
GAS/ GAZ	Gas connection	G2"	G2"
🌀	Condensation outlet	Ø 32 mm (internal)	Ø 32 mm (internal)
⌋	Flue gas outlet	Ø 350 mm	Ø 350 mm
⌋	Air supply Air supply manifold (optional)	Ø 250 mm Ø 350 mm	Ø 250 mm Ø 350 mm
(III) ↗	Second return (optional)	Flange DN 65 PN10	Flange DN 65 PN10

(1) The inner bore of the return flange is DN65.

3.5 Introduction to the controls platform

The C 340 / C 640 boiler is equipped with the controls platform. This is a modular system, and offers compatibility and connectivity between all products that make use of the same platform.

Fig.9 Generic example



AD-3001366-02

Tab.2 Components in the example

Item	Description	Function
CU	Control Unit: Control unit	The control unit handles all basic functionality of the appliance.
CB	Connection Board: Connection PCB	The connection PCB provides easy access to all connectors of the control unit.
SCB	Smart Control Board: Expansion PCB	An expansion PCB provides extra functionality, like an internal calorifier or multiple zones.
GTW	Gateway: Conversion PCB	A gateway can be fitted to an appliance or system, to provide one of the following: <ul style="list-style-type: none"> • Extra (wireless) connectivity • Service connections • Communication with other platforms
MK	Control panel: Control panel and display	The control panel is the user interface to the appliance.
RU	Room Unit: Room unit (for example, a thermostat)	A room unit measures the temperature in a reference room.
L-Bus	Local Bus: Connection between devices	The local bus provides communication between devices.
S-Bus	System Bus: Connection between appliances	The system bus provides communication between appliances.
R-Bus	Room unit Bus: Connection to a room unit	The room unit bus provides communication to a room unit.
A	Device	A device is a PCB, control panel or a room unit.
B	Appliance	An appliance is a set of devices connected via the same L-Bus
C	System	A system is a set of appliances connected via the same S-Bus

Tab.3 Specific devices delivered with the C 340 / C 640 boiler

Name visible in display	Software version	Description	Function
CU-GH13	1.1	Control unit CU-GH13	The CU-GH13 control unit handles all basic functionality of the C 340 / C 640 boiler.
MK3	1.29	Control panel Diematic Evolution	The Diematic Evolution is the user interface to the C 340 / C 640 boiler.
SCB-01	1.2	Expansion PCB SCB-01	The SCB-01 provides a 0-10 V connection for a PWM system pump and two potential-free contacts for status notification.
SCB-10	1.04	Expansion PCB SCB-10	The SCB-10 provides functionality for one DHW and three central heating zones, a 0-10 V connection for a PWM system pump and a potential-free contact for status notification.
GTW-22	-	Gateway GTW-22	The GTW-22 provides functionality to connect the boiler to an app via Bluetooth.

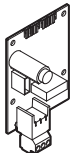
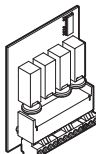
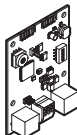
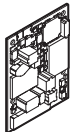
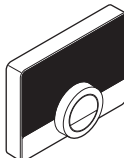
3.6 Accessories and options

Various accessories can be obtained for the boiler.

**Important**

Contact us for more information.

Tab.4 Electrical accessories and options available for the C 340 / C 640 boiler

Item	Description	Function	Code No.
 AD-3001727-01	Expansion PCB SCB-13	The SCB-13 provides functionality to connect an external hydraulic valve.	-
 AD-3001449-01	PCB AD249	The AD249 provides functionality for an extra zone for the expansion PCB SCB-10.	100013304
 AD-3001452-01	PCB GTW-08	The GTW-08 provides functionality to connect to a building management system via Modbus.	7721982
 AD-3001450-01	PCB GTW-30	The GTW-30 provides functionality to monitor the boiler via GPRS.	-
 AD-3001459-01	Thermostat Smart TC°	The Smart TC° is a modulating room thermostat with advanced functionalities.	7691374

4 Preparation of installation

4.1 Installation regulations



Warning

The boiler must be installed by a qualified installer in accordance with local and national regulations.

4.2 Location requirements



Danger

It is forbidden to store, even temporarily, combustible products and substances in or near the boiler.



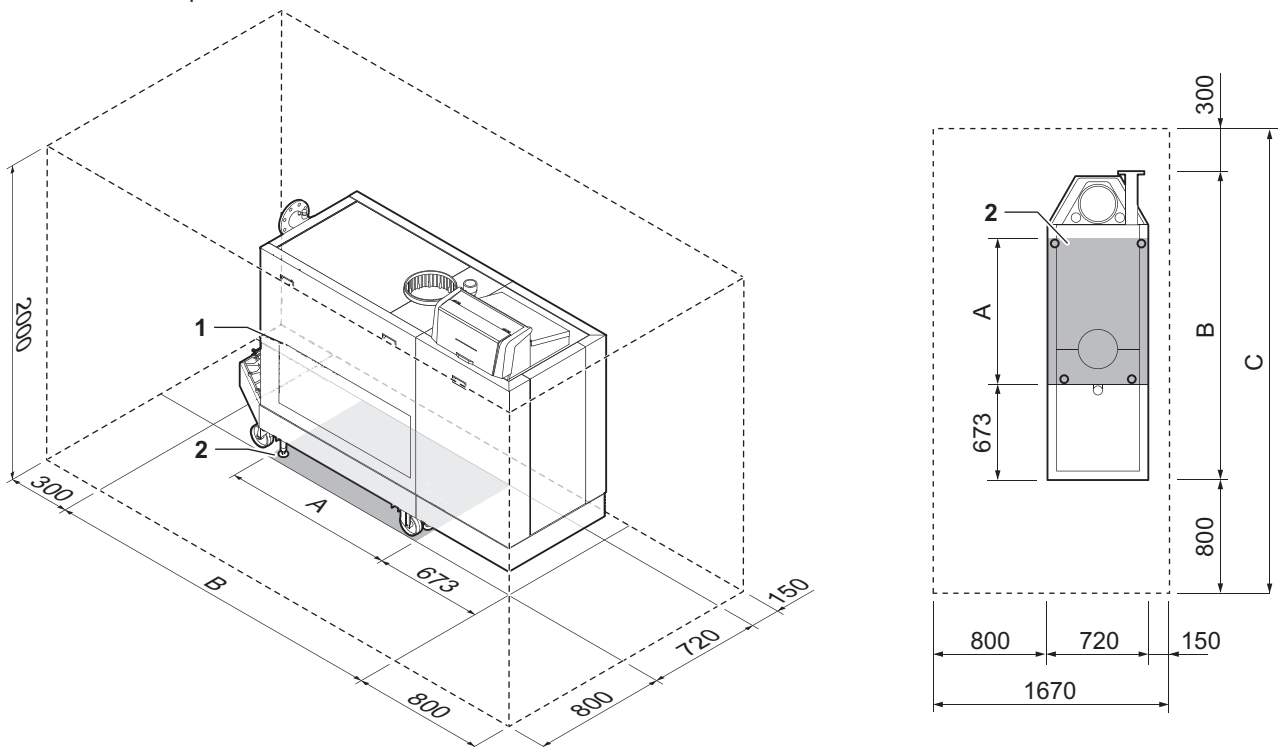
Caution

- The boiler must be installed in a frost-free area.
- An earthed electrical connection must be available close to the boiler.
- A connection to the drain must be present for the condensate drain close to the boiler.

When choosing the best installation location, consider:

- The regulations.
- The required installation space.
- The required space around the boiler for good access and to facilitate maintenance.
- The permitted position of the flue gas outlet and/or air supply opening.

Fig.10 Location requirements



- 1 Heat exchanger inspection hatch location
- 2 Support surface
- A Support surface length (see table)

- B Boiler length (see table)
- C Total length required (see table)

AD-3001441-01

Tab.5 Dimensions A / B / C (mm)

C 340	C 640	A (mm)	B (mm)	C (mm)
280	560	723	1862	2962
350	700	723	1862	2962

C 340	C 640	A (mm)	B (mm)	C (mm)
430	860	723	1862	2962
500	1000	1032	2172	3272
570	1140	1032	2172	3272
650	1300	1032	2172	3272

4.3 Requirements for water connections

- Before installation, check that the connections meet the set requirements.
- Carry out any welding work required at a safe distance from the boiler.
- If using synthetic pipes, follow the manufacturer's instructions.

4.3.1 Requirements for the central heating connections

- We recommend installing a central heating filter in the return pipe to prevent clogging of boiler components.

4.3.2 Requirements for the condensate drain

- The drain pipe must be Ø 32 mm or larger, terminating in the drain.
- Use only plastic material for the discharge pipe due to the acidity (pH 2 to 5) of the condensate.
- Fit a watertrap or siphon in the drain pipe.
- The drain pipe must slope down at least 30 mm per metre, the maximum horizontal length is 5 metres.
- Do not make a fixed connection in order to prevent an overpressure in the siphon.

4.4 Requirements for the gas connection

- Carry out any welding work required at a safe distance from the boiler.
- Before installing, check that the gas meter has sufficient capacity. Take into account the consumption of all appliances. Notify the local energy company if the gas meter has insufficient capacity.
- We recommend installing a gas filter to prevent clogging of the gas valve unit.
- Pipe diameters must be defined in accordance with ATG's (Association Technique de Gaz) B171 specifications.

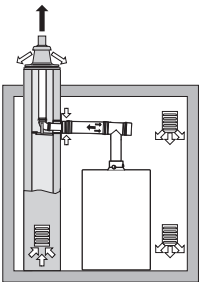
4.5 Requirements on the flue gas discharge system

4.5.1 Classification

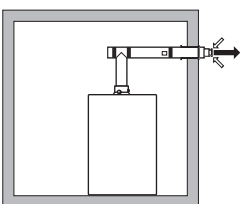
i Important

- The installer is responsible ensuring that the right type of flue gas outlet system is used and that the diameter and length are correct.
- Always use connection materials, roof terminal and/or outside wall terminal supplied by the same manufacturer. Consult the manufacturer for compatibility details.
- The use of flue gas outlet systems from other manufacturers is allowed in addition to the recommended manufacturers listed in this manual. Use is only allowed when all our requirements are met and the description of flue gas connection C₆₃ is respected.

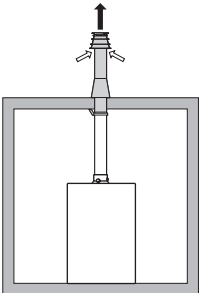
Tab.6 Type of flue gas connection: B₂₃ - B_{23P}

Principle	Description	Recommended manufacturers ⁽¹⁾
 <p>AD-3001055-01</p>	<p>Room-ventilated version</p> <ul style="list-style-type: none"> • Without down-draught diverter. • Flue gas discharge via the roof. • Air from the installation area. • The air supply opening of the boiler must stay open. • The installation area must be vented to ensure sufficient air supply. The vents must not be obstructed or shut off. • The IP rating of the boiler is lowered to IP20. 	<p>Connection material and roof terminal:</p> <ul style="list-style-type: none"> • Alukan • Cox Geelen • Muelink & Grol
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

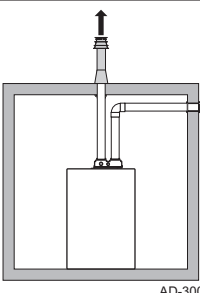
Tab.7 Type of flue gas connection: C₁₃

Principle	Description	Recommended manufacturers ⁽¹⁾
 <p>AD-3001056-01</p>	<p>Room-sealed version</p> <ul style="list-style-type: none"> • Discharge in the outside wall. • Air supply opening is in the same pressure zone as the discharge (e.g. a combined outside wall terminal). • Parallel wall terminal not permitted. 	<p>Outside wall terminal and connection material:</p> <ul style="list-style-type: none"> • Cox Geelen • Muelink & Grol
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

Tab.8 Type of flue gas connection: C₃₃

Principle	Description	Recommended manufacturers ⁽¹⁾
 <p style="text-align: center;">AD-3001057-01</p>	<p>Room-sealed version</p> <ul style="list-style-type: none"> • Flue gas discharge via the roof. • Air supply opening is in the same pressure zone as the discharge (e.g. a concentric roof terminal). 	<p>Roof terminal and connection material</p> <ul style="list-style-type: none"> • Cox Geelen • Muelink & Grol
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

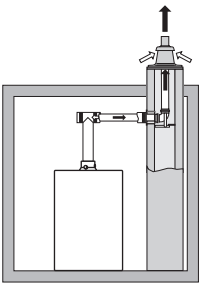
Tab.9 Type of flue gas connection: C₅₃

Principle	Description	Recommended manufacturers ⁽¹⁾
 <p style="text-align: center;">AD-3001058-02</p>	<p>Connection in different pressure zones</p> <ul style="list-style-type: none"> • Closed unit. • Separate air supply duct. • Separate flue gas discharge duct. • Discharging into various pressure areas. • The air supply and the flue gas outlet must not be placed on opposite walls. 	<p>Connection material and roof terminal:</p> <ul style="list-style-type: none"> • Alukan • Cox Geelen • Muelink & Grol
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

Tab.10 Type of flue gas connection: C₆₃

Principle	Description	Recommended manufacturers ⁽¹⁾
	<p>This type of unit is supplied by us without an air supply system and flue gas system.</p> <p>When selecting the material, please note the following:</p> <ul style="list-style-type: none"> • Condensed water must flow back to the boiler. • The material must be resistant to the flue gas temperature of this boiler. • Maximum permissible recirculation of 10%. • The air supply and the flue gas outlet must not be placed on opposite walls. • Minimum permitted pressure difference between the air supply and the flue gas outlet is -200 Pa (including -100 Pa wind pressure). 	<p>Use is only allowed when all our requirements are met and the description of this type of flue gas connection is respected.</p>
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

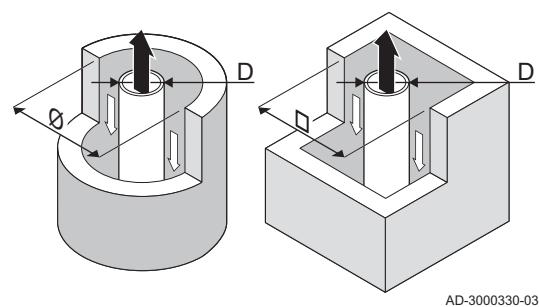
Tab.11 Type of flue gas connection: C₉₃

Principle ⁽¹⁾	Description	Recommended manufacturers ⁽²⁾
 <p>AD-3001059-01</p>	<p>Room-sealed version</p> <ul style="list-style-type: none"> • Air supply and flue gas discharge duct in shaft or ducted: <ul style="list-style-type: none"> - Concentric. - Air supply from existing duct. - Flue gas discharge via the roof. - Inlet opening for the air supply is in the same pressure zone as the discharge. 	<p>Connection material and roof terminal:</p> <ul style="list-style-type: none"> • Alukan • Cox Geelen • Muelink & Grol
<p>(1) See table for shaft or duct requirements. (2) The material must also satisfy the material property requirements from the relevant chapter.</p>		

Tab.12 Minimum dimensions of shaft or duct C₉₃

Version (D)	Without air supply		With air supply	
Rigid 150 mm	Ø 200 mm	□ 200 x 200 mm	Ø 220 mm	□ 220 x 220 mm
Rigid 200 mm	Ø 250 mm	□ 250 x 250 mm	Ø 280 mm	□ 280 x 280 mm
Concentric 150/200 mm	Ø 270 mm	□ 270 x 270 mm	-	-

Fig.11 Minimum dimensions of shaft or duct C₉₃



Important

The shaft must comply with the air density requirements of the local regulations.



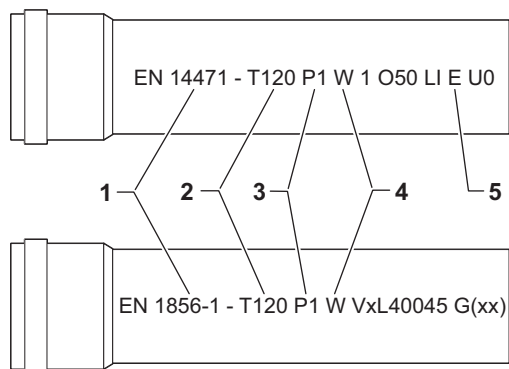
Important

- Always clean shafts thoroughly when using lining pipes and/or an air supply connection.
- It must be possible to inspect the lining duct.

4.5.2 Material

Use the string on the flue gas outlet material to check whether it is suitable for use on this appliance.

Fig.12 Sample string



- 1 EN 14471 of EN 1856-1:** The material is CE approved according to this standard. For plastic this is EN 14471, For aluminium and stainless steel this is EN 1856-1.
- 2 T120:** The material has temperature class T120. A higher number is also allowed, but not lower.
- 3 P1:** The material falls into pressure class P1. H1 is also allowed.
- 4 W:** The material is suitable for draining condensation water (W='wet'). D is not allowed (D='dry').
- 5 E:** The material falls into fire resistance class E. Class A to D are also allowed, F is not allowed. Only applicable to plastic.

**Warning**

- The coupling and connection methods may vary depending on the manufacturer. It is not permitted to combine pipes, coupling and connection methods from different manufacturers. This also applies to roof feed-throughs and common channels.
- The materials used must comply with the prevailing regulations and standards.

Tab.13 Overview of material properties

Version	Flue gas outlet		Air supply	
	Material	Material properties	Material	Material properties
Single-wall, rigid	<ul style="list-style-type: none"> • Plastic⁽¹⁾ • Stainless steel⁽²⁾ • Thick-walled, aluminium⁽²⁾ 	<ul style="list-style-type: none"> • With CE marking • Temperature class T120 or higher • Condensate class W (wet) • Pressure class P1 or H1 • Fire resistance class E or better⁽³⁾ 	<ul style="list-style-type: none"> • Plastic • Stainless steel • Aluminium 	<ul style="list-style-type: none"> • With CE marking • Pressure class P1 or H1 • Fire resistance class E or better⁽³⁾
(1) according to EN 14471 (2) according to EN 1856 (3) according to EN 13501-1				

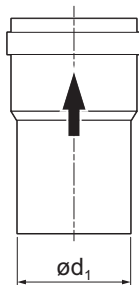
4.5.3 Dimensions of flue gas outlet pipe

**Warning**

The pipes connected to the flue gas adapter must satisfy the following dimension requirements.

d_1 External dimensions of flue gas outlet pipe

Fig.13 Dimensions of open connection



AD-3001094-01

Tab.14 Dimensions of pipe

	d_1 (min-max)
150 mm	149 - 151 mm
200 mm	199 - 201 mm
250 mm	249 - 251 mm
350 mm	349 - 351 mm

4.5.4 Length of the flue and air supply pipes

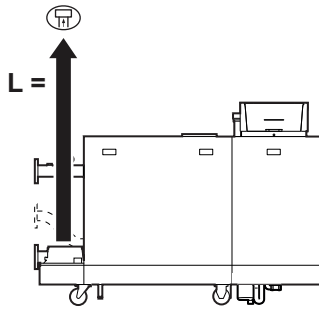
The maximum length of the flue and air supply vary per appliance type. Consult the relevant chapter for the correct lengths.

- If a boiler is not compatible with a specific flue system or diameter, it is indicated with "-" in the table.
- When using bends, the maximum flue length (L) must be shortened according to the reduction table.
- Use approved flue reducers for adaptation to another diameter.


■ Room-ventilated system (B₂₃, B_{23P})

With a room-ventilated system, only the flue is connected. The air supply is not connected and will draw the combustion air directly from the installation area.

Fig.14 Room-ventilated system C 340



AD-3001561-01

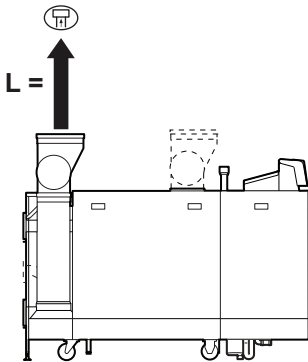
L Length of the flue to roof terminal
 Flue gas outlet connection

Tab.15 Maximum length (L)


Diameter ⁽¹⁾	150 mm	180 mm	200 mm	250 mm
C 340 280	20 m	50 m	50 m ⁽¹⁾	50 m ⁽¹⁾
C 340 350	11 m	30 m	50 m	50 m ⁽¹⁾
C 340 430	8 m	22 m	39 m	50 m ⁽¹⁾
C 340 500	7 m	18 m	32 m	50 m ⁽¹⁾
C 340 570	5 m	13 m	24 m	50 m ⁽¹⁾
C 340 650	-	10 m	18 m	50 m

(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).

Fig.15 Room-ventilated system C 640



AD-3001564-01

L Length of the flue to roof terminal
 Flue gas outlet connection

Tab.16 Maximum length (L)

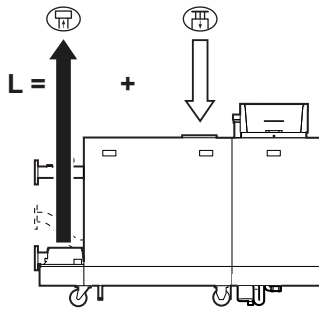
Diameter ⁽¹⁾	200 mm	250 mm	300 mm	350 mm
C 640 560	15 m	50 m ⁽¹⁾	50 m ⁽¹⁾	50 m ⁽¹⁾
C 640 700	6 m	31 m	50 m ⁽¹⁾	50 m ⁽¹⁾
C 640 860	-	20 m	50 m ⁽¹⁾	50 m ⁽¹⁾
C 640 1000	-	11 m	39 m	50 m ⁽¹⁾
C 640 1140	-	5 m	26 m	50 m
C 640 1300	-	3 m	19 m	50 m

(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).



■ Room-sealed system (C₁₃, C₃₃, C₆₃, C₉₃)

With a room-sealed system, both the flue and the air supply are connected.

Fig.16 Room-sealed system C 340



AD-3001562-01

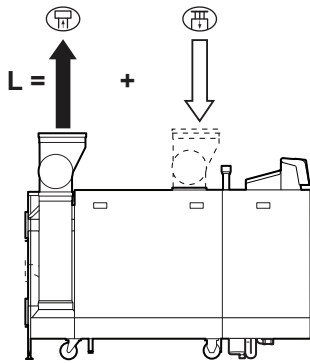
L Combined length of the flue and air supply channel to the roof terminal
 Flue gas outlet connection
 Air supply connection

Tab.17 Maximum length (L)

Diameter ⁽¹⁾	150 mm	180 mm	200 mm	250 mm	300 mm
C 340 280	10 m	18 m	84 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 340 350	-	-	42 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 340 430	-	-	26 m	100 m	100 m ⁽¹⁾
C 340 500	-	-	20 m	100 m	100 m ⁽¹⁾
C 340 570	-	-	10 m	68 m	100 m ⁽¹⁾
C 340 650	-	-	4 m	48 m	100 m ⁽¹⁾


(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).

Fig.17 Room-sealed system C 640



AD-3001565-01

L Combined length of the flue and air supply channel to the roof terminal

 Flue gas outlet connection

 Air supply connection

Tab.18 Maximum length (L)

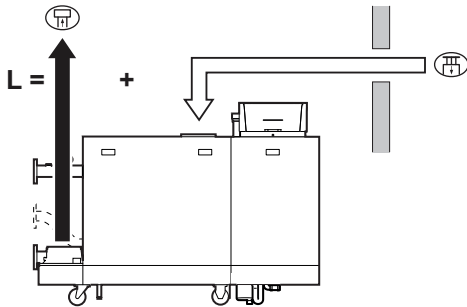
Diameter ⁽¹⁾	300 mm	350 mm	400 mm
C 640 560	100 m ⁽¹⁾	100 m ⁽¹⁾	100 m ⁽¹⁾
C 640 700	86 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 640 860	52 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 640 1000	26 m	70 m	100 m ⁽¹⁾
C 640 1140	10 m	32 m	48 m
C 640 1300	-	20 m	24 m

(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).

■ Connection in different pressure zones (C₅₃)


The maximum permitted height difference between the air supply terminal and the flue gas outlet is 36 m.

Fig.18 Different pressure zones C 340



AD-3001563-01

L Combined length of the flue and air supply channel

 Flue gas outlet connection

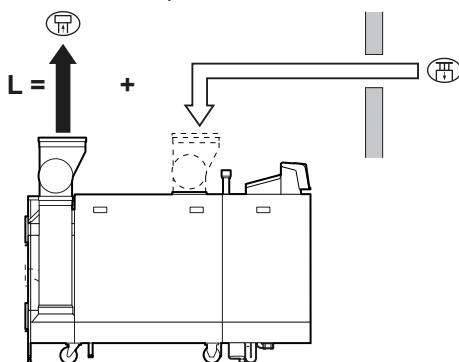
 Air supply connection

Tab.19 Maximum length (L)

Diameter ⁽¹⁾	180 mm	200 mm	250 mm	300 mm
C 340 280	32 m	61 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 340 350	14 m	30 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 340 430	8 m	20 m	88 m	100 m ⁽¹⁾
C 340 500	-	16 m	76 m	100 m ⁽¹⁾
C 340 570	-	10 m	53 m	100 m ⁽¹⁾
C 340 650	-	5 m	38 m	100 m ⁽¹⁾


(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).

Fig.19 Different pressure zones C 640



AD-3001566-01

L Combined length of the flue and air supply channel

 Flue gas outlet connection

 Air supply connection

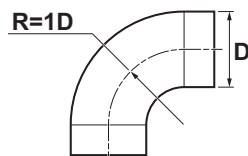
Tab.20 Maximum length (L)

Diameter ⁽¹⁾	300 mm	350 mm	400 mm
C 640 560	100 m ⁽¹⁾	100 m ⁽¹⁾	100 m ⁽¹⁾
C 640 700	48 m	100 m ⁽¹⁾	100 m ⁽¹⁾
C 640 860	24 m	83 m	100 m ⁽¹⁾
C 640 1000	-	38 m	90 m
C 640 1140	-	-	28 m
C 640 1300	-	-	-

(1) While maintaining maximum length, additional 5 times 90° or 10 times 45° bends can be used (indicated for each boiler type and diameter).

■ Reduction table

Fig.20 Bend radius 1D



AD-3001609-01

Tab.21 Pipe reduction for each bend - radius 1D (parallel)

Diameter	150 mm	180 mm	200 mm	250 mm	300 mm	350 mm	400 mm
45° bend	1.2 m	1.4 m	1.6 m	2.0 m	2.4 m	2.8 m	3.2 m
90° bend	2.1 m	2.5 m	2.8 m	3.5 m	4.2 m	4.9 m	5.6 m

4.5.5 Additional guidelines

■ Air supply filter

An air supply filter is separately available.

When installing the boiler in a room-ventilated setup (B₂₃, B_{23P}):

- It is recommended to install the air supply filter if the boiler is installed in a dusty room.
- It is mandatory to install the air supply filter if the boiler is exposed to construction dust.

■ Installation

- For installing the flue gas outlet and air supply materials, refer to the instructions of the manufacturer of the relevant material. After installation, check at least all flue gas outlet and air supply parts for tightness.



Warning

If the flue gas outlet and air supply materials are not installed in accordance with the instructions (e.g. not leak-proof, not correctly bracketed), this can result in dangerous situations and/or physical injury.

- Make sure that the flue gas outlet pipe towards the boiler has a sufficient gradient (at least 50 mm per metre) and that there is a sufficient condensate collector and discharge (at least 1 m before the outlet of the boiler). The bends used must be larger than 90° to guarantee the gradient and a good seal on the lip rings.

■ Condensation

- Direct connection of the flue gas outlet to structural ducts is not permitted because of condensation.
- If condensate from a plastic or stainless steel pipe section can flow back to an aluminium part in the flue gas outlet, this condensate must be discharged via a collector before it reaches the aluminium.
- Newly installed aluminium flue gas pipes with longer lengths can produce relatively larger quantities of corrosion products. Check and clean the siphon more often in this case.



Important

Contact us for more information.

4.6 Requirements for the electrical connections

- Establish the electrical connections in accordance with all local and national current regulations and standards.
- Electrical connections must always be made with the power supply disconnected and only by qualified installers.
- The boiler is completely pre-wired. Never change the internal connections of the control panel.
- Always connect the boiler to a well-earthed installation.
- The standard NF C 15,100.
- The standard CEI.
- The wiring must comply with the instructions in the electrical diagrams.
- Follow the recommendations in this manual.
- Separate the sensor cables from the 230 V cables
- Outside the boiler: Use 2 cables spaced at least 10 cm apart.

Make sure the following requirements are met when connecting the cables to the CB and SCB connectors:

Tab.22 PCB connectors

Wire cross section	Stripping length	Tightening torque
solid wire: 0.14 – 4.0 mm ² (AWG 26 – 12) stranded wire: 0.14 – 2.5 mm ² (AWG 26 – 14) stranded wire with ferrule: 0.25 – 2.5 mm ² (AWG 24 – 14)	8 mm	0.5 N·m

4.7 Water quality and water treatment

The quality of the heating water must comply with the limit values in the table below. These guidelines must be followed at all times.

Tab.23 Water quality requirements

Heat exchanger material		Aluminium
Heat exchanger type		Sections
Property	Unit	250 - 1300 kW
Degree of acidity (untreated water)	pH	6.5 - 9.0
Degree of acidity (treated water)	pH	6.5 - 9.0
Conductivity at 25°C	µS/cm	≤ 800
Chlorides	mg/l	≤ 150
Sulphates	mg/l	≤ 50
Other components	mg/l	-
Total water hardness (German)	°dH	≤ 8.4
Total water hardness (French)	°fH	≤ 15.0
Total water hardness (English)	°e	≤ 10.5
CaCO ₃	mmol/l	≤ 1.5

If water treatment is necessary, **De Dietrich** recommends the following manufacturers:

- Cillit
- Fernox
- Sentinel
- Spirotech

4.8 Process heat application

In process heat applications (for example pasteurisation and drying and washing processes), the boiler is being used for industrial purposes and not for central heating. With process heat, the nominal flow (at ΔT 20°C) in the primary CH circuit must be guaranteed. The flow in the secondary circuit may vary.

To ensure that this is the case, a flow rate sensor can be fitted, which locks out the boiler if the flow falls below a specified level (due to a defective pump or valve, for example).














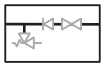
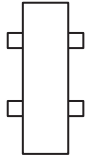
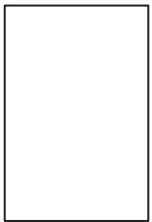

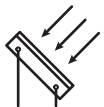



Important




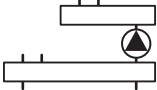


The service life of the boiler may be reduced if it is used for process heat applications.

4.9 Connecting diagrams

4.9.1 Symbols used

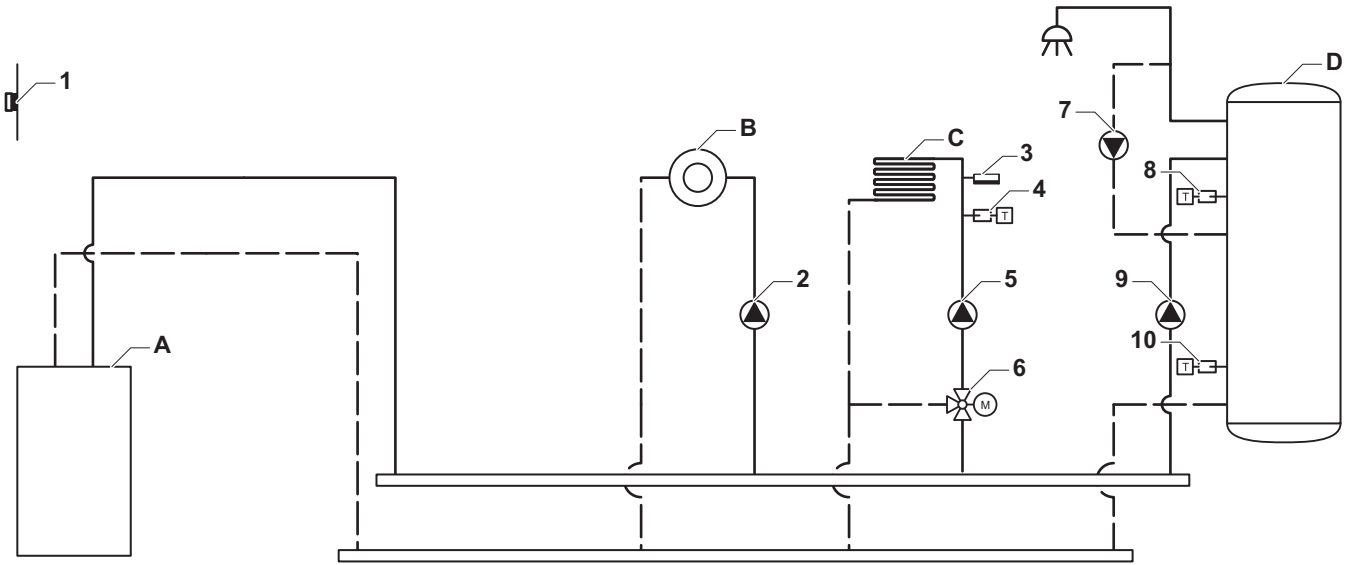
Tab.24 Explanation of symbols in the hydraulics flow diagram

Symbol	Explanation
	Return pipe
	Flow pipe
	Mixing valve
	Pump
	Domestic hot water
	Make contact
	Outdoor temperature sensor
	Sensor
	Safety thermostat
	Room thermostat
	Plate heat exchanger
	Safety group
	Low-loss header
	Instant boiler
	Primary heating circuit connection
	Solar collector
	Domestic hot water storage tank
	Titanium anode ⁽¹⁾
	Electrical heating element

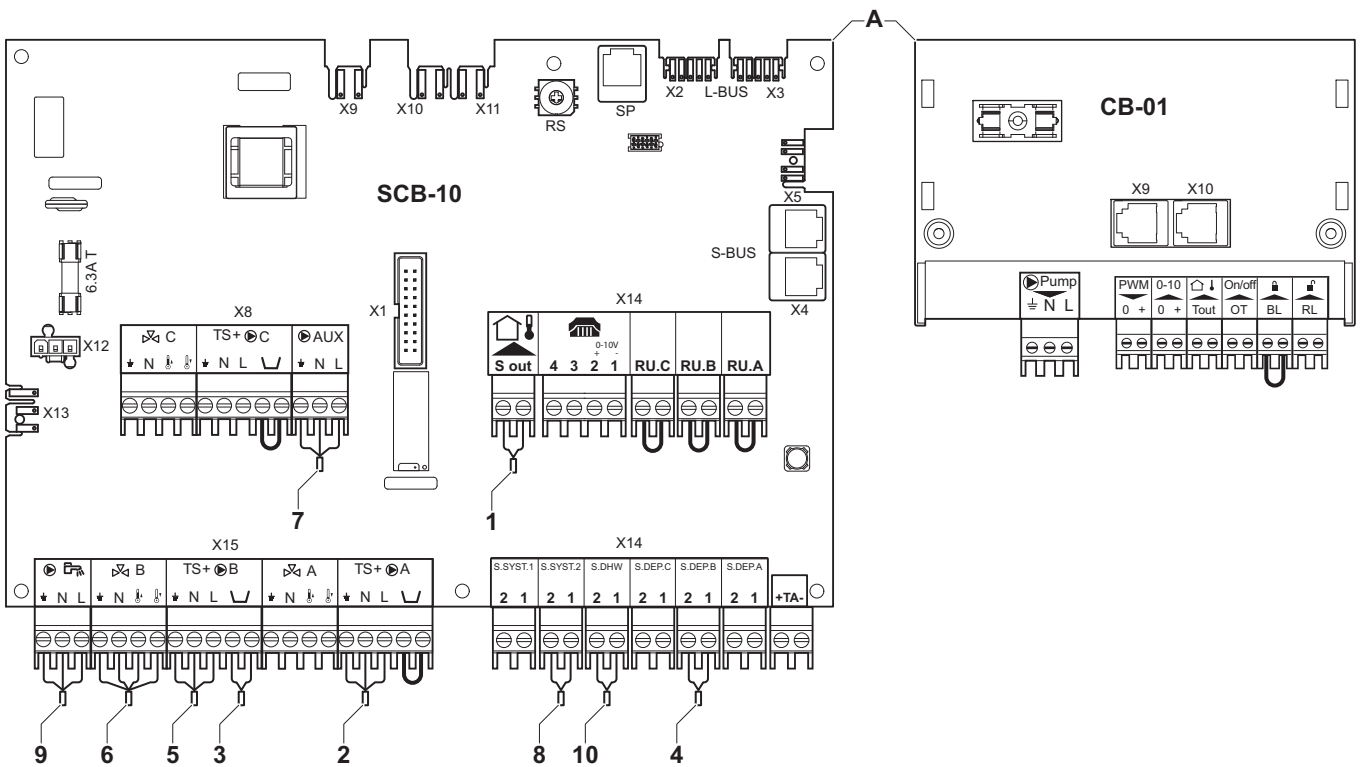
Symbol	Explanation
	Shower
	Heating zone
	Underfloor heating
	Underfloor heating manifold
	Hot-air heater
	Swimming pool
(1) Fitted in domestic hot water storage tank.	

4.9.2 Connection example - 1 direct zone + 1 mixing zone + domestic hot water zone

Fig.21 1 boiler + 1 direct zone + 1 mixing zone + domestic hot water (DHW) zone



AD-4100037-01



AD-4100049-01

- A Boiler
- B Direct zone - CircA1
- C Mixing zone - CircB1 (underfloor heating)
- D DHW zone - DHWA (layered calorifier - 2 sensors)

Tab.25 On > ≡ > Installation Setup > SCB-10 > DHW A > Parameters, counters, signals > Parameters

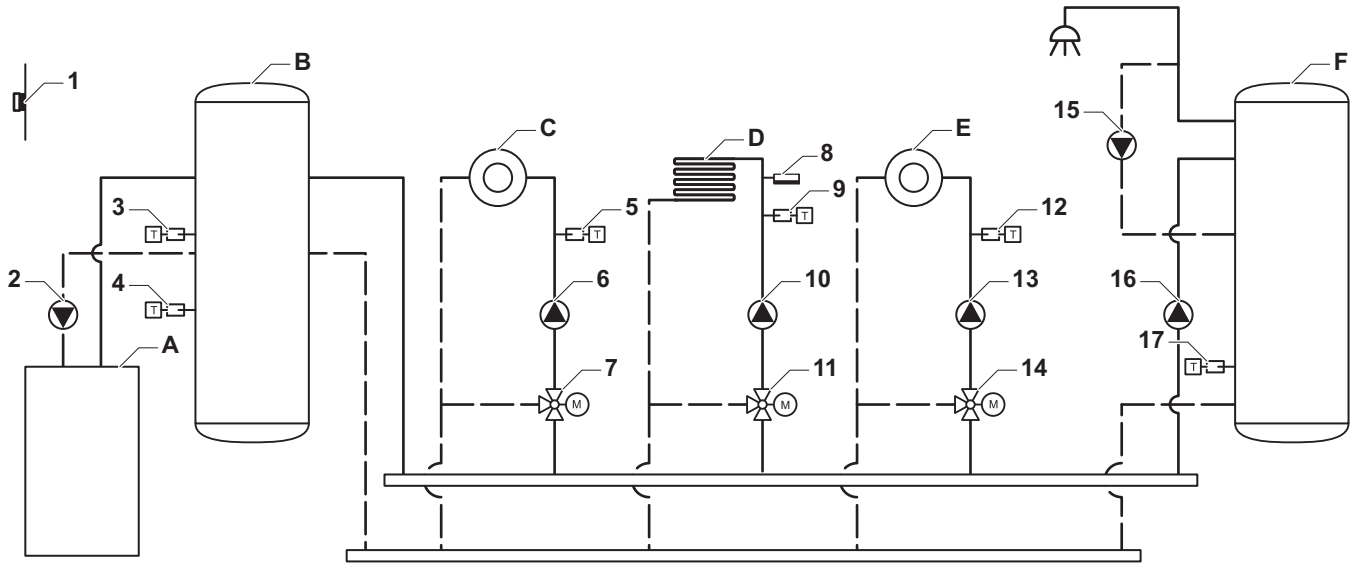
Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.26 On > ≡ > Installation Setup > SCB-10 > AUX > Parameters, counters, signals > Parameters

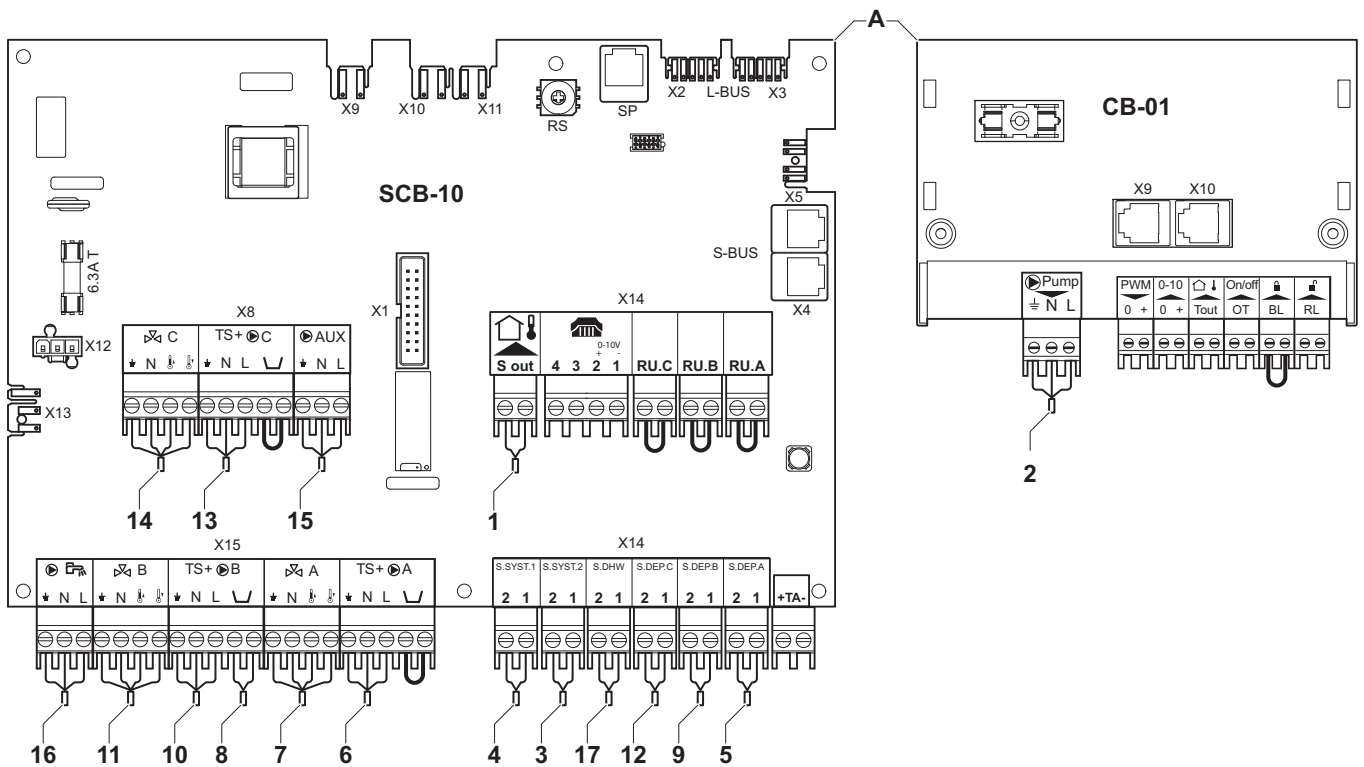
Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

4.9.3 Connection example - primary buffer tank + 3 mixing zones + domestic hot water zone

Fig.22 1 boiler + buffer tank + 3 mixing zones + domestic hot water (DHW) zone



AD-4100038-01




AD-4100050-01

- A Boiler
- B Buffer tank
- C Mixing zone - CircA
- D Mixing zone - CircB (underfloor heating)
- E Mixing zone - CircC
- F DHW zone - DHWA (1 sensor)

Tab.27 On > ≡ > Installation Setup > SCB-10 > Pass.buf.tank 2sens > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
BP001	Type Buffer Tank	Type of buffer tank	0 = Disabled 1 = One sensor 2 = Two sensors 3 = Three sensors	1

Tab.28  On > ≡ > Installation Setup > SCB-10 > **CIRCA** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	40
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convecteur 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	0.7

Tab.29 On > ≡ > Installation Setup > SCB-10 > CIRCA > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	5

Tab.30 On > ≡ > Installation Setup > SCB-10 > CIRCC > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP023	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	3

Tab.31 On > ≡ > Installation Setup > SCB-10 > DHW A > Parameters, counters, signals > Parameters

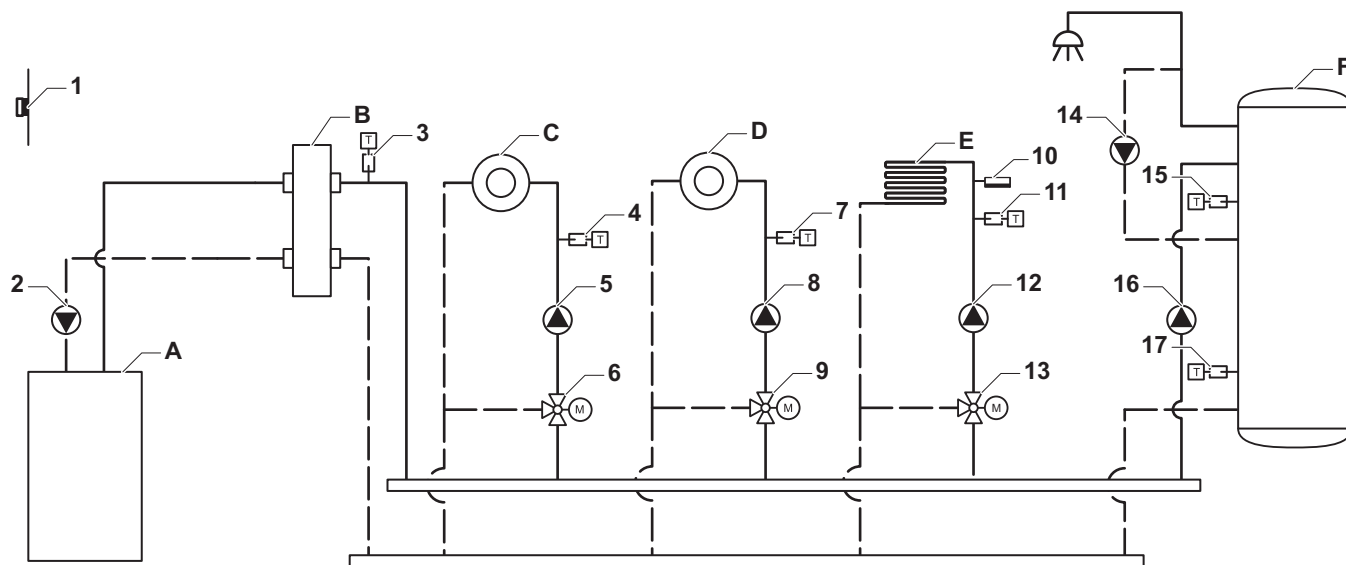
Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.32 On > ≡ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

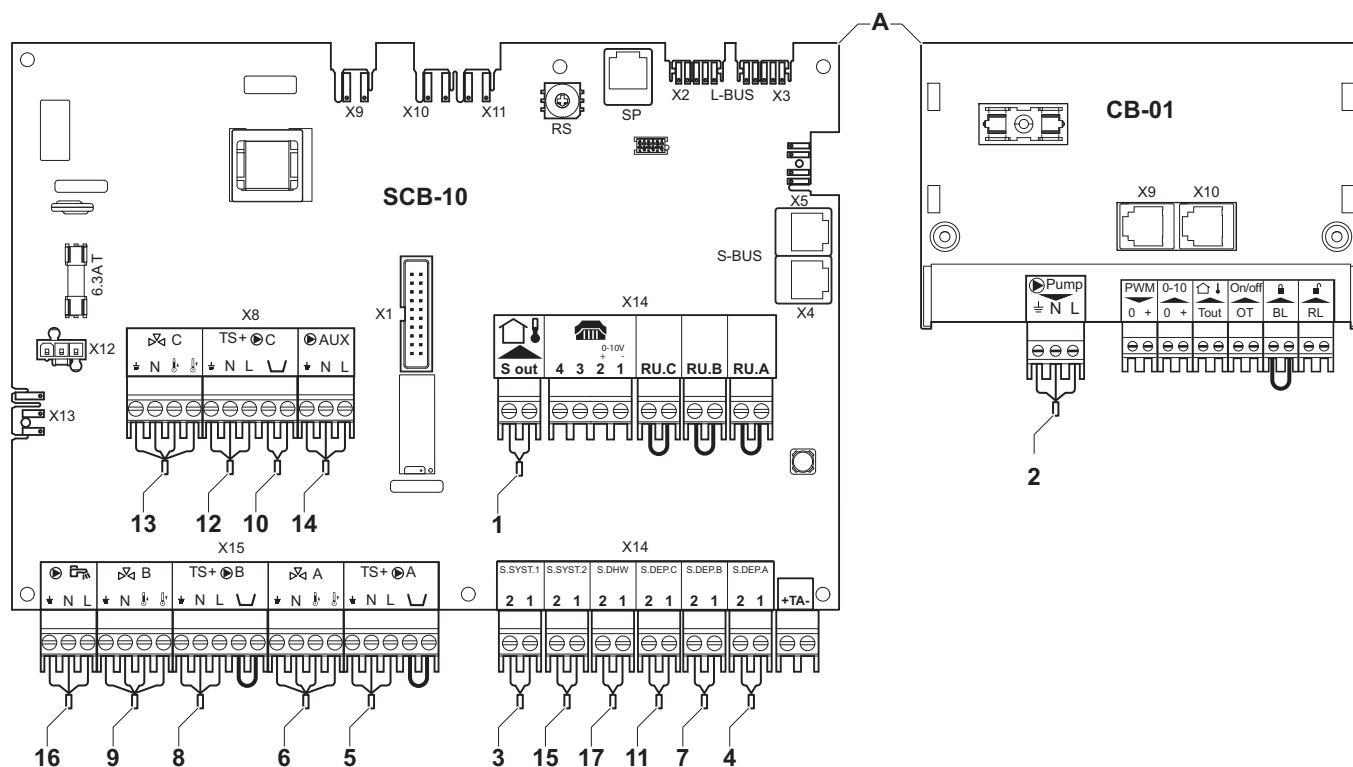
Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convactor 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

4.9.5 Connection example - low-loss header + 3 mixing zones + domestic hot water zone

Fig.24 1 boiler + low-loss header + 3 mixing zones + domestic hot water (DHW) zone



AD-4100041-01



AD-4100053-01

- A Boiler
- B Low-loss header
- C Mixing zone - CircA
- D Mixing zone - CircB
- E Mixing zone - CircC (underfloor heating)
- F DHW zone - DHWA (layered calorifier - 2 sensors)

Tab.33 On > ≡ > Installation Setup > SCB-10 > CIRCA > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	40

Code	Display text	Description	Range	Setting
CP020	Zone Function	Functionality of the zone	0 Disable 1 Direct 2 Mixing Circuit 3 Swimming pool 4 High Temperature 5 Fan Convectur 6 DHW tank 7 Electrical DHW 8 Time Program 9 ProcessHeat 10 DHW Layered 11 DHW Internal tank 31 DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	0.7

Tab.34 On > ≡ > Installation Setup > SCB-10 > **DHW A** > Parameters, counters, signals > Parameters

Coding unit	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convectur 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.35 On > ≡ > Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convectur 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.36 On > ≡ > Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

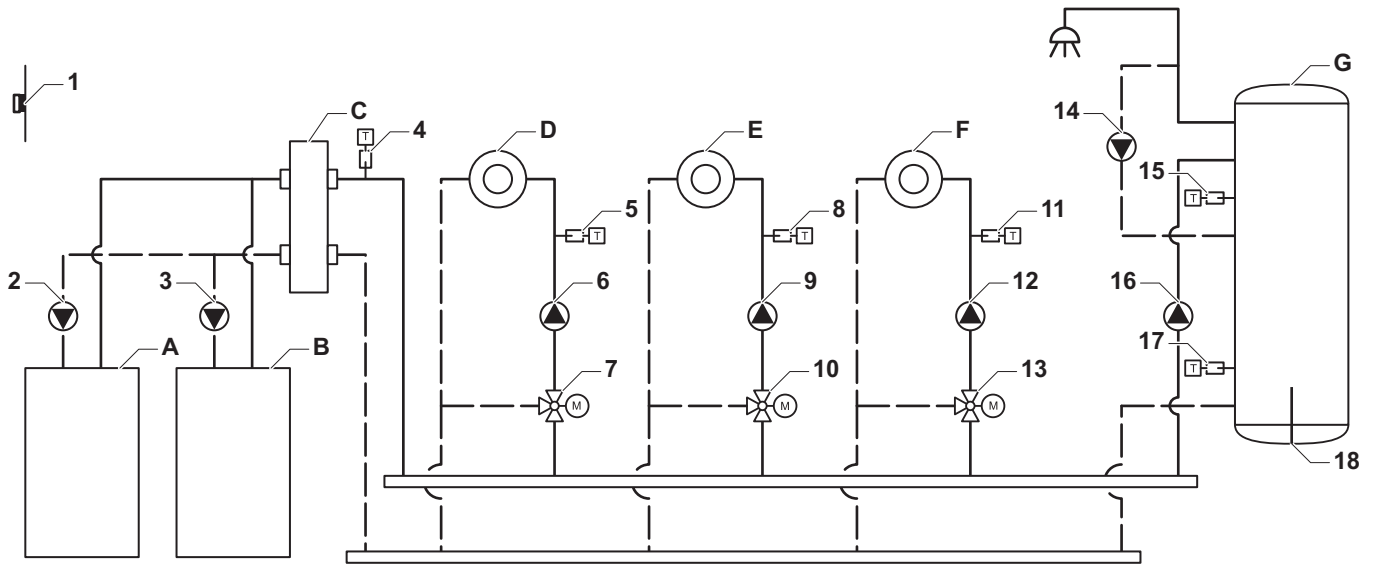
Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.37 On > ≡ > Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

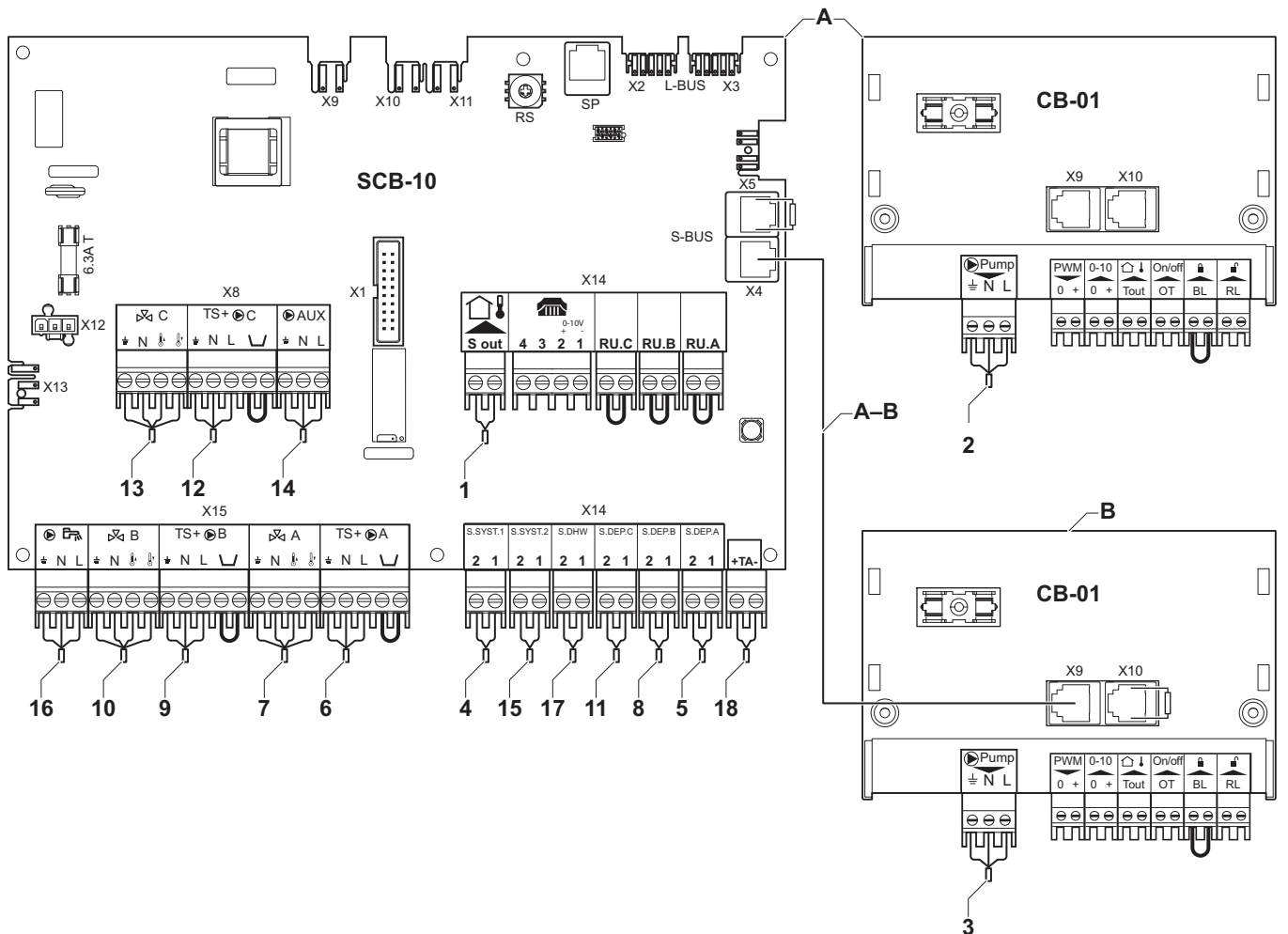
Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

4.9.6 Connection example - 2 boiler cascade + low-loss header + 3 mixing zones + domestic hot water zone

Fig.25 2 boiler cascade + low-loss header + 3 mixing zones + domestic hot water (DHW) zone



AD-4100044-01



AD-4100056-01

- A Boiler (master)
- B Boiler (slave)
- C Low-loss header
- D Mixing zone - CircA

- E Mixing zone - CircB
- F Mixing zone - CircC

- G** DHW zone - DHWA (layered calorifier - 2 sensors)
A-B S-BUS cable (comes with 2 resistors; one on connector X5 on the SCB-10 PCB and one on connector X10 on the CB-01 PCB from boiler B)

Tab.38 Installation Setup > SCB-10 > **CIRCA** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP000	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C – 100 °C	50
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C – 100 °C	40
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	2
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 – 4	0.7

Tab.39 Installation Setup > SCB-10 > **DHW A** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP022	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	10

Tab.40 Installation Setup > SCB-10 > **AUX** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 31 = DHW FWS EXT	8

Tab.41 Installation Setup > SCB-10 > **Cascade management B** > Parameters, counters, signals > Parameters

Code	Display text	Description	Range	Setting
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	1

Tab.42 Installation Setup > SCB-10 > **Analogue input** > Parameters, counters, signals > Adv. Parameters

Code	Display text	Description	Range	Setting
EP036	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	2
EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	3

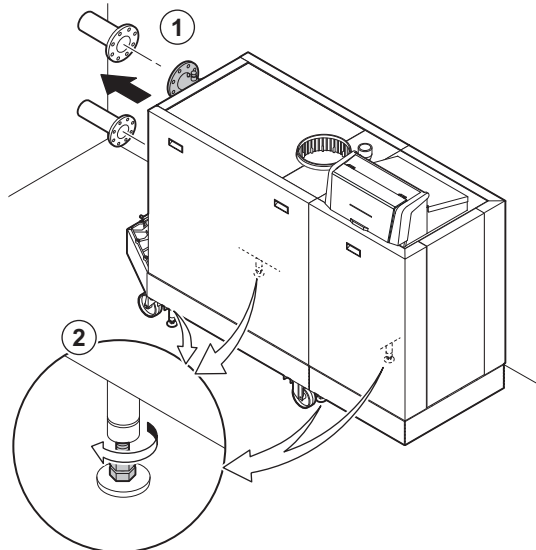
5 Installation

5.1 Positioning the boiler

Refer to the **lifting instructions document** on how to unpack and transport the boiler to the location.

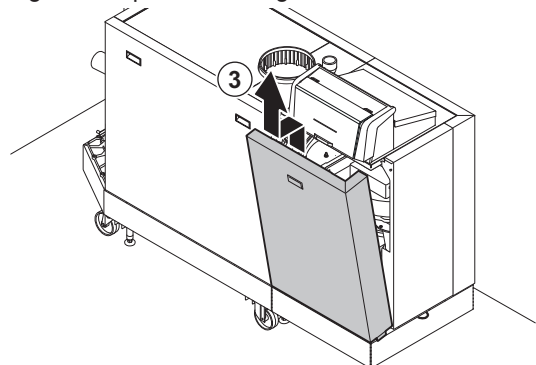
1. Manoeuvre the boiler to the exact location.
2. Unscrew the levelling feet until they stand firmly on the floor.

Fig.26 Place the boiler



AD-3001416-02

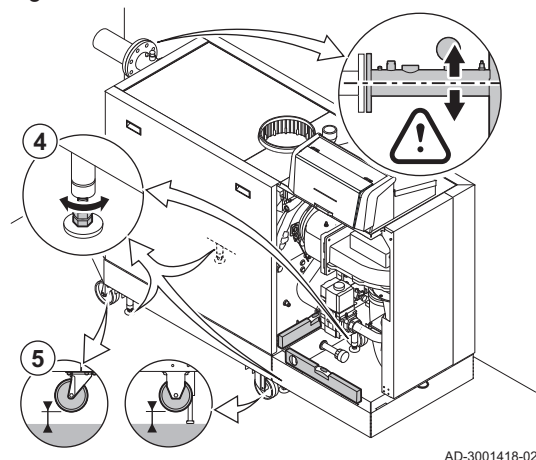
Fig.27 Open the casing



AD-3001417-02

3. Open the casing by lifting up the front panel and taking it off.

Fig.28 Level the boiler



AD-3001418-02

4. Adjust the levelling feet to level the boiler.
5. Check if the boiler is resting solely on the levelling feet (transport wheels must be off the floor).

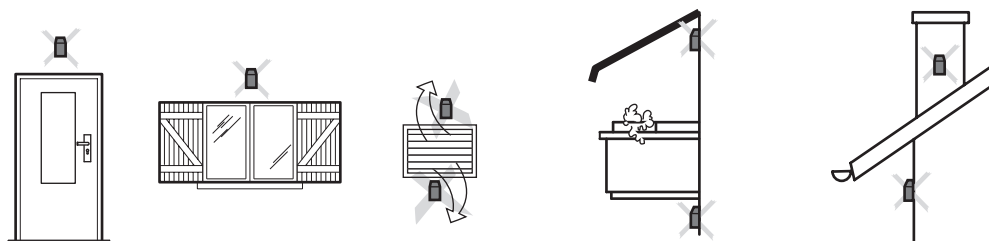
5.2 Mounting an outdoor temperature sensor

5.2.1 Positions to be avoided

Avoid placing the outside sensor in a position with the following characteristics:

- Masked by part of the building (balcony, roof, etc.).
- Close to a disruptive heat source (sun, chimney, ventilation grid, etc.).

Fig.29



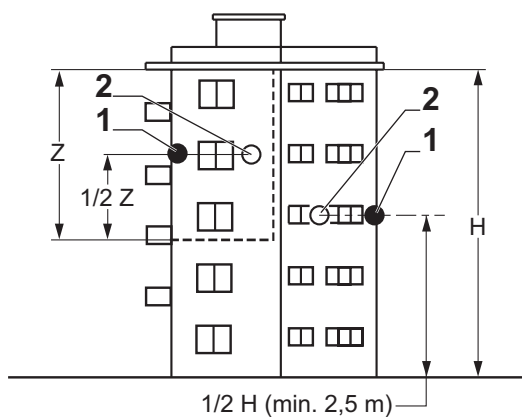
MW-3000014-2

5.2.2 Recommended positions

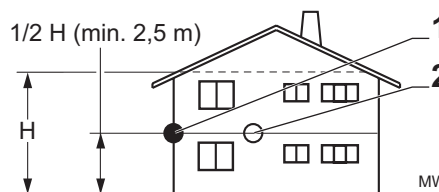
Place the outside sensor in a position that covers the following characteristics:

- On a façade of the area to be heated, on the north if possible.
- Half way up the wall of the area to be heated.
- Under the influence of changes in the weather.
- Protected from direct sunlight.
- Easy to access.

Fig.30



- 1 Optimum location
- 2 Possible position

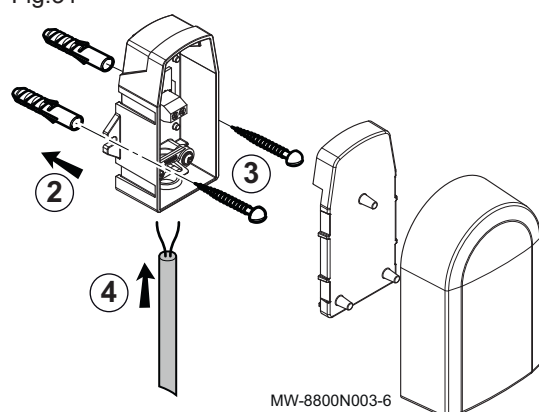


MW-8800N001-3

- H Inhabited height controlled by the sensor
- Z Inhabited area controlled by the sensor

5.2.3 Fitting the outdoor sensor

Fig.31



Plugs diameter 4 mm/drill diameter 6 mm

1. Choose a recommended location for the outdoor sensor.
2. Put the 2 plugs in place, delivered with the sensor.
3. Secure the sensor using the screws provided (diameter 4 mm).
4. Connect the cable to the outdoor temperature sensor.

5.3 Flushing the system

Installation must be carried out in accordance with the prevailing regulations, codes of practice and the recommendations in this manual.

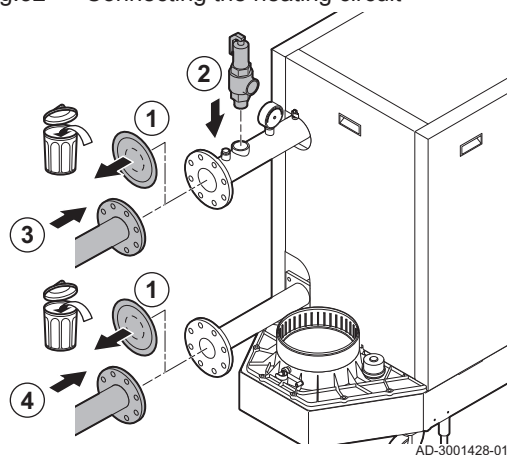
Before a new boiler can be connected to a system, the entire system must be thoroughly cleaned by flushing it. The flushing will remove residue from the installation process (weld slag, fixing products etc.) and accumulations of dirt (silt, mud etc.)

i Important

- Flush the heating system with a volume of water equivalent to at least three times the volume of the system.
- Flush the domestic hot water pipes with at least 20 times the volume of the pipes.

5.4 Connecting the heating circuit

Fig.32 Connecting the heating circuit



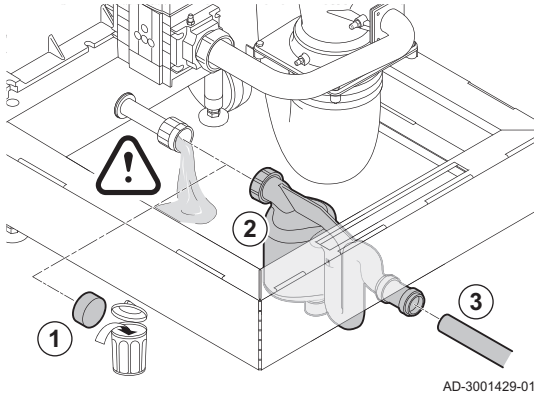
For boiler C 640, apply the instructions to each boiler module.

1. Remove the dust caps from the flow and return connections.
2. Connect a safety valve to the flow connection.
3. Fit the system flow pipe to the flow connection.
4. Fit the system return pipe to the return connection.

5.5 Connecting the condensate discharge pipe

For boiler C 640, apply the instructions to each boiler module.

Fig.33 Connecting the condensate discharge pipe



1. Remove the protective cap from the condensate connection.



Caution

Water from the factory test may come out.

2. Fit the siphon by screwing the swivel nut onto the connection.
3. Fit a plastic drain pipe of Ø 32 mm or larger to the siphon, terminating in the drain.

5.6 Connecting the gas pipe

For boiler C 640, apply the instructions to each boiler module.

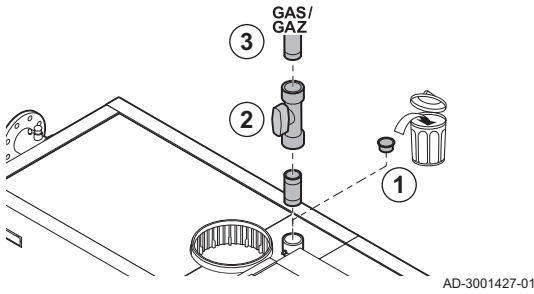
The gas pipe must be free of dirt and dust. The boiler is fitted with a gas filter as standard.



Warning

Before starting work on the gas pipes, turn off the main gas tap.

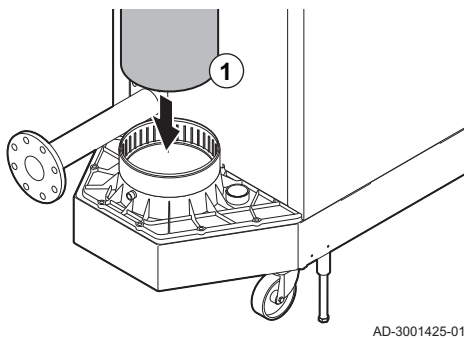
Fig.34 Connecting the gas pipe



1. Remove the dust cap from the gas connection ^{GAS/}GAZ.
2. Fit a gas valve near the boiler.
3. Fit the gas supply pipe to the gas supply ^{GAS/}GAZ.

5.7 Connecting the air inlet and flue gas outlet

Fig.35 Fit the flue gas outlet pipe to the boiler



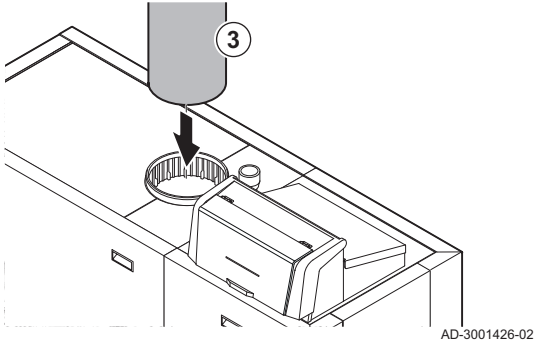
1. Fit the flue gas outlet pipe to the boiler.
2. Fit the subsequent flue gas outlet pipes in accordance with the manufacturer's instructions.



Caution

- The pipes must not be resting on the boiler.
- Fit the horizontal parts sloping down towards the boiler, with a slope of 50 mm per metre.

Fig.36 Fit the air inlet pipe to the boiler



3. Fit the air supply pipe to the boiler.
4. Fit the subsequent air supply pipes in accordance with the manufacturer's instructions.

Caution

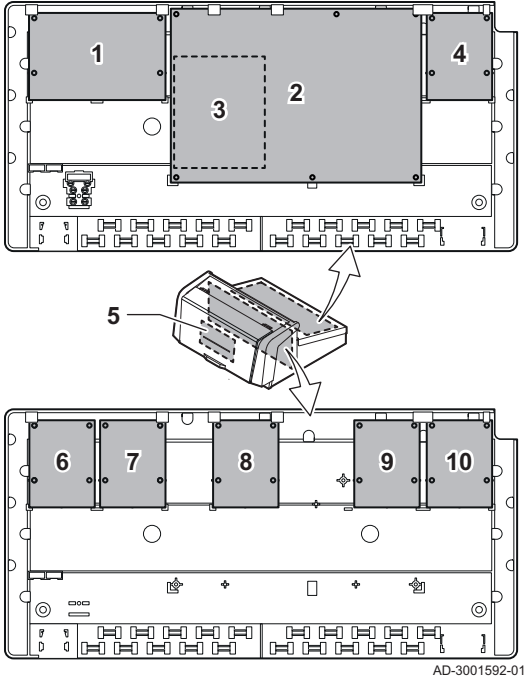
- The pipes must not be resting on the boiler.
- Fit the horizontal parts sloping down towards the air supply outlet.

5.8 Electrical connections

5.8.1 PCB locations

This illustration shows the location for each PCB. Both factory-fitted and optional PCBs are shown.

Fig.37 PCB locations



device	primary location	location option
CU-GH13	5	-
CB-01	1	-
SCB-01	7	8
SCB-10	2	-
SCB-13 (optional)	4	6
AD249 (optional)	3	-
GTW-08 (optional)	7	-
GTW-22	10	-
GTW-30 (optional)	8	9

5.8.2 The CB-01 connection PCB

The **CB-01** is placed in the control box. It provides easy access to all the standard connectors.

Fig.38 Connection PCB CB-01

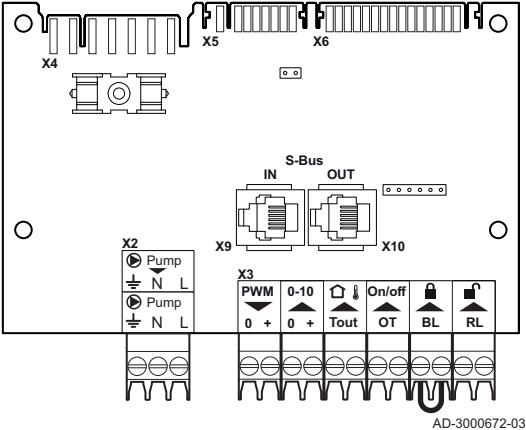
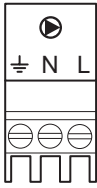
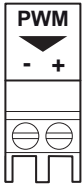


Fig.39 System pump



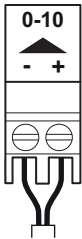
AD-3001306-01

Fig.40 PWM system pump



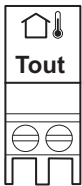
AD-3001307-01

Fig.41 Analogue input



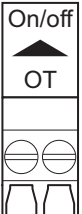
AD-3001304-01

Fig.42 Tout connector



AD-4000006-02

Fig.43 On/off - OT connector



AD-3001599-02

■ Connecting the system pump

1. Connect a system pump to the **Pump** terminals of the connector.



Important

The maximum power consumption is 300 VA.

The function of the system pump can be changed using parameters **PP015**, **PP016** and **PP018**.

■ Connecting a PWM system pump

A PWM system pump can be connected to the boiler and can be controlled in a modulating way from the boiler

1. Connect the PWM pump to the **PWM** terminals of the connector.



Important

Contact us for more information.

■ Analogue input

This input has two modes: control based on temperature or based on heat output. If this input is used, the OT communication from the boiler is ignored.

1. Connect the input signal to terminals **0-10** of the connector.

Change the mode of the analogue input using the parameter **EP014**.

■ Connecting an outdoor temperature sensor

An outdoor temperature sensor can be connected to the **Tout** connector. Always connect the sensor to the PCB that controls the zones. For example: when the zones are controlled by an SCB-10, connect the sensor to that PCB.

1. Connect the two-wire cable to the **Tout** connector.

Set parameter **AP056** to the installed outdoor temperature sensor type.

When an on/off thermostat is also connected, the boiler will control the temperature with the set point from the internal heating curve. **OpenTherm** controllers can also use the outdoor temperature sensor. In that case, the desired heating curve must be set on the controller.

■ Room thermostat connector (On/off - OT)

The **On/off - OT** connector can be used to connect a room thermostat. The connector supports the following types:

- **OpenTherm** thermostat
- **OpenTherm Smart Power** thermostat
- **On/off** thermostat

It does not matter which wire is connected to which cable clamp. The software recognizes which type of thermostat is connected.

■ Blocking input



Caution

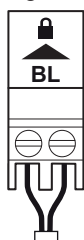
Only suitable for potential-free contacts (dry contact).



Important

First remove the bridge if this input is used.

Fig.44 Blocking input



AD-3000972-02

The boiler has a blocking input. A potential-free contact can be connected to the **BL** terminals of the connector. If the contact is opened, the boiler will be blocked.

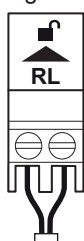
Change the function of the input using parameter **AP001**. This parameter has the following 3 configuration options:

- Complete blocking: no frost protection with the outdoor sensor and no boiler frost protection (pump does not start and burner does not start)
- Partial blocking: boiler frost protection (pump starts when the temperature of the heat exchanger is < 6°C and the burner starts when the temperature of the heat exchanger is < 3°C)
- Lock out: no frost protection with outdoor sensor and partial boiler frost protection (pump starts when the temperature of the heat exchanger is < 6°C, the burner does not start when the temperature of the heat exchanger is < 3°C).

■ **Release input**

Caution
Only suitable for potential-free contacts (dry contact).

Fig.45 Release input



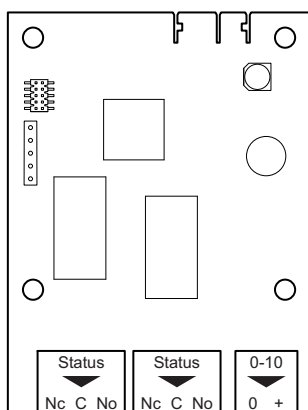
AD-3001303-01

The boiler has a release input. A potential-free contact can be connected to the **RL** terminals of the connector.

- If the contact is closed during a heat demand, the boiler will be blocked immediately.
- If the contact is closed when there is no heat demand, the boiler will be blocked after a waiting time.

Change the waiting time of the input using parameter **AP008**.

Fig.46 SCB-01 PCB



AD-3001514-01

5.8.3 The SCB-01 expansion PCB

The SCB-01 has the following features:

- Two potential free contacts for status notifications
- 0–10 V output connection for a PWM system pump

Expansion PCBs are automatically recognised by the control unit of the boiler. If expansion PCBs are removed, the boiler will show an error code. To resolve this error, an auto-detect must be carried out after removal.

■ **Connecting status notifications**

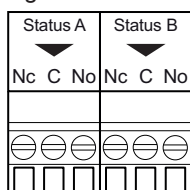
The two potential-free contacts, **Status**, can be configured as required. Depending on the setting, a particular status can be transmitted by the boiler.

Connect a relais as follows:

- Nc** Normally closed contact. Contact will open when status occurs.
- C** Main contact.
- No** Normally opened contact. Contact will close when status occurs.

Select the desired status notification (setting) using parameter **EP018** and **EP019**.

Fig.47 Status notifications



AD-3001312-01

■ Connecting 0–10 V output

Fig.48 0–10 V output connector



AD-3001305-01

The 0-10 contact can be used to connect a PWM system pump. The speed of the pump is modulated based on the signal received from the boiler. Depending on the make and type of pump, the pump can be controlled by a 0–10 V or a PWM signal.

Connect the system pump controller to connector 0-10.

- Select the type of signal that will be sent from the boiler using the parameter EP029.
- Select the type of signal that controls the pump using the parameter EP028.



Caution

- If possible, use the pump modulation signal. This provides the most accurate pump control.
- If the automatic burner unit does not support pump modulation, the pump will behave as an on/off pump.

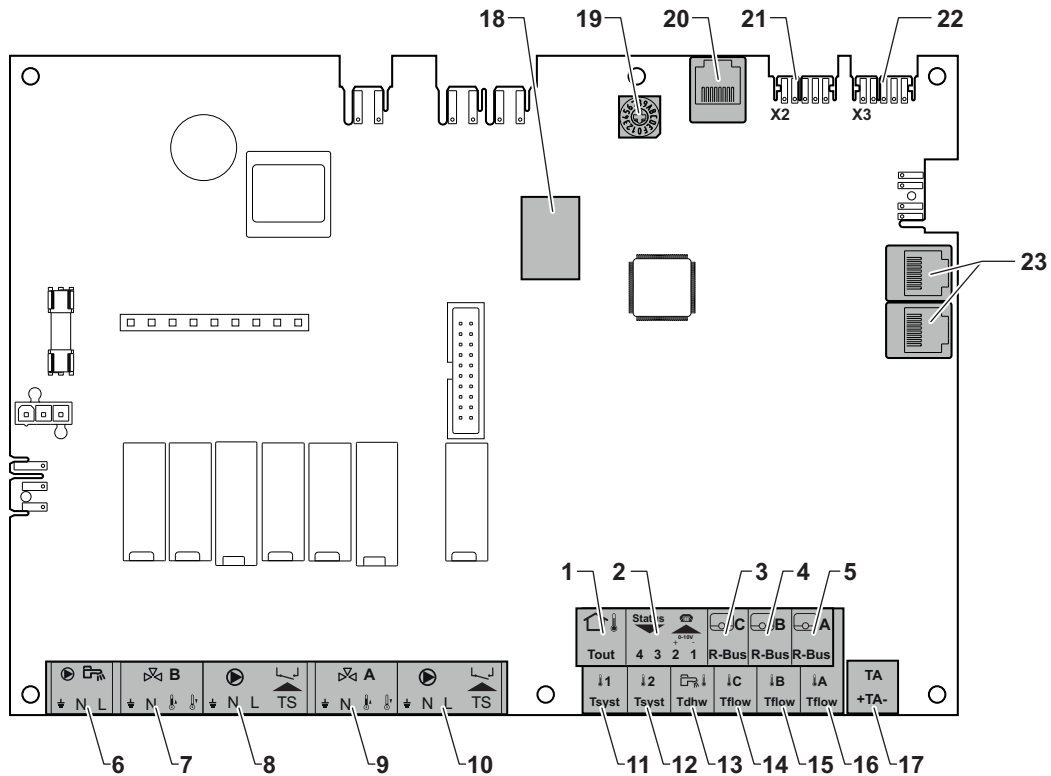
5.8.4 The SCB-10 expansion PCB

The SCB-10 has the following features:

- Control of 2 (mixing) zones
- Control of a third (mixing) zone via an optional PCB
- Control of one domestic hot water (DHW) zone
- Cascade layout

Expansion PCBs are automatically recognised by the control unit of the boiler. If expansion PCBs are removed, the boiler will show an error code. To resolve this error, an auto-detect must be carried out after removal.

Fig.49 SCB-10 PCB



AD-3001210-01

- | | |
|---------------------------------------|---|
| 1 Outdoor temperature sensor | 7 Mixing valve - circuit B |
| 2 Programmable and 0-10 V input | 8 Pump and safety thermostat - circuit B |
| 3 Room temperature sensor - circuit C | 9 Mixing valve - circuit A |
| 4 Room temperature sensor - circuit B | 10 Pump and safety thermostat - circuit A |
| 5 Room temperature sensor - circuit A | 11 System sensor 1 |
| 6 Domestic hot water tank pump | 12 System sensor 2 |

- 13 Domestic hot water sensor
- 14 Flow sensor - circuit C
- 15 Flow sensor - circuit B
- 16 Flow sensor - circuit A
- 17 Impressed current anode
- 18 Modbus connectors

- 19 Coding wheel, selects the generator number in the cascade in Mod-Bus
- 20 S-BUS connector
- 21 End connector for L-BUS connection
- 22 L-BUS connector
- 23 S-BUS connector

■ Connecting a domestic hot water (DHW) pump

Connecting a domestic hot water (DHW) pump. The maximum power consumption is 300 VA.

Connect the pump as follows:

- ⊥ Earth
- N Neutral
- L Phase

Fig.50 DHW pump connector



AD-4000123-01

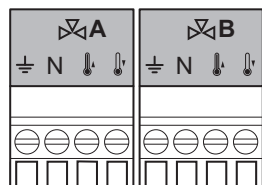
■ Connecting a mixing valve

Connecting a mixing valve (230 VAC) per zone (group).

Connect the mixing-way valve as follows:

- ⊥ Earth
- N Neutral
- ⏏ Open
- ⏏ Close

Fig.51 Mixing valve connectors



AD-4000002-01

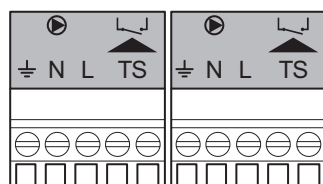
■ Connecting the pump with a protection thermostat

Connecting a pump with a protection thermostat, e.g. for underfloor heating. The maximum pump power consumption is 300 VA.

Connect the pump and the protection thermostat as follows:

- ⊥ Earth
- N Neutral
- L Phase
- TS protection thermostat (remove bridge)

Fig.52 Pump with protection thermostat connector



AD-4000001-02

■ Connecting an outdoor temperature sensor

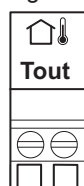
An outdoor temperature sensor can be connected to the **Tout** connector. Always connect the sensor to the PCB that controls the zones. For example: when the zones are controlled by an SCB-10, connect the sensor to that PCB.

1. Connect the two-wire cable to the **Tout** connector.

Set parameter **AP056** to the installed outdoor temperature sensor type.

When an on/off thermostat is also connected, the boiler will control the temperature with the set point from the internal heating curve. **OpenTherm** controllers can also use the outdoor temperature sensor. In that case, the desired heating curve must be set on the controller.

Fig.53 Tout connector



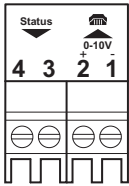
AD-4000006-02

■ Connecting a telephone connector

The telephone connector can be used to connect a remote control, a 0–10 V analogue input or as a status output.

The 0–10 V signal controls the boiler flow temperature in a linear way. This control modulates on the basis of flow temperature. The output varies between the minimum and maximum value on the basis of the flow temperature set point calculated by the controller.

Fig.54 Telephone connector



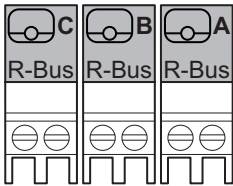
AD-4000004-02

Connect the telephone connector as follows:

- 1 + 2 0–10 V / status input
- 3 + 4 status output

■ **Connecting room thermostats per zone**

Fig.55 R-bus connectors



AD-4000003-01

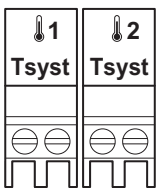
The SCB-10 is fitted with three **R-Bus** connectors. They can be used to connect room thermostats per zone. The **R-bus** connectors are related to the other zone-specific connectors on the SCB-10. The **R-Bus** connector supports the following types:

- **R-Bus** thermostat (for example, the **Smart TC°**)
- **OpenTherm** thermostat
- **OpenTherm Smart Power** thermostat
- **On/off** thermostat

The software recognizes which type of thermostat is connected.

■ **Connecting system sensors**

Fig.56 System sensor connectors

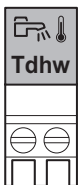


AD-4000008-02

Connecting system sensors (NTC 10k Ohm/25°C) for circuits (zones).

■ **Connecting the domestic hot water (DHW) sensor**

Fig.57 DHW sensor

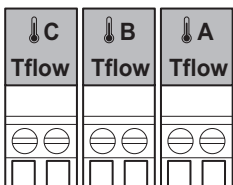


AD-4000009-02

Connecting the domestic hot water (DHW) sensor (NTC 10k Ohm/25°C).

■ **Connecting contact temperature sensors**

Fig.58 Contact temperature sensor connectors



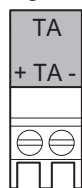
AD-4000007-02

Connecting contact temperature sensors (NTC 10k Ohm/25°C) for system flow, DHW temperatures or zones (groups).

■ **Connecting the calorifier tank anode**

Connecting a TAS anode (Titan Active System) for a calorifier tank.

Fig.59 Anode connector



AD-4000005-02

Connect the anode as follows:

- + Connection on the calorifier tank
- Connection on the anode

**Caution**

If the calorifier tank does not have a TAS anode, connect the simulation anode (= accessory)

5.8.5 Connecting the power cable

The power connection is located in the rear part of the control box. The power connection is fitted with a 10AT fuse.

**Danger of electric shock**

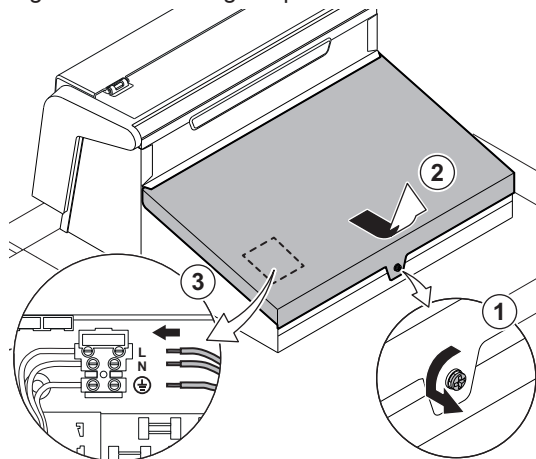
Always turn off the main power before working on the electrical connections.

Make sure the following requirements are met when connecting the power cable:

Tab.43 Power connection

Wire cross section	Stripping length	Tightening torque
solid wire: 2.5 mm ² (AWG 14) stranded wire: 2.5 mm ² (AWG 14) stranded wire with ferrule: 2.5 mm ² (AWG 14)	7 mm	0.5 N·m

Fig.60 Connecting the power cable



AD-3001593-01

1. Undo the quarter turn screw.
2. Remove the cover.
3. Connect the power cable to the connector block.
4. Close the cover.
5. Tighten the quarter turn screw.

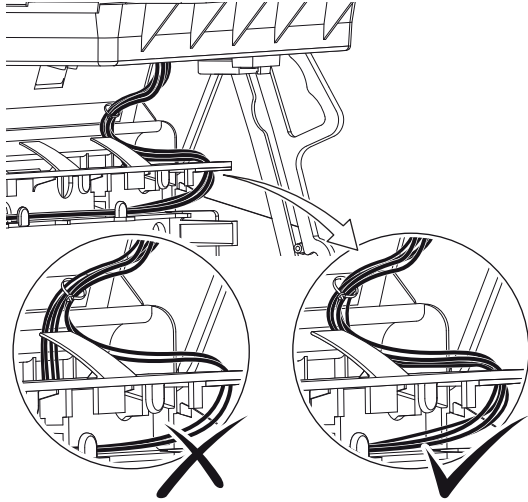
5.8.6 Cable routing in the control box front part



Caution

Make sure the cable routing matches the illustration when closing the control box.

Fig.61 Cable routing in the control box front part

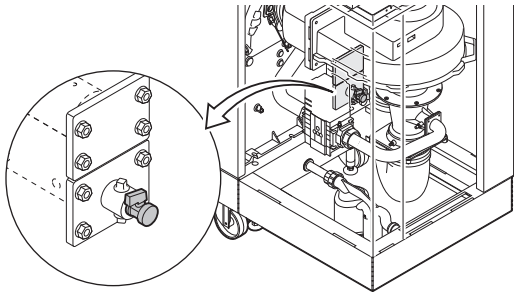


AD-3001768-01

6 Preparation of commissioning

6.1 Checklist before commissioning

Fig.62 Filling and drain valve location



AD-3001559-01

6.1.1 Filling the installation

The recommended water pressure is between 1.5 bar and 2.0 bar.

Proceed as follows to fill the installation:

1. Disconnect the boiler from the power supply.
2. Fill the central heating system with clean water, using the filling and drain valve (½", fitted on the front section).
3. Check the water-side connections for tightness.
4. Power up the boiler.

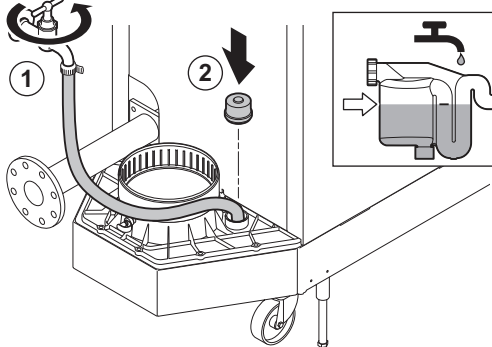
6.1.2 Filling the siphon



Danger

The siphon must always be sufficiently filled with water. This prevents flue gases from entering the room.

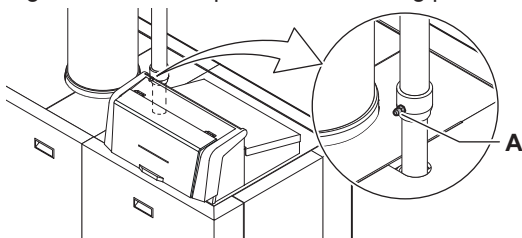
Fig.63 Filling the siphon



AD-3001600-01

1. Fill the siphon up to the mark via the condensate collector.
2. Put the sealing cap back on the condensate collector.

Fig.64 Gas inlet pressure measuring point



AD-3001560-01

6.1.3 Preparing the gas circuit









Warning

Ensure that the boiler is disconnected from the power supply.






























1. Open the main gas valve.
2. Open the boiler gas valve.
3. Check the tightness of the gas circuit.
4. Vent the gas supply pipe by unscrewing measuring point **A**.
⇒ The gas supply pipe is properly vented when a gas smell can be noticed.
5. Check the gas inlet pressure at measuring point **A**.
⇒ The pressure must be the same as the one shown on the data plate.
6. Tighten the measuring point again.

Tab.45 Available menus for the installer 







Description	Icon
Installation Setup	
Commissioning Menu	
Advanced Service Menu	
Error History	
System Settings	
Version Information	

6.2.4 Meaning of the icons in the display

Tab.46 Icons

Icon	Description
	User menu: user-level parameters can be configured.
	Installer menu: installer-level parameter can be configured.
	Information menu: read out various current values.
	System settings: system parameters can be configured.
	Error indicator.
	Gas boiler indicator.
	Domestic hot water tank is connected.
	The outdoor temperature sensor is connected.
	Boiler number in cascade system.
	The solar calorifier is on and its heat level is displayed.
	CH operation is enabled.
	CH operation is disabled.
	DHW operation is enabled.
	DHW operation is disabled.
	The burner is on.
	The burner is off.
	Burner output level (1 to 5 bars, with each bar representing 20% output).
	The pump is running.
	Three-way valve indicator.
	Display of the system water pressure.
	Chimney sweep mode is enabled (forced full load or low load for O ₂ measurement).
	Energy-saving mode is enabled.
	DHW boost is enabled.
	Timer program is enabled: The room temperature is controlled by a timer program.
	Manual mode is enabled: The room temperature is set to a fixed setting.
	Temporary overwrite of the timer program is enabled: The room temperature is changed temporarily.
	The holiday program (including frost protection) is active: The room temperature is reduced during your holiday to save energy.
	Frost protection is enabled: Protect the boiler and installation from freezing in winter.
	Installer contact details are displayed or can be filled in.

Tab.47 Icons - Zones

Icon	Description
	All zones (groups) icon.
	Living room icon.
	Kitchen icon.
	Bedroom icon.
	Study icon.
	Cellar icon.

7 Commissioning

7.1 Commissioning procedure



Warning

- Commissioning must be done by a qualified installer.
- If adapting to another gas type, the gas valve unit must be adjusted before switching on the boiler.

1. Open the main gas valve.
2. Open the appliance gas valve.
3. Switch on the power with the boiler's on/off switch.
4. Configure the settings shown on the display.
⇒ The start-up program will start and cannot be interrupted.
5. Set the components (thermostats, control) so that heat is demanded.



Important

In the event of an error during the start-up, a message with the corresponding code is displayed. The meaning of the error codes can be found in the error table.

7.2 Gas settings

7.2.1 Factory setting

The factory setting of the boiler is for operation with the natural gas group G20 (H gas).

Tab.48 C 340 - Factory settings G20 (H-gas)

Code	Display text	Description	280	350	430	500	570	650
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	5200	5500	3500	3800	4300	4100
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	5200	5500	3500	3800	4300	4100
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400	1550	950	1050	1100	1050
GP009	Fan RPM Start	Fan speed at appliance start	2500	2500	1300	1400	1400	1400

Tab.49 C 640 - Factory settings G20 (H-gas)

Code	Display text	Description	560	700	860	1000	1140	1300
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	5200	5500	3500	3800	4300	4100
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	5200	5500	3500	3800	4300	4100
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1900	1850	1300	1250	1400	1350
GP009	Fan RPM Start	Fan speed at appliance start	2500	2500	1300	1400	1500	1600

7.2.2 Adjusting to a different gas type











Warning
Only a qualified installer may carry out the following operations.

Important
If the boiler is adapted to another gas type, this must be stated on the sticker supplied. This sticker must be affixed next to the data plate.

Before operating with a different type of gas, carry out the following steps.

■ **Adjusting fan speed parameters for different gas types**

The factory fan speed settings can be adjusted for a different type of gas at installer level.

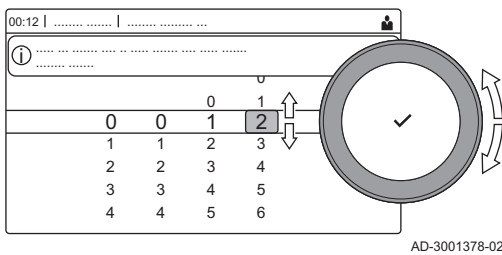
1. Select the tile [].
2. Press the  button to confirm the selection.
3. Use the rotary knob to select code: **0012**.
4. Press the  button to confirm the selection.
⇒ When the installer level is enabled, the status of the tile [] changes from **Off** into **On**.
5. Select the tile [].
6. Press the  button to confirm the selection.
7. Use the rotary knob to select **Parameters, counters, signals**.
8. Press the  button to confirm the selection.
9. Use the rotary knob to select **Adv. Parameters**.
10. Press the  button to confirm the selection.
⇒ A list of available parameters appears.
11. Use the rotary knob to select the required parameter.
12. Press the  button to confirm the selection.
⇒ The current value appears.
13. Use the rotary knob to change the setting.
14. Press the  button to confirm the selection.

■ **Fan speeds for different gas types**

For boiler C 640, apply the instructions to each boiler module.

1. Adjust the fan speed (if necessary) for the gas type used according to the table below. The setting can be changed with a parameter setting.

Fig.68 Installer level



Tab.50 C 340 - Adjustment for gas type G25 (L gas)

Code	Displayed text	Description	280	350	430	500	570	650
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	5300	5600	3500	3800	4300	4200
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	5300	5600	3500	3800	4300	4200
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400	1550	950	1050	1100	1050
GP009	Fan RPM Start	Fan speed at appliance start	2500	2500	1300	1400	1400	1400

Tab.51 C 640 - Adjustment for gas type G25 (L gas)

Code	Displayed text	Description	560	700	860	1000	1140	1300
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	5300	5600	3500	3800	4300	4200
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	5300	5600	3500	3800	4300	4200

Code	Displayed text	Description	560	700	860	1000	1140	1300
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1900	1850	1300	1250	1400	1350
GP009	Fan RPM Start	Fan speed at appliance start	2500	2500	1300	1400	1500	1600

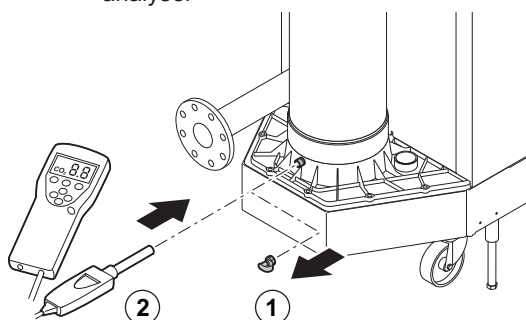
2. Check the setting of the gas/air ratio.

7.2.3 Checking and setting the gas/air ratio

For boiler C 640, apply the instructions to each boiler module. Make sure that the other boiler module is out of operation during this check and/or setting.

The flue gas analyser must have a minimum accuracy of $\pm 0.25\%$ O₂.

Fig.69 Insert the probe for the flue gas analyser



AD-3001424-01

1. Unscrew the cap from the flue gas measuring point.
2. Insert the probe for the flue gas analyser into the measurement opening.

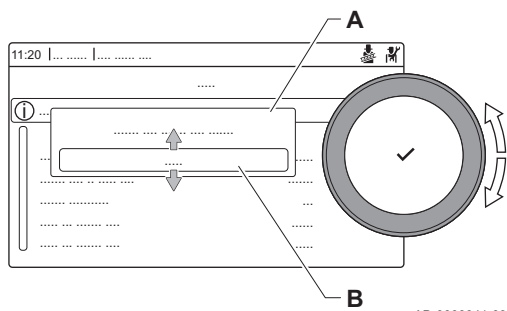


Warning

Fully seal the opening around the sensor during measurement.

3. Measure the percentage of O₂ in the flue gases. Take measurements at full load and at part load.

Fig.70 Full load test



AD-3000941-03

■ Performing the full load test

1. Select the tile [👤].
⇒ The **Change load test mode** menu appears.
2. Select the test **Medium power**.
A Change load test mode
B Medium power
⇒ The full load test starts. The selected load test mode is shown in the menu and the icon 👤 appears in the top right of the screen.
3. Check the load test settings and adjust if necessary.
⇒ Only the parameters shown in bold can be changed.

■ Checking/setting values for O₂ at full load

1. Set the boiler to full load.
2. Measure the percentage of O₂ in the flue gases.
3. Compare the measured value with the checking values in the table.

Tab.52 Checking/setting values for O₂ at full load for G20 (H gas)

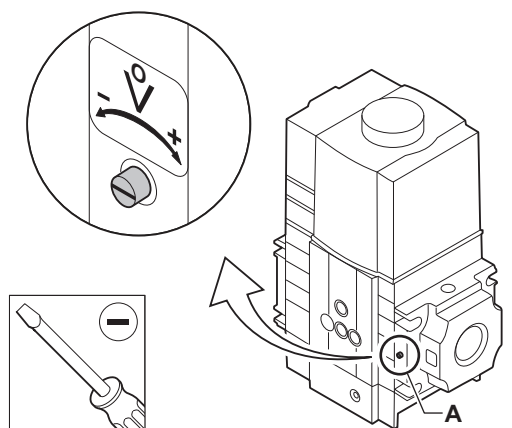
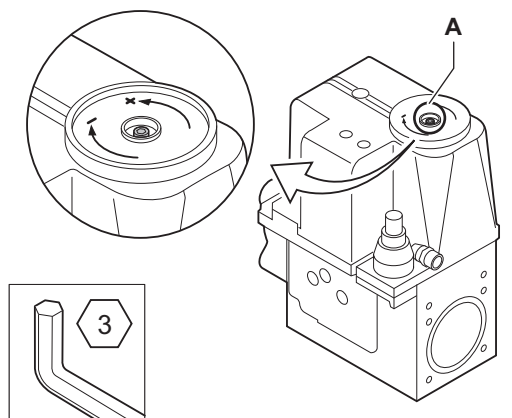
Values at full load for G20 (H gas)	O ₂ (%) ⁽¹⁾
C 340 280	4.3 – 4.8 ⁽¹⁾
C 340 350	4.3 – 4.8 ⁽¹⁾
C 340 430	4.3 – 4.8 ⁽¹⁾
C 340 500	4.3 – 4.8 ⁽¹⁾
C 340 570	4.3 – 4.8 ⁽¹⁾
C 340 650	4.3 – 4.8 ⁽¹⁾
C 640 560	4.3 – 4.8 ⁽¹⁾

Values at full load for G20 (H gas)	O ₂ (%) ⁽¹⁾
C 640 700	4.3 – 4.8 ⁽¹⁾
C 640 860	4.3 – 4.8 ⁽¹⁾
C 640 1000	4.3 – 4.8 ⁽¹⁾
C 640 1140	4.3 – 4.8 ⁽¹⁾
C 640 1300	4.3 – 4.8 ⁽¹⁾
(1) Nominal value	

Tab.53 Checking/setting values for O₂ at full load for G25 (L gas)

Values at full load for G25 (L gas)	O ₂ (%) ⁽¹⁾
C 340 280	4.1 – 4.6 ⁽¹⁾
C 340 350	4.1 – 4.6 ⁽¹⁾
C 340 430	4.1 – 4.6 ⁽¹⁾
C 340 500	4.1 – 4.6 ⁽¹⁾
C 340 570	4.1 – 4.6 ⁽¹⁾
C 340 650	4.1 – 4.6 ⁽¹⁾
C 640 560	4.1 – 4.6 ⁽¹⁾
C 640 700	4.1 – 4.6 ⁽¹⁾
C 640 860	4.1 – 4.6 ⁽¹⁾
C 640 1000	4.1 – 4.6 ⁽¹⁾
C 640 1140	4.1 – 4.6 ⁽¹⁾
C 640 1300	4.1 – 4.6 ⁽¹⁾
(1) Nominal value	

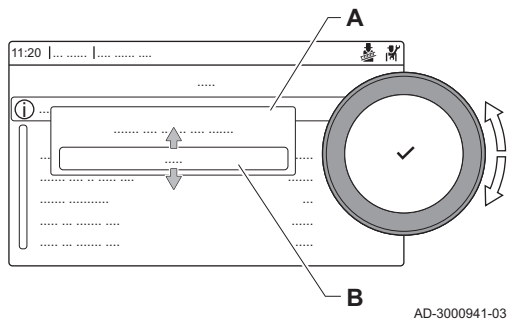
Fig.71 Adjusting screw A



AD-0000492-01

- If the measured value is outside of the values given in the table, correct the gas/air ratio.
- Use the adjustment screw **A** to set the percentage of O₂ for the gas type being used to the nominal value. Increasing the gas flow, will decrease O₂. The direction in which the adjusting screw must be turned to increase or decrease the gas flow is indicated on the gas control valve. The 5- to 9-section boilers are supplied with a different gas control valve from the 10-section boiler. See drawing for the position of adjusting screw **A** for full load.
- Check the flame through the inspection glass. The flame must not blow off.

Fig.72 Low load test



AD-3000941-03

■ Performing the low load test

1. If the full load test is still running, press the ✓ button to change the load test mode.
2. If the full load test was finished, select the tile [👷] to restart the chimney sweep menu.

A Change load test mode

B Low power

3. Select the **Low power** test in the menu **Change load test mode**.
⇒ The low load test starts. The selected load test mode is shown in the menu and the icon 👷 appears in the top right of the screen.
4. Check the load test settings and adjust if necessary.
⇒ Only the parameters shown in bold can be changed.
5. End the low load test by pressing the ⏪ button.
⇒ The message **Running load test(s) stopped!** is displayed.

■ Checking/setting values for O₂ at low load

1. Set the boiler to low load.
2. Measure the percentage of O₂ in the flue gases.
3. Compare the measured value with the checking values in the table.

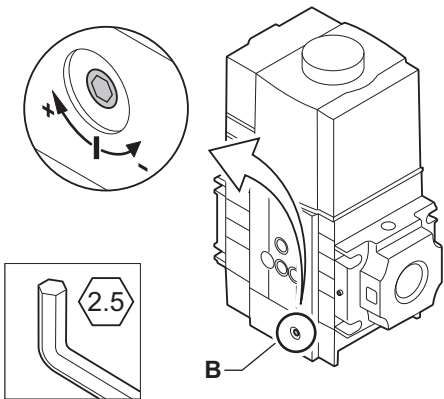
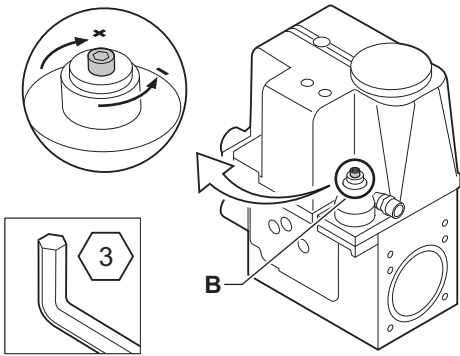
Tab.54 Checking/setting values for O₂ at low load for G20 (H gas)

Values at low load for G20 (H gas)	O ₂ (%) ⁽¹⁾
C 340 280	4.8 ⁽¹⁾ – 5.4
C 340 350	4.8 ⁽¹⁾ – 5.4
C 340 430	4.8 ⁽¹⁾ – 5.4
C 340 500	4.8 ⁽¹⁾ – 5.4
C 340 570	4.8 ⁽¹⁾ – 5.4
C 340 650	4.8 ⁽¹⁾ – 5.4
C 640 560	4.8 ⁽¹⁾ – 5.4
C 640 700	4.8 ⁽¹⁾ – 5.4
C 640 860	4.8 ⁽¹⁾ – 5.4
C 640 1000	4.8 ⁽¹⁾ – 5.4
C 640 1140	4.8 ⁽¹⁾ – 5.4
C 640 1300	4.8 ⁽¹⁾ – 5.4
(1) Nominal value	

Tab.55 Checking/setting values for O₂ at low load for G25 (L gas)

Values at low load for G25 (L gas)	O ₂ (%) ⁽¹⁾
C 340 280	4.6 ⁽¹⁾ – 5.2
C 340 350	4.6 ⁽¹⁾ – 5.2
C 340 430	4.6 ⁽¹⁾ – 5.2
C 340 500	4.6 ⁽¹⁾ – 5.2
C 340 570	4.6 ⁽¹⁾ – 5.2
C 340 650	4.6 ⁽¹⁾ – 5.2
C 640 560	4.6 ⁽¹⁾ – 5.2
C 640 700	4.6 ⁽¹⁾ – 5.2
C 640 860	4.6 ⁽¹⁾ – 5.2
C 640 1000	4.6 ⁽¹⁾ – 5.2
C 640 1140	4.6 ⁽¹⁾ – 5.2
C 640 1300	4.6 ⁽¹⁾ – 5.2
(1) Nominal value	

Fig.73 Adjusting screw B



AD-0000493-01

4. If the measured value is outside of the values given in the table, correct the gas/air ratio.
5. Use the adjustment screw **B** to set the percentage of O₂ for the gas type being used to the nominal value. Increasing the gas flow, will decrease O₂. The direction in which the adjusting screw must be turned to increase or decrease the gas flow is indicated on the gas control valve. The 5- to 9-section boilers are supplied with a different gas control valve from the 10-section boiler. See drawing for the position of adjusting screw **B** for low load.
6. Check the flame through the inspection glass. The flame must not blow off.
7. Repeat the full load test and the low load test as often as necessary until the correct values are obtained.
8. Set the boiler back to the normal operating status.

7.3 Final instructions

1. Remove the measuring equipment.
2. Screw the cap on to the flue gas measuring point.
3. Seal the gas valve unit.
4. Put the front casing back.
5. Heat up the central heating system to approximately 70°C.
6. Switch the boiler off.
7. Vent the central heating system after approx. 10 minutes.
8. Turn on the boiler.
9. Check the water pressure. If necessary, top up the central heating system.
10. Fill in the following data on the sticker included, and attach it next to the data plate on the appliance.
 - The gas type, if adapted to another gas;
 - The gas supply pressure;
 - The flue type, if set to overpressure application;
 - The parameters modified for the changes mentioned above.
11. Optimise the settings as required for the system and user preferences.
12. Save the commissioning settings on the control panel, so they can be restored after a reset.
13. Instruct the user in the operation of the system, boiler and controller.
14. Inform the user of the maintenance to be performed.
15. Hand over all manuals to the user.

Fig.74 Example filled-in sticker

<p>Adjusted for / Réglée pour / Ingesteld op / Eingestellt auf / Regolato per / Ajustado para / Ρυθμιζόμενο για / Nastawiony na / настроен для / Reglat pentru / настроен за / ayarlanmıştır / Nastavljen za / beállítva/ Nastaveno pro / Asetettu kaasulle / Justert for/ indstillet til/ ل تطبخ :</p> <p><input checked="" type="checkbox"/> Gas <u> G20 </u></p> <p><u> 20 </u> mbar</p> <p><input checked="" type="checkbox"/> C_{(10)3(X)}</p> <p><input type="checkbox"/> C_{(12)3(X)}</p> <p><input type="checkbox"/> _____</p>	<p>Parameters / Paramètres / Parameter / Parametri / Parámetros / Παράμετροι / Parametry / Параметры / Parametrii / Параметри / Parametreler / Paraméterek / Parametrit / Parametere / Parametre / تامل عمل :</p> <p><u> DP003 - 3300 </u></p> <p><u> GP007 - 3300 </u></p> <p><u> GP008 - 2150 </u></p> <p><u> GP009 - </u></p>
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7.3.1 Saving the commissioning settings

You can save all current settings on the control panel. These settings can be restored if necessary, for example after replacement of the control unit.

1. Press the ☰ button.
2. Use the rotary knob to select **Advanced Service Menu**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Save as commissioning settings**.
5. Press the ✓ button to confirm the selection.
6. Select **Confirm** to save the settings.

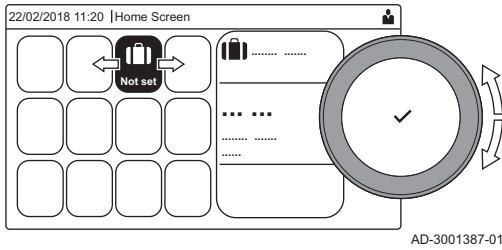
When you have saved the commissioning settings, the option **Revert commissioning settings** becomes available in the **Advanced Service Menu**.

8 User instructions

8.1 Accessing the user level menus

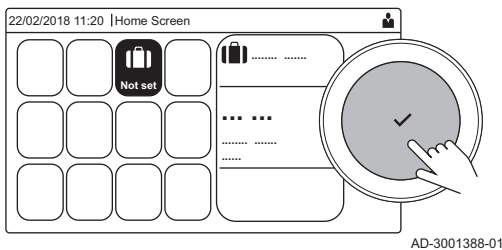
The tiles on the home screen provide quick access for the user to the corresponding menus.

Fig.75 Menu selection



1. Use the rotary knob to select the required menu.

Fig.76 Confirm menu selection



2. Press the ✓ button to confirm the selection.
 - ⇒ The available settings of this selected menu appear in the display.
3. Use the rotary knob to select the desired setting.
4. Press the ✓ button to confirm the selection.
 - ⇒ All options for change will appear in the display (if a setting cannot be changed, **Cannot edit read-only datapoint** will appear in the display).
5. Use the rotary knob to change the setting.
6. Press the ✓ button to confirm the selection.
7. Use the rotary knob to select the next setting or press the ↻ button to return to the home screen.

8.2 Home screen









The tiles on the home screen provide quick access to the corresponding menus. Use the rotary knob to navigate to the menu of your choice and press the ✓ button to confirm the selection. All options for change will appear in the display (**Cannot edit read-only datapoint** will appear in the display if a setting cannot be changed).

Tab.56 Selectable tiles for the user







Tile	Menu	Function
i	Information menu.	Read out various current values.
⊗	Error indicator.	Read out details about the current error. With some errors the 🛠️ icon will appear with installer contact details (when filled in).
🏠	Holiday mode.	Set the start and end date of your holiday to lower the room and domestic hot water temperatures of all zones.
🔥	Gas boiler indicator.	Read out burning details of the boiler and switch the heating function of the boiler on or off.
📊 bar	Water pressure indicator.	Shows the water pressure. Top up the installation when the water pressure is too low.
🔧, 🏠, 📊, 📈, 📉, 📊, 📈, 📉, 🏠	Heating circuit set-up.	Configure the settings per heating circuit.
🚿	DHW setup.	Configure the domestic hot water temperatures.
🌡️	Outdoor sensor setup.	Configure the temperature regulation using the outdoor sensor.

8.3 Activating holiday programs for all zones








If you go on holiday, the room temperature and domestic hot water temperature can be reduced to save energy. With the following procedure you can activate the holiday mode for all zones and domestic hot water temperature.


1. Select the tile .
2. Press the  button to confirm the selection.
⇒ The **Holiday Mode** menu opens.
3. Use the rotary knob to select **Start date holiday**.
4. Press the  button to confirm the selection.
⇒ The current date is displayed as start date of your holiday.
5. Change the start date, if necessary.
6. Press the  button to confirm the selection.
7. Use the rotary knob to select **End date holiday**.
8. Press the  button to confirm the selection.
⇒ The day after the start date of your holiday is displayed.
9. Change the end date, if necessary.
10. Press the  button to confirm the selection.
11. Use the rotary knob to select **Wished room zone temperature on holiday period**.
12. Press the  button to confirm the selection.
⇒ The room temperature for the holiday period is displayed.
13. Change the temperature, if necessary.
14. Press the  button to confirm the selection.
You can reset or cancel the holiday program by selecting **Reset** in the holiday mode menu.

8.4 Heating circuit configuration

For every heating circuit there is a quick user settings menu available. Select the heating circuit you want to configure by selecting the tile , , , ,  or .

Tab.57 Menu to configure a heating circuit

Icon	Menu	Function
	Scheduling	Set the scheduling mode and choose a timer program already created
	Manual	Set the manual mode; the room temperature setpoint is set to a fixed setting
	Short temperature change	Set the temporary mode; the room temperature setpoint is changed temporarily
	Holiday	Set the start and end date of your holiday to lower the room temperature setpoint.
	Antifrost	Set the frost protection mode; the minimum room temperature protects your system from freezing
	Set Heating Activity Temperatures	Set the room temperature setpoint for each activity of the timer program. See: Timer program to control the room temperature, page 69
	Zone configuration	Access the settings for the configuration of the heating circuit.

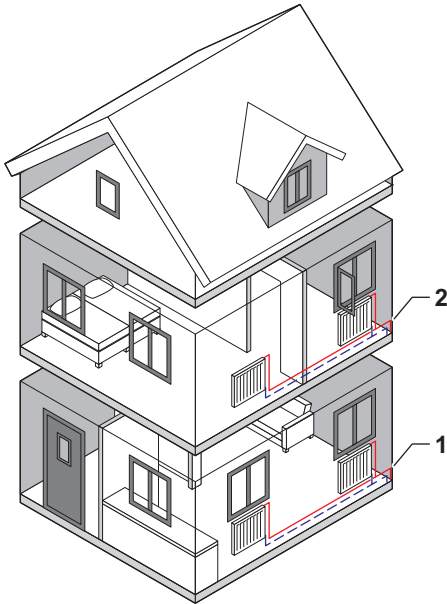
Tab.58 Extended menu to configure a heating circuit  **Zone configuration**

Menu	Function
Short temperature change	Change the room temperature temporarily, if required
OperatingZoneMode	Select the heating operating mode: Scheduling, Manual or Antifrost
Manu ZoneRoomTempSet	Set the room temperature manually to a fixed setting
Heating Schedule	Create a timer program (up to 3 programs allowed). See: Creating a timer program, page 69
Set Heating Activity Temperatures	Set the room temperature for each activity of the timer program
ZoneTimeProg Select	Select a timer program (3 options)

Menu	Function
Holiday Mode	Set the start and end date of your holiday and the reduced temperature for this zone
Zone friendly Name	Create or change the name of the heating circuit
Icon display zone	Select the icon of the heating circuit
OperatingZoneMode	Read the current operating mode of the heating circuit

8.5 Changing the room temperature of a zone

Fig.77 Two zones



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8.5.1 Definition of zone

Zone is the term given to the different hydraulic circuits CIRCA, CIRCB and so on. It designates several areas of a building served by the same circuit.

Tab.59 Example of two zones

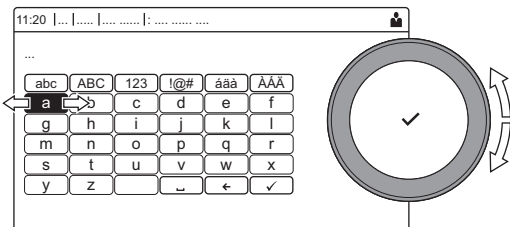
	Zone	Factory name
1	Zone 1	CIRCA
2	Zone 2	CIRCB

8.5.2 Changing the name and symbol of a zone

The zones have a factory symbol and factory name. You can change the name and symbol of a zone.

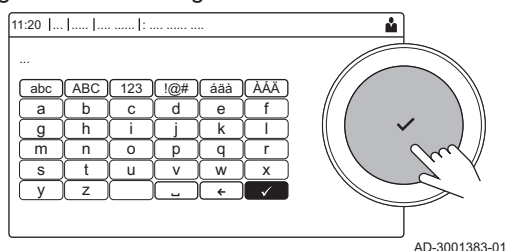
1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select ⚙️ **Zone configuration**
4. Press the ✓ button to confirm the selection.
5. Use the rotary knob to select **Zone friendly Name**
6. Press the ✓ button to confirm the selection.
⇒ A keyboard with letters, numbers and symbols is shown.
7. Change the name of the zone (20 characters maximum):
 - 7.1. Use the rotary knob to select a letter, number or action.
 - 7.2. Select ← to delete a letter, number or symbol.
 - 7.3. Press the ✓ button to confirm or to repeat a letter, number or symbol.
 - 7.4. Select ␣ to add a space.

Fig.78 Letter selection



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Fig.79 Confirm sign



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8. Select the ✓ sign on the screen when the name is complete.
9. Press the ✓ button to confirm the selection.
10. Use the rotary knob to select **Icon display zone**.
11. Press the ✓ button to confirm the selection.
 - ⇒ All available icons appear in the display.
12. Use the rotary knob to select the desired symbol of the zone.
13. Press the ✓ button to confirm the selection.

8.5.3 Changing the operating mode of a zone

To regulate the room temperature of the different areas of the house, you can choose from 5 operating modes:

1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
 - ⇒ The **Zone QuickSelect** menu opens.
3. Use the rotary knob to select the desired operating mode:

Tab.60 Operating modes

Icon	Mode	Description
	Scheduling	The room temperature is controlled by a timer program
	Manual	The room temperature is set to a fixed setting
	Short temperature change	The room temperature is changed temporarily
	Holiday	The room temperature is reduced during your holiday to save energy
	Antifrost	Protect the boiler and installation from freezing in winter

4. Press the ✓ button to confirm the selection.

8.5.4 Timer program to control the room temperature

■ Creating a timer program

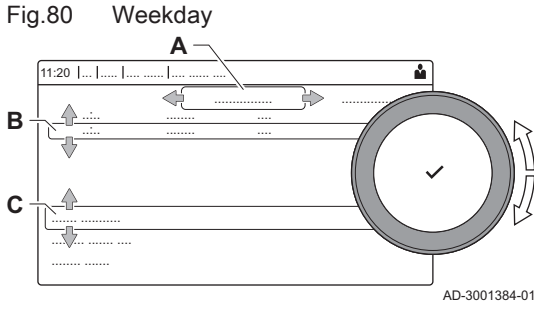
A timer program allows you to vary the room temperature per hour and per day. The room temperature is linked to the activity of the timer program.



Important

You can create up to three timer programs per zone. For example, you can create a program for a week with normal working hours and a programme for a week when you are at home most of the time.

1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select **Zone configuration**.
4. Press the ✓ button to confirm the selection.
5. Use the rotary knob to select **Heating Schedule**.
6. Press the ✓ button to confirm the selection.
7. Use the rotary knob to select the timer program you want to modify: **Schedule 1**, **Schedule 2** or **Schedule 3**.
8. Press the ✓ button to confirm the selection.
 - ⇒ Activities scheduled for Monday are displayed. The last scheduled activity of a day is active until the first activity of the next day. At initial start-up, all weekdays have two standard activities; **Home** starting at 6:00 and **Sleep** starting at 22:00.

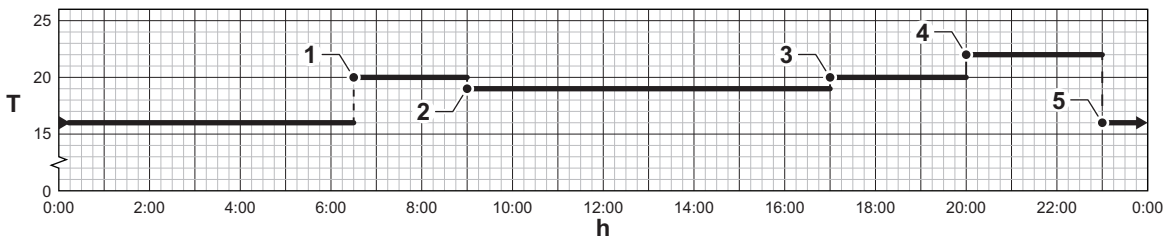


9. Use the rotary knob to select the weekday you want to modify.
 - A Weekday
 - B Overview of scheduled activities
 - C List of actions
10. Perform the following actions, if necessary:
 - 10.1. **Edit** the start time and/or activity of a scheduled activity.
 - 10.2. **Add** a new activity.
 - 10.3. **Delete** a scheduled activity (select the activity **Delete**).
 - 10.4. **Copy** the scheduled activities of the weekday to other days.
 - 10.5. **Change the temperature** linked to an activity.

■ **Definition of activity**

Activity is the term used when programming time slots in a timer program. The timer program sets the room temperature for different activities during the day. A temperature setpoint is associated with each activity. The last activity of the day is valid until the first activity of the next day.

Fig.81 Activities of a timer program



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Tab.61 Example of activities

	Start of the activity	Activity	Temperature setpoint
1	6:30	Morning	20 °C
2	9:00	Away	19 °C
3	17:00	Home	20 °C
4	20:00	Evening	22 °C
5	23:00	Sleep	16 °C

■ **Changing the name of an activity**

You can change the names of the activities in the timer program.


1. Press the ≡ button.
2. Use the rotary knob to select **System Settings** ⚙️.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Set Heating Activity Names**.
5. Press the ✓ button to confirm the selection.
 - ⇒ A list of 6 activities and their standard names is shown:

Activity 1	Sleep
Activity 2	Home
Activity 3	Away
Activity 4	Morning
Activity 5	Evening
Activity 6	Custom

6. Use the rotary knob to select an activity.
7. Press the ✓ button to confirm the selection.
 - ⇒ A keyboard with letters, numbers and symbols is shown.
8. Change the name of the activity:
 - 8.1. Press the rotary knob ✓ to repeat a letter, number or symbol.
 - 8.2. Select ← to delete a letter, number or symbol.
 - 8.3. Select ␣ to add a space.
9. Select the ✓ sign on the screen when the name is complete.
10. Press the ✓ button to confirm the selection.


■ Activating a timer program

In order to use a timer program, it is necessary to activate the operating mode **Scheduling**. This activation is done separately for each zone.

1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select  **Scheduling**.
4. Press the ✓ button to confirm the selection.
5. Use the rotary knob to select the timer program **Schedule 1**, **Schedule 2** or **Schedule 3**.
6. Press the ✓ button to confirm the selection.

8.5.5 Changing the heating activity temperatures

You can change the heating temperatures of each activity.

1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select  **Set Heating Activity Temperatures**.
4. Press the ✓ button to confirm the selection.
 - ⇒ A list of 6 activities and their temperatures is shown.
5. Use the rotary knob to select an activity.
6. Press the ✓ button to confirm the selection.
7. Set the heating activity temperature.
8. Press the ✓ button to confirm the selection.


8.5.6 Changing the room temperature temporarily

Regardless of the operating mode selected for a zone, it is possible to change the room temperature for a short period. After this period has elapsed, the selected operating mode resumes.




Important

The room temperature can only be adjusted in this way if a room temperature sensor/thermostat is installed.

1. Select the tile of the zone you want to change.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select  **Short temperature change**.
4. Press the ✓ button to confirm the selection.
5. Set the duration in hours and minutes.
6. Press the ✓ button to confirm the selection.
7. Set the temporary room temperature.
8. Press the ✓ button to confirm the selection.
 - ⇒ The **Short temperature change** menu shows the duration and the temporary temperature.

8.6 Switching the summer mode on or off

You can switch off the central heating function of the boiler to save energy, for example during the summer period.

1. Select the tile .
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select **Force summer mode**.
4. Press the ✓ button to confirm the selection.
5. Use the rotary knob to select the following setting:
 - 5.1. **On** to switch off the central heating function.
 - 5.2. **Off** to switch the central heating function on again.
6. Press the ✓ button to confirm the selection.

8.7 Changing the display settings

1. Press the  button.

2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select **System Settings** ⚙️.
4. Press the ✓ button to confirm the selection.
5. Perform one of the operations described in the table below:

Tab.62 Display settings

System Settings menu	Settings
Set Date and Time	Set the current date and time
Select Country and Language	Select your country and language
Daylight Saving Time	Enable or disable daylight saving time
Installer Details	Read out the name and phone number of the installer
Set Heating Activity Names	Create the names for the activities of the timer program
Set Screen Brightness	Adjust the brightness of the screen
Set click sound	Enable or disable the click sound of the rotary knob
License Information	Read out detailed license information from the device platform application

8.8 Reading the installer's name and phone number

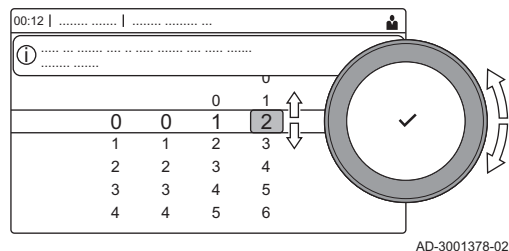
The installer can set his name and phone number in the control panel. You can read this information when you want to contact the installer.

1. Press the ≡ button.
2. Press the ✓ button to confirm the selection.
3. Select **System Settings** ⚙️
4. Press the ✓ button to confirm the selection.
5. Select **Installer Details**
6. Press the ✓ button to confirm the selection.
 - ⇒ The installer's name and phone number is shown.

9 Installer instructions

9.1 Accessing the installer level

Fig.82 Installer level



Some parameters that may affect the operation of the boiler are protected by an access code. Only the installer is allowed to modify these parameters.

1. Select the tile [].
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select code: **0012**.
4. Press the ✓ button to confirm the selection.
 - ⇒ When the installer level is enabled, the status of the tile [] changes from **Off** into **On**.
5. To leave the installer level, select the tile [].
6. Use the rotary knob to select **Confirm** or **Cancel**.
7. Press the ✓ button to confirm the selection.
 - ⇒ When the installer level is disabled, the status of the tile [] changes from **On** into **Off**.

When the control panel is not used for 30 minutes, the installer level is left automatically.

9.2 Configuring the installation at installer level

Configure the installation by pressing the button and selecting **Installation Setup** . Select the control unit or circuit board you want to configure:

Tab.63 CU-GH13

Icon	Zone or function	Description
	Internal DHW (Internal DHW)	Domestic hot water produced by boiler
	CIRCA / CH	Central heating circuit
	Auto filling CH	Adjust or start the automatic filling unit
	Commercial boiler	Gas boiler
	Gas fired appliance	Gas boiler
	Shower time function	Activate the shower time function

Tab.64 SCB-10

Icon	Zone or function	Description
	CIRCA 1	Central heating circuit A
	CIRCB 1	Central heating circuit B
	DHW 1	Domestic hot water external circuit
	CIRCC 1	Central heating circuit C
	Outdoor temperature	Outdoor sensor
	0-10 volt input	0-10 volt input signal
	Analogue input	Analogue input signal
	Cascade management B	Management of a cascade of multiple boilers
	Digital Input	Digital input signal
	Passive buffer tank	Enable a buffer tank with one or two sensors
	Status information	PCB SCB-10 status information

Tab.65 Configuring a zone or function of CU-GH13 or SCB-10

Parameters, counters, signals	Description
Parameters	Set the parameters at installer level
Counters	Read the counters at installer level
Signals	Read the signals at installer level
Adv. Parameters	Set the parameters at advanced installer level
Adv. Counters	Read the counters at advanced installer level
Adv. Signals	Read the signals at advanced installer level

9.2.1 Setting the installer details

You can store your name and phone number in the control panel to be read by the user.

1. Press the ≡ button.
2. Use the rotary knob to select **System Settings** ⚙️.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Installer Details**.
5. Press the ✓ button to confirm the selection.
6. Enter the following data:

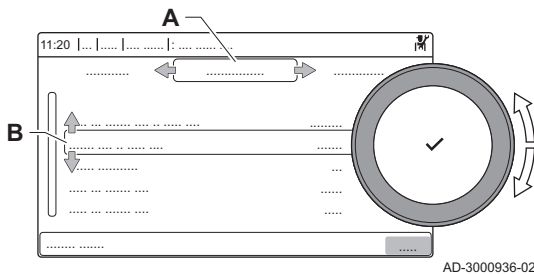
Installer name	Name of the installer
Installer phone	Phone number of the installer

9.2.2 Setting the parameters

You can change the parameters and settings of the appliance and the connected control boards, sensors etc. to configure the installation.

1. Press the ≡ button.
2. Use the rotary knob to select **Installation Setup**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select the zone or device you want to configure.
5. Press the ✓ button to confirm the selection.
6. Use the rotary knob to select **Parameters, counters, signals**.
7. Press the ✓ button to confirm the selection.
8. Use the rotary knob to select **Parameters** to change a parameter.
9. Press the ✓ button to confirm the selection.
10. If available, select **Adv. Parameters** to change a parameter at the advanced installer level.

Fig.83 Parameters, counters, signals



- A** - Parameters
- Counters
- Signals
- Adv. Parameters
- Adv. Counters
- Adv. Signals
- B** List of settings or values

The boiler's control unit is set for the most common central heating systems. These settings will ensure that virtually every central heating system operates effectively. The user or the installer can optimise the parameters as required.

**Caution**

Changing the factory settings may adversely affect the operation of the boiler.

9.2.3 Setting the boiler parameters when SCB-10 is fitted

When the boiler is fitted with the SCB-10 the following boiler CU-GH13 parameter(s) at installer level must be checked and adjusted, if necessary:

1. Press the **≡** button.
2. Use the rotary knob to select **Installation Setup**.
3. Press the **✓** button to confirm the selection.
4. Check and adjust parameter **CP020 (Zone Function)**:
 - 4.1. Use the rotary knob to select the submenu **CIRCA** for the CU-GH13.
 - 4.2. Press the **✓** button to confirm the selection.
 - 4.3. Use the rotary knob to select **Parameters, counters, signals**.
 - 4.4. Press the **✓** button to confirm the selection.
 - 4.5. Use the rotary knob to select **Parameters**.
 - 4.6. Press the **✓** button to confirm the selection.

⇒ A list of available parameters appears.
 - 4.7. Use the rotary knob to select the parameter **CP020 (Zone Function)**.
 - 4.8. Press the **✓** button to confirm the selection.

⇒ The current value appears.
 - 4.9. Use the rotary knob to change the setting to **0 = Disable**.
 - 4.10. Press the **✓** button to confirm the selection.
5. Check and adjust parameter **DP007 (Dhw 3wv Standby)**:
 - 5.1. Use the rotary knob to select the submenu **Internal DHW** for the CU-GH13.
 - 5.2. Press the **✓** button to confirm the selection.
 - 5.3. Use the rotary knob to select **Parameters, counters, signals**.
 - 5.4. Press the **✓** button to confirm the selection.
 - 5.5. Use the rotary knob to select **Parameters**.
 - 5.6. Press the **✓** button to confirm the selection.

⇒ A list of available parameters appears.
 - 5.7. Use the rotary knob to select the parameter **DP007 (Dhw 3wv Standby)**.
 - 5.8. Press the **✓** button to confirm the selection.

⇒ The current value appears.
 - 5.9. Use the rotary knob to change the setting to **0 = CH position**.
 - 5.10. Press the **✓** button to confirm the selection.
6. Check and adjust parameter **AP102 (Boiler Pump function)**:
 - 6.1. Use the rotary knob to select the submenu **Gas fired appliance** for the CU-GH13.
 - 6.2. Press the **✓** button to confirm the selection.
 - 6.3. Use the rotary knob to select **Parameters, counters, signals**.
 - 6.4. Press the **✓** button to confirm the selection.
 - 6.5. Use the rotary knob to select **Adv. Parameters**.
 - 6.6. Press the **✓** button to confirm the selection.

⇒ A list of available parameters appears.
 - 6.7. Use the rotary knob to select the parameter **AP102 (Boiler Pump function)**.
 - 6.8. Press the **✓** button to confirm the selection.

⇒ The current value appears.
 - 6.9. Use the rotary knob to change the setting to **0 = No**.
 - 6.10. Press the **✓** button to confirm the selection.

9.2.4 Zone functions of SCB-10

The SCB-10 with the **AD249** option has following basic functions with default zone settings:

- CIRCA1 with parameter **CP020** set as Direct circuit
- CIRCB1 with parameter **CP021** set as Disable

- DHW1 with parameter **CP022** set as Disable
- CIRCC1 with parameter **CP023** set as Disable
- AUX1 with parameter **CP024** set as Disable

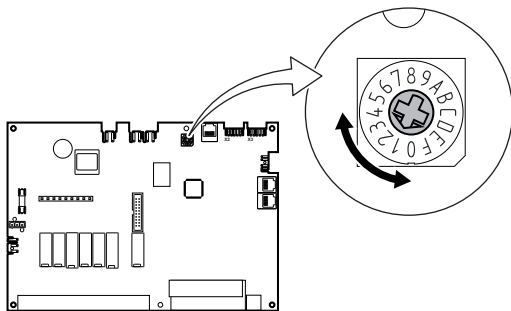
To configure your specific installation, make sure to check and adjust the parameter settings for the selected zones. The zone function table shows which parameter settings are available for which zones.

Tab.66 Parameter setting for zone function

Zone	CIRCA 1 ⁽¹⁾	CIRCB 1 ⁽¹⁾	DHW 1 ⁽¹⁾	CIRCC 1 ⁽¹⁾⁽²⁾	AUX 1 ⁽¹⁾⁽²⁾
Parameter to set zone function	CP020 ⁽³⁾	CP021 ⁽³⁾	CP022 ⁽³⁾	CP023 ⁽³⁾	CP024 ⁽³⁾
0 = Disable	x	x	x	x	x
1 = Direct	x	x		x	
2 = Mixing Circuit	x	x		x	
3 = Swimming pool	x	x		x	
4 = High Temperature	x	x		x	
5 = Fan Convactor	x	x		x	
6 = DHW tank	x	x	x	x	x
7 = Electrical DHW	x	x		x	
8 = Time Program	x	x	x	x	x
9 = ProcessHeat	x	x	x	x	x
10 = DHW Layered			x		
11 = DHW Internal tank	x	x	x	x	x

(1) The number refers to the circuit number which can be set with the rotary dial on the SCB-10.
 (2) With AD249 option.
 (3) The last number of the parameter is related to the zone. The code can be used to identify the parameter settings in the connection examples.

Fig.84 Rotary dial



AD-3001318-01

You can use the rotary dial to identify multiple SCB-10s, for example in a cascade situation. The default position of the rotary dial is 1. In this case zone A will appear in the display as CIRCA1 (circuit A 1).

Tab.67 Zone function settings explanation

Zone setting	Explanation
0 = Disable	Removes the circuit display, the circuit is not used, but its pump output can be used as a status output.
1 = Direct	Setting to manage a heating pump on the selected zone, cooling is not possible.
2 = Mixing Circuit	Setting to manage a valve and a pump with the flow sensor, in heating or cooling (example underfloor heating).
3 = Swimming pool	Setting to manage the pool heat pump according to the flow sensor (if the sensor is present) and also the pool filter pump.
4 = High Temperature	Setting to manage a pump, heats 365 days with program time, no stop in summer
5 = Fan Convactor	Setting to manage a pump, to warm and refresh
6 = DHW tank	Setting to manage a pump and a sensor for domestic hot water
7 = Electrical DHW	Setting to manage a pump, a sensor and to use the valve connector to control a relay for the electric resistance of the tank. When switching to summer mode the tank automatically switches to electric.
8 = Time Program	Setting to create a time schedule on the pump connectors.
9 = ProcessHeat	Setting to manage a pump, heats 365 days 24/24, no stop in summer, priority on all circuits. The boiler will remove all protections to produce maximum power in a minimum of time

Zone setting	Explanation
10 = DHW Layered	Setting to manage domestic hot water with 2 sensors, a tank top sensor (Tsyst 1 or 2) triggers the load and the bottom sensor of the tank (Tdhw) triggers the stop of the charge.
11 = DHW Internal tank	Setting to manage domestic hot water for boilers with internal tank.

9.2.5 0-10 Volt control with expansion PCB

The appliance has the ability to be controlled by a 0-10 Volts input. This specific situation describes the situation where the 0-10 Volt input is processed by an expansion PCB. The 0-10 volts setpoint will overrule the zone heat demand setpoint. This functionality has two control modes:

When temperature based is selected the 0-10 Volts will control the appliance flow temperature. The output varies between the minimum and maximum value on the basis of the flow temperature setpoint with a fixed power setpoint.

- 1 Parameter EP030
- 2 Parameter EP031
- 3 Parameter EP034
- 4 Parameter EP035

When heat output based is selected the 0-10 Volts will control the appliance heat output. The output will be converted towards a 0 - 100% relative power setpoint with a fixed temperature setpoint. The minimum output is linked to the appliance modulation depth.

Fig.85 0-10 Volts temperature based with expansion PCB

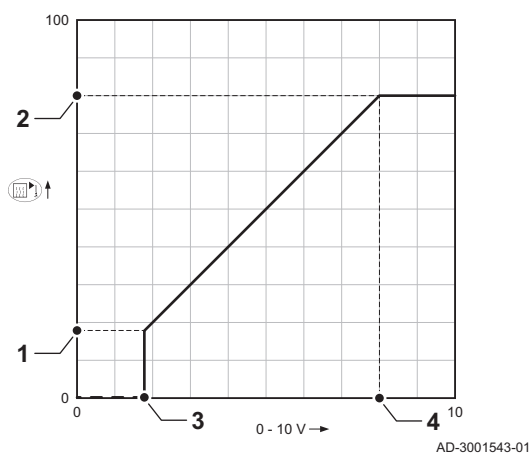
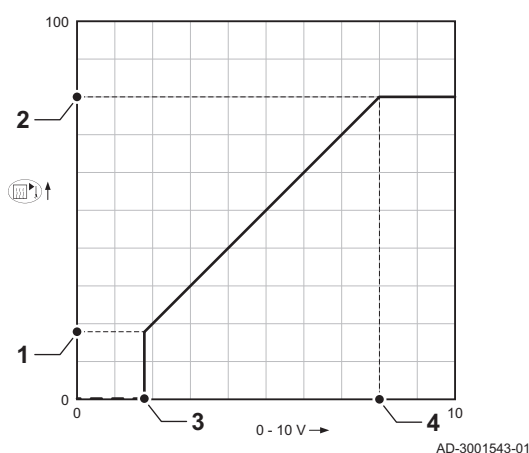


Fig.86 0-10 Volts heat output based with expansion PCB



- 1 Parameter EP032
- 2 Parameter EP033
- 3 Parameter EP034
- 4 Parameter EP035



Important

When using the 0-10 Volt input and a secondary circuit at the appliance, the device supplying this 0-10 voltage must always request a temperature at least equal to the needs of the secondary circuit.

■ Required components

The following components are required:

Tab.68 Required components

Components	Details
0-10 volts provider	Device which provides a 0-10 volts.
Two-wire cable	To connect the 0-10 Volts provider with the appliance. Diameter from 3 to 8 mm, 0,5 - 2,5 mm ² cores.

■ **Hardware configuration**

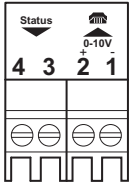
Install the hardware components according following instructions:

1. Place the 0-10 volts device at the appropriate position according packed instructions.

■ **Electrical connections**

1. Connect the wires to the 0-10 volts device.
2. Guide the wiring towards the electrical connections of the appliance.
3. Connect the input signals to terminals **1** and **2 (0-10V)** of the connector.

Fig.87 Connecting 0-10 volts with expansion PCB



AD-4000004-02

■ **Settings**

Depending on the requirements the following parameters need to be checked and adjusted.

Tab.69 Parameter settings

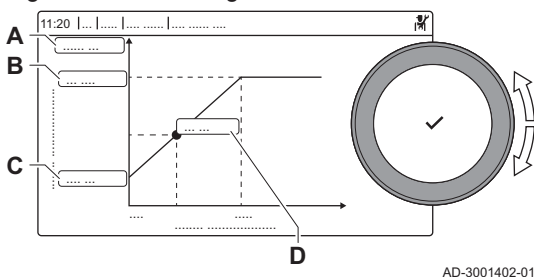
Code	Display text	Advice
EP014	SCB func. 10V PWMin	Set this to the correct mode. Control based on temperature (1) or heat output (2).
EP030	Min Setp Temp 0-10V	Set the minimum temperature setpoint.
EP031	Max Setp Temp 0-10V	Set the maximum temperature setpoint.
EP032	Min Setp Power 0-10V	Set the minimum heat output setpoint.
EP033	Max Setp Power 0-10V	Set the maximum heat output setpoint
EP034	Min Setp Volt 0-10V	Set the minimum voltage setpoint.
EP035	Max Setp Volt 0-10V	Set the maximum voltage setpoint.

9.2.6 Setting the heating curve

When an outdoor temperature sensor is connected to the installation, the relation between the outdoor temperature and the central heating flow temperature is controlled by a heating curve. This curve can be adjusted to the requirements of the installation.

1. Select the tile of the zone you want to configure.
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select **Control strategy**.
4. Press the ✓ button to confirm the selection.
5. Use the rotary knob to select the setting **Outdoor Temp. based** or **Outdoor & room based**.
6. Press the ✓ button to confirm the selection.
⇒ The option **Heating Curve** appears in the **Zone setup** menu.
7. Use the rotary knob to select **Heating Curve**.
8. Press the ✓ button to confirm the selection.
⇒ A graphic display of the heating curve is shown.
9. Adjust the following parameters:

Fig.88 The heating curve



AD-3001402-01

Tab.70 Settings

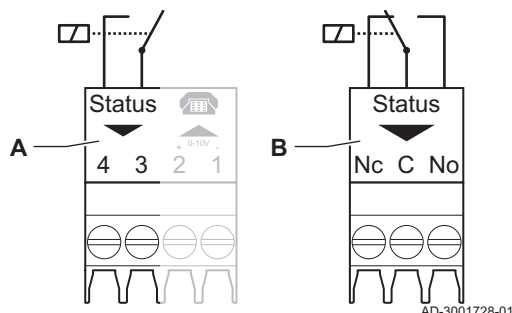
A	Slope:	Slope of the heating curve: • Floor heating circuit: slope between 0.4 and 0.7 • Radiator circuit: slope at approximately 1.5
B	Max:	Maximum temperature of the heating circuit
C	Base:	Ambient temperature setpoint
D	xx°C ; xx°C	Relationship between the heating circuit flow temperature and the outdoor temperature. This information is visible throughout the slope.

9.2.7 Status output on expansion PCB

The appliance can output status information via a status contact. You can use this output to turn on a signal light or relay when the appliance is in a locking or blocking status, for example.

Two types of status contacts exist:

Fig.89 types of status contacts, in rest position



Tab.71 Types of status contacts

Type	Wire positions	Functionality
A	2	Contains a 'normally open' (NO) relay contact. When the set status is true, the contact closes.
B	3	Contains a 'single pole, dual throw' (SPDT) relay contact. When the set status is true, the normally open (NO) contact closes and the normally closed (NC) contact opens.



Caution

The maximum current for these contacts is 5 A at 30 VDC or 10 A at 230 VAC

■ Required components

The following components are required:

Tab.72 Required components

Components	Details
Status output	Device which provides a Status output connector
Two-wire cable	To connect the status output connector to a relay or a lamp. Diameter from 3 to 8 mm, 0,5 - 2,5 mm ² cores.

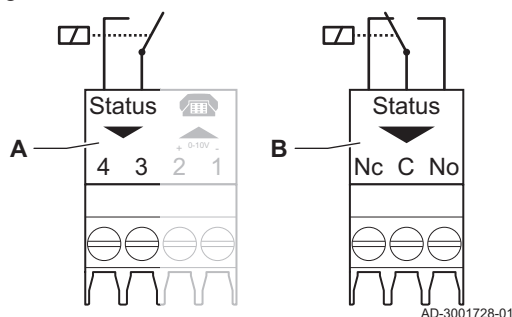
■ Hardware configuration

No specific hardware configuration is required.

■ Electrical connections

- Connect the wires to the **Status** contact:
 - To make use of the normally open (NO) contact on connector type **A**, connect the wires to **3** and **4**.
 - To make use of the normally open (NO) contact on connector type **B**, connect the wires to **C** and **No**.
 - To make use of the normally closed (NC) contact on connector type **B**, connect the wires to **C** and **Nc**.
- Guide the wiring towards the electrical connections of the appliance.
- Connect a relay or a light to the wires.

Fig.90 Status connectors



■ Settings

Depending on the requirements the following parameters need to be checked and adjusted.

Tab.73 Parameter settings

Code	Display text	Advice
EP018 EP019 ⁽¹⁾	Status relay func.	<p>Configure the function of the status contacts.</p> <p>0 = No Action : The status contact (C-No) will do nothing.</p> <p>1 = Alarm : The status contact (C-No) will close when there is an error.</p> <p>2 = Alarm Inverted : The status contact (C-No) is closed when there is no error.</p> <p>3 = Generator on : The status contact (C-No) will close when the appliance is in operation.</p> <p>4 = Generator off : The status contact (C-No) is closed when the appliance is not in operation.</p> <p>5 = Reserved : This option is not available.</p> <p>6 = Reserved : This option is not available.</p> <p>7 = Service request : The status contact (C-No) will close when service is requested.</p> <p>8 = Generator on CH : The status contact (C-No) will close when the appliance is active for central heating mode.</p> <p>9 = Generator on DHW : The status contact (C-No) will close when the appliance is active for domestic hot water mode.</p> <p>10 = CH pump on : The status contact (C-No) will close when the system pump runs.</p> <p>11 = Locking or Blocking : The status contact (C-No) will close when a locking or blocking is active.</p> <p>12 = Cooling mode : The status contact (C-No) will closes when the appliance is active for cooling.</p>
<p>(1) EP019 is only available on devices with two status contacts.</p>		

9.3 Commissioning the installation

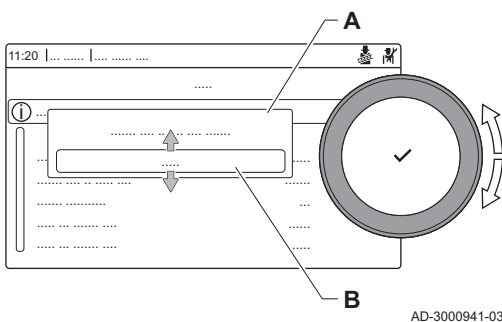
The commissioning menu shows submenus and tests needed for the commissioning of the appliance.

1. Press the ≡ button.
2. Select **Commissioning Menu**.
3. Select the submenu with settings you want to change or the test you want to perform.

9.3.1 Chimney sweep menu

Select the tile [👤] to open the chimney sweep menu. The **Change load test mode** menu will appear:

Fig.91 Load test



- A Change load test mode
- B Load test mode

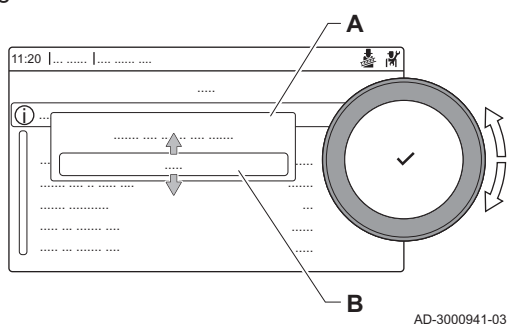
Tab.74 Load tests in the chimney sweep menu 👤

Change load test mode	Settings
Off	No test
Low power	Part load test
Medium power	Full load test for Central Heating mode
High power	Full load test for Central Heating + Domestic Hot Water mode

Tab.75 Load test settings

Load Test menu	Settings
Func. test status	Select the load test to start the test.
System Flow Temp	Read the central heating flow temperature
T return	Read the central heating return temperature
Actual fan RPM	Read the actual fan speed
Actual flame current	Read the actual flame current
Fan RPM Max CH	Adjust the maximum fan speed during Central Heating mode
Fan RPM Min	Adjust the minimum fan speed during Central Heating + Domestic Hot Water mode
Fan RPM Start	Adjust the start fan speed

Fig.92 Full load test

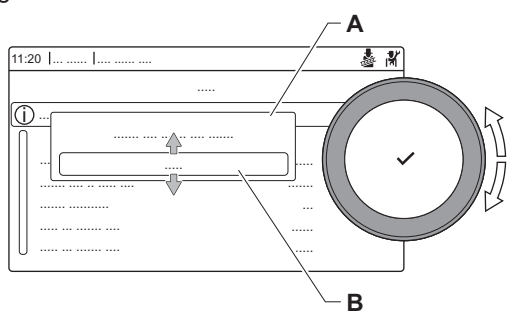


AD-3000941-03

■ Performing the full load test

1. Select the tile [🔧].
⇒ The **Change load test mode** menu appears.
2. Select the test **Medium power**.
A Change load test mode
B Medium power
⇒ The full load test starts. The selected load test mode is shown in the menu and the icon 🗑️ appears in the top right of the screen.
3. Check the load test settings and adjust if necessary.
⇒ Only the parameters shown in bold can be changed.

Fig.93 Low load test



AD-3000941-03

■ Performing the low load test

1. If the full load test is still running, press the ✓ button to change the load test mode.
2. If the full load test was finished, select the tile [🗑️] to restart the chimney sweep menu.
A Change load test mode
B Low power
3. Select the **Low power** test in the menu **Change load test mode**.
⇒ The low load test starts. The selected load test mode is shown in the menu and the icon 🗑️ appears in the top right of the screen.
4. Check the load test settings and adjust if necessary.
⇒ Only the parameters shown in bold can be changed.
5. End the low load test by pressing the ⏪ button.
⇒ The message **Running load test(s) stopped!** is displayed.

9.3.2 Saving the commissioning settings

You can save all current settings on the control panel. These settings can be restored if necessary, for example after replacement of the control unit.

1. Press the ≡ button.
2. Use the rotary knob to select **Advanced Service Menu**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Save as commissioning settings**.
5. Press the ✓ button to confirm the selection.
6. Select **Confirm** to save the settings.

When you have saved the commissioning settings, the option **Revert commissioning settings** becomes available in the **Advanced Service Menu**.

9.4 Maintaining the installation

9.4.1 Viewing the service notification

When a service notification appears on the display, you can view the details of the notification.

1. Select the tile [🔔].
2. Press the ✓ button to confirm the selection.
⇒ The **View Service Notification** menu opens.
3. Use the rotary knob to select the parameter or value you want to view.

9.4.2 Reading out measured values

The control unit continually registers various values from the boiler and the connected sensors. These values can be read on the control panel of the boiler.

1. Select the tile [🔧].
2. Press the ✓ button to confirm the selection.
3. Use the rotary knob to select code: **0012**.
4. Press the ✓ button to confirm the selection.
⇒ When the installer level is enabled, the status of the tile [🔧] changes from **Off** into **On**.
5. Press the ≡ button.
6. Use the rotary knob to select **Installation Setup**.
7. Press the ✓ button to confirm the selection.
8. Use the rotary knob to select the zone or device you want to read out.
9. Press the ✓ button to confirm the selection.
10. Use the rotary knob to select **Parameters, counters, signals**.
11. Press the ✓ button to confirm the selection.
12. Use the rotary knob to select **Counters** or **Signals** to read out a counter or signal.
13. Press the ✓ button to confirm the selection.
14. If available, select **Adv. Counters** or **Adv. Signals** to read out counters or signals at the advanced installer level.

Fig.94 Installer level

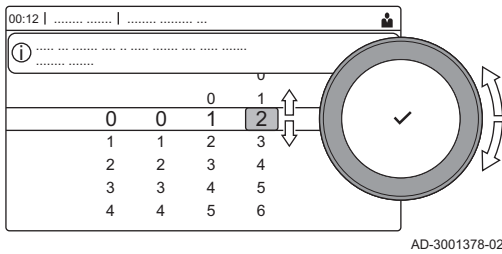
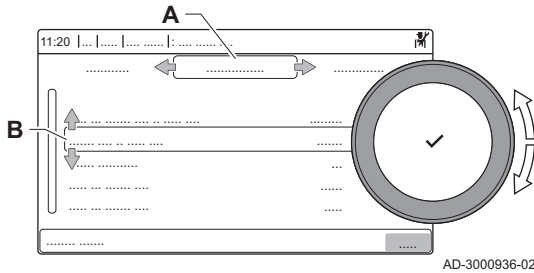


Fig.95 Parameters, counters, signals

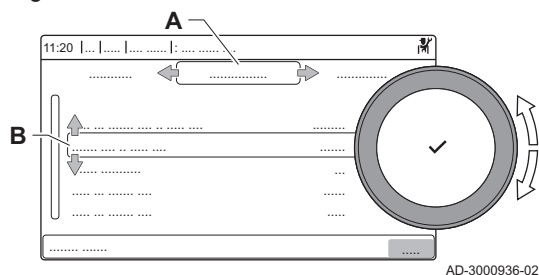


9.4.3 Viewing production and software information

You can read details about the production dates, hardware and software versions of the appliance and all connected devices.

1. Press the ≡ button.
2. Use the rotary knob to select **Version Information**.
3. Press the ✓ button to confirm the selection.

Fig.96 Version information



- Use the rotary knob to select the appliance, control board or any other device you want to view.

- A** Select the appliance, control board or device
B List of information

- Press the ✓ button to confirm the selection.
- Use the rotary knob to select the information you want to view.

9.4.4 Changing the domestic hot water temperature temporarily

When the timer program is active with a reduced domestic hot water temperature, you can temporarily increase the hot water temperature for e.g. testing of the hot water production.

- Press the ≡ button.
- Use the rotary knob to select **Installation Setup**.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select **Internal DHW**.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select **Hot water boost**.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select **Duration of temporary overwrite**.
- Press the ✓ button to confirm the selection.
- Set the duration in hours and minutes.
 - ⇒ The hot water temperature is increased to the **DHW comfort setpoint**.

You can delete or abort the temporary overwrite by selecting **Reset**.

9.5 Resetting or restoring settings

9.5.1 Resetting the configuration numbers CN1 and CN2

The configuration numbers must be reset when indicated by an error message or when the control unit has been replaced. The configuration numbers can be found on the data plate of the appliance.

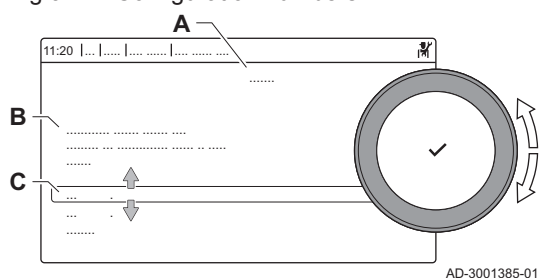


Important

All custom settings will be erased when the configuration numbers are reset. Depending on the appliance, there can be factory set parameters to enable certain accessories.

- Use the saved commissioning settings to restore these settings after the reset.
- If no commissioning settings were saved, write down custom settings before resetting. Include all relevant accessory related parameters.

Fig.97 Configuration numbers



- A** Select the control unit
B Extra information
C Configuration numbers

- Press the ≡ button.
- Use the rotary knob to select **Advanced Service Menu**.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select **Set Configuration Numbers**.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select the device you want to reset.
- Press the ✓ button to confirm the selection.
- Use the rotary knob to select and change the **CN1** setting.

9. Press the ✓ button to confirm the selection.
10. Use the rotary knob to select and change the **CN2** setting.
11. Press the ✓ button to confirm the selection.
12. Use the rotary knob to select **Confirm** to confirm the changed numbers.
13. Press the ✓ button to confirm the selection.

9.5.2 Carrying out an auto detect

The auto detect-function scans for devices and appliances connected to the L-Bus and S-Bus. This function must be used when a PCB has been replaced or removed from the boiler.

1. Press the ≡ button.
2. Use the rotary knob to select **Advanced Service Menu**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Auto Detect**.
5. Use the rotary knob to select **Confirm** to carry out the auto-detect.
6. Press the ✓ button to confirm the selection.

9.5.3 Restoring the commissioning settings

This option is only available when the commissioning settings were saved on the control panel and allows you to restore these settings.

1. Press the ≡ button.
2. Use the rotary knob to select **Advanced Service Menu**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Revert commissioning settings**.
5. Press the ✓ button to confirm the selection.
6. Use the rotary knob to select **Confirm** to restore the commissioning settings.
7. Press the ✓ button to confirm the selection.

9.5.4 Resetting to factory settings

You can reset the boiler to the default factory settings.

1. Press the ≡ button.
2. Use the rotary knob to select **Advanced Service Menu**.
3. Press the ✓ button to confirm the selection.
4. Use the rotary knob to select **Reset to Factory Settings**.
5. Press the ✓ button to confirm the selection.
6. Use the rotary knob to select **Confirm** to restore the factory settings.
7. Press the ✓ button to confirm the selection.

9.6 Advanced settings

9.6.1 Setting for process heat application



Important

The service life of the boiler may be reduced if it is used for process heat applications.

For this application, adjust the following parameters:

1. Set parameter **DP140** to **Process heat**.
2. Set parameters **DP005** and **DP070** to the required value for this installation.
3. If using a DHW sensor; set parameters **DP006** and **DP034** to the required value for this installation.

9.6.2 Changing the ΔT setting

The ΔT is factory set to 25 °C. It can be increased by a De Dietrich service technician. Contact De Dietrich for more information.



Important

When increasing the ΔT , the control unit limits the flow temperature to a maximum of 80 °C.

9.6.3 Screed drying

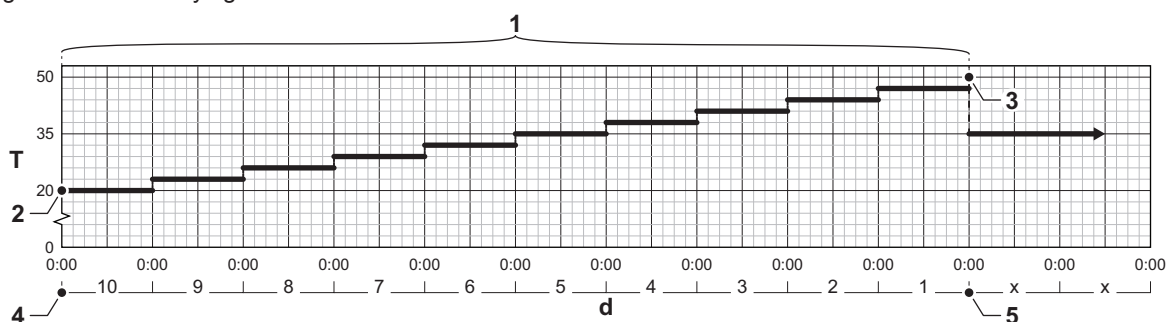
The screed drying function is used to force a constant flow temperature or a series of successive temperature levels to accelerate screed drying on underfloor heating.



Important

- The settings for these temperatures must follow the screed layer's recommendations.
- Activation of this function via the parameter **CP470** forces the permanent display of the screed drying function and deactivates all other regulator functions.
- When the screed drying function is active on one circuit, all other circuits and the domestic hot water circuit continue to run.
- It is possible to use the screed drying function on circuits A and B. The parameter settings must be made on the PCB that controls the circuit concerned.

Fig.98 Screed drying curve



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- | | |
|--|--|
| d Number of days | 3 Screed drying stop temperature (parameter CP490) |
| T Heating set point temperature | 4 Start of the screed drying function |
| 1 Number of days on which the screed drying function is activated (parameter CP470) | 5 End of the screed drying function, back to normal running |
| 2 Screed drying start temperature (parameter CP480) | |



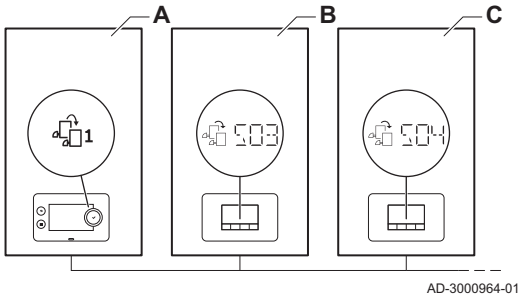
Important

Every day at midnight, the screed drying start temperature set point is recalculated and the remaining number of days on which the screed drying function is running decreases.

9.6.4 Cascade control

The appliance has the ability to control up to 7 appliances in cascade. The system sensor is connected to the master appliance. All the appliances in cascade are connected by an S-BUS cable. The appliances in cascade are automatically numbered.

Fig.99 Cascade numbering

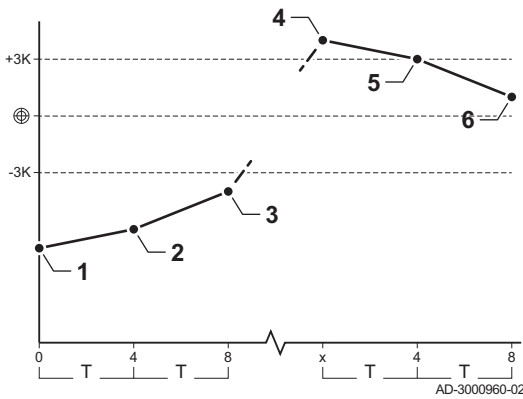


- A** Master appliance is number 1
- B** The first slave appliance is number 3 (number 2 does not exist).
- C** The second slave appliance is number 4; and so on.

There are two options for cascade control management:

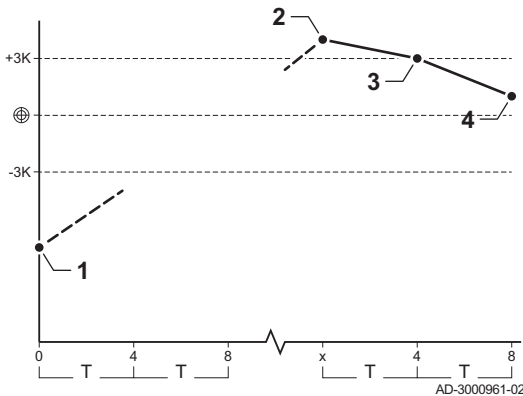
- Adding supplementary appliances successively (traditional control)
- Adding supplementary appliances simultaneously (parallel control)

Fig.100 Traditional cascade control management



- 1 First appliance starts running when system temperature is 3°C below setpoint.
- 2 After 4 minutes the second appliance starts running if $\Delta T < 6K$ and the system temperature is still more than 3°C below setpoint.
- 3 After 8 minutes the third appliance starts running if $\Delta T < 6K$ and the system temperature is still more than 3°C below setpoint.
- 4 First appliance stops running when system temperature is 3°C above setpoint.
- 5 After 4 minutes the second appliance stops running if $\Delta T < 6K$ and the system temperature is still more than 3°C above setpoint.
- 6 After 8 minutes the third appliance stops running if $\Delta T < 6K$ and the system temperature is still more than 3°C above setpoint.

Fig.101 Parallel cascade control management



- 1 All appliances in cascade start running when system temperature is 3°C below setpoint.
- 2 First appliance stops running when system temperature is 3°C above setpoint.
- 3 After 4 minutes the second appliance stops running if $\Delta T < 6K$ and the system temperature is still more than 3°C above setpoint.
- 4 After 8 minutes the third appliance stops running if $\Delta T < 6K$ and the system temperature is still more than 3°C above setpoint.

Temperature type cascade algorithm; the setpoint sent to the running appliance is:

- Output; requested by the zones.
- Temperature; output setpoint requested by the zones + error calculation.

Output type cascade algorithm; the setpoint sent to the running boiler is:

- Output; according to PI algorithms.
- Temperature; -90°C

■ **Required components**

The required components depends on required cascade configuration.

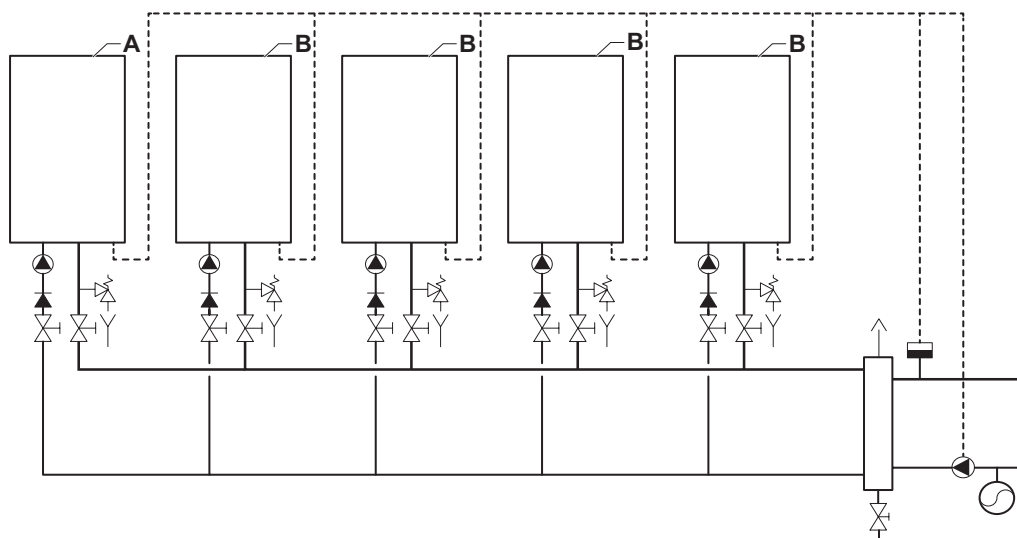
Tab.76 Required components

Components	Details
SCB-10	For cascade master control.
PCB with S-BUS connection (e.g. GTW-25, CB-01)	For slave connection per slave appliance.
S-BUS cable	Cable to connect the appliances via the S-BUS connections.
Terminator connector	120 Ohm / 0,5 Watt. Connect the terminator resistor on the first and the last S-BUS connection in the cascade.
Cascade set	Depending on the cascade configuration.

■ **Hardware configuration**

Connect the required cascade components according the given instructions.

Fig.102 Hardware configuration cascade



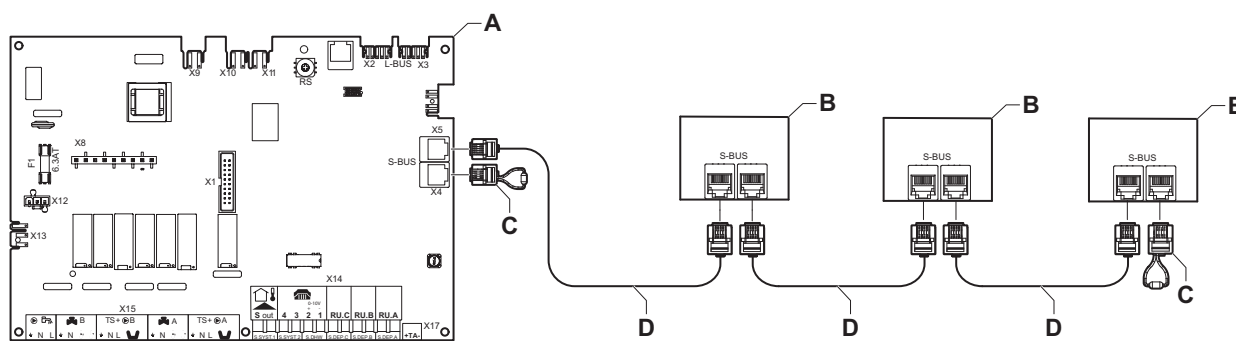
AD-3001544-01

A Master appliance

B Slave appliance

■ Electrical connections

Fig.103 Master - slave connections



AD-3001545-01

A SCB-10 (mounted in master appliance)

B Device with S-BUS connection (mounted in slave appliance)

C Terminator connector

D S-BUS cable

■ Settings

Depending on the requirements the following parameters need to be checked and adjusted.

Tab.77 Parameter settings

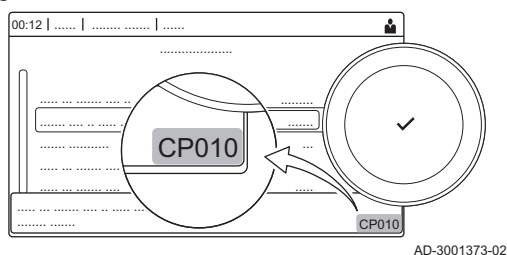
Code	Display text	Advice
AP083	Enable master func	Set this value to enable (1) for the appliance which is the master. The slaves should have this parameter set to disable (0).
NP005	Cascade Permutation	Default the master boiler is number 1, but this can be changed with this parameter.
NP006	Cascade Type	Select traditional or parallel control.
NP007	CascTOutsideHeatParl	Set the outdoor temperature triggering all appliances in cascade to start up at the same time. Typically this value is set to 10 degrees Celsius.
NP008	CascTPostRunGenePump	Set the minimum over run time of the appliance pump. Typically this is set to 4 minutes.
NP009	CascInterStageTime	Set the waiting time before starting up or shutting down the appliances in a cascade. Typically this is set to 4 minutes.
NP010	CascTOutsideCoolPara	Set the threshold outdoor temperature that triggers every appliance in the cascade to start up at the same time in cooling mode. Typically this value is set to 30 degrees Celsius.

Code	Display text	Advice
NP011	CascadeTypeAlgo	Select which type of cascade management is requested, temperature (0) or power (1) based.
NP012	CascPowerRiseTime	Set the time available for reaching the desired temperature. Typically set this value to 1. This value will be multiplied by 10.
NP013	CascForceStop Pprim	Select to enable (1) or disable (2) the cascade primary pump.
NP014	Cascade Mode	Select the correct operating mode of the pump in cascade. for heating (1) , cooling (2) or automatic (0). In automatic mode the cascade switches between heating and cooling.
AP111	Can line length	Select the value that is equal to or larger than the actual S-BUS cable length.

10 Settings

10.1 Introduction to parameter codes

Fig.104 Code on a Diematic Evolution



The controls platform makes use of an advanced system to categorise parameters, measurements and counters. Knowing the logic behind these codes, makes it easier to identify them. The code consists of two letters and three numbers.

Fig.105 First letter

CP010
AD-3001375-01

The first letter is the category the code relates to.

- A** Appliance: Appliance
- B** Buffer: Hot water tank
- C** Circuit: Zone
- D** Domestic hot water: Domestic hot water
- E** External: External options
- G** Gas fired: Gas-fired heat engine
- P** Producer: Central heating

Category D codes are appliance controlled only. When the domestic hot water is controlled by an SCB, it is handled like a circuit, with C-category codes.

Fig.106 Second letter

CP010
AD-3001376-01

The second letter is the type.

- P** Parameter: Parameters
- C** Counter: Counters
- M** Measurement: Signals

Fig.107 Number

CP010
AD-3001377-01

The number is always three digits. In certain cases, the last of the three digits relates to a zone.

10.2 Changing the parameters

The boiler's control unit is set for the most common central heating systems. These settings will ensure that virtually every central heating system operates effectively. The user or the installer can optimise the parameters as required.



Caution

Changing the factory settings may adversely affect the operation of the boiler.

10.3 List of parameters

10.3.1 CU-GH13 control unit settings - C 340

All tables show the factory setting for the parameters.



Important

The tables also list parameters that are only applicable if the boiler is combined with other equipment.

Tab.78 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.79 Factory settings at basic installer level

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
AP016	CH function on	Enable central heating heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1	1	1
AP017	DHW function on	Enable domestic hot water heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1	1	1
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	0	0	0	0	0	0
CP000	MaxZoneT-FlowSetpoint	Maximum Flow Temperature setpoint zone	7 - 100 °C	Direct zone	80	80	80	80	80	80
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 - 100 °C	Direct zone	90	90	90	90	90	90
CP080	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP081	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP082	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP083	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP084	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP085	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP200	Manu ZoneRoom-TempSet	Manually setting the room temperature setpoint of the zone	5 - 30 °C	Direct zone	20	20	20	20	20	20
CP320	Operating-ZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone	0	0	0	0	0	0
CP510	Temporary Room Setp	Temporary room setpoint per zone	5 - 30 °C	Direct zone	20	20	20	20	20	20
CP550	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	Direct zone	0	0	0	0	0	0
CP570	ZoneTime-Prog Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Direct zone	0	0	0	0	0	0

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
CP660	Icon display zone	Choice icon to display this zone	0 = None 1 = All 2 = Bedroom 3 = Livingroom 4 = Study 5 = Outdoor 6 = Kitchen 7 = Basement 8 = Swimming Pool 9 = DHW Tank 10 = DHW Electrical Tank 11 = DHW Layered Tank 12 = Internal Boiler Tank 13 = Time Program	Direct zone	0	0	0	0	0	0
CP750	MaxZone Preheat time	Maximum zone preheat time	0 - 240 Min	Direct zone	0	0	0	0	0	0

Tab.80 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.81 Factory settings at installer level

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
AP001	BL function	BL input function selection	1 = Full blocking 2 = Partial blocking 3 = User reset locking 4 = Backup relieved 5 = Generator relieved 6 = Gen.&Backup relieved 7 = High, Low Tariff 8 = Photovoltaic HP Only 9 = PV HP And backup 10 = Smart Grid ready 11 = Heating Cooling	Gas fired appliance	1	1	1	1	1	1
AP006	Min. water pressure	Appliance will report low water pressure below this value	0 - 6 bar	Gas fired appliance	0,8	0,8	0,8	0,8	0,8	0,8
AP008	Release wait time	Waiting time after closing the release contact to start the heat generator.	0 - 255 Sec	Gas fired appliance	0	0	0	0	0	0
AP009	Service hours	Number of heat generator operating hours for raising a service notification	100 - 25500 Hours	Gas fired appliance	2550 0	2550 0	2550 0	2550 0	2550 0	2550 0

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
AP010	Service notification	Select the type of service notification	0 = None 1 = Custom notification 2 = ABC notification	Gas fired appliance	0	0	0	0	0	0
AP011	Service hours mains	Hours powered to raise a service notification	100 - 25500 Hours	Gas fired appliance	8750	8750	8750	8750	8750	8750
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	0	0	0	0	0	0
AP063	Max CH flow setpoint	Maximum central heating flow temperature setpoint	20 - 90 °C	Gas fired appliance	90	90	90	90	90	90
AP073	Summer Winter	Outdoor temperature: upper limit for heating	15 - 30.5 °C	Outdoor temperature	22	22	22	22	22	22
AP079	Building Inertia	Inertia of the building used for heat up speed	0 - 10	Outdoor temperature	3	3	3	3	3	3
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-30 - 20 °C	Outdoor temperature	-10	-10	-10	-10	-10	-10
AP091	Outside Sens. Source	Type of outside sensor connection to be used	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0	0	0	0	0	0
AP098	BL1 contact config.	BL1 input contact configuration	0 = Open 1 = Closed 2 = Off	Gas fired appliance	1	1	1	1	1	1
CP000	MaxZoneT-FlowSetpoint	Maximum Flow Temperature setpoint zone	7 - 100 °C	Direct zone	80	80	80	80	80	80
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convector 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 12 = DHW Commercial Tank 13 = DHW FWS 31 = DHW FWS EXT 200 = BSB 254 = Occupied	Zone manager Zone disabled Direct zone	1	1	1	1	1	1
CP040	Postrun zone pump	Pump post runtime of the zone	0 - 20 Min	Direct zone	0	0	0	0	0	0

Code	Display text	Description	Adjustment range	Subme- nu	280	350	430	500	570	650
CP060	RoomT. Holiday	Wished room zone temperature on holiday period	5 - 20 °C	Direct zone	6	6	6	6	6	6
CP070	MaxReduce- RoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP210	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 - 90 °C	Direct zone	15	15	15	15	15	15
CP220	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 - 90 °C	Direct zone	15	15	15	15	15	15
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	Direct zone	1,5	1,5	1,5	1,5	1,5	1,5
CP240	ZoneRoom UnitInfl	Adjustment of the influence of the zone room unit	0 - 10	Direct zone	3	3	3	3	3	3
CP250	CalSonde AmbZone	Calibration of Zone Room Unit	-5 - 5 °C	Direct zone	0	0	0	0	0	0
CP340	TypeReduced Night-Mode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	Direct zone	0	0	0	0	0	0
CP470	Zone screed drying	Setting of the screed drying program of the zone	0 - 30 Days	Direct zone	0	0	0	0	0	0
CP480	ScreedStart- Temp	Setting of the start temperature of the screed drying program of the zone	20 - 50 °C	Direct zone	20	20	20	20	20	20
CP490	ScreedStop- Temp	Setting of the stop temperature of the screed drying program of the zone	20 - 50 °C	Direct zone	20	20	20	20	20	20
CP640	OTH Logic Level contact	Opentherm Logic level contact of the zone	0 = Open 1 = Closed 2 = Off	Direct zone	1	1	1	1	1	1
CP730	Zone Heat up speed	Selection of heat up speed of the zone	0 = Extra Slow 1 = Slowest 2 = Slower 3 = Normal 4 = Faster 5 = Fastest	Direct zone	0	0	0	0	0	0
CP740	Zone cool down speed	Selection of cool down speed of the zone	0 = Slowest 1 = Slower 2 = Normal 3 = Faster 4 = Fastest	Direct zone	0	0	0	0	0	0
CP780	Control strategy	Selection of the control strategy for the zone	0 = Automatic 1 = Room Temp. based 2 = Outdoor Temp. based 3 = Outdoor & room based	Direct zone	0	0	0	0	0	0
EP014	SCB func. 10V PWMIn	Smart Control Board function 10 Volt PWM input	0 = Off 1 = Temperature control 2 = Power control	0-10 volt input	0	0	0	0	0	0
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1000 - 8500 Rpm	Gas fired appliance	5200	5500	3500	3800	4300	4100

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	900 - 8500 Rpm	Gas fired appliance GVC Pneumatic	1400	1550	950	1050	1100	1050
GP009	Fan RPM Start	Fan speed at appliance start	900 - 5000 Rpm	Gas fired appliance GVC Pneumatic	2500	2500	1300	1400	1400	1400
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	1	1	1	1	1	1
GP021	Temp diff Modulating	Modulate back when delta temperature is large then this treshold	5 - 25 °C	Gas fired appliance	25	25	25	25	25	25
PP015	CH Pump postrun time	Central heating pump post run time	1 - 99 Min	Gas fired appliance	3	3	3	3	3	3
PP016	Max. CH pump speed	Maximum central heating pump speed (%)	20 - 100 %	Gas fired appliance	100	100	100	100	100	100
PP018	Min CH pump speed	Minimum central heating pump speed (%)	20 - 100 %	Gas fired appliance	20	20	20	20	20	20
PP023	CH Hysteresis	Temperature hysteresis for the generator to start on central heating	1 - 25 °C	Gas fired appliance	10	10	10	10	10	10

Tab.82 Navigation for advanced installer level

Level	Menu path
Advanced installer	≡ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.83 Factory settings at advanced installer level

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
AP002	Manual Heat Demand	Enable manual heat demand function	0 = Off 1 = With setpoint 2 = TOutdoor Control	Gas fired appliance	0	0	0	0	0	0
AP004	Hydr Valve Wait Time	Heat generator wait time to open the hydraulic valve	0 - 255 Sec	Gas fired appliance	0	0	0	0	0	0
AP026	Setpoint manual HD	Flow temperature setpoint for manual heat demand	7 - 90 °C	Gas fired appliance	40	40	40	40	40	40
AP063	Max CH flow setpoint	Maximum central heating flow temperature setpoint	20 - 90 °C	Gas fired appliance	90	90	90	90	90	90
AP102	Boiler Pump function	Configuration of the boiler pump as zone pump or system pump (feed low-loss header)	0 = No 1 = Yes	Gas fired appliance	0	0	0	0	0	0

Code	Display text	Description	Adjustment range	Subme- nu	280	350	430	500	570	650
CP010	Tflow set- point zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 - 100 °C	Direct zone	90	90	90	90	90	90
CP290	ConfigZone- PumpOut	Configuration of Zone Pump Output	0 = Zone output 1 = CH mode 2 = DHW mode 3 = Cooling mode 4 = Error report 5 = Burning 6 = Service flag 7 = System error 8 = DHW looping 9 = Primary pump 10 = Buffer pump	Zone disabled Direct zone	0	0	0	0	0	0
CP520	Zone Power setpoint	Power setpoint per zone	0 - 100 %	Direct zone	100	100	100	100	100	100
CP530	Zone PWM Pump speed	Pulse Width Modulation pump speed per zone	20 - 100 %	Direct zone	100	100	100	100	100	100
CP680	ConfPairing RU Zone	Select the Bus channel of the room unit for this zone	0 - 255	Direct zone	0	0	0	0	0	0
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 - 7000 Rpm	Gas fired appliance	5200	5500	3500	3800	4300	4100
DP010	Hysteresis DHW	Temperature hysteresis for the heat generator to start on domestic hot water production	1 - 10 °C	Gas fired appliance	5,5	5,5	5,5	5,5	5,5	5,5
DP011	Stop offset DHW	Temperature offset to stop heat generator on domestic hot water production	0 - 100 °C	Gas fired appliance	5	5	5	5	5	5
DP020	Postrun DHW pump/3wv	Post run time of the DHW pump/3 way valve after DHW production	0 - 99 Sec	Gas fired appliance	10	10	10	10	10	10
DP140	DHW load type	DHW load type (0 : Combi, 1 : Solo)	0 = Combi 1 = Solo 2 = Layered cylinder 3 = Process heat 4 = External	Gas fired appliance	1	1	1	1	1	1
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	1	1	1	1	1	1
GP017	Max power	Maximum power percentage in kilo Watt	0 - 1000 kW	Gas fired appliance	293,9	353,1	427,1	496,2	565,9	642
GP022	Tfa Filter Tau	Tau factor for average flow temperature calculation	0 - 255	Gas fired appliance	1	1	1	1	1	1
GP042	Fan RPM Max	Maximum fan speed	0 - 65535 Rpm	GVC Pneumatic	5700	5800	3700	4000	4500	4300
GP050	Power Min	Minimum power in kilo Watt for RT2012 calculation	0 - 300 kW	Gas fired appliance	54	68	82	95	109	122

Code	Display text	Description	Adjustment range	Submenu	280	350	430	500	570	650
PP007	Min anti-cycle time	Minimum heat generator holding time that can be reached after a stop	1 - 20 Min	Gas fired appliance	3	3	3	3	3	3
PP012	Stabilization time	Stabilization time after heat generator start for central heating	0 - 180 Sec	Gas fired appliance	30	30	30	30	30	30

10.3.2 CU-GH13 control unit settings - C 640

All tables show the factory setting for the parameters.



Important

The tables also list parameters that are only applicable if the boiler is combined with other equipment.

Tab.84 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.85 Factory settings at basic installer level

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
AP016	CH function on	Enable central heating heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1	1	1
AP017	DHW function on	Enable domestic hot water heat demand processing	0 = Off 1 = On	Gas fired appliance	1	1	1	1	1	1
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	0	0	0	0	0	0
CP000	MaxZoneT-FlowSetpoint	Maximum Flow Temperature setpoint zone	7 - 100 °C	Direct zone	80	80	80	80	80	80
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 - 100 °C	Direct zone	90	90	90	90	90	90
CP080	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP081	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP082	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP083	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP084	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP085	User T.Room Activity	Room setpoint temperature of the user zone activity	5 - 30 °C	Direct zone	16	16	16	16	16	16

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
CP200	Manu ZoneRoom-TempSet	Manually setting the room temperature setpoint of the zone	5 - 30 °C	Direct zone	20	20	20	20	20	20
CP320	Operating-ZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone	0	0	0	0	0	0
CP510	Temporary Room Setp	Temporary room setpoint per zone	5 - 30 °C	Direct zone	20	20	20	20	20	20
CP550	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	Direct zone	0	0	0	0	0	0
CP570	ZoneTime-Prog Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Direct zone	0	0	0	0	0	0
CP660	Icon display zone	Choice icon to display this zone	0 = None 1 = All 2 = Bedroom 3 = Livingroom 4 = Study 5 = Outdoor 6 = Kitchen 7 = Basement 8 = Swimming Pool 9 = DHW Tank 10 = DHW Electrical Tank 11 = DHW Layered Tank 12 = Internal Boiler Tank 13 = Time Program	Direct zone	0	0	0	0	0	0
CP750	MaxZone Preheat time	Maximum zone preheat time	0 - 240 Min	Direct zone	0	0	0	0	0	0

Tab.86 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.87 Factory settings at installer level

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
AP001	BL function	BL input function selection	1 = Full blocking 2 = Partial blocking 3 = User reset locking 4 = Backup relieved 5 = Generator relieved 6 = Gen.&Backup relieved 7 = High, Low Tariff 8 = Photovoltaic HP Only 9 = PV HP And backup 10 = Smart Grid ready 11 = Heating Cooling	Gas fired appliance	1	1	1	1	1	1
AP006	Min. water pressure	Appliance will report low water pressure below this value	0 - 6 bar	Gas fired appliance	0,8	0,8	0,8	0,8	0,8	0,8
AP008	Release wait time	Waiting time after closing the release contact to start the heat generator.	0 - 255 Sec	Gas fired appliance	0	0	0	0	0	0
AP009	Service hours	Number of heat generator operating hours for raising a service notification	100 - 25500 Hours	Gas fired appliance	2550 0	2550 0	2550 0	2550 0	2550 0	2550 0
AP010	Service notification	Select the type of service notification	0 = None 1 = Custom notification 2 = ABC notification	Gas fired appliance	0	0	0	0	0	0
AP011	Service hours mains	Hours powered to raise a service notification	100 - 25500 Hours	Gas fired appliance	8750	8750	8750	8750	8750	8750
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	0	0	0	0	0	0
AP063	Max CH flow setpoint	Maximum central heating flow temperature setpoint	20 - 90 °C	Gas fired appliance	90	90	90	90	90	90
AP073	Summer Winter	Outdoor temperature: upper limit for heating	15 - 30.5 °C	Outdoor temperature	22	22	22	22	22	22
AP079	Building Inertia	Inertia of the building used for heat up speed	0 - 10	Outdoor temperature	3	3	3	3	3	3
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-30 - 20 °C	Outdoor temperature	-10	-10	-10	-10	-10	-10
AP091	Outside Sens. Source	Type of outside sensor connection to be used	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0	0	0	0	0	0

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
AP098	BL1 contact config.	BL1 input contact configuration	0 = Open 1 = Closed 2 = Off	Gas fired appliance	1	1	1	1	1	1
CP000	MaxZoneT-FlowSet-point	Maximum Flow Temperature setpoint zone	7 - 100 °C	Direct zone	80	80	80	80	80	80
CP020	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convactor 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 12 = DHW Commercial Tank 13 = DHW FWS 31 = DHW FWS EXT 200 = BSB 254 = Occupied	Zone manager Zone disabled Direct zone	1	1	1	1	1	1
CP040	Postrun zone pump	Pump post runtime of the zone	0 - 20 Min	Direct zone	0	0	0	0	0	0
CP060	RoomT.Holiday	Wished room zone temperature on holiday period	5 - 20 °C	Direct zone	6	6	6	6	6	6
CP070	MaxReduce-RoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 - 30 °C	Direct zone	16	16	16	16	16	16
CP210	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 - 90 °C	Direct zone	15	15	15	15	15	15
CP220	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 - 90 °C	Direct zone	15	15	15	15	15	15
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	Direct zone	1,5	1,5	1,5	1,5	1,5	1,5
CP240	ZoneRoomUnitInfl	Adjustment of the influence of the zone room unit	0 - 10	Direct zone	3	3	3	3	3	3
CP250	CalSondeAmbZone	Calibration of Zone Room Unit	-5 - 5 °C	Direct zone	0	0	0	0	0	0
CP340	TypeReducedNight-Mode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	Direct zone	0	0	0	0	0	0
CP470	Zone screed drying	Setting of the screed drying program of the zone	0 - 30 Days	Direct zone	0	0	0	0	0	0
CP480	ScreedStart-Temp	Setting of the start temperature of the screed drying program of the zone	20 - 50 °C	Direct zone	20	20	20	20	20	20
CP490	ScreedStop-Temp	Setting of the stop temperature of the screed drying program of the zone	20 - 50 °C	Direct zone	20	20	20	20	20	20

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
CP640	OTH LogicLev contact	Opentherm Logic level contact of the zone	0 = Open 1 = Closed 2 = Off	Direct zone	1	1	1	1	1	1
CP730	Zone Heat up speed	Selection of heat up speed of the zone	0 = Extra Slow 1 = Slowest 2 = Slower 3 = Normal 4 = Faster 5 = Fastest	Direct zone	0	0	0	0	0	0
CP740	Zone cool down speed	Selection of cool down speed of the zone	0 = Slowest 1 = Slower 2 = Normal 3 = Faster 4 = Fastest	Direct zone	0	0	0	0	0	0
CP780	Control strategy	Selection of the control strategy for the zone	0 = Automatic 1 = Room Temp. based 2 = Outdoor Temp. based 3 = Outdoor & room based	Direct zone	0	0	0	0	0	0
EP014	SCB func. 10V PWMin	Smart Control Board function 10 Volt PWM input	0 = Off 1 = Temperature control 2 = Power control	0-10 volt input	0	0	0	0	0	0
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1000 - 8500 Rpm	Gas fired appliance	5200	5500	3500	3800	4300	4100
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	900 - 8500 Rpm	Gas fired appliance GVC Pneumatic	1900	1850	1300	1250	1400	1350
GP009	Fan RPM Start	Fan speed at appliance start	900 - 5000 Rpm	Gas fired appliance GVC Pneumatic	2500	2500	1400	1400	1500	1600
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	1	1	1	1	1	1
GP021	Temp diff Modulating	Modulate back when delta temperature is large then this treshold	5 - 25 °C	Gas fired appliance	25	25	25	25	25	25
PP015	CH Pump postrun time	Central heating pump post run time	1 - 99 Min	Gas fired appliance	3	3	3	3	3	3
PP016	Max. CH pump speed	Maximum central heating pump speed (%)	20 - 100 %	Gas fired appliance	100	100	100	100	100	100
PP018	Min CH pump speed	Minimum central heating pump speed (%)	20 - 100 %	Gas fired appliance	20	20	20	20	20	20
PP023	CH Hysteresis	Temperature hysteresis for the generator to start on central heating	1 - 25 °C	Gas fired appliance	10	10	10	10	10	10

Tab.88 Navigation for advanced installer level

Level	Menu path
Advanced installer	☰ > Installation Setup > CU-GH > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.89 Factory settings at advanced installer level

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
AP002	Manual Heat Demand	Enable manual heat demand function	0 = Off 1 = With setpoint 2 = TOutdoor Control	Gas fired appliance	0	0	0	0	0	0
AP004	Hydr Valve Wait Time	Heat generator wait time to open the hydraulic valve	0 - 255 Sec	Gas fired appliance	0	0	0	0	0	0
AP026	Setpoint manual HD	Flow temperature setpoint for manual heat demand	7 - 90 °C	Gas fired appliance	40	40	40	40	40	40
AP063	Max CH flow setpoint	Maximum central heating flow temperature setpoint	20 - 90 °C	Gas fired appliance	90	90	90	90	90	90
AP102	Boiler Pump function	Configuration of the boiler pump as zone pump or system pump (feed low-loss header)	0 = No 1 = Yes	Gas fired appliance	0	0	0	0	0	0
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 - 100 °C	Direct zone	90	90	90	90	90	90
CP290	ConfigZone-PumpOut	Configuration of Zone Pump Output	0 = Zone output 1 = CH mode 2 = DHW mode 3 = Cooling mode 4 = Error report 5 = Burning 6 = Service flag 7 = System error 8 = DHW looping 9 = Primary pump 10 = Buffer pump	Zone disabled Direct zone	0	0	0	0	0	0
CP520	Zone Power setpoint	Power setpoint per zone	0 - 100 %	Direct zone	100	100	100	100	100	100
CP530	Zone PWM Pump speed	Pulse Width Modulation pump speed per zone	20 - 100 %	Direct zone	100	100	100	100	100	100
CP680	ConfPairing RU Zone	Select the Bus channel of the room unit for this zone	0 - 255	Direct zone	0	0	0	0	0	0
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 - 7000 Rpm	Gas fired appliance	5200	5500	3500	3800	4300	4100
DP010	Hysteresis DHW	Temperature hysteresis for the heat generator to start on domestic hot water production	1 - 10 °C	Gas fired appliance	5,5	5,5	5,5	5,5	5,5	5,5
DP011	Stop offset DHW	Temperature offset to stop heat generator on domestic hot water production	0 - 100 °C	Gas fired appliance	5	5	5	5	5	5

Code	Display text	Description	Adjustment range	Submenu	560	700	860	1000	1140	1300
DP020	Postrun DHW pump/3wv	Post run time of the DHW pump/3 way valve after DHW production	0 - 99 Sec	Gas fired appliance	10	10	10	10	10	10
DP140	DHW load type	DHW load type (0 : Combi, 1 : Solo)	0 = Combi 1 = Solo 2 = Layered cylinder 3 = Process heat 4 = External	Gas fired appliance	1	1	1	1	1	1
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	1	1	1	1	1	1
GP017	Max power	Maximum power percentage in kilo Watt	0 - 1000 kW	Gas fired appliance	294, 2	351, 2	425, 6	494, 7	564, 4	642
GP022	Tfa Filter Tau	Tau factor for average flow temperature calculation	0 - 255	Gas fired appliance	1	1	1	1	1	1
GP042	Fan RPM Max	Maximum fan speed	0 - 65535 Rpm	GVC Pneumatic	5700	5800	3700	4000	4500	4300
GP050	Power Min	Minimum power in kilo Watt for RT2012 calculation	0 - 300 kW	Gas fired appliance	80	111	142	141	170	180
PP007	Min anti-cycle time	Minimum heat generator holding time that can be reached after a stop	1 - 20 Min	Gas fired appliance	3	3	3	3	3	3
PP012	Stabilization time	Stabilization time after heat generator start for central heating	0 - 180 Sec	Gas fired appliance	30	30	30	30	30	30

10.3.3 SCB-01 expansion PCB settings

Tab.90 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > SCB-01 > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.91 Factory settings at installer level

Code	Display text	Description	Range	Submenu	Default setting
EP018	Status relay func.	Status relay function	0 = No Action 1 = Alarm 2 = Alarm Inverted 3 = Burning 4 = Not burning 5 = Reserved 6 = Reserved 7 = Service request 8 = Boiler on CH 9 = Boiler on DHW 10 = CH pump on 11 = Locking or Blocking 12 = Cooling mode	Status information	0
EP019	Status relay func.	Status relay function	0 = No Action 1 = Alarm 2 = Alarm Inverted 3 = Burning 4 = Not burning 5 = Reserved 6 = Reserved 7 = Service request 8 = Boiler on CH 9 = Boiler on DHW 10 = CH pump on 11 = Locking or Blocking 12 = Cooling mode	Status information	0
EP028	Function 10V-PWM	Selects the function of the 0-10 Volt output	0 = 0-10V 1 (Wilo) 1 = 0-10V 2 (Gr. GENI) 2 = PWM signal (Solar) 3 = 0-10V 1 limited 4 = 0-10V 2 limited 5 = PWM signal limited 6 = PWM signal (UPMXL)	0-10 volt or PWM output	0
EP029	Source 10V-PWM	Selects the source signal for the 0-10 Volt output	0 = PWM 1 = Requested power 2 = Actual power	0-10 volt or PWM output	0

10.3.4 SCB-10 expansion PCB settings



Important

The table shows the factory setting for the parameters.

Tab.92 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.93 Factory settings at basic installer level

Code	Display text	Description	Range	Submenu	Default setting
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	0
AP077	Max. display level	Maximum Level of parameters and signals to display on MK	1 = End user 2 = Installer 3 = Installer advanced 4 = Lab 5 = Controls Development	System Functionality	3
AP081	Device short name	Shortname of the device		System Functionality	S10
AP089	Installer name	Name of the installer		Mandatory bus master	
AP090	Installer phone	Telephone number of the installer		Mandatory bus master	
CP010 CP011 CP012 CP013 CP014	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	7 °C - 100 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	75 40 75 40 75
CP080 CP081 CP082 CP083 CP084 CP085	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	CIRCA 1	16 20 6 21 22 23
CP086 CP087 CP088 CP089 CP090 CP091	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	CIRCB 1	16 20 6 21 22 23
CP092 CP093 CP094 CP095 CP096 CP097	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	DHW 1	16 20 6 21 22 23
CP098 CP099 CP100 CP101 CP102 CP103	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	CIRCC 1	16 20 6 21 22 23
CP104 CP105 CP106 CP107 CP108 CP109	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	AUX 1	16 20 6 21 22 23
CP140 CP141 CP142 CP143 CP144 CP145	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	CIRCA 1	30 25 25 25 25 25

Code	Display text	Description	Range	Submenu	Default setting
CP146 CP147 CP148 CP149 CP150 CP151	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	CIRCB 1	30 25 25 25 25 25
CP152 CP153 CP154 CP155 CP156 CP157	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	DHW 1	30 25 25 25 25 25
CP158 CP159 CP160 CP161 CP162 CP163	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	CIRCC 1	30 25 25 25 25 25
CP164 CP165 CP166 CP167 CP168 CP169	RoomCoolTempSetpoint	Setpoint of the room cooling temperature of the zone	20 °C - 30 °C	AUX 1	30 25 25 25 25 25
CP200 CP201 CP202 CP203 CP204	ManuZoneRoomTempSet	Manually setting the room temperature setpoint of the zone	5 °C - 30 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP320 CP321 CP322 CP323 CP324	OperatingZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP350 CP351 CP352 CP353 CP354	ComfortZoneDHWtemp	Comfort Domestic Hot Water Temperature Setpoint of zone	40 °C - 80 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	55 55 55 55 55
CP360 CP361 CP362 CP363 CP364	ReducedZoneDHWtemp.	Reduced Domestic Hot Water Temperature Setpoint of zone	10 °C - 60 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	10 10 10 10 10
CP510 CP511 CP512 CP513 CP514	Temporary Room Setp	Temporary room setpoint per zone	5 °C - 30 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP540 CP541 CP542 CP543 CP544	ZoneTSwimmPoolsetp	Setpoint of swimming pool when Zone is configured on Swimming Pool	0 °C - 39 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP550 CP551 CP552 CP553 CP554	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0

Code	Display text	Description	Range	Submenu	Default setting
CP570 CP571 CP572 CP573 CP574	ZoneTimeProg Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP660 CP661 CP662 CP663 CP664	Icon display zone	Choice icon to display this zone	0 = None 1 = All 2 = Bedroom 3 = Livingroom 4 = Study 5 = Outdoor 6 = Kitchen 7 = Basement 8 = Swimming Pool 9 = DHW Tank 10 = DHW Electrical Tank 11 = DHW Layered Tank 12 = Internal Boiler Tank 13 = Time Program	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 2 9 6 13
CP670 CP671 CP672 CP673 CP674	ConfPairing RU Zone	Configuration of pairing room unit per zone		CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	

Tab.94 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.95 Factory settings at installer level

Code	Display text	Description	Range	Submenu	Default setting
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	1
AP073	Summer Winter	Outdoor temperature: upper limit for heating	15 °C - 30.5 °C	Outdoor temperature	22
AP075	NeutralBandSum Winter	Outdoor temperature neutral band between heating and cooling. The generator is stopped.	0 °C - 10 °C	Outdoor temperature	4
AP079	Building Inertia	Inertia of the building used for heat up speed	0 - 10	Outdoor temperature	3
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-30 °C - 20 °C	Outdoor temperature	3
AP082	Enable daylight save	Enable daylight saving for the system to save energy during winter	0 = Off 1 = On	Mandatory bus master	0
AP083	Enable master func	Enable the master functionality of this device on the S-Bus for system control	0 = No 1 = Yes	Mandatory bus master Producer Manager Cascade management B	0

Code	Display text	Description	Range	Submenu	Default setting
AP091	Outside Sens. Source	Type of outside sensor connection to be used	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	0
BP001	Type Buffer Tank	Type of buffer tank	0 = Disabled 1 = One sensor 2 = Two sensors 3 = Three sensors 4 = Four sensors	Disabled buffer tank Pass.buffer.tank 1sens Pass.buffer.tank 2sens	0
BP002	Buff Tank HC Strat.	Heating Cooling Control strategy used with buffer tank	0 = Fixed setpoint 1 = Calculated setpoint 2 = Dedicated slope	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	0
BP003	Stp Buffertank Heat	Temperature setpoint for buffer tank in heating mode	5 °C - 100 °C	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	70
BP004	Setp Buffertank Cool	Temperature setpoint for Buffer tank in cooling mode	5 °C - 25 °C	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	18
BP005	Buffer Tank Slope	Buffer Tank Slope	0 - 4	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	1.5
BP013	BufferTankTcalOffset	Offset to add to the calculate Setpoint of the Buffer Tank	0 °C - 20 °C	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	5
BP014	BufferTank HystStart	Hysteresis of temperature which determines the start of Buffer Tank storage	1 °C - 20 °C	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	6
BP015	Buf.Tank post run	Minimum duration of post-operation of the buffer tank pump	0 Min - 20 Min	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	4
BP019	BufferTank HystStop	Hysteresis of temperature which determines the stop of buffer tank storage	-30 °C - 30 °C	Pass.buffer.tank 1sens Pass.buffer.tank 2sens	0
CP000 CP001 CP002 CP003 CP004	MaxZoneTFlowSetpoint	Maximum Flow Temperature setpoint zone	7 °C - 100 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	90 50 95 50 95

Code	Display text	Description	Range	Submenu	Default setting
CP020 CP021 CP022 CP023 CP024	Zone Function	Functionality of the zone	0 = Disable 1 = Direct 2 = Mixing Circuit 3 = Swimming pool 4 = High Temperature 5 = Fan Convactor 6 = DHW tank 7 = Electrical DHW 8 = Time Program 9 = ProcessHeat 10 = DHW Layered 11 = DHW Internal tank 12 = DHW Commercial Tank 13 = DHW FWS 31 = DHW FWS EXT 255 = Occupied	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	1 0 0 0 0
CP030 CP031 CP032 CP033 CP034	Bandwidth Mix. Valve	Bandwidth of mixing valve zone where modulation takes place.	4 °C - 16 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	12 12 12 12 12
CP040 CP041 CP042 CP043 CP044	Postrun zone pump	Pump post runtime of the zone	0 Min - 20 Min	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	4 4 4 4 4
CP050 CP051 CP052 CP053 CP054	Mixing Valve shift	Shift between calculated setpoint and mixing valve circuit setpoint	0 °C - 16 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	4 4 4 4 4
CP060 CP061 CP062 CP063 CP064	RoomT. Holiday	Wished room zone temperature on holiday period	5 °C - 20 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	6 6 6 6 6
CP070 CP071 CP072 CP073 CP074	MaxReducedRoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 °C - 30 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	16 16 16 16 16
CP210 CP211 CP212 CP213 CP214	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	15 15 15 15 15
CP220 CP221 CP222 CP223 CP224	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	15 15 15 15 15
CP230 CP231 CP232 CP233 CP234	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	1.5 0.7 1.5 0.7 1.5
CP240 CP241 CP242 CP243 CP244	ZoneRoomUnitInfl	Adjustment of the influence of the zone room unit	0 - 10	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	3 3 3 3 3

Code	Display text	Description	Range	Submenu	Default setting
CP270 CP271 CP272 CP273 CP274	CoolMixTflowZoneSet	Mixing flow temperature setpoint cooling of the zone	11 °C - 23 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	18 18 18 18 18
CP280 CP281 CP282 CP283 CP284	FanCoolTflowZoneSet	Fan flow setpoint cooling of the zone	7 °C - 23 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	10 10 10 10 10
CP340 CP341 CP342 CP343 CP344	TypeReducedNightMode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP370 CP371 CP372 CP373 CP374	Holiday ZoneDHWtemp	Holiday Domestic Hot Water Temperature Setpoint of zone	10 °C - 40 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	10 10 10 10 10
CP380 CP381 CP382 CP383 CP384	Antileg ZoneDHWtemp	Antilegionellosis Domestic Hot Water Temperature Setpoint of zone	40 °C - 80 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	65 65 65 65 65
CP390 CP391 CP392 CP393 CP394	Start Antileg	Start time of the function Antilegionellosis	0 HoursMinutes = 143 HoursMinutes	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	18 18 18 18 18
CP400 CP401 CP402 CP403 CP404	Zone Dhwan tileg.	Duration of the function Antilegionellosis	10 Min - 600 Min	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	60 60 60 60 60
CP420 CP421 CP422 CP423 CP424	ZoneDhwHysteresis	Trip differential for DHW production	1 °C - 60 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	6 6 6 6 6
CP430 CP431 CP432 CP433 CP434	Optimise DHW Zone	Used to force DHW tank loading according to the primary temperature	0 - 1	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP440 CP441 CP442 CP443 CP444	Release DHW zone	Prevents the cooling of the Tank at the start	0 - 1	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP460 CP461 CP462 CP463 CP464	DHW Zone Priority	Choice of DHW Priority 0:TOTAL 1:RELATIVE 2:NONE	0 = Total 1 = Relative 2 = None	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP470 CP471 CP472 CP473 CP474	Zone screed drying	Setting of the screed drying program of the zone	0 Days - 30 Days	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0

Code	Display text	Description	Range	Submenu	Default setting
CP480 CP481 CP482 CP483 CP484	ScreedStartTemp	Setting of the start temperature of the screed drying program of the zone	20 °C - 50 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP490 CP491 CP492 CP493 CP494	ScreedStopTemp	Setting of the stop temperature of the screed drying program of the zone	20 °C - 50 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP500 CP501 CP502 CP503 CP504	Tflow Sensor Enable	Enable/Disable Flow temperature sensor of the zone	0 = Off 1 = On	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP560 CP561 CP562 CP563 CP564	ZoneConfigDHW Antileg	Configuration of the Domestic Hot Water Antilegionella Protection of the zone	0 = Disabled 1 = Weekly 2 = Daily	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP600 CP601 CP602 CP603 CP604	ProcessHeat Spt zone	Heat demand setpoint during process heat of zone	20 °C - 100 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	60 60 60 60 60
CP610 CP611 CP612 CP613 CP614	Hys PH on per zone	Hysteresis switched on for process heat per zone	1 °C - 15 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	6 6 6 6 6
CP620 CP621 CP622 CP623 CP624	Hys PH off per zone	Hysteresis switched off for process heat per zone	1 °C - 15 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	6 6 6 6 6
CP630 CP631 CP632 CP633 CP634	StartdayAntileg zone	Startday of the function antilegionella of the zone	1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	6 6 6 6 6
CP640 CP641 CP642 CP643 CP644	OTH LogicLev contact	OpenTherm Logic level contact of the zone	0 = Open 1 = Closed 2 = Off	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	1 1 1 1 1
CP650 CP651 CP652 CP653 CP654	RedRoomTempCool Zone	Desired reduced room temperature setpoint in cooling mode per zone	20 °C - 30 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	29 29 29 29 29
CP690 CP691 CP692 CP693 CP694	RevContactOTH cool	Reversed OpenTherm contact in cooling mode for heat demand per zone	0 = No 1 = Yes	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0

Code	Display text	Description	Range	Submenu	Default setting
CP700 CP701 CP702 CP703 CP704	DHW Cal Offset zone	Offset for calorifier sensor per zone	0 °C - 30 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP710 CP711 CP712 CP713 CP714	Zone IncTFlowStp DHW	Increase primary temperature setpoint for heating DHW calorifier of the zone	0 °C - 40 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP720 CP721 CP722 CP723 CP724	Zone, IncFT ProcHeat	Increase Primary Temperature setpoint for process heat calorifier of the zone	0 °C - 40 °C	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	20 20 20 20 20
CP750 CP751 CP752 CP753 CP754	MaxZone Preheat time	Maximum zone preheat time	0 Min - 240 Min	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP760 CP761 CP762 CP763 CP764	Zone DHW TAS enable	The calorifier of the zone is equipped with a Titan Active System anode	0 = No 1 = Yes	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 1 0 0
CP780 CP781 CP782 CP783 CP784	Control strategy	Selection of the control strategy for the zone	0 = Automatic 1 = Room Temp. based 2 = Outdoor Temp. based 3 = Outdoor & room based	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
EP014	SCB func. 10V PWMIn	Smart Control Board function 10 Volt PWM input	0 = Off 1 = Temperature control 2 = Power control	0-10 volt input	0
EP018	Status relay func.	Status relay function	0 = No Action 1 = Alarm 2 = Alarm Inverted 3 = Burning 4 = Not burning 5 = Reserved 6 = Reserved 7 = Service request 8 = Boiler on CH 9 = Boiler on DHW 10 = CH pump on 11 = Locking or Blocking 12 = Cooling mode	Status information	11
EP030	Min Setp Temp 0-10V	Sets the minimum set point temperature for 0 - 10 volts for the Smart Control Board	0 °C - 100 °C	0-10 volt input	0
EP031	Max Setp Temp 0-10V	Sets the maximum set point temperature for 0 - 10 volts for the Smart Control Board	0.5 °C - 100 °C	0-10 volt input	100
EP032	Min Setp Power 0-10V	Sets the minimum set point power for 0 - 10 volts for the Smart Control Board	0 % - 100 %	0-10 volt input	0
EP033	Max Setp Power 0-10V	Sets the maximum set point power for 0 - 10 volts	5 % - 100 %	0-10 volt input	100
EP034	Min Setp Volt 0-10V	Sets the minimum set point voltage for 0 - 10 volts for the Smart Control Board	0 V - 10 V	0-10 volt input	0.5

Code	Display text	Description	Range	Submenu	Default setting
EP035	Max Setp Volt 0-10V	Sets the maximum set point voltage for 0 - 10 volts	0 V - 10 V	0-10 volt input	10
EP046	Digital input config	Sets the general configuration of the digital input	0 = Stop heating + DHW 1 = Stop heating 2 = Stop DHW 3 = Forced setpoint 4 = Buffer Tank input	Digital Input	0
EP056	Logic level Digi In	Sets the logic level contact of the Smart Control Board digital input	0 = Open 1 = Closed 2 = Off	Digital Input	1
EP066	Req FlowSetp digi In	Requested flow setpoint when digital input is configured to forced heat	7 °C - 100 °C	Digital Input	80
EP076	Req PowSetp digi In	Requested power setpoint when digital input is configured to forced heat	0 % - 100 %	Digital Input	100
NP005	Cascade Permutation	Choice of the leading generator, .AUTO: Switching of order every 7 days	0 - 127	Cascade management B	0
NP006	Cascade Type	Cascading boilers by adding successively or in parallel, the boilers function simultaneously	0 = Traditional 1 = parallel	Cascade management B	0
NP007	CascTOutsideHeatParl	Outdoor start temperature heating of all stages in parallel mode	-10 °C - 20 °C	Cascade management B	10
NP008	CascTPostRunGenePump	Duration of post operation of the cascade generator pump	0 Min - 30 Min	Cascade management B	4
NP009	CascInterStageTime	Switch on and switch off timing for the producer of the cascade	1 Min - 60 Min	Cascade management B	4
NP010	CascTOutsideCoolPara	Outdoor start temperature cooling of all stages in parallel mode	10 °C - 40 °C	Cascade management B	30
NP011	CascadeTypeAlgo	Choice of Cascade Algorithm type, power or temperature	0 = Temperature 1 = Power	Cascade management B	0
NP012	CascPowerRiseTime	Cascade, Time to reach Temperature Setpoint	1 = 10	Cascade management B	1
NP013	CascForceStopPprim	Force Primary Pump to Stop on cascade	0 = No 1 = Yes	Cascade management B	0
NP014	Cascade Mode	Functionnement Mode of cascade : automatic, heating or cooling	0 = Automatic 1 = Heating 2 = Cooling	Cascade management B	0

Tab.96 Navigation for advanced installer level

Level	Menu path
Advanced installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Parameters
(1) See the column "Submenu" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.97 Factory settings at advanced installer level

Code	Display text	Description	Range	Submenu	Default setting
AP111 AP112	Can line length	Can line length	0 = < 3m 1 = < 80m 2 = < 500m	Mandatory bus master Cascade management B	0
CP290 CP291 CP292 CP293 CP294	ConfigZonePump Out	Configuration of Zone Pump Output	0 = Zone output 1 = CH mode 2 = DHW mode 3 = Cooling mode 4 = Error report 5 = Burning 6 = Service flag 7 = System error 8 = DHW looping 9 = Primary pump 10 = Buffer pump	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 2 0 8
CP330 CP331 CP332 CP333 CP334	Opening Valve Time	The time needed by the valve to be fully opened	0 Sec - 240 Sec	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	60 60 60 60 60
CP520 CP521 CP522 CP523 CP524	Zone Power setpoint	Power setpoint per zone	0 % - 100 %	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	100 100 100 100 100
CP530 CP531 CP532 CP533 CP534	Zone PWM Pump speed	Pulse Width Modulation pump speed per zone	20 % - 100 %	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	100 100 100 100 100
CP680 CP681 CP682 CP683 CP684	ConfPairing RU Zone	Select the Bus channel of the room unit for this zone	0 - 255	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP730 CP731 CP732 CP733 CP734	Zone Heat up speed	Selection of heat up speed of the zone	0 = Extra Slow 1 = Slowest 2 = Slower 3 = Normal 4 = Faster 5 = Fastest	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	2 2 2 2 2
CP740 CP741 CP742 CP743 CP744	Zone cool down speed	Selection of cool down speed of the zone	0 = Slowest 1 = Slower 2 = Normal 3 = Faster 4 = Fastest	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	2 2 2 2 2
CP770 CP771 CP772 CP773 CP774	Zone Buffered	The zone is after a Buffer tank	0 = No 1 = Yes	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	1 1 1 1 1
CP790 CP791 CP792 CP793 CP794	DHW Tank Volume	Volume of water contained in the tank	10 l - 5000 l	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	400 400 400 400 400

Code	Display text	Description	Range	Submenu	Default setting
CP800 CP801 CP802 CP803 CP804	Commercial Dhw Mode	Select the requested heating mode for commercial domestical hot water tank	0 = Preheat 1 = Heating	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	0 0 0 0 0
CP810 CP811 CP812 CP813 CP814	DHW Backup Capacity	Total electrical backup capacity available to heat DHW tank	1 kW - 255 kW	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	12 12 12 12 12
CP820 CP821 CP822 CP823 CP824	DHW Production Time	Maximum reserved time for complete charging of the tank	1 HoursMinutes - 120 HoursMinutes	CIRCA 1 CIRCB 1 DHW 1 CIRCC 1 AUX 1	60 60 60 60 60
EP036 EP037	Sensor input config	Sets the general configuration of the sensor input	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	Analogue input	0
NP001	CascProdMan Hys.High	Hysteresis high for Producer Manager	0.5 °C - 10 °C	Cascade management B	3
NP002	CascProdMan Hys.Low	Hysteresis low for Producer Manager	0.5 °C - 10 °C	Cascade management B	3
NP003	CascProdManErr Range	Maximum error gain for Producer Manager	0 °C - 10 °C	Cascade management B	10
NP004	CascPFactorAlgo Temp	Proportional Factor for cascade with Temperature algorithm	0 - 10	Cascade management B	1

10.4 List of measured values

10.4.1 Control unit counters

Tab.98 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.99 Counters at basic installer level

Code	Display text	Description	Range	Submenu
AC001	Hours on mains	Number of hours that the appliance has been on mains power	0 - 4294967295 Hours	System Functionality
AC002	Service run hours	Number of hours that the appliance has been producing energy since last service	0 - 131070 Hours	Gas fired appliance
AC003	Hours since service	Number of hours since the previous servicing of the appliance	0 - 131070 Hours	Gas fired appliance
AC004	Starts since service	Number of heat generator starts since the previous servicing.	0 - 4294967295	Gas fired appliance

Code	Display text	Description	Range	Submenu
AC005	CH Energy Consumed	Energy consumed for central heating	0 - 4294967295 kWh	Producer Generic Gas fired appliance
AC006	DHW energy consumed	Energy consumed for domestic hot water	0 - 4294967295 kWh	Producer Generic Gas fired appliance
AC007	Cool Energy consumed	Energy consumed for cooling	0 - 4294967295 kWh	Producer Generic Gas fired appliance
AC026	Pump running hours	Counter that shows the number of pump running hours	0 - 4294967295 Hours	Gas fired appliance
AC027	Pump starts	Counter that shows the number of pump starts	0 - 4294967295	Gas fired appliance
DC004	DHW starts	Number of starts for domestic hot water	0 - 4294967295	Gas fired appliance
DC005	DHW run hours	Total number of hours that the appliance has been producing energy for domestic hot water	0 - 4294967295 Hours	Gas fired appliance
PC003	Heat gen run hrs	Total Number of hours that the appliance has been producing energy for central heating and DHW	0 - 65534 Hours	Gas fired appliance

Tab.100 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.101 Counters at installer level

Code	Display text	Description	Range	Submenu
DC001	DhwTotalPower Cons	Total power consumption used by Domestic Hot Water	0 - 4294967295 kW	Gas fired appliance
GC007	Failed starts	Number of failed starts	0 - 65534	Gas fired appliance
PC002	Total starts	Total number of heat generator starts. For heating and domestic hot water	0 - 65534	Gas fired appliance
PC004	Burner flame loss	Number of burner flame loss	0 - 65534	Gas fired appliance

Tab.102 Navigation for advanced installer level

Level	Menu path
Advanced installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.103 Counters at advanced installer level

Code	Display text	Description	Range	Submenu
PC001	ChCtrTotalPower-Cons.	Total power consumption used by Central Heating	0 - 4294967295 kW	Gas fired appliance

10.4.2 SCB-01 expansion PCB counters

Tab.104 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > SCB-01 > Submenu ⁽¹⁾ > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.105 Counters at basic installer level

Code	Display text	Description	Range	Submenu
AC001	Hours on mains	Number of hours that the appliance has been on mains power	0 Hours - 4294967295 Hours	System Functionality

10.4.3 SCB-10 expansion PCB counters

Tab.106 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Counters
(1) See the column "Submenu" in the following table for the correct navigation. The counters are grouped in specific functionalities.	

Tab.107 Counters at basic installer level

Code	Display text	Description	Range	Submenu
AC001	Hours on mains	Number of hours that the appliance has been on mains power	0 Hours - 4294967294 Hours	System Functionality
CC001	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CC002	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC003	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC004	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CC005	Zone Pump Run Hours	Numbers of pump operating hours of the zone	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC010	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC011	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank



Code	Display text	Description	Range	Submenu
CC012	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC013	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CC014	Zone Nbr Pump Starts	Numbers of times the pump of the zone has started	0 - 4294967294	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank

10.4.4 Control unit signals

Tab.108 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.109 Signals at basic installer level

Code	Display text	Description	Range	Submenu
AM010	Pump speed	The current pump speed	0 - 100 %	Gas fired appliance
AM012	Status Appliance	Current main status of the appliance.	 See Status and sub-status, page 144	Status information System Functionality
AM014	Sub status Appliance	Current sub status of the appliance.	 See Status and sub-status, page 144	Status information System Functionality
AM015	Pump running?	Is the pump running?	0 = Inactive 1 = Active	Gas fired appliance
AM016	System Flow Temp	Flow temperature of appliance.	-327.68 - 327.67 °C	Zone manager Producer Generic Gas fired appliance Prod. manager bridge
AM017	T heat exchanger	The temperature of heat exchanger	-25 - 150 °C	Gas fired appliance
AM018	T return	Return temperature of appliance. The temperature of the water entering the appliance.	-327.68 - 327.67 °C	Zone manager Gas fired appliance
AM019	Water pressure	Water pressure of the primary circuit.	0 - 25.5 bar	Gas fired appliance
AM027	Outside temperature	Instantaneous outside temperature	-70 - 70 °C	Outdoor temperature Gas fired appliance
AM028	0to10Vinput	Value of the 0 to 10 Volt input. Meaning is dependant on the current input function setting.	0 - 25 V	0-10 volt input
AM040	Control temperature	Temperature used for hot water control algorithms.	-327.68 - 327.67 °C	Gas fired appliance
AM046	Internet T.Outside	Outside temperature received from an internet source	-70 - 70 °C	Outdoor temperature
AM091	SeasonMode	Seasonal mode active (summer / winter)	0 = Winter 1 = Frost protection 2 = Summer neutral band 3 = Summer	Outdoor temperature
AM101	Internal setpoint	Internal system flow temperature setpoint	0 - 120 °C	Gas fired appliance
CM030	Zone RoomTemperature	Measure of the room temperature of the zone	0 - 50 °C	Direct zone

Code	Display text	Description	Range	Submenu
CM120	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone
CM130	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone
CM190	Zone Troom setpoint	Wished room temperature setpoint of the zone	5 - 30 °C	Direct zone
CM210	ZoneTout temp	Current outdoor temperature of the zone	-70 - 70 °C	Direct zone

Tab.110 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.111 Signals at installer level

Code	Display text	Description	Range	Submenu
AM036	Flue gas temperature	Temperature of the exhaust gas leaving the appliance	0 - 250 °C	Gas fired appliance
AM044	Nr sensors supported	Number of sensors supported by the device	0 - 255	Gas fired appliance
AM045	Water P available	Water pressure sensor present?	0 = No 1 = Yes	Gas fired appliance
CM070	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 - 150 °C	Direct zone
CM140	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone
CM150	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone
CM160	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone
CM200	ZoneCurrentHeat-Mode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone
GM001	Actual fan RPM	Actual fan RPM	0 - 8500 Rpm	Gas fired appliance
GM002	Fan RPM setpoint	Actual fan RPM setpoint	0 - 8500 Rpm	Gas fired appliance
GM008	Actual flame current	Actual flame current measured	0 - 25 µA	Gas fired appliance
NM001	CascSystemTF	Cascade system flow temperature	-10 - 120 °C	Producer Generic Producer<>Consumer
PM002	CH Setpoint	Central heating setpoint of the appliance	0 - 125 °C	Gas fired appliance

Tab.112 Navigation for advanced installer level

Level	Menu path
Advanced installer	☰ > Installation Setup > CU-GH13 > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.113 Signals at advanced installer level



Code	Display text	Description	Range	Submenu
AM001	DHW active	Is the appliance currently in domestic hot water production mode?	0 = Off 1 = On	Gas fired appliance
AM011	Service required?	Is service currently required?	0 = No 1 = Yes	Gas fired appliance
AM022	On / Off heat demand	On / Off heat demand	0 = Off 1 = On	Gas fired appliance
AM024	Actual rel. Power	Actual relative power of the appliance	0 - 100 %	Gas fired appliance
AM033	Next Service Ind.	Next service indication	0 = None 1 = A 2 = B 3 = C 4 = Custom	Gas fired appliance
AM043	Pwr dwn reset needed	A power down reset is needed	0 = No 1 = Yes	Gas fired appliance
AP078	Out sensor detected	Outside sensor detected in the application	0 = No 1 = Yes	Outdoor temperature
CM240	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone
CM280	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 - 100 °C	Direct zone
GM006	GPS status	Gas Pressure Switch status	0 = Open 1 = Closed 2 = Off	Gas fired appliance
GM012	Release Input	Release signal for the CU	0 = No 1 = Yes	Gas fired appliance
GM013	Blocking Input	Blocking input status	0 = Open 1 = Closed 2 = Off	Gas fired appliance
GM015	Vps Switch	Valve Proving System switch open / closed	0 = Open 1 = Closed 2 = Off	Gas fired appliance
PM003	ChTflowAverage	Actual average flow temperature	-25 - 125 °C	Gas fired appliance

10.4.5 SCB-01 expansion PCB signals

Tab.114 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > SCB-01 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.115 Signals at basic installer level

Code	Display text	Description	Range	Submenu
AM010	Pump speed	The current pump speed	0 % - 100 %	0-10 volt or PWM out
AM012	Status Appliance	Current main status of the appliance.	 See Status and sub-status, page 144	System Functionality
AM014	Sub status Appliance	Current sub status of the appliance.	 See Status and sub-status, page 144	System Functionality

Code	Display text	Description	Range	Submenu
AM015	Pump running?	Is the pump running?	0 = Inactive 1 = Active	0-10 volt or PWM out
GM011	Power setpoint	Power setpoint in % of maximum	0 % - 655.35 %	0-10 volt or PWM out

Tab.116 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > SCB-01 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.117 Signals at installer level



Code	Display text	Description	Range	Submenu
AM200	Status contact 1	Status of status contact 1. The meaning is dependant on the current function setting.	0 = Off 1 = On	Status information
AM201	Status contact 1	Status of status contact 1. The meaning is dependant on the current function setting.	0 = Off 1 = On	Status information

10.4.6 SCB-10 expansion PCB signals

Tab.118 Navigation for basic installer level

Level	Menu path
Basic installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.119 Signals at basic installer level

Code	Display text	Description	Range	Submenu
AM012	Status Appliance	Current main status of the appliance.	 See Status and sub-status, page 144	System Functionality
AM014	Sub status Appliance	Current sub status of the appliance.	 See Status and sub-status, page 144	System Functionality
AM027	Outside temperature	Instantaneous outside temperature	-70 °C - 70 °C	Outdoor temperature
AM046	Internet T.Outside	Outside temperature received from an internet source	-70 °C - 70 °C	Outdoor temperature
AM091	SeasonMode	Seasonal mode active (summer / winter)	0 = Winter 1 = Frost protection 2 = Summer neutral band 3 = Summer	Outdoor temperature
CM030	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone

Code	Display text	Description	Range	Submenu
CM031	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM032	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM033	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM034	Zone RoomTemperature	Measure of the room temperature of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM040	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM041	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM042	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM043	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM044	Zone Tflow /DHW temp	Measure Zone Flow Temperature or DHW temperature	-10 °C - 140 °C	Mixed zone Swimming pool DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM060	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM061	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM062	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM063	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM064	ZonePumpSpeed	Current Pump speed of zone	0 % - 100 %	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM070	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM071	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM072	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM073	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM074	Zone Tflow Setpoint	Current Flow temperature setpoint of zone	0 °C - 150 °C	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM120	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM121	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank
CM122	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank
CM123	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM124	ZoneCurrentMode	Zone Current Mode	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank DHW layered tank DHW tank internal DHW Commercial Tank
CM130	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank
CM131	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM132	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank
CM133	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank
CM134	ZoneCurrent activity	Current activity of the zone	0 = Anti frost 1 = Reduced 2 = Comfort 3 = Anti legionella	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM190	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM191	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM192	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM193	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM194	Zone Troom setpoint	Wished room temperature setpoint of the zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM200	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone
CM201	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone
CM202	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone
CM203	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone

Code	Display text	Description	Range	Submenu
CM204	ZoneCurrentHeatMode	Displaying current operating mode of the zone	0 = Standby 1 = Heating 2 = Cooling	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone
CM210	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM211	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM212	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM213	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM214	ZoneTout temp	Current outdoor temperature of the zone	-70 °C - 70 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM250	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank
CM251	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank
CM252	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank
CM253	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank
CM254	Zone temp DHW top	Measurement of the DHW tank temperature (top sensor) of the zone	-10 °C - 120 °C	DHW layered tank

Tab.120 Navigation for installer level

Level	Menu path
Installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.121 Signals at installer level

Code	Display text	Description	Range	Submenu
AM200	Status contact 1	Status of status contact 1. The meaning is dependant on the current function setting.	0 = Off 1 = On	Status information
BM001	Meas Btank temp	Measured buffer tank temperature	-1 °C - 150 °C	Passive buffer tank Pass.buff.tank 1sens Pass.buff.tank 2sens
BM002	Meas Btank temp	Measured buffer tank temperature	-1 °C - 150 °C	Passive buffer tank Pass.buff.tank 1sens Pass.buff.tank 2sens
BM020	Btank mode	Actual operating mode for the buffer tank	0 = Decoupling Tank 1 = Storage Tank	Pass.buff.tank 1sens Pass.buff.tank 2sens
CM160	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM161	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM162	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM163	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank

Code	Display text	Description	Range	Submenu
CM164	Zone Mod HeatDemand	Presense of modulating heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM290	ZoneSecSwimPool Pump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM291	ZoneSecSwimPool Pump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM292	ZoneSecSwimPool Pump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM293	ZoneSecSwimPool Pump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM294	ZoneSecSwimPool Pump	Status of the secondary pump used for the swimming pool of the zone	0 = Off 1 = On	Swimming pool
CM300	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
CM301	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
CM302	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
CM303	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
CM304	ZoneElecBackupOutput	Status of the outputs used for the electrical backup of the zone	0 = Off 1 = On	Electrical DHW tank
EM000	Sensor in config SCB	Sensor input current configuration of the Smart Control Board	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	Analogue input
EM001	Sensor in config SCB	Sensor input current configuration of the Smart Control Board	0 = Disabled 1 = DHW tank 2 = DHW tank top 3 = Buffer tank sensor 4 = Buffer Tank top 5 = System (cascade)	Analogue input
EM010	Meas 0-10V input SCB	Measurement of the Voltage on the 0-10V input of the Smart Control Board	0 V - 10 V	0-10 volt input
EM018	Tsetp 0-10V input	Temperature set point required by 0-10V Input	0 °C - 100 °C	0-10 volt input
EM021	Power setp 0-10V	Power setpoint required by 0-10V input	0 % - 100 %	0-10 volt input
EM024	Tas status	Titan anti corrosion system status	0 = Short circuited 1 = Open circuit 2 = Out of order 3 = OK	TAS settings
EM046	Digi input stat SCB	Digital input status of the Smart Control Board	0 = Off 1 = On	Digital Input
NM000	CascadeNbProducer	Cascade number of active producer	0 - 17	Cascade management B

Code	Display text	Description	Range	Submenu
NM001	CascSystemTF	Cascade system flow temperature	-10 °C - 120 °C	Producer Manager Cascade management B Producer<>C onsumer
NM022	CascNbStageAvail able	Number of stage available on the Cascade	0 - 255	Cascade management B
NM023	CascNbStageRequ ired	Number of stage required on the Cascade	0 - 255	Cascade management B
NM028	CascNbProdPrese nt	Cascade Number of Producer present recognized in the cascade	0 - 255	Cascade management B

Tab.122 Navigation for advanced installer level

Level	Menu path
Advanced installer	☰ > Installation Setup > SCB-10 > Submenu ⁽¹⁾ > Parameters, counters, signals > Adv. Signals
(1) See the column "Submenu" in the following table for the correct navigation. The signals are grouped in specific functionalities.	

Tab.123 Signals at advanced installer level

Code	Display text	Description	Range	Submenu
AP078	Out sensor detected	Outside sensor detected in the application	0 = No 1 = Yes	Outdoor temperature
BM021	Btank pump stat	Buffer tank pump status	0 = Off 1 = On	Pass.buff.tank 1sens Pass.buff.tank 2sens
CM010	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM011	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM012	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM013	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM014	Zone 3WV closing	Mixing valve closing status of zone	0 = No 1 = Yes	Mixed zone
CM020	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank
CM021	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank
CM022	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank

Code	Display text	Description	Range	Submenu
CM023	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank
CM024	Zone 3WV opening	Mixing valve opening status of zone	0 = No 1 = Yes	Mixed zone Swimming pool Electrical DHW tank
CM050	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM051	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM052	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM053	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank
CM054	Status Pump zone	Status of the Pump of zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Zone time program Process heat DHW layered tank DHW tank internal DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM110	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM111	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM112	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM113	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM114	ZoneTRoomUnit setp	Room Unit temperature setpoint of zone	0 °C - 50 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM140	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM141	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank

Code	Display text	Description	Range	Submenu
CM142	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM143	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM144	ZoneOTContr present	OpenTherm controller is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM150	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM151	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank

Code	Display text	Description	Range	Submenu
CM152	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM153	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM154	ZoneState Heatdemand	State of On Off heat demand per zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone Electrical DHW tank DHW layered tank
CM180	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM181	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM182	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM183	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank

Code	Display text	Description	Range	Submenu
CM184	Zone RU present	Presense of Room Unit in this zone	0 = No 1 = Yes	Direct zone Mixed zone Swimming pool High temp. zone Fan convector zone DHW tank Electrical DHW tank Process heat DHW layered tank DHW Commercial Tank
CM240	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone
CM241	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone
CM242	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone
CM243	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone
CM244	Zone Tout connected	Outdoor temperature sensor is connected to the zone	0 = No 1 = Yes	Direct zone Mixed zone High temp. zone Fan convector zone
CM280	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM281	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone

Code	Display text	Description	Range	Submenu
CM282	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM283	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM284	ZoneRTC TcalcRoomStp	Internal room temperature setpoint calculated by the room temperature controller of the zone	0 °C - 100 °C	Direct zone Mixed zone High temp. zone Fan convector zone
CM320	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
CM321	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
CM322	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
CM323	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
CM324	Time Start Backup	Estimated time before starting the electrical backup for DHW tank Loading	0 Min - 1200 Min	DHW Commercial Tank
EM014	Tas voltage meas	Titan anti corrosion system voltage measurement	0 V - 250 V	TAS settings
EM023	Tas Actual Current	Titan anti corrosion system measurement of the actual current	0 A - 655.35 A	TAS settings
EM026	Input meas sensor	Measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
EM027	Input meas sensor	Measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
EM036	Av input meas sensor	Average measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
EM037	Av input meas sensor	Average measurement of the input sensor of the Smart Control Board	-15 °C - 120 °C	Analogue input
NM002	CascTempoBetwStage	Temporisation between start next stage	0 Min - 60 Min	Cascade management B

10.4.7 Status and sub-status

Tab.124 AM012 - Status

Code	Display text	Explanation
0	Standby	The appliance is in standby mode.
1	Heat Demand	A heat demand is active.
2	Generator start	The appliance starts.
3	Generator CH	The appliance is active for central heating.
4	Generator DHW	The appliance is active for domestic hot water.

Code	Display text	Explanation
5	Generator stop	The appliance has stopped.
6	Pump Post Run	The pump is active after the appliance stopped.
8	Controlled Stop	The appliance does not start because the starting conditions are not met.
9	Blocking Mode	A blocking mode is active.
10	Locking Mode	A locking mode is active.
11	Load test min	Low load test mode for central heating is active.
12	Load test CH max	Full load test mode for central heating is active.
13	Load test DHW max	Full load test mode for domestic hot water is active.
15	Manual Heat Demand	Manual heat demand for central heating is active.
16	Frost Protection	Frost protection mode is active.
19	Reset In Progress	The appliance resets.
21	Halted	The appliance has stopped. It must be reset manually.
23	Factory test	The factory test mode is active.
200	Device Mode	The service tool interface controls the functions of the appliance.
254	Unknown	The actual state of the appliance is undefined.

Tab.125 AM014 - Sub status

Code	Display text	Explanation
0	Standby	The appliance waits for a process or an action.
1	AntiCycling	The appliance waits to restart, because there were too many consecutive heat demands (anti-short cycle).
4	WaitingForStartCond.	The appliance waits for the temperature to meet the start conditions.
10	CloseExtGasValve	An external gas valve is opened, when this option is connected to the appliance. An external option board must be connected to drive the valve.
12	CloseFlueGasValve	The flue gas valve opens.
13	FanToPrePurge	The fan runs faster to pre-purge.
14	WaitForReleaseSignal	The appliance waits for the release input to close.
15	BurnerOnCommandToSu	A burner start command is sent to the safety core.
17	Prelgnition	Ignition starts before the gas valve opens.
18	Ignition	Ignition is active.
19	FlameCheck	The flame detection is active after the ignition.
20	Interpurge	The fan runs to purge the heat exchanger after a failed ignition.
30	Normal Int.Setpoint	The appliance operates to reach the desired value.
31	Limited Int.Setpoint	The appliance operates to reach the reduced internal desired value.
32	NormalPowerControl	The appliance operates on the desired power level.
33	GradLevel1PowerCtrl	The modulation is stopped due to a faster heat exchanger temperature change than gradient level 1.
34	GradLevel2PowerCtrl	The modulation is set to low load due to a faster heat exchanger temperature change than gradient level 2.
35	GradLevel3PowerCtrl	The appliance is in blocking mode due to a faster heat exchanger temperature change than gradient level 1.
36	ProtectFlamePwrCtrl	The burner power is increased due to a low ionisation signal.
37	StabilizationTime	The appliance is in stabilisation time. Temperatures should stabilise and temperature protections are switched off.
38	ColdStart	The appliance runs at start load to prevent cold start noise.
39	ChResume	The appliance resumes central heating after a domestic hot water interruption.
40	SuRemoveBurner	Burner demand is removed from safety core.
41	FanToPostPurge	The fan runs to purge the heat exchanger after the appliance stopped.
44	StopFan	The fan has stopped.

Code	Display text	Explanation
45	LimitedPwrOnTflueGas	The power of the appliance is decreased to lower the flue gas temperature.
48	Reduced Set Point	The desired flow temperature is reduced to protect the heat exchanger.
60	PumpPostRunning	The pump is active after the appliance stopped in order to bring the remaining heat into the system.
61	OpenPump	The pump has stopped.
63	SetAntiCycleTimer	-
105	Calibration	The electronic combustion process calibrates the combustion.
200	Initialising Done	Initialisation is finished.
201	Initialising Csu	The CSU is initialising.
202	Init. Identifiers	The identifiers are initialising.
203	Init.BL.Parameter	The blocking parameters are initialising.
204	Init. Safety Unit	The safety unit is initialising.
205	Init. Blocking	The blocking is initialising.
254	StateUnknown	The sub state is undefined.
255	SuOutOfResetsWait1Hr	The safety unit is blocking due to too many resets. Wait for 60 minutes or turn the power off and on again.

11 Maintenance

11.1 Maintenance regulations



Important

The boiler must be maintained by a qualified installer in accordance with local and national regulations.

- An annual inspection is mandatory.
- Perform the standard checking and maintenance procedures once a year.
- Perform the specific maintenance procedures if necessary.



Important

Adjust the frequency of inspection and service to the conditions of use. This applies especially if the boiler is:

- In constant use (for specific processes)
- Used with a low supply temperature
- Used with a high ΔT



Caution

- Replace defective or worn parts with original spare parts.
- During inspection and maintenance work, always replace all gaskets on the parts removed.
- Check whether all gaskets have been positioned properly (absolutely flat in the appropriate groove means they are gas, air and water tight).
- During the inspection and maintenance work, water (drops, splashes) must never come into contact with the electrical parts.



Warning

Always wear safety goggles and a dust mask during cleaning work (involving compressed air).

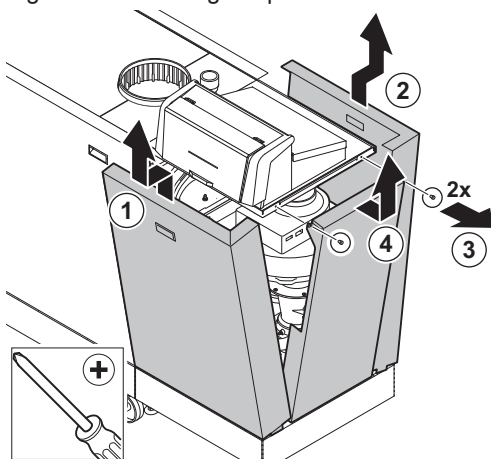


Danger of electric shock

Ensure that the boiler is switched off.

11.2 Opening the boiler

Fig.108 Removing the panels



AD-3001407-02

1. Remove the panels in the given order.

11.3 Standard inspection and maintenance operations

For a service, always perform the following standard inspection and maintenance operations.

**See**

The boiler service manual for the specific maintenance work. This manual can be found on the website.

11.3.1 Preparation

Carry out the following steps before commencing inspection and maintenance activities:

1. Set the boiler to full load until the return temperature is around 65°C, to dry the heat exchanger on the flue gas side.
2. Check the water pressure.
The minimum water pressure is 0.8 bar. The recommended water pressure is between 1.5 bar and 2.0 bar.
 - 2.1. If necessary, top up the central heating system.
3. Check the ionisation current at full load and at low load.
The value is stable after 1 minute.
 - 3.1. If the value is lower than 3 µA, clean or replace the ionisation and ignition electrode.
4. Check the condition and tightness of the flue gas outlet and air supply system.
5. Check the combustion by measuring the O₂ percentage in the flue gasses.

11.3.2 Checking the water quality

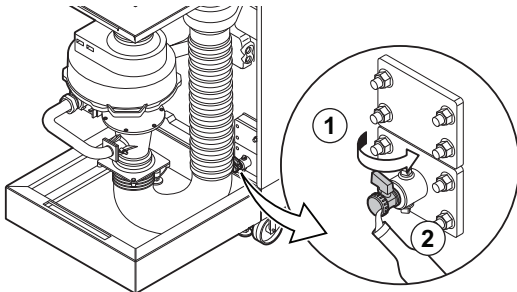
The requirements for the water quality can be found in our **Water quality instructions**.

**Caution**

Not fulfilling the water quality requirements can damage the boiler and will void the warranty.

1. Fill a clean bottle with some water from the boiler using the filling/drain valve.
2. Check the quality of this water sample or have it checked.

Fig.109 Checking the water quality

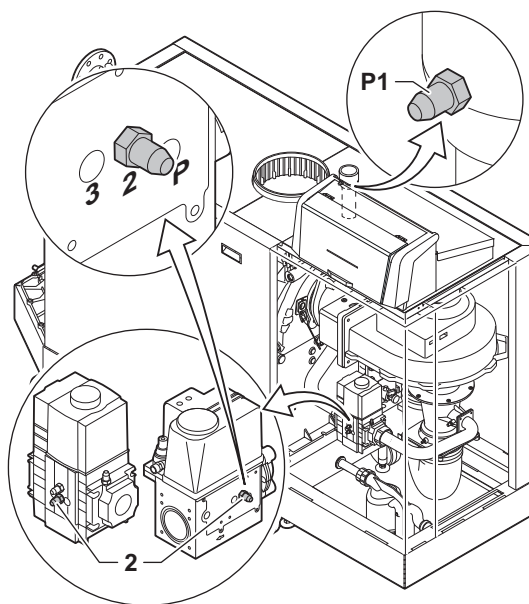


AD-3001567-01

11.3.3 Checking the gas filter

The gas control valve on the boiler is fitted with a gas filter. Check the gas filter for dirt. Proceed as follows:

Fig.110 Gas control valve measuring points



AD-3001568-01

1. Set the boiler to full load.
2. Measure the gas inlet pressure via the measuring point **P1** on the gas pipe.
⇒ This gas inlet pressure should be at least 17 mbar.
3. Check the gas inlet pressure at measuring point **2** on the gas control valve.
4. Compare the measured values with the values in the table.

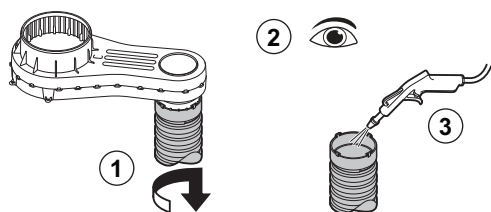
Tab.126 Minimum gas inlet pressure values at gas control valve measuring point 2

C 340	C 640	Minimum value (mbar)
280	560	14
350	700	13
430	860	10
500	1000	10
570	1140	10
650	1300	10

5. If the measured value is lower than the minimum value, clean or replace the gas filter.

11.3.4 Checking and cleaning the air supply hose

Fig.111 Cleaning the air supply hose

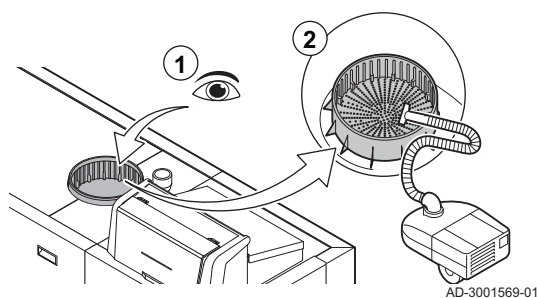


AD-0000535-01

1. Disconnect the hose on the air box side by loosening the bayonet fitting.
2. Check the hose for damage and pollution.
3. Remove the pollution from the hose with a cloth or soft brush.
4. Replace the hose if it is faulty and/or leaking.

11.3.5 Checking the air supply dirt trap

Fig.112 Dirt trap

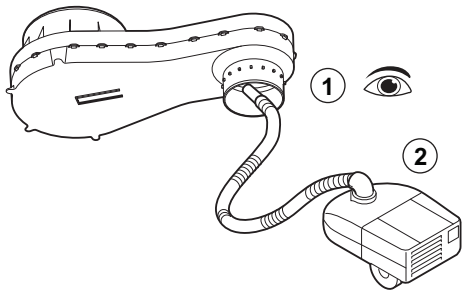


AD-3001569-01

If necessary, disconnect the air supply pipe or air inlet filter from the boiler to access the dirt trap.

1. Visually inspect the dirt trap on the air supply side for soiling.
2. Remove coarse soiling and clean the trap with a vacuum cleaner or a cloth.

Fig.113 Air box



AD-0000536-01

11.3.6 Checking the air box

1. Check the air box for soiling.
2. Clean the dirty air box using a vacuum cleaner. Do this from the connection opening for the air supply hose.



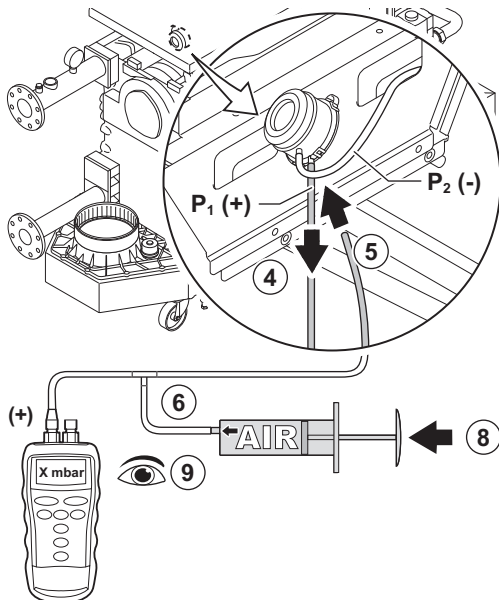
Important

If the air box is dirty, the following components must also be dismantled and blown clean:

- Non-return valve
- Venturi
- Fan

11.3.7 Checking the air pressure differential switch

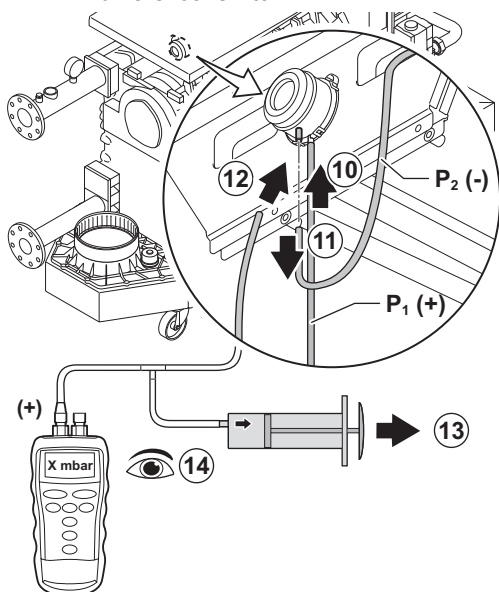
Fig.114 Positive (+) side of the air pressure differential switch



AD-3001570-01

1. Switch off the boiler.
2. Remove any dirt from all the connection points for hoses and the air pressure differential switch.
3. Check the condition and tightness of the hoses of the air pressure differential switch.
⇒ Replace the hoses if necessary.
4. Disconnect the silicon hose from the + side (P1) of the air pressure differential switch.
5. Connect a hose to the + side of the air pressure differential switch.
6. Take a T piece and connect it as follows:
 - 6.1. Connect one end of the T piece to the hose from the + side of the air pressure differential switch.
 - 6.2. Connect one end of the T piece to a large plastic syringe.
 - 6.3. Connect the other end of the T piece to a pressure gauge.
7. Switch on the boiler.
8. Push the syringe in very slowly until error code **E.04.08** appears on the display.
9. Check the pressure indicated by the pressure gauge at that point. This is the switch pressure.
⇒ A switch pressure between 5.5 and 6.5 mbar is good. A lower or higher switch pressure indicates a problem with the air pressure differential switch.

Fig.115 Negative (-) side of the air pressure differential switch



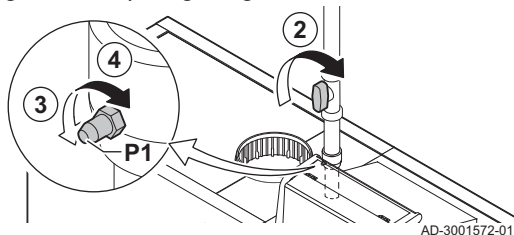
AD-3001571-01

10. Remove the syringe hose from the + side of the air pressure differential switch and reconnect the original hose.
11. Disconnect the silicon hose from the - side (P2) of the air pressure differential switch.
12. Connect the - side of the air pressure differential switch the hose coming from the T piece.
13. Pull out the syringe very slowly until error code **E.04.08** appears on the display.
14. Check the pressure indicated by the pressure gauge at that point. This is the switch pressure.
 - ⇒ A switch pressure between -5.5 and -6.5 mbar is good. A lower or higher switch pressure indicates a problem with the air pressure differential switch.

11.3.8 Checking the gas leakage monitoring (VPS)

The VPS check consists of two actions: checking the VPS for leaks and checking the switch value. Proceed as follows:

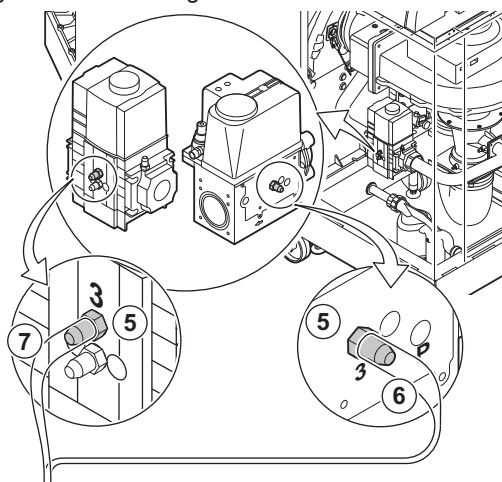
Fig.116 Preparing the gas circuit



AD-3001572-01

1. Switch off the boiler.
2. Close the boiler gas valve.
3. Remove the pressure from the gas pipe by unscrewing the screw in measuring point **P1**.
4. As soon as the gas pipe is pressure-free, re-tighten the screw.

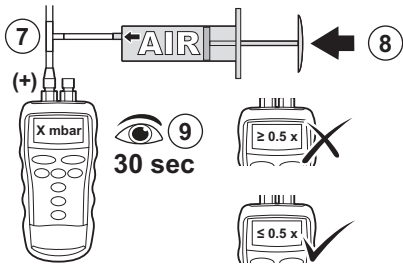
Fig.117 Connecting a hose



AD-3001573-01

5. Open the screw at measuring point **3** on the gas control valve.
6. Connect a hose to measuring point **3** of the gas valve.

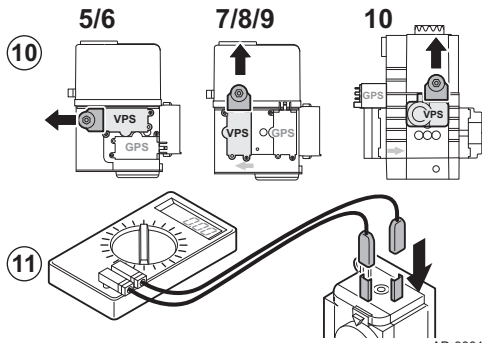
Fig.118 Checking the VPS for leaks



AD-3001574-01

7. Take a T piece and connect it as follows:
 - 7.1. Connect one end of the T piece to the hose from measuring point 3.
 - 7.2. Connect one end of the T piece to a large plastic syringe.
 - 7.3. Connect the other end of the T piece to a pressure gauge.
8. Push the syringe in very slowly until the pressure gauge indicates the minimum inlet gas pressure.
9. Check the measured pressure for about 30 seconds.
 - ⇒ If the pressure decreases by more than half, this indicates a gas leak: Replace the gas control valve or the VPS if necessary.

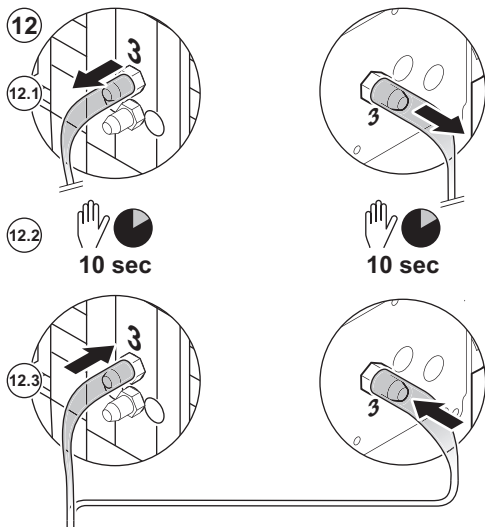
Fig.119 Connecting an ohmmeter



AD-3001575-01

10. To check the VPS switch value, remove the plug from the VPS.
11. Connect an ohmmeter to terminals 2 and 3 of the VPS.

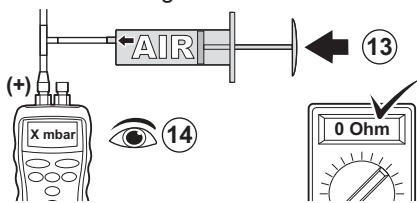
Fig.120 Releasing the pressure



AD-3001576-01

12. Release any pressure from the gas control valve:
 - 12.1. Remove the hose from measuring point 3 of the gas control valve.
 - 12.2. Wait 10 seconds.
 - 12.3. Reconnect the hose to measuring point 3.

Fig.121 Checking the switch value



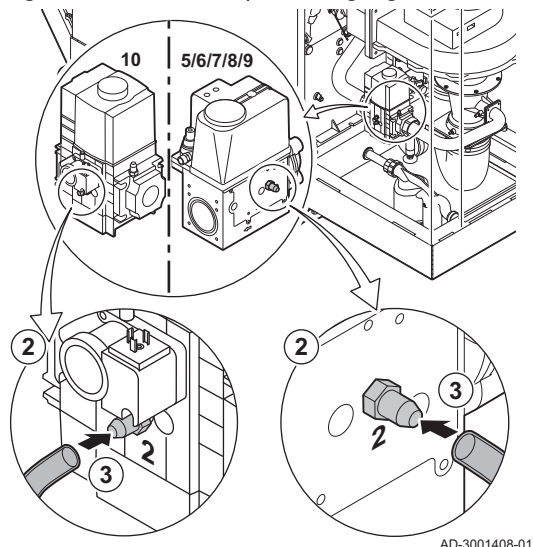
AD-3001577-01

13. Push the syringe in very slowly until the ohmmeter indicates 0 Ω.
14. Check the measured pressure at that point.
 - ⇒ If the measured pressure differs by more than 2 mbar from the value as set on the VPS, set the pressure switch to the actual measured value or replace the VPS.

11.3.9 Checking the minimum gas pressure switch (GPS)

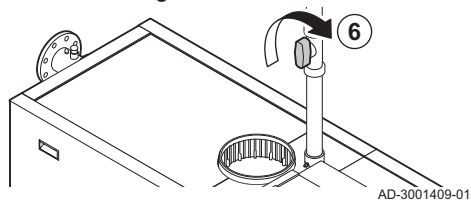
1. Switch off the boiler.

Fig.122 Connect the pressure gauge



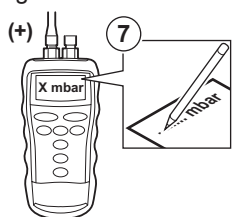
2. Open the screw in measuring point 2 of the gas control valve.
3. Connect a pressure gauge to measuring point 2 of the gas control valve.
4. Switch on the boiler.
5. Set the boiler to low load.

Fig.123 Close the gas valve



6. Close the boiler gas valve very slowly until error code **H.01.09** appears on the display.

Fig.124 Check the value



7. Compare the measured value with the minimum value in the table. Tab.127 Minimum gas pressure switch value

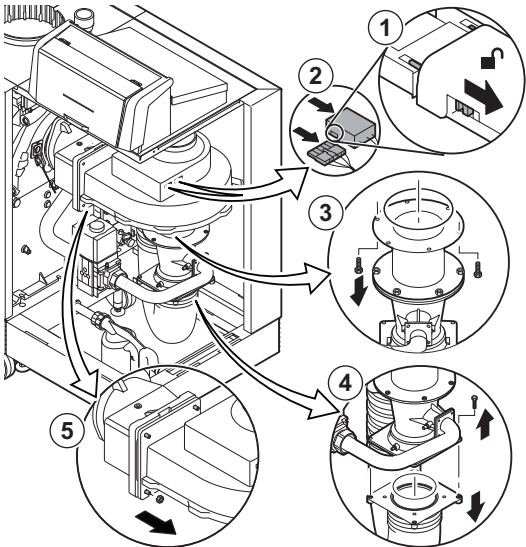
C 340	C 640	Minimum value (mbar)
280	560	14
350	700	13
430	860	10
500	1000	10
570	1140	10
650	1300	10

8. If the measured value is lower, set the gas pressure switch to the correct value or replace it.

11.4 Specific maintenance work

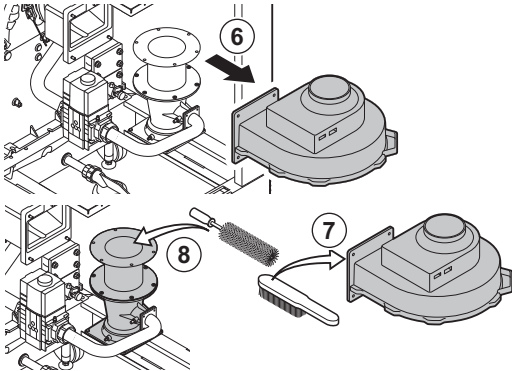
Perform the specific maintenance work if this proves to be necessary following the standard inspection and maintenance work. To conduct the specific maintenance work:

Fig.125 Disassembling the fan unit



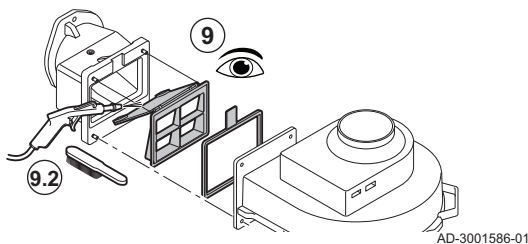
AD-3001584-01

Fig.126 Cleaning the fan and venturi



AD-3001585-01

Fig.127 Checking and cleaning the non-return valve



AD-3001586-01

11.4.1 Cleaning the fan, non-return valve and venturi

1. Push back the safety slides on both sides of the power plug to unlock it.
2. Remove the electrical connections from the fan.
3. Unscrew the bolts from the extension piece under the fan.
⇒ Support the gas control valve, using a block of wood for example.
4. Disconnect the air supply hose from the venturi.
5. Unscrew the nuts on the fan output.

6. Disconnect the fan from the adaptor.
7. Clean the fan with a soft plastic brush.
8. Clean the venturi with a soft plastic brush.

9. Inspect the non-return valve.
 - 9.1. Replace the non-return valve if it is faulty or seriously damaged.
 - 9.2. Clean the non-return valve with a soft plastic brush or compressed air if it does not need to be replaced.
10. Reassemble the unit in reverse order.



Important

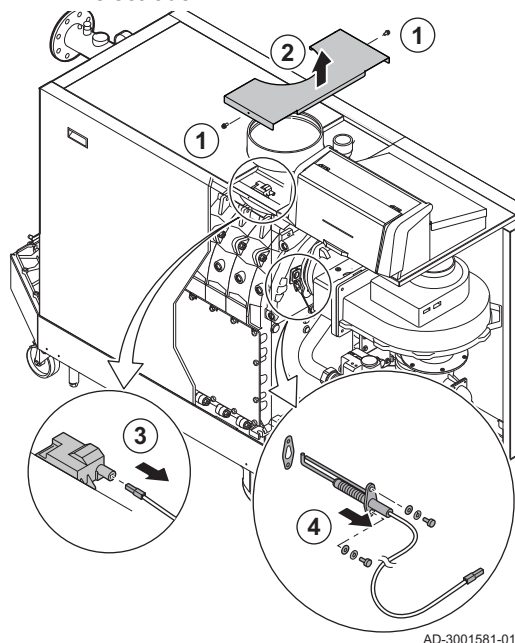
Reconnect the fan's electrical connection.

11.4.2 Replacing the ionisation/ignition electrode

The ionisation/ignition electrode must be replaced if:

- The ionisation current is $< 3 \mu\text{A}$.
- The electrode is damaged or worn.
- The specific maintenance activities are carried out.

Fig.128 Replacing the ionisation/ignition electrode



1. Unscrew the two screws on the middle top casing.
2. Remove the middle top casing.
3. Remove the plug of the electrode from the ignition transformer.

**Important**

The ignition cable is fixed to the electrode and may not be removed.

4. Unscrew the 2 screws on the electrode.
5. Remove the electrode.
6. Fit the new electrode.

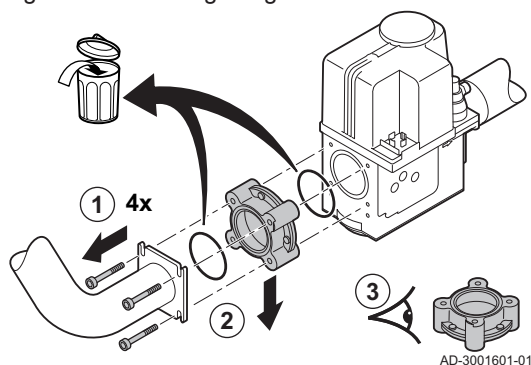
**Caution**

To prevent damage, do not fit the new electrode until the burner has been cleaned and refitted.

7. Reassemble the unit in reverse order.

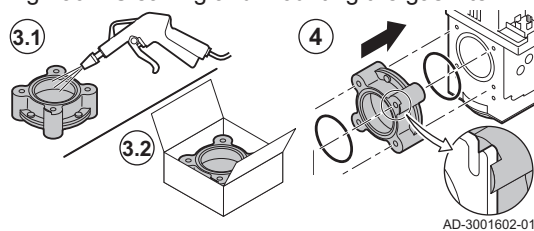
11.4.3 Cleaning the gas filter - 5-9 sections boiler

Fig.129 Removing the gas filter



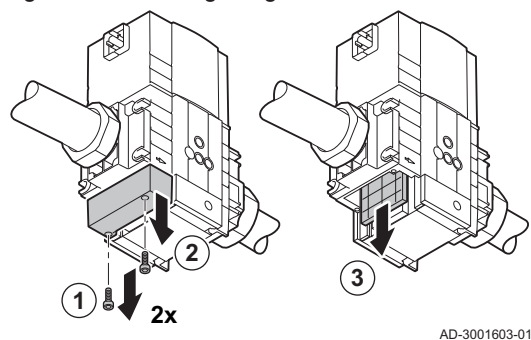
1. Remove the four screws from the gas pipe.
2. Remove the gas filter.

Fig.130 Cleaning and mounting the gas filter



3. Inspect the gas filter.
 - 3.1. Replace the gas filter if necessary.
 - 3.2. Clean the gas filter without the use of liquids (shake it or carefully blow it clean) if it does not need to be replaced.
4. Reassemble the unit in reverse order. Make sure the ridge on the gas filter is positioned as indicated.

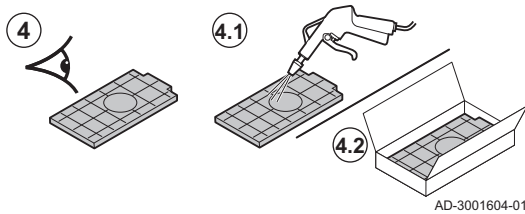
Fig.131 Removing the gas filter



11.4.4 Cleaning the gas filter - 10 sections boiler

1. Remove the two screws from the gas filter cover.
2. Remove the cover.
3. Remove the gas filter.

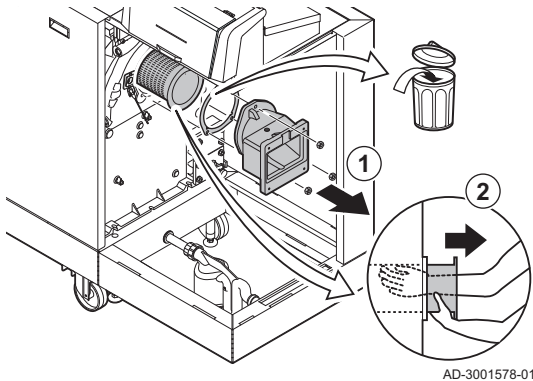
Fig.132 Inspecting and cleaning the gas filter



4. Inspect the gas filter.
 - 4.1. Replace the gas filter if necessary.
 - 4.2. Clean the gas filter without the use of liquids (shake it or carefully blow it clean) if it does not need to be replaced.
5. Reassemble the unit in reverse order.

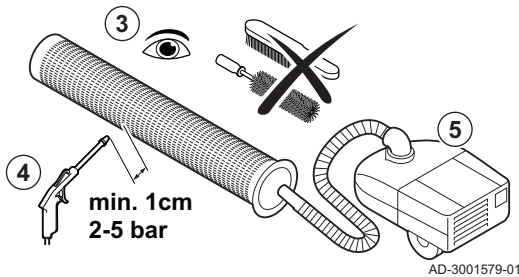
11.4.5 Cleaning the burner

Fig.133 Removing the burner



1. Unscrew the bolts from the adaptor and remove the adaptor.
2. Lift the burner out of the heat exchanger.

Fig.134 Checking and cleaning the burner



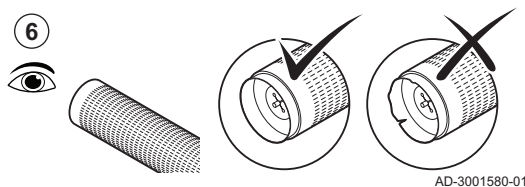
3. Check the burner.
4. Clean the outside of burner using compressed air with a pressure of 2 to 5 bar.

Caution

- Maintain a minimum distance of 1 cm from the surface of the burner.
- Never clean the burner's surface with a brush or similar item.

5. Clean the inside of the burner using a vacuum cleaner.

Fig.135 Checking the burner end cap

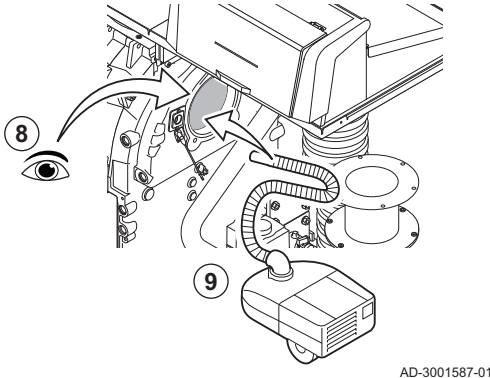


6. Check the burner end cap.
 - ⇒ Replace the burner or end cap if faulty or seriously damaged.
7. Set the burner aside, making sure it can not be damaged.

Caution

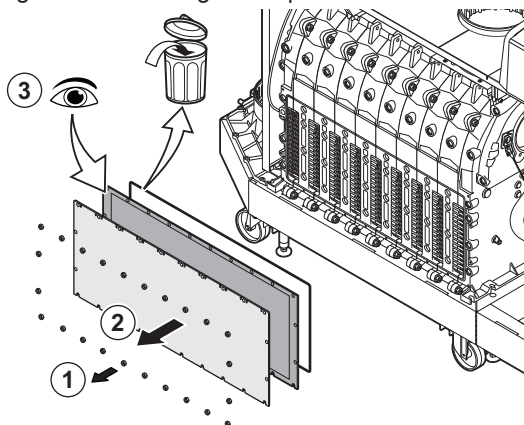
Do not refit the burner until the heat exchanger, condensate collector and siphon have been cleaned.

Fig.136 Cleaning the burner area



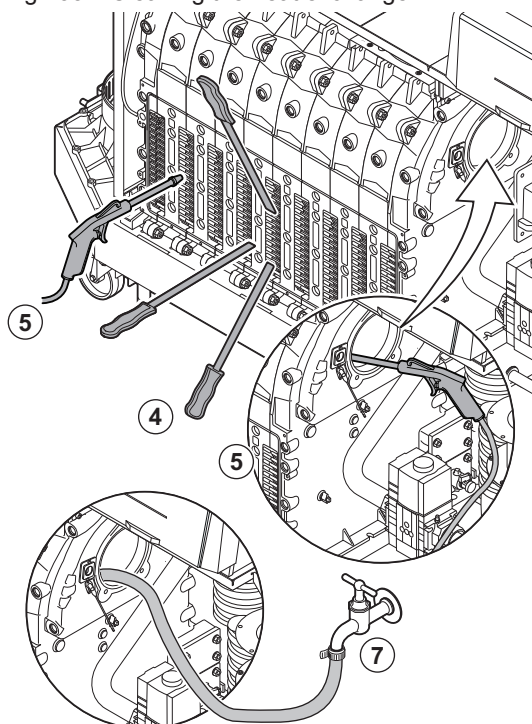
8. Visually inspect the burner area.
9. Use a vacuum cleaner to remove any visible soiling from the burner area.

Fig.137 Removing the inspection hatch



AD-3001582-01

Fig.138 Cleaning the heat exchanger



AD-3001583-01

11.4.6 Cleaning the heat exchanger

1. Unscrew the nuts from the inspection hatch on the heat exchanger.
2. Carefully remove the inspection hatch, the insulation cloth and the silicon insulation cord from the heat exchanger.



Caution

The insulation cloth may stick to the heat exchanger. Avoid damaging or tearing the insulation cloth.

3. Inspect the insulation cloth and replace if it is faulty or seriously damaged.

4. Clean the areas between the pins of the heat exchanger using the cleaning knife. Always work from the bottom to the top. Move the cleaning knife between the pins horizontally and diagonally.



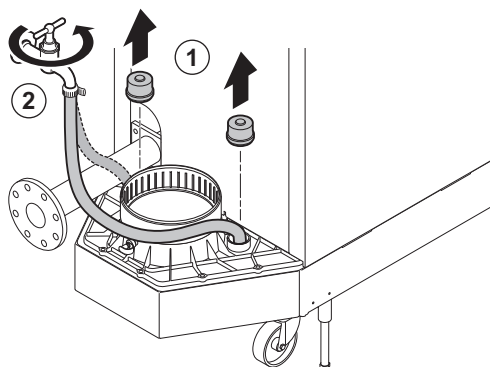
Caution

Always use the cleaning knife specially designed for this boiler. This knife is 560 mm long.

5. Use compressed air to blow the cleaned parts through in turn. Do this from the service side and from the burner area.
6. Fit the inspection hatch and the insulation cloth with a new silicon cord.
7. Use clean water to thoroughly rinse the heat exchanger from the burner area.

11.4.7 Cleaning the condensate collector

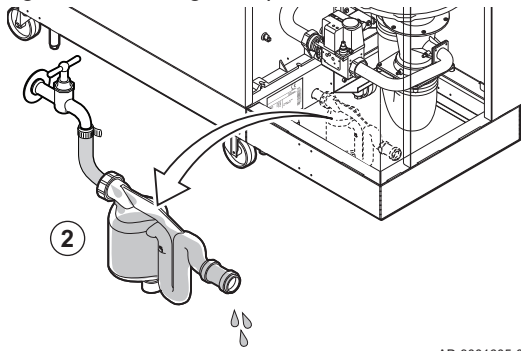
Fig.139 Cleaning the condensate collector



AD-3001607-01

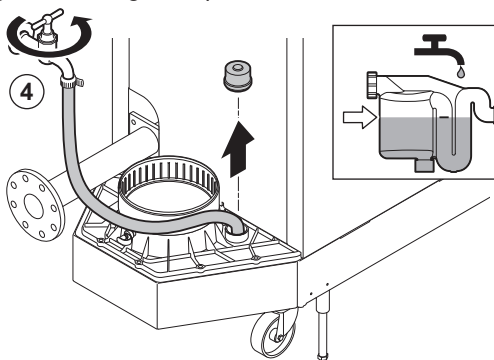
1. remove both sealing caps from the condensate collector.
2. Thoroughly rinse each side of the condensate collector for at least 5 minutes, with the largest possible water flow.
3. Refit both sealing caps on the condensate collector.

Fig.140 Cleaning the siphon



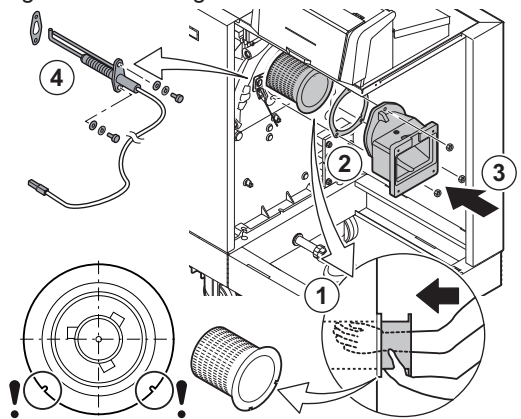
AD-3001605-01

Fig.141 Filling the siphon



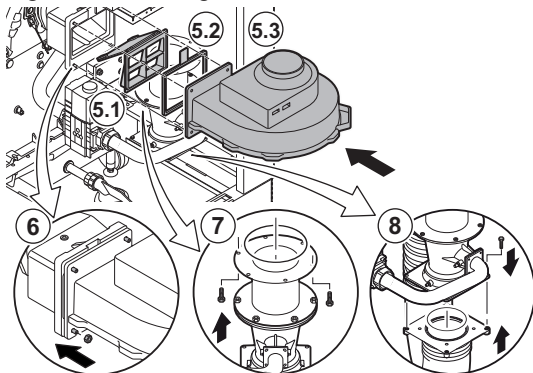
AD-3001606-01

Fig.142 Mounting the burner



AD-3001588-01

Fig.143 Mounting the fan



AD-3001589-01

11.4.8 Cleaning the siphon

1. Remove the siphon.
2. Clean the siphon with water.
3. Put the siphon back in place.

4. Fill the siphon with water up to the mark via the condensate collector.



Danger

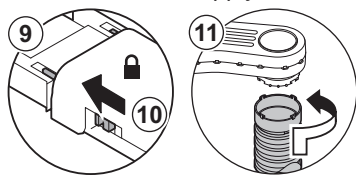
The siphon must always be sufficiently filled with water. This prevents flue gases from entering the room.

11.4.9 Assembly after maintenance

1. Mount the burner.
⇒ The burner has two slots at the front. Position these over the two pins at the burner opening.
2. Place a new burner gasket.
3. Mount the adapter.
4. Mount the new ionisation/ignition electrode.

5. Mount the fan assembly:
 - 5.1. Place the non-return valve.
 - 5.2. Place the new gasket.
 - 5.3. Mount the fan.
6. Tighten the nuts on the adapter.
7. Tighten the nuts on the venturi.
8. Mount the air supply hose to the venturi.

Fig.144 Fitting the electrical connections and air supply hose



AD-3001590-01

9. Connect the electrical connections to the fan.
10. Lock the fan power plug with the safety slides.
11. Mount the air supply hose to the air box.

11.5 Finalising work

1. Fit all removed parts in the reverse order, but do not close the casing yet.



Caution

During inspection and maintenance operations, always replace all gaskets on the parts removed.

2. Fill the siphon with water.
3. Put the siphon back in place.
4. Carefully open all system and supply valves which were closed to carry out the maintenance.
5. Fill the central heating system with water if necessary.
6. Vent the central heating system.
7. Top up with more water if necessary.
8. Check the tightness of the gas and water connections.
9. Put the boiler back into operation.
10. Carry out an auto-detect when a control board has been replaced or removed from the boiler.
11. Set the boiler to full load and carry out a gas leak detection and a thorough visual check.
12. Set the boiler to normal operation.
13. Close the casing.

11.6 Disposal and recycling

Fig.145



Important

Removal and disposal of the boiler must be carried out by a qualified person in accordance with local and national regulations.

To remove the boiler, proceed as follows:

1. Cut the power supply to the boiler.
2. Shut off the gas supply.
3. Shut off the water supply.
4. Drain the system.
5. Remove the siphon.
6. Remove the air supply/flue gas outlet pipes.
7. Disconnect all pipes on the boiler.
8. Remove the boiler.

12 Troubleshooting

12.1 Error codes

The boiler is fitted with an electronic regulation and control unit. The heart of the control is a microprocessor, which controls and also protects the boiler. In the event of an error, a corresponding code is displayed.

Tab.128 Error codes are displayed at three different levels

Code	Type	Description
A00.00 ⁽¹⁾	Warning	The boiler continues to operate but the cause of the warning must be investigated. A warning can change into a blocking or lock-out.
H00.00 ⁽¹⁾	Blocking	The boiler starts up again automatically when the cause of the blocking has been rectified. A blocking can become a lock-out.
E00.00 ⁽¹⁾	Lock out	The boiler starts up again only when the cause of the lock-out has been rectified and reset manually.

(1) The first letter indicates the type of error.

The meaning of the code can be found in the various error code tables.

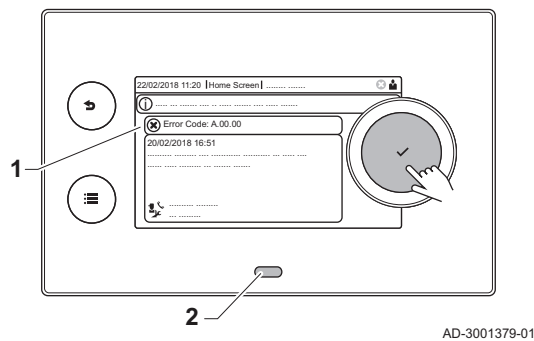


Important

The error code is needed to find the cause of the error quickly and correctly and for any support from De Dietrich.

12.1.1 Display of error codes

Fig.146 Diematic Evolution



When an error occurs in the installation, the control panel shows:

- 1 The display will show a corresponding code and message.
- 2 The status LED of the control panel will show:
 - Continuous green = Normal operation
 - Flashing green = Warning
 - Continuous red = Blocking
 - Flashing red = Lock out

1. Press and hold the ✓ button to reset the boiler.
 - ⇒ The boiler starts up again only when the cause of the error has been rectified.
2. If the error code reappears, correct the problem by following the instructions in the error code tables.
 - ⇒ The error code remains visible until the problem is solved.
3. Note the error code when the problem cannot be solved.

12.1.2 Warning

Tab.129 Warning codes

Code	Display text	Description	Solution
A.00.32	TOutside Open	Outside temperature sensor is either removed or measures a temperature below range	Outdoor temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
A.00.33	TOutside Closed	Outside temperature sensor is either shorted or measures a temperature above range	Outdoor temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
A.00.34	TOutside Missing	Outside temperature sensor was expected but not detected	Outdoor sensor not detected: <ul style="list-style-type: none"> Outdoor sensor is not connected: Connect the sensor Outdoor sensor is not connected correctly: Connect the sensor correctly
A.01.21	Dhw Temp GradLevel3	Maximum Dhw Temperature Gradient Level3 Exceeded	Temperature warning: <ul style="list-style-type: none"> Check the flow.
A.02.06	Water Press Warning	Water Pressure Warning active	Water pressure warning: <ul style="list-style-type: none"> Water pressure too low; check the water pressure
A.02.37	Uncritic device lost	Uncritical device has been disconnected	SCB not found: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors Faulty SCB: Replace SCB
A.02.45	Full Can Conn Matrix	Full Can Connection Matrix	SCB not found: <ul style="list-style-type: none"> Carry out an auto-detect
A.02.46	Full Can Device Adm	Full Can Device Administration	SCB not found: <ul style="list-style-type: none"> Carry out an auto-detect
A.02.49	Failed Init Node	Failed Initialising Node	SCB not found: <ul style="list-style-type: none"> Carry out an auto-detect
A.02.55	Inval or miss SerNR	Invalid or missing device serial number	Contact your supplier.
A.02.76	Memory full	The reserved space in memory for custom parameters value is full. No more user changed possible	Configuration error: <ul style="list-style-type: none"> Reset CN1 and CN2 Faulty CSU: Replace CSU Replace the CU-GH
A.03.17	Safety check	Periodically safety check ongoing	Safety check procedure active: <ul style="list-style-type: none"> No action
A.10.33	SDhwTopZoneD Open	Domestic Hot Water tank top temperature sensor Zone DHW open	Domestic hot water top temperature sensor open: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors Incorrectly fitted sensor: check that the sensor has been correctly fitted Sensor is not present. Faulty sensor: replace the sensor
A.10.34	SDhwTopZoneD Closed	Domestic Hot Water tank top temperature sensor Zone DHW Closed	Domestic hot water top temperature sensor short-circuited: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors Incorrectly fitted sensor: check that the sensor has been correctly fitted Faulty sensor: replace the sensor
A.10.45	RoomTempZoneA miss	Measure of Room Temperature Zone A is missing	Room temperature sensor not detected in zone A: <ul style="list-style-type: none"> Room temperature sensor is not connected: connect the sensor Room temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor
A.10.46	RoomTempZoneB miss	Measure of Room Temperature Zone B is missing	Room temperature sensor not detected in zone B: <ul style="list-style-type: none"> Room temperature sensor is not connected: connect the sensor Room temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor

Code	Display text	Description	Solution
A.10.47	RoomTempZoneC miss	Measure of Room Temperature Zone C is missing	Room temperature sensor not detected in zone C: <ul style="list-style-type: none"> Room temperature sensor is not connected: connect the sensor Room temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor
A.10.50	T_DHW top D miss	Domestic Hot Water temperature sensor top zone DHW is missing	Domestic hot water temperature sensor not detected in zone DHW: <ul style="list-style-type: none"> Domestic hot water temperature sensor is not connected: connect the sensor Domestic hot water temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor
A.10.54	Temp. Zone DHW miss.	Temperature sensor Zone DHW is missing	Temperature sensor not detected in zone DHW: <ul style="list-style-type: none"> Temperature sensor is not connected: connect the sensor Temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor
A.10.56	T_DHW Zone AUX miss	Domestic Hot Water temperature sensor Zone AUX is missing	Domestic hot water temperature sensor not detected in zone AUX: <ul style="list-style-type: none"> Domestic hot water temperature sensor is not connected: connect the sensor Domestic hot water temperature sensor is not connected correctly: connect the sensor correctly Faulty sensor: replace the sensor


12.1.3 Blocking

Tab.130 Blocking codes

Code	Display text	Description	Solution
H.00.36	T 2nd Return Open	Second return temperature sensor is either removed or measures a temperature below range	Second return temperature sensor open: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors. Incorrectly fitted sensor: check that the sensor has been correctly fitted. Faulty sensor: replace the sensor.
H.00.37	T 2nd Return Closed	Second return temperature sensor is either shorted or measures a temperature above range	Second return temperature sensor short-circuited: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors. Incorrectly fitted sensor: check that the sensor has been correctly fitted. Faulty sensor: replace the sensor.
H.00.69	TbufferTankOpen	Buffer Tank temperature sensor is either removed or measures a temperature below range	Buffer tank temperature sensor open: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors Incorrectly fitted sensor: check that the sensor has been correctly fitted Sensor is not present. Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H.00.70	TbufferTankClosed	Buffer Tank temperature sensor is either shorted or measures a temperature above range	Buffer tank temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.00.71	TbufferTankTopOpen	Buffer Tank top temperature sensor is either removed or measures a temperature below range	Buffer tank top temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.00.72	TbufferTankTopClosed	Buffer Tank top temperature sensor is either shorted or measures a temperature above range	Buffer tank top temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.00.74	TBufferTankMissing	Buffer Tank temperature sensor was expected but not detected	Buffer tank temperature sensor not detected: <ul style="list-style-type: none"> • Buffer tank temperature sensor is not connected: Connect the sensor • Buffer tank temperature sensor is not connected correctly: Connect the sensor correctly • Faulty sensor: replace the sensor
H.00.75	TBufferTankTop Miss	Buffer Tank Top temperature sensor was expected but not detected	Buffer tank top temperature sensor not detected: <ul style="list-style-type: none"> • Buffer tank top temperature sensor is not connected: Connect the sensor • Buffer tank top temperature sensor is not connected correctly: Connect the sensor correctly
H.00.76	TcascadeFlow Open	Cascade Flow temperature sensor is either removed or measures a temperature below range	Cascade flow temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.00.77	TcascadeFlow Closed	Cascade Flow temperature sensor is either shorted or measures a temperature above range	Cascade flow temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.00.78	TcascadeFlow missing	Cascade Flow temperature sensor was expected but not detected	Cascade flow temperature sensor not detected: <ul style="list-style-type: none"> • Cascade flow temperature sensor is not connected: Connect the sensor • Cascade flow temperature sensor is not connected correctly: Connect the sensor correctly • Faulty sensor: replace the sensor
H.01.00	Comm Error	Communication Error occurred	Communication error with the security kernel: <ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH

Code	Display text	Description	Solution
H.01.06	Max Delta TH-TF	Maximum difference between heat exchanger temperature and flow temperature	<p>Maximum difference between heat exchanger and flow temperature exceeded:</p> <ul style="list-style-type: none"> • No flow or insufficient flow: <ul style="list-style-type: none"> - Check the circulation (direction, pump, valves). - Check the water pressure. - Check the cleanliness of the heat exchanger. - Check that the installation has been de-aired. - Check water quality according to supplier's specifications. • Sensor error: <ul style="list-style-type: none"> - Check that the sensors are operating correctly. - Check that the sensor has been fitted properly.
H.01.07	Max Delta TH-TR	Maximum difference between heat exchanger temperature and return temperature	<p>Maximum difference between heat exchanger and return temperature exceeded:</p> <ul style="list-style-type: none"> • No flow or insufficient flow: <ul style="list-style-type: none"> - Check the circulation (direction, pump, valves). - Check the water pressure. - Check the cleanliness of the heat exchanger. - Check that the installation has been correctly vented to remove air. • Sensor error: <ul style="list-style-type: none"> - Check that the sensors are operating correctly. - Check that the sensor has been fitted properly.
H.01.08	CH Temp Grad. Level3	Maximum CH temperature gradient level3 exceeded	<p>Maximum heat exchanger temperature increase has been exceeded:</p> <ul style="list-style-type: none"> • No flow or insufficient flow: <ul style="list-style-type: none"> - Check the circulation (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger - Check that the central heating system has been correctly vented to remove air • Sensor error: <ul style="list-style-type: none"> - Check that the sensors are operating correctly - Check that the sensor has been fitted properly
H.01.09	Gas Pressure Switch	Gas Pressure Switch	<p>Gas pressure too low:</p> <ul style="list-style-type: none"> • No flow or insufficient flow: <ul style="list-style-type: none"> - Make sure that the gas valve is fully opened - Check the gas supply pressure - If a gas filter is present: Make sure that the filter is clean • Wrong setting on the gas pressure switch: <ul style="list-style-type: none"> - Make sure that the switch has been fitted properly - Replace the switch if necessary
H.01.13	Max THeat Ex	Heat Exchanger temperature has exceeded the maximum operating value	<p>Maximum heat exchanger temperature exceeded:</p> <ul style="list-style-type: none"> • Check the circulation (direction, pump, valves). • Check the water pressure. • Check that the sensors are operating correctly. • Check that the sensor has been fitted properly. • Check the cleanliness of the heat exchanger. • Check that the central heating system has been correctly vented to remove air.

Code	Display text	Description	Solution
H.01.14	Max Tflow	Flow temperature has exceeded the maximum operating value	Flow temperature sensor above normal range: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • No flow or insufficient flow: <ul style="list-style-type: none"> - Check the circulation (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger
H.01.15	Max Tflue Gas	Flue gas temperature has exceeded the maximum operating value	Maximum flue gas temperature exceeded: <ul style="list-style-type: none"> • Check the flue gas outlet system • Check the heat exchanger to ensure that the flue gas side is not clogged • Faulty sensor: replace the sensor
H.02.00	Reset In Progress	Reset In Progress	Reset procedure active: <ul style="list-style-type: none"> • No action
H.02.02	Wait Config Number	Waiting For Configuration Number	Configuration error or unknown configuration number: <ul style="list-style-type: none"> • Reset CN1 and CN2
H.02.03	Conf Error	Configuration Error	Configuration error or unknown configuration number: <ul style="list-style-type: none"> • Reset CN1 and CN2
H.02.04	Parameter Error	Parameter Error	Factory settings incorrect: <ul style="list-style-type: none"> • Parameters are not correct: <ul style="list-style-type: none"> - Restart the boiler - Reset CN1 and CN2 - Replace the CU-GH PCB
H.02.05	CSU CU mismatch	CSU does not match CU type	Configuration error: <ul style="list-style-type: none"> • Reset CN1 and CN2
H.02.09	Partial block	Partial blocking of the device recognized	Blocking input active or frost protection active: <ul style="list-style-type: none"> • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H.02.10	Full Block	Full blocking of the device recognized	Blocking input is active (without frost protection): <ul style="list-style-type: none"> • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H.02.12	Release Signal	Release Signal input of the Control Unit from device external environment	Waiting time release signal has elapsed: <ul style="list-style-type: none"> • External cause: remove external cause • Wrong parameter set: check the parameters • Bad connection: check the connection
H.02.16	Int CSU Timeout	Internal CSU Timeout	Configuration error: <ul style="list-style-type: none"> • Reset CN1 and CN2 • Replace the PCB
H.02.18	OBD Error	Object Dictionary Error	<ul style="list-style-type: none"> • Reset CN1 and CN2  See The data plate for the CN1 and CN2 values.
H.02.36	Funct device lost	Functional device has been disconnected	Communication error with the SCB PCB: <ul style="list-style-type: none"> • Bad connection with BUS: check the wiring. • No PCB: reconnect PCB or retrieve from memory using auto-detect.
H.02.40	Function unavailable	Function unavailable	Contact your supplier
H.02.45	Full Can Conn Matrix	Full Can Connection Matrix	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect

Code	Display text	Description	Solution
H.02.46	Full Can Device Adm	Full Can Device Administration	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
H.02.48	Funct Gr Conf Fault	Function Group Configuration Fault	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
H.02.50	Funct Gr Comm Err	Function Group Communication Error	-
H.02.55	Inval or miss SerNR	Invalid or missing device serial number	Replace the CU-GH PCB
H.02.61	Unsupported function	Zone A doesn't support the selected function	Zone A function setting is not correct or is not allowed on this circuit: <ul style="list-style-type: none"> • Check the setting of parameter CP020.
H.02.62	Unsupported function	Zone B doesn't support the selected function	Zone B function setting is not correct or is not allowed on this circuit: <ul style="list-style-type: none"> • Check the setting of parameter CP021.
H.02.63	Unsupported function	Zone C doesn't support the selected function	Zone C function setting is not correct or is not allowed on this circuit: <ul style="list-style-type: none"> • Check the setting of parameter CP023.
H.02.64	Unsupported function	Zone D doesn't support the selected function	Zone C function (DHW) setting is not correct or is not allowed on this circuit: <ul style="list-style-type: none"> • Check the setting of parameter CP022.
H.02.65	Unsupported function	Zone E doesn't support the selected function	Zone E function (AUX) setting is not correct or is not allowed on this circuit: <ul style="list-style-type: none"> • Check the setting of parameter CP024.
H.02.66	TAS not connected	The anti corrosion protection (TAS) of the Domestic Hot Water tank is not connected	Corrosion protection anode (TAS) not detected: <ul style="list-style-type: none"> • Anode is not connected: Connect the anode • Anode is not connected correctly: Connect the anode correctly
H.02.67	TAS short-circuit	The anti corrosion protection (TAS) of the Domestic Hot Water tank is shortend	Corrosion protection anode (TAS) missing or short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.02.79	Appliance lost S Bus	There is no appliance present on system bus (cascade).	S-Bus connector devices missing: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted connectors: check that the connectors has been correctly fitted • End connectors (with resistor) are missing or badly connected: check wiring and connectors • Check if connected devices are activated
H.02.80	Missing Cascade Ctrl	Missing Cascade controller	Cascade controller not found: <ul style="list-style-type: none"> • Reconnect the cascade master • Carry out an auto-detect
H.03.00	Parameter Error	Safety parameters level 2, 3, 4 are not correct or missing	Parameter error: security kernel <ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH
H.03.01	CU to GVC data error	No valid data from CU to GVC received	Communication error with the CU-GH: <ul style="list-style-type: none"> • Restart the boiler

Code	Display text	Description	Solution
H.03.02	Flame loss detected	Measured ionisation current is below limit	No flame during operation: <ul style="list-style-type: none"> • No ionisation current: <ul style="list-style-type: none"> - Vent the gas supply to remove air - Check that the gas valve is fully opened - Check the gas supply pressure - Check the operation and setting of the gas valve unit - Check that the air supply inlet and flue gas outlet are not blocked - Check that there is no recirculation of flue gases
H.03.05	Internal blocking	Gas Valve Control internal blocking occurred	Security kernel error: <ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH
H.10.00	T Flow Zone A Open	Flow temperature sensor Zone A Open	Flow temperature sensor zone A open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.01	T Flow Zone A Closed	Flow temperature sensor Zone A Closed	Flow temperature sensor zone A short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.02	T Dhw Zone A Open	Domestic Hot Water temperature sensor Zone A Open	Domestic hot water temperature sensor zone A open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.03	T Dhw Zone A Closed	Domestic Hot Water temperature sensor Zone A Closed	Domestic hot water temperature sensor zone A short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter CP500 must be set to off (=disable)
H.10.04	TSwimmPoolZoneA Open	Swimming Pool Temperature Sensor Zone A Open	Swimming pool temperature sensor A open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.05	TSwimmPoolZoneA-Close	Swimming Pool Temperature Sensor Zone A Closed	Swimming pool temperature sensor zone A short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H.10.09	T Flow Zone B Open	Flow temperature sensor Zone B Open	Flow temperature sensor zone B open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.10	T Flow Zone B Closed	Flow temperature sensor Zone B Closed	Flow temperature sensor zone B short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.11	T Dhw Zone B Open	Domestic Hot Water Temperature Sensor Zone B Open	Domestic hot water temperature sensor zone B open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.12	T Dhw Zone B Closed	Domestic Hot Water temperature sensor Zone B Closed	Domestic hot water temperature sensor zone B short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter CP501 must be set to off (=disable)
H.10.13	TSwimmPoolZoneB Open	Swimming Pool Temperature Sensor Zone B Open	Swimming pool temperature sensor B open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.14	TSwimmPoolZoneB-Close	Swimming Pool Temperature Sensor Zone B Closed	Swimming pool temperature sensor zone B short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.18	T Flow Zone C Open	Flow temperature sensor Zone C Open	Flow temperature sensor zone C open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.19	T Flow Zone C Closed	Flow temperature sensor Zone C Closed	Flow temperature sensor zone C short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor

Code	Display text	Description	Solution
H.10.20	T Dhw Zone C Open	Domestic Hot Water Temperature Sensor Zone C Open	Domestic hot water temperature sensor zone C open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.21	T Dhw Zone C Closed	Domestic Hot Water temperature sensor Zone C Closed	Domestic hot water temperature sensor zone C short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter CP503 must be set to off (=disable)
H.10.22	TSwimmPoolZoneC Open	Swimming Pool Temperature Sensor Zone C Open	Swimming pool temperature sensor C open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.23	TSwimmPoolZoneC-Close	Swimming Pool Temperature Sensor Zone C Closed	Swimming pool temperature sensor zone C short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.27	T Flow Zone DHW open	Flow temperature sensor Zone DHW open	Flow temperature sensor zone DHW open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.28	Sens. ZoneDHW closed	Flow temperature sensor Zone DHW closed	Flow temperature sensor zone DHW short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.29	Sensor Zone DHW open	Temperature sensor Zone DHW open	Domestic hot water temperature sensor zone DHW open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor


Code	Display text	Description	Solution
H.10.30	T Zone DHW closed	Domestic Hot Water temperature sensor Zone DHW closed	Domestic hot water temperature sensor zone DHW short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter CP502 must be set to off (=disable)
H.10.36	Sensor Zone AUX open	Flow temperature sensor Zone AUX open	Flow temperature sensor zone AUX open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.37	Sens. ZoneAUX closed	Flow temperature sensor ZoneAUX closed	Flow temperature sensor zone AUX short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
H.10.38	T Dhw Zone AUX open	Domestic Hot Water temperature sensor Zone AUX open	Domestic hot water temperature sensor zone AUX open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Sensor is not present. • Faulty sensor: replace the sensor
H.10.39	Sens. ZoneAUX Closed	Domestic Hot Water temperature sensor Zone AUX closed	Domestic hot water temperature sensor zone AUX short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor • When using thermostat instead of sensor: parameter CP504 must be set to off (=disable)

12.1.4 Locking

Tab.131 Locking codes

Code	Display text	Description	Solution
E.00.00	TFlow Open	Flow temperature sensor is either removed or measures a temperature below range	Flow temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.01	TFlow Closed	Flow temperature sensor is either shorted or measures a temperature above range	Flow temperature sensor short circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.

Code	Display text	Description	Solution
E.00.04	TReturn Open	Return temperature sensor is either removed or measures a temperature below range	Return temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E.00.05	TReturn Closed	Return temperature sensor is either shorted or measures a temperature above range	Return temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E.00.08	THeat Ex Open	Heat exchanger temperature sensor is either removed or measures a temperature below range	Heat exchanger temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.09	THeat Ex Closed	Heat exchanger temperature sensor is either shorted or measures a temperature above range	Heat exchanger temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.20	TFlue Gas Open	Flue gas temperature sensor is either removed or measures a temperature below range	Open circuit in flue gas sensor: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.21	TFlue Gas Closed	Flue gas temperature sensor is either shorted or measures a temperature above range	Flue gas sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.40	WaterPressureOpen	Water pressure sensor is either removed or measures a temperature below range	Hydraulic pressure sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.00.41	WaterPressureClosed	Water pressure sensor is either shorted or measures a temperature above range	Hydraulic pressure sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Incorrectly fitted sensor: check that the sensor has been correctly fitted. • Faulty sensor: replace the sensor.
E.01.04	5x Flame Loss Error	5x Error of unintended Flame Loss occurrence	Flame loss occurs 5 times: <ul style="list-style-type: none"> • Vent the gas supply to remove air • Check that the gas valve is fully opened • Check the gas supply pressure • Check the operation and setting of the gas valve unit • Check that the air supply inlet and flue gas outlet are not blocked • Check that there is no recirculation of flue gases

Code	Display text	Description	Solution
E.01.12	Return Higher Flow	Return temperature has a higher temperature value than the flow temperature	Flow and return reversed: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Water circulation in wrong direction: check the circulation (direction, pump, valves) • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Malfunctioning sensor: check the Ohmic value of the sensor • Faulty sensor: replace the sensor
E.02.04	Parameter Error	Parameter Error	Configuration error: <ul style="list-style-type: none"> • Reset CN1 and CN2  See The data plate for the CN1 and CN2 values.
E.02.13	Blocking Input	Blocking Input of the Control Unit from device external environment	Blocking input is active: <ul style="list-style-type: none"> • External cause: remove external cause • Wrong parameter set: check the parameters
E.02.15	Ext CSU Timeout	External CSU Timeout	CSU time out: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty CSU: Replace CSU
E.02.17	GVC CommTimeout	Gas Valve Control unit communication has exceeded feedback time	Communication error with the security kernel: <ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH
E.02.35	Safety device lost	Safety critical device has been disconnected	Communication fault <ul style="list-style-type: none"> • Carry out an auto-detect
E.02.47	Failed Conn Funct Gr	Failed Connecting Function Groups	Function group not found: <ul style="list-style-type: none"> • Carry out an auto-detect • Restart the boiler • Replace the CU-GH
E.02.48	Funct Gr Conf Fault	Function Group Configuration Fault	-
E.02.52	Gvc Burner Prof Err	Gvc Burner Profile Error	-
E.02.70	HRU test error	External heat recovery unit test failed	-
E.04.00	Parameter error	Safety parameters Level 5 are not correct or missing	Replace the CU-GH.
E.04.01	TFlow Closed	Flow temperature sensor is either shorted or measuring a temperature above range	Flow temperature sensor short circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E.04.02	TFlow Open	Flow temperature sensor is either removed or measuring a temperature below range	Flow temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E.04.03	Max Flow temp	Measured flow temperature above safety limit	No flow or insufficient flow: <ul style="list-style-type: none"> • Check the circulation (direction, pump, valves) • Check the water pressure • Check the cleanliness of the heat exchanger

Code	Display text	Description	Solution
E.04.04	TFlue Closed	Flue temperature sensor is either shorted or measuring a temperature above range	Flue gas temperature sensor short-circuited: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E.04.05	TFlue Open	Flue temperature sensor is either removed or measuring a temperature below range	Flue gas temperature sensor open: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Incorrectly fitted sensor: check that the sensor has been correctly fitted • Faulty sensor: replace the sensor
E.04.06	Max Flue temp	Measured flue temperature above limit	-
E.04.07	TFlow Sensor	Deviation in flow sensor 1 and flow sensor 2 detected	Flow temperature sensor deviation: <ul style="list-style-type: none"> • Bad connection: check the connection • Faulty sensor: replace the sensor
E.04.08	Safety input	Safety input is open	Air pressure differential switch activated: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Pressure in flue gas duct is or was too high: <ul style="list-style-type: none"> - Non-return valve does not open - Siphon blocked or empty - Check that the air supply inlet and flue gas outlet are not blocked - Check the cleanliness of the heat exchanger
E.04.09	TFlue Sensor	Deviation in flue sensor 1 and flue sensor 2 detected	Flue gas temperature sensor deviation: <ul style="list-style-type: none"> • Bad connection: check the connection • Faulty sensor: replace the sensor
E.04.10	Unsuccessful start	5 Unsuccessful burners starts detected	Five failed burner starts: <ul style="list-style-type: none"> • No ignition spark: <ul style="list-style-type: none"> - Check the wiring between the CU-GH and the ignition transformer - Check the ionisation/ignition electrode - Check breakdown to earth - Check the condition of the burner cover - Check the earthing - Replace the CU-GH • Ignition spark but no flame: <ul style="list-style-type: none"> - Vent the gas pipes to remove air - Check that the air supply inlet and flue gas outlet are not blocked - Check that the gas valve is fully opened - Check the gas supply pressure - Check the operation and setting of the gas valve unit - Check the wiring on the gas valve unit - Replace the CU-GH • Flame present, but ionisation has failed or is inadequate: <ul style="list-style-type: none"> - Check that the gas valve is fully opened - Check the gas supply pressure - Check the ionisation/ignition electrode - Check the earthing - Check the wiring on the ionisation/ignition electrode.

Code	Display text	Description	Solution
E.04.11	VPS	VPS Gas Valve proving failed	Gas leakage control fault: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Gas leakage control VPS faulty: Replace the GPS • Gas valve unit faulty: Replace the gas valve unit
E.04.12	False flame	False flame detected before burner start	False flame signal: <ul style="list-style-type: none"> • The burner remains very hot: Set the O₂ • Ionisation current measured but no flame should be present: check the ionisation/ignition electrode • Faulty gas valve: replace the gas valve • Faulty ignition transformer: replace the ignition transformer
E.04.13	Fan	Fan speed has exceeded normal operating range	Fan fault: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Fan operates when it should not be operating: check for excessive chimney draught • Faulty fan: replace the fan
E.04.15	FlueGas Pipe Blocked	The flue gas pipe is blocked	Flue gas outlet is blocked: <ul style="list-style-type: none"> • Check that the flue gas outlet is not blocked • Restart the boiler
E.04.17	GasValve Driver Err.	The driver for the gas valve is broken	Gas valve unit fault: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty gas valve unit: Replace the gas valve unit
E.04.23	Internal Error	Gas Valve Control internal locking	<ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH
E.04.250	Internal error	Gas valve relay error detected	-
E.04.254	Unknown	Unknown	-

12.2 Error history

The control panel includes an error memory in which is stored a history of the last 32 errors. Details of the boiler when the error occurred can be read out. For example;

- status
- sub-status
- flow temperature
- return temperature

These details and others can contribute to the error solution.

12.2.1 Reading out and clearing the error memory

The error memory stores the details of the most recent errors.



1. Select the tile [].
2. Press the  button to confirm the selection.

Fig.147 Installer level

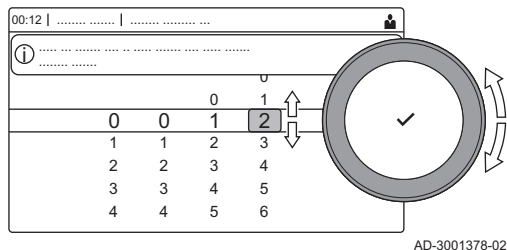
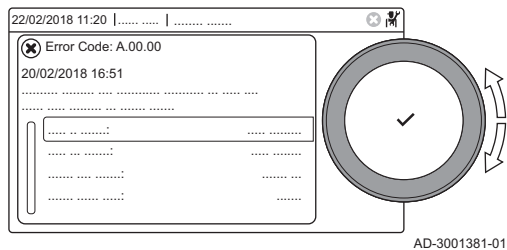


Fig.148 Error details



3. Use the rotary knob to select code: **0012**
4. Press the ✓ button to confirm the selection.
 - ⇒ When the installer level is enabled, the status of the tile [] changes from **Off** into **On**.
5. Press the ≡ button.
6. Use the rotary knob to select **Error History**.
7. Press the ✓ button to confirm the selection.
 - ⇒ A list up to 32 most recent errors is displayed with the error code, a short description and the date.
8. Use the rotary knob to select the error code you want to investigate.
9. Press the ✓ button to confirm the selection.
 - ⇒ The display shows an explanation of the error code and several details of the boiler when the error occurred.
10. To clear the error memory, press and hold the ✓ button.

13 Technical specifications

13.1 Homologations

13.1.1 Certifications

Tab.132 Certifications

CE identification number	PIN 0063CU3937
Class NOx ⁽¹⁾	6
Type of flue gas connection	B ₂₃ , B _{23P} ⁽²⁾ C ₁₃ , C ₃₃ , C ₅₃ , C ₆₃ , C ₉₃
(1) EN 15502-1 (2) When installing a boiler with connection type B ₂₃ , B _{23P} , the IP rating of the boiler is lowered to IP20.	

■ Unit categories

Tab.133 Unit categories

Country	Category	Gas type	Connection pressure (mbar)
Armenia	I _{2H}	G20 (H gas)	20
Austria	I _{2H}	G20 (H gas)	20
Azerbaijan	I _{2H}	G20 (H gas)	20
Bulgaria	I _{2H}	G20 (H gas)	20
Belarus	I _{2H}	G20 (H gas)	20
Cyprus	I _{2H}	G20 (H gas)	20
Czech Republic	I _{2H}	G20 (H gas)	20
Algeria	I _{2H}	G20 (H gas)	20
Estonia	I _{2H}	G20 (H gas)	20
Spain	I _{2H}	G20 (H gas)	20
Finland	I _{2H}	G20 (H gas)	20
France	I _{2Esi}	G20 (H gas) G25 (L gas)	20 25
Georgia	I _{2H}	G20 (H gas)	20
Greece	I _{2H}	G20 (H gas)	20
Ireland	I _{2H}	G20 (H gas)	20
Italy	I _{2H}	G20 (H gas)	20
Kyrgyzstan	I _{2H}	G20 (H gas)	20
Kazakhstan	I _{2H}	G20 (H gas)	20
Lithuania	I _{2H}	G20 (H gas)	20
Luxembourg	I _{2H}	G20 (H gas)	20
Latvia	I _{2H}	G20 (H gas)	20
Morocco	I _{2H}	G20 (H gas)	20
Moldova	I _{2H}	G20 (H gas)	20
Portugal	I _{2H}	G20 (H gas)	20
Romania	I _{2H}	G20 (H gas)	20
Russia	I _{2H}	G20 (H gas)	20
Slovenia	I _{2H}	G20 (H gas)	20
Tajikistan	I _{2H}	G20 (H gas)	20
Turkmenistan	I _{2H}	G20 (H gas)	20

Country	Category	Gas type	Connection pressure (mbar)
Tunesia	I ₂ H	G20 (H gas)	20
Uzbekistan	I ₂ H	G20 (H gas)	20

13.1.2 Directives

In addition to the legal requirements and guidelines, the supplementary guidelines in this manual must also be followed.

Supplements or subsequent regulations and guidelines that are valid at the time of installation shall apply to all regulations and guidelines specified in this manual.

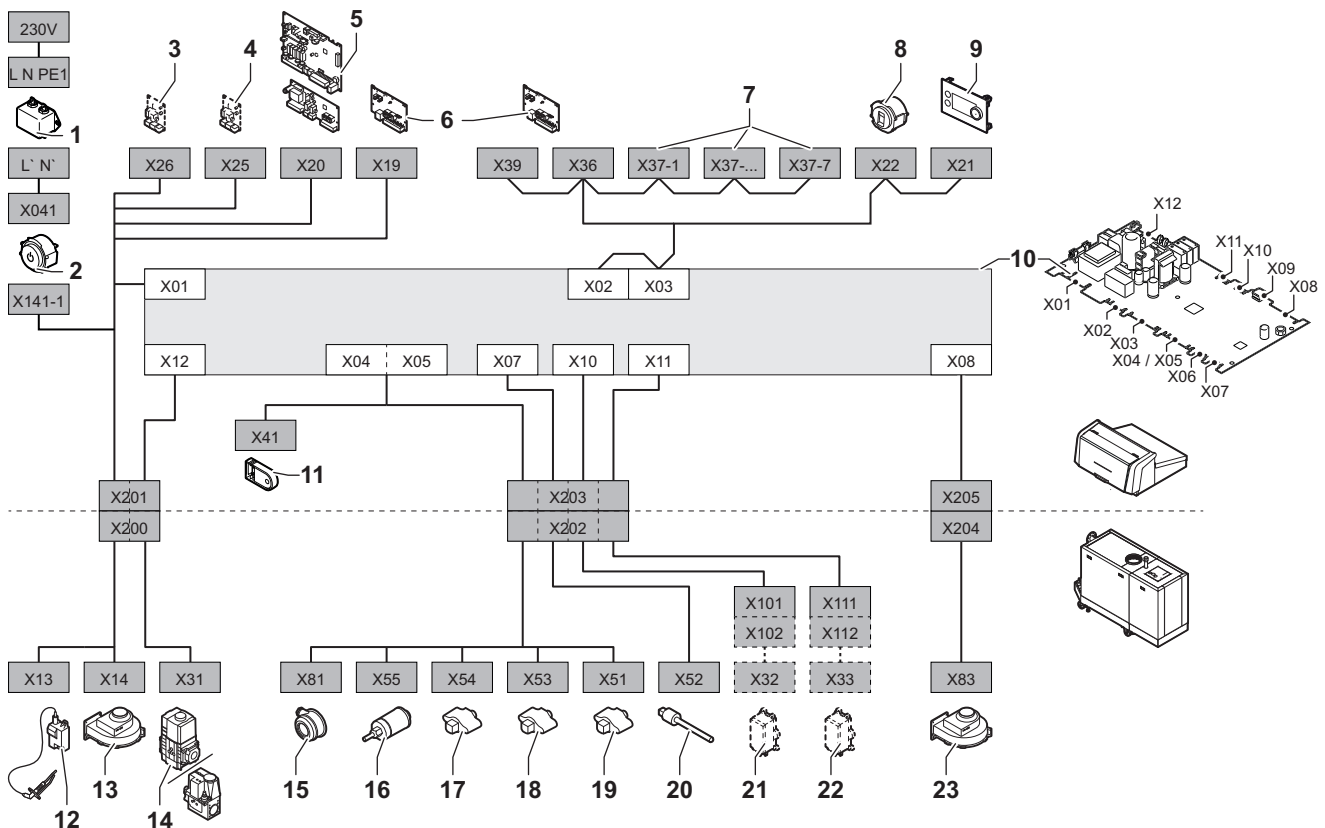
13.1.3 Factory test

Before leaving the factory, each boiler is optimally set and tested for:

- Electrical safety.
- Adjustment of O₂.
- Water tightness.
- Gas tightness.
- Parameter setting.

13.2 Electrical diagram

Fig.149 Electrical diagram



- | | |
|---|--------------------------------------|
| 1 Line filter | 8 Service connector |
| 2 On / off switch | 9 Control panel (HMI) |
| 3 SCB expansion board power supply | 10 Control unit CU-GH13 |
| 4 SCB expansion board power supply | 11 Configuration storage unit (CSU) |
| 5 SCB zone expansion board power supply | 12 Ignition transformer power supply |
| 6 CB-01 connection board power supply (X19) and CAN connections (X36 and X39) | 13 Fan power supply |
| 7 SCB expansion board CAN connections (X37-1 - X37-7) | 14 Gas control valve |
| | 15 Air pressure differential switch |
| | 16 Water pressure sensor |

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- 17 Return temperature sensor
 18 Heat exchanger temperature sensor
 19 Flow temperature sensor
 20 Flue gas temperature sensor

- 21 Valve proving system (VPS)
 22 Gas pressure switch (GPS)
 23 Fan PWM signal

13.3 Hydraulic resistance


Tab.134 Hydraulic resistance

Heat exchanger size	Hydraulic resistance in mbar										
	ΔT 10 °C	ΔT 11 °C	ΔT 12 °C	ΔT 13 °C	ΔT 14 °C	ΔT 15 °C	ΔT 16 °C	ΔT 17 °C	ΔT 18 °C	ΔT 19 °C	ΔT 20 °C
5 sections: C 340 280 C 640 560	452	374	314	267	231	201	177	156	140	125	113
6 sections: C 340 350 C 640 700	440	364	306	260	224	196	172	152	136	122	110
7 sections: C 340 430 C 640 860	480	397	333	284	245	213	188	166	148	133	120
8 sections: C 340 500 C 640 1000	440	364	306	260	224	196	172	152	136	122	110
9 sections: C 340 570 C 640 1140	500	413	347	296	255	222	195	173	154	139	125
10 sections: C 340 650 C 640 1300	520	430	361	308	265	231	203	180	160	144	130

13.4 C 340 technical data

Tab.135 General

C 340				280	350	430	500	570	650
Number of sections				5	6	7	8	9	10
Nominal output	P_n 80/60 °C	kW	min max ⁽¹⁾	51.1 260.7	64.8 326.7	78.6 394.8	91.5 461.0	105.5 530.4	118.7 600.9
Nominal output	P_{nc} 70/50 °C	kW	max ⁽¹⁾	262.0	328.0	396.4	462.4	532.0	602.1
Nominal output	P_{nc} 50/30 °C	kW	max ⁽¹⁾	278.8	350.3	424.5	497.1	573.5	651.5
Nominal input	Q_{nh} (H_i)	kW	min max ⁽¹⁾	54 266	68 333	82 402	95 469	109 539	122 610
Nominal input	Q_{nh} (H_s)	kW	min max ⁽¹⁾	60 295.6	75.6 370.0	91.1 446.7	105.6 521.1	121.1 598.9	135.6 677.8
Full load central heating efficiency	P_n (H_i) 80/60 °C	%		98.0	98.1	98.2	98.3	98.4	98.5
Full load central heating efficiency	P_n (H_i) 70/50 °C	%		98.5	98.5	98.6	98.6	98.7	98.7
Full load central heating efficiency	H_i 50/30 °C	%		104.8	105.2	105.6	106.0	106.4	106.8
Min load central heating efficiency	H_i Return temperature 60 °C	%		94.7	95.3	95.8	96.3	96.8	97.3
Part load central heating efficiency	P_n (H_i) Return temperature 30 °C	%		109.2	109.0	108.8	108.6	108.3	108.1
Full load central heating efficiency	P_n (H_s) 80/60 °C	%		88.2	88.3	88.4	88.5	88.6	88.7

C 340				280	350	430	500	570	650
Full load central heating efficiency	$P_n (H_s)$ 70/50 °C	%		88.7	88.7	88.7	88.7	88.8	88.8
Full load central heating efficiency	H_s 50/30 °C	%		94.3	94.7	95.0	95.4	95.8	96.1
Min load central heating efficiency	H_s Return temperature 60 °C	%		85.2	85.8	86.2	86.7	87.1	87.6
Part load central heating efficiency	$P_n (H_s)$ Return temperature 30 °C	%		98.3	98.1	97.9	97.7	97.5	97.3
(1)  Factory setting									

Tab.136 Gas and flue gas data

C 340				280	350	430	500	570	650
Gas inlet pressure	G20	mbar	min max	17 25	17 25	17 25	17 25	17 25	17 25
Gas inlet pressure	G25	mbar	min max	20 30	20 30	20 30	20 30	20 30	20 30
Gas consumption	G20	m ³ /h	min max	5.7 28.1	7.2 35.2	8.7 42.5	10.1 49.6	11.5 57.0	12.9 64.6
Gas consumption	G25	m ³ /h	min max	6.7 32.7	8.4 41.0	10.1 49.5	11.7 57.7	13.4 66.3	15.0 75.1
NOx annual emissions	G20 O ₂ = 0% (EN15502)	ppm		29	29	30	30	30	31
NOx annual emissions	G20 H_i (EN15502)	mg/kWh		47	48	49	50	51	52
NOx annual emissions	G20 H_s (EN15502)	mg/kWh		43	43	44	45	46	47
NOx weighted average emissions	G20 H_s	mg/kWh		45	-	-	-	-	48
CO annual emissions	G20 H_s	mg/kWh		11	-	-	-	-	13
Flue gas amount		kg/h	min max	91 448	115 561	138 677	160 790	184 907	205 1027
Flue gas temperature		°C	min max	30 60	30 61	30 64	30 63	30 66	30 65
Maximum counter pressure for flue gas outlet		Pa		130	120	130	150	150	150
Flue efficiency	(H_i) 80/60 °C Ambient temperature 20 °C	%		97.8	97.8	97.8	97.7	97.7	97.7
Flue losses	(H_i) 80/60 °C Ambient temperature 20 °C	%		2.2	2.2	2.2	2.3	2.3	2.3

Tab.137 Central heating circuit data

C 340				280	350	430	500	570	650
Water content		l		49	60	71	82	93	104
Water operating pressure		bar	min	0.8	0.8	0.8	0.8	0.8	0.8
Water operating pressure	<i>PMS</i>	bar	max	7.0	7.0	7.0	7.0	7.0	7.0
Water temperature		°C	max	110	110	110	110	110	110
Operating temperature		°C	max	90	90	90	90	90	90
Water flow at full load central heating	80/60 °C	m ³ /h	max	11.1	13.9	16.8	19.6	22.5	22.5
Water flow at full load central heating	70/50 °C	m ³ /h	max	11.3	14.1	17.1	19.9	22.9	25.9

C 340				280	350	430	500	570	650
Water flow at full load central heating	50/30 °C	m ³ /h	max	12.0	15.1	18.3	21.4	24.7	28.1
Water flow to ensure correct operation	50/30 °C	m ³ /h	min	2.5	3.2	3.8	4.4	5.1	5.7
Water side pressure drop	ΔT=40K	mbar		34	33	36	33	38	39
Water side pressure drop	ΔT=30K	mbar		60	59	64	59	67	69
Water side pressure drop	ΔT=20K	mbar		113	110	120	110	125	130
Water side pressure drop	ΔT=11K	mbar		374	364	397	364	413	435
Standby loss	With heat exchanger insulation kit	W %	(ΔT = 30K) ⁽¹⁾	464	479	493	508	522	537

(1) ΔT = (boiler temperature – ambient temperature).

Tab.138 Electrical data

C 340				280	350	430	500	570	650
Supply voltage		V~/Hz		230/50	230/50	230/50	230/50	230/50	230/50
Power consumption ⁽¹⁾	Max input CH	W	max	280	345	450	576	768	720
Power consumption ⁽¹⁾	Max input CH (<i>elmax</i>)	W	max	280	345	450	576	768	720
Power consumption ⁽¹⁾	Min input CH	W	min	52	57	64	72	68	60
Power consumption ⁽¹⁾	Min input CH (<i>elmin</i>)	W	min	60	62	76	86	89	80
Power consumption ⁽¹⁾	standby (<i>P_{SB}</i>)	W	min	10	9	10	10	10	10
Electrical protection index ⁽²⁾		IP		X1	X1	X1	X1	X1	X1
Fuse – main (power connector)		(AT)		10	10	10	10	10	10
Fuse – CU-GH13		(AT)		1.6	1.6	1.6	1.6	1.6	1.6
Fuse – CB-01		(AT)		6.3	6.3	6.3	6.3	6.3	6.3

(1) Without pump
(2) For a room-sealed system.

Tab.139 Other data

C 340				280	350	430	500	570	650
Total weight with packaging	Including control box	kg		436	470	505	572	608	645
Total weight without packaging	Including control box	kg		366	400	435	497	533	570
Weight of the split boiler	Heat exchanger side	kg		249	283	317	356	390	424
Average acoustic level at a distance of 1 metre from the boiler ⁽¹⁾	LpA	dB(A)		61.2	61.2	64.8	64.8	64.8	64.8
Average acoustic level ⁽²⁾	LwA	dB(A)		77.6	77.6	81.2	81.4	81.4	81.4
Ambient temperature		°C	max	40	40	40	40	40	40

(1) For a sealed installation
(2) For a sealed installation

Tab.140 Technical parameters

C 340				280	350	430	500	570	650
Condensing boiler				Yes	Yes	Yes	Yes	Yes	Yes
Low-temperature boiler ⁽¹⁾				No	No	No	No	No	No
B1 boiler				No	No	No	No	No	No
Cogeneration space heater				No	No	No	No	No	No

C 340			280	350	430	500	570	650
Combination heater			No	No	No	No	No	No
Rated heat output	<i>Prated</i>	kW	261	327	395	461	530	601
Useful heat output at nominal heat output and high temperature operation ⁽²⁾	P_4	kW	260.7	326.7	394.8	461.0	530.4	600.9
Useful heat output at 30% of rated heat output and low temperature regime ⁽¹⁾	P_1	kW	87.1	108.9	131.2	152.8	175.1	197.8
Seasonal space heating energy efficiency	η_s	%	-	-	-	-	-	-
Useful efficiency at rated heat output and high temperature regime ⁽²⁾	η_4	%	88.3	88.4	88.5	88.6	88.7	88.7
Useful efficiency at 30% of rated heat output and low temperature regime ⁽¹⁾	η_1	%	98.4	98.2	98.0	97.8	97.6	97.4
Auxiliary electricity consumption								
Full load	<i>elmax</i>	kW	0.280	0.345	0.450	0.576	0.768	0.720
Part load	<i>elmin</i>	kW	0.060	0.062	0.076	0.086	0.089	0.080
Standby mode	P_{SB}	kW	0.010	0.009	0.010	0.010	0.010	0.010
Other items								
Standby heat loss	P_{stby}	kW	0.571	0.591	0.611	0.630	0.650	0.670
Ignition burner power consumption	P_{ign}	kW	-	-	-	-	-	-
Annual energy consumption	Q_{HE}	kWh GJ	-	-	-	-	-	-
Sound power level, indoors	L_{WA}	dB	78	78	81	81	81	81
Emissions of nitrogen oxides	NO_x	mg/kWh	43	43	44	45	46	47
(1) Low temperature means 30 °C for condensing boilers, 37 °C for low temperature boilers and 50 °C (at heater inlet) for other heating appliances.								
(2) High temperature operation means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.								




See
Refer to the back cover for contact details.

13.5 C 640 technical data

Tab.141 General

C 640				560	700	860	1000	1140	1300
Number of sections				2x5	2x6	2x7	2x8	2x9	2x10
Nominal output	P_n 80/60 °C	kW	min max ⁽¹⁾	75.8 521.4	86.7 656.3	122.6 789.5	122.3 922.1	148.1 1080.6	165.4 1201.7
Nominal output	P_{nc} 70/50 °C	kW	max ⁽¹⁾	524.0	656.3	792.7	924.9	1064.0	1204.1
Nominal output	P_{nc} 50/30 °C	kW	max ⁽¹⁾	557.5	700.6	849.0	994.3	1147.0	1303.0
Nominal input	$Q_{nh}(H_i)$	kW	min max ⁽¹⁾	80 532	91 666	128 804	127 938	153 1078	170 1220
Nominal input	$Q_{nh}(H_s)$	kW	min max ⁽¹⁾	88.9 591.1	101.1 740.0	142.2 893.3	141.1 1042.2	170.0 1197.8	188.9 1355.6
Full load central heating efficiency	$P_n(H_i)$ 80/60 °C	%		98.0	98.1	98.2	98.3	98.4	98.5
Full load central heating efficiency	$P_n(H_i)$ 70/50 °C	%		98.5	98.5	98.6	98.6	98.7	98.7
Full load central heating efficiency	H_i 50/30 °C	%		104.8	105.2	105.6	106.0	106.4	106.8
Min load central heating efficiency	H_i Return temperature 60 °C	%		94.7	95.3	95.8	96.3	96.8	97.3
Part load central heating efficiency	$P_n(H_i)$ Return temperature 30 °C	%		109.2	109.0	108.8	108.6	108.3	108.1

C 640				560	700	860	1000	1140	1300
Full load central heating efficiency	$P_n(H_s)$ 80/60 °C	%		88.2	88.3	88.4	88.5	88.6	88.7
Full load central heating efficiency	$P_n(H_s)$ 70/50 °C	%		88.7	88.7	88.7	88.7	88.8	88.8
Full load central heating efficiency	H_s 50/30 °C	%		94.3	94.7	95.0	95.4	95.8	96.1
Min load central heating efficiency	H_s Return temperature 60 °C	%		85.2	85.8	86.2	86.7	87.1	87.6
Part load central heating efficiency	$P_n(H_s)$ Return temperature 30 °C	%		98.3	98.1	97.9	97.7	97.5	97.3
(1)  Factory setting									

Tab.142 Gas and flue gas data

C 640				560	700	860	1000	1140	1300
Gas inlet pressure	G20	mbar	min max	17 25	17 25	17 25	17 25	17 25	17 25
Gas inlet pressure	G25	mbar	min max	20 30	20 30	20 30	20 30	20 30	20 30
Gas consumption	G20	m ³ /h	min max	8.5 56.3	9.6 70.5	13.5 85.1	13.4 99.3	16.2 115.8	18.0 129.1
Gas consumption	G25	m ³ /h	min max	9.9 65.5	11.2 82.0	15.8 99.0	15.6 115.4	18.7 134.7	20.9 150.2
NOx annual emissions	G20 O ₂ = 0% (EN15502)	ppm		29	29	30	30	30	31
NOx annual emissions	G20 H_i (EN15502)	mg/kWh		47	48	49	50	51	52
NOx annual emissions	G20 H_s (EN15502)	mg/kWh		43	43	44	45	46	47
NOx weighted average emissions	G20 H_s	mg/kWh		45	-	-	-	-	48
CO annual emissions	G20 H_s	mg/kWh		11	-	-	-	-	13
Flue gas amount		kg/h	min max	135 896	153 1121	216 1354	214 1579	258 1842	286 2054
Flue gas temperature		°C	min max	30 60	30 61	30 64	30 63	30 66	30 65
Maximum counter pressure for flue gas outlet		Pa		130	120	130	150	150	150
Flue efficiency	(H_i) 80/60 °C Ambient temperature 20 °C	%		97.8	97.8	97.8	97.7	97.7	97.7
Flue losses	(H_i) 80/60 °C Ambient temperature 20 °C	%		2.2	2.2	2.2	2.3	2.3	2.3

Tab.143 Central heating circuit data

C 640				560	700	860	1000	1140	1300
Water content		l		98	120	142	164	186	208
Water operating pressure		bar	min	0.8	0.8	0.8	0.8	0.8	0.8
Water operating pressure	<i>PMS</i>	bar	max	7.0	7.0	7.0	7.0	7.0	7.0
Water temperature		°C	max	110	110	110	110	110	110
Operating temperature		°C	max	90	90	90	90	90	90
Water flow at full load central heating	80/60 °C	m ³ /h	max	22.2	27.8	33.6	39.2	45.1	51.0

C 640				560	700	860	1000	1140	1300
Water flow at full load central heating	70/50 °C	m ³ /h	max	22.6	28.3	34.1	39.8	45.8	51.9
Water flow at full load central heating	50/30 °C	m ³ /h	max	24.0	30.2	36.6	42.8	49.4	56.1
Water flow to ensure correct operation	50/30 °C	m ³ /h	min	3.7	4.3	6.0	5.9	7.1	7.9
Water side pressure drop	ΔT=40K, per heat exchanger	mbar		34	33	36	33	38	39
Water side pressure drop	ΔT=30K, per heat exchanger	mbar		60	59	64	59	67	69
Water side pressure drop	ΔT=20K, per heat exchanger	mbar		113	110	120	110	125	130
Water side pressure drop	ΔT=11K, per heat exchanger	mbar		374	364	397	364	413	435
Standby loss	With heat exchanger insulation kit	W	(ΔT = 30K) ⁽¹⁾	928	958	986	1016	1044	1074
(1) ΔT = (boiler temperature – ambient temperature).									

Tab.144 Electrical data

C 640				560	700	860	1000	1140	1300
Supply voltage		V~/Hz		230/50	230/50	230/50	230/50	230/50	230/50
Power consumption ⁽¹⁾	Max input CH	W	max	560	690	900	1152	1536	1440
Power consumption ⁽¹⁾	Max input CH (<i>elmax</i>)	W	max	560	690	900	1152	1536	1440
Power consumption ⁽¹⁾	Min input CH	W	min	120	124	160	166	178	148
Power consumption ⁽¹⁾	Min input CH (<i>elmin</i>)	W	min	120	124	152	172	178	160
Power consumption ⁽¹⁾	standby (<i>P_{SB}</i>)	W	min	20	18	20	20	20	20
Electrical protection index ⁽²⁾		IP		X1	X1	X1	X1	X1	X1
Fuse – main (power connector)		(AT)		10	10	10	10	10	10
Fuse – CU-GH13		(AT)		1.6	1.6	1.6	1.6	1.6	1.6
Fuse – CB-01		(AT)		6.3	6.3	6.3	6.3	6.3	6.3
(1) Without pump (2) For a room-sealed system.									

Tab.145 Other data

C 640				560	700	860	1000	1140	1300
Total weight with packaging	Including control box	kg		851	915	981	1111	1179	1249
Total weight without packaging	Including control box	kg		711	775	841	961	1029	1099
Weight of the split boiler	Heat exchanger side	kg		249	283	317	356	390	424
Average acoustic level at a distance of 1 metre from the boiler ⁽¹⁾	LpA	dB(A)		64.2	64.2	67.8	67.8	67.8	67.8
Average acoustic level ⁽²⁾	LwA	dB(A)		81.2	81.2	84.8	85.0	85.0	85.0
Ambient temperature		°C	max	40	40	40	40	40	40
(1) For a sealed installation (2) For a sealed installation									

Tab.146 Technical parameters

C 640			560	700	860	1000	1140	1300
Condensing boiler			Yes	Yes	Yes	Yes	Yes	Yes
Low-temperature boiler ⁽¹⁾			No	No	No	No	No	No
B1 boiler			No	No	No	No	No	No
Cogeneration space heater			No	No	No	No	No	No
Combination heater			No	No	No	No	No	No
Rated heat output	<i>P_{rated}</i>	kW	521	653	790	922	1061	1202
Useful heat output at nominal heat output and high temperature operation ⁽²⁾	<i>P₄</i>	kW	521.4	653.3	789.5	922.1	1060.8	1201.7
Useful heat output at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>P₁</i>	kW	174.3	217.8	262.4	305.6	350.3	395.6
Seasonal space heating energy efficiency	<i>η_s</i>	%	-	-	-	-	-	-
Useful efficiency at rated heat output and high temperature regime ⁽²⁾	<i>η₄</i>	%	88.3	88.4	88.5	88.6	88.7	88.7
Useful efficiency at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>η₁</i>	%	98.4	98.2	98.0	97.8	97.6	97.4
Auxiliary electricity consumption								
Full load	<i>el_{max}</i>	kW	0.560	0.690	0.900	1.152	1.536	1.440
Part load	<i>el_{min}</i>	kW	0.120	0.124	0.152	0.172	0.178	0.160
Standby mode	<i>P_{SB}</i>	kW	0.020	0.018	0.020	0.020	0.020	0.020
Other items								
Standby heat loss	<i>P_{stby}</i>	kW	1.142	1.182	1.222	1.260	1.300	1.340
Ignition burner power consumption	<i>P_{ign}</i>	kW	-	-	-	-	-	-
Annual energy consumption	<i>Q_{HE}</i>	kWh GJ	-	-	-	-	-	-
Sound power level, indoors	<i>L_{WA}</i>	dB	81	81	85	85	85	85
Emissions of nitrogen oxides	NO _x	mg/kWh	43	43	44	45	46	47
(1) Low temperature means 30 °C for condensing boilers, 37 °C for low temperature boilers and 50 °C (at heater inlet) for other heating appliances.								
(2) High temperature operation means 60 °C return temperature at heater inlet and 80 °C feed temperature at heater outlet.								

**See**

Refer to the back cover for contact details.

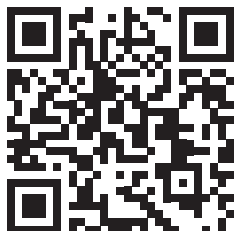
14 Spare parts

14.1 General

Only replace defective or worn boiler parts with original parts or recommended parts.

Information about available parts can be found via the website for professionals.

Fig.150 <http://pieces.dedietrich-thermique.fr>



MW-3000456-01



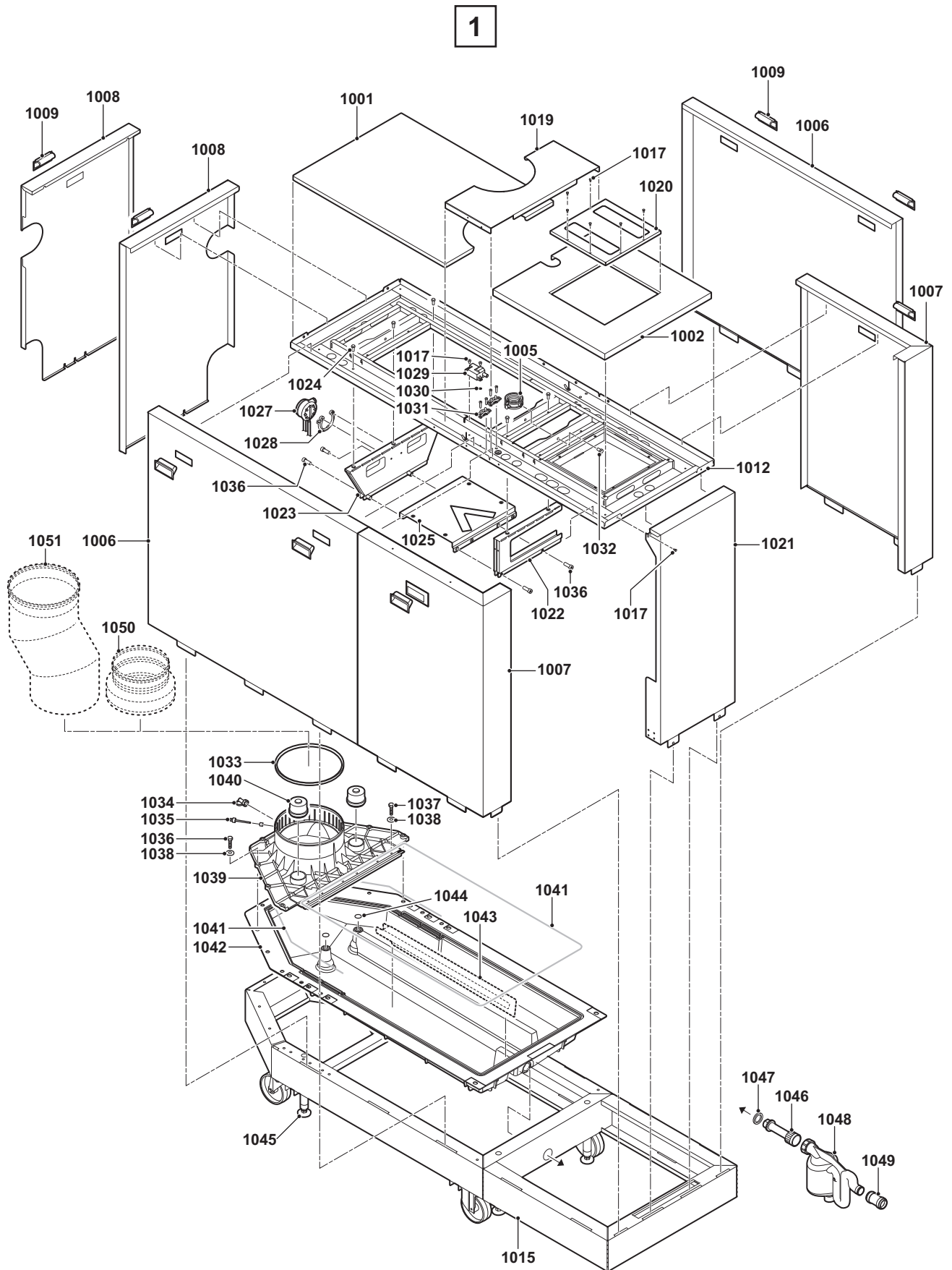
Important

When ordering a part, you must state the part number of the required part.

When ordering a part, you must state the part number that appears in the list beside the position number of the required part.

14.2 Exploded views

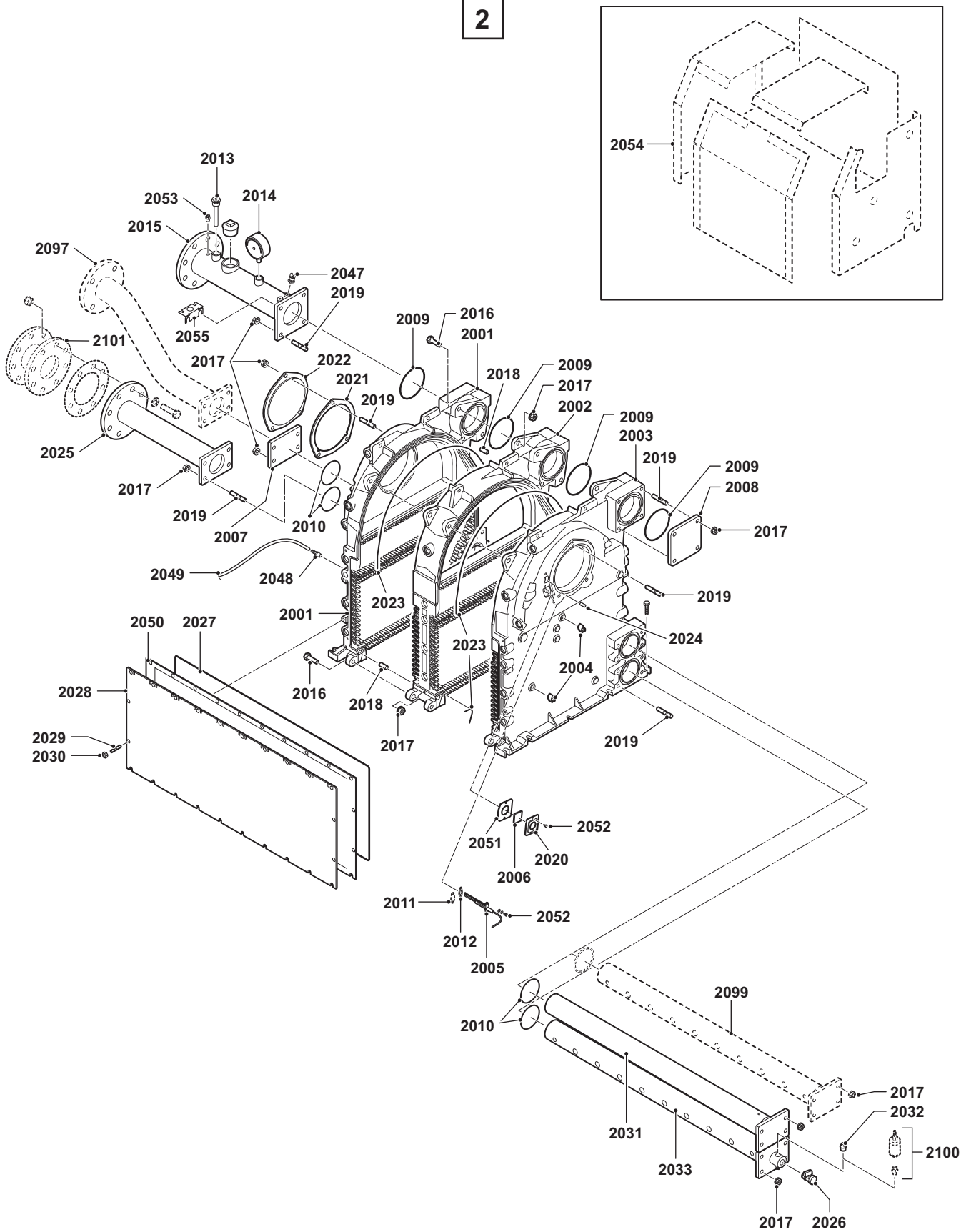
Fig.151 C 340 / C 640 - Casing



AD-4800024-01

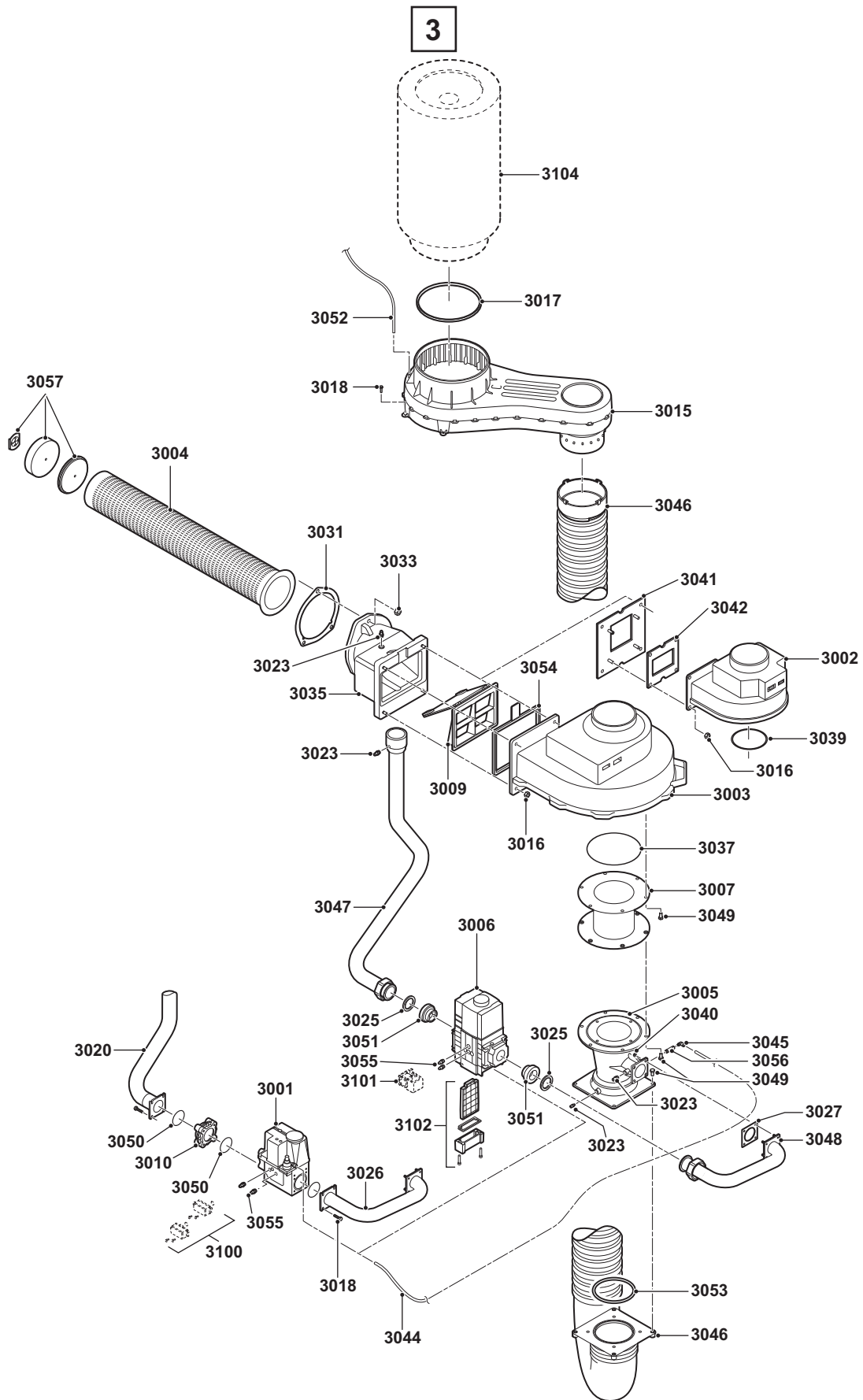
Fig.152 C 340 / C 640 - Heat exchanger and burner

2



AD-4800021-01

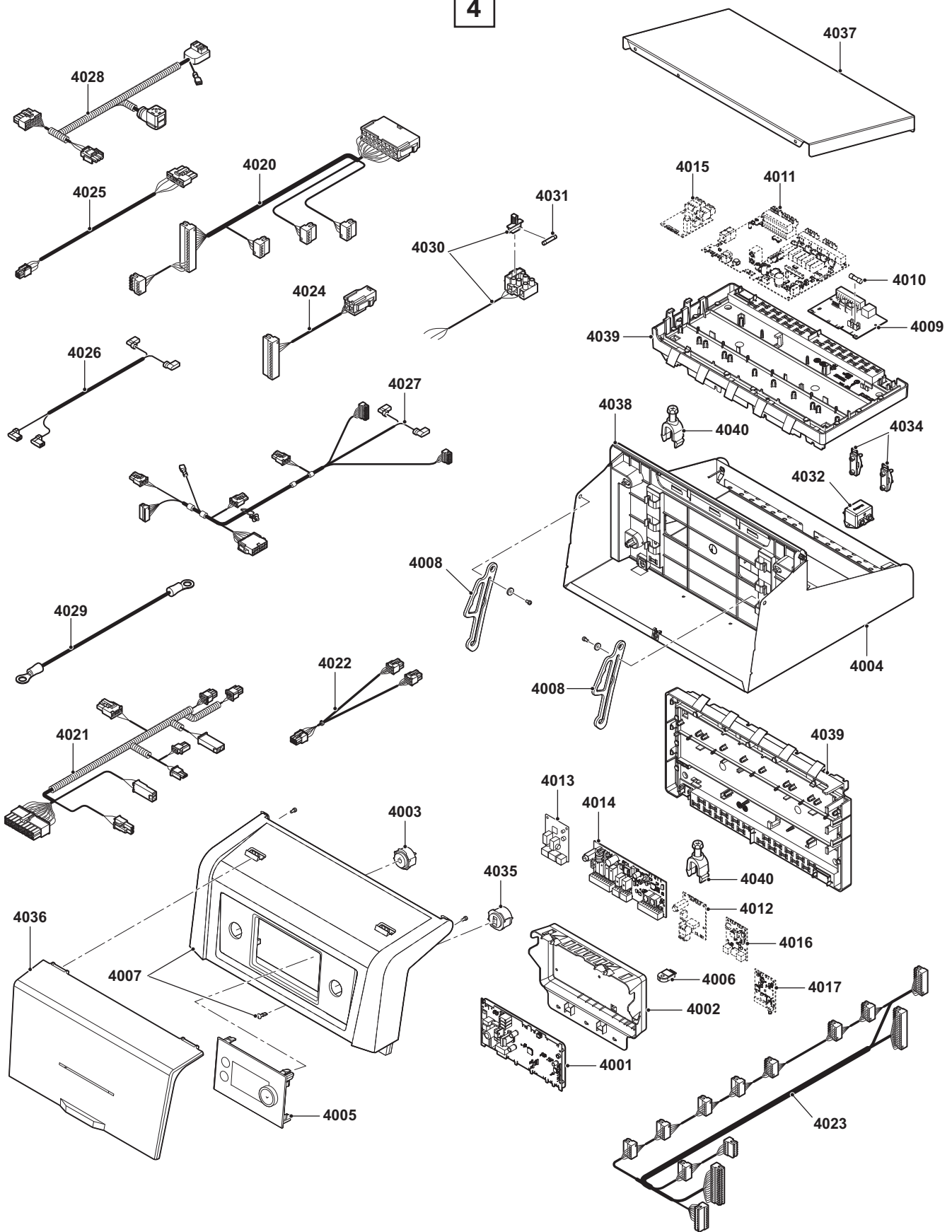
Fig.153 C 340 / C 640 - Gas / air



AD-4800019-01

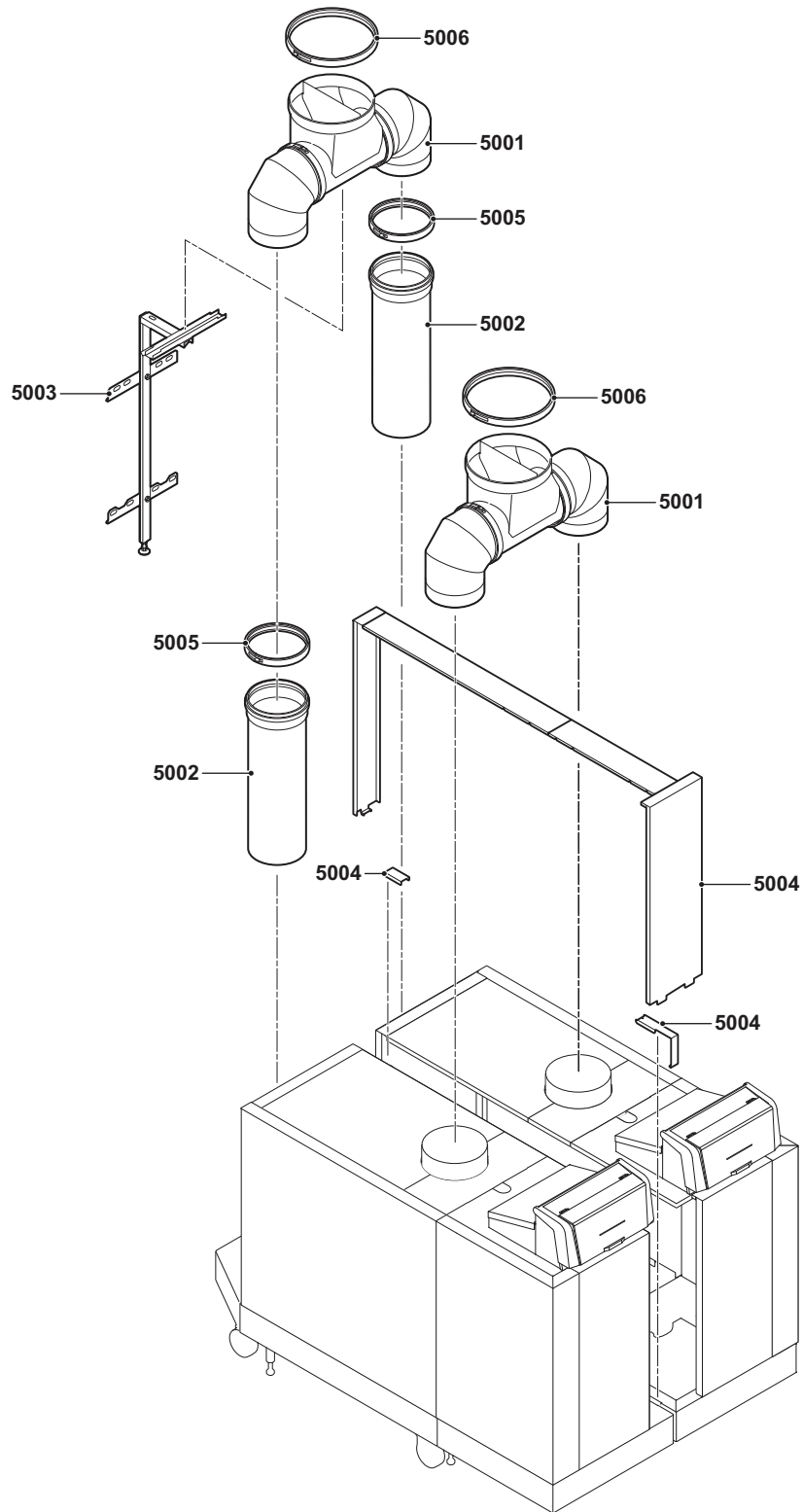
Fig.154 C 340 / C 640 - Control box

4



AD-4800018-01

Fig.155 C 640



14.3 Parts list

Tab.147 C 340 / C 640 - Casing

Item	Part number	Description
1001	7740930	Top cover 5-7 sections
1001	7740960	Top cover 8-10 sections
1002	7740961	Top cover front (outer part)
1005	S103242	Gas pipe bracket
1006	S103102	Side cover 5-7 sections (corner left side)
1006	S103103	Side cover 5-7 sections (corner right side)
1006	S103104	Side cover 5-7 sections (corner right side)
1006	S103101	Side cover 8-10 sections (corner right side)
1007	S103098	Side cover right
1007	S103099	Side cover left
1007	7741177	Side cover with logo right
1007	7741204	Side cover with logo left
1008	7740962	Back cover left
1008	7740963	Back cover right
1009	S100419	Cover handle
1012	S103152	Frame top 5-7 sections
1012	S103153	Frame top 8-10 sections
1015	S103144	Frame bottom 5-7 sections
1015	S103145	Frame bottom 8-10 sections
1017	S14254	Sheet metal screw 4.2 x 9.5 (20 pcs.)
1019	7741209	Top cover middle
1020	7741208	Top cover front
1021	7749333	Front cover
1021	7741211	Front cover
1022	S103154	Front frame support bracket
1023	S103155	Back frame support bracket
1024	S100570	Bolt M5 x 20 mm (10 pcs.)
1025	S103156	Air box bracket
1027	S103246	Pressure differential switch
1028	S103247	Pressure differential switch clip (5 pcs.)
1029	S103251	Ignition transformer
1030	S21473	Washer spring ring a4.3 (10 pcs.)
1031	S103315	Cable clamp (10 pcs.)
1032	S103248	Bolt M8 x 10 mm (5 pcs.)
1033	S103140	Flue gas outlet sealing ring \varnothing 250 mm (2 pcs.)
1034	S103244	Flue gas measuring point cap (2 pcs.)
1035	S59659	Tulle for flue gas pipe
1035	7740176	Flue gas temperature sensor
1036	S103250	Bolt M8 x 35 mm (10 pcs.)
1037	S103260	Bolt M8 x 20 mm (10 pcs.)
1038	S103249	Washer \varnothing 8.4 mm (10 pcs.)
1039	S103137	Flue gas discharge adapter 5+8 sections
1039	S103138	Flue gas discharge adapter 6+9 sections
1039	S103139	Flue gas discharge adapter 7+10 sections
1040	S103141	Sealing cap (2 pcs.)
1041	S101372	Sealing silicon \varnothing 10 mm (5 m)
1042	S103135	Condensate collector 5-7 sections
1042	S103136	Condensate collector 8-10 sections
1043	S103302	Condensate collector strip 6 sections

Item	Part number	Description
1044	S62713	O-ring \varnothing 20 x 2.5 mm (10 pcs.)
1045	S103243	Levelling foot (2 pcs.)
1046	S103143	Syphon connection
1047	S103261	Sealing ring 45 x 34 x 3 mm (10 pcs.)
1048	S103142	Syphon assembly
1049	7741277	Sleeve for syphon
1050	S103179	Adapter 250 - 200 mm
1050	7600367	Clamp band and gasket ring \varnothing 200 mm
1051	S103178	Flue gas adapter \varnothing 250 mm
1051	7600368	Clamp band and gasket ring \varnothing 250 mm

Tab.148 C 340 / C 640 - Heat exchanger and burner

Item	Part number	Description
2001	7741215	Section front
2002	7768023	Section middle (basic)
2002	7750343	Section middle (extended)
2003	7741214	Section end
2004	7623837	NTC sensor
2005	7774699	Ignition/ionisation electrode
2006	S45004	Inspection glass with gasket and screws
2007	S100430	Blanking flange return
2008	S100431	Blanking flange flow
2009	S103263	O-ring \varnothing 107 x 5 mm (4 pcs.)
2010	S103264	O-ring \varnothing 82 mm (8 pcs.)
2011	S103265	Cover plate
2012	S62105	Gasket for electrode (10 pcs.)
2013	S42649	Thermostat pocket 1/2"
2014	S103291	Pressure gauge 0-10 bar
2015	S103030	Flow pipe 5+8 sections
2015	S103031	Flow pipe 6+9 sections
2015	S103032	Flow pipe 7+10 sections
2016	7750414	Screw M12 x 40 mm (10pcs.)
2017	S103283	Flange nut M12 (10 pcs.)
2018	7750418	Dowel pin \varnothing 12H8 x 20 mm (10pcs.)
2019	7750419	Stud M12 x 35 mm (10pcs.)
2020	S54822	Mounting frame for inspection glass
2021	S103266	Gasket for cover plate/burner (2 pcs.)
2022	S57785	Cover plate for burner hole
2023	S100643	Silicone sealant
2024	S103267	Dowel for burner (10 pcs.)
2025	S103033	Connection piece return 5+8 sections
2025	S103034	Connection piece return 6+9 sections
2025	S103035	Connection piece return 7+10 sections
2026	S103304	Filling and drain cock 1/2"
2027	S101368	Sealing silicon red \varnothing 7 mm (5 m)
2028	S57720	Inspection hatch heat exchanger 5 sections
2028	S57721	Inspection hatch heat exchanger 6 sections
2028	S57722	Inspection hatch heat exchanger 7 sections
2028	S57723	Inspection hatch heat exchanger 8 sections
2028	S57724	Inspection hatch heat exchanger 9 sections
2028	S103148	Inspection hatch heat exchanger 10 sections
2029	S100549	Stud M8 x 20 mm (25 pcs.)

Item	Part number	Description
2030	S100556	Nut M8 (25 pcs.)
2031	S57738	2nd return water pipe blind 5 sections
2031	S57739	2nd return water pipe blind 6 sections
2031	S57740	2nd return water pipe blind 7 sections
2031	S57741	2nd return water pipe blind 8 sections
2031	S57742	2nd return water pipe blind 9 sections
2031	S103036	2nd return water pipe blind 10 sections
2032	S100532	Plug 3/8"
2033	S103269	Return water distribution pipe 5 sections
2033	S103270	Return water distribution pipe 6 sections
2033	S103271	Return water distribution pipe 7 sections
2033	S103272	Return water distribution pipe 8 sections
2033	S103273	Return water distribution pipe 9 sections
2033	S103038	Return water distribution pipe 10 sections
2047	7623837	NTC sensor
2048	S103188	Nipple incl. silicone tube 8x2
2049	S103274	Silicone tube 4/8 1300 mm
2050	S100668	Insulation inspection hatch heat exchanger 5 sections
2050	S100669	Insulation inspection hatch heat exchanger 6 sections
2050	S100670	Insulation inspection hatch heat exchanger 7 sections
2050	S100671	Insulation inspection hatch heat exchanger 8 sections
2050	S100672	Insulation inspection hatch heat exchanger 9 sections
2050	S103149	Insulation inspection hatch heat exchanger 10 sections
2051	S35458	Gasket for inspection glass (5 pcs.)
2052	S48950	Screw M4 x 10 mm (50 pcs.)
2053	S41601	Air bleed 1/8"
2054	S101806	Heat exchanger insulation 5 sections
2054	S101807	Heat exchanger insulation 6 sections
2054	S103307	Heat exchanger insulation 7 sections
2054	S103308	Heat exchanger insulation 8 sections
2054	S103309	Heat exchanger insulation 9 sections
2054	S103310	Heat exchanger insulation 10 sections
2055	7600397	Hose bracket
2097	S103039	2nd return pipe 5-8 sections
2097	S103040	2nd return pipe 6-9 sections
2097	S103041	2nd return pipe 7-10 sections
2099	S57743	2nd return distribution pipe 5 sections
2099	S57744	2nd return distribution pipe 6 sections
2099	S57745	2nd return distribution pipe 7 sections
2099	S57746	2nd return distribution pipe 8 sections
2099	S57747	2nd return distribution pipe 9 sections
2099	S103037	2nd return distribution pipe 10 sections
2100	7750082	Water pressure sensor
2101	S101775	Pump adapter

Tab.149 C 340 / C 640 - Gas / air

Item	Part number	Description
3001	S103275	Gas control valve 5 sections
3001	S103276	Gas control valve 6 sections
3001	S103277	Gas control valve 7-9 sections
3002	S57770	Fan 5-6 sections
3003	S103150	Fan 7-10 sections

Item	Part number	Description
3004	S100347	Burner 5 sections
3004	S103077	Burner 6 sections
3004	S100329	Burner 7 sections
3004	S100330	Burner 8 sections
3004	S100331	Burner 9 sections
3004	S103078	Burner 10 sections
3005	S57791	Venturi assembly 5 sections
3005	S57792	Venturi assembly 6 sections
3005	S57793	Venturi assembly 7-9 sections
3005	S103079	Venturi assembly 10 sections
3006	S103151	Gas control valve 10 sections
3007	S103073	Venturi - fan connecting piece 7-10 sections
3007	S103072	Venturi - fan connecting piece 5-6 sections
3009	S103071	Non return valve
3010	S103074	Gas filter HFVR
3015	S103075	Air box
3016	S44483	Nut M8 (10 pcs.)
3017	S103140	Flue gas outlet sealing ring ø 250 mm (2 pcs.)
3018	S100570	Bolt M5 x 20 mm (10 pcs.)
3020	S103042	Gas supply pipe 5-9 sections (left)
3020	S103043	Gas supply pipe 5-9 sections (right)
3023	S103279	Pressure test nipple 1/8" (2 pcs.) incl. loctite
3025	S103280	Gasket ø 56 x 42 x 2 (5 pcs.)
3026	S103047	Gas supply pipe 5+6 sections bottom (right)
3026	S103048	Gas supply pipe 7-9 sections bottom (left)
3026	S103049	Gas supply pipe 7-9 sections bottom (right)
3026	S103046	Gas supply pipe 5+6 sections bottom (left)
3027	S103281	Gasket for venturi (2 pcs.)
3031	S103266	Gasket for cover plate/burner (2 pcs.)
3033	S103283	Flange nut M12 (10 pcs.)
3035	S103070	Mixing adapter
3037	S103284	O-ring ø 180 x 3,5 mm (5 pcs.)
3039	S103285	O-ring ø 111 x 4 mm (2 pcs.)
3040	S46687	Flange nut M12 (10 pcs.)
3041	S103286	Mounting plate fan
3042	S59650	Gasket for fan
3044	S103288	Hose ø 6 x 1 mm (0.6m)
3045	S103289	Coupling 90 degrees M5 x 6 mm (5 pcs.)
3046	S103076	Flexible hose complete
3047	S103044	Gas supply pipe 10 sections (left)
3047	S103045	Gas supply pipe 10 sections (right)
3048	S103051	Gas supply pipe 10 sections bottom (right)
3048	S103050	Gas supply pipe 10 sections bottom (left)
3049	S59141	Screw M5 x 18 mm (15 pcs.)
3049	S15524	Bolt M8 x 16 mm (10 pcs.)
3050	S100619	O-ring ø 52.39 x 3.53 (5 pcs.)
3051	S103290	Adapter 2" x 1.½" (2 pcs.)
3052	S47170	Silicone hose ø 4 mm i/d 8 mm (1 m)
3053	S103287	O-ring ø 130 x 3.5 mm (2 pcs.)
3054	S103330	Gasket non return valve (5 pcs.)
3055	S103356	Pressure test nipple 1/8" (2 pcs.)
3056	S103357	Adapter 1/8" M5 (2 pcs.) incl. loctite

Item	Part number	Description
3057	S100490	Burner insulation repair set
3100	7745411	Valve proving system (VPS) 5-9 sections
3100	7745414	Gas pressure switch (GPS) 5-9 sections
3101	7745412	Valve proving system (VPS) 10 sections
3101	7745415	Gas pressure switch (GPS) 10 sections
3102	S103292	Gas filter 10 sections
3104	59212	Air inlet filter ø 325 mm

Tab.150 C 340 / C 640 - Control box

Item	Part number	Description
4001	7750337	Control unit CU-GH13
4002	7750339	Box for control unit CU-GH13
4003	7654846	Power switch grey
4004	7749564	Control box base grey
4005	7768028	Control panel Diematic Evolution
4006	7633327	Configuration storage unit CSU-01
4007	7765800	Instrument panel front with HMI cover
4008	7656853	Controlbox slider (2 pcs.)
4009	7635885	Connection PCB CB-01
4010	S6778	Glass fuse 6.30 Amp Slow (10 pcs.)
4011	7774497	Expansion PCB SCB-10
4012	7750338	Expansion PCB SCB-13
4013	7635886	Expansion PCB SCB-01
4015	7663076	Expansion PCB SCB-09
4016	7721982	Expansion PCB GTW-08
4017	7733655	Expansion PCB GTW-30
4020	7741274	Cable harness sensors - control box side
4021	7741275	Cable harness sensors - boiler side
4022	7600363	Cable BUS split
4023	7741276	Cable harness 24V
4024	7750330	Cable harness PWM-fan - control box side
4025	7750332	Cable harness PWM-fan - boiler side
4026	7750333	Cable power supply 230 VAC
4027	7750334	Cable harness 230 VAC - control box side
4028	7750335	Cable harness 230 VAC - boiler side
4029	7750336	Ground cable
4030	7764001	Cable line filter
4031	7604728	Glass fuse 10 Amp Slow (5 pcs.)
4032	7765622	Line filter
4034	S103315	Cable clamp (10 pcs.)
4035	7654847	RJ-11 connector grey
4036	7657320	HMI cover
4037	7749569	Control box cover grey
4038	7750118	Frame dark grey
4039	7749571	Installer box
4040	7612543	Strain relief set

Tab.151 C 640

Item	Part number	Description
5001	S103128	Junction for air inlet or flue gas outlet
5002	S103119	Flue gas pipe ø 250 mm l= 890 mm

Item	Part number	Description
5003	S103318	Flue gas pipe support
5004	S103313	Cover set 5-7 sections
5004	S103314	Cover set 8-10 sections
5005	7600368	Clamp band and gasket ring ø 250 mm
5006	7600369	Clamp band + gasket ring ø 350 mm

Tab.152 C 340 / C 640 - Other

Item	Part number	Description
-	S100316	Outdoor temperature sensor
-	S103294	Maintenance kit
-	S58823	Cleaning knife 560 mm

15 Appendix

15.1 ErP information

15.1.1 Product fiche

Tab.153 Product fiche

De Dietrich - C 340		280	350	430	500	570	650
Seasonal space heating energy efficiency class		-	-	-	-	-	-
Rated heat output (<i>Prated or Psup</i>)	kW	258	323	391	455	523	592
Seasonal space heating energy efficiency	%	-	-	-	-	-	-
Annual energy consumption	GJ	-	-	-	-	-	-
Sound power level L_{WA} indoors	dB	78	78	81	81	81	81

Tab.154 Product fiche

De Dietrich - C 640		560	700	860	1000	1140	1300
Seasonal space heating energy efficiency class		-	-	-	-	-	-
Rated heat output (<i>Prated or Psup</i>)	kW	516	647	781	911	1062	1185
Seasonal space heating energy efficiency	%	-	-	-	-	-	-
Annual energy consumption	GJ	-	-	-	-	-	-
Sound power level L_{WA} indoors	dB	81	81	85	85	85	85



See

For specific precautions in relation to assembly, installation and maintenance: Safety, page 6

15.2 EC declaration of conformity

The appliance complies with the standard type described in the EC declaration of conformity. It has been manufactured and commissioned in accordance with European directives.

The original declaration of conformity is available from the manufacturer.

16 Parameter index

Tab.155 Parameter index

Code	Display text	Menu path
AP001	BL function	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP002	Manual Heat Demand	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
AP004	Hydr Valve Wait Time	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
AP006	Min. water pressure	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP008	Release wait time	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP009	Service hours	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP010	Service notification	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP011	Service hours mains	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP016	CH function on	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP017	DHW function on	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP026	Setpoint manual HD	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
AP056	Outdoor sensor	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP056	Outdoor sensor	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP063	Max CH flow setpoint	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
AP073	Summer Winter	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP073	Summer Winter	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP074	Force summer mode	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP074	Force summer mode	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP075	Season cross-over	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP079	Building Inertia	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP079	Building Inertia	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP080	Frost min out temp	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters
AP080	Frost min out temp	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP083	Enable master func	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
AP091	Outside Sens. Source	≡ > Installation Setup > SCB-10 > Outdoor temperature > Parameters, counters, signals > Parameters

Code	Display text	Menu path
AP091	Outside Sens. Source	≡ > Installation Setup > CU-GH13 > Outdoor temperature > Parameters, counters, signals > Parameters
AP102	Boiler Pump function	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
AP111	Can line length	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
AP112	Can line length	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
BP001	Type Buffer Tank	≡ > Installation Setup > SCB-10 > Disabled buffer tank > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP002	Buff Tank HC Strat.	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP003	Stp Buffertank Heat	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP004	Setp Buffertank Cool	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP005	Buffer Tank Slope	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP013	BufferTankTcalOffset	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP014	BufferTank HystStart	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP015	Buf.Tank post run	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
BP019	BufferTank HystStop	≡ > Installation Setup > SCB-10 > Pass.buff.tank 1sens > Parameters, counters, signals > Parameters ≡ > Installation Setup > SCB-10 > Pass.buff.tank 2sens > Parameters, counters, signals > Parameters
CP000	MaxZoneTFlowSetpoint	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP000	MaxZoneTFlowSetpoint	≡ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP001	MaxZoneTFlowSetpoint	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP002	MaxZoneTFlowSetpoint	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP003	MaxZoneTFlowSetpoint	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP004	MaxZoneTFlowSetpoint	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP010	Tflow setpoint zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP010	Tflow setpoint zone	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP011	Tflow setpoint zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP012	Tflow setpoint zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP013	Tflow setpoint zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP014	Tflow setpoint zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP020	Zone Function	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP020	Zone Function	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP021	Zone Function	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP022	Zone Function	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP023	Zone Function	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP024	Zone Function	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP030	Bandwidth Mix. Valve	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP031	Bandwidth Mix. Valve	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP032	Bandwidth Mix. Valve	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP033	Bandwidth Mix. Valve	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP034	Bandwidth Mix. Valve	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP040	Postrun zone pump	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP040	Postrun zone pump	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP041	Postrun zone pump	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP042	Postrun zone pump	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP043	Postrun zone pump	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP044	Postrun zone pump	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP050	Mixing Valve shift	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP051	Mixing Valve shift	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP052	Mixing Valve shift	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP053	Mixing Valve shift	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP054	Mixing Valve shift	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP060	RoomT. Holiday	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP060	RoomT. Holiday	≡ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP061	RoomT. Holiday	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP062	RoomT. Holiday	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP063	RoomT. Holiday	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP064	RoomT. Holiday	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP070	MaxReducedRoomT.Lim	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP070	MaxReducedRoomT.Lim	≡ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP071	MaxReducedRoomT.Lim	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP072	MaxReducedRoomT.Lim	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP073	MaxReducedRoomT.Lim	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP074	MaxReducedRoomT.Lim	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP080	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP080	User T.Room Activity	≡ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP081	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP081	User T.Room Activity	≡ > Installation Setup > CU-GH13 > Direct zone > Parameters, counters, signals > Parameters
CP082	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP082	User T.Room Activity	≡ > Installation Setup > CU-GH13 > Direct zone > Parameters, counters, signals > Parameters
CP083	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP083	User T.Room Activity	≡ > Installation Setup > CU-GH13 > Direct zone > Parameters, counters, signals > Parameters
CP084	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP084	User T.Room Activity	≡ > Installation Setup > CU-GH13 > Direct zone > Parameters, counters, signals > Parameters
CP085	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP085	User T.Room Activity	≡ > Installation Setup > CU-GH13 > Direct zone > Parameters, counters, signals > Parameters
CP086	User T.Room Activity	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP200	Manu ZoneRoomTempSet	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP201	Manu ZoneRoomTempSet	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP202	Manu ZoneRoomTempSet	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP203	Manu ZoneRoomTempSet	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP204	Manu ZoneRoomTempSet	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP210	Zone HCZP Comfort	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP210	Zone HCZP Comfort	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP211	Zone HCZP Comfort	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP212	Zone HCZP Comfort	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP213	Zone HCZP Comfort	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP214	Zone HCZP Comfort	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP220	Zone HCZP Reduced	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP220	Zone HCZP Reduced	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP221	Zone HCZP Reduced	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP222	Zone HCZP Reduced	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP223	Zone HCZP Reduced	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP224	Zone HCZP Reduced	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP230	Zone Heating Curve	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP230	Zone Heating Curve	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP231	Zone Heating Curve	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP232	Zone Heating Curve	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP233	Zone Heating Curve	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP234	Zone Heating Curve	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP240	ZoneRoomUnitInfl	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP240	ZoneRoomUnitInfl	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP241	ZoneRoomUnitInfl	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP242	ZoneRoomUnitInfl	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP243	ZoneRoomUnitInfl	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP244	ZoneRoomUnitInfl	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP250	CalSondeAmbZone	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP270	Floor Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP271	Floor Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP272	Floor Cool. setpoint	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP273	Floor Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP274	Floor Cool. setpoint	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP280	Fan Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP281	Fan Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP282	Fan Cool. setpoint	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP283	Fan Cool. setpoint	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP284	Fan Cool. setpoint	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP290	ConfigZonePumpOut	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP290	ConfigZonePumpOut	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP291	ConfigZonePumpOut	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP292	ConfigZonePumpOut	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP293	ConfigZonePumpOut	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP294	ConfigZonePumpOut	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP320	OperatingZoneMode	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP320	OperatingZoneMode	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP321	OperatingZoneMode	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP322	OperatingZoneMode	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP323	OperatingZoneMode	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP324	OperatingZoneMode	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP330	Opening Valve Time	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP331	Opening Valve Time	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP332	Opening Valve Time	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP333	Opening Valve Time	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP334	Opening Valve Time	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP340	TypeReducedNightMode	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP340	TypeReducedNightMode	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP341	TypeReducedNightMode	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP342	TypeReducedNightMode	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP343	TypeReducedNightMode	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP344	TypeReducedNightMode	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP350	ComfortZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP351	ComfortZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP352	ComfortZoneDHWtemp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP353	ComfortZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP354	ComfortZoneDHWtemp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP360	ReducedZoneDHWtemp.	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP361	ReducedZoneDHWtemp.	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP362	ReducedZoneDHWtemp.	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP363	ReducedZoneDHWtemp.	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP364	ReducedZoneDHWtemp.	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP370	Holiday ZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP371	Holiday ZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP372	Holiday ZoneDHWtemp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP373	Holiday ZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP374	Holiday ZoneDHWtemp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP380	Antileg ZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP381	Antileg ZoneDHWtemp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP382	Antileg ZoneDHWtemp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP383	Antileg ZoneDHWtemp	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP384	Antileg ZoneDHWtemp	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP390	Start Antileg	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP391	Start Antileg	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP392	Start Antileg	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP393	Start Antileg	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP394	Start Antileg	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP400	Zone Dhwh antileg.	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP401	Zone Dhwh antileg.	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP402	Zone Dhwh antileg.	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP403	Zone Dhwh antileg.	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP404	Zone Dhwh antileg.	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP420	ZoneDwhHysterisis	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP421	ZoneDwhHysterisis	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP422	ZoneDwhHysterisis	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP423	ZoneDwhHysterisis	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP424	ZoneDwhHysterisis	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP430	Optimise DHW Zone	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP431	Optimise DHW Zone	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP432	Optimise DHW Zone	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP433	Optimise DHW Zone	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP434	Optimise DHW Zone	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP440	Release DHW zone	≡ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP441	Release DHW zone	≡ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP442	Release DHW zone	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP443	Release DHW zone	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP444	Release DHW zone	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP460	DHW Zone Priority	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP461	DHW Zone Priority	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP462	DHW Zone Priority	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP463	DHW Zone Priority	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP464	DHW Zone Priority	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP470	Zone screed drying	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP470	Zone screed drying	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP471	Zone screed drying	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP472	Zone screed drying	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP473	Zone screed drying	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP474	Zone screed drying	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP480	ScreedStartTemp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP480	ScreedStartTemp	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP481	ScreedStartTemp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP482	ScreedStartTemp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP483	ScreedStartTemp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP484	ScreedStartTemp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP490	ScreedStopTemp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP490	ScreedStopTemp	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP491	ScreedStopTemp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP492	ScreedStopTemp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP493	ScreedStopTemp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP494	ScreedStopTemp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP500	Tflow Sensor Enable	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP501	Tflow Sensor Enable	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP502	Tflow Sensor Enable	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP503	Tflow Sensor Enable	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP504	Tflow Sensor Enable	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP510	Temporary Room Setp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP510	Temporary Room Setp	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP511	Temporary Room Setp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP512	Temporary Room Setp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP513	Temporary Room Setp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP514	Temporary Room Setp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP520	Zone Power setpoint	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP520	Zone Power setpoint	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP521	Zone Power setpoint	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP522	Zone Power setpoint	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP523	Zone Power setpoint	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP524	Zone Power setpoint	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP530	Zone PWM Pump speed	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP530	Zone PWM Pump speed	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP531	Zone PWM Pump speed	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP532	Zone PWM Pump speed	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP533	Zone PWM Pump speed	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP534	Zone PWM Pump speed	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP540	Zone TSwimmPool setp	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP541	Zone TSwimmPool setp	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP542	Zone TSwimmPool setp	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP543	Zone TSwimmPool setp	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP544	Zone TSwimmPool setp	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP550	Zone, fire place	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP550	Zone, fire place	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP551	Zone, fire place	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP552	Zone, fire place	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP553	Zone, fire place	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP554	Zone, fire place	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP560	ZoneConfigDHWAntileg	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP561	ZoneConfigDHWAntileg	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP562	ZoneConfigDHWAntileg	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP563	ZoneConfigDHWAntileg	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP564	ZoneConfigDHWAntileg	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP570	ZoneTimeProg Select	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP570	ZoneTimeProg Select	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP571	ZoneTimeProg Select	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP572	ZoneTimeProg Select	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP573	ZoneTimeProg Select	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP574	ZoneTimeProg Select	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP600	ProcessHeat Spt zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP601	ProcessHeat Spt zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP602	ProcessHeat Spt zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP603	ProcessHeat Spt zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP604	ProcessHeat Spt zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP610	Hys PH on per zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP611	Hys PH on per zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP612	Hys PH on per zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP613	Hys PH on per zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP614	Hys PH on per zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP620	Hys PH off per zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP621	Hys PH off per zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP622	Hys PH off per zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP623	Hys PH off per zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP624	Hys PH off per zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP630	StartdayAntileg zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP631	StartdayAntileg zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP632	StartdayAntileg zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP633	StartdayAntileg zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP634	StartdayAntileg zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP640	OTH LogicLev contact	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP640	OTH LogicLev contact	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP641	OTH LogicLev contact	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP642	OTH LogicLev contact	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP643	OTH LogicLev contact	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP644	OTH LogicLev contact	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP650	Cool stop Room T.	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP651	Cool stop Room T.	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP652	Cool stop Room T.	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP653	Cool stop Room T.	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP654	Cool stop Room T.	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP660	Icon display zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP660	Icon display zone	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP661	Icon display zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP662	Icon display zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP663	Icon display zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP664	Icon display zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP680	ConfPairing RU Zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP680	ConfPairing RU Zone	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP681	ConfPairing RU Zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP682	ConfPairing RU Zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP683	ConfPairing RU Zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP684	ConfPairing RU Zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP690	RevContactOTH cool	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP691	RevContactOTH cool	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP692	RevContactOTH cool	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP693	RevContactOTH cool	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP694	RevContactOTH cool	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP700	DHW Cal Offset zone	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP701	DHW Cal Offset zone	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP702	DHW Cal Offset zone	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP703	DHW Cal Offset zone	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP704	DHW Cal Offset zone	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP710	Zone IncTFlowStp DHW	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP711	Zone IncTFlowStp DHW	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP712	Zone IncTFlowStp DHW	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP713	Zone IncTFlowStp DHW	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP714	Zone IncTFlowStp DHW	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP720	Zone, IncFT ProcHeat	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP721	Zone, IncFT ProcHeat	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP722	Zone, IncFT ProcHeat	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP723	Zone, IncFT ProcHeat	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP724	Zone, IncFT ProcHeat	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP730	Zone Heat up speed	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP730	Zone Heat up speed	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP731	Zone Heat up speed	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP732	Zone Heat up speed	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP733	Zone Heat up speed	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP734	Zone Heat up speed	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP740	Zone cool down speed	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP740	Zone cool down speed	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP741	Zone cool down speed	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP742	Zone cool down speed	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP743	Zone cool down speed	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP744	Zone cool down speed	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP750	MaxZone Preheat time	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP750	MaxZone Preheat time	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP751	MaxZone Preheat time	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP752	MaxZone Preheat time	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP753	MaxZone Preheat time	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP754	MaxZone Preheat time	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP760	Zone DHW TAS enable	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP761	Zone DHW TAS enable	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP762	Zone DHW TAS enable	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP763	Zone DHW TAS enable	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP764	Zone DHW TAS enable	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP770	Zone Buffered	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP771	Zone Buffered	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters
CP772	Zone Buffered	☰ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP773	Zone Buffered	☰ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP774	Zone Buffered	☰ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
CP780	Control strategy	☰ > Installation Setup > SCB-10 > CIRCA 1 > Parameters, counters, signals > Parameters
CP780	Control strategy	☰ > Installation Setup > CU-GH13 > CIRCA > Parameters, counters, signals > Parameters
CP781	Control strategy	☰ > Installation Setup > SCB-10 > CIRCB 1 > Parameters, counters, signals > Parameters

Code	Display text	Menu path
CP782	Control strategy	≡ > Installation Setup > SCB-10 > DHW 1 > Parameters, counters, signals > Parameters
CP783	Control strategy	≡ > Installation Setup > SCB-10 > CIRCC 1 > Parameters, counters, signals > Parameters
CP784	Control strategy	≡ > Installation Setup > SCB-10 > AUX 1 > Parameters, counters, signals > Parameters
DP003	Abs. max fan DHW	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
DP010	Hysteresis DHW	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
DP011	Stop offset DHW	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
DP020	Postrun DHW pump/3wv	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
DP140	DHW load type	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
EP014	SCB func. 10V PWMin	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP014	SCB func. 10V PWMin	≡ > Installation Setup > CU-GH13 > 0-10 volt input > Parameters, counters, signals > Parameters
EP018	Status relay func.	≡ > Installation Setup > SCB-10 > Status information > Parameters, counters, signals > Parameters
EP018	Status relay func.	≡ > Installation Setup > SCB-01 > Status information > Parameters, counters, signals > Parameters
EP019	Status relay func.	≡ > Installation Setup > SCB-01 > Status information > Parameters, counters, signals > Parameters
EP028	Function 10V-PWM	≡ > Installation Setup > SCB-01 > 0-10 volt or PWM out > Parameters, counters, signals > Parameters
EP029	Source 10V-PWM	≡ > Installation Setup > SCB-01 > 0-10 volt or PWM out > Parameters, counters, signals > Parameters
EP030	Min Setp Temp 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP031	Max Setp Temp 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP032	Min Setp Power 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP033	Max Setp Power 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP034	Min Setp Volt 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP035	Max Setp Volt 0-10V	≡ > Installation Setup > SCB-10 > 0-10 volt input > Parameters, counters, signals > Parameters
EP036	Sensor input config	≡ > Installation Setup > SCB-10 > Analogue input > Parameters, counters, signals > Adv. Parameters
EP037	Sensor input config	≡ > Installation Setup > SCB-10 > Analogue input > Parameters, counters, signals > Adv. Parameters
EP046	Digital input config	≡ > Installation Setup > SCB-10 > Digital Input > Parameters, counters, signals > Parameters
EP056	Logic level Digi In	≡ > Installation Setup > SCB-10 > Digital Input > Parameters, counters, signals > Parameters
EP066	Req FlowSetp digi In	≡ > Installation Setup > SCB-10 > Digital Input > Parameters, counters, signals > Parameters
EP076	Req PowSetp digi In	≡ > Installation Setup > SCB-10 > Digital Input > Parameters, counters, signals > Parameters

Code	Display text	Menu path
GP007	Fan RPM Max CH	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
GP008	Fan RPM Min	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters ≡ > Installation Setup > CU-GH13 > GVC Pneumatic > Parameters, counters, signals > Parameters
GP009	Fan RPM Start	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters ≡ > Installation Setup > CU-GH13 > GVC Pneumatic > Parameters, counters, signals > Parameters
GP010	GPS Check	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
GP017	Max power	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
GP019	Pre Purge Time	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters ≡ > Installation Setup > CU-GH13 > GVC Pneumatic > Parameters, counters, signals > Adv. Parameters
GP021	Temp diff Modulating	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
GP022	Tfa Filter Tau	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
GP030	Flue Gas Temp Max	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
GP042	Fan RPM Max	≡ > Installation Setup > CU-GH13 > GVC Pneumatic > Parameters, counters, signals > Adv. Parameters
GP050	Power Min	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
GP082	Chimney over DHW	≡ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
NP001	CascProdMan Hys.High	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
NP002	CascProdMan Hys.Low	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
NP003	CascProdManErrRange	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
NP004	CascPFactorAlgoTemp	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Adv. Parameters
NP005	Cascade Permutation	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP006	Cascade Type	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP007	CascTOutsideHeatParl	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP008	CascTPostRunGenePump	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP009	CascInterStageTime	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP010	CascTOutsideCoolPara	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP011	CascadeTypeAlgo	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP012	CascPowerRiseTime	≡ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters

Code	Display text	Menu path
NP013	CascForceStop Pprim	☰ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
NP014	Cascade Mode	☰ > Installation Setup > SCB-10 > Cascade management B > Parameters, counters, signals > Parameters
PP007	Min anti-cycle time	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
PP012	Stabilization time	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
PP015	CH Pump postrun time	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
PP016	Max. CH pump speed	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
PP017	ChPumpSpeedMaxFactor	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Adv. Parameters
PP018	Min CH pump speed	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters
PP023	CH Hysteresis	☰ > Installation Setup > CU-GH13 > Gas fired appliance > Parameters, counters, signals > Parameters

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