



Installation and user manual
High-efficiency wall-hung gas boiler

Quinta Ace 30 - 45 - 55 - 65 - 90 - 115

Dear Customer,

Thank you very much for buying this appliance.

Please read through the manual carefully before using the product, and keep it in a safe place for later reference. In order to ensure continued safe and efficient operation we recommend that the product is serviced regularly. Our service and customer service organisation can assist with this.

We hope you enjoy years of problem-free operation with the product.

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1 Safety

1.1 General safety instructions

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.

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. Report any leaks immediately.
5. Evacuate the property.
6. Contact a qualified installer.



Danger

If you smell flue gases:

1. Switch the boiler off.
2. Open the windows.
3. Report any leaks immediately.
4. Evacuate the property.
5. 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 condensation drain must not be changed 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 and CO alarms at suitable places in your home.



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 (BS 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 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 **Remeha**.

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 General

This manual describes the installation, use and maintenance of the Quinta Ace boiler. This manual is part of all the documentation supplied with the boiler.

2.2 Additional documentation

The following documentation is available in addition to this manual:

- Water quality instructions

2.3 Symbols used

2.3.1 Symbols used in the manual

This manual uses various danger levels to draw attention to special instructions. We do this to improve user safety, to prevent problems and to guarantee correct operation of the appliance.

**Danger**

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

**Danger of electric shock**

Risk of electric shock.

**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

The Quinta Ace boiler is delivered with a combination of the control panel, control unit and extension PCB. The contents of this manual are based on the following software and navigation information:

Tab.1 Software and navigation information

	Name visible in display	Software version
Boiler Quinta Ace	CU-GH08	1.4
Control panel HMI T-control	MK3	1.29

3.1 General description

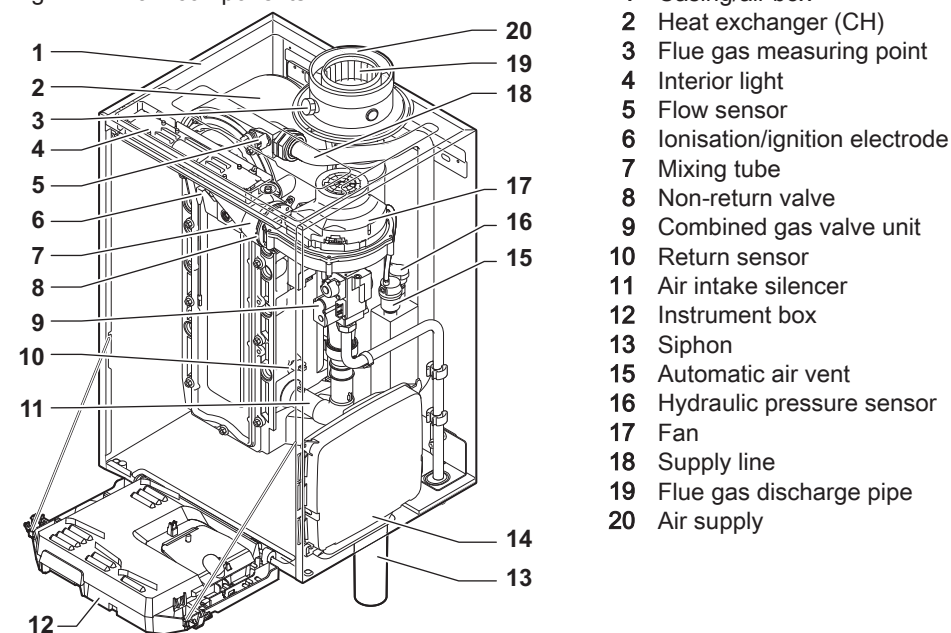
The Quinta Ace boiler is a high-efficiency wall-hung gas boiler with the following properties:

- High-efficiency heating.
- Limited emissions of polluting substances.
- Ideal choice for cascade configurations.

All Quinta Ace boiler models are supplied without a pump, but with the required pump connection cables.

3.2 Main components

Fig.1 Main components



AD-400070-01

3.2.1 Circulating pump

A circulation pump is not supplied with this boiler. Take the boiler resistance and system resistance into account when selecting a pump.



Caution

The pump may have a maximum input of 200 W. Use an auxiliary relay for a pump with greater power.



See

Technical data, page 65

If possible, install the pump directly under the boiler on the return connection.

4 Before installation

4.1 Installation regulations



Warning

The installer must be registered with Gas Safe and have the correct ACS qualifications.

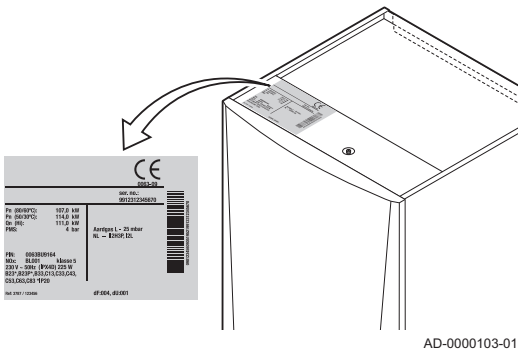


Important

Practical guidelines - see the latest version.

4.2 Choice of the location

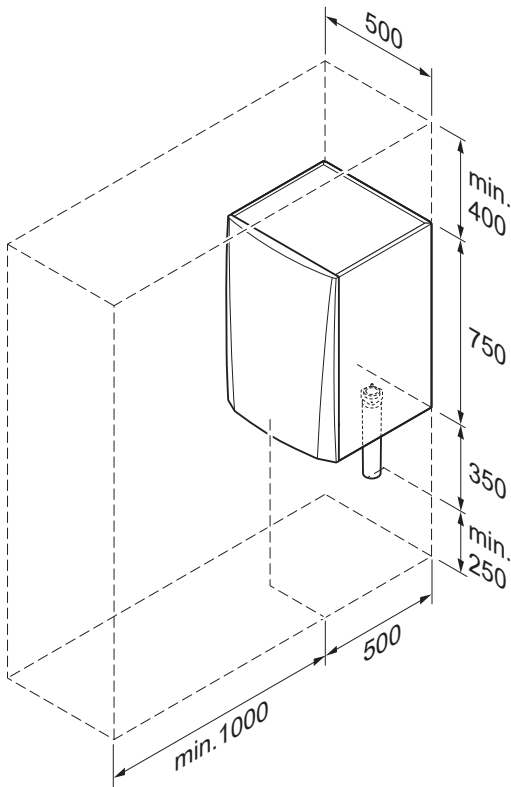
Fig.2 Position of type plate



4.2.1 Type plate

The type plate on top of the boiler features the boiler serial number and important boiler specifications, for example the model and unit category. The factory setting codes CN 1 and CN 2 are also stated on the type plate.

Fig.3 Installation area



4.2.2 Location of the boiler

- Use the guidelines and the required installation space as a basis for determining the correct place to install the boiler.
- When determining the correct installation space, take account of the permitted position of the flue gas discharge and/or air supply outlet.
- Ensure that there is sufficient space around the boiler for good access and ease of maintenance.



Danger

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



Warning

- Fix the appliance to a solid wall capable of bearing the weight of the boiler when full of water and fully equipped.



Caution

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

4.3 Ventilation

The installation must comply with BS 5540 (part 1 + 2), BS 6644 and IGEM/UP/10.

4.4 Requirements for CH water connections

- When fitting service shut-off valves, position the filling and drain valve, the expansion vessel and the safety valve between the shut-off valve and the boiler.
- Carry out any welding work required at a safe distance from the boiler or before the boiler is fitted.
- For filling and tapping the boiler, install a filling and drain valve in the system, preferably in the return.
- Install an expansion vessel in the return pipe.
- When installing open-vented systems, the cold feed and expansion tank heights must comply with the requirements laid down in the Health and Safety Executive publication PM5. The Quinta Ace boilers require a minimum static height of 3 m (Quinta Ace 30/45/55/65/90 or 5 m (115).

4.5 Requirements for condensate drain line

- The siphon must always be filled with water. This prevents flue gases from entering the room.
- Never seal the condensate drain.
- The drain pipe must slope down at least 30 mm per metre, the maximum horizontal length is 5 metres.
- Condensed water must not be discharged into a gutter.

4.6 Requirements for gas connection

- Before starting work on the gas pipes, turn off the main gas tap.
- 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.
- Remove dirt and dust from the gas pipe.
- Always perform welding work at a sufficient distance from the boiler.
- We recommend installing a gas filter to prevent clogging of the gas valve unit.

4.7 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 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

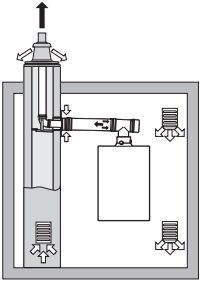
4.8 Requirements for the flue gas outlet system

4.8.1 Classification

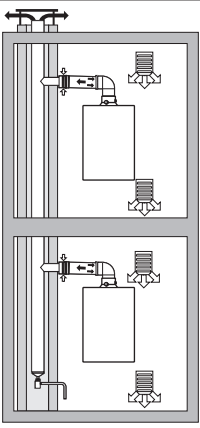
i Important

- 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.

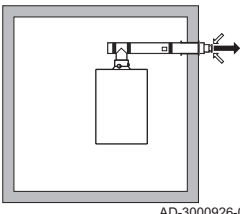
Tab.2 Type of flue gas connection: B_{23P}

Principle	Description	Permitted manufacturers ⁽¹⁾
 <p>AD-3000924-01</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 IP rating of the boiler is lowered to IP20. 	<p>Connection material and roof terminal:</p> <ul style="list-style-type: none"> • Centrotherm • Cox Geelen • Muelink & Grol • Natalini • Poujoulat • Ubbink
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

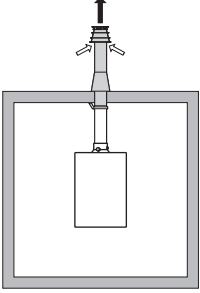
Tab.3 Type of flue gas connection: B₃₃

Principle	Description	Permitted manufacturers ⁽¹⁾
 <p>AD-3000925-01</p>	<p>Room-ventilated version</p> <ul style="list-style-type: none"> • Without down-draught diverter. • Joint flue gas discharge via the roof, with guaranteed natural draft (at all times underpressure in the joint discharge duct). • Flue gas discharge rinsed with air, air from the installation area (special construction). • The IP rating of the boiler is lowered to IP20. 	<p>Connection material:</p> <ul style="list-style-type: none"> • Centrotherm • Cox Geelen • Muelink & Grol • Natalini • Poujoulat • Ubbink
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

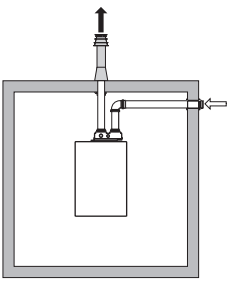
Tab.4 Type of flue gas connection: C₁₃

Principle	Description	Permitted manufacturers ⁽¹⁾
 <p>AD-3000926-01</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 not permitted. 	<p>Outside wall terminal and connection material:</p> <ul style="list-style-type: none"> • Remeha, combined with connection material from Muelink & Grol • Cox Geelen • Muelink & Grol
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

Tab.5 Type of flue gas connection: C₃₃

Principle	Description	Permitted manufacturers ⁽¹⁾
 <p>AD-3000927-01</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"> • Centrotherm • Cox Geelen • Muelink & Grol • Natalini • Poujoulat • Ubbink
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

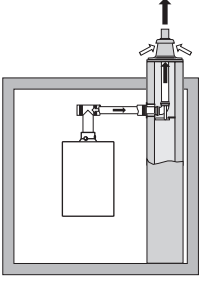
Tab.6 Type of flue gas connection: C₅₃

Principle	Description	Permitted manufacturers ⁽¹⁾
 <p>AD-3000929-02</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"> • Centrotherm • Cox Geelen • Muelink & Grol • Natalini • Poujoulat • Ubbink
<p>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

Tab.7 Type of flue gas connection: C₆₃

Principle	Description	Permitted manufacturers ⁽¹⁾
	<p>This type of unit is supplied by the manufacturer 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>(1) The material must also satisfy the material property requirements from the relevant chapter.</p>		

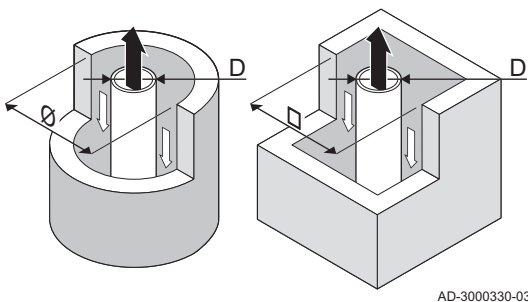
Tab.8 Type of flue gas connection: C₉₃

Principle ⁽¹⁾	Description	Permitted manufacturers ⁽²⁾
 <p style="text-align: center;">AD-3000931-01</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"> • Centrotherm • Cox Geelen • Muelink & Grol • Natalini • Poujoulat • Ubbink
<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.9 Minimum dimensions of shaft or duct C₉₃

Version (D)	Without air supply		With air supply	
Rigid 80 mm	Ø 130 mm	□ 130 x 130 mm	Ø 140 mm	□ 130 x 130 mm
Rigid 100 mm	Ø 160 mm	□ 160 x 160 mm	Ø 170 mm	□ 160 x 160 mm
Rigid 150 mm	Ø 200 mm	□ 200 x 200 mm	Ø 220 mm	□ 220 x 220 mm
Concentric 80/125 mm	Ø 145 mm	□ 145 x 145 mm	Ø 145 mm	□ 145 x 145 mm
Concentric 100/150 mm	Ø 170 mm	□ 170 x 170 mm	Ø 170 mm	□ 170 x 170 mm
Concentric 150/200 mm	Ø 270 mm	□ 270 x 270 mm	-	-

Fig.4 Minimum dimensions of shaft or duct C₉₃



Important

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



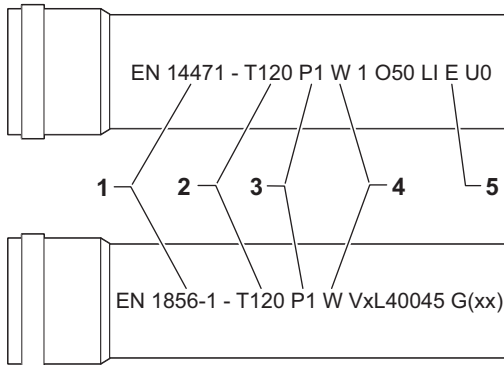
Important

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

4.8.2 Material

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

Fig.5 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.
- Please contact us to discuss using flexible flue gas outlet material.

Tab.10 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				

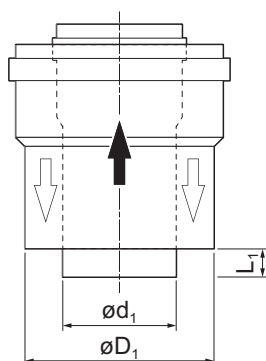
4.8.3 Dimensions of flue gas outlet pipe

**Warning**

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

- d_1 External dimensions of flue gas outlet pipe
- D_1 External dimensions of air supply pipe
- L_1 Length difference between flue gas outlet pipe and air supply pipe

Fig.6 Dimensions of concentric connection



AD-3000962-01

Tab.11 Dimensions of pipe

	d_1 (min-max)	D_1 (min-max)	$L_1^{(1)}$ (min-max)
80/125 mm	79.3 - 80.3 mm	124 - 125.5 mm	0 - 15 mm
100/150 mm	99.3 - 100.3 mm	149 - 151 mm	0 - 15 mm
(1) Shorten the inner pipe if the length difference is too great.			

4.8.4 Length of the air and flue gas pipes

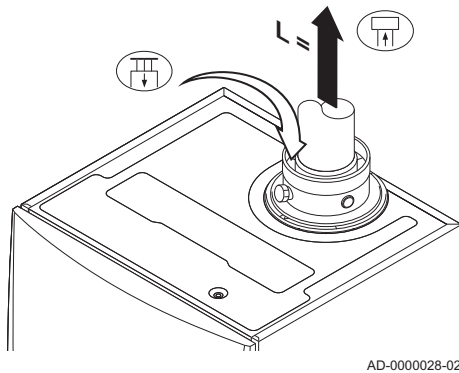
The maximum length of the flue gas outlet and air supply channel vary depending on the appliance type; consult the relevant chapter for the correct lengths.

**Important**

- When using bends, the maximum chimney length (L) must be shortened according to the reduction table.
- For adaptation to another diameter use approved transitions
- The boiler is also suitable for longer chimney lengths and diameters other than those specified in the tables. Contact us for more information.

■ Room-ventilated model (B_{23P}, B₃₃)

Fig.7 Room-ventilated version



- L Length of the flue gas outlet channel to roof feed-through
- Connecting the flue gas outlet
- Connecting the air supply

With a room-ventilated version, the air supply opening stays open; only the flue gas outlet opening is connected. This will ensure that the boiler obtains the necessary combustion air directly from the installation area.



Caution

- The air supply opening must stay open.
- The installation area must be equipped with the necessary air supply openings. These openings must not be obstructed or shut off.

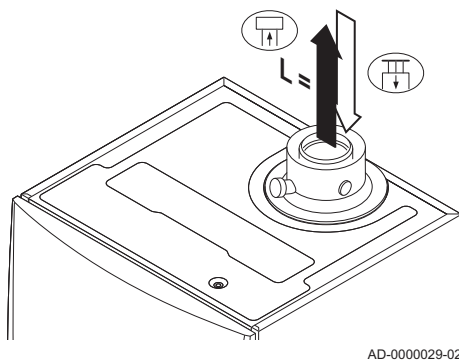
Tab.12 Maximum length (L)

Diameter ⁽¹⁾	80 mm	90 mm	100 mm	110 mm	130 mm
Quinta Ace 30	33 m	40 m	40 m	40 m ⁽¹⁾	40 m ⁽¹⁾
Quinta Ace 45	39 m	40 m ⁽¹⁾	40 m ⁽¹⁾	40 m ⁽¹⁾	40 m ⁽¹⁾
Quinta Ace 55	16 m	26 m	39 m	40 m ⁽¹⁾	40 m ⁽¹⁾
Quinta Ace 65	11 m	17 m	26 m	40 m	40 m ⁽¹⁾
Quinta Ace 90	10 m	16 m	24 m	40 m	40 m ⁽¹⁾
Quinta Ace 115	8 m	13 m	19 m	38 m	40 m ⁽¹⁾

(1) Retaining the maximum chimney length it is possible to use an extra 5 x 90° or 10 x 45° elbows.

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

Fig.8 Room-sealed version (concentric)



- Connecting the flue gas outlet
- Connecting the air supply

With a room-sealed version, both the flue gas outlet and the air supply openings are connected (concentrically).

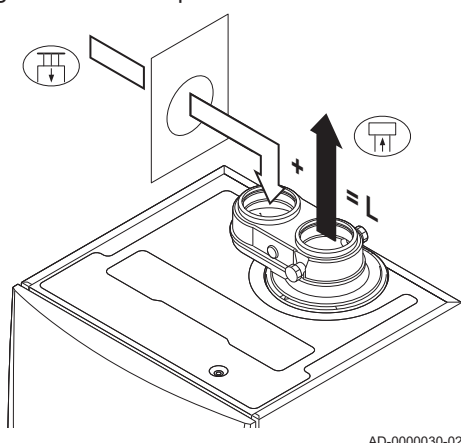
Tab.13 Maximum chimney length (L)



Diameter ⁽¹⁾	80/125 mm	100/150 mm
Quinta Ace 30	20 m	20 m
Quinta Ace 45	20 m	20 m ⁽¹⁾
Quinta Ace 55	8 m	20 m ⁽¹⁾
Quinta Ace 65	4 m	18 m
Quinta Ace 90	4 m	17 m
Quinta Ace 115	-	13 m

(1) Retaining the maximum chimney length it is possible to use an extra 5 x 90° or 10 x 45° elbows.

■ Connection in different pressure areas (C₅₃)

Fig.9 Different pressure areas



- L Total length of the flue gas outlet and air supply duct
-  Connecting the flue gas outlet
-  Connecting the air supply

An 80/80 or 100/100 mm flue gas adapter (accessory) must be fitted for this connection.

Combustion air supply and flue gas discharge are possible in different pressure areas and semi-CLV systems, with the exception of the coastal area. The maximum permitted height difference between the combustion air supply and the flue gas outlet is 36 m.

Tab.14 Maximum length (L)

Diameter ⁽¹⁾	80 mm	90 mm	100 mm	110 mm	130 mm
Quinta Ace 30	17 m	29 m	40 m	40 m ⁽¹⁾	40 m ⁽¹⁾
Quinta Ace 45	29 m	40 m	40 m ⁽¹⁾	40 m ⁽¹⁾	40 m ⁽¹⁾
Quinta Ace 55	9 m	17 m	27 m	40 m	40 m ⁽¹⁾
Quinta Ace 65	5 m	10 m	16 m	34 m	40 m ⁽¹⁾
Quinta Ace 90	-	-	17 m	37 m	40 m ⁽¹⁾
Quinta Ace 115	-	-	14 m	31 m	40 m ⁽¹⁾

(1) Retaining the maximum chimney length it is possible to use an extra 5 x 90° or 10 x 45° elbows.

■ Reduction table

Tab.15 Pipe reduction for each element used (parallel)

Diameter	80 mm	100 mm
45° bend	1.2 m	1.4 m
90° bend	4.0 m	4.9 m

Tab.16 Pipe reduction for each element used (concentric)

Diameter	80/125 mm	100/150 mm
45° bend	1.0 m	1.0 m
90° bend	2.0 m	2.0 m

4.8.5 Additional guidelines

■ 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.

4.9 Water quality and water treatment

The quality of the CH water must comply with certain limit values, which can be found in our **Water quality instructions**. The guidelines in these instructions must be followed at all times.

In many cases, the boiler and central heating system can be filled with normal tap water and water treatment will not be necessary.

4.10 Water flow in process heat

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).

For this application, adjust the following parameters:

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



Important

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

4.11 Increasing standard ΔT setting

In some cases, the standard ΔT setting of the boiler will need to be increased, for example in systems with:

- underfloor heating
- air heating
- district heating
- a heat pump.

Tab.17 Increasing standard ΔT setting

Boiler type	ΔT setting
Quinta Ace 30 Quinta Ace 45 Quinta Ace 55 Quinta Ace 65 Quinta Ace 90	The standard ΔT setting of 25K can be increased to a maximum of 40K.
Quinta Ace 115	The standard ΔT setting of 20K can be increased to a maximum of 35K.

Increase the ΔT setting using parameter **GP021**. When increasing the ΔT , the control unit limits the flow temperature to a maximum of 80 °C.

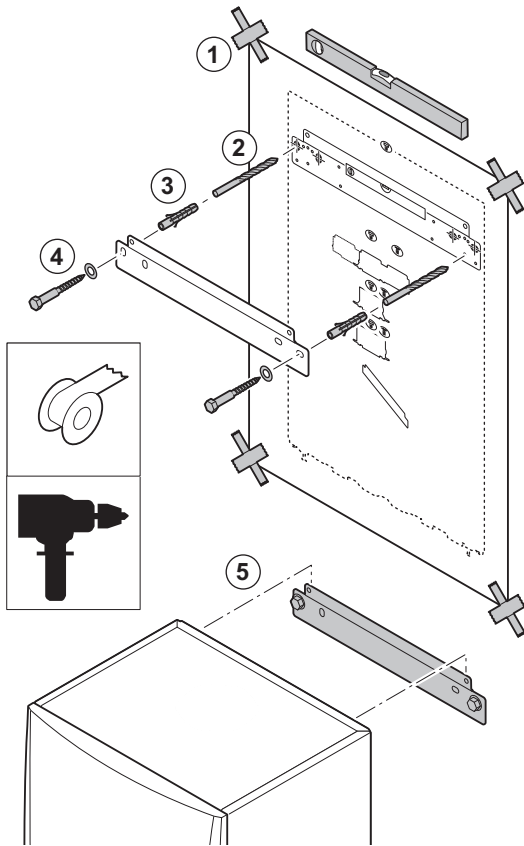
i Important

- With the increased ΔT setting, the Service Tool will use a sub-status to indicate that the limited flow temperature is active.
- Prevent the boiler from locking out and ensure a minimal water circulation by using a bypass or low-loss header.
- If a PWM-controlled central heating-pump is controlled by the boiler control unit, set parameter **PP014** to **2**.

5 Installation

5.1 Positioning the boiler

Fig.10 Mounting the boiler



The fitting bracket on the back of the casing can be used to mount the boiler directly on the suspension bracket.

The boiler is supplied with a mounting template.

1. Attach the mounting template of the boiler to the wall using adhesive tape.



Warning

- Use a level to check whether the mounting template is hanging perfectly horizontally.
- Protect the boiler against building dust and cover the connection points for the flue gas outlet and air supply. Only remove this cover to assemble the relevant connections.

2. Drill 2 holes of \varnothing 10 mm.



Important

The extra fixing holes in the suspension bracket are intended for use in the event that one of the two holes is not suitable for the correct fastening of the plug.

3. Fit the \varnothing 10 mm plugs.
4. Remove the mounting template.
5. Attach the suspension bracket to the wall with the \varnothing 10 mm bolts supplied.
6. Mount the boiler on the suspension bracket.

5.2 Rinsing the system

The installation must be cleaned and flushed in accordance with BS 7593 (2006) and BSRIA BG 33/2014.

Before a new boiler can be connected to an existing or new system, the entire system must be thoroughly cleaned and flushed. This step is absolutely crucial. The flushing helps to remove residue from the installation process (weld slag, fixing products etc.) and accumulations of dirt (silt, mud etc.)



Important

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

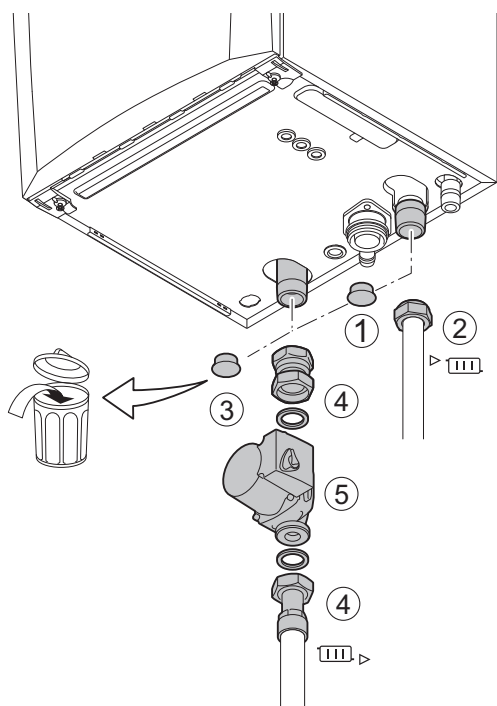


Important



Due to the presence of an aluminium heat exchanger, suitable chemicals and the correct use of these chemicals should be discussed with specialist water treatment companies.

5.3 Connecting the heating circuit

Fig.11 Connecting the CH flow and CH return



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1. Remove the dust cap from the CH flow connection  at the bottom of the boiler.
2. Fit the outlet pipe for CH water to the CH flow connection.
3. Remove the dust cap from the CH return connection  at the bottom of the boiler.
4. Fit the inlet pipe for CH water to the CH return connection.
5. Install the pump in the CH return pipe (if applicable).



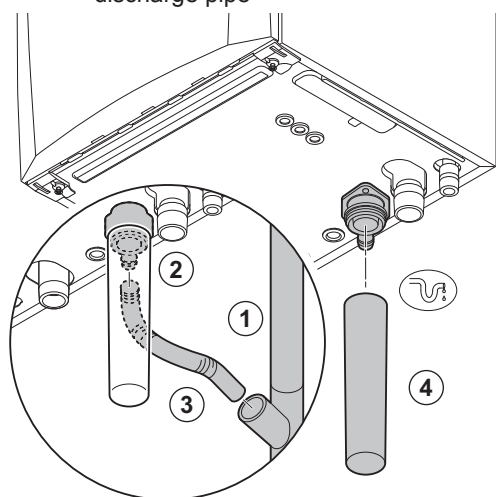
For more information, see

Connecting the PWM pump, page 29

Connecting the standard pump, page 30

5.4 Connecting the condensate discharge pipe

Fig.12 Connecting the condensate discharge pipe

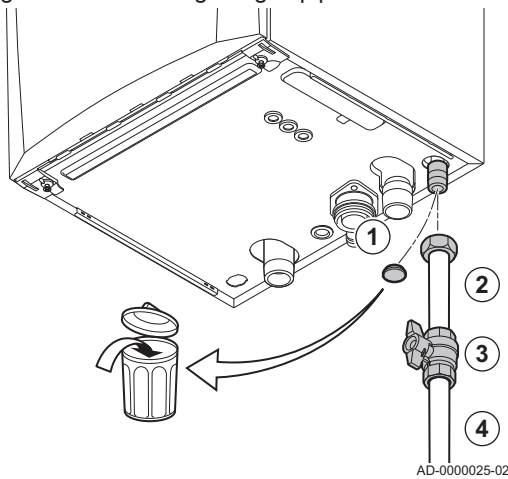


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1. Fit a plastic drain pipe of \varnothing 32 mm or larger, terminating in the drain.
2. Insert the flexible condensate drain hose into the pipe.
3. Fit a stench-trap or siphon in the drain pipe.
4. Fit the siphon.

5.5 Gas connection

Fig.13 Connecting the gas pipe



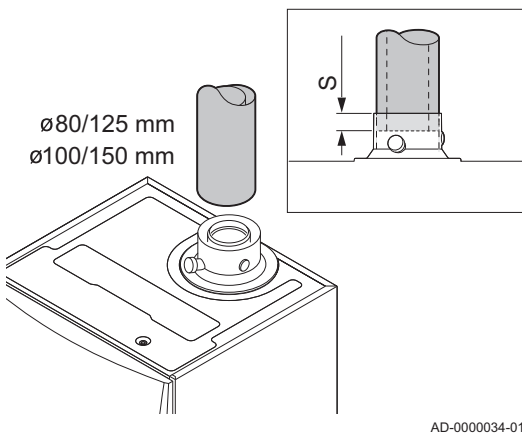
1. Remove the dust cap from the gas supply pipe ^{GAS/}_{GAZ} at the bottom of the boiler.
2. Fit the gas supply pipe.
3. Fit a gas tap in this pipe, directly underneath the boiler (within 1 metre).
4. Fit the gas pipe to the gas tap.

i Important
The gas tap must always be accessible

5.6 Air supply/flue gas outlet connections

5.6.1 Connecting the flue gas outlet and air supply

Fig.14 Connecting the flue gas outlet and air supply



S Insertion depth 25 mm

1. Connect the flue gas outlet pipe and the air supply pipe to the boiler.
2. Fit the subsequent flue gas outlet pipes and 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 boiler, with a gradient of 50 mm per metre.

5.7 Electrical connections

5.7.1 Control unit

The table gives important connection values for the control unit.

Tab.18 Connection values for control unit

Supply voltage	230 VAC/50 Hz
Main fuse value F1 (230 VAC)	2.5 AT
Fan	230 VAC

**Danger of electric shock**

The following components of the boiler are connected to a 230 V power supply:

- Electrical connection to circulating pump.
- Electrical connection to gas combination block.
- Electrical connection to fan.
- Control unit.
- Ignition transformer.
- Power supply cable connection.

The boiler has a three-wire mains lead (lead length 1.5 m) and is suitable for a 230 VAC/50 Hz power supply with a phase/neutral/earth system. The boiler is not phase sensitive. The power supply cable is connected to the **X1** connector. A spare fuse can be found in the housing of the control unit.

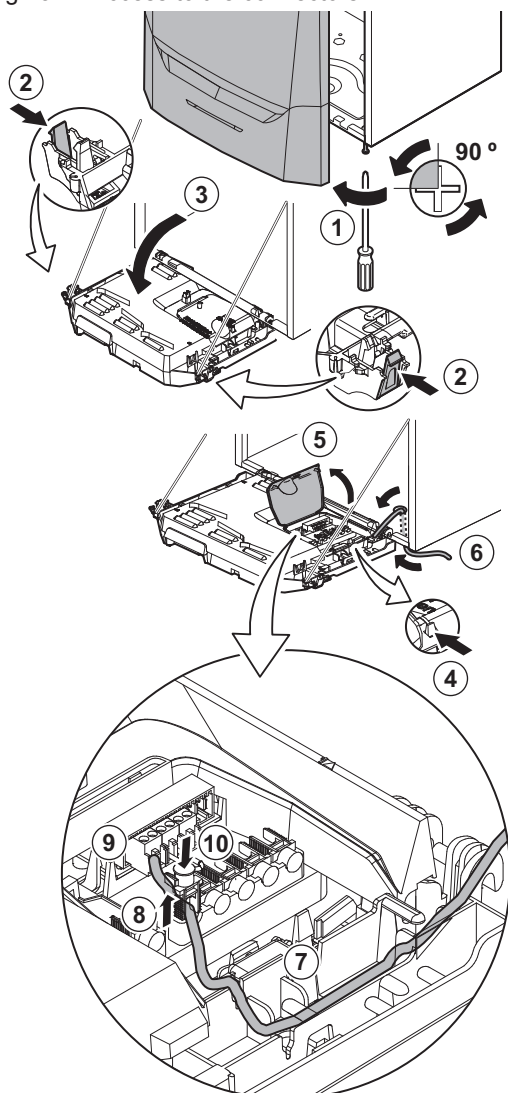
**Caution**

- Always order a replacement mains lead from Remeha. The power supply cable should only be replaced by Remeha, or by an installer certified by Remeha.
- The boiler switch must be easily accessible at all times.

The boiler has several control, protection and regulation connection options. The standard PCB can be extended with optional PCBs.

5.7.2 Access to the connectors

Fig.15 Access to the connectors



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The following is installed in the instrument box:

- the standard PCB **CB-03** with connector **X-03**.
- the **IF-01** PCB with connector **X4** and **X5**

Various thermostats and regulators can be connected to this.

Access to the connectors:

1. Unscrew the two screws located under the front housing by a quarter turn and remove the front housing.
2. Press the clips on the sides of the instrument box inwards slightly.
3. Tilt the instrument box forwards.
4. Press the clip on the side of the instrument box flap inwards slightly.
5. Open the instrument box flap.
 - ⇒ The connector **X-03** for the **CB-03** PCB is now accessible
6. Open the instrument box by releasing the clips (4x) using a screwdriver.
 - ⇒ The connectors **X4** and **X5** for the **IF-01** PCB are now accessible.
7. Guide the cables from the regulator or the thermostat through the round grommet(s) on the boiler's bottom plate.
8. Guide the relevant connection cable(s) through the instrument box via the cable ducts provided.
9. Undo the strain relief clip(s) and feed the cable(s) underneath.
10. Connect the cables to the appropriate terminals on the connector.
11. Press the strain relief clip(s) firmly into place.
12. Close the instrument box.

5.7.3 Connection options for the standard PCB

■ General

Various thermostats and regulators can be connected to the standard PCB.

■ Connecting modulating thermostat

The boiler is fitted with an R-Bus connection as standard. This connection is also compatible with **OpenTherm**. This enables the user to connect modulating **OpenTherm** thermostats (such as iSense) or R-Bus thermostats (such as **eTwist**) without any further adjustments being made to the appliance. The boiler is also suitable for **OpenTherm Smart Power**.

1. In the case of a room thermostat: install the thermostat in a reference room.
2. Connect the two-wire cable for the thermostat to the **R-Bus** terminals for the connector. It does not matter which wire is connected to which cable clamp.



Important

If the tap water temperature can be set on the **OpenTherm** thermostat, the boiler will supply this temperature, with the value set in the boiler as a maximum.

■ Connecting the on/off thermostat

The boiler is suitable for connection to a two-wire on/off ambient thermostat (**Tk**).

1. Install the (power stealing) thermostat in a reference room.
2. Connect the two-wire cable for the thermostat to the **R-Bus** terminals for the connector. It does not matter which wire is connected to which cable clamp.

■ Frost protection combined with on/off thermostat

When an on/off thermostat is used, the pipes and radiators in a frost-sensitive room can be protected by a frost thermostat. The radiator valve in the frost-sensitive room must be open.

1. Place a frost thermostat (**Tv**) in a frost-sensitive room (e.g. a garage).
2. Connect the frost thermostat (**Tv**) parallel to the on/off thermostat (**Tk**) on the **R-Bus** terminals for the connector.



Warning

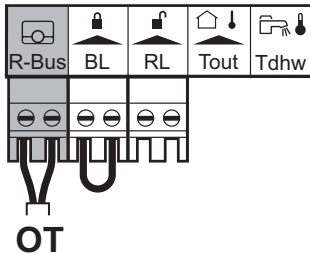
If a Remeha **eTwist** or **OpenTherm** thermostat is used, a frost thermostat cannot be connected in parallel to the **R-Bus** terminals. In that case, implement frost protection of the central heating system in combination with an outside sensor.



For more information, see

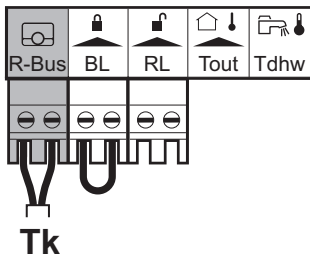
Additional documentation, page 10

Fig.16 Connecting modulating thermostat



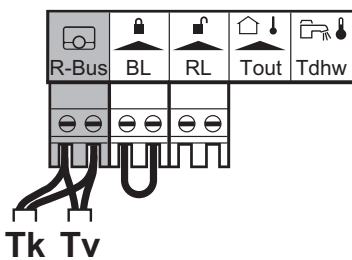
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Fig.17 Connecting the on/off thermostat



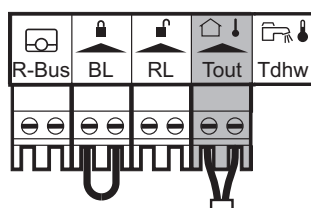
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Fig.18 Connecting the frost thermostat



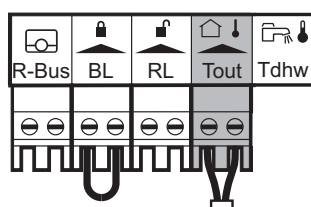
AD-4100103-02

Fig.19 Connecting an outside sensor



AD-4100109-02

Fig.20 Connecting an outside sensor



AD-4100109-02

■ Frost protection combined with outside sensor

The central heating system can also be protected against frost in combination with an outside sensor. The radiator valve in the frost-sensitive room must be open.

1. Connect the outside sensor to the **Tout** terminals of the connector.

The frost protection works as follows with an outside sensor:

- If the outside temperature is lower than -10°C : heat demand from the boiler.
- If the outside temperature is higher than -10°C : no heat demand from the boiler.

i Important

The outside temperature before the start of frost protection can be changed with parameter **AP080** (as mentioned above the factory setting is -10).

■ Connecting an outside sensor

An outside sensor can be connected to the **Tout** terminals of the connector (accessory). In the event of an on/off thermostat, the boiler will regulate the temperature using the set point of the internal heating curve (**F**). Various parameter settings can be used to change the internal heating curve.

1. Connect the plug from the outside sensor to the **Tout** connector.

– Outside sensor data

Various outside sensors can be used. Use below mentioned sensors or sensors with identical characteristics:

- AF60 = NTC $470 \Omega/25^{\circ}\text{C}$
- QAC34 = NTC $1000 \Omega/25^{\circ}\text{C}$

Select the outside sensor with parameter **AP056**.

– Setting the heating curve

Various parameter settings can be used to change the internal heating curve.

F Heating curve

- 1 Heating curve set point (maximum flow temperature)

parameter **CP010 / CP000**

- 2 Heating curve comfort base point

parameter **CP210**

- 3 Heating curve steepness

parameter **CP230**

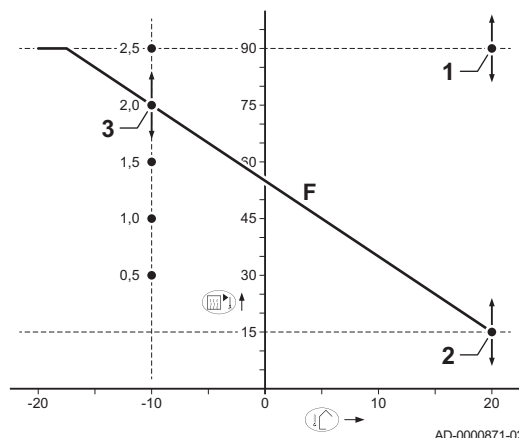
Outside temperature (Tout)

Flow temperature (Ta)

i Important

An **OpenTherm** controller can also use this outside sensor. In that case, the desired internal heating curve must be set on the controller.

Fig.21 Internal heating curve



AD-0000871-02

Tab.19 Internal heating curve settings

Comfort base point (°C) (parameter CP210)	Steepness (parameter CP230)	Ta (°C) (where Tout = -10°C)
15	0.5	30
15	1.0	45
15	1.5	60
15	2.0 ⁽¹⁾	75
15	2.5	90
15	3.0	105 ⁽²⁾

(1) See sample drawing
 (2) Flow temperature is cut off at Ta (max) = parameter **CP010 / CP000**

■ **Blocking input**

The boiler has a blocking input (Normally Closed contact). This input relates to the **BL** terminals of the connector.

If this contact is opened, the boiler will be blocked or locked out.

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

- Complete blocking: no frost protection with the outside 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 outside 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).



Important

First remove the bridge if this input is used.



Warning

Only suitable for potential-free contacts.

■ **Release input**

The boiler has a release input (Normally Open contact). This input relates to the **RL** terminals of the connector.

If this contact is closed before there is a heat demand, the boiler will be blocked after a waiting time. Change the waiting time of the input with parameter setting **AP008**.

If this contact is closed during a heat demand, the boiler will be blocked instantly.



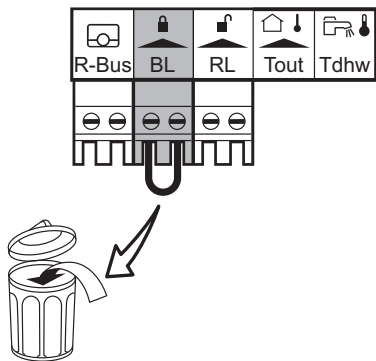
Warning

Only suitable for potential-free contacts.

■ **Connecting the calorifier sensor/thermostat**

A calorifier sensor or thermostat can be connected to the **Tdhw** terminals of the connector.

Fig.22 Blocking input



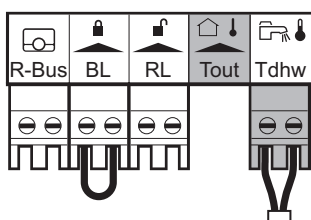
AD-4100104-02

Fig.23 Release input



AD-3001303-01

Fig.24 Connecting the calorifier sensor/ thermostat



AD-4000096-01

1. Connect the plug from the calorifier sensor or calorifier thermostat to the **Tdhw** connector.

– Domestic hot water sensor data

Various domestic hot water sensors can be used. Use below mentioned sensor or sensors with identical characteristics:

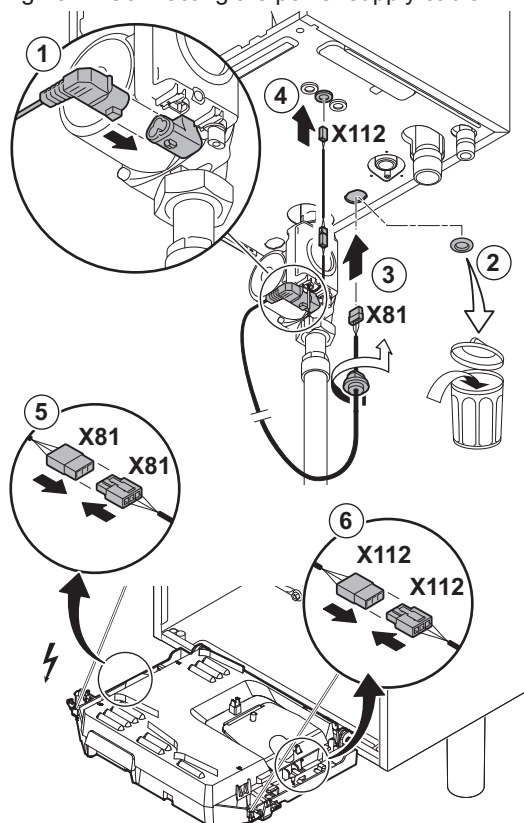
- NTC 10 k Ω /25°C

■ Connecting the PWM pump

The energy-efficient modulating pump must be connected to the standard control PCB. To do this, proceed as follows:

1. Connect the power supply cable and the cable for the PWM signal to the pump.
2. Remove the grommet from the opening in the middle of the base of the boiler.
3. Pass the pump power supply cable through the base of the boiler and seal the opening by tightening the bayonet fitting to the cable.
4. Pass the PWM cable from the pump through one of the grommets on the right in the base of the boiler.
5. Connect the X81 pump power supply cable to the X81 cable that runs along the cable duct to the left of the instrument box.
6. Connect the X112 pump PWM cable to the X112 cable that runs along the cable duct to the right of the instrument box.

Fig.25 Connecting the power supply cable



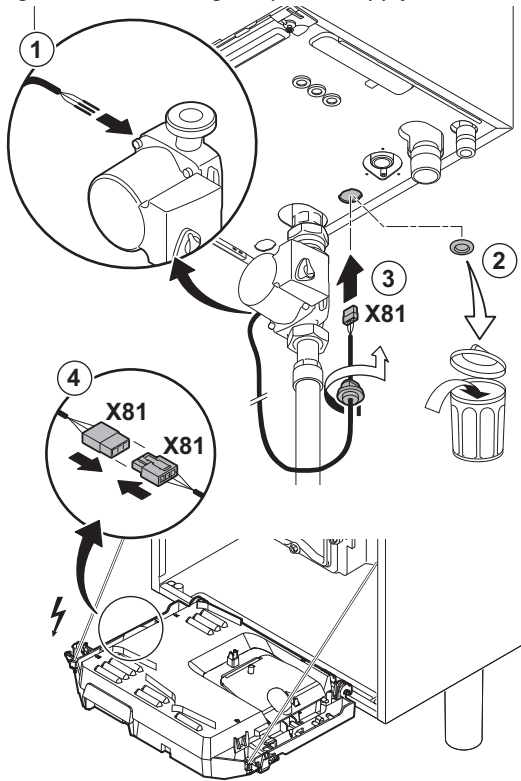
AD-4000094-01



Important

The pump's various settings can be adjusted using the parameters **PP014**, **PP016**, **PP017** and **PP018**.

Fig.26 Connecting the power supply cable



AD-4000093-01

■ Connecting the standard pump

The pump must be connected to the standard control PCB. To do this, proceed as follows:

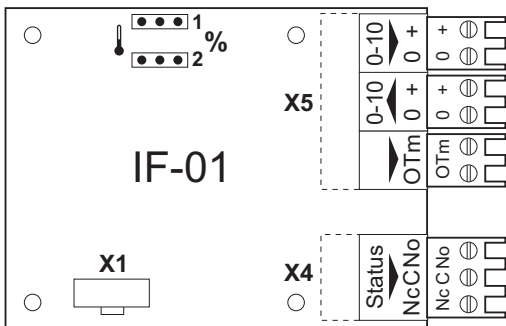
1. Connect the X81 power cable supplied with the boiler to the pump.
2. Remove the grommet from the opening in the middle of the base of the boiler.
3. Pass the pump X81 cable through the base of the boiler and seal the opening by tightening the bayonet fitting to the cable.
4. Connect the X81 pump cable to the X81 cable that runs along the cable duct to the left of the instrument box

5.7.4 Additional control PCBs

■ Connection options for the extension PCB IF-01

The IF-01 extension PCB is pre-installed in the instrument box as standard.

Fig.27 IF-01 PCB



AD-0000054-01

Caution
Do not connect a frost thermostat or room thermostat to the boiler if using the 0–10 V control PCB.

– Connecting the status relay (Nc)

If the boiler locks out, a relay is de-energised and the alarm can be transmitted via a potential-free contact (maximum 230 V, 1 A) on terminals **Nc** and **C** of the connector.

– Connection (OTm)

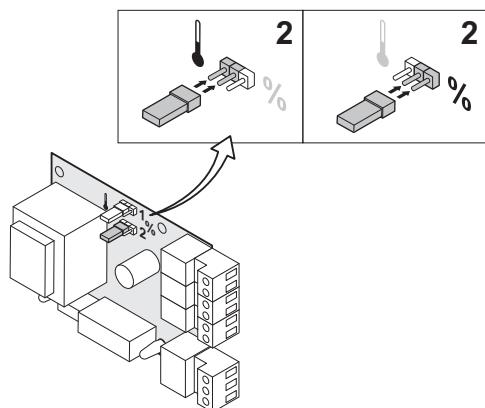
The interface uses **OpenTherm** to communicate with the boiler control unit. To make this possible, the **OTm** connection must be connected to the **OpenTherm** input of the boiler control unit. **OTm**

– Analogue input (0-10 V)

A choice can be made with this control between control based on temperature or heat output. The two controls are described briefly below.

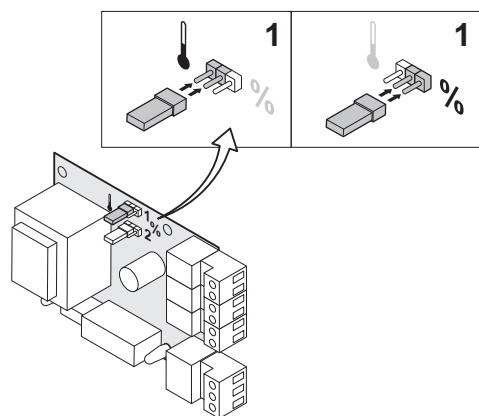
1. Connect the input signal to terminals **0–10** of the connector.

Fig.28 Switch jumper (2)



AD-0000055-01

Fig.29 Switch jumper (1)



AD-0000056-01

Tab.20 Temperature-based control (°C)

Jumper 2	Input signal (V)	Temperature °C	Description
🌡️	0–1.5	0–15	Boiler off
	1.5–1.8	15–18	Hysteresis
	1.8–10	18–100	Desired temperature

The 0–10 V signal controls the boiler supply temperature. 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.

A jumper (2) on the interface is used to select either temperature-based control (🌡️) or output-based control (%).

Tab.21 Control based on heat output

Jumper 2	Input signal (V)	Heat output (%)	Description
%	0–2.0 ⁽¹⁾	0–20	Boiler off
	2.0–2.2 ⁽¹⁾	20–22	Hysteresis
	2.0–10 ⁽¹⁾	20–100	Desired heat output

(1) Dependent on the minimum modulation depth (set speeds, standard 20%)

The 0–10 V signal controls the boiler output. This control modulates on the basis of the heat output. The minimum output is linked to the boiler's modulation depth. The output varies between the minimum and maximum value on the basis of the value defined by the controller.

– Analogue output (0–10 V)

This feedback can be based on temperature or heat output. The two controls are described briefly below.

A jumper (1) on the interface is used to select either temperature (🌡️) or output (%).

Tab.22 Temperature message

Jumper 1	Output signal (V)	Temperature °C	Description
🌡️	0.5	–	Alarm
	1–10	10–100	Supplied temperature

Tab.23 Output message

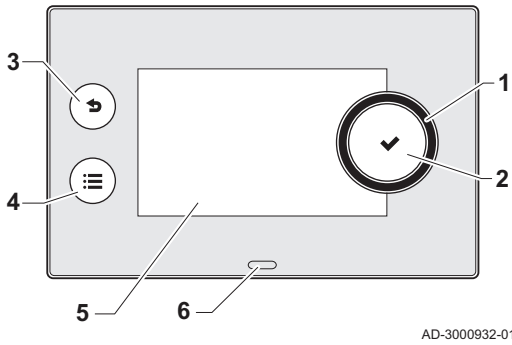
Jumper 2	Output signal (V)	Heat output (%)	Description
%	0	0–15	Boiler off
	0.5	15–20	Alarm
	2.0–10 ⁽¹⁾	20–100	Supplied heat output

(1) Dependent on the minimum modulation depth (set speeds, standard 20%)

6 Before commissioning

6.1 Control panel description

Fig.30 Components of the control panel



AD-3000932-01

6.1.1 Description of the components

- 1 Rotary knob to select a tile, menu or setting
- 2 Button ✓ to confirm the selection
- 3 Back button ↶ to return to the previous level or previous menu
- 4 Menu button ≡ to return to the main menu
- 5 Display
- 6 LED for status indication:
 - continuous green = normal operation
 - flashing green = warning
 - continuous red = shutdown
 - flashing red = lockout



For more information, see Additional documentation, page 10

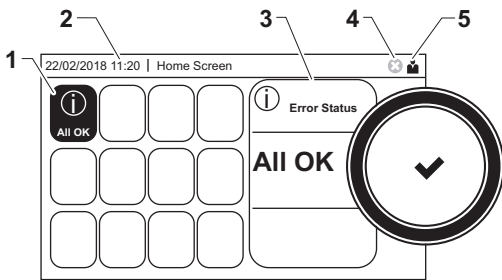
6.1.2 Description of the home screen

This screen is shown automatically after start-up of the appliance. The control panel goes automatically in standby mode (black screen) if the screen is not touched for 5 minutes. Press one of the buttons on the control panel to activate the screen again.

You can navigate from any menu to the home screen by pressing the back button ↶ for several seconds.

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.

Fig.31 Icons on home screen



AD-3001157-01

- 1 Tiles: the selected tile is highlighted
- 2 Date and time | Name of the screen (actual position in the menu)
- 3 Information about the selected tile
- 4 Error indicator (only visible if an error has been found)
- 5 Icon showing the navigation level:

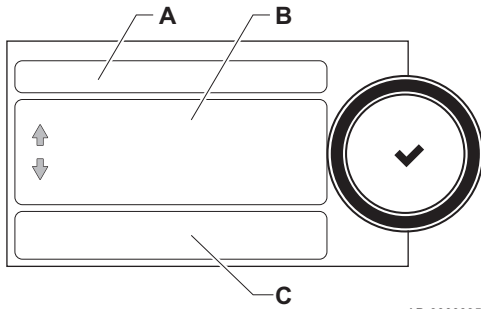
- 🧹: Chimney sweeper level
- 👤: User level
- 🛠️: Installer level

The installer level is protected by an access code. When this level is active, the status of the tile [🛠️] changes from **Off** into **On**.

6.1.3 Description of the main menu

You can navigate from any menu directly to the main menu by pressing the menu button ≡. The number of accessible menus depends on the access level (user or installer).

Fig.32 Items in the main menu



AD-3000935-01

- A Date and time | Name of the screen (actual position in the menu)
- B Available menus
- C Brief explanation of the selected menu

Tab.24 Available menus for the user

Description	Icon
System Settings	
Version Information	i

Tab.25 Available menus for the installer

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

■ Meaning of the icons in the display

Tab.26 Icons

	User level	i	Information
	Installer level		Error display
	Chimney sweeper level		System settings
	Service		Water pressure
	Timer program		DHW 1
	Temporary overwrite of the timer program		DHW 2
	Holiday program		DHW boost on
	Manual		Gas boiler
	Energy-saving mode		Burner output level (1 to 5 bars, with each bar representing 20% output)
	Frost protection		Burner on
	Central heating on		Outside temperature sensor
	All zones (groups)		DHW tank
	Living room ⁽¹⁾		Solar calorifier
	Kitchen ⁽¹⁾		Cascade
	Bedroom ⁽¹⁾		Pump
	Study ⁽¹⁾		Three-way valve
	Cellar ⁽¹⁾		

(1) Adjustable icon for heating zone

6.2 Checklist before commissioning

6.2.1 Filling the siphon

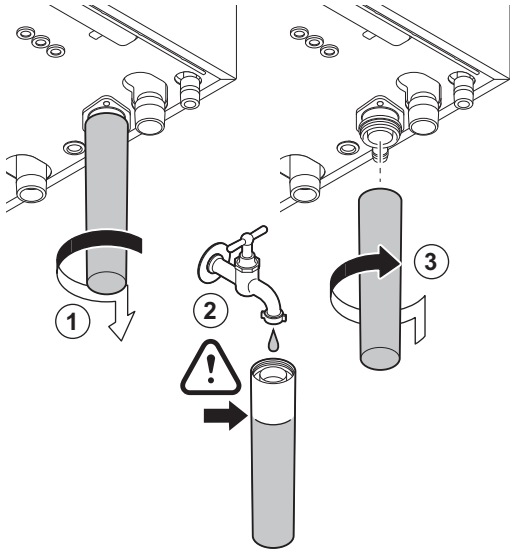


Danger

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

1. Remove the siphon.
 2. Fill the siphon up with water.
 3. Fit the siphon.
- ⇒ Check that the siphon is securely fitted and that there are no leaks.

Fig.33 Filling the siphon



AD-0000086-01

6.2.2 Filling the system



Caution

Before filling, open the valves on every radiator in the installation.



Important

In order to be able to read off the water pressure from the boiler display, the boiler must be switched on.

1. Fill the central heating system with clean tap water.



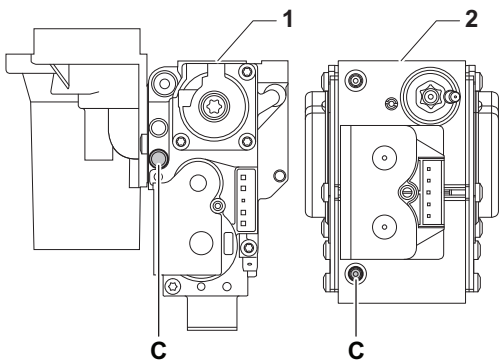
Important

The recommended water pressure is between 1.5 bar and 2 bar.

2. Check the water-side connections for tightness.

6.2.3 Gas circuit

Fig.34 Gas valve unit measuring points C



AD-0000066-02

- 1 Quinta Ace 30 - 45 - 55 - 65 - 90
- 2 Quinta Ace 115



Warning

- Ensure that the boiler is switched off.
- Do not put the boiler into operation if the type of gas supplied does not conform to the approved gas types.

1. Open the main gas tap.
2. Open the boiler gas tap.
3. Unscrew the two screws located under the front housing by a quarter turn and remove the front housing.

4. Check the gas inlet pressure at the measuring point **C** on the gas valve unit.

**Warning**

- The gas pressure that was measured at the measuring point **C** must fall within the stated gas inlet pressure limits. See Technical data, page 65
- For authorised gas pressures, see: Unit categories, page 62

5. Vent the gas supply pipe by unscrewing the measuring point on the gas valve unit.
6. Tighten the measuring point again when the pipe has been fully vented.
7. Check all connections for gas tightness. The maximum allowable test pressure is 60 mbar.

6.2.4 Hydraulic circuit

1. Check the siphon; it should be fully filled with clean water.
2. Check the water-side connections for tightness.

6.2.5 Electrical connections

1. Check the electrical connections.

7 Commissioning

7.1 Commissioning procedure



Warning

- Initial commissioning must be done by a qualified installer.
- If adapting to another type of gas, e.g. propane, the boiler must be adjusted before it is switched it on.



See

Adjusting to a different gas type, page 36

1. Open the main gas tap.
2. Open the boiler gas tap.
3. Switch the power on with the boiler's on/off switch.
 - ⇒ The start-up program will start and cannot be interrupted. During the program, all segments of the display are shown briefly.
4. Set the components (thermostats, control) so that heat is demanded.



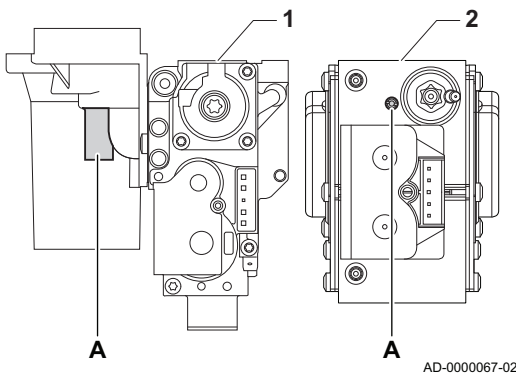
Important

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 Adjusting to a different gas type

Fig.35 Position of adjusting screw A



- 1 Quinta Ace 30 - 45 - 55 - 65 - 90
- 2 Quinta Ace 115

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

Tab.27 Factory settings G20 (H-gas)

Code	Display text	Description	Adjustment range	30	45	55	65	90	115
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 Rpm 7000 Rpm	4100	5400	5100	5600	6300	6800
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1400 Rpm 7000 Rpm	4100	5400	5100	5600	6300	6800
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400 Rpm 4000 Rpm	1550	1550	1600	1600	1600	1750
GP009	Fan RPM Start	Fan speed at appliance start	1000 Rpm 4000 Rpm	2500	2500	2500	2500	2500	2500



Warning

Only a qualified installer may carry out the following operations.

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

Tab.28 If operating on propane

Boiler type	Action
Quinta Ace 30	Rotate the adjusting screw A on the venturi 3½ turns in a clockwise direction
Quinta Ace 45	Rotate the adjusting screw A on the venturi 4¾ turns in a clockwise direction
Quinta Ace 55	Rotate the adjusting screw A on the venturi 6½ turns in a clockwise direction
Quinta Ace 65	Rotate the adjusting screw A on the venturi 6½ turns in a clockwise direction
Quinta Ace 90	Replace the current gas valve unit with the propane gas valve unit according to the instructions supplied with the propane conversion kit
Quinta Ace 115	Rotate the adjusting screw A in a clockwise direction until it is closed, then: Rotate the adjusting screw A on the gas valve unit 3½–4 turns in an anticlockwise direction

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.

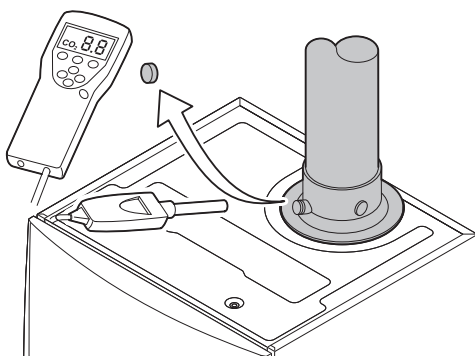
Tab.29 Adjustment for gas type G31 (propane)

Code	Display text	Description	Adjustment range	30	45	55	65	90	115
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 Rpm 7000 Rpm	3800	5100	4800	5400	6000	6700
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1400 Rpm 7000 Rpm	3800	5100	4800	5400	6000	6700
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400 Rpm 4000 Rpm	1550	1550	1500	1600	2000	1800
GP009	Fan RPM Start	Fan speed at appliance start	1000 Rpm 4000 Rpm	2500	3000	2500	2500	2500	3500

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

7.2.2 Checking and setting the gas/air ratio

Fig.36 Flue gas measuring point



AD-0000069-01

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



Warning

During measurement, seal the opening around the sensor fully.



Important

- The flue gas analyser must have a minimum accuracy of $\pm 0.25\%$ O₂/CO₂.
- The flue gas analyser must meet the requirements of BS 7927 or BS-EN 503793 and be calibrated according to the manufacturer's requirements.

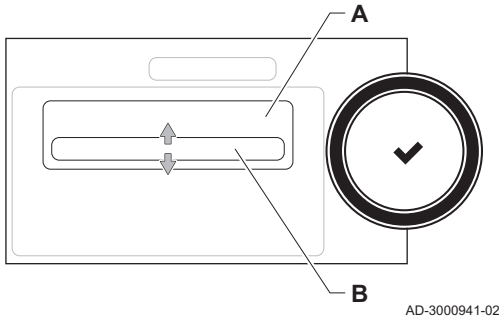
3. Measure the percentage of O₂/CO₂ in the flue gases. Take measurements at full load and at part load.



Important

Measurements must be taken with the front casing off.

Fig.37 Full load test

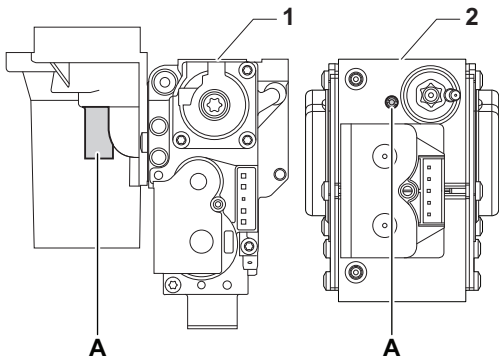


AD-3000941-02

■ Performing the full load test

1. Select the tile [👤].
⇒ The **Change load test mode** menu appears.
2. Select the test **MaximumPowerCH**.
 - A Change load test mode
 - B MaximumPowerCH
 ⇒ 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.38 Position of adjusting screw A



AD-0000067-02

■ Checking/setting values for O₂/CO₂ at full load

- 1 Quinta Ace 30 - 45 - 55 - 65 - 90
- 2 Quinta Ace 115

1. Measure the percentage of O₂/CO₂ in the flue gases.
2. Compare the measured value with the checking values in the table.
3. If the measured value is outside of the values given in the table, correct the gas/air ratio.

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

4. Using adjusting screw A, adjust the percentage of O₂/CO₂ for the gas type being used to the nominal value. This should always be inside the highest and lowest setting limit.

Tab.30 Checking/setting values for O₂/CO₂ at full load for G20 (H gas)

Values at full load for G20 (H gas)	O ₂ (%) ⁽¹⁾	CO ₂ (%) ⁽¹⁾
Quinta Ace 30	4,3 - 4,8 ⁽¹⁾	9,0 ⁽¹⁾ - 9,3
Quinta Ace 45	4,3 - 4,8 ⁽¹⁾	9,0 ⁽¹⁾ - 9,3
Quinta Ace 55	4,3 - 4,8 ⁽¹⁾	9,0 ⁽¹⁾ - 9,3
Quinta Ace 65	4,3 - 4,8 ⁽¹⁾	9,0 ⁽¹⁾ - 9,3
Quinta Ace 90	4,3 - 4,7 ⁽¹⁾	9,1 ⁽¹⁾ - 9,3
Quinta Ace 115	4,2 - 4,7 ⁽¹⁾	9,1 ⁽¹⁾ - 9,4
(1) Nominal value		

Tab.31 Checking/setting values for O₂/CO₂ at full load for G31 (propane)

Values at full load for G31 (propane)	O ₂ (%) ⁽¹⁾	CO ₂ (%) ⁽¹⁾
Quinta Ace 30	4,4 - 4,9 ⁽¹⁾	10,5 ⁽¹⁾ - 10,8
Quinta Ace 45	4,4 - 4,9 ⁽¹⁾	10,5 ⁽¹⁾ - 10,8
Quinta Ace 55	4,1 - 4,6 ⁽¹⁾	10,7 ⁽¹⁾ - 11,0
Quinta Ace 65	4,6 - 4,9 ⁽¹⁾	10,5 ⁽¹⁾ - 10,7
Quinta Ace 90	4,9 - 5,2 ⁽¹⁾	10,3 ⁽¹⁾ - 10,5
Quinta Ace 115	4,9 - 5,4 ⁽¹⁾	10,2 ⁽¹⁾ - 10,5
(1) Nominal value		

**Caution**

- The O₂ values at full load must be lower than the O₂ values at part load.
- The CO₂ values at full load must be higher than the CO₂ values at part load.

■ Performing the part load test

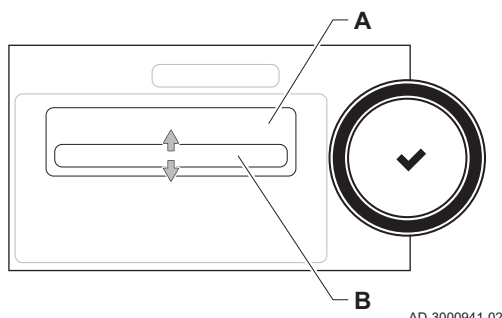
1. If the full load test is still running, press the ✓ button to change the load test mode.
2. If the full load test was finished, select the tile [👤] to restart the chimney sweep menu.

A Change load test mode

B MinimumPower

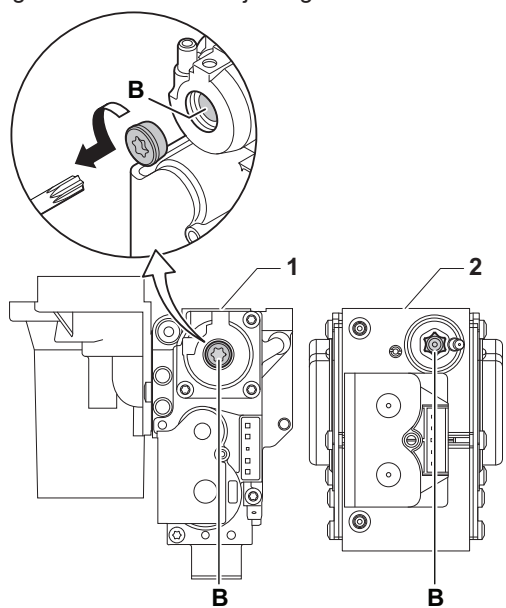
3. Select the **MinimumPower** test in the menu **Change load test mode**.
⇒ The part load test starts. The selected load test mode is shown in the menu and the icon 👤 appears in the top right of the screen.
4. Check the load test settings and adjust if necessary.
⇒ Only the parameters shown in bold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

Fig.39 Part load test



AD-3000941-02

Fig.40 Position of adjusting screw B



AD-0000072-02

■ Checking/setting values for O₂/CO₂ at part load

- 1 Quinta Ace 30 - 45 - 55 - 65 - 90
- 2 Quinta Ace 115

1. Measure the percentage of O₂/CO₂ in the flue gases.
2. Compare the measured value with the checking values in the table.
3. If the measured value is outside of the values given in the table, correct the gas/air ratio.

**Warning**

Only a qualified installer may carry out the following operations.

4. Using adjusting screw B, adjust the percentage of O₂/CO₂ for the gas type being used to the nominal value. This should always be inside the highest and lowest setting limit.
5. Set the boiler back to the normal operating status.

Tab.32 Checking/setting values for O₂/CO₂ at part load for G20 (H gas)

Values at part load for G20 (H gas)	O ₂ (%) ⁽¹⁾	CO ₂ (%) ⁽¹⁾
Quinta Ace 30	5,7 ⁽¹⁾ - 6,2	8,2 - 8,5 ⁽¹⁾
Quinta Ace 45	5,7 ⁽¹⁾ - 6,2	8,2 - 8,5 ⁽¹⁾
Quinta Ace 55	4,8 ⁽¹⁾ - 5,3	8,7 - 9,0 ⁽¹⁾
Quinta Ace 65	4,8 ⁽¹⁾ - 5,3	8,7 - 9,0 ⁽¹⁾
Quinta Ace 90	5,2 ⁽¹⁾ - 4,8	9,0 - 8,8 ⁽¹⁾
Quinta Ace 115	5,6 ⁽¹⁾ - 6,1	8,3 - 8,6 ⁽¹⁾
(1) Nominal value		

Tab.33 Checking/setting values for O₂/CO₂ at part load for G31 (propane)

Values at part load for G31 (propane)	O ₂ (%) ⁽¹⁾	CO ₂ (%) ⁽¹⁾
Quinta Ace 30	5,4 ⁽¹⁾ - 5,9	9,9 - 10,2 ⁽¹⁾
Quinta Ace 45	5,7 ⁽¹⁾ - 6,2	9,7 - 10,0 ⁽¹⁾

Values at part load for G31 (propane)	O ₂ (%) ⁽¹⁾	CO ₂ (%) ⁽¹⁾
Quinta Ace 55	5,1 ⁽¹⁾ - 5,6	10,1 - 10,4 ⁽¹⁾
Quinta Ace 65	5,4 ⁽¹⁾ - 5,7	10,0 - 10,2 ⁽¹⁾
Quinta Ace 90	5,7 ⁽¹⁾ - 5,4	10,2 - 10,0 ⁽¹⁾
Quinta Ace 115	5,8 ⁽¹⁾ - 6,3	9,6 - 9,9 ⁽¹⁾
(1) Nominal value		

**Caution**

- The O₂ values at part load must be higher than the O₂ values at full load.
- The CO₂ values at part load must be lower than the CO₂ values at full load.

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 the central heating system up 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 supply pressure;
 - If set to overpressure application, fill in the type;
 - The parameters modified for the changes mentioned above.
11. Instruct the user in the operation of the system, boiler and controller.
12. Inform the user of the maintenance to be performed.
13. Hand over all manuals to the user.
14. Confirm the commissioning with a signature and a company stamp.
 - ⇒ The boiler is now ready for operation.

Fig.41 Example filled-in sticker

Adjusted for / Réglée pour / Ingesteld op / Eingestellt auf / Regolato per / Ajustado para / Ρυθμισμένο για / Nastawiony na / настроен для / Reglat pentru / настроен за / ayarlanmıştir / Nastavljjen za / beállitva/ Nastaveno pro / Asetettu kaasulle / Justert for/ indstillet til/ ل ضبط ل :	Parameters / Paramètres / Parameter / Parametri / Parámetros / Παράμετροι / Parametry / Параметри / Parametrii / Параметри / Parametreler / Paraméterek / Parametrit / Parametere / Parametre / شامل عمل :
<input checked="" type="checkbox"/> Gas <u>G20</u> <u>20</u> mbar	<u>DP003 - 3300</u> <u>GP007 - 3300</u> <u>GP008 - 2150</u> <u>GP009 -</u>
<input checked="" type="checkbox"/> C _{(10)3(X)} <input type="checkbox"/> C _{(12)3(X)} <input type="checkbox"/> _____	

AD-3001124-01

8 Settings

8.1 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.






For more information, see

Additional documentation, page 10



8.1.1 Accessing the 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. Enter code: 0012
 - ⇒ When the installer level is active, the status of the tile [] changes from **Off** into **On**.
3. To leave the installer level, select the tile [] > **Confirm**.

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

■ 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.34 CU-GH08

Icon	Zone or function	Description
	CIRCA / CH	Central heating circuit
	Gas fired appliance	Gas boiler

Tab.35 Configuring a zone or function of CU-GH08 or

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

8.2 List of parameters

The code of the parameters always contain two letters and three numbers. The letters stand for:

- AP** Appliance related parameters
- CP** Zone related parameters
- DP** Domestic hot water related parameters

GP Gas-fired heat engine related parameters
PP Central heating related parameters

**Important**

All possible options are indicated in the adjustment range. The display of the boiler only shows the relevant settings for the appliance.

8.2.1 Description of parameters CU-GH08 control unit

**Important**

- All tables show the factory setting for the parameters.
- All possible options are indicated in the adjustment range. The display of the boiler only shows the relevant settings for the appliance.

Tab.36 Navigation for user level

Level	Menu cascade
User / Installer	☰ > Installation Setup > CU-GH08 > Navigation ⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Navigation" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.37 Factory settings at user level

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
AP016	CH function on	Enable central heating heat demand processing	0 - Off 1 - On	Gas fired appliance	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	Gas fired appliance	1	1	1	1	1	1
AP073	Summer Winter	Outdoor temperature: upper limit for heating	10 °C - 30 °C	Outdoor temperature	Outdoor temperature	22	22	22	22	22	22
AP074	Force summer mode	The heating is stopped. Hot water is maintained. Force Summer Mode	0 = Off 1 = On	Outdoor temperature	Outdoor temperature	0	0	0	0	0	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	Mandatory bus master	0	0	0	0	0	0
AP089	Installer name	Name of the installer		Mandatory bus master	Mandatory bus master	None	None	None	None	None	None
AP090	Installer phone	Telephone number of the installer		Mandatory bus master	Mandatory bus master	0	0	0	0	0	0
AP107	Color display Mk2	Color display Mk2	0 = White 1 = Red 2 = Blue 3 = Green 4 = Orange 5 = Yellow 6 = Violet	Mandatory bus master	Mandatory bus master	2	2	2	2	2	2
CP010	Tflow setpoint zone	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	0 °C - 90 °C	Direct zone	Direct zone	90	90	90	90	90	90

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
CP0 80	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	16	16	16	16	16	16
CP0 81	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	20	20	20	20	20	20
CP0 82	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	6	6	6	6	6	6
CP0 83	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	21	21	21	21	21	21
CP0 84	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	22	22	22	22	22	22
CP0 85	User T.Room Activity	Room setpoint temperature of the user zone activity	5 °C - 30 °C	Direct zone	Direct zone	20	20	20	20	20	20
CP2 00	Manu ZoneRoomTempSet	Manually setting the room temperature setpoint of the zone	5 °C - 30 °C	Direct zone	Direct zone	20	20	20	20	20	20
CP3 20	OperatingZoneMode	Operating mode of the zone	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Direct zone	Direct zone	1	1	1	1	1	1
CP5 10	Temporary Room Setp	Temporary room setpoint per zone	5 °C - 30 °C	Direct zone	Direct zone	20	20	20	20	20	20
CP5 50	Zone, fire place	Fire Place mode is active	0 = Off 1 = On	Direct zone	Direct zone	0	0	0	0	0	0
CP6 60	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	Direct zone	3	3	3	3	3	3

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
DP0 60	DHW timeprog. select	Time program selected for DHW.	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Internal DHW	Internal DHW	0	0	0	0	0	0
DP0 70	DHW comfort setpoint	Comfort temperature setpoint from the Domestic Hot Water tank	40 °C - 65 °C	Internal DHW	Internal DHW	60	60	60	60	60	60
DP0 80	DHW reduced setpoint	Reduced temperature setpoint from the Domestic Hot Water tank	7 °C - 50 °C	Internal DHW	Internal DHW	15	15	15	15	15	15
DP2 00	DHW mode	DHW primary mode current working setting	0 = Scheduling 1 = Manual 2 = Antifrost 3 = Temporary	Internal DHW	Internal DHW	1	1	1	1	1	1
DP3 37	DHW holiday setpoint	Holiday temperature setpoint from the Domestic Hot Water tank	10 °C - 60 °C	Internal DHW	Internal DHW	10	10	10	10	10	10

Tab.38 Navigation for installer level

Level	Menu cascade
User / Installer	☰ > Installation Setup > CU-GH08 > Navigation⁽¹⁾ > Parameters, counters, signals > Parameters
(1) See the column "Navigation" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.39 Factory settings at installer level

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
AP00 1	BL input setting	Blocking input setting (1: Full blocking, 2: Partial blocking, 3: User reset locking)	1 = Full blocking 2 = Partial blocking 3 = User reset locking 4 = Backup Relieved 5 = Heat Pump Relieved 6 = HP & 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	Gas fired appliance	1	1	1	1	1	1
AP00 3	Flue Valve Wait Time	Wait time after burner command to open flue gas valve	0 Sec - 255 Sec	Gas fired appliance	Gas fired appliance	0	0	0	0	0	0
AP00 6	Min. water pressure	Appliance will report low water pressure below this value	0 bar - 6 bar	Gas fired appliance	Gas fired appliance	0,8	0,8	0,8	0,8	0,8	0,8
AP00 8	Time release signal	The appliance will wait x sec (0=off) for the release contact to close in order to start the burner	0 Sec - 255 Sec	Gas fired appliance	Gas fired appliance	0	0	0	0	0	0
AP00 9	Service hours burner	Burning hours before raising a service notification	0 Hours - 51000 Hours	Gas fired appliance	Gas fired appliance	6000	6000	6000	6000	6000	6000
AP01 0	Service notification	The type of service needed based on burn and powered hours	0 = None 1 = Custom notification 2 = ABC notification	Gas fired appliance	Gas fired appliance	2	2	2	2	2	2
AP01 1	Service hours mains	Hours powered to raise a service notification	0 Hours - 51000 Hours	Gas fired appliance	Gas fired appliance	3500 0	3500 0	3500 0	3500 0	3500 0	3500 0
AP06 3	CH Set Max System	Maximum flow temperature setpoint for burning at central heating	20 °C - 90 °C	Gas fired appliance	Gas fired appliance	90	90	90	90	90	90
AP07 9	Building Inertia	Inertia of the building used for heat up speed	0 - 15	Outdoor temperature	Outdoor temperature	3	3	3	3	3	3

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
AP080	Frost min out temp	Outside temperature below which the antifreeze protection is activated	-60 °C - 25 °C	Outdoor temperature	Outdoor temperature	-10	-10	-10	-10	-10	-10
AP082	Enable daylight save	Enable daylight saving for the system to save energy during winter	0 = Off 1 = On	Mandatory bus master	Mandatory bus master	1	1	1	1	1	1
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	Outdoor temperature	0	0	0	0	0	0
AP108	OutsideSensorEnabled	Enable the function Outside Sensor	0 = Auto 1 = Wired sensor 2 = Wireless sensor 3 = Internet measured 4 = None	Outdoor temperature	Outdoor temperature	0	0	0	0	0	0
CP000	MaxZoneFlowSetpoint	Maximum Flow Temperature setpoint zone	0 °C - 90 °C	Direct zone	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 31 = DHW FWS EXT	Direct zone	Direct zone	1	1	1	1	1	1

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
CP060	RoomT. Holiday	Wished room zone temperature on holiday period	5 °C - 20 °C	Direct zone	Direct zone	6	6	6	6	6	6
CP070	MaxReducedRoomT.Lim	Max Room Temperature limit of the circuit in reduced mode, that allows switching to comfort mode	5 °C - 30 °C	Direct zone	Direct zone	16	16	16	16	16	16
CP210	Zone HCZP Comfort	Comfort footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone	Direct zone	15	15	15	15	15	15
CP220	Zone HCZP Reduced	Reduced footpoint of the temperature of heat curve of the circuit	15 °C - 90 °C	Direct zone	Direct zone	15	15	15	15	15	15
CP230	Zone Heating Curve	Heating curve temperature gradient of the zone	0 - 4	Direct zone	Direct zone	1,5	1,5	1,5	1,5	1,5	1,5
CP340	TypeReducedNightMode	Type of reduced night mode, stop or maintain heating of circuit	0 = Stop heat demand 1 = Continue heat demand	Direct zone	Direct zone	1	1	1	1	1	1
CP470	Zone screed drying	Setting of the screed drying program of the zone	0 Days - 30 Days	Direct zone	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 °C - 50 °C	Direct zone	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 °C - 50 °C	Direct zone	Direct zone	20	20	20	20	20	20
CP570	ZoneTimeProg Select	Time Program of the zone selected by the user	0 = Schedule 1 1 = Schedule 2 2 = Schedule 3 3 = Cooling	Direct zone	Direct zone	0	0	0	0	0	0
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	Direct zone	3	3	3	3	3	3
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	Direct zone	2	2	2	2	2	2

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
CP7 50	MaxZone Preheat time	Maximum zone preheat time	0 Min - 240 Min	Direct zone	Direct zone	90	90	90	90	90	90
CP7 80	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	Direct zone	0	0	0	0	0	0
DP0 04	Legionella calor.	Legionella mode protection calorifier	0 = Disabled 1 = Weekly 2 = Daily	Tank DHW	Tank DHW	1	1	1	1	1	1
DP0 07	Dhw 3wv Standby	Position of three way valve during standby	0 = CH position 1 = DHW position	Tank DHW	Tank DHW	0	0	0	0	0	0
DP0 35	Start pump DHW calo	Start pump for Domestic Hot Water calorifier	-20 °C - 20 °C	Tank DHW	Tank DHW	-3	-3	-3	-3	-3	-3
DP1 50	DHW Thermostat	Set DHW Thermostat function On or Off	0 = Off 1 = On	Tank DHW	Tank DHW	1	1	1	1	1	1
DP1 60	DHW AntiLeg Setpoint	Setpoint for DHW anti legionella	50 °C - 90 °C	Internal DHW	Internal DHW	70	70	70	70	70	70
DP1 70	Start time holiday	Start time of holiday Time stamp		Internal DHW	Internal DHW	-	-	-	-	-	-
DP1 80	End time holiday	End time of holiday Timestamp		Internal DHW	Internal DHW	-	-	-	-	-	-
GP0 17	Max power	Maximum power percentage in kilo Watt	0 kW - 80 kW	Gas fired appliance	Gas fired appliance	71,5	71,5	104, 6	103, 6	124, 5	140, 9
GP0 50	Power Min	Minimum power in kilo Watt for RT2012 calculation	0 kW - 80 kW	Gas fired appliance	Gas fired appliance	1,6	4,7	5,1	6,7	10,8	11,4
PP01 5	CH Pump postrun time	Central heating pump post run time	0 Min - 99 Min	Gas fired appliance	Gas fired appliance	1	1	1	1	1	1

Tab.40 Navigation for advanced installer level

Level	Menu cascade
Advanced installer	☰ > Installation Setup > CU-GH08 > Navigation ⁽¹⁾ > Parameters, counters, signals > Parameters > Adv. Parameters
(1) See the column "Navigation" in the following table for the correct navigation. The parameters are grouped in specific functionalities.	

Tab.41 Factory settings at advanced installer level

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
AP002	Manual Heat Demand	Enable manual heat demand function	0 = Off 1 = With setpoint 2 = TOutdoor Control	Gas fired appliance	Gas fired appliance	0	0	0	0	0	0
AP026	Setpoint manual HD	Flow temperature setpoint for manual heat demand	10 °C - 90 °C	Gas fired appliance	Gas fired appliance	40	40	40	40	40	40
AP056	Outdoor sensor	Enable outdoor sensor	0 = No outside sensor 1 = AF60 2 = QAC34	Outdoor temperature	Outdoor temperature	1	1	1	1	1	1
AP102	Boiler Pump function	Configuration of the boiler pump as zone pump or system pump (feed lowloss header)	0 = No 1 = Yes	Gas fired appliance	Gas fired appliance	0	0	0	0	0	0
AP111	Can line length	Can line length	0 = < 3m 1 = < 80m 2 = < 500m	Mandatory bus master	Mandatory bus master	0	0	0	0	0	0
CP130	T.OutdoorToZone	Assigning the outdoor sensor to zone ...	0 - 4	Direct zone	Direct zone	0	0	0	0	0	0
CP240	ZoneRoomUnitInfl	Adjustment of the influence of the zone room unit	0 - 10	Direct zone	Direct zone	3	3	3	3	3	3
CP250	CalSondeAmbZone	Calibration of Zone Room Unit	-5 °C - 5 °C	Direct zone	Direct zone	0	0	0	0	0	0
CP770	Zone Buffered	The zone is after a Buffer tank	0 = No 1 = Yes	Direct zone	Direct zone	0	0	0	0	0	0
DP003	Abs. max fan DHW	Maximum fan speed on Domestic Hot Water	1000 Rpm - 7000 Rpm	Gas fired appliance	Gas fired appliance	4100	5400	5100	5600	6300	6700
DP005	Calorifier Tf offset	Flow setpoint offset for loading calorifier	0 °C - 50 °C	Tank DHW	Tank DHW	20	20	20	20	20	20
DP006	Hyst calorifier	Hysteresis to start heating calorifier	2 °C - 15 °C	Tank DHW	Tank DHW	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 Sec - 99 Sec	Gas fired appliance	Gas fired appliance	10	10	10	10	10	10
DP034	DhwCalorifierOffset	Offset for calorifier sensor	0 °C - 10 °C	Tank DHW	Tank DHW	2	2	2	2	2	2
DP140	DHW load type	DHW load type (0 : Combi, 1 : Solo)	0 = Combi 1 = Solo 2 = Layered cylinder 3 = Process heat 4 = External	Internal DHW Tank DHW	Internal DHW Tank DHW Gas fired appliance	1	1	1	1	1	1
GP007	Fan RPM Max CH	Maximum fan speed during Central Heating mode	1400 Rpm - 7000 Rpm	Gas fired appliance	Gas fired appliance	4100	5400	5100	5600	6300	6800

Code	Display text	Description	Range	FunctionGroup	Navigation	30	45	55	65	90	115
GP008	Fan RPM Min	Minimum fan speed during Central Heating + Domestic Hot Water mode	1400 Rpm - 4000 Rpm	Gas fired appliance	Gas fired appliance	1550	1550	1600	1600	1600	1750
GP009	Fan RPM Start	Fan speed at appliance start	1000 Rpm - 4000 Rpm	Gas fired appliance	Gas fired appliance	2500	2500	2500	2500	2500	2500
GP010	GPS Check	Gas Pressure Switch check on/off	0 = No 1 = Yes	Gas fired appliance	Gas fired appliance	0	0	0	0	0	0
GP021	Temp diff Modulating	Modulate back when delta temperature is large then this threshold	10 °C - 40 °C	Gas fired appliance	Gas fired appliance	25	25	25	25	25	20
GP022	Tfa Filter Tau	Tau factor for average flow temperature calculation	1 - 255	Gas fired appliance	Gas fired appliance	1	1	1	1	1	1
PP014	ChPumpDT Reduction	Reduction of temperature delta modulating for pump modulation	0 °C - 40 °C	Gas fired appliance	Gas fired appliance	18	18	18	18	18	18
PP016	Max. CH pump speed	Maximum central heating pump speed (%)	20 % - 100 %	Gas fired appliance	Gas fired appliance	100	100	100	100	100	100
PP017	ChPumpSpeedMaxFactor	Maximum central heating at minimum load as percentage of max pump speed	0 % - 100 %	Gas fired appliance	Gas fired appliance	100	100	100	100	100	100
PP018	Min CH pump speed	Minimum central heating pump speed (%)	20 % - 100 %	Gas fired appliance	Gas fired appliance	30	30	30	30	30	30
PP023	Start hysteresis CH	Hysteresis to start burner in heating mode	1 °C - 10 °C	Gas fired appliance	Gas fired appliance	10	10	10	10	10	10

9 Maintenance

9.1 General

The boiler does not require a lot of maintenance. Nevertheless, the boiler must be inspected and maintained periodically. To determine the best time for servicing, the boiler is equipped with an automatic service message. The control unit determines when this service message appears.



Caution

- Maintenance operations must be completed by a qualified installer.
- During inspection or maintenance work, always replace all gaskets of the disassembled parts.
- We recommend taking out a maintenance contract.
- Replace defective or worn parts with original spare parts.
- An annual inspection is mandatory.

9.2 Maintenance message

The boiler display will clearly indicate that a service is required at the appropriate time. Use the automatic maintenance message for preventive maintenance, to keep faults to a minimum. The service messages show which service kit must be used. These service kits contain all parts and gaskets that are required for the relevant service. These service kits (A, B or C) put together by Remeha are available from spare parts suppliers.



Important

Maintenance messages must be followed up within 2 months.



Important

If the iSense or eTwist modulating thermostat is connected to the boiler, this thermostat can also display the maintenance message. Consult the thermostat manual.



Caution

Reset the maintenance message following every service.



For more information, see

Additional documentation, page 10

9.3 Standard inspection and maintenance operations

9.3.1 Checking the water pressure

1. Check the water pressure.



Important

The recommended water pressure is between 1.5 bar and 2 bar.

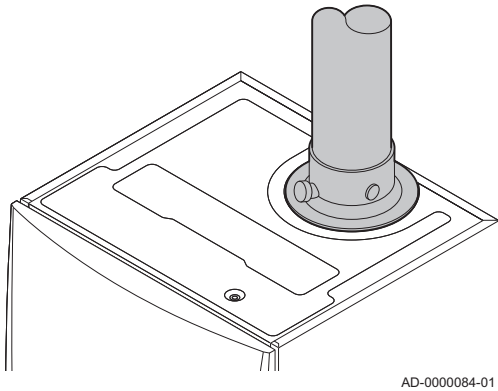
⇒ The water pressure must be at least 0.8 bar.

2. If necessary, top up the central heating system.

9.3.2 Checking the ionisation current

1. Check the ionisation current at full load and at low load.
 - ⇒ The value is stable after 1 minute.
2. Clean or replace the ionisation/ignition electrode if the value is lower than 4 µA.

Fig.42 Checking flue gas outlet/air supply connections



9.3.3 Checking the flue gas outlet/air supply connections

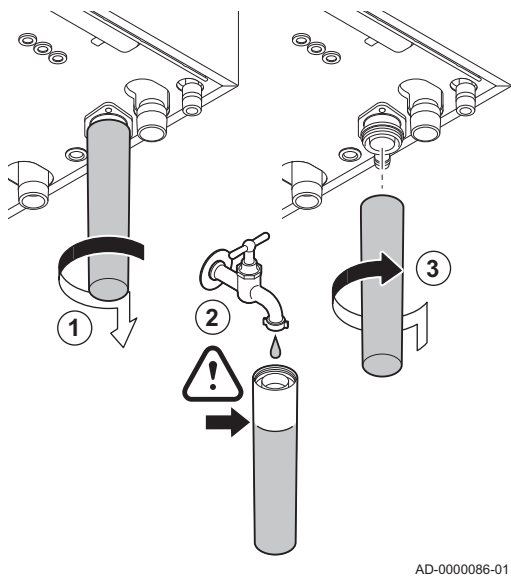
1. Check the flue gas outlet and air supply connections for condition and tightness.

9.3.4 Checking the combustion

Combustion is checked by measuring the O₂/CO₂ percentage in the flue gas outlet duct.

9.3.5 Cleaning the siphon

Fig.43 Cleaning the siphon



Danger

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

1. Dismantle the siphon and clean it.
2. Fill the siphon up with water.
3. Fit the siphon.

9.4 Specific maintenance operations



For more information, see
Additional documentation, page 10

9.4.1 General



Danger

- Disconnect the boiler's electricity supply.
- Shut off the gas supply.

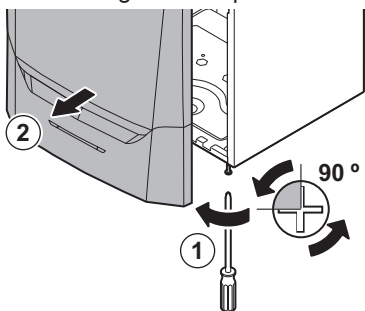


Caution

During inspection or maintenance work, always replace all gaskets of the disassembled parts.

9.4.2 Removing the front panel

Fig.44 Removing the front panel

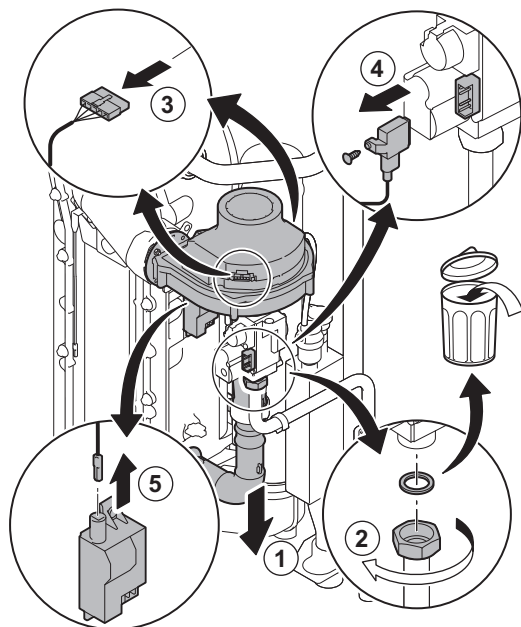


AD-4000071-01

1. Unscrew the two screws located at the bottom of the front panel by a quarter turn
2. Remove the front panel.

9.4.3 Checking the non-return valve

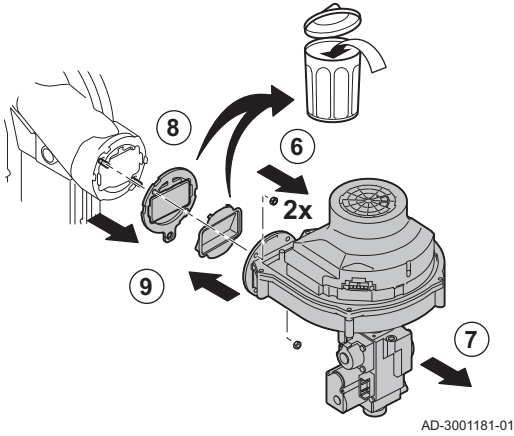
Fig.45 Disconnecting the fan



AD-3001178-01

1. Remove the air inlet pipe from the venturi.
2. Unscrew the cap nut of the gas valve unit.
3. Disconnect the fan plugs (on the front and rear).
4. Remove the screwed-on plug from the gas valve unit.
5. Remove the ignition electrode plug from the ignition transformer.

Fig.46 Checking the non-return valve



6. Dismantle the fan.
7. Remove the fan together with the gas valve unit.
8. Inspect the non-return valve and replace it in the event of a defect or damage, or if the maintenance kit contains a non-return valve.
9. Reassemble in the reverse order.

9.4.4 Reassembling the boiler

1. Fit all removed parts in the reverse order.
2. Switch on the electricity supply to the boiler.
3. Open the gas valve.
4. Vent the installation.
5. Top up with more water if necessary.
6. Check the tightness of the gas and water connections.
7. Put the boiler back into operation.

10 Troubleshooting

10.1 Error codes

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

Tab.42 Error codes are displayed at three different levels

Code	Type	Description
A00.00	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	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	Lock out	The boiler starts up again only when the cause of the lock-out has been rectified and reset manually.

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 Remeha.

10.1.1 Warning

Tab.43 Warning codes

Code	Display text	Description	Solution
A00.34	TOutside Missing	Outside temperature sensor was expected but not detected	Outside sensor not detected: <ul style="list-style-type: none"> • Outside sensor is not connected: Connect the sensor • Outside sensor is not connected correctly: Connect the sensor correctly
A00.42	WaterPressureMissing	Water pressure sensor was expected but not detected	Water pressure sensor not detected <ul style="list-style-type: none"> • Water pressure sensor is not connected: connect the sensor • Water pressure sensor is not connected correctly: connect the sensor correctly
A01.23	Poor Combustion	Poor combustion	Configuration error: No flame during operation: <ul style="list-style-type: none"> • No ionisation current: <ul style="list-style-type: none"> - Purge the gas supply to remove air. - Check whether the gas tap is properly open. - Checking the gas supply pressure. - Check the operation and setting of the gas valve unit. - Check that the air inlet and flue gas discharge flues are not blocked. - Check that there is no recirculation of flue gases.
A02.06	Water Press Warning	Water Pressure Warning active	Water pressure warning: <ul style="list-style-type: none"> • Water pressure too low; check the water pressure
A02.36	Funct device lost	Functional device has been disconnected	SCB not found: <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty SCB: Replace SCB

Code	Display text	Description	Solution
A02.37	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
A02.45	Full Can Conn Matrix	Full Can Connection Matrix	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
A02.46	Full Can Device Adm	Full Can Device Administration	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
A02.48	Funct Gr Conf Fault	Function Group Configuration Fault	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
A02.49	Failed Init Node	Failed Initialising Node	SCB not found: <ul style="list-style-type: none"> • Carry out an auto-detect
A02.55	Inval or miss SerNR	Invalid or missing device serial number	Contact your supplier.
A02.69	Fair mode active	Fair mode active	Contact your supplier.
A02.76	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
A08.02	Shower Time Elapsed	The time reserved for the shower has elapsed	Take a shorter shower or adjust parameter DP357 .

10.1.2 Blocking

Tab.44 Blocking codes

Code	Display text	Description	Solution
H00.81	RoomTempMissing	Room Temperature sensor was expected but not detected	Room temperature sensor not detected: <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
H01.00	Comm Error	Communication Error occured	Communication error with the security kernel: <ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH
H01.05	Max Delta TF-TR	Maximum difference between flow temperature and return temperature	Maximum difference between the flow and return temperature exceeded: <ul style="list-style-type: none"> • No flow or insufficient flow: <ul style="list-style-type: none"> - Check the flow (direction, pump, valves) - Check the water pressure - Check the cleanliness of the heat exchanger • Sensor error: <ul style="list-style-type: none"> - Check that the sensors are operating correctly - Check that the sensor has been fitted properly

Code	Display text	Description	Solution
H01.08	CH Temp Grad. Level3	Maximum CH temperature gradient level3 exceeded	Maximum heat exchanger temperature increase has been exceeded: <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
H01.14	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
H01.15	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
H02.00	Reset In Progress	Reset In Progress	Reset procedure active: <ul style="list-style-type: none"> • No action
H02.02	Wait Config Number	Waiting For Configuration Number	Configuration error or unknown configuration number: <ul style="list-style-type: none"> • Reset CN1 and CN2
H02.03	Conf Error	Configuration Error	Configuration error or unknown configuration number: <ul style="list-style-type: none"> • Reset CN1 and CN2
H02.04	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
H02.05	CSU CU mismatch	CSU does not match CU type	Configuration error: <ul style="list-style-type: none"> • Reset CN1 and CN2
H02.09	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
H02.10	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
H02.12	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
H02.38	No water hardness	No hardness of water	-
H02.70	HRU test error	External heat recovery unit test failed	Check the external heat recovery system.

Code	Display text	Description	Solution
H03.00	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
H03.01	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
H03.02	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
H03.05	Internal blocking	Gas Valve Control internal blocking occurred	Security kernel error: <ul style="list-style-type: none"> Restart the boiler Replace the CU-GH
H03.17	Safety check	Periodically safety check ongoing	<ul style="list-style-type: none"> Restart the boiler Replace the CU-GH

10.1.3 Locking

Tab.45 Locking codes

Code	Display text	Description	Solution
E00.04	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
E00.05	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
E00.06	TReturn Missing	Return temperature sensor was expected but not detected	No connection to temperature return sensor: <ul style="list-style-type: none"> Bad connection: check the wiring and connectors. Faulty sensor: replace the sensor

Code	Display text	Description	Solution
E00.07	dTReturn Too High	Return temperature difference is too large	<p>Difference between the flow and return temperatures too great:</p> <ul style="list-style-type: none"> • No circulation: <ul style="list-style-type: none"> - Vent the central heating system to remove air - Check the water pressure - If present: check the boiler type parameter setting - Check the circulation (direction, pump, valves) - Check that the heating pump is operating correctly - Check the cleanliness of the heat exchanger • Sensor not connected or incorrectly connected: <ul style="list-style-type: none"> - Check that the sensors are operating correctly - Check that the sensor has been fitted properly • Faulty sensor: replace the sensor if necessary
E00.16	DHW sensor Open	Domestic Hot Water tank temperature sensor is either removed or measures a temperature below range	<p>Calorifier sensor open:</p> <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E00.17	DHW sensor Closed	Domestic Hot Water tank temperature sensor is either shorted or measures a temperature above range	<p>Calorifier sensor short-circuited:</p> <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty sensor: replace the sensor
E01.04	5x Flame Loss Error	5x Error of unintended Flame Loss occurrence	<p>Flame loss occurs 5 times:</p> <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
E01.11	Fan Out Of Range	Fan speed has exceeded normal operating range	<p>Fan fault:</p> <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors. • Faulty fan: replace the fan • Fan operates when it should not be operating: check for excessive chimney draught
E01.12	Return Higher Flow	Return temperature has a higher temperature value than the flow temperature	<p>Flow and return reversed:</p> <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

Code	Display text	Description	Solution
E01.24	Combustion Error	Several combustion errors occurs with 24 hours	Low 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.
E02.13	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
E02.15	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
E02.17	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
E02.35	Safety device lost	Safety critical device has been disconnected	Communication fault <ul style="list-style-type: none"> • Carry out an auto-detect
E02.47	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
E04.00	Parameter error	Safety parameters Level 5 are not correct or missing	Replace the CU-GH.
E04.01	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
E04.02	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
E04.03	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
E04.07	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

Code	Display text	Description	Solution
E04.10	Unsuccessful start	5 Unsuccessful burners starts detected	<p>Five failed burner starts:</p> <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.
E04.12	False flame	False flame detected before burner start	<p>False flame signal:</p> <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
E04.13	Fan	Fan speed has exceeded normal operating range	<p>Fan fault:</p> <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
E04.17	GasValve Driver Err.	The driver for the gas valve is broken	<p>Gas valve unit fault:</p> <ul style="list-style-type: none"> • Bad connection: check the wiring and connectors • Faulty gas valve unit: Replace the gas valve unit
E04.23	Internal Error	Gas Valve Control internal locking	<ul style="list-style-type: none"> • Restart the boiler • Replace the CU-GH

10.2 Error memory

The control panel includes an error memory in which the last 32 errors are stored. Details of the error are stored with the error codes. Included are the status, sub-status, flow temperature, return temperature, fan rotation speed and the ionisation current.



For more information, see
Additional documentation, page 10

11 Technical specifications

11.1 Homologations

11.1.1 Certifications

Tab.46 Certifications

CE identification number	PIN 0063CS3928
Class NOx ⁽¹⁾	6
Type of flue gas connection	B _{23P} , B ₃₃ ⁽²⁾ C ₁₃ , C ₃₃ , C ₅₃ , C ₆₃ , C ₉₃
(1) EN 15502-1 (2) When installing a boiler with connection type B _{23P} , B ₃₃ , the IP rating of the boiler is lowered to IP20.	

■ Gas council numbers

Tab.47 Gas Council number

Quinta Ace	30	45	55	65	90	115
Gas Council number	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

11.1.2 Unit categories

Tab.48 Unit categories

Country	Category	Gas type	Connection pressure (mbar)
Great Britain	II _{2H3B/P}	G20 (H gas)	20
	II _{2H3P}	G31 (propane)	37-50

11.1.3 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.

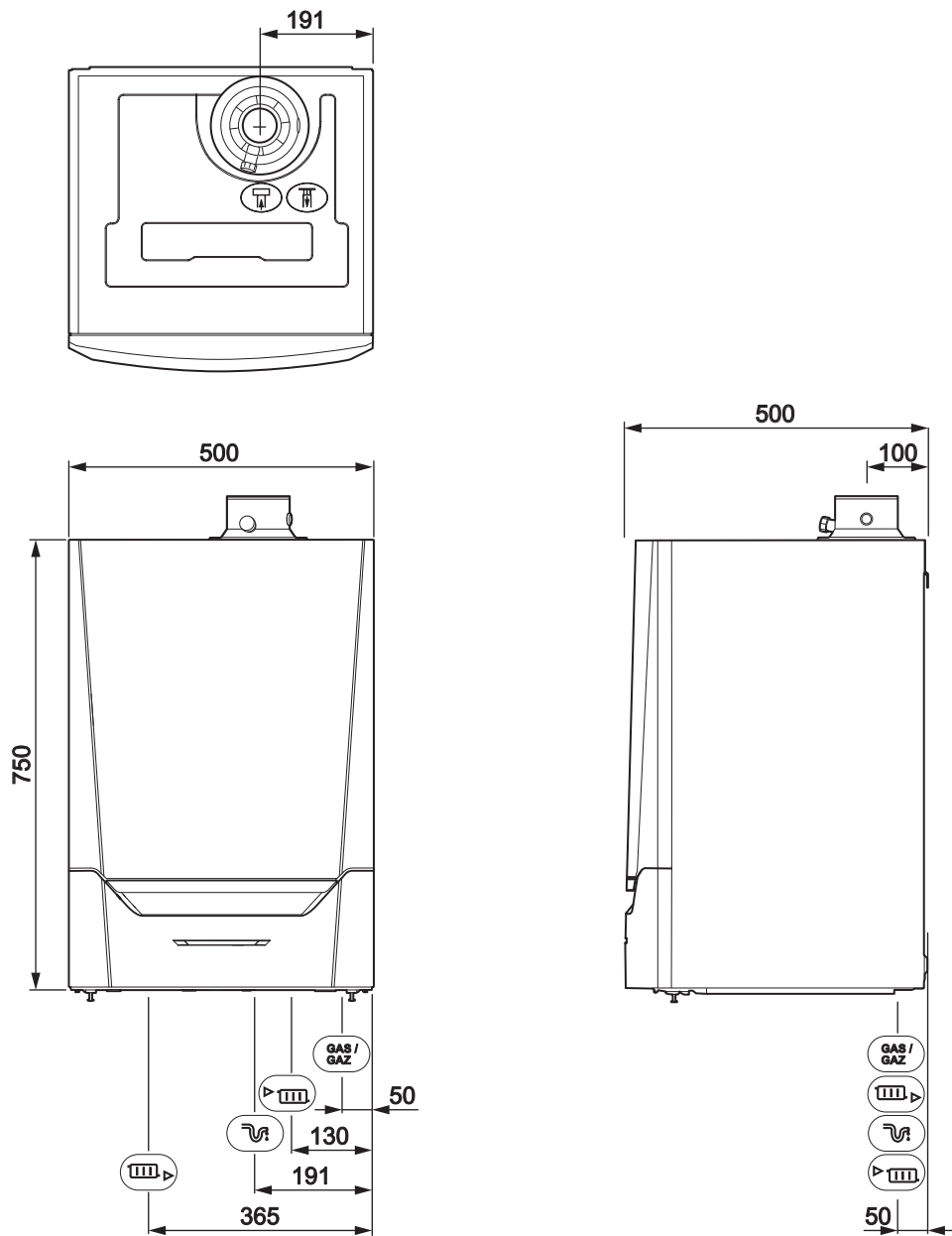
11.1.4 Factory test

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

- Electrical safety.
- Adjustment of (O₂/CO₂).
- Water tightness.
- Gas tightness.
- Parameter setting.

11.2 Dimensions and connections

Fig.47 Dimensions



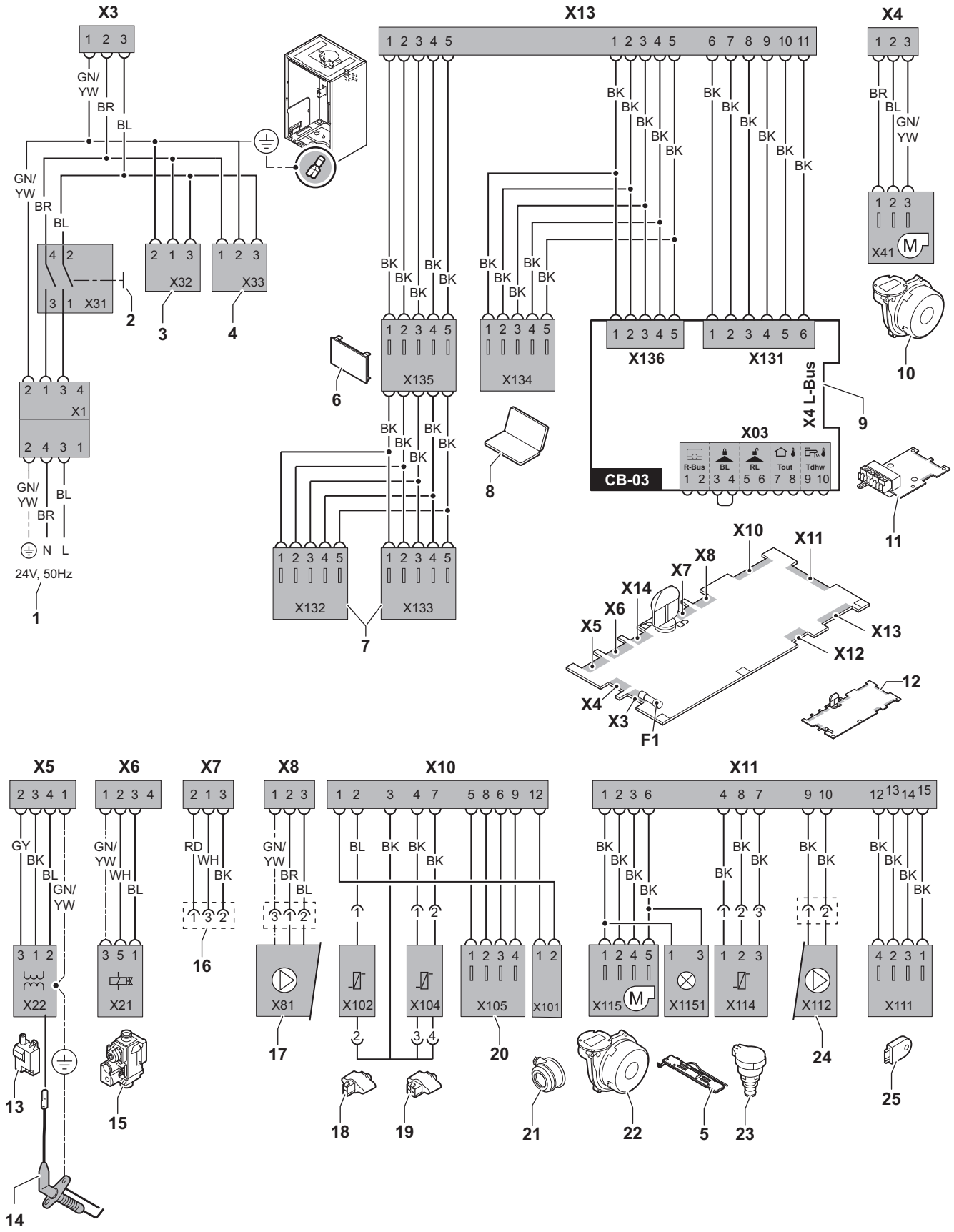
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Tab.49 Connections

Symbol	Connection	Quinta Ace 30	Quinta Ace 45	Quinta Ace 55	Quinta Ace 65	Quinta Ace 90	Quinta Ace 115
	Flue gas outlet	Ø 80 mm	Ø 80 mm	Ø 100 mm	Ø 100 mm	Ø 100 mm	Ø 100 mm
	Air supply	Ø 125 mm	Ø 125 mm	Ø 150 mm	Ø 150 mm	Ø 150 mm	Ø 150 mm
	Siphon	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm
	CH flow	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread
	CH return	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread	1 1/4" male thread
	Gas	3/4" male thread	3/4" male thread	3/4" male thread	3/4" male thread	3/4" male thread	3/4" male thread

11.3 Electrical diagram

Fig.48 Electrical diagram



- 1 Power supply
- 2 On/off switch
- 3 Power supply for SCB-xx control PCBs





- 4 Power supply for IF-01 control PCB
- 5 Interior lighting
- 6 Display

AD-3001177-01

7 Connection points for additional SCB-xx control PCBs	20 Connection point for flue gas sensor (PTC <20Ω/25°C)
8 Service connection	21 Connection point for air pressure differential switch
9 L-Bus connection for SCB-xx control PCBs	22 Fan control
10 Fan supply	23 Pressure sensor
11 Standard CB-03 control PCB	24 Control for PWM pump
12 CU-GH08 control unit	25 Storage information (CSU)
13 Ignition transformer	BK Black
14 Ionisation/ignition electrode	BL Blue
15 Combined gas valve unit	BR Brown
16 Connection to CB-08 PCB (for 24 V or 230 V three-way valve)	GN Green
17 Power supply for pump	GY Grey
18 Return sensor (NTC 10 kΩ/25°C)	RD Red
19 Flow sensor (NTC 10 kΩ/25°C)	WH White
	YW Yellow

11.4 Technical data

Tab.50 General

Quinta Ace			30	45	55	65	90	115
Nominal output (Pn) Central heating operation (80/60°C)	min- max  ⁽¹⁾	kW	8.0 - 29.8 29.8	8.0 - 40.8 40.8	11.1 - 55.3 55.3	12.0 - 61.5 61.5	14.1 - 84.2 84.2	18.9 - 103.9 103.9
Nominal output (Pn) Central heating operation (50/30°C)	min- max  ⁽¹⁾	kW	9.1 - 30.9 30.9	9.1 - 42.4 42.4	12.3 - 58.6 58.6	13.5 - 65.0 65.0	15.8 - 89.5 89.5	21.2 - 109.7 109.7
Nominal load (Qnh) Central heating operation (Hi)	min- max  ⁽¹⁾	kW	8.2 - 30.0 30.0	8.2 - 41.2 41.2	11.3 - 56.5 56.5	12.2 - 62.0 62.0	14.6 - 86.0 86.0	19.6 - 107.0 107.0
Nominal load (Qnh) Central heating operation (Hs)	min- max  ⁽¹⁾	kW	9.1 - 33.3 33.3	9.1 - 45.7 45.7	12.5 - 62.7 62.7	13.6 - 68.8 68.8	16.2 - 95.5 95.5	21.9 - 118.8 118.8
Full load central heating efficiency (Pn) (Hi) (80°C/60°C)		%	99.4	99.1	97.8	99.2	97.9	97.1
Full load central heating efficiency (Pa) (Hi) (80°C/60°C)		%	97.5	97.2	97.8	98.3	97.9	97.1
Full load central heating efficiency (Hi) (50°C/30°C)		%	102.9	102.9	103.8	104.6	104.1	102.5
Central heating efficiency under part load (Hi) (Return temperature 60 °C)		%	97.5	97.2	97.8	98.3	96.6	96.5
Part load central heating efficiency (Pn) (Hi) (Return temperature 30 °C)		%	110.4	110.6	108.7	110.4	108.1	108.0
Part load central heating efficiency (Pn) (Hi) (Return temperature 30 °C)		%	108.5	108.4	108.7	108.9	108.1	108.0
Full load central heating efficiency (Pn) (Hs) (80/60°C)		%	89.5	89.2	88.1	89.3	88.2	87.4
Full load central heating efficiency (Pa) (Hs) (80/60°C)		%	87.8	87.5	88.1	88.5	88.2	87.4
Full load central heating efficiency (Hs) (50/30°C)		%	92.7	92.7	93.5	94.2	93.7	92.3
Heating efficiency under part load (Hs) (Return temperature 60 °C)		%	87.8	87.5	88.1	88.5	88.2	87.4

Quinta Ace			30	45	55	65	90	115
Central heating efficiency under partial load (Pn) (Hs) (Return temperature 30 °C)		%	99.4	99.6	97.9	99.4	97.3	97.3
Central heating efficiency under partial load (Pa) (Hs) (Return temperature 30 °C)		%	97.7	97.6	97.9	98.1	97.3	97.3
(1) Factory setting								

Tab.51 Gas and flue gas data

Quinta Ace			30	45	55	65	90	115
Gas inlet pressure G20 (H gas)	min-max	mbar	17 - 25	17 - 25	17 - 25	17 - 25	17 - 25	17 - 25
Gas inlet pressure G31 (propane)	min-max	mbar	37 - 50	37 - 50	37 - 50	37 - 50	37 - 50	37 - 50
Gas consumption G20 (H gas) ⁽¹⁾	min-max	m ³ /h	0.9 - 3.2	0.9 - 4.4	1.2 - 6.0	1.3 - 6.6	1.5 - 9.1	2.1 - 11.3
Gas consumption G31 (propane) ⁽¹⁾	min-max	m ³ /h	0.4 - 1.2	0.4 - 1.7	0.5 - 2.3	0.5 - 2.5	0.9 - 3.5	0.9 - 4.4
Gas resistance between boiler connection point and measurement point on the gas valve unit (measured with G20)	max	mbar	0.5	1.0	2.0	2.0	2.5	3.0
NOx annual emission G20 (BREEAM EN15502)		mg/kWh	33	33	36	36	29	33
Flue gas quantity	min-max	kg/h	14 - 50	14 - 69	19 - 93	21 - 104	28 - 138	36 - 178
Flue gas temperature	min-max	°C	30 - 65	30 - 67	30 - 68	30 - 68	30 - 68	30 - 72
Maximum counter pressure		Pa	70	150	120	100	160	220
Central heating chimney efficiency (Hi) (80/60°C) at 20°C amb.		%	99.4	99.1	97.8	99.2	97.9	97.1
Central heating chimney losses (Hi) (80/60°C) at 20°C amb.		%	0.6	0.9	2.2	0.8	2.1	2.9
(1) Gas consumption based on lower heating value under standard conditions: T=288.15 K, p=1013.25 mbar. Gag 30.33; G25 29.25; G31 88.00 MJ/m ³								

Tab.52 Central heating circuit data

Quinta Ace			30	45	55	65	90	115
Water content		l	4.3	4.3	6.4	6.4	9.4	9.4
Water operating pressure	min	bar	0.8	0.8	0.8	0.8	0.8	0.8
Water operating pressure (PMS)	max	bar	4.0	4.0	4.0	4.0	4.0	4.0
Water temperature	max	°C	110.0	110.0	110.0	110.0	110.0	110.0
Operating temperature	max	°C	90.0	90.0	90.0	90.0	90.0	90.0
Hydraulic resistance ($\Delta T=20K$)		mbar	70	114	130	163	153	250
Casing-related losses	$\Delta T 30^{\circ}C$	W	101	101	110	110	123	123
	$\Delta T 50^{\circ}C$		201	201	232	232	254	254

Tab.53 Electrical data

Quinta Ace			30	45	55	65	90	115
Supply voltage		VAC	230	230	230	230	230	230
Power consumption - Full load central heating ⁽¹⁾	max	W	40	75	100	89	114	182
Power consumption - Part load central heating (30%) ⁽¹⁾	min	W	20	22	42	29	30	36
Power consumption - Minimal load central heating ⁽¹⁾	min	W	19	20	38	26	26	32

Quinta Ace			30	45	55	65	90	115
Power consumption - Stand-by (Psb) ⁽¹⁾	max	W	6	6	7	7	7	6
Electrical protection index		IP	X4D	X4D	X4D	X4D	X4D	X4D
Fuses (slow)	Main CU-GH08	A	2.5	2.5	2.5	2.5	2.5	2.5
(1) without pump								

Tab.54 Other data

Quinta Ace			30	45	55	65	90	115
Total weight including packaging		kg	60.5	60.5	66.5	66.5	76.5	76.5
Minimum mounting weight ⁽¹⁾		kg	50	50	56	56	65.2	65.2
Average acoustic level at a distance of one metre from the boiler		dB(A)	38.3	45.1	46.7	46.7	51.6	51.1
(1) Without front panel.								

Tab.55 Technical parameters

Quinta Ace			30	45	55	65	90	115
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>Prated</i>	kW	30	41	55	62	84	104
Useful heat output at nominal heat output and high temperature operation ⁽²⁾	<i>P₄</i>	kW	29.8	40.8	55.3	61.5	84.2	103.9
Useful heat output at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>P₁</i>	kW	9.9	13.7	18.4	20.5	27.9	34.7
Seasonal space heating energy efficiency	<i>η_s</i>	%	94	94	92	94	-	-
Useful efficiency at rated heat output and high temperature regime ⁽²⁾	<i>η₄</i>	%	89.6	89.3	88.1	89.4	88.2	87.5
Useful efficiency at 30% of rated heat output and low temperature regime ⁽¹⁾	<i>η₁</i>	%	99.5	99.6	97.9	99.5	97.4	97.3
Auxiliary electricity consumption								
Full load	<i>elmax</i>	kW	0.040	0.075	0.100	0.100	0.124	0.184
Part load	<i>elmin</i>	kW	0.020	0.020	0.042	0.029	0.030	0.036
Standby mode	<i>P_{SB}</i>	kW	0.006	0.006	0.007	0.007	0.007	0.006
Other items								
Standby heat loss	<i>P_{stby}</i>	kW	0.101	0.101	0.110	0.110	0.123	0.123
Ignition burner power consumption	<i>P_{ign}</i>	kW	-	-	-	-	-	-
Annual energy consumption	<i>Q_{HE}</i>	GJ	91	125	173	188	-	-
Sound power level, indoors	<i>L_{WA}</i>	dB	46	53	55	55	60	59
Emissions of nitrogen oxides	NO _x	mg/kWh	42	42	48	48	53	41
(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

The back cover for contact details.

12 Appendix

12.1 ErP information

12.1.1 Product fiche

Tab.56 Product fiche

Remeha–Quinta Ace		30	45	55	65	90	115
Seasonal space heating energy efficiency class		A	A	A	A	_(1)	_(1)
Rated heat output (<i>Prated or Psup</i>)	kW	30	41	55	62	84	104
Seasonal space heating energy efficiency	%	94	94	92	94	-	-
Annual energy consumption	GJ	91	125	173	188	-	-
Sound power level L_{WA} indoors	dB	46	53	55	55	60	59
(1) For CH boilers and boilers over 70 kW, no ErP information needs to be provided.							



See

For specific precautions about assembling, installing and maintaining: Safety, page 5

- I The value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %.
- II The factor for weighting the heat output of preferential and supplementary heaters of a package as set out in the following table.
- III The value of the mathematical expression: $294/(11 \cdot \text{Prated})$, whereby 'Prated' is related to the preferential space heater.
- IV The value of the mathematical expression $115/(11 \cdot \text{Prated})$, whereby 'Prated' is related to the preferential space heater.

Tab.57 Weighting of boilers

$P_{sup} / (Prated + P_{sup})^{(1)(2)}$	II, package without hot water storage tank	II, package with hot water storage tank
0	0	0
0.1	0.3	0.37
0.2	0.55	0.70
0.3	0.75	0.85
0.4	0.85	0.94
0.5	0.95	0.98
0.6	0.98	1.00
≥ 0.7	1.00	1.00

(1) The intermediate values are calculated by linear interpolation between the two adjacent values.
(2) Prated is related to the preferential space heater or combination heater.

12.2 Disposal

12.2.1 Disposal and recycling



Caution

Only qualified professionals are permitted to remove and dispose of the boiler, in accordance with local and national regulations.

Fig.50



If you need to remove the boiler, proceed as follows:

1. Switch off the boiler.
2. Cut the power supply to the boiler.
3. Close the main gas valve.
4. Close the water mains.
5. Close the gas valve on the boiler.
6. Drain the installation.
7. Remove the air/flue gas pipes.
8. Disconnect all pipes.
9. Dismantle the boiler.

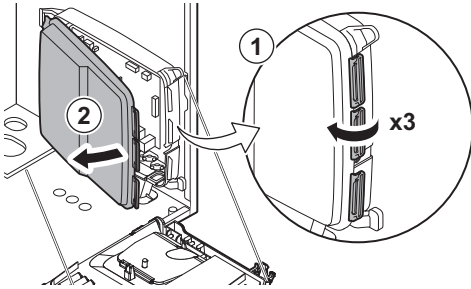
12.3 EC declaration of conformity

The unit 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.

12.4 Optional electrical connections

Fig.51 Open housing for extension PCBs



AD-4000062-01

12.4.1 Electronics extension box for extension PCBs

If there is no space in the boiler's instrument box to install an (optional) extension PCB, install the PCB in the electronics extension box. This is available as an accessory.

1. Unclip the housing cover.
2. Remove the cover.
3. Install the extension PCB in accordance with the instructions supplied.

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