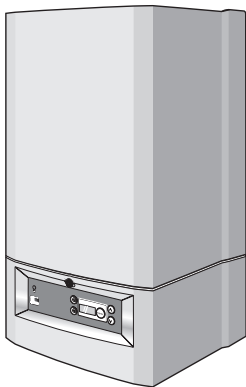


Users manual

Wall-mounted condensing gas combi boiler Buderus 500 - 24/C, 500 - 28/C



Buderus

Please read thoroughly before operating the unit



Introduction

Please read these instructions and follow them carefully for a safe and economical use of your combi boiler.

Important general instructions for use

This device should only be used for its intended purpose and in accordance with the regulations.

It is a requirement and in your own interest, and that of safety that this boiler must be installed by a CORGI registered installer, in accordance with the relevant requirements of the current Gas Safety (Installation and Use) Regulations,

The Building Regulations, current I.E.E. Wiring Regulations and the relevant British Standard Codes of Practice.

The device may only be used in combination with the units, accessories and spare parts listed in the installation and maintenance instructions.

Other combinations of units, accessories and consumables are only to be used if they completely fulfil the specifications involved, and if system performance and safety are not affected in any way.

Subject to technical modifications

As a result of our policy of constant development, there may be small differences with respect to illustrations, functional steps and technical data.

Cleaning

For normal cleaning simply dust with a dry cloth. To remove stubborn marks and stains, wipe with a damp cloth and soap and finish off with a dry cloth.

DO NOT use abrasive cleaning materials.

G. C. Appliance No. :

Buderus 500-24/C : 41-110-04

Buderus 500-28/C : 41-110-03

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Dear Customer,

Your Buderus **500 Series** wall-mounted condensing gas combi boiler has been designed and built in accordance with state-of-the-art technological standards and the recognised safety rules. Special focus has been placed on operator convenience in this respect.

Carefully read the safety instructions and operating manual to ensure safe, economic and ecologically beneficial use of the unit.

Due to the high efficiency of the boiler a plume of water vapour may form at the terminal during operation. This is normal.

1 Safety precautions



DANGER! If you smell gas:

- 1) **No naked flames ! Do not smoke !**
- 2) **Avoid sparks ! Do not operate electrical switches. Do not use the telephone, plug-in devices of any kind or the doorbell!**
- 3) **Shut off the main gas supply!**
- 4) **Open windows and doors!**
- 5) **Warn building occupants and evacuate the building!**
- 6) **Call the gas distributor (under 'GAS' in the telephone directory) from outside the building!**



NOTE

In the event of any other type of incident, shut off the main gas supply and electric supply to the appliance and seek assistance from a CORGI registered engineer.

2 Installation area / boiler room



DANGER!

The air intake and outlet openings must not be reduced in size or closed.



DANGER!

Do not store or use inflammable materials or liquids near the heating boiler.



NOTE

To prevent the boiler from being damaged, care must be taken not to contaminate the combustion air with halogenated hydrocarbons (e. g. contained in aerosol sprays, solvents, detergents, paints, and adhesives), or with high quantities of dust. The room in which the boiler is installed must be frost-proof and be well ventilated.

3 Working in the heating system



DANGER!

Only a CORGI registered Engineer is to be entrusted with the installation of this boiler, the gas supply and the flue connection. Commissioning, Servicing and any Repairs must be carried out by a competent person i.e.: a CORGI Registered Engineer.

All CORGI Registered Installers carry a CORGI identification card and have a registration number.

Both should be recorded in your boiler logbook.

You can check if your installer/Engineer is registered by telephoning 01256 372300 or by writing to:
CORGI, 1 Elmwood, Chineham Business Park,
Crockford Lane, Basingstoke. RG24 8WG.



NOTE

It is mandatory to clean and service the system once a year ! This includes an inspection of the entire system to see if it is in full working order. Any faults and defects found in the course of inspection must be rectified immediately.

It is recommended to enter into a service contract with a specialist company.

4 Functions of the system and operating instructions

The installer should familiarize the user with the functions and operation of the heating system and ensure that a complete set of technical documentation is supplied.

5 Maintenance

The appliance should be serviced at least once a year by a CORGI registered installer.

6 Conversion to LPG

The boiler is suited for natural gas. To convert the boiler to LPG you must contact a CORGI registered fitter.

7 Abbreviations

DBA = Control unit (Dedicated Burner Automat)

MCW inlet = Mains Cold Water inlet

DHW outlet = Domestic Hot Water warm outlet

CH flow = Central Heating flow

CH return = Central Heating return.

8 Permanent clearances

The boiler must be located in an area with the following permanent clearances.

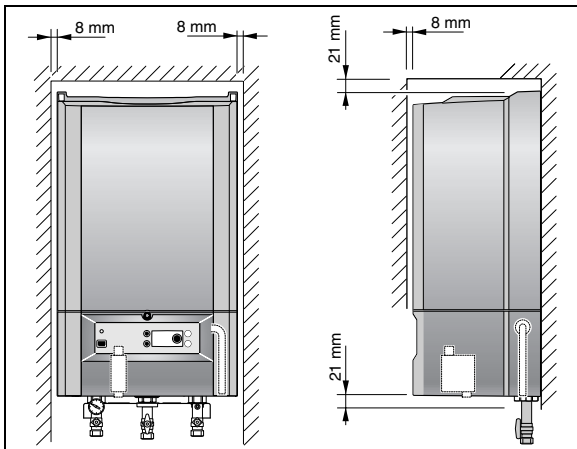
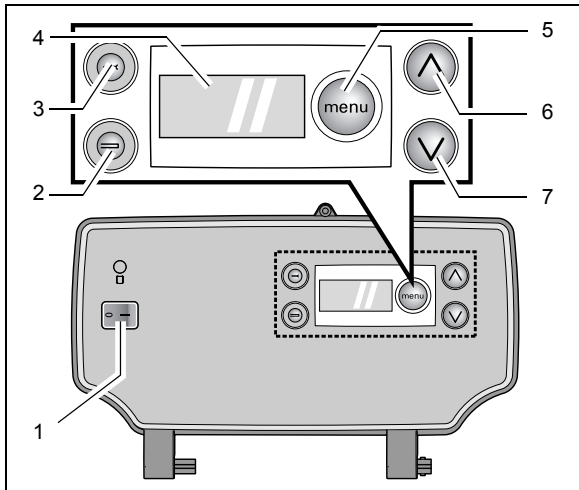


fig. 1

**NOTE**

The permanent clearances do not change if a wall spacing frame is used.

The installer or service engineer must be able to create sufficient service clearances. These clearances should have been considered at time of installation.

9 DBA*fig. 2 DBA*

Key to fig. 2 :

item 1: mains switch

item 2: "reset" button

item 3: "service" button

item 4: display

item 5: "menu" button

item 6: adjusting arrow up

item 7: adjusting arrow down

The boiler is equipped with a DBA. This is the internal control of the boiler. The DBA is located behind the access panel. The DBA allows you to operate the boiler and to make adjustments in its settings.

DBA overview:

1. Mains switch (see fig. 2).

Use this switch to turn the boiler on or off.

2. Reset button " (see fig. 2)

When a blinking code is in the display, it is possible to try and restart the boiler by pressing this button.



NOTE

It is not possible to reset the boiler when there is no fault code blinking in the display.

3. Service Button "⊖" (see fig. 2)

Is used for servicing purposes only.

DO NOT use this button!

4. Display (see fig. 2)

The display visualizes settings, adjustments and fault codes (see fig. 3).

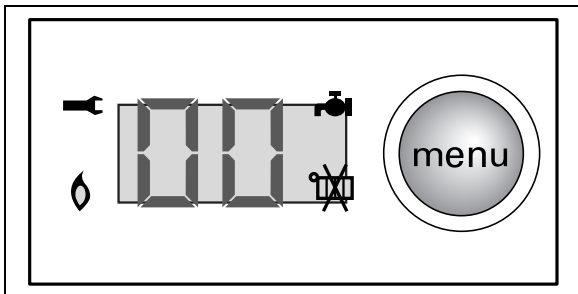


fig. 3 DBA display

5. Menu button "☰" (see fig. 2)

The menu button "☰" allows you to scroll through the menu items.

Pressing the ☰ button once, the current warm start function setting is displayed.

Pressing the ☰ button again gives the current DHW temperature setting is displayed.

Pressing the ☰ button again gives the current setting of summer operation.

Pressing the ☰ button once more gives the current CH flow temperature setting.

6. and 7. Up "⬆" and Down "⬇" keys (see fig. 2)

These keys can be used for adjusting temperatures and activating or de-activating certain summer operation.

The ⬆ key when pressed gives the current operating status of the boiler.

10 Initial start-up

10.1 Preparing for operation

Please also note the user manual supplied with the external time controls and thermostat.

10.1.1 Check water pressure

- Check the pressure gauge (fig. 4, item 3) located at the bottom of the boiler for the current system pressure. Optimum system pressure is 1.5 bar.

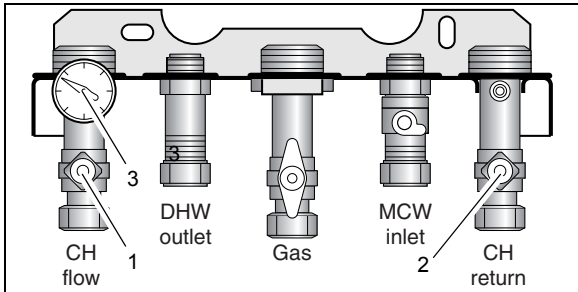


fig. 4 Servicing valves

10.1.2 Topping up the heating system



WARNING!

The wall-mounted condensing gas combi boiler must not be activated at this stage.

The system should be filled with untreated mains water.

- Turn off the boiler by setting the mains switch to "0" (fig. 5, item 1).
- If necessary open the CH flow and CH return servicing valves (fig. 4, item 1 and 2).

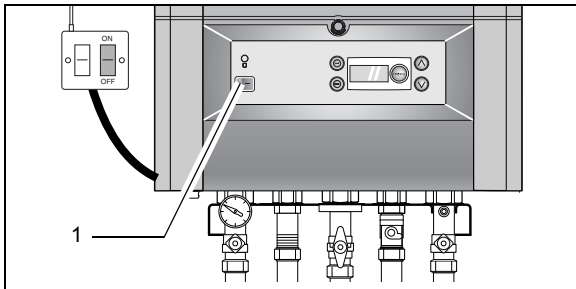


fig. 5 DBA – Mains switch

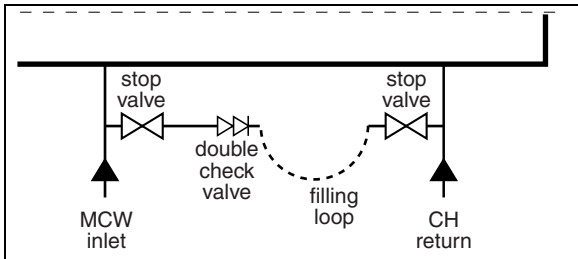


fig. 6 *Filling loop*

- Connect filling loop (accessory) (fig. 6).
- Open both stop valves (fig. 6).
- Fill the system to a pressure of approx. 1.5 bar (fig. 4, item 3).
- Shut both stop valves.
- Disconnect the filling loop.
- Vent all radiators from air starting with the lowest radiator and working your way up to the highest point.




- Check the pressure after venting. If the pressure has dropped under 1.0 bar then top up the system as described previously.
- Disconnect the filling loop and cap off.

**NOTE**

If there are frequent water losses, have the system examined and repaired by a CORGI registered installer. Have the inhibitor concentration checked every year.

10.1.3 Temperature-setting adjustments

Setting the warm start function

- Press  button once.
- Use the  and  keys to turn the warm start function on or off (table 1). Factory setting: warm start function is "on".






Setting	Meaning
 - ECO / cold start	More energy efficient, less chance of calcification, longer waiting periods.
 - comfort / warm start	Maximum comfort due to short waiting period for warm water. Not as energy efficient as the cold start and there is more chance of calcification.

table 1 Warm start function

Setting the domestic hot water (DHW) temperature

- Press  button (see fig. 7, item 2) twice then adjust the DHW temperature to the desired temperature (40 °C - 60 °C) using the  and  keys (fig. 7, item 1). Factory setting is 48 °C.

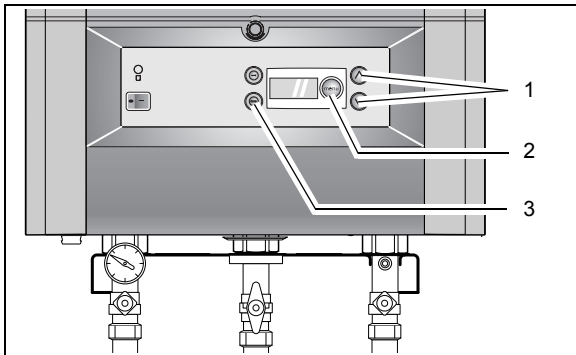







fig. 7 DBA – Mains switch

Setting the boiler to summer operation

When you want to make sure that your boiler will not operate for central heating in the summer then you can set the boiler to summer operation. The boiler will then only operate for DHW.




- Press the  button (see fig. 7, item 2) three times.
The current setting blinks.
- Use the  and  keys to adjust to desired setting.

	Central heating is on.
	Central heating is off (summer operation). DHW is still available.

**NOTE**


When summer operation is active then the boiler will not operate for central heating until summer operation has been deactivated.

Setting the flow temperature for CH

- Press  button (see fig. 7, item 2) four times then adjust the flow temperature to the desired temperature (30 °C – 80 °C) using the  and  keys (see fig. 7, item 1).
Factory setting is 80 °C.

It is not possible to set the flow temperature when the boiler is set to summer operation.

10.2 Operational and fault codes

Operating conditions and possible faults can be seen, pressing the  key.

All codes not contained in table 2 should be noted down separately. These are malfunctions that require the presence of a CORGI installer.



Display after pressing service button " 	Meaning	Rectification
0A, 0C, 0E, 0H, 0L, 0U, 0Y	Boiler is ready for operation	
6A	Burner not ignited	Press Reset button "  (fig. 7, item 3). If the burner fails to ignite after several unblocking operations, consult a CORGI installer.
-H	Normal heating mode	Maximum comfort when set at 60 °C
=H	Normal hot water mode	

table 2 Operational and fault codes

11 Taking the system out of service

- Push the mains power switch (fig. 5, item 1) to “0”.
- Close the gas service valve by turning it clockwise (fig. 8, item 1).

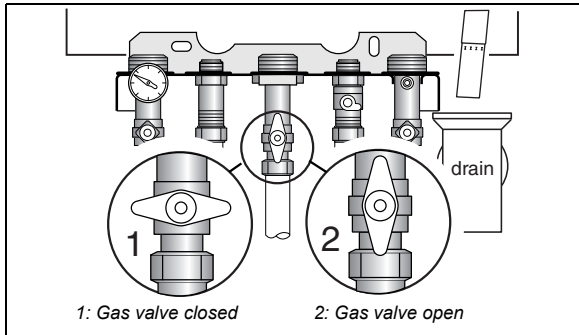


fig. 8 Gas service valve

Frost protection

The boiler has an automatic frost protection. When the CH flow temperature drops below 7 °C then the boiler will start up.

11.1 Draining the system in case of frost

It is not recommended, but if the boiler needs to be shut down for a longer period of time, then it is necessary to drain the system. Especially when there is a chance for frost conditions.

- Turn off the boiler by setting the mains power to "0" (fig. 5, item 1).
- Close the gas valve (fig. 8, item 1).

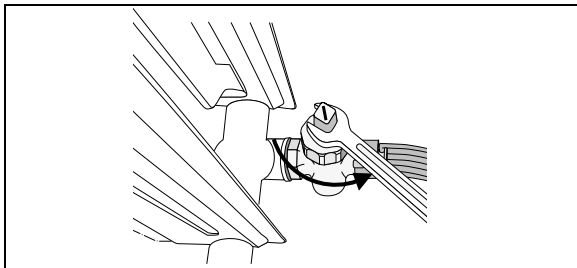


fig. 9 *Draining the system*

- Drain the system at its lowest point using the stop valves or radiator (see fig. 9). The automatic air vent at the system's highest point must be open.

The logo for Boulter Buderus features a stylized icon on the left consisting of three curved, parallel lines that resemble a flame or a stylized 'B'. To the right of this icon, the word 'Boulter' is written in a large, black, sans-serif font. Below 'Boulter', the word 'Buderus' is written in a larger, bold, black, sans-serif font, and is underlined with a thick black horizontal line.

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