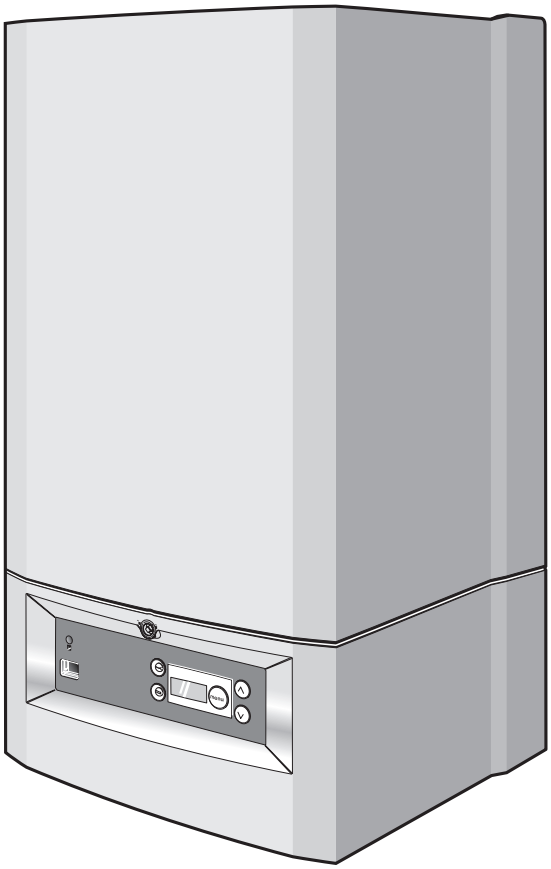
Users manual

Wall-mounted condensing gas system boiler
Buderus 500 - 24/S



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Preface

Introduction

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

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. Aplliance No. :

Buderus 500-24/S : 41-110-24

Contents

1 Safety precautions 4

2 Installation area / boiler room 4

3 Working in the heating system 4

4 Functions of the system and operating instructions 4

5 Maintenance 4

6 Conversion to LPG 4

7 Abbreviations 4

8 Permanent clearances 5

9 DBA 6

10 Initial start-up 7
10.1 Preparing for operation 7
10.2 Operational and fault codes 8

11 Taking the system out of service 9
11.1 Draining the system in case of frost 9

Preface

Dear Customer,

Your Buderus **500 Series** wall-mounted condensing gas system 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)

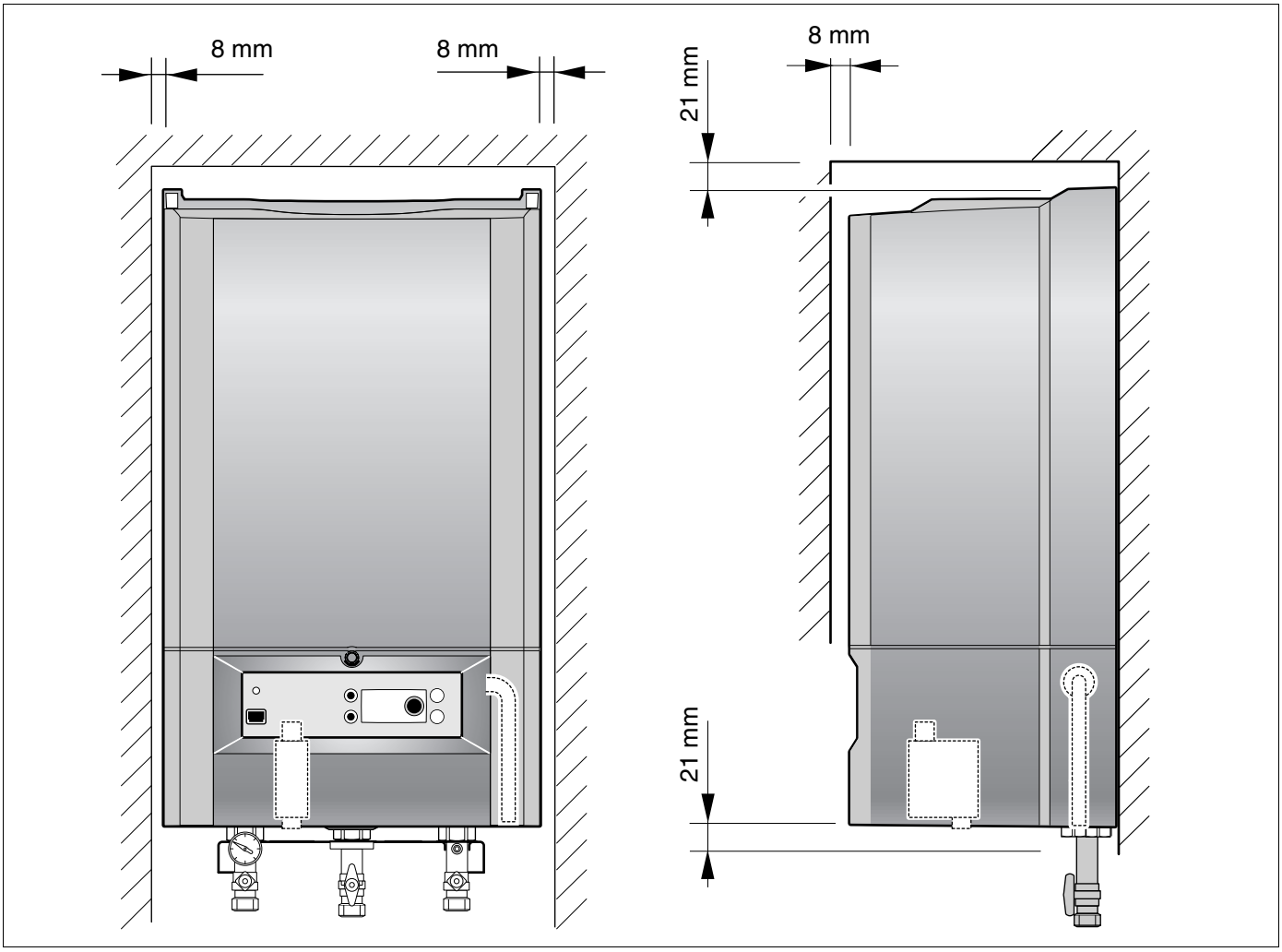
CH flow = Central heating flow

CH return = Central heating return

MCW = Mains Cold Water.

8 Permanent clearances

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



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 clearences. These clearences should have been considered at time of installation.

9 DBA

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. 1)

Use this switch to turn the boiler on or off.

2. Reset button "⇆" (see fig. 1)

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. 1)

Is used for servicing purposes only.

DO NOT use this button!

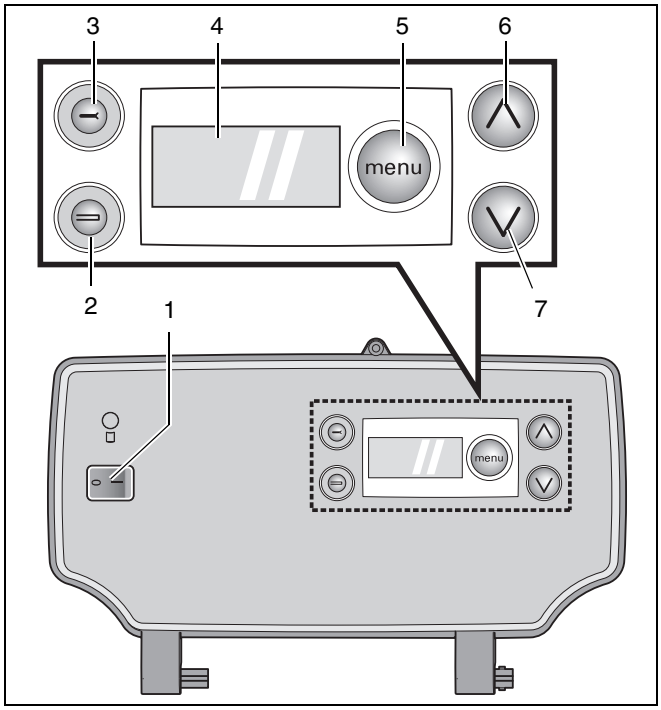


fig. 1 DBA

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

4. Display (see fig. 1)

The display visualizes settings, adjustments and fault codes (see fig. 2).

5. Menu button "menu" (see fig. 1)

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

Pressing the menu button once, the current DHW temperature (in combination with an external hot water cylinder) setting is displayed.

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

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

6. and 7. Up "∧" and Down "∨" keys (see fig. 1)

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.

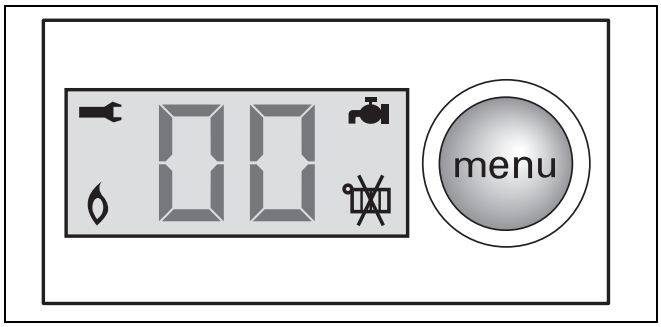


fig. 2 DBA display

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. 3, item 3) located at the bottom of the boiler for the current system pressure. Optimum system pressure is 1.5 bar.

10.1.2 Topping up the heating system

WARNING!

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

The system should be filled with untreated mains water.

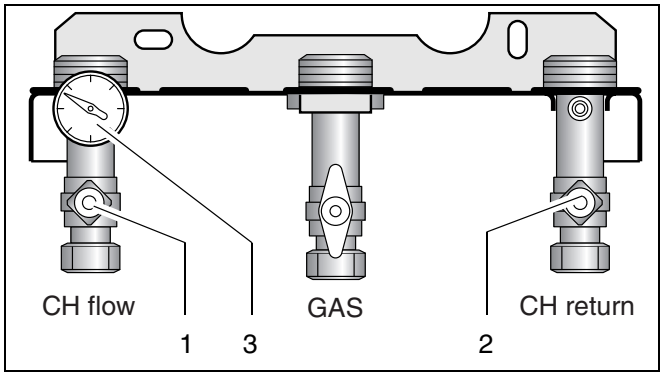


fig. 3 Servicing valves

- Turn off the boiler by setting the mains switch to "**0**".
- If necessary open the CH flow and CH return servicing valves (fig. 3, item 1 and 2).

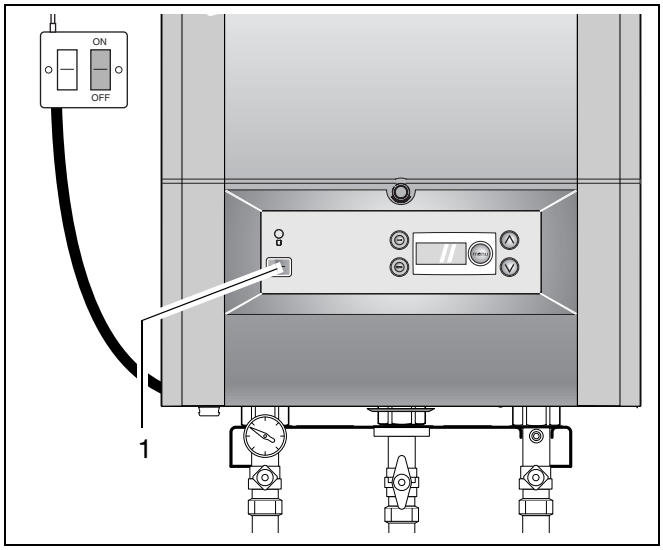


fig. 4 DBA – Mains switch

- Connect filling loop (accessory) (fig. 5).
- Open both stop valves (fig. 5).
- Fill the system to a pressure of approx. 1.5 bar (fig. 3, 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.

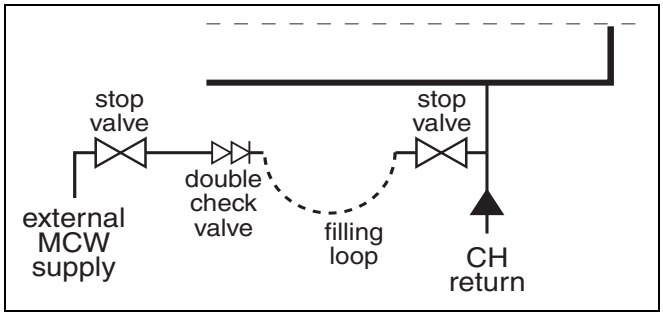


fig. 5 Filling loop

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 domestic hot water (DHW) temperature (in combination with an external hot water cylinder)

- Press (menu) button (see fig. 6, item 2) once then adjust the DHW temperature to the desired temperature (40 °C - 60 °C) using the (∧) and (∨) keys (see fig. 6, item 1). Factory setting is 48 °C.

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 (in combination with an external hot water cylinder).

- Press the (menu) button (see fig. 6, item 2) twice. 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 (in combination with an external hot water cylinder).

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 (menu) button (see fig. 6, item 2) three times then adjust the flow temperature to the desired temperature (30 °C – 80 °C) using the (∧) and (∨) keys (see fig. 6, item 1). Factory setting is 80 °C.

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

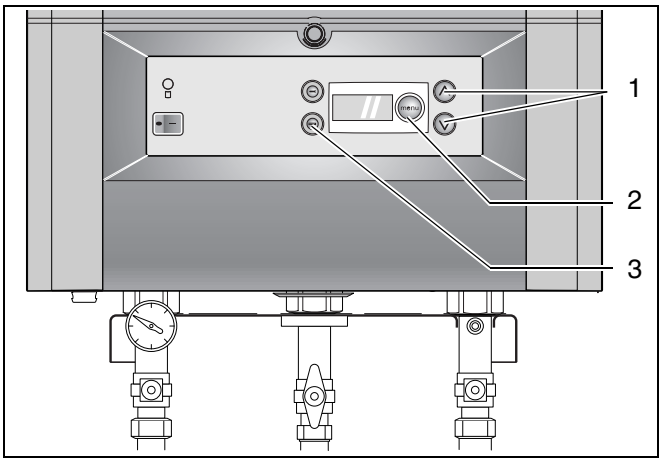


fig. 6 DBA – control panel

10.2 Operational and fault codes

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

All codes not contained in table 1 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. 6, 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	

Tab. 1 Operational and fault codes

11 Taking the system out of service

- Push the mains power switch (fig. 4, item 1) to "**0**".
- Close the gas service valve by turning it clockwise (fig. 7, item 1).

Frost protection

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

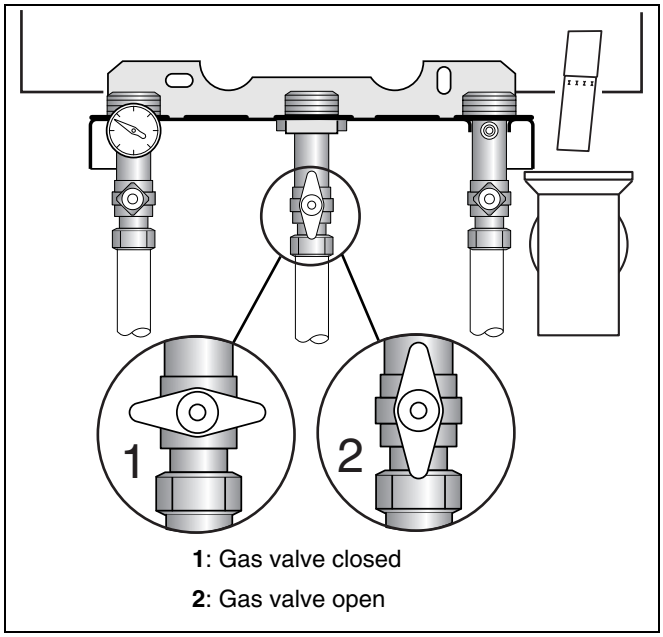


fig. 7 Gas service valve

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. 4, item 1).
- Close the gas valve (fig. 7, item 1).
- Drain the system at its lowest point using the stop valves or radiator (see fig. 8). The automatic air vent at the system's highest point must be open.

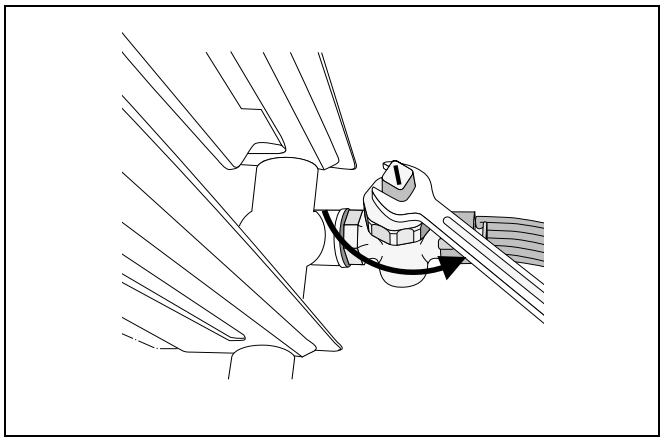


fig. 8 Draining the system

Note

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Heating system specialist:

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Magnet House
30 Whitehouse Road
Ipswich
Suffolk, IP1 5JA
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Sales Boilers: 0044 (0)1473 - 243780
Customer Services (gas): 0044 (0)870 - 421 5933
Technical Product Support (gas): 0044 (0)870 - 421 5944
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