

For the user

Instructions for use
aquaPLUS



Gas fired room sealed fan assisted
combination boiler with 15L store

VUI 362-7

| | page |
|---|----------|
| Information to the documentation | 2 |
| Attachment and safe storage of the documentation | 2 |
| Key to symbols | 2 |
| 1 General information | 3 |
| 1.1 For your information | 3 |
| 1.2 Liability | 3 |
| 1.3 Specified use | 3 |
| 1.4 EC designation | 3 |
| 1.5 Factory Guarantee | 3 |
| 2 Safety | 4 |
| 2.1 Safety instructions | 4 |
| 2.1.1 Setup and adjustments | 4 |
| 2.1.2 Gas smell | 4 |
| 2.1.3 Modifications in and around the boiler | 4 |
| 2.1.4 Explosive and flammable materials | 4 |
| 2.1.5 Inspection | 4 |
| 2.2 General precautions | 4 |
| 2.2.1 Corrosion protection | 4 |
| 2.2.2 Drinking water supply pressure | 4 |
| 3 Operation | 5 |
| 3.1 Overwiev | 5 |
| 3.1.1 Operating controls | 5 |
| 3.1.2 Boiler display | 5 |
| 3.2 Initial checks before turning ON | 6 |
| 3.2.1 Open the service valves | 6 |
| 3.2.2 Check the water contents | 6 |
| 3.3 Domestic hot water operation | 6 |
| 3.3.1 Warmstart operation | 7 |
| 3.3.2 Obtaining hot water | 7 |
| 3.4 Heating operation | 8 |
| 3.4.1 Setting the maximum radiator temperature control | 8 |
| 3.4.2 Setting the external controls | 8 |
| 3.5 Status display | 9 |
| 3.6 Resetting the appliance | 9 |
| 3.6.1 Faults in the hot water system | 10 |
| 3.7 Turning the boiler OFF | 10 |
| 3.7.1 To turn OFF the central heating only (Summer mode) | 10 |
| 3.7.2 To turn OFF central heating and hot water for short periods of time | 11 |
| 3.8 Care and maintenance | 11 |
| 3.9 Frost protection | 11 |
| 3.10 Troubleshooting | 11 |

 **Important note!**
This is possibly a dangerous situation for the product and the environment!

 **Note!**
Useful information and guidelines.

- This symbol is used to indicate a required step.

1 General information

1.1 For your information

Thank you for choosing a Vaillant boiler. The information given in this booklet will enable you to obtain the best performance from your boiler.

aquaPLUS provides both central heating and domestic hot water, with the domestic hot water supplied directly from the boiler. The boiler will operate automatically to provide domestic hot water whenever a hot water tap is opened, and automatically adjusts to meet the demand for both central heating and domestic hot water in the most economical way.

If, after reading these instructions, you have any questions on the operation of the boiler, please contact either your installer or Vaillant Technical Department.

1.2 Liability



Warning!

We can accept no liability whatsoever for damage or injury resulting from failure to observe these instructions.

1.3 Specified use

Vaillant aquaPLUS boilers are made to fulfil the latest technical specifications and official safety regulations.

These appliances are designed as boilers for use in central heating and hot water supply systems.

If the appliances are used for purposes other than or in excess of these specifications, this shall be classed as incorrect operation, and neither the manufacturer nor supplier will accept any liability for resulting damage or injury.

Use of this type is entirely at the owner's risk.

The term "specified use" also covers observance of the operating and installation instructions, along with adherence to the servicing schedules.

The benchmark gas boiler commissioning checklist (in the installation manual) should be completed by the installer and/or the commissioning engineer.

All CORGI Registered Installers carry a CORGI ID card, and have a registration number. Both should be recorded in the Benchmark gas boiler commissioning checklist.

You can check your installer by calling CORGI direct on 01256 372300.01256 372300.



The mark of quality for domestic heating

1.4 EC designation

The purpose of EC designation is to certify that the boiler complies with the requirements of the directives covering gasfired appliances (Council directive 90/396/EEC) and electromagnetic compatibility (Council directive 89/336/EEC).

These appliances also comply with the requirements of the directive on operating efficiency (Council directive 92/42/EEC).



1.5 Factory Guarantee

Our confidence in the quality of craftsmanship and performance of our products is demonstrated by the Vaillant two year guarantee.

During the first year from installation the guarantee covers your boiler against manufacturing defects for both parts and labour. In order to extend this guarantee to the second year from installation all you have to do is ensure that your boiler receives a service when it is a year old. (Please note that the cost of the service is not included in the guarantee).

Important

To qualify for the your two year guarantee:

The boiler must be serviced either by Vaillant Ltd. or another competent servicing company (CORGI registered) within one year of the installation date and the details recorded in the Benchmark gas boiler commissioning checklist (this should have been completed by the installer).

Please note that the cost of the service is not included in the guarantee.

Registering with us

Registration is simple. Just complete the Guarantee Registration Card and return to Vaillant within 30 days of installation. Your details will then be automatically registered within the Vaillant scheme.

Note: No receipt will be issued.

Immediate help

If your Vaillant boiler develops a fault your first action should be to contact your installer, as his professional assessment is needed under the terms of our Guarantee. If you are unable to contact your installer, phone Vaillant Service Solutions: 0870 6060 777.

2 Safety

2 Safety

2.1 Safety instructions

2.1.1 Setup and adjustments

Installation and adjustment of the boiler as well as service maintenance and repair of the boiler may only be carried out by a competent person in accordance with the Gas Safety (Installation and Use) Regulations 1998. (In the U.K. "CORGI" Registered installers undertake the work to a safe and satisfactory standard). If the boiler is installed in a compartment do not obstruct any purpose provided ventilation openings, and do not use the compartment for storage purposes.

2.1.2 Gas smell

If you smell gas or suspect a gas leak:

- Turn off the boiler
- Do not switch the light or any electrical switches in the hazardous area on or off, do not use the telephone in the hazardous area, avoid sparking, such as lighting the lighter or matches
- Do not smoke in the hazardous area
- Turn off the gas supply at the gas meter
- Ventilate the room
- Warn the other occupants and leave the house
- Consult your gas supplier, service agent or other competent person.

2.1.3 Modifications in and around the boiler

No modifications may be made to the following items:

- The boiler
- The gas, water and electrical supply
- The flue system
- The safety valve for the heating water
- Any structural changes around the appliance that could affect the operational safety of the boiler.

2.1.4 Explosive and flammable materials

Do not use or store any explosive or highly flammable materials (e.g. gasoline, paper or paint) near to the appliance.

2.1.5 Inspection

The boiler should be serviced annually. We recommend that you sign a service agreement with your service agent or Vaillant Ltd.



Attention!

The device may only be used

- for initial operation
 - for testing
 - for continuous operation
- with the chamber cover closed and with the flue system fully mounted and sealed.**

2.2 General precautions

2.2.1 Corrosion protection

DO NOT use aerosol sprays, solvents, chlorine-based cleaning products, paints, adhesives, etc. in the vicinity of the unit. The use of these items can, under certain circumstances, also result in corrosion damage to the flue outlet system.



Important!

When tightening or slackening screwed connections always use suitable open-ended spanners (not pipe wrench, or extensions, etc.).

Incorrect use and/or unsuitable tools can lead to damage being caused (e.g. gas or water leakage)!

3 Operation

3.1 Overview

3.1.1 Operating controls

For access to the controls pull the side edges of the lower front panel and drop it down.

The following can be seen:

- 1 Maximum radiator temperature control
- 2 The "+" and "-" buttons for the display panel
- 3 Main ON/OFF control
- 4 Pressure gauge displaying the pressure in the heating system
- 5 Built in control/timer module (if fitted)
- 6 The "i" information button
- 7 Boiler display
- 8 "Reset" button
- 9 Maximum hot water temperature control and warmstart ON/OFF control

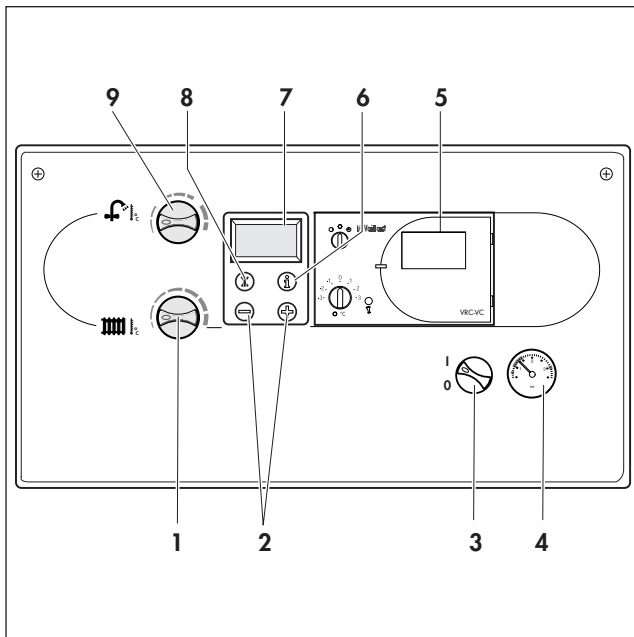


Fig. 3.1: Operating elements

3.1.2 Boiler display

aquaPLUS boilers have an advanced multifunction boiler display. When the main ON/OFF control is in the "ON" position the display will normally show the temperature of water in the boiler circuit (50° C in the example), which confirms that the boiler is functioning correctly. The display supplies the following information:

- 1 Fan speed malfunction
- 2 Heating demand
- 3 Hot-water demand
- 4 Warm-start on (Comfort mode)
- 5 Pump on
- 6 Gas valve on
- 7 Actual Heating-system flow temperature (e.g. 50 °C)
or
Displaying of a status/error code
- 8 Correct burner operation (normal flame) or
lock out (crossed-out flame)

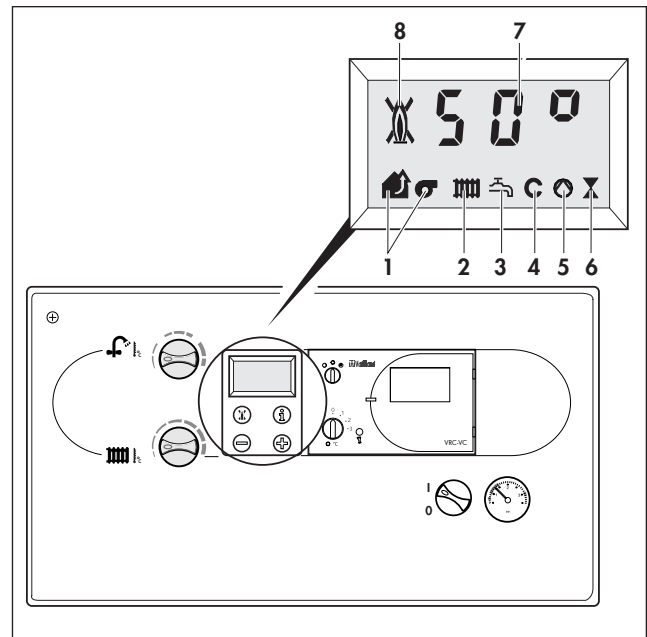


Fig. 3.2: Display indications

3 Operation

3.2 Initial checks before turning ON

3.2.1 Open the service valves

- Ensure the cold water service valve is open. This can be checked by opening a hot water tap and ensuring water flows.
- Ensure that the service valves in the heating flow and return (2 and 1) and the gas service valve (3) are open.

Note!
The flow, return and gas service valves are open when the line marking has the same direction as the pipe.

- The pressure relief valves (4) are provided for safety reasons and must not be interfered with.

Note!
A bottom cover is fitted to the appliance. The service valves can be seen through the cover.

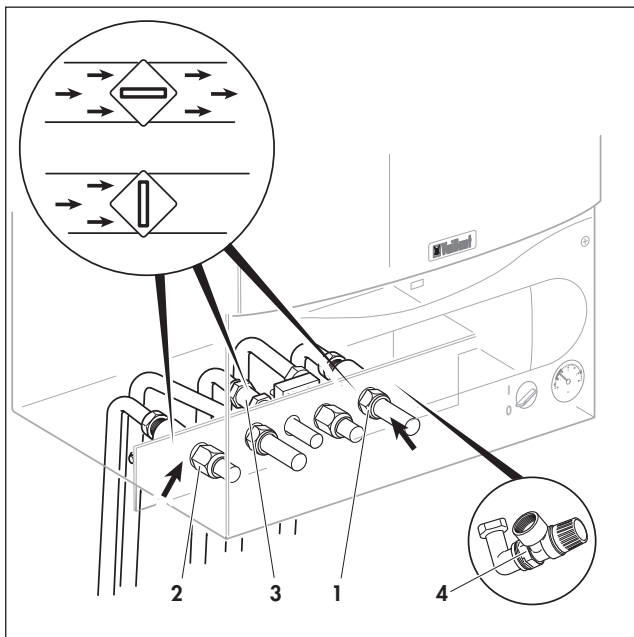


Fig. 3.3: Opening service valves

3.2.2 Check the water contents

- Check the water contents of the system on the pressure gauge (1).

The needle on the pressure gauge (1) should be within the green band (between 1 and 1.5 bar). If the needle displays a value below 0.75 bar when the appliance is cold, follow the instructions left by your installer to refill the system. Alternatively, your installer should be called to refill the system.

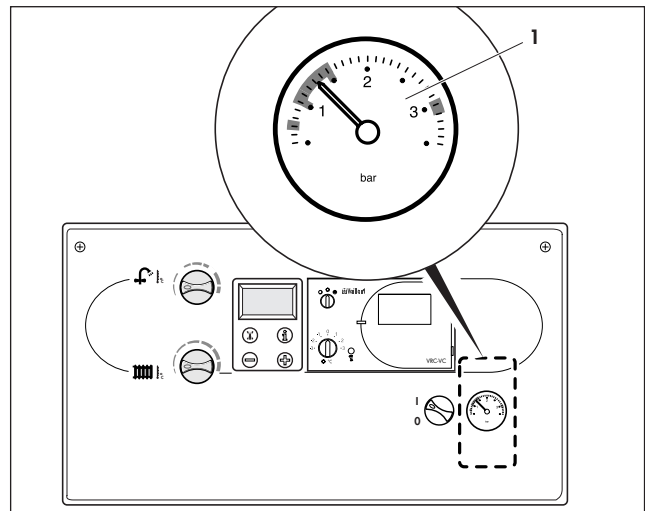


Fig. 3.4: Checking the water level

3.3 Domestic hot water operation

Warning!
The boiler should only be used when the heating system contains water. Use of the boiler without water may cause damage to the boiler or its components.

Setting the maximum domestic hot water temperature control

- Turn the main switch (2, Fig. 3.5) to the "I" position.
- The domestic hot water temperature can be adjusted using the hot water temperature control (3, Fig. 3.5).
- Turn the control clockwise to increase the temperature and anti-clockwise to decrease the temperature.

As a guide for normal circumstances set the knob to the one o'clock position.

Note!
This control adjusts the maximum domestic hot water temperature. If adjusting the control upwards appears to have no effect on the temperature, then the boiler is already operating at full output for the selected flow rate.

Warning!
If you live in a hard water area please do not set the control knob above the mid (12 o'clock) position to prevent excessive scale formation (fig. 3.5).

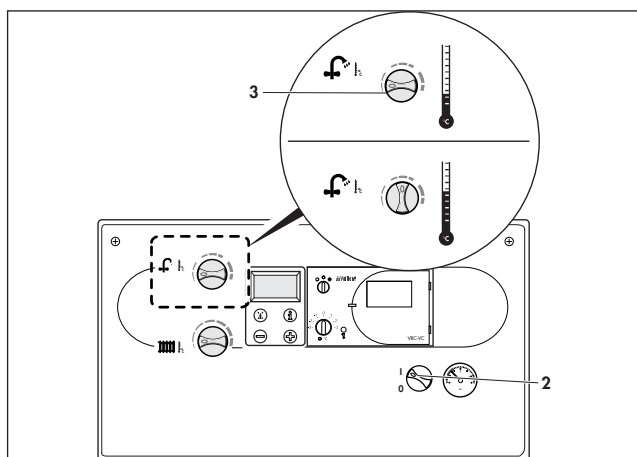


Fig. 3.5: Domestic hot water supply

3.3.1 Warmstart operation

The warmstart facility provides instantaneous delivery of domestic hot water from the aquaPLUS boiler. When the warmstart system is switched ON the boiler will automatically light periodically to maintain the internal temperature of the boiler. When the warmstart system is switched OFF a short delay may be experienced in obtaining hot water at the tap.

- The warmstart system is activated by turning the hot water temperature control knob (1) all the way to the very right for a short time. Reset the hot water temperature control knob to the desired setting. The symbol "C" (comfort) appears in the display and shows that the Warmstart system is activated. The boiler will now provide instantaneous delivery of hot water directly when a hot water tap is turned on.
- The Warmstart system is switched off by momentarily turning the knob (1) to the left, as far as the stop. The "C" symbol no longer appears in the display. Reset the hot water temperature control knob to the desired setting.

Note!
Irrespective of whether the warmstart facility is switched on or off, the boiler will automatically operate to provide hot water whenever a hot water tap is opened.

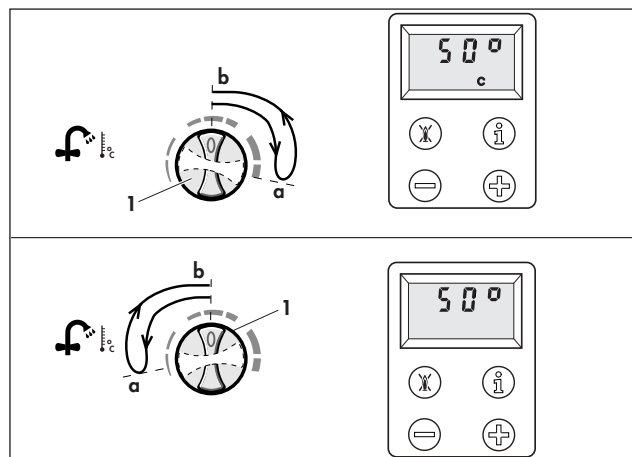


Fig. 3.6: Switching the warm start on and off

3.3.2 Obtaining hot water

When you open a hot water tap (1) at a draw-off point (wash basin, shower, bath etc.), the appliance supplies you with the hot water you require. When a certain volume of water has been drawn off, the appliance is brought into operation automatically and the integrated hot water storage vessel is re-filled (in some circumstances, the appliance may operate only after the water has been drawn off).

Warning!
The appliance is equipped with an automatic protection function against legionella: If the temperature in the hot water storage vessel falls below 50 °C, then the vessel will be heated to 65 °C once in a 24 hr period. In this way, the water in the storage vessel is thermally disinfected. Please note that after completion of the thermal disinfection process there is a possible risk of scalding when drawing off hot water.

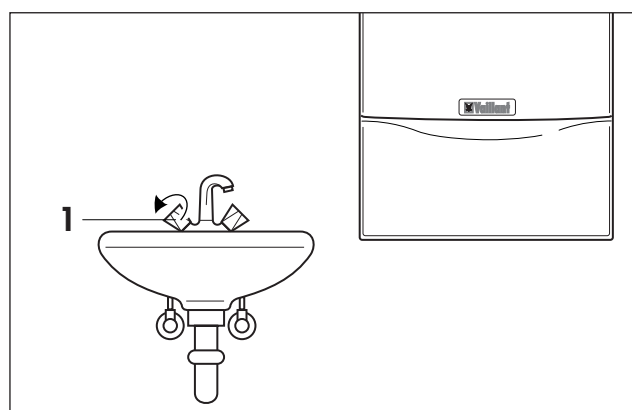


Fig. 3.7: Drawing off hot water

3 Operation

3.4 Heating operation

3.4.1 Setting the maximum radiator temperature control

- Turn the main switch (1) to the "I" position.
- Set the maximum radiator temperature control to the desired setting using the control knob (2). We recommend the following settings:
 - Left setting during spring and autumn (turning the control knob all the way to the very left switches OFF heating),
 - Middle setting during mild winter,
 - Right setting during cold winter.

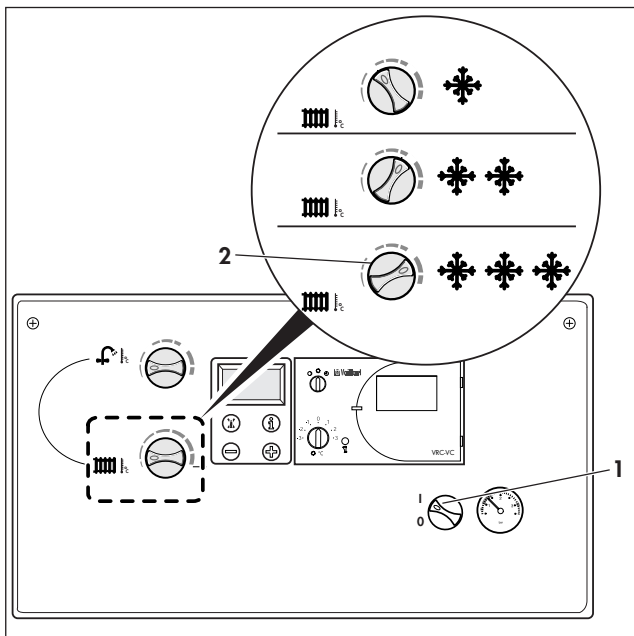


Fig. 3.8: Setting the flow temperature

3.4.2 Setting the external controls

- Set the room thermostat (3, accessory) and/or the thermostatic radiator valves (4, accessory) according to the instructions supplied with the control(s).



Note!

Vaillant offer room thermostat/ time control accessories which give accurate and economic room temperature control as well as improved comfort.

Ask your installer!

The boiler will now operate automatically to provide central heating for the conditions selected on the external controls and also provide domestic hot water on demand).

Whilst the boiler is operating, the boiler display (7, fig. 3.2) indicates the temperature of the water within the boiler circuit. After the boiler stops operating the pump and fan will continue to operate for a short period to fully disperse the heat from the boiler.



Note!

The boiler incorporates an anti-cycling economiser control to prevent energy wasteful ON and OFF operation of the boiler for short periods when in the central heating mode. When turning the room thermostat to a higher setting there may therefore be a short delay before the boiler operates.

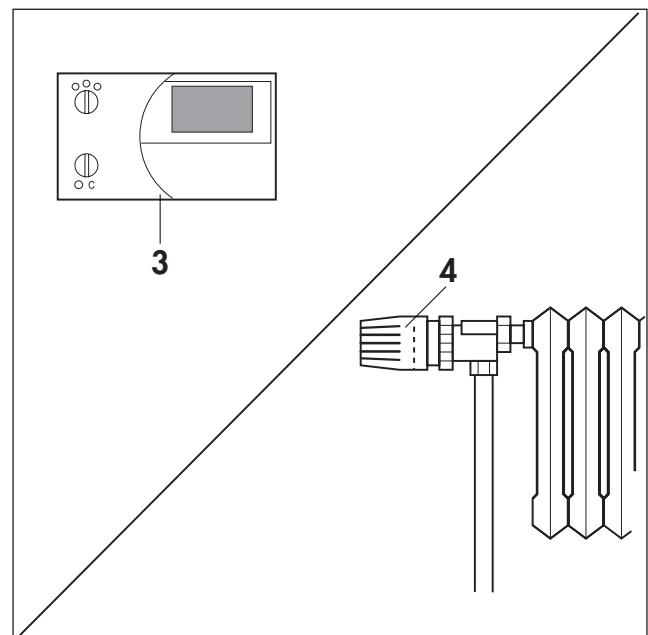


Fig. 3.9: Setting the external controller

3.5 Status display

(For maintenance and service work performed by your installer or service agent)

The status displays are activated by pressing the "i" button (1). The current status code, e.g. "S.34" for the frost protection mode, is shown on the display (2). Pressing the "i" button again will switch you back to the normal mode.

The "+" and "-" buttons will only be used by your installer or service agent during service and maintenance work.

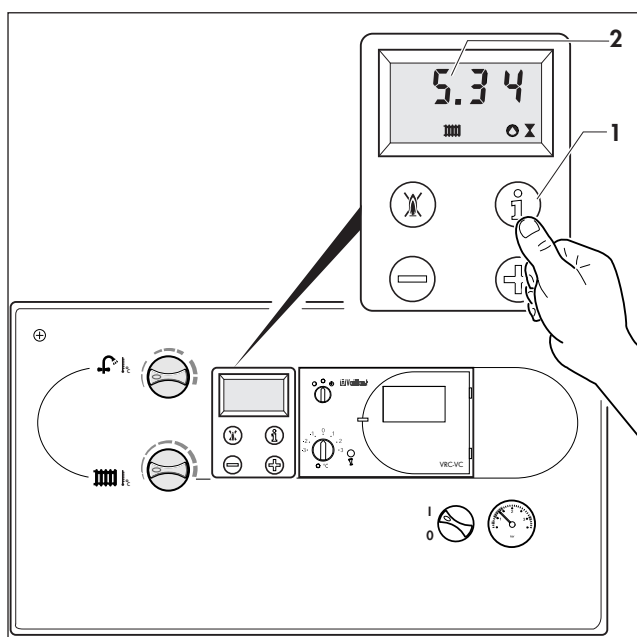


Fig. 3.10: Status displays

| Display | Meaning |
|---------|---|
| S.00* | No heating demand |
| S.02* | Pump running |
| S.03* | Ignition sequence |
| S.04* | Burner ignited |
| S.05* | Fan and water pump over run |
| S.07* | Water pump over run |
| S.08* | Anti cycling mode (after heating operation) |
| S.10** | Hot water demand |
| S.20** | Tank cycle mode active |
| S.28** | Anti cycling mode (after tank filling) |
| S.34* | Frost protection mode active |

Table 3.1: Status displays (A complete overview of the status codes can be found in the installation instructions).


* Heating operation, ** Hot water operation

3.6 Resetting the appliance

When a hot water tap or the central heating system requires heat, the boiler automatically ignites and starts to operate. If the automatic ignition is not successful within 10 seconds, then the boiler does not go into operation and switches to "Lock out".


This is indicated visually by the crossed out flame in the display and the displaying of fault code "F.28" or "F.29" (flame extinguished during operation). A new attempt to ignite the flame can then only be performed after pressing the "Reset" button.

- Press the "Reset" button (2) and hold for approx. 1 second.

Warning!
 **If the boiler still shuts off after a third attempt, then please consult your installer or Vaillant Service Solutions.**

The boiler also switches to "Fault" when there is not enough water in the system. This fault is indicated by fault codes "F.22", "F.23" or "F.24". The boiler must only be placed back in operation after the heating system has been properly refilled with water.

In the unlikely event of any other fault developing, which prevents the boiler from operating, the display will also show other fault codes. If a fault code is displayed please contact your installer or Vaillant Service Solutions.

Note!
 **If contacting Vaillant Service Solutions please remember to quote the fault code, as this will help to pinpoint the fault.**

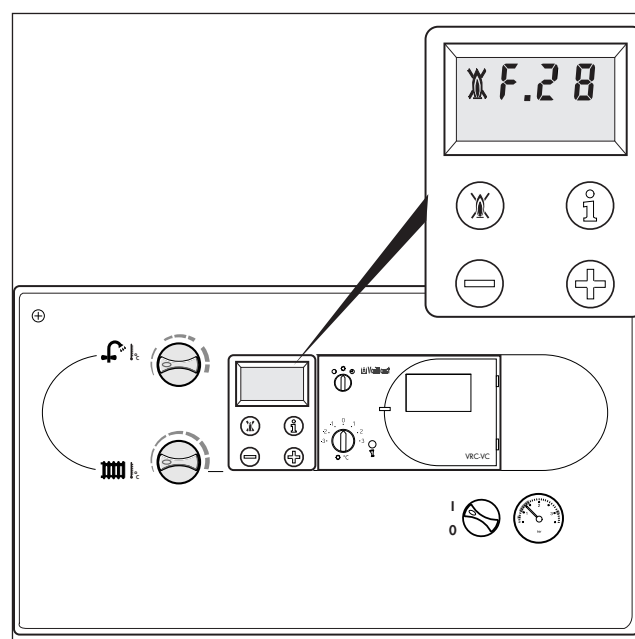


Fig. 3.11: Reset

3 Operation

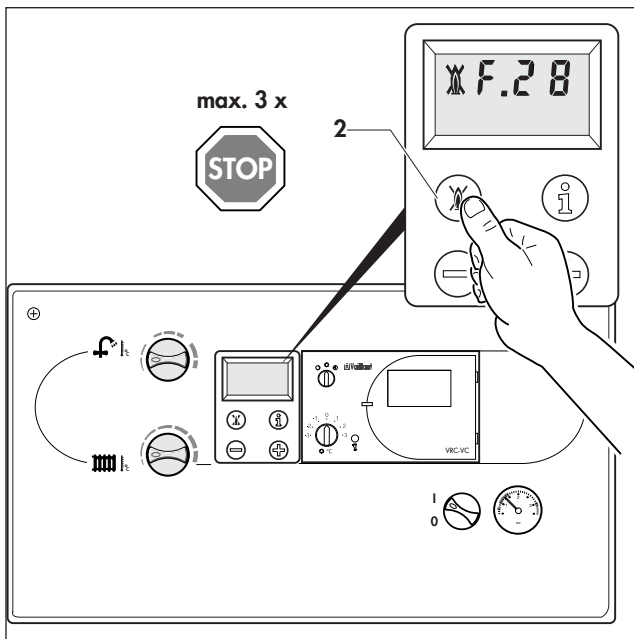


Fig. 3.12: Reset

3.6.1 Faults in the hot water system

To protect the storage vessel feed pump, the appliance is equipped with dry-running protection. This prevents operation of the feed pump if an insufficient quantity of water is available in the appliance. If dry-running protection is activated, reset the appliance as follows:

- Press the "Clear fault" button (see 2, illustration 3.12) and hold it down for approx. 1 sec. or, alternatively, switch the appliance main switch "OFF" and "ON" again.

If the boiler still shuts off after a third attempt, please consult your installer or Vaillant Service Solutions.

3.7 Turning the boiler OFF

3.7.1 To turn OFF the central heating only (Summer smode)

- Turn the maximum radiator temperature control knob used to control the heating supply temperature (1) all the way to the left.

Note!

You can switch off the heating operation in summer, for example, but the boiler will continue to provide domestic hot water whenever a hot water tap is opened.

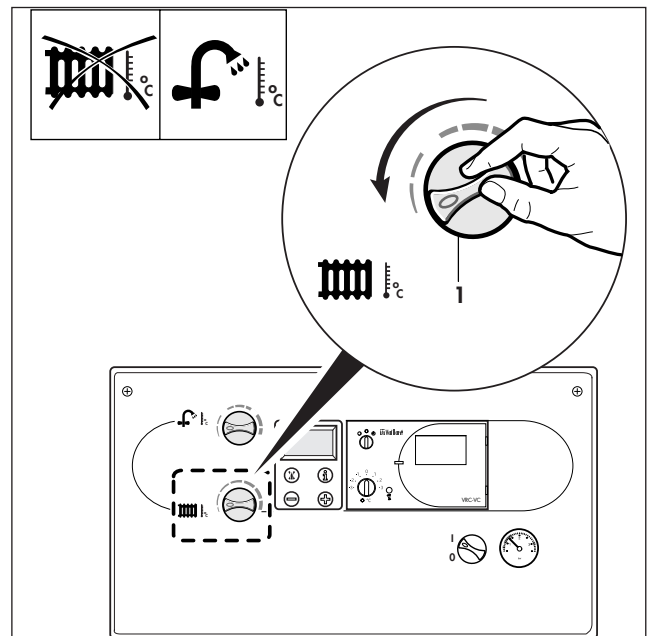


Fig. 3.13: Setting the summer operating mode

3.7.2 To turn OFF central heating and hot water for short periods of time

- Turn the main ON/OFF control (2) to the "0" position.

Note!
 If you want to turn the aquaPLUS boiler OFF for a longer period of time (e.g. holidays), and there is no danger of frost, then you should also turn off the gas supply, the cold water service valve and the electrical supply. Please note the frost protection hints in this regard.

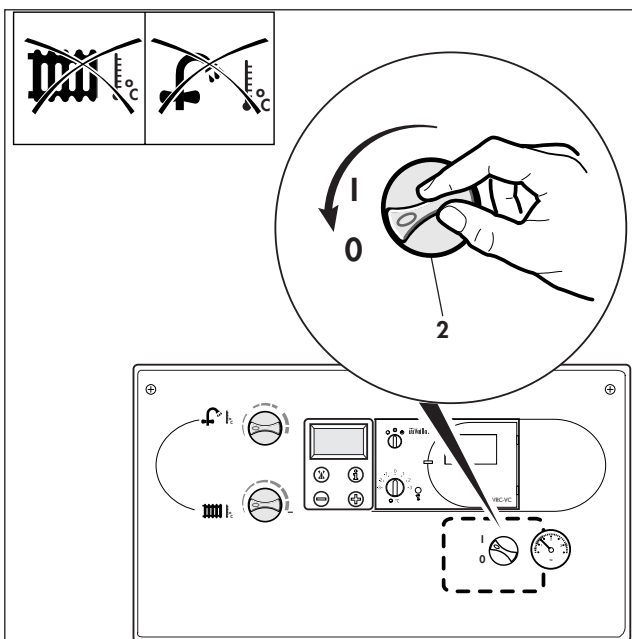


Fig. 3.14: Shutting down the unit completely

3.8 Care and maintenance

Clean the outer casing of your boiler with a damp cloth and a little soap. Do not use abrasive or solvent cleaning agents that may damage the case or the plastic fittings.

The appliance should be serviced at least once per year. To ensure regular servicing, it is strongly recommended that arrangements are made with your service agent or Vaillant Ltd. For further details please contact Vaillant Service Solutions: (0870 6060777).

3.9 Frost protection

Your boiler is equipped with a frost protection function: If the heating water temperature drops below 5 °C when the main switch is ON, then the boiler goes into operation and heats the boiler circuit to approx. 30 °C.

Warning!
 It cannot be guaranteed that water will circulate throughout the entire heating system.

If the boiler is not operated for several hours during very cold weather there is therefore the possibility of the system freezing. Please ensure that if you are absent during a period of frost the central heating remains in operation and all rooms are kept above freezing point.

It must be remembered, however, that the boiler will be automatically switched off by the built in monitoring devices if certain faults occur, e.g. interruption in the gas or electricity supply or faults in the flue gas system. To overcome this possibility you can drain both the central heating system and boiler.

Warning!
 Frost protection and monitoring devices can only function when the main switch of the unit is set to the "I" position and the boiler is connected to the electrical supply.

3.10 Troubleshooting

In the unlikely event that a problem occurs with the operation of the aquaPLUS boiler, the following points should be checked:

Boiler fails to operate:

- Is the gas supply turned on?
- Is the water supply turned on?
- Is there enough water in the heating system?
- Is the electrical supply switched on?
- Is the main ON/OFF control in the "On" position? (switch position "I")
- Dry-running protection activated?
- Is the burner lock out indicator illuminated?

Hot water operates but no central heating

- Is the heating turned on?
- Are all external heating controls ON?

Warning!
 If your boiler still does not operate then please consult your installer or Vaillant Service Solutions (0870 6060 777).

Vaillant Ltd

Vaillant House ■ Medway City Estate ■ Trident Close ■ Rochester ■ Kent ME2 4EZ
Telephone 01634 292300 ■ Fax 01634 290166 ■ www.vaillant.co.uk ■ info@vaillant.co.uk