

For the operator

Operating instructions



ecoTEC pro

Gas fired wall hung high efficiency boiler

GB, IE

1 Notes on the documentation

The following instructions are intended to guide you throughout the entire documentation. Other documents apply in addition to these operating instructions. We accept no liability for any damage caused by failure to observe these manuals.

Other applicable documents

When operating the ecoTEC pro, you must observe all operating instructions that are included with other components of your system.

Further instructions for all accessories and controllers used also apply.

The benchmark check list for starting up gas-fired boilers (contained in the installation instructions) must be completed by the competent person present during the commissioning and must be passed on to the system operator. After reading through these instructions, if you have any questions regarding the operation of the boiler, please contact your recognised approved heating specialist company or Vaillant's technical department.

In these instructions, the heating specialist company and competent person approved by the Health and Safety Executive will be abbreviated as the heating specialist company and skilled tradesman.

1.1 Storing documents

- Store these operating instructions and all other applicable documents in such a way that they are available whenever required.
- If you move out or sell the house, pass on the documents to the relevant person as well.

1.2 Symbols used

The symbols used in the text are explained below: Symbols for identifying dangers are also used in these operating instructions (→Section 2.1.1).



Symbol that denotes useful tips and information

- Symbol for a required action

1.3 Applicability of the instructions

These operating instructions apply exclusively to appliances with the following article numbers:

Boiler	Type designation	Article number
ecoTEC	pro 24 (VUW GB 246/5-3)	0010011689
ecoTEC	pro 28 (VUW GB 286/5-3)	0010011690
ecoTEC	pro 28 (VUW GB 286/5-3) (LPG)	0010011718

1.1 Type overview

To find out the article number of your boiler, refer to the identification plate.

1.4 Identification plate

The identification plate of your Vaillant ecoTEC pro boiler is attached at the factory to the underside of your boiler.

The seventh to sixteenth digits of the serial number on the identification plate represent the article number.

The serial numbers are also located on a plate, which is stuck behind the front flap on the underside of the boiler in a plastic fish plate (→ Fig. 3.1 Item 2).

1.5 CE label



The CE label shows that the boilers comply with the basic requirements of the applicable directives as stated on the identification plate.



Vaillant Ltd. supports the Benchmark Initiative. A benchmark checklist for commissioning gas-fired boilers is attached to these installation instructions. It is very important that this document be filled out properly when installing, commissioning and handing-over to the operator of the installation.



2 Safety

2.1 Safety and warning information

- When operating your boiler, take account of the general safety instructions and the warning notes that appear before each action.

2.1.1 Classification of warnings

The warning notes are classified in accordance with the severity of the possible danger using the following warning signs and signal words:

Warning signs	Signal word	Explanation
	Danger!	Immediate danger to life or risk of severe personal injury
	Danger!	Risk of death from electric shock
	Warning!	Risk of minor personal injury
	Caution!	Risk of material or environmental damage

2.1 Meaning of warning signs and signal words

2.1.2 Structure of warnings

Warning signs are identified by an upper and lower separating line and are laid out according to the following basic principle:

**Signal word!****Type and source of danger!**

Explanation of the type and source of danger

- Measures for averting the danger

2.2 Intended use

The Vaillant ecoTEC pro boilers are state-of-the-art appliances which have been constructed in accordance with recognised safety regulations. Nevertheless, there is still a risk of injury or death to the operator or others or of damage to the boiler and other property in the event of improper use or use for which it is not intended.

This boiler is not intended for use by persons (including children) having limited physical, sensory or mental capacities or who have inadequate experience and/or knowledge, unless supervised by a person responsible for their safety or who has been given instructions from them as to how to operate the boiler.

Children must be supervised to ensure that they do not play with the boiler.

The boiler is intended as a heater for closed hot water/central heating installations and for hot water generation.

The use of the ecoTEC pro in vehicles, such as mobile homes and caravans, is not classed as intended use. Units that are not classed as vehicles are those that are installed in a fixed and permanent location and that do not have any wheels (fixed installation).

Any other use, or use beyond that specified, shall be considered as improper use. Any direct commercial or industrial use is also deemed to be improper.

The manufacturer or supplier is not liable for any damage resulting from such use. The user alone bears the risk.

Intended use includes the following:

- observing the included operating, installation and maintenance instructions for the Vaillant product and any other parts and components of the system
- installing and fitting the appliance in accordance with the boiler and system approval
- complying with all of the inspection and maintenance conditions listed in the instructions.

Caution!

Any misuse is forbidden.



2.3 Basic safety instructions

- Observe the following safety instructions at all times.

Installation and adjustment

The boiler must only be installed by a suitably qualified competent person. The existing regulations, rules and guidelines must be observed when doing so. He is also responsible for inspection, maintenance and repairs to the boiler, and alterations to the gas volume setting.

Procedure in case of gas smell in buildings

Installation errors, damage, handling, an unauthorised installation site or similar can cause gas to escape and result in a risk of poisoning and explosion. If there is a smell of gas in the building, proceed as follows:

- Avoid rooms that smell of gas.
- If possible, open doors and windows fully and ensure adequate ventilation.
- Avoid the use of naked flames (e.g. lighters, matches).
- Do not smoke.
- Do not use any electrical switches, mains plugs, doorbells, telephones or other intercommunication systems in the building.
- Close the gas meter isolator device or the main isolator device.
- If possible, close the gas isolator cock on the boiler (→ **Section 5.1.1**).
- Warn other occupants in the building by calling out or banging on doors or walls.
- Leave the building.
- If you can actually hear gas leaking, leave the building immediately and ensure that others do not enter the building.
- Alert the police and fire brigade once you are outside the building.
- Use a telephone outside the building to inform the emergency service department of the gas supply company.

National phone number for gas emergencies:
0800 111 999

What to do in an emergency if you smell flue gas

Installation errors, damage, handling, an unauthorised installation site or similar can cause flue gas to escape and result in a risk of poisoning. If there is a smell of flue gas in the building, proceed as follows:

- Open all accessible doors and windows fully and ensure adequate ventilation.
- Switch the boiler OFF.
- Inform a heating specialist company.

Explosives and highly flammable substances

The risk of explosion arises from the flammable mixture of gas and air. Take note of the following:

- Do not use or store explosive or highly flammable substances (e.g. petrol, paper, paint) in the same room as the boiler.

Preventing scalding

There is a danger of scalding at the hot water draw-off points if the hot water temperatures are greater than 60 °C. Young children and elderly persons are particularly at risk, even at lower temperatures.

- Select the temperature so that nobody is at risk.

Preventing material damage due to unauthorised changes to the appliance.

Take note of the following:

- Never interfere or tamper with the boiler or other parts of the heating installation.
 - Never try to carry out maintenance work or repairs on the boiler yourself.
 - Do not damage or remove any seals on components.
- Only recognised heating specialist companies are authorised to alter sealed components.

Material damage caused by corrosion

To prevent corrosion on the boiler and also on the flue system, note the following:

- Do not use sprays, solvents, chlorinated cleaning agents, paint, adhesives or similar substances in the vicinity of the boiler.

Under adverse circumstances these substances can cause corrosion, even in the flue system.

Preventing frost damage

If there is a power cut, or if the room temperature is set too low in individual rooms, it cannot be ruled out that sections of the heating installation might be damaged by frost.

- If you are going to be away during a cold period, make sure the heating installation remains in operation and that the rooms are sufficiently heated.
- Always observe the information on frost protection provided in → **Section 5.7**.

Even if rooms, or the whole dwelling, are not in use for certain periods, the heating must remain in operation.

Caution!

Frost protection and monitoring devices are only active while the boiler is connected up to the power supply. The boiler must be connected to the power supply. The boiler must be switched on. You can see from symbols in the display that the boiler is switched on.



2 Safety



Caution!

- Under no circumstances should you add frost protection agents (or other additives, e.g. jointing compounds, corrosion protection agents, etc.) to the heating water without first consulting your qualified skilled tradesman. Otherwise, this could result in damage to seals and diaphragms as well as noises during heating mode. Vaillant assumes no liability for this or any consequential damage.

Another way to protect the heating system and the boiler from frost is to drain them. In doing so, you must ensure that the heating system and boiler are completely drained.

- Contact your approved heating specialist company for advice on this.

Maintaining operation with an emergency power generator in the event of a power cut

Your recognised heating specialist company connected your boiler to the power mains during installation.

If the power supply is cut, it is possible that parts of the heating installation may become damaged by frost.

If you want to maintain the operation of the boiler during a power cut using an emergency power generator, take note of the following:

- Make sure that the technical values of this generator (frequency, voltage, earthing) match those of the power mains.
- Contact your approved heating specialist company for advice on this.

Changes to the surroundings of the boiler

You must not make any changes to the surroundings of the boiler:

- Never shut down the safety devices.
- Do not tamper with any of the safety devices.
- Do not make any changes:
 - to the boiler
 - to the gas, air, water and electricity supply lines,
 - to the entire flue system,
 - to the entire condensate drain system,
 - to the expansion relief valve or the drain line and
 - constructional conditions that could affect the operational reliability of the boiler

Cupboard Installation

- If you require your boiler to be fitted into a kitchen type cupboard then please consult your approved heating specialist company. Under no circumstances must you enclose your boiler yourself.

Enclosing the appliance in a cupboard requires compliance with the special design instructions. This is to ensure all necessary access is available for all necessary future service requirements.

What to do if there are leaks in the hot water pipes

Take note of the following:

- In the event of leaks, immediately close the cold water stop valve in the domestic hot water pipework between the boiler and the draw-off points.
- Have the leak repaired by your approved heating specialist company.

With Vaillant ecoTEC pro boilers, the cold water stop valve is not included in the scope of delivery of your boiler.

- Ask your approved heating specialist company where they fitted the cold water stop valve.

Preventing damage caused by low system pressure in the heating installation

To prevent the heating installation being used when the amount of water is too low and to therefore prevent any subsequent damage that may be caused by this, note the following:

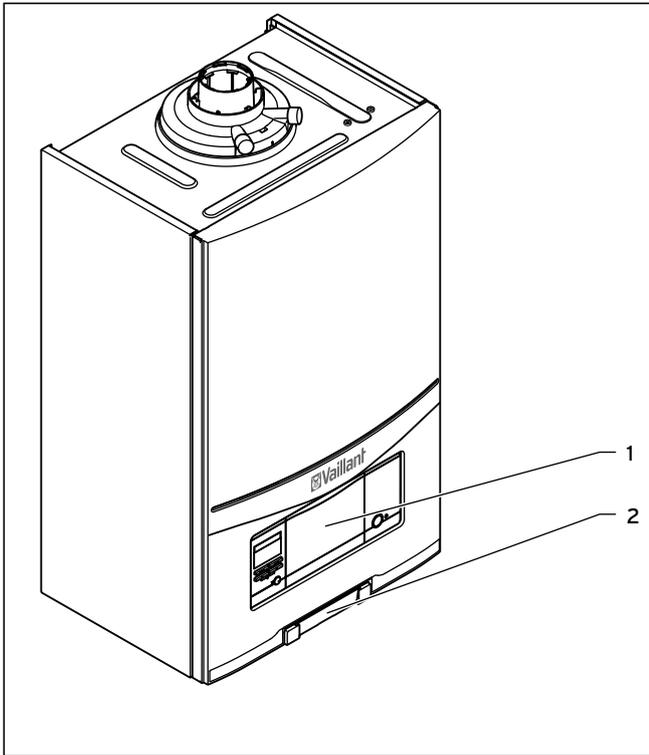
- Check the filling pressure of the heating installation at regular intervals.
- Always observe the information on filling pressure provided in → **Section 5.1.3**.

Requirements for the installation site

It is not necessary to keep a clearance between the boiler and combustible materials or components since, at the nominal heat output of your boiler, the temperature on the surface of the casing is always lower than the maximum permissible temperature of 85°C.

3 Equipment and functional description

3.1 Design



3.1 Front view of the ecoTEC pro

Key

- 1 Controls
- 2 Plate with serial number on the rear

3.2 Function

Your Vaillant ecoTEC pro is a gas-fired wall-hung high-efficiency boiler, which generates heat for heating and/or domestic hot water generation.

3.2.1 Heating mode

In heating mode, the boiler heats the hot water and sends it through the radiators or underfloor heating of your home (heating circuit). The hot water pumped into the heating circuit exits the boiler at a specific heating flow temperature, emits its heat into the rooms and flows back into the boiler once cooled to return temperature. The heating water is then heated again.

3.2.2 Domestic hot water generation

When you open a hot water valve (sink, shower, bath, etc.), the boiler operates automatically and supplies hot water at a temperature set by you.

When you close the hot water tap, the boiler automatically stops producing hot water.

If you have activated Comfort mode, the boiler supplies you with hot water at the requested temperature without you having to wait for the water to heat up.

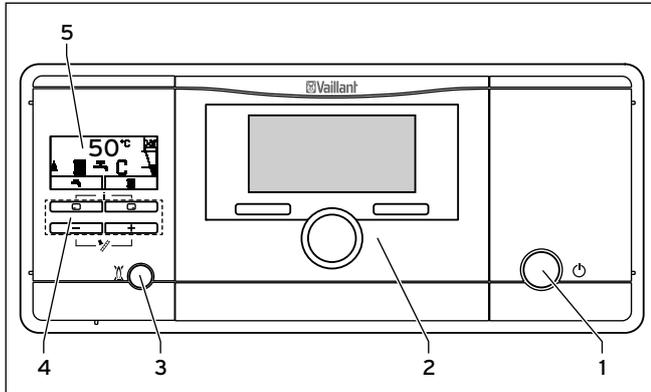


To prevent unnecessary energy loss, do not set the temperature higher than is required.

4 Operation

4 Operation

4.1 Overview of the control elements



4.1 ecoTEC pro operator control elements

- 1 On/off button for switching the boiler on or off
- 2 Controller (accessory)

The Digital Information and Analysis System consists of:

- 3 Reset button to clear certain faults
- 4 Operating buttons
- 5 Display

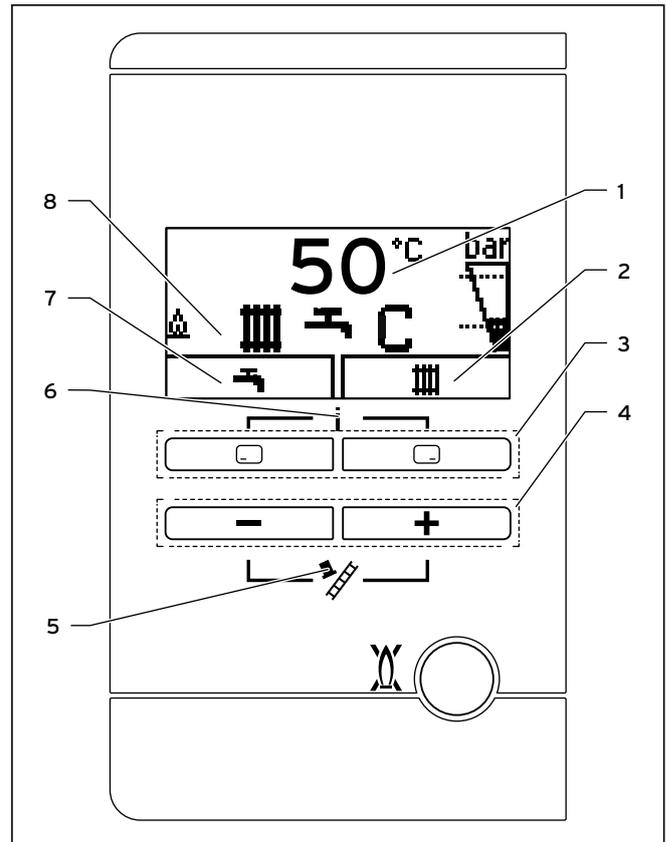
4.2 Digital Information and Analysis System (DIA)

The ecoTEC pro boiler is equipped with a digital information and analysis system (DIA system). It consists of a display showing symbols and 5 operation buttons. This system provides information on the operating status of your boiler and helps you deal with problems.

The display lights up,

- if you switch the boiler on or
- if you press a button for the DIA system when it is switched on. At first, pressing this button does not trigger any other function.

The light automatically switches off after one minute if you do not press any button.



4.2 DIA system with possible symbol displays

- 1 Display of the present heating flow temperature, the filling pressure of the heating system, the operating mode or a fault code
- 2 Display of the current configuration of the right-hand selection button (after switching on the boiler and in the basic display: = heating)
- 3 Left and right-hand selection buttons
- 4 Minus and plus button
- 5 Chimney sweep mode (for chimney sweeps only)
- 6 Access to status of the boiler (Live monitor)
- 7 Display of the current configuration of the left-hand selection button (after switching on the boiler and in the basic display: = hot water generation)
- 8 Display of the symbols for the active operating status

Displayed symbols



Flame:
Permanently on: Correct burner operation; burner on



Display of the current filling pressure of the heating system (bar graph display). The filling pressure must be in the mid range between the two dotted lines.

Permanently on: The filling pressure is within the permitted range.

Flashing: The filling pressure is outside of the permitted range (→ **Section 5.1.3**).

Heating mode active



Permanently on: Heating mode heat requirement

Flashing: Burner on in heating mode



Hot water generation active

Permanently on: In draw-off mode before burner is on

Flashing: Burner on in draw-off mode



Comfort mode active

Permanently on: Comfort mode is activated

Flashing: Comfort mode is active, burner on



Maintenance required. In the "Live monitor", you can read further information about the reason for the service (→ **Section 8**).

Additional symbols:



Summer mode active
Heating mode is switched off



Burner anti-cycling time is active
This function is used to prevent frequent on/off operations, and therefore contributes to prolonging the life of your boiler.
The symbol also appears if the boiler is in a waiting period.



F.XX

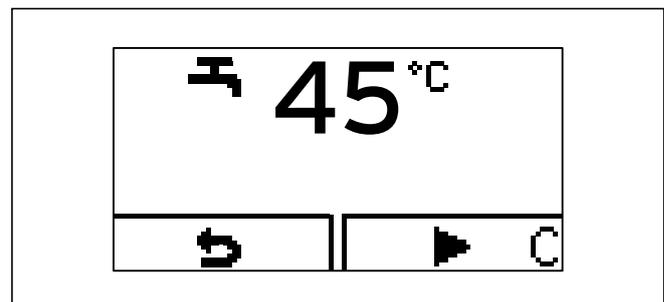
Fault in the boiler. Appears instead of the basic display (→ **Section 4.4**).

Example: F:10

4.3 Operating concept

You can operate the boiler using the selection buttons and the plus/minus buttons.

Both selection buttons have a soft key function. This means that their function may change.



4.3 Display after pressing the left-hand selection button

If, for example, you press the left-hand selection button in the basic display (→ **Section 4.4**), the current function switches from "🔥" (domestic hot water temperature) to "🔧" (Back).

With the left-hand selection button :

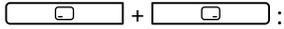
- you can navigate directly to set the domestic hot water temperature
- you can cancel the change to a set value or the activation of an operating mode

With the right-hand selection button :

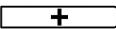
- you can navigate directly to set the heating flow temperature, to the precise value of the water pressure of the heating system and to activate Comfort mode
- you can confirm a set value or the activation of an operating mode

4 Operation

With both selection buttons at the same time



- you can display the current status of the boiler

With the minus button  or the plus button  :

- you can increase or decrease a selected set value

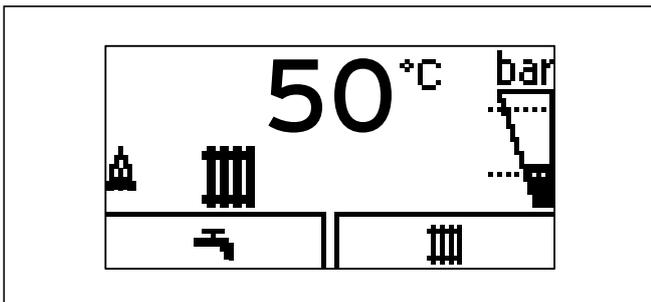
Adjustable values are always displayed as flashing. You must always confirm a change to a value. Only then is the new setting saved.

You always have the option to cancel the change to a setting or the reading of a value by pressing the left-hand selection button.



If you do not press any buttons for more than 15 minutes, the display returns to the basic display. Changes that are not confirmed will not be applied.

4.4 Basic display



4.4 Basic display

In the normal operating status, you can see the basic display in the display. The basic display shows the current status of the boiler. If you press a selection button, the relevant activated function is displayed in the display. If the display becomes dark, the light is first switched on by the first press of the button. In this case, to trigger the button function, you must press the button again.

You can switch back to the basic display by:

- pressing the left-hand selection button and exiting the selection levels
- not pressing any button for longer than 15 minutes.

Changes that are not confirmed will not be applied.

If there is a fault, a fault message will be shown instead of the basic display.

From the basic display, you can directly change and read the most important settings and information by pressing the selection buttons.

The functions that are available depend on whether a controller is connected to the boiler.

4.5 Operating levels

The boiler has two operating levels.

Operating levels for the operator

The operating level for the operator offers you the most frequently used setting options that do not require any special prior knowledge and displays the most important information.

Operating level for the heating engineer

The operating level for the heating engineer must only be operated with expertise and is therefore protected by a code. This level is used by the skilled tradesman to adjust the parameters for the boiler to the heating system.

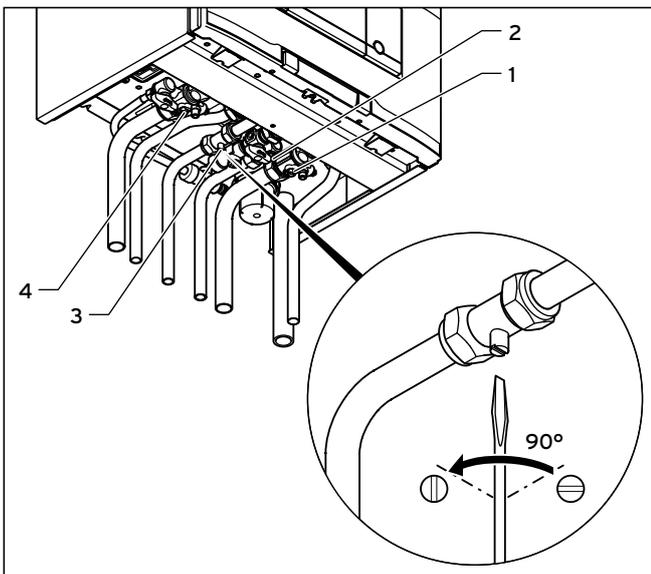
5 Operation

5.1 Putting the boiler into service.

5.1.1 Opening/closing the isolator devices



If the boiler is fitted with a bottom cover, the isolating devices are under this cover.



5.1 Opening the shut-off valves

The isolator devices are open if the slot for the screwdriver is parallel to the pipes.

- Open the gas isolator cock (3).
- Check that the heating flow (4) and heating return (1) isolator devices are open. Open these if they are closed.
- Open the cold water stop valve (2).
- In order to check this, open a hot water tap at a draw-off point and check that water flows out.

Closing isolator devices

The isolator devices are closed if the slot for the screwdriver is at a right-angle to the pipes.

5.1.2 Switching on the boiler



Caution!

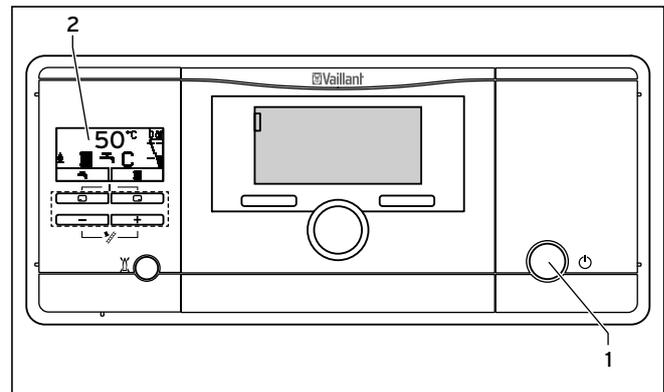
Risk of damage caused by frost.

Frost protection and monitoring devices are only active while the boiler is connected up to the power supply and your boiler is switched on using the on/off switch.

- Do not isolate the boiler from the power mains.
- Leave your boiler switched on at the on/off switch.

To ensure that the frost protection and monitoring devices remain active, switch your boiler on and off using the controller (see the corresponding operating instructions for more information on this).

→Section 10 describes how to fully shut down your boiler.



5.2 Switching on the boiler

- Press the on/off switch (1) to switch on the boiler.

If the boiler is switched on, the current heating flow temperature and other information will appear in the display (2) (→ Fig. 4.4).

To set your boiler to suit your needs, read **Section 5.2** and **Section 5.3** which describe the setting options for domestic hot water generation and the heating mode.

5 Operation

5.1.3 Checking the filling pressure of the heating system



Caution!
Low filling pressure can cause damage to the unit.

Operating the heating installation with low filling pressure can cause damage to the boiler and the heating installation. The boiler switches off automatically when the filling pressure falls too low.

- Fill up the heating system as soon as the filling pressure falls below 0.08 MPa (0.8 bar).

To avoid operating the system with insufficient water volume and to prevent possible damage associated with this, your boiler is fitted with a pressure sensor and a digital pressure display.

To ensure that the heating system operates smoothly, the filling pressure when the heating system is cold must be between 0.1 MPa and 0.2 MPa (1.0 bar and 2.0 bar) or lie between the two dotted lines in the bar graph display.

If the heating system extends over several storeys, a higher filling pressure may be required for the heating system.

- Ask your approved skilled tradesman for details about this.

If the pressure falls below 0.08 MPa (0.8 bar), the right-hand bar graph display and the current pressure flash in the display.

- Fill up the heating system (→ **Section 5.1.4**).

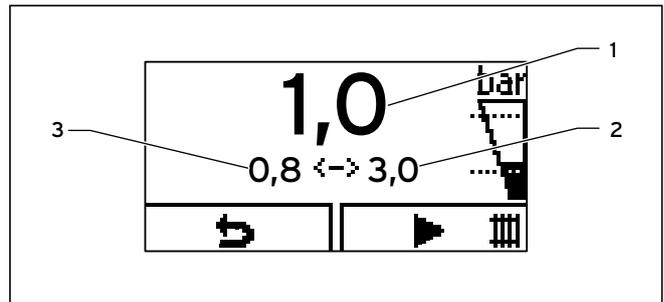


Switch off the boiler if the filling pressure in the heating system falls below 0.05 MPa (0.5 bar). The display alternates between the fault message F.22 and the current filling pressure.

The heating installation must be topped up with water before the boiler can be put into operation again. As soon as the system has been topped up with sufficient water, the message disappears automatically after approx. 20 seconds. If the pressure drops frequently the reason for the loss of hot water must be identified and eliminated

- Contact your heating engineer.

You can see the filling pressure in the right-hand bar graph display or display the exact value using the selection buttons to the right of the display.



5.3 Digital display of filling pressure

- Press the right-hand selection button  twice.

The current filling pressure (1) and the minimum (3) or maximum water pressure (2) that is to be set appear in the display.

5.1.4 Filling the heating system



Caution!
Risk of damage caused by tap water that is extremely calciferous or corrosive or contaminated by chemicals.

Unsuitable tap water damages the seals and diaphragms, blocks components in the boiler and heating installation through which the water flows and causes noise.

- Only fill the heating installation with suitable tap water.
- In case of doubt, consult your approved skilled tradesman regarding this.

To fill up and to refill the heating installation, you can normally use tap water. In exceptional cases, however, the water quality may not be suitable for filling the heating installation because the water is highly corrosive or calciferous.

- If this is the case, contact your approved heating engineer.

The heating installation is filled via a filling cock provided by the installer.

- Ask your approved skilled tradesman where the filling cock is located.
- Ask your approved skilled tradesman to explain how to fill the heating system.

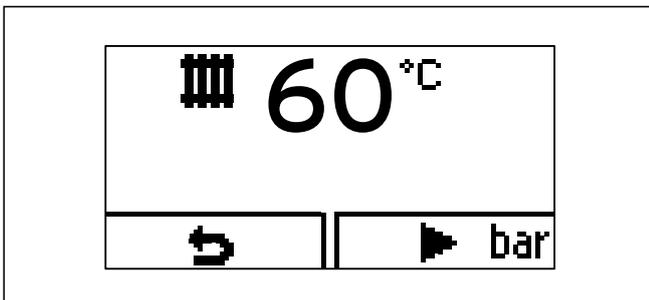
You can show the exact filling pressure in the display (→**Section 5.1.3**).

Proceed as follows to fill the heating installation:

- Open all radiator valves (thermostatic radiator valves) of the heating installation.
- Connect the filling cock for the heating system, as explained by your approved skilled tradesman, to a cold water draw-off valve.
- Open the filling cock slowly.
- Fill it with water using the draw-off valve until the required filling pressure is reached in the display.
- Close the draw-off valve.
- Bleed all the radiators.
- Then check the filling pressure on the display.
- Fill with more water if required.
- Close the filling cock.
- Remove the connection between the filling cock and the draw-off valve.
- Return to the basic display.

5.2 Setting the heating flow temperature

5.2.1 Setting the heating flow temperature without a controller connected



5.4 Setting the heating flow temperature

If no external controller is connected to the boiler, set the heating flow temperature according to the respective outside temperature as follows:

- Press the right-hand selection button ("▸"). The value of the heating flow temperature appears in the display.
- Use the minus button or the plus button to change the heating flow temperature.
- Confirm the change by pressing the right-hand selection button ("▸").

The heating flow temperature is factory-set for temperatures up to 75°C.

If higher (or lower) values can be set on your boiler, this means that your approved skilled tradesman has calibrated your unit to adjust the maximum temperature to your heating system.

5.2.2 Using a controller to set the heating flow temperature

If your boiler has a weather compensator or a room thermostat control system, you must make the following settings:

- Set the maximum heating flow temperature on the boiler (→ **Section 5.2.1**).

The actual heating flow temperature is automatically adjusted by the controller (for information about this, see the controller operating instructions).

5.3 Domestic hot water generation



Danger!

Risk of being scalded by hot water.

There is a danger of scalding at the hot water draw-off points if the hot water temperatures are greater than 60°C. Young children and the elderly can even be at danger at lower temperatures.

- Select the temperature so that nobody is at risk.



Danger!

Possible danger to life from legionella!

If the boiler is used to reheat water in a solar-based drinking water heating system, note the following:

- Set the minimum hot water temperature to 60°C.



Caution!

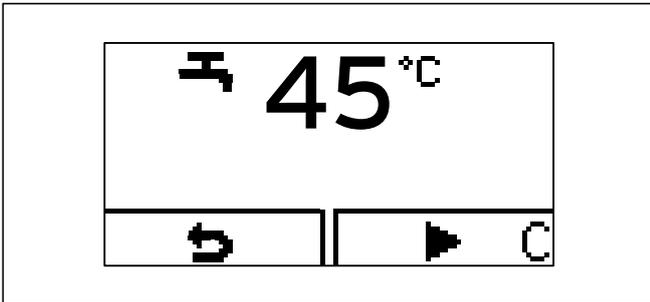
Risk of damage caused by calcification.

If the water hardness is more than 3.57 mol/m³ (=357 mg/l), there is a risk of calcification.

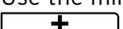
- Set the domestic hot water temperature to a maximum of 50°C.

5 Operation

5.3.1 Setting the hot water temperature



5.5 Setting the hot water temperature

- Press the left-hand selection button  ("⚡"). The domestic DHW temperature that is set is shown flashing on the display.
- Use the minus button  or the plus button  to change the domestic hot water temperature.
- Confirm the change by pressing the right-hand selection button  ("✓").

If you have connected an eBUS auto controller to the boiler, you can set the DHW target temperature on the controller.

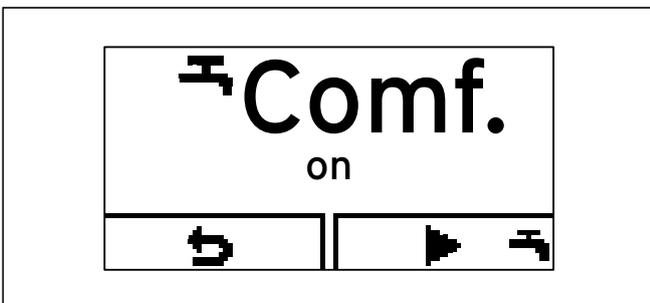
- Ask your approved skilled tradesman whether an eBUS auto controller is connected.

If you are using an eBUS auto controller:

- Set the hot water temperature on the boiler to the maximum possible temperature.
- Set the desired hot water temperature (hot water target temperature) on your controller.

5.3.2 Activating/deactivating Comfort mode

Comfort mode immediately supplies you with hot water at the required temperature, without you having to wait for the water to heat up. To do this, the plate-type heat exchanger of the ecoTEC pro is kept at your selected temperature level.

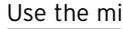
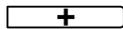
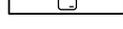


5.6 Switching Comfort mode on and off

- Press the left-hand selection button  ("⚡").

- Press the right-hand selection button  ("▶C").

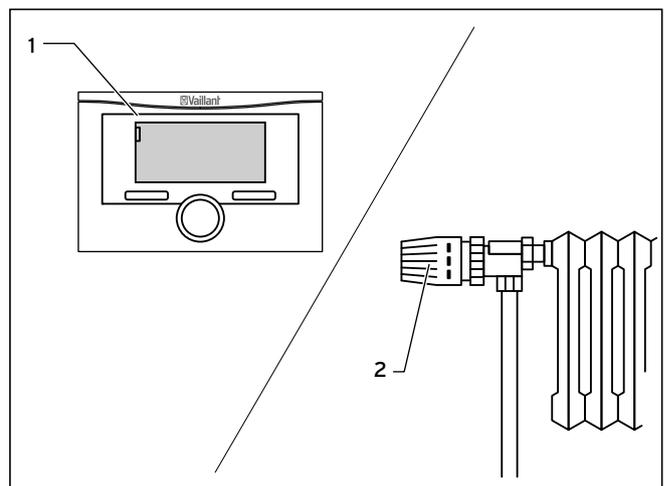
"Comf. on" or "Comf. off" are shown flashing in the display.

- Use the minus button  or the plus button  to activate or deactivate Comfort mode.
- Confirm the change by pressing the right-hand selection button  ("✓").

When you have activated Comfort mode, the symbol "C" is shown in the basic display.

When you have deactivated Comfort mode, the symbol "C" goes out in the basic display.

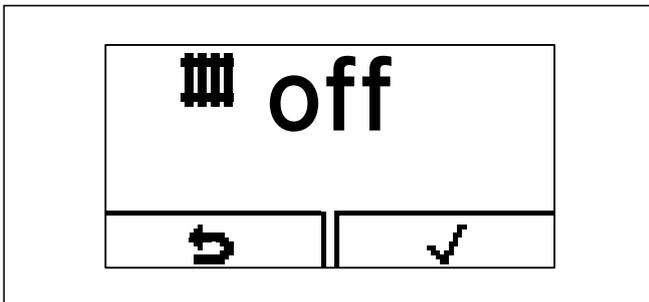
5.4 Setting a room thermostat or weather compensator



5.7 Setting the room temperature controller/weather controlled regulator

- Set the room thermostat, weather compensator (1) and thermostatic radiator valves (2) as specified in the operating instructions for these accessories.

5.5 Switching off Heating mode (summer mode)



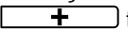
5.8 Switching off Heating mode (summer mode)

You can switch off the heating mode in summer without switching off the domestic hot water supply.

- Press the right-hand selection button  ("flame"). The value of the heating flow temperature appears in the display.
- Use the minus button  to set the domestic hot water flow temperature to "Off".
- Confirm the change by pressing the right-hand selection button  ("✓").

Heating mode is switched off. The  symbol appears on the display.

To switch Heating mode on again:

- Use the plus button  to set your required heating flow temperature.
- Confirm the change by pressing the right-hand selection button  ("✓").

5.6 Temporarily shutting down the boiler

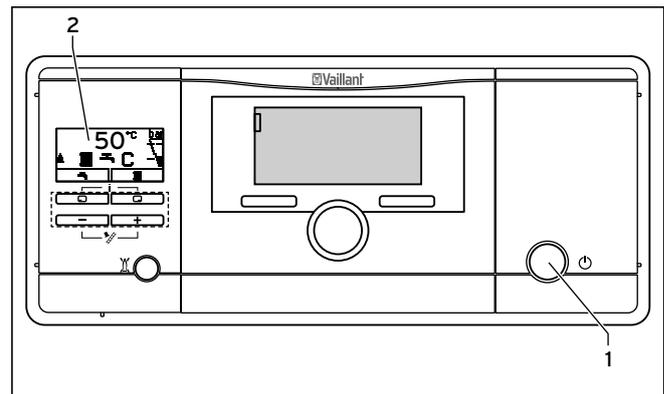


Caution!

Risk of damage caused by frost.

Anti-freeze and monitoring devices are only active while the boiler is connected up to the power mains and the on/off switch is on.

- Do not isolate the boiler from the power mains.
- Leave your boiler switched on at the on/off switch.
- Only switch the boiler on and off in normal mode using the controller.
- Make sure that the boiler cannot become damaged by frost.



5.9 Switching off the boiler

- Press the on/off switch (1) to switch the boiler off.

If the boiler is switched off, the display (2) turns off.



If the boiler is going to be unused for longer periods (e.g. holiday), you should also close the gas isolator cock and the cold water stop valve, but only if there is no risk of frost.

5.7 Protecting the heating system against frost

5.7.1 Activating the frost protection function

Your Vaillant ecoTEC is fitted with a frost protection function for each boiler:

If the heating flow temperature falls below 5 °C when the on/off switch is on, the boiler comes into operation and heats the heat generation circuit to approx. 30 °C on both the heating side and the domestic hot water side (if available).



Caution!

Risk of damage caused by frost.

The frost protection function cannot guarantee flow through the entire heating installation, which means that parts of the heating installation may freeze and become damaged.

- Make sure that the boiler remains on whilst you are away.
- Make sure that the rooms are heated sufficiently.

5 Operation

5.7.2 Draining the heating system

Another way to protect the heating system and the boiler from frost when they are switched off for a very long time is to drain them. You must ensure that the heating installation and boiler are completely drained.

All the cold and hot water pipes in the house and in the boiler must also be drained.

- Ask your heating engineer to drain the heating installation.

6 Energy saving tips

Fitting a weather compensator

Weather compensators regulate the heating flow temperature according to the outside temperature. Thus it is ensured that heat in excess of what is required at that moment is not generated. In addition, desired heating and set-back phases (e.g. at night) are automatically turned on and off by using integrated time programmes.

Weather compensators combined with thermostatic radiator valves are the most economical form of heating regulation.

Operating the heating system in energy-saving mode

- Reduce the room temperature for the night and for periods when you will be absent.

The simplest and most reliable way is to be able to reduce the room temperature using the controller with individually selectable timer programmes.

- At such times, set the room temperature approx. 5 °C lower than during full heating times.

If you reduce the room temperature by more than 5 °C, you do not save any additional energy, because increased heating capacities would then be required for the next full heating period. Only for longer absences, e.g. during holidays, is it worthwhile to lower the temperatures further.

Caution!

- In winter, make sure that adequate frost protection is maintained (→ **Section 5.7**).

Room temperature

- Set the room temperature only as high as would be enough for your comfort level.

Each extra degree would cause an increased energy consumption of about 6%.

- Adjust the room temperature according to the purpose of use of the room.

For example, normally, bedrooms or rooms that are seldom used are heated to 20 °C.

Uniform heating

- Heat all rooms in your dwelling evenly and according to their use.

If you are only heating one room or individual rooms in your dwelling, the unheated adjoining rooms are also heated in an unregulated manner through walls, doors, windows, roofs and floors. The capacity of the radiators in the heated rooms is obviously not enough for such an operating mode. It is then not possible to heat up the heated rooms sufficiently (the same effect arises when doors between heated and unheated/partially heated rooms are left open).

Thermostatic radiator valves and weather compensators or room thermostats

Thermostatic valves on all radiators maintain the room temperature exactly once they have been set. You can adjust

the room temperature to suit your individual requirements and ensure effective operation of your heating system using thermostatic valves in combination with a room thermostat or a weather compensator.

How the thermostatic radiator valve works: If the room temperature rises above the value set on the sensor head, the thermostatic radiator valve shuts off automatically, and when the temperature drops below the defined value, it opens again.

Do not obstruct the controller

- Do not obstruct your controller with furniture, curtains or other objects.

The controller must be able to record the circulating room air unhindered. Covered thermostatic radiator valves can be equipped with remote sensors and thus still work.

Ventilating living rooms

- During the heating period, open windows only for ventilation and not to regulate the temperature.

Brief ventilation is more effective and energy-saving than leaving windows open for a long time.

Close all the thermostatic valves in the room during ventilation.

- If you have a room thermostat installed, set it to minimum temperature.

This guarantees adequate exchange of air without unnecessary loss of energy and cooling off.

Setting the operating mode

- In warmer seasons, when the dwelling needs no heating, turn the heating to summer mode.

Heating mode is then switched off. The boiler and system remain ready for operation for the domestic hot water generation.

Setting the hot water temperature

- Only heat the warm water up to the extent that is necessary for use.

Any further heating results in unnecessary power consumption and domestic hot water temperatures of more than 60 °C also lead to increased limescale sediment.

Switching on Comfort mode

Comfort mode immediately supplies you with hot water at the required temperature, without you having to wait for the water to heat up. For this, the hot water heat exchanger is kept at a preselected temperature level.

If you do not need hot water for a long period, it is recommended to turn off comfort mode to save energy further.

6 Energy saving tips

Energy-conscious use of water

Responsible use of water can reduce your bills considerably. For example, taking a shower instead of a bath: While about 150 litres of water are required for a bath, a modern shower equipped with water-saving fittings only requires a third of this volume.

By the way: A dripping water tap wastes up to 2000 litres of water and a leaking toilet flush wastes up to 4000 litres of water each year.

7 Troubleshooting



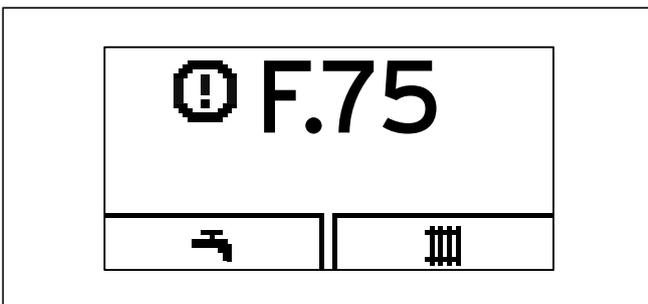
Danger!

Risk of injury and material damage due to incorrect maintenance and repairs.

If maintenance is not carried out, or carried out incorrectly, this may adversely affect the operational reliability of your boiler.

- Never perform maintenance work or repairs on your boiler by yourself.
- You must employ an approved skilled tradesman or Vaillant Service Solutions (0870 6060 777) to complete such work.

7.1 Reading fault messages



7.1 Fault display

Fault messages have priority over all other displays. If a fault develops in the boiler, the display shows a fault code instead of the basic display, e.g. F.75 (Fault Pump/water shortage).

If multiple faults occur at the same time, the display shows the corresponding fault codes for two seconds each in sequence.

- If your boiler displays a fault message, contact your approved skilled tradesman.

You can use the "Live monitor" function to call up status messages about the status of your boiler (→ **Section**).

7 Troubleshooting

7.2 Detecting and rectifying malfunctions

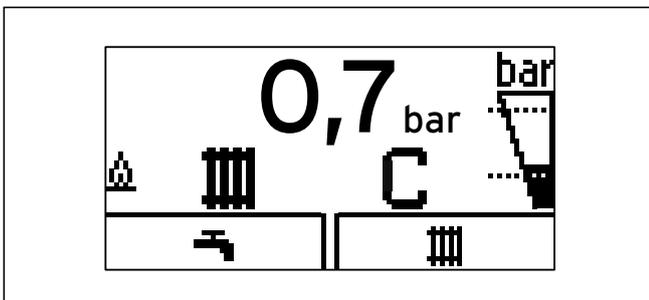
If problems occur whilst operating your boiler, you can carry out the following self-checks:

Problem	Possible cause	Solution
No hot water, heating stays cold; boiler does not start	Building gas isolator cock closed	► Open building gas isolator cock (→ Section 5.1.1)
	Building power supply switched off	► Switch on building power supply
	On/off switch on boiler switched off	► Switch on the on/off switch on the boiler (→ Section 5.1.2)
	The heating flow temperature is set too low or in the "Heating off" position (→ Section 5.5) and/or the domestic hot water temperature is too low	► Set the heating flow temperature to the desired temperature (→ Section 5.2) and/or set the domestic hot water temperature to the desired temperature (→ Section 5.3.1).
	Filling pressure of the heating installation too low	► Top up the heating system with water (→ Section 5.1.4)
	Air in the heating installation	► Purge the radiators. ► If the problem occurs again: Inform the competent person
	Ignition malfunction	► Press the Fault clearance button ► If the problem occurs again: Inform the competent person (→ Section 7.4).
DHW mode without any problems; Heating does not start	No heating demand via the controller	► Check the timer programme on the controller and correct it if necessary. ► Check the room temperature and, if required, correct the target room temperature (→ Section 5.4; Controller operating instructions).

7.1 Detecting and rectifying malfunctions

- If, after checking the points mentioned in **Table 7.1**, your boiler still shows signs of a fault, contact your approved skilled tradesman to eliminate the problem.

7.3 Rectifying a water shortage



7.2 Display of the filling pressure for the heating system is too low

If the filling pressure for the heating system falls below 0.08 MPa (0.8 bar), the red bar display and the current filling pressure flash in the display.

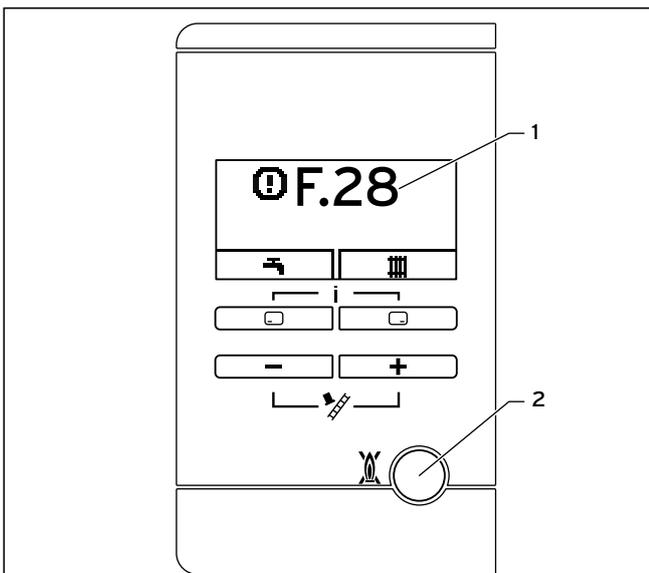
In addition, the maintenance symbol (open-ended spanner) is displayed after approx. one minute.
 If the pressure falls below 0.05 MPa (0.5 bar), the boiler switches off and the fault message F.22 appears in the display. To restart the boiler, you must refill the heating system with water (→Section 5.1.3 and 5.1.4).

7.4 Resolving ignition faults



Caution!
Risk of damage due to improper alterations.

Improper alterations or persistent faults can result in material damage.
 > If you are unable to resolve the ignition problem yourself by resetting the boiler three times, then consult your approved skilled tradesman.



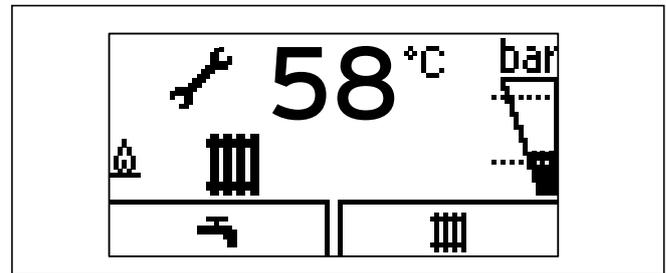
7.3 Resetting the boiler

If the burner fails to ignite after five attempts, the boiler will not operate and switches to "Fault". This is indicated by the fault code "F.28" (Failure during start-up, ignition unsuccessful) or "F.29" (1) on the display.

The boiler will only ignite automatically again once you have reset it manually.

- > To reset the boiler manually, press the reset button (2) and hold for one second.

7.5 Maintenance message



7.4 Maintenance message

If the open-ended spanner is displayed, a service is required for the boiler.

- > Consult your skilled tradesman about doing this. The boiler is not in fault mode but continues to operate.
- > In the "Live monitor", you can read further information about the reason for the service (→ Section 8).

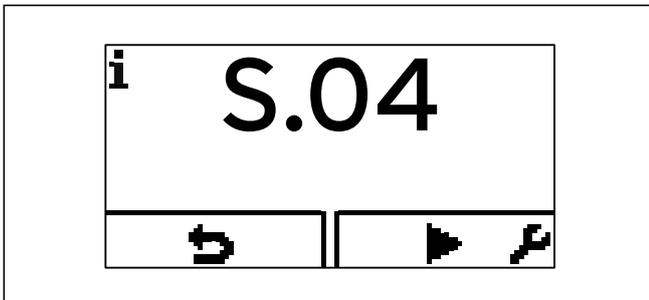


If the water pressure is shown flashing at the same time (→ Section 7.3), you only have to top up the water (→ Section 5.1.3 and 5.1.4).

8 Live monitor (current status of the boiler)

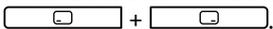
8 Live monitor (current status of the boiler)

This function allows you to read the current status of your boiler.



8.1 Current status of the boiler; example)

► Press both selection buttons at the same time



The display is automatically updated if the boiler status changes.

Status code	Meaning
	Displays in heating mode
S.00	Heating no heat requirement
S.02	Heating mode Pump flow
S.03	Heating mode Ignition
S.04	Heating mode Burner on
S.06	Heating mode fan slow down
S.07	Heating mode Pump wake
S.08	Heating, remaining cut-off time xx min
	Displays during DHW mode
S.10	Hot water demand via fan sensor
S.14	DHW mode Burner on
	Displays in cylinder charging mode
S.20	DHW demand
S.22	DHW mode Pump running
	Special cases
S.31	No heat requirement Summer operation
S.34	Heating mode, frost protection

8.1 Possible appliance statuses (selection)

9 Service



Danger!
Risk of injury and material damage due to incorrect maintenance and repairs.

If maintenance is not carried out, or carried out incorrectly, this may adversely affect the operational reliability of your boiler.

- Never attempt to perform maintenance work or repairs on your boiler by yourself.
 - Always employ a recognised heating engineer.
-

9.1 Servicing the boiler

Permanent operational readiness and safety, reliability and a long working life require inspections and maintenance work to be carried out annually on the boiler by your approved skilled tradesman.

Regular servicing ensures maximum efficiency and economical operation of your boiler.

We recommend making a maintenance agreement.

9.2 Caring for your boiler



Caution!
Unsuitable cleaning agents can cause damage!

Unsuitable cleaning agents (scouring or other cleaning agents) can damage the exterior, the fittings or the controls.

- Do not use sprays, solvents or cleaning agents containing chlorine.
-

- Clean the exterior of your boiler with a damp cloth and a little solvent-free soap. Do not use any detergent.

10 Decommissioning

10 Decommissioning

- Contact a heating engineer to disconnect the boiler permanently.

10.1 Disposing of the boiler

Do not dispose of your Vaillant ecoTEC pro boiler or any of its accessories in the household waste.

- Make sure the old unit and any accessories are disposed of properly.
- Observe national regulations.

10.2 Disposing of the packaging

Arrange for the approved heating engineer who installed the boiler to dispose of the transport packaging.

11 Manufacturer's guarantee and works customer services

11.1 Factory guarantee

One year guarantee for ecoTEC pro appliances

Vaillant undertakes to rectify any manufacturing defect that occurs within twelve months of the installation date.

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

11.2 Vaillant Service

To ensure regular servicing, it is strongly recommended that arrangements are made for a Maintenance Agreement. Please contact Vaillant Service Solutions (0870 6060 777) for further details.

12 Glossary

Air/flue gas duct

The air/flue gas duct consists of all components that route combustion air to the boiler or exhaust gas from the boiler.

Burner

The burner on a gas-fired condensing boiler is the component on whose surface the gas/air mix is control-burnt.

Calorific value

Unlike the heating value, the calorific value of a fuel describes the total useable heat during combustion, based on the quantity of fuel used, including the condensation heat in the steam. Condensing boilers use this additional condensation heat to achieve much high efficiency levels than conventional boilers.

Controller

The controller is the interface to the boiler and can be used to adjust the room temperature, hot water temperature, heating times or night-time temperature reduction. A distinction is made between room thermostat, weather compensator and solar controller.

Cylinder charging

Cylinder charging mode refers to the process for heating up the cylinder.
See also hot water generation.

Domestic hot water generation

In the boiler, the water is heated directly in the through-flow principle.
Comfort mode supplies you with domestic hot water at the required temperature, without you having to wait for the water to heat up. In order to do this, the hot water heat exchanger is kept at a preselected temperature level.

eBUS

The abbreviation eBUS is short for energyBUS.
The eBUS is a special cable system used in the heating technology field, which is used for communication between the heating technology components (e.g. controller, boiler, vnetDIALOG).

Frost protection

The frost protection function protects your heating system and dwelling from frost damage. If the heating flow temperature falls below 5 °C when the on/off switch is on, the boiler comes into operation and heats the heat generation circuit to 30 °C.

Heating flow temperature

Your boiler heats water which is pumped through your heating installation. The temperature of this hot water as it leaves the boiler is referred to as the heating flow temperature.

Legionella

Legionella are water-borne bacteria which can quickly propagate and cause serious lung diseases. Legionella bacteria occur wherever heated water provides the optimum conditions for multiplication. Temporarily heating the water to above 60 °C kills off the legionella.

Room thermostat

A room thermostat continuously measures the room temperature and compares it with the room temperature you have set (target room temperature). This allows the heating installation to maintain a constant set temperature in your room.

In addition, you can enter individual heating times. The target room temperature and the heating times set by you control the operation of your boiler, the power of which is adapted automatically to the respective heat demand.

Weather compensator

A weather compensator is a controller that controls the heating flow temperature of the heating installation as a function of the measured outside temperature.
On the weather compensator you can also enter individual heating times. The outside temperatures measured and the heating times set control the operation of the burner, the output of which is adjusted automatically to the respective heat demand.

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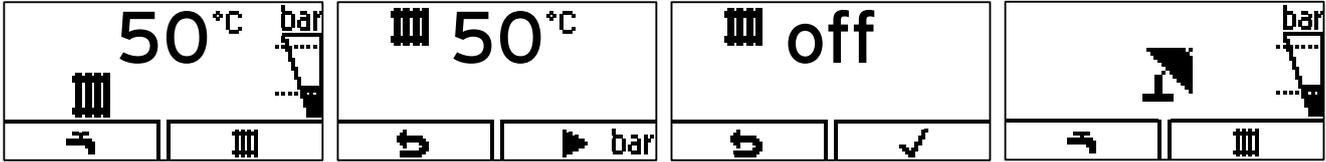
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Brief operating instructions

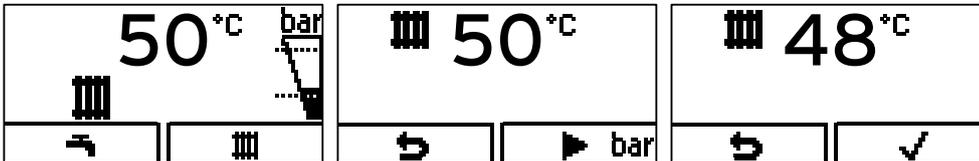
For detailed information, please read the corresponding section in these installation instructions.

1. Switching off the heating mode (Summer mode) (→Section 5.5)



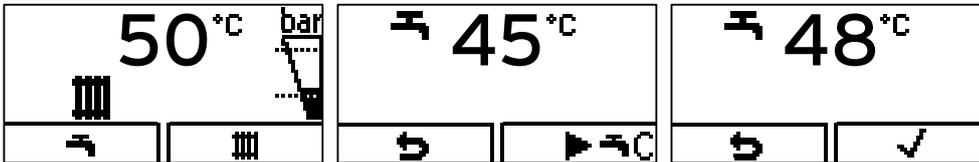
- > Right-hand selection button "III"
- > --Button to "Heating off"
- > Confirm "✓"

2. Setting the heating temperature (switching on Heating mode) (→ Section 5.2.1)



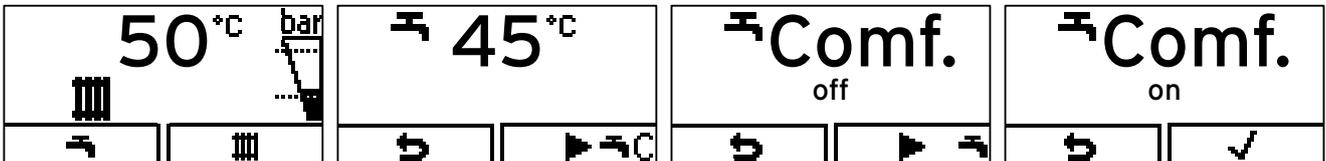
- > Right-hand selection button "III"
- > +/- button for selecting the temperature
- > Confirm "✓"

3. Setting the hot water temperature (→Section 5.3.1)



- > Left-hand selection button "H"
- > +/- button for selecting the temperature
- > Confirm "✓"

4. Switching Comfort mode on/off (→Section 5.3.2)



- > Left-hand selection button "H"
- > Right-hand selection button for Comfort mode
- > +/- button for switching on/off
- > Confirm "✓"

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