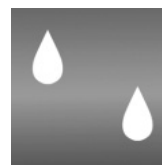


Operating instructions
for system users

VIESSMANN

Heating systems with Vitotronic 100 control unit
for constant temperature operation

**VITODENS
VITOPEND
VITOPLUS**



For your safety



Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained



Danger

This symbol warns against the risk of injury.



Important information

This symbol warns against the risk of material losses and environmental pollution.

Note

Details identified by the word "Note" contain additional information.

Target group

These operating instructions are designed for heating system users.



Danger

Incorrect work on the heating system can lead to life-threatening accidents.

- Work on gas equipment must only be carried out by a registered gas fitter.
- Electrical work must only be carried out by a qualified electrician.

If you notice a smell of gas



Danger

Escaping gas can cause explosions which may lead to serious injury.

- Do not smoke. Prevent naked flames and sparks. Never switch electrical lights or equipment.
- Open windows and doors.
- Close the gas shut-off valve.
- Remove all personnel from the danger zone.
- Observe the safety regulations of your local gas supplier which can be found on the gas meter.
- Notify your heating contractor from outside the building.

If you smell flue gas



Danger

Flue gas may lead to life-threatening poisoning.

- Shut down the heating system.
- Ventilate the boiler room.
- Close all doors leading to the living space.

For your safety (cont.)

If you notice fire



Danger

Fire causes a risk of burns and explosion.

- Shut down the heating system.
- Close the fuel line shut-off valves.
- Use a tested fire extinguisher, class ABC.

Installation area conditions



Important information

Incorrect ambient conditions can lead to damage to the heating system and put safe operation at risk.

- Ensure ambient temperatures higher than 0 °C and lower than 35 °C.
- Prevent the air becoming contaminated by halogenated hydrocarbons (e.g. as contained in paints, solvents or cleaning fluids) and excessive dust (e.g. through grinding/polishing work).
- Avoid continuously high humidity levels (e.g. through frequent drying of washing).
- Never close existing ventilation apertures.

Ancillary components, spare and wearing parts



Important information

Components which are not tested with the heating system may lead to damage to the heating system, or may affect their various functions. Installation or replacement must only be carried out by qualified personnel.

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Initial start-up

The initial start-up and matching of the control unit to local conditions and the structural characteristics of the building must be carried out by your heating contractor.

As the user of new combustion equipment, you are obliged to notify your local flue gas inspector of the installation [check local regulations]. Your local flue gas inspector will also inform you (where appropriate) about work he may be required to perform on your combustion equipment (e.g. regular checks, cleaning).

Your heating system is pre-set at the factory

"Heating and DHW" are already set up at the factory, i.e. the system delivers central heating and DHW heating/loading (subject to a DHW cylinder being installed).

Your heating system is therefore ready for use.

You may change the factory settings in accordance with personal requirements.

Note

All data is saved in case of power failure.

Multi-boiler system

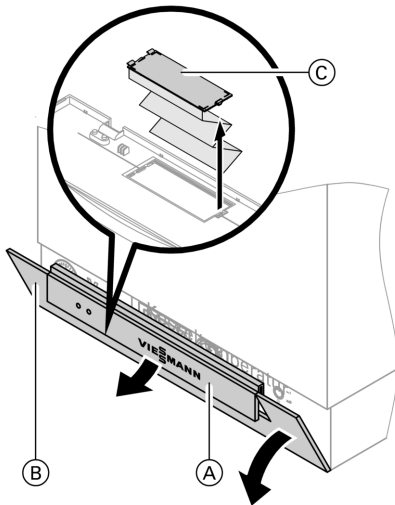
You only require the Vitotronic 333 operating instructions if the boiler is used in a multi-boiler system in conjunction with a Vitotronic 333 control unit. These instructions also include the operating steps for boiler control.

Summary of controls and indicators

You can change all settings for your heating system, centrally, at the control unit.

You can change the room temperature and time program settings for central heating at the remote control (see separate operating instructions), provided your system is equipped with a remote control unit.

Opening the control unit



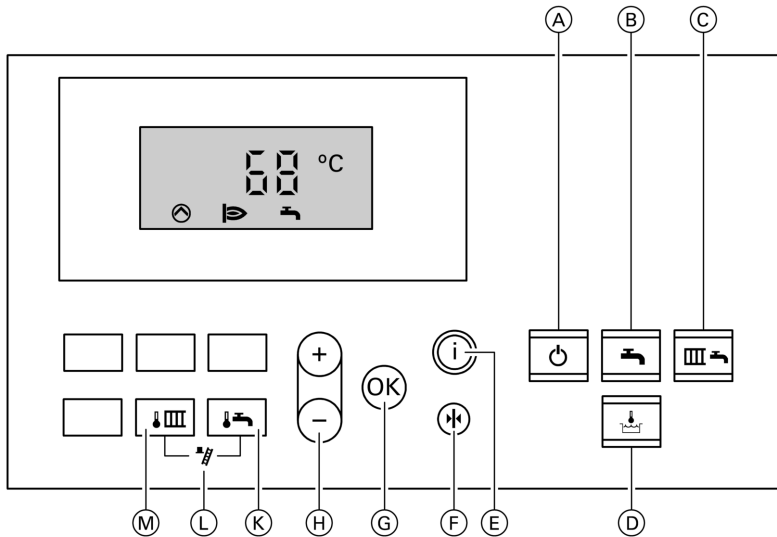
Lift up cover (A), and pivot control unit flap (B) down. All boiler controls are located behind the control unit flap. On the inside of control unit flap (B), an abridged version of these operating instructions can be found behind a further flap (C). You may remove the abridged operating instructions with the flap.

- (A) Cover
- (B) Control unit flap (open to make adjustments)
- (C) Flap with abridged operating instructions

Where to find the controls

Summary of controls and indicators (cont.)

Functions



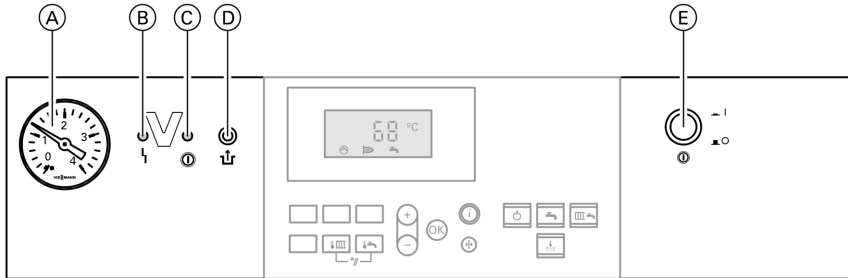
- Ⓐ Standby mode (page 12)
- Ⓑ DHW only (page 12)
- Ⓒ Heating and DHW (page 12)
- Ⓓ Comfort function (page 13)
- Ⓔ Help (page 16)
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- Ⓖ Confirmation/acknowledgement
- Ⓗ Setting values
- Ⓚ DHW temperature (page 15)
- Ⓛ Emissions test switch (only for qualified personnel)
- Ⓜ Boiler water temperature (page 14)

Basic settings

All modified values are reset to their factory settings by pressing Ⓜ.

Summary of controls and indicators (cont.)

Further controls and indicators



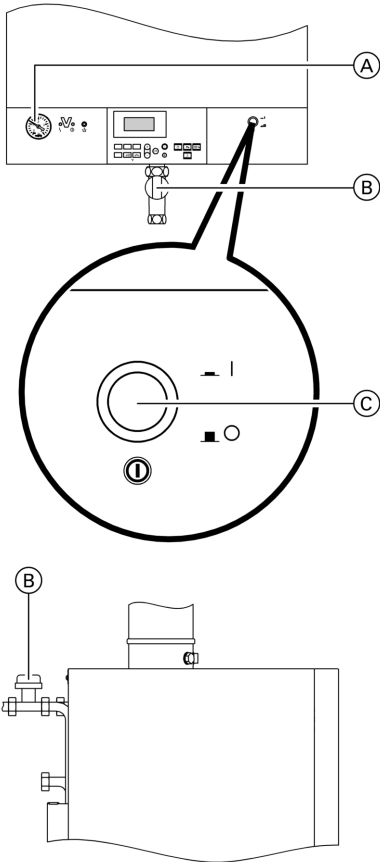
- (A) Pressure gauge
- (B) Fault indicator (red)
- (C) ON/OFF indicator (green)
- (D) Burner fault reset
- (E) ON/OFF switch

Symbols in the display

These symbols are not permanently displayed, but appear subject to the system version and the operating state. Flashing displays indicate that modifications can be made.

- | | | | |
|--|---|--|-------------------|
| | Central heating or "Boiler enable" in a multi-boiler system | | Burner ON |
| | DHW loading enabled | | Emissions test ON |
| | Heating circuit pump running | | Burner fault |
| | DHW loading through a solar heating system | | Fault message |


Heating system start-up



Position of the gas shut-off valve for Vitodens 333

1. Check the heating system pressure on pressure gauge (A): The system pressure is too low if the needle indicates below 0.8 bar. In that case, top up with water or contact your local heating contractor.
2. **For open flue operation:** The combustion air is drawn from the boiler room. Check whether the ventilation/exhaust apertures in the boiler room are open and unobstructed.
3. **On Vitodens and Vitopend:** Open gas shut-off valve (B).
On Vitoplus: Open the shut-off valves in the oil supply lines (at the oil tank and the filter).
4. Switch ON the mains power supply; e.g. at a separate fuse or a mains electrical isolator.
5. Switch ON main ON/OFF switch (C); standby mode is then indicated by the green indicator (ON indicator); after a short time the boiler temperature will be displayed. Your heating system and, if installed, your remote control unit are now ready for use.

Heating system shutdown

If, temporarily, you have no need of your heating system, e.g. during a summer holiday, switch the system to "**Standby mode**"  (see page 12).

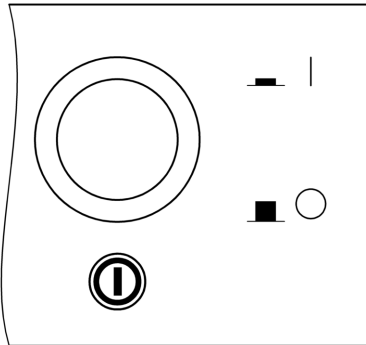
Note


The circulation pumps are briefly started every 24 hours to prevent them from seizing up.

Shut down your heating system if you do not want to use it.

Before you shut down your heating system for short or long periods, it would be advisable to contact your local heating contractor.

Your heating contractor can then take any necessary measures, subject to requirements, e.g. for frost protection of the system or to preserve the heating surfaces.



1. Switch OFF main ON/OFF switch ; the green indicator (ON/OFF indicator) goes out.
2. Close the shut-off valves in the oil supply lines (at the oil tank and filter) or the gas shut-off valve.
3. Switch OFF the mains power supply; e.g. at a separate fuse or a mains electrical isolator. As the system is now at zero volts; the heating system has **no** frost protection.

Note

All control settings remain intact.

Start-up and shutdown


Starting a heating circuit and DHW heating/loading

Press .

Heating and DHW:

- Central heating active.
- DHW will be loaded (subject to a DHW cylinder or instantaneous water heater being installed).
- Frost protection for the boiler and DHW cylinder is active.


Starting DHW only

Press .

DHW only:

- No central heating.
- DHW will be loaded (subject to a DHW cylinder or instantaneous water heater being installed).
- Frost protection for the boiler and DHW cylinder is active.

Shutting down a heating circuit and DHW heating/loading

Press .

Standby mode:


- No central heating.
- No DHW heating.
- Frost protection for the boiler and DHW cylinder is active.

Note

The circulation pump will be started for short periods at regular intervals to prevent it from seizing up. These intervals can be modified by your heating contractor.

Switching the comfort function ON and OFF

Only for Vitodens 300 with integral instantaneous water heater.
The instantaneous water heater is held at temperature (standby), as long as the comfort function is switched ON. Hot water will then be available instantly.

The comfort function can be switched OFF with , to prevent the boiler starting up, thereby saving the energy required to maintain standby mode when no hot water is drawn, e.g. at night.


Adjusting temperatures

Adjusting the room temperature

In addition to the boiler control unit, a separate room temperature controller (e.g. Vitotrol 100 remote control unit) must be installed in one of the living rooms, if the heating system is to be regulated in accordance with the required room temperature.

Make adjustments using the appropriate operating instructions.

Please also note:

- "Heating and DHW"  must be selected.
- Set the boiler water temperature high enough.
- All thermostatic radiator valves in the room where the controller is installed must be fully open.


Adjusting the boiler water temperature

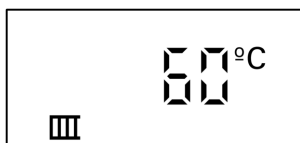
If a remote control unit is connected:



Set the room temperature on the remote control unit.

Set the boiler water temperature high enough to be able to achieve the required room temperature.

Press the following keys:


1.  for "Set boiler water temperature"; the current temperature will flash.






2.  for the required temperature.
3.  to confirm; the temperature no longer flashes and is now saved.

Adjusting the DHW temperature

Press the following keys:

1.  for "Set DHW temperature"; the current temperature will flash.



2. /  for the required temperature.
3.  to confirm; the temperature no longer flashes and is now saved.

Scanning options

Scanning information

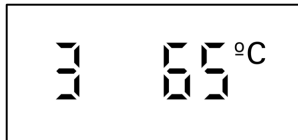
Subject to connected components, you can scan current temperatures and operating conditions.

Press the following keys:

1. **i** for boiler water temperature.

2. **+/-** for additional scans.

3. **OK** to end scanning.



Display indication	Description	Notes
1 20 °C	Outside temperature	Display only if an outside temperature sensor is connected.
3 65 °C	Boiler water temperature	–
5 50 °C	DHW temperature	Display only if a DHW cylinder has been installed.
5□ 45 °C	DHW temperature for solar operation	Display only if a solar heating system is connected.
6 70 °C	Collector temperature	Display only if a solar heating system is connected.
▲ 003572 h	Burner hours run	The hours run can be reset to "0" by pressing + . The hours run displayed are only approximate values.
▲▲▲ 030417	Burner starts	The number of burner starts can be reset to "0" by pressing + .
▲▲▲▲ 030417	Fuel consumption	The fuel consumption can be reset to "0" by pressing + .
▲▲▲▲▲ 000850 h	Hours run – solar circuit pump	The hours run can be reset to "0" on the Vitosolic solar control unit. The hours run displayed are only approximate values.

Scanning information (cont.)

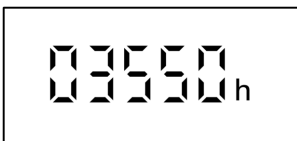
Display indication	Description	Notes
▲▲▲▲▲▲ 002850	Solar energy in kWh	The solar energy display can be reset to "0" on the Vitosolic solar control unit.

Special displays

Maintenance display

If your heating contractor has entered a maintenance interval into the control unit, a message will appear on the display after expiry of that period.










Maintenance display after a given number of hours run (flashing display):



Maintenance display according to a time interval (flashing display), e.g. maintenance after 12 months:



When rooms are too cold

Cause	Remedy
Heating system is switched OFF ON/OFF indicator  (green) is OFF	<ul style="list-style-type: none"> ■ Switch ON system ON/OFF switch  (see page 10) ■ Switch ON mains electrical isolator, if installed (outside boiler room) ■ Check the circuit breaker inside power distribution (main domestic fuse) and reset it, if required
Control unit or remote control unit is incorrectly adjusted	Set up "Heating and DHW"  (see page 12)
Only when operating with DHW loading: DHW priority (  in the display)	Wait until the DHW cylinder has been heated up or, if an instantaneous water heater is installed, until no more DHW is being drawn ( is extinguished in the display)
No fuel	<p>Oil/LPG: Check fuel level and, if necessary, re-order fuel.</p> <p>Natural gas: Open the gas shut-off valve and check with your gas supplier, if required.</p>
Control unit fault:  is displayed and the red fault indicator flashes	Check the fault code on the display (see page 21) and notify your local heating contractor
Burner fault:  is displayed and the red fault indicator on the control unit flashes	Press burner fault reset  – if that attempt to start also fails, notify your heating contractor
Heating water temperature or required room temperature too low	Raise the heating water temperature or the required room temperature (see remote control operating instructions)
Remote control fault	Notify your local heating contractor

What to do

When rooms are too hot

Cause	Remedy
The control unit or the remote control unit is incorrectly adjusted	Check the room temperature setting and correct, if required
Control unit fault: \downarrow is displayed and the red fault indicator flashes	Check the type of fault (see page 21) and notify your heating contractor

When there is no hot water

Cause	Remedy
Heating system is switched OFF ON/OFF indicator \odot (green) is OFF	<ul style="list-style-type: none"> ■ Switch ON system ON/OFF switch \odot (see page 10) ■ Switch ON mains electrical isolator, if installed (outside boiler room) ■ Check the circuit breaker inside power distribution (main domestic fuse) and reset it, if required
Control unit incorrectly adjusted	Check settings and correct if required: <ul style="list-style-type: none"> ■ DHW heating must be switched ON (see page 12) ■ DHW temperature (see page 15)
No fuel	Oil/LPG: Check fuel level and re-order fuel, if required. Natural gas: Open the gas shut-off valve and check with your gas supplier, if required.
Control unit fault: \downarrow is displayed and the red fault indicator flashes	Check the type of fault (see page 21) and notify your heating contractor
Burner fault: The red fault indicator of the control unit flashes and " \uparrow " is displayed	Press burner fault reset " \uparrow " – if that attempt to start also fails, notify your heating contractor.

When the hot water is too hot

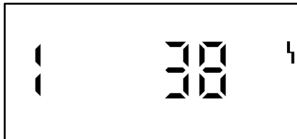
Cause	Remedy
Control unit incorrectly adjusted	Check and, if necessary, correct DHW temperature (see page 15)
Sensor fault	Notify your local heating contractor

Scanning fault display

If your heating system has developed a fault, it will be displayed and indicated by the flashing red fault indicator (see page 9).

You can check the fault code on the display and then notify your heating contractor accordingly. This allows the heating contractor to better prepare for the service call and may save additional travelling costs.

Checking/acknowledging fault codes



Press the following keys:

1. \oplus/\ominus to display further fault codes, if several faults are active.

2. OK to acknowledge the fault.

Note

If the fault has not been rectified, the fault message will be redisplayed at 7:00 h on the following day. The red fault display flashes until the fault has been rectified.

Vitoplus 300 – ordering fuel oil

Fuel oil quality

Vitoplus 300 may be operated with low sulphur fuel oil to DIN 51603-EL-1 (max. sulphur content 50 ppm).

A condensate neutralising system is not required (according to Code of Practice ATV-DVWK-A251 [Germany]) when using this low sulphur fuel.

Fuel oil additives

Fuel oil additives are materials which can be used to:

- improve fuel stability during storage,
- improve thermal stability of fuel,
- reduce odour during filling



Important information

Fuel oil additives can create residues and impair the safe operation of your heating system.

The use of fuel oil additives which leave residues is not acceptable.

Combustion improvers

Combustion improvers are additives for optimising fuel oil combustion.

Viessmann oil burners do not require combustion improvers, as these burners operate with clean and efficient combustion.



Important information

Combustion improvers can create residues and impair the safe operation of your heating system.

The use of combustion improvers which leave residues is not acceptable.

Bio-fuels

Bio-fuels are made from vegetable oil, e.g. sunflower or rape seed oil.



Important information

Bio fuels can lead to damage on Viessmann oil burners.

Their use is not permissible.

If in doubt ask your local heating contractor.

Cleaning

All devices may be cleaned with a commercially available domestic cleaning agent (non-scouring).

Inspection and maintenance

Inspection and maintenance of your heating system is prescribed by the Energy Savings Order [Germany] and the standards DIN 4755 and DIN 1988-8 (check local regulations).

Regular maintenance ensures trouble-free, energy-efficient and environmentally responsible heating operation. For this, we strongly advise you to arrange an inspection and maintenance contract with your local heating contractor.

Boiler

Increasing boiler contamination raises the flue gas temperature and thereby increases energy losses. For that reason, all boilers should be cleaned annually.

For Vitoplus 300, inspection and maintenance **must** be carried out annually by a heating contractor.

DHW cylinder

DIN 1988-8 and EN 806 prescribe that maintenance and cleaning should be carried out no later than two years after commissioning and, thereafter, as required. Only a recognised heating contractor should clean the inside of a DHW cylinder including the DHW connections.

Refill any water treatment equipment (e.g. a lock or injection equipment) in good time, if such equipment is installed in the cold water supply of the DHW cylinder. Observe the manufacturer's details.

In addition for Vitocell 100:

We recommend that the correct function of the sacrificial anode is checked annually by your heating contractor. The anode function can be checked without interrupting system operation. The heating contractor will check the earth current with an anode tester.

Inspection and maintenance (cont.)

Safety valve (DHW cylinder)

Check the safety valve function every six months by venting, or have it checked by your heating contractor.

There is a risk of the valve seat becoming contaminated (see the valve manufacturer's instructions).

DHW filter (if installed)

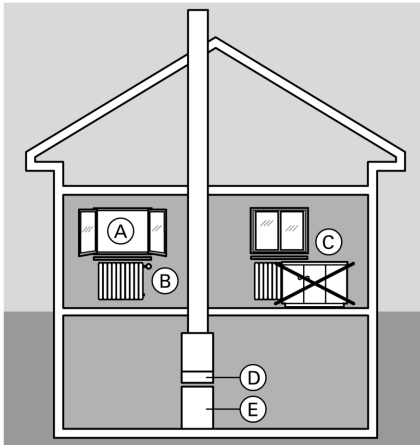
For reasons of hygiene

- on non-back-flushing filters, replace the filter element every six months (visual inspection every two months),
- on back-flushing filters, back-flush every two months.

Energy saving tips

Along with using a modern heating system, you can save additional energy by your own actions.

For this, the following measures will help you:



- Correct ventilation.
Briefly open windows (A) fully, and at the same time close thermostatic radiator valves (B).
- Do not overheat.
Endeavour to reach a room temperature of 20 °C; every degree of room temperature reduction saves up to 6 % of your heating bills.
- Close roller shutters (if installed) at dusk.
- Adjust thermostatic radiator valves (B) correctly.
- Do not cover radiators (C) or thermostatic radiator valves (B).
- Utilise the setting options offered by control unit (D).
- Set the DHW temperature of DHW cylinder (E) at control unit (D).
- Only activate the DHW circulation pump, if DHW is being drawn.
- Controlled DHW consumption: A shower generally uses less energy than a full bath.

Keyword index

Keyword index

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Your contact

Contact your local heating contractor if you have any questions regarding the maintenance and repair of your heating system. You may, for example, find local heating contractors on the internet under www.viessmann.com.

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