

Operating instructions for the system user

VIESSMANN

Heating system with Vitotronic 100 control unit
for constant temperature mode

**VITODENS
VITOPEND**



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.



Please note

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 for the heating system user.



Danger

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

- Work on gas appliances must only be carried out by a qualified gas fitter.
- Work on electrical equipment must only be carried out by a qualified electrician.

If you smell gas



Danger

Escaping gas can lead to explosions which may result in serious injury.

- Never smoke. Prevent naked flames and sparks. Never switch electrical lights or equipment ON or OFF.
- Close the gas shut-off valve.
- Open windows and doors.
- Remove all people from the danger zone.
- Notify your gas or electricity supplier and your local heating contractor from outside the building.
- Shut off the electricity supply to the building from a safe place (outside the building).

If you smell flue gas



Danger

Flue gas can lead to life-threatening poisoning.

- Shut down the heating system.
- Vent the boiler room.
- Close all doors in the living space.

For your safety (cont.)

In case of fire



Danger

Fire creates the risk of burning and explosions.

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

Boiler room requirements



Please note

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

- Ensure ambient temperatures above 0 °C and below 35 °C.
- Prevent air contamination 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



Please note

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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Commissioning

The commissioning and matching up 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 may be 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 system is preset at the factory

The control unit is already adjusted to "Heating and hot water" in the factory, i.e. the system provides DHW and central heating (if a DHW cylinder is 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 300-K operating instructions if the boiler is used in a multi-boiler system in conjunction with a Vitotronic 300-K control unit. These instructions also include the operating steps for boiler control.

Summary of controls and indicators

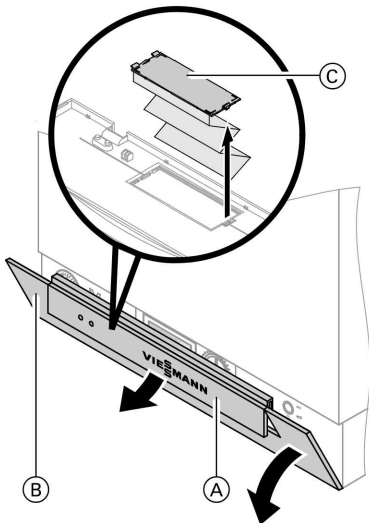
You can change all settings for your heating system, centrally, at the programming unit.

You can adjust the room temperature and the time programs at the remote control, if your system is equipped with a remote control unit .



Remote control operating instructions

Opening the control unit



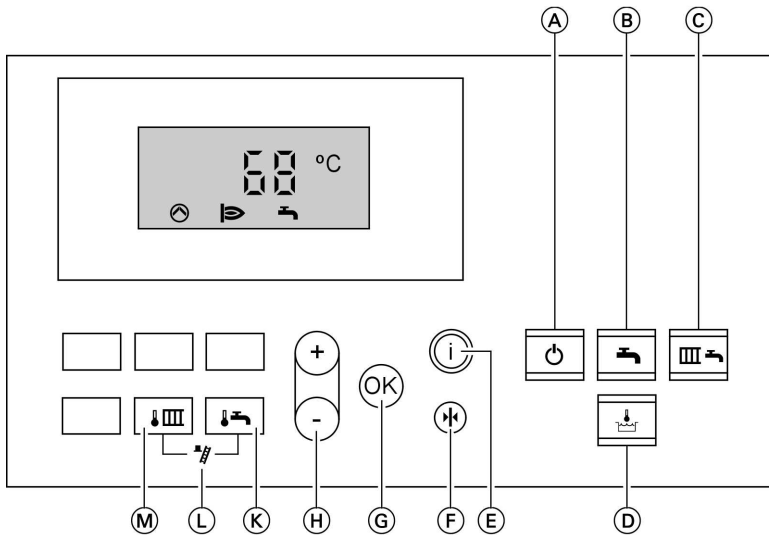
Lift cover (A) and pivot control unit flap (B) down. All boiler controls are located behind the control unit flap. On the inside of control unit flap (B), an abridged version of these operating instructions can be found behind a further flap (C). The abridged operating instructions can be removed with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

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

Where to find the controls

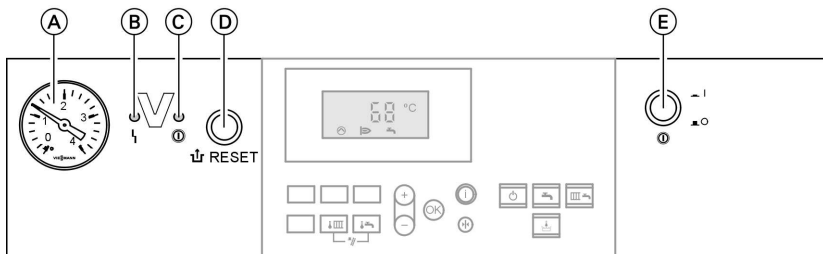
Summary of controls and indicators (cont.)

Functions



- (A) Standby mode (page 12)
- (B) DHW only (page 12)
- (C) Heating and DHW (page 11)
- (D) Comfort function (page 12)
- (E) Help (page 16)
- (F) Standard setting
- (G) Confirmation
- (H) Setting values
- (K) DHW temperature (page 14)
- (L) Emissions test function (only for contractors)
- (M) Boiler water temperature (page 13)

Further controls and indicators











Summary of controls and indicators (cont.)

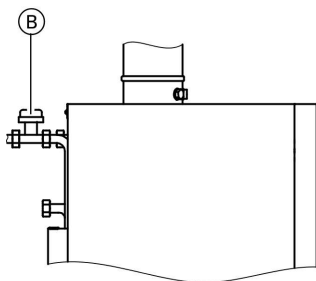
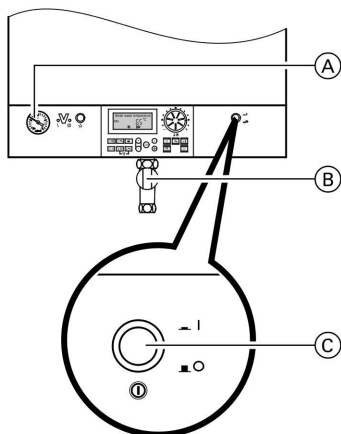
- (A) Pressure gauge
- (B) Fault indicator (red)
- (C) ON indicator (green)
- (D) Reset button
- (E) ON/OFF switch

Symbols in the display

These symbols are not always displayed, but appear subject to the system version and the operating condition. Flashing values in the display indicate that modifications can be made.

-  The system delivers central heating or the boiler in a multi-boiler system is enabled
-  DHW heating enabled
-  Heating circuit pump running
-  DHW heating by the solar heating system
-  Burner "On"
-  Emissions test function "On"
-  Burner fault
-  Fault message

Starting the heating system



Position of the gas shut-off valve at the Vitodens 333-F


1. Check the heating system pressure at pressure gauge (A): The system pressure is too low if the indicator points to the area below 1.0 bar. In that case, top up with water or notify your local heating contractor.
2. **For open flue operation:** Check whether the ventilation apertures in the installation room are open and unobstructed.

Note

With open flue operation, the combustion air is drawn from the installation room.

3. Open gas shut-off valve (B).
4. Switch ON the power supply, e.g. at a separate MCB/fuse or a main isolator.
5. Switch system ON/OFF switch "ⓐ" ⓐ ON.
Standby is indicated by the green indicator (ON indicator). The boiler water temperature is displayed after a short time. Your heating system and, if installed, your remote control unit are now ready for use.

Shutting down the heating system

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).

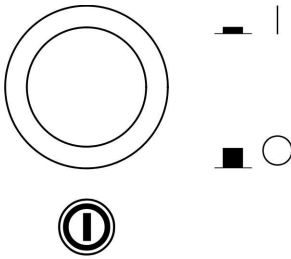
Note

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

Shutting down the heating system (cont.)

If you do not want to use your heating system, you can shut it down. We recommend you contact your local heating contractor, if you plan to take your heating system out of use for longer periods and before returning it into use.

Your heating contractor can then take any necessary actions, subject to requirements, e.g. frost protection or preserving the heating surfaces.



1. Switch system ON/OFF switch "ⓘ" OFF.
The green indicator (ON indicator) goes out.
2. Close the gas shut-off valve.
3. Isolate the system from its main power supply, e.g. at a separate MCB/fuse or a main isolator.

Note

*Frost protection is **no longer** enabled
All control settings are retained.*

Starting a heating circuit and DHW heating

You want to heat your rooms and have DHW available.

Press .

Heating and DHW:

- Central heating is active.
- DHW will be heated (subject to a DHW cylinder or instantaneous water heater being installed).
- Boiler and DHW cylinder are protected against frost.

Start-up/shutdown

Starting DHW heating only

You do not want to heat your rooms but would like to have DHW available.

Press .

DHW only:

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

Shutting down a heating circuit and stopping DHW heating

You do not want to heat your rooms or have DHW available.

Press .

Standby mode:

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


Note

The circulation pump is briefly started in certain intervals to prevent it from seizing up. Your heating contractor can alter these intervals.

Switching the comfort function ON and OFF

Only for Vitodens 200-W or Vitopend 200 (type WHKA) with integral instantaneous water heater.

If the comfort function is switched ON, the instantaneous water heater is kept up to temperature (standby). This makes hot water available immediate.


You can switch OFF the comfort function with "". This prevents the boiler being switched ON, saving energy in connection with maintaining the standby temperature when no hot water is being drawn (e.g. at night).

Adjusting the room temperature

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

Please make any adjustments using the relevant operating instructions.

Please also note:

- "Htg.+ DHW"  must be selected.
- The boiler water temperature must be set sufficiently high.
- All thermostatic radiator valves must be fully open in the room where the control unit is installed.


Adjusting the boiler water temperature

If a remote control unit is connected:



You set the room temperature on the remote control.

Set the boiler water temperature sufficiently high so the required room temperature can be achieved.

Press the following keys:

1.  for "Boiler temp.setpt."; the current temperature will flash.




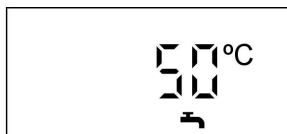
2.  for the required temperature.
3.  to confirm; the temperature no longer flashes and is saved.



Setting temperatures

Setting the DHW temperature

Press the following keys:


1.  for "DHW temp.setpt."; the current temperature will flash.



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

Restoring the standard settings

It is possible to simultaneously reset all changed values to their factory settings.

For this, press .

Scanning options

Scanning temperatures and operating conditions

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

Press the following keys:

2. \oplus/\ominus for further scans.

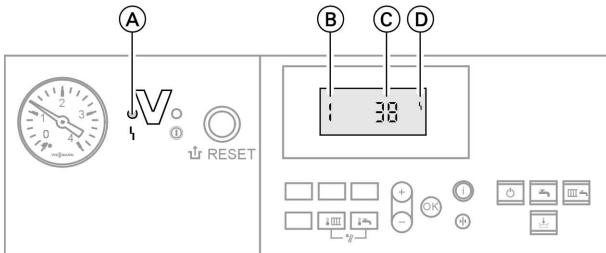
1. \textcircled{i} for boiler water temperature.

3. \textcircled{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 with 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	Hours run are only approximate values.
▲▲▲ 030417	Burner starts	
▲▲▲▲▲ 000850 h	Solar circuit pump hours run	Hours run are only approximate values.
▲▲▲▲▲▲ 002850	Solar energy in kWh	The displayed solar yield represents only an approximate value.

Scanning fault display



- (A) Fault display
 (B) Fault number
 (C) Fault code
 (D) Fault symbol

If your heating system has developed a fault, it will be displayed and indicated by the flashing red fault indicator (A). You can check the fault code on the display and then notify your heating contractor accordingly. This allows your contractor to better prepare for the service call and may save additional travelling costs.

Press the following keys:

1. \oplus/\ominus to display further faults, if several faults exist.
2. OK to acknowledge the fault.

To recall fault codes press the following keys:

1. OK for approx. 3 s.
2. \oplus/\ominus to display further faults, if several faults exist.

Note

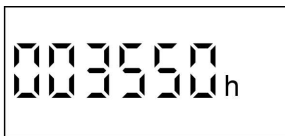
The fault message will be displayed again the following day, if the fault has not been rectified. The red fault indicator flashes until the fault has been rectified.

Special displays

Service display

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

Service display after a set number of hours run (display flashes):



Service display after an interval (flashing display), e.g. service every 12 months:



Rooms are too cold

Cause	Remedy
The heating system is switched OFF ON indicator "ⓘ" (green) OFF	<ul style="list-style-type: none"> ■ Switch system ON/OFF switch "ⓘ" ON (see page 10) ■ Switch the main isolator ON, if installed (outside the boiler room) ■ Check and, if required, reset/replace the MCB/fuse inside the power distribution board (main domestic MCB/fuse)
Control unit or remote control incorrectly adjusted	Check and, if required, correct adjustments (see page 11 or the operating instructions of the remote control).
Only when operating with DHW heating: DHW priority (☞Ⓢ is displayed)	Wait until the DHW cylinder has been heated up or no more DHW is drawn off when operating an instantaneous water heater (☞ is extinguished from the display)
No fuel	<p>For LPG: Check the fuel stock and re-order, if required.</p> <p>With natural gas: Open the gas shut-off valve and check with your gas supplier, if required.</p>
Control unit fault: The display shows "I", and the red fault indicator flashes	Check the fault code on the display (see page 17) 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.
Remote control fault	Notify your local heating contractor

What to do if...

Rooms are too hot

Cause	Remedy
Control unit or remote control incorrectly adjusted	Check and, if required, correct adjustments (see page 11 or the operating instructions of the remote control).
Control unit fault: The display shows "I", and the red fault indicator flashes	Check the type of fault (see page 17) and notify your heating contractor

There is no hot water

Cause	Remedy
The heating system is switched OFF ON indicator "Ⓞ" (green) OFF	<ul style="list-style-type: none"> ■ Switch system ON/OFF switch "Ⓞ" ON (see page 10) ■ Switch the main isolator ON, if installed (outside the boiler room) ■ Check and, if required, reset/replace the MCB/fuse inside power distribution (main domestic circuit breaker/fuse)
Control unit incorrectly adjusted	Check settings and correct, if required: <ul style="list-style-type: none"> ■ DHW heating must be switched ON (see page 11) ■ DHW temperature (see page 14)
No fuel	For LPG: Check the fuel stock and re-order, if required. With natural gas: Open the gas shut-off valve and check with your gas supply utility, if required.
Control unit fault: The display shows "I", and the red fault indicator flashes	Check the type of fault (see page 17) and notify your heating contractor
Burner fault: The red fault indicator on the control unit flashes, and "I" is displayed	Press burner fault reset "I"; if that attempt to start also fails, notify your heating contractor.

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The DHW is too hot

Cause	Remedy
Control unit incorrectly adjusted	Check and, if required, correct the DHW temperature (see page 14)
Sensor fault	Notify your local heating contractor

Maintenance

Cleaning

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

Inspection and maintenance

The inspection and maintenance of a heating system is prescribed by the Energy Saving Order [EnEV - Germany] and the DIN 4755, DIN 1988-8 and EN 806 standards.

Regular maintenance ensures a 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.

DHW cylinder (if installed)

The DIN 1988-8 and EN 806 specify that maintenance and cleaning should be carried out no later than two years after commissioning and thereafter as required.

Only a qualified heating contractor should clean the inside of a DHW cylinder and the DHW connections. Refill any water treatment equipment (e.g. a lock or injection system) in good time, if such equipment is installed in the cold water supply of the DHW cylinder. Observe the manufacturer's instructions.

Additionally for a 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 the system operation. The heating contractor will check the earth current with an anode tester.

Inspection and maintenance (cont.)**Safety valve (DHW cylinder)**

The safety valve function should be checked every six months by venting, either by the system user or the local heating contractor. The valve seat may become contaminated (see the valve manufacturer's instructions).

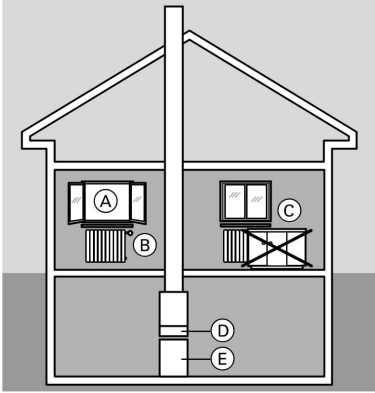
Potable water filter (if installed)

To maintain high hygienic standards, proceed as follows:

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

Energy saving tips

With the following steps, you can save additional energy:



- Correct ventilation/airing.
Briefly open windows (A) fully and at the same time close thermostatic valves (B).
- Never overheat rooms;
endeavour to achieve a room temperature of 20 °C; every degree of room temperature reduction saves up to 6% of your heating bills.
- Close roller shutters (where installed) at dusk.
- Adjust thermostatic valves (B) correctly.
- Never cover radiators (C) or thermostatic valves (B).
- Make full use of the setting options offered by control unit (D), e.g. "Normal room temp." alternating with "Red.room temp.".
- Adjust the DHW temperature of DHW cylinder (E) at control unit (D).
- Only activate the DHW circulation pump (via switching times at the control unit), when DHW is actually drawn.
- Controlled DHW consumption: A shower generally uses less energy than a full bath.

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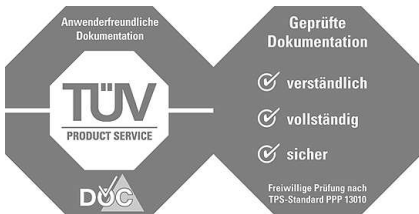
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Certification



Your contact

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

Viessmann Werke GmbH&Co KG
D-35107 Allendorf
Telephone: +49 6452 70-0
Fax: +49 6452 70-2780
www.viessmann.com

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP, GB
Telephone: +44 1952 675000
Fax: +44 1952 675040
E-mail: info-uk@viessmann.com

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