

Installation instructions

for contractors

VIESSMANN

Vitodens 200-W

Type **WB2C**, 4.8 to 35.0 kW

Wall mounted gas condensing boiler

Natural gas and LPG version

Gas Council no.

41-819-14; 41-819-15; 41-819-16; 41-819-17 (system boilers)

47-819-09; 47-819-10; 47-819-11 (combi boilers)



VITODENS 200-W



Safety instructions



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 instructions are exclusively designed for qualified personnel.

- 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.

Regulations

Observe the following when working on this system

- all legal instructions regarding the prevention of accidents,
- all legal instructions regarding environmental protection,
- the Code of Practice of relevant trade associations,

- all current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards.
- Gas Safety (Installation & Use) Regulations
 - the appropriate Building Regulation either the Building regulations, the Building Regulation (Scotland), Building Regulations (Northern Ireland),
 - the Water Fittings Regulation or Water Bylaws in Scotland,
 - the current I.E.E. Wiring Regulations.

Working on the system

- Isolate the system from the power supply and check that it is no longer 'live', e.g. by removing a separate fuse or by means of a mains isolator.
- Safeguard the system against unauthorised reconnection.
- When using gas as fuel, also close the main gas shut-off valve and safeguard against unauthorised reopening.

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Product information

Vitodens 200-W, WB2C

Set up for operation with natural gas H.

For conversion to LPG P (without conversion kit), see the service instructions.

The Vitodens 200-W should generally only be delivered to those countries specified on the type plate. For deliveries to alternative countries, an approved contractor must on his own initiative arrange individual approval in accordance with the law of the land.

All Vitodens 200-W WB2C up to 35kW have a built-in sealed system kit, circulating pump and a diverter valve.

The system boilers have two pairs of heating flow / return pipes - the outer pair are for central heating and the inner for the cylinder primaries. The hot water cylinder is recommended to be controlled by a Viessmann cylinder temperature sensor, and if it is an un-vented Vitocell cylinder, a 2-port valve and cylinder control stat is not required.

The boiler is either supplied with a constant temperature controller (Vitolronic 100) or a weather-compensated controller (Vitolronic 200).

The Vitolronic 100 (HO2A) provides a 7-day electronic timing for hot water and central heating. A separate room thermostat may be fitted.

The Vitolronic 200 is a weather compensated controller and includes a 7-day timing function, outdoor sensor as well as the option to control three separate heating circuits with independent time and weather-compensated control. Additional remote controllers are available. A standard room thermostat can not be connected.

Preparing for installation

Preparing the boiler for installation



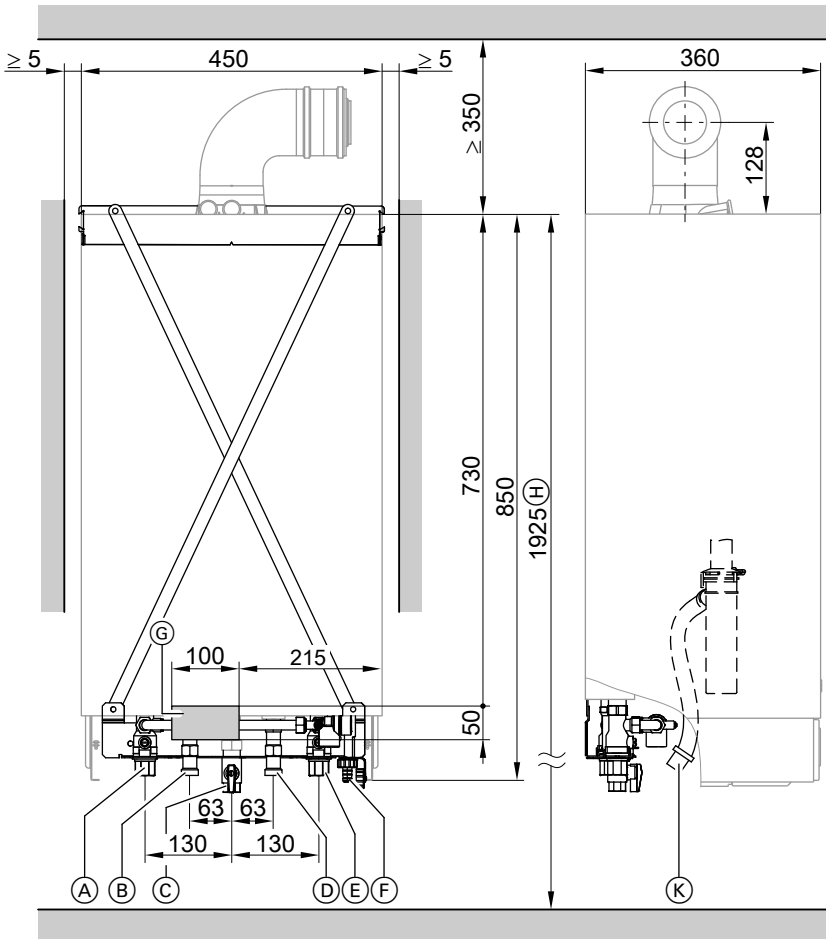
Please note

To prevent equipment damage, install all pipework free of load and torque stresses.



For on-site preparation of gas, water and electrical connections, see installation aid or mounting frame installation instructions.

Preparing for installation (cont.)



- | | |
|--|--|
| (A) Heating flow Rp $\frac{3}{4}$ | (E) Heating return Rp $\frac{3}{4}$ |
| (B) DHW Rp $\frac{1}{2}$ (gas combi boiler)
Cylinder flow G $\frac{3}{4}$ (gas boiler) | (F) Drain & fill valve |
| (C) Gas connection | (G) Cable entry |
| (D) Cold water Rp $\frac{1}{2}$ (gas combi boiler)
Cylinder return G $\frac{3}{4}$ (gas boiler) | (H) Dimension with DHW cylinder
below |
| | (K) Condensate drain |

Preparing for installation (cont.)

Minimum clearances

Area around the Vitodens for maintenance: min. 700 mm.

Maintenance clearances to the l.h. or r.h. side of the Vitodens are **not** required.

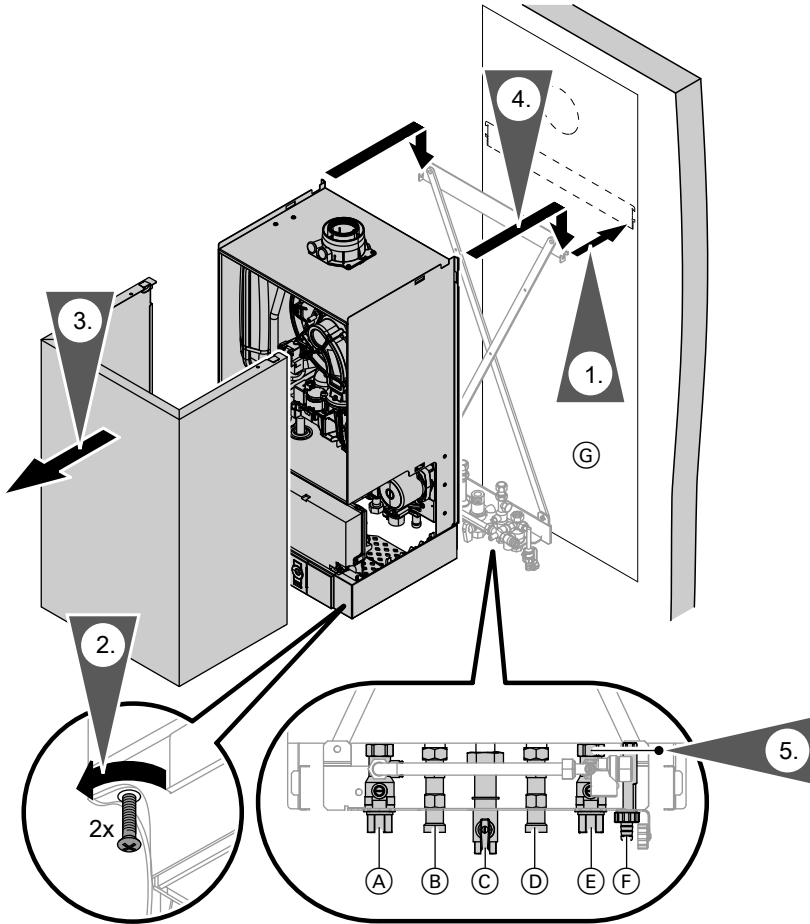
Note

This boiler (protection: IP X4 D) is approved for installation in wet rooms inside safety zone 2 according to the current I.E.E. Wiring Regulations.

The requirements of the I.E.E. Wiring Regulations must be observed.

1. Prepare the water connections. Flush the heating system thoroughly.
2. Prepare gas connection in compliance with the The Gas Safety (Installation and Use) Regulations 1998.
3. Prepare the electrical connections.
 - Power supply cable: 3 x 1.0 mm², 2 m long is fitted in the delivered condition.
Fuse max. 16 A, 230 V~, 50 Hz.
 - Accessory cables: e.g. type NYM cable with the required number of conductors for the external connections.
 - Allow all cables in area "ⓐ" (behind the boiler) to protrude 1200 mm from the wall.

Installing the boiler and making all connections



- | | |
|---|---------------------------|
| (A) Heating flow | (E) Heating return |
| (B) DHW (gas combi boiler)
Cylinder flow (gas boiler) | (F) Drain & fill valve |
| (C) Gas connection | (G) Installation template |
| (D) Cold water (gas combi boiler)
Cylinder return (gas boiler) | |

Installing the boiler and making all connections (cont.)

Note

If the gas condensing boiler is to be operated in weather-compensated mode and with a DHW cylinder, connect the DHW cylinder at cylinder flow (B) and cylinder return (D) (four pipe connections).

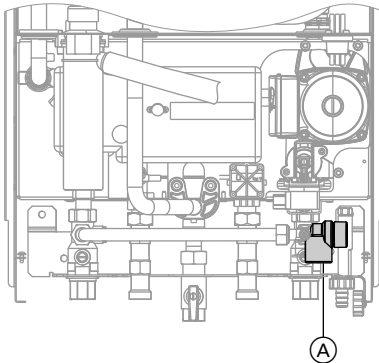
Flue installation and connection

Connect the appropriate flue system as per our flue gas system installations. During installation and positioning of the flue gas system, observe building regulations part L and BS 5440 as well as the flue gas system installations which are provided with the boiler.



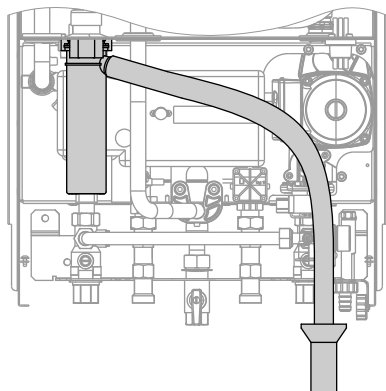
Flue gas system installation instructions.

Connecting the safety valve drain/blow-off pipe



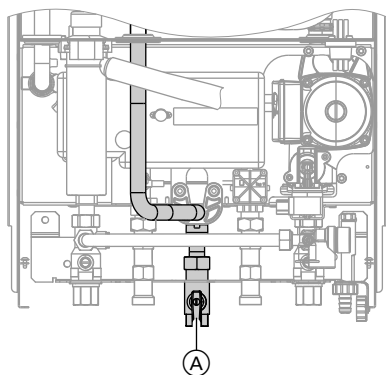
Connect safety valve (A) with visible outlet to the household drain system or route with visible outlet through the external wall.

Condensate connection



Connect the condensate drain with a slope and a pipe vent to the public sewer.
Observe the Building Regulations. Where the condensate drain pipe is routed outside, it must have a diameter of at least 30 mm and must be protected against frost through sufficient lagging of the pipe. Avoid excessive pipe runs at the outside wall.

Gas connection



Notes regarding operation with LPG.
We recommend the installation of an external safety solenoid valve when installing the boiler in rooms below ground level.

1. Seal in gas shut-off valve (A) at the gas connection.

2. Carry out a tightness test.

Note

For the tightness test, use only suitable and approved leak detecting agents (EN 14291) and devices. Leak detecting agents with unsuitable constituents (e.g. nitrites, sulphides) can lead to material damage. Remove residues of the leak detecting agent after testing.



Please note

Excessive test pressure may damage the boiler and the gas valve.
Max. test pressure 150 mbar. Where higher pressure is required for tightness tests, separate the boiler and the gas valves from the gas supply pipe (undo the fitting).

Gas connection (cont.)

3. Vent the gas line.



Conversion to other gas types:
Service instructions

Opening the control unit casing

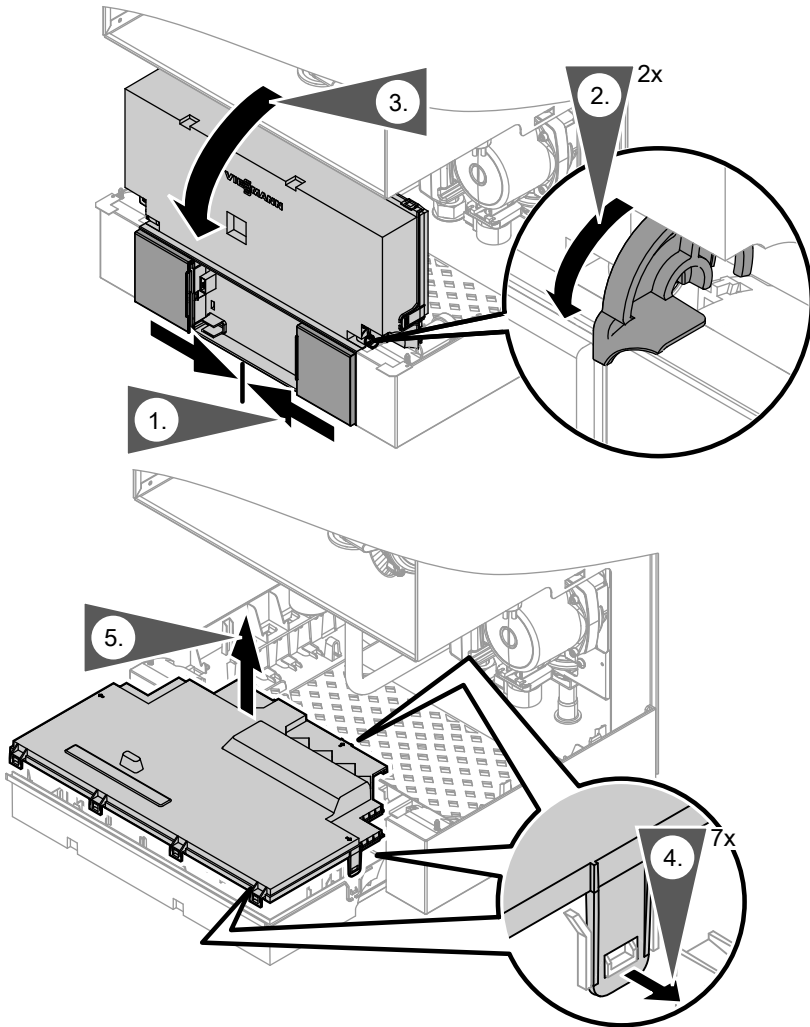


Please note

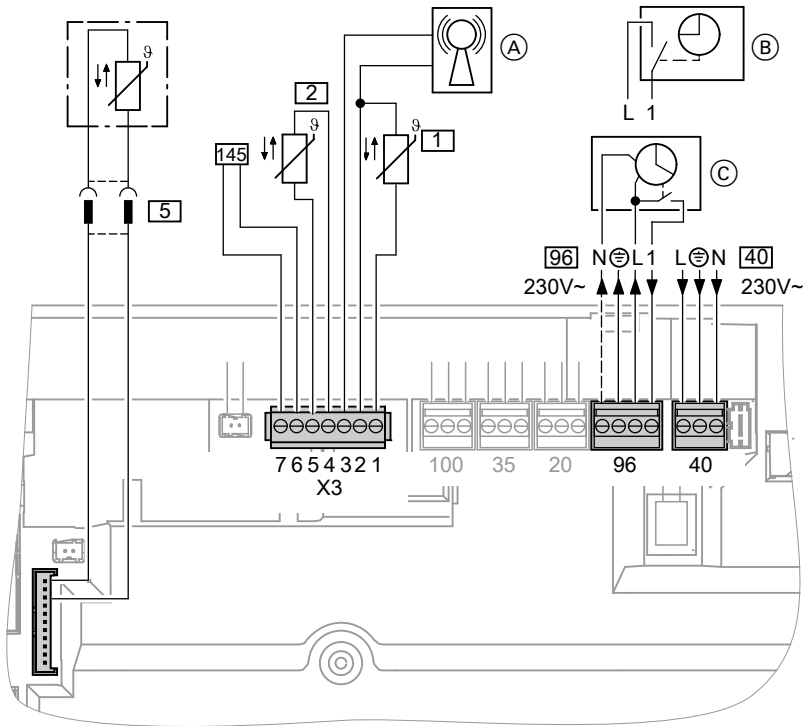
Electronic modules can be damaged by electrostatic discharges.

Before beginning work, touch earthed objects, such as heating or water pipes, to discharge static loads with your hands.

Opening the control unit casing (cont.)



Electrical connections



- (A) Radio clock receiver (optional)
- (B) Only for constant temperature control units (Plug 96):
- Vitotrol 100 UTDB
 - or
 - on-site room temperature controller 230 V (terminal L and 1)
 - or
 - on-site room temperature controller with time switch.
- When making this connection, remove jumper between "1" and "L" (terminal L and 1).
- (C) Only for constant temperature control units (Plug 96):
- Vitotrol 100 UTA
 - or
 - Vitotrol 100 UTDB-RF wireless receiver
 - or
 - on-site room temperature controller 230 V (terminal N, L and 1)
 - or
 - on-site room temperature controller with time switch.
- When making this connection, remove jumper between "1" and "L".

Electrical connections (cont.)



Information regarding the connection of accessories

For the connection, observe the separate installation instructions provided with the accessory components.

230 V~ plugs

40 ■ Power supply [terminals]



Danger

Incorrect cable core termination can cause severe injuries and damage to the equipment.

Never interchange cable cores "L1" and "N".

- Install an isolator in the power supply line which simultaneously separates all non-earthed conductors from the mains with contact separation of at least 3 mm. We additionally recommend installing an AC/DC-sensitive RCD for DC (fault) currents that can occur with energy-efficient equipment.
- Max. fuse rating 16 A.

- 96 ■ Power supply accessories (230 V ~ 50 Hz). Where the boiler is installed in a wet area, the connection of accessories to the power supply must not be carried out at the control unit. The power supply connection for accessories can be made immediately at the control unit, if the boiler is installed outside wet areas. This connection is directly controlled with the system ON/OFF switch (max. 3 A).
- Vitotrol 100 UTA
 - Vitotrol 100 UTDB
 - Vitotrol 100 UTDB-RF

Low voltage plugs

- 1 ■ Outside temperature sensor (only for weather-compensated control units).

Installation:

- North or north-western wall, 2 to 2.5 m above ground level; in multi-storey buildings, in the upper half of the second floor
 - Not above windows, doors or ventilation outlets
 - Not immediately below balconies or gutters
 - Never render over
 - 2-core lead, max. 35 m length with a cross-section of 1.5 mm²
- 2 ■ Flow temperature sensor for low loss header (accessories)

Electrical connections (cont.)

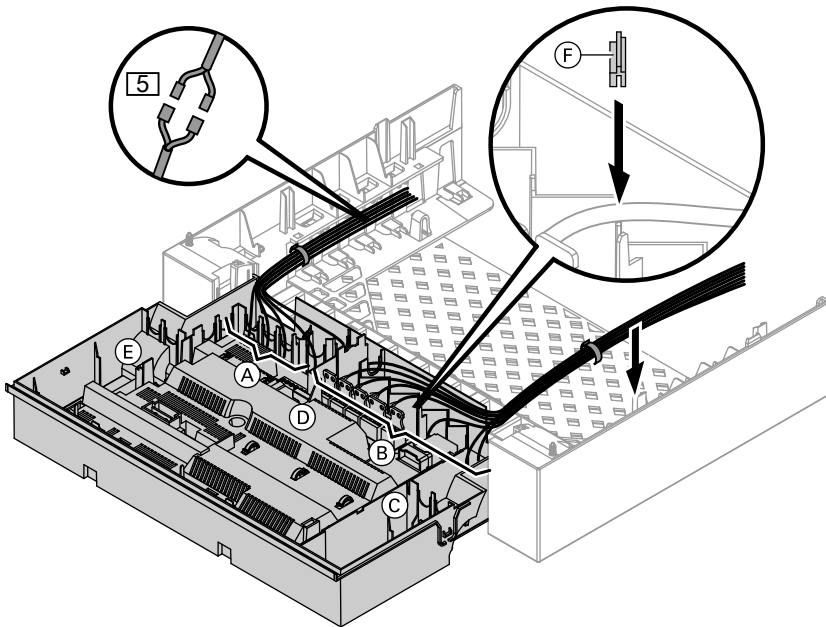
- 5 Cylinder temperature sensor (part of the DHW cylinder connection set).
- 145 KM BUS subscriber (accessory)
 - Vitotrol 200A or 300A remote control
 - Vitocom 100
 - Extension kit for one heating circuit with mixer
 - Solar control module, type SM1
 - Vitosolic
 - Extension AM1
 - Extension EA1

Routing the mains cable and other electrical accessories



Please note

If connecting cables touch hot components they will be damaged. When routing and securing connecting cables on site, ensure that the maximum permissible temperatures for these cables are not exceeded.



- (A) Low voltage connections
- (B) 230 V connections
- (C) Internal extension

- (D) Main PCB
- (E) Communication module
- (F) Cable grommet for power cable

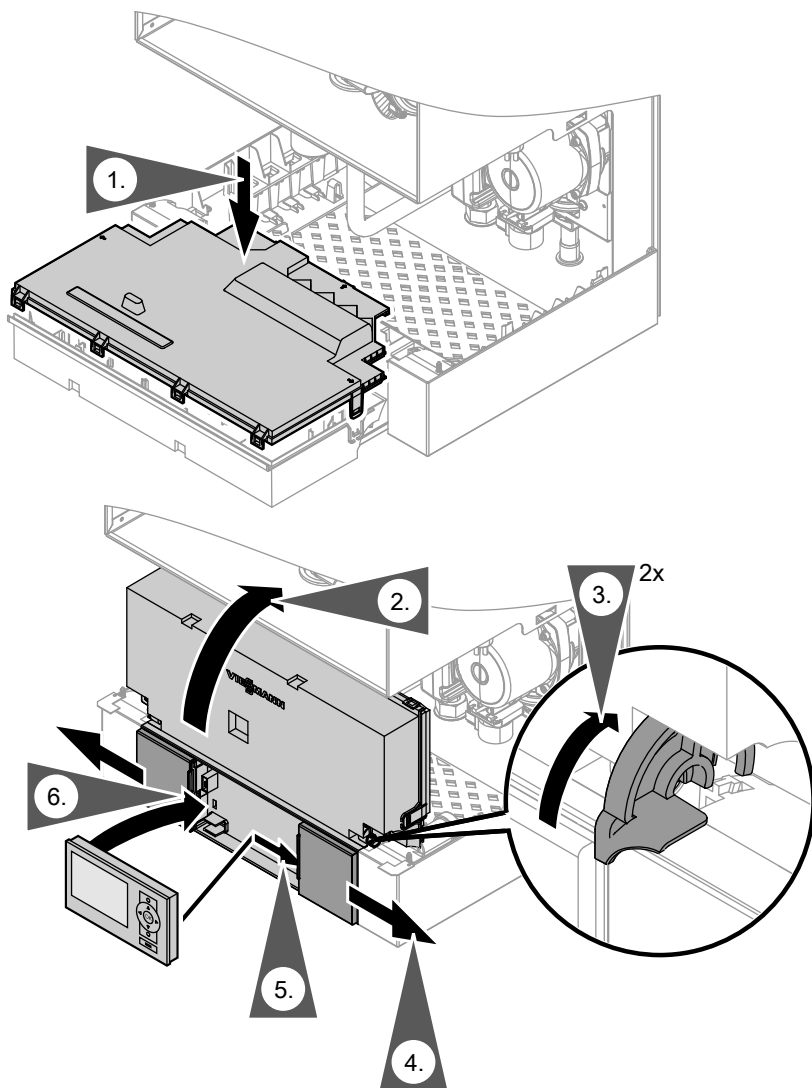


Electrical connections (cont.)

- 5 Plugs for connecting the cylinder temperature sensor to the cable harness (or for traditional 'Y' - or 'S'-plan systems connecting the cylinder demand box - optional)

Remove the existing cable grommet when using larger cross-sections (up to $\varnothing 14$ mm). Secure the cable with cable grommet (F) (black) integrated into the casing base.

Closing the control unit casing and inserting the programming unit



Closing the control unit casing and inserting... (cont.)

Insert programming unit (packed separately) into the control unit support.

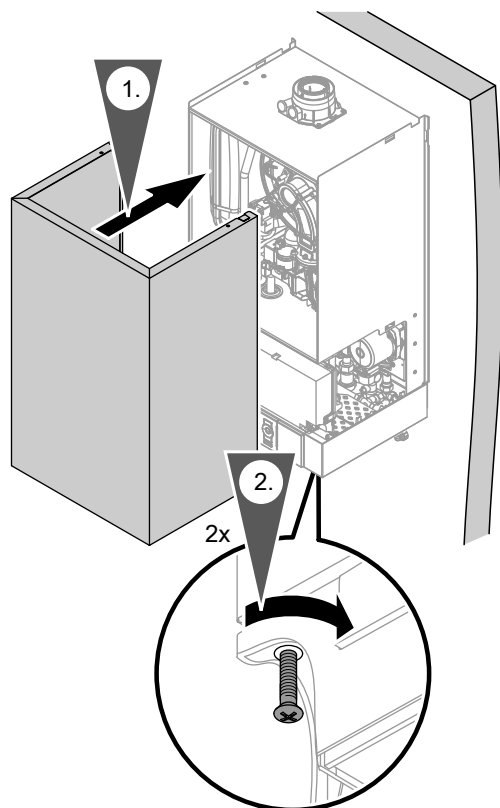
Note

The programming unit can also be used in a wall mounting base (accessory) near the boiler (max. 5 m distance).



Wall mounting base installation instructions

Fitting the front panel



Note

Ensure the case fixing screws are screwed in before operating the boiler.

Commissioning and adjustment



Flueing instructions, commissioning and adjustment (please see appropriate instructions within the technical documentation).

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