

# Installation instructions

for heating engineers

**VIESSMANN**

## **Vitodens 333**

Type **WS3A**, 6.6 to 26.0 kW

Compact gas fired condensing boiler  
natural gas and LPG version



## **VITODENS 333**



## Safety instructions



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

### Safety instructions explained



#### Important information

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

#### Note

*Details identified by the words "Note" contain additional information.*

### Safety regulations

Installation, initial start-up, inspection, maintenance and repairs must be carried out by a competent person (heating engineer/installation contractor).

Observe all current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE or all locally applicable standards.

See also the "safety instructions" in the "Vitotec Technical Guide" folder.

Before working on the equipment/heating system, isolate the mains electrical supply (e.g. by removing a separate mains fuse or by means of a mains electrical isolator) and safeguard against unauthorised reconnection.

Close the main gas shut-off valve and safeguard against unauthorised reopening.

Electrical assemblies provided on site must be type-approved.

### Work on gas equipment

This must only be carried out by an approved gas fitter.

Observe all commissioning work specified for gas installations to TRGI or TRF and all local regulations.

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## Product information

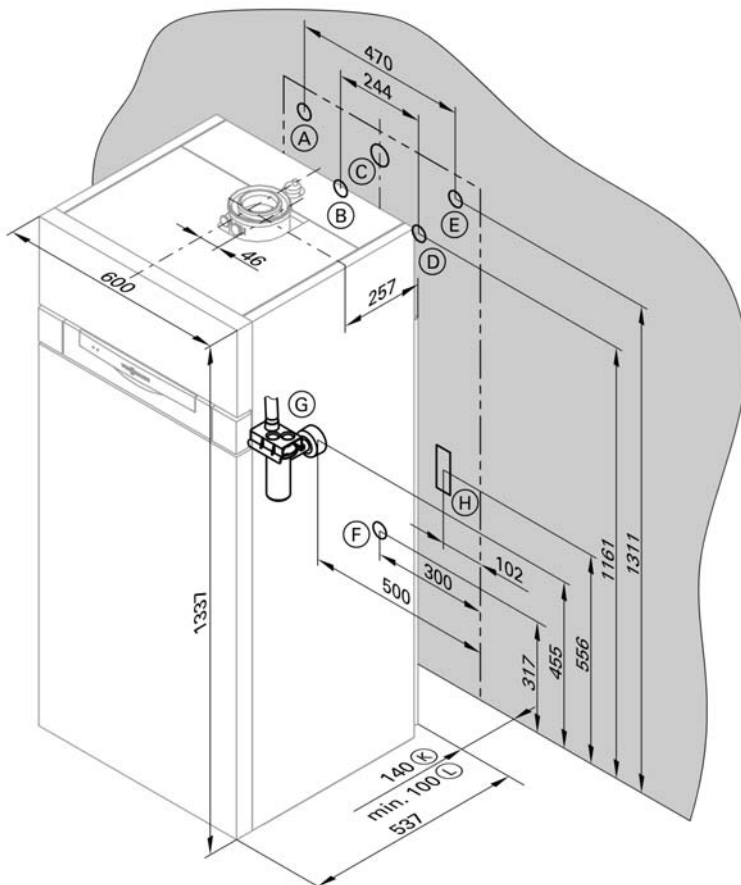
### **Vitodens 333, Type WS3A**

Set up for operation with natural gas E.

The natural gas E version can be converted to natural gas LL or LPG P using a conversion kit.

## Preparations for boiler installation

 On-site preparations when using a connection set (accessory), see the installation instructions of the connection set.



- (A) Cold water G $\frac{3}{4}$ "
- (B) Heating flow G $\frac{3}{4}$ "
- (C) Gas connection G $\frac{3}{4}$ "
- (D) Heating return G $\frac{3}{4}$ "
- (E) DHW G $\frac{3}{4}$ "
- (F) DHW circulation G1"
- (G) Drain outlet kit (accessory)
- (H) Cable arrangement area
- (K) Wall clearance with connection set (accessory)
- (L) Wall clearance with on-site connection



## Preparations for boiler installation (cont.)

1. Prepare the primary connections. Thoroughly flush the heating system.
2. Prepare the secondary connections. Install the safety assembly (accessory or on-site provision) to DIN 1988 [or local regulations] into the cold water supply line.
3. Equip the DHW circulation pipe with circulation pump, check valve and time switch.
4. Connect the condensate drain with a pipe vent to the public sewer.
5. Prepare the gas connection according to TRGI or TRF or all local regulations.
6. Prepare the electrical connections.
  - Mains cable: NYM-J 3 x 1.5 mm<sup>2</sup>, fuse max. 16 A, 230 V~, 50 Hz.
  - Accessory cables: NYM with the required number of conductors for the external connections.
  - All cables in area "Ⓜ" should protrude 2 000 mm from the wall.

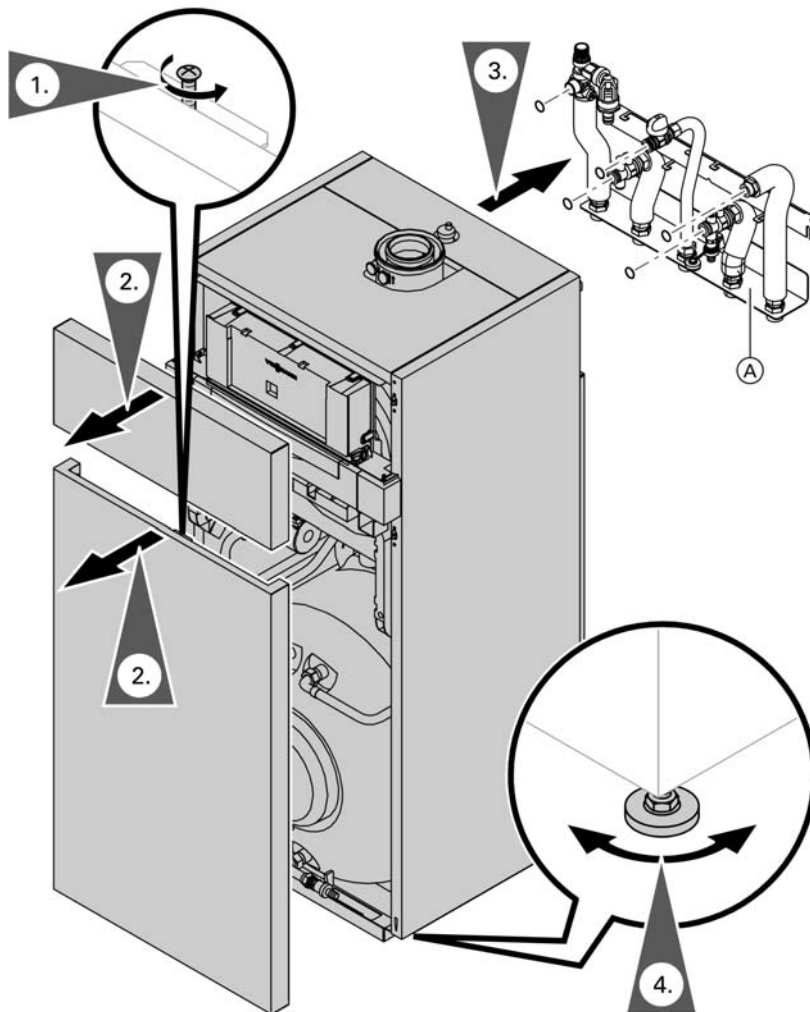
### **Note**

*Should an on-site diaphragm expansion vessel be required, install this into the heating return. If no connection set (accessory) is used, install the on-site fill tap into the heating return.*

## Installing the boiler and making all connections

### Note

Connect the condensate drain and drain lines from the safety valves with a slope and a pipe vent to the public sewer.



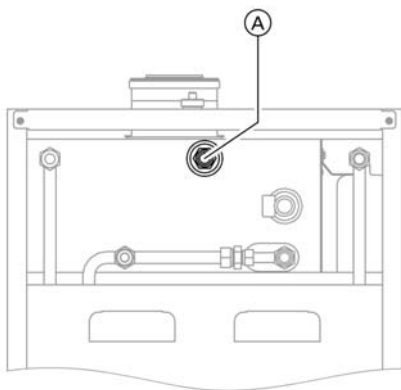
## Flue gas connection

Connect the balanced flue pipe.



Flue gas system installation instructions.

## Gas connection



Ⓐ Gas connection



**Conversion to other gas types:**

Conversion kit installation instructions

### **Information regarding operation with LPG**

*We recommend the installation of an external safety solenoid valve when installing the boiler in rooms below ground level.*

1. Carry out a leak test.



#### **Important information**

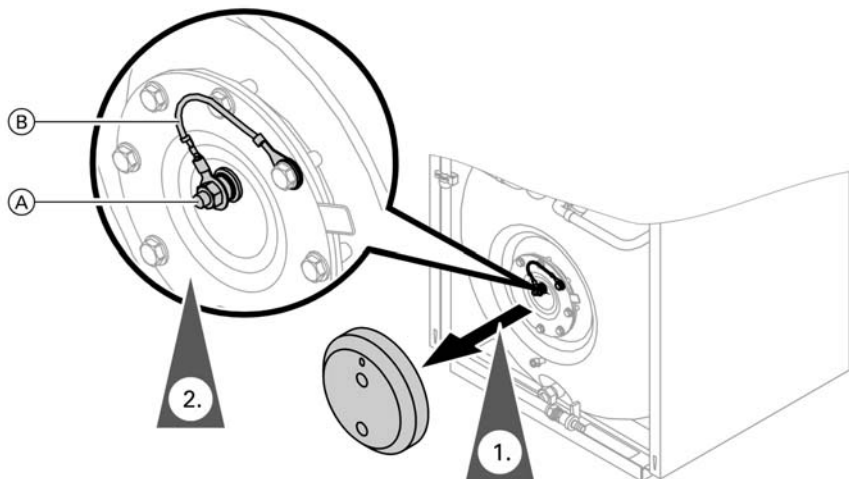
Excessive test pressure leads to damage to the boiler and gas train.

Max. test pressure 150 mbar. If a higher pressure is required for leak tests, separate the boiler and the gas train from the mains gas supply (undo fittings).

2. Purge the gas supply pipe.



## Checking anode connection



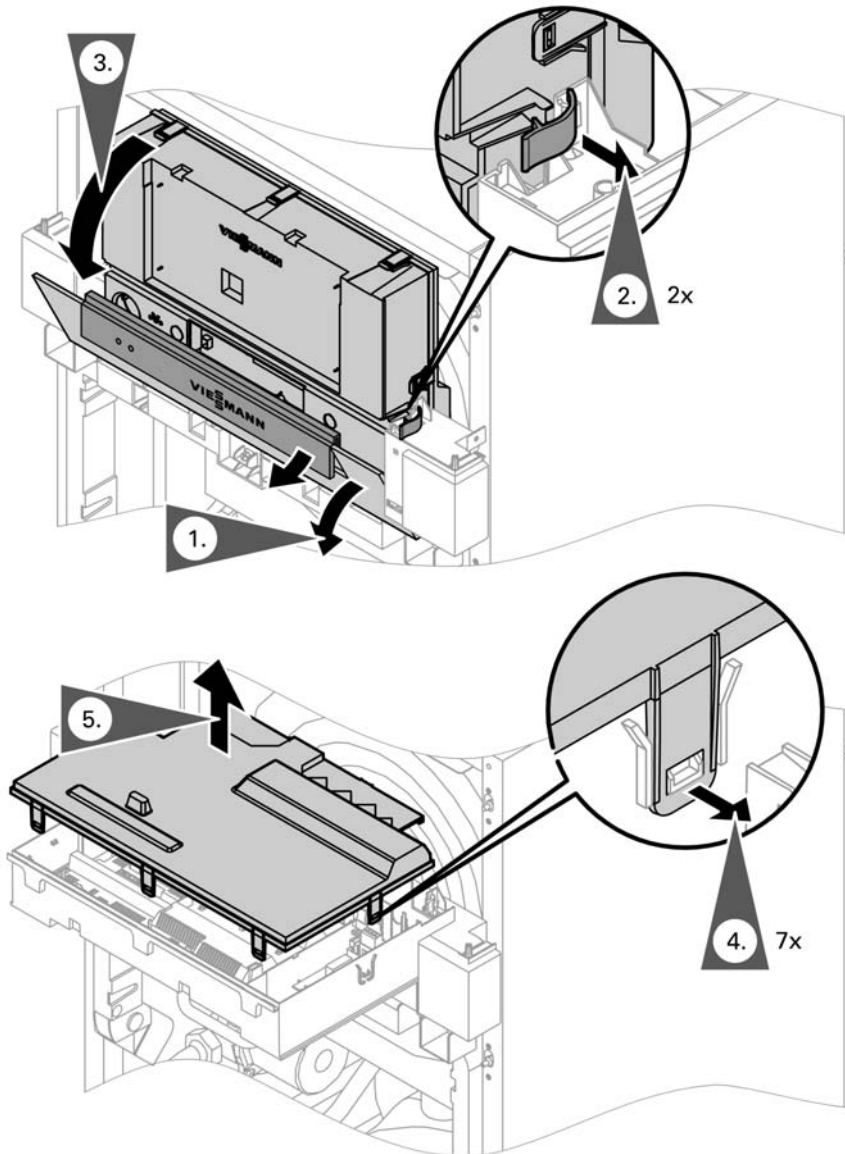
Ⓐ Magnesium anode

Ⓑ Earth cable

1. Remove the flange lid cover.

2. Check whether the earth cable is connected on the magnesium anode.

## Opening the control unit housing

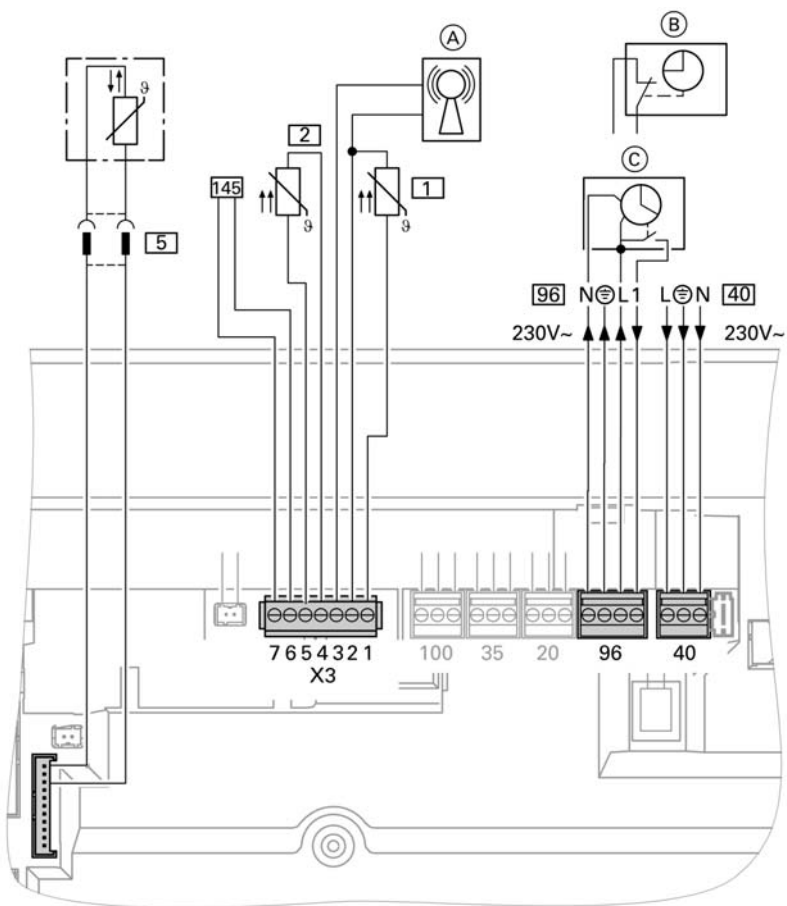


## Electrical connections



### Notes regarding the connection of accessories

For details of accessories, also observe the separate installation instructions provided.



(A) Radio clock connection

(B) Vitotrol 100 UTD (only for control units operating with a constant temperature)

(C) Vitotrol 100 UTA (only for control units operating with a constant temperature)

## Electrical connections (cont.)

### Plug 230 V~

- 40 Power supply
  - Never interchange cores "L1" and "N".
  - Install an isolator in the mains supply line which simultaneously separates all non-earthed conductors from the mains with at least 3 mm contact separation.
  - Max. fuse rating 16 A.
- 96 Mains supply - accessories (230 V ~ 50 Hz). Where the boiler is installed in a bathroom or shower room, the mains supply of accessories outside the wet area must not be connected to the control unit. The power supply connection for accessories can be made immediately at the control unit, if the boiler is installed outside damp areas. This connection is directly controlled with the system ON/OFF switch (max. 3 A).
  - Vitotrol 100 UTA
  - Vitotrol 100 UTD

### Low voltage plug

- 1 Outside temperature sensor (only for weather-compensated mode)  
Installation
  - North or northwestern 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 balcony or gutter
  - Do not render over
  - Two core cable with a maximum length of 35 m and a cross-section of 1.5 mm<sup>2</sup>
- 2 Flow temperature sensor for low loss header (accessories)
- 5 DHW cylinder temperature sensor (fitted in the delivered condition)
- 145 KM BUS user (accessory)
  - Vitotrol 200 or 300 remote control
  - Vitocom 100
  - Extension kit for one heating circuit with mixer
  - Vitosolic
  - External extension

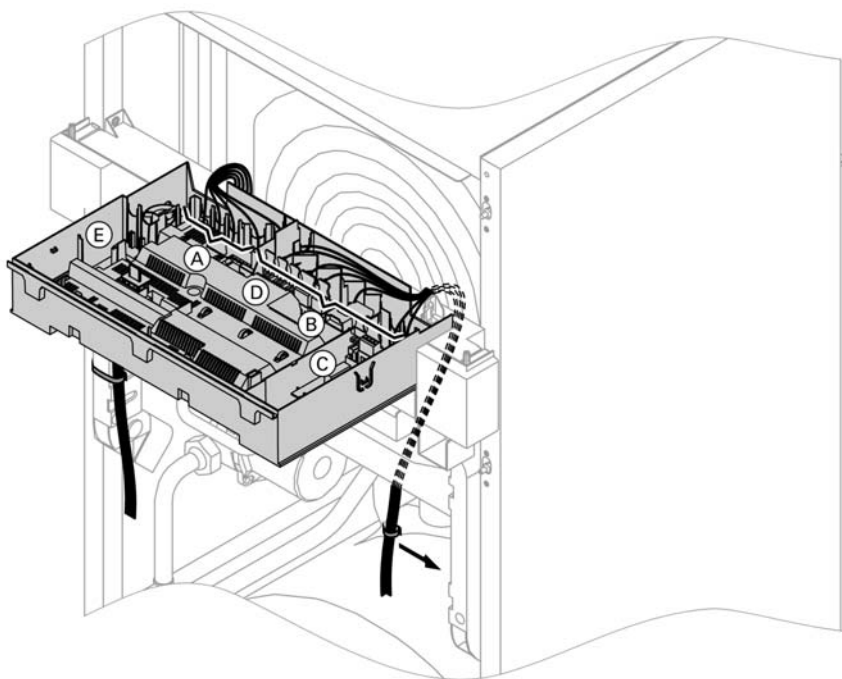
## Electrical connections (cont.)

### Routing connecting cables



#### Important information

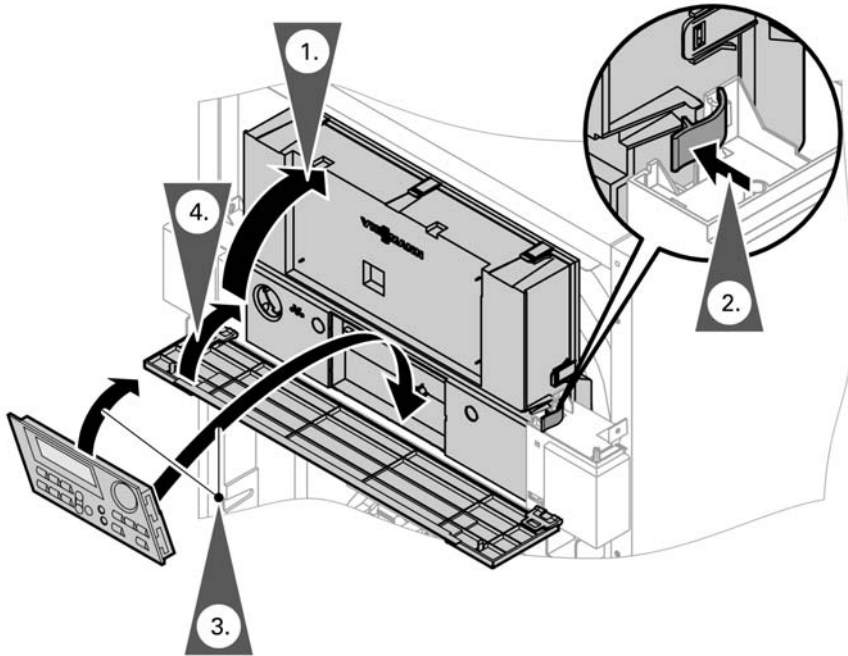
Connecting cables are damaged if they touch hot components. When routing and securing connecting cables on site, ensure that the maximum permissible cable temperatures are not exceeded.



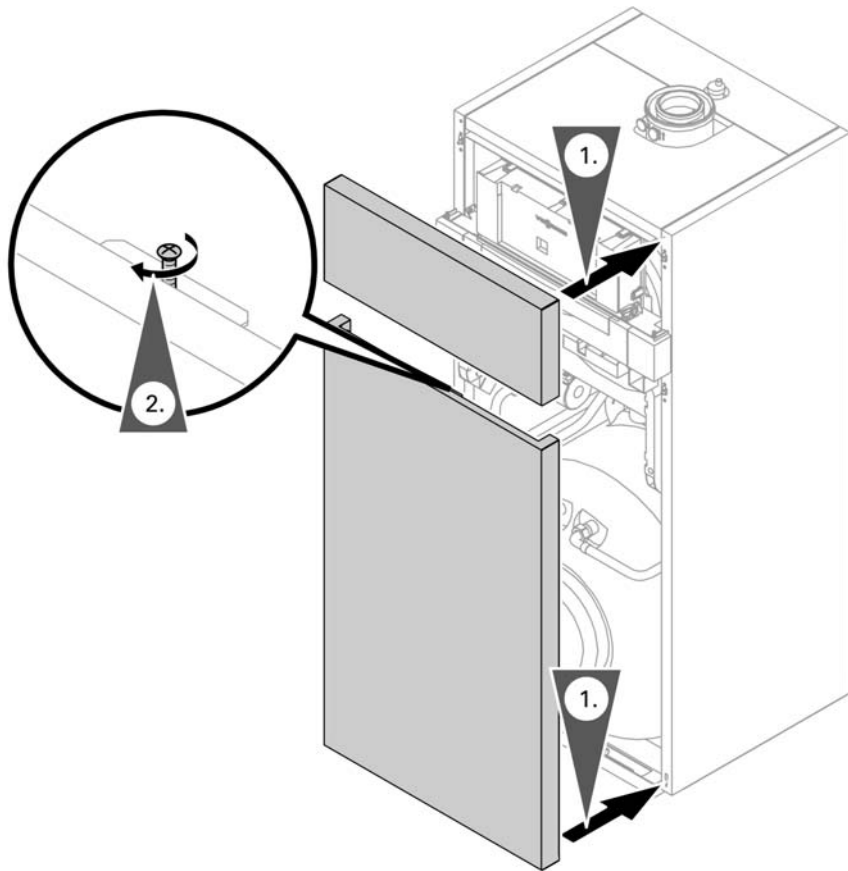
- (A) Low voltage connections
- (B) 230 V connections
- (C) Internal extension

- (D) Main PCB
- (E) Communications module

## Closing control unit housing and inserting user interface



## Front panel installation



## Commissioning and adjustments



For commissioning and adjustment, see service instructions.

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