

# Installation instructions

## for contractors



## Gas valve replacement

for the Vitodens 100-W, type WB1B

### 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.

#### Note

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

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

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

When using gas as fuel, also close the main gas shut-off valve and safeguard against unauthorised reopening.

Repairing components which fulfil a safety function can compromise the safe operation of your heating system.

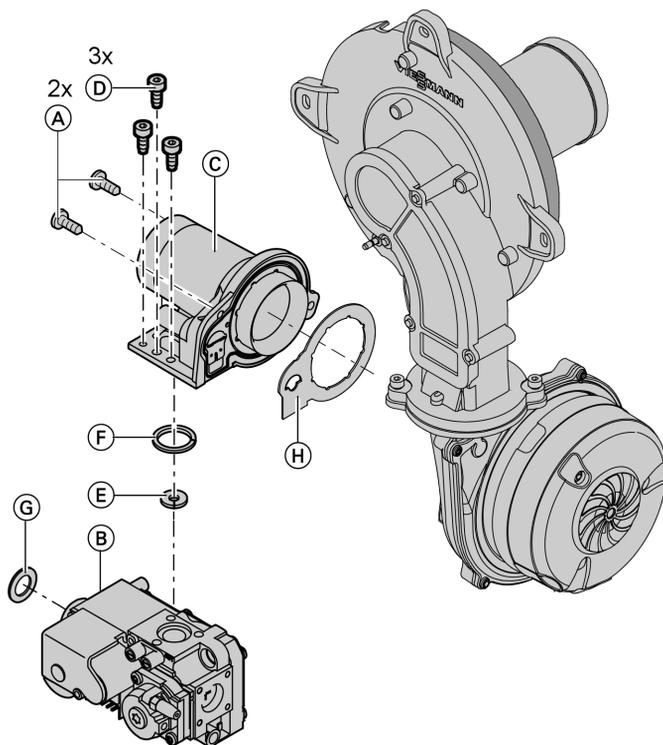
For replacements, use only original spare parts supplied or approved by Viessmann.

### Opening the Vitodens and removing the burner



Installation and service instructions

## Replacing the gas valve



1. Undo two screws (A) and remove gas valve (B) together with venturi nozzle (C).

2. If the boiler is **not** operated with gas type G 20 or G 25, remove the gas restrictor from the old gas valve and insert it into the new one:
- Undo three screws (D) and remove venturi nozzle (C) from gas valve (B).
  - Remove gas restrictor (E) from old gas valve (B) and insert with new gasket (F) into new gas valve (B).
  - Fit venturi nozzle (C) to new gas valve (B).
- Fixing screw torque: 3 Nm.

## Replacing the gas valve (cont.)

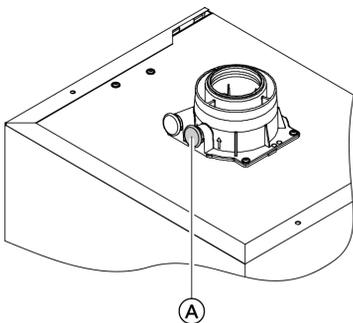
3. Fit new gas valve (B) with venturi nozzle (C) and new gaskets (G) and (H).  
Fixing screw torque: 3 Nm.

4. Install the burner.  
Union nut torque: 22 Nm.

### Note

Insert new gaskets on all gas connections.

## Adjusting the burner



1. Connect a flue gas analyser at flue gas port (A) on the boiler flue connection.
2. Start up the boiler and check for tightness.



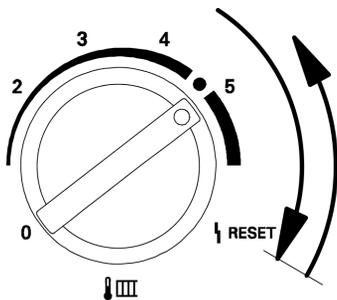
Installation and service instructions



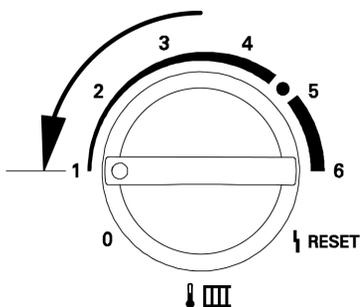
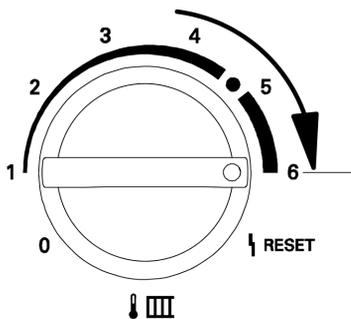
### Danger

Escaping gas leads to a risk of explosion.  
Check gas equipment for tightness.

3. Turn rotary selector "⏏" clockwise for less than 2 s and then anticlockwise back to the control range on the right.  
The display shows "SERV" and the boiler water temperature is shown.



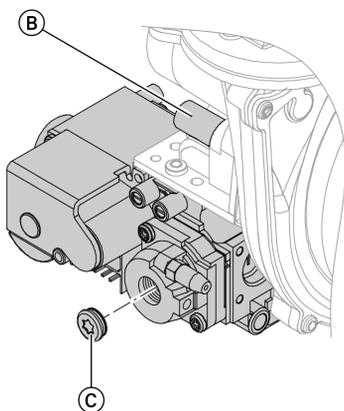
## Adjusting the burner (cont.)



4. Adjust the upper output:  
Turn rotary selector "📊" to the control range on the right.  
The display shows 5 bars for upper output.
5. Measure the CO<sub>2</sub> content for upper output.  
The CO<sub>2</sub> content must be between the following values:
  - When operating with G 20/G 25: 7.5 to 10.5 %
  - When operating with G 31: 10.0 to 12.0 %
6. Adjust the lower output:  
Turn rotary selector "📊" to the left control range.  
The display shows 1 bar for lower output.
7. Test the CO<sub>2</sub> content for lower output.  
The CO<sub>2</sub> content must be between the following values:
  - When operating with G 20/G 25: 7.5 to 10.5 %
  - When operating with G 31: 10.0 to 12.0 %
8. ■ If the CO<sub>2</sub> content is within the given range, continue with point 15.
  - If the CO<sub>2</sub> content is **not** within the given range, check the flue gas/ventilation air system for tightness.  
Remedy any leaks.



## Adjusting the burner (cont.)



9. Test the CO<sub>2</sub> content for upper and lower output again.  
If the CO<sub>2</sub> content is **still not** within the given range, adjust the CO<sub>2</sub> content.

### 10. Adjusting the CO<sub>2</sub> content

Adjust the upper output.

11. With the adjusting screw (B), set the CO<sub>2</sub> content for upper output to the following values:
  - When operating with G 20/G 25: 9.0 %
  - When operating with G 31: 10.8 %

12. Adjust the lower output.

13. Remove cover (C) from gas train. With the adjusting screw below, set the CO<sub>2</sub> content for lower output to the following values:
  - When operating with G 20/G 25: 8.7 %
  - When operating with G 31: 10.5 %

14. Refit cover (C).

15. Shut the boiler down, remove flue gas analyser and close flue gas port (A).

16. Return rotary selectors "↓↔" and "⏏↓" to their original positions.

17. Fit front panel and start the boiler.





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