Installation instructions

for contractors

Replacing the gas train

for Vitodens 100-W and Vitodens 111-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.

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.

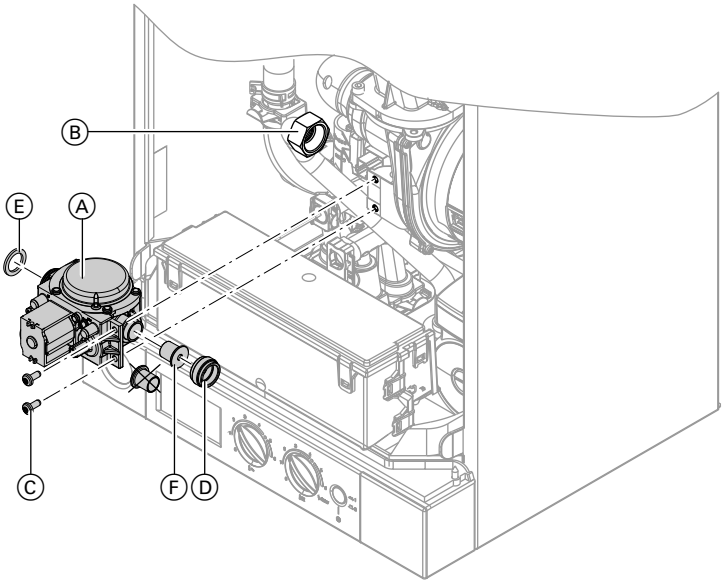
Repairing components which fulfil a safety function can compromise the safe operation of your heating system. For replacements, use only original spare parts supplied or approved by Viessmann.

Opening the Vitodens

Installation and service instructions

Dispose after installation.

Replacing the gas train



1. Pull cable from gas train Ⓐ.
2. Undo union nut Ⓑ.
3. Undo 2 screws Ⓒ and remove gas train Ⓐ.
4. Into new gas train Ⓐ, insert new gasket Ⓓ and gas restrictor Ⓕ subject to gas type:
   - Operation with natural gas EG-E (G20):
     Gasket Ⓓ **without** gas restrictor Ⓕ.
   - Operation with natural gas EG-L (G25):
     Gasket Ⓓ **without** gas restrictor.
   - Operation with LPG (G31):
     Gasket Ⓓ **with** gas restrictor Ⓕ.
   - Operation with LPG (G27):
     Gasket Ⓓ **with** gas restrictor Ⓕ.
   - Operation with natural gas EG-Ls (G2.350):
     Gasket Ⓓ **without** gas restrictor.
   - Operation with special gas (G230):

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Vitodens 100-W (cont.)

Gasket Ⓓ **without** gas restrictor.

- Operation with natural gas EG-S (G25.1):
  Gasket Ⓓ **with** gas restrictor Ⓕ.

Please note

Ensure the gas restrictor is fitted correctly.

5. Mount gas train Ⓐ with new gaskets Ⓔ.
   Torque for fixing screws Ⓒ: 6 Nm
   Torque for union nut Ⓑ: 30 Nm

6. Start the boiler and check for leaks.

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

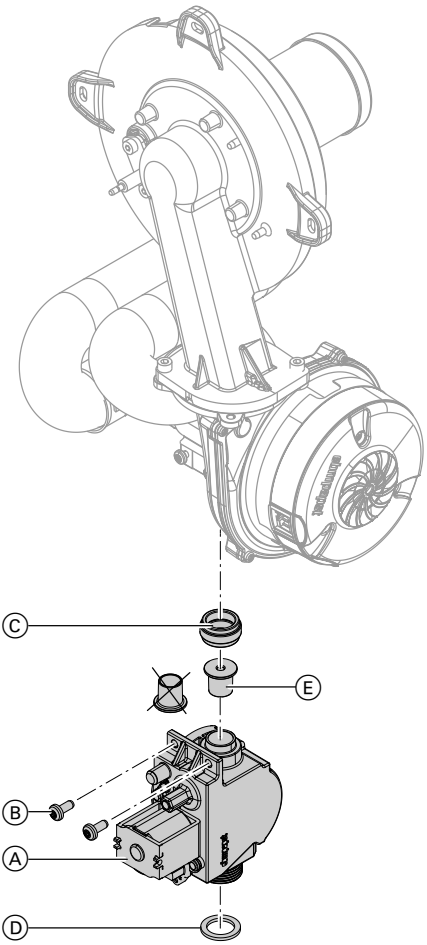
Please note
The use of leak detection spray can result in faulty operation.
Leak detection spray must not come into contact with electrical contacts or seal the diaphragm opening on the gas valve.

Vitodens 111-W

Removing the burner

Installation and service instructions

Replacing the gas train



1. Pull cable from gas train Ⓐ.
2. Undo the union nut.
3. Undo 2 screws Ⓑ and remove gas train Ⓐ.
4. Into new gas train Ⓐ, insert new gasket Ⓒ and gas restrictor Ⓔ subject to gas type:
   - Operation with natural gas EG-E (G20):
     Gasket Ⓒ **without** gas restrictor.
   - Operation with natural gas EG-L (G25):
     Gasket Ⓒ **without** gas restrictor.
   - Operation with LPG (G31):
     Gasket Ⓒ **with** gas restrictor Ⓔ.
   - Operation with natural gas EG-Lw (G27):
     Gasket Ⓒ **with** gas restrictor Ⓔ.
   - Operation with natural gas EG-Ls (G2.350):
     Gasket Ⓒ **without** gas restrictor.
   - Operation with special gas (G230):
     Gasket Ⓒ **without** gas restrictor.
   - Operation with natural gas EG-S (G25.1):
     Gasket Ⓒ **with** gas restrictor Ⓔ.

   Please note

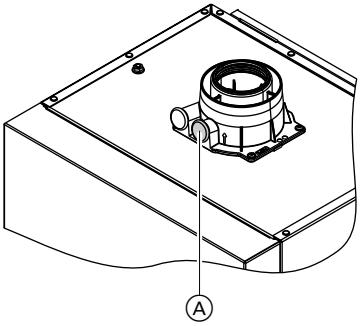
   Ensure the gas restrictor is fitted correctly.
5. Mount gas train Ⓐ with new gaskets Ⓓ.
   Torque for fixing screws Ⓑ: 6 Nm
   Torque for union nut on the gas connection: 30 Nm

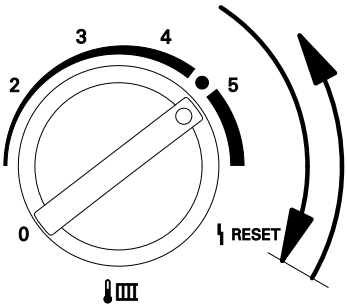
6. Start the boiler and check for leaks.

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

Please note
The use of leak detection spray can result in faulty operation.
Leak detection spray must not come into contact with electrical contacts or seal the diaphragm opening on the gas valve.

Checking the CO_2 content





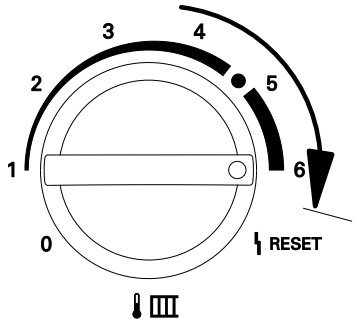
1. Connect a flue gas analyser at flue gas port Ⓐ on the boiler flue connection.

2. Start the boiler and check for leaks.

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

3. Turn rotary selector "🌡" fully clockwise, until the display shows **"SERV"**.
Return the rotary selector to the r.h. control range within 2 s. The display shows "🔧".

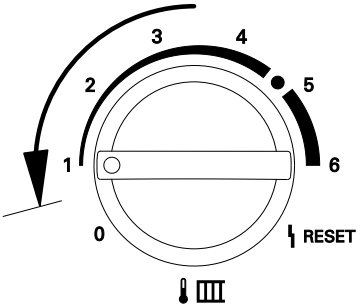
Checking the CO_2 content (cont.)



4. Set the upper heating output:
   Turn rotary selector "🌡" fully clockwise, until the display shows 5 bars for the upper heating output.

5. Check the CO_2 content for the upper heating output.
   The CO_2 content must lie between the following values. See table:

Gas type	CO_2 content in %
Ls (G2.350)	7.5 – 9.7
E or H (G20)	7.0 – 10.5
L or LL (G25)	7.0 – 10.5
Lw (G27)	7.8 – 10.6
P (G31)	10.0 – 12.0
M (G230)	10.0 – 12.0



6. Set the lower heating output:
   Turn rotary selector "🌡" fully anticlockwise, until the display shows 1 bar for the lower heating output.

7. Check the CO_2 content for the lower heating output.
   The CO_2 content must be between 0.3 and 0.9 % below the value of the upper heating output.

8. ■ If the CO_2 content is within the indicated range, continue with point 10.
   ■ If the CO_2 content is **not** within the indicated range, check the flue gas/ventilation air system for tightness; remedy any leaks.

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Checking the CO_2 content (cont.)

9. Re-check the CO_2 content for the higher and lower heating output.

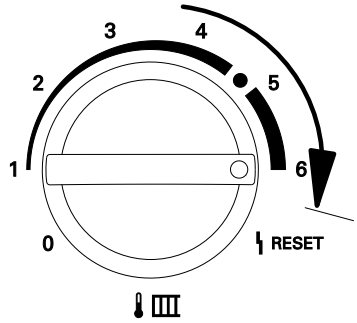
10. Shut down the boiler, remove the flue gas analyser and close flue gas test port Ⓐ.

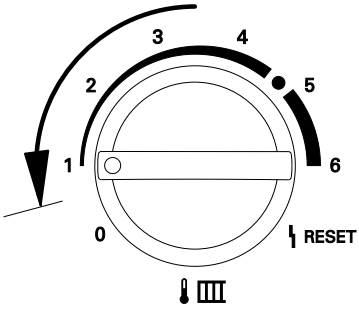
11. Turn rotary selector "🌡≡" back to its original position.

12. Mount front panel and start the boiler.

Only for gas type S (G25.1): Checking the O_2 content

Standard limit gas S (G25.1):
CO_2 content 14 %.





1. Set the upper heating output:
   Turn rotary selector "🌡≡" into the r.h. section of the control range until the display shows 5 bars for the upper heating output.

2. Check the O_2 content for the upper heating output.
   The O_2 content must be within 6.4 – 3.4 %.

3. Set the lower heating output:
   Turn rotary selector "🌡≡" into the l.h. section of the control range until the display shows 1 bar for the lower heating output.

Only for gas type S (G25.1): Checking the O_2 … (cont.)

4. Check the O_2 content for the lower heating output.
   The O_2 content must be at least 0.7 % above the value for the upper heating output.

5. ■ If the O_2 content lies within the indicated range, continue with page 7.
   ■ If the O_2 content is **not** within the indicated range, check the flue gas/ventilation air system for tightness; remedy any leaks.
   Replace gas train if required.

6. Re-check the O_2 content for the higher and lower heating output.

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