

## Flue gas cascade for multi boiler system

for Vitodens 200-W, 45 to 105 kW

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### Safety instructions



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

#### Safety instructions explained

##### **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.

### Installation information

- Up to 4 boilers can be connected to a common flue.
- Flue system in open flue operation with positive pressure.
- Install a flue gas non-return device (part of the flue gas cascade standard delivery) above each boiler in the area of the connection to the header.
- Connect the flue gas header to the chimney with a slight upward incline (min. 3°). Trim the flue gas non-return device at the markings according to the number of boilers (see pages 6 and 7).
- Align the connection between the flue gas non-return device and the flue gas header horizontally or with a slight fall to the flue gas header.

## Installation information (cont.)

### Note

*Replace the boiler coding card of the individual boiler control units with the boiler coding cards supplied.*



See separate installation instructions.

## Combustion air vents

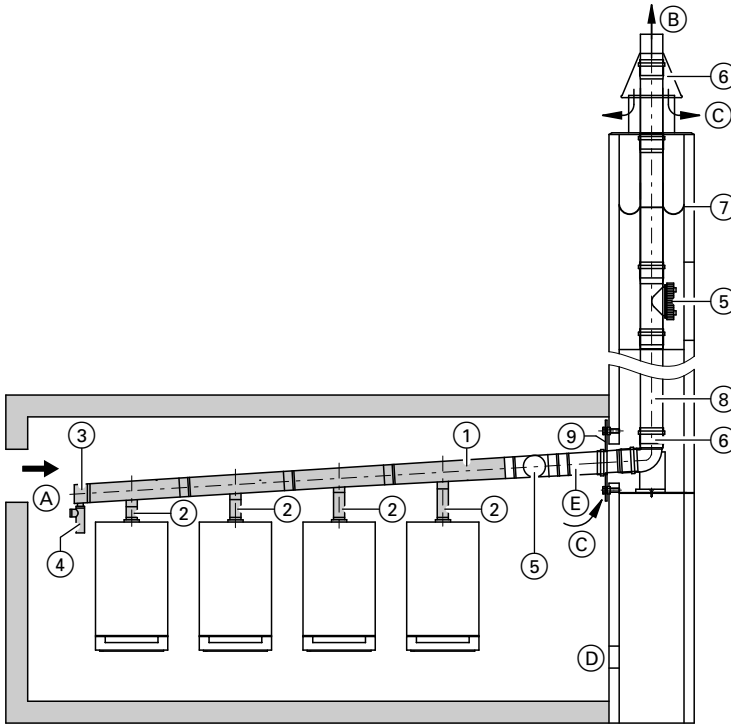
Gas equipment with a total rated heating output in excess of 50 kW must be provided with combustion air apertures leading to the outside.

The cross-section should be at least 150 cm<sup>2</sup> and should be 2 cm<sup>2</sup> larger for each additional kW above the 50 kW total rated heating output. This cross-section may not be split over more than 2 apertures (observe your local fire regulations and TRGI 2008).

## Inspection port

The FeuVo [Germany] requires the installation of an inspection port inside the installation room.

# Components



- (A) Ventilation air
- (B) Flue gas
- (C) Secondary ventilation

- (D) Inspection port
- (E) Connection line

**The standard multi boiler system delivery includes:**

- (1) Flue gas header
- (2) Flue gas non-return device
- (3) End piece with condensate drain
- (4) Siphon with hose

**Accessories:**

- (5) Inspection piece
- (6) Standard shaft pack comprising:

- Support bend
- Support rail
- Shaft cover
- Spacers (3 pce, max. clearance 5 m)

- (7) Spacers (3 pce, max. clearance 5 m)

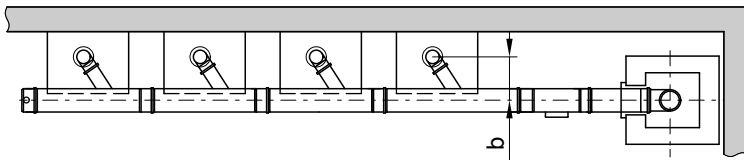
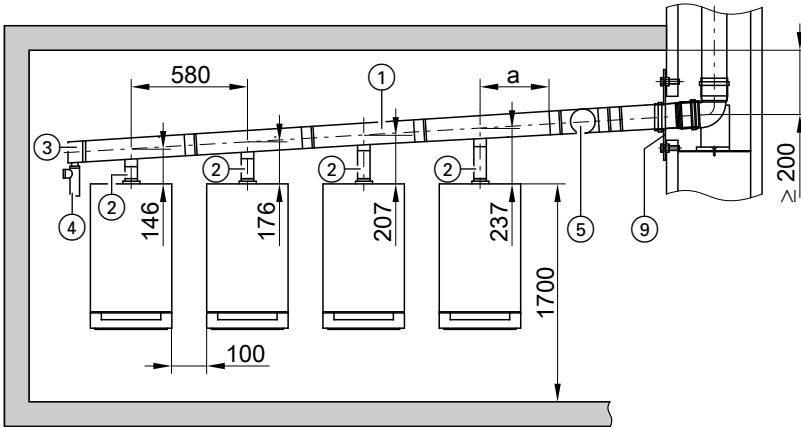
- (8) Flue pipe

- (9) Vent bezel

# Installing a flue gas cascade

## Installation and dimensions

### Installation in series with or without a mounting frame



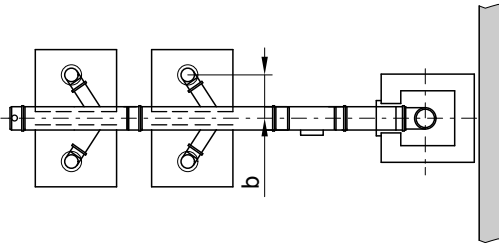
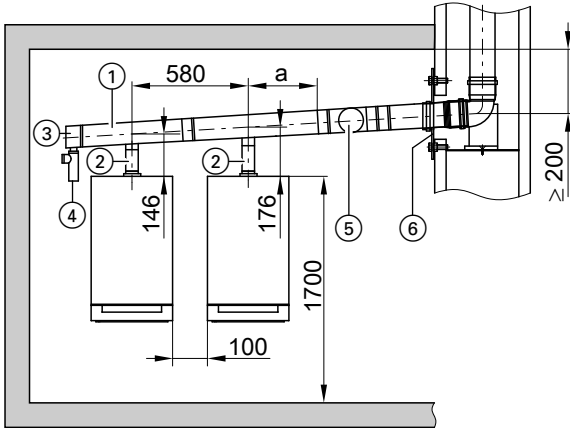
Header Ø mm	a mm	b mm
125	196	202
150	261	233
200	404	253

Route the flue gas header with a fall of at least 3° (approx. 50 mm/m) to the boiler.

The fall is achieved by trimming the flue gas non-return devices at the markings (see page 6).

## Installing a flue gas cascade (cont.)

### Installation as a block with a mounting frame



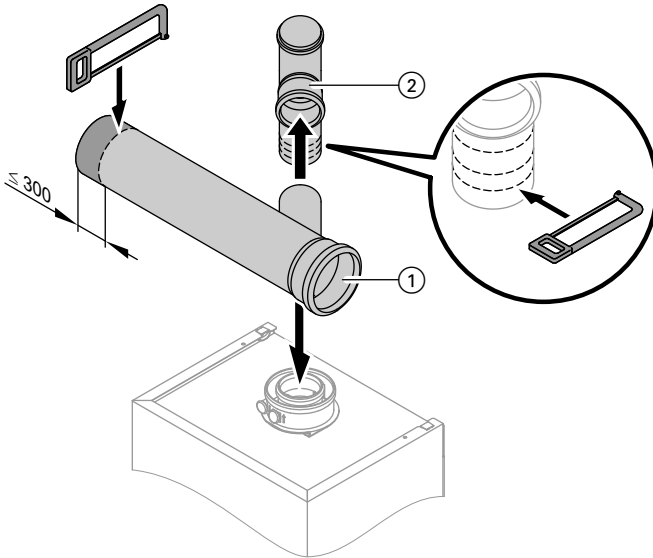
Header Ø mm	a mm	b mm
150	196	202
200	502	352

The fall is achieved by trimming the flue gas non-return devices at the markings (see page 6).

Route the flue gas header with a fall of at least 3° (approx. 50 mm/m) to the boiler.

## Installing a flue gas cascade (cont.)

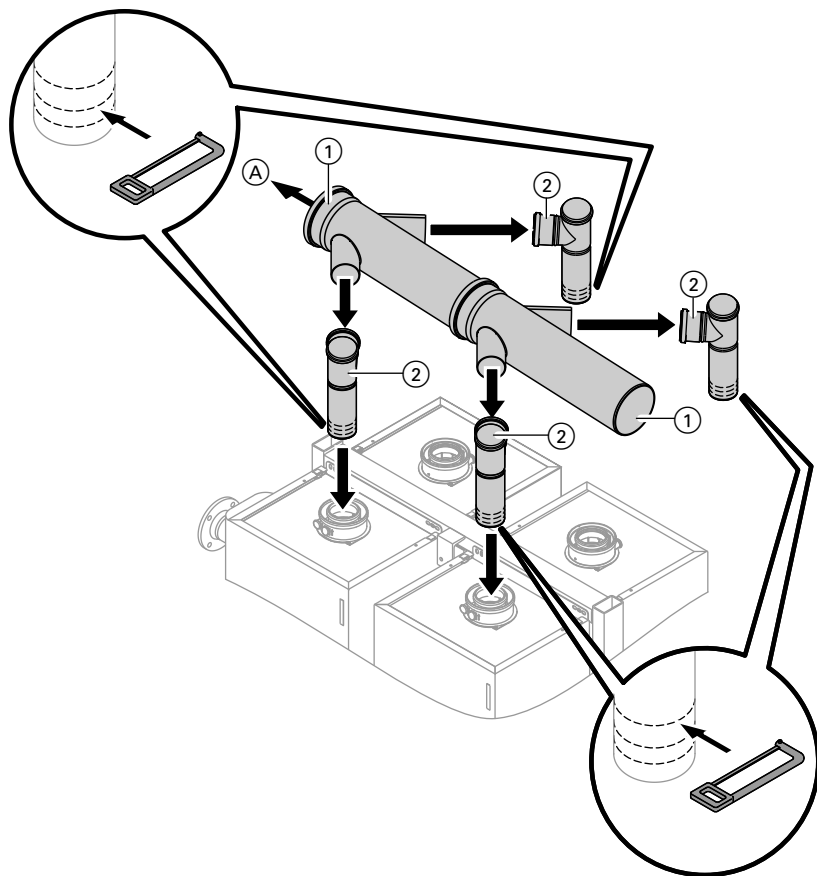
### Installation with Vitodens in series



1. Trim flue gas non-return devices (2) subject to the number of boilers at the relevant markings (with a clearance of 100 mm between the boilers). In the case of different clearances, trim the flue gas non-return devices to create a fall of min. 3° (approx. 50 mm/m).
2. Mount and align flue gas non-return devices (2).
3. Trim headers (1) subject to the clearance between the boilers (max. 300 mm).
4. Fit headers (1).

## Installing a flue gas cascade (cont.)

### Installation with Vitodens in a block



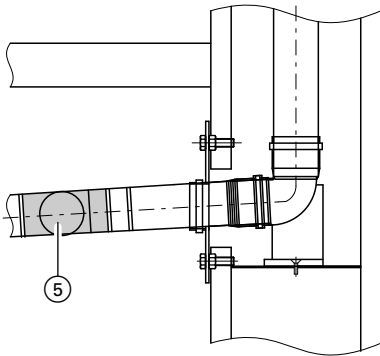
Ⓐ Flue gas flow direction



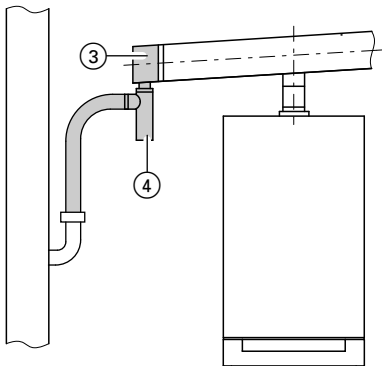
## Installing a flue gas cascade (cont.)

1. Trim flue gas non-return devices (2) at the relevant markings:
  - Trim flue gas non-return devices (2) on both boilers arranged closest to the flue system at the second marking from the top.
  - Trim flue gas non-return devices (2) on both boilers arranged furthest from the flue system at the top marking.
2. Mount and align flue gas non-return devices (2).
3. Connect headers (1) together and fit simultaneously to all flue gas non-return devices (2).

## Fit connection line to the shaft and siphon



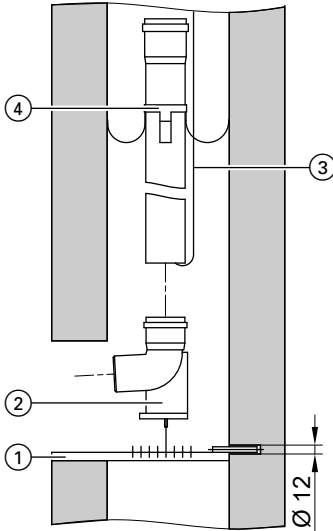
1. Fit inspection piece (5) and connection line to the shaft.



2. Mount end piece (3) and secure siphon (4) with screws.
3. Connect the condensate drain hose to the public sewage system with a fall and a pipe vent.



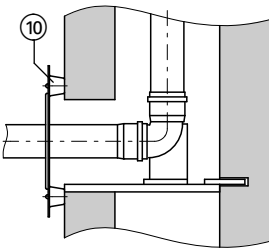
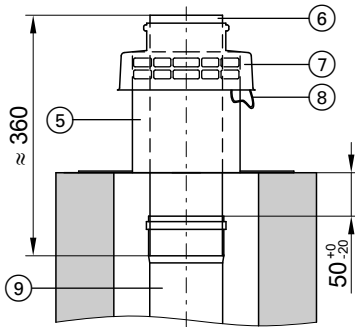
### Installing a flue pipe in a shaft



1. Drill a  $\varnothing$  12 mm hole centrally in the rear shaft wall to secure support rail ①.
2. Insert support rail ① into the drilled hole, and secure with screws or mortar to the front shaft wall.
3. Position support bend ② and secure with the pin in a hole in the support rail.
4. Secure installation rope ③ externally on the lowest vertical pipe section.
5. Apply the lubricating paste supplied to the pipe gaskets.  
The lubricating paste is at the shaft cover.
6. Subject to shaft size, install a spacer ④ every 2 to 5 m and at each profiled piece (e.g. inspection piece or bend). Bent ends facing up.
7. Push the pipes into each other whilst slightly turning them, and let them descend into the shaft using the installation rope.
8. Remove the rope and push the lowest pipe into support bend ②.



## Installing a flue gas cascade (cont.)



9. Let the highest pipe section ⑨ terminate approx. 50 mm below the top edge of the shaft.
10. Secure the lower part of shaft cover ⑤.
11. Trim the last pipe ⑥ (without female connection) so that it protrudes out of the fitted flashing ⑦ by 10 to 20 mm.
12. Push on flashing ⑦ and secure safety rope ⑧ to the lower part.
13. Push on vent bezel ⑩ and push it against the shaft opening.

### Note

*The gap created is designed to provide secondary ventilation for the shaft.*

*No additional ventilation grille required.*



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