

- [1] Key slot (wireless gateway)
- [2] On/Off-switch
- [3] Condensate trap
- [4] Data plate 1
- [5] Pressure sensor
- [6] Pressure gauge
- [7] Adjustable nozzle
- [8] Valve for filling with nitrogen
- [9] Fan
- [10] Expansion Vessel
- [11] CH flow
- [12] De-aerator
- [13] Mixing device with exhaust gas check valve (non-return valve)
- [14] Ignition transformer
- [15] Flue gas pipe
- [16] Ignition electrodes
- [17] Flame sense electrode
- [18] Heating block temperature limiter
- [19] Flow temperature sensor at heating block
- [20] Inspection aperture cover
- [21] Condensate sump
- [22] Air/gas ratio control valve
- [23] Data plate 2
- [24] 3-way valve
- [25] Heating system circulation pump
- [26] Pressure relief valve (heating circuit)
- [27] Drain cock
- [28] Control box

3 Regulations

- Observe all regulations and standards applicable to the system in your country prior to installation and commissioning.
- Make sure the entire system satisfies the following standards, regulations and directives.

Where no specific instruction is given, reference should be made to the following standards:

- AS 1596 LPG storage and handling
- AS 1697 Installation and maintenance of steel pipe systems for gas
- AS 1910 Water supply - float control valves for use in hot and cold water
- AS 3498 Authorization requirements for plumbing products - water heaters and hot water storage tanks
- AS 3500 National plumbing and drainage code
- AS 4032 Water supply - valves for the control of hot water supply temperatures
- AS/NZS5263.1.2 Gas fired water heaters for hot water supply and/or central heating
- AS/NZS 5601 Gas Installations
- AS/NZS 3000 Electrical Installations

Number	Description
92/42/EEC	Efficiency Directive
98/83/EC	Directive in relation to the quality of water for human consumption
2004/108/EC	EMC Directive
2006/96/EC	Low-voltage guideline
2009/142/EC	EC Gas Appliances Directive
DIN 4726/4729	Oxygen diffusion resistance
EN 437	Test gases, test pressures, appliance categories
EN 12828	Heating systems in buildings - planning hot water heating systems
EN 12831	Heating systems in buildings – process for calculating the standard heat energy demand

Number	Description
EN 13384	Flue systems, heat and fault calculation models
EN 50201-1	Boiler for gaseous fuels - Part 1: General requirements and tests
EN 50201-2-1	Boilers for gaseous fuels - Part 2-1: Type C boilers and Type B2, B3 and B5 boilers with a rated heat input no greater than 1000 kW

Table 4 Regulations, standards and guidelines

4 Flue gas routing

4.1 Approved flue accessories

The flue accessories for the flue gas systems described in these instructions are an integral part of the heat source CE approval.

This is why we recommend using Bosch original accessories.

You can find designations and part numbers in the main catalogue.

4.2 Installation instructions



DANGER

Risk of poisoning due to carbon monoxide!

Leaking flue gas gives rise to high carbon monoxide values in the breathing air that pose a risk to life

- Ensure that flue pipes and gaskets are not damaged.
- When installing the flue system only use the lubricating paste approved by the system manufacturer.

- Check flue accessories are intact when unpacking.
- Observe the installation instructions for the accessories.
- Crop accessories to the required length.
Make the cut at a right angle and deburr the cut surface.
- Apply supplied lubricating paste to the gaskets.
- Push the accessory as far as it will go into the female connection.
- Install horizontal sections with 3° slope (= 5.2 % or 5.2 cm per metre) in the direction of flue gas flow.
- Secure the entire flue with pipe clips:
 - Keep a maximum clearance of ≤ 2 m between two pipe clips.
 - Attach a pipe clip to each elbow.
- Check tightness once work is complete.

Flue gas routing over several storeys

If the flue gas routing passes through several storeys, it must be in a duct.

Requirements for installation in an existing duct

- If the flue is installed in an existing duct, tightly seal any existing connection openings using appropriate materials.

4.3 Flue terminal positions

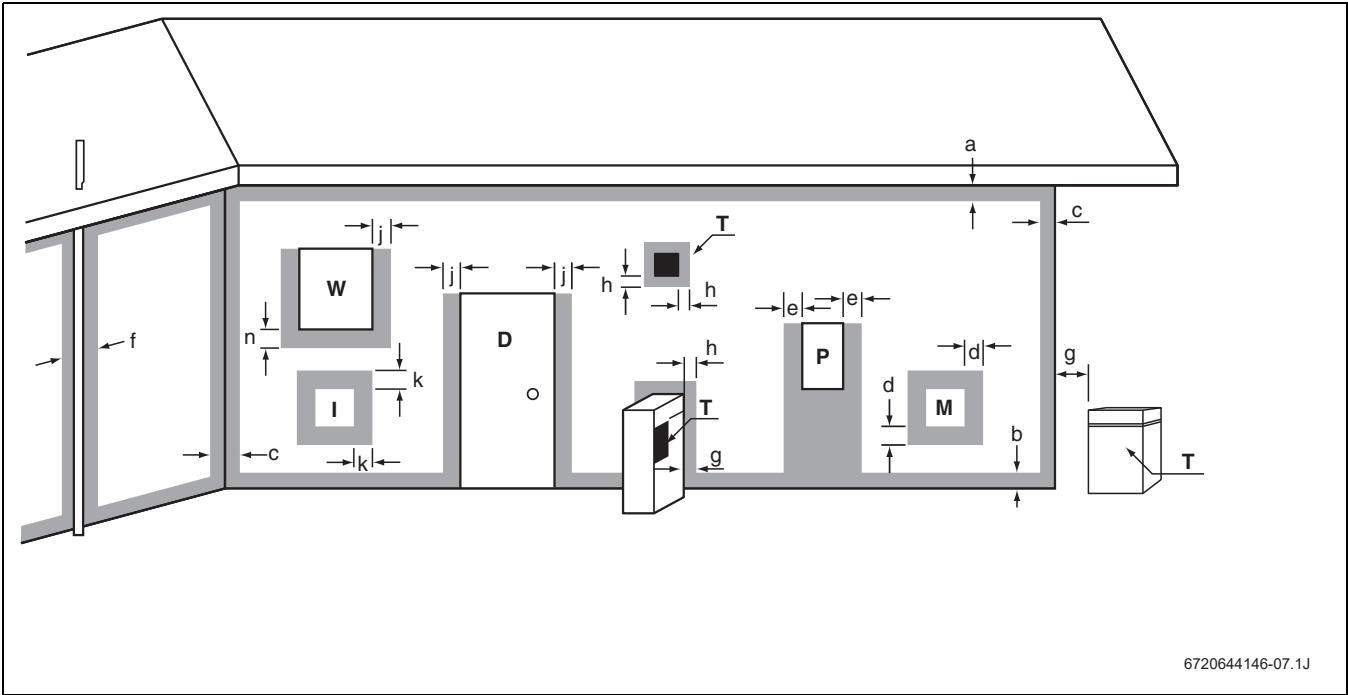


Fig. 5 Flue terminal positions

- D Door
I Mechanical air inlet
M Gas meter
T Flue terminal
W Window

Ref.	Item	Min. Clearance (in mm)
a	Below eaves, balconies and other projections (Appliances over 50MJ/h)	300
b	From the ground, above a balcony or other surface	300
c	From a return wall or external corner	300
d	From a gas meter	1000
e	From an electricity meter or fusebox/breaker panel	500
f	From a drain pipe or soil pipe	75
g	Horizontally from any building structure or obstruction facing a flue terminal	500
h	From any other flue terminal, cowl or combustion air intake	300
j	Horizontally from any opening window, door, non-mechanical air inlet or other opening into a building with the exception of sub-floor ventilation	300
k	From a mechanical air inlet including a spa blower	1000
n	Vertically below an opening window, non-mechanical air inlet or any other opening into a building with the exception of sub-floor ventilation	1000

Table 5

- The location of the flue terminal must comply with the clearances shown on this page.
If you are unsure about clearances not indicated here, in general refer to AS/NZ 5601 or your local authority.
- All measurements are the minimum clearances required.
- Terminals must be positioned so to avoid combustion products entering the building.

4.4 Inspection apertures

It must be possible to clean flue systems easily and safely. It must be possible:

- to check the cross-section and tightness of the pipework.
 - to check the required cross-section between the flue and duct (secondary ventilation) for safe operation of the combustion system, and to clean it.
- Observe local standards and regulations.

4.5 Vertical flue gas routing through the roof

Installation location and flue system

Prerequisite: only the roof structure is above the ceiling of the installation location.

- If a fire rating is required for the ceiling, the flue system between the top edge of the ceiling and the roof skin must be clad in a material with the same fire rating.
- If no fire rating is required for the ceiling, the flue system must be routed through a duct made of non-combustible, dimensionally-stable materials or a metal protective pipe (mechanical protection) running from the top edge of the ceiling to the roof skin.
- Observe country-specific requirements for the minimum clearances in relation to roof windows.

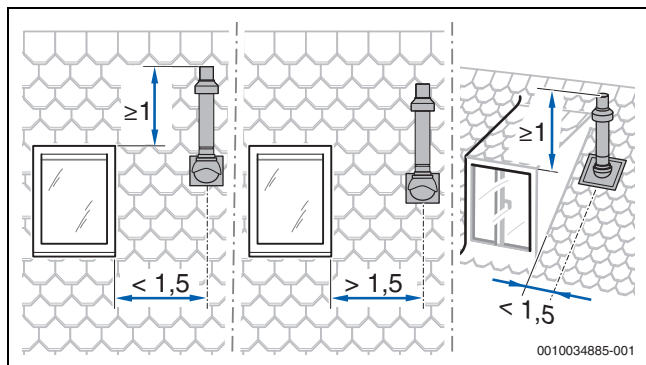


Fig. 6

4.6 Calculating the length of a flue system

You can find an overview of the maximum permissible pipe lengths in each case alongside the individual flue gas routing types.

The specified maximum pipe lengths take the deflections required in a flue gas routing system which are shown correctly in the relevant figures into consideration.

- Every additional 87° elbow reduces the permissible pipe length by 1.5 m.
- Every additional elbow between 15° and 45° reduces the permissible pipe length by 0.5 m.

4.7 Calculating the length of a flue system

You can find an overview of the maximum permissible pipe lengths in each case alongside the individual flue gas routing types.

The specified maximum pipe lengths take the deflections required in a flue gas routing system which are shown correctly in the relevant figures into consideration.

- Every additional 87° elbow reduces the permissible pipe length by 1.5 m.
- Every additional elbow between 15° and 45° reduces the permissible pipe length by 0.5 m.

For detailed information on calculating the length of a flue system refer to the technical guide.

4.8 Horizontal concentric flue system

Inspection apertures

- Observe local standards and regulations.

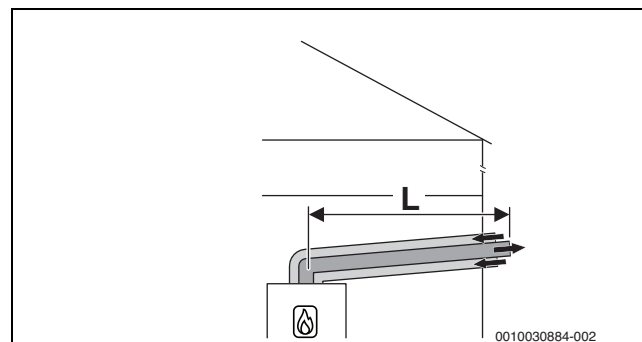


Fig. 7 Horizontal concentric flue system via the external wall

Allowed maximum length

GC8300iW 25 P

Accessory Ø [mm]	Maximum pipe length L [m]
Ø 60/100	15
Ø 80/125	25

Table 6 Flue routing

Allowed maximum length

GC8300iW 35 P

Accessory Ø [mm]	Maximum pipe length L [m]
Ø 60/100	10
Ø 80/125	29

Table 7 Flue routing

4.9 Vertical concentric flue system

You can find information on the installation location and roof clearances with vertical flue gas routing in Chapter 4.5 on page 11.

Inspection apertures

- Observe local standards and regulations.

4.9.1 Vertical flue system via roof

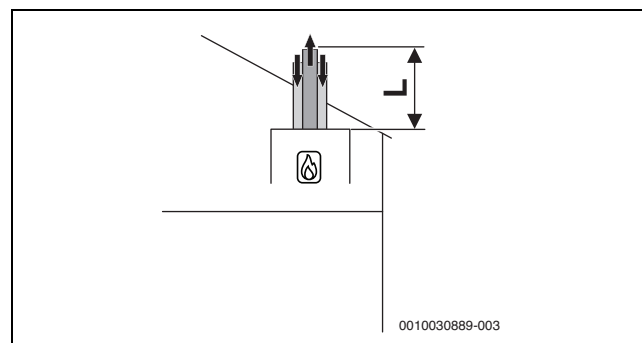


Fig. 8 Vertical concentric flue system

Allowed maximum length

GC8300iW 25 P

Accessory Ø [mm]	Maximum pipe length L [m]
Ø 60/100	20
Ø 80/125	25

Table 8 Flue routing

Allowed maximum length
GC8300iW 35 P

Accessory Ø [mm]	Maximum pipe length L [m]
Ø 60/100	14
Ø 80/125	29

Table 9 Flue routing

5 Preconditions for installation

5.1 General notes

- ▶ Observe all the current applicable national and regional regulations as well as all technical rules and guidelines.
- ▶ Obtain all necessary approvals (gas supplier, etc.).
- ▶ Consider the requirements of the building authorities, e.g. when using a condensate neutraliser (accessory).
- ▶ Convert open heating systems into closed systems.
- ▶ Do not use galvanized radiators or pipework.

5.2 Installation location requirements

 **DANGER**

Danger to life from explosion!

An increased and permanent ammonia concentration may lead to stress corrosion cracking on brass (e.g. gas valves, union nuts). As a result, there is a risk of explosion from gas escaping.

- ▶ Do not use wall mounted gas boilers in rooms where there is an increased or permanent ammoniac concentration (e.g. livestock stables or storage room for fertilisers).
- ▶ If contact with ammonia is unavoidable, make sure that there are no brass parts installed in the system.

Surface temperature

The maximum surface temperature of the appliance is below 85 °C. Therefore no special safety measures are required to protect flammable materials and fitted furniture. Country-specific regulations must be observed.

Wall structure

The wall used for installation of the appliance must be load-bearing and the appliance must be able to rest on it over the entire surface.

Protection zones in damp areas



Observe all the current applicable national and regional regulations as well as all technical rules and guidelines. These may contain additional or deviating requirements for installations in damp areas.

- ▶ Do not install any switches, sockets or devices with mains power supply in the protection zones.
- ▶ Connect device to a residual current circuit breaker.
- ▶ Use only control units with suitable IP rating.

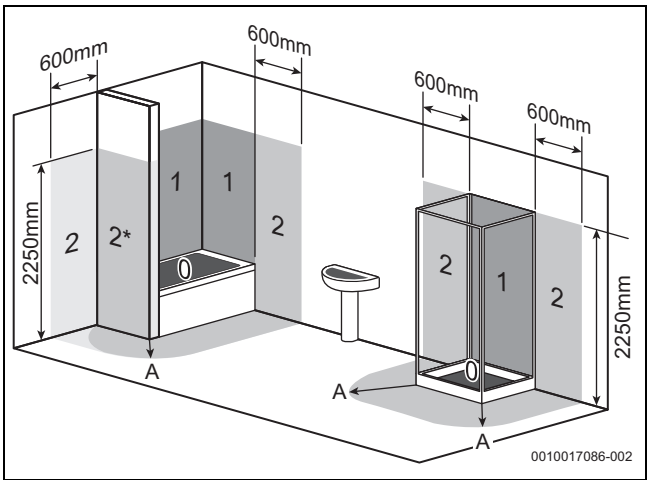


Fig. 9 Protection zones (example)

- [0] Protection zone 0
- [1] Protection zone 1
- [2] Protection zone 2
- [2*] Without bulkhead, protection zone 2 with a width of 600 mm applies.
- [A] Within a radius of 600 mm from the bath or shower

5.3 Water system and pipe work

Plastic pipe work

- Any plastic pipe work must have a polymeric barrier with 600 mm (minimum) length of copper pipe connected to the boiler.
- Plastic pipe work used for underfloor heating must be correctly controlled with a thermostatic blending valve limiting the temperature of the circuits to approximately 50 °C.

Primary system connections/valves

- All system connections, taps and mixing valves must be capable of sustaining a pressure up to 3 bar (300 kPa).
- Bosch recommends that thermostatic radiator valves (TRVs) be used on all radiators within the sleeping accommodation but not the radiator where the room thermostat is sited. This must be fitted with lock-shield valves and left open.
- A drain point is required at the lowest part of the system.
- An air vent is required at all the high points in the system.



The boiler is equipped with an automatic internal by-pass.

Sealed primary system



Do not use artificially softened water to fill the CH system.
Do not use galvanised pipes or radiators.

- The CH sealed system must be filled using an approved filling loop or comply with figure 10, p. 13 for system fill.