

Security: checks and maintenance, the obligations of the law

The control and maintenance of gas systems are imposed by art. 8 of Ministerial Decree 37/2008 and only for heating systems, also under Art. 7 of Presidential Decree 74/2013.

The person in charge (who coincides with the occupants in the domestic installations) must respect the indications defined by the installer and the service technician on the basis of specific technical standards and the instructions of the manufacturer of the various components. These indications must be recorded in the installation booklet, as regards the heating systems, and in a specific document in other cases.

Who can do the control and Maintenance of plants?

Maintenance operations must be entrusted to qualified companies registered with the Chamber of Commerce. For thermal power plants, the companies draw up the paper control report to be attached to the power plant book and record the data in the regional CIRCE telematics register.

Checks and documents, what are the most important?

The evaluation of the suitability of the boiler room and any other appliance, the verification of the operation of the smoke system (draft control in the case of open chamber boilers) and the entire system gas distribution (leak test) reduce the risk of carbon monoxide poisoning and explosion related to possible gas leaks, often insensitive to people. The basic document for each installation is the declaration of conformity to the rule of art, issued in case of a new installation or modification of a system by the installer. In the case of heating systems, the installer also plans to register in the regional CIRCE telematics cadastre.

TRUST YOUR INSTALLER OR MAINTENANCE MANAGER

Good combustion has the following advantages:

- ✓ **fuel savings** (waste reduction up to 10%)
- ✓ **reduction of carbon monoxide formation**, which can put people's lives at risk
- ✓ **increasing installation time:** reducing the content of unburned substances in rivers limits corrosion inside the chimney and boiler
- ✓ **pollutants' reduction and carbon dioxide emitted into the atmosphere** (about 2 quintals less per year for an average family), contributing to the improvement of local air quality and limiting the global warming of the planet.

Suitability of the boiler installation room

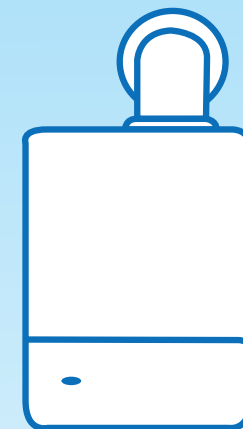
Room type	Open room	Waterproof room
garage	NO	NO
Connected rooms	yes if with the door E 120	yes if with the door E 120
Potentially dangerous room	NO	NO
bathroom	NO	yes
Bedroom/flat	NO	yes
Room with stoves or fireplaces or communicating	NO	yes
Room with controlled mechanical ventilation	NO	yes

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The safety Of domestic gas and lpg Systems

Indications for correct use of
systems with a power
not exceeding 35 kW



Boiler: type B or type C?

Boilers, stoves and gas water heaters can be divided into type B or "open chamber" appliances and type C or "closed chamber" appliances.



BOILER TYPE B OR OPEN ROOM

This boiler uses and consumes the oxygen in the room in which it is installed, by naturally aspirating it. This is why the room must always be equipped with a ventilation system guaranteeing the renewal of the air. It also evacuates the smoke outside by a chimney or a branched collective stem, which must be effective to prevent their return to the environment.

Can the boiler be installed in any room?

NO! Boilers type B must NEVER be installed in the bathroom, bedroom (or studio) and, like all gas appliances, in garages or in any room where dangerous operating conditions may be created. Their presence is also prohibited in rooms (including those communicating with them) where there is a wood or pellet appliance and in all real estate units where a controlled mechanical ventilation system is installed.

Ventilation of the room: how do we do it?

The simplest system to ensure constant air exchange in rooms with a type B boiler and /or open flame cooking appliance is a simple hole in the wall, with a section adapted to the power of the boiler and never less than 100 cm², it must never be obstructed (open windows are not valid), it must be protected by grids and positioned on an exterior wall, never on stairwells or other rooms for common use. Alternatively, and according to precise indications of the technical standards, it is possible to use ventilation ducts or to use intermediate parts on external walls.

Is a single pipe needed for the smoke channel (chimney connector)?

NO! As a fundamental part of the system that transports fumes containing harmful substances to the outside of the room, it must have the characteristics to lead them to the chimney, thus contributing to its "draw"; diameter, changes of direction, absence of cracks, the joints must comply precise indications and the material must comply with the CE regulations and the technical standard of the sector.

The monoxide: is it possible to limit the risks?

Carbon monoxide is the most dangerous substance that develops during non-optimal combustion. The odorless and colorless gas is extremely dangerous, even at very low concentrations, in case of extended breathing; immediately fatal if present in significant amounts. Boiler maintenance, proper ventilation and proper chimney draft are essential to avoid bad combustion and carbon monoxide formation!



TYPE C BOILER OR DRY ROOM

This boiler is characterized by a "separate combustion air circulation system", waterproof to the installation room: it is therefore less dangerous.

So, the Type C boiler eliminates the risks for those who use it?

Yes, if installed and checked regularly! It can indeed be installed in any room "ventilated" even with a simple window. However, these boilers can not be installed in garages or in any other room that may have dangerous operating conditions.

No gas boiler can be installed in garages, but in near rooms?

All gas appliances can not be installed in fire-risk rooms, such as garages, and in all rooms where there are potentially dangerous operating conditions (low oxygen, flammable substances, dust or sparks). Instead, they can be installed in adjacent rooms if they are separated by a fire door (at least E120).

If the boiler is running on LPG, what are the constraints?

LPG is a gas more explosive than methane: additional constraints therefore concern the ventilation of premises. The room in which the appliance and / or the cylinder are installed must be equipped with a mandatory permanent opening flush with the ground, it must not be below the road surface nor communicate with rooms in the basement, unless there is a special way. The volume of the room where the bottle is placed must be suitable for its contents; the cylinder can be placed outside, but never directly exposed to the sun.

Cooking appliances: do they require attention?

Like all gas appliances, they must be properly installed and require, except special conditions, air inlet from the outside and systems to evacuate cooking vapors outside. Special attention should be paid to the expiry date of any rubber connection pipe. Five-year delay that we often forget!

Type "A" devices: what are they?

These are potentially more dangerous gas appliances. They use the oxygen present in the room where they are installed, in which the flue gases are also emitted. They can only be installed in rooms of adequate volume and equipped with at least two permanent holes (one at the top and one at the bottom), never in the bedroom, the bathroom and the garage.