

Safety Alert: Gas boilers - flues in voids

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Who should read this alert?

- Property owners, landlords and tenants living in, or responsible for, properties with gas central heating appliances (boilers) that are located on internal walls. These types of boilers may have a flue that runs through the ceiling void (the space between the ceiling and floor of the room above); within a purpose built enclosure/duct or even through another property.
- Builders, property developers, managing agents and gas installers.
- **If your boiler is located on or near an external wall (where the flue goes straight out through the wall or goes vertically out through the roof), you do not need to read any further.**

Why is this alert being issued?

- To raise awareness of the potential dangers from certain types of flues connected to gas-fired central heating installations in some properties.
- HSE has become aware that some of these flues may not have been installed properly, or may have fallen into disrepair without anyone noticing.
- If the flue is not in good condition, this can affect the performance of the boiler. If the boiler is not working efficiently it may start to produce high levels of harmful carbon monoxide (CO) gas.
- CO may then enter the ceiling void/enclosure through any breaks in the flue (e.g. where joints are not sealed properly or where the flue material has degraded over time). It could then enter the living spaces above and below the flue.

What is carbon monoxide (CO) and why is it so dangerous?

- CO is a poisonous gas produced by incomplete burning of carbon-based fuels such as gas, oil or solid fuel. You can't see it, taste it or smell it, but it can kill and injure quickly, and without warning.

What is the problem?

- If the flue that takes the waste products from your gas boiler to outside has a break in it, and your boiler is not operating correctly then CO could enter your property.
- In some properties the flue can be hidden, built-in, out of sight, or in a void such as the ceiling. In such cases it can be difficult to see whether the flue has been installed correctly, or whether it is still in good condition when the appliance is serviced.

Should I be concerned?

- Data indicates that this problem is restricted to the flues to boilers that are located away from external walls. The flue to this type of boiler is more likely to be run through a void, such as the ceiling void.
- This type of installation is most common in multi-storey flats and apartments built since 2000; some modern terraced homes could also be affected.
- Older properties that have recently been renovated or modernised may also have gas boilers located away from an external wall with the flue running through the ceiling void or other enclosure.
- It appears that in some properties where the flue runs through the ceiling void or other concealed route there is no means for the flue to be visually checked (e.g. when the appliance connected to the flue is being serviced or maintained). This alert is relevant to such cases.
- Just because the flue may run through a ceiling void doesn't mean that you're at risk. It's when the flue was not properly installed or has been damaged that there may be a problem. One indication that a flue running through a ceiling is damaged can be staining on the ceiling – this is caused by condensation leaking out of the flue. If you've had to redecorate the ceiling due to staining, and the cause was not identified, then it might have been due to a break in the flue. Staining of building material around the flue can be another sign of flue damage.

- If you regularly (every 12 months) have your gas appliance checked for safety by a registered installer then they should have picked-up any concerns.
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What should I do if I think I'm at risk?

- Contact your builder and/or a Registered Gas Installer about this alert (they should be able to offer further information and help in getting problems resolved). You should be able to find the name of the builder in the legal documents you received when you bought the property, even if you bought it from a previous occupant.
- If you live in rented accommodation then bring this alert to the attention of your landlord or managing agent.
- As a property owner, if you've not had your gas boiler and flue checked in the last 12 months then arrange a service visit by a CORGI registered gas installer.
- Fit a audible CO alarm - HSE strongly recommend these to anyone with a gas appliance in their property; arrange for a CO alarm to be installed if you do not already have one. Please note that CO alarms do not replace the need for regular maintenance of your gas appliance by a competent registered gas installer.
- **If you have immediate safety concerns, or think you are suffering the symptoms of [CO poisoning](#)^[2], stop using the appliance and contact the National Gas Emergency Service on 0800 111 999.**
- **Please do NOT attempt to check the flue system yourself. You are likely to do more harm to the installation and place you and your family at greater risk.**
- **Please do NOT try to install inspection hatches yourself. You may damage other key functions of the ceiling, such as fire and noise proofing.**