

What is negative pressure?

Gas safety advice from Energy Safe Victoria

Fact sheet

You have received this fact sheet to explain what negative pressure is, and the potential it has for drawing carbon monoxide into your home under certain conditions.

Understanding negative pressure

Negative pressure can occur when there isn't enough ventilation in the home and an exhaust fan is operating. Essentially, it has the effect of drawing air from any external opening in a house, including gas appliance flues and chimneys. This creates a problem with the operation of an open flued gas heater, and particularly a faulty one – because it means that dangerous gasses, such as carbon monoxide, can be drawn into living spaces via the gas appliance flue or chimney.

Carbon monoxide (CO) is an odourless, colourless gas, which can cause fatal poisoning.

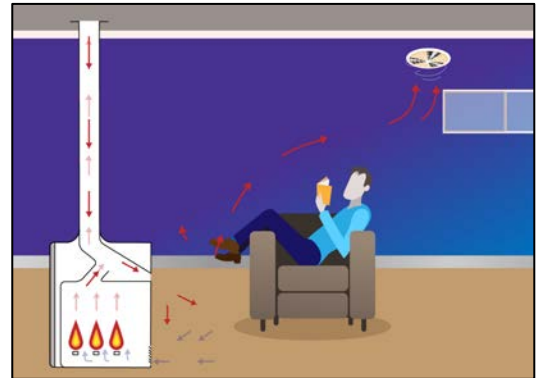


Diagram shows a negative pressure environment.

Simple steps you can take to resolve negative pressure

Victorian winters can be very cold, so it's important to keep warm. If you have an open-flued gas heater there are some simple steps you can take that will keep you and your loved ones safe:

- **Get your gas heater serviced once every two years:** to ensure your heater runs safely and efficiently, and includes a check for negative pressure by your gas plumber.
- **Don't operate exhaust fans at the same time as your heater:** your rangehood, toilet or bathroom fan can create a 'negative pressure' effect, drawing carbon monoxide into living areas.
- **Ensure you have adequate ventilation:** while it's not necessary to have windows and doors wide open on a freezing cold day, ventilation is important to ensure carbon monoxide isn't drawn into a living space.
- **Don't leave your gas heater on all night:** Don't leave the heater on for extended periods or when you don't need it.
- **Consider installing back-up measures such as a carbon monoxide alarm:** Carbon monoxide alarms can be a useful back-up precaution, but should not be considered a substitute for the proper installation and maintenance of gas heating appliances. Further information is available below.
- **Never use your outdoor heating appliances indoors:** Outdoor heaters, such as patio heaters, barbecues, coal heaters and fire pits release carbon monoxide into the surrounding atmosphere. Carbon monoxide is lighter than air and can disperse more readily outdoors, but can be fatal if used indoors.

Carbon monoxide alarms

If you're considering purchasing carbon monoxide alarms choose an alarm that meet US or EU carbon monoxide standards, including recommendations for use and installation. The alarm will indicate compliance with one of the following standards:

- EN50291 (EU)
- UL2034 (US)

Choose alarms that provide visual and audible alarms indicating when the electrochemical sensor or battery has expired. While these alarms may provide some indication of the presence of carbon monoxide, their operation is dependent upon the location where the alarms are placed, as levels elsewhere in the room may vary. Don't install them near cooking appliances, as this may result in nuisance alarms.

Remember, if you purchase a hard-wired alarm, it can only be installed by a licenced electrician.

Further information

Information about maintaining your gas heater and staying warm in winter can be found on our website at www.esv.vic.gov.au