

heater will effectively heat your room. Unflued gas heaters must not be installed in a room too small for their rated capacity due to the emissions they produce. For fast heating, choose the biggest capacity (measured in MJ/h) suitable for the room. A lower capacity heater can still heat the room but will be slower.

Flued or unflued?

There are benefits and drawbacks to both flued and unflued heaters.

Pros of a regular unflued gas heater

- They're **portable** – so you can point them in different directions, move them from room to room, store them away in summer and take them with you when you move house.
- They're **very efficient** – about 90% of the energy content of the gas is transformed into heat. All models sold in Australia have to be certified and carry an efficiency label (up to six stars, with six being the best).
- They **provide instant heat** – and lots of it. Unflued gas heaters come with a capacity of up to 25 MJ/h (megajoules per hour). That's equivalent to more than 6kW of electric heating – the same as you'd get from three 2kW electric heaters.
- They're **much cheaper to run than portable electric heaters**, even though they're a lot more expensive to buy.
- They **produce a quarter to a third of the carbon dioxide of an equivalent electric heater** (unless you get your electricity from renewable sources).
- Modern models have a **range of safety features that switch the heater off in case something's wrong** – for example, an oxygen depletion sensor if the oxygen level in the room gets too low, flame failure protection in case the flame gets extinguished, and a tilt switch in case the heater tips over.

Cons of a regular unflued gas heater

- Not having a flue means that **emissions from the gas combustion process in the heater are vented back into your room.**
- They're **illegal to use in bedrooms, bathrooms and other small or badly ventilated rooms**, so for those areas you need a flued heater (which vents the products of combustion via a flue to

the outside), or an electric heater.

- Some states have **further restrictions on using this heater type** – check with a gas plumber or retailer.
- An unflued gas heater **produces carbon monoxide (CO) and nitrous oxides (NOx)**, but only in relatively small quantities – Australian emission standards are among the toughest in the world. However, they can still cause problems for asthmatics or people with certain allergies or respiratory problems – a flued gas heater would be a better solution for these people.
- **Water vapour from the combustion process can condense on walls and ceilings and cause mould**, which is why ventilation is so important.

What to look for in flued gas heaters

- **Remote controls** allow you to control the temperature settings and fan speeds, with some models offering both wired and wireless versions so they can extend a further distance.
- **Thermostats** make it easier to set a desired temperature.
- **Programmable timers** will help with energy saving. Most can be programmed to turn on and off during a 24-hour period.
- **Child locks** are available on some models, and are a very important safety concern for us here at CHOICE. We would like to see this feature on more products in future.
- **Electronic ignition** is great, because it means potential energy savings due to not having to have a pilot light running at all times.
- A **filter-clean warning** feature is very useful, so you can be sure to clean it regularly and as needed.
- An **LPG conversion kit** allows you to operate the heater in areas without natural gas, but be careful - operating costs will be higher as a result.

What about installation?

Yep, installation is a price hike on top of the heater itself. One way you can get around this is by buying last year's model and asking for a discount, saving a bit of money in the process.

CHOICE strongly recommends professional installation for these heaters, as many things can go

wrong. When our experts tested a range of flued heaters in 2010, in every case there were incorrect parts supplied or manuals incorrectly printed – or some heaters were not assembled correctly to the point of being potentially dangerous. Good grief!

Do I need a chimney?

Not necessarily. Most units can be installed into an existing fireplace, with an existing chimney accommodating the flue; otherwise you can use a firebox and put the unit anywhere in the room, as long as you can incorporate a flue.

Cost

The average price range for flued heaters is from \$1200 to \$2200.

What to look for in unflued gas heaters

There are two different types of unflued gas heater:

- **Convection heaters** rely on the natural movement of hot air, but also have a fan to speed things up. They're often electronically controlled, which means they have, for example, a thermostat and a remote control. A thermostat is particularly useful, as it provides better temperature control than the heat and fan settings on models that aren't electronically controlled. However, electronically controlled models also use standby power — some more than 10W. The external surfaces on convectors shouldn't get very hot.
- **Radiant-convection** models also rely on convection, but have an exposed area that radiates heat into the room. Radiant convectors tend to be cheaper to buy, but have fewer features (no thermostat, timer, remote control, etc) than similarly sized convection heaters. They have manually operated electronic ignition (you need to press the ignition button and hold it down for about 20 seconds).

Cost

The average price range for unflued heaters is from \$400 to \$1400.

The author

