Centre for Sustainable Energy

Cavity wall insulation

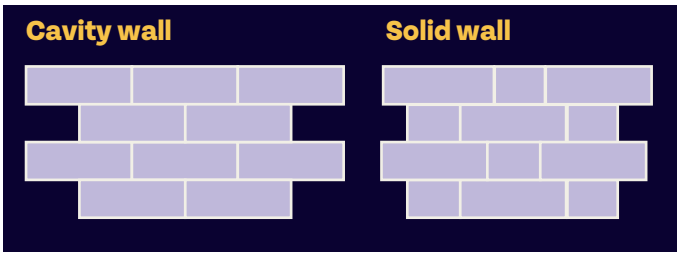
Cavity wall insulation is a simple and effective way to reduce your heating bills – and have a warmer home.

If your home was built after the 1920s, the chances are that its external walls are made of two 'skins' with a small gap between them. This means they are 'cavity walls' and the gap between them can be filled with insulating material to slow the rate of heat loss to the outside.

Generally speaking, your home will be suitable for cavity wall insulation if:

- **The external walls are unfilled cavity walls.**
- **The masonry and brick work is in good condition.**
- **The cavity is at least 50mm wide (some forms of insulation are suitable for cavities as narrow as 35mm).**

To find out whether your home has cavity walls, look at the brick work (see illustration, below). If your home has cavity walls, the bricks will normally have a regular pattern (left). If the bricks have an alternating long-short-long-short pattern, then this typically indicates a solid wall roughly 215mm (about 8 ½ inches) thick.



If you can't see the brickwork a surveyor can find out if there is a cavity by drilling a small exploratory hole into the wall.

If your home was built later than the mid-1990s, there is a good chance that the cavity is already insulated.

Filling cavity walls is not a DIY job. It should always be carried out by a registered installer (see box overleaf).

Cavity wall insulation can pay for itself quickly through substantial savings on your heating bills. What's more, there is often financial support available to help people pay for it. For professional installers, the job is simple and quick (about two hours) and makes little mess.

How is it installed?

Cavity walls are usually insulated by drilling a series of small holes – around 25mm or 1 inch across – into the mortar at regular intervals and injecting the insulation through these holes and into the cavity. The holes are refilled once the insulation has been blown in. These days many installers use polystyrene beads as the insulation material – often carbon coated to make them extra energy efficient. Mineral fibre is also still used though it is less efficient. Expanding foam was common in the past but is rarely used these days.

If you have a conservatory, garage, car port or other fixtures which make it difficult to access the external walls using a ladder then scaffolding may be required and this will add to the cost of the work. Some installers make use of a telescopic lance system for hard-to-access walls. Using the lance the insulation material is injected by entering the cavity end-on,

rather than drilling through into the cavity at 90 degrees. With new-build properties rigid insulation boards are often fitted into the cavities as part of the construction process.

How much will cavity wall insulation save me?

	Typical installation cost	Energy bill savings
Detached house	£4,300	£420/year
Semi detached house	£2,700	£240/year
Mid-terrace house	£1,500	£140/year
Detached bungalow	£2,000	£180/year
Mid-floor flat	£1,100	£120/year

These are estimated figures published by the Energy Saving Trust. Estimates based on a gas-heated home. The average install cost is unsubsidised. Figures are based on fuel prices as of July 2025.

Does cavity wall insulation cause damp?

Many people, including some building professionals, believe that wall cavities should never be filled and that insulating cavity walls will inevitably lead to damp bridging. But this isn't true.

To date, around 4m UK homes have had cavity wall insulation retrofitted. The number of cases where cavity wall insulation has directly caused damp bridging is very small indeed. Where water penetration does occur this is usually due to defects in the construction of the property and not due to faulty or inappropriate installation of cavity wall insulation.

Defects, like cracks or pre-existing damp problems can easily be spotted by a competent assessor and can usually be remedied, meaning that the walls can be insulated and damp problems avoided. So it is important to have a proper assessment carried out before any insulation is put in.

The vast majority of houses in the UK are suitable for cavity wall insulation. However, there are some that are not, and this can be for a number of reasons, including:

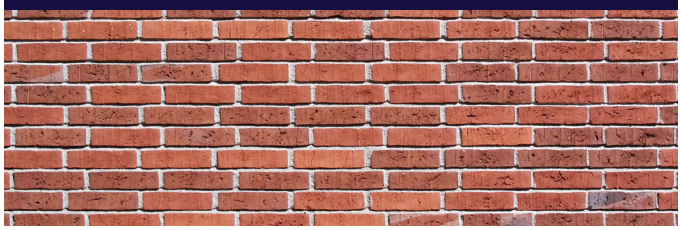
- **Poor maintenance or structural issues like cracks in the walls.**
- **Dirty cavities, dirty wall-ties (these hold the two walls together) or builder's rubble in the cavity.**
- **Exposed locations, particularly those that experience persistent wind driven rain.**
- **Overflowing or blocked guttering.**

This means that in a small number of cases householders are correctly advised that cavity wall insulation is not appropriate. In these cases, and where no remedial action is appropriate, the insulation should not be installed.

Guaranteed for 25 years

Any reputable installer will be registered with the Cavity Insulation Guarantee Agency (CIGA). The CIGA guarantee is for 25 years and covers problems that are caused by faulty or inappropriate installation of cavity wall insulation. If you have cavity wall insulation already and are worried that there is a problem with it then you can contact CIGA to check whether your guarantee is still in place.

Where a defect in materials or workmanship is involved CIGA always seeks to resolve complaints to the customer's complete satisfaction. CIGA will have your property registered if the cavity walls have been insulated by an installer covered by the guarantee.



CSE

St James Court
St James Parade
Bristol BS1 3LH

0117 934 1400
cse.org.uk
info@cse.org.uk

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Our Home Energy Team offers free advice on domestic energy use to people in central southern and southwest England.

Contact us:

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