

Insulate your loft and stop the 'great escape'

Insulate your home to improve energy efficiency and stop the heat from escaping.

A well-insulated house keeps warmth exactly where you need it – indoors. Loft insulation is a simple and effective way to reduce your heating bills, improve energy efficiency and is a home improvement you can do yourself.

Before you embark on insulating your loft, you'll need to make sure it's in good condition and dry, otherwise the insulation won't work properly and you could be trapping dampness and mould in. If you're planning a home retrofit – where improvement works are made to improve the energy efficiency of your home – insulation is the recommended first step, to ensure any other improvements have the maximum results.

Here's how much a typical installation could cost you, how much you could save on your energy bill by topping up your loft insulation from 120mm to 270mm.

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| Detached house | £55 per year |
| Semi-detached house | £35 per year |
| Mid-terrace house | £30 per year |
| Detached bungalow | £55 per year |

(NB These estimates are based on gas-heated homes and on fuel prices as of October 2022, and assuming an unsubsidised insulation cost. The recommended depth of mineral wool insulation is 270mm, but other materials need different depths. Prices will vary.)

Standard loft insulation

Loft insulation is effective for at least 40 years, and it will pay for itself over and over in that time. Depending on your home type and size, you can save between £300



Insulation keeps the heat indoors. People who insulate their loft notice the difference in their comfort and in their fuel bills.

and £600 on your energy bill each year if your loft is completely uninsulated before you insulate it.

Standard loft insulation is appropriate for most homes. This is where rolls of insulation are laid in between and over the floor joists.

Generally speaking, if your home has an accessible loft with no damp or condensation problems, it will be a good candidate for loft insulation.

Even if you already have some insulation, your loft may need a top-up. The recommended depth for mineral wool insulation – the most common material – is 270mm (about 1ft), but there are other materials (usually more expensive) which require different depths.

You might even be eligible for an insulation grant towards the cost of professional insulation, depending on your circumstances and how much insulation you currently have.

If you have loft insulation at joist level – on the 'floor' of the loft – then you do not also need insulation under the

sloping part of the roof, unless you intend to use the loft as a living space.

Laying standard loft insulation is usually a straightforward job for a competent DIY-er. Mineral wool insulation can be bought in big rolls (also known as 'blankets' or 'quilts') from builders' merchants or DIY stores. See our separate DIY loft insulation factsheet for more information on aspects that need to be considered, such as ventilation and safety.

If you need to use your loft for storage, you can use joist extenders to lift boards above the insulation. This will maintain a constant level of insulation throughout your loft space. But make sure the boards aren't touching the insulation. You'll need to leave a gap for ventilation to reduce risks of condensation, which can make your loft mouldy.

Blown-in loft insulation

For lofts with difficult access – e.g. small hatches and very little space – standard loft insulation rolls aren't suitable. Instead, you can opt for blown-in insulation, which is where small pieces of insulating material is blown into your loft using a specialist tank and hose. The pieces offer good coverage of your loft as they reach all the nooks and crannies. Whereas rolls can be installed yourself, this is a job for a professional installer and can take a few hours depending on the size of the loft.

If you use your loft as storage, however, this may not be the right option. Because the coverage is so good, it can be hard to see the joists to place boards over them. And any pressure from the boards can reduce the effectiveness of the insulation.



Flat roof insulation

Flat roof insulation is most likely to be relevant on extensions, such as a kitchen or bathroom. These roofs can lose a lot of heat and are expensive to insulate, so it is usually best doing it at the same time as regular maintenance or home repairs.

For this, an insulation called 'warm deck' insulation can be used. This is where a layer of rigid insulation board is laid on top of the existing roof deck, with a vapour barrier in-between to prevent condensation build up. A new roof deck is then fitted on top of the insulation boards.

Or, 'cold deck' insulation is where the internal ceiling is removed and either mineral fibre or rigid insulation boards are added between the roof deck and the ceiling, with at least a 50mm gap between the insulation and the deck. A vapour barrier is created between the internal ceiling and the insulation.

This work should always be done by a professional. Even so, cold deck insulation is usually not the most effective way of insulating a flat roof due to potential condensation build up if not done properly.

Warm deck insulation tends to be the cheaper of the two options, especially if done at the same time as repairing or replacing the roof's finish.



Fancy doing it yourself? See our factsheet on DIY loft insulation and what you need to consider in terms of ventilation, safety and even bats!



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We're a charity (298740) supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes.

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

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