

Internal wall insulation

Please note - before your walls can be insulated, any problems with penetrating or rising damp must be resolved. Insulation should not be used to cover, hide or isolate damp as this could lead to serious problems in the future.

Types of insulation

There are two ways to insulate a solid wall internally – with rigid insulation boards, or a stud wall.

Stud wall insulation is thicker than rigid insulation boards, so it will reduce the size of your room more. But a stud wall is strong enough to hold heavy fittings such as kitchen units, radiators or wash basins. Insulation boards need fixings that go through them and into the wall behind.

Is the wall's surface even? If the plaster is uneven or plaster has been removed and the brickwork is uneven, the wall must be levelled with a layer of plaster or render before boards can be fitted, so a stud wall might be a better option.

Rigid insulation boards

Plasterboard backed with rigid insulation is fitted to the inside of your walls. The insulation is usually made from one of several forms of foamed plastic. It should normally be at least 60mm thick, and can be up to 100mm. The actual thickness required will depend on the material used - Insulation boards are fixed straight onto the wall using continuous ribbons of plaster or adhesive. Extra fixings hold the boards firm, and joints between boards are sealed to prevent air leaking out.

Stud wall

A metal or wooden studwork frame is attached to the wall and filled in with mineral wool fibre. It can then be plastered over, ready for redecoration.

Mineral wool insulation is less effective than rigid insulation boards, so the filling needs to be at least 120mm thick.

Instead of applying plaster, the frame can be covered with rigid insulation boards for even more effective insulation, reducing your running costs even further.

Finding an installer

Internal solid wall insulation usually needs a professional installer. Only very experienced DIY-ers should install it themselves and must keep all receipts for materials and photographic evidence of the installation so that it can be taken into account on an Energy Performance Certificate (EPC).

If you are insulating your walls as a one-off, without doing other building work at the same time, then it is probably best to use a specialist insulation company.

However, if you are getting other building work done - maybe a new kitchen or bathroom - then you might want to ask the same builder to do the insulation for you. Check that they have experience in fitting internal insulation.

You can search for companies that specialise in internal wall insulation through one of the main trade associations' websites such as the National Insulation Association (NIA). To be eligible for any government financial support schemes you may need to use a Green Deal certified installer. For a full list of Green Deal certified installers, visit the Green Deal orb website.

When choosing an installer, you might want to ask for:

- ✔ **before and after photos of previous internal wall insulation work**
- ✔ **the rate at which heat will pass through the wall after the work is done, known as the U-value. (This should normally be no more than 0.30 watts per square-metre kelvin - the lower the better)**
- ✔ **which insulation materials they will be using and why, and which materials are not recommended**
- ✔ **what consideration needs to be given, if anything, to avoid the build-up of moisture in your home following installation**

We always recommend you get quotes from at least three different companies so that you can properly compare costs and services.

Preparing for internal insulation

Light fittings, radiators and pipe work on external walls will need to be removed and reattached, so that they are flush with your new 'wall'. So will features such as coving and cornices.

Skirting boards and door frames on external walls will also need to be removed and replaced on the new wall. Areas around windows must be insulated at the same time as the walls, to prevent condensation.

Regulations

Normally your installer will ensure that the insulation is up to standard and will arrange approval from the local Building Control Office for you. If they are not going to do this, you should contact Building Control at an early stage to make sure you comply.

A building warrant is likely to be required. Listed Buildings may require Listing Building Consent. Contact your local authority planning department to check what permissions are required

