

# Energy efficient glazing and high performance external doors

Homes lose 10-20% of their heat through windows and external doors. Installing energy efficient glazing and high thermal performance doors in your home will reduce heat loss, keep your home warmer and cut heating bills. Glazing can also insulate against external noise.

## Will double glazing save me money?

Installing new windows and doors is expensive and the payback period can be long. A set of energy efficient windows for a semi-detached house can cost around £12,000. A door bought on its own could cost more than £1,000 (although might be less if bought alongside windows). How much you'll save on heating by fitting energy efficient windows and door depends on many factors, including the size of the home and its overall energy efficiency, how it's heated (gas, oil, electricity), if it's exposed to harsh weather, and the number and size of windows and doors being replaced. On average, the savings for a semi-detached house would be £140 a year.

Funding towards the cost of new windows or doors is rarely available, so if you are investing you'll need to weigh up the cost of the improvement against the savings on your heating bills. The typical lifetime of double glazing is around 20 years (in reality, this varies from 10 to 35 years, depending on the quality of the product and the installation and where the windows are situated). Of course, there may be non-financial reasons behind your decision to install energy efficient glazing, including comfort, appearance, noise reduction or home improvement.



## What to consider before installing windows and doors

Before investing in energy efficient glazing or high thermal performance doors, check whether you can create a warmer home with more cost-effective options.

1. You first need to consider the overall insulation of your home. On average, 60% of heat is lost through the walls and loft combined. It therefore makes sense to insulate these areas, if possible, before replacing the windows or doors.
2. Consider draught-proofing or other simple improvements, which are both cost-effective and less intrusive. These include insulated blinds for windows, and curtains for windows and doors, such as using the portiere rod shown. Shutters and secondary glazing are useful for traditional or listed buildings or if you live in a conservation area, where there can be restrictions on what you can install. See our factsheets on 'Secondary glazing' and 'Draught-proofing'.



Photo: [www.jim-lawrence.co.uk](http://www.jim-lawrence.co.uk)

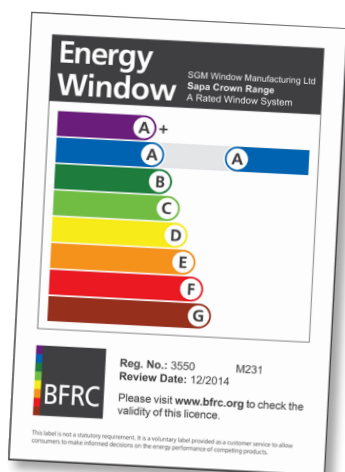


3. If a double-glazing window pane is misted inside it means the seal has failed and the pane is no longer providing any insulation. Before replacing the whole window check with a specialist contractor if only the failed pane can be replaced.

## Choosing energy efficient windows and doors

New windows and doors have an energy rating, like those on fridges and washing machines. Energy ratings enable you to compare window and door products and choose those most appropriate for your home.

With the British Fenestration Rating Council (BFRC) scheme, the highest rating is A++ and the lowest rating is C for windows and E for doors. Other window energy rating labels exist (British Standards Institute, CERTASS) and work in the same way.



There are three main factors to consider when choosing replacement energy efficient windows and doors.

1. Consider the energy rating you want within your budget, including the type of glass and the frame or door material. Material sources and disposal for the glazing unit may also be a consideration. For example, some uPVC windows have 80% recycled content for their core material but can be hard to recycle. Timber and aluminium frames can also be made from recycled content, can last much longer than uPVC frames (if properly maintained) and can be disassembled for easier recycling.
2. What windows and doors will be suitable for the style of property? For instance, do the windows need to be timber framed to fit with other windows or the neighbourhood? This is a particularly important consideration if your home is a listed building or you live in a conservation area.
3. When your window and doors are replaced, it is vital to make sure that the building remains well

ventilated, as the replacements will be more airtight than the originals. New double glazing is required to have trickle ventilation. Ventilation allows fresh air into your home, allows moisture to escape and helps to prevent condensation and mould.

## Listed homes and conservation areas

If your property is listed or in a conservation area there are likely to be restrictions on what you can do to your windows and external doors, so contact your local authority conservation or planning office to discuss the options available before carrying out any work. If you can't replace the windows, there are several non-intrusive alternatives which can improve the energy efficiency and warmth of your home. These include heavy lined curtains, insulated blinds, internal or external shutters and secondary glazing, or a combination of these.



## How do energy efficient windows and high thermal performance doors work?

The glazing in energy efficient windows and doors is usually double glazed. This means the windows have two sheets of glass with a gap between them. The air trapped in the gap works as an insulating barrier, slowing down the rate at which heat escapes the home. The inside of the glass has an invisible metal oxide coating, which also slows the escaping heat. Sometimes, a different gas is used in the gap, which improves the insulation of the window. Some windows will be triple glazed, with three sheets of glass. The material of the window frame or door will also affect its thermal efficiency.



## Choosing an installer

You can find an installer through one of the following organisations.

The **Glass and Glazing Federation** is a membership organisation for the glazing sector whose members sign up to a consumer code of practice. They also give advice on buying glazing products and offer a free conciliation scheme in the event of a dispute. [www.myglazing.com](http://www.myglazing.com) | **0207 939 9100**

The **Fenestration Self-Assessment Scheme (FENSA)** is a government-backed Competent Person Scheme for the replacement of windows, doors and roof lights in England and Wales. Members registered with FENSA comply to thermal performance standards so that any glazing they install meets standards for energy efficiency. [www.fensa.org.uk](http://www.fensa.org.uk) | **0207 645 3700**

The British Fenestration Rating Council has a 'find-a-product' facility so you can find a door or window by energy rating and find authorised installers and manufacturers.

[www.bfrc.org](http://www.bfrc.org) | **020 7403 9200**

The Double Glazing & Conservatory Ombudsman Scheme offers a free service to investigate complaints about work carried out by its members. This includes independent inspections, arbitration and a compensation fund. Accredited installers must offer deposit protection and a comprehensive guarantee to customers. [www.dgcos.org.uk](http://www.dgcos.org.uk) | **0845 053 8975**

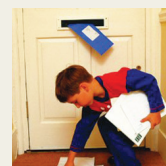


## Tips to cut your electricity use and save money ...



**Give your clothes a day in the sun (and give your tumble drier a break).** Clothes dried in fresh air feel great.

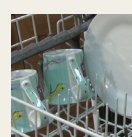
**Draught-proof!** Fit draught-excluders to your front door, letter box and key hole, and draw your curtains at dusk to keep the heat in.



**Only fill the kettle with as much water as you actually need** (but make sure you cover the metal element at the base).

### Buying a new appliance?

Remember to check the energy rating label and consider the size.



**Wait until you have a full load** in your dishwasher or washing machine before doing a wash. Two half-loads use more energy than one full load.

**Sleep tight.** Make sure all the lights are turned off when you go to bed. You can get low-wattage night lights for children's rooms or landings.



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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.

### Contact us:

PHONE 0800 082 2234

EMAIL [home.energy@cse.org.uk](mailto:home.energy@cse.org.uk)

See all our energy advice pages at [www.cse.org.uk/advice](http://www.cse.org.uk/advice)