

High performance external doors

Keeping the cold air out ...

Replacing your old door with a high thermal performance door can keep your home warmer and reduce your fuel bills.

How do they work?

High performance external doors can be solid, partially glazed or fully glazed. They can be constructed of PVC-U, aluminium, timber or a combination of these materials. Fully or partially glazed doors will be either double or triple glazed with a thermal barrier (sometimes called a 'thermal break') between the panes of glass. Between these panes is either air or an inert gas like argon which prevents heat passing through the glass. In addition, thermal breaks also have the added bonus of reducing the level of noise which is transferred through the door.

Not only are modern doors better insulated, but they are also likely to fit much tighter in the door frame and therefore reduce draughts.

How do you measure the energy efficiency of a door?

Under the current Building Regulations all new doors which are sold and fitted in England and Wales require a U-value of 1.8W/m²K or less. The U-value is a measure of the door's energy efficiency and takes into account both the glass and the door frame. If it is cold outside and warm inside the U-value measures how quickly the heat from the inside flows to the outside.

As a general rule when considering purchasing a new door, the lower the U-value the more energy efficient the door is. Like windows, doors can now also be given an energy efficiency rating from A-G under the British Fenestration Rating Council (BFRC) rating scheme. Under this system an E-rating is indicative of a U-value of 1.8, and therefore compliant with the Building Regulations. An A-rating is reserved for doors with the highest thermal performance currently available.



Not all high performance thermal doors are glazed. Some are solid and made from timber or aluminium



Photo: iStock.com / Steven Mlric

When should I buy more energy efficient doors?

Around 18% of heat lost from your house is likely to come from the doors and windows, so significant energy savings could be made by replacing old doors with new ones. If fitted individually, new doors could cost in excess of £1000, but when bought alongside new windows (most window companies will also fit doors) they could work out cheaper.

There are other advantages to replacing doors to bear in mind, such as aesthetics, security, noise reduction and fire safety. Whatever your reason for replacing doors, it is worth making sure the new ones are as energy efficient as possible.

If you live in a conservation area or your house is listed there may be restrictions on the replacement of external doors and windows. In such cases you should contact your local conservation or planning office to discuss the options available.

Tips for lower energy bills

Happy paying your electricity and gas supplier more money than you need to? Thought not. Here are 10 ways to cut your bills ...

1) Give your clothes a day in the sun; and give your tumble drier a break. Clothes dried in the fresh air feel great, and there are drying days in winter, too.



2) Keep the oven door shut as much as possible; every time you open it, nearly a quarter of the heat escapes.



3) Catch 'em young. Encourage your children to switch off electric toys and lights that they're not using. They'll soon get the hang of saving energy.

4) Be a friend to your freezer. Defrost it regularly to help it run more efficiently.

5) Buying a new washing machine, TV or dishwasher? Look out for the Energy Saving Trust logo.



6) Don't over-fill the kettle (but do make sure you cover the metal element at the base).



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

8) Turn your heating down by 1 degree. You'll hardly notice the change in temperature, but it'll make a big difference to your heating bill.

9) Wait 'til you have a full load before doing a wash. Two half-loads use more energy (and water) than one full load.

10) Sleep tight. Make sure all the lights are turned off when you go to bed. If you want to light a child's room or a landing, use a low-wattage night light.



This leaflet is one of a series that covers a range of energy efficiency and renewable energy topics, produced by the Sustainable Energy Across the Common Space (SEACS) project, for you to view online or download to share in your community.

SEACS brought together three UK and two French local authorities – Devon County Council, Dorset County Council, Wiltshire Council, le Conseil Général des Côtes d'Armor and Lannion-Trégor Agglomération – to tackle the energy challenge that is faced on both sides of the channel.

The aim was to create opportunities for individuals, households, communities, schools and local authority buildings in both UK and France to reduce their energy consumption, implement energy efficiency measures and use clean/renewable energy where possible. The project has raised awareness of climate and energy issues and encouraged long term behavioural change towards energy use. Cooperation was the ethos of the project and participants had the opportunity to exchange and learn from each other.

For further information about SEACS project, to get ideas and view case studies to help you and your community save energy, and to find out which schools and community groups in your area have been involved, visit the SEACS website or the energy pages of your local authority's website.

- www.seacs.info
- www.wiltshire.gov.uk/sustainability
- www.dorsetforyou.com/climatechange
- www.devon.gov.uk/energy

This leaflet was first produced by the Centre for Sustainable Energy (CSE) and reprinted in this version on behalf of SEACS.

CSE's Home Energy Team offers free advice on domestic energy use to householders in Bristol and Somerset (including the unitary authorities of North Somerset and Bath & North East Somerset).

- Call: 0800 082 2234 or 0117 934 1957
- Email: home.energy@cse.org.uk
- Web: www.cse.org.uk/loveyourhome
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