

Weathershield Update - A Guide To Window Energy Ratings

The British Fenestration Ratings Council (BFRC) launched window Energy Ratings in March 2004. From 6th April 2006 the BFRC window energy rating was recognised in Part L of the Building Regulations as an alternative to a U value.

A window's energy rating is determined by a formula which takes into account factors such as standard domestic occupancy, average UK climate data, the window U value, solar heat gain and air filtration/leakage through the window. The resulting value is then placed in a band on an A-G scale. An 'A' rated window achieves a positive rating which means that, over the course of a year in an 'average location', these windows will actually contribute towards the heating of the house.

The implications of this may be a reversal in the trend to reduce window sizes to improve the overall U value of a building, with energy efficient windows being seen as beneficial where traditionally they were viewed as the weakest link within the building envelope.

Latest Building Regulations - Part L (conservation of fuel and power)

From April 2006 Part L of the Building Regulations carry the following recommendations for windows:

Replacement Windows	U value $\leq 2.0\text{W/m}^2\text{k}$ or Energy Rating 'E'
Windows in an Extension	U value $\leq 1.8\text{W/m}^2\text{k}$ or Energy Rating 'D'
New Build	The minimum requirement depends on the results of a SAP assessment. Window U value not to exceed $2.2\text{W/m}^2\text{k}$

Below is an indication of what would need to be applied to a window for it to achieve various Energy Ratings.

Energy Band	What Does This Mean?	General Requirements To Achieve Standard
A	'Energy Efficient' window loses no energy through window and can in some cases contribute to heating the property. Can carry Energy Saving recommended (ESR) logo.	Triple glazing, low iron glass, Argon/Krypton Gas, warm edge spacer, Low E glass, additional insulation, 'warm reinforcing'.
B	'Energy Efficient' window loses no more than $10\text{kWh/m}^2\text{/year}$. Can carry ESR logo.	24/28mm Unit comprising 1 pane of low iron glass, Argon filled cavity, warm edge spacer bar, and 1 pane of Low E glass + additional insulation.
C	'Energy Efficient' window loses no more than $20\text{kWh/m}^2\text{/year}$. Can carry ESR logo.	24/28mm Unit comprising 1 pane of standard float glass, Argon filled cavity, warm edge spacer bar, and 1 pane of Low E glass.
D	2006 Part L Compliant for New Windows in Extensions.	24/28mm Unit comprising 1 pane of standard float glass, Argon filled cavity, 1 pane of Low E glass.
E	2006 Part L Compliant for Replacement Windows.	24/28mm Unit comprising 1 pane of standard float glass, air filled cavity, 1 pane of Low E glass.