

heritage  
tradeFRAMES

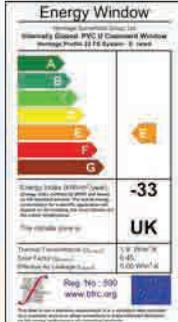
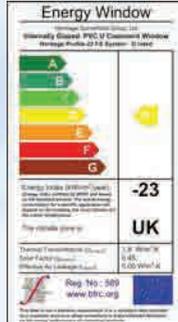
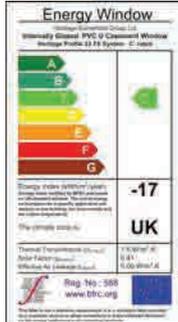
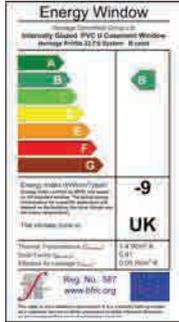
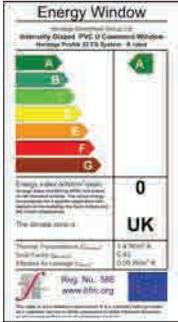
**A GUIDE TO**

**ENERGY**

**RATED**

**WINDOWS**

# WINDOW ENERGY RATING



## WHAT IS WINDOW ENERGY RATING WER?

The window energy rating is the objective method used to assess the total energy performance of a window; it takes into account the materials used (glass, framing materials etc), the air leakage and the solar gain to determine the rating which expresses the energy efficiency of the product. The determined value will place the window design into a rated band (A to G). The rating compares standard size windows; this provides a simple method of comparing different products from either the same supplier or from different suppliers. Most of you will be familiar with the Energy Efficient label and A-G rating on "white goods", like refrigerators, which operates on the same principle as that for windows.

**Heritage hold WER certification for A,B,C,D & E rated windows** above are copies of the certificates

## WHO ADMINISTERS THE WER SCHEME?

The BFRC Ltd is the operation of a UK national rating system for the thermal performance of fenestration products. The rating system is recognised within building regulations throughout the UK.



## WHO ARE THE BFRC?

BFRC stands for British Fenestration Rating Council. It

was originally established in 1999 with assistance from Government and the major fenestration Trade Associations as part of a research project to develop a Window Energy Rating scheme for the UK.

BFRC Ltd was established in 2006, to take over and further develop the activities of the original BFRC.

BFRC Ltd. is part of the Glass and Glazing Federation (the largest trade association for the glazing and fenestration sector in the UK)

The GGF have invested in the development of the scheme to enable it to respond to the growing needs of the market and operation of an independent impartial method of rating the energy efficiency of windows and hence encouraging their use.

## ENERGY SAVING RECOMMENDED

The energy saving recommended certification mark was developed by the Energy Saving Trust to distinguish the most energy efficient products on the market.

Only products that meet the strict requirements will be endorsed and given the certification mark. The certification scheme is managed by the Energy Saving Trust and backed by the Government.

Only Manufacturers whose windows achieve a minimum BFRC window energy rating of C or above can apply and use the Energy Saving Recommended Logo.



The British Fenestration Rating Council (BFRC) energy performance label can help you determine how well a product will perform the functions of:

**HELPING YOU CONTAIN AND CONSERVE HEAT WITHIN YOUR BUILDING IN THE WINTER  
COOL IT IN SUMMER**

**KEEP OUT THE WIND AND RESIST CONDENSATION**

By using the information contained on the label, builders and consumers can reliably compare one product with another and make informed decisions regarding the energy performance of window products. The basic label lists the manufacturer, describes the product, includes the essential energy performance data and provides a source for additional information.

**THERMAL TRANSMITTANCE (U-VALUE)**

This measures how well a product prevents heat escaping. The energy rating value is based on a standard window to enable comparison of product. This **does not** represent the actual energy efficiency for actual product installed. The BFRC Rating is calculated from the formula: **Rating = 218.6 x g-value - 68.5 (U-value +L50)**

**SOLAR FACTOR**

(g-value)

This measures how well a product blocks heat caused by sunlight. The Solar Factor is expressed as a number between 0 and 1. A lower Solar Factor means less heat gain

**AIR LEAKAGE**

(L50 value)

The factor L50 in the formula is an air leakage factor. For good quality windows, air leakage makes little difference to energy performance, for leaky windows, the impact is significant.

**Energy Window**  
Heritage Somerfield Group Ltd  
Internally Glazed PVC-U Casement Window  
Heritage Profile 22 FS System - C rated

Approved Company & Certificate Number

Approval Rating

BRFC Rating Value

Thermal Transmittance (U-Value)

Solar Factor (g-Value)

Air Leakage (L<sub>50</sub>-Value)

Energy Index (kWh/m<sup>2</sup>/year)  
(Energy index certified by BFRC and based on UK standard window. The actual energy consumption for a specific application will depend on the building, the local climate and the indoor temperature)  
**-17**

The climate zone is:  
**UK**

Thermal Transmittance (U-Value) (U<sub>g</sub>): **1.6 W/m<sup>2</sup>.K**  
Solar Factor (g-value) (g): **0.41**  
Effective Air Leakage (L<sub>50</sub>): **0.00 W/m<sup>3</sup>.K**

Reg. No.: 588  
www.bfrc.org

This label is not a statutory requirement. It is a voluntary label provided as a customer service to allow consumers to make informed decisions on the energy performance of competing products.

Each rating label is specific to a manufacturer and is non-transferable. The BFRC Certificate Number relates to the specific certificate, and details of the certificate can be obtained from this web site. The BFRC rating is provided for a standard window to represent typical window sizes. The size is 1.48 x 1.23 m. This enables comparison between different products.

The BFRC is a collaborative venture between all stakeholders in the window industry. It was established in 1999 with the assistance of the DETR and the major trade associations from the window industry.

Our objective is to create and maintain a “fair, accurate and credible” rating system to impartially measure and assess the thermal efficiency of windows. In developing the BFRC Rating. The BFRC is advancing new methods of energy assessment for window products.

**Window Energy Ratings are expressed in units of Kilowatt hours per square metre per year – KWh/m<sup>2</sup>/year**

**From this figure the window is allocated a band from an A – G rating scale.**

BFRC Rating Scale	BFRC Rating (kWh/m <sup>2</sup> /year)
A	Greater than 0
B	-10 to < 0
C	-20 to < -10
D	-30 to < -20
E	-50 to < -30
F	-70 to < -50
G	Less than -70

### WHERE DO I GET ENERGY RATED WINDOWS FROM?

Heritage Trade Frames now produce a SAFEGUARD range of energy rated windows with the C rated window supplied as a standard.

### WHAT IS THE MAKE UP OF A C RATED WINDOW?



The SAFEGUARD casement window is manufactured from the Profile 22 fully sculptured 70mm system, internally beaded with an easy glaze featured bead. All gasketing is low line 'BubbleX' co-extruded and corner welded. Reinforcements utilise the new RCM recycled material to improve performance and improve future recyclability.

Standard glazing required for a C rated window is a 28mm unit made up of an outer pane of 4mm clear float glass, a dual sealed 20mm cavity filled with Argon Gas and an inner pane of 4mm clear Low E Soft Coat (Guardian Neutralite or similar) with the soft coat on the number 3 surface.

### WHY SOFT COAT GLASS & WHY ARGON FILL THE UNIT?

Soft coat Low E glass offer's a substantial improvement in the U Value performance of the glass. Its coating is hardly visible and thus colour neutral, unlike K glass (hard coat) which has a 'tinting' effect.

The air cavity between the two panes of glass slows the transfer of heat. Filling the air space with an inert gas — Argon— improves a window's performance by further slowing the rate at which heat is transferred from one pane to the other. Argon gas is an odourless, invisible and non-toxic gas with a thermal conductivity that is 30% less than air.

### WHAT IS THE MAKE UP OF A B RATED WINDOW?



The general properties of a window remain the same as above with the increase in U value performance achieved by the use of a 'Warm Edge' spacer bar in the make up of the glass unit such as a Thermix TX-N.

### WHAT IS THE MAKE UP OF AN A RATED WINDOW?



The general properties of a window remain the same as above with the increase in U value performance achieved by changing the make up of the unit to an inner pane of Low E (Planitherm Total), an outer pane of Low Iron (Diamant) with a 20mm cavity created by a Superspacer warm edge spacer bar. The cavity is also Argon filled.

### WHAT IS THE COST DIFFERENCE BETWEEN C, B, & A RATED WINDOWS?

As the general window make up remains the same there is little difference in frame cost between a C, B, & A rated window. However the glass unit cost increases by 10 % from a C unit to a B unit and by over 100% from C to an A.

### SO WHICH ONE SHOULD I CHOOSE?

All WER windows contribute to reducing a customer's energy requirements. Clearly an A rated window offers the highest performance however the increased cost of the glazed unit, which is substantially higher than that of a B or C, may not at this time be considered economical.

In view of this we have adopted a C rated window as our standard but can offer an upgrade to either B or A

FOR MORE INFORMATION ON ANY ASPECT OF WER RATINGS PLEASE CONTACT OUR SALES TEAM ON **01204 664700**

fax: 01204 698682 email: [info@heritagetradeframes.co.uk](mailto:info@heritagetradeframes.co.uk)