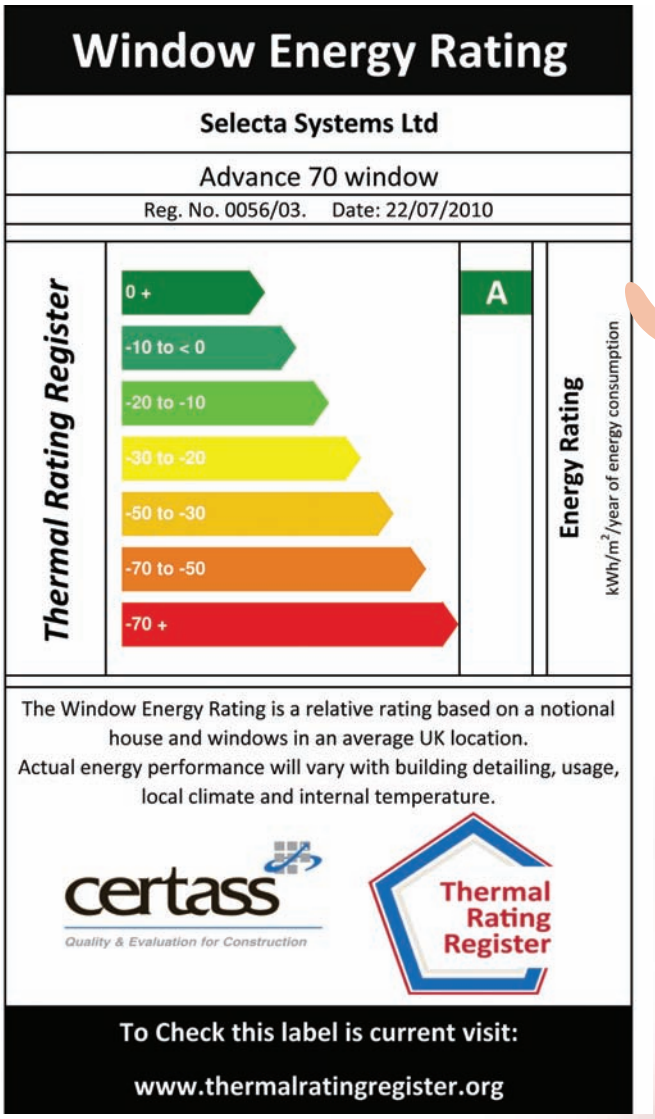
The Fabricators guide to Window Energy Ratings



ADVANCE 70
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FM90894

BBA

LEAD FREE SELECTA

PAS 23 KM565686

PAS 24 KM565686

BS EN 12608 KM 84612

BS EN 7950 KM 84614

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Why are we moving towards Window Energy Ratings?

As part of Britain's commitment to the international Kyoto Protocol, the Government is taking dramatic steps to reduce our carbon emissions and become more energy efficient.

As part of this process a series of amendments to Document L of the Building Regulations have been proposed and are likely to come into effect from October 2010. Currently, window installations can be assessed by whole window u-value, centre pane u-value or a Window Energy Rating of "E".

The October changes allow whole unit U-value or WER rating however, the proposed changes mean that it is likely that Window Energy Ratings will be more accepted more by the public as, WER's also take into account the benefit of sunlight (solar gain) entering a room which helps reduce the need for heating (energy consumption).

What does it all mean?

The amendments mean that, from October 2010, companies cannot install a replacement window in a domestic property unless it has a "C" rating or better or U-value of 1.6 W/m^{2}K.

There are three window energy rating schemes:

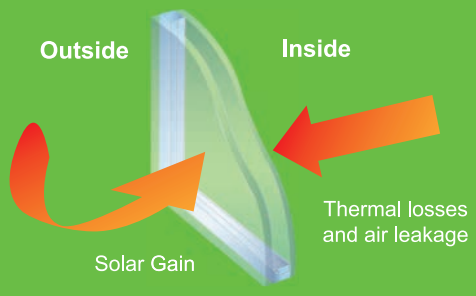
- BFRC
- BSI
- TRR

They all provide product certification schemes for the thermal rating of windows under building regulations.

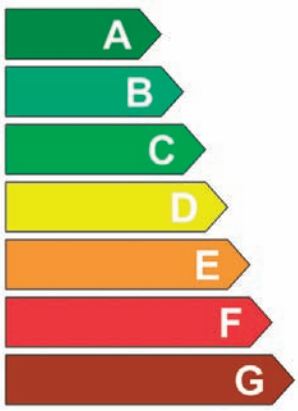
If you install windows you will need to have a licence for each product specification you install. If you supply the trade, your customers will need to use your product licences.

WER calculations

A WER is calculated by taking solar gain (g-value) and subtracting thermal losses (u-value and air leakage). The resulting value (Energy Index) is placed on the energy rating scale from A to G which gives consumers a simple way of comparing one product with another.



WER's = solar gain - (thermal losses +air leakage)



Selecta at the forefront of WER's

Selecta's Advance 70 window system is at the forefront of window energy ratings. Innovative profile design and five chamber construction dramatically improves insulation so that a C, B or A Rating is easily achievable.

We believe that the TRR (Thermal Rating Register) offers the easiest and most cost effective solution for Selecta's fabricators, we provide an overview of the scheme in the following pages.

Window Energy Ratings in 3 easy steps

Steps to TRR Registration with Selecta Systems

1. Speak to your local Selecta Sales Manager or call TRR direct to calculate your WER (Window Energy Rating) using the WER Calculator

2. Complete and return the TRR application form.

   TRR will review your application and arrange an audit or your factory production processes.

3. TRR will issue a WER, based on your WER specification and inspection, and list the WER on the TRR website

4. Need to change window specification? Simply contact TRR ask for an update using the WER calculator and TRR will update your label.

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1. You can use the WER Calculator, or full Simulations carried out by a certified simulator, to determine the thermal performance of your windows.

Each WER label issued will need a design specification of the window components.

2. You will need a Quality Management System (QMS)/Factory Production Control system (FPC) for the product to be certified. If you don't have one in place TRR will provide a free QMS or FPC suitable to your company.

Versions are available for Window Fabricators and Installers.

Component purchase and usage must be controlled to ensure that only components used to calculate the TRR rating are used in the production of windows claimed to have a TRR rating.

3. You will need to hold test evidence of EN1279 part 2 and or part 3 as appropriate for glazing units fitted to the rated window, available from your IGU supplier.

4. You will need to abide by the TRR scheme rules for usage of the TRR WER.

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Thermal Rating Register

Contact your Local Selecta Sales Manager or
call the Thermal Rating Register direct on
0845 838 8580
or visit **www.thermalratingregister.org**

WER Advance 70 Calculations

Glazing options	Planitherm Total/Diamant ARGON
Spacer options	Super spacer
System choice	Advance 70 narrow

INDICATIVE RATING A

	Reinforcement type	
	Minimum	Full
	WER Result	Result
Uw (Whole window U Value)	1.38	1.42
gW (Window Solar Factor or Glass Effect)	0.44	0.44
BFRC Rating (kWh/m2/year)	2	-1
BFRC Rating (kWh/m2/year)	2	-1

Glazing Information	
Inner/Outer/Cavity Fill	Planitherm Total/Diamant ARGON
Centre Pane U	1.2
Panel Width (mm)	28
G Factor	0.71
Air Leakage	0.00

THE RATING GRADE AND SCALE SHOWN IS FOR GUIDANCE ONLY.
A SIMULATION BY AN APPROVED SIMULATOR WILL BE REQUIRED
WHEN APPLYING FOR A RATING.

Glazing options	Planitherm Total/Diamant AIR
Spacer options	Super spacer
System choice	Advance 70 narrow

INDICATIVE RATING B

	Reinforcement type	
	Minimum	Full
	WER Result	WER Result
Uw (Whole window U Value)	1.54	1.58
gW (Window Solar Factor or Glass Effect)	0.44	0.44
BFRC Rating (kWh/m2/year)	-9	-12
BFRC Rating (kWh/m2/year)	-9	-9

Glazing Information	
Inner/Outer/Cavity Fill	Planitherm Total/Diamant ARGON
Centre Pane U	1.4
Panel Width (mm)	28
G Factor	0.71
Air Leakage	0.00

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WHEN APPLYING FOR A RATING.

Glazing options	Pilkington K/Optwhite AIR
Spacer options	Super spacer
System choice	Advance 70 narrow

INDICATIVE RATING C

	Reinforcement type	
	Minimum	Full
	WER Result	WER Result
Uw (Whole window U Value)	1.75	1.79
gW (Window Solar Factor or Glass Effect)	0.44	0.44
BFRC Rating (kWh/m2/year)	-13	-16
BFRC Rating (kWh/m2/year)	-13	-16

Glazing Information	
Inner/Outer/Cavity Fill	Planitherm Total/Diamant ARGON
Centre Pane U	1.7
Panel Width (mm)	28
G Factor	0.78
Air Leakage	0.00

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WHEN APPLYING FOR A RATING.

Useful Contact Numbers

Certass Ltd
37 Carrick Street, Ayr, KA7 1NS

Office Tel: 08458 388 580
Simon Swift: 07977 430438
Ian Kelly: 07791 421640
www.thermalratingregister.org
Email: info@thermalratingregister.org

Build Check Ltd
Build Check Ltd Cressex Enterprise
Centre Lincoln Road
High Wycombe Bucks HP9 1HL
Tel: 01494 614624
Fax: 0870 2101013

Contact: Sue Peatey or Richard Bate
Email: certification@buildcheck.co.uk

Thermal Rating Register Application form

Thermal Ratings Register is a trading name of Certass Limited

This form is the initial application to become a TRR Registered company. Please read associated guidance notes and information booklet of member responsibilities.

Applicant details			
Applicant company name:			
Applicant Company Address:			
Invoice details if different:			
Applicant contact name:			
Applicant contact phone:			
E-mail			
Certass Member number (if Known)			
Fensa Registration number (if Known)			
Are You: Circle as appropriate	Fabricator Only Fabricator/Installer Installer Only	or or	Trade frame supplier Trade frame supplier/installer

(a list of approved simulators can be provided on request)

Simulator details (if using WER v4 Calculator, write WERv4 in Simulator name)	
Simulator Name	
Simulator Address	
Simulator Phone	

CALL 0845 838 8580 Quote Selecta to discuss using the WERv4 Calculator

Applicants using Simulators simulation report which will additionally show, air leakage values and glass manufacturer's "G" value data. In addition applicants must obtain the IGU manufacturers BS EN 1279 documentation.

OR for applicants using WERv4 calculator, complete the WERv4 details box on the following page

Authorised Signatory Name:	
Authorised Signatory Signature:	
Date:	

Each application covers an A,B & C label within the license fee

Return to:
Thermal Rating Register
37 Carrick Street,
Ayr, KA7 1NS

1. Completed Application Form
2. Payment (see website or call 0845 838 8580)

Note: There will be a £50 charge for use of the Pilkington WER calculator if not specifying Pilkington branded products

Frequently Asked Questions

Can I join any scheme with Selecta Systems?

Yes you can!

What will the scheme cost me?

Each of the schemes have there own pricing structures, visit the respective schemes website for up to date pricing.

How does label licensing work?

Each of the three schemes issues labels in different ways. In the BFRC scheme each label is specific to a window design. The TRR scheme licence provides an A, B & C label for a single fee & allows multiple glazing specifications on a single label.

What about installers?

The BFRC & TRR Schemes have a scheme especially for installers. Each allowing the installer to purchase frames & glazing from se per ate sources and in addition providing the installer with their own WER label.

What is a Factory Production Control system?

A Factory Production Control system is simply a management system that provides traceability of your materials and processes to ensure you are meeting your obligation to provide the correct rated window. TRR will provide a FREE factory control system as part of your licence.

Can I supply unglazed frames to trade customers?

The WER label is issued on a complete glazed window to exact specification including glass. Your trade customer cannot therefore buy glass separately unless they register themselves with a rating scheme and apply for their own label.

What can Selecta do to help?

Selecta has invested heavily to develop Advance 70 to meet the requirements of Window Energy Ratings, and have carried out extensive simulations that are available to all Selecta fabricators to help reduce the cost and speed up the process of achieving A, B and C Rated windows.

What is the next step?

We recommend you contact the TRR on 0845 838 8580, explain that you are a Selecta fabricator and they will start the process with you.

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