



## The BFRC Energy Rating Scheme

glas facades is pleased to announce that many configurations of our Vision 3000 window system have undergone successful assessment under the BFRC (British Fenestration Rating Council) stringent test regime. We can therefore offer a complete range of certified energy efficient windows.

The BFRC (visit them at [www.bfrc.org](http://www.bfrc.org)) rating system uses easy to understand labelling of certified window configurations so that end users and specifiers can identify and make informed decisions on the energy conservation available from these certified windows. The labelling is in the familiar A to G rating format that is seen on many other consumer goods such as washing machines, tumble dryers etc.

Whilst a grade C rated window is considered an excellent energy efficient window system, the ultimate grade A window means that the tested configuration will actually absorb more energy from the sun during a year than it loses back through the window during the same year. This is a very hard standard to achieve and requires the use of near airtight window seals, low-iron white glasses (that result in a much higher solar factor allowing more solar gain heat energy to transfer from the outside) and highly insulating coated glasses coupled with insulating inert gas between the panes of the glazing units.

The rating scheme is especially relevant to energy conservation as it takes into account not only U values (i.e. the thermal transmission through a window), but also the solar gain (i.e. how much heat energy is transferred from the outside to the inside via the sun) and effective air leakage (i.e. how well the windows seal against air transference). This results in a much more applicable rating of the window system in regard to energy conservation.

As a result, the BFRC rating scheme has now appeared as part of the Building Regulations as an alternative to compliance with Document L (the Conservation of Fuel and Power), and is being trialled for integration into the current SAP procedure which is the method used to assess the energy efficiency of complete houses. The Energy Saving Trust (visit [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)) has also embraced the rating scheme and recommend it as a move towards the conservation of energy.

The current 2006 Building Regulations for England and Wales accepts grade E windows as compliant, and the Energy Savings Trust recommends grade C as a performance level suitable for energy saving.

At glas facades, we recognise that a development may not warrant the most energy efficient, and subsequently most expensive system available. We have therefore developed a sub-range of Vision 3000 that has attained all grades A, B and C for both the Vision 3000 UK and the Vision 3000 EU systems. This gives the specifier complete control over both budget and performance level.

## Performance

GLASS TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5
Outer pane	4mm Diamant	4mm Diamant	4mm Diamant	4mm Diamant	4mm Diamant
Coating	none	none	none	none	none
Airspace (size-type)	20mm-90% Argon	14mm-90% Argon	14mm-90% Krypton	14mm-90% Argon	14mm-90% Krypton
Coating	n/app (double)	Planitherm Ultra N	Planitherm Ultra N	Planitherm Ultra N	Planitherm Ultra N
Central pane (triple glazed)	n/app (double)	4mm Planilux	4mm Planilux	4mm Planilux	4mm Planilux
Coating	n/app (double)	none	none	none	none
Airspace (triple glazed)	n/app (double)	12mm-90% Argon	12mm-90% Krypton	12mm-90% Argon	12mm-90% Krypton
Coating	Planitherm Ultra N	none	none	Planitherm Ultra N	Planitherm Ultra N
Inner pane	4mm Planilux	4mm Planilux	4mm Planilux	4mm Planilux	4mm Planilux
Solar factor (g)	0.67	0.61	0.61	0.57	0.57
Centre pane U value	1.15 W/m <sup>2</sup> K	0.94 W/m <sup>2</sup> K	0.83 W/m <sup>2</sup> K	0.68 W/m <sup>2</sup> K	0.49 W/m <sup>2</sup> K

Frame Type	Rating	glas facades special window range name for BFRC energy rating scheme compliancy				
Vision 3000-UK	Grade A					<b>Evo-A</b>
Vision 3000-UK	Grade B			<b>Evo-B</b>	<b>Evo-B Plus</b>	
Vision 3000-UK	Grade C	<b>Evo-C</b>	<b>Evo-C Plus</b>			
Vision 3000-EU	Grade A					<b>Evo-A</b>
Vision 3000-EU	Grade B			<b>Evo-B</b>	<b>Evo-B Plus</b>	
Vision 3000-EU	Grade C	<b>Evo-C</b>	<b>Evo-C Plus</b>			
Whole window U Value (W/m <sup>2</sup> K)		<b>1.4</b>	<b>1.3</b>	<b>1.2</b>	<b>1.1</b>	<b>1.0</b>

Performance data based on BBA (British Board of Agrément) assessment April 2007. Glazing units are furnished with Swisspacer warm edge spacer bars. Assessments are based on industry standard GGF (Glass and Glazing Federation) Domestic Standard Reference Window. Glazing for above BFRC weighted specification windows is based on supply from Saint Gobain Glass (Diamant glass, Planilux glass and Planitherm coatings)