



 **HOWARTH TIMBER
& BUILDING SUPPLIES**

Made to measure **PVC-U windows,
doors & conservatories**

Crystal  **COLOUR**
No.1 for choice • No.1 for colour



Made to measure **PVC-U windows**

PVC-U window and door systems are fully BBA accredited, CE Marked and kitemarked 70mm window system designed and manufactured to exceptional standards.

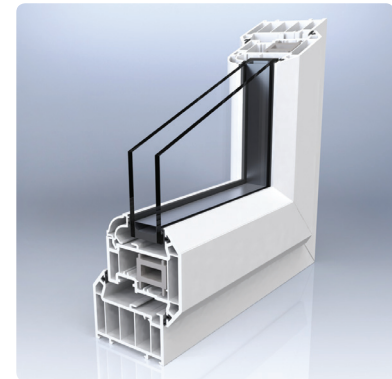
Available with a contemporary chamfer or elegant sculptured design to profile edges that is consistent across window and door sections, is has a clean, uncluttered aesthetic that is suitable for both domestic and commercial applications.

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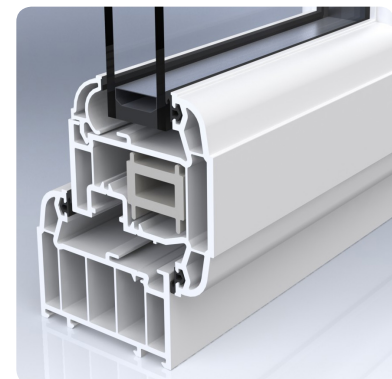
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- Chamfered/sculptured frame styling - common through casement, tilt and turn and door sections
- 70mm front-to-back dimension
- 4 outer frame sizes, including a multi-chambered option for cost-effective energy efficiency
- Range of 5 plastic thermal reinforcements for improved thermal performance
- Low sightline gasket for increased visible glass area
- Combined bubble and flipper gasket for enhanced weather protection
- Accommodates a full 22mm back set espagnolette system
- Sash horn and Georgian bar decorative options
- High gloss finish - easy clean surface
- Single leg j beads for quick and simple glazing, including a 40mm triple glazing bead
- Equal v notching - for better looking windows
- Available in 3 woodgrain options and 12 colours



Chamfered



Sculptured



Made to measure **PVC-U VS windows**

VS sash windows maintain the elegant proportions of traditional sash windows, whilst incorporating the very best in modern-day technology to deliver the low maintenance and high security of PVC-U without the problems associated with timber sash windows.

Quality-assured VS sash windows feature low-line beads and glazing gaskets for improved sight lines and energy efficient glass for enhanced thermal performance. They can also be supplied with tilting upper and lower sashes for ease of cleaning.

From terraced housing to stately homes, VS sash windows enable old-style properties to retain their heritage, character and charm. A wide range of styles, colours and hardware options can be specified, whilst providing the benefits of modern-day technology.

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- Low maintenance PVC-U frames with traditional styling
- A-rated as standard, with B or C also available
- BSI Kitemarked
- Fully featured sculptured profiles
- Equal sight lines for top and bottom sashes
- Choice of Georgian glazing bar designs
- Easy-clean tilt facility, with tilt restrictors for safety
- Double glazed with 24mm glass
- Choice of sill sizes available: 154mm (*standard*), 150/180/225mm
- Sill jointers for professional detailing
- Decorative and run through sash horns (*optional*)
- Trickle vents (*optional*)
- Anti-jemmy security bar (*optional*)
- Sash child/travel restrictors (*optional*)
- Deep bottom rail for period styling (*optional*)
- CE Marked



Pole eye - White



Lock - Satin Chrome



Sash lift - Chrome



Run through sash horns



Sash lift - Gold



Tilt restrictor



Made to measure **PVC-U fully reversible windows**

Our fully reversible system meets the challenges of climate change head on with major design breakthroughs, which reduce heat loss and improve weather tightness.

Windows meet Part L Regulations, plus security standard BS 7950 and egress requirements. Fully reversible windows are widely used for medium to high construction as the windows can be cleaned internally and externally from inside the property.

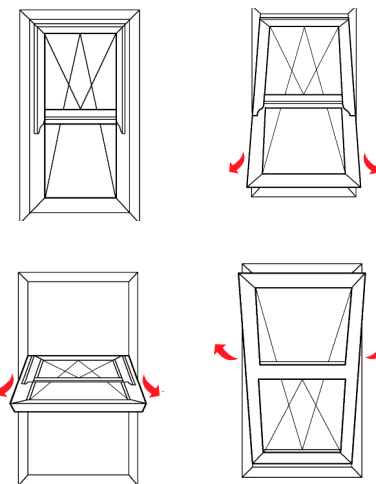
Twin weather seals are fused to the main profiles and are welded together at the corners ensuring a continuous homogeneous seal. This precision technology ensures exceptional air and water tightness. The profile design of the main sections has five independent chambers not the conventional three. This gives the profile greater strength and, importantly, enhances the thermal efficiency of the frame by up to 15%.

All profiles are manufactured to the environmental standard, BS EN 14001 and are fully recyclable.



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Reversible window opens out like a top-hung but looks like a vertical slider and reverses out for cleaning.

Minimum frame width : 850mm

Maximum frame width : 1250mm

Minimum frame height : 875mm

Maximum frame height : 1500mm



Made to measure **PVC-U residential doors**

Our range of PVC-U doors are manufactured to the highest standards, are practical and require very little maintenance and will never need sanding, treating or painting - just a wipe down every so often! To ensure homes are secure all doors are fitted with state-of-the-art high security multi-point locking systems.

PVC-U doors are thermally efficient, keep out draughts, will keep homes warm and heating bills down. Whether your customer prefers a contemporary or traditional style, a solid panel door or one giving a larger glass area, we have a wide range to suit all tastes.

PVC-U doors comprise of two PVC-U skins, pressure bonded to a core material of E.H.D.F.R.A polystyrene (extra high density fire retardant additive) using a specially formulated adhesive that is both heat and moisture resistant. The result is a core free from CFCs and a skin that is approved to BS476:part 12 'Method of Test for Ignitability of Products by Direct Flame Impingement'. This offers a high degree of thermal efficiency and, by using our range of reinforcing options, a high degree of security.

All glass is toughened (Kitemark BS6206) and all door panels meet class 1 surface spread of flame classification BS476 part 7.

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Made to measure **composite doors**

No more sanding, painting or varnishing ... a composite door offers your customers the look and feel of a timber door, but without the maintenance.

Manufacturing using cutting edge technology, our doors are made of glass reinforced polyester (GRP) with an inner core of high density foam and are available in a huge range of styles, finishes, door furniture and colours to complement a home perfectly. There are many different types of hardware and accessories available; letter plates, spyholes, knockers and numbers in finishes that will suit every taste or style.

Composite doors will give a home excellent heat retention due to its insulated foam core and weather resistant seals. The PVC-U outer frame will also provide additional insulation. Installed with a multi-point locking system and high security hinges our doors will keep homes safe and secure.

Composite doors are incredibly easy to care for and they won't discolour, fade or warp. Simply wipe down with warm soapy water with a soft cloth to remove any grime or dirt. Also all moving parts, such as hinges, handles, knockers etc, will require regular lubrication every 6 months.

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Made to measure **PVC-U bi-folds**

Contemporary bi-fold doors combine elegance with flexibility, allowing design of panoramic view wide-span door openings to create versatile spaces.

Bi-fold doors are precision engineered to the highest standards and available in a variety of finishes and folding leaf combinations. PVC-U door sashes slide along a thermally-broken aluminium top and bottom track system, designed to ensure years of trouble-free service. Rigid aluminium tracks increase the structural strength and enable easy transportation, preventing excessive flex to ensure that the doors run smoothly, even on long spans with multiple leaf configurations.

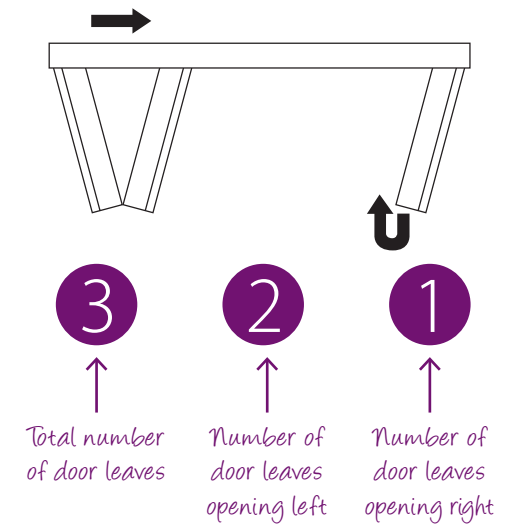
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- Bi-fold door is supplied fully assembled for easy installation
- Thermally-broken top and bottom aluminium tracks
- High quality Siegenia gearing
- PVC-U door frames available in a choice of single or dual-colour finishes
- Aluminium tracks and hinge covers available in white or brown finish
- Range of hardware available
- Choice of door designs: open-in or open-out
- Weatherstrips conceal unsightly gasket lines for a professional finish
- Double glazed as standard with 28mm toughened clear glass
- U-value: 1.7 W/m²K
- Choice of glazing bead styles: chamfered or sculptured ovolo
- Doors can also be supplied unglazed (optional)
- Choice of sill sizes: 85mm and 150mm
- Sill track trims for improved aesthetics (optional)
- Trickle vents fitted to first and last door sashes (optional)
- CE Marked



How the configurations work



Viewed from the outside.



Made to measure **PVC-U patios**

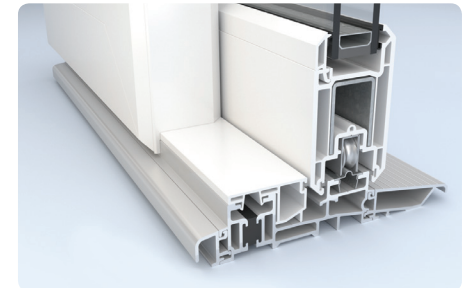
Designed to maximise daylight and provide unhindered views with easy access to outside spaces, patio doors remain a favourite home improvement product and offer an ideal solution when space is at a premium.

Patio doors are engineered to the highest standards and available in a variety of finishes and choice of sliding and fixed leaf combinations. PVC-U door leaves slide along an excellent stainless steel track system, designed to ensure years of trouble-free service. Doors are supplied complete with Yale cylinder locks, handle set, steel frame reinforcements, rollers, thresholds, trims, bump stop and anti-lift blocks.

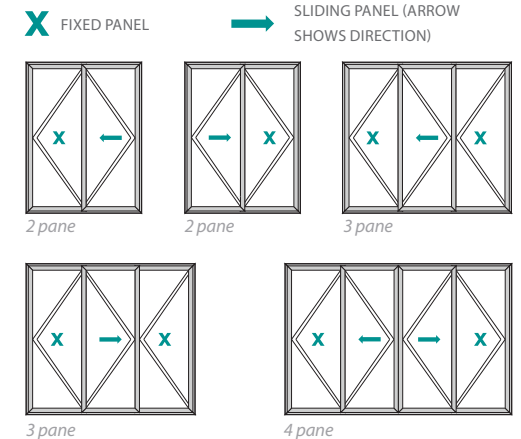
Patio doors require little maintenance and will keep homeowner premises warm due to their energy efficient design.

- Patio door is supplied fully assembled for easy installation
- Stainless steel patio tracks
- High quality Yale stainless steel 6 hook bi-directional lock and keep
- Available in a choice of single or dual-colour finishes
- Hardware available in white, black, polished gold or polished chrome
- Sliding sashes and interlocks fitted with woolpile for draught exclusion
- Tandem rollers provide up and down adjustment for glazing precision
- Double glazed as standard with 28mm toughened clear glass
- U-value: 1.5 W/m²K
- Internally glazed for security
- Choice of sill sizes: 85mm, 150mm and 180mm
- Choice of outer frame constructions: fully-welded or mechanically-jointed
- Trickle ventilator fitted at head (*optional*)
- CE Marked

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Trim/ramp option





Made to measure **PVC-U French doors**

French doors are perfect for opening up a home to the outside, e.g. a conservatory or a garden.

Made from hard wearing PVC-U and available in a wide range of styles and colours they will suit any property.

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- Fully assembled for ease of installation
- Triple high security forged brass hooks for anti-separation resistance
- Bi-directional throw of locking features - enhanced anti-jimmy feature
- Security be design upgrade available
- Optional shoot bolt engagement for additional security
- Available in single or dual colour finishes
- Choice of hardware
- Various cill options available
- Low threshold available
- Butt or flag hinge



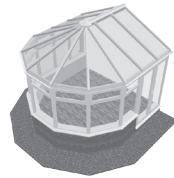


Made to measure **conservatories**

Using state-of-the-art design software, conservatory roofing systems can be individually scoped to provide flexible and creative living spaces. The roof has been extensively tested and the system has received BBA accreditation. Independently tested, the our roofs have achieved market leading performance results that far exceeded expectations.

Individual design requirements will differ and we offer a range of conservatory roof styles to suit each installation. From simple lean-to designs perfect for installations with restricted height, to large bespoke designs with lantern tops.

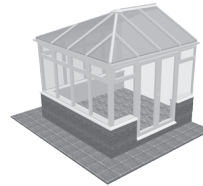
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Victorian

A bay fronted duo-pitched roof with a central ridge, normally with three or five facets at the front.

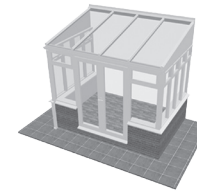
Available in sizes up to 6.5m wide.



Georgian/Edwardian

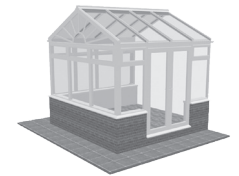
A square fronted duo-pitch roof with a central ridge. A style that maximises floor space.

Available in sizes up to 6.3m wide.



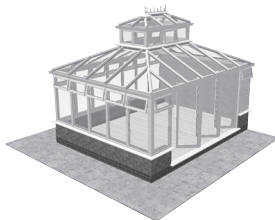
Lean-to

A conservatory with a mono pitched roof. The pitch of the roof can be varied making it a versatile option. Pitches as low as 2.5° can be accommodated by the Global 600 lean-to-roof.



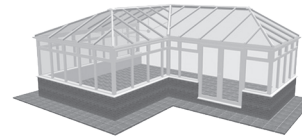
Gable

Gable ended roofs are a variant of the Edwardian style roof and consist of duo-pitched sides with a flat faced frontage. These can include the use of a decorative designed gable frame.



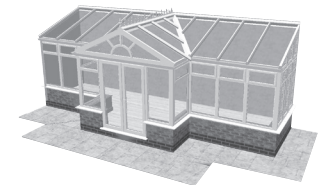
Lantern

Distinguished by two tiered roofs, the Lantern design adds light, height, space and grandeur.



P-shaped

A combination shaped roof usually constructed from a lean-to section at the side of a Victorian/Edwardian shaped roof. This creates a versatile living space.



T-shaped

Another combination roof style. T-shaped conservatories are aesthetically balanced and create a versatile living space.



Made to measure **orangeries**

Orangeries feature classically-styled design elements to create elegant building extensions utilising the latest materials and construction techniques, whilst ensuring speed and ease of installation.

Utilising the market leading roofs we are able to supply you with a wide range of orangeries, enhancements to the Global or K2 roof and a range of structural orangeries, Venetian, Rio, Integra and Modena.

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Integra

Integra is a classic and sturdy traditional brick-built orangerie design, which includes a lantern roof and wide perimeter gutter system supported inside the cavity wall, and discreetly concealed from view behind the external parapet.



Venetian

Venetian presents the ultimate in contemporary orangerie design technology. The structural aluminium posts are optional yet give complete freedom, allowing designers to specify additional options, such as fully-framed walls, brick work or large bi-folding doors in the knowledge that these elements do not support the roof.



Global Summer

Global Summer is a design enhancement of the market leading and proven Global conservatory roof to provide a cost-effective orangerie solution. Global Summer delivers the distinguished look of a traditional orangerie with external design features precisely engineered to provide a high quality aesthetic appearance.



Modena

Modena offers all of the benefits of a structural orangerie in a striking, modern form that is particularly suited to contemporary urban buildings, such as town houses.



Rio

Rio's flat roof detailing delivers a strikingly different appearance from alternative orangerie designs, with the eye-catching lantern visibly 'sat' on top for maximum visual impact.



Capella

Capella is a modular system that offers a series of upgrade options for a standard K2 conservatory roof to achieve a customised orangerie look, whilst avoiding the extra building work or added cost associated with fully structural orangeries.



Made to measure options - **colours and hardware**

All of our products are available in a range of colours and styles of hardware. Please ask for details on the full range available and ensure you have seen a colour swatch prior to placing an order.

Colour Options - PVC-U



Hardware



Not all products are available in all colours - ask for details



Made to measure options - **glass**

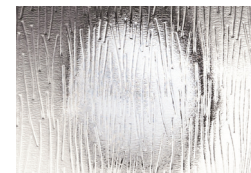
Our inspiring range is available in a variety of contemporary and traditional designs. Below is a small selection, please ask for full details



Everglade™



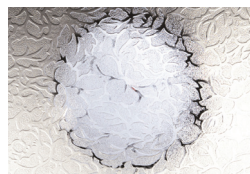
Pelerine™



Charcoal Sticks™



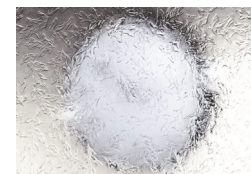
Stained



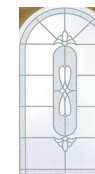
Florielle™



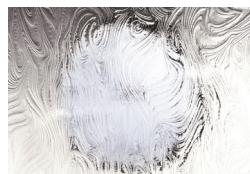
Mayflower™



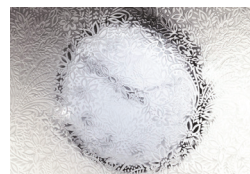
Oak™



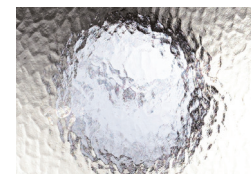
Etched



Taffeta™



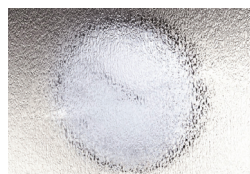
Chantilly™



Minster™



Resin Bevel



Contora™



Digital™



Warwick™



Bevelled



Made to measure **cavity closers**

For sealing cavities around the openings in walls - choose CavCrystal. This BBA accredited system provides a rigid template for brickwork, optimises time spent on site and boosts the productivity of window installers and bricklayers.

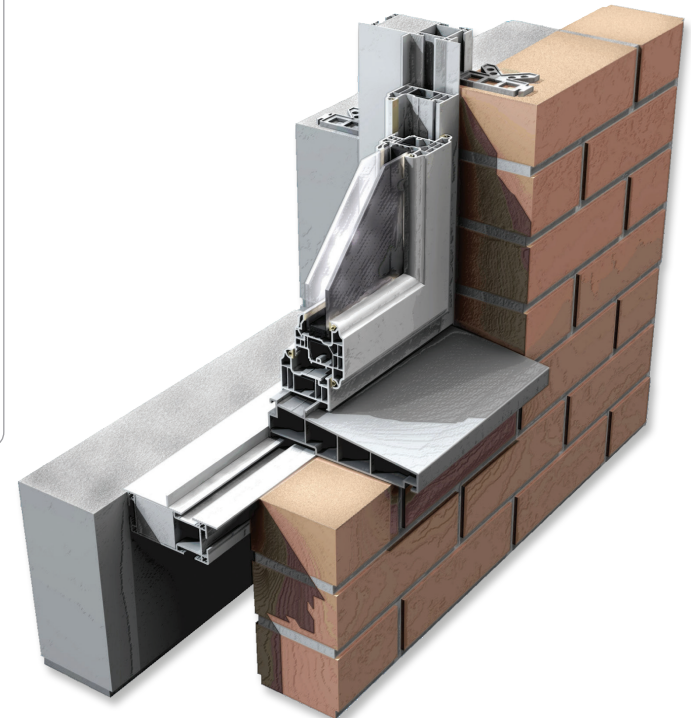
CavCrystal requires no tools, adhesives or screws as the system simply clicks together. Manufactured entirely from recycled PVC-U, our cavity closers are the perfect choice for every new build project and assist compliance with the Code for Sustainable Homes.

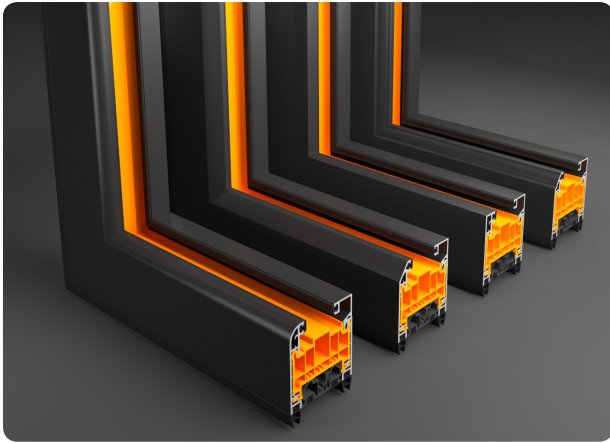
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- Uses a reusable bracket and brace system
- Manufactured from 100% recycled PVC-U
- Tough and robust design
- Quick and easy to fabricate and cut
- No adhesives required
- Fully approved by the BBA
- Compatible with most window systems
- Windows can be fitted internally or externally
- Helps comply with HSE working at height guidelines
- Available in kit form for site assembly or fully factory manufactured with welded joints





NEW products

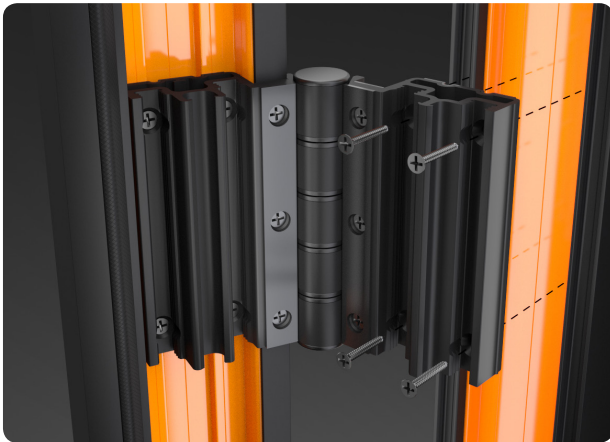
We continually develop new products to add to our portfolio to give you, the customer, more opportunities to sell. We have just launched a new aluminium folding sliding door, French and residential doors, and very soon we will be adding a solid roof to our portfolio!

Aluminium folding sliding door system

Our innovative aluminium folding sliding door system incorporates a radically different product design approach to deliver a new high performance fenestration framing solution: 'warm aluminium'.

Designed from scratch starting with a clean sheet of paper, every single component has been concept sketched, detail designed, prototyped, tooled, trial installed and rigorously tested. This is a high quality aluminium folding sliding door solution with peerless thermal performance that ensures end-user comfort, all year round.

- Thermal core reducing the threat of cold bridging
- 70mm front to back overall sash depth
- Market leading thermal performance due to multi-chambered insulating core
- High Security Door System
- Achieves PAS24:2012
- Secured By Design With Laminated Glass
- Part M Compliant
- High performance glazing
- Engineered hardware



Solid roof - **COMING SOON!**



Industry jargon explained



What is FENSA?

FENSA (Fenestration Self-assessment Scheme) was set up by the Glass and Glazing Federation (GGF), with Government approval, in response to the new Building Regulations for England and Wales which came into force on the 1st April 2002.

All replacement glazing in dwellings now comes within the scope of the Building Regulations. Anyone who installs replacement windows or doors has to comply with improved thermal performance standards. When having their windows and doors replaced, homeowners must ensure that they get a certificate from the Local Authority Building Controller or have the work completed by a FENSA Registered Company. One of the main reasons for this change to the Building Regulations is the need to reduce energy loss.

Registered approved member companies of FENSA are allowed to self certify their installations and will be subject to random checks. All installations will be recorded on the FENSA database which will be made available to local authorities and the Law Society. FENSA will issue certificates to householders as proof of compliance. When a householder wishes to sell the property, solicitors will check with the Law Society to ensure compliance with Buildings Regulations, failure will result in the cost of obtaining retrospective approval.

Those companies that do not comply and/or are not members of FENSA must obtain Building Regulations approval. FENSA applies to installation NOT product or manufacturing, an installer can be FENSA registered, not a product, it is not compulsory, it is an alternative to the traditional route of seeking Building Regulations approval. FENSA only covers installations of windows and doors in a replacement environment, it is NOT applicable to any new build construction.

For more information on FENSA visit www.fensa.co.uk



What is SECURED BY DESIGN?

Established in 1989, Secured by Design (SBD) is owned by the Association of Chief Police Officers (ACPO) and is the corporate title for a group of national police projects focusing on the design and security for new and refurbished homes, commercial premises and car parks as well as the acknowledgement of quality security products and crime prevention projects.

Crystal windows have been tested, approved and certified to achieve SBD standards. Details available on request.



What is CE MARKING?

CE marking indicates that a product conforms to legal requirements in specific European technical standards known as harmonised European Norms ('hEN').

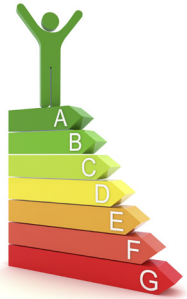
It enables a product to be placed legally on the market in any European member state. However, regulatory requirements may differ from country to country. Note, this will mean Scotland, Wales and Northern Ireland in the future as the devolved administrations have responsibility for Building Regulations in their countries.

The CE marking symbol is placed on either the product or the packaging accompanying the product.

The manufacturer is the company that brings together the frame and the glazing, i.e. a company that buys frames from one source and IGUs from another is deemed to be the manufacturer under the CE regulation.

All Crystal windows and doors are fully CE compliant.

Industry **jargon explained**



What are **WER'S**?

In 2005, the Glass and Glazing Federation took over the British Fenestration Ratings Council (BFRC) and significantly increased its brand awareness and the widespread acceptance of WERs through the large numbers of licences and licence holders.

The GGF and BFRC also gained Government acceptance of WERs resulting in it now being a means of; compliance with Building Regulations and the increasing focus on solar gain benefits as opposed to simply U values - which tended to lean towards new buildings with fewer glazed areas. Today, the Window Energy Rating (WER) system follows a similar rainbow label that consumers are familiar with on white goods, easily understanding the level of thermal performance for their new windows.

All Crystal windows are C rated as standard. An upgrade to A rated is available on request.



What are **PRODUCT WARRANTIES**?

All products must be installed and maintained in accordance with Crystal Clear Group Limited recommendations for the same, full information available on request. This warranty must not be reproduced without Crystal Clear Group Limited's express and written permission and refers the cost of repair and/or replacement product only in accordance with Crystal Clear Group Limited's Terms and Conditions of Trade (copy available on request). This warranty is in no way associated with installation costs and/or consequential loss.

All Crystal products carry a 10 year manufacturer's warranty.

NOTES

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THINK PVC-U WINDOWS DOORS AND CONSERVATORIES THINK CRYSTAL



No.1 for choice • No.1 for colour

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