Everest Core Technical Guide

Version 2.0

27/06/2018

Everest
FIT THE BEST

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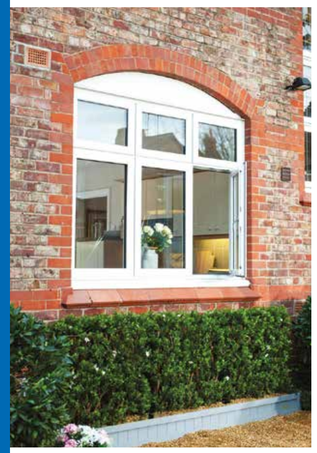
A lot has changed since Everest first started improving homes in 1965. We have introduced an ever growing range of products, and continue to be at the forefront of product development. It is our commitment to producing the best products of their kind on the market that marks us out in the industry. During our time, we have helped over 2 million people enjoy warmer, safer and quieter homes. All of our products are proudly made in Britain. This Technical Guide covers all the information and technical details you need so that you can ensure that Everest's fine range of products will solve all your home improvement problems and you can be sure you are fitting the best.

MADE IN BRITAIN



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1.0 Introduction

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1.1 A Brief Company History

1965
Foundation of company (Home Insulation Ltd) selling aluminium secondary glazing in Waltham Abbey, Essex

1967
The company becomes known as Everest and is a market leader

1978
Everest begins selling aluminium double glazing

1979
Our 'Fit The Best' brand statement was born

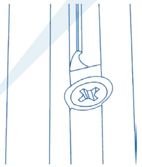
1982
Ted Moult becomes our brand ambassador & synonymous with our heritage

1984
Everest introduces uPVC double glazing to their range

2003
U-Values introduced as part of a UK building regulation

2005
The advertising standards authority rules that "Everest products still have a significant advantage over competitors."

2015
Everest triple glazing earns WER A++ 21 & our uPVC Smoothweld no-groove finish is launched



2017
Everest introduces their strongest most secure locking system yet - GrabLock, developed with Yale

1.2 Accreditations

Company Standards

ISO 9001:2015 Quality Management

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Industry Standards

FENSA Registered No. 12404

GGF Glass and Glazing Federation

Conservatory Association

APPROVED CODE TRADINGSTANDARDS.UK

BFRC

Interlay The Association of Paving Contractors

TRUST MARK Government Endorsed Standards www.trustmark.org.uk

TGAS The Glazing Arbitration Scheme

Product Accreditations

energy saving trust endorsed product

Secured by Design Official Police Security Initiative

FSC

KM660666 Aluminium Window System Supplier Enhanced Security PAS24

KM7272 Aluminium Door Fabricator Enhanced Security PAS24

KM7817 Fabricator Aluminium Alloy Windows

KM77912 Window Fabricator Enhanced Security PAS24

KM77911 KM12891 PVC U Windows

KM598445 Composite Doors Enhanced Security PAS24

KM660665 KM60363 PVC U Door Fabricator Enhanced Security PAS24

KM12894 Extruded profiles

KM37917 Insulated Glass Sealed Units

KM7077 Thermally toughened Safety Glass

KM33534 PVC U Improved Security Windows

KM508760 Rainwater Systems

BBA Approval Inspection Testing Certification

BBA Certificate 03/4067 for Roof Waterproofing System

BBA Certificate 06/4318 for Conservatory Roof Systems

BBA Certificate 13/5035 for uPVC Roofline System

BBA Certificate 11/4856 for uPVC Cladding System

1.3 Products Offered

uPVC Windows

uPVC Doors

Composite Doors

Aluminium Windows

Aluminium Doors

Secondary Windows

Amdega Collection Windows

Amdega Collection Doors

Bi Fold Doors

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1.3 Products Offered

Patio Doors

Garage Doors

Roofline

Greener Grass

Driveways

Security Systems

Fire Doors

Conservatories

Orangeries

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1.4 Terminology

A

Acoustics
The science of sound and sound control. For more information, see *section 2.7.*

Air Infiltration/Leakage
The amount of air leaking in and out of a building through cracks in walls, windows and doors.

Annealed Glass
Annealed glass is another name for standard float glass, the glass is annealed as part of the cooling process which takes stresses out of the glass.

Aperture
The opening for a window/door to be installed within.

Argon
An inert, non-toxic gas often used in insulating glass units to reduce heat transfer.

B

Balance
A mechanical device (normally spring-loaded) used in sliding sash windows as a means of counterbalancing the weight of the sash during opening and closing.

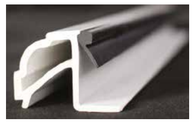
Backplate/ Faceplate

The housing component of a handle and lock on a door.

Bay Window

An arrangement of three or more individual window units, attached so as to follow project from the building. A bay window can be distinguished from a bow window by the fact that you can walk inside the bay window and you cannot walk into a bow window. For more information, see *section 4.4.*

Bead



A fixing strip/trim which holds the glass into the frame. Glazing beads can be fitted on the inside/outside of the window. An internal bead is utilised to prevent the removal of the bead by potential burglars on the outside of the property.

Bitumen
A crude oil based rubber that is used around the perimeter of sealed units to create an air tight seal. For more information, see *section 2.2.*

Bow Window

An arrangement of two or more individual window units, attached so as to project from the building. A bow window can be distinguished from a bay window by the fact that you cannot stand inside the projection created by a bow window.

C

Casement

A window sash that swings outwards to open.

Cill/Sill

The lowest horizontal member in a door, window, or sash frame.

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1.4 Terminology

Chamber

Hollow space in a profile that increases thermal efficiency and rigidity. This is formed during profile extrusion using the die.

Clearline Glazing
When the gasket sits below the edge of the frame meaning an unobstructed view through the pane and no black line around the edge of the glazing.

Composite
A material consisting of two or more materials for example, a GRP material, which is comprised of Glass Reinforced Plastic.

Condensation

The deposit of water vapour from the air on any cold surface when humid air is in contact with it - such as a cold window glass or frame that is exposed to humid indoor air.

Conduction
The transfer of heat through a solid material by contact of one molecule to the next. Heat flows from a higher temperature area to a lower temperature or vice versa.

Convection
A heat transfer process involving motion in a fluid/air caused by the difference in density of the fluid and the action of gravity. Convection affects heat transfer from the glass surface to room air, and between two panes of glass.

Cool Spots

Condensation formed around the colder sections, usually the perimeter, of a sealed unit.

Cottage Bars/Georgian Bars

Traditionally, a Cottage style window was made up of several small panes of glass fixed within a matrix of horizontal and vertical bars. In modern windows this effect is achieved by applying narrow strips of profile to the outer surface of the glass which will be aligned with a spacer bar between the panes of the sealed unit. This makes it appears the window is made up of multiple smaller glazed units - this is known as 'authentic' Cottage bars/Georgian bars.

D

DER's
The energy rating system used to grade doors. For more information, see *section 8.5.*

Desiccant
A crystalline substance used to absorb moisture and prevent excess humidity. Everest uses desiccant substances to absorb the moisture from within the sealed air unit which is positioned in the spacer bar.

Dewpoint
The temperature at which water vapour in air will condense at a given state of humidity and pressure.

Door Curtain

On Sectional and Roller garage doors, the linking sections/ lathes make up the door curtain. This is the 'door' part of the garage.

Dormer
A space which protrudes from the roof, usually including one or more windows.

1.4 Terminology

Double Door
Also known as a French Door, double doors are made from two connected door panels which can be designed to swing inwards or outwards. They are particularly popular back door designs which can grant easier access to your garden. One door will be the master door which normally opens and a slave door which is normally closed.

Double glazing
In general, two panes of glass separated by a spacer bar within a sealed unit to improve insulation against heat transfer and/or sound transmission. In factory-made double glazing units, the space between the glass sheets is sealed airtight.

Drip

A projecting fin or a groove at the outer edge of a sill, soffit, or other projecting member in a wall designed to interrupt the flow of water downward over the wall or inward across the soffit.

Dummy Vent

Dummy Vents are implemented to create an equal line between top 'opener' windows and fixed panes. The fixed window panes are fitted with 'dummy' sashes which imitate the look of the opener windows, making all the visible panes sit in line. This creates an 'Equal Sightline'.

E

Egress
A window hinge that allows the window to be opened to 90 degrees to enable escape in the event of an emergency. For more information, see *section 4.9.*

Emergency Exit
A window large enough for a person to easily climb out of in case of fire or another emergency.

Energy Rating
A system that calculates the energy efficiency of windows and other forms of glazing. Everest uPVC Casement Windows carry an A++-Rating from the British Fenestration Rating Council (BFRC). For more information, see *section 4.5.*

EPDM (Ethylene Propylene Diene Monomer)
A synthetic rubber used as seals on windows and doors.

Equal Sightline

Equal sightlines are created when each section of a window is balanced, that every part of the frames, glass panes and glazing bars is in line. This is used to give the window a much more pleasing aesthetic as there is an element of symmetry in the design of the window. For more information, see *section 4.7.*

Extrusion
The process of producing vinyl or aluminium shapes by forcing heated material through an orifice in a die.

F

Façade
The front or 'face' of a building.

Fanlight

A window above a door that can both be opened or fixed. Also known as a top light. For more information, see *section 8.10.*

Fenestration
The placement of window openings in a building wall, one of the essential elements in controlling the exterior appearance of a building. Also, a window, door, or skylight and its associated interior or exterior elements, such as shades or blinds.

1. Introduction

1.4 Terminology

Fibreglass
A composite material made by embedding glass fibres in a polymer matrix.

Finish
A coating applied to the outer surface of a material to improve its performance and/or aesthetics.

Fixed Light/Pane
A pane of glass installed directly into non-operating framing members.

Fixed Panel
An inoperable panel without any locks, hinges, handles or sash.

Fixed Window/Dummy Vent
A window with no operating sashes.

Float Glass
Glass formed by a process of floating the material on a bed of molten metal. It produces a high-optical-quality glass with parallel surfaces, without polishing and grinding. For more information, see *section 3.2.*

Floating Mullion
A dummy central post that sits vertically in a window frame between two opening sashes, but which is attached to one of the sashes to provide an unobstructed space when the window is open (usually for escape in the event of an emergency).

Fogging/Misting
A deposit of contamination left on the inside surface of a sealed insulating glass unit due to extremes of temperatures or failed seals.

Flush

A type of sash that sits flat to the frame creating a seamless construction. This is an aesthetically pleasing style that is derives from traditional Timber Windows. For more information, see *section 5.3.*

Frame

The supporting structure around the outside of a window/door which holds the sash or slab as well as hardware.

Fusion Welding
The manufacturing process of fixing window profiles together through heat application to the ends and then being pushed together. Once cooled, this provides a solid weld.

G

Gas Fill
A gas, other than air, placed between window glazing panes to reduce the U-factor by suppressing conduction and convection.

Gaskets

A seal that fills space between two surfaces. Most often in windows and doors, this will be between the profile and the glazing/sealed unit to secure it in place and avoid the two coming in contact and causing stress on them.

Gearbox
Mechanism that sits behind the handle, that when turned will operate the locking system fitted on the door.

Georgian Bar/Cottage Bars
Traditionally, a Georgian style window was made up of several small panes of glass fixed within a matrix of horizontal and vertical bars. In modern windows, this effect is achieved by applying narrow strips of profile to the outer surface of the glass which will be aligned with a spacer bar between the panes of the sealed unit so that it appears that the window is made up of multiple smaller glazed units - this is known as 'authentic' Georgian Bar (see also Cottage Bars).

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1.4 Terminology

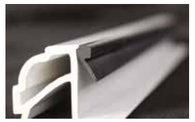
Georgian Effect

Unlike authentic Cottage Bar designs (see above), a window with a Georgian effect does not have profile on the outer surface of the glass. The Georgian affect is created by bars of uPVC between the panes. This makes the surface of the glass easier to clean as it is unobstructed.

Glazing

The glass or plastic panes in a window or door.

Glazing Bead



A moulding or stop around the inside or outside of a window frame to hold the glass in place. Glazing beads will be fitted on the inside of the window to prevent the removal of the bead by potential burglars on the outside of the property.

H

Heat Gain

The transfer of heat from outside to inside by means of conduction, convection, and radiation through all surfaces of a house.

Heat Loss

The transfer of heat from inside to outside by means of conduction, convection, and radiation through all surfaces of a house.

Horizontal Slider

A window with a movable panel that slides horizontally.

Horn

Horns are an additional feature available on Sliding Sash windows. They are decorative elements that sit on the bottom of the top sash. For more information, see *section 5.6.*

I

Inner Pane

The closest glass pane to a building's interior within a double or triple glazed unit.

Insulation

Construction materials used for protection from noise, heat, cold or fire.

Interlock

An upright frame member of a panel in a sliding glass door which engages with a corresponding member in an adjacent panel when the door is closed. Also called Interlocking Stile.

J

Jamb

A vertical member at the side of a window frame, or the horizontal member at the top of the window frame, as in head jamb. For more information, see *section 4.2.*

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K

Kitemark British Standard

An accreditation confirming that the product meets the requirements of the British or European standard. Everest products carry numerous Kitemark's from the British and European Standards authorities and are regularly tested to ensure they maintain their high standard of quality.

Krypton

An inert, non-toxic gas used in insulating windows to reduce heat transfer. Krypton is much denser than Argon but is very expensive too.

KWH (KiloWatt Hour)

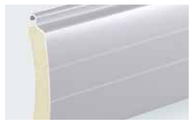
Unit of energy or work equal to one thousand watt-hours.

L

Laminated Glass

Two or more sheets of glass with an inner layer of transparent plastic to which the glass adheres if broken. Used for safety/security glazing and sound reduction. For more information, see *section 3.2.*

Lathes



The linked structural pieces used on Roller Doors. These interlock with each other to form the curtain and enable the rolling element of the door. For more information, see *section 1.7.*

Leading

A decorative application on windows which is used to create patterns, usually in a grid or lattice, with lead strips.

Light

A window; a pane of glass within a window. Double-hung windows are designated by the number of lights in upper and lower sash, as in six-over-six. Also spelled informally lite.

Lintel

A horizontal structural member above a window or door opening that supports the structure above.

Low-Emittance (Low-E) Coating

Microscopically thin, virtually invisible, metal or metallic oxide layers deposited on a window glazing surface primarily to reduce the U-factor by suppressing radiative heat flow.

M

Maintenance

The time and effort it takes to keep your home improvements in full-working order and looking their best. Everest products are designed to be as low-maintenance as possible, through our use of high-quality materials and craftsmanship, and our comprehensive long-term guarantees. For more information, see *section 1.7.*

Mechanical Joints

A manufacture technique in which profiles are fixed at 90 degrees using alternative forms of jointing other than welding.

Mortise Lock

A lock fitting a rectangular-shaped cavity in the edge of a door.

Mullion

A major structural vertical member between window units or sliding glass doors (see also floating mullion). For more information, see *section 4.2.*

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Muntin
The vertical structural profile member fitted centrally on doors.

Multipoint Lock
A locking system, operated with one handle, that secures a window or door at two or more locking points to the frame. This is one of the most common types of locking system and one of the most secure. For more information, see *section 4.6.2* (Windows) and *section 8.6* (Doors).

O

Obscure Glass
Glass that incorporates a textured design, such as frosting, etching, etc. Obscure glass is typically used in windows, patio doors or conservatories to protect the privacy of the homeowner, or for decorative effect. For more information, see *section 2.5.*

Openable Window
Window that can be opened for ventilation.

P

Pane
One of the compartments of a door or window consisting of a single sheet of glass in a frame; also, a sheet of glass.

Panel
A major component of a sliding glass door, consisting of a light of glass/uPVC slab in a frame installed within the main (or outer) frame of the door. A panel may be sliding or fixed, transparent or solid.

Patio Doors
A style of door that features sliding glass panels for ease of access and maximum glazed areas. This design is most popular as a back entrance, opening out onto your garden or balcony.

Profile

A length of extruded material.

Q

Q-Lon

Modern weather seal made of a foam core and a polyethylene film with memory like properties.

R

Rebate
When an overlap is created between the sash and the frame, meaning a compression between the two. This works in tandem with the gaskets to form an air tight seal.

Refraction
The deflection of a light ray from a straight path when it passes at an oblique angle from one medium (such as air) to another (such as glass).

S

Safety Glass
Glass that, when broken, shatters into tiny cubes (see also tempered glass). For more information, see *section 2.3.*

Sash

The portion of a window that includes the glass and the framing sections directly attached to the glass, not to be confused with the complete frame into which the sash sections are fitted.

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Sealant

A material used to seal any opening or junction of two parts, such as between the glass and a metal sash, commonly made of silicone, butyl tape, or polysulfide.

Sealed Unit

A sealed unit is the part of a window that sits within the profile and the frame. The unit consists of the glazing and the spacer bars that are sealed together with argon gas inside. These are secured into the sash profiles using glazing beads. For more information, see *section 2.2.*

Secondary Window
A second pane of glass fitted in the reveal behind your existing window allows additional warmth and security without compromising the look of your home. As a result, they are most popular in traditional properties and listed buildings. For more information, see *section 6.4.*

Sheet Glass
A transparent, flat glass found in older windows, now largely replaced by float glass.

Sightlines
The area of a pane that is able to be looked out of, that is created by the horizontal and vertical lines of the sash or frame. For more information, see *section 4.7.*

Silicone Seal
Silicone seals are used to fill edges when the frames are fitted into the aperture. This keeps it air and weather tight.

Sill/Cill
The lowest horizontal member in a door, window, or sash frame. Used to take water away from the wall. For more information, see *section 4.2*

Single Glazing
Single thickness of glass in a window or door.

Spacer Bar

The linear bar that separates and maintains the space between the panes of glass in sealed unit. This also enhances its insulating values.

Stays
A device used to keep a window sash opened/closed. For more information, see *section 4.9.*

Steel Reinforcement
A rectangular shaped insert that is fitted inside a profile chamber to add strength to the sash and frame.

Storm-proof

A term used with Casement windows where the sash overlaps the frame when closed.

T

Toughened Glass
Treated glass that is strengthened by reheating it to just below the melting point and then quickly cooling it. When shattered, it breaks into small pieces. Approximately five times stronger than standard annealed glass; and is required as safety glazing in patio doors, entrance doors, side lights, and other hazardous locations. It cannot be re-cut after toughening. For more information, see *section 2.3.*

EVEREST TECHNICAL GUIDE

1.4 Terminology

Thermal Break

An element of low conductance placed between elements of higher conductance to reduce the flow of heat. Often used in aluminium windows.

Thermal Expansion
Change in dimension of a material because of temperature change.

Thermal Transmittance
The percentage of radiation that can pass through glazing. Transmittance can be defined for several types of light or energy, e.g., visible light transmittance, UV transmittance, or total solar energy transmittance.

Threshold
The member that lies at the bottom of a sliding glass door or swinging door; the sill of a doorway. For more information, *see section 4.2.*

Tilt Turn window
A type of window that has a dual hinge mechanism which allows the sash to be tilted inwards at the top for ventilation or opened fully inwards, on side hinges, for cleaning of the outside surface of the window. For more information, see *section 5.5.*

Tinted glass
Glass coloured by the incorporation of a mineral admixture. Any tinting reduces both visual and radiant transmittance.

Transom
A horizontal transverse beam or bar in a frame; a crosspiece separating a door or the like from a window or fanlight above it.

Trim
Decorative pieces applied to the sash and frame to complete the design of the window and hide any structural details.

U

U-factor (U-value)
A measure of the rate of non-solar heat loss or gain through a material or assembly. The lower the U-factor, the greater a window's resistance to heat flow and the better its insulating value.

Ultraviolet Light (UV)
The invisible rays of the spectrum that are outside of the visible spectrum at its short-wavelength violet end. Ultraviolet rays are found in everyday sunlight and can cause fading of paint finishes, carpets, and fabrics.

uPVC
Un-Plasticized Polyvinyl Chloride also known as PVC-U/PVC-UE. A rigid, chemically resistant form of PVC used for window frames and profile. Its low-maintenance and structural properties make it the ideal material for the manufacture of windows and doors. For more information, see *section 3.1.*

Unequal Sightline
Unlike equal sightlines, this is when a window has two lights which have different sized panes of glass, usually due to there being an opening sash. When this happens, the vertical and horizontal lines of the two do not match, meaning there is an unequal sightline. For more information, see *section 4.7.*

V

Vent

The movable framework or sash in a glazed window that is hinged or pivoted to swing open; also describes a mechanism which allows air to circulate from inside a room to outside, and vice versa.

W

Warm-edge Technology/Spacer
The use of a low-conductance spacer bar to reduce heat transfer near the edge of insulated glazing.

Warp
A curve, bend or other deviation from flatness in glass.

Weather Stripping
A strip of resilient material used for covering the joint between the window sash and frame to reduce air leaks and prevent water from entering the structure.

WER's (Window Energy Rating)
Rating system in which windows are graded on thermal efficiency, allowing them to be compared with one another.

Window Board
Structural piece on the interior of the window connected to the sill. For more information, see *section 4.2.*

Window Hardware
Various devices and mechanisms for the operation of the window including catches, fasteners and locks, hinges, pivots, lifts and pulls, pulleys and sash weights, sash balances, and stays.

1. Introduction

1.4 Terminology









2.0 Glazing

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2.1 Glass Types

Low Iron

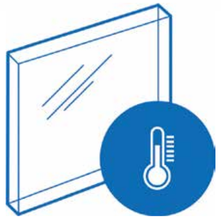
Low iron glass is "clearer" than regular glass as it has less parts per million ppm of iron. This means it lets through more of the sun's free energy and heat into your home.

Clear Glass	**475 ppm**
Low Iron Glass	**150 ppm**

Approximate values subject to variance

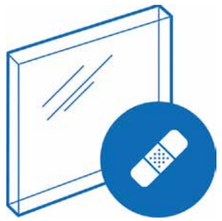
Heatlock (Low-E)

A high performance glass with Low-E coating, low-emission and double glazed units. This energy efficient glass retains heat and keeps bills down. Our standard sealed units also includes layer of argon gas, which keeps extra heat inside.



Toughened

Designed and toughened to shatter into fragments if shattered for enhanced safety. Regulations dictate when this must to be used but can be installed anywhere. Safety glass required below or partly below 1500mm for doors and side-panels within or partly within 300mm of a door and below or partly below 800mm for windows.



Laminated

Everest's 6.4mm & 6.8mm laminated security glass surpasses every security standard on glass with an extra layer of laminate for added security. Laminated glass offers significant performance benefits over non-laminated glass. The layer in the centre is made from PVB, polyvinyl butyral.

2. Glazing

2.1 Glass Types

Acoustic Laminate

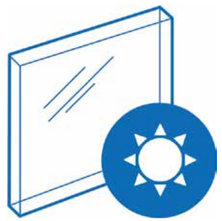
Sound reduction glass is another form of laminated glass that has a special polymer layer which has been engineered to absorb sound waves and reduce noise pollution from entering your home.

Obscure

A range of patterns available with different levels of privacy to suit your needs. Ideal for bathrooms bedrooms or anywhere else you want privacy.

Solar Control

Solar control glass sunlight to pass through while radiating and reflecting away a large degree of the sun's heat. The indoor space stays bright and much cooler than would be the case if normal glass were used. It incorporates invisible layers of special materials on the glass which have the dual effect of allowing sunlight in, while repelling solar heat.



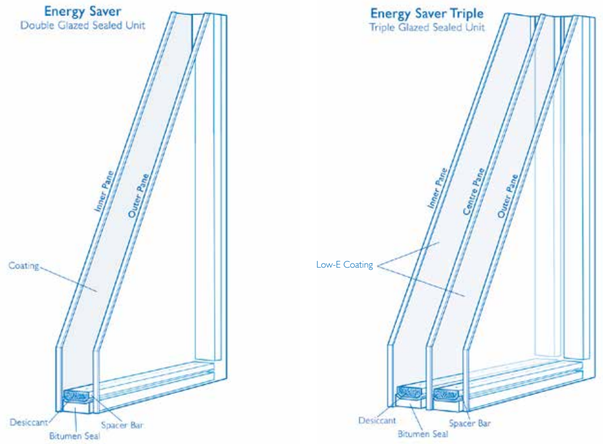
Easy Clean Glass

Easy cleaning glass has a special coating on the outside surface. The first stage of the cleaning process is "photo-catalytic". In this stage, the coating reacts with daylight to break down organic dirt. The second stage is "hydrophilic". Here, instead of forming droplets, rainwater hits the glass and spreads evenly, running off in a "sheet" and taking the loosened dirt with it, also drying quickly without leaving streaks.

2.2 Sealed Unit Parts

Glazing

Everest offer a wide range of glazing solutions. This list of glazing options is in *section 2.4*. Some solutions involve just one of the panes for example, the use of obscured outer panes for added privacy but that still allow light and heat to pass through. However, the majority of these solutions involve a combination of panes in the unit which shows the importance of not only double/triple glazing but also choosing a combination of panes which helps solve any historical glazing problems you may have. One thing that you will never have to worry about are blown/foggy sealed units as we guarantee our sealed units against leaking and fogging up for a lifetime.



Double Glazed Sealed Unit

Triple Glazed Sealed Unit

2. Glazing

2.2 Sealed Unit Parts

Spacer Bar

Most of the energy lost through a window is lost at the cool spots at the edge of the glazing. This is because historically, the old aluminium spacer bar was acting as a thermal bridge allowing heat to transfer from the inner pane to the outer pane. In Everest windows, we use a warm-edge spacer with desiccant beads for greater thermal efficiency. The warm edge spacer has better insulating properties than the aluminium spacer used in most windows. This is because the warm edge spacer is made from a composite material designed to act as an insulator. The desiccant makes sure the argon between the panes stays moisture free by absorbing any moisture.

The Spacer bars used in Everest windows are available in two colours, Black and Grey. The Grey is used for the Essentials Range and the Black for the Exclusives Range. The Black Spacer bar provides an almost 'borderless' aesthetic which blurs the lines between the frame and glazing.

Gas Between the Panes

The sealed unit of a window is arguably its most important part as its the part you see through but not only that - it makes up most of the window and therefore, it is at the biggest risk of being the part which leaks the most heat. Everest do a number of things to ensure that our sealed units are the best and most thermally efficient they can be. We use warm-edge spacers as mentioned above. We also use Low-E glass and soft to reflect heat back into your home. However, the process we do that has the most influence includes filling our sealed units with the inert gas, argon. This gas is much denser than air and are better insulators of heat and sound which means that compared to an air filled window, they are much more thermally efficient. Other firms will drill two small holes in their sealed unit and hand pump the argon in which often leaves the unit filled with a mixture of air and argon. Everest's sealed units are assembled by robots in rooms that are filled with argon which means that the only thing that can be in our sealed units is argon and it also means we never have to drill into the sealed unit and risk the structural integrity and air tight seal.

2.2 Sealed Unit Parts

Offline Coating

The coatings that are put on glazing in a window are located by counting the faces. A double glazed window has four faces and in a triple glazed unit, there are six (two for each piece of glass, one each side.) The very outside face of the glass on the exterior of the property is counted as face one. The reverse of that is two then opposite that is three and so on.

The offline coating (often referred to as soft coating) goes on face three in a double glazed unit and on faces three and five in a triple glazed unit. This coating is invisible to the naked eye and is extremely thin, 0.04 microns, in fact. To put this into perspective, if the thickness of the glass was scaled up to the height of The Shard, (around 300m) the coating would be the thickness of a penny laying on top (3mm).

This extremely thin coating is a very important and powerful part of the window. This coating acts as an 'invisible mirror' reflecting heat back into your property, whilst letting the free energy and light from the sun through to warm the room.

Bitumen Seal

This seal is applied to the outer perimeter of the sealed unit once the components have been assembled. This seal provides an extra added layer of protection to ensure that the unit stays airtight.

The seal is applied when molten and is spread to provide full coverage and ensure there is no gaps. The seal then sets to a rubber like finish that can flex with the expansion and contraction of the unit in the hot and cold weather.

2.3 Toughening & Safety Glass

Toughening

Toughened glass is sometimes required by law, although it is still available on any window at the request of the customer. Glass is toughened by heating the pane of glass up to a temperature in excess of 600°C. The glass is then cooled rapidly. Should toughened glass be hit with a force substantial enough to smash the pane, it will disintegrate into small pieces reducing the risk of injury.

Quality checks are done on every batch of glass or every 2 hours which ever is sooner. The quality test involves taking a piece of glass and breaking it with a centre punch. A 50mm x 50mm square is then placed over the break pattern. If there is at least 40 particles in the 50mm x 50mm square, the batch passes the quality test.

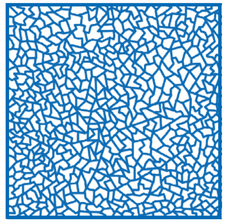
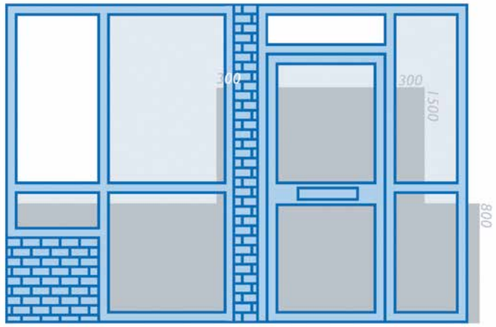


Diagram of toughened glass break pattern

Diagram of annealed non toughened glass break pattern

Safety Glass

Below is a diagram of when and where toughened safety glass is required by law. All safety glass installed meets all of the required safety and material standards set by the British Standards Institution.



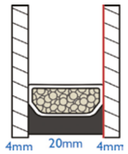
Safety glass required below or partly below 1500mm for doors and side panels within or partly within or partly within 300mm of door even with brick piers of less than 300mm and below or partly below 800mm for windows.

Panels Required Safety Glass

Mandatory Safety Glass Area

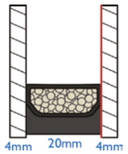
2.4 Sealed Unit Options

These are the sealed unit specifications that are offered on Everest windows. They cover a wide range of glazing solutions and each is manufactured and assembled in the UK. The standard width of a double glazed unit is 28mm which is used in all Everest double glazed casement windows. This can change depending on the window type however. The standard size of a triple glazed unit is 36mm and this does not change which makes it unsuitable for certain window types.



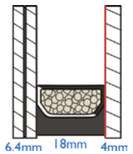
Energy Saver

- 4mm/6mm Clear Outer Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Grey Spacer



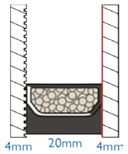
Energy Saver Plus

- 4mm/6mm Clear Low Iron Outer Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Black Spacer



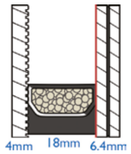
Energy Saver Security

- 6.4mm/6.8mm Laminated Outer Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Grey or Black Spacer



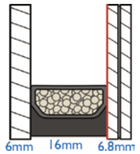
Privacy

- 4mm/6mm Obscure Outer Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Grey or Black Spacer



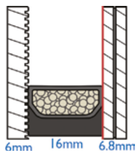
Privacy Secure

- 4mm/6mm Obscure Outer Pane
- 6.4mm/6.8mm Laminated Low-E Coated Inner Pane
- Warm Edge Grey or Black Spacer



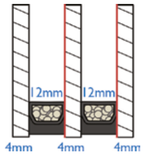
Acoustic Laminate

- 6mm Low Iron Outer Pane
- 6.8mm Acoustic Laminated Low-E Coated Inner Pane
- Warm Edge Black Spacer



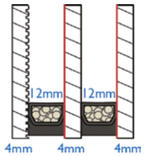
Acoustic Laminate Privacy

- 6mm Obscure Outer Pane
- 6.8mm Acoustic Laminated Low-E Coated Inner Pane
- Warm Edge Black Spacer



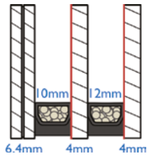
Triple Glazed

- 4mm/6mm Clear Low Iron Outer Pane
- 4mm/6mm Low-E Coated Toughened Centre Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Black Spacer



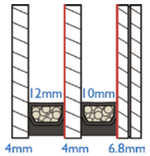
Triple Glazed Privacy

- 4mm/6mm Obscure Outer Pane
- 4mm/6mm Low-E Coated Toughened Centre Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Black Spacer



Triple Glazed Security

- 6.4mm/6.8mm Laminated Outer Pane
- 4mm/6mm Low-E Coated Toughened Centre Pane
- 4mm/6mm Low-E Coated Inner Pane
- Warm Edge Black Spacer



Acoustic Laminate Triple

- 4mm/6mm Low Iron Outer Pane
- 4mm/6mm Low-E Coated Toughened Centre Pane
- 6.8mm Acoustic Laminated Low-E Coated Inner Pane
- Warm Edge Black Space

Key

Low-E Soft Coating

Privacy Glass Pattern

2.5 Obscure/Privacy/Glass

Warwick
Privacy Level 1

Chantilly
Privacy Level 2

Minster
Privacy Level 2

Sycamore
Privacy Level 2

Taffeta
Privacy Level 3

Digital
Privacy Level 3

Autumn
Privacy Level 3

Mayflower
Privacy Level 4

Florielle
Privacy Level 4

Oak
Privacy Level 4

Charcoal
Privacy Level 4

Stippolyte
Privacy Level 4

2.5 Obscure/Privacy/Glass

Arctic
Privacy Level 4

Contora
Privacy Level 4

Arena
Privacy Level 4

Pelerine
Privacy Level 5

Cotswold
Privacy Level 5

Everglade
Privacy Level 5

White Diffusa
Privacy Level 5

Laural
Acid Etched Pattern

Canterbury
Acid Etched Pattern

Brocade
Acid Etched Pattern

Ravenna
Acid Etched Pattern

2.6 Decorative Glass Options

Full Door Panel Designs

310

314

Half Door Panel Designs

214

227

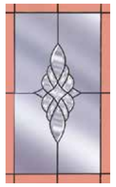
228

523

8320

8321

8324



8359

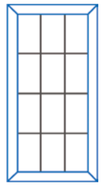
8365

8402

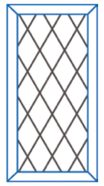
8404

2.6 Decorative Glass Options

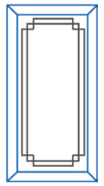
Lead Designs



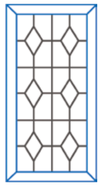
Rectangular Lead



Diamond Lead

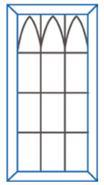


Eton Lead

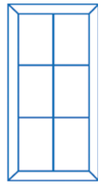


Queen Anne Lead

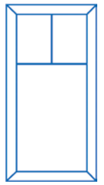
Royal Stuart Lead



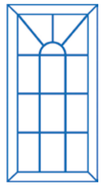
Arches Lead



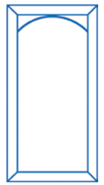
Standard Georgian Bars



Suspended Georgian Bars



Special Georgian Bars



Radius Bar

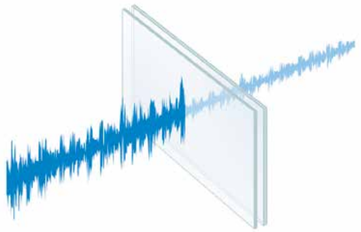
Georgian Fanlight 1

Georgian Fanlight 2

At Everest, all standard lead designs shown on this page are available in both 9mm lead and 12mm lead.

2.7 Acoustic Glass

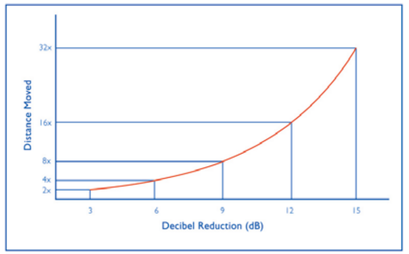
If excess noise is disturbing your sleep or road traffic is making it difficult to watch your favourite TV show, then our new Acoustic double and triple glazing options are the answer. They have been engineered to disrupt and absorb sound waves and keep unwanted noise outside, where it belongs. Research in April 2018, revealed that we are kept awake one night a week by noise or disturbances outside our homes. Whether it's the constant hum of traffic keeping you awake at night or the neighbour's extra loud band practice spoiling the enjoyment of your favourite TV show, Everest Acoustic double and triple glazing will be music to your ears.



Everest's new laminated Acoustic glass has a 6mm outer pane and a 6.8mm acoustic laminate pane specifically engineered to disrupt and absorb sound waves and reduce noise pollution.

In general, using a combination of laminated glass and different thicknesses of glass reduces vibrations and noise, so less sound travels through the window. In tests, our Acoustic double glazed windows reduce sound by 40dB, which would take the loud 80dB noise from road traffic down to a quiet 40dB noise, which is equivalent to the sound of someone speaking in a library.

Put another way, noise reduction can also be expressed in terms of distance. Every 3dB reduction in noise doubles the distance. The Everest Double Glazed window reduces sound by 33dB, but the Everest Acoustic Double Glazed window reduces noise by 40dB. This further 7dB reduction means that if a road was 20 metres from your house, with Everest Acoustic Double Glazing it will make the sound appear as if the road is 80 metres away – that's a whole 4 times further.



Type of Noise	Impression	Level (dB)
Siren	Unbearable	140
		130
Jet Plane		120
	Painful	110
Pneumatic Drill		100
		90
Noisy Street	Loud	80
Street Traffic		70
Conversation	Medium	60
Dishwasher		50
Library	Quiet	40
Whispering		30
Quiet Forest	Very Quiet	20
		10
Threshold of Hearing	Silence	0









3.0 Manufacture

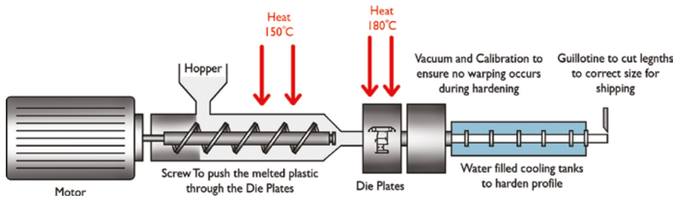
3.1 Profile Extrusion

uPVC = Un-Plasticized Polyvinyl-chloride.

uPVC is a tough material that generally exhibits excellent resistance to aggressive conditions either occurring naturally such as weather damage or man made such as a result of industrial activity. uPVC is resistant to almost all forms of chemical corrosion. The uPVC offered by most firms will offer good weather resistance however at Everest our uPVC offers excellent weather protection. We are so confident of the secret recipe that makes up the uPVC in our Everest Exclusives range that we offer a lifetime guarantee on the white finish, which means there will be no yellow windows in years to come.

Basic Profile Extrusion

The blend of salts and oil that makes up our uPVC powder is fed into the hopper where is moved through a heated barrel by an Archimedes Screw. As it reaches the die plates, it has a putty like consistency. It is heated again as it goes through the die which shapes the profile to the carefully engineered shapes. The profile is then calibrated in a vacuum to ensure that no warping occurs. The profile length then goes through a water filled cooling tank which hardens the profile. Calibration continues during this step. The profiles are then cut by a moving blade to ensure a perfect cut as the profiles move down the production line.



Foiling

Foiling is the process in which a plastic foil is applied to the profiles as they are extruded. Foils are used in the most part to give the profile a wood grain affect finish.

The profiles pass though a machine where a special resin is applied to the surface of the profile. The machine then lays the foil on top of the resin. The profile then passes under a set of rollers to ensure there are no air bubbles under the foil.

All Everest uPVC foiled finishes, where the exterior and interior finish match, are foiled onto a profile which closely resembles the foiled finish in colour. For example, grey foils are foiled onto grey profiles. Everest offer three profile colours in uPVC, these are;

White Brown Grey

3. Manufacture

3.1 Profile Extrusion

Aluminium Profile Extrusion

The method for the extrusion of aluminium profile lengths is very similar to the method used to make uPVC profiles. The main difference being that the aluminium is heated to between 400-500°C and is pushed under a huge amount of pressure through the die. It is then cooled or quenched as it comes out of the die to avoid any warping.

The aluminium is the "aged" to increase its strength. This involves heading the profile in an oven at around 190°C for 4 to 8 hours.

The profiles then go though a finishing process which protects the profiles from oxidisation.

EVEREST TECHNICAL GUIDE

3.2 Glass & Sealed Unit Manufacture

The glass we use at Everest is supplied by a firm called Saint-Gobain (Pronounced San Goban). Saint Gobain are the world's premier glass manufacturer, with over 350 years of history and experience in the industry. They are continuously innovating and developing new technology with the aim to further improve their product and create the highest standard possible. Supplying famous landmarks such as London's The Shard, The Gherkin and Tower Bridge plus international attractions such as The Statue of Liberty in New York and Sail Tower in Singapore. This demonstrates the calibre that Saint-Gobain work at and why they are the perfect and only real choice for our glass.

Saint-Gobain glass is produced in the UK using the float process which is a historic method used throughout the world. The basic formula for glass floating hasn't changed much over time but with modern technology being implemented in the various stages, it has become more efficient and the end product has increased in quality and performance. This is an overview of how our glass is made:

1. The manufacturing process starts with the mixing of the batch that will eventually become the glass. There are two parts to the mix; raw materials and cullet (recycled glass). The raw materials that are used are made up of sand, soda ash, limestone, dolomite, salt cake with silica and oxides. The cullet makes up 30% of the glass batch. Utilising 30% of the batch as cullet yields many benefits to the process including reducing NOx (Nitric Oxide) emissions, reduced energy usage, increased furnace efficiency and the diversion of the cullet going into landfill. To ensure the quality of the glass is to standard the batch ingredients are crushed to the correct size whilst mixing together on a conveying system.

2. On this conveying system, the batch is fed into a furnace that is heated at a temperature of 1500°C. This melts the batch efficiently to get it to the state of molten glass which can then be processed.

3. From the furnace, a gate known as a 'tweel' controls the flow of the molten glass onto a molten tin bath. When on the tin bath the glass ribbon has a width of around 3m. The gate utilises rollers which can determine the thickness of the glass produced and allow changes to be made when necessary. As the tin can oxidise with atmospheric oxygen the whole bath is under a protective gas atmosphere of both nitrogen and hydrogen. Floating on the tin, the glass ribbon is protected and achieves the smooth surface finish. Here it is at a temperature of around 1100°C.

3. Manufacture

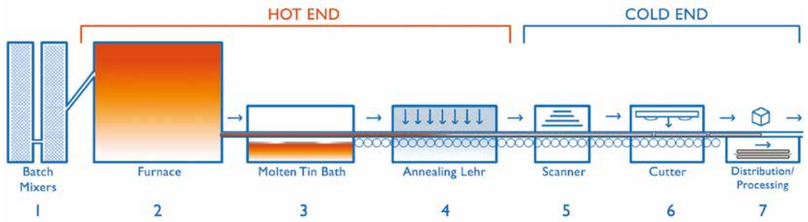
3.2 Glass & Sealed Unit Manufacture

4. The molten glass flows on rollers from the tin bath into an annealing lehr, where it begins to cool to a temperature around 600°C. The cooling releases the stresses within the glass and allows the compounds in the glass structure to form it into a solid.

5. The rollers continue to move the glass along the line where it carries on cooling to about 200°C. To provide a consistent quality in the glass product, a laser detection system scans every 1 cm^2 of the glass from above to detect imperfections and defects. These defects can be things such as bubbles, external contamination, chips and marks. The scanner can detect the size, type and position of the defect allowing it to be then cut out of the glass and taken away from the line to ensure only the highest quality of glass can be used.

6. The glass can be then cut to size using a circular blade. The sizes are specified by a machine which maximises the usage of the product. The blade moves with the glass as it rolls to allow the cut to be straight. Any excess is collected and used as cullet in future batches.

7. At this stage of the process the individual glass segments are lifted using suction pads, where they are either sent to the customer untreated or taken to be laminated or coated in the factory.



3.2 Glass & Sealed Unit Manufacture

Soft Coating/Magnetron Coating

Magnetron coating is a method used to improve glass performance when managing heat. Specified properties can be implemented in the glass to accommodate for varying degrees of control. Control of the heat from the outside is done by deflecting it away whilst control of the heat form inside your home is done by inner coating deflecting it back. The clarity of the glass isn't compromised when these coatings are applied which means the product quality remains of an immense standard. The method for producing this glass involves a lot of advanced modern technology and is implemented in these steps:

1. Before the glass is exposed to the sputtering of the magnetrons, it is cleaned and enclosed in a vacuum which eliminates contaminants that may have been picked up during the manufacturing process.

2. The glass moves through to the coating chambers where it is subject to the firing of microscopic metal oxides onto the surface, fusing them in the process. The build-up of layers that covers the whole sheet act as the protection the glass needs. The scale of these coatings on the glass are the equivalent of placing a 1p coin on top of The Shard.

3. The mixture of the metals and oxides depends on what performance properties the glass is designed to possess. The engineers can maximise the performance by changing a number of variables such as glass movement speed, spread of the sputter, quantity of the sputter and also the types of metals used.

4. The atmospheric pressure gradually increases as the coated glass comes out of the coating chamber.

5. A precision scanner analyses the coated sheets to check the layers and see if they have been applied as effectively as possible to the set product specifications as well as for defects. The quality of the coating is crucial to the functionality of the glass.

6. Once scanned and marked, the glass can be sent for distribution to the customer.



3. Manufacture

3.2 Glass & Sealed Unit Manufacture

Lamination Process

Using laminated glass can have considerably positive impact on the safety and security. The PVB (polyvinyl butyral) layer that is applied in a process that aims to improve the security of the glass by acting as a bond when the glass reaches breaking point. It prevents the glass from breaking into large pieces and makes it nearly impossible to pierce through. UV light is also blocked by the PVB layer, meaning there is a reduced risk of furniture inside your property fading over time. The process used for manufacturing the laminated glass is straight forward and includes these steps:

1. A sheet of glass is cleaned using a vacuum taking away any dust in the process ensuring the risk of contamination with the PVB layer is minimal.

2. The sheet is the lifted upwards carefully using specialist suction pads.

3. Another cleaned sheet with PVB laid on top is slid underneath the lifted sheet.

4. Slowly the sheet which has been lifted is pushed down on top of the PVB and the bottom sheet to sandwich the PVB in between.

5. The sandwiched pieces are then guided between rollers to push any air bubbles out that may exist after the three have been placed together.

6. An oven heated to around 250°C is used to bond the layers, ensuring they don't come apart. Whilst in this oven, the PVB which originally has a cloudy aesthetic, changes state and turns transparent, maximising clarity when in use.

7. To finish the process, the glass is inserted into a pressurised clave oven for several hours to cure the glass, getting rid of any remaining bubbles and making sure the lamination is as strong as possible.



3.2 Glass & Sealed Unit Manufacture

Sealed Unit Manufacture

For our sealed units, a lot of consideration and detail goes into each stage of how they are made to ensure that the quality is of the highest standard. They are potentially one of the most important aspects of the Everest range as they are a main component in the majority of the products we sell. The quality of the sealed unit emphasises and enhances our products, therefore we take pride in them being the best they can be.

Having our units produced in the UK shows that we care not only about the standard of our products, but we also want to continue our support of British manufacturing and the management of our carbon footprint which is reduced by the fact that we aren't getting our sealed units shipped in from overseas.

Each sealed unit we produce is bespoke. This helps us to monitor each individual order and streamline our manufacturing and delivery process. We produce our units by following these steps:

1. When the order comes through, the measurements are first taken and processed. The glass for the sealed unit is cut to size in conjunction with the spacer bars. Spacer bars are already prepared with the desiccant inside them.

2. The spacer bars are secured together using composite joining caps to form the structure of the sealed unit.

3. A conveying system bring the glass and the spacer bars to the same stage of the process so they match allowing them to fit perfectly.

3. Manufacture

3.2 Glass & Sealed Unit Manufacture

4. One sheet is laid with the spacer bars on top, these move through an argon filled chamber. Whilst still moving the second pane of glass gets pressed with precision on top of the spacer bar sealing the unit off. This traps the argon gas inside.

5. To secure the sealed unit a bitumen-based sealant is applied to the perimeter whilst it is in a molten state. This helps avoid the argon escaping the unit and makes it weather tight. Applying it at a molten state allows it to flex if the unit does.

6. The unit is packed and stored to be sent to be fitted into its frame.

Most of our sealed unit manufacturing is done mechanically. This is because when assembling a sealed unit, lifting the glass by hand can put unnecessary stress on the panes which can lead to warping and visual defects. When the panes are lifted by a machine, they are lifted by suction cups which lift the pane evenly ensuring that no part of the glass is under stress.

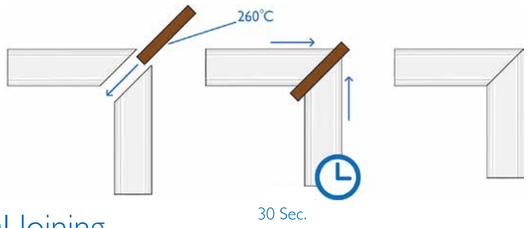
EVEREST TECHNICAL GUIDE

3.3 Joining

Fusion Welding

The lengths used to make windows and doors are often cut in pairs (top and bottom and then left and right) to ensure they are the same length. Once cut, the profile lengths are then welded together to make the frame of the window.

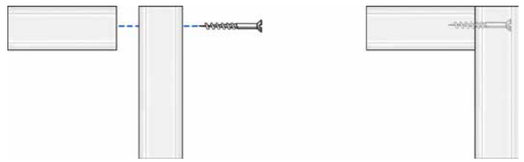
The ends of the profile are heated using a 260°C plate for 30 seconds which melts the ends enough so that when the plate is removed, and the ends are pushed together they fuse to form a strong joint. Aluminium welding is done in much the same way just at a much higher temperature.



Mechanical Joining

Mechanical joining is a joining method which involves using a screw or some other mechanical fixing to join two pieces of profile at the corner. Metal inserts are placed into the frame to add to the strength of the joint. Mechanical joining is normally used to create a 'Butt-Joint' effect. This kind of joint can't be welded as the surface area of the joint does not provide a strong enough weld.

Mechanical joining can provide a traditional but jointed aesthetic. However, it is a labour-intensive process and involves putting metal inserts and metal screws into the frame which will have a negative effect on the thermal efficiency of the window.



When the profiles are pushed together there is often an untidy finish. A machine cuts a groove along the joint to remove this untidy finish. This cut is called a feature groove. Feature grooves will come on most uPVC windows except for Everest's Exclusives Premium Window collection.

Everest's new smoothweld technology removes the need for a feature groove giving the finish of a timber window without the maintenance and better thermal efficiency. Available in only foiled finishes on the Everest Exclusive Premium Window collection.

3.4 Door Manufacture

70mm GRP Composite

Our 70mm composite doors are fabricated in the UK with the highest amount of attention to detail, meaning their quality and specification reaches the standard that we have set. Many companies in the industry provide a range of doors that have a large number of mass produced components, being shipped in bulk from overseas countries such as China. The result is usually a much more inferior door, structurally and aesthetically. With our doors, each one is made to be bespoke, providing the customer with peace of mind that we take pride in them being the best they can be. The image below show door slabs that have been shipped in from China.

3.4 Door Manufacture

MADE IN BRITAIN

Here's how we make them:

1. Our manufacturing process starts with two sheets of fibre glass matting being laid out. Another specially designed layer is combined with the fibre glass, increasing the tensile properties of the bonded sheet.

2. The two are placed on an aluminium door leaf mould. This mould has been made using real timber. This gives the most realistic grain possible.

3. Combining them with resin, the mould is heated under pressure creating two leaves door leaves, the interior and exterior.

4. Removing the now shaped door leaves from the mould, they are inspected to check they have been pressed correctly. This mould provides a precise design with a wooden aesthetic, achieving the grain for added detail.

5. A double rebated inner door frame is prepared by having profiles machined to size which are welded together. This is specified to customer door measurements.

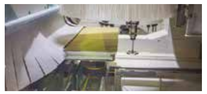
6. The interior leaf is then married to the inner frame ensuring it is aligned.

7. The interior and exterior moulded sheets are then adhered to the 70mm double rebated frame forming an inner void.

8. To ensure the frame and laves bond fully they are pressed together using intense force.

9. The void is then filled with high density insulating foam before undergoing a curing process to let it set and form.

10. Coming from the curing the excess pieces are precisely cut to size using a CNC machine.



3. Manufacture

3.4 Door Manufacture

11. All apertures for windows, letterboxes, handles or locks are precisely machined into the panel at this stage. The double rebate is also machined at this stage.

12. The panels are then sprayed painted precisely to the customer's choice of colour. Particular care is taken to ensure the deep grain is not filled in too much with the paint, so the detail can remain.

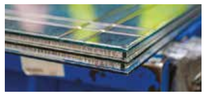
13. The painted panels undergo a full inspection before the paint fully cures to ensure full coverage and grain enhancement is achieved.

14. After being subjected to an infra-red bake the panels are then hung to fully dry the paint finish.

15. In the Glass Studio, any decorative designs that are going to be applied to the doors are hand crafted with the necessary leading and inserts to high precision.

16. If sandblasting is specified by the customer for privacy or to incorporate house names or numbers, the individual glass panes are prepared with the correct typeface and wording. The masking is pulled away after to reveal the sandblasted detailing.

17. Sealed units are prepared to with the separate components to be fit together to form the unit. The triple glazed units are then sealed before filling with insulating argon gas to enhance the thermal efficiency.



18. The sealed units, hinges and door furniture are then added to the coloured panel to form the finished door.

19. The door is hung, tested and inspected precisely to exacting standards. This allows us to make sure it is fit for use before it goes to be installed at the customer's household.

20. The finished door is then wrapped for protection before leaving the factory to the installation.

EVEREST TECHNICAL GUIDE

3.4 Door Manufacture

Aluminium Doors

The beginning of our entrance door manufacture begins with the cutting of the extruded aluminium profiles specified by the customers' requirements for their property. They are cut at 45° so that a mitre type joint can be formed when they are married together.

To join the four profiles together, they are placed in a holding jig where 'L' shaped cleats are placed into the end of the profiles. Screws are then applied from the profile to the cleat to secure them together. A strong adhesive is applied during this stage of the process along the edges of the to add to the bond between the two faces. This process is done to both the door leaf and the outer frame profiles. Gaskets for the leaf to the frame are cut to size and fixed. If mullions and transoms are required in the leaf design, they are adhered in place to complete the structural support and aesthetic in the design. The leaf design is applied using panels that use a bead to keep them in place in the leaf frame. For the designs of these leafs, the aluminium would have been pressed to form chamfers that make up the design.

Any glazing sealed units are fitted and held in place with an internal bead. The leaf is filled with high density foam to add insulation and strength to the whole door. It will then cool and set to form a solid core.

At this stage any components such as the locking mechanism are assembled and fixed in place along with their adjacent keeps. Hardware specified by the customer can then be attached to the leaf to complete the door and make it ready to be dispatched.

3. Manufacture

3.4 Door Manufacture

Amdega Collection Doors

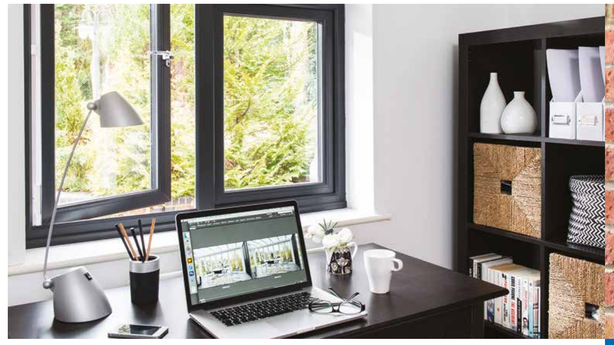
As our timber doors are bespoke made, a great deal of craftsmanship is involved to ensure they are of the highest quality. We use engineered Sapele hardwood in the door leaf due to its reliability and structural integrity. The door leaf, specified by customer requirements, is cut out using precision saw blades guaranteeing it is as close to the required parameters as possible. The leaf designs are machined from the structure and then hand finished to make sure any imperfections can be taken out and the design is as accurate as possible.

Housing for any glazing inserts and furniture are then machined out so they can be fit later down the line. Each CNC cut involves hand finishing to keep the standard of the quality remain throughout.

Mechanical components that are attached to the leaf have fixing points hand cut and planed, making sure they can sit flush and work properly in when in use. To get the required finish our doors go through different stages of sanding to ensure they have the smoothest of finishes. Treatment is applied to the Sapele, protecting the wood against rot and fungal decay. This treatment stage also stabilises the Sapele preventing it from warping and twisting over time.

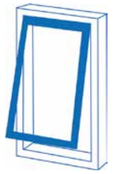
If specified, paint or stains are applied in separate coat layers so the whole door has a consistent tone and all parts are covered that need to be. Locking mechanisms for the door can then be assembled and fit appropriately, matching up with any adjacent keeps. Any furniture such as handles, and letter plates are then fixed into place by hand, the handles will be housed with the locking system to allow them to operate together.

Glazing sealed units can be then fitted into the housing that was cut previously in the process. A frame to match the leaf will have been manufactured alongside the door, guaranteeing they will fit and operate correctly when married together. Mortise and Tenon joints are utilised in the frame to provide structural support, when applied correctly they can be a very strong and durable joining technique. A quality inspection is carried out on both the door and the frame to ensure nothing has been missed and any finishing touches can be made. The finished doors are fully cleaned with any sediment removed. Throughout the whole process, the doors are kept in a controlled environment to ensure the moisture content of the door is kept to a specified standard.

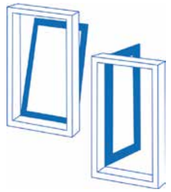


4.1 Window Types

Side Hung Casement Windows
A hinged window with an outward opening sash. These are the most commonly used window type in the UK.



Top Hung Casement
A top hung casement window that tilts outward. Also known as an Awning window.



Tilt and Turn
A dual function window that can both tilt open at the top and open inwards on hinges. Designed for larger openings with the ability to be cleaned internally.

Dummy Sash
A false sash added to create symmetry and or equal sightlines.

Sliding Window
A sliding sash window where both sashes have the option to be slid vertically as well as having the optional ability to tilt for easy cleaning.

Bay Window
A structure with at least two windows that projects from the wall line. The distinction of a bay window is that it extends all the way to the floor. For more information, go to *section 4.4.*

Plant-on Bow Window
A structure with at least two windows that projects from the wall line. The distinction of a bow window is that it does not extend all the way to the floor and cannot be walked into.

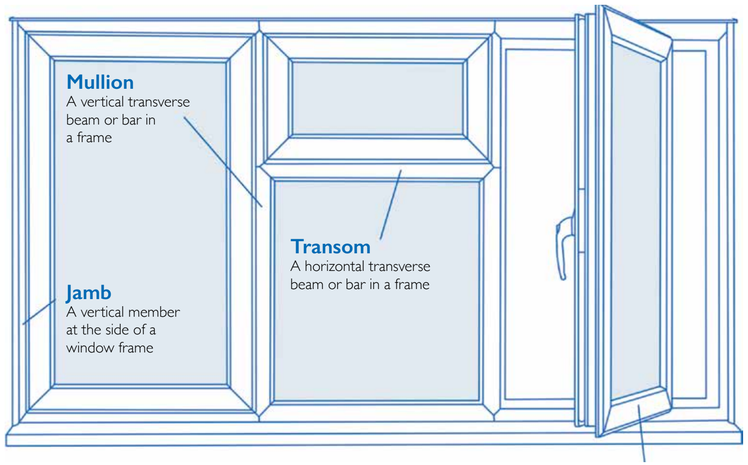
Fan Light
The commonly accepted name for a window above a door. Also known as a transom window.

Secondary Glazing
Secondary glazing sits on the window sill of your original window to add another layer of glass improving thermal efficiency of the existing windows. Made from aluminium and usually used where original windows cannot be replaced.

Fire Egress Window
Any window with at least 450mm opening in any direction and at least a third of a meter squared unobstructed open area. Designed primarily for fireman's access. See *section 4.9* for more information.

4.2 Window Parts

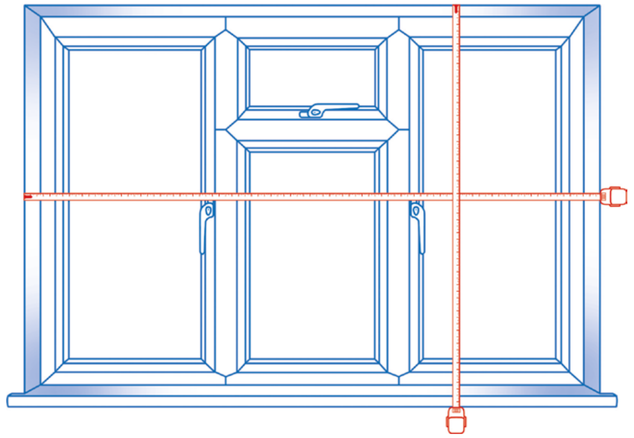
Head
A horizontal member at the top of a window frame.



Cill/Sill
The lowest horizontal member in a window or sash frame

Opening Sash
Side of top hung sash that opens on a set of friction hinges. Also known as an opener, vent or casement window

4.3 How to Measure



When measuring a window, it is important to remember these key points:

- Windows should always be measured from the inside
- Windows should always be measured horizontally from reveal to reveal
- When measuring vertically the window should be measured from the head reveal down to the bottom of the window board
- This means that the width of the window board needs to be included in the vertical measurement

Note: Tape measures give a fairly accurate measurement however they have inbuilt errors due to factors such as stretching due to age or expansion of metal strip when warm. For the best and most accurate measurement, a laser measurement device should be used.





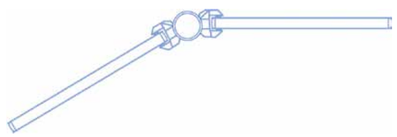


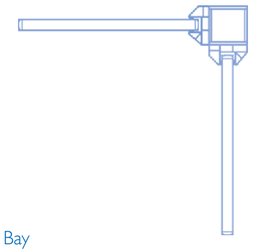


4.4 Bay Windows

Typical Configurations

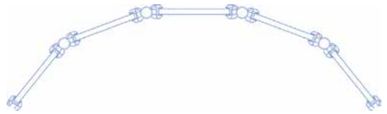
Single End Bay



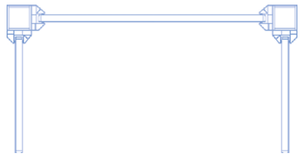


Splay Bay

Circular Bay



Square Bay



Structural & Non-Structural Bay

Everest offer both structural and non-structural bays depending on what you need/want. The explanation below/over the page shows the difference between structural and non-structural bays.

Non-Structural Bay

Non structural bays are bays that aren't designed to bear any weight or support any additional loads. They can either be first floor or second floor bays.

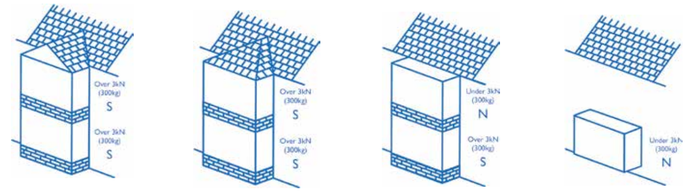
Structural Bays

Structural bays are designed to bear the addition load that the structure above will impose. If the design is anything more than two floors then a structural bay may not be appropriate and a study into the structural engineering of the building needs to be done.

4. Windows

4.4 Bay Windows

Structural vs Non-Structural S = Structural N = Non-Structural



GABLE HIPPED FLAT PLANT ON

Applicable Products

Non-Structural Applications

All Everest windows can be used in non-structural bays.

Structural Application

Structural bays on a bottom floor can be built numerous ways.

Window Fronted With a Door With Double Doors

All door and window collections and materials can be used in a structural bay window.

Bay Window vs Bow Window

The difference between a bay window and a bow window is that an bow window is a unit that is planted onto the wall and therefore, you cannot stand in the projection created by the bow window. Whereas a bay window adds a projection to the wall that can be stood in.

Bay Window

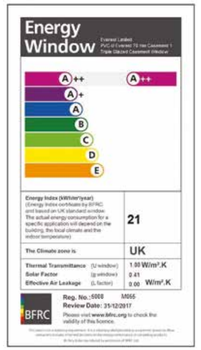
Bow Window

4.5 W.E.R Ratings

The BFRC are the independent nationally recognised body that measure the effectiveness and thermal and energy efficiency of windows.

Windows are tested and graded on a letter-based grading system which runs on a scale from 'E' for the worst performing windows up to 'A' for the best performing windows. Any replacement windows fitted in the UK must have an energy rating of 'C' or better.

When measuring windows, the BFRC look at and measure three factors. U-Value, G-Value & L-Factor. These three factors combined create The Energy Rating for that product.



U-Value

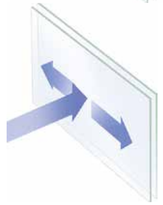
The U-value is a measure of heat loss through the window. It is measured with an inside temp of 21°C and an outside temp of 18°C and 15mph wind. This value is measured in W/(m.K). These are the units for thermal conductivity.

G-Value

The G-value is a measure of how much of the sun's free energy enters through the window and warms your home. This value is measured in W/(m.K). These are the units for thermal conductivity.

L-Factor

The L-value of a window is a measure of how much air can leak out though the window. This value should be 0 for all new windows. This air leakage is measured in m^3 of air per hour per m of profile.



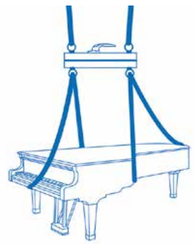
Locking Mechanisms

4.6.1 GrabLock

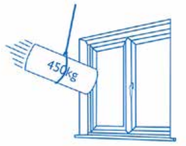
GrabLock. Everest's strongest most secure window lock ever.

With its two aluminium rotating cylinders and GRP metal re enforced keeps, GrabLock has triple the locking area of a standard multi-point lock and provides security down the full length of the window.

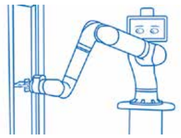
As the handle is turned the two blades rotate out of the frame and lock into the keeps on the frame, 'grabbing' on to them. Once the lock is engaged it can withstand massive amounts of force. In tests, when locked, GrabLock could lift 600kg which is roughly the weight of a grand piano.



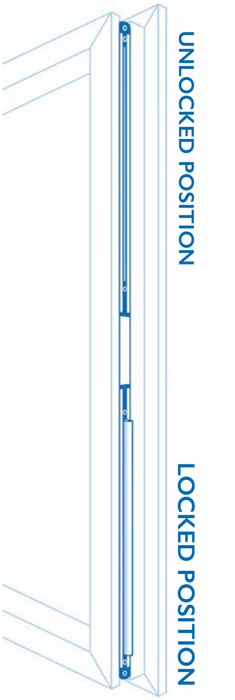
GrabLock was tested with 4500N of force which is equivalent to a 450kg battering ram hitting the window at a free fall.



GrabLock is incredibly durable and has been tested through 30,000 cycles which is equal to about 41 years of use.



Everest GrabLock®
Designed & developed exclusively with Yale



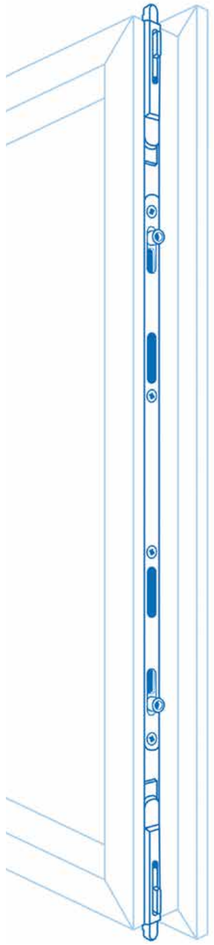
Secured by Design
SBD
Official Police Security Initiative

Locking Mechanisms

4.6.2 Multi-Point Locking

At Everest, we have a range of multi-point locking mechanisms that combine multiple locks and keeps providing points of high security at equal intervals to create a secure window with no extended weak points.

On a Standard Everest Essentials casement window, there are eight locking points. As shown on the diagram, six of these locking points are on the "lock-side" of the window with the other two being the GRP blades that act as anti-jemmy devices"on the hinge side. These blades grab together to give added protection to the previously non-locking side of the window.

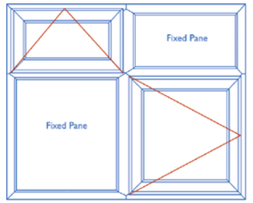


4.7 Equal vs Unequal Sightlines

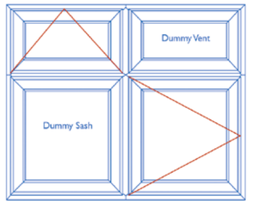
When choosing your framing options, it is important to consider the sightlines of the design. Sightlines are the horizontal and vertical edges of the glazing area. When the sightlines are equal it means that the edges of the glazing line up both horizontally and vertically.

Some window designs provide equal sightlines just by the placement of their opening sashes. For designs that do not provide this look you can employ a devise called a dummy sash. Dummy sashes look like opening sashes however they do not have any hinges or handles and are fixed to the frame.

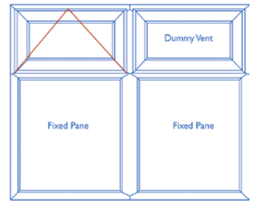
Dummy Sashes aren't as heavy as opening sashes and they are also less expensive which makes them ideal for adding to windows to create the look of a window with more openers and equal sightlines without the added costs and weight issues.



Unequal



Equal



Dummy Venting

Equal Sightlines

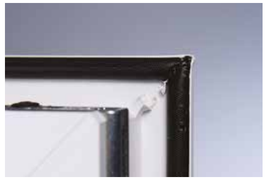
Unequal Sightlines

4.8 Gaskets

Gaskets

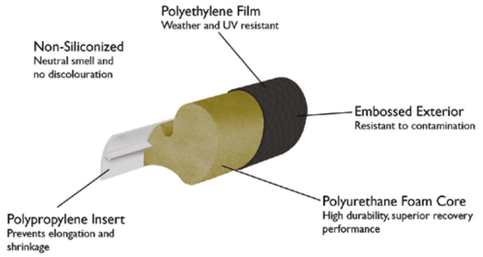
Everest uPVC Exclusives Windows have four gaskets - three made with a product called Q-Lon and one made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the sash and the frame. One of these is positioned on the inside of the sash and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The other two gaskets are located on the sash and they are designed to create a seal either side of the sealed unit. The external one is made from Q-Lon, the internal one from EDPM. The external glazing seal/gasket is made from Q-Lon because a EDPM/rubber seal could shrink and become brittle.



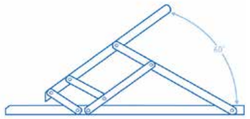
Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C



4.9 Friction Stays

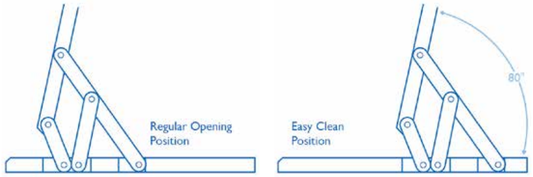
All Everest windows are fitted with stainless steel re-enforced friction stays which act not only as a means to open the window, but are also a prominent safety and security feature.



Everest fit two types of friction stays on our windows. The first and most common is a sixty-degree friction stay which is the standard friction stay which allows for a wide opening and in most cases, some access to the outer face for cleaning.

The second type of friction stay is an easy clean/fire egress friction stay which at the press of a button allows for a wider opening on the window for two reasons.

- The first being that the window opens at a 90° angle to the frame making cleaning the outside face of the window very easy.
- The second and more important being that it's a legal requirement to have one window in a room that can open wide enough (0.33m²) for either escape from a fire or for a firefighter to climb through. These friction stays are fitted where the regular sixty-degree friction stay doesn't provide enough opening space or at the customer's request for the easy cleaning feature.



The friction stay fitted on all Everest casement windows is designed to also act as a security feature. When closed, the friction stay folds into the frame of the window and folds up in such a way that it cannot be tampered with even if the profile in front of it has been broken and the friction stay is left exposed. This is achieved by the fact that when the friction stays is folded into the frame the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless, meaning any would-be intruder would then need to remove the complete sash to try and get in.

Window Installation

4.10 Installation

Removal of Existing Windows

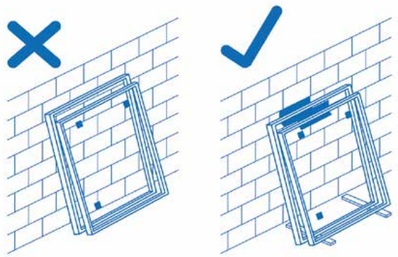
The components that make up the order are checked against the order specification sheet at the installation depot. The components are also checked for any visual faults. The installation team will then travel to your home.

Once they have arrived, they begin by introducing themselves, talking you through the work they are going to be completing. They will also check the specification sheet is correct by measuring your windows and doing any final checks before they begin with the delicate process of removing the existing windows.

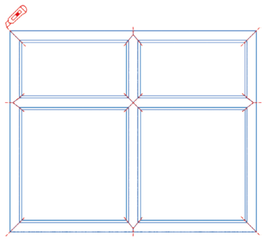
They then lay down sheets and protective equipment on any flooring that they will be walking on, both internal and external, to ensure that they don't leave any traces of their work.

Everest have strict internal regulations about the storage and transit of products for install. This means that your products are looked after with great care from the moment they are made to the moment they are installed. This care and attention is paramount to giving you the best possible product and installation.

To see a video of a window installation visit the Media Centre in Oscar.



Once the installation area is fully prepped, they begin by removing the opening sashes of the existing windows followed, if possible, by any dummy sashes or fixed panes. This is done by removing the glazing bead and lifting the sealed unit out.



The frame is then cut into sections, usually along weld lines to make the frame easier to lift out.

Once everything has been removed, it is all placed in rubble boxes to be taken away and recycled.

N.B. Windows are removed one at a time so that your home is exposed to the elements for as little time as possible.

4. Windows

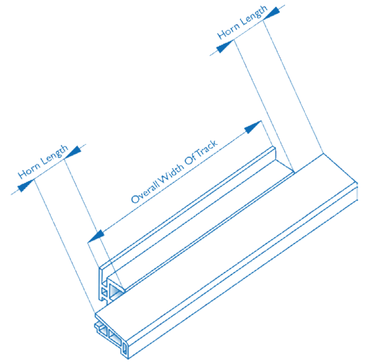
Window Installation

4.10 Installation

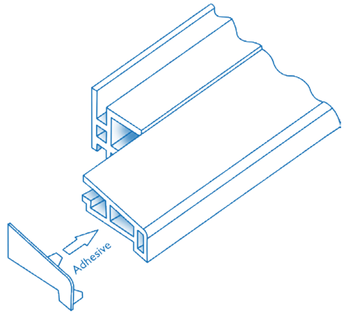
Cill Preparation

If a flush cill is specified, it will be pre-cut to the overall width of the window by the factory to include the horn length entered by the surveyor.

If a projection cill with horns is specified then the installer will then measure up the base of the window and, having already measured the cill from your existing window, they will cut the cill to length and shape to allow for horns either side. The cill will be cut to allow for expansion.



The cill ends will then be capped to give a professional finish and cover the freshly cut edge. This also stops mould, insects and any other small animals from taking refuge in the hollow cill.



EVEREST TECHNICAL GUIDE

Window Installation

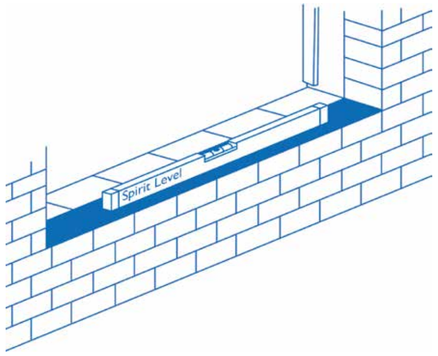
4.10 Installation

Bedding of Frames

All frames are bedded and sealed along the underside of the cill and the wall. Generally, most frames are bedded on mortar. However, there is exceptions to this rule as detailed in this table:

Type of Construction & Position of Frame	Bedding
Frame on external wall made from brick or block	Mortar bed
Frame on external wall made from steel or timber	Silicone
Frame on internal wall made from brick or block	Mortar bed or silicone (situation depending)
Frame on internal wall made from steel or timber	Silicone
Frame on a wall made from concrete	Mortar bed or silicone (situation depending)
Frame on quarry tiles	Silicone
Frame on lead flashings	Silicone

The support pads are checked for level before and after applying mortar.



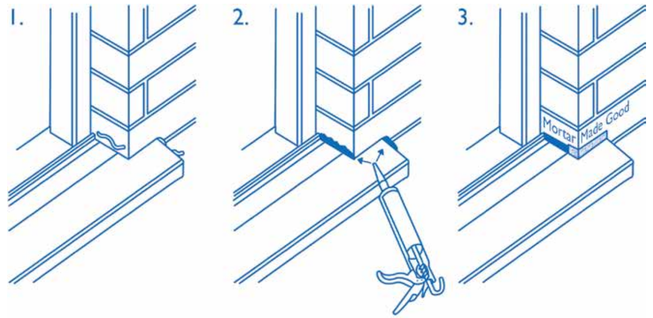
Window Installation

4.10 Installation

Positioning of Cill

The cill will then be installed with the installer making sure that the expansion gap is maintained and that the cill projects at out least 30mm from the wall.

The ends of the cill where it meets the wall will be sealed with sealant.



1. Foam is positioned between the cill end cap and the structure.
2. A silicone seal is placed between the end cap and structure.
3. Once all silicone sealing is complete, the external surface is filled with cement mix.

DPC (Damp Proof Course) Under Frames

uPVC framed windows do not always require new DPC. If the existing DPC is in good condition, leave in position. It will only need a new one if the original is damaged.

If there are cavities in the walls next to where the jambs of the window will sit, the installer will fill the cavities with a timber or brick infills ensuring that the infill has a DPC protecting it from the wall.

Whenever there is a cavity in the wall around the frame for which no cavity drainage is provided, a wide vertical DPC must be inserted above so that the back-edge rests against the cavity side of the inner wall with the outer edge coming out over the window head, providing a path and means of escape for any moisture which may run down the cavity side of the external wall.

Window Installation

4.10 Installation

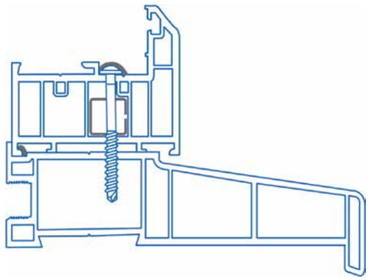
Ensuring the Window is Plumb

It is important that the frame is installed square and plumb. Failure to do so will result in problems at a later stage. The edge of the frame might not be parallel to the wall. Nevertheless, the window will be installed straight, independent of the surrounding aperture.

Installing the New Window

The frame is then screwed in to the cill. If the frame width exceeds 1600mm then the frame will need re-enforcing and will therefore will need to be pre-drilled.

Sheets are placed over the frame whenever drilling is in progress to protect the frame from dust.



A small layer of insulating foam is placed on the back of the frame facing the wall this foam helps stop heat-loss and air leakage round the edge of the frame. The frame is then attached to the wall with fixing screws. These screws are designed and used to provide extra security as they are longer than the industry standard. The frame is then sealed to the wall using a silicone seal to prevent water ingress and create an airtight seal.

Window Installation

4.10 Installation

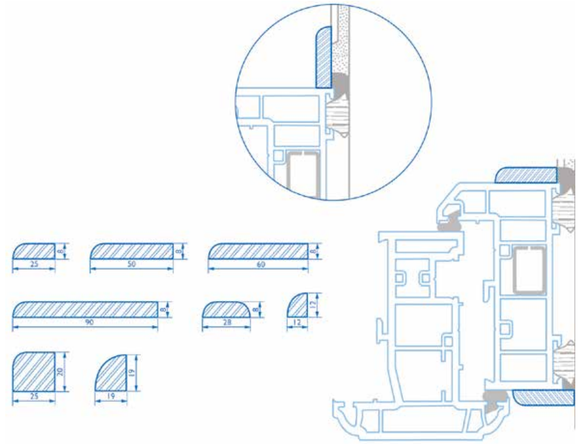
Trimming

All Everest windows are trimmed internally and externally. The trimming used is a thin piece of uPVC which is used to protect the silicone from water and weather damage. This trimming provides an extra layer of protection from drafts and water ingress.

The trim will match the finish on your windows even with foiled finishes.

If your window is fitted with a flush cill a small piece of trim is required to increase weathering function, aesthetics, and ease of trimming the jambs.

Everest offer eight trim shapes to be used in any orientation at the installers discretion to give the best finish possible and create the best protection for the sealant.



Window Installation

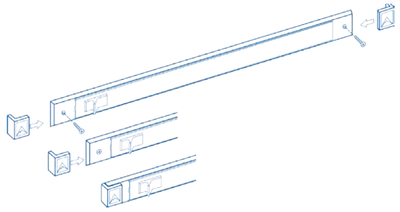
4.10 Installation

Fitting of Head Drip

A head drip is supplied with every window and must be fitted to all windows to protect the seals from water build up.

Trickle Ventilated Frames

Trickle vents are fitted to most Everest windows. In a lot of these cases, this is because it's a legal requirement. Any existing window with a trickle vent must be replaced with a like-for-like window with a trickle vent. If there is no trickle vent on the existing window, then installing one on the replacement is optional.



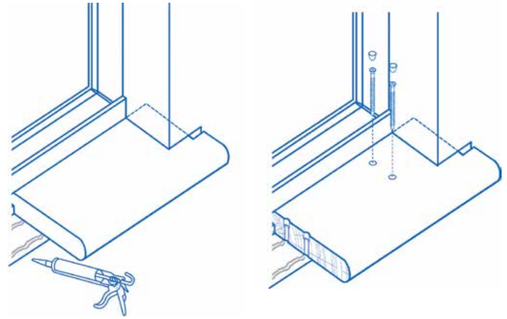
4. Windows

Window Installation

4.10 Installation

Window Boards

There are two types of window board that can be specified. The first is a veneered board designed to match the internal window foil. The second is a Hardwood dark wood board which is a great match for the white internal finishes. The window board is set into the plaster slightly to trap the ends and prevent warping.



When fitting the veneered uPVC window board, the installer will prepare the board by cutting the board to size, shaping out horns at either end. He will then apply a generous amount of neoprene adhesive to the internal cill surface. He will then immediately locate the window in a square and level position.

Hardwood window boards can be glued in position as per the uPVC window board or the can be screwed and plugged. This process is called mechanical fixing. To mechanically fix the window board, the installer will locate the board on the internal cill surface. He will then drill and counter bore the screw holes. This allows for counter sunk crew heads. This allows a hardwood pellet to be placed in the hole to cover the screw head.

EVEREST TECHNICAL GUIDE

Bay Window Installation

4.10 Installation

N.B. Windows are removed one at a time so that your home is exposed to the elements for as little time as possible.

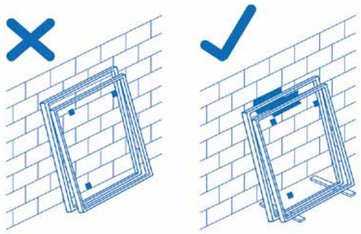
Preparation

As before with the window installation, the components that make up the order are checked against the order specification sheet at the installation depot. The components are also checked for any visual faults. The installation team will then travel to your home.

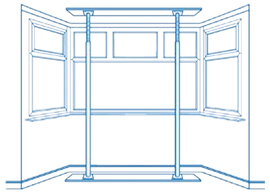
Once they have arrived, they begin by introducing themselves, talking you through the work they are going to be completing. They will also check the specification sheet is correct by measuring your windows and doing any final checks before they begin preparing the bay window for the removal of the existing windows.

They then lay down sheets and protective covers on any flooring that they will be walking on, both internal and external, to ensure that they don't leave any traces of their work.

Everest have strict internal regulations about the storage and transit of products for install. This means that your products are looked after with great care from the moment they are made to the moment they are installed. This care and attention is paramount to giving you the best possible product and installation.



Bay windows are often load bearing. This means that removing the existing windows without providing any additional support could result in the collapse of your bay window. This means that before removing the old windows, the bay window needs propping up to support the weight of the building work above it. This is done with wooden planks and telescopic metal poles. Protective sheets are laid underneath and on top of the temporary prop to protect your flooring and ceiling. Once suitably supported the existing windows will then be removed *(see removal of existing windows section on previous installation section).*



4. Windows

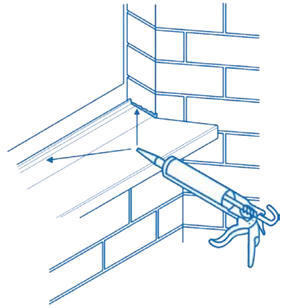
Bay Window Installation

4.10 Installation

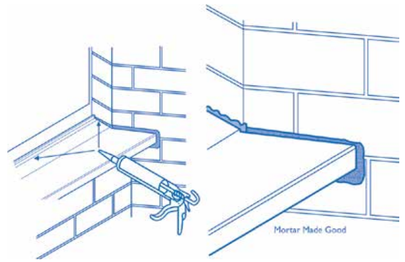
Fitting the Cill/Sill

The pre-fabricated cill will be the first component to be installed. The cill will be bedded much like the cill of a regular window (See previous installation details). The cill will then be offered to the opening to check for size. Any adjustments to the cill will be made to ensure a perfect fit.

There are two ways to install a bay window cill. The first is where you shape the cill to fit around the wall, providing a small gap for the expansion of the cill in hot weather. The installation involves shaping the end of the cill to fit around the brick work. The cill will then be laid in place and screwed into the bedding. The ends will then be then sealed with a silicone seal that will flex without losing the water tight seal when the cill expands.



The second type of cill installation is called a cut in cill. This involves making a small recess in the wall for the cill to sit in. This helps stopping the cill from warping and bending. The cill is sealed into the brick work with a water tight seal. This method leaves an extremely tidy finish, however it is a lot more building work than the first and can de-stress brick work on older properties. Because of this, the installer will use his expertise to decide which method will give the best possible finish whilst also causing the least amount of distress to your home.

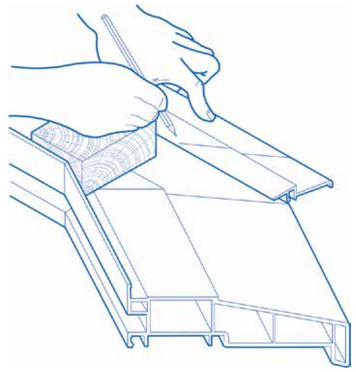


Bay Window Installation

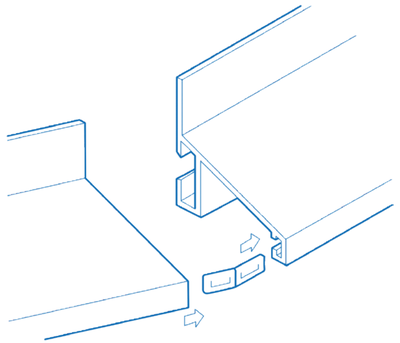
4.10 Installation

Cutting the Drip Section to Size

The head drip is then cut to size to match the cill shape. This is done by laying it over the new cill and cutting it so that the weld lives will be in the same place.



Once cut, the head trim sections are clipped and glued together to ensure a tidy and water tight finish.



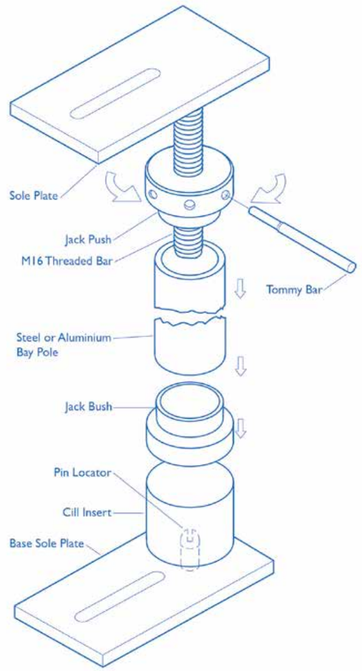
4. Windows

Bay Window Installation

4.10 Installation

Preparation of Bay Poles

Bay poles come in two materials, steel or aluminium. The material used is specified by the load that they must bear. Bay poles have a telescopic jacking system which is designed to bear immense amounts of weight.



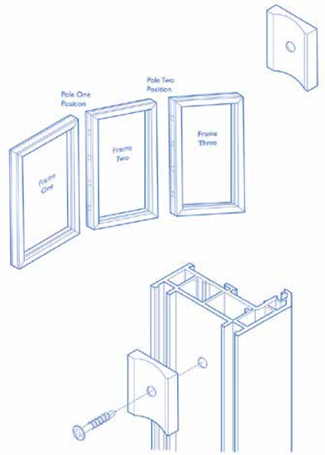
The pole is first lined up and screwed into the cill at the bottom. The jacking system is then turned until the sole plate is tight with the ceiling. The installer will then check that the pole is plumb before attaching it to the ceiling.

Bay Window Installation

4.10 Installation

Fitting of Bay Pole Holders

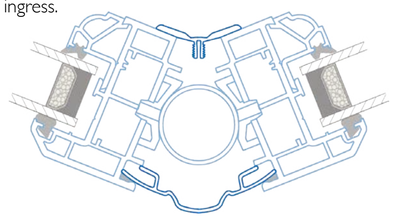
The frames are fitted with a series of bay pole holders. Bay pole holders are small blocks that are shaped in such a way that they allow the flat edge of the frame to be attached to the rounded edge of the bay pole. These holders are placed the full length of the frame at 300mm intervals.



Installation of the Frames

The frames in a bay window are always installed from left to right as you look at the window from the inside. The actual installation of the frames are not that different to a regular installation at this point. The frames are then placed in and screwed to the cill and reveal. The only difference is that they are then attached to the bay poles.

Once all of the frames have been installed, caps are used to cover the bay poles. These caps have a silicone seal down both edges to prevent water ingress.



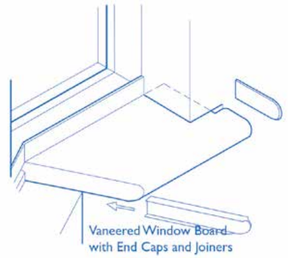
Bay Window Installation

4.10 Installation

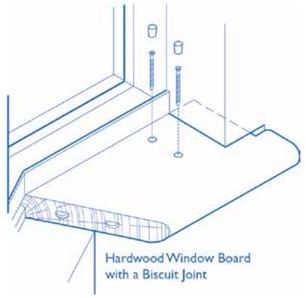
Window Board Fitting

Before sealing and trimming the internal face of the window, the window board must be installed. There are two types of window board that can be specified. The first is a veneered board designed to match the internal window foil. The second is a hardwood dark wood board which is a great match for the white internal finishes. The window board is set into the plaster slightly to trap the ends and prevent warping.

When fitting the veneered uPVC window board, the installer will prepare the board by cutting the board to size shaping out horns at either end. He will then apply a generous amount of neoprene adhesive to the internal cill surface. He will then immediately locate the window in a square and level position.



Hardwood window boards can be glued in position as per the uPVC window board or they can be screwed and plugged. This process is called mechanical fixing. To mechanically fix the window board, the installer will locate the board on the internal cill surface. He will then drill and counter bore the screw holes. This allows for counter sunk crew heads. This allows a hardwood pellet to be placed in the hole to cover the screw head.



4.11 Box Sash Removal

Box Sash Removal

Box sash removal and sealing is a very specialist process which involves a lot of delicate work to remove the box sashes that are set into the wall. If not done properly, it can cause not only significant short-term damage, but also devastating long term damage to the wall.

Before the removal process begins, the site is prepared and as with any Everest installation sheets and other means of property, protection is laid down to protect the property and ensure that the installers leave no trace of their work.

Once everything is prepared and ready, the installer will begin the process of removing the window. Any glazing that can be removed will be lifted out and placed to one side. The weights are then disconnected from the sashes and both are lifted out. The frame is then cut into sections which can be un-screwed and lifted away from the reveal in small manageable pieces.

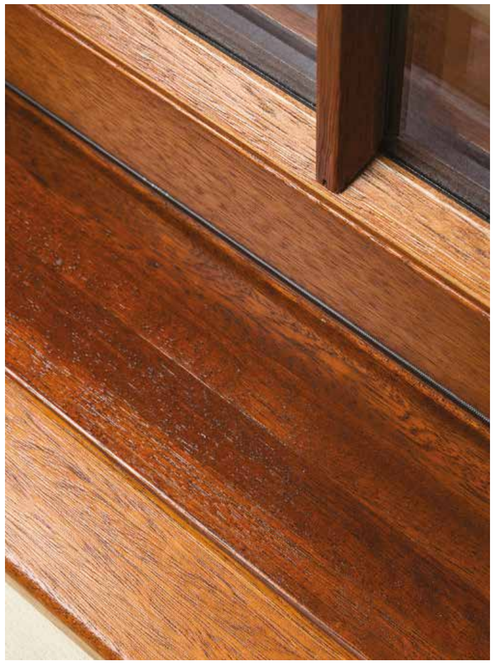
Once the window has been removed, the installer can begin working on removing the old sash boxes from the window. As these boxes are set into the wall, the removal of these need to be done with great care as to not damage either the internal or external wall surface.

They begin by making two angled cuts into the box at approximately a third of the height to one side. This frees up the centre section of the box to be carefully removed. The boxes are then carefully collapsed and pulled out of the recess in the wall.

The sill is then removed leaving a completely empty reveal. The aperture is then cleaned down to remove dust and debris. A damp proof course is then applied to the inside of the recess to prevent any damage to the new frame from damp.

The recess is now damp proof. For added protection, the installer will line all five faces of the recess with uPVC sealing the lining together with silicone.

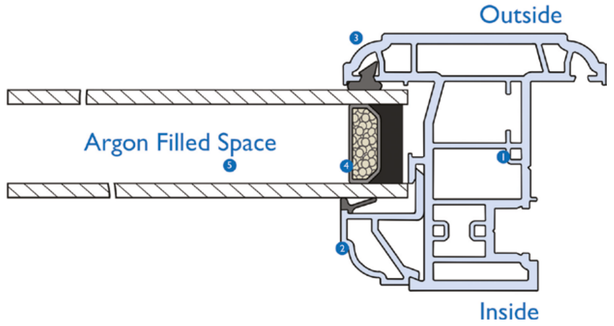
The new window is installed as would be with a regular window installation *(for more information on window installation, see section 4.10)* with the installer connecting the new lining of the recess to the edge of the window so that this lining becomes an extension of the frame.



5.0 uPVC Windows

uPVC Windows

5.1 Sash Features & Benefits

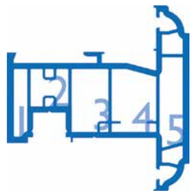


Key Features and Benefits

1. New five chamber sash design for a more consistent thermal performance across all coloured finishes.
2. Internal glazing bead for greater security along with improved installer safety.
3. Various frame finish options available to suit your individual style.
4. Warm-edge spacer and argon filled sealed unit for improved thermal efficiency.

1. New Five Chamber Sash Design

Everest's new five chamber uPVC profile have been carefully designed and engineered to be Everest's most efficient profile yet. Previously, our window profiles gained much of their strength and rigidity from a thermal insert. A thermal insert is a bar designed to insulate the large open middle chamber in the profile. Thermal inserts are used to run through the full length of the profile. In dark coloured foils, this was replaced with steel as dark foiled profiles absorb more heat and are therefore more prone to movement. This means that historically, dark foiled profiles achieve lower energy ratings (A drop from A+21 down to A+19 in a dark foil) than white uPVC windows. However, this new profile design is much stronger and more rigid than its predecessor which means there is no longer any need for the thermal insert or steel bars, meaning that the thermal performance of Everest windows will be more consistent no matter the colour.



This diagram shows 5 major chambers of the sash profile.

2. Internal Glazing Bead

All Everest windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

5. uPVC Windows

uPVC Windows

5.1 Sash Features & Benefits

3. Internal and External Frame Finish

The external frame finish is available in a decorative sculptured finish, a more traditional chamfered finish or a modern flush finish. None of the window finishes are any more or less secure than the other it is a purely aesthetic choice depending on what style you are after. Q-Lon gaskets are used on the beading. Q-Lon has replaced the rubber gaskets typically used because Q-Lon is more weather resistant, less prone to discolouration and has an anti fungal coating which stops unsightly mould from growing on your windows.

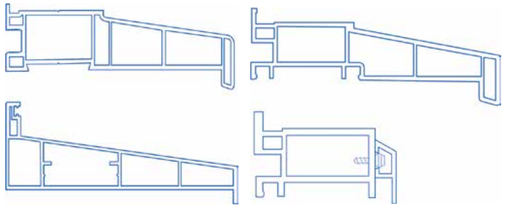
4. Spacer Bar

Most of the energy lost through a window is lost at the edge of the glazing. This is because historically, the old aluminium spacer bar was acting as a thermal bridge. In Everest windows, we use a warm-edge spacer with desiccant beads for greater thermal efficiency. The warm edge spacer has better insulating properties than the aluminium spacer used in many other windows. This is because the warm-edge spacer is made from a composite material designed to act as an insulator. The desiccant makes sure the argon between the panes stays moisture free.

5. Gas Between the Panes

The sealed unit of a window is arguably its most important part as its the part you see through but not only that - it makes up most of the window and therefore, it is at the biggest risk of being the part which leaks the most heat. Everest do a number of things to ensure that our sealed units are the best and most thermally efficient they can be. We use warm-edge spacers as mentioned above. We also use Low-E glass and soft to reflect heat back into your home. However, the process we do that has the most influence includes filling our sealed units with the inert gas, argon. This gas is much denser than air and are better insulators of heat and sound which means that compared to an air filled window, they are much more thermally efficient. Other firms will drill two small holes in their sealed unit and hand pump the argon in which often leaves the unit filled with a mixture of air and argon. Everest's sealed units are assembled by robots in rooms that are filled with argon which means that the only thing that can be in our sealed units is argon and it also means we never have to drill into the sealed unit and risk the structural integrity and air tight seal.

Cills



Cill Usage

The cill used on a window depends entirely on the depth of the wall under the window. The edge of the cill must overhang the reveal by at least 25mm.

uPVC Windows

5.2 Exclusives Range

It's Britain's favourite range of windows.

Why are they so popular? Well, quite simply because they're among the most secure, technically advanced, energy-efficient, longest-lasting windows you can buy. We guarantee they won't fade, crack, peel or rot for as long as you own them, and the sealed units are guaranteed for life. We build every single window to fit the space exactly – so there are no draughty gaps. Every window can be designed to your individual taste, with a choice of window design styles, colour, handles etc. Designed to take double or triple glazing, they could help reduce your heating bills. Everest's Exclusives Range are fitted with GrabLock, our exclusive, new lock mechanism that's virtually impenetrable. In fact, these windows are so secure that they have the Secured by Design accreditation.

5. uPVC Windows

uPVC Windows

5.2 Exclusives Range

Structural Design

Everest Exclusives range of windows are available with two of the structural design options which are the Traditional Chamfered or the Decorative Sculptured.

Traditional Chamfered

Decorative Sculptured

uPVC Windows

5.2 Exclusives Range

Double or Triple Glazed

Available in double or triple glazed. For more information, please see *section 2.4.*

Double Glazed

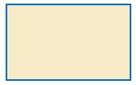
Triple Glazed

Colour Options

One Colour Options:
Same colour on inside and outside.

White

White Woodgrain



Cream Woodgrain

Anthracite Grey

Rosewood

Golden Oak

Natural Oak

Grey Cedar

Two Colour Options:
Mixed with white on the inside.

White/Black Woodgrain

White/Golden Oak

White Woodgrain /Natural Oak

White/Anthracite Grey

White/Rosewood

White Woodgrain /Olive Grey

White Woodgrain /Chartwell Green

White /Light Grey

White Woodgrain /Smooth Anthracite

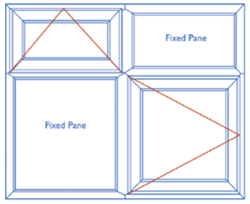
5. uPVC Windows

uPVC Windows

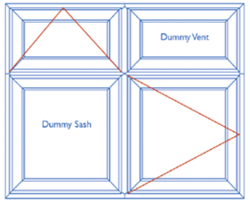
5.2 Exclusives Range

Framing Options

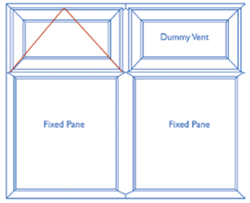
Available in equal or unequal sightlines. For more information, please see *section 4.7.*



Unequal



Equal



Dummy Venting

Handle Options

Exclusives

White

Chrome

Gold

Black

Silver

Monkey Tail

Chrome

Gold

Black

Graphite

Tear Drop

Chrome

Gold

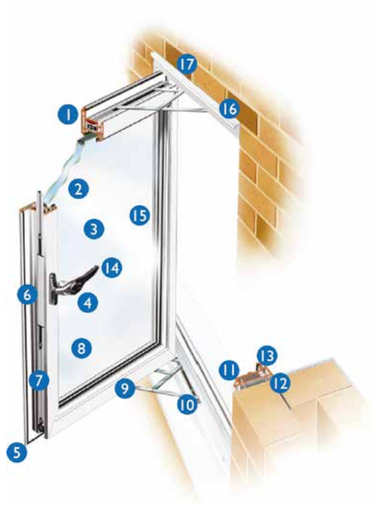
Black

Graphite

uPVC Windows

5.2 Exclusives Range

Feature Diagram



Secured by Design

Official Police Security Initiative

1. New Five Chamber Sash design for a more consistent thermal performance.
2. 20mm gap between panes increases thermal and sound insulation.
3. State-of-the-art glass technology as standard BS EN 12150 toughened safety glass as standard in high risk areas (optional elsewhere).
4. Lockable handle also locks in night-vent position (not PAS24 accredited in night-vent position).
5. Outer weatherproof seal prevents water getting in.
6. New GrabLock exclusive to Everest.
7. Rotating aluminium cylinder "grabs" the specially designed keeps of the window frame.
8. Lifetime guarantee against fog and condensation between the panes.
9. Internal glazing bead helps prevent would-be intruders removing glass from outside.
10. Stainless steel friction hinge controls the window opening and holds firm in windy conditions.
11. Galvanised steel or thermal reinforcement.
12. Inner weatherproof seal keeps out draughts (Q-Lon).
13. New Five Chamber profile for improved thermal performance.
14. Off-set handle with key operated deadlock is easy and comfortable to use.
15. Low-E glass reflects heat back into the room.
16. Optional trickle ventilation is incorporated into frame.
17. Weather-drip directs rain away from window.

5. uPVC Windows

uPVC Windows

5.2 Exclusives Range

Security Features

Locking System: GrabLock

All Everest Exclusives casement windows come with GrabLock. GrabLock was designed and developed exclusively with Yale and is Everest's strongest window lock ever. It has triple the locking area of a regular multi-point locking system and is accredited by Secured by Design.

Internal Glazing Bead

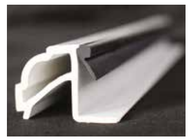
All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

Stainless Steel Friction Hinge

The friction hinge fitted on all Everest uPVC casement windows is designed to fold into the frame of the window and fold up in such a way that it cannot be tampered with even if the uPVC in front of it has been broken and the hinge is left exposed. This is achieved by the fact that when the hinge is folded into the frame, the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless locking the window closed meaning that any would be intruder would need to remove the entire window sash to break in.

Hinge Brackets

The hinge side is fitted with two GRP brackets which re-enforce that side of the window making attacking that edge of the window very difficult. These brackets on the hinge side, the hinges top and bottom and the locking mechanism means that all four sides of the window are protected.



Night Vent

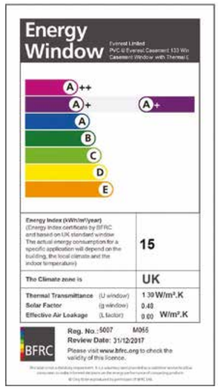
The GrabLock locking mechanism can be set to a night vent position so that air can ventilate into the room without compromising the security of the window by leaving it open. To create a small gap between the sash and the frame, the multi-point locking system locks into keeps that are further forward in the frame. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

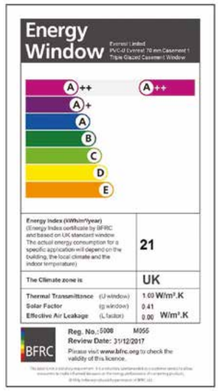
uPVC Windows

5.2 Exclusives Range

Thermal Efficiency

- A+/A++ rated thermal performance
- 28mm double glazed unit as standard - A+15
- 36mm triple glazed unit available - A++21
- For more information on Window Energy Ratings (W.E.R) go to *section 4.5*
- NEW Five Chamber Sash profile to achieve a more consistent thermal performance across the full foil range by removing the need for steel inserts
- Argon filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room. A magnetron coating acts as an 'invisible mirror' reflecting heat back into your home
- Designed to exceed BS6375 for weather performance
- Double rebated window with weather resistant seals on both faces for double weather protection
- Energy Saving Trust endorsed product





5. uPVC Windows

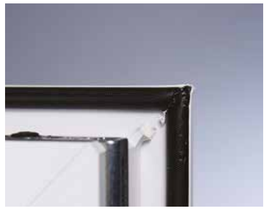
uPVC Windows

5.2 Exclusives Range

Gaskets

We at Everest have four gaskets on our uPVC Exclusives windows. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the sash and the frame. One of these is positioned on the inside of the sash and is compressed against the frame externally, creating the first seal. The second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other gaskets are located on the sash and they are designed to create a seal either side of the sealed unit. The external one is made from Q-Lon and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.



Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

uPVC Windows

5.2 Exclusives Range

Hinges

The hinges fitted on Everest uPVC windows have a lot more features than just security. Everest fit two types of hinge. One is a sixty-degree hinge which is the standard hinge which allows for a wide opening and in most cases, access to the outer face for cleaning. The other type of hinge is an easy clean/fire egress hinge which at the press of a button allows for a wider opening on the window for two reasons. The first being that the window opens at a 90° angle to the wall making cleaning the outside face of the window very easy. The second and more important being that it's a legal requirement to have one window in a room that can open wide enough (0.33m^2) for either escape from a fire or for a firefighter to climb through. These hinges are fitted where the regular sixty-degree hinge doesn't provide enough opening space or at the customer's request. All Everest hinges are stainless steel to prevent rust from forming.

5. uPVC Windows

uPVC Windows

5.2 Exclusives Range

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's uPVC windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly, it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Sealed Unit (Double & Triple)	Against fog and condensation between the panes	Lifetime
White uPVC Finish	Covers against discolouration. Does not include foiled finishes	Lifetime
Window	Whole window, includes foiled, woodgrain finishes	10 years

uPVC Windows

5.3 Exclusives Premium Range

We took our bestselling windows and made them even better still –

Foiled on both sides - with the addition of elegant, Equal Sightlines frame designs as standard, along with our exclusive ultra-secure GrabLock lock mechanism. They also feature our ingenious new Smoothweld technology. This gives an almost invisible corner joint, with clean, seam-free lines, no deep grooves that might harbour dirt and a beautiful, flawless aesthetic.

Everest's newest addition to the Exclusives Premium is our new five-chamber flush casement window which combines the aesthetic of timeless flush timber casement windows, with the modern technology of uPVC which not only brings less maintenance than old timber windows; but also provides improved security and thermal efficiency.

We know that little refinements like these make a big statement and leave a powerful impression on visitors, and that's how we know that all the effort that goes into creating the technology is worth it. Designed to take double or triple glazing, they could save you hundreds of pounds on your heating bills. And what's more, when triple-glazed, they have the highest energy rating it's possible to award* (A++); which means these lovely windows make your home warmer.

5. uPVC Windows

uPVC Windows

5.3 Exclusives Premium Range

Structural Design

Everest Exclusives Premium Range of windows are available in two of the structural design options. These are the Traditional Chamfered and the Modern Flush Sash.

Traditional Chamfered

Modern Flush Sash

SmoothWeld Technology

When assembling a window in the factory, the four pieces of uPVC profile that make up the sash are welded together at the corners with a 45° mitre joint. Often when these profile pieces are welded together, excess uPVC can bulge out of the top of the joint. This excess plastic is called flash. This flash is then cut away with a sharp blade creating a feature groove on the frame. At Everest, we use a new welding technique that eliminates this flash from bulging out. We call this new technique Smoothweld. Our Smoothweld technology gives you an almost invisible corner joint, with clean, seam-free lines, no deep grooves that might harbour dirt and a beautiful, flawless aesthetic.

EVEREST TECHNICAL GUIDE

uPVC Windows

5.3 Exclusives Premium Range

Double or Triple Glazed

Available in double or triple glazed. Flush sash is not available in triple glazed – For more information, please see *section 2.4.*

Double Glazed

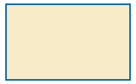
Triple Glazed

Colour Options

All Everest Exclusives Premium Range windows are foiled on both sides with SmoothWeld corner joints.

One Colour Options:
Same colour on inside and outside.

White Woodgrain



Cream Woodgrain

Anthracite Grey

Natural Oak

Rosewood

Grey Cedar

Two Colour Options:
Mixed with White Woodgrain on the inside.

White Woodgrain /Chartwell Green

White Woodgrain /Olive Grey

White Woodgrain /Natural Oak

White Woodgrain/ Rosewood

White Woodgrain/ Smooth Anthracite

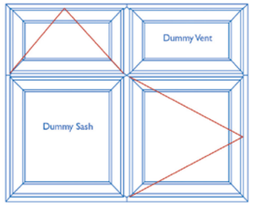
5. uPVC Windows

uPVC Windows

5.3 Exclusives Premium Range

Framing Options

Only available in equal sightlines. For more information, please see *section 4.7.*



Equal

Handle Options

Exclusives

White

Chrome

Gold

Black

Silver

Monkey Tail

Chrome

Gold

Black

Graphite

Tear Drop

Chrome

Gold

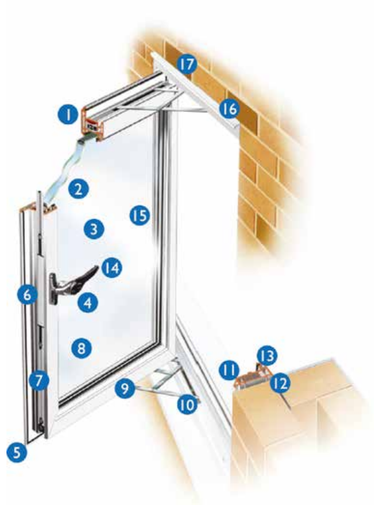
Black

Graphite

uPVC Windows

5.3 Exclusives Premium Range

Feature Diagram - Standard Casement



Secured by Design

Official Police Security Initiative

1. New Five Chamber Sash design for a more consistent thermal performance.
2. 20mm gap between panes increases thermal and sound insulation.
3. State-of-the-art glass technology as standard BS EN 12150 toughened safety glass as standard in high risk areas (optional elsewhere).
4. Lockable handle also locks in night-vent position (not PAS24 accredited in night-vent position).
5. Outer weatherproof seal prevents water getting in.
6. New GrabLock exclusive to Everest.
7. Rotating aluminium cylinder "grabs" the specially designed keeps of the window frame.
8. Lifetime guarantee against fog and condensation between the panes.
9. Internal glazing bead helps prevent would-be intruders removing glass from outside.
10. Stainless steel friction hinge controls the window opening and holds firm in windy conditions.
11. Galvanised steel or thermal reinforcement.
12. Inner weatherproof seal keeps out draughts (Q-Lon).
13. New Five Chamber profile for improved thermal performance.
14. Off-set handle with key operated deadlock is easy and comfortable to use.
15. Low-E glass reflects heat back into the room.
16. Optional trickle ventilation is incorporated into frame.
17. Weather-drip directs rain away from window.

5. uPVC Windows

uPVC Windows

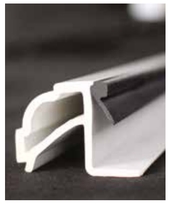
5.3 Exclusives Premium Range

Security Features - Standard Casement

Locking System: GrabLock

All Everest Exclusives Casement Windows come with GrabLock. GrabLock was designed and developed exclusively with Yale and is Everest's strongest window lock ever. It has triple the locking are of a regular multi-point locking system and is accredited by Secured by Design.

Internal Glazing Bead



All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is in inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

Stainless Steel Friction Hinge

The friction hinge fitted on all Everest uPVC casement windows is designed to fold into the frame of the window and fold up in such a way that it cannot be tampered with even if the uPVC in front of it has been broken and the hinge is left exposed. This is achieved by the fact that when the hinge is folded into the frame, the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless, meaning any would-be intruder would then need to remove the complete sash to try and get in.

Hinge Brackets

The hinge side is fitted with two GRP brackets which re enforce that side of the window making attacking that edge of the window very difficult. These brackets on the hinge side, the hinges top and bottom and the locking mechanism means that all four sides of the window are protected.

Night Vent

The GrabLock locking mechanism can be set to a night vent position so that air can ventilate into the room without compromising the security of the window by leaving it open. When in the night vent position the GrabLock locks into a set of keeps that are a little further forward in the frame to create a small gap for the air. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

uPVC Windows

5.3 Exclusives Premium Range

Feature Diagram - Flush Casement

1. Weather-drip directs rain away from window.
2. 20mm gap between panes increases thermal and sound insulation.
3. State-of-the-art glass technology as standard BS EN 12150 toughened safety glass as standard in high risk areas (optional elsewhere).
4. Multi-point locking mechanism.
5. Lockable handle also locks in night-vent position.
6. Outer weatherproof seal prevents water getting in (Q-Lon).
7. Flush Sash exterior finish with SmoothWeld corner joints.
8. Die cast shoot-bolt mechanism lodges into steel plated keeps.
9. Internal glazing bead helps prevent would-be intruders removing glass from outside.
10. Stainless steel friction hinge controls the window opening and holds firm in windy conditions.
11. Inner weatherproof seal keeps out draughts (Q-Lon).
12. Low-E glass reflects heat back into the room.
13. Optional trickle ventilation is incorporated into frame.
14. New Five Chamber Sash design for a more consistent thermal performance.
15. Lifetime Guarantee against condensation and fog between the panes of the sealed unit.

Secured by Design
SBD
Official Police Security Initiative

5. uPVC Windows

uPVC Windows

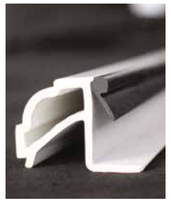
5.3 Exclusives Premium Range

Security Features - Flush Casement

Locking System: Multi-Point Locking System

All Everest Exclusives Premium windows come with a multi-point locking system. This system which includes eight locking points makes for a very secure window. The system has; two shoot-bolts, one at the top and one at the bottom of the window; two espagnolettes, one either-side of the gear box; two locking bolts, one either side of the espagnolettes and finally a pair of re-enforced hinges.

Internal Glazing Bead



All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

Stainless Steel Friction Hinge

The friction hinge fitted on all Everest uPVC casement windows is designed to fold into the frame of the window and fold up in such a way that it cannot be tampered with even if the uPVC in front of it has been broken and the hinge is left exposed. This is achieved by the fact that when the hinge is folded into the frame, the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless, meaning any would-be intruder would then need to remove the complete sash to try and get in.

Hinge Brackets

The hinge side is fitted with two GRP brackets which re-enforce that side of the window making attacking that edge of the window very difficult. These brackets on the hinge side, the hinges top and bottom and the locking mechanism means that all four sides of the window are protected.

Night Vent

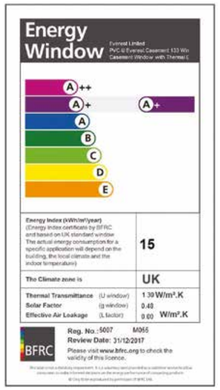
The GrabLock locking mechanism can be set to a night vent position so that air can ventilate into the room without compromising the security of the window by leaving it open. To create a small gap between the sash and the frame, the multi-point locking system locks into keeps that are further forward in the frame. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

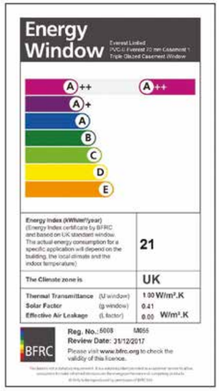
uPVC Windows

5.3 Exclusives Premium Range

Thermal Efficiency

- A+/A++ rated thermal performance
- 28mm double glazed unit as standard - A+15
- 36mm triple glazed unit available - A++21
- For more information on Window Energy Ratings (W.E.R) go to *section 4.5*
- NEW Five Chamber Sash profile to achieve a more consistent thermal performance across the full foil range by removing the need for steel inserts
- Argon filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room. A magnetron coating acts as an 'invisible mirror' reflecting heat back into your home
- Designed to exceed BS6375 for weather performance
- Double rebated window with weather resistant seals on both faces for double weather protection
- Energy Saving Trust endorsed product





5. uPVC Windows

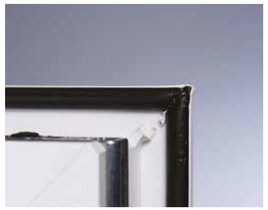
uPVC Windows

5.3 Exclusives Premium Range

Gaskets

We at Everest have four gaskets on our uPVC Exclusives windows. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the sash and the frame. One of these is positioned on the inside of the sash and is compressed against the frame externally, creating the first seal. The second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other gaskets are located on the sash and they are designed to create a seal either side of the sealed unit. The external one is made from Q-Lon and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.



Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

uPVC Windows

5.3 Exclusives Premium Range

Hinges

The hinges fitted on Everest uPVC windows have a lot more features than just security. Everest fit two types of hinge. One is a sixty-degree hinge which is the standard hinge which allows for a wide opening and in most cases access to the outer face for cleaning. The other type of hinge is an easy clean/fire egress hinge which at the press of a button allows for a wider opening on the window for two reasons. The first being that the window opens at a 90° angle to the wall making cleaning the outside face of the window very easy. The second and more important being that it's a legal requirement to have one window in a room that can open wide enough (0.33m^2) for either escape from a fire or for a firefighter to climb through. These hinges are fitted where the regular sixty-degree hinge doesn't provide enough opening space or at the customer's request. All Everest hinges are stainless steel to prevent rust from forming.

5. uPVC Windows

uPVC Windows

5.3 Exclusives Premium Range

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's uPVC windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Sealed Unit (Double & Triple)	Against fog and condensation between the panes	Lifetime
Window	Whole window, includes foiled, woodgrain finishes	10 years

uPVC Windows

5.4 Essentials Range

Practical, simple and stylish –

Our Essentials Range represents astonishing value for anyone who appreciates affordable high quality. It gives you a choice of contemporary window types and designs, with four colour options (including the highly desirable new Anthracite) and a choice of elegant accessories.

If you're looking for Georgian style, there's an ingeniously neat option with the bars between the panes - which makes a world of difference when it comes to cleaning.

Everest Essentials Windows have achieved an A+10 rating which is more consistently achievable across the full colour range thanks to the new Five Chamber Sash design.

Finally, to help you sleep at night every essentials window has eight locking points with shoot-bolts, espagnolettes and re-enforced hinges.

5. uPVC Windows

uPVC Windows

5.4 Essentials Range

Structural Design

Everest Essentials range of windows are only available in one of the structural design options which is the Traditional Chamfered.

Traditional Chamfered

uPVC Windows

5.4 Essentials Range

Double or Triple Glazed

Only available in double. For more information, please see *section 2.4.*

Double Glazed

Colour Options

One Colour Options:
Same colour on inside and outside.

White uPVC

Two Colour Options:
Mixed with white on the inside.

White/Golden Oak

White/Rosewood

White/Anthracite Grey

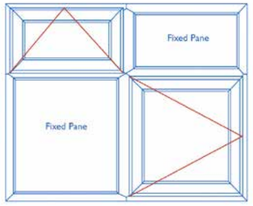
5. uPVC Windows

uPVC Windows

5.4 Essentials Range

Framing Options

Only available in unequal sightlines. For more information, please see *section 4.7.*



Unequal

Handle Options

Essentials

White

Chrome

Gold

Black

Silver

uPVC Windows

5.4 Essentials Range

Feature Diagram

1. Weather-drip directs rain away from window.
2. 20mm gap between panes increases thermal and sound insulation.
3. State-of-the-art glass technology as standard BS EN 12150 toughened safety glass as standard in high risk areas (optional elsewhere).
4. Multi-point locking mechanism.
5. Lockable handle also locks in night-vent position.
6. Outer weatherproof seal prevents water getting in (Q-Lon).
7. Galvanised steel or thermal.
8. Die cast shoot-bolt mechanism lodges into steel plated keeps.
9. Internal glazing bead helps prevent would-be intruders removing glass from outside.
10. Stainless steel friction hinge controls the window opening and holds firm in windy conditions.
11. Inner weatherproof seal keeps out draughts (Q-Lon).
12. Low-E glass reflects heat back into the room
13. Optional trickle ventilation is incorporated into frame.

5. uPVC Windows

uPVC Windows

5.4 Essentials Range

Security Features

Locking System: Multi-Point Locking System

All Everest Essentials Windows come with a multi-point locking system. This system which includes eight locking points makes for a very secure window. The system has; two shoot-bolts, one at the top and one at the bottom of the window; two espagnolettes, one either-side of the gear box; two locking bolts, one either side of the espagnolettes and finally a pair of re-enforced hinges.

Internal Glazing Bead

All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

Stainless Steel Friction Hinge

The friction hinge fitted on all Everest uPVC casement windows is designed to fold into the frame of the window and fold up in such a way that it cannot be tampered with even if the uPVC in front of it has been broken and the hinge is left exposed. This is achieved by the fact that when the hinge is folded into the frame the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless locking the window closed meaning that any would be intruder would need to remove the entire window sash to break in.

Hinge Brackets

The hinge side is fitted with two GRP brackets which re-enforce that side of the window making attacking that edge of the window very difficult. These brackets on the hinge side, the hinges top and bottom and the locking mechanism means that all four sides of the window are protected.

Night Vent

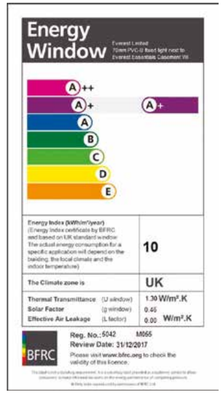
The multi-point locking mechanism can be set to a night vent position so that air can ventilate into the room without compromising the security of the window by leaving it open. To create a small gap between the sash and the frame, the multi-point locking system locks into keeps that are further forward in the frame. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

uPVC Windows

5.4 Essentials Range

Thermal Efficiency

- A+10 rated thermal performance
- 20mm argon-filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room
- Rebated window with double weather-resistant seal
- New five chamber sash means that thermal performance is more consistent no matter the colour of the frame
- The main difference between the thermal performance of the essentials range and the exclusives range is the specification of the sealed unit
- Energy Saving Trust endorsed product



5. uPVC Windows

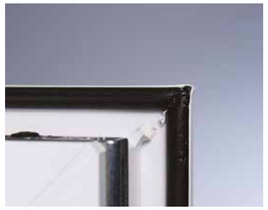
uPVC Windows

5.4 Essentials Range

Gaskets

We at Everest have four gaskets on our uPVC Exclusives windows. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the sash and the frame. One of these is positioned on the inside of the sash and is compressed against the frame externally, creating the first seal. The second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other gaskets are located on the sash and they are designed to create a seal either side of the sealed unit. The external one is made from Q-Lon and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.



Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

uPVC Windows

5.4 Essentials Range

Hinges

The hinges fitted on Everest uPVC Windows have a lot more features than just security. Everest fit two types of hinge. One is a sixty-degree hinge which is the standard hinge which allows for a wide opening and in most cases access to the outer face for cleaning. The other type of hinge is an easy clean/fire egress hinge which at the press of a button allows for a wider opening on the window for two reasons. The first being that the window opens at a 90° angle to the wall making cleaning the outside face of the window very easy. The second and more important being that it's a legal requirement to have one window in a room that can open wide enough (0.33m^2) for either escape from a fire or for a firefighter to climb through. These hinges are fitted where the regular sixty-degree hinge doesn't provide enough opening space or at the customer's request. All Everest hinges are stainless steel to prevent rust from forming.

5. uPVC Windows

uPVC Windows

5.4 Essentials Range

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's uPVC windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly, it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Sealed Unit	Against fog and condensation between the panes	10 years
White uPVC Finish	Protects against flaking and discolouration	10 years
Window	Whole window, includes hinges and gear-box	10 years

uPVC Windows

5.5 uPVC Tilt Turn

A versatile dual-purpose window –

A versatile dual-purpose window that has two opening mechanisms. Turning the handle through 90° allows the window tilt inwards and ventilates the room without the security issues that leaving your windows wide open can bring. Turning the handle through 180° allows the window to be opened inwards for full ventilation.

This inwards opening mechanism means that not only can tilt turn windows be cleaned easily but it also means that they adhere to regional building regulations where windows at a certain height can be cleaned without the need for leaning out of the opening.

Everest Tilt Turn Windows are available in two ranges: The Exclusives and the Essentials range. The Exclusives come with an upgraded glazing specification, along with more colour options. Finally, to help you sleep at night – every tilt and turn window has ten locking points with shoot-bolts, espagnolettes and re-enforced hinges.

5. uPVC Windows

uPVC Windows

5.5 uPVC Tilt Turn

Double or Triple Glazed

Only available in double glazed. For more information, please see *section 2.4.*

Double Glazed

Colour Options

Essentials Tilt Turn Colour Options:
Designed to match Everest Essentials Range.

White uPVC

White/Golden Oak

White/Rosewood

White/Anthracite Grey

Exclusives Tilt Turn Colour Options:
Available in single and dual colour options.

White

White Woodgrain

Cream Woodgrain

Golden Oak

Rosewood

White/Black Woodgrain

White/Golden Oak

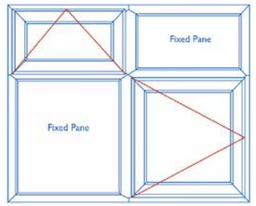
White/Rosewood

uPVC Windows

5.5 uPVC Tilt Turn

Framing Options

Only available in unequal sightlines. For more information, please see *section 4.7.*



Unequal

Handle Options

Tilt Turn

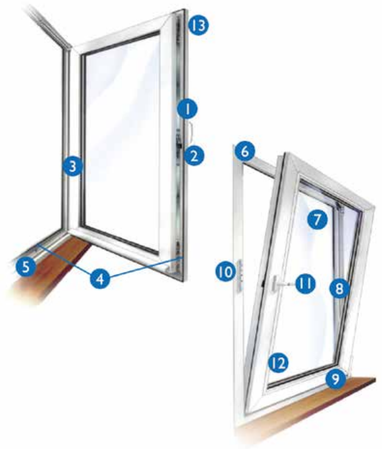
White | Chrome | Gold | Black | Silver

5. uPVC Windows

uPVC Windows

5.5 uPVC Tilt Turn

Feature Diagram



1. High-quality steel locking gear.
2. Multi-point locking mechanisms.
3. Window turns inwards on hinges to enable easy cleaning or emergency exit.
4. Double weather-proof Q Lon seals keep draughts out.
5. uPVC will never rot, rust or flake.
6. Optional trickle ventilation is incorporated into the frame.
7. Low-E glazing reflects heat back into the room
8. 20mm air gap increases thermal and sound insulation.
9. Scissor-hinge tilts window inwards for ventilation.
10. Optional tilt restrictor holds the tilted window in one of four ventilation positions.
11. Key lockable handle.
12. Internal glazing bead helps prevent removal of glass from the outside for additional security.
13. Espagnolette Locking Mechanism on all four sides.

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EVEREST TECHNICAL GUIDE

uPVC Windows

5.5 uPVC Tilt Turn

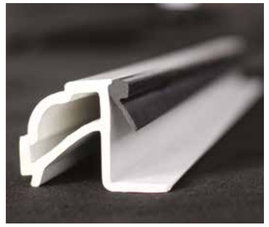
Security Features

Locking System: Multi-Point Locking System

All Everest Tilt Turn Windows come with a multi-point locking system. This system which includes ten locking points makes for a very secure window. The system has locking points on all four sides of the window so that no side is vulnerable.

Internal Glazing Bead

All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.



Dual-Directional Hinges

The dual directional hinges in the window work in opposite directions and until the handle is turned both are engaged. This means that opening the window without engaging the gear box behind the handle is impossible as each of the hinges is preventing the window being opened in the opposite direction. This, plus the multi-point locking mechanism makes for a very secure window.

Night Vent

The internal tilting of the window creates a night vent like effect to create a small gap for air to pass into the room. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

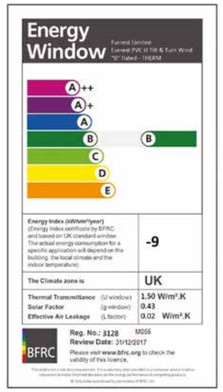
5. uPVC Windows

uPVC Windows

5.5 uPVC Tilt Turn

Thermal Efficiency

- B rated thermal performance
- 20mm argon-filled gap in sealed unit for optimum insulation
- Warm-edge spacer for superior sealed unit efficiency
- Low-E glass reflects heat back into the room on both Exclusives and Essentials
- Rebated window with double weather-resistant seal



EVEREST TECHNICAL GUIDE

uPVC Windows

5.5 uPVC Tilt Turn

Gaskets

We at Everest have four gaskets on our uPVC Exclusives windows. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the sash and the frame. One of these is positioned on the inside of the sash and is compressed against the frame externally, creating the first seal. The second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal.

The two other gaskets are located on the sash and they are designed to create a seal either side of the sealed unit. The external one is made from Q-Lon and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.

Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

5. uPVC Windows

uPVC Windows

5.5 uPVC Tilt Turn

Hinges

There are two sets of hinges on an Everest Tilt Turn Window. One set sits along the bottom edge of the window and allows the window to be tilted inwards. The second set run up one of the edges of the window and allows the window to open inwards as you begin to turn the handle. The different sets of hinges engage and become active depending on the position of the handle.

When the handle is on the locked position, both sets of hinges are engaged which means that the window is hinged in an almost "L" shape along the side and bottom. This makes opening the window impossible without engaging the gearbox, behind the handle. This means that when locked, the window can't be pushed open from the outside without breaking one of the sets of steel hinges.

This makes the hinges an excellent security feature. All Everest Tilt Turn Windows are fire egress windows.

EVEREST TECHNICAL GUIDE

uPVC Windows

5.6 uPVC Sliding Sash

Everest's Range of uPVC Sliding Sash Windows

Everest's Range of uPVC Sliding Sash Windows have been designed and developed to give the most traditional appearance possible whilst also providing all the benefits of modern uPVC windows. Everest's new through horn option gives the sashes a more authentic aesthetic.This along with Everest's range of foiled finishes means that you can customize your windows to give the exact look and feel that you are after.

Our uPVC Sliding Sash have achieved an A rating and are accredited by the independent Energy Saving Trust, who only lend their support and accreditation to products which have the potential of substantially increasing the energy efficiency of your home. So, these beautiful, traditional looking windows can actually make your home more thermally efficient.

Another advantage of the modern technology is the security features. All Everest uPVC Sliding Sash Windows are secured by design accredited which shows they have been deemed secure enough to achieve the accreditation from the official police security and crime prevention initiative.

5. uPVC Windows

uPVC Windows

5.6 uPVC Sliding Sash

Double or Triple Glazed

Only available in double glazed. For more information, please see *section 2.4.*

Double Glazed

Colour Options

One Colour Options:
Same colour on inside & outside.

White

White Woodgrain

Cream Woodgrain

Anthracite Grey

Rosewood

Golden Oak

Two Colour Options:
Mixed with white on the inside.

White/Anthracite Grey

White/Rosewood

White/Golden Oak

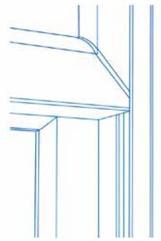
White Woodgrain /Olive Grey

uPVC Windows

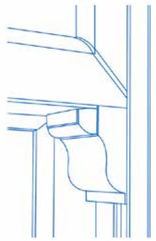
5.6 uPVC Sliding Sash

Sash Design Options

On the underside of the top sash section there is an optional component known as a horn. There are two types of horns; plant on horns and through horns. Through horns are an optional extra on Everest's sliding sash windows. Through horns offer a richer more authentic aesthetic with the bottom section "butting" against the side sections.



No Horn



Plant-on Horn

Through Horn

Furniture Options

Fitch Lock

White

Chrome

Gold

Lift Hook

White

Chrome

Gold

Sash Travel Restrictor

White

Chrome

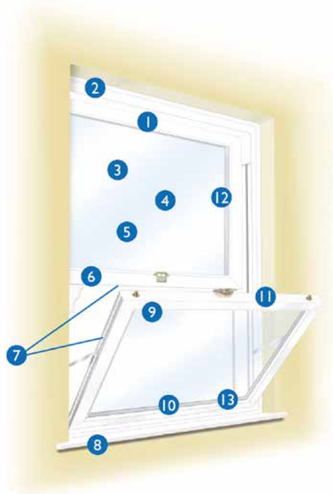
Gold

5. uPVC Windows

uPVC Windows

5.6 uPVC Sliding Sash

Feature Diagram



1. Comprehensive 10 year guarantee on the window and installation.
2. Optional trickle ventilation is incorporated into the frame.
3. State-of-the-art sealed unit technology fitted as standard.
4. 16mm gap between panes increases thermal and sound insulation.
5. Low-E glazing reflects heat back into the room.
6. Optional sash horn to the top sash.
7. Multiple weather-resistant seals help keep draughts out.
8. uPVC will never rot, rust or flake.
9. Catches slide to allow both windows to tilt inwards for cleaning.
10. Deep bottom rail for authenticity.
11. Traditional style brass effect fitch locks.
12. Galvanised steel reinforcement in sash and frame.
13. White glazing gasket for authentic appearance.

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EVEREST TECHNICAL GUIDE

uPVC Windows

5.6 uPVC Sliding Sash

Security Features

Locking System: Fitch Locking System

The Fitch lock on Everest's Sliding Sash Windows are Secured by Design accredited. The lock turns and throws a metal hook which wraps around a bar in the metal keep. This makes for a secure lock which provides security both vertically and horizontally. The fitch lock can be locked with a key.

Internal Glazing Bead

All Everest uPVC windows are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the window much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it is inside your house then it prevents potential unwanted visitors from removing the beading and glass and gaining access to your property. It also means that glazing can be fitted from inside the property, removing the need for it to be carried up ladders and on to scaffolding. This makes the installation of windows a much safer process.

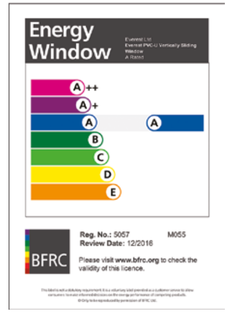
5. uPVC Windows

uPVC Windows

5.6 uPVC Sliding Sash

Thermal Efficiency

- A rated thermal performance
- 16mm argon-filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room
- Multiple weather-resistant seals help stop draughts
- Energy Saving Trust endorsed product



uPVC Windows

5.6 uPVC Sliding Sash

Gaskets and Brush Seals

Due to the nature of the opening mechanism, some of the seals on the sliding sash must be brush seals as the constant sliding of material over the top of a Q-Lon or EPDM would damage the surface and compromise the seal. The gaskets for the glazing are made EPDM.

Spiral Balance

The spiral balance system in the frame uses a series of springs to counter balance the sash and ensure a smooth opening mechanism. This spiral balance system has replaced the cords and weights system used in traditional sliding sash windows. It allows for a thinner window profile which means more light and warmth. Often, traditional sash windows have what are called "Box Sashes." Removing these for replacement windows to be installed is a very specialist service and will need performing properly by a qualified installer. This service is available from Everest with every replacement window. For more information on Box Sash Removal, see *section 4.11*.

5. uPVC Windows

uPVC Windows

5.6 uPVC Sliding Sash

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's uPVC windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly, it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

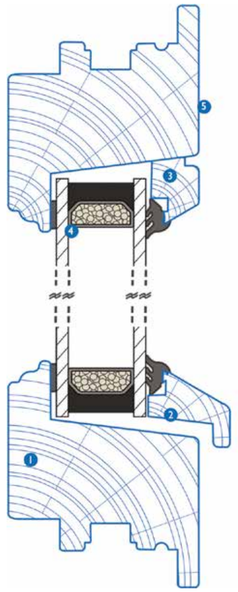
Guarantees		
Sealed Unit	Against fog and condensation between the panes	10 years
White uPVC Finish	Protects against flaking and discolouration	10 years
Window	Whole window, includes foiled finishes, hinges and gear-box	10 years

7.0 Amdega Collection Windows

Everest
FIT THE BEST

Amdega Collection Windows

7.1 Sash Features and Benefits



Key Features & Benefits

1. FSC certified Hardwood and Softwood frames available
2. Concealed drainage for a clean clear aesthetic
3. Glazing bead is glued and pinned to the frame for added safety and security
4. Argon filled sealed unit
5. Paint and satin finishes available

1. Hardwood or Softwood Frame

All Everest timber windows are made from either Forestry Stewardship Council (FSC) certified Hardwood or Forestry Stewardship Council (FSC) certified Softwood. This means that the wood is not only checked for quality but also responsible and sustainable sourcing. The term Hardwood and Softwood can be a little misleading as some Hardwoods are soft and some Softwoods hard. The important thing to remember is that both types of wood have different properties, suited to different needs in a home.

The difference between Hardwoods and Softwoods lies in their cellular structure. Hardwoods contain four different types of cell which gives them incredible strength, durability and beautiful grains. They can be quite expensive, however. Softwoods only contain two different types of cell but are much easier to work, are more sustainable and have better thermal retention properties. They can also be much more cost-effective.

FSC®

7. Amdega Collection Windows

Amdega Collection Windows

7.1 Sash Features and Benefits

2. Concealed Drainage

All windows need drainage otherwise water could build up on the frame. This build up of water can lead to the finish of the timber degrading and mould growing in the window. Another potential issue with water resting on the frame is that after many years, the timber will absorb enough water and begin to rot, compromising the security of your home. At Everest, all of our Amdega Collection windows are fitted with concealed drainage to avoid water building up on the frame.

3. Glazing Bead

All Everest Amdega collection windows are installed with an external glazing bead. This external glazing bead allows for the concealed drainage in the frame. This glazing bead is bonded to the frame with a special resin, which is left to cure for 24 hours. This bonds the bead to the frame. For added security, a series of small almost invisible metal pins are added. This ensures that the bead stays anchored to the frame.

4. Gas Between the Panes

The sealed unit of a window is arguably its most important part as its the part you see through but not only that - it makes up most of the window and therefore, it is at the biggest risk of being the part which leaks the most heat. Everest do a number of things to ensure that our sealed units are the best and most thermally efficient they can be. We use warm-edge spacers as mentioned above. We also use Low-E glass and soft to reflect heat back into your home. However, the process we do that has the most influence includes filling our sealed units with the inert gas, argon. This gas is much denser than air and are better insulators of heat and sound which means that compared to an air filled window, they are much more thermally efficient. Other firms will drill two small holes in their sealed unit and hand pump the argon in which often leaves the unit filled with a mixture of air and argon. Everest's sealed units are assembled by robots in rooms that are filled with argon which means that the only thing that can be in our sealed units is argon and it also means we never have to drill into the sealed unit and risk the structural integrity and air tight seal.

5. Paint and Stain Finishes available

Everest's Amdega Range are available in paint or stain finish options. The choice depends entirely on what you want from your windows. The paint finish offers a beautiful range of colours to really make your windows stand out as a main feature of the facade of your home. The stain finish involves treating the wood with a blend of oils which bring out the beautiful natural grain of the wood. Both finishes are engineered to protect the wood from weather damage and rot.

Amdega Collection Windows

7.2 Amdega Collection Casement

Everest Amdega Collection Casement

Everest Amdega Collection Casement Windows combine the timeless beauty of timber with the benefits of modern technology such as improved thermal efficiency. The up-to-date glazing technology designed to trap the warmth in your home used on the Amdega Collection and the natural insulating properties of timber means that these are Everest's warmest timber windows ever.

Available in both 68mm depth and 92mm depth to accommodate all wall thicknesses.

For added security, all Everest Amdega Collection Casement Windows have a multi-point bi-directional locking system. This locks into a set of metal locking points and can be adjusted and locked into a night vent position. This locking system and set of keeps sit within the timber frame, this in itself is a security feature which is resistant to attack as breaking the timber frames would be a struggle.

Each window is engineered in durable, sustainable and FSC-certified Softwood or Hardwood which provides a beautiful knot free finish. Each profile is treated with 21st century preservation techniques which protects the timber and means we can guarantee the profiles against rot and fungus for 30 years.

7. Amdega Collection Windows

Amdega Collection Windows

7.2 Amdega Collection Casement

Double or Triple Glazed

Only available in double glazed.

Colour Options

One Colour Options:

Same colour on inside and outside.

White | Cream | Beige Grey | Chartwell Green | Agate Grey

Stain Finish Options

Same colour on inside and outside.

Light Oak | Mellow Teak | Warm Mahogany | Dark Walnut | Ebony

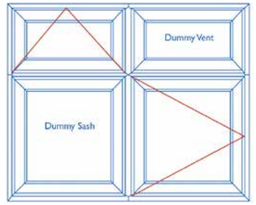
EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.2 Amdega Collection Casement

Framing Options

Only available in equal sightlines. For more information, please see *section 4.7.*



Equal

Handle Options

Exclusives

Chrome

Gold

Black

Silver

7. Amdega Collection Windows

Amdega Collection Windows

7.2 Amdega Collection Casement

Feature Diagram

1. Optional trickle ventilation is incorporated into the frame.
2. Made from engineered timber – Softwood and Hardwood.
3. Glazing bead secured with concealed nails.
4. 20mm air gap between panes for increased thermal and sound.
5. State-of-the-art sealed unit technology.
6. Key lockable handle also locks in the night.
7. Multi-point bi-directional locking system.
8. Lamb's tongue profile.
9. Low-E glazing reflects heat back into the room.
10. Double weather resistant seals.
11. Matching timber trims and sills.
12. Timber guaranteed for 30 years against rot and fungi.
13. Stainless steel friction hinge controls the window opening and holds firm in windy conditions.
14. Tested to BS6375 for weather performance.
15. Tough interlocking hinge-side security brackets resist forced entry by would-be intruders.
16. Matching timber weather drip deflects rain away from the window.

EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.2 Amdega Collection Casement

Security Features

Locking System: Multi-Point Locking System

All Everest Amdega Collection windows come with a multi-point locking system. This system which includes six locking points makes for a very secure window. The system has; two shoot-bolts, one at the top and one at the bottom of the window; two espagnolettes just below the window further down and finally a pair of re-enforced hinges.

Stainless Steel Friction Hinge

The friction hinge fitted on all Everest Amdega Collection Casement Windows is designed to fold into the frame of the window and fold up in such a way that it cannot be tampered with even if the Amdega Collection in front of it has been broken and the hinge is left exposed. This is achieved by the fact that when the hinge is folded into the frame, the layers of stainless steel sit in a perfect stack with each piece attached with a pivot point at both ends which means no part of it can be manipulated with pliers or tampered with without breaking which then renders the hinge useless, meaning any would-be intruder would then need to remove the complete sash to try and get in.

Hinge Brackets

The hinge side is fitted with two steel brackets which re-enforce that side of the window, making attacking that edge of the window very difficult. These brackets on the hinge side, the hinges top and bottom and the locking mechanism means that all four sides of the window are protected.

Night Vent

The locking mechanism can be set to a night vent position so that air can ventilate into the room without compromising the security of the window by leaving it open. To create a small gap between the sash and the frame, the multi-point locking system locks into keeps that are further forward in the frame. This means that you can keep the room cool and sleep tight knowing your house is still nice and secure.

7. Amdega Collection Windows

Amdega Collection Windows

7.2 Amdega Collection Casement

Timber

Engineered timber for added strength and rigidity – a lamination process where layers of timber are specially bonded together Softwood and Hardwood available.

Softwood

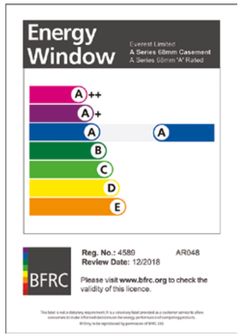
European Redwood FSC – Forestry Stewardship Council certified.
Finger jointed for added durability and clear knot-free finish.

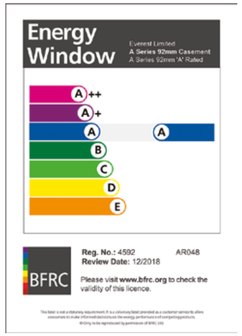
Hardwood

Red Grandis FSC – Forestry Stewardship Council certified.
Finger jointed for added durability and clear knot-free finish.

Thermal Efficiency

- A rated thermal performance
- For more information on Window Energy Ratings (W.E.R) go to *section 4.5*
- Argon filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room.
  A magnetron coating acts as an 'invisible mirror' reflecting heat back into your home.
- Designed to exceed BS6375 for weather performance
- Double rebated window with weather resistant seals on both faces for double weather protection
- Energy Saving Trust endorsed product





Amdega Collection Windows

7.2 Amdega Collection Casement

Gaskets

We at Everest have four gaskets on our Amdega Collection Windows. Two of the gaskets are located internally and externally on either side of the opening. These gaskets create the seal between the sash and the frame.

One of these is positioned on the inside of the sash and locates and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other seals are located on the sash and they are designed to create a seal either side of the sealed unit. These two gaskets are fitted below the level of the sash creating a sharper unobstructed view out of the window.

Hinges

The hinges fitted on Everest Amdega Collection Windows have a lot more features than just security. Everest fit two types of hinge; one is a sixty-degree hinge which is the standard hinge which allows for a wide opening and in most cases access to the outer face for cleaning. The other type of hinge is an easy clean/fire egress hinge which at the press of a button, allows for a wider opening on the window for two reasons. The first being that the window opens at a 90° angle to the wall making cleaning the outside face of the window very easy. The second and more important being that it's a legal requirement to have one window in a room that can open wide enough (0.33m^2) for either escape from a fire or for a firefighter to climb through. These hinges are fitted where the regular sixty-degree hinge doesn't provide enough opening space or at the customer's request. All Everest hinges are stainless steel to prevent rust from forming.

7. Amdega Collection Windows

Amdega Collection Windows

7.2 Amdega Collection Casement

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's Amdega Collection windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Timber Profile	Against rot of the timber material and fungal attack	30 years
Paint and Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Area/Harsh Climates	Whole window guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Everest Amdega Collection Casement

The enduring beauty of a classic design, given a lasting durability by the technology that we excel in. That's the beauty of our Amdega Collection Timber Sash Windows.

Gone are the rattles, jams and draughts that blighted their noble ancestors, and in their place, we'll fit finely engineered, smooth-gliding, warmth-retaining, noise-abating modern windows, craftsman finished in sustainable timber and built to last for decades.

With some of the most future-proof security built in, they match the security of windows made from the most state-of-the-art materials and are highly energy-efficient - but with a choice of ten different finishes, they're just as beautiful as the ones that your house was built with, if not more so.

The Amdega Collection Sash Windows are available with both a spiral balance and a cords and weights window mechanism.

Spiral balance windows offer a modern alternative to the more classic cords and weights mechanism. The spiral balance mechanism allows for a thinner frame and often a lot less building work.

7. Amdega Collection Windows

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Double or Triple Glazed

Only available in double glazed – For more information, please see *section 2.4.*

Colour Options

One Colour Options:
Same colour on inside and outside.

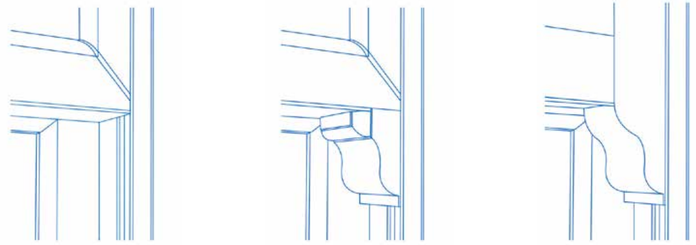
White | Cream | Beige Grey | Chartwell Green | Agate Grey

Stain Finish Options
Same colour on inside and outside.

Light Oak | Mellow Teak | Warm Mahogany | Dark Walnut | Ebony

Sash Design Options

On the underside of the top sash section there is an optional component known as a horn. There are two types of horns; plant on horns and through horns. Everest Amdega Collection are only available with either through horns or no horns.



No Horn | Plant-on Horn | Through Horn

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Furniture Options

Fitch Lock


Chrome


Gold

Sash Pull Handle


Chrome


Gold

Sash Lifts


Chrome


Gold

Sash Restrictor


Chrome


Gold

7. Amdega Collection Windows

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Feature Diagram

1. Multiple weather seals help keep out draughts.
2. Made from engineered timber – Softwood and Hardwood.
3. Low-E glazing reflects heat back into the room.
4. Optional Georgian bars.
5. Optional authentic sash horns.
6. 14mm air gap between panes for increased thermal and sound insulation.
7. Spiral balance mechanism for easy smooth operation.
8. 30 year guarantee against rot and fungi.
9. Optional trickle ventilation is incorporated into the frame.

EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Security Features

Locking System: Fitch Locking System

The fitch lock on Everest's Sliding Sash Windows are secured by design accredited. The lock turns and throws a metal hook which wraps around a bar in the metal keep. This makes for a secure lock which provides security both vertically and horizontally. The fitch lock can be locked with a key.

Sash Travel Restrictors

On the frame there is a pair of restrictors that when engaged stop the sliding sash from being able to be opened entirely meaning that the window can be opened to give ventilation without leaving your home completely vulnerable.

Timber

Engineered timber for added strength and rigidity – a lamination process where layers of timber are specially bonded together Softwood and Hardwood available.

Softwood

European Redwood FSC – Forestry Stewardship Council certified.
Finger jointed for added durability and clear knot-free finish.

Hardwood

Red Grandis FSC – Forestry Stewardship Council certified.

Gaskets

Due to the nature of the opening mechanism some of the seals on the sliding sash must be brush seals as the constant sliding of material over the top of a Q-Lon or EPDM would damage the surface and compromise the seal. The Gaskets for the glazing are made EPDM.

7. Amdega Collection Windows

Amdega Collection Windows

7.3 Amdega Collection Sliding Sash (Spiral Balance)

Spiral Balance

The spiral balance system in the frame uses a series of springs to counter balance the sash and ensure a smooth opening mechanism. This spiral balance system has replaced the cords and weights system used in traditional sliding sash windows. It allows for a thinner window profile which means more light and warmth. Often, traditional sash windows have what are called "Box Sashes." Removing these for replacement windows to be installed is a very specialist service and will need performing properly by a qualified installer. This service is available from Everest with every replacement window. For more information on Box Sash Removal, see *section 4.11.*

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's Amdega Collection windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Timber Profile	Against rot of the timber material and fungal attack	30 years
Paint and Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Area/Harsh Climates	Whole window guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Everest Amdega Collection Casement

The enduring beauty of a classic design, given a lasting durability by the technology that we excel in. That's the beauty of our Amdega Collection Timber Sash Windows.

Gone are the rattles, jams and draughts that blighted their noble ancestors, and in their place, we'll fit finely engineered, smooth-gliding, warmth-retaining, noise-abating modern windows, craftsman finished in sustainable timber and built to last for decades.

With some of the most future-proof security built in, they match the security of windows made from the most state-of-the-art materials and are highly energy-efficient - but with a choice of ten different finishes, they're just as beautiful as the ones that your house was built with, if not more so.

The Amdega Collection Sash Windows are available with both a spiral balance and a cords and weights window mechanism.

Cords and weights offer the ultimate in traditional opening mechanisms. Our cords and weights mechanism has been engineered to sit in a slimmer frame than older sash windows which means you can have a traditional beautiful window without compromising on sightlines or window space.

7. Amdega Collection Windows

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Double or Triple Glazed

Only available in double glazed – For more information, please see *section 2.4.*

Colour Options

One Colour Options:
Same colour on inside and outside.

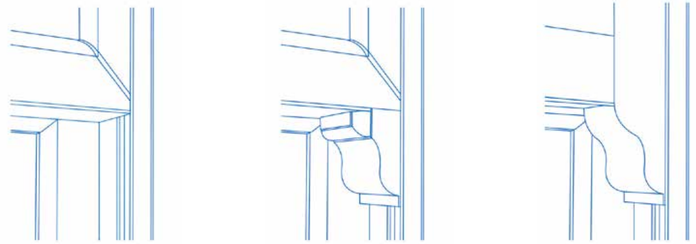
White | Cream | Beige Grey | Chartwell Green | Agate Grey

Stain Finish Options
Same colour on inside and outside.

Light Oak | Mellow Teak | Warm Mahogany | Dark Walnut | Ebony

Sash Design Options

On the underside of the top sash section there is an optional component known as a horn. There are two types of horns; plant on horns and through horns. Everest Amdega Collection are only available with either through horns or no horns.



No Horn | Plant-on Horn | Through Horn

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Furniture Options

Fitch Lock


Chrome


Gold

Sash Pull Handle


Chrome


Gold

Sash Lifts


Chrome


Gold

Sash Restrictor


Chrome


Gold

7. Amdega Collection Windows

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Feature Diagram

1. Multiple weather seals help keep out draughts.
2. Made from engineered timber - Softwood and Hardwood.
3. Low-E glazing reflects heat back into the room.
4. Optional Georgian bars.
5. Optional authentic sash horns.
6. 14mm air gap between panes for increased thermal and sound insulation.
7. Authentic cords and lead weights mechanism.
8. 30 year guarantee against rot and fungi.
9. Optional trickle ventilation is incorporated into the frame.

EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Security Features

Locking System: Fitch Locking System

The fitch lock on Everest's Sliding Sash Windows are Secured by Design accredited. The lock turns and throws a metal hook which wraps around a bar in the metal keep. This makes for a secure lock which provides security both vertically and horizontally. The fitch lock can be locked with a key.

Sash Travel Restrictors

On the frame, there is a pair of restrictors that when engaged stop the sliding sash from being able to be opened entirely meaning that the window can be opened to give ventilation without leaving your home completely vulnerable.

Timber

Engineered timber for added strength and rigidity – a lamination process where layers of timber are specially bonded together Softwood and Hardwood available.

Softwood

European Redwood FSC – Forestry Stewardship Council certified.
Finger jointed for added durability and clear knot-free finish.

Hardwood

Red Grandis FSC – Forestry Stewardship Council certified.

Gaskets

Due to the nature of the opening mechanism, some of the seals on the sliding sash must be brush seals as the constant sliding of material over the top of a Q-Lon or EPDM would damage the surface and compromise the seal. The gaskets for the glazing are made EPDM.

7. Amdega Collection Windows

Amdega Collection Windows

7.4 Amdega Collection Sliding Sash (Cords & Weights)

Cords and Weights

The cords and weights mechanism offered by Everest have been engineered to not only allow the window to glide open but also is substantially thinner than previous cord and weights mechanisms, which means that you don't have to compromise on glazing space which means more light and warmth.

The beautiful aesthetic of the cords receding into and revealing them selves from the frame is second to none. However, the cords and weights option on timber sash windows are an added extra.

Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's Amdega Collection windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Timber Profile	Against rot of the timber material and fungal attack	30 years
Paint and Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Area/Harsh Climates	Whole window guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

Amdega Collection Windows

7.5 Amdega Collection Dual Turn

Everest Amdega Collection Casement

This innovative design allows both sashes to swing completely round for easy cleaning from the inside. You can choose from either Softwood or Hardwood options, with painted and stained finishes respectively. And like all our timber windows, they're precision crafted and look absolutely beautiful.

Our timber dual turn windows maximise heat retention in your home, using modern technology like Low-E glass and draught-resistant seals. They are also precision crafted to ensure a perfect fit, with the locks engaging securely at the interlock to create a super-tight seal. Our Timber Dual Turn Windows have not just been created for style, but for practicality too. Both sashes completely swing around, allowing you to easily clean the outside window panes from the inside of your home, so there's no need for ladders.

We've designed our Timber Dual Turn Windows with security in mind, so each opening sash is secured by two key-lockable handles. We also fit thermally toughened safety glass as standard within 80cm of floor level and where necessary.

7. Amdega Collection Windows

Amdega Collection Windows

7.5 Amdega Collection Dual Turn

Double or Triple Glazed

Only available in double glazed.

Colour Options

One Colour Options:
Same colour on inside and outside.

White | Cream | Beige Grey | Chartwell Green | Agate Grey

Stain Finish Options
Same colour on inside and outside.

Light Oak | Mellow Teak | Warm Mahogany | Dark Walnut | Ebony

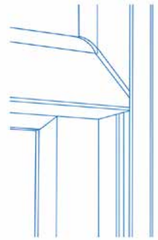
EVEREST TECHNICAL GUIDE

Amdega Collection Windows

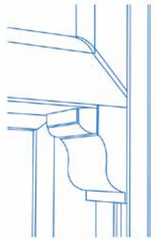
7.5 Amdega Collection Dual Turn

Sash Design Options

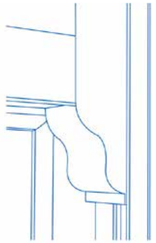
On the underside of the top sash section, there is an optional component known as a horn. There are two types of horns; plant on horns and through horns. Everest Amdega Collection are only available with either through horns or no horns.



No Horn



Plant-on Horn



Through Horn

Furniture Options

Dual Turn

Chrome

Gold

Black

Silver

7. Amdega Collection Windows

Amdega Collection Windows

7.5 Amdega Collection Dual Turn

Feature Diagram

1. Made from engineered timber - Softwood and Hardwood.
2. Both sashes are fully reversible to allow for easy cleaning of the glass.
3. 14mm air gap between panes for increased thermal and sound insulation.
4. Low-E glazing reflects heat back into the room.
5. 30 year guarantee against rot and fungi.
6. Multiple weather seals help keep out draughts.
7. Optional sash horns.
8. Optional Georgian bars.
9. Optional trickle ventilation is incorporated into the frame.

EVEREST TECHNICAL GUIDE

Amdega Collection Windows

7.5 Amdega Collection Dual Turn

Timber

Engineered timber for added strength and rigidity – a lamination process where layers of timber are specially bonded together Softwood and Hardwood available.

Softwood

European Redwood FSC – Forestry Stewardship Council certified.
Finger jointed for added durability and clear knot-free finish.

Hardwood

Red Grandis FSC – Forestry Stewardship Council certified.

Hinges

Each of the tilting sashes in the window sit on a set of stainless steel friction hinges. These hinges fold out and use friction alone to hold the sash open. The hinges are also designed so that the sash is fully reversible, and the exterior pane can be easily cleaned without the need for leaning out of the window.

7. Amdega Collection Windows

Amdega Collection Windows

7.5 Amdega Collection Dual Turn

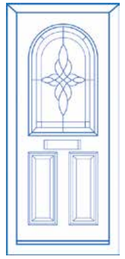
Drip Edge

The drip edge is a very important part of the window. The drip edge on Everest's Amdega Collection windows sit above and below the window. The drip edge stops water from dripping directly onto the window and more importantly it stops water from pooling on the frame which could lead to issues such as degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Timber Profile	Against rot of the timber material and fungal attack	30 years
Paint and Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Area/Harsh Climates	Whole window guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

8.1 Door Types



Entrance Doors

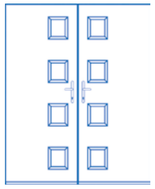
A door with a hinged, normally inward opening slab that can either be right or left hung from the frame. Entrance doors can be used as both front and back doors.

Available in uPVC/Composite/ Aluminium/Timber

Stable Doors

A Stable Door is different to a regular entrance door by virtue of it being split in half so that each half can be opened independently of the other. Also known as Dutch Doors.

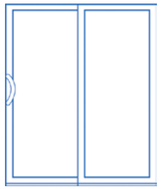
Available in Composite



Double Doors

Double Doors are classed as a set of two slabs that can both open and when closed meet in the centre of the frame.

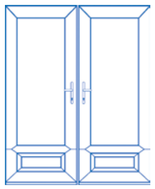
Available in uPVC/ Composite/Aluminium



Sliding Patio Doors

A set of doors that slide horizontally past one another, normally used on the rear of a property.

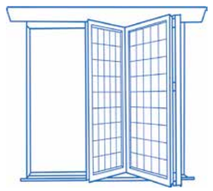
Available in uPVC/Aluminium



French Doors

French Doors are normally the denotation for a set of two doors that open outwards on the rear of a property.

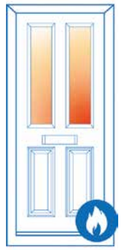
Available in uPVC/ Aluminium/Timber



Bi-Fold

A set of doors that open and fold in a concertina fashion. When folded they stack neatly against a wall allowing wide access to the exterior of a property.

Available in Aluminium

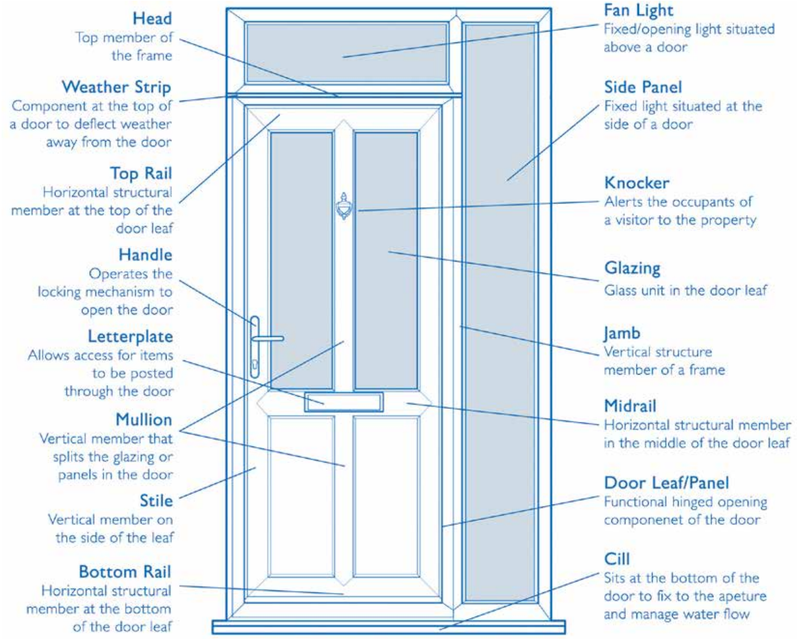


Fire Doors

Fire Doors have to meet various regulations in terms of thickness and required furniture. They must have an overhead closer and a fire rated letter-plate. All Everest Fire Doors are FD30 rated. For more information, please see *section 13.1*.

Available in Composite

8.2 Door Parts

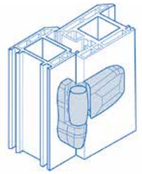


Spyhole

A device installed into the knocker of the door that allows you to look through your door and see who is waiting at the door.

Hinges

A device fitted to one side of the door that allows for rotational movement and the opening of the leaf.



8.4 Secured By Design

Secured by Design

Secured by Design or SBD is the official police security initiative which lend their accreditation to products that meet their standards and therefore in their opinion, will help the owner from being a victim of crime. When it comes to doors, there is a strict criteria that a door must meet for it to be accredited by Secured by Design.

PAS 24-2016

First of all, the door must have passed the security testing standard PAS 24 – 2016. PAS 24 is the enhanced security performance test for the UK and includes; a mechanical loading test, a soft impact test, a hard impact test, a manual lock test, a manual intervention test, a cut through test, an endurance test and finally, a weather resistance test. For more information on all these tests, see *section 1.6* Testing. The eight tests listed above are designed to test every aspect of the doors security performance and assure customers that the door can withstand multiple forms of attack.

Letter Box Fishing Guard

All doors that are fitted with a letter box must be fitted with a fishing guard to earn the Secured by Design accreditation. These fishing guards act to direct objects put through the letter box downwards. This prevents a method of burglary called 'fishing' where a burglar will use a long metal hook; for example, a wire coat hanger, to attempt to lift keys for your home or your car from either a table next to the door or if left in the door lock.

Security Hinges

Security hinges or 'Dog Bolt' hinge brackets must be fitted to re-enforce the hinge side of the door.

Locking Standards

They say that nobody knows, however you will, as all Everest SBD doors come with door locking mechanisms that conform to the British Standard BS 3621. This is another criterion for Secured by Design accreditation.

Recommendations

Secured by Design have a further set of recommendations that aren't essential but will help make your door even more secure. They recommend that you fit a door viewer/spyhole, so you can identify people before opening the door. They also recommend that door chains can stop callers pushing their way in but be warned as they must be securely fixed to avoid screws being pulled out.

8.5 D.E.R

The BFRC are the independent nationally recognised body that measure the effectiveness, thermal and energy efficiency of doors. Doors are tested and graded on a letter-based grading system which runs on a scale from 'G' for the worst performing windows and up to 'A' for the best performing doors. Any replacement doors fitted in the UK must have an energy rating of 'E' or better. When measuring doors, the BFRC look at and measure two factors.

Energy Saving Trust

The Energy Saving Trust are an independent body that work to offer consumers impartial information to consumers about the best way to save money and improve the energy efficiency of their homes. Products with a rating of 'A' above can be registered and can then carry the 'endorsed product' logo.

U-Value & L-Factor

These 2 factors combined create The Energy Rating for that product.

U-Value

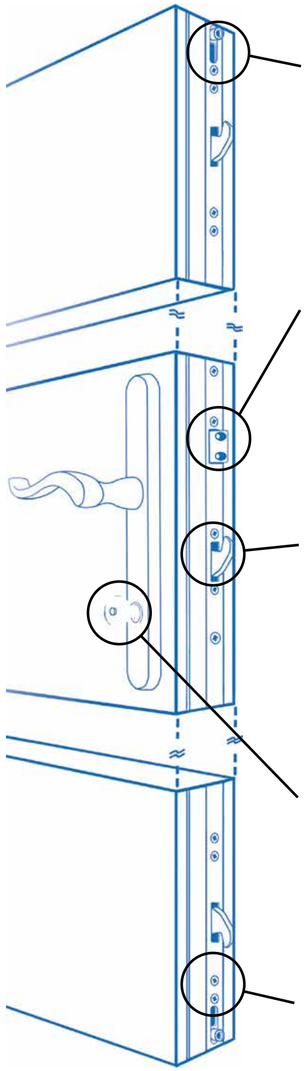
The U-value is a measure of heat loss through the window. It is measured with an inside temp of 21°C and an outside temp of 18°C and 15mph wind. This value is measured in W/(m.K). These are the units for thermal conductivity.

L-Factor

The L-value of a window is a measure of how much air can leak out though the window. This value should be 0 for all new windows. This air leakage is measured in m^3 of air per hour per m of profile.

If the leaf of the door has a surface that is anything more than 60% glazing, then the door is tested as a window with solar gain also factored in.

8.6 Locking Systems



Roller Cams

When locked, the rollers will slide upwards on the top part of the system and down on the bottom into the narrow keeps. These act as separation resistance of the door against the frame and also provide a tight weather-seal. Made with precision from steel, their shape has been designed to fit directly into the opposing keeps that are fully adjustable.

Spring Latch

This component works with the handle to allow the door to be opened. The chamfered part of the lock (usually in the central gearbox) initially engages to hold the door in the closed position when shut. The latch is spring loaded and retracts when it makes contact with the striking edge of the keep, and then extends when aligned with the keep to close the door.

Hook Bolts

The hook when thrown will engage with the keep and place itself behind the keep itself. The arch of the hook adds a large section of surface area to the overall mechanism and acts as the main locking part when engaged. Using these on the top, centre and bottom of the door ensure the whole door is covered, maximising the number of spots the leaf and the frame are in contact. These will deadlock in the thrown position.

Euro Cylinder Profile

The key part of the locking mechanism. Once inserted, the key is turned which rotates the central cam to operate the locking points on the doors system. Cylinders themselves have been designed with increased security features such as anti-drill, anti-bump and anti-pick to protect against attempts by burglars.

Cylinder Screws

Inserted upon installation to secure the locking system plate to the door leaf.

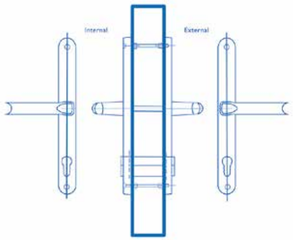
8. Doors

8.6 Locking Systems

Locking Mechanisms

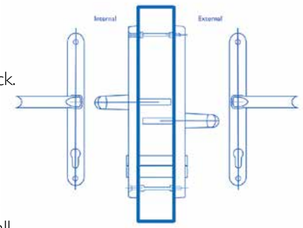
There are a number of different handle combinations with two styles of locking operation. It is extremely important to be fully conversant with these as it is part of the installers responsibility to demonstrate and explain them to the customer upon installation, so they are familiar. The customer can specify which one they desire.

In-Line Back Door Lever/Lever Type Handle



- The In-Line door locking arrangement has a full spindle going between the two handles.
- With the door in the closed position, the handles can be lifted from both the inside and the outside to engage the hook bolts.
- To release the locks, push the lever down.
- When in the locked position, the key can be turned fully to deadlock all points and render the handles immovable.
- Turn the key in the opposite direction to release the deadlock, push the lever down to open the door.

Split Spindle Front Door Lever/Lever and Lever/Pad Handle



- The Offset front door locking arrangement is set with the handles at different levels with half spindles.
- Each handle works independently from each other.
- Entry cannot be gained from the outside without a key, although all locking points can be engaged by lifting the lever upwards, followed by a full turn of the key in the lock cylinder.
- To gain entry, first turn the key a full turn to release the deadlock. Push the lever/pad down to disengage all the locking points. At this stage, you cannot gain entry until you turn the key a quarter turn to release the centre latch.
- To lock the door from the inside, it must first be in the close position. Lift up the handle to engage all the lock points, release the handle to the horizontal position. Turn the key fully to lock all the locking points into the deadlocked position. Remove the key from the cylinder.
- It is important not to leave a key on the inside, as while a key is in the cylinder, no one can unlock the door from the outside.
- To unlock the door from the inside, insert the key and turn all the way, lowering the handle which will disengage both the locking points and the latch, to allow the door to open.

8.7 SmartLock

SmartLock
The smarter way to protect your home

Yale smart Living

Say goodbye to keys

We've teamed up with the Britain's most trusted lock supplier, Yale, to bring you our most advanced door yet. The Conexis L1 is totally keyless and lets you open your door through a variety of different methods so there's no more hiding spare keys under door mats or plant pots.

Open in a way that suits you

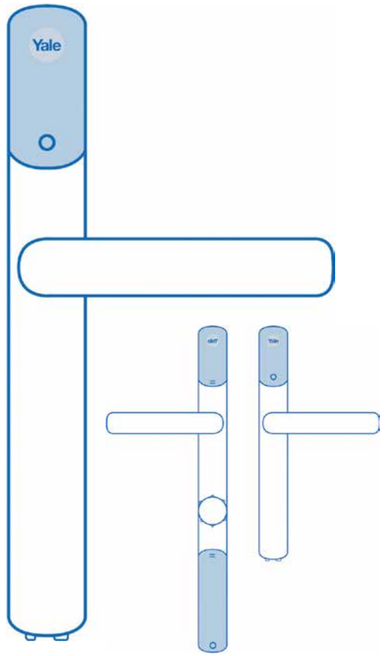
Using the latest technology, SmartLock lets you open the door with either a key card, key fob, phone tag or your smartphone via the secure Yale Conexis app.

Send keys remotely

The option to send mobile keys to family and friends, gives you total control of who you let into your home. You can choose to give access for a few hours, days or even weeks - it's up to you and you can even receive a notification when your loved ones or guests are safely inside.

Protect your home

SmartLock offers all the security you'd expect, and works perfectly with our multipoint locking system. It has a secure push & turn Thumbturn, to prevent would be intruders opening the door through the letterbox. And if that wasn't enough, it's also fitted with a loud alarm should they try to break into the lock, so you can feel assured it meets the highest security standards.



8. Doors

8.7 SmartLock

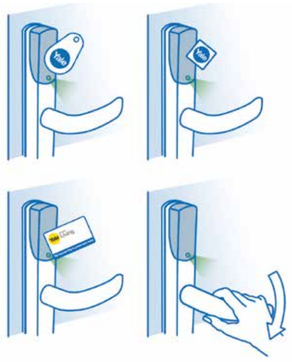
Ways to open your door

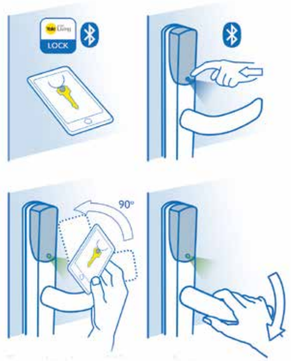

Smart Phone App


Key Card


Key Fob


Phone Tag (sold separately)





Twist the phone 90° and back up to use the mobile key.

FAQ's

Q: How secure is SmartLock?

At Yale, security is taken very seriously. Not only do Yale use proven security as defined by NIST (National Institute of Standards), they also employ leading third-party information security firms to carry out regular security assessments to ensure their products are fully secure.

Q: Does SmartLock pass British security standards?

PAS24 is a method for testing and assessing the enhanced security performance requirements of external door sets, comprising the door and also the lock. SmartLock (Conexis L1) has achieved this accreditation as part of a full door test.

Q: What is the battery life of SmartLock?

Based on average usage, the battery life is expected to last for approximately one year. The lock will play an audible tune to warn when the batteries are about to expire.

Q: What happens if my batteries run flat?

There is a 9v battery connection port on the external side of the lock which can be used to power the SmartLock to gain entry to your property (using either a virtual key/key tag/key card).

8.8 Letterbox Fishing Guard

The new Secured by Design approved Letterbox Fishing Guard is a prevention method for the latest form of attack by modern burglars. Doors with standard letterboxes are prone to the fishing method by the burglar simply using a hooked rod through the letterbox and grabbing whatever is in reach. Most often, these are keys for both the property and vehicles that may have been left on the side overnight with the homeowner not realising what risk the placing of those keys possess.

To wipe out any chance of this happening, the new Fishing Guard utilises a flap on the interior side of the door which stops in place at a safe projection point when pushed, minimising the angle a rod/hook can manoeuvre around. The inner flap has also been designed to still allow access for letters to be posted through the letterbox. Its simple but greatly effective form can complement any door face with the addition of an elegant letter plate on the exterior.

Feature Summary:

- Conforms to PAS24
- Suitable for both uPVC and composite doors
- External flap is manufactured from 304 Stainless Steel for ultimate corrosion resistance
- Inner protective housing has unique concealed hinge mechanism to prevent attack
- Inner lap has a positive stop feature for maximum protection from 'fishing'
- Inner lap projection is below door handle height for added protection
- Opening and closing action cycle tested to 20,000 cycles
- Corrosion test - outer corrosion tested in excess of 1,000 hours based on BS EN 1670 classification

Entrance Door Installation

8.9 Installation

Entrance Door Installation

The components that make up the order are checked against the specification sheet at the installation depot. The components are also checked for any visual faults or problems that may affect the installation or operation. The installation team will then travel to your home.

The installation team will begin by introducing themselves, talking you through the work they are going to be completing. They will also check the specification sheet is correct by measuring your doors and doing any final checks before they begin with the delicate process of removing the existing doors. The new frame will be measured against the opening to ensure it will be able to be fitted.

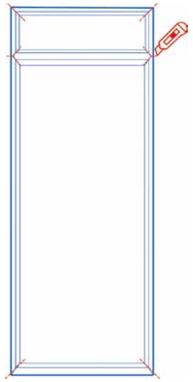
Protective equipment, sheets and cover will be laid out on any flooring/surfaces that they will be walking or performing work on, both internal and external, to ensure that they don't leave any traces of their work.

Everest have strict internal regulations about the storage and transit of products for install. This means that your products are looked after with great care from the moment they are made to the moment they are installed. This care and attention is paramount to giving you the best possible product and installation. *(See Care and Installation of Everest Products Section)*

Once the installation area is fully prepped, they begin removing the existing leaf from the door-frame by opening the door and un-screwing the hinges. The frame is then removed by cutting it into sections, usually along weld lines to make the frame easier to lift out. This is done as efficiently as possible to allow ease of access when the new door frame gets installed.

Once everything has been removed, the debris is cleaned away and everything is placed in rubble boxes to be taken away and recycled after the installation is complete.

If any special preparation work is needed with the property, then this will have been specified by the surveyor and will be carried out before anything can be installed.

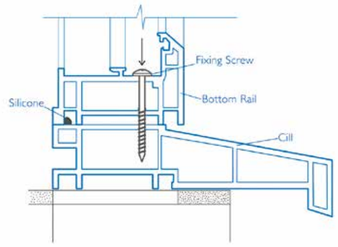


Entrance Door Installation

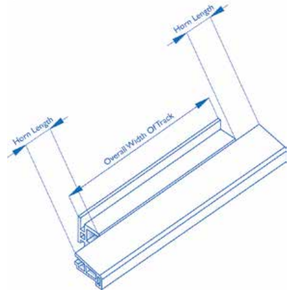
8.9 Installation

Cill Preparation

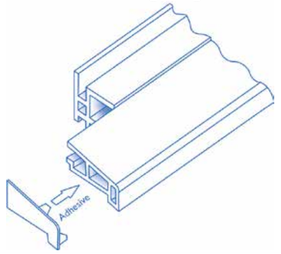
To start, the cill will be prepared to suit the opening. A small bead of silicone is run along the cill so that the frame can be located on top whilst providing a temporary fix and seal between the two. The frame is placed on the cill and screwed to secure them together.



If a flush cill is specified, it will be either be pre-cut to the overall width of the door by the factory to include the horn length entered by the surveyor. If a projection cill with horns is specified then the installer will then measure up the base of the door and, having already measured the cill from your existing door, they will cut the cill to length and shape to allow for horns either side. The cill will be cut to allow for expansion.



The cill ends will then be capped to give a professional finish and cover the freshly cut edge. This also stops mould, insects and any other small animals from taking refuge in the hollow cill.



8. Doors

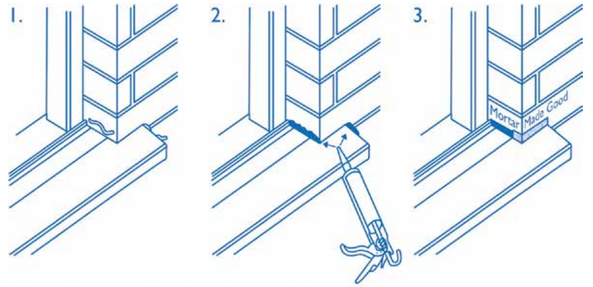
Entrance Door Installation

8.9 Installation

Positioning of Cill

The cill will then be installed with the installer making sure that the expansion gap is maintained and that the cill projects out at least 30mm from the wall.

The ends of the cill where it meets the wall will be sealed with sealant.



1. Foam is positioned between the cill end cap and the structure.
2. A silicone seal is placed between the end cap and structure.
3. Once all silicone sealing is complete, the external surface is filled with cement mix.

Bedding of Frames

All frames are bedded and sealed along the underside of the cill and the wall.

Generally, most frames are bedded on mortar. However, there is exceptions to this rule as detailed in this table:

Type of Construction & Position of Frame	Bedding
Frame on external wall made from brick or block	Mortar bed
Frame on external wall made from steel or timber	Silicone
Frame on internal wall made from brick or block	Mortar bed or silicone (situation depending)
Frame on internal wall made from steel or timber	Silicone
Frame on a wall made from concrete	Mortar bed or silicone (situation depending)
Frame on quarry tiles	Silicone
Frame on lead flashings	Silicone

The support pads are checked for level before and after applying mortar.

8.9 Installation

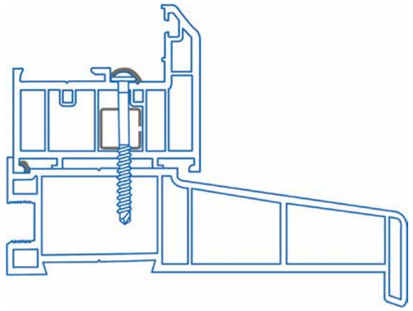
DPC (Damp Proof Course) Under Frames

Replacement doors do not always require new DPC. If the existing DPC is in good condition, leave in position. It will only need a new one if the original is damaged or not fit for purpose.

Whenever there is a cavity in the wall about the frame for which no cavity drainage is provided, a wide vertical DPC must be inserted above so that the back-edge rests against the cavity side of the inner wall with the outer edge coming out over the door head, providing a path and means of escape for any moisture which may run down the cavity side of the external wall.

Installing the New Door

The frame is then screwed in to the cill. If the frame width exceeds 1600mm, then the frame will need re-enforcing and will therefore will need to be pre-drilled.



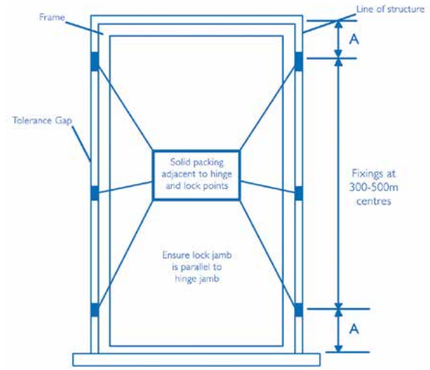
Sheets are placed over the frame whenever drilling is in progress to protect the frame from dust.

8. Doors

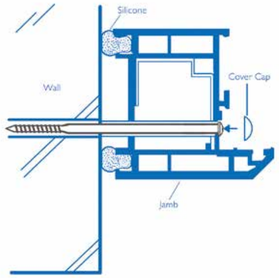
Entrance Door Installation

8.9 Installation

A small layer of insulating foam is placed on the back of the frame facing the wall. This foam helps stop heat-loss and air leakage round the edge of the frame. Wedges will be placed in the appropriate places shown in the diagram below.



It is essential to wedge directly behind hinges and locking points and not above or below. The door may become unstable if so. The frame is then attached to the wall with either 120/140/160mm fixing screws. These screws are designed and used to provide extra security as they are greater in size than the industry standard. It is essential that a good solid fixing is obtained to all hinges and locks, which ensures that the frame does not vibrate loose during years of operation and use. Cover caps are including over the heads of the screws to improve aesthetics.



The frame is then sealed to the wall using a silicone seal to prevent water ingress and create an airtight seal.

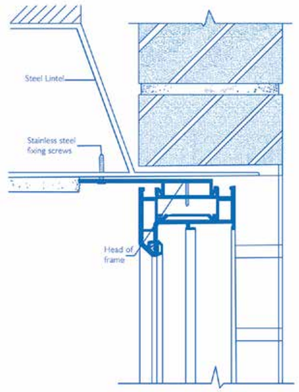
EVEREST TECHNICAL GUIDE

Entrance Door Installation

8.9 Installation

Head Fixings

Head fixings are essential on double doors and combination frame installations. To avoid drilling into cavity trays, which will inevitably lead to water penetration, lugs are used. Although these lugs are a tight fit between track legs, a screw fixing into the track must be fitted. All of the fixing screws we use are stainless steel. Where it is possible for water penetration, silicone should be applied.



Ensuring the Door is Plumb

It is important that the frame is installed square and plumb. Failure to do so will result in problems at a later stage. The edge of the frame might not be parallel to the wall never the less the door will be installed straight independent of the surrounding aperture.

Trimming

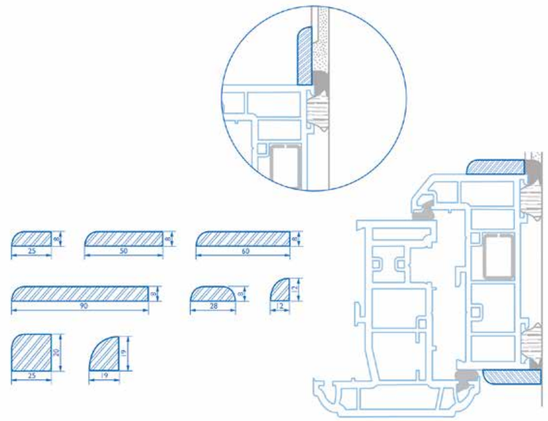
All Everest doors are trimmed internally and externally. The trimming used is a thin piece of uPVC which is used to protect the silicone from water and weather damage. This trimming provides an extra layer of protection from drafts and water ingress. The trim will match the finish on your doors even with foiled finishes. The trim can be sealed as well at your request.

8. Doors

Entrance Door Installation

8.9 Installation

If your door is fitted with a flush cill, a small piece of trim is required to increase weathering function, aesthetics, and ease of trimming the jambs. Everest offer eight trim shapes to be used in any orientation at the installers discretion to give the best finish possible and create the best protection for the sealant.



If you don't want the trim fitting internally or externally, then the installer will be more than happy to oblige. However, trimming creates the best finish possible and as Everest offer it free of charge with all doors, we would highly recommend taking advantage of it.

EVEREST TECHNICAL GUIDE

8.9 Installation

Patio Door Installation

In essence, a patio door is much like a big window which you can walk through when open. This means that the ways that in which both products are installed are very similar.

Removing the existing patio door is done by de-glazing the original door and unscrewing and cutting the frame into small pieces so that they are easier to remove from the reveal. The moving panel is the first part that is dismantled. These are de-glazed before separating the four profile pieces and lifting each out of the frame. The rest of the panels are then de-glazed and then cut up and removed.

The DPC (Damp Proof Course) is then inspected and if a new one is required, the installer will remove the existing one and prepare a new one. For more information on DPCs see the entrance door installation guide.

Ensuring the Door is Plumb

It is important that the frame is installed square and plumb. Failure to do so will result in problems at a later stage. The edge of the frame might not be parallel to the wall; nevertheless, the door will be installed straight independent of the surrounding aperture.

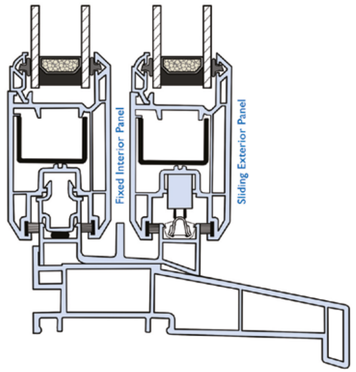
Installing the New Door

The reveal is then prepared with the bedding for the frame being laid down. For more information on frame bedding, see entrance door installation. Once the reveal and installation area are fully prepped, the installers will begin assembling the frame. This is done on site as the frames for most patio doors are too big to be sent assembled.

The frame, fixed panes and moving panel are all assembled together. The fixed panel is deglazed before installation.

Sheets are placed over the frame whenever drilling is in progress to protect the frame from dust.

A small layer of insulating foam is placed on the back of the frame facing the wall this foam helps stop heat-loss and air leakage round the edge of the frame. The frame is then attached to the wall with 120/140/160mm fixing screws. These screws are designed and used to provide extra security as they are longer than the industry standard.



8. Doors

Patio Door Installation

8.9 Installation

The frame is then sealed to the wall using a silicone seal to prevent water ingress and create an airtight seal.

The edge of the frame is then trimmed so that there is an extremely tidy finish to the joint. For more information on trimming, see the entrance door installation guide. Any components such as tracks and tread are fitted into place before the panels can be applied. Trim is fitted to finish off the structural parts of the frame.

The panels are then installed. First, the fixed panel is placed into the tracks and secured to the outer frame using screws on the rails, jambs and head of the panel. Covers are applied to the jambs and head to hide the internal substrate. The glazed sliding panel is then lifted onto the tracks. It should be slid up to the jamb in the frame to check it is square. The wheels can be adjusted to allow ease of movement.

Once the two are in place, the fixed panel can be re-glazed. The locks in the patio can be adjusted so that they work correctly when in operation.

EVEREST TECHNICAL GUIDE

Bi-Fold Installation

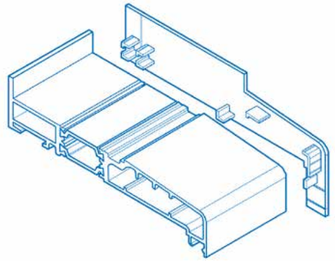
8.9 Installation

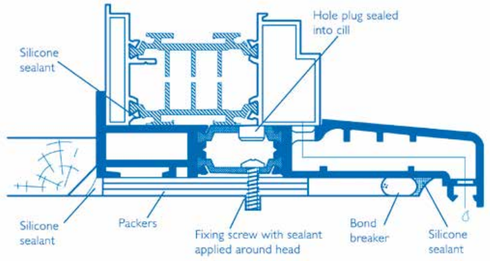
Bi-Fold Installation

The installation of a bi-fold door would start by following the same steps as any other installation in terms of preparation and set up. Any existing windows/doors are removed as efficiently as possible with any excess materials taken to be recycled. The surfaces in the aperture are cleaned and any debris is removed to make the fitting of components as easy as possible. It may be possible that there is brickwork projecting from the aperture and if so, this needs to be trimmed back.

Fitting of the Sub-Cill and Frame Into the Aperture

The sub-cill is marked into place and then screwed with sealant applied to the head of the screw to keep it watertight. It is vitally important that the cill is laid flat and level to achieve good performance. Drainage paths through the sub-cill can be seen on the illustration, so care must be taken to ensure they are not obstructed and that screw fixings do not penetrate these areas. When fitting the frame to the sub-cill, silicone sealant must be gunned as shown to ensure that a watertight joint is created on the inside of the frame. Silicone sealant or small gap sealer is applied to each end cap and pushed into position to hold secure. Any damaged damp proof membranes are replaced or if required, additional membranes are incorporated. Ideally, the frame should be bedded on mortar to provide added structural support.





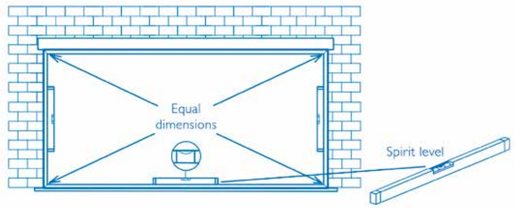
8. Doors

Bi-Fold Installation

8.9 Installation

Ensuring the Frame is Plumb

When the opening was originally measured, a suitable gap should have been allowed to let any packing be applied to make the door plumb and square. To check the door is square, the diagonals can be measured from corner to corner. These dimensions should not differ by 1 or 2mm. If this is the case, then the packing is to be adjusted to make the door square. The lay of the frame in to out can be checked by using a spirit level on the jambs. On replacement applications, the correct position of the frame might not align with the original. This will require some remedial work to make good the plaster reveal around the frame on the inside as well as any render that is present on the outside.



Hanging the Leafs

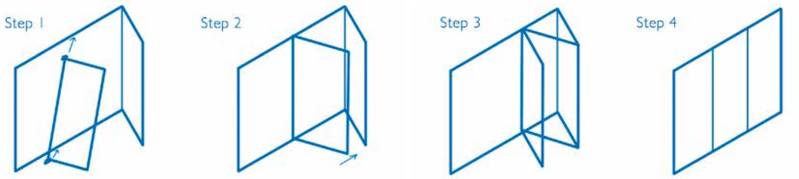
The first leaf is offered into place up to the hanging jamb. The hinges are then fixed from jamb to the leaf and then trim is applied to cover the hinges, improving aesthetics and stopping any debris from getting to the hinges. The movable leafs are then installed. These are the basic steps:

Step 1: First the leaf and its guides are lifted into the head track channel and then the bottom guides into the bottom track.

Step 2: The leaf is slid towards the hanging leaf that was previously attached. Hinges are then attached between the two so that they can move together in the concertina like fashion.

Step 3: This process is then repeated for all of the other leafs until they are all in place. Magnetic catches are fitted at the top of the leafs so when opened they can be held together in place.

Step 4: A full inspection of the door is carried out for operation and the separate components to make sure there is nothing catching and the door functions properly.

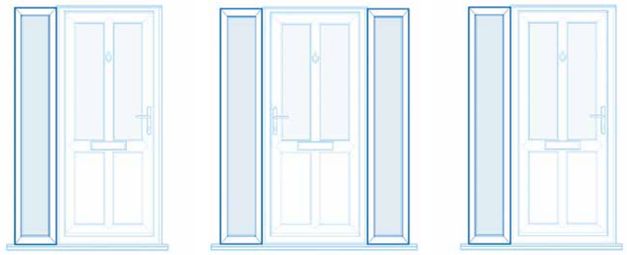


EVEREST TECHNICAL GUIDE

8.10 Door Configuration Options

Side Panels

A modern addition to any entrance door – side panels provide emphasis to your design as well as allowing more light into your entrance way. They are included as part of the frame at the flanks. Available in a number of styles that can be chosen to suit your door perfectly. To give the side panel that extra personal touch, decorative, patterned and leaded glass designs can be implemented to the full side panel. The colour of your side panels can be chosen the same as your entrance door or as an alternative can be another colour to complement your door. Side panels can be a unique replacement for double doors that were previously in use, adding more balance in the aesthetic and providing more light to your entrance. Side panels are able to be used with all the door materials we offer.

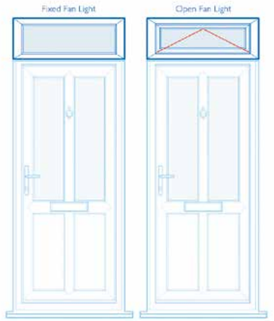


8. Doors

8.10 Door Configuration Options

Fan Lights

Similar to side panels, fan lights are an additional door component that are applied to the top of a door frame structure. They can be easily suited to both traditional and contemporary properties to complement your entrance door and the surrounding structure. A fixed light can be chosen or if desired, an open-able sash is able to be included, to help with ventilation and functionality. The glazing in a fan light can match the same design as the door glazing, allowing the two to balance and work well as a pair. One of the main benefits in an Everest fan light is that they are part of the same frame as the door. This means that there is no need for structural components to be added, improving aesthetics and meaning more light can pass through the fan light. Fan lights are able to be used with all the door materials we offer. Products such as French Doors can also have fan lights included with them.



8.12 Gaskets/Q-Lon/Brushes

Q-Lon

At Everest, we use Q-Lon weather proof seals on our doors. Q-Lon has all of the positive performance aspects of rubber seals without the mould build-up, weather damage and rotting that they can experience. This is because Q-Lon consists of a polyurethane foam core, providing high durability and immense recovery performance and a polyethylene film exterior which is both weather and UV resistant. The memory aspect to the Q-Lon seals is where it stands it out from the EPDM equivalents used on typical uPVC doors. Having it return to its original shape after any period of usage or conditions allow it to maintain its high quality of performance all year round.

Made with a unique combination of materials and with technical performance unparalleled by any other material used in weather seals, Q-Lon offers the highest standard of sealing function – even under extreme conditions.

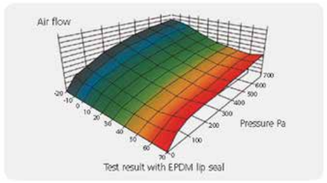
Continuous research and development, as well as strict material inspection and quality inspections, have made Q-Lon one of the best-established sealing systems in the industry today.

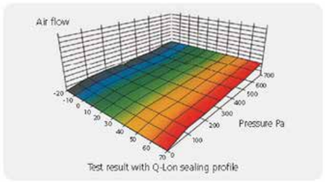
Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

Air Flow Comparison

The graph below shows the weather performance against competitor gaskets and demonstrates that Q-Lon provides less air leakage over a wide temperature range when compared to our competitors.





8. Doors

8.12 Gaskets/Q-Lon/Brushes

Brushes

Pile fibres move independently and are flexible. They seal perfectly against moving elements and also uneven surfaces. Early in the previous century, pile weather strips were developed for use in revolving doors. The first types were made from wool with a cotton backing (so-called wool pile). In recent years, demands regarding draught proofing and durability in the building industry have increased, and the products developed accordingly.

All of our brush pile seals are now made from polypropylene (PP) and come with numerous options:

- Available in many different widths and heights
- Reinforced woven backing, extruded base for optimal ease of insertion or carrier profile
- With optional adhesive backing based on hot-melt (HM) glue technology
- PP (Polypropylene) yarn treated with silicone to resist water, mould and mildew
- Different densities depending on seal type, width and mounting distance
- Standard soft multifilament yarn in many different colours
- Heat set for recovery after compression
- UV stable and chemically inert
- Excellent resistance to abrasion and static build-up and low friction for improved sliding performance
- Optional central or lateral fins for additional draught proofing

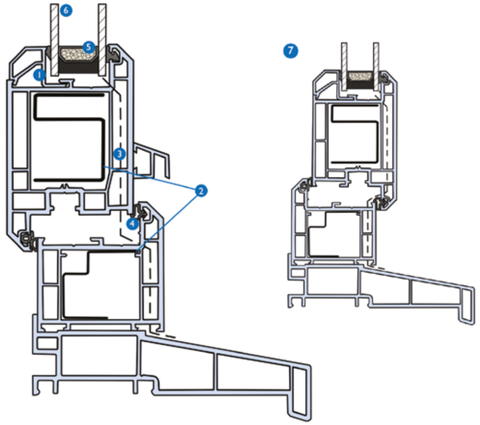
EVEREST TECHNICAL GUIDE

9.0 uPVC Doors

Everest
FIT THE BEST

uPVC Doors

9.1 Door Leaf Features & Benefits



Key Features & Benefits

1. Internal glazing bead for increased security
2. Steel re-enforced frame for strength and shape
3. Concealed drainage for a clean clear aesthetic
4. Q-Lon weather-proof seals
5. Warm-edge composite spacer bar
6. Argon filled sealed unit
7. Outward opening option available

1. Internal Glazing Bead

All Everest uPVC Doors are fitted with an internal glazing bead for two reasons. The first and most important is; it makes the door much more secure than if the glazing bead was put on the outside. This is because the glazing bead is the only thing that holds the glazing in place and if it's inside your house then this prevents potential unwanted visitors from removing the beading and glass and gaining access to your property.

2. Steel Re-enforced Frame

Doors are tested to near destruction when being tested. Most of these tests centre around the strength of the door frame and uPVC profile sections that make up the door. These tests include impact tests, cut through tests and manual attack tests. Steel re-enforcement in the frame ensures that Everest's door frames and door profiles are strong and secure.

3. Concealed Drainage

All doors need drainage – otherwise, water could build up in the frame which would lead to the frame becoming much heavier and putting the door frame and leaf frame at risk of cracking when opened because of the increased weight. Most doors have a plastic strip which covers the hole that has been drilled for drainage. Everest's uPVC doors have concealed drainage so that they don't have unsightly plastic strips.

9. uPVC Doors

uPVC Doors

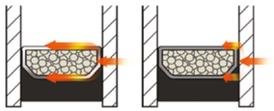
9.1 Door Leaf Features & Benefits

4. Q-Lon Weather-Proof Seals

Without these seals, the door would leak and water would leak into your home every time it rained. They are extremely important components in the door. Everest use Q-Lon weather proof seals. Q-Lon has all of the positive performance aspects of rubber seals; without the mould build-up, weather damage and rotting that rubber seals can experience. This is because Q-Lon is a composite material with an anti-fungal layer on it to prevent mould build-up.

5. Spacer Bar

Most of the energy lost through a door is lost at the edge of the glazing. This is because historically, the old aluminium spacer bar was acting as a thermal bridge. In Everest doors, we use a warm-edge spacer with desiccant beads for greater thermal efficiency. The warm-edge spacer has better insulating properties than the aluminium spacer used in most doors. This is because the warm-edge spacer is made from a composite material designed to act as an insulator. The desiccant makes sure the argon between the panes stays moisture free.



6. Gas Between the Panes

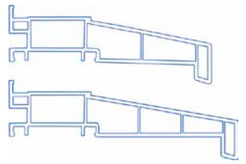
At Everest, we do several things to ensure that our sealed units are the best and most thermally efficient they can be. We use warm-edge spacers as mentioned above. We also use Low-E glass and soft coated glass to reflect heat back into your home however the process we do that has the most influence is filling our sealed units with the inert gas, argon. This gas is much denser than air and it is better insulators of heat and sound which means that compared to an air filled sealed unit they are much more thermally efficient. Other firms will drill two small holes in their sealed unit and hand pump the argon in which often leaves the unit filed with a mixture of air and argon. Everest's sealed units are assembled by robots in rooms that are filled with argon which means that the only thing that can be in our sealed units is argon and it also means we never have to drill into the sealed unit and risk the structural integrity and air tight seal.

7. Outward Opening Option

Everest's uPVC Doors can be built to open either inwards or outwards. Outward opening doors are often used when it is a set of French doors, however it can be used on a single door if required. The outward opening door has all of the same security features and benefits of the inward opening door.

Thresholds

There are three threshold options when installing a uPVC doors. The first two are with a drip guard cill like the ones above. The third is where you remove the drip cill and the frame goes straight into the ground, however this third option involves a lot of ground work to make the frame stable.



uPVC Doors

9.2 Exclusives

Practical, smart and secure.

Everest's Exclusives uPVC Doors offer a range of unique styles and colours which means your front door is really your front door. Each one is bespoke and designed around your particular style with choice of feature panel, door configuration, colour, furniture and where applicable, glazing.

All our doors with space available for glazing are available with triple and all of them are fitted with 6.8mm laminated glass. This 0.8mm layer of laminate might not sound like much but it provides an immense amount of security and has the potential to make your home much more secure.

This laminated glass along with the multi-point locking system has earned our uPVC Exclusives Doors Secured by Design accreditation. Finally, uPVC brings with it a very low level of maintenance compared to traditional entrance door materials.

9. uPVC Doors

uPVC Doors

9.2 Exclusives

Feature Panel Options

The Exclusives Collection

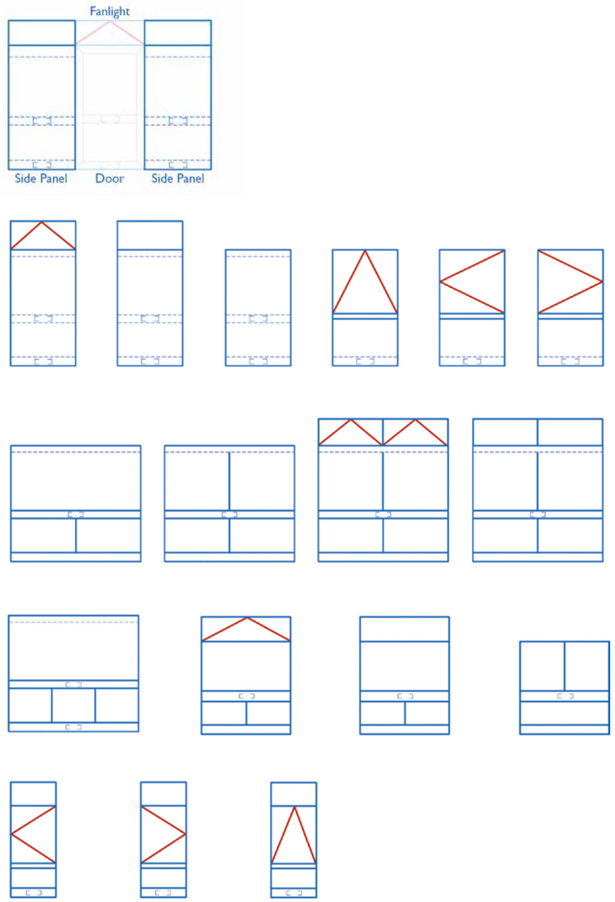
The Cottage Range

uPVC Doors

9.2 Exclusives

Door Configurations Options

Side Panels

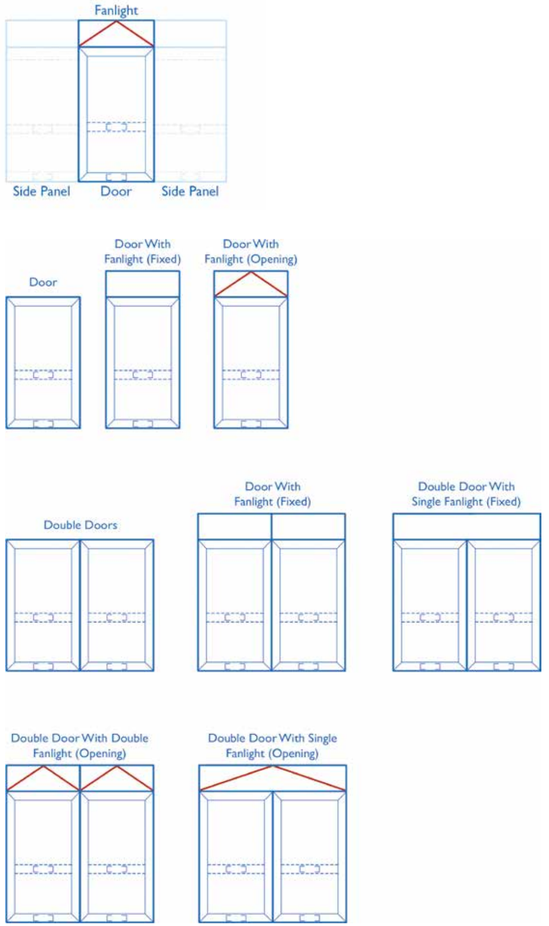


9. uPVC Doors

uPVC Doors

9.2 Exclusives

Fanlights



uPVC Doors

9.2 Exclusives

Single Door vs French/Double Doors

Available in both Single Door and Double/French Door configurations.

Single Door

Double/French Door

9. uPVC Doors

uPVC Doors

9.2 Exclusives

Colour Options

Available in both Single Door and Double/French Door configurations.

One Colour Options:
Same colour on inside and outside.

White | White Woodgrain | Cream Woodgrain | Anthracite Grey | Rosewood

Golden Oak

Two Colour Options:
Mixed with white on the inside.

White/Anthracite Grey | White/Rosewood | White/Golden Oak | White Woodgrain /Light Grey | White/Black Woodgrain

Please note any feature panel option with sculptured Georgian panels are only available in White uPVC.

Double or Triple Glazed

Available in double or triple glazed. For more information, please see *section 2.4.*

Double Glazed

Triple Glazed

uPVC Doors

9.2 Exclusives

Handles

Modern Handles

Pad Handles

Swan Neck Handles

SmartLock
from Yale

Letterboxes

Chrome

Gold

Black

Door Knockers

Chrome with and without Spy Hole

Gold with and without Spy Hole

Black with and without Spy Hole

Extra Furniture

Chrome

Gold

Black

9. uPVC Doors

uPVC Doors

9.2 Exclusives

Decorative Lead Options

Decorative lead options available. See *section 2.6* for more information on decorative leading.

Feature Diagram

1. 20mm air gap within sealed unit increases thermal and sound insulation.
2. Galvanised steel reinforcement.
3. Key lockable handle.
4. Multi-point locking mechanisms secured into galvanised steel reinforcements.
5. Internal glazing bead helps prevent glass being removed from the outside.
6. Multi-chambered uPVC profile gives rigidity and improves thermal performance.
7. Double weather-resistant seals around the door frame.
8. uPVC will never rot, rust, flake or discolour.
9. Optional letter box, door chain, knocker and spy hole.
10. Lifetime guarantee against fogging and condensation in the sealed unit.
11. Three high performance hinges.
12. BS EN 12150-1:2000 toughened safety glass fitted as standard.
13. Optional trickle ventilation is incorporated into the frame.
14. Weather drip deflects rain away from the door.

Secured by Design
SBD
Official Police Security Initiative

EVEREST TECHNICAL GUIDE

uPVC Doors

9.2 Exclusives

Security Features

Multi Point Locking System

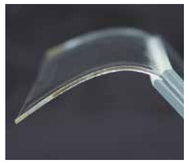
The Everest uPVC Exclusive Door is fitted with a multi-point locking system which provides great locking capabilities across the whole door leaf and frame. Utilising the 3 Hook and 2 Roller multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Hinges

Our Exclusive uPVC Doors use high performance hinges that allow your door to operate to its full potential. Its double knuckle design overcomes drooping of the door from the frame and an added solidity enhancing security. Fully adjustable design that provides no visual change and the same quality of operation. The hinge offers four screw port fixes into the sash reinforcing chamber providing optimum security if the door came under attack. With the hinge endurance tested for 100,000 cycles, you can guarantee the mechanism will remain durable and ensure your entrance operates how you would expect it to. All hinges match the chosen door furniture finishes (Chrome, Gold, Black).

6.8mm Laminated Glass

All Everest uPVC Exclusives Doors are fitted with 6.8mm laminated glass. Laminated glass provides added security for the door as any unwanted visitors will struggle to smash the glazing and reach the inside handle or gain access to your property.



Reinforced Door Leaf and Frame

Both the frame of the leaf and the outer frame are re-enforced with steel rods. This re-enforcement in the frames give the door a lot of added strength and means that the likelihood of either snapping completely is massively reduced. This reduces the risk of someone gaining access to your property.

Internal Beading

Having an internal glazing bead means that any and all glazing in the door is installed from the inside and is held in place by a piece of uPVC called a bead. This bead is very easy to remove and is designed to make the replacement of windows and doors a more environmentally friendly process as the materials can be separated to be recycled. Having this glazing on the outside not attached to the frame can be a major security risk. All Everest uPVC Doors have internal glazing beads leaving them entirely less vulnerable to attack.

9. uPVC Doors

uPVC Doors

9.2 Exclusives

Thermal Efficiency

- A rated thermal performance
- 20mm argon-filled gap in sealed unit for optimum insulation
- Low-E glass reflects heat back into the room
- Rebated door with double weather-resistant seal
- Energy Saving Trust endorsed product

EVEREST TECHNICAL GUIDE

uPVC Doors

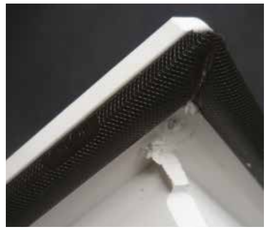
9.2 Exclusives

Gaskets

We at Everest have four gaskets on our uPVC Exclusives Doors. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the leaf and the frame. One of these is positioned on the inside of the leaf and locates and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other seals are located on the sash and they are designed to create a seal either side of the sealed unit/feature panel. The external one is made from Q-Lon again and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.





Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

9. uPVC Doors

uPVC Doors

9.2 Exclusives

Drip Edge

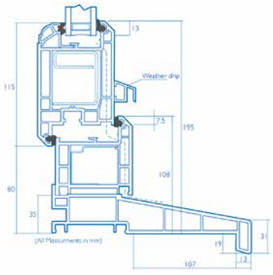
The drip edge is a very important part of the door. The drip edge on Everest's uPVC doors sit above and below the door. The drip edge stops water from dripping directly onto the door and more importantly, it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

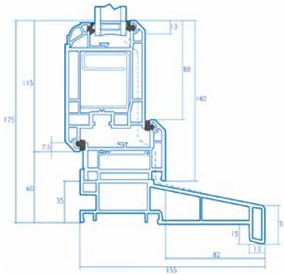


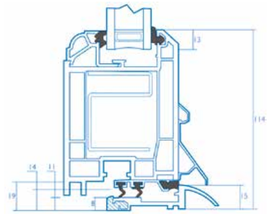
Threshold

There are three threshold options available when fitting an Everest uPVC door. The type of threshold that is used is a decision made by the surveyor when he comes to measure your property. The Threshold used depends on the configuration of your door and in certain cases any individual requirements.

The three threshold options are; (all measurements in mm)


Standard (with drip fitted)


Low


Ground Level (Accessibility)

Guarantees

Guarantees		
Timber Profile	Against fog and condensation between the panes	Lifetime
White uPVC Finish	Protects against flaking and discolouration of white uPVC finish	Lifetime
Door	Whole door, includes hinges and gear-box	10 years

uPVC Doors

9.3 Exclusives Premium

We've taken our best uPVC door and made them better.

Everest's Exclusives Premium uPVC Doors offer a range of unique styles and colours which means your front door is really your front door. Each one is bespoke and designed around your particular style with choice of feature panel, door configuration, colour, furniture and where applicable glazing.

All our doors with space available for glazing are available with triple and all of them are fitted with 6.8mm laminated glass. This 0.8mm layer of laminate might not sound like much but it provides an immense amount of security and has the potential to make your home much more secure.

They also feature our ingenious new Smoothweld technology. This gives an almost invisible corner joint, with clean, seam-free lines, no deep grooves that might harbour dirt and a beautiful, flawless aesthetic.

9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

Feature Panel Options

The Exclusives Collection


FP1


FP2


FP3


FP5


FP6


FP8


FP9


FP11


FP12


FP13


FP14


FP15


F17


FP19


FP24

The Cottage Range


GP1


GP2


GP3


GP5


GP6


GP8


GP9


GP11


GP12


GP13


GP14


GP15


G17


GP19

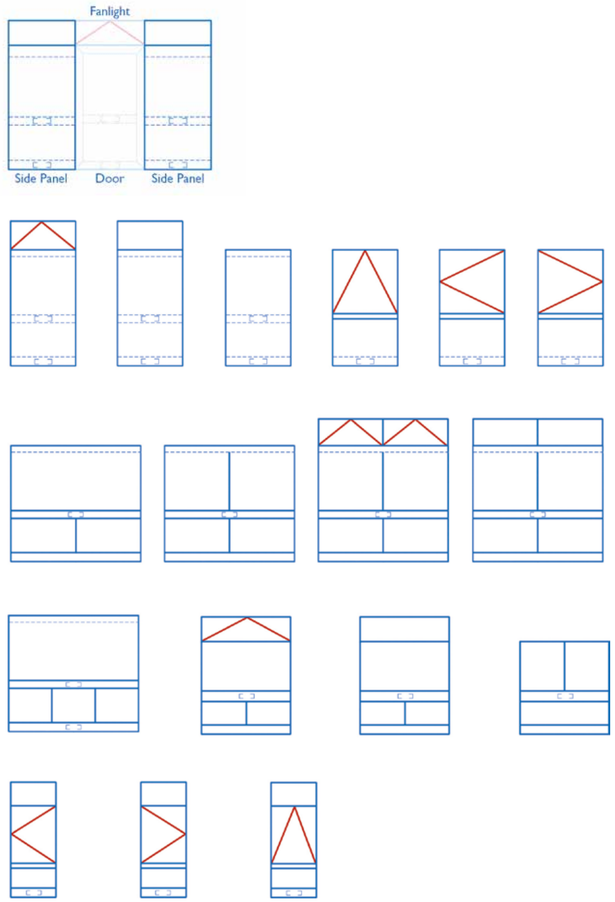

GP24

uPVC Doors

9.3 Exclusives Premium

Door Configurations Options

Side Panels

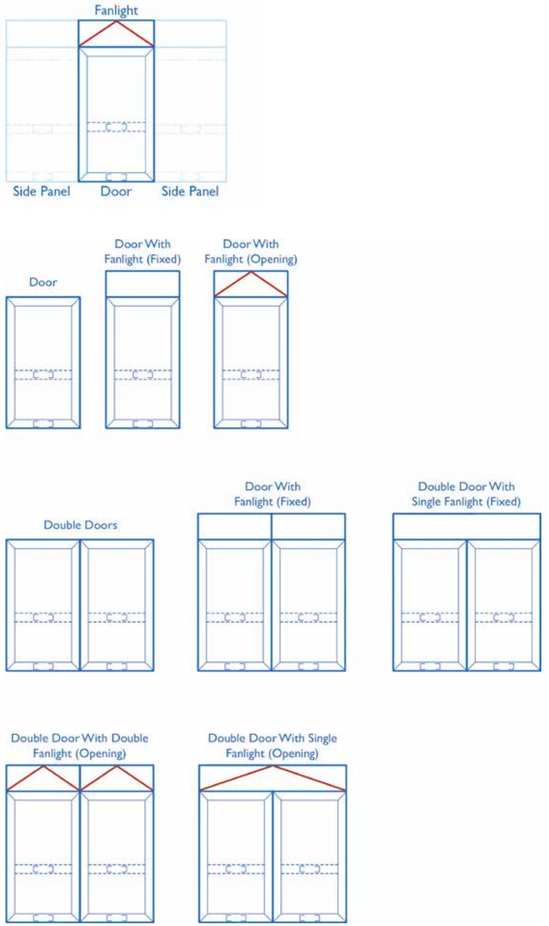


9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

Fanlights



uPVC Doors

9.3 Exclusives Premium

Single Door vs French/Double Doors

Available in both Single Door and Double/French Door configurations.

Single Door

Double/French Door

9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

Colour Options

Available in both Single Door and Double/French Door configurations.

One Colour Options:
Same colour on inside and outside.

White Woodgrain | Rosewood | Golden Oak

Two Colour Options:
Mixed with white on the inside.

White Woodgrain/ Rosewood | White Woodgrain /Golden Oak | White Woodgrain /Olive Grey | White Woodgrain /Chartwell Green

Double or Triple Glazed

Available in double or triple glazed. For more information, please see *section 2.4.*

Double Glazed

Triple Glazed

uPVC Doors

9.3 Exclusives Premium

Handles

Modern Handles

Pad Handles

Swan Neck Handles

SmartLock
from Yale

Letterboxes

Chrome

Gold

Black

Door Knockers

Chrome with and without Spy Hole

Gold with and without Spy Hole

Black with and without Spy Hole

Extra Furniture

Chrome

Gold

Black

9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

Decorative Lead Options

Decorative lead options available. See *section 2.6* for more information on decorative leading.

Feature Diagram

Secured by Design

Official Police Security Initiative

1. 20mm air gap within sealed unit increases thermal and sound insulation.
2. Galvanised steel reinforcement.
3. Key lockable handle.
4. Multi-point locking mechanisms secured into galvanised steel reinforcements.
5. Internal glazing bead helps prevent glass being removed from the outside.
6. Multi-chambered uPVC profile gives rigidity and improves thermal performance.
7. Double weather-resistant seals around the door frame.
8. uPVC will never rot, rust, flake or discolour.
9. Optional letter box, door chain, knocker and spy hole.
10. Lifetime guarantee against fogging and condensation in the sealed unit.
11. Three high performance hinges.
12. BS EN 12150-1:2000 toughened safety glass fitted as standard.
13. Optional trickle ventilation is incorporated into the frame.
14. Weather drip deflects rain away from the door.
15. Smoothweld technology for a virtually seam free corner joint.

EVEREST TECHNICAL GUIDE

uPVC Doors

9.3 Exclusives Premium

Security Features

Multi Point Locking System

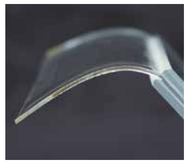
The Everest uPVC Exclusive Door is fitted with a multi-point locking system which provides great locking capabilities across the whole door leaf and frame. Utilising the 3 Hook and 2 Roller multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Hinges

Our Exclusive uPVC Doors use high performance hinges that allow your door to operate to its full potential. Its double knuckle design overcomes drooping of the door from the frame and an added solidity enhancing security. Fully adjustable design that provides no visual change and the same quality of operation. The hinge offers four screw port fixes into the sash reinforcing chamber providing optimum security if the door came under attack. With the hinge endurance tested for 100,000 cycles you can guarantee the mechanism will remain durable and ensure your entrance operates how you would expect it to. All hinges match the chosen door furniture finishes (Chrome, Gold, Black).

6.8mm Laminated Glass

All Everest uPVC Exclusives Doors are fitted with 6.8mm laminated glass. Laminated glass provides added security for the door as any unwanted visitors will struggle to smash the glazing and reach the inside handle or gain access to your property.



Reinforced Door Leaf and Frame

Both the frame of the leaf and the outer frame are re-enforced with steel rods. This re-enforcement in the frames give the door a lot of added strength and means that the likelihood of either snapping completely is massively reduced. This reduces the risk of someone gaining access to your property.

Internal Beading

Having an internal glazing bead means that any and all glazing in the door is installed from the inside and is held in place by a piece of uPVC called a bead. This bead is very easy to remove and is designed to make the replacement of windows and doors a more environmentally friendly process as the materials can be separated to be recycled. Having this glazing on the outside not attached to the frame can be a major security risk. All Everest uPVC Doors have internal glazing beads leaving them entirely less vulnerable to attack.

9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

Thermal Efficiency

- A rated thermal performance
- 20mm argon-filled gap in sealed unit for optimum insulation
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EVEREST TECHNICAL GUIDE

uPVC Doors

9.3 Exclusives Premium

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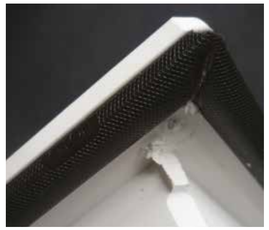

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9. uPVC Doors

uPVC Doors

9.3 Exclusives Premium

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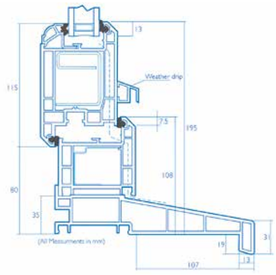
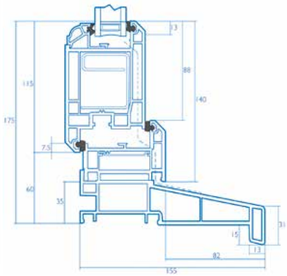
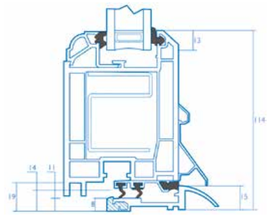


Standard (with drip fitted)



Low



Ground Level (Accessibility)

Guarantees

Guarantees		
Sealed Unit	Against fog and condensation between the panes	Lifetime
Door	Whole door, includes hinges and gear-box	10 years

uPVC Doors

9.4 Essentials

Perfect for those who want practical and stylish, no nonsense door –

Solidly secure and maintenance free, the Essentials range gives you four exterior colour options (including the very chic new Anthracite Grey), multi-point locking and double weatherproof seals. You won't find better value in a front or back door.

This is a door you can fit and forget. It won't rot, flake rust or fade and you'll never have to sand, paint or varnish it. All that's needed is a wipe down with a soft cloth every now and then.

With exceptional design, rock solid multi-point locking and insulating glass units, an Everest Essentials Door does everything you want a front door to do, and far better than most.

9. uPVC Doors

uPVC Doors

9.4 Essentials

Feature Panel Options

The Essentials Collection

FP1 FP3 FP4 FP5 FP6 FP7 FP9

Double or Triple Glazed

Only available in double. For more information, please see *section 2.4.*

Double Glazed

Colour Options

One Colour Options:
Same colour on inside and outside.

White uPVC

Two Colour Options:
Mixed with white on the inside.

White/Golden Oak

White/Rosewood

White/Anthracite Grey

uPVC Doors

9.4 Essentials

Furniture Options

Handles

Modern Handles

Chrome Gold Black

Letterboxes

Chrome Gold Black

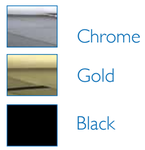
Door Knockers

Chrome without Spy Hole

Gold without Spy Hole

Black without Spy Hole

Extra Furniture



Chrome

Gold

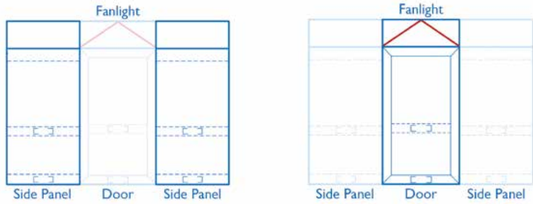
Black

9. uPVC Doors

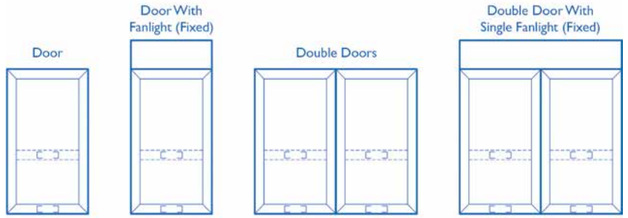
uPVC Doors

9.4 Essentials

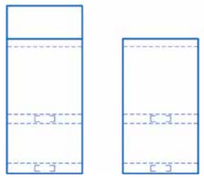
Door Configurations Options



Fan Lights



Side Panels



uPVC Doors

9.4 Essentials

Feature Diagram

1. 20mm air gap within sealed unit increases thermal and sound insulation.
2. Galvanised steel reinforcement.
3. Key lockable handle.
4. Multi-point locking mechanisms secured into galvanised steel reinforcements.
5. Internal glazing bead helps prevent glass being removed from the outside.
6. Multi-chambered uPVC profile gives rigidity and improves thermal performance.
7. Double weather-resistant seals around the door frame.
8. uPVC will not rot for at least a decade.
9. Optional letter box, door chain, knocker and spy hole.
10. 10 year guarantee against fogging and condensation in the sealed unit.
11. Three high performance hinges.
12. BS EN 12150-1:2000 toughened safety glass fitted as standard.
13. Optional trickle ventilation is incorporated into the frame.
14. Weather drip deflects rain away from the door.

9. uPVC Doors

uPVC Doors

9.4 Essentials

Security Features

Multi Point Locking System

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Hinges

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Reinforced Door Leaf and Frame

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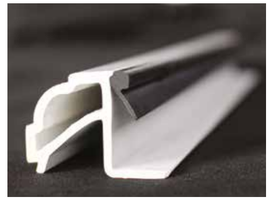
Internal Beading



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uPVC Doors

9.4 Essentials

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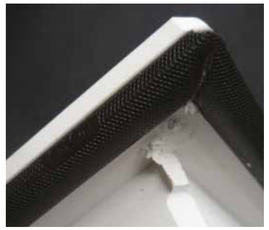

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9. uPVC Doors

uPVC Doors

9.4 Essentials

Drip Edge

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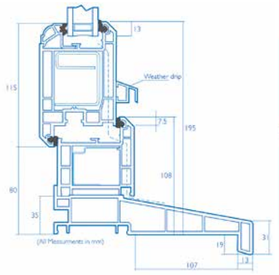
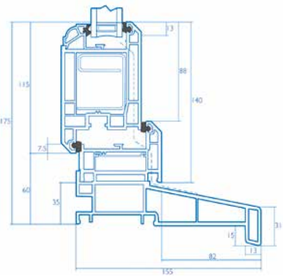
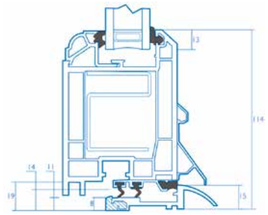


Standard (with drip fitted)



Low



Ground Level (Accessibility)

Guarantees

Guarantees		
Sealed Unit	Against fog and condensation between the panes	10 years
White uPVC Finish	Against discolouration of white uPVC Profiles	10 years
Door	Whole door, includes hinges and gear-box	10 years

uPVC Doors

9.5 Patio

Everest Patio Doors are precision-made in aluminium or uPVC to do exactly what they're supposed to, day after day, year after year –

Breezing silently open and closed, keeping your home cosy when required and allowing you to let in the sunshine and fresh air when the weather is kinder.

A set of Everest uPVC Patio Doors are the perfect addition to your home. With a simple slide of the opening panel, you can glide open the door and open up your home to the nature outside. The sliding panels tracks and rollers are designed to last and we're so confident in them that we will guarantee the smooth operation of both parts for at least a decade.

Available in a range of colour finishes with a choice of handle colour, this means that your patio door is not only made to measure for your home but is also built to your own personal taste making it completely bespoke.

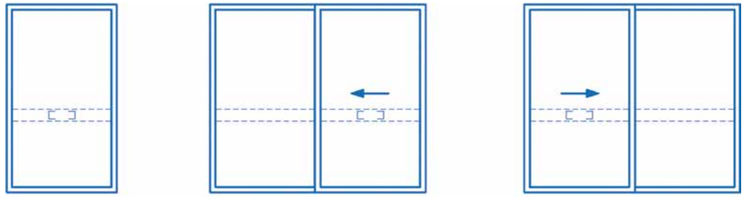
The multi-point locking system and interlocking panes are designed to keep your home secure and with a lockable gearbox and cylinder lock, you can have peace of mind that your home will be kept secure.

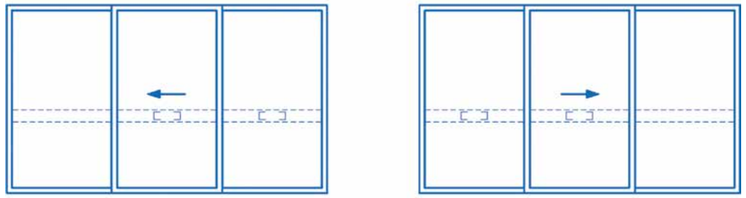
9. uPVC Doors

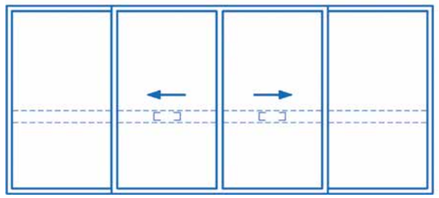
uPVC Doors

9.5 Patio

Door Configurations Options







EVEREST TECHNICAL GUIDE

uPVC Doors

9.5 Patio

Colour Options

Available in both Single Door and Double/French Door configurations.

One Colour Options:
Same colour on inside and outside.

White | White Woodgrain | Cream Woodgrain | Rosewood | Golden Oak

Double vs Triple Glazed

Only available in double glazed. For more information, please see *section 2.4.*

Double Glazed

Door Furniture

Door Handles:
Available in 4 colours.

White | Black | Chrome | Gold

9. uPVC Doors

uPVC Doors

9.5 Patio

Feature Diagram

1. Anti-lift security strip.
2. 20mm air gap within sealed unit increases thermal and sound insulation.
3. Ergonomic handle design.
4. Multi-point locking mechanism.
5. Double weather-resistant seals around the sliding door.
6. Internal glazing bead helps prevent glass from being remove from the outside.
7. Door panel engages into channel in outer frame, providing excellent draught resistance.
8. One-piece stainless steel track ensures smooth operation.
9. Lock for added security.
10. uPVC will never rot, rust or flake.
11. Choice of white uPVC or woodgrain finish.
12. Low-E glass reflects heat back into the home.
13. Optional trickle ventilation is incorporated into the frame.
14. Interlocking door leafs prevent draughts and increase security when shut.

EVEREST TECHNICAL GUIDE

uPVC Doors

9.5 Patio

Security Features

Multi Point Locking System

The Everest uPVC Exclusive Door is fitted with a multi-point locking system which provides great locking capabilities across the whole door leaf and frame. Utilising the 3 Hook and 2 Roller multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Interlocking Anti-Lift Panels

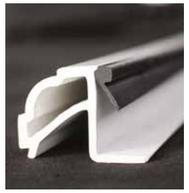
When in the closed and locked position, the sliding pane interlocks with the fixed pane to ensure that the centre mullion is not vulnerable to attack. This interlocking not only acts as a security feature but also increases the weather resistance of the door. Each of the panels are fitted with anti-lift blocks which lock the panels in a state of horizontal motion to the track.

Reinforced Door Leaf and Frame

Both the frame of the leaf and the outer frame are re-enforced with steel rods. This re-enforcement in the frames give the door a lot of added strength and means that the likelihood of either snapping completely is massively reduced. This reduces the risk of someone gaining access to your property.

Internal Beading

Having an internal glazing bead means that any and all glazing in the door is installed from the inside and is held in place by a piece of uPVC called a bead. This bead is very easy to remove and is designed to make the replacement of windows and doors a more environmentally friendly process as the materials can be separated to be recycled. Having this glazing on the outside not attached to the frame can be a major security risk. All Everest uPVC doors have internal glazing beads leaving them entirely less vulnerable to attack.



9. uPVC Doors

uPVC Doors

9.5 Patio

Gaskets

We at Everest have four gaskets on our uPVC Patio Doors. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the leaf and the frame. One of these is positioned on the inside of the leaf and locates and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other seals are located on the sash and they are designed to create a seal either side of the sealed unit/feature panel. The external one is made from Q-Lon again and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.

Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

EVEREST TECHNICAL GUIDE

uPVC Doors

9.5 Patio

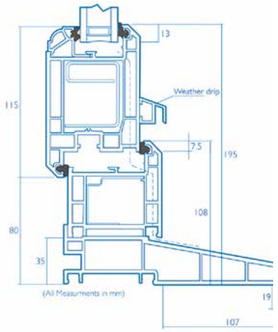
Drip Edge

The drip edge is a very important part of the door. The drip edge on Everest's uPVC doors sit above and below the door. The drip edge stops water from dripping directly onto the door and more importantly, it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

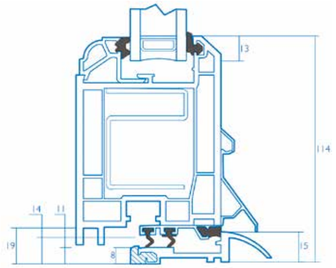
Threshold

There are two threshold options available when fitting an Everest uPVC door. The type of threshold that is used is a decision made by the surveyor when he comes to measure your property. The threshold used depends on the configuration of your door and in certain cases any individual requirements.

The two threshold options are; (all measurements in mm)



Standard (with drip fitted)



Ground Level (Accessibility)

9. uPVC Doors

uPVC Doors

9.5 Patio

Guarantees

Guarantees		
Sealed Unit	Against fog and condensation between the panes	10 years
White uPVC Finish	Against discolouration of white uPVC profiles	10 years
Door	Whole door, includes tracks and gear-box	10 years

EVEREST TECHNICAL GUIDE

uPVC Doors

9.6 uPVC French Doors

Also known as a French Door, double doors are made from two connected door panels which can be designed to swing inwards or outwards –

They are particularly popular back door designs which can grant easier access to your garden. All Everest French Doors have a master door and a slave door. The master door needs to be opened first before opening the slave door. The slave door is attached to the floating mullion. When the slave door is closed and locked, it locks into the frame and then once the master door is closed, it locks into the floating mullion along with locking into the frame. This multi-point locking system ensures that the centre mullion is not a vulnerability of the door.

All three Everest uPVC door ranges are available in a French Door configuration and the styles and colours available match whichever door range you are building into your French Doors.

9. uPVC Doors

uPVC Doors

9.6 uPVC French Doors

Feature Diagram

Secured by Design

Official Police Security Initiative

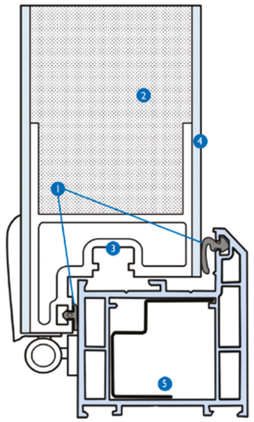
1. State-of-the-art sealed unit technology.
2. Everest famous lifetime guarantee against fog and condensation developing between the panes of the sealed unit on Exclusives and Exclusives Premium.
3. Lock exceeds standards for BS1670.
4. Latest thermal barrier technology minimises heat transfer through the frame.
5. Multi-point stainless steel locking mechanism.
6. Internal glazing bead prevents removal of glass from outside.
7. Double Q-Lon weather-resistant seal
8. uPVC finish guaranteed for a lifetime on Exclusives and Exclusives Premium.
9. Security lock cylinder complies with BS EN 1303.
10. Three high performance hinges.
11. 20mm air gap in sealed unit for optimum insulation.
12. Rebated door leaf design helps prevent draughts.
13. Optional trickle ventilation is incorporated into the frame.

10.0 Composite Doors

Everest
FIT THE BEST

Composite Doors

10.1 Door Leaf Features & Benefits



1. Double Rebate

All Everest 70mm Composite Doors are manufactured with a double rebated edge between the frame and the leaf. This means that, when locked, not only is the door pressing against the frame and creating a seal but also, the frame is pressing against the door, therefore creating two stages of draft-proof seals. This makes for a very weather resistant seal around the door. As this seal is draft proof and practically air tight, this also means that it will be waterproof as well keeping your home warm and dry. To utilise the double rebate to its full advantage, we use a Q-Lon gasket on the exterior rebate and a TPE gasket on the interior side of the door. They are both used in the same way, however the weather resistant capabilities of Q-Lon mean it is a more suitable choice for the exterior side as it will be in contact with the elements more frequently. This double rebate gives our 70mm House Beautiful Collection of doors a significant advantage over other composite doors such as our 44mm composite which is only single rebated, when it comes to thermal efficiency and weather resistance.

2. High Density Foam Core

At the heart of our 70mm door is its high density foam core. The foam core composed of polyurethane, provides the door with structure and rigidity that ensures its quality and durability. During the manufacturing process, the foam is filled into the sub frame and then cured which allows it to set and the compound to become solid. High density foam is known for its insulating properties due to the amount of small air bubbles that are trapped in the compound when set. This combined with the GRP skin on both sides enable the door to be highly thermal efficient, retaining heat effectively. The slab construction provides a fully sealed product impervious to moisture. The sturdiness of the foam structure is also one of the door slabs main security features as it is immensely tough to penetrate. It's not only the structure of the foam but the thickness too which is highly superior to the 44mm alternative.

10. Composite Doors

Composite Doors

10.1 Door Leaf Features & Benefits

3. GRP (Glass Reinforced Plastic) Sub-Frame

The sub-frame allows all the components of the door such as the foam core and the GRP skin to be combined together securely. Sitting in between the two adds reinforcement to the perimeter of the slab and holds them together as a secure unit. The build of the GRP also adds to the strength of the frame as the way the fibres are laid together in the thermosetting polymer results in a strong, lightweight material that is naturally watertight.

4. GRP Skin

On either side of the foam core, there are GRP skins that are the main focal point of the door in terms of aesthetics. The woodgrain textured skin is produced from an aluminium mould that was pressed with real timber. This provides the most life-like timber appearance possible. With the application of colour through layers of finely sprayed paint, the door can stand out and really impact the appearance of your property. Naturally, the quality of the skin means that it won't wear or chip easily, preserving the high quality finish for a longer period of time. The addition of the GRP skin to the GRP sub-frame and the foam core means that there are multiple layers to the door's internal structure, providing a solid door that will not only look beautiful and hold its form, but will also give you piece of mind when thinking about the security of your home.

5. Steel Reinforced Frame

Doors are tested to near destruction when being tested. Most of these tests centre around the strength of the door frame and uPVC profile sections that make up the door frame. These tests include impact tests, cut through tests and manual attack tests. Steel re-enforcement in the frame ensures that Everest's door frames and are strong and secure. The way that the profile is designed improves structural stability as the stress is spread across the separate chambers. Having the steel insert that is screwed in place is needed due to the stress the door will be under when fixed into the aperture. The weight of the door will also apply stress with effects such as warping, which is minimalised with the steel re-enforcement. A uPVC frame is a perfect application for the slab to be held in; this will provide smooth and correct operation at all times.

EVEREST TECHNICAL GUIDE

Composite Doors

10.2 House Beautiful Composite Door Range

With all the effort to make your house as aesthetically pleasing as possible, who ever said that your doors shouldn't follow suit too?

To us, a door is far more than an entrance to your home. It is a stunning first impression designed and built to last a lifetime. So, who better to partner with than a leader in home styling, House Beautiful.

With twenty four exclusive styles across five design ranges, all available in sixteen elegant colours, our new range of handmade, hard wearing composite doors have been created to give your home an element of unrivalled style. Our new ranges include gorgeous Georgian, elegant Art Deco, sleek Contemporary, modern Ultra Contemporary and charming Cottage styles to choose from.

The 70mm double-rebate design gives you unyielding security and doubly impregnable weatherproofing. The double seal is made using Q-Lon gaskets, which using their memory-like properties will always spring back into full shape no matter how many times the door gets opened and closed. Having a high density foam core and triple glazing keeps your home warmer and quieter than any door has ever done. In terms of security, the door has been stepped up even further with multi-pint locking, anti-bump, anti-pick and dead bolted construction, easily passing British Standard PAS24 and achieving Secured by Design accreditation. And with Everest's new SmartLock available on every door, it can be even more secure with the new generation of smart home security.

Everest is proud of the fact that every one of our exclusive House Beautiful Doors is carefully and precisely handmade in the UK. We believe in going the extra mile for our customers. Whilst other door manufacturers choose to ship in their door slabs from China, and then cut them to fit; we take our time to make the complete door from the beginning to end, following an exact process.

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Feature Panel Options

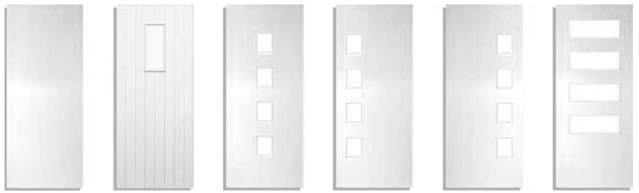
Georgian Range

Brompton | Kensington | Hammersmith | Greenwich | Islington

Art Deco Range

Savoy | Fairmont | Plaza

Contemporary



Geneva | Oslo | Munich | Vienna Left | Vienna Right | Zurich

Composite Doors

10.2 House Beautiful Composite Door Range

Feature Panel Options

Contemporary

Gothenburg | Prague | Bruges Left | Bruges Right | Lisbon | Valencia

Cottage

Grasmere | Windermere | Ullswater | Coniston

Ultra Contemporary

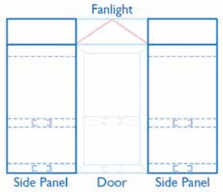
Barcelona | Milan

10. Composite Doors

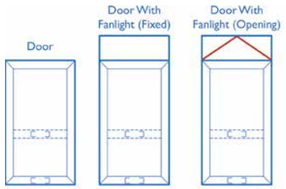
Composite Doors

10.2 House Beautiful Composite Door Range

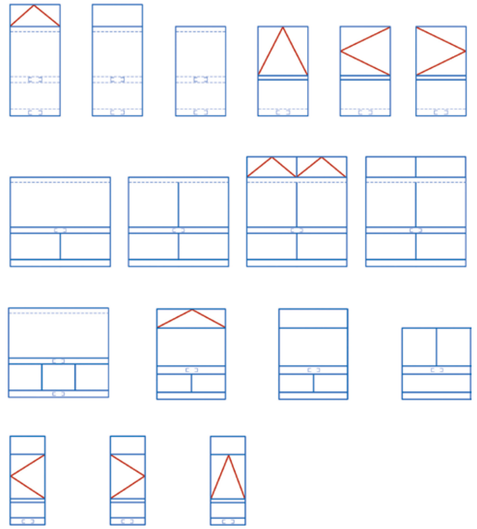
Door Configurations Options



Fanlights



Side Panels



Composite Doors

10.2 House Beautiful Composite Door Range

Colour Options

Jet Black | Charcoal | Everest Blue | Slate Blue | Beach Pebble

Sandstone | Cornish Blue | Peacock Teal | Red Velvet | Antique Rose

Ash Pink | Arctic White | Racing Green | Chartwell Green | Mint Julep

Deep Urchin

Double vs Triple Glazed

Only available in triple glazed. For more information, please see *section 2.4*.

Triple Glazed

10. Composite Doors

Composite Doors

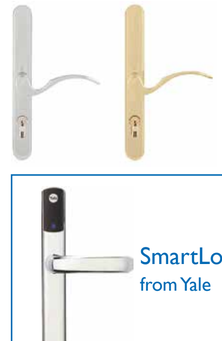
10.2 House Beautiful Composite Door Range

Handles

Modern Handles

Pad Handles

Swan Neck Handles



Letterboxes

Chrome

Gold

Black

Door Knockers

Chrome with and without Spy Hole

Gold with and without Spy Hole

Black with and without Spy Hole

Extra Furniture

Chrome

Gold

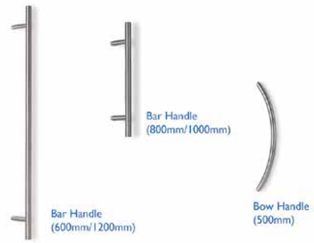
Black

Composite Doors

10.2 House Beautiful Composite Door Range

Heritage Furniture

Contemporary Furniture



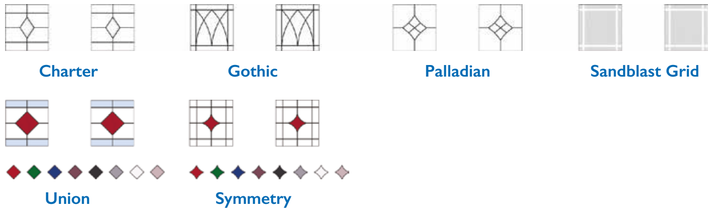
10. Composite Doors

Composite Doors

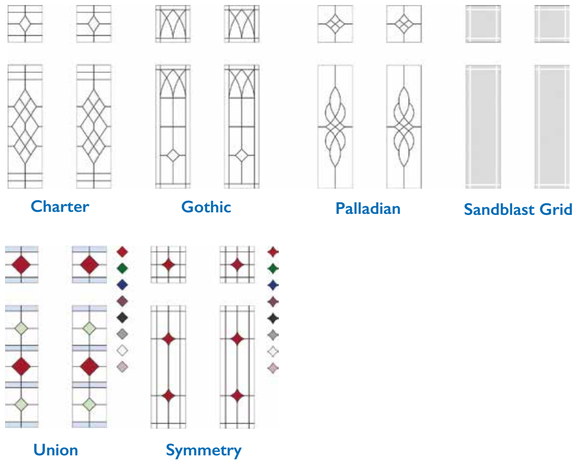
10.2 House Beautiful Composite Door Range

Georgian Range

Kensington Door Glazing Options



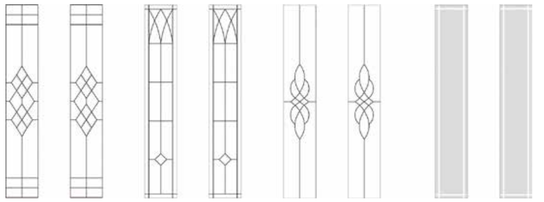
Hammersmith Door Glazing Options



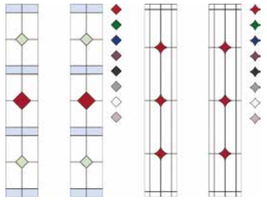
Composite Doors

10.2 House Beautiful Composite Door Range

Greenwich Door Glazing Options

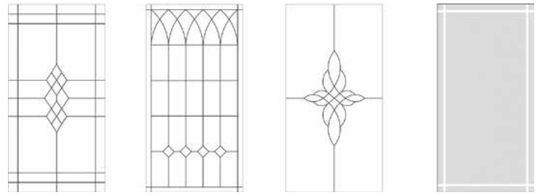


Charter | Gothic | Palladian | Sandblast Grid

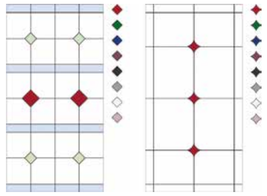


Union | Symmetry

Islington Door Glazing Options



Charter | Gothic | Palladian | Sandblast Grid



Union | Symmetry

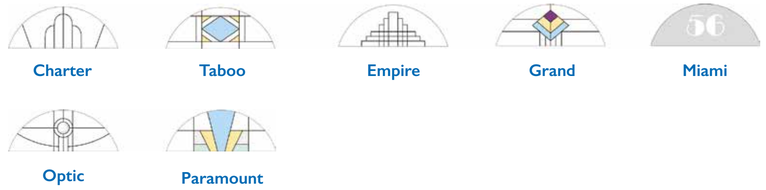
10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Art Deco Range

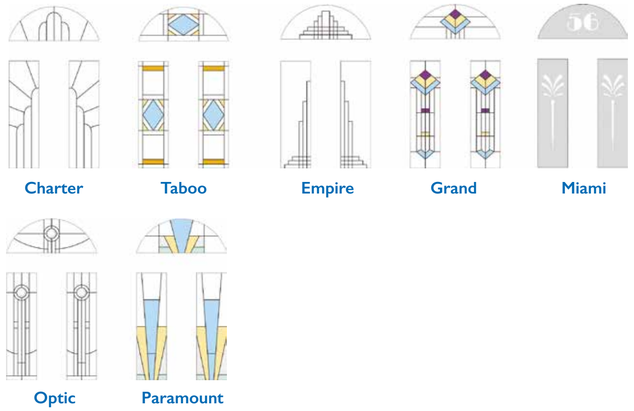
Savoy Door Glazing Options



Charter | Taboo | Empire | Grand | Miami

Optic | Paramount

Fairmont Door Glazing Options



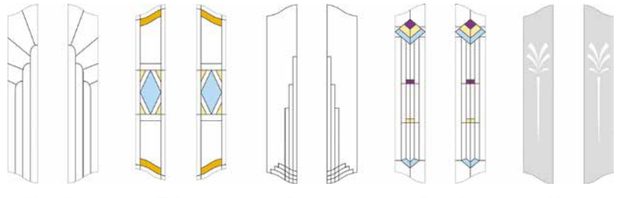
Charter | Taboo | Empire | Grand | Miami

Optic | Paramount

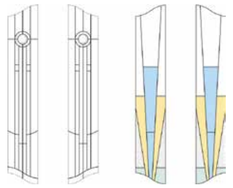
Composite Doors

10.2 House Beautiful Composite Door Range

Plaza Door Glazing Options



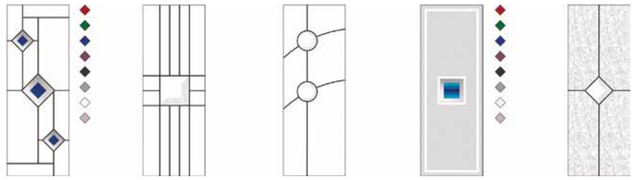
Chrysler | Taboo | Empire | Grand | Miami



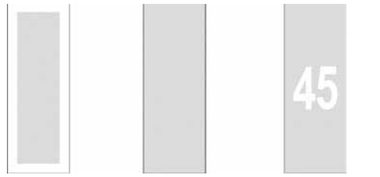
Optic | Paramount

Contemporary Range

Oslo Door Glazing Options



Aspect | Geo | Luna | Cameo | Prism



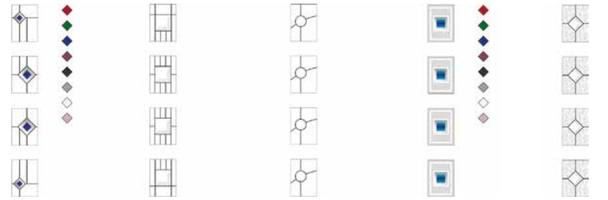
Sandblast Frame | Sandblast | Sandblast With House Number

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

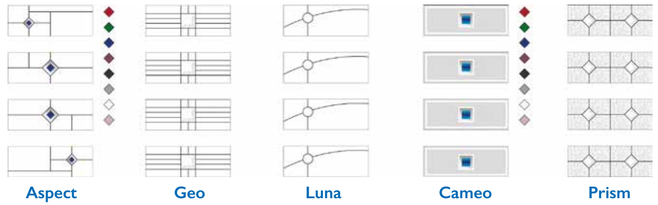
Munich & Vienna Door Glazing Options



Aspect | Geo | Luna | Cameo | Prism

Sandblast Frame | Sandblast | Sandblast With House Number

Zurich Door Glazing Options



Aspect | Geo | Luna | Cameo | Prism

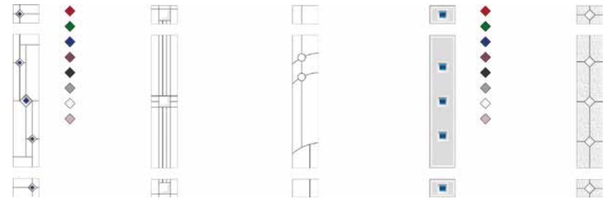
Sandblast Frame | Sandblast | Sandblast With House Number

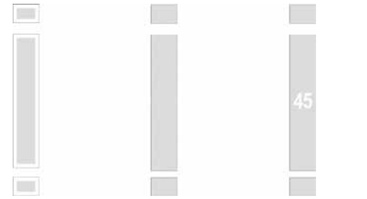
EVEREST TECHNICAL GUIDE

Composite Doors

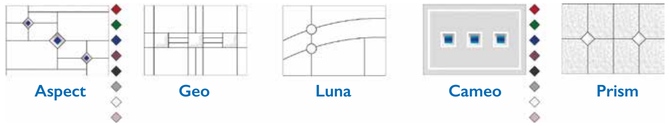
10.2 House Beautiful Composite Door Range

Gothenburg Door Glazing Options





Lisbon Door Glazing Options

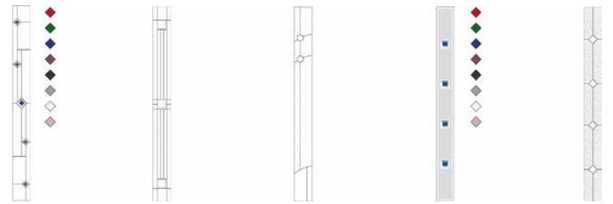


10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Prague & Berlin Door Glazing



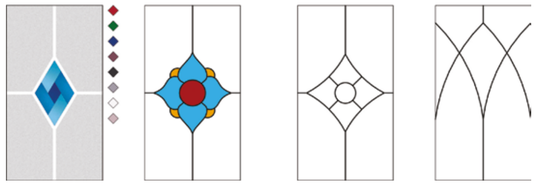
Valencia Door Glazing Options

Composite Doors

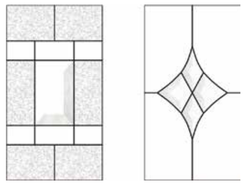
10.2 House Beautiful Composite Door Range

Contemporary Range

Grasmere & Windermere Door Glazing

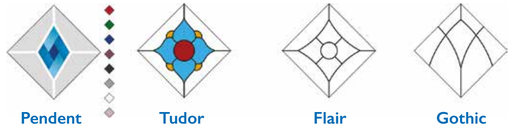


Pendent | Tudor | Flair | Gothic

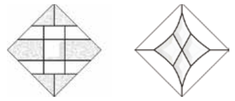


Haze | Jewel

Ulswater Door Glazing Options



Pendent | Tudor | Flair | Gothic



Haze | Jewel

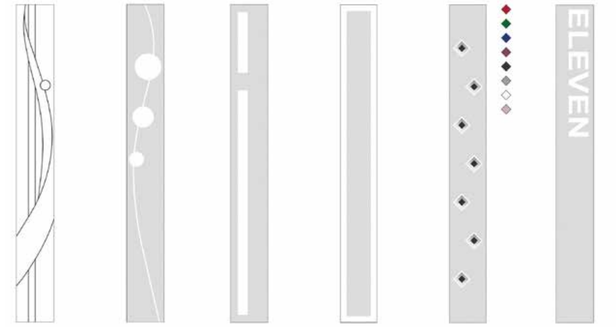
10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Ultra Contemporary Range

Barcelona Door Glazing Options



Mercury | Radius | Europa | Atlas | Galaxy | Sandblast with Letters

Milan Door Glazing Options

Mercury | Radius | Europa | Atlas | Galaxy | Sandblast with Letters

EVEREST TECHNICAL GUIDE

Composite Doors

10.2 House Beautiful Composite Door Range

Door Personalisation

With the House Beautiful Range, comes the option to have your door number or house name stencilled onto the glazing. This will leave a clear number on a sand blasted pane. This option is available on certain feature panel options along with certain fanlight configurations.

Each range has a typeface carefully chosen to match the feature panel styles.

Art Deco - Broadway

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
abcdefghijklm
nopqrstuvwxyz
1234567890

The Old School House
56

Georgian - Times New Roman

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
abcdefghijklm
nopqrstuvwxyz
1234567890

The Old School House
56

Conteporary/Ultra Contemprary - Arial

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
abcdefghijklm
nopqrstuvwxyz
1234567890

The Old School House
56

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Feature Diagram

Secured by Design

Official Police Security Initiative

1. 68mm thick double rebated door leaf.
2. Unique GRP sub-frame.
3. Lifetime guarantee against fogging and condensation in the sealed unit.
4. No glazing bead - sealed unit is secured with concealed metal brackets.
5. Rigid foam core adds insulation, rigidity and strength.
6. Security lock cylinder complies with BS EN1303.
7. Multi-point locking system.
8. Tested to PAS24 and BS6375 for security, weather and operational performance.
9. Double weather-resistant seals around the door frame.
10. Q-Lon gaskets on both the leaf and the frame.
11. Authentic door leaf appearance – moulded from real timber.
12. GRP skins to both the inside and outside of the door leaf.
13. BS EN 12150-1:2000 toughened safety glass fitted as standard and triple glazed for added warmth and security.
14. Optional trickle ventilation is incorporated into the frame.
15. Weather drip deflects rain away from the door.

EVEREST TECHNICAL GUIDE

Composite Doors

10.2 House Beautiful Composite Door Range

Security Features

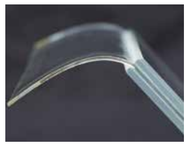
Multi Point Locking System

The Everest 70mm Composite Door is fitted with a multi-point locking system which provides great locking capabilities across the whole door leaf and frame. Utilising the 3 Hook and 2 Roller multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Hinges

Our uPVC Composite Doors use high performance hinges that allow your door to operate to its full potential. Its double knuckle design overcomes drooping of the door from the frame and an added solidity enhancing security. Fully adjustable design that provides no visual change and the same quality of operation. The hinge offers four screw port fixes into the sash reinforcing chamber providing optimum security if the door came under attack. With the hinge endurance tested for 100,000 cycles, you can guarantee the mechanism will remain durable and ensure your entrance operates how you would expect it to. All hinges match the chosen door furniture finishes (Chrome, Gold, Black).

6.8mm Laminated Glass



All Everest 70mm Composite Doors are fitted with 6.8mm laminated glass. Laminated glass provides added security for the door as any unwanted visitors will struggle to smash the glazing and reach the inside handle or gain access to your property.

Reinforced Door Leaf and Frame

Both the frame of the leaf and the outer frame are re-enforced with steel rods. This re-enforcement in the frames give the door a lot of added strength and means that the likelihood of either snapping completely is massively reduced. This reduces the risk of someone gaining access to your property.

Dog Bolts

The hinge side is fitted with two galvanized steel dog bolts which further re-enforce that edge of the door. When closed, the dog bolts lock into steel keeps. The shape and positioning of these dog bolts mean that when locked they provide additional locking along all three axises.

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Stable Doors

Stable Doors are door designs that incorporate a 50:50 split leaf. The Stable Door design style originated from rustic cottages and stables where they were used to keep out animals whilst allowing ventilation at the same time. This door design not only allows for ample ventilation, but it also combines an archetypal rural aesthetic with all of the modern technology of Everest House Beautiful Composite Doors such as added security and a low maintenance finish. These doors really leave an impression and can complement your household perfectly. Available in three individual designs, matching other House Beautiful door designs to keep a consistent aesthetic throughout.

EVEREST TECHNICAL GUIDE

Composite Doors

10.2 House Beautiful Composite Door Range

Security Features: Stable Doors

Multi Point Locking System

The Everest 70mm Composite Stable Door is fitted with a special multi-point locking system which provides great locking capabilities across each door leaf and frame. The two parts of the mechanism, which can operate independently or in tandem, is immensely secure incorporating more locking point than the standard 70mm composite doors. Each leaf has a one deadlock, one hook and one roller system along the height, with a flush 90-degree bracket at the top to house it.

The door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. Having deadbolts connecting the two leafs together means that they are both secure as each other and having that point of connection further enhances the security aspect of the door. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Hinges

Our 70mm Composite Doors use high performance hinges that allow your door to operate to its full potential. Its double knuckle design overcomes drooping of the door from the frame and an added solidity enhancing security. Fully adjustable design that provides no visual change and the same quality of operation. The hinge offers four screw port fixes into the sash reinforcing chamber providing optimum security if the door came under attack. With the hinge endurance tested for 100,000 cycles, you can guarantee the mechanism will remain durable and ensure your entrance operates how you would expect it to. All hinges match the chosen door furniture finishes (Chrome, Gold, Black).

6.8mm Laminated Glass

All Everest 70mm Composite Doors are fitted with 6.8mm laminated glass. Laminated glass provides added security for the door as any unwanted visitors will struggle to smash the glazing and reach the inside handle or gain access to your property.

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

Weather Bars

To prevent water and the elements breaking past the split in the two leaf sections we have fitted a weather bar on each of them. The two combined close off the split with the addition of EPDM rubber seals and create an effective barrier for making the door as thermally efficient as possible. Elegantly shaped to suit the aesthetic as well as manage drainage properly. An overlap between the wider weather bar on the bottom leaf and the bottom edge of the top leaf emphasises the seal between the two. This is also another element used to minimalise draughts. There is another weather bar at the base of the door to run water away from the door.

Gaskets

We at Everest put a lot of consideration into the gaskets on our 70mm Composite Stable doors. These gaskets create the seal between the leaf and the frame. We utilise Q-Lon gaskets on the door due to their weather proofing capabilities. They are located on the inside of the frame and is compressed against the frame, creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal gasket where the weather bar is situated as it is not subject to as much weathering.

Composite Doors

10.2 House Beautiful Composite Door Range

Gaskets

We at Everest have four gaskets on our uPVC Exclusives Doors. Three of these are made with a product called Q-Lon and one is made from EPDM. Two of the three Q-Lon gaskets are located internally and externally. These gaskets create the seal between the leaf and the frame. One of these is positioned on the inside of the leaf and locates and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other seals are located on the sash and they are designed to create a seal either side of the sealed unit/feature panel. The external one is made from Q-Lon again and the internal one is made from EPDM, a very hard-wearing rubber that will not be subject to weathering due to its internal position. Q-Lon is used on the external glazing gasket because, unlike rubber it does not shrink and leave gaps, deteriorate, discolour or become brittle making it difficult to clean. EPDM is suitable for the internal glazing gasket because its internal position is not subject to weathering.

Q-Lon – the ultimate benefits in material and function:

- **Excellent memory** – returns to original shape after compression
- **Stability** – low/no stretch gained by glass fibre internal cord or insert
- **Easily compressed** – low compression forces, unaffected by temperature variance
- **Acoustics** – outstanding acoustic performance - independently tested
- **Thermal conductivity** – unrivalled thermal performance - independently tested
- **Paint and stain proof** – properties unaffected by standard paints and stains
- **Stabilised** – unaffected by rot, fungi, UV light or ozone
- **Temperatures** – the widest operating range -60°C to +70°C

10. Composite Doors

Composite Doors

10.2 House Beautiful Composite Door Range

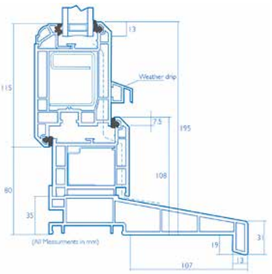
Drip Edge

The drip edge is a very important part of the door. The drip edge on Everest's uPVC doors sit above and below the door. The drip edge stops water from dripping directly onto the door and more importantly it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

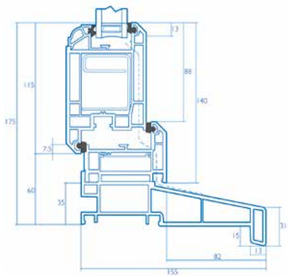
Threshold

There are three threshold options available when fitting an Everest uPVC door. The type of threshold that is used is a decision made by the surveyor when he comes to measure your property. The threshold used depends on the configuration of your door and in certain cases any individual requirements.

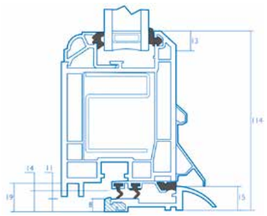
The three threshold options are; (all measurements in mm)



Standard (with drip fitted)



Low



Ground Level (Accessibility)

Guarantees

Guarantees		
Sealed Unit	Against fog and condensation between the panes	Lifetime
Door	Whole door, includes hinges and gear-box	10 years

Aluminium Doors

11.3 Bi Fold

Transform a room into a spectacular and versatile space, flooded with sunlight –

Our bi-fold doors are welcoming when they're closed – allowing you to enjoy the view from your cosy living room – as when you glide them smoothly and silently into the wall space so you can entertain friends and family on a warm, sunny day. Using the elegant concertina like operation, the Everest Bi-fold Door will certainly enhance your homes qualities and make the most out of the space you have.

Available in a range of modish colours, Everest's strong, lightweight aluminium alloy is the ideal material for this type of door, with its slim profile and cleverly-designed handles maximising the light and taking up minimal space when folded open. You can achieve a more refined look that balances well with a modern décor and just as easily create designs that blend in with traditional architecture.

Add the wow factor to your home and seamlessly merge your garden and living space with the slim aluminium frames and maximum glass of our bi-fold doors. Each door leaf folds smoothly onto each other and is held firmly in place with magnetic pads to allow in maximum light and uninterrupted views. A highly flexible operation which is able to open In & Out, Left & Right Hand.

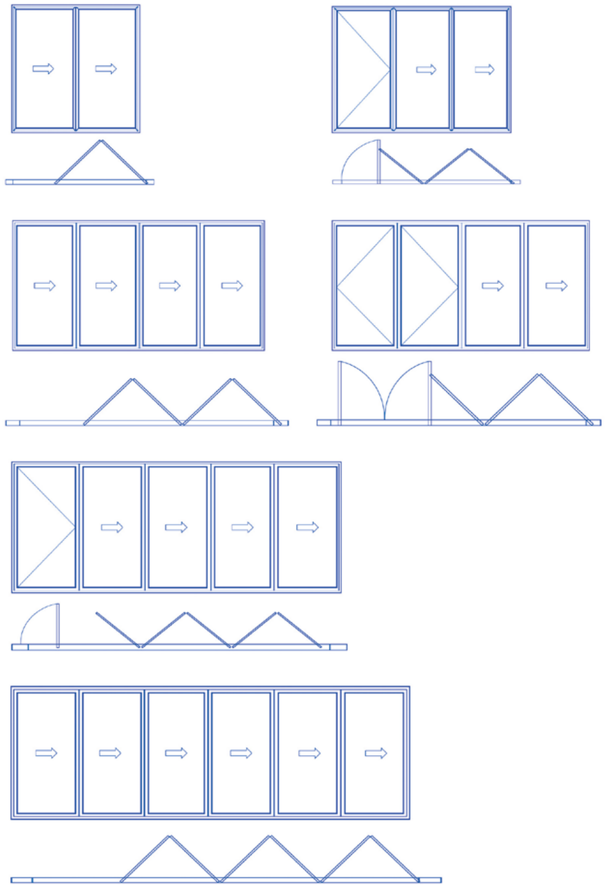
11. Aluminium Doors

Aluminium Doors

11.3 Bi Fold

Door Configurations Options

All available as left hand folding.

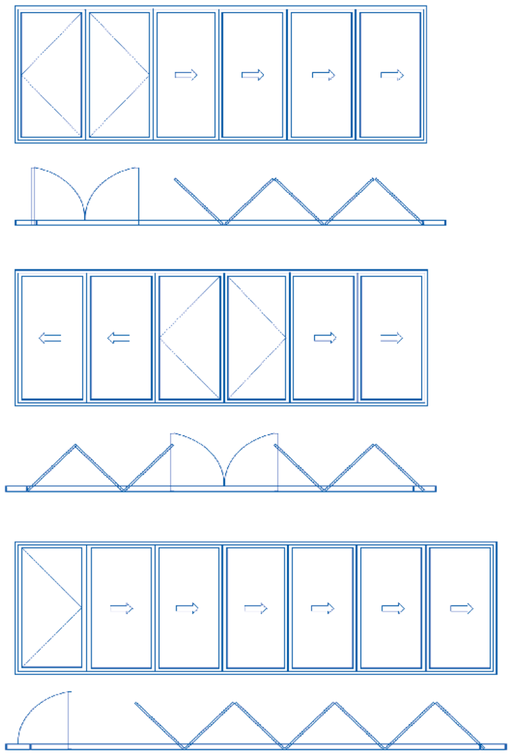


Aluminium Doors

11.3 Bi Fold

Door Configurations Options

All available as left hand folding.



11. Aluminium Doors

Aluminium Doors

11.3 Bi Fold

Colour Options

One Colour Options:
Same colour on inside and outside.

White | Charcoal Grey | Battleship Grey | Black (Semi-Gloss) | Brown

Two Colour Options
Mixed with white on the inside.

White/Black

Double vs Triple Glazed

Only available in double glazed.

EVEREST TECHNICAL GUIDE

Aluminium Doors

11.3 Bi Fold

Furniture Options

Modern Handle


Black


White


Chrome


Silver

Flat D Handle


Black


White


Chrome


Silver

11. Aluminium Doors

Aluminium Doors

11.3 Bi Fold

Feature Diagram

1. Optional trickle ventilation is incorporated into the frame.
2. Multiple weather-resistant seals help to prevent drafts and water ingress.
3. 20mm air gap between panes for increased thermal and sound insulation.
4. Polyamide thermal break minimises heat loss through the frame.
5. Internal glazing bead prevents removal of glass from outside.
6. BS EN 12150 toughened safety glass fitted as standard.
7. Low-E glass reflects heat back into the home
8. Stainless steel wheels guide leafs in stainless steel tracks to ensure smooth opening of the door.
9. Choice of colours to match Everest Aluminium Casement Windows and Aluminium Entrance Doors, with the option of having a different colour on the inside and outside of the frame.
10. Shoot-bolts at the top and bottom of the interlocks.
11. Multi-point stainless steel locking mechanism on traffic doors.
12. Flush line handle allows doors to stack tightly.
13. Aluminium will never rot, rust or flake so there is no need to paint - just wash with soap and water.

Aluminium Doors

11.3 Bi Fold

Security Features

Multi Point Locking System

The Everest Aluminium Bi-fold Entrance Door is fitted with a multi-point stainless steel locking system on the traffic door, which provides great locking capabilities across the whole door leaf and the frame. Utilising the 3 Hook multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. Each and every one of the interlocks has shoot bolts on the tops and bottom meaning the traffic door isn't the only one that provides a secure hold to the frame. The lock cylinder is also an added security feature as it has been tested to BS EN1303 and further exceeds standards for BS1670 level 4 (salt spray weather test). These components combined with the aluminium bi-fold frame and door leaf allow it to meet PAS24 meaning it would be a solid addition to your entrance.

Hinges

Our Aluminium Bi-fold Doors use a continuous hinge design that stretches along the whole height of the leafs allowing optimum contact between each. The unobtrusive design offers a child friendly way of using the door without compromising the high levels of security. The design of the hinge prevents any lever points being accessible that an intruder may use to prize the door open. Manufactured from extruded aluminium which is hard-wearing and will operate as required for prolonged usage. In terms of durability of the door, the assembly has been cycle tested under maximum leaf load conditions to 10,000 cycles. This is equivalent to opening the door once a day for 27 years.

Guides

Guides are situated at the top and the bottom of each door leaf interlock. These are slotted into the tracks that the door moves along to keep it following the same line of the frame when pushed back and forth. With the track overlapping the guides they are an added security benefit as it acts as an anti-lift component.

11. Aluminium Doors

Aluminium Doors

11.3 Bi Fold

Security Features

Internal Beading

Having an internal glazing bead means that any glazing in the door is installed from the inside and is held in place by a strong piece of aluminium called a bead. This bead is very easy to remove and is designed to make the replacement of windows and doors a more environmentally friendly process as the materials can be separated to be recycled. Having this glazing on the outside not attached to the frame can be a major security risk. All Everest Aluminium Bi-fold Doors have internal glazing beads leaving them entirely less vulnerable to attack. The two together guarantee that the glazing cannot simply be popped out of place to gain access to your property.

Thermal Efficiency

- 20mm argon-filled gap in sealed unit for optimum insulation
- Polyamide thermal break in the aluminium profile helps stop valuable heat being lost through the frame
- Multiple weather seals helps stop draught
- Low-E glass reflects heat back into the room

EVEREST TECHNICAL GUIDE

Aluminium Doors

11.3 Bi Fold

Gaskets

On our Aluminium Bi-fold Doors, we utilise a combination of double EPDM/TPE gaskets. Having both weather resistant and hard-wearing properties they are the perfect addition to make our aluminium doors as thermally efficient as possible. Two of the gaskets are located internally and externally on either side of the opening. These gaskets create the seal between the door leaf and the frame. One of these is positioned on the inside of the leaf and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the leaf inside the frame creating a perfect seal. With each door leaf on our bi-fold doors having these gaskets, the whole structure is weather tight and performance doesn't get affected when part of the door is opened.

D Handle

The D handle is used on the bi-fold door to lock and unlock the sliding panels of the door. The 'T' Bar can be pulled out and turned to unlock the door and when the door is pulled to the tracks it can be then pushed back in to lock them together. The form of the handles allow the door to fold flush together.

Stainless Steel Rollers

The stainless steel wheels and tracks ensure a smooth opening to the outside, with a roller mechanism for a safer sliding operation. This seamless design allows the door to be opened effortlessly and operate as it should for many years. The rollers in the door are manufactured from stainless steel making them highly secure and able to operate how they were designed to.

Magnetic Retainers

To prevent the door moving freely with the breeze when opened, Magnetic Retainers are fitted to the door panels to hold them together. Having these on the door enables them to sit flush together allowing the full door to be used.

11. Aluminium Doors

Aluminium Doors

11.3 Bi Fold

Drip Edge

The drip edge is a very important part of the door. The drip edges on Everest's Aluminium Bi-fold Doors sit above and below the door. The drip edge stops water from dripping directly onto the door and more importantly it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Aluminium Profile	Integrity and colour finish	25 years
Whole Door	Includes furniture and operation	10 years

EVEREST TECHNICAL GUIDE

12.0 Amdega Collection Doors

Everest
FIT THE BEST

Amdega Collection Doors

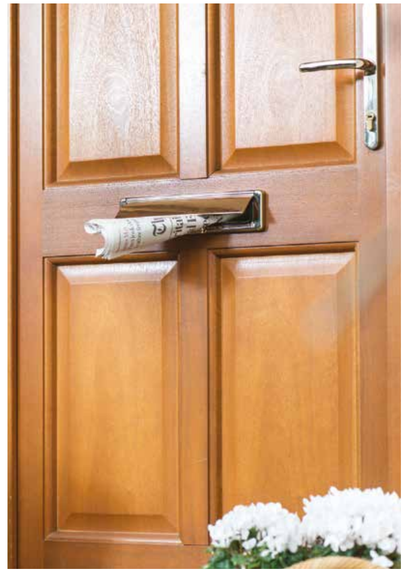
12.1 Amdega Collection Entrance Doors

Everest Amdega Collection Doors combine the timeless beauty of timber with the benefits of modern technology such as improved thermal efficiency –

The up-to-date glazing technology designed to trap the warmth in your home used on the Amdega Collection and the natural insulating properties of timber means that these are Everest's warmest timber doors ever.

For added security, all Everest Amdega Collection doors have a multi-point bi-directional locking system. This locking system and set of keeps sit in the timber frame which in its self a security feature as it very resistant to attack as breaking the timber frames will be a struggle.

Each door is engineered in durable, sustainable and FSC-certified softwood or hardwood which provides a beautiful knot free finish. Each profile is treated with 21st century preservation techniques which protects the timber and means we can guarantee the profiles against rot and fungus for 30 years.



12. Amdega Collection Doors

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

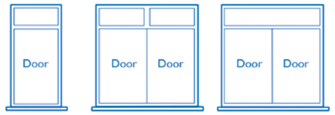
Feature Panel Options

FP1 FP4 FP6 FP7 FP13 FP18 FP29 FP30 FP31

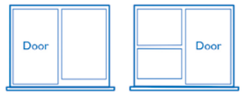
FP32 FP36 FP37 FP38 FP39 FP40 FP41

Door Configurations Options

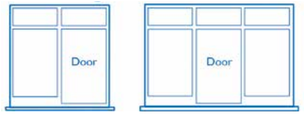
Fan Lights



Side Panels



Side Panels/Fan Lights



Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Double vs Triple Glazed

Only available in double glazed. For more information, please see *section 2.4.*

Double Glazed

Colour Options

Paint Finish Options:
Same colour on inside and outside.

White | Cream | Beige Grey | Blue | Red

Green | Chartwell Green | Agate Grey

Stain Finish Options:
Same colour on inside and outside.

Medium Oak | Mellow Teak | Warm Mahogany | Dark Walnut

12. Amdega Collection Doors

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Furniture Options

Handles

Modern Handles | **Pad Handles** | **Swan Neck Handles**

Letterboxes

Chrome | Gold | Black

Door Knockers

Chrome with and without Spy Hole | Gold with and without Spy Hole | Black with and without Spy Hole

Extra Furniture

Chrome
Gold
Black

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Decorative Lead Options

Decorative lead options available. See *section 2.6* for more information on decorative leading.

Feature Diagram

1. Made from sustainably forested hardwood.
2. Toughened safety glass as standard.
3. Low-E glass reflects heat back into the home.
4. Triple glazed for optimum insulation.
5. Rebated door leaf design minimises draughts.
6. Key lockable handle.
7. Multi-point locking system.
8. Choice of paint or stain finish.
9. Double weather-resistant seals around the opening.
10. 5 year guarantee on paint or stain finish.
11. 10 year guarantee on door and installation.
12. Optional letter box, door chain, knocker and spy hole.
13. Three high performance hinges.

Secured by Design

SBD

Official Police Security Initiative

12. Amdega Collection Doors

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Security Features

Multi Point Locking System

The Everest Amdega Collection Door is fitted with a multi-point locking system which provides great locking capabilities across the whole door leaf and frame. Utilising the 3 Hook and 2 Roller multi-point system, the door benefits not only from the amount of contact points the lock has with the keeps but also from the way they are in contact. Having hooks going in both directions foils an intruders attack from just one side as all points are covered. The lock cylinder is also an added security feature as it has been tested to BS EN1303.

Hinges

Our Exclusive Amdega Collection doors use high performance hinges that allow your door to operate to its full potential. Its double knuckle design overcomes drooping of the door from the frame and an added solidity enhancing security. Fully adjustable design that provides no visual change and the same quality of operation. The hinge offers four screw port fixes into the sash reinforcing chamber providing optimum security if the door came under attack. With the hinge endurance tested for 100,000 cycles, you can guarantee the mechanism will remain durable and ensure your entrance operates how you would expect it to. All hinges match the chosen door furniture finishes (Chrome, Gold, Black).

EVEREST TECHNICAL GUIDE

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Timber

Engineered timber for added strength and rigidity – a lamination process where layers of timber are specially bonded together Softwood and Hardwood available.

Softwood

European Redwood FSC – Forestry Stewardship Council certified
Finger jointed for added durability and clear knot-free finish

Hardwood

Red Grandis FSC – Forestry Stewardship Council certified
Finger jointed for added durability and clear knot-free finish

Gaskets

We at Everest have four gaskets on our Amdega Collection Doors. Two of the gaskets are located internally and externally on either side of the opening. These gaskets create the seal between the leaf and the frame. One of these is positioned on the inside of the leaf and locates and is compressed against the frame externally creating the first seal and the second is positioned internally on the frame and locates against the sash inside the frame creating a perfect seal that when tested by the BFRC creates a 0.00 air leakage.

The two other seals are located on the sash and they are designed to create a seal either side of the sealed unit. These two gaskets are fitted below the level of the sash creating a sharper unobstructed view out of the door.

12. Amdega Collection Doors

Amdega Collection Doors

12.1 Amdega Collection Entrance Doors

Drip Edge

The drip edge is a very important part of the door. The drip edge on Everest's Amdega Collection Doors sit above and below the door. The drip edge stops water from dripping directly onto the door and more importantly it stops water from pooling on the frame which could lead to issues such degradation of the sealant around the edge of the frame which could lead to drafts or leaking water. It can also lead to mould growth.

Guarantees

Guarantees		
Timber Profile	Against rot and fungus	30 years
Paint & Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Areas/ Harsh Climates	Whole door guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

Amdega Collection Doors

12.2 Amdega Collection French Doors

Also known as a French door, double doors are made from two connected door panels which can be designed to swing inwards or outwards –

They are particularly popular back door designs which can grant easier access to your garden.

All Everest French Doors have a master door and a slave door. The master door needs to be opened first before opening the slave door. The slave door is attached to the floating mullion. When the slave door is closed and locked it locks into the frame and then once the master door is closed it locks into the floating mullion along with locking into the frame. This multi-point locking system ensures that the centre mullion is not a vulnerability of the door.

All Everest Amdega Collection Doors are available in a French door configuration and the styles and colours available match whichever door range you are building into your French doors.

12. Amdega Collection Doors

Amdega Collection Doors

12.2 Amdega Collection French Doors

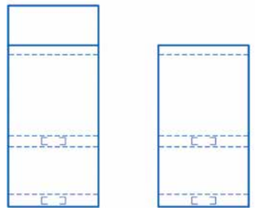
Feature Panel Options

FP1 FP4 FP6 FP10 FP12 FP19 FP24

Door Configurations Options

Fan Lights

Side Panel



Amdega Collection Doors

12.2 Amdega Collection French Doors

Double vs Triple Glazed

Only available in double glazed.

Colour Options

Paint Finish Options:
Same colour on inside and outside.

White | Cream | Chartwell Green | Agate Grey | Beige Grey

Stain Finish Options:
Same colour on inside and outside.

Light Oak | Warm Mahogany | Ebony

12. Amdega Collection Doors

Amdega Collection Doors

12.2 Amdega Collection French Doors

Furniture Options

Handles

Modern Handles | **Pad Handles** | **Swan Neck Handles**

Letterboxes

Chrome | Gold | Black

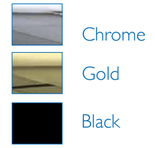
Door Knockers

Chrome with and without Spy Hole

Gold with and without Spy Hole

Black with and without Spy Hole

Extra Furniture



Chrome
Gold
Black

Amdega Collection Doors

12.2 Amdega Collection French Doors

Feature Diagram

1. Made from engineered timber – softwood and hardwood.
2. 20mm air gap within sealed unit increases thermal and sound insulation.
3. Tested to PAS24 and BS6375 for security, weather and operational performance.
4. Key lockable handle.
5. Micro-porous paint and stain finish allows the timber to breathe.
6. Optional Georgian bars, door chain and spy hole.
7. Multi-point bi-directional locking system secures the door in place.
8. Double weather-resistant seals.
9. BS EN 12150-1:2000 toughened safety glass fitted as standard.
10. 5 year guarantee on paint or stain finish.
11. 3 high performance hinges on each door.
12. 10 year guarantee on door and installation.
13. Optional trickle ventilation is incorporated into the frame.

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12.2 Amdega Collection French Doors

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Reinforced Door Leaf and Frame

Both the frame of the leaf and the outer frame are re-enforced with steel rods. This re-enforcement in the frames give the door a lot of added strength and means that the likely hood of either snapping completely is massively reduced. This reduces the risk of someone gaining access to your property.

EVEREST TECHNICAL GUIDE

Amdega Collection Doors

12.2 Amdega Collection French Doors

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Guarantees

Guarantees		
Timber Profile	Against fog and condensation between the panes	30 years
Paint & Stain Finish	Protects against peeling and cracking. Must follow care and maintenance guide to validate	5 years
Coastal Areas/ Harsh Climates	Whole door guarantee changes if you live in a coastal are where the weather will be more abrasive on the timber	5 years

EVEREST TECHNICAL GUIDE

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