
aluminium
Windows and Doors
Platinum®
NRG
Modern, Heritage and Traditional Designs

how aluminium has changed

Aluminium windows and doors throughout the 1970's and 1980's, were problematic on many levels.

Aluminium was the first material to really be used for mass-produced double glazing due to it's strength and relatively slim appearance. The double-glazed glass units were quite effective but the aluminium frames not only transmitted cold back into the home but also didn't retain the heat generated indoors due to the conductive nature of the metal. Warm moist air from indoors would hit the aluminium frames, condense into water droplets and form pools of water at the base of the window.

To try and insulate the aluminium window, they were installed into hardwood timber frames which helped, however, over time the condensation would start and would rot the timber frames.

The combination of relentless condensation and slowly rotting timber gave rise to the formation of dangerous mould spores and respiratory issues with people's health.

Today, modern aluminium windows combine energy efficiency with longevity

Our modern aluminium systems separate the inner and outer parts of the window with a polyamide (nylon) section which prevents the cold being transmitted through the window.

This is referred to as a thermal break and it insulates the window very effectively and removes the need for the window to be set into a timber frame. Not only does this reduce the cost of the whole window but it also gives it a slimmer appearance.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

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how the window has evolved in Britain...

16th Century

Throughout the 1500's windows were merely stone and timber frames with no opening casements.

Most window frames were unglazed and relied on either shutters or oiled cloths hung over these openings to protect the insides of the building.

Glass was scarce and couldn't be produced as large panes. This meant that smaller pieces of glass had to be used and were held together by lead sections to produce larger glazed windows - this is what we now refer to as leaded-lights. Opening casement windows started to appear before the end of the century.

17th Century

By the 1600's, window designs had become taller and narrower with leaded-lights becoming common place. As the century progressed, glass became more popular and started to be produced in larger panes.

Timber framed windows became more popular with timber astragal bars allowing multiple panes of glass to be combined to enable larger windows. The range of frames also increased, and details such as the Ovolo moulding becoming popular for stone mullions. Opening casements started to make an appearance too.

18th Century

Sliding sash windows became more popular as window frames continued to be narrower and thinner. These early sash windows replaced the casement windows that had been used up to this point.

Plate glass was introduced in the 1770's, which contributed to the decline of the astragal barred window and enabled larger windows to be produced with less individual panes of glass.
Even the most humble of homes would now have had opening sash windows as they became increasingly more affordable.

19th Century

The industrial age enabled wider manufacturing techniques and an abundance of materials including larger panes of glass to be used.

Projecting windows, such as bay and bow windows, became more popular in homes.

Three movements influenced the style of windows in the late nineteenth century: the Gothic revival, which introduced wrought-iron window frames, the Arts and Crafts movement, which brought back leaded lights, and the Queen Anne style for sash windows.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

...over the last 500 years...

20th Century

The modernist style of 1920's buildings incorporated new, slim steel frames. Post-war construction in the 1940's saw an increase in available materials and many new house styles.

Developments made in the aircraft industry during the war meant aluminium became a viable alternative for window construction, alongside popular painted softwood frames.

By the 1970's and 80's many homeowners started to replace their timber windows as double glazing was introduced to improve insulation in their homes.

21st Century

Aluminium and PVCu became more popular, offering longer lasting and maintenance free solutions alongside a wider choice of frame styles, including aluminium frames with timber inserts that were cheaper than their hardwood timber alternatives.

As lifestyles and tastes changed the demand for narrow window profiles and large expanses of glass led to aluminium becoming very popular in modern building design.

Basic Window Terminology

CASEMENT

A **typical outward-opening window** incorporating top and/or side hung openers. Sometimes referred to as a 'vent'.

WARM EDGE SPACER

The **insulating profile** that separates the inner and outer panes of glass used in the double-glazed glass unit

WER

Window Energy Ratings, a simple A - G rating system as used on 'white goods' to help assess energy efficiency

THERMAL BREAK

The **insulating profile** that separates the inner and outer parts of the frame and sash.

LOW-E GLASS

Low-E stands for low-emissivity glass. This glass has a special invisible coating to create a type of **insulating glass** which works by letting in energy from the sun and minimising heat loss from indoors

OUTER FRAME

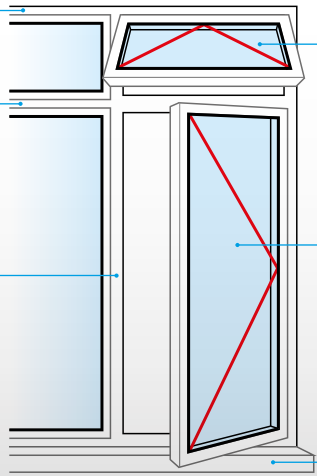
The fixed, **outer component** of the window

TRANSOM

The **horizontal** structural component that separates adjacent window sashes

MULLION

The **vertical** structural component that separates adjacent window sashes



SASH or VENT

The **opening component** of the window -

either

top-hung (top-hinged)

or

side-hung (side-hinged)

CILL or SILL

The **protruding lip** that directs water away from the outer wall

aluminium frames enable much larger, uninterrupted glass areas

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

slimmer, stronger, lighter...

Aluminium is stronger and lighter than equivalent materials such as PVCu or good quality timber.

This strength allows for windows and doors to be manufactured in slimmer designs which in turn allows for greater areas of glass. More glass means more light coming in and a less obstructed view out.

Window designs such as bays and bows look very bulky and heavy in PVCu - by using aluminium you can reduce the size of the unions quite considerably between each window segment.

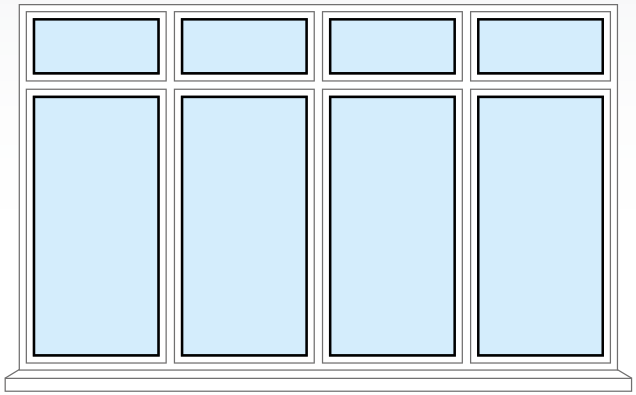
Very little maintenance is required to ensure a very long life and to retain their original appearance.

Available in a wide range of RAL colours

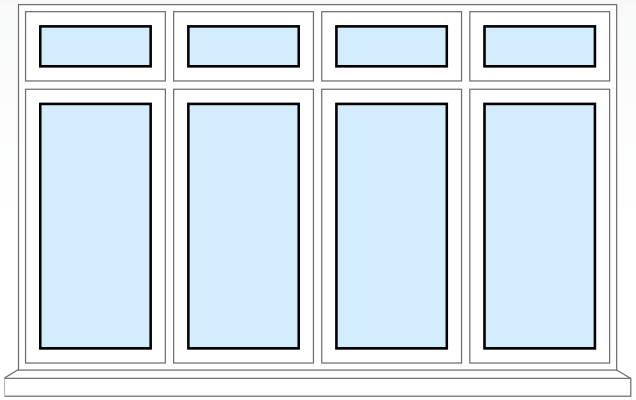
dummy sashes, equal sight-lines

A 'dummy-sash' refers to a non-opening sash which is inserted into the frame to achieve a symmetrical and evenly proportioned sight-line.

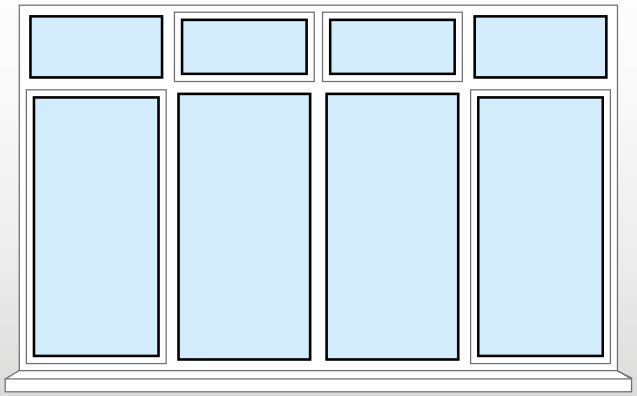
These illustrations of Aluminium and PVC-u windows clearly demonstrate the differences between the different materials but also how the **'unequal sight-line'** appearance is more noticeable in PVC-u.



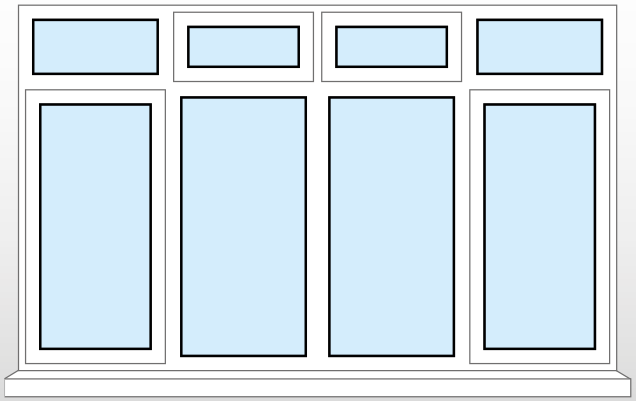
Aluminium EQUAL SIGHT-LINES



PVC-u EQUAL SIGHT-LINES



Aluminium UNEQUAL SIGHT-LINES



PVC-u UNEQUAL SIGHT-LINES

A flatter, slimmer sash helps defines the style of the Contemporary range with a square or chamfered glazing bead. Simple, sleek lines work on many styles of property but probably more suited to a modern home.

◀ **AW690** sash has a chamfered profile glazing bead to achieve a strikingly slim and uncluttered appearance.

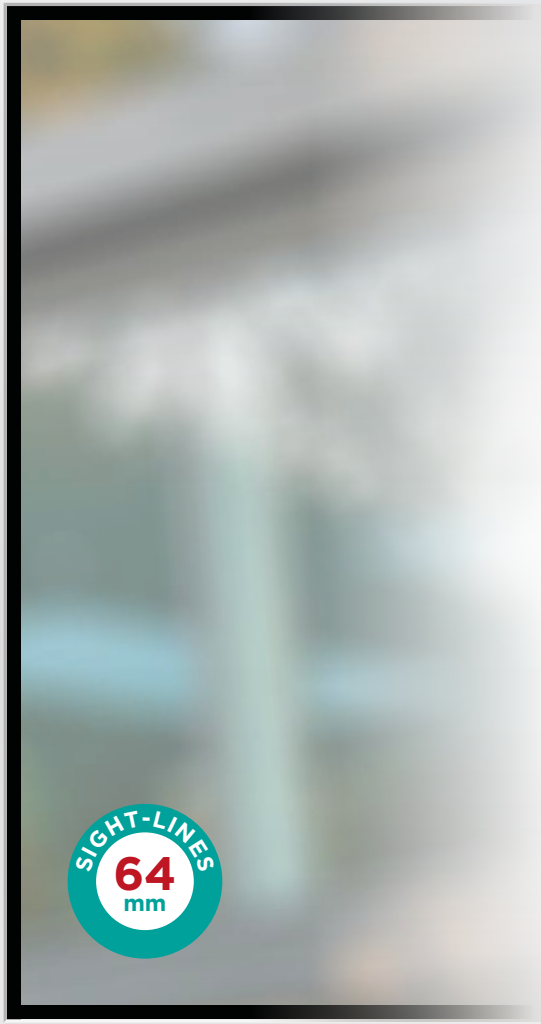
Through innovative design and superior build quality this window system offers high thermal and acoustic performance alongside the inherent strength and low maintenance benefits of aluminium to make your home safe and secure.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

contemporary

The Contemporary range also encompasses slim, flat sashes together with large expanses of glass to offer an almost uninterrupted view from within.

AW685 Simple flat profile design looks very modern and is easy to coordinate with other contemporary products such as sliding patio doors and bi-folding doors



Opening up a room to let the light flood in, these windows have narrow framing and can offer uninterrupted glazing to a height of 2 storeys.

Get the look with the ultimate in maximum glazing, minimum framing aluminium window systems and add a whole new perspective to your home.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

contemporary

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

MODERN & TRADITIONAL

french doors

French Doors are undoubtedly considered the ‘traditional’ method of entering the garden or rear of your home but it still can have a modern feel if needed. Again, the slimmer profiles maximise incoming light and offer a greater view from indoors.

Traditional chamfered profiles give the projecting appearance of timber whilst flatter profiles suit the modern aesthetic. A flush appearance can be achieved using bi-fold door profiles for a very sleek design.

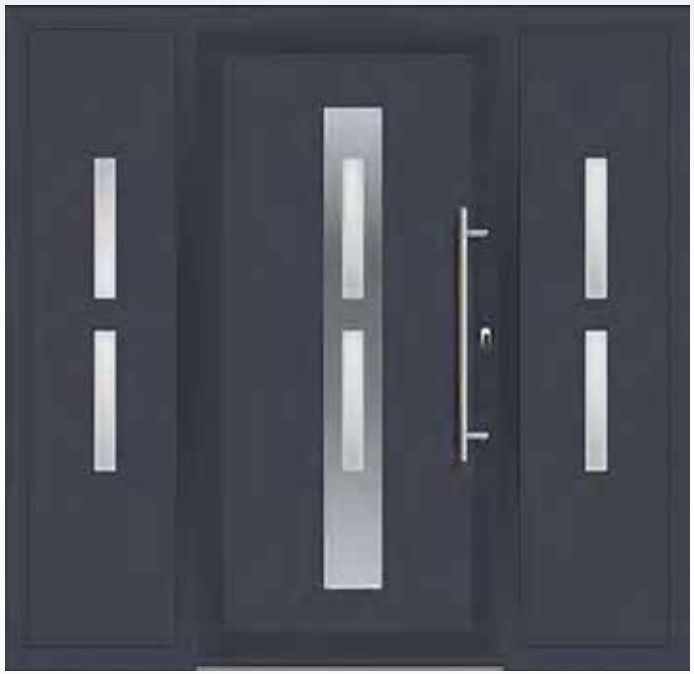
a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

entrance doors

Our range of high performance entrance doors have safety and security at the heart of their manufacture.

Available in single and double door configurations, our entrance doors are available in a complete range of glazing formats and include several added security features, including multi point locking mechanisms.

Our entrance doors are available in a wide variety of colours, finishes and formats to best complement your home.



a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

MODERN
entrance doors

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Platinum® NRG


ABER5


ALBERG1


ARTUBY3


ASPEN1


AUTRANS2


AVORIAZ1


BORMIO 3


CARONA 2


CERVINIO1


IGMAN


JAVORNIK 3


LB 6


LEYSIN 3


LIVIGNO 1


LURISIA 4


LUZERN 3


MANALI 6


MATIGNY 2


NEOSLOPE 3


PECA 3


PORTE 1


RISOUL 5


SESTRIERE 3


SUMMIT 6


TAVASCAN 2


TRIBERG 1


VALMOREL 2

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

entrance doors

Our Aluminium doors perform well against the rigors of the British weather, reducing draughts and providing excellent weather proofing. This enables the doors to maintain their high performance even in the most extreme locations.

Security concerns are alleviated by the use of the superbly engineered and 'Secured by Design' approved Winkhaus Key-Wind Lock - a multi-point locking mechanism allowing our doors to exceed the requirements of PAS 24 (Enhanced Security).


CHAMONIX 3


COLOGNE 4


COURCHEVEL 3


ELORN 1


MERIBEL 4


MERIZINE 3


MOLVINO 1


MORZINE 1


VALNORD 2


VERBIER 3


VEYSONNAZ 3


VEYSONNAZ 5


ZERMATT 3

Our range of patio doors offer an ideal and inexpensive solution for your home, with minimal frame design to let the maximum amount of light flood into your home.
Built to the highest standards our patio door range combines flexibility with design and security to ensure your comfort and peace of mind.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

MODERN
sliding patio doors

Our range of in-line premium aluminium doors offers high performance complemented by stunning design to add a modern and stylish look to your home, opening your living space to the outside.

Combining unique system design with a range of configurations they will enhance your home whilst keeping the weather at bay.
Built to the highest standards our patio door range combines flexibility with design and security to ensure your comfort and peace of mind.

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Platinum® NRG

3 distinctive styles to suit many different homes

BSF70

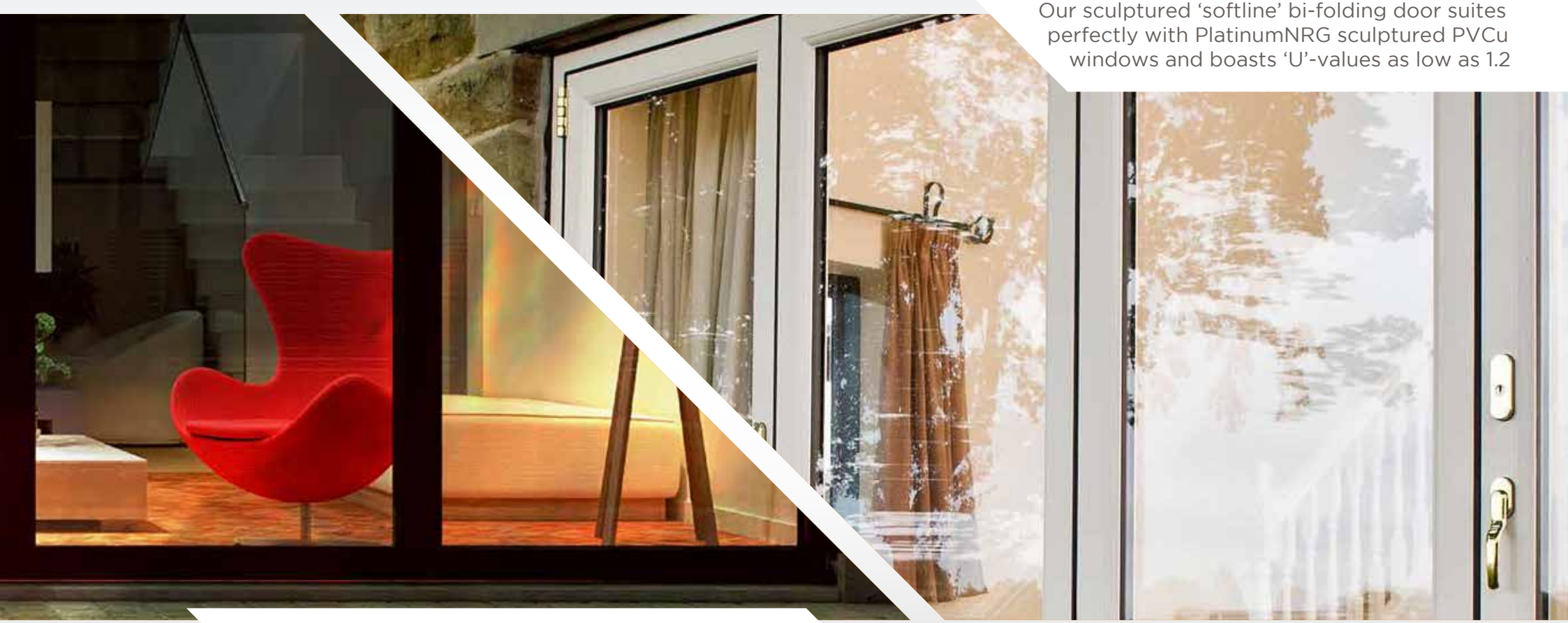
luminia F82

Our standard bi-folding door with 140mm meeting stiles and door sizes of up to 3000mm tall and 1000mm wide along with ‘U’-values as low as 1.6

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

ALUMINA

Our sculptured ‘softline’ bi-folding door suites perfectly with PlatinumNRG sculptured PVCu windows and boasts ‘U’-values as low as 1.2



Our slim, architectural bi-folding door with 122mm meeting stiles and door sizes of up to 1200mm wide along with ‘U’-values as low as 1.3

Our range of bi-fold doors enables you to expand your living space by opening up wide expanses of your external walls to your outside space. Whilst at the same time keeping the weather out and the heat in during cold months.

Our bi-fold doors are built to your needs, offering you a bespoke solution every time, from the configuration of the doors to the handles, accessories and colour, making our bi-fold doors the perfect addition to your home.

performance

- Wide range of configuration options
- High performance glazing and design
- Minimal profiles for a modern look
- Complete range of handles and accessories
- Unique flush line pop-out handle option
- Full range of standard and bespoke colours
- Dual colour option for inside and out
- Chamfered and square bead options
- Sturdy and reliable sliding mechanism
- Low threshold option for room dividers
- High performance as standard

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

BSF70 bi-fold doors

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Platinum NRG

New, contemporary traffic door handle and escutcheon plate.

122mm Slimline Interlock/ Meeting Stile

97mm Slimline sight-line

Heavy-duty, compact rollers as standard.

A contemporary, stylish bi-folding door. With thinner sight-lines and interlock of 122mm that provide larger glazing panels without compromising on performance.

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

luminia F82 bi-fold doors

Unique, flush 'pop-out' handle for ease of operation removes the need for an additional 'D'-handle to open additional door leaves.

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Platinum® NRG

Uniquely designed by the experts at Liniar, the Alumina bi-fold is a ‘true’ aluminium door - able to span up to 1.2 metres wide per sash and 2.5 metres high, with optional warm-touch foiled exterior and superior U-values - yet manufactured in the same traditional way as other aluminium systems.

Alumina takes all the benefits of an aluminium door and adds extra features to make it the perfect choice where you need strength with size. And as it’s designed to perfectly match Liniar’s range of thermally efficient PVCu windows, you can mix and match for an overall cost effective installation.

suites perfectly with PVCu / U-values as low as 1.2W/m²K / wide range of colours & finishes

ALUMINA BI-FOLD

bi-fold doors

suites perfectly with PVCu / U-values as low as 1.2W/m²K / wide range of colours & finishes

ALUMINA BI-FOLD

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Platinum® NRG

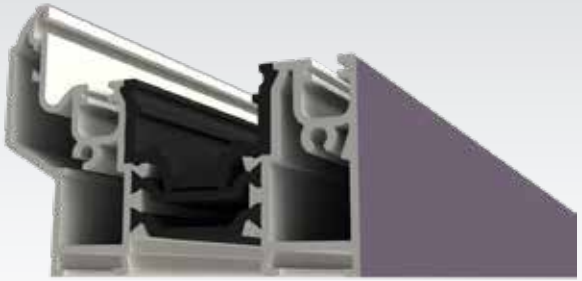
suites perfectly with PVCu / U-values as low as 1.2W/m²K / wide range of colours & finishes

All Alumina bi-folding doors are available with three threshold options, for the ultimate choice.

The **STANDARD** rebated aluminium frame runs seamlessly around to form a weather-tight threshold, and the doors are supplied with this as standard.

Our **OPTIONAL** aluminium low threshold requires no trench excavation to install, and is just 23.5mm at its highest point.

Add an **OPTIONAL** tray to the low threshold to make the bi-fold doors Part M compliant for wheelchair access and family living.



Rebated Aluminium Frame

Thermally-broken Low Threshold

Thermally-broken Part M Threshold

HARDWOOD FRAMES

Here we have some examples of original and replacement hardwood frames and the aesthetic it creates.

Revival frames retain this style.

REVIVAL

A MODERN SOLUTION TO AN AGE-OLD PROBLEM

Over the last few hundred years it has been very common to install steel and more recently, aluminium windows into a timber sub-frame.

Due to the inherent long-term problems of timber in terms of rot and degradation it can often render a window installation dangerous or ineffective.

To maintain this traditional appearance the only options have been to install a new timber sub-frame or to lose the timber appearance altogether and replace the whole window with either PVCu or timber.

Now however, we have a new solution.

A solution that incorporates our evolutionary Revival 85mm frame into which our range of aluminium windows can be installed. The Revival frame can be produced in a flat colour or with a woodgrain finish to emulate the appearance required.

A solution that is far cheaper than timber and gains the low-maintenance qualities of PVCu along with it's longevity.

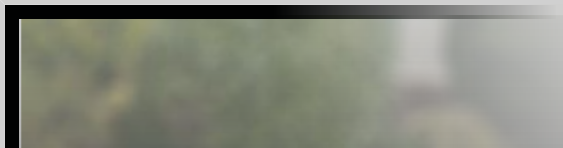
◀ Our traditional Chamfered window using the **AW604** slim frame, the **AW610** externally-glazed sash with the **AW513** chamfered glazing bead

▼ A combination of sashes and dummy sashes create a good timber-look installation with slim sight-lines and sealed-in Georgian bars for easy cleaning.

▼ The sash and bead also ▶ lend themselves well to older properties - **RAL9005 Black** with diamond-leaded lights.

Highly flexible and adaptable, our Chamfered range is ideal for homeowners looking for a traditional framing look. The sash protrudes from the frame with a chamfered profile around the outer edges and a chamfered glazing bead.

The chamfered glazing bead emulates the style of a typical timber window as it gives the appearance of having held the glass in place with putty - what we refer to as a 'putty-line appearance'.



a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

TRADITIONAL
chamfered

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Our traditional Ovolo window is essentially the same window as our traditional Chamfered but uses a sculptured (or Ovolo) profile around the outer edges of the sash. This gives the sash a more decorative appearance and is often referred to as ‘soft-line’.

Again, this would be found on period timber windows and can be glazed with either the putty-line chamfered bead or a square bead.

◀ Our traditional Ovolo window using the **AW604** slim frame, the **AW613** externally-glazed sash with the **AW513** chamfered glazing bead

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

One of many great advantages in using aluminium is when it comes to creating bay windows. It's slim dimensions allow for the bay corners to be far less bulky than when using PVCu. The bays can be made even slimmer if you choose an unequal sight-line design and keep opening sashes at either end of the bays. Even if you opt for the more uniform appearance of equal sight-lines the bay is still comparatively slim.

▼ Our **Steel Replacement** window using the **AW622** frame, the **AW614** internally-glazed sash with the **AW663** flat glazing bead

▼ These 6-part bays look even slimmer by using unequal sight-lines and keeping the opening sashes at either end

▼ RAL9005 Black finish really enhances the **AW614 Steel Replacement** for a slim appearance and as it doesn't protrude from the frame, the overall effect is very slim.

All our window systems are ideal for the creation of Bay Windows, offering a solution with a classic profile and innovative design to suit your home.
Made from high-performance aluminium, our Bay Window systems are a sustainable and reliable solution and provide the perfect solution for traditional and modern bay windows.
Designed to offer a low maintenance, high performance solution, our Bay Windows are kite-marked and rated A for energy efficiency.

Steel Replacement aluminium windows where the **AW614** ▶ sashes lie flat against the outer frame but still retains a chamfered 'putty line' around the glass.
Dummy (non-opening) sashes have been used throughout to achieve a symmetrical 'equal sight-line' appearance.

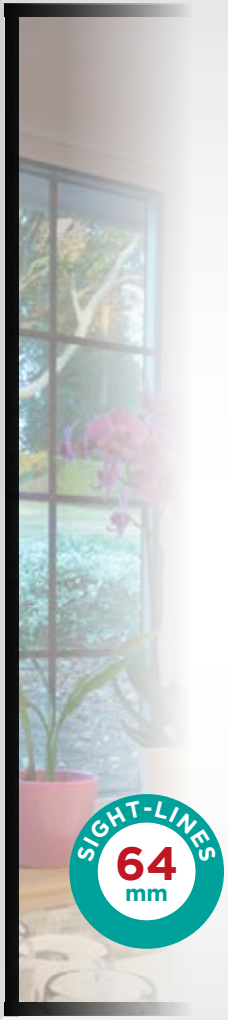
a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

BAY WINDOWS

heritage, traditional and modern

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

Platinum NRG

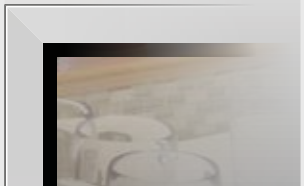


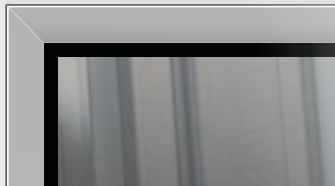
A choice of either a ‘stepped’ Crittall-style or a chamfered ‘putty line’ profile capture the style and elegance of the British heritage steel windows that were predominantly used throughout the last century.

▼ Black ‘stepped-profile’ **AW686** windows set into hardwood frames provide an authentic **Crittall Replacement**

Our Heritage windows are an ideal replacement for current steel-framed glazing in your home.
Manufactured in the UK from lightweight aluminium, they offer a higher performance alternative to traditional alternatives, whilst still retaining the look and style of your property.

Designed to improve thermal and acoustic performance, this system is low maintenance and customisable, yet still replicates the narrow sight lines that traditional steel windows provide.

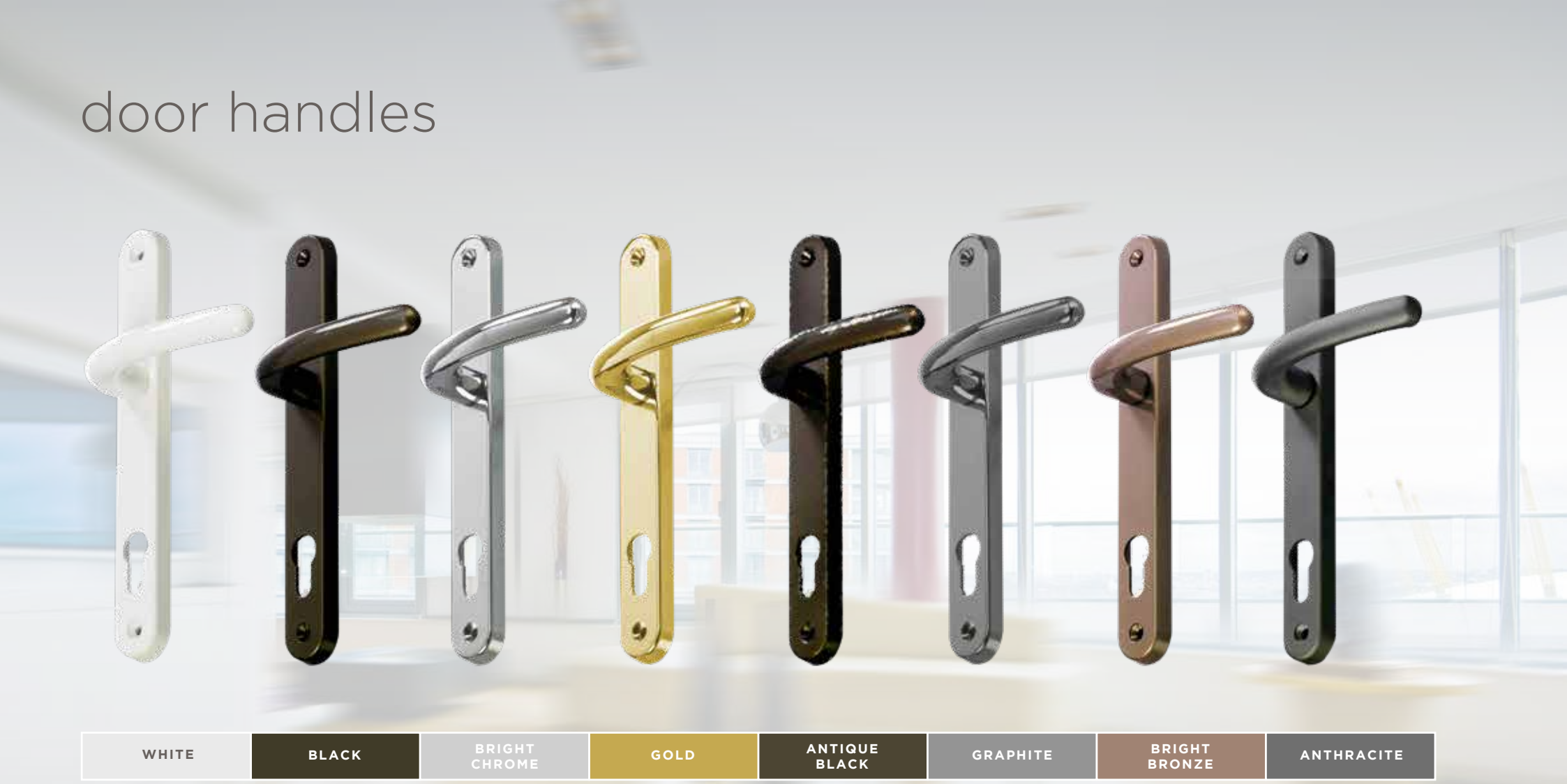




a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

Call **0800 652 3151** for your nearest dealer or go to **www.platinumNRG.co.uk**

door handles



WHITE	BLACK	BRIGHT CHROME	GOLD	ANTIQUE BLACK	GRAPHITE	BRIGHT BRONZE	ANTHRACITE

Features

- Solid die cast construction with heavy duty spring cassette
- Sturdy feel and consistent 90 degree lever return
- Sculpted ergonomic lever and low friction nylon bush
- Colour coordinated screw heads
- Perfectly matching hardware, even down to the smallest details
- Corrosion resistance to BS EN 1670:2007 Grade 5 (480 hours)
- Endurance tested in excess of 200,000 cycles
- Tested to meet the requirements of PAS 24 as part of a compliant door set

lockable classic designs with a contemporary twist, all in a range of colours & finishes

window handles

WHITE	BLACK	BRIGHT CHROME	GOLD	ANTIQUE BLACK	GRAPHITE	BRIGHT BRONZE	ANTHRACITE

Features

- Solid die cast Zinc construction
- Heavyweight handle with sturdy feel
- Heavy duty sprung latching wedge
- Greater leverage and easy to operate without catching a hand on the window
- Patented cover caps with colour coordinated finish
- Perfectly matching components, even down to the smallest details
- Secured By Design
- Corrosion resistance to BS EN 1670:2007 Grade 5 (480 hours)
- Endurance tested in excess of 50,000 cycles
- Tested to meet the requirements of PAS 24 as part of a compliant window

sliding patio door handles

WHITE	BLACK	BRIGHT CHROME	SILVER

Features

- Solid die cast construction with heavy duty spring cassette
- Sturdy feel and consistent 90 degree lever return
- Colour coordinated screw heads
- Corrosion resistance to BS EN 1670:2007 Grade 5 (painted) and Grade 4 (plated)

lockable classic designs with a contemporary twist, all in a range of colours & finishes

FINISHING TOUCHES

Contemporary
Tear-drop Handle

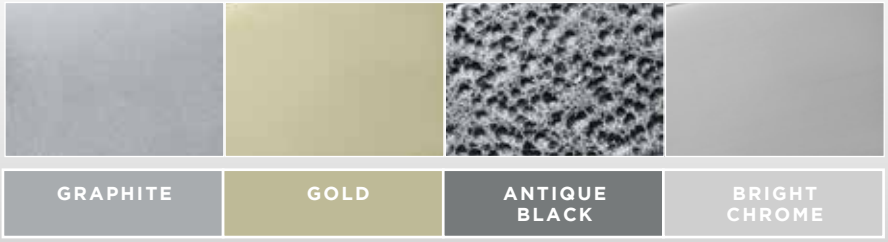
Contemporary
Monkey-tail Handle

Traditional
Tear-drop Handle

Traditional
Monkey-tail Handle

Traditional Finishes**

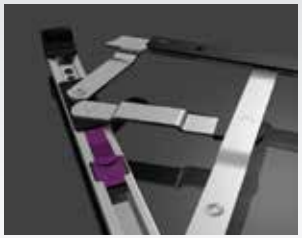
Contemporary Finishes**



Our standard range of hardware is further surpassed by an even wider selection of designs and finishes.
This gives you tremendous scope to either make a bold statement with your home or conversely, a discreet and subtle way of improving the aesthetics of your home.

**** Due to different suppliers, hardware names for the contemporary finishes DO NOT correspond with the names of the traditional finishes**

easy clean hinges



Initial opening similar to standard side-hung friction stay

Full opening to 90 degrees providing clear egress in excess of 500mm on a 600mm wide vent

Easy to operate thumb catches allow the vent to slide to the easy-clean position giving between 100 and 250mm clear opening

To reset simply close the window and then re-open to go back to the egress position and close

Increased Security Designed to accommodate stay-guards that increase the security performance of BS 7950
Corrosion resistant By utilising high quality plastic components the new release mechanism provides greater corrosion resistance to BS 7479
Easy-cleaning User-friendly push button operation enables window to smoothly slide along the track for easy access from inside the building
Reduced Friction The enhanced track profile produces an effortless sliding motion
Trouble-free Quality materials and manufacturing create a reliable product of superior quality
90 degree opening Enables the window to meet new Part B regulations
Smoothly efficient The new and unique (patent applied for) moulded components guarantee uninterrupted operation giving a safer, more efficient performance

locking mechanisms

doors

Stainless steel construction for ultimate corrosion resistance

PAS 24:2012 and BS6375-2:2009 tested

High security and excellent compression when tested as part of a system

4 compression-adjustable roller cams for excellent sealing into the frame and smooth operation

5 hook bolts including 2 pairs of opposing hooks for high levels of security.

windows

Tested to BS EN 1670 and has exceeded grade 4 classification

Tested to 30,000 cycles under operational load

Can achieve PAS 24 as part of a specific window system

The energy-saving ability of your windows and their control of the sun's heat is primarily down to one element - the glass! The glass not only minimises the heat escaping from your home but also reduces the cold entering your home - all whilst controlling the amount of the sun's rays warming your home.

Single Glazing

Outdoor temp. **-5ºC**
Indoor temp. **20ºC.**
Inner pane **2ºC.**

The temperature of the room drops off rapidly as you get closer to the window, therefore your heating will have to work a lot harder to retain a comfortable temperature indoors. The glass isn't keeping the cold out nor is it keeping the heat in.

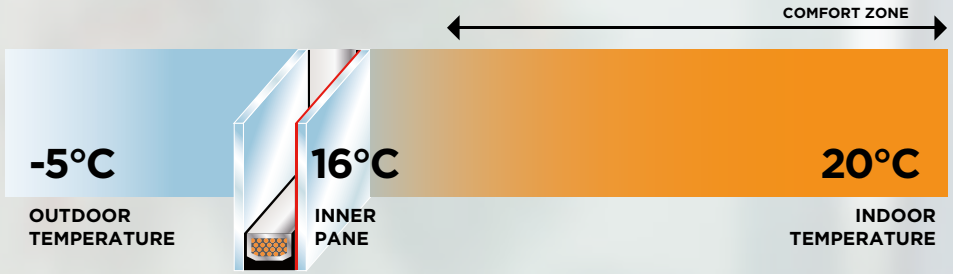
Standard Double Glazing

Outdoor temp. **-5ºC**
Indoor temp. **20ºC.**
Inner pane **10ºC.**

The temperature of the room drops off gradually as you get closer to the window, therefore your heating won't have to work as hard to retain a comfortable temperature indoors. The glass is keeping a lot of the cold out and a lot of the heat in.

There are still a lot of single-glazed windows in the UK - over a quarter of the heat generated in these homes is lost through these windows. There are also a lot of older double-glazed windows out there - they are certainly more effective than single-glazing BUT possibly only half as efficient as modern double-glazing!

Double Glazing with Energy Glass



Outdoor temp. **-5ºC**
Indoor temp. **20ºC.**
Inner pane **16ºC.**

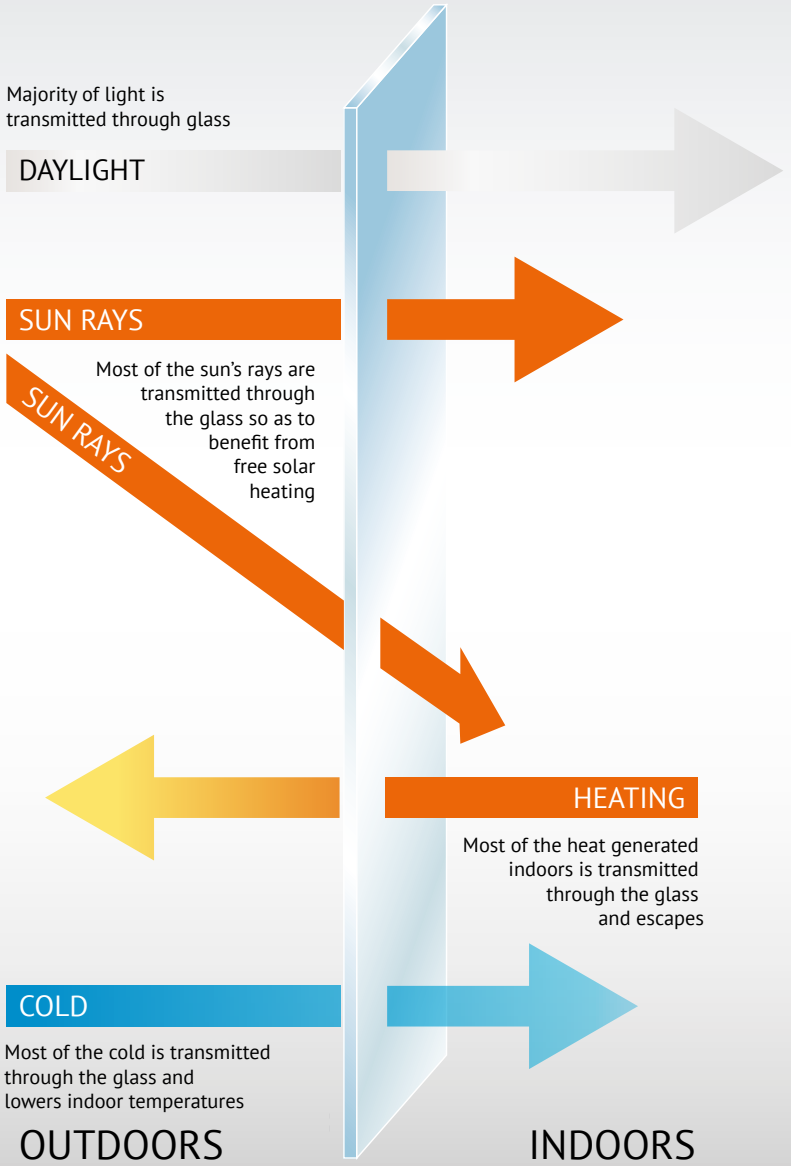
The temperature of the room barely drops off as you get close to the window, therefore your heating will have to work even less to retain a comfortable temperature indoors. The glass is keeping most of the cold out and is keeping most of the heat in. The effect of this can be enhanced even further by changing the combinations of glass, the air or gas sandwiched between the glass and the spacer bar surrounding the glazing unit.

SPECIAL COATINGS

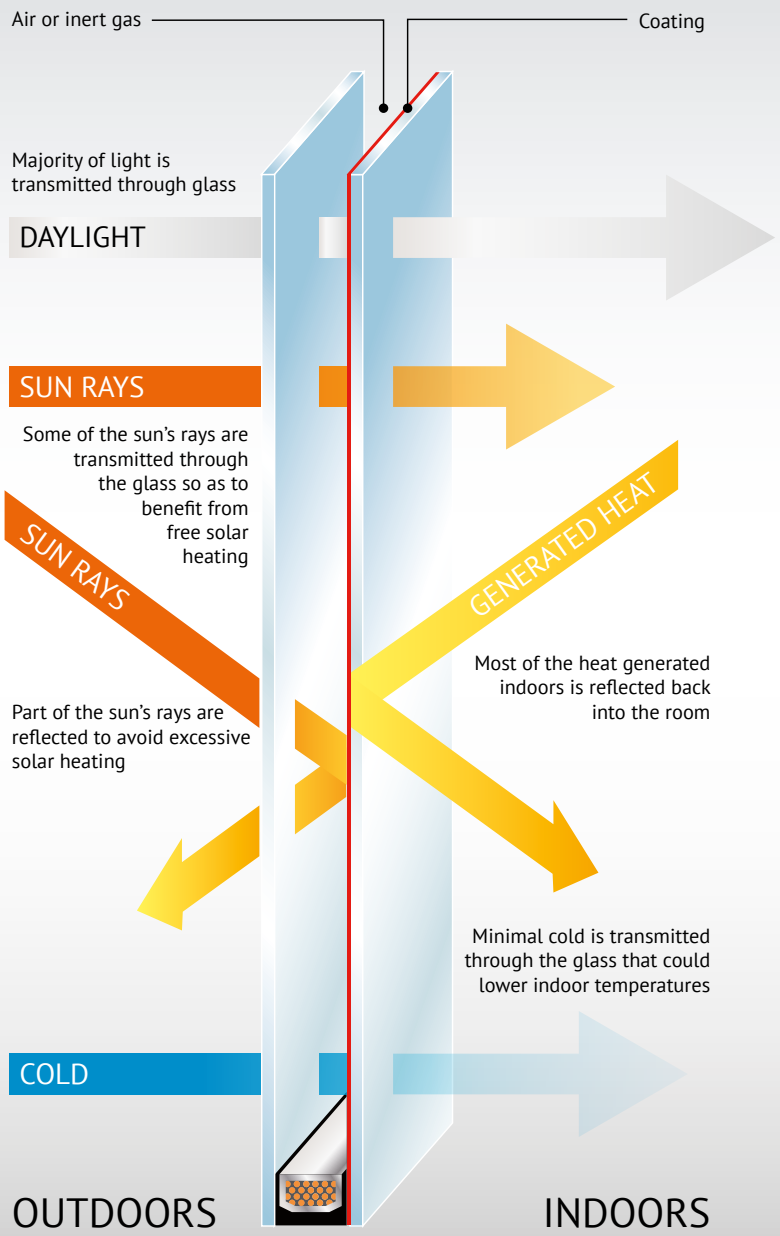
The most commonly used term for this is **Low-E**, whereby the 'E' stands for emissivity. Emissivity in this instance means the amount of heat energy the coating can actually give out. The latest coatings are almost invisible whereas only a few years ago they had a noticeable tint to them.

Window glass is by it's very nature, highly emissive. To improve thermal efficiency, (insulation properties) specially designed thin film coatings are applied to the glass. These coatings are then applied to one or more surfaces of the glass. These coatings reflect radiant infrared energy, thus tending to keep radiant heat on the same side of the glass from which it originated, whilst still allowing visible light to pass. This results in more efficient windows as radiant heat originating from indoors in winter is reflected back inside, while a large amount of infra-red heat radiation from the sun is reflected away preventing over-heating.

energy loss

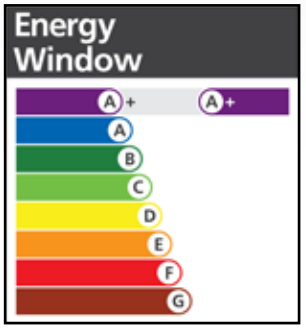

Majority of light is transmitted through glass
DAYLIGHT
SUN RAYS
Most of the sun's rays are transmitted through the glass so as to benefit from free solar heating
SUN RAYS
HEATING
Most of the heat generated indoors is transmitted through the glass and escapes
COLD
Most of the cold is transmitted through the glass and lowers indoor temperatures
OUTDOORS
INDOORS

energy efficiency



Double Glazing with Energy Glass

Double glazing offers high levels of heat insulation. Insulation levels are governed by the type of glass, spacer bar, glass coating, air or gas fill. It can get rather complicated which is why the Energy Rating Labels are used.



A special coating on the inner face of the glass reflects some of the sun's infra-red rays to avoid 'solar overheating'. This coating also reflects the radiated heat (from central heating, gas fires and even our bodies) back into the room.

Save money, reduce your heating bills and reduce your carbon footprint Less heat escaping means using less energy to create warmth which in turn means fewer CO_2 emissions

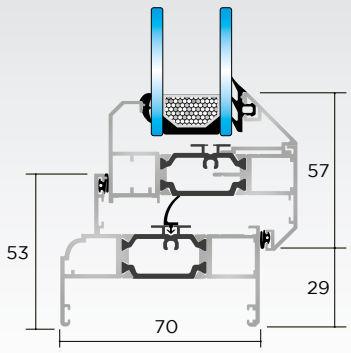
This cavity is created by a spacer bar that runs around the perimeter of the glass. A modern spacer bar conducts minimal heat yet does retain it, minimising the risk of condensation. This 'sandwich' of glass and air is referred to as a 'sealed glass unit'.

In a sealed glass unit, the lighter warm air rises creating a convection current that circulates the heavier, cooler air from the bottom of the unit.

Filling the cavity with low-reactivity Argon gas rather than air, reduces the transfer of cold air through the unit

Due to it's lower density, Argon gas also reduces sound transmission through the unit helping improve acoustic insulation.

TRADITIONAL - Chamfered Bead Chamfered Sash - **EXTERNALLY** GLAZED



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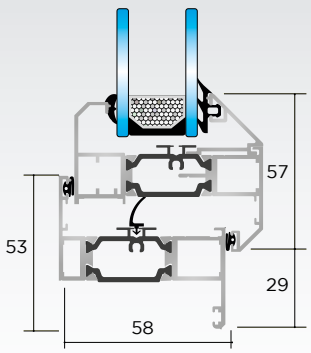

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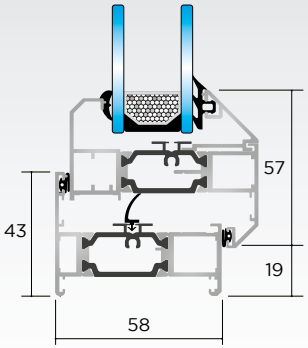

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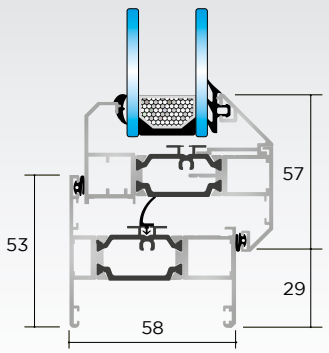

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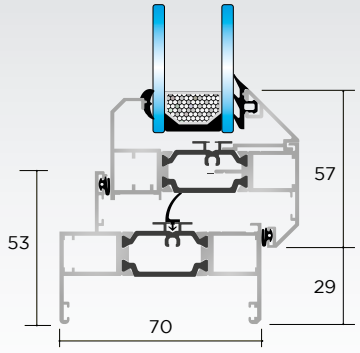
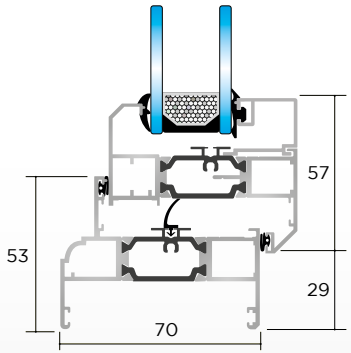


AW622-AW610-AW513

TRADITIONAL - Square Bead Chamfered Sash - **EXTERNALLY** GLAZED



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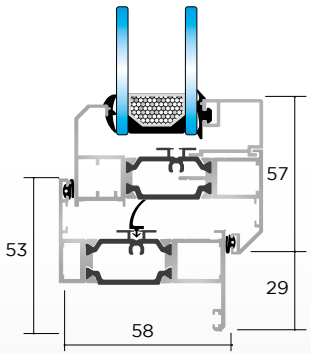

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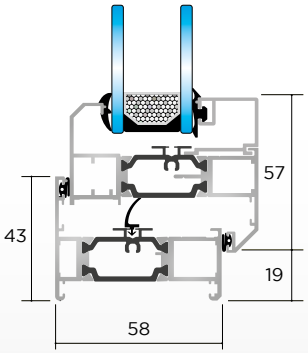

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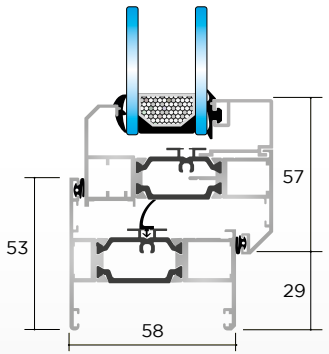

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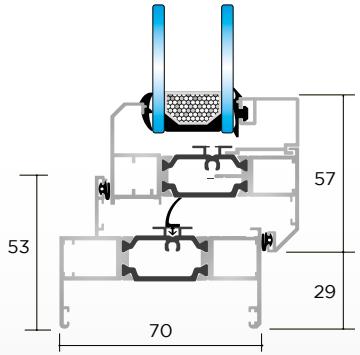


AW622-AW610-AW660

performance

- Tested in wind speeds up to hurricane force
- Enhanced weather performance
- Thermally broken profiles as standard with unique design to improve thermal insulation
- Double or triple glazing options for thermal and acoustic insulation

security

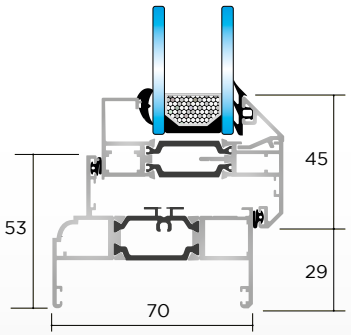
- Enhanced security
- Espagnolette multi point locking
- Child safety restrictions
- Standard hardware including concealed friction hinges and multi-point locking

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

chamfered



TRADITIONAL - Externally-Chamfered (square internally) Sash Profile - **EXTERNALLY** GLAZED



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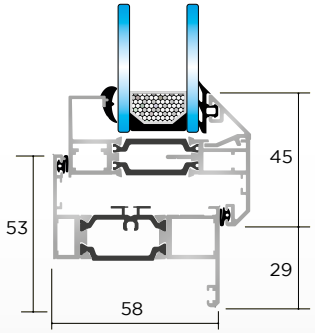

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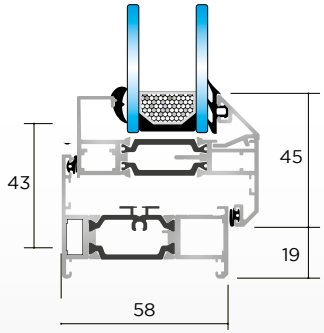

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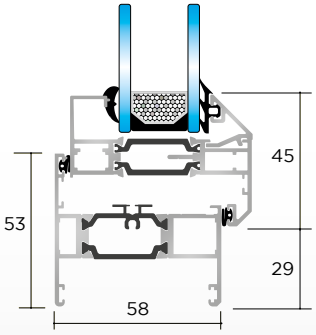

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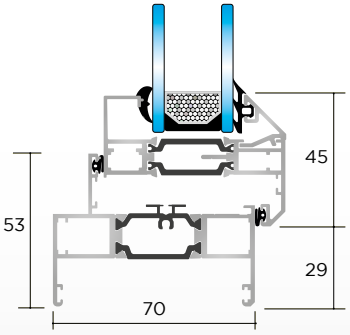


AW622-AW690-AW682

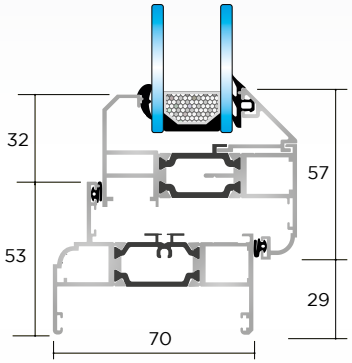
comfort

- Optional trickle ventilation
- Integrated night vent position
- Green guide ‘A’ rating

design

- Projecting top or side hung vents
- Can easily be combined with all of our window and door systems
- Surpasses the requirement of building regulations

TRADITIONAL - Chamfered Bead **Ovolo** Sash - **EXTERNALLY** GLAZED



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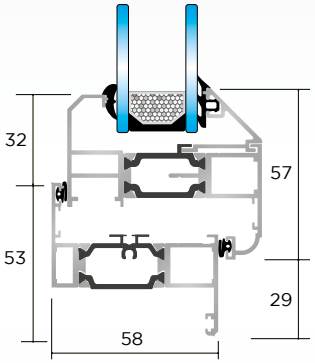

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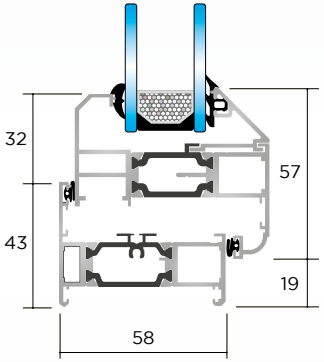

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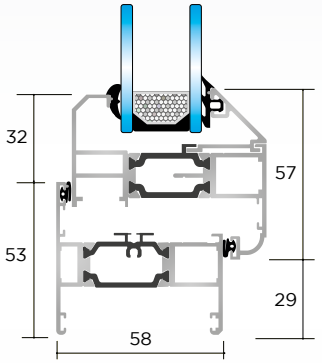

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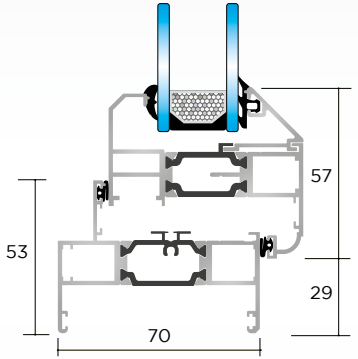


AW622-AW613-AW513

performance

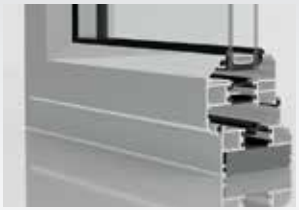
- Tested in wind speeds up to hurricane force
- Enhanced weather performance
- Thermally broken profiles as standard to improve thermal insulation
- Double or triple glazing options for thermal and acoustic insulation

security

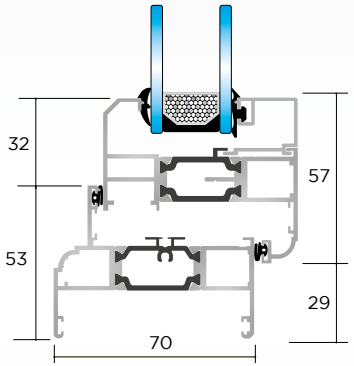
- Enhanced security
- Espagnolette multi point locking
- Child safety restrictions
- Standard hardware including concealed friction hinges and multi-point locking

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

ovolo



TRADITIONAL - Square Bead Ovolo Sash - EXTERNALLY GLAZED



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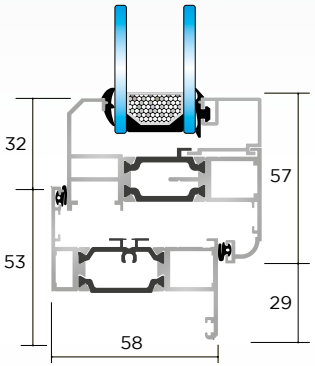

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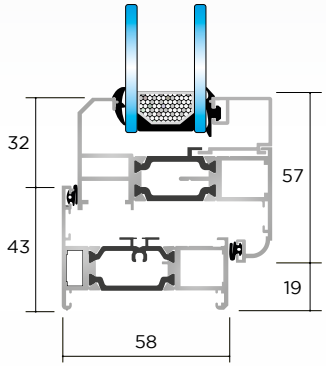

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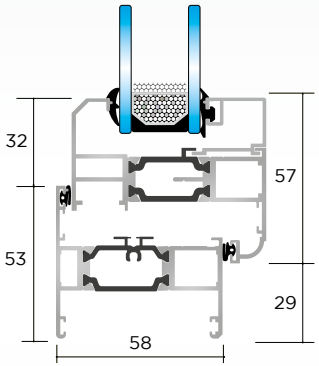

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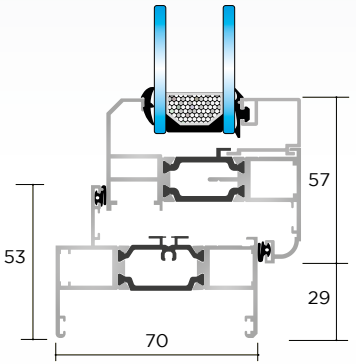


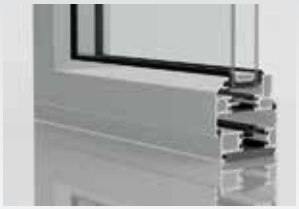
AW622-AW613-AW660

comfort

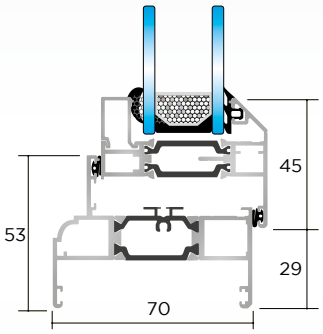
- Optional trickle ventilation
- Integrated night vent position
- Green guide 'A' rating

design

- Projecting top or side hung vents
- Can easily be combined with all of our window and door systems
- Surpasses the requirement of building regulations



HERITAGE STEEL REPLACEMENT - Chamfered Sash Profile - **INTERNALLY** GLAZED



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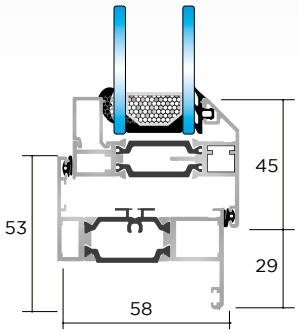

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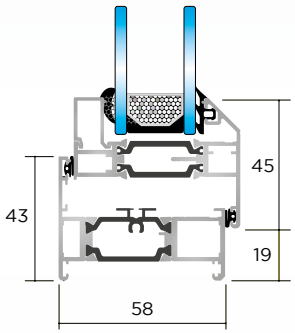

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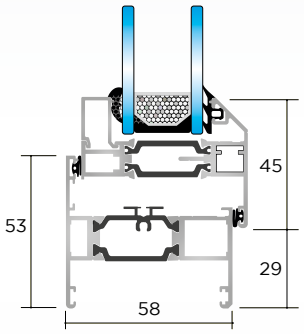

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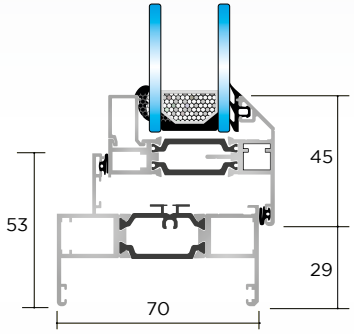


AW622-AW614-AW663

performance

- Tested in wind speeds up to hurricane force
- Enhanced weather performance
- Thermally broken profiles as standard with unique design to improve thermal insulation
- Double or triple glazing options for thermal and acoustic insulation

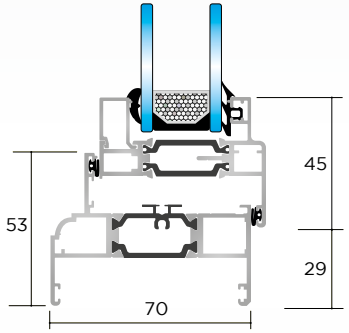
security

- Enhanced security
- Espagnolette multi point locking
- Child safety restrictions
- Standard hardware including concealed friction hinges and multi-point locking

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours



HERITAGE CRITTALL REPLACEMENT - Stepped Sash Profile - **INTERNALLY** GLAZED



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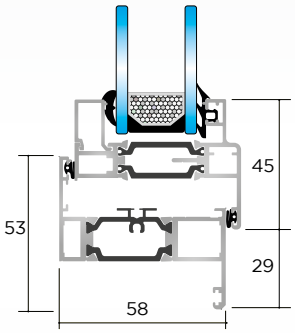

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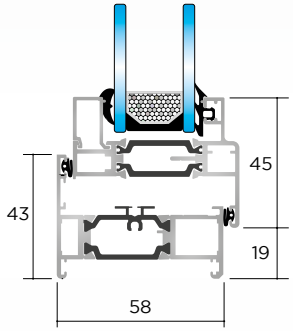

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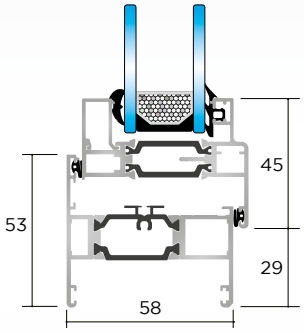

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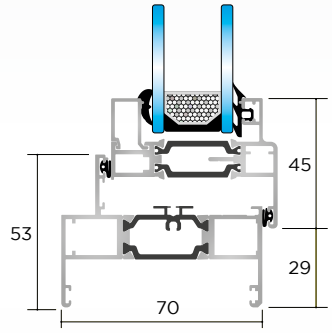


AW622-AW686-AW663

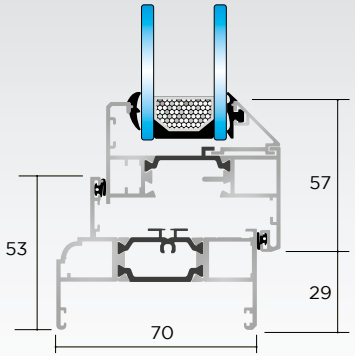
comfort

- Optional trickle ventilation
- Integrated night vent position
- Green guide 'A' rating

design

- Projecting top or side hung vents
- Can easily be combined with all of our window and door systems
- Surpasses the requirement of building regulations

MODERN - Chamfered Bead Flat Sash Profile - EXTERNALLY GLAZED



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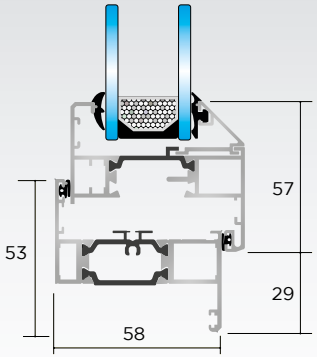

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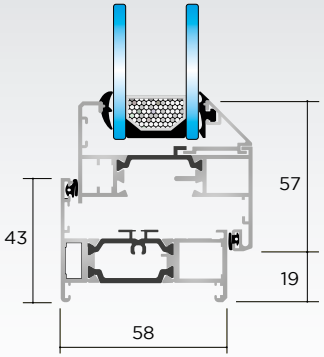

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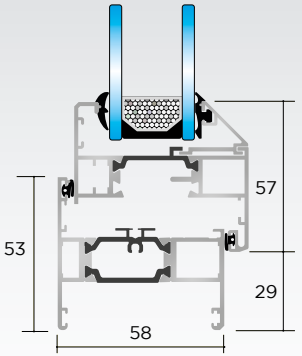
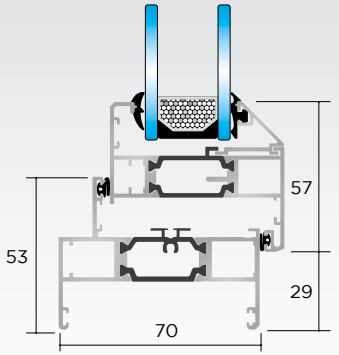
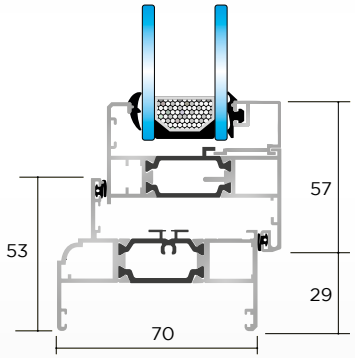


AW605-AW624-AW513

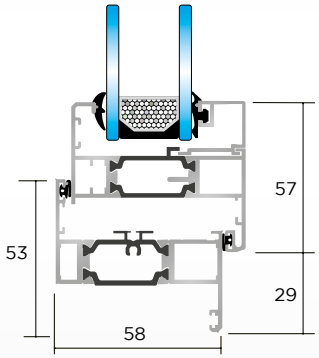


AW622-AW624-AW513

MODERN - Square Bead Flat Sash Profile - EXTERNALLY GLAZED



AW602-AW624-AW660



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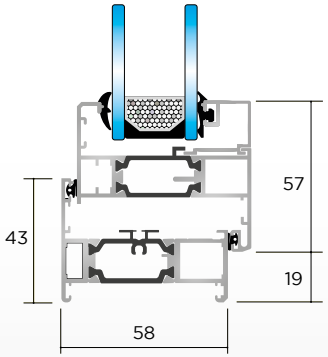

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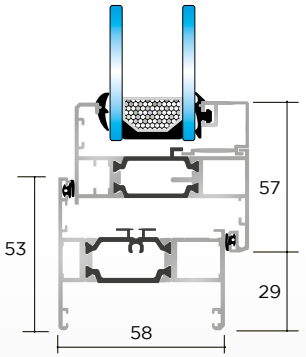

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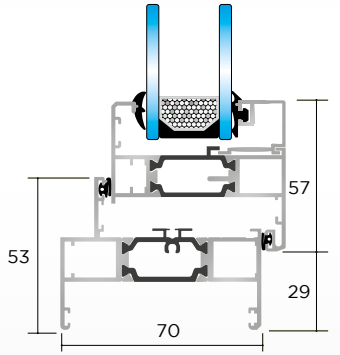


AW622-AW624-AW660

performance

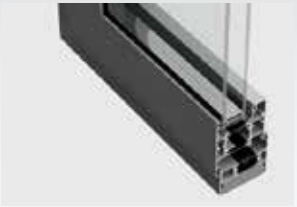
- Tested in wind speeds up to hurricane force
- Enhanced weather performance
- Thermally broken profiles as standard with unique design to improve thermal insulation
- Double or triple glazing options for thermal and acoustic insulation

security

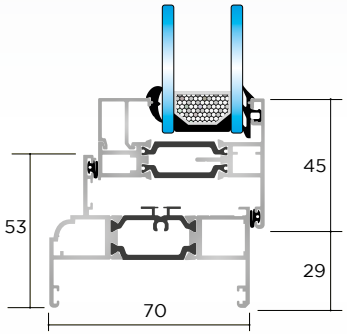
- Enhanced security
- Espagnolette multi point locking
- Child safety restrictions
- Standard hardware including concealed friction hinges and multi-point locking

a choice of 5 frames, 7 sashes and 5 glazing beads in a wide range of RAL colours

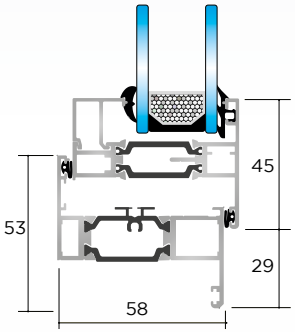
contemporary



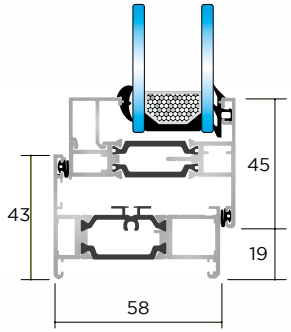
MODERN - Contemporary Flat Sash Profile - **INTERNALLY** GLAZED



AW602-AW685-AW683



AW603-AW685-AW683



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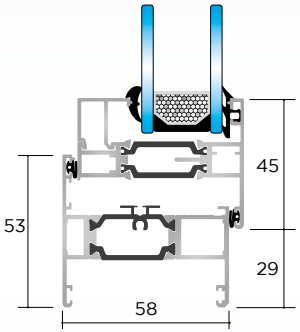

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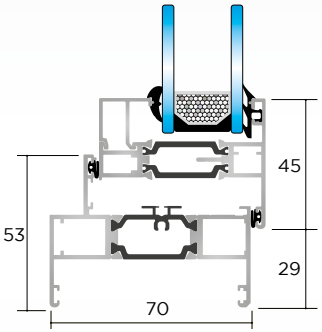


AW622-AW685-AW683

comfort

- Optional trickle ventilation
- Integrated night vent position
- Green guide 'A' rating

design

- Projecting top or side hung vents
- Can easily be combined with all of our window and door systems
- Surpasses the requirement of building regulations

...and if you really need to know...

CHOICE OF OUTER FRAMES IN 2 DEPTHS

Frame Depth	70mm		58mm		
Internal Frame Style	Ovolo Equal Leg	Square Equal Leg	Odd Leg	Slim Equal Leg	Equal Leg
Bay Window Suitability	YES	YES	NO	NO	YES*
Profile ID	**AW602**	**AW622**	**AW603**	**AW604**	**AW605**
Achievable WER Rating	**B**	**B**	**A**	**A**	**B**

CHOICE OF SASHES/VENTS IN 7 STYLES

	INTERNALLY GLAZED			EXTERNALLY GLAZED			
Sash Width	45mm			45mm	57mm		
Profile ID	**AW614**	**AW685**	**AW686**	**AW690**	**AW613**	**AW624**	**AW610**
Form Factor	SLIM REBATE	SLIM REBATE	SLIM REBATE	DEEP REBATE	DEEP REBATE	SLIM REBATE	DEEP REBATE
Form Factor (showing rebate distance from frame to sash)							
Sash Profile	PUTTYLINE	FLAT	STEPPED	FEATURE (CHAMFERED)	FEATURE (OVOLO)	SQUARED	CHAMFERED
NRG Range	HERITAGE	MODERN	HERITAGE	MODERN	TRADITIONAL	MODERN	TRADITIONAL
Application	Steel Replacement	Contemporary Property	Crittall Replacement	Contemporary or Period	Period Property	Contemporary Property	Period Property
Achievable WER	**A**	**A**	**A**	**A**	**B**	**B**	**B**

GLAZING BEAD OPTIONS

Glazing Bead	FLAT	SQUARE	FLAT	CHAMFERED	CHAMFERED	CHAMFERED	CHAMFERED
Profile ID	**AW663**	**AW683**	**AW663**	**AW682**	**AW513**	**AW513**	**AW513**
Glazing Bead	n/a	n/a	n/a	n/a	SQUARE	SQUARE	SQUARE
Profile ID	**n/a**	**n/a**	**n/a**	**n/a**	**AW660**	**AW660**	**AW660**

* narrow frame depth necessitates a bay pole and increases the width of the bay coupling considerably

how sash choice affects appearance

AW614
HERITAGE

Chamfered sash pushes the glass further backward into the window to create a traditional 'puttyline' appearance

Chamfered sash creates a shadow around the glass area AND the outer frame which gives the window more depth

SLIM REBATE

Unequal sightline

AW686
CRITTALL REPLACEMENT

Stepped sash pushes the glass further backward into the window to create the Crittall window style

Stepped sash creates a shadow around the glass area which gives the window more depth

SLIM REBATE

Unequal sightline

AW685
CONTEMPORARY

Flat sash brings the glass further forward into the window for a more contemporary appearance

SLIM REBATE

Equal sightline

AW610
TRADITIONAL

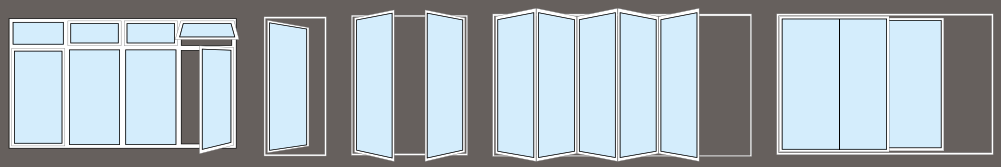
Chamfered sash pushes the glass further backward into the window to create a traditional 'puttyline' appearance

Chamfered sash creates a shadow around the glass area AND the outer frame which gives the window more depth

DEEP REBATE

Unequal sightline

aluminium



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