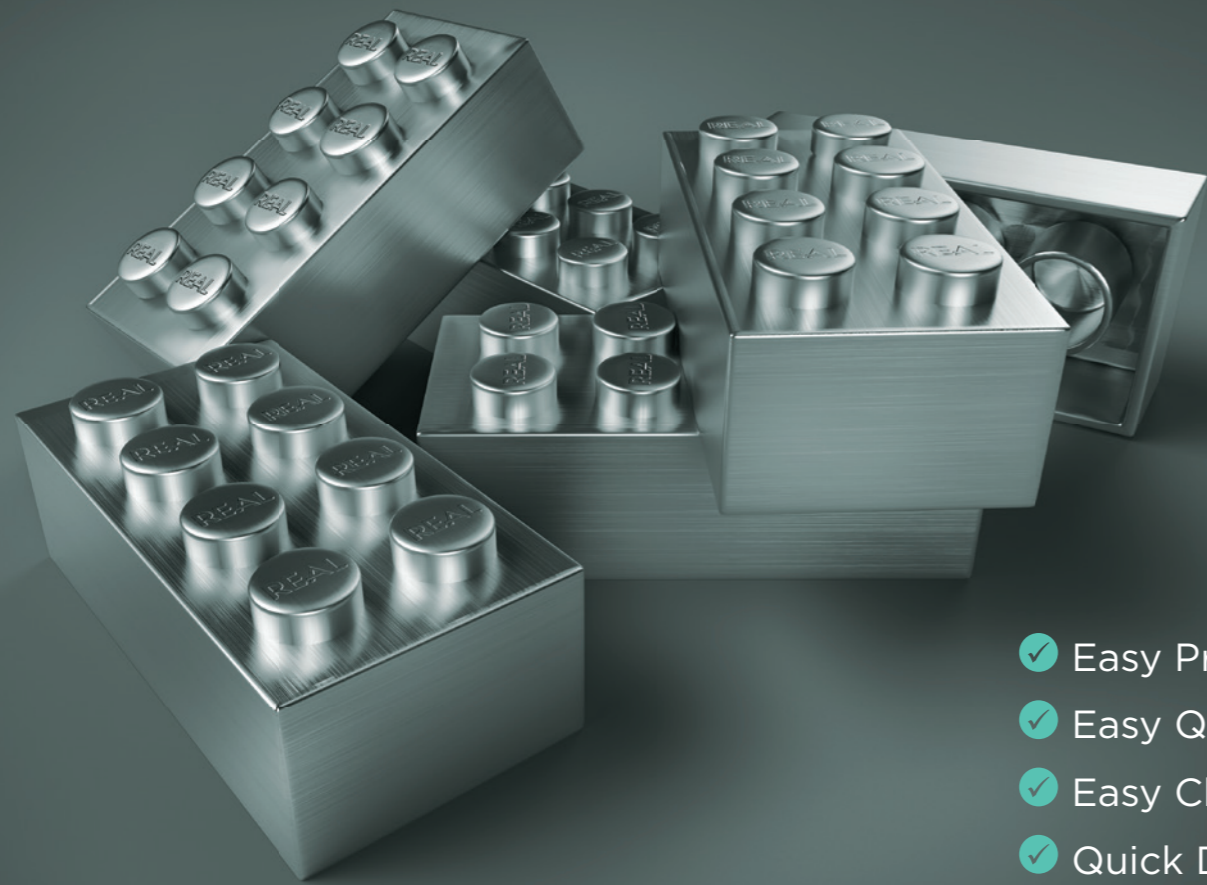


ALUMINIUM MADE EASY  
YOUR COMPLETE ALUMINIUM  
WINDOW & DOOR RANGE.



REAL ALUMINIUM. THE FINER CHOICE.

# WHY REAL ALUMINIUM? IT'S AS EASY AS CHILD'S PLAY...



- ✓ Easy Pricing
- ✓ Easy Quoting
- ✓ Easy Choices
- ✓ Quick Delivery
- ✓ Quick Quoting

REAL Aluminium fabricates a comprehensive range of aluminium fenestration products for all domestic and commercial installations. Manufactured using profiles and components held in stock at the dedicated factory in Gloucestershire.

With strong, slim profiles and long-lasting quality materials and finish, REAL Aluminium covers a full suite of aluminium products. That includes: casement windows, bi-folding doors, sliding doors, residential doors and designer doors.

All stock aluminium products on a **2-week** turnaround

## LEAD TIMES ✓

Quoting – **24/48 hours on standard products or immediate via pricing tools**

Delivery – **2 weeks\***

\*From sign off/next delivery date  
Astragal bar products = 3 weeks  
Grey exterior and white interior = 2 weeks  
Composite door bespoke colours = 3 weeks

## COLOUR OPTIONS ✓

White, Black, Grey,  
Grey Exterior/White Interior

## OUR PROFILES ✓

The REAL aluminium range of products provide a full solution for any aluminium installation as the systems are manufactured to the highest quality and have been specifically engineered to meet the new Document L standards.

All the profile options are designed to give optimum strength and durability to ensure a structurally sound product that requires minimal maintenance to deliver reliable performance over a lifetime of use.

For Profile Charts and Assembly Charts of all REAL Aluminium products, visit [www.re-aluminium.co.uk](http://www.re-aluminium.co.uk)

## MARKETING SUPPORT ✓

Our Marketing Team are happy to support you and are on hand to help.

Contact us on: **01453 826884** or email [marketing@customade.co.uk](mailto:marketing@customade.co.uk)

## A SERVICE YOU CAN RELY ON

Each and every product within the REAL Aluminium range is manufactured from stocked profile and components. Should there be any requirements for replacements or remakes these can be turned around in 1 week, compared to 3 weeks or more for non-stocked products.







# ALUMINIUM...THE FINER CHOICE

## Why choose aluminium?

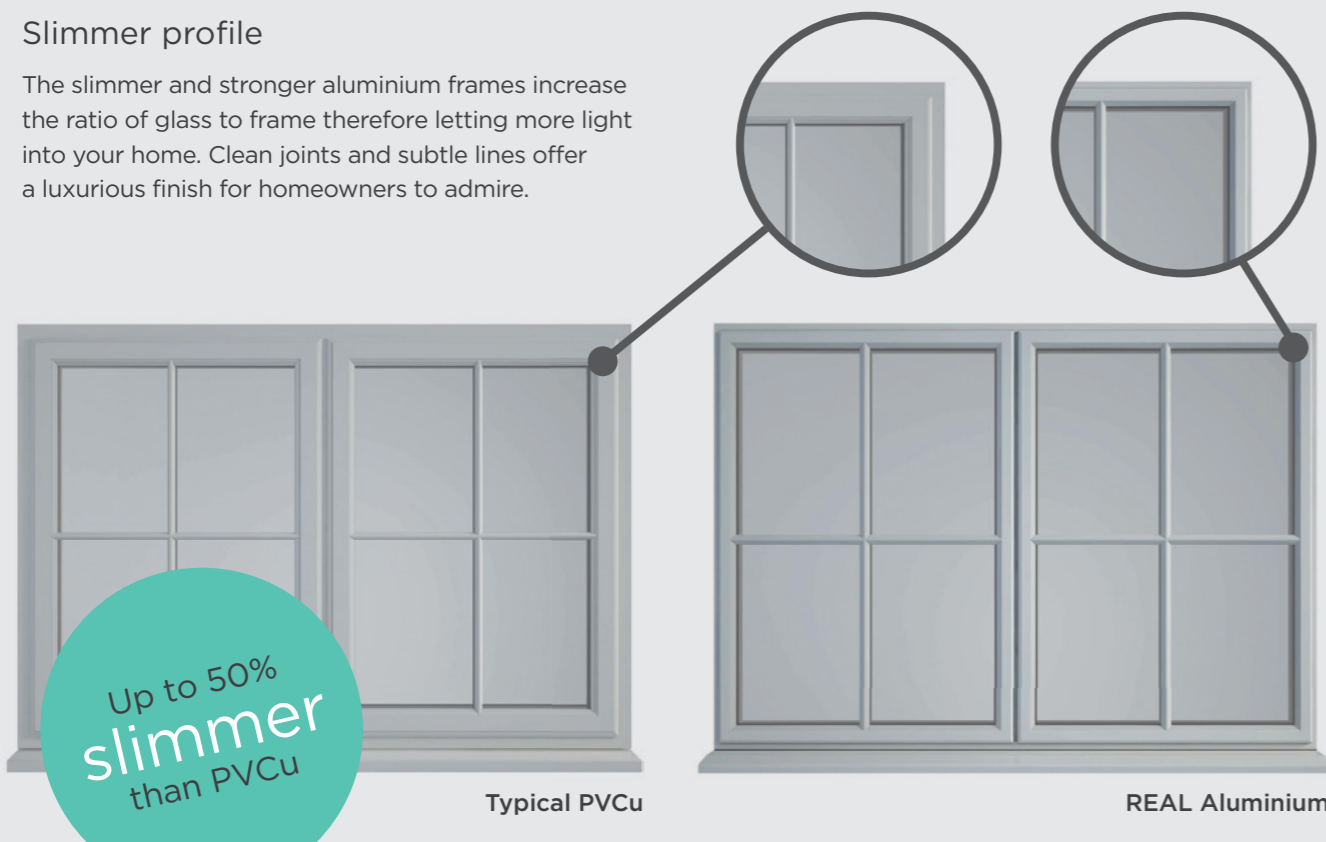
There are a multitude of reasons to choose aluminium. Homeowners are becoming more aware of the benefits of this slimmer and stronger material for their home. Improvements to aesthetics and thermal performance differentiate today's aluminium products from those of the eighties and nineties.

Aluminium is the preferred product of discerning architects...why would discerning homeowners choose anything else? Whatever the taste or style of your home, the REAL Aluminium range offers distinctive styles and designs to suit.

Aluminium - designed and built to last.

### Slimmer profile

The slimmer and stronger aluminium frames increase the ratio of glass to frame therefore letting more light into your home. Clean joints and subtle lines offer a luxurious finish for homeowners to admire.



Up to 50%  
**slimmer**  
than PVCu

Typical PVCu

REAL Aluminium

## LONG-LASTING COLOUR

Powder-coated aluminium is one of the most durable finishes available for windows and doors. It won't discolour, rust or peel, giving it a long-lasting, attractive appearance.

All aluminium products from the REAL Aluminium range come with superior guarantees. This guarantee covers the powder-coating against the following faults:

- peeling, powdering and blistering
- corrosion
- chalking, fading and loss of sheen

Refer to the Care & Maintenance Instructions for guarantee exclusions: [www.re-aluminium.co.uk](http://www.re-aluminium.co.uk)



## HIGH STRENGTH

Aluminium, by its very nature, is a strong material compared to PVCu and doesn't require additional reinforcements.

The superior strength of aluminium allows for larger arrangements which are only possible with timber or PVCu when using bulky profiles and couplers.

Most PVCu bi-folds can only extend to 750mm-wide sashes; the REAL Aluminium Bi-folding Doors can accommodate 1200mm sashes.

## EASE OF MAINTENANCE

Aluminium is easy to keep looking great and is virtually maintenance free. Modern powder-coating delivers a hard-wearing finish which will last for years.

With occasional cleaning and periodic lubrication of locks and hinges, aluminium windows and doors will look and operate 'as-new' for longer.



Refer to the Care & Maintenance Instructions for details: [www.re-aluminium.co.uk](http://www.re-aluminium.co.uk)



## BETTER FUNCTIONALITY

Aluminium is a durable substance, therefore windows and doors made from aluminium will continue to open and slide smoothly over many years.

## ENVIRONMENTALLY FRIENDLY

Aluminium is infinitely recyclable, and when recycled uses just 5% of the total energy needed to produce frames from scratch.

## THERMALLY EFFICIENT

The REAL Aluminium range is enhanced with polyamide thermal barrier technology, enabling the windows and doors to exceed the energy performance requirements of current Building Regulations.

Profiles used in all products from the REAL Aluminium range have a very high resistance to heat transfer from the inner face of the frame to the external face of the frame, giving superior thermal efficiency and reduced condensation.



# YOUR COMPLETE ALUMINIUM WINDOWS & DOORS

Suitable for all property types from traditional cottages to contemporary town houses.

## Building Regulation Compliance, Window Energy Ratings (WER) and Doorset Energy Ratings (DSER)



Compliance with current Building Regulations is a vital part of every installation and can sometimes be complex. Using REAL Aluminium, meeting the requirements of Part L of current UK Building Regulations, is easy as the entire range is compliant using energy ratings for renovations to existing properties when installed with a double-glazed unit with a U Value of 1.2 W/m<sup>2</sup>K and a solar gain of 0.71 or better

that is manufactured using an Edgetech Super Spacer Bar or equivalent. All REAL Casement Windows achieve an 'A'-rating if the aforementioned glass unit is upgraded to low-iron glass. The thermal efficiency of the REAL Aluminium range can be enhanced further by using higher-performance double-glazed or triple-glazed units.

### REAL Aluminium WER, DSER & U Values

**WER: Window Energy Performance Certificate**  
WER Window Energy Rating - In accordance with Approved Document L

Company: Customade/REAL  
Project: REAL Alltherm 400i Window  
Date: 14 Jul 2022  
BFRC System: SC010  
BFRC Manufacturer: M117 M117  
BFRC Simplified Energy Licence: SEL

**A**

<b>WER:</b>	Window Energy Rating: 196.74(1-f)kglass) - 68.5 x (U + (0.0165 xAL))	<b>3.2 kWh/m<sup>2</sup>/Year</b>
<b>Thermal Transmittance:</b>	WER U Value of window calculated using the methods and conventions set out in BR443 Whole window U Value with frame, glazing and glass spacer bar combined. Standard window configuration set out by BR443/GGF 2.3 U Window: 0.496+0.919+0.143	<b>1.6 W/m<sup>2</sup>K</b>
<b>Frame:</b>	Supplier: Smart Architectural Aluminium System: Alltherm 400 KB Outer Frame: ETC4110F (1.556) Vent Frame: ETC4129F (2.218) Transom Mullion: ETC4130F (2.112) Heat Transfer: 2.024 W/m <sup>2</sup> K x (24.5% Frame)	<b>0.496 W/m<sup>2</sup>K</b>
<b>Glazing:</b>	Supplier: Glass Systems Specification: 4/20/4 Clear Softcoat Low Iron 1.2 CPV Centre Pane, g Value: 1.217 W/m <sup>2</sup> K, 0.74 Heat Transfer: 1.217 W/m <sup>2</sup> K x (75.5% Glass)	<b>0.919 W/m<sup>2</sup>K</b>
<b>Spacer:</b>	Supplier: Edgetech Spacer Bar: Super Spacer Premium Heat Transfer: 0.035 W/m <sup>2</sup> K x (4.092m <sup>2</sup> )	<b>0.143 W/m<sup>2</sup>K</b>
<b>U Value:</b>	Window U Value: Calculation to BR443/GGF 2.3	<b>1.6 W/m<sup>2</sup>K</b>

BFRC Calculated in accordance with UK Building Regulations Document L and BR443  
BS EN ISO 10077-2: Thermal performance of windows, doors and shutters.  
Calculation of thermal transmittance, Part 2: Numerical method for frames. Version 6.0 (0327)

**U Value: Certificate**  
Window U Value - In accordance with Approved Document L

Company: Customade/REAL  
Project: REAL System 1 - Triple glazed window  
Date: 14 Jul 2022  
BFRC System: SC010  
BFRC Manufacturer: M117 M117  
BFRC Simplified Energy Licence: SEL3310

**U Value**  
**1.2 W/m<sup>2</sup>K**

<b>WER:</b>	Window Energy Rating: 196.74(1-f)kglass) - 68.5 x (U + (0.0165 xAL))	<b>-18.4 kWh/m<sup>2</sup>/Year</b>
<b>Thermal Transmittance:</b>	WER U Value of window calculated using the methods and conventions set out in BR443 Whole window U Value with frame, glazing and glass spacer bar combined. Standard window configuration set out by BR443/GGF 2.3 U Window: 0.566+0.531+0.125	<b>1.2 W/m<sup>2</sup>K</b>
<b>Frame:</b>	Supplier: Smart Architectural Aluminium System: Alltherm 300 Outer Frame: ZSB169FF (1.915) Vent Frame: ETC424N (2.947) Transom Mullion: ETC333 (3.104) Heat Transfer: 2.699 W/m <sup>2</sup> K x (21.0% Frame)	<b>0.566 W/m<sup>2</sup>K</b>
<b>Glazing:</b>	Supplier: Glass Systems Specification: 4/12/4/12/4 clear/softcoat 1/softcoat 1 0.7 CPV Centre Pane, g Value: 0.672 W/m <sup>2</sup> K, 0.42 Heat Transfer: 0.672 W/m <sup>2</sup> K x (79.0% Glass)	<b>0.531 W/m<sup>2</sup>K</b>
<b>Spacer:</b>	Supplier: Edgetech Spacer Bar: Super Spacer Premium Heat Transfer: 0.030 W/m <sup>2</sup> K x (4.165m <sup>2</sup> )	<b>0.125 W/m<sup>2</sup>K</b>
<b>U Value:</b>	Window U Value: Calculation to BR443/GGF 2.3	<b>1.2 W/m<sup>2</sup>K</b>

BFRC Calculated in accordance with UK Building Regulations Document L and BR443  
BS EN ISO 10077-2: Thermal performance of windows, doors and shutters.  
Calculation of thermal transmittance, Part 2: Numerical method for frames. Version 6.0 (0323)



**Note:**  
All REAL Aluminium products when used in conjunction with the glass specifications on pages 8,9,10 and 11 satisfy current Building Regulations Part L for refurbishment and new-build applications.

The addition of low-iron glass will not improve U Values but will improve WER/DSER rating due to solar gain.

The addition of triple glazing will improve U Values but due to reduced solar gain has limited effect on WER/DSER ratings.



# APPROVED DOCUMENT L RENOVATION

## REPLACEMENT ON EXISTING DWELLINGS OR EXTENSIONS (Energy ratings)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	DOUBLE GLAZED UNIT SPEC	ACTUAL RATING	
B rated or Uw 1.4 W/m²k		Alitherm 300 Window System 1 (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	Band A achievable with low iron glass + FF insulation
		Alitherm 300 Window System 2 (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	
		<b>NEW PRODUCT</b> Alitherm 400 Window (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	A*	
>60% glazed door C rated or Ud 1.4 W/m²k		<b>NEW PRODUCT</b> Alitherm 400 Resi Door (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	
C rated or Ud 1.4 W/m²k		<b>NEW PRODUCT</b> Alitherm 400 French Door (F)	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass
C rated or Ud 1.4 W/m²k		Visofold 1000 SLIM Bi-fold door	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass
C rated or Ud 1.4 W/m²k		Visoglide Plus Sliding Door	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	C	Band B achievable with low iron glass + F insulation
B rated or Uw 1.4 W/m²k		Ecofutural TBT	28mm unit clear/argon/softcoat 1.2 Centre pane 1.22 W/m²k warm edge spacer	B	

Glass type 1.2 -examples K glass S, Planitherm Total, Climaguard A+

\*Internally glazed Alitherm 400 windows need low iron glass to achieve an A rating.

## EXTENSIONS U VALUES (Limiting U value 1.4 W/m²k)

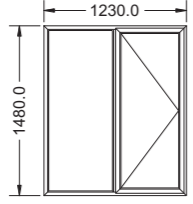
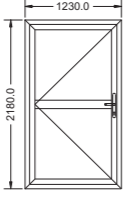
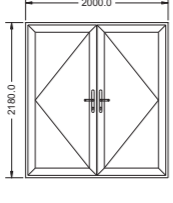
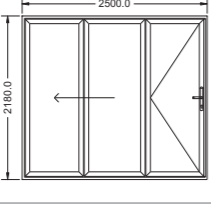
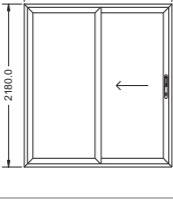
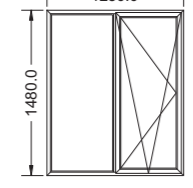
REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	GLAZED UNIT SPEC	ACTUAL UW/UD
B rated or Uw 1.4W/m²k		Alitherm 300 Window System 1 (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.8 W/m²k warm edge spacer	1.3 W/m²K
		Alitherm 300 Window System 2 (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.8 W/m²k warm edge spacer	1.3 W/m²K
		<b>NEW PRODUCT</b> Alitherm 400 Window (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068 W/m²k warm edge spacer	1.4 W/m²K
>60% glazed door C rated or Ud 1.4W/m²k		<b>NEW PRODUCT</b> Alitherm 400 Resi Door (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068W/m²k warm edge spacer	1.4 W/m²K
C rated or Ud 1.4W/m²k		<b>NEW PRODUCT</b> Alitherm 400 French Door (F)	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.07W/m²k warm edge spacer	1.4 W/m²K
C rated or Ud 1.4W/m²k		Visofold 1000 SLIM Bi-fold door	Triple glazed 44mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.7 W/m²k warm edge spacer	1.3 W/m²K
C rated or Ud 1.4W/m²k		Visoglide Plus Sliding Door (F)	Triple glazed 36mm unit clear/softcoat 1.2/softcoat 1.2 Centre pane 0.76 W/m²k warm edge spacer	1.3 W/m²K
B rated or Uw 1.4W/m²k		Ecofutural TBT	Double glazed 28mm unit clear/argon/softcoat 1 Centre pane 1.068W/m²k warm edge spacer	1.4 W/m²K

Glass type 1.2 -examples K glass S, Planitherm Total, Climaguard A+, Glass type 1 -examples Pilkington S1, Planitherm one, Climaguard 1



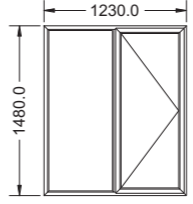
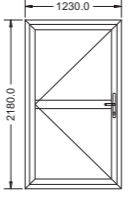
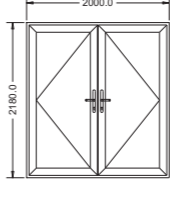
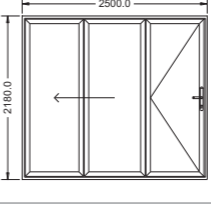
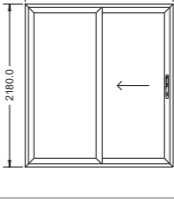
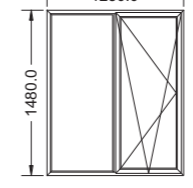
# APPROVED DOCUMENT L NEW BUILD

## NEW BUILD U VALUES WITH DOUBLE GLAZING (Limiting U value 1.6 W/m<sup>2</sup>k)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	DOUBLE GLAZED UNIT SPEC	ACTUAL UW/UD
Uw 1.6 W/m <sup>2</sup> k minimum Uw 1.2 W/m <sup>2</sup> k Target		Alitherm 300 Window System 1 (FF)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.6 W/m <sup>2</sup> K
		Alitherm 300 Window System 2 (FF)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.5 W/m <sup>2</sup> K
		<b>NEW PRODUCT</b> Alitherm 400 Window (F)	28mm unit clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.4 W/m <sup>2</sup> K
>60% glazed door Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		<b>NEW PRODUCT</b> Alitherm 400 Resi Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.4 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		<b>NEW PRODUCT</b> Alitherm 400 French Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.4 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		Visofold 1000 SLIM Bi-fold door	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.6 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		Visoglide Plus Sliding Door (F)	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.6 W/m <sup>2</sup> K
Uw 1.6 W/m <sup>2</sup> k minimum Uw 1.2 W/m <sup>2</sup> k Target		Ecofutural TBT	28mm clear/argon/softcoat 1 Centre pane 1.068 W/m <sup>2</sup> k warm edge spacer	1.4 W/m <sup>2</sup> K

Glass type 1 -examples Pilkington S1, Planitherm One, Climaguard 1

## NEW BUILD U VALUES WITH TRIPLE GLAZING NOTIONAL METHOD (Target U value 1.2 W/m<sup>2</sup>k)

REQUIREMENT	WINDOW / DOOR DESIGN	SYSTEM	TRIPLE GLAZED UNIT SPEC	ACTUAL UW/UD
Uw 1.6 W/m <sup>2</sup> k minimum Uw 1.2 W/m <sup>2</sup> k Target		Alitherm 300 Window System 1 (FF)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.7 W/m <sup>2</sup> k warm edge spacer	1.2 W/m <sup>2</sup> K
		Alitherm 300 Window System 2 (FF)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.7 W/m <sup>2</sup> k warm edge spacer	1.2 W/m <sup>2</sup> K
		<b>NEW PRODUCT</b> Alitherm 400 Window (F)	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m <sup>2</sup> k warm edge spacer	1.1 W/m <sup>2</sup> K
>60% glazed door Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		<b>NEW PRODUCT</b> Alitherm 400 Resi Door (F)	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m <sup>2</sup> k warm edge spacer	1.1 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		<b>NEW PRODUCT</b> Alitherm 400 French Door (F)	40mm unit clear/softcoat 1/softcoat 1 Centre pane 0.63 W/m <sup>2</sup> k warm edge spacer	1.1 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		Visofold 1000 SLIM Bi-fold door <b>NEW BEAD</b>	44mm unit clear/softcoat 1/softcoat 1 Centre pane 0.6 W/m <sup>2</sup> k warm edge spacer	1.2 W/m <sup>2</sup> K
Ud 1.6 W/m <sup>2</sup> k minimum Ud 1.2 W/m <sup>2</sup> k Target		Visoglide Plus Sliding Door (F)	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.72 W/m <sup>2</sup> k warm edge spacer	1.3 W/m <sup>2</sup> K
Uw 1.6 W/m <sup>2</sup> k minimum Uw 1.2 W/m <sup>2</sup> k Target		Ecofutural TBT	36mm unit clear/softcoat 1/softcoat 1 Centre pane 0.67 W/m <sup>2</sup> k warm edge spacer	1.1 W/m <sup>2</sup> K

Glass type 1 -examples Pilkington S1, Planitherm One, Climaguard 1

+Note: Triple glazing reduces light transmission to the inside





## AD L: ENERGY EFFICIENCY - NEW DWELLINGS

The Notional dwelling Target 'U' Values for Windows and Doors are laid out in Table 1.1 of the Approved Document L.

The notional method enables Architects to trade off 'U' values against other materials in the dwelling as long as they are within the limiting 'U' values.

Table 1.1 from Doc L

DESCRIPTION	TARGET 'U' VALUE
Windows	1.2 W/m <sup>2</sup> K
Doors with glazed area greater than 60%	1.2 W/m <sup>2</sup> K
Other doors	1.0 W/m <sup>2</sup> K

The lowest specification 'U' Value allowable referred to as the Limiting 'U' Values are shown in Table 4.1.

Table 4.1 from Doc L

DESCRIPTION	LIMITING 'U' VALUE
Windows	1.6 W/m <sup>2</sup> K
Doors	1.6 W/m <sup>2</sup> K



## AD L: ENERGY EFFICIENCY - EXISTING DWELLINGS

'U' Values, Window Energy Ratings (WER) and Doorset Energy Ratings (DSER) of replacement windows and doors must be both:

- No worse than that of the element being replaced
- Meet the limiting standards in Table 4.2 (Lowest specification of 'U' Value or WER/DSER allowable)

Table 4.2 from Doc L

DESCRIPTION	'U' VALUE	WER/DSER
Windows	1.4 W/m <sup>2</sup> K	B
Doors with glazed area greater than 60%	1.4 W/m <sup>2</sup> K	C
Other doors	1.4 W/m <sup>2</sup> K	B

'U' Values, Any windows and doors replaced will need to be at least the level of performance detailed in Table 4.2 above.

## FRESHER, CLEANER INDOOR AIR (PART F)

The new TTF Slimline is a through-frame trickle ventilator that is a robust, yet attractive aluminium ventilator. With its built-in updraught and various operating modes the TTF Slimline is a stylish and effective product that perfectly complements our beautiful REAL profiles.

### TTF SLIMLINE

- Independently tested to BS EN 13141-1:2019
- Water tightness of 400pa
- Independently acoustically tested in accordance with BS EN 20140-10:1992, ISO 140-10:1991.
- Tested in accordance with BS EN 1026:2016 & BS EN 1027: 2016 Weather performance



## AD F: VENTILATION - NEW DWELLINGS

Table 1.7 from Doc F

ROOM TYPE	MINIMUM EQUIVALENT AREA OF BACKGROUND VENTILATORS FOR DWELLINGS WITH MULTIPLE FLOORS	MINIMUM EQUIVALENT AREA OF BACKGROUND VENTILATORS FOR SINGLE STORY DWELLINGS
Habitable Room (see note 2 & 3)	8,000mm <sup>2</sup>	10,000mm <sup>2</sup>
Kitchen (see note 2 & 3)	8,000mm <sup>2</sup>	10,000mm <sup>2</sup>
Utility Room	NO MINIMUM	NO MINIMUM
Bathroom (see note 4)	4,000mm <sup>2</sup>	4,000mm <sup>2</sup>
Sanitary Accommodation	NO MINIMUM	NO MINIMUM

The use of this table is not appropriate in the following situations or conditions and expert advice must be sought.

1a) If the dwelling has only one exposed facade (e.g. within a multi-storey building).

1b) If the dwelling has 70% of its openings on the same facade.

1c) If a kitchen has no windows or external facade where a ventilator could be installed.

2) Where a kitchen and living room accommodation are not separate rooms (i.e. open plan), no fewer than three ventilators of the same equivalent area as for other habitable rooms should be provided within the open plan space (8,000mm<sup>2</sup>).

3) The total number of ventilators installed in the dwelling's habitable rooms and kitchen/s should be no fewer than five, except in one bedroom properties where there should be no fewer than four.

4) If a bathroom has no window or external facade through which a ventilator can be installed, the minimum equivalent area specified should be added to the ventilator sizes specified in nearest adjoining rooms. (i.e. 8,000mm<sup>2</sup> increased to 12,000mm<sup>2</sup> and 10,000mm<sup>2</sup> increased to 14,000mm<sup>2</sup>).

## AD F: VENTILATION - REPLACEMENT WINDOWS

If the existing windows have background ventilators, the replacement windows should have background ventilators that are:-

- No smaller than the background ventilators in the original windows.
- Be controllable either automatically or by the occupant.

If the existing windows do not have background ventilators and there is no mechanical ventilation with a heat recovery system, it is necessary to ensure that the ventilation provision in the dwelling is no worse than it was before the work was carried out.

This may be demonstrated in any of the following ways:-

- Incorporating background ventilators in the replacement windows equivalent to column one in the above table 1.7.
- If there is a continuous mechanical extract ventilation, replacement windows in habitable rooms which are not wet rooms must have a minimum background ventilation area of 4,000mm<sup>2</sup>.
- Other ventilation provisions, if it can be demonstrated to a building control body that they comply.

Note: If it is not technically feasible to adopt the minimum equivalent areas set out in the above table 1.7, the background ventilators should have equivalent areas as close to the minimum value as is feasible.



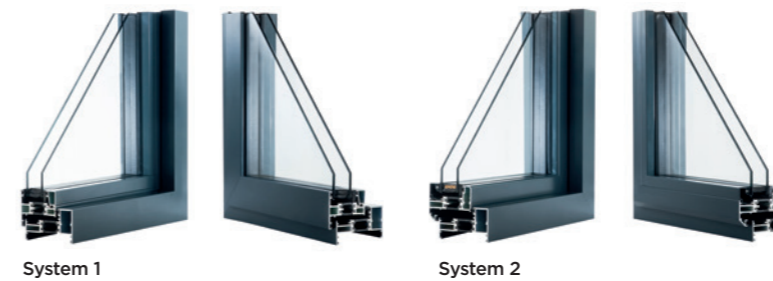


ELEGANT, SLIM SIGHTLINE  
- Up to 50% slimmer than PVCu

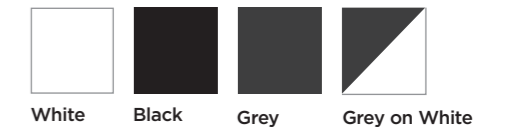
## REAL SYSTEM 1 & 2 SQUARE - CONTEMPORARY EXCLUSIVE TO REAL ALUMINIUM

The square-edged profile of the 'Contemporary' window provides clean, slim sightlines and a modern finish to any home.

System	Modified 70mm Alitherm 300
Finish	Polyester powder coated
WER	up to A-rating using suitable double-glazed unit
U Value	up to 1.2 w/m <sup>2</sup> k using suitable triple-glazed unit
Locking system	Espag locking
Frame depth	70mm
Typical sightline	67mm
SH Max o/a width	600mm
SH Max o/a height	1400mm
TH Max o/a width	1400mm
TH Max o/a height	1400mm
Glazing	28mm double-glazed or 36mm triple-glazed



Available colours:



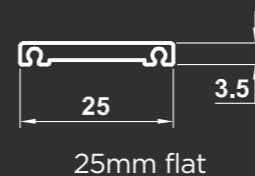
## CASEMENT WINDOWS

The REAL Casement Windows range offers ultimate flexibility with numerous combinations of top-hung sashes, side-hung sashes, dummy sashes and fixed lights available that are ideal for residential installations.

All REAL Aluminium profiles utilise innovative polyamide thermal break technology which creates a barrier between the cold air outside and the warm air inside. This technology significantly reduces thermal transmittance and enhances the overall U Value of a product, allowing REAL Aluminium casement windows to achieve a Window Energy 'A' Rating when used in conjunction with the correct double-glazed unit.

The REAL aluminium range of windows offers style and elegance to suit all tastes. Each window is manufactured using the very latest technologies and processes to create the finest finish to your windows. Options are available in both internally and externally glazed.

For a truly classic look, why not add Georgian or Astragal bars?

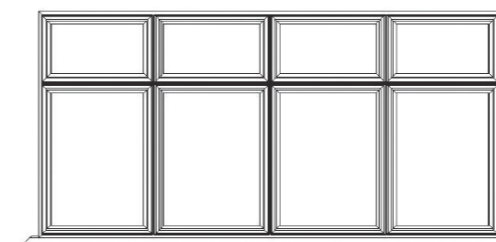


## DUMMY SASHES\*

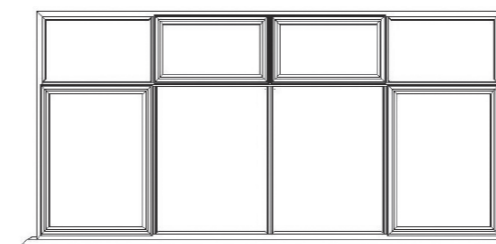
If you have an eye for detail you may wish to consider 'dummy sashes' to give that truly symmetric design.

Window styles that have a combination of opening and fixed areas can look a little uneven due to the frame design. A dummy sash allows you to balance the sight-lines and create a more uniform look.

\* required for system 1



With Dummy Sash



Without Dummy Sash

### System options

- 1 Contemporary frame - flat sash, internally glazed, square bead with dummy sashes
- 2 Contemporary frame - bevel sash, externally glazed, square bead



# ALITHERM 400 RANGE



The new Alitherm 400 offers outstanding quality, performance and value via a range of stylish casement windows and single and double doors. As the first thermally broken aluminum system to feature an extruded glazing gasket, it provides enhanced performance and reduced installation time.

Its innovative design incorporates polyamide thermal break technology that significantly reduces thermal transmittance, enhancing the systems overall 'U' value. Available in neutral colours, Alitherm 400's new Quick-Glaze Bead is simply tapped in on site with the gasket already in place, eliminating the need for wedge gaskets on internally beaded windows. Making for a faster, simpler and more cost-effective glazing process.

## Features and specifications:

- Fully compliant with changes to document L of the building regulations
- Improved thermal and weather performance
- Brand new quick glaze bead for a simpler, faster and cost-effective glazing process
- PAS 24: 2016 approved for added security
- Unlimited colour choice provided by any RAL colour on top of the stock colour selections

## Alitherm 400 Windows

Alitherm 400 windows are currently available in two options. The popular Alitherm 400i range is an internally beaded system with dummy sashes which can achieve PAS 24 security standards.

Alternatively, we have the externally glazed Alitherm 400x range, which can be upgraded to PAS 24 security standards with the introduction of glass security clips.

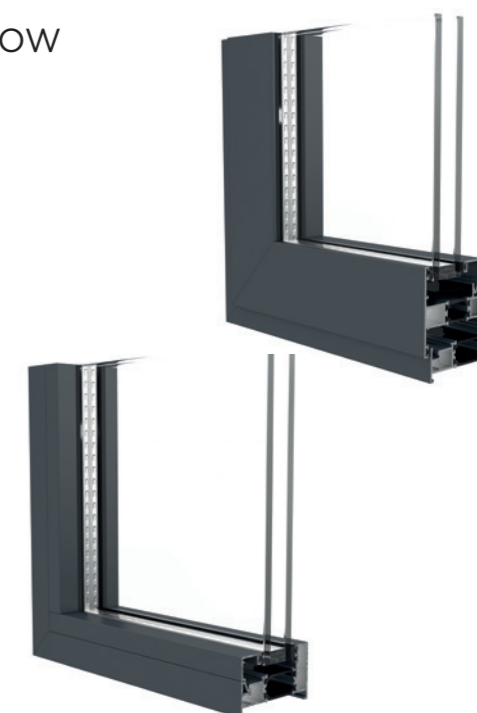
Quick-Glaze tap in bead standard on internally glazed windows with 28mm double glazing.



## SPECIFICATION ALITHERM 400 WINDOW

System	Alitherm 400*
Finish	Polyester powder organic coating to BS6496
WER	down to A+ rating using suitable double glazed unit
U Value	down to 1.1 w/m <sup>2</sup> k with triple-glazing
Handles	Espag locking handles by ERA
Frame depth	70mm
Typical sight line	71.5mm
SH Max o/a width	864mm
SH Max o/a height	1400mm
TH Max o/a width	1400mm
TH Max o/a height	1500mm
Glazing	28mm double glazed or 40mm triple glazed

\*Externally glazed and triple glazed windows require wedge gasketing.





# RESIDENTIAL OR FRENCH DOORS

Our elegant, yet strong and durable aluminium residential or French doors enhance the beauty of a home, keep in the warmth and let in more light due to their slim sightlines.



Open out or open in, the REAL Aluminium Residential or French Door is a high-performance product suitable for use in high traffic or exposed areas where a durable and reliable door is required. Available as single or double doors, both with internal beading. Adjustable hinges, colour-matched flat panels and a double seal make the REAL Aluminium Residential Doors a perfect option for any home.

## Alitherm 400 Doors

Suitable for both residential and commercial applications, Alitherm 400 doors perfectly complement the window range, offering the same stylish lines and same ease of fabrication and installation. With unrivalled thermal performance and security assurance, the system is available as open-in or open-out, single or double doors.

Quick-Glaze tap in bead standard on internally glazed doors with 28mm double glazing.



## SPECIFICATION ALITHERM 400 DOOR

Peace of mind is ensured with the inclusion of an enhanced security multi-point locking system on double doors. Security can be further enhanced with additional shootbolts.

All main sections feature an extended Polyamide thermal break that allows the residential doors from the REAL range to achieve a U Value of 1.4 W/m<sup>2</sup>K when installed with a suitable double-glazed sealed unit.

System	Alitherm 400
U Value	up to 1.1 w/m <sup>2</sup> k using a suitable triple-glazed unit
Security	Multi-point locking & 3 star cylinder
Max height	2400mm
Max width	1100mm
Max weight	100kg
Glazing	28mm double-glazed or 40mm triple-glazed

\*Triple glazed doors require wedge gasketing.



Available colours:

Square Profile:



White Black Grey Grey on White

Aluminium designer door panels are available.

Alitherm 400

Contemporary frame - flat sash, internally glazed, square bead

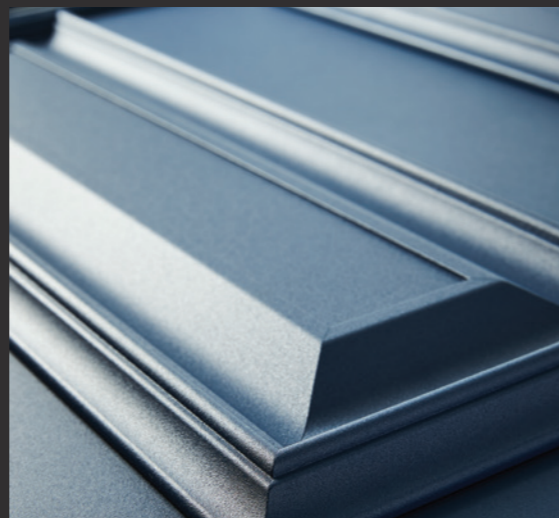
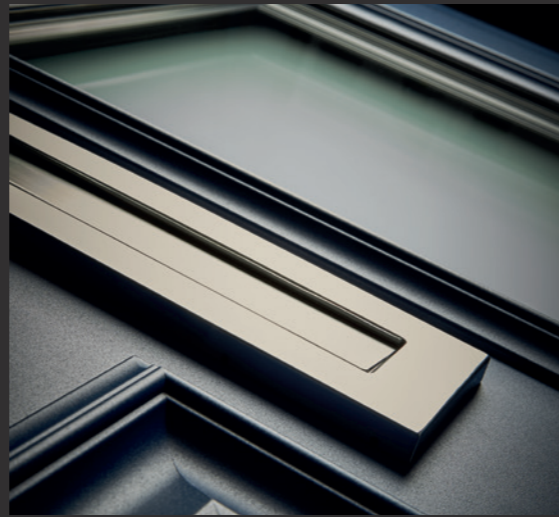


# ALUMINIUM DESIGNER DOORS

Safety and security were central to each design decision in the development of the new Designer Door range, with each door meeting the requirements of PAS24, a British Standards test used to assess the security performance of windows and doors.

Our extensive Designer Door collection features an impressive array of designs and styles the cutting edge of minimalist chic in our Modern range to the timeless elegance of our Traditional, Cottage and Vintage portfolios. We have also put together a wide range of colour, glazing and hardware options to provide those all-important finishing touches for your new door.

Select the perfect colour combination for the inside and outside of your Designer Door, with options ranging from traditional white to pastel shades of blue and from greys and blacks through to vibrant reds and greens. With this huge selection, you can choose to match an existing colour, or to make a real design statement with a striking contrast.



### Guaranteed Performance

- Elegant aluminum profiles provide strength and durability
- All glazing units are 66mm triple glazed and laminated for added protection and comfort
- Our fully insulated door panel and thermal barrier technology provide enhanced performance and energy efficiency
- The integrated weather bar and centre gaskets provide excellent weather protection
- Our doors require minimal maintenance and deliver outstanding, long-life performance



SHERBOURNE  
DM0021



OXFORD  
DM0031



AMERSHAM  
DM0001



BROADSTONE  
DM0004

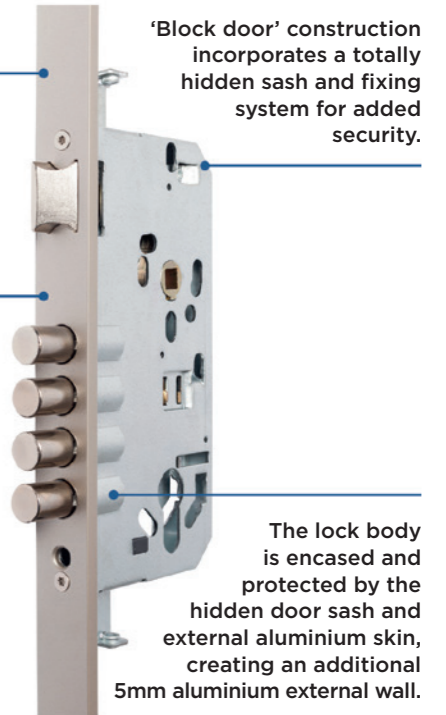
# RELIABLE SECURITY YOU CAN DEPEND ON

- 10-point locking for high security
- Hardened stainless steel and picking protection pins provide tamper-protection
- Upper and lower locking pins shaped conically for efficient closure
- Our laser-cut key profile system prevents the use of any unauthorized keys
- Horizontal key has a cross groove in the core which can only align with the 10-point spring-loaded pin pairs within the lock
- Hidden hinge protectors provide robust security against external impacts
- ISEO R7 cylinder, anti-bumping and placed 60mm away from the frame: high security and easy opening
- Adjustable hinges and lock
- Successfully tested to PAS 24:2016 Enhanced Security Performance

Door sashes sit flush internally and externally with the outer frame for an elegant finish.

A high security 10-point lock and escutcheon plate system, with drill proof 'anti-bump' cylinder, is fitted as standard.

An integrated, enclosed glazing panel prevents the need for glazing beads - which provides maximum protection against ramming and forced entry.





# BI-FOLDING DOORS

REAL Aluminium Bi-folding Doors create a true sense of space and light.



The perfect addition to any home, bi-folding doors not only offer slim frame profiles and quality running mechanisms but also enhanced thermal performance.

All profiles feature a polyamide thermal break which enhances the thermal performance of the profile and improves the overall U Value. Profiles feature high-quality EPDM gaskets and weather brushes to aid weather resistance.

REAL Aluminium Bi-folds comply with the requirements of Building Regulations Document L 2022. Security is assured by multi-point lock mechanisms on main opening sashes, and shootbolt locking on floating mullions.

All bi-folding doors within the REAL Aluminium range have the option of either low thresholds for unimpeded, easy access, integrated cills on opening out doors or rebated thresholds that offer improved weather resistance.

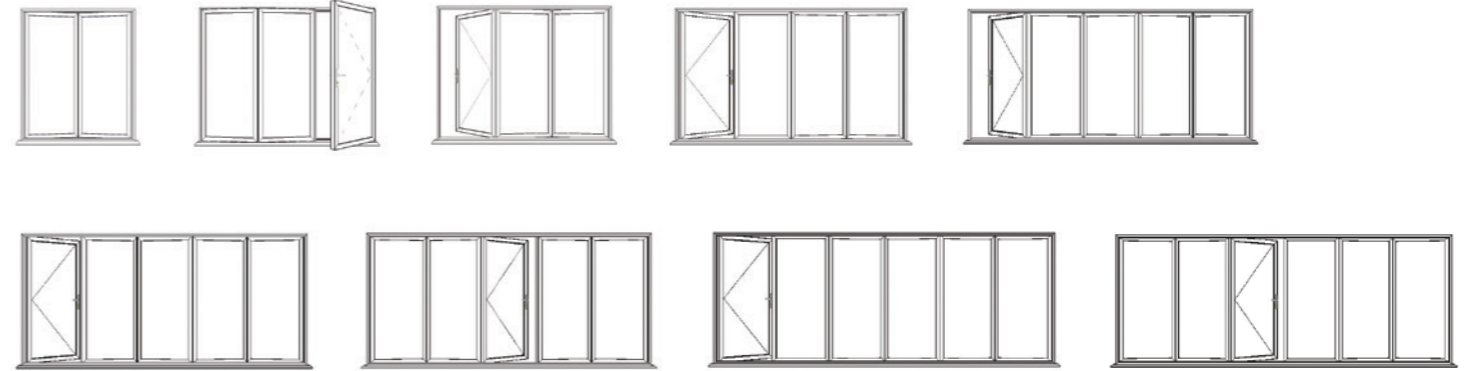


## SPECIFICATION SLIM QUICK-GLAZE TAP IN BEAD

Bi-folding doors offer a choice of opening configurations to suit any application. Choose to fold the sashes internally or externally, place the opening at the side so the sashes all fold one way, at one end, to create a single entrance door for easy access, or in the middle to give the option of a double door.



Configuration examples:

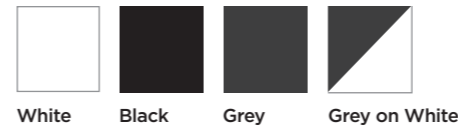


System	Visofold 1000 Slim Quick-Glaze Tap In Bead
Finish	Polyester powder coated
U Value	up to 1.2 w/m <sup>2</sup> k using suitable triple-glazed unit
Security tested	PAS 24: 2016 enhanced security-rated doors on a three-pane open-out door
Weather tested	BS 6375 Part 1: 2009
Security	Multi-point locking with shootbolt
Frame depth	70mm
Typical sight line	122mm
Max sash weight	100kg
Max o/a height (per sash)	2500mm
Max o/a width (per sash)	1200mm*
Glazing	28mm double-glazed or 44mm triple-glazed

\*provided sash does not exceed recommended weight limits

^Triple glazed doors require wedge gasketing

Available colours:



System options 1 Contemporary frame - flat sash, internally glazed, square bead



# SLIDING DOORS

A REAL Aluminium Sliding Door adds eye-catching impact to the exterior of a home. The outward appearance focuses on stunning glass areas, highlighted by bold aluminium sections styled with clean aesthetic lines that work in harmony with the character of any home.



Delivering optimum performance and tested to the highest standards REAL Aluminium Sliding Doors guarantee reliability. The strong and thermally broken aluminium sections make large sliding doors and large glass areas possible without compromising thermal performance or weather resistance.

Special sliding mechanisms enable even the largest sashes to slide effortlessly, whatever the size. Each sliding panel can be up to 2500mm high and when closed these large sliding doors form a thermally efficient glass facade, a wonderful way to flood a space with light and to enjoy beautiful views.

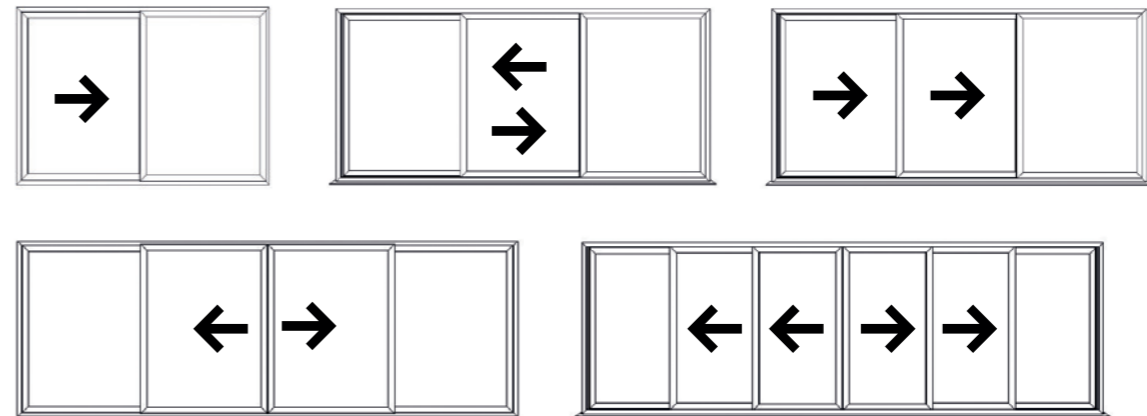
This adaptable system is ideal for use as residential sliding doors that maximise light and give stunning unimpeded views or as sliding commercial entrances where large opening apertures are required.

REAL Aluminium Sliding Door profiles have been designed to improve both strength and weather resistance. All main sections feature an extended Polyamide thermal break that allows the sliding doors from the REAL range to achieve a U Value of 1.6 W/m<sup>2</sup>K when installed with a standard double-glazed sealed unit.

# SPECIFICATION



Configuration examples:



System	Visoglide Plus
Finish	Polyester powder coated
U Value	up to 1.3 w/m <sup>2</sup> k using a suitable triple-glazed unit
Security	Multi-point locking plus individual keeps
Frame depth	99mm or 126mm double track 165.5mm or 182.5mm triple track
Max sash weight	200kg
Max sash height	2500mm
Max sash width	Within above limitations
Glazing	28mm double-glazed or 36mm triple-glazed
Track	Double or triple dependent on configuration

Available colours:





# HANDLES AND ACCESSORIES

Use the reference chart below to discover the perfect set of handles and accessories for your home.

		White	Black	Grey	Graphite	Chrome
BI-FOLDING DOORS	Lever (straight) handle	✓	✓	✓	✓	✓
	Locking pop up handle	✓	✓	✓		
	D handle	✓	✓	✓		
	Magnetic catch	✓	✓	✓		✓
	Trickle vents	✓	✓	✓		
SLIDING PATIO DOORS	Long lever handle	✓	✓	✓		
	Sliding Door D handle	✓	✓	✓		
CASEMENT WINDOWS	Offset handle	✓	✓	✓	✓	✓
	Monkey tail handle					
ENTRANCE & FRENCH DOORS	Lever (straight) handle	✓	✓	✓	✓	✓
	Lever (swan) handle					
	Letterplate (black ABS surround)	✓	✓			✓
	Letterplate (matching surround)	✓	✓		✓	✓
ALUMINIUM COMPOSITE DOORS	Lever (Ergonomic) handle					
	Lever (Mitre) handle					
	Lever (T Bar) handle					
	Pull Knob				✓	✓
	Inline Round Pull Bar					
	Flush Escutcheon					✓
	Pull Escutcheon		✓		✓	✓
	Letterplate				✓	✓
	Knocker (Urn)					✓
	Knocker (Bullnose)				✓	✓
	Knocker (architectural)				✓	✓
	Knocker (Horse Tail)					✓
	Spyhole					✓

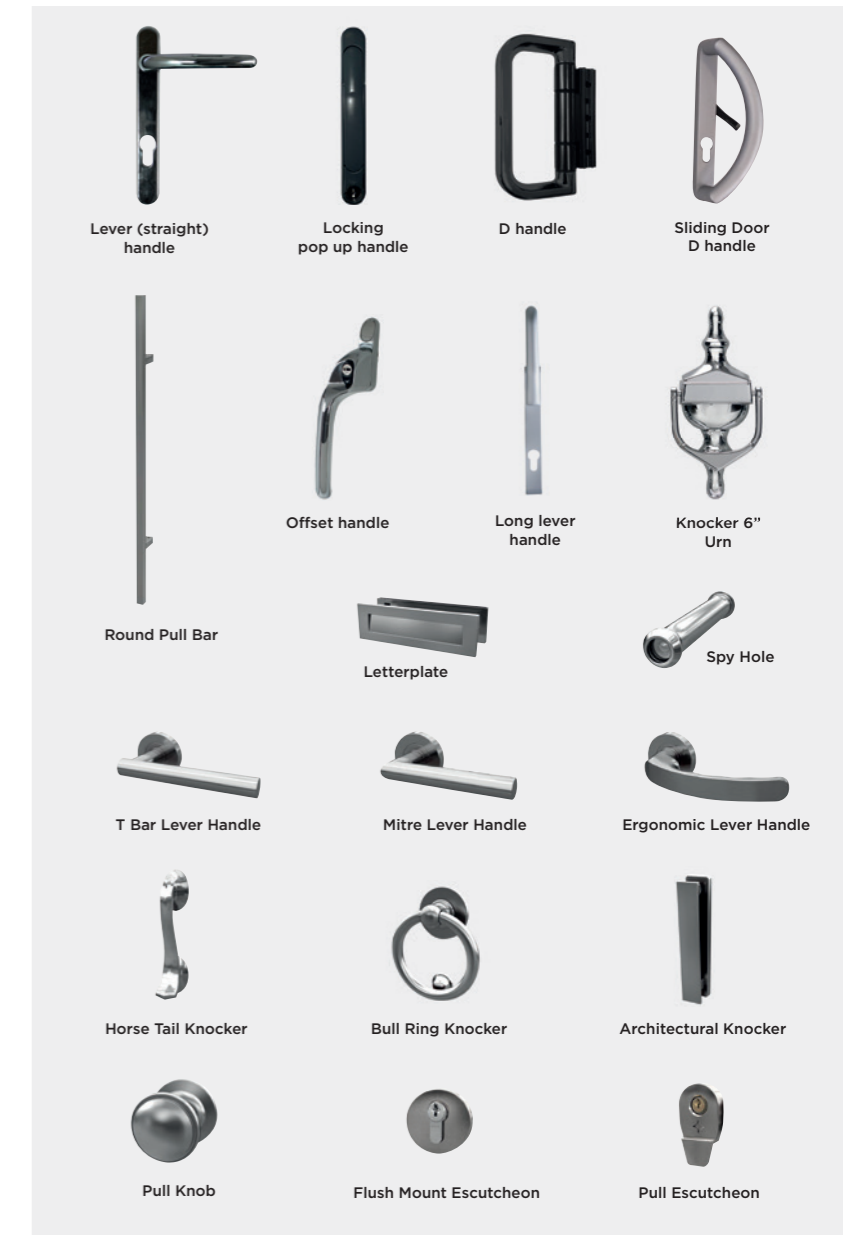
A range of locking cylinders are available to give enhanced security on bifold and sliding doors. **Please speak to your REAL retailer for details.**

	Satin Silver	Polished Gold	Stainless Steel	Antique Black
	✓	✓		
	✓			
	✓	✓		
	✓			✓
	✓			
	✓	✓		
	✓			
			✓	
			✓	
		✓		
			✓	
		✓	✓	
		✓		

\*silver anodised SAA

# LOCKS

REAL Aluminium doors that have more than one lock will only require one key to operate all of them (this is called 'keyed alike'). Separate doors will have unique keys unless specified. Alitherm 400 doors have a high-security key system (3 Star System) as standard. With our standard high-security key system (3 Star System), all keys will be unique. For further details, please speak to your REAL Retailer.



Antique black range





# MAKE QUOTING AND ORDERING ALUMINIUM AS EASY AS CHILD'S PLAY...

Aluminium can be a little tricky to cost and has a reputation for being on a longer lead time. The REAL Aluminium range makes aluminium easy to understand, easy to price, easy to quote and provides a sensible choice of windows and doors.

## MAKING ALUMINIUM EASY TO UNDERSTAND

- ✓ Easy Pricing
- ✓ Easy Quoting
- ✓ Easy Choices
- ✓ Quick Delivery
- ✓ Quick Quoting

**REAL**  
ALUMINIUM

[www.re-aluminium.co.uk](http://www.re-aluminium.co.uk)

01453 826884

[enquiries@real-aluminium.co.uk](mailto:enquiries@real-aluminium.co.uk)

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