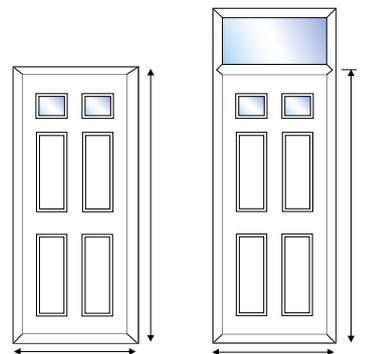


# *Technical Guide*







## About Us

In today's modern world, exterior doors, whether a front or back door, need to stand out for being more than just a means to enter and leave a building. A Virtuoso door offers security, interior warmth, and resilience – with beauty. Cutting-edge precision engineering and expertise deliver a door with incredible accuracy, stunning detailing, and unrivalled quality.

We have one of the largest composite door ranges available, with colour options to suit any taste, for any door and on any home. With more than 80 doors complemented by different configurations of glass, door furniture, styles and frames, providing 80,000 choices. Add to this our easy-to-use online design and ordering system, our sales, technical and customer service teams, and it's easy to see why Virtuoso is the Installers' and Homeowners' choice.

It's Crafted Precision, and it's built into every door we make. Our state-of-the-art 120,000 sq ft. manufacturing facility is home to every unique Virtuoso Door and ensures a quick and efficient turn-around. Every single door is bar-coded before entering our seamless automated production line, and is only removed at the very end of the process. Each component is matched to the door's unique code, ensuring the door your customer ordered, is the one they receive.

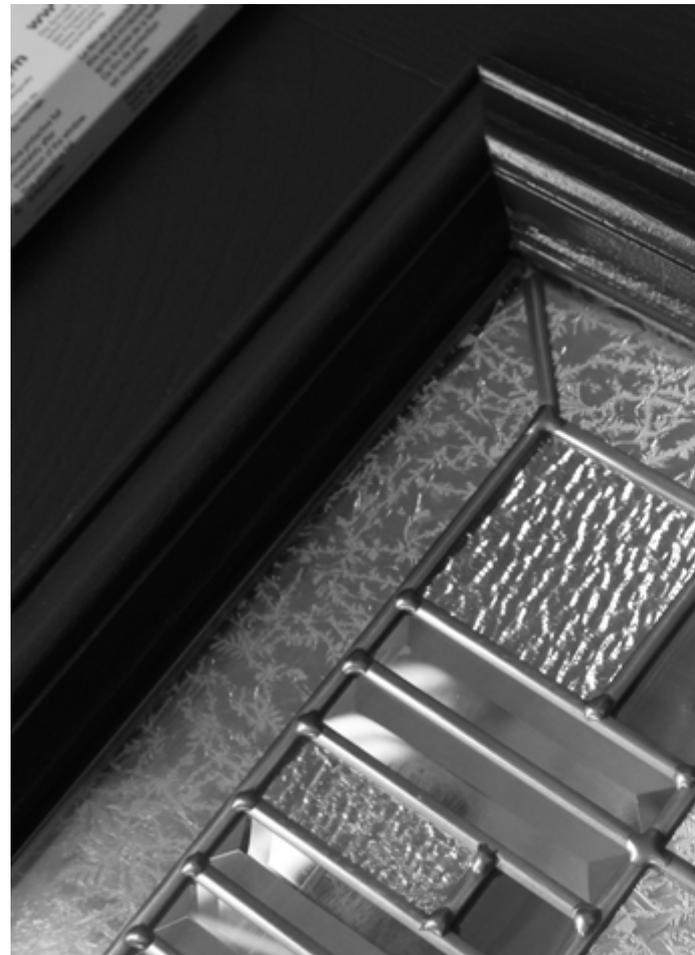
## Why Choose Us?

**Utilising our in-house product development team ensures we provide one of the most comprehensive product ranges in the market. We have built lasting relationships with trade customers, some dating back over 20 years, demonstrating our commitment to the trade market.**

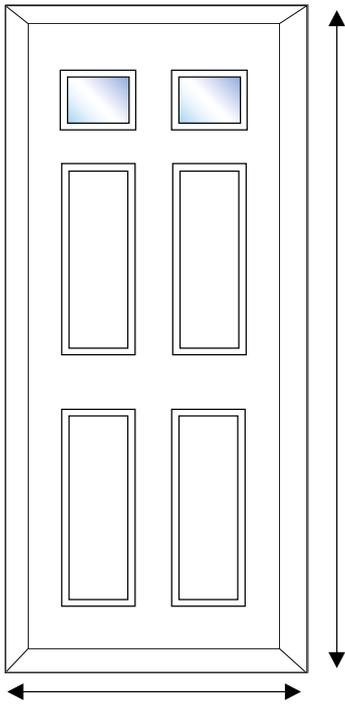
Our products are manufactured using state-of-the-art equipment for absolute precision. Stuga Flowlines, Quad Welders & CNC Corner Cleaners ensure a perfect composite door frame. SCM Beam saws, Edge Banders and Twin Bed CNC Machines ensure a perfect door slab.

Our highly trained craftsmen and women have a keen eye for detail and follow a strict quality control programme. We also only use the best materials available on the market.

Choose from Eurocell, Rehau and REAL Smart's aluminum frame profiles. Also we offer Yale & Ultion cylinders plus the Ultion Bolt lock to offer the consumer peace of mind. Fab & Fix suited handles, letterboxes and knockers give a high quality finish. We never compromise on quality.



## Eurocell Minimum & Maximum Widths and Heights 15mm & 25mm Add-ons Available

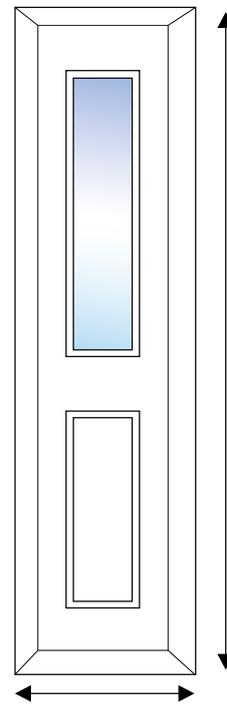


Width: 845mm - 1004mm

PVCu Threshold Height: 1991mm - 2101mm

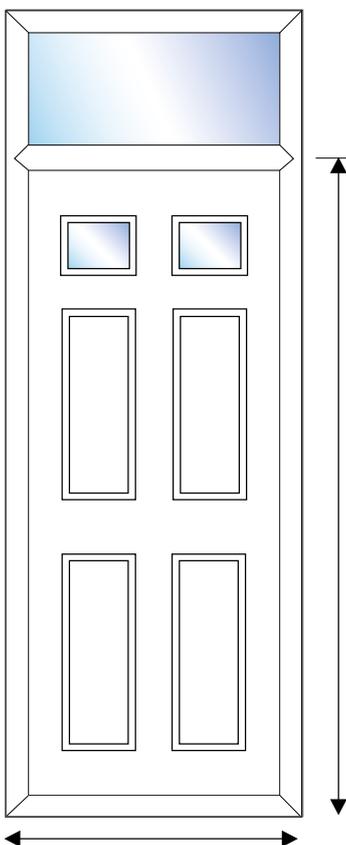
Low Aluminium Threshold Height: 1969mm - 2079mm

**Part M Height: 1962mm - 2072mm**



Sidescreen Height:  
1991mm - 2101mm

Width: 406mm - 465mm



Width: 825mm - 1004mm

Overall Height Max : 2700mm

PVC Threshold Height: 1971mm - 2081mm

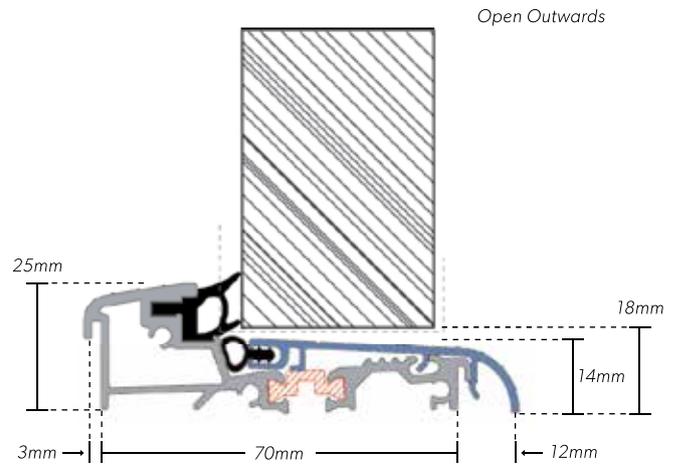
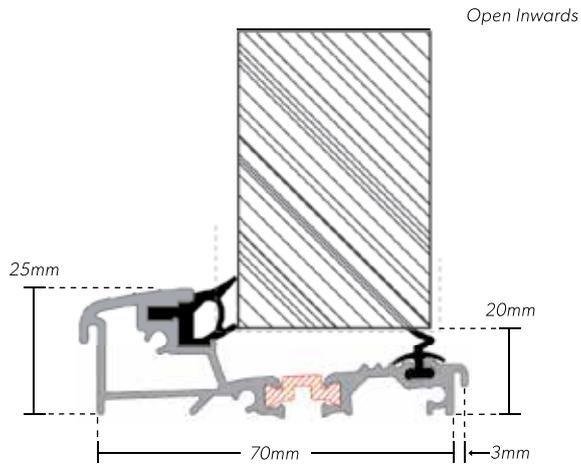
Low Aluminium Threshold Height: 1943mm - 2053mm

**Part M Height: 1949mm - 2053mm**

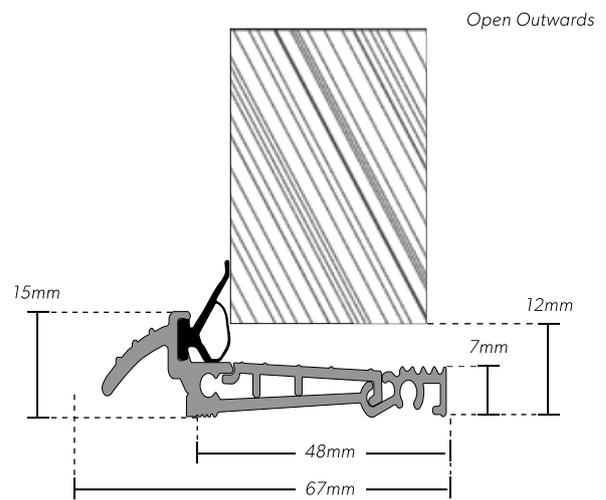
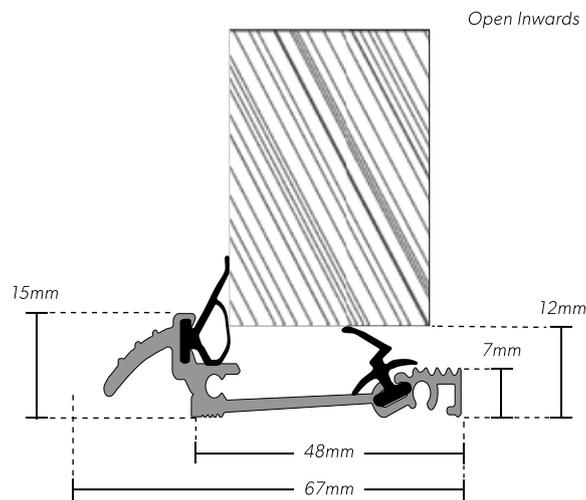
Min and max sizes may differ depending on styles

## Thresholds Eurocell Profiles

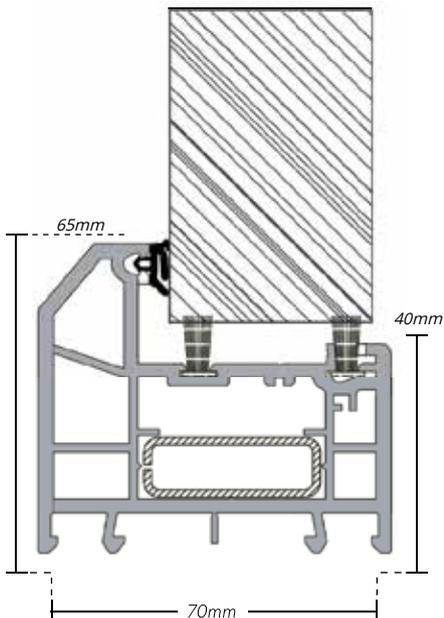
### Standard Low Aluminium Threshold



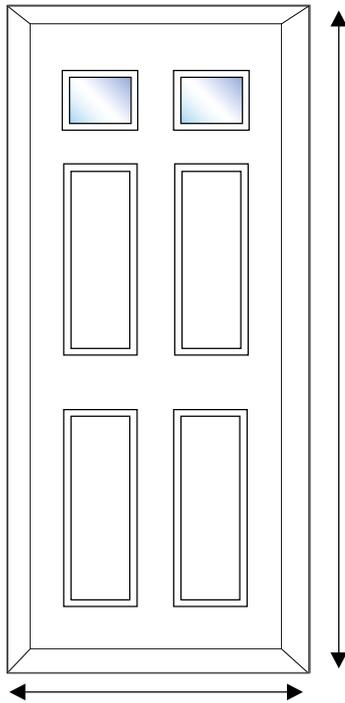
### Part M Low Aluminium Threshold



### PVCu Threshold



## Rehau Minimum & Maximum Widths and Heights 15mm & 40mm Add-ons Available

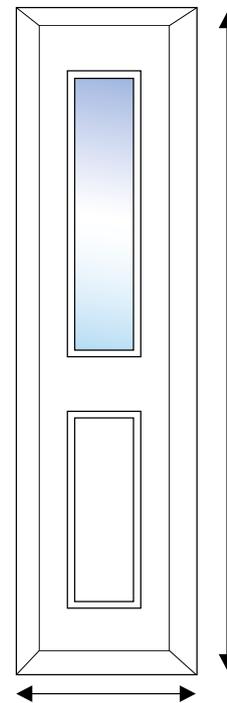


Width: 829mm - 1005mm

PVCu Threshold Height: 1997mm - 2107mm

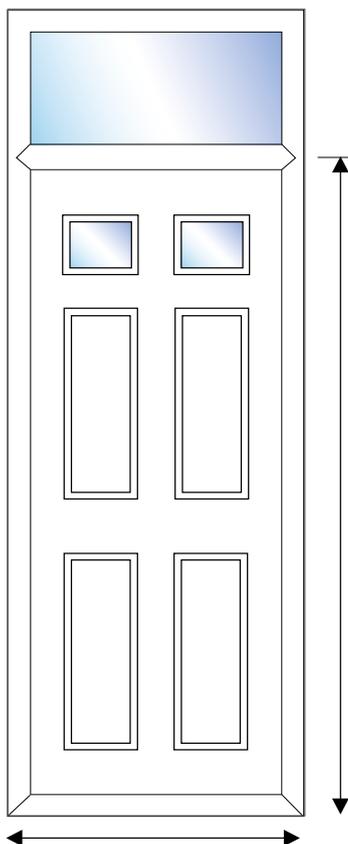
Low Aluminium Threshold Height: 1968mm - 2078mm

**Part M Height: 962mm - 2072mm**



Width: 398mm - 442mm

Sidescreen Height:  
1991mm - 2101mm



Width: 829mm - 1008mm

Overall Height Max : 2700mm

PVC Threshold Height: 1997mm - 2107mm

Low Aluminium Threshold Height: 1968mm - 2078mm

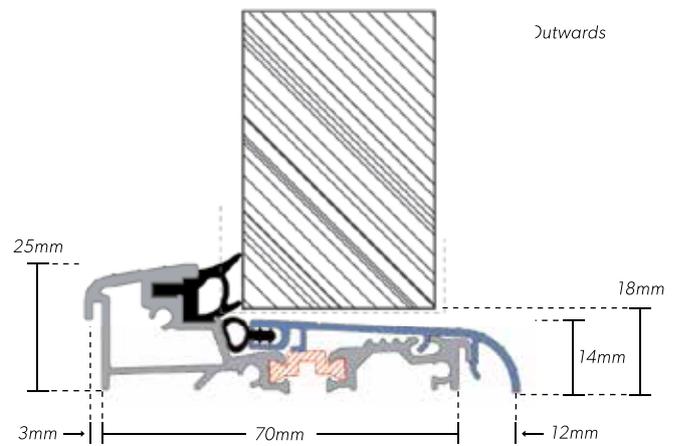
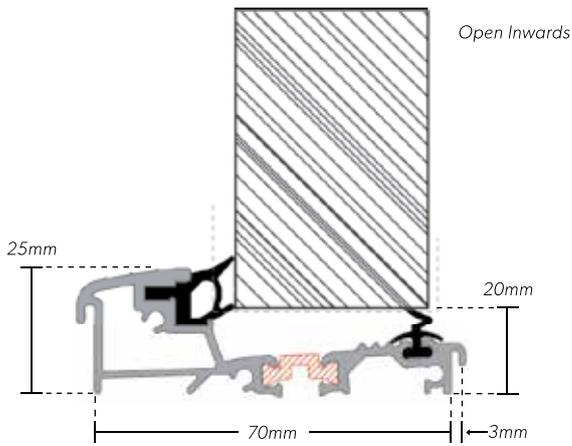
**Part M Height: 1949mm - 2053mm**

Min and max sizes may differ depending on styles

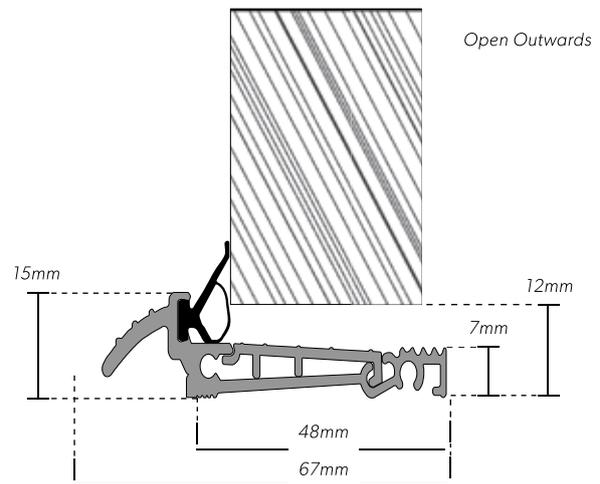
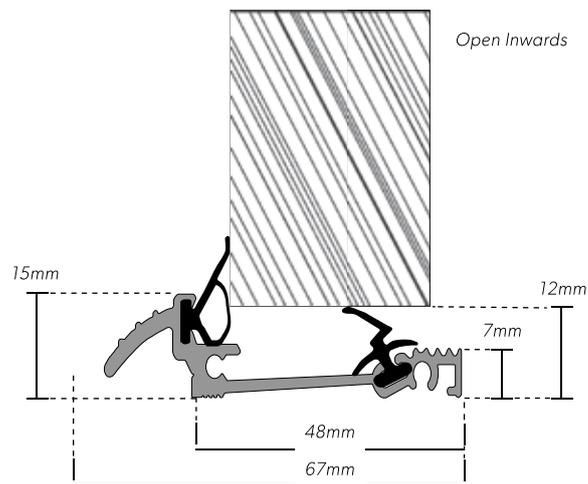
## Thresholds

Rehau Profiles

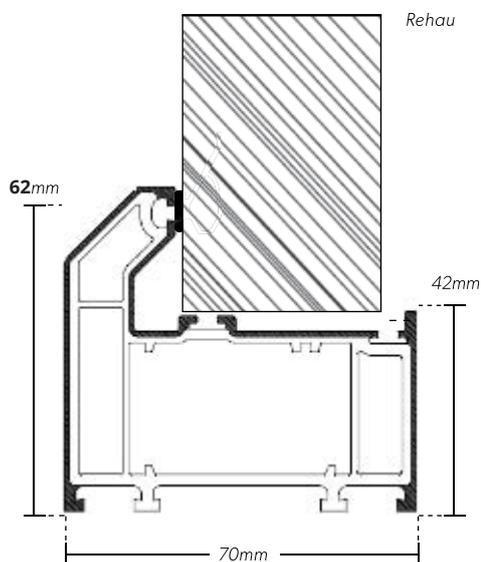
### Standard Low Aluminium Threshold



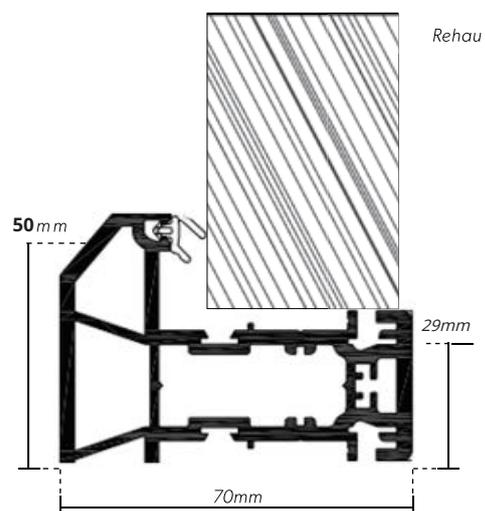
### Part M Low Aluminium Threshold



### PVCu Threshold

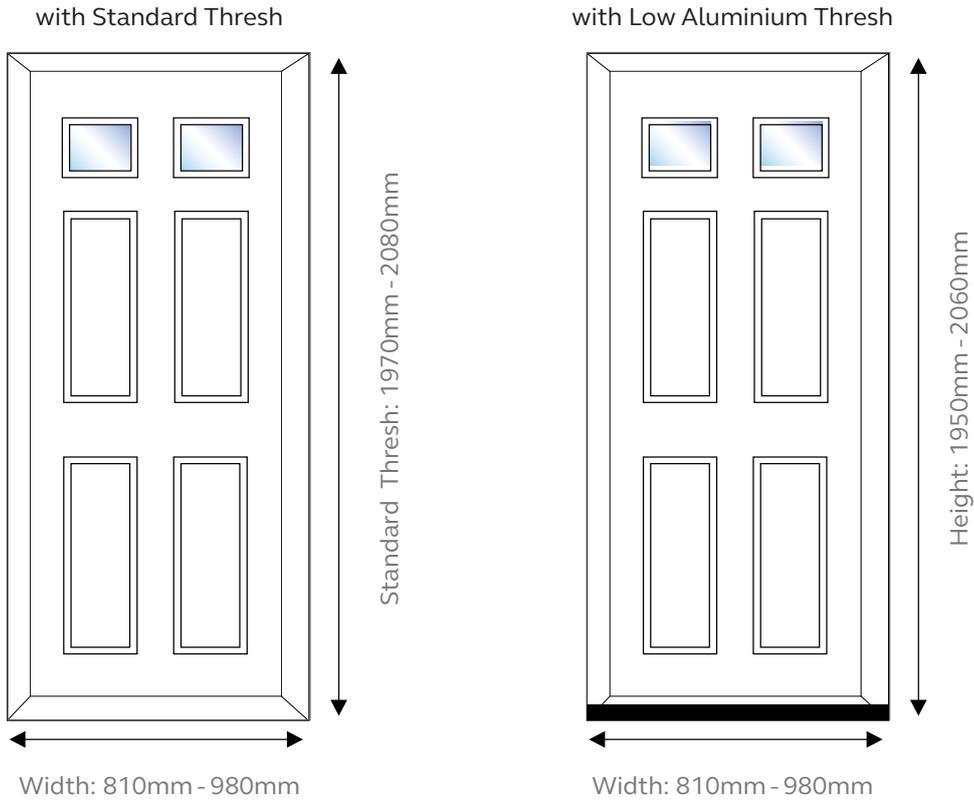


### Low PVCu Threshold



## REAL Minimum & Maximum Widths and Heights

20mm & 42mm Add-ons Available



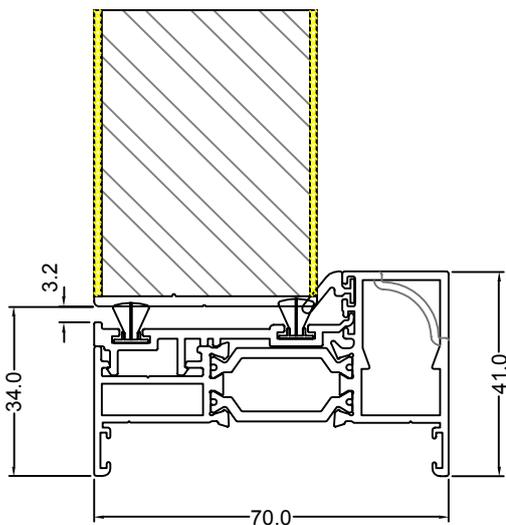
**NB - Toplights and Sidelights Available**

Separate Frames with Concealed Coupler.

## Thresholds

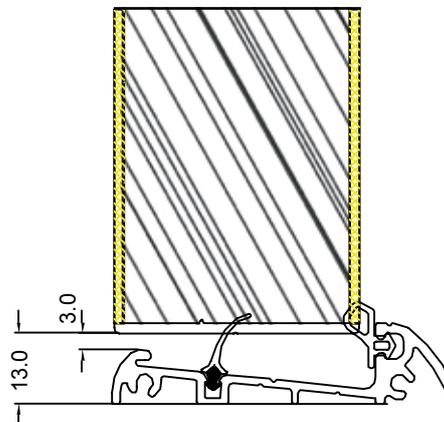
### REAL Aluminium Frame

#### Standard Threshold

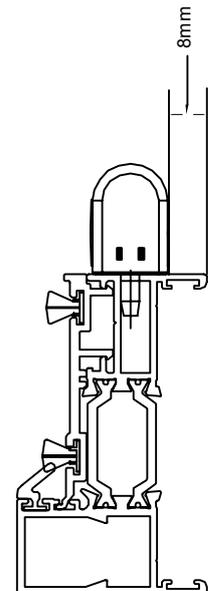


- Contemporary Frame
- Classic-Al Frame (shown)

#### Low Aluminium Threshold

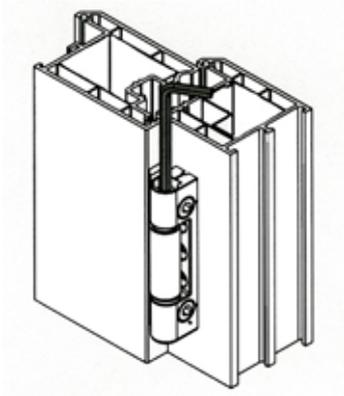


#### Hinge Clearance



**NB - Important Info - Hinge Clearance only 8mm -20mm or 42mm build ups available.**

## Hinge Adjustment Guide



### Standard Butt Hinge

#### COMPRESSION ADJUSTMENT +0.5mm -0.5mm (5mm ALLEN KEY)

Remove the top cap.

Check pin alignment via mark on top of pin. If the mark is pointing towards the door sash, the adjustment is in the neutral setting.

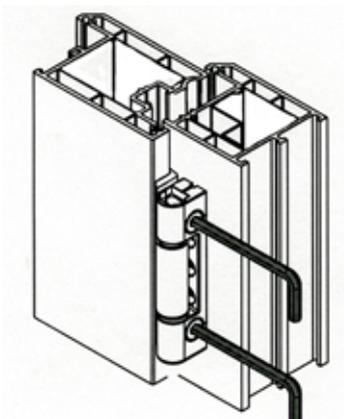
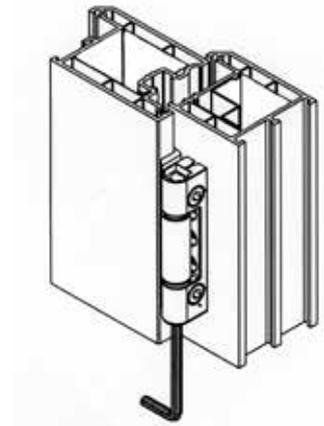
To increase compression, turn the pin so that the alignment mark is moved towards the door frame.

#### VERTICAL ADJUSTMENT +3.0mm -0.0mm (5mm ALLEN KEY)

Remove the bottom cap.

To raise door sash, rotate the vertical adjustment screw clockwise. Ensure that all other hinges are adjusted equally.

To lower door sash, rotate the vertical adjustment screw anticlockwise. Ensure that all other hinges are adjusted equally.



#### LATERAL ADJUSTMENT +2.0mm -2.0mm (4mm ALLEN KEY)

Remove the side cover caps.

Rotate the lateral adjustment drives in the direction required. Ensure that each pair of alignment marks are at the same point.

#### WARNING

It is not recommended to fully adjust either one adjuster only or one hinge only. Adjustments should be made gradually, aligning each pair of marks on each hinge until the desired adjustment is achieved.

### Superior Flag Hinge

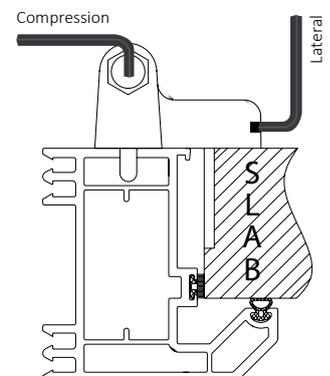
Adjustments (5mm ALLEN KEY)

Compression: +/- 2.00mm

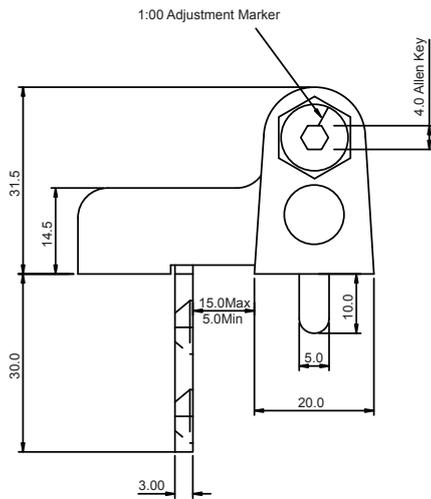
Lateral: +/- 10.00mm

Available in a range of colour finishes.

All adjustments accessible with door in closed position.

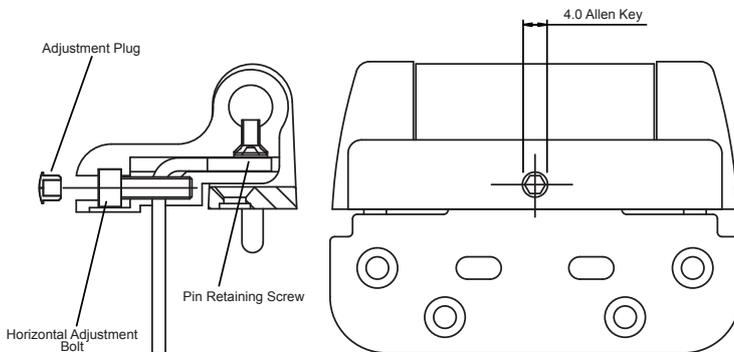


## Flag Hinge Adjustment Guide



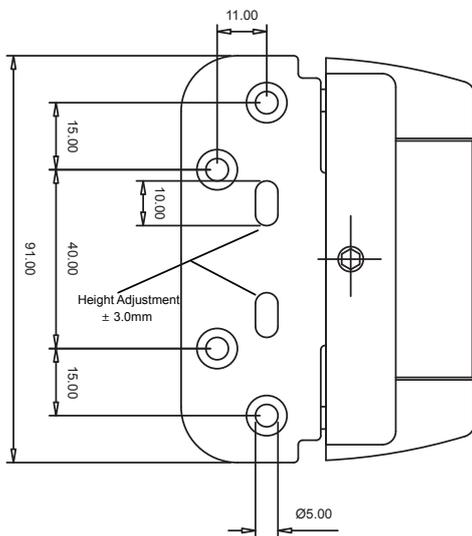
### Compression Adjustment

The factory setting of the compression pin should be set to 1:00 o'clock as shown opposite. This is adjustable by using a 4mm Allen Key and turning either clockwise or anti-clockwise to achieve +/- 2mm of Compression Adjustment. The pin is located within a socket and will have to be removed slightly to enable turning.



### Horizontal Adjustment

Horizontal Adjustment is achieved using a 4mm Allen Key on the Horizontal adjustment bolt, positioned as shown opposite. The Adjustment Plug may have to be removed. Please ensure that the Pin Retaining Screw, added for security, is tightened fully to allow the bracket to move forwards/backwards easily. Replace the adjustment plug after adjustment is complete.



### Height Adjustment

The Steel fixing bracket comprises of 6 sets of holes. Two of these holes are 10mm elongated slots as shown opposite and allow the fitter to raise or lower the hinge by an adjustment tolerance of +/- 3mm before completing the fix using the additional 4 fixing holes.

## Composite Technical

### SFS Hinge Adjustment Video

Kindly scan the QR code to access a video showcasing the newest SFS hinge choice, unveiled in September 2023.





Official Police Security Initiative



KM734056  
BS8529/PAS24

As would-be thieves find ever-more diverse ways of gaining access to a home, it's important to install a door with impeccable security credentials. Which is why our sophisticated solutions are tried, tested, and tested again to ensure access is as difficult and almost impossible – as possible.

The strength of our doors starts at the core. A multi-layered, engineered foam-filled slab that can take the brunt of sledgehammer – then made even stronger incorporating an aluminium 'U' rail.

A super-resilient and high-impact resistant 5mm outer Glass Reinforced Plastic skin adds yet more strength, whilst our range of multi-point locking systems are approved by BSI security standards and Secured by Design – the police-preferred specification for ultimate peace of mind for you.



## Yale and Ultion Cylinders

Our multipoint locking mechanisms are complemented by either a Yale Platinum 3 Star Euro Profile Cylinder or Ultion 'Secured by Design' High Security Cylinder. Both have peace-of-mind anti-snap, anti-pick, and anti-drill technology and comes with a compensation guarantee should you experience a break-in by means of snapping one of our locks.

### Yale cylinders: £1000 in compensation

(available with key or thumbturn options)

### Ultion cylinders: £2000 in compensation

(available with key, thumbturn, and one key fits all\* options)

# Installation Instructions

## Installation Instructions for Virtuoso Composite Doors

### Pre-Installation Check:

Prior to commencing any installation work, ensure sizes of both the door and the aperture are correct. The door set specification including glazing type, door style and hardware should be checked against the order. Before discarding any packaging check that all ancillary components which may be supplied loose are accounted for.

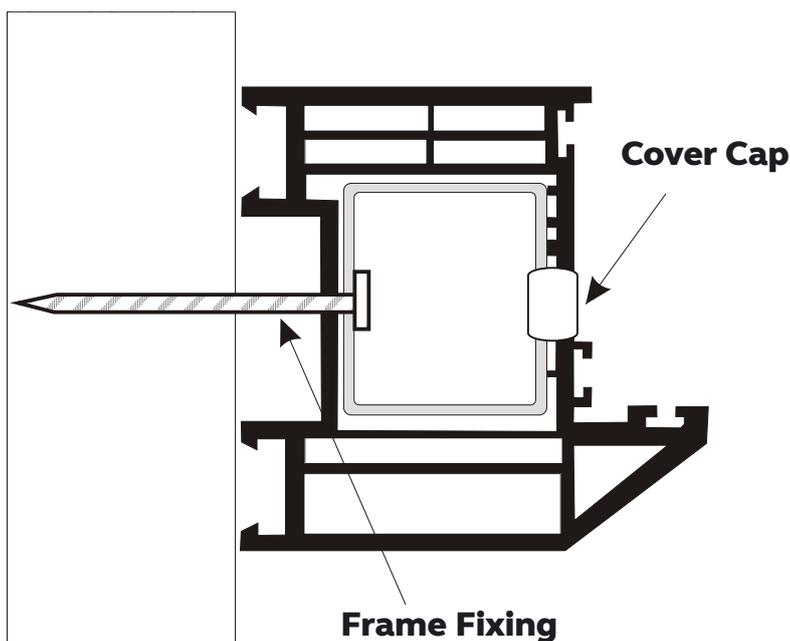
**It is important that the door should be installed plumb and square, without being twisted or distorted in any way.**

### Fixings:

There are two methods of fixing available. The first method is through the frame with a frame fixing. The second method is to use fixing lugs. We recommend for fixing the composite door, only through frame fixings should be used. The frame fixing should penetrate at least 50mm into the substrate.

**The squareness should be checked by measuring the diagonals.**

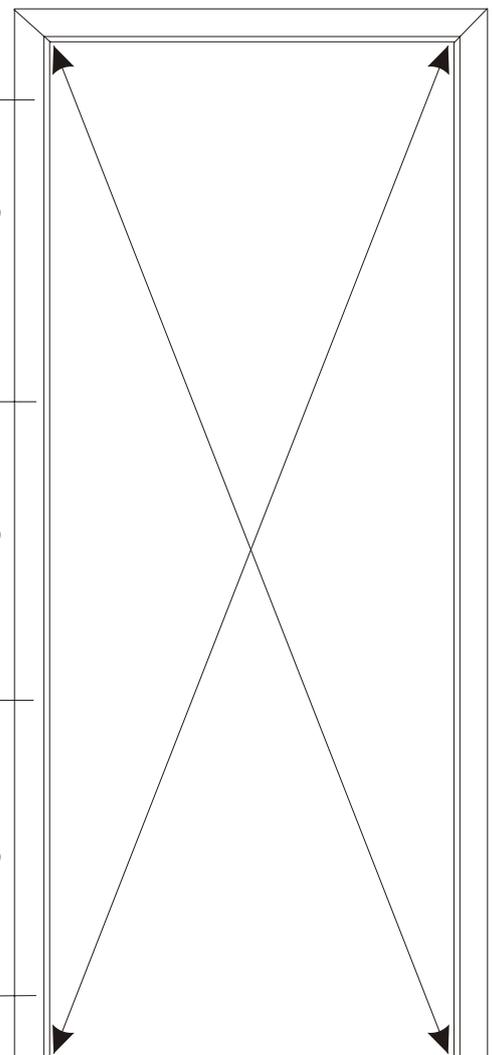
### Frame Fixing:



Approx. 250mm

Centres no greater than 600mm

Approx. 250mm



The fixings should be tightened ensuring the frame is held securely, take care not to over-tighten the screws as this may distort the frame.

### Note:

The importance of installing the composite door outer frames plumb and square within the aperture, without twist, racking or distortion of any form cannot be over emphasised.

# Installation Instructions

## Installation Instructions for Virtuoso Composite Doors

1. Before removing the existing doorset, carefully inspect your new doorset to ensure the contents are correct and for any damage and check the sizes are correct for the opening.  
**IMPORTANT: Claims for damage cannot be reported after the doorset has been fitted.**
2. It is recommended that the door and frame are fitted as a complete unit and using two people will make for an easier installation.
3. After the old door has been removed ensure the door aperture is clean with all excess cement & silicone removed.
4. To fit the cylinder, place this into the lock aperture and fix using the long machine screw provided on the lock side of the door.
5. To fit the door handle, insert the spindle through the lock mechanism, the handle with the fixing screws should be placed on the inside of the door with the lever pushed squarely onto the spindle, repeat for the external lever. Insert the two countersunk screws into the holes on the internal handle and tighten.
6. Measure, cut and fit frame extension pieces to the door frame if required.
7. If fitting with a sill ensure it has been fixed as per manufacturers instructions and is level.  
Note: sill should be on a bed of foam.
8. Offer the doorset to the opening and temporarily wedge into place, using a spirit level check the frame is plumb and square.
9. Use packers between the frame and the brickwork, close to fixing points to ensure the frame remains plumb and straight during fixing.
10. The doorset should be fixed through the frame legs (4 each side should be sufficient). No screws should be fitted through the frame head or down into the floor.
11. These fixing points are for guidelines only.  
**Corner fixings** 150mm minimum and maximum of 250mm from external corner.  
**Intermediate fixings** not exceeding 600mm.
12. Use the masonry fixing screws supplied, drill the frame legs with a 7mm HSS drill, with a 6mm masonry bit, drill into the substrate ensuring the hole is deep enough for the fixing. Use a Torqz T30 driver bit to fix the masonry fixing into place being careful not to bow or twist the PVCu frame (the use of installation packers behind the frame and close to the fixing points will help with this).
13. The hinges should be adjusted to ensure an even air gap between the frame and door slab, refer to page 2 for this operation.
14. Measure and fit any trims (not supplied) ensuring the area is clean and dust free to maintain a good bond, then seal around the inside of the frame.
15. Clean the door as referenced in the Care and Maintenance Guide.

# Door Maintenance Guide

## Cleaning your Door

Your Virtuoso door will stay in top condition with just one clean a month. Here's how to care for each part of your door...

Part of the Door	Cleaning	Finishing
Door Leaf	Keep the grime and grit away with warm, soapy water (not washing up liquid) and wipe with a soft cloth	
Door Frame	Wash with warm, soapy water	Stubborn stains demand a specialised PVCu cleaner. Read the cleaner's guidelines carefully
External Glass	Wash with warm, soapy water using a soft cloth	Finish with a proprietary glass cleaner
Leaded Glass	Wash with warm, soapy water	Finish with a proprietary glass cleaner (oxidisation will occur naturally over time)
Hardware (handles, knockers)	Take a clean cloth and warm water with mild detergent, then simply wipe clean to a shine	



## Maintaining your Door

Your Virtuoso doors are low maintenance—you'll find a little care every six months goes a very long way...

Part of the Door	Cleaning	Finishing
Hinges	Keep them at their best by lubricating with a little light engineering oil, e.g. 3 in 1	
Hardware (handles, knockers)	Just add a touch of light engineering oil on all moving parts	Especially important if you live near the coast, by a building or industrial site



**\* Easy to clean and very low maintenance**

Doors made of all materials experience thermal movement. The composite door will recover to its flat plane, to a maximum bow of 3mm side to side and 5mm top to bottom, when the installation recommendations are applied (see below).



## Vertical

Deflection of the slab inwards and outwards from top to bottom.

Maximum bow permitted is 5mm measured from the middle of the slab.

## Horizontal

Deflection of the slab inwards and outwards from side to side.



Maximum bow permitted is 3mm measured from the middle of the slab.

Slackening off the lock keeps will compensate for the movement of the slab within these tolerances. The hooks of the multipoint lock must be in compression with the inner edge of the pocket keep. If this does not happen the door may move to the inside of the property (towards the cold side) and give the impression the door is bowed.

It is important to ensure the centre keep for the latch only allows the door to become flush with the inner face of the outer frame and not any tighter as this could also cause the door to appear bowed.



If the hooks on the multipoint lock are not thrown throughout the day and the centre keep setting is too tight, the top and bottom of the door will be in unsupported tension and will eventually stand proud of the inner face of the profile. This will make the hooks on the lock to become stiff, as they cannot draw themselves into the hook keep.

**Protect your door from natural thermal distortion. Make sure the top and bottom locking points are engaged by pulling the handle up every time you shut the door.**

If these points are not observed, the warranties on the functionality and operation of the door could be affected. Condensation issues are typically building ventilation related, not product related.



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**VIRTUOSO**  
DOORS