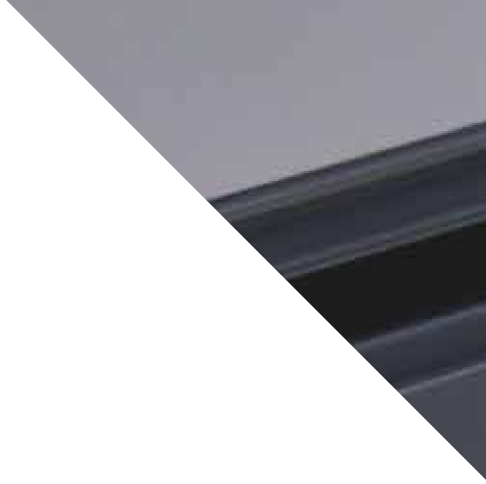
origin

DOORS AND WINDOWS

# Windows Specification File

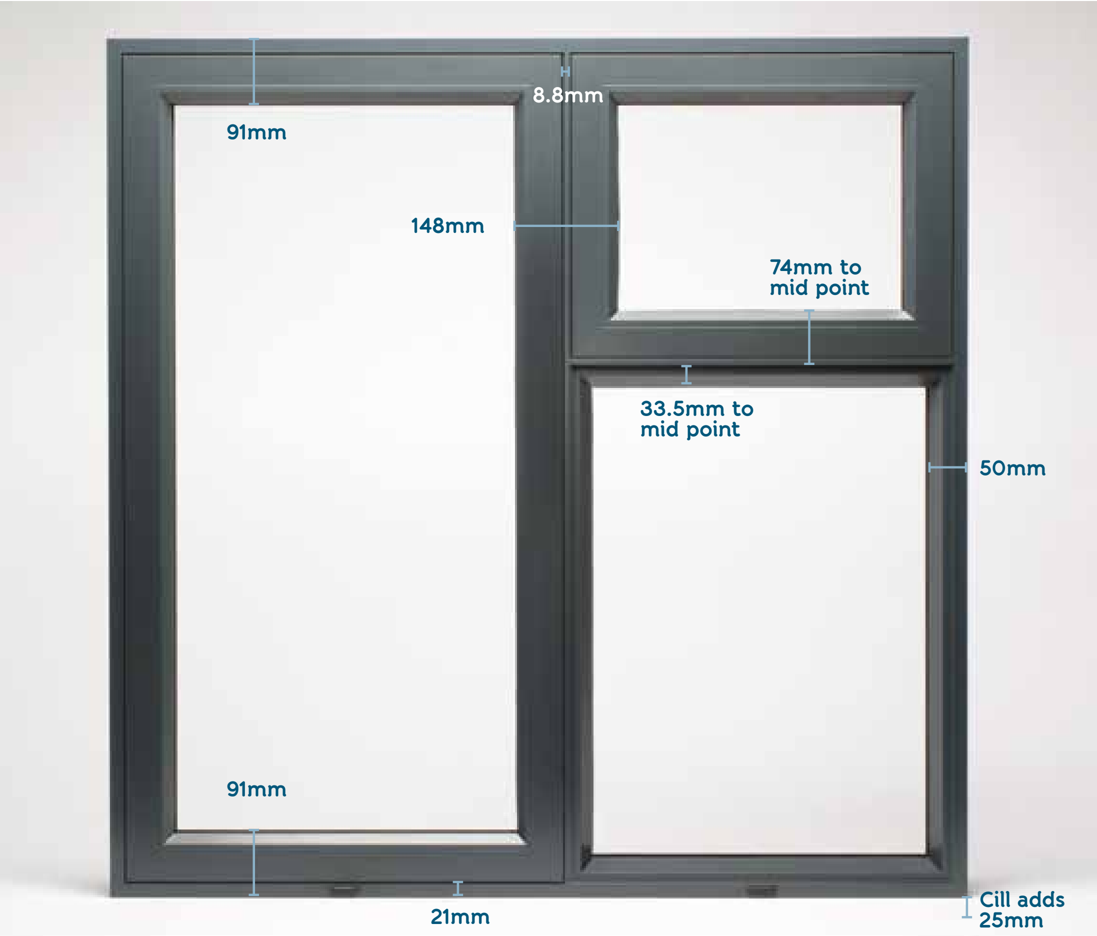


# Contents

# Specification Overview

## Aluminium Window

### External view of Origin Window




## Profile Specification

| | |
|---|---|
| Outer Frame Depth | 80mm |
| Sash Depth | 80mm |
| Frame and Sash Sightline | 91mm |
| Mullion and Sash Sightline | 148mm |

## Origin Window Specification

| | Origin |
|---|---|
| **Energy Rating** | From B to A++ (see page 9) |
| **u-Value** | Up to 0.9 W/Km2K |
| **Air** | Class 4 (600Pa) |
| **Wind** | Class B5 (2000Pa) |
| **Water** | Class E1500 (1500Pa) |

| **Side Hung** | | **Top Hung** | |
|---|---|---|---|
| **Max Height** | 1800 | **Max Height** | 1500 |
| **Max Width** | 1000 | **Max Width** | 1500 |
| **Max Weight** | 50kg | **Max Weight** | 50kg |

## Features

- 20 year guarantee
- Internally and externally flush casement. The sash closes into the frame, sitting in line with the inside and outside of the window
- Chamfered bead
- Mechanically double crimped corners
- Easi-clean mechanism on side hung configurations*
  *between 400-700mm
- Yale Encloser locking mechanism
- Stainless steel friction stay hinges

## Options and extras

- Fixed, casement, bay and gable configurations
- Accommodates double and triple glazing with unit sizes of 28mm or 44mm
- Open out or fixed
- 95, 150, 180 and 225mm cills
- Available in over 150 different RAL colours
- Fixing straps
- 15 or 35mm frame extensions
- Restrictor hooks
- Egress hardware
- Aerogel insulation
- Window couplers
- Black, white and colour-coded gaskets available
- Door to window coupling
- 2500EA and 5000EA trickle vents available
- Marine finish
- Colour matched handle options

# Available in the following colour finishes

1
week
lead time

## Origin's Popular Colour Range is available on a one week lead time

Dark Silver Metallic (9007M)

Black Grey (7021M)

Jet Black (9005M)

Slate Grey (7015M)

Hipca White (9910G)

Anthracite Grey (7016M)

DUAL
COLOUR
OPTION

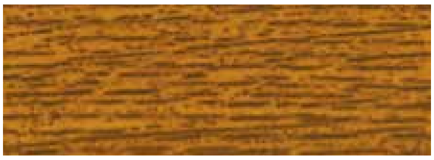
9910G / 7016M (Dual Colour)

This popular dual colour option is available on a 1 week lead time

Dual Colour options available on a 3 week lead time

Origin's 4 woodgrain finishes are also available in just 1 week

Natural Oak



Golden Oak

Mahogany

Walnut


Origin's special RAL colours are available on a 3 week lead time

## Lead Times

| | |
|---|---|
| Popular colour casement windows: | 1 week |
| RAL colour windows: | 3 weeks |
| Popular colour gables: | 2 weeks |
| RAL colour gables: | 4 weeks |
| Aerogel windows: | 4 weeks |

# Features and Benefits

## Security

The Origin Window is PAS 24 certified.

Origin casement windows* have been impact tested up to 2633Pa and fixed windows** tested to 3591Pa without failure or any sign of weakness in the crimps.

Origin hinges are made of ferritic stainless steel (to BS EN 10088-2 Grade, previously known as 304) for enhanced corrosion resistance. The hinges are tested to 50,000 cycles and feature a friction adjustment without metal to metal contact, ensuring minimum wear.

Hinge guards featuring patented anti-slip & lock technology are fitted as standard along the hinged side of the window.

The Yale Encloser lock is fitted to accurately align with the keeps. The cams are manufactured to be finely adjustable, if necessary.

## Thermal efficiency

The Origin Window is fitted as standard with a 35mm polyamide thermal break that features interlocking barriers that minimise air flow through the system.

A bespoke cavity gasket is fitted into the internal chamber of the window between the sash and the frame (excl. the locking side) in order to further improve thermal efficiency.

The Origin Window is available with Aerogel as an optional upgrade. Aerogel is the most insulating material on the planet and allows the Origin Window to achieve a Window Energy Rating of A++ or up to a 0.9 u-Value.

For more information on Aerogel,
visit www.origin-global.com/aluminium-windows

See the Window Energy Rating Specification Sheet for certified test results.

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*Testing was conducted on a "1500mm x 2500mm double top hung specimen"

**Testing was conducted on a "1525mm x 2641mm double top hung specimen"

# Optional Extras

## Restrictor hooks

Variable restrictor hooks limit the sash opening to 70mm, but can be unhooked to open the window fully.

## Trickle vents

Trickle vents have to meet the minimum air flow rates as defined in the British Building Regulations (see specifics below).

**Trickle vents can be fitted through the sash or through a 35mm frame extension.***

**(See page 41 and page 42 for cross-section drawings)**


## Additional Information

**England and Wales:**
*Equivalent Air Rates of 2500EA and 5000 EA as required by Approved Document "F" 2006 for England & Wales.*

**Scotland and Northern Ireland:**
*2000, 3000, 4000, 6000 & 8000 free air models available for use in Scotland and Northern Ireland.*

**minimum sash width applies.*

# Introducing Aerogel

**What is Aerogel?**

Aerogel is a synthetic, highly porous solid material derived from a silica dioxide gel in which the liquid has been extracted and replaced with air. The gel is critically heated and the liquid evaporated, leaving a bonded, cross-linked macromolecule framework.

The name Aerogel may be misleading at first, as aerogels are dry, rigid or elastic foam-like materials but the name originates from the fact that aerogels are usually derived from wet gels, physically similar to edible jelly.

**A brief history of Aerogel**

Aerogel is believed to have been discovered in 1931 as a result of a bet between two chemists, Samuel Kistler and Charles Learned, over who could replace the liquid in jelly with gas without causing the remaining solid to shrink. It was Kistler that first succeeded.

Since then, aerogels have been used in a wide range of applications from space exploration (Stardust launch and Mars exploration rovers) to commercial manufacture of building insulation, clothing, tennis rackets, supercapacitors and thickening agents in cosmetics.

Due to the expensive processes involved in producing Aerogel, commercial manufacture of aerogel has only become viable since the dawn of the 21st century.

**Why is Aerogel such a good insulator?**

Aerogel can withstand very high temperatures, delivering 39 times more insulation than fibreglass. Aerogels are fantastic insulators because they limit two of the three methods of heat transfer (convection, conduction and radiation). Firstly, they are excellent conductive insulators because they are composed of 99.8% gas (air) and gases are very poor at conducting heat. The remaining 0.02% of the aerogel is made of silica, which is incidentally also a poor conductor of heat. Secondly, the lattice structure of the solid is highly effective at minimising convection because air cannot circulate through it. While aerogels are poor radiative insulators (infrared radiation transfers heat) within an aluminium window frame, the aluminium blocks any infrared radiation.

# Egress application

Approved Document B of the Building Regulations 2010 specifies the following provisions with regards to egress application:

**Section 2.8 Emergency egress windows and external doors**

Any window provided for emergency egress purposes and any external door provided for escape should comply with the following conditions:

a. The window should have an unobstructed openable area that is at least $0.33m^2$ and at least 450mm high and 450mm wide (the route through the window may be at an angle rather than straight through). The bottom of the openable area should be no more than 1000mm above the floor; and
b. the window or door should enable the person escaping to reach a place free from danger and free from fire. This is a matter for judgement in each case, but, in general, a courtyard or back garden from which there is no exit other than through other buildings would have to be at least as deep as the dwelling house is high to be acceptable.

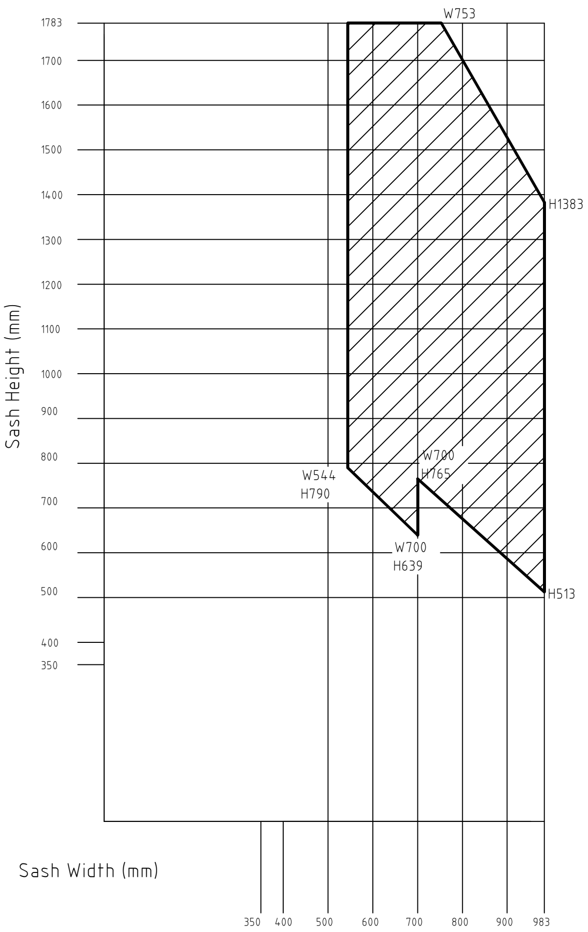
**Note 1.** Approved Document K protection from falling, collision and impact specifies a minimum guarding height of 800mm, except in the case of a window in a roof where the bottom of the opening may be 600mm above the floor.

**Note 2.** Locks (with or without removable keys) and stays may be fitted to egress windows, subject to the stay being fitted with a release catch, which may be child resistant.

**Note 3.** Windows should be designed such that they will remain in the open position without needing to be held by a person making their escape.

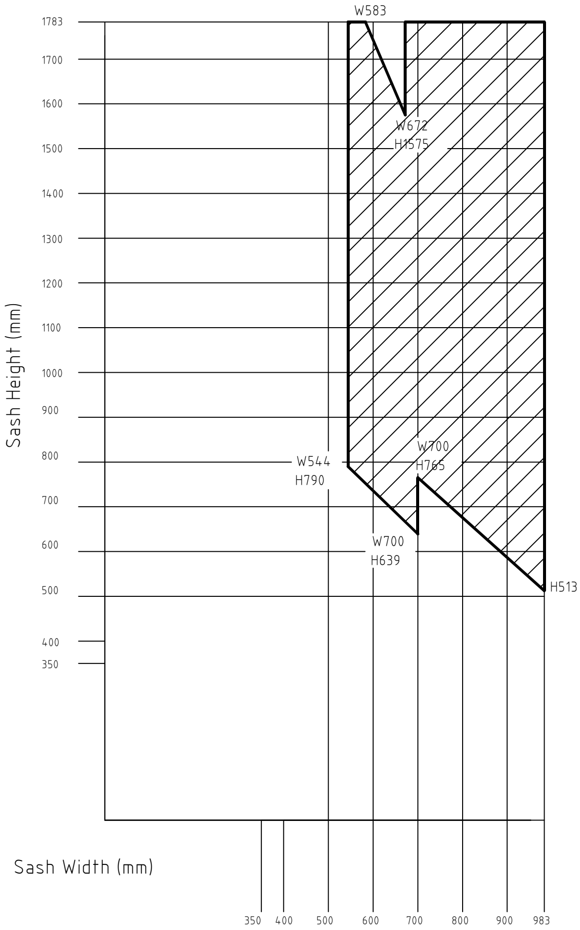
# Windows – Side Hung Sash Egress Dimensions

## Glazing Weight 26.4kg/m²




Generic 44mm Triple Glazed

## Glazing Weight 17.6kg/m²




Generic 28mm Double Glazed

## Sash

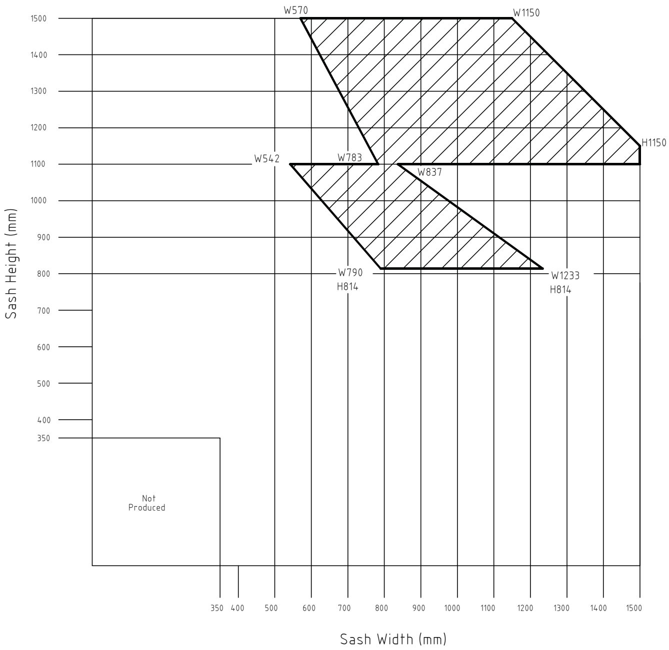
Mullion to Mullion = 16mm
Mullion to Frame = 32mm
Frame to Frame = 48mm

Windows

origin

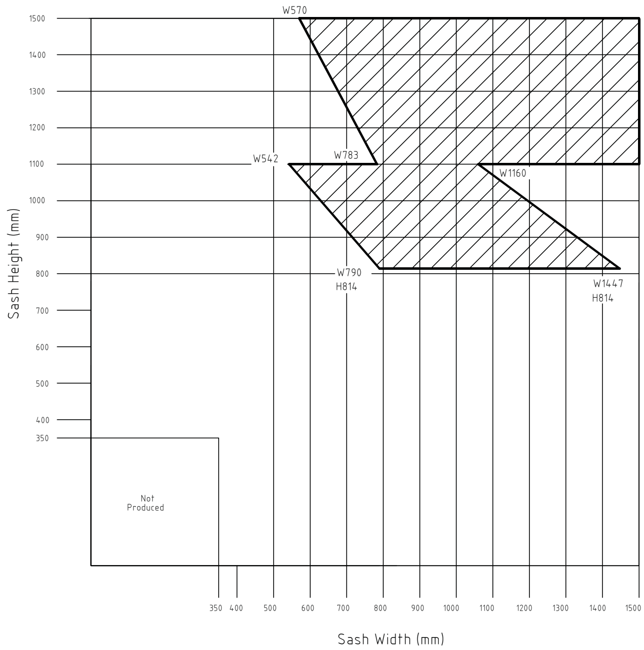
# Windows – Top Hung Sash Egress Dimensions

## Glazing Weight 26.4kg/m²




Generic 44mm Triple Glazed

## Glazing Weight 17.6kg/m²



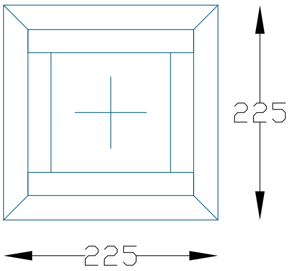

Generic 28mm Double Glazed

## Sash

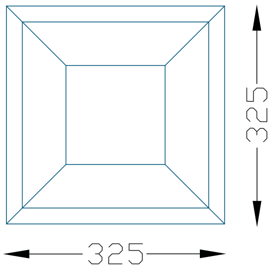
Mullion to Mullion = 16mm
Mullion to Frame = 32mm
Frame to Frame = 48mm

# Size Guidelines

## Minimum Dimensions




Fixed frame

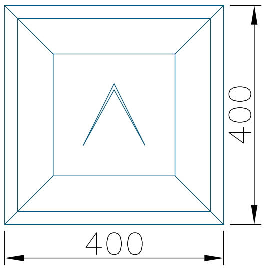



Dummy sash

**Casement Window:**

**Min height =** 325mm

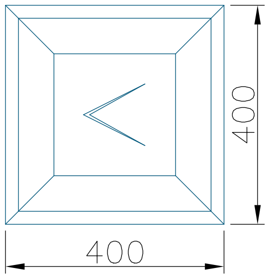
**Min width =** 325mm




Top hung

**Min height =** 400mm

**Min width =** 400mm




Side hung

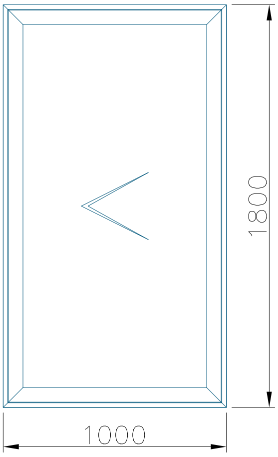
**Min height =** 400mm

**Min width =** 400mm

*Minimum height will be greater with a cill

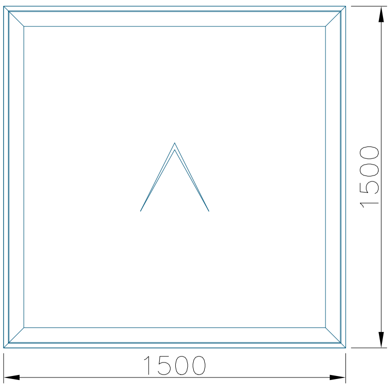
*Minimum width will be greater with a frame extension

## Maximum Sash Dimensions




Maximum sash weight 40kg

Side Hung Maximum Dimensions

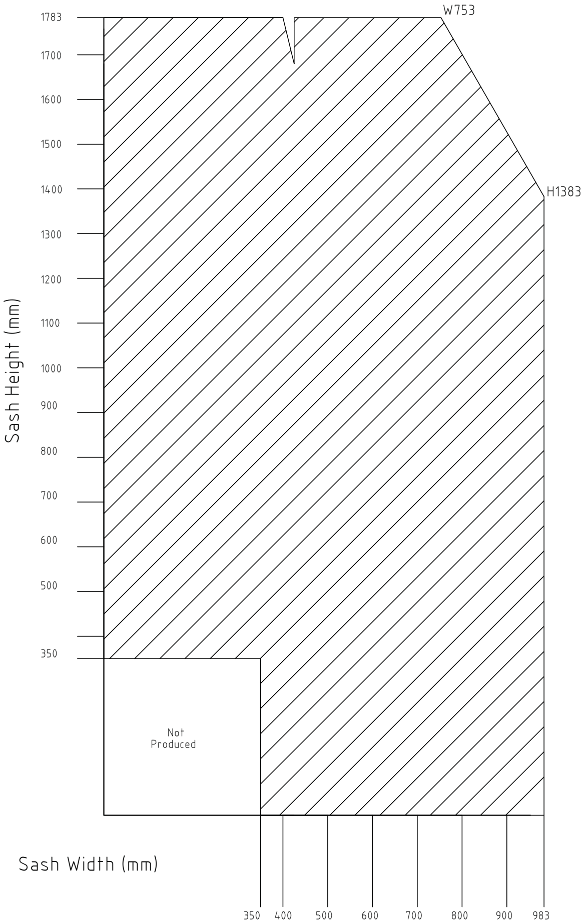



Maximum sash weight 50kg

Top Hung Maximum Dimensions

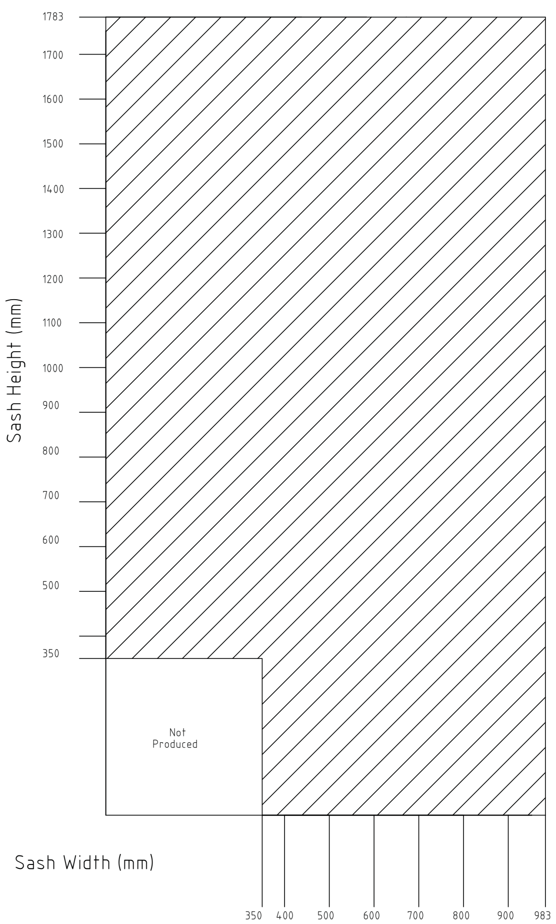
# Windows – Side Hung Sash Maximum Dimensions

## Glazing Weight 26.4kg/m²




Generic 44mm Triple Glazed

## Glazing Weight 17.6kg/m²



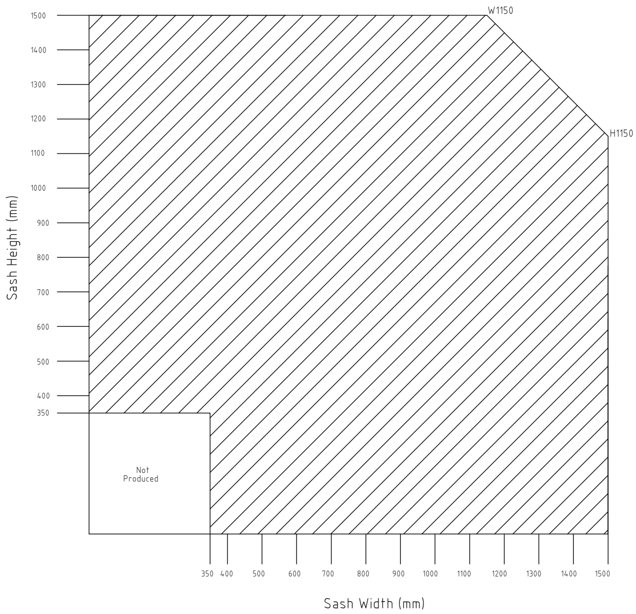

Generic 28mm Double Glazed

## Sash

Mullion to Mullion = 16mm
Mullion to Frame = 32mm
Frame to Frame = 48mm

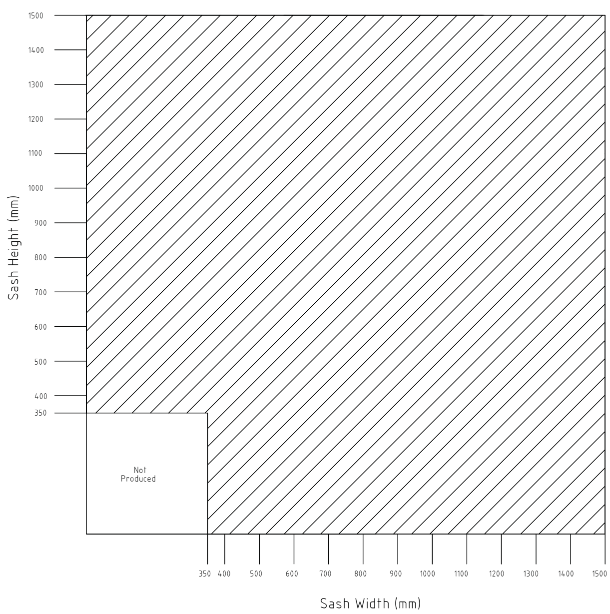
# Windows – Top Hung Sash Maximum Dimensions

## Glazing Weight 26.4kg/m²




Generic 44mm Triple Glazed

## Glazing Weight 17.6kg/m²




Generic 28mm Double Glazed

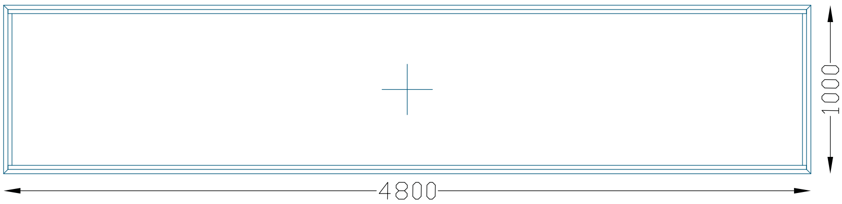
## Sash

| | |
|---|---|
| Mullion to Mullion | = 16mm |
| Mullion to Frame | = 32mm |
| Frame to Frame | = 48mm |

## Fixed frame maximum dimensions

Maximum area = 4.8m²
Maximum height/width = 4.8m

**Example 1**

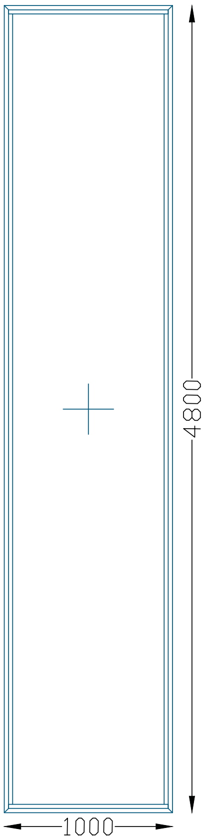



Maximum fixed width and area

**Maximum area =** 4800mm x 1000mm = 4.8m²

**Maximum width =** 4800mm

**Example 2**

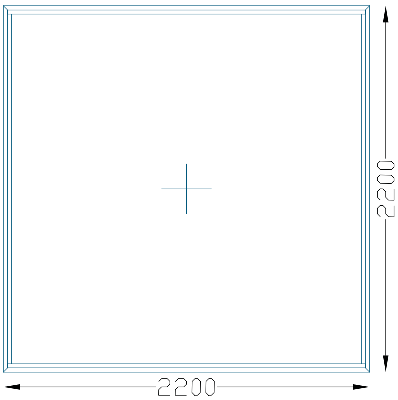



Maximum fixed height and area

**Maximum area =** 4800mm x 1000mm = 4.8m²

**Maximum height =** 4800mm

**Example 3**



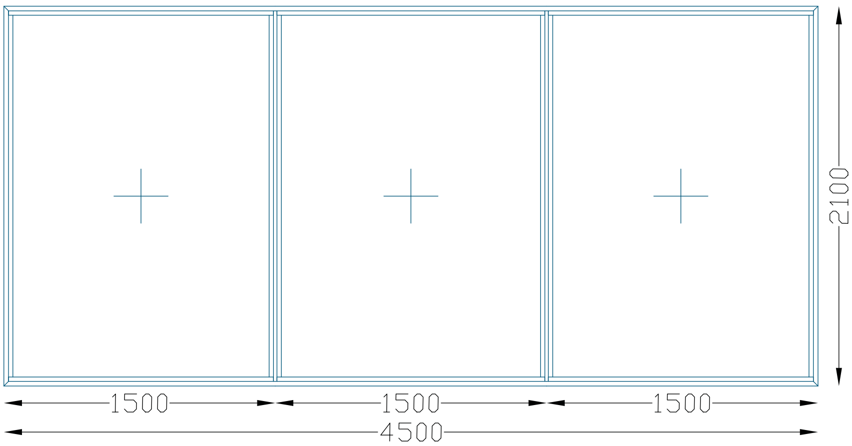

Maximum fixed area

**Maximum area =** 2200mm x 2200mm = approx 4.8m²

# Maximum mullion/transom length

Maximum glazed area next to mullion/transom:
= 3.15m$^2$ Maximum length: = 2100mm

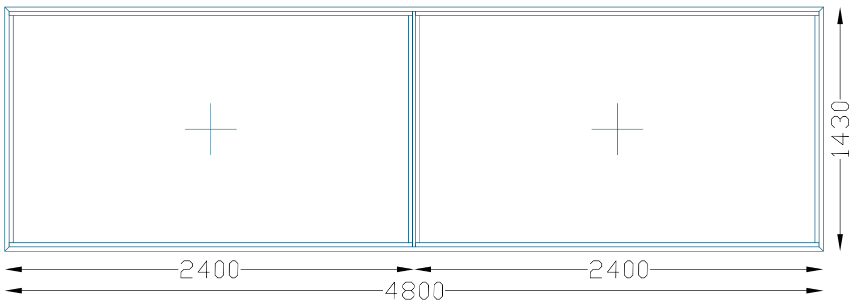
**Example 1**




## Maximum mullion length and glazed area next to a mullion/transom

**Maximum glazed area next to mullion/transom =** 1500mm x 2100mm = 3.15m$^2$
**Maximum height =** 2100mm
(Window width of 4500mm is under maximum of 4800mm)

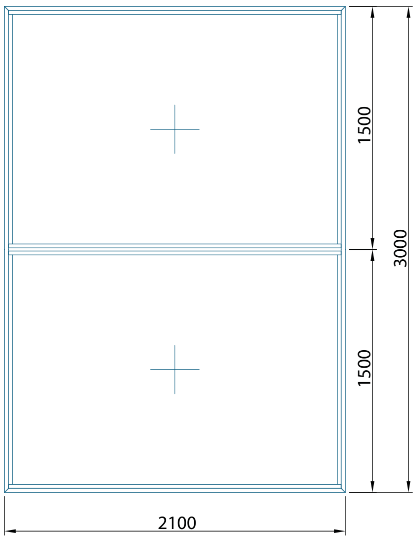
**Example 2**




## Maximum glazed area next to a mullion or transom

**Maximum glazed area next to mullion/transom =** 2400mm x 1430mm = 3.15m$^2$
**Maximum window width =** 4800mm
(Mullion is under maximum height of 2100mm)

**Example 3**



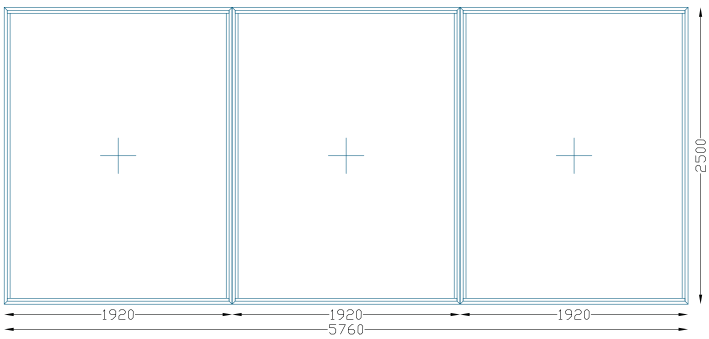

## Maximum transom

Transom under maximum width of 2100mm
**Maximum glazed area next to mullion/transom**
**=** 2100mm x 1500mm = 3.15m$^2$

# Maximum coupled length

Maximum coupled length: = 2.5m

**Example 1**



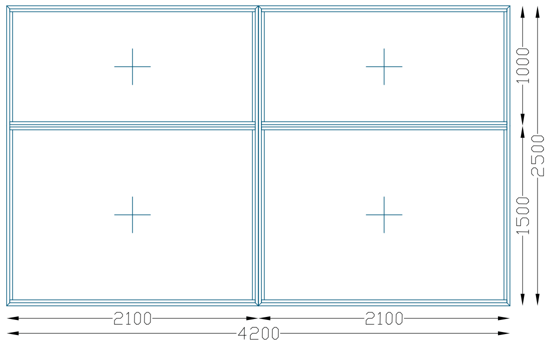

## Maximum coupled height with maximum individual glazed area.

**Maximum coupled height =** 2500mm

**Maximum glazed area =** 1920mm x 2500mm = 4.8m²

(Overall width at 5760mm is fine as each frame is coupled)

**Example 2**



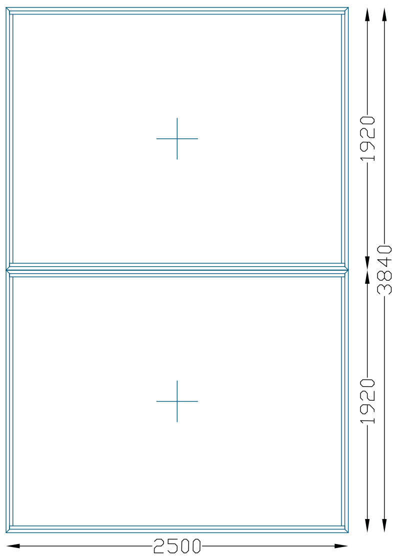

## Maximum coupled height with a maximum transom

**Maximum coupled height =** 2500mm

**Maximum transom length =** 2100mm

**Maximum glazed area next to mullion/transom =** 2100mm x 1500mm = 3.15m²

**Example 3**

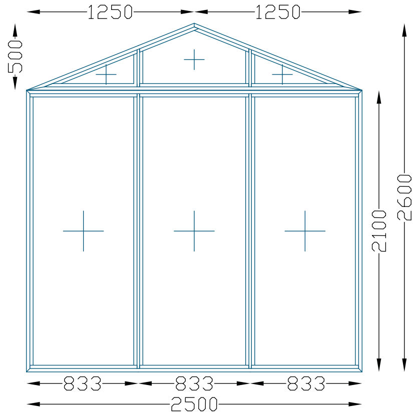



## Maximum coupled width

**Maximum glazed area =** 2500mm x 1920mm = 4.8m²

**Maximum coupled length =** 2500mm

**Example 4**



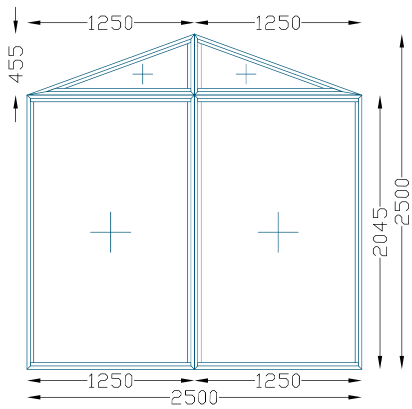

## Maximum coupled gable width, minimum gable corner angle and maximum mullion

**Maximum coupled length =** 2500mm

**Maximum mullion length =** 2100mm

Tightest gable corner angle = 20°

**Example 5**




## Maximum coupled width and height with tightest gable corner angle

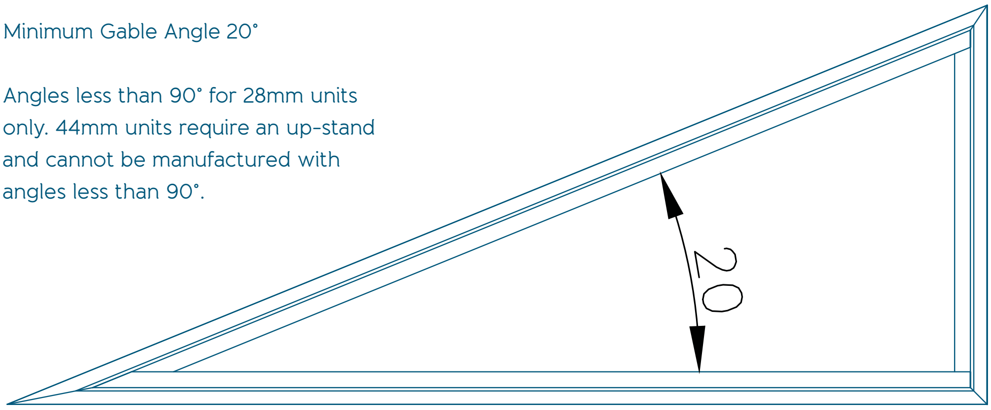
**Maximum coupled width and height =** 2500mm

**Tightest gable corner angle =** 20°

## Gables

Minimum Gable Angle 20°

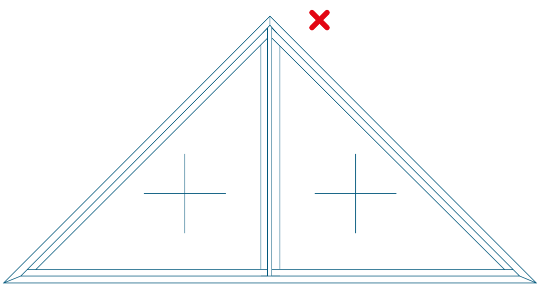
Angles less than 90° for 28mm units only. 44mm units require an up-stand and cannot be manufactured with angles less than 90°.

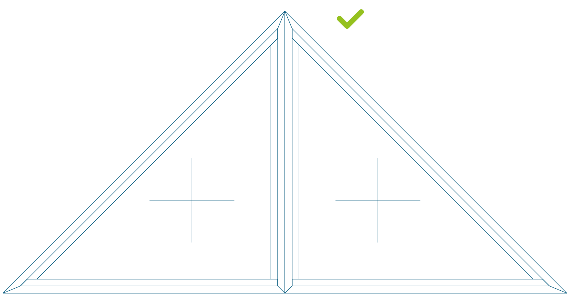



## Gables mullion restrictions

Mullions cannot be joined to another joint or apex in the frame:

Mullions cannot be joined to an apex like this

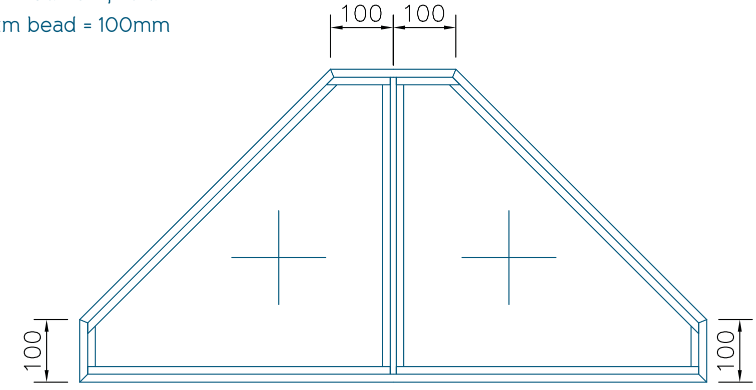




In this instance, the gable must be made out of two parts and coupled together.

## Minimum gable up-stand

Minimum Gable Up-stand = 100mm
Minimum bead = 100mm



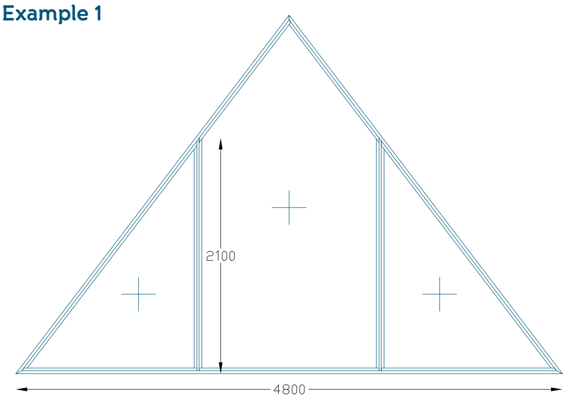

The minimum up-stand on a gable is 100mm.

Similarly, in the diagram above, if a mullion splits a small section of frame, there must be at least 100mm of profile either side of the mullion.

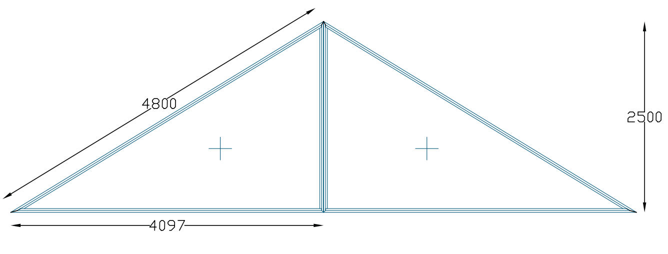
## Maximum gable size

Maximum mullion length 2100mm
Maximum profile length 4800mm
Maximum coupled length 2500mm

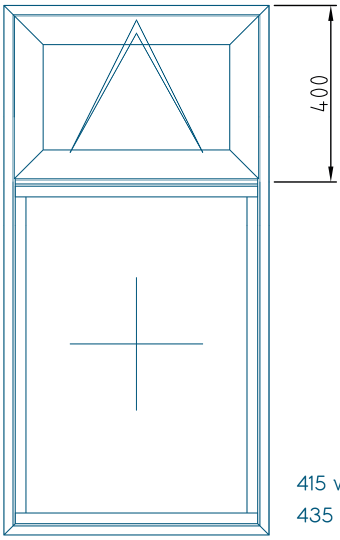
**Example 1**




**Example 2**

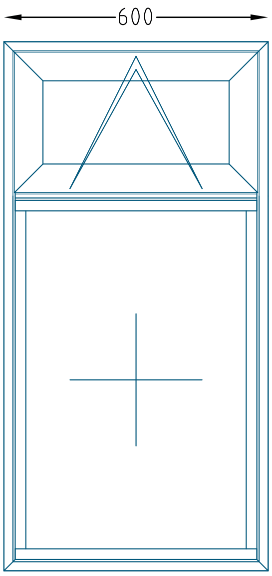


## Minimum transom drop




415 with 15mm frame extension
435 with 35mm frame extension

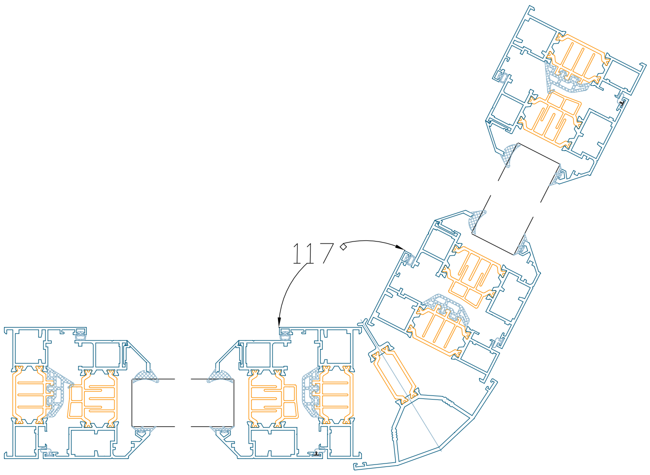
## Minimum sash width with trickle vent



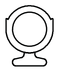
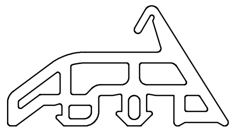
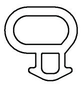
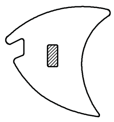
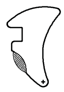
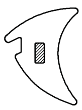

The minimum width for a 2500EA trickle vent to go through a 35mm add-on is 400mm.

## Bay window tightest angle

Tightest bay angle 117°



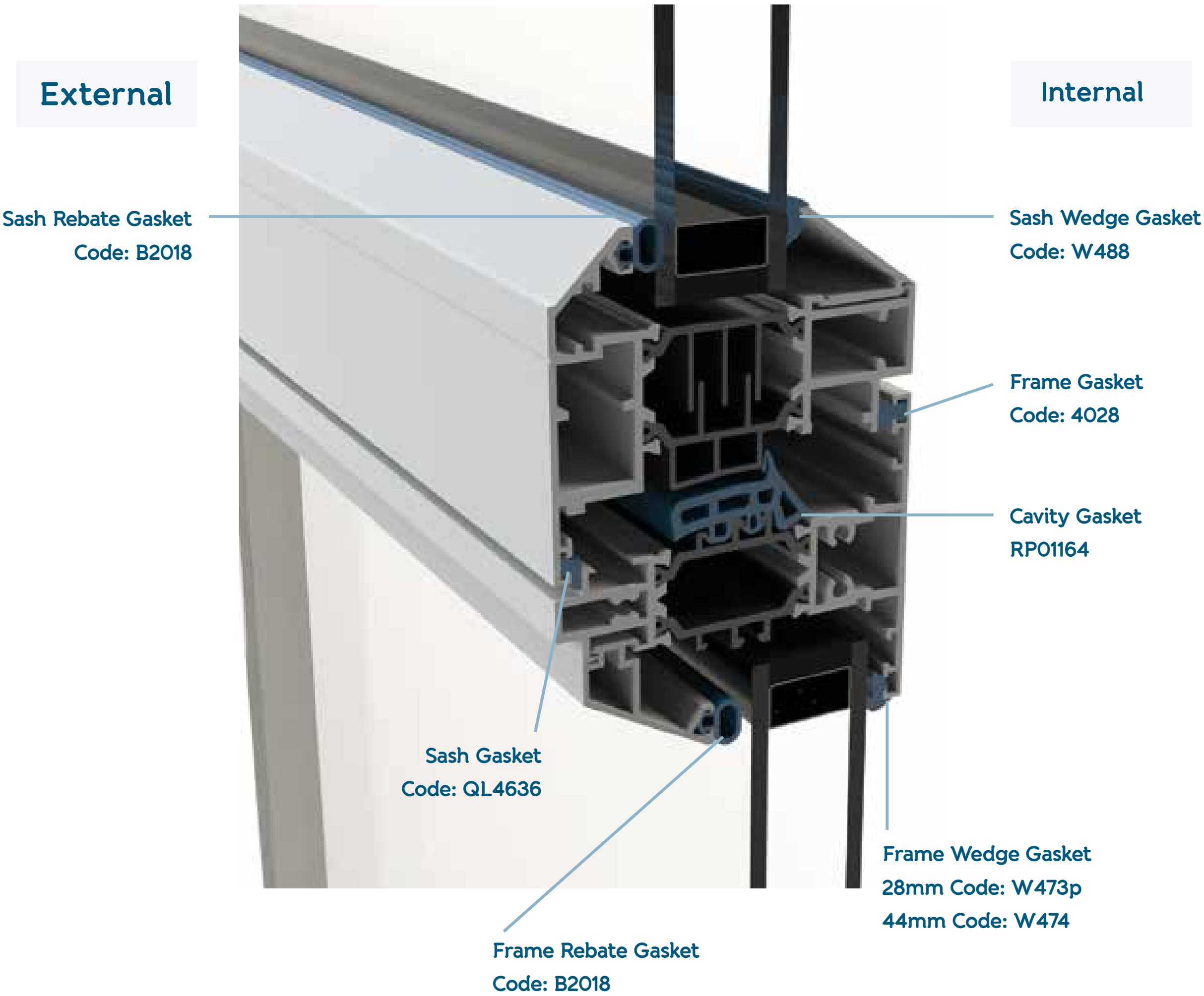
# Gaskets

| | | |
|---|---|---|
| FRAME GASKET (INTERNALLY FITTED)<br><br>4028<br>BLACK | SASH GASKET (EXTERNALLY FITTED)<br><br>QL4636<br>BLACK | <br>CAVITY GASKET<br>BLACK |
| GLAZING REBATE (EXTERNALLY FITTED)<br><br>B2018<br>BLACK | FRAME WEDGE 28mm (INTERNALLY FITTED)<br><br>W473P<br>BLACK, WHITE, COLOUR-CODED | SASH WEDGE 28/44mm (INTERNALLY FITTED)<br><br>W488<br>BLACK, WHITE, COLOUR-CODED |
| FRAME WEDGE 44mm (INTERNALLY FITTED)<br><br>W474<br>BLACK, WHITE, COLOUR-CODED | | |

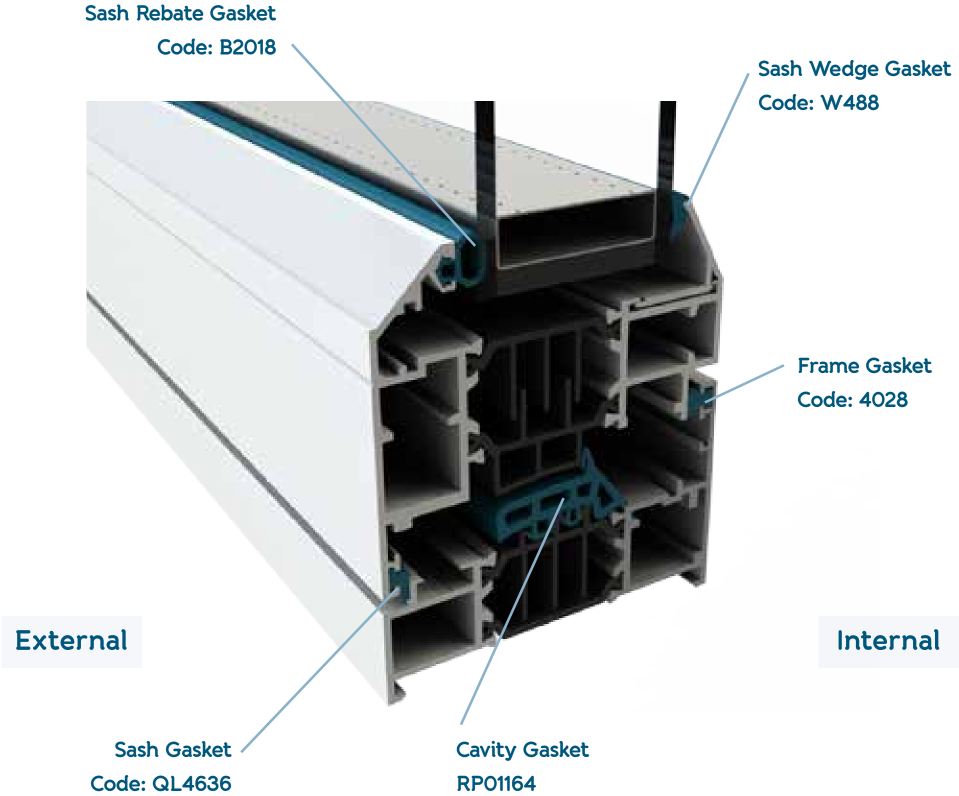
## Key

**The colour-coded gasket option includes the following colours:**
7015, 7016, light grey, white, light oak, bronze and chestnut brown.

## Cross sectional gasket diagram

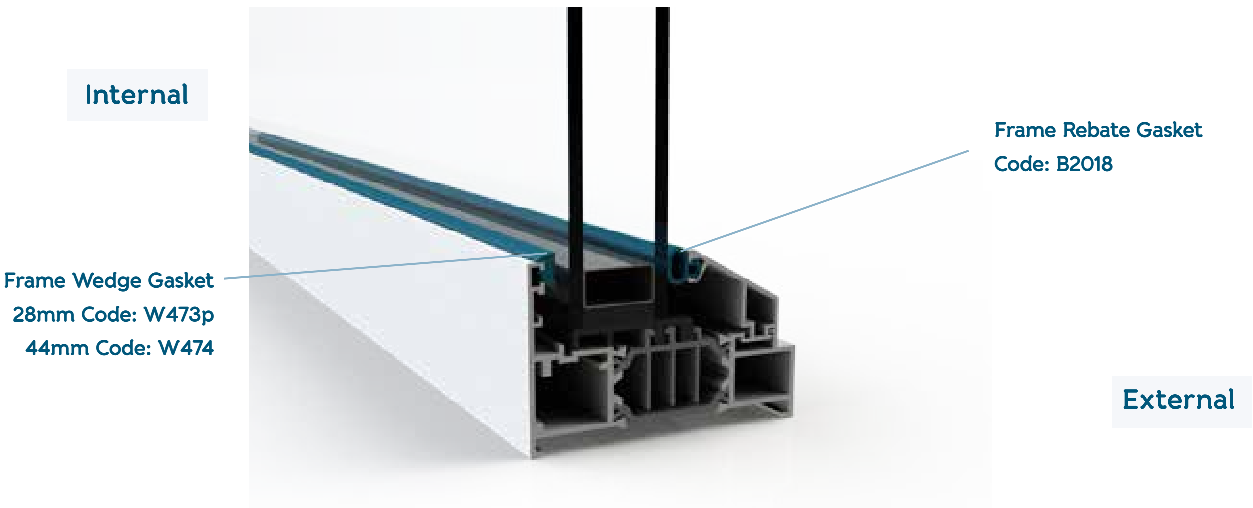


# Cross sectional gasket diagrams



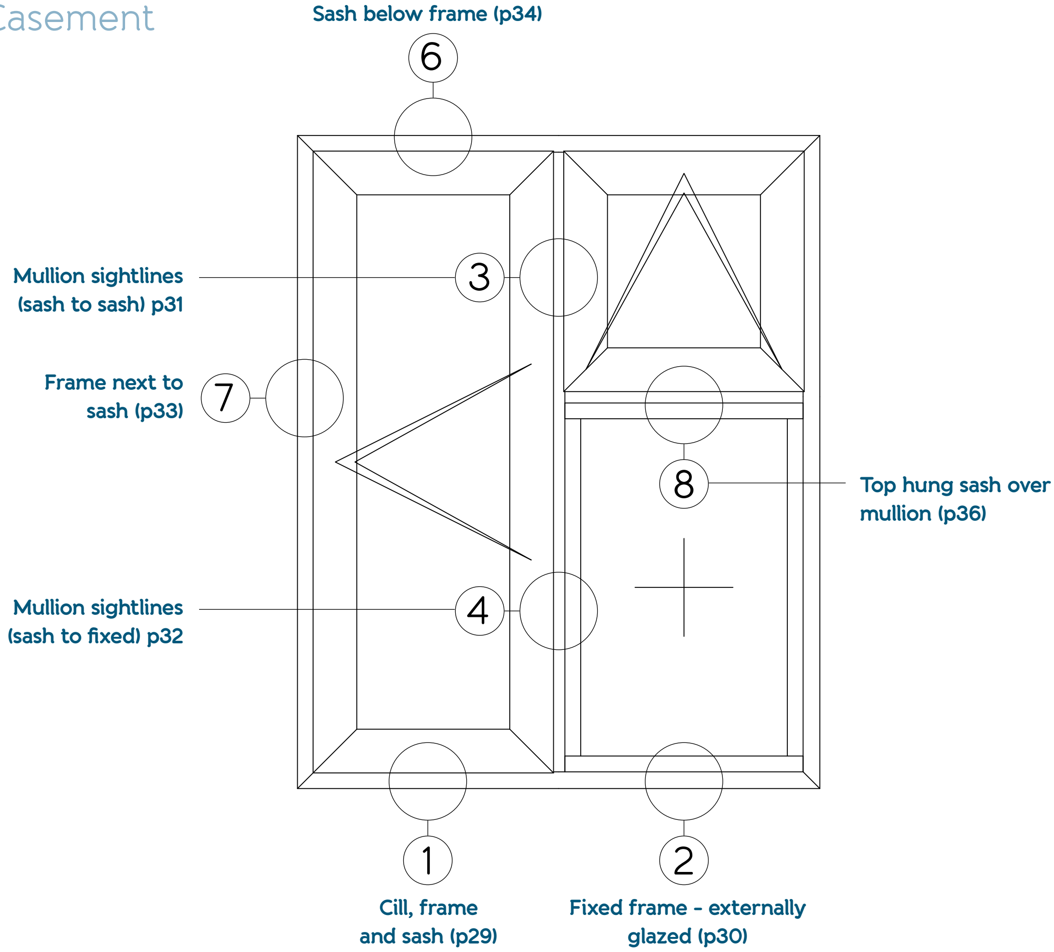

The cavity gasket not only provides an internal seal for the window, but more importantly, is a critical component for reducing the flow of air between the frame and the sash. This improves the thermal performance of the window.

## Fixed frame

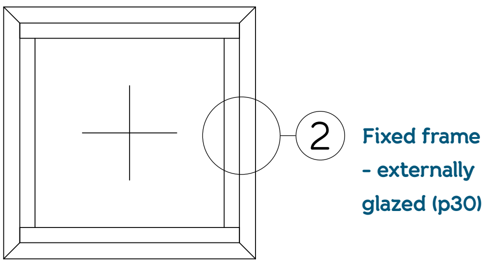


# Technical Drawings

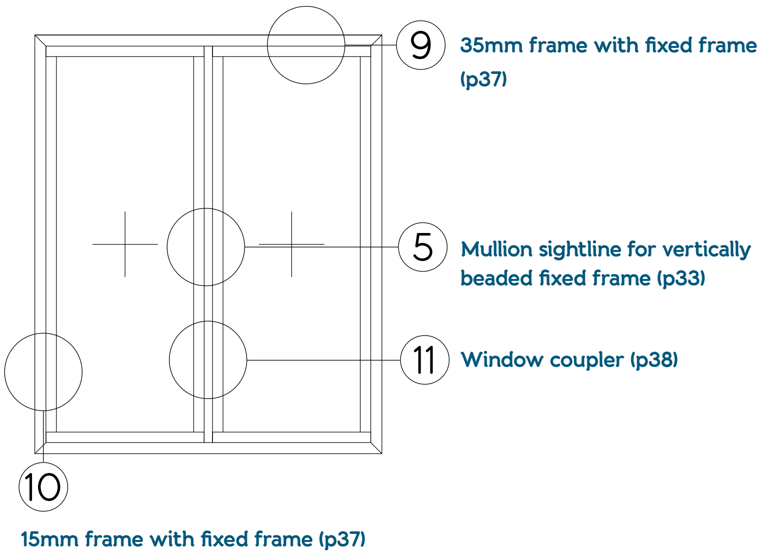
## Awning and Casement



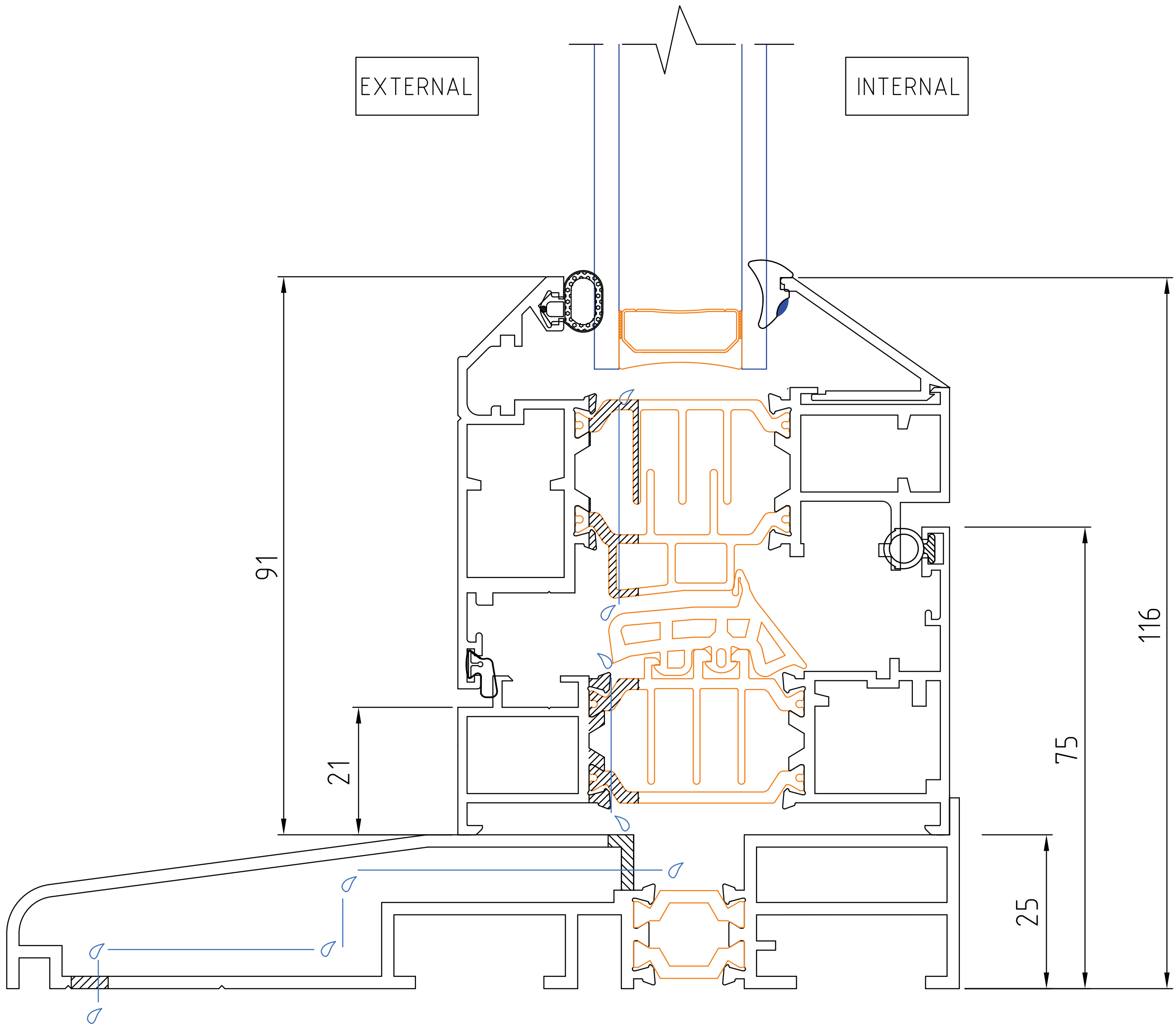

## Fixed

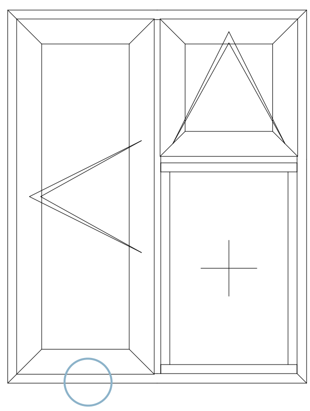



## Mulllion sightlines for fixed frames

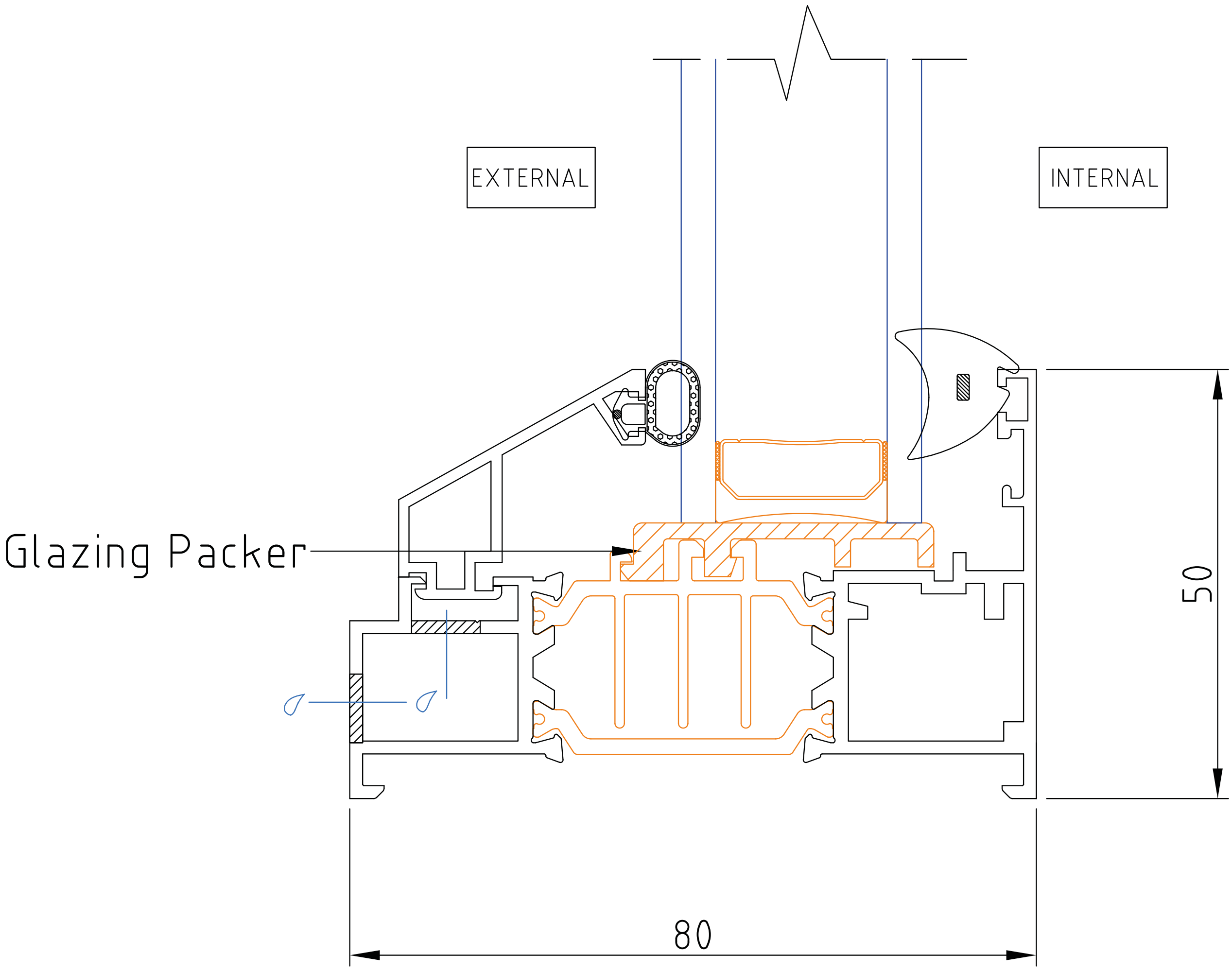


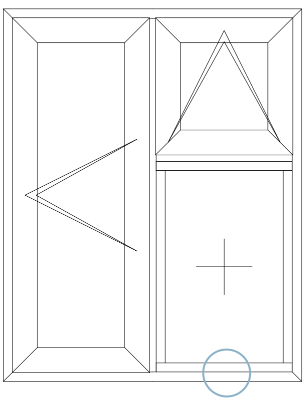
## 1 Cill, frame and sash



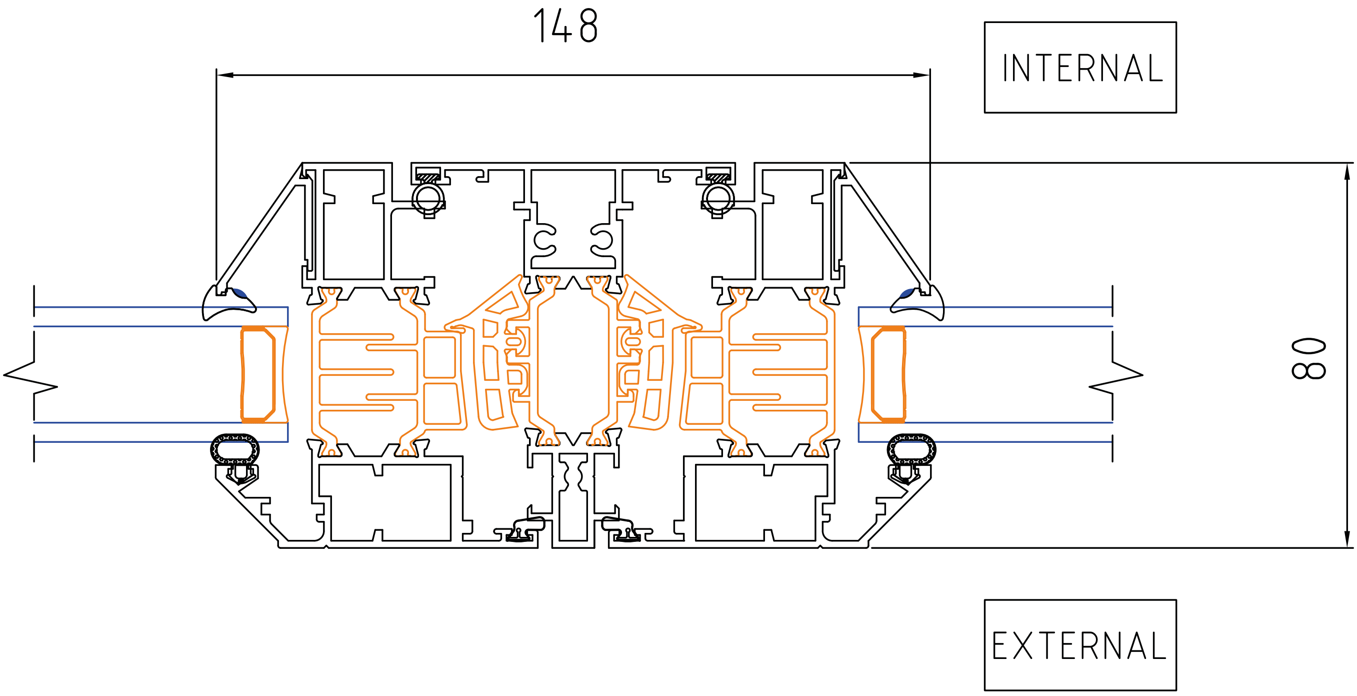



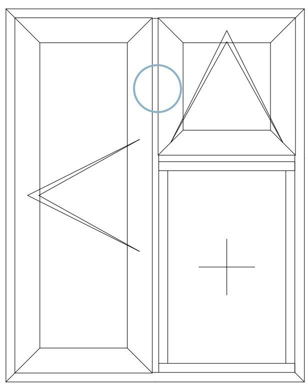
2 Fixed frame – externally glazed



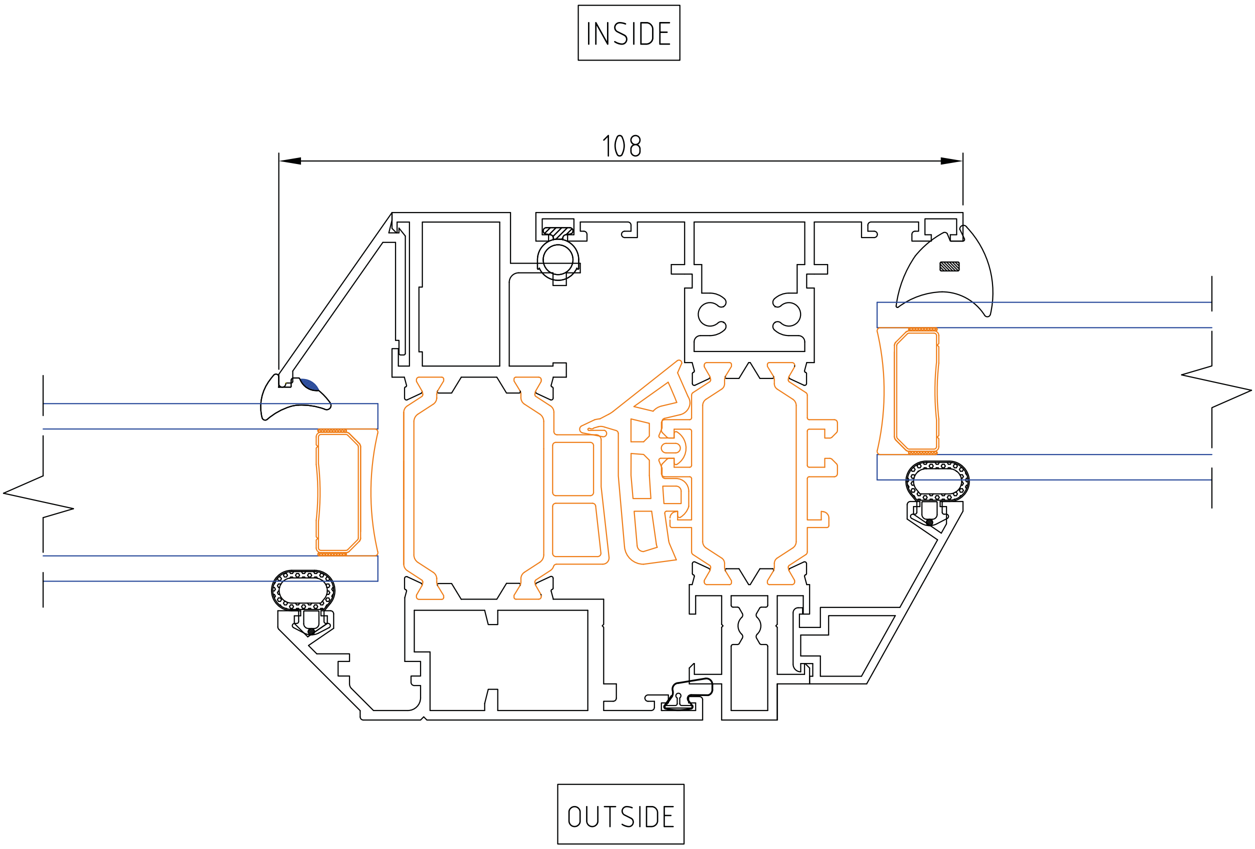



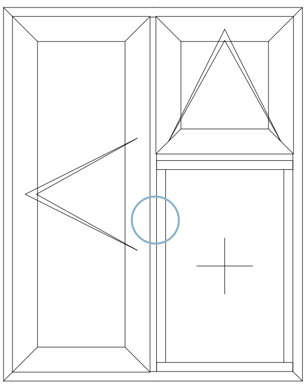
## 3 Mullion sightlines - Sash to sash



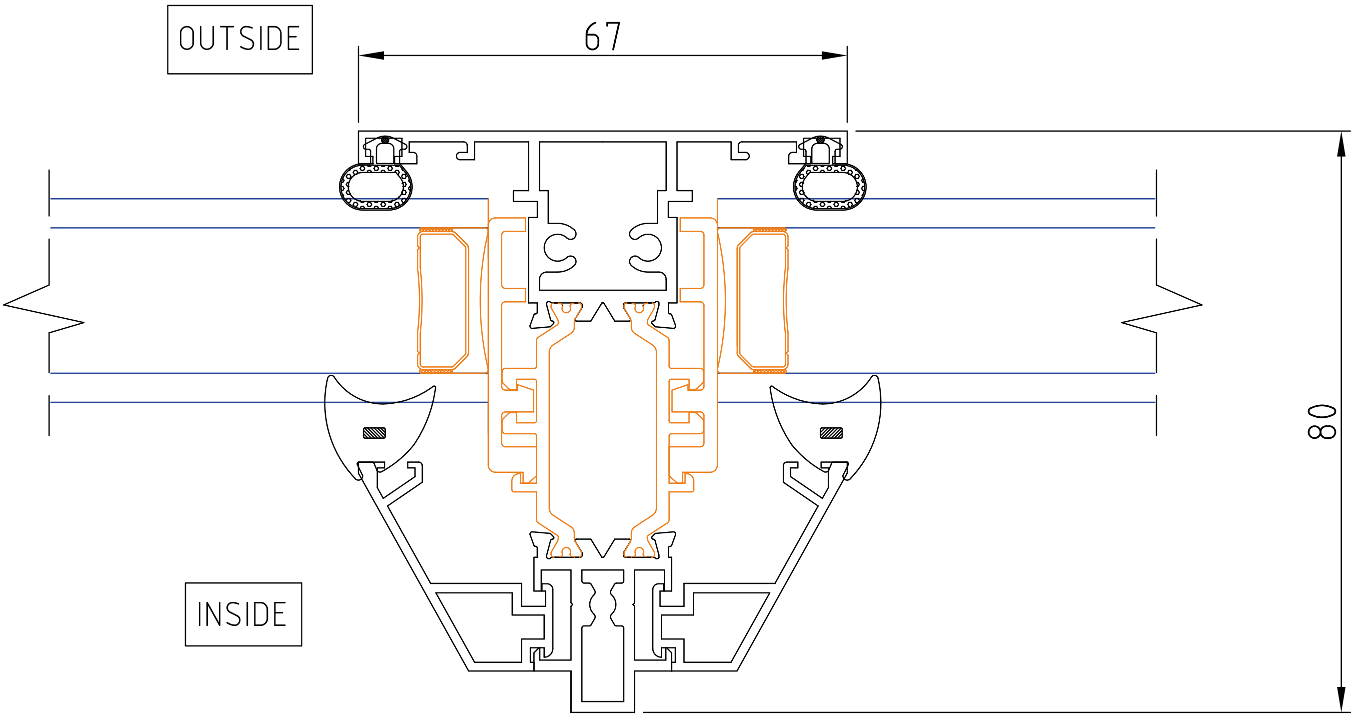



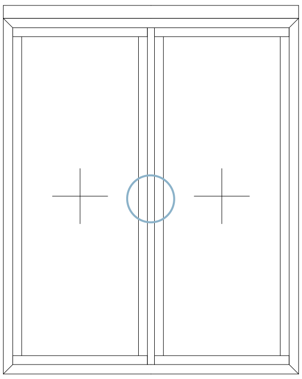
## 4 Mullion sightlines – Sash to fixed



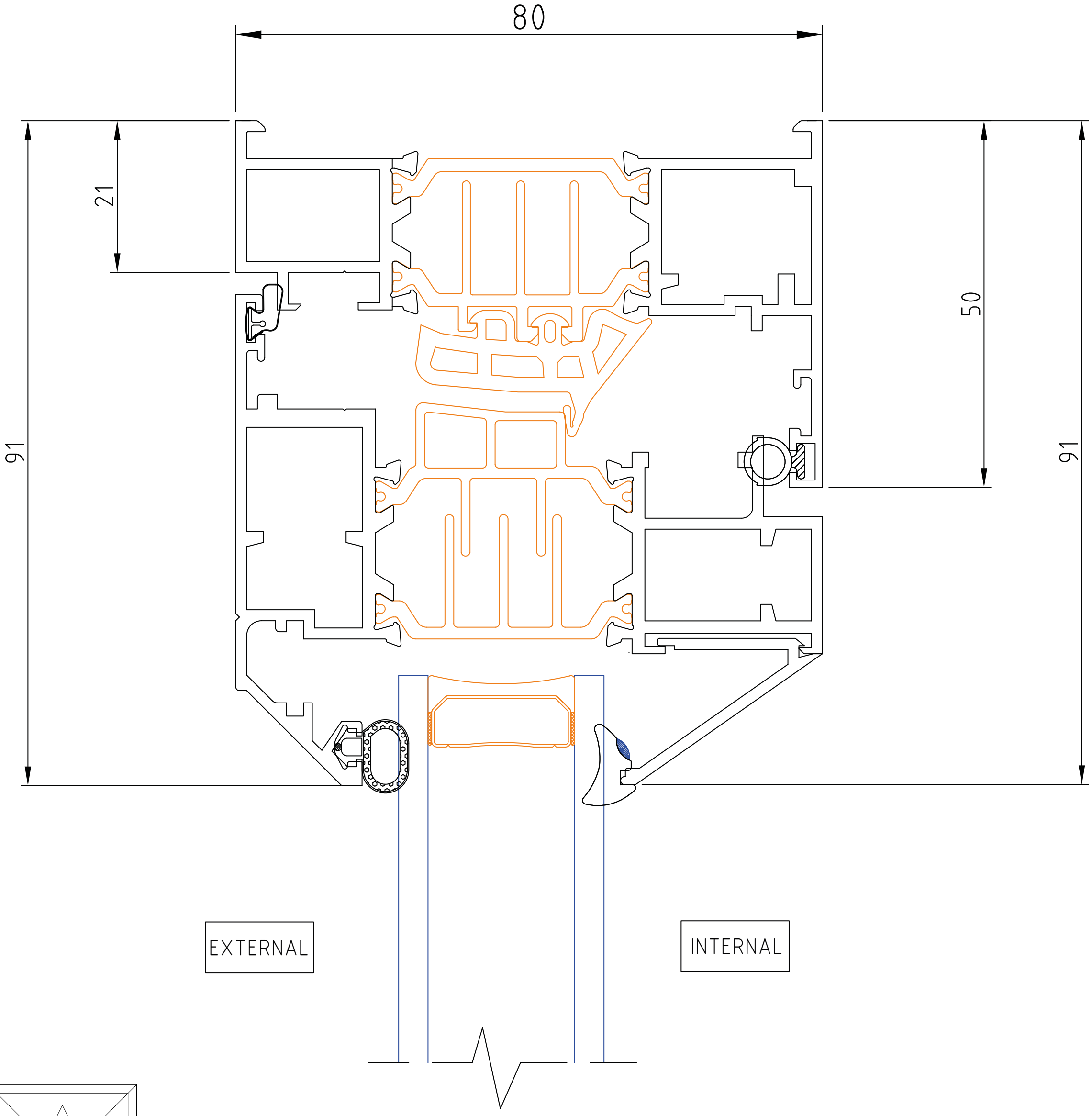



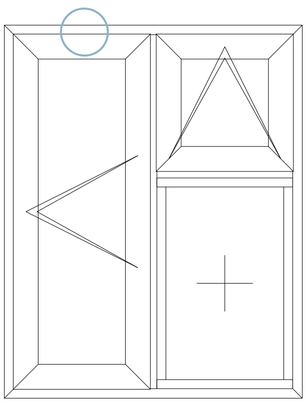
## 5 Mullion sightlines for internally beaded fixed frames



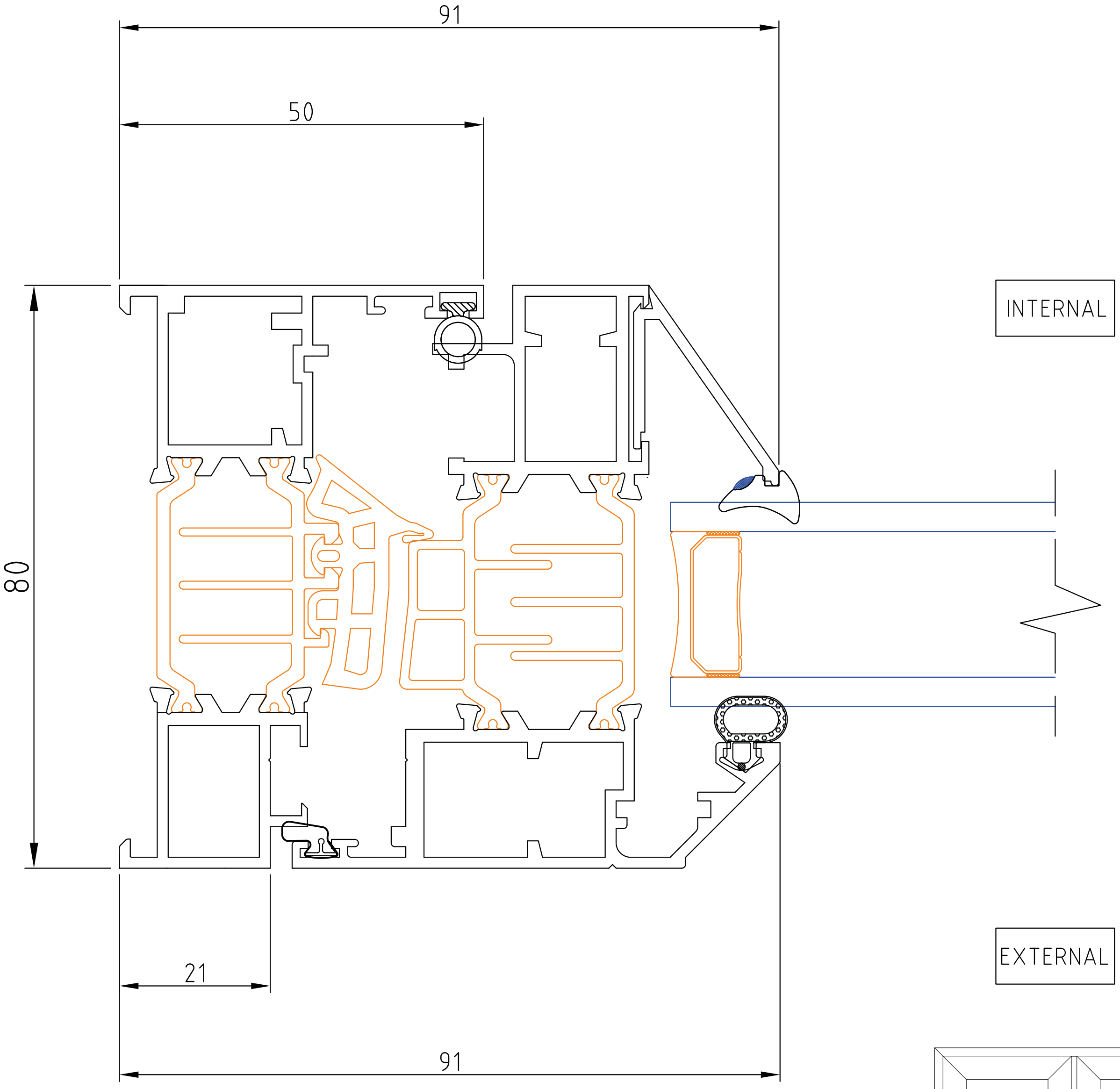



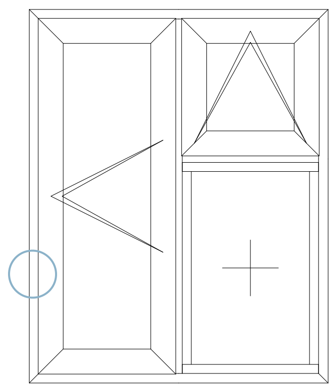
## 6 Sash Below Frame



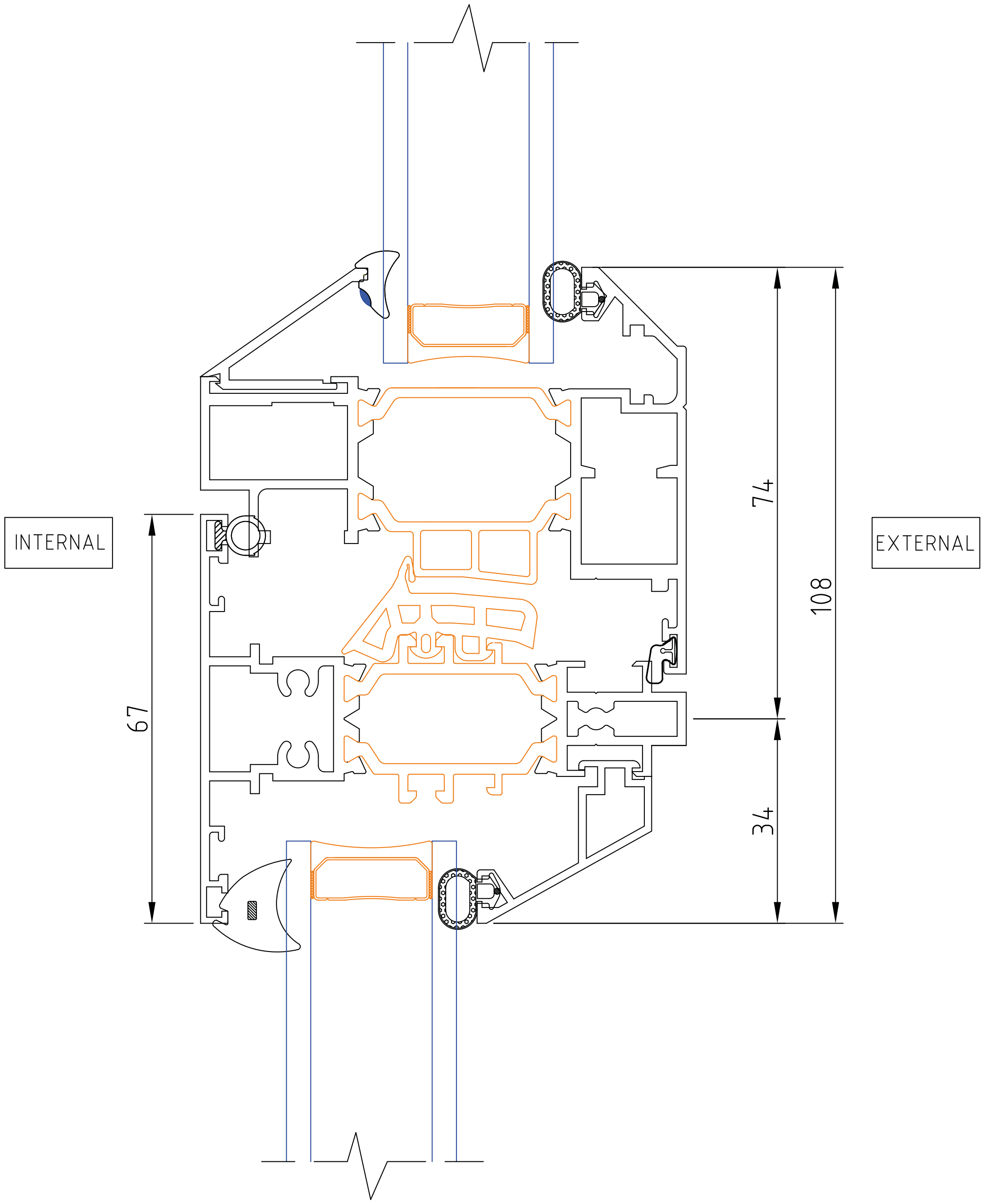



## 7 Frame Next to Sash



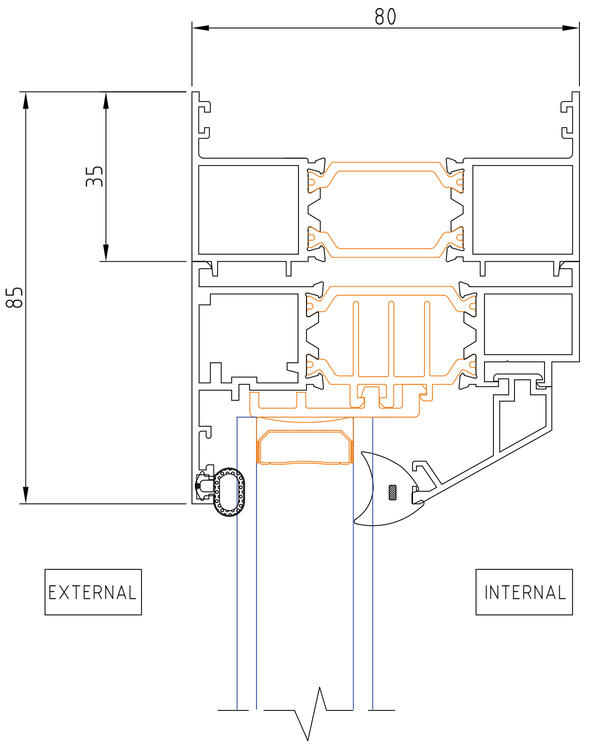
## 8 Top Hung Sash over Mullion



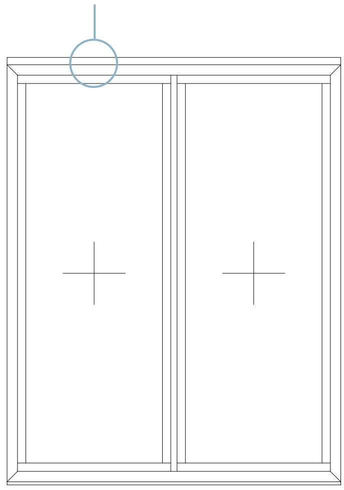



origin

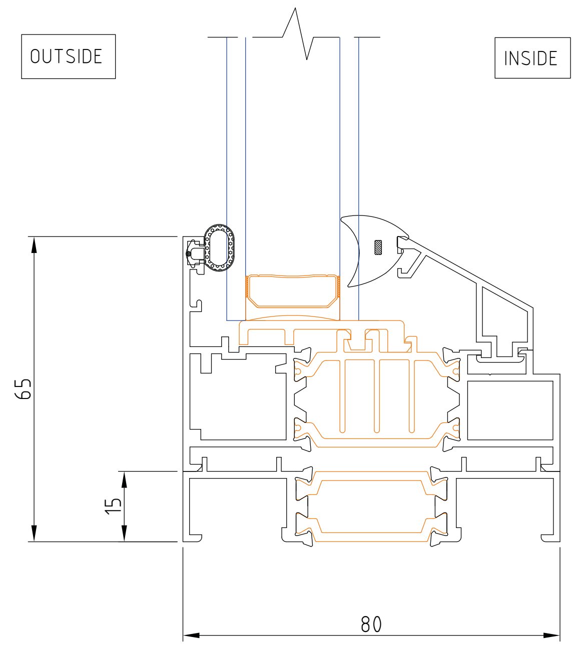
## 9 35mm frame extension



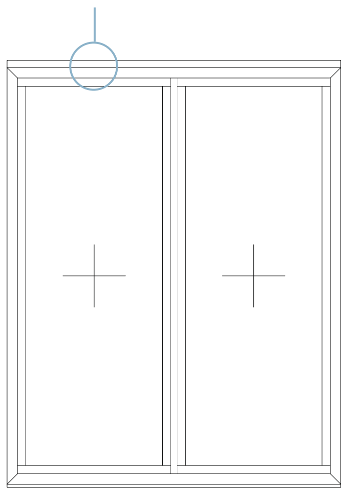

**35mm frame extension with fixed frame**



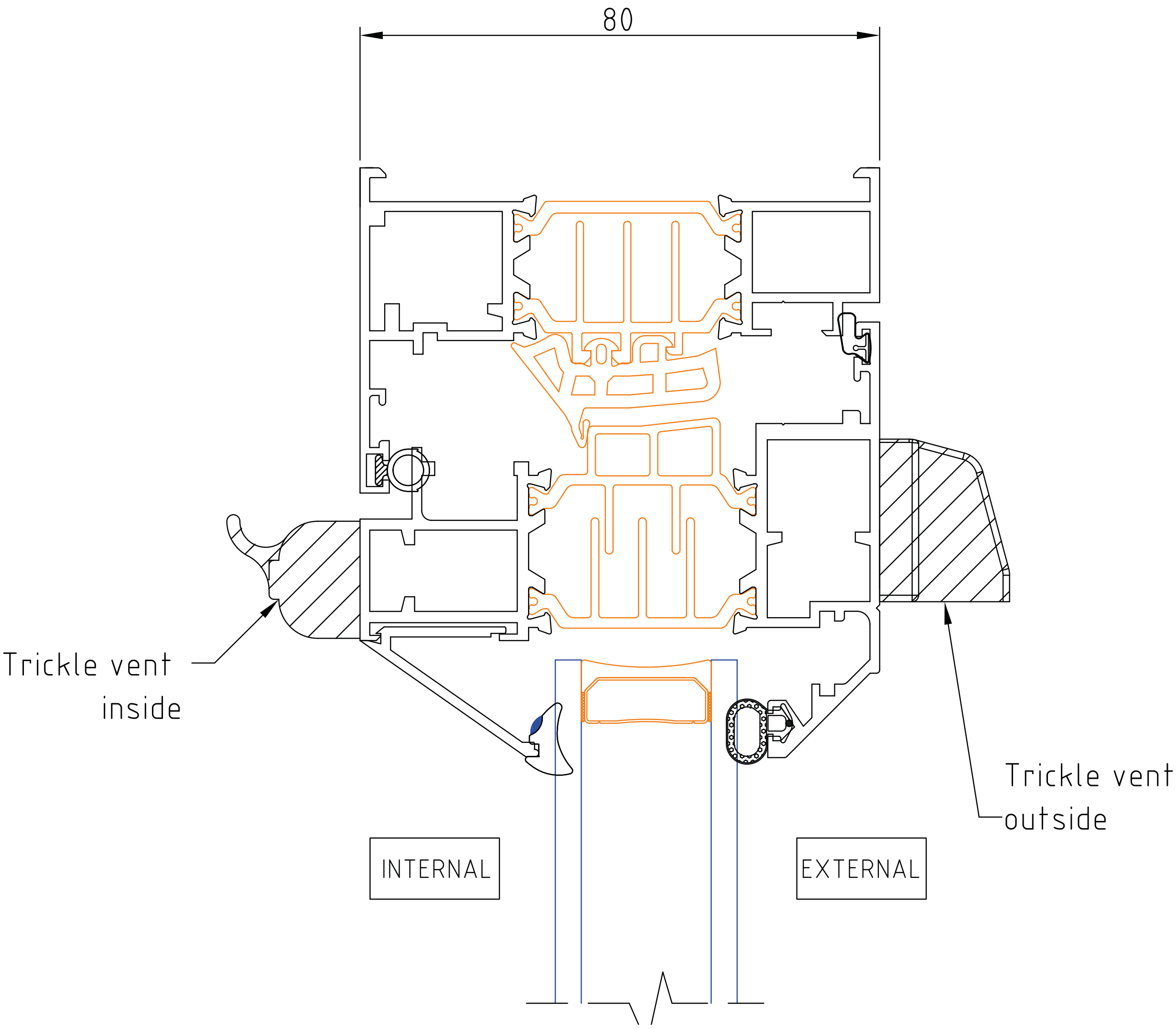
## 10 15mm frame extension



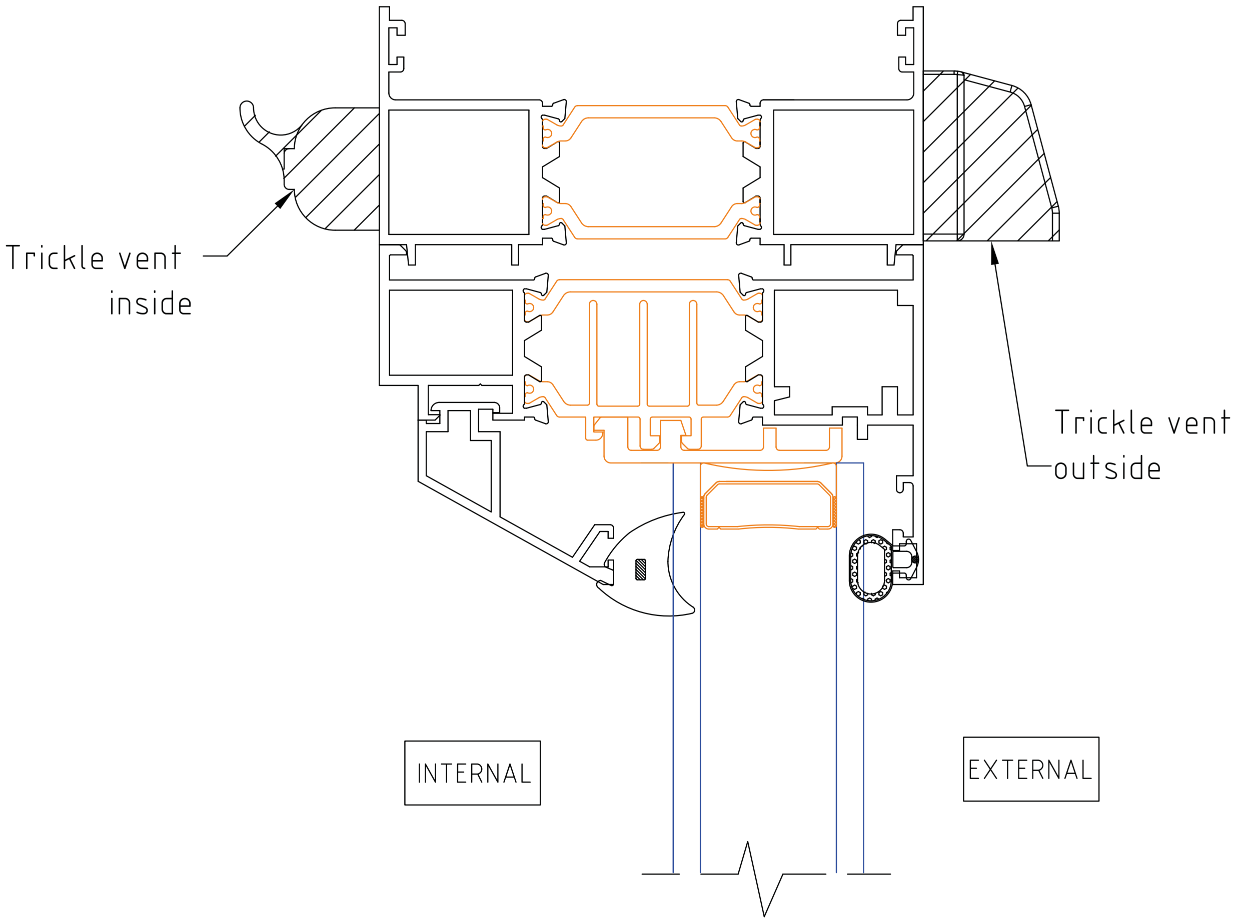

**15mm frame extension**



## 10 Trickle vent – through sash



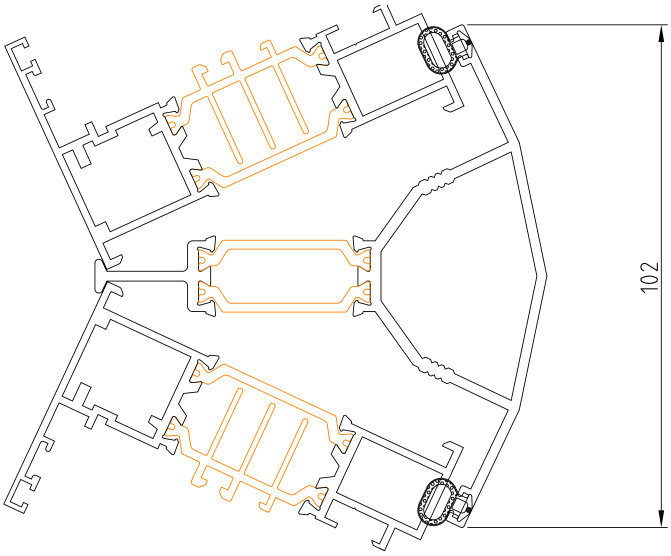
## 11 Trickle Vent - through 35mm frame extension



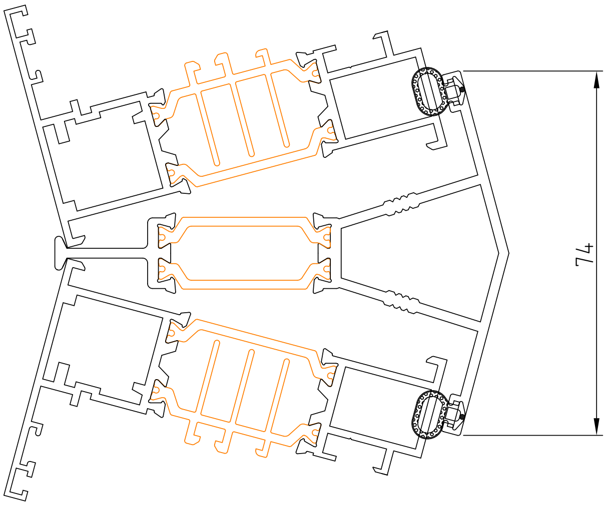
12

## Variable bay mullion

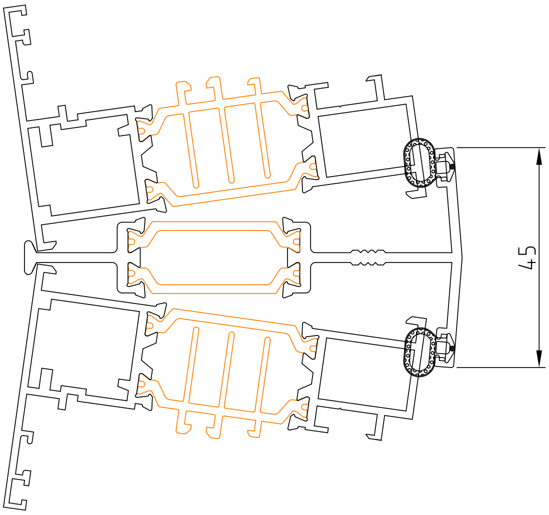
Internal angles: 117° – 138°



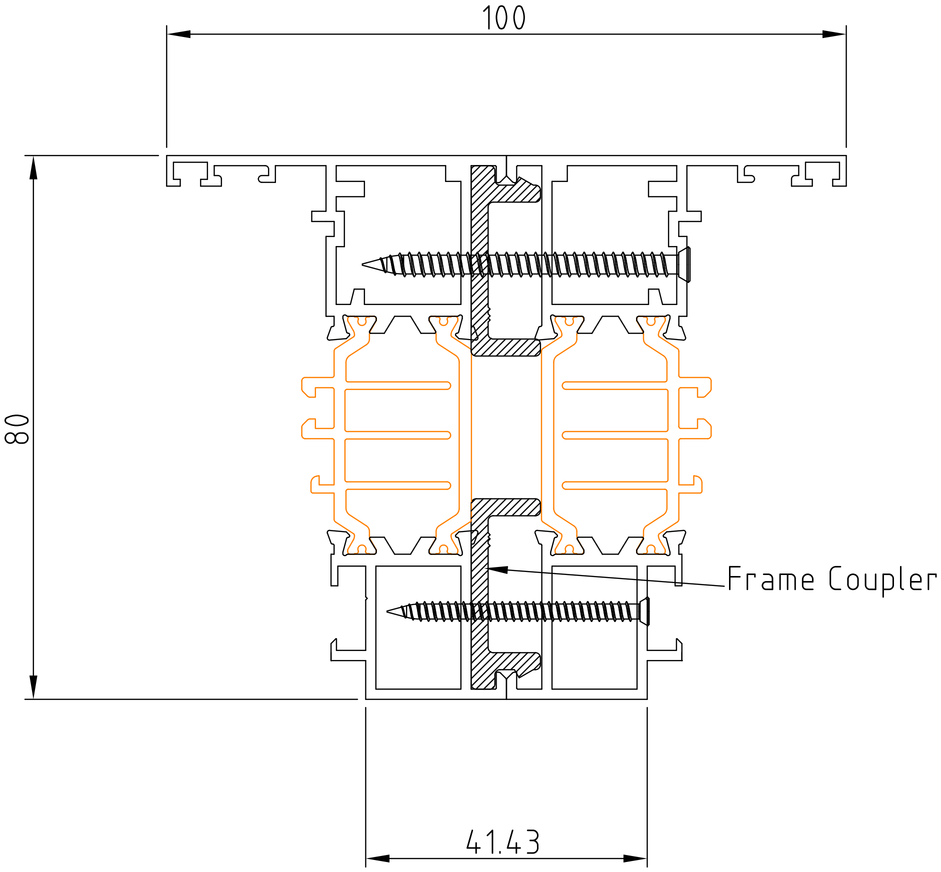

Internal angles: 138° – 159°

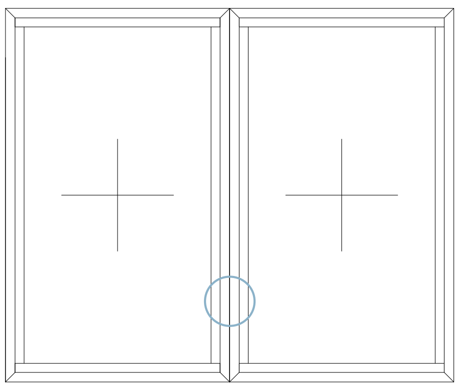



Internal angles: 159° – 175°

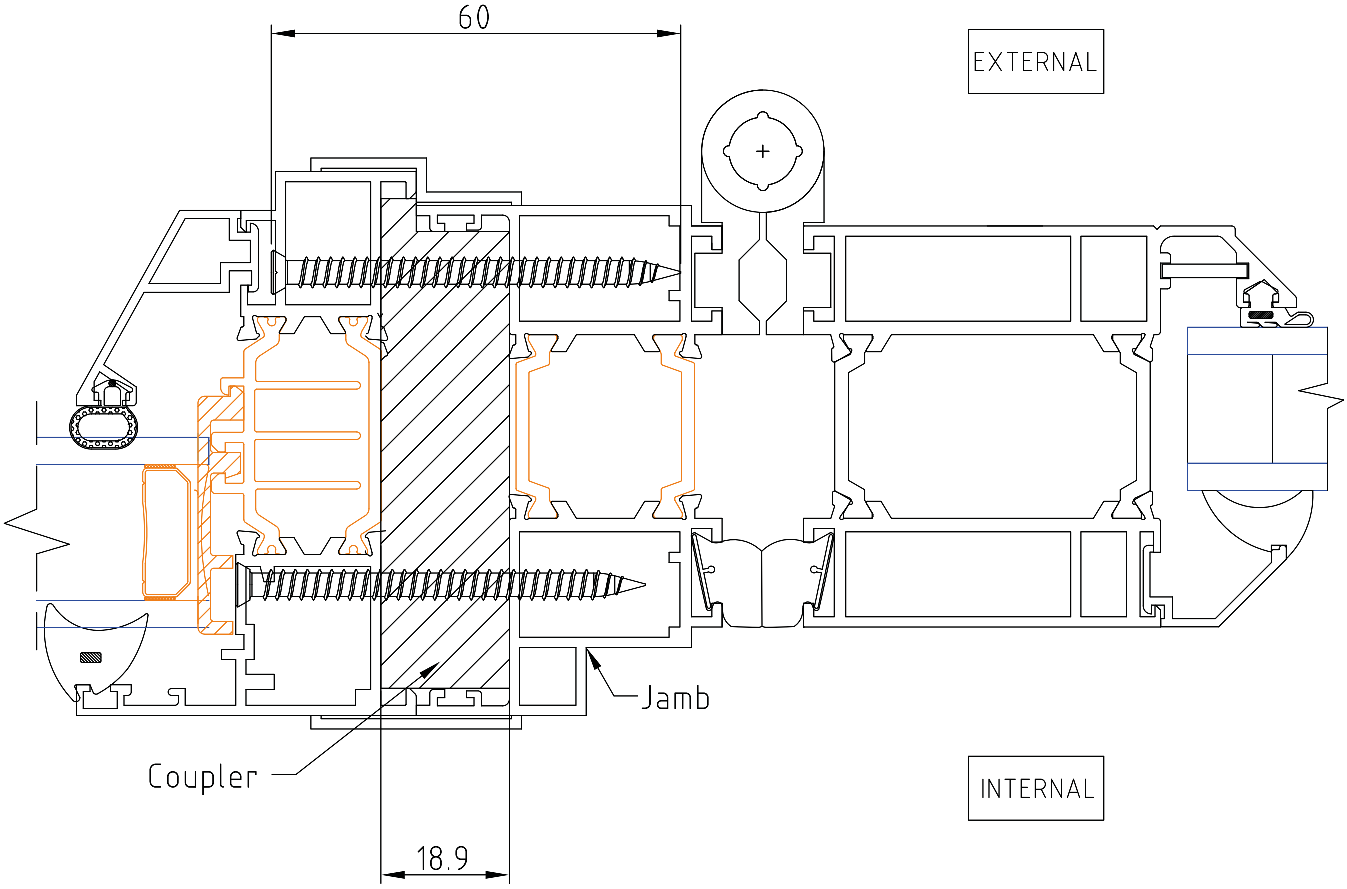


## 13 Window coupler

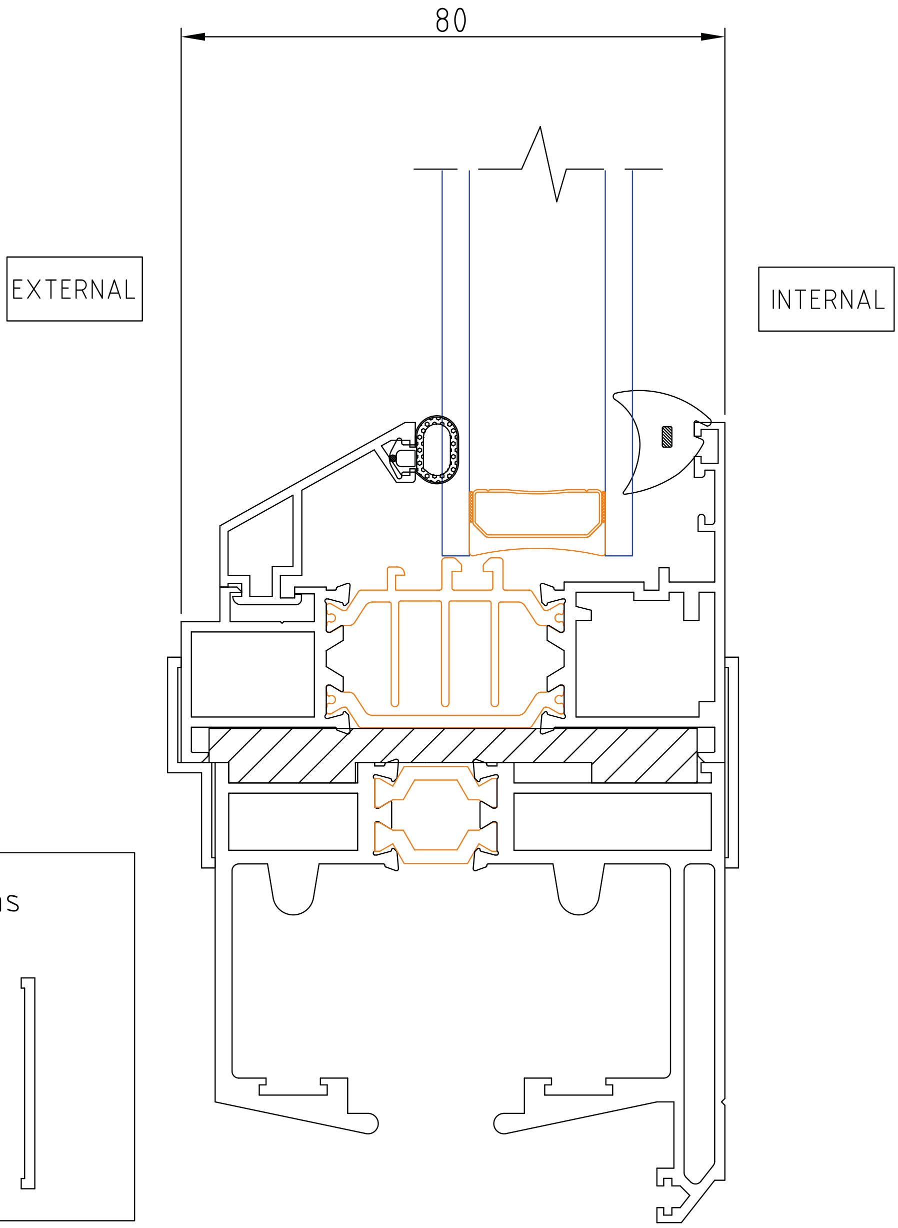


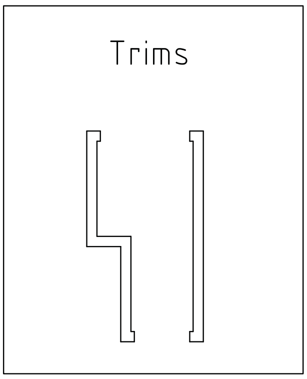



## 14 Window to door jamb coupler

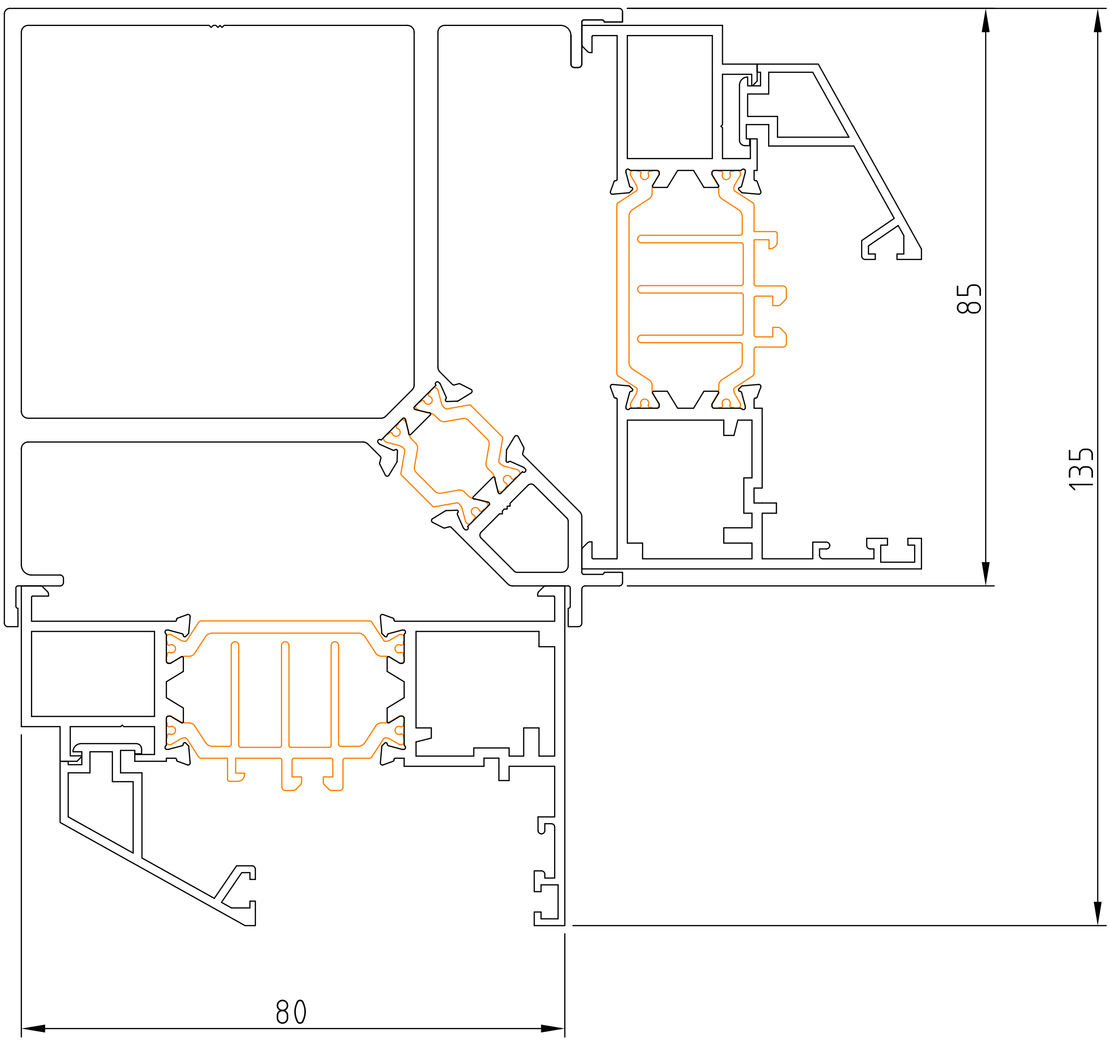


## 15 Window to door track coupler

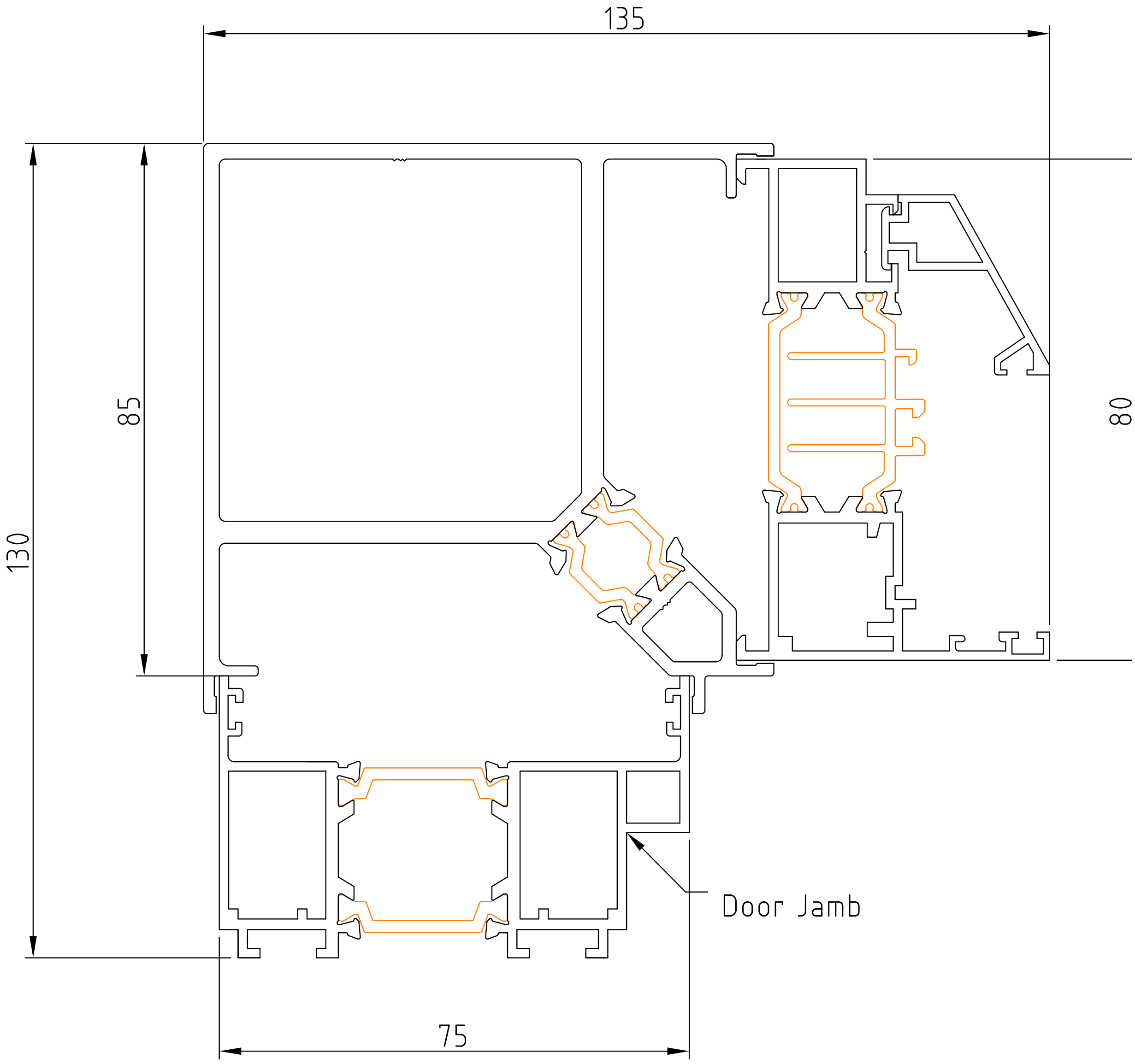


## 16 Window to window corner post



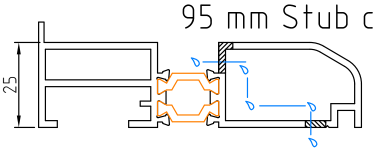
## 17 Window to door corner post



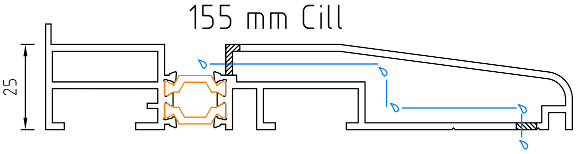
# 18 Cills, bead and trim

*The 95mm Stub cill can only be prepared with concealed drainage if the water can drain away towards the outside of the reveal. There must be a gap of at least 20mm between the drainage hole and the substrate in order to ensure the water can drain effectively. The substrate must be sloped to ensure the water doesn't drain back into the building. It is the installers responsibility to ensure the drainage outlets are clear and free to drain water away from the substrate.

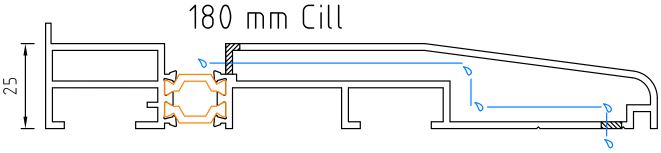
95 mm Stub cill



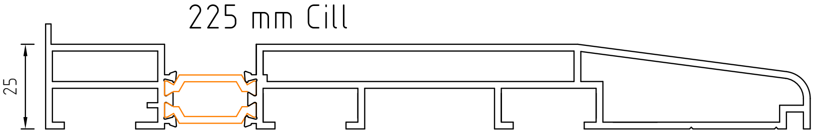

155 mm Cill



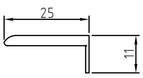

180 mm Cill



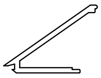

225 mm Cill



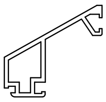

Trim




28mm Sash Bead

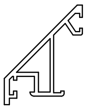


28mm Frame Bead



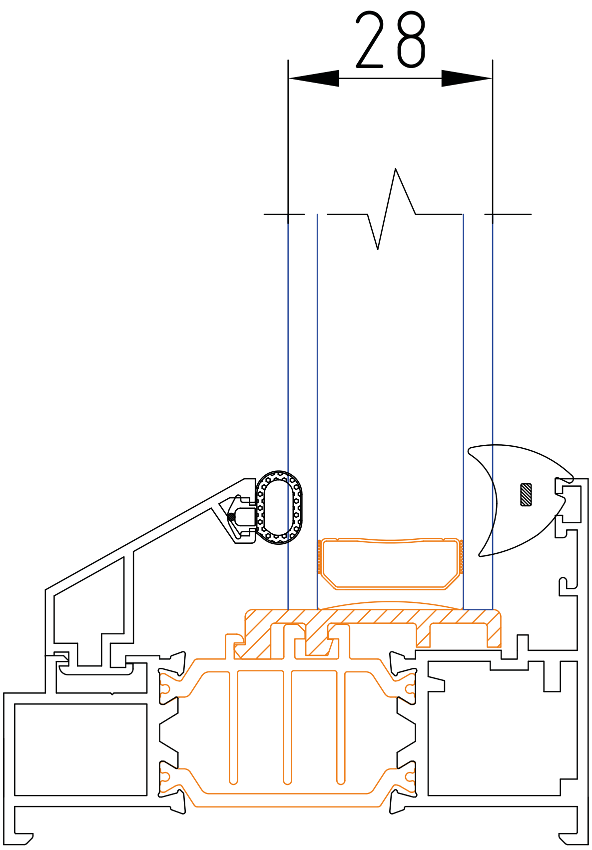
44mm Sash Bead

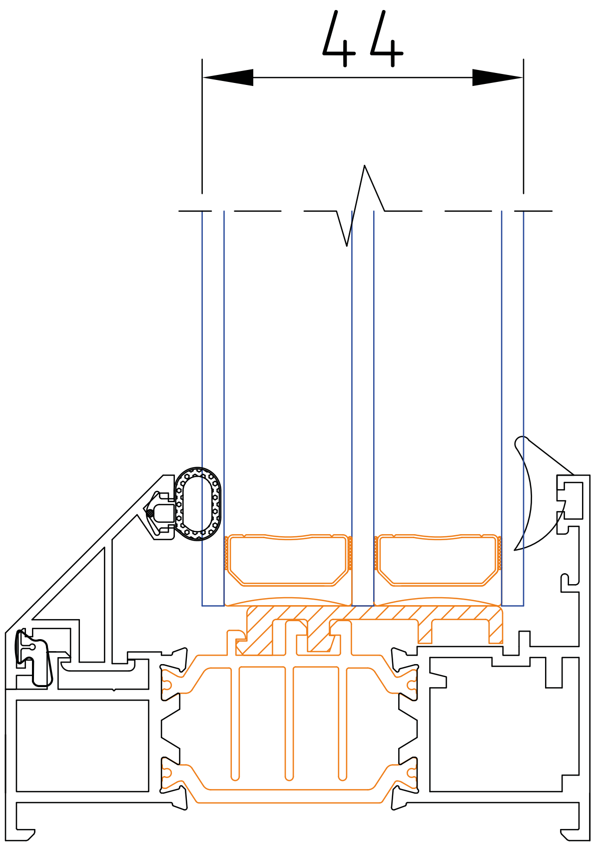
44mm Frame Bead



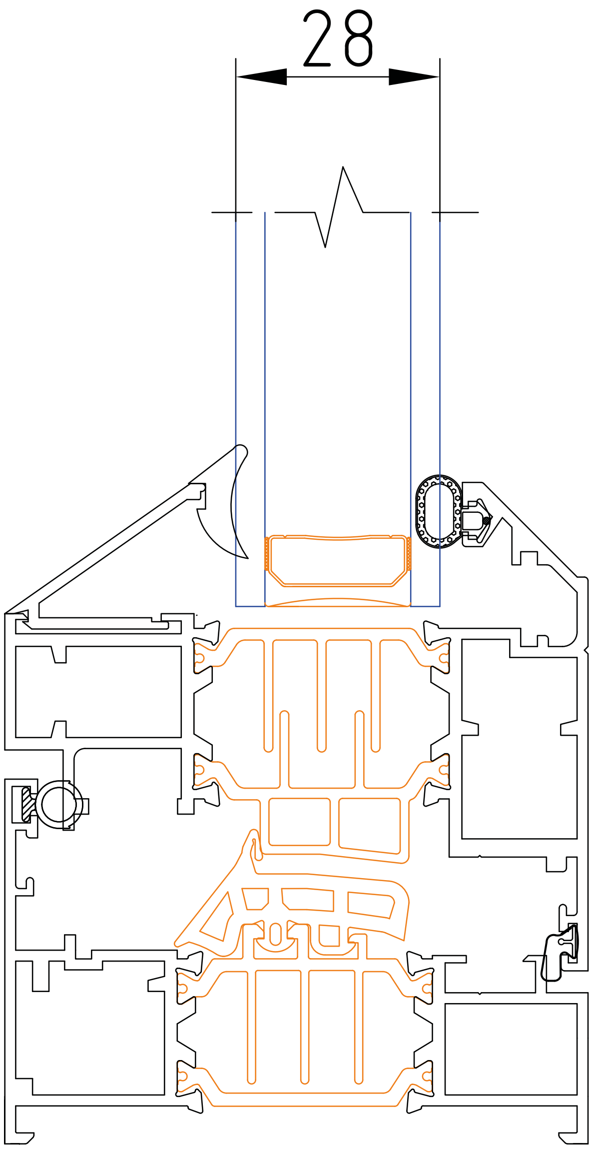
## Glazing options

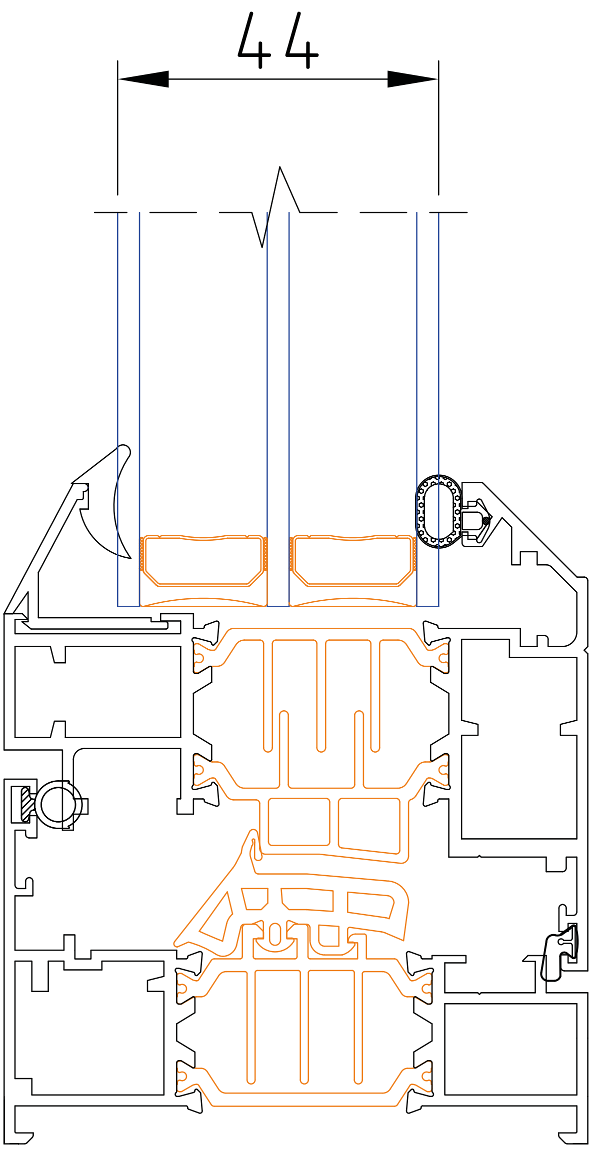
Fixed frame



Frame and sash



# Thermal Certificates & Energy Ratings

Windows

## Thermal Simulation Report

| | |
|---|---|
| PRODUCT | Origin Window |
| SIM - SOFTWARE | Win Iso 2D Pro |
| GLASS CENTRE PANE U/VALUE | 0.5 W/m2K (44mm triple glazing) |
| INSULATION | AEROGEL |

**Thermal Transmittance:**

0.9 W/(m2K)

**Date:** 05/11/2015

origin
DOORS AND WINDOWS

All simulations strictly in accordance with the requirements of ISO 10077-2:2015

Email: info@origin-global.com | Web: www.origin-global.com

Origin Frames Ltd, Sands 10 Industrial Estate, Hillbottom Road, High Wycombe, HP12 4HS

OFDL_3.96.1

Windows

# Thermal Simulation Report

| | |
|---|---|
| PRODUCT | Origin Window |
| SIM - SOFTWARE | Win Iso 2D Pro |
| GLASS CENTRE PANE U/VALUE | 0.5 W/m2K (44mm triple glazing) |
| INSULATION | NONE |

## Thermal Transmittance:

1.1 W/(m2K)

**Date:** 05/11/2015

origin

DOORS AND WINDOWS

All simulations strictly in accordance with the requirements of ISO 10077-2:2015

Email: info@origin-global.com | Web: www.origin-global.com

Origin Frames Ltd, Sands 10 Industrial Estate, Hillbottom Road, High Wycombe, HP12 4HS

OFDL_3.97.1

Windows

# Thermal Simulation Report

| | |
|---|---|
| PRODUCT | Origin Window |
| SIM - SOFTWARE | Win Iso 2D Pro |
| GLASS CENTRE PANE U/VALUE | 1.070 W/m2K (28mm double glazing) |
| INSULATION | NONE |

**Thermal Transmittance:**

1.5 W/(m2K)

**Date:** 05/11/2015

origin

DOORS AND WINDOWS

All simulations strictly in accordance with the requirements of ISO 10077-2:2015

Email: info@origin-global.com | Web: www.origin-global.com

Origin Frames Ltd, Sands 10 Industrial Estate, Hillbottom Road, High Wycombe, HP12 4HS

ISO OFDL_3.98.1

origin

# Window Energy Rating Spec Sheet

The following profiles, beads and glass specifications must be adhered to in order to achieve the associated energy rating.

| BFRC Energy Rating | B-9 |
|---|---|
| Profile Spec | Origin Window Standard (frame:W66-67, Sash:W83-84) |
| Bead | 28mm (ie. double glazed) |
| Glass Spec | 4mm Diamant - 20mm 90% Argon - 4mm Planitherm Total + |
| Spacer Bar | 20mm Swiss Ultimate |

| BFRC Energy Rating | A+6 |
|---|---|
| Profile Spec | Origin Window Aerogel (frame:WA03-04, Sash: WA05-06) |
| Bead | 28mm (ie. double glazed) |
| Glass Spec | 4mm Diamant - 20mm 90% Argon - 4mm Planitherm Total + |
| Spacer Bar | 20mm Swiss Ultimate |

| BFRC Energy Rating | A+9 |
|---|---|
| Profile Spec | Origin Window Standard (frame:W66-67, Sash:W83-84) |
| Bead | 44mm (ie. triple glazed) |
| Glass Spec | 4mm Diamant - 2x16mm 90% Argon - 2x4mm Planitherm Total + |
| Spacer Bar | 2 x 16mm Swiss Ultimate |

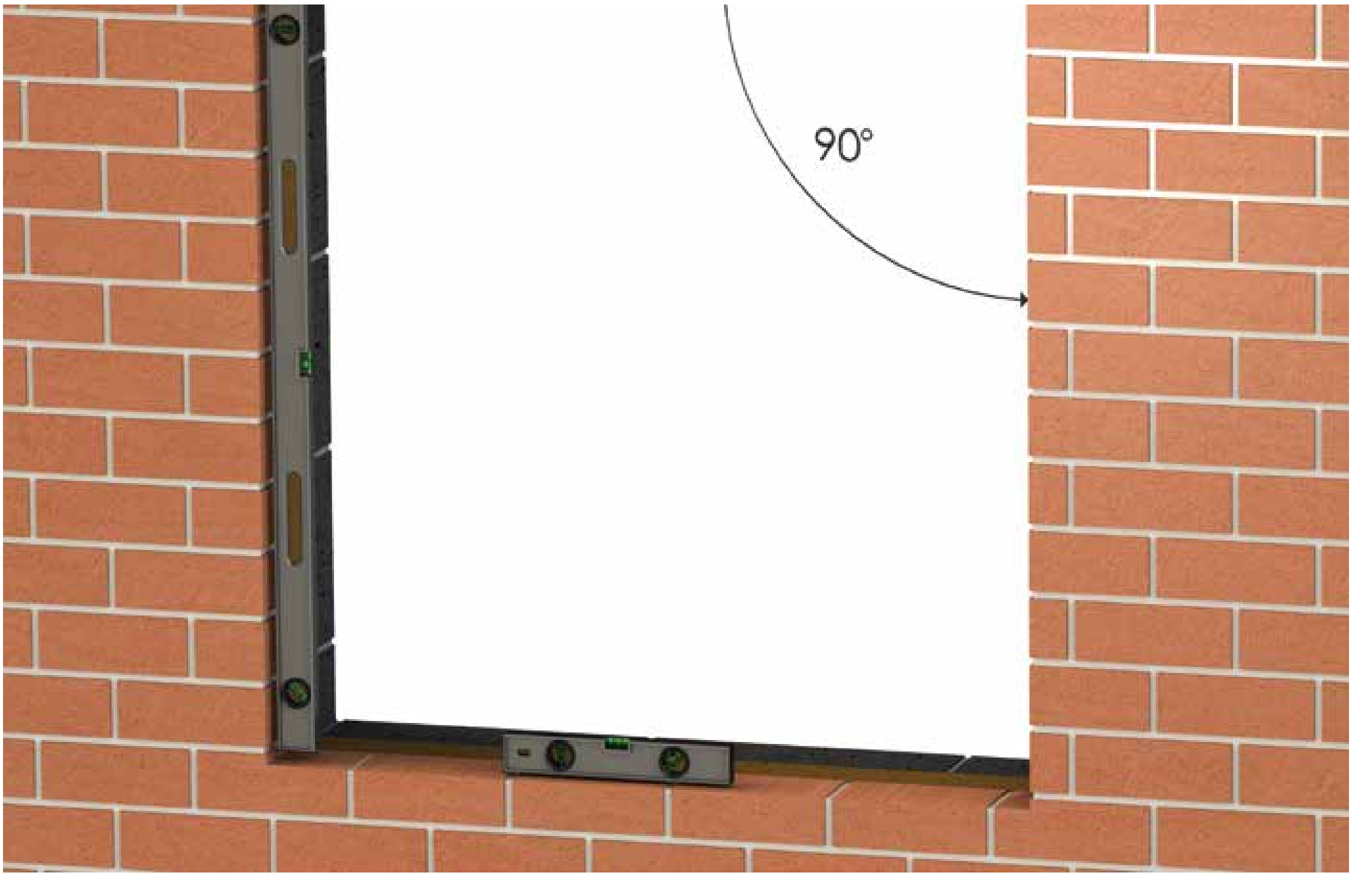
| BFRC Energy Rating | A++ |
|---|---|
| Profile Spec | Origin Window Aerogel (frame:WA03-04, Sash: WA05-06) |
| Bead | 44mm (ie. triple glazed) |
| Glass Spec | 4mm Diamant - 2x16mm 90% Argon - 2x4mm Planitherm Total + |
| Spacer Bar | 2 x 16mm Swiss Ultimate |

OFDL_5.32.2

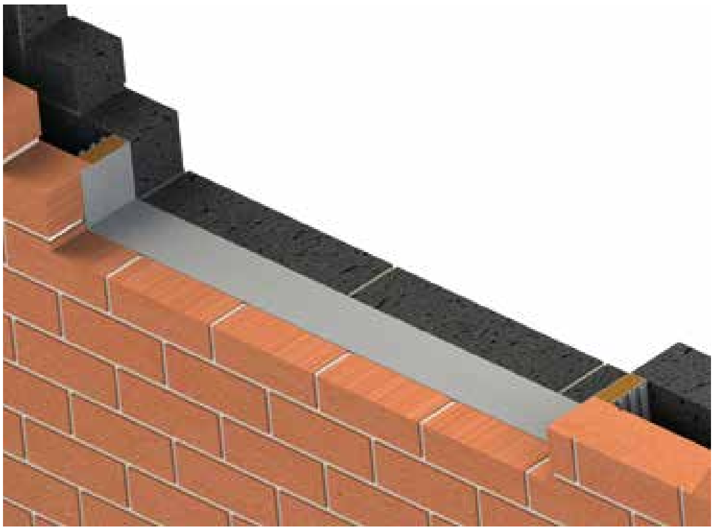
origin

# Installation Guide

## Apertures




Open cavities discovered between the inner and outer skins of brick or block work should be bridged or closed with an insulation material in accordance with the local building authority.



### Installation

Windows should be installed in the aperture without twisting, racking or distorting.

# 1. Frame Fixing

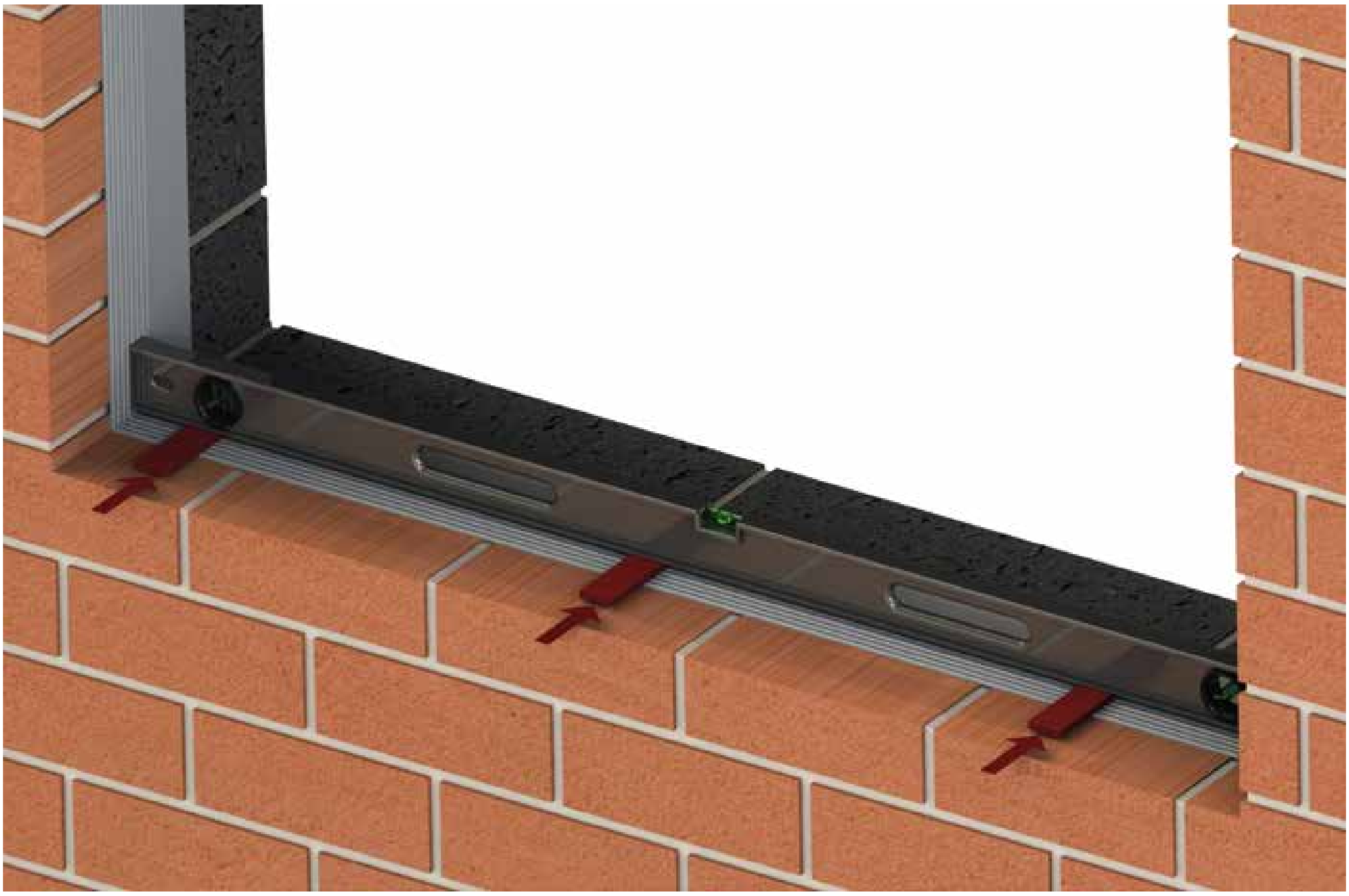


FIG 1

Measure the opening, checking it fits with all measurements on your Origin paperwork.

**1.1.** Place the correct frame packers spaced at a maximum of 500mm apart along the length of the opening to create a level, well supported platform for the track/cill to sit. (Fig.1)

## 1. Frame Fixing (continued)

FIG 2

- **1.2.** Using an appropriate silicone sealant, fill the ends of the cill section & install the end caps. (Fig.2)
- **1.3.** Place the cill on the pre prepared frame packers and re-check for level. Adjust if necessary. (Fig.2)
- **1.4.** Using a silicone sealant, seal the drainage channels adjacent to the brickwork. (Fig.2)
- **1.5.** Run a bead of sealant along the up-stand of the cill. (Fig.2)

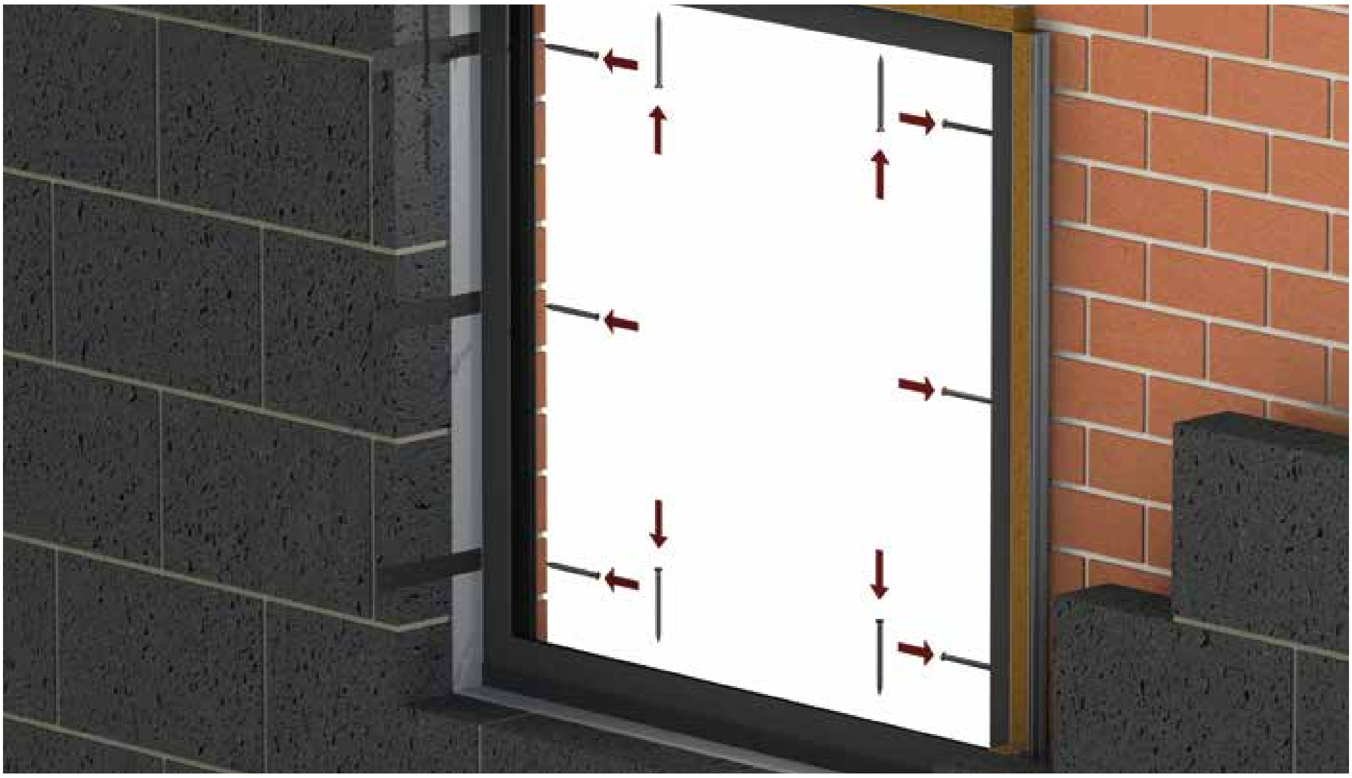


FIG 3

*If using fixing straps, please skip to 1.7.*

**1.6.** Place the window on the cill and secure into position. Wherever practical, all four corners of the frame should be secured as follows:

- Frame fixing should be between 100mm to 150mm from the external corners.
- Fixings should be at no greater than 600mm apart and there should be the minimum of two fixings on each jamb. On windows over 1800mm wide, central head and cill fixings should be provided. (Fig.3)

*Please move to 2.1.*

**1.7.** Secure the fixing strap into the rebate of the window with the screws provided. All four corners of the frame should be secured wherever practical.

# 2. Glazing

FIG 4

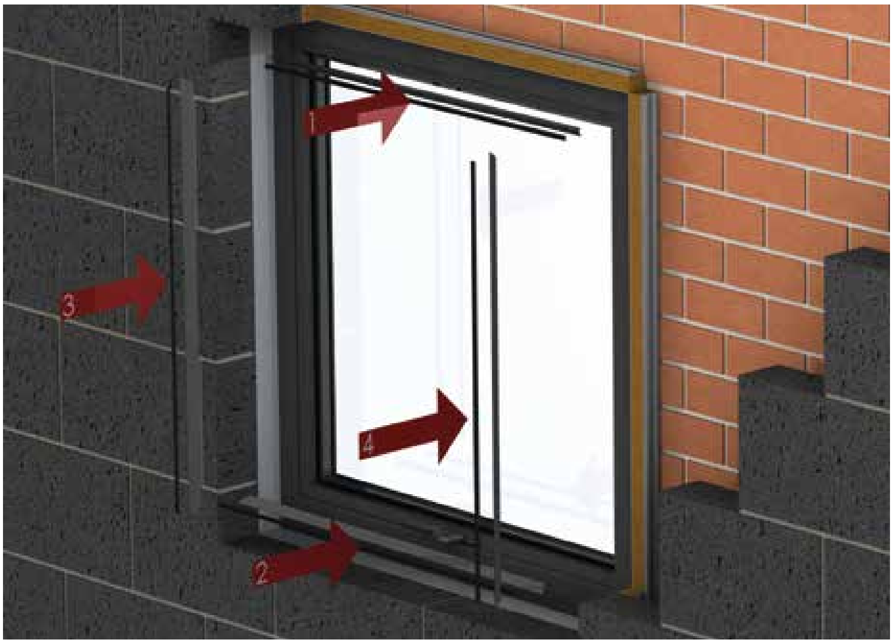



FIG 5

- **2.1.** All insulated glass units should be examined for damages and defects before installation. (Fig.4)
- **2.2.** Close the window and fully engage the lock. (Fig.4)
- **2.3.** Remove the 4 glazing beads. (Fig.4)
- **2.4.** Place the required packers in the bottom of the glazing chamber spaced approximately 50mm in from each corner at 90° to the window. (Fig.4)
- **2.5.** Install the glass on the packers, taking care not to pinch the gasket on the outside. (Fig.4)
- **2.6.** For safety, always ensure the top bead is installed first, followed by the bottom and then the side beads. (Fig.5)
- **2.7.** Cut the glazing wedge gasket to length and insert between the glass unit and the glazing bead. (Fig.5)

FIG 6

3.1. Wherever practical, windows should be foam filled to stop air flow around the window and the surrounding aperture. (Fig.6)

3.2. If required, use trims to bridge the gap between the window and the aperture. All trim should be compatible with the material of the frame and should be colour matched where specified. (Fig.6)

3.3. The sealant should be applied against a firm backing so that it is forced against the sides of the joint during application. Best practice is to have insulating foam fill inserted wherever practical. (Fig.6)

# Notes

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