



origin

DOORS AND WINDOWS

# Slimline Window (OW-70) Specification File





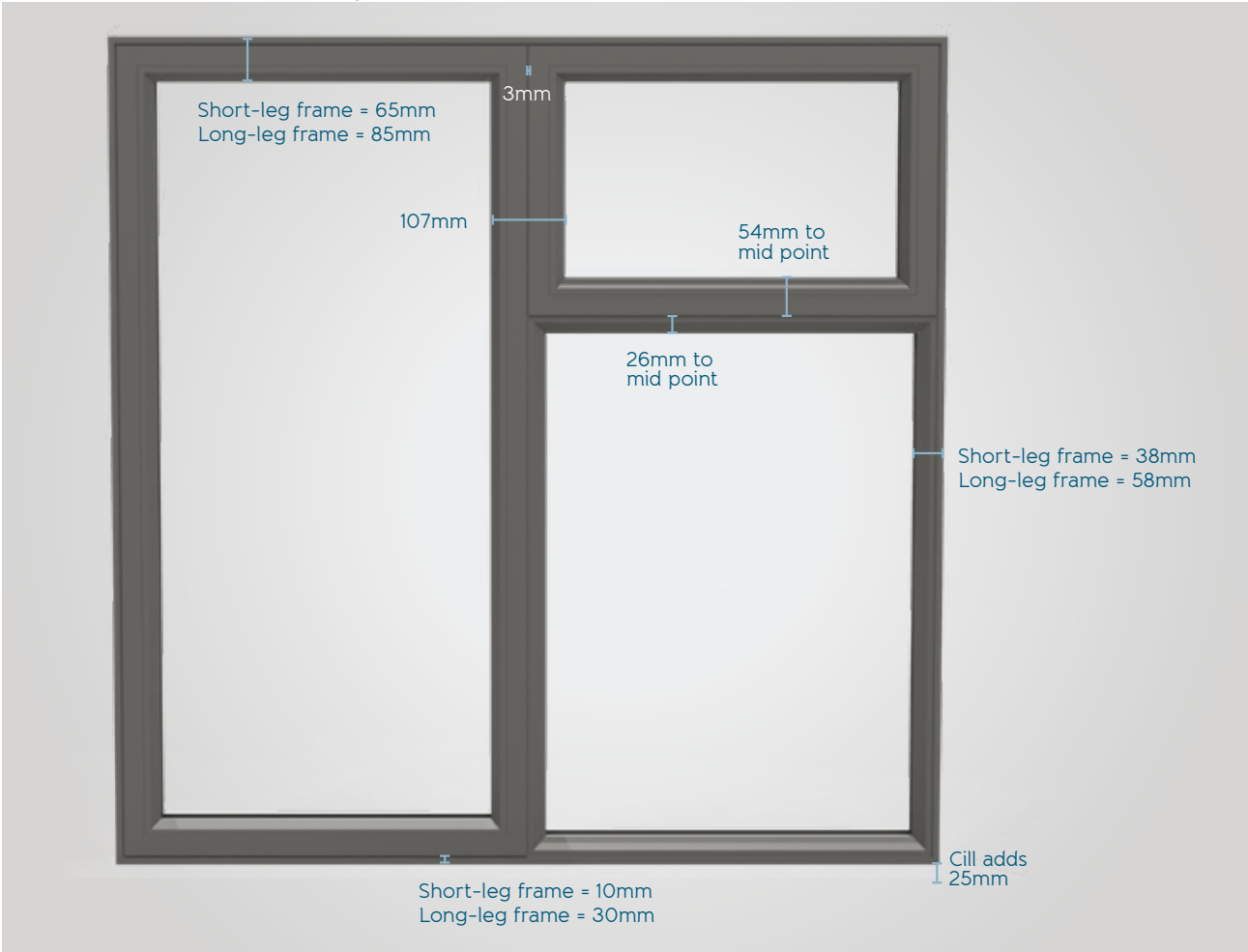
# Contents

Specification Overview	04
Security	08
Optional Extras	09
Window Make-Up	11
Performance and Limitations	12
Popular Configurations	28
Egress Application	29
Size Guidelines	30
Technical Drawings	34
Gaskets	57
Installation Guide	59
Accreditations	65

# Specification Overview

Thermally Broken Aluminium Window

## External view of the OW-70



## Profile Specification

	Short-leg Frame	Long-leg Frame
Frame and Sash Sightline	65mm	85mm

Outer Frame Depth 70mm

Sash Depth 64mm

Mullion and Sash Sightline 80mm

## Features

- ▶ Up to a 20-year guarantee\*
- ▶ Square or chamfered bead option
- ▶ External flush casement
- ▶ Mechanically double crimped corners
- ▶ Nemesis espag locking mechanism

## Options and extras

- ▶ Casement, bay and fixed configurations available
- ▶ Metallic or colour-coded handles
- ▶ Accommodates double and triple glazing, with a 28mm glazing unit size available
- ▶ Open-out, fixed or dummy sash
- ▶ 95, 155, 180 and 225mm cill options available
- ▶ Available in over 150 different RAL colours
- ▶ Colour-coded gaskets are available as an option
- ▶ 35mm frame extender option
- ▶ Restrictor hooks available
- ▶ Egress hardware
- ▶ 2500EA trickle vents available
- ▶ Window-to-window coupling option available
- ▶ Marine grade hinges

\*Guarantee based on location of where the windows will be installed.

Full terms and conditions can be found on the Origin website - [origin-global.com/terms-and-conditions](http://origin-global.com/terms-and-conditions).

origin

4 of our popular colours are available on a 1-week lead time



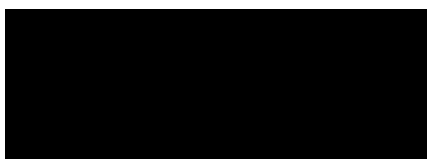
Hipca White (9910G)



Anthracite Grey (7016M)



Slate Grey (7015M)



Jet Black (9005M)

Outside of this, any RAL colour can be selected. These are on a 3-week lead time

For the full range, visit [origin-global.com](http://origin-global.com)



Dual coloured windows operate on a 3-week lead time

## Lead Times

Popular colour casement and fixed windows:	1-week
Special RAL colour casement and fixed windows:	3-weeks
Dual colour casement and fixed windows:	3-weeks
Bay windows* (all colours):	4-weeks

More colours, including woodgrain options, are available on our 'Your Lead Time, Not Ours' delivery promise on the OW-80 Premium Window range

\*Bay windows are only available on the Long-leg frame

## Drainage cap colours

Popular Colour	Drainage Cap Colour	Code
9007M (Dark Silver Metallic)	No. 38 Grey	C01349
7021M (Black Grey)	Dark Grey	C01350
9005M (Jet Black)	Black	C01163
7015M (Slate Grey)	Dark Grey	C01350
9006M (Light Silver Metallic)	Cement Grey	C01352
9910G (Hipca White)	White	C01353
7016M (Anthracite Grey)	Dark Grey	C01350

# Security

The OW-70 has been designed with security in mind. Being PAS 24:2016 and Secured by Design accredited, we have ensured that despite its slim nature, it still possesses components of the highest quality to ensure its security.

The hinge guards feature anti-slip and lock technology, and are fitted as standard along the hinged side of the window. The bespoke Nemesis lock, which sits inside the sash, features a robust offset handed die-cast gearbox and bi-directional twin cam locking. It also incorporates stainless steel faceplate drive bars and mushroom cams to enhance both its appearance and longevity.

For more information about Secured by Design, please see page 66.





# Optional Extras

## Restrictor Hooks

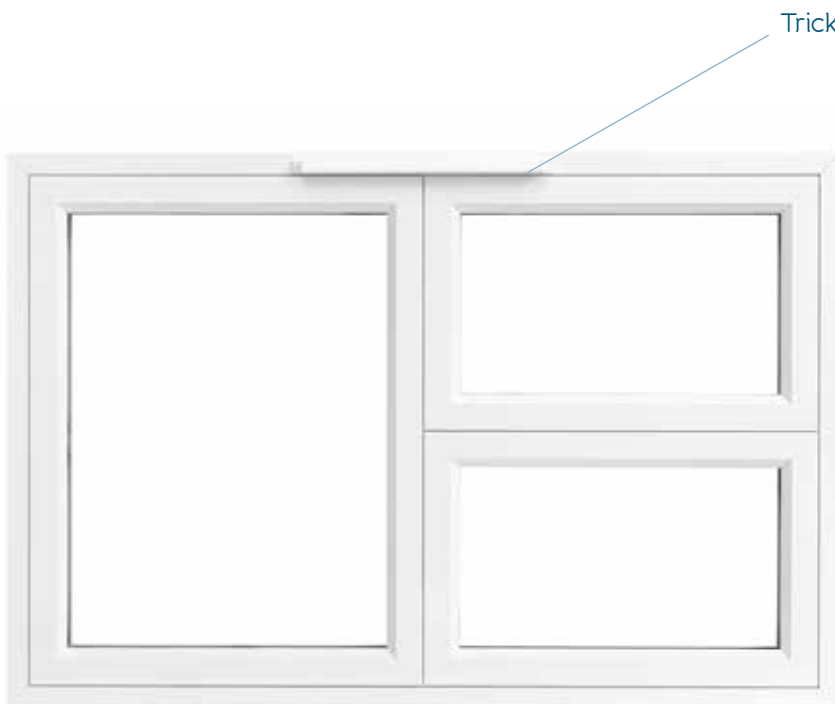
Restrictor hooks limit the sash opening to 70mm, but can be unhooked to allow the window to open fully.



## Trickle Vents

Trickle vents can be fitted through the long-leg frame or through a 35mm frame extender.\*

See page 43 for cross-section drawings.



Trickle vents

## Additional Information

### England and Wales:

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

### Scotland and Northern Ireland:

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

## Handles

The inline window handle is available in six metallic finishes or you can opt for a colour-coded offset handle.

### Inline handle range



Brushed  
(H-094)



Satin  
(H-094)



Anthracite Grey  
(H-094)



Chrome  
(H-094)



Silver  
(H-094)



Gold  
(H-094)

---

### Offset colour-matched handle range

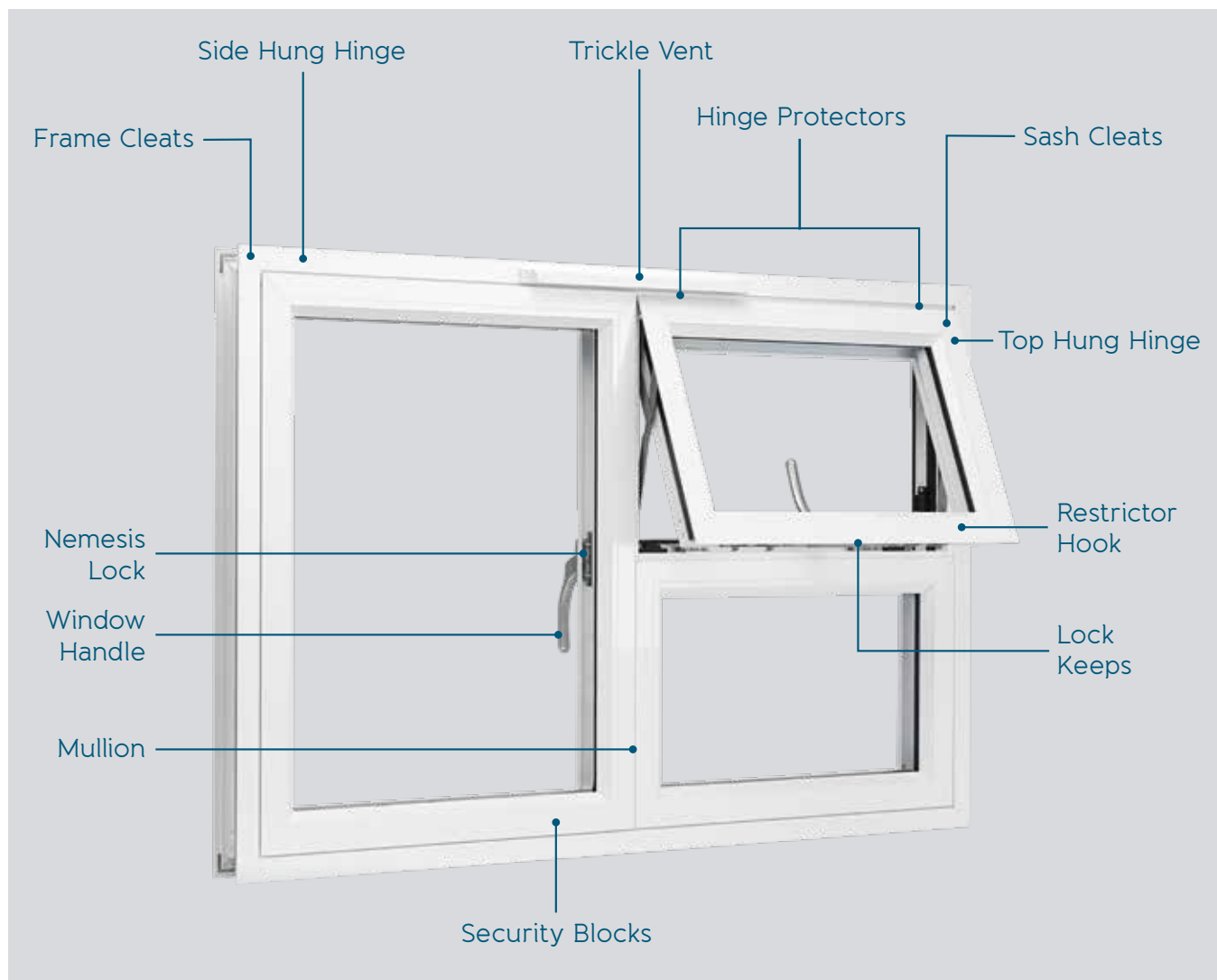
For an integrated or contrasting look to your windows, the offset handle is available in any RAL colour.



---

*\*Minimum sash width applies.*

# Window Make-Up



# Performance and Limitations

## Thermal Ratings

u-Value	Short-leg frame: up to 1.2W/m <sup>2</sup> .K*	Long-leg frame: 1.2W/m <sup>2</sup> .K*
---------	---	--

See pages 14-27 for thermal simulation results.

## Weather Rating

Air Permeability	Class 4
Resistance to Wind Load	Class A5
Water Tightness	Class 9A

## Performance Testing

PAS 24:2016 Certified (Document Q Compliant)

Secured by Design Accredited

## Size and Weight Limitations

	Width	Height	Weight
Maximum Dimensions:			
Side Hung:	Max: 950mm**	Max: 1400mm**	Max: 35kg***
Maximum Dimensions:			
Top Hung:	Max: 1374mm**	Max: 1474mm**	Max: 50kg***

Please note: the minimum and maximum sizes vary depending on the configuration. See page 30-33 for more information.

Maximum coupling lengths: 3000mm\*\*\*\*

## Building Regulation Requirements

New Build and Extensions	2.0W/m <sup>2</sup> K
Replacements	1.6W/m <sup>2</sup> K
Energy Rating	B or better

All windows must conform to these requirements.

\*Short-leg based on using glass with centre pane of 0.6W/m<sup>2</sup>.K. Long-leg based on using glass with centre pane of 0.6W/m<sup>2</sup>.K.

\*\*Max sizes refer to the maximum overall frame and sash size for an individual window.

\*\*\*Max weight refers to the maximum glazed sash weight.

\*\*\*\*Depends on window size and wind loading.

## Thermal Efficiency

In order to improve thermal efficiency, the OW-70 is fitted with a 32mm polyamide thermal break and a bespoke cavity gasket in the internal chamber of the window between the sash and the frame as standard.

The short-leg and long-leg frame have a u-Value of up to 1.2.



OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.6W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 8MM KRYPTON - 4MM PLANITHERM 4SII - 8MM KRYPTON - 4MM PLANITHERM
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.2W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.70.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.7W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 6MM AIR - 4MM PLANITHERM 4SII - 10MM KRYPTON - 4MM PLANITHERM 4SII
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.3W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road, Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.71.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

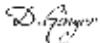
PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.9W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 8MM ARGON - 4MM PLANITHERM 4SII - 8MM ARGON - 4MM PLANITHERM 4SII
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.4W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.72.1

**origin**  
DOORS AND WINDOWS



OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: SHORT-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.0W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM 4SII
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.5W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.59.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: SHORT-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM TOTAL+
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.6W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.61.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

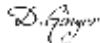
PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.6W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 8MM KRYPTON - 4MM PLANITHERM 4SII - 8MM KRYPTON - 4MM PLANITHERM
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.2W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.70.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.7W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 6MM AIR - 4MM PLANITHERM 4SII - 10MM KRYPTON - 4MM PLANITHERM 4SII
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.3W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.71.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70 - SHORT-LEG/ LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	0.9W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P954 OR P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 8MM ARGON - 4MM PLANITHERM 4SII - 8MM ARGON - 4MM PLANITHERM 4SII
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.4W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.72.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.0W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME: P958, SASH: P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM 4SI
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.5W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.74.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME:P958, SASH:P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM TOTAL+
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.6W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.60.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

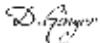
PRODUCT:	OW-70: LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME:P958, SASH:P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM TOTAL+
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.6W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.60.1

**origin**  
DOORS AND WINDOWS



OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/M2K
INSULATION:	STANDARD
PROFILE SPEC:	FRAME:P958, SASH:P955
BEAD:	28MM
GLASS SPEC:	4MM CLEAR - 20MM 90% ARGON - 4MM PLANITHERM TOTAL+
SPACER BAR:	SWISSPACER ULTIMATE

THERMAL TRANSMITTANCE:

1.6W/m2K

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.60.1

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: SHORT-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/m <sup>2</sup> K
INSULATION:	NONE
SOLAR FACTOR (G WINDOW)	0.52
AIR PERMIABILITY (@ 50PA)	0.00W/m <sup>2</sup> K
PROFILE SPEC:	FRAME:P954, SASH:P955
BEAD:	28mm
GLASS SPEC:	4mm DIAMANT - 20mm 90% ARGON - 4mm PLANITHERM TOTAL+
SPACER BAR:	SWISSPACER ULTIMATE
THERMAL TRANSMITTANCE:	1.6W/m <sup>2</sup> K

ENERGY RATING:

A +3

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road,  
Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.871

**origin**  
DOORS AND WINDOWS

OW-70

# Certificate of thermal simulation

PRODUCT:	OW-70: LONG-LEG FRAME
SIM - SOFTWARE:	WIN ISO 2D PRO
GLASS CENTRE PANE U-VALUE:	1.2W/m <sup>2</sup> K
INSULATION:	STANDARD
SOLAR FACTOR (G WINDOW)	0.49
AIR PERMIABILITY (@ 50PA)	0.00W/m <sup>2</sup> K
PROFILE SPEC:	FRAME:P958, SASH:P955
BEAD:	28mm
GLASS SPEC:	4MM DIAMANT - 20mm 90% - 4MM PLANITHERM TOTAL+
SPACER BAR:	ARGON SWISSPACER ULTIMATE
THERMAL TRANSMITTANCE:	1.6W/m <sup>2</sup> K

ENERGY RATING:

B -2

TESTED BY: David Ginger (Product Compliance Director)

DATE: 10/07/2018

SIGNED: 

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

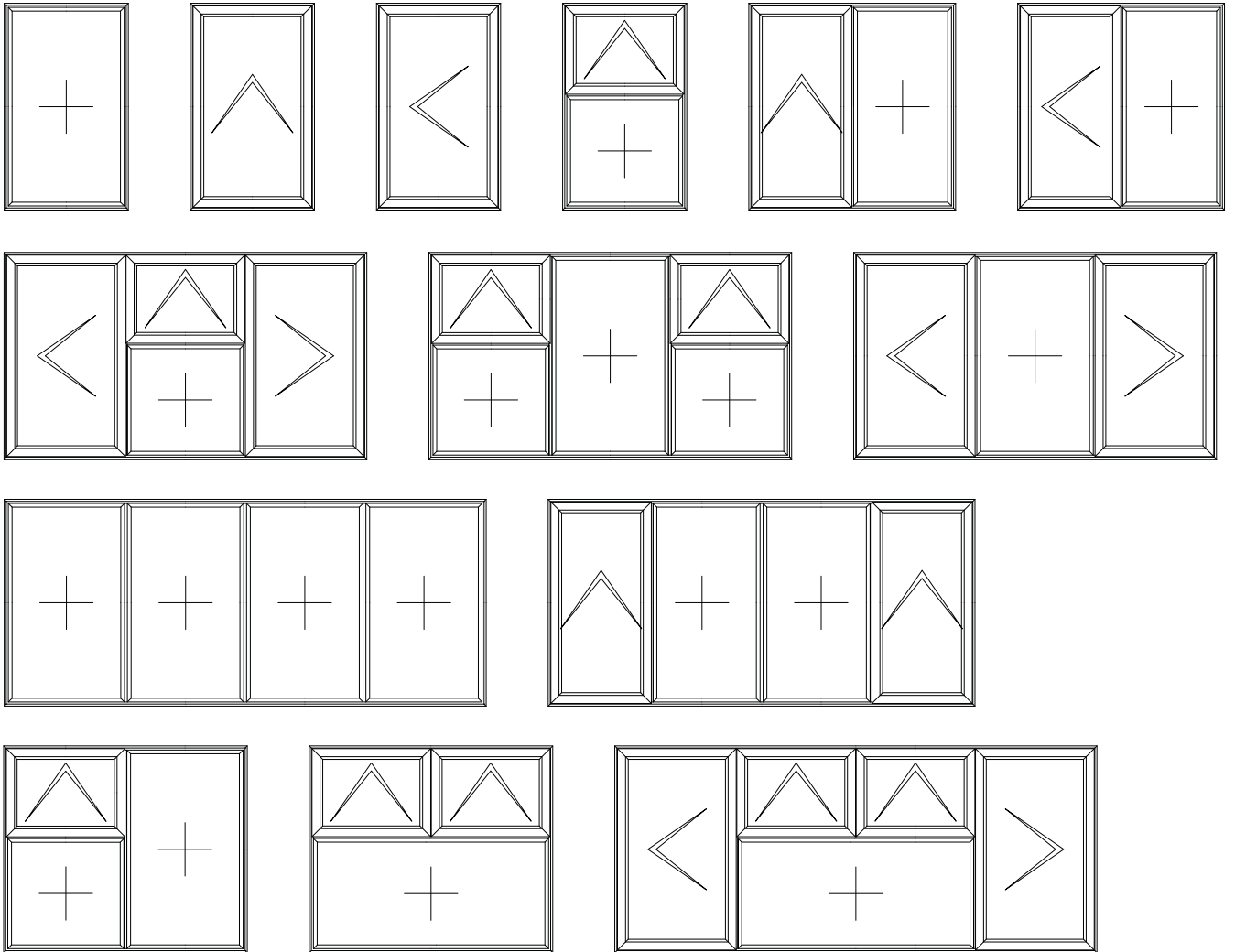
Email: [enquiry@origin-global.com](mailto:enquiry@origin-global.com) | Web: [www.origin-global.com](http://www.origin-global.com)

Origin Global HQ, Stuart House, Castle Estate, Coronation Road, Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3TA

OFDL\_18.89.1

**origin**  
DOORS AND WINDOWS

# Popular Configurations



Key: + Fixed Frame or Dummy Sash    ^ Top Hung    < Left Hung    > Right Hung

*\*Popular configurations are able to be specified on both Short-leg and Long-leg windows.*

# Egress Application

Approved Document B of the Building Regulations 2010 specifies the following provisions with regards 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<sup>2</sup> and at least 450mm high and 450mm wide. In practice, this means the opening should be at least 450mm high by 750mm wide or 750mm high and 450mm wide (the route through the window may be at an angle rather than straight through). The bottom of the open-able area should be no more than 1100mm 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.

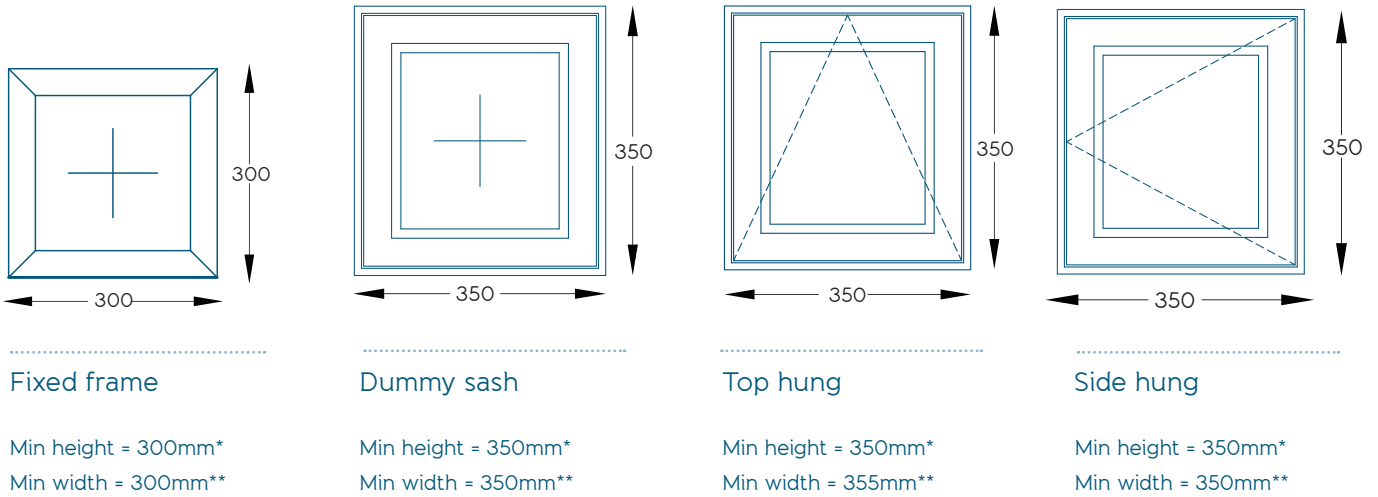
**Note 1.** Approved Document K protection from falling, collision and impact specifies a minimum guarding height of 800mm, except in the case of a window in a roof where the bottom of the opening may be 600mm above the floor.

**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.

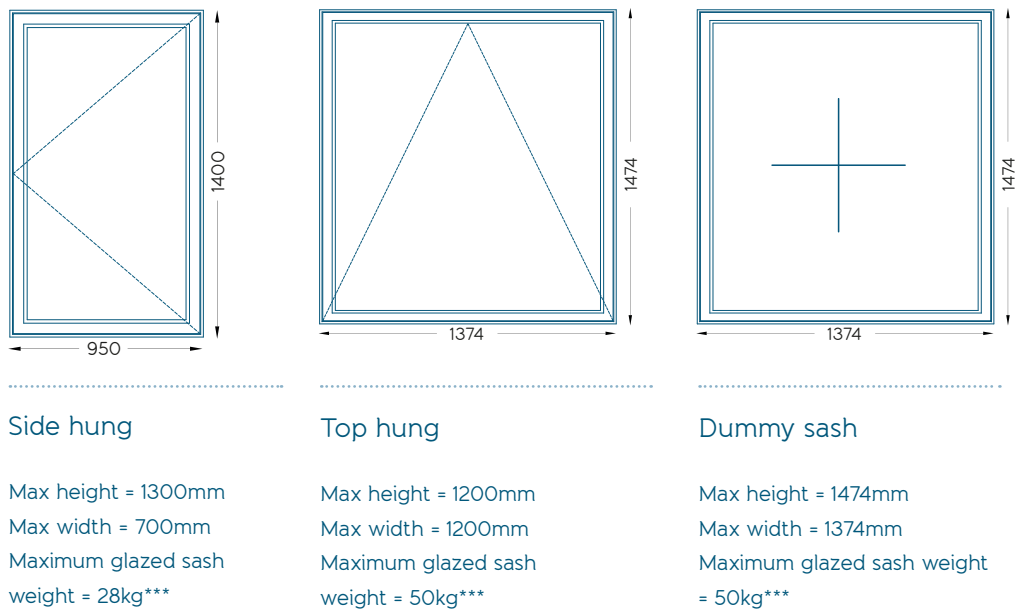
**Note 3.** Windows should be designed such that they will remain in the open position without needing to be held by a person making their escape.

# Size Guidelines

## Minimum Frame Dimensions



## Maximum Frame Dimensions



\*Minimum height will be greater with a cill.

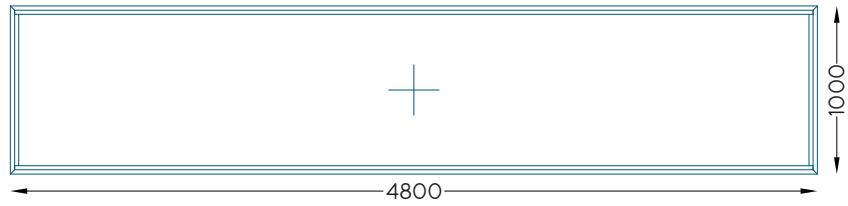
\*\*Minimum width will be greater with a frame extension.

\*\*\*Max weight refers to the maximum glazed sash weight.

## Fixed Frame Maximum Dimensions

Maximum area = 4.8m<sup>2</sup>  
Maximum height/ width = 4.8m

Example 1



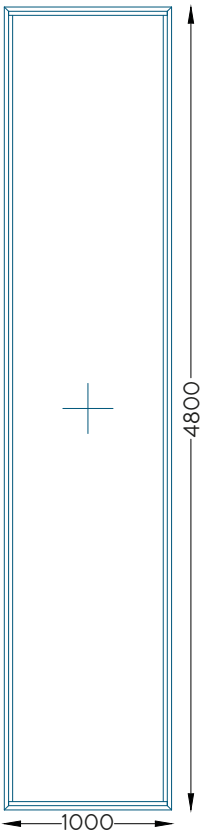
Maximum fixed width and area

Maximum area = 4800mm x 1000mm = 4.8m<sup>2</sup>

Maximum width = 4800mm

---

Example 2



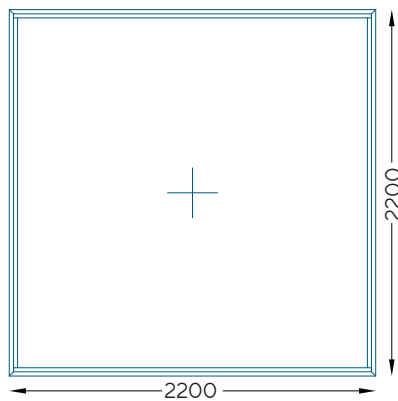
Maximum fixed height and area

Maximum area = 4800mm x 1000mm  
= 4.8m<sup>2</sup>

Maximum height = 4800mm

---

Example 3



Maximum fixed area

Maximum area = 2200mm x 2200mm  
= approx 4.8m<sup>2</sup>

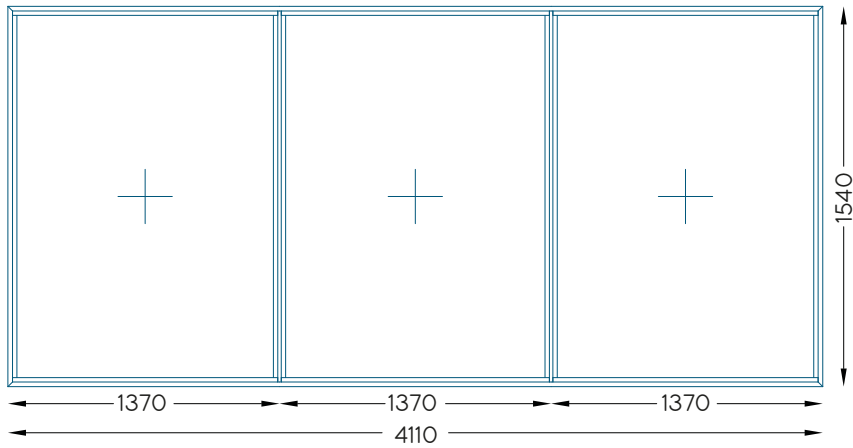
---

Fixed windows over 4.8sqm cannot be coupled using Origin couplers.

## Maximum Mullion/ Transom Length

Maximum glazed area next to mullion/ transom:  
= 2.055m<sup>2</sup> Maximum height: = 1540mm

Example 1

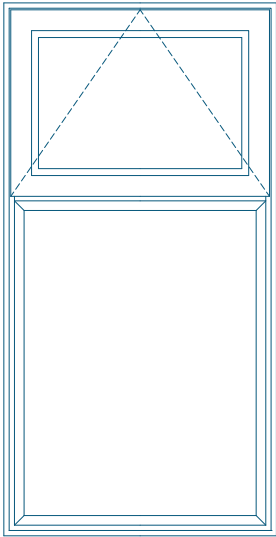


Maximum mullion length and glazed area next to a mullion/ transom

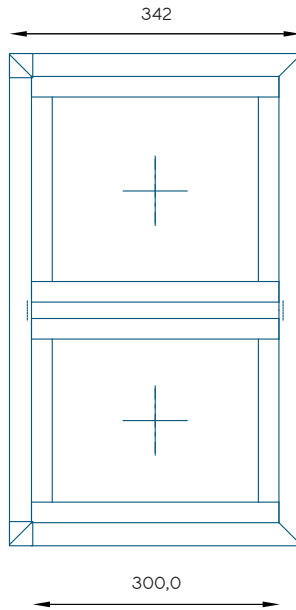
*The above sizes are based on Long-leg frame and a wind loading of 1600pa.*



## Minimum Transom Drop

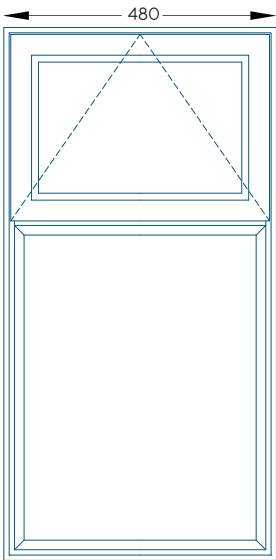


Minimum transom drop with 35mm frame extension: 385mm



Transom/Mullion  
Min transom length: 300mm

## Minimum Frame Width With Trickle Vent

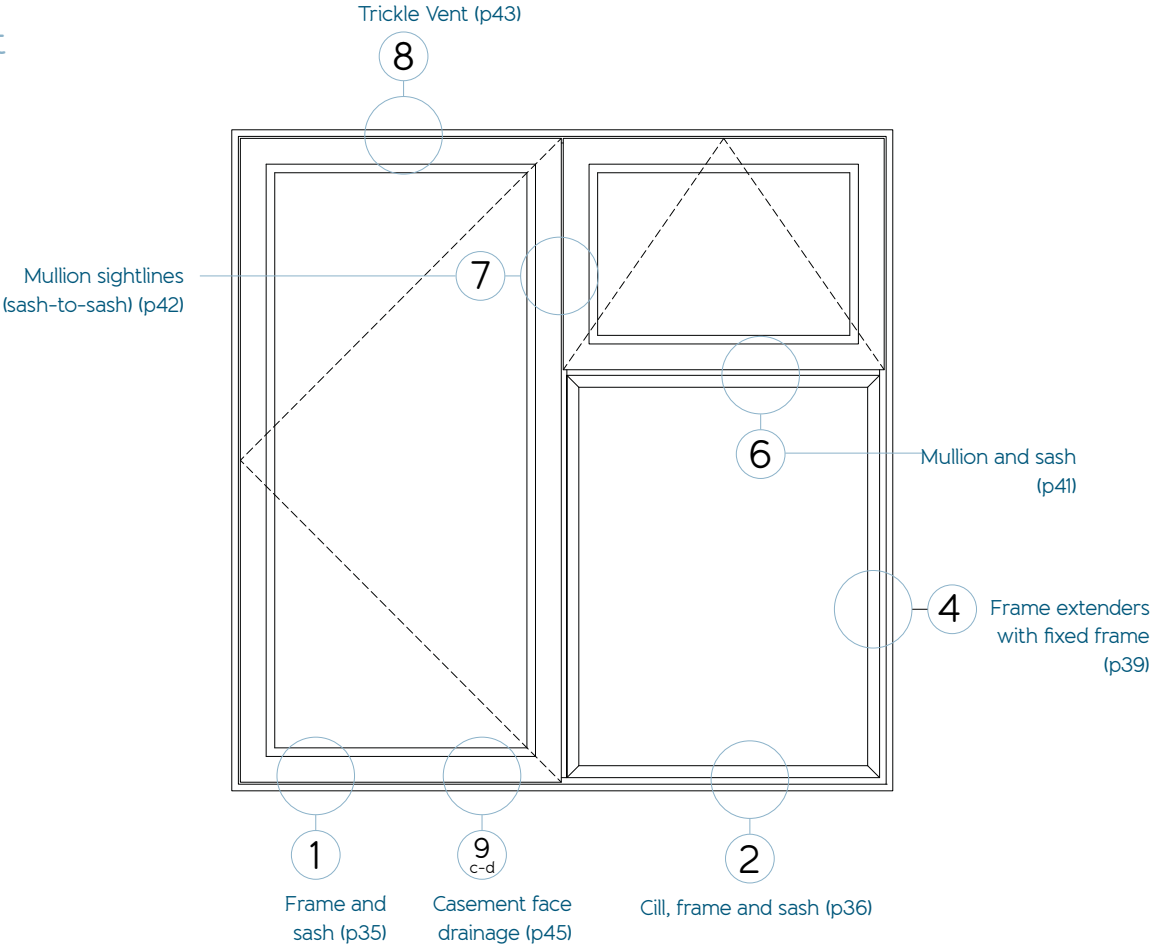


The minimum width for a 2500EA trickle vent to go through a 35mm add-on is 400mm.\*

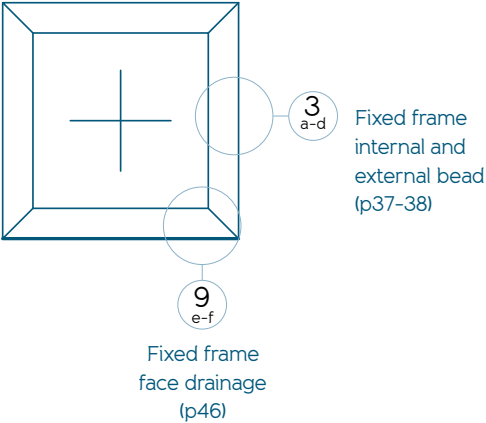
\*Minimum airflow requirements to be adhered to as per building regulations.

# Technical Drawings

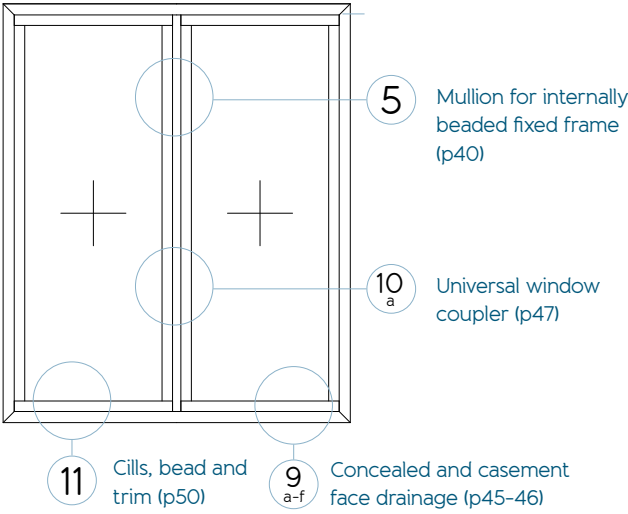
## Casement



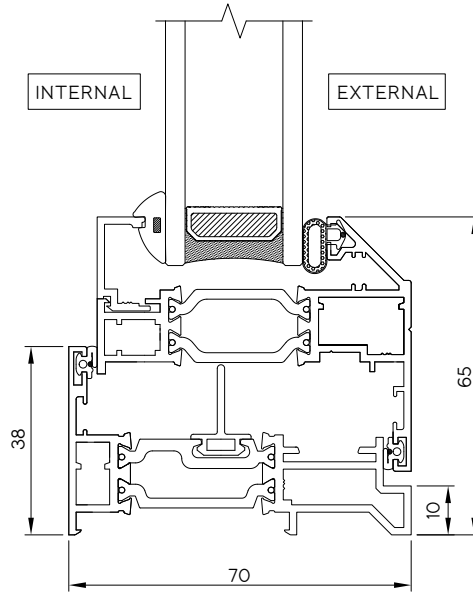
## Fixed



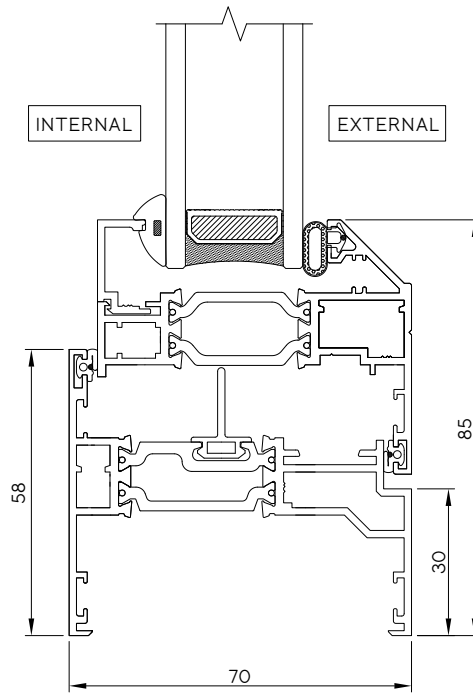
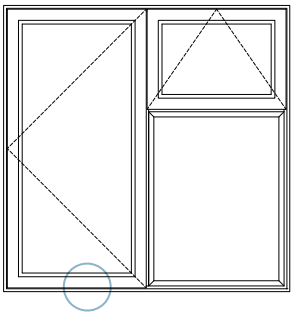
## Mullion sightlines for fixed frames



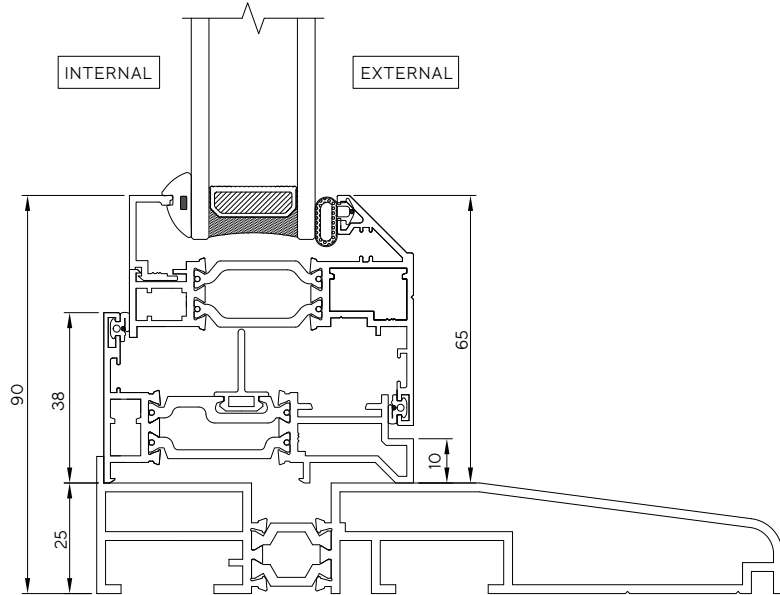
1a Short-Leg Frame and Sash



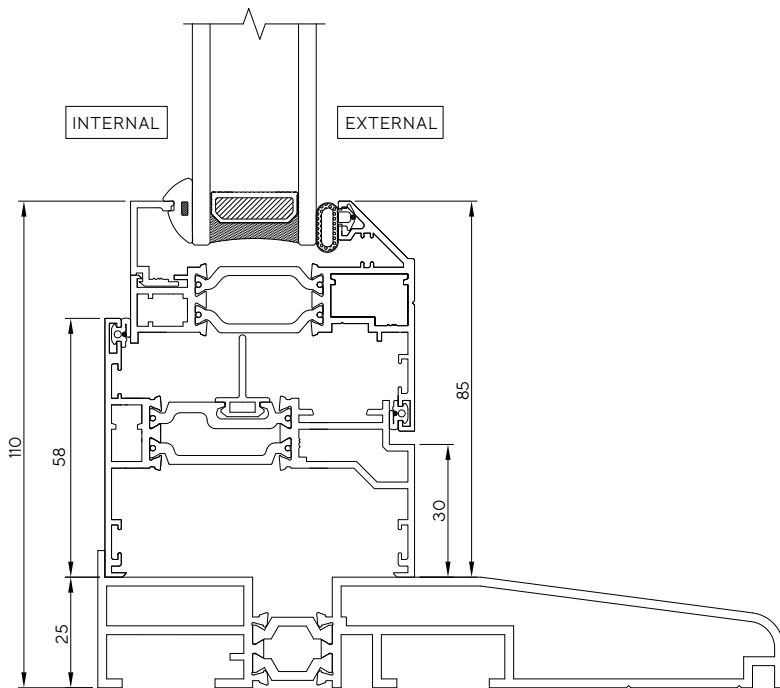
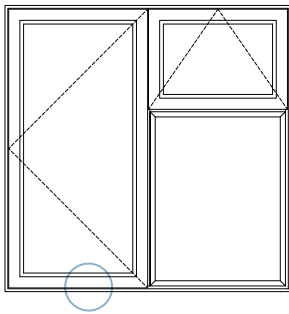
1b Long-Leg Frame and Sash



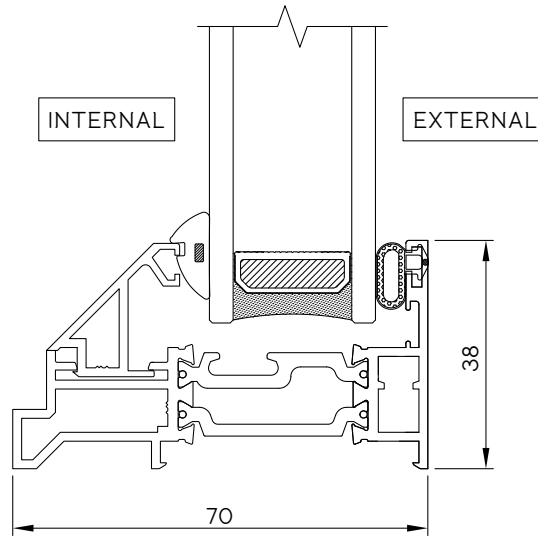
2a Cill Short-Leg Frame and Sash



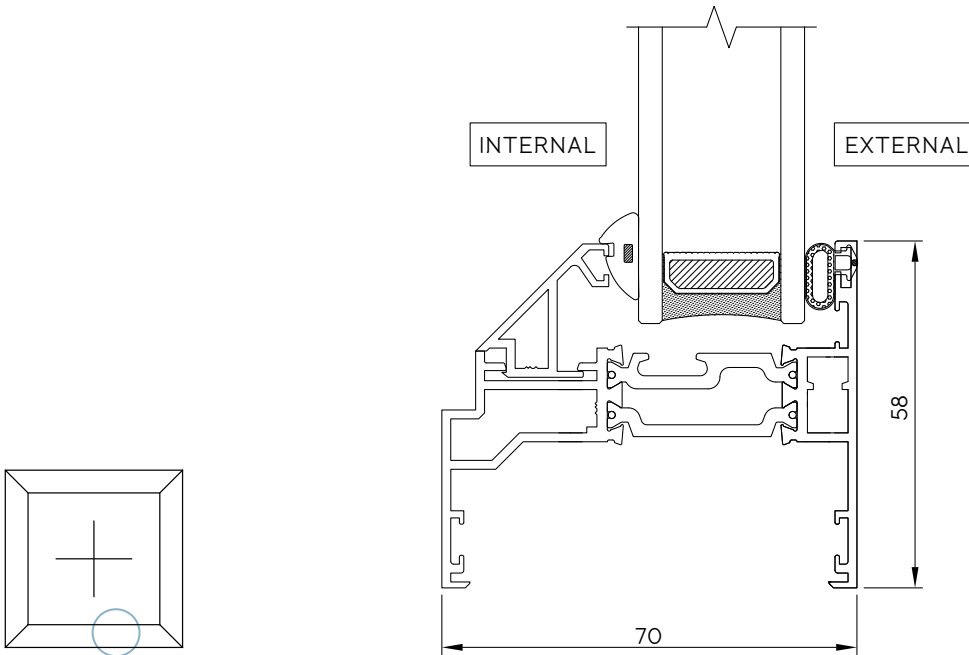
2b Long-Leg Frame and Sash



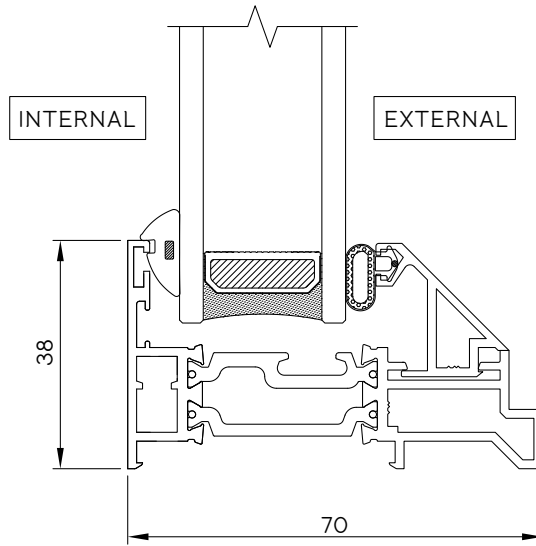
3a Fixed Short-Leg Frame - Internal Bead



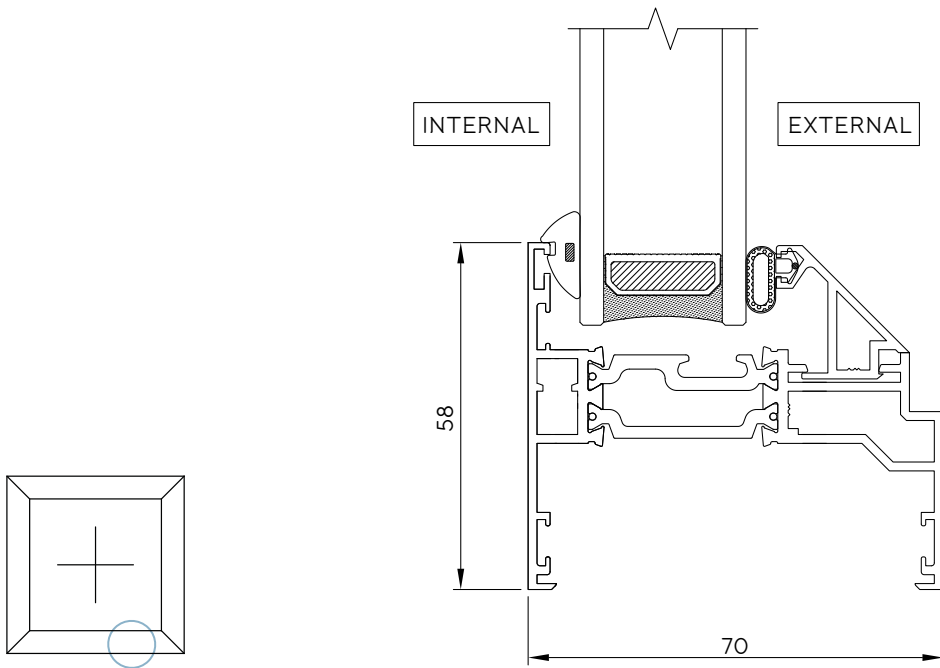
3b Fixed Long-Leg Frame - Internal Bead



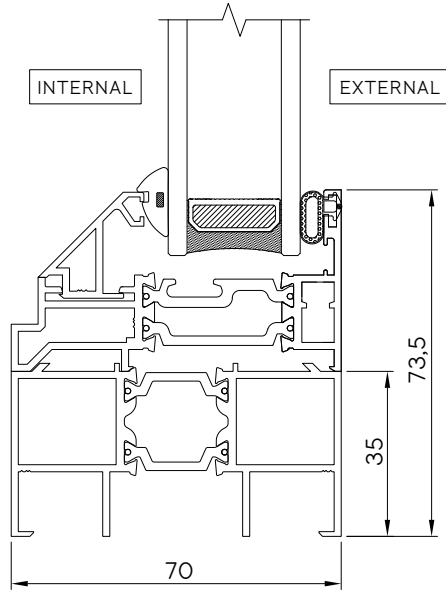
3c Fixed Short-Leg Frame - External Bead



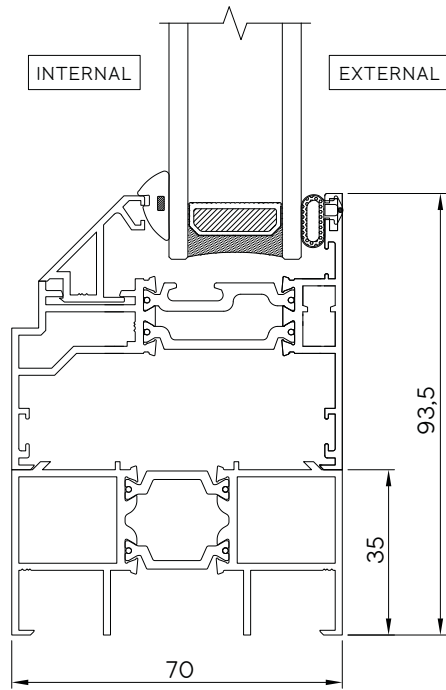
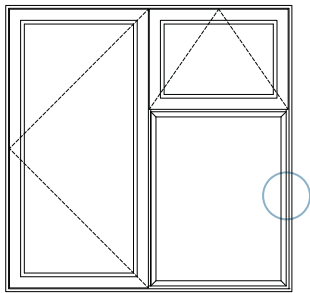
3d Fixed Long-Leg Frame - External Bead



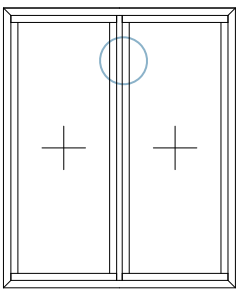
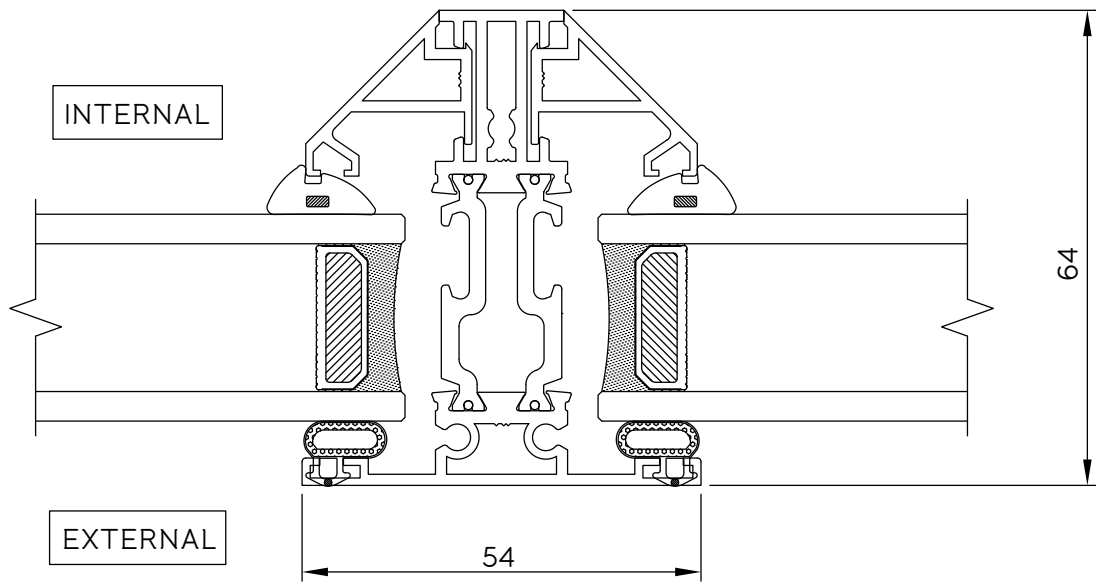
4a 35mm Frame Extender With Short-Leg Frame



4b 35mm Frame Extender With Long-Leg Frame



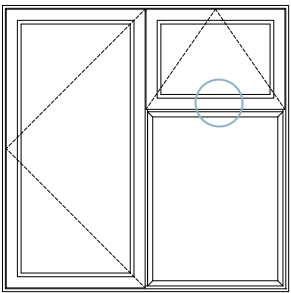
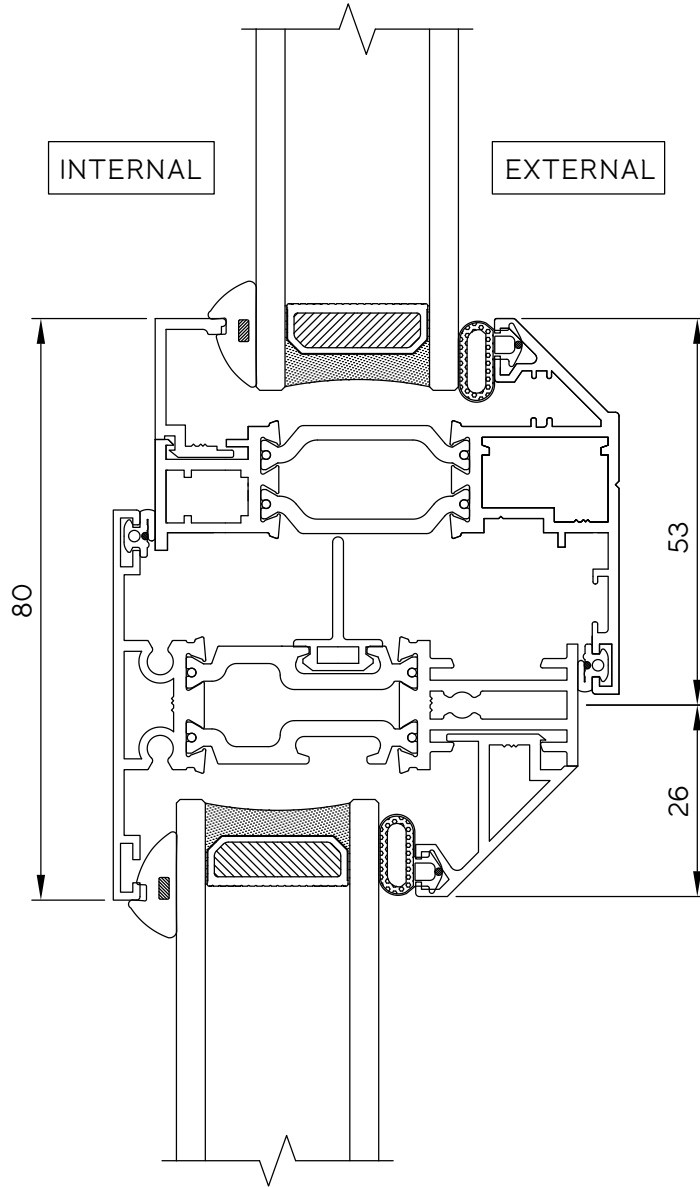
5 Mullion Sightlines For Internally Beaded Fixed Frames



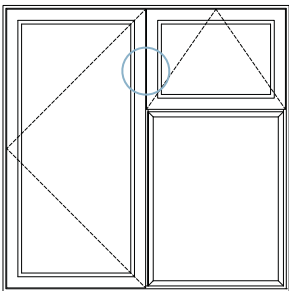
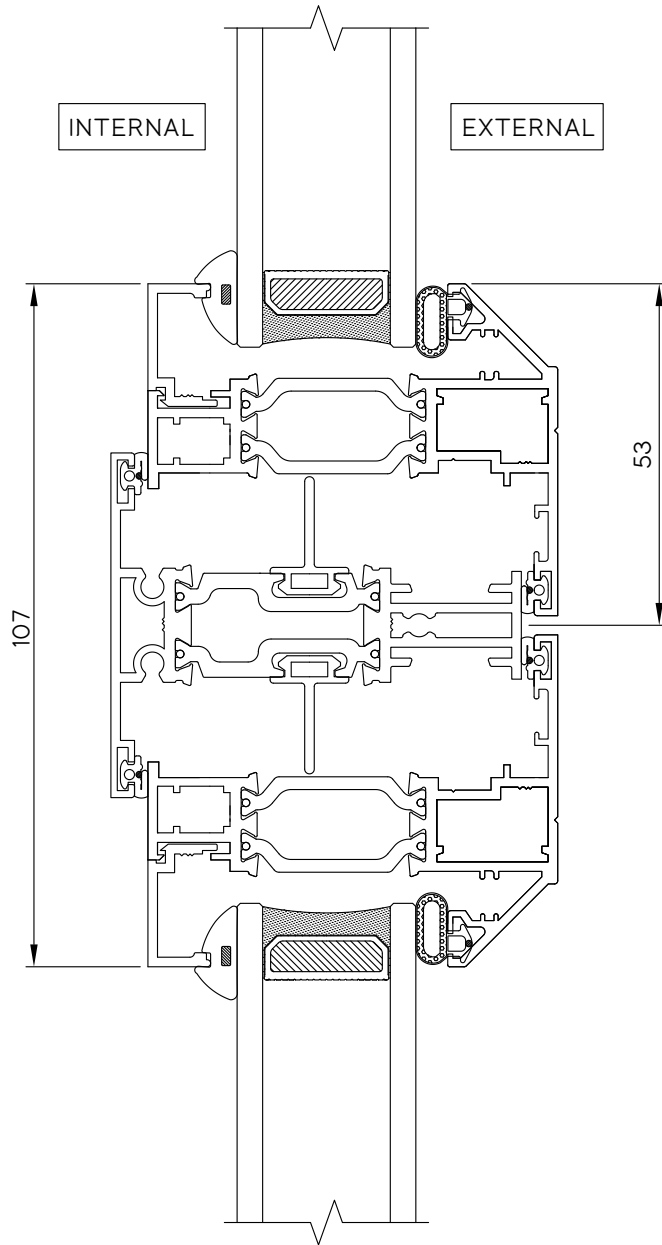


6

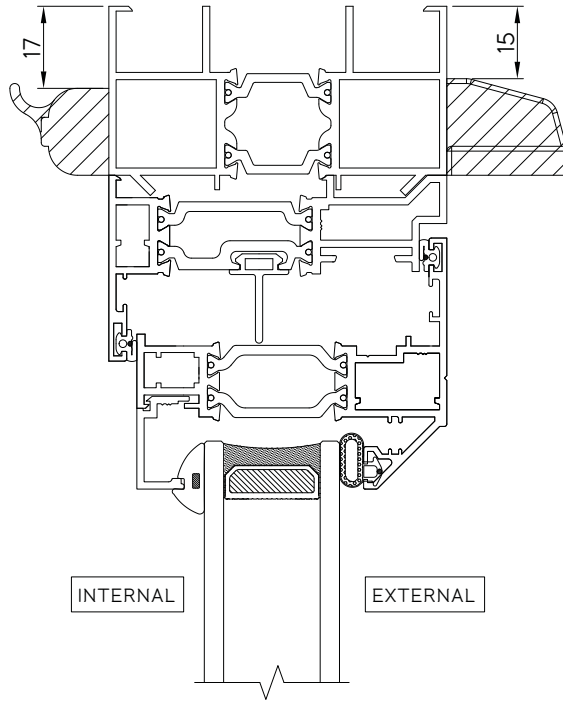
Mullion and Sash



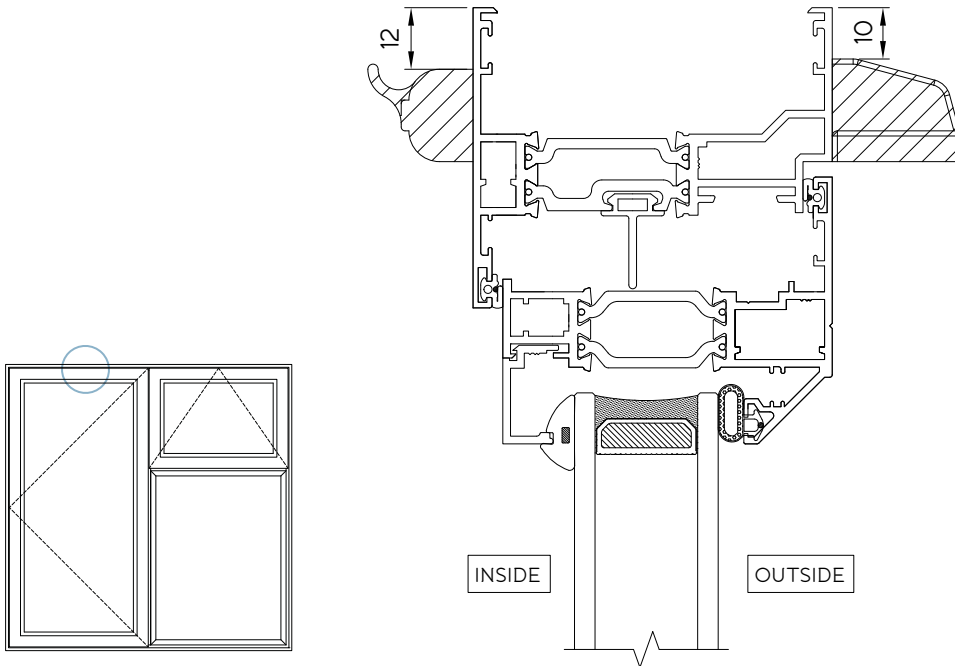
7 Mullion and Double Sash



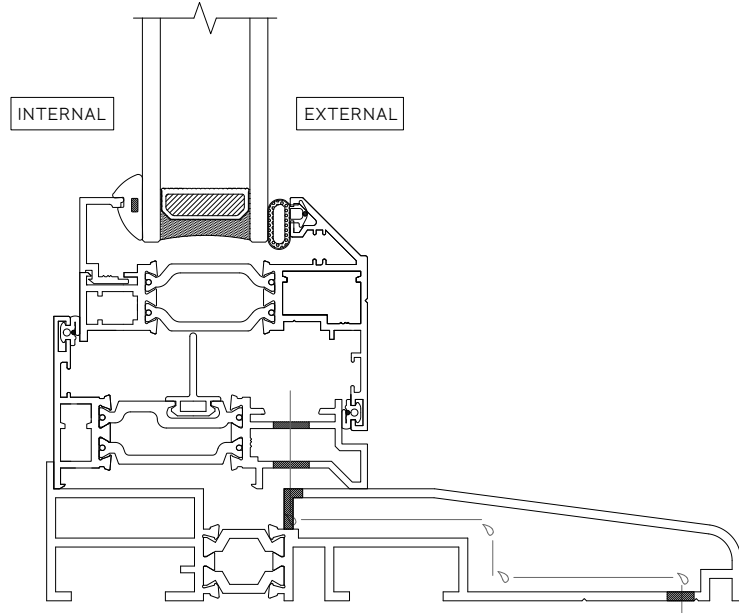
8a Trickle Vent Through 35mm Add-On



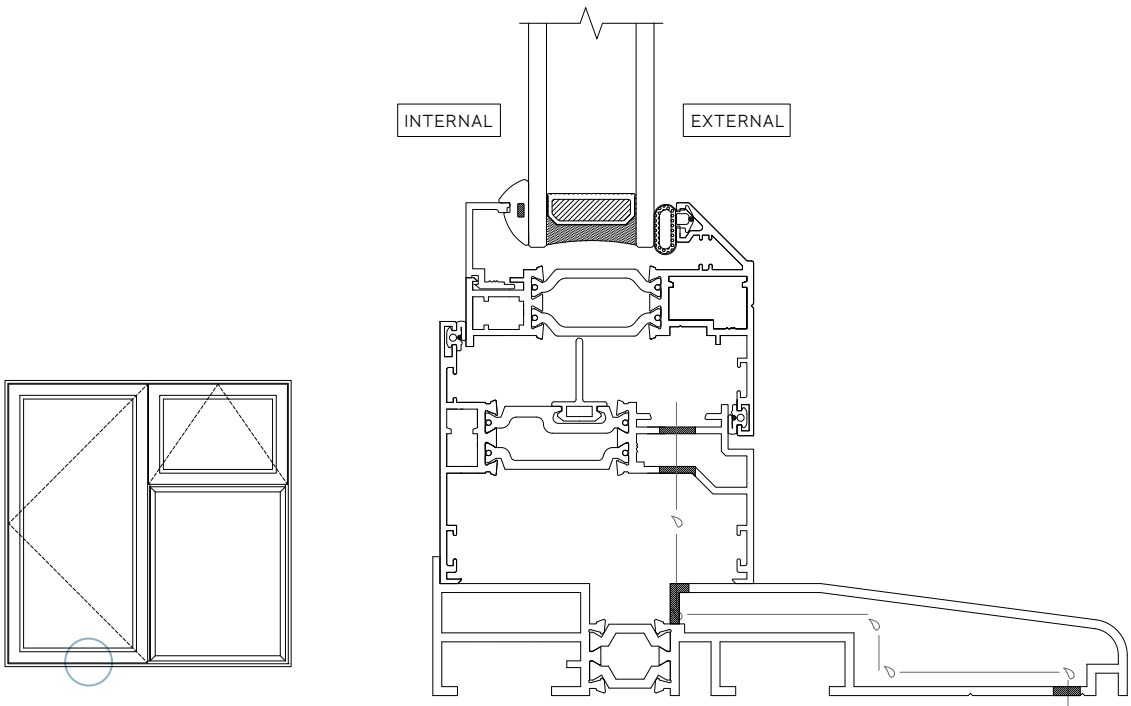
8b Trickle Vent Through Long-Leg Frame



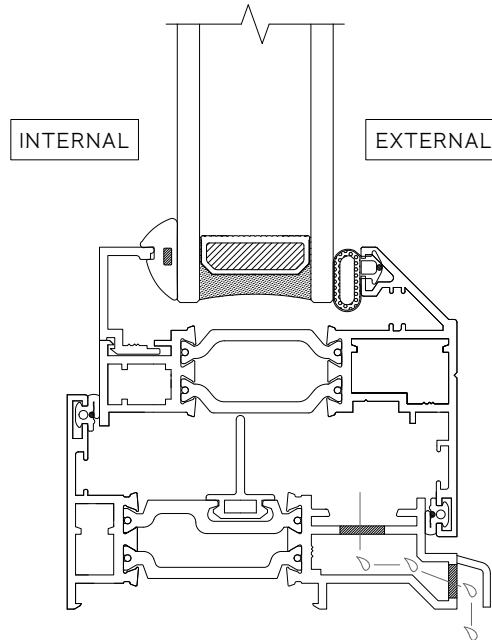
9a Short-Leg Concealed Drainage



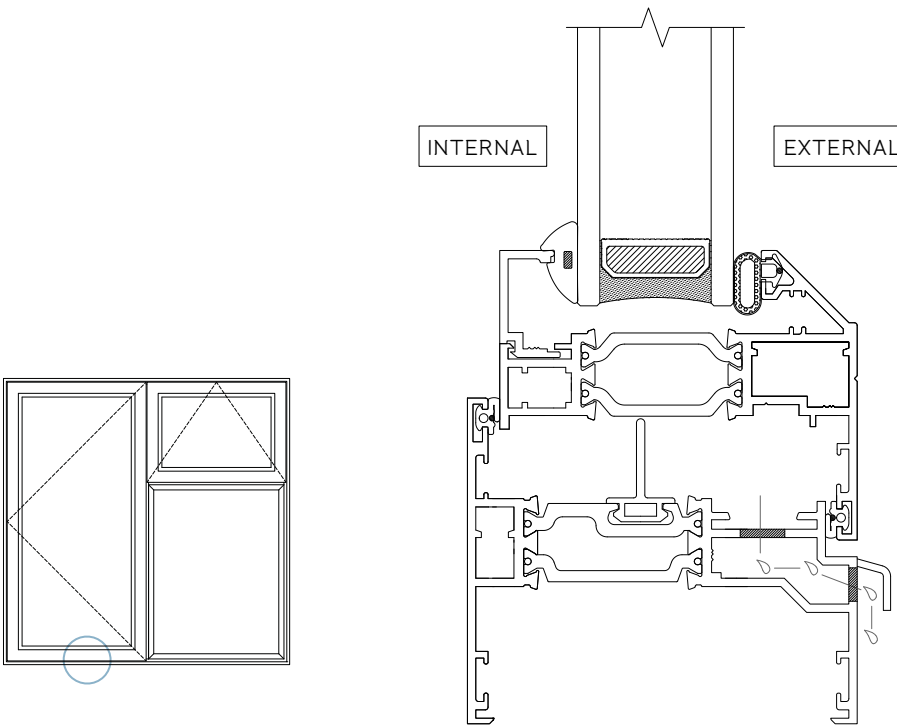
9b Long-Leg Concealed Drainage



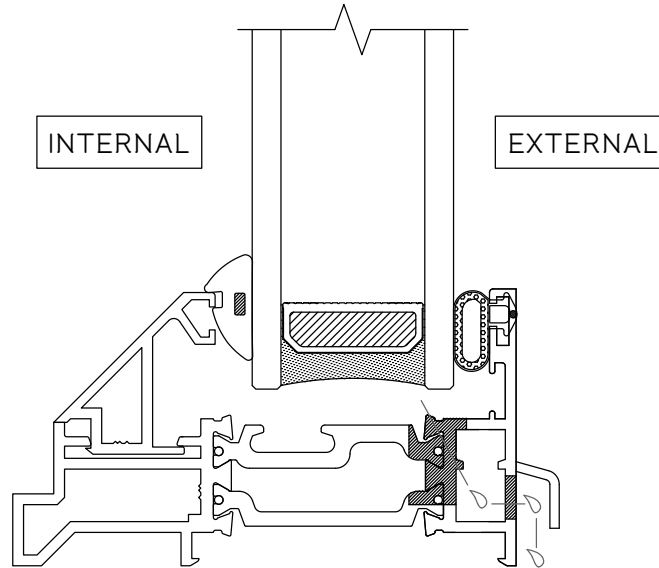
9c Short-Leg Casement Face Drainage



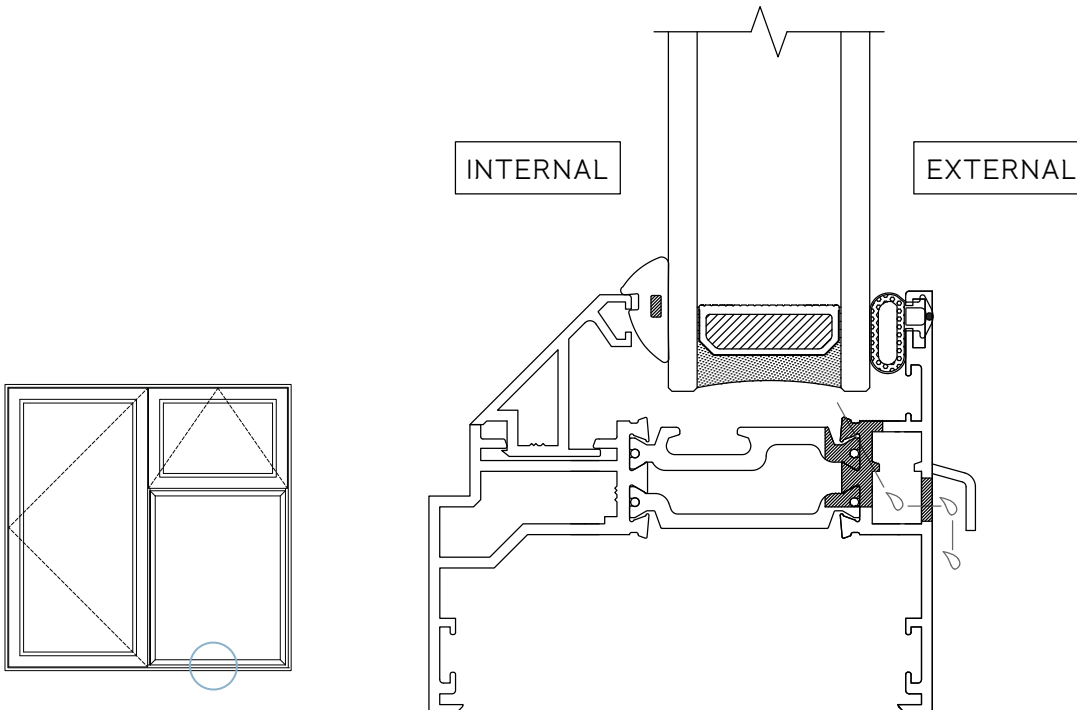
9d Long-Leg Casement Face Drainage



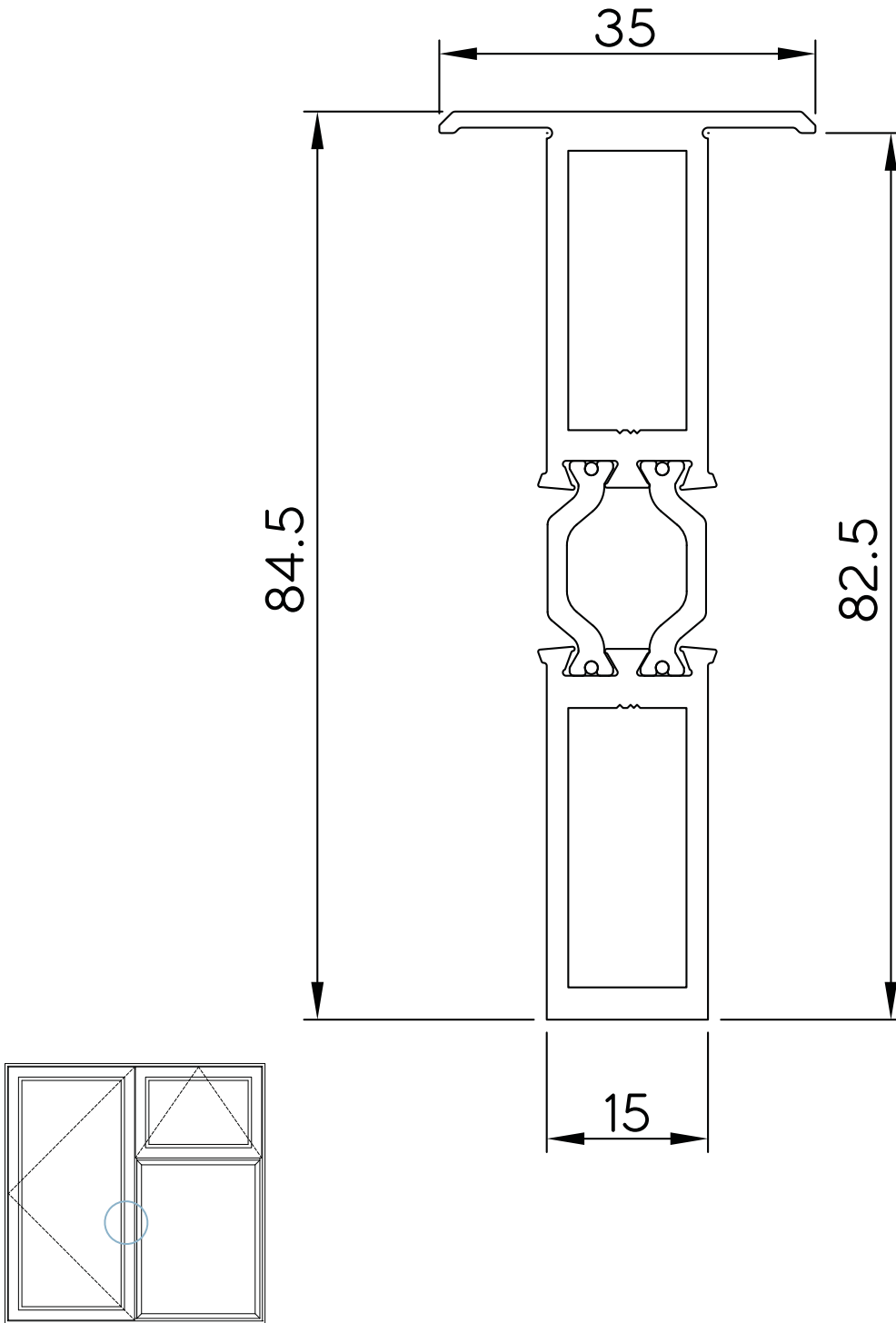
9e Short-Leg Fixed Frame Face Drainage



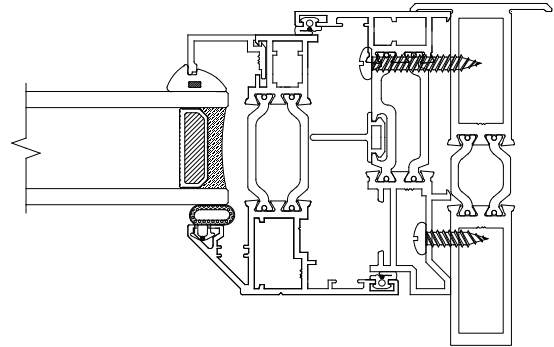
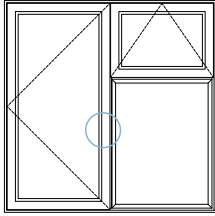
9f Long-Leg Fixed Frame Face Drainage



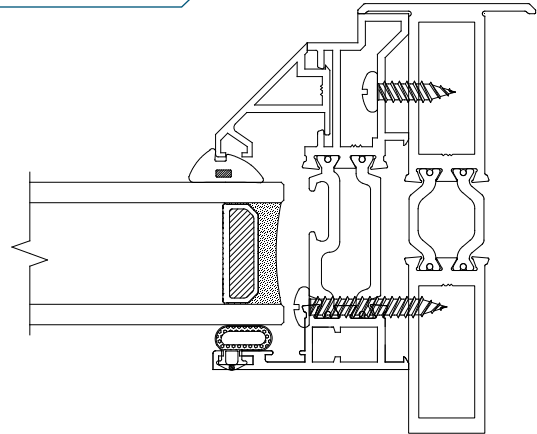
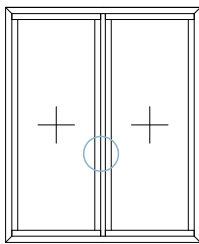
10a Window Coupler



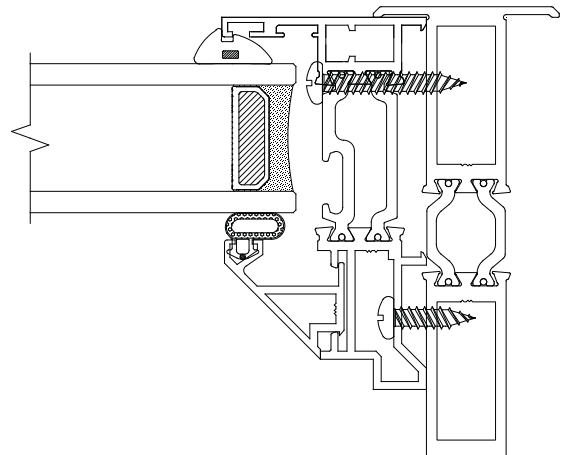
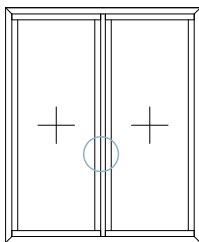
10b Short-Leg - Casement Window Coupling



10c Short-Leg Coupling - Fixed Internally Glazed

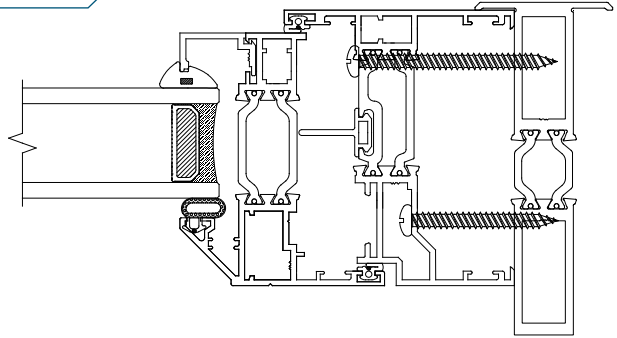
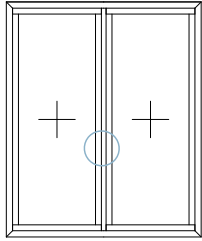


10d Short-Leg Coupling - Fixed Externally Glazed

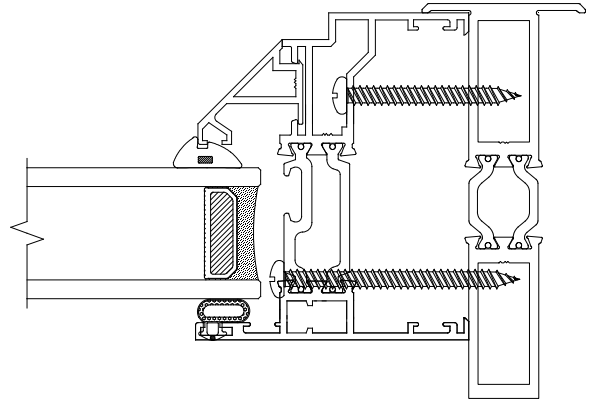
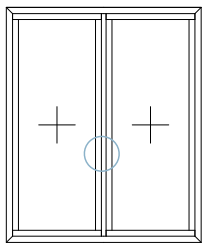




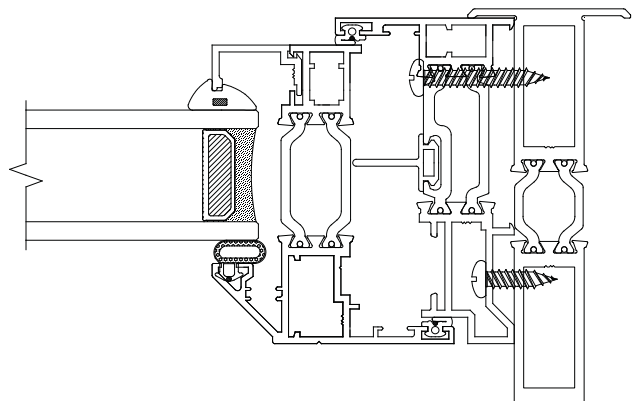
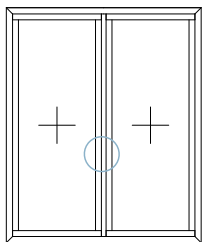
10e Long-Leg Coupling - Casement Window



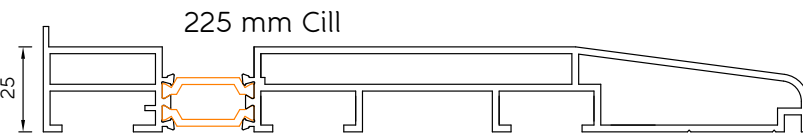
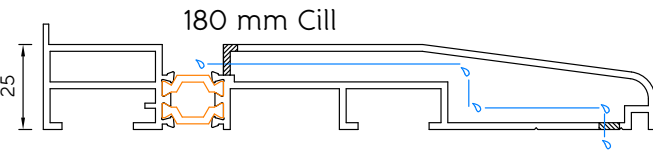
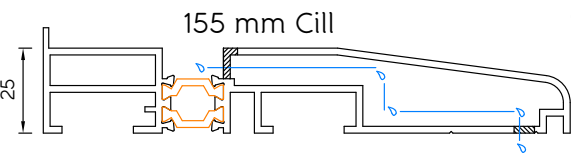
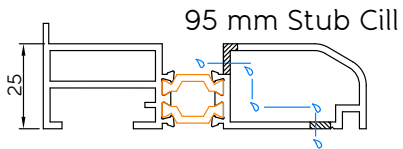
10f Long-Leg Coupling - Fixed Internally Glazed



10g Long-Leg Coupling - Fixed Externally Glazed



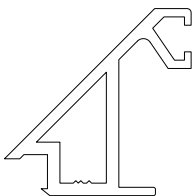
# 11 Cills, Bead and Trim



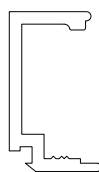
The 95mm stub cill can only be prepared with concealed drainage if the water can drain away towards the outside of the reveal. There must be a gap of at least 20mm between the drainage hole and the substrate in order to ensure the water can drain effectively. The substrate must be sloped to ensure the 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.

## Beads

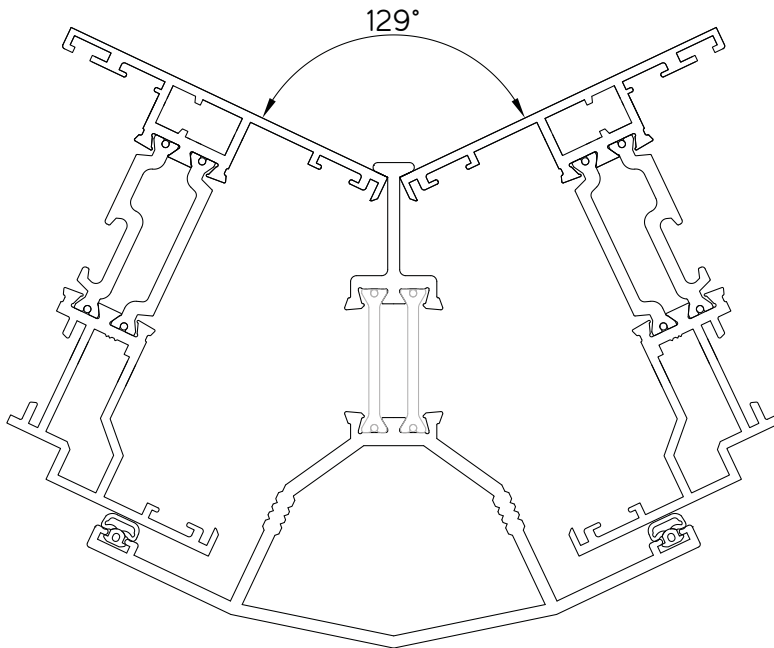
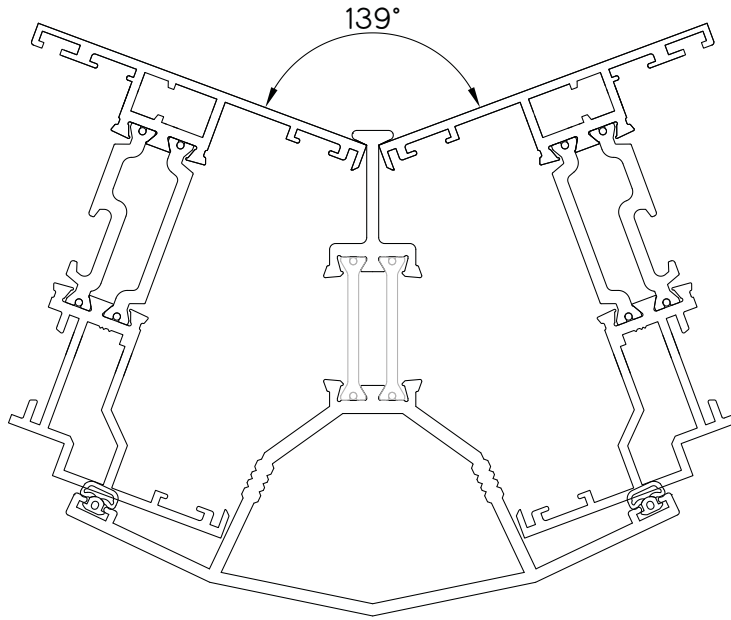
Frame Bead



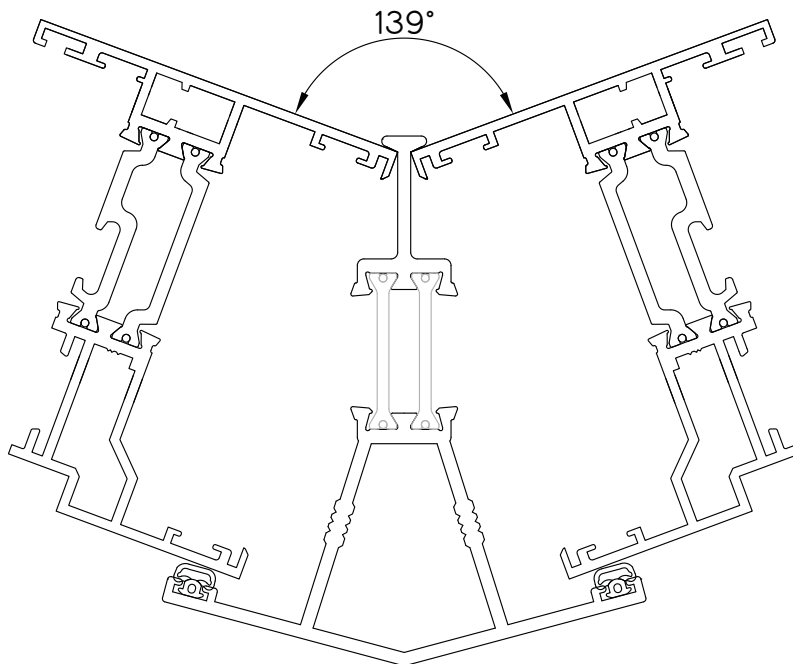
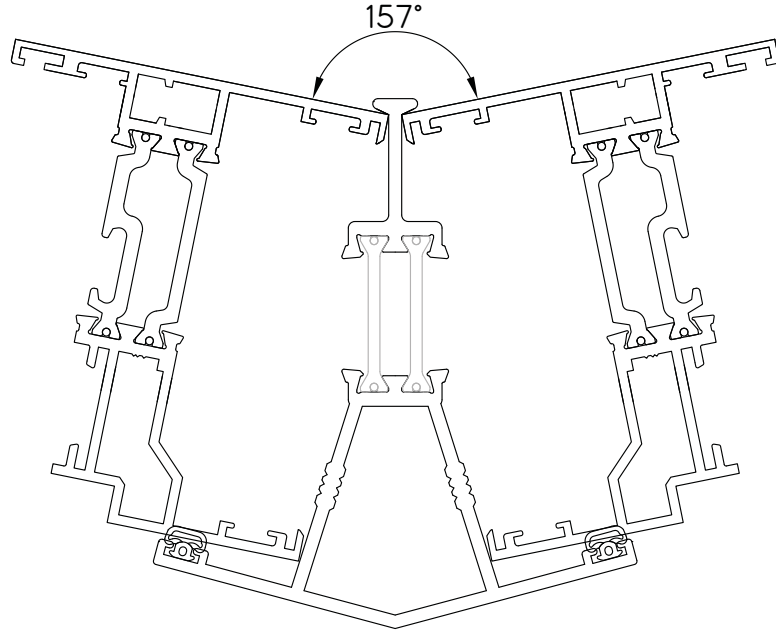
Sash Bead



12a Variable Bay Mullion 129° - 139°

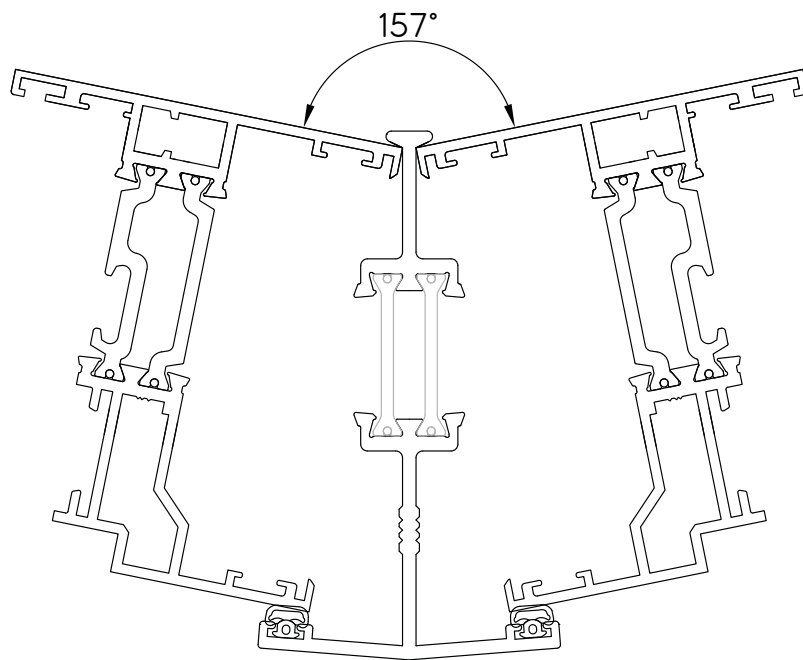
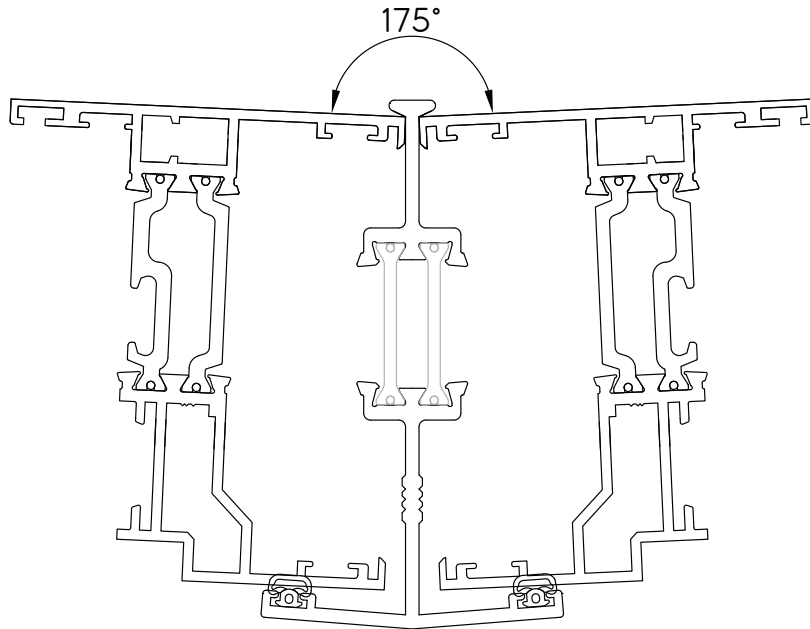


12b Variable Bay Mullion 139° - 157°



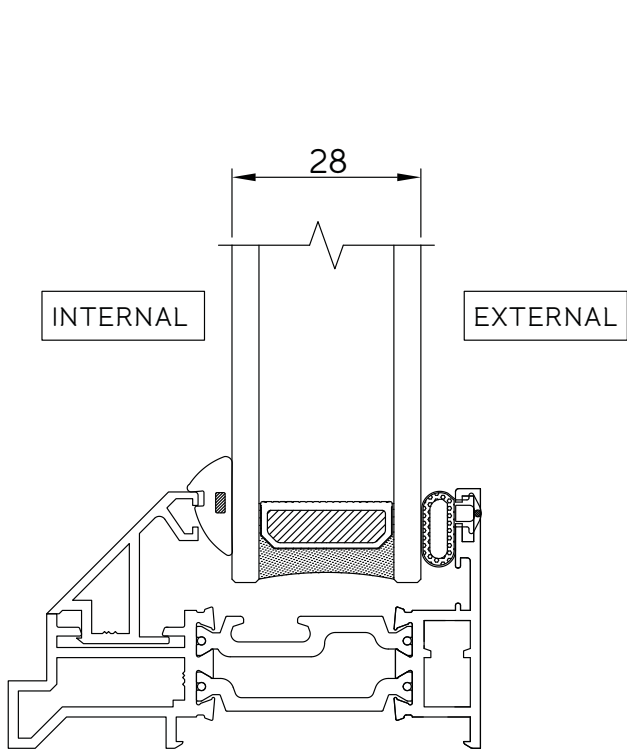
12c

Variable Bay Mullion 157° - 175°

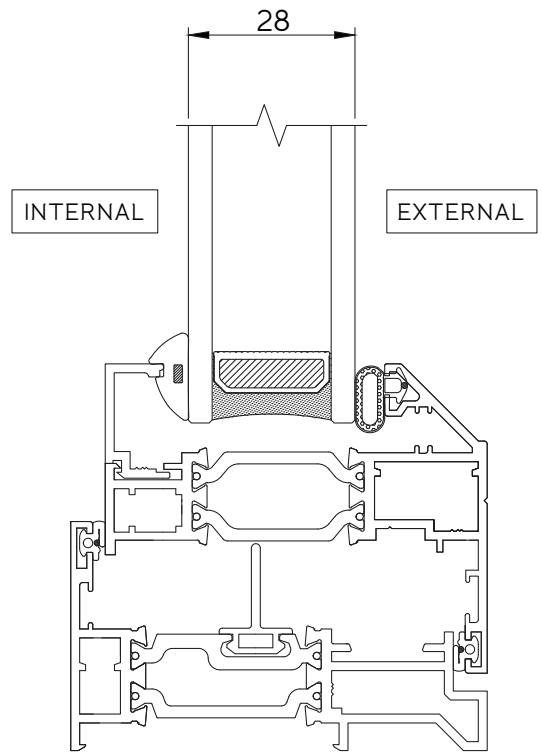


Short-Leg Glazing Options

Fixed frame

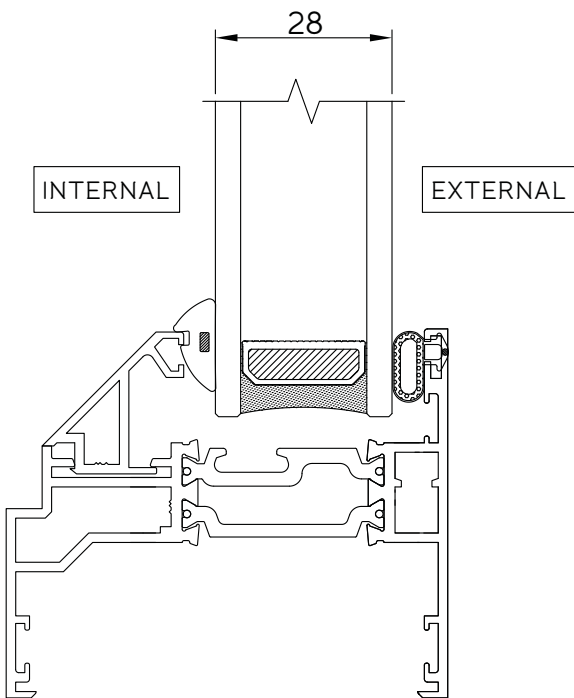


Frame and sash

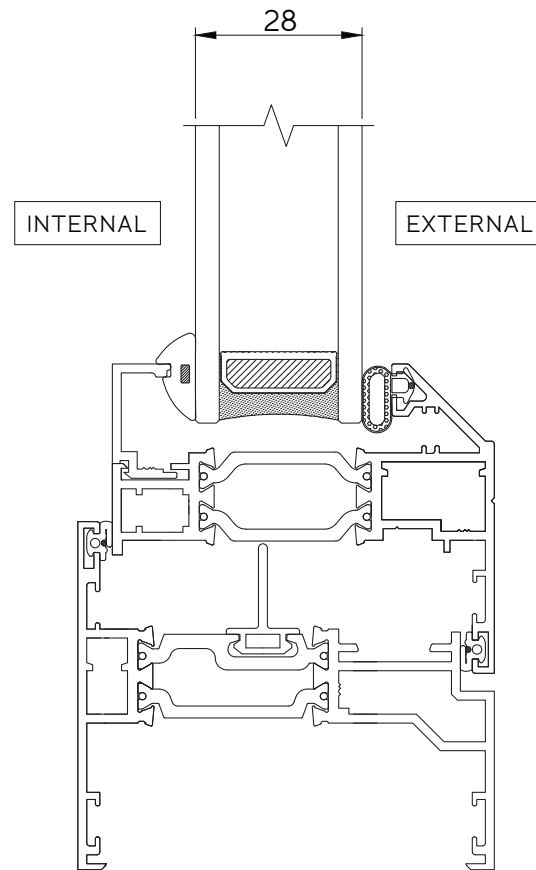


## Long-Leg Glazing Options

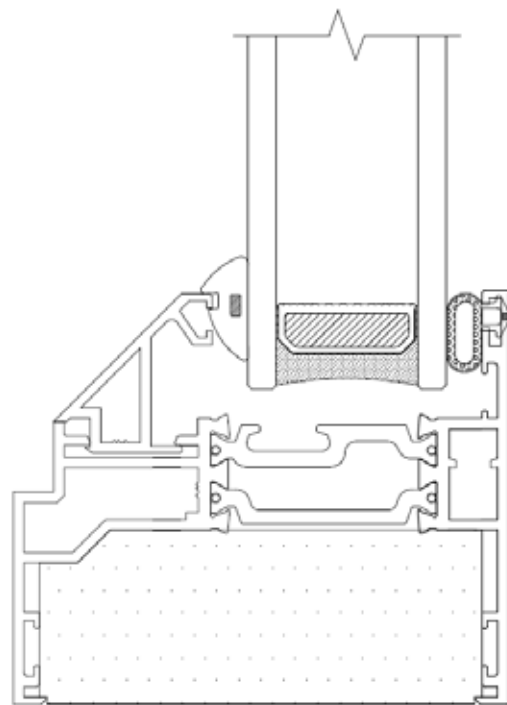
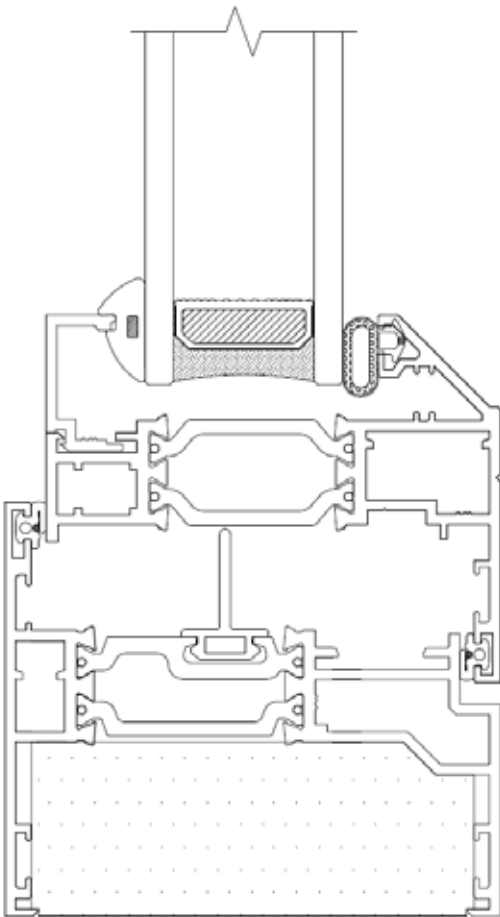
Fixed frame



Frame and sash



Long-Leg Frame Foam



A grey expanded polyether foam (25mm x 70mm) adhesive backed that is installed in the cavity of the OW-70 Long-leg frame



(Foam)



# Gaskets

AF032

Closing Gasket



B2018

Glazing Rebate



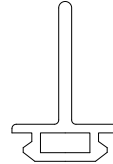
E3434

Glazing Rebate



OG03

Central Gasket



W474

Glazing Wedge



Colour	AF032 (Closing Gasket)	B2018 (Glazing Rebate)	E3434 (Glazing Rebate)	W474 (Glazing Wedge)	OG03 (Central Gasket)
Black	G0014	G00001	G00004	G00040	G0013
White		G00002	G00005	G00041	
Graphite Grey		G00064	G00066		
Light Oak		G00065	G00067	G00076	
Light Grey		G00089	G00071	G00075	
Bronze		G00090	G00072	G00077	
Chestnut Brown		G00091	G00073	G00078	
7015		G00092	G00074	G00068	
7016				G00061	

- Colour coded gaskets are available as an optional extra.
- All colours are mapped across from the 'Colour' column except 7016. G00061 will be mapped with Graphite Grey for the W474 Glazing Wedge..

## Cross Sectional Gasket Diagrams

- Colour coded gaskets to are available as an optional extra.
- All colours are available mapped across from the colours column except 7016. G00061 will be used for mapping with 'Graphite Grey' for the W474 Glazing Wedge.

External

Internal

B2018  
Glazing Rebate

W474  
Glazing Wedge

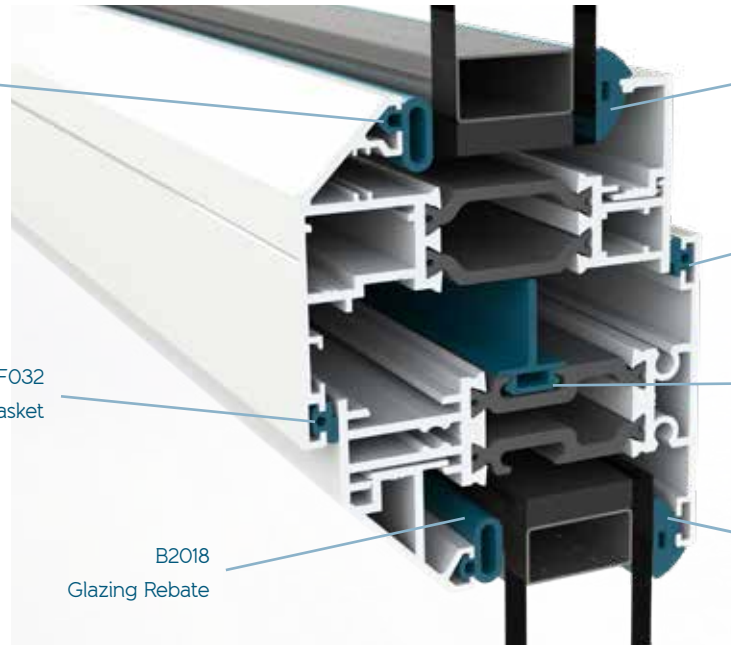
AF032  
Closing Gasket

AF032  
Closing Gasket

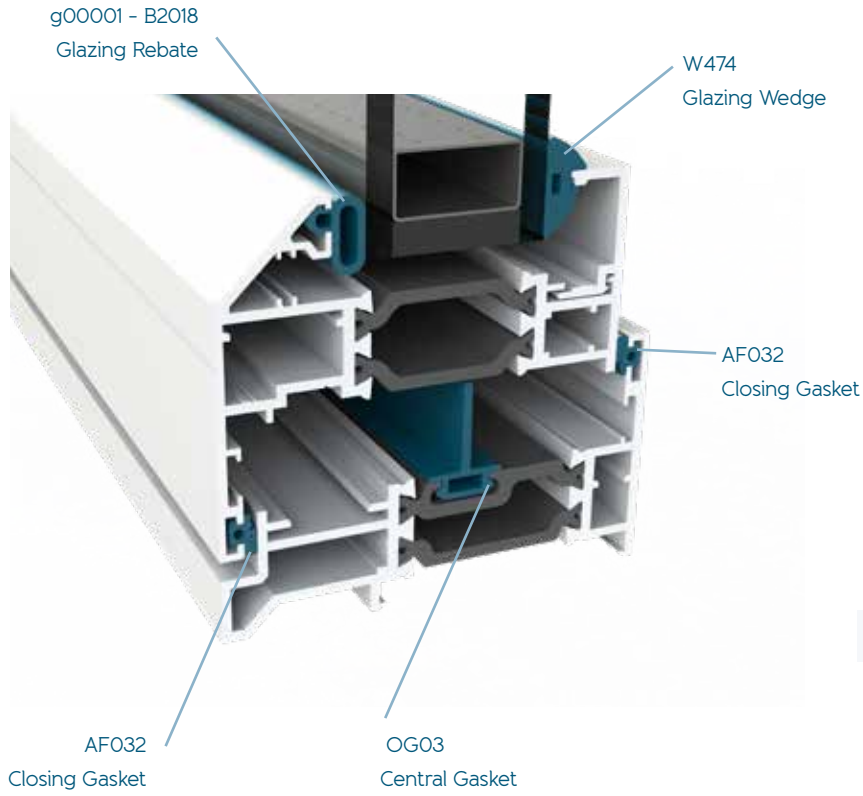
B2018  
Glazing Rebate

OG03  
Central Gasket

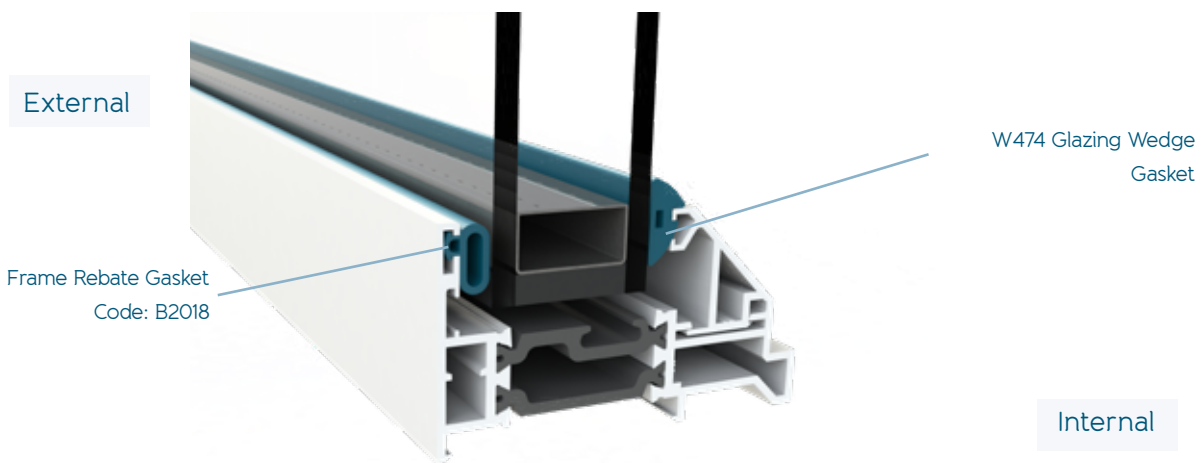
W474  
Glazing Wedge



## Cross Sectional Gasket Diagrams

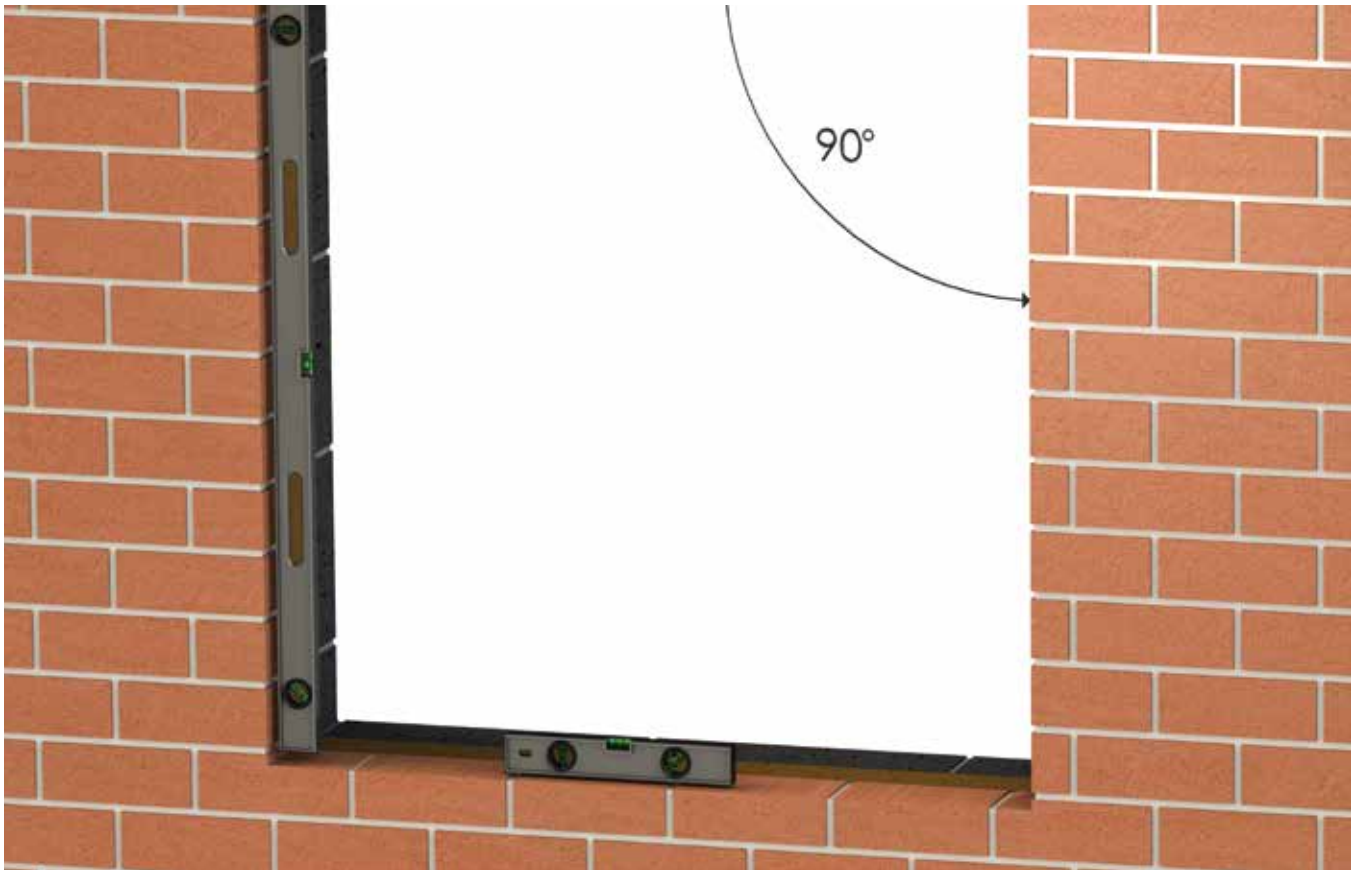


### Fixed frame



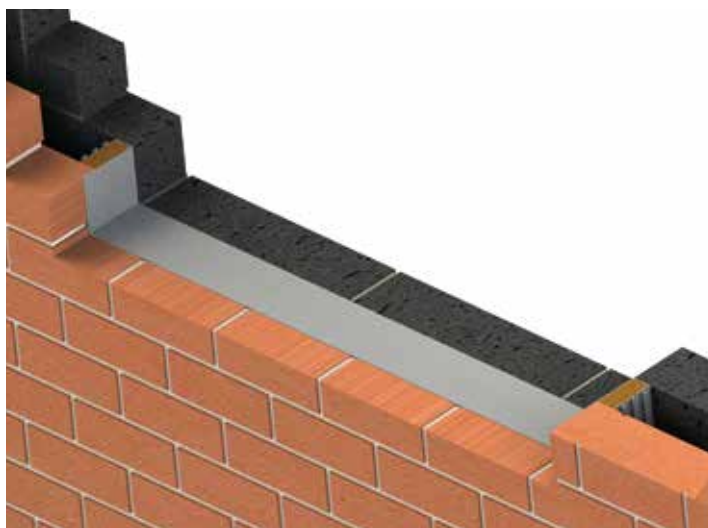
# Installation Guide

## 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.

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



## 1. Frame Fixing

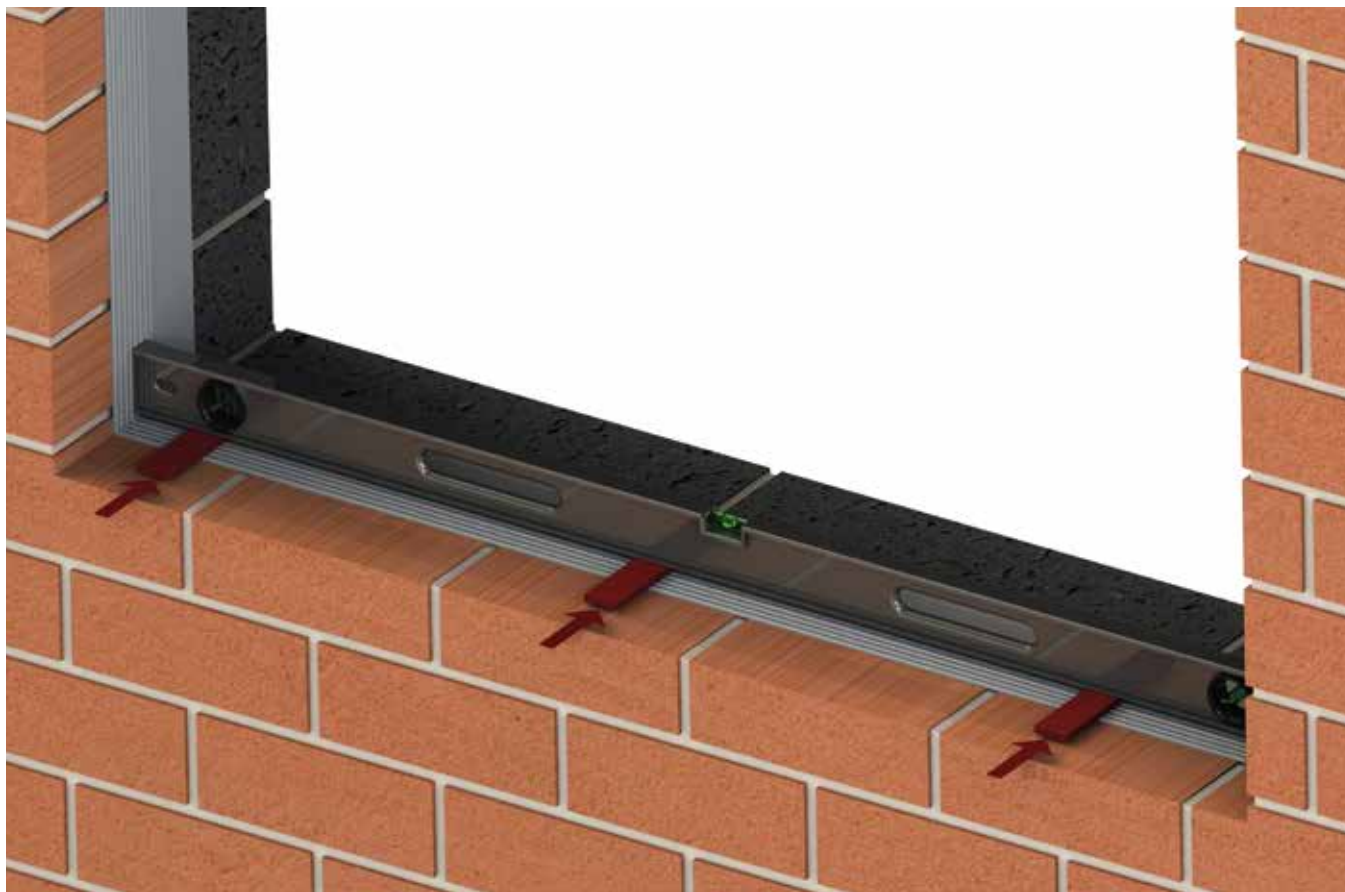


FIG 1

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 and 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)



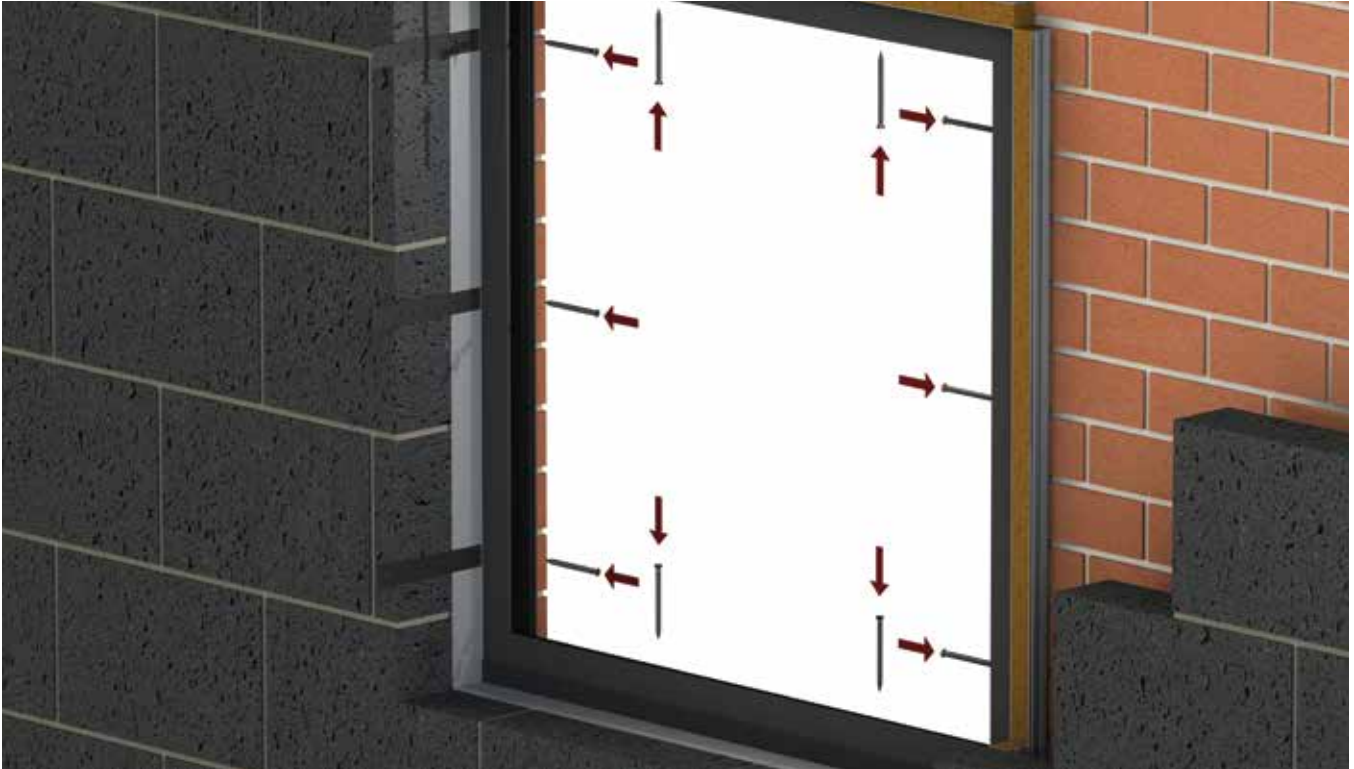


FIG 3

*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 side. 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

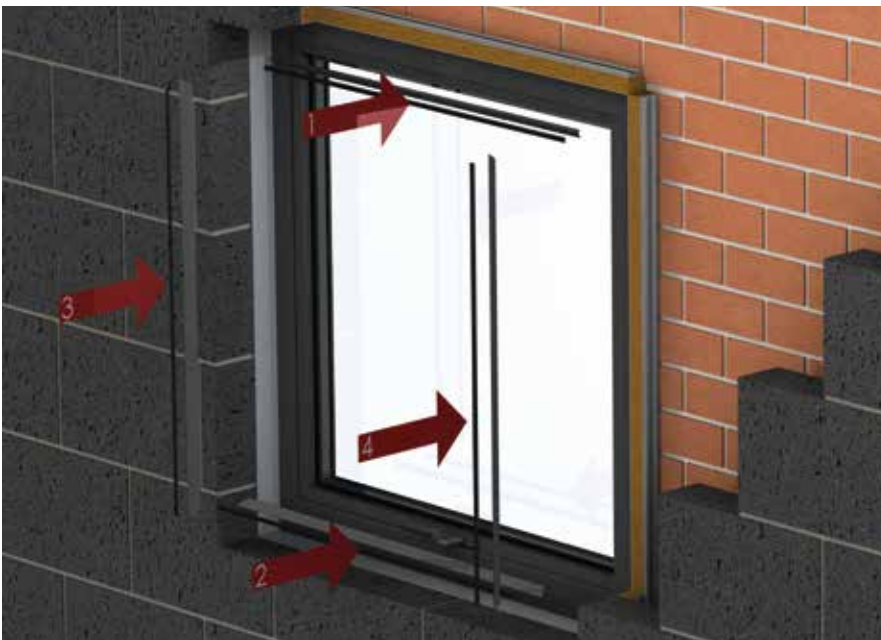


FIG 5

- ▶ 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, gaps around the window 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. The best practice is to have insulating foam fill inserted wherever practical. (Fig.6)

# Accreditations...

At Origin, we pride ourselves on providing best quality products backed by best levels of service and efficiency. Put simply, our aim is to continuously learn, evolve and improve.

We are well known for having rigorously high standards in everything that we do. We're also known for innovation, but we never want to settle: if there's a way that we could do something better, we will find it.

This ethos has been instilled throughout Origin. Whether it's a process, product offering or even the company's sustainability, we have created a culture that encourages continuous improvement.

To demonstrate our commitment and as a way of measuring our performance, we work towards gaining certain prestigious accreditations. Our achievements show a strong moral and ethical intent in how we operate and how we try to do things the best way, not because we are told to do so, but because we think it is the right thing to do.

We'll run through some of these now.

## ISO 9001 – Quality Management...

ISO 9001 is an international standard that assesses a company's quality management system. Having first achieved it in 2013, the fact that we still are certified means that we have a track record of consistently providing products and services that meet both customer and regulatory requirements.

It's something that we take very seriously and its influence is integrated into every process. Key areas of this include:

Product quality – To ensure a product's overall manufacture is flawless, we have checks in place to guarantee you the best quality. A few examples are:

- Supply chain – an inspection at the point of delivery and before going into manufacturing. If anything is spotted, it's documented and raised with the supplier.
  - Production – there are quality checks at every station, not only to look over the previous person's work, but to review the quality of the overall build.
  - Equipment – a robust maintenance schedule for machinery and equipment ensures consistency.
  - Pre-delivery – before it is packaged and loaded ready for delivery, there's another thorough check to ensure nothing's happened whilst being moved from station to station.
  - Feedback – as part of our mission to always innovate, whether it's from internal or external stakeholders, feedback is imperative. We are very proactive at bringing this type of information back into the business and learning, as it gives us an opportunity to improve.
-

- Training and development for our employees – meaning we're better at understanding the good, the bad, and what we can do better.

## Secured by Design...

Secured by Design (SBD) is a national, police-backed standard, associated with security and levels of performance for weather, operation and quality on domestic properties. The flagship UK police initiative was originally introduced to help 'design out' crime through the use of high-quality, innovative products and market-leading processes.

It recognises that our doors and windows have not only been tested to the required security standards, but that they also adhere to the rigorous test standards required by the police.

This independent certification involves initial testing of the products and regular re-tests, as well as inspections of our manufacturing and production facilities, to ensure the correct processes are maintained constantly over time, providing more secure and reliable products.

In order to be able to apply, we first needed to achieve:

1. PAS 24 (Enhanced Security)
2. BS EN 6375 Part 1 (Weathertightness)
3. BS EN 6375 Part 2 (Operational and Strength Characteristics)
4. BS EN 6375 Part 3 (Basic Security)
5. ISO 9001 (Quality Management)

We're proud to say that our products passed every one and SBD, so you can feel secure by choosing Origin.

## PAS 24...

This is your guarantee that the door sets and windows that we manufacture deliver the right level of security for the buildings they are intended to be part of.

Like most British Standards, PAS 24 is a minimum standard, and it is either a pass or fail test. There isn't a performance scale for those that are more or less secure, so some of the products that pass will be stronger than the minimum requirement. That's why we have become Secured by Design accredited. Because it's a voluntary scheme, we feel it demonstrates our commitment to the security and overall performance of our products.

## ISO 14001 – Environmental Management...

Now more than ever, we need to be aware of the impact our operations may have on our environment; the legal obligations we must adhere to, and ensuring we are doing things the right way.

The internationally renowned ISO 14001 accreditation measures the environmental management system that we have in place. It's a subject that's very close to our hearts, which is why working towards this standard was an easy decision.

We care about the resources we use for our products – where they come from and where they end up. To add to this, we aim to be zero waste to landfill and have already put into place many positive changes to make this happen. We want our customers to buy from us with a clear conscience and feel that ISO 14001 can prove that Origin is taking responsibility, acting ethically, legally and exercising best practice in all that we do. Our environmental management system covers:

- Waste management and energy targets – to reduce our consumption and impact on the environment  
Helpful hints, tips and reminders are prompted to all staff regularly, so that they can join us in our goal and see how small changes to their work practices can have a big impact.
- Product design and lifecycle – recyclability and sustainability are a design priority for us.
- Supply chain – choosing suppliers that are aligned with our ethos and vision. This is applicable not only when bringing on new suppliers, but also working with existing ones to better their carbon footprint – whether that's minimising packaging, reusing or even our drivers picking up the materials on their routes, rather than a supplier sending their own fleet, we are constantly reviewing how we can improve.



# Contact

## Accounts

---

t 08448 802 371 or 01494 416 895    e [Finance@origin-global.com](mailto:Finance@origin-global.com)

## Marketing

---

t 08448 802 374 or 01494 416 897    e [Marketing@origin-global.com](mailto:Marketing@origin-global.com)

## Sales Operations

---

t 0808 168 5816 or 01494 686 868    e [OrdersNorth@origin-global.com](mailto:OrdersNorth@origin-global.com)  
e [OrdersSouth@origin-global.com](mailto:OrdersSouth@origin-global.com)

## Solutions

---

t 08448 802 373 or 01494 416 896    e [Solutions@origin-global.com](mailto:Solutions@origin-global.com)

## Fleet and Logistics

---

t 08448 802 378 or 01494 416 898    e [Logistics@origin-global.com](mailto:Logistics@origin-global.com)



Origin Global HQ, Stuart House, Castle Estate,  
Coronation Road, High Wycombe  
Buckinghamshire, HP12 3TA

t 0808 168 5816  
e [enquiry@origin-global.com](mailto:enquiry@origin-global.com)  
w [www.origin-global.com](http://www.origin-global.com)

Origin Northern Centre of Excellence,  
Taurus Park, Europa Boulevard, Westbrook,  
Warrington, Cheshire, WA5 7ZT

t 01925 907 907  
e [enquiry@origin-global.com](mailto:enquiry@origin-global.com)  
w [www.origin-global.com](http://www.origin-global.com)