



Series 464 Sashless Double-Hung Window



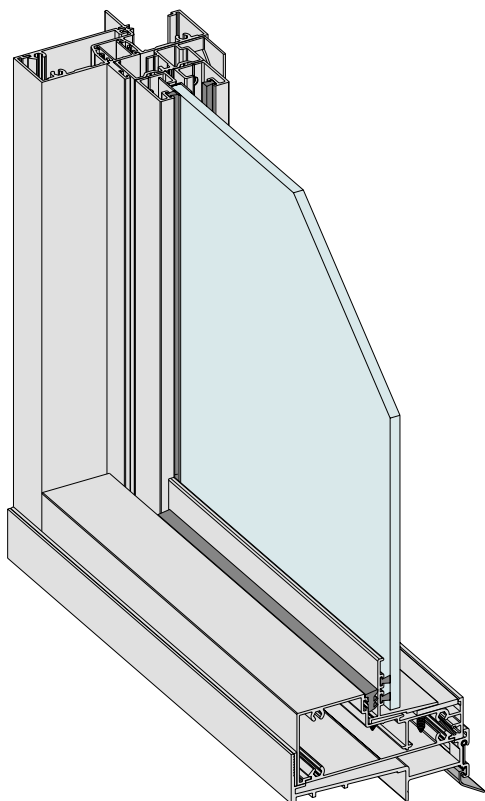
Photo courtesy of Evolution Windows & Doors

Series 464

SASHLESS DOUBLE-HUNG WINDOW

DATE: MAY 13
 REPLACES: JUNE 06
 SCALE: NOT TO SCALE

KEY FEATURES/PERFORMANCE CHARACTERISTICS



Series 464 ClearVENT™ Sashless Double-hung window
 internal view

- ClearVENT™ offers clear unobstructed vision as there are no horizontal central sash rails. As one sash is lifted, the other lowers (the sashes are joined via cords and pulleys).
- Sashes are secured with key locking shoot bolt.
- A fixed sill glass panel can be fitted into the ClearVENT™ window to make it easy to get top ventilation only. This fixed sill panel could also be used on tall windows in elevated installations as a safety barrier (check the requirements of local authorities).
- ClearVENT™ windows can be fitted with external flyscreens, special extrusions have been cut to make sure this detail matches the overall window design, no turn buckles required.
- Sashes are counterweighted by the adjoining sash via stainless steel/nylon pulleys and cords.
- ClearVENT™ vertical sliding sashes can also be installed into Series 50 or 51 hinged and bi-fold doors.



SOUND REDUCTION

The following glass combination has been tested with this system to achieve sound reduction numbers listed below.

Glass Description	Rating
6.38mm Laminated glass	Rw32

NOTE: The actual tests were carried out on a product very similar to this window (Series 614).

Maximum Panel Height*	1010mm
Maximum Panel Width*	1210mm
Maximum Glass Thickness	≤ 6.38mm

* Subject to individual site conditions and wind loads. Contact AWS Technical Support for more information, email techsupport@awsaustralia.com.au



2D & 3D CAD FILES AVAILABLE

To access 2D & 3D CAD models visit our online specifier resource centre
www.specifyaws.com.au



MORE INFORMATION

For the latest updates regarding this product visit our website
www.elevatealuminium.com.au/464

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DESIGN FEATURES

This full vision vertical sliding sashless double-hung window has been created in 102mm commercial framing.

The window has been tested for compliance with the relevant Australian Standards, achieving a high water resistance of 300Pa.

Sashes are secured with key locking shoot bolt type lock.

The main feature with this ClearVENT™ window is the clear unobtrusive vision, as there are no horizontal central sash rails. As one sash is lifted, the other lowers (the sashes are joined via cords and pulleys).

A fixed sill glass panel can be fitted into the ClearVENT™ window to make it easy to get top ventilation only. This fixed sill panel could also be used on tall windows in elevated installations as a safety barrier (check the requirements of local authorities).

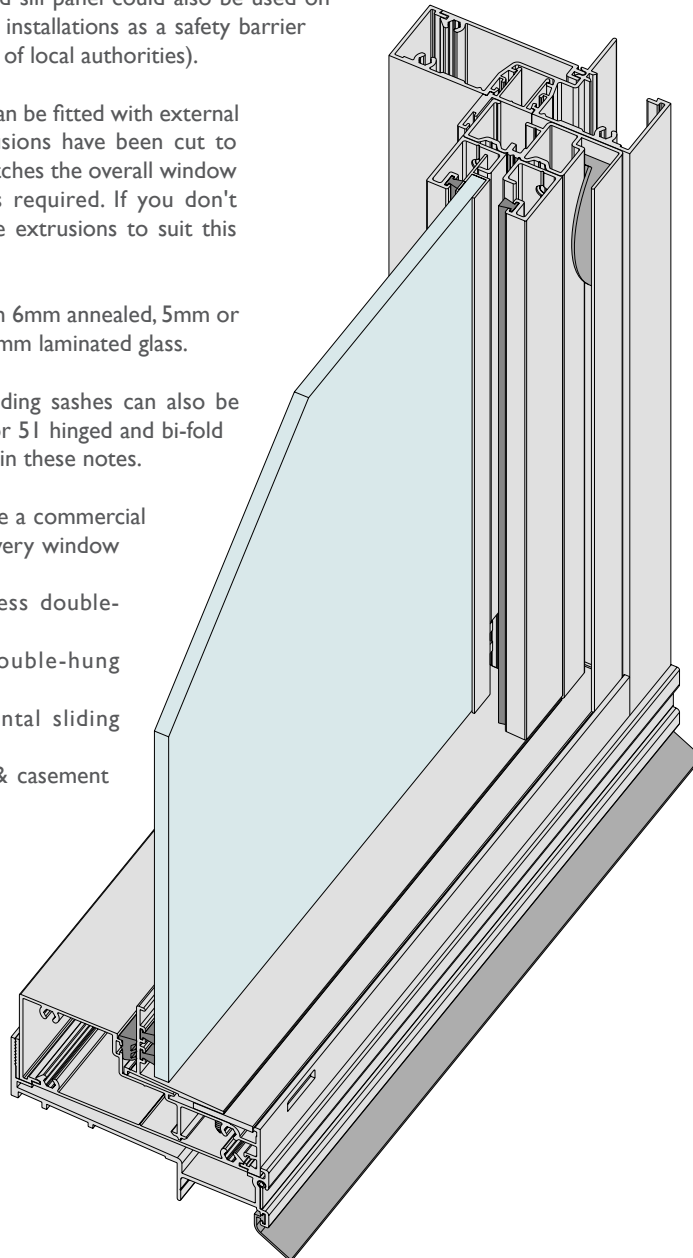
ClearVENT™ windows can be fitted with external flyscreens. Special extrusions have been cut to make sure this detail matches the overall window design, no turn buckles required. If you don't require screens, we have extrusions to suit this situation.

Sashes can be glazed with 6mm annealed, 5mm or 6mm toughened or 6.38mm laminated glass.

ClearVENT™ vertical sliding sashes can also be installed into Series 50 or 51 hinged and bi-fold doors, refer details later in these notes.

It's now possible to make a commercial frame that will accept every window option we offer:

- ClearVENT™ sashless double-hung sashes.
- Commercial tilt double-hung sashes.
- Commercial horizontal sliding sashes.
- Commercial awning & casement sashes.



HOW TO SPECIFY

SYSTEM NAME

Elevate™ Aluminium Systems Series 464 Sashless Double-Hung Window

FINISH

Powder Coat
Anodised

COLOUR

Select from the AWS range of approved powder coat or anodising colours

GLASS

Specify thickness ≤6.38



Specification Assistance

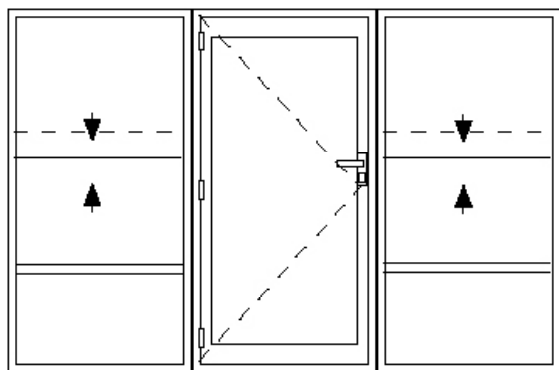
Need help specifying this product? Email techsupport@awsaustralia.com.au and our qualified technical advisors will assist you with product selection and specification for your project.

Series 464

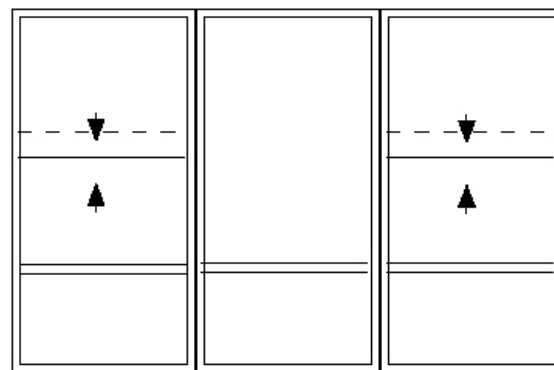
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TYPICAL CONFIGURATIONS AND SASH STRENGTH



ClearVENT™ double-hung windows next to door openings require grade 'A' safety glass as they are within 300mm of a door opening, as per AS 1288.



On tall combination windows subjected to high wind loads it's possible to use one of the stronger CentreGLAZE™ mullions.

Max. inlay height = 2400mm

This may be limited by the maximum sash weight of 25kg and the strength of the glass.

Max. inlay width = 1200mm

But be aware glass supported on two sides may be the weak link and prevent you from getting to 1200mm.

Glass Performance of ClearVENT™ sashes:

The weak link on frameless double-hung sashes will be the unsupported glass edge across the centre of the window. The situation is covered in Australian Standard AS 1288-2006, Section 4.

Typical window examples based on this Standard:

Maximum Window Width (based on 30mm frames)

Wind Classification	6mm Annealed Glass	5mm Toughened Glass	6mm Toughened Glass	6.38mm Laminated Glass
N1	1210mm	1210mm	1210mm	1210mm
N2	1210mm	1210mm	1210mm	1210mm
N3	1067mm	1186mm	1210mm	1037mm
N4	904mm	1036mm	1186mm	880mm
N5	763mm	886mm	1036mm	744mm
N6	679mm	859mm	995mm	662mm
C1	942mm	1186mm	1210mm	917mm
C2	794mm	1012mm	1176mm	773mm
C3	679mm	859mm	995mm	662mm
C4	601mm	755mm	872mm	587mm
Human Impact	Not suitable	1136mm	1210mm	886mm

Human Impact

If the ClearVENT™ sill is within 500mm of the floor, you have to allow that this window is subject to the Human Impact section of the Standard. Use the lower of the spans when Human Impact is allowed (e.g. If your window was in wind classification N3 and within 500mm of the floor and used 6.38mm laminated glass the maximum window width would be 886mm – limited by Human Impact. Alternatively if the same window was in wind classification N4 the maximum window width would be 880mm – limited by glass span table).

Laminated Glass Limitations

Laminated glass can be used on ClearVENT™ sashes, but as can be seen from the chart above, this option is quite weak.

Safety Note: Laminated glass is recommended over the use of toughened in areas subject to Human Impact, due to the counterbalancing effect of the top sash dropping rapidly if the toughened glass bottom sash is broken and the glass weight removed.

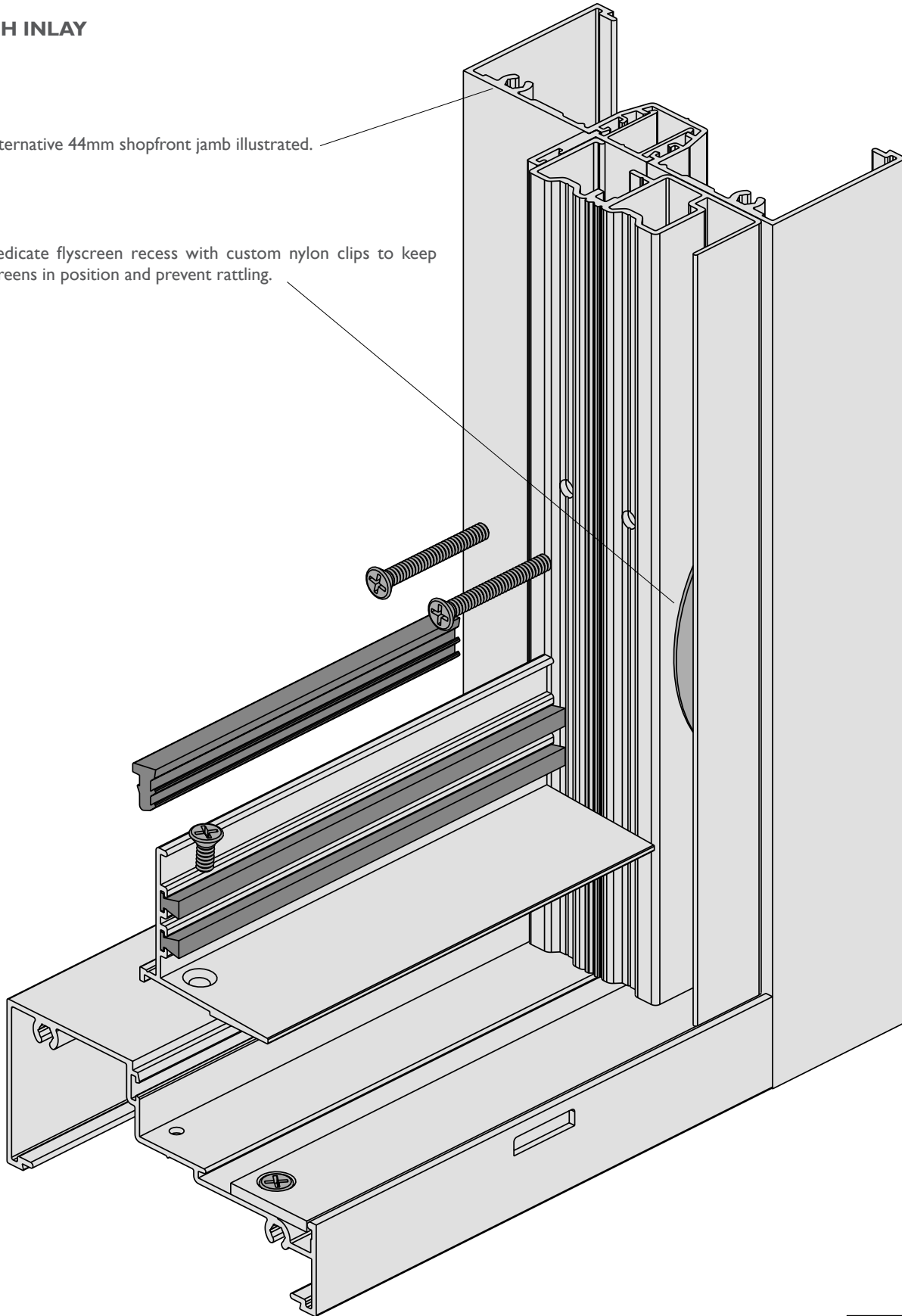
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SASH INLAY

Alternative 44mm shopfront jamb illustrated.

Dedicate flyscreen recess with custom nylon clips to keep screens in position and prevent rattling.

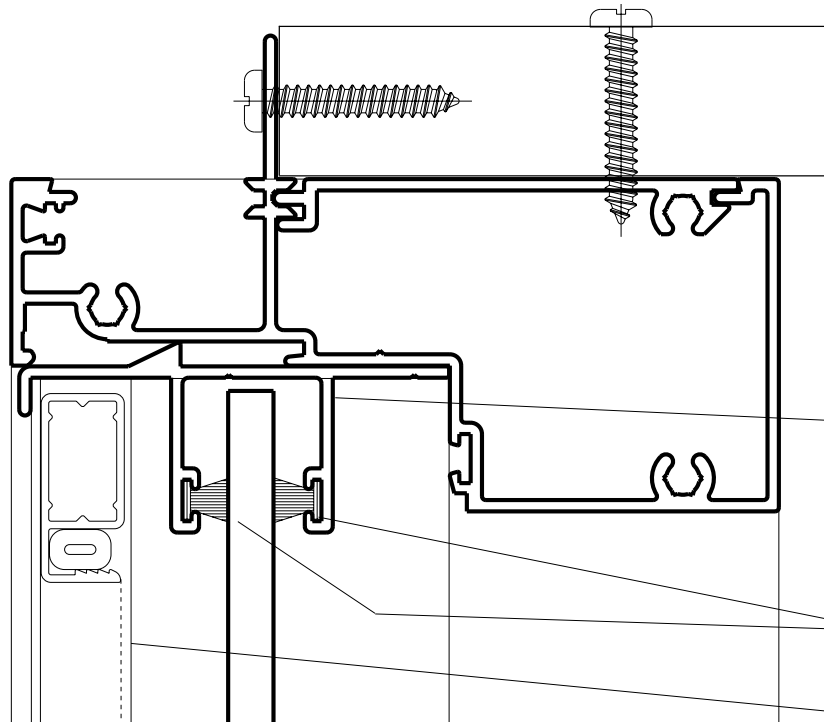


Series 464

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HEAD AND SILL



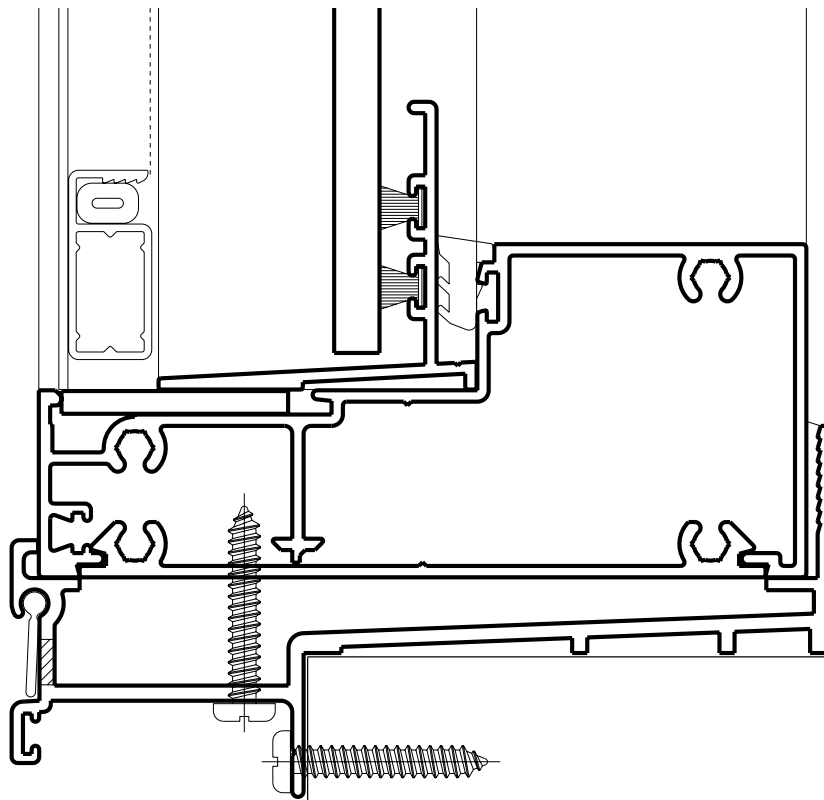
Head

We can fit a snap-in filler to allow us to double fix timber reveal to frame. This pulls the reveal up tight on the frame. Timber reveals are typically used on brick veneer installations.

ClearVENT™ head insert nests into nailing fin frame as shown left.

Weatherpile sealed.

Optional flyscreen if required is fitted within the main frame.



Sill

ClearVENT™ sill insert nests into commercial sill as shown left.

Sub-sills are standard under Series 464 windows.

This sub-sill has built-in nailing fin to suit cavity brick and brick veneer installations.



CAD file: DWG
 464.CVT.1

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JAMB

Alternative 44mm wide nailing fin jamb.

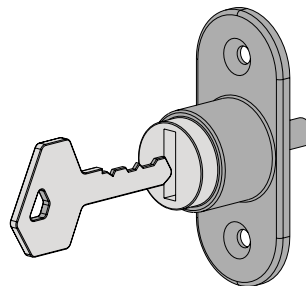
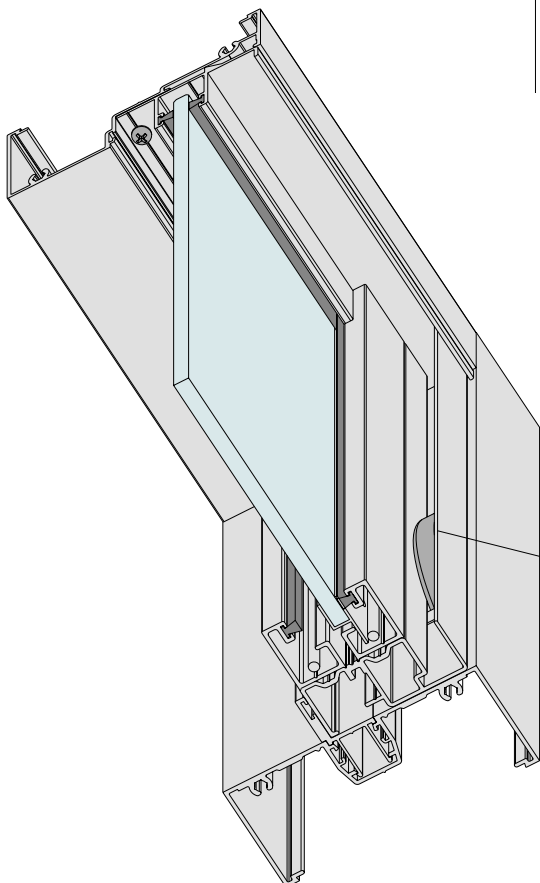
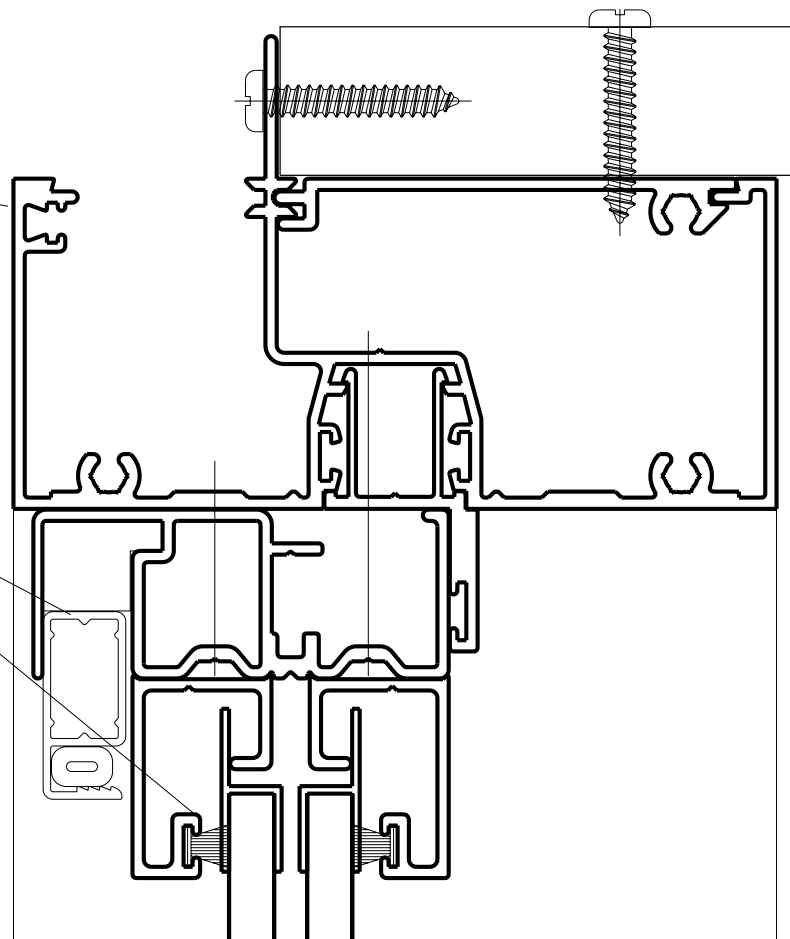
ClearVENT™ jamb insert has been designed to nest into commercial jamb (shown right).

AWS offer two types of ClearVENT™ insert:

- Flyscreen version (shown right).
- Non-flyscreen version – no external screen acceptor channel also available.

Custom optional extruded flyscreen.

Weatherpile sealed.



ClearVENT™ panels are secured with press button keylock shown above.

Flyscreen retained with custom nylon clips that snap into screen acceptor channel – no rivets or turnbuckles required.

External view of head to jamb intersection with flyscreen option.



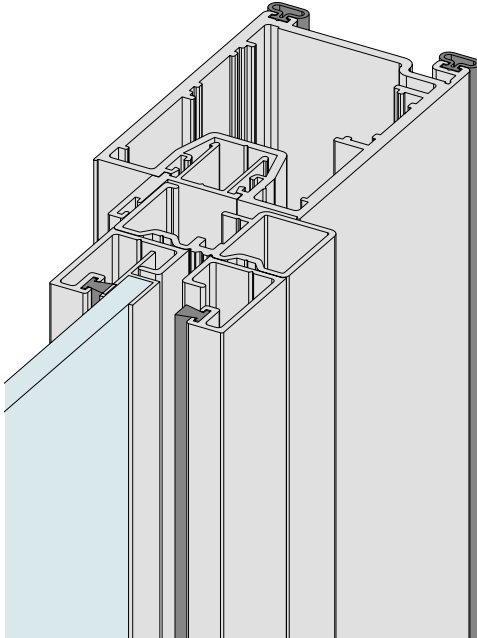
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DOOR INSTALLATIONS

**Non-flyscreen version.**

The detail above shows the dedicated jamb adaptor designed for projects where flyscreens are not required.

Flyscreen version.

The detail right shows the dedicated jamb adaptor designed for projects where flyscreens are required.

Most opening windows in Australia will require flyscreen sooner or later. With this in mind we have designed a system that accepts screens professionally.

The jamb screen recess is fitted with custom nylon spring clips that keep the screen in position.

There is nothing upmarket about an unsightly surface mounted turnbuckle - as used by most of our competitors to support their flyscreens.

The details on this page show ClearVENT™ inlaid into Series 50 door panel in Series 410 Bi-fold door.

When ClearVENT™ is inlaid into door panels we recommend midrails 1/3 up to stabilise panel.

