



# Architectural Information

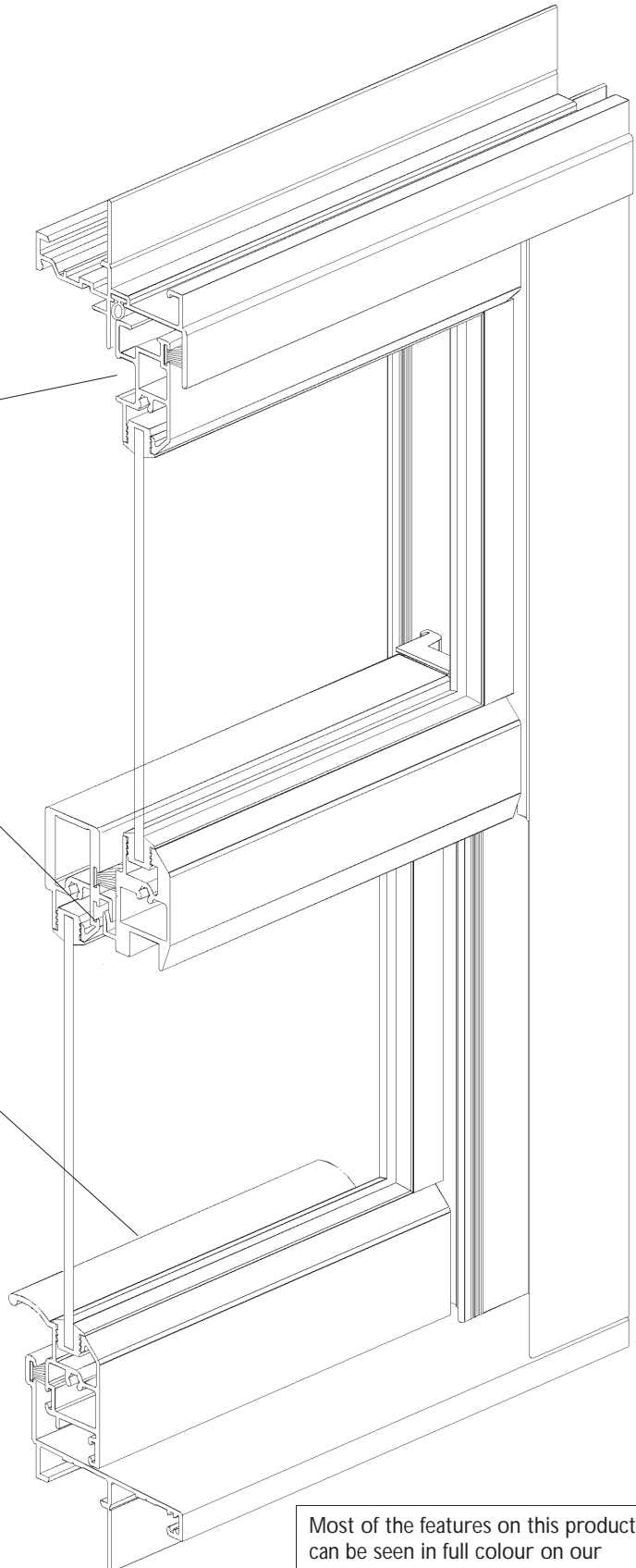
## Series 514 Double-hung Window

### Standard Wrap Around Sash Introduction

Page: 22. 1  
Date: Aug 03  
Replaces:  
Scale: Not to scale

## Design Features

1. Successfully tested for compliance with Australian Standard AS 2047.
2. Optional mullion and transom strengths cover a large variety of design wind load areas, refer Pascal rating tables.
3. 50mm wide perimeter frame will couple to a large variety of adaptors without visible rivets or screws, refer section 10.
4. Finger grip built into the top sash rail.
5. The same frame can be used for double-hung or fixed sidelights in standard wrap around glazing or individually glazed sashes.
6. Sashes will bypass each other to allow cleaning of all glass from inside the building.
7. Sashes run on spring balances with auto adjust spring shoes.
8. Custom heavy duty key lockable catch with die cast keeper.
9. Interlocking meeting rails.
10. Spring shoe is recessed up into the external meeting rail and the bottom rail to reduce the chance of shoe damaged. This is particularly relevant when the top sash is fully opened and strikes the sash stop (basically the side rails hit the stops not the shoes).
11. Fixed sill has built-in drainage to take care of condensation.
12. Large finger grip on bottom sash.
13. Standard sill as detailed below will rate to 200Pa water resistance plus there is a tubular sill option for 300Pa water resistance projects.
14. WERS (Window Energy Rated System) tables are in section 04. Sound reduction ratings can be found in section 55.



Magnum™ and sashless ClearVENT™ double-hung windows are also available. refer Series 613 (section 26) and Series 614 (section 27).

Australian Registered Design

Most of the features on this product can be seen in full colour on our web site:  
[www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)

Page: **22.2**  
 Date: Aug 03  
 Replaces:  
 Scale: Not to scale

# Architectural Information

## Series 514 Double-hung Window

### Check List



**Not all double-hung windows are the same.** Sure they cover a hole in the wall and the sashes go up and down - but if you want your windows to perform, keep the elements on the outside where they belong and operate smoothly for years to come there are some things you should check/compare when choosing your supplier.

Features	Vantage D.H.	Opposition
Does the window comply with the relevant Australian Standards. <ul style="list-style-type: none"> <li>All windows should comply but it pays to ask for written proof.</li> </ul>	Yes	
Standard window has a high water rating of 200 Pa.	Yes	
Very exposed installations can be upgraded to an even higher 300 Pa water rating.	Yes	
Fixed lights can be beaded off with matching extruded aluminium glazing beads.	Yes	
Window configuration can be changed without removing the window from building. <ul style="list-style-type: none"> <li>If the home owner should change their mind on the window type 'DF' to 'DD' or 'FD', it's possible to change the window without removing it from the building.</li> </ul>	Yes	
Low maintenance spring balances support the opening sashes.	Yes	
Full interlocking meeting rails. <ul style="list-style-type: none"> <li>This interlock improves the weather performance.</li> <li>Conceals the cam handle and keeper, this reduces the chance of manipulation from outside.</li> </ul>	Yes	
Both sashes can be opened and closed. <ul style="list-style-type: none"> <li>Some other companies make a single-hung window.</li> <li>The main feature of double-hung windows is to allow cool air in the bottom and hot air out the top, this won't happen with a single-hung sash.</li> </ul>	Yes	
Sashes bypass each other to allow cleaning of glass from inside. <ul style="list-style-type: none"> <li>If the sashes don't bypass each other you won't be able to clean the top portion of the lower sash from inside the building and this could result in external ladders etc.</li> </ul>	Yes	
Optional custom key lock available.	Yes	
Window can be coupled to sliding doors or other windows without visible rivets.	Yes	
Rounded corner on the frame and sash members where ever possible. <ul style="list-style-type: none"> <li>Modern paint finishes don't like sharp corners.</li> </ul>	Yes	
102mm Wide frame option. <ul style="list-style-type: none"> <li>'Longreach' frame extenders can be snapped to the double-hung frame for added impact.</li> </ul>	Yes	
Federation trim option. <ul style="list-style-type: none"> <li>We can clip 'Paddington' trims to 'Longreach' frame extenders.</li> <li>Alternatively we can clip 'Balmain' trims to the standard double-hung frame.</li> </ul>	Yes	

**These are what we see as the most important points to be checked - Compare us with the others.**



# Architectural Information

## Series 514 Double-hung Window

Vertical Section through Standard Sashes

Page: 22.3  
 Date: Mar 07  
 Replaces: Aug 03  
 Scale: Full size

1

Top rail has built-in drainage trough to guide any water that gets past the primary seal to the sides.

Weatherpile mohair primary seal.

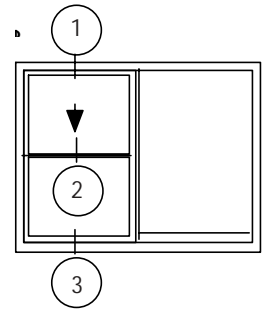
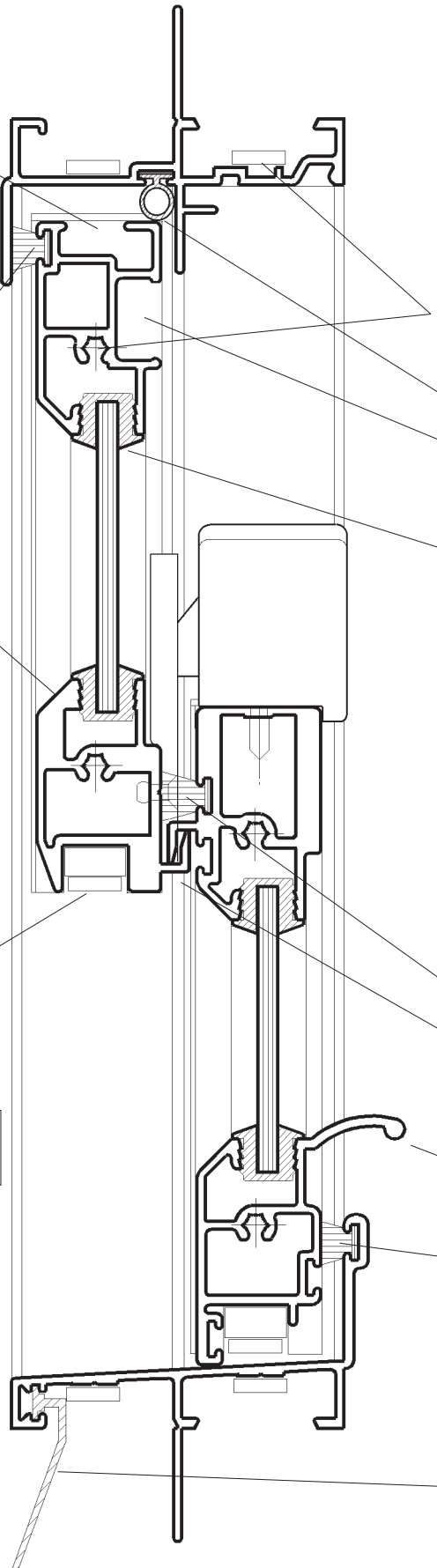
Splayed heavy duty sash rails shed water and dust.

2

Recessed sash support brackets.

CAD file: DWG or DXF  
**VAN\_514**

3



Stainless steel self tapping frame and sash assembly screws.

PVC bulb secondary seal.

Top sash finger grip recess.

Wrap around PVC glazing channel.

Non-key cam handle package.

or alternative

Custom Vantage key lock package, comes in a variety of standard colours.

Alternative crescent type lock.

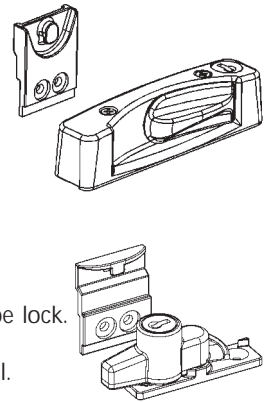
Weatherpile mohair seal.

Full interlocking meeting rails.

Bottom sash finger pull.

Weatherpile mohair seal.

PVC sill flap seals the window sill to the structure and allows for future settlement without leaving unsightly holes.

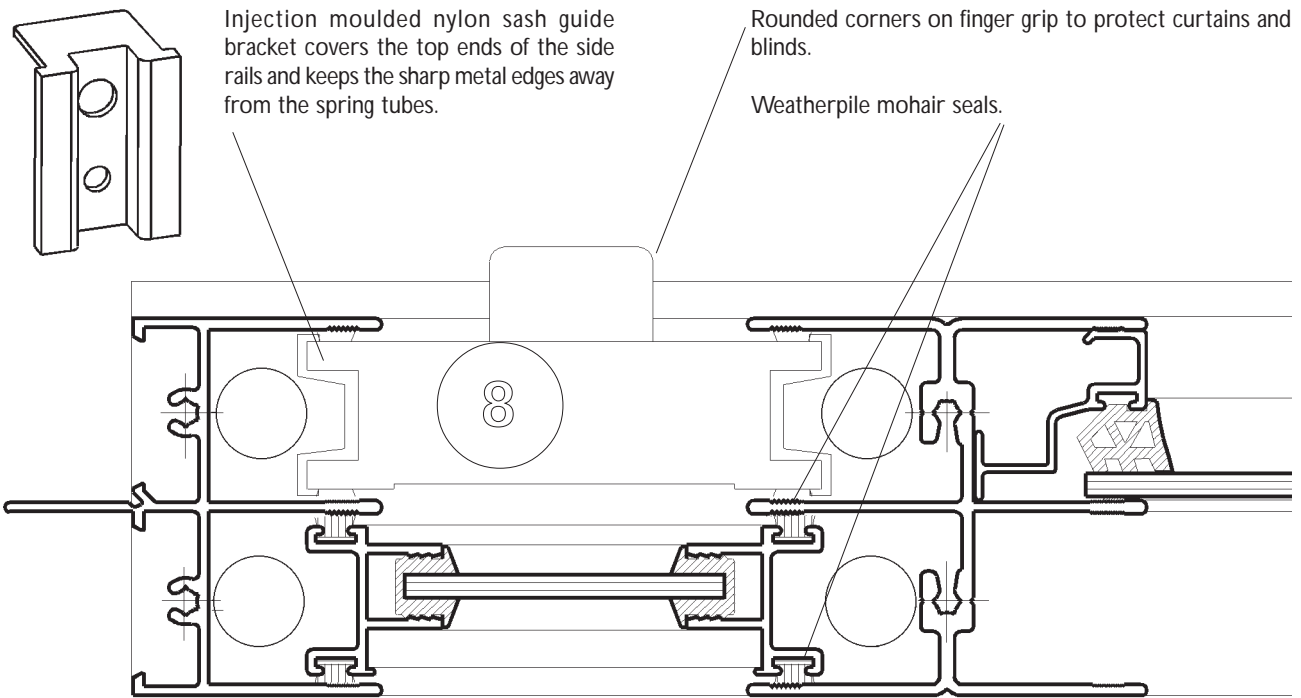


Page: 22.4  
 Date: Aug 03  
 Replaces:  
 Scale: Full size

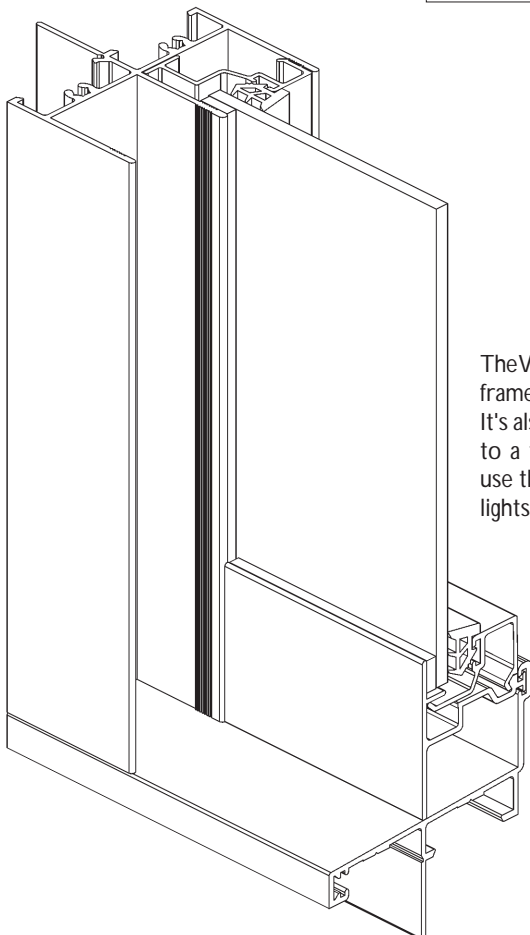
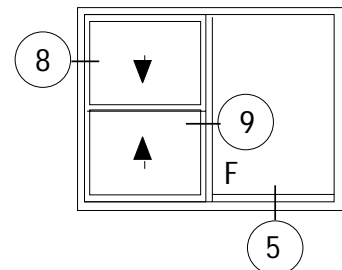
# Architectural Information

## Series 514 Double-hung Window

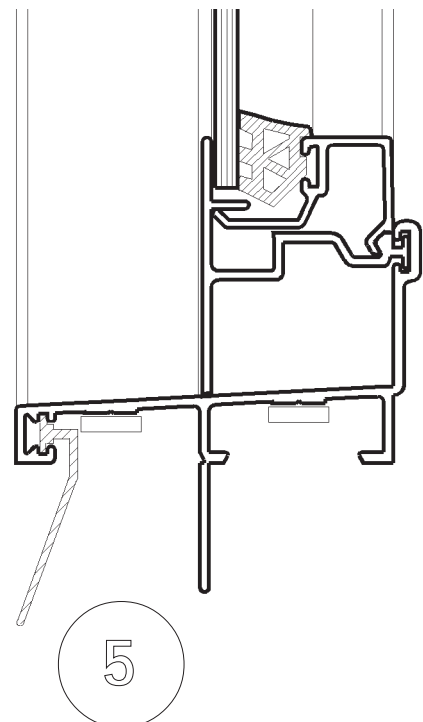
### Horizontal Section through Standard 'DF'

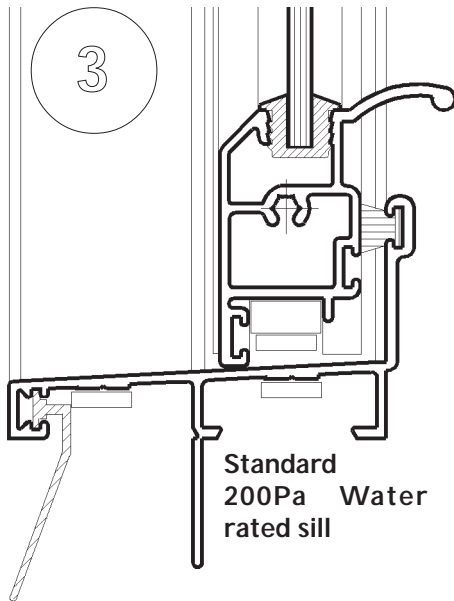


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**VAN\_514**



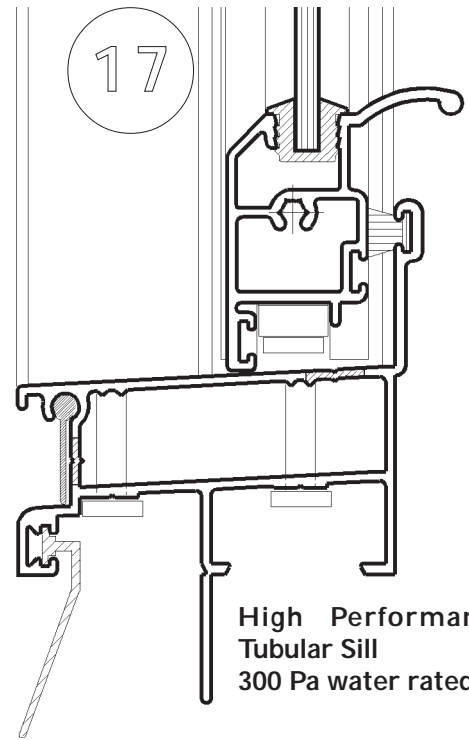
The Vantage double-hung fixed sidelight frame matches the opening sash frame. It's also possible to re-hand a type 'DF' to a type 'FD' or 'DD' on site as we use the same basic frame for the fixed lights.





Standard  
200Pa Water  
rated sill

CAD file: DWG or DXF  
VAN\_514



High Performance  
Tubular Sill  
300 Pa water rated

Window type	Window		Meeting Rails	
	Height mm	Width mm	S	U
D	1200	1010	1876	3074
D	1400	1010	1714	2790
D	1500	1010	1660	2692
D	1800	1010	1575	2538
D	2100	1010	1570	2575

Table 22.1 Wind Ratings (Pa) Meeting rails.

**S** = Serviceability limit state (deflection = L/150).  
**U** = Ultimate strength limit state (factored yield strength = 104 MPa).  
 These tables have been calculated using nominal section properties.  
 A typical assembly has been tested as per the requirements of AS2047,  
 Ultimate strength rating has been limited to 4500 Pa.  
 2200 Serviceability ratings were restricted by the maximum water  
 resistance (300Pa) achieved on this product.  
 Blank Denotes rating under 500 Pa.

**Sound Reduction**

We have tested a number of glass combinations in this double-hung window. Window was fitted with 'Qlon seals horizontally and weatherpile vertically.

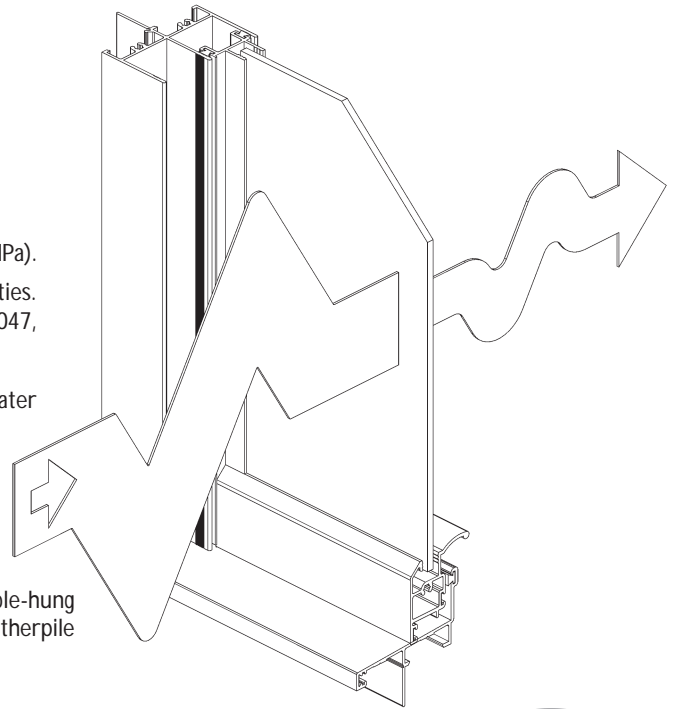
- 5mm Annealed glass 27dB(A) RW28
- 6.38mm Laminated glass 27dB(A) RW28
- 7.52mm Laminated glass 28dB(A) RW30

Go to the SoundOUT section 55 for other options.

**Thermal Transmission WERS**

This window has been WERS rated. The star ratings for heating and cooling climates with various glass options can be found in the WERS section 04.

If you are looking for insulating glass units in a double hung window go to Magnum™ section 26.







# Architectural Information

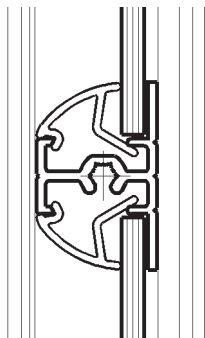
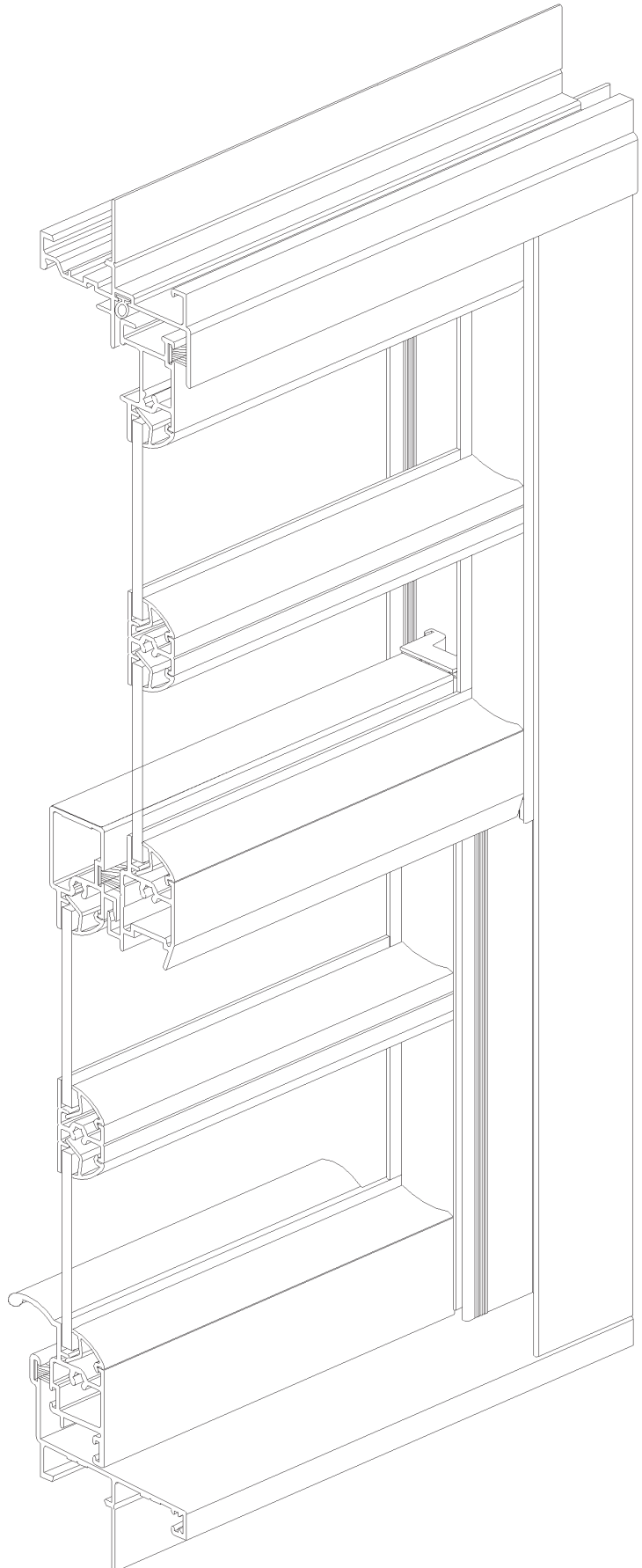
## Series 514 Double-hung Window

True Individually Glazed Option

Page: **22.7**  
Date: Aug 03  
Replaces:  
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### Design Features

1. All of the standard sash features listed on page 1 apply to this individually glazed design.
2. These individually glazed sashes go into the same frame as standard sashes.
3. The colonial bar is screwed to the vertical sash rails and teeth into the horizontals for added strength and stability.



This colonial bar has been designed to maximise its strength, the bar is then machined so that it won't be weakened in the process. Horizontal bars run through without any mid span notching and are screwed to sash side rails, the vertical bars are then notched into the horizontals.

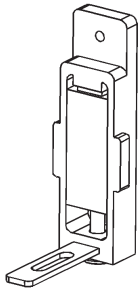
# Architectural Information

## Series 514 Double-hung Window

### Sash Support Details



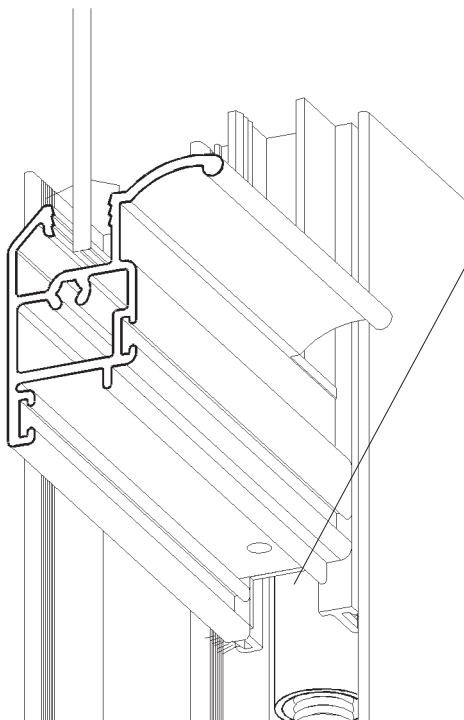
Sashes are supported on spring balances fitted with auto adjust friction shoes



Adjustable friction shoe nests into sash bottom rails.

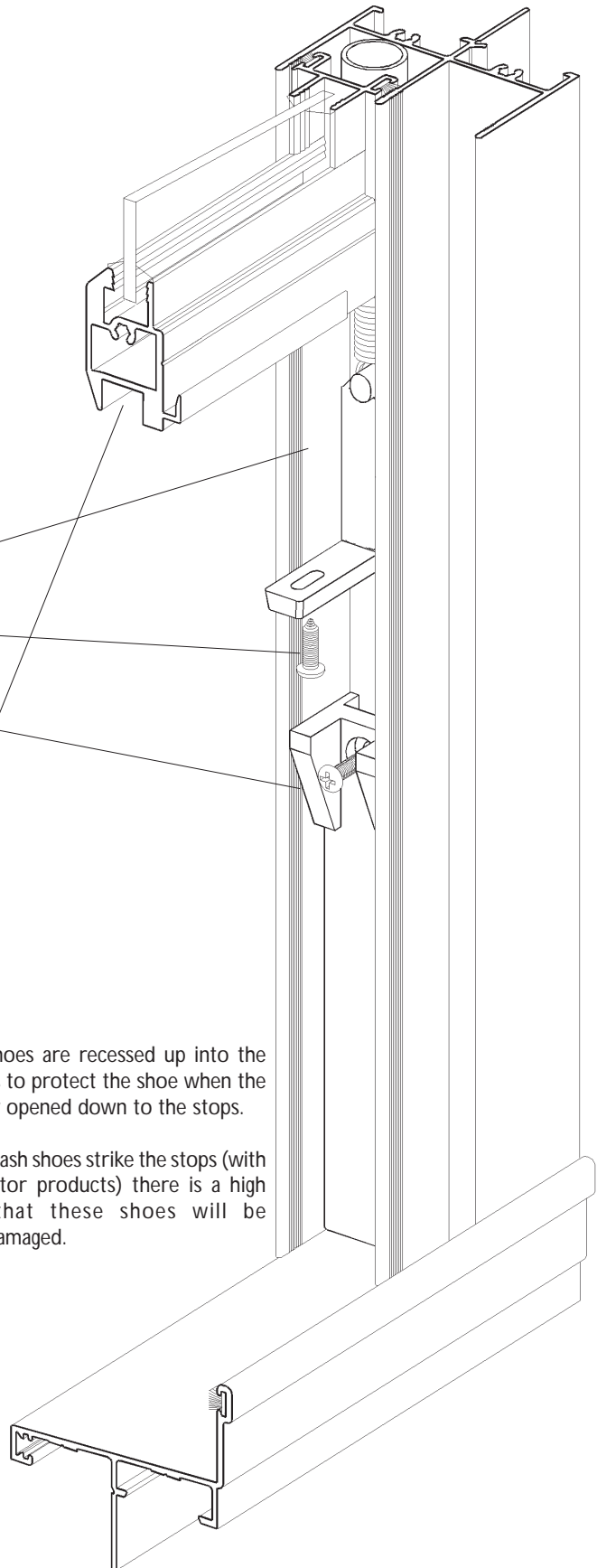
The shoe is fixed to sash with stainless steel screws.

The sash stop is designed to stop the sash firmly and runs right through to the sill for added strength.



The friction shoes are recessed up into the horizontal rails to protect the shoe when the sashes are fully opened down to the stops.

Basically if the sash shoes strike the stops (with some competitor products) there is a high probability that these shoes will be permanently damaged.





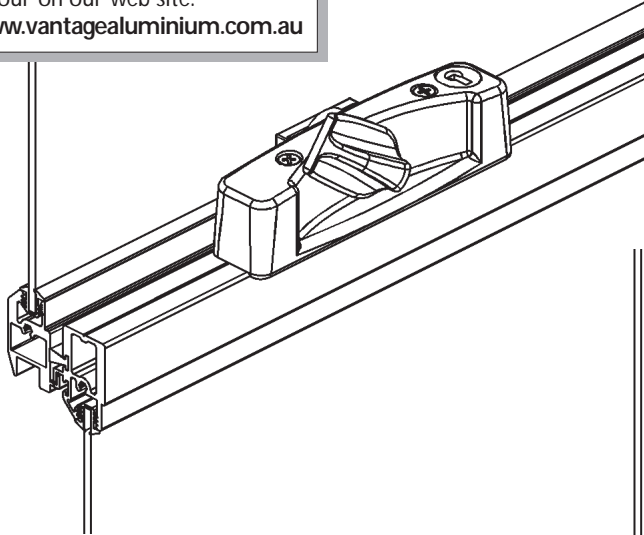
# Architectural Information

## Series 514 Double-hung Window

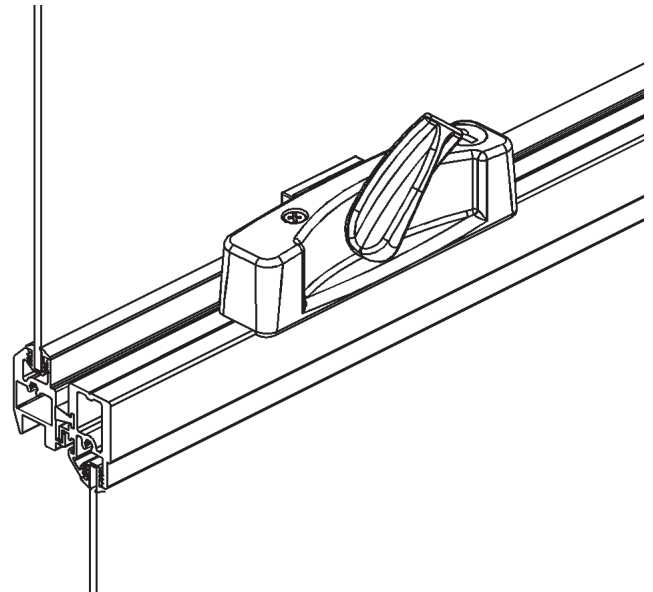
### Cam Handle Features and Operation

Page: 22.9  
Date: Aug 03  
Replaces:  
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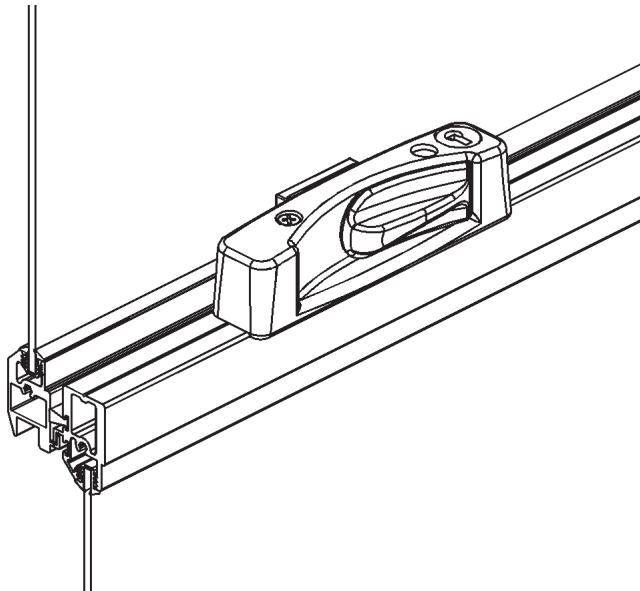
See the lock open and close in full colour on our web site:  
[www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)



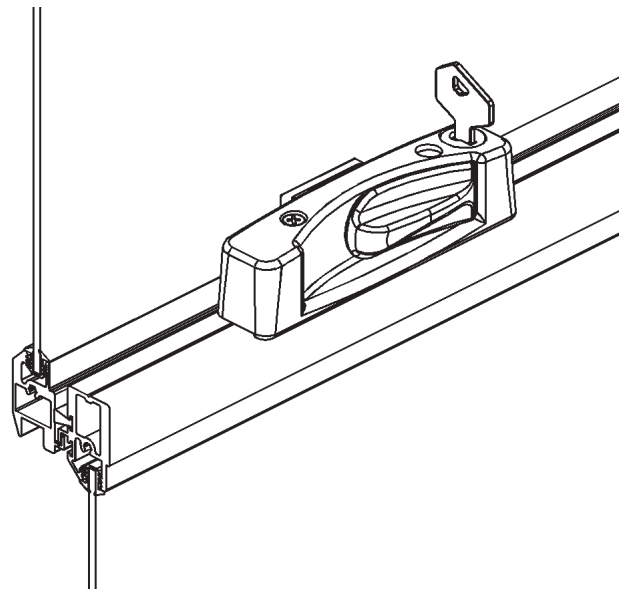
The cam rolls over 180° from the unlocked to the latched position.



This cam is easy to operate



In the latched position the die cast cam has engaged the die cast keeper and the sash meeting rails have also interlocked.



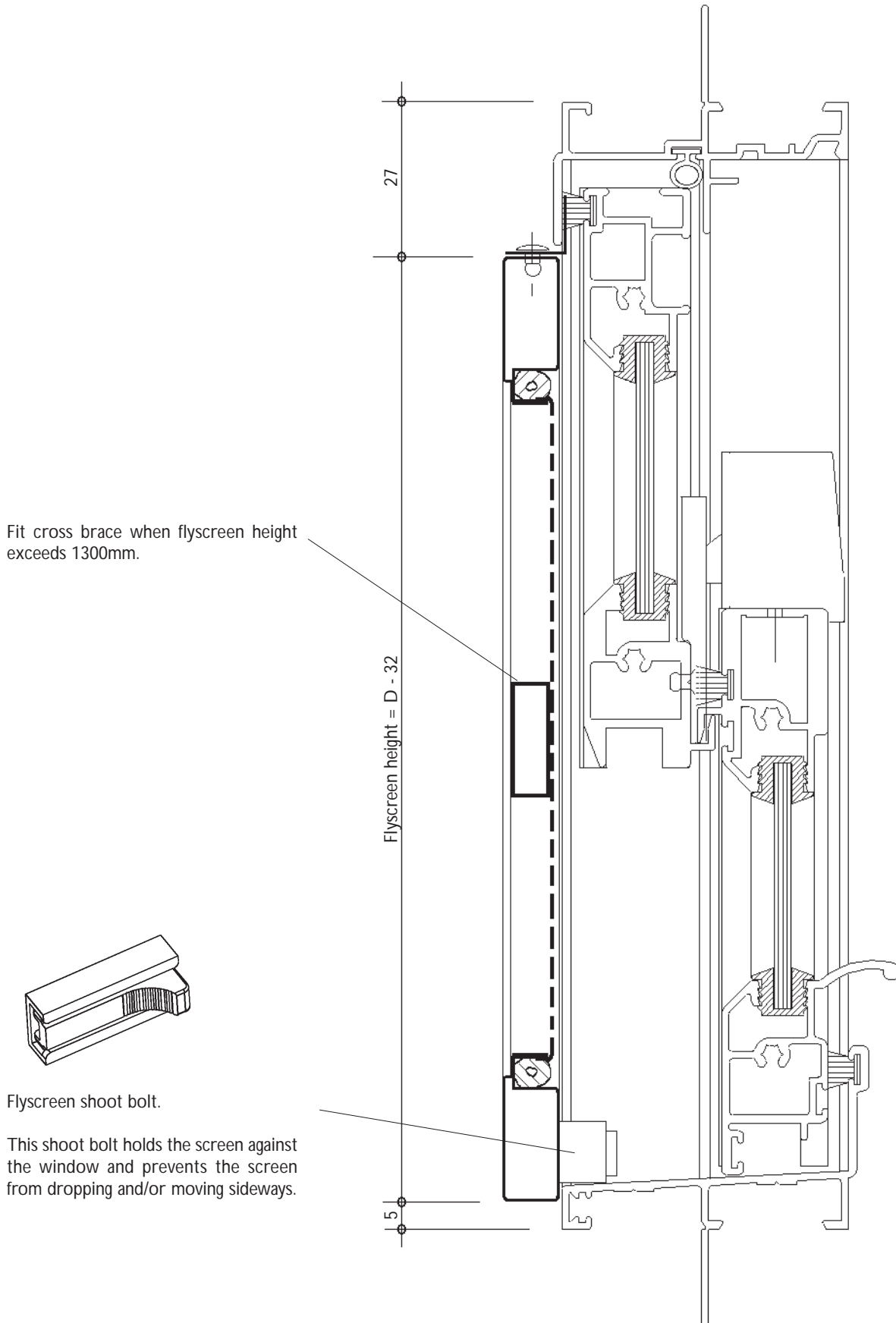
The Vantage double-hung cam lock can be key locked for added security.

Page: 22. 10  
Date: Aug 03  
Replaces:  
Scale: Full size

# Architectural Information

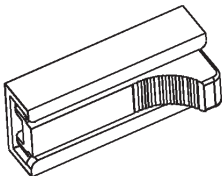
## Series 514 Double-hung Window

### Flyscreen Fitting Details



Fit cross brace when flyscreen height exceeds 1300mm.

Flyscreen height = D - 32



Flyscreen shoot bolt.

This shoot bolt holds the screen against the window and prevents the screen from dropping and/or moving sideways.



# Architectural Information

## Series 514 Double-hung Window

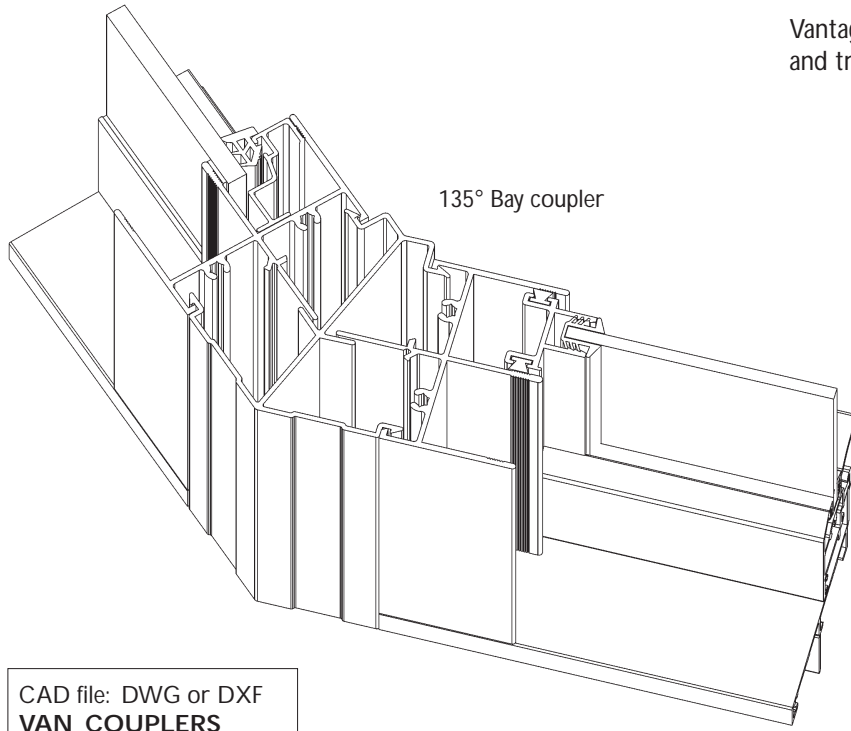
### Couplers

Page: 22. 11

Date: Oct 04

Replaces: Aug 03

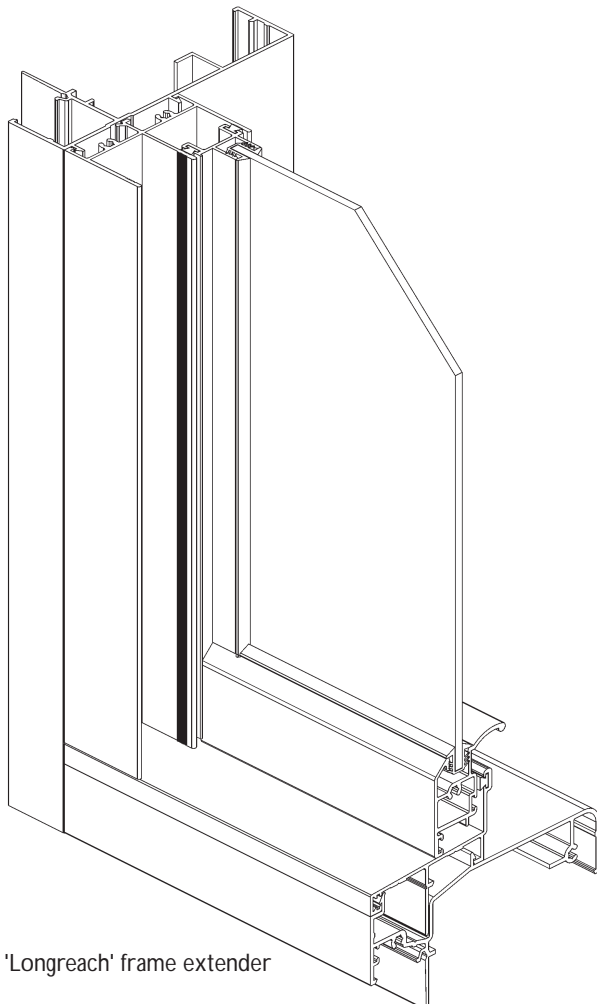
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135° Bay coupler

CAD file: DWG or DXF  
VAN\_COUPLERS

Vantage offer a large range of snap on couplers and trims, refer section 10 for full details.



'Longreach' frame extender

#### Some of the couplers and trims we can offer:

- 135° Bay coupler for 50mm windows (illustrated top left).
- 135° Bay coupler for 50mm windows to 102mm doors.
- 90° Corner coupler for 50mm windows.
- 90° Corner coupler for 50mm windows to 102mm doors.
- 180° Coupler for 50mm windows.
- Door to window vertical coupler.
- Door to window horizontal coupler.
- 'Longreach' frame extender (illustrated lower left).
- 'Paddington' federation trims.
- 'Balmain' federation trims.
- 20mm and 50mm Flat trims.
- Storm moulds.
- Architraves.
- External flange adaptors.
- Flat jamb closer.



### Alternative Commercial Double-hung Window

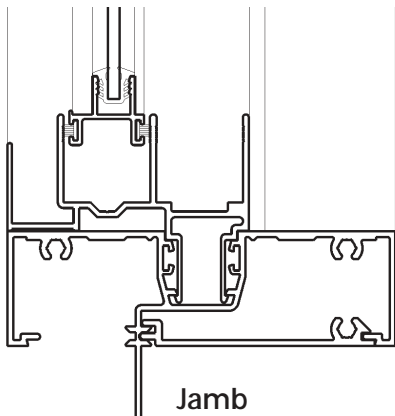
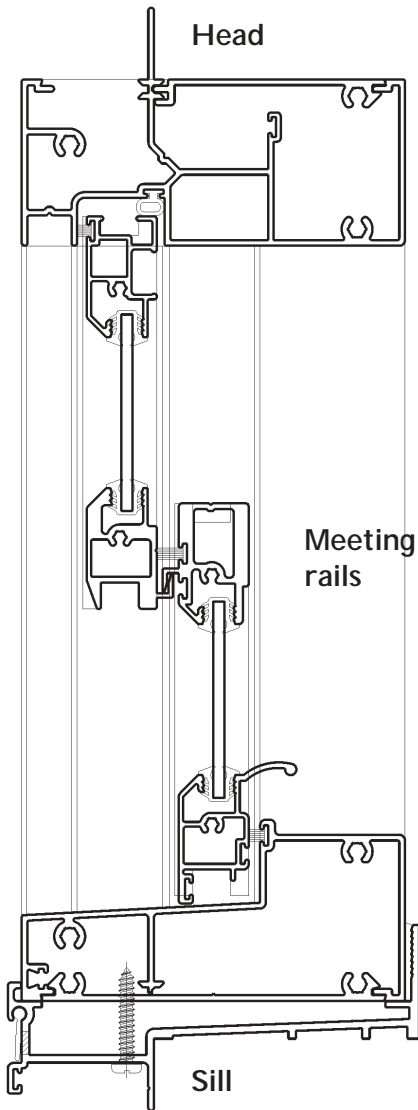
If you are looking for a bolder frame consider the AWS Commercial double-hung window Series 453.

Features overview:

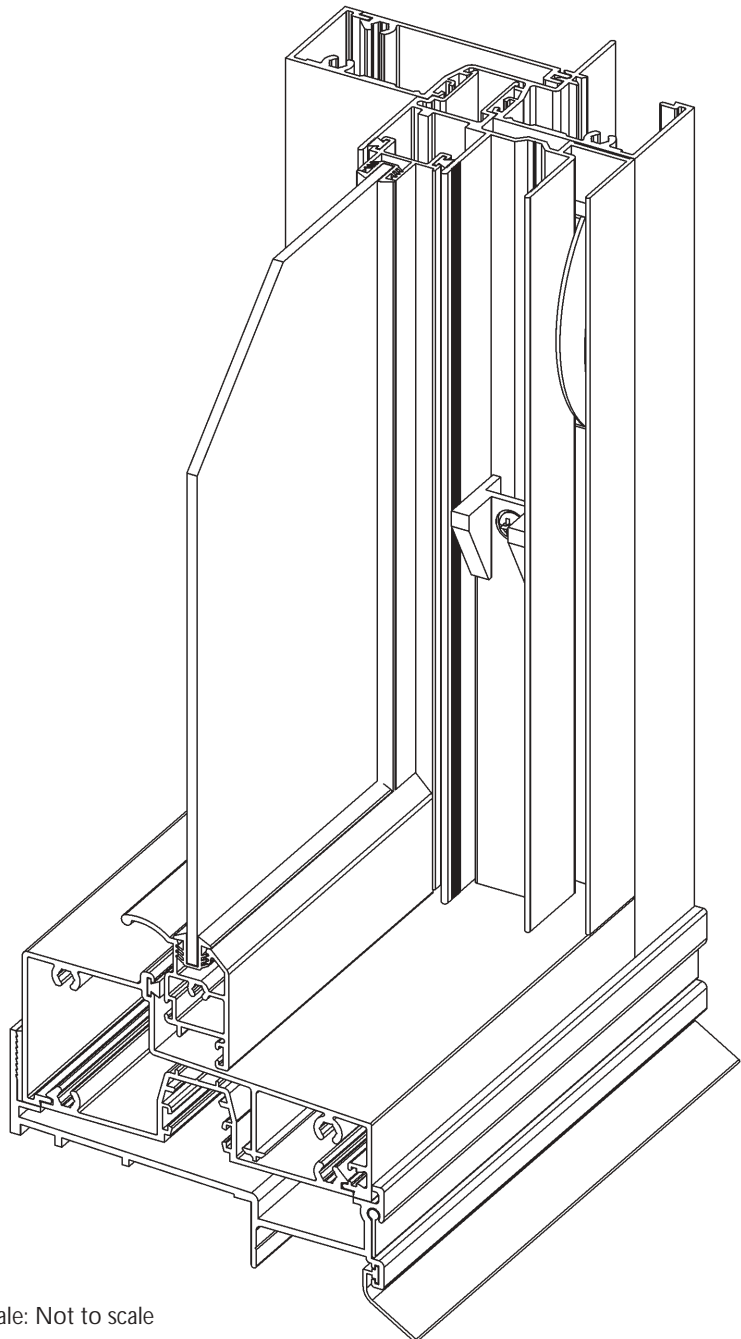
- Bold square commercial frame with built-in nailing fin.
- Nailing fin sub-sill is standard.
- Compatible with conventional CentreGLAZE™ shopfront framing.

Refer AWS Commercial Specifier Manual for more details.  
Coloured animated images can be seen on AWS web site:  
[awscommercial.com.au](http://awscommercial.com.au)

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# Architectural Information

## Series 514 Double-hung Window

### Index

Page: **22.0**  
Date: Oct 04  
Replaces: Aug 03  
Scale:

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Page	Contents
22.1	Standard wrap around sash introduction.
22.2	Check list.
22.3	Full size vertical section through standard opening sash.
22.4	Full size horizontal section through standard 'DF'.
22.5	Sill options and performance.
22.6	Vertical section through fixed lowlight.
22.7	True individually glazed option.
22.8	Sash support details.
22.9	Cam handle fitting detail
22.10	Flyscreen fitting details.
22.11	Couplers.
22.12	Alternative sashes in shopfront frame.

Series 514 Double-hung window internal view  
(Not to scale)

