

Series 514  
Residential Double Hung Window



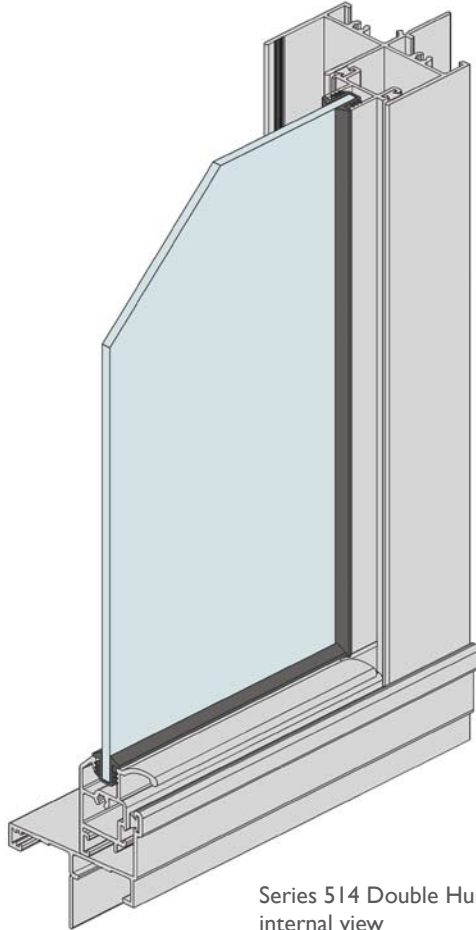
Photo courtesy of Vista Windows



# Series 514 Residential Double Hung Window

DATE: NOV 09  
 REPLACES: AUG 03  
 SCALE: NOT TO SCALE

## KEY FEATURES / PERFORMANCE CHARACTERISTICS



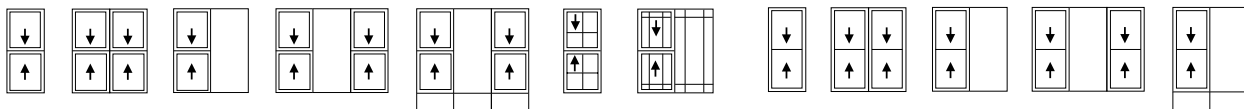
Series 514 Double Hung window  
internal view

- Successfully tested for compliance with AS 2047.
- Optional mullion and transom strengths cover a large variety of design wind load areas, refer Pascal rating tables.
- 50mm wide perimeter frame will couple to a large variety of adaptors without visible rivets or screws. Refer to installation section for more information.
- Finger grip built into the top and bottom sash rails.
- The same frame can be used for Double-Hung or fixed sidelights in standard wrap around glazing or individually glazed sashes.
- Sashes will bypass each other to allow cleaning of all glass from inside the building.
- Sashes run on spring balances with adjustable spring shoes.
- Interlocking meeting rails.
- Fixed sill has built-in drainage to take care of condensation.
- Standard sill as detailed left will rate to 200Pa water resistance plus there is a tubular sill option for 300Pa water resistance projects.

Maximum Panel Height*	1050mm
Maximum Panel Width*	1010mm
Maximum Glass Thickness	≤ 7.52

\* Subject to individual site conditions and wind loads. Contact AWS Technical Support for more information, e-mail [techsupport@awsaustralia.com.au](mailto:techsupport@awsaustralia.com.au)

## TYPICAL CONFIGURATIONS



# Series 514

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### SOUND REDUCTION

We have tested a number of glass combinations in this Double-Hung Window. Window was fitted with 'Qlon seals horizontally and weather pile vertically.

Glass Description		
5mm Annealed glass	25dB(A)	RW28
6.38mm Laminated glass	27dB(A)	RW28
7.52mm Laminated glass	28dB(A)	RW30



### WERS RATINGS

#### Single Glazed

Glass Description	COOLING	HEATING	Uw	SHGCw	Tvw	Inf
3mm Clear	12%	20%	6.2	0.73	0.75	0.96
5mm Clear	15%	20%	6.1	0.71	0.74	0.96
5mm EverGreen	35%	10%	6.1	0.49	0.61	0.96
5mm Grey	32%	12%	6.1	0.52	0.42	0.96
6.38mm Solect	37%	38%	4.2	0.58	0.69	0.96
6.38mm Comfort Plus	48%	31%	4.3	0.44	0.49	0.96

### HOW TO SPECIFY

#### SYSTEM NAME

Vantage Series 514 Residential Double Hung Window

#### FINISH

Powder Coat

Anodised

#### COLOUR

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

#### GLASS

Specify thickness  $\leq 7.52$

Specify thermal performance where applicable (Uw & SHGC)

Specify acoustic performance where applicable (RW)

#### HARDWARE

Refer to hardware selection guide for compatible options



### Specification Assistance

Need help specifying this product? email [techsupport@awsaustralia.com.au](mailto:techsupport@awsaustralia.com.au) and our qualified technical advisors will assist you with product selection and specification for your project.



#### 2D & 3D CAD FILES AVAILABLE

GO TO: [www.vantagealuminium.com.au](http://www.vantagealuminium.com.au) > CAD & Revit 3D Files

CAD file: DWG or DXF VAN\_514



#### MORE INFORMATION

For the latest updates regarding this product visit our website

[www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)

# Series 514 Residential Double Hung Window

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## SPECIFIERS CHECKLIST

Not all double hung windows are the same. 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 - compare us with the others.

FEATURE	Series 514	Opposition
<b>Does the window comply with the relevant Australian Standards.</b> All windows should comply but it pays to ask for written proof.	YES	
<b>Standard window has a high water rating of 200 Pa.</b>	YES	
<b>Very exposed installations can be upgraded to an even higher 300 Pa water rating.</b>	YES	
<b>Fixed lights can be beaded off with matching extruded aluminium glazing beads.</b>	YES	
<b>Window configuration can be changed without removing the window from building.</b> 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.	YES	
<b>Low maintenance spring balances support the opening sashes.</b>	YES	
<b>Full interlocking meeting rails.</b> This interlock improves the weather performance. Conceals the cam handle and keeper, this reduces the chance of manipulation from outside.	YES	
<b>Both sashes can be opened and closed.</b> Some other companies make a single-hung window. 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.	YES	
<b>Sashes bypass each other to allow cleaning of glass from inside.</b> 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.	YES	
<b>Optional custom key lock available.</b>	YES	
<b>Window can be coupled to sliding doors or other windows without visible rivets.</b>	YES	
<b>Rounded corner on the frame and sash members wherever possible.</b> Modern paint finishes don't like sharp corners.	YES	
<b>102mm Wide frame option.</b> 'Longreach' frame extenders can be snapped to the Double-Hung frame for added impact.	YES	
<b>Federation trim option.</b> We can clip 'Paddington' trims to 'Longreach' frame extenders. Alternatively we can clip 'Balmain' trims to the standard Double-Hung frame.	YES YES	

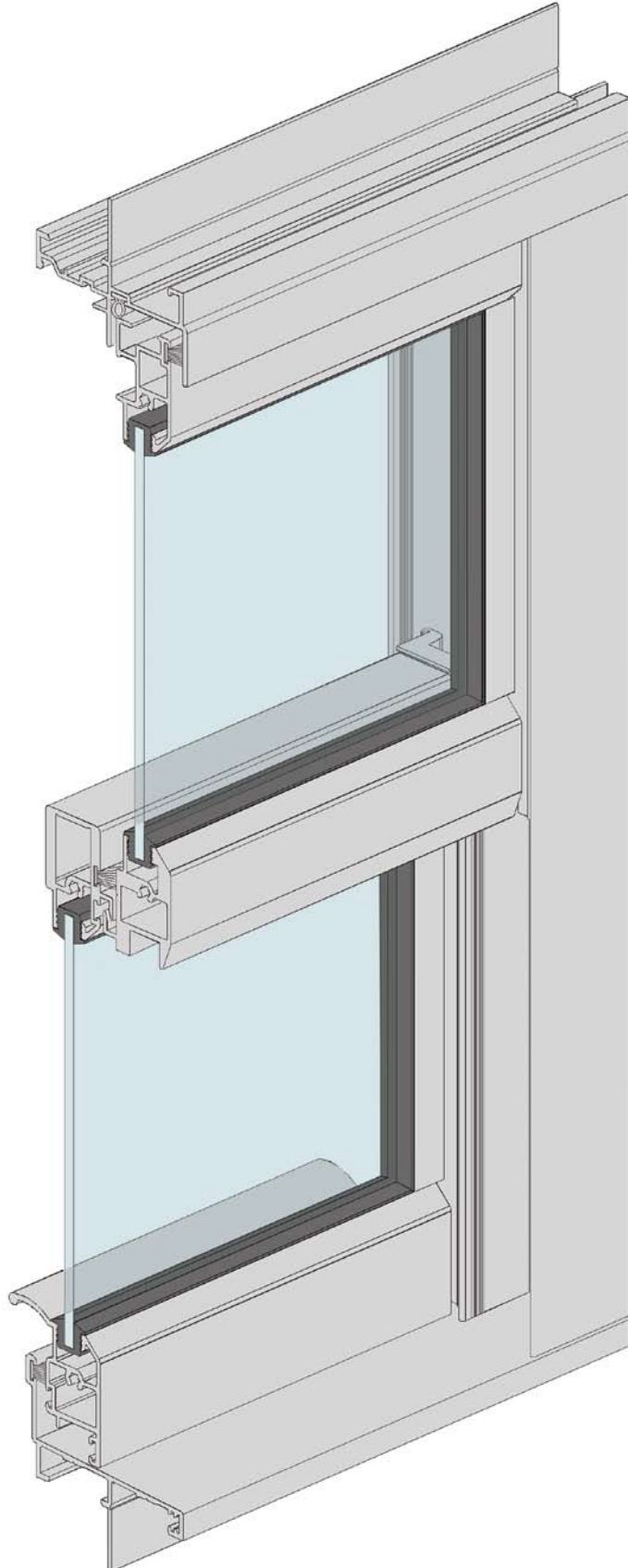
# Series 514 Residential Double Hung Window

DATE: NOV 09  
REPLACES: AUG 03  
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 to installation section for more information.
4. Finger grip built into the top sash rail.
5. Sashes will bypass each other to allow cleaning of all glass from inside the building.
6. Sashes run on spring balances with adjustable spring shoes.
7. Custom heavy duty key lockable catch with die cast keeper.
8. Interlocking meeting rails.
9. Spring shoe is recessed up into the external meeting rail and the bottom rail to reduce the chance of shoe damage. 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).
10. Fixed sill has built-in drainage to take care of condensation.
11. Large finger grip on bottom sash rail.
12. Standard sill as detailed right will rate to 200Pa water resistance plus there is a tubular sill option for 300Pa water resistance projects.

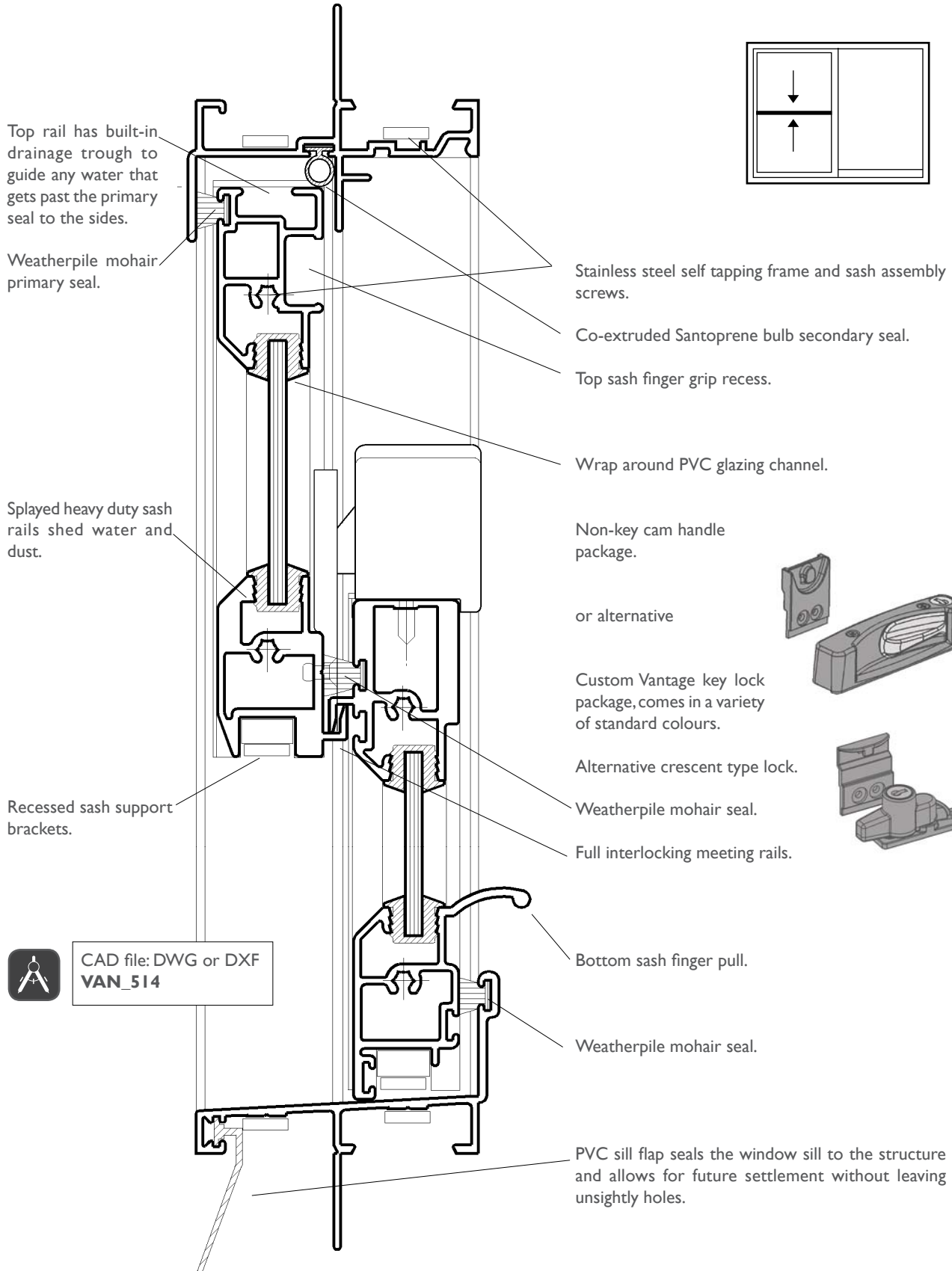
MAGNUM™ and sashless ClearVENT™ Double-Hung windows are also available refer to Designer Series.



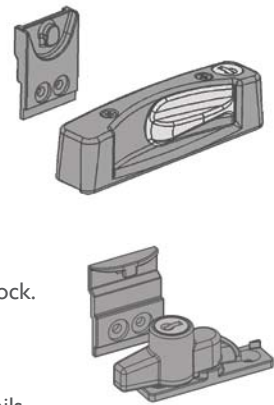
# Series 514 Residential Double Hung Window

DATE: NOV 09  
REPLACES: AUG 03  
SCALE: FULL SIZE

## VERTICAL SECTION THROUGH STANDARD SASHES



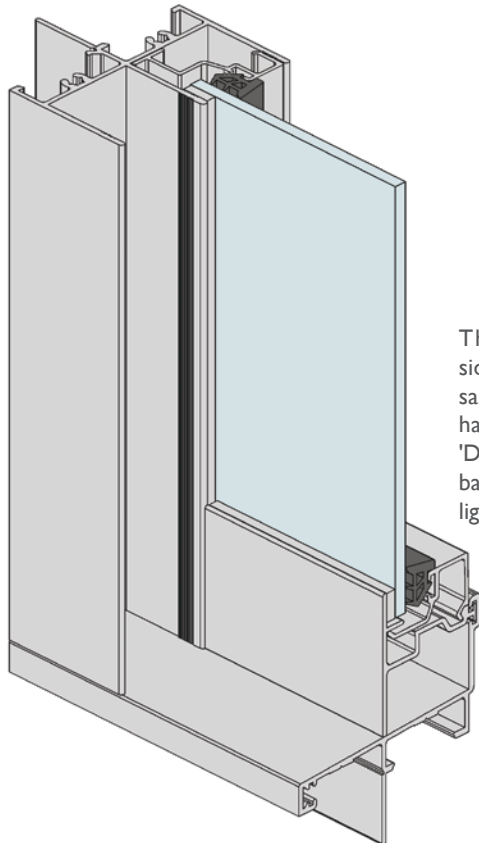
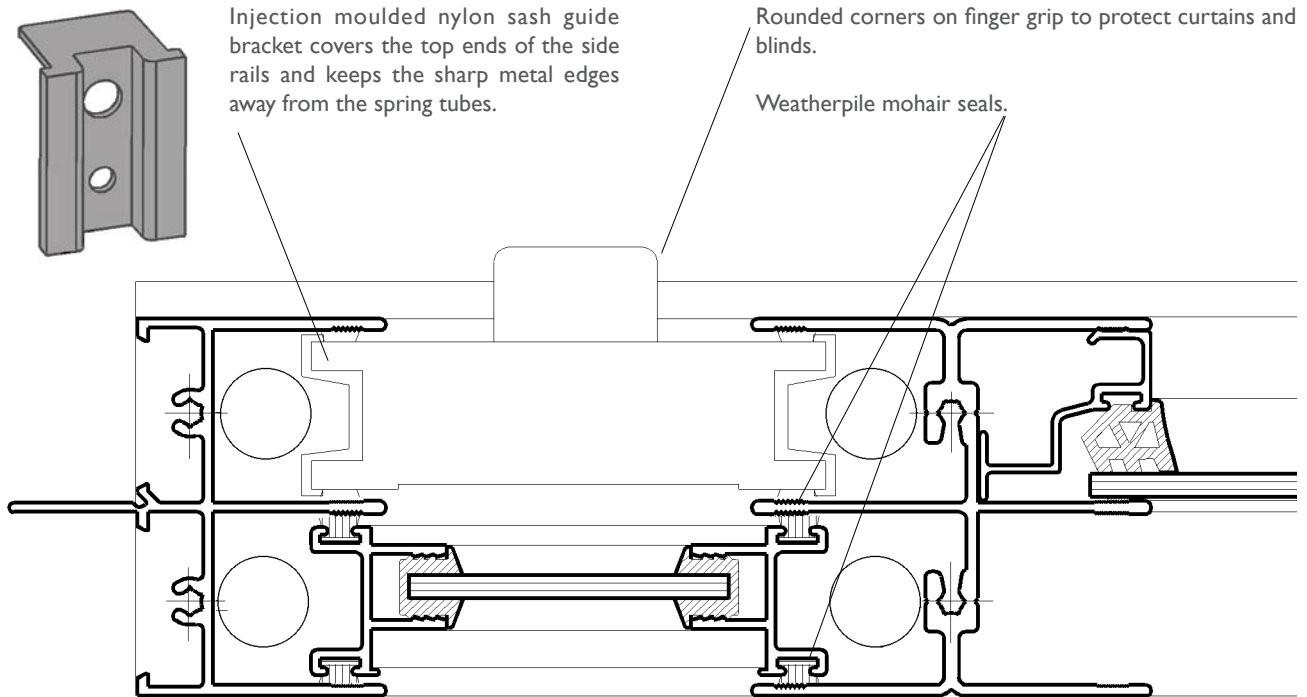
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**VAN\_514**



# Series 514 Residential Double Hung Window

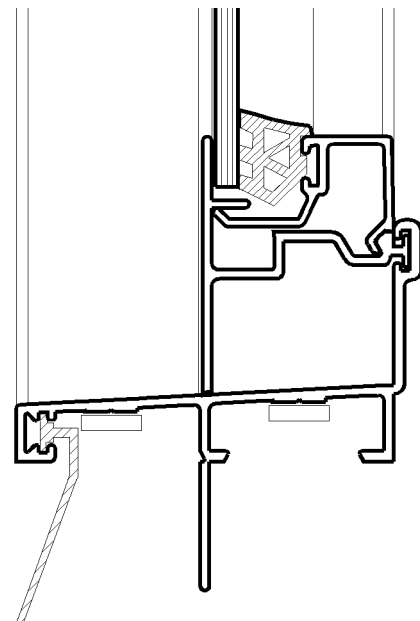
DATE: NOV 09  
REPLACES: AUG 03  
SCALE: FULL SIZE

## HORIZONTAL SECTION THROUGH STANDARD 'DF'



CAD file: DWG or DXF  
**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 can use the same basic double-hung frame for the fixed lights.

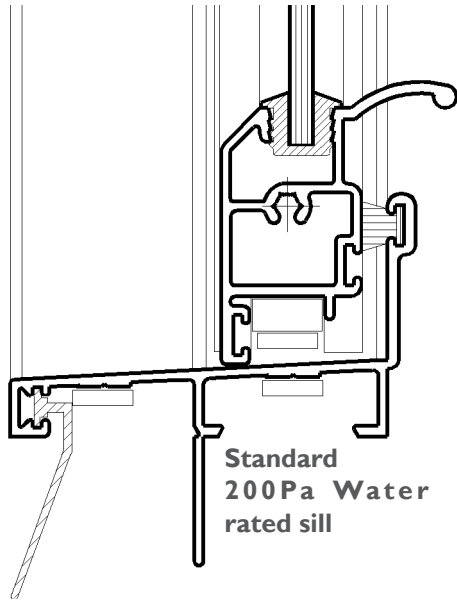




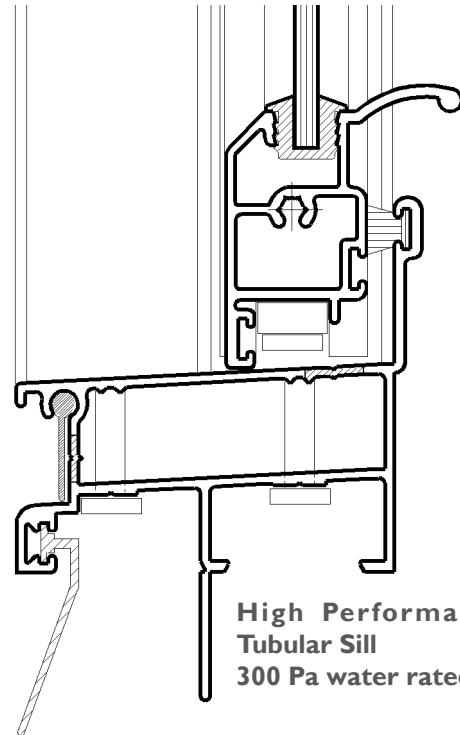
# Series 514 Residential Double Hung Window

DATE: NOV 09  
REPLACES: OCT 04  
SCALE: FULL SIZE

## SILL OPTIONS AND PERFORMANCE



CAD file: DWG or DXF  
VAN\_514



### Wind Ratings (Pa) Meeting rails.

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

**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.

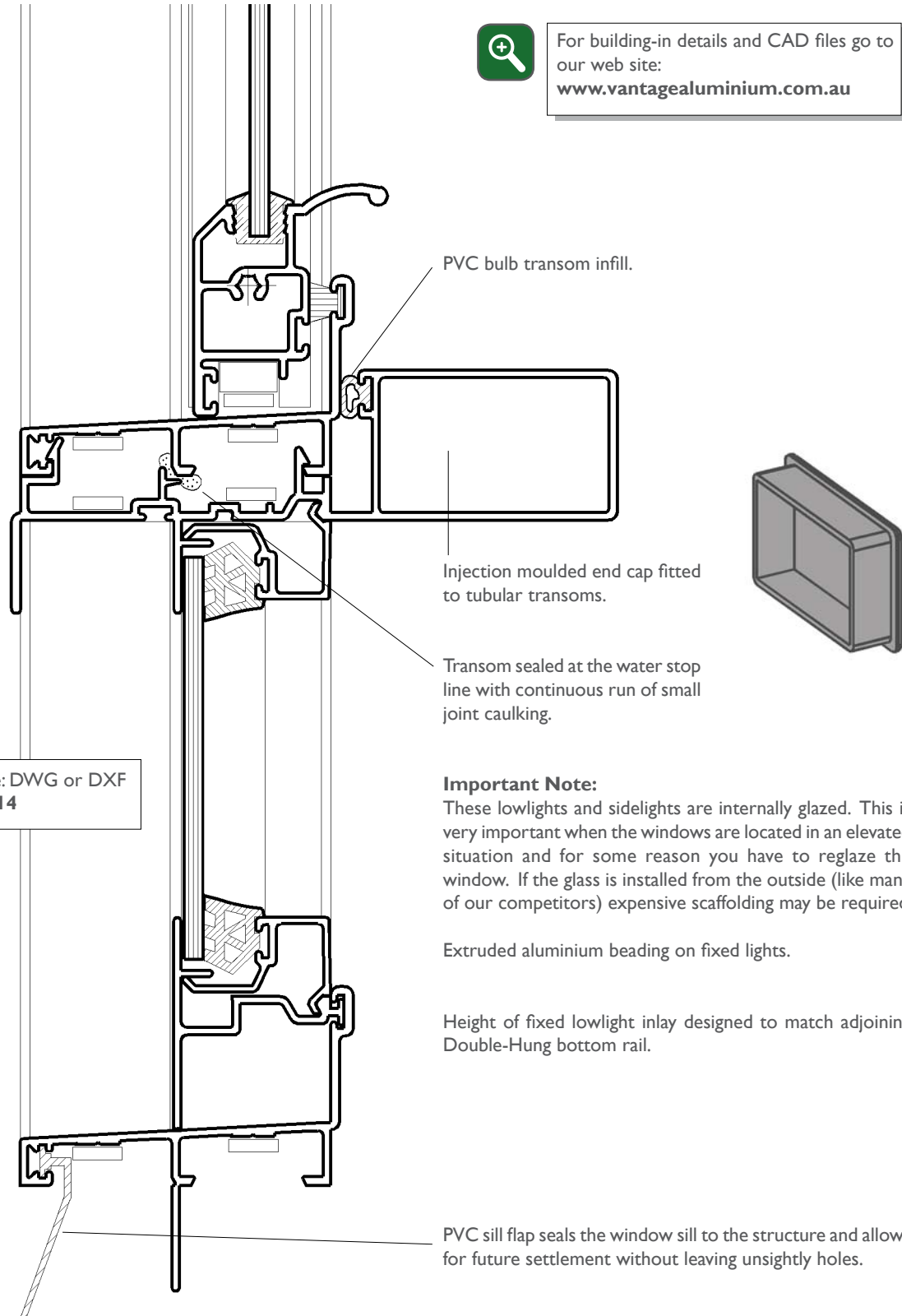
2200 Serviceability ratings were restricted by the maximum water resistance (300Pa) achieved on this product.



# Series 514 Residential Double Hung Window

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SCALE: FULL SIZE

## VERTICAL SECTION THROUGH FIXED LOWLIGHT



**Important Note:**  
These lowlights and sidelights are internally glazed. This is very important when the windows are located in an elevated situation and for some reason you have to reglaze the window. If the glass is installed from the outside (like many of our competitors) expensive scaffolding may be required.

Extruded aluminium beading on fixed lights.

Height of fixed lowlight inlay designed to match adjoining Double-Hung bottom rail.

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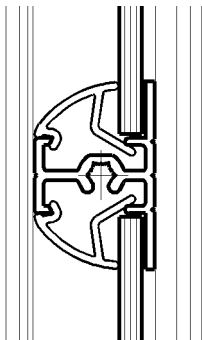
## TRUE INDIVIDUALLY GLAZED OPTION

### Design Features

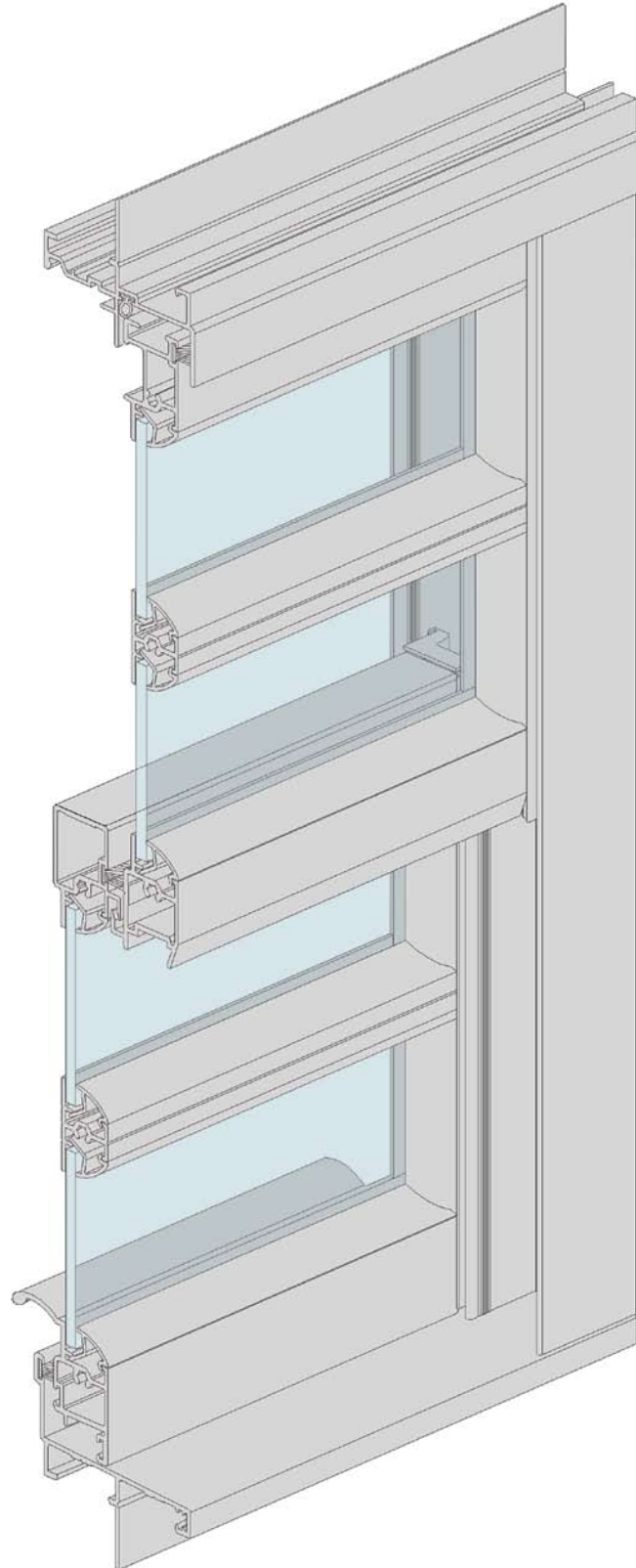
1. All of the standard sash features listed earlier apply to this individually glazed design.
2. These individually glazed sashes go into the same frame as standard sashes.
3. The colonial bar is screwed to the vertical sash rails and teeth into the horizontals for added strength and stability.



For building-in details and CAD files go to our web site:  
[www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)



This colonial bar has been designed to maximise 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.

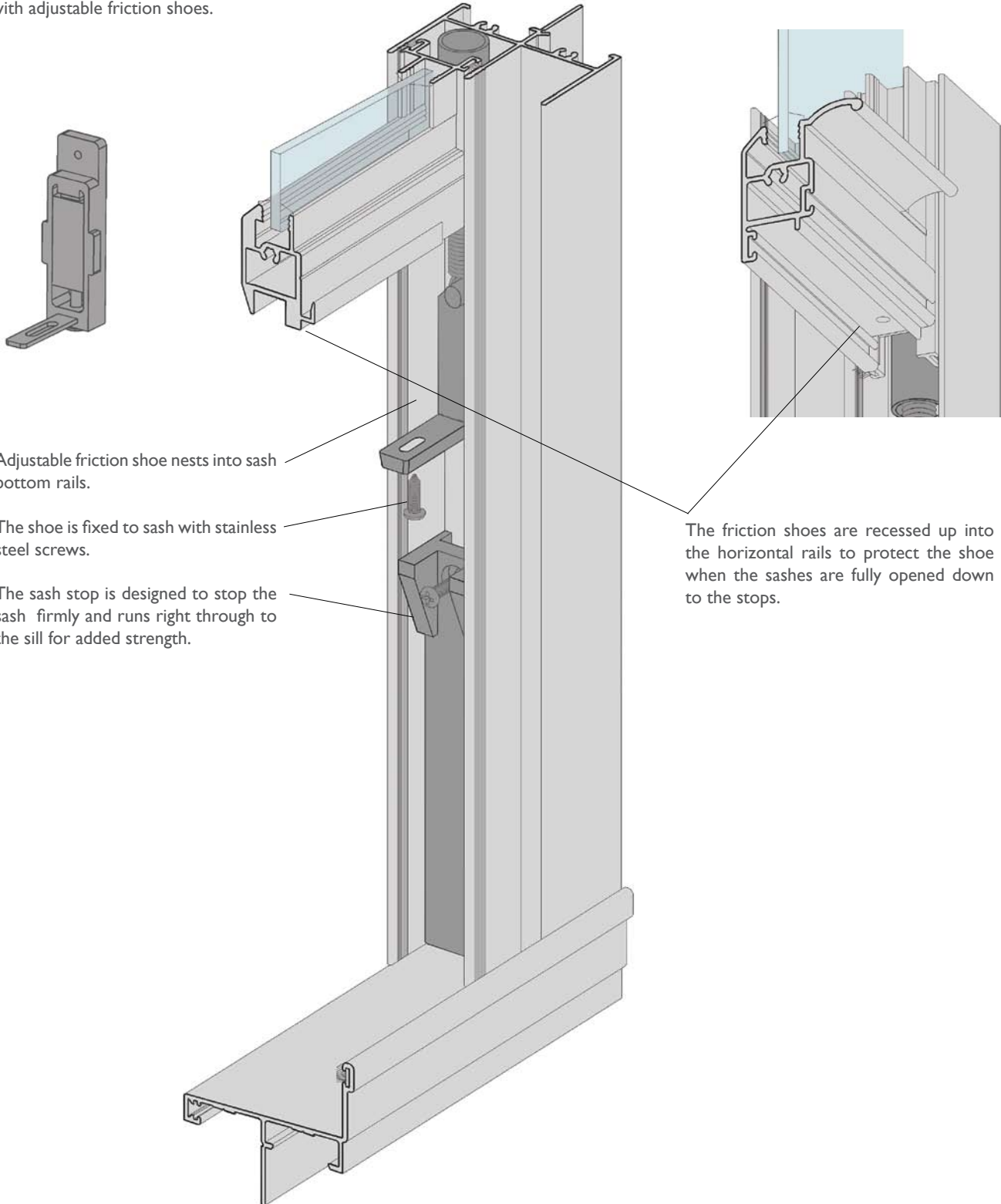


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## SASH SUPPORT DETAILS

Sashes are supported on spring balances fitted with adjustable friction shoes.



Adjustable friction shoe nests into sash bottom rails.

The shoe is fixed to sash with stainless steel screws.

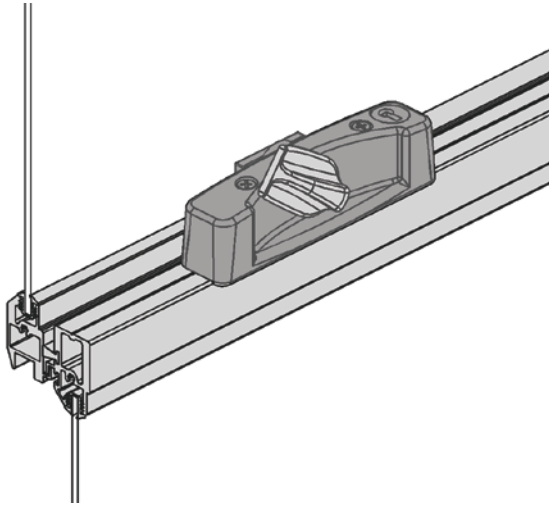
The sash stop is designed to stop the sash firmly and runs right through to the sill for added strength.

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

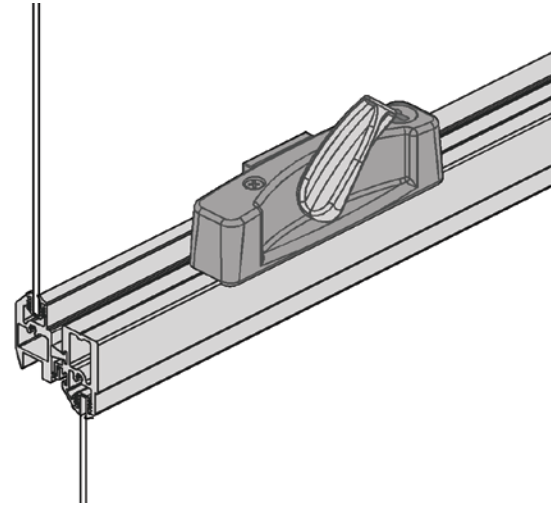
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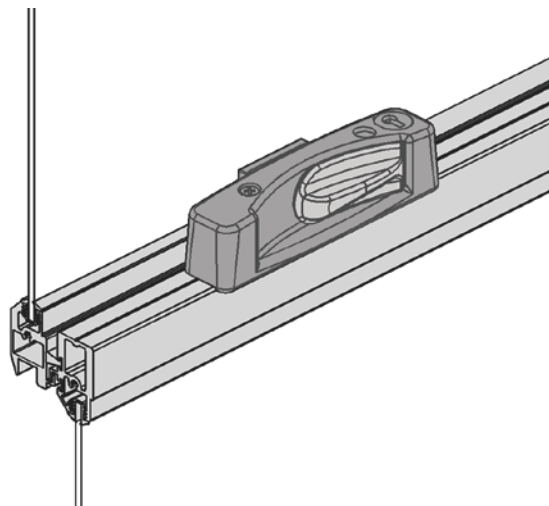
## CAM HANDLE FEATURES AND OPERATION



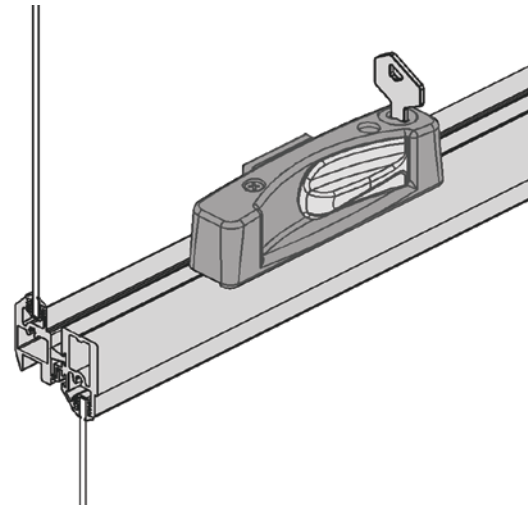
The cam rolls over 180° from the unlocked to the latched position.



This cam is easy to operate.



The Vantage Double-Hung cam lock can be key locked for added security.



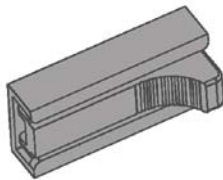
In the latched position the die cast cam has engaged the die cast keeper and the sash meeting rails have also interlocked.

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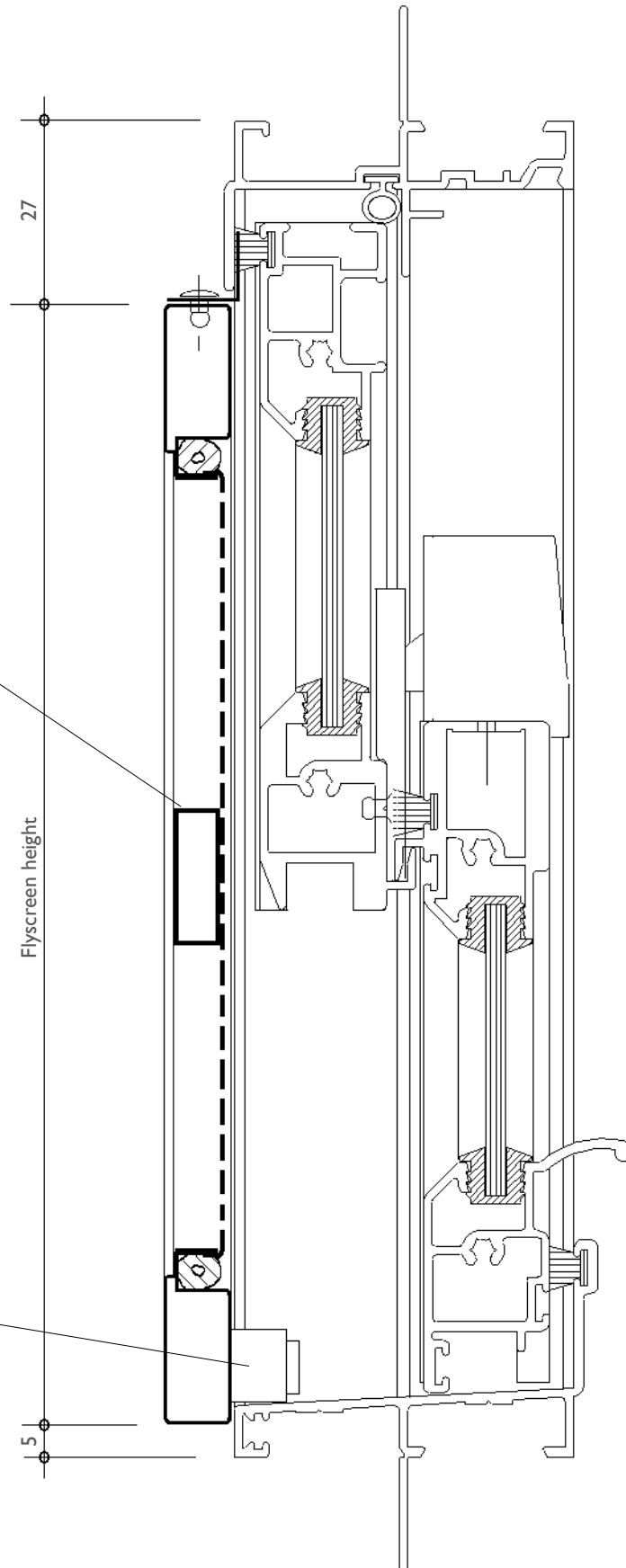
## FLYSCREEN FITTING DETAILS

Fit cross brace when flyscreen height exceeds 1300mm.



Flyscreen shoot bolt.

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



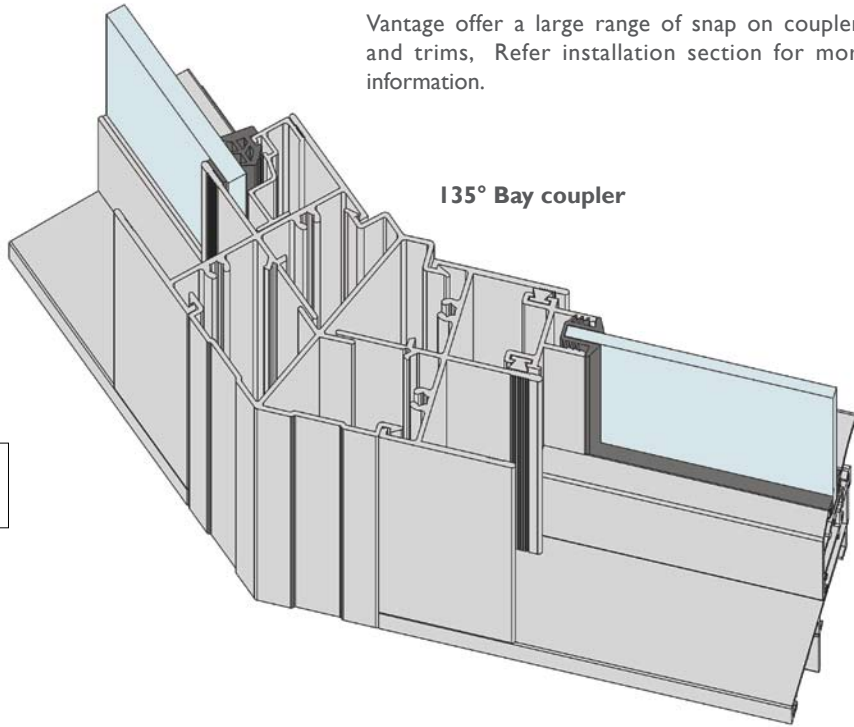
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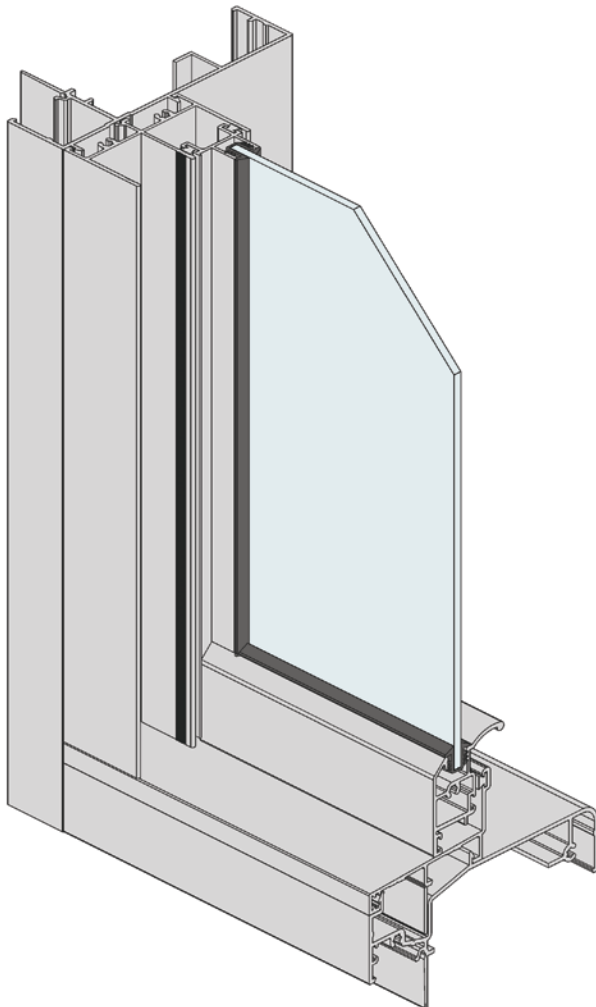
## COUPLERS

Vantage offer a large range of snap on couplers and trims, Refer installation section for more information.

135° Bay coupler



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



Longreach frame extender

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

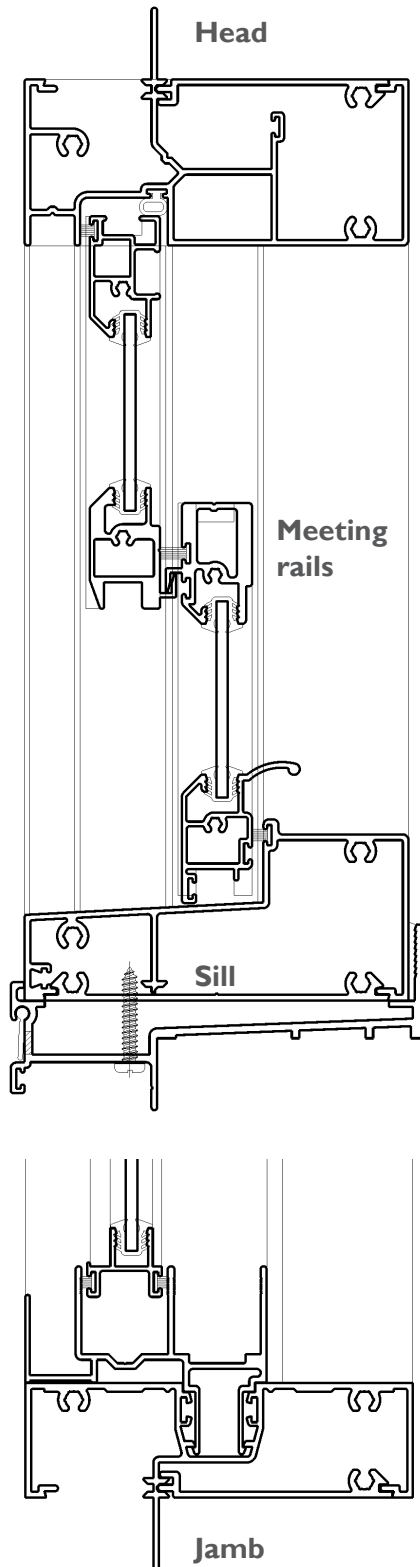
- 135° Bay coupler for 50mm windows (illustrated above).
- 135° Bay coupler for 50mm windows to 102mm doors.
- 90° Corner coupler for 50mm windows.
- 90° Corner coupler for 50mm windows to 102mm doors.
- 180° Coupler for 50mm windows.
- Door to window vertical coupler.
- Door to window horizontal coupler.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

Refer to installation section for full details of couplers

# Series 514 Residential Double Hung Window

DATE: NOV 09  
REPLACES: AUG 03  
SCALE: HALF FULL SIZE

## ALTERNATIVE SASHES INTO COMMERCIAL FRAME



### Alternative Commercial Double-Hung Window

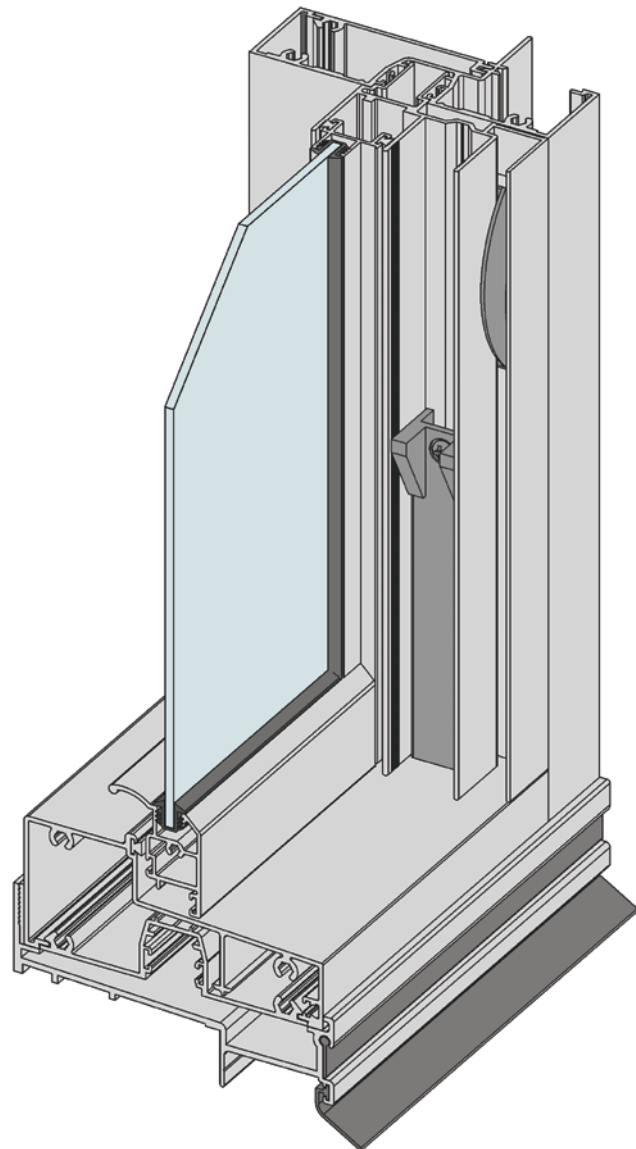
If you are looking for a bolder frame consider the AWS Commercial Double-Hung window Series 453.

Features overview:

- Bold square commercial frame with built-in nailing fin.
- Nailing fin sub-sill is standard.
- Flyscreen tucks into frame.
- Compatible with conventional CentreGLAZE™ commercial framing.
- Specifically designed head and sill sections.



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



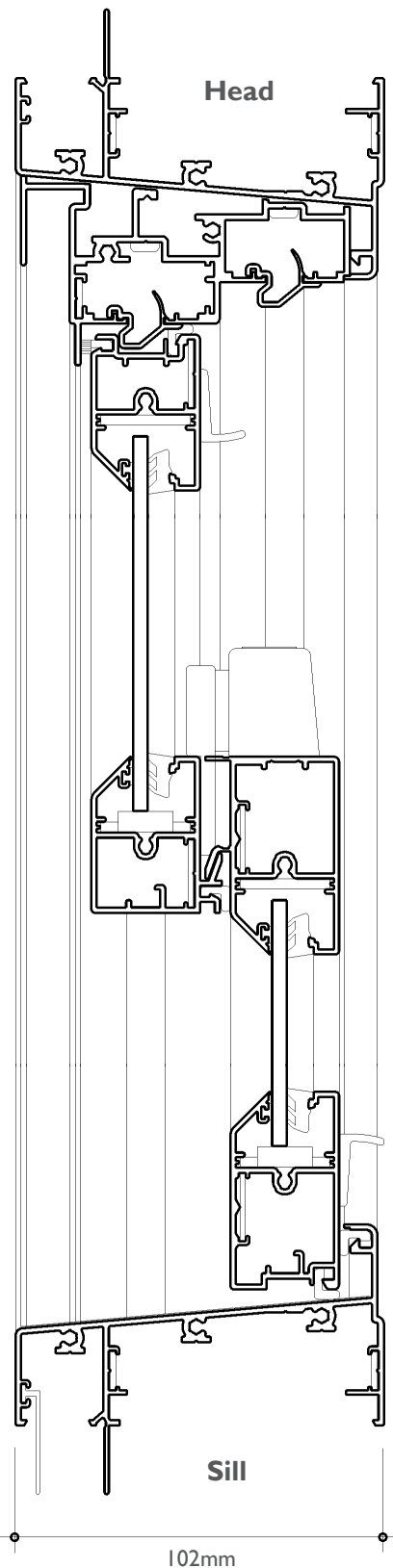


Series 514

## Residential Double Hung Window

DATE: NOV 09  
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 SCALE: HALF FULL SIZE

## ALTERNATIVE MAGNUM™ DOUBLE-HUNG WINDOW



## Alternative MAGNUM™ Series 613 Double-Hung Window

If you are looking for a bolder residential frame consider the MAGNUM™ Series 613 Double-Hung window.

Features overview:

- Bold square 102mm frame, mullion and transom.
- 30mm thick sashes.
- Soft 2mm internal radius.
- Both sashes can be hinged back into the room to allow cleaning of both sides of the glass from inside



Refer Designer Series section of this Manual for more details.  
 Coloured animated images can be seen on the Vantage web site:  
[www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)

