

Series 516
Residential Awning Window



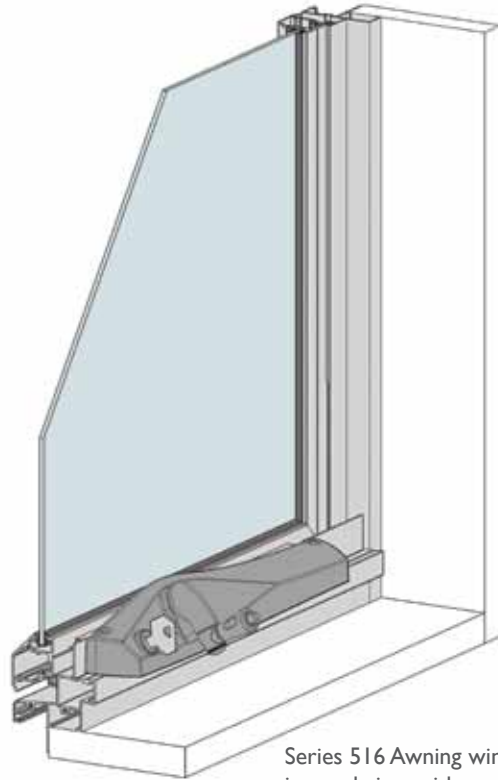
Photo courtesy of MidCity Windows



Series 516 Residential Awning Window

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

KEY FEATURES / PERFORMANCE CHARACTERISTICS



Series 516 Awning window internal view with standard manual chain winder

- Successfully tested for compliance with AS 2047.
- Optional sash and mullion strengths cover a large variety of design wind load areas, refer Pascal rating tables.
- Continuous hinge hood protects the top of the sash from water intrusion.
- Water resistance rating of 450Pa allows this awning window to be used in most exposed locations in Australia.
- Awning type sashes are fitted with heavy duty corrosion resistant chain winders with 304 stainless steel chains as standard.
- Casement type sash option available. These sashes are fitted with stainless steel adjustable friction stays and wedgeless cam handles.
- Adjoining fixed sidelights and/or lowlights have matching splayed glazing beads.
- Fixed sidelight and lowlight sills can be supplied with optional self draining ball valve that drains condensation water back to the outside while preventing blow backs through the drainage hole (Australian Registered Design).
- 50mm wide perimeter frame will couple to a large variety of adaptors, no screws or rivets required. Refer to installation section for more information.

AWNINGS

Maximum Panel Height*	2060mm
Maximum Panel Width*	1210mm
Maximum Glass Thickness	≤ 20mm

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

CASEMENT

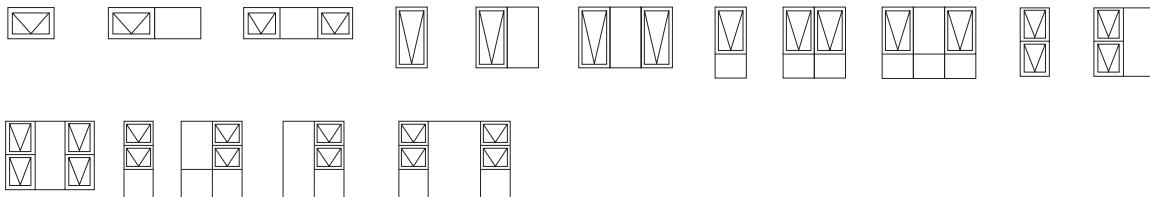
Maximum Panel Height*	1500mm
Maximum Panel Width*	600mm
Maximum Glass Thickness	≤ 20mm

Casement Sash Height to Width Ratio

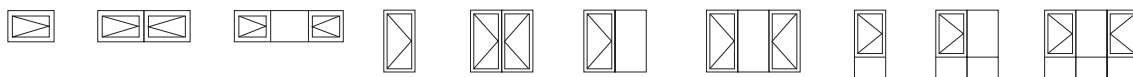
The maximum width of the casement sash is limited to 50% of the sash height

TYPICAL CONFIGURATIONS

Awning Style



Casement Style



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SOUND REDUCTION

We have tested a number of glass combinations in this awning window. Opening sash was fitted with co-extruded Santoprene bulb seal on all sides.

Glass Description		
3mm Annealed glass	30dB(A)	RW31
6.38mm Laminated glass	34dB(A)	RW34
10.38mm Laminated glass	36dB(A)	RW37
20mm Insulating glass unit	30dB(A)	RW30

Secondary glazed sliding window will give significantly higher numbers 45dB(A) | RW47



WERS RATINGS

Single Glazed

Glass Description	COOLING	HEATING	Uw	SHGCw	Tvw	Inf
3mm Clear	18%	31%	6.6	0.65	0.66	0.06
5mm Clear	21%	31%	6.5	0.63	0.65	0.06
5mm EverGreen	36%	23%	6.5	0.45	0.53	0.06
5mm Grey	34%	24%	6.5	0.47	0.37	0.06
6.38mm Solect	38%	47%	5.0	0.52	0.59	0.06
6.38mm Comfort Plus	47%	41%	5.0	0.40	0.43	0.06

Double Glazed

Glass Description	COOLING	HEATING	Uw	SHGCw	Tvw	Inf
4Clr/10Gap/4Clr	40%	57%	4.3	0.54	0.56	0.06
4Az/10Gap/4EA	59%	50%	3.8	0.30	0.43	0.06
4Clr/10Ar/4EA	46%	64%	3.5	0.51	0.51	0.06
4Clr/10Gap/4EA	45%	61%	3.8	0.51	0.51	0.06
5Clr/8Gap/5Clr	40%	55%	4.4	0.53	0.55	0.06
5EG/8Ar/5EA	59%	51%	3.7	0.31	0.42	0.06
3EG/12/3	52%	49%	4.2	0.38	0.48	0.06
3Clr/12Ar/3EA	45%	65%	3.5	0.52	0.52	0.06



2D & 3D CAD FILES AVAILABLE

GO TO: www.vantagealuminium.com.au > CAD & Revit 3D Files
 CAD file: DWG or DXF VAN_503



MORE INFORMATION

For the latest updates regarding this product visit our website
www.vantagealuminium.com.au

HOW TO SPECIFY

SYSTEM NAME

Vantage Series 516 Residential Awning Window

FINISH

Powder Coat
 Anodised

COLOUR

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

GLASS

Specify thickness ≤ 20mm

Specify thermal performance where applicable (Uv & 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 and our qualified technical advisors will assist you with product selection and specification for your project.

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SPECIFIERS CHECKLIST

Not all Awning 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 516	Opposition
Does the window comply with the relevant Australian Standards. All windows should comply but it pays to ask for written proof.	YES	
Standard awning window has very high 450 Pa water resistance.	YES	
Heavy duty hardware. Awning sashes fitted with heavy duty chain winder. Casement windows fitted with stainless steel friction stays and wedgeless cam handles.	YES	
Reinforced hardware fixing points. No one will accept a window where the hardware (usually the chain winder) is loose. Chain winders can develop very high loads on the screw fixings especially where they are screwed to the sash. When the sash is being closed the operator can over tighten the winder and this in turn tries to pull the fixing screws out of the sash. Many awning windows suffer from the loose hardware syndrome - Chain winder or cam handles almost falling off. This is caused by fixing the hardware item to a section of the window frame or sash that's not strong enough (too thin) to take the load. This fault is very hard to almost impossible to correct on a defective window and usually results in replacement of the complete unit.	YES	
The Vantage Series 516 awning has thickened sections (3mm) on both frame and sash where we fix the chain winder and cam handles.	YES	
Chain winder fixed directly to the sill. For all of the reasons listed above the chain winder needs to be fixed as securely as possible to the sill. This is why the Series 516 awning has no spacers or packers under the winder and is screwed directly into a thickened section in the sill.	YES	
Chain winder with corrosion resisting stainless steel chain (10 year manufacturers warranty) standard.	YES	
Fixed sidelights and / or lowlights have splayed beads on the outside to match the adjoining awning sash rails. This external splayed bead sheds water and dust away from the glass line.	YES	
Condensation draining fixed sill and transom. The Vantage awning fixed light sills can be fitted with optional anti blow back condensation draining ball valve (Australian Registered Design).	YES	
No screws to catch the fingers on. Series 516 awning chain winders are fixed into a tubular section of the sill. Nothing to catch curtains and blinds on.	YES	
Sash corner guards. Awning and casement sashes in the open position can be dangerous. Series 516 is fitted with moulded nylon corner guards to blunten the sharp corner and reduce the chance of injuries.	YES	
Water resisting hinge hood. When the awning sash is in the open or closed position the vulnerable top rail is protected from the elements with a continuous extruded aluminium hinge hood.	YES	
Clean flyscreen installation. The awning sill has a built-in upstand to accept flyscreen installation. Building in this flyscreen support leg will save the owner money when they come to fit flyscreens as no trims or infills are required.	YES	
Window can be coupled to sliding doors or other windows without visible rivets. Rounded corner on the frame and sash members wherever possible. We offer a large range of couplers and trims to make installation cleaner and easier.	YES	

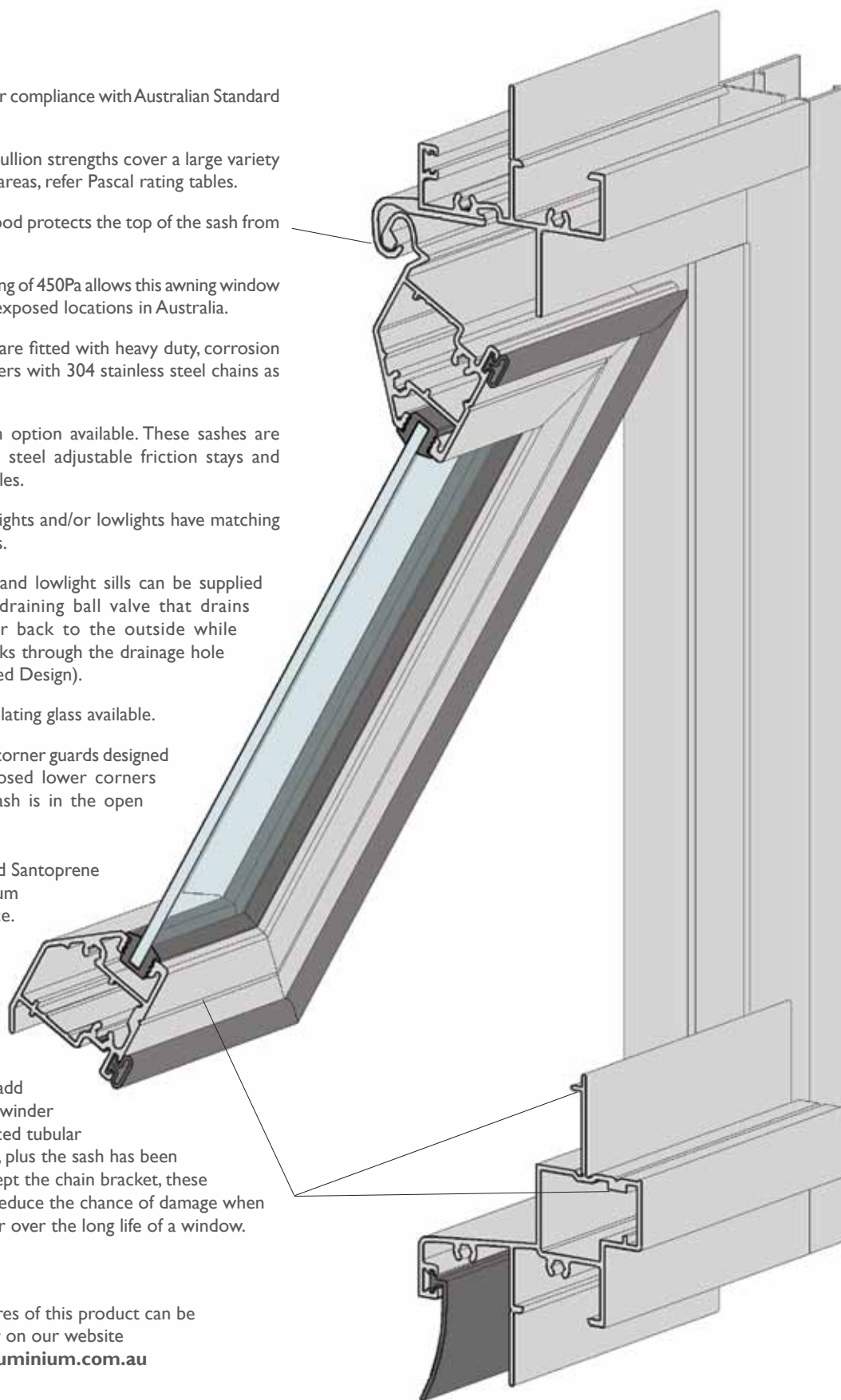
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DESIGN FEATURES

1. Successfully tested for compliance with Australian Standard AS 2047.
2. Optional sash and mullion strengths cover a large variety of design wind load areas, refer Pascal rating tables.
3. Continuous hinge hood protects the top of the sash from water intrusion.
4. Water resistance rating of 450Pa allows this awning window to be used in most exposed locations in Australia.
5. Awning type sashes are fitted with heavy duty, corrosion resistant chain winders with 304 stainless steel chains as standard.
6. Casement type sash option available. These sashes are fitted with stainless steel adjustable friction stays and wedgeless cam handles.
7. Adjoining fixed sidelights and/or lowlights have matching splayed glazing beads.
8. The Fixed sidelight and lowlight sills can be supplied with optional self draining ball valve that drains condensation water back to the outside while preventing blow backs through the drainage hole (Australian Registered Design).
9. Optional 20mm insulating glass available.
10. Moulded nylon sash corner guards designed to protect the exposed lower corners when the awning sash is in the open position.
11. Custom co-extruded Santoprene bulb seal for maximum weather performance.
12. The sill of the awning has built-in flyscreen support leg that allows you to install a flyscreen without add on trims. The chain winder is fitted to a reinforced tubular section in the frame, plus the sash has been thickened up to accept the chain bracket, these thickened sections reduce the chance of damage when operating the winder over the long life of a window.

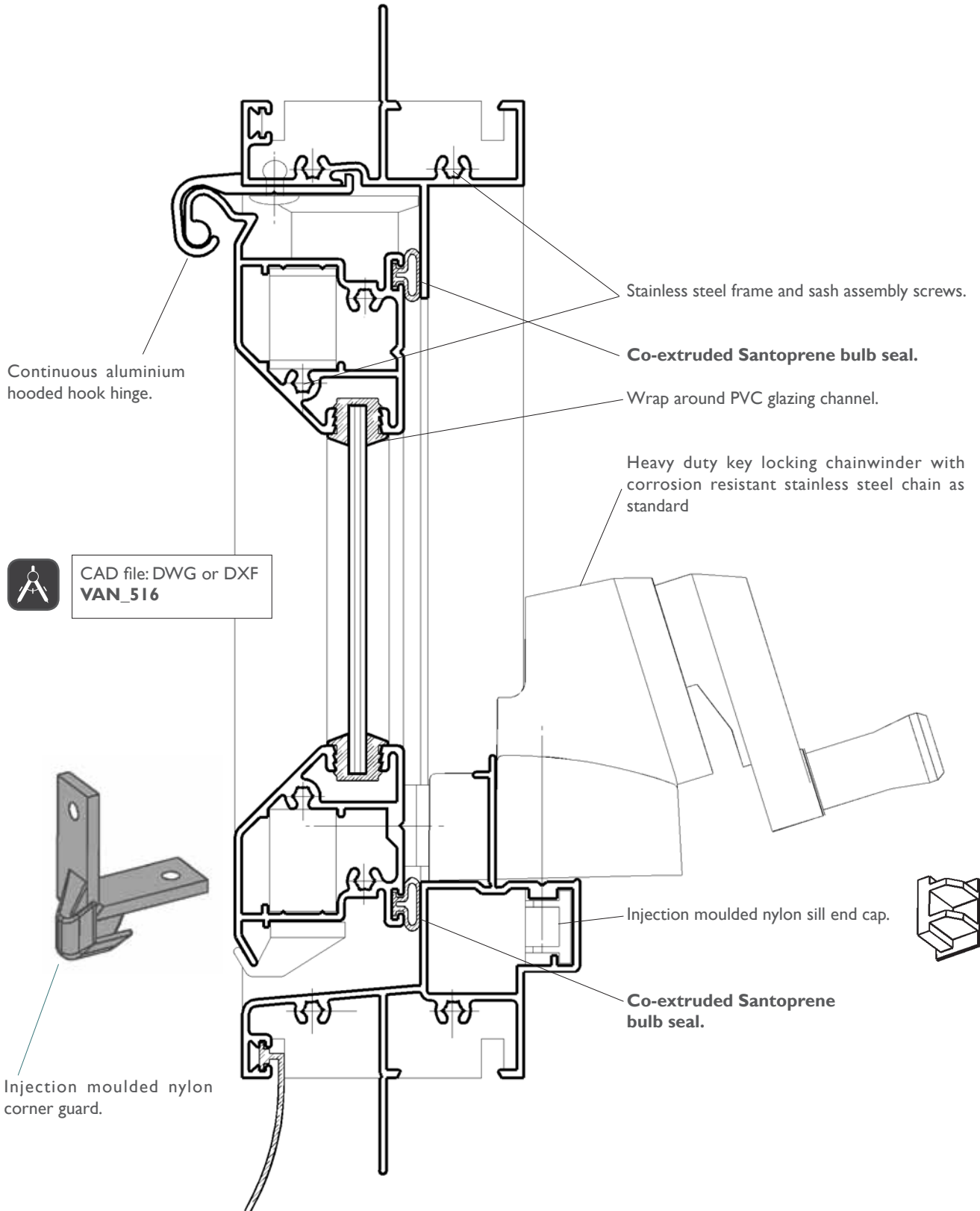


Most of the features of this product can be seen in full colour on our website
www.vantagealuminium.com.au

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SCALE: FULL SIZE

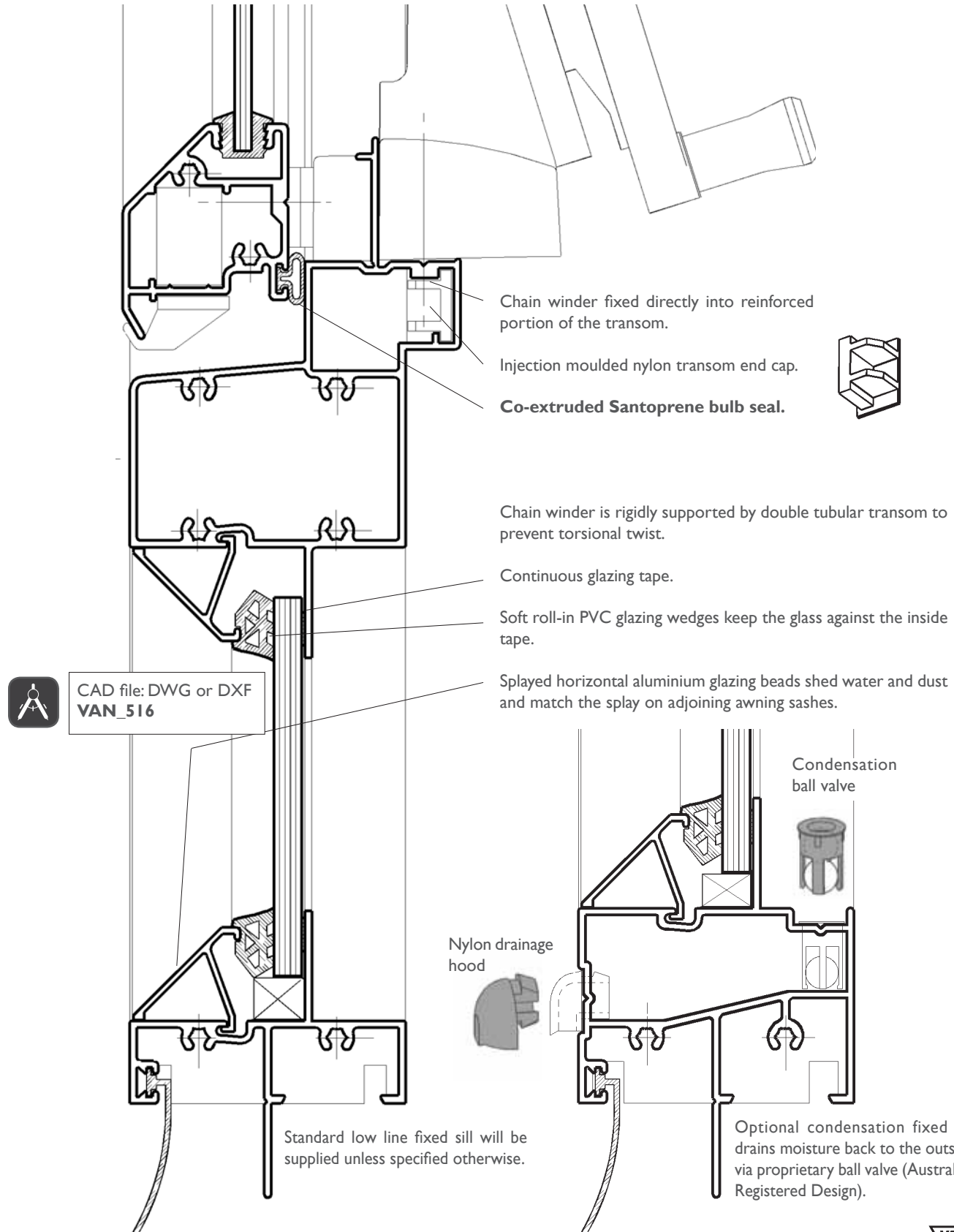
VERTICAL CROSS SECTION THROUGH AWNING WINDOW



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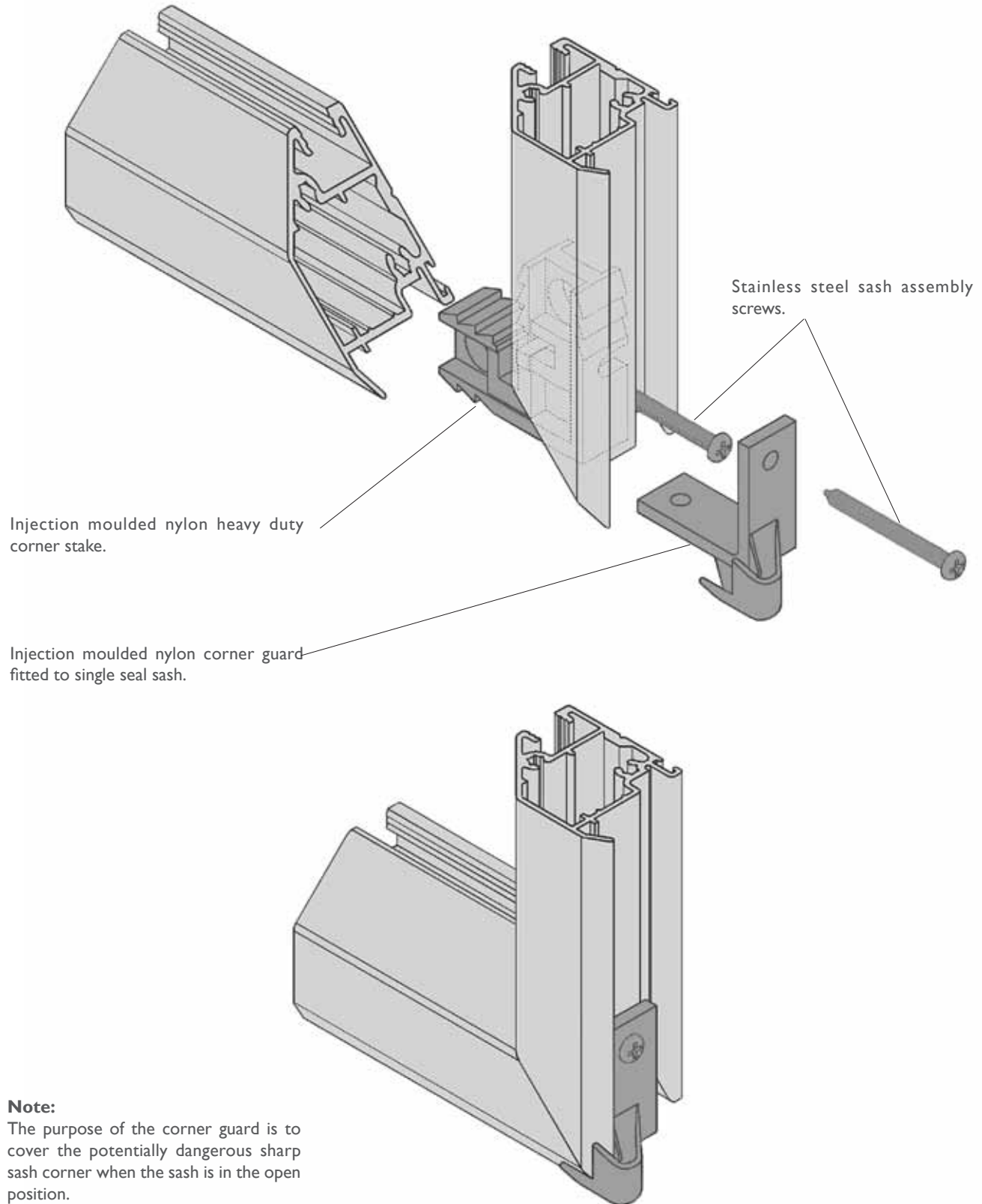
HORIZONTAL SECTION THROUGH TRANSOM AWNING OVER FIXED



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SASH ASSEMBLY DETAIL



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STANDARD CHAIN WINDER AND SASH STRENGTHS

The frame and sash have been designed to accept the window hardware. Winder sits onto tubular sill platform and is screwed to reinforced sections in frame and sash.

Secure fixings in these areas are critical to the long term performance of the window.

Polesium™ body chain winder and the standard stainless steel chain won't corrode or rust. The standard winder colour is black but for a small extra charge winders can be coloured to match window frame.

Window type	Window		Standard Sash 16012		H.D. Sashes 16014 & 16024		H.D. Beaded Sash 16026	
	Height mm	Width mm	S	U	S	U	S	U
A	1200	910	1244	1998	1998	3627	1998	4500
A	1200	1010	1132	1814	1791	3292	1791	4500
A	1200	1210	970	1547	1484	2809	1484	4500
A	1500	910	611	1239	1001	2249	1586	4021
A	1500	1010	553	1120	906	2032	1422	3634
A	1500	1210			766	1741	1178	3066
A	1800	910			565	1533	1131	2741
A	1800	1010			510	1382	1021	2471
A	1800	1210					858	2073
A	2100	910					701	1990

Sash Ratings (Pa)

S = Serviceability limit state (deflection = L/150).

U = Ultimate strength limit state (factored yield strength = 104 MPa).

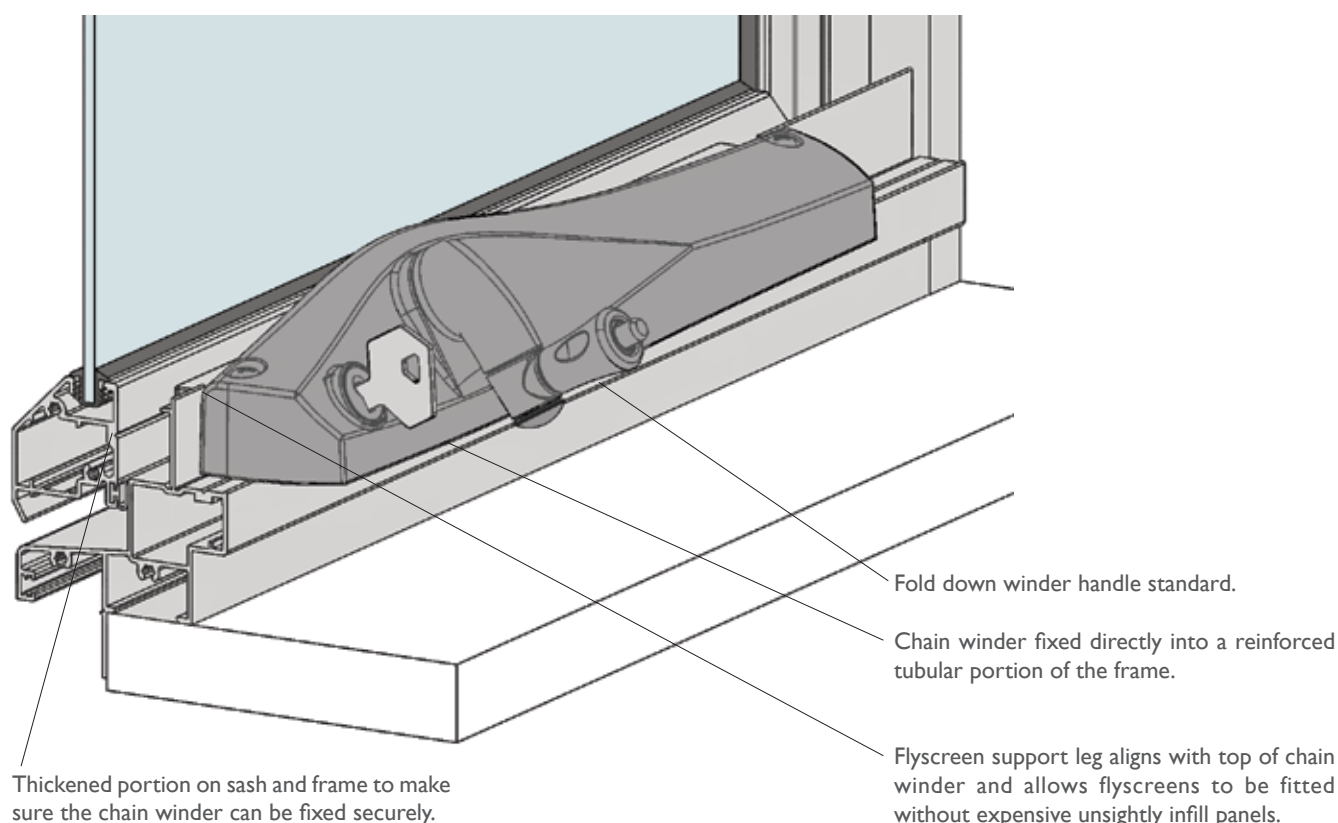
These tables have been calculated using nominal section properties.

A typical assembly has been tested as per the requirements of AS2047,

Ultimate strength rating has been limited to 4500 Pa.

3000 Pa. Serviceability ratings were restricted by the maximum water resistance (450Pa) achieved on this product.

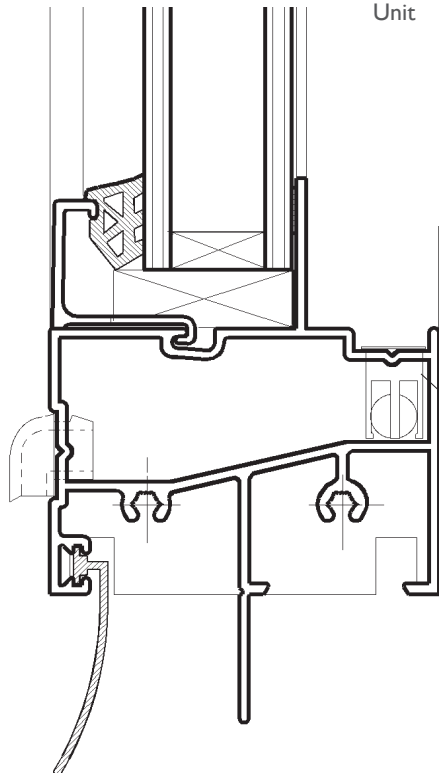
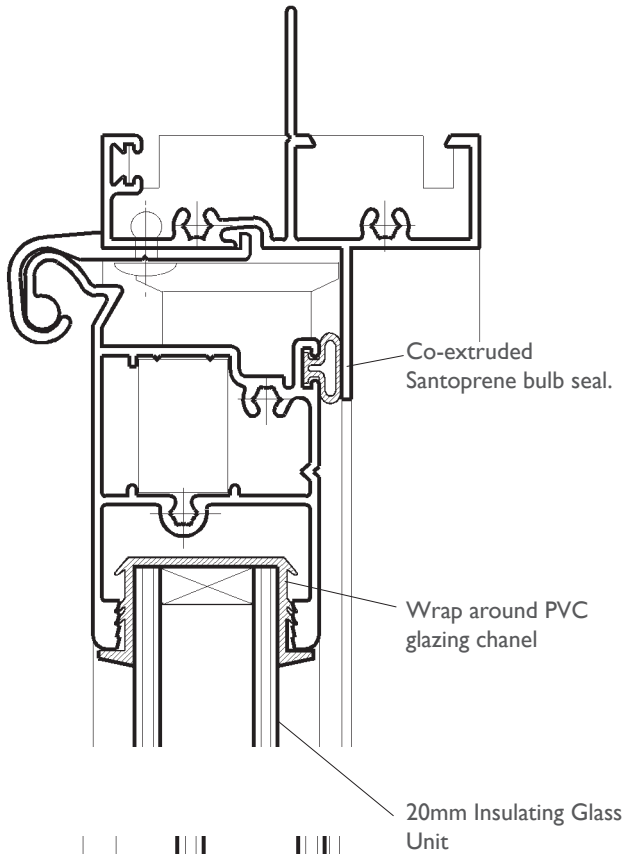
Blank Denotes rating under 500 Pa.



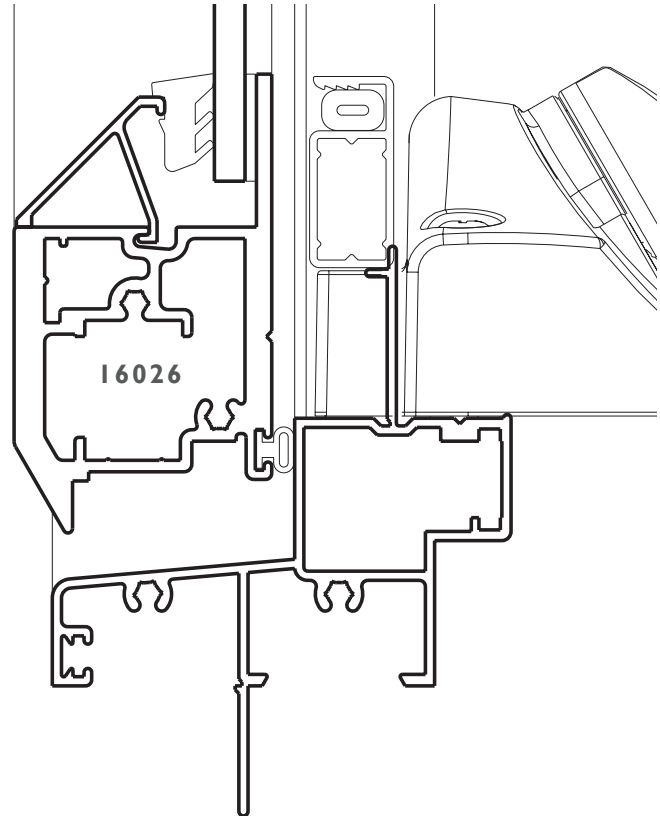
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OPTIONAL DOUBLE GLAZING



Optional Heavy Duty Beaded Sash



The alternative Heavy Duty Beaded Sash can be single glazed as drawn. Sash will also accept 20mm IGU using an alternative glazing bead.

Proprietary condensation drain ball valve.

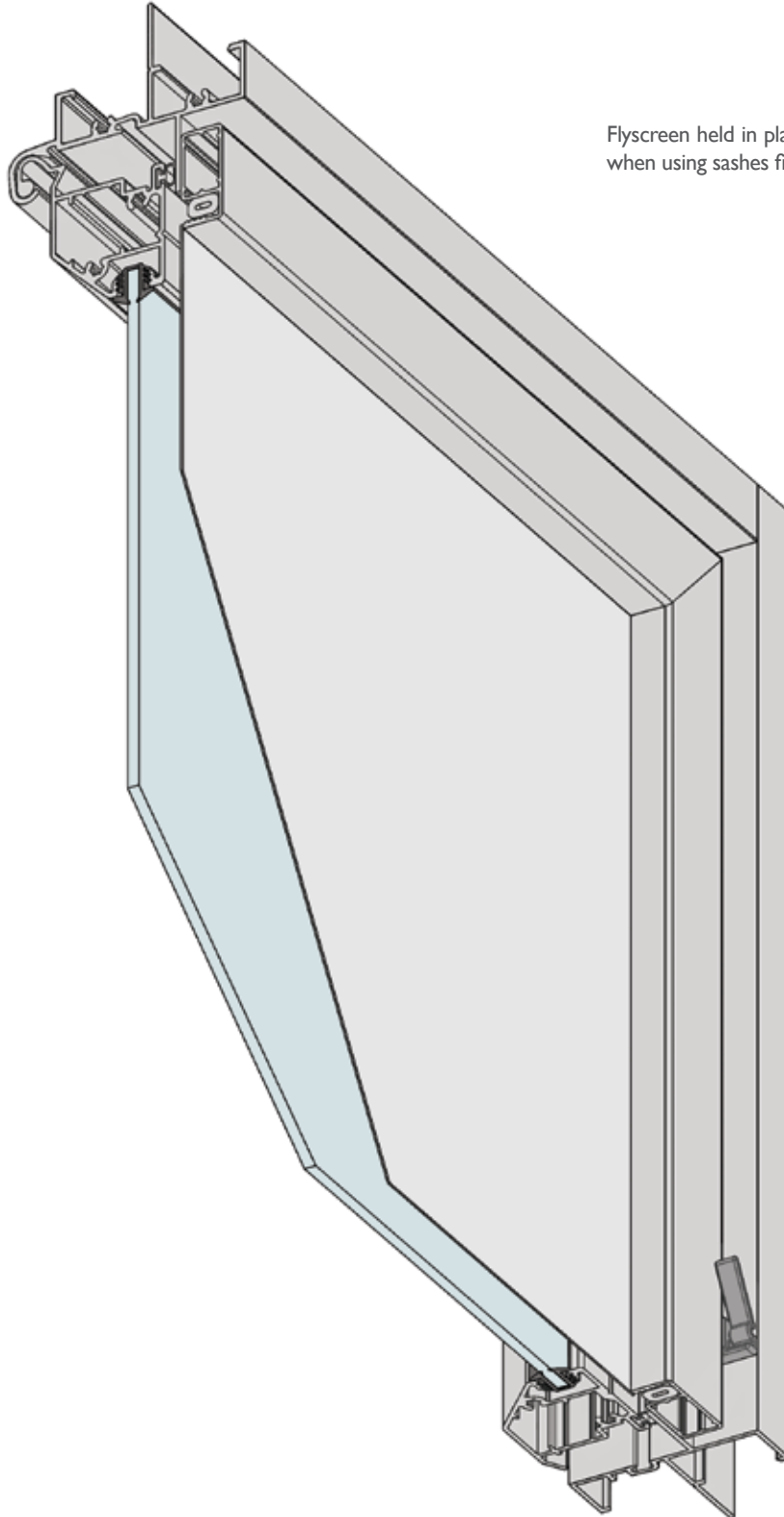
Custom double glazed fixed light to match the double glazed sash illustrated above, will accept 20mm insulating glass and the self draining condensation ball valve.

Drawn with the optional condensation draining fixed sill. Can also be supplied with the standard lowline fixed sill (as detailed on previous page).

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AWNING FLYSCREEN FITTING DETAILS



Flyscreen held in place with custom nylon clips when using sashes fitted with chainwinders.



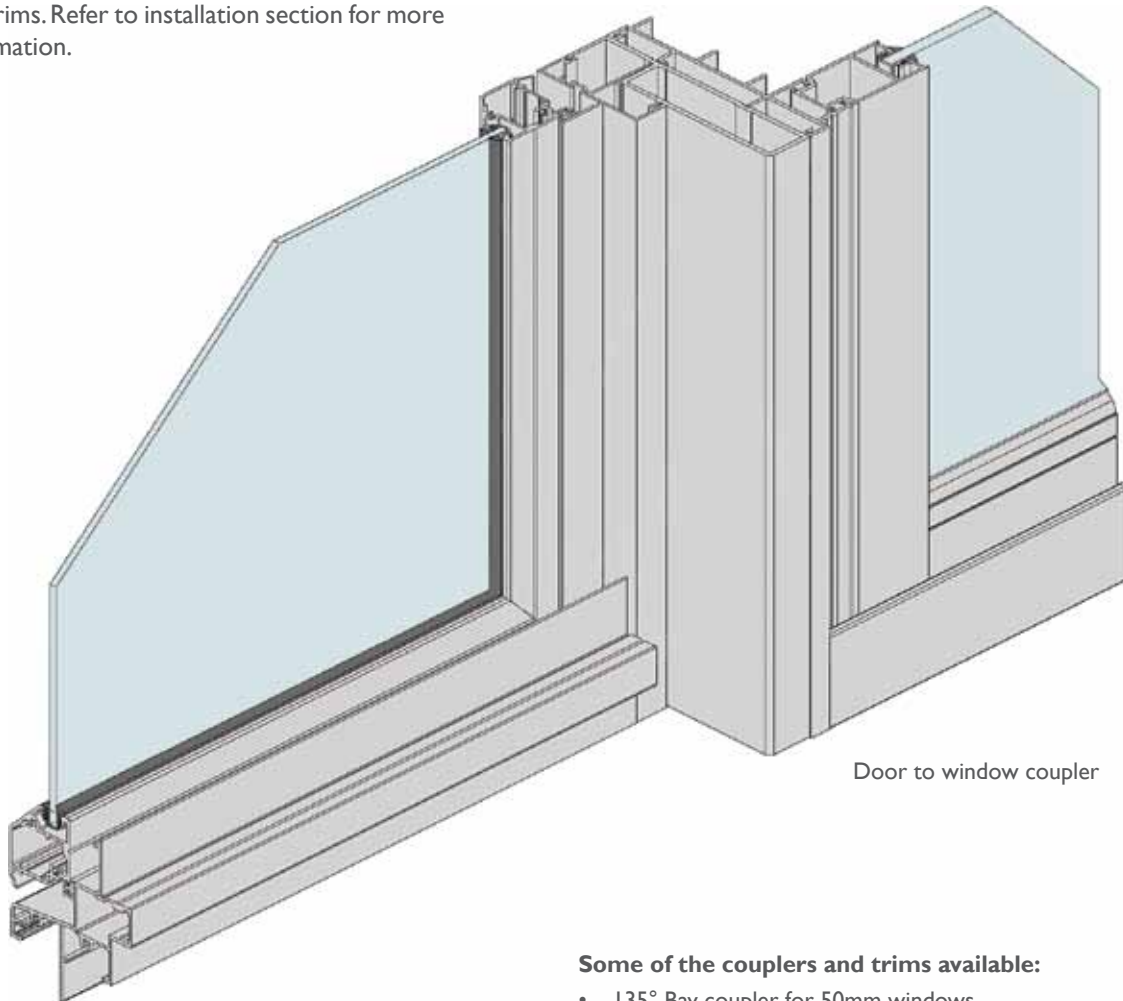
Nylon spring clips

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COUPLERS AND TRIMS

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



Door to window coupler

Some of the couplers and trims available:

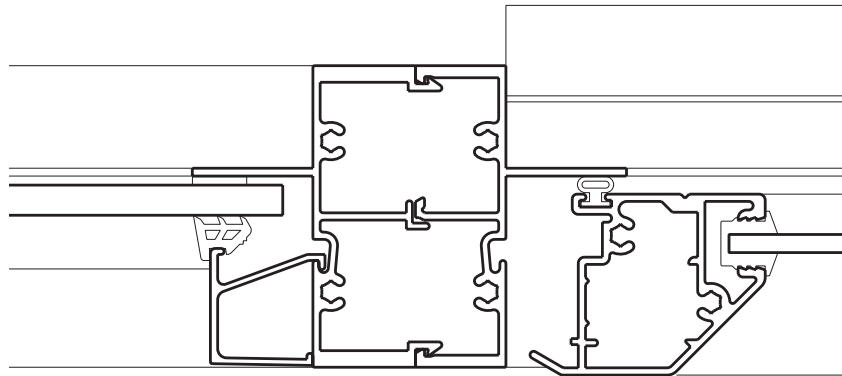
- 135° Bay coupler for 50mm windows.
- 135° Bay coupler for 50mm windows to 102mm doors.
- 90° Corner coupler for 50mm windows.
- 90° Corner coupler for 50mm windows to 102mm doors.
- 180° Coupler for 50mm windows.
- Door to window vertical coupler (illustrated above).
- Door to window horizontal coupler.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

Refer to installation section for more information.

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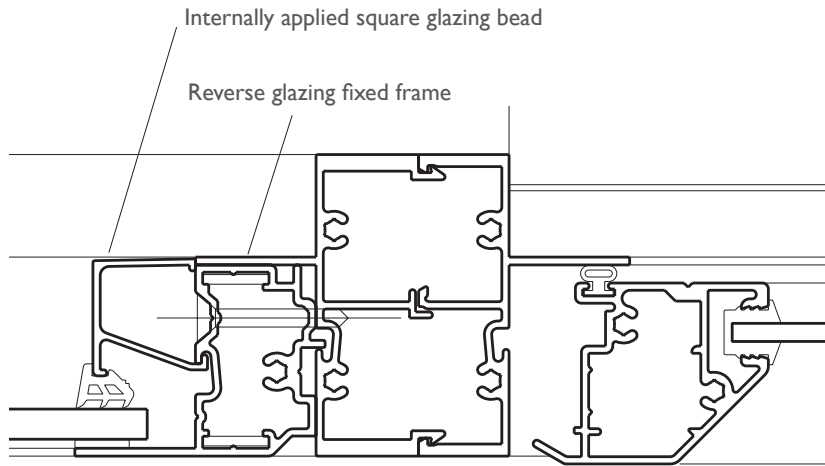
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OPTIONAL REVERSE (INTERNAL) FIXED GLAZING



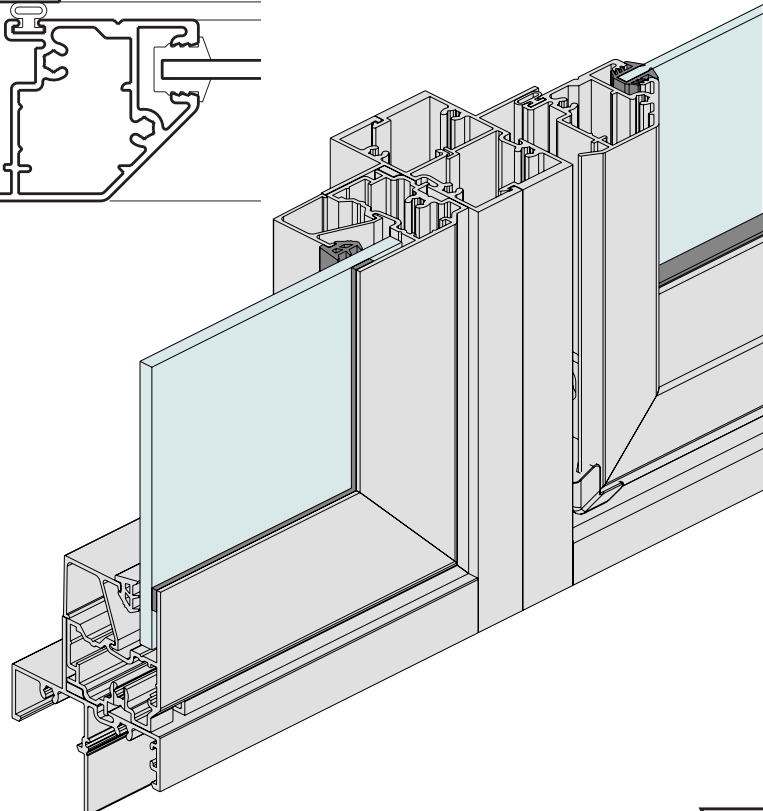
Standard mullion with external glazed fixed light

Externally applied square bead illustrated, splayed bead standard



Alternative mullion with internally glazed fixed light

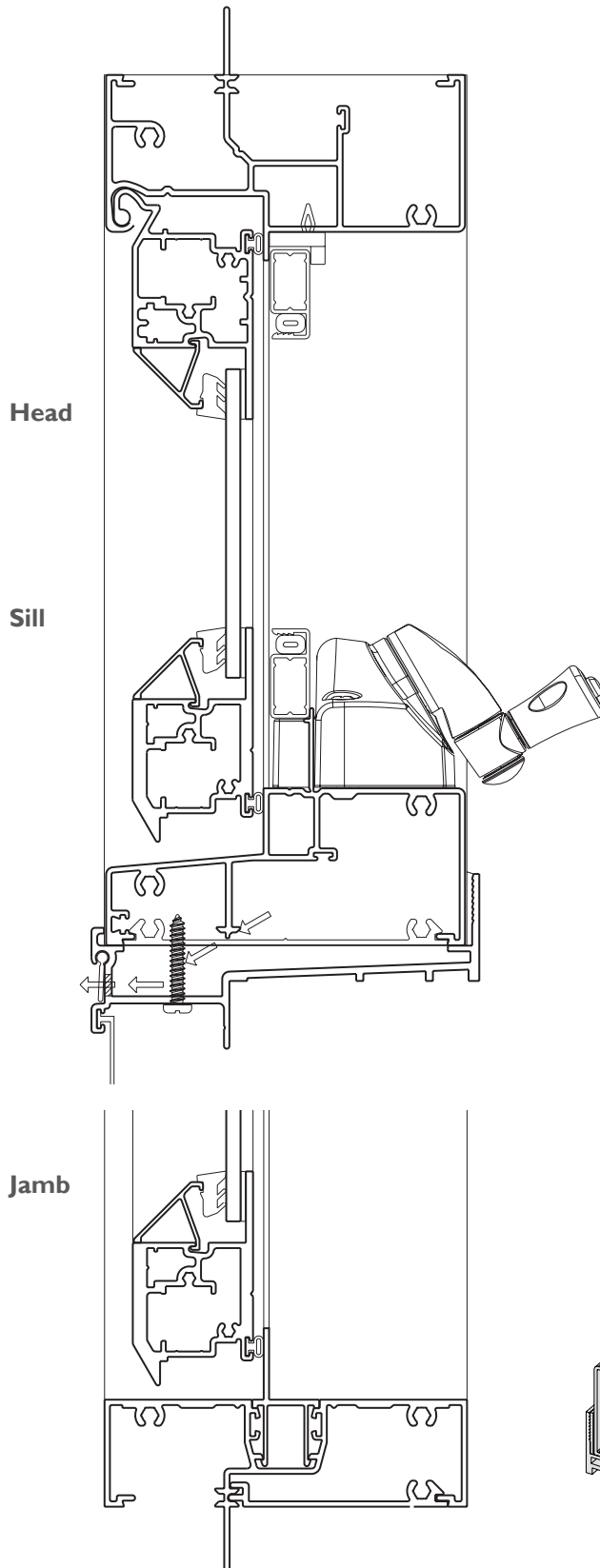
Reverse glazing is ideal for elevated applications where re-glazing of windows may be required i.e. Multi-story buildings



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ALTERNATIVE AWNING SASHES IN COMMERCIAL FRAMING



Alternative awning sashes in commercial framing

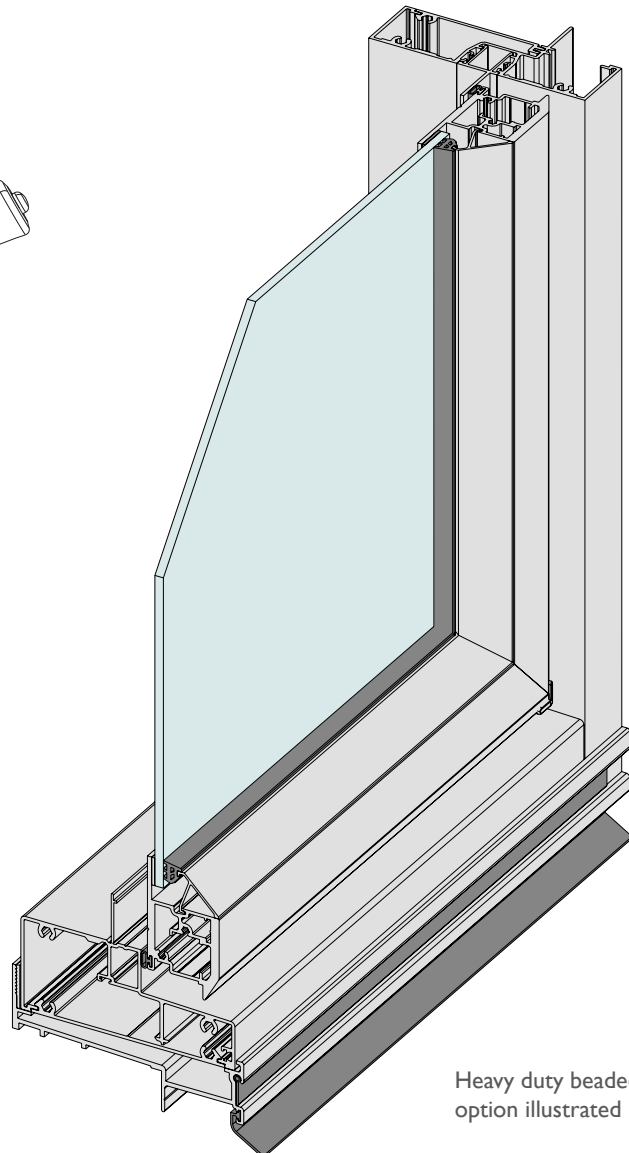
If you are looking for a bolder frame consider the AWS Commercial awning window Series 456.

Features overview:

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



For more information visit our website
www.awscommercial.com.au



Heavy duty beaded sash
option illustrated