ELEVATE
ALUMINIUM SYSTEMS

ARCHITECTURAL SERIES

Series 466

Architectural Awning Window

Photo courtesy of Hanlon Windows Australia. Project: Nowra Anglican College.

AWS
ARCHITECTURAL WINDOW SYSTEMS PTY LTD

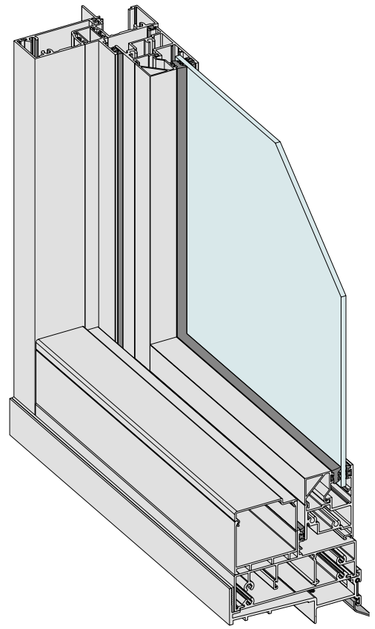
DATE: APRIL 2021 | REPLACES: MAY 2013

ELEVATE
ALUMINIUM SYSTEMS

Series 466
ARCHITECTURAL AWNING WINDOW

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

KEY FEATURES/PERFORMANCE CHARACTERISTICS



Series 466 Architectural Awning Window
Internal view.

- This 102mm thick commercial grade awning window has been designed with bold frame lines and thick (strong) sashes that can carry heavy glass including 24mm thick double glazing.
- The perimeter frame has been designed to make installation into brick veneer and cavity brick easier with built-in nailing fins (weather bars).
- The extra strong sashes allow large sash windows to be fabricated for high wind load areas.
- Splayed or square glazing beads available.
- Awning sashes can be fitted with cam handles, manual chain winders or concealed electric winders. The winder options suit fixed flyscreen installation.
- Sashes are hung on heavy duty four-bar stainless steel or aluminium stays.
- Sashes will accept a variety of glass thicknesses from 4mm single panes to 24mm insulating glass units.
- Two non-facing (recessed) sash designs cover internal and external glazing.

Maximum Panel Height*	1800mm
Maximum Panel Width*	1200mm **
Maximum Glass Thickness	≤24mm

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

** Over width awning sashes are available, contact local AWS sales office for details.

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

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SOUND REDUCTION

A number of glass combinations have been tested with this system to acheive sound reduction numbers listed below.

Glass Description	Rating
6.50mm VLam Hush glass	Rw37
6mm Toughened glass /12mm air gap / 6.50mm VLam Hush glass	Rw40
8.5mm VLam Hush glass /10mm air gap / 6.50mm VLam Hush glass	Rw41
4mm Glass	Rw32
6.38mm Laminated glass	Rw34
10.38mm Laminated glass	Rw36
24mm IGU (6mm glass / 12mm air gap / 6mm glass	Rw35

NOTE: Results highlighted in grey are from tests conducted on similar Series 616.

WERS RATINGS

Single Glazed

Window ID	Glass Type	Uw	SHGCw	Tvw	Inf
AWS-032-01	5Clr	7.0	0.57	0.50	0.12
AWS-032-02	5SG	7.0	0.40	0.28	0.12
AWS-032-03	5GY	7.0	0.37	0.41	0.12
AWS-032-04	6.38Sct	5.9	0.44	0.48	0.12
AWS-032-05	6.38VLam	7.0	0.52	0.52	0.12
AWS-032-06	4SnClr	6.2	0.40	0.40	0.12
AWS-032-07	6SnClr	6.2	0.40	0.40	0.12
AWS-032-08	6EVanBG	6.0	0.31	0.33	0.12
AWS-032-09	6EVanClr	6.0	0.41	0.39	0.12
AWS-032-10	6EVanGy	6.0	0.29	0.19	0.12
AWS-032-11	6EVanSpB	6.0	0.26	0.23	0.12
AWS-032-12	6EVanSpGn	6.0	0.26	0.28	0.12
AWS-032-13	6.38LamGy	7.0	0.25	0.08	0.12
AWS-032-14	6.38TLam	7.0	0.28	0.20	0.12
AWS-032-15	6.38SnClr	6.1	0.39	0.40	0.12
AWS-032-16	6.38SnGy	6.1	0.30	0.19	0.12
AWS-032-17	6.38CPClr	5.9	0.45	0.48	0.12
AWS-032-18	6.38CPGn	5.9	0.34	0.42	0.12
AWS-032-19	6.38CPGy	5.9	0.34	0.23	0.12
AWS-032-20	10SnClr	5.6	0.33	0.34	0.12
AWS-032-21	10.38LamClr	5.8	0.37	0.38	0.12
AWS-032-22	10.38LamSpGy	6.6	0.40	0.38	0.12
AWS-032-23	10.38Tlam	6.6	0.19	0.06	0.12
AWS-032-24	10.38SnClr	6.0	0.36	0.37	0.12

HOW TO SPECIFY

SYSTEM NAME

Elevate™ Aluminium Systems Series 466 Architectural Awning Window

FINISH

Powder Coat

Anodised

COLOUR

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

GLASS

Specify thickness ≤24mm

Specify thermal performance where applicable (Uv & SHGC)

Specify acoustic performance where applicable (RW)

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.

NOTES
1. Uw is the whole window U-value
2. SHGCw is the whole window solar heat gain coefficient
3. Tvw is the whole window visible (light) transmittance
4. Maximum air infiltration is 5.0L/s.m2 at a positive pressure difference of 75 Pa as measured according to AS 2047
5. Static performance (Uw SHGCw Tvw Tdw) calculated using Window 6.3 and Therm 6.3 software (LBNL), 1999-2010
6. Results disclosed at Australian Fenestration Rating Council (AFRC) regulations.
7. Ratings for use with Section J of the Building Code of Australia - Class 2-9

For the latest WERS data for this system visit www.wers.net

Australian registered design.

ARCHITECTURAL SERIES

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WERS RATINGS

Double Glazed

Window ID	Glass Type	Uw	SHGCw	Tvw	Inf
AWS-032-25	4/10/4	5.0	0.47	0.47	0.12
AWS-032-26	5/8/5	4.4	0.45	0.43	0.12
AWS-032-27	5/8/5	5.0	0.46	0.47	0.12
AWS-032-28	3/12Ar/3ET	4.3	0.46	0.44	0.12
AWS-032-29	3SG/12/3	4.9	0.34	0.40	0.12
AWS-032-30	4/10/4ET	4.5	0.45	0.43	0.12
AWS-032-31	4Az/10/4ET	4.5	0.28	0.36	0.12
AWS-032-32	5SG/8Ar/5ET	4.5	0.28	0.36	0.12
AWS-032-33	4SnClr/10/4	4.7	0.35	0.36	0.12
AWS-032-34	4SnClr/10Ar/4	4.5	0.35	0.36	0.12
AWS-032-35	6.38LamClr/12/6	4.8	0.45	0.46	0.12
AWS-032-36	6.38LamClr/12Ar/6	4.8	0.45	0.46	0.12
AWS-032-37	6.38SnClr/12/6	4.5	0.34	0.35	0.12
AWS-032-38	6.38SnClr/12Ar/6	4.4	0.34	0.35	0.12
AWS-032-39	6.38CPClr/8/4	4.6	0.40	0.43	0.12
AWS-032-40	6.38CPClr/8Ar/4	4.4	0.40	0.43	0.12
AWS-032-41	6.38CPClr/12/6	4.4	0.39	0.43	0.12
AWS-032-42	6.38CPClr/12Ar/6	4.3	0.39	0.43	0.12
AWS-032-43	6.38CPGy/8/4	4.6	0.29	0.21	0.12
AWS-032-44	6.38CPGy/8Ar/4	4.5	0.29	0.21	0.12
AWS-032-45	6.38CPGy/12/6	4.4	0.28	0.20	0.12
AWS-032-46	6.38CPGy/12Ar/6	4.3	0.28	0.20	0.12
AWS-032-47	6.38LamGy/12/6	4.8	0.18	0.07	0.12
AWS-032-48	6.38LamGy/12Ar/6	4.8	0.18	0.07	0.12
AWS-032-49	6.38SnGy/12/6	4.4	0.33	0.35	0.12
AWS-032-50	6.38SnGy/12Ar/6	4.4	0.33	0.35	0.12
AWS-032-51	6.38TLam/12/6	4.8	0.22	0.17	0.12
AWS-032-52	6.38TLam/12Ar/6	4.8	0.21	0.17	0.12
AWS-032-55	6.38EVanClr/12/6	4.8	0.37	0.35	0.12
AWS-032-56	6.38EVanClr/12Ar/6	4.8	0.37	0.35	0.12
AWS-032-57	6.38EVanGy/12/6	4.5	0.24	0.17	0.12
AWS-032-58	6.38EVanGy/12Ar/6	4.3	0.23	0.17	0.12
AWS-032-59	10.38LamClr/8/6	4.9	0.34	0.35	0.12
AWS-032-60	10.38LamClr/8Ar/6	4.8	0.34	0.35	0.12
AWS-032-61	10.38SnClr/8/6	4.7	0.32	0.34	0.12
AWS-032-62	10.38SnClr/8Ar/6	4.5	0.31	0.34	0.12
AWS-032-63	10.38LamGy/8/6	4.9	0.14	0.06	0.12
AWS-032-64	10.38LamGy/8Ar/6	4.8	0.14	0.06	0.12
AWS-032-65	10.38TLamGy/8/6	4.6	0.30	0.31	0.12

NOTES
1. Uw is the whole window U-value
2. SHGCw is the whole window solar heat gain coefficient
3. Tvw is the whole window visible (light) transmittance
4. Maximum air infiltration is 5.0L/s.m2 at a positive pressure difference of 75 Pa as measured according to AS 2047
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Series 466
ARCHITECTURAL AWNING WINDOW

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DESIGN FEATURES

This high performance awning and casement window system has been designed around custom frame and sash extrusions.

The extra strong sashes allow large sash windows to be fabricated for high wind load areas, refer Pascal rating tables later in these notes.

Splayed or square glazing beads available.

Awning sashes can be fitted with cam handles, manual chain winders or concealed electric winders. The winder options suit fixed flyscreen installation as detailed in these notes.

Fixed lowlights/sidelights can be single or double glazed.

Sashes are hung on heavy duty four bar stainless steel or aluminium stays.

Sashes will accept a variety of glass thicknesses from 4mm single panes to 24mm insulating glass units.

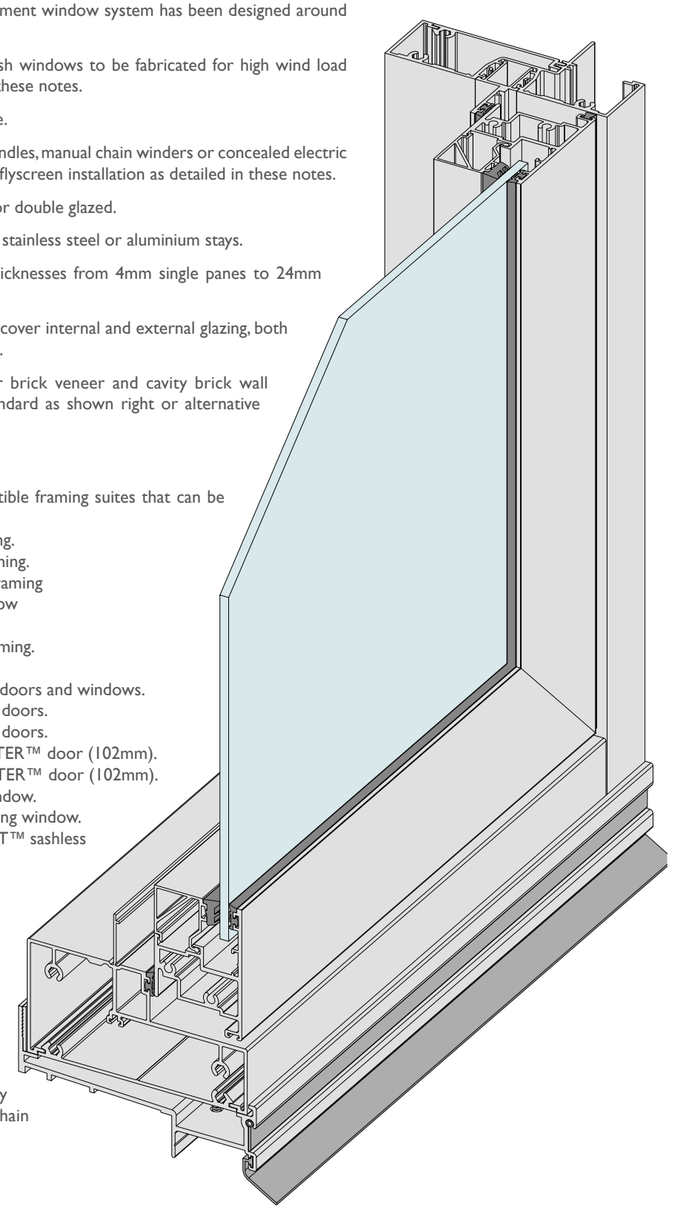
Two non-facing (recessed) sash designs cover internal and external glazing, both sash options are detailed in these notes.

The nailing fin frames are suitable for brick veneer and cavity brick wall installations. Two jamb sizes 30mm standard as shown right or alternative 44mm wide.

Compatibility:

We have designed a number of compatible framing suites that can be coupled or used together:

- Series 400 CentreGLAZE™ framing.
- Series 406 SG FrontGLAZE™ framing.
- Series 424 DG CentreGLAZE™ framing
- Series 461 Apartment sliding window
- Series 471 Apartment sliding door
- Series 426 DG FrontGLAZE™ framing.
- Series 407 FaceLINE™ framing.
- Series 410 FoldMASTER™ Bi-fold doors and windows.
- Series 411 ViewMASTER™ Bi-fold doors.
- Series 412 ViewMASTER™ Bi-fold doors.
- Series 702 Performance SlideMASTER™ door (102mm).
- Series 704 Architectural SlideMASTER™ door (102mm).
- Series 462 Architectural sliding window.
- Series 463 Architectural double-hung window.
- Series 464 Architectural ClearVENT™ sashless double-hung window.
- Series 467 Commercial awning & casement windows.



The illustration right shows the internally beaded non-facing sashes in manual chain winder sill option.

Australian registered design.

ARCHITECTURAL SERIES

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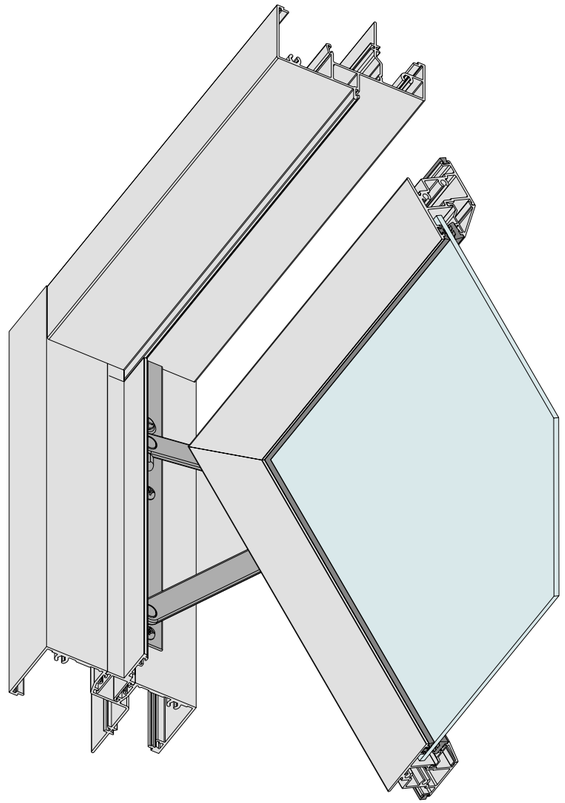
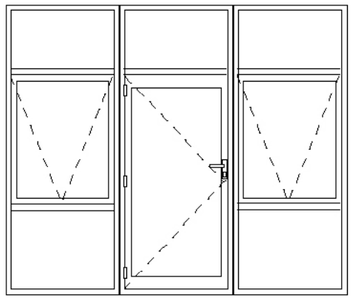
TYPICAL CONFIGURATIONS



The illustration above shows the non-facing externally beaded sash with heavy duty stays.

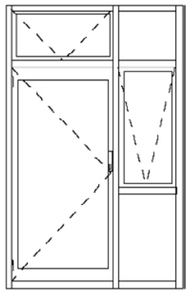
When we talk about non-facing throughout these notes we mean: Recessed sash with a perimeter recess designed to match adjoining hinged doors.

Water Resistance - 600Pa
We always recommend sub-sills under commercial windows.



We can fit awnings in sidelights as shown above and the highlight as shown below.

Sashes and fixed sidelights within 300mm of door opening are to be glazed with grade 'A' safety glass in accordance with AS 1288.



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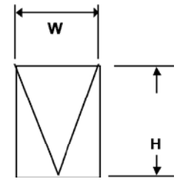
DESIGN FEATURES

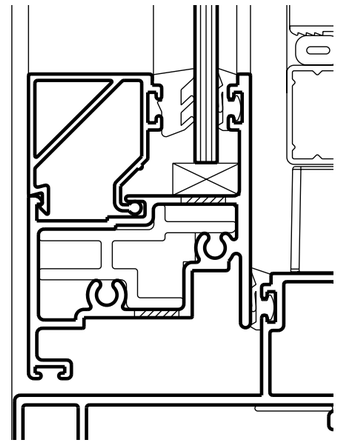
Rating tables for alternative sash side rails on this page.
S = Serviceability limit state (deflection = L/180 or deflection L/250).
U = Ultimate strength limit state (factored yield strength = 104MPa).

These tables have been calculated using section properties.
A typical assembly has been tested as per the requirements of AS 2047,

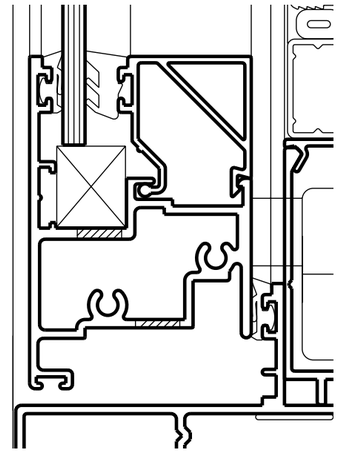


Type 'A' and type 'C' windows Height 'A' or 'C' mm	Width mm		Sashes 72840	Sashes 72841	Hardware Rating (Pa)
1500	810	**L/180 S**	2029	2187	1793
		L/250 S	1461	1575	1793
		U	3659	3818	
1500	1010	**L/180 S**	1626	1753	1422
		L/250 S	1171	1262	1422
		U	2925	3052	
1500	1210	**L/180 S**	1275	1375	1085
		L/250 S	918	990	1085
		U	2283	2382	
1600	810	**L/180 S**	1620	1746	1667
		L/250 S	1166	1257	1667
		U	3147	3283	
1600	1010	**L/180 S**	1295	1396	1322
		L/250 S	932	1005	1322
		U	2510	2619	
1600	1210	**L/180 S**	1011	1090	1009
		L/250 S	728	785	1009
		U	1951	2036	
1700	810	**L/180 S**	1363	1469	1577
		L/250 S	981	1058	1577
		U	2804	2925	
1700	1010	**L/180 S**	1088	1173	1250
		L/250 S	783	845	1250
		U	2234	2331	
1700	1210	**L/180 S**	847	913	954
		L/250 S	610	657	954
		U	1731	1807	
1800	810	**L/180 S**	1138	1227	1487
		L/250 S	819	883	1487
		U	2485	2593	
1800	1010	**L/180 S**	907	978	1179
		L/250 S	653	704	1179
		U	1977	2063	
1800	1210	**L/180 S**	704	759	900
		L/250 S	507	546	900
		U	1529	1595	

Wind Ratings (Pa) sashes.



Externally beaded sash **72840**



Internally beaded sash **72841**

ARCHITECTURAL SERIES

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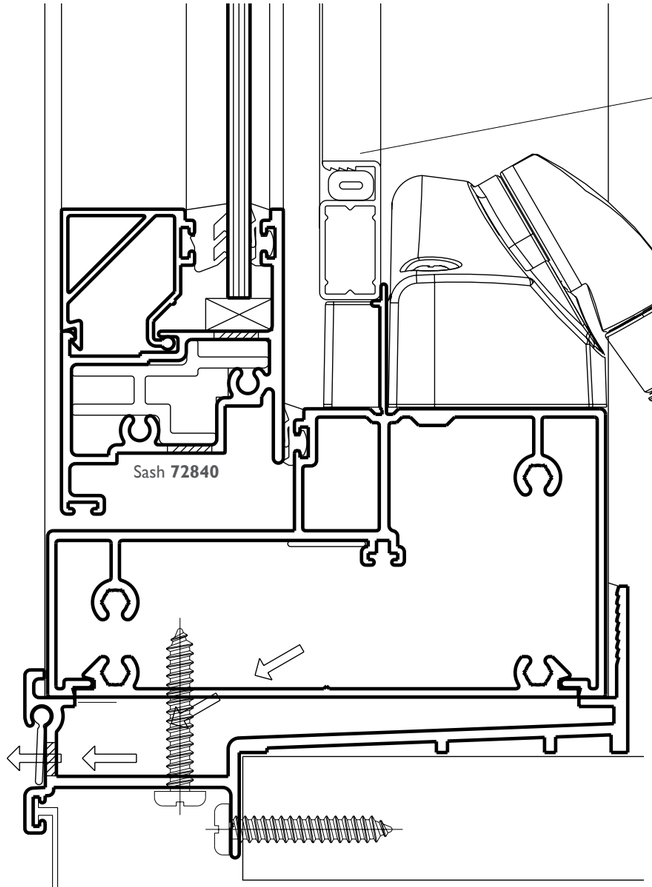
AWNING SASH WITH CHAINWINDER



Manual chain winder with rustproof Polesium™ body and base and stainless steel chain as standard.

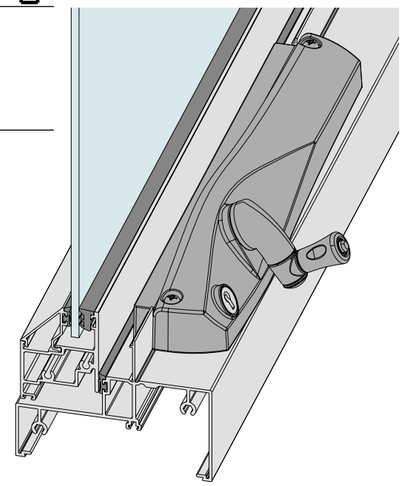
Custom extruded flyscreen can be fitted neatly on the winder base upstand.

Externally beaded non-facing sash illustrated.

Custom winder sill lifts the winder chain above the weather seal – improved weather performance.

Sub-sill standard under all Series 466 windows.

CAD file: DWG
466.AWN.1



Winders come with stainless steel chain as standard.

Standard chain throw is 250mm, heavier sashes will have a shorter throw chain to suit the sash weight.

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Series 466
ARCHITECTURAL AWNING WINDOW

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SCALE: FULL SIZE & NTS

AWNING SASH WITH ELECTRIC WINDER

Concealed electric winder.

Custom extruded flyscreen can be fitted neatly onto the winder cover.

Snap-on cover allows future access to winder.

A large variety of glazing beads allow us to offer glass thickness from 4mm to 24mm.

Custom winder base and cover designed specifically for this winder, lifts the winder chain above the weather seal – improved weather performance.

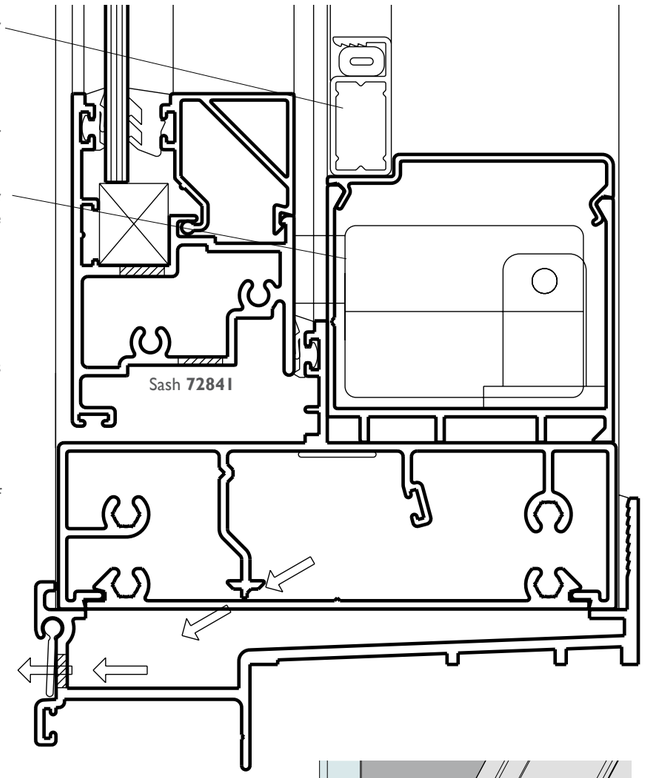
Internally beaded non-facing sash illustrated.

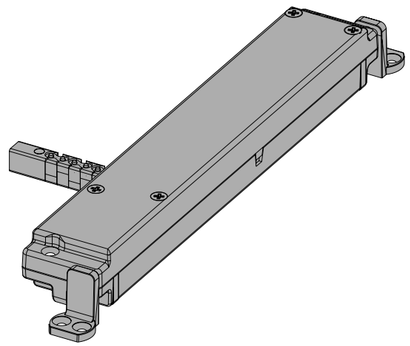
This type of winder would be ideal for awnings over doors or awnings in elevated situations.

Dedicated frame designed for this type of hardware.

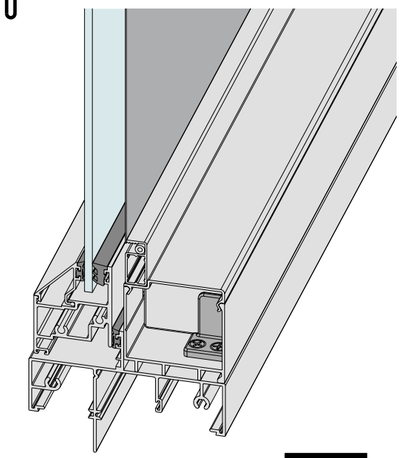
Sub-sill standard under all Series 466 windows.

CAD file: DWG
466.AWN.2





Concealed heavy duty electric winder.



Australian registered design.

Series 466
ARCHITECTURAL AWNING WINDOW

DATE: APR 21
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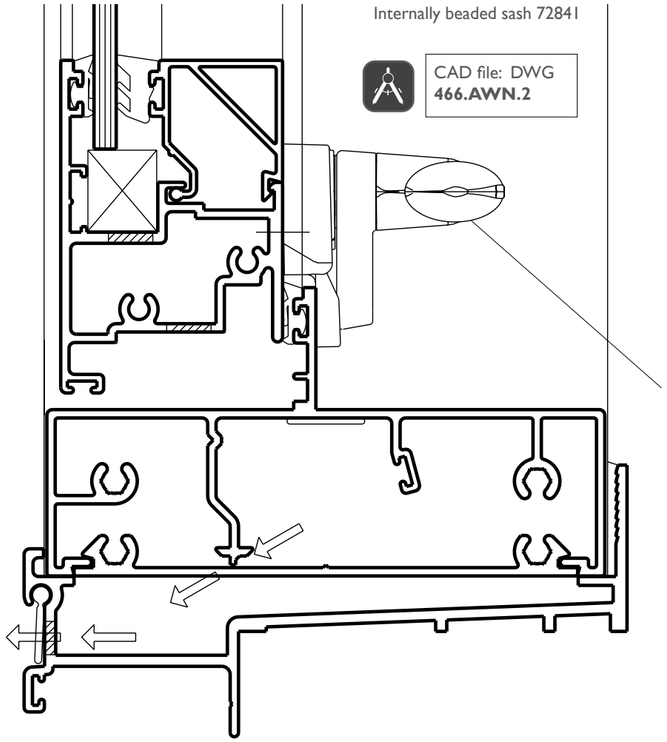
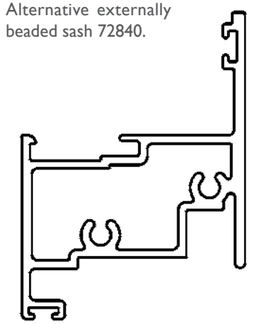
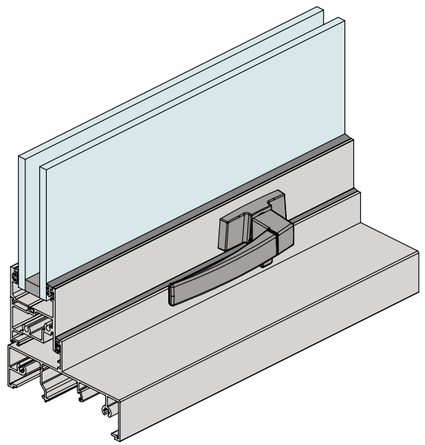
AWNING SASH WITH CAM HANDLE







icon

ICON™ Helix Cam handle

This cam handle is designed to match other ICON™ hardware.

The important features with this type of cam handle:
- Keeper is part of the cam handle.
- No keeper fixings required through the weather bar.

The ICON™ Helix Cam handle is available only in 316 stainless steel finish.

Sub-sill standard under all Series 466 windows.

Series 466
ARCHITECTURAL AWNING WINDOW

DATE: MAY 13
REPLACES: JUNE 06
SCALE: FULL SIZE

JAMB OPTIONS

Standard 30mm jamb.

This narrow 30mm jamb matches the head and sill external 30mm face.

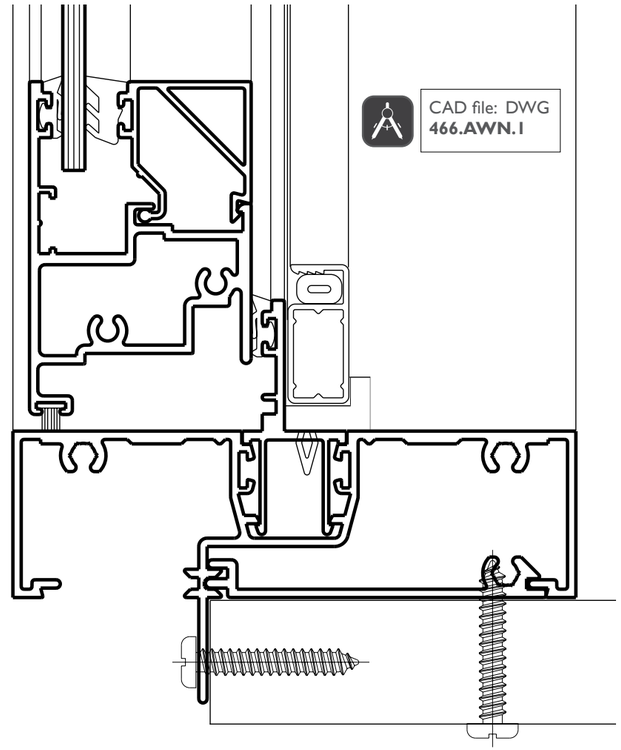
Detail illustrates the recessed non-facing internally glazed sash. This sash with the appropriate glazing bead will accept glass from 4mm to 24mm thick.

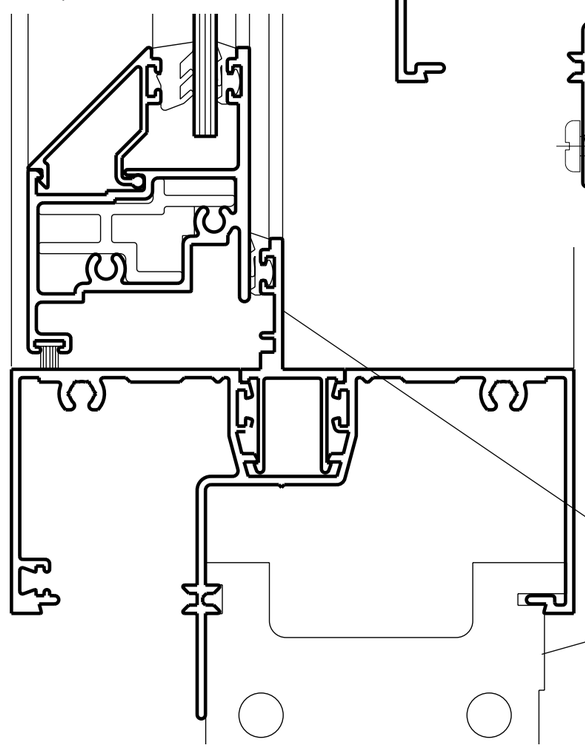
Optional Elevate heavy duty extruded flyscreen nests into jamb adaptor.

Jamb adaptor snaps into central glazing pocket.

Custom frame filler used for additional timber reveal fixings to ensure that these reveals are held tight against the frame.

30mm jamb will also accept the galvanised building-in lugs shown below on alternative 44mm jamb.





Alternative 44mm wide jamb.

If you are looking for a bold wide jamb, we offer this 44mm nailing fin frame.

Detail illustrates the recessed non-facing externally glazed sash. This sash with the appropriate glazing bead will accept glass from 4mm to 24mm thick. This sash can also be fitted with a variety of splayed beads as shown left or alternative square glazing beads.

Jamb adaptor snaps into central glazing pocket.

Nailing fin jambs will accept height adjustable galvanised building-in lugs.

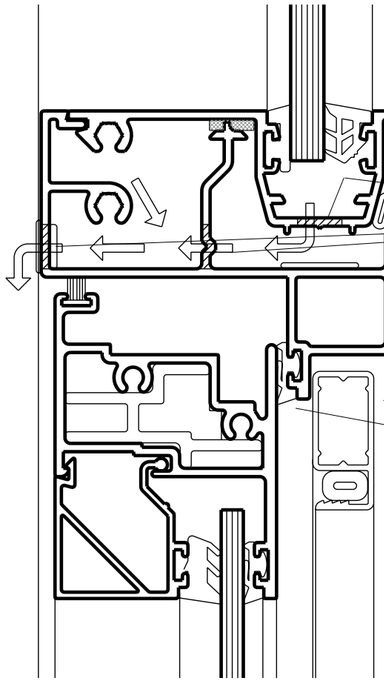
These building-in lugs are ideal for cavity brick wall installation.

ARCHITECTURAL SERIES

Series 466
ARCHITECTURAL AWNING WINDOW

DATE: MAY 13
REPLACES: JUNE 06
SCALE: FULL SIZE & NTS

HIGHLIGHT TRANSOM



Transom sealed with co-extruded Santoprene bulb seal.

8mm drain holes guide any moisture that gets into this transom back to the outside.

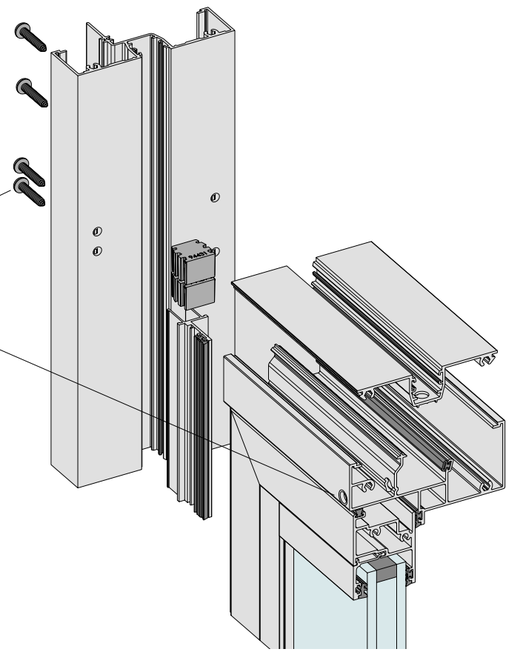
Optional Elevate™ extruded flyscreen nests into jamb adaptor.

Santoprene sash to frame seal.

Exploded view of transom to jamb junction.

#10 stainless steel frame assembly screws.

8mm drain holes in transom through front face and nailing fin 150mm from both ends.



CAD file: DWG
466.AWN.2

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Series 466
ARCHITECTURAL AWNING WINDOW

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

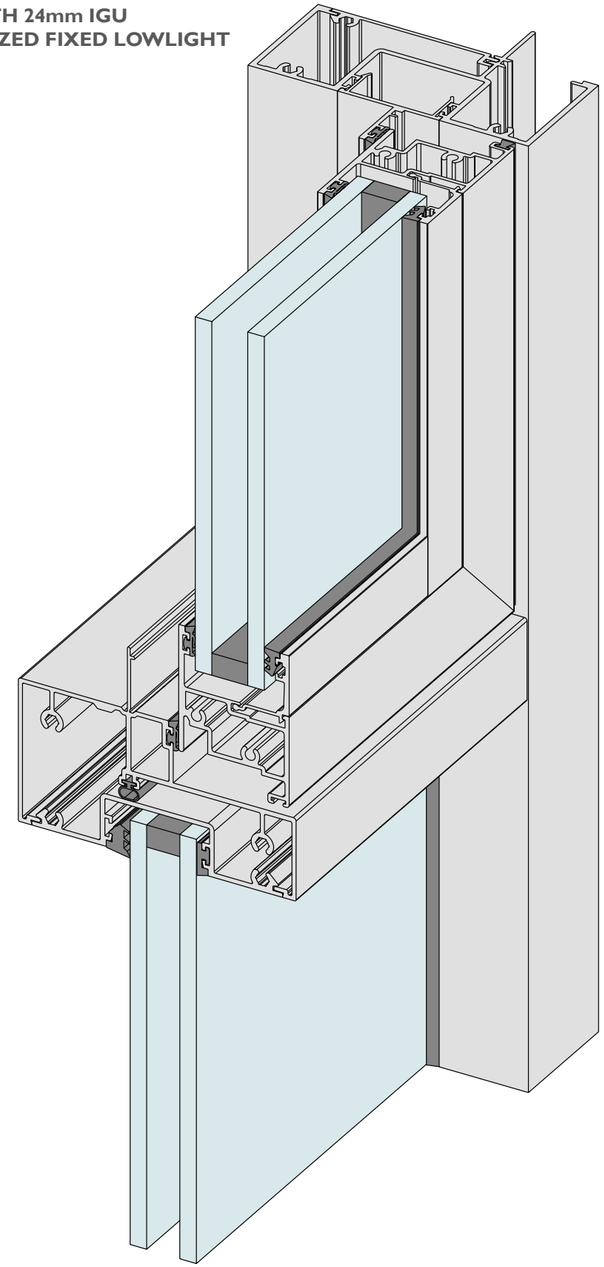
DOUBLE GLAZED BEADED SASH WITH 24mm IGU AND 24mm IGU IN THE DOUBLE GLAZED FIXED LOWLIGHT

This detail is created with run through double glazed jamb.

The jamb runs through to ensure overall frame strength and weather resistance.

In the lowlight area the wide glazing pocket will accept 24mm IGU's with conventional captive and roll-in glazing wedges.

In awning sash area we use a dedicated jamb adaptor, to snap into the double glazed frame pocket.



Series 466 chain winder transom accept the double glazed pocketed filler as detailed right.

Transom sealed to filler with co-extruded Santoprene bulb seal.

The double glazed unit nests neatly into transom, jambs and sill, giving a clean professional finish.

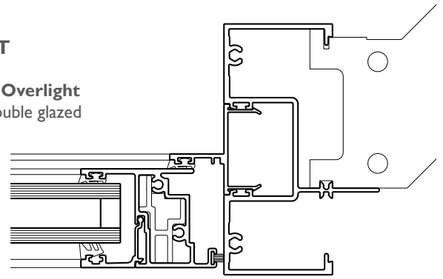
ARCHITECTURAL SERIES

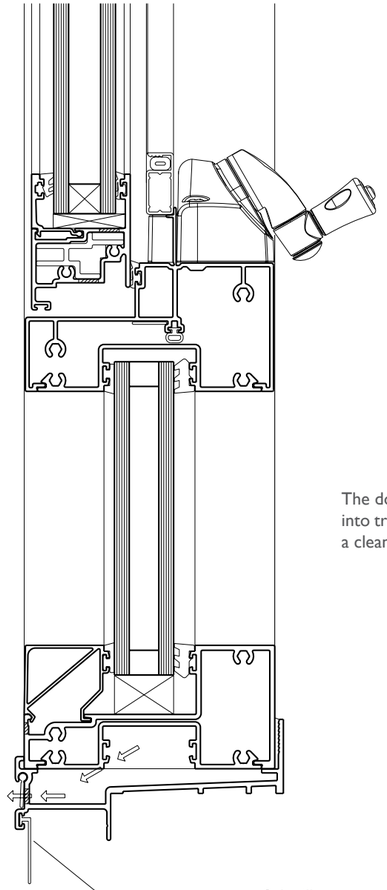
Series 466
ARCHITECTURAL AWNING WINDOW

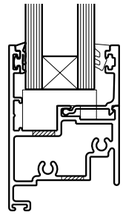
DATE: MAY 13
REPLACES: JUNE 06
SCALE: NOT TO SCALE

DOUBLE GLAZED BEADED SASH WITH 24mm IGU AND 24mm IGU IN THE DOUBLE GLAZED FIXED LOWLIGHT

Awning Overlight
24mm double glazed



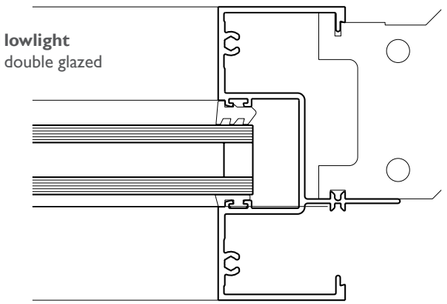




Series 466 sashes can be supplied with external or internally fitted glazing beads.

The double glazed unit nests neatly into transom, jambs and head, giving a clean professional finish.

Fixed lowlight
24mm double glazed



Sub-sills are standard on Series 466 windows and are fitted with custom moulded nylon end caps.

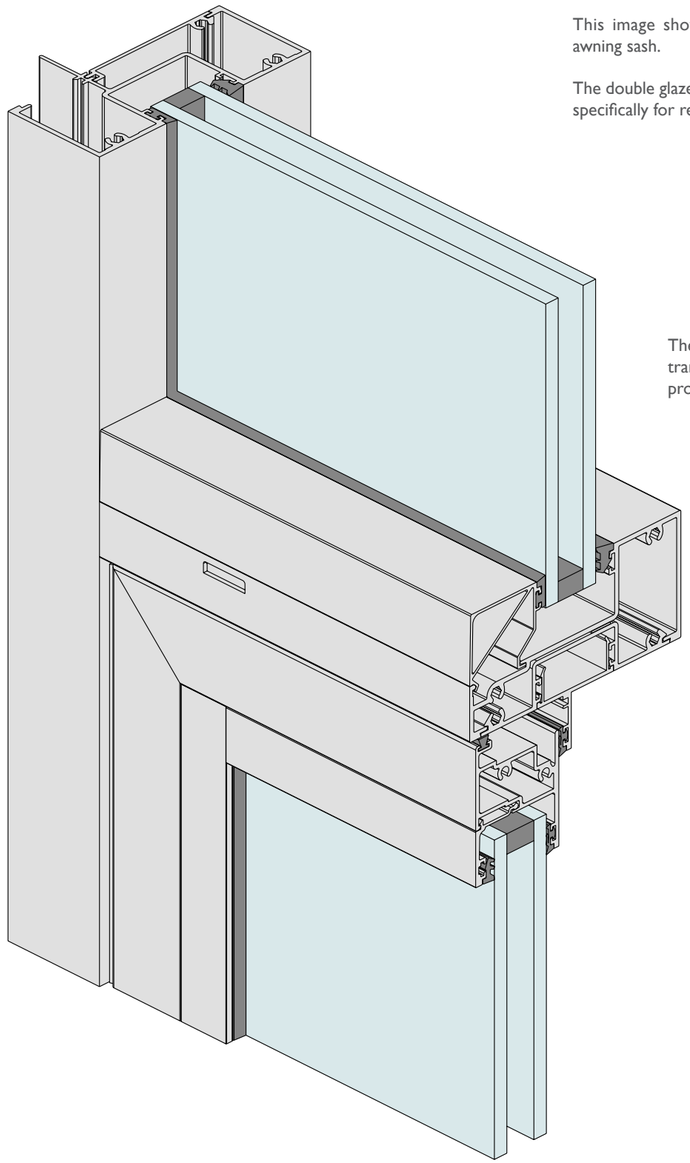
Flexible PVC sill flap caters for sill brick variations.

CAD file: DWG
466.AWN.8

Series 466
ARCHITECTURAL AWNING WINDOW

DATE: MAY 13
REPLACES: JUNE 06
SCALE: HALF FULL SIZE

DOUBLE GLAZED BEADED SASH WITH 24mm IGU AND 24mm IGU IN THE DOUBLE GLAZED FIXED HIGHLIGHT



This image shows double glazed fixed light over awning sash.

The double glazed nailing fin jamb has been designed specifically for residential applications.

The double glazed unit nests neatly into transom, jambs and head, giving a clean professional finish.

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Series 466

ARCHITECTURAL AWNING WINDOW

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

CASEMENT SASH

Casement Sash fitted with heavy duty stays

Alternative 44mm wide nailing fin jamb illustrated.

Externally glazed sash with splayed glazing beads illustrated. Alternative square beads available along with internally glazed sash shown on earlier pages.

Co-extruded Santoprene sash to frame stop.

Custom 30mm nailing fin head and sill with built-in sash stop.

Heavy duty four bar stainless steel casement stays allow the sashes to open through to 90°.