



**SOUTHERN STAR
WINDOWS & DOORS**

www.southernstarwindows.com.au

Thermal Star™



The 7-Star Generation of Homes Is Here. Are You Ready?

It's happening. The National Construction Code (NCC) will make a minimum Nationwide House Energy Rating Scheme (NatHERS) score of 7-stars mandatory in the majority of new Australian homes.

The era-defining change will forever alter how our homes are built, with a much greater focus on energy efficiency - especially with glazed windows and doors.

According to the Australian Governments YourHome website, up to **40% of a homes warmth is lost** and **87% of its heat gained** through its windows.

This makes energy efficient windows & doors likely the most important element of achieving 7-star performance in your builds.

For builders, 7-star will be a challenge.

Getting a home to 7-star compliance may involve rethinking:

- Materials
- Layouts
- Orientations
- Construction methods
- Windows and glazed doors

Increased costs will be an unavoidable feature of 7-star energy efficiency ratings.

Key Changes to the NCC:

- The NCC 2022 will increase home energy efficiency requirements.
- A Nationwide Housing Energy Rating Scheme (NatHERS) 7-star rating will become the new minimum for all builds.



Introducing the
Thermal Star™ Range



THERMAL STAR™

ACHIEVE AFFORDABLE 7-STAR PERFORMANCE

Thermal Star™ is our new thermal performance solution designed to help you affordably meet the tightened energy requirements of the NCC 2022.

With an **inline reveal**, **thermally improved frames**, and **unbeatable value**, the Thermal Star™ range of aluminium windows and doors is designed to help you achieve affordable 7-star performance. The Thermal Star Range is also WERS rated and tested.



Energy Efficiency

Superior U_w^* & Solar Heat Gain^{**} values to help you get to 7-star performance.



Value

Ultimate affordability so you don't need to compromise on your builds or home designs.



Comfort

Outstanding temperature regulation provides an unparalleled level of comfort.



*** U_w Value:** A measurement of how well a building product insulates by measuring heat flow resistance. The lower the U_w -Value the better it performs.

****SHGC Value:** How well a product blocks heat caused by sunlight. Expressed as a number between 0 and 1, a lower SHGC rating will transmit less heat.





Why Choose
Thermal Star™?

WHY CHOOSE THERMAL STAR™?



Superior Uw & SHGC Values
to help you achieve 7-star performance.



Inline Reveal Technology
for optimum thermal control.



Double Glazing As Standard
to maintain first-rate temperature control.



Tested to Australian Conditions
to meet Australian Standard 2047-2014.



Value For Money
for compliance without compromise.



Reduces Condensation
Through consistent climate control.



THERMAL STAR™ PERFORMANCE TEST

To demonstrate the power of the Thermal Star™ range we set up a test.

We compared the NatHERS performance of a single storey display home WITH and WITHOUT Thermal Star™ 150 Series thermally improved aluminium windows and doors.

The houses were as similar as possible in every other respect and were tested in various orientations to comprehensively evaluate the impact of Thermal Star™ range on the NatHERS performance of the home.

Test House Details

House Type: 1 Storey, 4 Bedroom, 2 Bathroom, 231m².

Overshadowing: Calculated using two storey house either side and built on boundary.

Elevated Floor: R4.0 Ceiling batt.

External Wall: R2.5 - R2.7 Wall batt.
R6.0 batt with R2.5 perimeter edge batt.

Roof Colour: Dark.

Location/Climate Zone: Greater Melbourne/Zone 6 (Mild Temperate Climate).



THERMAL STAR™ PERFORMANCE TEST

Without Thermal Star™

House Orientation	NatHERS Rating
North	6.3
North-East	6.2
East	6.1
South-East	6.0
South	5.9
South-West	5.9
West	6.1
North-West	6.2

With Thermal Star™

House Orientation	NatHERS Rating
North	7.3
North-East	7.3
East	7.2
South-East	7.0
South	7.0
South-West	7.0
West	7.2
North-West	7.2

***Disclaimer:** The 7-Star Case Study is intended to showcase the potential benefits of using the Thermal Star™ range, specifically the 150 Series thermally improved aluminium windows and doors with improved glazing options. However, it is essential to note that this study should only be considered as a guide and not as a definitive assessment of the National House Energy Rating Scheme (NatHERS) compliance. To obtain an accurate NatHERS assessment, it is crucial to engage the services of an accredited NatHERS energy assessor who can conduct a comprehensive evaluation based on the specific requirements and guidelines of NatHERS. The final NatHERS assessments should only be performed by a qualified professional to ensure compliance and accuracy.



SOUTHERN STAR
ALUMINIUM WINDOWS & DOORS

AkzoNobel
Interpon®
POWDER COATINGS

Interpon Textura® Fine Texture Powdercoating

The advanced Interpon Textura® powdercoat finish is standard with all aluminium windows and doors in the Thermal Star™ range.

The 'anti-mar' finish and advanced powder technology of Interpon Textura® combine to protect the surface of your windows and doors from abrasions, scuffing during transport and in-situ construction wear and tear.

Features

- Mar reduction technology for use in high wear areas.
- High durability finish to reduce transport damage.
- Textured pattern removes powder coat irregularities.
- Outperforms standard powder-coatings on all abrasion testing metrics.
- Australian-made.
- Available for the entire Southern Star Aluminium & Thermal Star™ ranges.

THERMAL STAR™ COLOUR OPTIONS

01 TEXTURA BLACK

02 TEXTURA MONUMENT

03 TEXTURA WOODLAND GREY

04 TEXTURA JASPER

05 TEXTURA DUNE

06 TEXTURA ULTRA SILVER

07 TEXTURA SURFMIST

08 TEXTURA PEARL WHITE

09 TEXTURA PAPERBARK

Interpon Textura® features an 'anti-mar' finish and advanced powder technology designed to protect from surface abrasions whether in-situ or during transport.



01



02



03



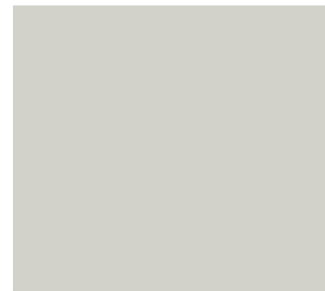
04



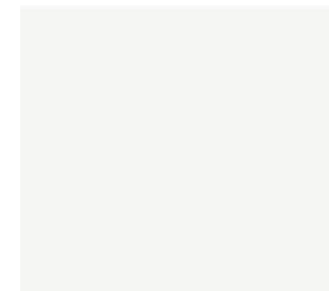
05



06



07



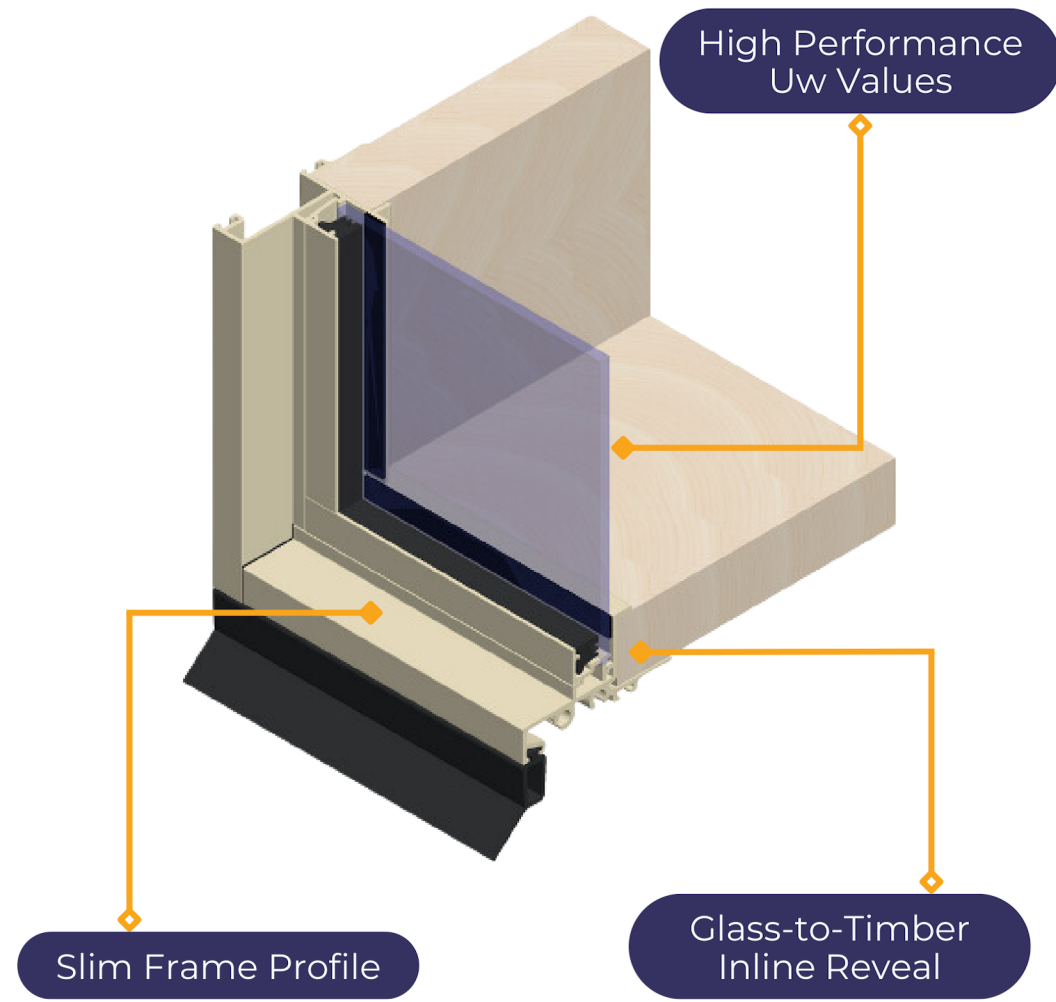
08



09



Thermal Star™
Thermally Improved Range



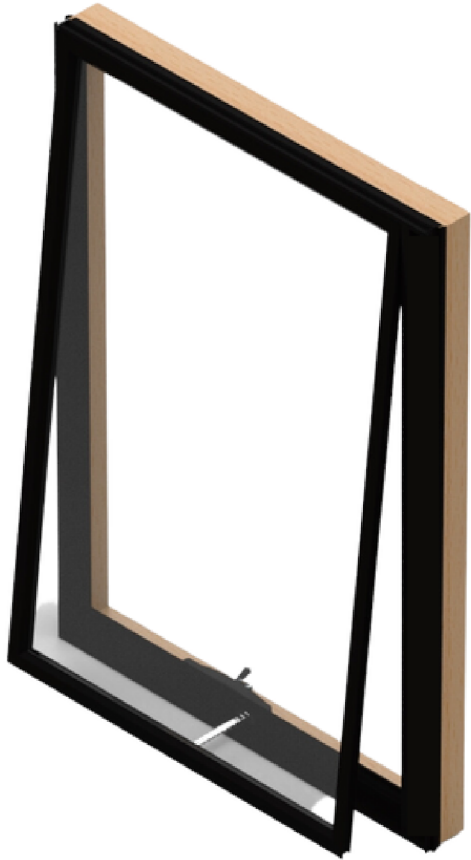
Thermal Star™ 150 Series

This series offers the standard residential suite in the Thermal Star™ range, catering to diverse residential projects with its unmatched features.

The 150 Series boasts a streamlined glass-to-timber inline reveal system, delivering a sleek and elegant appearance. Its slim frame profile not only enhances the flow of natural light but also offers expansive views, creating a harmonious blend of aesthetics and functionality for every home.



THERMAL STAR™ 150 SERIES AWNING WINDOW



U Value Range	3.2 - 2.2
---------------	-----------

SHGC Range	0.43 - 0.58
------------	-------------

Maximum Glass Thickness	18mm
-------------------------	------

The Thermal Star™ 150 Series Awning Window. sets new standards for sealing, ventilation, and thermal efficiency. Its glass-to-timber inline reveal system invites natural light while the slim frame profile offers unobtrusive views and a seamless connection with the outdoors. Experience lasting durability and ventilation with the Thermal Star™ 150 Series Awning Window. Redefine living spaces with elegance and functionality, enhancing home appeal and comfort.

THERMAL STAR™ 150 SERIES SLIDING DOOR & STACKING SLIDING DOOR



U Value Range	3.3 - 2.2
---------------	-----------

SHGC Range	0.48 - 0.67
------------	-------------

Maximum Glass Thickness	18mm
-------------------------	------

Experience modern living with our Thermal Star™ 150 Series Aluminium Sliding and Stacking Sliding Doors. These doors blend style and practicality while prioritising thermal performance and energy efficiency. The advanced thermally broken design and 18mm double-glazing provide exceptional insulation. Create a seamless connection between indoor and outdoor spaces, enhancing your home's flow and functionality.



Thermal Star™
Thermally Broken Range



WHAT DOES THERMALLY BROKEN MEAN?

Thermally broken windows and doors feature a **thermal barrier** between the **interior frame** and **exterior frame** to minimise the transferral of temperature.

The barrier is made of a low-conductive material to prevent the transfer of heat or cold through the aluminium frame and into the home.

This significantly improves energy efficiency and home comfort.

Improved Thermal Efficiency



By reducing heat transfer through the window frames, thermally broken windows can help keep your home cooler in the summer and warmer in the winter.

Reduced Condensation

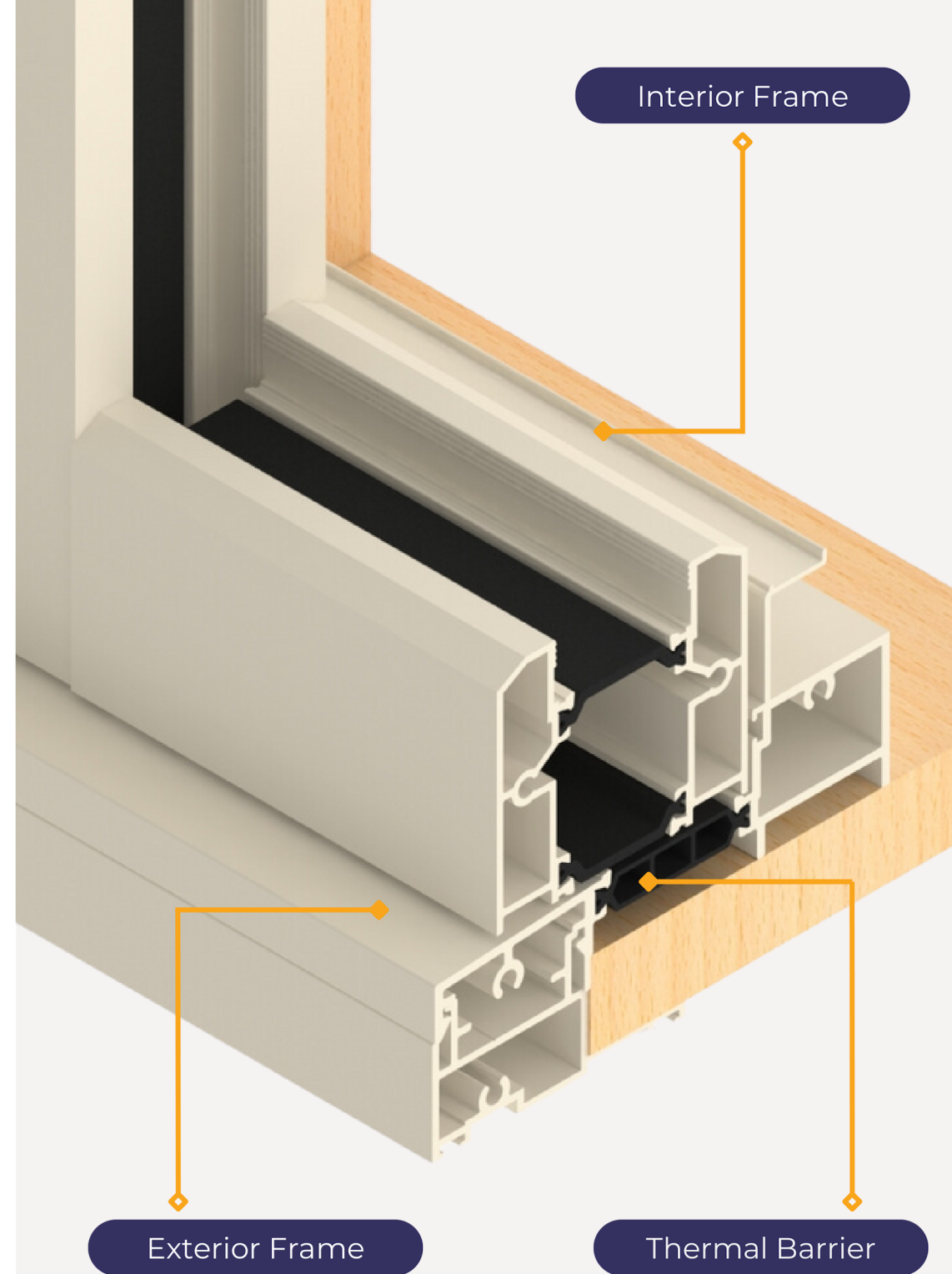


Thermally broken windows can minimise condensation by reducing the temperature difference between the interior and exterior of the window.

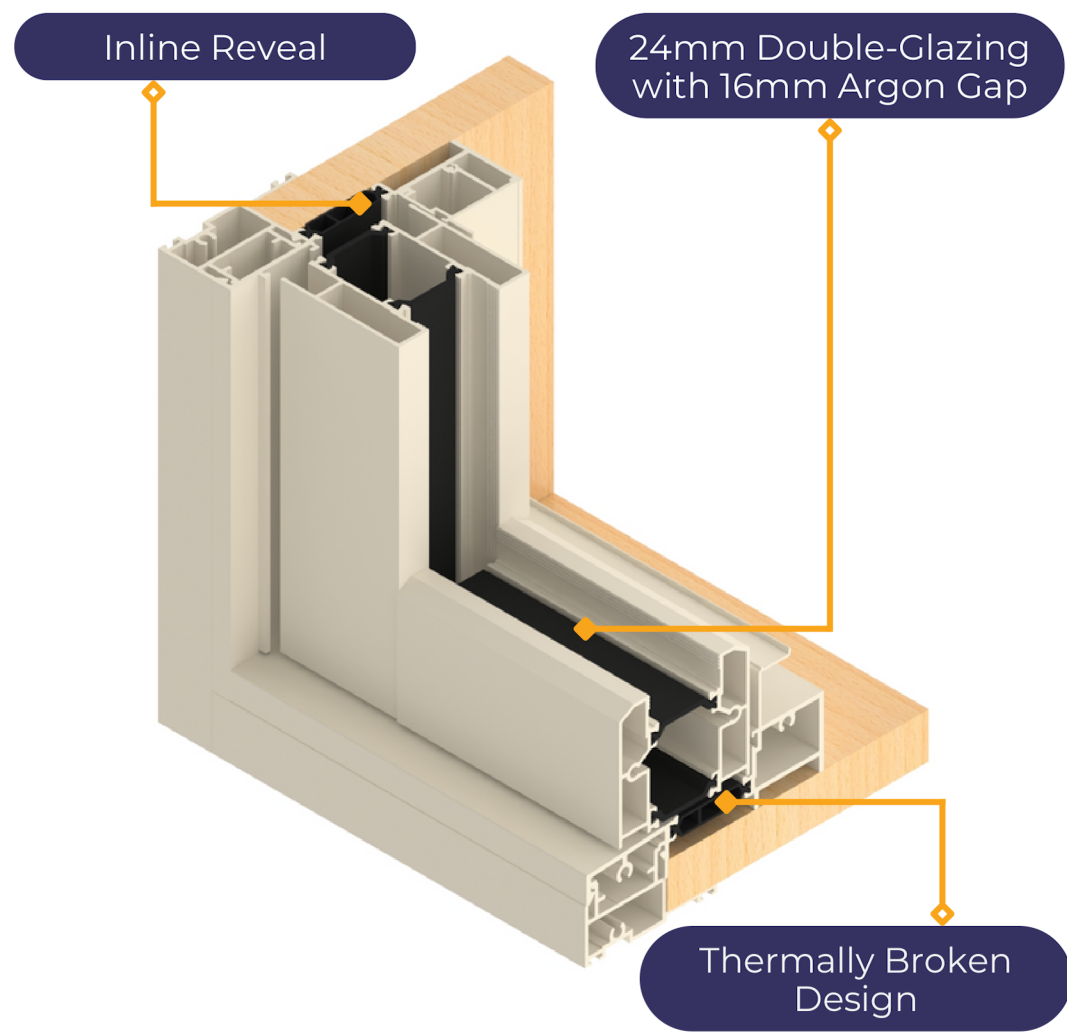
Enhanced Noise Reduction



The insulating properties of the barrier between the interior and exterior frames help to block out unwanted ambient noise.







Thermal Star™ 350 Series

This architectural suite in the Thermal Star™ range is engineered for exceptional performance in commercial and architectural projects. The 350 Series features a thermally broken design, elevating thermal performance to new heights and ensuring excellent energy efficiency.

With its stylish 100mm frame, this series boasts a robust commercial look that exudes modern elegance. The Thermal Star™ 350 Series also offers high-performance U_w and SHGC values, making it the ultimate choice for builders and architects seeking superior efficiency and sustainability.



THERMAL STAR™ 350 SERIES AWNING WINDOW



U Value Range 3.1 - 2.2

SHGC Range 0.33 - 0.48

Maximum Glass Thickness 24mm

The innovative Thermal Star™ 350 Series Awning Window presents a leap forward in architectural design. The 350 Series boasts a sleek 100mm frame, seamlessly complementing various architectural styles. For architects and builders, the choice is evident: the Thermal Star™ 350 Series Awning Window. By blending thermal engineering and captivating design, it crafts comfortable, sustainable, and brilliant spaces.

THERMAL STAR™ 350 SERIES SLIDING DOOR & STACKING SLIDING DOOR



U Value Range 3.5 - 2.5

SHGC Range 0.40 - 0.54

Maximum Glass Thickness 18mm

Introducing the Thermal Star™ 350 Series Stacking Sliding Door – where style meets function. Crafted for modern living, these doors offer a seamless blend of aesthetics and practicality, perfect for entertaining and alfresco dining areas. With meticulous attention to thermal performance, the 350 Series features an innovative thermally broken design with a subtle glass-to-timber reveal, ensuring year-round comfort and energy efficiency.

Thermal Star™

Hardware & Configuration Options



WINDOW HARDWARE

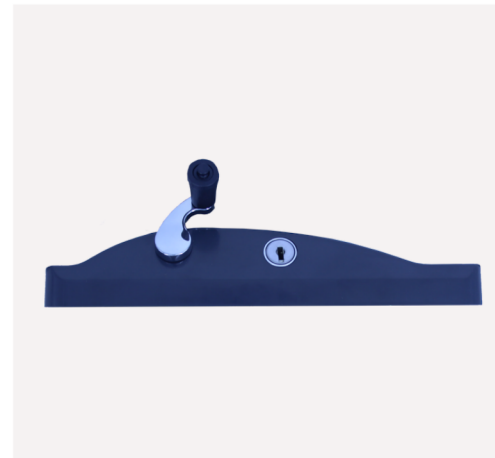
THERMAL STAR™ HARDWARE OPTIONS

01 COMET AWNING WINDER
(NON LOCKABLE)

02 AWNING WINDER
(LOCKABLE)



01



02



DOOR HARDWARE

THERMAL STAR™ HARDWARE OPTIONS

01 ALPHA SLIDING DOOR LOCK
(SNIB ONLY)

02 ALPHA SLIDING DOOR LOCK
(CYLINDER/SNIB)

03 ALPHA SLIDING DOOR LOCK
(CYLINDER/CYLINDER)

04 DELTA SLIDING DOOR LOCK
(CYLINDER/CYLINDER)

05 GAMMA SLIDING DOOR LOCK
(CYLINDER/CYLINDER)

06 400mm D Handle



01



02



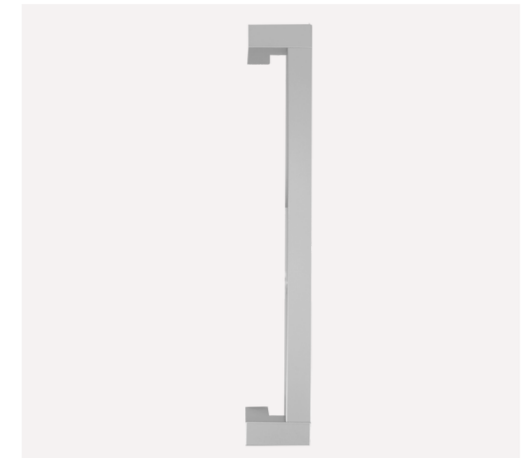
03



04



05



06

350 Series Only



THERMAL STAR™ 150 SERIES AWNING WINDOW SPECIFICATIONS

STUD	OPENING	620	860	1220	1460	1820	2060	2420	2660
	FRAME	610	850	1210	1450	1810	2050	2410	2660
	CODE	06	09	12	15	18	21	24	27
534	514	06							
877	857	09							
1049	1029	10							
1220	1200	12							
1392	1372	14							
1477	1457	15							
1820	1800	18							
2077	2057	21							

All frames are viewed from outside.

When specifying frame size, use Frame Type/Height Code/ Width Code/Series.

Frame Type - AAW.

Frame Code & Series -
AAW 1218 150 = (1200mm high x 1810mm wide, 2 lite window).

2 panel frames standard with opening sash on left hand side.

Nominate (REV) at the end of code to have opening sash on right hand side.

All sizes are in millimetres.

THERMAL STAR™ 150 SERIES SLIDING DOOR & STACKING SLIDING DOOR SPECIFICATIONS

STUD	OPENING	1470	1830	2070	2430	2708	3068	3608	2876	3596	4076	4796
	FRAME	1450	1810	2050	2410	2688	3048	3588	2856	3576	4056	4776
	CODE	15	18	21	24	27	30	36-3	29	36-4	41	48
2125	2095	21										
2430	2400	24										
STUD	OPENING	2177	2717	3077	3617	4286	5366	6086				
	FRAME	2157	2697	3057	3597	4266	5346	6066				
	CODE	21-STK	27-STK	30-STK	36-STK	43-STK	54-STK	61-STK				
2125	2095	21										
2430	2400	24										

All frames are viewed from outside.

When specifying frame size, use Frame Type/ Height Code/Width Code/Series Frame Type - ASD.

Frame Code & Series (Example) -
ASD 2118 150 = (2095mm high x 1810mm wide, 2 lite Door).

Frames standard with Sliding Left to Right.

Nominate (REV) at the end of code to Sliding Right to Left.

All sizes are in millimetres.

THERMAL STAR™ 250 SERIES AWNING WINDOW SPECIFICATIONS

STUD	OPENING	620	860	1220	1460	1820	2060	2420	2660
	FRAME	610	850	1210	1450	1810	2050	2410	2650
	CODE	06	09	12	15	18	21	24	27
534	514	06							
877	857	09							
1049	1029	10							
1220	1200	12							
1392	1372	14							
1477	1457	15							
1820	1800	18							
2077	2057	21							

All frames are viewed from outside.

When specifying frame size, use Frame Type/ Height Code/ Width Code/250.

Frame Type - AAW.

Frame Code & Series -
AAW 1218 250 = (1210mm high x 1800mm wide, 2 lite window).

2 panel frames standard with opening sash on left hand side.

Nominate (REV) at the end of code to have opening sash on right hand side.

All sizes are in millimetres.

THERMAL STAR™ 250 SERIES SLIDING DOOR & STACKING SLIDING DOOR SPECIFICATIONS

STUD	OPENING	1460	1820	2060	2420	2678	3038	3578	2837	3557	4037	4757
	FRAME	1450	1810	2050	2410	2668	3028	3568	2827	3547	4027	4747
	CODE	15	18	21	24	27	30	36-3	29	36-4	41	48
2130	2100	21										
2430	2400	24										
STUD	OPENING	2168	2708	3068	3608	4229	5309	6029				
	FRAME	2118	2658	3018	3558	4179	5259	5979				
	CODE	21-STK	27-STK	30-STK	36-STK	42-STK	53-STK	60-STK				
2130	2100	21										
2430	2400	24										

All frames are viewed from outside.

When specifying frame size, use Frame Type/ Height Code/Width Code/Series Frame Type - ASD.

Frame Code & Series (Example) -
ASD 2118 150 = (2100mm high x 1810mm wide, 2 lite Door).

Frames standard with Sliding Left to Right.

Nominate (REV) at the end of code to Sliding Right to Left.

All sizes are in millimetres.

THERMAL STAR™ 350 SERIES AWNING WINDOW SPECIFICATIONS

STUD OPENING			630	870	1230	1470	1830	2070	2430	2670
FRAME			610	850	1210	1450	1810	2050	2410	2650
CODE			06	09	12	15	18	21	24	27
544	514	06								
887	857	09								
1059	1029	10								
1230	1200	12								
1402	1372	14								
1487	1457	15								
1830	1800	18								
2087	2057	21								

All frames are viewed from outside.

When specifying frame size, use Frame Type/ Height Code/ Width Code/Series.

Frame Type - AAW.

Frame Code & Series -
AAW 1218 350 = (1200mm high x 1810mm wide, 2 lite window).

2 panel frames standard with opening sash on left hand side.

Nominate (REV) at the end of code to have opening sash on right hand side.

All sizes are in millimetres.

THERMAL STAR™ 350 SERIES SLIDING DOOR & STACKING SLIDING DOOR SPECIFICATIONS

STUD OPENING			1470	1830	2070	2430	2670	3030
FRAME			1450	1810	2050	2410	2650	3010
CODE			15	18	21	24	27	30
2130	2100	21						
STUD OPENING			2780	3140	3680	4040	4580	
FRAME			2760	3120	3660	4020	4560	
CODE			28	31	37	40	46	
2130	2100	21						
STUD OPENING			2856	3576	4056	4776	5256	5976
FRAME			2836	3556	4036	4756	5236	5956
CODE			29	36	41	48	53	60
2125	2095	21						
STUD OPENING			2651	3011	3551	4136	5216	5936
FRAME			2631	2991	3531	4116	5196	5916
CODE			27-STK	30-STK	36-STK	42-STK	53-STK	60-STK
2125	2095	21						

All frames are viewed from outside.

When specifying frame size, use Frame Type/ Height Code/Width Code/Series.

Frame Type - ASD.

Frame Code & Series (Example) -
ASD 2118 350 = (2100mm high x 1810mm wide, 2 lite Door).

Frames standard with Sliding Left to Right.

Nominate (REV) at the end of code to Sliding Right to Left.

All sizes are in millimetres.



SOUTHERN STAR
ALUMINIUM WINDOWS & DOORS

www.southernstarwindows.com.au

**Southern Star Group
Head Office and Showroom**

North Geelong

5 Kelly Court
PO Box 563
North Geelong VIC 3215
P 03 5277 7200
E info@windowsanddoors.build

Offices & Showrooms

Victoria

261 Princes Highway
Hallam VIC 3803
P 03 8786 9500

590 Heatherton Road
Clayton South VIC 3169
P 03 9549 7333

South Australia

19 Tappa Road
Edinburgh Park SA 5111
P 08 8256 9500



SOUTHERN STAR
WINDOWS & DOORS

For your nearest branch
call our toll free number
1300 733 599

New South Wales

267 Newport Road
Cooranbong NSW 2265
P 07 5549 5600

Unit 4/1002-1010 Canley Vale Road
Wetherill Park NSW 2164
P 02 9426 7400

39 Uralla Road
Port Macquarie NSW 2444
P 02 6581 0908

Queensland

55 Motorway Circuit
Ormeau QLD 4208
P 07 5549 5600



DESIGN
INNOVATION
QUALITY
PERFORMANCE