

VANTAGE ENERGY

HIGH PERFORMANCE WINDOWS AND DOORS FOR EFFICIENCY & COMFORT



MAXIMISE
EFFICIENCY
& COMFORT

WITH HIGH PERFORMANCE WINDOWS AND DOORS

Australia's largest range of high performance and thermally broken aluminium windows and doors.



WINDOWS & THE ENVIRONMENT

Selecting Vantage high performance windows and doors for your home will help to improve energy efficiency and comfort. AWS is committed to the development of high performance energy efficient window and door systems and is Australia's market leader in the use of Aluminium Thermal break technology. Our systems are tested to deliver the ultimate in weather sealing and performance.

Unlike many other systems on the market, Vantage windows and doors are purposefully designed to accept double glazing without the need for adaptors. This ensures you can achieve excellent thermal performance whilst maintaining aesthetic integrity.

When you choose Vantage high performance windows and doors for your home or building project you are minimizing your energy requirements and helping to create a more sustainable future.

WERS RATED PRODUCTS

All Vantage windows and doors are WERS rated. WERS is the official energy rating scheme for windows in Australia and provides a means to understand and compare the thermal performance of windows and doors.

WINDOWS AND HOME DESIGN

Giving attention to the selection and placement of windows and doors within your home will help you maximize the use of passive design principles to achieve excellent thermal outcomes. Home orientation, insulation, shading, window selection and placement are important considerations in achieving the best possible efficiency and performance for your home.

DESIGNER SERIES THERMALHEART™

The new Vantage range of 'thermally broken' windows and doors has a nylon insulator incorporated in every aluminium profile which provides a highly effective barrier for minimising the transmission of cold and the development of condensation. When combined with double glazing these systems offer homeowners and designers major advantages in meeting new energy efficiency provisions.



ENERGY RATINGS & WINDOWS

THE WINDOW ENERGY RATING SCHEME

WERS is the Window Energy Rating Scheme for Windows and Doors in Australia. WERS enables windows to be rated and labelled for their annual energy impact on a home - similar to the rating system used on whitegoods.

The rating of a window is derived based on its U-Value and Solar Heat Gain Coefficient (SHGC).

U-VALUE

The U-Value is the measure of how much heat is transferred through the window. The lower the U-Value the better the insulation properties of the window - the better it is at keeping the heat or cold out.

SOLAR HEAT GAIN COEFFICIENT

SHGC is a measure of how much solar radiation passes through the window. In a cool climate windows which have a high SHGC allow a greater amount of solar radiation to pass through. Offering free solar heating for the home.

COOLING & HEATING STARS

When windows are rated under WERS they are ranked using a 10 star scale against 17 generic window types. The generic windows range from very high performance to very low performance for heating and cooling.

A low star rating indicates poor performance whilst a high star rating indicates good performance. A 10 star rating indicates the perfect window system. In Australia the highest performing windows typically fall between 6 and 7 stars for heating and 4 and 5 stars for cooling.

Vantage ThermalHEART™ systems fall within this range, as do a many of our standard high performance aluminium window and door systems.

For more information about WERS visit the WERS website www.wers.net



THE LEAKY BUCKET ANALOGY

Imagine your home were like a bucket, you have insulated the ceilings and walls to keep the house warm in winter and cool in summer.

When the bucket is filled up with water it is like filling your house up with heat in winter or air-conditioned cooling in summer.

Low performing windows and doors become a weak spot in the building envelope. Like the hole in a leaky bucket they let energy escape from your home costing you valuable dollars.

Water escapes from the bucket faster than you can pour it in. High performing energy efficient windows and doors maintain the integrity of your building envelope. They make your home easier to heat or cool and avoid wasting electricity.



CLIMATE & DESIGN

WINDOW SELECTION & DESIGN
CONSIDERATIONS FOR EFFICIENCY & COMFORT

All Vantage windows and doors are WERS rated. Your local Vantage fabricator can help you to select windows and doors to give you the best possible thermal performance for your project.

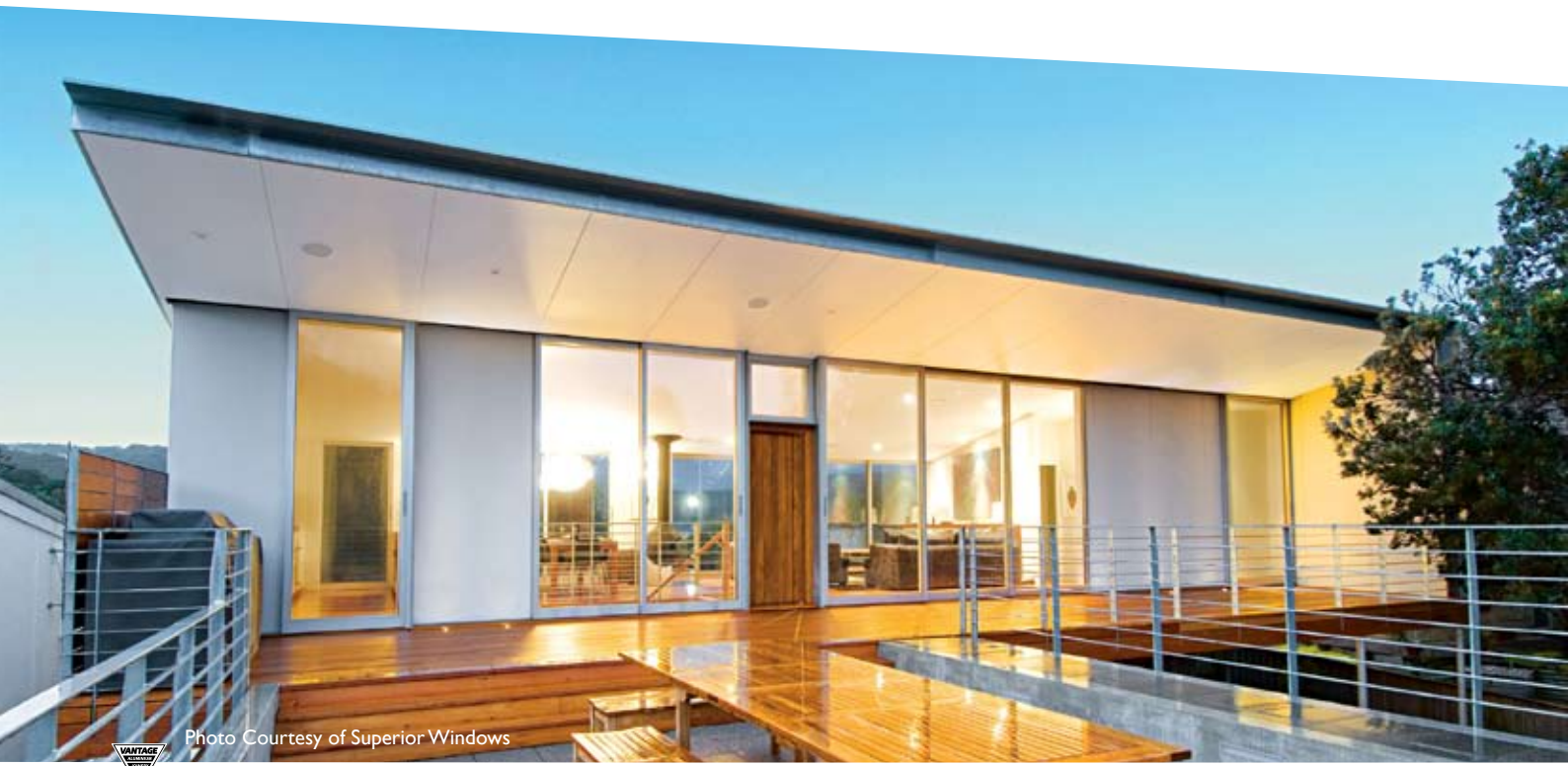
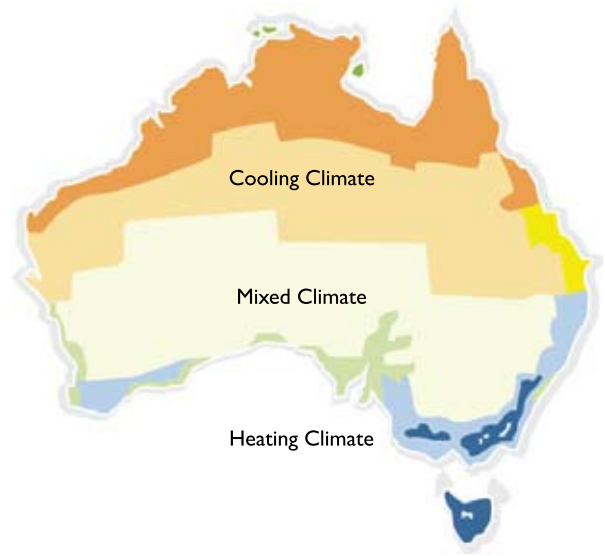


Photo Courtesy of Superior Windows



The appropriateness of different frame and glass combinations can vary between climate zones. WERS breaks the country up into three main climate zones, Heating, Cooling and Mixed.

COOLING CLIMATE

A cooling climate is one in which the outside air temperature is typically warm and energy is often expended on cooling the home. In a cooling climate the goal is to keep unwanted heat out of your home. This will help to minimise the need for air conditioning and reduce your energy usage. Windows and doors which can limit solar heat gain are ideal in this environment – that is windows with a low SHGC value. Their role is particularly important on east and west facing windows or windows which are un-shaded. The U-Value of the window is also important, if air-conditioning is used you want to keep that air conditioned air cool, a window with good insulating properties will assist here – that is one with a low U-Value.

HEATING CLIMATE

A heating climate is one in which the outside air temperature is typically cool and energy is often expended on heating the home. In a heating climate the goal is to retain heat within the home and maximise the input of solar energy in cooler months. This will help to minimise

the need for heating and reduce your energy usage. Windows and doors which offer good insulating properties to minimise heat loss are ideal in this environment – that is windows with a low U-Value. Windows should also have a high SHGC to maximise the use of free solar energy to heat the home. Double glazed windows with low-E coatings are ideal in these environments.

MIXED CLIMATE

A mixed climate is one in which the outside air temperature may vary significantly between winter and summer and energy is expended on heating and cooling the home. In a mixed climate the goal is to stop heat entering the home in summer and reduce heat escaping from the home in winter. In these environments windows which offer a good balance between U-Value and SHGC are required. Careful glass selection subject to aspect and elevation can also help to achieve a good result in this climate.



Photos Courtesy of Midcity Windows



THERMAL HEART

THERMALLY BROKEN ALUMINIUM WINDOWS



ThermalHEART™ is the technology that lies at the heart of a new thermally efficient range of aluminium windows and doors.

Released as part of the Designer Series, this innovative new product range is ideal for those jobs where minimising cold and heat transfer is a priority.

Designer Series ThermalHEART™ windows and doors have been shown to deliver up to 32% better thermal performance than standard double glazed windows and doors.

THERMAL BREAK TECHNOLOGY

ThermalHEART™ products include a glass fibre-reinforced nylon insulator or thermal break between the aluminium exterior and interior elements. This break minimises the transfer of heat and cold through the aluminium frame, providing excellent insulation properties for the window.

Vantage offer the only locally designed, extruded and manufactured thermally broken window and door systems on the Australian market.



Photo Courtesy of Midcity Windows



HOW DOES IT WORK?

COLD CLIMATE

In a cold climate ThermalHEART™ windows and doors will achieve two things. First they will drastically reduce the transmission of cold from the exterior environment to the interior of your home - keeping your home warmer. Second they will help to keep the warm air within your home to minimise your heating costs. Often in a cold climate where double glazing is used in standard aluminium frames and there is a significant difference between the internal and external temperatures condensation can occur on the inside window frame. By creating a break in the aluminium frame ThermalHEART™ products eliminate this problem. No condensation to cause mould or damage your timber reveals.



The polyamide thermal break incorporated into profiles will generally show up as black. These breaks are only seen when windows or doors are in an open position and even then they are relatively unobtrusive.

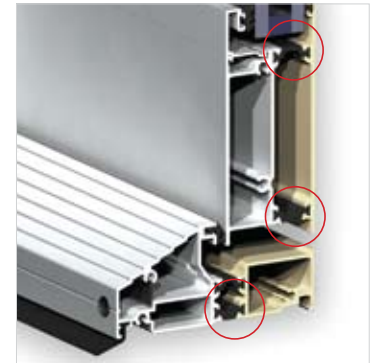
HOT CLIMATE

In a hot climate ThermalHEART™ products will act as a buffer against the hot outside air temperatures, minimising the transfer of heat from outside into the home. They will also help to minimise the loss of cool air from artificial cooling units, thus reducing your need for cooling and lowering your homes energy consumption.

When combined with double-glazing, our Designer Series ThermalHEART™ windows and doors meet contemporary aspirations for energy conservation and comfortable interior temperatures. In terms of thermal efficiency, this new product range rates 32% better than standard double glazed windows and doors.



Double glazing will be used as standard with Designer Series ThermalHEART™ products to obtain maximum thermal benefit from the insulated window system. A glass panel thickness of up to 32mm is possible. Typically standard double glazed panels are 24mm thick.



The unique thermal insulator jointing method allows a different choice of colour to compliment both internal and external colour palettes resulting in one colour on the outside and another on the inside.



DESIGNER SERIES WITH THERMAL HEART

A comprehensive suite of Designer Series ThermalHEART™ products is offered - Awning, Casement, and Bi-fold windows, Hinged, Sliding and Bi-fold doors. Designer Series ThermalHEART™ not only offers excellent suitability for thermal performance but is capable of impressive product sizes allowing the large heights and spans sought by many designers and homeowners to be achieved (doors are suitable to heights of 2.7m)



AWNING WINDOW

This window frame and sash demonstrates the dual colour capability of the Designer Series ThermalHEART™ range. The frame and sash set the theme for a flat faced, square edged aesthetic common to all Designer Series products. Window mullions have internal stiffening boxes rather than external fins to also improve aesthetics.



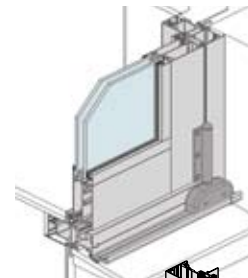
HINGED DOOR

The Designer Series ThermalHEART™ range has been designed with flat faces for a clean, contemporary look. In this respect it mirrors the design approach adopted for standard Designer Series products. Corners have generally been squared off, with externally applied glazing beads also following a square, rather than sloped, shape.



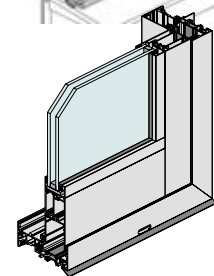
BI-FOLD DOOR

The Designer Series ThermalHEART™ Bi-fold doors and windows incorporate a reliable bottom mounted roller system for smooth, reliable, performance. Our heavy duty quad rollers run on a matching double track for optimum performance and support this ensures heavy panels operate easily.



SLIDING DOOR

The Designer Series ThermalHEART™ sliding door system offers excellent thermal performance and stacking door configurations of up to 4 panels in each direction. The clean bold frame design gives a modern aesthetic, integrated screening options are available.



ENERGY EFFICIENT WINDOWS CHECKLIST

Want to maximise the energy efficiency of your home? Here are some important points you should consider when selecting your windows and doors.

- Is the window tested in accordance with Australian Standards?
- Is the window WERS rated?
- Does the windows U-Value and SHGC suit the climate of your home?
- Are your windows and doors positioned to maximise natural cross ventilation?
- Have you located your windows and doors to maximise natural daylight and warm winter sun but minimise heat gain in summer?
- Have you utilised eaves and shading to reduce summer heat gain but allow winter sun penetration?
- Have you selected a qualified installer to ensure windows are properly sealed to avoid air leakage?

Need help selecting your windows and doors?
Your local Vantage fabricator can offer expert advice & assistance. Visit our website www.vanatgealuminium.com.au to locate a showroom near you.





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