



SHOWROOM GETS THE GREEN LIGHT

KINGHORN MOTORS CAR DEALERSHIP USES INNOVATIVE THERMALHEART™ TO MEET STRINGENT ENERGY PROVISIONS



With an ever-increasing focus on environmental sustainability, the pressure is on for builders and architects to meet very strict energy requirements. When Kinghorn Motors VW decided to upgrade their showroom on Princes Highway, Nowra, the project almost didn't make it past the planning stages. In fact, this beautiful and functional space may not have been built at all, had it not been for an innovative new product called ThermalHEART™.

The ThermalHEART™ thermally broken window and door system is a groundbreaking product which is opening up whole new vistas of possibility. The true genius of this energy-efficient revolution lies in its design. ThermalHEART™ consists of two pieces of aluminium joined with an insulating strip to minimise the transfer of heat and cold between the internal and external environment. Astonishingly, it is approximately 60% more efficient than a typical aluminium window, and it tipped the balance when it came to how the Kinghorn Motors Showroom performed thermally. Indeed, it was the key to meeting the stringent energy demands for new construction under Section J of the Building Code of Australia.

The major challenge to face the building design team was the showroom's less-than-perfect aspect, facing the highway and the eastern sun. Section J required the glazing to achieve extremely low U-Values and minimal solar heat gain, which were unable to be met using conventional commercial aluminium products.

According to architect, Blair Mullins, from Art House Building Design, "When we were approached by a local car dealership to design their latest showroom we didn't imagine that we would undertake one of the first commercial uses of the Elevate™ ThermalHEART™ range of products. We were fortunate to have a close relationship with a local window company that specialises in energy-efficient products. Without the use of thermally broken windows and doors from Hanlon Windows we would not have been able to achieve the outcome that we did. The combination of thermally broken aluminium frames and high performance IGUs with Low-E glass made all the difference, and we were able to incorporate large glass facades to three sides of the building, which was extremely important for



Vantage Designer Series ThermalHEART™

- Maximise energy efficiency and comfort with Vantage's new range of thermally broken windows and doors. ThermalHEART™ is the technology that lies at the core of the new Vantage range of thermally efficient aluminium windows and doors.
- Released as part of Vantage's Designer Series, this innovative product range is ideal for applications where minimising cold and heat transfer is a priority. ThermalHEART™ products include a glass fibre-reinforced nylon insulator or thermal break between the aluminium exterior and interior elements. This break minimises heat transfer between the interior and exterior elements.
- When combined with double-glazing, ThermalHEART™ products deliver exceptional thermal outcomes.

the car dealership owners as they wanted to obtain maximum exposure of their display area.”

The front door of the showroom needed to be very large and, once again, the ThermalHEART™ range exceeded the client's expectations. The extra-strong door stiles on the Elevate™ Series 729 ThermalHEART™ Hinged Doors allowed for oversize door panels to be fabricated. The additional benefit of high water-resistance made the product the perfect choice.

The showroom facades were manufactured using Elevate™ Series 726 Fixed Awning Window Frames, and the extra-strong sash allowed large sash windows to be fabricated for high-wind areas.

Other products used included the Elevate™ Series 726 ThermalHEART™ Awning Windows, Dual colour ClearMIST finish to all windows and doors, and AWS ICON

Hardware. All glass installed was double-glazed with a combination of Evergreen and Energy Advantage with a Low-E coating, to minimise solar heat gain and increase the insulation benefits.

The showroom's green building credentials were further bolstered with the use of recyclable and long-life materials. The width of the louvred sun-awning around the building's perimeter was calculated to provide winter sun while filtering out the summer sun - a basic solar passive principle which takes the load off heating and cooling systems. The lightweight external materials also have a small thermal mass while the internal thermal mass is elevated with the use of a concrete slab floor.

With all these elements combined, the result is a building that will continue to provide high energy-efficiency for years to come – without sacrificing the architecturally-inspired design and clean, striking aesthetic.



Hanlon Windows (Aust) is one of 150 licensed manufacturers of Vantage and Elevate™ products around Australia. The business is 100% Australian owned and operated and has been a leading manufacturer of aluminium windows and doors for over 30 years. Hanlon Windows realise the importance of quality and customer service and can manage the selection, supply and servicing of Australia's leading window and door systems for your project.



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For the latest technical information regarding Designer ThermalHEART™ or other Vantage products, visit our website: www.vantagealuminium.com.au



2D & 3D CAD FILES AVAILABLE

Download the Vantage Designer ThermalHEART™ CAD & Revit 3D Files to use in your projects from the SpecifyAWS Website: www.specifyaws.com.au

