

ThermalHEART.

Our innovative ThermalHEART technology takes the fight against winter one step further— the thermally efficient range is ideal for those jobs where minimising cold and condensation is a priority.

Released to meet new insulation requirements for homes, ThermalHEART is a high performance system for the Residential and Metro Series— providing maximum energy conservation and interior comfort.

ThermalHEART technology incorporates a glass fibre-reinforced nylon insulator or thermal break between the aluminium exterior and interior elements, resulting in windows and doors that are 35% more thermally efficient than standard double glazed products.

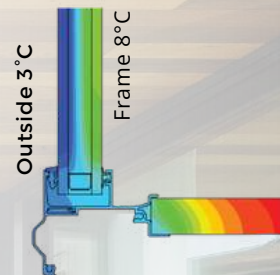
When compared to non-thermally broken single glazed frames, ThermalHEART delivers a 130% improvement in thermal performance. When compared to non-thermally broken double-glazed frames, the improvement is 35% for Metro Series and 20% for Residential Series.

Thermal Performance.

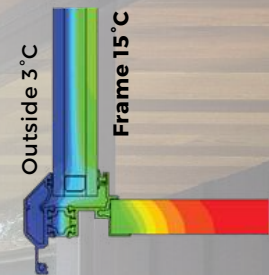
These thermal models demonstrate the superior insulation provided by the ThermalHEART barrier.

- The left hand illustration shows a double glazed window without a thermal break. The outside air temperature in this instance is 3°C while the temperature on the inside of the frame is 8°C.
- On the right is a ThermalHEART frame with clear double glazing. The outside air temperature is 3°C but the inside frame temperature is a now warmer 15°C.

Clear double glazed
non ThermalHEART



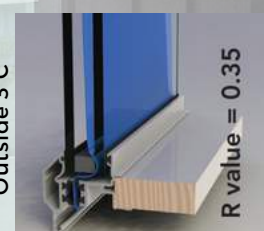
Clear double glazed
with ThermalHEART



Condensation Control.

These illustrations demonstrate the superior performance of the ThermalHEART barrier in influencing the dew point, the temperature at which condensation forms.

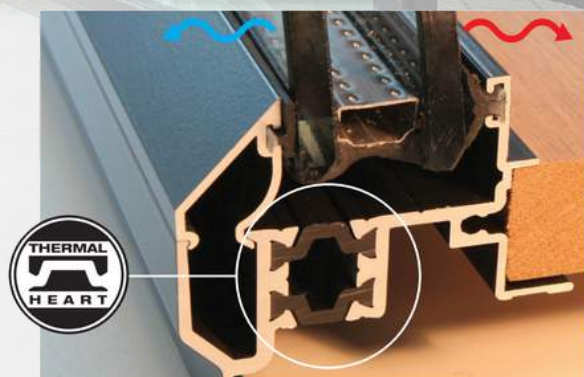
- In the illustration on the left (non-thermally broken frame / clear double glazing) the air temperature on the outside is 3°C, the inside temperature is 21°, and the relative humidity is 50%. The blue line indicates the dew point surface,
- In the illustration on the right (same glass format with a ThermalHEART window barrier and the same relative humidity) the dew point surface moves left and no condensation occurs on the frame.



'R' value: The measure of total thermal resistance of a building element. The larger the 'R' value, the better the performance. In the average New Zealand home, space heating amounts to about a third of total energy use. The improved R value provided by ThermalHEART can lead to lower heating requirements, and therefore lower total energy use.

The Technical Benefits.

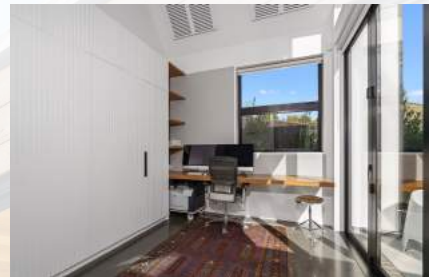
- The ThermalHEART insulator in every profile is an excellent 'thermal break' to minimise the transfer of cold and the incidence of condensation.
- Designed to be used in conjunction with insulated glass units (double glazing) up to 24mm thick for a fully-effective barrier system.
- The jointing process for window and door extrusions ensures that the composite ThermalHEART/aluminium profiles have optimum straightness and rigidity.
- Frames are based on a large 46mm platform ensuring suitability for a wide range of residential projects.
- Doors are generally suitable to heights of 2.1m in 'very-high' wind zones.



ThermalHEART creates a break in the conductive process of the aluminium.

ThermalHEART offers the best of both worlds and marries together our residential brand of aluminium joinery with the latest in thermal break technology.

It's the smart step up from our standard joinery, with a small price premium that's more of an investment than a cost.



WINDOWMAKERS
THE DIFFERENCE IS CLEAR

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