



The roofing system that does it all

Tricore® is a fully lined, insulated cost effective roof system,¹ it is practical, fully detailed and backed by Dimond and Nuralite. Tricore® offers a choice of roofing profiles and skylights easily optimised for appearance, thermal and acoustic performance, providing the flexibility to enhance performance and meet client needs.

Why Tricore®?

- **Weather Secure** – continuous roofing sheets with no end laps or joins which rely on sealant; the slotted roof rail and fastening system negates the use of long fasteners through the roof sheet that would flex due to thermal expansion, increasing the risk of leakage.
- **Breathes** – slotted roof rail design allows ventilation of the roof space resulting in lower moisture levels than other systems year round, removes the need to rely on a vapour barrier and reduces the risk of moisture accumulating sufficiently to cause corrosion of the roof sheet.²

- **Insulates** – consistent R-Value across the roof, reliable for the life of the roof; fastening system reduces energy loss from thermal bridging.
- **Aesthetic** – your choice of roof profile including Dimondek 630 clip-fastened roof sheets in continuous lengths up to 90m.
- **Straightforward** – easy to install to Building Code requirements using the Metal Roofing Code of Practice; building is closed in quickly enabling sequencing of sub-trades to be optimised. Easy to maintain as the roof sheet can easily be replaced if damaged without disturbing the insulation.
- **For NZ** – designed in New Zealand specifically for the rigours of New Zealand's environment. New Zealand Building Code compliant to clause B1, B2⁴, E2/AS1 and H1.
- **Warranty** – 15 year system warranty on materials.

The next generation in roofing is available today, specify Tricore® on your next commercial roofing project.

¹Tricore® is available as a system only, and is not sold as separate components

²As proven by WUFI Modelling.

³Subject to volume requirements

⁴Between 0-500 m of the sea, Tricore® cannot be used

Pre-finished Lining Sheet

- NPM 900 profile in Zinalume or ColorCote finish if left exposed as visible lining, available in 0.40, 0.55 or 0.75 mm steel thickness to suit purlin spacing and construction loads.
- Pan-fixed to purlins to achieve rapid enclosure of the building.
- Maximum spans to support 1kN foot traffic load and 2.0kPa[†] ultimate limit state (ULS) wind load.

| NPM 900 | 0.40mm | 0.55mm | 0.75mm |
|--------------------|--------|--------|--------|
| End Span (mm) | 1000 | 1800 | 2200 |
| Internal Span (mm) | 1600 | 2700 | 3400 |

[†]Based on fastening every second pan of all sheets on all purlin lines.

Insulation Board

- High quality Enertherm PIR with tri-laminated aluminium foil facing to both sides, with minimal shrinkage over time
 - Large panel sizes can be used minimising the risk of loss of R value due to gaps at joins
 - Density : 32 kg/m³
 - Compression Strength : at 10% deformation ≥ 175 kPa (EN 13501 Part 1)
 - Fire Rating: Enertherm ALU in thicknesses between 40mm and 140mm, faced with a 0.75 mm steel liner sheet achieves EN13823 - Class BS2. For additional information about our alternative insulation options, please contact us.
- Available as square edge
- Complies with EN13165 for thermal performance

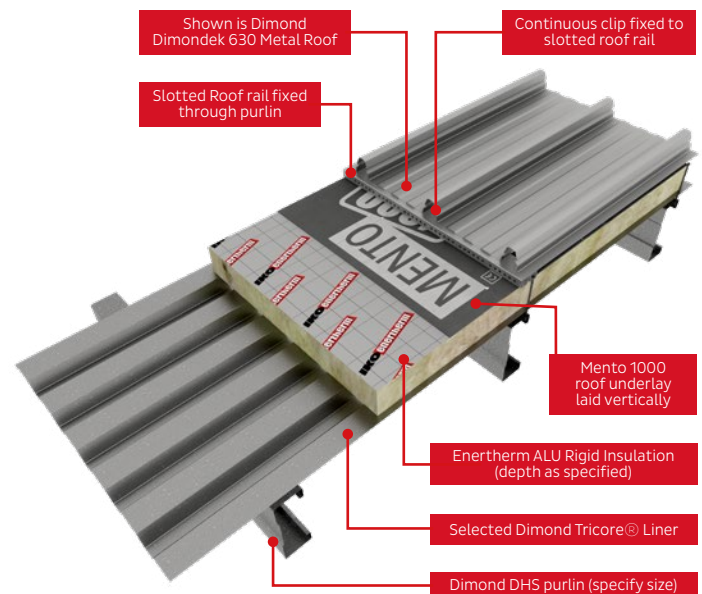
| PIR Thickness (mm) | R* (m ² °C/W) |
|--------------------|--------------------------|
| 50 | 2.25 |
| 70 | 3.15 |
| 80 | 3.60 |
| 100 | 4.50 |
| 120 | 5.45 |
| 140 | 6.35 |

[†]Based on PIR only without the additional R value from surface effects and additional Tricore® components.

Slotted Roof Rail

- Enables free flow of ventilation air and drainage of any moisture that may be present.
- Ventilated air space ensures moisture accumulation is removed from the underside of the roof sheet. Given this, Relative Humidity at the roof sheet underside is not

- expected to exceed 90%. By comparison, an insulated roof build-up that does not have a sufficiently ventilated space below the roof sheet could be expected to have a Relative Humidity at the roof sheet underside exceeding 90% for up to 8 months of the year, creating a significant risk of roof sheet corrosion.
- Ensures that any leakage at the roof fastener is managed by the roof underlay, preventing fastener leakage entering the PIR.
 - Enables the roof fasteners to be separated from the fasteners that penetrate the warm side of the system.
 - Galvanised steel to provide sufficient roof screw holding, and fastened separately through the PIR board and into the structural purlin at 300mm centres.



Roof Sheet and Underlay

- Choice of long run profile, with no end laps or reliance on sealant to achieve weather security, including the option of clip fastened Dimondek 630 to avoid fastener penetration of the roof sheet.
- Proven load/span data for each roofing profile based on product testing and history of use.
- Underlay is supported by the PIR boards. Additionally moisture is retained within the ventilated cavity space by the underlay, allowing it to be dried by the air.

October 2020