Insulation

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Insulation for Curved Roofs

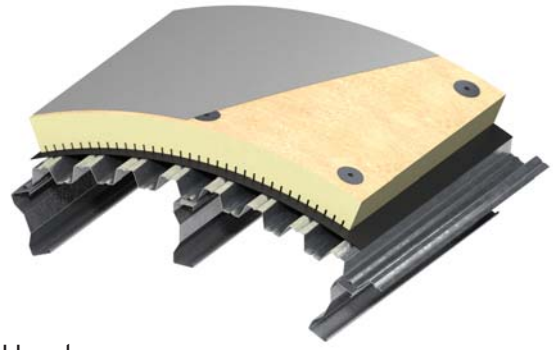
Kingspan®

Low Energy –
Low Carbon Buildings

Insulation for Curved Roofs

Introduction

Curved roofs offer a unique aesthetic appearance to any building but still have the same thermal requirements as a typical flat roof construction. For this reason Kingspan Insulation Ltd have developed a curved roof insulation board for both new build and refurbishment projects. This curved board is created by cutting 20 mm deep slots into one side of *Kingspan* **Therma**roof® TR27 LPC/FM Boards.



Roof Radius

The 20 mm deep slots allow the insulation board to follow roof radii as small as 1.5 m. Convex roofs areas will have slots facing down and concaved roof areas will require the boards to have the slots facing up. For this reason concaved roof areas require an additional 25 mm *Kingspan* **Therma**roof® TR27 LPC/FM to provide a continuous surface for the application of the waterproofing. This 25 mm will curve to a minimum 1.5 m radius without the need for slotting, whereas boards of the thickness normally used on flat roofs will not.

U-values

The effect of the 20 mm slots must be taken into account when calculating U-values in accordance with BS / I.S. EN ISO 6946: 2007 (Building components and building elements. Thermal resistance and thermal transmittance. Calculation method).

To gain a comprehensive U-value calculation for your project please consult the Kingspan Insulation Technical Service Department for assistance.

The Weymouth Wave

A £6.5 million fire station has quickly become a local landmark thanks to its iconic wave-form roof, made possible with the use of over 5,000 m² of Kingspan's high performance **Therma**roof® TR27 LPC/FM Curved Roof Board.

Weymouth Community Fire Station is the first purpose built community fire station in the UK and replaces the town's outdated coast-front fire station.

One of the most technically challenging aspects of the project was the station's eye-catching wave-form roof. The design made *Kingspan* **Therma**roof® TR27 LPC/FM Curved Roof Board the ideal choice for the building as Graham Stevenson, Director at design practice Tetris Solutions, explained: "The wave-form roof was an integral part of our design for the station as it emphasises Weymouth's close relationship with the sea. We specified Kingspan Insulation's **Therma**roof® TR27 LPC/FM Curved Roof Board as it was able to provide a high standard of thermal performance, while also bending to the 2.5 metre radius required by the roof's design".

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