

THOR HELICAL[®] FLAT ROOF INSULATION BOARD FIXING



DESCRIPTION

The Thor FR Nail is a unique helical fixing used to anchor plywood-faced composite insulation boards to flat roof structures.

These helical fasteners have a washer-like retaining head fastened on a profiled steel shaft that is twisted to form large work hardened thread-cutting blades.

The angle of the helix causes the spiral nail to corkscrew into a variety of building materials when driven with axial impacts.

- Hammer driven self tapping anchors
- Reliable interlock anchorage

BENEFITS

The self tapping action of the FR Nail enables a hammer driven connection between the plywood-faced insulation panels and the supporting timbers, without need to pre-drill the 6mm plywood layer.



Drill 4mm pilot hole, through the top layer only, of thicker ply-faced insulation panels, to ensure rapid, cost effective installation.

- No pre-drill for 6mm ply
- Rapid cost effective installation

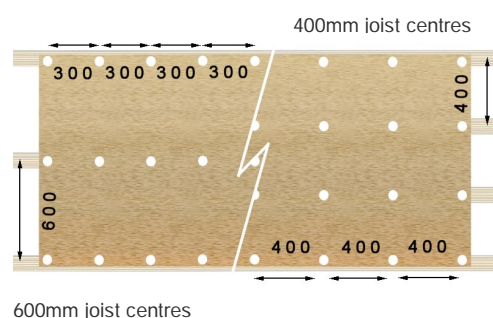
DISTINCTION

The cross sectional area of the profiled FR Nail is about a quarter the size of a typical twist nail of equivalent diameter. This enables the FR Nail to windingly connect composite insulation panels to flat roofs, balconies and decking with minimal disturbance to the insulation and reduced heat transfer potential.



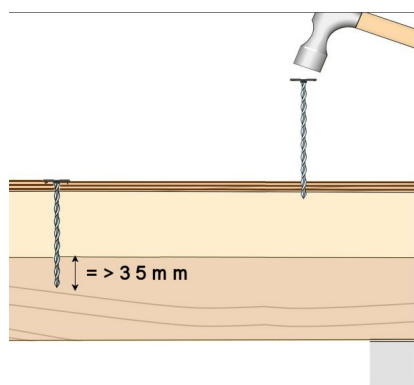
- Minimum disturbance to insulation
- Reduced thermal bridging

METHOD STATEMENT



1. Fix 50 x 50mm cross-noggins between joists, ready to support the short edges of the composite insulation boards.
2. Lay boards, with the long edges parallel to the line of the joists; ensuring the plywood, or thicker plywood, layer is uppermost. Ensure at least 20mm bearing on joists and noggins and use vapour sealant at butt joints.
3. Stagger board joints and leave an expansion gap of approximately 2mm between boards at all butt joint edges.
4. Fasten boards with Thor Helical FR Nails. Use 24 fasteners per board for UK locations up to 200m above sea level where the flat roof is up to 10m high (wind load resistance = 4.15kN/m², based on a conservative design load of 0.5kN / nail).

- NB FR Nails must be staggered where two board edges share the same joist or noggin. Fixings are to be installed:
- a) At least 10mm in from the board edge
 - b) At least 50mm from each corner.
 - c) At least 35mm into the joist.



PRODUCT SPECIFICATION

- Product:** FR Nail "Big-Twist"
- Material:** Zinc Plated Carbon Steel
- Packaging:** Bag = 50 Box = 500
- Lengths:** 135mm 165mm 195mm
- Nominal Head Diameter:** = 20mm
- Nominal Shank Diameter:** = 8mm
- Nominal Shank CSA:** = 13mm²
- Pitch Deviation on Nail:** < 0.5%

| Product Selector | |
|-----------------------|---------------------|
| Composite Panel Depth | Big Twist Nail Size |
| 70-96mm | 8 x 135mm |
| 100-126mm | 8 x 165mm |
| 130-156mm | 8 x 195mm |

European Patent No. EP 1307303
United States Patent No. US 7269987

TWISTED PRODUCTS - STRAIGHT FORWARD SOLUTIONS

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