

# Big-Twist Helical Nails

## Description

Big-Twist is a unique helical nail used for fixing plywood-faced composite insulation boards to flat roof structures.

These helical fixings 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
- Patented pitch accuracy

## Benefits

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

Drill 12mm ply-faced panels with a 4mm pilot bore, through the top ply layer only, to ensure rapid, cost effective installation.

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

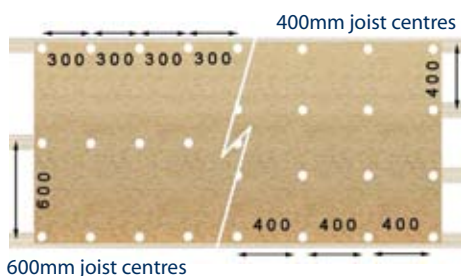


## Distinction

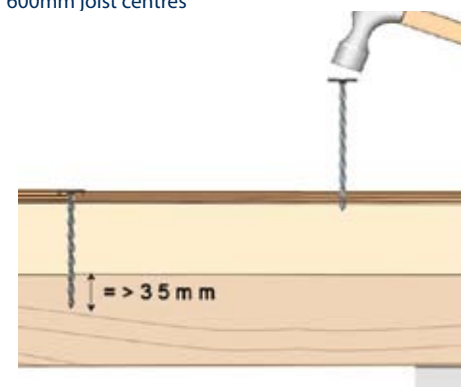
The cross sectional area of the spiral shaft is about a quarter the size of a cylindrical shaft of equivalent diameter. This enables the Big-Twist anchors to windingly connect insulation panels to flat roofs, balconies and decking with minimal disturbance to the insulation and reduced heat transfer potential.



- Minimum disturbance to insulation
- Reduced thermal bridging



600mm joist centres



## Method statement

1. Fix 50 x 50mm cross-noggins between joists, ready to support the short edges of the 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 butt joint.
4. Nail boards with Big Twist helical 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/m<sup>2</sup>, based on a conservative design load of 0.5kN / nail).

**NB** Big Twist 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:** Big-Twist Flat Roof Nail  
**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:** = 13mm<sup>2</sup>  
**Pitch Deviation on Nail:** < 0.5%

### BIG-TWIST SELECTOR

COMPOSITE PANEL DEPTH	BIG-TWIST NAIL SIZE
70-96mm	8 x 135mm
100-126mm	8 x 165mm
130-156mm	8 x 195mm

Produced under Licence of European Patent EP1307303

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