



SURETWIST WARM ROOF FIXINGS for warm roof applications.



Range: SureTwist Plus

Lengths (mm) available in 6mm standard:

100 - 110 - 120 - 125 - 130 - 135 - 140 - 145 - 150
- 160 - 170 - 180 - 190 - 200 - 205 - 210

Lengths (mm) available in TC7mm:

150 - 160 - 170 - 170 - 180 - 190 - 200 - 210 - 220
- 230

Tooling:

We recommend tooling for 6mm fixings over 120mm long and for 7mm fixings over 170mm long.



Installation tools



Alignment tool

Applications:

- ▢ A Helical fixing that is used to secure and sandwich a layer of insulation over the structural roofing timbers in energy efficient buildings

Benefits:

- ▢ Easy and fast installation
- ▢ Unlike a nail it rotates as it is driven in reducing the risk of splitting or bouncing timbers
- ▢ Does not compress insulation or impair thermal performance
- ▢ Unique one-piece stainless steel fixing
- ▢ Excellent holding performance in tension and compression
- ▢ Supports heavy sliding loads in all wind conditions
- ▢ 6mm and TC7mm available
- ▢ 304 Stainless steel
- ▢ Hammered or power-driven without pre-drilling
- ▢ Headless for minimal cold bridging and heat transfer
- ▢ Recommended by all the leading insulation manufacturers
- ▢ In house design service - full technical data available
- ▢ Tested and endorsed by independant testing authorities

Advantages:

- ▢ Roof timbers are kept warm and dry
- ▢ Creates a continuous thermal envelope without cold bridges, improving the thermal efficiency of the property
- ▢ Protects against damp and corrosion
- ▢ Roof tile ventilation is no longer required
- ▢ Produces warm usable space
- ▢ Capable of achieving Part L of building regulations

If the thickness of the insulation exceeds 100mm or if the counterbatten is warped an alignment installation tool is recommended enabling central alignment during installation.

CONSTRUCTION PRODUCTS SOLUTIONS INTERNATIONAL LTD.

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Installation

When fixing through hardwood we recommend that either a pilot hole is drilled or to install with a power installation tool.

SureTwists can be driven using a conventional hammer. A series of light taps rather than heavy blows will allow the SureTwist to rotate during insertion. Hand and power support tools are also available.

1. Line the counterbatten up with the rafter beneath the insulation.
2. Apply pressure to the counterbatten pressing firmly onto the insulation.
3. Place the SureTwist as near to the centre of the counterbatten as possible and hammer home. (Alternatively drive with power support tool).
4. Place the remaining fixings at the recommended spacings along the counterbatten, and hammer home.

Once fixed at the recommended density the battens will feel vertically secure, but may feel a little springy horizontally if the gap is not set tightly enough. This movement will be alleviated by the bracing effort of the tile battens which will provide additional lateral rigidity.

Installing the SureTwist Plus



Finishing the installation of the SureTwist Plus



Installing the SureTwist Plus with the Hand Support Tool



Installing the SureTwist Plus with the Power Support Tool

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Please always wear the appropriate safety and protective clothing when installing fixing and anchor products. Always observe the necessary Health & Safety guidelines.

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Technical specifications

CALCULATING CORRECT LENGTH OF 6mm FIXING

| * BATTEN/ COUNTERBATTEN THICKNESS | + INSULATION THICKNESS | + THICKNESS OF ANY ADDITIONAL MATERIAL - (PLYWOOD, DAMP-PROOFING) | + 35mm EMBEDMENT IN RAFTER | = LENGTH OF FIXING REQUIRED |
|-----------------------------------------|---------------------------|-------------------------------------------------------------------------|----------------------------------|-----------------------------------|
| e.g. 25mm | + 60mm | + 12mm | + 35mm | = 132mm Use 135mm |

THE DENSITY AND SPACING OF SURETWIST WARM ROOF FIXINGS – (Using a 25mm counter batten)

| INSULATION THICKNESS | FIXINGS PER M2 | RAFTER SPACING | | |
|----------------------|----------------|----------------|-------|-------|
| | | 400mm | 450mm | 600mm |
| 0 - 50mm | 6.5 | 380 | 325 | 260 |
| 51 - 75mm | 13.2 | 185 | 180 | 125 |
| 76 - 100mm | 18.4 | 135 | 130 | 90 |

CALCULATING THE QUANTITY OF FIXINGS

Batten fixings per m² x Total roof area m² = Quantity required

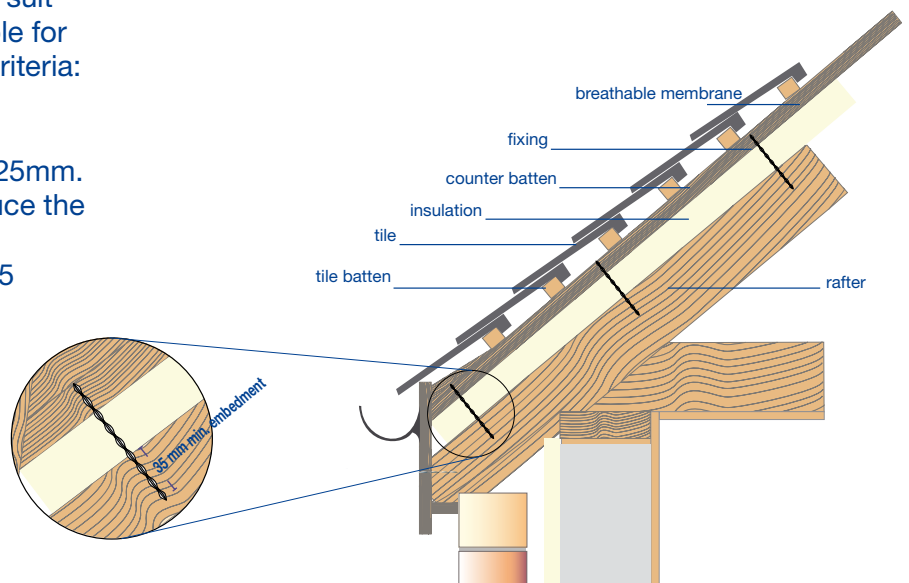
* 25mm minimum counter-batten thickness 38mm – Recommended by BRE

Insulation is getting much thicker to help to conform to part L of the building regulations, thus helping to reduce carbon emissions. SureTwist now has a 7mm ø fixing to improve the efficiency of fixing insulation over 50mm thick.

Note:

The table above has been designed to suit the majority of applications. It is suitable for projects matching all of the following criteria:
 Buildings up to 15 metres in height
 Roof coverings up to 60kg/m²
 Minimum counter-batten thickness of 25mm. Using a 38mm counter batten will reduce the quantity of fixings required per M²*
 Slope of ground within 1km up to 1:12.5
 Locations in wind zones up to 52m/s.

* Contact the CPSI technical department for assistance.



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THE BIGTWIST TC8 COMPOSITE PANEL FIXING

The original fixing for securing structural 6 mm plywood composite insulation.
For flat and pitched roofs



Applications:

- Hammer driven fixing for securing structural 6mm plywood composite insulation board to flat roofs

Benefits:

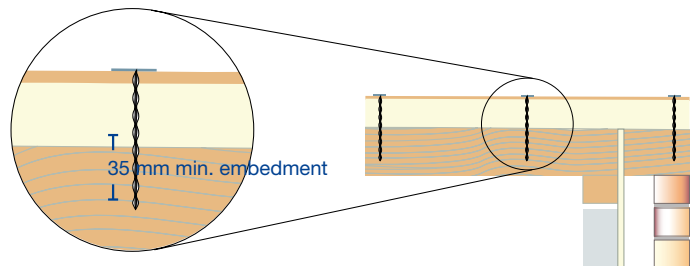
- No drilling
- No need for screws
- Quick installation
- Unlike a nail, rotates whilst being driven in, eliminating the risk of splitting timber
- Unique one-piece stress free fixing
- Improved design to prevent bending during installation
- Large 20mm Ø head
- High performance
- Range suitable for current and future insulation thicknesses
- Minimal compression of insulation
- Improved thermal bridging
- No other product on the market for the same application
- Approved by the major insulation suppliers
- 8.8 High Tensile Steel, Zinc Plated and Passivated.

Range: SureTwist PZ Steel TC8mm

- TC8 x 90mm suitable for up to 55mm panels
- TC8 x 135mm suitable for 70mm–96mm panels
- TC8 x 165mm suitable for 96mm–126mm panels
- TC8 x 195mm suitable for 126mm–156mm panels
- TC8 x 220mm suitable for 150mm–185mm panels

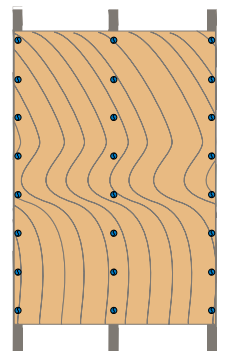
Tested at the Imperial college London

| TEST RESULTS | Max. LOAD | Min. LOAD | MEAN LOAD |
|----------------|-----------|-----------|-----------|
| 25mm Embedment | 800 N | 525 N | 637 N |
| 35mm Embedment | 1380 N | 890 N | 1090 N |
| 50mm Embedment | 1700 N | 1300 N | 1406 N |

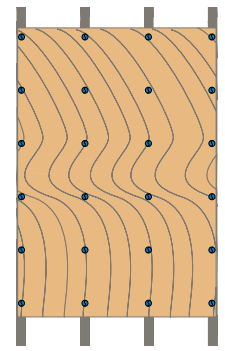


SPACINGS AND QUANTITIES

| | RAFTER CENTRES | |
|------------------|------------------------|------------------------|
| | 400mm | 600mm |
| 150mm Insulation | 8.6 per m ² | 8.6 per m ² |
| 120mm Insulation | 8.6 per m ² | 8.6 per m ² |
| 90mm Insulation | 8.6 per m ² | 8.6 per m ² |
| 70mm Insulation | 8.6 per m ² | 8.6 per m ² |
| 50mm Insulation | 8.6 per m ² | 8.6 per m ² |
| Axial spacing | 400mm | 300mm |



600mm rafter centre



400mm rafter centre

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