InSkew

High performance timber fixing for pitched warm roof constructions

APPLICATIONS

- Structural fixing for securing timber battens and counter battens to rafters, through insulation, in pitched warm roofs

FEATURES

- Slim, self-tapping, helical stainless steel fixing
- Complies with Building Regulations Part L
- Recommended by leading insulation manufacturers
- Structurally more reliable and economical than traditional nails
- High performance – fewer fixings required
- Excellent holding power in both tension and compression
- Hammer or power driven, normally without pre-drilling
- Designed to withstand the structural loads – both the roof weight and wind suction
- Prevents compression of insulation and does not impair its thermal performance
- Self-tapping action avoids batten bouncing and splitting of timbers
- Headless, flush fixing for minimal cold bridging and heat transfer
- Rapid, free, in-house design service available
- Written specifications covered by Helifix Professional Indemnity insurance
- Full technical data available: Independently tested by TRADA

TECHNICAL SPECIFICATIONS

INSKEW						
Material	Austenitic stainless steel Grade 304 (1.4301) or 316 (1.4401)					
Diameter	6mm					
Lengths	Available from 75mm to 300mm. Standard lengths are 75mm, 85mm, 90mm, 100mm, 110mm, 115mm, 120mm, 125mm, 130mm, 135mm, 140mm, 145mm, 150mm, 160mm, 170mm, 180mm, 190mm and 200mm					
Spacing:	**400**		**Counter Batten Centres**		**600**	
0-60	61-80	81-100	Insulation Thickness (mm)	0-60	61-80	81-100
7.2	8.3	11.1	InSkews per m^2	7.3	8.4	11.1
350	300	225	Fixing Centres (mm)	225	200	150

ASSUMPTIONS: 1. UK mainland, not coastal or western Scotland. 2. Laid weight of tiles is less than or equal to 60Kg/m^2. These figures are for guidance only – please call Helifix for a detailed specification

INSKEW LENGTH – EXAMPLE CALCULATION:	
Counter batten thickness	38mm
+	+
Insulation thickness	50mm
+	+
Optional ply deck	Nil
+	+
35mm into the rafter	35mm
=	=
InSkew Length	**125mm**

(Rounded up to nearest standard length)
InSkews require a minimum penetration of 35mm into a softwood rafter.

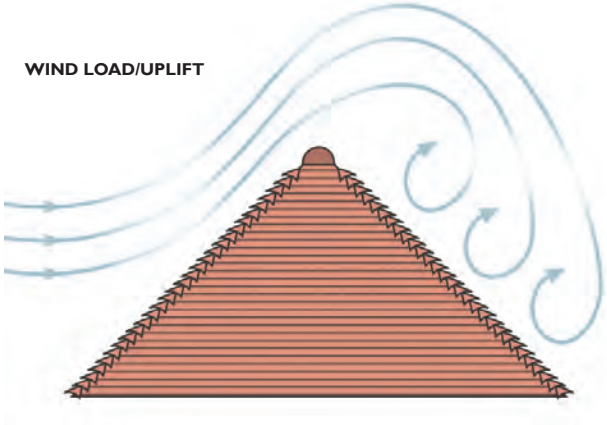
RECOMMENDED TOOLING	
For installing InSkews:	Helifix InSkew hand-held or power Support Tool

NOTE

- Counter battens (usually 25mm-50mm thick and 38mm-50mm wide) must be at least 25mm thick to grip the InSkews firmly and enable them to resist the wind uplift. They must not buckle under the sliding load between fixings and must be wide enough to meet the manufacturer's requirements for clamping the insulation.
- Insulation over 50mm thick requires a stop batten.
- Hand or power support tools should be used with InSkews of 120mm or longer. The power driver speeds installation and is recommended for deep insulation and to reduce buckling when driving into hard rafters.
- When using InSkews to fix tile battens to support vertically hanging tiles, contact the Helifix Technical Sales Team.

PITCHED WARM ROOF STRUCTURAL LOADS

1. On a warm roof the weight of the roof is supported by the counter battens (rather than the rafters) which are laid on top of the insulation, a non-structural element.
2. The counter batten effectively reproduces the rafter above the insulation. It is essential therefore that the counter batten becomes a structural member to which the tile batten can be fixed while holding down the insulation against wind suction.
3. As insulation thicknesses increase so do the bending forces on the InSkew fixings due to the sliding loads that are imposed on the counter batten.
4. The heavier the tile weight and the steeper the roof pitch, the greater the sliding load becomes, which could compress the insulation and impair its thermal performance.
5. Tensile loads caused by wind suction will be affected by the anticipated wind speed, the height of the building, the site exposure and the local topography.



InSkew has been designed to resist both the sliding and compression loads of the roof covering while also counteracting the tensile loads caused by wind uplift.