

Installation of Gerard Roofs in all wind zones Including Extra High Wind Zone

Fastenings for tile batten - rafter junctions and for Gerard Roof Tiles to battens.

Batten Rafter connections for wind loads below and up to Extra High Wind Zone (55 m/s) for timber framed buildings can be found in NZS3604:2011, table 10.12.

Gerard Roofs Specific - Tile batten fastening schedule.

Tile Batten Size	Max Span	Maximum Span and fixing in the following wind zones										Specific Design up to 70 m/s 7.5 kPa	
		Low 32 m/s 0.61 kPa		Medium 37 m/s 0.82 kPa		High 44 m/s 1.16 kPa		Very High 50 m/s 1.50 kPa		Extra High 55 m/s 1.86 kPa			
		Spacing	Fixing	Spacing	Fixing	Spacing	Fixing	Spacing	Fixing	Spacing	Fixing		
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
Light Roof Cladding													
50 x 40	900	370	S	370	S	370	S	370	S	370	T	370	U
50 x 50	1200	370	S	370	S	370	T	370	T	370	T	370	U
Fixing Type	Description										Alternative Fixing Capacity (kN)		
R	1 / 90 x 3.15 gun nail										0.55		
S	2 / 90 x 3.15 gun nails										0.8		
T	1 / 10 gauge self drilling screw 80 mm long										2.4		
U	1 / 14 gauge self drilling screw 100 mm long										4.0		

These fastener selections take into account wind loading around the periphery of the roofs.

Gerard Roofs have instructed installers to use:

2 / 90 mm x 3.15 mm gun nails in areas up to and including the Very High Wind Zone (50 m/s) for all roofs on rafter spans up to and including 900 mm, exceeding the requirements of NZS3604:2011.

1 / 10 gauge self drilling screw 80 mm long in the Extra High Wind Zone (55 m/s)

Specific Design:

Wind Speeds greater than 55 m/s require specific design.

1 / 14 gauge self drilling screw 100 mm long can be used in winds up to 70 m/s or a wind load of 7.5 kPa. (Northern Territory Deemed to comply documents)

Tile Nailing

The loading that tile nails can withstand have been tested. (Northern Territory Deemed to comply documents)

It's unlikely that the wind load on a roof will exceed 3.8 kPa in NZ. In cases where the load is calculated higher the nailing schedule in the table below should be used.

Gerard Roofs Specific - Tile nailing schedule

Max Wind Load	Fastening Type	Approx. fastener spacing
3.8 kPa	4 nails/tile, and tile lap	360 mm
5.2 kPa	5 nails/shake or shingle or 7 nails/tile*	245 mm shake/ shingle 180 mm tile
7.5 kPa	7 nails per tile*	180 mm

*nail at each module, Classic tile - 8 nails/tile