QUIKBATT!/

INSTALLATION & DESIGN GUIDE

ROOF TILE BATTEN

The Quikbatt'n roof tile batten is a new and innovative product which utilises the strength and reliability of BlueScope TRUECORE[®] high tensile light gauge steel. The design (patent pending) allows for the ability of concrete roof tiles to be fixed seamlessly without the need to worry about the structural performance of the roof battens.

Tile Batten is sold under licence and is the subject of Australian Design No. AU201612896 and pending Australian patent application AU2017203636

Features:

0.42BMT hi-tensile steel is strong, lightweight and easy to cut A textured surface makes installation easy when fixing the roof tiles 21mm high profile provides strength and is designed to nest for handling and storage Rippled flange to allow fixing using a standard first fix framing gun with standard 75mm framing nails The return edge provides safety and rigidity Straight edge for nesting of concrete tile lug Available in stock lengths of 6100mm

Benefits:

Straight and true free from weak spots and warping

Lighter and stronger when compared to conventional timber battens.

Capacity to be walked on during laying of roof tiles.

Can store concrete tiles at mid-span

Comes in 6100mm lengths minimizing the need for cuts and joins.

Capacity to be fixed in place with a standard framing gun.

Does not affect current practices as used on timber batten construction.

Joins can be lapped without the need for cutting.

Increased stacking and handling abilities.

Simple connection to valley and roofs reducing the number of cuts and connections.

Works as a system with the valley and hip supports.



INSTALLATION

The Quikbatt'n roof tile batten and batten reciever are manufactured from BlueScope TRUECORE[®] high tensile light gauge steel with Activate technology which complies with AS1397/G550 AM150.

Quikbatt'n Roof Tile Batten Material Specifications				
Base Metal Thickness	0.42 mm			
Yield Strength	550 MPa			
Coating Mass*	150 g/m ²			
Maximum Span	600 mm			
Maximum Spacing	408 mm			
Batten Mass	0.31 kg/m			





*TRUECORE[®] steel with Activate technology (Aluminium/Zinc/Magnesium alloy) Note: Batten span and spacing must not exceed the maximum recommended spans

Quikbatt'n Roof Tile Batten F	Reciever Material Specifications		34		
Base Metal Thickness	0.75 mm				
Yield Strength	550 MPa	22			
Coating Mass*	150 g/m ²				
Maximum Fixing Centres	850 mm	+	59	}	
Batten Mass	0.687 kg/m	/	Figure 2 - BR7	5	

Notes:

1. All wind loads are obtained from AS4055-2012 or calculated in accordance with AS1170.2-2011.

2. All permanent and imposed loads are obtained from NASH Standard Part 1-2005 or AS1170.1-2002.

3. Tile batten complies with AS2050-2002 Clause 2.2.2

4. The roof tile batten accommodates for local wind pressure effects that occur near edges of roofs.

5. Allowable spans and overhangs are based on a maximum tile roof mass of 60 kg/m². Overhangs should not exceed 50% of actual backspan.

6. Roof tile battens are suitable for non-cyclonic conditions up to and including W41 (N3).

7. Roof tile battens can be loaded during construction with stacks of up to 15 concrete tiles*

8. Tile batten and tile batten receiver are fit for purpose in marine zones⁺

9. Span tolerance must be limited to +/- 60mm. Continual +60mm spans are not acceptable and battens are to be doubled up for that bay.

*based on Boral concrete tile specifications.

⁺TRUECORE[®] steel battens are not suitable for use less than 300m from breaking surf and 100m from calm marine without additional corrosion protection. (refer to material manufacturer's specifications)

Quikbatt'n Roof Tile Batten Receiver

Batten to Timber Fixing

Place the batten receiver along all valley and hip lines across the roof always such that the open side of the receiver faces towards the inside of the roof plane.

Along a Valley

Place the batten receiver along the edge of the valley boards in place of the valley support batten, so that the web of the receiver is hard up against the valley board. Fix the batten receiver to all intersecting trusses or rafters with a single standard 75x3.06mm D-head impulse framing nail through the foot of the receiver at each fixing point. (see Figure 3a-b)



Note: The nails are to penetrate the rafter to a depth of at least 10 times the diameter of the specified nail. (see appendix C AS2050 for Acceptable nail sizes)

Quikbatt'n Roof Tile Batten Receiver

Joining the Batten Receiver

The joints in the batten receivers must be cut over the centre of a truss or rafter and both ends fixed with a single standard 75x3.06mm D-head impulse framing nail through the foot of the receiver. (See Figure 4a-b)

Note: where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Quikbatt'n Roof Tile Batten Receiver

Fixing the Tile Batten to the Batten Receiver

Once all the batten receivers are placed in location along all the valley lines across the roof, the batten is to be placed inside the receiver at the required spacing needed for the specific roof tile (see manufacturer specifications). The batten must meet the receiver at an angle of 45°. The batten is then fixed to the receiver using a single standard 75x3.06mm D-head impulse framing nail through the top of the receiver penetrating the top of the batten at each fixing point. The adjacent rafter is to be fixed through the foot of the batten. (See Figure 5a-b)



Quikbatt'n Roof Tile Batten

Fixing the Tile Batten to Hip

Place the tile batten along the roof at the required spacing needed for the specific roof tile (refer to tile manufacturers specifications). The tile batten must meet the hip rafter at an angle of 45° with the end of the battens to be cut at angle of 45° in order for the two battens to be butt joined over the hip rafter. The batten is then fixed to the hip rafter using 2 x standard 75x3.06mm D-head impulse framing nails, 1 through the top of the batten and 1 through the foot at each fixing point. The adjacent rafter is to be fixed through the foot of the batten. (See Figure 6a-b)

Note: Where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Figure 6a - Fixing of Roof Tile Batten to a Hip Truss or Rafter

Quikbatt'n Roof Tile Batten

Batten to Timber Fixing

Place the Quikbatt'n roof tile batten with the rippled foot always facing to the eave line so that the straight edge of the batten provides a flat surface for the roof tile lug to rest against. (See Figure 7)



Figure 7 - Batten Installation

General Roof Area

Fix the batten to every truss or rafter intersection using a single standard 75x3.06mm D-head impulse framing nail at each fixing point alternating between the foot and the top of the batten. (See Figure 8a-b)



QUIK BATT' INSTALLATION & DESIGN GUIDE

INSTALLATION - TIMBER

Quikbatt'n Roof Tile Batten

End Roof Area

Fix the batten to last truss or rafter intersection using two standard 75x3.06mm D-head impulse framing nails at the last fixing point, one fixing to the foot of the batten and the other to the top of the batten. The adjacent fixing must be through the foot of the batten and the rear flange. (See Figure 9a-c)

Note:

- 1. The impulse framing gun should be dialed back to prevent the nail from penetrating through the metal batten.* (Refer to impulse nailer manufacturer's product information)
- 2. The nails are to penetrate the rafter to a depth of at least 10 times the diameter of the specified nail. (See appendix C AS2050 for Acceptable nail sizes)

*For example a Paslode Impulse FrameMaster-Li 30 Degree Framing Nailer should be dialed back to 40% of its allowable capacity



Quikbatt'n Roof Tile Batten

Fixing the Roof Tiles

Fix the roof tiles to the top face of the batten using 50mm ring shank clout nails (refer to manufacturer's technical information). The number of fixings per tile and frequency of fixings should be as per the tile manufacturer's specifications. (See Figure 10a-b)



Quikbatt'n Roof Tile Batten

Lapping the Battens

In order to minimise the cutting of roof battens, the battens are to be laid out in one direction across the roof. The battens are to overlap by a minimum of 200mm central to a truss and be supported by a truss or rafter at each end. The battens are to be fixed using 2 x standard 75x3.06mm D-head impulse framing nails. (See Figure 11a-b)

Note: where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Note: The batten on either side of the lapping must have a minimum backspan of two truss bays, otherwise a minimum of one additional truss bay must be overlapped.

Quikbatt'n Roof Tile Batten Receiver

Batten to Steel Fixing

Place the batten receiver along all valley and hip lines across the roof always such that the open side of the receiver faces towards the inside of the roof plane.

Along a Valley

Place the batten receiver hard up against the edge of the valley battens. Fix the batten receiver to all intersecting trusses with a single 10g-16x16 screw through the foot of the receiver at each fixing point. (see Figure 12a-b)



Quikbatt'n Roof Tile Batten Receiver

Joining the Batten Receiver

The joints in the batten receivers must be cut over the centre of a truss or rafter and both ends fixed with a single 10g-16x16 screw through the foot of the receiver. (See Figure 13a-b)

Note: where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Quikbatt'n Roof Tile Batten Receiver

Fixing the Tile Batten to the Batten Receiver

Once all the batten receivers are placed in location along all the valley lines across the roof, the batten is to be placed inside the receiver at the required spacing needed for the specific roof tile (see manufacturer specifications). The batten must meet the receiver at an angle of 45°. The batten is then fixed to the receiver using a single 10g-16x16 screw through the top of the receiver penetrating the top of the batten at each fixing point. The adjacent rafter is to be fixed through the foot of the batten. (See Figure 14a-b)



Quikbatt'n Roof Tile Batten

Fixing the Tile Batten to Hip

Place the tile batten along the roof at the required spacing needed for the specific roof tile (refer to tile manufacturers specifications). The tile batten must meet the hip rafter at an angle of 45° with the end of the battens to be cut at angle of 45° in order for the two battens to be butt joined over the hip truss. The batten is then fixed to the hip rafter using 2 x 10g-16x16 screws, 1 through the foot of the batten and 1 through the rear flange at each fixing point. The adjacent truss is to be fixed through the foot of the batten. (See Figure 15a-b)

Note: Where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Figure 15a - Fixing of Roof Tile Batten to a Hip Truss

Quikbatt'n Roof Tile Batten

Batten to Timber Fixing

Place the Quikbatt'n roof tile batten with the rippled foot always facing to the eave line so that the straight edge of the batten provides a flat surface for the roof tile lug to rest against. (See Figure 16)



Figure 16 - Batten Installation

General Roof Area

Fix the batten to every truss intersection using a single standard 10g-16x16 screw at each fixing point alternating between the foot and the rear flange of the batten. (See Figure 17a-b)



Quikbatt'n Roof Tile Batten

End Roof Area

Fix the batten to last truss or rafter intersection using two standard 10g-16x16 screws at the last fixing point, one fixing to the foot of the batten and the other to the rear flange of the batten. The adjacent fixing must be through the foot of the batten. (See Figure 18a-b)



Quikbatt'n Roof Tile Batten

Fixing the Roof Tiles

Fix the roof tiles to the top face of the batten using 50mm ring shank clout nails (refer to manufacturer's technical information). The number of fixings per tile and frequency of fixings should be as per the tile manufacturer's specifications. (See Figure 19a-b)



Quikbatt'n Roof Tile Batten

Lapping the Battens

In order to minimise the cutting of roof battens, the battens are to be laid out in one direction across the roof. The battens are to overlap by a minimum of 200mm central to a truss and be supported by a truss or rafter at each end. The battens are to be fixed using 2 x standard 10g-16x16 screws. (See Figure 20a-b)

Note: where cutting is required, cuts are to be made using tin snips or a cold cut saw in order to preserve the corrosion protection over the cut. If a hot cut is used the ends must be sprayed with cold galvanizing spray.



Note: The batten on either side of the lapping must have a minimum backspan of two truss bays, otherwise a minimum of one additional truss bay must be overlapped.