





# Decra Installation Manual

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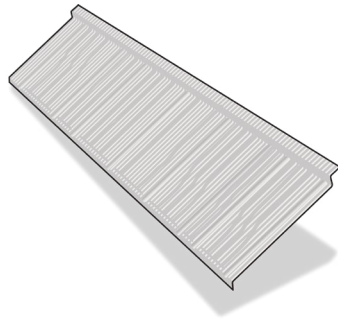
# 1.0 PRODUCT INFORMATION



# 1.1 PRODUCT SPECIFICATION

## SHAKE

Combining a flat plane with continuous but irregular grooves gives Shake a recurring but slightly organic pattern that works with many styles of home.

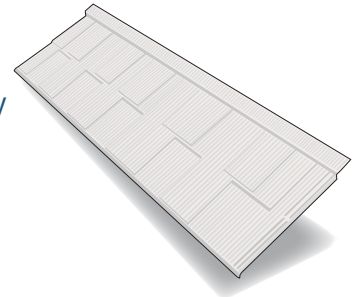


Pitch – min./max.	15-60°
Overall length	1310 mm
Length of cover	1250 mm
Width of cover	368 mm
Upstand	27 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	2.1 kg
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	4.7 kg

Shake is compatible with all three Decra trims – Barrel, Angle and Box.

## SENATOR

A profile with a modern look and subtle raised detailing. Senator is known for the simplicity and uniformity it brings to contemporary and traditional homes.



Pitch – min./max.	15-60°
Overall length	1320 mm
Length of cover	1250 mm
Width of cover	368 mm
Upstand	16 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	NA

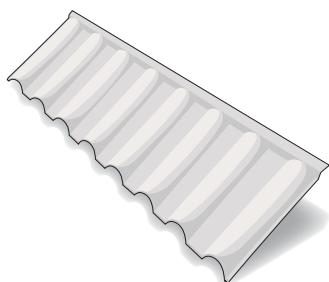
Senator is compatible with Angle Trim.

Dimensions and weights given are nominal.



## MILANO

With balanced arches and flats found in traditional design, Milano is a timeless profile that creates clean elegant and classical looking roofs.

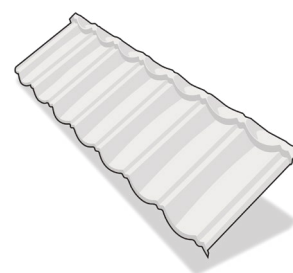


Pitch – min./max.	12-60°
Overall length	1330 mm
Length of cover	1210 mm
Width of cover	368 mm
Upstand	25 mm
Roof cover/panel	0.45 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.6 kg
Weight/m <sup>2</sup> Satin	NA

Milano is compatible with Barrel and Angle trims.

## HERITAGE

The scalloped shapes of this profile bring a look that's similar to heavyweight tiles. The advantages of pressed steel mean this profile is often chosen as a substitute.



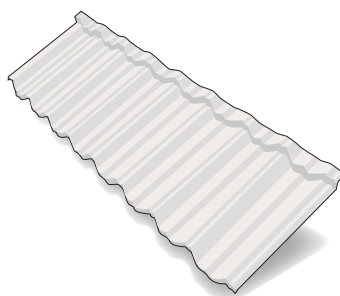
Pitch – min./max.	12-60°
Overall length	1330 mm
Length of cover	1257 mm
Width of cover	368 mm
Upstand	28 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.2
Weight/panel Textured	2.9 kg
Weight/panel Satin	NA
Weight/m <sup>2</sup> Textured	6.4 kg
Weight/m <sup>2</sup> Satin	NA

Heritage is compatible with all three Decra trims – Barrel, Angle and Box.

Dimensions and weights given are nominal.

## CLASSIC

Classic is a geometric profile with shapes and angles that accentuate light and shadow to emphasise its corrugations.



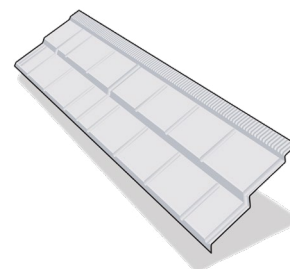
Pitch – min./max.	12-60°
Overall length	1325 mm
Length of cover	1262 mm
Width of cover	368 mm
Upstand	26 mm
Roof cover/panel	0.46 m <sup>2</sup>
Panels/m <sup>2</sup>	2.15
Weight/panel Textured	3.0 kg
Weight/panel Satin	2.1 kg
Weight/m <sup>2</sup> Textured	6.5 kg
Weight/m <sup>2</sup> Satin	4.5 kg

Classic is compatible with all three Decra trims – Barrel, Angle and Box.

Dimensions and weights given are nominal.

## ASPEN

Aspen's slate-like appearance creates a beautiful textured aesthetic. It is often used in projects alongside dressed stone and natural timbers.



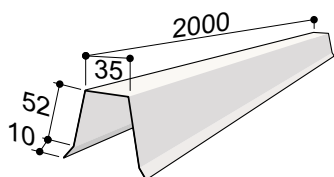
Pitch – min./max.	15-60°
Overall length	1320 mm
Length of cover	1165 mm
Width of cover	368 mm
Upstand	18 mm
Roof cover/panel	0.43 m <sup>2</sup>
Panels/m <sup>2</sup>	2.3
Weight/panel Textured	2.9 kg
Weight/panel Satin	2.1
Weight/m <sup>2</sup> Textured	6.7 kg
Weight/m <sup>2</sup> Satin	4.8

Aspen is compatible with Angle Trim.



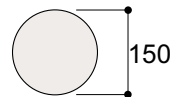
## 1.2 ACCESSORY SPECIFICATION

### BOX TRIM



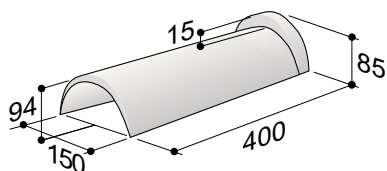
Overall length	2000 mm
Length of cover	1900 mm
Downturn	62 mm
Width	320 mm
Weight/unit Texture	35 mm
Roof cover/tile	2.0 kg
Weight/unit Satin	1.3 kg

### BARREL TRIM END



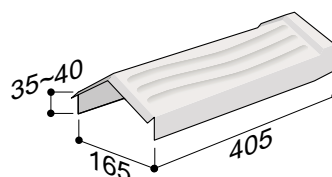
Diameter	150 mm
Weight/unit Texture	0.1 kg
Weight/unit Satin	0.1 kg

### BARREL TRIM



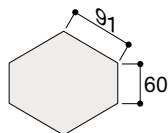
Overall length	400 mm
Length of cover	370 mm
Weight/unit Texture	0.6 kg
Weight/unit Satin	0.4 kg

### ANGLE TRIM



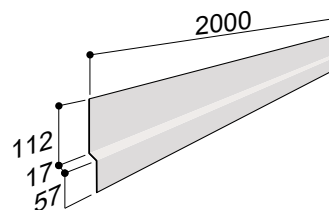
Overall length	405 mm
Length of cover	370 mm
Width	165 mm
Weight/unit	0.5 kg

## ANGLE TRIM END



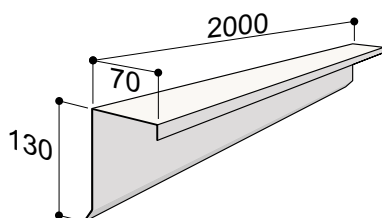
Weight/unit	0.1 kg
Width	157 mm
Height	150 mm

## SIDE FLASHING



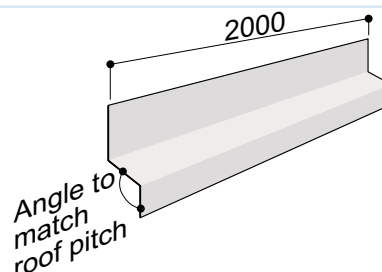
Overall length	2000 mm
Length of cover	1900 mm
Upturn	112 mm
Width	17 mm
Downturn	57 mm
Weight/unit Texture	1.8 kg
Weight/unit Satin	1.2 kg

## BOX BARGE



Overall length	2000 mm
Length of cover	1900 mm
Downturn	130 mm
Width	70 mm
Weight/unit Texture	2.5 kg
Weight/unit Satin	1.6 kg

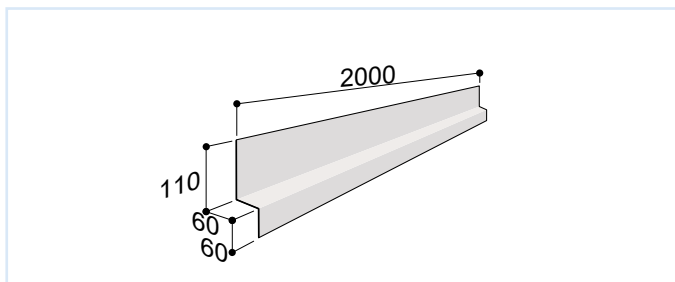
## STEP FLASHING



Overall length	2000 mm
Length of cover	1900 mm
Upturn	110 mm
Width	60 mm
Downturn	60 mm
Weight/unit Texture	2.3 kg
Weight/unit Satin	1.6 kg

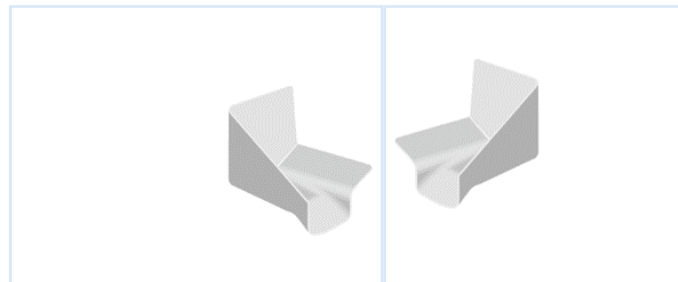


## PITCH FLASHING



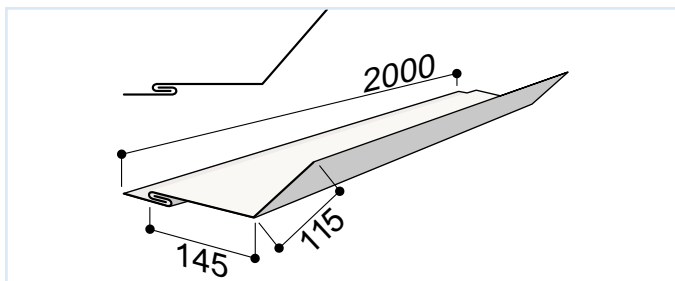
Overall length	2000 mm
Length of cover	1900 mm
Upturn	110 mm
Width	60 mm
Downturn	60 mm
Weight/unit Texture	2.3 kg
Weight/unit Satin	1.6 kg

## STOP END LEFT & RIGHT



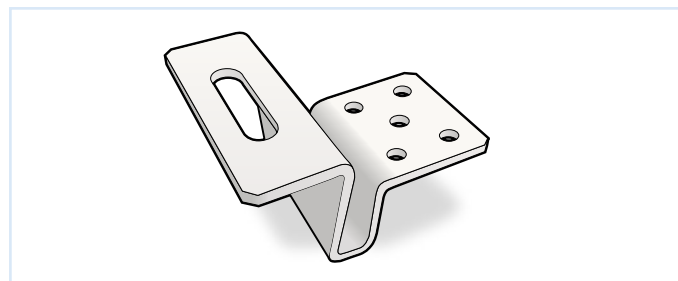
Material	PVC
Colour	White
Weight/unit	0.2 kg

## APRON FLASHING



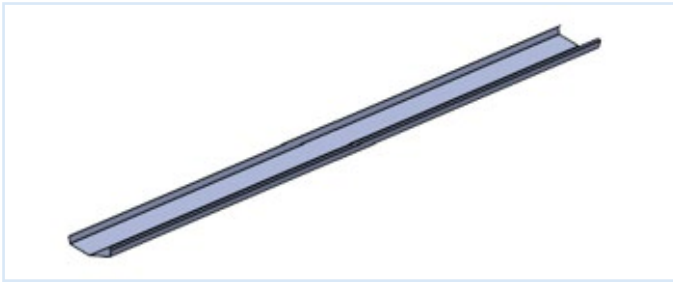
Overall length	2000 mm
Width	300 mm
Weight/unit Texture	2.9 kg
Weight/unit Satin	2.0 kg

## SOLAR BRACKETS



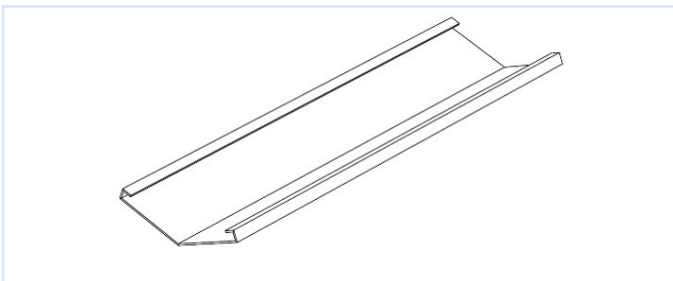
Weight/unit Senator	0.18 kg
Weight/unit HMCC	0.23 kg

## VALLEY



Overall length	2400 mm
Lap	150 mm
Width	160 mm
Weight/unit	2.1 kg

## WIDE VALLEY



Overall length	2400 mm
Length of cover	2250 mm
Weight/unit Satin	3.3 kg



# 2.0 INSTALLATION



## 2.1 BATTEN SETTING OUT

Battens set out should proceed in a similar manner as for houses with wooden framing.

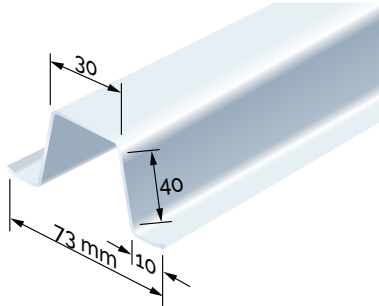


Figure 2.1.1 Steel batten

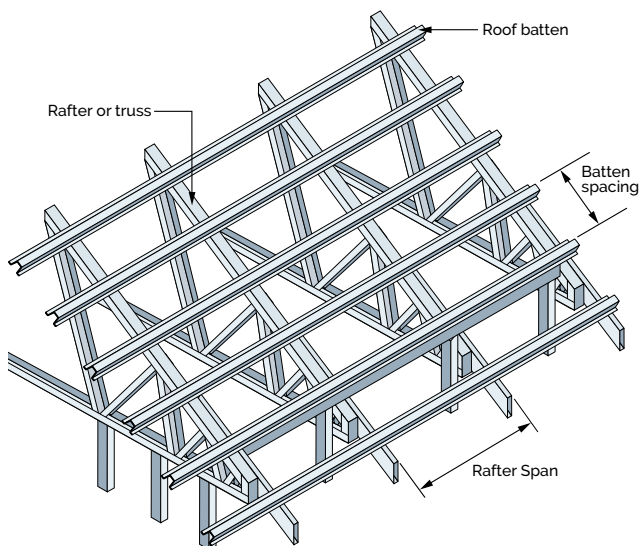


Figure 2.1.2 Steel framing

Steel battens are supplied by the steel frame supplier. These will be engineered to span up to 1200 mm however they may be used at narrower spacings.

Battens must be secured every second rafter with at least one tek screw before walking on them during the installation process. Once the section of roof has been covered with battens and underlay the battens must be fastened with the acceptable method before moving on to other sections or laying tiles.

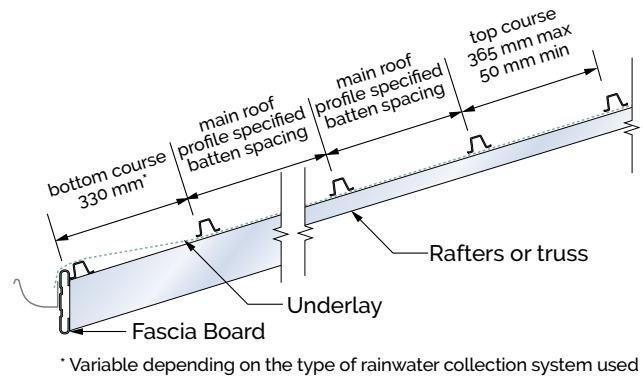


Figure 2.1.3 Rafter truss end on view, batten spacing

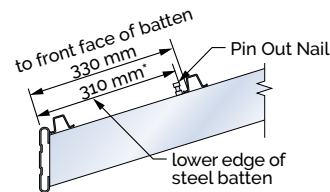


Figure 2.1.4 Eave and first batten location/spacing

## 2.2 INSTALLING BATTENS AND ROOFING UNDERLAY

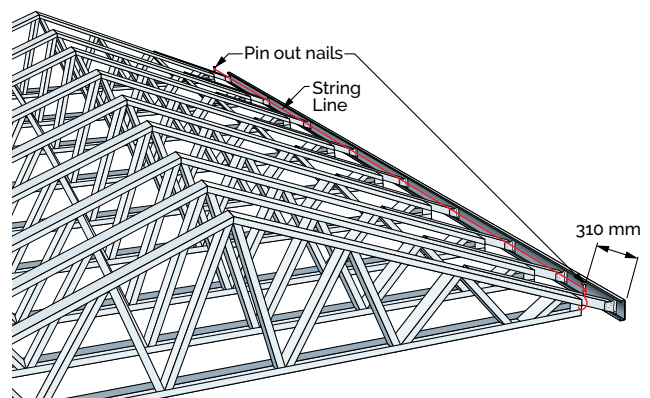


Figure 2.2.1 Batten pin-out

Mark/set out and fixing of the battens should be done sequentially throughout the batten installation process. The first batten is to be fixed behind fascia.

Pin-out the second row to the recommended spacing to ensure that the eave tile is far enough into the gutter (40mm). Then place the batten on the pin-out nail/screw, this will be

used to support the first run of roofing underlay as rolled out across the roof.

The roofing underlay can then be rolled out placing a magnet strip on every second rafter to hold the roofing underlay in place.

### 2.2.1 Eaves flashing installation

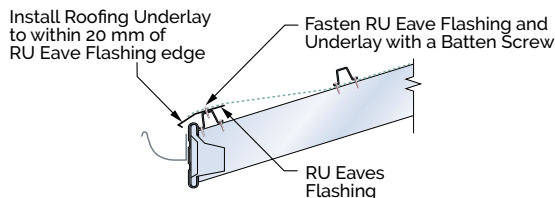


Figure 2.2.1.1

The Eaves Flashing supports the roofing underlay at the edge and reduces or eliminates underlay vibration that can occur in high winds.

Lay the roofing underlay to within 20 mm of the edge of the Eaves Flashing, the Eaves Flashing overhangs the gutter by approximately 40 mm and the underlay is pinned by the batten screws so that any condensation will run into the gutter should it occur.

Minimum overlap of a lower section of under lap is 75 mm.

### 2.2.1 Underlay installation

Do not get on to the roof or top plate to roll out the roofing underlay, this is to be done from the working platform (Figure 2.2.2.1).

Once the roofing underlay is in place lift the second batten out from under the roofing underlay and fasten it in place against the pin-out nail/screw (Figure 2.2.2.2).

Roll out roofing underlay from the platform.

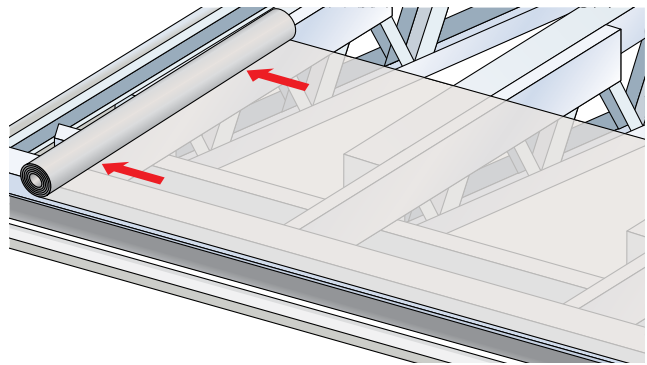


Figure 2.2.2.1

Fasten the second batten.

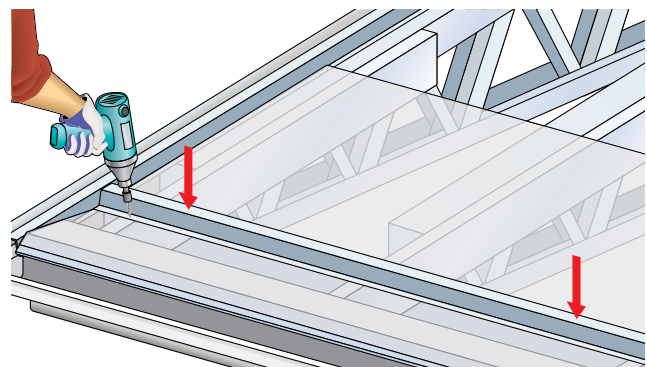


Figure 2.2.2.2

Space battens using batten spacers.

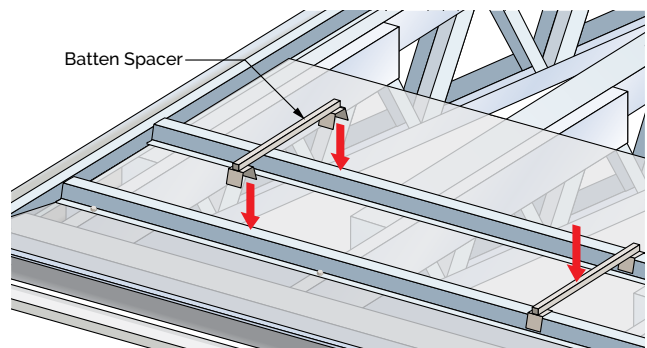


Figure 2.2.2.3



Fasten only the bottom/lower edge of the batten at the top edge of the roofing underlay.

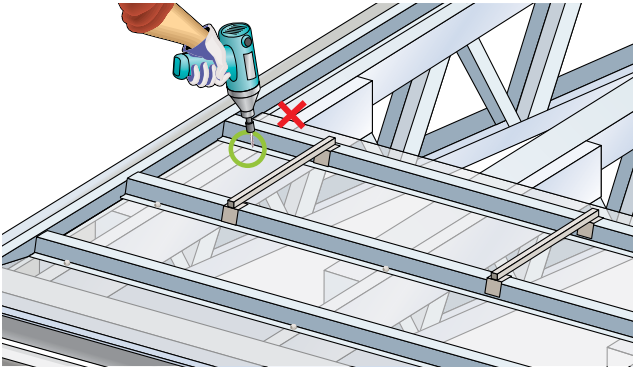


Figure 2.2.2.4

The batten at the top of the roofing underlay is to be screwed at the bottom only so it can be tilted up to enable the lap of the next run of roofing underlay to slide underneath. (Figure 2.2.2.4)

Place the next batten with the batten spacer off the top batten to support the next run of paper as in Figure 2.2.2.5.

Place supporting batten for second run of roofing underlay then roll out roofing underlay.

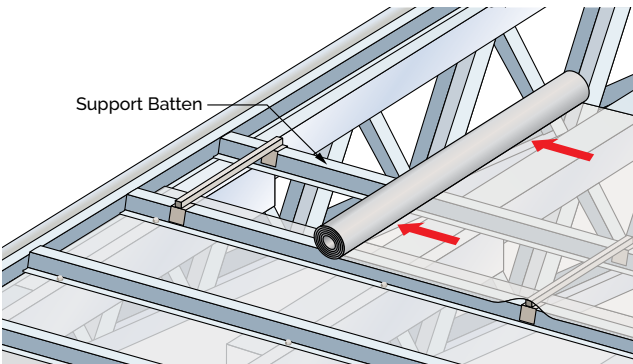


Figure 2.2.2.5

Roll out the next run of roofing underlay along the battens placing a magnet strip every second rafter.

Do not reach over open rafters to attach fixings to top of paper to hold in place.

Once the roofing underlay has been rolled out remove the batten spacer (Figure 2.2.2.6) allowing the batten under the roofing underlay to slide down. Place the batten on top of the roofing underlay using the batten spacer to locate it (Figure 2.2.2.7), fasten this batten. The lower edge of the roofing underlay is then tucked under

the top edge of the batten below. (Figure 2.2.2.8 & Figure 2.2.2.9)

Remove batten spacer and remove batten from under the roofing underlay.

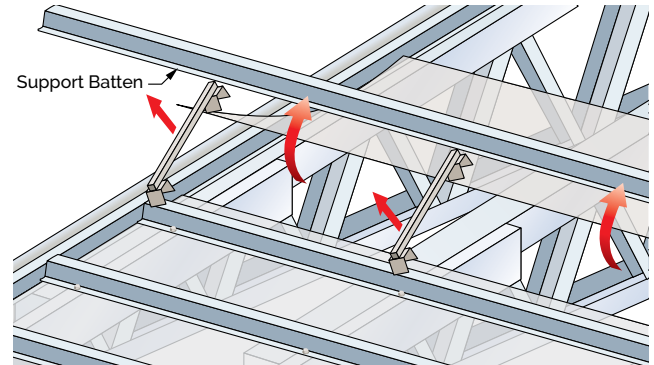


Figure 2.2.2.6

Place batten on top of the roofing underlay and fasten it in place.

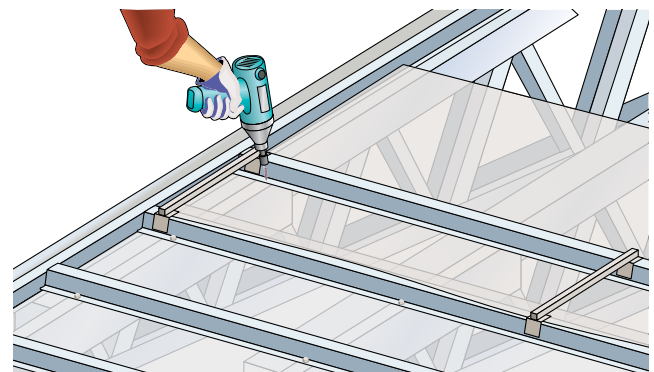


Figure 2.2.2.7

Tuck the roofing underlay under the top most batten of the rolled out underlay below.

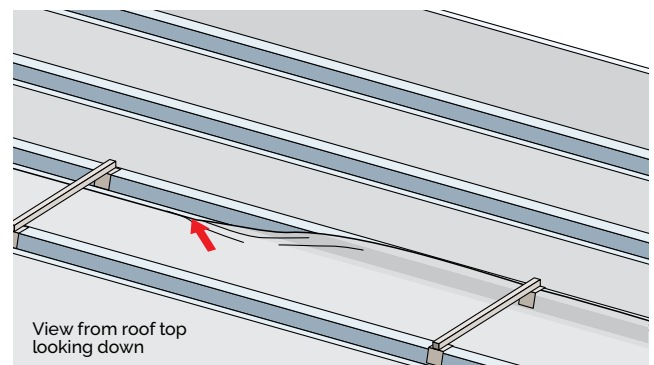


Figure 2.2.2.8

Tuck the underlay under the batten, then fasten the top edge of the batten.



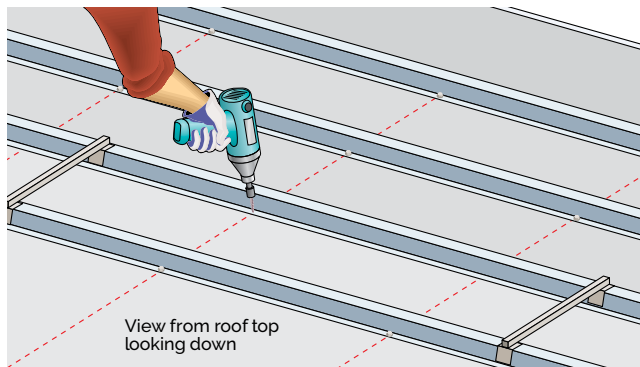
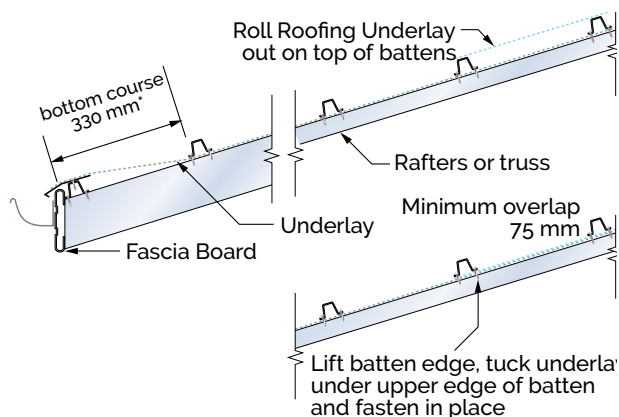


Figure 2.2.2.9



\* Variable depending on the type of rainwater collection system used

Figure 2.2.2.10 Installation and overlap of roofing underlay

## 2.3 BATTEN FASTENING

Batten joints are to be cut to length so that they lap together on top of a rafter.

Fasten through the batten into the rafter using the approved fastening technique of:

2 x 16 mm 10 gauge drill point screws or 2 x 12 gauge tile fasteners one each side of the batten.

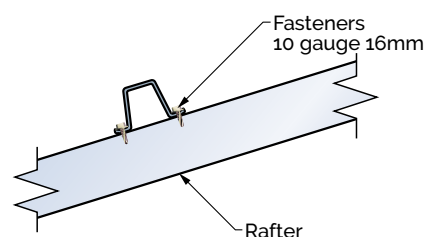


Figure 2.3.1

## 2.4 ACCESSORY BATTEN INSTALLATION

### 2.4.1 Ridge installation

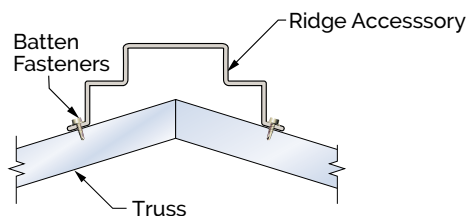


Figure 2.4.1.1 Ridge batten installation

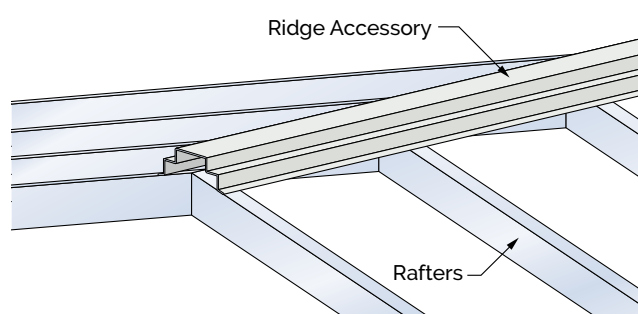


Figure 2.4.1.2

### 2.4.2 Hip installation

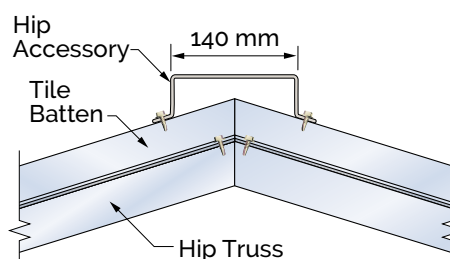


Figure 2.4.2.1 Hip batten installation

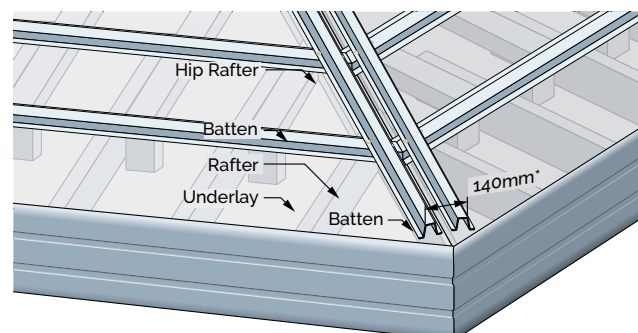


Figure 2.4.2.3 Hip batten installation alternative

### 2.4.3 Ridge hip accessory junction

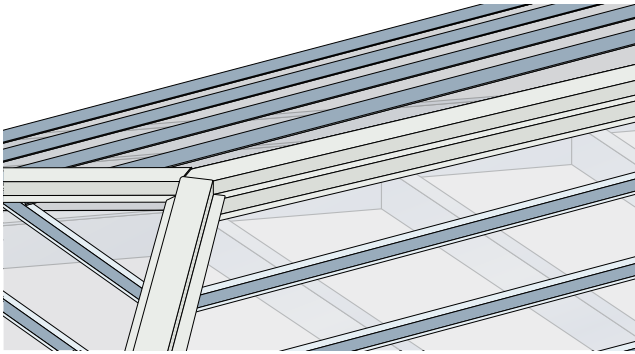


Figure 14.4.3.1

### 2.4.4 Gable installation

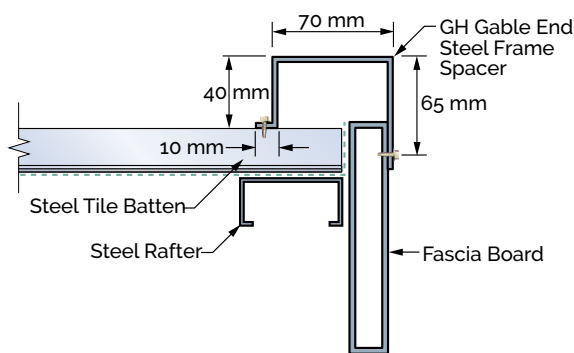


Figure 2.4.4.1 Gable batten installation Angle trim with steel frame gable end spacer

Locate gable and batten as close to the edge of the batten. Fasten trim to fascia and over turned up tile.

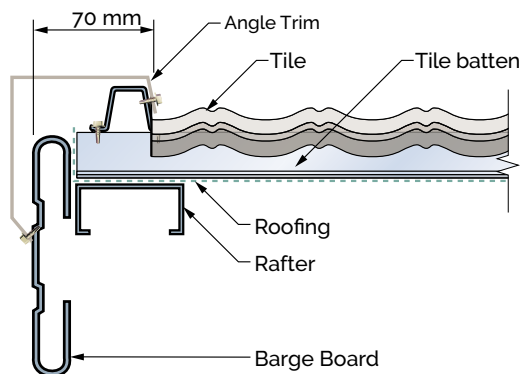


Figure 2.4.4.2 Gable batten installation Angle trim

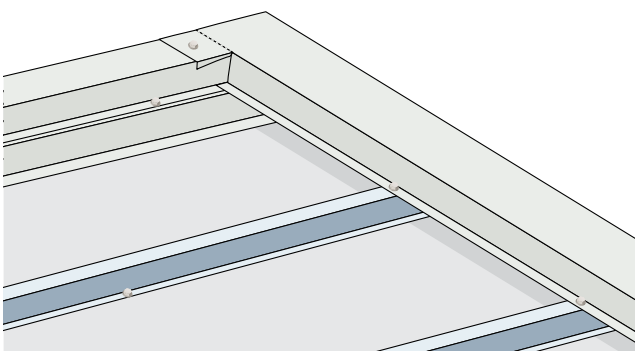


Figure 2.4.4.3

## 2.5 VALLEY BATTEN INSTALLATION

Steel valley boards should be installed by the builder prior to the roof fixers starting batten installation.

Roofing underlay is to be installed over the valley boards and under the tile battens.

Valleys may be held in place by clipping the top section of the valley and fastening it to the valley board. Valleys should be overlapped a minimum of 150 mm.

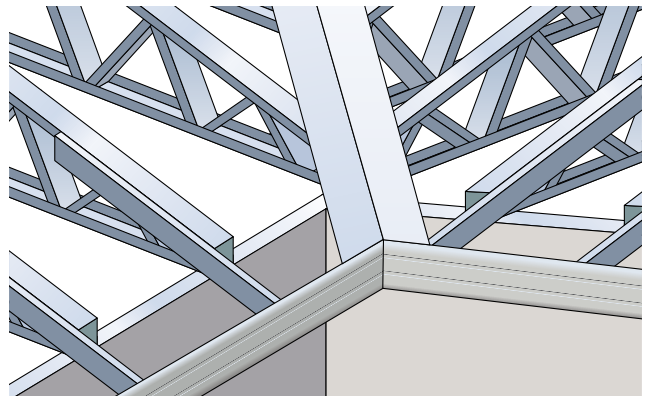


Figure 2.5.1 Two steel pieces riveted together

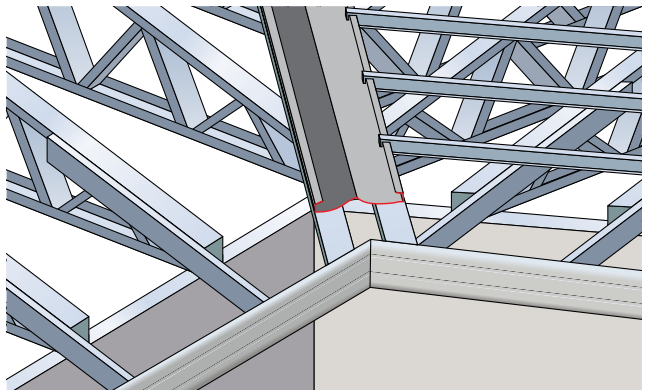


Figure 2.5.2 Two 'C' section steels

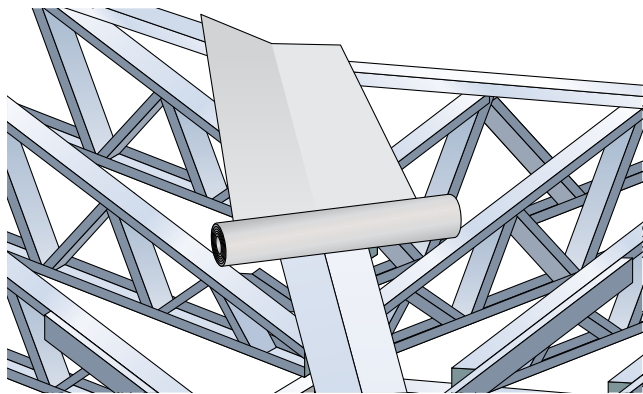


Figure 2.5.3 Installing the underlay from the top valley, note approach is from a fully battened section of roof

## 2.6 TILE INSTALLATION OVER STEEL BATTENS

### 2.6.1 General

Safety signs and edge protection, if required, should be in place before installation starts.

### 2.6.2 Preparatory work

Underlay, tile and accessory battens, wall flashings, valleys and fascia boards should be in place before laying tiles.

### 2.6.3 Tile selection - colour coding

The roof installer should check that the tiles are of the correct colour and are in good condition. Decra provides a colour code on each pallet (A - M).

Different colour coded tiles should NOT be installed on the same roof.

Tiles with surface defects should NOT be installed on the roof.

### 2.6.4 Walking on tiles

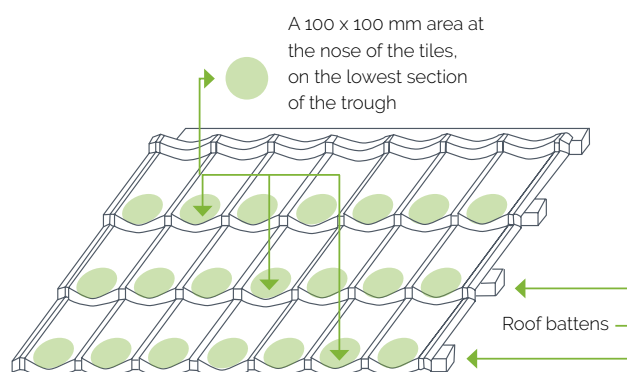
Soft soled shoes capable of providing secure footing should be worn. Extreme care is required when walking on wet tiles and this should be avoided if possible. Satin finish tiles can be very slippery and should NOT be worked on while wet.

The surface coating of the textured finish tiles may be damaged when they are wet, and damage increases as the pitch increases.

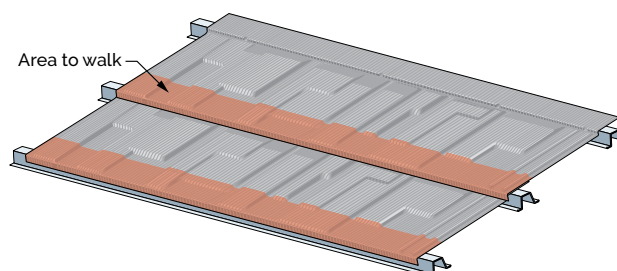
When walking on the tiles weight must be concentrated directly above the batten for Shake, Senator, Aspen and Alpine and in the pan (lower section) of tiles above the batten.

Tile damage will occur if installer weight is applied to tile ridges or mid sections of Shake, Senator, Aspen and Alpine.

For Heritage, Milano and Classic



For Shake, Senator, Aspen and Alpine



### 2.6.5 Damaged tiles

Tiles damaged during installation should be removed and replaced.

### 2.6.6 Sub-trade damage

If substantial work is to be carried out above a section of roof, such as installation of walls, tiles should generally be installed after this work has been completed. Tiles may be installed prior however protection for the tiles and their surface coatings needs to be installed before the wall cladding is installed. This may involve drop sheets and/or a plywood covering. At this point it should be made clear to the building supervisor who is responsible for damaged tiles by sub-trades.

### 2.6.7 Work interruption

If work is interrupted for any reason, or at the end of a workday, all loose tiles, accessories and incomplete sections must be secured against possible movement by wind.

Tile and accessories must be left clean and dry and securely covered to protect against the weather.

### 2.6.8 Clean up

The building site should be left clean of any roofing materials. All batten and tile off cuts, nails and packaging must be removed from the site. The roof should be cleaned to remove any debris left by the installation process.

### 2.6.9 Sign off

Obtain sign off for the roof as soon as possible after completion of the clean up.

## 2.7 TILE LAYING

For Shake, Senator, Aspen and Alpine tiles only, to prevent lines of tile joins showing down the roof make sure to random stagger the tiles.

All tiles interlock. Depending on the tile profile they may be interlocked in both directions or only in one direction.

Lay tile laps facing away from prevailing winds. Where possible the tiles should be laid with the laps facing away from the line of normal sight.

### 2.7.1 Laying tiles

Tiles are installed from the top of the roof to the eave. Install the second to top course tiles (usually the first full width tile), hold them in place by fastening through the flat of the back edge of the tile which sits on the batten (Step 1 in Figure 2.7.1.1). Lower courses of tiles may then be laid without having to fasten each tile.

Subsequent tiles are laid by lifting both tiles in the course above and sliding the next course

under the nose of the tiles already in place (Steps 2 and 3 in Figure 2.7.1.1). Tiles should be staggered so that side laps do not line up down the roof.

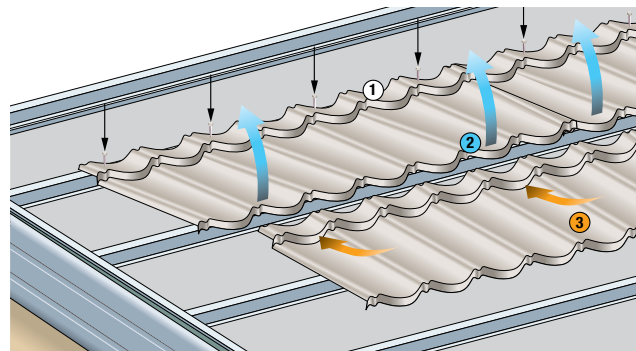


Figure 14.7.1.1

On lower pitched roofs all full tiles can be laid to cover the entire area without fastening. On higher pitch roofs, over 30°, tiles should be fastened two courses above the tiles being laid.

All tiles should be fastened in place before leaving the job site for any reason.

### 2.7.2 Tile fastening

Tiles in the body of the roof are fastened using 4 tile fasteners per tile (spacing 420 mm approx.) through the front downturn (tile nose) so that the fastener penetrates the front face of the steel tile batten (see Figures 2.7.2.1 & 2.7.2.2). Fasteners need to be placed 60 mm from the lowest section of a pan on tiles and not in the hidden water channels on Shake, Senator, Aspen and Alpine tiles.

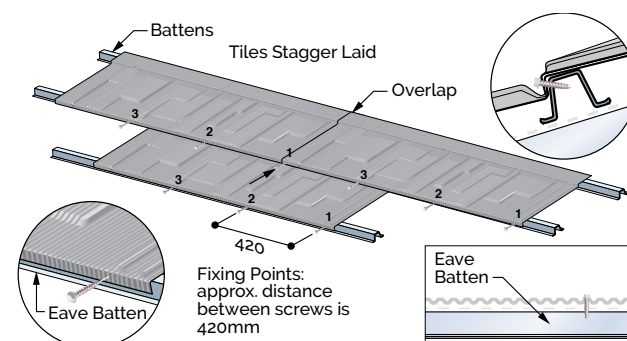
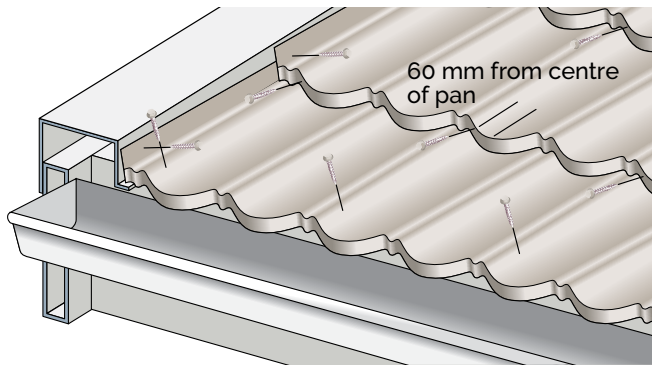


Figure 2.7.2.1





Fasteners should be installed a minimum of 10mm from the edge of the nose or half the width of the nose.

Eave tiles are fastened through the tops of the tiles using 4 fasteners, not in the pans or water channels.

To ensure weather proofing - satin finish (painted) tile requires a rubber washer under the head of the eave fastener.

### 2.7.3 Fastening technique

The person fastening the tiles should stand on the tiles below, push down on the tile just above the location to be fastened. Push on the drill to drive the fastener into the nose and through the steel batten.

Clean any swarf that may fall on to the tile surface.



Figure 2.7.3.1

### 2.7.4 Gable roof

Tiles are turned up against the gable end accessory batten a minimum of 40 mm.

The end of the first tile is bent up 40 mm, this tile is then positioned against the accessory batten and second to top course tile batten, full tiles are then laid the length of the gable.

Starting from the course already laid; lay the tiles two courses at a time end to end. The tile laps must be staggered down the roof. The staggered laying will result in gaps at either end of the gable. Tiles need to be measured, cut and bent to suit. When laying these cut and bent tiles make sure that the laps are laid the same way as the rest of the roof.

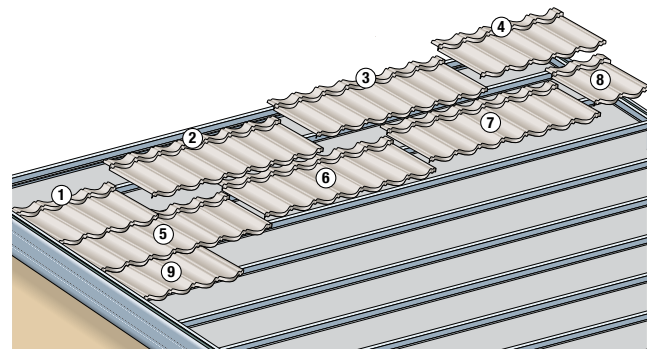


Figure 2.7.4.1 Stagger the tile laps down the roof, using part tiles at the gable end

#### Measuring, cutting and bending gable end tiles

Measurements for cutting and bending tiles are taken on the roof. The measurements are then transferred on to tiles on the ground where they are cut, bent and stacked in order.

For Heritage, Classic and Milano: the measurement is taken from the centre of the water channel of the tile, along the front face of the tile batten on the roof to the inside of the gable end accessory batten, this is the bend line. Add 40 mm for the turn up of the tile, this is the cut line.

For Corona, Senator and Alpine: the measurement is taken from the edge of the side

lap of the tile, along the front face of the tile batten on the roof to the inside of the gable end accessory batten, this is the bend line. Add 40mm for the turn up of the tile, this is the cut line.

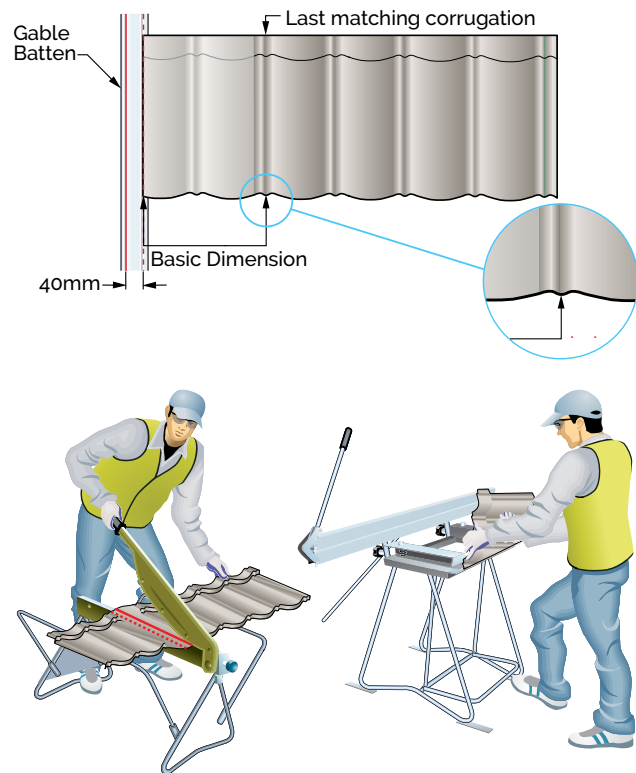


Figure 2.7.4.2 Gable end tile being cut then bent

If the gable is 90° then the bend can be made straight across the width of the tile. If it is an angled gable, treat the measurements the same way as a hip roof (Refer 2.7.5 Hip roof).

Gable end, end tiles are installed from the eave up ensuring lapping is correct. Tiles are nailed in place through the front down turn and into the accessory batten through the turn up.

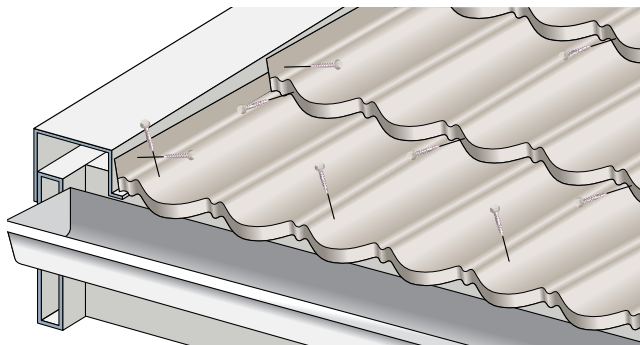


Figure 2.7.4.3 Fastener locations

Note the cut edge of a tile must be covered by accessories or other tiles on the roof to protect against weather.

## 2.7.5 Hip roof

Tiles are turned up against the hip accessory batten a minimum of 40 mm.

Lay the first full tile at the second to top course (if it doesn't fit, lay from the third to top course) so that the back of the tile is a minimum of 150 mm from the inside edge of the hip accessory batten (see Figure 2.7.5.1). This allows a full module to be used for the cut and bent hip tile.

Stagger and lay full tiles across the length of the roof until the last full tile. If the hip tile for the end section cannot be cut and bent out of a full tile it will be necessary to insert a part tile before the end of the hip. Heritage, Milano and Classic can be cut in modular length, Shake, Senator, Aspen and Alpine have specific points where to cut.

Lay the remaining full tiles down the roof leaving gaps at each end where hip tiles will need to be inserted.

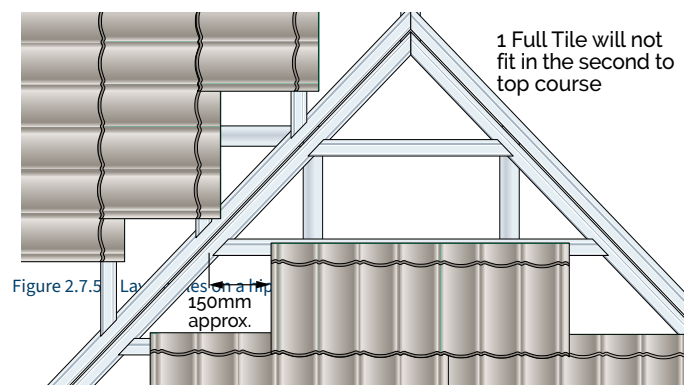


Figure 2.7.5 Lay tiles on a hip 150mm approx.

## Measuring, cutting and bending hip tiles

Measurements for cutting and bending tiles are taken on the roof.

All measurements need to be taken along the front face of the batten as this is where the tiles are fastened. Tiles need to be marked along a line where the batten will eventually be positioned. Failure to follow this procedure will result in bends being incorrect on the modular tiles.

The measurements are then transferred on to tiles on the ground where they are cut, bent and stacked in order.

For Heritage, Classic and Milano: the measurement is taken from the centre of the water channel of the tile, along the front face of the tile batten on the roof to the inside of the hip accessory batten, this is the bend line. Add 40 mm for the turn up of the tile, this is the cut line.

For Shake, Senator, Aspen and Alpine: the measurement is taken from the edge of the side lap of the tile, along the front face of the tile batten on the roof to the inside of the hip accessory batten, this is the bend line. Add 40 mm for the turn up of the tile, this is the cut line.

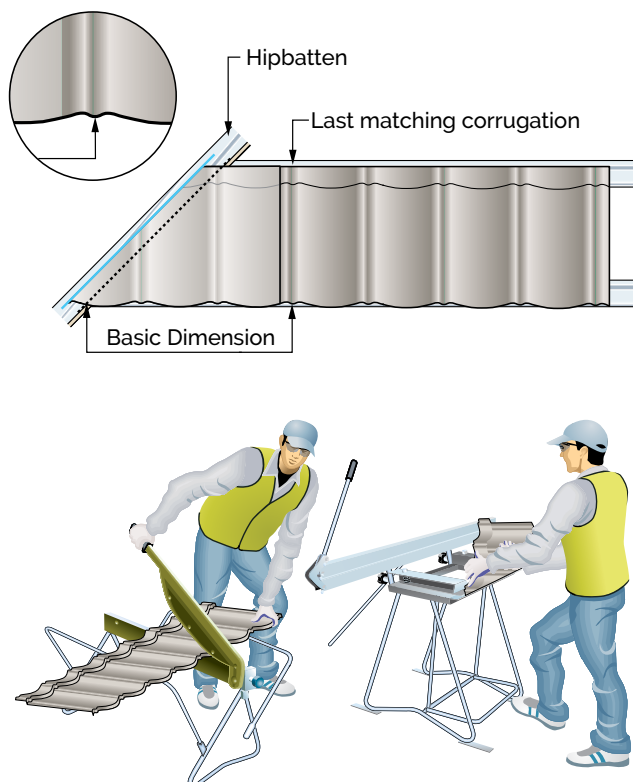
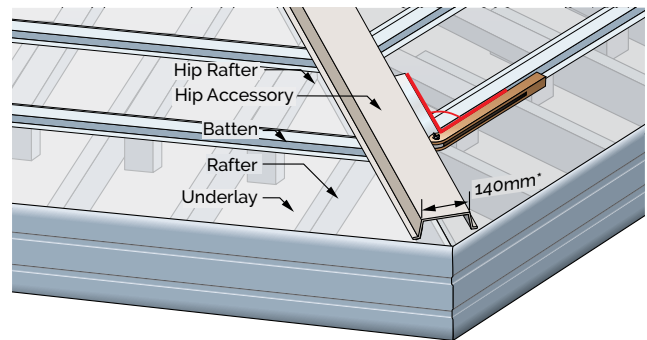


Figure 2.7.5.2 Cutting and bending a hip tile

A bevel set to the angle of the hip may then be used to mark the required angle for the hip tile. Alternatively measurements of the front and back of the tile along the front face of the tile batten may be used to provide the angle.



\* May vary depending on pitch of roof

Figure 2.7.5.3 Tile bevel hip angle measurement

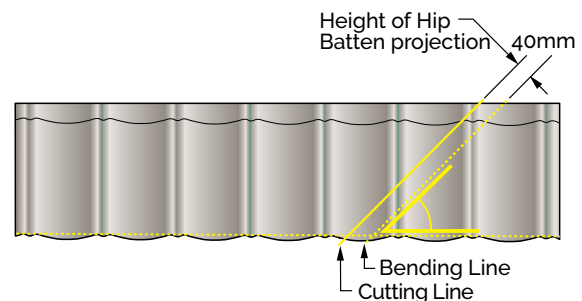


Figure 2.7.5.4 Transfer hip angle to the tile to be cut

Hip tiles are then laid to fill the gaps from the eave up, nailing through the front downturn and through the turn up into the hip accessory batten.

Heritage, Milano and Classic need to be laid as described above as they are modular and require significant care in ensuring the modules line up down the roof.

Shake, Senator, Aspen and Alpine may be installed by pre-cutting and bending for the starting end of a hip. The angle of the hip tile is taken from the roof using a bevel; this is then transferred onto the tile on the ground. Each tile should be made a slightly different length so that when the roof is completed it will have a random pattern on the roof. This results in only having to measure the end hip tile gaps.

Each tile should supply two cut sections leaving a minimum wastage.

Careful cut tile selection and use of cut tiles for hips and valleys also reduces waste.

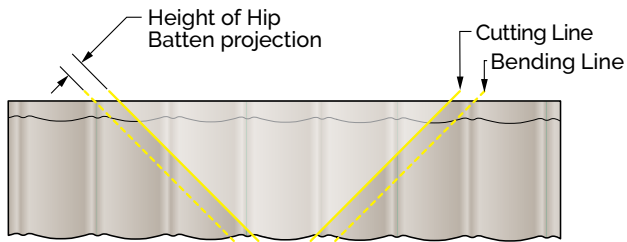


Figure 2.7.5.5 Hip cuts out of a tile

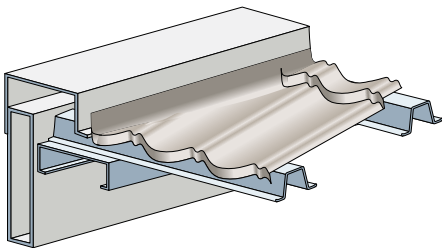


Figure 2.7.5.6 Hip cut against a batten

Note: the cut edge of a tile must be covered by accessories or other tiles on the roof to protect against weather.

## 2.7.6 Ridge tiles

Measurements for bending and cutting tiles are taken on the roof. Ridge tiles are bent before cutting.

All measurements need to be taken along the front face of the batten as this is where the tiles are fastened. Tiles need to be marked along a line where the batten will eventually be positioned.

The measurement is taken from the front of the headlap of the tile to the front of the ridge tile batten (A), this is the bend line. Add 40 mm for the turn up of the tile, this is the cut line. (Refer to 6.4 Use of fixing tools – guillotine and benders).

Measurements along the ridge are required to ensure that the cut tiles are correct (do NOT assume that the ridge is exactly straight unless you have measured).

The measurements are transferred to tiles on the ground. The tiles are bent, cut and stacked in order as they will be laid on the roof.

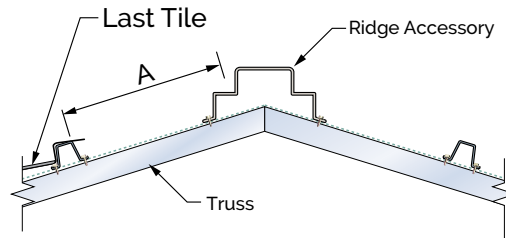


Figure 2.7.6.1 Standard ridge/hip setup

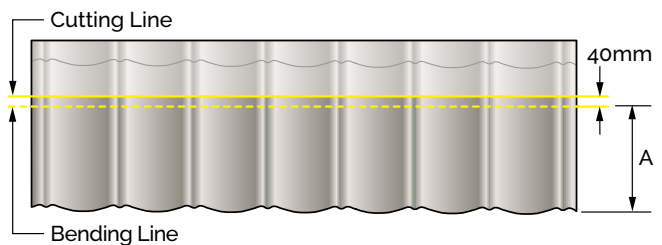


Figure 2.7.6.2 Standard ridge/hip cut and bend lines

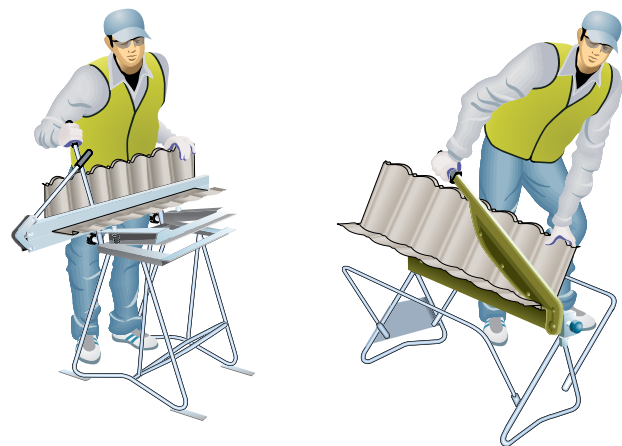


Figure 2.7.6.3 Ridge tile being bent then cut

Bend the tile before cutting, if you cut and then bend the tile will bow excessively.

### Installing ridge tiles

Fasten the ends of the front of the tile first (Steps 1 and 2 in Figure 2.7.6.4), then fasten the outside ends of the back of the tile so that the modules line up with other tiles on the roof, also fasten the back so that the pitch of the top course tile is the same as the roof (Steps 3 and 4 in Figure 2.7.6.4). By fastening each end the back of the tile will bow up (due to the distortion created when bending) (see Figure 2.7.6.4); push the centre of the tile down and nail the upturn to the ridge batten in several places (see Figure 2.7.6.5).



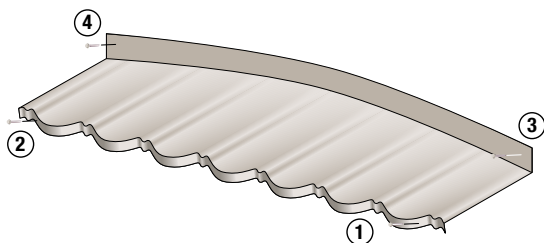


Figure 2.7.6.4



Figure 2.7.6.5

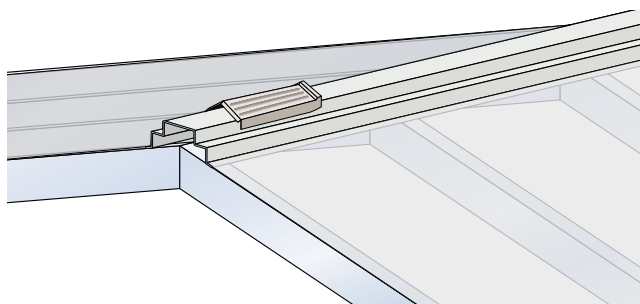


Figure 2.7.6.6 Ridge hip tile and Angle trim installed over a ridge accessory

Note: the cut edge of a tile must be covered by accessories or other tiles on the roof to protect against weather.

### 2.7.7 Valley tiles

Measurements for cutting and bending tiles are taken on the roof.

All measurements need to be taken along the front face of the batten as this is where the tiles are fastened. Tiles need to be marked along a line where the batten will eventually be positioned. Failure to follow this procedure will result in bends being incorrect on the modular tiles. The measurements are then transferred on to tiles on the ground where they are cut, bent and stacked in order.

For Heritage, Classic and Milano: the measurement is taken from the centre of the water channel of the tile, along the front face of

the tile batten on the roof to 30 mm past the edge of the valley. The turn down is not parallel to the bend line, add 40 mm at the front (nose) of the tile and 30 mm to the back of the tile, this is the cut line (see Figure 2.7.7.1).

For Shake, Senator, Aspen and Alpine: the measurement is taken from the edge of the side lap of the tile, along the front face of the tile batten on the roof to 30 mm past the edge of the valley. The turn down is not parallel to the bend line, add 40 mm at the front (nose) of the tile and 30 mm to the back of the tile, this is the cut line (see Figure 2.7.7.1).

The slope on the cut made on valley tiles is required to make sure that the bottom edge of the valley tile appears straight in the valley.

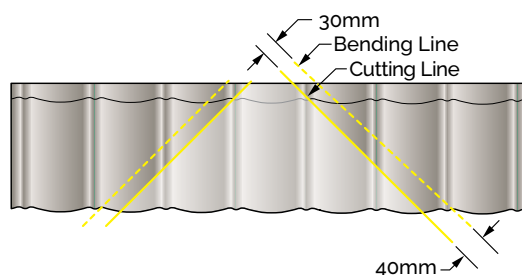


Figure 2.7.7.1 Cut and bend lines of a valley tile



Figure 2.7.7.2 Valley tile being cut then bent

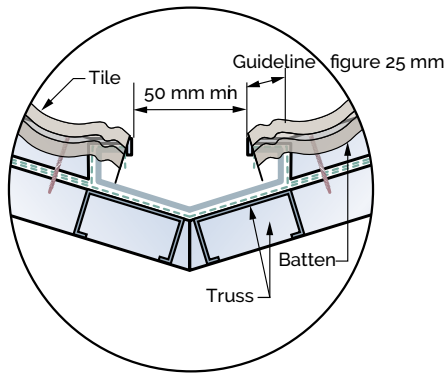


Figure 2.7.7.3

Cut and bend the tiles at the valley as straight as possible to obtain a straight line. Lay the valley tiles from the eave up. Never fasten into a valley.

## 2.8 FIXING TOOLS

The guillotine can be used to cut tiles or accessories as required.

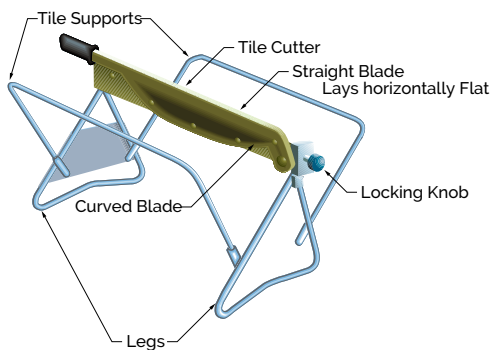


Figure 2.8.1

### 2.8.1 Gable, hip and valley tiles

Flattening the nose and headlap before cutting the tile will make cutting easier.



Figure 2.8.1.1

Cut along the marked line, a quick single motion

down while pulling the guillotine blade towards yourself (to the left) will keep the blades together and usually ensure that a cut is made in one operation. If more than one cut is required move the tile closer to where the blades intersect as this is where the guillotines cutting power is greatest.

Hold the tile so that the largest side is held in the left hand, this gives you greater control over the tile being cut.

### Cutting a tile



Figure 2.8.1.2

### Bending a tile



Figure 2.8.1.3

### 2.8.2 Ridge tiles

These are bent in the long tile bender before cutting to help reduce tile distortion (splay).



Figure 2.8.2.1

These tiles are cut along the length of the tile, so it will take several cuts to complete a ridge tile.

Start with the tile headlap to the right of the guillotine blade, make short cuts along the cut line pushing the tile into the first 1/3 of the cutting area of the guillotine. Continue the sequence until the tile is cut.



Figure 2.8.2.2

### 2.8.3 Short tile bender

The short tile bender is used for folding turn-ups required for gable, hip and wall tiles and for the turndowns into valleys. It clamps and flattens the tile turn-ups so that the tiles can be installed under accessories.

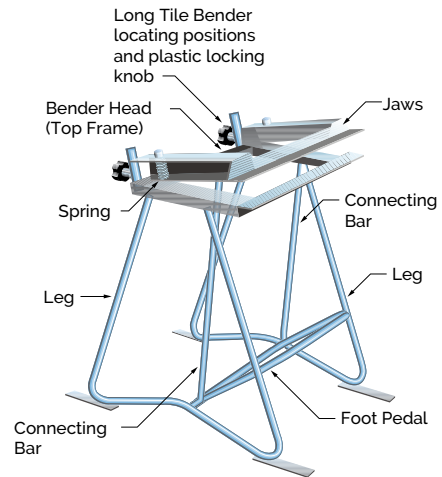


Figure 2.8.3.1

### 2.8.4 Long tile bender

This folder attaches to the back of the short tile bender. It can be used for folding ridge tiles and if necessary gable, hip or valley tiles.

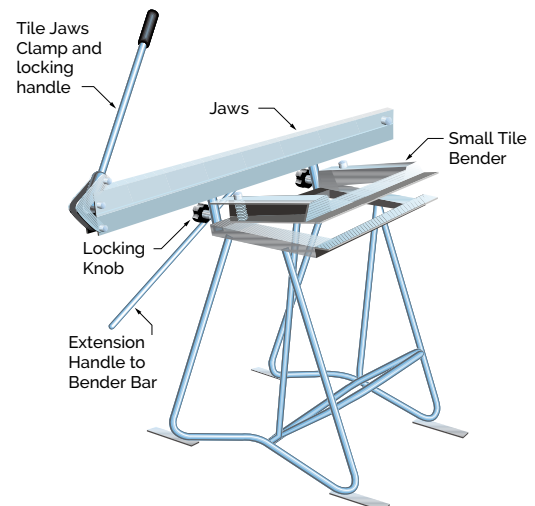
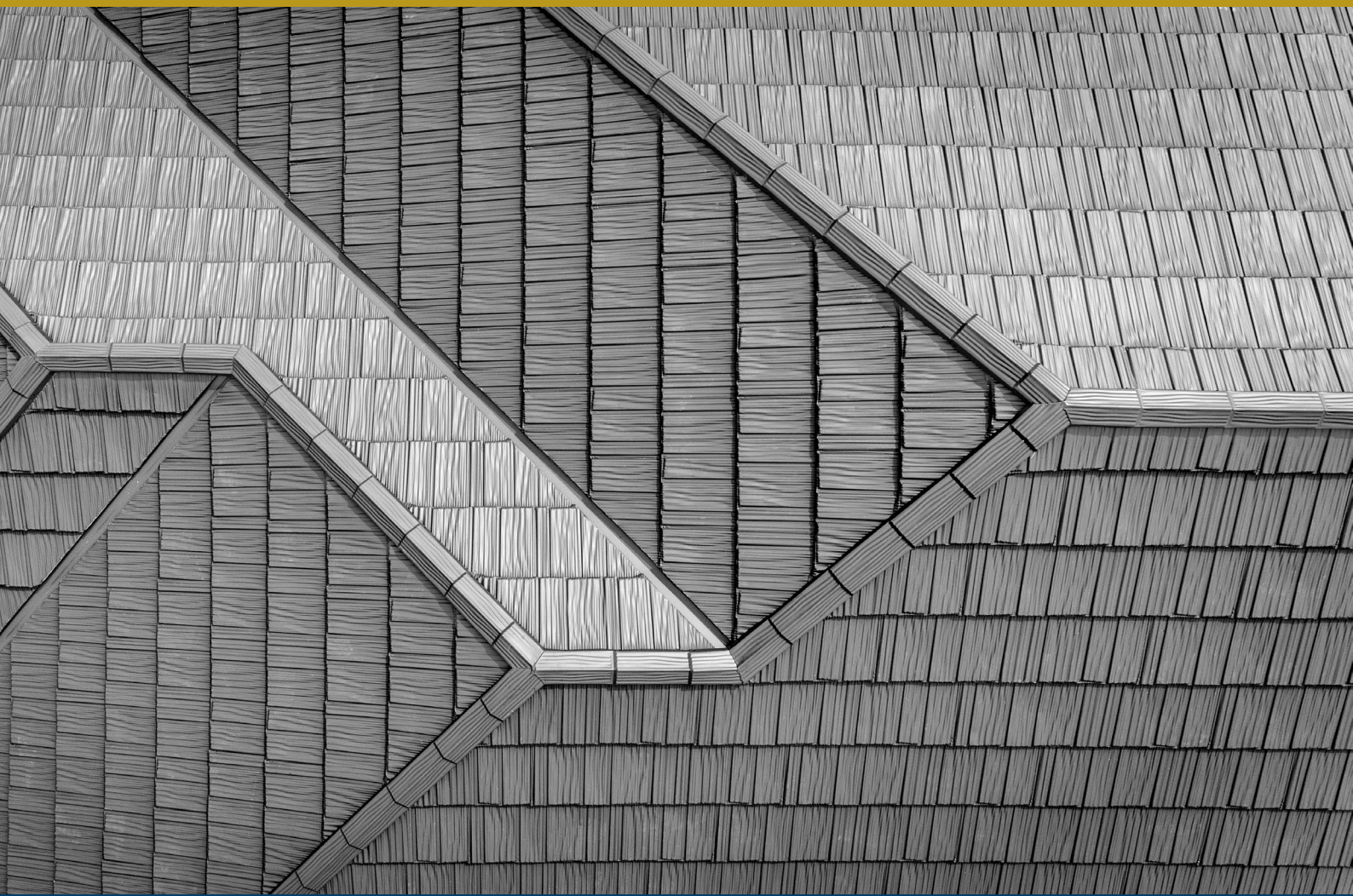


Figure 2.8.4.1



# 3.0 PRODUCT SPECIFIC INSTALLATION





## 3.1 SHAKE

### Batten spacing

Shake textured (chipped) 368 mm.

### Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

### Tile batten fastening

2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.

### Laying direction

Left over right or right over left

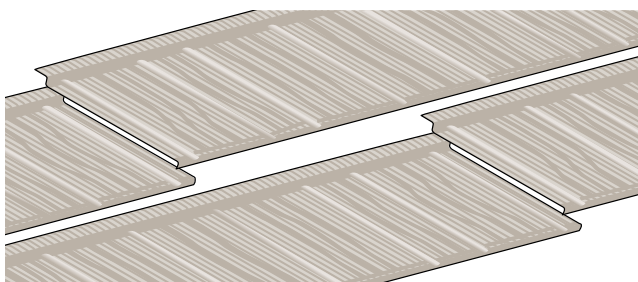
Lay laps away from line of sight.

Lay away from prevailing winds.

Lay laps away from discharging rainwater pipes or roof valleys.

### Laying pattern

Stagger lay Shake down the roof to create a random pattern. Laps of tile above or below should not be closer than 200 mm.



### Fastening

4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

## 3.2 SENATOR

### Batten spacing

Senator textured (chipped) 368 mm.

### Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

### Tile batten fastening

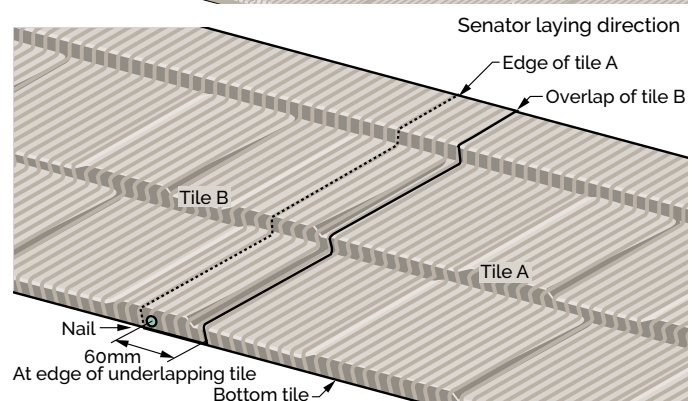
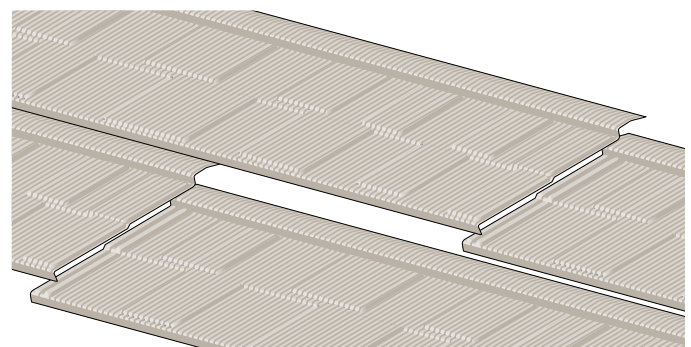
2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.

### Laying pattern

One way lay - right to left

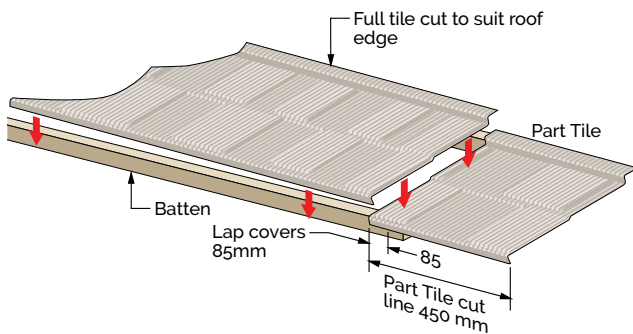


### Laying pattern

Stagger lay Senator down the roof to create a random pattern. Laps of tile above or below should not be closer than 200 mm.

## Part tile

There is only one specific point where a part Senator can be created. This is 450 mm from the right hand end of the tile. The right hand end of the part tile is always overlapped by a full tile. Lap using the maximum coverage of the lap (80 mm).



## Fastening

4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

# 3.3 HERITAGE

## Batten spacing

Heritage textured (chipped) 368mm

## Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

## Tile batten fastening

2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.

## Laying direction

Left over right or right over left

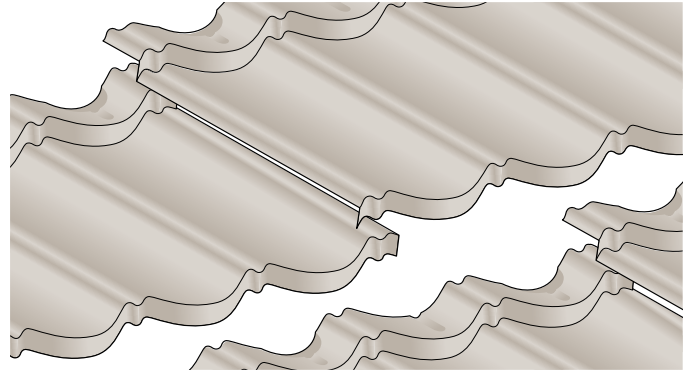
Lay laps away from line of sight.

Lay away from prevailing winds.

Lay laps away from discharging rainwater pipes or roof valleys.

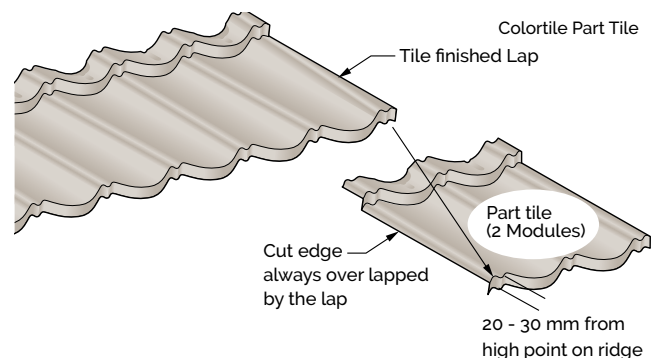
## Laying pattern

Stagger lay tiles laps 2 or more modules apart down the roof.



## Part tile

Tiles may be cut down to modular size. Cut edges should be overlapped by tile finish laps.



## Tile fastening

4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

## 3.4 MILANO

### Batten spacing

Milano textured (chipped) 368mm

### Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

### Tile batten fastening

2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.s.

### Laying direction

Left over right or right over left

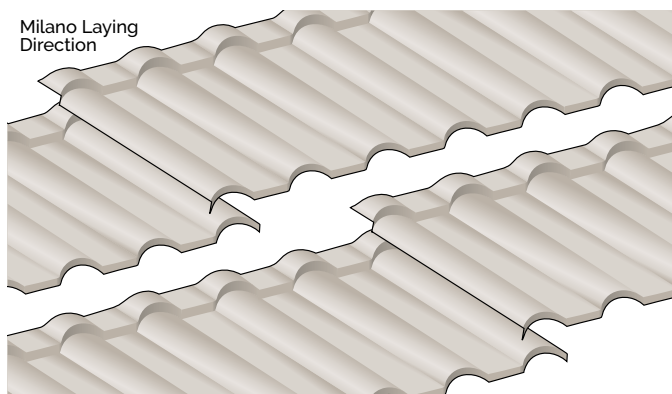
Lay laps away from line of sight.

Lay away from prevailing winds.

Lay laps away from discharging rainwater pipes or roof valleys.

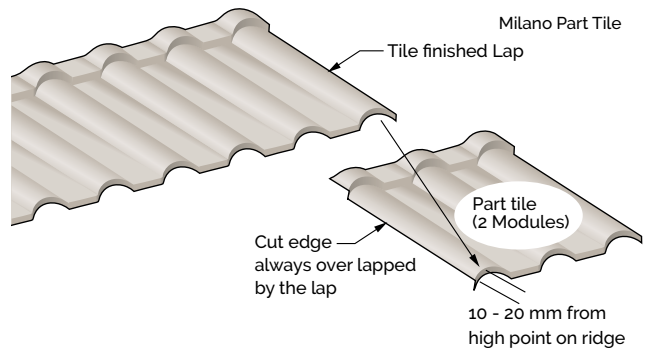
### Laying pattern

Stagger lay tiles laps 2 or more modules apart down the roof.



### Part tile

Tiles may be cut down to modular size; Cut edges should be overlapped by tile finish laps.



### Tile fastening

4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

## 3.5 CLASSIC

### Batten spacing

Classic textured (chipped) 368mm

### Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

### Tile batten fastening

2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.

### Laying direction

Right over left

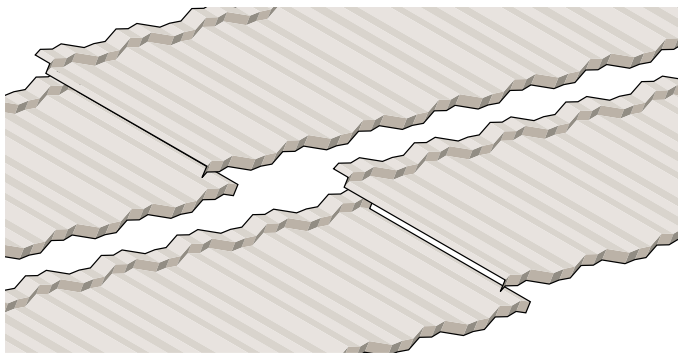
Lay laps away from line of sight.

Lay away from prevailing winds.

Lay laps away from discharging rainwater pipes or roof valleys.

### Laying pattern

Stagger lay tiles laps 2 or more modules apart down the roof.



### Laying pattern

Stagger lay Aspen down the roof to create a random pattern. Laps of Aspen above or below should not be closer than 200 mm.

### Part tile

Tiles may be cut down to modular size; Cut edges should be overlapped by tile finish laps.

### Tile Fastening

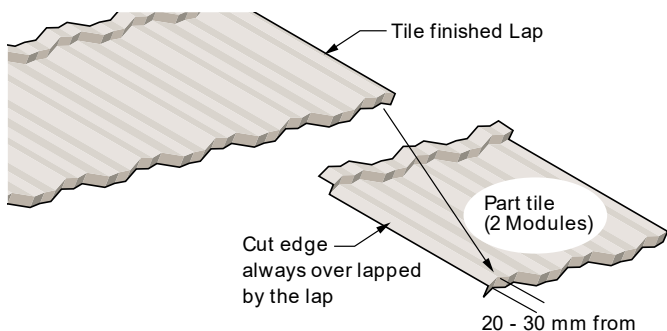
4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

### Part tile

Tiles may be cut down to modular size; Cut edges should be overlapped by tile finish laps.



### Tile fastening

4x 10g x40mm hex head screws. Screw spacing ~320 mm, up to and including Extra High wind zones.

7 x 10g x40mm hex head screws for Specific Engineering Design above 5.2 kPa design load.

Only use screws approved by Decra.

## 3.6 ASPEN

### Batten spacing

Aspen textured (chipped) 368 mm.

### Tile batten sizes

40mm x 50mm steel battens with a maximum rafter spacing of 1200mm and maximum batten spacing of 900mm.

### Tile batten fastening

2x 10g x 16mm Tek screws per batten for Low wind zones.

4x 10g x 16mm Tek screws per batten for Medium, High wind zones.

SED for Very high wind and Extra High wind zones.





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## Important information about this material

Decra and IKO Metals Roofing Systems accepts no liability if the Decra roofing system is not used in accordance with the instructions contained in this publication.

Substitution of specified or recommended components with alternative brands can compromise performance. The Decra system is not generic and must be installed as specified using Decra branded components.

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