



Installation Guide

pantile 2000

BRITMET
LIGHTWEIGHT ROOFING

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lightweight composite slate | lightweight granulated tile panels | lightweight tile effect sheets | flat-to-pitch roof conversions | structural liner trays | door canopies | decorative exterior paint

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Installing the Battens

- 1** Measure and Position the Battens:
 - Measure and adjust the rafter or truss spacing between 450mm and 1500mm to determine the appropriate batten size
 - Secure battens at 300mm increments to align with the tile modules of the sheet design, ensuring the spacing between battens does not exceed 1500mm

- 2** Secure the Battens: Fix the battens in place using nails or screws that comply with industry standards.

- 3** Install the Eave Battens: Place two battens side by side at the eaves to provide support for the eave drip.

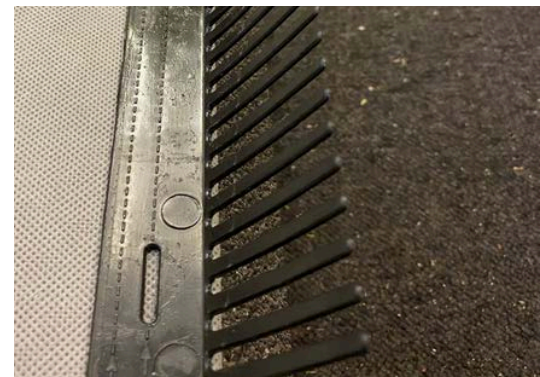
- 4** Install the Ridge Batten: Position the ridge batten with at least 50mm of clearance on both sides of the ridgeline to allow for proper placement.

Note: Begin by ensuring all battens are treated to provide long-lasting protection.

<u>Rafter or Truss Spacing</u>	<u>Minimum Nailing Requirements</u>	<u>Batten Width</u>	<u>Batten Depth</u>
450	1 no 75mm x 3.35mm	38mm	50mm
600	1 no 75mm x 3.35mm	50mm	50mm
900*	1 no 75mm x 4.00mm	50mm	50mm
1200*	1 no 1000 x 4.00mm	50mm	50mm
1500*	1 no 125mm x 12g screw	50mm	75mm

Installing at the Eaves

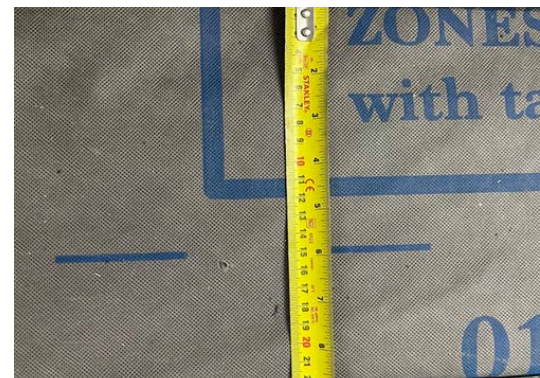
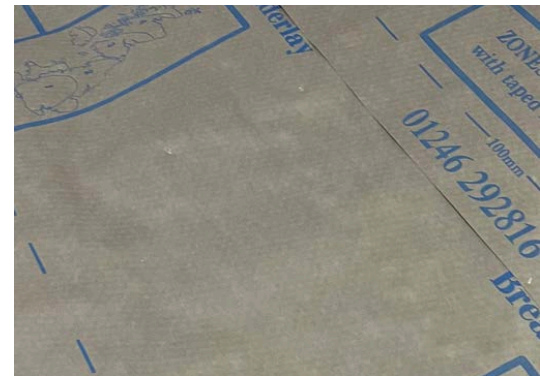
- 1** Install the Eave Vent Strip: Install the eave vent strip by fastening it to the fascia board along the entire eave.
- 2** Install the Eave Batten: Attach a 50x25mm eave batten 25mm behind the eave vent strip.
- 3** Install the Eave Drip Flashing: Set the eave drip flashing square to the eaves and fasten it to the eave batten using 25mm self-tapping countersunk screws.
- 4** Install the Membrane: Lay the membrane over the eave drip flashing, ensuring it aligns with the downturn.
- 5** Install the Comb Filler:
 - Position the comb filler on top of the eave drip flashing
 - Use the eave drip flashing as a template to help align the roofing sheets



Note: The size of the vent strip depends on the roof pitch: use a 10mm strip for pitches of 16° or more, and a 25mm strip for pitches of 15° or less.

Installing the Roof Membrane and Battens

- 1** Lay the Roof Membrane: Cover the roof area with the membrane, ensuring it drapes slightly over the rafters for proper water runoff.
- 2** Position the First Batten: Using 50x50mm battens, place the first batten 250mm from the front edge of the eave flashing, allowing for a 50mm overhang into the gutter.
- 3** Measure and Space the Battens:
 - Measure from the bottom of each batten and maintain a minimum spacing of 600mm between battens
 - Batten centres can be spaced at 600mm, 900mm, 1200mm, or 1500mm depending on the roof design
- 4** Secure the Battens: Fasten the battens to the rafters using 80-100mm screws to ensure a secure fit across the entire roof.



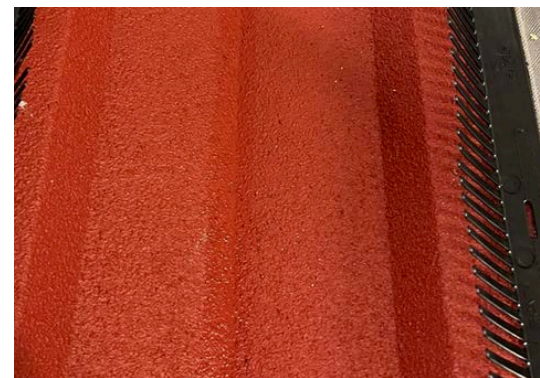
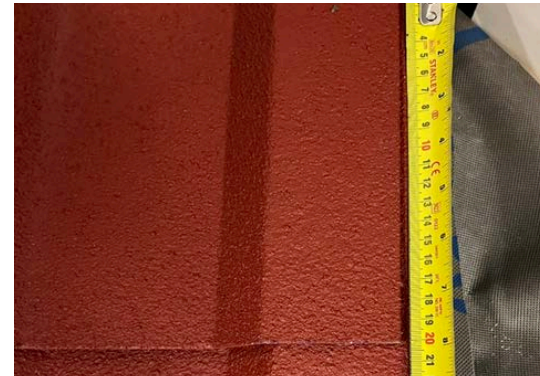
Installing the Valley Boards & Membrane

- 1** Install the Valley Boards: Secure the lay boards into the valley area, ensuring they are flush with the rafters for a smooth surface.
- 2** Lay the Membrane to the Valley: Extend the roof membrane up to the valley area, preparing for the installation of valley battens.
- 3** Install the Valley Battens: Position valley battens on either side of the valley line, spaced 250mm apart to provide support for the valley flashing.
- 4** Lay the Membrane in the Valley: Place the membrane inside the valley area, overlapping the valley battens, and leave 50mm of excess membrane.
- 5** Secure the Membrane: Staple or tack the membrane into the valley battens to hold it securely in place.
- 6** Position the Valley Flashing: Lay the valley flashing into the valley area, ensuring there is excess material extending past the eave.
- 7** Mark and Cut the Flashing:
 - Mark the valley flashing so that it extends 30mm beyond the fascia
 - Use a reciprocating saw or nibblers to cut the flashing along the marked line



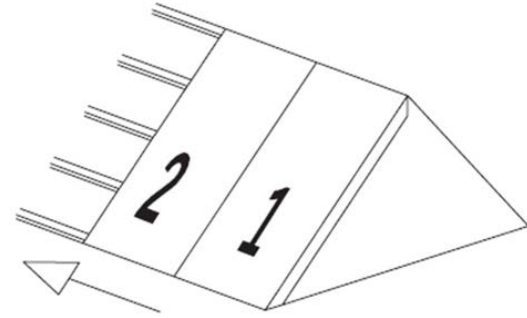
Installing the Valley Boards & Membrane

- 8** Install the Flashing: Place the trimmed flashing back into the valley area.
- 9** Secure the Flashing: Fasten the flashing to the valley battens using 30mm countersunk self-tapping screws, spaced every 400mm for a secure hold.
- 10** Position the Next Valley Flashing: Lay the next piece of valley flashing with a lap depending on the roof pitch: 300mm overlap for a roof pitch of 5–9° or 200mm for 10° and above.
- 11** Secure the Lap: Fasten the lap on both sides of the valley using screws to ensure a secure fit.
- 12** Install the Comb Fillers:
 - Place the comb fillers on top of the valley flashing, ensuring the comb faces towards the valley
 - Secure the comb fillers by screwing through the flashing and into the valley battens
- 13** Repeat for Both Sides: Repeat the process for both sides of the valley, ensuring the comb fillers are neatly butted against each other.

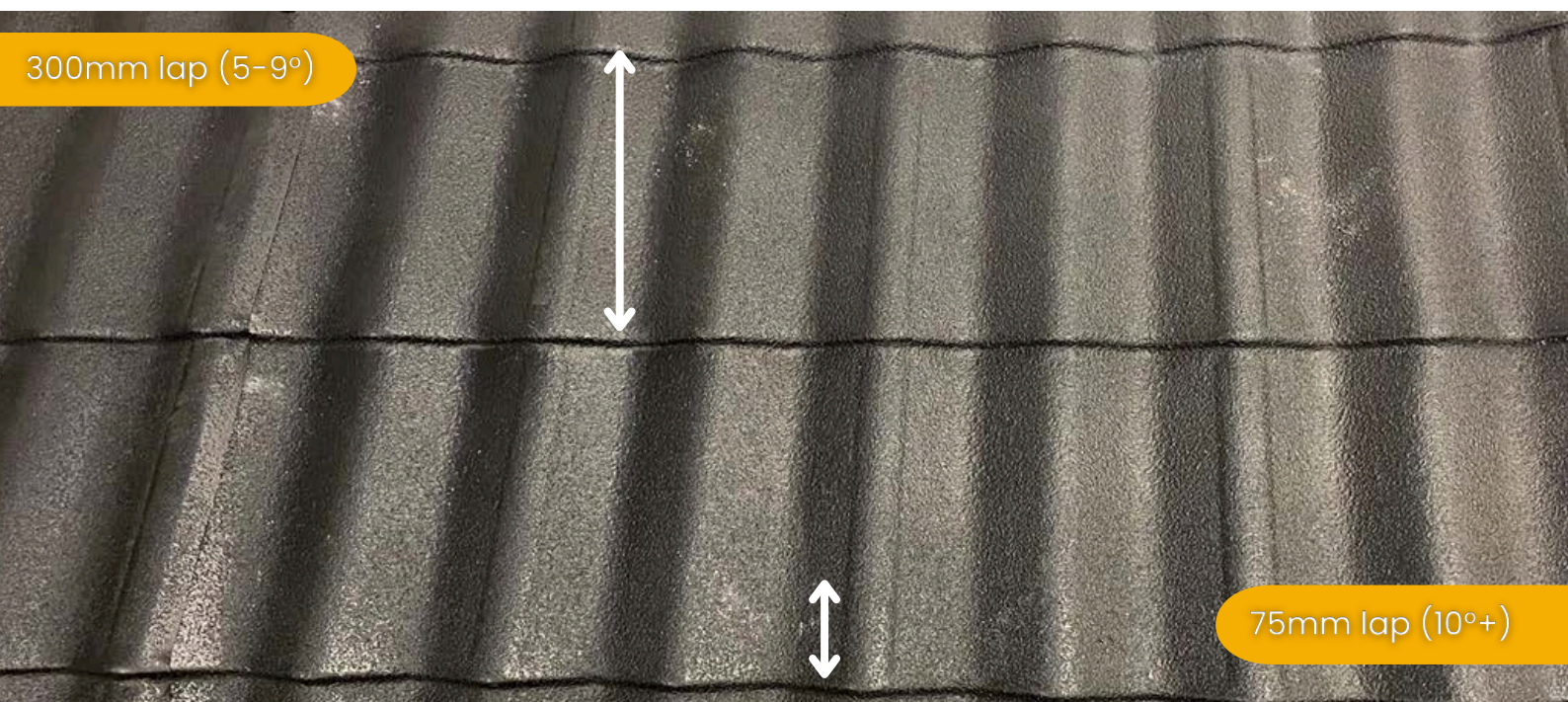


Preparing the Roofing Sheets

- 1** Prepare the Sheets: Ensure the sheets are manufactured to match the required length of the rafters or trusses, with a maximum sheet length of 6m.



- 2** Lay the First Sheet:
 - Position the first sheet square to the eave, not the gable or abutment, and install the sheets from right to left
 - Overlap each sheet, ensuring the left side overlaps the right
- 3** Install Multiple Sheets (if needed for longer rafter lengths):
 - For roof pitches of 10° or greater, use a 75mm lap between sheets
 - For roof pitches between $5-9^{\circ}$, use a full 300mm tile module for the lap



Securing the Roofing Sheets

1 Fixings for Purlins:

- Use 4 main fixings for eave and ridge purlins
- Use 3 main fixings for intermediate purlins

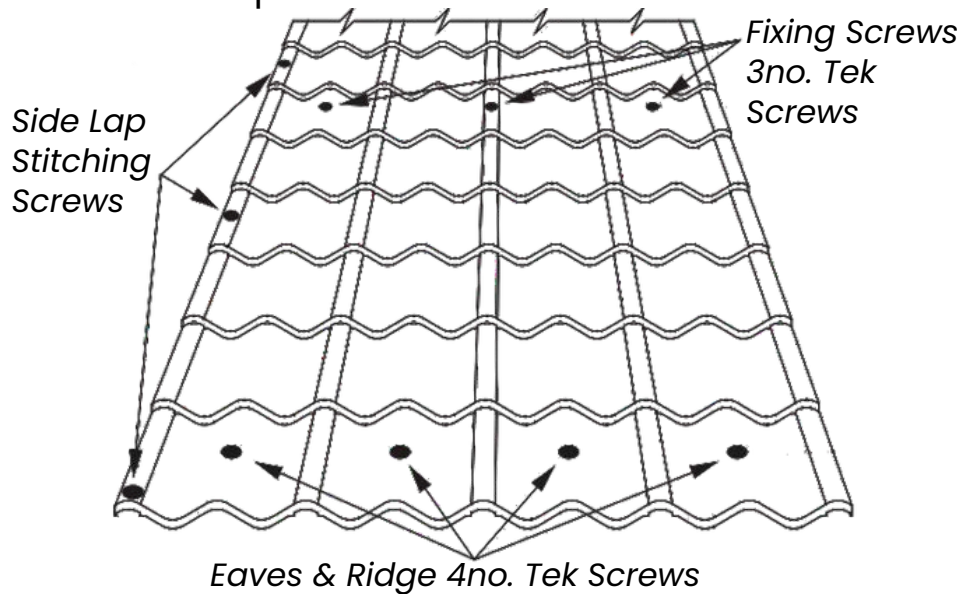
2 Apply Butyl Sealant:

- Apply IDL butyl sealant on every sheet lap
- For roof pitches of 5-9 degrees, use 10mm sealant
- For pitches of 10 degrees and above, use 6mm sealant

3 Use Stitching Screws:

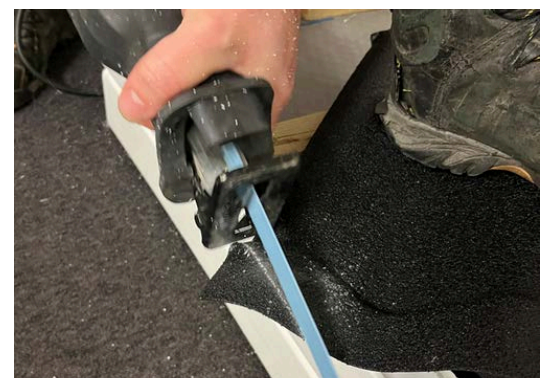
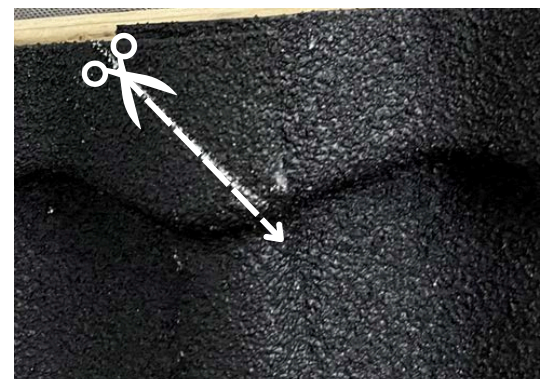
- For laps on sheets, use stitching screws
- For roof pitches greater than 10 degrees, space screws at 900mm centres
- For pitches of 10 degrees or less, space screws at 600mm centres

4 Install Sheet Fixings: Ensure all sheet fixings are installed through the crown of the sheets.



Installing the Roofing Sheets

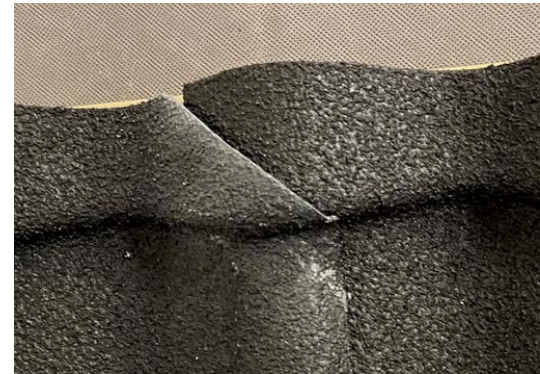
- 1 Mitre the Corners:** For longer rafter lengths with multiple sheets, mitre the corners for a better fit.
- 2 Position the First Sheet:** Lay the first sheet from right to left, ensuring it reaches up to the batten.
- 3 Overlap the Next Sheet:** Place the next sheet, overlapping it left over right.
- 4 Mark and Cut the Second Sheet:**
 - On the second sheet, draw a diagonal line from the upstand at a 45° angle
 - Cut along the marked line using a reciprocating saw or nibblers to match the mitred fit



Installing the Roofing Sheets

5 Position the Cut Sheet:

- Lay the cut sheet over the previous sheet, ensuring IDL Sealant is applied to every lap detail
- Complete the mitring for every sheet in the course



6 Start the Next Course:

- Begin the next course from the right, ensuring the lap is appropriate for the roof pitch
- Mark the sheet with a diagonal line and a straight line where the lap will be
- Cut along the marked lines and lay the sheet in place



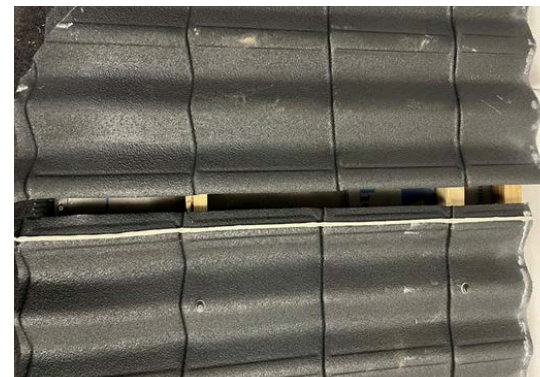
7 Complete the Mitre and Fix the Sheets:

- Repeat the mitring process for the top of the sheet
- Fix the lap using stitching screws
- Continue this process for all sheets and courses.
- Touch up any marks with the provided kit as needed



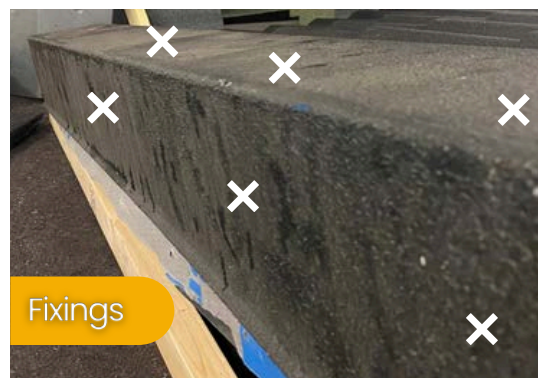
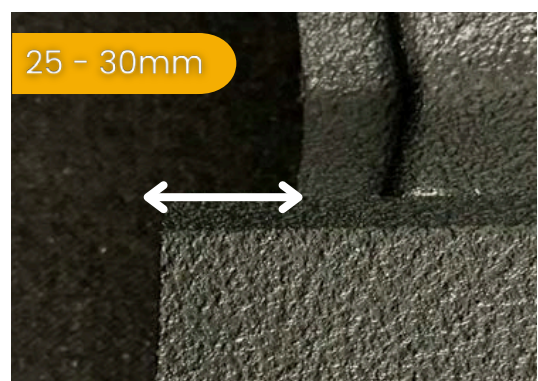
Installing Sheets Around the Valley

- 1 Measure and Mark:** Measure the distance from the lap of the previous sheet to the valley upstand and add 25mm for an overhang. Mark the sheet at both the top and bottom and use a straight edge to connect the marks.
- 2 Cut the Sheets:** Cut the sheets along the marked lines using a nibbler or jigsaw.
- 3 Install the Sheets:**
 - Apply IDL sealant under the lap where the sheets will overlap
 - Install the sheets according to standard details
- 4 Finish and Touch Up:** Once all sheets are installed around the valley, use the provided kit to touch up any cut and marked areas.



Installing the Barge Flashing

- 1** Position the Barge End Cap: Place the Barge End Cap at the end of the Barge Flashing, ensuring you use the correct cap for the left-hand (LH) or right-hand (RH) side.
- 2** Fix the End Cap:
 - Secure the end cap by driving stitching screws through the downturn of the barge flashing into the end cap
 - Repeat the process by securing through the top of the barge flashing
- 3** Finalize Installation: The barge flashing is now ready for installation.
- 4** Position the Barge Flashing:
 - Starting from the eave, lay the barge flashing along the gable, ensuring it is flush with the gable end and level with the roof slope
 - Ensure the flashing extends 25-30mm over the edge
- 5** Overlap at the Ridge Line:
 - When reaching the ridge line, overlap the flashing from both sides
 - Mark a vertical line from the ridgeline and cut along the line
- 6** Secure the Flashing:
 - Use 3 stitching screws on the top of the flashing to secure it into the crown of the sheet
 - Add 3 fixings on the side of the flashing
 - Install and secure the barge end caps with stitching screws



Installing the Ridge Flashing

- 1** Position the Sheets: Ensure that the sheets are spaced at least 50mm apart at the ridgeline.
- 2** Install the Comb Filler: Place the comb filler under the ridge flashing, oriented upside down so that the combs align with the profile of the sheets.
- 3** Prepare the Ridge End Cap: Position the Ridge End Cap over the verge flashing, making sure the centre aligns with the ridge line.
- 4** Mark and Cut the Ridge Flashing: Place the ridge flashing over the ridge end cap and mark a cut line for accurate fitting.
- 5** Cut the Ridge Flashing: Use a jigsaw or reciprocating saw to cut the ridge flashing along the marked line.
- 6** Position the Ridge Flashing: Place the cut ridge flashing into position, ensuring the centre aligns with the ridge line.
- 7** Secure the Flashing:
 - Use a stitching tool to fasten the ridge flashing and end cap into the verge flashing below
 - Repeat the fixing process across the ridge flashing, making sure each fixing penetrates both the flashing and the high peaks of the sheet



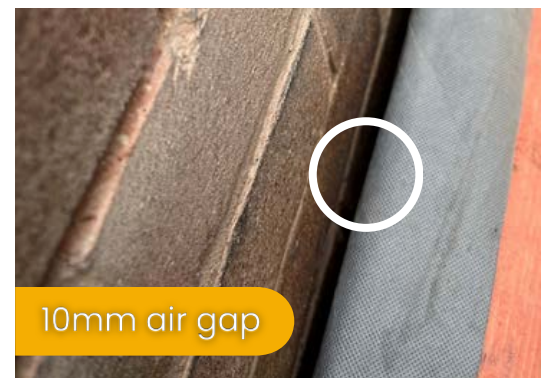
Installing the Hip Flashing and End Cap

- 1 Position and Mark the Sheets:**
 - Place the sheets over the hip, then run a batten or ruler along the hip line, leaving a 10mm gap on either side
 - Mark the sheet according to the hip line
- 2 Cut and Position the Sheets:**
 - Cut the marked sheet using a reciprocating saw
 - Position the sheet over the hip and secure it in place
- 3 Repeat for Both Sides:** Repeat the process for both sides of the hip line, ensuring a minimum gap of 20mm.
- 4 Secure the Comb Fillers:** Attach comb fillers along both sides of the hip line, ensuring the combs face downwards and outwards.
- 5 Position the Hip End Cap:** Place the hip end cap so it fits flush with the front edge of the sheets.
- 6 Install the Hip Flashing:** Lay the hip flashing over the hip end cap, aligning it evenly on both sides of the hip line.
- 7 Secure the Flashing and End Cap:** Use a stitching tool to fasten the hip flashing and end cap into the sheet below, spacing the fixings approximately 400mm apart.



Installing and Securing the Apron Flashing

- 1 Measure and Mark:** Measure 178mm up from the batten height along the length of the abutment and mark this line.
- 2 Scribe the Line:** Scribe along the marked line, creating a groove that is 2-3mm wide and 25mm deep.
- 3 Ensure Proper Spacing:** Maintain a 10mm air gap between the battens and the wall.
- 4 Double Batten the Area:** Install double battens at least 10mm away from the wall to provide additional support for the sheets.
- 5 Install the Pantile 2000 Sheets:** Place the Pantile 2000 sheets on the roof area, ensuring they are positioned up to 10mm from the wall. Secure the sheets with main fixings into the timber purlins below.

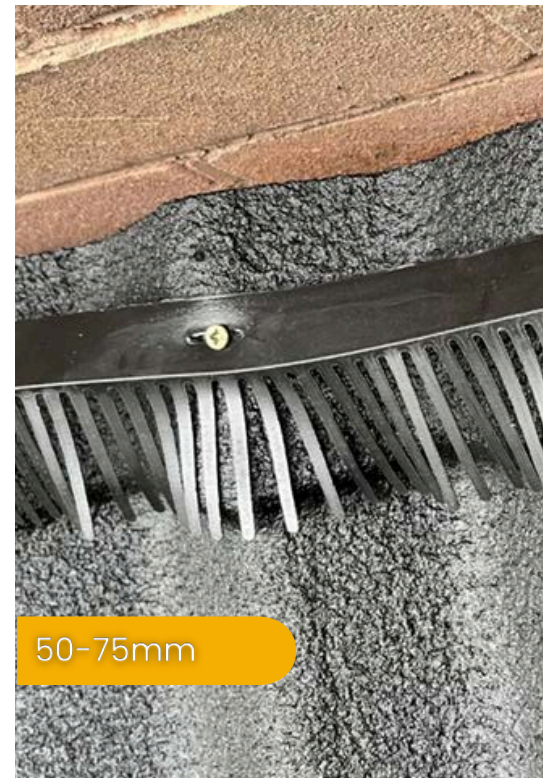


Installing and Securing the Apron Flashing

- 6** Position and Fix Comb Fillers: Place comb fillers along the sheet, approximately 50-75mm from the wall. Fasten them using self-tapping screws into the high points of the sheet, spacing the screws every 3-4 peaks.

- 7** Install the Apron Flashing:
 - Position the apron flashing over the sheet, ensuring the return of the flashing fits into the scribed area
 - Secure the apron flashing into the sheet below with stitching screws

- 8** Seal the Scribed Area: Apply silicone sealant to the scribed area, matching the colour of the flashing for a finished look.



Installing and Securing the Sidewall Flashing

- 1** Batten the Roof: Install battens up to the wall, making sure the membrane is folded upwards.
- 2** Measure and Scribe: Measure and mark a line 150mm above the battens, extending the full length of the rafter. Scribe along this line to a width of 2-3mm and a depth of 25mm.
- 3** Install the Pantile 2000 Sheets: Place the Pantile 2000 sheets up to 10mm from the wall and secure them with main fixings into the timber purlins.
- 4** Install the Sidewall Flashing:
 - Begin installing the sidewall flashing from the eave upwards, ensuring the upstand is flush with the wall
 - If using multiple pieces of flashing, ensure each piece overlaps by 100mm
 - Fix the flashings into the sheet below with stitching screws spaced at 600mm intervals



Installing and Securing the Sidewall Flashing

5 Measure and Cut LEADAX:

- Measure the distance from the horizontal part of the sidewall flashing to the scribed line. Transfer this measurement to the LEADAX flashing
- Cut the LEADAX using tin snips or a similar tool



6 Install the LEADAX Flashing: Insert the LEADAX into the scribed area, ensuring it is dressed down flush against the wall and extends over the upstand of the sidewall flashing.



7 Seal the Scribed Area: Apply silicone sealant in a matching colour to the scribed area to ensure a watertight seal.

