

Prefix **WARM**roof®

INSTALLATION GUIDE



NOVEMBER 2022
VERSION 2.9

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INTRODUCTION.

This universal guide provides a general overview of the installation of the WARMroof. Due to the nature of bespoke installations, any areas or details not covered in this guide can be discussed with our technical support team on 01254 871800. The Prefix WARMroof® is delivered as a pre-fabricated kit. You will have a clearly marked location plan showing the position of each pre-cut component, the numbers and letters on the plan correspond with those labelled on the components for ease of re-assembly. Please refer to these plans when requested to ensure measurements and components all relate. **READ OUR TIPS & TRICKS ON THE LAST PAGE!**

IMPORTANT NOTE: PLEASE READ BEFORE COMMENCING INSTALLATION

The Prefix WARMroof® weighs approximately 53kg/m², this weight must be considered before installing the product to ensure the new or existing side walls are structurally capable of supporting the loadings of the WARMroof. It is the responsibility of the installation company to ensure that proper structural provision has been made during the design and build of the side wall system. Prefix Systems have a full range of structural solutions for both new and retro fit installations. These are available from stock and our technical team can be contacted to discuss options further on **01254 871800**.

Check for damage and that all components have arrived. We recommend that all packaging is opened on delivery and the components checked against our packing lists. For any damaged or missing components please contact a member of our Aftersales Team on 01254 871800.

Tool List - not exhaustive

- Tape Measure
- Drill bits Ø4.5mm Ø5.5mm, Ø8mm, 4mm steel bit
- Masonry Drill Bits (min 200mm reach) Ø8.0mm
- Battery Drill / Driver PZ1,PZ2,PZ3,PH2
- Screwdriver Bit
- Silicone Gun
- Foam Gun
- Working platforms

Health & Safety

It is the responsibility of the Installation Company to ensure the safety of the whole fitting team, and their customers.

A risk assessment should have been completed upon the survey to identify and reduce risks on site, which should have been understood before commencing the install. The use of ladders and safe working platforms should be used in line with BS EN 131. As stated on page 2, this roof system is substantially heavier than a traditional conservatory. Please take this into account when lifting heavy panels, aluminium sections and steel beams, using two man lifting techniques where necessary along with any lifting aids that may be of use.

Careful consideration should be given to the safe disposal of packaging materials.

Design Options

The Prefix WARMroof® system is available in a range of styles including, Georgian, Victorian, Lean To and Gable. These roof styles can be enhanced to suit a wide variety of site scenarios with the use of Valleys, Drop Valleys, Box Gutters, Hipped Ends and Hybrid Glass Sections to create the most versatile warm roof on the market.

Roof Pitches

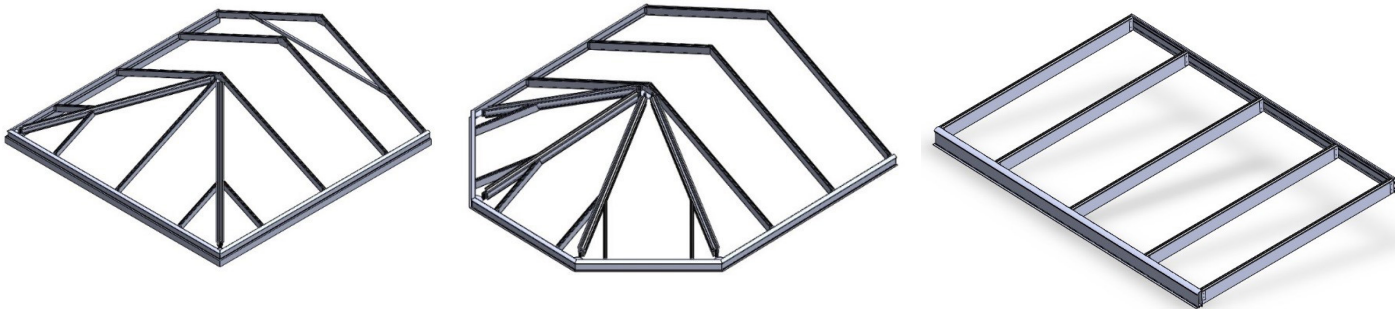
Envirotile Roofs:	12.5 - 40°
Tapco Tiles:	14 - 40°
When Using Velux®	Minimum Pitch is 15°

Aluminium Extrusions

Components used on the WARMroof are extruded in 6082 T6 and 6063 T6 Aluminium.

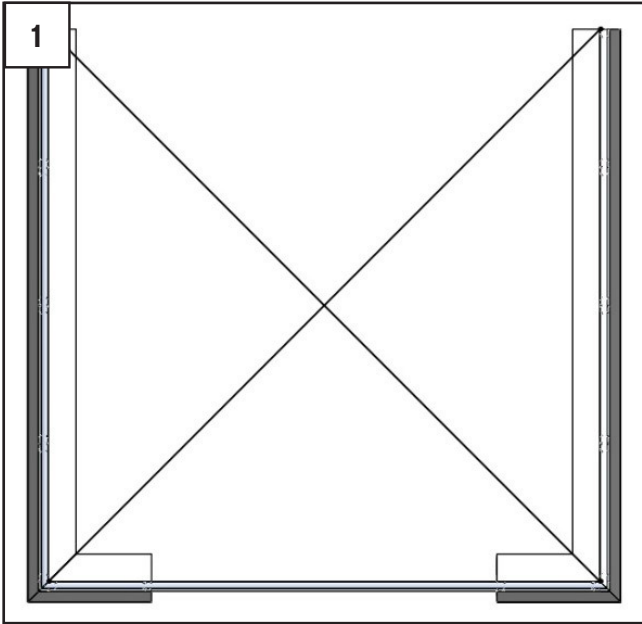
Tile options:

- Envirotile** – Available in Black, Grey, Brown and Terracotta. Hips and Ridge finished with colour coded aluminium covers.
- Tapco** – Available in Black, Grey, Brown and Terracotta. Hips and Ridge finished with Tapco Hip and Ridge Slate (Other Tapco options available on request, but may incur an increase in price and lead time).
- Britmet** - Available in Charcoal, Slate, Ash, Oak, Amethyst, Sunset & Sunshine.
- Concrete or Clay Tiles** – Roof proven to accept concrete/clay tiles. Please contact Prefix technical with information on the tile specification to ensure the roof is designed accordingly (tiles sourced by others).
- Internal Finish:** Foil Back Plasterboard required when finishing internal face of WARMroof (not supplied by Prefix). If finishing in any other cladding, suitable vapour shield should be used.

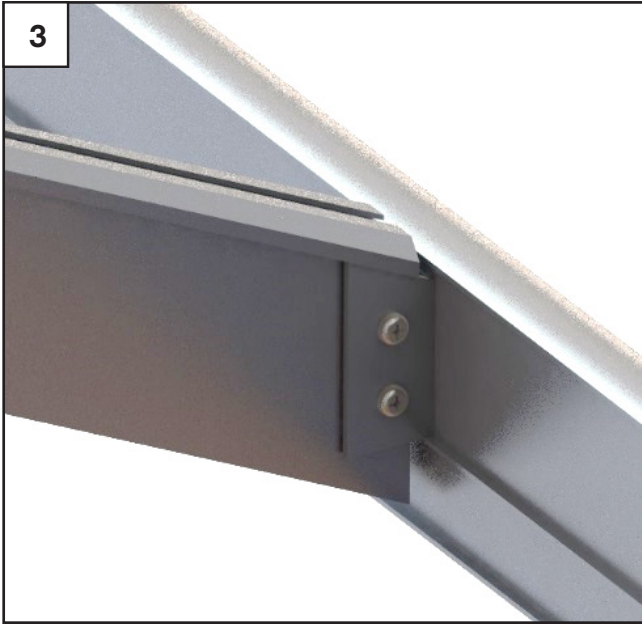


GEORGIAN INSTALLATION.

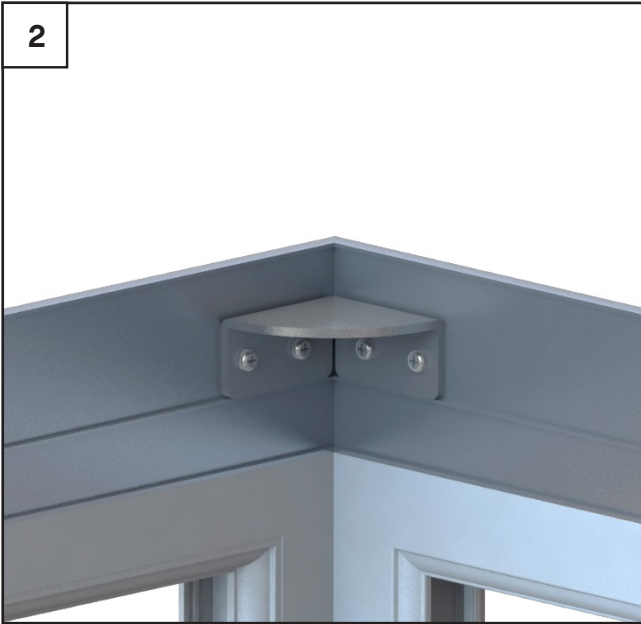
Frames & Eaves Beam



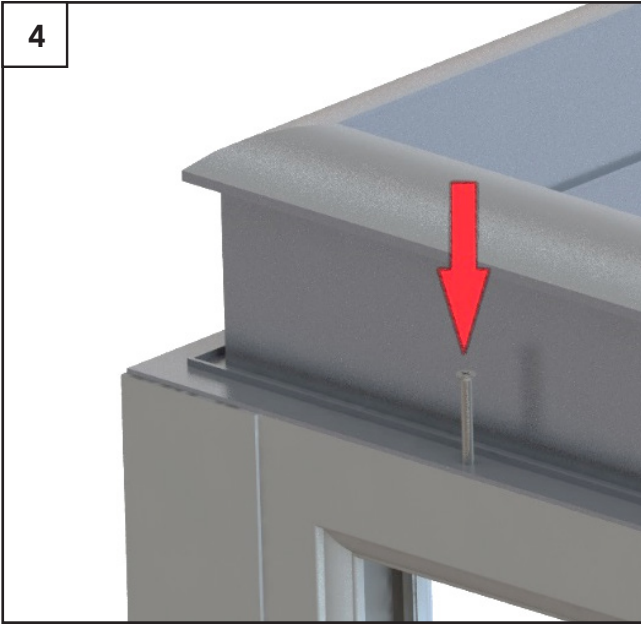
Float Eaves Beams on frames, line up with internal edge of frames/internal face of external skin of brick, checking all dimensions and diagonals are correct. Do not fix down until all A-frames and Rafters are in Position.



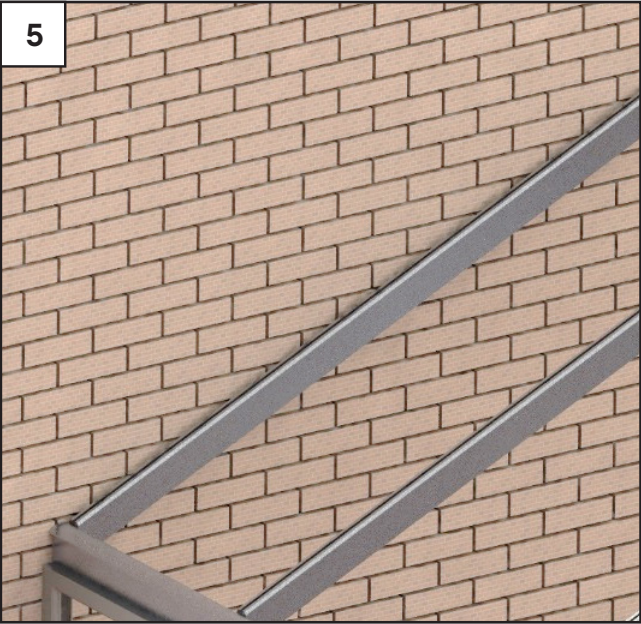
U-Channel Brackets will be pre-positioned on the back of the Eaves beam. Drop the A-Frames into the brackets (using Rafter Location Plan in Job paperwork). Shoulder of rafter should rest on the top of the bracket automatically setting A-Frame at correct height. Secure in position using 4 x M6x16mm Pan Pozi Self Tapping Screws - 2 x each side.



Eaves are connected at corners on back face using the corner brackets (90° Corner shown). Fix using 4 x M6x16mm Pan Pozi Self Tapping Screws.



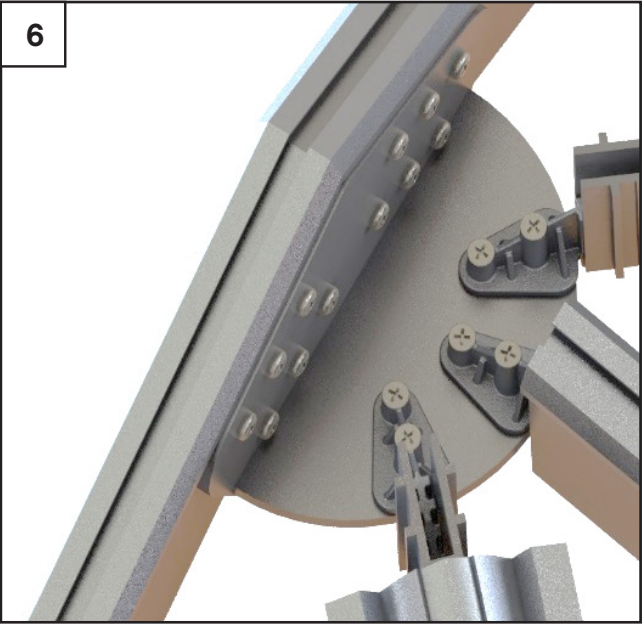
Once all bars are in position fix eaves beam down to frames. Fix at 450mm centres and 150mm from each corner. If fastening to brick work suitable fixing straps should be used (not supplied by Prefix). If fastening to new frames, fix up through unglazed frame into underside of eaves beam.



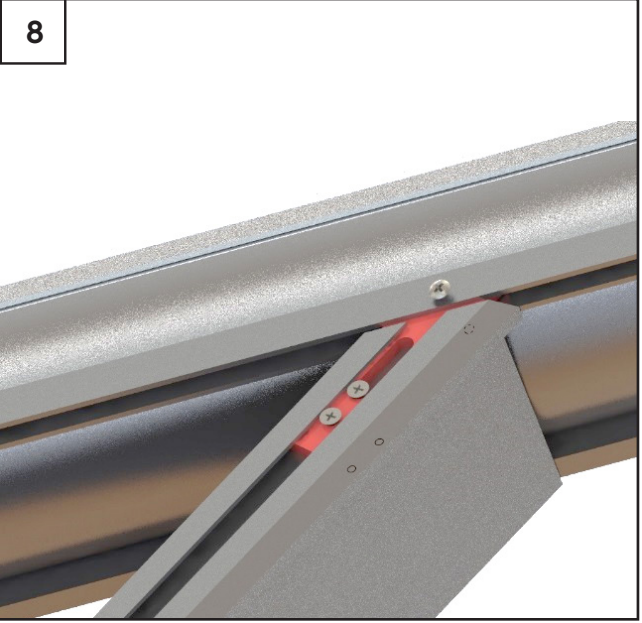
Starter A-frame set 25mm off house wall to allow for uneven host walls. Pack between ensuring A Frame remains vertical, and fix through A-Frame back to host wall using suitable substrate fixings, 150 from each end and every 500 centres. Strips of insulation sent out to fill any gaps at host wall.



Position the Hip Bar Assembly at the eaves. Line up Tennon to its marked location and fix down to the eaves corner bracket using 2 x M6x50mm Countersunk Taptite Self Tapping Screws.



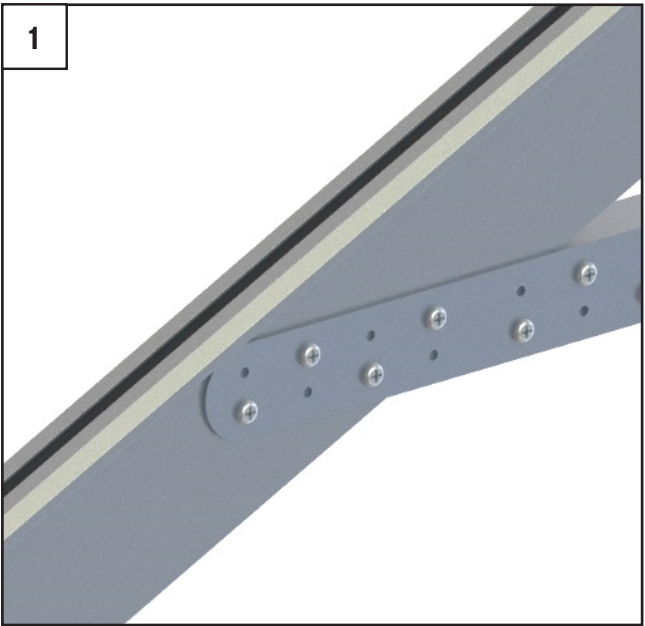
Hip Bars and Radius Ends
Position the Hip Bar Assembly or any spider bars on to the Rad End. Line up the Tennon to its marked location and fix down to radius end plate using 2 x M6x50mm Countersunk Taptite Self Tapping Screws.



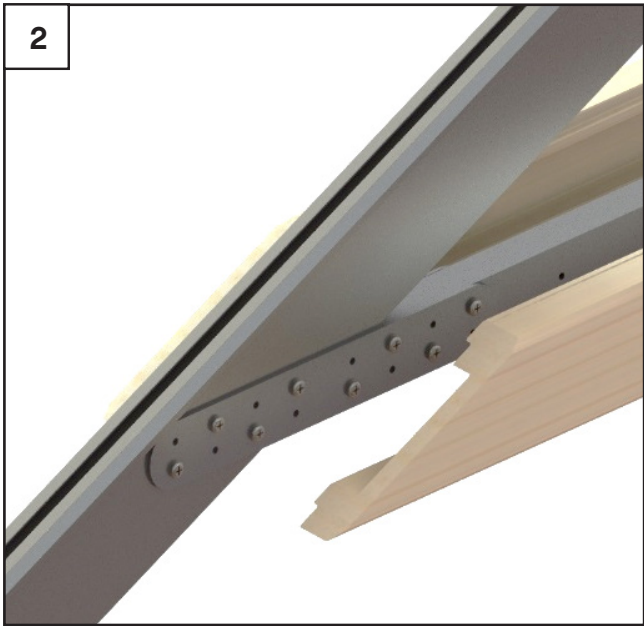
Jack Rafters
To fit Jacks to hips, back off screw in end of jack and slide connector plate back into end of bar. Drop Jack into rafter bracket on eaves beam and line up against marked position on Hip Bar. Once jack is in place, push the jack plate up into the slot in the side of the hip bar and tighten screw back up in the jack plate. Drill and fix another 3.8x40mm self-drilling screw through the jack plate into the rafter to ensure no slippage on the slot fixing. Fix another screw down through hip wing to secure plate.

Once all frame work is in position, double check to make sure all projections, dimensions and pitch are correct, square up on frames and secure to frames. Ensure all screws are securely fastened. Tie bars are usually pre-assembled on the A-Frame by Prefix, however if in any case they are not, fit them to the rafters at this point before any of the panels are installed. See page 6.

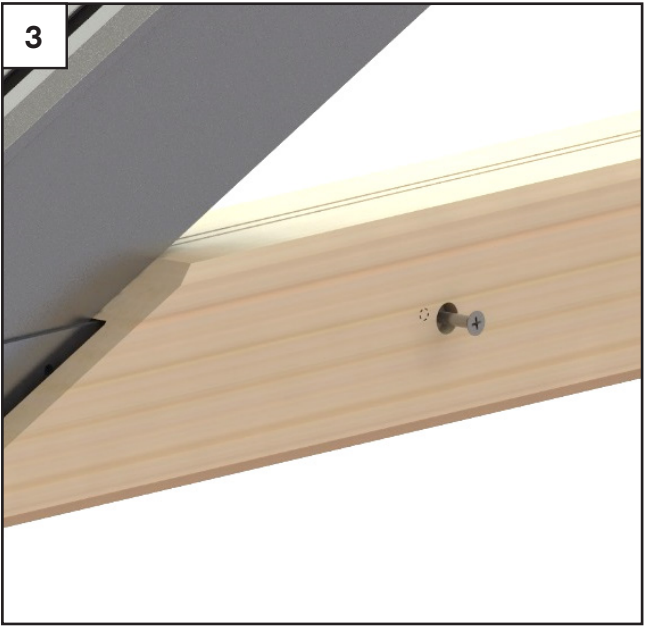
TIE BAR INSTALLATION.



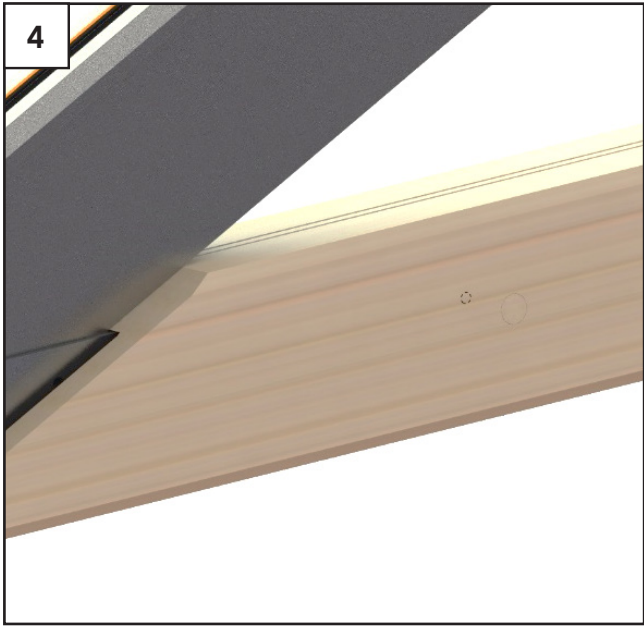
Slide Tie Bar into position from the underside until the mitre sits flush with the underside of the rafter. The plates should also sit tangent to the underside of the shoulder on the rafter as shown. Fix tie bar in position using 4 off M6x16mm Taptite screws per bracket. 4 brackets per tie bar. NOTE: not all holes need to be fixed through. Just fix 4 of the most suitable holes. Bracket designed to suit entire pitch range. See WARMroof Technical guide for further assistance if required.



To fit the claddings wrap timber round each side of Tie Bar. This is the same profile both sides which interlocks. Centralise using packers and clamp in position. Can be glued before clamping as an extra measure if required using wood adhesive.

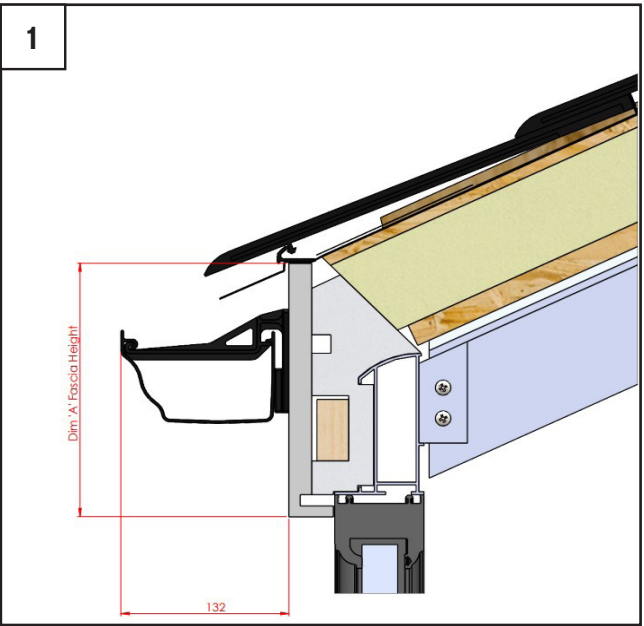


Using 4.8x30mm countersunk self-drilling screws secure OPUS claddings to Aluminium Tie Bar. Counter bored holes will already be in timber at set spacing's of approx. 500mm



Using the plugs provided, tap in until flush with external face of timber cladding. Range of plugs supplied, line up grains where possible to minimise visibility of the plugs. However due to the use of natural materials they will remain visible, yet subtle.

FASCIA AND SOFFIT CONFIGURATION.

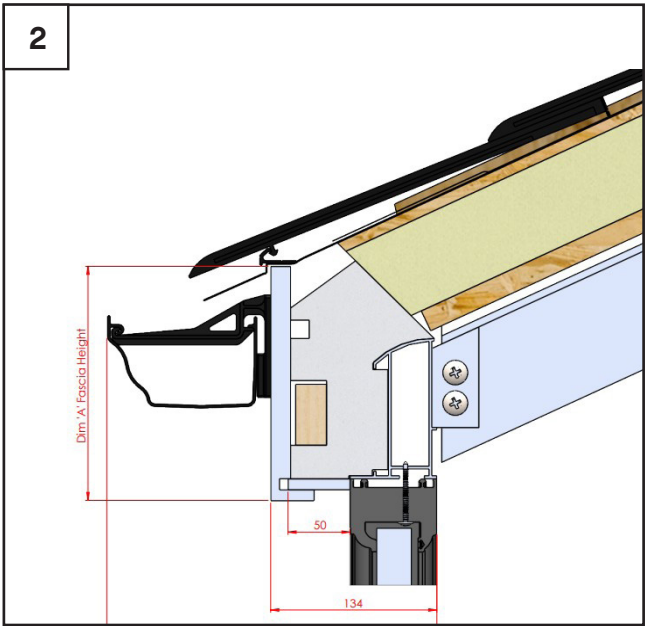


Pitch °	Dimension D
5	220
10	214
15	208
20	203
25	199
30	198
35	196
40	195

Dimension 'A' Fascia Height

86mm wide EPS Profile (C0039) on all pitches from 5-40°.

For jobs sat on frames all round only.



Pitch °	Dimension D
5	218
10	209
15	200
20	194
25	186
30	182
35	176
40	171

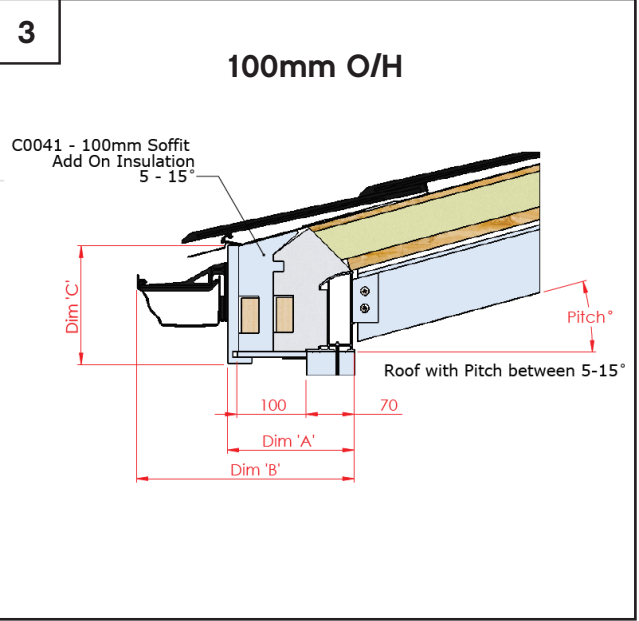
Dimension 'A' Fascia Height

50mm soffit overhang: 116mm EPS Profile (C0040) on all pitches from 5-40°. (Example shown above with 50mm soffit on 70mm frames.

The same insulation is used here when a roof sits on 100mm brickwork or brick columns (when fascia sits flush against brickwork).

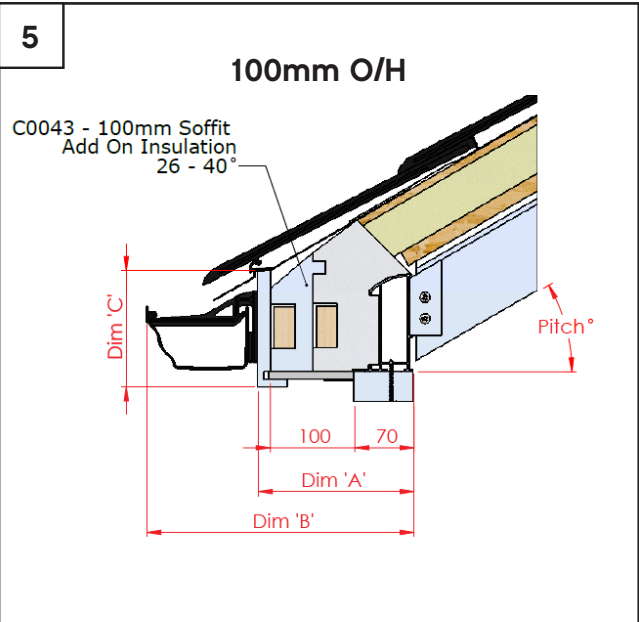
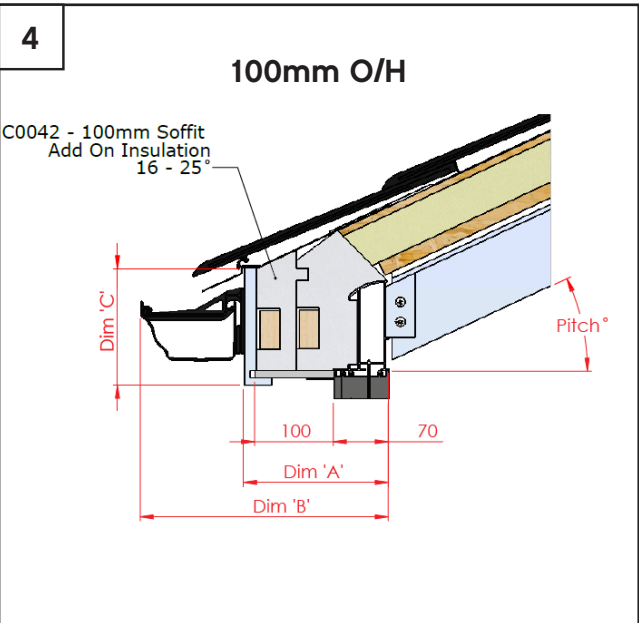
Soffit is supplied for window and door openings to run from fascia back to frames.

Continued on page 8...

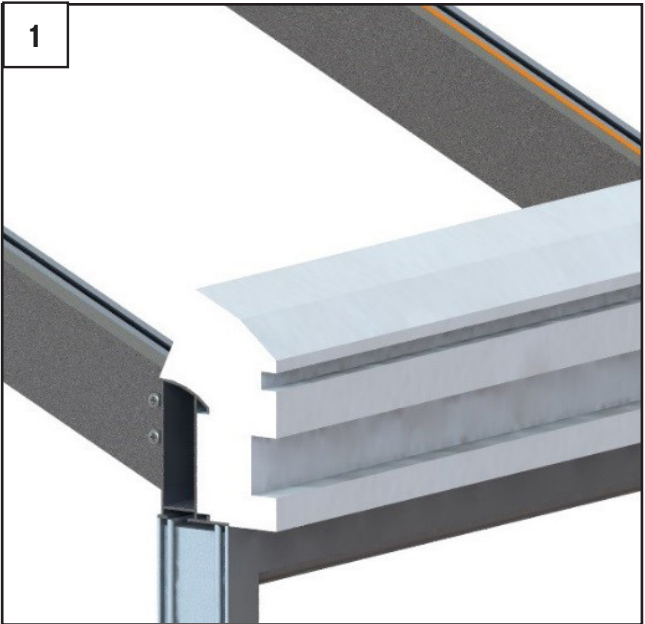


Pitch °	Dimension D
5	213
10	200
15	187
20	175
25	163
30	152
35	141
40	129

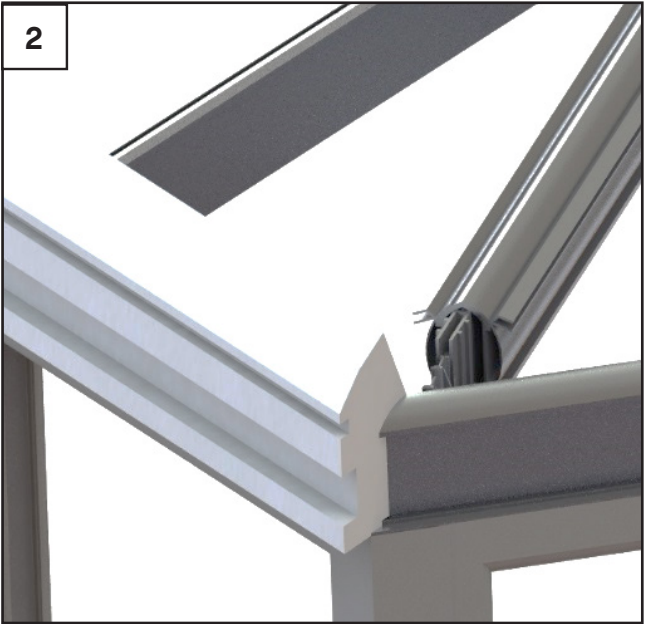
Dimension 'C' Fascia Height



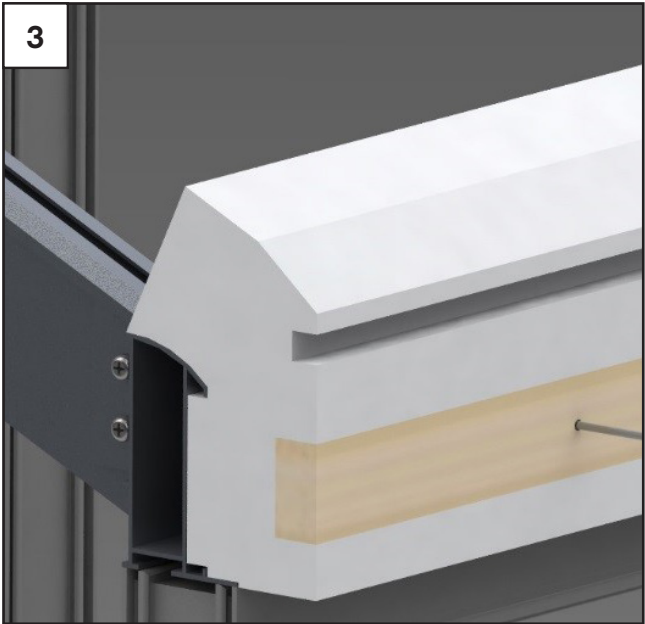
EAVES INSULATION INSTALLATION.



Wire cut EPS insulation push fits over the eaves beam to insulate the aluminium. See Fascia and soffit detail page 10 for more detail on which product has been supplied. Insulation as shown in this example is to suit a 100mm soffit.



Insulation supplied in 1200mm lengths and require cutting in at corners to suit. On gable ends, run insulation 50mm longer than eaves, to line up with edge of base panels.



Cut to length and fit 25x50mm timber batten into recess on front of insulation and fix through to Aluminium eaves beam to secure insulation.

60mm Bay pole screws supplied for 86mm narrow insulation.

109mm Bay pole screws supplied for 116mm wide insulation.



If the roof requires a soffit overhang. Additional EPS will be supplied. Push into front of eaves insulation until flush. Follow previous step cutting and fixing 25x50mm timber batten into front of insulation. Secure in position by fixing through battens using 90mm woodscrews supplied.

INSULATED BASE PANEL INSTALLATION.



Refer to your Base Panel Location Plan and start to slot the preformed insulated panels between the rafters, starting in alphabetical order as per your plan.

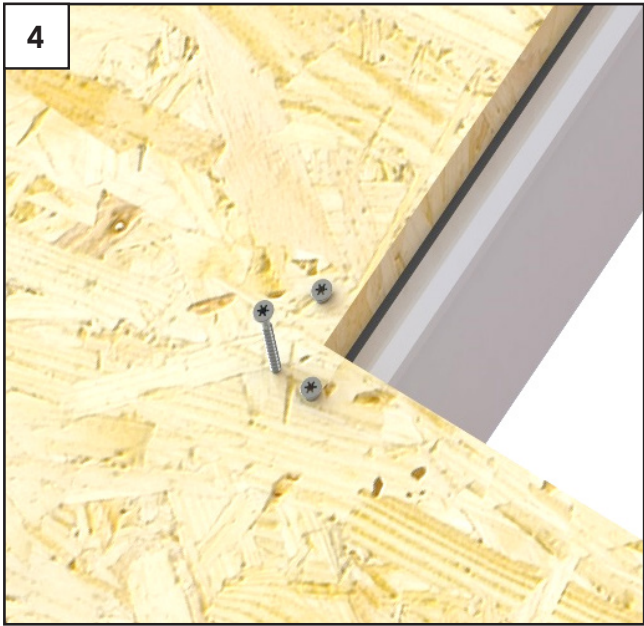


Fit all first row of panels around eaves beam first. Fitting these first will ensure all base panels hereafter will fit correctly. The top face of the panels are designed to fit 'tight' together, therefore they may need manipulating into position. Ensure the bottom end of the panels are all aligned.



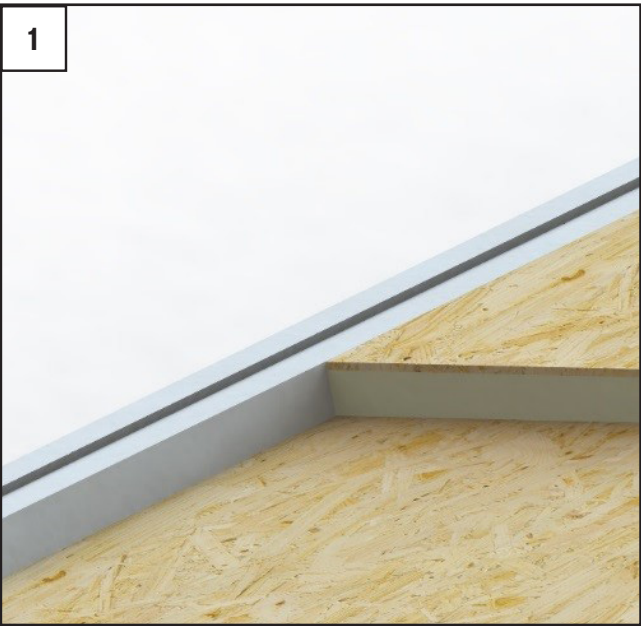
Measure in 10mm from edge of 15mm OSB and mechanically fix OSB to Rafter using 5.5 x 60mm torx head tech fast countersunk self-drilling screw. 6 x fixing required per 1200 x 1200 panel, 1 in each corner.

NOTE: Heavy Duty Rafters with Steel inserts will need pre-drilling before fixing (4mm drill bit).

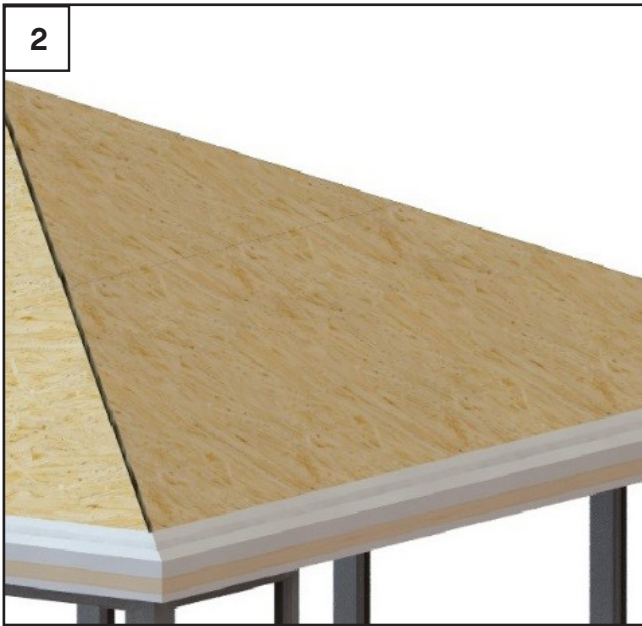


Once bottom row are secure, continue to fit rest of base panels, as per plan making sure panels butt tight together. Fix each corner to secure panels.

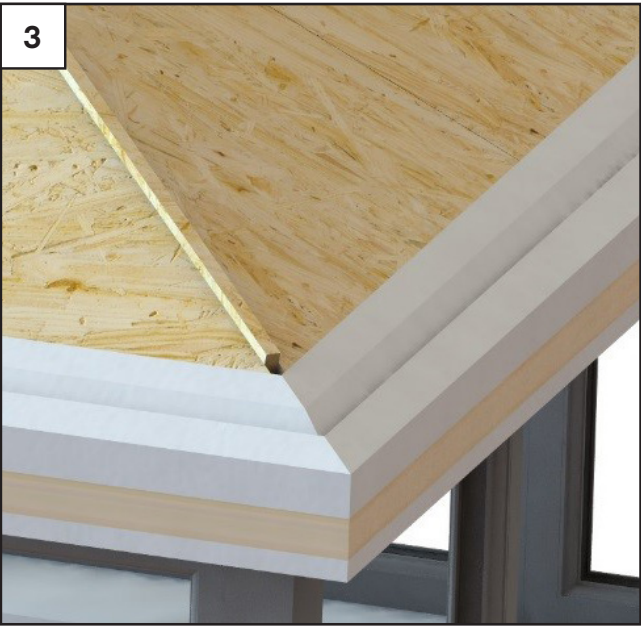
TOP PANEL INSTALLATION.



Top Panels are a pre-bonded 9mm OSB with 70mm phenolic insulation. Refer to the location plan for position of panels. Drop Panels on top of base panels. First row should sit tight against the upstand of the EPS eaves insulation.

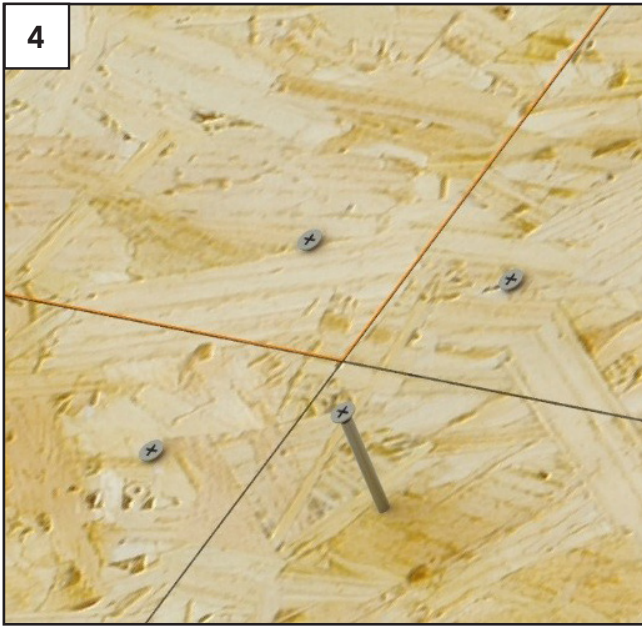


Fit remaining Top Panels in position. A visible 18mm Gap should be left at the ridge and hip positions to fit 18mm OSB timber spines.



Before fixing the top panels down, push fit the 15mm OSB timber spines into position on the hips and ridge. These are supplied at 1200mm long and may require trimming to size on site.

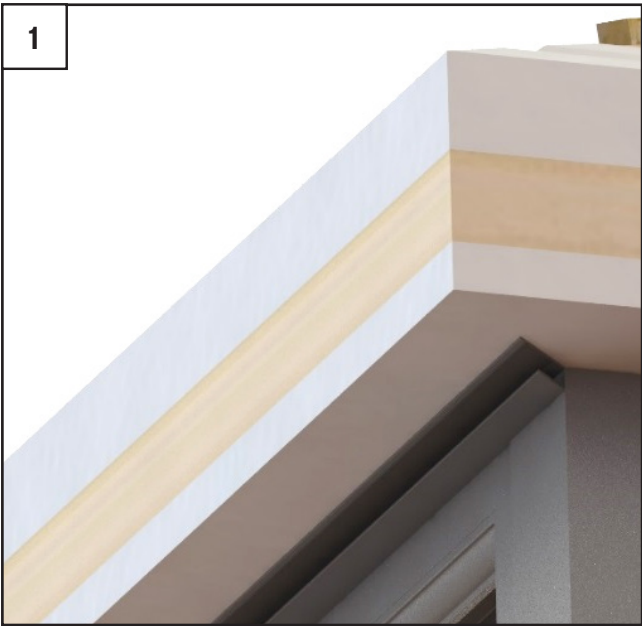
IMPORTANT: for hip soakers (see page 15 to fit correctly, Spines should protrude no more than 10mm above the edge of the top panels.



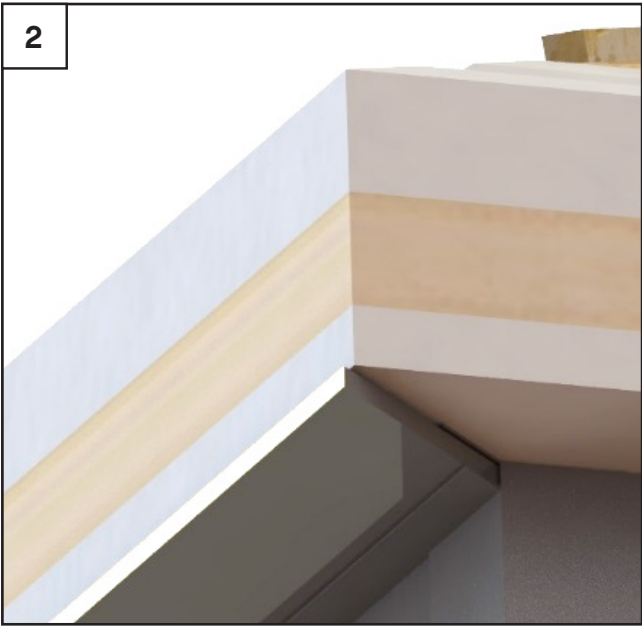
Fix the top panels down to the base panel OSB using 4.8 x 120mm woodscrews provided. Ensure you fix 9 screws per panel, 1 in each corner 75mm in from edge of panels, and across the mid-points. Fix triangle panels with appropriate quantity of fixings.

Secure Hip Spines to top panels on alternate sides up the hip using 4.8 x 90mm woodscrews supplied.

SOFFIT - IF SPECIFIED.

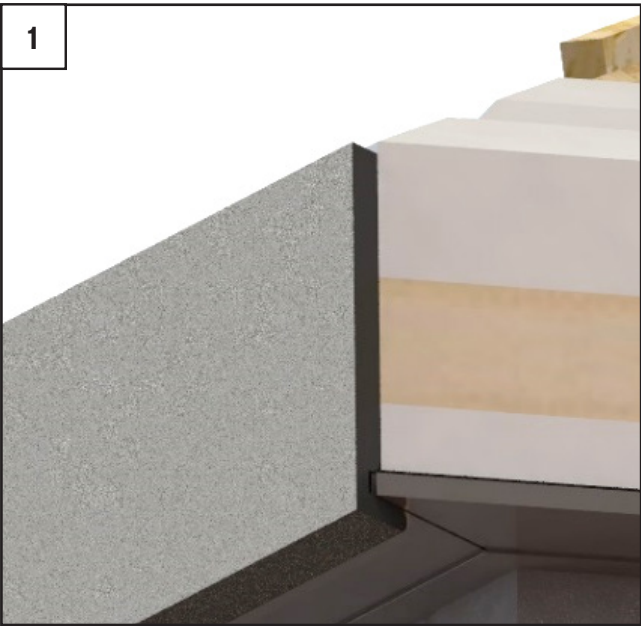


First fix the J-Channel to accept the soffit board. Offer this channel up to the roof/frames, measure and cut. Angle back to suit mitred corner joint. Fix the channel into the window frame, as tight to the underside of the insulation as possible.

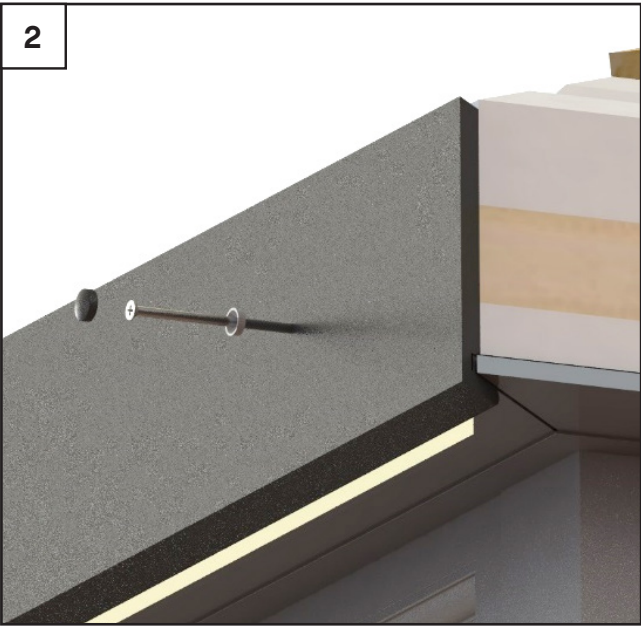


Offer the soffit board up to the roof sitting the board into the channel already in place. Mark the board and angle at corners to suit. Repeat around the perimeter of the roof. Using a soffit jointer (H Section, supplied in 30mm lengths) for any angles or in-line joints.

FASCIA INSTALLATION.

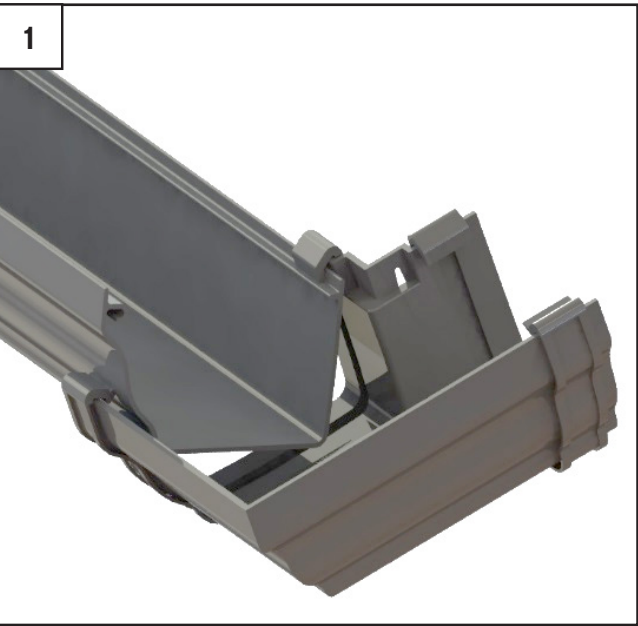


Offer the fascia board up to roof and position to suit. If using a soffit board locate it into the rebate on the back of the fascia board and check level at this point. Mark and notch out any fascia corners ready for fixing.

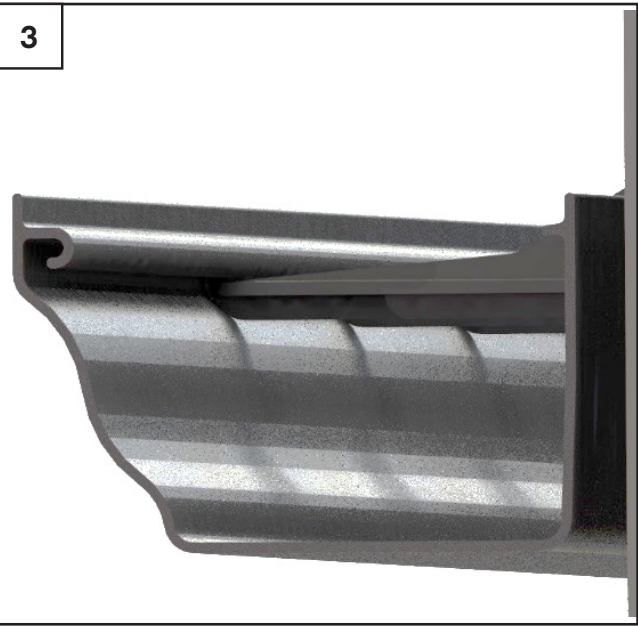


Fix the fascia board using 4.0x60mm woodscrews supplied (colour coded cover caps included). Measure approx. 65mm from bottom of fascia and draw a line down length of the fascia protection film to fix along. Check for level when fixing, maximum 500mm centres along the length. Joint covers are supplied for any in-line or corner joints.

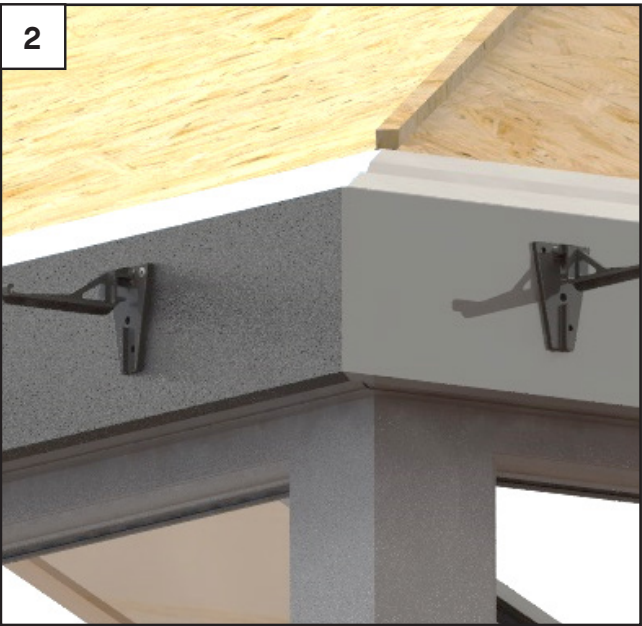
GUTTER INSTALLATION.



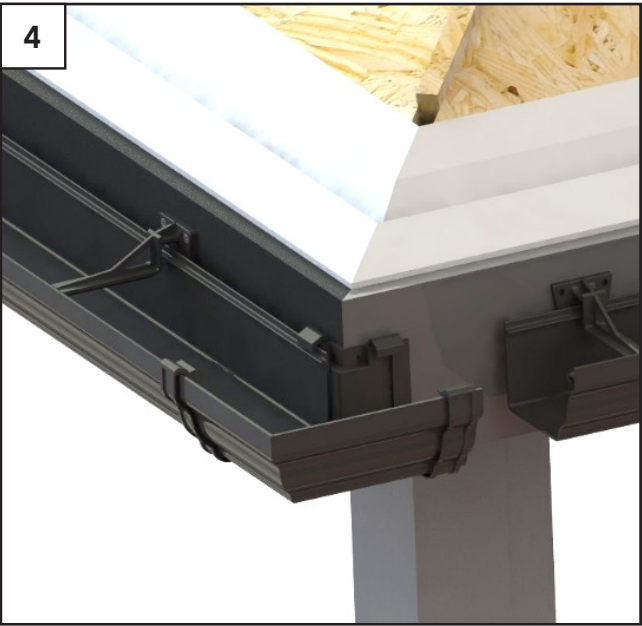
Measure fascia and cut gutter to length. On the ground build up the guttering fitting any gutter jointers and corners to 1 length of the guttering. Fit items by rolling under the back edge. Snap the integral clips on the adapters over the gutter.



Clip the front lip of the gutter into the brackets.



Fit the face fix gutter brackets to the fascia board using 4.0x40mm stainless screws provided at approx 500mm centres and 200mm from ends. Line top of bracket 25mm down from top of fascia board.



Ensure all clips are engaged and guttering is pushed up to insertion depths on all joints, corners and stop ends. Fit any drainage pipes.

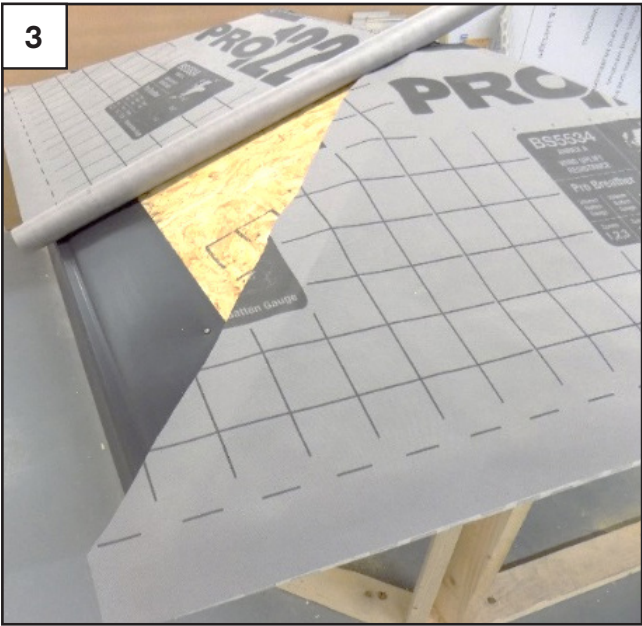
EAVES PROTECTION BOARD & MEMBRANE INSTALL.



Before laying the membrane, ensure that the eaves protector is installed directly onto board and over the fascia detail, it should sit on the fascia to provide an adequate overhang into the gutter of no less than 50mm.



Mitre and notch around any hip spines to provide a tight fit. Seal all joined sections of overlap of 150-200mm on straight joints.



Roll out the breathable membrane over the top panels, ensure the membrane overlaps the eaves protection boards. Working from the bottom up overlap the membrane by the sizes shown in table below. Allow for membrane to return 100mm up host walls and cover battens on any gable end (see page 19, step 2)



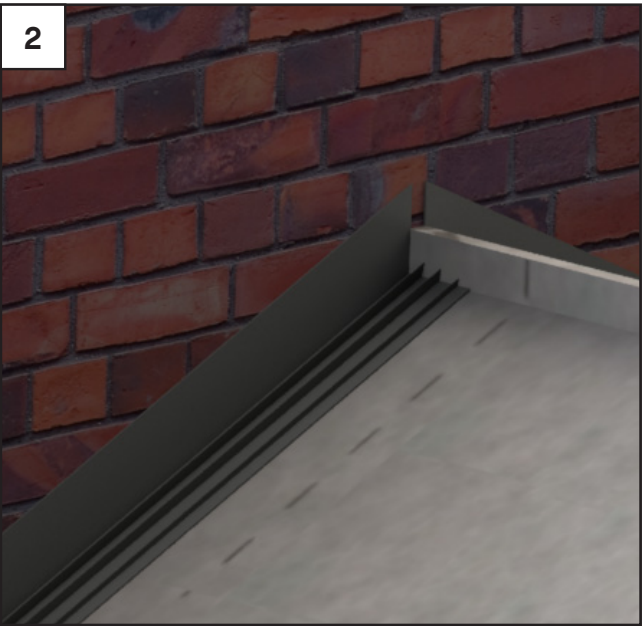
Ensure whole roof is sufficiently covered and staple membrane to top boards.

Roof pitch	Breather Membrane Overlap
Greater than 25°	100mm
20° - 25°	200mm
Less than 25°	300mm

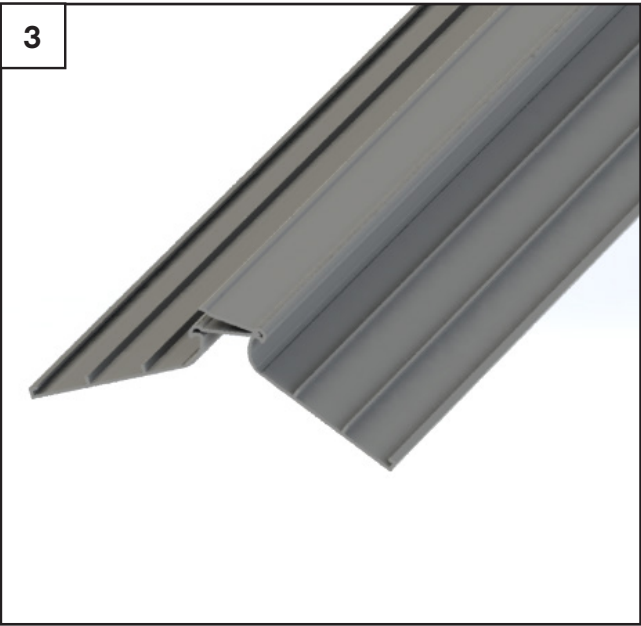
WALL SOAKER & HIP SOAKER INSTALLATION.



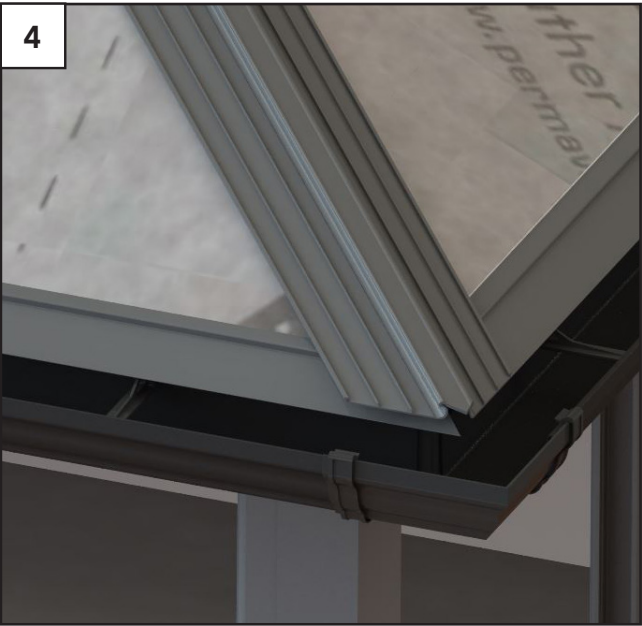
Lap the breathable membrane up onto the host wall 100mm to sit behind the soaker trim. Position the soaker against the host wall ensuring the bottom overhangs into the gutter. If fixing in place is required. Fasten back to host wall, NOT down into roof.



Mitre soaker at ridge then dress your lead or CONSERVAFLASH onto the soaker. Check flashing fully weatherproof before continuing.

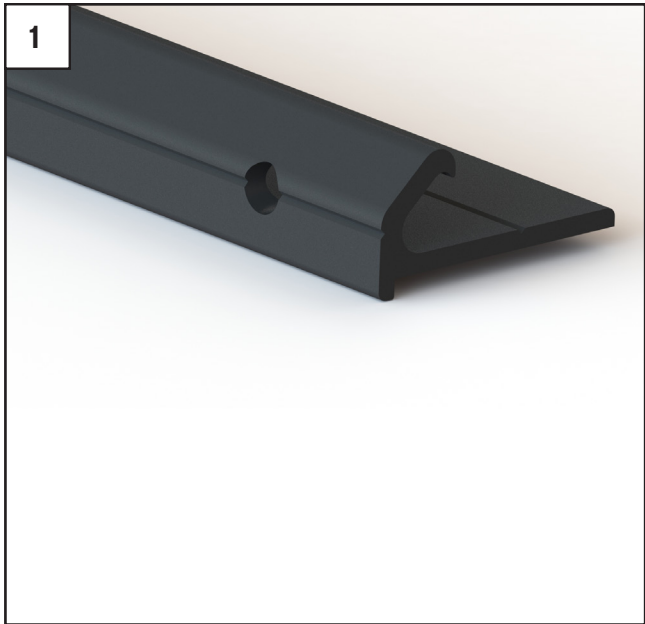


Take two hip soaker wings and squeeze them together along the mid seam. They should clip into place.

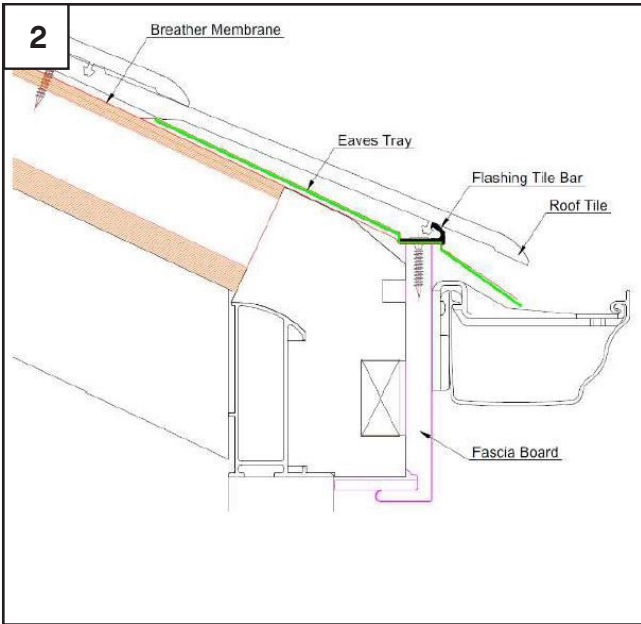


Position the assembled soaker on to the hip spine. Mitre the soaker at the Ridge or wall plate. Mitre at the bottom end of the soaker parallel to each eaves overlapping into the gutter as shown. Fix down into timber spines using 40mm stainless screws.

ENVIRO TILE INSTALLATION.



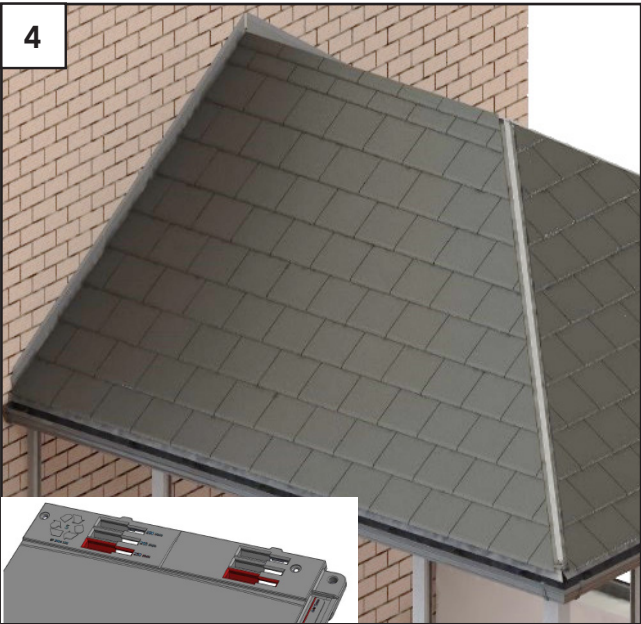
Mark and drill Ø5mm holes in front face of tile bar 100mm in from each end and 1m centres. Alternatively tile bar can be installed on 6mm packers to allow ventilation and drainage.



Line the tile bar with the lip of the eaves protector, up to edge of the wall soaker. Offer a tile into position to ensure sufficient overhang into gutter. Ensure the rail runs parallel to eaves. Fix starter rails down using 40mm stainless steel screws provided at 300mm centres and 100mm max from each end.



Position 1st tile into the starter rail, ensuring the locking tabs hook under the tile rail and fix using 40mm stainless steel screws. Continue along eaves leaving a 5mm gap between tiles Prior installation on the RH roof face the last tile against the wall need the male joint tab removing in order to locate tile against wall. Note: An expansion gap is required of 5mm between tiles, this is marked on each tile.



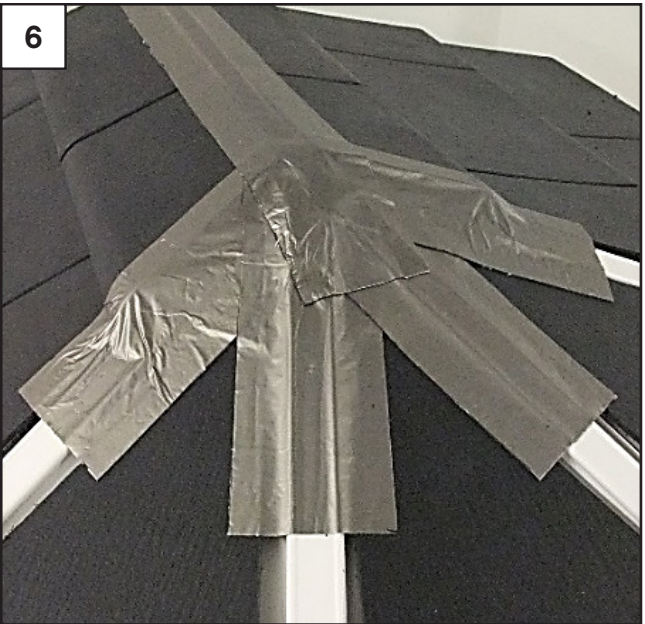
Tile remainder of roof. Fix tiles using the 40mm stainless steel screws provided, one screw per tile using the preformed fixing point, it is important not to over tighten the screws into the tile.

Note: As a general rule use the bottom slot (250mm overlap) when laying the tiles, as this gives the most coverage to suit all pitches

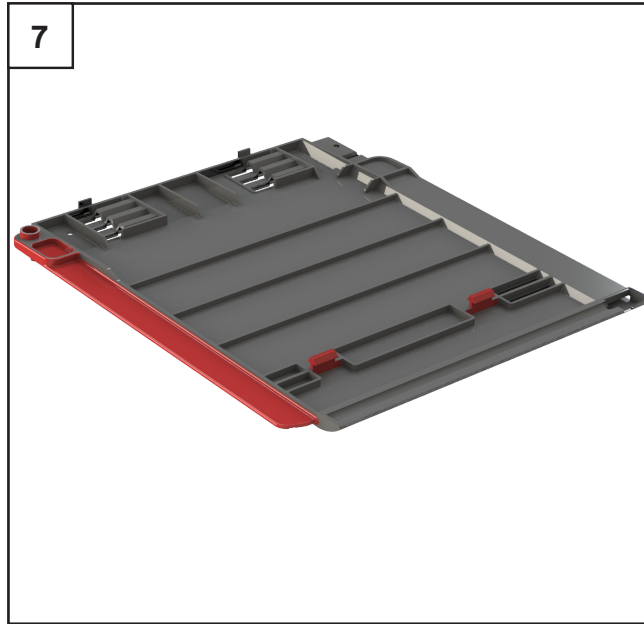


Using a panel saw cut down the last tile into the ridge / hip to suit. Tiles will also need to be cut or angled to suit on hip details, gable ends and against house walls. Note: Not to be fixed to roof in sub zero temperatures

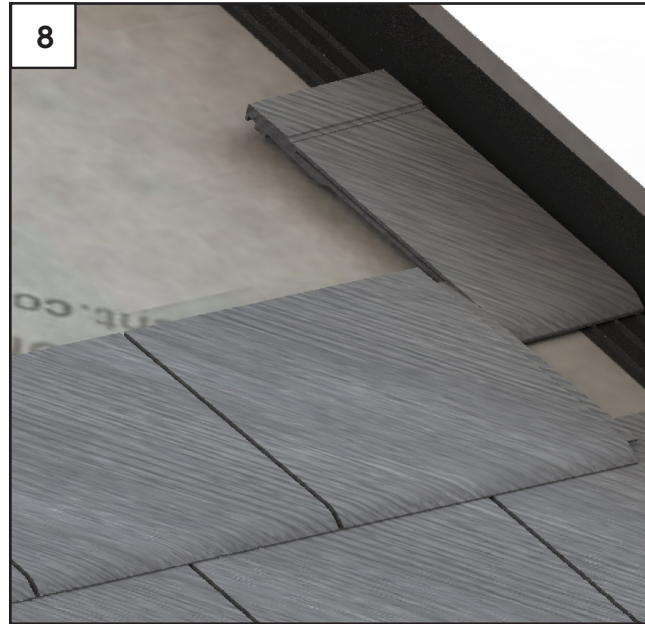
IMPORTANT - Ensure that the hip soakers are positioned beneath the last tile at the hip point (not ridge), this acts as a secondary drainage channel, should any water enter this channel it will be diverted away from the hip junctions and into the gutter system.



Once tiling is complete seal the full length of the ridge and 250mm down each hip using the roll of flash band provided, ensure fully weatherproof.



When installing tiles up against wall or Velux, remove highlighted tab (where necessary) and reduce size of arrow head carefully using stanley knife. By cutting 1 half of the arrow head off.

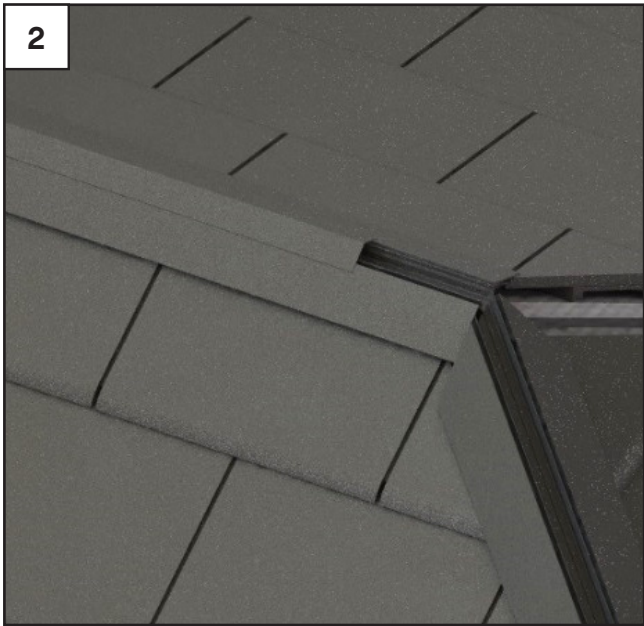


Slide roof tile into previous tile from above and knock arrow head into slot of the tile below. For details on tile at Velux flashing kit see details on page 23 - Velux Installation.

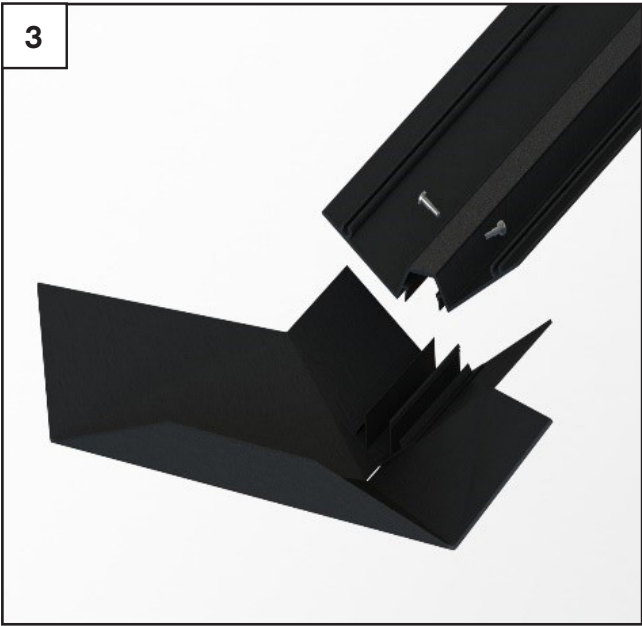
HIP & RIDGE CAP INSTALLATION.



Position Ridge cap on roof. Drill and fix base of ridge down to ridge spine using 40mm stainless screws provided then clip in the cover rail. When using an aluminium radius end cover, cut back the clip in profile by approximately 120mm.

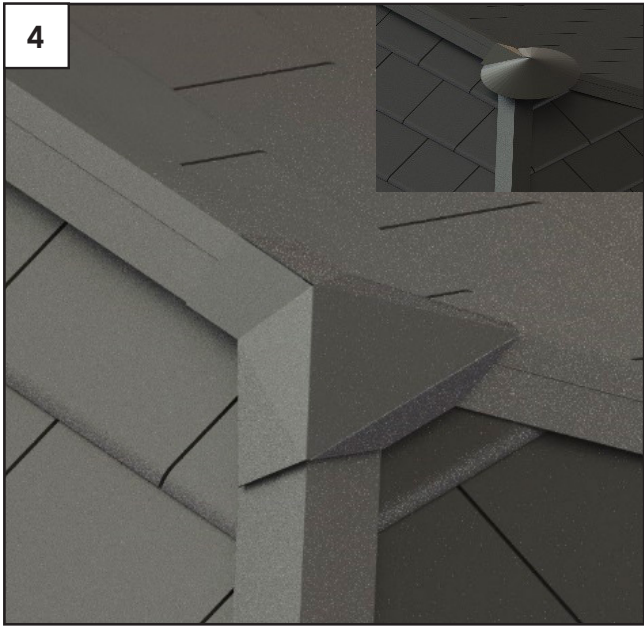


Place hip caps in position on roof so top of ridge lines through with the top of the hip caps, mark out and cut so they mitre in at the radius end. Drill and fix base of hips down to hip spines using 40mm stainless steel screws provided and clip in the top cap cover profile. Seal the mitred joints at the ridge.



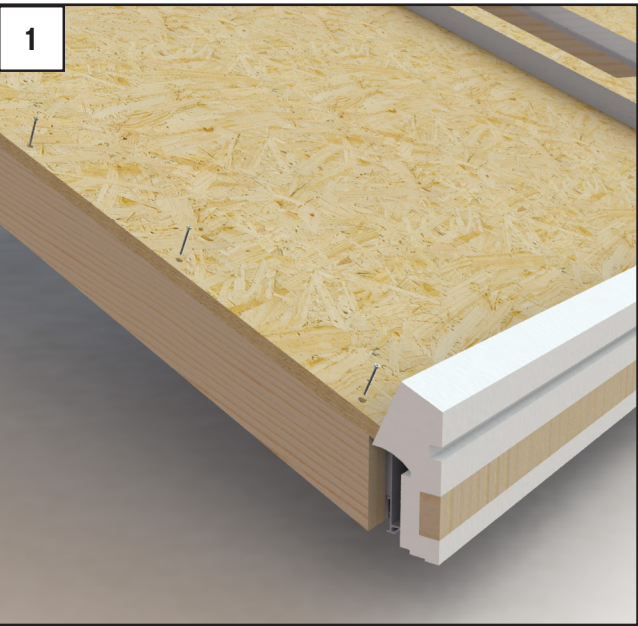
Prior to screwing down Ridge Cap to the roof, run silicone along underside of radius end cover 10mm in from edge, clip radius end cover into position on the Ridge Base Capping and turn over.

Using 2 Ø3.8 x 13mm self-drilling screws, fix through base capping into the legs on the radius end cover to secure cover in place.

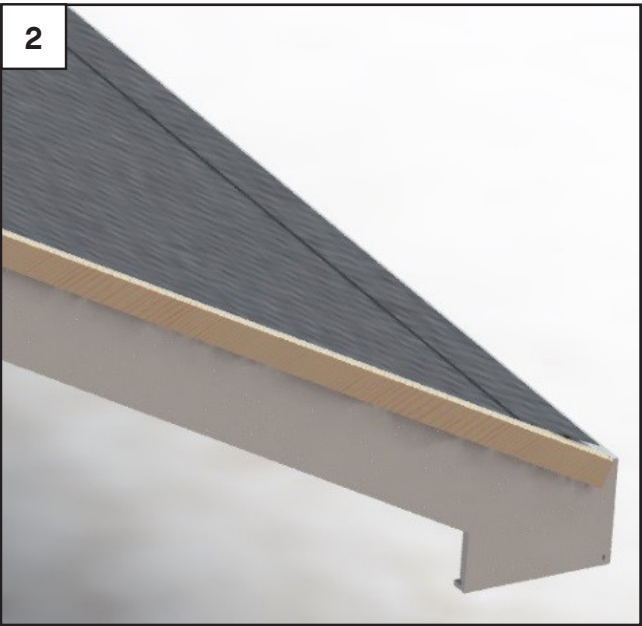


Position Ridge back on roof and screw into OSB spines using 40mm stainless steel screws provided. Using the cut down top profile, clip into Ridge capping and slide under the back edge of the Radius End Cover. Lead flash over ridge at host wall ensuring water tight. (Note: Radius End Cover can also be fitted at the end and fixed down from the top using colour coded cover caps over the screws in scenarios where step 3 cannot be achieved). On unequal pitched roofs a Round Radius End Cover will be supplied.

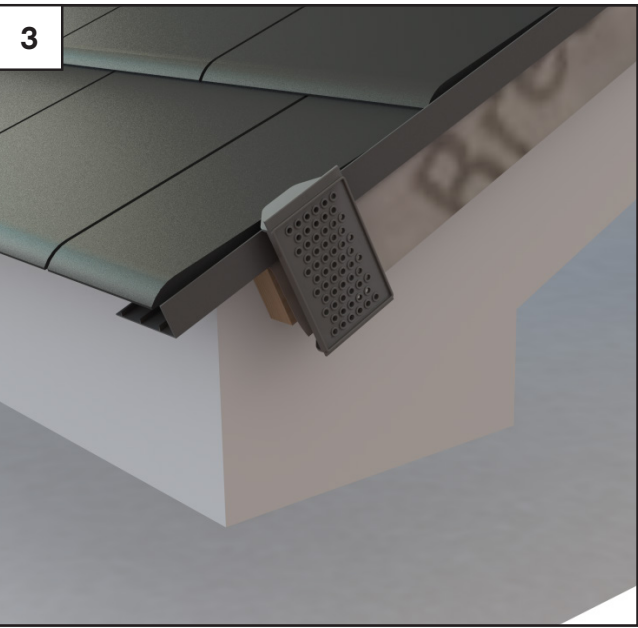
GABLE END INSTALLATION.



Fix 100x38mm timber (down through OSB) to the underside of base panels, flush with the edge of base panels.



After Fixing the Fascia Board to the Gable End or Lean-to End Timbers, fold back overlapping membrane and fix 25 x 50mm batten along the full length aligned to the upper edge and mitre as necessary. 70mm Wood screws are provided. Fold the membrane down over the batten and staple into place continuing to tile the roof as normal making sure the tiles finish flush with the front edge of the batten.

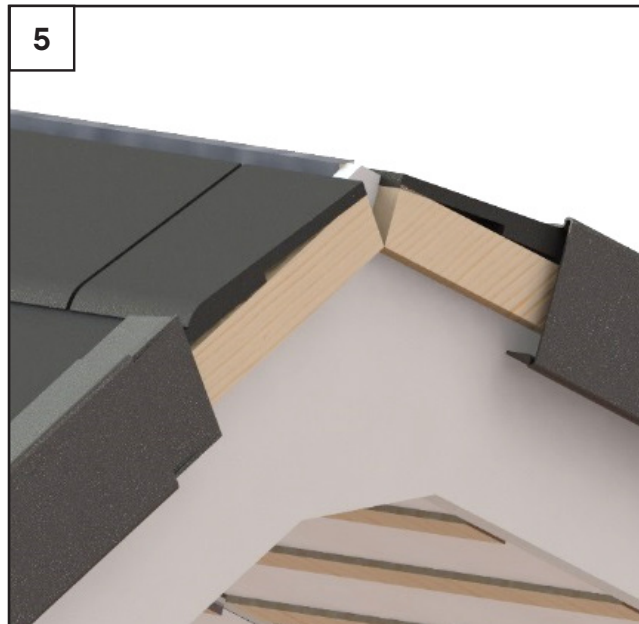


Using 40mm stainless steel screws, securely fix a Fixing Clip to the end of the fixing batten at the eaves. It is important to ensure that the flange of the fixing clip that is labelled "top" faces upwards. Screw through an appropriate hole so that it penetrates the centre of the batten.

When installing, it is important that the dry verge rests upon the highest point of the tiles. (Do NOT pull down when fastening to fascia).



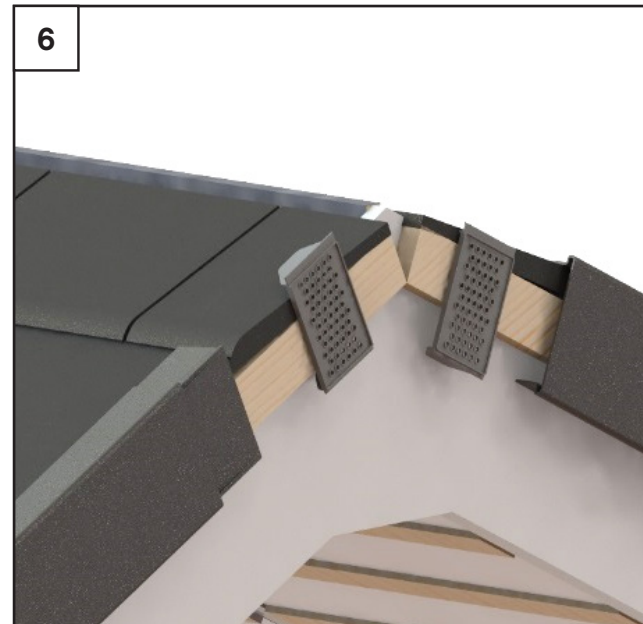
Hook the Linear Verge Unit over the top of the Fixing Clip and press firmly until it engages. Screw the tail end of the linear verge unit using 40mm stainless steel screws, through an appropriate hole so that the screw penetrates the centre of the batten strip. Avoid fixing too tight to tiles to avoid warping after expansion and contraction.



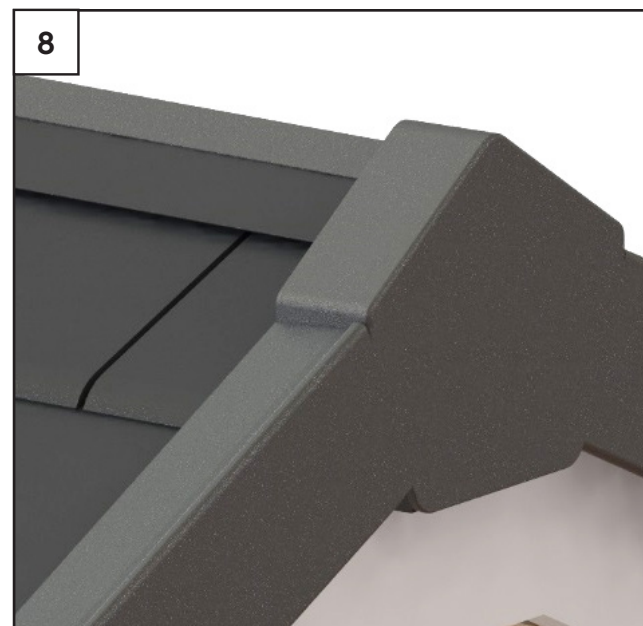
Continue to fit full lengths of the linear units up the run of the verge until all tiles have been covered or no full lengths can be fitted as shown. Once one hand of the verge is completed repeat steps 3 & 4 on the opposing verge, this time using the other hand of Linear verge units. **Always allow a 3mm gap between each dry verge connection.**



Cut down and mitre the final verge sections together install and seal as shown above.



For the final piece(s) of verge, fit another fixing clip approx. 100mm down from the apex (on both sides for a gable).

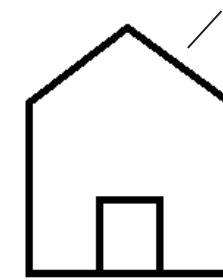


Install the Ridge Capping in the usual way to make sure it runs to the edge of the new verge. Attach the foam tape and silicone in front to prevent driving rain from tracking under the capping. Reattach and fix with the screws provided in the kit. Trim the Ridge Cover along the edge shown to allow a closer fit with ridge top cap.

DRY VERGE IMPORTANT NOTES.



Right Hand Dry Verge



Left Hand Dry Verge

Note: Careful attention should be taken when specifying 'Right' & 'Left'

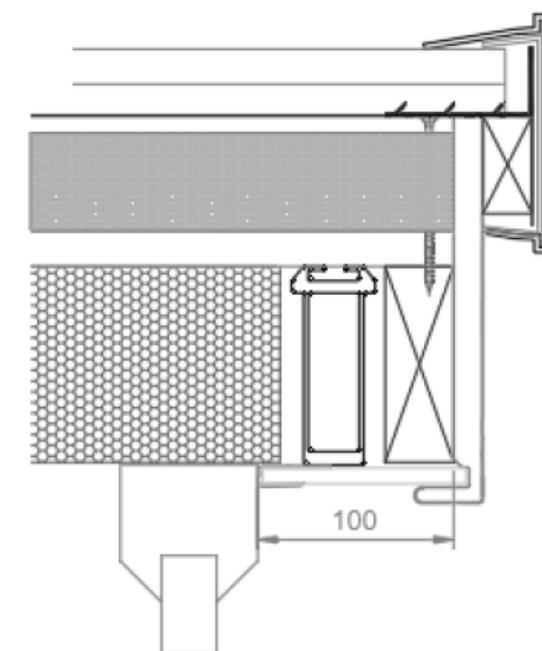
Lean-To roof designs will follow the same procedure using only the appropriate hand of components. Where a Lean-to meets the wall - the verge should be mitred finished and flashed over with the appropriate flashing.



Right Hand Dry Verge



Left Hand Dry Verge

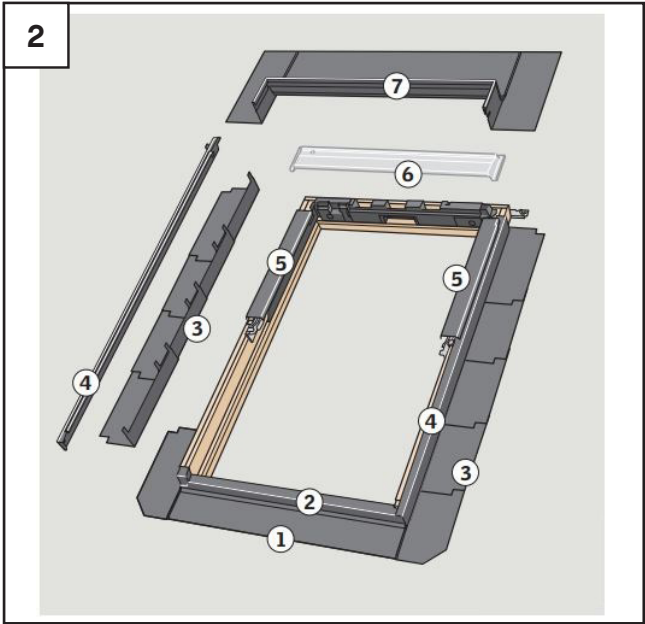
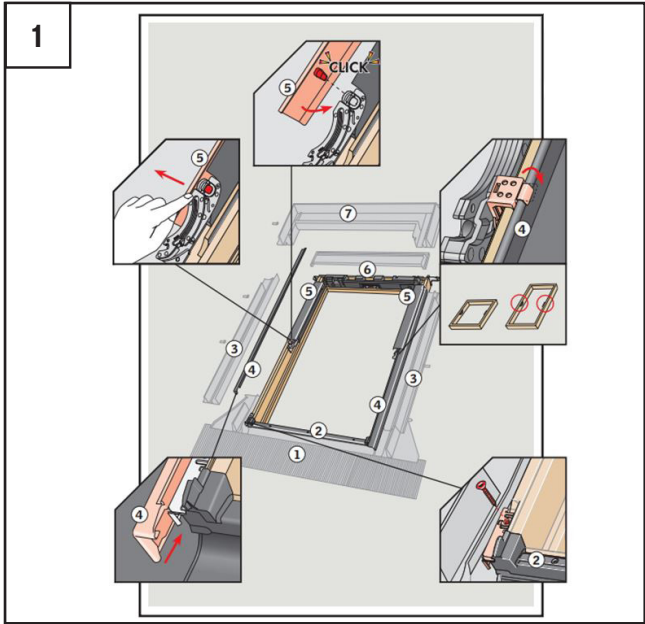


When installing, it is important that the Dry Verge rests upon the highest point of the tiles (do not pull down when fastening to fascia) A 3mm expansion gap is required between each Dry Verge connection.

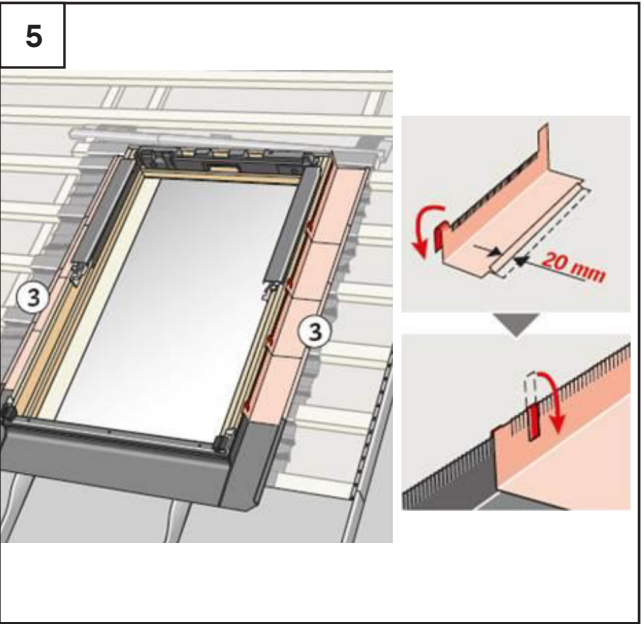
VELUX ROOF LIGHT INSTALLATION.



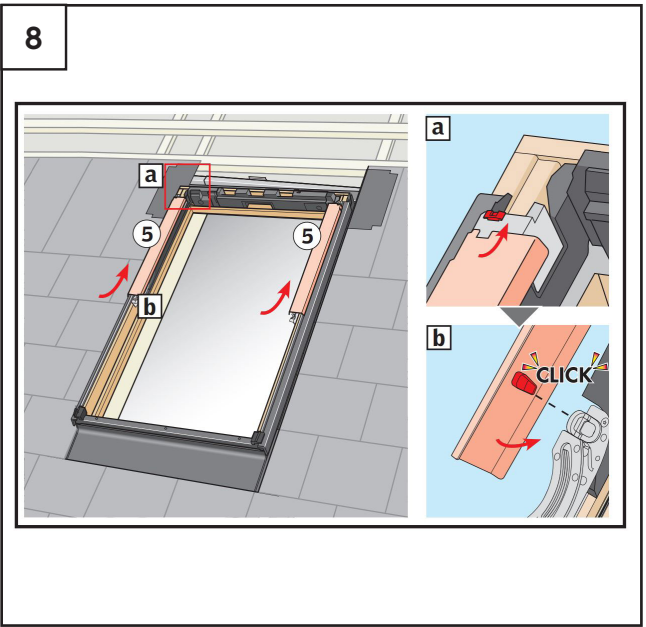
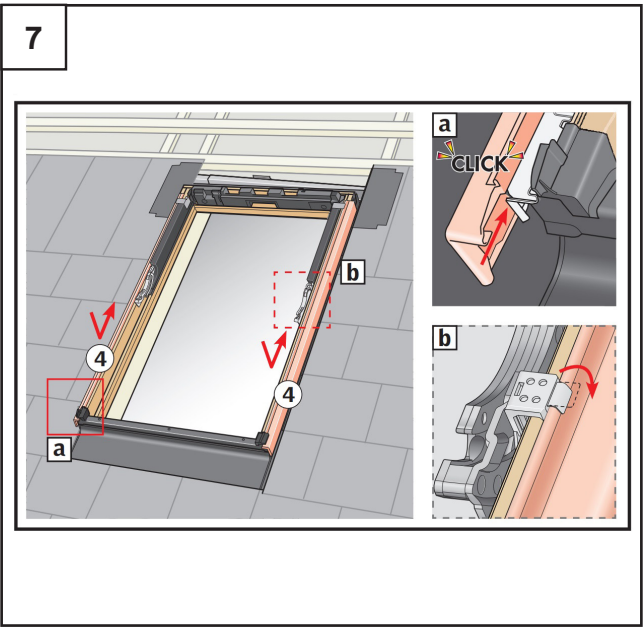
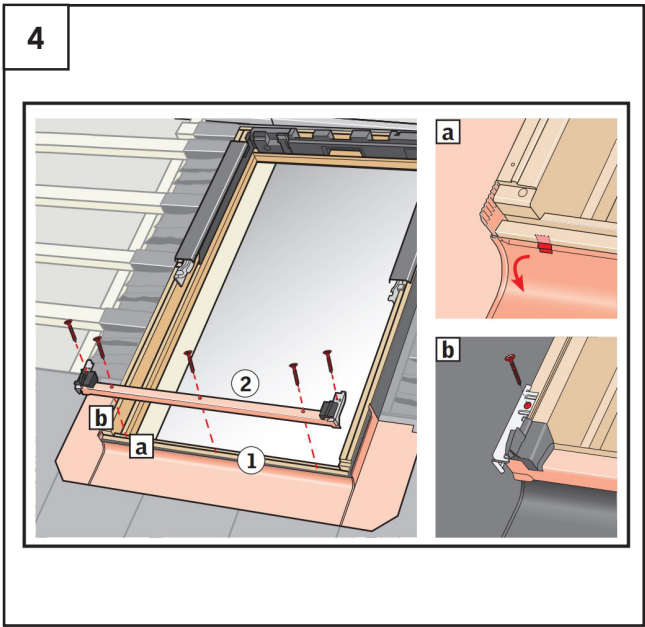
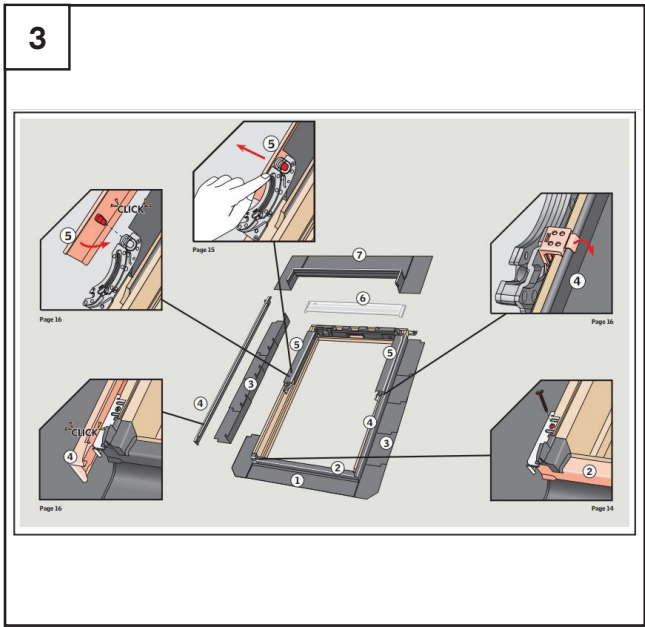
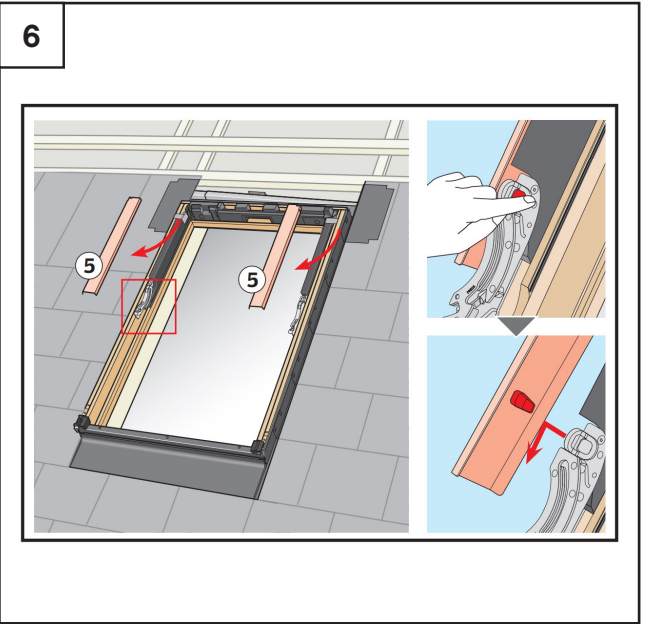
The mainframe of the Velux Roof light is Pre-fitted into the panel for ease of installation. Tile up to the bottom of the Velux Roof light at that point fit the flashing kit as per the drawing on next page, once flashing kit is installed continue to tile the rest of the roof as normal. Cut tile to suit around flashing.



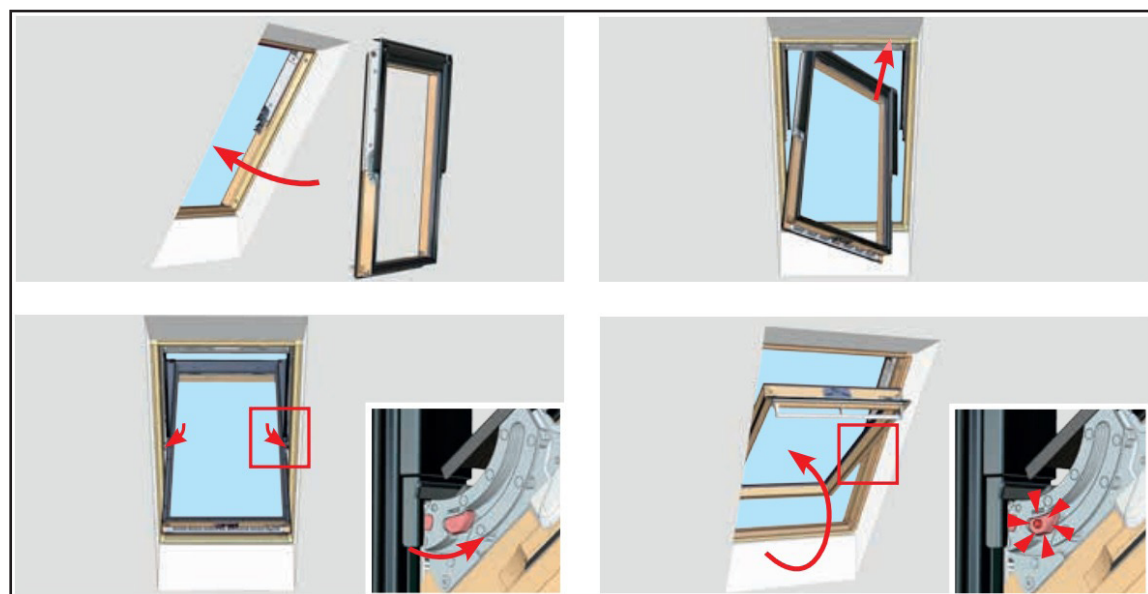
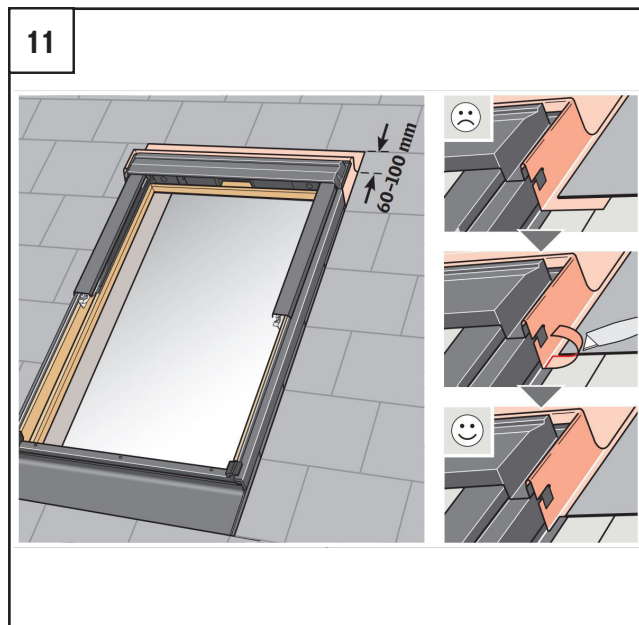
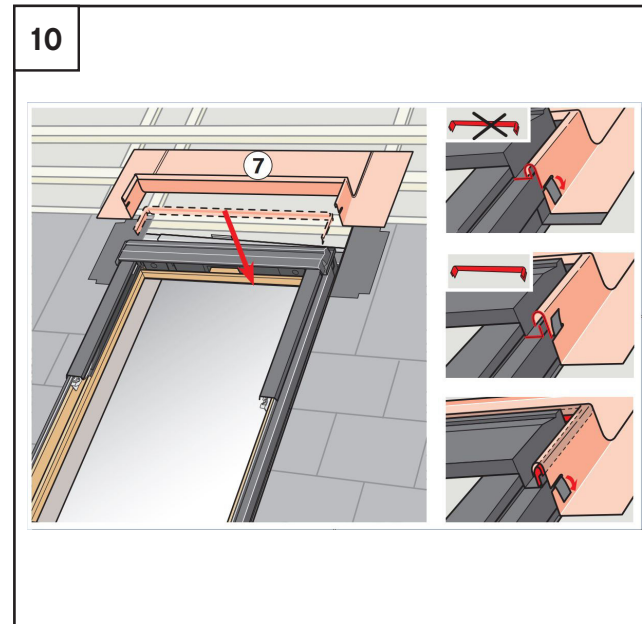
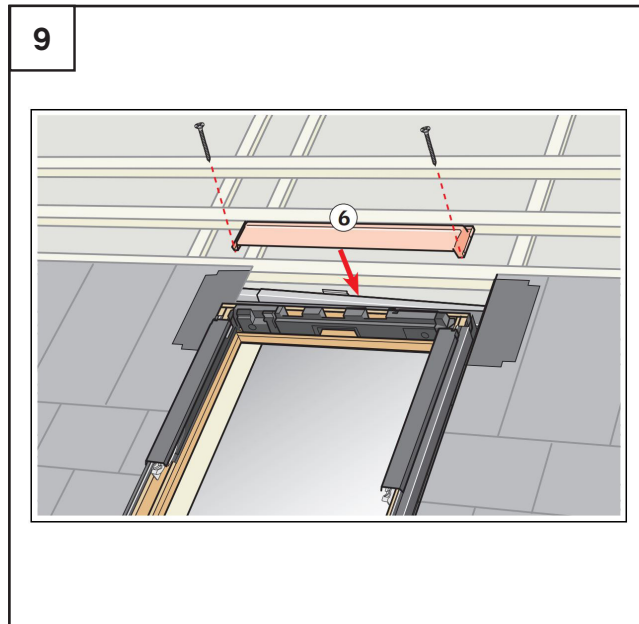
When Tapco Slate is selected on a WARMroof, the existing EDL Flashing Kit will be specified. This is still the best suited product for slate finish up to 8mm thick.



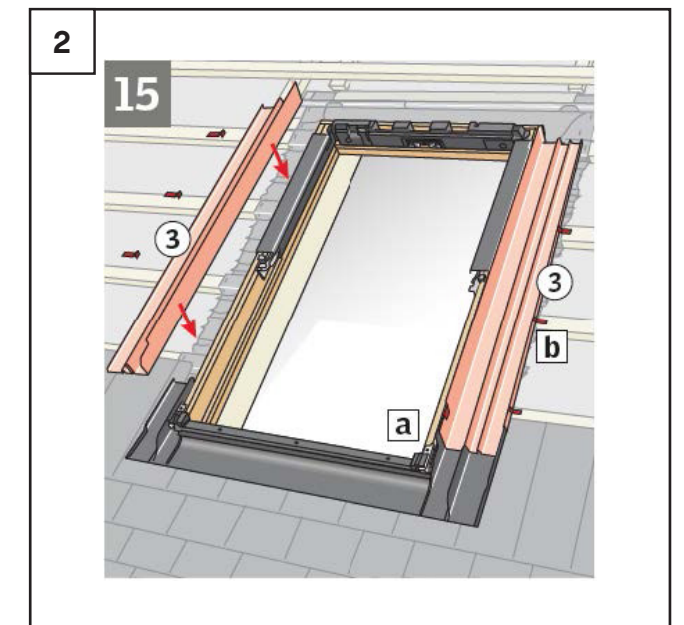
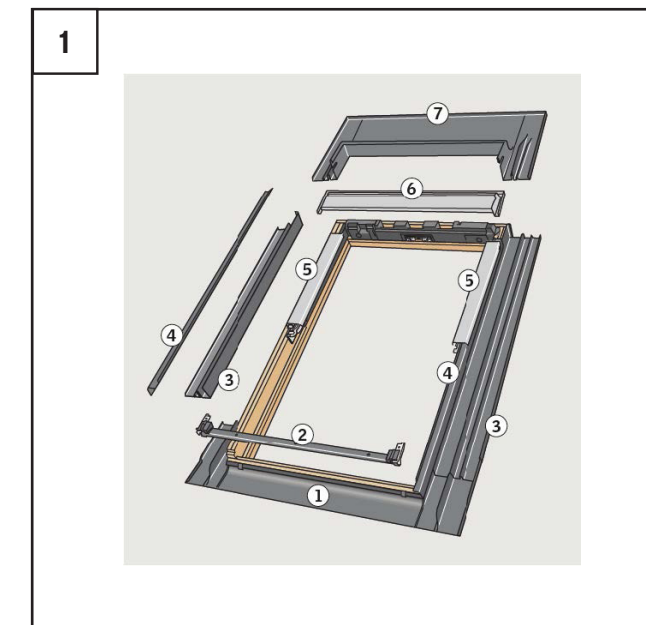
Envirotile only: Fold edge of flashing kit back on itself using block and hammer to create lip to direct any rain water down the roof.



Tile up to bottom of frame. Add bottom apron, add trims and fold. RH side repeat step on tile (page 17)
Apron should line up with edge of tile in most scenarios.



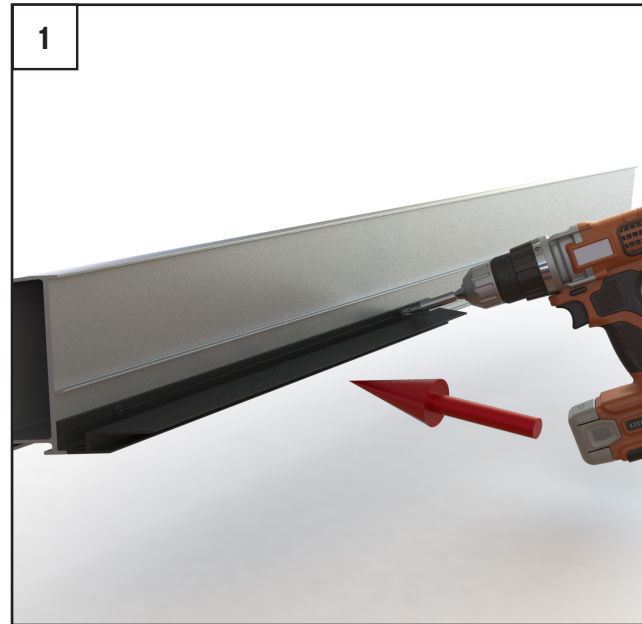
VELUX WITH ENVIROTILE



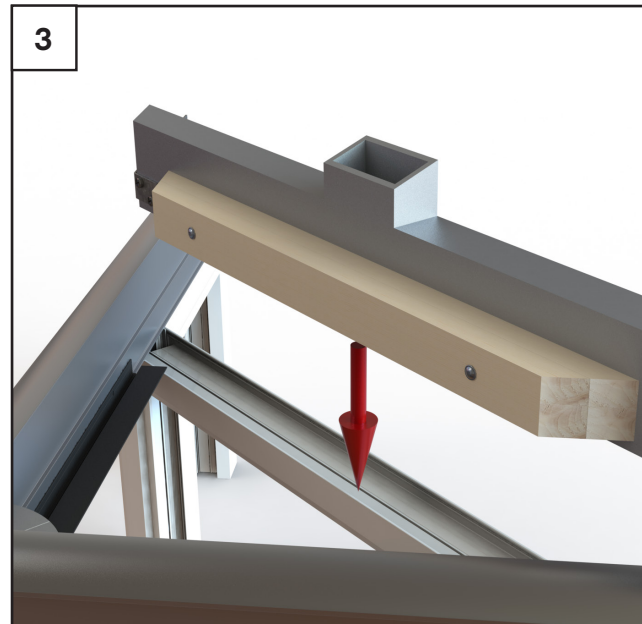
Products updated in VS software to specify EDS Flashing kits when Envirotile is selected.

Installation Tip: If bottom tray (1) overlaps the top edge of its supporting tile, pack below the top edge of the tray, level with the supporting tile to avoid bottom flashing kicking up. This can be done using An off-cut of tile or 9mm OSB.

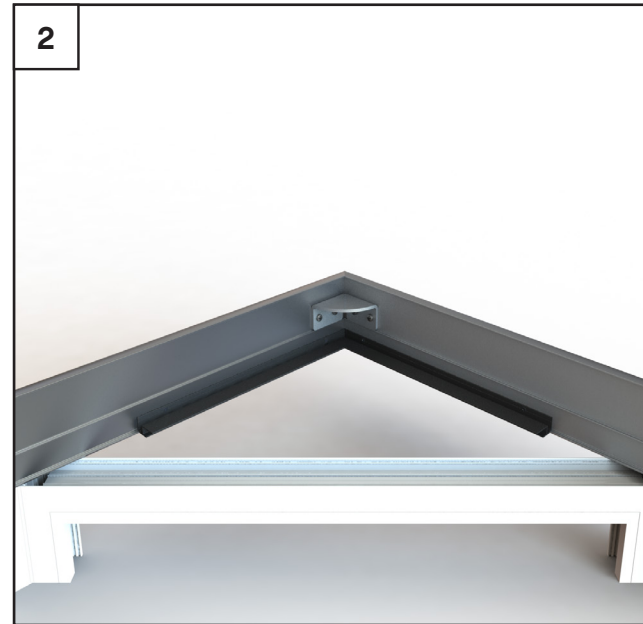
GEORGIAN OVERHANGS ON VICTORIAN FRAME



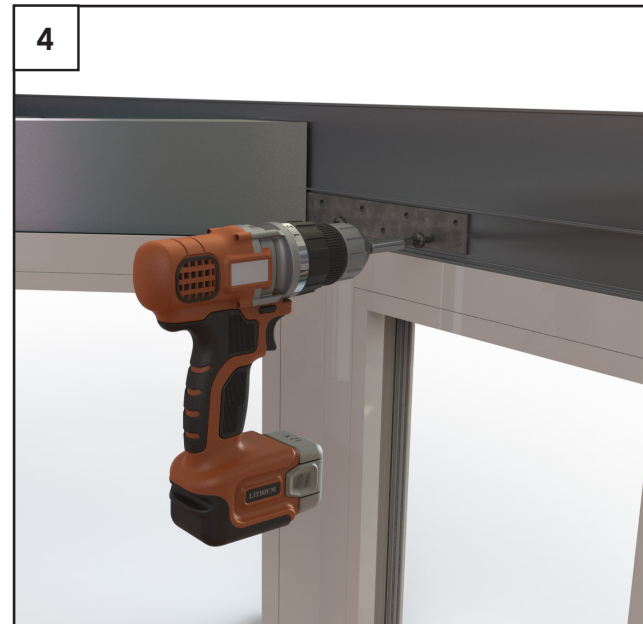
Where a Georgian roof is supplied to fit on Victorian Frames, the Eaves and Hip will cantilever over the frames requiring support to the underside of the Hip bar and cladding off of the open cavities. If not already attached, locate and fix PVC pelmet rail to eaves beam using 4.8 x 25mm CSK Self Drilling Screws provided (F0022).



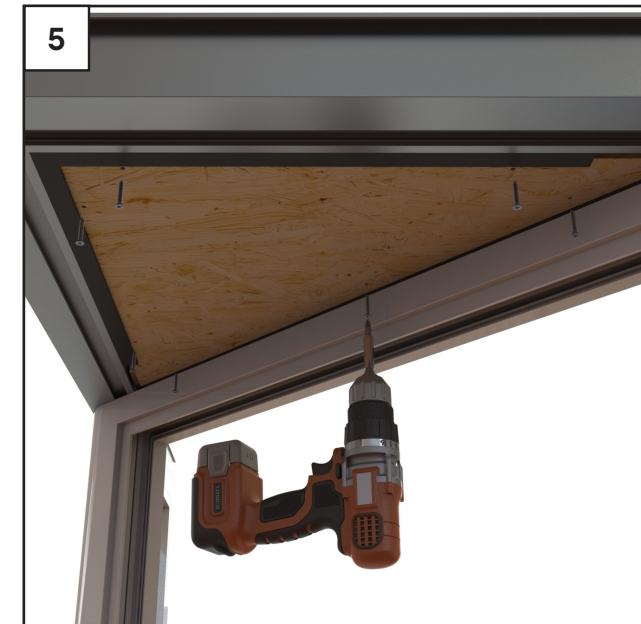
Locate pre-fabricated Aluminium Cross Support Assembly and position on head of frames over the facet 18mm outbound of internal frame.



Position eaves on top of frames. Once square with A Frames in place, fix eaves to head of the frames. Complete the next steps before installing Hip Bar and panels to allow better access.



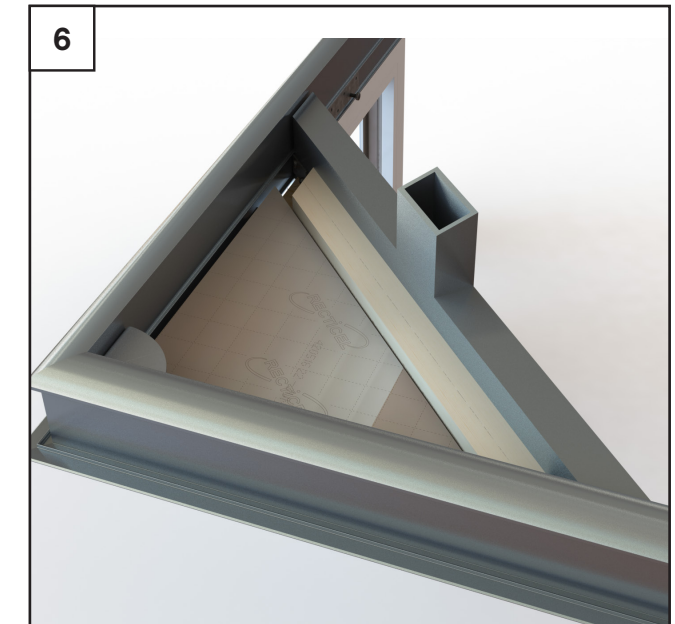
Secure beam in position by fixing the straps into back face of eaves using 2 x M6 x16mm Taptite screws provided per bracket. Additional fasteners can be used to fix through support beam into head of frames. (Pilot hole required through top surface of box section to allow fixing through bottom face of beam into frames. Not supplied by Prefix).



Ensuring 25 x 50mm timber stops are attached to the cross member. Push 9mm OSB triangle into cavity from below, sliding the outer edges into the PVC rail on the eaves and butting the edge adjacent to the frames up to the timber stop. Fix in position using 4.0x40mm Stainless steel screws (F0021).

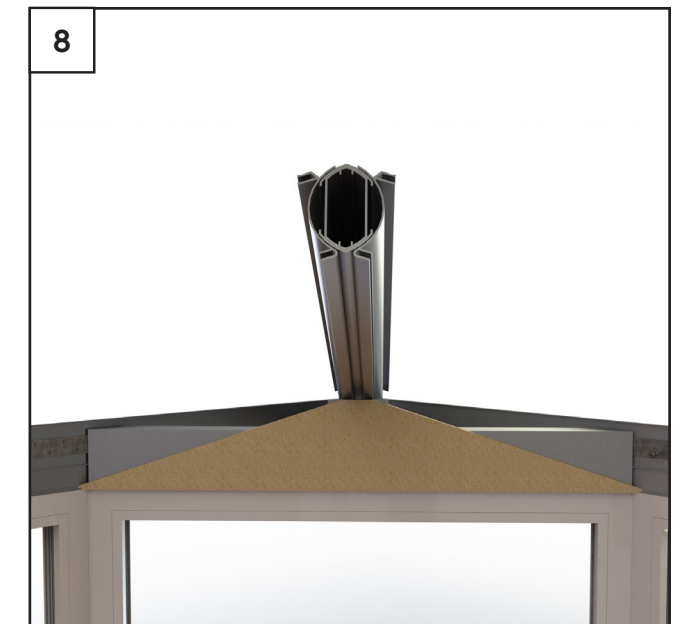


Install the hip bar and all remaining rafters to the roof. Underside of hip bar should rest on Aluminium upstand to reduce deflection of the overhanging roof area.



Drop in 25mm PIR triangle insulation from above to insulate the void.

Area now ready to accept soffit board.

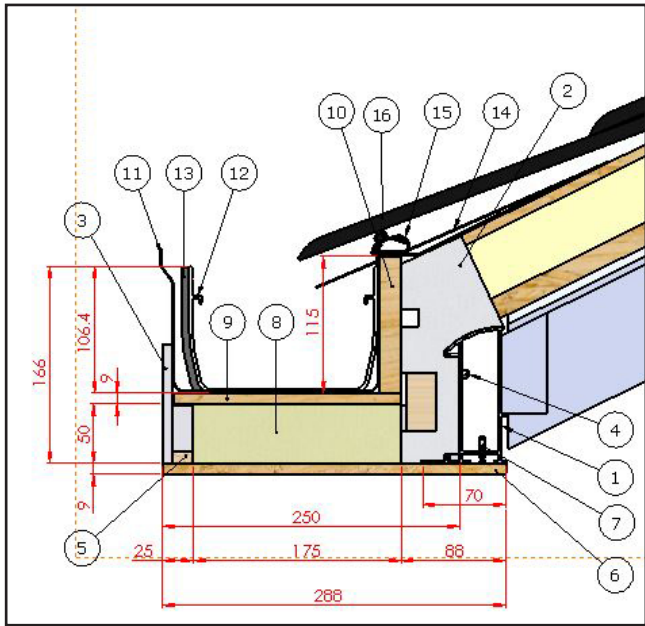


To provide a surface to fix internal plasterboard, position and fix 18mm OSB to internal face of cross member, with bottom edge of OSB flush to the head of the frames.

NOTE: Base panel insulation will require notching locally over Aluminium cross beam on site.

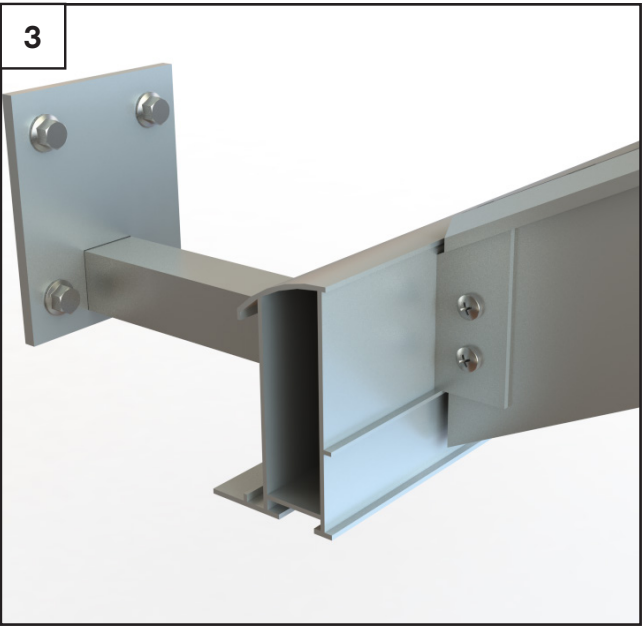
BOX GUTTER INSTALLATION.

Note: Box gutters should not span any further than 2000mm without support unless an alternative solution has been structurally approved.



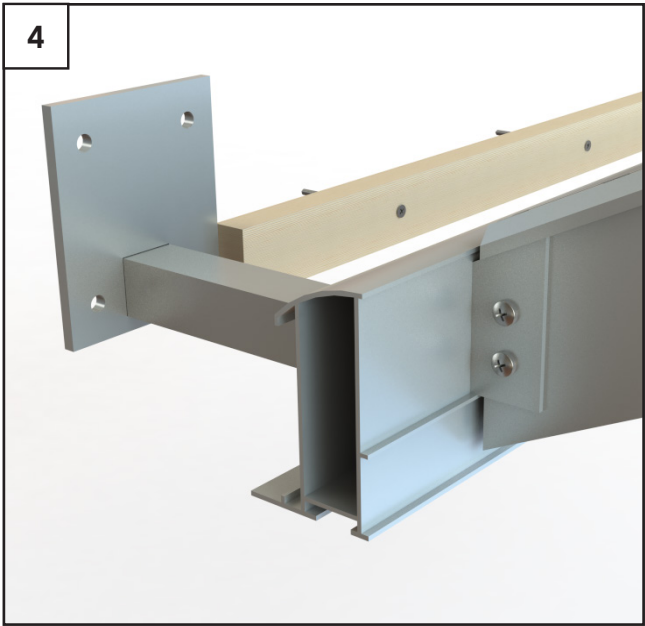
Section through showing box gutter and components. See table on the right for part description.

Item Number	Part Description
1	Eaves Beam
2	Eaves Beam Insulation 88mm (2000059)
3	Eaves Support Bracket Assembly
4	M6 x 16mm Taplite Screw
5	25 x 50mm Timber Batten
6	9mm OSB Under Cladding
7	4.8 x 32mm Countersunk Self Drilling Screw
8	50mm Xtratherm Insulation (PIR)
9	9mm OSB Upper Cladding
10	18mm OSB Upstand
11	600mm Wide Strip Membrane (box gutter)
12	Prefix Box Gutter
13	Box Gutter Foil Back Insulation
14	Eaves Protector Board
15	Tile Rail Assembly (Top & Bottom)
16	Envirotile

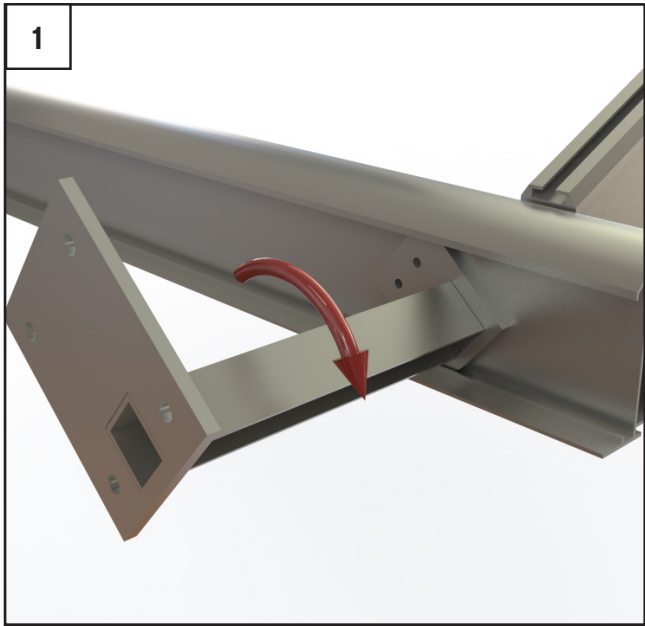


Set Eaves beam back into position and fasten to Host Wall using substantial substrate fixings. (To be supplied by installer)

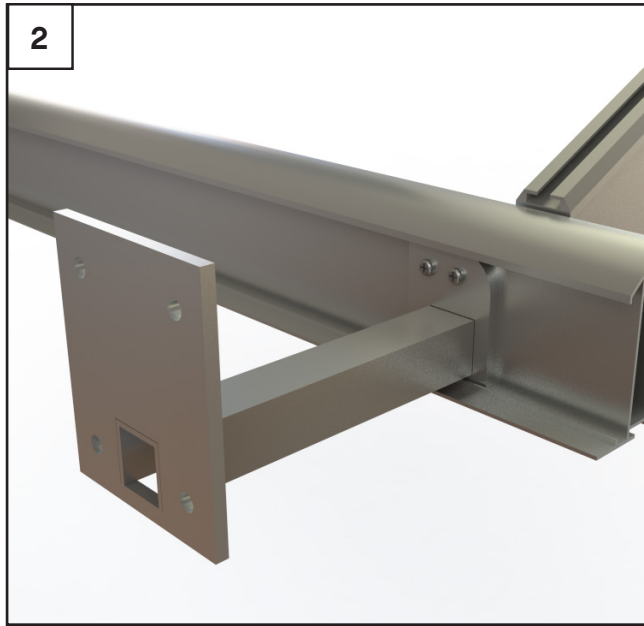
Note it is important eaves beam sits square with rest of roof. Pack behind brackets where host wall runs out of square. Use of props may be handy.



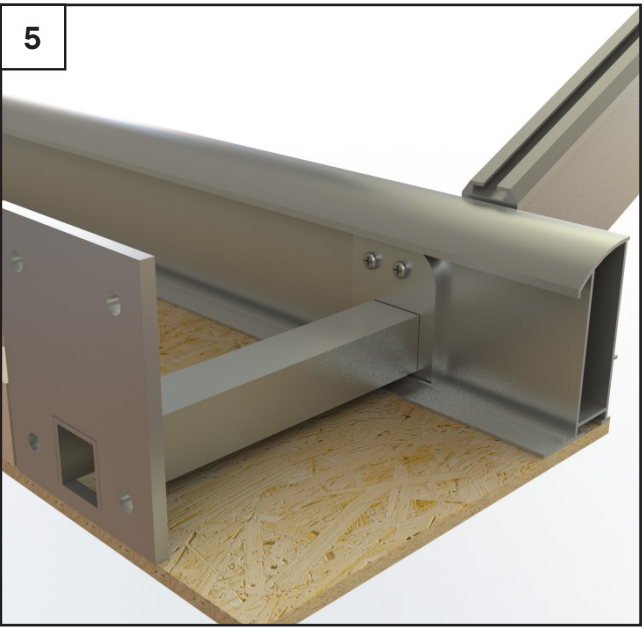
Cut and fix 50 x 25mm timber batten to host wall in between brackets making sure underside of timber is in line with underside of eaves beam (Top of frame height).



Set Eaves Beam 288mm away from host wall (internal frame). Quarter turn brackets into eaves beam loose. Position accordingly (in line with A-Frames where possible) and mark position on host wall and eaves beam.

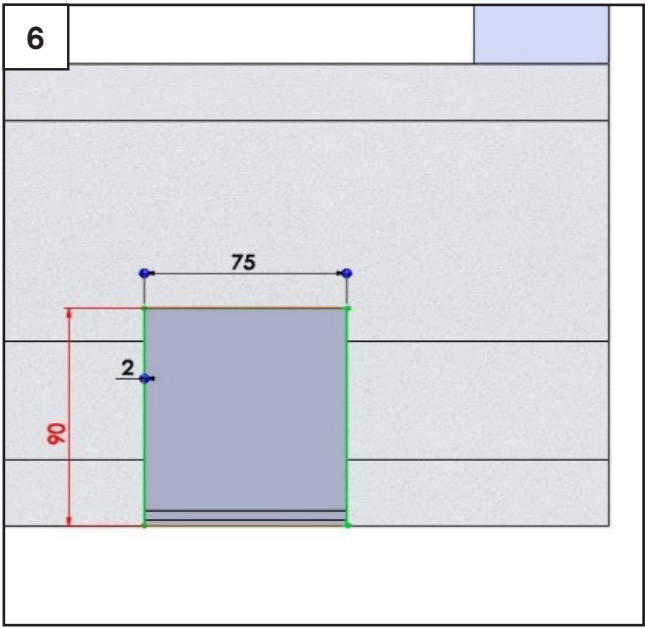


Move eaves beam to a suitable working position then drill and fasten brackets to eaves beam using M6 x 16mm Taplite screws provided (5.5mm drill bit)

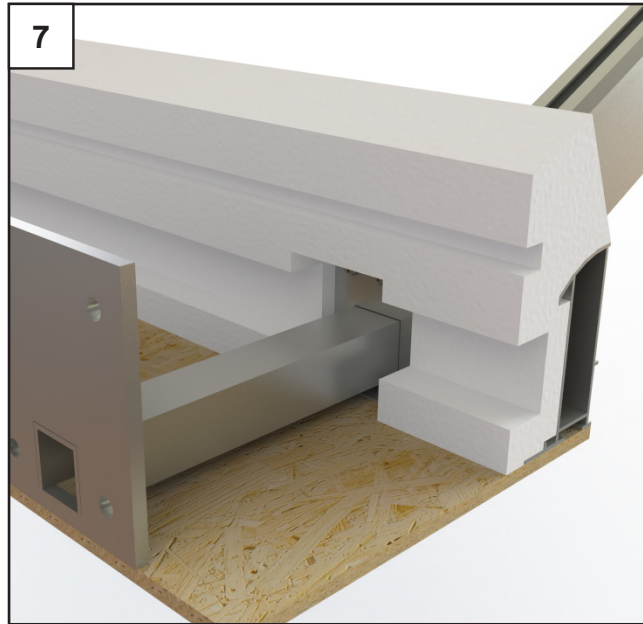


Fix 9mm OSB to underside of Eaves beam and batten. Using 4.8x32mm countersunk self-drilling screws provided.

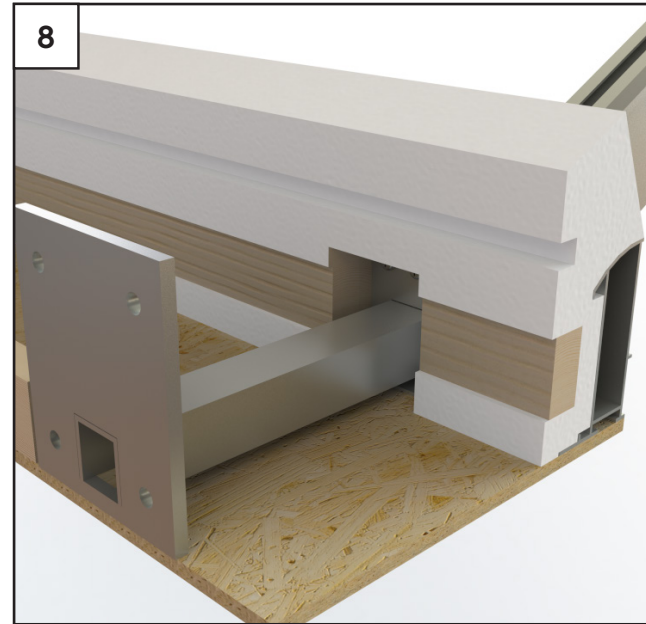
Batten – Mark 12.5mm in from edge of OSB
Eaves – Mark 20mm in from Edge of OSB.



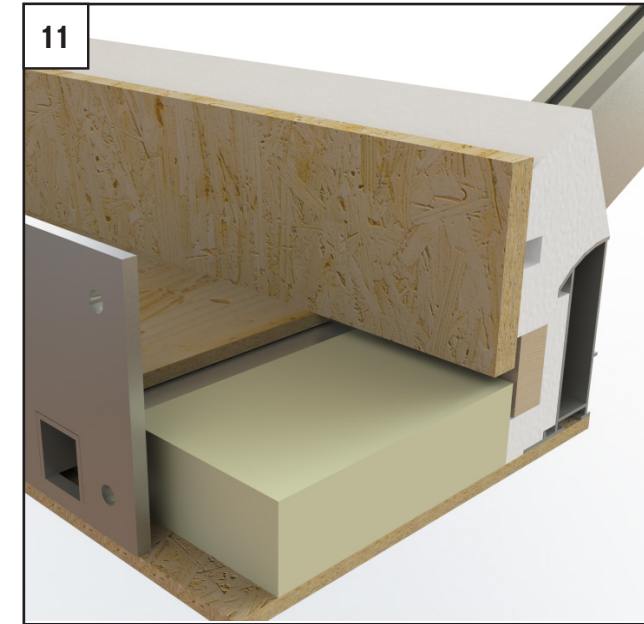
Mark 75 x 90mm Notches in Eaves Insulation and cut out to fit over support brackets where applicable.



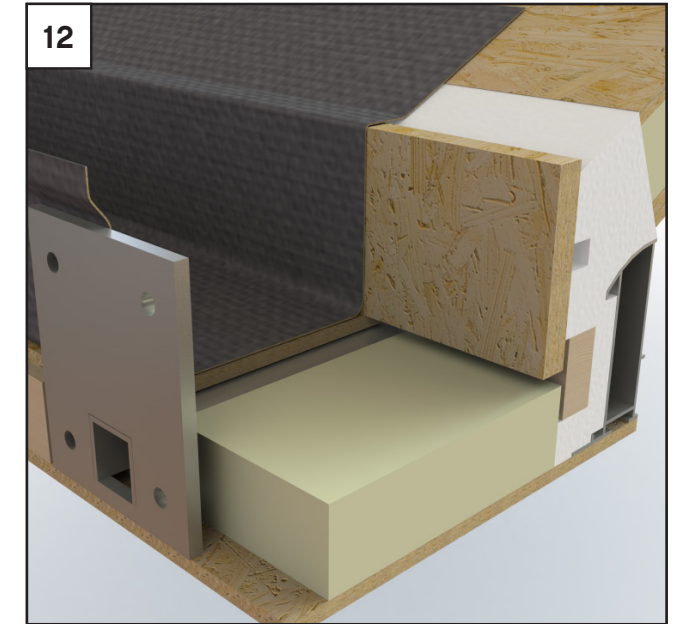
Push Eaves Insulation over Eaves beam and support brackets. 2000059 86mm Eaves insulation to be used in all cases on box gutters.



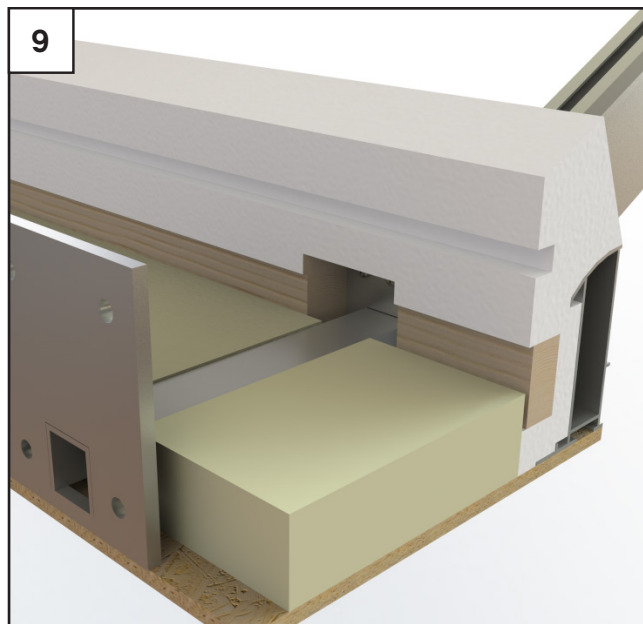
Cut 25 x 50mm batten to push fit into eaves insulation between the brackets.



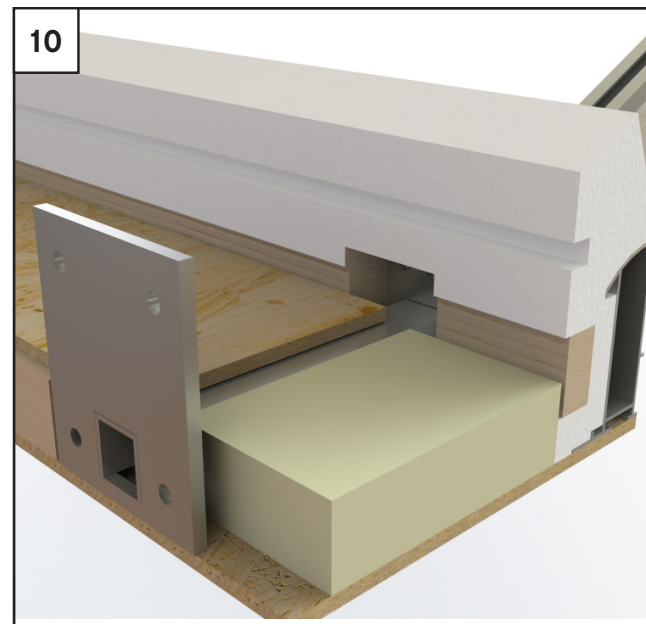
Fit 18mm OSB board over the top of the 9mm OSB vertically against the Eaves Insulation. Fix diagonally down into the Eaves Batten to hold in position.



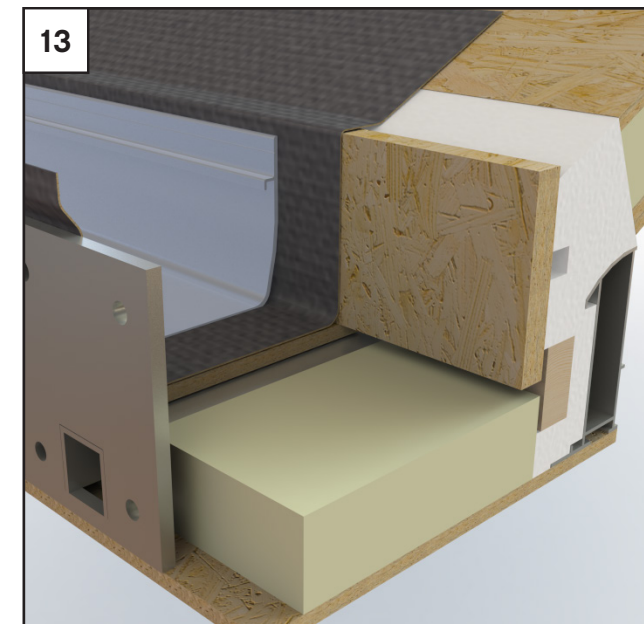
Line OSB with Strip of Membrane, Lapping up approx. 200mm over the Top Panel. Overall Width of Membrane Approx. 600mm



Measure and cut 50mm PIR insulation to length and push fit in between support brackets on to 9mm OSB.

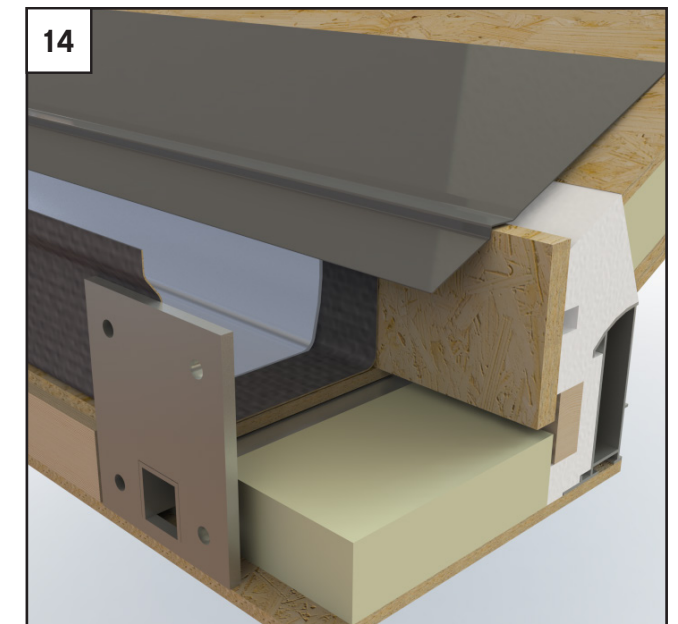


Fit 9mm OSB board over the top of the insulation and support brackets fixing into the support brackets and timber batten at the host wall to secure in position using 4.8x40mm countersunk self-drilling screws provided.



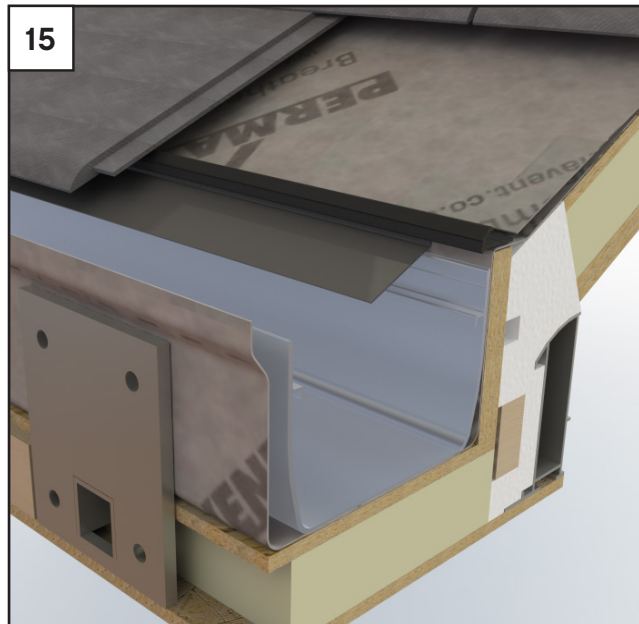
Lift box gutter into position with foam insulated edge against the host wall. Any Joints in box gutter should be sealed properly and adapters sealed in position.

Drill and fasten box gutter back to host wall using sufficient fixings (not supplied) Back fill any gaps between host wall and box gutter with expanding foam. Lead flash down into box gutter, ensuring fully sealed and water tight.



(At this point it may be worth lining up gutter and gutter brackets around rest of roof before installing eaves protector and tiles for ease of installation).

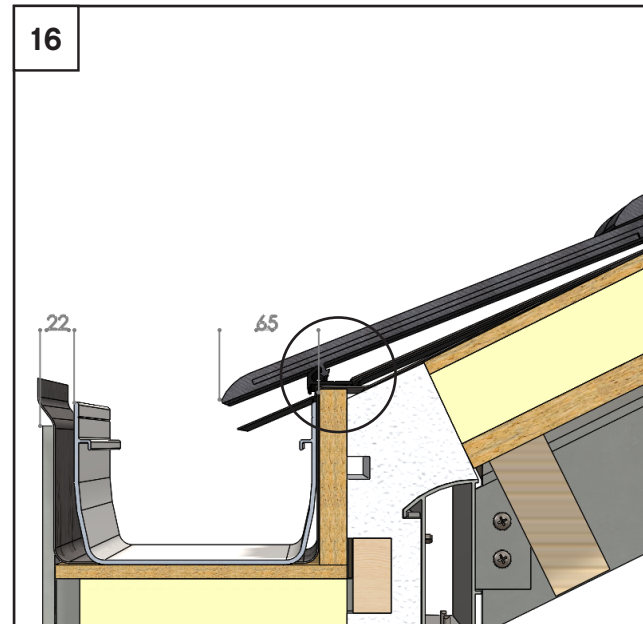
Fit Eaves Protector Board over top panels and box gutter membrane with drip edge dropping into box gutter.



Fasten tile rails in position over top of 18mm OSB Upstand. Continue as per rest of roof and Tile.

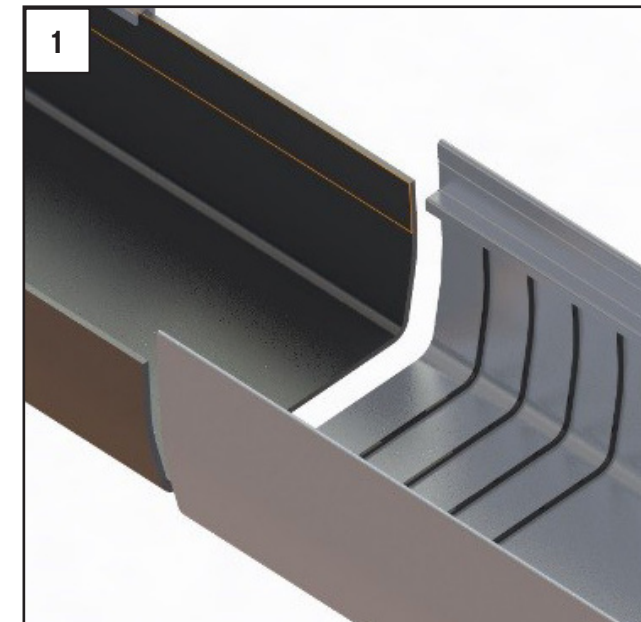
If using Tapco remember to double layer the first row and allow sufficient overhang into the box gutter.

Box gutter approx. 22mm away from host wall to allow for any bolt heads or anomalies in brickwork. Back fill gaps with expanding foam gun before lead flashing.

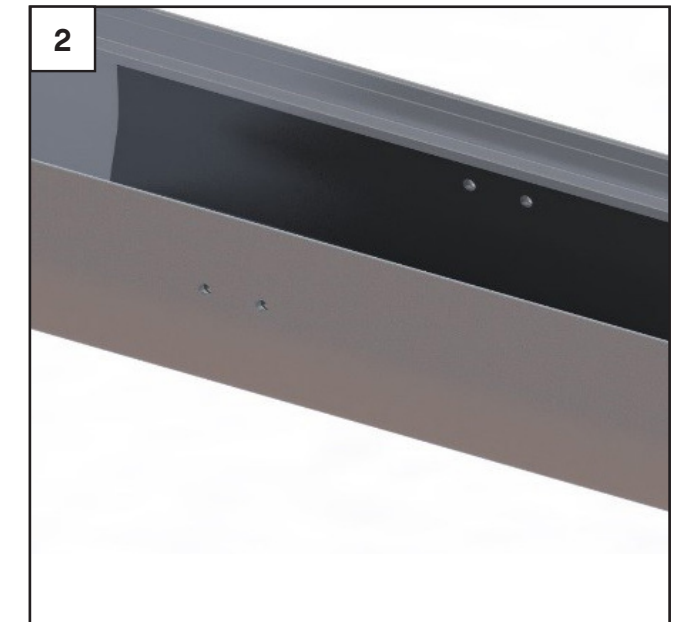


It is recommended to back fill any gaps with expanding foam gun prior to lead flashing.

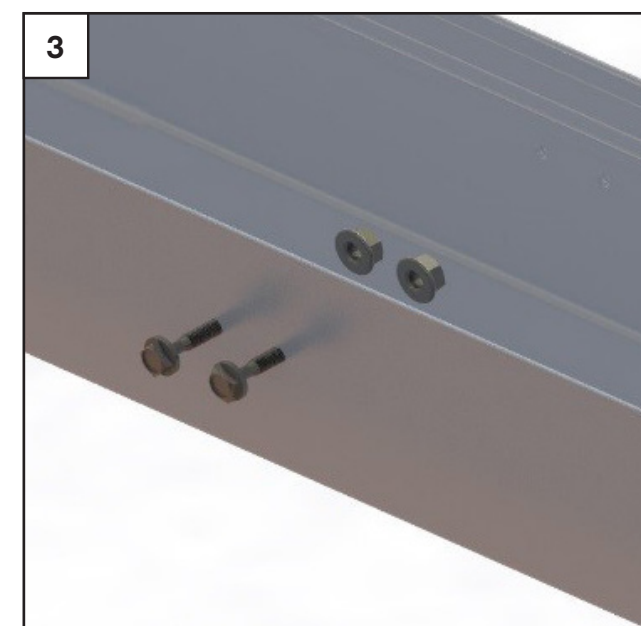
BOX GUTTER JOINTING.



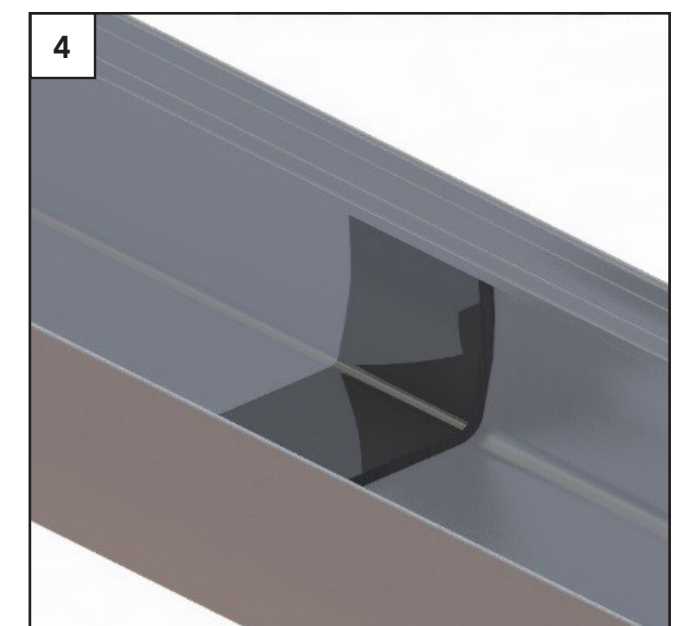
Thoroughly clean box gutter mating parts to remove any dirt or grease. Apply generous beads of low modulus neutral silicone to the clean area where the internal sleeve locates ensuring full face of sleeve will be sealed.



Push sleeve into other half of box gutter until both faces are flush together. Drill 6.5mm holes through the box gutter and sleeve both sides within 50mm of the edge of the joint.

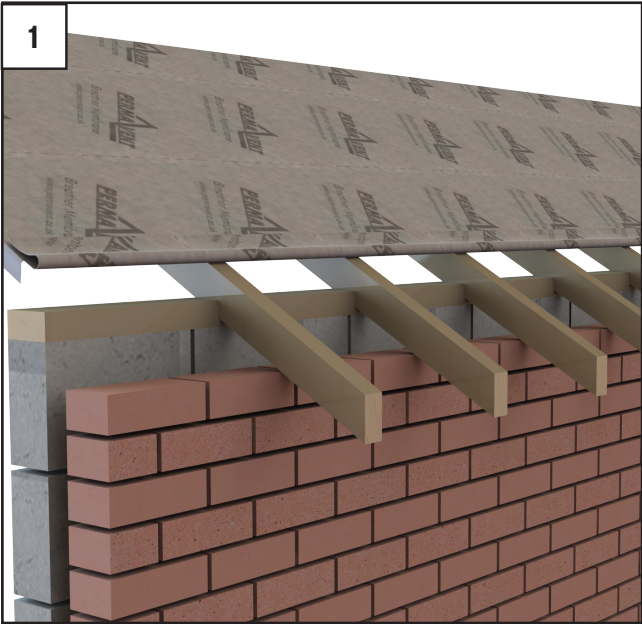


Fix using the nuts, bolts and washers provided in the joining kit. Seal over all the exposed bolt heads on both inside and outside of the box gutter.

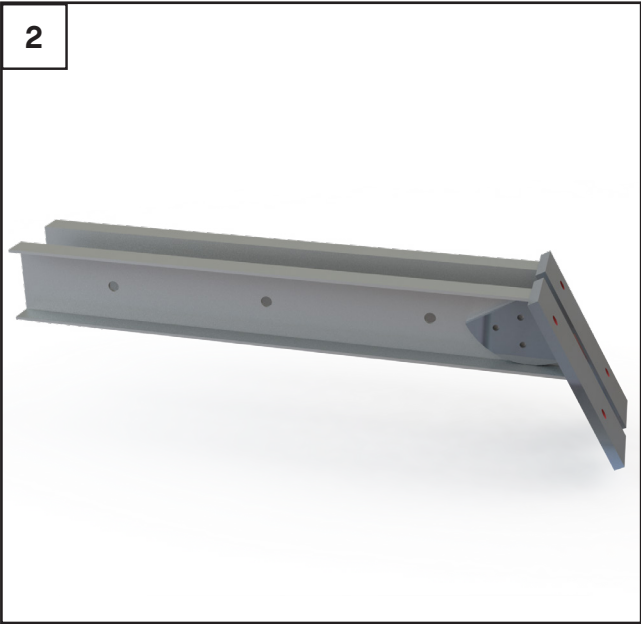


Check surface is dry, clean and grease free. Degrease if necessary. Heat both sealing tape and the box gutter with a heat gun and position the tape firmly across the joint of the sleeve and box gutter ensuring no air gaps.

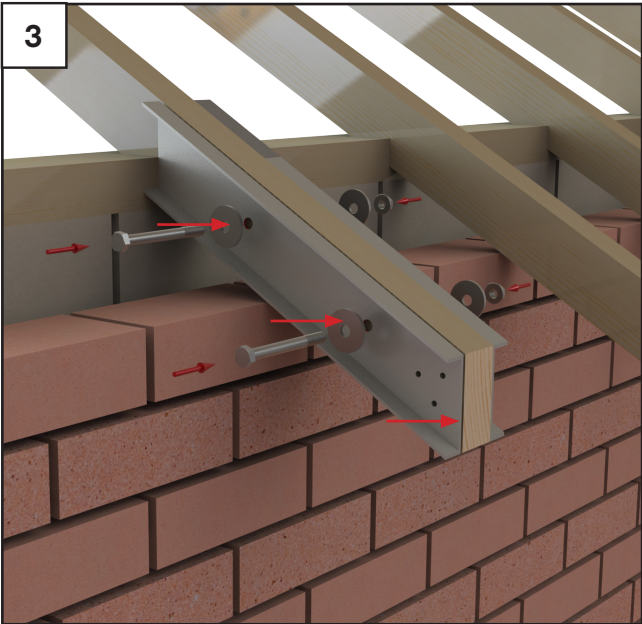
BOX GUTTERS AGAINST HOUSE FASCIA & SOFFIT.



Locally remove existing house fascia board, tile rows and membrane to reveal house rafters.

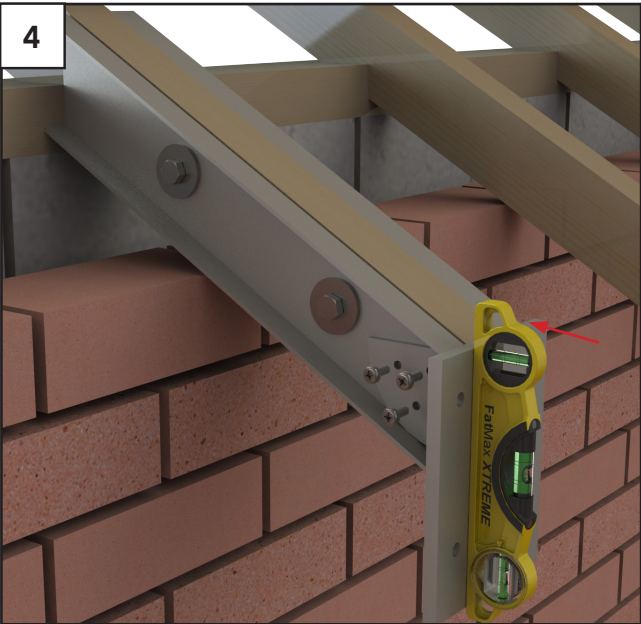


Adjustable rafter straps suit pitches from 0-60°, 0-29.9° - Fixing plate fastens to square cut end 30-60° Fixing plate fastens to angled end. Prior installation, please determine correct orientation.

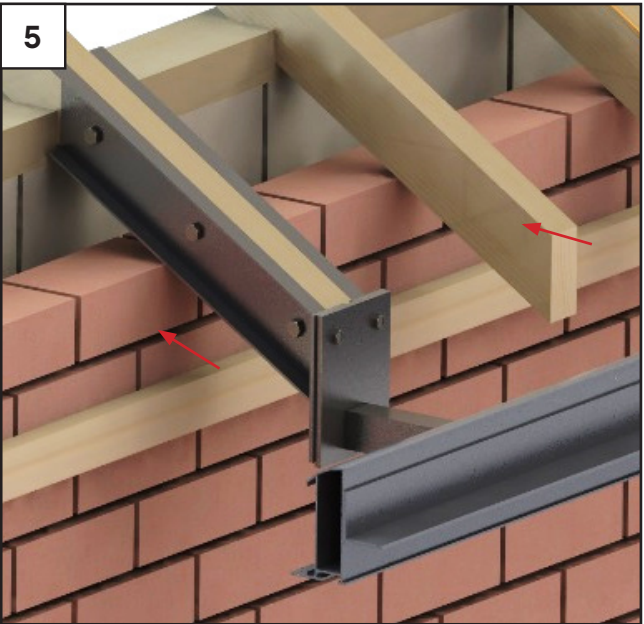


Line rafter strap C channel up with top of house rafter and flush against end of rafter. Mark and drill holes 11mm to suit M10 fixings. Fix through straps using M10x75 hex bolts, washers and nylon nuts provided. 3 fixings recommended per bracket where possible.

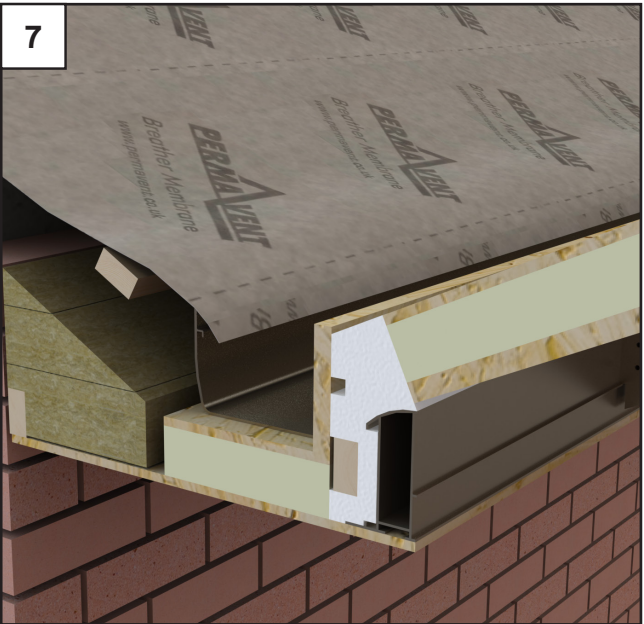
NB: Rafter traps in some cases may need cutting down as shown in image due to variations in height, soffit and cavity depths. **DO NOT cut brackets down to less than 300mm in length.**



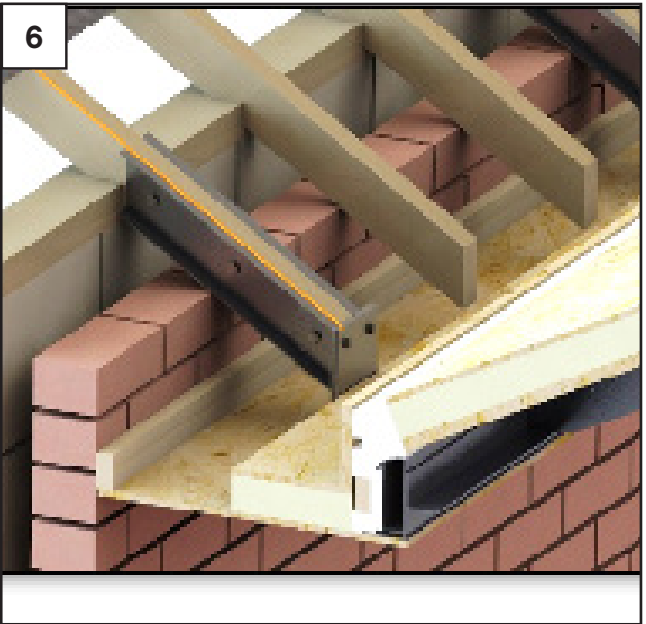
Position house rafter fixing plates against the inner face of the C channel. Using spirit level, check face of plate is plumb. Mark fixings positions from holes in plate on to the C channel and drill 3 x Ø5.5 holes per side through rafter strap and timber rafter. Fix plates in position using 3 x M6 x 16 pan head taptite screw provided (per side)



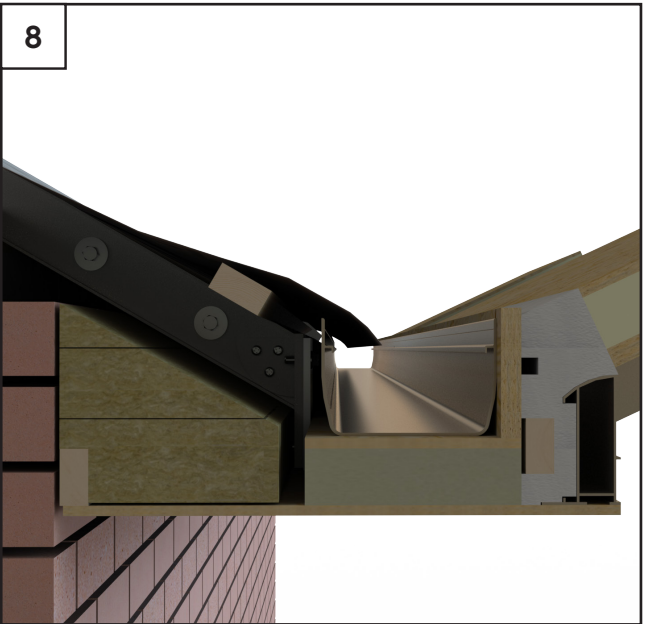
Offer support bracket up to rafter plate and mark position on eaves beam. **(In line with WARMroof Rafters where possible)** Follow Box Gutter Install Step 2 Page 25. Mark and Drill 9.5mm holes in House Rafter Strap Plate. With Support brackets now fixed to the eaves, line back up to house rafter plates and fasten using 2 x M10x30mm Taptite Hex Head Screws provided. Underside of Rafter plates may need cutting back if protruding below underside of Eaves level



Fill any voids and areas between house rafters with expanding foam, or Rockwool Insulation (not supplied).

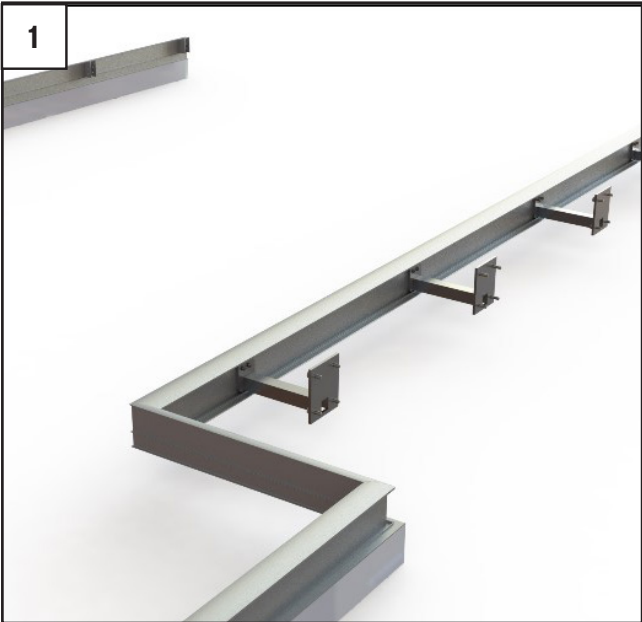


Following Box Gutter Installation pages 26 – 29 fit batten to host wall in line with underside of eaves. Secure all insulation and OSB in position following steps 4-16.

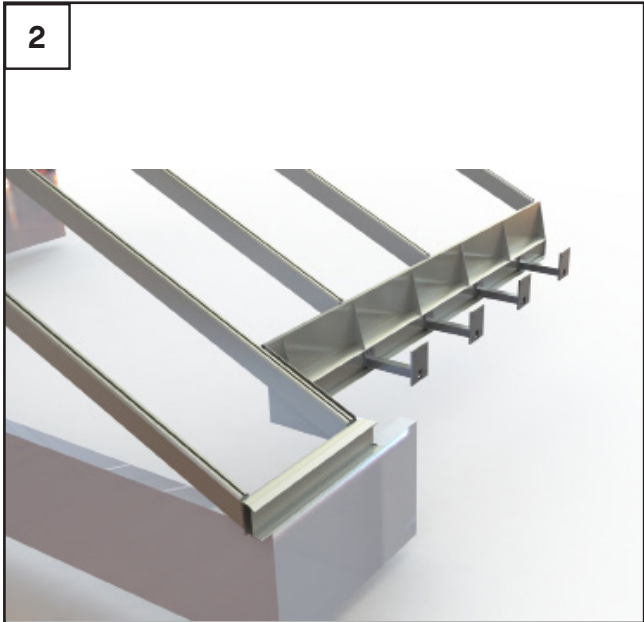


Where site surveys alter from this typical example please contact the Prefix Technical Department for guidance on an alternative solution prior to Installation.

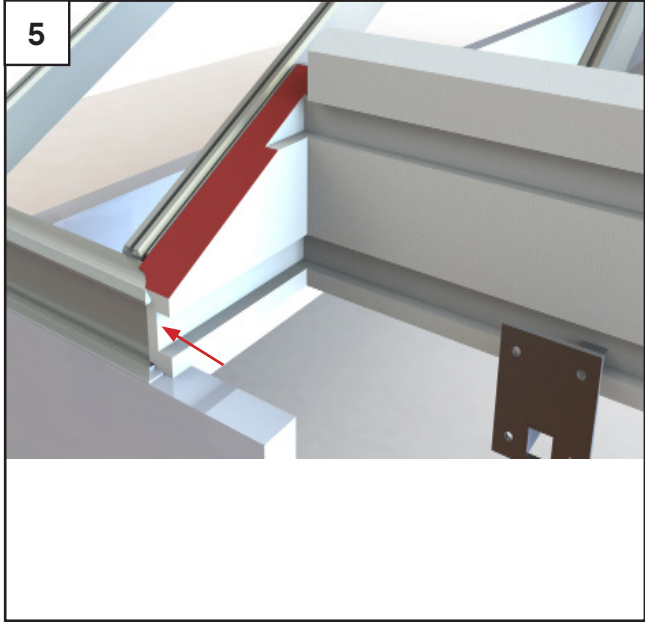
RAISED BOX GUTTER



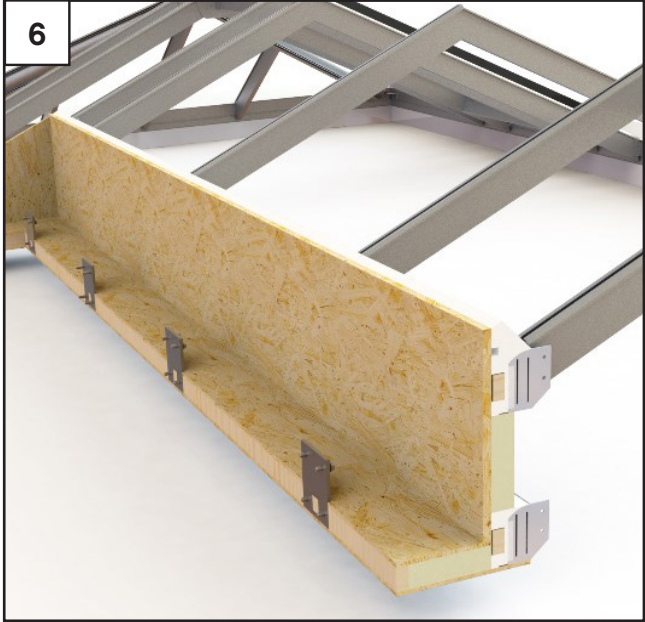
Follow steps 1 and 2 Page 28 box gutter installation to locate and fix support brackets. Using site installation paperwork, lay eaves beams out over frames and set eaves at box gutter 288mm from host wall/fascia to internal face of eaves. Secure back to host wall using suitable substrate fixings (not supplied by Prefix). Follow installation steps over previous pages to secure support plates to host wall/House rafters.



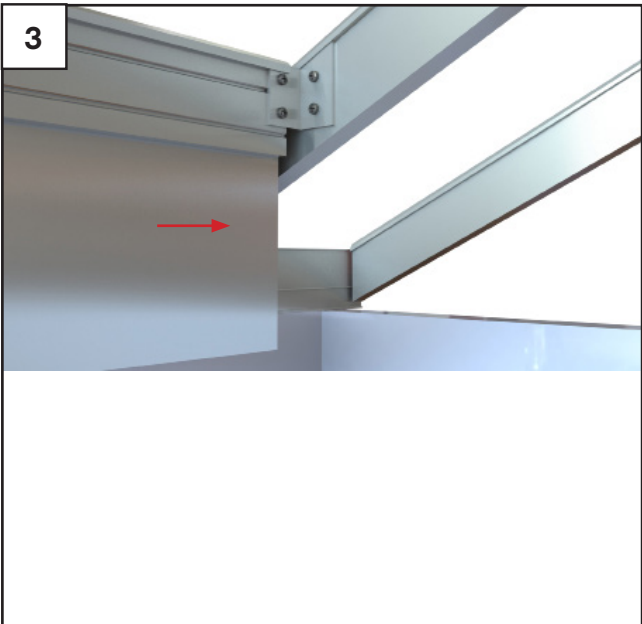
It is recommended where possible to have rafters set close to box gutter return to allow additional support of box gutter.



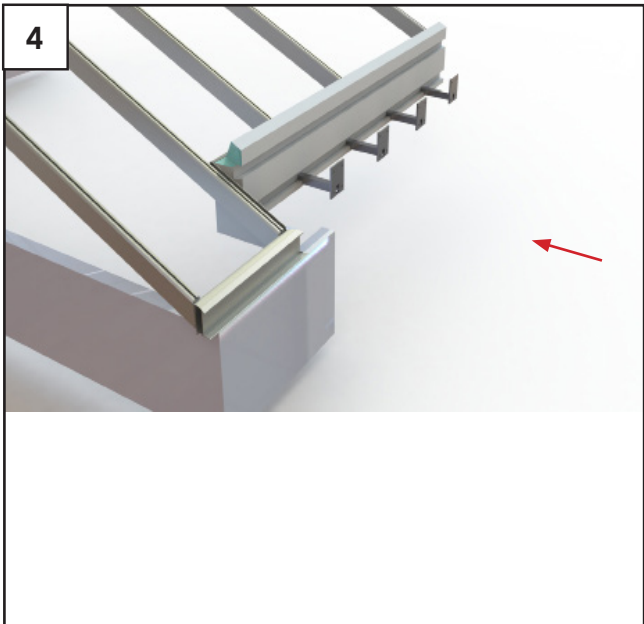
Fit the bespoke insulation around the box gutter return and cut into suit the roof pitch, inline with the top edge of the sloped eavesbeam. Inline insulation requires an 86mm notch to suit roof pitch.



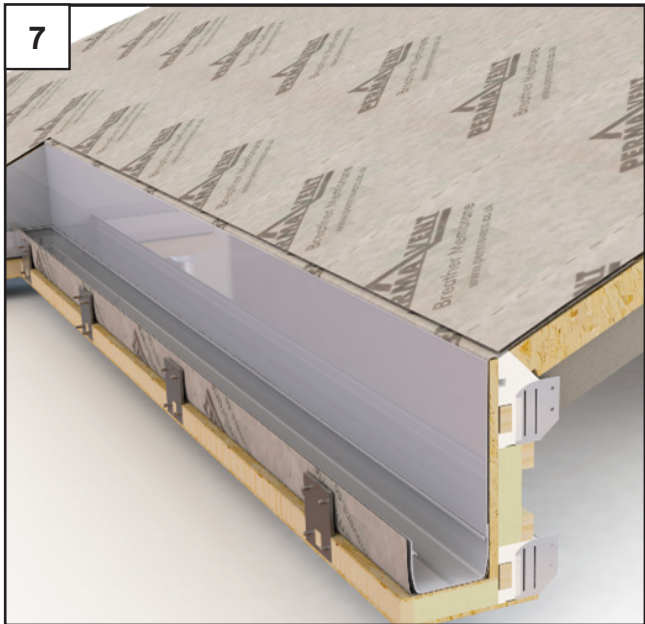
Following the same method as a standard box gutter install, insulate and clad box gutter with 50mm PIR and OSB panels.



Fix upper fabricated eaves beam into A-Frame using 2 x M6x16mm Taptite screws ensuring top of eaves is square, level and tangent to the top face of the rafter. Fix in position remaining A-Frames, Rafters and Hips.

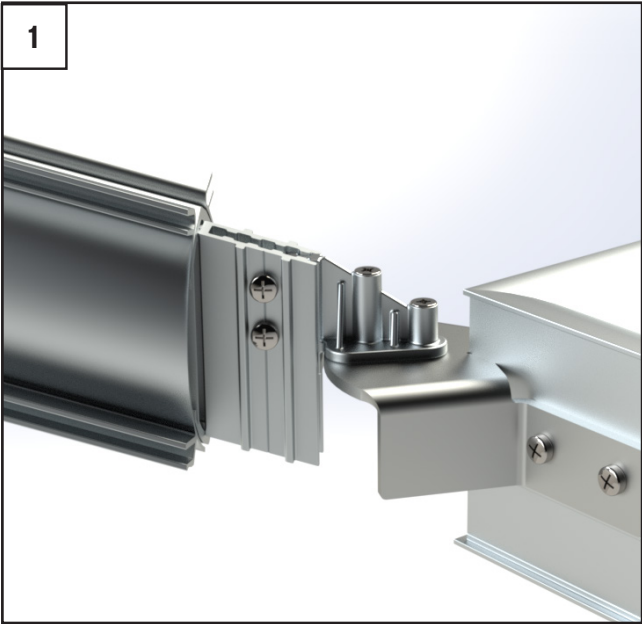


Insulate Eaves beam around roof. (Narrow Insulation always used at Box Gutter). Box gutter region has bespoke wire cut EPS. to suit height. Notching is required over bracket locations and support ribs where applicable.

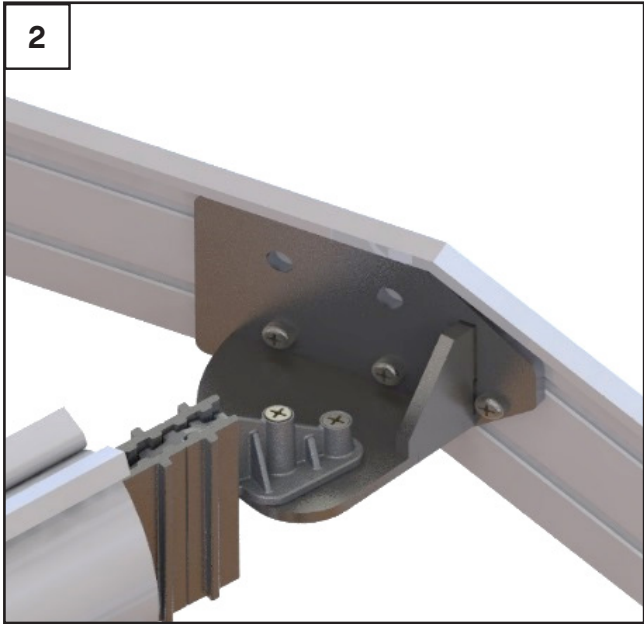


Follow rest of guide for installation steps for rest of roof and box gutter procedures. Install box gutter ensuring secure and weathertight.

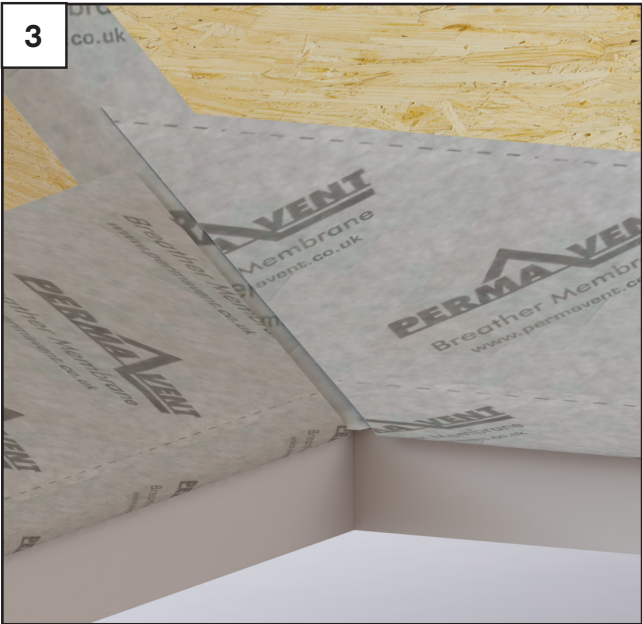
VALLEY INSTALLATION.



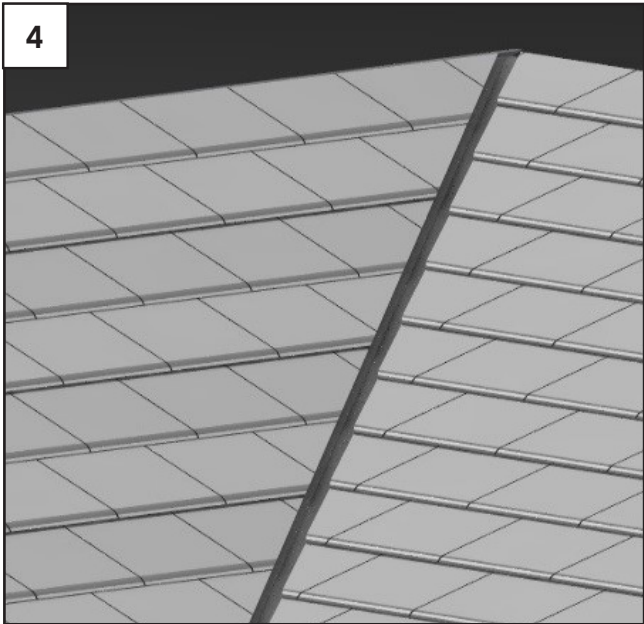
Position the Valley Bar Assembly at the eaves. Line up Tennon to its marked location and fix down to the valley corner bracket using 2 x M6x50mm Countersunk Taptite Self Tapping Screws. (Note: Valley assembly is same as hip bar assembly but inverted).



Position the Hip Bar Assembly or any spider bars on to the Rad End. Line up the Tennon to its marked location and fix to radius end plate using 2 x M6x50mm Countersunk Taptite Self Tapping Screws.

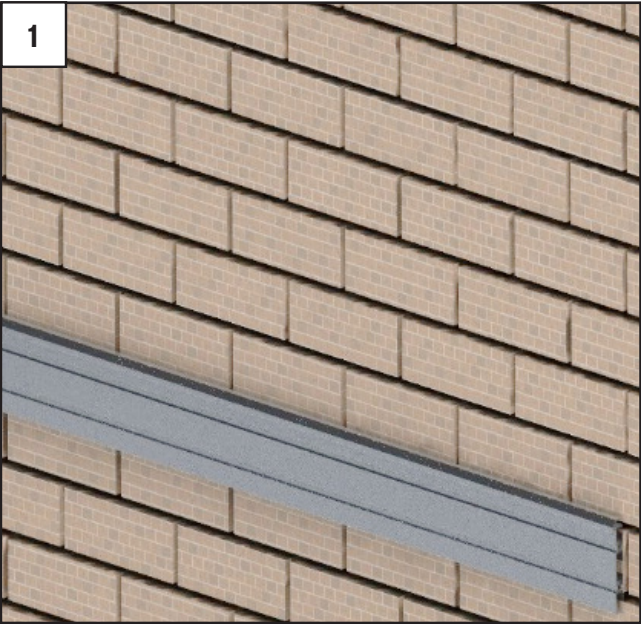


Run membrane across the roof. Make sure an extra strip runs down the full length of the valley for each side membrane to run on to. Position GRP Valley tray in position. Mark and cut top and bottom to shape ensuring enough overhang into the gutter. If fixing down, pin along outside edges, away from where any running water will reach using 38mm stainless screws.



When running tiles in to the valley, ensure no fixings go through GRP. Run tiles over the shoulder minimum of 25mm (distance between tiles meeting to the discretion of the installer). Note: when tiling into a valley with Envirotile 28mm glazing end channel (RAL 7016) is sent out to flash over cut edge of tiles down full length of valley below tiles.

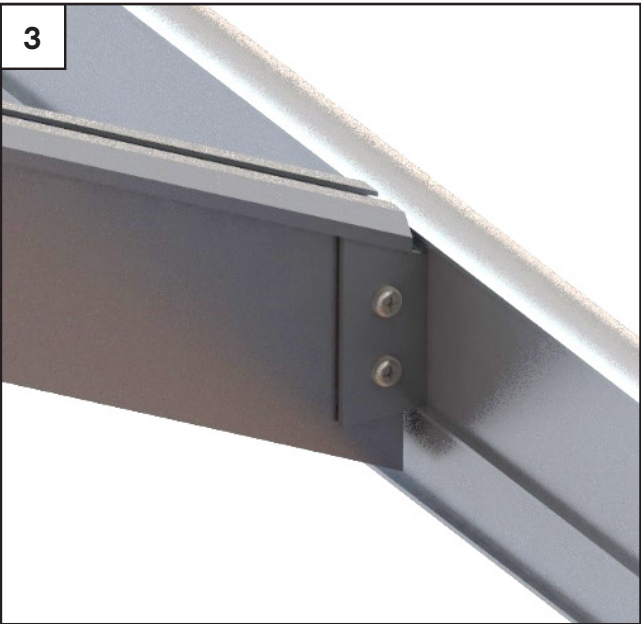
LEAN TO ROOF INSTALLATION.



On a Lean To style roof. Mark height to underside of wall plate on host wall (shown on paperwork). Take wall plate and offer up against wall. Ensure level and support in position.



Once level, Drill and fix back to host wall using sufficient substrate fixings max centres 500mm (Not supplied by Prefix).



Rafters drop in to preset eaves brackets as shown on page 5 of this Installation Guide. Drill any necessary hole into rafters using 5.5mm drill bit. Fix using 4 x M6 x 16 Taptite Screws.

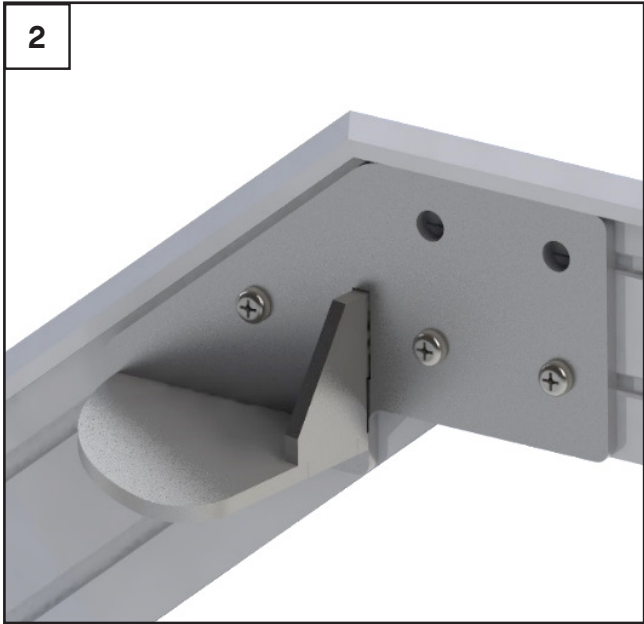


Rafters drop in to preset brackets as shown on the wall plate. Drill any necessary hole into rafters using 5.5mm drill bit. Fix using 4 x M6 x 16 Taptite Screws. Continue rest of roof as shown earlier in this guide. Refer to Gable end section of this guide for Lean to Gable ends.

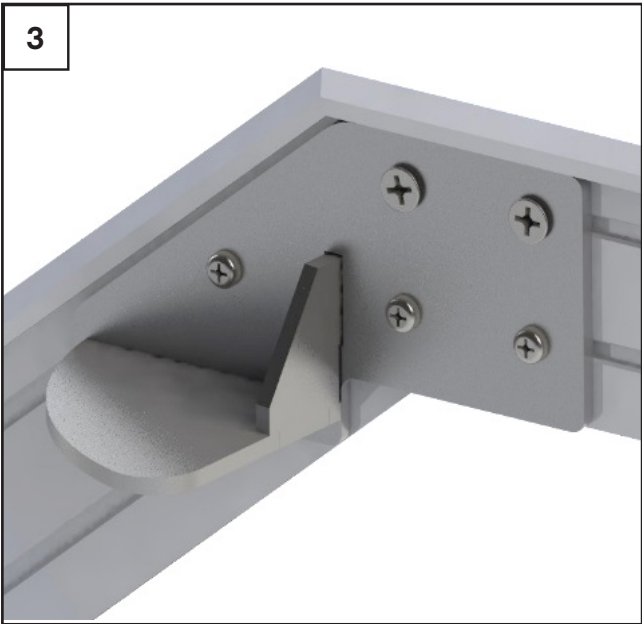
HIPPED LEAN TO ROOF INSTALLATION.



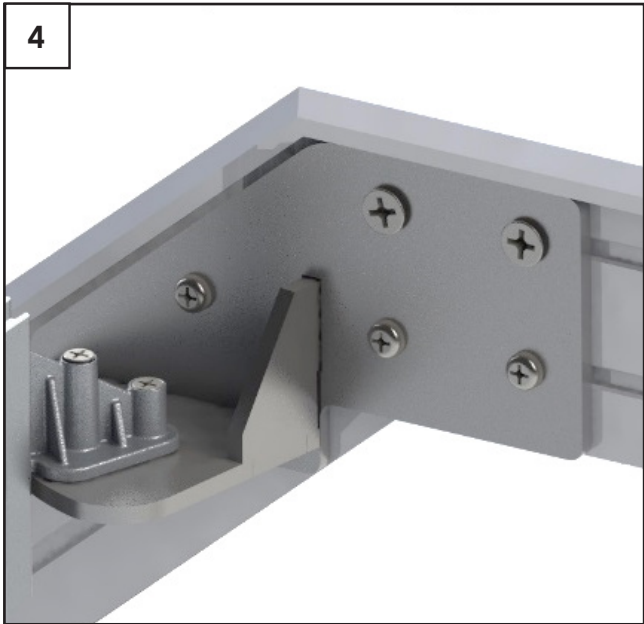
Position starter bar up to mitred edge of wall plate. Wall plate radius end should already be fixed to the wall plate. This can be done prior to fitting against wall.



Once in position, Drill and fix bracket to starter bar using 5.5mm drill bit and fix using M6x16mm Taptite screw.

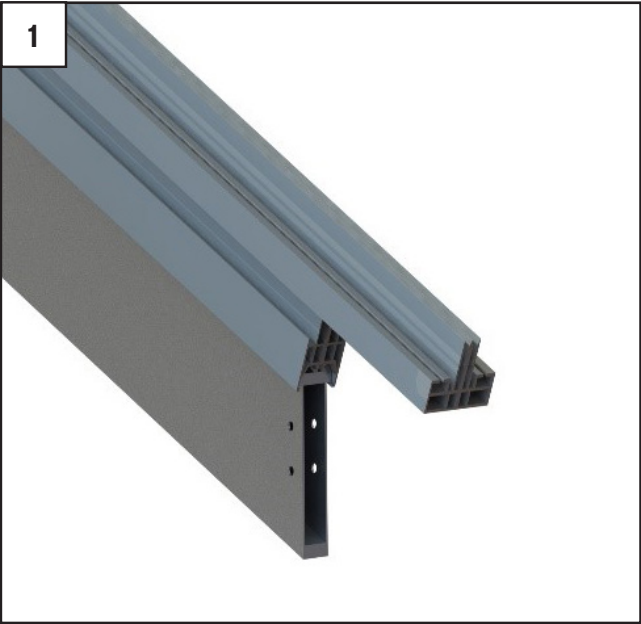


Mark height to underside of wall plate on host wall (shown on paperwork). Offer wall plate assembly up against wall. Ensure level and support in position. Drill 2x holes through wall plate and host wall and fasten using sufficient substrate fixings. (Not supplied by Prefix).

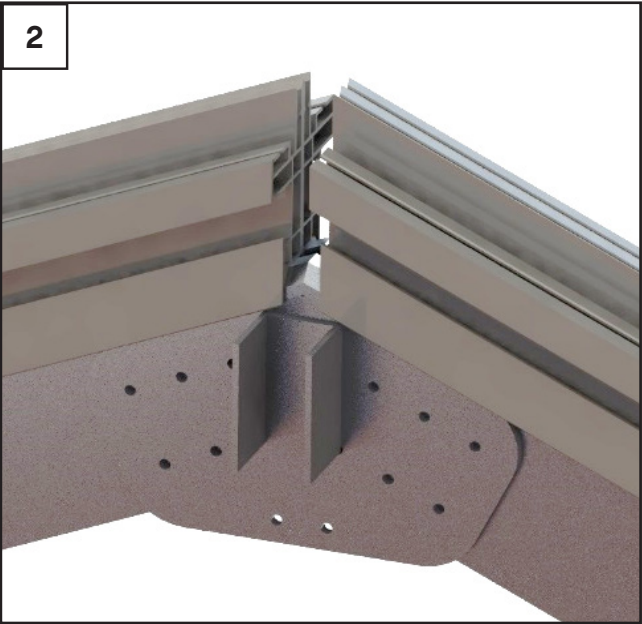


Fix hip bar in to position on radius end as shown. Fix down using 2 x M6x50mm Countersunk Taptite Screws.

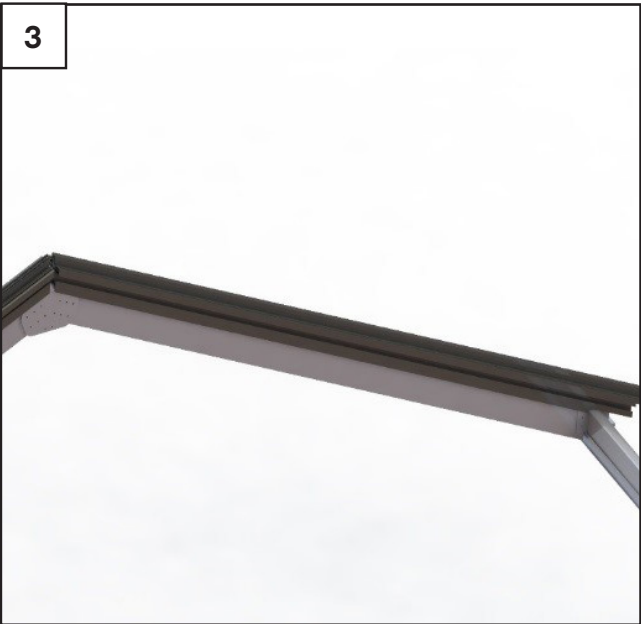
HYBRID ROOF INSTALLATION - CENTRAL RIDGE.



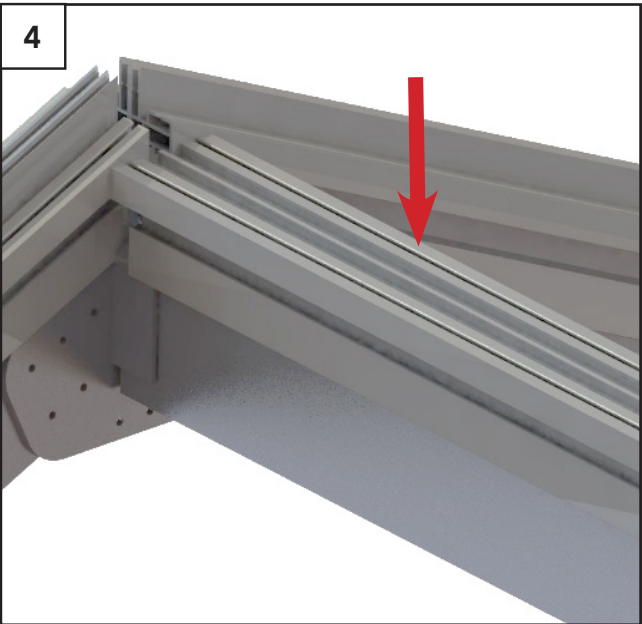
Prior installation, ensure the PVC thermal breaks have been connected to the applicable rafter, with the notched end at the bottom. On A-Frames against the host wall, back to back thermal breaks are used as shown above



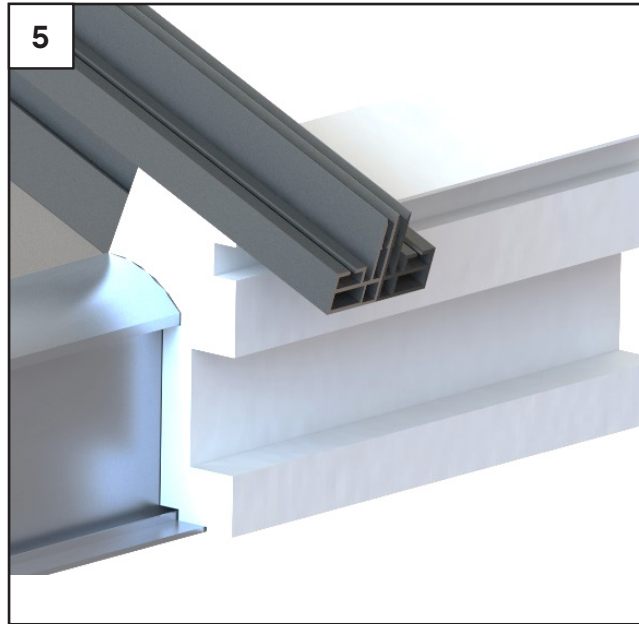
Leave an 18mm gap between each thermal break at the apex of the A-Frames (9mm each side) to allow for the OSB ridge support to run through.



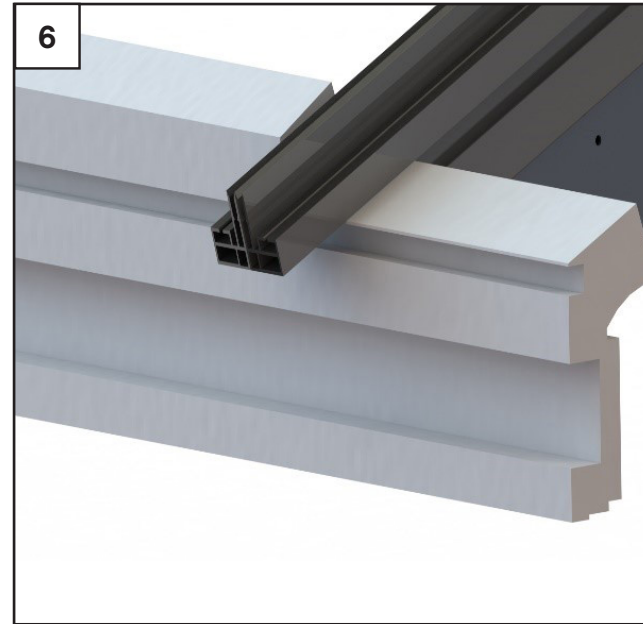
Drop the assembled A-Frame inside the uchannel brackets at the pre-set positions on the eaves. At house wall, pack out between bar and wall and fasten A-frame to house wall at approx. 500mm centres using substantial substrate fixings (Not supplied by Prefix).



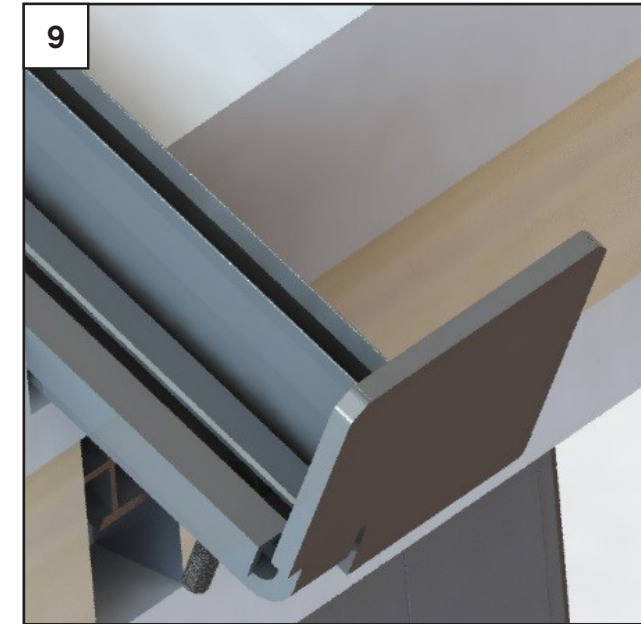
When locating A-Frames, drop ridge rafter into the u-channels on the A-Frame gusset plates until shoulder of rafter sits on to top of bracket. This may require positioning before fully locating A-Frames into Eaves Brackets. PVC on ridge should sit up to PVC on rafters. Fix using 2 x M6 x 16mm Taptite screws each side.



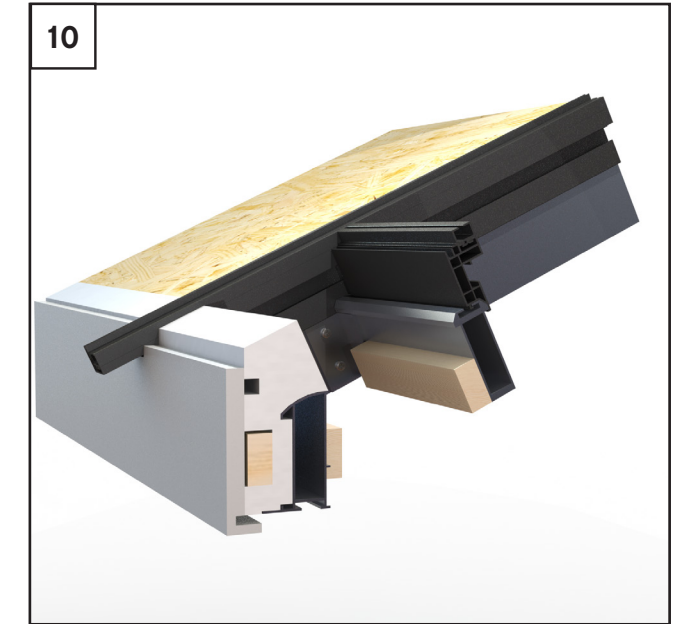
Thermal Break will be notched over the eaves to run past fascia board and support the glass. The eaves insulation and fascia board will be notched to suit.



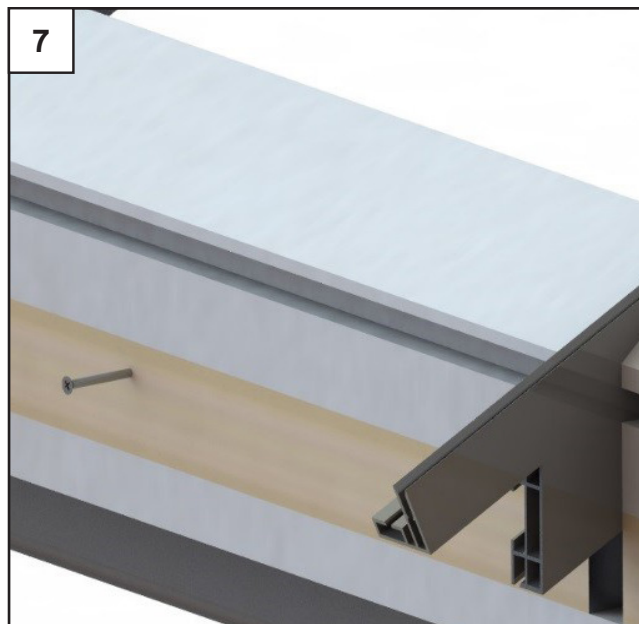
Locate pre-notched eaves insulation between the rafters, this may need splitting to fit in around thermal break. Top of insulation should sit flush with gasket channel in the PVC extrusion.



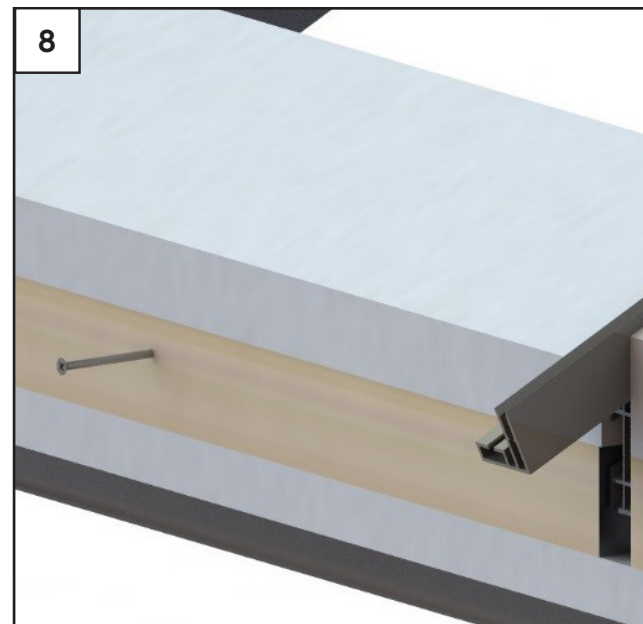
Take glazing bar end caps/glass stops and slide inside chamber below gasket chamber or position on underside if notched away. Fix through using 2 x M6x25mm square head nuts and secure with m6 bolts supplied. Note: these caps are handed.



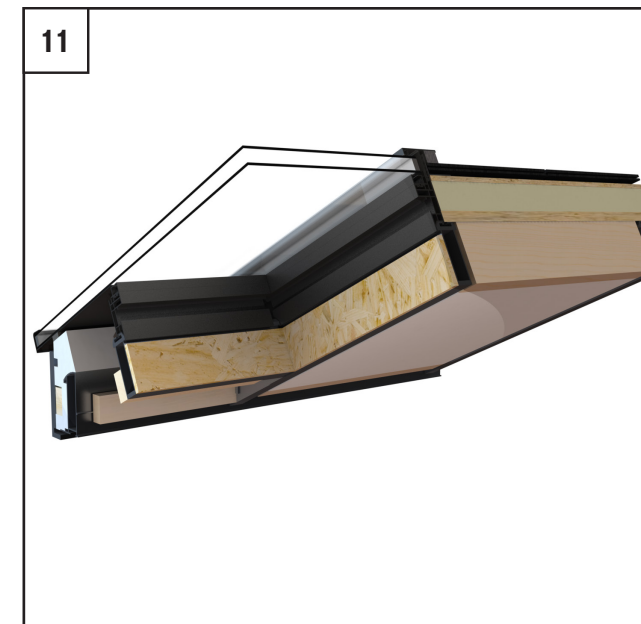
Line up cross rafter with drilled hole positions in A-Frames and fix using 2 x M6 x 16mm Taptite Screws Provided. Ensure timber batten is fixed to back face of cross rafter and eaves beam as fixing point for internal plasterboard



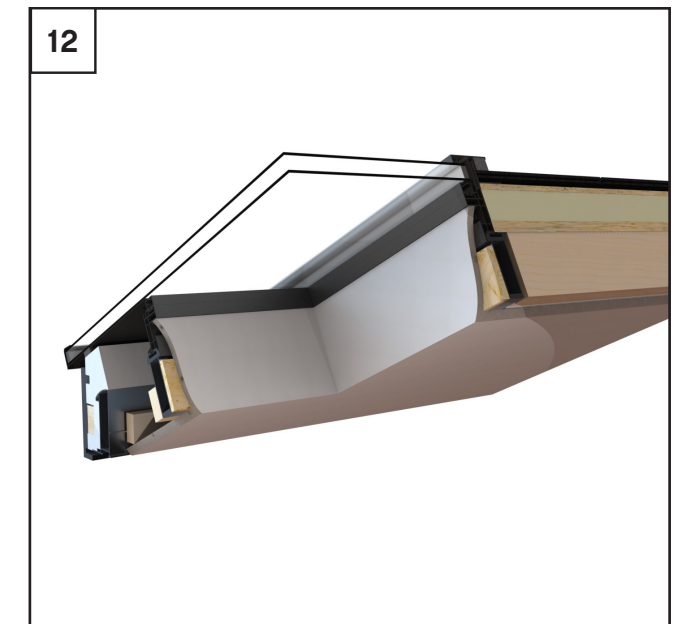
Insert 25x50mm timber batten into recess in the front of the eaves insulation. This may need cutting between the PVC rafters. Fix through timber into the aluminium eaves beam using the bay pole screws provided to secure the insulation in place.
86mm insulation = 60mm bay pole screws.
116mm insulation = 100mm bay pole screws.



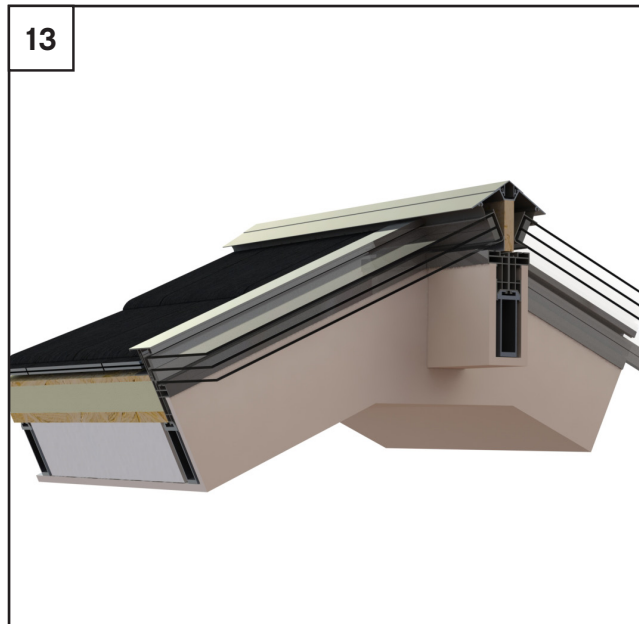
If an overhang is required, repeat steps 6 & 7 locating the insulation and batten in position. Fix through battens using 90mm woodscrews provided.



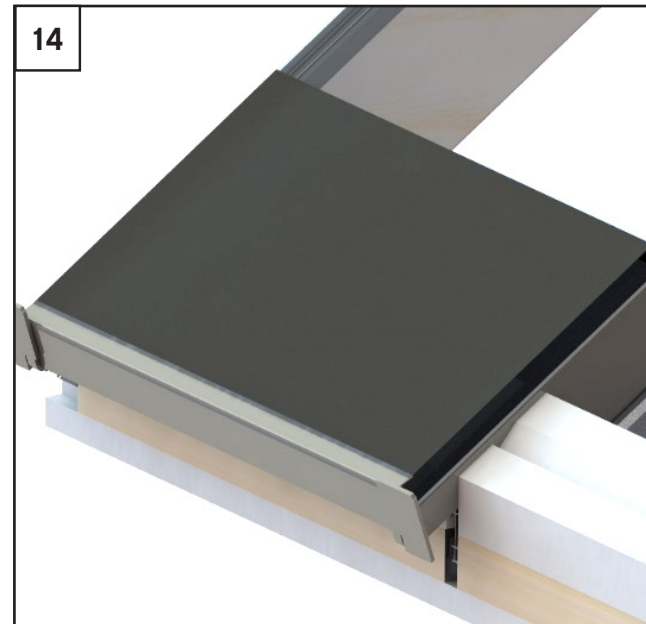
Locate 80 x 1200 x 9mm OSB packers. Position underside of packer with bottom edge of Rafter and fix using 4.8 x 25mm self drilling screws to allow plasterboard to sit square on PVC thermal break. (Cross Sections on Page 46).



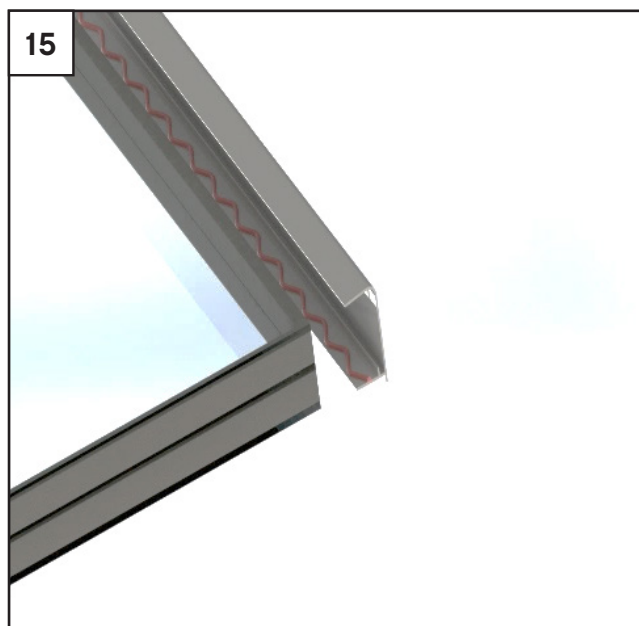
Once the rest of the roof is panelled and water tight, internal surface can be clad using Foil Back Plasterboard (not supplied by Prefix) See cross sectional images on page 47.



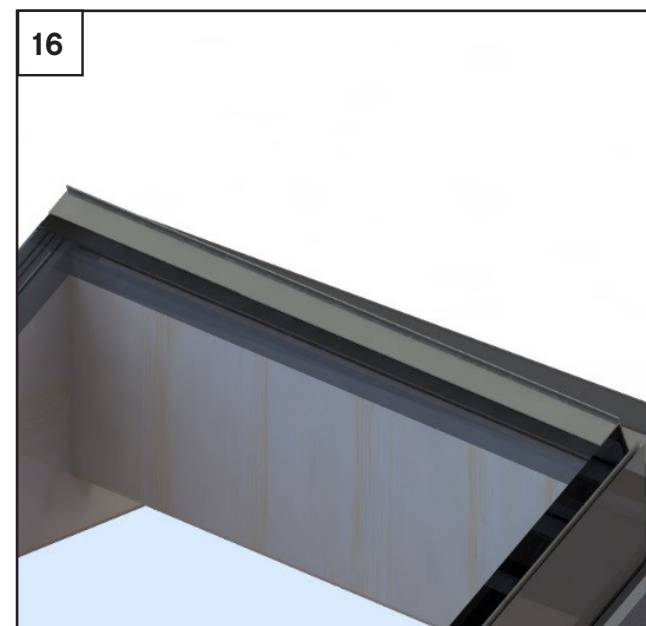
Where ridge rafter is used follow steps 11 and 12 to fix plasterboard using cross sections on page 46 as a visual reference.



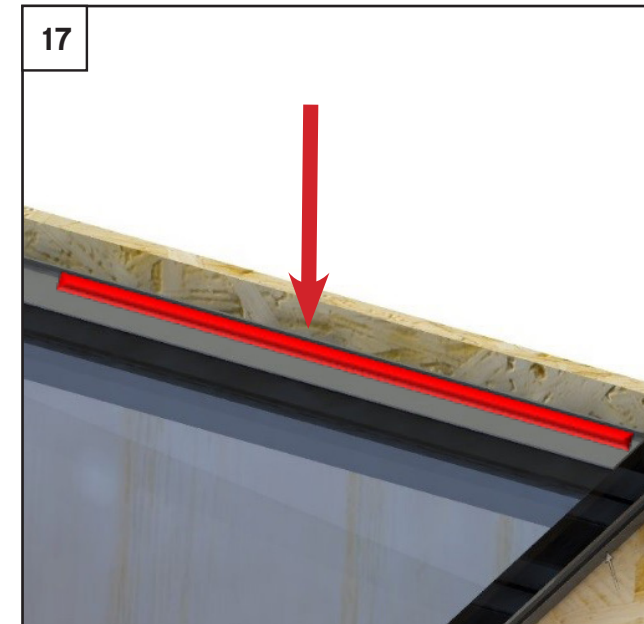
Ensure E gasket is fitted down the PVC channel and insert glass units. Ensure Glazing bar end caps are bolted in position at bottom of thermal break, before fitting glass as these act as glass stops. Black out film to sit on internal face of glass at the eaves to mask the internal structure of the roof through the glass.



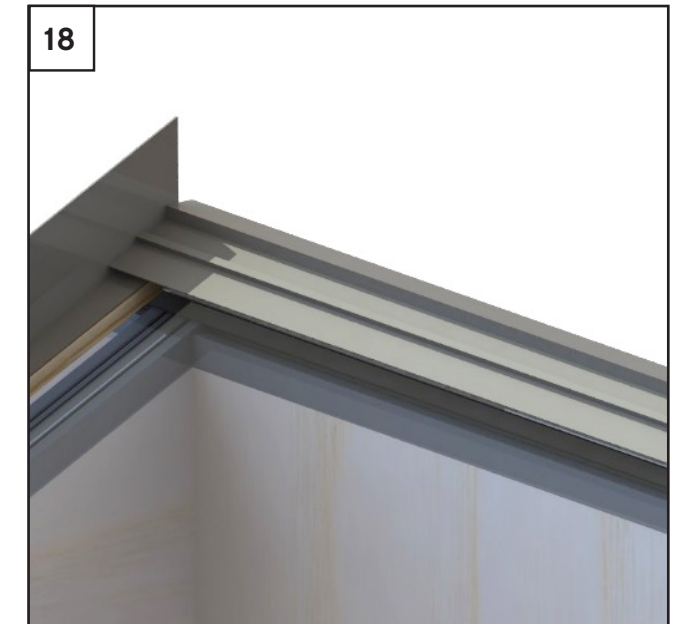
Take end channel and run a bead of suitable MS polymer sealant along the top and bottom internal faces and slide over the top and bottom edges of the glass units. Note: at the bottom of the unit the tab on the PVC should face down. On the top of the unit the tab should face upwards. (28mm units will be supplied with an aluminium end channel)



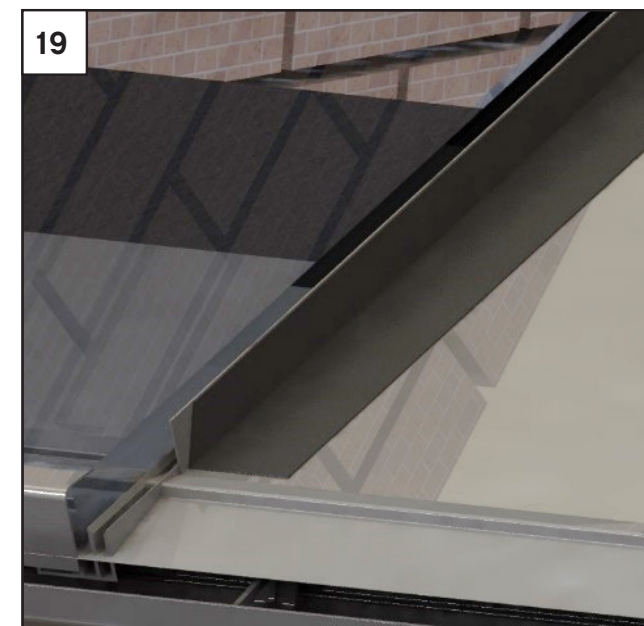
Once glass is located. Insert base panels, top panels, OSB spines, fascia and gutter, as per earlier on in installation guide.



Run expanding foam along edge between OSB ridge and the 44mm glazing end channel to fill and seal this area.



Run flash band seal over the whole ridge and onto the glazing end channel, ensure watertight.

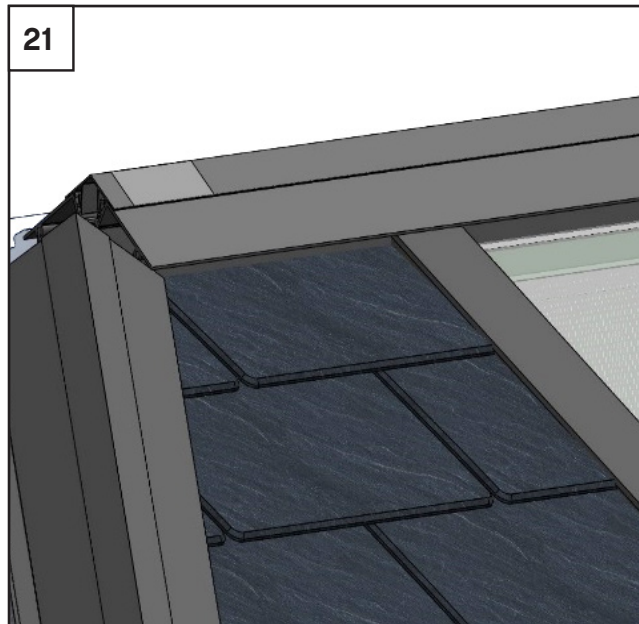


Lay membrane across rest of WARMroof, leaving extra at glass to lap up behind soaker rail. Take soaker rail with the ripped down upstand (approx. 25-30mm) and position tight up to edge of panels/ back of PVC thermal break. (Note: glazing bar end cap omitted from this view for clarity)

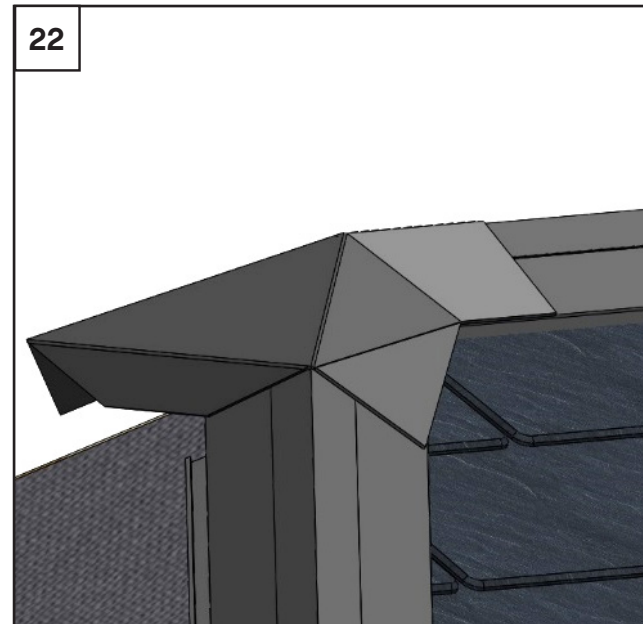


Tile rest of roof. Leave approx. 20mm gap between end of tiles and soaker rail upstand to allow glazing bar top cap fit. Push glazing bar top cap down securely into PVC Thermal break, ensuring even seal on the gasket onto the glass. Expanding foam seal should expand to fill voids against the tiles.

Fit new end cap covers prior to installing gutter.

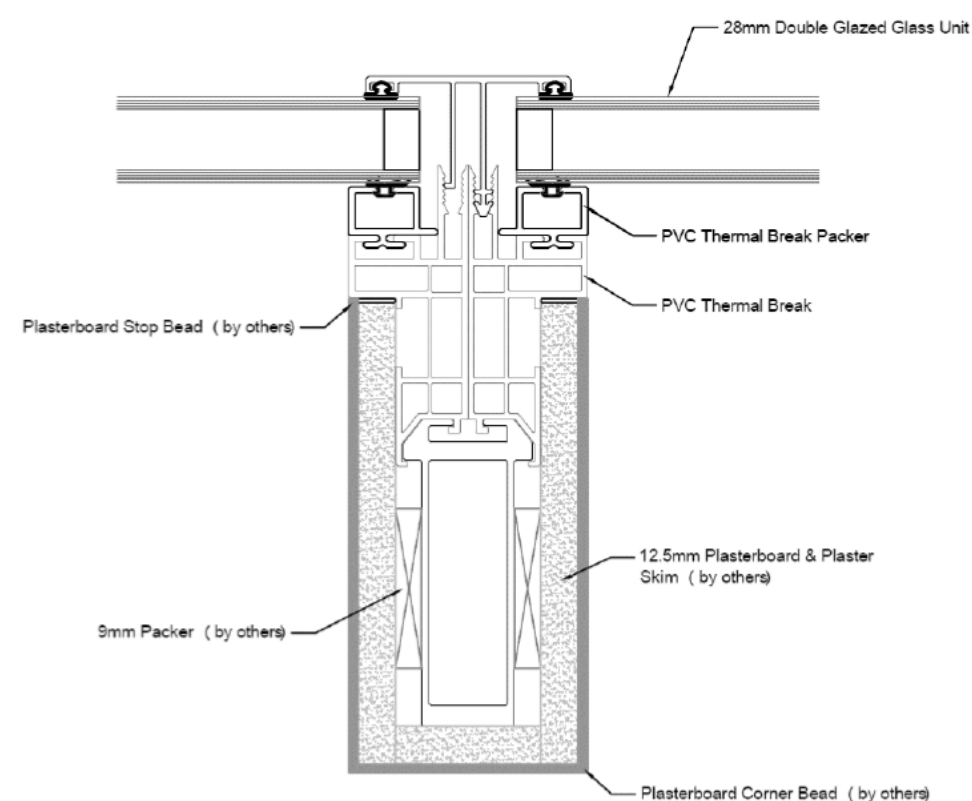


Fit top cap as per WARMroof install guide drill through aluminium at approx. 500mm centres fixing down into OSB ridge spine using 40mm stainless steel screws supplied. Note: ensure top layer of tiles is packed up appropriately for capping gasket to seal against the tile. This may require cutting an additional row of tiles in to make work. Or packing below tiles with OSB.

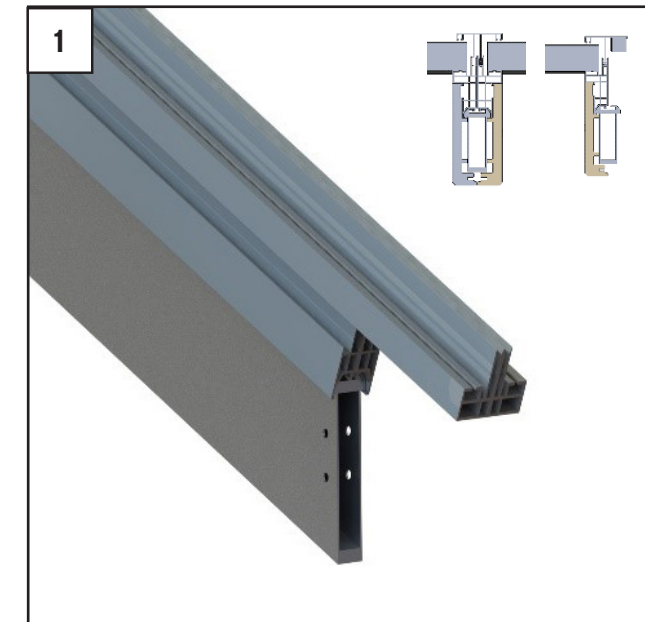


Prior to fitting the top cap cover, Notch back the top cover rail accordingly to allow radius end cover cap to clip into the top cap base. Using colour coded sealant, seal underside of radius end cover and clip into Ridge Top Cap Base. Ensure good amount of sealant to ensure radius end cover seals against ridge and hips and glass.

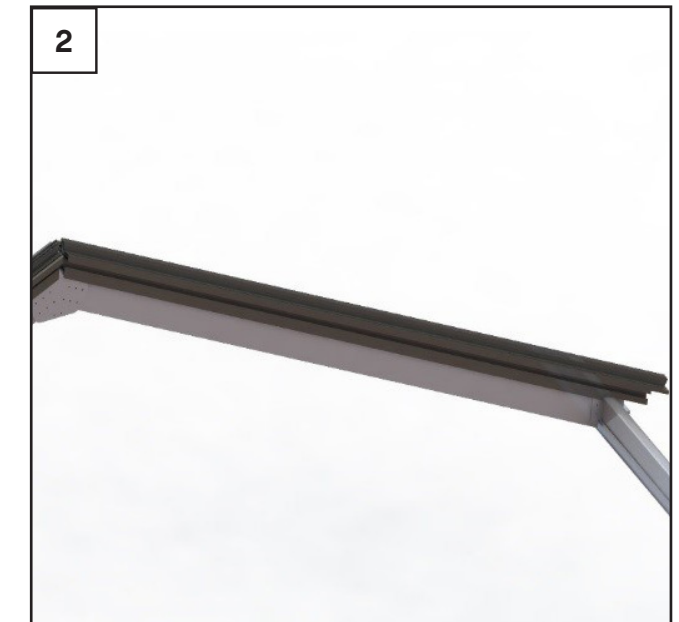
Typical section details of a back to back Hybrid unit. 9mm packers required to space 12.5mm foil backed plasterboard off the rafter (plasterboard and packers not supplied by Prefix). Typical approx internal finished width is 82mm.



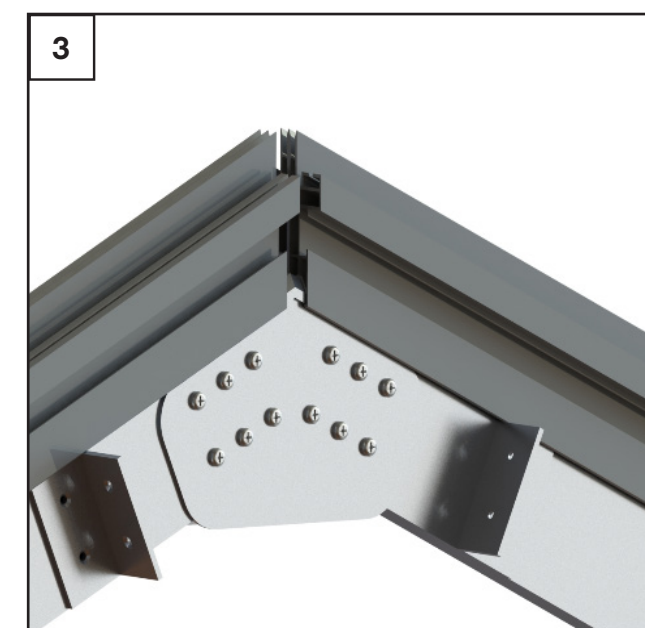
HYBRID ROOF INSTALLATION - DROP RIDGE.



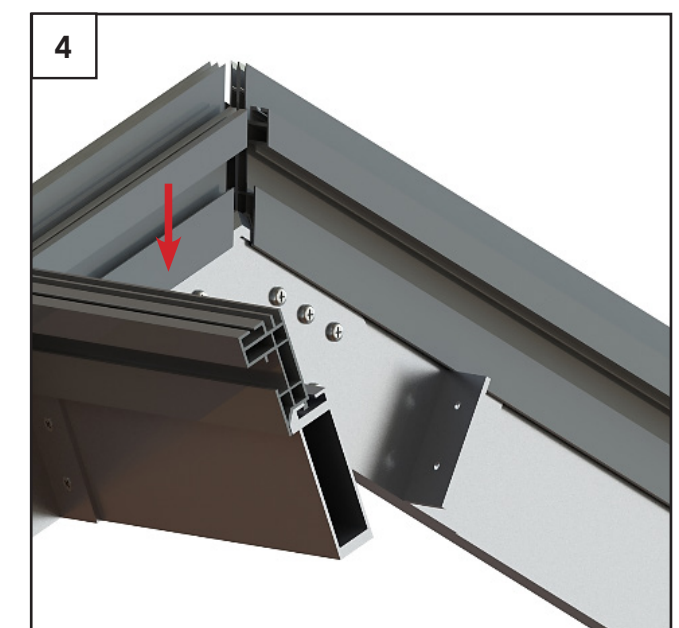
Note: The Opus A-Frames may have already been pre-assembled in manufacture. Slide the PVC thermal Break up the applicable rafter, with the notched end at the bottom. On A-Frames against the host wall, back to back thermal breaks are used as shown above.



Drop the assembled A-Frame into the prepositioned brackets on the eaves. Always pack starter A-Frame off wall and fasten to host wall 250mm from ends and at max. 500mm centres using substantial substrate fixings (Not supplied by Prefix).

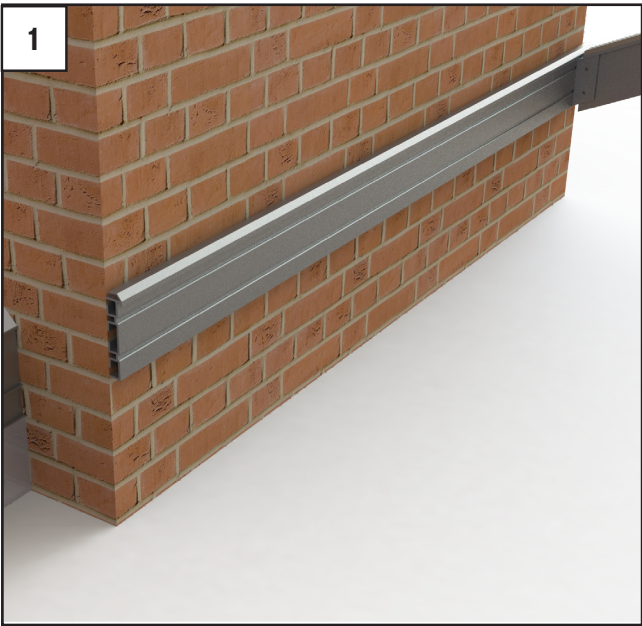


Ensure Brackets located on rafter are pointing inwards on the sections where the glass units will be placed. There should be one at the ridge and one at the eaves to position the cross rafters.



Once A-Frames are installed, select the appropriate cross rafters (using paperwork supplied) and drop into positions at ridge and eaves. Fix using 2 x 4.8 x 32mm countersunk self-drilling screws provided per bracket.

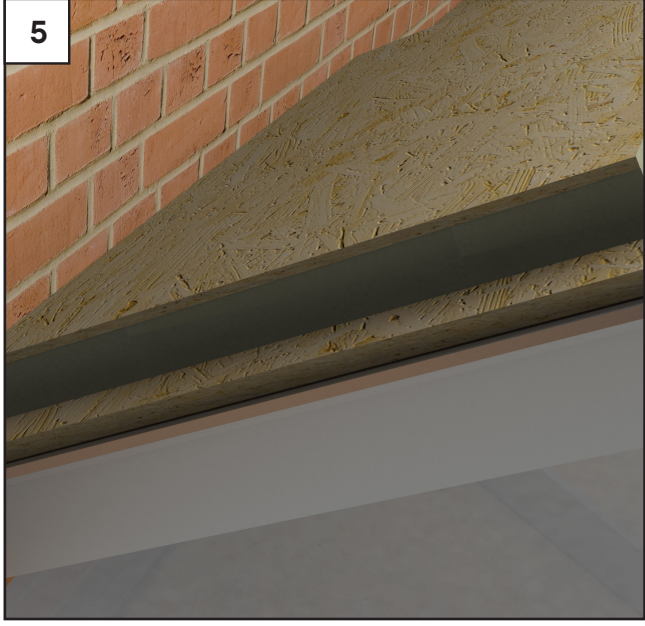
FLASHING TRAY DETAIL.



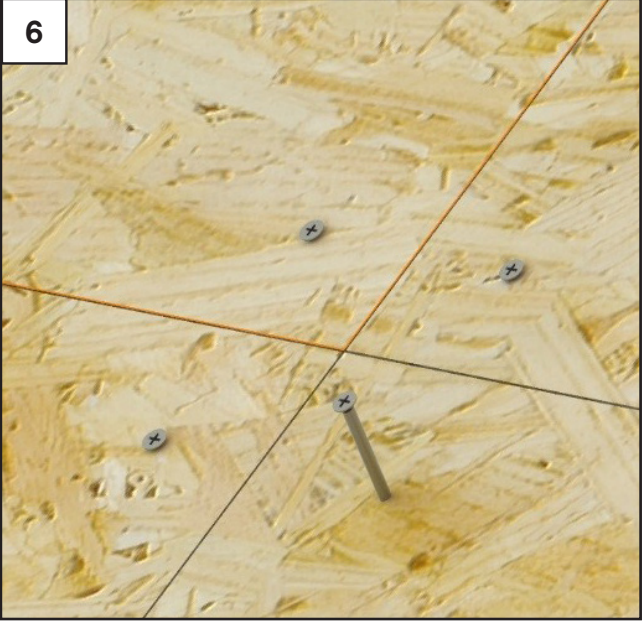
Using drawing pack (provided) measure and mark position of wall plate on host wall. Fix in position 150mm from each end and at approx. 500mm centers using suitable fixings.



From information provided, identify and locate the rafters. Using M6x16mm Taptite screws, fix the rafters as per standard detail over the uchannel brackets on the wall plate.



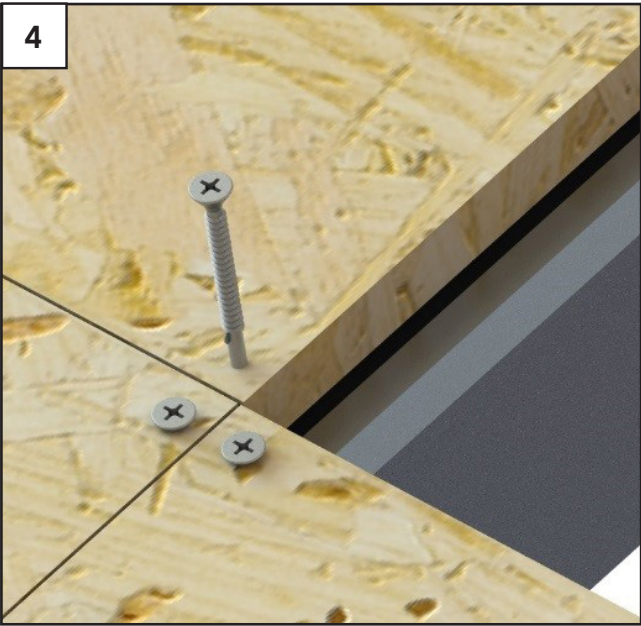
Identify and locate top panels. Top panels in this area will be mitered to suit the pitch and should sit flush against house wall.



Fix top panels to base panels approx. 75mm in from the edge of the panel, using 4.0 x 90mm woodscrews provided.



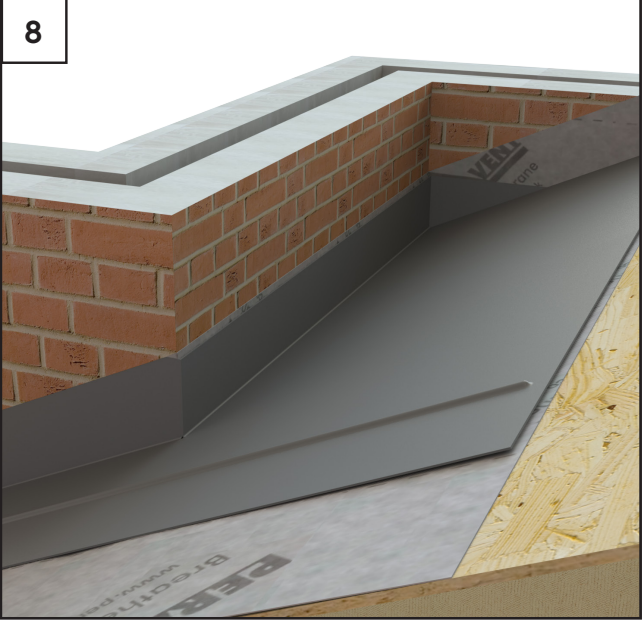
Identify and fit base panels into position. Ensure the top edge of the base panel sits against the host wall and the internal timber against the edge of the wall plate.



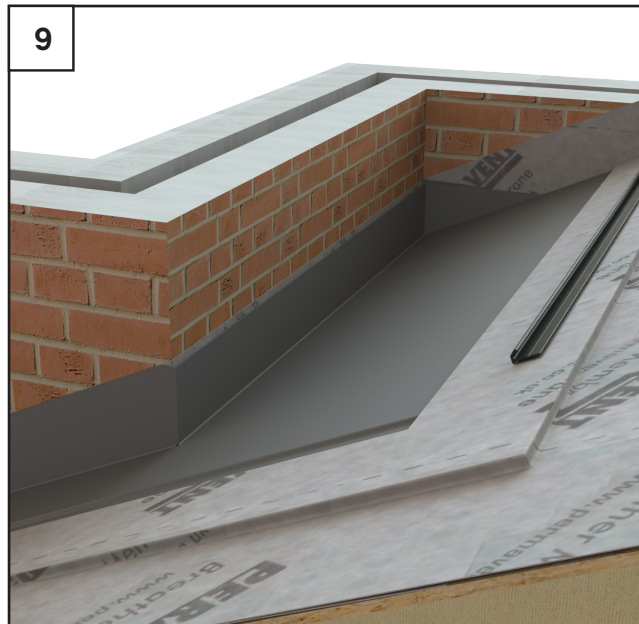
Secure base panels to rafters 10mm in from edge of base panels. Fix using 5.5 x 60mm self-drilling tek-screws provided.



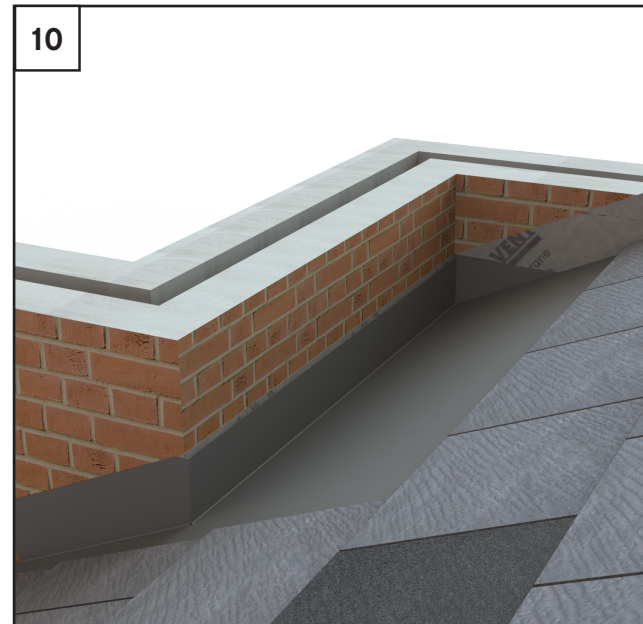
Flash roof and house wall with membrane where the flashing tray is to be installed. Take care where membrane runs up the wall into or around a corner. Note: Ensure membrane always has a min. 150mm overlap



Position flashing tray against host wall. It is recommended to seal the tray to the host wall using a suitable sealant (low modulus silicone or lead sealant). Dress lead work over the flashing upstand.



Measure position of tile rail on flashing tray. It is recommended that generous bead of sealant is applied along the length of the tray beneath the tile rail prior fixing into position. Note: Always ensure that full tiles are set along the tray (higher than the tray upstand where possible).

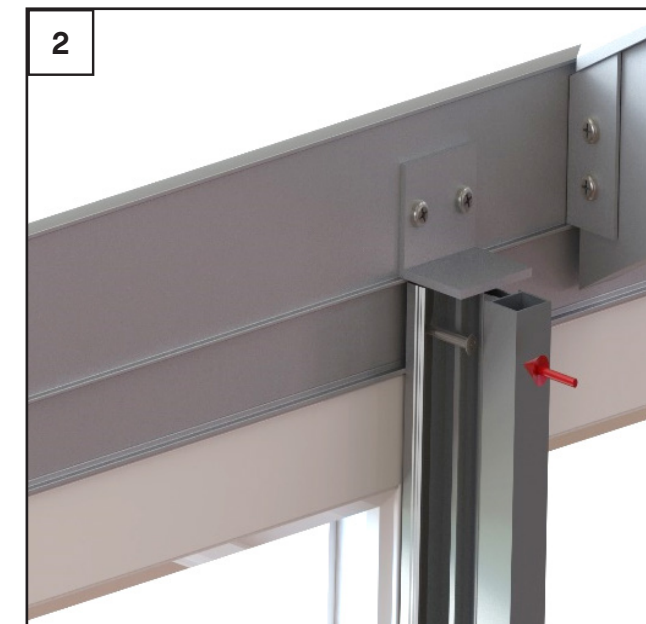


Continue to install breather membrane on the rest of the roof as previously described in the installation guide ensuring the breather membrane overlaps is adhered to and tile accordingly. Note: Always ensure that the membrane has a minimum 150mm overlap.

RETRO FIT POST INSTALLATION.



Prior to installation ensure base plate spans the cavity (supported by both the inner and outer skin of brickwork). Pack up or notch out the back of the window cill to enable base plate to sit on to outer skin of brick

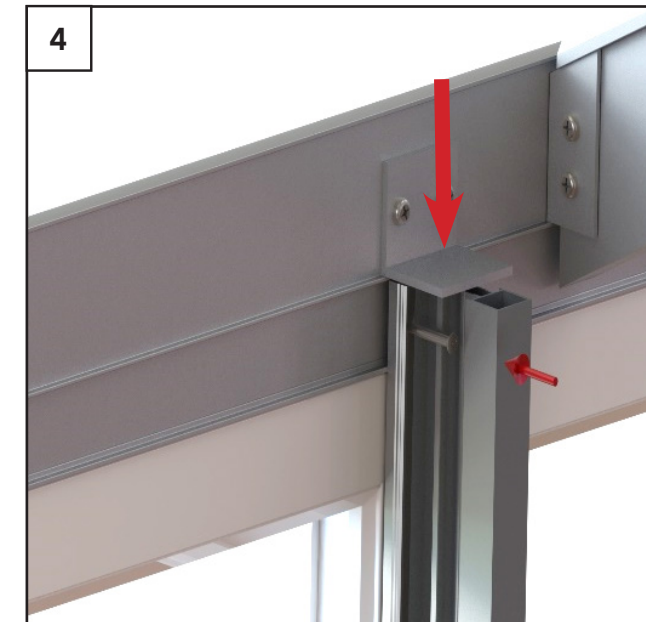


Identify mullion/post position, mark and fix 50x50mm angle bracket into eaves beam using 2 x M6 x 16mm Taptite Screws. (Ø5.5mm pilot hole required). Cut post to size to fit tight from underside of bracket to the baseplate.

Note: If post inline with rafter.



Slide 90° brackets into the end of the post and fix using M5x12 Taptite screws (Ø4.5mm pilot hole required). Position support post on base plate (see details on sheet 054) and fix to base plate using M5x12 Taptite screws.



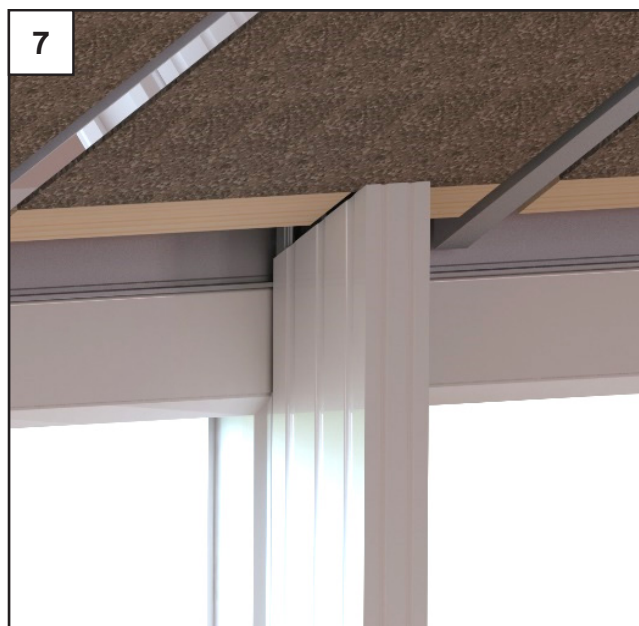
Ensuring post is plumb, fix either side of post into back of eaves beam using 2 x 4.8x32mm countersunk self-drilling screws. Fix post into frames no more than 200mm from top and bottom and at 500mm centres using the 32mm countersunk self-drilling screws.



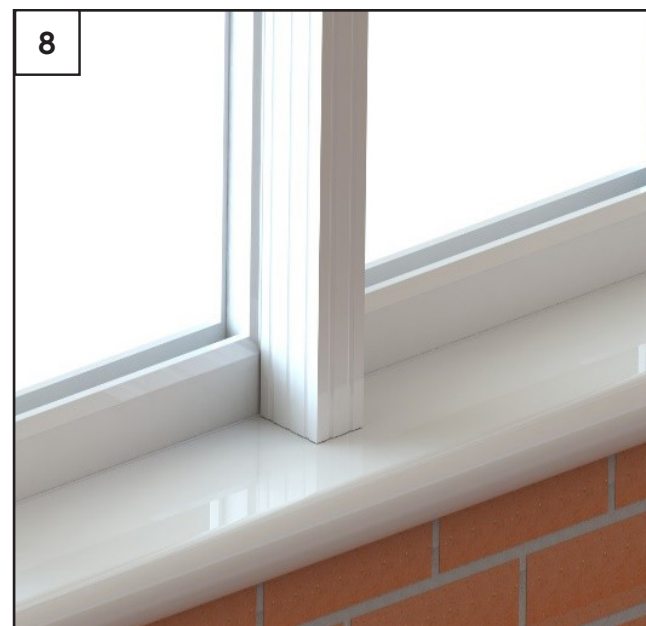
When installing the window board, mark and notch around the post to suit. Some notching or packing to the underside of the window board may be necessary.



Before installing the base panels mark and notch out bottom edge of base panel approx. 70mm wide to clear top of retrofit post and eaves angle. Back fill any gaps in the insulation with expanding foam.



Measure and cut the PVC cladding to the underside of the pitched roof and knock onto post using a nylon mallet.

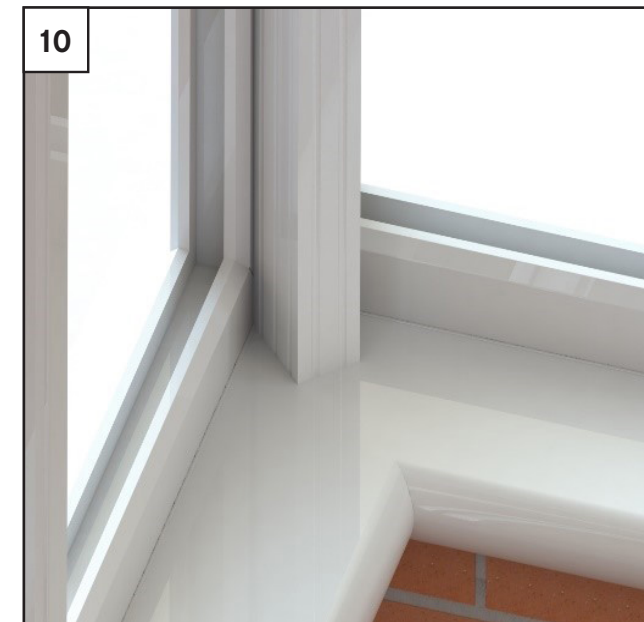


Cladding should sit flush against window board.

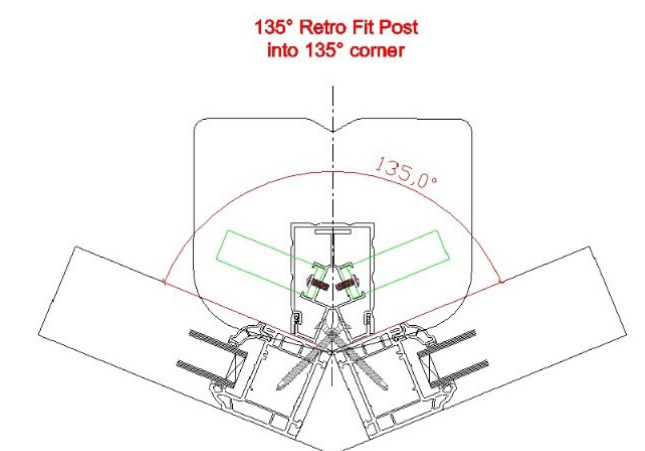
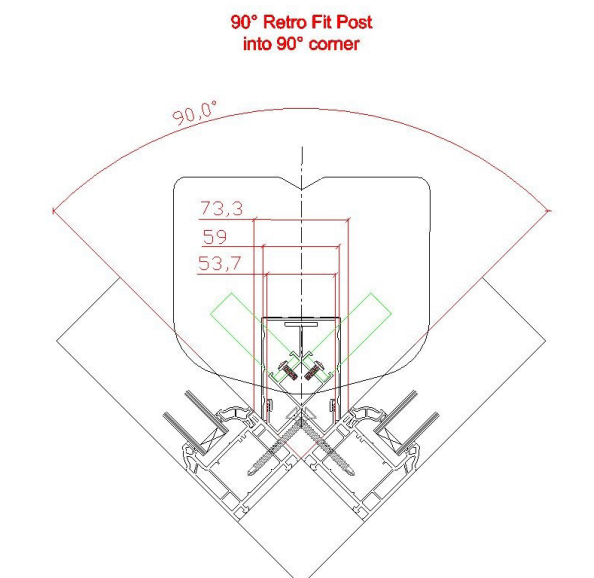
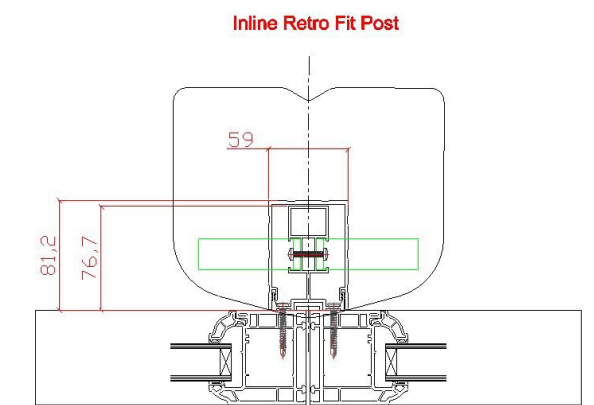


On a corner post. Remove the 2 inner M6 screws from the corner bracket. Line post up and cut to size to fit beneath the corner plate.

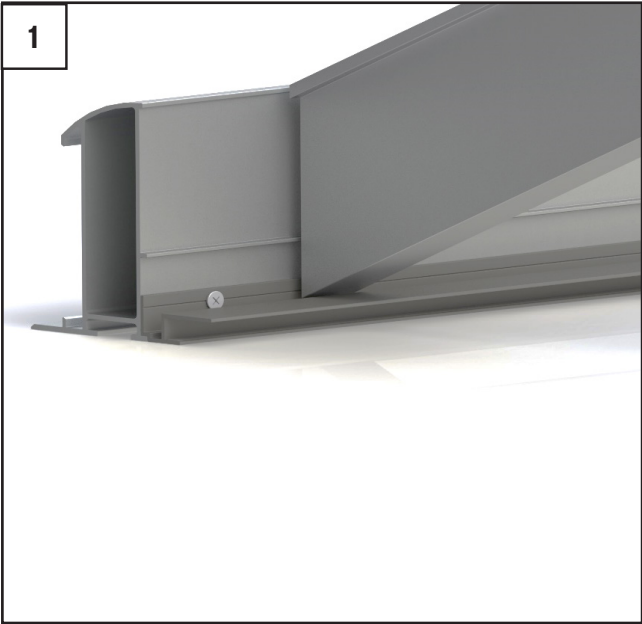
Mark and Notch the top internal edge of post to clear bottom edge of hip bar. Position post and fasten through post into the back of the eaves beam and frames using 2 x Ø4.8x70mm countersunk self-drilling screws.



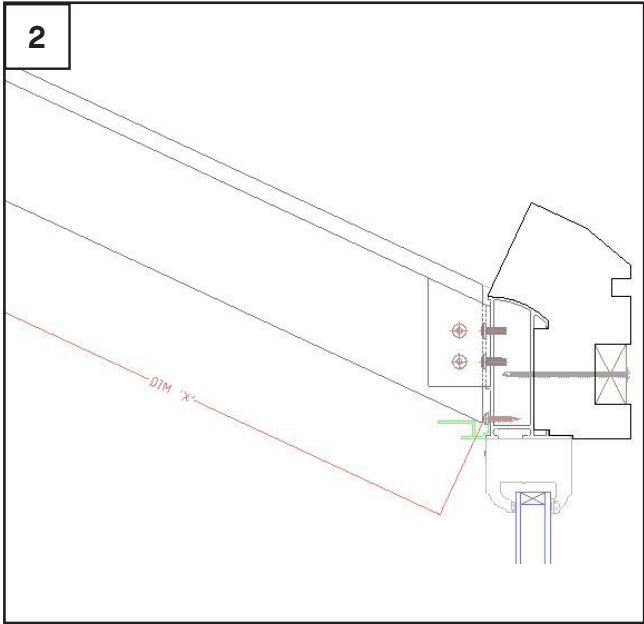
Follow Steps 5 and 8 notching, window board and cutting cladding in at the top and knocking into place, making sure cladding sits flush against window board.



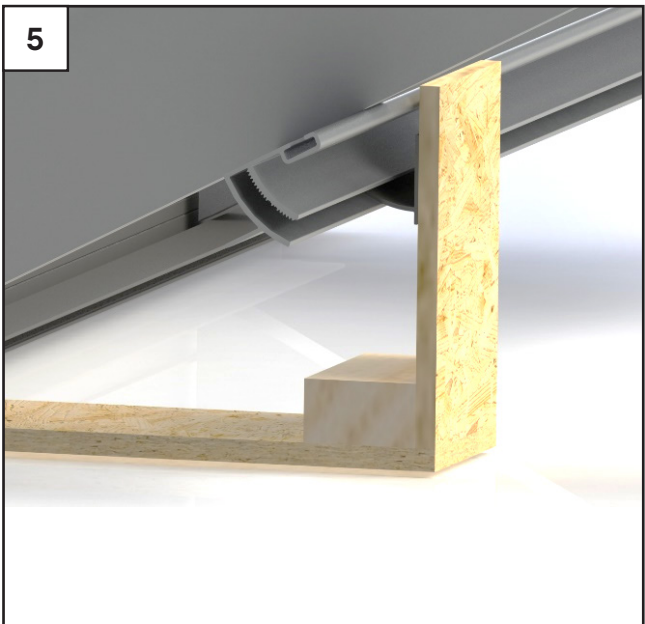
PELMET INSTALLATION.



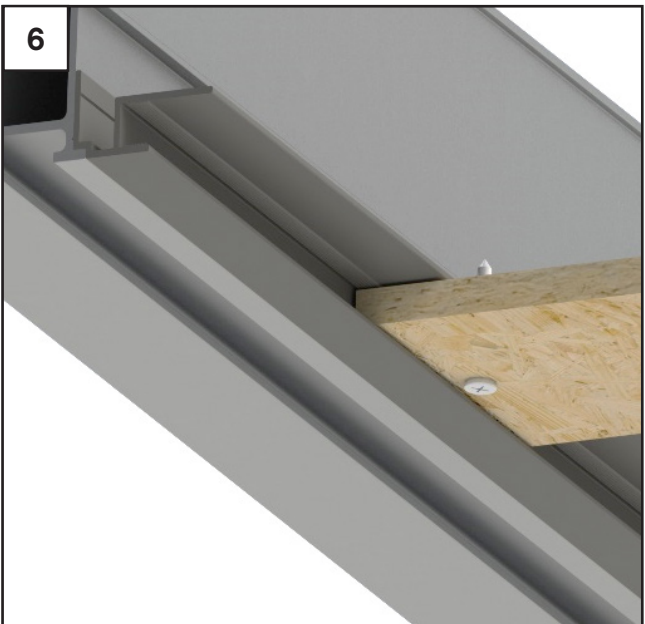
Prior installation of the pelmet, ensure PVC rails are connected to perimeter of eaves beam. Prefix recommend fitting all pelmet rails before installing the base panels.



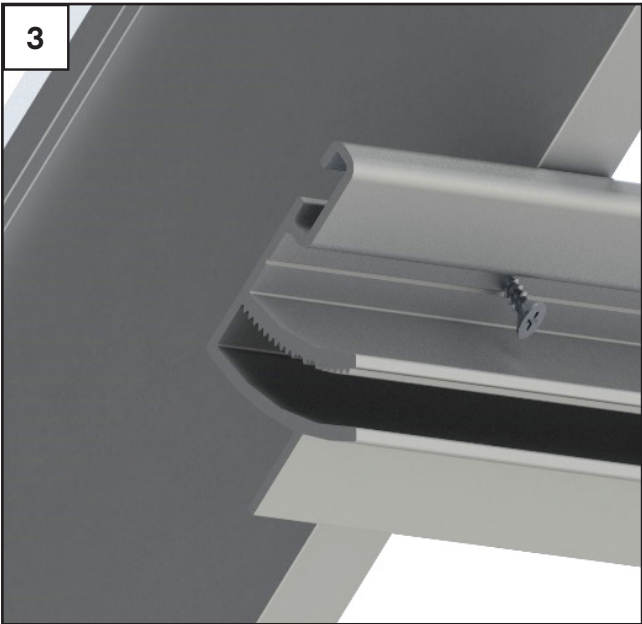
Using the location plan provided, find Dim 'X' and measure up from the bottom edge on the underside of the bar and mark the bottom of each rafter. If pitches are unequal this dimension will vary to keep the vertical pelmet size the same around the roof.



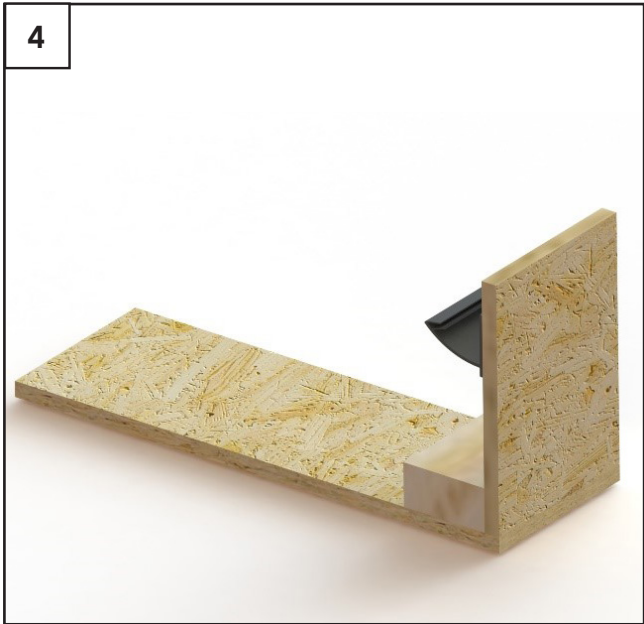
Start to engage the PVC Clip on the Bracket into the Aluminium Pelmet rail. Make sure the bottom edge of the bracket locates into the PVC eaves rail then knock the bracket firmly into the rail and checking that upright OSB is vertical.



Fix horizontal OSB up into the PVC eaves rail using Ø4.8x32mm countersunk self-drilling screws.



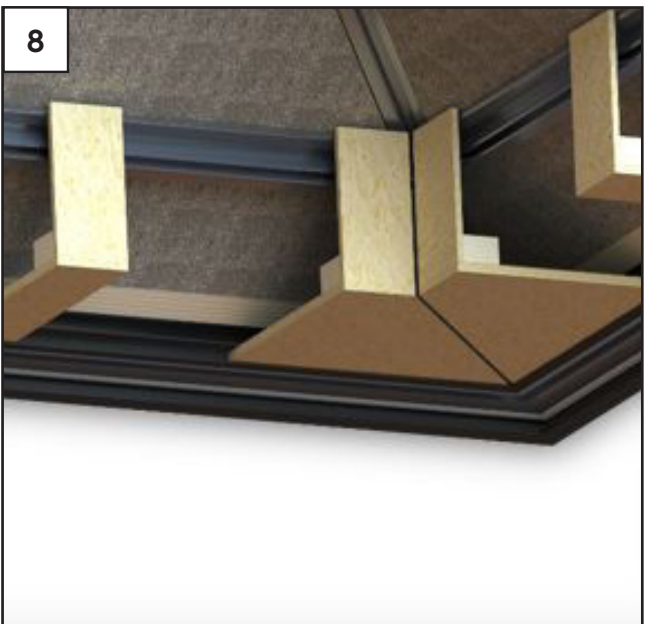
Aluminium rail supplied at Internal Eaves length. If running into a hip, measure along the reference line (step 2) the length of the rail and cut to size. Position rail with top edge up to the reference line. Prefix recommend clamping rail to rafters using quick clamps. Fix through aluminium rails into the underside of the rafters using Ø4.8x32mm countersunk self-drilling screws.



Identify pre-assembled pelmet brackets. If roof pitches are unequal find the different width brackets and group separately.



Continue to install brackets around the roof at 450-500mm centres. If roof pitches are unequal, make sure the correct width brackets go on the correct face of the roof to ensure pelmet remains a constant height around the room.



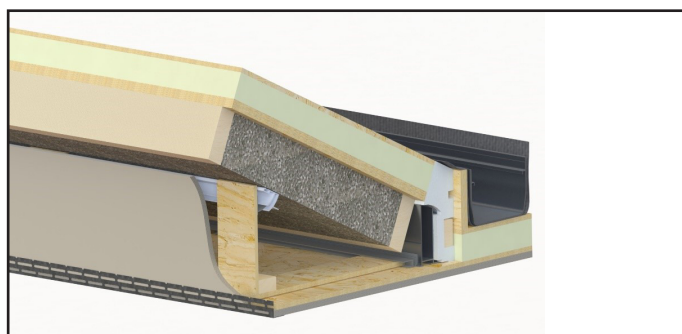
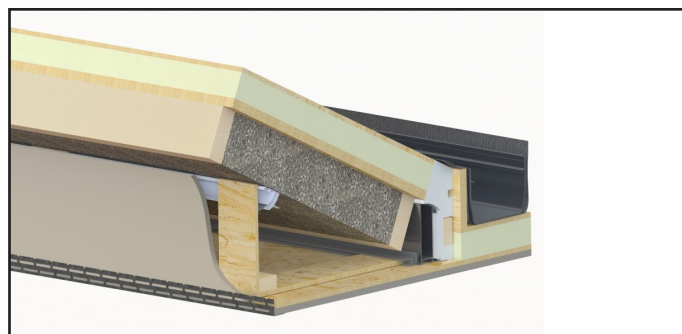
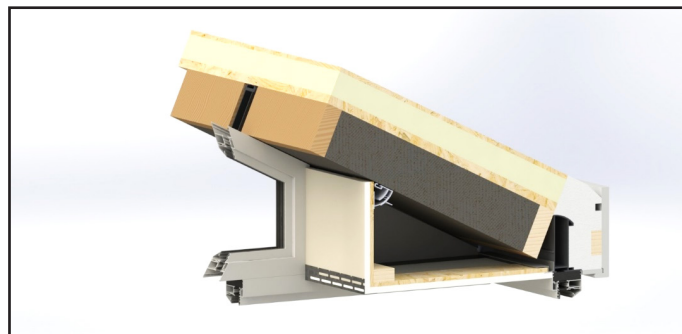
At the internal corners, the underside of OSB will run in to the corner as a fixing point for the plasterboard. When installing second corner piece it may be necessary to fit away from hip, then knock the bracket towards the hip with a nylon mallet to the correct position before fixing bracket at the eaves.



Finish pelmet by fixing 12.5mm foil backed plasterboard (not supplied by Prefix), to the pelmet brackets around the roof.

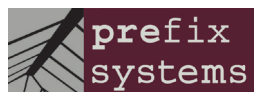
Refer to Technical Guide for more details on the Pelmet system, including configurations and details at Gable Ends and box gutters.

Note: Please do not order gable frames on roofs before speaking to one of our WARMroof Team Members as these may vary when pelmets are used.



TIPS & TRICKS!

- Have the correct tools for the job in hand. e.g. For self- drilling screws use a combi drill at the correct speed/torque setting (let the screw do the work) & impact drivers for machine screws.
- For safe access use a scaffold tower & roof ladders – this will also speed up installation times.
- Familiarise yourself with the roof. Have all the location plans to hand -these can be taped to the windows.
- Check cross dimensions of the supporting window frames/walls with the roof.
- Before fixing the rafters together you can ‘float’ the eavesbeam on the supporting window frames/ walls (fix all corner cleats & use a temporary clamp on the eavesbeam to hold in place).
- Arrange the panels into the relevant order starting with the base panels. Drop all panels into the structure first before fixing down, follow the same procedure for the top panels.
- Chase out the lead lines before the breathable membrane is applied.
- If the weather becomes wet you can apply the breathable membrane before the fascia & soffits.
- Make a jig/stop to help set up the first row of tiles. This can be made from two lengths of timber fixed together at 90 degrees and approximately 1 to 1.2m long.
- Always start fitting the tiles on the right hand side of the roof – cut tile sizes can be transferred to the opposite side of the roof (Georgian/Victorian designs).
- Keep your boots clean when gaining access to the tiled roof (it will make the final clean-up easier).



T: 01254 871800 | **E:** enquiries@prefixsystems.co.uk

www.prefixsystems.co.uk