

# equinox<sup>®</sup>

## INSTALLATION GUIDE

Issue 5



## CONTENTS

1. Preparing the ring beam	2
2. Installing the eaves beam	3
3. How to install structural support posts	7
4. Insulating and waterproofing	8
5. Tile application: Steel tiles	10
6. Non-standard roof crowns	13
7. Roof windows: Steel tiles	15
8. Tile application: Composite slate tiles	18
9. Tile application: SlateSkin GRP sheet tile	21
10. Roof windows: SlateSkin GRP sheet tile	26
11. Eaves seal installation	30
12. Valley tray preparation & installation	31
13. Valley tray installation for Steel tiles	32
14. Fascia boards & Guttering	33
15. Internal Insulation	38



### BE SAFE WHEN WORKING AT HEIGHT

Ensure you conform to the latest Work at Height Regulations. For more details, visit:

**[www.hse.gov.uk/work-at-height](http://www.hse.gov.uk/work-at-height)**

### If in doubt at any stage

Please contact our Customer Services Team for additional support or advice.



**0800 988 7307**



**[customercare@deeplas.co.uk](mailto:customercare@deeplas.co.uk)**

# INSTALLATION GUIDE

## PRE-INSTALLATION CHECKS



- ▶ Equinox roof kits should be checked against the order acknowledgement provided by Deeplas.
- ▶ Before discarding any packaging, check all components are accounted for.
- ▶ Prior to commencing any installation work, the size, type, and condition of all Equinox roof kits should be checked against the survey sizes.
- ▶ When retro-fitting the Equinox tiled roof system, ensure the existing conservatory frames and base are structurally sound before conducting any installation work.

▶ **Chimney flues** can be installed through the Equinox roof system, but the installation **must comply with approved documents F, J, L, G & P of the Building Regulations**. Deeplas recommends that any work carried out is by an approved chimney installer to ensure the correct flue is used. Ensure combustible materials are the correct distance away from the flue and the position of the flue exit is correct to conform with all current legislation. Deeplas recommends that you consult your Local Authority as most work relating to domestic solid fuel, wood and biomass and the associated systems for heating is notifiable to the relevant Local Authority.

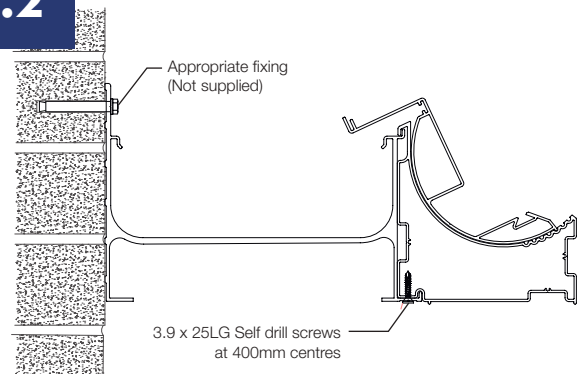
## 1. PREPARING THE RING BEAM

1.1



All the M6 double and single studs should already be set in position on the ring beam. Check the position of the studs and that they are all there. Slide in additional studs if required.

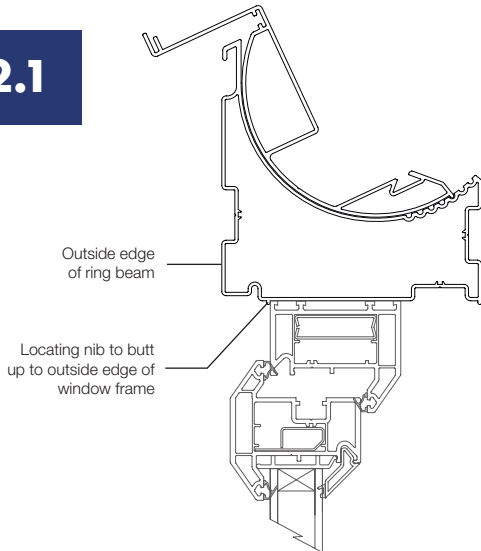
1.2



**Where a box gutter is required** fix the pre-cut box gutter to the property wall with appropriate fixings (not supplied) at 400mm centres. Install the steel ring beam cleats before fixing the ring beam to the box gutter using 4.2x38LG screws at 400mm centres.

## 2. INSTALLING THE EAVES BEAM

2.1



Align the locating nib with the front edge of the frame.  
Clamp to the frame to hold in position.

2.2



Continue locating the ring beam using the internal and external Brackets and the self-drill screws (supplied).

2.3



Ensure the window frames are correctly aligned.

2.4



Once the ring beam is in place, screw up from the frame using 5.5mm self-drill bay pole coupling screws (not supplied) to secure 300mm centres, ensuring you keep 150mm away from any welded frame joint.

## 2.5



If necessary, tidy up any plaster so the new gable rafters go up to the host wall.

## 2.6



Using the pre-positioned studs, locate the rafters in the ring beam and ridge in the marked positions. **Do not** fully tighten the nuts. Again, check the alignment of the frames.

## 2.7



Once the ridge is in place, locate the hips. Aligning the centre of the hip with the corner of the frames. Ensure the centre line of the hip strikes through the centre line of the ring beam bolt slots.

## 2.8



The hips are a two-part component and locate into the ring beam and rest on the wok (to be bolted later).



2.9



Locate any jack rafters on the ring beam and studs. Use single studs supplied to fix the top of the jack rafter to the hip. **Do not** fully tighten the nuts.

2.10



Check the height and level of the ridge. Ensuring rafters are aligned. Tighten all nuts in the ridge and ring beam. Tighten jack rafters and hips at this point. Ensure ridge height is the same as paperwork supplied.

2.11



Clamp the 'wok' to the hip. Use the M6x50LG bolts, nuts and washers supplied into the pre-drilled hole and bolt together. Do not fully tighten.

2.12



Ensure jack rafters and hips are correctly aligned. Set hips in position using the self-tapping screws supplied.

**2.13**



Fix gable rafters (at 400mm centres) to the back wall using suitable fixings (not supplied).

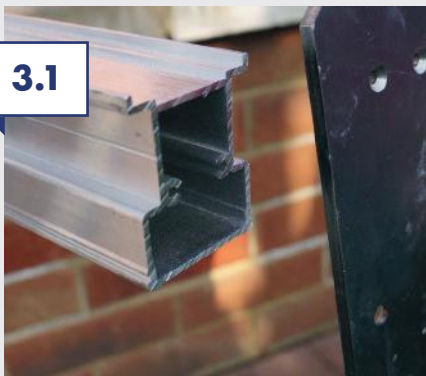
**2.14**



Install continuous 19x38mm battens on to the top face of all rafters using 4.2x38LG self-drilling screws. All hips, ridges, wall plates and valleys to have 300mm sections of battens fitted 100mm apart to allow airflow. (Some battens may be pre-installed by the supplier)

### 3. HOW TO INSTALL STRUCTURAL SUPPORT POSTS

**3.1**



Cut the support post to size, measure the distance from the underside of the ring beam to the internal brickwork below and deduct 5mm for the support plate.

**3.2**



Attach the support plate to the support post with the screws provided.

**3.3**



Position the assembly in its correct location. The support post should be flush to the underside of the ring beam to offer full support to the roof.

**3.4**



Using the supplied angle brackets, fasten the ring beam to the support post. 2 angle brackets are required on each support post.

**3.5**



Drill and fix the support plate to the internal brick/block work with suitable fixings.

**3.6**



Now the support post is fixed in its correct position, measure and cut the capping trim to size. Fit the capping trims and repeat the process until all support posts are fitted then re-fit or replace the window cills.



## 4. INSULATING & WATERPROOFING

4.1



Once all of the framework for the roof is assembled and tightened, install the pre-cut 100mm styrene insulation. Ensure the styrene is fully seated down to meet the base of the rafters.

4.2



Use an appropriate fire retardant expanding foam to seal any 3mm or larger gaps present between the styrene and the aluminium structure

4.3



At the crown and ridge of the roof, insert cavity insulation (Supplied) between the aluminium. Also insulate the void at the bottom of the hips where it meets the eaves beam.

4.4



4 Install all fascia vents along all sides of the ring beam using 4.2x38LG self-drill screws through the pre-set holes identified in the moulding. At corners, ensure vents are cut tight to each other.



## 4.5



Cover the entire roof with the pre-cut 18mm OSB3 boards, refer to the supplied plan to identify the correct locations. Fix the bottom boards to the ring beam using 50mm self-drilling screws (supplied) 50mm from the front edge, every 300mm. Fasten the remaining edges and along any intermediate rafters using the same fixings at 300mm centres. Top boards should be fastened along the ridge or wall plate.

## 4.6



Once the 18mm OSB3 is fully installed, fit the eaves guard around the edge of the roof with a minimum of 50mm overlap and mitred to each other at any corners.

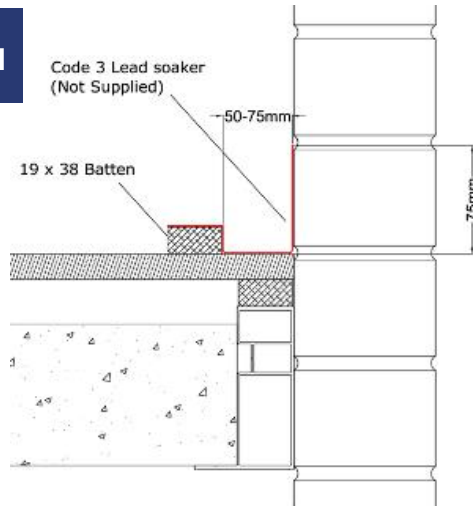
## 4.7



Cover the roof with HR membrane (supplied). Ensure the starting edge is to the front of the felt tray, do not extend the membrane past this point. Minimum horizontal overlap of 225mm for below 15 degree roof pitch and 150mm for 15 degrees and above. Lap membrane up host wall a minimum of 75mm. If additional roof membrane is required ensure it is HR type membrane (Non-breathable membrane) and is suitable for the pitch and location to be installed.

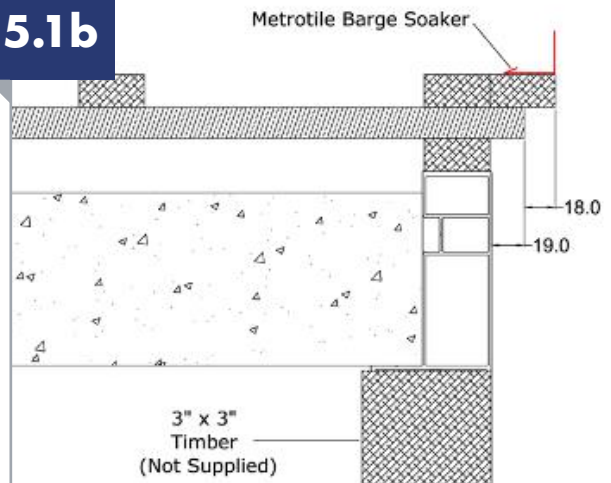
## 5. TILE APPLICATION: STEEL TILES

### 5.1a



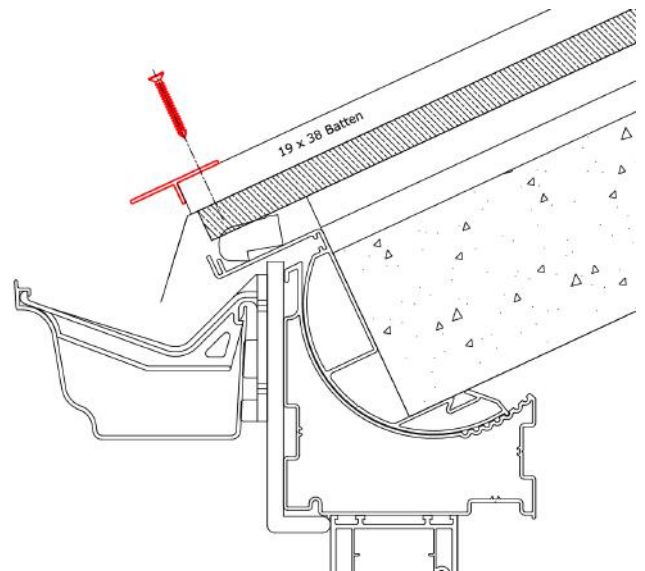
After the roofing membrane is installed, position the first 19x38 batten 50-75mm away from the wall, then using 9" code 3 lead, create soakers no longer than 1.5m in length and ensuring they lap up host wall 75mm in height. Each soaker should overlap the lower one by 75mm.

### 5.1b



After the roofing membrane is installed, position and fix the first 19x38 batten so it overhangs the OSB by 18mm, then fix another batten directly next to it. Then position the galvanised barge soaker as shown below, a run of sealant underneath will hold the soakers in place whilst the steel roofing tiles are fitted on top of them. Ensure the soakers overlap each other by 50mm minimum.

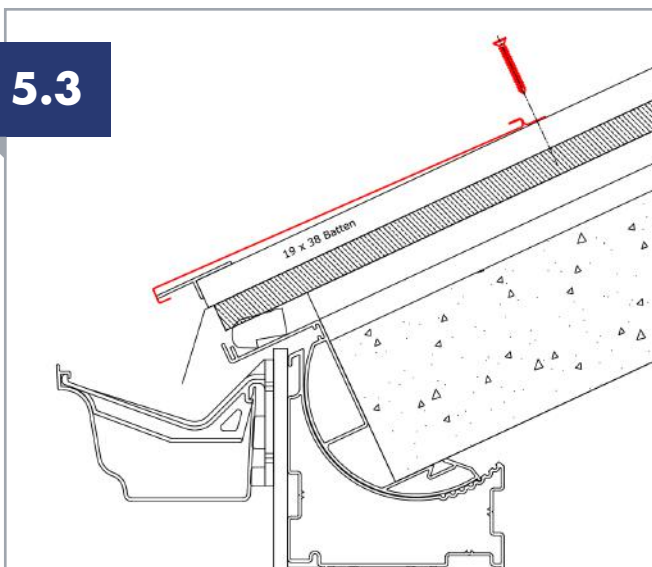
### 5.2



When the roofing membrane is installed, fix 19 x 38 battens vertical as shown at 200mm centres then fix the Metrotile cleat to the base of the battens,

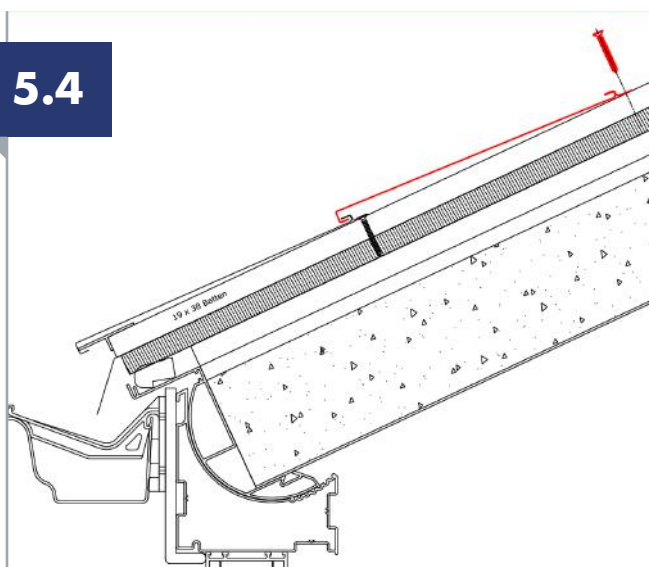
**METROTILE SHINGLE STEEL TILES CANNOT BE FITTED ON A ROOF PITCH BELOW 15°.**

### 5.3



Once the cleat is in place, hook the first tile over the cleat to locate.

### 5.4



Continue to install the tiles by fixing to the battens along the top edge of the tile.

### 5.5



Fix the metrotile hip vent moulding to the 19x38 hip battens using 4.2x16LG screws, then use a hip end cap to position and centralised, using the inner edge of the batten as a guide, mark a reference line on the tile to enable positioning of the battens later.

### 5.6



At the crown point use a ridge profile to set the width or set the width of the vent moulding to 240mm, ensuring the centreline aims to the crown point. If the roof has been supplied with a standard crown capping use this to correctly position the battens. Mark the tiles to the inside of the battens for reference later.



5.7



Apply the metrotile expanding foam to the underneath of the battens and then align with the reference marks and fix using 4.2x38LG self drill screws at each tile base. Noting the tape may take a few hours to expand and fill voids.

5.8



Install the hip end caps and then the ridge tiles by fixing through the vertical upstands into the side of the battens, note the ridge tiles are slightly wider on the base to allow overlap onto the previous tile, usually the base of the tile has a printed reference number at the base of the tile but check the width at both ends. Ridge tile should have 110mm overlap.

5.9



Complete the tiling by fitting the ridge moulding. Use repair kit to cover screw heads.



## 6. NON-STANDARD ROOF CROWNS (STEEL TILE ONLY)

6.1



Following section 5 until the last ridge tile, starting at one of the outer hips, cut the last ridge tile so its projects past the crown point. Using a straight edge scribe a line down the ridge centre line and a line from the crown point to the lower tile intersection point.

6.2



Using tin snips, cut the ridge tile upstand at the lower intersection point and fold the tile up to allow the tile to seat down, then mark another line 20mm parallel to the original one.

6.3



Cut the tile to the outside line and then fold the tile up along the first line to create a valley gutter. Tip; when using tin snips cutting in the correct direction will not leave a white line down the tile surface .

6.4



Continue the same process on the remaining hips.



6.5



Position and fix the ridge tile battens so that the height of the ridge tile is sufficient to ride over the hip tiles at the crown point.

6.6



Lay the ridge tile 20mm past the crown point and scribe a line to the outer tile intersection point, then trim the ridge tile. At the tip cut back to the crown point and fold down to restrain the tips of the hip tiles. Fix the ridge tiles to the battens through the outer edges.

6.6



6.7



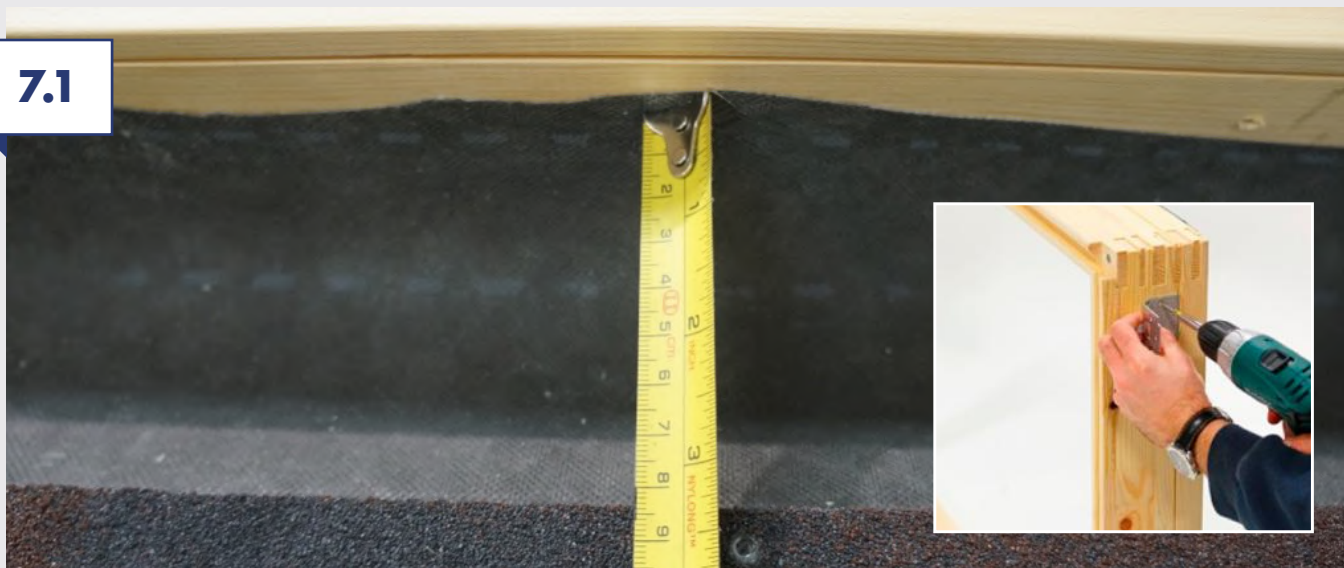
Use the glue and dust kits (supplied) if additional cover of the joints is required.



## 7. ROOF WINDOWS: STEEL TILES

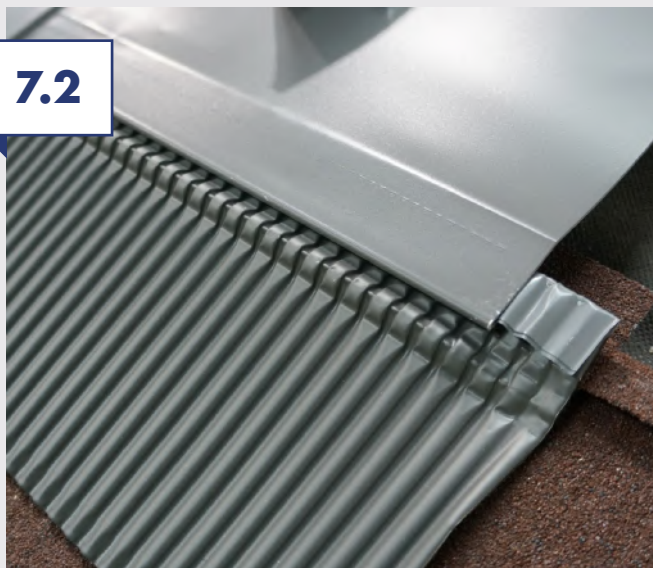
Use these steps in conjunction with manufacturers fitting/installation instructions.

### 7.1



Position the roof window 85mm above the immediate tile below the roof window position, marking out roof window perimeter cut ply/insulation. On the roof window fixing brackets, flatten the small location tang (inset picture) so the brackets sit flat directly onto the ply. Fix the roof window ensuring the felt is lapped up the sides of the roof window.

### 7.2



Fit the lower flashing kit. The powder coated steel flashing should be in line with the male hook of the Metrotile shingle tile.

### 7.3



Fold the flashing kit over as shown below, this directs any water blown sideways down. The lead skirt can also be cut the same width as steel base for neatness (Optional). Ensure a vertical batten is positioned at the side of the flashing Kit, not underneath.

## OPTIONAL

**7.4**



Offer the next tile up and mark where the transition from tile to flashing kit is, cut this away using some aviation snips as shown below.

**7.5**



Where the tile rides over the flashing kit slightly bend down the tile hook and press down the lead flashing, this allows the tile to hook under the steel flashing and shingle to the side, ensuring the front edge is fully restrained.

**7.6**



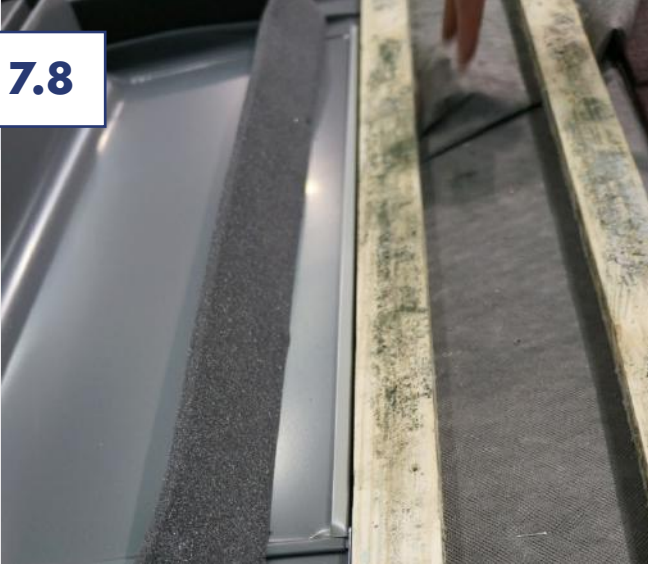
Continue fitting the tiles around the roof window. Note the foam does not need cutting down now the vent is fastened directly to ply. When fastening tiles down fold excess foam away from the roof window. Ensure cuts up to the flashing kit ridge are square and neat.

**7.7**



Fit the top flashing kit, remove and discard the tile support angle.

**7.8**



Fit a timber batten above the roof window horizontally.

**7.9**



Fit the upper tile(s) and nail or screw the tile in a couple of places into the batten above the flashing kit to secure the front edge. Finish the screws/nails off with Metrotile touch up kit. Note Photo shows a 780mm roof window, if 980mm is fitted then tile will required cutting around roof window.



## 8. TILE APPLICATION: COMPOSITE SLATE TILES

**LOOKING  
FOR STEEL TILE  
ROOF  
INSTRUCTIONS?  
GO TO PAGE 10**

### 8.1



For the first tile course, the tile height requires to be cut to 305mm from base. If the roof section being tiled is up to a single host wall, start tiling from the wall. If the roof section has hips, gable ends or host walls at both sides then start tiling from the centre of the roof section. The starter tiles should be fixed in the marked locations using the supplied 4.2x38LG self-drill screws and positioned so the tiles have a 30mm overhang from the eaves guard.

### 8.2a



Where the tiles meet a host wall, lead soakers cut out of code 3 lead or standard tin soakers should be installed under each tile in-line with standard building practices.

### 8.2b



If an end bar is present, Install and prepare the verge tray by running two generous beads of Soudal Fix All High Tack adhesive sealant (or equivalent) underneath each tile.

### 8.3



The next row uses full tiles and should be cross bonded with the below starter row. The tiles have fixing location information on them.

## 8.4



For the next row of tiles, check the lowest pitch on the roof, then set the tile overlap using the gauge shown on the side of the tiles. This overlap should be used for the whole roof.

**TAPCO SLATE CANNOT BE FITTED ON A ROOF PITCH BELOW 15°.**

### Gauge

6"  
6.5"  
7"  
7.5"

### Roof pitch

15°-25°  
25°-27.5°  
27.5°-30°  
30° +

## 8.5a



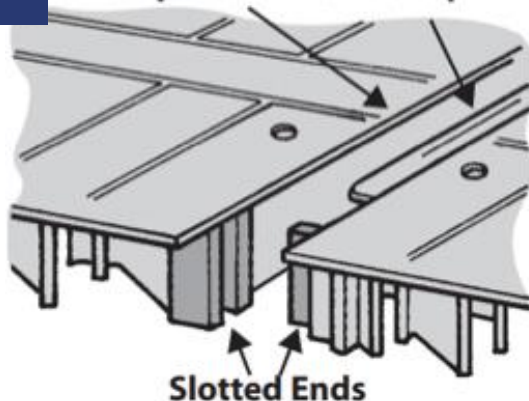
Where two facets meet over the hip, the tiles need to be cut and mitred leaving a 30mm maximum gap. Cut rectangular slots up the hips 200mm x 20mm sections through the HR membrane to allow breather space.

## 8.5b



Before applying the hip/ridge masters run a generous bead of silicone down both sides hips and ridge, ensuring the silicone is set back from the outer edges of the hip/ridge masters.

### 8.5c Overlap End Underlap End



Fix ridge master mouldings along the ridge, if host wall is present position the moulding so the directional arrows face away from host wall. Ensure the mouldings are clipped together using the slots as shown above and fix in marked locations, approx. 150mm centres using 60mm screws. Fix hip master mouldings up the hips ensuring directions arrows point upwards towards the crown point.

### 8.5d



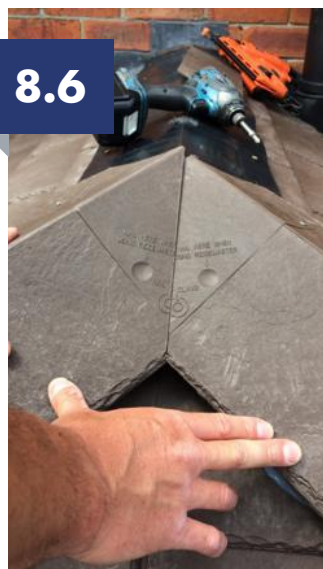
The ridge and hip masters will require mitring/scribing into each other when they reach the crown point as shown below

### 8.5e



Once mitred/scribed together use butyband to seal the joints on as shown below.

### 8.6



Install ridge tiles using 60mm fixings with appropriate overlap and marked fixing locations. At the ridge intersection the tiles will require mitring together to suit the roof geometry. Any joints can be sealed using appropriate colour sealant.



## 9. TILE APPLICATION: SLATESKIN GRP SHEET TILES

### PRE-INSTALLATION CHECKS



#### Preparation

- ▶ SlateSkin panels are delivered with colour coded and numbered labels for each facet, to assist fast installation arrange the tiles on the floor in order.

#### Safety

- ▶ Ensure that appropriate scaffolding or tower platforms are in place when installing the roof system and SlateSkin tile system. Do not venture on top of the roof unless you are wearing an appropriate safety harness. If any cutting of the panels takes place ensure that appropriate safety glasses, gloves and breathing masks are worn. COSHH sheets are available on request. It is the installer's responsibility to undertake an appropriate risk assessment for each installation.

#### Cutting & Grinding SlateSkin

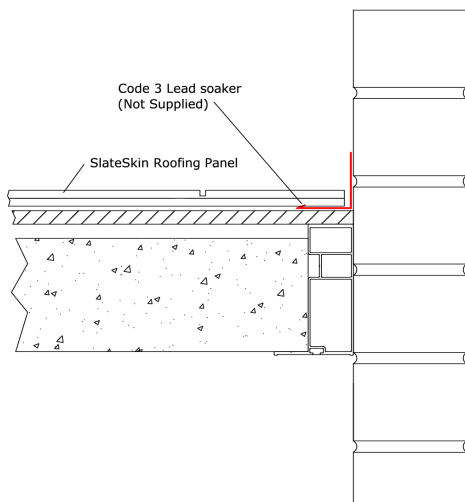
- ▶ Dust produced from grinding GRP can cause fluid to collect on the lungs, respiratory irritation and skin irritation. There is no work exposure limit (WEL) specified specifically for exposure to GRP. However, there is a WEL specified for nuisance dust of 10 mg/m<sup>3</sup> averaged over an 8-hour day, which would apply to GRP dust.

Please note the above has been taken from  
<http://www.hse.gov.uk/plastics/faqs.htm>

- ▶ Employers should carry out assessments to determine what control measures are appropriate for grinding GRP. Possible control measures include the use of gloves/overalls etc to protect skin, good hygiene procedures to remove dust, and local exhaust ventilation (LEV) to prevent it being inhaled. You should also train and inform your staff of the hazards of GRP dust, the symptoms to be aware of if exposed, and what action to take if exposure occurs.

For more information on carrying out assessments, see:  
<http://www.hse.gov.uk/coshh/index.htm>

#### 9.1a



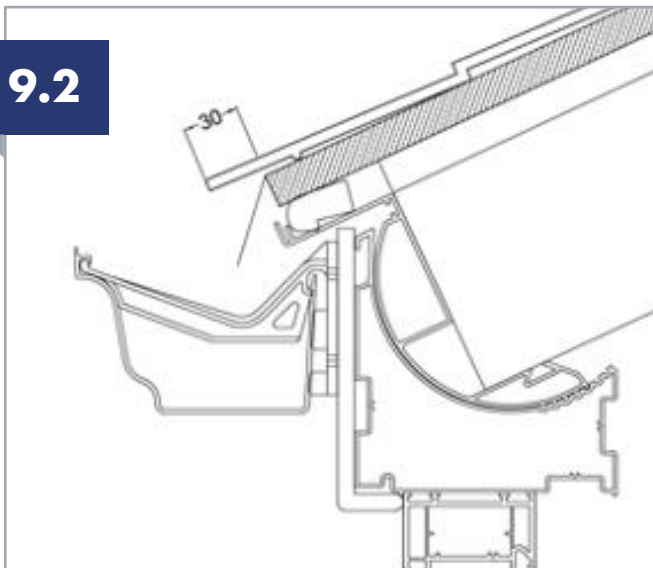
If a wall bar is present, prepare and position lead soakers using code 3 lead, ensure the internal edge is folded over to create a dam. The soakers should be 50mm minimum in width and lap up the wall 50mm minimum. Soakers should be no longer than 1.2m in length and have a minimum 75mm overlap with the one below.

#### 9.1b



If an end bar is present, prepare the verge tray by running two generous beads of Soudal Fix All High Tack adhesive sealant (or equivalent) until just past the height of the SlateSkin panel.

## 9.2



Position the base tile of the facet with 30mm overhang from the felt tray along its entire length.

## 9.3



Fix the panel to the roof ply using 4.8x32mm self-drilling screws supplied through the pre-drilled holes. Apply Soudal High Tack adhesive sealant (or equivalent) into the hole before fixing. Ensure the torque is set low and then adjusted to ensure the panel is not deformed.

## 9.4



Using a 3mm drill a pilot hole through the panel, plywood and aluminium support 65mm back from the face of the SlateSkin panel. Perform this every other tile impression on base of the starter tile only. (Do not repeat this on any other panels further up the roof slope)

## 9.5



Using a countersink bit, countersink the panel until 10mm in diameter. Apply soudal fix all high tack adhesive sealant (or equivalent) into the hole, then fix using grey painted stainless steel screws being careful not to over torque and deflect the panel. Wipe any excess sealant away.



**\* ONLY PERFORM THIS ON BOTTOM SLATESKIN PANEL \***

**9.6**



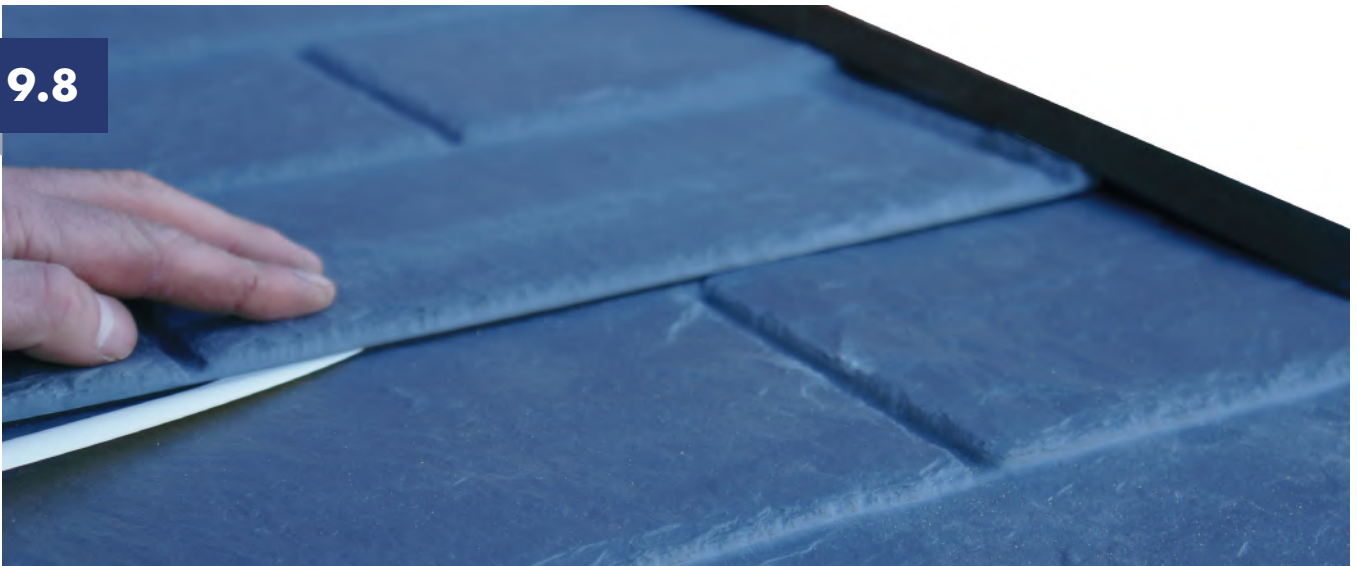
Ensuring the SlateSkin tile is dry and clean, apply the supplied 2mm thick HTAF tape (supplied) to the panel 2mm above the slate effect section. Peel back 20-30mm of tape film and fold down at both ends.

**9.7**



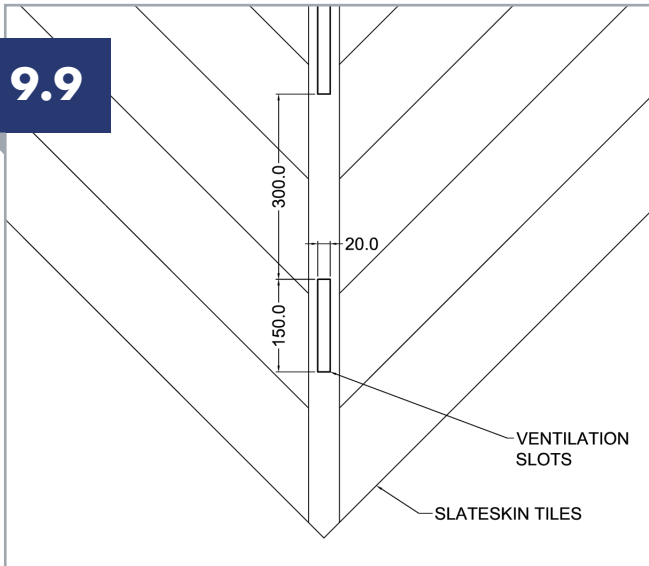
Ensure the tile is dry and clean, then apply an 8-10mm bead of Soudal High Tack Fix All adhesive sealant just below the recess channel of the panel ensuring the adhesive sealant covers any fixing screws.

**9.8**



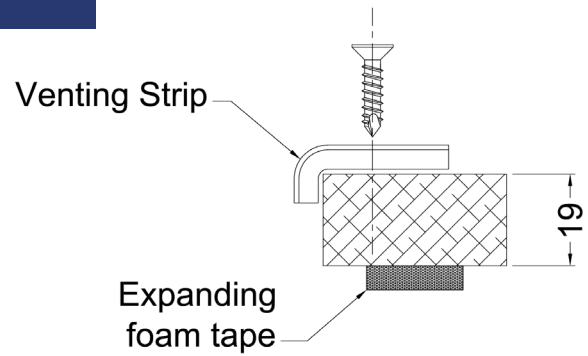
Position the next panel ensuring the location pip is engaged into the channel of the below panel, then gently peel away the tape film. Apply pressure to the front of the panel along its entire length to ensure adhesion, then fix the panel using 4.8x32mm screws as previously described and repeat this process until all facets are fully tiled.

## 9.9



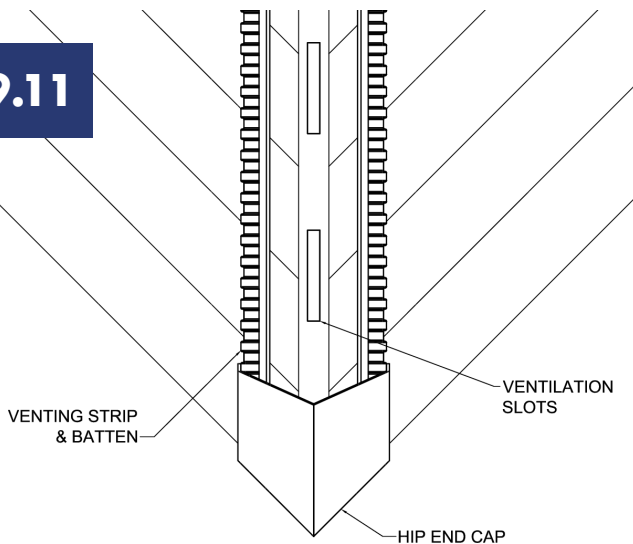
Where two facets meet over the hip or ridge, cut slots 200mm x 20mm ventilation slots through the membrane.

## 9.10



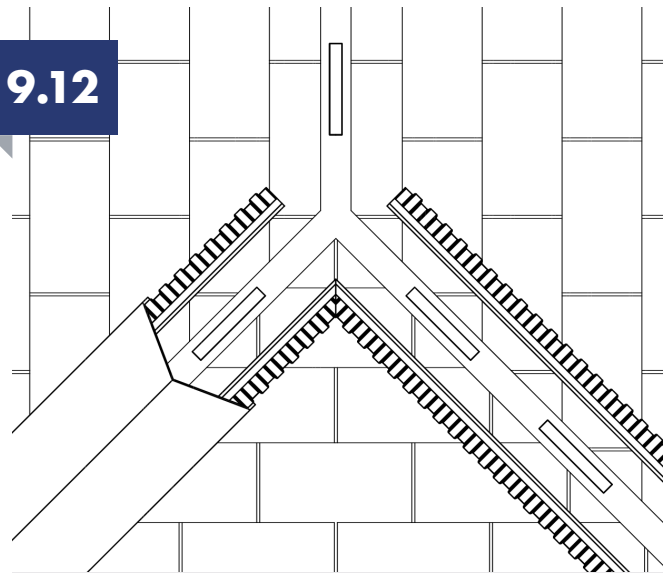
Screw multiple hip venting strips to 19x38 roofing battens using 4.2x16LG screws and then apply expanding foam tape to the underneath of the battens.

## 9.11



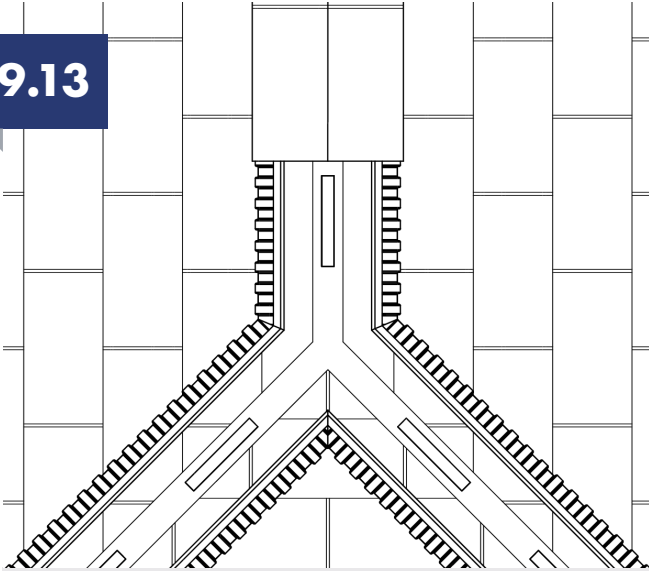
Using the ridge profile, set the width of the battens at crown point, note this will be slightly wider than the end cap end, fix the battens at the top, do not fully fix battens at this point. Repeat this on all hips.

## 9.12



Using the ridge profile set the width of the battens at the crown point, note this will be slightly wider than the end cap end. Mark the position of the battens on the slateskin panel for future reference, fix the battens to the tiles at the ends only.

**9.13**



Fix ridge vent mouldings to battens for the ridge profile and then apply expanding foam tape to the underneath of the batten, use the ridge capping to set the batten along the ridge and fix at the ends only.

**9.14**



Check the fitment of the crown cap, if all ridge positions are acceptable remove the ridge cappings and fix the battens down fully at 300-400mm centres using 4.8x32mm self drilling screws.

**9.15**



Fit the hip end caps and position the ridge cappings over the end caps, using the painted grey stainless screws supplied, fix the end cap and ridge to the battens. Note new countersunk holes may need to be created.

**9.16**



Position and fix the ridge crown caps using the painted grey stainless screws supplied.



## 10. ROOF WINDOWS: SLATESKIN

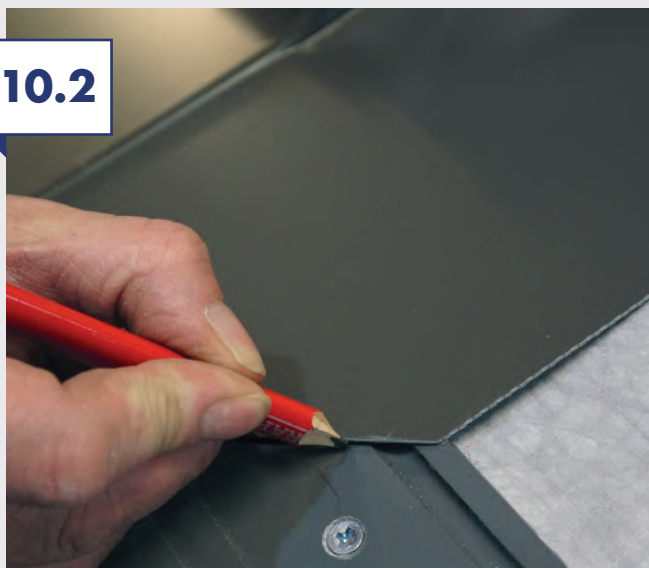
Use these steps in conjunction with manufacturer's fitting/installation instructions.

### 10.1



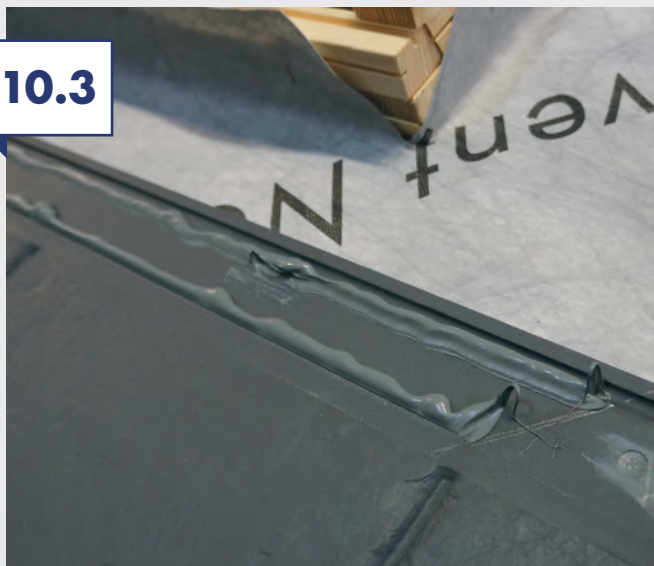
The roof window cut out through the ply is required to be 70mm above the required SlateSkin panel as shown below.

### 10.2



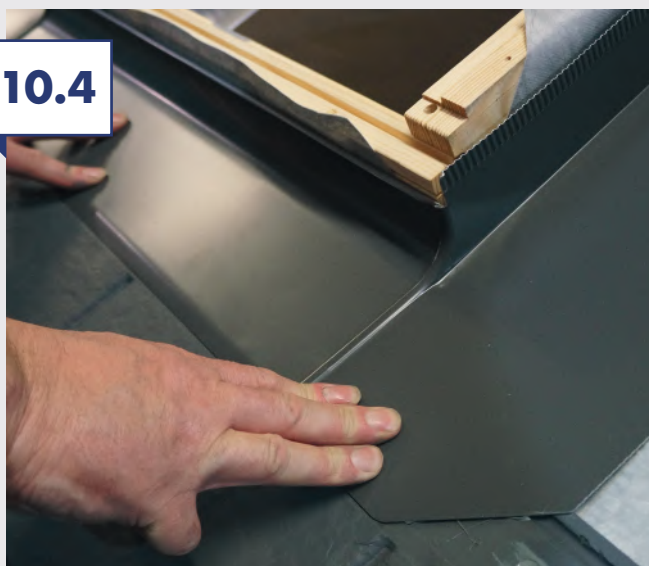
Position the bottom flashing kit and mark the width onto the panel.

### 10.3



Run two generous beads of Soudal Fix All High Tack adhesive sealant (or equivalent) in between the flashing tray marks as shown below.

### 10.4



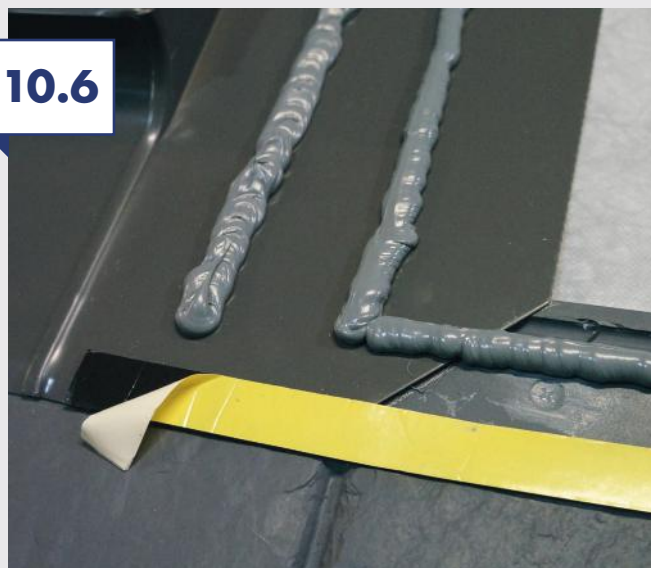
Install the bottom flashing tray.

10.5



Install the side flashing trays and position 50mm above the top of the next SlateSkin panel. Run the HTAF tape over the bottom flashing as shown.

10.6



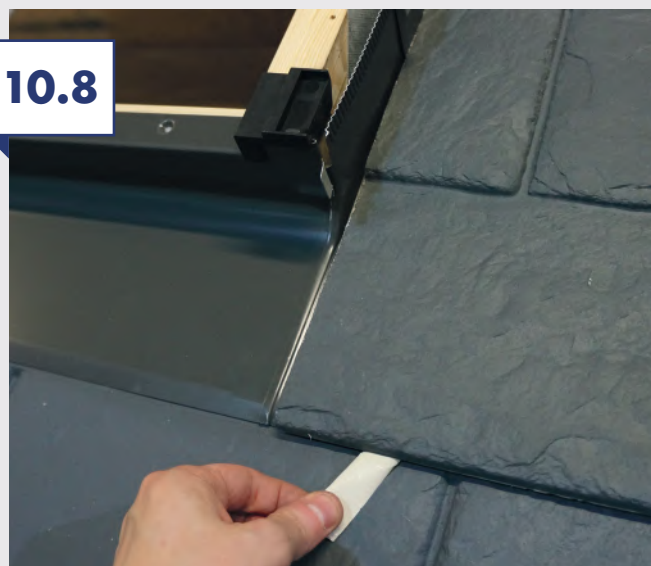
Run two generous beads of Soudal Fix All High Tack adhesive sealant (or equivalent) down the side flashing trays as shown.

10.7



Cut the SlateSkin panel and position 2-5mm away from the side flashing. Then grind the location nib away on the underneath of the panel to allow panel to ride over bottom flashing tray. Use appropriate dust mask when cutting and grinding the panels.

10.8



Position and fix the panel as previously described, the bottom of the panel should be in line with the flashing tray.

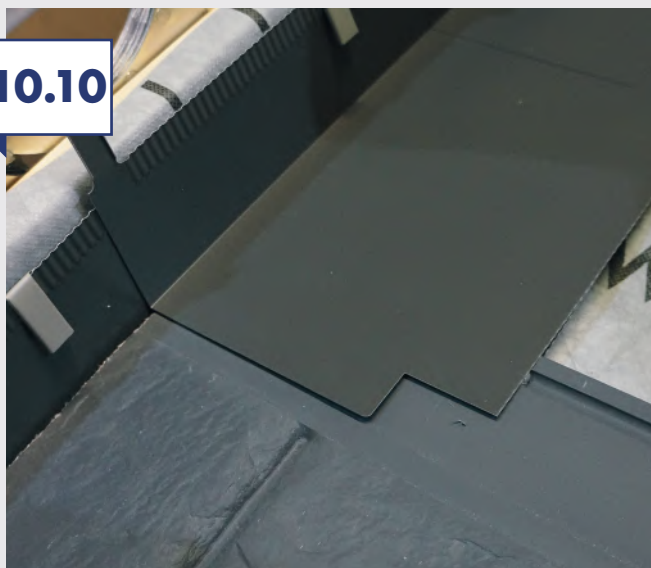
## OPTIONAL

10.9



Run a bead of Soudal Fix All High Tack adhesive sealant (or equivalent) across the top of the panel ready for the next side flashing tray to be installed.

10.10



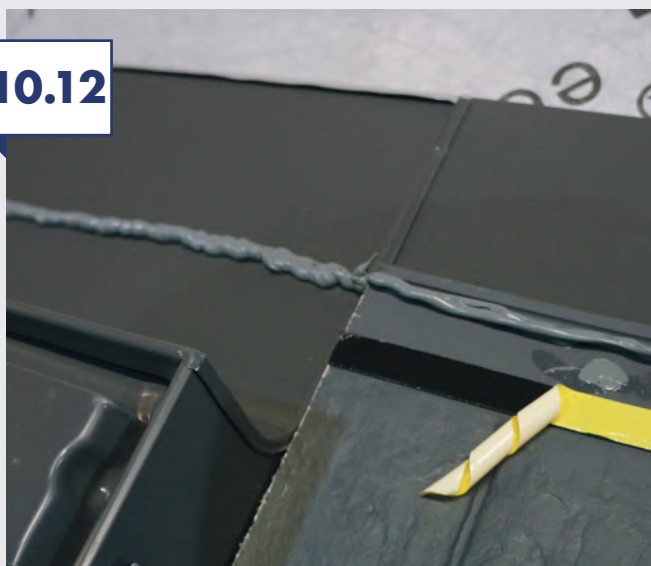
Install the side flashing tray just above the 10mm platform on the SlateSkin panel.

10.11



Install the side flashing trays and the top flashing hood to the manufacturer's instructions and install the next SlateSkin panel as previously described.

10.12



Continue the bead of Soudal Fix All High Tack adhesive sealant (or equivalent) across the flashing hood as shown. It may also be necessary to flatten the upstand slightly on the top of the flashing hood.



**10.13**

Install the SlateSkin panel above the roof window, 980mm high roof window shown. The SlateSkin panel above a 780mm will require notching around the flashing hood.

## 11. LEAN TO EAVES INSTALLATION

Only applicable on sections below a 15 degree pitch.

11.1



Holding the CRS8480BK seal in position to cause compression under the tile, drill a pilot hole using a 3mm drill through the seal, eaves tray and OSB roof sheets

11.2



Using the supplied grey painted stainless steel screws fasten the seal to the eaves, repeat along the entire length at 300mm centres.

## 12. VALLEY TRAY PREPARATION & INSTALLATION FOR COMPOSITE SLATE TILES

12.1



Using a nylon mallet, flatten the valley tray sides against a hard surface.

12.2



Mark and cut the valley to suit the tile overhang, fix the outside edges using the self drill screws supplied. Run a large bead of silicone up each side of the valley tray 50mm from the centre of the valley.

12.3



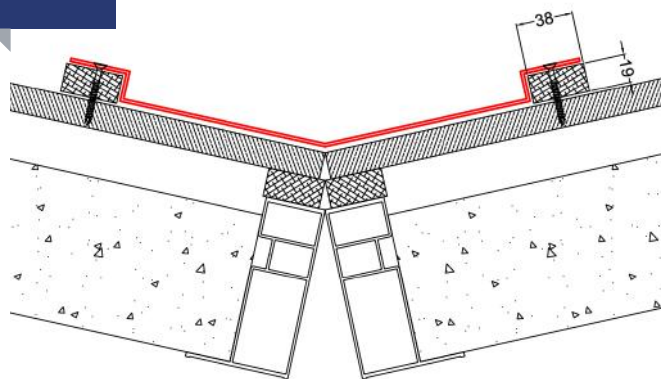
Mitre the composite slates so they finish 25mm from the valley centreline as shown above. Slateskin tile sheets will be supplied pre-cut to the required size.



## 13. VALLEY TRAY INSULATION FOR STEEL SHINGLE TILES

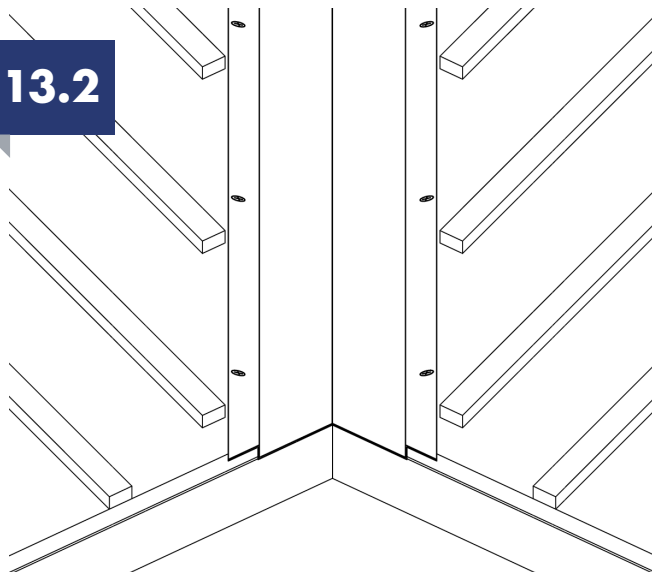
Only applicable on sections below a 15 degree pitch.

### 13.1



Use a valley tray to position 19x38 Battens both sides of the valley centreline. Run battens at the same width all the way to the top of the roof, ensure they are kept straight and equal distances from the valley centre.

### 13.2



Mark and cut the valley to suit internal ring beam corner then set over hang to 30mm past felt tray. Vertical battens in the valley area can be square cut and left 10mm short of valley battens.

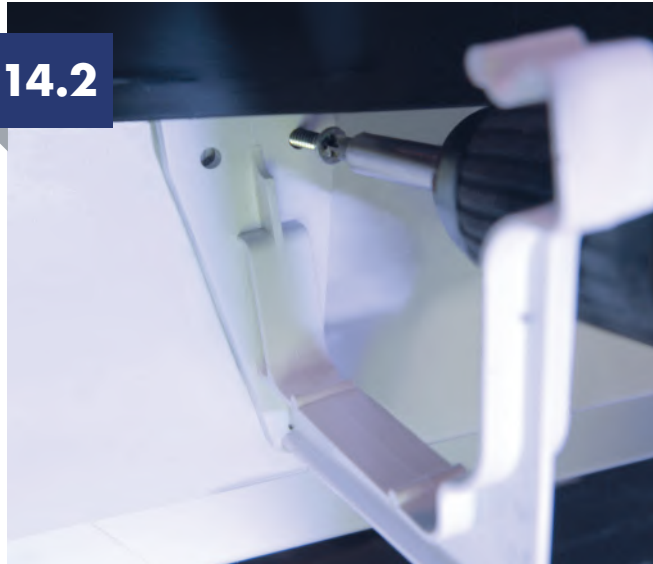
## 14. FASCIA BOARDS & GUTTERING

### 14.1



Install capping board by positioning the first gutter bracket and marking its location. The screw will then be covered by the gutter bracket. These steps can be done before or after the drip tray and membrane are installed.

### 14.2



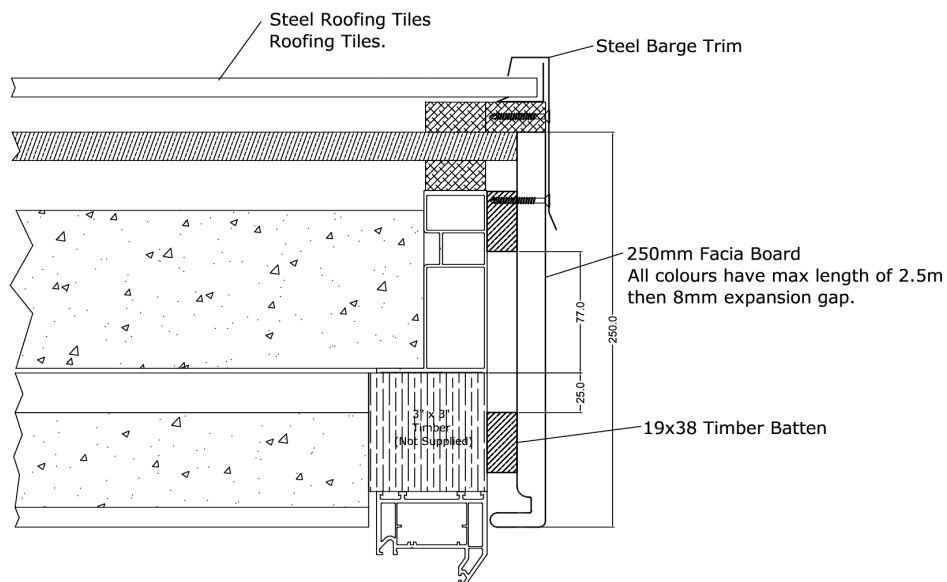
Fix the gutter brackets into the ring beam using self-tapping screws at maximum 600mm centres ensuring protective tape is peeled back first.

### 14.3



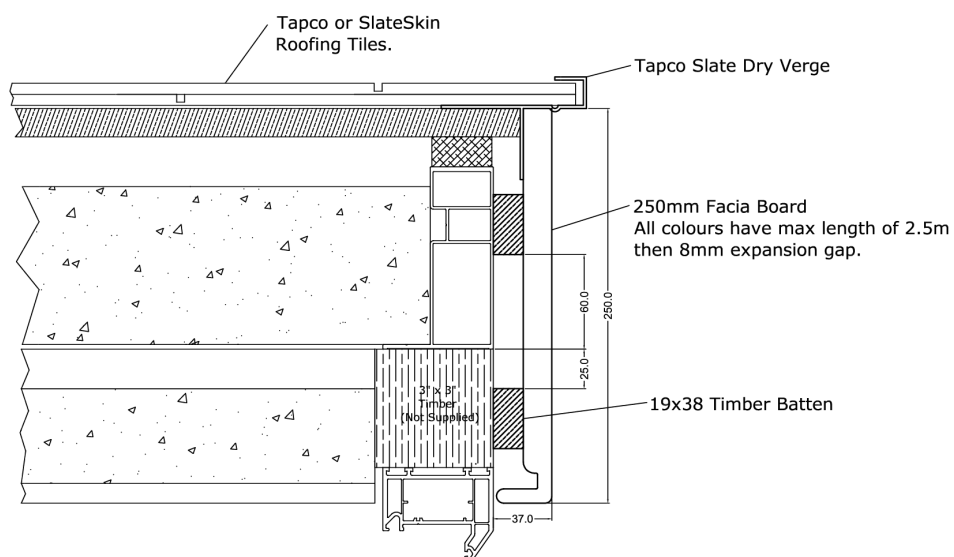
Fix the guttering into position on the gutter brackets, taking care to seal the external angles. Affix corner trims onto fascia boards. Install gutter corners, stop ends and outlet.

## 14.4a



If the roof is tiled with steel tiles and has a gable end, fix two runs of battens down the gable bars and fix the facia boards and box ends using polytop nails. Install facia corner mouldings and inline joints if necessary then install the steel barge trim with screws. Use the supplied tile touch up kit to cover the heads with granules.

## 14.4b



If the roof is tiles with composite or Slateskin and has a gable end, fix two runs of battens down the gable bars and fix the facia boards and box ends using polytop nails. Install facia corner mouldings and inline joints if necessary.



## 14.5



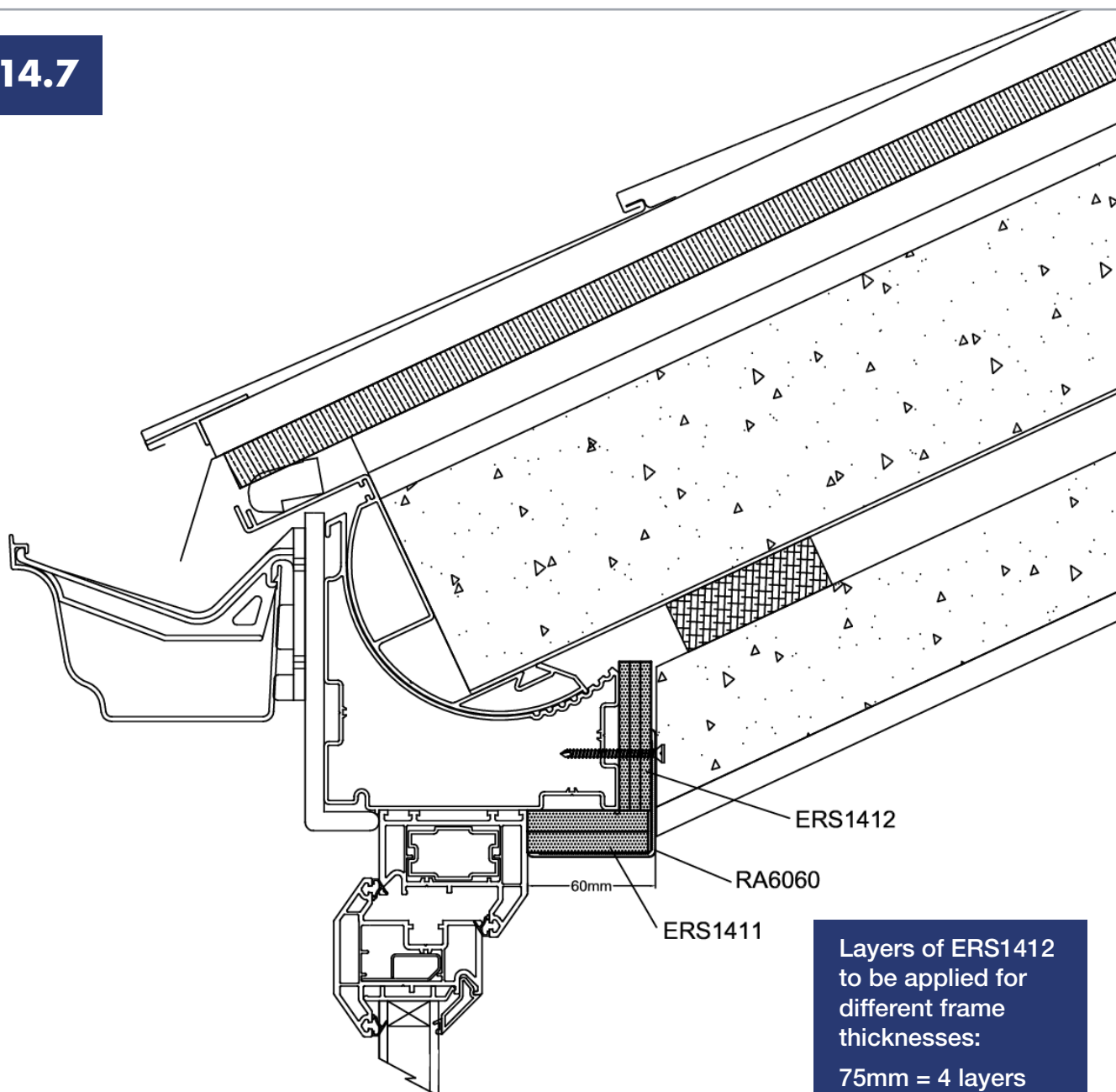
If existing lead is in good condition and appropriate length for the new roof construction, reposition it to complete the external installation. If lead work requires replacing use code 4 lead and ensure the vertical drop and tile coverage meeting appropriate industry guide lines.

## 14.6



We advise carrying out a water test for all tile types using a hose to represent heavy rain fall. The water should fall vertically, do not direct the water up under the tile joints. This should be done before any internal work commences.

## 14.7



ERS1412

RA6060

ERS1411

60mm

Layers of ERS1412  
to be applied for  
different frame  
thicknesses:

75mm = 4 layers  
70mm = 3 layers  
65mm = 2 layers  
60mm = 1 layer

The Equinox ring beam foam always needs to be applied to the internal faces of the ring beam as demonstrated above. The internal face requires building up with the correct amount of ERS1412 (5mm thick) foam to suit the frame thickness, see above. The underneath of the ring beam should have two layers of ERS1411 (10mm thick) foam. Then fix the RA6060 trim using 4.2x38Lg self drill screws.

## 14.8



Once the RA6060 internal trim has been installed, fit the appropriate corner trims using an appropriate glue/adhesive.



## 15. INTERNAL INSULATION

The insulated plasterboard is supplied with the Equinox roof kit. 62.5mm plasterboard for England & Wales and 72.5mm for Scotland.

To complete your Equinox installation, you will need to finish the roof off internally. Install 75 x 25mm battens horizontally at 600mm centres, then install the insulation boards using drywall screws (supplied). Ensure drywall screws do not penetrate into the aluminium structure.

### To achieve 0.15 U-value

To meet Building Regulations in Scotland  
A 60mm PIR insulation combined with 12.5mm plaster board is supplied.

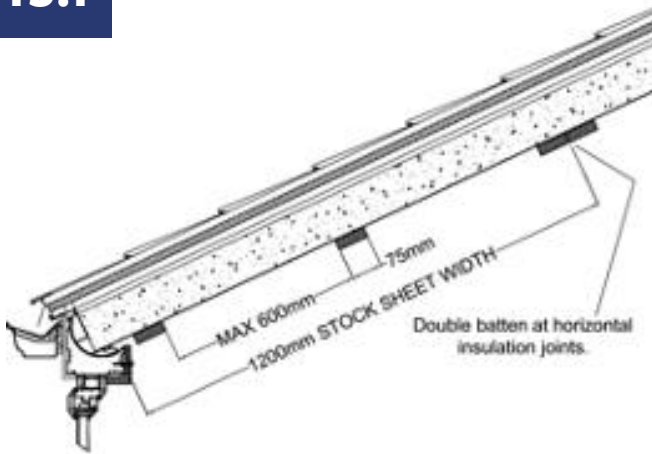
### To achieve 0.18 U-value

To meet Building Regulations in England and Wales  
A 50mm PIR insulation combined with 12.5mm plaster board is supplied.

Optional downlights (not supplied) can be installed, with recessed lights additional vaulting of the ceiling will be necessary to ensure the PIR insulation is not broken. Alternatively, surface mounted lights can be used.



### 15.1



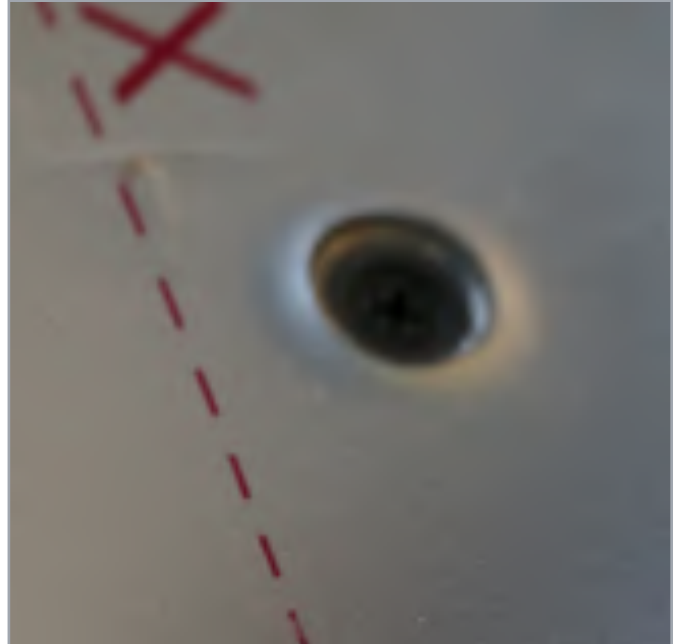
Using the supplied 25mm x 75mm x 2400mm battens, begin to fix these to the bottom of the rafters using the 4.2mm x 38mm self-tapping screws. Battens should run horizontally and spaced at maximum 600mm intervals. Ensure that a double batten is fixed where stock 1200mm sheets will join.

### 15.2



Fix horizontal battens onto the base of the ridge at 600mm centres, or alternatively fix to rafter battens lower down to create a vaulted ceiling.

### 15.3



Using stock sheets of 60mm PIR 1.2 x 2.4m, mitre the bottom edge to suit the roof pitch, to ensure it is flush against the 60x60 trim (as shown above). Use 90mm drywall screws with washers to fix the insulation to the 75 x 25mm battens. Screws should go through the PIR at 500mm intervals, ensuring the fixings are not over torqued. Screw heads should be flush to 1mm from the face of the insulation without damaging the foil vapour barrier.

### 15.4



Continue to install insulation around the roof, use hip and valley centre lines as a measurement references and ensure cuts have appropriate mitres where necessary as shown below. Gaps in between the insulation should be kept to a minimum.

## 15.5



Proceed from the bottom of the roof working upwards, cutting the shapes from the stock sheets to fit the roof faces.

## 15.6



If tie wires have been installed, cut two insulation sheets so the joint is in line with the tie wire, then mark out the tie wire bracket location and cut away the minimum amount of insulation.

## 15.7



Fill the void with an appropriate expanding foam to fully cover the bracket. Leave the foam to set and trim away any excess before fully covering with PIR foil tape.

## 15.8



Ensure any gaps in between the insulation are filled with an appropriate expanding foam.

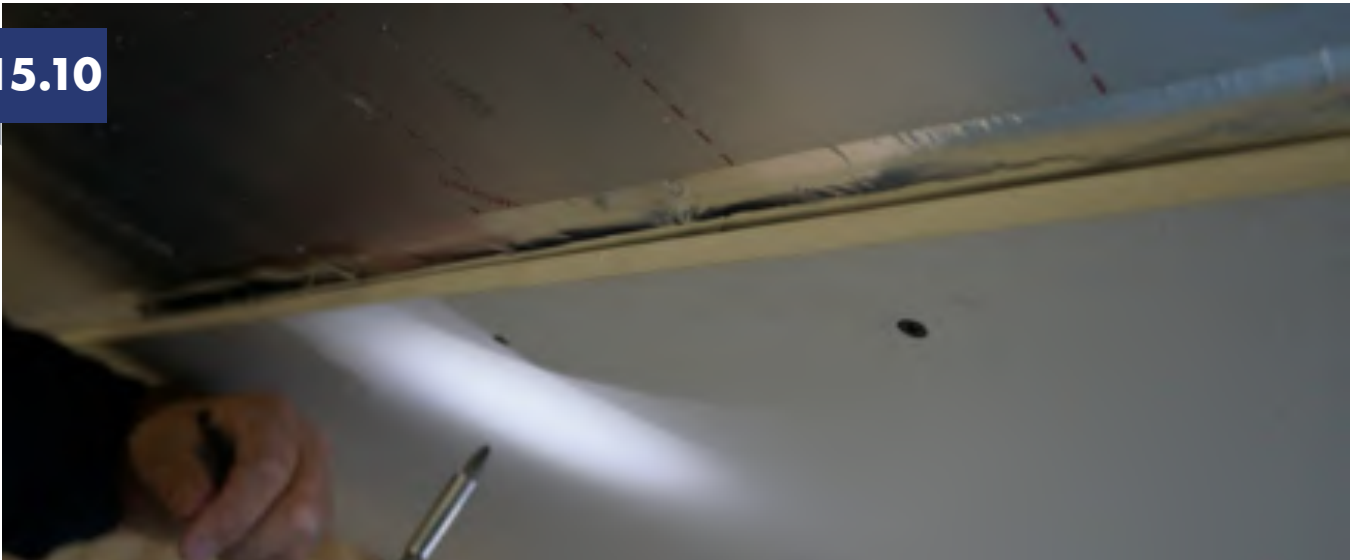


## 15.9



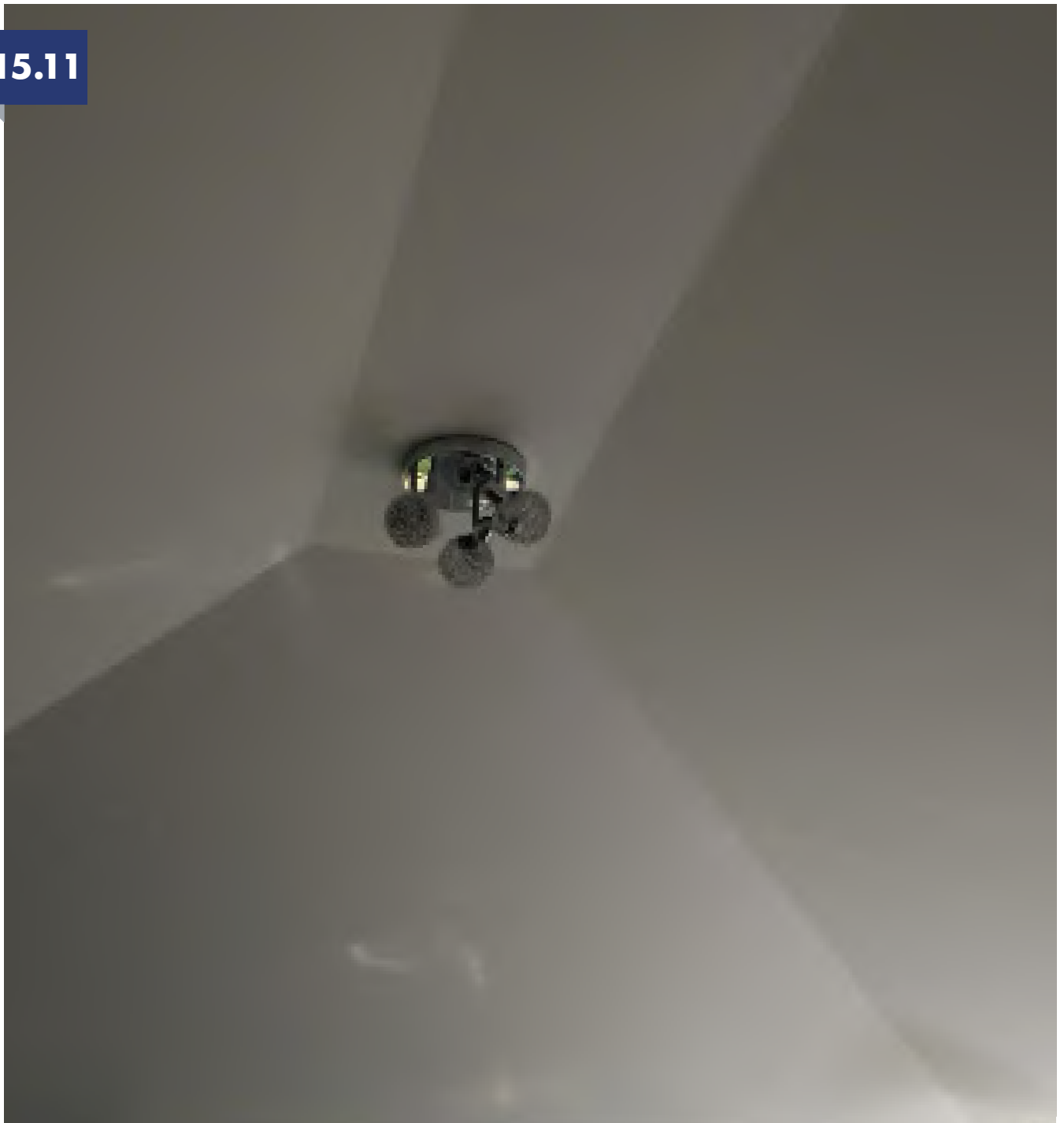
Once all the insulation has been fitted, seal all joints with the PIR silver tape to maintain the vapour barrier. Making sure all joints are taped including the bottom edge that meets the 60x60 trim.

## 15.10



Once all joints are sealed install the 12.5mm plasterboard sheets over the PIR insulation. Use the 100mm drywall screws to fix the plasterboard ensuring they pick up on the battens behind the insulation. Ensure the drywall screws are installed at least 10mm from bound edges or 13mm from cut edges and the screw heads are flush with the board face. Drywall screws should be installed at 300mm centres.

## 15.11



After the plaster skim, the room should be left to naturally dry until all the moisture inside the plaster has dispersed. The ceiling is then ready to be painted to the end user specification. Note, the drying out period will vary depending on various conditions i.e the amount of recent wet construction like new base and walls, time of year when installed, internal ventilation etc. It can take many months for the humidity within the roof construction to normalise.



## YOUR FINISHED ROOF





## NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## NOTES

[illegible]



Certificate No: EW6o6



Certificate No: EWS6o6



(LABC achieved with composite slate tiles and steel tiles).

(LABSS achieved with composite slate tiles and steel tiles).

Please contact our Customer Services Team for additional support or advice.



0800 988 7307



customer@deeplas.co.uk



Deeplas, Birchwood Way, Cotes Park Industrial Estate,  
Alfreton, Derbyshire DE55 4QQ

Product specification is subject to change without notification. Please also note that colours shown are illustrative only, as the printing process does not allow 100% accurate colours to be reproduced.

DPEQUINOXIG Is5/May20