

equinox[®]

INSTALLATION GUIDE

Issue 3



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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

If in doubt at any stage

Please contact our Equinox Technical Support for additional support or advice.



0333 777 3057



equinox@eurocell.co.uk

INSTALLATION GUIDE

PRE-INSTALLATION CHECKS



- ▶ **Equinox roof kits should be checked against the order acknowledgement provided by Eurocell.**
- ▶ **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**. Eurocell 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. Eurocell 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.

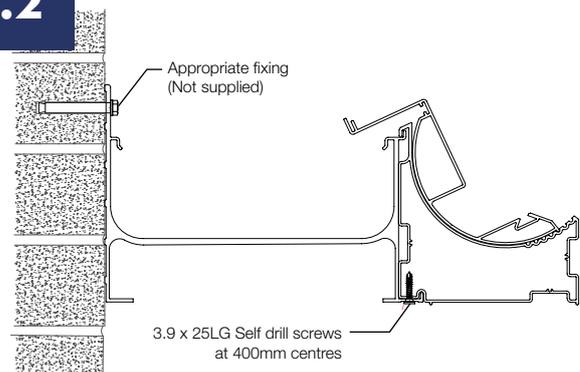
1. PREPARING THE RING BEAM

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

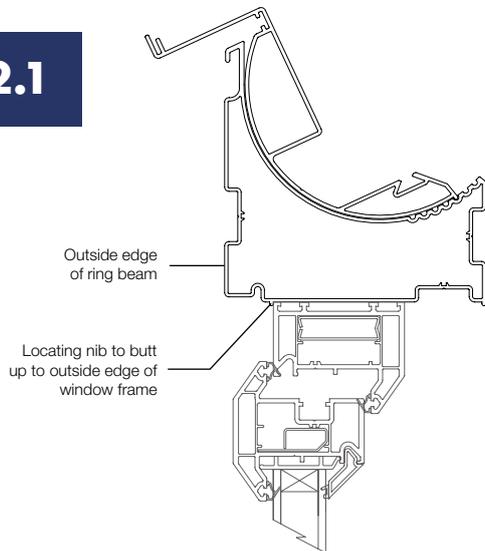


Where a box gutter is required

Fix the pre-cut box gutter to the property wall with appropriate fixings (not supplied) at 400mm centres. Install the steel ring beam before fixing the ring beam to the box gutter using 3.9 x 25LG 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 baypole 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 nuts, bolts 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).

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.



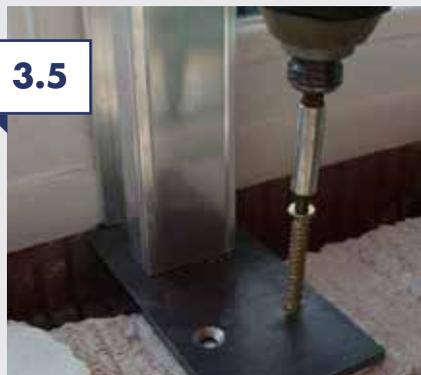
3.3

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

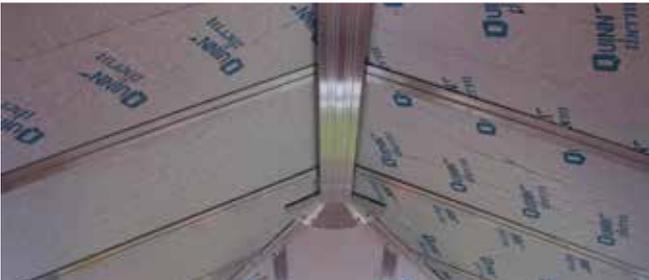


3.6

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 tight, start fitting the pre-cut 100mm insulation. Ensure the insulation is fully tapped down over the bolts.

4.2



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

4.3a



ENGLAND AND WALES

Once insulation is fully fitted, cover the entire roof with the pre-cut 12mm plywood. To fix on to bottom of ring beam, use self-drilling screws (supplied). Fix these 55mm from the front edge, every 300mm. Then, fasten up the hips and rafters every 300mm, using self-drilling screws (supplied).

4.3b



SCOTLAND

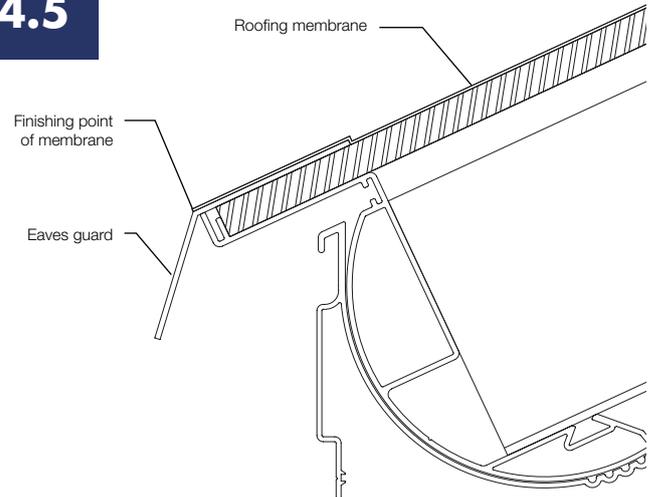
Once installation is fully fitted, cover the entire roof with 150 x 19 treated sarking boards. Leave 2-3mm between boards to aid ventilation. To fix the bottom run, screw 55mm up from the bottom every 300mm using self-drilling screws (supplied). Then fix all boards with two fixings where they pass over the rafter and hips.

4.4



Once the plywood is fitted and secure, fit the eaves guard around the edge of the roof with a minimum of 50mm overlap mitred together on the corners.

4.5



Cover the roof with the high vapour breathable membrane (supplied). Minimum horizontal overlap of 150mm. Lap membrane up host wall approximately 70mm. If additional roof membrane is required ensure it conforms BS5250, is categorised as Type LR and is suitable for the pitch and location to be installed.

**LOOKING
FOR COMPOSITE
ROOF SLATE
INSTRUCTIONS?**

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5. TILE APPLICATION: STEEL TILES

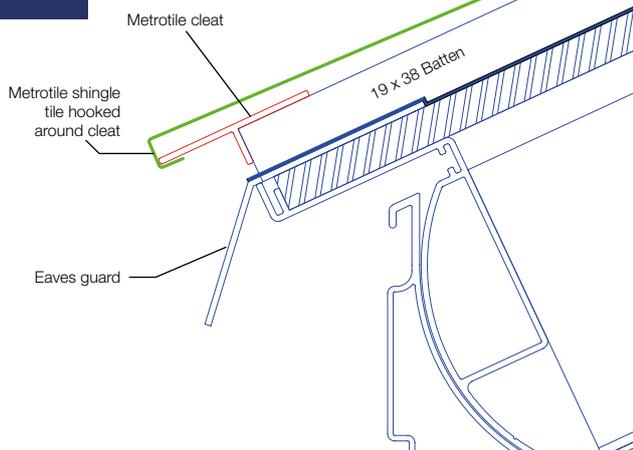
5.1



When the breathable 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°.

5.2



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

5.3



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

5.4



Once the roof is fully tiled, lay the framework to tile the ridges. Using a ridge tile to set the width, fix timber battens over ridge and hip ready for the ridge tiles application.

5.5



Using the self adhesive flashing (supplied), seal the ridge joints with a heat gun ensuring the self adhesive flashing is tucked tight at the corners.

5.6



Fix ridge tiles and end caps to timber battens. Note: Ridge/hip tiles are wider at the base to ensure correct overlay fit.

5.7



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



Once the ridge tile position has been established, mark the self adhesive flashing with the central location of each hip. This will identify the capping point of the roof.

6.2



Using a ridge tile position, fix the battens for the ridge and hips to create a framework for the cap. The ridge tiles running up the hips should be spread to reduce their height. This way they can fit under the ridge tile.

6.3



Once the cap is created, use the centre line drawn in step 6.1 to line up and mark the tiles that cover each of the hips.

6.4



Once you are happy with the position of the tiles, you can cut them to sit in position.

6.5



Continue working your way around the cap, cutting each ridge tile into the previous one.

6.6



Once all the hip tiles are in place, position the ridge tile. Mark carefully so the ridge tile sits at the cap of the roof.

6.7



Cut the tile to size and fit into position.

6.8



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

7. ROOF WINDOWS: STEEL TILES

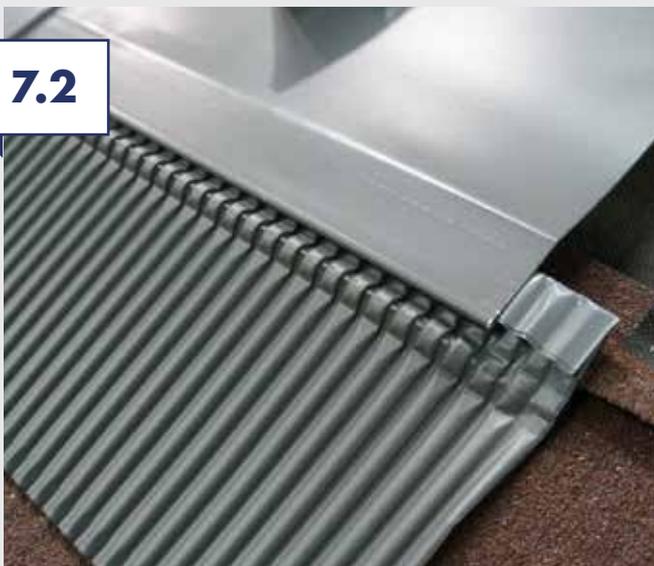
Use these steps in conjunction with manufacturers fitting/installation instructions.

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).

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 flashing kit ridge are square and neat.

7.7



Fit the top flashing kit and remove 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?**
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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 25mm overhang from the eaves guard.



8.2

Where the tiles go back to a host wall, lead soakers cut out of code 3 lead should be installed under each tile inline with standard building practices.



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° +

8.5



Where two facets meet over a hip the tiles need to be cut and mitred together leaving a 5mm to 10mm maximum gap. Using the self adhesive flashing supplied seal the hip and ridge joints as shown, it is advised to gently warm with a heat gun and push into the tile edges to ensure good adhesion and seal.

8.6



Install ridge tiles using appropriate overlap and marked fixing location. At the ridge intersection the tiles will require mitring together to suit the roof geometry, any joints can be sealed using an 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

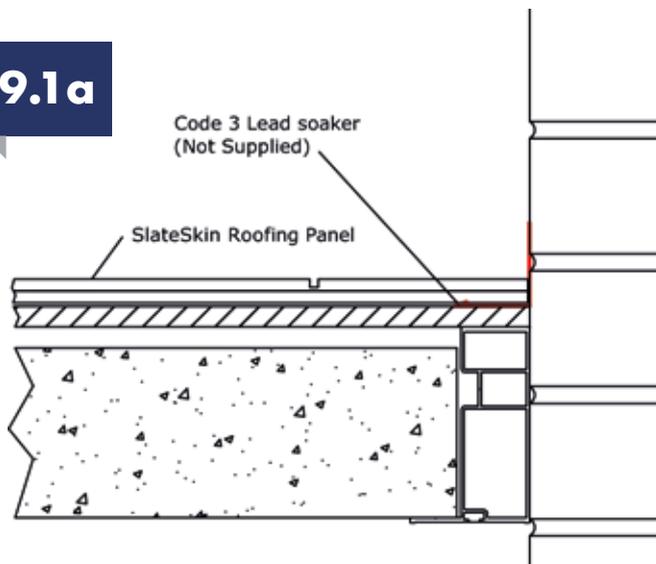
- ▶ Dust produced from grinding GRP can cause fluid to collect on the lungs, respiratory irritation and skin irritation. There is no work exposure limit (WEL) specified specifically for exposure to GRP. However, there is a WEL specified for nuisance dust of 10 mg/m³ averaged over an 8-hour day, which 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



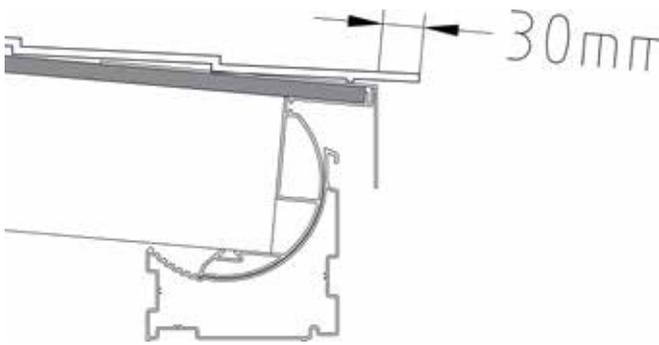
If a wall bar is present, prepare and position lead soakers using code 3 lead, ensure the internal edge is folded over to create a dam.

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 the base panel only.

9.5



Using a counter sink or 10mm drill in reverse, counter sink the panel until 10mm in diameter. Fill the hole with Soudal Fix All high Tack adhesive sealant (or equivalent), then fix using grey painted stainless steel screws. Wipe any excess sealant away.

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

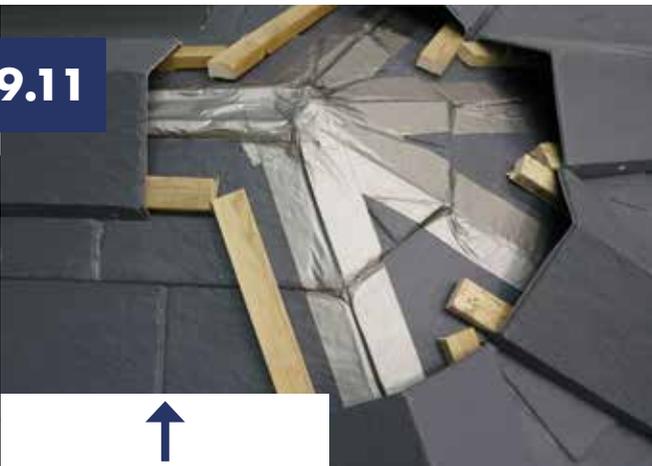


If ridges or hips are present, using the supplied self adhesive flashing, cover all the hips and ridges ensuring the flashing is pushed tight into the tile corners. A gentle heat from a heat gun is recommended to improve adhesions of the flashing to the tiles.

9.10



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.



Using the appropriate hip end cap, position two 19x38 battens, mark position and screw down 200mm from base using 4.8x32 self-drilling screws.

9.12



Use the ridge capping to set the batten position along the ridge, fix at ends only.

9.13



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.

9.14



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.

9.15



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

10. ROOF WINDOWS: SLATESKIN

Use these steps in conjunction with manufacturers 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.

10.8



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

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. EAVES SEAL 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 aluminium support.



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 centreline of the valley as shown above.

13. FINISHING OFF

13.1



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.

13.2



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

13.3



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.

13.4



Reposition the existing lead to complete the external installation.

13.5



We advise carrying out a water test for both steel and composite slate tile installations. This should be done before internal work commences.

YOUR FINISHED ROOF



14. INTERNAL INSULATION

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.

14





Certificate No: EW6o6



Certificate No: EWS6o6



(LABC achieved with SlateSkin GRP sheet tiles, composite slate tiles and steel tiles).

(LABSS achieved with composite slate tiles and steel tiles, SlateSkin GRP sheet tiles pending).

CONTACT

For further information, contact the Eurocell Technical Team on **0333 777 3057**. Visit eurocell.co.uk to find installation guides and videos for Eurocell products.

