



eQUBE SOLAR with QUBE INSTALLATION GUIDE

IMPORTANT

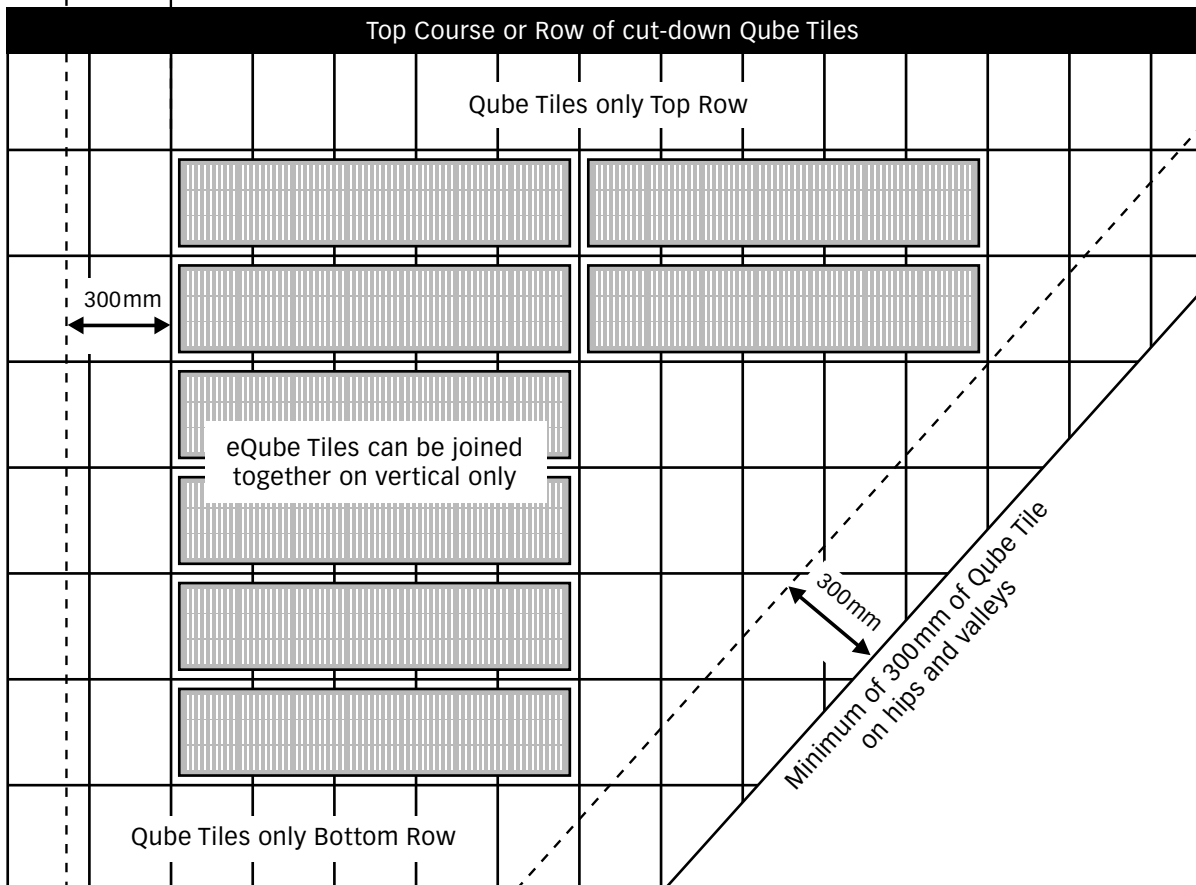
eQube Tiles **CAN ONLY BE INSTALLED** working alongside a qualified MCS approved Electrician **AT TIME OF TILE FITTING**

These instructions are guidelines only and do not include all the appropriate equipment which should be used in accordance with safety regulations.

Please also note **ROOFING FELT** and **VENTS** are **NOT ILLUSTRATED** and should be fitted as required.

Basic Tile Planning for an eQube with Qube roof

Minimum of 300mm
of Qube Tile
fixed on ends



IMPORTANT

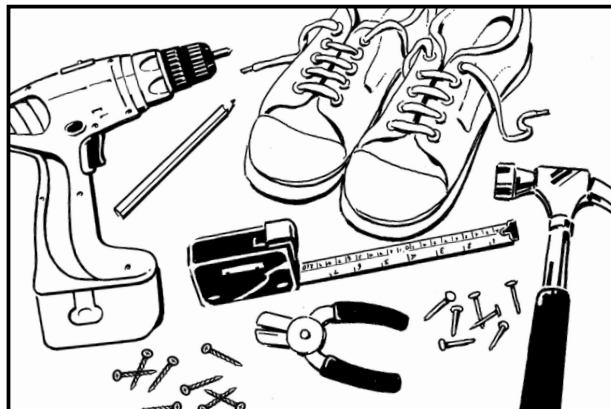
eQube Solar Tiles must be electrically connected **AT THE TIME OF FIXING** by a qualified MCS approved electrician.

Fix **eQube Solar Tiles** using **Metrotile Screws** to allow ease of detachment for maintenance purposes. Ends of adjacent Qube tiles should be screwed to allow upturn and release of eQube Solar Tiles. All other Qube tiles can be nailed.

eQube Solar Tiles must not be bent or cut.

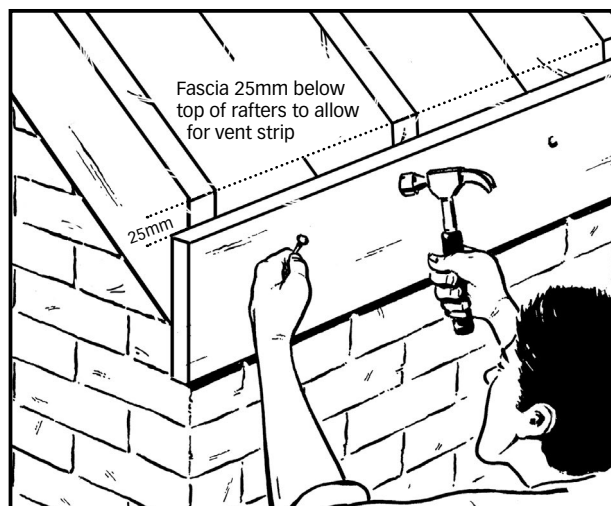
1 Tools required

Soft soled shoes, screwdriver, claw hammer, tape measure, snips, pencil, Metrotile screws & nails.



2 Attach Fascia Boards

Fix timber or UPVC fascia board. Top edge to be approximately 25mm below the top of the rafters to allow for a 25mm Metrotile Vent strip to be attached (not illustrated).

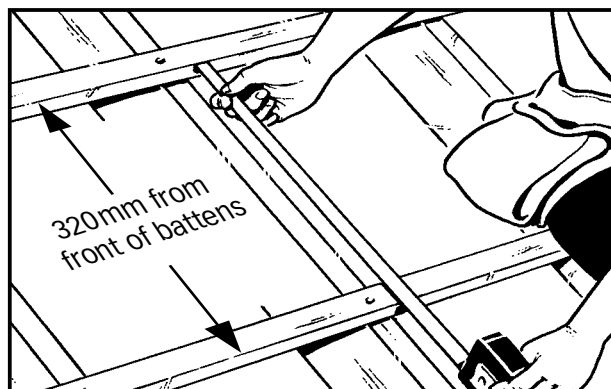
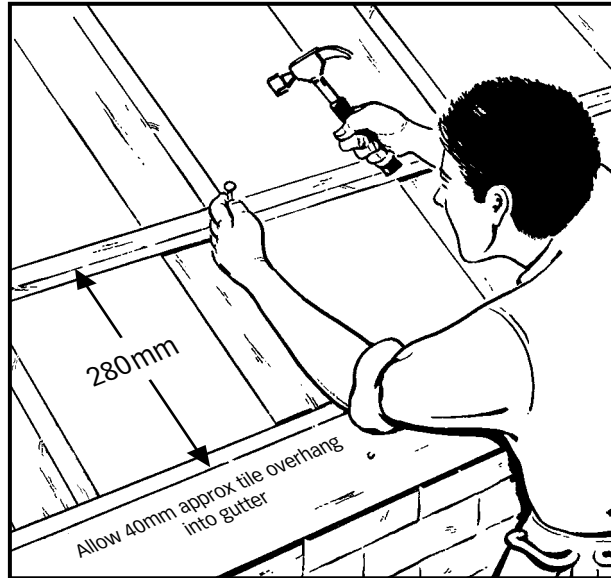


3 Space and attach Battens

Batten spacings are crucial.

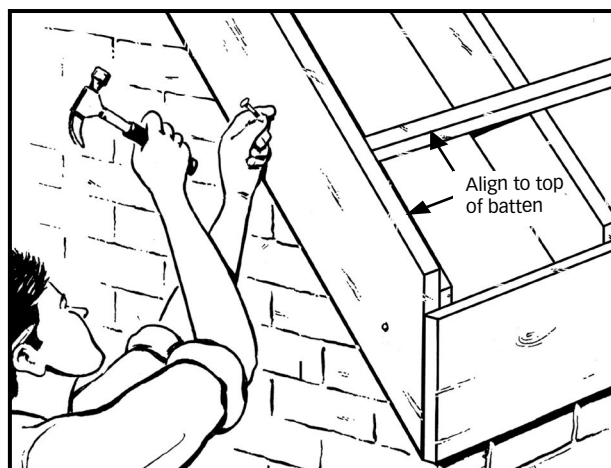
They should be set out from front of batten to front of the batten above at 320mm except the first batten which will be 320mm less the overhang of the tile into the gutter, usually 40mm.

Note: If using the .9 thickness tile, it usually fits better with a gauge of 318mm.



4 Attach Barge Board

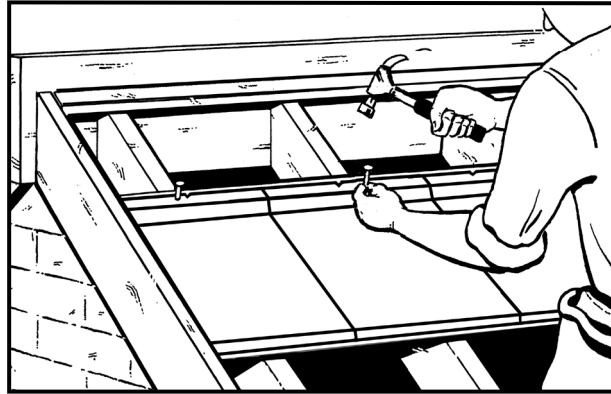
Fix the timber or UPVC barge board with its top in line with the top of tiling battens.



5 Attach first row of Qube Tiles

Start nailing from the first full course down from the ridge. Put in a couple of nails in the top flange of the tile to hold it onto the batten. Lift the front edge of the tile and slide in the next tile down to lap under the top tile. Work along the roof, laying the tiles with the laps away from the line of sight or prevailing weather.

A roof using eQube Solar Tiles with Qube Tiles is laid in uniform lines down the roof (i.e. not broken bonded).



6 Nailing and screwing the Tiles

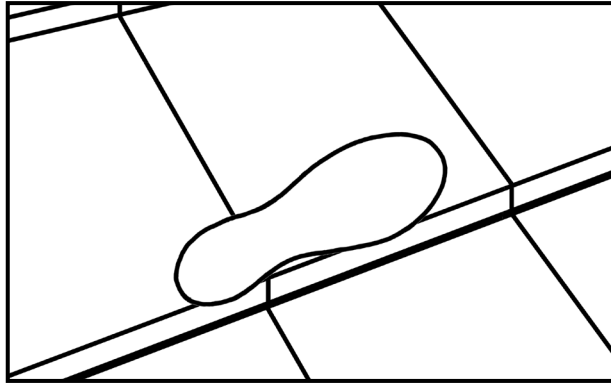


Stand on the nose of the Qube tile (where the batten goes) and nail each Qube tile in the front edge at its highest point (treading on the tiles keeps them nice and tight on the laps!). On the Qube tiles adjacent to eQube solar tiles, use a screw at the nearest point to the eQube solar tile. This allows the solar tile to be removed easily for maintenance purposes.

Fix all eQube solar tiles with screws only.

7 Stand on the nose of the Tiles

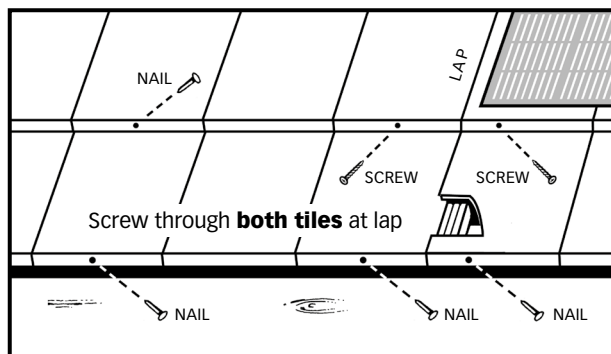
Do not tread on the middle of the tile or on the raised corrugations, always on the front edge in the pan, above where the batten is.



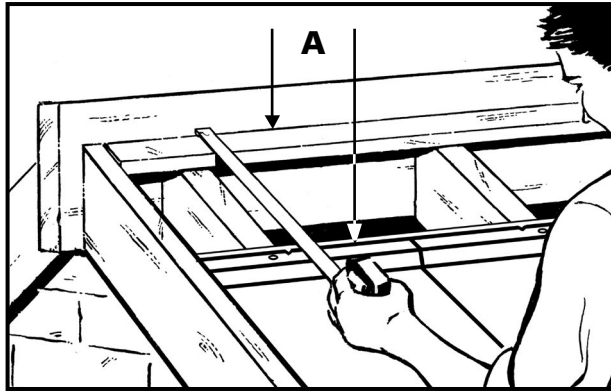
8 Nailing and screwing points

Fix **eQube solar tiles** with **screws** to allow ease of detachment for maintenance purposes.

Fix **Qube tiles** with **nails** *apart from the nearest point to an eQube tile*, where it needs to be **screwed**. This allows the Qube tile to be upturned slightly to enable the eQube solar tile to be detached.



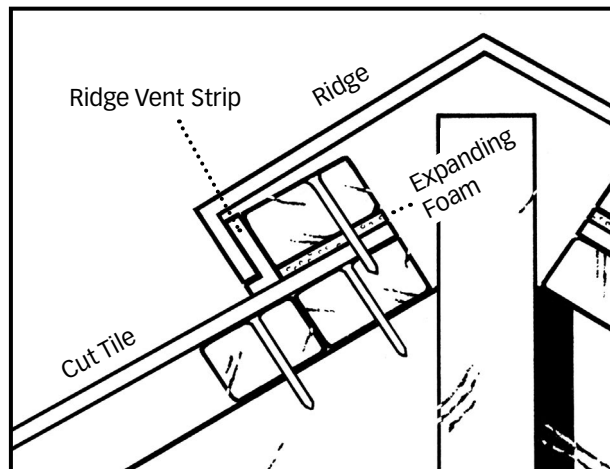
FITTING TILES AT THE RIDGE



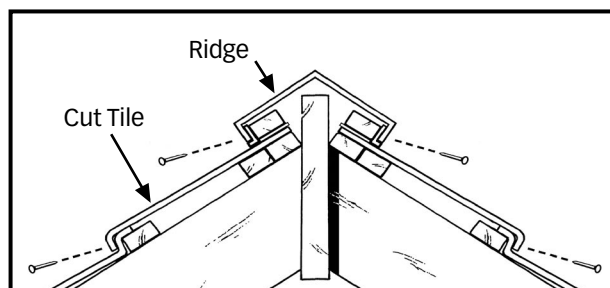
9 Measure the gap

Hopefully you will have a full course of Qube tiles at the ridge. If not, measure **gap A** at the ridge between the back of the top most course of tiles and the back of the ridge batten. Cut the Qube tiles to width of gap A. Please note there is no need to bend the top of the tile at the ridge.

Nail the Qube tile at the bottom through the lap. A second batten with expanding foam needs to be attached on top of the tile at the Ridge. Align the batten with the top of the tile and the batten underneath. Nail through the top batten, expanding foam and the tile into the batten underneath.



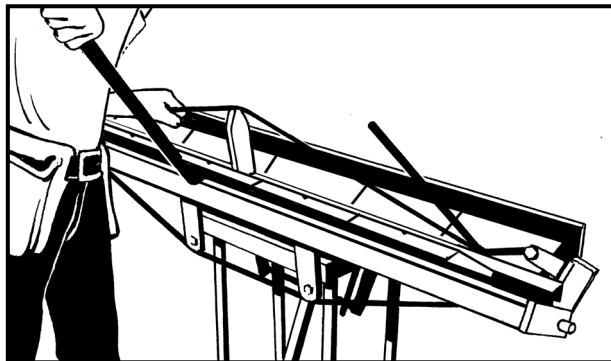
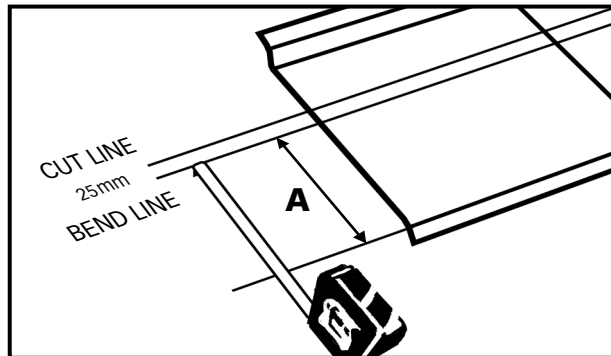
You are now ready to attach the Ridge Vent Strip and the Ridge. Place the Ridge Vent Strip between the batten and the Ridge and nail through the Ridge into the top batten as shown.



10 Marking Tiles for bending and cutting

Not applicable to eQube Solar Tiles.

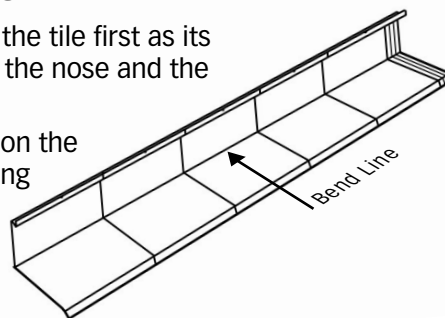
Measure from the front of the tile and mark a line on the tile where your Bend Line is to be. Mark a line approximately 25mm above this, which will be your Cut Line (see 13).



11 Bending Tiles

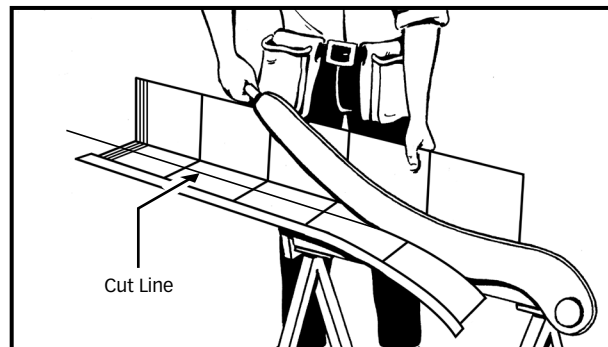
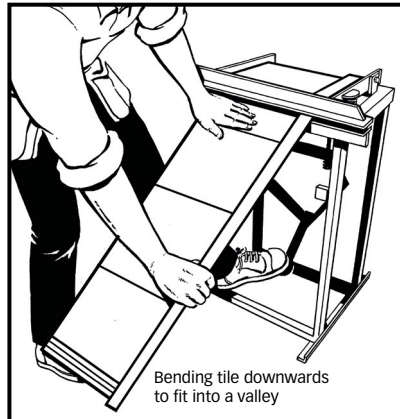
Always bend the tile first as its strength is in the nose and the rear upstand.

Bend the tile on the Bend Line using the bending equipment.



12 Bending Tiles for Hips and Valleys

Using the bending equipment bend the tiles upwards for Hips (see 17), and downwards for Valleys (see 18).



13 Cutting tiles using guillotine

Cut off waste along the Cut Line with guillotine. You can alternatively use snips if necessary.

FITTING BARGE BOARD COVERS

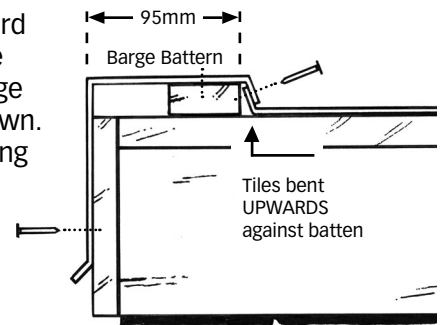


14 Attach Barge Board Covers

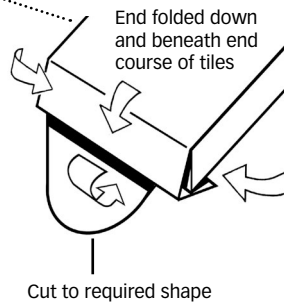
Measure and cut Barge Board Cover leaving overlap for finishing at end. Attach batten as shown in 15. Bend tiles upwards 30mm against batten and attach Barge Board Cover to barge board and batten. Attach nails as shown in 15.

15 Nailing points for Barge Board Covers

Nail Barge Board Cover to barge board and barge batten as shown. Use 3 nails along length on both sides.

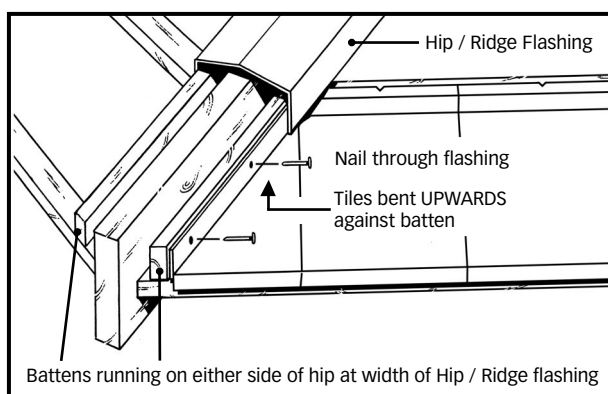


16 Finishing off ends



Finishing off Barge Board Cover ends can vary depending on the final look required. Using snips, cut and bend the cover as required making sure all corners and edges have underlapping flaps to make watertight.

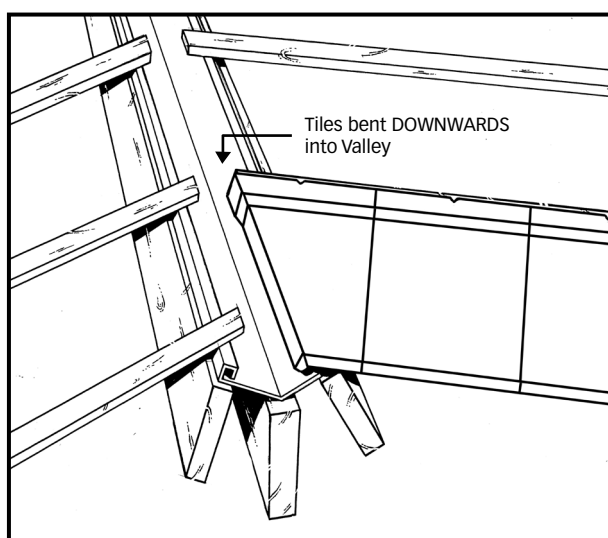
FITTING TILES TO HIPS AND VALLEYS



17 Fitting Tiles at Hips

Fix tile battens on either side of Hip (running up the length of the hip and approx 210mm apart measured from outside of batten to outside of batten) at the width of the hip flashing.

Tiles should be cut to the rake of the Hip and bent up against batten and fixed securely. Hip flashing should be then fixed by nailing through the flashing and into the battens through the upstand of the tiles using 2 nails per side.



18 Fitting Tiles to Valleys

Tiles should be cut at the rake of the Valley (over hanging into the Valley gutter) and bend downwards into the Valley to prevent wind blown water. Tiles should be fixed into tiling battens as close to the Valley as possible.

