Decra Oberon Tile

Installation Instructions (August 2005)

Decra Roof Systems Limited
A member of the Icopal Group

Our Contact Details

If there is anything in this guide that you do not understand or that is unclear to you please do not hesitate to contact us on;

Tel: (01293) 545058
Fax: (01293) 562709
Web: www.decra.co.uk
Email: technical@decra.co.uk

1. Safety

These instructions are illustrative only. For the sake of clarity, access equipment, which should always be erected in accordance with safety regulations, has been omitted, as have safety helmets, roofing felt and sarking boards.

2. You Need

Pencil.

Tape measure or ruler.

Tin snips.

Decra hand nails, Decra Power Nails* or Decra Screws.

You must only use fixing nails and screws supplied by Decra, OTHERWISE the Decra guarantee is invalidated.

Decra roofing felt or breather membranes.

Soft soled safety shoes.

Safety helmet.

**Decra Power nails are designed for use with a Paslode IM350 frame nailer gun.*

3. You Also Need

To cut the tiles and accessories you need;

Decra Tile Guillotine or alternatively a reciprocating saw or jigsaw (fitted with an appropriate Decra Cutting Blade).

DO NOT USE angle grinders or disk cutting equipment.

To form edge details to the perimeters of the roof you need

Decra Tile Bender.

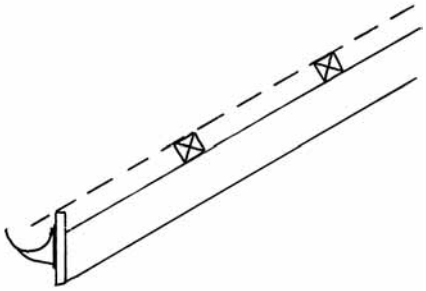
Decra Tile Bender Attachment (for bending the full length of a tile).

IMPORTANT - Operatives are reminded to take all due care when handling sharp edges and using tools.

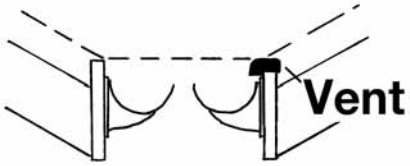
4. Setting Out The Fascia Board At Eaves

The positioning of the fascia board at the eaves is crucial to the success of the installation.

The fascia board must be set at the right height, set too low the tiles will dive, set too high the tiles will kick up at the wrong angle. The top edge of the fascia board should be set at the same height as the tile battens.



However if you are installing fascia mounted eave ventilators or Decra Eaves Guard the fascia board may need to be set lower (refer to the instructions supplied in the Decra Ventilation pack & Decra Eaves Guard pack).



Unventilated *Ventilated*

5. Battening

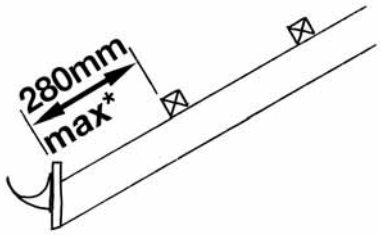
The most crucial factor in laying tiles is the accurate setting out of the tile battens, if you are not accurate then the tiles won't fit together properly.

Time spent taking extra care when battening is time saved when tiling.

Batten Sizes	
Rafter Centres	Batten Size (recommended)
450mm	50mm x 25mm
600mm	50mm x 25mm
900mm	50mm x 50mm
1200mm	50mm x 50mm

6. Setting Out The Battens At Eaves

The positioning of the first full batten at the eaves is crucial to the success of the installation.



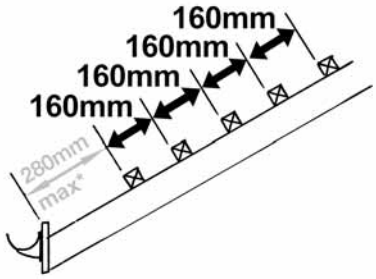
* The first tile batten should be placed in a position to suit the roof pitch and/or type of gutter, typically this is 280mm from the front edge of the fascia board to the front edge of the first tile batten.

However if you are installing fascia mounted eave ventilators refer to the instruction supplied in the Decra Ventilation pack.

7. Battening The Roof

Then fix the other battens working from the bottom of the rafter.

At 160mm spacings from front lower face of batten to front lower face of batten.

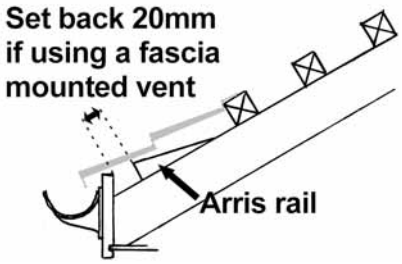


Care should be taken to be accurate when installing the battens. Time spent taking extra care when battening is time saved when tiling.

© Decra Roof Systems Ltd 2005

8. Arris Rail Support At Eaves

A timber arris rail should be installed in-between the fascia board and the first batten. This arris rail acts as a support and a fixing point for the first course of tiles

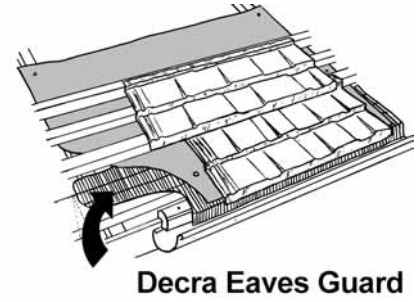


If using a 50mm x 25mm tile batten, install an arris rail 200mm x 25mm (finished size).

If using a 50mm x 50mm tile batten, install an arris rail 200mm x 45mm (finished size)

9. Decra Eaves Guards

Decra Eaves Guard is an eave protection system which is installed underneath the roofing underlay providing support for the underlay at eaves.



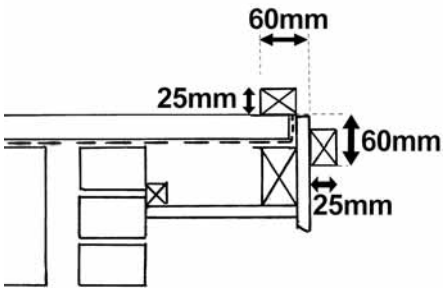
The installation procedure for the Decra Eave Guard varies according to roof pitch and rafter spacing.

If you are installing the Decra Eaves Guard refer to the instruction supplied in Decra Eaves Guard pack.

10. Setting Out Gables

Fix the barge boards in a position where they are level with the tops of the tile battens.

Underlay should turn up against the edge of bargeboard by 25mm.



On top of the tile battens nail additional 50mm x 25mm gable runner battens up the slope of the roof. This batten should be set 60mm from the outer top edge of the bargeboard (see drawing above).

11. Walking On The Tiles

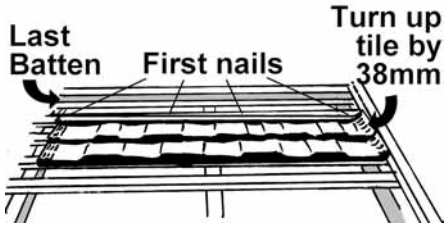
When walking on the roof it is strongly recommended that installers should wear soft soled safety shoes to avoid any possible abrasion to the surface coating.

Your weight should be concentrated over the front edge of the tile, as this is the area supported by battens.

If you have managed to dent a tile refer to the tips section in the back of this guide.

12. Start Laying The Tiles

Lay the tiles starting at the batten below the ridge and next to the gable

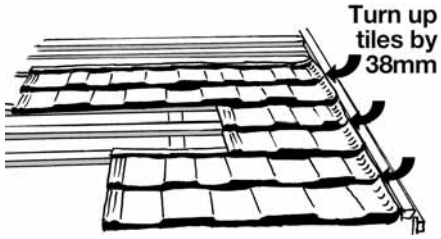


When putting your first nails in take care not to puncture the underlay below.

Q Why lay from the top?

A Although this is the opposite of traditional tiling practice, by laying from the top the tiles interlock tighter and it is actually quicker to lay the Decra tiles this way.

Cut the first row of tiles from the bargeboard into random widths so that the profile of the tile does not appear in the same vertical position. Form a 25mm to 38mm upstand in the cut edge of the tile and abut the upstand edge against the gable runner batten (see setting out gables section).

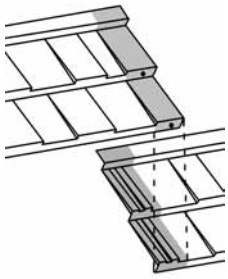


Q Do I lay the tiles straight Bond or Staggered Bond?

A Oberon tiles should always be laid staggered bond ensuring that a repeat pattern does not appear in the side overlap down the roof slope.

Q How much side lap?

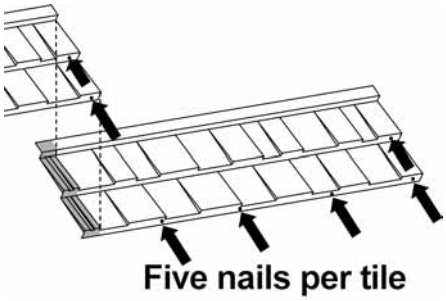
A

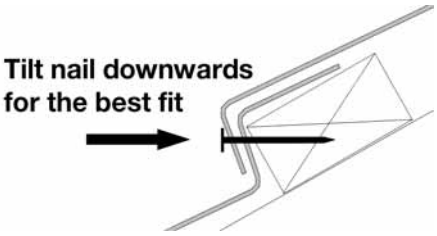


13. When You Have Laid Several Courses

When you have laid several courses (laying them one under the other, by lifting the nose of a tile and tucking the next tile under) start nailing with Decra nails, 5 per tile (4 along the bottom edge and one at the lap of the stepped section of the tile).

Nail tiles through the nose as shown in the sketches, leaving bottom course loose until more tiles are laid. One nailing point must be at lap of course below.



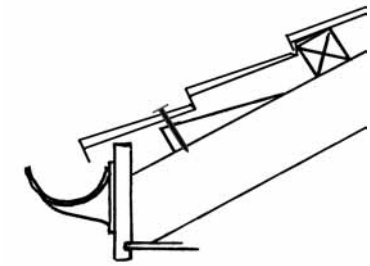


You must only use fixing nails and screws supplied by Decra, OTHERWISE the Decra guarantee is invalidated.

© Decra Roof Systems Ltd 2005

14. Nail The Eaves Course

Nail the eaves course at the high points of the tile surface into the top of fascia or eaves arris rail (if eaves ventilation is being fitted, see ventilation pack for nail positions).

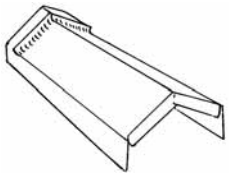


Use 4 nails per each tile.

After completion of roof cover these nail heads with Decra finishing kit.

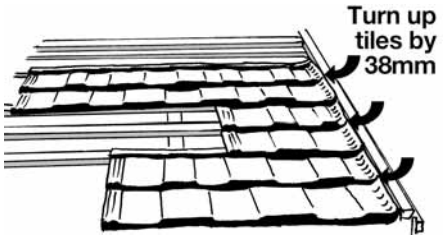
15. Gables

The gable ends of the roof are finished by using a Ridge/Barge cap accessory.



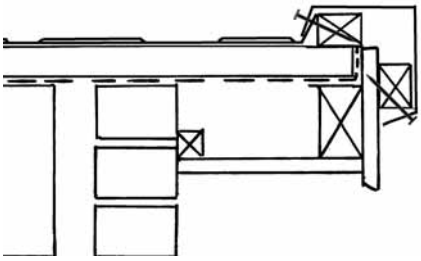
Ridge/Barge cap

Turn up edge of tiles to form a 38mm upstand against a gable runner batten.



Holding the Decra Ridge/Barge cap in your hands squish the cap to a 90° angle (see image below)

starting at the eaves and working up the slope, each Ridge/Barge cap should be secured with 2 nails on each side of the ridge cap through the pre-drilled hole. The nails should be skew fixed through the upstand of the tile below (see image below).



Where the gable meets the eave of the roof the exposed end of Ridge/Barge cap will need blocking off with an end cap (see section “Ridge/Barge End cap” shown later in this guide for general principles)

For tips on cutting and bending tiles, see back of this guide

16. Ridge Course Ridge/Barge Cap

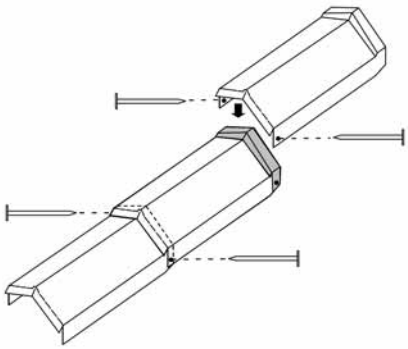
The correct way to install the top course of tiles and the ridge tiles is determined by whether you are trying to achieve an unventilated or ventilated ridge detail.

Universal ridge ventilator

17. Ridge/Barge Caps Nailing & Lapping

The Ridge/Barge caps have a slight taper in their design. Place the wider end of the ridge over the narrower end of the ridge beneath (overlap areas shown shaded grey).

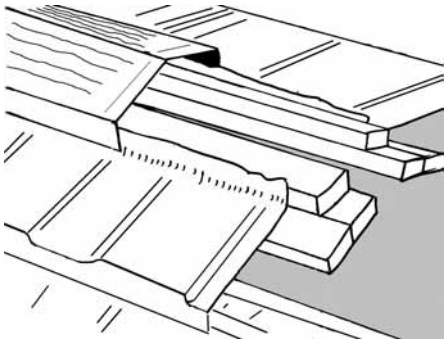
Each Ridge/Barge cap should be secured with 2 nails on each side of the ridge cap through the pre-drilled holes.



18. Ridge/Barge Cap Ridges (Unventilated)

Fit two tile battens either side of ridge. Fix additional 50mm x 38mm batten to suit Ridge/Barge cap on top of rear of the two tile battens.

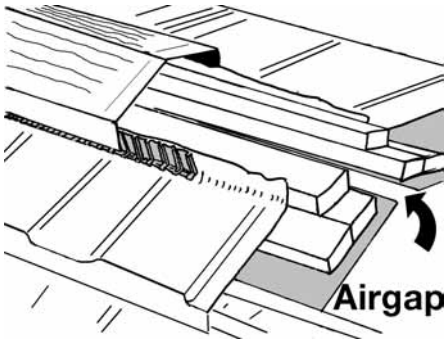
Lay top course of tiles with back turned up 38mm against the top tile batten.



For tips on cutting and bending tiles, see back of this guide

19. Ridge/Barge Cap Ridge (Ventilated)

Universal ridge ventilator



Cut underlay short of ridge line and fit two tiles battens either side of ridge, leaving a sufficient gap for ventilation.

Fix additional tile batten to suit ridge on top of rear of the two tile battens.

Lay top course of tiles with back turned up 38mm against top tile batten.

Place Ridge/Barge cap into position over the top batten and the upstand edge of tile. Pull bottom edge of ridge cap away from the upstand edge of tiles and slip Universal 'D' ridge/hip ventilators into position on each side of the Ridge/Barge cap. Ventilators should run continuously along each side of the ridge cap.

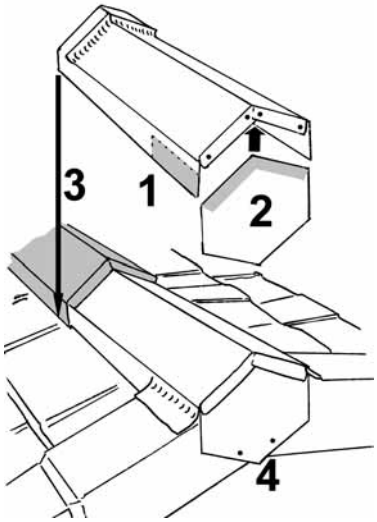
The ridge cap and ventilator to be nailed through the predrilled holes in the

© Decra Roof Systems Ltd 2005

downturn of the ridge cap into the face of the batten, using two Decra fixing nails on each side of the Ridge/Barge cap.

For tips on cutting and bending tiles, see back of this guide

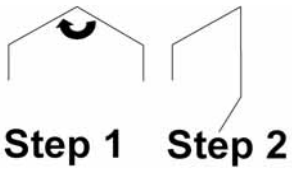
20. Ridge/Barge Cap Ends



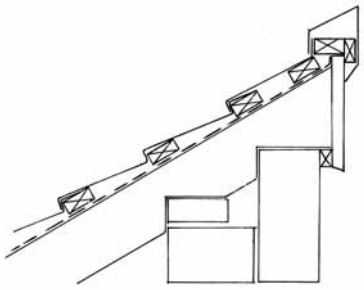
1. Snip and fold out flap to suit intersection of Ridge/Barge caps with gable mounted Ridge/Barge caps.
2. Slot end cap into position behind the flaps of the Ridge/Barge caps and fix into position with pop rivets or small zinc plated self tapping screws and cover with Decra finishing kit.
3. Install Ridge/Barge caps and nail into position.
4. Nail lower edge of end cap.

21. Mono-Pitch Ridge/Barge Cap

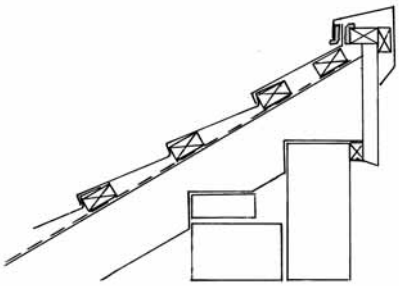
Mono-pitch ridge caps can be formed by adjusting the angles of Decra's standard Ridge/Barge cap.



The procedure for installing the monopitch ridge is essentially the same as the detail for the ridges (please refer to ridge instruction shown earlier in this guide).



Unvented

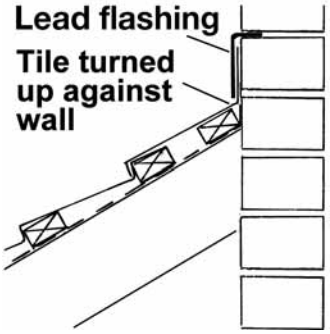


Vented using a Universal D Ridge Vent*

*When fitting the tile battens at the top remember to leave a sufficient gap for ventilation

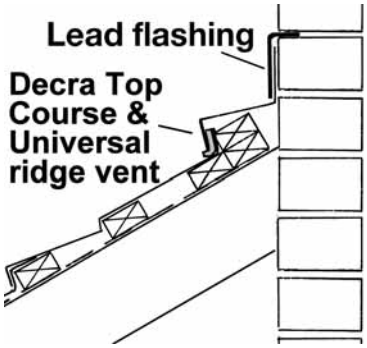
For tips on cutting and bending tiles, see back of this guide

22. Top Edge Abutment



Unvented

Turn the tile (or a Decra Top course flashing) and the roofing underlay 75mm up the abutment wall and cover over with a lead flashing.



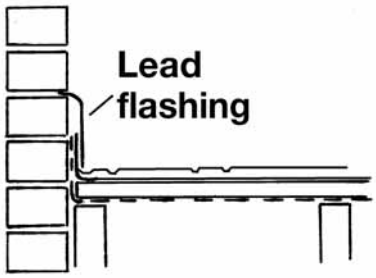
Vented with a Universal D Ridge Vent Filler

(When fitting the two tile battens at the top remember to leave a sufficient gap for ventilation)

For tips on cutting and bending tiles, see back of this guide

23.Side Edge Abutment

Turn the tile and roofing underlay 75mm up the abutment wall and cover over with a lead flashing.

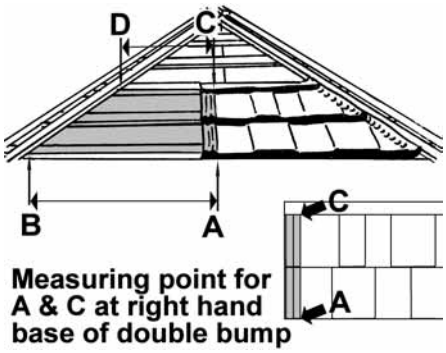


For tips on cutting and bending tiles, see back of this guide

24. Hips

Install tile battens to suit gauge of tiles, ensure that tile battens project to centre line of hip tree.

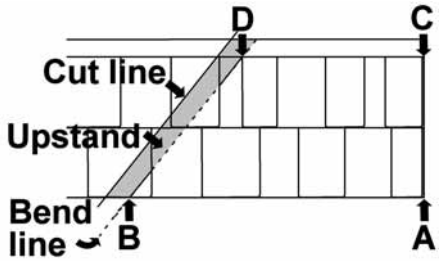
Install hip runner batten to each side of hip to suit width of ridge/barge cap.



Step 1, Measuring for the Hip Tile

Measure from point (A) to (B). Measure from point (C) to (D), write down these measurements as these will be the set distance to make your bend at.

Step 2, Marking Out Your Hip Tile



Markout the same measurement (A), (B), (C) and (D) to a tile. When transferring measurements to tile ensure

© Decra Roof Systems Ltd 2005

measurement correspond with the position underlying tile batten.

Scribe a line from (B) to (D), this will be the bending point for your hip tile.

Scribe an additional cut line on to the tile to allow for a tile upstand at the hip. This upstand should be sufficient to cover the hip runner batten (any excess in the upturn can be dressed over the top of the hip batten).

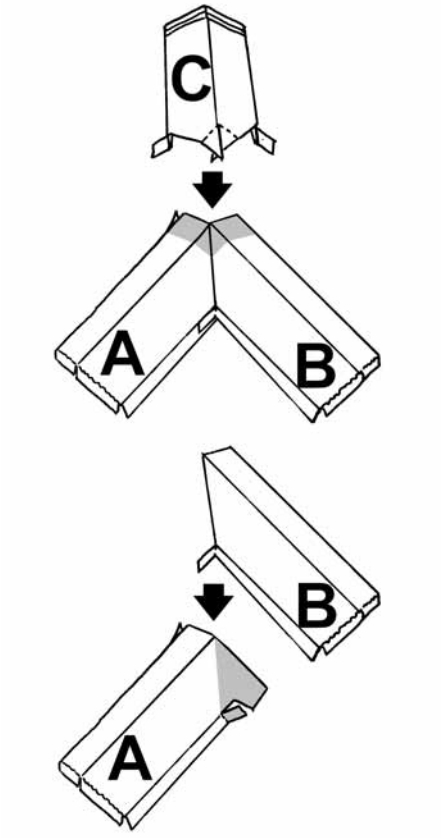
Step 3, Cut and bend your hip tile

See tips on cutting and bending tiles at back of this guide.

Step 4, Install ridge cap to hip

The methods for installing Decra Ridge/Barge cap with or without Universal D ridge ventilators are the same in principle as shown for the ridge detailing earlier in this guide.

25. Forming A Three Way Intersection At Hips

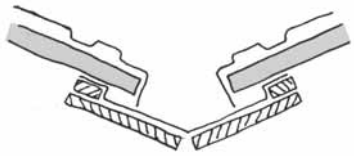


To form a three way intersection using ridges/barge caps. cut and fold tabs and flaps in ridge tiles as shown ridge sections A, B & C above. Install ridge section A followed by ridge section B then C on top. Nail ridge caps into position and touch up with Decra finishing kit.

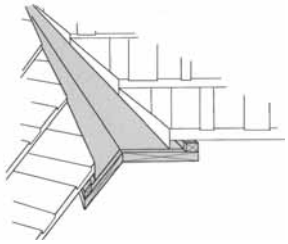
26. Valleys

Lay valley boards flush with rafter level and install valley runner batten to each side of valley.

If needed install an additional packer batten, parallel to side of valley runner batten, so as to support sweep of tile batten.



Install tile battens to suit gauge of tiles, ensure that tile battens sweep up and over valley runner batten. Cut battens to rake projecting over valley to 65mm short of centre line of valley.



For measuring, marking out, cutting and bending valley tiles follow the same procedure as the hips (refer to hip section). But form a downturn in the valley tile rather than an upstand.

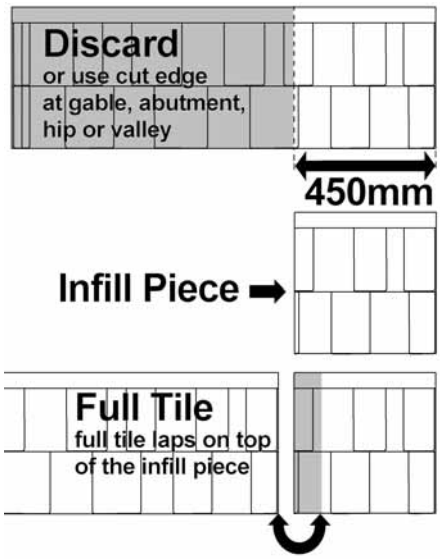
NOTE: When forming a downturn in the tile take a measurement from top of leading edge of tile batten to valley surface and allow for tolerance in fit to avoid the downturned edge of the tile making any contact with valley surface.

For tips on cutting and bending tiles, see back of this guide

27. Creating An Infill Piece

At hips and valleys you will sometimes find that the tile you are about to cut is too small to provide sufficient coverage.

To solve this problem it is often useful to replace the last full tile (i.e. the tile next to the tile you are about cut) with an infill piece of tile.



© Decra Roof Systems Ltd 2005

Decra Tool Assembly Instructions

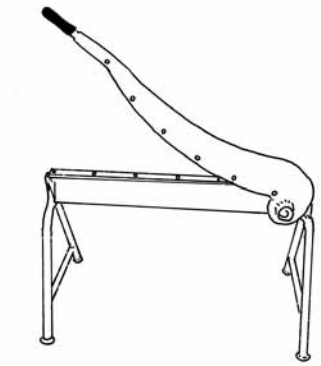
Classic, Parctile, Stratos, Oberon & Elegance (August 2005)

Decra® Roof Systems Limited
A member of the Icopal Group

Decra Guillotine

Assembly

Depending on model, guillotine may be supplied dismantled. In this case insert 'A' frame legs in sockets in underside of guillotine body & secure by tightening wingnuts.

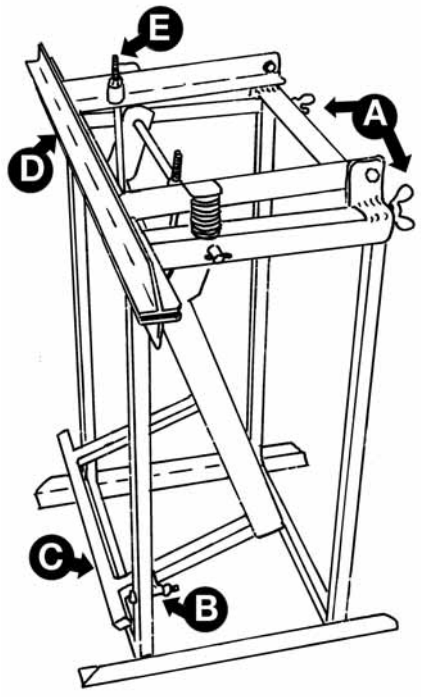


Decra Bender

Assembly

Put foot on treadle (C) and apply pressure, rotate treadle release catch (B) 90° clockwise to open position.

Foot treadle (C) should be in line with front legs of frame, when jaws (D) are closed. Alignment can be changed by adjusting nuts on bolts (E).



Bender Key

(A) full-width bender attachment bolts
(B) treadle release catch
(C) treadle
(D) bender jaws
(E) jaw adjustment bolts

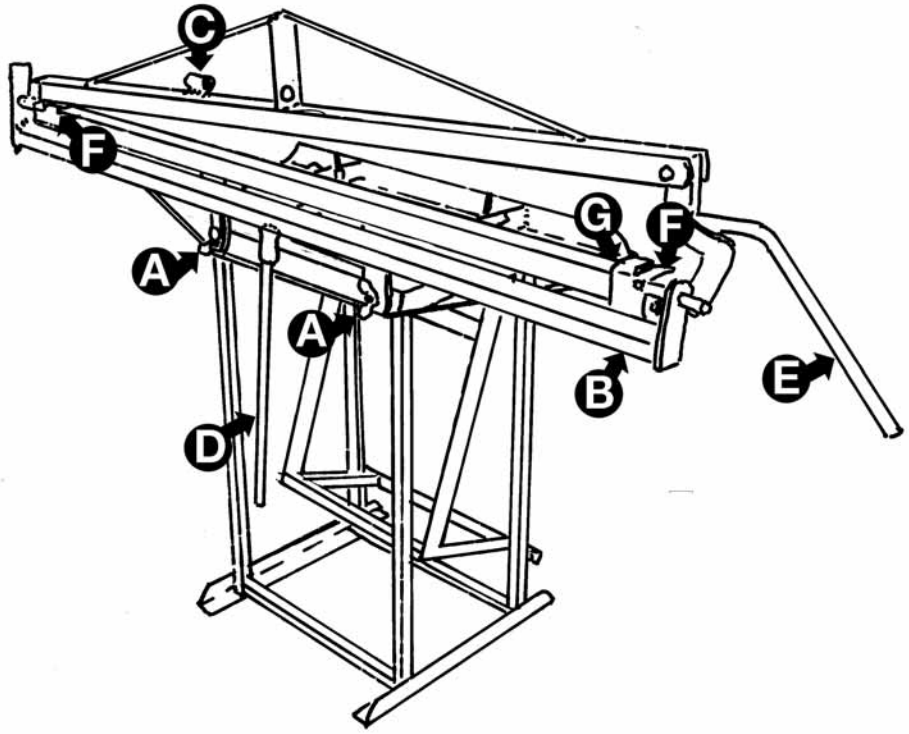
Decra Bender Attachment

Assembly

1. Locate holes in lower frame (A) onto bolts at rear of bender & secure with wing nuts.
2. Unlock bending beam (B) from travelling position by sliding to left and downwards.
3. Unscrew handle (D) from stowage position (C) & screw into socket on bending beam.

Operation

Position tile with edges under guide lips (F) & lock jaws shut with handle (E), before bending. A spacer (G) is provided for use with Stratos tiles.



Bender Attachment Key

(A) attachment holes
(B) bending beam
(C) bending beam handle stowage position
(D) bending beam handle
(E) jaw operating handle
(F) tile edge guide lips
(G) spacer for Stratos tile

Our Contact Details

If there is anything in this guide that you do not understand or that is unclear to you please do not hesitate to contact us on;

Tel: (01293) 545058
Fax: (01293) 562709
Web: www.decra.co.uk
Email: technical@decra.co.uk

Decra Roof System; Remember Safety

- Safety first.
- Never leave a guillotine unattended with the blade up.
- Always wear a safety helmet.
- Always wear soft-soled safety shoes.
- Always work from a safe platform or use a safety harness.
- Always ensure tools are set up correctly and are regularly maintained.
- Use tools safely.
- It is advisable to wear gloves to protect hands from any sharp edges.

© Decra Roof Systems Ltd 2005

Decra Installation Tips & Techniques

(November 2006)

Decra® Roof Systems Limited
A member of the Icopal Group

Our Contact Details

If there is anything in this guide that you do not understand or that is unclear to you please do not hesitate to contact us on;

Tel: (01293) 545058
Fax: (01293) 562709
Web: www.decra.co.uk
Email: technical@decra.co.uk

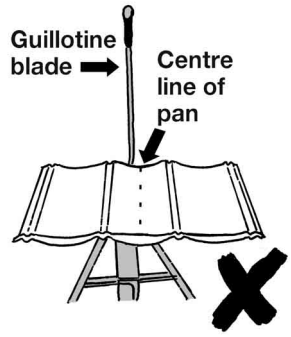
(A) Using The Guillotine (applies to all Decra tile profiles except Decra Plus)

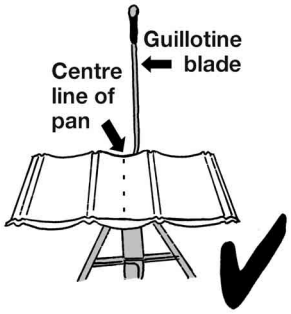
Operation

1. Stand facing guillotine & operate by pulling handle downward.

2. Always place tile face up (i.e. granulated side) in guillotine.

3. Cross-tile cuts should always be made with lowest point of tile pan to operator's left of guillotine blade. If necessary turn tile around to achieve this (see below).





4. Nip edge of tile closest to blade hinge flat before commencing cut.

5. Cross-tile cuts should be made before bending tile.

Longitudinal (full width) cuts should be made after bending.

Do not use the guillotine for cutting small pieces where the hands could be to close to the blade.

Always ensure that the work piece is firmly held when cutting and bending Decra products. Only one person should use the equipment so that risk of finger entrapment or injury is minimised.

(B) Cutting Tips

If the guillotine does not have a smooth cutting action

Decra's guillotine should have any easy, smooth cutting action when cutting a tile. If it feels like you are having to make too much effort while cutting, or if it feels like the guillotine blade is dragging, there is an easy solution to improving performance. Just wipe and clean the blade with an oily rag (3 in 1 oil or any other light oil will do as long as you do not leave to much oil residue on the blade).

If the guillotine has been left out in the rain on site you may find light corrosion marks on the blade. Clean these off with a wire brush or wire wool and once again wipe and clean the blade with an oily rag.

Dealing with tile scuff while using a reciprocating saw

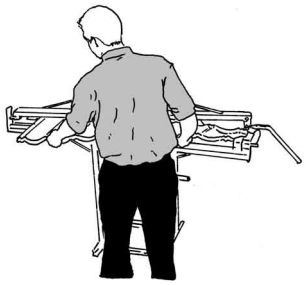
If you find the sole plate of your reciprocating saw is making undesirable scuff marks on the top face of the tile. Flip the tile over and using a black marker pen mark your cut line on the back of the tile and the cut from the back.

(C) Forming A Top Course Of Tiles

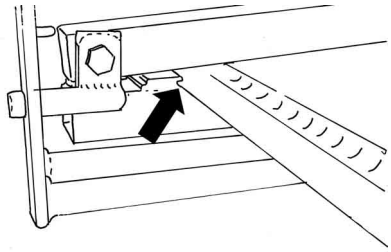
(applies to all Decra tile profiles except Decra Plus)

Insert and locate the tile

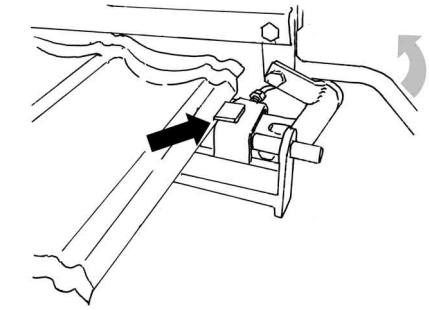
1. Position tile into the bender attachment.



2. Tile should be offered into locating tabs of bender attachment.

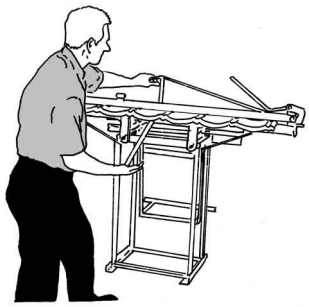


3. Ensure you locate other end of tile to adjustable tab. Tile located in position within the adjustable tab (see black arrow). Lift lever arm up to lock jaws of bender attachment (see grey arrow).

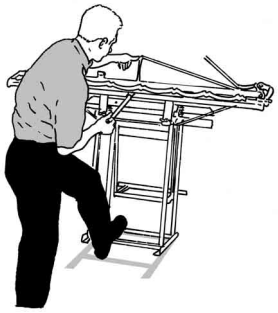


Bending technique

4. Set the Bender by tilting the bender away from operators body, whilst supporting with left arm (for right handed people). With other hand take hold of handle ready to control bending process.

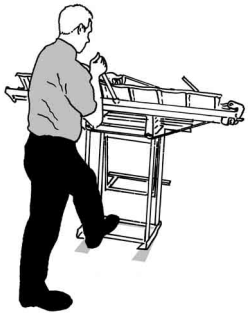


5. Lock lever arm to operator's side and allow bender to rotate gently towards operator.



© Decra Roof Systems Ltd 2005

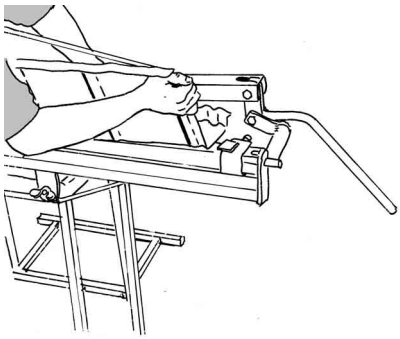
6. As the bender comes to ground level extend sweep of arm controlling the lever.



Raise lever to extent of sweep action to create full upturn bend. Operators arm is extending to control unit and bend of tile. Lever in full sweep position of bent tile.

Unlock the tile

7. Carefully grip tile and pull tile out of locating tab. Slide tile to right and lift bent tile out and away from bender.

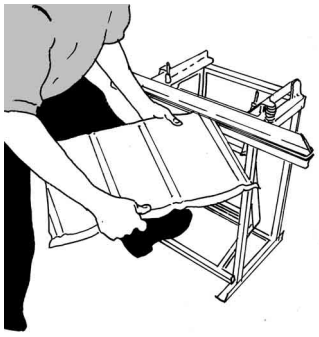


(D) Forming A Side Upstand

(applies to all Decra tile profiles)

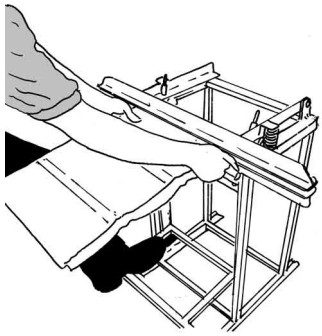
Bending preparation

1. First, flatten downturn of tile at front corner. Some distortion will occur with flattening process, this is normal. Repeat process for rear corner of tile.



Bending

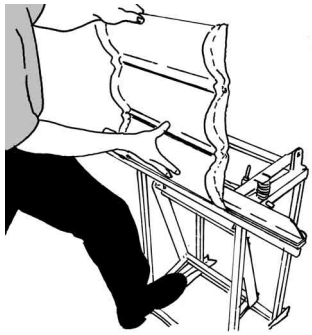
2. Offer tile into jaws of bender using fingers as stop guide for size of upturn.



3. Keeping fingers clear of vice jaws apply controlled pressure foot to peddle bar. Jaws will then clamp tile.

4. With tile held by jaws of bender hold pressure on peddle and prepare to bend tile.

5. Keeping foot pressed fully on peddle, bend tile in upward direction a full 90°, thus forming upturn.



If you are installing Decra Oberon Tiles please also read the section "Bending Tips For Oberon Tiles" later in this guide

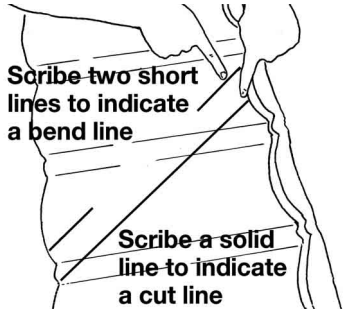
(E) Forming A Raking Cut & An Upturned Edge At Hips

(applies to all Decra tile profiles except Decra Plus)

(Valleys carried out in similar procedure)

Marking out.

1. Once measurements taken for hip tile transfer measurements and mark onto tile with scriber using a batten as a guide (if using Decra Elegance DO NOT scribe, use a pencil, chino graph pen or wax crayon).



2. Allow for upturn distance to suit requirements. Remember continuous line is cutting line two short lines are bending reference lines.

Cutting

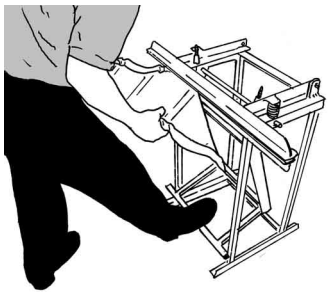
3. Tilt tile to suit bed of guillotine as shown. (Don't put fingers close to cutting blade).

4. The portion of required tile is held by the left hand. Waste tile falls to the right of blade when viewed from operators position.

5. Apply controlled pressure to blade and with left hand control guide of tile against cutting blade. .

Bending preparation

6. Offer tile to bender to flatten rear upturn and front downturn.

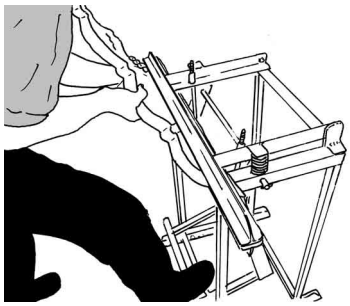


7. First, flatten front downturn of tile at front corner. By positioning front downturn into jaws of bender and applying pressure to peddle to flatten. Some distortion will occur with flattening process, this is normal.

8. Repeat the same flattening procedure for rear upturn.

Bending upturn

9. Then offer tile to scribed bending lines.



10. Apply pressure to bending jaws by foot peddle.

11. Start to bend tile in upward direction.

12. Bend tile upwards through full 90° to form upturn.

If you are installing Decra Oberon Tiles please also read

© Decra Roof Systems Ltd 2006

the section "Bending Tips For Oberon Tiles" later in this guide

(F) Bending Tips (General)

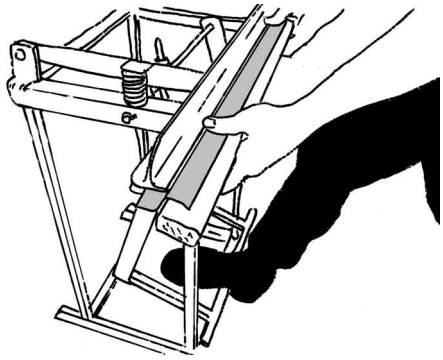
How to bend very small bends in a small work piece

It is possible to make very small bends or form bends in a small piece of tile or tile accessory.

Tips how to do it

1. Tuck a bit of timber under your work piece and pinch it with your thumbs against the work piece (see image below). This will allow you to maintain sufficient grip and leverage when bending.

2. Don't try to bend the full length of your work piece in one go. By bending a smaller bend than needed and then moving the work piece along in the bender and bending again its possible to bend very small bends at quite awkward angles.



Dealing with tile scuff while bending

If you find the tile bender is making undesirable scuff marks on the top face of the tile, when bending the tiles at the valleys. Cut two thin strips of wood (50mm x 6mm or 2" x ¼") and then tape them to the internal jaws of the bender. This will stop the tile slipping and causing scuffing when bending.

Tile slips whilst bending small work piece items for details

See "How to bend very small bends in a small work piece" and "Dealing with tile scuff while bending"

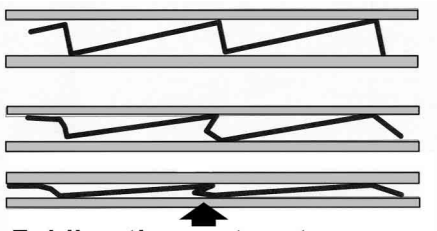
Having problems bending and forming small work piece details?

If you are new to Decra bending and forming small details (for example ridge hip intersection and mitres) can seem tricky to do.

Rather than having several attempts using Decra's steel components and wasting time and money, its often a good idea to use a piece of cardboard to have a go first. Cut lines, fold lines and tabs can easily be marked out and formed on cardboard and its much quicker to learn how to form your detail. Even better still this piece of cardboard can then be used as a template to mark out on the Decra components.

(G) Bending Tips For Oberon Tiles

When forming an upstand or a downturn at the side of an Oberon Tile it is possible to cause unwanted distortion or damage in the centre step area of the tile (see image of tile in tile bender jaws below).

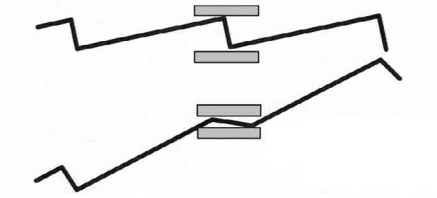


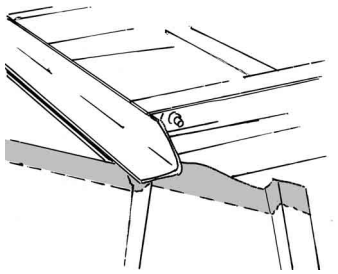
Folding the centre step incorrectly can cause problems

To avoid this occuring the correct bending procedure must be carried out.

Step 1

Flatten out step in the centre of the tile using the Decra Bender (Flatten only in the area of the tile which is to have an upstand or downturn formed).





Step 2

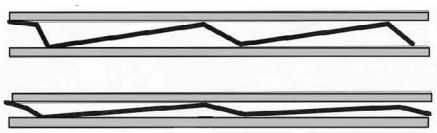
Offer tile to bender to flatten rear upturn edge of tile and front downturned nose of tile.

First, flatten front downturn of tile at front corner. By positioning front downturn into jaws of bender and applying pressure to peddle to flatten.

Repeat the same flattening procedure for rear upturn.

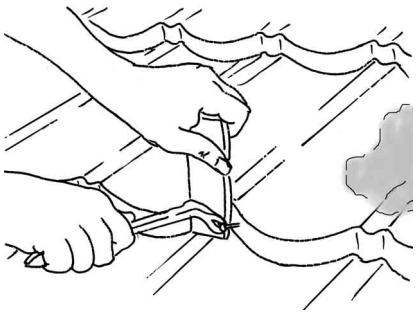
Step 3

Now place the full width of the area of the tile to be bent in the jaws of the bender and form your upstand or downturn in the tile as required.

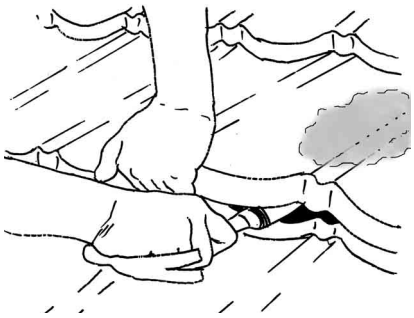


(H) Maintenance Procedures For Removal Of Tile Deformations Or Dents (Nail Fixed)

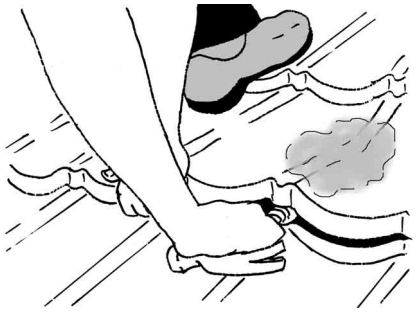
To remove light to medium dents without pronounced creasing in tile: Remove nails from front of deformed tile and to adjacent nails to tiles each side, allowing front edge of tile to be raised.



Tile nails are removed by using a carpenters nail puller or similar behind the nail head. When levering nails from front edge of tile, place a piece of batten between head of nail puller and tile surface, to enable maximum leverage to be applied and to prevent further damage or scuffing occurring.



Lift unfastened front edge of deformed tile and slide shaft of a hammer under location of dent (shaft of hammer will form a lever against underlying tile batten). Push down on front edge of tile and hammer head until dent of tile pops back into correct position.



Install new Decra nails in the same positions as those removed earlier. In the event of nail holes in adjacent tiles being exposed, after fixing new tiles, these should have a Decra finishing kit applied to seal the holes, as should any scuff marks on tiles.

© Decra Roof Systems Ltd 2006

NOTE: Heavily dented or creased tiles may need complete replacement.

(I) Lost Drill Screw Bit

If you are screw fixing the tiles and have lost your drill screw bit a ¼" screw driver bit holder will fit the Decra screws

(J) Decra Roof System; Remember Safety

- Safety first.
- Never leave a guillotine unattended with the blade up.
- Always wear a safety helmet.
- Always wear soft-soled safety shoes.
- Always work from a safe platform or use a safety harness.
- Always ensure tools are set up correctly and are regularly maintained.
- Use tools safely.
- It is advisable to wear gloves to protect hands from any sharp edges.

© Decra Roof Systems Ltd 2006