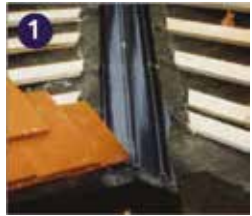


# Fixing Instructions for Mortarless Dry Fix Valley Troughs



## Installation with Plain Tiles



The first course is shown abutting the Dry Valley upstand - in this case there is no need to cut an angle as the next course will cover the gap on the eaves tile. Both under eaves and first course of tiles have nailing capability.



Tiles being cut to the correct angle to suit the Dry Valley upstand.



Removing the tile nib will prevent 'kicking up' on the Dry Valley water bar still allowing a nail hole for fixing.



Positioning the cut tile up the Dry Valley upstand.



The cut tile is then positioned and nailed, avoiding penetration of the Dry Valley.



Subsequent coursing in place. The pitch of the roof here is 35 degrees the untilted main slope of the roof is 45 degrees.



The Dry Valley mitred at the ridge and awaiting the final tile course.



In this situation the bridge piece is placed in position to support the smaller cut tile section. Alternatively a tile and a half may be used to avoid small cuts of tile.



Here the lead saddle is dressed over the intersecting valleys and welted under the ridge tile for a dry ridge application.



The dry ridge is fitted - note the last section is 'notched' to clear the Dry Valley upstand.

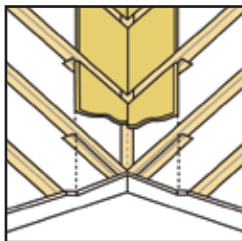


Fig.1

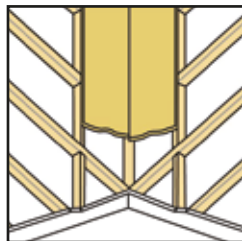


Fig.2

## Valley Board Construction

In all cases valley boards should be fitted. Valley boards may be inset or continuous over the rafters. Where they are inset, they should be a minimum of 12mm thick and supported on bearers of 50 x 25mm or similar and set at a depth to suit the thickness of the Valley Board (Fig. 1).

Continuous overlaid boards should be minimum of 6mm thick plywood and butt jointed only over a supporting rafter. (Fig. 2).

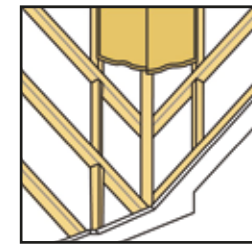


Fig.3

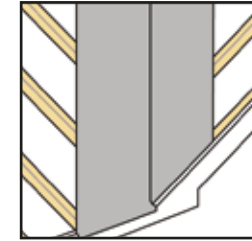


Fig.4

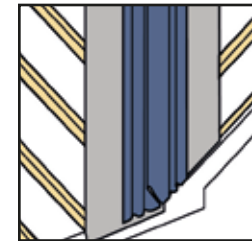


Fig.5

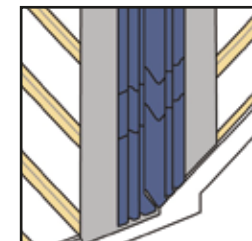


Fig.6



Fig.7

The width of the valley boards should extend by a minimum of 50mm beyond the edge of the valley trough. For overlaid boards on rafter spacings above 450mm, it is recommended that support noggins of 75 x 50mm are fixed under the outer edge of the valley board between the rafters (Fig. 3).

The fascia or barge board may be trimmed to allow the valley trough to pass through without flattening the profile, or alternatively a lead soaker may be used if required.

## Lining the Valley

A single strip of roofing underlay, at least the full width of the valley boards, should be laid up the centre and directly on top of the boards allowing for an overlap beyond the fascia line where appropriate and which may be trimmed later (Fig. 4).

## Fixing the Valley Trough

When fixing the Dry Valley, the raised centre section should be pinched together at the base and the trough pushed down firmly, locating it centrally onto the valley boards (Fig. 5).

The foot of the valley trough, when discharging into the gutter should be trimmed either prior to fixing or insitu to provide a 50mm overhang into the guttering.

Where a lead soaker is to be used at the foot of the valley, i.e. where the Dry Valley terminates above eaves level (Fig. 7) or where an eaves intersects with a verge or it is not appropriate to notch the fascia boards, the soaker should be welted at the edge and supported with suitable timber work. The valley trough should be trimmed to suit before fixing if necessary.

With the Dry Valley in position, it is nailed through the outer flange into the supporting timbers at 500mm centres maximum. The small exposed void in the upstand at the end of the trough can be filled using a suitable mastic.

## Joining Valley Sections

Additional lengths can be joined by overlapping (Fig. 6). No sealant or jointing materials is required if the following overlap lengths are used:

| Roof Pitch | Over 39° | 30° - 39° | 22.5° - 29° | Below 22.5° |
|------------|----------|-----------|-------------|-------------|
| Overlap    | 150mm    | 200mm     | 300mm       | 350mm       |

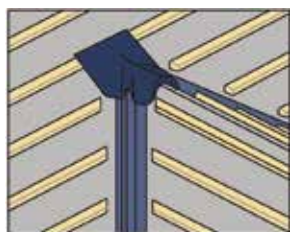


Fig.8

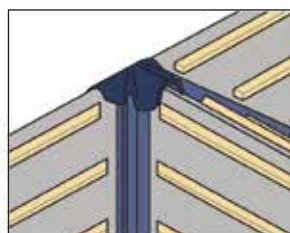


Fig.9

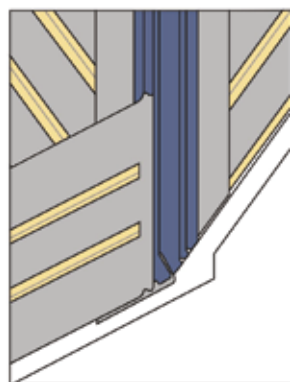


Fig.10

## Valley Intersections

Where a section of Dry Valley intersects with another section of Dry Valley e.g. at the ridge of a dormer roof or where one or more sections intersect with the ridge of a roof, it is necessary to mark the angle of intersection and cut the valley trough prior to fixing.

A minimum Code 4-lead saddle should then be dressed over the mitred sections of the Dry Valley(s) and ridge if necessary. The length of the overlap of the saddle onto the Dry Valley should be in accordance with the overlap lengths above (Fig. 8 & 9). Alternatively the lead saddle may be dressed over the slates or tiles.

## Installation of Underlays and Battens

The underlay can now be installed in the recommended manner and overlapped onto the Dry Valley before trimming between the two outer water bars either side of the central upstand.

The battens should be mitre cut to the angle of the valley, located on to the flat outer flanges of the valley trough and nailed to the supporting timber work outside the line of the Dry Valley (Fig. 10).

## Interlocking Tiles

Tile the roof to within one full tile width of the central upstand the full length of the valley. Measure the cover width of the tile being used, double this measurement and transfer it from the side of the central upstand closest to the tiles to be cut and in line with the coursing of the tiles. Mark the bottom edge of the first tile at the base of the valley and the last tile at the top of the valley. It is important for the tape measure to be on top of the tile when transferring this measurement (Fig. 11a).

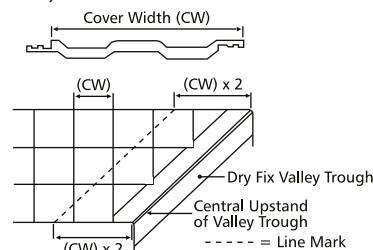


Fig. 11a

Using a chalk line (or straight edge) between the two marked points, snap a line to establish the position of the cuts to be made. When using a chalk line to mark the cut in profiled tiles, it may be necessary to mark the tiles further using a straight edge. The tiles may be numbered or marked prior to removal from the roof to establish the correct repositioning after cutting.

Replace each removed tile with a full tile. The cut tiles can then be fitted back into the appropriate course, taking care not to force the tiles too heavily against the central upstand to avoid distortion and maintain the straight line appearance of the valley (Fig. 11b).

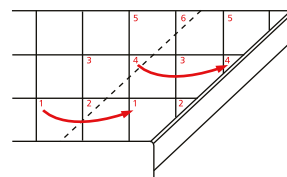


Fig. 11b

Where small cuts of tiles occur, and there is insufficient support from adjacent tiles on the left side of the valley, it becomes necessary to use either an anti-corrosive tile clip to hold the interlock together (Fig. 12), or alternatively, the Tile Support Bridge can be placed over the water bar adjacent to the central upstand (Fig. 13) and underneath the tile, held in position by the double-sided tape on the underside of the Bridge.

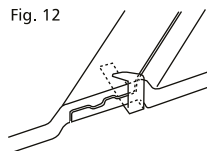


Fig. 12

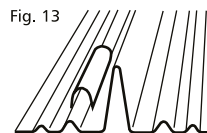


Fig. 13

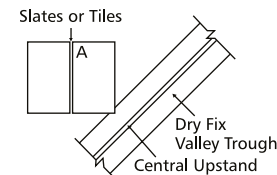


Fig. 1

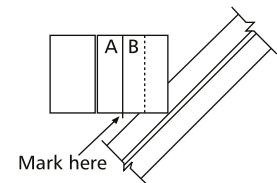


Fig. 2

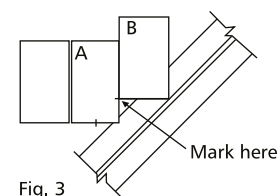


Fig. 3

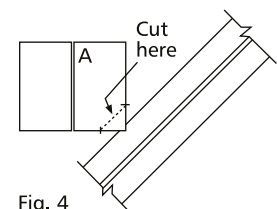


Fig. 4

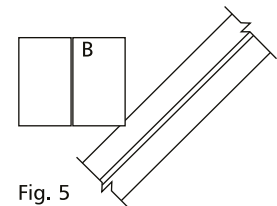


Fig. 5

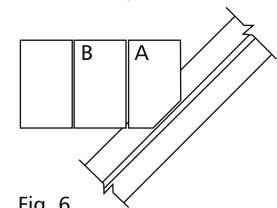


Fig. 6

## Double Lap Tiles & Slates

Commencing with the eaves courses and each subsequent course thereafter, the positioning, marking and cutting for both sides of the valley should be carried out in accordance with the following sequence:

Slate or tile the roof into the valley up to the last full slate or tile **A** that will fit (Fig. 1).

Place slate or tile **B** over **A** ensuring that the bottom edges are in line and the corner of **B** is lightly touching the central upstand of the Dry Valley. Mark the bottom edge of **A** where **B** overlaps (Fig. 2).

Repositioning slate or tile **B** alongside **A** with the bottom corner of **B** still in contact with the central upstand. Mark the side of **A** with the bottom edge of **B** (Fig. 3).

Remove slate or tile **A** and cut to the established marks (Fig. 4).

Position and fix full slate or tile **B** in position previously occupied by **A** (Fig. 5).

Fit slate or tile **A** against central upstand taking care not to nail through the valley or force the slate or tile against the central upstand to avoid distortion and maintain the straight-line appearance of the Dry Valley (Fig. 6).

**Note:** to avoid small cuts of slate or tile occurring that are difficult to fix, it is recommended that a tile and a half or wider slate is used.