Redland

COMPONENTS INSTALLATION GUIDE

Part of **BRAAS MONIER BUILDING GROUP**

At Redland it is our aim to deliver high-quality roofs that are easy to specify, buy, install and own.

AN INTRODUCTION

Redland is a brand of the worldwide Braas Monier Building Group (BMBG).

With operations in 36 countries and over 100 production sites, BMBG is the leading worldwide supplier of pitched roofing materials. Our goal is to deliver high-quality roofing solutions that perfectly meet our customers' expectations.

Redland draws on the expertise and experience gathered from nearly 100 years as an industry leader. Our range of tiles, slates, renewable energy systems, fittings and accessories, combined with market-leading technical support services, enable us to deliver total pitched roofing solutions you can rely on.

REDLAND TECHNICAL SOLUTIONS SERVICE

Staffed by industry experts with both the technical and real world knowledge of designing with Redland systems, our Technical Solutions team's service will help you bring your project to fruition with industry-leading knowledge every step of the way.

As well as an unrivalled range of roof tiles and systems, Redland has developed a comprehensive range of free technical services to save you time and provide complete peace of mind in your roofing project.

SpecMaster

Complete guaranteed roof specification service with NBS-based clauses

QuantMaster

Redland's bespoke roof materials quantity estimating service

DesignMaster

Comprehensive CAD library of over 4,000 quality roofing drawings

ViewMaster

The online visualisation software that enables you to 'try before you buy'

FixMaster

Fixing specification service tailored to each customer's needs

EcoMaster

Guaranteed specification service for projects using renewable energy systems

Call 03708 702595 or visit www.redland.co.uk/services for further information on these services

Founded in 1983 as the UK's first centre for roofing industry training, our Gloucestershire-based Redland National Training Centre has been leading the industry ever since.

Our purpose-built facility enables us to deliver presentations and theory in a classroom environment, before stepping next door, where 'real-life' roofing techniques can be practised in the comfort of our 480m^2 heated, indoor workshop, using our custom-built roof rigs.

Whether your interest is in BS 5534, estimating, dry fix components, solar, ventilation, or simply getting a better grasp of Redland's products in order to do your job better, we can accommodate your needs, alongside offering bespoke courses tailored directly to your requirements.

Regardless of your level of roofing expertise, our team of experienced trainers will help develop your knowledge and understanding.

A MESSAGE FROM OUR TRAINING CENTRE MANAGER

Underpinning our roofing expertise at Redland is our purpose-built National Training Centre where Redland customers, suppliers and specifiers regularly undertake in-depth training.

We believe it's important that everyone involved in the supply, installation and specification of roofs is educated on the most up-to-date regulations, techniques and products and we're recognised in the industry for our commitment to delivering quality training.

Whether you are just starting out in the industry, looking to pick up a new skill, or you're an old-hand wanting to understand how new legislation affects you, we're here to help. We look forward to welcoming you to the centre.

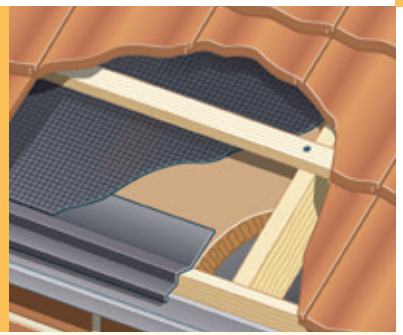
Mat Woodyatt

"Easy to glue laps because of the unique glue strip system."

UNDERLAY

1

Spirtech 400 2S is a high-quality, durable, vapour permeable underlay designed to be robust with high tensile strength.

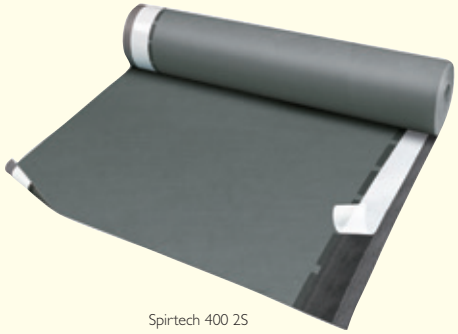


SPIRTECH 400 2S: PRODUCT CODE AND DESCRIPTION

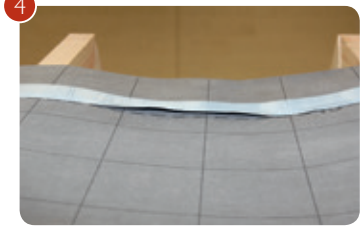
Description	Product Code	Coverage
Spirtech 400 2S	9202	50 x 1.5m roll

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code	Length
Underlay Support Tray	9076	1.5m
UnoRoll	9439	50m
DuoRoll	9440	50m
DivoTape	9458	25m



Spirtech 400 2S



1

The underlay must be supported at the eaves near the top of the fascia board to ensure a positive fall. This can be achieved through the use of an Underlay Support Tray, RedVent EavesVent Packs, Rapid EavesVent 2-in-1 Trays or timber tilt fillet and 5U Felt.

2

Roll out Spirtech 400 2S horizontally across the roof with the bottom edge in line with the top of the fascia.

3

Create a top fixing point to hold the upper part of the underlay in place.

4

Pull taught and release to ensure there is a nominal 10mm drape between each rafter. Nail into place. Remove backing from lower adhesive strip and adhere to Underlay Support Tray.

5

Batten out the underlay section and continue to lay Spirtech 400 2S, ensuring that each underlay course overlaps the one below by the marked 150mm headlap. Continue to batten out subsequent underlay sections as the underlay is laid up the roof. When laying Spirtech 400 2S directly onto insulation boards each underlay course must be secured before starting on the next. Remove backing from the two adhesive strips and ensure they adhere at the overlaps. UnoRoll is required to connect the vertical overlaps and connections to the building structure. Batten the roof at the same time.

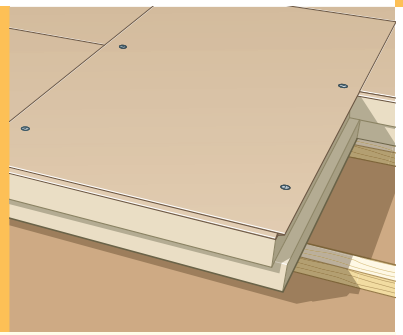
Sidelaps must be a minimum of 100mm and should coincide with a rafter/ counterbatten line in order to secure the roll ends.

Avoid laps above the same support in consecutive layers.

INSULATION

2

A straightforward and high-performance way to create a loft storage platform. Rapid Loft Board's extremely efficient insulating layer and sturdy 8mm OSB facing turns roof spaces into practical storage space.



RAPID LOFT BOARD INSULATION: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Pack Contents	Coverage (fitted)
100mm Rapid Loft Board	9423	20 Boards	12.7m²
140mm Rapid Loft Board	9426	16 Boards	10.1m²

2

3

1 PREPARATION

i) The roof structure should be fit for purpose. Timber and composite materials are sensitive to moisture and temperature. Rapid Loft Board Insulation should be stored so that it can adapt to the moisture levels at the installation site and should be protected against wetting and mechanical damage.

ii) Ensure the loft area is clear, well-lit and ventilated. Isolate electrical wiring in the loft. Electrical cables should be repositioned above any insulation to avoid overheating. Insulation should not cover the area directly above light fittings unless sealed hoods are introduced.

iii) Check the ceiling joists or existing boarding before installation to establish their load-bearing capacity and whether they are level. Severe unevenness should be rectified to ensure a level surface for the Rapid Loft Board Insulation.

iv) Check the surface to be laid upon to ensure it is dry, especially in new builds, and remove any moisture if necessary.

2 VENTILATION

If Rapid Loft Board Insulation panels are being installed at the same time the roof covering is being renewed, ventilation to the loft space should be provided in accordance with the requirements of BS 5250. At low level a continuous 10mm ventilation opening should be provided to the loft. This can be achieved by installing the Redland RedVent EavesVent for example. Where the rafter pitch is 15° or less, this should be increased to a continuous 25mm ventilation opening. This can be achieved by installing the Redland RedVent 25 Over-Fascia Vent with the Redland Underlay Support Tray.

3 LAYOUT

Rapid Loft Board Insulation must be laid with the boards staggered, offset by about half a board length as shown. The layout should be chosen so as to minimise offcuts. Rapid Loft Boards should be laid so as to span a minimum of two, and preferably three, ceiling joists.

4

5

Where only two joists are spanned, consideration should be given to the loads that can be applied to the areas where joints occur.

4 LAYING THE INSULATION

Start laying at one corner. Do not forget the initial spacer wedges around the edges. To eliminate thermal bridges, remove the tongue along the sides if in contact with walls. This can be done mechanically using standard woodworking tools (e.g. circular saw, hand saw). Apply standard wood glue to the top surface of the tapered tongue and groove edge. The surfaces to be bonded must be clean and fee from dust and grease.

5 FIXING THE BOARDS

The 8mm wood board laminated to the top of Rapid Loft Board Insulation with its tapered tongue and groove edge makes it easy to fit the panels together. Each Rapid Loft Board Insulation panel can be fixed on each corner of each board, through to the existing ceiling joists. This should be carried out using suitable length wood screws. Care should be taken not to drill or screw through cables or pipes.

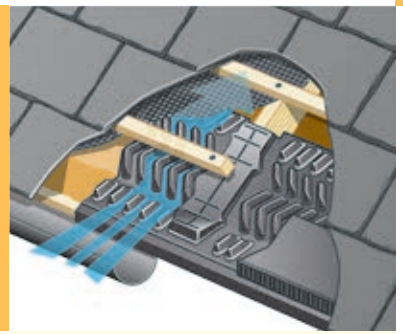
6 FINAL STEPS

When the joints and glued connections of the Rapid Loft Board Insulation have set, the spacer wedges around the edges can be removed. It is advisable to inspect the insulation around thermal bridges, e.g. near knee walls or lower purlins, and check that ventilation openings at the eaves are not blocked and can still function.

EAVES SYSTEMS

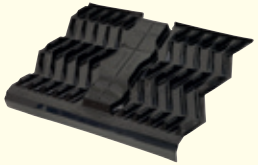
3

The RedVent EavesVent provides continuous over-fascia eaves ventilation for use when insulation is laid between and/or on top of the horizontal ceiling joists.

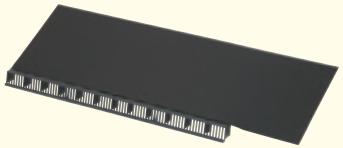


REDVENT EAVESVENT: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Pack Contents	Coverage
RedVent EavesVent for 350-450mm Rafter Centres	9189	14 Eaves Ventillation Trays 12 Fascia Grille and Aprons	6m of eaves at maximum rafter centres
RedVent EavesVent for 450-600mm Rafter Centres	9190	10 Eaves Ventillation Trays 12 Fascia Grille and Aprons	6m of eaves at maximum rafter centres
Extension Pack for 350-450mm Rafter Centres	9498	14 Eaves Ventillation Trays 12 Fascia Grille and Aprons	6m of eaves at maximum rafter centres
Extension Pack for 450-600mm Rafter Centres	9499	10 Eaves Ventillation Trays 12 Fascia Grille and Aprons	6m of eaves at maximum rafter centres



Eaves Ventillation Tray



Fascia Grille and Apron

2

3

1

Fascia board should be positioned or cut 25mm lower than standard position.

2

Cut an Eaves Ventillation Tray down the centre of the rafter upstand along the marked groove, to provide a starter section at the first rafter adjacent to the wall.

With a uPVC fascia, nail an additional timber fillet immediately behind the uPVC fascia.

3

Starting on the right-hand side of the roof, place the left-hand section on the first rafter inside the brickwork at the right-hand verge. Ensure that the overhang section is located correctly on the fascia board such that the gutter skirt stands clear of the fascia.

Fix the section using two clout head nails, fixing in the grooves marked 'Nail A' and 'Nail B'. For Plain Tiles ensure that all slack is taken out at the eaves batten position prior to nailing.

4

5

6

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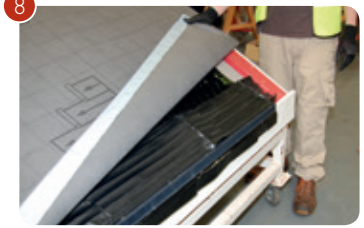
8



9

4

Lay a complete Eaves Ventillation Tray over the next rafter, snapping all the interlocking sections together and fixing with two clout head nails onto the rafter.

5

Repeat operation 4) to complete the remainder of the roof, utilising the right-hand section of the cut Eaves Ventillation Tray at the last rafter on the left-hand side, inside the brickwork. Ensure throughout that the tray is located correctly on the fascia board.

6

Fix the first Fascia Grille at the right-hand verge end of the fascia, using three 45 x 2.35mm aluminium alloy nails placed into the nail hole guides.

7

Repeat this operation along the eaves ensuring that the Grilles are butted together and that the aprons are overlapped.

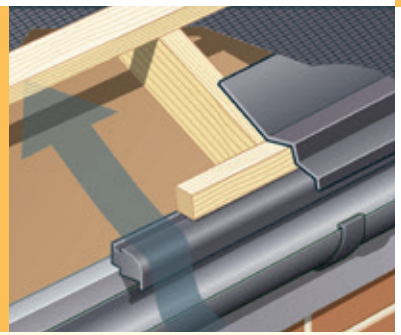
8

Fix the first layer of underlay ensuring a minimum 150mm overlap with the Fascia Grille apron and leaving the slot in the Fascia Grille clear. Underlay and batten the remainder of the roof in the normal manner.

9

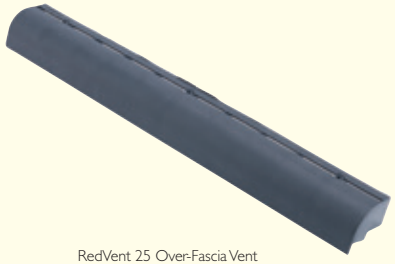
Where the distance to the top of the insulation is greater than 450mm measured from the fascia up the rafter, Extension Trays should be used. They should be laid in the same way as Eaves Ventilation Tray and can be joined to them if required. Where this distance is greater than 830mm, two rows of Extension Trays should be used. Diagonal cutting is required for hips to ensure that the continuous skirt into the gutter is maintained. Diagonal cutting is not recommended for valley detailing. Nail any Eaves Combs or Eaves Clips through the continuous slot provided in the top of the Fascia Grille.

The RedVent 25 Over-Fascia Vent provides unobtrusive continuous ventilation at the eaves – for use where the insulation is installed either between or above the rafters. It can also be used for low pitch cold roofs or certain types of eaves constructions such as open rafters.



REDVENT 25 OVER-FASCIA VENT: PRODUCT CODE AND DESCRIPTION

Description	Product Code	Pack Contents	Coverage
RedVent 25 Over-Fascia Vent	9593	12 grilles	6m



RedVent 25 Over-Fascia Vent

1

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2

4

1

Make sure the 25mm thick fascia board is fixed at a height that ensures that the eaves course of tiles lies in the same plane as all other tiles on the roof. Place the Over-Fascia Vent unit on and in line with the end of the fascia board. Nail in position through the nail holes provided.

2

Fix a 25 x 25mm clip batten to fascia board through slots in Over-Fascia Vent with 90 x 3.35mm nails (not required with plain tiles).

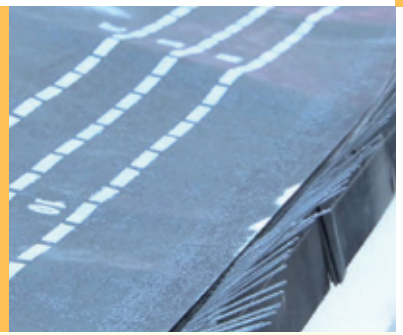
3

Install an Underlay Support Tray on the timber clip batten. Nail into place at each rafter intersection.

4

Lay underlay and dress to marked line on Underlay Support Tray.

The Rapid Eaves Vent System is designed for use in cold pitched roofs with unheated loft spaces as a means of introducing low-level roof space ventilation into the loft space.

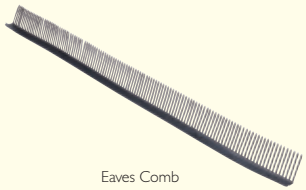


RAPID EAVES VENT SYSTEM: PRODUCT CODES AND DESCRIPTIONS

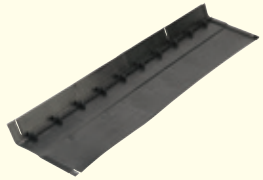
Description	Product Code	Size
Rafter Roll	9984	6m
Rapid 2-in-1 Eaves Tray	9988	1m
Eaves Comb	9965	1m

NB: Each sold separately

Rafter Roll



Eaves Comb



Rapid 2-in-1 Eaves Tray

1

2

3a

1

Roll out and position the Rafter Roll over the rafters where the ceiling level insulation (most commonly compressible mineral or glass wool) meets the eaves.

(**Note:** the precise position will depend on the eaves construction). Secure the tray to the rafters using 25 x 2.65mm clout nails at every rafter intersection, both at the top and bottom of the roll.

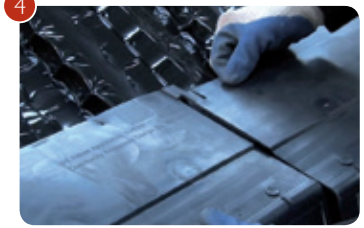
2

Lay the Rapid 2-in-1 Eaves Tray over the fascia board using the guiding lugs on the underside of the tray to locate the correct position.

3a

With a timber fascia, nail the 2-in-1 Eaves Tray directly into the top of the fascia board through the raised nail bosses (on the upper surface of the tray) using 60 x 3.35mm aluminium alloy nails *(product code 9333)*.

Where an Eaves Comb is required, install this on top of the 2-in-1 Eaves Tray prior to nailing the Tray.



3b

With a uPVC fascia, either nail the rear end of the 2-in-1 Eaves Tray into the rafters at every rafter intersection or nail into an additional timber fillet immediately behind the uPVC fascia. Where an Eaves Comb is required, install this on top of the 2-in-1 Eaves Tray prior to nailing the Tray into the additional timber fillet.

4

The tray units interlock with each other; so ensure adjacent units are interlocked together correctly before fixing.

5

Lay the roof underlay ensuring the bottom edge is butted up against Eaves Comb. Lay the rest of the underlay as per underlay instructions.

RAPID EAVES VENT SYSTEM

Rapid Eaves Vent System
Cambrian Slate, Slate Grey

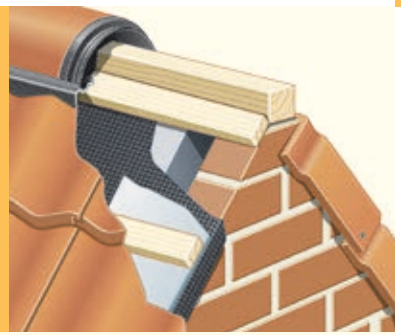
"A neat maintenance-free verge."

Ambi-Dry Verge
Richmond 10 Slate,
Slate Grey

VERGE SYSTEMS

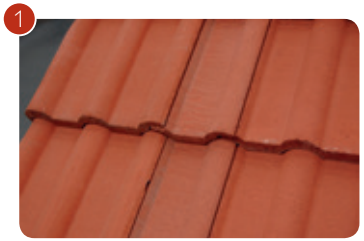
4

The Cloaked Verge continues the tiling over the gable end, using a one-piece concrete tile. The system has very high resistance to storm damage and with no wet trades required it removes concerns about mortar failure.



CLOAKED VERGE:
PRODUCT CODES AND DESCRIPTIONS

Description	Product Code
Regent LH Cloaked Verge	7271
Regent RH Cloaked Verge	7272
Grovebury LH Cloaked Verge	7273
Grovebury RH Cloaked Verge	7274
50 Double Roman LH Cloaked Verge	7275
50 Double Roman RH Cloaked Verge	7276
Renown LH Cloaked Verge	7277
Renown RH Cloaked Verge	7278
Landmark Double Pantile LH Cloaked Verge	8333
Landmark Double Pantile RH Cloaked Verge	8334
Landmark Double Roman LH Cloaked Verge	8343
Landmark Double Roman RH Cloaked Verge	8344
Cathedral Clay Pantile RH Cloaked Verge	5927
Cathedral Clay Pantile LH Cloaked Verge	5928
Cathedral Clay Pantile 2/3 Tile	5929
Renown Half Tile	7710
50 Double Roman Half Tile	7730
Regent Half Tile	7750
Grovebury Half Tile	7770
Landmark Double Pantile Half Tile	8331
Landmark Double Roman Half Tile	8341
Landmark LH Cloaked Verge Eaves Clip	9179



1

Set the roof out with the verge overhang the same at both verges. The use of Half Tiles (Two Thirds Tiles for Cathedral Clay Pantile) in each course will allow the overhang to be reduced to a minimum, but these should not be used at the edge. In cases where no batten end fixing is available on roof pitches of 30° and above, a second batten is required to support the main batten. It is essential to secure the second batten over at least two rafters.

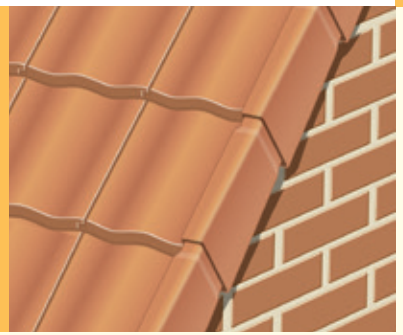
2

An undercloak should be installed between the battens and the structure, touching the inside face of the Cloaked Verge tile, to prevent bird ingress.

3

Install Cloaked Verge as if it were a standard tile and push home the supplied plastic lug. Nail it at the top too.

The Ambi-Dry, Rapid and Slate 10 Dry Verge Systems provide a neat, maintenance-free verge for slates and our most popular profile tiles. With very high resistance to storm damage and with no wet trades required, it removes concerns about mortar failure.



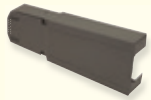
DRY VERGE PACKS: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents (in all bags)
Metric Ambi-Dry Verge	9550	10 x Ambi-Dry Verge Units 10 x Batten End Clips 10 x S/S Nails (65 x 3.35mm) 20 x S/S Nails (20 x 2.65mm)
Metric Rapid Verge	9601	
Cambrian Ambi-Dry Verge	9570	
Stonewold II Ambi-Dry Verge	9576	
DuoPlain Ambi-Dry Verge	9660	
Slate 10 LH Dry Verge	9603	
Slate 10 RH Dry Verge	9604	
Redland 49 / Fenland Pantile Ambi-Dry Verge	9692	
Redland 49 / Fenland Pantile Rapid Verge	9701	

EAVES/RIDGE PACKS: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents (in all bags)
Metric Ambi-Dry Eaves/Ridge Pack	9552	1 x Eaves Closure Unit 1 x Ambi-Dry Eaves Clip 1 x Ridge Comb Unit 2 x S/S Annular Ring Shanked Nails (55 x 2.65mm)
Metric Rapid Verge Eaves/Ridge Pack	9602	
Cambrian Eaves/Ridge Pack	9491	
Stonewold II Ambi-Dry Eaves/Ridge Pack	9495	
DuoPlain Ambi-Dry Eaves/Ridge Pack	9680	
Slate 10 Eaves/Ridge Pack	9605	
Redland 49 / Fenland Pantile Ambi-Dry Eaves/Ridge Pack	9693	
Redland 49 / Fenland Pantile Rapid Verge Eaves/Ridge Pack	9702	

Ambi-Dry Verge Pack (9550 shown)



Ambi-Dry Verge Units

Batten End Clips and S/S Nails

Eaves/Ridge Pack (9552 shown)

Eaves Clip and S/S Nails

Ridge Comb Unit and Eaves Closure

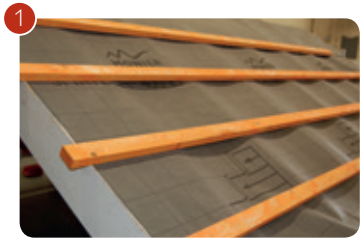
MAXIMUM PITCHES

Tile Type	Duo-Pitch	Mono-Pitch
Landmark Double Pantile	67.5°	57.5°
Landmark Double Roman	62.5°	67.5°
Regent	67.5°	52.5°
Grovebury	67.5°	57.5°
50 Double Roman	62.5°	67.5°
Renown	60.0°	65.0°
Mini Stonewold	67.5°	72.5°
DuoPlain	60.0°	47.5°
Slate 10 range	67.5°	72.5°
Redland 49	52.5°	60.0°
Fenland Pantile	47.5°	67.5°

Note: There is no maximum pitch on lean-to roofs or where lead roll details are used.

AMBI-DRY, RAPID AND SLATE 10 DRY VERGE SYSTEMS

1



2

FOR METRIC & REDLAND 49 / FENLAND PANTILE

1

Underlay and batten the roof, carrying the underlay over the full width of the gable and extending the tiling battens beyond masonry, bargeboard or gable ladder by 60mm (or 45mm for Redland 49 and Fenland Pantile). Ensure all battens project by the same distance to achieve a straight verge line.

2

Using the 20 x 2.65mm nails provided, fix a Batten End Clip to each tiling batten.

3

There are then two alternative methods of fitting the Eaves Closure Unit:

a) Fit the Eaves Closure Unit over the first tile in the eaves course. Fix into the bargeboard or masonry through the two most appropriate holes in the Eaves Closure Unit using the two screws provided. Wall plugs will be required if screwing into masonry.

b) Alternatively, taking an Eaves/Ridge Pack, pass the 'L' shaped clip through the 'T' shaped slot in the Eaves Closure Unit and turn to suit left or right-hand verge. Using the nails provided in the Eaves/Ridge Pack, fix the eaves clip to the fascia board.

4

At this stage one of two approaches may be adopted:

a) Lay all tiles and fix the Ambi-Dry Verge Units afterwards.

b) Fix Ambi-Dry Verge Units as the tiles are laid. In either case the procedure is as shown from section 5 onwards.

5

Clip the first Ambi-Dry Verge Unit over the Eaves Closure Unit. Slide the Ambi-Dry Verge Unit in the direction of the ridge until the tail coincides with the tail of the eaves course tile. To ensure a straight verge line is achieved, remove 10mm from the edge of the eaves tile at the point where it slots into the Eaves Closure Unit.

AMBI-DRY, RAPID AND SLATE 10 DRY VERGE SYSTEMS

6

Ensuring contact with the head of a tile, nail the Ambi-Dry Verge Unit into the Batten End Clip. Nail through the most convenient hole using the 65 x 3.35mm nail provided.

7

Depending on the hand of the verge, prepare the Ambi-Dry Verge Units by snapping out the relevant section. Picture shows a right-hand Ambi-Dry Verge Unit being prepared.

8

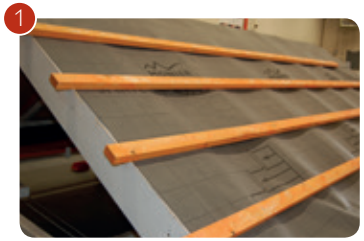
Carefully locate the second Ambi-Dry Verge Unit in the upper and lower slots of the first. Slide the Ambi-Dry Verge Unit in the direction of the ridge until the tail coincides with the tail of a tile. Secure the Ambi-Dry Verge Unit to the Batten End Clip as before. Continue in the same manner to the ridge.

9

Interlock two Ridge Comb units and slide until fully closed. Offer up to the Ambi-Dry Verge Unit. Secure the Ridge Comb units onto the Ambi-Dry Verge Units and fix to the top tiling battens using 25mm galvanised clout nails.

10

Complete the ridge/verge junction with a Universal Angle or Half Round Block-End Ridge Tile or a Ridge End Cap.



FOR CAMBRIAN & STONEWOLD II

1

The tiling battens should end in a perpendicular line and extend 50mm beyond the outer edge of the masonry or bargeboard. Set out the rest of the roof in the normal manner.

2

Snap off the bottom upstand return portion of the Ambi-Dry Verge Unit to form either left or right-hand units. The portion to snap is indicated on the inside of the Verge Unit.

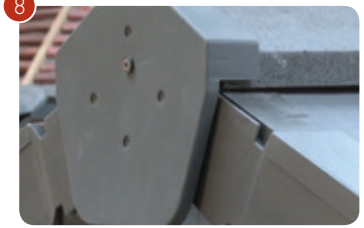
3

Position the Eaves Closure Unit inside a Verge unit as shown, with the face printed 'TOP' towards the downstand which has not been snapped off. Ensure the slot of the Eaves Closure Unit engages into the downstand of the Verge Unit, and slide forward until it clicks into position.

4

Position the Verge/Eaves unit in place ensuring the tiling battens fit in the box section of the Verge unit. Push an Ambi-Dry Verge Clip through the upper slot on the side of the Verge Unit and fix to the tiling batten using a 25mm galvanised clout nail.

AMBI-DRY, RAPID AND SLATE 10 DRY VERGE SYSTEMS



5

Position the Eaves Clip into the slot in the Eaves Stop End and nail to the fascia using 25mm galvanised clout nails, ensuring the unit is tight against the verge. (If using Redland RedVent EavesVent, nails should be a minimum of 50mm long.) The unit should be held securely against the clip when the eave tile is laid.

6

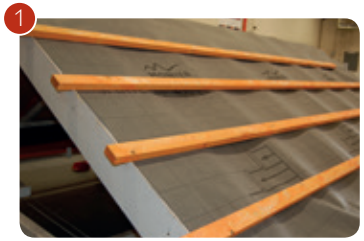
Offer up subsequent units, ensuring the downstand of the Verge unit is below the clip. Then slide the Verge Unit over the unit below. It is important to ensure the lugs engage top and bottom and the box section fits over the batten. Secure the unit with an Ambi-Dry Verge Clip. Complete the rest of the verge in a similar manner.

7

Do not fix Ambi-Dry Verge Clips on the top course. The verge at the apex should be completed for opposite roof slopes at the same time. Interlock two Ridge Comb Units and slide until fully closed. Offer up to the Verge Unit on the top courses and slide back over the Verge Unit. Secure the Ridge Comb Units onto the Verge Units in the top course and fix to the top tiling battens using a 25mm long galvanised clout nail.

8

Finish the Verge with a Universal Angle or Half Round Block-End Ridge or a Ridge End Cap (shown).



FOR SLATE 10 RANGE

1

Underlay and batten the roof, carrying the underlay over the full width of the gable and extending the tiling battens beyond masonry, bargeboard or gable ladder by 60mm. Ensure all battens project by the same distance to achieve a straight verge line. The ridge batten should overhang the verge by 30mm.

2

Using the 20 x 2.65mm nails provided, fix a Batten End Clip to each tiling batten.

3

There are then two alternative methods of fitting the Eaves Closure Unit.

a) Taking an Eaves/Ridge Pack, attach the foam filler to the Eaves Closure Unit as shown.

Then fit the Eaves Closure Unit over the first tile in the eaves course. Fix into the masonry or bargeboard through the two most appropriate holes in the Eaves Closure Unit using the two screws provided. Wall plugs will be required if screwing into masonry.

b) Alternatively, taking an Eaves/Ridge Pack, pass the 'L' shaped clip through the 'T' shaped slot in the Eaves Closure Unit and turn to suit left or right-hand verge.

Using the nails provided in the Eaves/Ridge Pack, fix the eaves clip to the fascia board.

4

At this stage one of two approaches may be adopted:

a) Lay all tiles and fix the Dry Verge Units afterwards.

b) Fix Dry Verge Units as the tiles are laid. In either case the procedure is as shown from 6 onwards.

5

Clip the first Dry Verge Unit over the Eaves Closure Unit. Slide the Dry Verge Unit in the direction of the ridge until the tail coincides with the tail of the tile. To ensure a straight verge line is achieved, remove 10mm from the edge of the eaves tile at the point where it slots into the Eaves Closure Unit.

6

Ensuring contact with the head of a tile, nail the Dry Verge Unit into the Batten End Clip. Nail through the most convenient hole using the 65 x 3.35mm nail provided.

7

Carefully locate the second Dry Verge Unit into the slots of the first. Slide the Dry Verge Unit in the direction of the ridge until the tail coincides with the tail of a tile. Secure the Dry Verge Unit to the Batten End Clip as before. Continue in the same manner to the ridge.

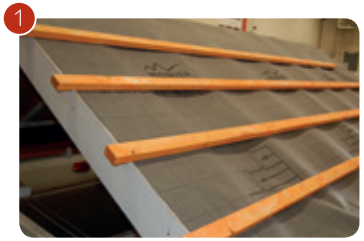
8

Interlock two Ridge Comb Units and slide until fully closed. Offer up to the Verge Unit. Secure the Ridge Comb Units onto the Verge Units in the top course and fix to the top tiling battens using 25mm long galvanised clout nails.

9

Complete the ridge/verge junction with a Universal Angle or Half Round Block-End Ridge Tile or a Ridge End Cap.

AMBI-DRY, RAPID AND SLATE 10 DRY VERGE SYSTEMS



FOR DUOPLAIN

1

Underlay and batten the roof, carrying the underlay over the full width of the gable and extending the tiling battens beyond masonry, bargeboard or gable ladder by 45mm. Ensure all battens project by the same distance to achieve a straight verge line.

2

Using the 20 x 2.65mm nails provided, fix a Batten End Clip to each tiling batten.

3

There are then two alternative methods of fitting the Eaves Closure Unit.

a) Fit the Eaves Closure Unit over the first tile in the eaves course. Fix into the masonry or bargeboard through the two most appropriate holes in the Eaves Closure Unit using the two screws provided. Wall Plugs will be required if screwing into masonry.

b) Alternatively taking an Eaves/Ridge Pack, pass the 'L' shaped clip through the 'T' shaped slot in the Eaves Closure Unit and turn to suit left or right-hand verge. Using the nails provided in the Eaves/Ridge Pack, fix the eaves clip to the fascia board.

4

At this stage, one of two approaches may be adopted:

a) Lay all tiles and fix the Ambi-Dry Verge Units afterwards.

b) Fix Ambi-Dry Verge Units as the tiles are laid. In either case the procedure is as shown from 5 onwards.

5

Set all tile courses 5mm back from the batten end on each verge. Ensure that the eaves tile is fully inserted into the Eaves Closure Unit. The interlocks of left-hand verge tiles must be removed.

Clip the first Ambi-Dry Verge Unit over the Eaves Closure Unit. Slide the Ambi-Dry Verge Unit in the direction of the ridge until the tail coincides with the tail of the tile. To ensure a straight verge line is achieved, remove 10mm from the edge of the eaves tile at the point where it slots into the Eaves Closure Unit.

6

Ensuring contact with the head of a tile, nail the Ambi-Dry Verge Unit into the Batten End Clip. Nail through the most convenient hole using the 65 x 3.35mm nail provided.

7

Depending on the hand of the verge, prepare the Ambi-Dry Verge Units by snapping out the relevant section. Picture shows a right-hand Ambi-Dry Verge Unit being prepared.

8

Offer up the next unit and tip it onto its outside face. Engage the bottom of the Verge Unit behind the installed one and tip/turn the unit upright to the normal position engaging the lugs that lock the units in place. Slide the unit upwards to line up with the adjacent tile, ensuring lugs remain fully engaged. Nail through Batten End Clip into batten.

9

Interlock two Ridge Comb Units and slide until fully closed. Offer up to the Verge Unit. Secure the Ridge Comb Units onto the Verge Units in the top course and fix to the top tiling battens using 25mm long galvanised clout nails.

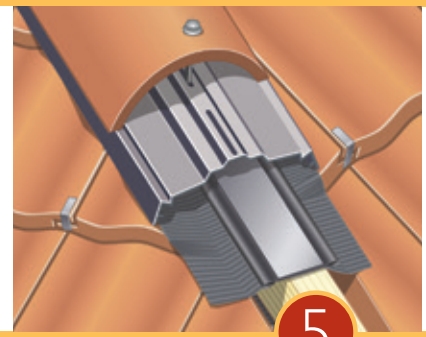
10

Complete the ridge/verge junction with a Universal Angle or Half Round Block-End Ridge Tile or a Ridge End Cap.

"An attractive finish to the hip line."

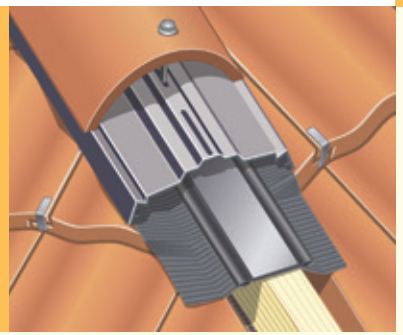
Dry Hip System
Grovebury, Terracotta

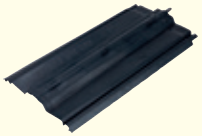
HIP SYSTEMS



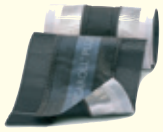
5

The Dry Hip System has delivered years of trouble-free service on tens of thousands of properties across the UK. As with our dry verge systems, very high resistance to storm damage and no wet trades required mean that concerns about mortar failure can be ignored.



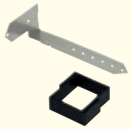


Hip Tile Support



Rollable Weathertight Membrane

Screws and Nails



Spacer Blocks and Hip Batten Straps

Tail Clips

Head Clips

DRY HIP SYSTEM

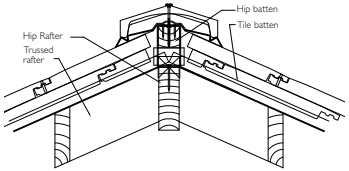
DRY HIP SYSTEM PACKS: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents	Coverage
Metric* / Stonewold II Dry Hip System pack	9046	6 x Hip Tile Supports 18 x Spacer Blocks (Polypropylene) 12 x Hip Batten Straps 12 x Head Clips 12 x Tail Clips 12 x 100mm Woodscrews (Stainless Steel) and Washers 24 x Nails for Fixing Battens (Stainless Steel) 24 x Nails for Fixing to Rafters (Stainless Steel) 1 x 2.75m Rollable Weathertight Membrane	2.7m
Slate 10 Range / Plain Tile Dry Hip System pack	9047	6 x Hip Tile Supports 12 x Spacer Blocks (Polypropylene) 12 x Hip Batten Straps 12 x Head Clips 12 x Tail Clips 12 x 100mm Woodscrews (Stainless Steel) and Washers 24 x Nails for Fixing Battens (Stainless Steel) 24 x Nails for Fixing to Rafters (Stainless Steel) 1 x 2.75m Rollable Weathertight Membrane	2.7m
Natural Slate / Cambrian Slate Dry Hip System pack	9048	6 x Hip Tile Supports 12 x 100mm Woodscrews (Stainless Steel) and Washers 10 x 100mm Nails (Stainless Steel) 1 x 2.75m Rollable Weathertight Membrane	2.7m
DuoPlain Dry Hip System pack	9534	6 x Hip Tile Supports 12 x Spacer Blocks (Polypropylene) 12 x Hip Batten Straps 12 x 100mm Woodscrews (Stainless Steel) and Washers 24 x Nails for Fixing Battens (Stainless Steel) 24 x Nails for Fixing to Rafters (Stainless Steel) 1 x 2.75m Rollable Weathertight Membrane	2.7m

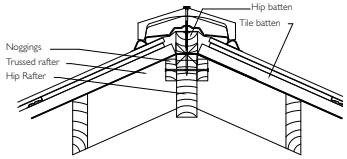
*Metric tiles are Mini Stonewold, MockBond Mini Stonewold, Grovebury, 50 Double Roman, Regent, Renown, Landmark Double Pantiles and Landmark Double Romans.

DRY HIP SYSTEM

1a

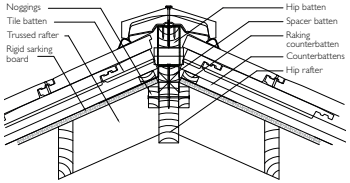


1c



4

1b



2

3

5

1a FOR STANDARD DRY HIP

Underlay and batten the roof with ends of tiling battens supported on the hip rafter.

1b FOR DRY HIP WITH RIGID SARKING

Finish sarking board at the side of the hip rafter. Fix a spacer batten to the hip rafter to a height level with the top of the counterbattens. Underlay, counterbatten and batten the roof with the tiling battens supported on the spacer batten.

1c FOR CAMBRIAN DRY HIP

Fix 50 x 25mm noggings to the sides of the hip rafter. Underlay the roof. Fix a hip batten to the hip rafter at 300mm centres with the 100 x 3.75mm ring shank nails provided. Batten the roof with ends supported on noggings. Go to step 5.

2

Secure a pair of Hip Batten Straps to the hip rafter using the 3.35 x 60mm stainless steel nails provided. At centres no greater than 550mm apart, fix the other straps up the length of the hip. Ensure that the first and last straps are fixed no more than 250mm from the fascia or hip/ridge intersections respectively.

3

Place the correct number of Spacer Blocks for the tile (see table below) onto the straps.

Tile Profile	Number of Spacer Blocks
Regent, Landmark Double Pantile, Landmark Double Roman, Grovebury, 50 Double Roman	3
Stonewold II, Mini Stonewold, Slate 10 Range, DuoPlain	2
Plain Tile	2
DuoPlain	2

The number of Spacer Blocks stated assumes that the top of the hip rafter is flush with the top of the jack rafters. Where this is not so, adjust accordingly.

4

Place a timber batten onto the Spacer Blocks (for the correct size, see table on inside flaps of carton). Where it is necessary to use more than one length of timber, joints should be made over the supporting blocks. **Do not fix the batten at this stage**.

5

Secure the hip batten in position by wrapping the stainless steel straps around the batten and then fix with the 2.65 x 30mm stainless steel clout nails provided.

Lay the eaves course of tiles as normal with the eaves overhang equal on both sides of the hip. Neatly cut tiles to the line of the hip batten. The cut edge of

DRY HIP SYSTEM

6

8

7

9

the tiles should not be more than 30mm from the hip batten. For Cambrian Slates: each cut slate (for type, see table below) must have at least two nails at the head and be clipped where possible.

Slate-and-a-half	25° and above
Double Slate	15° – 24.5°

6

Secure the cut eaves tile on both sides of the hip using two of the Head Clips (C-shaped clips) on the interlock, one at the head and one at the tail of the tile. Continue tiling in the normal manner, ensuring all cut tiles are within 30mm of the hip batten.

7

For the second and subsequent courses, all cut tiles should be secured with two clips. The Tail Clip (larger of the two clips) should be slid up under the interlock of the last full tile and bent down over the head of the tile in the course below.

8

The Head Clip is then positioned at the head of the cut tile in the region of the interlock. Lay and clip all tiles up the length of the hip.

9

Starting from the eaves, dress the Rollable Weathertight Membrane centrally over the hip batten ensuring all gaps at the eaves are covered. Remove the backing strip from the adhesive section and neatly dress onto the tiles. For optimal adhesion tiles should be clean and dry. Continue up the full length of the hip and over the ridge batten, overlapping each roll by at least 50mm.

10

11

10

Cut one of the Hip Support Trays between the eaves cut line indicated. Align the cut edge with the tail of the eaves course of tiles and secure the cut hip tile support to the hip batten with a clout nail placed through the top tab. Carry on clipping uncut Hip Support Trays ensuring the tails of the trays are aligned to the line at the head of the fixed support.

11

Place a purpose designed Block-End Hip Tile or Hip End Cap tight against the eaves tiles and secure with the screws provided. Continue up the hip ensuring the hip tiles are butted together and that no individual hip tile is less than half its original length.

12

Where two hips meet a dry ridge, the intersection should be weathered using the Hip/Ridge Junction piece *(product code 9520 or 9521 supplied separately)*. The three mitred tiles must be cut from full length tiles. Re-drill the cut hip and ridge tiles to provide two fixings per tile. (Other forms of junction may be weathered using Wakaflex Rapid Flashing.)

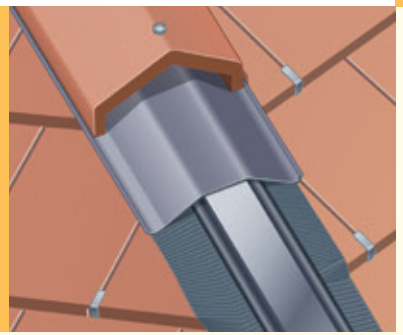
13

Fix the final ridge tile in position, ensuring the screw passes through the hole in the Hip/Ridge Junction piece and the ridge tile traps the junction piece in place. Fix the final hip tiles in position. If necessary, adjust the height of the hip tiles with a screwdriver to give a true line.

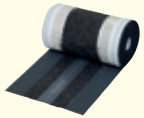
Turn to page 60 for additional Dry Hip System instructions for Plain Tile.

DRY HIP SYSTEM

The Continuous Hip System is an easy and quick-to-fit, maintenance-free hip system with very high resistance to storm damage and no mortar required. The system also ventilates the batten cavity when used with Spirtech 400 2S underlay.



GRP Hip Tile Support Tray 2.7m



Rollable Weathertight Membrane

Screws and Nails

Spacer Blocks and Hip Batten Straps

Tail Clip

Head Clip

CONTINUOUS HIP SYSTEM PACKS: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents	Coverage
Metric* / Stonewold II Continuous Hip System	9028	30 x Spacer Blocks (Polypropylene) 20 x Hip Batten Straps 12 x Head Clips 12 x Tail Clips 20 x 100mm Woodscrews (Stainless Steel) and Washers 40 x Nails for Fixing Battens (Stainless Steel) 40 x Nails for Fixing to Rafters (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m

CONTINUOUS HIP SYSTEM PACKS: PRODUCT CODES AND DESCRIPTIONS

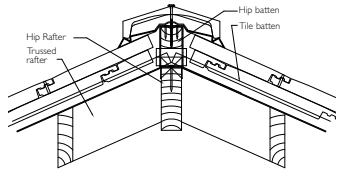
Description	Product Code	Contents	Coverage
Fenland Pantile / Redland 49 Continuous Hip System	9502	30 x Spacer Blocks (Polypropylene) 20 x Hip Batten Straps 12 x Head Clips 12 x Tail Clips 20 x 100mm Woodscrews (Stainless Steel) and Washers 40 x Nails for Fixing Battens (Stainless Steel) 40 x Nails for Fixing to Rafters (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m
Natural Slate / Cambrian Continuous Hip System	9503	12 x 100mm Woodscrews (Stainless Steel) and Washers 17 x Nails (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m
Slate 10 Range / Plain Tile / Rosemary / Heathland Continuous Hip System	9524	20 x Spacer Blocks (Polypropylene) 20 x Hip Batten Straps 12 x Head Clips 12 x Tail Clips 20 x 100mm Woodscrews (Stainless Steel) and Washers 40 x Nails for Fixing Battens (Stainless Steel) 40 x Nails for Fixing to Rafters (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m
DuoPlain Continuous Hip System	9562	20 x Spacer Blocks (Polypropylene) 20 x Hip Batten Straps 20 x 100mm Woodscrews (Stainless Steel) and Washers 40 x Nails for Fixing Battens (Stainless Steel) 40 x Nails for Fixing to Rafters (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m
Cathedral Clay Pantile Continuous Hip System	9870	20 x Spacer Blocks (Polypropylene) 30 x Rafter Clips and Screws (Stainless Steel) 20 x Hip Batten Straps 20 x 100mm Woodscrews (Stainless Steel) and Washers 40 x Nails for Fixing Battens (Stainless Steel) 40 x Nails for Fixing to Rafters (Stainless Steel) 1 x 5m Rollable Weathertight Membrane	5m

*Metric tiles are Mini Stonewold, MockBond Mini Stonewold, Grovebury, 50 Double Roman, Regent, Renown, Landmark Double Pantiles and Landmark Double Romans.

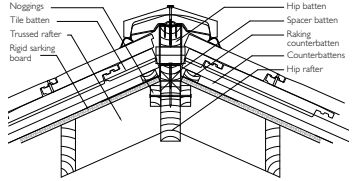
EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code
Kro-Clip	9142
Third Round Hip/Ridge Junction	9521
Universal Angle Hip/Ridge Junction	9520

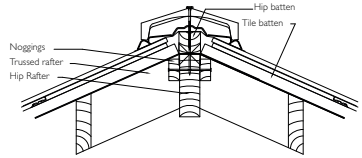
1a



1b



1c



2

1a FOR STANDARD RIDGE / HIP

Underlay and batten the roof with ends of tiling battens supported on the hip rafter.

1b FOR CONTINUOUS HIP WITH RIGID SARKING

Finish sarking board at the side of the hip rafter. Fix a spacer batten to the hip rafter to a height level with the top of the counterbattens. Underlay, counterbatten and batten the roof with the tiling battens supported on the spacer batten.

1c FOR CAMBRIAN CONTINUOUS HIP

Fix 50 x 25mm noggings to the sides of the hip rafter. Underlay the roof. Fix a hip batten to the hip rafter at 300mm centres with 100 x 3.75mm ring shank nails provided. Batten the roof with ends supported on noggings. Go to step 5.

2

Secure a pair of Hip Batten Straps to the hip rafter using the 60 x 3.35mm stainless steel nails provided. At centres no greater than 550mm, fix the other straps up the length of the hip. Ensure that the first and last straps are fixed no more than 250mm from the fascia or hip/ridge intersections respectively.

3

Place the correct number of Spacer Blocks for the tile (see table below) onto the straps.

Tile Profile	Number of Spacer Blocks
Stonewold II, Mini Stonewold, MockBond Mini Stonewold, 50 Double Roman, Landmark Double Roman, Renown, Slate 10 Range, DuoPlain, Redland 49, Cathedral Clay Pantile	2
Regent, Landmark Double Pantile, Grovebury, Fenland Pantile	3

Note: The number of Spacer Blocks stated assumes that the top of the hip rafter is flush with the top of the jack rafters. Where this is not so, adjust accordingly.

4

Place a timber batten onto the blocks (for the correct size see table on inside flaps of carton). Where it is necessary to use more than one length of timber, joints should be made over the supporting blocks. Do not fix the batten at this stage.

5

Secure the hip batten in position by wrapping the stainless steel straps around the batten and then fix with the 30 x 2.65mm stainless steel clout nails provided.

Lay the eaves course of tiles as normal with the eaves overhang equal on both sides of the hip. Neatly cut tiles to the line of the hip batten. The cut edge of

the tiles should not be more than 30mm from the hip batten. For Cambrian Slates: Each cut slate (for type see table below) must have at least two nails at the head and be clipped where possible. Continuous Hip itself acts as a third fixing.

Slate-and-a-half	25° and above
Double Slate	15° – 24.5°

6a EXCEPT CAMBRIAN AND CATHEDRAL CLAY PANTILE

Secure the cut eaves tile on both sides of the hip using two of the Head Clips ('C' shaped clips) on the interlock, one at the head and one at the tail of the tile. Continue tiling in the normal manner, ensuring all cut tiles are within 30mm of hip batten. Proceed to Step 7.

6b CATHEDRAL CLAY PANTILE ONLY

Secure each cut tile on both sides of the hip using Rafter Clips. Gently tap the clip onto a convenient part of the cut edge. Screw each Rafter Clip to the side of the hip batten. Proceed to Step 9.

7

For the second and subsequent courses, all cut tiles should be secured with two clips. The Tail Clip (larger of the two clips) should be slid up under the interlock of the last full tile and bent down over the head of the tile in the course below.

CONTINUOUS HIP SYSTEM

8

9

10

11

8

The Head Clip is then positioned at the head of the cut tile in the region of the interlock. Lay and clip all tiles up the length of the hip.

9

Starting from the eaves, dress the Rollable Weathertight Membrane centrally over the hip batten ensuring all gaps at the eaves are covered. Remove backing strip from the adhesive section and neatly dress onto the tiles. For optimal adhesion, tiles should be clean and dry. Continue up the full length of the hip and over the ridge batten, overlapping each roll by at least 50mm.

10

Cut Hip Support Tray to suit at the eaves and secure to the hip batten with a single clout nail at its centre point to hold it in place. Where more than one tray is required to complete the hip, overlap on top of the one already fixed by 200mm. Where two hips meet at the ridge, mitre the hip trays together.

11

Place a purpose designed Block-End Hip Tile or Hip End Cap tight against the eaves tiles and secure with the screws provided. Continue up the hip ensuring the hip tiles are butted together and that no individual cut hip tile is less than half its original length.

12

13

12

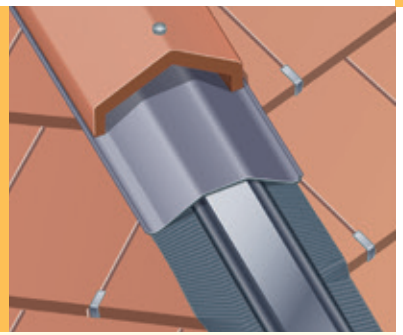
Where two hips meet a dry ridge, the intersection should be weathered using the Hip/Ridge Junction piece *(product code 9520 or 9521 supplied separately)*. The three mitred tiles must be cut from full length tiles. Re-drill the cut hip and ridge tiles to provide two fixings per tile. (Other forms of junction may be weathered using Wakaflex Rapid Flashing.)

13

Fix the final ridge tile in position, ensuring the screw passes through the hole in the Hip/Ridge Junction piece and the ridge tile traps the junction piece in place. Fix the final hip tiles in position. If necessary, adjust the height of the hip tiles with a screwdriver to give a true line.

See next page for additional Continuous Hip System instructions for Plain Tile.

Follow the fixing instructions for Dry Hip/Continuous Hip System for the Slate 10 range on pages 44-59 as required, with the following special considerations.



ADDITIONAL DRY AND CONTINUOUS HIP SYSTEM INSTRUCTIONS FOR PLAIN TILE

Technical Specification		Dry Hip (Product Code 9047)		Continuous Hip (Product Code 9524)	
Hip Batten (mm)		50 x 50	50 x 50	50 x 38	50 x 38
Spacer Blocks between hip rafter & hip batten		2	2	2	2
Maximum distance from hip batten to face of cut tile		20mm	30mm	20mm	30mm
For 90° Plan Angle	Minimum Pitch Maximum Pitch	35° 60°	60° 90°	35° 55°	55° 60°
For 100° Plan Angle	Minimum Pitch Maximum Pitch	35° 72.5°	72.5° 90°	35° 62.5°	62.5° 72.5°
For 105° Plan Angle	Minimum Pitch Maximum Pitch	35° 90°	- -	35° 70°	70° 90°
For 110° Plan Angle or wider	Minimum Pitch Maximum Pitch	35° 90°	- -	35° 90°	- -

NOTES

- Plain Tiles should be cut into the hip to minimise the number of small cut pieces. This is best achieved using Plain Tile-and-a-Halves and running the battens up to the hip.
- The pitch range for which Dry and Continuous Hip Systems are suitable varies with plan angle and hip tile profile.
  At certain combinations of pitch and plan angle a supplementary Secret Gutter may need to be installed to ensure the hip is weathertight. Please consult Redland Technical Solutions (Tel: 03708 702595) for advice on the suitability of the product for your particular pitch, plan angle and hip tile profile.
- The Dry and Continuous Hip Systems are both suitable for ventilating the batten cavity when adapted and/or used with a vapour permeable underlay. Please consult Redland Technical Solutions for advice on positioning of underlay and counterbattens if using product for batten space ventilation.

ADDITIONAL DRY AND CONTINUOUS HIP SYSTEM INSTRUCTIONS FOR PLAIN TILE

1

2

3

4

1

All perimeter tiles should be mechanically fixed with either nails or clips.

2

Where a tile cannot be nailed, the Tail Clip should be used to mechanically fix the tile piece. Take the Tail Clip and bend the small up-stand down flat.

3

Bend the end of the Tail Clip over the tile on the course below and place the cut piece into the clip.

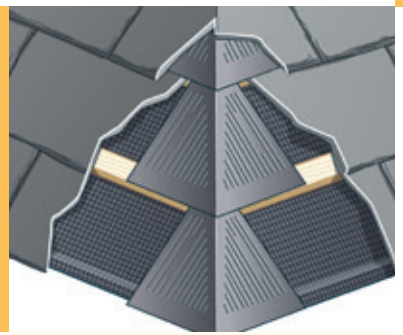
A Head Clip (also known as a 'C-Clip') *(product code 9518)* can also be used to secure small cut pieces. See main fixing instructions in pack.

4

If the maximum distance from the hip batten to the face of the cut tile (see table opposite) cannot be achieved with a Plain Tile-and-a-Half or a Plain Tile, then cut the tiles further back into the course to reposition the end tile and reduce the gap.

Note: Plain tiles must always have a minimum sidelap of 55mm.

Specifically designed for use with Cambrian Slates to achieve a neat mitred hip detail, whilst ensuring very high resistance to storm damage over a wide range of rafter pitches and plan angles.



CAMBRIAN MITRED HIP SYSTEM: PRODUCT CODE AND DESCRIPTION

Description	Product Code	Contents	Coverage
Cambrian Mitred Hip System	9504	10 Weathering Units 10 Tail Clips and screws	Contains sufficient components in each pack for 10 courses of slates

Weathering Unit

Tail Clip and Screw

1

1

Install underlay and batten the roof in the normal manner.

The tiling battens should be carried onto the hip rafter and must meet at the same height and be mitre cut to form a close junction. Where the hip rafter projects above the level of the rafters the cut ends of the battens should be supported on noggings of timber positioned between the rafters and fixed to the hip rafter.

2

If two mitred hips meet at an apex it is useful to finish the final (top) course with a single double slate. This will assist ease of laying and provide the best visual effect. To achieve this on a roof with an even number of courses from eaves to ridge, the eaves course of slates should be laid out so that the centre of a double slate on the top course is directly below the apex. For a roof with an odd number of courses in the top course a slate bond should be positioned directly below the apex.

3

3

The first Weathering Unit should be positioned on the eaves course of battens using the batten locating lugs on the underside of the unit to ensure it is in the correct position. If the battens are supported on noggings and do not meet, ensure the top of the batten and the bottom of the locating lugs are in line. Fix the Weathering Unit in place with one of the aluminium nails supplied, positioning the nail at the top end of the slot.

4

Lay the eaves course of slates; nailing and clipping as normal. At the hip, cut a slate-and-a-half or double slate to size as appropriate (see table), ensuring the gap between the cut slates is in the range of 3-5mm.

Slate-and-a-half	45° and above
Double Slate	<45°

5

Using the tail of the slate as a guide, cut the Weathering Unit to length with a sharp knife.

6

The raking cut slates should be fixed at the head with standard Cambrian Slate nails. Where the raking cut leaves only one nail hole, a second nail hole (3-3.5mm diameter) should be drilled on-site. All cut slates should be secured with at least two head fixings. At times this may involve nailing through the upper section of the Weathering Unit – this does not affect the weathertightness of the system.

7

The tail of the cut slates is secured using the blackened Tail Clip and woodscrew fixing supplied. Position the fixing as close to the tail of the slates as the head of the slates below will allow and secure using a screwdriver. The clip will flatten to accommodate varying pitches; however care should be taken to avoid over-tightening which may cause 'cocking' of the cut slate.

8

Position and nail the Weathering Unit in the second course and mitre slates as before. Trim the Unit, again using the tail of the slates as a guide. **Caution:** Do not fix slates in position at this point.

9

To prevent the cut slates riding up, pull the unit upwards towards the ridge until the cut slates just drop down onto the slates below.

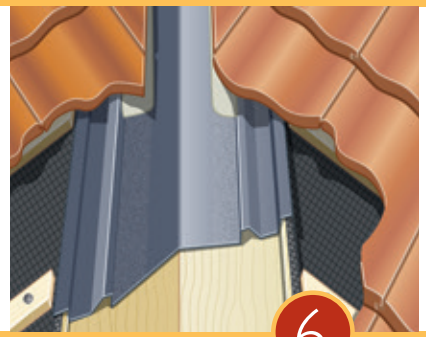
10

Fully fix the slates as before. Repeat the operation for all courses. Depending on the detail a lead or Wakaflex Rapid Flashing saddle may be required to weather-proof the junction at the upper point of the hip. Where the Cambrian Mitred Hip System is used in combination with the Redland DryVent Ridge, Continuous Ridge System or Uni-Vent Rapid Ridge/Hip System, a Block-End Ridge is available to complete the ridge line. A small piece of DryVent Ridge filler should be positioned beneath the Block-End Ridge to ensure weathertightness.

"A neat alternative to the traditional lead-lined valleys, giving a close-cut appearance."

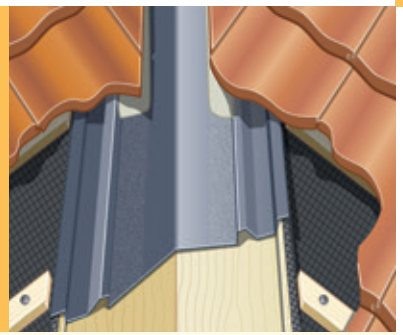
Dry Valley – High Profile
Fenland Pantile, Farmhouse Red

VALLEY SYSTEMS



6

Designed as a cost-effective alternative to lead, the 125 & Cambrian GRP Valleys are easy to fix, durable and lightweight. They are ideal for most types of roof design which have a junction between two roof slopes.



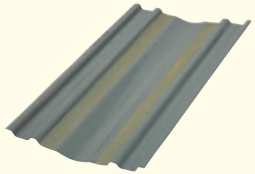
125 & CAMBRIAN GRP VALLEYS: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Length
125 GRP Valley	9595	3m
Cambrian GRP Valley	9553	3m

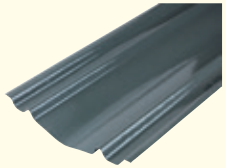
Roof Pitch	Lap
17.5° - 22°	350mm
22.5° - 29.5°	300mm
30° - 39.5°	200mm
40° - 45°	150mm

NOTES

- Where the roof plan area discharging into the valley is greater than 25m², minimum rafter pitch is 30°
- A Wakaflex Rapid Flashing saddle will be required at the head of all valleys.
- Not to be used where the pitch difference between adjacent slopes is more than 5°. This table details the amount of overlap required between valley sections.



125 GRP Valley



Cambrian GRP Valley

1

2

3

1

Fix noggings (38/50 x 25mm timber battens) to either side of the rafters adjacent to the valley, approx 300mm in length and set down 19mm, to support 19mm timber board. Cut the board to finish flush with the top of the rafters and approx 300mm wide on each side, then nail fix to the noggings.

2

Cut out a section of the fascia board at the valley, down to the top of the rafter, to allow for the width of the GRP Valley (400mm) to pass through. Fix 50 x 25mm timber valley battens down either side of the valley, to support edges of GRP Valley by a min 25mm, and nail fix into the rafters using 65mm batten nails, one per rafter.

Note: For Cambrian GRP Valley, two valley battens are required either side of valley but only one is required either side with 125 GRP Valley.

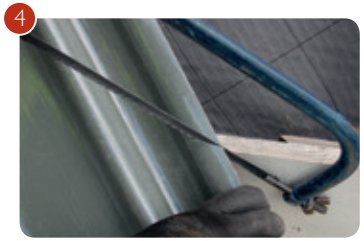
Note: An alternative to notching fascia board is to construct a lead or Wakaflex Rapid Flashing saddle supported on a tilting fillet.

3

Lay underlay on roof, turn up around the valley battens and secure with clout nails. Alternatively, if using a non-bituminous underlay, first lay a single strip of underlay, full width of the valley boards, up the centre of the valley before fixing the valley support battens. Batten out the roof, cutting the ends of the tiling battens approx 10mm away from the valley batten, and nail-fix into the ends of the rafters and/or support boards.

125 & CAMBRIAN GRP VALLEYS

4



6

5

4

Cut the first section of GRP Valley to correspond with the line of the fascia boards. The foot of the GRP Valley should be trimmed to overhang the fascia by approx. 50mm to allow discharge into the eaves gutter. Once cut, lay the GRP Valley on and between the valley battens, ensuring the first length overhangs the fascia boards by approx 50mm.

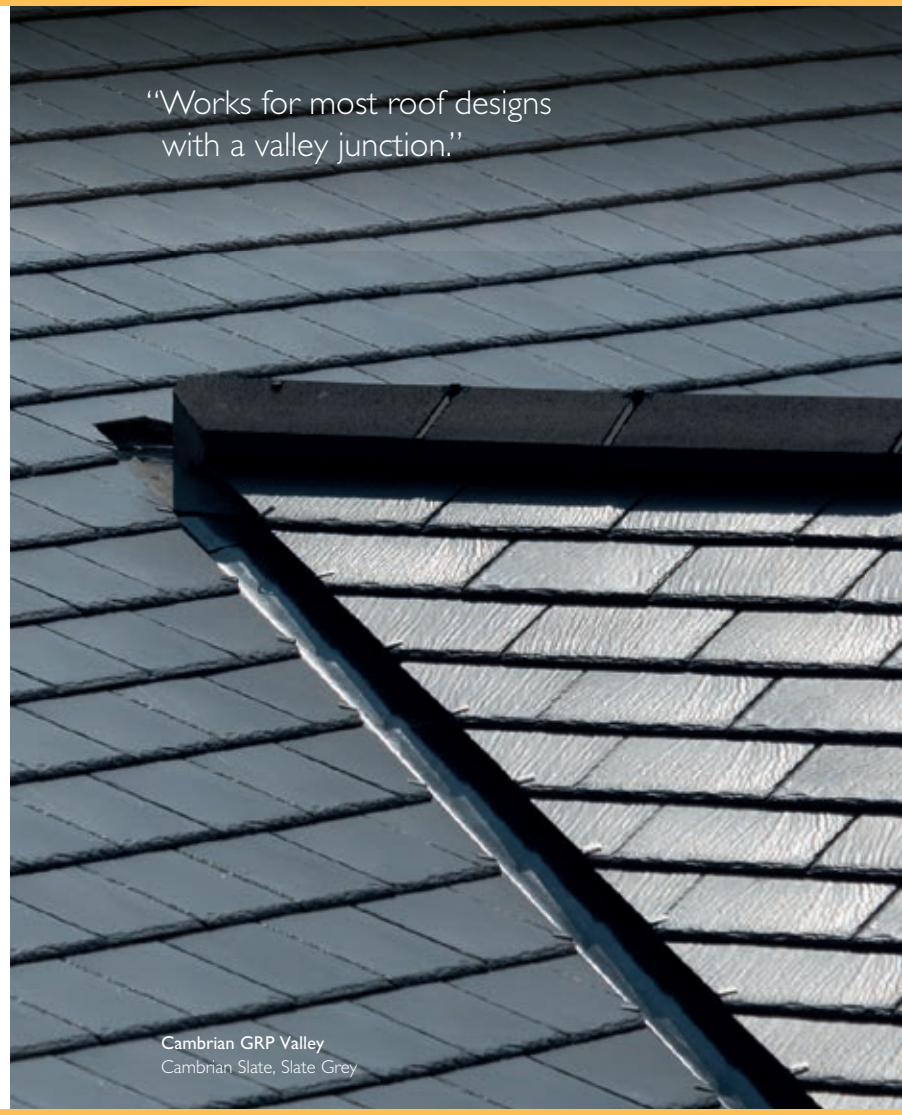
5

Nail-fix the GRP Valley to the 25mm thick valley support battens with clout nails. At the head of the valley, cut the top section to correspond with the adjacent ridge line, and fix into position.

6

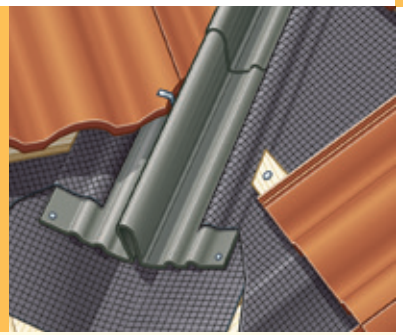
Cut the tiles to the line of the valley leaving a clear 125mm wide open drainage channel down the centre.

Mortar bed the tiles onto the pre-sanded strips on the GRP Valley, ensuring the outer Valley channels and tile interlocks are left clear of mortar, (not applicable to Cambrian GRP Valley).



Cambrian GRP Valley
Cambrian Slate, Slate Grey

Redland Dry Valley is a mortar-free, dry-fix valley that is fast to install in any weather conditions providing a neat, mitred finish to a valley.

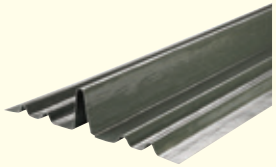


DRY VALLEY: PRODUCT CODES AND DESCRIPTIONS

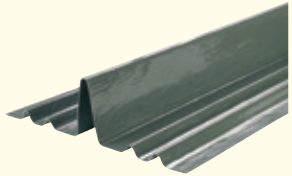
Description	Product Code	Pack Contents
Dry Valley – Low Profile	9575	1 x 3m Dry Valley
Dry Valley – High Profile	9574	1 x 3m Dry Valley

PRODUCT DETAILS:

Pitch range is 17.5-60° at any plan angle with a maximum difference between adjacent roof slopes of 20°. Maximum roof area on plan draining into valley of 100m².



Dry Valley – Low Profile



Dry Valley – High Profile

1

2

3

4

1

Fix noggings (38/50 x 25mm timber battens) to either side of the rafters adjacent to the valley, approx 300mm in length and set down 19mm, to support 19mm timber valley support board. Cut the board to finish flush with the top of the rafters and approx, 300mm wide on each side, then nail fix to the noggings.

2

Cut out a section of timber fascia at the valley, down to the top of the rafter, to allow for the width of the Dry Valley (400mm) to pass through. (**Note:** An alternative to notching fascia board is to construct a lead or Wakaflex Rapid Flashing saddle supported on a tilting fillet).

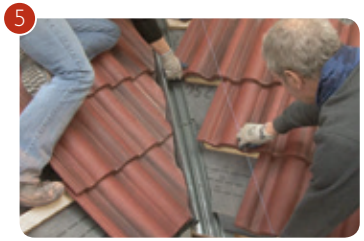
3

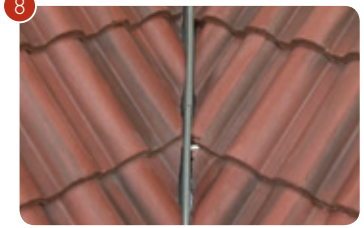
Line the valley with a single length of underlay to at least the full width of the valley boards. Press the upstand of the Dry Valley together and position it centrally in the valley – pushing down firmly to ensure full contact with valley boards. Nail through the outer flange of the Dry Valley into the valley boards at maximum 500mm centres.

4

When joining lengths of valley, use the recommended minimum overlaps.

Roof Pitch	<22.5°	22.5-29°	30-39°	>39°
Overlap	350mm	300mm	200mm	150mm





5

Mark out the tiles to establish the position of the tile cuts to be made. A line is drawn 2 x cover width of tile away from central upstand of Dry Valley using a straight edge or chalk line. Cut the tiles as required following HSE Guidelines. Repeat the process above for both sides of the valley.

6

Ensure small tile cuts are mechanically fixed using Redland Head Clips *(product code 9518)* and/or Redland Kro-Clips *(product code 9142)*. It is recommended two Head Clips are used both at the head and tail of the coverlock/interlock tile junction with the adjacent tile, and one Kro-Clip is used at the free cut edge of the tile.

7

The fascia board can be cut to allow the Dry Valley to pass through without flattening the profile, or alternatively, a Wakaflex Rapid Flashing saddle may be used if required. In the former case the Dry Valley should be trimmed to overhang into the eaves gutter by approx 50mm.

8

Lay the cut tiles close up to the central upstand of the Dry Valley and complete the tile coursing as normal.

1

To prevent birds, insects and rodents from entering the cavity at the bottom of the Dry Valley, it is recommended that Redland Kompriband expandable foam tape *(product code 9467)* is used to close it off. Peel the backing off the adhesive side and stick the Kompriband to the inside bottom of the Dry Valley.

2

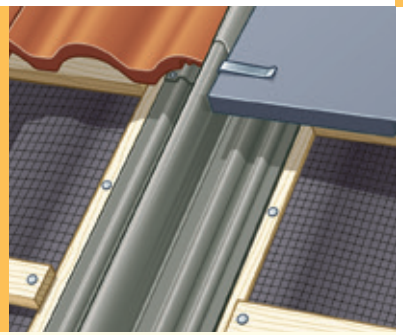
The Kompriband foam tape expands to fill the available space closing the cavity at the bottom of the Dry Valley at the eaves.

3

Where two Dry Valleys meet at the top of two valleys, close mitre cut the two Dry Valleys. The junction is then weather-proofed using a section of 370mm wide Wakaflex Rapid Flashing roll *(product code 9957)*.

See Rapid Flashing Application Guide at www.redland.co.uk/fixing for detailed instructions.

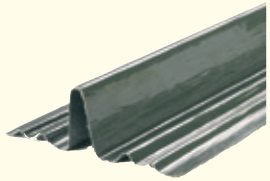
Redland Bonding Gutter is a mortar-free, dry-fixed gutter designed to weatherproof the junction between two adjacent roof coverings.



DRY VALLEY: PRODUCT CODES AND DESCRIPTIONS

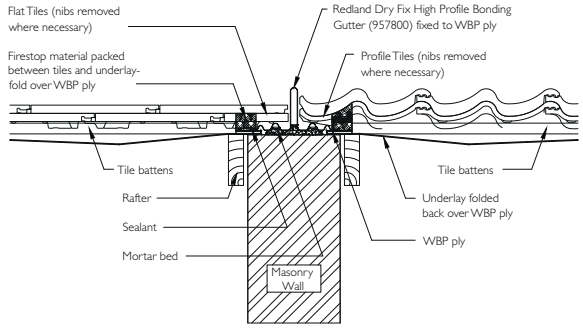
Description	Product Code	Pack Contents
Bonding Gutter – High Profile	9578	1 x 3m Bonding Gutter
Bonding Gutter – Low Profile	9580	1 x 3m Bonding Gutter

Rafter Pitch	<22.5°	22.5° - 29°	30° - 39°	>39°
Overlap (mm)	350	300	200	150

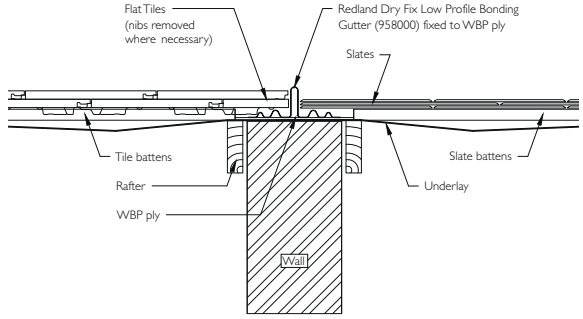


Bonding Gutter – Low Profile

Bonding Gutter – High Profile



BONDING GUTTER – HIGH PROFILE
TYPICAL INSTALLATION WITH FIRE BREAK – FLAT TILES AND PROFILE TILES

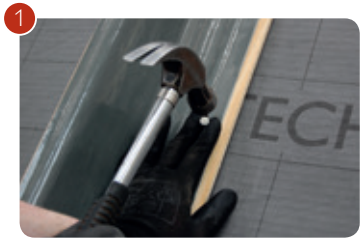


BONDING GUTTER – LOW PROFILE
TYPICAL INSTALLATION – FLAT TILES AND SLATES

For situations where the Bonding Gutter is to be used over non-fire-break walls, the underlay can be carried through underneath the Bonding Gutter – but the tiling battens should be terminated either side of a central 6mm WBP plyboard, into which the Bonding Gutter is fixed.

BONDING GUTTER

1



1

Establish the position of the Bonding Gutter. Underlay and batten the roof in accordance with the construction details. Position the Bonding Gutter onto established line and nail through outer-flange into 6mm WBP ply below at maximum 500mm centres. When joining lengths of Bonding Gutter use the minimum overlaps specified.

2

2

The slates and tiles should be laid as close as possible to the central upstand on both sides with care taken to avoid any distortion and maintain the straight line appearance of the profile. Mark the centre line of the Bonding Gutter and remove slates or tiles for cutting as required so as to maintain the correct bond of the slating and tiling.

3

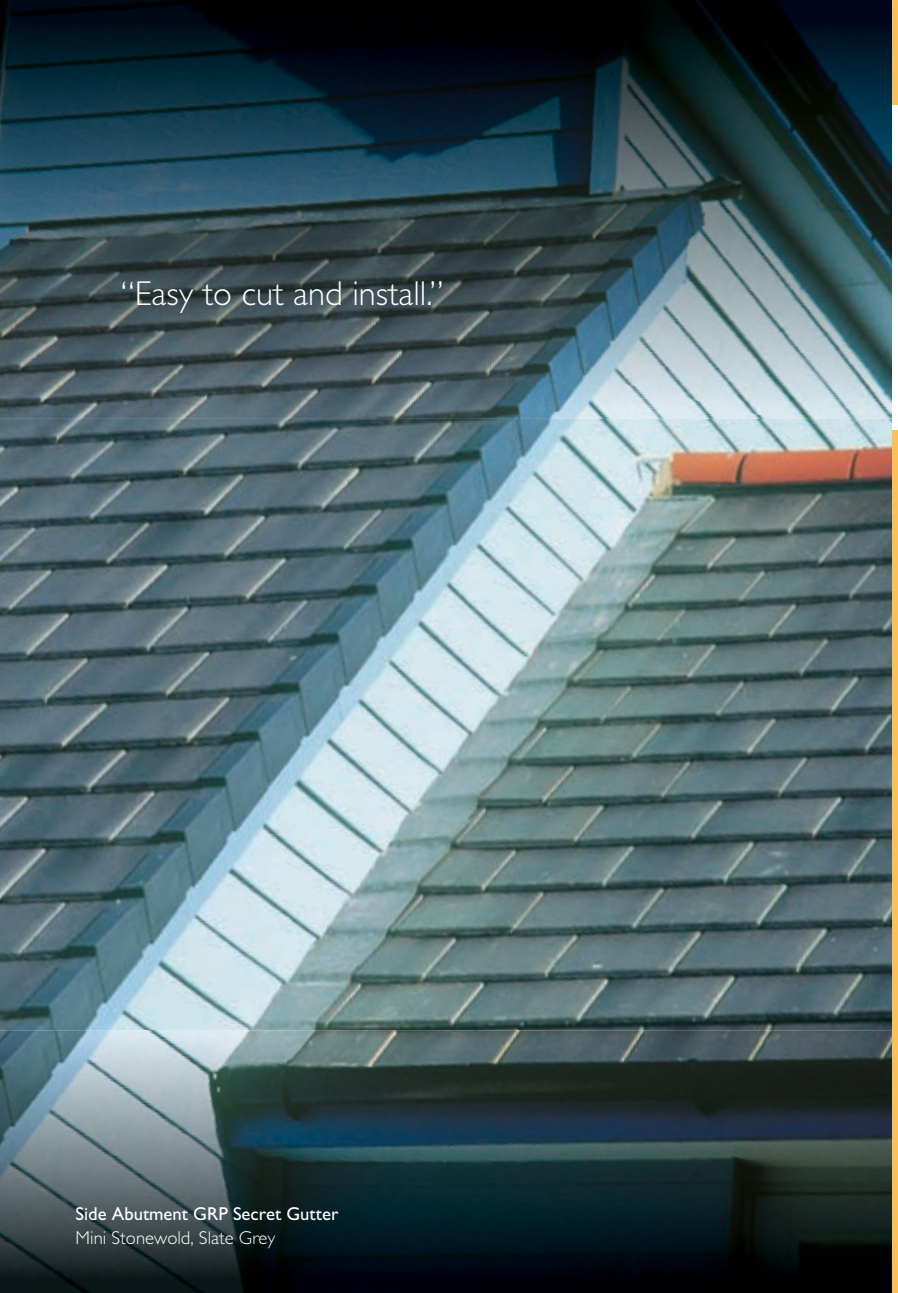
3

Where the tile nibs interfere with the Bonding Gutter, they should be carefully removed.

4

4

Ensure all tiles and cut tiles adjacent to the Bonding Gutter are mechanically fixed in accordance with the Redland fixing specification for the roof. The standard nails and clips can be used. For half slates and other small cut tiles either Redland Head Clip *(product code 9518)*, and/or Redland Kro-Clips *(product code 9142)* can be used. Complete the slating and tiling as required.



Side Abutment GRP Secret Gutter
Mini Stonewold, Slate Grey

ABUTMENT SYSTEMS

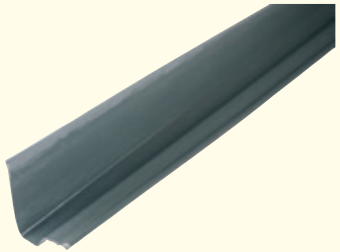
7

Offers a secondary line of defence against wind-driven rain where a roof slope abuts a vertical wall. Being easy to cut and install makes this product an ideal solution for these otherwise complicated details. A GRP Secret Gutter should be used when using any interlocking flat tile or slate.

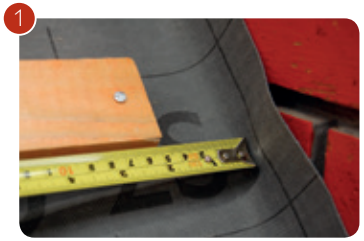
SIDE ABUTMENT GRP SECRET GUTTER: PRODUCT CODE AND DESCRIPTION

Description	Product Code	Length
GRP Secret Gutter	9596	3m

Roof Pitch	15° - 17°	15.5° - 22°	22.5° - 29.5°	30°+
Overlap (mm)	300	250	200	150



Side Abutment GRP Secret Gutter



1

Finish underlay 50mm up abutment. Finish tiling battens 55mm from wall and nail-fix to final rafter. If final rafter is less than 55mm from wall, fix a supplementary timber nogging (50 x 50mm) to the side of, and flush with, the top of the final rafter to support the battens.

2

Fix timber tilting fillet to support Wakaflex Rapid Flashing outlet at base of GRP Secret Gutter.

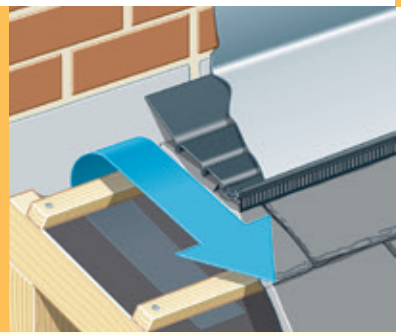
3

Fix Wakaflex Rapid Flashing onto tilt fillet to ensure that water is discharged into the gutter over tiles.

4

Starting at eaves, ensure that the first GRP Secret Gutter section overlaps the Wakaflex Rapid Flashing outlet by 150mm. Each GRP Secret Gutter section should overlap the one below by the length stated in the table opposite.

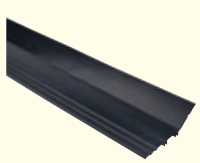
A system that provides a continuous unobstructed ventilation path from the roof void to the outside. It can be installed far quicker than traditional methods.



TOP EDGE ABUTMENT VENTILATION SYSTEM: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Pack Contents	Coverage
Flat Tiles Top Edge Abutment Pack	9548	3 Trays, 10 Ratchet Clips with Spacer Blocks and 7 Profile Filler Units	3m
Landmark Double Pantile / Grovebury Top Edge Abutment Pack	9541	3 Trays, 10 Ratchet Clips with Spacer Blocks and 7 Profile Filler Units	3m
Regent Top Edge Abutment Pack	9542	3 Trays, 10 Ratchet Clips with Spacer Blocks and 7 Profile Filler Units	3m
Landmark Double Roman / 50 Double Roman Top Edge Abutment Pack	9543	3 Trays, 10 Ratchet Clips with Spacer Blocks and 7 Profile Filler Units	3m
Renown Top Edge Abutment Pack	9544	3 Trays, 10 Ratchet Clips with Spacer Blocks and 7 Profile Filler Units	3m

Compatible with all Redland profiles with the exception of Redland 49, Fenland Pantile, Postel Clay Tile, Old Hollow Clay Pantile and Cathedral Clay Pantile. For use with natural/fibre cement slates, please contact Technical Solutions on 03708 702595.



Lead Support Tray

Profile Filler Unit (Regent shown)

Ratchet Clip

TOP EDGE ABUTMENT VENTILATION SYSTEM

1

2

3

1

Fix underlay so that it finishes under top batten (see table on page 87 for top batten position). Ensure the underlay does not touch the wall at mid-point between rafters.

2

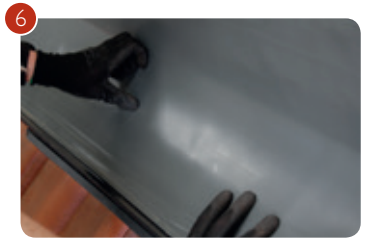
To provide the required ventilation, ensure that there is a minimum 10mm gap between the top tile and the face of the wall. For roofs with rigid sarking, ensure sarking boards are laid short of wall by a minimum of 10mm.

3

Take Ratchet Clip and peel off the protective backing strip. (For profiled tiles fold both wings down at right angles prior to peeling off the protective backing strip).

Important Note: The adhesive material on the underside of the Ratchet Clip will only adhere to the surface if the tile is dry, clean and dust free.

TOP EDGE ABUTMENT VENTILATION SYSTEM



4

a) With profiled tiles, carefully centre the Ratchet Clip over the nail hole position on the top tile, ensuring that the downstand of the clip is tight against the head of the tile. Press the wings firmly down onto the surface of the tile. When using a nail holed product, make certain that the centre line of the clip is directly over the nail hole.

b) When fixing plain tiles, locate the clip in the centre of the head of the tile and press firmly into position (**Note:** plain tile top clips must be used when fitting concrete plain tiles.) For all other flat tiles with nail holes, position the centre of the clip over the right-hand nail hole in the tile. For all flat tiles with no nail hole, position the clip in the centre of the head of the tile.

Note: Fix one clip per tile in all cases except plain tiles where a clip is fixed to every other tile.

5

When fixing a nail holed product, secure the tile by nailing through the centre of the clip into the tiling batten regardless of the clipping specification. Locate Profile Filler Unit on to the face of the tile and snap Ratchet Clip hook into one of the ventilation openings. Attach all Profiled Filler Units to Ratchet Clips.

6

Take a tray and locate the underside of the leading edge flush with the edge of the Profiled Filler Units. Press down firmly on the tray so that the channels on the underside of the tray engage into the upstands of the Ratchet Clip. A 5mm gap should be left between successive lengths of the tray to allow for any thermal expansion.

Depending on the pitch of the roof, the hinged rear section of the tray should be folded back to touch the wall. Continue laying the trays the full length of the abutment, ensuring that any cut lengths of tray are supported by no less than two Ratchet Clips. Any cut lengths of tray should be positioned in the centre of the abutment.

7

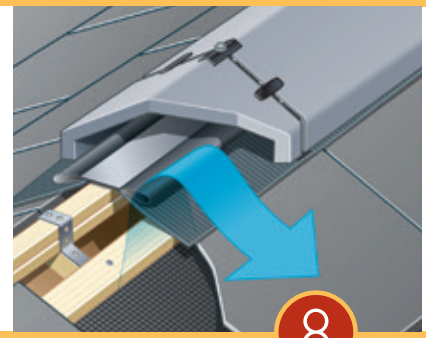
Fix lead or Wakaflex Rapid Flashing in lengths not exceeding 1.5 metres, laying it into the trays and ensuring that it is firmly engaged into the channel on the leading edge of the tray. Fix and dress the lead or Wakaflex Rapid Flashing as normal in accordance with Lead Sheet Association (LSA) or Redland fixing instructions.

PITCH RANGE AND TOP BATTEN DISTANCES

Tile & Slate	Range (degrees)	Top batten distance down rafter from wall
Landmark Double Pantile / Grovebury	15° - 50° 50° - 60°	40mm 30mm
Mini Stonewold / Slate 10 Range / Renown / Landmark Double Roman / 50 Double Roman	17.5° - 60°	40mm
Regent	12.5° - 50° over 50° - 60°	40mm 20mm
Cambrian Slate	15° - 60°	20mm
Stonewold II	17.5° - 44°	70mm
Plain Tile / Heathland	35° - 60° 60° - 65° 65° - 67.5°	65mm 90mm 95mm
DuoPlain	25° - 60° 60° - 65° 65° - 67.5°	65mm 90mm 95mm
Rosemary clay plain tile	35° - 60°	40mm
Fontenelle	20° - 60°	40mm

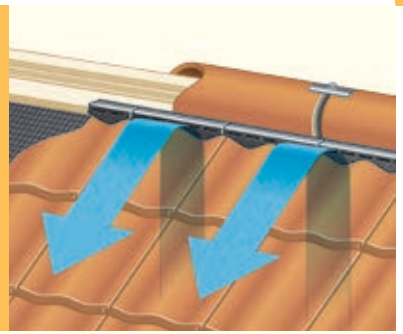
DryVent Ridge System
Cambrian Slate, Slate Grey

RIDGE SYSTEMS



8

Provides a continuous, weathertight ventilation path from the roof void to the outside that is an exceptionally durable method of securing ridge tiles. It is maintenance free and requires no mortar, delivering high resistance to storm damage.



DRYVENT RIDGE SYSTEM: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents				Coverage (m)	
		Vented Profile Filler Unit	Ridge-to-Ridge Seal	No. 8 x 50mm S/S Woodscrews	Neoprene Washer	Filler Units	Pack
DryVent Ridge pack (Duo pitch only)							
Slate range and Plain Tiles with Half Round Ridge Tile	9058	12	6	6	12	0.45	2.7
Rosemary clay plain tile	9056	8	4	6	8	0.45	1.8
Grovebury / Landmark Double Pantile	9094	12	6	6	12	0.3	2.7
50 Double Roman	9095	12	6	6	12	0.3	2.7
Landmark Double Roman / Regent	9096	12	6	6	12	0.3	2.7
Renown	9097	12	6	6	12	0.3	2.7
Slate range and Plain Tiles with Universal Angle Ridge Tile	9059	12	6	6	12	0.3	2.7
Ornamental Universal Angle Ridge Tiles	9085	12	6	6	12	0.45	2.7

Ridge-to-Ridge Seal with Clamping Plate and screw (Half round shown)

Ridge Batten Strap

Profile Filler Unit (Double Roman shown)

2

3

1a

Lay underlay and batten the roof in the normal manner. For a non-vented ridge, underlay should be dressed over the apex by no less than 150mm. For a vented ridge, underlay should be left 30mm short of the apex on either side of the roof.

1b

With rigid sarking, batten the roof in the normal manner. Ensure that the rigid sarking is left short of the apex to allow a 10mm gap. Also, the counterbattens must be extended to form a mitred apex to support the ridge tree batten.

Note: Do not fix the top tiling battens at this stage.

2

Hold the Ridge Batten Strap so that the metal ridges are on top. Bend the strap downwards on both sides where marked '1', to form a U-shape. Position the ridge batten so it lies along the centre of the apex. Ensure nails used to secure ridge battens together are located mid span of rafters.

Place strap over the timber ridge batten. The height of the ridge batten varies according to roof tile, ridge tile and roof pitch (refer to the pitch range and batten height table on page 94). The ridge batten should finish flush with the outer face of the gable end, except when using Dry Verge when the batten should project 50mm beyond the gable.

3

Fold the sides of the strap so they lie flat against the trusses. Using the two 30mm stainless steel annular ring shank nails provided, nail the strap to the rafter through the nail hole directly below the fold, one each side. Drive the nails as far into the rafters as possible so the strap is not slack.

4

Fix a Batten Strap to each rafter or counterbatten. Fix the top tiling battens on either side of the apex. The tiling battens should be fixed down from the apex according to the following table:

Cambrian	30mm
Stonewold II	90mm
Plain Tile	70mm
Rosemary	35mm top batten 75mm 2nd batten
All Profiles	55mm
All Slates	60mm
DuoPlain	40mm

5

Lay Profile Filler Units along the roof tiles, snapping them together on either side of the ridge to receive the ridge tiles. If necessary, cut the final filler units to suit the ridge length. On gable end roofs, use a Block-End Ridge Tile as the first ridge tile.

6

Slide the first Ridge-to-Ridge Seal under the open end of the first ridge tile, ensuring that the full width of the seal is located in the trough of the Profile Filler Units.

7

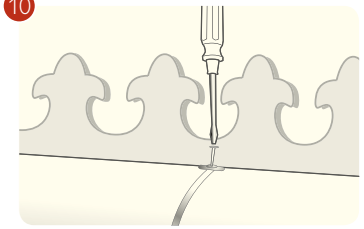
Slide the next ridge tile over the Ridge-to-Ridge Seal ensuring the clamping plate is parallel to the ridge line. Screw centrally into the ridge batten. Continue laying and fixing ridge tiles and ridge components along the ridge line.

8

On gable end roofs, finish with a second Block-End Ridge Tile. Fix the screw provided through the hole in the top of the tile into the ridge batten. On hip end roofs, carefully drill a 6mm diameter hole, 100mm in from the end of the last ridge tile and secure using the screw provided. Packs of additional screws are available separately.

9

When using a Cloaked Verge or a Dry Verge, cut a Profile Filler Unit along the line indicated and snap on the smaller piece to the final unit to fill the open end.



10

When using ornamental ridges, slide the Ornamental Ridge Tiles over the Ridge-to-Ridge Seal and tighten. On gable end roofs, finish the ridge line with an Ornamental Block-End Ridge Tile and secure using the screw provided. On hip end roofs, finish the ridge line by carefully mitre cutting a Block-End Ridge Tile and secure using the screw provided.

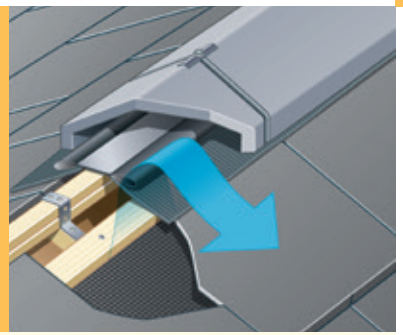
DRYVENT RIDGE SYSTEM

PITCH RANGE AND RIDGE BATTEN HEIGHT FOR DRYVENT RIDGE SYSTEM (38MM RIDGE BATTEN WIDTH)

Tile/Slate	Rafter Pitch (Degrees)																							
	15	17.5	20	22.5	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60	62.5	65	67.5	70
Half Round	Batten Height (mm)																						
Cambrian Slate	50	50	50	50	25	25	25	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-
Slate 10 Range	-	50	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-
Stonewold II	-	75	50	50	50	50	50	50	25	25	25	25	25*	-	-	-	-	-	-	-	-	-	-
Mini Stonewold / MockBond Mini Stonewold	-	75	50	50	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-
Heathland	-	-	-	-	-	-	-	-	50	25	25	25	25	25	25	25	25	25	25	25	-	-	-
Plain Tile	-	-	-	-	-	-	-	-	50	25	25	25	25	25	25	25	25	25	25	25	-	-	-
DuoPlain	-	-	-	-	50	50	50	50	25	25	25	25	25	25	25	25	25	25	25	-	-	-	-
Landmark Double Pantile / Grovebury	100	100	75	75	75	75	75	75	50	50	50	50	50	50	50	50	-	-	-	-	-	-	-
Landmark Double Roman / 50 Double Roman	-	75	75	75	75	50	50	50	50	50	50	25	25	25	25	25	-	-	-	-	-	-	-
Regent	100	100	100	75	75	75	75	75	75	50	50	50	50	50	50	50	-	-	-	-	-	-	-
Renown	-	75	75	50	50	50	50	50	50	25	25	25	25	25	25	25	-	-	-	-	-	-	-
Natural Slate	-	-	-	-	25	25	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-
Fontenelle	-	-	75	75	50	50	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-
Universal Angle																							
Cambrian Slate	50	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-	-
Slate 10 Range	-	75	50	50	50	50	50	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-
Stonewold II	-	75	75	50	50	50	50	50	25	25	25	25	25*	-	-	-	-	-	-	-	-	-	-
Mini Stonewold / MockBond Mini Stonewold	-	75	75	75	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-
Plain Tile	-	-	-	-	-	-	-	-	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-
Natural Slate	-	-	-	-	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-	-	-
Rosemary Half Round																							
Cambrian Slate	75	75	75	75	75	75	50	50	50	50	25	25	25	25	25	25	25	25	-	-	-	-	-
Slate 10 Range	-	75	75	75	75	75	50	75	50	50	50	50	50	25	25	25	25	25	25	25	-	-	-
Rosemary Clay	-	-	-	-	-	-	-	-	75	75	75	50	50	50	50	50	25	25	25	25	25	25	25
Natural Slate	-	-	-	-	75	50	50	50	50	50	25	25	25	25	25	25	25	-	-	-	-	-	-
Fontenelle	-	-	100	100	100	75	75	75	75	75	75	50	50	50	50	25	25	25	25	25	25	25	25
Rosemary Clay Craftsman	-	-	-	-	-	-	-	-	75	75	75	50	50	50	50	50	25	25	25	25	25	25	25

*44 degree Maximum Pitch

The Continuous Ridge System is a cost-effective solution for providing both high-level ventilation and mechanically fixed ridge tiles. The system is a genuine alternative to a mortar-bedded ridge with the added advantage of being quicker and easier to fix.

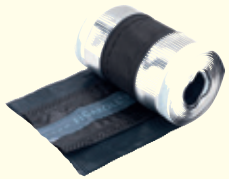


CONTINUOUS RIDGE SYSTEM: PRODUCT CODES AND DESCRIPTIONS

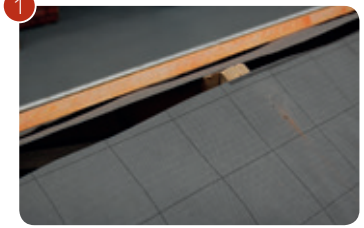
Description	Product Code	Pack Contents
Half Round Continuous Ridge System (Flat Tiles)	9302	5m Rollable Weathertight Membrane 11 Ridge-to-Ridge Seals 9 Stainless Steel Batten Straps 18 Stainless Steel ARS 30 x 2.65mm Nails 2 End Ridge Fixings
Half Round Continuous Ridge System (Profile Tiles)	9304	
Universal Angle Continuous Ridge System	9308	

Ridge-to-Ridge Seal with Clamping Plate and screw (Universal Angle shown)

Ridge Batten Strap



Rollable Weathertight Membrane



1

Lay underlay and batten roof in the normal manner. Leave underlay 30mm short of the apex on either side of the roof. Ensure any rigid sarking is left short of the apex to allow a 10mm gap and counterbattens are extended to form a mitred apex. Do not fix the top tiling batten at this stage.

Construct the ridge batten using a combination of 38 x 25mm softwood battens to achieve the correct ridge batten height (see table on page 100) and nail them together at the same centres as the rafters with 65mm nails.

2

Position the ridge batten along the centre-line of the apex. Ensure nails used to secure ridge batten together are located mid span of rafters. Bend Ridge Batten Straps to the correct height settings, and nail at each rafter, with two 30 x 2.65mm annular ring shank nails provided. Fix top tiling batten using table on page 100 to determine its distance down from the apex of the roof.

3

Lay tiles/slates on the battens, including all dry verge, or mortar bedded verge tiles/slates. It is essential that the tiles/slates are dry and free from dust and any other surface contamination. Secure the top course of tiles/slates to comply with the fixing recommendation.

4

Roll out the Rollable Weathertight Membrane along the centreline of the ridge batten, and tack to the ridge batten with a staple or underlay nail. Strip off the protective tape from the adhesive strip and mould the crimped edge onto the surface of the tiles/slates to produce a continuous surface contact. If a dry verge system is being used go to 5a). If the verge is mortar bedded go to 6a).

5a DRY VERGE

The ridge batten should be finished in line with the end of the tiling battens. The Rollable Weathertight Membrane should be neatly rolled down the vertical face of the dry verge and tucked back under the verge system.

5b

The Block-End Ridge Tile should be installed tight against the dry verge system whilst ensuring that the fixing screw lines up with the centre-line of the ridge batten. Using the screw, washer and plate provided, use a Pozidrive no 3 screw bit and tighten the washer until it is fingertight.

6 MORTAR BEDDED VERGE

Note:

a. The ridge batten should finish 100mm back from the flush face of the mortar. The Rollable Weathertight Membrane should be cut 50mm back from the face of the mortar.

b. Drill from the underside of the ridge tile a 6mm diameter hole centrally. Install the end of the ridge tile onto the verge mortar bedding using the screw, washer and plate provided. Screw using a Pozidrive no 3 screw bit until the washer is fingertight. Point the mortar in the usual manner.

7

Place a Ridge-to-Ridge Seal and plate between each pair of adjacent ridge tiles. Ensure that the ridge tiles are butted up tight to the seal with the plate on top of the ridge tiles and that the ridge tiles line up with the centre-line of the ridge batten. Screw the preinstalled ridge fixing screw into the centre of the ridge batten, until the washer is fingertight.

ADDITIONAL INSTRUCTIONS

Joining Rollable Weathertight Membrane
When joining two pieces of Rollable Weathertight Membrane, one must overlap the other by a minimum of 50mm.

Cut Ridge Tiles
Ridge tiles located at a distance of 900mm or less from the ridge end should not be cut. Any cut ridge tile should not be less than half its original length. If the distance to be made up is less than half, then two ridge tiles should be cut.

Ornamental Ridge
Remove the nail plates from the Ridge-to-Ridge Seal assemblies and flatten with a hammer. Reassemble the Ridge-to-Ridge Seals and proceed as per the instructions overleaf.

Abutments
At an abutment such as a chimney, the Rollable Weathertight Membrane should be turned up the wall by 50mm; the ridge tile should be drilled as per item 5b and screwed onto the ridge batten. A lead or Wakaflex Rapid Flashing saddle should be installed under the ridge tile as per Redland or the Lead Sheet Association's (LSA) recommendations.

Hip Junctions
The procedure for weathering a hip junction is detailed in the fixing instructions that accompany the Continuous Hip System.

L-Shape Buildings
At the ridge and hip intersections of an L-shape building, the Rollable Weathertight Membrane should be lapped prior to the lead or Wakaflex Rapid Flashing saddle being installed. The edges of the saddle under the ridge and hip tiles should be welted. The end ridge tiles should be mitre cut prior to drilling as shown in 5b.

T-Shaped Buildings
At the ridge intersection of a T-shape building, or where a dormer intersects a roof slope, the ridge construction should not cross the valley construction. The lead or Wakaflex Rapid Flashing saddle should be installed onto the valley construction prior to the roof tiles being laid. The Rollable Weathertight Membrane should be rolled out along the head of the T shape with the crimped edge adhered to the surface of the saddle. Where a dry verge system is not being used, the Rollable Weathertight Membrane on the leg of the T-shape building, or where the dormer ridge meets the valley, should finish 50mm back from the face of the mortar bedding. The end ridge tile should be fixed as per item 6b.

Gas Flues
Gas Flue Ridge Terminals are not compatible with Continuous Ridge System or Uni-Vent Rapid Ridge/Hip Systems.

CONTINUOUS RIDGE SYSTEM

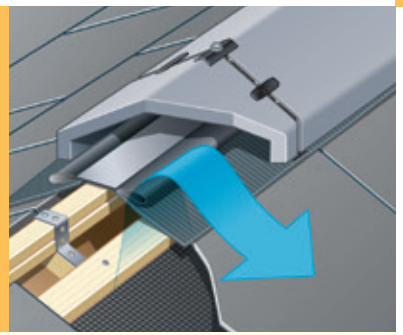
PITCH RANGE AND RIDGE BATTEN HEIGHT FOR CONTINUOUS RIDGE SYSTEM (38MM RIDGE BATTEN WIDTH)

Tile/Slate	Roof Pitch (Degrees)																		
	12.5	15	17.5	20	22.5	25	27.5	30	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5
Half Round	Batten Height (mm)																		
Landmark Double Pantile	-	75	75	75	75	75	75	75	75	50	50	50	50	50	50	50	50	50	-
Grovebury	-	75	75	75	75	75	75	75	75	50	50	50	50	50	50	50	50	50	-
Landmark Double Roman	-	-	75	75	75	50	50	50	50	50	50	50	50	50	50	25	25	-	-
50 Double Roman	-	-	75	75	75	50	50	50	50	50	50	50	50	50	50	25	25	-	-
Regent	100	75	75	75	75	75	75	75	75	75	75	50	50	50	50	-	-	-	-
Renown	-	-	75	50	50	50	50	50	50	50	50	50	50	25	25	25	25	25	-
Fenland Pantile	-	-	75	75	75	75	75	75	75	75	75	75	50	50	50	-	-	-	-
Redland 49	-	-	50	50	50	50	50	50	50	50	50	25	25	25	25	25	25	-	-
Cathedral Clay Pantile	-	-	-	-	75	75	75	75	75	75	50	50	20	50	50	50	-	-	-
Cambrian Slate	-	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-	-	-	-
Slate 10 Range	-	-	-	-	50	50	50	50	50	50	50	25	25	25	25	25	25	25	-
Stonewold II	-	-	75	50	50	50	50	50	50	25	25	25	25	25*	-	-	-	-	-
Mini Stonewold / MockBond	-	-	75	50	50	50	50	25	25	25	25	25	25	25	25	25	25	-	-
Plain Tile	-	-	-	-	-	-	-	-	-	25	25	25	25	25	25	25	25	25	25
DuoPlain	-	-	-	-	-	50	50	50	50	50	50	50	25	25	25	25	25	25	-
Natural Slate#	-	-	-	-	-	50	50	25	25	25	25	25	25	25	-	-	-	-	-
Universal Angle																			
Cambrian Slate	-	50	50	50	50	50	25	25	25	25	25	25	25	25	-	-	-	-	-
Slate 10 Range	-	-	-	-	50	50	50	50	50	50	50	25	25	25	25	25	-	-	-
Stonewold II	-	-	75	75	50	50	50	50	50	25	25	25	25	25*	-	-	-	-	-
Mini Stonewold / MockBond	-	-	50	50	50	50	50	50	25	25	25	25	25	25	25	25	25	-	-
Plain Tile	-	-	-	-	-	-	-	-	-	50	25	25	25	25	25	25	25	25	25
Natural Slate#	-	-	-	-	-	50	50	25	25	25	25	25	25	-	-	-	-	-	-

*44 degree Maximum Pitch
Cathedral Clay Pantile uses Landmark concrete ridge tiles.
Pitches between those shown use taller Ridge Batten Height.
For Top Batten distance from Apex please refer to the relevant product Fitting Instructions.
500 x 250mm Standard Pre-Holed at 195mm from head. Pitch range depends upon exposure level.
For pitches outside above range please contact Technical Solutions on 03708 702595.

Tile and Slate Type	Top Tiling Batten Position From Apex
Cambrian / DuoPlain	40mm
Rosemary	Top Batten 35mm 2nd Batten 75mm
Fenland Pantile	40mm
Landmark Double Pantile / Landmark Double Roman / Regent / Grovebury / 50 Double Roman / Renown / Redland 49	45mm
Slate 10 Range	50mm
Concrete Plain Tiles	60mm
Stonewold II	80mm

Uni-Vent Rapid Ridge/Hip is a simple and quick-to-install system providing a secure, weathertight and mortar-free universal ventilation solution for the mechanical fixing of ridge and hip tiles. The system is suitable for most flat and profile interlocking tiles, slates and plain tiles.



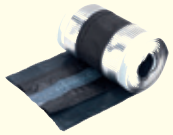
UNI-VENT RAPID RIDGE/HIP: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Pack Contents
Uni-Vent Rapid Ridge/Hip	9313	17 x Stainless Steel Batten Straps, inc nails 22 x Universal Flexi-Seals with 100 x 4mm woodscrews, washers and clamping plates 10m Rollable Weathertight Membrane

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code	Pack Contents
Universal Flexi-Seals	9312	6
Universal Angle Clamping Plates	9567	6
100 x 4mm woodscrews & washers	9584	6
Hip Support Tray	9069	1
Kro-Clips (for small cut tiles)	9142	50

Rapid Hip Support Tray (sold separately)



Rollable Weathertight Membrane

Universal Flexi-Seals

Ridge Batten Strap

Kro-Clips (sold separately)

UNI-VENT RAPID RIDGE/HIP

1

1

Ridge: Build-up a ridge batten using 38 x 25mm tiling battens to a height to give at least 15mm penetration of a 100 x 4mm wood screw into the ridge batten.

Do not fix the top tiling batten at this stage.

If finishing at a gable-end where used in conjunction with a dry verge, the ridge batten should be finished 25mm beyond the end of the tiling battens. Leave underlay 30mm short of apex on both sides of the ridge. If rigid sarking is used, leave short of apex on both sides of ridge to allow a 10mm gap and extend counter battens to form a mitred apex.

Hip: Build-up 38 x 25mm or 50 x 25mm tiling battens to a height such that Hip Support Tray (if used) rests on the hip batten and slates and tiles either side of the hip. (**Note:** If Hip Support Tray is not used then hip batten is built up to a height such that at least 15mm penetration of wood screws into hip batten is achieved when the hip tiles are screwed down to the slates and tiles either side of the hip.

2

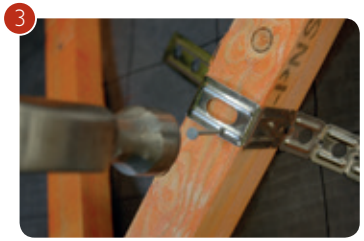
2

Secure the built-up tiling battens to ridge and hip by wrapping Batten Straps tightly around battens and mechanically fixing to every rafter intersection using 30 x 2.65mm stainless steel annular ring shanked nails. Ensure nails pinch the Batten Strap tightly against the ridge/hip batten at the base. Use two nails on each rafter either side of the ridge/hip.

Fix the top tiling batten after the Batten Straps have been fixed both at ridge and hip. Ensure all the remaining tiling battens are fixed at the correct gauge and that the ends of the tiling battens where they meet the hip batten are supported.

UNI-VENT RAPID RIDGE/HIP

3



3

Nail the built-up tiling battens together through the upper hole in the Batten Strap using 65 x 3.35mm galvanised steel nails. A longer nail may be required in special circumstances depending on the number of tiling battens used to form the ridge/hip batten (a 65mm long nail is adequate for three 25mm thick battens).

4

4

Lay and mechanically fix the slates and tiles as per Redland's fixing recommendations. Ensure small tile cuts that cannot be mechanically fixed in the normal way at hips are secured using a single Redland Kro-Clip on the cut edge of the tile. Try to keep the length of wire between Kro-Clip and securing ring-shanked nail as short as possible.
On the left side of a hip where the cut tile is not supported by the adjacent tile at the head, fix the Kro-Clip near the head of cut tile and secure wire and nail above the cut tile to the hip batten so that the cut tile is raised at the head to avoid gapping with the adjacent tile cover-lock.

A Head Clip can also be used to secure the cut piece to the interlock of the adjacent tile.

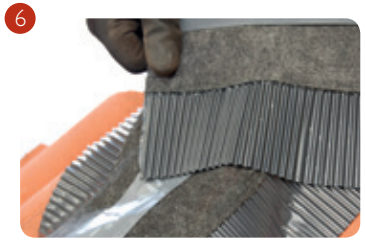
5

5

Ensure that the slates and tiles are dry and free from dust and any other surface contamination.

Lay Rollable Weathertight Membrane centrally along the ridge or hip batten and tack with a staple or underlay nail to the ridge/hip batten. Remove the protective backing from the butyl edge sealing strip and dress the crimped edges of the Rollable Weathertight Membrane neatly down onto the surface of the slates and tiles either side of the ridge/hip to produce a continuous surface contact. Where a ridge meets a dry verge the Rollable Weathertight Membrane should be neatly rolled down the vertical face of the dry verge and tucked back under the verge system.

6



6

Where the hip intersects with a ridge ensure the Rollable Weathertight Membrane on the ridge overlaps the Rollable Weathertight Membrane on the hip by a minimum 50mm.

7

A Hip Support Tray can be used to support the hip tiles keeping the hip tiles straight and level when screw-fixing to the hip. This is not required for concrete or clay plain tiles and optional for flat interlocking tiles depending on setting out of hip tiles. However, a Hip Support Tray is recommended for profile interlocking tiles. Where used, cut the Hip Support Tray to suit at eaves and secure to the hip batten with a single clout nail at its centre point to hold it in place. Where more than one tray is required to complete the hip, overlap on top of the one already fixed by 200mm. Where two hips meet at the ridge, mitre the hip trays together.

8

Secure the ridge/hip tiles to the ridge/hip batten using the wood screws and clamping plates. Place a Universal Flexi-Seal and clamping plate assembly between each pair of adjacent ridge/hip tiles. Ensure that the ridge/hip tiles are butted up tight to the seal with the clamping plate on top of the ridge/hip tiles and that the ridge/hip tiles line up with the centre-line of the ridge/hip batten.

Depending on the profile of the ridge/hip tile the ends of the Universal Flexi-Seal can be trimmed to suit. Screw the fixing screw into the centre of the ridge/hip batten, until the washer will not turn between the fingers.

UNI-VENT RAPID RIDGE/HIP

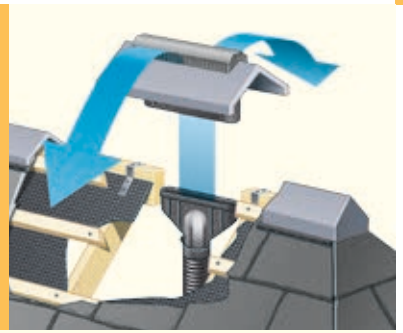
Where two hips meet at the ridge (at a plan angle of 90 degrees), the intersection should be weathered using a hip/ridge junction piece *(product codes 9520 and 9521, supplied separately)*. The three mitred tiles must be cut from full length tiles. Re-drill the cut hip and ridge tiles to provide an additional fixing per tile using 100 x 4mm woodscrews with washers. Fix the final ridge tile in position, ensuring the additional screw passes through the hole in the hip/ridge junction piece and that the ridge tile traps the junction piece in place. Fix the final hip tile in position using an additional screw and washer similarly at the head of the hip tile.

9

Continue along the ridge/hip ensuring the ridge/hip tiles and seal assemblies are butted together tightly and screwed to the ridge/hip batten and that no individual ridge/hip tile is less than half its original length. Cut ridge/hip tiles should not be laid within 900mm of the ridge/hip end. Where a ridge meets a dry verge the Block-End Ridge Tile should be installed tight against the dry verge system while ensuring that the fixing screw lines up with the centre-line of the ridge batten.

The end of the hip can be finished using a purpose designed Block-End Hip Tile. The Block-End Hip Tile is finished flush with the eaves course of slates and tiles and secured with an additional wood screw and washer at the tail of the Block-End Hip Tile as shown. If necessary, adjust the height of the ridge/hip tiles with a screwdriver to give a true line.

The Ridge Vent Terminal can be used for soil pipe, roof space ventilation or mechanical extraction.



RIDGE VENT TERMINAL:
PRODUCT CODES AND DESCRIPTIONS

Description	Product Code
Half Round Ridge Vent	7253
Universal Angle Ridge Vent	7254
DuoPlain Ridge Vent	7402
Heathland Half Round Ridge Vent	7678
Landmark Universal Angle Ridge Vent	8330
Landmark Half Round Ridge Vent	8310
Rosemary Ridge Vent	8486

EXTRA COMPONENTS (SOLD SEPARATELY)

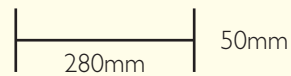
Ancillary Products	Product Code
Vent Adaptor	9175
Flexible Pipe	9172

Ridge Vent Terminal
(Universal Angle shown)

Vent Adaptor
(sold separately)

Flexible Pipe
(sold separately)

1b



1a

2

1a

For DryVent Ridge, remove a 280mm section of the ridge batten equidistant between rafters. For traditional construction, remove a 280mm section of the ridge board, ensuring that trimmer boards are then fitted on each side of the ridge and secured to adjacent rafters to maintain the structural strength of the roof.

1b

For a mortar bedded ridge, mark the underlay with chalk, as shown, centrally between rafters. Cut the underlay along the chalk lines with a sharp knife. If rigid sarking is also present, a section of this must also be removed to provide a clear 280 x 50mm path into the roof space.

2

Place the Terminal through the hole in the underlay (and rigid sarking). For a DryVent Ridge, place Profile Filler Units below the Terminal and secure with the woodscrew and clamping plate provided in the pack. For a mortar bedded ridge, continuously edge bed and solidly butt joint the ends of the Terminal.

RIDGE VENT TERMINAL

3

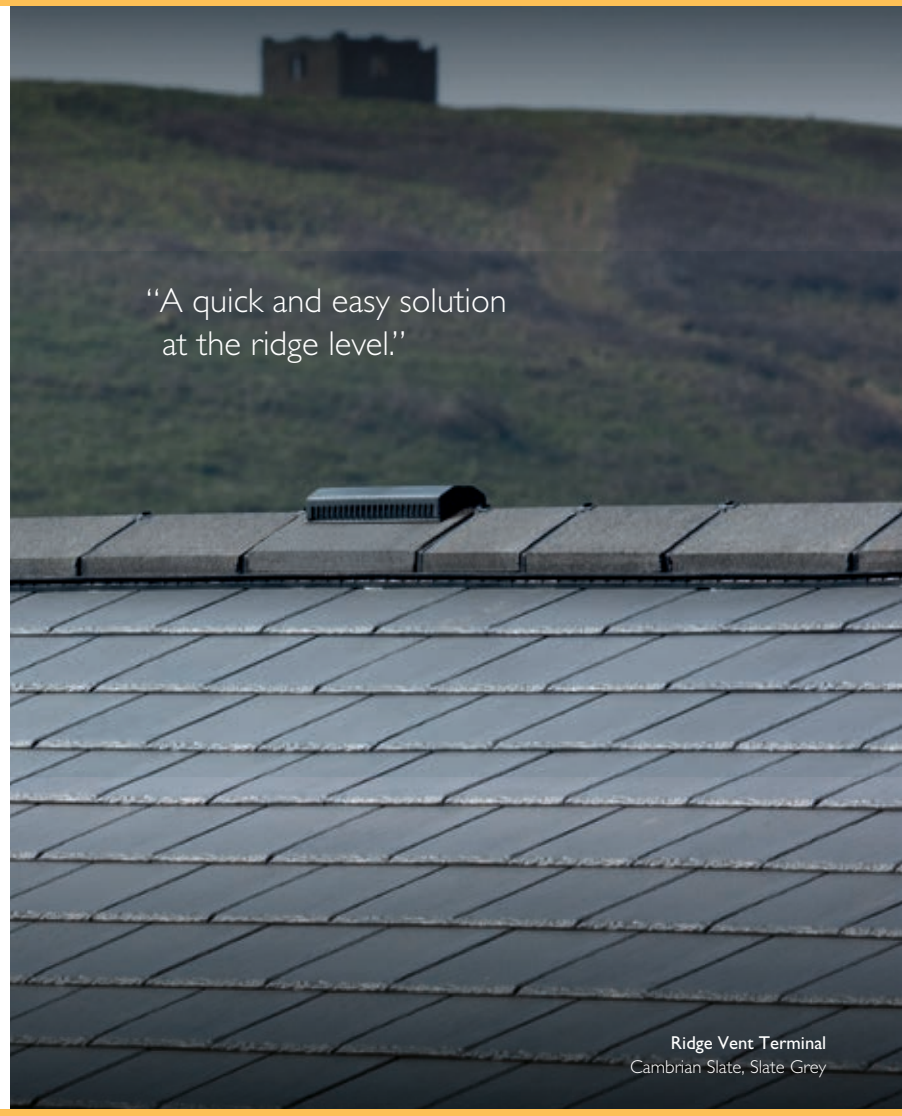
3

For soil vents or mechanical extraction, fix the Flexible Pipe onto the Vent Adaptor by tightening the jubilee clip with a screwdriver to provide an airtight joint. Ensure the worm drive section of the jubilee clip is placed on the overlapped neoprene cuff area.

4

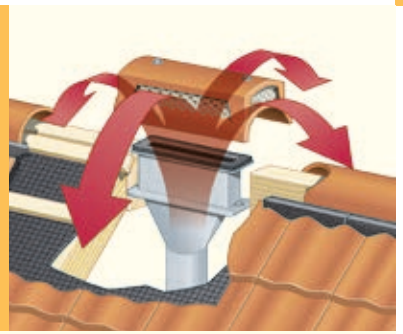
4

Connect the Vent Adaptor ensuring the four lugs on the Terminal engage into the four holes in the Adaptor. Apply downward pressure on the Terminal to ensure a satisfactory connection. The free end of the Flexible Pipe is then connected to the main stack of the soil vent pipe or mechanical extraction pipe.



Ridge Vent Terminal
Cambrian Slate, Slate Grey

The Gas Flue Ridge Terminal is designed for use on duo-pitched roofs in conjunction with concrete Half Round and Universal Angle Ridge Tiles on DryVent or bedded ridges. The Terminal is of low air-flow resistance design, to enable flue gases to escape easily.



GAS FLUE RIDGE TERMINAL: PRODUCT CODES AND DESCRIPTIONS

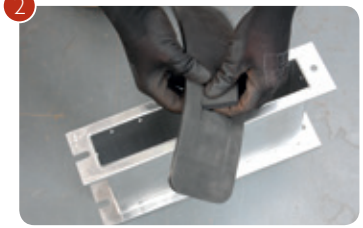
Description	Product Code
Half Round Gas Flue Ridge Terminal	7241
Universal Angle Gas Flue Ridge Terminal	7242
Extension Adaptor	9143

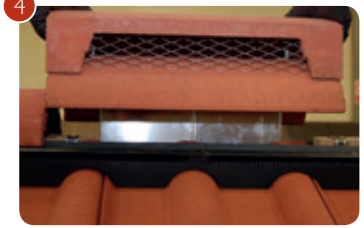
Blanking Plates are required when used with DryVent Ridge, available in the following packs.

Description	Product Code	Contents (number of units per pack)	Coverage (m)	
		Blanking Plates	Length	Coverage
Slates and Plain Tiles	9099	8	0.45	1.8m
Grovebury / 50 Double Roman / Regent / Renown	9098	12	0.3	1.8m

Gas Flue Ridge Terminal (Universal Ridge shown)

Extension Adaptor (sold separately)





1

For DryVent Ridge remove a 370mm section of the ridge batten equidistant between rafters.

2

If an optional Extension Adaptor is to be used, remove the foam infill panel from the Sealing Gasket.

3

Apply the Sealing Gasket and Extension Adaptor to the underside of the Gas Flue Ridge Terminal. Secure with the nuts supplied.

4

Insert the Gas Flue Ridge Terminal through the gap created in the ridge batten.

GAS FLUE RIDGE TERMINAL

5

5

Securely fit a Ridge-to-Ridge Seal at each end of the Gas Flue Terminal, and screw into the ridge batten.

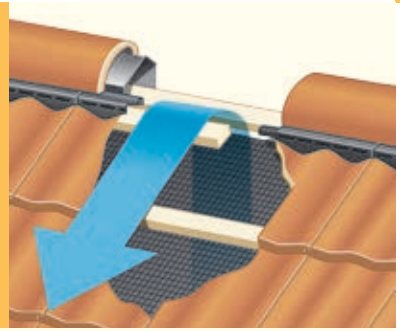
6

6

To comply with Building Regulations, when using DryVent Ridge with a Gas Flue, one pack of Blanking Plates must be used with each terminal. Each pack contains sufficient inserts to blank off the required number of Profile Filler Units. A Blanking Plate must be inserted into the grille of every Profile Filler Unit within 600mm each side of and directly below the Gas Flue Ridge Terminal.

Gas Flue Ridge Terminal
50 Double Roman, Terracotta

The DryVent Monoridge System provides a continuous weathertight ventilation path from the roof void to the outside. The mechanically-fixed system complies with Building Regulations requirements.



DRYVENT MONORIDGE SYSTEM: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Pack Contents				Coverage
		Vented Profile Filler Unit	Ridge-to-Ridge Seal	No. 8 x 50mm S/S Woodscrews	Neoprene Washer	
Regent DryVent Monoridge	9079	9	6	12	12	2.7m
Landmark Double Pantile / Grovebury DryVent Monoridge	9080	9	6	12	12	2.7m
Renown DryVent Monoridge	9081	9	6	12	12	2.7m
Landmark Double Roman / 50 Double Roman DryVent Monoridge	9082	9	6	12	12	2.7m
Flat Tiles DryVent Monoridge	9084	6	6	12	12	2.7m

Ridge-to-Ridge Seal

Profile Filler Unit (Renown shown)

No. 8 x 50mm S/S Woodscrews

DRYVENT MONORIDGE SYSTEM

MAXIMUM PITCH AND TOP BATTEN DISTANCE FOR DRYVENT MONORIDGE SYSTEM

Description	Top Batten Distance (mm) Maximum	Maximum Pitch (Degrees)	
	Under 35° / 35° and over	Half Round	Universal Angle
Landmark Double Pantile / Grovebury	35 / 10	47.5°	-
All other Profiled Tiles	35 / 10	45.0°	-
Cambrian Slate	5	42.5°	50°
Stonewold II	40	44.0°	44.0°
Mini Stonewold / MockBond	15	47.5°	52.5°
Slate 10 Range	15	42.5°	50.0°
DuoPlain	25	47.5°	-
Plain Tile	35	55.0°	60.0°
Heathland	35	55.0°	-
Rosemary Clay (Concrete Ridge)	1st batten 10, 2nd batten 50	55.0°	-
Fontenelle (Concrete Ridge)	25	47.5°	47.5°

1

Lay underlay and batten the roof in the normal manner. For a non-vented system, underlay should be dressed over the apex by not less than 150mm. For a vented system, underlay should be left 30mm short of the top of the rafters. If using rigid sarking, ensure rigid sarking, counterbattens and underlay are left short of the apex to allow a 10mm gap.

2

Fix the top tiling batten according to the table above.

DRYVENT MONORIDGE SYSTEM

3

4

5

6

7

3

Fix a 25mm thick continuous ridge batten to the back of the rafters. Lay and fix tiles in accordance with manufacturers fixing specification.

4

Lay Profile Filler Units along the roof tiles snapping them together so they are ready to accept the Monoridge Tiles. If necessary, cut the filler unit to suit the ridge length.

5

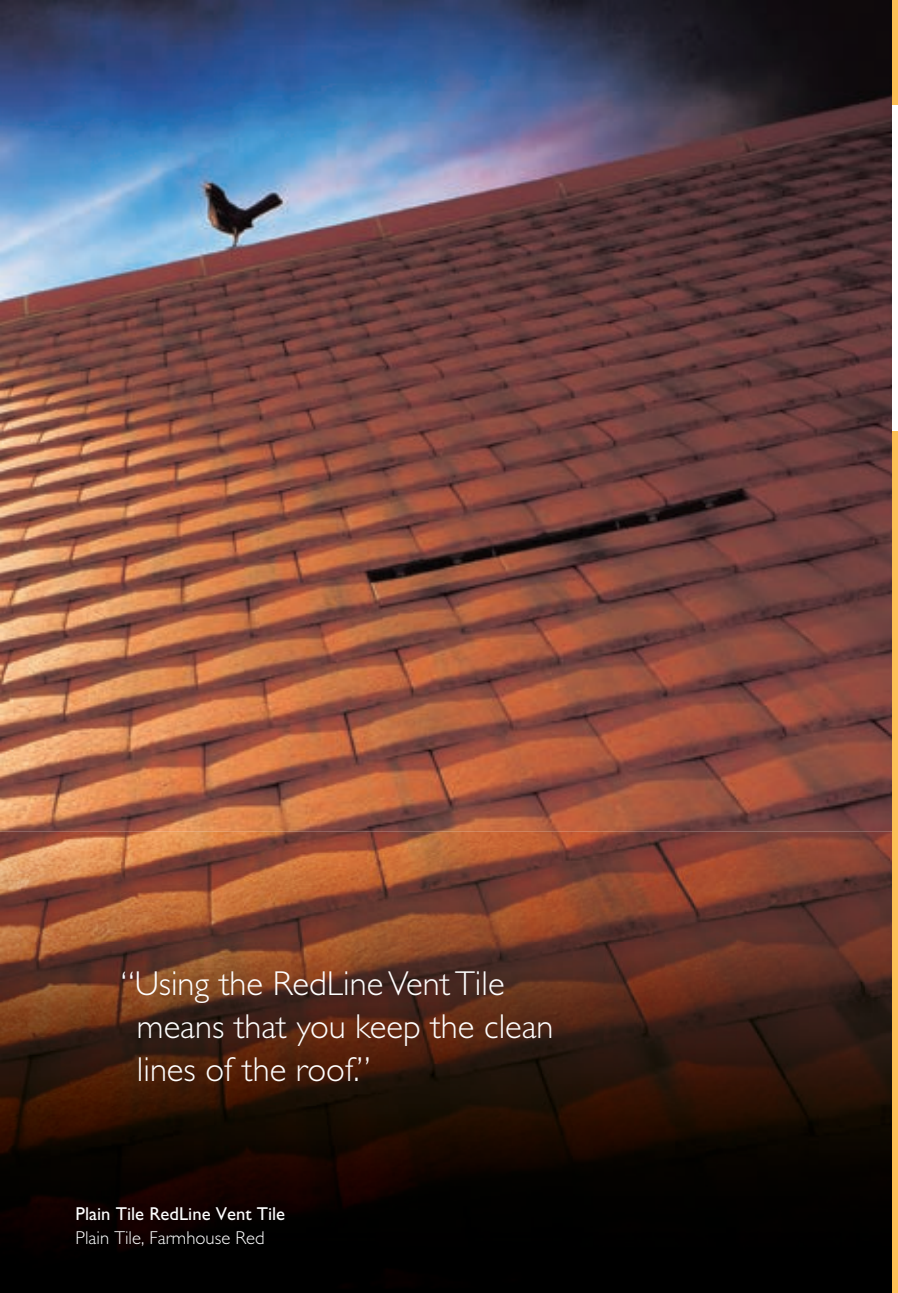
Fold leg of Ridge-to-Ridge Seal and slide under the open end of the first and subsequent Monoridge Tiles.

6

Fix each concrete Monoridge Tile with two woodscrews and neoprene washers supplied, screwing into the continuous ridge batten. Slide the next Monoridge Tile over the Ridge-to-Ridge Seal. Continue laying and fixing Monoridge Tiles and DryVent Monoridge components along the ridge line. When cutting Monoridge Tiles to length, ensure a clean-cut face is achieved to abut closely against the Ridge-to-Ridge Seals.

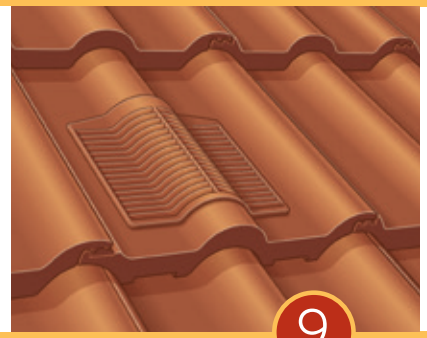
7

On gable end roofs, use left-hand and/or right-hand Block-End Monoridge Tiles or Monoridge End Caps (LH/RH). Cut Monoridge Tiles should not be less than half their original length and should not be fixed within 450mm of the end of a ridge line. Carefully drill a 6mm diameter hole, 30mm in from the end of cut Monoridge Tiles. When using Cloaked Verge at the left-hand verge, cut a Profile Filler Unit to fill the open end.



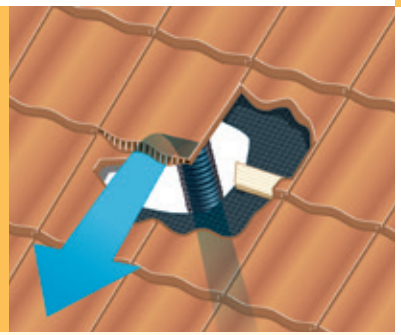
Plain Tile RedLine Vent Tile
Plain Tile, Farmhouse Red

VENTILATION TILES



9

The RedLine Vent Tile provides roof space, soil and mechanical ventilation through the leading edge of the tile ensuring that the clean lines of the roof are maintained. It is ideal for use where alternative eaves and ridge ventilation systems are not appropriate.

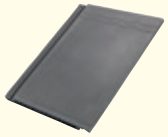


INTERLOCKING REDLINE VENT TILE: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
Slate 10 RedLine Vent	9141	1 x RedLine Vent 1 x Underlay Seal 1 x Nail and Clip pack
Landmark Double Pantile / Grovebury RedLine Vent	9114	
Regent RedLine Vent	9115	
Renown RedLine Vent	9116	
Landmark Double Roman / 50 Double Roman RedLine Vent	9117	
Mini Stonewold RedLine Vent	9118	

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code	
Flexible Pipe (100/100mm)	9172	Sold separately



Interlocking RedLine Vent Tile (Mini Stonewold shown)

Underlay Seal

Nails & Clips

Flexible Pipe (sold separately)

REDLINE VENT TILE – FOR INTERLOCKING TILES

1

Place Underlay Seal over space in which RedLine Vent is to be fitted, ensuring that the arrows above the wording 'RedLine Vent' are pointing towards the ridge. Line up edge of tile with line marked on Underlay Seal. Cut slot in underlay tight up to the top edge of the tiling batten between points indicated on the Underlay Seal.

2

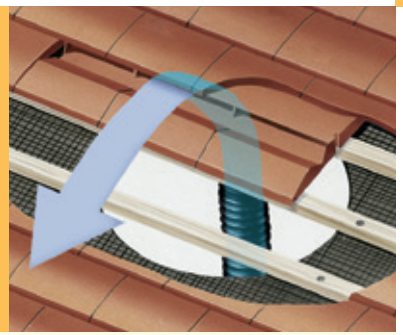
Slide Underlay Seal under the lower and upper tiling battens, slipping the top centre tab into the slit in the underlay. Cut a 'cross' into the underlay, ensuring the cuts cross in the centre of the hole.

Note: In the case of rigid sarking or boarding a suitable wood saw must be used to provide a clear path to the roof space.

3

Remove clip and nail pack from Vent Tile pipe. Place the Vent Tile in position ensuring the pipe passes through the hole in the underlay. Fix in two places with both clip and nail provided. Continue to lay tiles around the vent as normal.

This range of ventilators maintains the beauty of the plain tiled roof. They are ideal for roof space ventilation where alternative eaves and ridge ventilation systems are not appropriate. They can also be used for mechanical extraction and soil pipe ventilation.

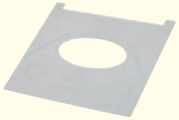


PLAIN TILE REDLINE VENT TILE: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
Heathland / Plain Tile RedLine Vent Tile	9119	1 x RedLine Vent 1 x Underlay Seal 4 x 25mm Underlay Nails

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code	
Flexible Pipe (100/100mm)	9172	Sold separately
Plain Tile Vent Adaptor	9175	Sold separately



Underlay Seal

Plain Tile RedLine Vent Tile

Plain Tile Vent Adaptor (sold separately)

Flexible Pipe (sold separately)

1

Position Underlay Seal on top edge of tiling batten and score cut lines in underlay at each side. Ensure arrow is central with gap of two tiles. Ensure the Underlay Seal is as close to the centre of the rafter space as possible.

2

Cut underlay along the top of the batten, between the scores, fold up and fix to batten.

Note: In the case of rigid sarking or boarding a suitable wood saw must be used to provide a clear path to the roof space.

3

Slide the Underlay Seal under the tiling batten. Slide the central flap into the hole and the outer flaps on top of the underlay and under the batten.

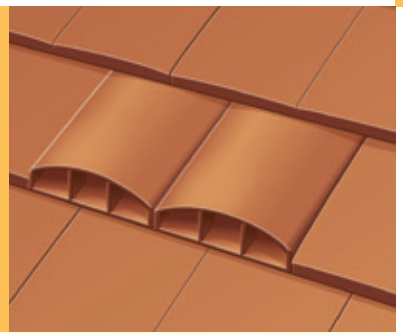
4

Open the RedLine Vent by lifting the tabs at each side. Install the vent spigot into the Underlay Seal hole. Using four 25mm underlay nails, nail into tiling batten through each nail hole. Using available shunt in tile course below, nail two 65mm nails through either concrete or clay nail holes.

5

Close lid. Complete tiling in the normal manner.

The DuoPlain RedLine Vent Tile provides roof space, soil or mechanical ventilation through the leading edge of the tile ensuring that the clean lines of the roof are maintained. It is ideal for use where alternative eaves and ridge ventilation systems are not appropriate.

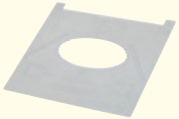


DUOPLAIN REDLINE VENT TILE: PRODUCT CODES AND DESCRIPTIONS

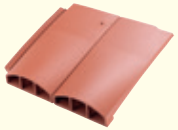
Description	Product Code	Contents
DuoPlain RedLine Vent Tile	9113	1 x RedLine Vent 1 x Underlay Seal 1 x Adaptor 1 x Nail and Clip pack

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products	Product Code	
Flexible Pipe (100/100mm)	9172	Sold separately



Underlay Seal



DuoPlain RedLine Vent Tile

DuoPlain Vent Tile Adaptor

Flexible Pipe (sold separately)

REDLINE VENT TILE – FOR DUOPLAIN TILES

1

Place Underlay Seal over space in which the RedLine Vent is to be fitted (ensure the seal is as close to the centre of the rafter space as possible.) Line up 'MIN' and 'MAX' shunt lines, marked on Underlay Seal, with edge of tile. Pull back centre section of seal and score cut lines in underlay with a nail, using side 'finger' sections as a guide.

2

Measure 150mm down from the top of the battens, and cut underlay accordingly. Fold underlay back over tiling batten and fix with underlay nails into batten.

Cut the excess underlay flush with the top of batten.

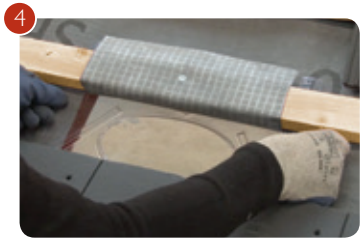
Note: In the case of rigid sarking or boarding a suitable wood saw must be used to provide a clear path to the roofspace.

3

Slide the Underlay Seal under the tiling batten below, on top of the underlay.

REDLINE VENT TILE – FOR DUOPLAIN TILES

4



4

Slide the central section of the Underlay Seal into the hole, under the underlay and the outer 'fingers' between the underlay and the tiling batten. Slide up until the 'TOP OF BATTEN' line 'B' (on the seal) lines up with the top of the batten.

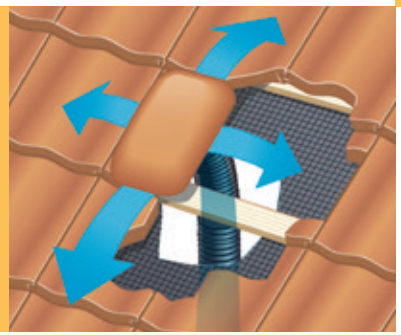
Align 'MIN' and 'MAX' shunt lines, marked on Underlay Seal, with edge of tile (interlock). Insert the adaptor into the vent tile spigot and ensure the lugs are located in the appropriate channels.

5

5

Insert the Pipe Adaptor through the hole in the Underlay Seal, using the slit at bottom edge to aid fitting. Ensure the seal returns to a flat position against the underlay after fitting. Using the fixings provided, nail the vent tile to the tiling batten and then secure the hook of the clip over the tile's interlock and slide down under the head of the tile. Continue tiling as normal.

The ThruVent Tile is a means of incorporating roof space ventilation within the roof slope where alternative eaves and ridge ventilation systems are not appropriate. It can also be used for mechanical extraction and soil pipe ventilation.



THRUVENT TILE – INTERLOCKING: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
ThruVents 4.5k		
Fenland Pantile 4.5K ThruVent	7328	
Redland 49 4.5K ThruVent	7334	
Cambrian 4.5K ThruVent	7705	
Cathedral 4.5K ThruVent	7830	
Old Hollow 4.5k ThruVent	7834	
Hi-Flow ThruVent		
Cambrian Hi-Flow ThruVent	7349	
ThruVents 8.8K		
Regent 8.8K ThruVent	7930	
Grovebury 8.8K ThruVent	7931	
Renown 8.8K ThruVent	7932	1 x ThruVent
50 Double Roman 8.8K ThruVent	7933	1 x Underlay Seal
Stonewold II 8.8K ThruVent	7934	
Landmark Double Pantile 8.8K ThruVent	7938	
Landmark Double Roman 8.8K ThruVent	7939	
Richmond 10 8.8K ThruVent	7943	
Saxon 10 8.8K ThruVent	7944	
Landmark 10 Slate 8.8K ThruVent	7945	
Mini Stonewold 8.8K ThruVent	7935	
Ancillary Products (sold separately)		
Flexible Pipe (100/100mm) for 8.8K ThruVents	9172	
Flexible Pipe (75/100mm) for 4.5K ThruVents	9188	

4.5K ThruVent (Cambrian shown)

Hi-Flow ThruVent (Cambrian Slate)

Underlay Seal

8.8K ThruVent (Double Roman shown)

Flexible Pipe for 8.8K ThruVent (sold separately)

Flexible Pipe for 4.5K ThruVent (sold separately)

1

3

2

1 MARKING POSITION FOR THRUVENT

Place Underlay Seal over space in which ThruVent is to be fitted, ensuring that the arrows above the wording ThruVent are pointing towards the ridge. Line up edge of tile with the line marked for tile profile. Position the corresponding line marked for tile profile with the top edge of the tiling batten. Cut slot in underlay tight up to the edge of the Underlay Seal between points indicated.

2 FITTING UNDERLAY SEAL

Cut a 'cross' into the underlay, ensuring the cuts cross in the centre of the hole. Slide Underlay Seal under the lower and upper battens, slipping the top centre tab into the slit in the underlay.

Note: In the case of rigid sarking or boarding a suitable wood saw must be used to provide a clear path to the roof space.

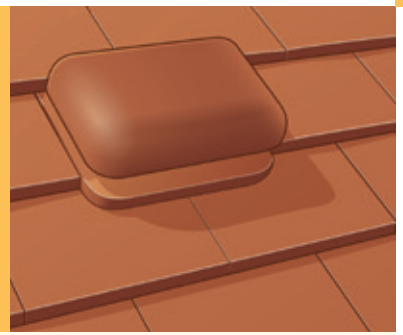
3 NAILING AND CLIPPING

Place ThruVent Tile in position ensuring the pipe passes through the hole in the underlay. Fix the vent with the nail provided into the tiling batten and clip if required.

NOTES

- If tiles are laid at minimum gauge, there may be some interference with the ThruVent cap and the tile above. In this instance, push the tile in the course above the ThruVent up until it clears the cap. Fix in position via a re-drilled nail-hole and by nailing to the batten.
- Hi-Flow ThruVent requires a non-Redland Adaptor to connect to a pipe.

The ThruVent Tile is a means of incorporating roof space ventilation within the roof slope where alternative eaves and ridge ventilation systems are not appropriate. It can also be used for mechanical extraction and soil pipe ventilation.

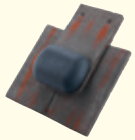


THRUVENT TILE – PLAIN TILE: PRODUCT CODES AND DESCRIPTIONS

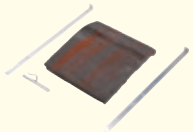
Description	Product Code	Contents
Plain Tile 4.5K ThruVent	7347	1 x Main Unit 1 x Small Unit 1 x Underlay Seal 1 x Fixing Pack (inc. Batten Support Straps)

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products		
Flexible Pipe (75/100mm)	9188	Sold separately



ThruVent Tile Main Unit



Plain Tile ThruVent and fixings Small Unit

Underlay Seal

Flexible Pipe (sold separately)

1

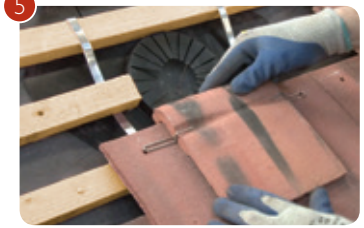
Mark the position of the ThruVent such that the battens are sprung on the adjacent rafters. Where the ThruVent downpipe will be positioned, cut the tiling batten to leave a gap the width of a Plain Tile. Gap should be in line with the tile two courses below to ensure correct coursing of tiles.

2

Place Underlay Seal over space in which ThruVent is to be fitted, ensuring that the arrows above the wording 'THRU VENT' are pointing towards the ridge. Line up edge of tile with line marked for plain tile. Line up Underlay Seal to top edge of batten (two courses up from pipe hole). Cut slot in underlay tight up to the edge of the underlay seal between points indicated.

3

Slide Underlay Seal under the lower and upper tiling battens, slipping the top centre tab into the slit in the underlay. Cut a 'cross' into the underlay ensuring the cuts cross in the centre of the hole.



4

Hook the Batten Support Straps as indicated to support the ends of the cut batten. Nail into position with plain tile nails.

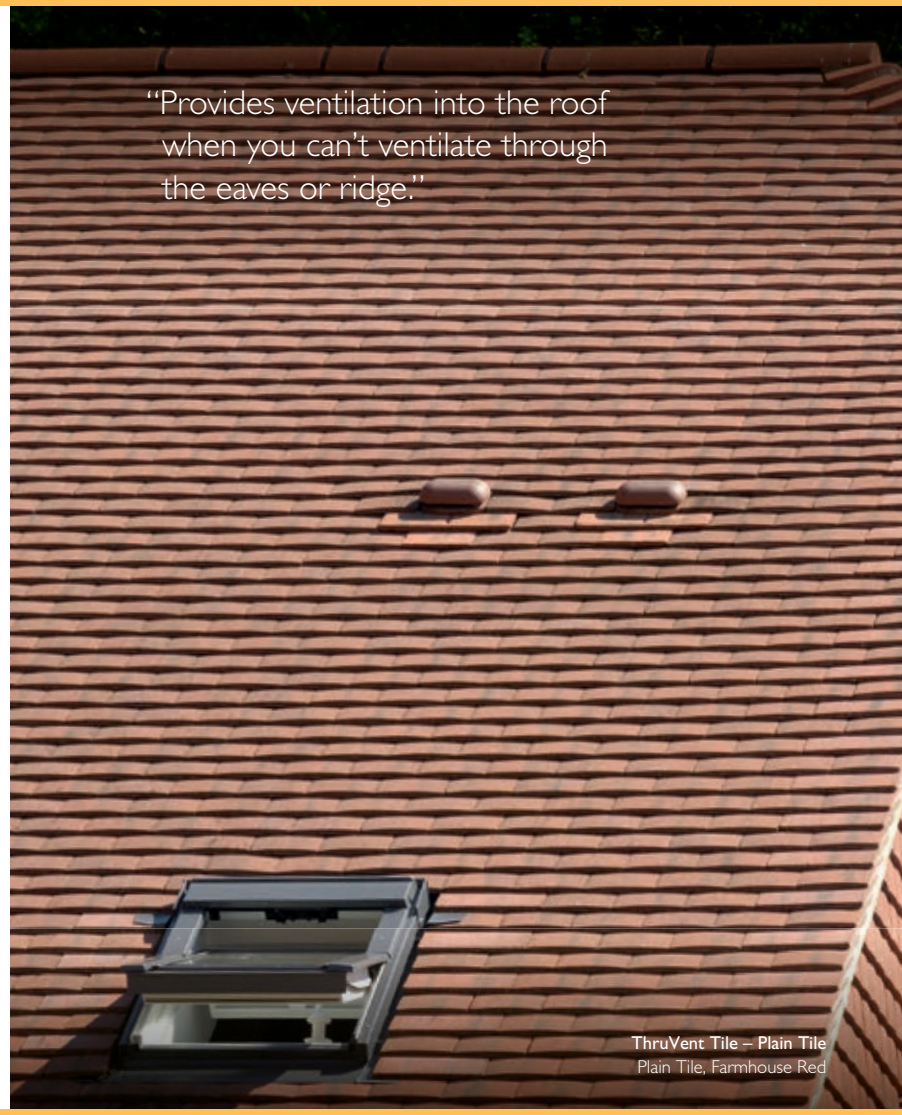
5

Support small tile on top of tiles as shown. Secure with the clips provided by nailing through the clip into the nail holes of the tile beneath.

6

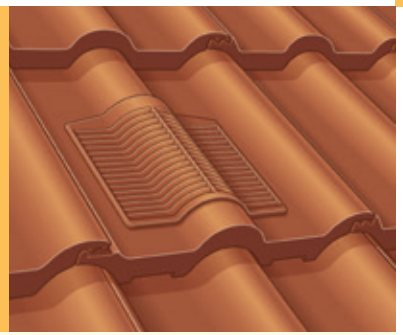
Place ThruVent into position ensuring the outlet pipe passes through the hole in the underlay. Complete the tiling in the normal manner.

THRUVENT TILE – PLAIN TILE



ThruVent Tile – Plain Tile
Plain Tile, Farmhouse Red

A range of in-line ventilating tiles suitable for both low and high-level roof space ventilation, to combat condensation, as well as mechanical and soil pipe ventilation. Suitable for use with most popular interlocking concrete tiles and plain tiles.



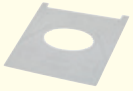
RAPID ROOF VENT TILE: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code
Slate 10 Range Vent	9123
Mini Stonewold Vent	9124
50 Double Roman Vent	9125
Grovebury Vent	9126
Renown Vent	9127
Plain Tile Vent	9128
Redland 49 Vent (inc. Vent Adaptor)	9129
Ancillary Products (sold separately)	
Vent Adaptor (Interlocking Tiles)	9791
Vent Adaptor (Plain Tile)	9175
Flexible Pipe (100/100mm)	9172

To meet the requirements of BS 5250:2011 the vents must be installed at the following centres

Description	mm^2 of effective ventilation	5,000 mm^2/m	10,000 mm^2/m	25,000 mm^2/m
Interlocking No adaptor	10,000	2m	1m	0.4m
Interlocking/49# (inc. adaptor)	8,600	1.72m	0.86m	0.34m
Plain Tile	6,500	1.3m	0.65m	0.26m

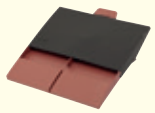
the 49 comes with the adaptor which MUST be used.



Underlay Seal (Interlocking Tiles)

Underlay Seal (Plain Tile)

Flexible Pipe (sold separately)



Rapid Roof Vent (Plain Tile)

Rapid Roof Vent (Double Roman)

Vent Adaptor (Interlocking Tiles) (sold separately)

Vent Adaptor (Plain Tile) (sold separately)

1

Position Underlay Seal over underlay in location where vent tile is to be fitted (ensure the seal is located centrally between rafters). Line up the centre of the Underlay Seal with tile with either the nail hole (straight bond), the tile edge (broken bond) or the centre of the tiles below (Plain Tiles). Pull back the centre section of the Underlay Seal and score cut 2 vertical lines in underlay along edges of seal with a nail or Stanley knife, using side 'finger' sections as a guide.

Note: The Plain Tile Underlay Seal has different dimensions to the image, but is fixed the same way.

2

Using the score lines as a guide, measure 150mm down from the bottom edge of the batten and make a horizontal score line. Once cut, fold underlay back over tiling batten and fix with 2 underlay nails.

Note: In the case of rigid sarking or boarding a suitable wood saw must be used to provide a clear path to the roof space.

3

Position the Underlay Seal so that the central section of the seal fits into the hole under the underlay (and upper batten) and the outer fingers of the seal slide between the underlay and upper tiling batten.

RAPID ROOF VENT TILE

5

4

6

4

Place the Vent Tile in position so that the moulded underside clip is located below the interlock of the adjacent tile (when fitted this prevents the Vent Tile from lifting). Ensure the Underlay Seal fits around the spigot and returns to a flat position against the underlay after fitting.

NOTES

- If the vent is to be used for soil or mechanical extraction the Vent Adaptor *(product code 9791/9175)* and 100mm diameter Flexible Pipe *(product code 9172)* must be used.
- When used for roof space ventilation at high level the vent must not be installed directly under the ridge tile.
- Maximum headlap 100mm.
- Minimum pitch will depend on the minimum pitch for the relevant Redland tile profile.

5

When using the Vent Adaptor, ensure the adaptor lugs are located in the appropriate channels in the vent spigot. Insert the Vent Adaptor through the hole in the Underlay Seal and engage the moulded underside clip of the Vent Tile with the adjacent tile as in 4. Ensure the Underlay Seal returns to a flat position against the underlay after fitting.

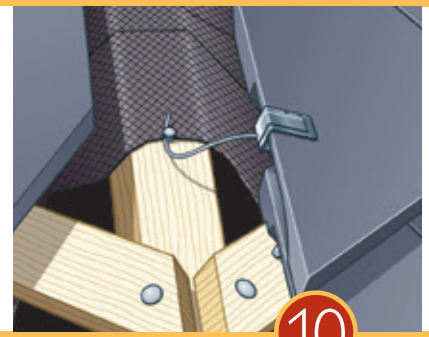
Note: Rapid Roof Vent for Redland 49 tiles must be installed with the Pipe Adaptor supplied.

6

Mechanically fix the vent into position. Continue with tiling the roof in the normal manner.

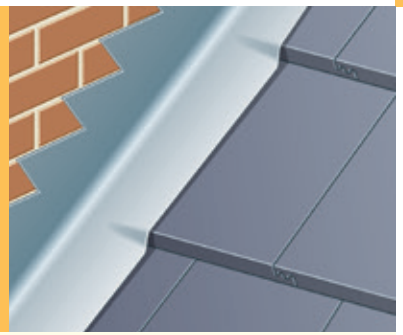
Rapid Roof Vent Tile
Grovebury, Farmhouse Red

ACCESSORIES



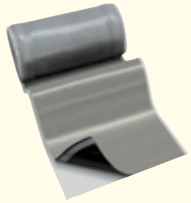
10

Wakaflex Rapid Flashing can be used instead of lead on the majority of pitched roof applications. The unrivalled speed and ease of installation enables standard flashing details to be completed up to twice as quickly as with lead, offering a viable and safer alternative to traditional methods.



WAKAFLEX RAPID FLASHING: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Size
Wakaflex Rapid Flashing Roll	9953	140mm x 5m
Wakaflex Rapid Flashing Roll	9960	180mm x 5m
Wakaflex Rapid Flashing Roll	9955	280mm x 5m
Wakaflex Rapid Flashing Roll	9956	280mm x 10m
Wakaflex Rapid Flashing Roll	9957	370mm x 5m
Wakaflex Rapid Flashing Roll	9959	560mm x 5m

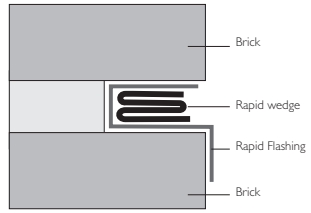


Wakaflex Rapid Flashing

ACCESSORIES

Description	Product Code	Size
Wakaflex Rapid Flashing M-Glue	9929	290ml
Wakaflex Rapid Flashing Butyl Roll	9930	20mm x 20m
Wakaflex Rapid Flashing Roller	9994	-
Wakaflex Rapid Flashing Sealant	9995	310ml tube
Wakaflex Rapid Flashing Strip	9998	4 x 1.25m

WAKAFLEX RAPID FLASHING



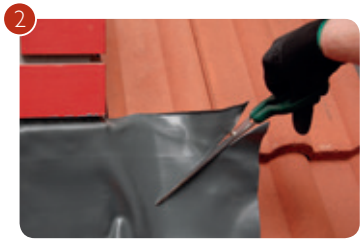
FIXING WITH WAKAFLEX RAPID FLASHING STRIP

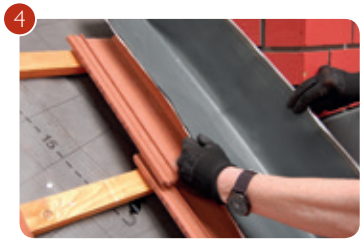
For fixing to rendered walls or instead of chasing into brickwork. Install Wakaflex Rapid Flashing with a 65mm upstand. Place the Wakaflex Rapid Flashing Strip over the top edge. Fix in place through all screw holes. Seal top edge with a bead of Wakaflex Rapid Flashing Sealant.

WEDGES FOR TRADITIONAL STEP FLASHING

Wedges are strips of Wakaflex Rapid Flashing folded several times to suit the thickness of brickwork joint. Wedges are used to retain the step flashing in place until finished with Wakaflex Rapid Flashing Sealant. The wedges are driven into place by a wooden plugging chisel so as not to damage the Wakaflex Rapid Flashing.

WAKAFLEX RAPID FLASHING





FIXING WITH WAKAFLEX RAPID FLASHING STRIP

1

Cut a piece of Wakaflex Rapid Flashing so that it extends either side of the side abutment/chimney by minimum 150mm or over a full pan and roll whichever is the greater and has a minimum upstand of 65mm. The flashing should extend over the tiles by min of 90mm.

2

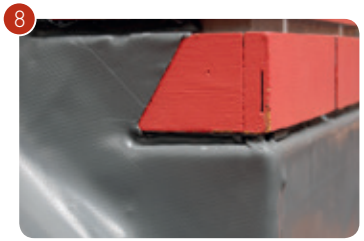
Lay next course of tiling. Fold material into the profile of the tile and stick the base down. To form the corner, cut from the outside corner diagonally to the side abutment/chimney corner, stopping short by 15mm.

3

Return the top section around the side abutment/chimney. Fold into brickwork forming a cup shape in the brick joint. Fold the lower section down onto the tile, form into the profile of the tile and stick down.

4

Cut a piece of Wakaflex Rapid Flashing to the length of the side abutment/ chimney. Ensure that the bottom edge is lined up with the bottom of the apron. The top edge should extend beyond the back of the side abutment/chimney by 35mm.



5

Place side piece so that it covers the tile by 150mm or by one pan and roll, whichever is greater. Mark out 15mm from the corner of the chimney, draw a line down vertically, then down the line of tiles, leaving 15mm extra material on both edges. Cut this piece out.

6

Form the step as you do with lead. With the step the same angle as the roof pitch, cut back to the water line (65mm). Ensure at least 25mm excess is left to be turned into the brickwork joint.

7

Once the steps have been cut start moulding the flashing to the profile of the tile. Return the 15mm upstand around the front of the side abutment/ chimney to form the front corner. Use a roller if necessary to seal the seam.

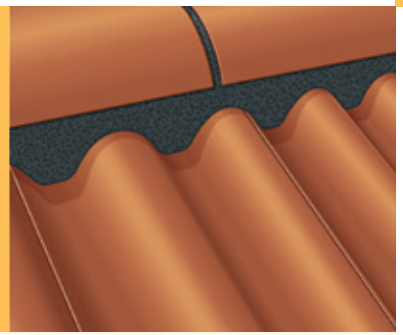
8

Once steps have been chased into the brick joints, peel off protective strip and mould into the profile of the tile. Once finished use a Wakaflex Rapid Flashing Sealant to bed the joints in.

NOTES

- For additional details and applications please see our website.
- For Slate range a Secret Gutter must be incorporated.
- For Plain Tile range use soakers instead of cover flashing.
- Overlap sections of Wakaflex Rapid Flashing by min. 30mm.

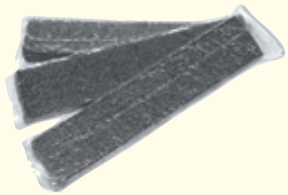
Rapid Roof Putty is a flexible, highly adhesive, fibre-reinforced synthetic mortar. Rapid Roof Putty can be used with all types of concrete tiles and slates as an alternative to traditional concrete mortars, and provides weathertightness against driving rain and drifting snow.



RAPID ROOF PUTTY: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents	Coverage (m)
Rapid Roof Putty – Black	915563	9 individually packed strips per carton. Total weight: about 5.5 kg per carton	Approx. 2m ridge/hip (both sides)
Rapid Roof Putty – Terracotta	915534		
Rapid Roof Putty – Brown	915536		

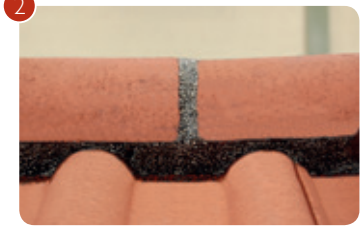
Rapid Roof Putty is available in Brown, Terracotta or Black colours.
Can be used in conjunction with Mortar Bedded Fixing Kit *(product code 9314)*.
Rapid Roof Putty is not compatible with clay tiles or Cambrian Slates.



Rapid Roof Putty

1

2



3

1

Remove the protective film from the back of the putty strip and place it on the ridge, positioning it 3.5cm set back from the front edge of where the ridge tile will go (once in position). Roughly form the shape of the profile of the tile and then lay the ridge tile on top of the putty. There must be 10-12mm thickness of putty between the ridge tile and the upper surface of the roof tiles.

2

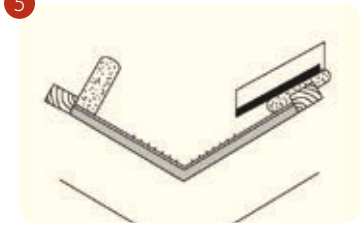
Remove excess putty and fill in any gaps with a trowel, smoothing the putty carefully and keeping it at right angles to the surface of the roof. Spare putty can be used to fix the next ridge tile. The butt joint between two ridge tiles is filled with putty, similar to mortar installations.

3

When all ridge tiles are in position secure each ridge tile to the timber ridge batten using a 100 x 4mm woodscrew and clamping plate.

RAPID ROOF PUTTY

5



4

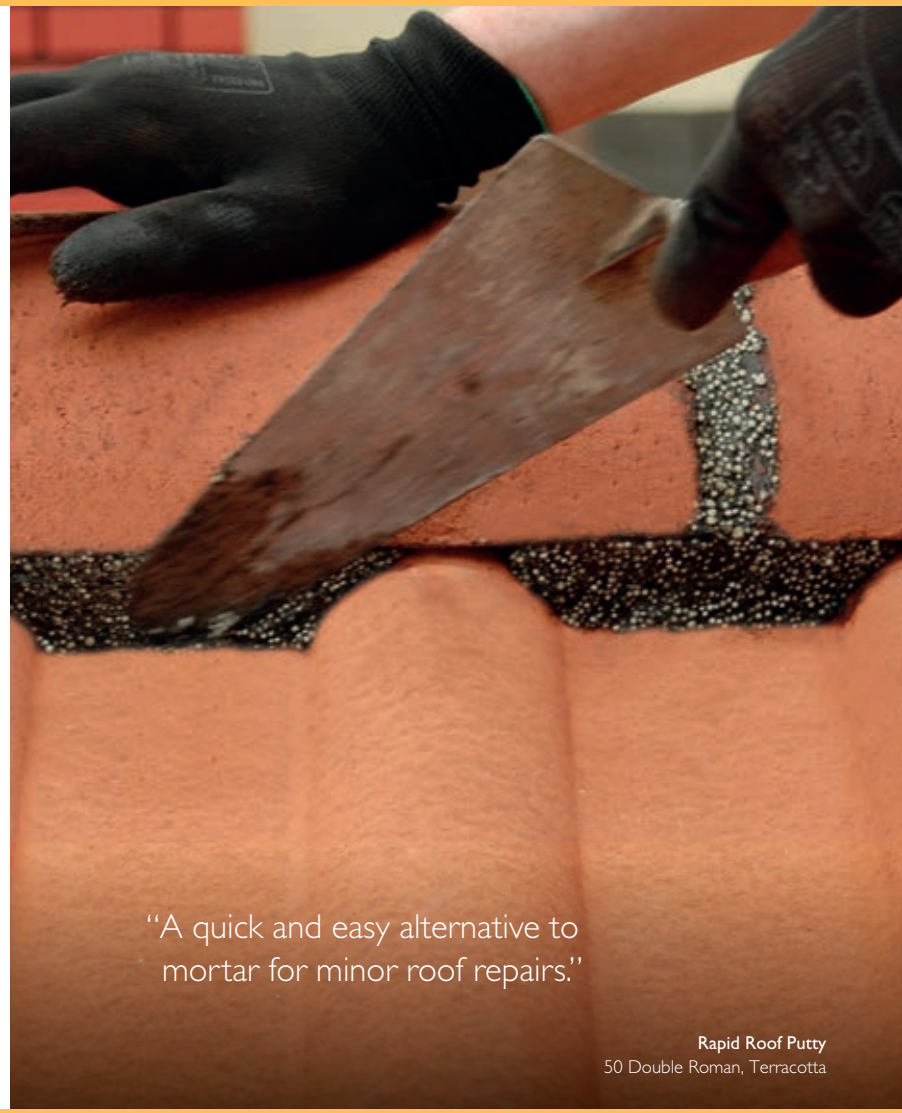
At hips, use a hip tile as a guide to find the correct position of the Rapid Roof Putty. The back of the strip must be positioned 3.5cm behind the front edge of the hip tile. Ensure all hip tiles are secured to the timber hip batten using 100 x 4mm woodscrews.

5

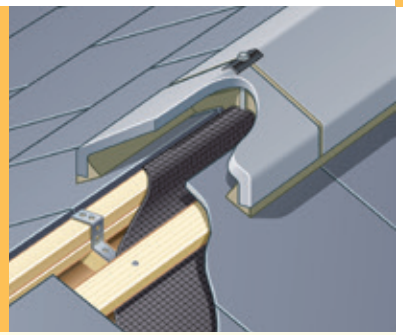
At valleys, place Rapid Roof Putty as shown in the sketch, set back at least 3cm from the cut roof tile edges. Press the Rapid Roof Putty down onto the valley. Remove the protective film from the back of the putty. Press the roof tiles down into the putty to establish good adhesion. Ensure that the putty thickness is 10-12mm.

NOTES

- Rapid Roof Putty is made from linseed and speciality mineral oils combined with micro polystyrene balls. Drying takes place naturally when exposed to air.
- Rapid Roof Putty withstands temperatures from -40°C. to +80°C. It works best when stored at 20°C.
- Store out of direct sunlight and excessive heat. Use within 1 year from the time of production.
- All tiles should be fixed according to the current standards and manufacturer's instructions.



The Redland Mortar Bedded Fixing Kit is the new way to mechanically fix mortar bedded ridges and hips. Ideally suited to traditional-style buildings, it enables the installer to maintain a traditional aesthetic, whilst still complying with BS 5534 and NHBC guidelines.



MORTAR BEDDED FIXING KIT: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
Mortar Bedded Fixing Kit	9314	8 Stainless Steel Batten Straps 16 Stainless Steel Ring Shank Nails 11 100 x 4mm Woodscrews 11 Universal Angle Clamping Plates

EXTRA COMPONENTS (SOLD SEPARATELY)

Ancillary Products (For fixing hips the following products may also be required)

Kro-Clip for fixing small cut tiles	9142
Hip Tail Clip	9519/9522
Head Clip/C-Clip	9518

Ridge Batten Strap

Screws and Nails

1

Lay underlay to the apex of the roof and batten the roof in the normal manner. Do not fix the top tiling batten at this stage. Use a combination of 38 x 25mm softwood battens to build up the ridge batten to the correct ridge batten height and nail them together at the same centres as the rafters with 65mm nails.

2

Form the Batten Straps so that they can wrap easily around the built-up ridge batten.

3

Position the ridge batten along the centreline of the apex. Nail the Batten Straps to the rafters using two 30 x 2.65mm annular ring shank nails provided.

4

Cover the ridge/hip tree with underlay and fix the top tiling batten in the usual way.

5

Tile the roof in the normal manner ensuring compliance with your manufacturer's fixing specification.

6

Apply mortar to the roof in the traditional way and place the ridge/hip tile on the roof in the normal manner. Remove excess mortar as normal and trowel to a smooth finish. When mortar has almost set use a soft brush to remove any mortar from tiles.

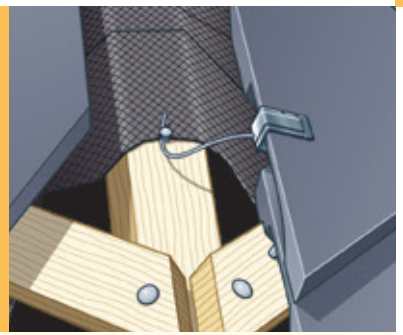
7

Insert the woodscrew through the clamping plate and embed it into the mortar join between the tiles. Screw the woodscrew in ensuring that it remains perpendicular to the roof. Alternatively the wood screw and clamping plate can be secured through the middle of the ridge/hip tile after pre-drilling a hole through the centre of the ridge/hip tile using a 6mm masonry drill bit.

MORTAR BEDDED FIXING KIT

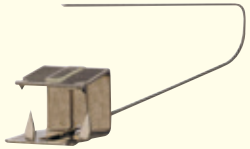
Mortar Bedded Fixing Kit
Mini Stonewold, Slate Grey

A versatile clip that allows small roof tile cuts to be mechanically fixed in accordance with BS 5534 Code of Practice for Slating and Tiling at hips, valleys, roof windows and many other applications where it is difficult otherwise to obtain a secure mechanical fixing either at the head or tail of the cut roof tile.



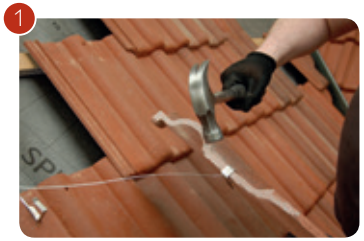
KRO-CLIP: PRODUCT CODE AND DESCRIPTION

Description	Product Code	Contents	Dimensions	Material
Kro-Clip	9142	50 per box	Wire: 380mm long Clip: 30mm long x 12mm depth (jaw), 16mm depth (back)	Corrosion-resistant stainless spring steel



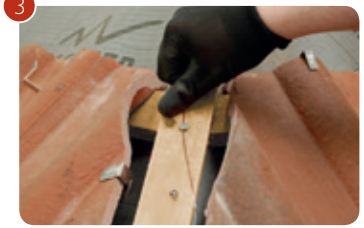
Kro-Clip

1



2

3



1

Push the jaws of the Kro-Clip (with the tail pointing towards the back of the tile) onto the edge of the tile and hammer firmly home.

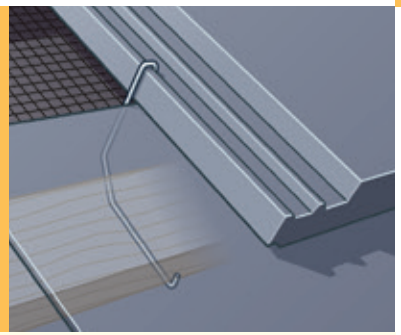
2

Hammer a nail half way into the rafter (or, as in the picture shown, a hip batten). The fixing point must be located above the clip position, and the distance between the fixing point and the clip must be kept as short as possible.

3

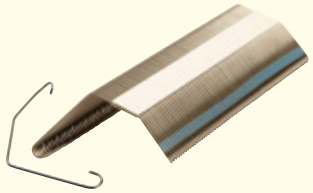
Wrap the tail several times around the nailed fixing point ensuring that the wire is pulled tight between the fixing point and the clip. Hammer the fixing point nail home to secure the tail.

Innofix Clip is the revolutionary new tool-free tile clip. It's simple to fix, with less tile breakage and it's quicker than ever to install. It's our strongest clip yet, and suitable for all UK exposure zones under the new BS 5534:2014. It is designed to work with 50 x 25mm tiling battens only.

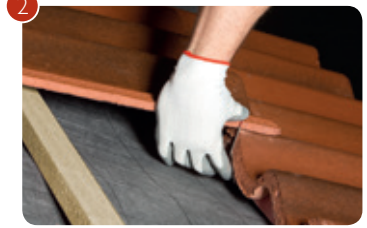


INNOFIX CLIP: PRODUCT CODES AND COMPATIBILITY

Description	Product Code	Contents	Compatibility
Innofix Clip – Red	9821	500	Grovebury / Regent / Landmark Double Pantile / Fenland Pantile
Innofix Clip – Light Blue	9822	500	50 Double Roman / Landmark Double Roman
Innofix Clip – Light Orange	9823	500	Redland 49 / Renown
Innofix Clip – Gold	9824	500	Mini Stonewold / MockBond Mini Stonewold
Innofix Clip – Purple	9825	500	Richmond 10 Slate / MockBond Richmond 10 Slate / Saxon 10 Slate / Landmark 10 Slate / DuoPlain



Innofix Clip



The Innofix Clip is installed by hooking onto the Redland tile interlock and then sliding beneath the 50 x 25mm roof batten, where it is then clipped into place:

1

Place the top (painted) hook of the Innofix Clip on the interlock of the tile.

2

Push the bottom part of the hook down under the 50 x 25mm batten – and wait for the audible 'click'.

3

Innofix Clip is fixed in a click (**Note:** underlay omitted for clarity).

INSTRUCTIONS FOR FITTING INNOFIX CLIP OVER A RAFTER

Where the edge of the tile interlock sits above a rafter, the clip is prevented from sliding directly beneath and must therefore reach around the rafter to hook either side of the obstructing timber. This will be a tighter fit and the Innofix click will not be as audible, but the clip will reach around the rafter and hook onto the batten just the same.

HIP END CAP

Redland Hip End Caps are the new way to finish off a dry hip installation. Cost effective and quick to install, Hip End Caps are compatible with all Redland dry hip systems and clay universal angle and third-round hip tiles.

HIP END CAP: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
Hip End Cap (Universal Angle)	9704	1
Hip End Cap (Third-Round)	9712	1

2

1

Install your chosen Redland dry hip system in accordance with its own installation instructions ensuring its compatibility with the chosen tile and fitting type.

2

Place the first hip tile on the hip and slide the Hip End Cap under it.

3

3

Screw the hip tile in place through a pre-drilled hole in the tile. A hole will be punched through the Hip End Cap ensuring a secure fit. Continue to install hip tiles as normal up the hip.

RIDGE END CAP

Redland Ridge End Caps are the easy way to complete a dry ridge installation. Cost effective and quick to install, Ridge End Caps are designed to colour match the Redland Rapid Verge system as well as Redland's clay Universal Angle ridge tiles.

RIDGE END CAP: PRODUCT CODES AND DESCRIPTIONS

Description	Product Code	Contents
Ridge End Cap (Universal Angle)	9773	1
Ridge End Cap (Half-Round)	9772	1

1

1

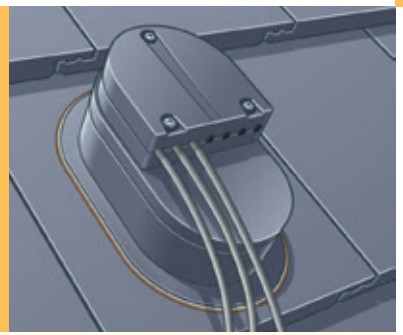
Install the Dry Verge in accordance with the instructions in section 4, ensuring the ridge combs interlock correctly.

2

2

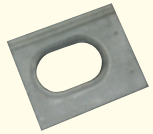
Position the Ridge End Cap over the final ridge tile and screw into the ridge batten, ensuring that it is securely fixed.

A range of modular outlet adaptors, that can be combined with Redland interlocking concrete tiles to give a great fit and match to the rest of the tiles, giving peace of mind and a properly sealed roof.



OUTLET ADAPTORS: PRODUCT CODES AND DESCRIPTIONS

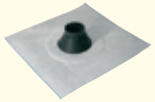
Description	Product Code
Outlet Adaptors	
Cable Outlet Adaptor	9262
Solar Outlet Adaptor	9263
Aerial Outlet Adaptor	9264
Outlet Base Tiles	
Regent Outlet Base	9249
Grovebury Outlet Base	9250
Renown Outlet Base	9251
50 Double Roman Outlet Base	9252
Stonewold II Outlet Base	9253
Mini Stonewold Outlet Base	9255
Landmark Double Pantile Outlet Base	9256
Landmark Double Roman Outlet Base	9257
Richmond 10 Outlet Base	9259
Saxon 10 Outlet Base	9260
Landmark 10 Slate Outlet Base	9261
Cable Seals	
Cable Seal 8–12mm	9469
Cable Seal 15-22mm	9470
Cable Seal 25-32mm	9471



Outlet Base Tile
(Mini Stonewold shown)

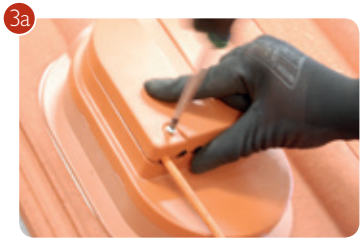
Aerial Adaptor

Solar Adaptor



Cable Seal

Cable Adaptor Set



1

Position base tile to avoid roof rafters and mark underlay with a 'cross' at centre of opening. Cut to allow cables or aerial post to pass through.

2

Seal around the cables with a Cable Seal. Stick to underlay in a diamond orientation.

3a CABLE OUTLET ADAPTOR

Push Adaptor onto base tile and snap into place, ensuring all 4 tabs are engaged. Cut one block off blanking strip for each cable being used, and insert into front channel. Then, with cables in position, add the foam strips and adaptor cover and screw into place.

3b SOLAR OUTLET ADAPTOR

Pass the large cable through the Adaptor and snap the Adaptor into place. Cut the end of the rubber gasket to suit the size of the cable. It should be a close fit to provide a weathertight solution. Push the gasket firmly onto the Adaptor.

3c

3c AERIAL OUTLET ADAPTOR

The Aerial Adaptor, for fixing aerials or satellite dishes, comes in two parts. Attach the top part one way round for a lower roof pitch range or the other way round for a higher roof pitch range – i.e. so that the outlet is as vertical as possible. Snap the Aerial Adaptor onto the base tile with the outlet vertical.

Redland

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