

Roof Slates

ACCESSORIES

Verges, Ridges, Ventilation & Fixings



Pitched roof accessories

At Cembrit we have decades of expertise sourcing and advising on complete pitched roof covering solutions.

Our accessories are specified to comply with BS 5534:2003 and are produced from a variety of materials selected to provide the best performance for the most common UK pitched roof details. The Cembrit range also includes options to correspond with varying regional traditions as well as differing skill levels.



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Ridges

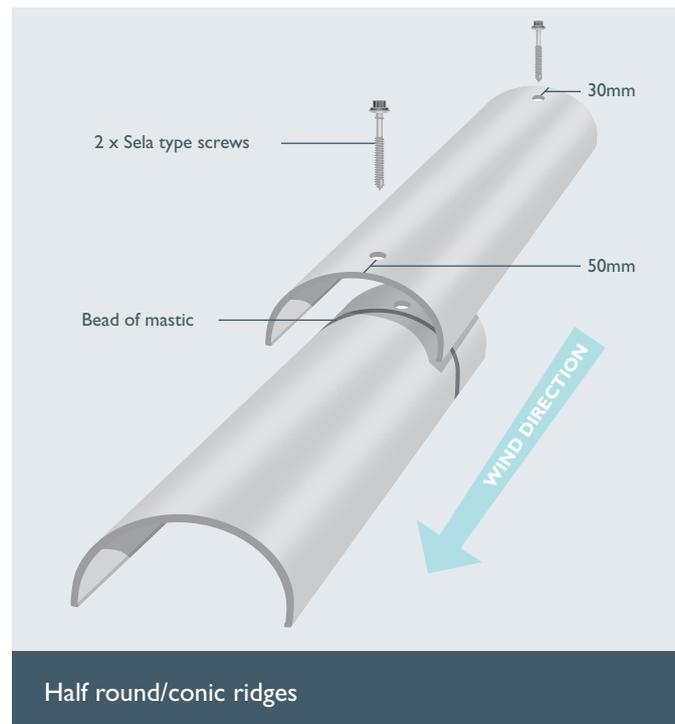
Dry fixed fibre-cement ridges and wet fixed concrete/clay/natural slate/GRC ridges to BS 5534:2003

Cembrit fibre-cement ridges are manufactured to BS EN 492:2004 product specification for fibre-cement slates and their fittings. The factory operates a quality management system complying with ISO EN 9001:2000 and an environmental management system to ISO EN 14001:2004.

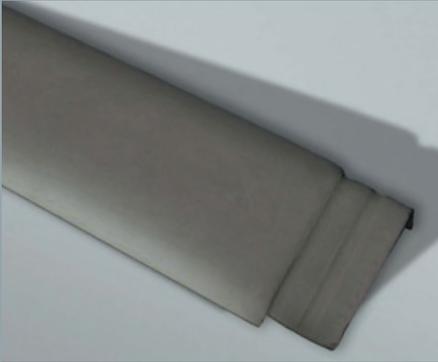
Fibre-cement Ridge Fixing Locations



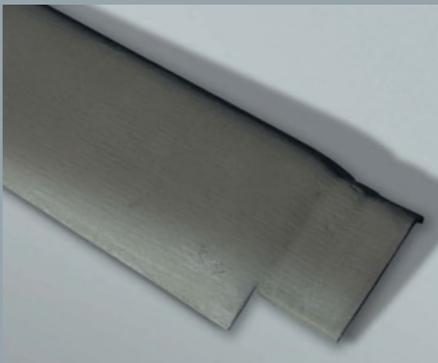
Screw holes should be pre-drilled 2mm larger than the diameter of the Sela screw. 4 fixings are used per ridge, 2 per wing, located 75mm from the bottom edge and 130mm from end of the wing. The open end of the ridge overlays the socket. It is advisable to seal this join by applying a bead of mastic to the groove in the socket particularly in exposed locations.



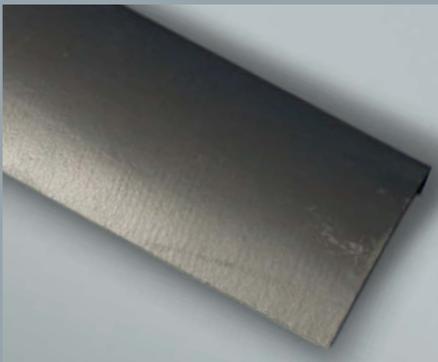
Screw holes should be pre-drilled 2mm larger than the diameter of the Sela screw. 2 fixings are used per ridge, each fixing through 2 thicknesses of ridge. It is advisable to seal the overlap in front of the fixing holes with a bead of mastic particularly in exposed locations.



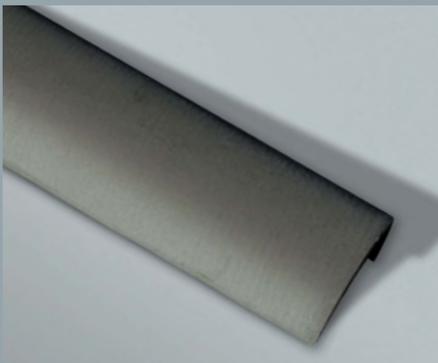
Universal



Plain angle



Large half round conic



Baby conic

Fibre-cement dry fix ridge and hip coverings (cappings)

Ridges and hips are subject to high wind loadings. Experienced slaters, working according to BS 8000:1990 part 6 and BS 5534:2003, can create a weatherproof hip by close mitring the slates. It is however common practise at low pitches and for less experienced slaters to use “cappings” to provide extra protection on hips as well as on ridges.

Fibre cement ridge/hip covering product range – Dimensions

Profile	Joint	Roof pitch	Ridge angle	Cover length (mm)	Wing (mm)	Cover width (diameter)	Block end depth (mm)
Universal	Spigot	(nominal) 37°	106°	600	175	252	n/a
	End cap Socket	(nominal) 37°	106°	600	175	252	200
	End cap Spigot	(nominal) 37°	106°	600	175	252	200
Plain angle	Spigot	22.5°	135°	525	120	200	n/a
	End cap Socket	22.5°	135°	500	120	200	190
	Spigot	30°	120°	525	120	200	n/a
	End cap Socket	30°	120°	500	120	200	195
	Spigot	37.5°	105°	525	120	200	n/a
	End cap Socket	37.5°	105°	500	120	200	190
	Spigot	45°	90°	525	120	200	n/a
	End cap Socket	45°	90°	500	120	200	200
	Spigot	52.5°	75°	525	120	200	n/a
	End cap Socket	52.5°	75°	500	120	200	75
Large half round conic				c.400	n/a	(230) 206	n/a
	Small end cap				n/a	190	211
	Large end cap				n/a	220	228
Baby conic				c.300	n/a	(120) 112	n/a

Concrete/clay/GRC wet fix ridge and hip coverings (cappings)

Ridges are available with plain or capped ends and in universal, angled or curved profiles.

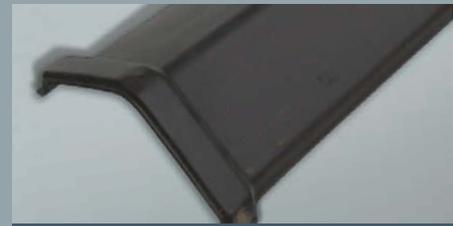
Ridges bedded in mortar are the traditional method for protecting the vulnerable apex of both natural and fibre cement slate roofs. They are also used as hip coverings. Mortar is mixed to a ratio of 1:3 cement to sand, and in the case of fibre cement slate an anti-shrink additive is added to the mortar and a bonding agent applied to the surface of any fibre cement slates that will receive the mortar. Slate slips and mortar are used to fill the voids at the gable ends.

Concrete/clay/GRC wet fix ridge and hip covering product range – Dimensions

Profile	Joint	Roof pitch	Ridge angle	Material	Colour	Cover (mm)
Universal	Plain	n/a		Concrete	Grey	450
		n/a		Concrete	Black	450
		n/a		Concrete	Terracotta	450
Universal	Capped	n/a		Clay	Black	400
		n/a		Clay	Terracotta	400
Angled	Plain	45°	90°	GRC	Blue black	450
		45°	90°	Concrete	Grey	450
		35°	105°	GRC	Blue black	450
		35°	105°	GRC	Terracotta	450
		30°	120°	GRC	Terracotta	450
Angled	Capped	45°	90°	Concrete	Black	450
		45°	90°	Concrete	Terracotta	450
		45°	90°	GRC	Black	450
		45°	90°	GRC	Blue black	450
		45°	90°	GRC	Terracotta	450
		35°	105°	Concrete	Grey	450
		35°	105°	GRC	Blue black	450
		35°	105°	GRC	Terracotta	450
		30°	120°	Concrete	Grey	450
		30°	120°	GRC	Blue black	450
Curved	Angled	22 – 35°	n/a	Concrete	Grey	450
					Black	450
					Terracotta	450
Angled	Plain	45, 35, 32.5	90, 105, 115	Slate	Grey/green	450
					Graphite	450
Universal monopitch <small>Made to order</small>	Plain	n/a		Concrete	Grey	450
					Black	450
					Terracotta	450



Universal (Concrete/Terracotta)



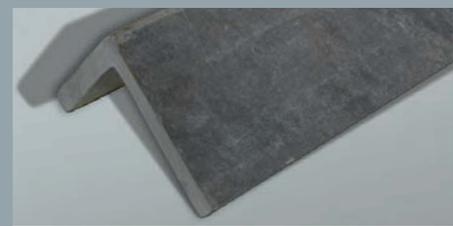
Capped (Clay/Black)



Angled (GRC/Terracotta)



Curved (Concrete/Black)



Angled (Natural slate/ Grey/green)



Monopitch (Concrete/Black)

Ventilation

In line with current design principles, Cembrit's portfolio incorporates a range of unobtrusive roof slope vents and ridge ventilation strips, that allow the designer to comply with Building Regulations requirements without compromising the sleek appearance; one of the chief characteristics designers attempt to achieve with the specification of slate roofs.

The requirements for ventilation

The warmer the air the greater its capacity for holding water vapour. Improved levels of insulation and draft proofing are creating higher indoor temperatures and reducing the levels of fortuitous ventilation. Increased water vapour generation associated with 21st century lifestyles creates a need for better condensation control. This is called for by the UK Building Regulations and the Building Standards.

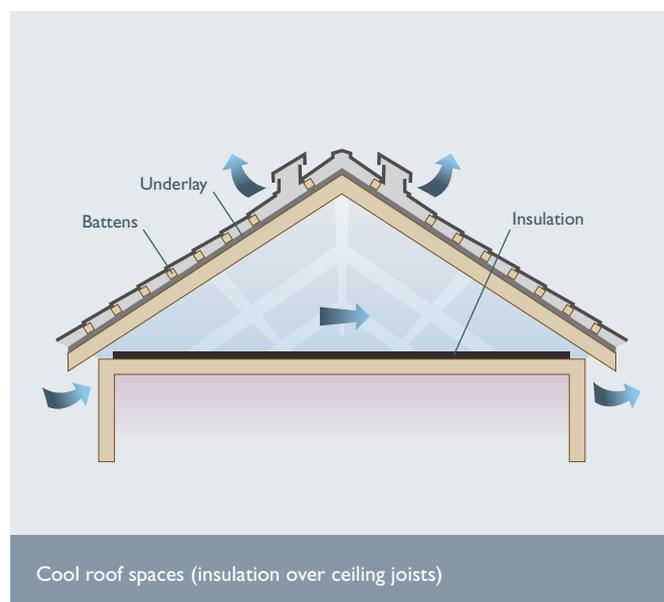
As warm air rises, the critical point for passive condensation control occurs where moisture laden warm air meets a cold surface. This will often be between the insulation and the roof covering regardless of whether the insulation is laid horizontally over the ceiling joists or on the incline at roof rafter level. The risk of condensation is usually greatest on the underside of the roof covering or roof underlay or both.

The use of "breather" or "vapour permeable" roofing underlays with slates

Fibre cement slates and many natural slates are considered as "tight fitting" roof coverings as defined by BS 5250. Consequently the roof space, and in the event of warm roof construction the batten cavity above the roofing underlay, must always be ventilated regardless of the type of underlay used. Sections 8.4.2.2 to 8.4.2.6 give design guidance for particular roof constructions.

So called "breather" membranes cannot be used with any fibre cement slates and some natural slates without ventilation.

In the UK there are two basic roof types:

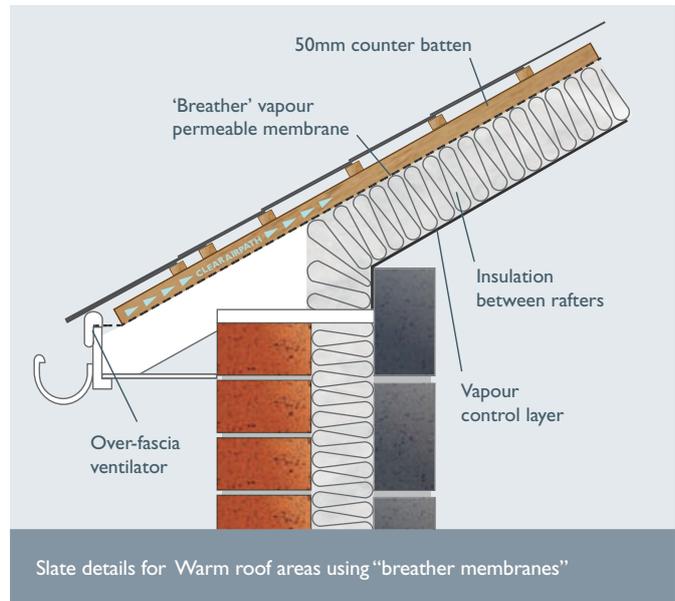
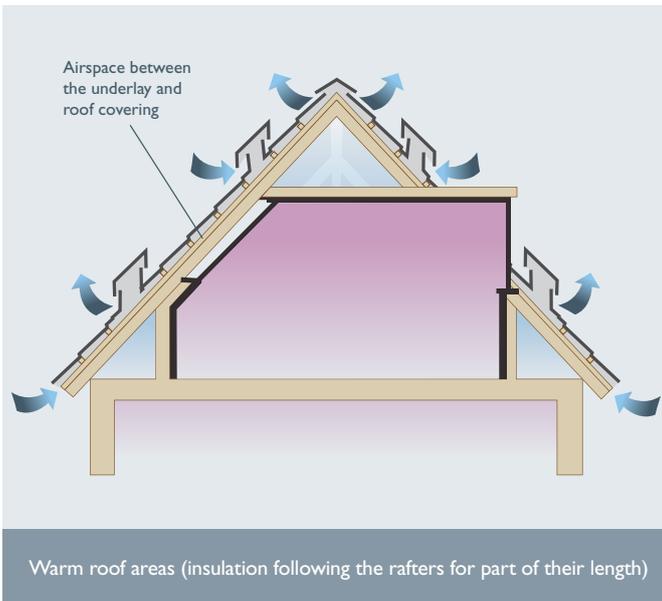


a) 'Cold roofs'

This is the more common UK roof construction. Insulation is installed horizontally over the ceiling joists. The roof space is cold and condensation is reduced by ventilation.

Wherever possible there should be a clear airpath through the roof from eaves to eaves with no stale pockets. The equivalent of a 10,000mm² continuous airgap should be provided at the eaves/ bottom of all roof slopes. In addition it is recommended to provide the equivalent of a continuous 5,000mm² airgap at the ridge/top of all roof slopes. This is particularly recommended at steeper pitches of 35° or more and wide roof spans of 10m or more.

The NHBC 2011 Standards have incorporated BS 5250 recommendations for a continuous 5mm airgap for the length of the ridge as a requirement.



b) 'Warm roofs'

Where the roof space is intended to be a habitable room, insulation is installed to the pitch of the roof between or above the rafters for all or part of the length of the rafters. A minimum 50mm airgap must be provided between the top of the insulation and the underside of the roof underlay by the use of counterbattens on the tops of the rafters. Ventilation is still required in the space between the insulation and the roof covering.

Wherever possible there should be a clear airpath through the roof from eaves to eaves and eaves to ridge with no stale pockets. The equivalent of a 25,000mm² continuous airgap should be provided at the eaves/bottom of all roof slopes and a continuous 5,000mm² airgap at the ridge/top of all roof slopes.

British Standard 5250:2002 describes the appropriate ventilation to be applied to various specific roof constructions.

Recommended detail for slates on a 'warm roof'

Use an impermeable (HR) membrane laid over counterbattens which create a 50mm airgap between the underlay and the insulation. Ventilation is provided for at eaves, via soffit vents or over fascia vents. In the case of over fascia vents the impermeable membrane is dressed over the over-fascia vent.

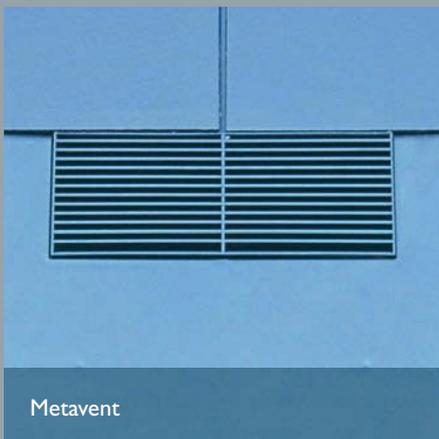
If so called 'breather membranes' (LR) are insisted on the batten cavity must be ventilated with over fascia vents. The 'breather membrane' is fitted beneath the vents as shown in the diagram above. Continuous ridge ventilation is always required on warm roof constructions.

In-line vent installation

Vents are installed to the same bond as surrounding slates. The intermediate batten between the rafters (approx. 2/3 from the foot of the slate) must be cut between the rafters and re-nailed further up the roof to accommodate the air channel/adaptor on the underside of the vent and to support the head of the vent. Cembrit's in-line natural slate ventilators; Slate vent 2 can be used with 500x250mm (20"x10") slates. The adjacent slates must be cut to maintain the broken bond effect.



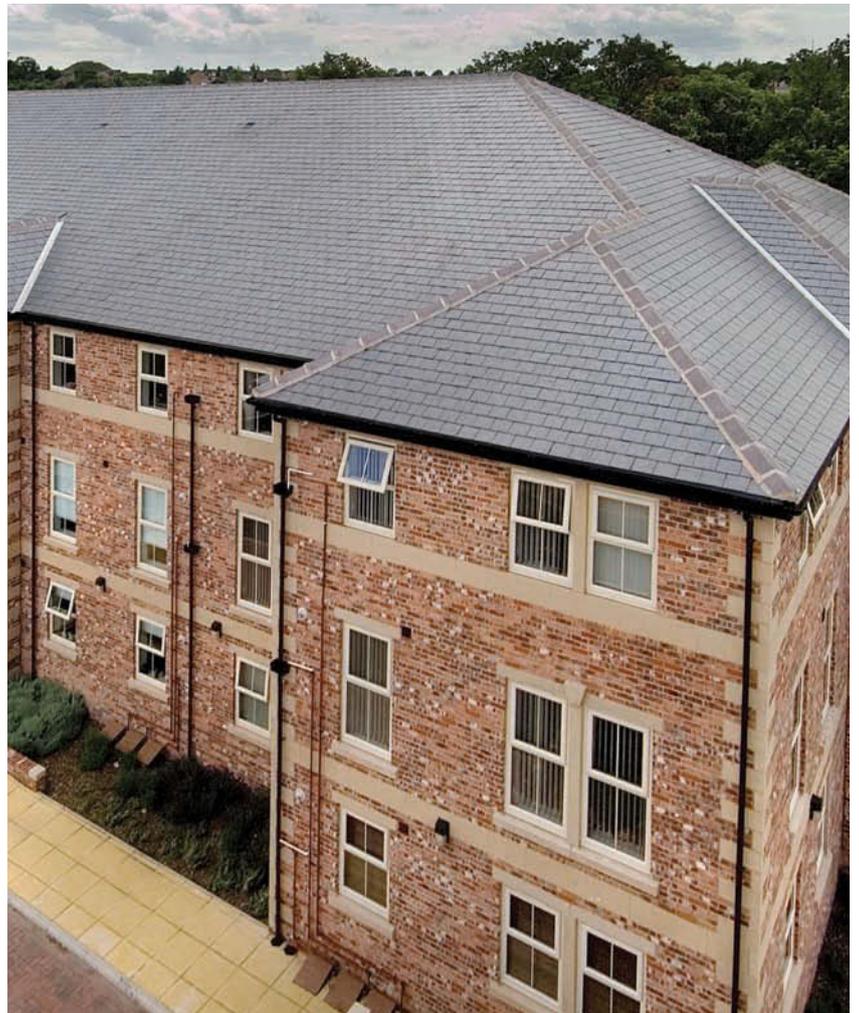
Slate Vent



Metavent



Vent Adaptor



In-line roof slope vents – product range

Product	Clear air capacity	Appearance smooth	Appearance textured	Dimension 600x300mm	Dimension 500x250mm
Metavent	10,000mm ²	✓	✓	✓	✓
Slate Vent 2 (grill & vent apparatus set into natural slate)	10,000mm ²		✓	✓	
Vent adaptor	10,000mm ²	n/a	n/a	✓	✓

BS 5250:2002 Code of practice for control of condensation in buildings requires low level inlet/outlet and high level outlet of air into and out of the roof to remove potentially damaging condensation. In-line vents fulfill both functions according to where they are located in the roof. They can also be used to provide ventilation where continuous ventilation is not possible such as on hip and valley slopes. In-line vents can be converted to terminals for gas and soil outlet when used with adapters and flexible hoses.

Ridge ventilation

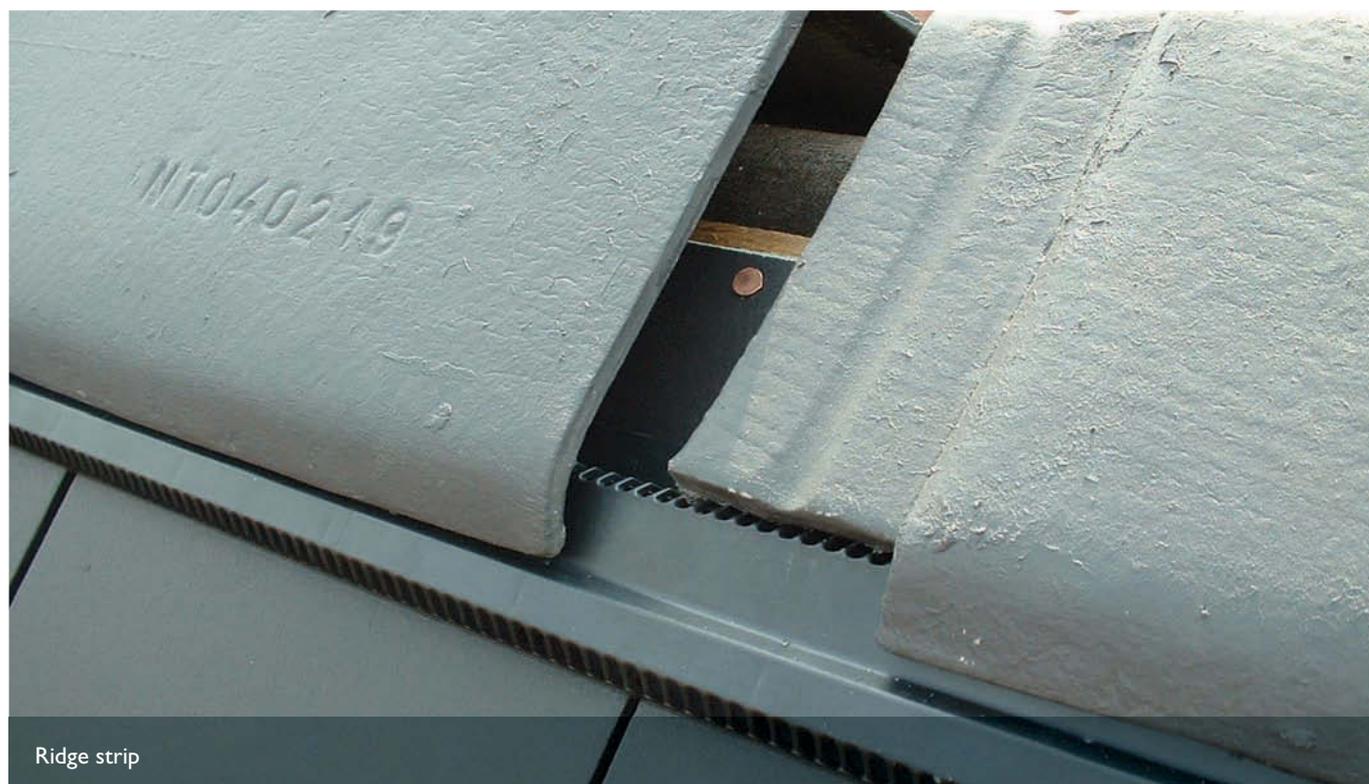
BS 5250:2002 requires high level ventilation outlets at or near the apex of any roof slope. Outlets should provide the equivalent of 5,000mm² of continuous ridge ventilation.

Cembrit's vent strips are compatible with universal ridges, round ridges and other ridge profiles that have a wing that can rest in the concave top of the strip.

Cembrit's ridge vent roll is a fast fix method of creating continuous ridge ventilation where heavier ridge cappings are used. The system comprises ventilated aluminium corrugated roll, fixing screw and stainless steel ridge clip for all butt jointed ridges. The system can also be used with socketed ridges but the ridges require to be fixed through the apex of the ridge itself.

Ridge Strip options

Product	Clear air capacity	Length	Fixing	Compatibility
Ridge strip	5,000mm ²	900mm	2 nails per strip	Universal/ round/conic
Ridge vent roll	5,000mm ²	5m	2 felt clout nails at 2m centres	Concrete, clay and GRP ridge



Verges

The perimeters of pitched roofs are their most exposed areas and are subject to high wind loadings. It is important that tried and tested components, corresponding to the requirements of British Standards, are used to complete these vulnerable details.

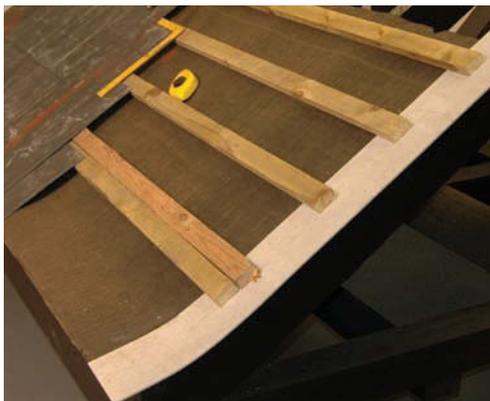
Wet Verge

The traditional approach to producing a weathertight verge is to fix a flat strip of material (undercloak) up the length of the last rafter from eaves to ridge to support a bed of mortar. The mortar is applied to the gap between the flat strip and the roof covering, sealing the gap and protecting the ends of the roof covering battens from rain saturation.

Cembrit's fibre cement undercloak is a buff coloured strip meeting the fire performance requirements of BS 476:1989 part 6 and BS476:1997 part 7. The strip is autoclaved for improved moisture resistance and strength. It is available in a number of lengths, widths and thicknesses to suit various roof configurations.

Undercloak Product Range – Dimensions

Thickness	Length	Width	Quantity per pallet	Weight per strip in Kg
3.2mm	1200mm (4')	150mm (6")	1000	0.91
4.5mm	1200mm (4')	150mm (6")	600	1.28
4.5mm	2400mm (8')	150mm (6")	420	2.56
4.5mm	1200mm (4')	300mm (12")	300	2.56



Dry Verge

There are many proprietary, mechanically fixed systems on the UK market, with varying degrees of complexity. All are designed to eliminate the need for accurately mixing the correct ratio of sand/cement mortar and associated problems of mortar shrinkage/cracking. Dry verge systems have the additional advantage of being able to be installed whatever the weather, wet verge installation is restricted to dry weather conditions.

Cembrit's system has been selected to provide guaranteed secure fixing with the minimum number of components each of which are available individually or as a complete system. The strip is produced from tough extruded PVCu coloured slate grey. The strip seals the verge and protects the ends of the battens. It is also self draining.

Dry verge strip product range – Dimensions

Component	Dimensions
Dry verge strip	2400mm
Dry verge strip connector	50mm
Right hand dry verge stop end	n/a
Left hand dry verge stop end	n/a



Fixings

Cembrit supply fixings whose specifications comply with the requirements of BS 5534:2003. Using the specified fixings will dramatically reduce the risk of failure of the pitched roofing project.

Type / Standard	Compatibility	Length	Shank diameter	Head	Quantity per pack
Slate nails (Copper)/ BS 5534:2003	Natural	32mm	3mm	10mm	1Kg/5Kg
	Fibre cement	30mm	2.65mm	8mm	1Kg/5Kg
	Natural	35mm	3mm	10mm	1Kg
	Natural	38mm	3mm	10mm	1Kg/5Kg
Nail hooks (Black stainless steel)/ BS 1554:1990 S316 For roof pitches between 25 – 30° crimped shanked hooks (crossinus) are available	100mm headlap		2.7mm	n/a	500
	80mm headlap		2.7mm	n/a	500
	117mm headlap		2.7mm	n/a	500
	120mm headlap		2.7mm	n/a	500
	130mm headlap		2.7mm	n/a	500
Disc rivets (Copper)	Fibre cement slates	20mm	2mm	Disc 20mm x ≥ 0.45	1000
Shingle nails (Stainless steel)/ AISI 304	Cedar shingles	31mm	2.1mm	4mm	1Kg
	Cedar shingles	30mm	2.1mm	4mm	1Kg
Sela washer self tapping screw (Stainless steel)/ S304	Fibre cement ridge	76mm	5mm	Black nylon hex cap	100

The combination of Cembrit products, accessories complying with BS 5534 & 5520 and professional workmanship undertaken to the various relevant BS 8000 Codes of Practise will provide a long lasting and attractive pitched roof.



Slate nails (Copper)



Nail hooks (Black stainless steel straight shank)



Disc rivets (Copper)



Shingle nails (Stainless steel)



Sela washer self tapping screw (Stainless steel)



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|----------------|-----------------------|
| 1 London | T +44 (0)20 8301 8900 |
| 2 Southampton | T +44 (0)23 8061 5631 |
| 3 Bovey Tracey | T +44 (0)1626 835722 |
| 4 Llandow | T +44 (0)1446 773777 |
| 5 Normanton | T +44 (0)1924 890890 |

Cembrit Ltd

57 Kellner Road
London
SE28 0AX

Tel: +44 (0)20 8301 8900

Fax: +44 (0)20 8301 8901

sales@cembrit.co.uk

