



PREFA ROOF SYSTEMS

PLANNING GUIDE



NOTE

The planning guide shows examples of the different PREFA products and PREFA Aluminiumprodukte GmbH accessories in various scenarios.

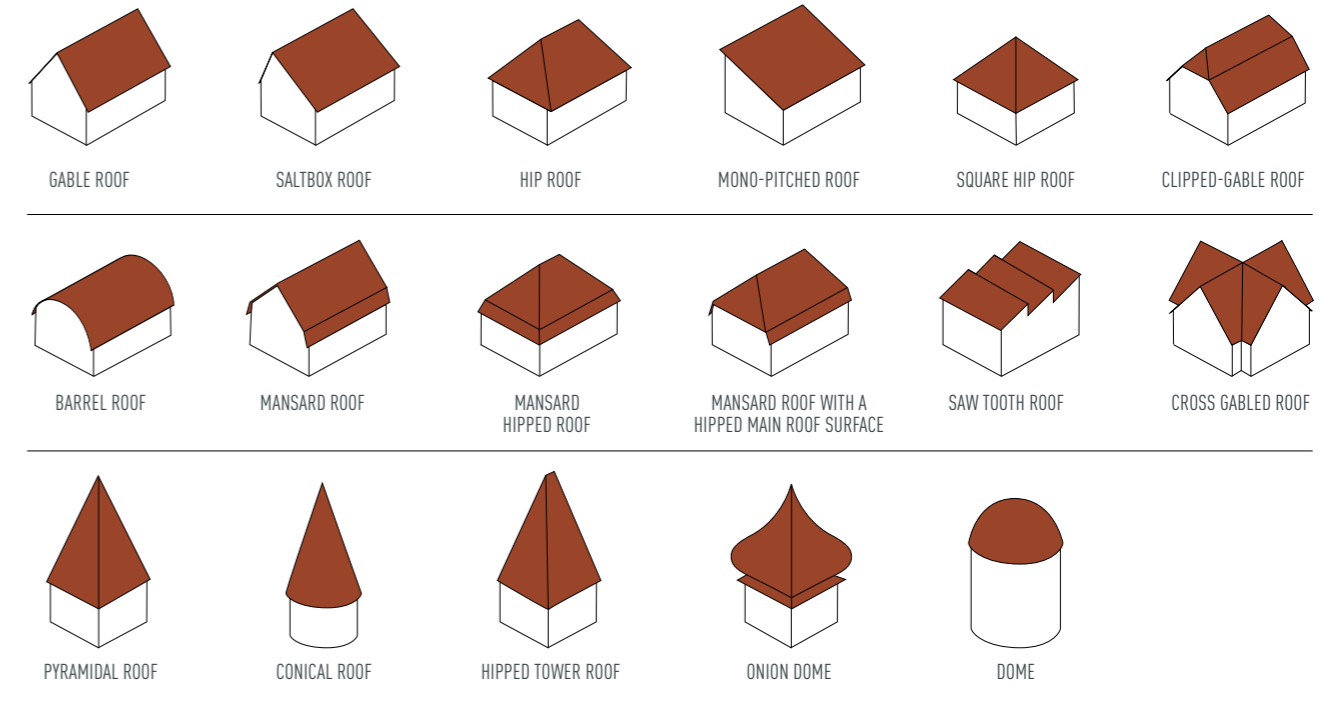
The planning guide is by no means an exhaustive list of all the details or implementation options, and is not meant to be understood as planning or installation guidelines. Visit www.prefa.com where you can find a comprehensive description of the details next to each respective product.

National standards and guidelines may stipulate other designs and must be taken into account.

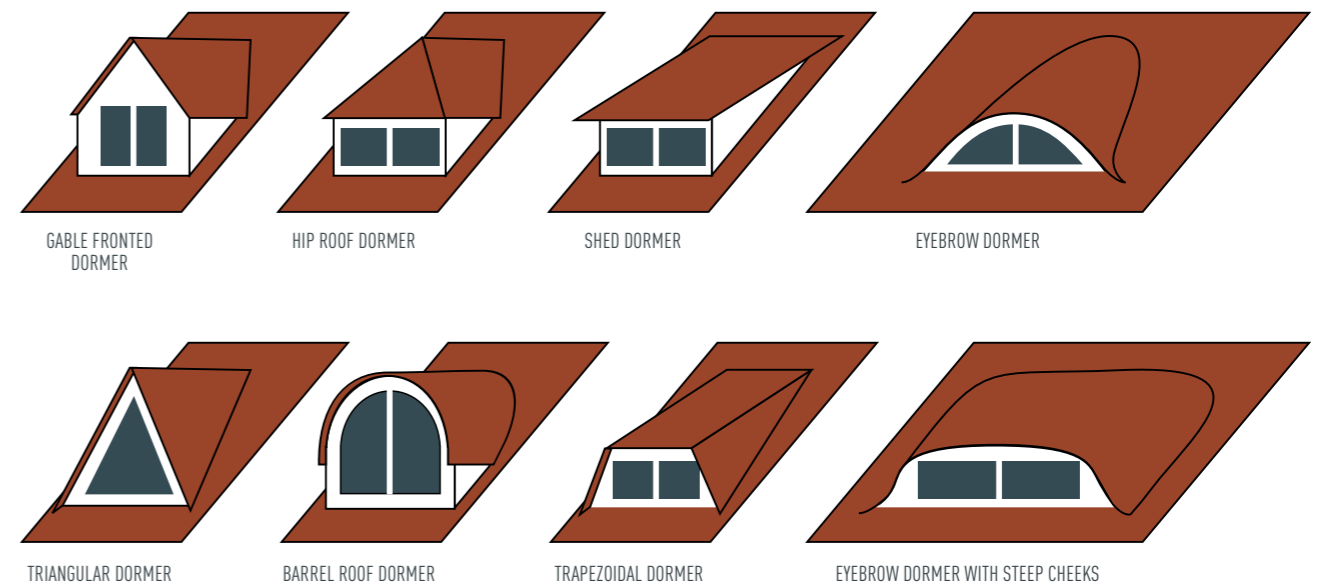


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ROOF SHAPES

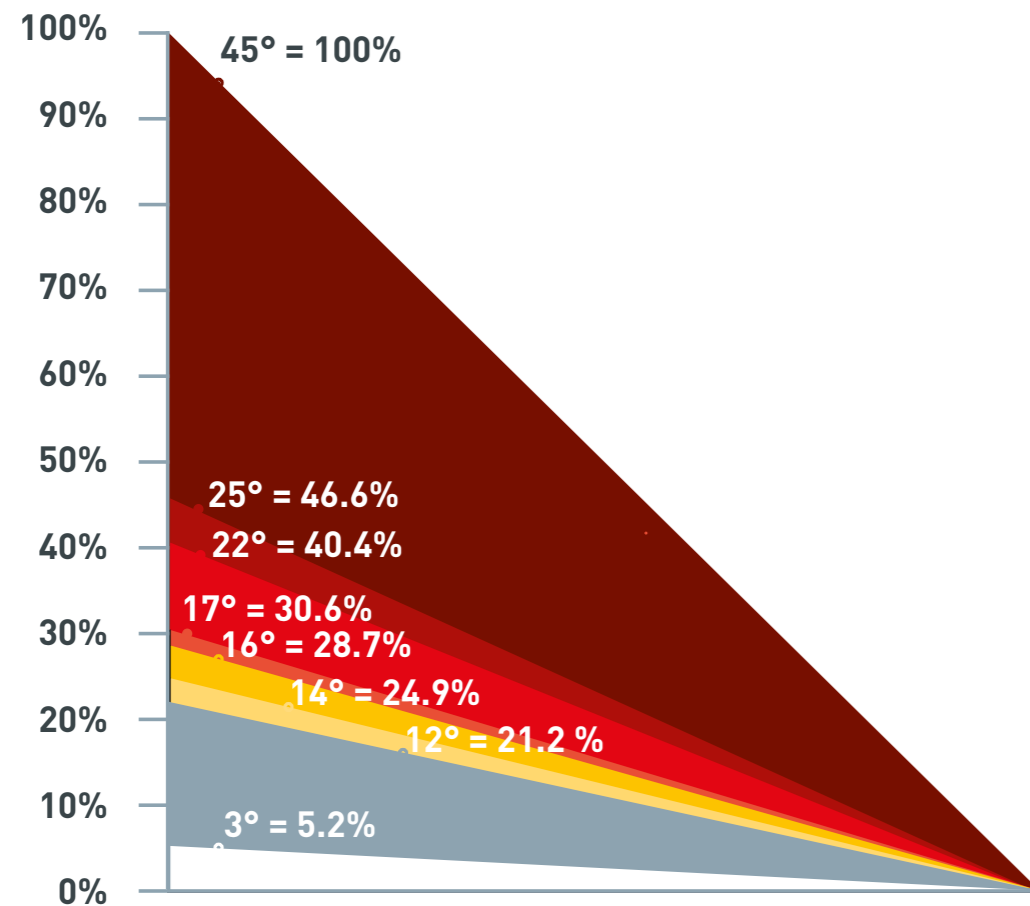


DORMER SHAPES



ROOF PITCH

	≥ 3°*	≥ 5°*	≥ 7°	≥ 12°	≥ 14°	≥ 16°	≥ 17°	≥ 22°	≥ 25°
Roof tile				rafter length: < 7 m					
				rafter length: 7–12 m					
				rafter length: > 12 m					
R.16 roof tile				Up to 25°: only with a bituminous separation layer					
Shingle				From 25°					
DS.19 shingle				Up to 25°: only with a bituminous separation layer					
Rhomboid roof tile 29 × 29				From 22°					
Rhomboid roof tile 44 × 44				rafter length: < 7 m					
				rafter length: 7–12 m					
				rafter length: > 12 m					
FX.12 roof panel				Up to 25°: only with a bituminous separation layer					
PREFALZ				* Restrictions, deviations and additional measures according to national standards and specialist guidelines and PREFALZ's installation instructions must be taken into account.					

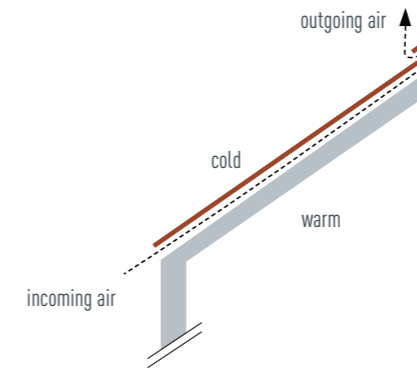


ROOF STRUCTURE

ALUMINIUM ROOFS WITH A VENTILATED SUPPORTING SUBSTRATE

Ventilated roof structures have been used for many decades and have proven themselves in all climatic conditions. That's why PREFALZ recommends constructing aluminium roofs with a ventilated supporting substrate. The roof covering and thermal insulation layers are separated by a ventilated gap. The advantage of this is that any moisture that may occur, e.g. due to condensation or moisture caused by occupancy diffusing from the interior rooms, is removed again. In principle, the roof covering is ventilated (see figure 1). However, the entire attic can be ventilated too (see figure 2).

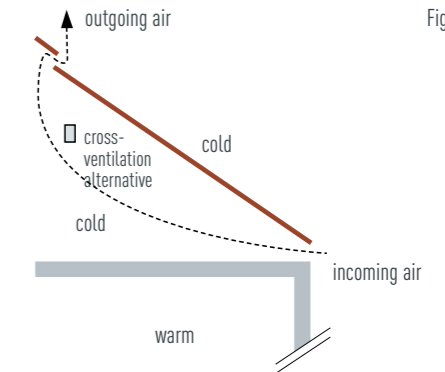
Figure 1



ATTIC CAN ALSO BE USED AS LIVING SPACE.

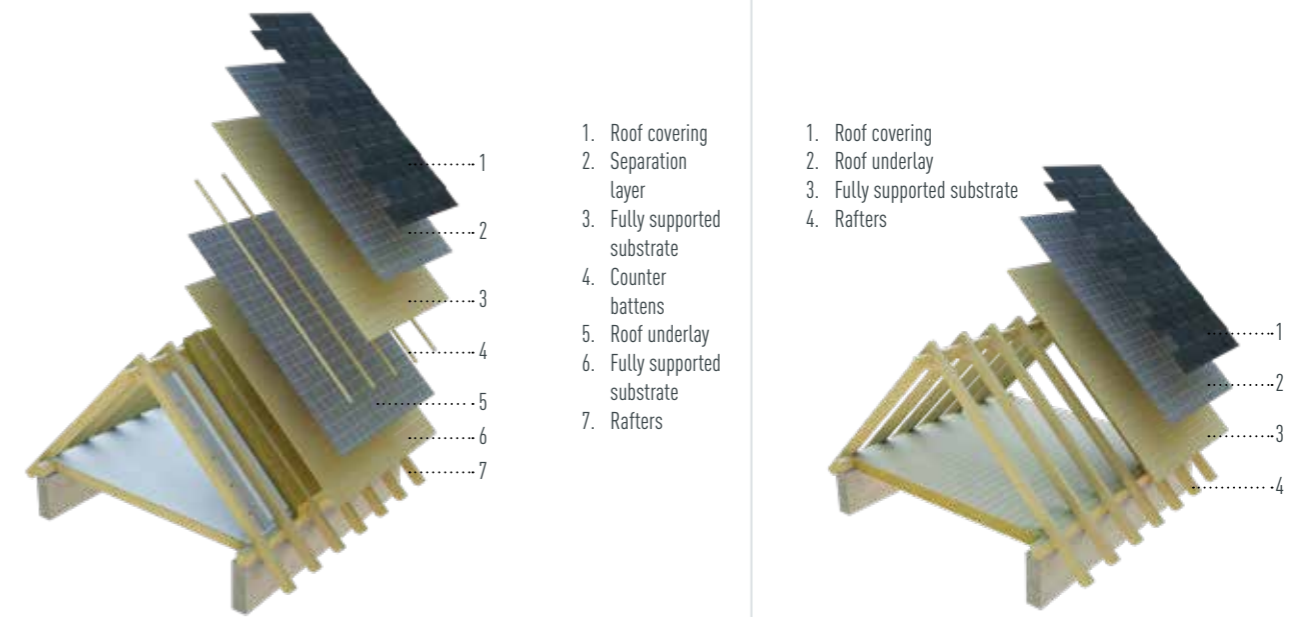
Compared to a single-skin roof structure, a ventilated channel is added to the double-skin roof structure (counter battens). This makes it possible to also thermally insulate between the rafters (straightforward creation of an attic extension at a later stage).

Figure 2



THE ATTIC IS NOT USED AS LIVING SPACE

With this type of roof structure, the attic ceiling must be thermally insulated (complicated creation of an attic extension at a later stage).



- The roof structure must be designed according to building physics criteria (e.g. thermal insulation, airflow).
- The arrangement and dimensioning of the air inlet and outlet vents must be planned and implemented according to building physics requirements.
- Non-ventilated structures should be designed as a special solution and planned separately.
- The need and requirements for the underlay according to national standards and specialist guidelines must be taken into account.

SEPARATION LAYER AND SUPPORTING SUBSTRATE

THE SUPPORTING SUBSTRATES MUST BE DESIGNED AND BUILT ACCORDING TO STATIC REQUIREMENTS.

FULLY SUPPORTED SUBSTRATE

Roof tiles, R.16 roof tiles, roof shingles, DS.19 roof shingles, 29 × 29 rhomboid roof tiles, 44 × 44 rhomboid roof tiles, FX.12 roof panels and **PREFA**LZ must be installed on a fully supported substrate. The fully supported substrate must be executed in accordance with national standards and regulations.

- Board width: 80–160 mm*
- Board thickness: min. 24 mm*
- Wood moisture: max. 20%*

* National standards and guidelines must be taken into account.

➔ FROM A SNOW LOAD OF 3.25 kN/m² OR IN THE TERRAIN CATEGORIES 0, I OR II, ALL PREFE SMALL-FORMAT PRODUCTS REQUIRE INSTALLATION ON A FULLY SUPPORTED SUBSTRATE WITH A BITUMINOUS SEPARATION LAYER.



Terrain category 0 - lakes and coastal areas exposed to the open sea.

Terrain category I - lakes and areas with low vegetation and without obstacles.

Terrain category II - areas with low vegetation such as grass and individual obstacles (trees, buildings) with distances of at least 20 times the height of the obstacle.

Terrain category III - areas with uniform vegetation and buildings or with individual properties with distances of less than 20 times the height of the obstacle (e.g. villages, suburban developments, forest areas).

Terrain category IV - areas where at least 15% of the surface is covered with buildings that are of an average height of 15 metres.

SHEETS MADE OF WOOD-BASED MATERIALS

- When using wood-based sheets as an installation substrate for aluminium roof coverings, the choice of thickness, the mounting to the wood-based material and the intended use as a metal roof substrate must be agreed with the manufacturer or dealer of the wood-based panels.
- When using wood-based sheets, a separation layer is required.
- Structural woodwork such as step work, internal gutters, recessed (lowered) valley or roof verge constructions should already be taken into account during the design stage.
- OSB sheets as a substrate are special purpose solutions and should be designed as such. PREFA does not recommend the use of OSB sheets as a substrate for metal roofing with or without a separation layer.

SEPARATION LAYERS

Bituminous separation layers on the top formwork level can constitute a normative sub-roof under certain conditions. However, this is not always the case. The prerequisites and conditions under which a bituminous underlay placed directly under the metal roof covering can replace a normatively regulated sub-roof are defined in the corresponding national regulations (e.g. sub-roof standards).

Separation layers arranged directly under the roof covering can fulfil a variety of tasks. Therefore, whether or not to use a separation layer and if so, what type, should already be taken into account during the planning phase.

FUNCTION OF SEPARATION LAYERS

- They can protect the timber formwork or wood-based panels from damp during the building phase.
- They can improve sound insulation (acoustic decoupling).
- They can even out minor unevenness in the roof structure.
- They can protect the metal on the underside against harmful alkaline influences and possible damaging influences of wood preservatives.
- They can support the roof covering and underlay in their rainproof function.

Depending on the function that a separating layer is to assume, a suitable product must be agreed with the manufacturer of the separation layers. If the separation layer is to be applied, for example, as additional soundproofing, then we recommend using stronger, heavier bituminous separation layers (e.g. BauderTOP UDS 3 NK or equivalent). If the separation layer is “only” intended to protect the supporting substrate during the building phase, a thinner bituminous separation layer can be used (e.g. BauderTOP TS 40 NSK or equivalent).

In addition to the framework conditions specified above, the manufacturer’s information on the arrangement of separation layers is defined by PREFA as follows:

- with snow loads greater than 3.25 kN/m² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required for roof tiles, R.16 roof tiles, roof shingles, DS.19 shingles, rhomboid roof tiles 29 × 29, rhomboid roof tiles 44 × 44 and FX.12 roof panels;
- with a roof pitch of up to 25°, a bituminous separation layer is required for R.16 roof tiles, DS.19 shingles and FX.12 roof panels.
- In the case of single-skin, non-insulated roofbuild ups, a sub-roof must comply with the requirements of national regulations (sub-roof standards), and a bituminous separation layer is required as a minimum.

Structured separation layers are not required due to the corrosion resistance of aluminium. PREFA advises against using structured separation layers in combination with PREFA roof products, except in the case of special building physics requirements.

In general, we recommend the use of suitable bituminous separation layers.

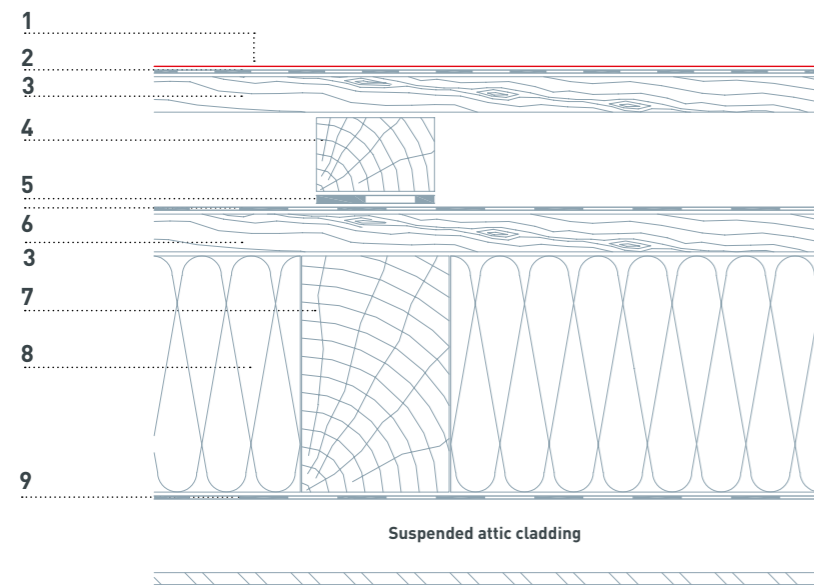
BUILD UP EXAMPLES

NOTE

In the construction examples, the separation layers and roof underlay shown are examples of our reference products. Equivalent products made by other manufacturers may also be used.

FOR CONVERTED ATTICS

- 1 Roof covering (PREFA)
- 2 Bituminous separation layer
- 3 Fully supported substrate
- 4 Counter battens
- 5 Nail sealing tape
- 6 Underlay
- 7 Rafters
- 8 Insulation material
- 9 Diffusion-inhibiting layer/vapour barrier

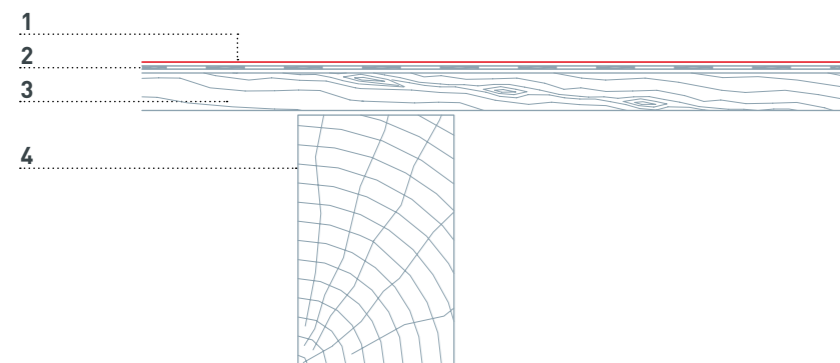


FOR NON-CONVERTED ATTICS

- 1 Roof covering (PREFA)
- 2 Roof underlay (according to table)
- 3 Fully supported substrate
- 4 Rafters

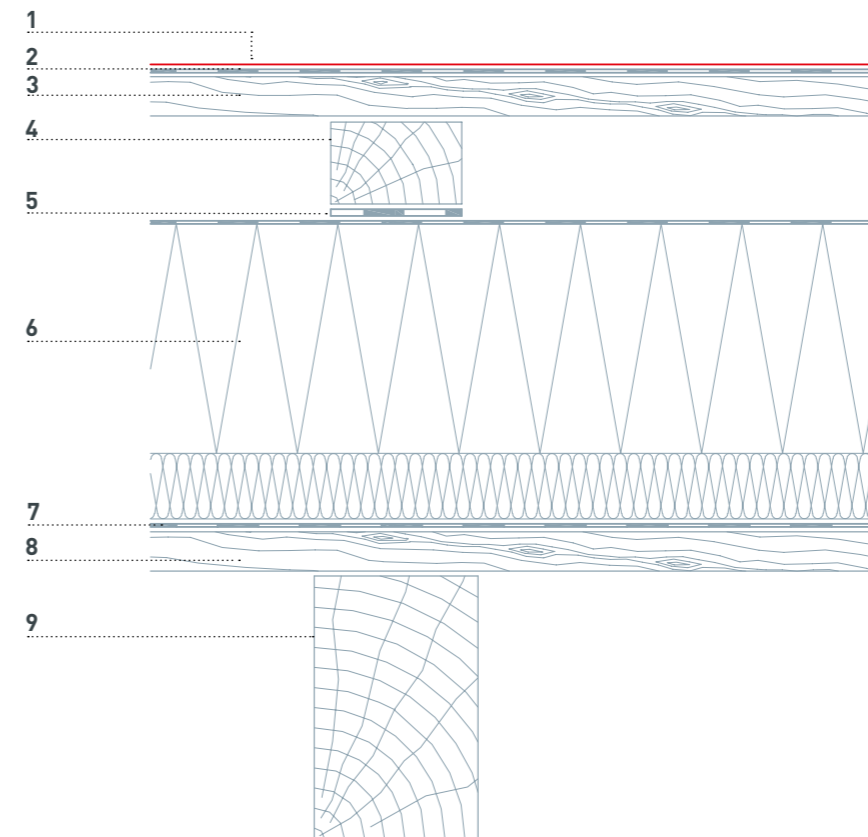
REQUIREMENT	ROOF UNDERLAY (MINIMUM QUALITY)
Sub-roof in accordance with ÖNORM B 4119 required	Bitumen sheeting E-3 nsk (equivalent to ÖNORM B 3661) ¹⁾
No sub-roof in accordance with ÖNORM B 4119 required	Bitumen sheeting E-KV-15 nsk (equivalent to ÖNORM B 3661) ²⁾

1) The design with a roof underlay of the specified minimum quality corresponds to an increased rain-proof sub-roof in accordance with ÖNORM B 4119. Nailing with clip nails is irrelevant.
 2) The design with a roof underlay/separation layer of the specified minimum quality does not correspond to a sub-roof according to ÖNORM B 4119. The design is suitable for objects which do not require a sub-roof in line with the sub-roof standard.



FOR CONVERTED ATTICS

- 1 Roof covering (PREFA)
- 2 Bituminous separation layer
- 3 Fully supported substrate
- 4 Counter battens
- 5 Nail sealing tape
- 6 Sub-roof thermal insulation element (BauderPIR SWE › BauderPIR + 40/35 sound insulation panel)
- 7 Diffusion-inhibiting layer/vapour barrier
- 8 Exposed formwork
- 9 Rafters



NON-VENTILATED ROOF BUILD UP

Non-ventilated insulated roof build ups have also been used on metal roofs for a number of years. In this case, the guidelines (particularly the building physics requirements) for insulated roofs must be observed. Non-ventilated structures should be quoted for and designed separately.

To apply the specified construction examples, the product's roof pitch information must be observed.

APPLICATION – ROOF TILE

ROOF TILE

600 × 420 mm in installed area
Minimum roof pitch: 12°

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R.16 ROOF TILE

700 × 420 mm in installed area
Minimum roof pitch: 17°

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SHINGLE

420 × 240 mm in installed area
Minimum roof pitch: 25°

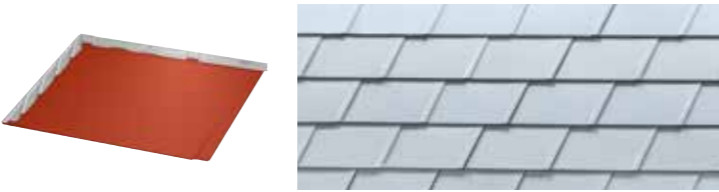
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DS.19 SHINGLE

480 × 262 mm in installed area
Minimum roof pitch: 17°

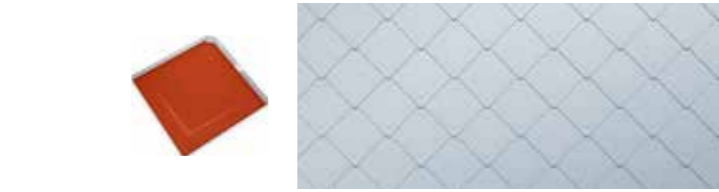
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RHOMBOID ROOF TILE 29 × 29

290 × 290 mm in installed area
Minimum roof pitch: 22°

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RHOMBOID ROOF TILE 44 × 44

437 × 437 mm in installed area
Minimum roof pitch: 12°

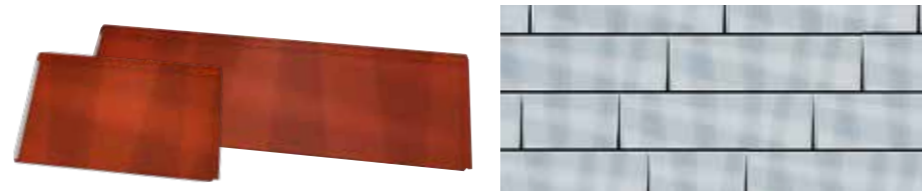
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FX.12 ROOF PANEL

700 × 420 mm and 1,400 × 420 mm
Minimum roof pitch: 17°

PAGE 29



PREFALZ

0.7 × 500 mm, 0.7 × 650 mm
Minimum roof pitch: 3°

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APPLICATION – ROOF TILE

ROOF TILE

MATERIAL	coil-coated aluminium, 0.7 mm thick
SIZE	600 × 420 mm in installed area (4 pcs./m ²)
WEIGHT	approx. 2.3 kg/m ²
ROOF PITCH	from 12° (approx. 21%) – rafter length: up to 7 m from 14° (approx. 25%) – rafter length: 7–12 m from 16° (approx. 29%) – rafter length: over 12 m
SUPPORTING SUBSTRATE AND SEPARATION LAYER*	on fully boarded substrate (at least 24mm) with snow loads greater than 3.25 kN/m ² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
STANDARD FASTENING	2 patent clips and ring nails per roof tile (i.e. 8 patent clips and ring nails per m ²)

*Observe national regulations and guidelines.



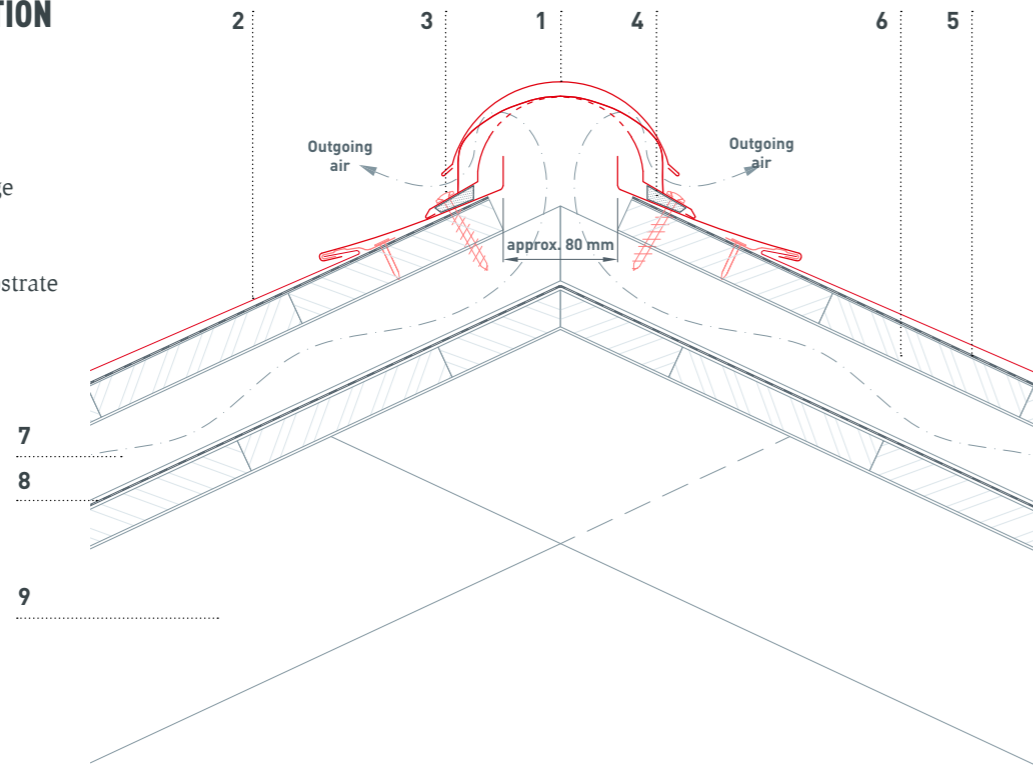
CROSS-SECTION: FASTENING OF ROOF TILE WITH PATENT CLIPS AND RING NAILS



APPLICATION – ROOF TILE

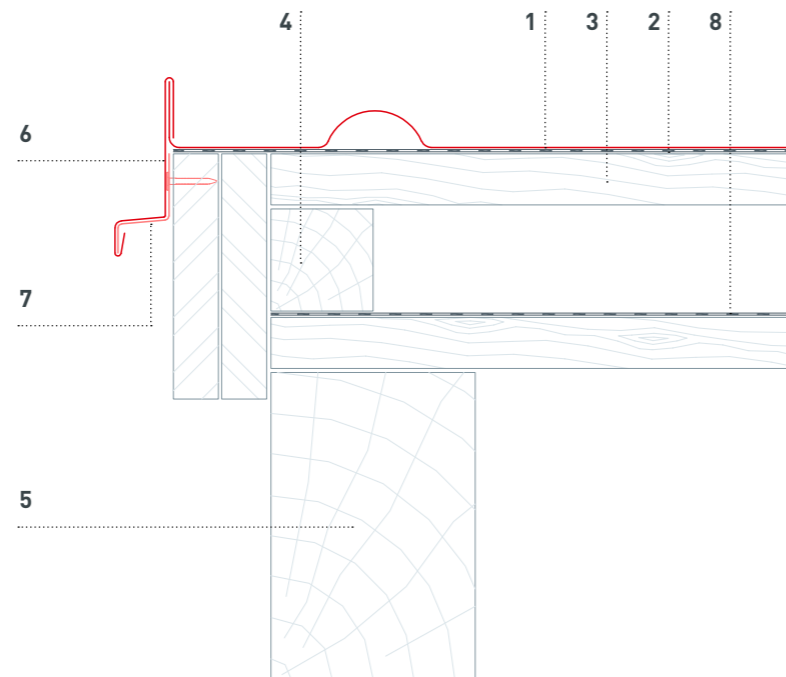
RIDGE CONSTRUCTION WITH RIDGE VENT

- 1 Ridge vent
- 2 Roof tile
- 3 Sealing screw
- 4 Foam cushion wedge (self-adhesive)
- 5 Separation layer
- 6 Fully supported substrate
- 7 Counter battens (ventilation level)
- 8 Underlay
- 9 Rafters



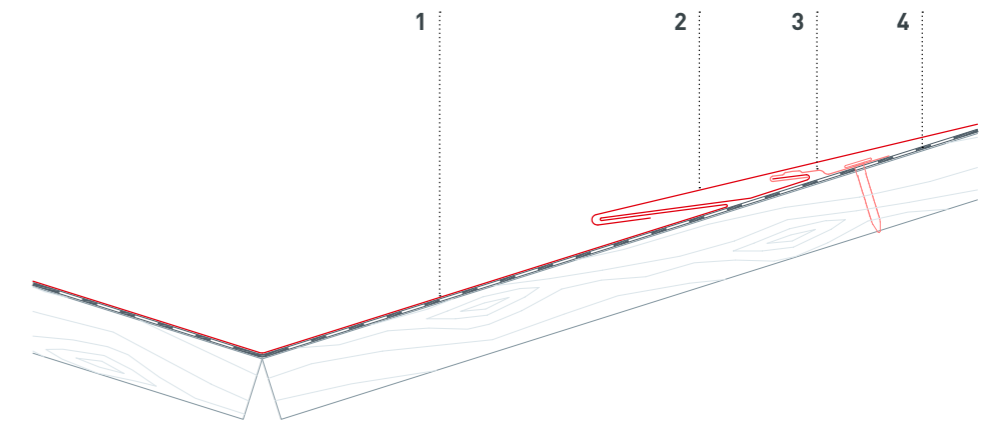
ROOF VERGE DETAIL WITH VERGE FLASHING

- 1 Roof tile
- 2 Separation layer
- 3 Fully supported substrate
- 4 Counter battens
- 5 Rafters
- 6 Verge flashing
- 7 Cleat strip
- 8 Underlay



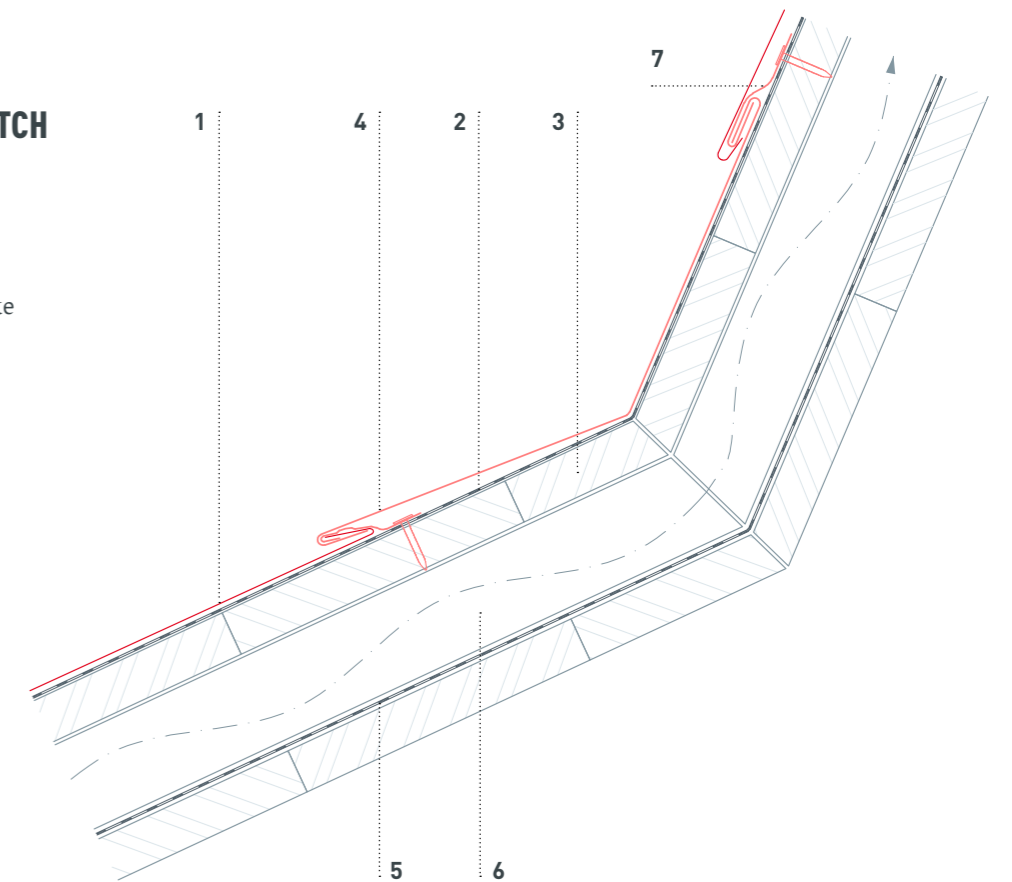
VALLEY DETAIL WITH SAFETY VALLEY

- 1 Safety valley
- 2 Roof tile
- 3 Patent clip
- 4 Separation layer



CONSTRUCTION OF PITCH TRANSITION WITH ROOF TILES

- 1 Roof tile
- 2 Separation layer
- 3 Fully supported substrate
- 4 Transition flashing
- 5 Underlay
- 6 Counter battens
- 7 Clip



APPLICATION – R.16 ROOF TILE

R.16 ROOF TILE

- MATERIAL** coil-coated aluminium, 0.7 mm thick
- SIZE** 700 × 420 mm in installed area (3.4 pcs./m²)
- WEIGHT** approx. 2.5 kg/m²
- ROOF PITCH** from 17° (approx. 31%)
- SUPPORTING SUBSTRATE AND SEPARATION LAYER*** on fully supported substrate (min. 24 mm); a separation layer is required from 17–25°; with snow loads greater than 3.25 kN/m² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
- STANDARD FASTENING** 3 ring nails per R.16 roof tile (i.e. approx. 10 ring nails per m²)

*Observe national regulations and guidelines.

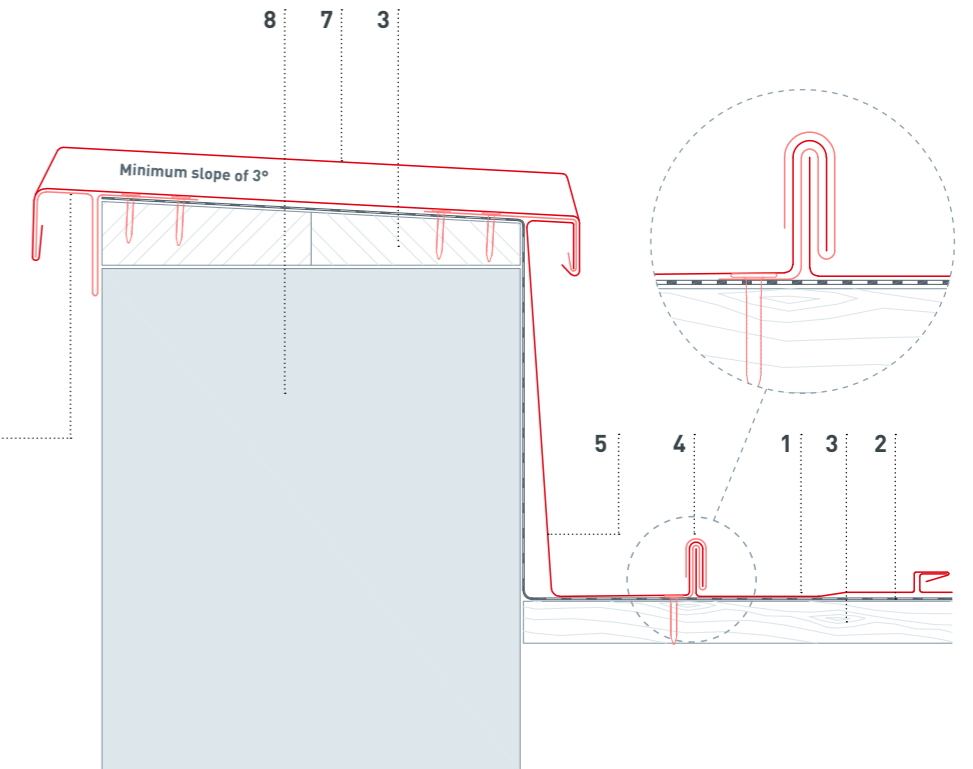


CROSS-SECTION: FASTENING OF R.16 ROOF TILE WITH RING NAILS



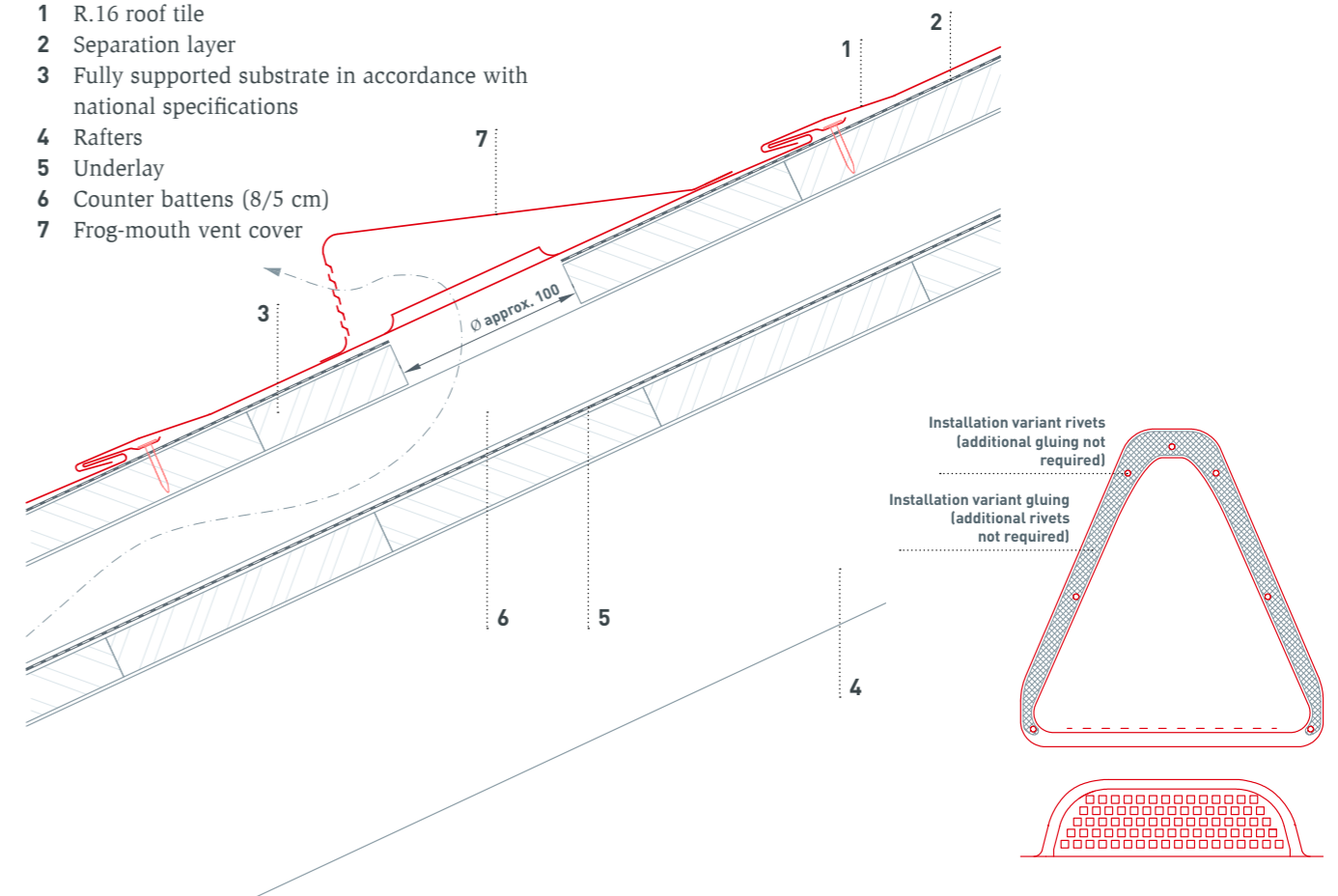
ROOF PARAPET CAPPING WITH JOINT DETAIL TO R.16 ROOF TILES

- 1 R.16 roof tile
- 2 Separation layer
- 3 Fully supported substrate
- 4 Return clip
- 5 Abutment detail
- 6 Cleat strip
- 7 Roof parapet capping
- 8 Masonry



FROG-MOUTH VENT COVER FOR R.16 ROOF TILES

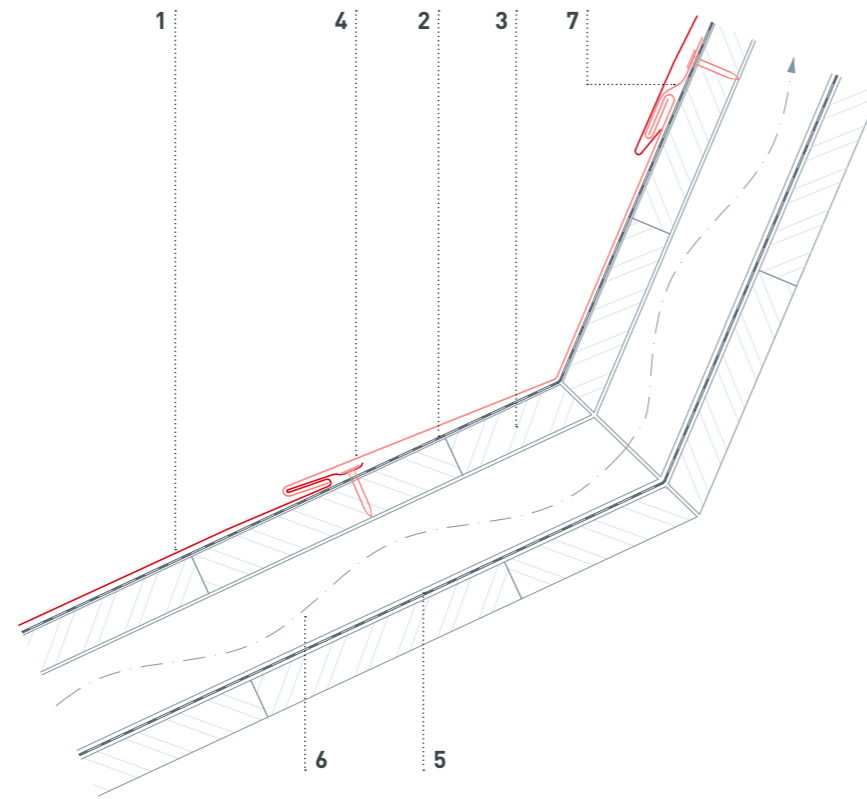
- 1 R.16 roof tile
- 2 Separation layer
- 3 Fully supported substrate in accordance with national specifications
- 4 Rafters
- 5 Underlay
- 6 Counter battens (8/5 cm)
- 7 Frog-mouth vent cover



APPLICATION – R.16 ROOF TILE

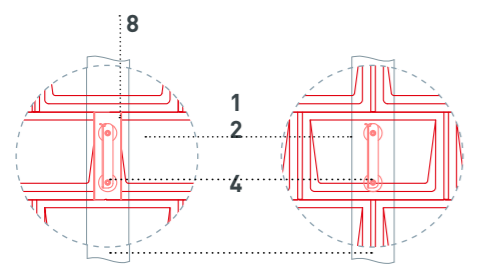
CONSTRUCTION OF PITCH TRANSITION WITH R.16 ROOF TILES

- 1 R.16 roof tile
- 2 Separation layer
- 3 Fully supported substrate
- 4 Transition flashing
- 5 Underlay
- 6 Counter battens
- 7 Clip

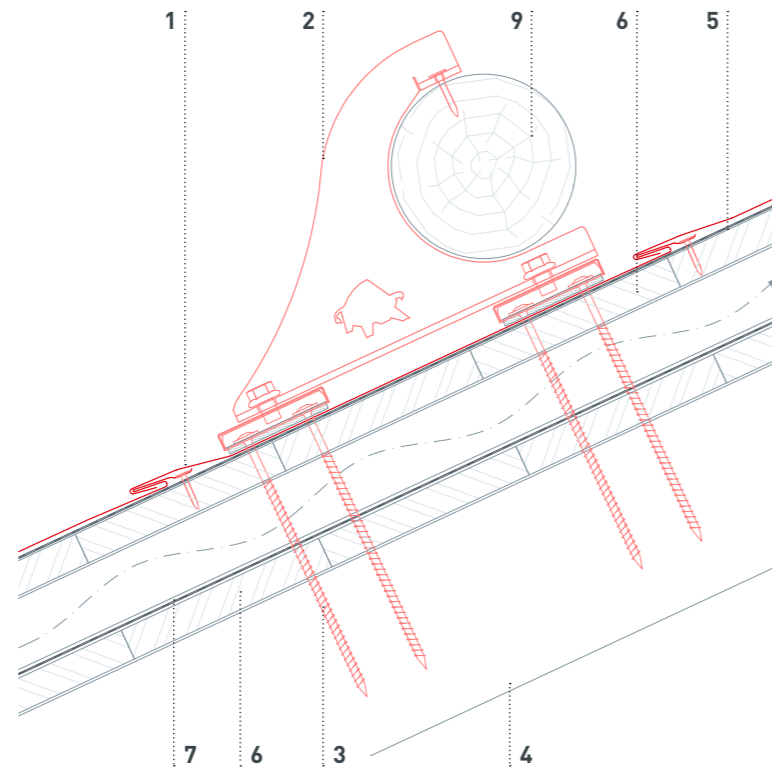


MOUNTAIN SNOW GUARD BRACKET FOR R.16 ROOF TILES

- 1 R.16 roof tile
- 2 Mountain snow guard bracket
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Base plate
- 9 Round timber (Ø 140 mm)



Installation with base plate Installation without base plate



APPLICATION – ROOF SHINGLE

SHINGLE

- | | |
|---|---|
| MATERIAL | coil-coated aluminium, 0.7 mm thick |
| SIZE | 420 × 240 mm in installed area (10 pcs./m ²) |
| WEIGHT | approx. 2.5 kg/m ² |
| ROOF PITCH | from 25° (approx. 47%) |
| SUPPORTING SUBSTRATE AND SEPARATION LAYER* | on fully supported substrate (at least 24 mm); with snow loads greater than 3.25 kN/m ² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7) |
| STANDARD FASTENING | 1 patent clip and ring nail per roof shingle (i.e. 10 patent clips and ring nails per m ²) |

*Observe national regulations and guidelines.



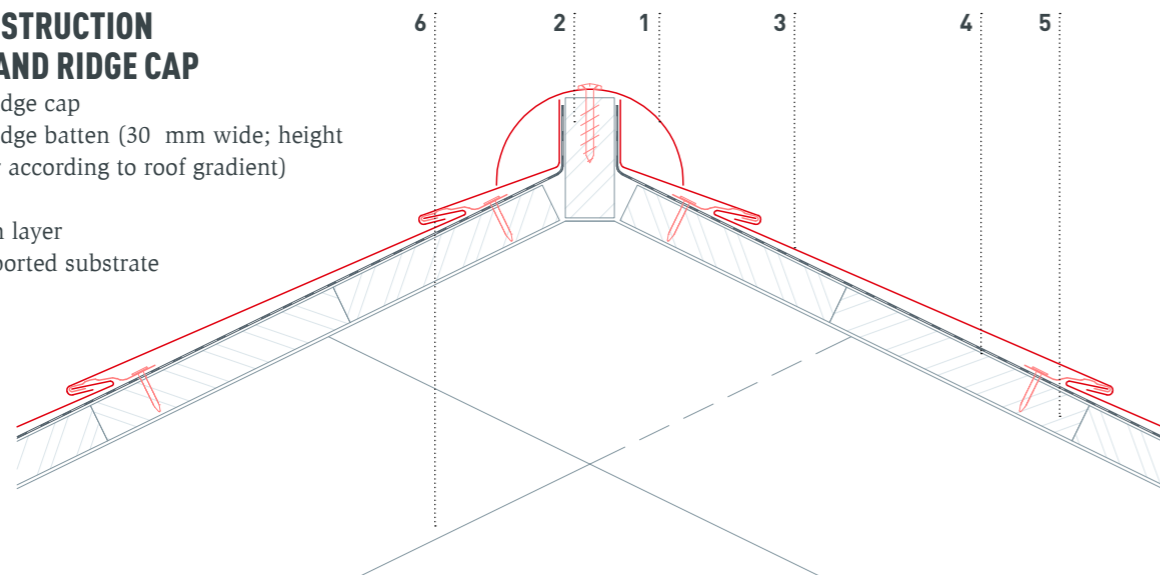
CROSS-SECTION: FASTENING OF ROOF SHINGLE WITH PATENT CLIP AND RING NAIL



APPLICATION – ROOF SHINGLE

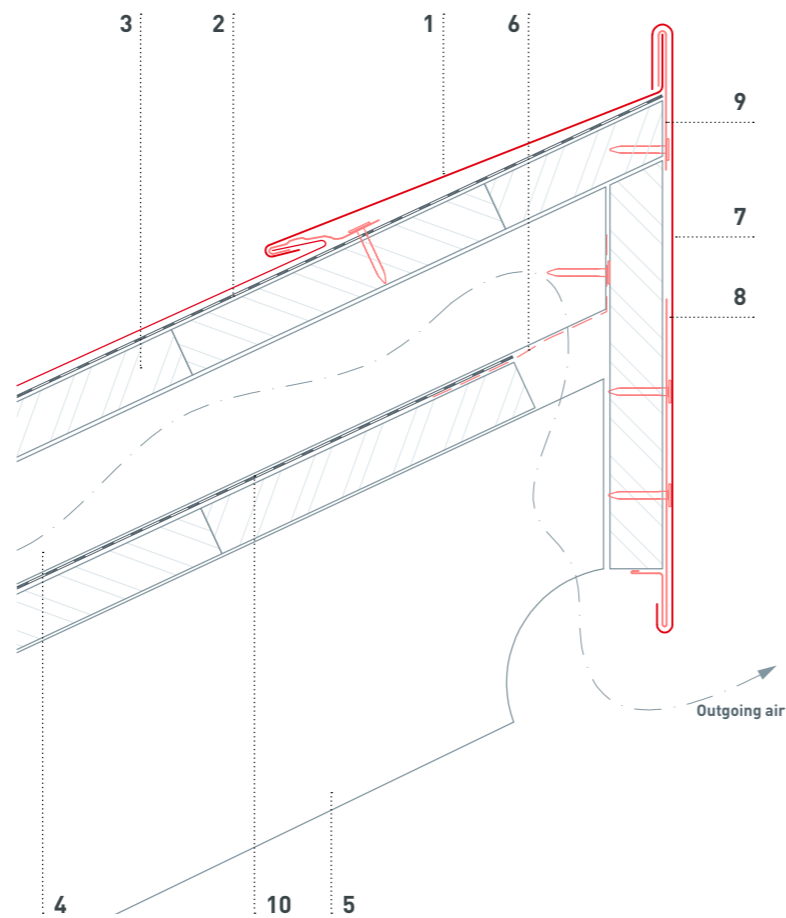
RIDGE CONSTRUCTION WITH HIP AND RIDGE CAP

- 1 Hip and ridge cap
- 2 Hip and ridge batten (30 mm wide; height may differ according to roof gradient)
- 3 Shingle
- 4 Separation layer
- 5 Fully supported substrate
- 6 Rafters



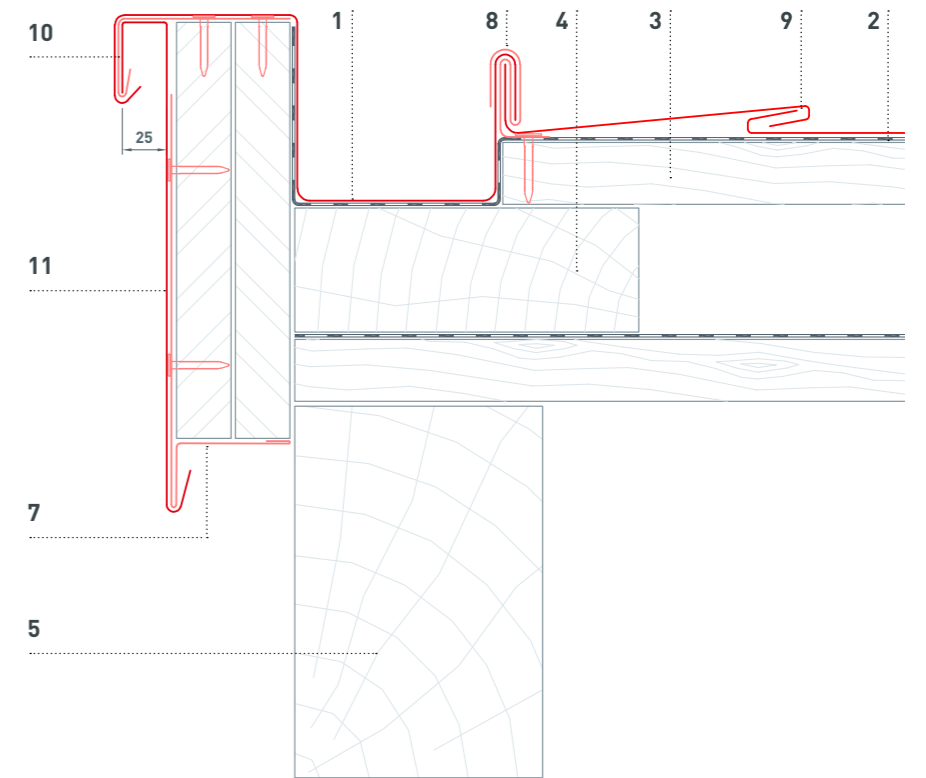
MONO-PITCHED ROOF RIDGE DETAIL FOR ROOF SHINGLES

- 1 Shingle
- 2 Separation layer
- 3 Fully supported substrate
- 4 Counter battens
- 5 Rafters
- 6 Perforated sheet
- 7 Mono-pitched roof ridge detail
- 8 Starter strip
- 9 Cleat strip
- 10 Underlay



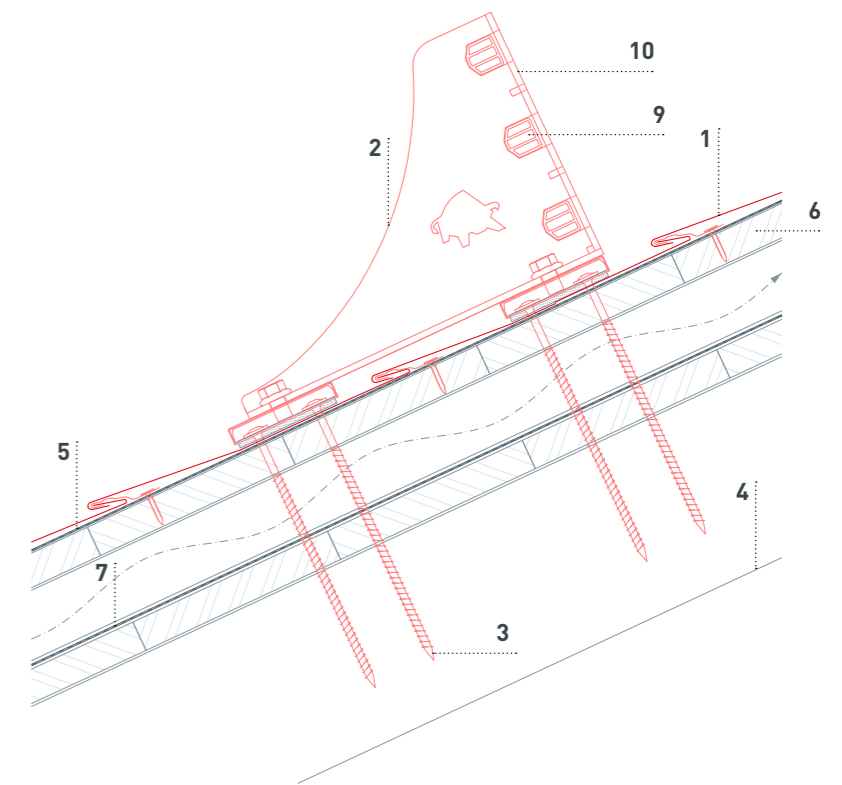
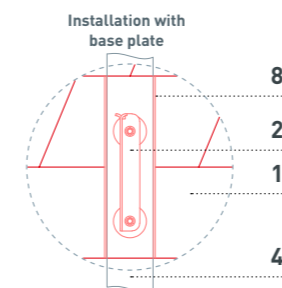
ROOF VERGE CONSTRUCTION WITH RECESS FOR ROOF SHINGLES

- 1 Recessed verge detail
- 2 Separation layer
- 3 Fully supported substrate
- 4 Recessed roof verge sheathing
- 5 Rafters
- 6 Underlay
- 7 Starter strip
- 8 Return clip
- 9 Shingle
- 10 Cleat strip
- 11 Verge flashing



PIPE-STYLE SNOW GUARD SYSTEM FOR ROOF SHINGLES

- 1 Shingle
- 2 Pipe-style snow guard system
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Base plate
- 9 Insert profile
- 10 Fixing slider



APPLICATION – DS.19 SHINGLE

DS.19 SHINGLE

- MATERIAL** coil-coated aluminium, 0.7 mm thick
- SIZE** 480 × 262 mm in installed area (8 pcs./m²)
- WEIGHT** approx. 2.75 kg/m²
- ROOF PITCH** from 17° (approx. 31%)
- SUPPORTING SUBSTRATE AND SEPARATION LAYER*** on fully supported substrate (at least 24 mm); a separation layer is required from 17–25°; with snow loads greater than 3.25 kN/m² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
- STANDARD FASTENING** 1 patent clip and ring nail per DS.19 roof shingle (i.e. 8 patent clips and ring nails per m²)

*Observe national regulations and guidelines.

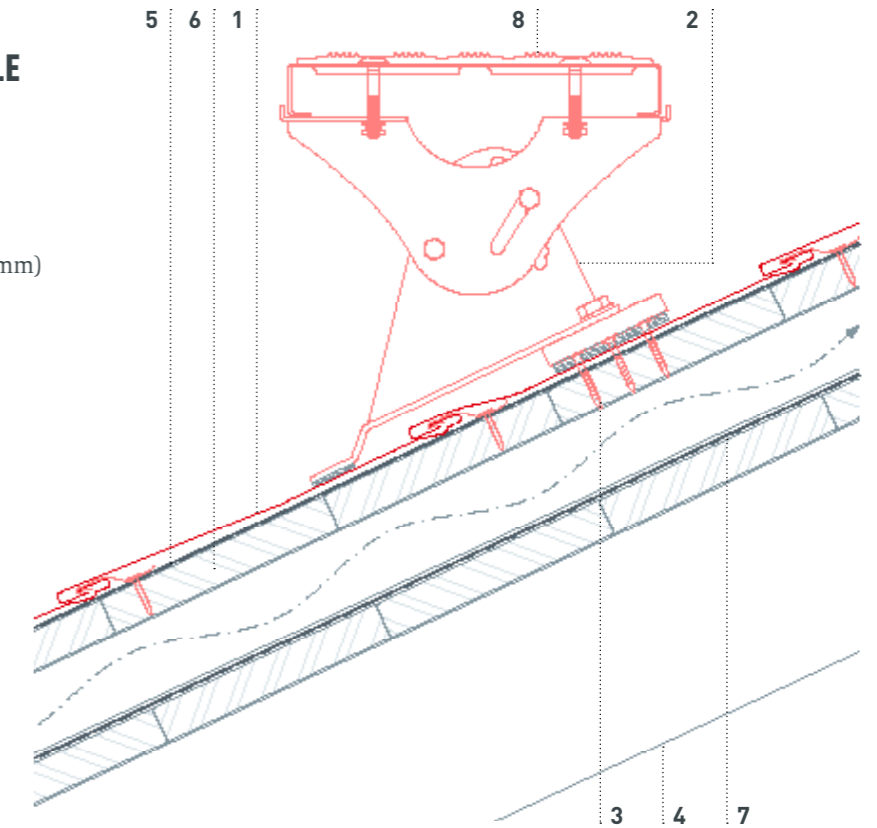


CROSS-SECTION: FASTENING OF DS.19 ROOF SHINGLE WITH PATENT CLIP AND RING NAIL



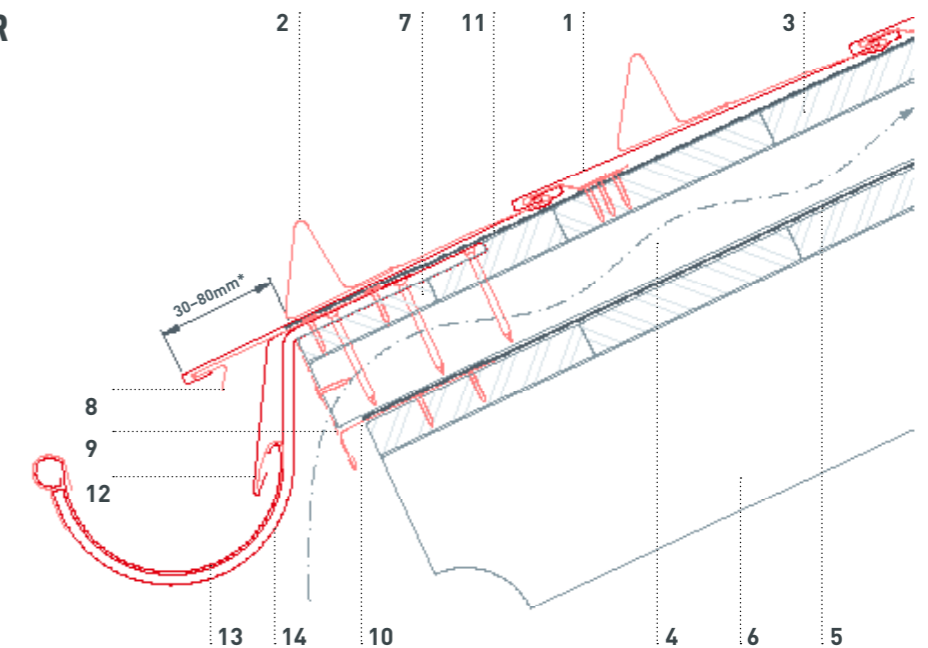
WALKWAY SUPPORT ON ONE MOUNT FOR DS.19 ROOF SHINGLE

- 1 DS.19 shingle
- 2 Walkway support on one mount
- 3 Fixing material:
- 4 Rafters
- 5 Separation layer
- 6 Fully boarded substrate (at least 24 mm)
- 7 Underlay
- 8 Walkway grating



EAVES DETAIL WITH GUTTER FOR DS.19 ROOF SHINGLE

- 1 DS.19 shingle
- 2 Snow guard
- 3 Fully supported substrate
- 4 Counter batten
- 5 Underlay
- 6 Rafters
- 7 Eaves board
- 8 Starter strip
- 9 Perforated sheet
- 10 Under roof eaves drip edge
- 11 Separation layer
- 12 Starter flashing
- 13 Half-round gutter
- 14 Gutter bracket

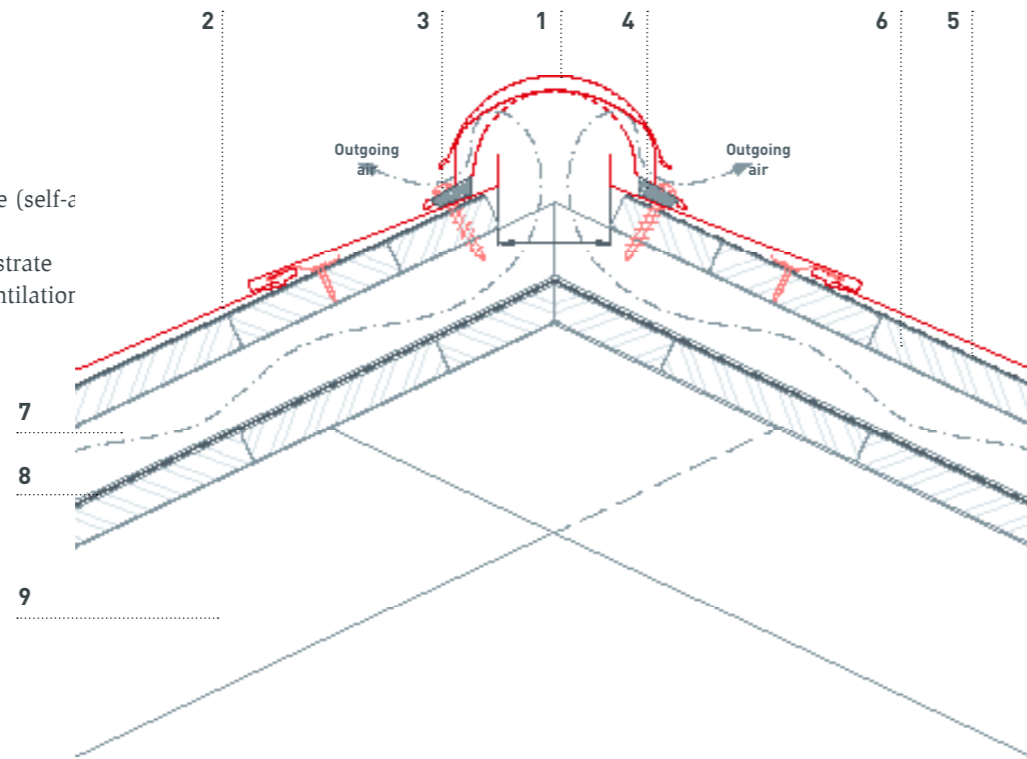


* The eaves projection must not exceed 80 mm.

APPLICATION – DS.19 SHINGLE

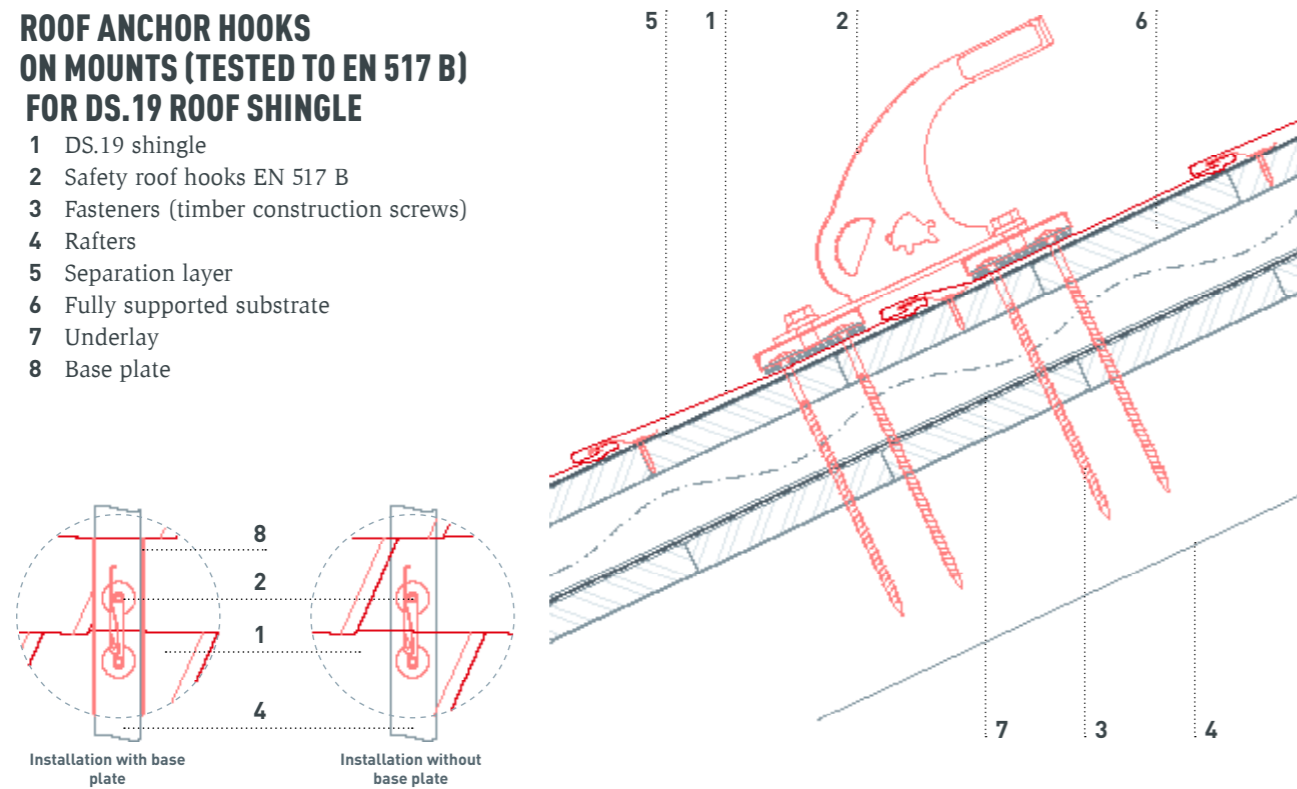
RIDGE DETAIL WITH RIDGE VENT

- 1 Ridge vent
- 2 DS.19 shingle
- 3 Sealing screw
- 4 Foam cushion wedge (self-a
- 5 Separation layer
- 6 Fully supported substrate
- 7 Counter battens (ventilator
- 8 Underlay
- 9 Rafters



ROOF ANCHOR HOOKS ON MOUNTS (TESTED TO EN 517 B) FOR DS.19 ROOF SHINGLE

- 1 DS.19 shingle
- 2 Safety roof hooks EN 517 B
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Base plate

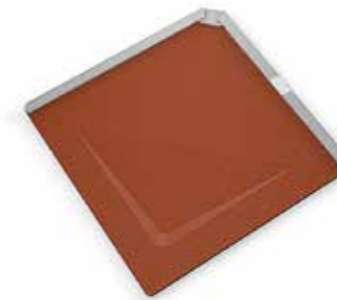


APPLICATION – RHOMBOID ROOF TILE 29 × 29

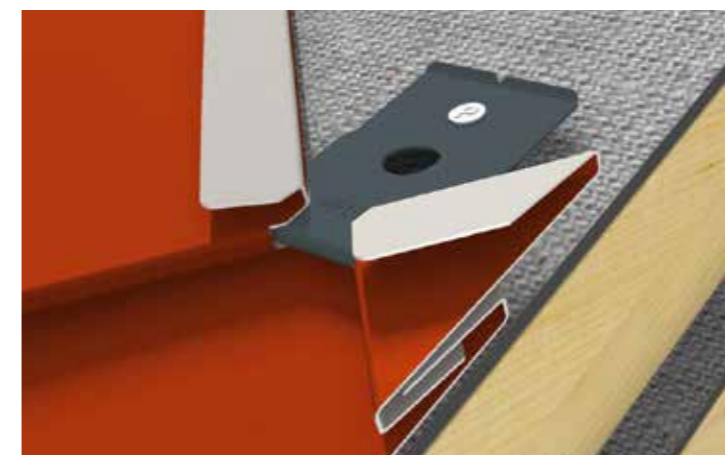
RHOMBOID ROOF TILE 29 × 29

MATERIAL	coil-coated aluminium, 0.7 mm thick
SIZE	290 × 290 mm in installed area (12 pcs./m ²)
WEIGHT	approx. 2.6 kg/m ²
ROOF PITCH	from 22° (approx. 40%)
SUPPORTING SUBSTRATE AND SEPARATION LAYER*	on fully supported substrate (at least 24 mm); with snow loads greater than 3.25 kN/m ² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
STANDARD FASTENING	1 rhomboid roof tile clip and ring nail per rhomboid roof tile 29 × 29 (i.e. 12 rhomboid roof tile clips and ring nails per m ²)

*Observe national regulations and guidelines.



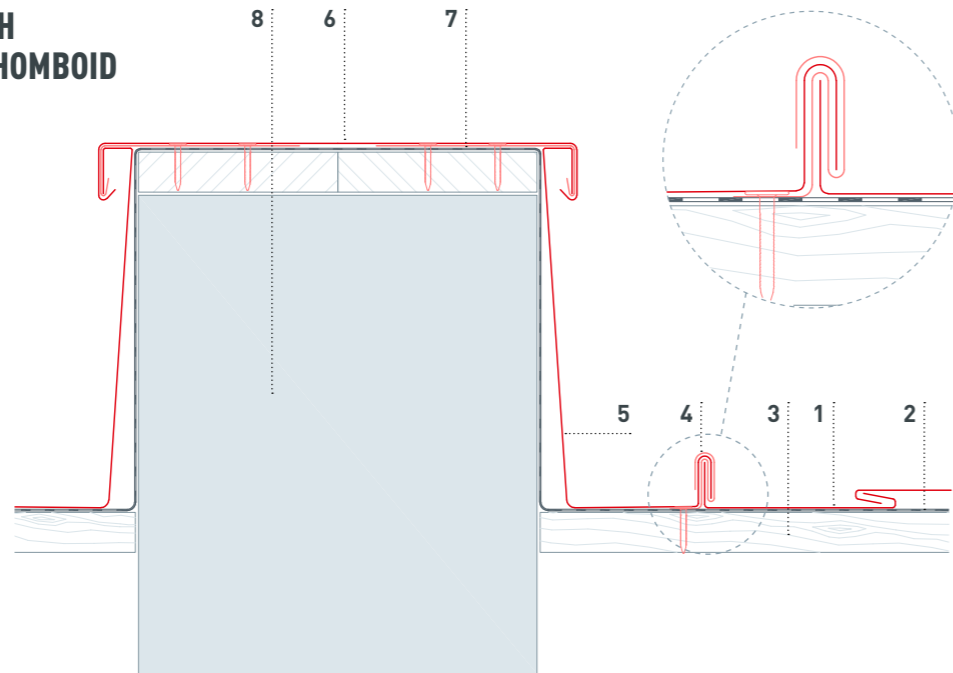
CROSS-SECTION: FASTENING OF RHOMBOID ROOF TILE 29 × 29 WITH RHOMBOID ROOF TILE CLIP AND RING NAIL



APPLICATION – RHOMBOID ROOF TILE 29 × 29

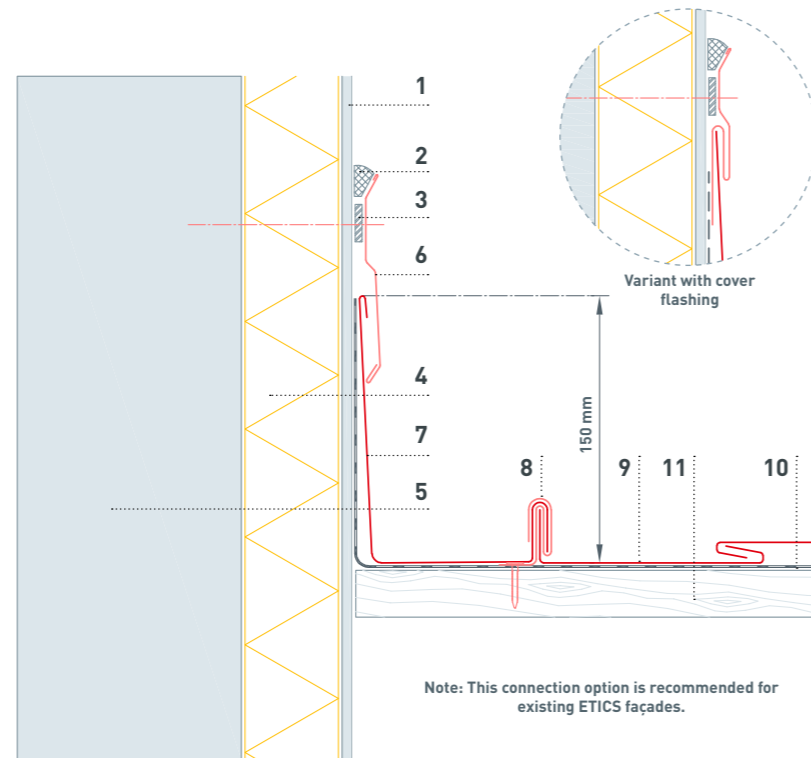
PARAPET CAPPING WITH ABUTMENT DETAIL TO RHOMBOID ROOF TILES 29 × 29

- 1 Rhomboid roof tile 29 × 29
- 2 separation layer
- 3 Fully supported substrate
- 4 Return clip
- 5 Abutment detail
- 6 Parapet capping
- 7 Cleat strip (retainer)
- 8 Masonry



ABUTMENT DETAIL WITH RHOMBOID ROOF TILES 29 × 29

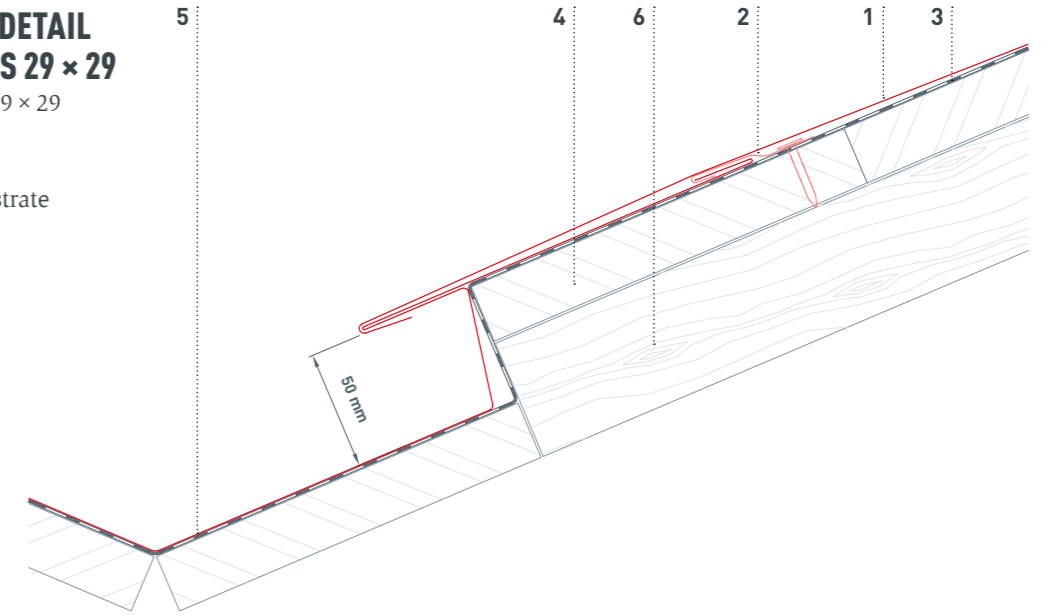
- 1 Plaster
- 2 Elastic sealant
- 3 Sealing tape
- 4 Full thermal insulation masonry
- 5 Masonry
- 6 Cover flashing
- 7 Abutment flashing (min. 150 mm high)
- 8 Return clip
- 9 Rhomboid roof tile 29 × 29
- 10 Separation layer
- 11 Fully supported substrate



Note: This connection option is recommended for existing ETICS façades.

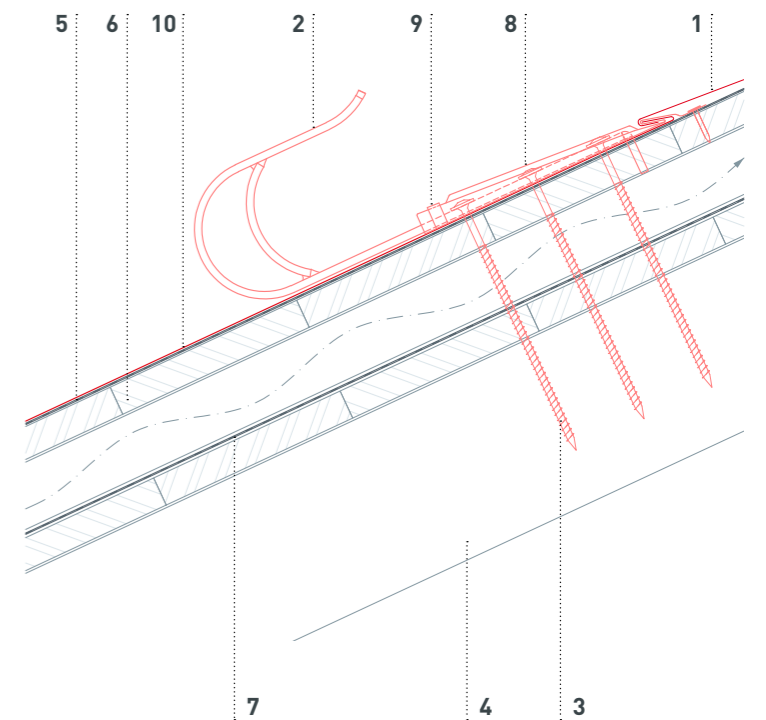
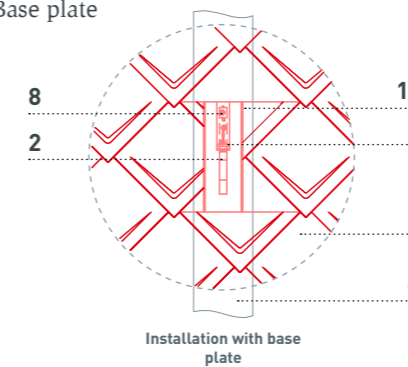
RECESSED VALLEY DETAIL FOR ROOF SHINGLES 29 × 29

- 1 Rhomboid roof tile 29 × 29
- 2 Clip
- 3 Separation layer
- 4 Fully supported substrate
- 5 Recessed valley
- 6 Counter battens



ROOF ANCHOR HOOKS (TESTED TO EN 517 B) WITH RHOMBOID ROOF TILES 29 × 29

- 1 Rhomboid roof tile 29 × 29
- 2 Safety roof hooks EN 517 B
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Cover capping
- 9 Retaining strips
- 10 Base plate



APPLICATION – RHOMBOID ROOF TILE 44 × 44

RHOMBOID ROOF TILE 44 × 44

MATERIAL	coil-coated aluminium, 0.7 mm thick
SIZE	437 × 437 mm in installed area (approx. 5 pcs./m ²)
WEIGHT	approx. 2.6 kg/m ²
ROOF PITCH	from 12° (approx. 21%) – rafter length: up to 7 m from 14° (approx. 25%) – rafter length: 7–12 m from 16° (approx. 29%) – rafter length: over 12 m
SUPPORTING SUBSTRATE AND SEPARATION LAYER*	on fully supported substrate (at least 24 mm); with snow loads greater than 3.25 kN/m ² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
STANDARD FASTENING	4 ring nails per rhomboid roof tile 44 × 44 (i.e. 20 ring nails per m ²)

*Observe national regulations and guidelines.



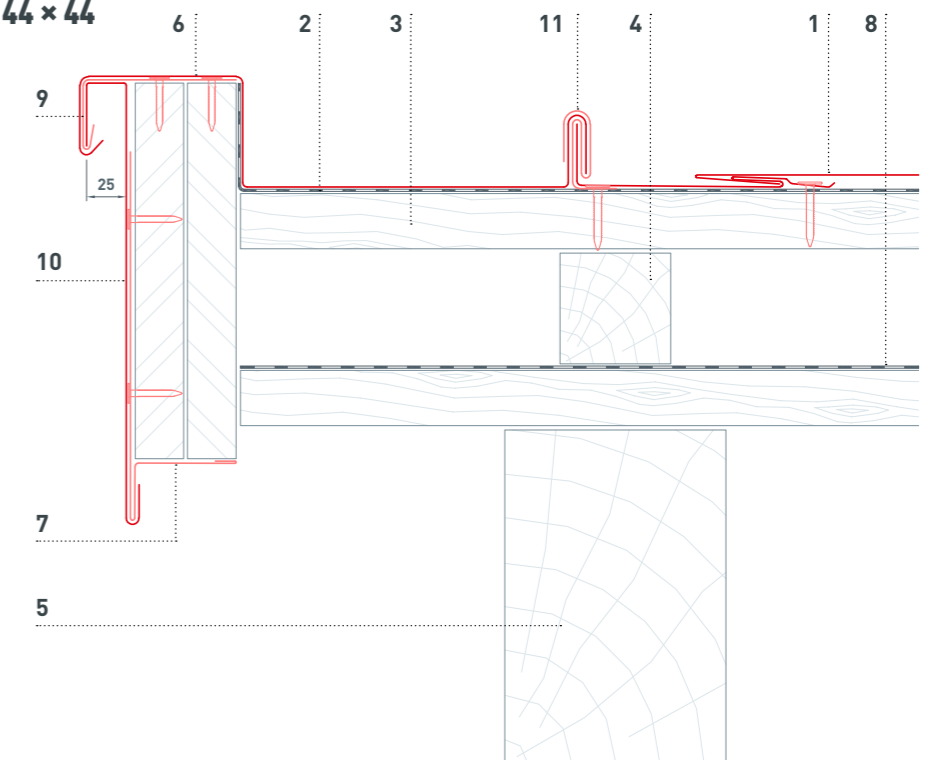
CROSS-SECTION: FASTENING OF RHOMBOID ROOF TILE 44 × 44 WITH RING NAILS



APPLICATION – RHOMBOID ROOF TILE 44 × 44

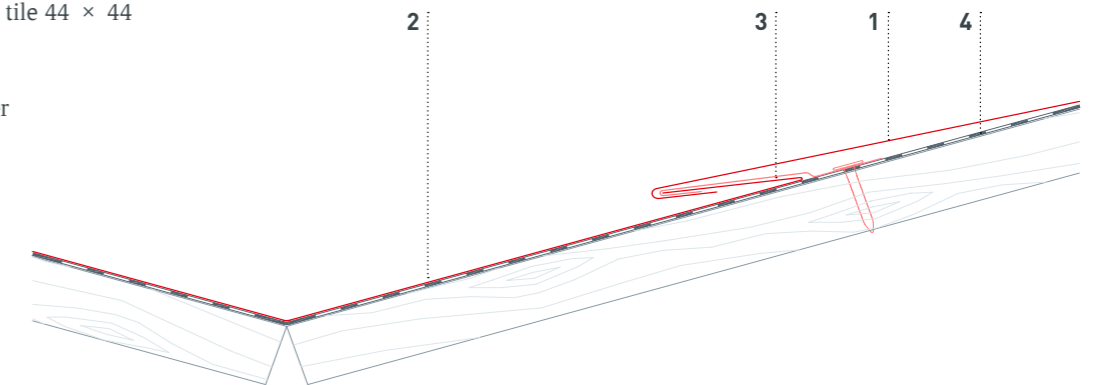
ROOF VERGE DETAIL WITH FASCIA BOARD FOR RHOMBOID ROOF TILES 44 × 44

- 1 Rhomboid roof tile 44 × 44
- 2 Separation layer
- 3 Fully supported substrate
- 4 Counter battens
- 5 Rafters
- 6 Verge flashing
- 7 Starter strip
- 8 Underlay
- 9 Cleat strip
- 10 Verge flashing
- 11 Return clip



VALLEY DETAIL FOR RHOMBOID ROOF TILE 44 × 44

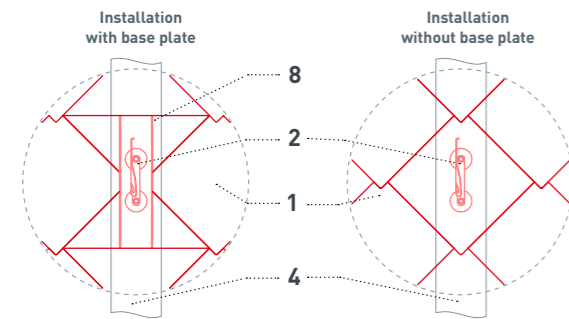
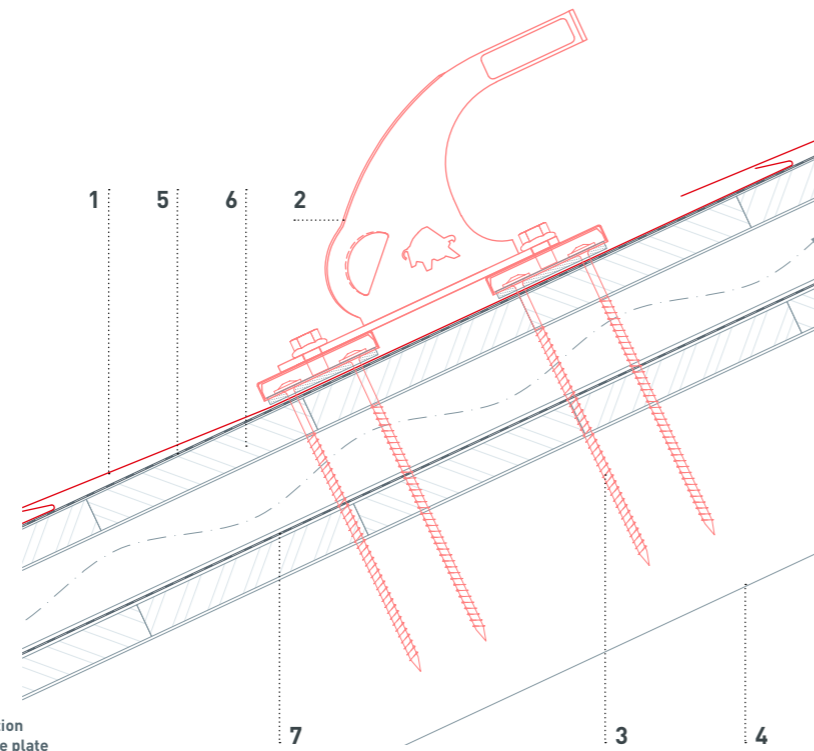
- 1 Rhomboid roof tile 44 × 44
- 2 Valley flashing
- 3 Clip
- 4 Separation layer



APPLICATION – RHOMBOID ROOF TILE 44 × 44

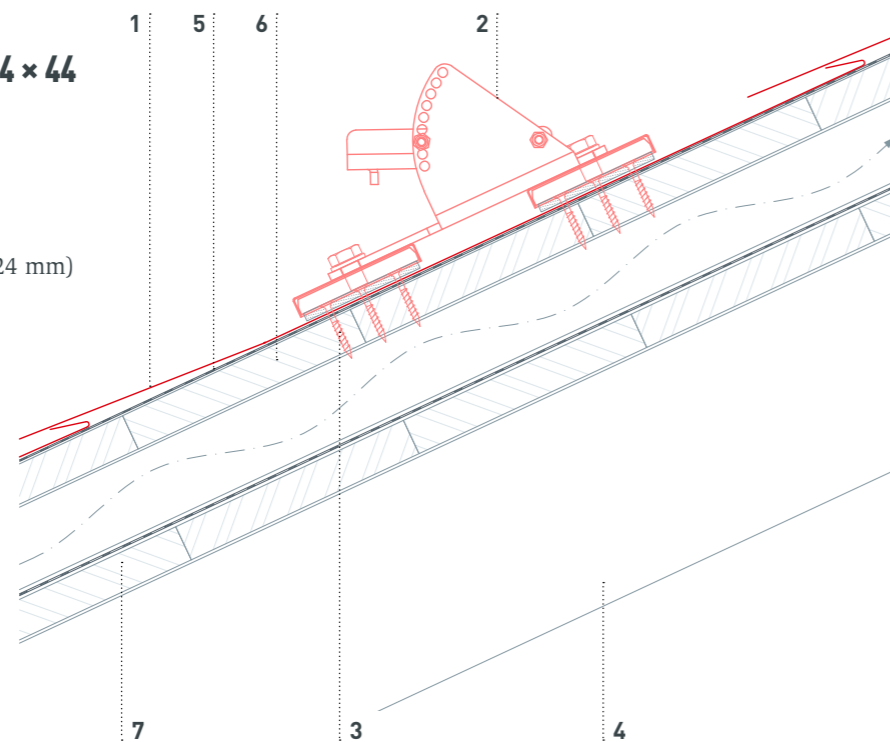
ROOF ANCHOR HOOK WITH MOUNTS (TESTED TO EN 517 B)

- 1 Rhomboid roof tile 44 × 44
- 2 Roof anchor hook with mounts
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Base plate



SAFETY TREAD FOR RHOMBOID ROOF TILES 44 × 44

- 1 Rhomboid roof tile 44 × 44
- 2 Safety tread
- 3 Fixing material:
- 4 Rafters
- 5 Separation layer
- 6 Fully boarded substrate (at least 24 mm)
- 7 Underlay



APPLICATION – FX.12 ROOF PANEL

FX.12 ROOF PANEL

MATERIAL	coil-coated aluminium, 0.7 mm thick
SIZE	700 × 420 mm in installed area (3.4 pcs./m ²) 1,400 × 420 mm in installed area (1.7 pcs./m ²)
WEIGHT	approx. 2.4–2.5 kg/m ²
ROOF PITCH	from 17° (approx. 31%)
SUPPORTING SUBSTRATE AND SEPARATION LAYER*	on fully supported substrate (at least 24 mm); a separation layer is required from 17–25°; with snow loads greater than 3.25 kN/m ² or in terrain categories 0, I or II, installation on fully supported substrate with a bituminous separation layer is required (see page 7)
STANDARD FASTENING	3 ring nails per small FX.12 roof panel, 5 ring nails per large FX.12 roof panel (i.e. approx. 8 – 10 ring nails per m ²)
NOTE	ratio large to small: 2:1 pcs.

*Observe national regulations and guidelines.



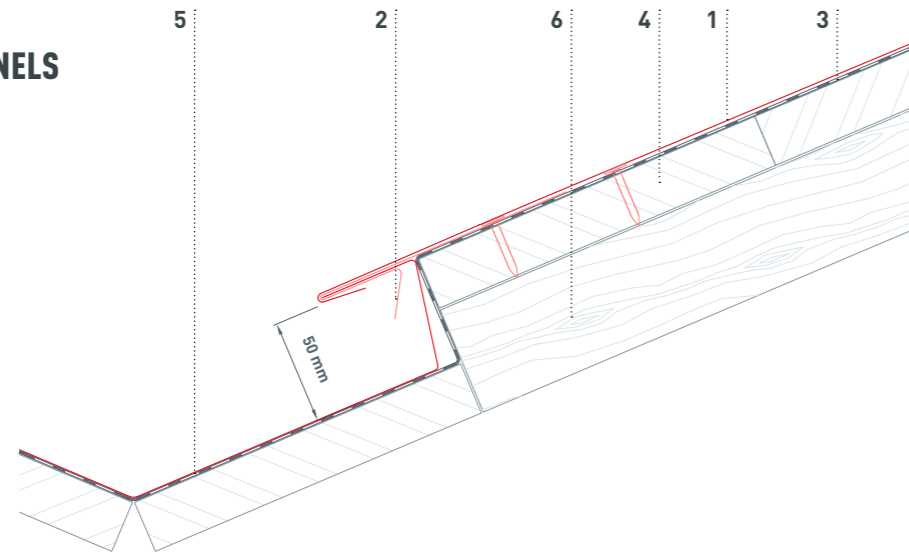
CROSS-SECTION: FASTENING OF FX.12 ROOF PANEL WITH RING NAILS



APPLICATION – FX.12 ROOF PANEL

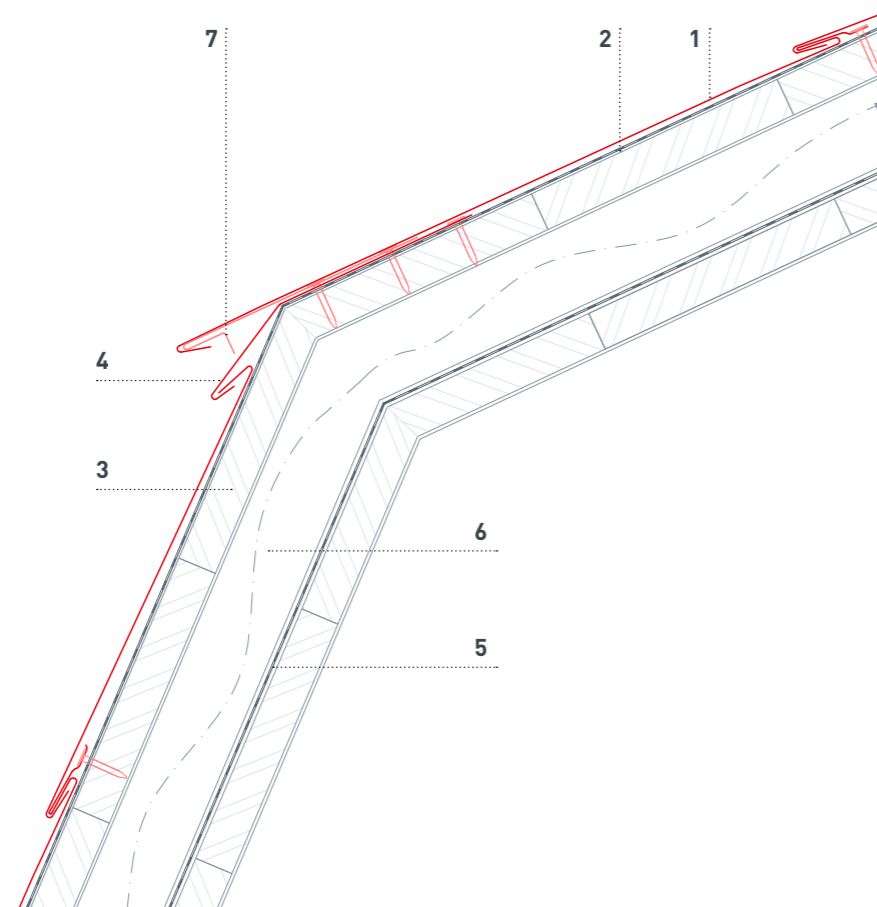
RECESSED VALLEY DETAIL WITH FOR FX.12 ROOF PANELS

- 1 FX.12 roof panel
- 2 Cleat strip
- 3 Separation layer
- 4 Fully supported substrate
- 5 Recessed valley
- 6 Counter battens



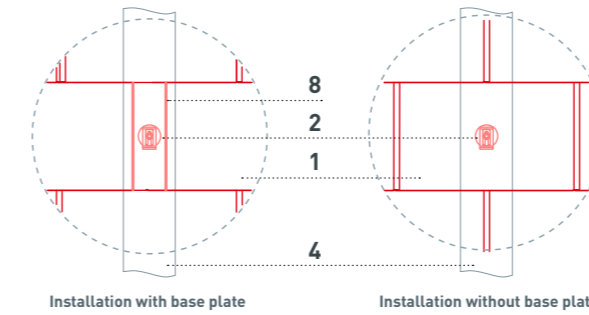
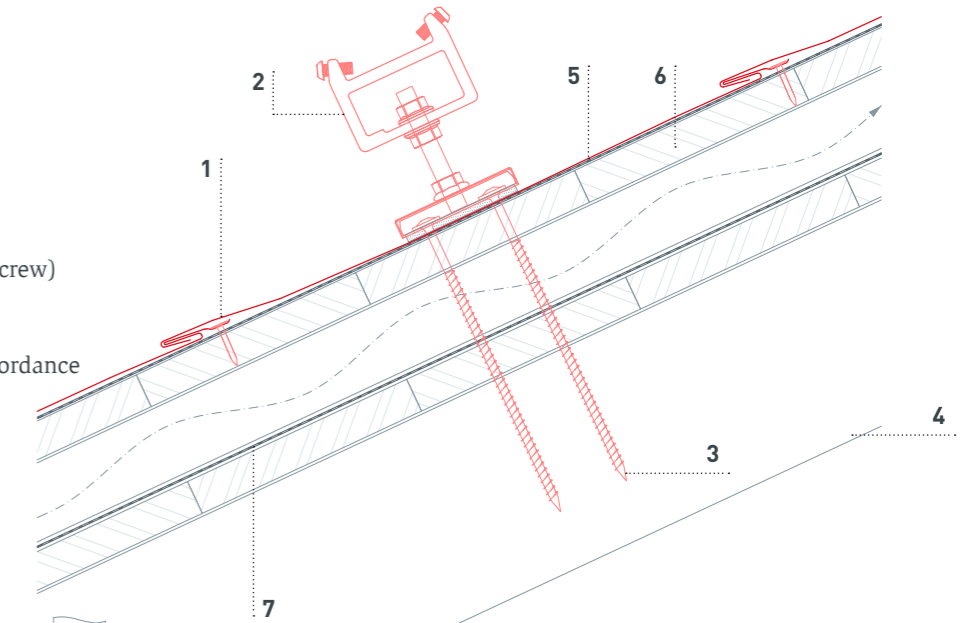
CONSTRUCTION OF PITCH TRANSITION WITH FX.12 ROOF PANELS

- 1 FX.12 roof panel
- 2 Separation layer
- 3 Fully supported substrate
- 4 Aluminium flashing
- 5 Underlay
- 6 Counter battens
- 7 Starter strip



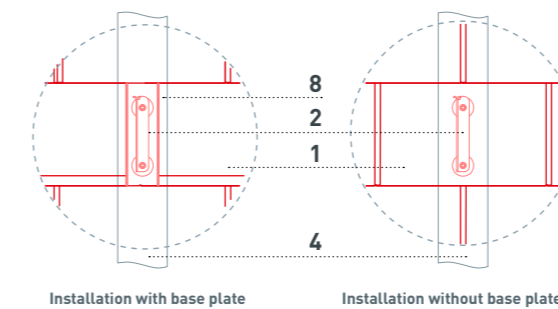
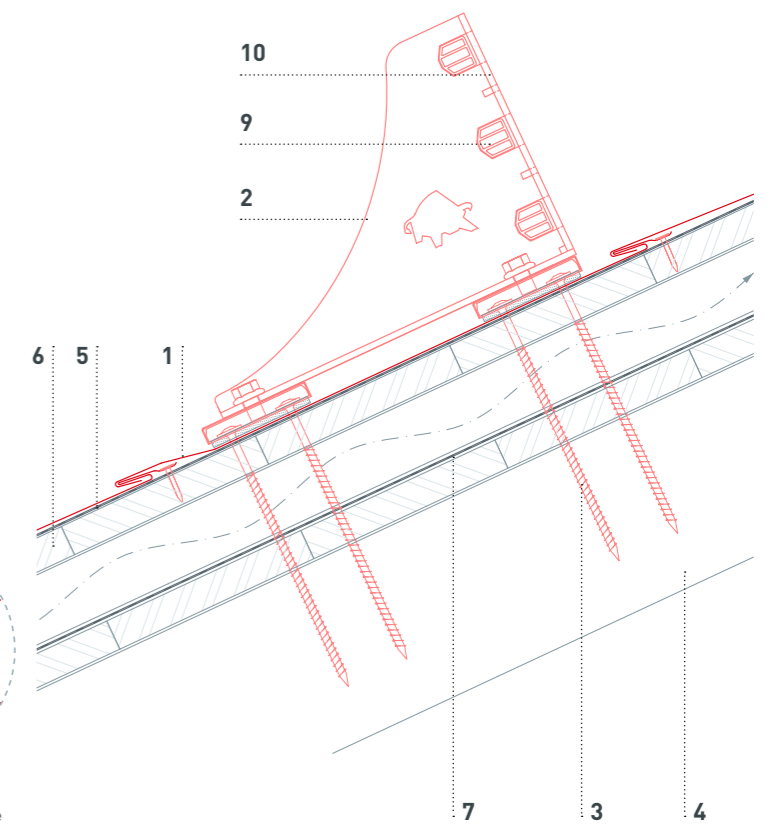
VARIO SOLAR BRACKET FOR FX.12 ROOF PANELS

- 1 FX.12 roof panel
- 2 Vario (or Fix) solar bracket
- 3 Fasteners (timber construction screw)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate in accordance with national specifications
- 7 Underlay
- 8 Base plate



PIPE-STYLE SNOW GUARD SYSTEM FOR FX.12 ROOF PANELS

- 1 FX.12 roof panel
- 2 Pipe-style snow guard system
- 3 Fasteners (timber construction screws)
- 4 Rafters
- 5 Separation layer
- 6 Fully supported substrate
- 7 Underlay
- 8 Base plate
- 9 Insert profile
- 10 Fixing slider

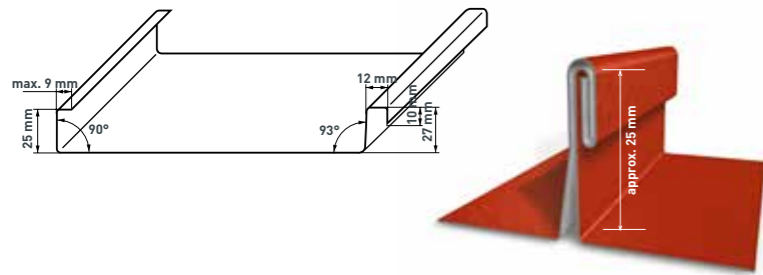


APPLICATION – PREFALZ

PREFALZ

MATERIAL	coil-coated aluminium, 0.7 mm thick
DIMENSIONS	0.7 × 500 mm (tray width: 430 mm) 0.7 × 650 mm (tray width: 580 mm) 0.7 × 1,000 mm (complementary coil)
WEIGHT	approx. 1.89 kg/m ² effective usage with PREFALZ 500 : approx. 2.3 kg/m ² ; for PREFALZ 650 : approx. 2.2 kg/m ²
ROOF PITCH	from 3° (approx. 5%) (Observe national regulations and guidelines.)
INSTALLATION	on fully boarded substrate (at least 24 mm)
SEPARATION LAYER	we recommend the use of a suitable bituminous separation layer (local conditions must be taken into consideration).
FASTENING	with fixed clips and sliding clips or long sliding clips (according to static requirements)

For mono-pitch roofs and buildings in areas with higher windloads we do highly recommend the use of 500 mm **PREFALZ** coils (430 mm tray width) as well to incorporate a separation layer.

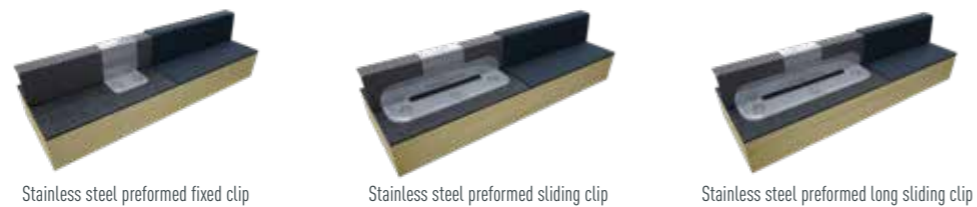


RECOMMENDATION

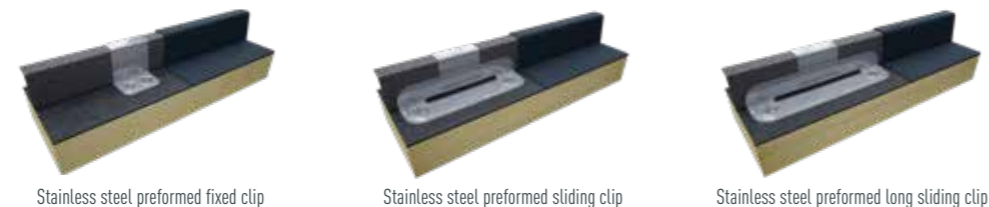
The lower the roof pitch, the greater the risk of water ingress through the seams caused by driving rain, snow and retained water.

We therefore recommend designing the roof build up with a roof pitch > 7° (13%). For a roof pitch of up to 7°, special precautions (e.g. seam gel, sealing tapes) must be taken into consideration

FIXING WITH RING SHANK NAILS

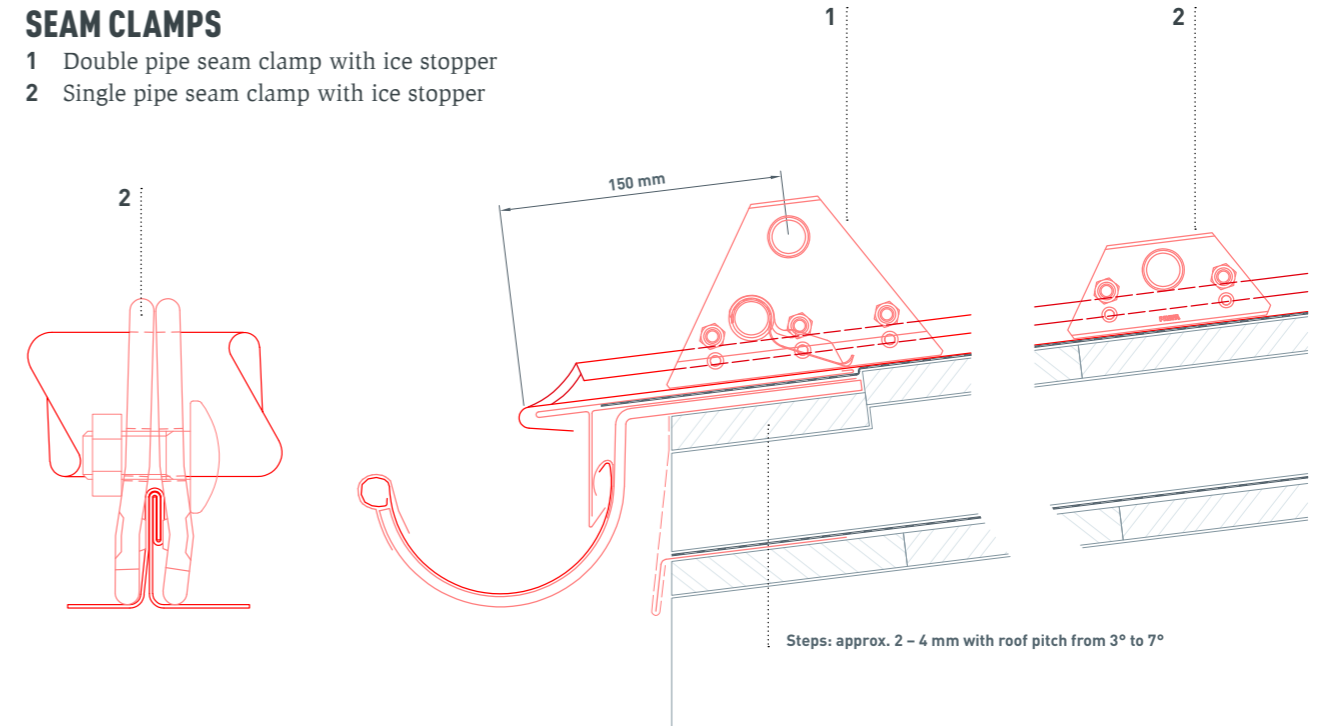


FASTENING WITH SCREWS



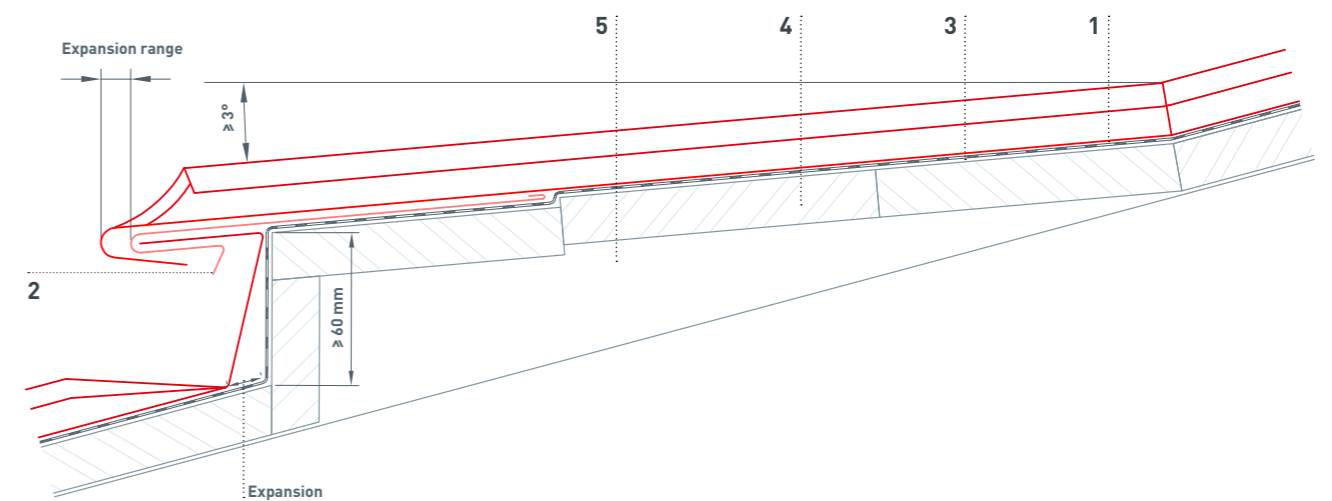
SEAM CLAMPS

- 1 Double pipe seam clamp with ice stopper
- 2 Single pipe seam clamp with ice stopper



CONSTRUCTION OF A TRANSVERSE STEP FOR PREFALZ

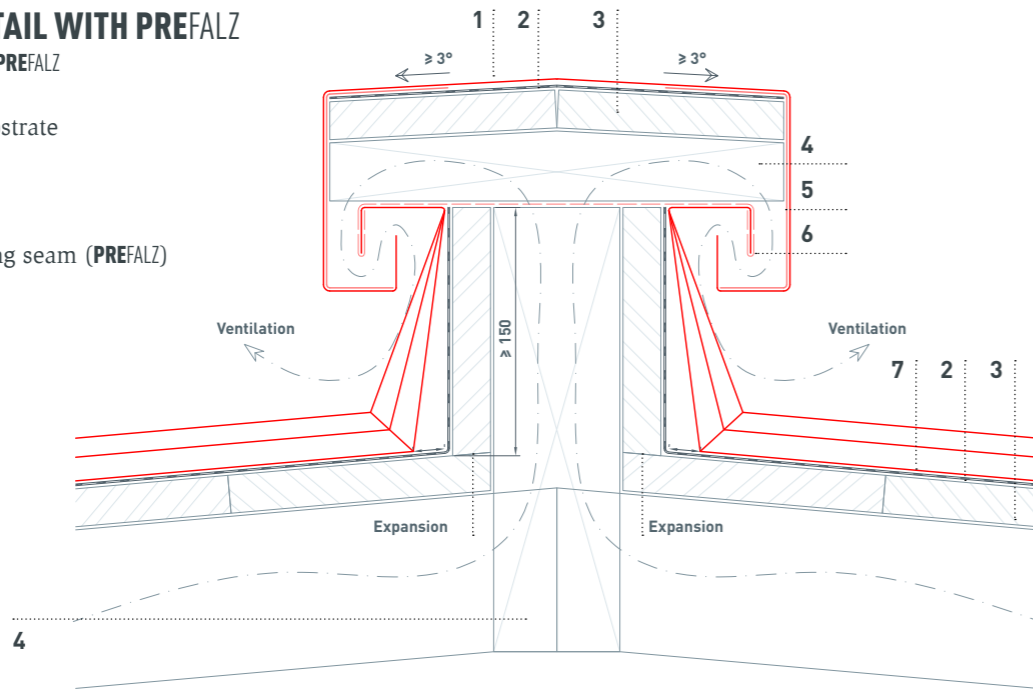
- 1 Double-lock standing seam (**PREFALZ**)
- 2 Patent starter strips
- 3 Separation layer
- 4 Fully supported substrate
- 5 Wedged transverse step





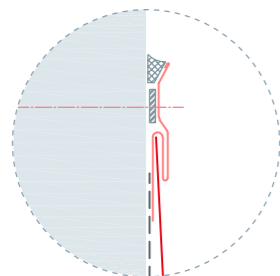
VENTED RIDGE DETAIL WITH PREFALZ

- 1 Ridge cap made of PREFALZ
- 2 Separation layer
- 3 Fully supported substrate
- 4 Square timber
- 5 Patent starter strips
- 6 Perforated sheet
- 7 Double-lock standing seam (PREFALZ)

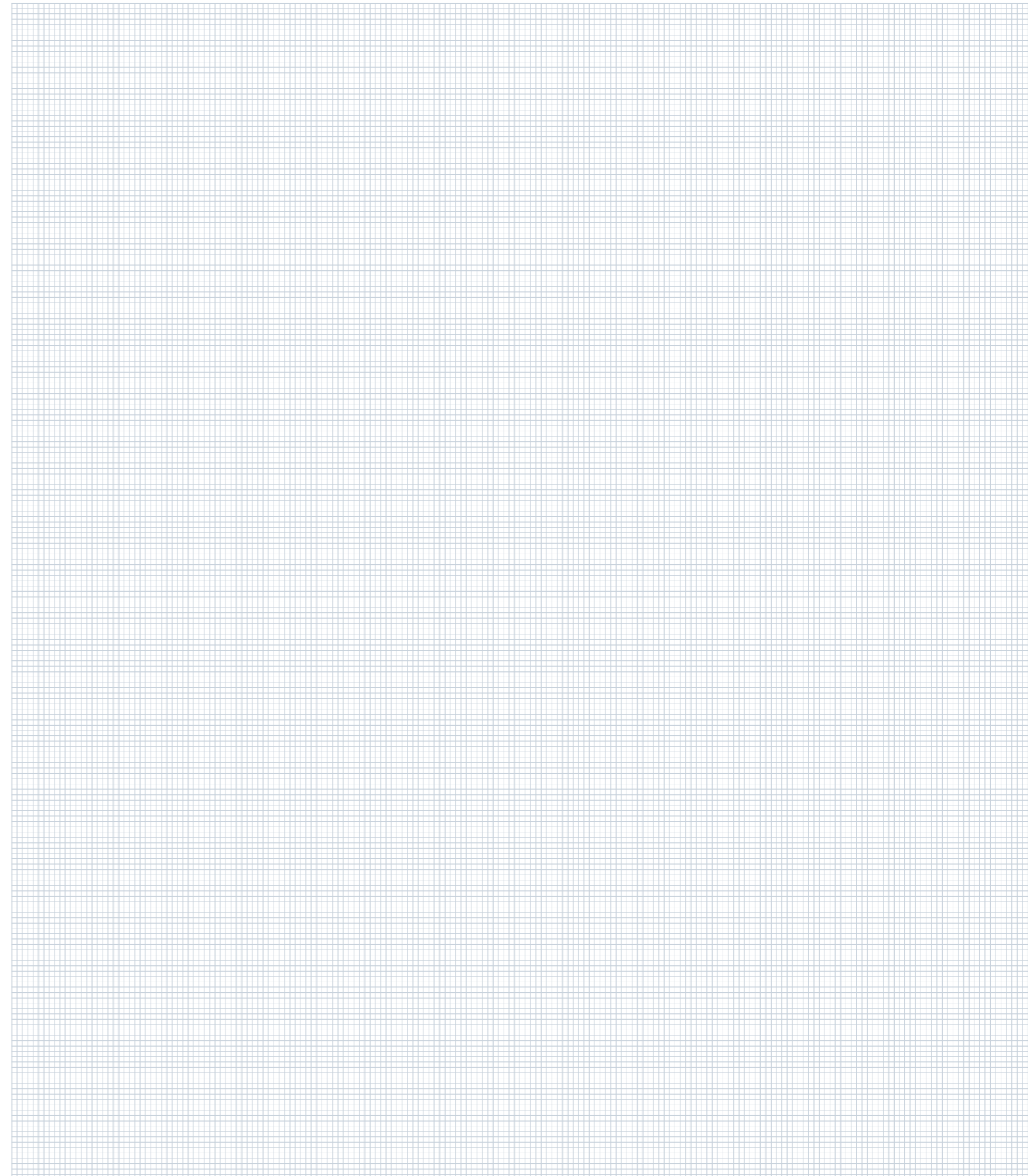
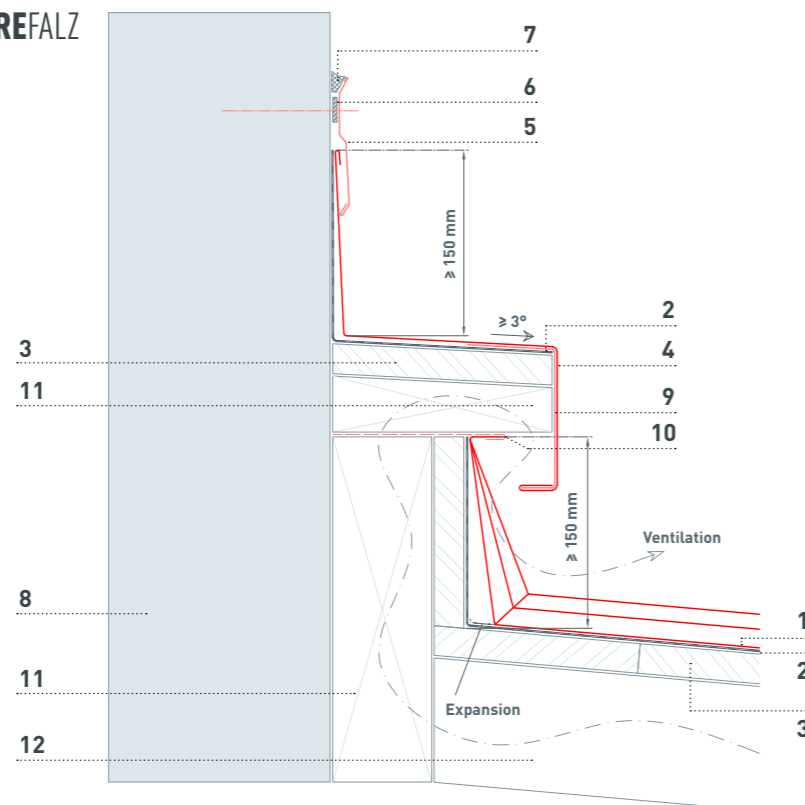


VENTED DETAIL ABUTMENT WITH PREFALZ

- 1 Double-lock standing seam (PREFALZ)
- 2 Separation layer
- 3 Fully supported substrate
- 4 Wall flashing (height: min. 150 mm)
- 5 Cover flashing
- 6 Sealant (sealing gel)
- 7 Elastic sealant
- 8 Wall
- 9 Patent starter strips
- 10 Perforated sheet
- 11 Square timber
- 12 Counter battens

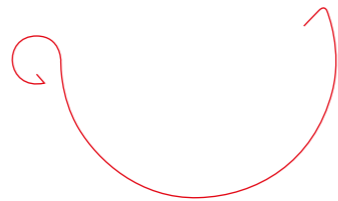


Variant with sealing tape insert



PRODUCT OVERVIEW – ROOF DRAINAGE

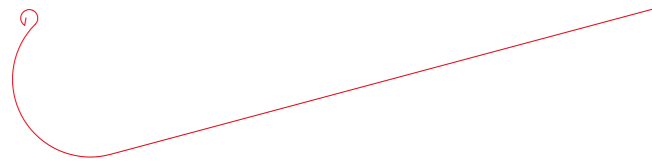
HALF-ROUND GUTTER



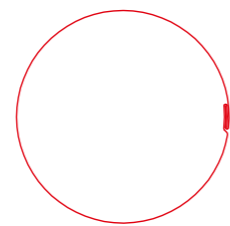
BOX GUTTER



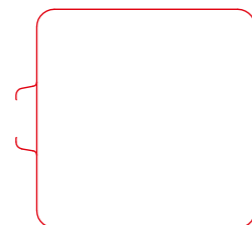
ON-ROOF GUTTER



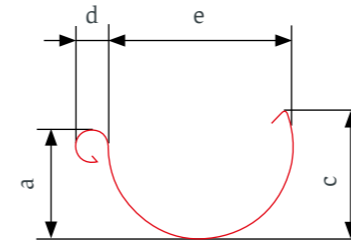
DOWNPIPE



SQUARE DOWNPIPE

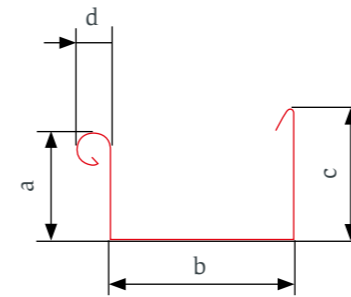


DIMENSIONS – ROOF DRAINAGE



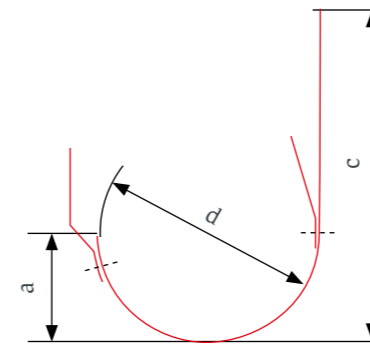
HALF-ROUND GUTTERS

Gutter dimensions	Height of gutter front: a [mm]	Height of gutter back: c [mm]	Gutter diameter: e [mm]	Bead diameter: d [mm]
25 cm	61	72	110	19
28 cm	67	78	126	19
33 cm	87	98	153	19
40 cm	110	121	192	19



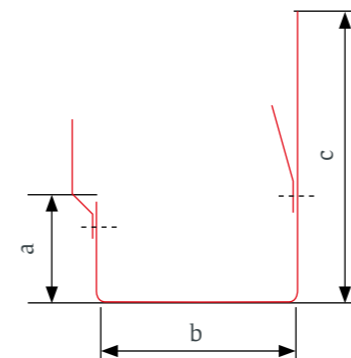
BOX GUTTERS

Gutter dimensions	Height of gutter front: a [mm]	Gutter base: b [mm]	Height of gutter back: c [mm]	Bead diameter: d [mm]
25 cm	54	86	63	19
33 cm	75	120	93	19
40 cm	92	150	113	19
50 cm	114	200	142	19



BOX GUTTER BRACKET

Gutter dimensions	Length of gutter bracket: c [mm]	Front of gutter bracket: a [mm]	Diameter of gutter bracket: d [mm]	Cross-section
25 cm	330	50	107	23 × 7 mm
25 cm (short)	281	50	107	23 × 7 mm
28 cm	347	58	134	28 × 7 mm
28 cm (short)	294	58	134	28 × 7 mm
28 cm (long)	446	58	134	28 × 7 mm
33 cm	374	77	153	28 × 7 mm
33 cm (short)	312	77	153	28 × 7 mm
33 cm (long)	467	77	153	28 × 7 mm
40 cm	436	107	192	30 × 7 mm

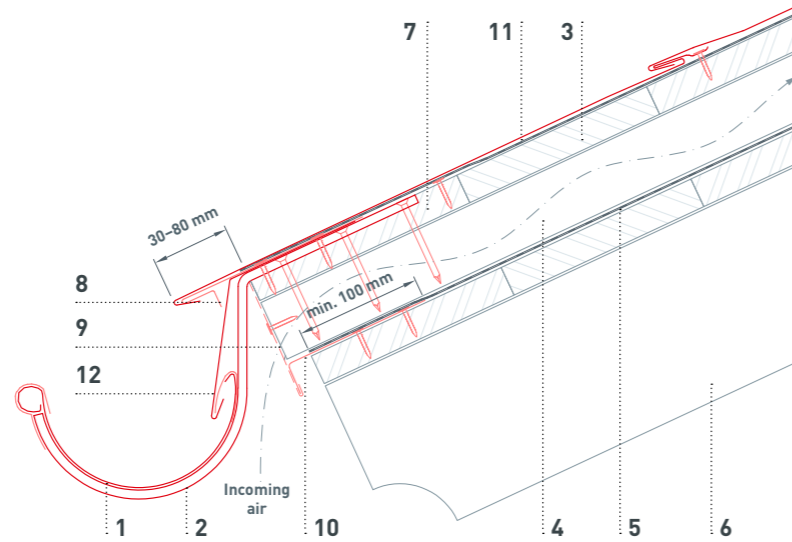


GUTTER BRACKETS FOR BOX GUTTERS

Gutter dimensions	Length of gutter bracket: c [mm]	Front of gutter bracket: a [mm]	Base of gutter bracket: b [mm]	Cross-section
25 cm	325	41	85	23 × 7 mm
33 cm	375	57	120	28 × 7 mm
40 cm	435	76	150	30 × 7 mm
50 cm	455	102	205	35 × 7 mm

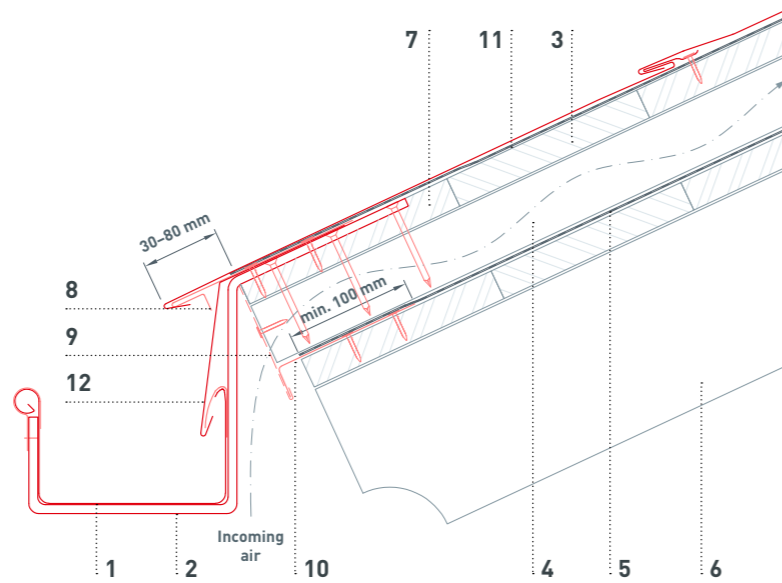
EAVES CONSTRUCTION WITH BOX GUTTER

- 1 Half-round gutter
- 2 Gutter bracket
- 3 Fully supported substrate
- 4 Counter batten
- 5 Underlay
- 6 Rafters
- 7 Eaves board
- 8 Starter strip
- 9 Perforated sheet
- 10 Under roof eaves drip edge
- 11 Separation layer
- 12 Starter flashing



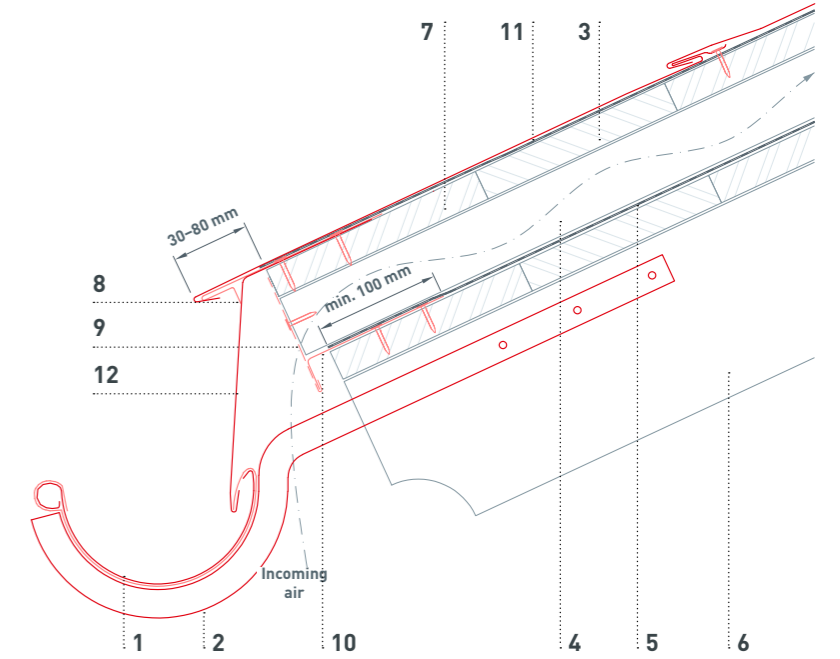
EAVES CONSTRUCTION WITH BOX GUTTER

- 1 Box gutter
- 2 Gutter bracket
- 3 Fully supported substrate
- 4 Counter batten
- 5 Underlay
- 6 Rafters
- 7 Eaves board
- 8 Starter strip
- 9 Perforated sheet
- 10 Under roof eaves drip edge
- 11 Separation layer
- 12 Starter flashing



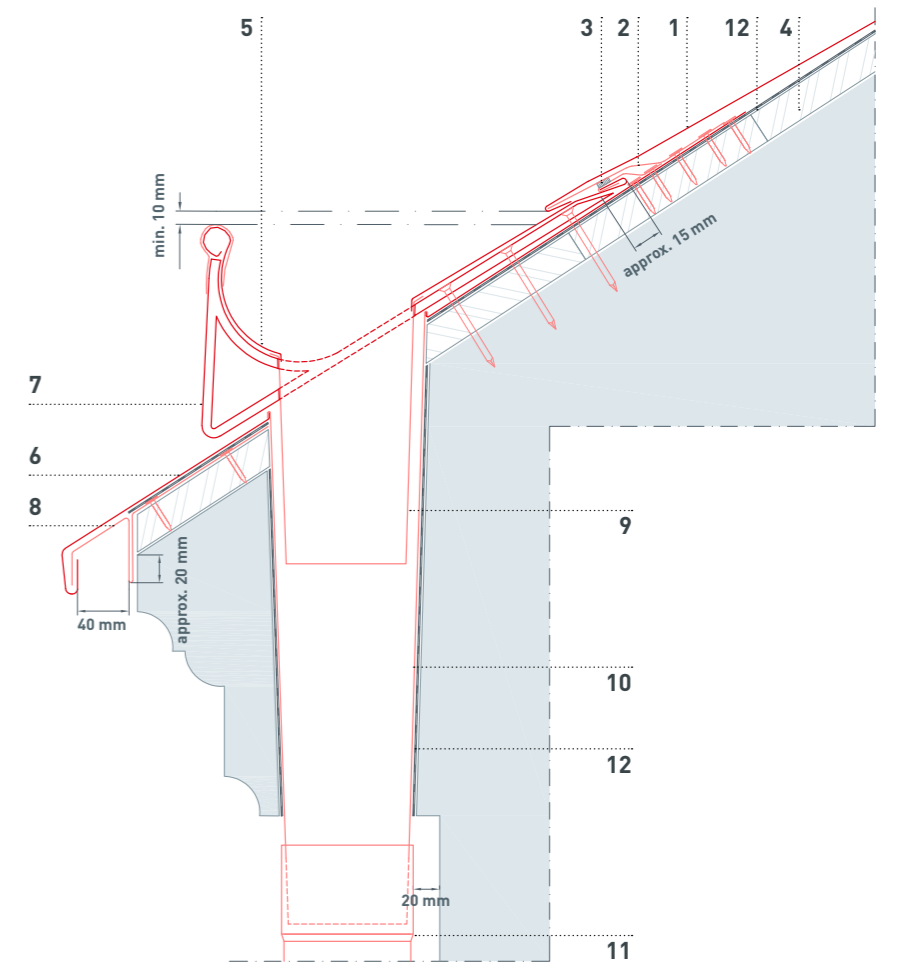
EAVES DETAIL WITH UPRIGHT GUTTER BRACKETS (LATERAL MOUNTING)

- 1 Half-round gutter
- 2 Upright gutter bracket (twisted)
- 3 Fully supported substrate
- 4 Counter batten
- 5 Underlay
- 6 Rafters
- 7 Eaves board
- 8 Starter strip
- 9 Perforated sheet
- 10 Under roof eaves drip edge
- 11 Separation layer
- 12 Starter flashing



EAVESDETAIL WITH ON-ROOF GUTTER

- 1 R.16 roof tile
- 2 Starter strip
- 3 Sealing tape (if applicable)
- 4 Fully supported substrate
- 5 On-roof gutter
- 6 Hem plate
- 7 On-roof gutter bracket
- 8 Eaves drip edge
- 9 Gutter outlet
- 10 Eaves outlet fitting
- 11 Downpipe
- 12 Separation layer





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STRENGTH IS OUR PROMISE.

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- Perfectly coordinated complete systems
- Over 5,000 products in many colours and shapes
- Guarantee of up to 40 years on materials and colours*
- Personal, all-round service at every stage

LET'S TALK ABOUT IT.



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* Information about the material and colour guarantee can be found at: uk.prefa.com/guarantee

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