



QUEENTILE

TOTAL SUPREMACY

INSTALLATION GUIDE

2018

INTRODUCTION

QUEENTILE® roofing system is developed for sloped roof arrangement. Complex of QUEENTILE® stone coated steel roofing and roofing accessories is designed for installation of both standard roofs and isolated ones including on an attic floor.

All elements of roofing system are combined harmoniously with each other in form and color, creating reliable, distinctive, and beautiful roofs.

Recommended pitch slope makes 15...90°. In case of roof isolation with small inclination (up to 20°) additional water isolation coats shall be used. In this case, the installation of isolation film is also required, even on 'cold' surfaces.

Following this step by step installation guide will result in a professional and aesthetically pleasing roof installation that will complement any home for many years to come.

It should be emphasised, however, that this Installation Guide is for guidance only. It is the responsibility of the installer to ensure that all National Standards and Local Building Regulations are strictly adhered to and they must take precedence over the installation techniques recommended in this manual.



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2 COLLECTION

Stone coated steel roofing QUEENTILE® is manufactured of three profile types:
QUEENTILE® Standard, QUEENTILE® Classic, QUEENTILE® Verona.



QUEENTILE SHAKE

Width — 1175 (1100*) mm
Length — 420 (370*)mm
Profile height — 12 mm
Area — 0,49 (0,4*) m²
Consumption — 2,5 pcs./m²
Weight / pcs. — 2,7 kg
Weight / m² — 6,75 kg



QUEENTILE VERONA

Width — 1102 (1058*) mm
Length — 380 (345*)mm
Profile height — 40 mm
Area — 0,418 (0,365*) m²
Consumption — 2,73 pcs./m²
Weight / pcs. — 2,46 kg
Weight / m² — 6,7 kg



QUEENTILE CLASSIC

Width — 1140 (1065*) mm
Length — 410 (350*) mm
Profile height — 25 mm
Area — 0,46 (0,37*) m²
Consumption — 2,68 pcs./m²
Weight / pcs. — 2,57 kg
Weight / m² — 6,9 kg



QUEENTILE STANDARD

Width — 1150 (1100*) mm
Length — 400 (350*) mm
Profile height - 24 mm
Area — 0,47 (0,385*) m²
Consumption — 2,6 pcs./m²
Weight / pcs. — 2,74 kg
Weight / m² — 7,1 kg

* Effective area

Roofing system QUEENTILE® has an obvious advantage over the products of other manufacturers by the presence of large-sized tile sheets. Use of 6-tile sheets allows to reduce overall material consumption up to 12% due to the absence of transverse crisscrosses during tiling.

Besides, large-sized sheets are easier to install and require less time for slope pre-aligning.



QUEENTILE **STANDARD 3 - tile**





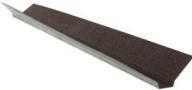





Width — 1150 (1100*) mm
Length — 1100 (1050*) mm
Profile height — 24 mm
Area — 1,26 (1,15*) m²
Consumption — 0,86pcs./m²
Weight / pcs. — 7 kg
Weight / m² — 6,1 kg




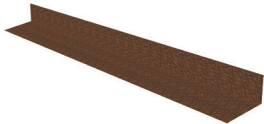
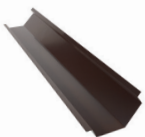




QUEENTILE **STANDARD 6 - tile**

Width— 1150 (1100*) mm
Length — 2150 (2100*) mm
Profile height — 26 mm
Area — 2,47 (2,31*) m²
Consumption — 0,43 pcs./m²
Weight / pcs.— 13,15 kg
Weight / m² — 5,6 kg

3 ACCESSORIES

TRIANGLE RIDGE		Arrangement of ridges and hips. Length – 2 m Consumption: 0,55 pcs./m
END CAP OF TRIANGLE RIDGE		Completing the ridge on both sides. Specifications: Completing triangle ridges and ribs 170x140mm. Consumption: 1 (0,5) pcs. per side.
BARREL RIDGE		Arrangement of ridges and ribs. Specifications: Length – 1,98 m Consumption: 0,55 pcs./m
END CAP OF BARREL RIDGE		Completing the ridge on both sides. Completing barrel ridges and ribs, R74 mm. Consumption: 1 (0,5) pcs. per side.
DECORATIVE VALLEY		Decorative valley finishing. Specifications: Length - 2 m Consumption: 0,55 pcs./m
BARGE BOARD		Finishing of gables and roof edges. Specifications: Length- 2 m Consumption: 0,55 pcs./m
FLAT SHEET		Multipurpose using. Flat sheet coated with basalt chippings in all color palette. Length - 1,25 m; Width - 1 m
STANDARD SIDE FLASHING		Finishing attachments to the walls and balusters. Specifications: Length - 2 m Consumption: 0,55 pcs./m
SIDE WALL FLASHING SHIELD		Attaching arrangement to the walls and balusters. Specifications: Length- 2 m. Consumption: 0,55 pcs./m
MEMBRANE DRIP EDGE		Prevents water-saturation of wooden roofing framework. Specifications: Length - 2 m

BARGE BOARD LEFT		Finishing of gables and roof edges. Specifications: Length- 1.250 m Consumption: 0,95 pcs./m
BARGE BOARD RIGHT		Finishing of gables and roof edges. Specifications: Length- 1.250 m Consumption: 0,95 pcs./m
VERONA COVER FLASHING		Finishing of ridges and wall adjoining. Specifications: Length- 1.250 m Consumption: 0,95 pcs./m
EAVES FLASHING VERONA		Finishing of eaves. Specifications: Length- 1.250 m Consumption: 0,95 pcs./m
BARGE BOARD N2		Finishing of gables and roof edges. Specifications: Length- 2 m Consumption: 0,55 pcs./m
METAL TILE VALLEY		Valley installation. Metal without stone coating, painted in tile color. Specifications: Length - 2 m Consumption: 0,55 pcs./m
EAVES FLASHING. SMALL		Used for installation of unventilated eave and slope angle reduction. Specifications: Length - 2 m Consumption: 0,55 pcs./m
SHIELD FLASHING		Protection of upper edge of connection strips to vertical surfaces. Specifications: Length - 2 m Consumption: 0,55 pcs./m

4 MANUFACTURING TECHNOLOGY

Stone coated steel roofing QUEENTILE® is made of cold-rolled structural steel of leading metallurgical plants with hot application of protective aluzinc coating. Other than aluzinc has corrosion protection more 3...6 times than standard galvanization, it has increased adhesion with paint coatings.

In order to improve corrosion-resistant properties, polymer coating is applied on the metal from both sides. Protective paint coatings not only increase adhesion of decorative covering, but also improve resistance to internal condensation.

Rolling and pressing of stone coated steel roofing sheets is carried out on automated line of 'SAMESOR OY' (Finland). Due to continuous hardware check of geometric parameters and microprocessor control system, sheets obtain identical characteristics. Thereby this tighter lock closing is achieved and the roof leakage possibility is decreased in case of extreme weather conditions. Along with that, slopes obtain perfect flatness, which provides a greater architectural expressiveness of the building as a whole.

After the mechanical treatment, half-finished goods are supplied to application line of protective and decorative outer coating designed and manufactured in Italy. In automatic mode, the sheets shall be covered using acrylic priming, which serves as basis for basalt chippings. Specially selected fractional composition improves adhesion of basalt grains with metal base and gives the similarity to stone coated steel roofing with ceramic one.

At the end, final coat of acrylic glaze shall be applied. It is designed for decorative properties improvement, increase of basalt layer cohesion and roofing material life extend. Cake obtained shall be sintered per certain time-temperature cycle.

Strict control of process parameters at all stages of protective and decorative coating application ensures 50 years' durability of roofing system QUEENTILE®.

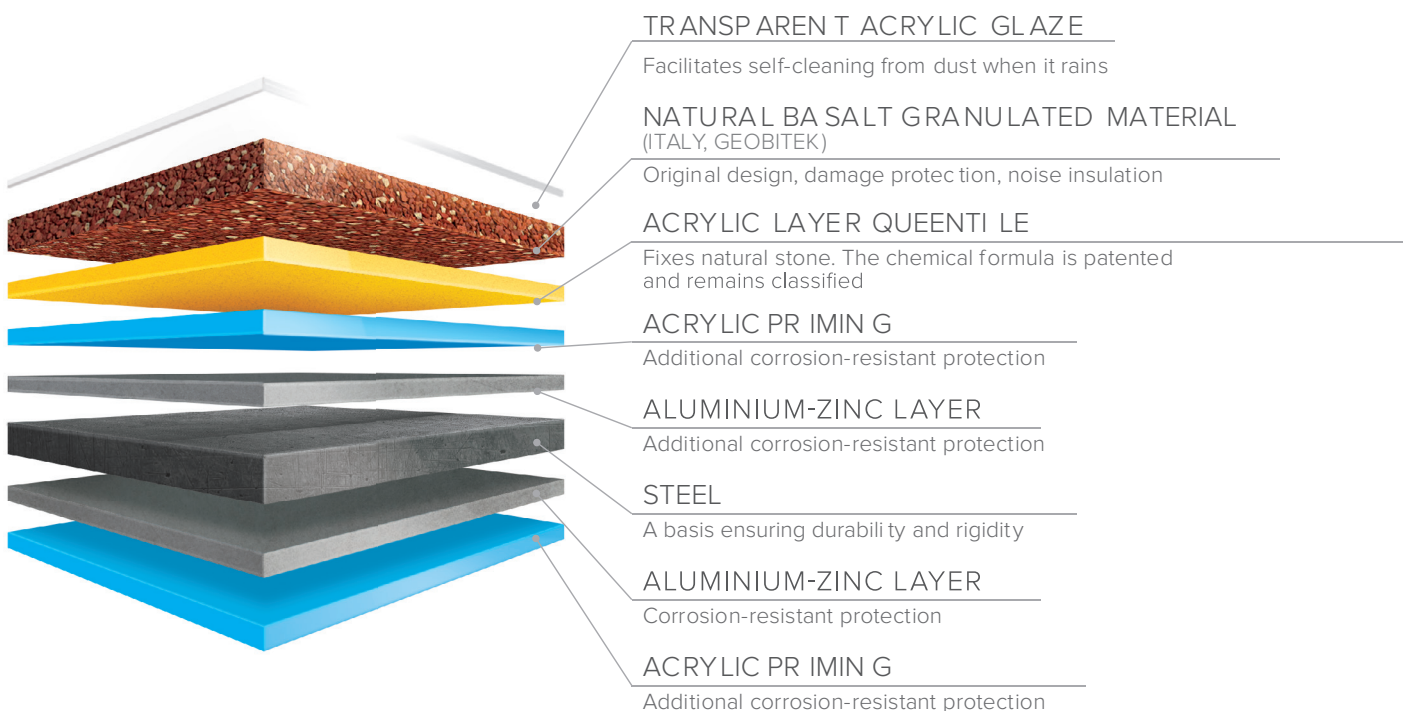


Fig.4 Structure of QUEENTILE

It is recommended to store the stone coated steel roofing sheets and accessories at temperatures below 15 °C. If the elements are stored at reduced temperatures, they should be withstood in a heated room at least 12 hours prior to mechanical treatment.

Storage of maintenance kit at a temperature below +5 °C IS PROHIBITED. Paint and coatings included in it lose their physicochemical properties during freezing and further defrosting.

Не допускается перемещение листов композитной черепицы волоком по другим листам либо земле.

Movement of stone coated steel roofing sheets by dragging along other sheets or by the ground is not allowed. If during handling operations the elements have received minor mechanical damage, damaged areas should be cleaned and covered using maintenance kit.

Stacking of pallets with roofing system QUEENTILE® is PROHIBITED!

The products in factory packaging can be stored outdoors no more than 1 month, protecting it against environmental influences (precipitation, UV radiation). Longer storage period is carried out in dry, ventilated premises. At that, transportation package should be removed. Storage of the components of roofing system QUEENTILE® on the ground directly, even indoors is prohibited.

6 TOOLS USING DURING INSTALLATION



TAPE MEASURE



FRAMING SQUARE



LEVEL



CHALKLINE



SNIPS FOR CUTTING



FOLD FORMING TOOL



NOZZLE-SCISSORS



DRILL



ROOFING HAMMER



NAIL PUNCH



METAL SHEAVE



HANDSAW



JIG SAW OR DISC SAW



UTILITY KNIFE



STAPLE GUN



SILICONE GUN

7 ROOF INSULATION AND WATERPROOFING

Roof insulation is an important part of the building's thermal insulation system, as the highest heat loss occurs through the top of the building. On pitched roofs may be used vapor-permeable insulation, such as fiberglass, mineral wool and basalt wool. They can be released in packages like slabs and on a roll. The thickness is mainly 50 and 100 mm.

In the case of using vapor-proof insulation, the roof ceases to be self-ventilated. On such a heater and adjacent surfaces excess moisture is released in the form of condensate, which leads to rapid wearout of the insulation and wooden roof structures. There are two ways of pitched roofs insulation:

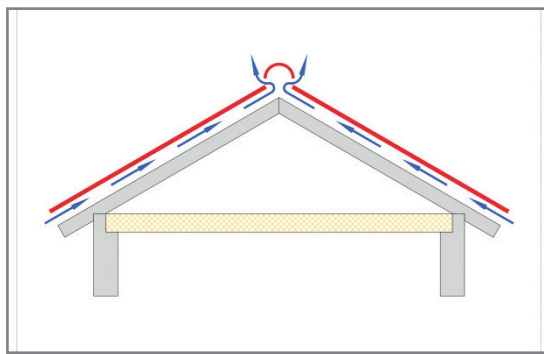


Fig 7.1 Cold roof

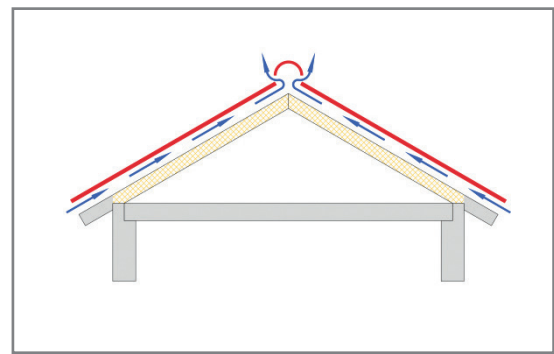


Fig 7.1.2 Warm roof

The horizontal insulation is used when the customer is not going to use the attic space as a living accommodation. This saves the quantity of insulation, the area of which is limited by constructions of the building and is as it were inside. This type of insulation in the future allows you to reduce the volume of the heated room in contrast to the insulation along the rafters. Along the rafters insulation is laid strictly with the use of roof superdiffusion membranes with a density of 115 mg / m² and above and vapor barrier films with a density of 110 mg / m². The density plays an important role in the long-term exploitation of effective insulation. The membranes and films in the junctions should be glued with a special adhesive tape or film sealant.

The thickness of effective insulant shall be no less than 200 mm. The thicker the insulation, the lower the cost of heating. Calculation of the necessary insulation is carried out at the design stage. You can lay the insulation both from bottom and from top, relative to the plane of the rafters. The vapor barrier along the roof contour. It should be wrapped to the top and is glued in the way resemble a tray, it does not allow moisture to get inside the building on the insulator. It should be remembered, That a vapor barrier film can not carry a weight, so the insulation must eventually lie on a wooden or other flooring. It is necessary to lay the insulator in such a way as to ensure the dressing of the seams. Measuring the width of the rafters, cut out the insulation 20mm wider, this will avoid the cracks along the rafters. Do not allow pressing or excessive sealing insulation, remember: it should lie freely.

8.1. Membrane roof sheathing

At slopes with small slope (up to 15°) the stone coated steel roofing shall be installed along solid flooring with roll waterproof finish. At that, it serves only for decorative purposes. One of the mandatory conditions for the installation of slopes (up to 15°) is the using of a membrane roof sheathing, which provides protection from sagging film under the effect of loads. Also, the sheathing does not allow the insulator to squeeze the membrane up, especially when installing the insulator from below. Besides that the wood has low thermal conductivity and can increase the insulation value. The sheathing is performed by a board measuring $30 * 100\text{mm}$ or other cross-section, according to the design documentation.

For roofs with a slope from 15° the using of solid membrane sheathing is not required. The sheathing for these slopes is often missing but can be performed with a step through an equal footing, i.e with a gap between the boards at 100mm . Having the same qualities as a solid sheathing for small slope angles besides that will allow to move more safe and to work on the roof, additionally will connect the rafters to the final sheathing, will allow to pull the front part of the roof for a length of up to 600mm from the edge of the wall and the possibility of further strengthening this node.

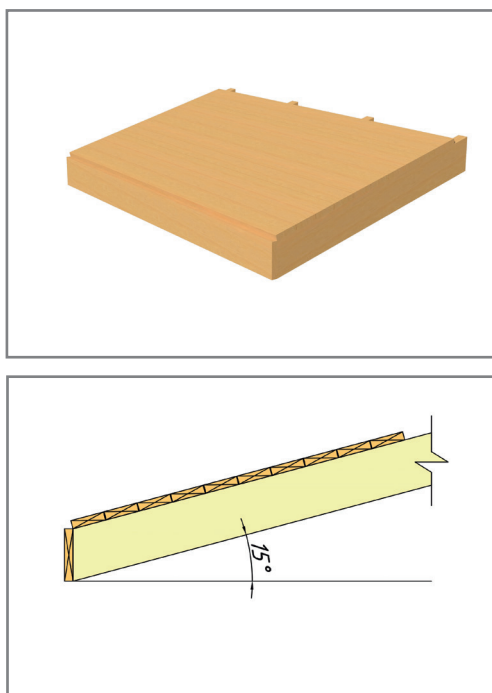


Fig 8.1.1. Membrane roof sheathing up to 15°

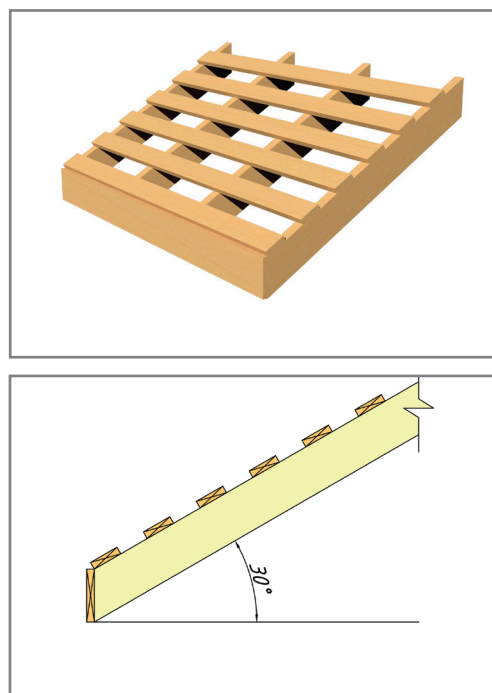


Fig 8.1.2. Membrane roof sheathing from 15°

8 ROOF SHEATHING

8.2 Roofing membranes

it is necessary to lay superdiffusion membranes with density from 115 mg / m² and higher as waterproofing on the roof. Using these membranes allows roofing to «breathe» .

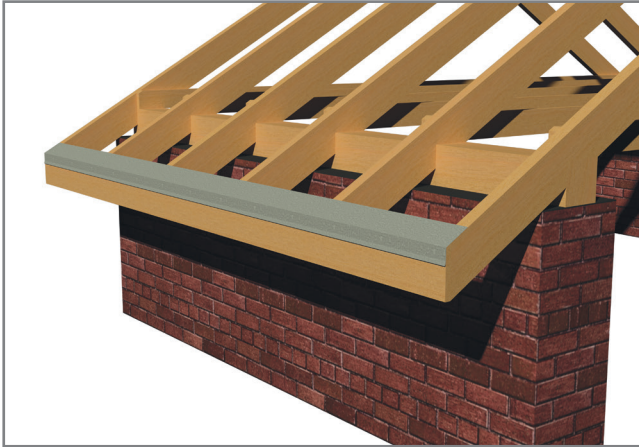


Fig 8.2 Eaves protection flashing

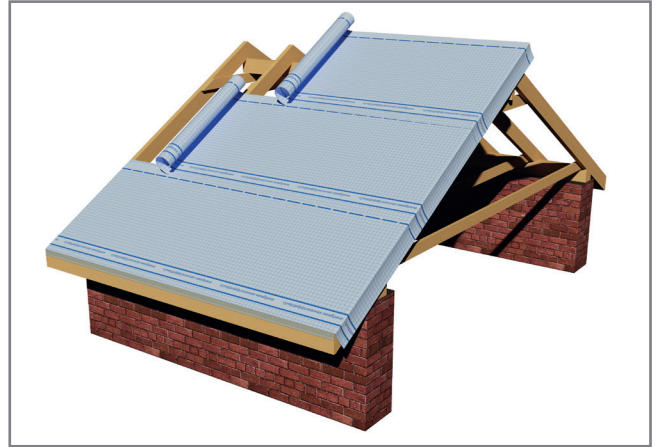


Fig 8.2.1 Membrane installation

Membrane installation is from bottom to top. The lower edge on the roof projection is needed to be glued. It is important to understand that the membrane should to be ended by eaves protection flashing, that will not allow to water-saturation of wooden roofing framework and soffits. Membrane fixing occurs by fixing the stapler bracket and than attaching the counter batten. All joints of membranes must be glued with special adhesive tape or film sealant. The horizontal flutter should be at least 100mm, vertical - 200mm. The end of the membrane edge should be let out 200mm beyond the edge of the roof and install in the front of gable sheathing.

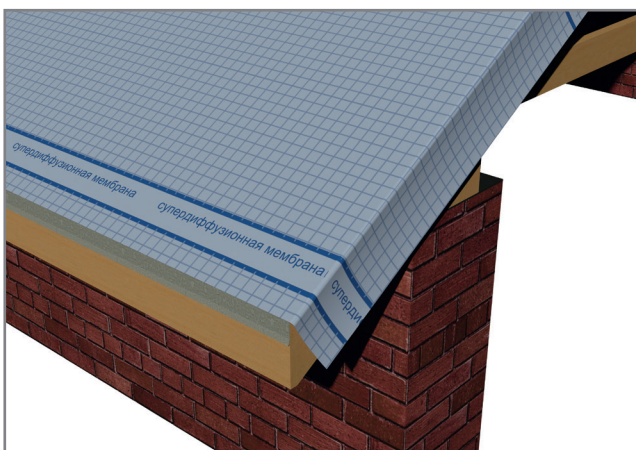


Fig 8.2.3 Membrane release over the slope

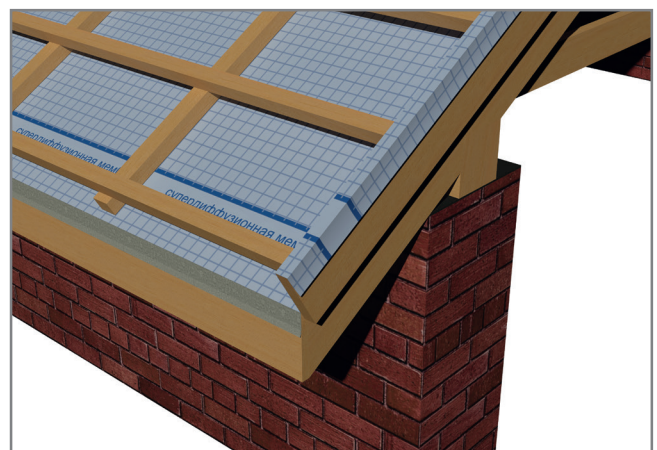


Fig 8.2.4 The membrane should be turned up

On the ridge and hip, an overlap should be at least 200 mm. Valley node should be mount with a special care. The overlaps planes on each other should be at least 500 mm and the third layer of the membrane should be required, which stacks up along the valley line. The damage points of the underlay should be glued with glue or put a patch from a piece of the same membrane, gluing it.

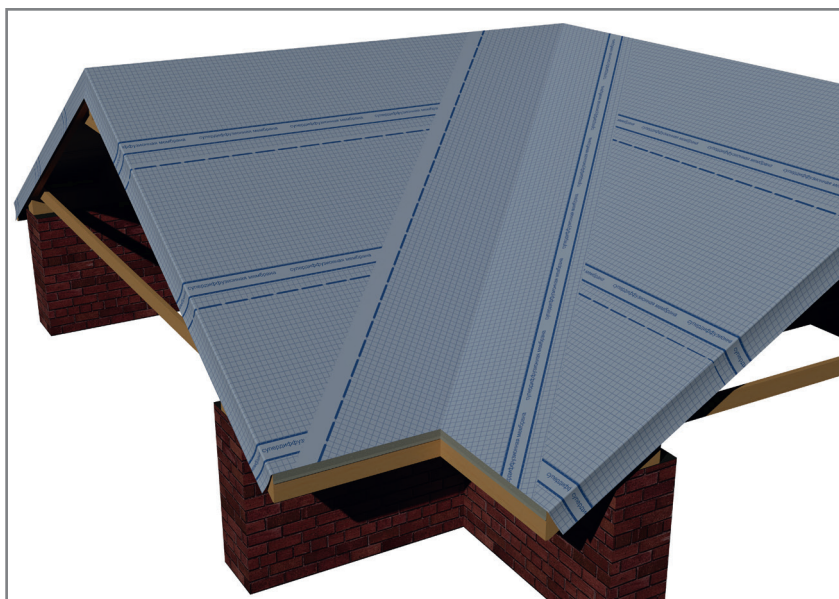


Fig 8.2.5 The water isolation of the valley's node

8.3 Counter battens

The counter batten is installed along the rafters on the top of the underlay. The counter batten fixing should be fit by the screw of a minimum length 75mm. Counter battens provide a ventilation space between the underlay and the roof covering. The minimum counter batten height is 25 mm.

Securely holds the underlay of the roof, as in the time of installation, as well as in finished roof. In addition to the sealing tape under the counter batten, it is a sealed node for fixing the underlay to the roof frame.

The counter batten is the base of arrangement of the sheathing under the final cover. You shouldn't forget, that during arrangement and fitting the roof sheathing frequently you should saw-in into the counter batten, so you should not use battens 25mm high, but a plenty to spare. Especially you should to give a careful attention to the size of counter-batten while you are re-roofing without the replacement of rafters.

You should to remember, that the counter batten transmits the load from whole roofing to the raftings and also keeps the roof sheathing and final coating on the roof during the wind and other loads. That is why it should securely fasten to the rafters or other foundation.

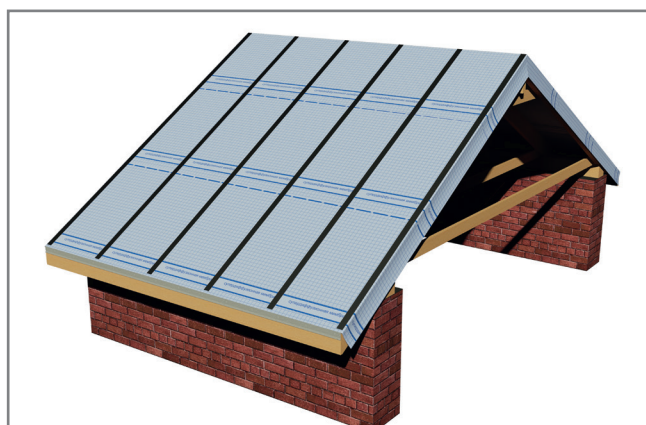


Fig 8.3.1 The tape gumming underneath the counter batten

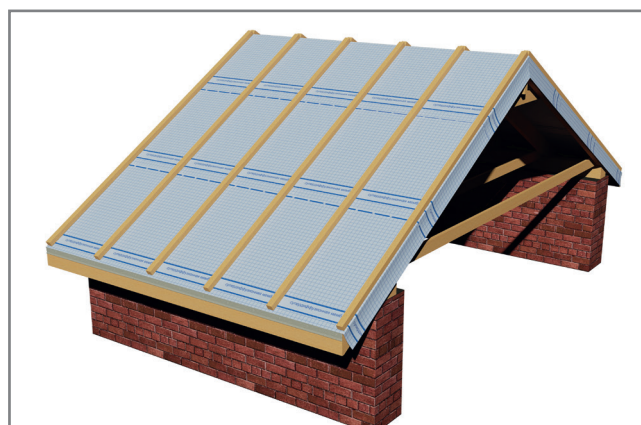


Fig 8.3.2 The counter battens

8 ROOF SHEATHING

8.4 Roof overhang

Roof sheathing of simple roofing is arranged from bottom to top. The roof sheathing starts from the roof overhang.

Determine location of the first and second skids taking into consideration location of the face board and presence of fastening elements of the gutter.

For example, if the gutters are planned to be arranged, the eave part of the first tile overhangs above the edge of the first skid of the roof sheathing to the distance required by the installation rules of the selected drainage system. Pitch between the first and second skid of the roof sheathing is reduced by the same distance.

If the gutters holders are fastened to the roof slope, for convenience of the roof sheathing installation it is necessary to use a board 10 mm thinner instead of the first skid, as well as a «big eaves flashing» roofing accessory.

If the gutters holders are attached to the face board, or you are not going to install a drainage system, skids of the roof sheathing shall have the same cross section. They should be laid with the same pitch recommended for the selected model of QUEENTILE stone coated steel roofing. In this case, QUEENTILE recommends to use a «small eaves flashing» roofing accessory.



Fig 8.4.1 The roof sheathing with rainwater hooks

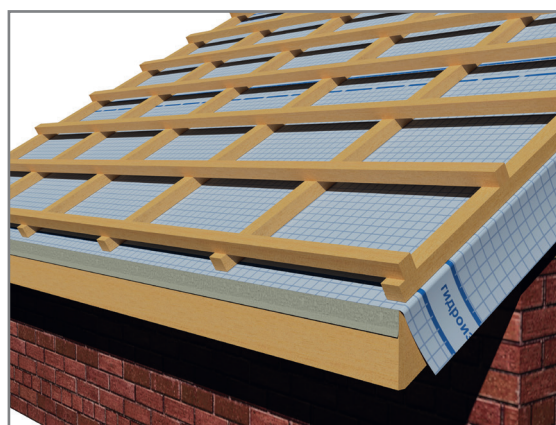


Fig 8.4.2 The roof sheathing without rainwater hooks

8.5 Slope plane roof sheathing

When arranging rafters with a pitch not exceeding 800 mm, we will need a skid with a cross section of at least 40*40 mm for the slope plane roof sheathing. If the pitch of rafters exceeds 800 mm, cross section of the roof sheathing skid should be increased.

Take a tape measure, pencil and mark the counter batten according to the tile layout. Marking should be applied along the edges of the slope, then pull the cord and mark the intermediate points.

Arrange the 40*40 mm skid according to the marking. Adjustment of the length of the skid is performed on the counter batten.

Check the height of the laid roof sheathing with the help of a 2-meter leveling board. Height difference less than 5 mm is allowed on the roof sheathing. If the height difference is more than 5 mm, adjustment will be needed.

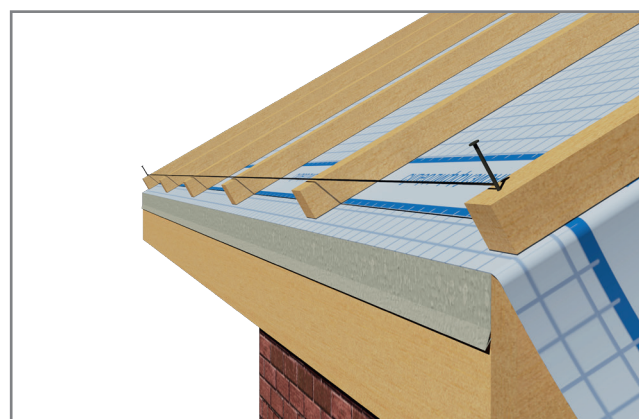


Fig 8.5.1 Marking of the intermediate points of the slope

Batten spacing for roof sheathing depends on the profile type.

Space for 1-tile QUEENTILE® Standard sheets is 347 mm. For QUEENTILE® Classic - 350mm.

QUEENTILE® Verona - 345mm, QUEENTILE® Shake - 370mm.

Roof sheathing space for 3-tile and 6-tile QUEENTILE® Standard sheets is specific.

Length between the first and last roof sheathing skid under 3-tile sheets is 1050 mm. And under 6-tile sheets is 2100 mm. This dimension shall be strictly respected. For convenience of tile laying and firm adjoining to the upper roof sheathing skid, shift the intermediate skids of 3 mm up.

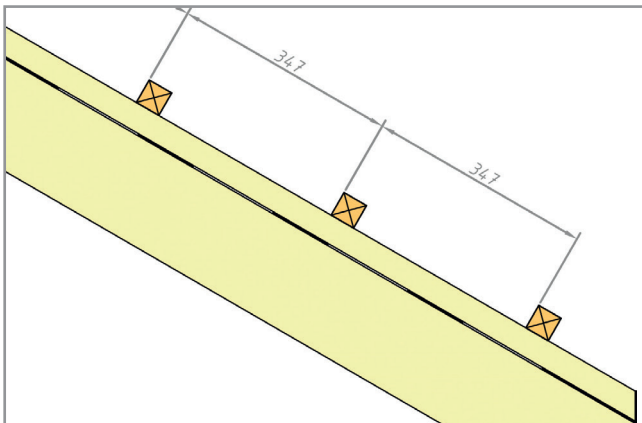


Fig 8.5.1 The batten spacing for QUEENTILE® Standard (1-tile)

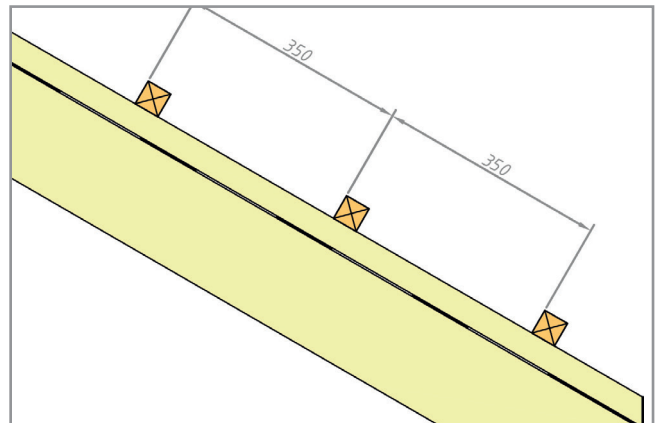


Fig 8.5.2 The batten spacing for QUEENTILE® Classic

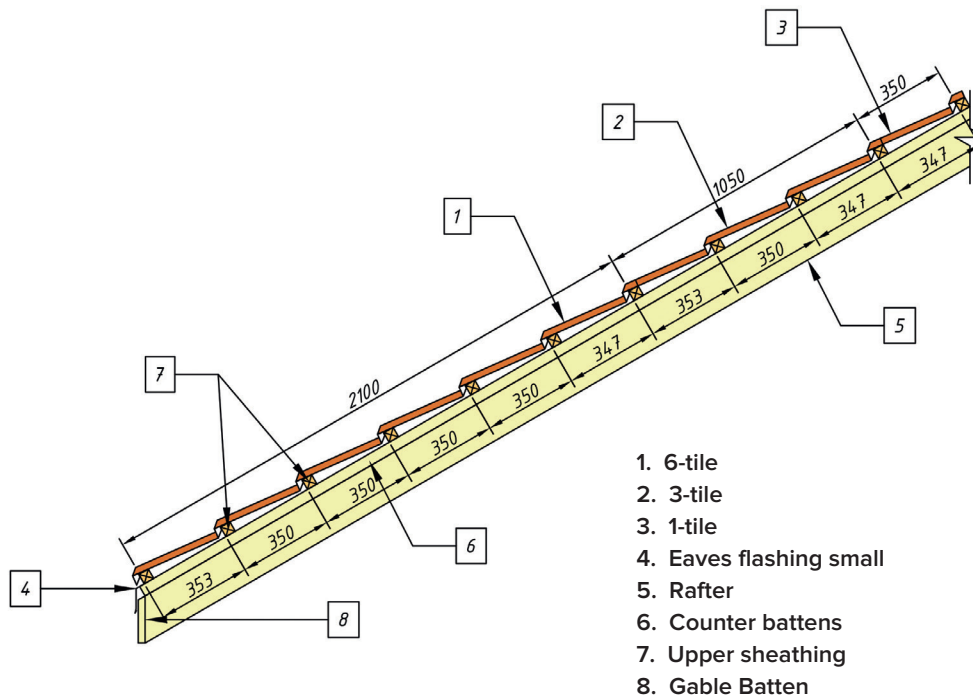


Fig 8.5.3 The roof sheathing for QUEENTILE® Standard

8 ROOF SHEATHING

If the slope ends with a ridge, then the last bar of the battens should be laid after mounting the ridge bar holders.

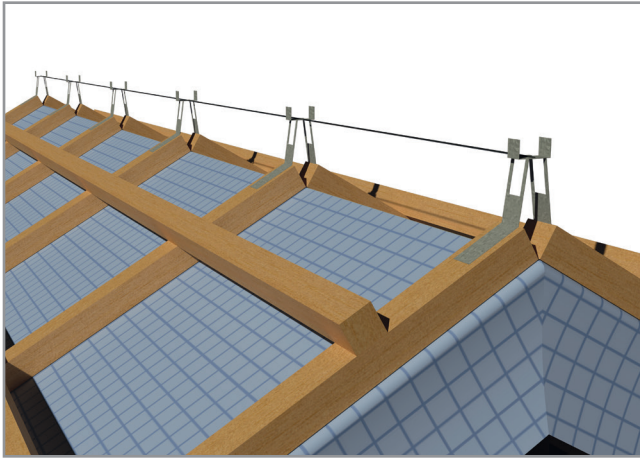


Fig 8.5.4 Mounting of ridge batten holders

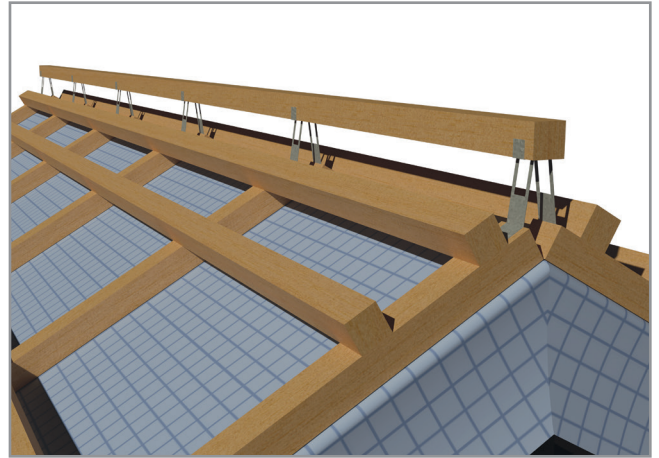


Fig 8.5.5 Laying of bridge and batten last beams

8.6 Arrangement of the roof sheathing and installation of the valley

Roof sheathing of the valley node shall be installed on the plank flooring. Height of the skids equals to height of the counter batten. The flooring shall overlap the slopes by at least 200 mm. Splicing of the sheathing boards shall be carried out only on rafters. The roof sheathing shall be cut along the roof line after final fastening.

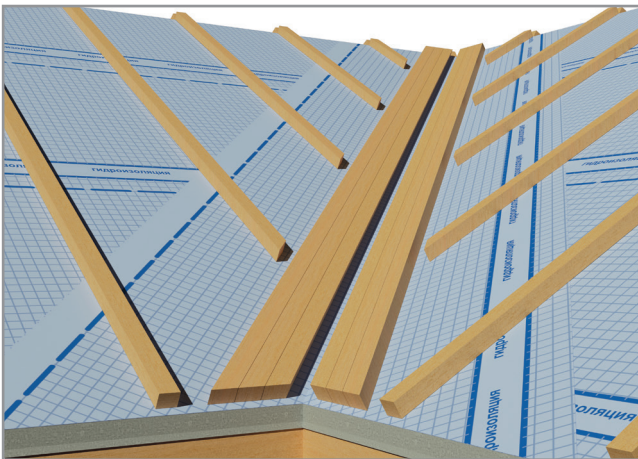


Fig 8.6.1 The counter batten of the valley node

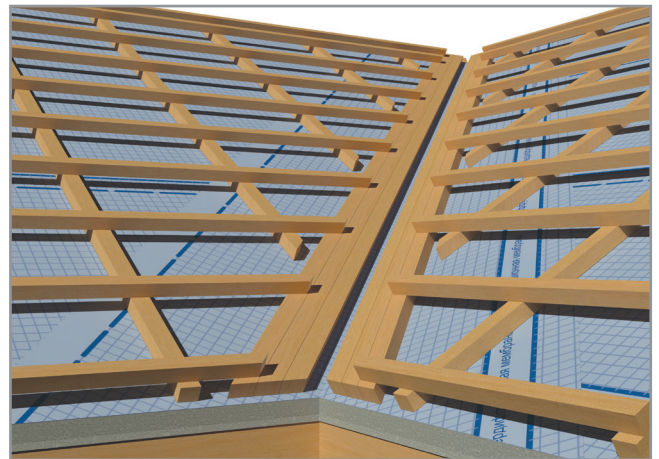


Fig 8.6.2 The batten of the valley node

Determine center of the node based on intersection of the slope planes. Stretch a thread and mark 130 mm either side from it. Stretch the threads that mark the edge of the valley node, and cut off the roof sheathing along these lines. Then put the valley flashing. The lower part of the flashing shall be cut along the shape of the overhang, leaving 50 mm to bend the edge of the valley.

Please note: in order to allow condensate to flow freely to the eave, and the air of the drying ventilation to rise to the ridge, the counter batten should be cut at 20-30 mm from the valley roof sheathing.

The slope roof sheathing skids are fastened to the projecting edge of the valley roof sheathing.

We have to install the valley flashing exactly in the node roof sheathing. Adjust the lower edge of the flashing along the shape of the overhang by cutting and folding the edges down over the eave flashings installed earlier. The edge of the upper flashing should be adjusted according to the place of its exit. Fasten the valley to the slope roof sheathing. Overlapping of the flashings should be 100 mm. Glue the seal on both sides along the length of the valley flashing.

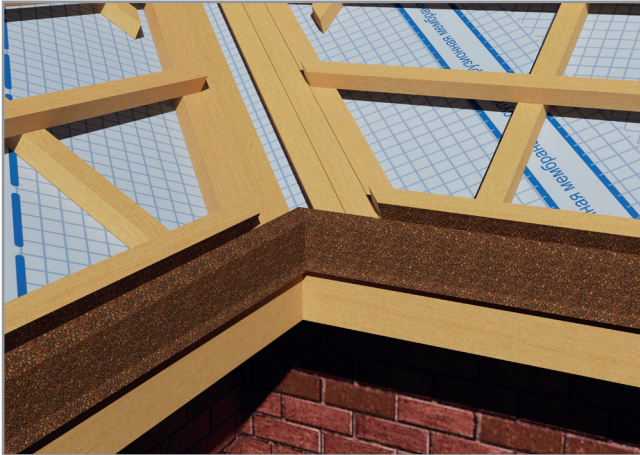


Fig 8.6.3 Eaves flashings

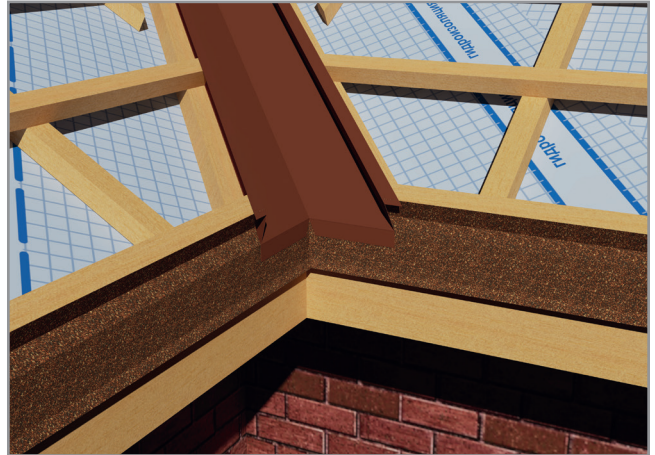
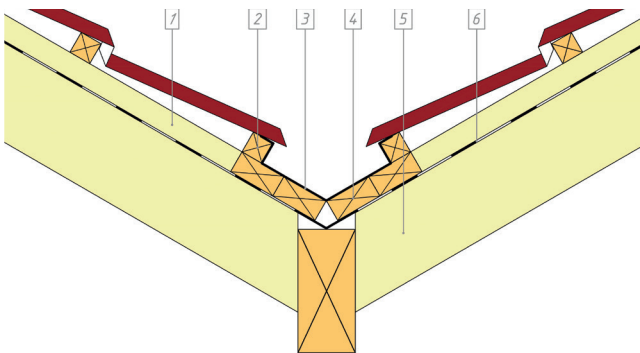


Fig 8.6.4 Metal tile valley



1. Counter Batten
2. Sheathing
3. Valley flashing
4. Solid padding
5. Rafter
6. Underlay

Fig 8.6.5 Valley Node

8.7 Gable roof sheathing



Fig 8.7.1 Gable Batten

The gable roof sheathing shall end with a wind board. For convenience, take a 30*150 mm board.

The wind board should be higher than the roof sheathing by the height of the selected profile of QUEENTILE stone coated steel roofing.

8 ROOF SHEATHING

8.8 Preparation for ridge flashing fastening

The foundation of ridge flashing installation is the arrangement of ridge beam. The ridge skid is installed on its holders. Installation of holders of the ridge beam for roofs with a slope of 30-50 degrees:

- Find the ridge center.
- Fasten ridge skid holders on the edges to a height of 90-100 mm from the counter batten.
- Stretch a thread between the extreme ridge skid holders and install remaining holders with a pitch not exceeding 500 mm.
- Fasten the ridge skid to the holders.

Please note: joining of the skid should be performed on the holders.

For the roofs with different pitch angle the high of the ridge may change in favour of appealing appearance.

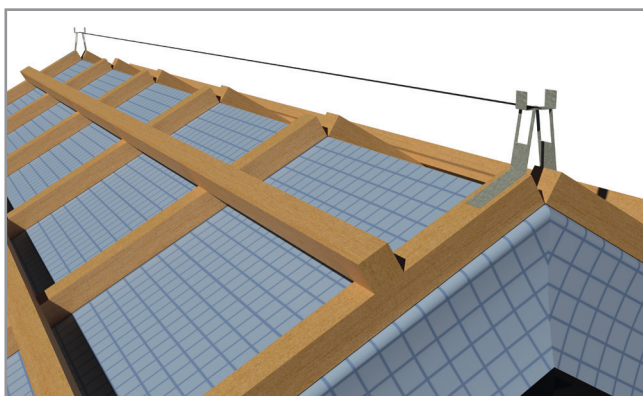


Fig 8.8.1 Installation of ridge batten end holders

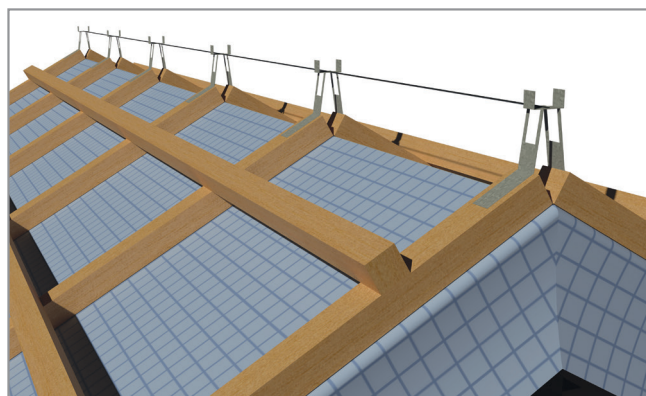


Fig 8.8.2 Ridge beam holders installation

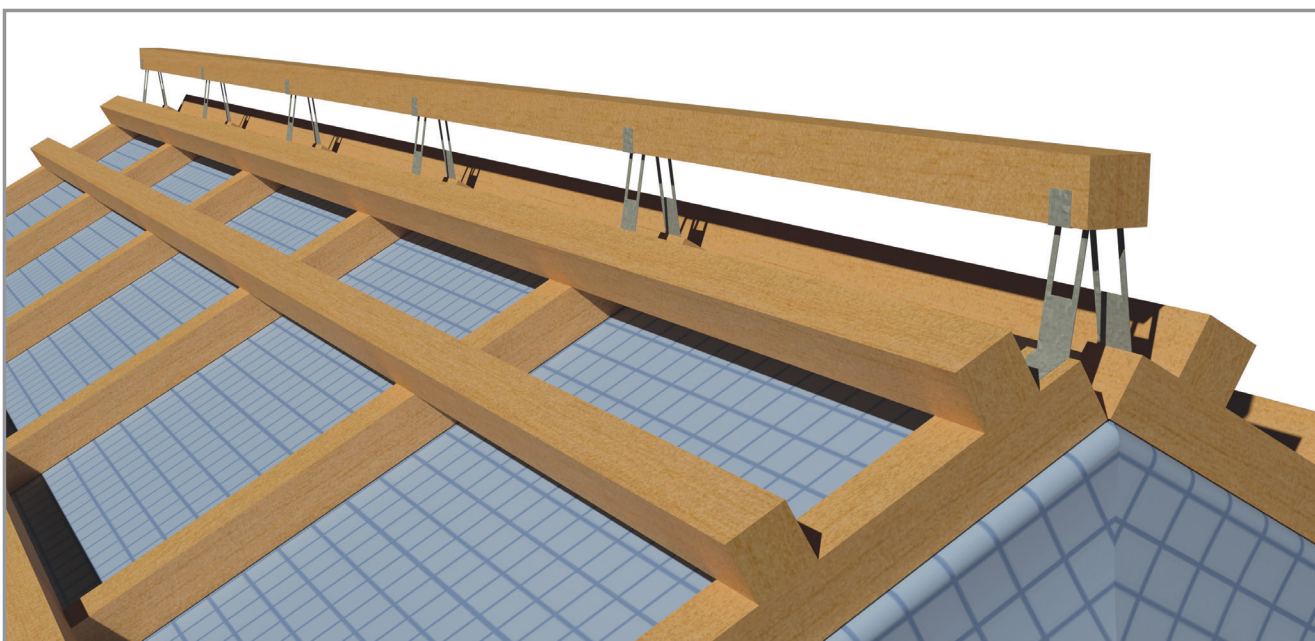


Fig 8.8.3 Ridge beam installation

9.1 Installation of eave flashings and tiles

Prior to installation of the lower tile, fasten the eave flashing. Overlapping of the roofing accessories should be at least 100 mm. The flashing nailed by two-three nails

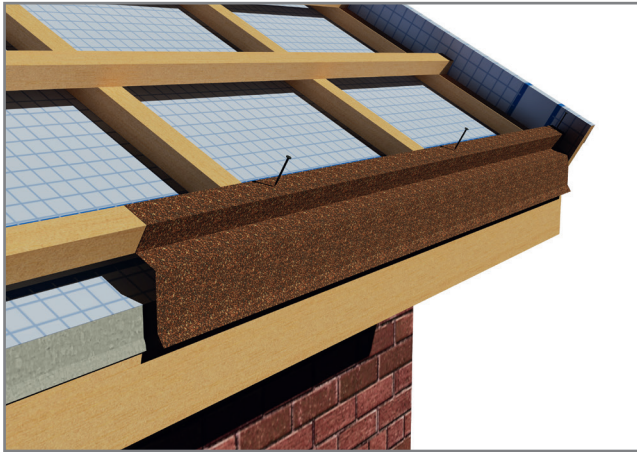


Fig 9.1.1 Small eave flashing installation

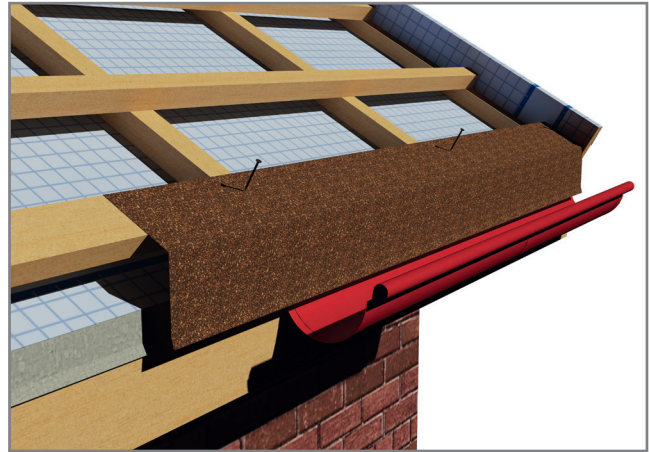


Fig 9.1.2 Big eave flashing installation

QUEENTILE® Classic installation

Start installation of QUEENTILE® Classic tiles from the second upper row and move down to the overhang. Tiles should be shifted chequerwise. The upper row should be installed the last, where we can put cut tiles, previously prepared considering the overlap in lock. .

QUEENTILE® Classic shallow profile tiles shall be bent along the ridge and front units, as well as at places of adjoining. Tile laying may be performed from left to right and vice versa. Choose a direction depending on wind loads, visual attraction of the roof and other conditions of the design.

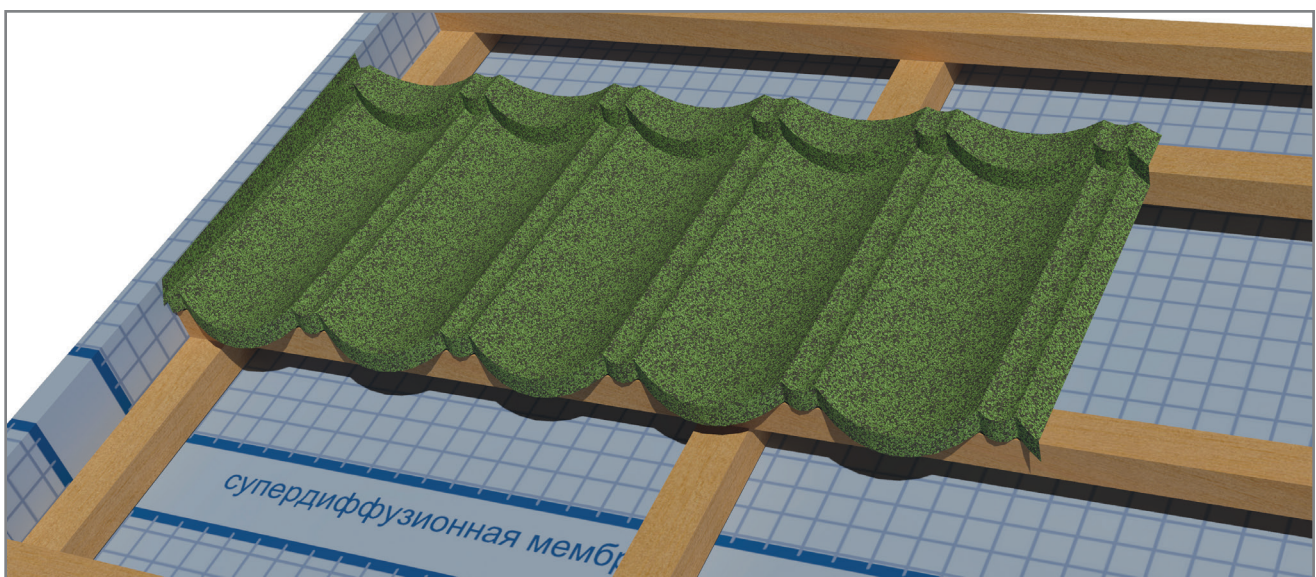


Fig 9.1.3 Bending up the tile on the gable

9 INSTALLATION OF TILES AND ROOFING ACCESSORIES

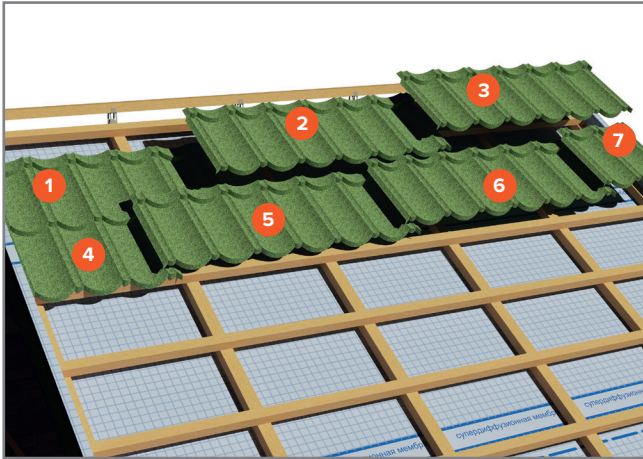


Fig 9.1.4 Laying a horizontal row

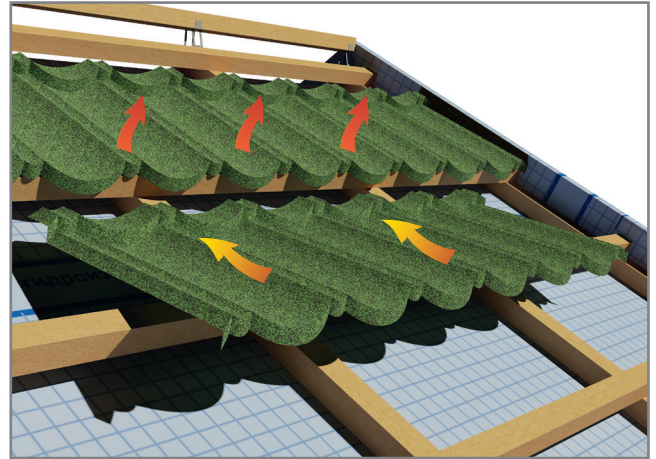


Fig 9.1.5 Laying a vertical row

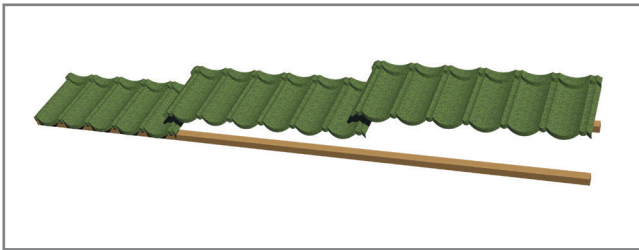


Fig 9.1.6 Overlapping the tiles from left to right

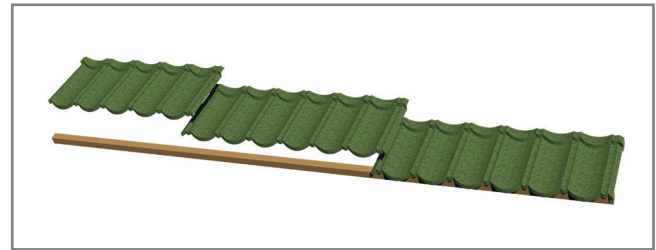


Fig 9.1.7 Overlapping the tiles from right to left

QUEENTILE® Standard and QUEENTILE® Verona deep profile tiles shouldn't be bent.

Lock in QUEENTILE Standard is unusual for stone coated steel roofing. It visually hides the vertical seam, but assumes only one installation direction when the left tile overlaps the right one.

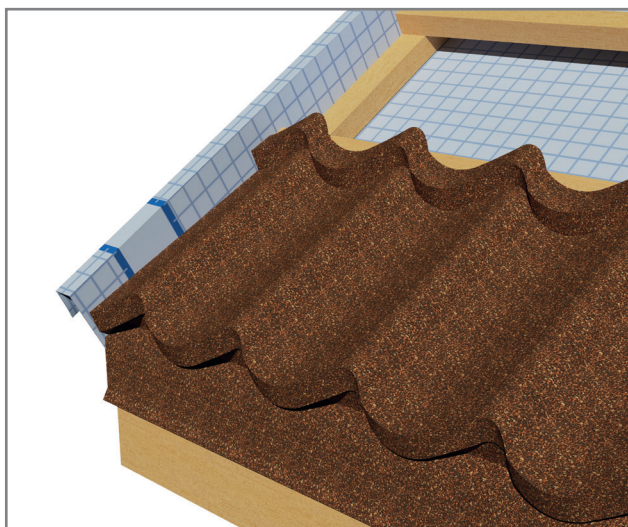


Fig 9.1.8 Gable adjoining

Besides that, QUEENTILE® Standard is produced by rolling technology and in the place of top location there is a projecting part, which can be bent with the help of a hammer the way as tile beared against the sheathing.

Besides that, QUEENTILE Standard is produced by rolling technology. QUEENTILE® Standard tiles are produced in three typical sizes: 1-tile, 3-tile and 6-tile. When using multi-tile sheets on the roof, installation shall start with these tiles.

QUEENTILE® Standard stone coated steel roofing has one unique feature. It may be installed from the eave projection to the ridge node similar to the traditional installation method used for all types of roofing coats.

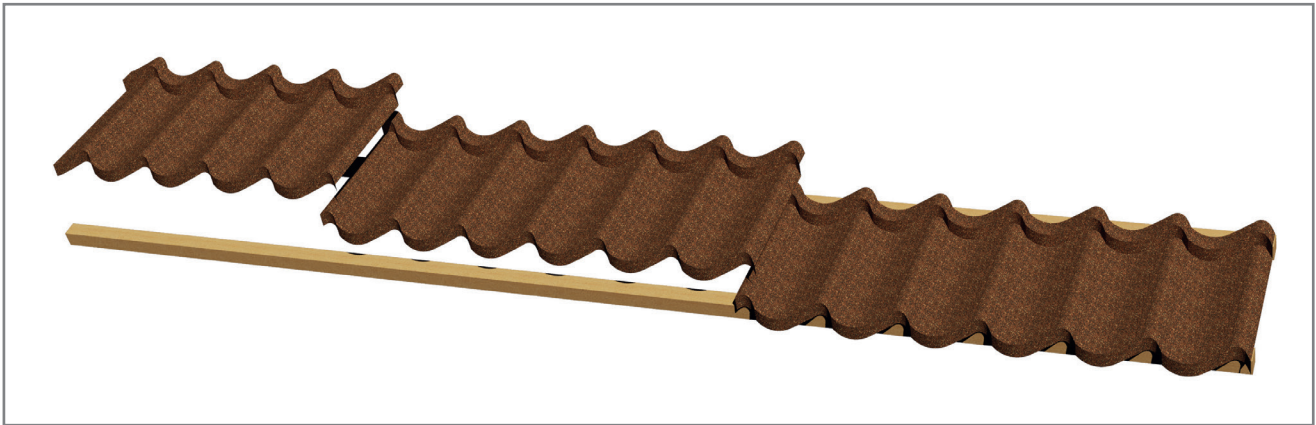


Fig 9.1.9 The overlapping is possible from right to left

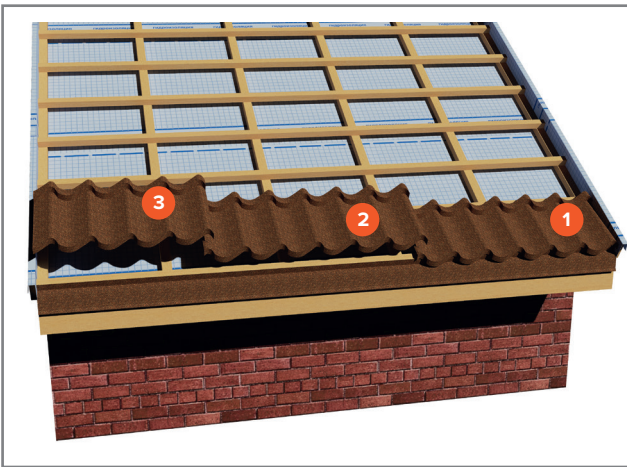


Fig 9.1.10 The installation of the first row

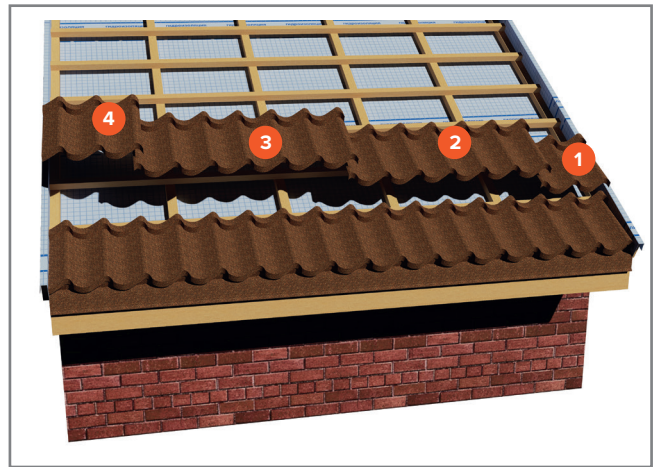


Fig 9.1.11 The installation of the following rows

At the same time, the standard installation method from the ridge to the eave is not excluded. Fasten the stone coated steel roofing using anticorrosive painted nails.

Initial tiles are fastened to the roof sheathing in the upper part with 2-3 nails perpendicularly to the slope plane. Later, these fastening points will be hidden under upper tiles or roofing accessories.

Main points of tile fastening on the slope plane are located at sheet joints and next but one wave. 1-tile, 3-tile and 6-tile sheets are fastened to at least 8, 16 and 28 points respectively.

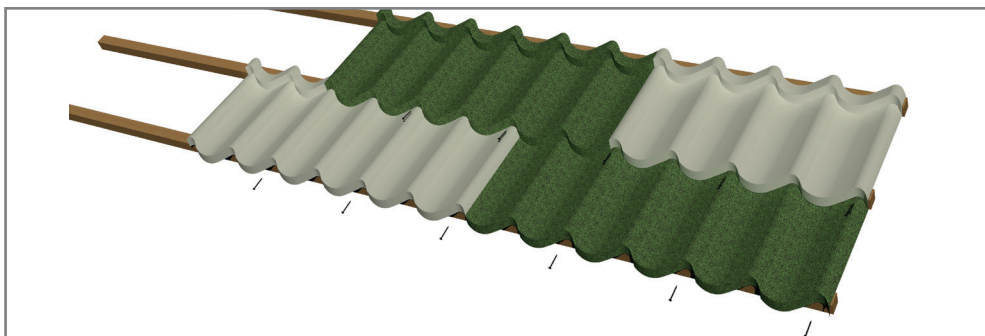


Fig 9.1.12 Points of tiles adjoining

9 INSTALLATION OF TILES AND ROOFING ACCESSORIES

Fastening of the sheets shall be performed to the vertical ledge, separating the transverse tiles rows. Exception is made for slope rows such as first row next to the eave and the last one at the top. Nailing may be performed both manually or using a pneumatic hammer.

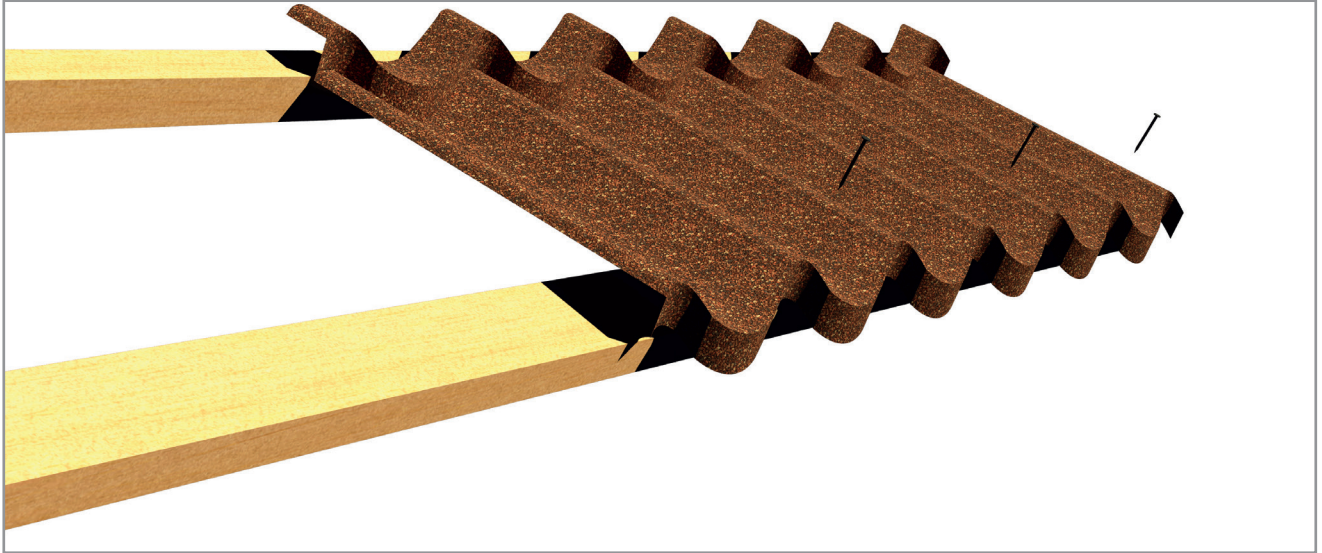


Fig 9.1.13 Fixing points on the overhang

Nail up a nail at an angle of about 45 degrees to the slope plane, into the edge of the roof sheathing skid. When nailing is performed manually, a nail shall be punched in with the help of a nail punch.

Nail head shall be treated with a maintenance kit.

9.2 Ridge installation

Apply ventilation tape of a sufficient width over the ridge skid. Fix it with staples, roll the edges with a roller and glue them to the surface of the stone coated steel roofing.

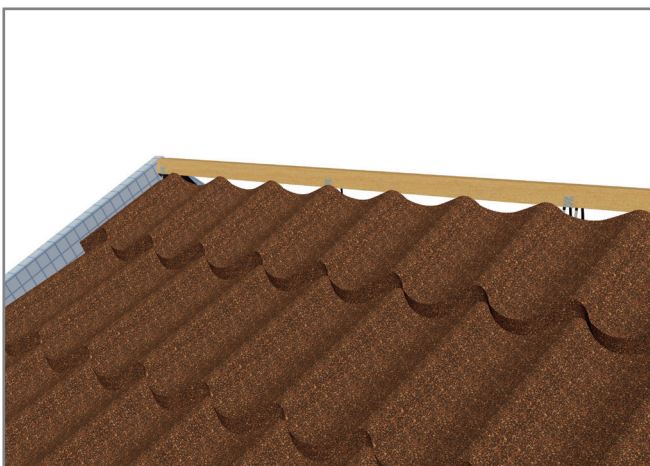


Fig 9.2.1 Tile adjoining to the ridge batten

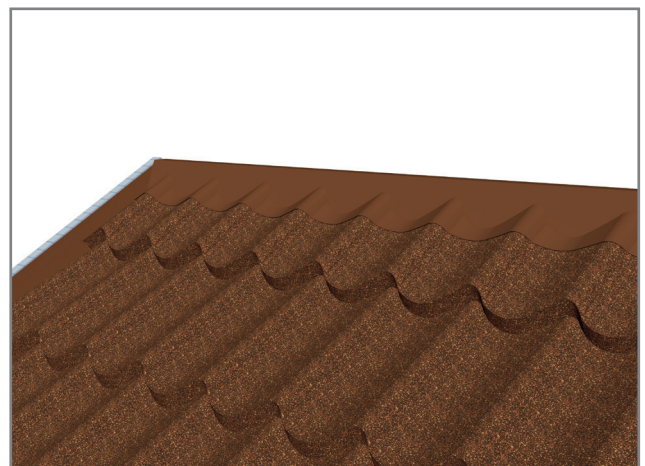


Fig 9.2.2 Ventilation tape installation

Install the ridge flashing fastening it to the ridge skid at the top. Be sure to check that the ridge flashing is laid in a straight line. We recommend to use a stretched thread for reference.

In order to improve appearance of the ridge, install an end caps.

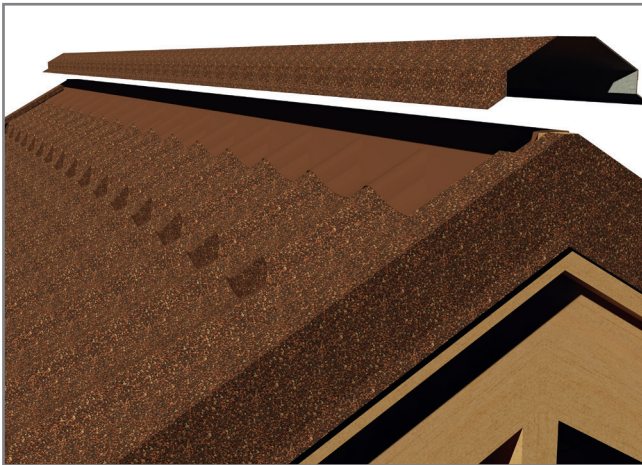


Fig 9.2.3 Ridge flashing installation

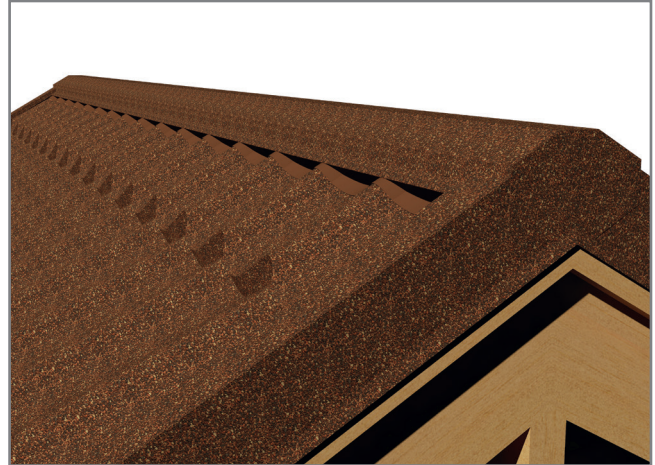


Fig 9.2.4 End cap installation

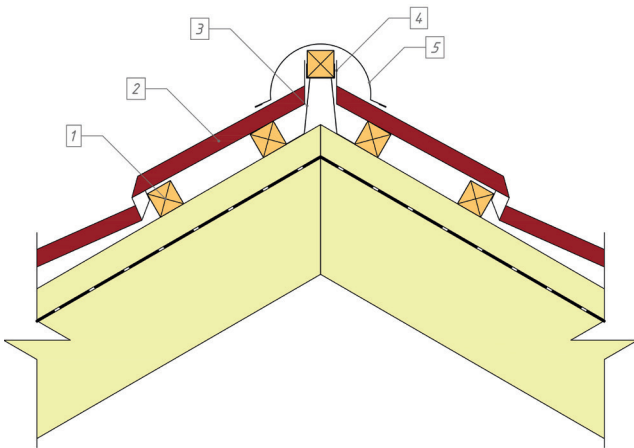


Fig 9.2.5 Ridge node without ventilation tape

1. Roof sheathing
2. Classic tile
3. The holder of the ridge batten
4. Tile's hemming
5. Ridge flashing

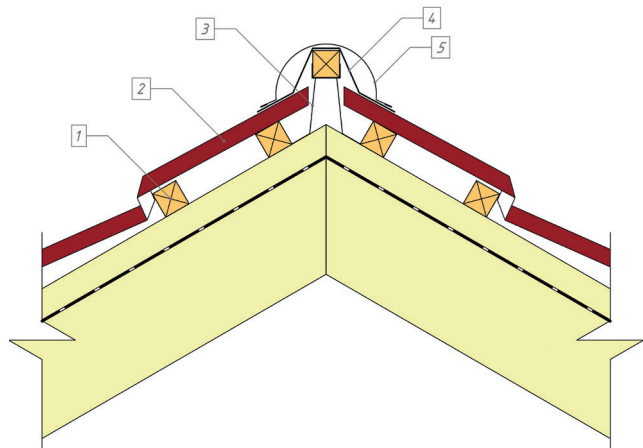


Fig 9.2.6 Ridge node with ventilation tape

1. Roof sheathing
2. Classic tile
3. The holder of the ridge batten
4. The ventilation tape of the ridge
5. Ridge flashing

Example. Cut the strip along the angles of the intersecting planes by 10-15 mm, and bend the appeared consoles inwards by 90°. For convenience of bending, the cuts may be done at an angle of 45° to the point of their encounter. Put the end cap of the ridge inside on the sealant and fasten it with pop-rivets or self-drilling screws.

9 INSTALLATION OF TILES AND ROOFING ACCESSORIES

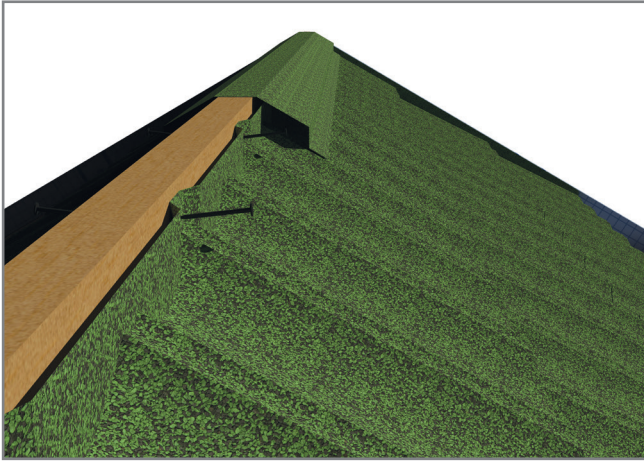


Fig 9.2.7 Tile's adjoining to the ridge batten without using the roofing tape

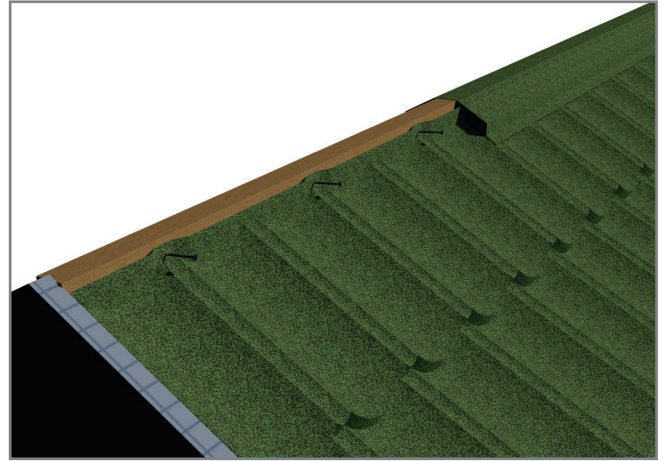


Fig 9.2.8 Tile's adjoining to the ridge batten without using the roofing tape

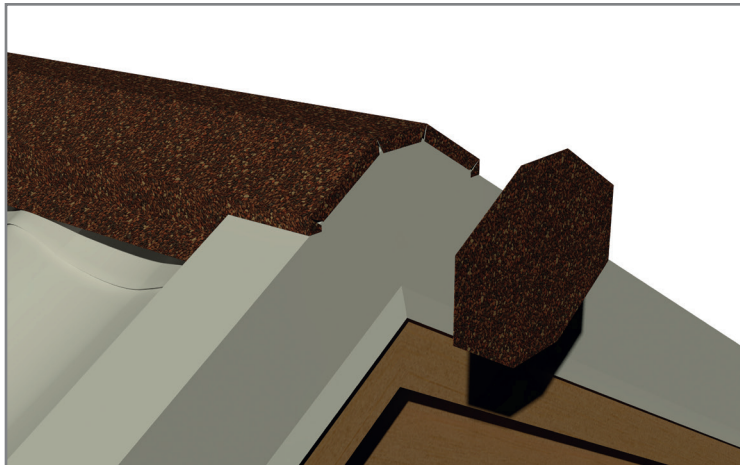
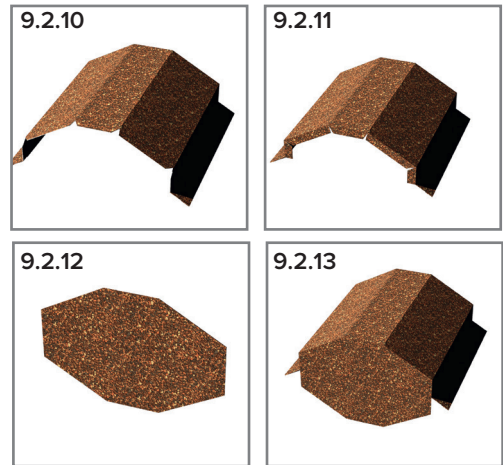


Fig 9.2.9 End cap installation



Also the end cap may be fastened in a different way – to separately prepared corners of cutting waste.

The end cap is ready. Now treat the joints of the end cap and the ridge with sealant and maintenance kit, if necessary.

Connections of three or more ridge flashings, as well as joints with gable boards shall be adjusted in place, and then also treated with sealant and maintenance kit.

9.3 Installation of valley decorative flashing

Perform installation from bottom to top. Adjust the lower part of the first flashing and the upper part of the last one in place.

Fasten with anticorrosive self-drilling screws with a flat wide head or aluminum pop-rivets at the points of contact between the flashing and the tile. It is very important for the laying to be straight – for this purpose we need to stretch the threads.

Decorative valley is needed for aesthetic beauty and alignment of the internal corners line on the roof. Besides that, it prevents snow and debris from entering the inner valley.

Please note: overlapping of the flashings in valley node shall be at least 100 mm.

9.4 Installation of gable board

Finishing gable flashings are in two versions – left and right. They fit perfectly to the pitch of the tile wave.

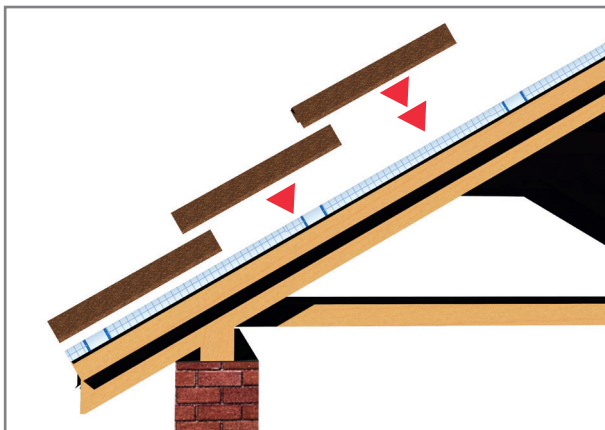


Fig 9.4.1 Gable flashing installation



Fig 9.4.2 Gable flashing installation

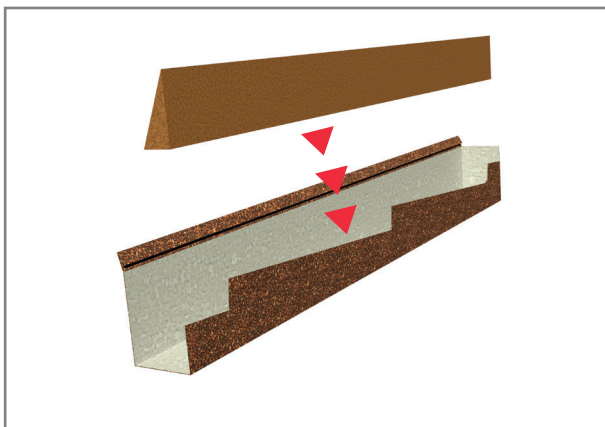


Fig 9.4.3 Glueing the sealant

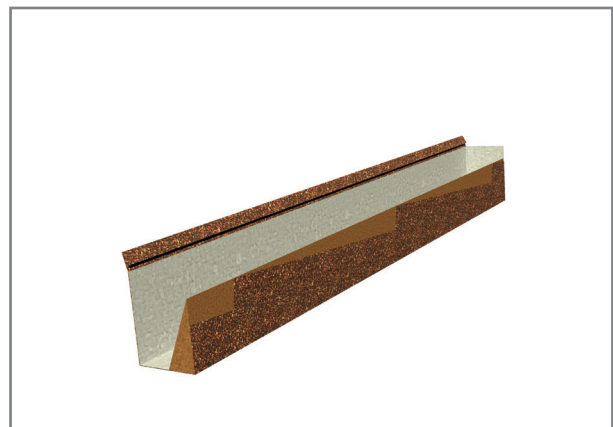


Fig 9.4.4 The flashing with glued sealant

9 INSTALLATION OF TILES AND ROOFING ACCESSORIES

The gable flashing adjoining should be install on the top part, leaving the opportunity for installing the underlaying elements of gable overhang. The installation is carried from bottom to top.



Fig 9.4.5 The gable board with ending cap installation

There is a need to close a protruding end. Example. Cut 4 corners from the scraps of the material. Attach them to the edge of the gable board. Then. Cut a rectangle out of a flat sheet with sides that are 2 mm smaller than the inner cavity of the board. Fasten by the riveted rivets or the screws. Treat it by the maintenance kit.

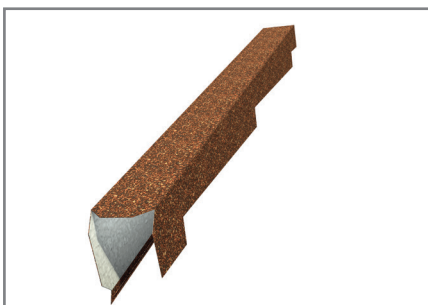


Fig 9.4.6 Cutting the board endings



Fig 9.4.7 Подгиб образовавшихся консолей



Fig 9.4.8 Установка заглушки торца планки

9.5 Arrangement of adjoining

It is very important that the water isolation membrane is securely glued in places of the adjoining.

Depending on material of wall surface, pipe or other roof structures, you may need to prepare the surface to the tape gluing. The adjoining tape should be laid from bottom to top, rolling it with a metal roller. Then cover the tape with a flashing of side adjoining.

Select fastening elements to fasten the flashing, based on the material of walls or pipe. The upper edge of the flashing and connections of the flashings with each other should be treated with the sealant.

Please note: it is not recommended to groove or perform other rough works on a roof with laid stone coated steel roofing due to fine dust formation. It will be difficult to remove it from rough surface of the roofing material.

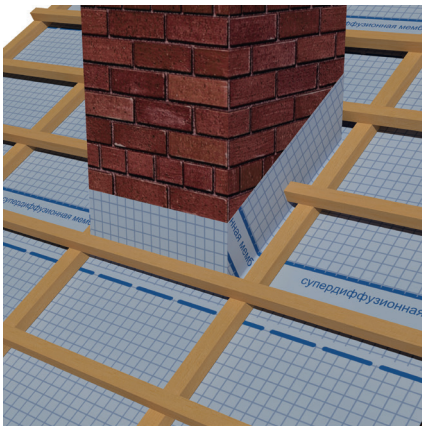


Fig 9.5.1 Gluing the membrane to the vertical surface

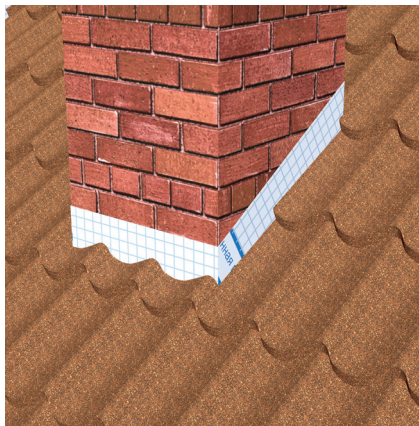


Fig 9.5.2 Tile installation in the place of adjoining

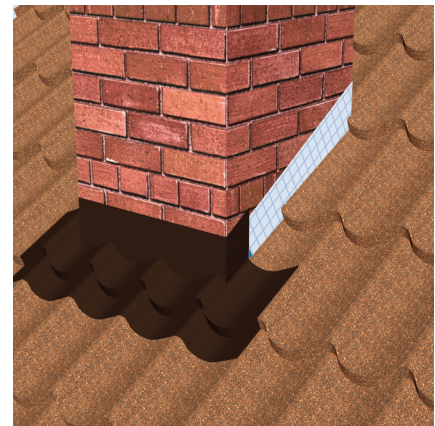


Fig 9.5.3 The roofing tape gluing in the lower part of adjoining

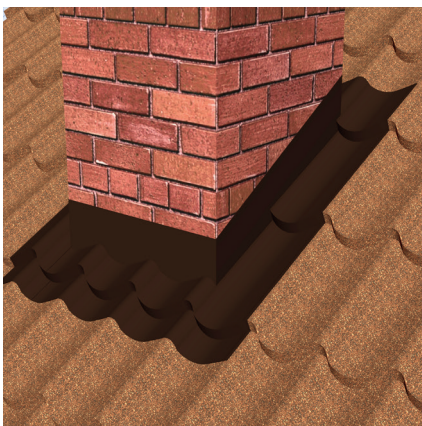


Fig 9.5.4 Gluing the roofing tape

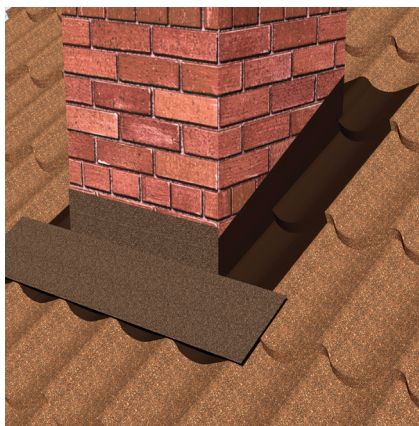


Fig 9.5.5 Side flashing installation in the lower part of adjoining node

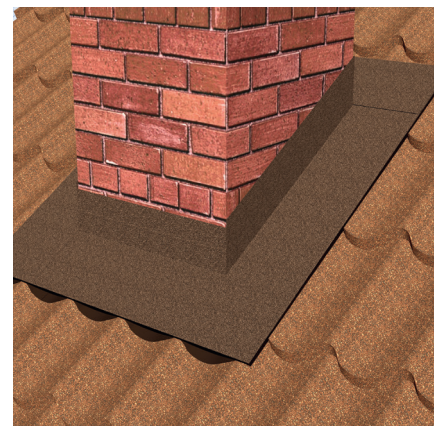


Fig 9.5.6 Side flashing installation at the side and top of adjoining node

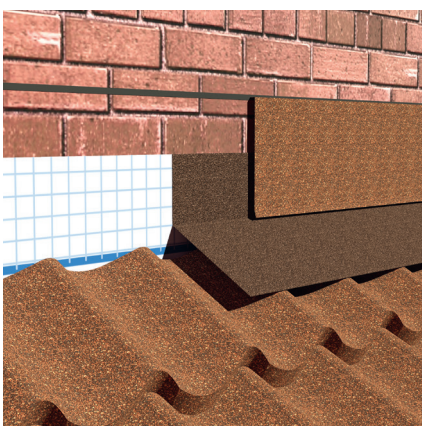


Fig 9.5.7 The adjoining of roof pitch to the wall sideways on the slope

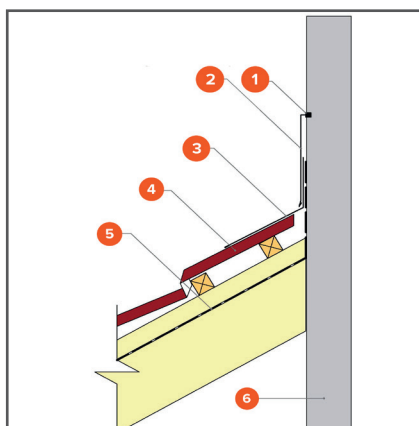


Fig 9.5.9 The adjoining of roof pitch to the wall sideways on the slope

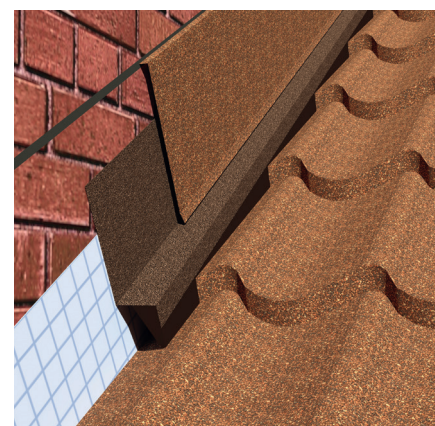


Fig 9.5.8 The adjoining of roof pitch to the wall parallel to the slope

- 1. Silicone sealant
- 2. Side wall flashing shield
- 3. Side flashing N°2

- 4. Standard tile
- 5. Superdiffusion membrane
- 6. Wall

9 INSTALLATION OF TILES AND ROOFING ACCESSORIES

9.6 Treatment with a maintenance kit

After installation of the roofing coat and roofing accessories, it is necessary to treat all damages of the decorative coating, as well as nails, self-drilling screws, rivets and other elements of fastening. A standard QUEENTILE maintenance kit includes:

- acrylic binder – 1 L
- basalt granulate – 1 kg;
- acrylic glaze – 0.5 L

To apply the binder and glaze you will need brushes.

Recommended application temperature is above 5 °C. The compound shall be applied to dry roof surface. The binder is applied by drops. In this way it will completely cover the place of damage of the stone coated steel roofing surface or fastening points and securely capture the granulate.

Important note: the glaze should be applied only the next day after treatment of damaged places and fastening points with the binder and granulate.

Store acrylic components of the maintenance kit in a warm place at a temperature above 10°C.

Treatment with maintenance kit is the final step in roof arrangement using QUEENTILE® stone coated steel roofing.

CONCLUSION

On the calculation of the roofing, please contact the managers. In the shortest time, our engineers will provide calculations for the components of the roof, taking into account overlaps and waste materials.

QUEENTILE® is a stone coated steel roofing of a new generation, that occupies a rightful place among elite building materials. Tile quality preserves its beauty and appearance for a long time.

Thanks to new technologies, roofing materials change from heavy and bulky systems to simpler and more efficient structures. Choosing QUEENTILE® stone coated steel roofing you choose reliability, quality and excellent architectural expressiveness.