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Installation instructions Steel roofing tile cut to size.

for smart builders

HANBUD

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assembler's guide

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The method of installation of cut-to-size steel roofing tiles offered by HANBUD presented in this manual is a general guideline and does not exempt the contractor from observing the rules of installation of steel roofing tiles and building standards. The installation method may vary depending on the shape of the roof slope and the building design.

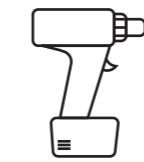
1. background information

Comply with all applicable health and safety regulations. Always wear protective clothing and gloves when working. Avoid contact with sharp sheet edges, corners of sheets and wind braces. Take maximum care when moving around and carrying out work on the roof. Use a safety rope and soft sole shoes during assembly.

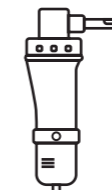
2. general principles

- Cutting of the steel roofing tiles should be carried out using hand shears or electric shears (nibbler). It is forbidden to use an angle grinder, which can damage the zinc protective coating.
- During installation, it is a good idea to continuously remove metal filings from the sheet metal surface, metal filings can lead to paint damage and corrosion.
- Appropriate roofing shoes must be worn for walking on the roof surface, especially on already laid roofing, to prevent damage to the coating and to ensure stable movement on the sheets.
- **HANBUD** permits the use of flashings, membrane and tapes from other manufacturers, provided their intended use is in accordance with the manufacturer's guidelines.

3. tools



screwdriver with bit for screws self-drilling



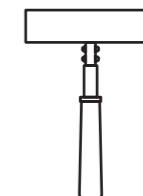
cutter for sheet metal



hammer rubber



hand shears or electric

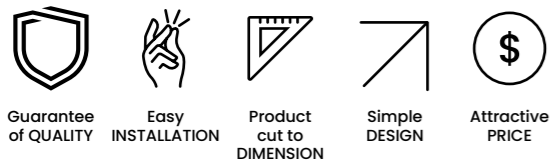


pliers for sheet metal

4. technical specifications for steel roofing tiles

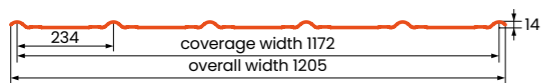


Claro

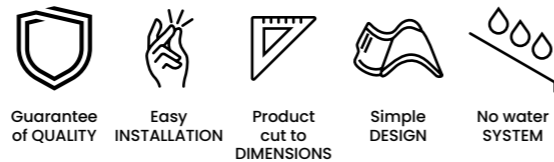


Technical data
available modules 350/25; 400/25

Profile height	38 mm
rib height	25 mm
usable width	1172 mm
overall width	1205 mm
module length	350 mm / 400 mm
min. sheet length	400 mm / 450 mm
max. recommended sheet length	5000 mm
minimum roof pitch	14°

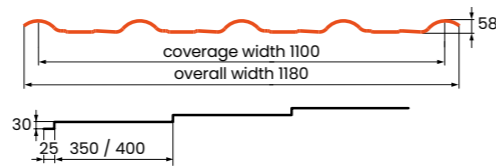


Ārgilla



Technical data
available modules 350/30; 400/30

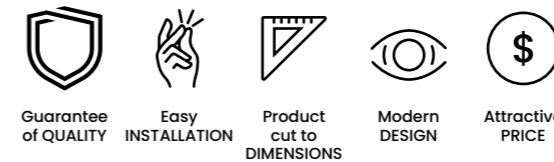
Profile height	58 mm
rib height	30 mm
usable width	1100 mm
overall width	1180 mm
module length	350 mm / 400 mm
min. sheet length	470 mm / 520 mm
max. recommended sheet length	5000 mm
minimum roof pitch	14°



technical specification for steel roofing tiles

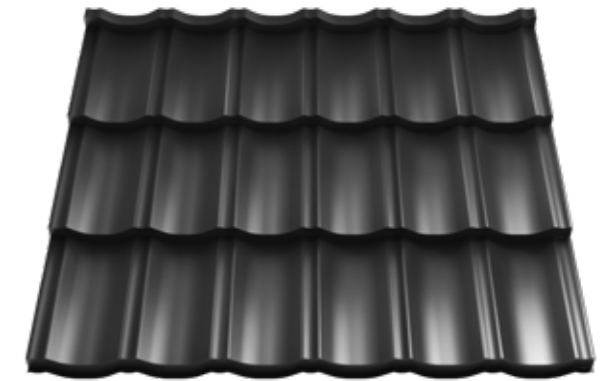
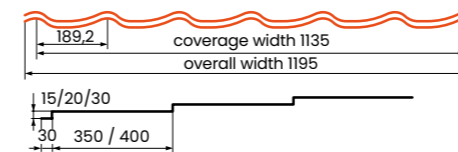


Vēna

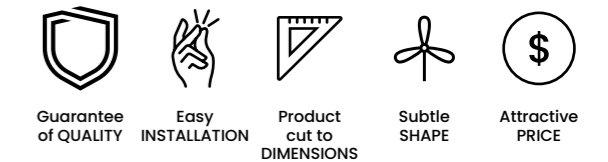


Technical data
available modules 350/15; 350/20; 350/30; 400/20

Profile height	38 mm / 43 mm / 53 mm
rib height	15 mm / 20 mm / 30 mm
usable width	1135 mm
overall width	1195 mm
module length	350 mm / 400 mm
min. sheet length	400 mm / 450 mm
max. recommended sheet length	6000 mm
minimum roof pitch	14°

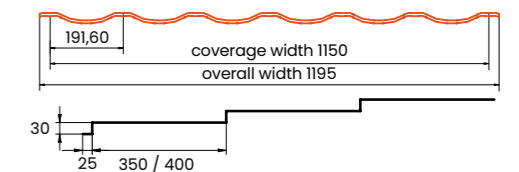


Ļalta



Technical data
available modules 350/30; 400/30

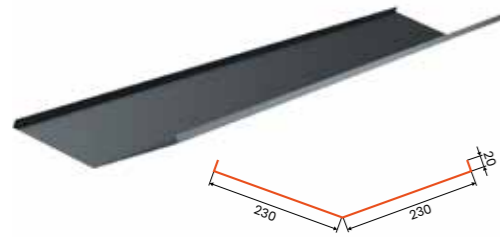
Profile height	48 mm
rib height	30 mm
usable width	1150 mm
overall width	1210 mm
module length	350 mm / 400 mm
min. sheet length	470 mm / 520 mm
max. recommended sheet length	5000 mm
minimum roof pitch	14°



5. flashings

When installing **HANBUD** roofing, we recommend the use of professionally made flashings, which will allow the installation of the roofing tile in accordance with the art of roofing.

basket trough



drip edge



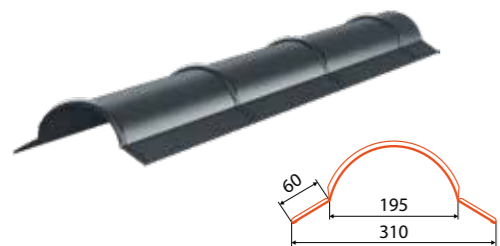
lower wind brace



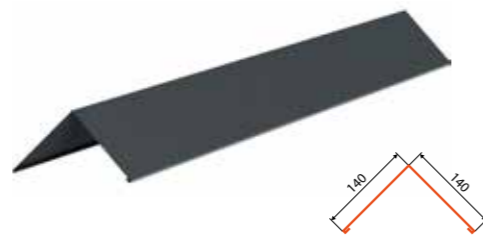
top wind brace



barrel ridge



straight ridge



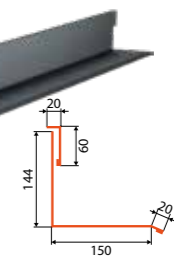
5. flashings

The flashings are available in the same colours and coatings as the roofing tiles. This maintains a consistent appearance across all roofing elements. It is also permissible for the roofing contractor to carry out the flat metal roof flashings himself.

wall flashing



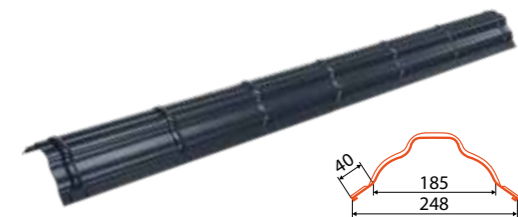
chimney flashing



wind brace to the panel



ridge pressed cascade



ridge straight cascade



snow barrier



6. transport and unloading

The **argilla**, **malta**, **vena** and **claro** roofing tiles are manufactured as cut-to-size sheets. This means that the length of the sheets can be up to 6 m. For this reason, transport should be carried out in a suitable vehicle equipped with a HDS to enable proper unloading. For transport, the sheets are protected by a protective film.

The sheets should be unloaded using an HDS boom. Where this is not the case, care must be taken to ensure that there are enough people to unload. We advise that there should be one person on each side for every 2 metres of sheeting. This will not only ensure that the sheets are safely unpacked, but will prevent the sheets from bending due to the resulting stresses.

The recipient, upon arrival of the transport, is obliged to check the completeness of the sheets and verify that no mechanical damage has occurred. Minor damage to the paintwork should be treated with touch-up paint.



Fig. 1 Incorrect method of transporting steel roofing tiles.



Fig. 2 Correct way of transporting steel roofing tiles.

7. storage of roofing sheets

The tiles should be stored in its factory packaging for no longer than 2 weeks. After this period, the sheet metal should be removed from the factory foil, each sheet separated by wooden spacers. This will prevent the sheet metal from chipping, which can result in damage to the protective coating.

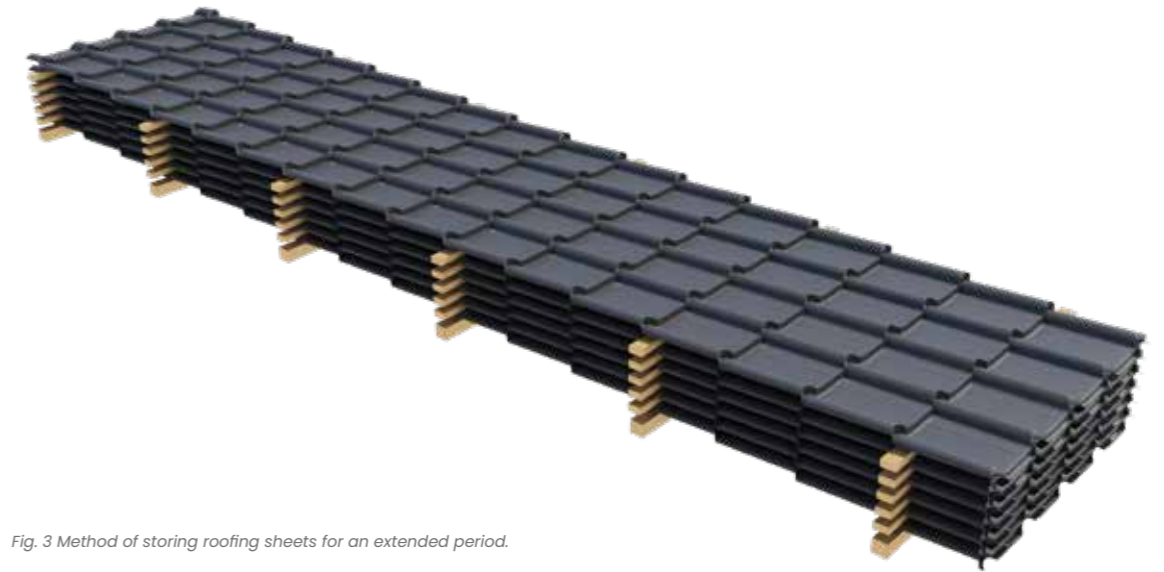


Fig. 3 Method of storing roofing sheets for an extended period.

8. roof structure

The tile should be installed on a properly prepared roof structure. It is therefore necessary to check that the roof slope is even and to compensate for any unevenness by tamping the battens accordingly.

Before installation, the length of the diagonals should also be checked by selecting the two furthest rafters from each other

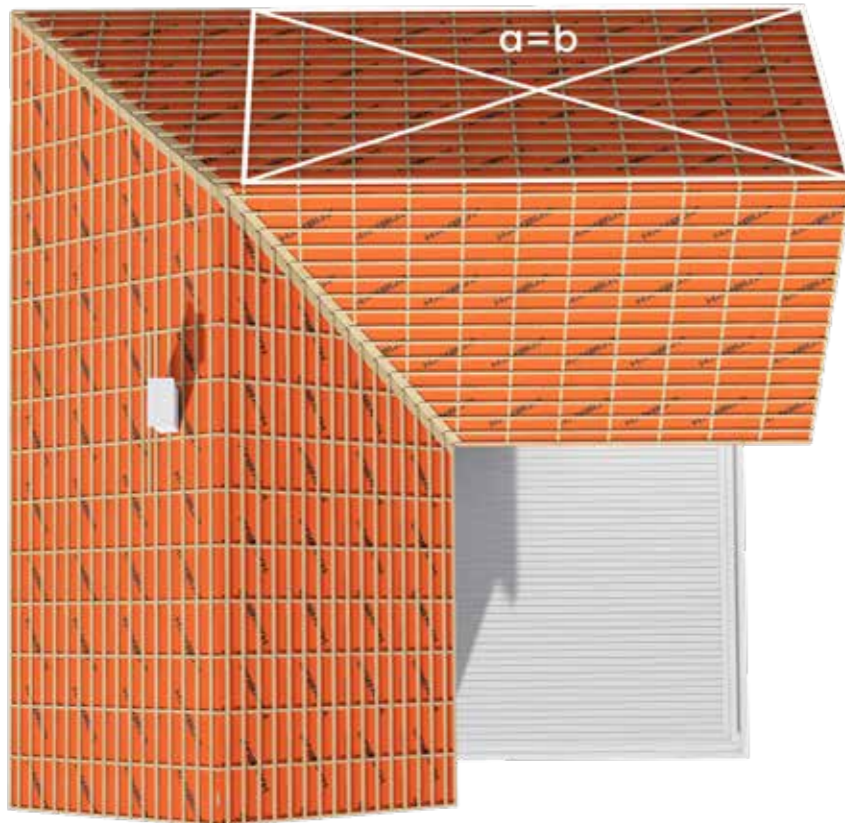


Fig. 4 Checking the roof slope planes.

A structure consisting of a membrane, counter-battens and battens should be used to install the roofing sheets. We recommend using counter-battens with a minimum width of 50 mm and a height of 25 mm. Patches should be 50 mm wide and 40 mm high. A lower height will not guarantee adequate airflow.

This design will ensure adequate ventilation of the roof slope, preventing condensation. In summer, it reduces excessive heating of the roof slope, providing thermal comfort in the attic.

The minimum roof pitch for the installation of a metal roofing tile is 14°, which allows rainwater to drain away, preventing it from ponding on the roof slope.

assembler's guide

1. installation of verge trim

Installation work must begin with the installation of the verge trim. You can use ready-made flashing or prefabricate one yourself from flat sheet metal. The verge trim is bolted to the eaves board with flat-head screws. When joining the sheet overlap of at least 5 cm must be maintained



Fig. 5 Correct installation of the verge trim to the eaves plank.

2. Installation of membrane, counter-battens and battens

The membrane should be laid out in stages over the roof slope, by stapling it to the rafters. Use a 15 cm overlap at joints.

The membrane should be adhered to the verge trim with roofing tape, which will protect it from deformation.



Fig. 6 Membrane distribution on the slope surface.

Once the membrane roll has been fixed, counter-battens are installed by nailing them in place. We recommend using 4 cm x 6 cm boards.



Fig. 7 Installation of counter-battens on the roof slope.

The counter-battens should be of such a length that an overlap of 15 centimetres from the top remains. Once the counter-battens have been installed, the battens should be nailed in stages. Use a 15 centimetre overlap at the membrane joints.

The outer spacing between the first and second battens should be 32 centimetres. It is useful to mark out this distance with a chalk cord.



Fig. 8 Layout of battens on the roof slope.

Install each next batten 35 cm apart. Perforated netting should be fitted to the first batten, which provides protection against birds and insects. Attach it with staples.



Fig. 9 Installation of perforated mesh to protect the roof eaves from insects and debris.

3. Installation of drip edge

The next stage is the installation of the gutter drip edge, which provides an aesthetically pleasing finish to the roof slope on the eaves side. A gap should be left during installation to ensure air circulation.

The gutter drip edge is screwed to the end board with flat-head screws.

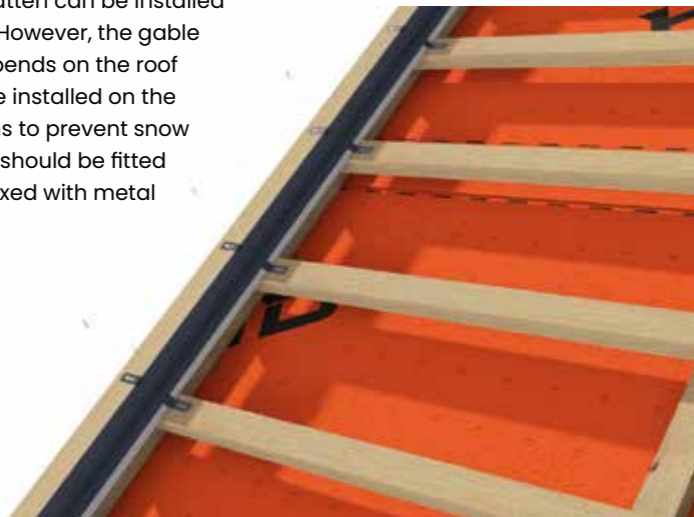


Fig. 10 Correct installation of the gutter drip edge.

TIP The gutter drip edge should penetrate to approximately 1/3 of the gutter depth

4. Installation of gable batten and drain gutter

On the edge slopes, a gable batten can be installed to stabilize the gable flashing. However, the gable batten is not essential and depends on the roof construction. Gutters should be installed on the outer sides of the gable battens to prevent snow and rain from blowing in. They should be fitted to the gable batten and then fixed with metal roofing clips.



Rys 11 Sposób montażu rynienki odpływowej.

5. Installation of a basket gutter

The basket gutter ensures that water drains from the roof slope directly into the gutter. It is an essential element on a roof where the individual slopes join at 90 degrees. It should be fixed with metal roofing clips, attaching it to each patch.

We recommend that wedge gaskets are placed on both sides of the valley gutter, which are glued along the entire length. The end of the basket gutter at the eaves should be bent and sealed with a rubber mallet.



Fig. 12 Installation of basket gutter.

6. Installation of starter strip

In order to correctly install the first sheet at the eaves, a starter strip must be installed to raise the first sheet. This flashing also provides ventilation to the roof slope, further protecting it from animals and dirt.

Some contractors use the method of raising the first batten by the height of the rib, but this method does not improve the ventilation of the roof.



Fig. 13 Starter strip for proper installation of roofing sheets.

7. Installation of steel roofing tile sheets

The symmetrical overlap allows the installation to start from either side. However, we recommend starting the installation of the roof tiles on the side opposite the most frequent wind gusts. Before installing the first sheet, level it at a 90-degree angle to the eaves.



Fig. 14 Installation of the first sheet at a 90 degree angle to the eaves.

The sheets are joined by a longitudinal overlap over the width of one sheet rib.



Fig. 15 Longitudinal overlap when joining roofing sheets.

At the roof edge, screws must be screwed into each rib. In the central part of the roof slope, screws can be installed in every second rib.

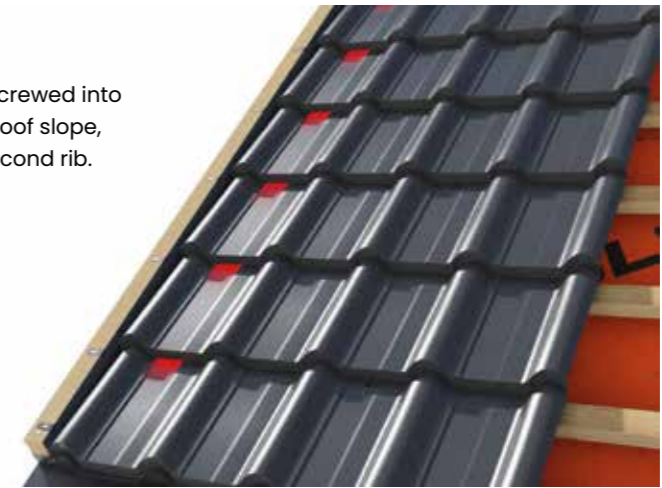


Fig. 16 Screwing the screws to the roofing sheets.

Particular care should be taken when installing sheet metal at the basket gutter. Cutting the sheet metal for the basket gutter is best done in two stages. The pre-cut is made before the sheet is fitted. The actual cut is made after the sheet has been fitted, keeping to the pre-determined lines.



Fig. 17 Laying of roofing sheets at the basket gutter.

TIP In order to ensure that the basket gutter is sufficiently unobstructed, a minimum distance of 8 cm between the sheeting and the axis of the basket must be maintained.

TIP Please note that the sheets should be cut with handheld shears or electric shears. The use of angle grinder, which can overheat the surface of the sheet, is not permitted.

8. Installation of wind braces

Once the sheets have been installed, install the barge flashing. The dimensions of this flashing are chosen individually according to the size of the barge board.

First install the bottom wind brace by screwing it to the board with farmers' screws. Where flashings need to be joined, a 10 cm overlap should be maintained to ensure tightness.



Fig. 18 Assembling the wind brace with a 2 cm overlap.

It is advisable to leave a 2cm distance from the bottom for the installation of the soffit panel.

If the dimensions of the wind brace require it, install a middle and top wind brace, cutting it properly at the eaves.



Fig. 19 Installation of the centre and top wind brace, allowing an aesthetically pleasing and tight finish to the roof slope.

9. Chimney flashing

Before installing the chimney flashing, the steel roofing tiles must be properly cut and installed on the eaves side. At this stage, we do not install the sheets on the ridge side.

The front flashing should be installed first, followed by the side flashing. The rear flashing is installed before the roof tiles are laid. The chimney flashings should be bent so that a right angle is maintained between the sheets and the chimney. The sheet is fastened to the chimney with dowels.

Mitre cut the flashing at 45 degrees before attaching the top flashing. Seal the joints with roofing caulk. This is a proven method that ensures tightness. The incision area should also be sealed with roofing caulk.



Fig. 20 Installation of chimney flashing - front and sides.



Fig. 21 Chimney cut before installation of top flashings.



Fig. 22 Fixing the top flashings to the chimney with dowels.

10. Installation of ridge

Where the two roof slopes intersect, install ridge sealing tape which is air and humidity permeable to ensure proper ventilation of the roof structure. Once the tape is in place, the ridge can be installed. It is secured to the top corrugation of the roofing sheet with screws.

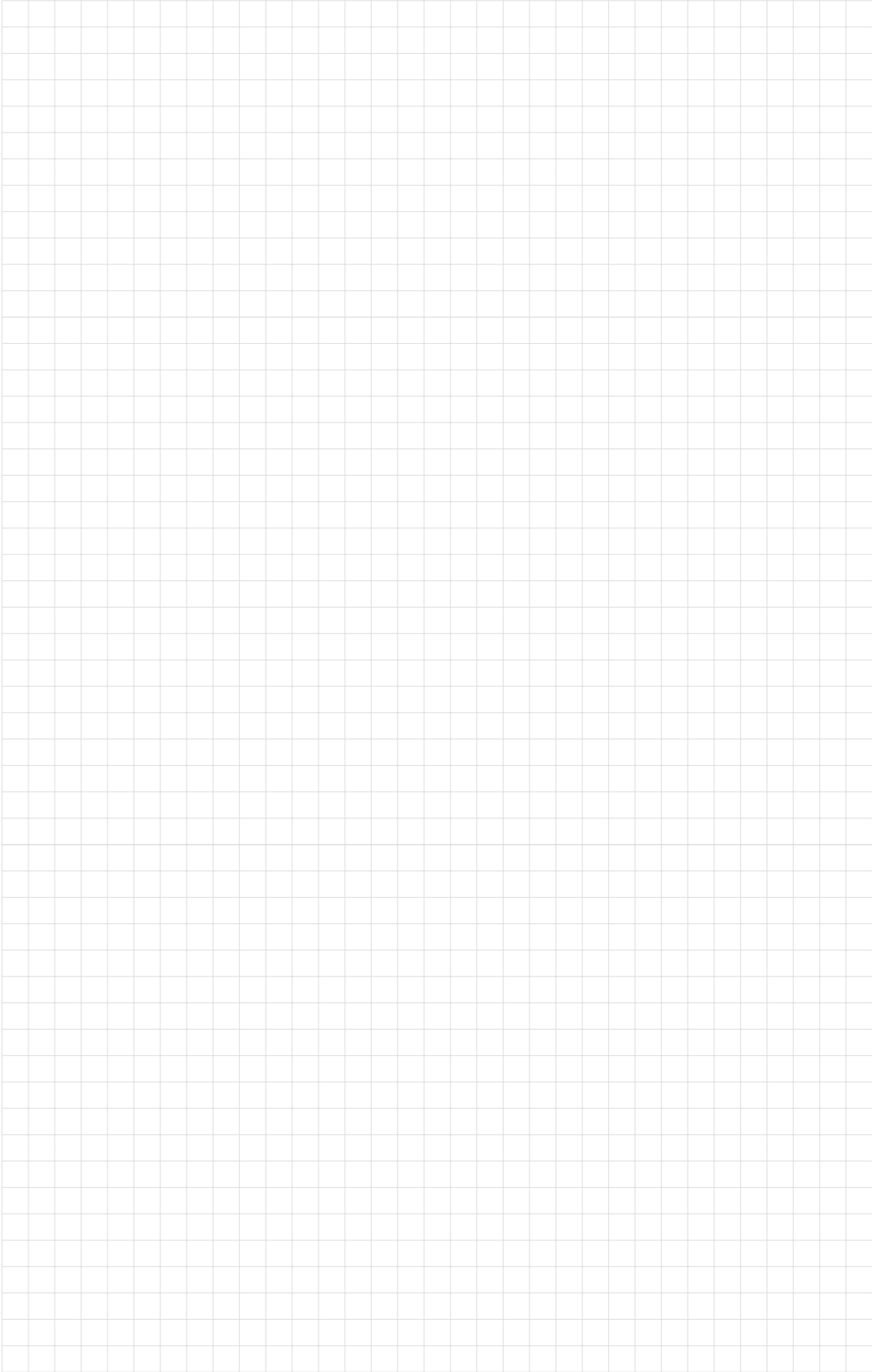


Fig. 23 Installation of ridge tape.

During installation, the ridge pieces should be connected to the metal roofing sheet ribs.



Fig. 24 Installation of the ridge.



Do you prefer to watch? See instructions in video form:



**argilla
installation
instructions**



**malta
installation
instructions**



**vena
installation
instructions**

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