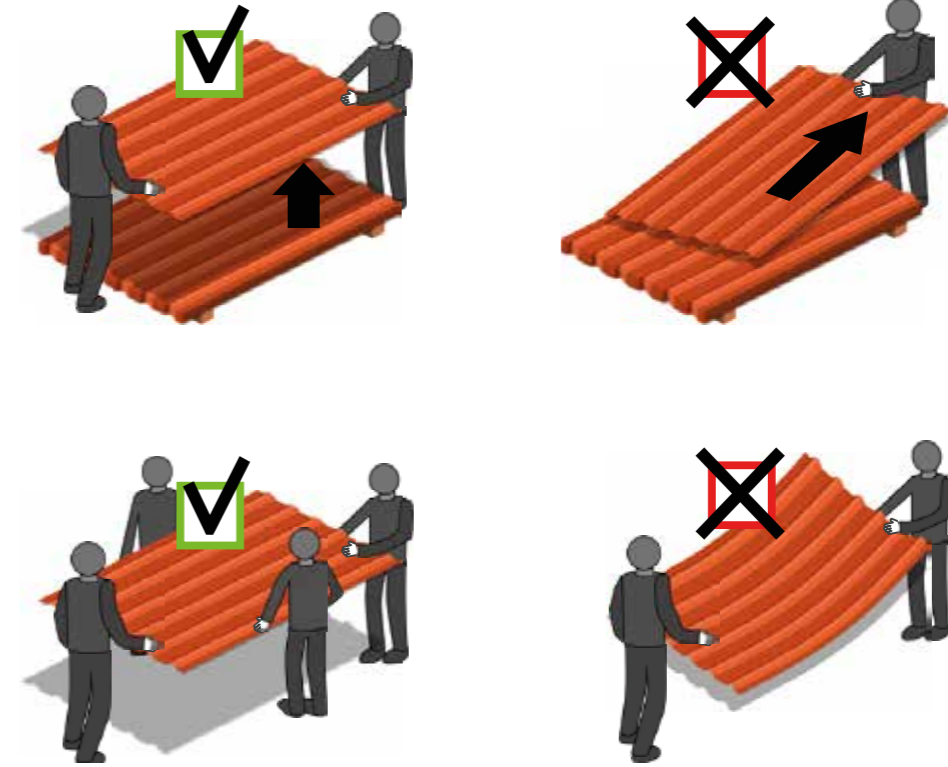


## Installation manual box profile sheet

for *smart* builders

## Delivery acceptance

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## Box profile sheet installation manual

1. Delivery acceptance
2. Base structure preparation
3. Installation sequence
4. Lengthwise sheet joints
5. Fastening
6. Installing screws
7. Flashings
8. End notes

### Receiving the product

When receiving this product from delivery, make sure the delivery meets the order specifications. Report all missing or wrong order items and all damage caused during transport on the waybill and immediately notify **HANBUD** or the wholesaler from whom the product has been purchased.

### Unloading

It is recommended to unload the product using a forklift truck, pallet truck or other handling equipment provided with forks spaced 1500 mm wide. It is also acceptable to use the knuckle-boom crane of the delivery truck, which requires a spreader boom and dedicated textile slings.

### Manual handling of sheets

If no powered handling equipment is available, the product can be unloaded by hand. The generally accepted safety practice must be strictly followed in this case. Do not slide the sheets over one another or the coating will be damaged. Manual unloading requires enough people: assume one person per 1 metre of sheet length; for example, a 4-metre long sheet requires unloading by a team of 4 people, with 2 people handling each side.

## Base structure preparation

### Roof geometry

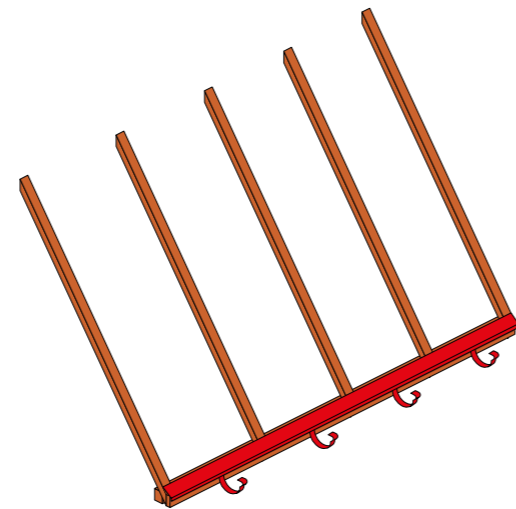
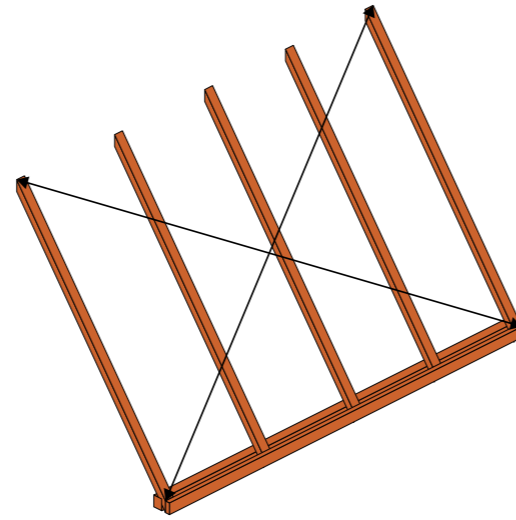
The roof structure shall be built in conformity with good wood construction practice and following an approved set of construction plans.

Before cladding the roof in the sheets, measure the pitch and geometrical configuration.

The minimum roof pitch for installing box profile sheets is 7°.

Verify that the roof plane is level, using a string between the first and the last rafter. Do this along the eaves, along the ridge, and in the middle of length between the two.

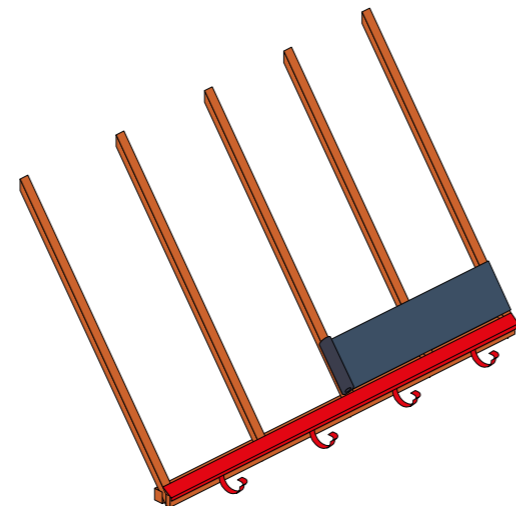
Next, measure the roof plane diagonals, which should be equal if the slope is rectangular or square. If the difference is small, 2 to 3 cm, you can offset it in the next steps of roof cladding. Larger differences need readjustment by realigning the rafters properly.



### Installing the eaves board

Start the installation process by fastening the eaves board, on which the flashings and gutter hooks will be installed.

Next, install the gutter drip edge using nails or screws.



### Roofing membrane

The next step in preparing the roof for roofing is: nailing the roof membrane or felt. Installation must be done in accordance with the recommendations of the manufacturer of the given product.

Then we screw wooden strips (counter battens) along the rafters, with dimensions of at least 25 mm x 50 mm. They are intended to provide free roof ventilation.

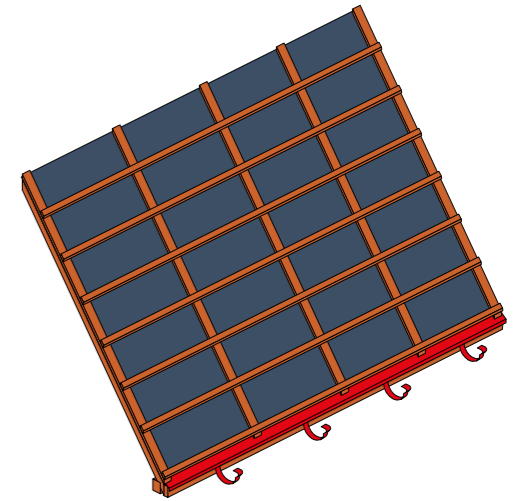
## Base structure preparation

### Installing the roof boards

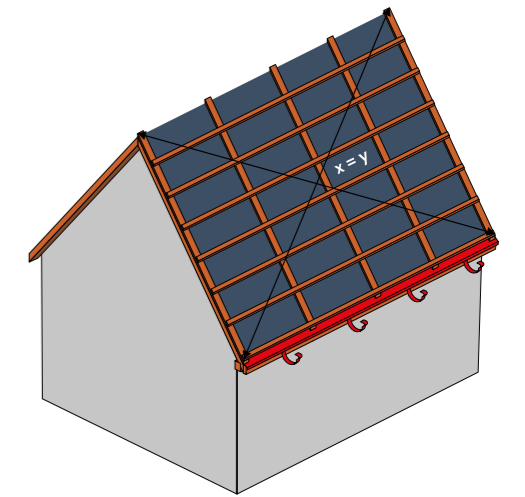
The sheets need to be fastened to wooden roof boards, a.k.a. battens. The recommended and most common timber square size for the battens is 40 mm x 50 mm.

Start installing the battens from the eaves one and work towards the roof ridge. HANBUD recommends a centre-to-centre distance between the battens to be within 250-350 mm.

The need for a larger distance should be proven in the construction plans and confirmed by the designer.

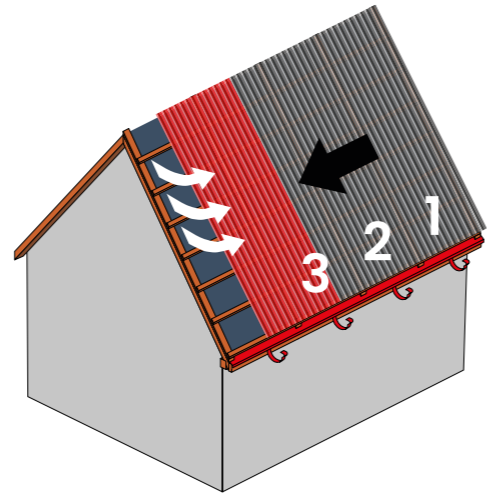


Repeat the geometry check of the roof slope. Correct everything out of alignment as required.

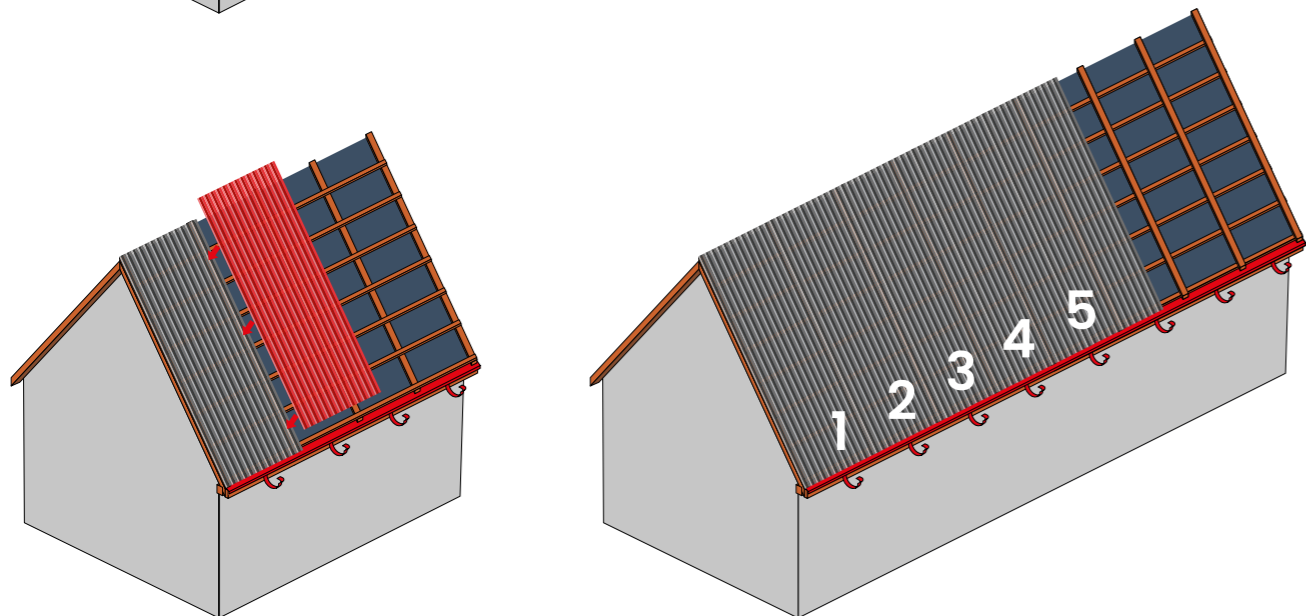
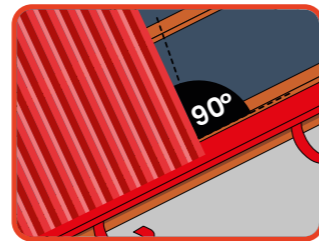
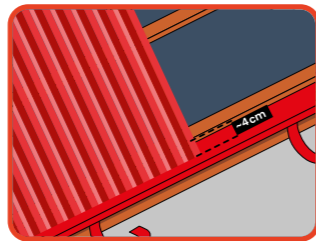
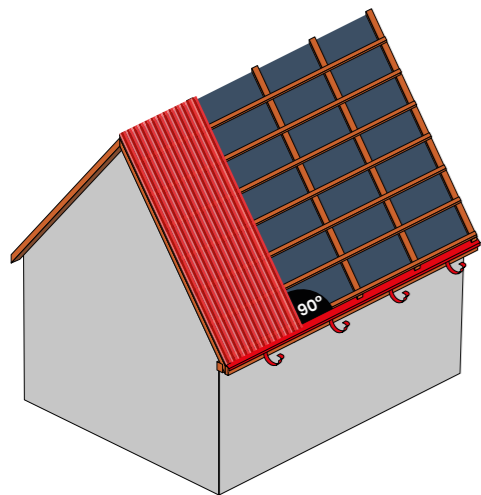


## Installation sequence

The box profile sheets can be installed in any orientation without any limitations. They can be installed from the left or right-hand edge of the roof. However, it is recommended to install them in sequence from the end up the predominant gusts of wind. Depending on the installation sequence, lay each next sheet with an overlap over or under the last sheet.

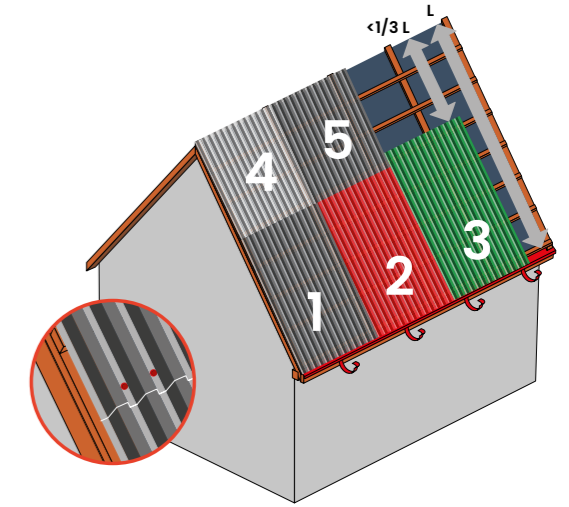


Attach the first sheet to the roof slope using one screw at the eaves; now, align the sheet square to the eaves line. Continue by laying and fastening the next sheets.



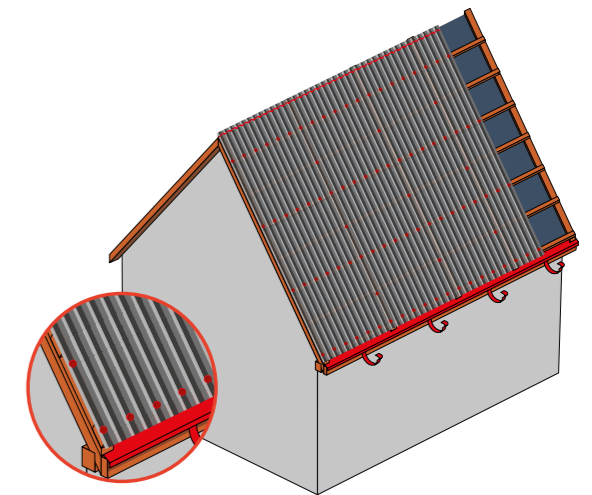
## Lengthwise sheet joints

Where the sheets need to be attached to one another on the roof slope, remember that the sheet must overlap one another by 150–300 mm. Follow the installation sequence shown in the figure below.



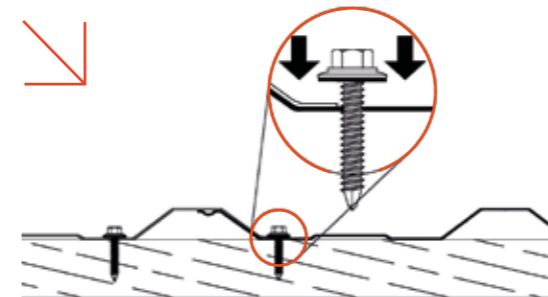
## Fastening

Fasten the sheets using galvanised and coated, size 4.8 x 35 mm hex head washer drilling screws. The sheet parts along the eaves, the ridge and the overlaps need to be fastened in each valley of the box profile, the sheet parts along the verges need to be fastened to each batten. The spacing of screws along the edges should be 8 screws/m<sup>2</sup>. The spacing of screws in the middle of the roof slope should be 5 screws/m<sup>2</sup>.

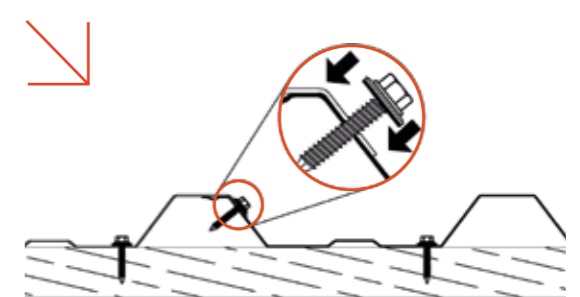


## Installing screws

Installing the screws to fasten box profile sheets (does not apply to T-35 or T-55)



Installing the screws to fasten box profile sheets, size T-35 and T-55

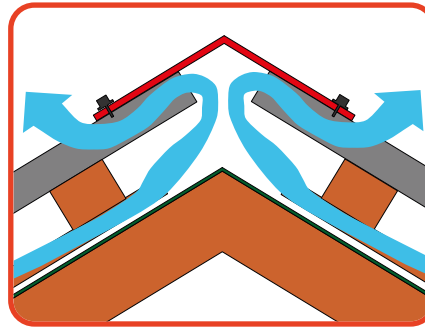


## Flashings

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All the flashing parts required to finish the roof are available in the product catalogue.

Install the flashing and provide the required roof breathability to prevent profuse condensation.



## End notes

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Trim the sheet metal using dedicated metal roofing tools, like nibblers or hand shears.

Do not cut the sheets with an angle grinder or any other tool which may cause overheating of the workpiece. Do not attempt to trim a sheet laid on the roof slope. All metal swarf from cutting or installing the sheets must be immediately removed. Otherwise, external corrosion spots may form. If they do, they will reduce the service life of the sheets and void the product warranty.

**HANBUD** shall not be liable for any damage caused by installing the product without conforming to this installation manual.

