

WHY CHOOSE A SHEET METAL ROOF?

Many people ask the question: Why sheet metal? Pantiles have been the most popular material to use for the past few years so this is a good question. The fact is that the answer is very simple. Sheet metal is a classic material, it is easy to install and is much lighter than pantiles for example. In many cases sheets can be installed directly onto the old roof, making it unnecessary to install a new roof deck.

A good house always has a good roof. As far as that is concerned no cheating or shortcuts are allowed. Our ever changing Nordic climate places great demands on a roof; which must withstand rain, snow, gales and melting ice. A properly installed, high quality, sheet metal roof should not have a problem with severe winters or hot summers.

PREPARATION

Measure the diagonals to check that the roof is true (see Figure 1). If the roof deck is rectangular the diagonals and opposite sides should have the same measurements. Minor deviations can be adjusted using standard flashing. The edges must be even to start with. Work out how to deal with openings and other obstacles before starting installation.

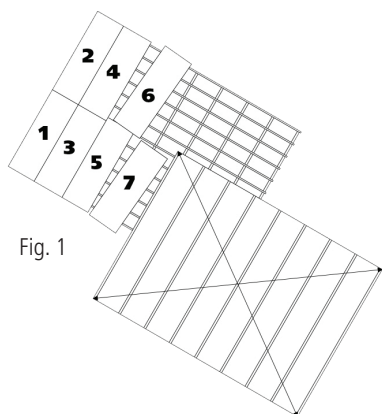


Fig. 1

Check that the underlay is intact. If necessary repair wood boarding and underlay felt. Check that the underlay is flat. Determine the number of sheets needed and their length.

The batten/purlin spacing varies depending on the pitch of the roof and the type of profile being used. See our recommendations under each profile's load table at www.arecoprofiles.se.

Still unsure? Contact Areco for the correct dimensions.

At roof pitches below 14 degrees, down to 5.71 degrees, we recommend applying a bead of transparent Runotex or similar sealant to the longitudinal and transverse joints to prevent capillary suction and any leakage. Secure the side overlap with screws at a maximum c/c of 300 mm for a roof pitch below 14 degrees and at a c/c of 500 mm above 14 degrees.

Depending on the structure of the house the roof can be installed on C or Z section lightweight beams or on wooden joists.

INSTALLATION

Install the gutter bracket and edge sheet on the bottom batten (see Figures 2 or 3).

Uninsulated construction

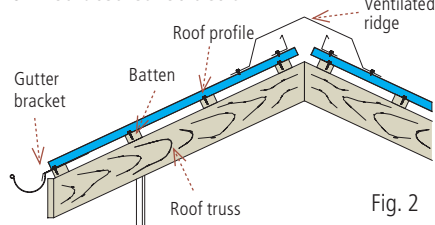


Fig. 2

Insulated construction

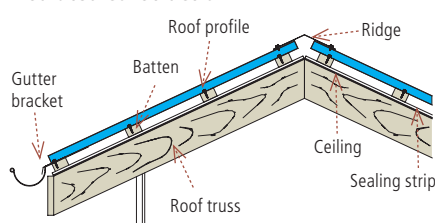


Fig. 3

When the fascia plate and gutter bracket are in place it is time to install the profile. Install and align the sheets following a line stretched at the eaves or along the ridge.

Ensure that the water trap on one long side of the sheet always goes under other sheet in the side lap (see Figure 4).

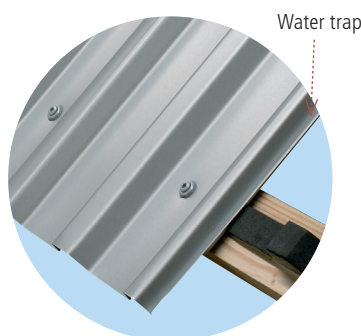


Fig. 4

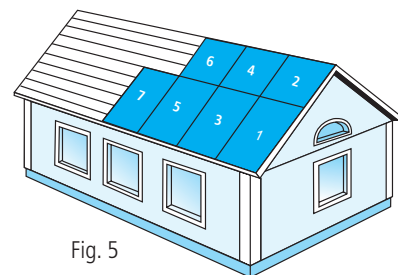


Fig. 5

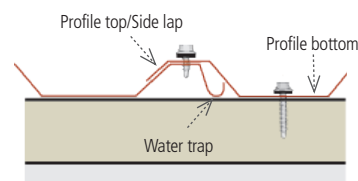
When there are several lengths of sheet start installing them according to Figure 5.

Start installation either from right to left or from left to right. Key is that the water trap is under the second sheet.

Position and secure the first sheet provisionally on the bottom batten. Install the sheets from the bottom up.

Check that the first sheet is aligned with the roof line at the eaves. It is important for the entire assembly that the first sheet is correctly positioned.

Screw the roofing sheet into place using one 4.8 x 35 mm screw in the bottom of every other profile. At wood purlins the roofing sheet is to be screwed into place on scantlings using 4.8 x 35 mm wood screws. Scantlings at the eaves and ridge are to be screwed into place with a c/c spacing of 200 mm. Other wood purlins are to be screwed into place with a c/c spacing of 300 mm. In terrain categories lower than 2 contact Areco for the correct design of fasteners.



In the following installation instructions the underlay is roofing felt with a fascia board at the eaves. While this detail can have different designs the roof laying method is the same.

Secure other flashing such as the ridge plate and bargeboard using 4.8 x 20 mm screws.

Join sheets on a batten. Joints must have an overlap of at least 200 mm and are to be secured using screws according to Figure 6.

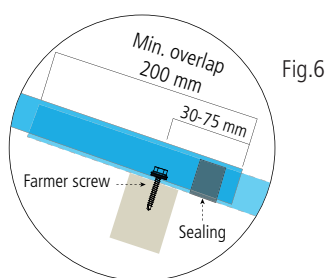


Fig. 6

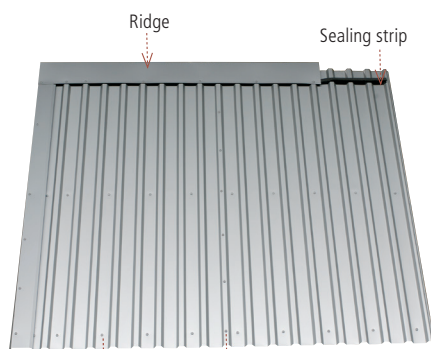


Fig. 7

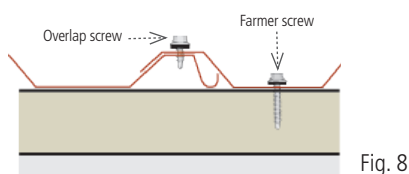


Fig. 8

Secure the roofing sheets to wood using 35 mm self-drilling self-tapping screws. Use 20 mm self-drilling self-tapping screws for steel purlins and steel battens. Screw the screws through the trough of the profile (see Figure 8).

If the batten spacing is greater than 500 mm, secure the side overlap using 4.8 x 20 mm overlap screws with a maximum centre to centre spacing of 500 mm.

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Screw the ridge plate and bargeboard into place with a maximum centre to centre spacing of 300 mm (according to Figures 9 and 10). Flashings must overlap by at least 100 mm. 4.8 x 20 mm overlap screws are recommended for fixing.

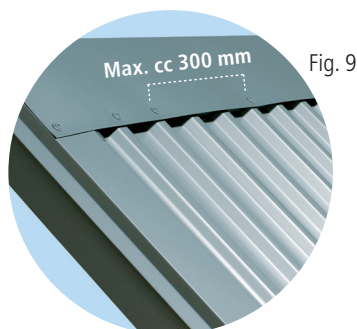


Fig. 9

We have a comprehensive range of standard flashings such as ridge plates, edge sheets and bargeboards. If you need custom made flashings send us a drawing with your required measurements. However, we recommend that flashing around the chimney be carried out by a qualified sheet metal worker.

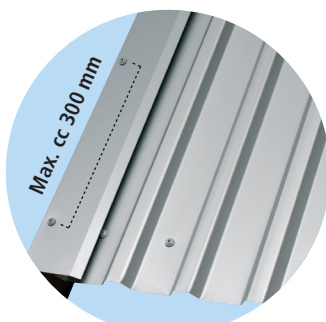


Fig. 10

Installing sealing strip

To seal the roof structure completely install sealing strip under the ridge plate (see Figure 7) and at the eaves (see Figure 10).

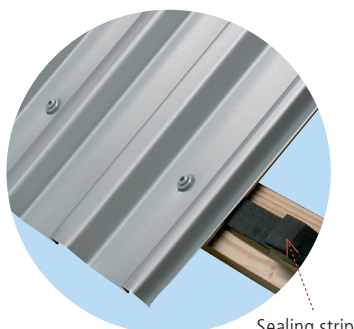


Fig. 11

Roofing sheet with anti-condensation felt

Do not use anti-condensation felt in insulated roof structures.

Uninsulated roof structures with anti-condensation felt on the roofing sheets must be ventilated to remove any accumulation of condensate.

We therefore recommend always using a ventilated ridge (see Figure 12) when the profiles are clad with anti-condensation protection.

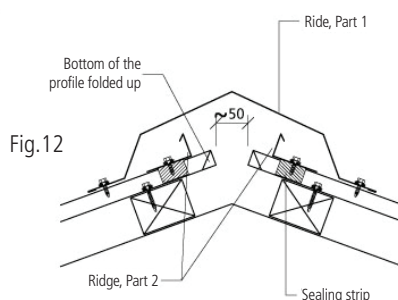


Fig. 12

GENERAL ADVICE

Handling

Never lift sheets by their ends as they can "stretch", making them difficult to fit. When moving and installing sheets take care not to damage their surface finish. Lift the sheets – NEVER pull them out of the stack.

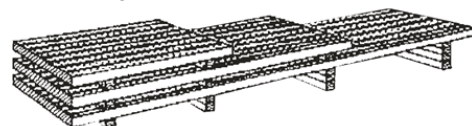
Short-term storage

Lay the bundles of underlay at least 200 mm above the ground. Ensure that the bundles are inclined so that any water can run off. Cover the bundles with an open-ended tarpaulin to provide good ventilation.

Long-term storage

The sheets are packaged when they are delivered to the construction site. When storing them for a long period they should be stacked flat (see Figure 13), indoors in a dry area. If the sheets are exposed to water and dirt during storage they can discolour.

Fig. 13



Cutting

Use a nibbler or plate shears (see Figure 14). Never use an angle grinder as this can damage the surface of the sheet.

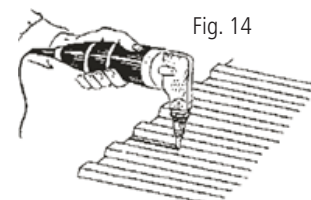


Fig. 14

Walkability

Wear soft shoes to walk on the roof. Always step in the trough of the profile on top of a batten. Ensure that the sheet is screwed into place before walking on it. Never leave the worksite with loose sheets on the roof.

Cleaning

Remember! After installation make sure that you clean up any swarf and other debris from the sheets. This prevents rusting.

Touching up the surface

Damage caused during installation can be repaired using touch-up paint. Touch up all cut edges.