WECKMAN

Wall sheet installation instructions

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The structural solutions in this installation manual are indicative and implementations may differ from them. Deviating structural solutions must be approved by the structural designer and contractor and must comply with the provisions of the Finnish Building Code. If these installation manuals differ from the original installation, service and maintenance instructions for products subcontracted by Weckman, the original instructions for the product must be followed. These installation manuals cover the installation of corrugated sheets W-1, W-15, W-20 and W-45J on walls.

1. Handling

1.1. Receiving the goods

Check that all goods mentioned in the consignment are included. Incorrect delivery and the amount and quality of damage during transport must be recorded on the consignment note and reported immediately to the factory or dealer. A faulty product must not be used. The notice period is 8 days from delivery. The factory is not responsible for the costs of replacing products installed in violation of the instructions in these installation instructions. **Note! The lifting slings included in the delivery must not be used after the load has been unloaded by the driver.**

1.2. Work safety

Avoid handling the sheets in strong winds. The edges and corners of the sheet are sharp and, after processing, are very jagged. Wear work gloves and protective clothing. The sheets are slippery, wet or icy sheets are very slippery. Always use a safety rope and soft-soled footwear when moving on the roof. When moving a bundle of sheets, always ensure that the lifting equipment is secure and durable (see the end of section 1.1). Do not go under a hanging bundle of sheets or a sheet. The applicable safety regulations must be observed during work.

1.3. Handling

The sheets are unloaded from the truck onto a flat surface provided by the customer. The bundles must be approx. 20 cm off the ground. The distance between the transverse supports must not exceed one meter (Figure 1).

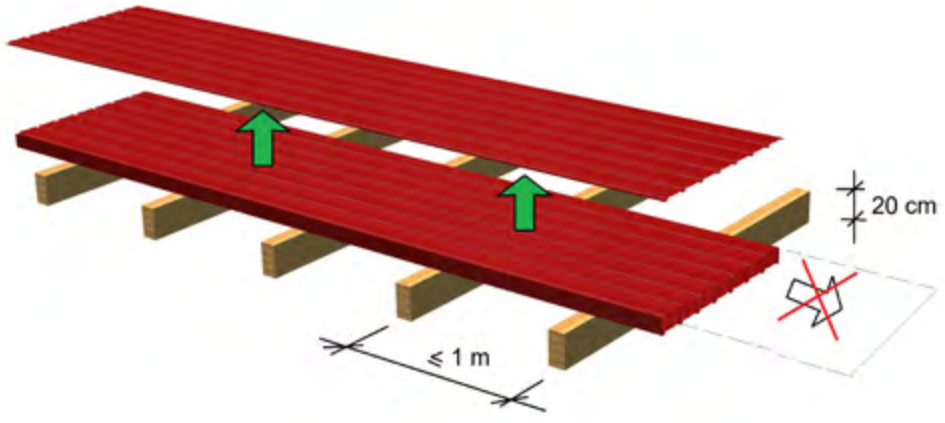


Image 1. Handling of sheets.

Unpack the sheets by lifting them, not pulling them, as the sharp end of the plate will damage the coating of the plate underneath when pulled. Thin metal sheets are sensitive to dents and bending, so handle them carefully. Dirt stains can be removed from the sheets with a mild detergent.

1.4. Storage

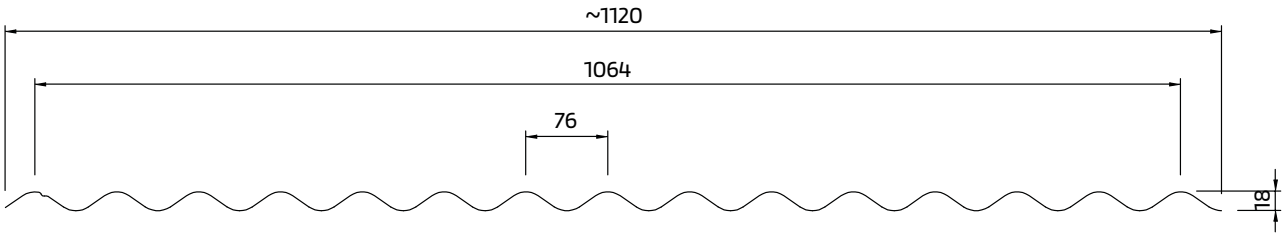
Galvanized sheets must not be stored in a tight bundle (can cause so-called white rust). The factory is not responsible for damage to sheets that are stored incorrectly. Protect the sheets and stack them on a sloping surface so that any water that may get between the sheets can evaporate or drain away. Coated sheets can be stored without packaging or in the transport packaging under normal conditions for a maximum of two weeks. For longer storage periods, proceed as with galvanized sheets. Place sufficient weight on the sheets or tie them so that they do not cause any harm in windy weather.

1.5. Processing corrugated sheets

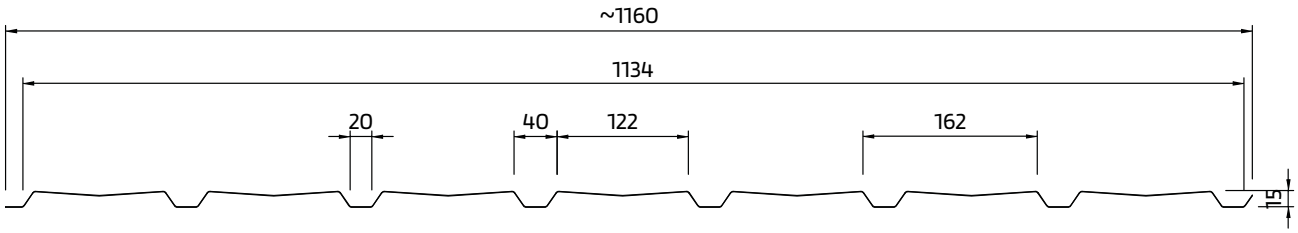
Roofing sheets are processed with a hand circular saw (the blade must be suitable for cutting steel sheet metal), a nibbler, a jigsaw or sheet metal shears. Wear safety glasses and hearing protection, as well as the necessary protective clothing. Do not use an angle grinder to work on the panels, as the heat at the cutting point and the splashes generated during cutting will burn the coating. No other work or cuts that generate hot splashes should be carried out within 10 metres of the panels. Protect the area around the work areas, as hot chips (e.g. drilling chips) will damage the surface of the sheet. Remove cutting and drilling waste carefully. Rusting chips and rivet mandrels left on the sheet will damage the surface. We recommend painting the cut areas of the sheets and any scratches that may occur during installation with a paint intended for repairing/ patching sheets after installation. Use installation stands that are high enough, have a suitable working distance and have railings that comply with regulations.

2. Installation of corrugated sheets (W-1, W-15, W-20A, W-20B and W-45JA)

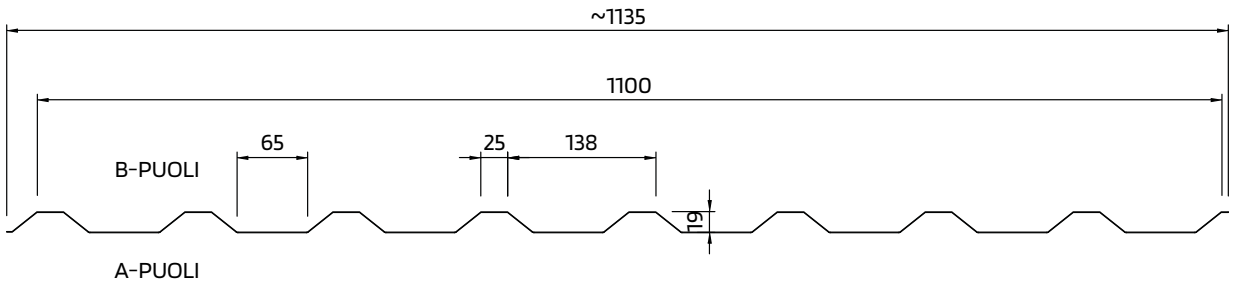
W-1/1064



W-15/1134



W-20/1100



W-45JA/900

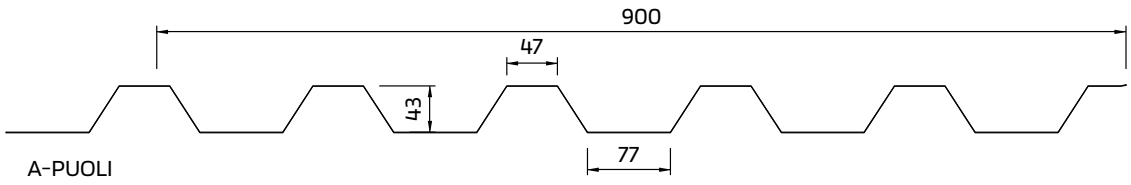


Image 2. Dimensions according to SFS EN-508-1 tolerances.

2.1. Sheet dimensions

Wall sheets are manufactured cut to length per order. Manufacturing tolerances
According to SFS EN-508-1. The recommended maximum lengths of corrugated sheets are in Table 1. If the wall is made of two or more parts, the extension overlap is usually approx. 100 mm. There must always be a support at the overlap point. When ordering corrugated sheets, the manufacturing tolerances regarding the length must be taken into account and it must be stated if the wall sheet will be installed exactly between two lines.

Product	Nominal effective width mm	Overall width mm	Recommended maximum length mm	Minimum length mm
W-1/1064	1064	1120	8 000	400
W-15/1134	1134	1160	6 000	400
W-20A/1100 ja W-20B/1100	1100	1135	8 000	400
W-45JA/900	900	980	10 000	400

Table 1. Dimensions of corrugated sheets.

2.2. Number of sheets

The number of sheets in vertical installation is obtained by dividing the wall width by the useful width of the selected profile and rounding the resulting number upwards. The useful width of the last sheet on the wall = total width. The (nominal) widths of the corrugated sheets are in Table 1. Any diagonal cuts to the wall sheets must be made on site.

2.3. Substructure

The wall sheeting can be installed either horizontally or vertically. The framing under the wall sheets must be designed so that the entire wall structure is ventilated in accordance with building regulations, also at the windows, for example.

The framing material can be wood or steel. The recommended spacing is 600–900 mm.
With a higher profile and thicker raw material, a longer spacing can be achieved, but wind noise and mechanical load resistance may be reduced too much.

2.4. Installing the sheets

Corrugated sheets can be installed either horizontally or vertically. In vertical installation, the installation can proceed either from right to left or vice versa. During installation, the bottom edge of the sheet must be followed to prevent it from "dripping". In horizontal installation, the installation begins at the bottom edge of the wall. During installation, the overlapping method and direction of the sheets must be taken into account.

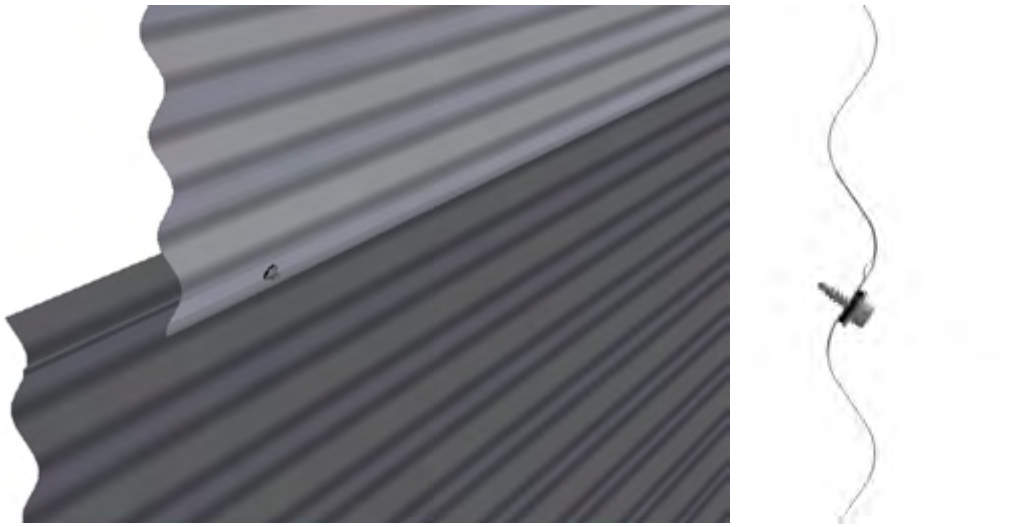


Image 3. W-1/1064 sheet overlap in horizontal installation.

2.5. Fixing the sheets

Corrugated sheets are usually fixed to the wooden frame with a 4.8 x 28 self-tapping screw and to the steel base with a 5.5 x 32 self-tapping screw. The average number of screws is approx. 5 pcs/m^2 and the fixing is usually at the edges of the sheet from the bottom of each fold and in the middle area at intervals of approx. 500 mm/from the bottom of every other fold. The lateral overlap of the corrugated sheets is screwed to each other with self-tapping screws at intervals of 500 mm.

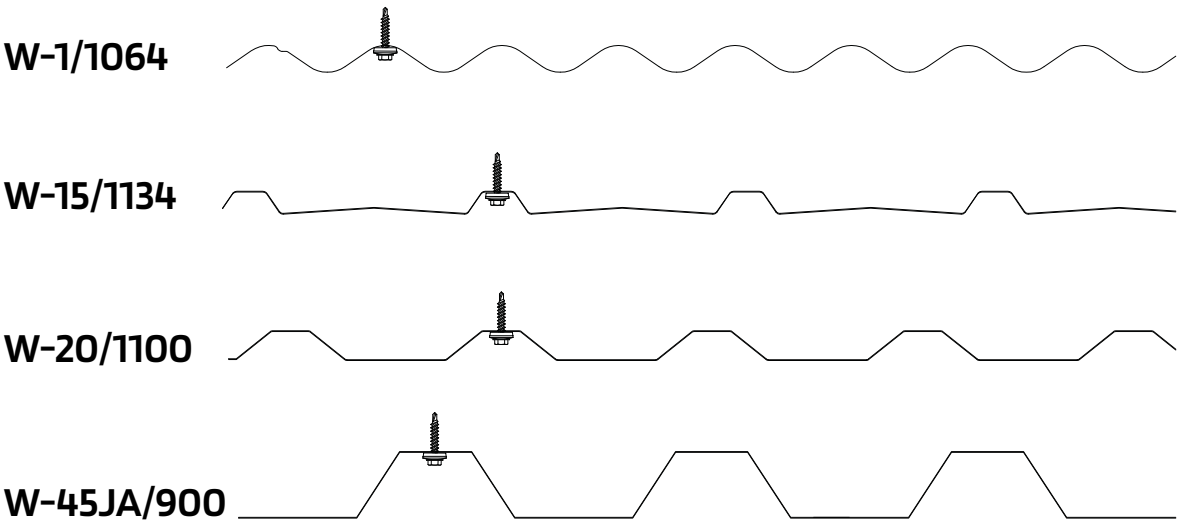


Image 4. Fastening of various wall profiles.

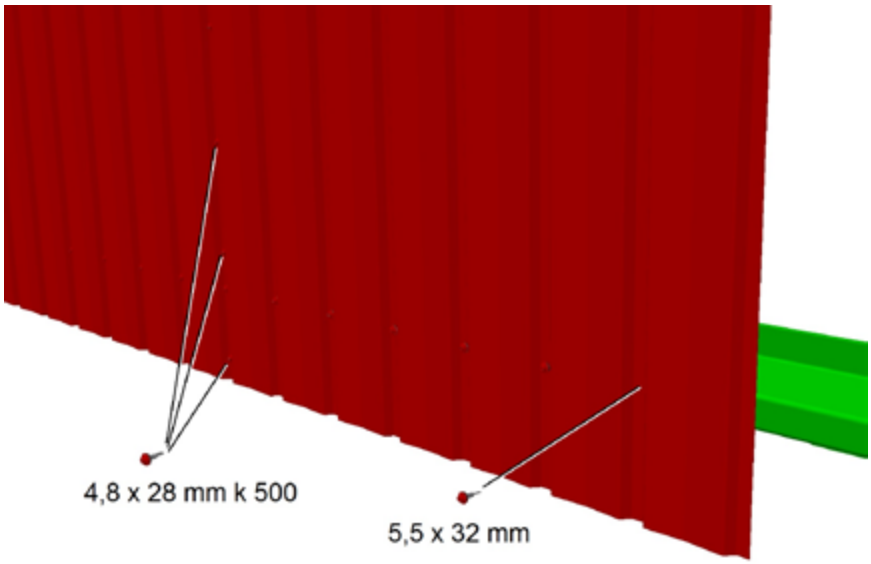


Image 5. W-15/1134 attachment to steel purlin and lateral overlap screwing.

3. Attaching the flashings

3.1. External corner flashing

The standard length of the external corner flashing is 2450 mm. The external corner flashing is attached to the wall sheet with sealing roofing screws at intervals of approx. 1 m. The overlap between the flashings is approx. 100 mm.

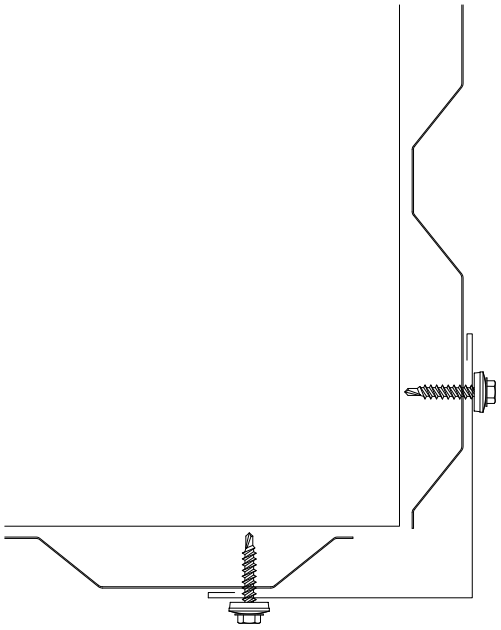


Image 6. External corner flashing. Wall sheets for vertical installation.

3.2 Internal corner flashing

The standard length of the internal corner flashing is 2000 mm. The internal corner flashing is attached to the joists at intervals of approx. 1 m and remains under the wall sheets during installation. The overlap between the flashings is approx. 100 mm.

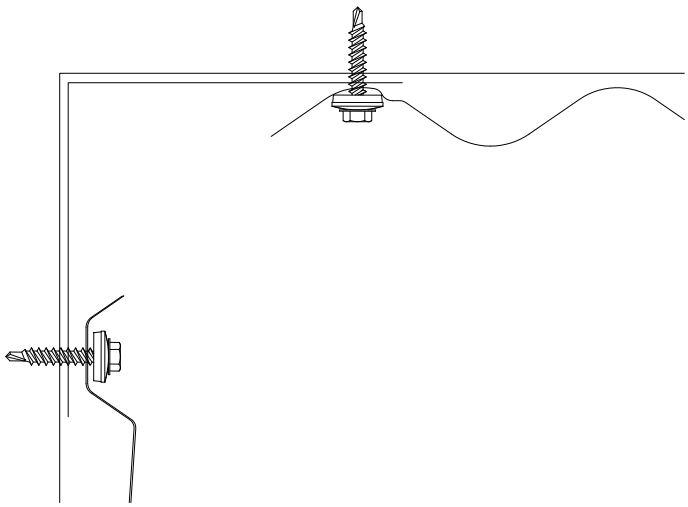


Image 7. Internal corner flashing. Wall sheets for vertical installation.

3.3 Wall-top flashing

Wall-top flashings are used at the boundary between two wall panels, either in connection with horizontal or vertical sheet metal. The wall sheet is left approx. 10 mm from the folds of the wall-top flashing. The overlap between the wall-top flashings is approx. 50–100 mm. The same flashing can be used, for example, at the top edges of window or door openings.

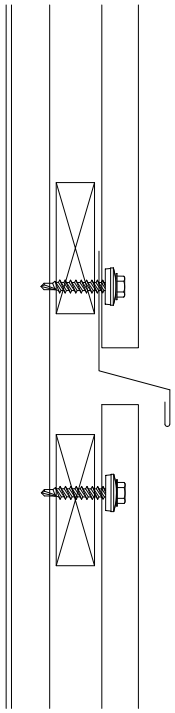


Image 8. Flat strip. Wall sheets vertical installation.

3.4 Plinth flashing

The plinth flashing directs water flowing from the wall sheet outside the base. The plinth flashing is always made to the customer's dimensions, which are determined by the protrusion of the wall frame in relation to the outer edge of the base. If the wall frame is in line with the base, a plinth flashing is not necessary; it is often sufficient for the wall sheet to extend below the boundary between the wall frame and the plinth.

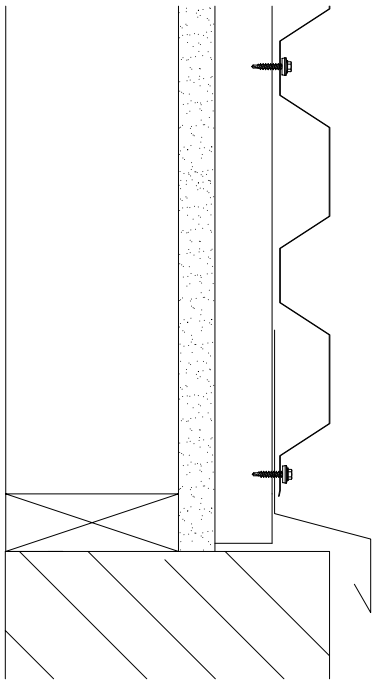


Image 9. Plinth flashing. Wall sheets horizontal installation.

4. Maintenance of coated sheets

Check the coatings annually. If necessary, wash the wall sheets to remove dirt with a pressure washer and a mild alkaline detergent. If the coating is damaged or has come off, remove all loose or peeling coating. Remove rust, dirt and other dirt from the area to be repaired with light wire brushing or scraping. Use paints developed in collaboration between steel manufacturers and paint factories to repair the damaged area. Further information about these can be obtained from leading paint manufacturers.

NATURALLY
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Weckman reduces the burden on the environment

Weckman is committed to reducing its carbon footprint by defining the most environmentally friendly solutions for all processes in the supply chain of its product groups. The steel used in Weckman sheet metal products is 100% recyclable and up to 80% of our sheet metal is made from the most environmentally friendly steel.

The 50-year life cycle of Weckman steel halls and the recyclable steel used as material guarantee ecology. The Weckman tractor trailer collection has been renewed throughout the manufacturing process to be as environmentally friendly and sustainable as possible. Ecology is one of our values for Weckman and our products will last from generation to generation.

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Weckman is the only one
that manufactures interlocking roofing
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Weckman Steel Oy is a private family company founded in 1962, specializing in the production of thin steel sheet products, steel halls and tractor trailers. Weckman products are manufactured in Vierumäki and Iisalmi in Finland, Zeven in Germany and Viimsi in Estonia.

Weckman has a long tradition: the current owners are already the eighth generation continuing to handle steel and iron. Over the years, the expertise acquired, the best materials and expert service guarantee the renowned Weckman quality.
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