

INSTALLATION INSTRUCTIONS

RIB-ROOF SPEED 500 / RIB-ROOF EVOLUTION

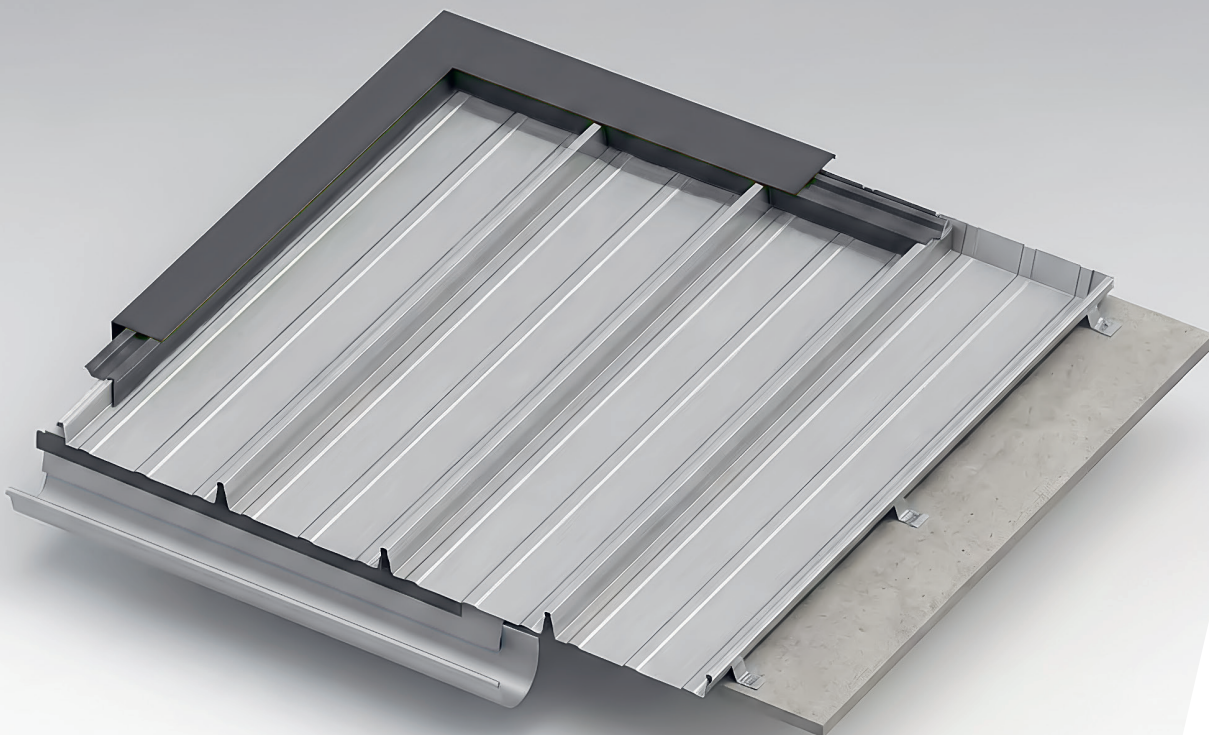


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1 About These Installation Instructions

1.1 Purpose

These installation instructions describe the correct and safe installation of the system. They are intended for all installers and contain all essential information required to prevent errors, damage, and safety risks.

1.2 Target Group

These installation instructions are intended for qualified personnel. Qualified personnel are persons who have acquired specialized knowledge and experience through appropriate professional training. Safe handling of the required tools as well as the necessary skills to work on roofs are a prerequisite.

1.3 Contact Information

Manufacturer	Zambelli RIB-ROOF GmbH & Co. KG
Address	Hans-Sachs-Straße 3 + 5 D-94569 Stephansposching
Phone	+49 9931 89590-0
Email	rib-roof@zambelli.com
Website	www.zambelli.com

1.4 Presentation Conventions

The following presentation conventions are used in these installation instructions:

Guidelines and Instructions

The steps to be performed are numbered.

The results of individual steps are indicated by a black arrow.

The overall result of the instruction is highlighted by a white arrow inside a black circle.

Example ✓ Prerequisite

1. Instruction (Step 1)
2. Instruction (Step 2)
⇒ Result or system response to Step 2
3. Instruction (Step 3)
- ➡ Overall result of the instruction

Lists

Lists without a mandatory sequence are presented as bullet points.

- Example**
- Property A
 - Detail 1
 - Detail 2
 - Property B
 - Detail 1
 - Detail 2

2 Safety

2.1 Safety Instructions

The system complies with the current state of the art. It was developed and manufactured in accordance with the current applicable standards, guidelines, regulations, and technical rules. This is confirmed in the CE Declaration of Performance.

However, the system may pose hazards if the safety instructions and warning notices are not observed. The safety instructions in this chapter help to prevent personal injury and property damage.

The project manager must ensure that all safety instructions and warning notices are understood and followed. They must ensure that all personnel involved in the installation of the system has read and understood the installation instructions in full before commencing work.

Product-Specific Hazards and Residual Risks

- Mechanical hazards
- Product modification
- Damage risks

2.2 Warning Notices

2.2.1 Structure of Warning Notices

All warning notices in this document are structured as follows:

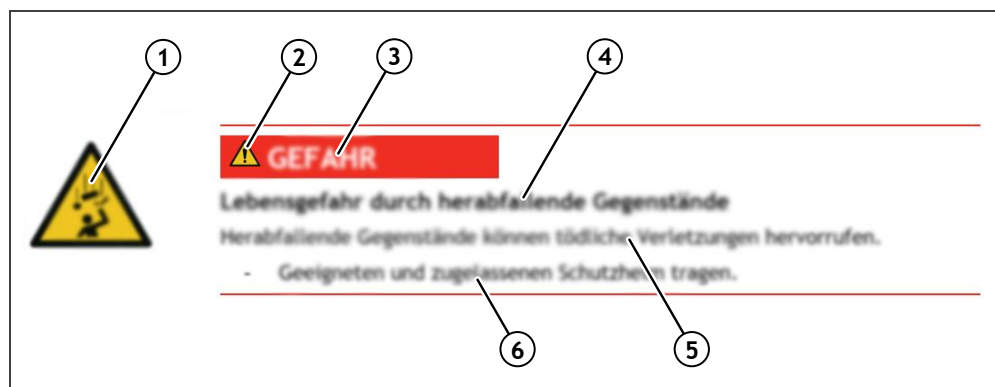


Fig. 1: Structure of the warning notices

1	Hazard-specific Symbol	2	Warning sign
3	Signal word	4	Nature and source of hazard
5	Possible consequences of non-compliance	6	Measures for hazard prevention

2.2.2 Meaning of Signal Words and Safety Symbols

The following signal words are used in this document:

Signal Word	Meaning, Consequences if Not Avoided
DANGER	Indicates a hazardous situation which will result in death or severe injury.
WARNING	Indicates a potentially hazardous situation which may result in death or severe injury.
CAUTION	Indicates a potentially hazardous situation which may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation which may result in property damage or environmental damage.

Table 1: Meaning of the signal words

The following graphic safety symbols for hazards, warnings, mandatory actions, and prohibitions are used in this document:

Symbol	Meaning
	General warning of a hazardous area
	Warning of risk of falling
	Warning of slippery surfaces
	Warning of sharp edges / objects

Table 1: Warning signs

Symbol	Meaning
	Wear hand protection
	Wear a safety helmet
	Observe the operating instructions
	Wear a fall-arrest harness

Table 2: Mandatory signs

2.3 Operator's Responsibility

The project manager must ensure the safe installation of the product and strictly comply with the following requirements.

Safe condition during and after installation

- Keep unauthorized persons away
- Replace damaged product components immediately
- Spare parts must always comply with the technical requirements specified by the manufacturer
- Observe the applicable local accident prevention regulations
- Observe the applicable local environmental protection regulations

Obligations Toward Personnel

The following requirements have to be conveyed to all personnel involved in the safe installation of the system, regardless of any instruction or training provided by qualified specialists:

- Personnel must possess the required qualifications and receive the necessary safety training
- Mandatory signs (white symbols on a blue background) must be clearly visible at the installation site in accordance with local safety regulations and installed considering any potential temporary visual obstructions
- Personnel must have read and understood the sections of the installation instructions relevant to their assigned tasks
- Personnel must be informed about site-specific conditions and operational requirements

2.4 Personnel Requirements

The personnel must meet the following requirements:

- Persons whose reactions are impaired, for example due to drugs, alcohol, or medication, are not permitted to install the system
- Personnel must observe all safety instructions and hazard warnings
- Personnel must keep the installation site clean and orderly
- Unauthorized persons must be kept away from the installation area

Qualifications The tasks described in these instructions require different qualification levels of the personnel performing the work. Insufficiently qualified personnel may not be able to properly assess the risks associated with handling the product and may expose themselves and / or others to the risk of injury. Insufficiently qualified personnel are prohibited from entering the work area or hazard zone of the product installation.

Assistant An assistant is an untrained person who has been instructed by the project manager or by an authorized representative of the project manager (qualified personnel) regarding the assigned tasks and the potential hazards resulting from improper conduct. The assistant has been instructed and trained regarding the necessary protective equipment and safety measures. The assistant must have sufficient knowledge of the written and spoken local language and be familiar with the installation instructions.

Qualified Personnel Qualified personnel are individuals who, based on their professional training, knowledge, and experience, as well as their knowledge of the applicable standards and regulations, are capable of carrying out and evaluating the assigned tasks, and independently identifying potential hazards. The individuals are familiar with the product's installation instructions. Qualified personnel include roofers, carpenters, sheet metal workers, and similar professional groups.

Activity	Assistant	Qualified Personnel
Transport, storage	Only under supervision	Permitted
Installation	Only under supervision	Permitted
Disassembly, disposal	Only under supervision	Permitted

Table. 3: Personnel areas of activity

3 Product Overview

3.1 Intended Use

The RIB-ROOF metal roofing system is designed as a self-supporting roof cladding system. The system is fastened using penetration-free sliding clips, ensuring permanent weatherproofing. The profile panels are connected to the clips via a form-fit connection. The system allows for tension-free linear expansion, is building-code approved for roof pitches of 1.5° and above and is designed for use under various climatic conditions as well as for all common roof constructions and substructures. In addition, it can also be used as wall cladding, facade system, or for comparable applications.

3.2 Improper Use

- Use below the building-code-approved minimum roof pitch of 1.5°
- Penetration of the roof skin, e.g., by additional screws or fastening elements
- Use of unsuitable fastening elements
- Improper substructure, e.g., non-load-bearing or uneven substructures
- Failure to allow for thermal expansion
- Use in unsuitable environments, e.g., coastal regions or near chemical industry facilities without sufficiently corrosion-resistant materials
- Use of the product as a load-bearing structural component
- Failure to maintain the required clip spacing
- Improper execution of fixed points

3.3 Technical Data

3.3.1 Profile Panels

Material	Finish	Material Thickness (mm)	Weight (kg/m ²)
Steel Sheet	Aluzinc coating	0.63	6.76
	Hot-dip galvanized and color-coated	0.63	6.81
Aluminium	Mill-finished and stucco-embossed	0.70	2.53
		0.80	2.89
		0.90	3.26
		1.00	3.62
	Smooth and color-coated	0.70	2.66
		0.80	3.02
		0.90	3.39
		1.00	3.75

Table 4: Technical data – profile panels

3.3.2 Fastening Components

Designation	Material	Length (mm)	Material Thickness (mm)
Standard clip	Aluzinc-coated steel sheet	-	1.30
Turned clip	Aluzinc-coated steel sheet	-	1.30
Directional clip 200	Aluzinc-coated steel sheet	195	1.00
Turned directional clip 200	Aluzinc-coated steel sheet	195	1.00
Directional profile	Aluzinc-coated steel sheet	variable	1.00
Turned directional profile	Aluzinc-coated steel sheet	variable	1.00
Flat clip border	Aluzinc-coated steel sheet	113 x 3,000	1.30
Universal clip border	Aluzinc-coated steel sheet	170 x 3,000	1.30

Table 5: Technical data – fastening elements

3.4 Product Description

The RIB-ROOF Speed 500 sliding-seam metal roofing system consists of prefabricated roof elements (profile panels) and the associated concealed fastening components (clips).

The profile panels are manufactured from corrosion protected steel strip with color coating or from aluminum strip, with or without color coating. The profile panels are cold roll-formed into a trough-shaped cross-section, with ribs running parallel to the load-bearing direction.

The profile panels interlock to form a weather-tight configuration through the continuous side overlap of the edge ribs of the adjacent panels.

The connection to the substructure is made using clips that are fixed between the ribs and are not visible from above. The clips are fastened to the substructure using appropriate, building-code approved fastening elements.

3.5 Graphical Description

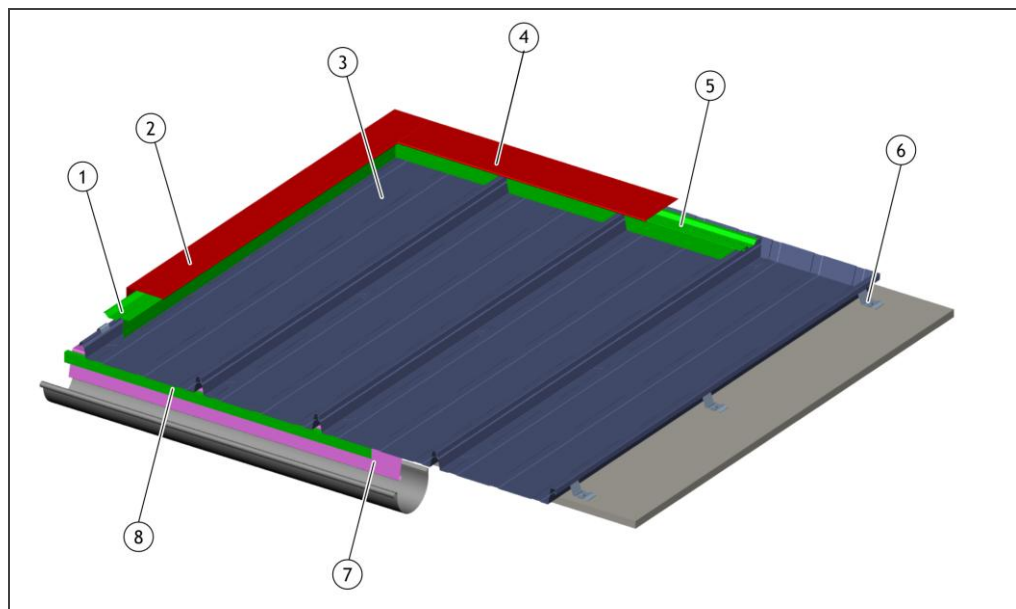


Fig. 2: Example illustration of RIB-ROOF Speed 500 without fastening elements

1	Hook-in profile	2	Verge cover	3	RIB-ROOF profile panel
4	Ridge cover	5	Toothed strip	6	Standard clip
7	Gutter inlet flashing	8	Eaves angle	9	Profile filler (not displayed)

Table 6: Overall view of RIB-ROOF Speed 500

3.5.1 Overview of Clip Variants

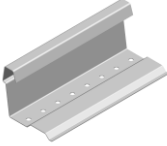
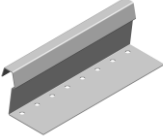
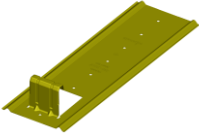
Component	Designation
	Standard clip
	Turned clip
	Directional clip
	Turned directional clip
	Clip border (3,000 mm long, contains 6 clips)

Table 7: Overview of clip variants

4 Transport and Storage



CAUTION

Risk of injuries from falling objects

Unsecured materials or tools may cause injuries.

- Wear personal protective equipment (PPE).
- Immediately secure materials and tools to prevent them from falling.
- Do not stand or work under suspended loads.
- Stop installation immediately in case of extreme weather conditions.

4.1 Transport Requirements

The product must only be transported with appropriate lifting equipment.

For panel lengths of up to 30 m, a semi preassembled crane spreader beam (dead weight 980 kg, maximum payload 1,500 kg) can be provided. Special spreader beams are available upon request. Profile panels up to 13 m in length may also be unloaded without a crane spreader beam.

When unloading by crane, wide lifting straps (min. width 10 cm) must be used to protect the profile edges from damage.

When placing and storing the panels on the roof, the load-bearing capacity of the supporting surface must be observed.

4.2 Storage

- Store the profile panels protected from weather exposure.
- Position the profile panels at an incline in the longitudinal direction to allow for the drainage of precipitation and condensation.
- Cover the profile panels with tarpaulins.
- Ensure adequate ventilation of the profile panels.

Further information: See Manual for Planning and Installation

5 Installation



WARNING

Risk of falling at roof edges, openings, or non-walkable areas

Openings in the roof, unsecured roof edges, and non-walkable surfaces may result in falls.

- Wear personal protective equipment (PPE).
- Stop installation immediately in case of extreme weather conditions.
- Implement appropriate fall protection measures.



CAUTION

Slipping hazard due to wet surfaces

Injuries caused by slipping on wet surfaces.

- Wear safety shoes with slip-resistant soles.
- Exercise caution in wet and damp weather conditions.



CAUTION

Cut hazard from metal components

Contact with sharp edges may result in cut injuries.

- Wear personal protective equipment (PPE).



CAUTION

Risk of injuries from falling objects

Unsecured materials or tools may cause injuries.

- Wear personal protective equipment (PPE).
- Immediately secure materials and tools to prevent them from falling.
- Do not stand or work under suspended loads.
- Stop installation immediately in case of extreme weather conditions.

5.1 Additional Documents

QR Code	Description
	Videos explaining the installation principle https://www.zambelli.com/en/building-envelope/application/installation-information.html
	Manual for Planning and Installation https://www.zambelli.com/files/dateien/pdf/pdf-gebaeude-huelle/downloads/broschueren/Manual-for-planning-and-installation_ZRR_EN.pdf
	Additional information available in the download area https://www.zambelli.com/en/building-envelope/service/downloads.html

Table 8: Additional documents

5.2 System Installation

5.2.1 Installation of RIB-ROOF Profile Panels

Notice:

Notice:

- Strictly adhere to the grid dimensions specified in the installation plan, both at the ridge and at the eaves.
- Vacuum drilling debris after completing the work and keep the work area clean.
- Follow the installation directions as specified in the installation plan.
- Set fixed points: see section 5.2.4 "Setting Fixed Points" on page 25.

- ✓ All required preparatory work has been completed.
- ✓ Related trades have completed their work.
- ✓ The roof area has been measured and laid out.
- ✓ The substructure is suitable and load-bearing.

1. Align the first row of directional clips / standard clips along the verge side.
 2. Fasten the directional clips / standard clips to the substructure using approved fastening elements and maintain the spacings specified in the installation plan.
- ⇒ The first row of directional clips / standard clips is aligned and installed.



Fig. 1: Installation of the first row of directional clips / standard clips

3. Swing the small rib of the first RIB-ROOF profile panel into the directional clips / standard clips.
4. Pivot the RIB-ROOF profile panel into the standard clips / directional clips.
⇒ The first RIB-ROOF profile panel is installed.

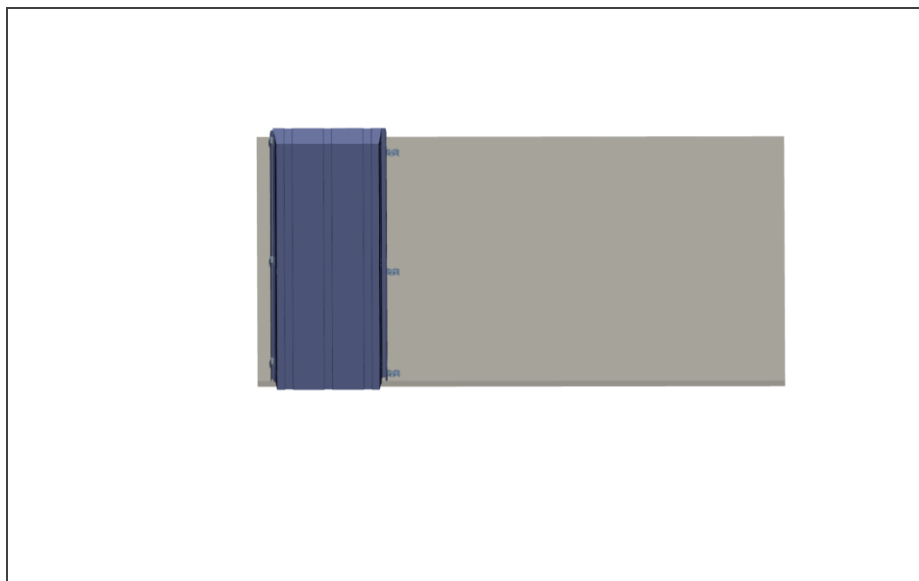


Fig. 2: Installation of the first RIB-ROOF profile panel

5. Engage the next row of directional clips / standard clips into the large rib of the RIB-ROOF profile panel.
6. Fasten the directional clips / standard clips to the substructure using approved fastening elements.
7. Set fixed points: see Section 5.2.4 "Setting Fixed Points" on page 25.
8. Swing the small rib of the next RIB-ROOF profile panel into the directional clips / standard clips.
9. Pivot the RIB-ROOF profile panel into the directional clips / standard clips.
⇒ The second RIB-ROOF profile panel is installed

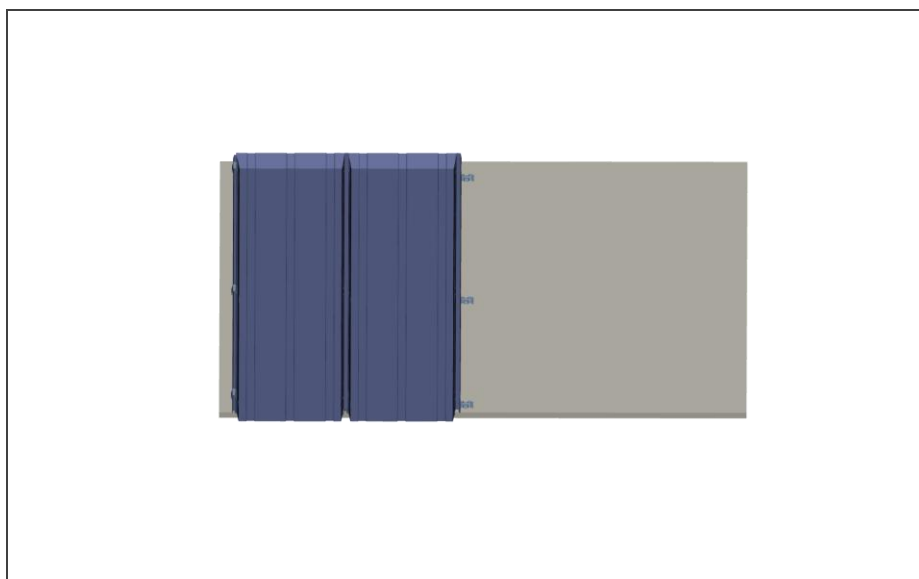


Fig. 3: Installation of the second RIB-ROOF profile panel

10. Repeat the process until the roof area is fully covered.

➡ The RIB-ROOF profile panels are installed.

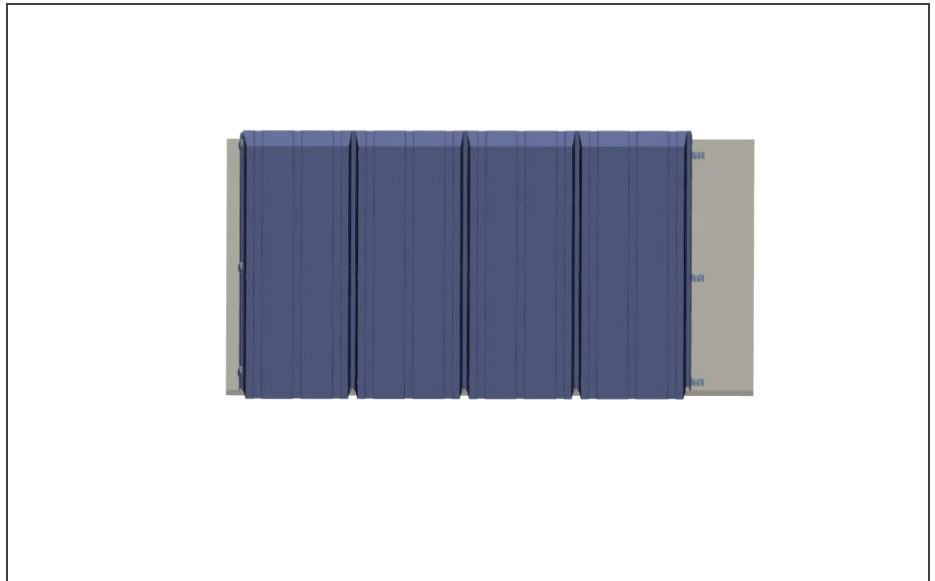


Fig. 4: Installation of RIB-ROOF profile panels

The design of eave, verge, and ridge details may vary depending on the specific project requirements.

5.2.2 Installation of Curved RIB-ROOF Profile Panels

Notice:

- Strictly adhere to the grid dimensions specified in the installation plan, both at the ridge and at the eaves.
- Vacuum drilling debris after completing the work and keep the work area clean.
- Follow the installation directions as specified in the installation plan.
- In the apex area with a roof pitch below 1.5° , an additional sealing tape must be installed in the seam and beneath the turned clip.
- Set fixed points: see section 5.2.4 "Setting Fixed Points" on page 25.

Recommendation: Layout and directional work should be conducted by qualified specialist contractors.

- ✓ All required preparatory work has been completed.
- ✓ Related trades have completed their work.
- ✓ The roof area has been measured and laid out.
- ✓ The substructure is suitable and load-bearing.

1. Align the first row of turned directional clips / turned clips along the verge side.
2. Fasten the first row of turned directional clips / turned clips to the substructure using suitable, approved fastening elements.

⇒ The first row of turned directional clips / turned clips is aligned and installed.

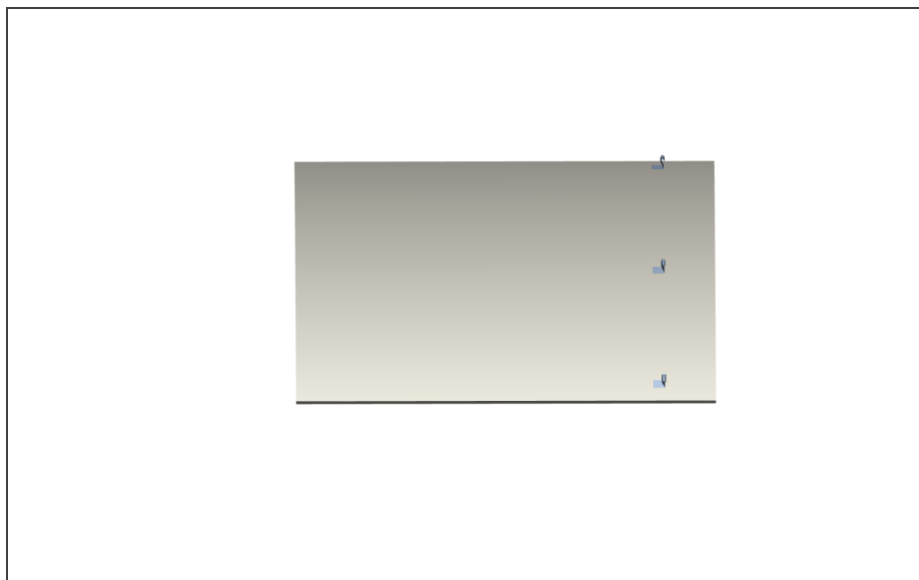


Fig. 5: Installation of the first row of turned directional clips / turned clips

3. Place the curved RIB-ROOF profile panel from above onto the turned directional clips / turned clips and press it down until the return bend of the large rib slides over the edge of the turned clip.

⇒ The first curved RIB-ROOF profile panel is installed.

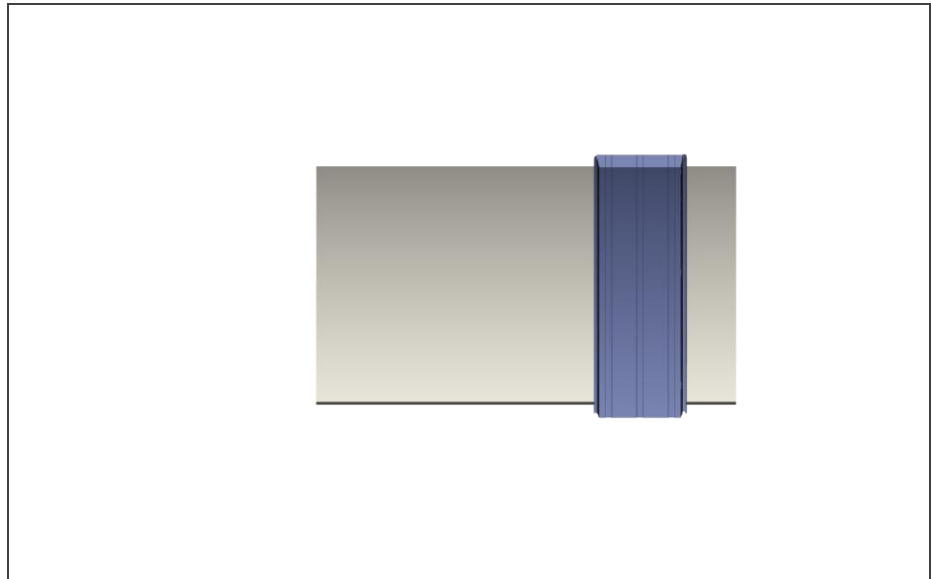


Fig. 6: Installation of the first curved RIB-ROOF profile panel

4. Place the next row of turned directional clips / turned clips onto the small rib of the already installed RIB-ROOF profile panel and fasten them as described above.
5. Set fixed points: see section 5.2.4 "Setting Fixed Points" on page 25.
6. Place the curved RIB-ROOF profile panel from above onto the turned directional clips / turned clips and press it down until the return bend of the large rib slides over the edge of the turned clip.

⇒ The second curved RIB-ROOF profile panel is installed.

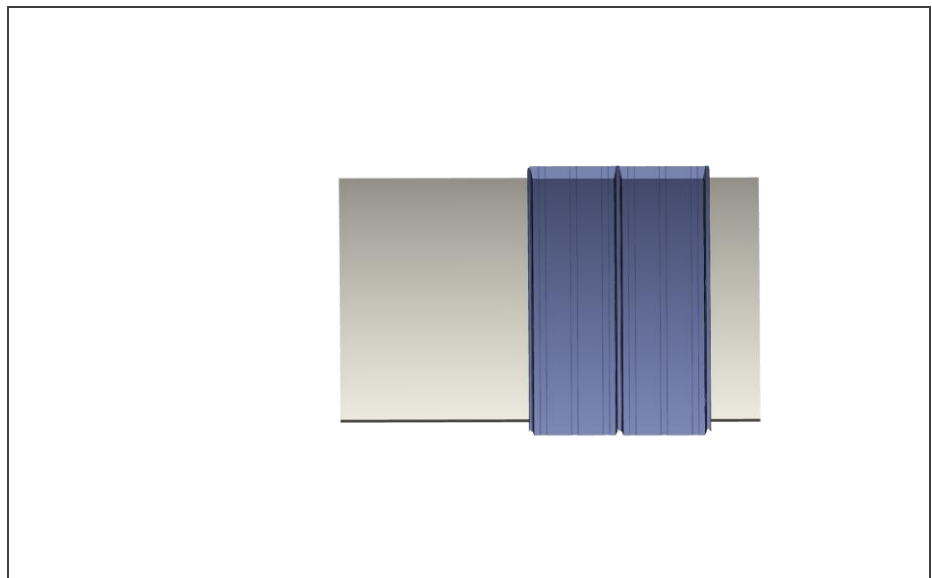


Fig. 7: Installation of the second curved RIB-ROOF profile panel

7. Repeat the process until the roof area is fully covered.
- ➡ The curved RIB-ROOF profile panels are installed.

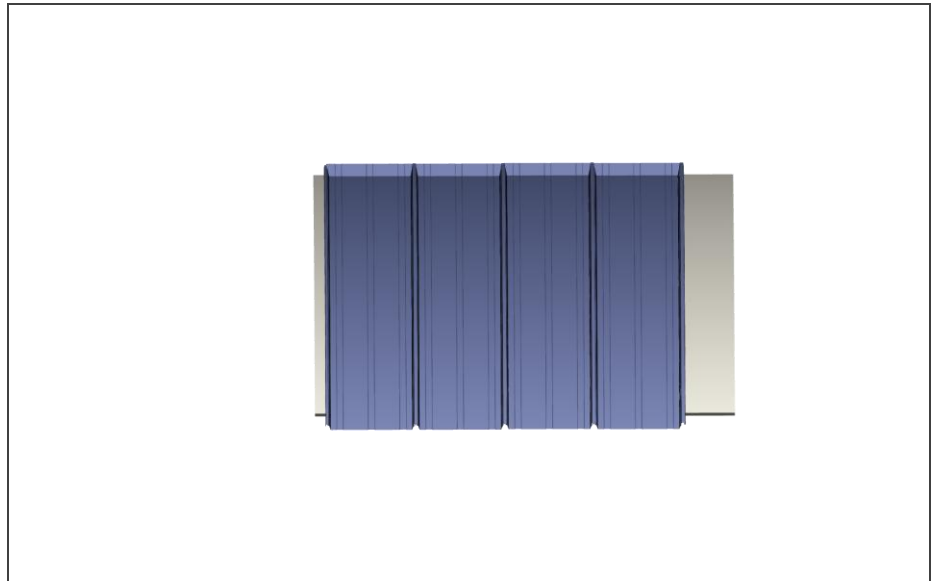


Fig. 8: Installation of curved RIB-ROOF profile panels

The design of eave, verge, and ridge details may vary depending on the specific project requirements.

5.2.3 Installation Using Clip Border

Notice:

- Strictly adhere to the grid dimensions specified in the installation plan, both at the ridge and at the eaves.
- Vacuum drilling debris after completing the work and keep the work area clean.
- Follow the installation directions as specified in the installation plan.
- Ensure square alignment of the clip border.
- Set fixed points: see Section 5.2.4 "Setting Fixed Points" on page 25.

- ✓ All required preparatory work has been completed.
- ✓ Related trades have completed their work.
- ✓ The roof area has been measured and laid out.
- ✓ The substructure is suitable and load-bearing.

1. Align and preinstall the clip borders at the verge and the eaves.
2. Fasten the clip borders to the substructure using suitable, approved fastening elements, positioning the fasteners as close to the clips as possible and evenly distributed along the clip border.

⇒ The clip borders are aligned and installed.

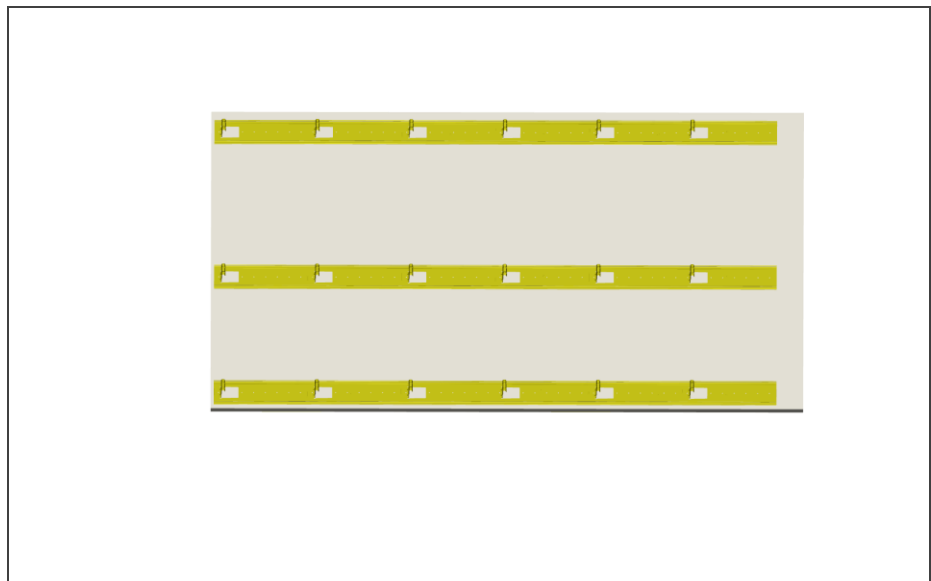


Fig. 9: Installation of clip borders

3. Snap the small rib of the first RIB-ROOF profile panel into the clips.
 4. Place the RIB-ROOF profile panel onto the clips from above and press it down until the return bend of the large rib slides over the edge of the clip.
 5. Set fixed points: see Section 5.2.4 "Setting Fixed Points" on page 25.
- ➡ The first RIB-ROOF profile panel is installed.

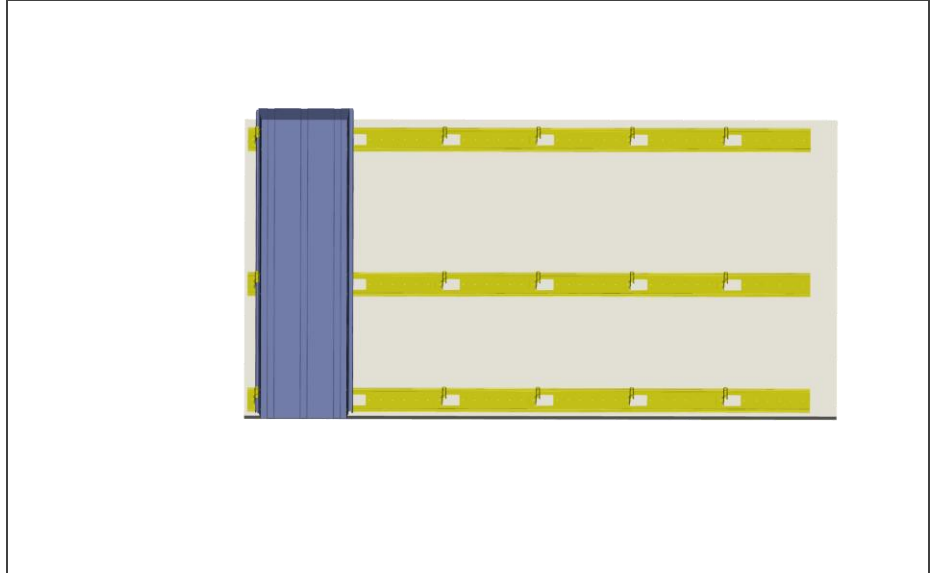


Fig. 10: Installation of the first RIB-ROOF profile panel

6. Install the subsequent RIB-ROOF profile panels as described above.
- ➡ The RIB-ROOF profile panels are installed.

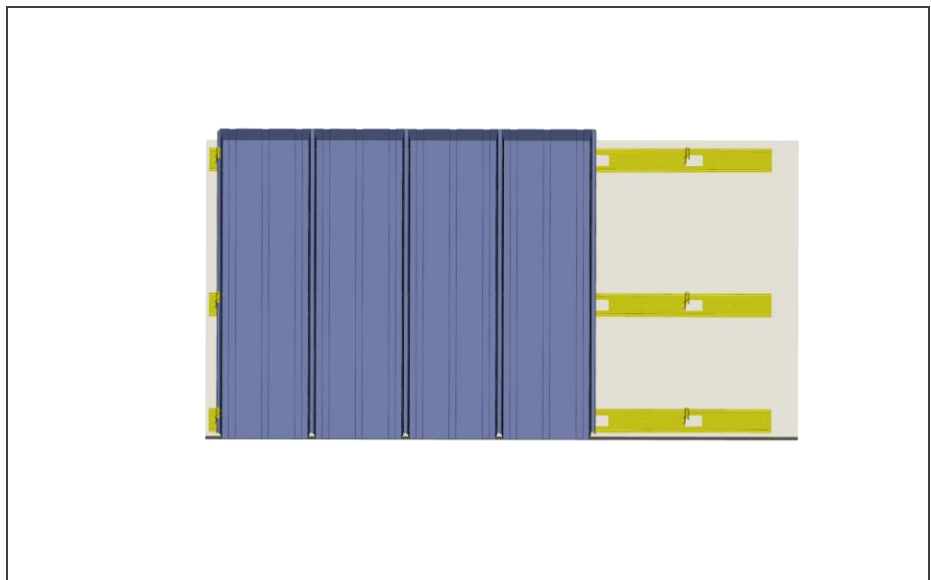


Fig. 11: Installation of further RIB-ROOF profile panels

The design of eave, verge, and ridge details may vary depending on the specific project requirements.

5.2.4 Setting Fixed Points

Further information: See Manual for Planning and Installation

Notice:

- Observe the number of fixed-point rivets specified in the installation plan.
- Set exactly one fixed point per profile panel.
- Exercise particular caution in areas subject to snow drifts, skylights, and interruptions.
- Vacuum drilling debris after completing the work and keep the work area clean.

5.2.4.1 Setting a Fixed Point Using an Directional Clip / Standard Clip

- ✓ The directional clip / standard clip has been properly installed in the corresponding RIB-ROOF profile panel.
 1. At the large rib, drill the specified number of suitable holes through the profile panel and the clip at an angle of approx. 45° (90° to the profile panel rib) for the 4.8 × 8.0 mm cup-head blind rivets.
 2. Fasten the profile panel to the clip using the specified number of 4.8 × 8.0 mm cup-head blind rivets.
- ➡ The fixed point using the directional clip / standard clip has been set and the next RIB-ROOF profile panel can be installed.

5.2.4.2 Setting a Fixed Point Using a Turned Directional Clip / Turned Clip

- ✓ The turned directional clip / turned clip has been properly installed in the corresponding curved RIB-ROOF profile panel.
 1. Drill the specified number of suitable holes vertically from above through the turned directional clip / turned clip and the small rib of the profile panel for the 4.8 × 8.0 mm cup-head blind rivets.
 2. Fasten the profile panel to the clip using the specified number of 4.8 × 8.0 mm cup-head blind rivets.
- ➡ The fixed point using the turned directional clip / turned clip has been set and the next curved RIB-ROOF profile panel can be installed.

5.2.4.3 Setting a Fixed Point Using a Clip Border

- ✓ The RIB-ROOF profile panel has been properly installed in the corresponding clip border.
 1. At the large rib, drill the specified number of suitable holes at an angle of approx. 45° for the 4.8 × 8.0 mm cup-head blind rivets.
 2. Fasten the profile panel to the clip using the specified number of 4.8 × 8.0 mm cup-head blind rivets.
- ➡ The fixed point has been set, and the next RIB-ROOF profile panel can be installed.

6 Disassembly and Recycling



WARNING

Risk of falling at roof edges, openings, or non-walkable areas

Openings in the roof, unsecured roof edges, and non-walkable surfaces may result in falls.

- Wear personal protective equipment (PPE).
- Stop installation immediately in case of extreme weather conditions.
- Implement appropriate fall protection measures.



CAUTION

Slipping hazard due to wet surfaces

Injuries caused by slipping on wet surfaces.

- Wear safety shoes with slip-resistant soles.
- Exercise caution in wet and damp weather conditions.



CAUTION

Cut hazard from metal components

Contact with sharp edges may result in cut injuries.

- Wear personal protective equipment (PPE).



CAUTION

Risk of injuries from falling objects

Unsecured materials or tools may cause injuries.

- Wear personal protective equipment (PPE).
- Immediately secure materials and tools to prevent them from falling.
- Do not stand or work under suspended loads.
- Stop installation immediately in case of extreme weather conditions.

1. Dismantle the product properly and safely.
2. Loosen all fasteners and connections.
3. Remove the product section by section.
4. Dispose of the product and installation materials separately in accordance with applicable regulations.

➡ The product has been dismantled and disposed of.

Notice: Avoid damage to the substructure.



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