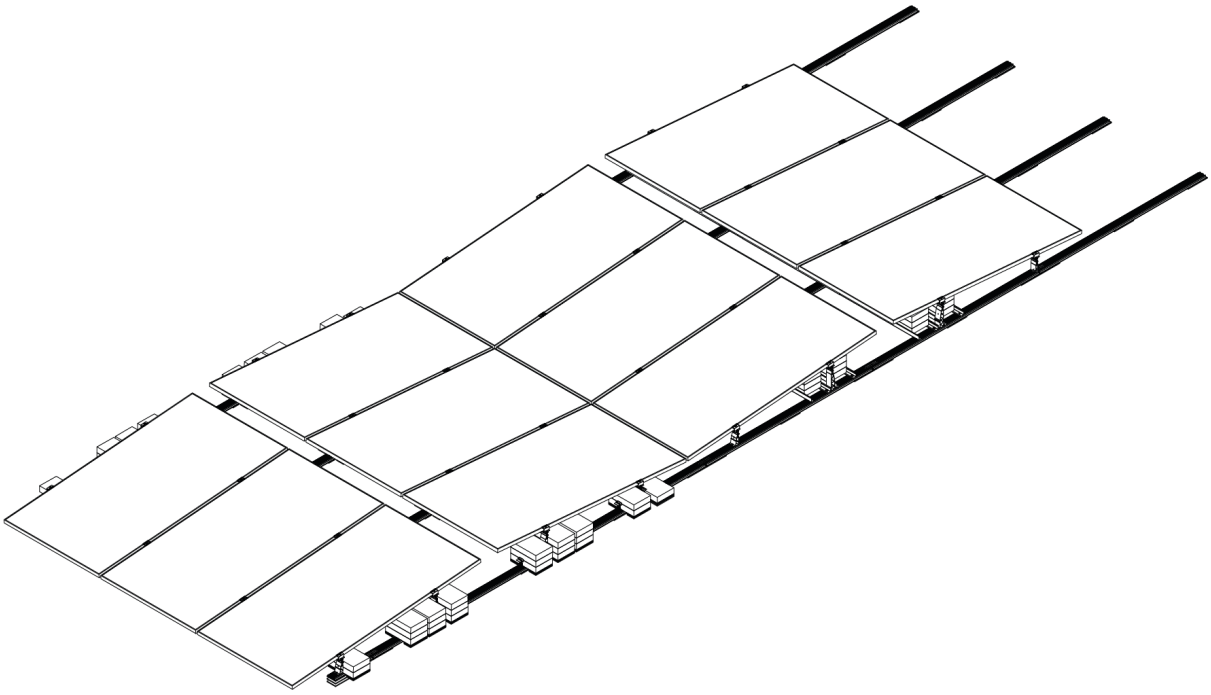
AEROCOMPACT®

ENGLISH



Assembly Instruction

# COMPACT**FLAT** SN2 Q PLUS Portrait

**Version : 3.0**
**Language : English**
**Important! Read carefully before installation!**

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**Legal Notice**

Subject to change due to technical modifications! These assembly instructions correspond to the technical status of the delivered product and not to the current development status at the manufacturer. If pages or parts of the assembly instructions are missing, please contact the manufacturer's address given below. The original language of these assembly instructions is German. Any assembly instructions in another language are a translation of the assembly instructions in German. Therefore, in case of doubt or contradiction, the authentic German version shall prevail. The installation instructions are protected by copyright. The installation instructions may not be copied, reproduced, microfilmed, translated or converted for storage and processing in computer systems, either in part or in full, without the written permission of AEROCOMPACT Europe GmbH



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**Creation date**

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# TOC

# GENERAL

These assembly instructions describe the assembly procedure and must be strictly adhered to. Read these installation instructions carefully before starting installation. The basic prerequisite for safe working is compliance with all the safety and handling instructions in these installation instructions. In addition, the local accident prevention regulations and general safety regulations for the area of application of the product apply. Illustrations in these instructions are for basic understanding and may differ from the actual design.

## APPLICABLE DOCUMENTS

In addition to this manual, you have received an AEROTOOL project report, planning documents and drawings. Always comply with the instructions and notes contained therein.

## LIMITATION OF LIABILITY

All information and instructions in these assembly instructions have been compiled taking into account the applicable standards and regulations, the state of the art and our many years of knowledge and experience. Liability provisions are stated in our **terms** and can be accessed at **www.aerocompact.com/downloads**.

## EXPLANATION OF SYMBOLS

### SYMBOLS FOR INSTRUCTIONS


Prerequisites for action instruction


Step by step action instruction


Results of action steps


This note provides useful information for smooth installation

### SYMBOLS IN ILLUSTRATIONS - ACTIVITIES


Optional component,
optional mounting variation


Visual inspection


Activity by hand


Observe right angle


Check AEROTOOL project report or planning documents


Assembly tip

### SYMBOLS IN ILLUSTRATIONS - TOOLS


Measuring tape, measure


Cordless screwdriver, screwdriver


Pencil, mark


Use a torque wrench,
Observe torque


Chalk line


Use Allen key


Scissors, tin snips, cut to size

# SAFETY

The following list serves as an indication of the most common safety risks that can occur when installing these products. There is no liability for the completeness of the risks presented. A specific check of the necessary safety measures must be carried out by an authorized specialist company before installation.

## APPROPRIATE USE

The CompactFLAT flat roof system is designed exclusively for mounting PV modules on flat roofs or similar flat surfaces. Proper use also includes correct installation in accordance with these installation instructions. Installation must be carried out by qualified personnel who are familiar with the installation of photovoltaic systems and strictly in accordance with the installation instructions, planning documents and project report. The building protection mat included in the scope of delivery is matched to the roof surface defined in the project. Due to the large number of different types of waterproofing used in the past and currently available on the market, the responsible planner must ensure compatibility and the static friction coefficient between the building protection mat and the roof structure of the building on which the system design is based. The friction coefficient is determined during the planning process using the Friction Measurement Kit.

## PERSONNEL REQUIREMENTS

Installation may only be carried out by a specialist company and must be carried out strictly in accordance with the installation instructions, the project report and the planning documents. A specialist company is a company that is familiar with the installation and maintenance of photovoltaic systems as part of its normal business operations. National and local building regulations, standards and environmental protection must be complied with. Under no circumstances may the assembly personnel be under the influence of medication, alcohol, drugs or in any other condition that impairs consciousness (e.g. overtiredness). Trainee personnel may only carry out work under the instruction and supervision of specialist personnel who are authorized to train personnel.

## WORKING SAFELY

The contractual partner shall ensure that all relevant safety and labor regulations are complied with during installation. Information from AEROCOMPACT Europe GmbH is supportive, but without guarantee or claim to completeness. The contractual partner is responsible for informing himself about all applicable regulations and implementing them. Areas below the roof must be protected from falling objects and blocked off if necessary. Work must not be carried out in unsuitable weather conditions, strong winds, wet conditions or temperatures below freezing. Only use intact, tested ladders and secure them. Mechanical climbing aids have their own rules and the PV mounting system must not be used as a climbing aid. Maintain a distance from overhead power lines and carry out equipotential bonding in accordance with country-specific regulations. When cutting materials to size, ensure that there are no burrs, especially on edges and corners. Rooflights, skylights and large ventilation flaps do not generally bear the load of people. Secure these areas such as roof edges. Corrugated fiber cement roofs are generally susceptible to breakthrough. Define routes and secure them with load distribution. Always use load distribution aids on non-load-bearing roof coverings (e.g. thin sheet metal, corrugated fiber cement).

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment is used to protect people from health and safety hazards at work. Personnel must wear personal protective equipment during installation. Personal protective equipment is explained below:

**Wear safety goggles when drilling and sawing**

**Wear cut-resistant work gloves during assembly**

**Wear safety shoes**

**Use fall protection**

**Helmets must be worn by all persons working on the construction site**

**Wear hearing protection**

# STRUCTURE OF THE WARNINGS ACCORDING TO HAZARD LEVELS

The warnings used in these installation instructions indicate safety-relevant information. They consist of:

- Signal word and warning sign to indicate the hazard level
- Type and source of danger
- Consequences of ignoring the danger
- Escape (measures to avoid the danger)

### WARNING SIGNS ACCORDING TO EN ISO 7010 - EXAMPLES


General


Hand injury


Risk of slipping


Risk of tripping


Electrical hazard


Cut injury

### SIGNAL WORDS ACCORDING TO EN IEC/IEEE 82079

**Personal injury**
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**Personal injury**
Indicates a potential hazard which, if not avoided, will result in death or serious injury.

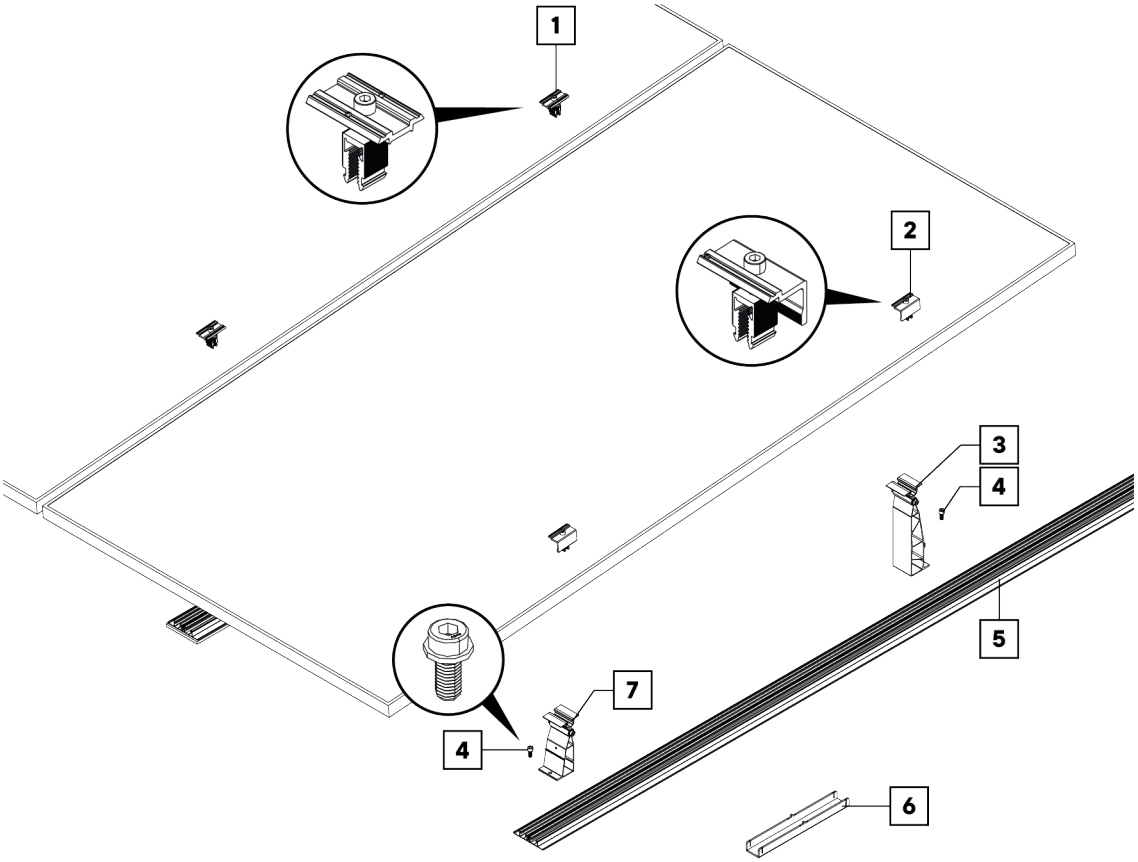
**Personal injury**
Indicates a potential hazard which, if not avoided, will result in death or serious injury.

**Material damage**
Indicates a situation which, if not avoided, may cause damage to the product or other property.


ⓘ The information given here on warning signs covers the minimum requirements. However, there may be additional national, regional or project-specific requirements that must also be fully observed. Compliance with all relevant regulations is essential.

# SYSTEM OVERVIEW SN2 Q PLUS PORTRAIT

**DESIGN: CONNECTED BASE RAILS AND LONG BASE RAIL**




1 **CLM10**
Middle clamp Click 30 - 46 mm

2 **CLE20**
End clamp Click 28 - 42 mm

3 **SNPORB**
SN rear bracket portrait

4 **AB8x18S**
Allen head bolt M8x18 serration

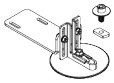
5 **BR1980 | BRW1980**
Base rail 1980 mm | Base rail wide 1980 mm

5 **BR5800**
Base rail 5800 mm

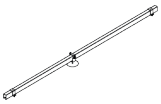
6 **BRCNSN**
Base rail connector SN

7 **SNPOFB**
SN front bracket portrait

# SYSTEM ACCESSORIES

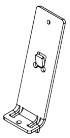


**APA-SN**
Single roof anchor connection for SN2



**DAPA**
Double roof anchor connection with anchor rail 1280 or 2500 mm

**BIT150E**
Bit extension 150 mm



**SNPOWB**
Wind deflector bracket

**Sx10WD-1350**
10° Wind deflector 1350 mm

**SN-SP-2500**
SN2 Mounting gauge for base rails 2500 mm

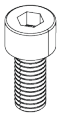
**SN-SP-1980**
SN2 Mounting gauge for front brackets and rear brackets 1980 mm

## BALLASTING ACCESSORIES

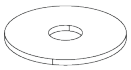
**CSi-1380**
Cross strut inner part 1380 mm

**CSo-1380**
Cross strut outer part 1380 mm

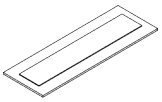
**MSS6x25**
Thin sheet metal screw 6x25



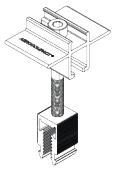
**AB8x18S**
Allen head bolt M8x18 serration



**FW8.4/24**
Washer 8,4x24

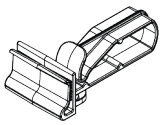


**PP200**
Building protection pad for ballast stones and ballast tray

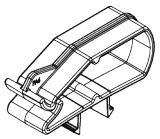


**CLB20**
Ballast clamp for ballast stone height from 40 - 80 mm

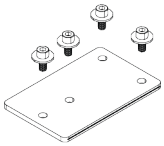
## CABLE MANAGEMENT



**CLP-U**
Cable clip universal



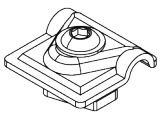
**CLP-R**
Cable clip rail



**SNCP125**
Connecting plate BR125x80

**CLP-M**
Cable tie clip for module frames with a thickness of 1 - 3 mm

## EQUIPOTENTIAL BONDING ACCESSORIES



**WCL8-10**
Wire clamp 8 - 10 mm

# ASSEMBLY

## ASSEMBLY PREPARATION

### Required tools for assembly

ⓘ Before starting the assembly, make sure that the assembly personnel are familiar with the proper use of the listed tools.

**Bit hexagon socket 6 mm**

**Bit TORX T40**

**Measuring tape**

**Chalk line**

**Torque wrench 10 - 30 Nm with hexagon socket bit 6mm**

**Cordless screwdriver**

**Socket bit 8 mm**

## INFORMATION ON MOUNTING ON GRAVEL ROOFS

ⓘ According to the planning documents, the installation of the system takes place either directly on the seal or the protective fleece (coefficient of friction 1.5) or freely on the gravel (coefficient of friction 0.3).

### Install the system on waterproofing or protective fleece

✓ Height of gravel fill: 30 - 60 mm

ⓘ Due to possible damage to the roof waterproofing caused by excessive linear/surface loads, it is not recommended to install the system on a gravel layer of less than **60 mm**.

☐ Carefully remove the gravel in the area of the module field.
☐ Install the system directly on the waterproofing or on the protective fleece.

### Set up the system on the gravel

✓ The height of the gravel bed is 60 – 100 mm and protective fleece (min. 300 g/m²) is available or
✓ the gravel fill is 100 mm or more.

☐ Place the system on the gravel.

# WIDE BASE RAILS

ⓘ The wide base rail is suitable for optimum **load distribution** with soft roof insulation.

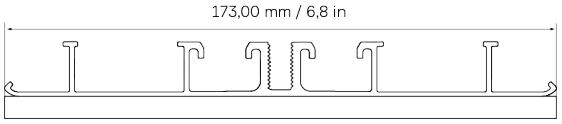
**VARIANTS**

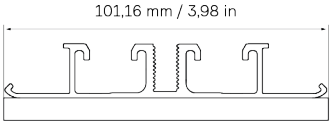
**BRW450**
Base rail wide 450 mm

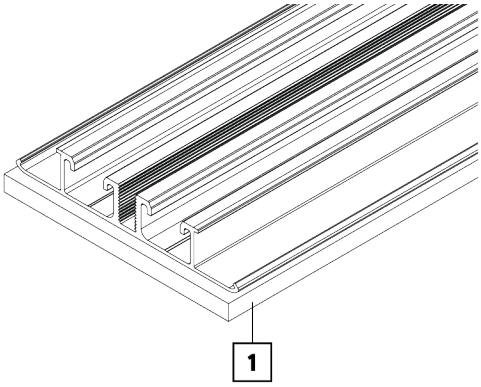
**BRW1980**
Base rail wide 1980 mm

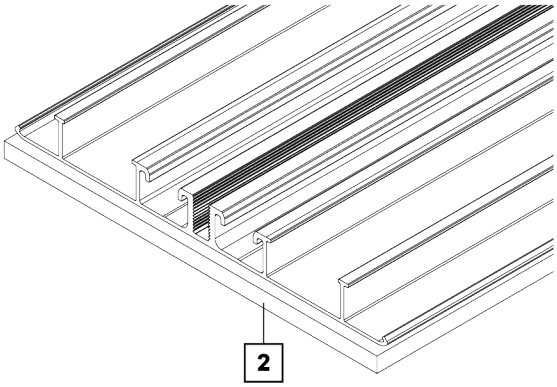
**DIMENSION**

ⓘ The wide base rail is available in lengths of **450 mm** and **1980 mm**.



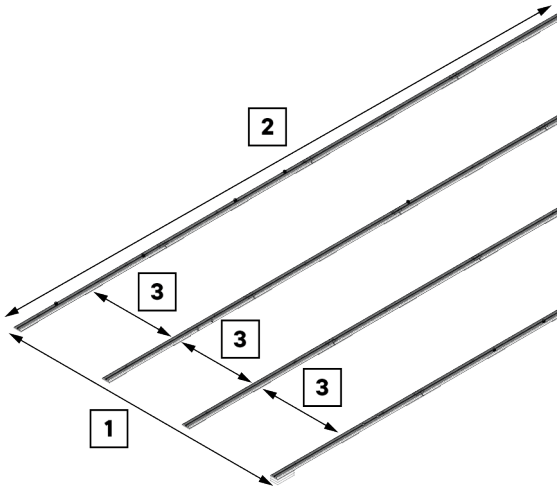

ⓘ **Info:**
The installation sequence in these instructions is identical for the standard base rail (1) and the wide base rail (2). The SN2 components are compatible with both base rails*.

*The single roof anchor connection is not compatible with the wide base rail.

# MEASURE AREA

ⓘ This step is not necessary if the system is planned with the "**pre-assembly**" option.

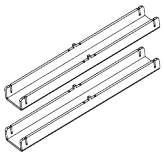
- ☑ Take over the dimensions of the module field from the planning documents.
- ☑ Measure the length (1) and width (2) of the entire module field and mark the line.
- ☑ Determine the distance between the module rows (3): **Module length + 2 cm**.
- ☑ Measure the distance (3) and mark lines.



# BASE RAIL CONNECTOR

ⓘ Two base rails are connected using the base rail connectors. Due to thermal expansion, it is essential to install the base rail connectors in **a floating position**.

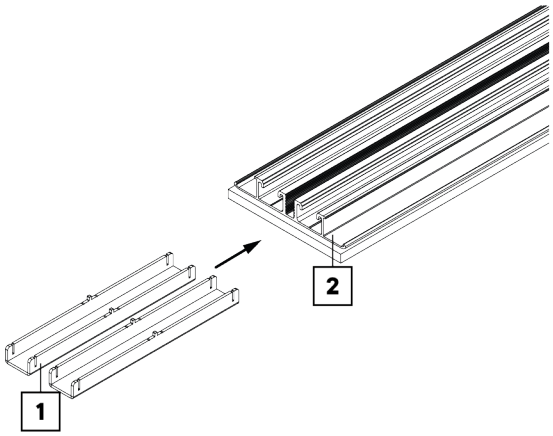
**REQUIRED COMPONENTS**



**BRCNSN**
Base rail connector SN

**ASSEMBLY**

☐ Insert the two base rail connectors (1) at the base rail (2).

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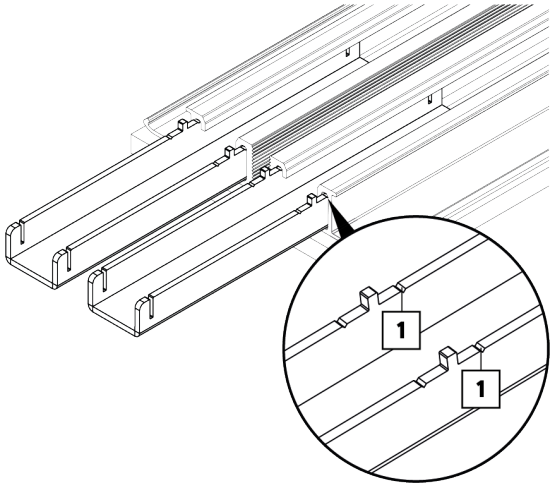
ⓘ The base rail connector has a notch (1) on both sides. This marks how far the connector must be pushed in.

☐ Insert the base rail connectors up to the notch (1).

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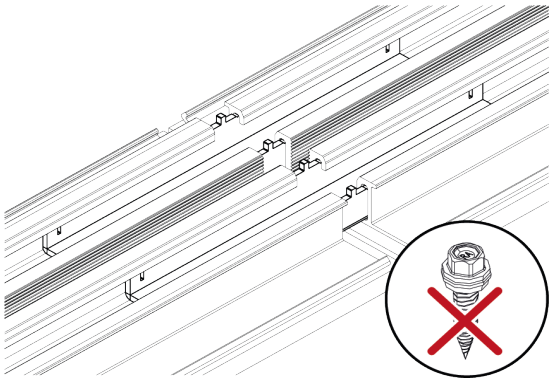
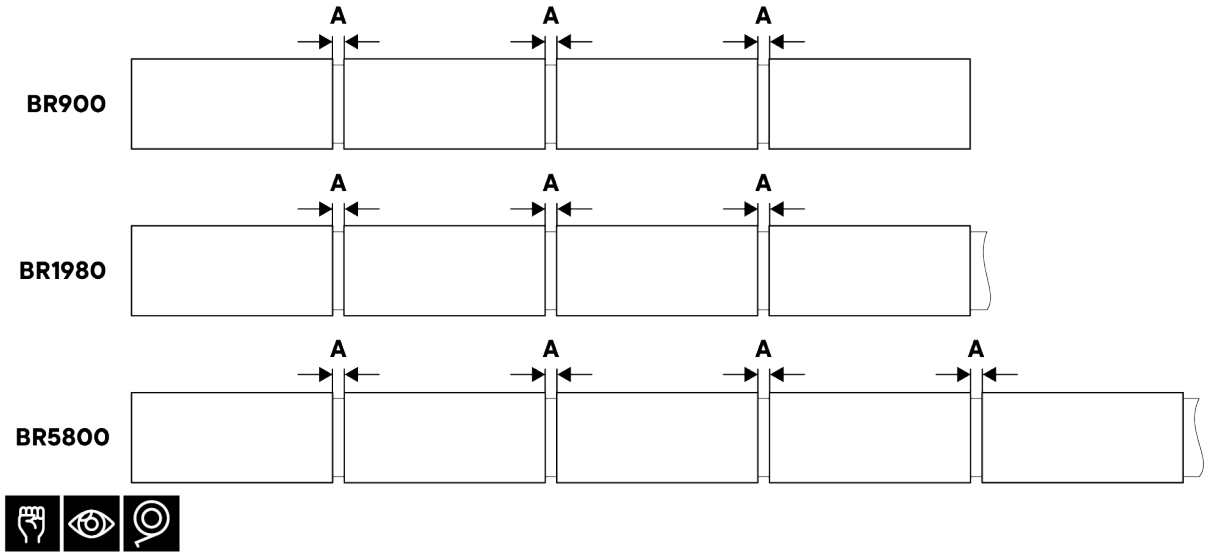
ⓘ The base rail connectors must **not** be screwed together!



# ATTACH ADDITIONAL STRUCTURAL PROTECTION PADS (OPTIONAL)

ⓘ Taking into account the structural conditions, it is necessary to improve the bearing surface of the system. For this purpose, additional structural protection mats are installed, the number of which must be taken from the planning documents. The possibility of pre-assembly of the building protection pads exists.




☐ It is important to ensure that the distance (A) between the construction protection mats is always even, and that the area to be covered with the base rail is dry and free of grease, dust or other contamination.

☐ The number of structural protection mats is defined by the length of the base rails:

| | |
|---|---|
| **BR900** | Two additional protection pads per rail |
| **BR1980** | Two additional protection pads each between the existing protection pads. |
| **BR5800** | Two additional protection pads each between the existing building protection mats |

## Attach construction protection mats to cut-to-size base rails

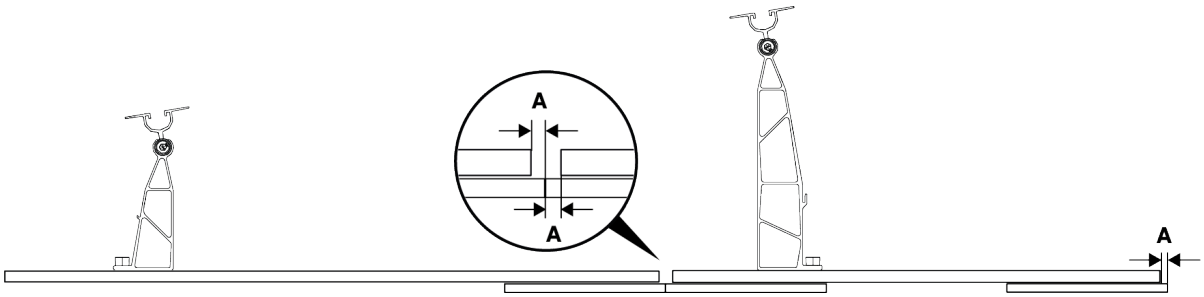
ⓘ The base rails (BR5800) can be cut/separated for the following reasons: firstly, for thermal separation according to the planning documents; secondly, if the base rails protrude beyond the module field. To secure the roof cladding, structural protection pads are placed underneath the base rails at the separation points. If a construction protection pad is already present at a separation point, it is removed.

**DANGER**

**Danger from cuts**

**Skin contact with sharp edges can cause cuts.**

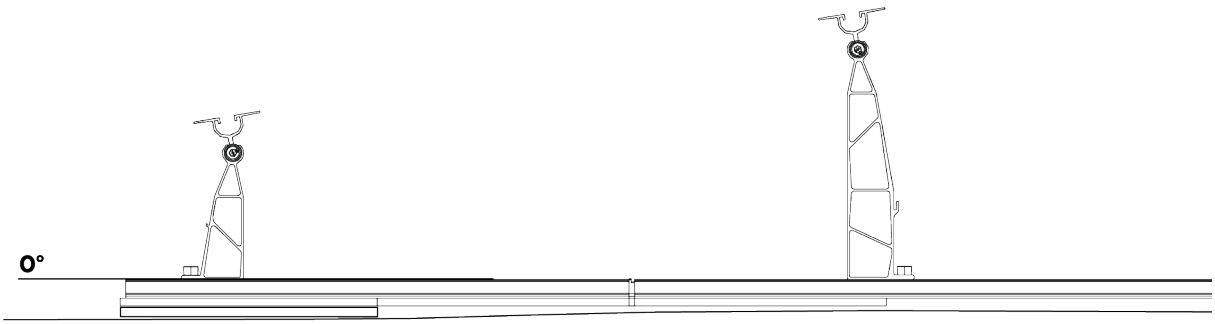
☒ **Wear safety gloves**
☒ **Handle with care**




☒ It is necessary to place construction protection pads at the ends of the base rails. The overhang of the building protection pads is **A = 6 mm** in each case.

## Protection pads for level compensation

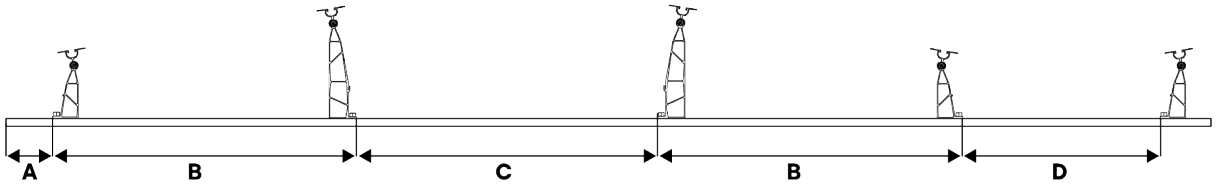
ⓘ In case of unevenness, additional building protection mats can be placed underneath for level compensation.




☒ Place the required protection pads under the base rail until an angle of **0°** is achieved.

# MOUNT BRACKETS

## Positioning




The dimensions **A, B, C** and **D** can be found in the corresponding planning documents.

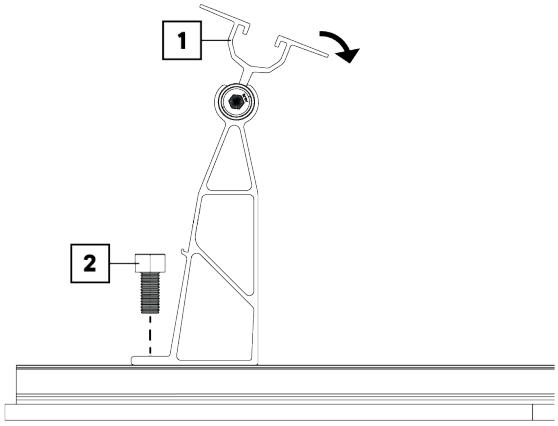
**An assembly gauge is available as an optional accessory for positioning the front bracket and rear bracket. The instructions can be found on our website at www.aerocompact.com/downloads.**

## Assembly

Tilt the rocker (1) of the bracket backwards

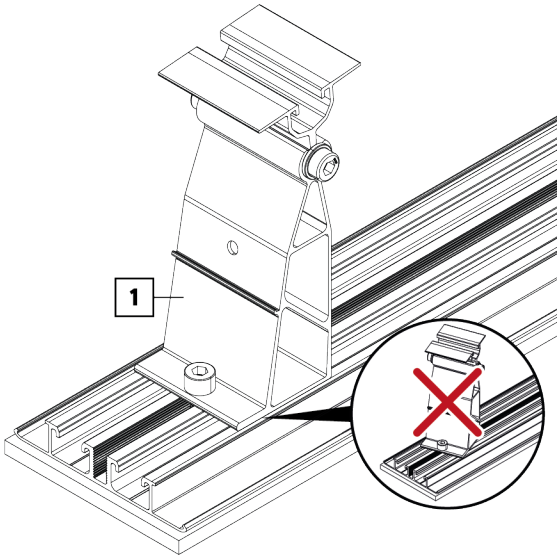
Then tighten the screw (2) with a torque of 10 Nm or 7.37 lb-ft.

**Important!**
Never use an impact or impulse wrench when installing the components. The use of a bit extension is recommended for fastening the bracket.

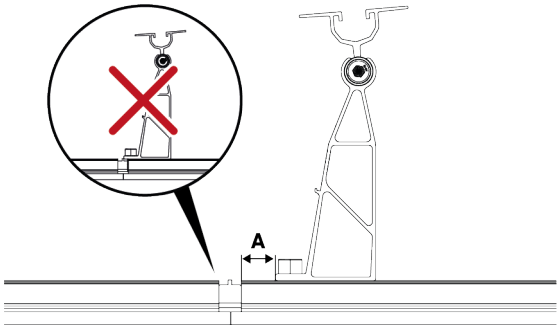


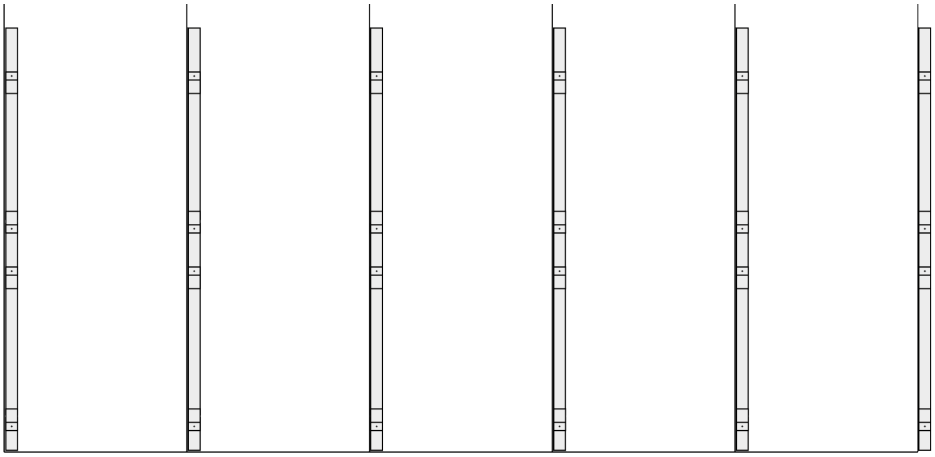

Make sure that the bracket (1) is screwed parallel to the base rail.

Assemble the other front bracket and rear bracket according to the **same sequence**.



For connected base rails, make sure that the bracket are not screwed in the joint area between two base rails. A distance of at least **20 mm (A)** must be maintained from the joint area.



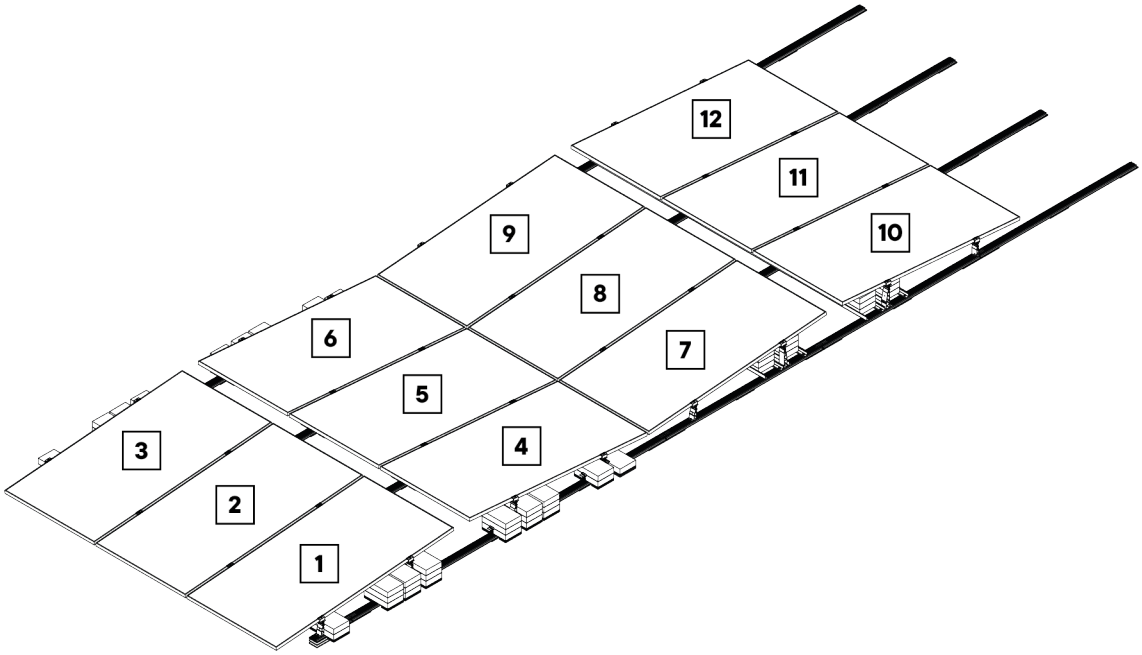



Then align the pre-assembled base rails to the marked positions.

# INSTALLING THE MODULES

## Assembly sequence of the modules

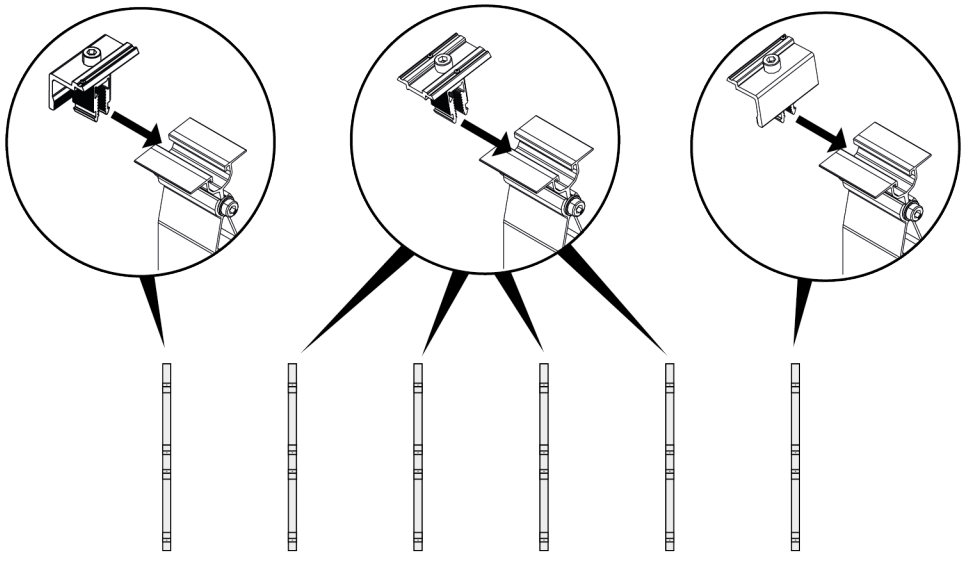
ⓘ The following illustration is an example and may show a different number of modules and ballast trays depending on the project. The module assembly sequence remains constant.



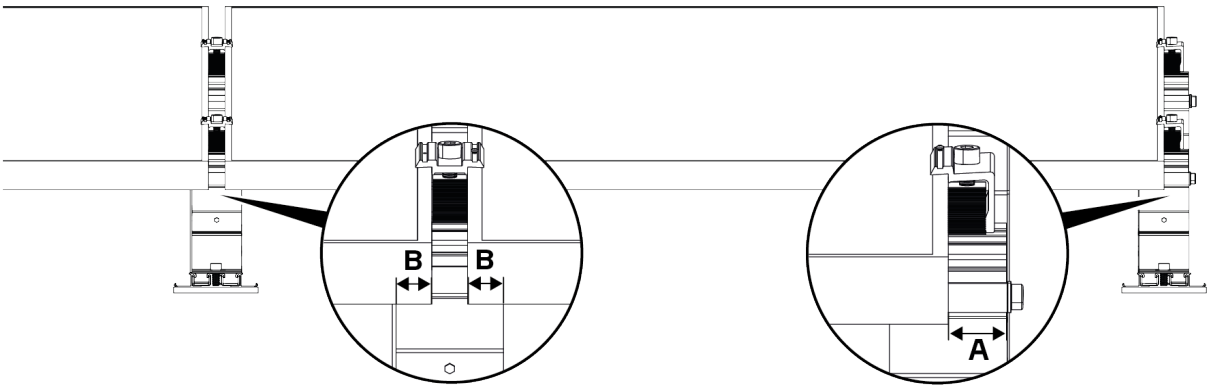

☐ The modules must be installed in ascending order from **1** to **12**.

## Attach clamps

ⓘ When preparing the end and middle clamps, please note that the **end clamps** must be fitted at the edge of the module field and the **middle clamps** must be fitted inside the module field.

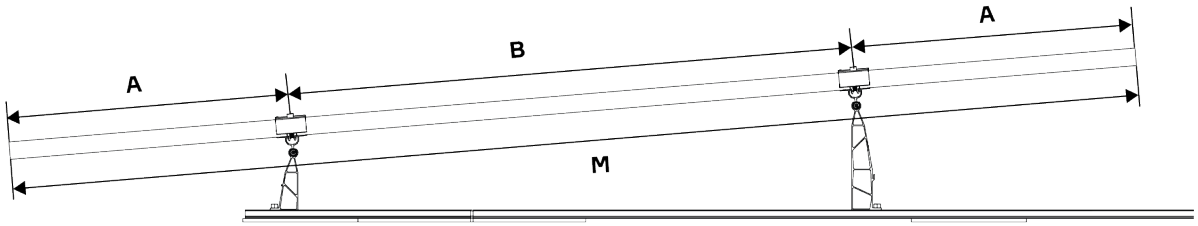


## Position Module




- In the case of the middle clamps, the lateral support surface is **20 mm (B) each.**
- At the module field edge, the distance between the module and the outer edge of the bracket is **40 mm (A)**

## Vertical position of the modules

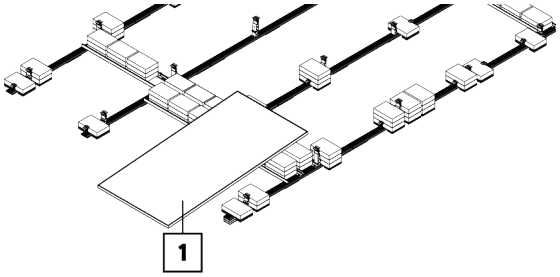



- Position the module vertically:

  **A** = according to the manufacturer's clamping position, if permissible **1/4 of the length** of the module M

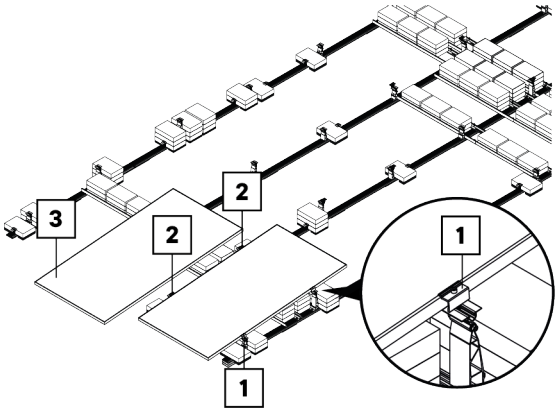
  **B** = according to the manufacturer's clamping position, if permissible **1/2 of the length** of the module M

# Assemble first module row



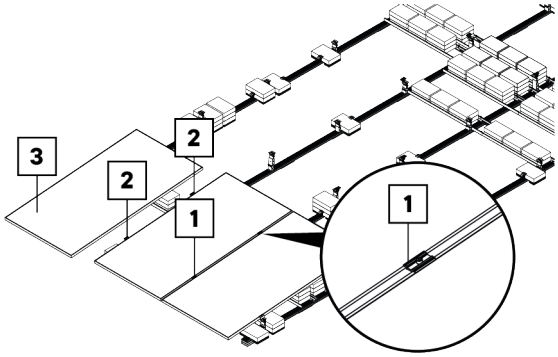

- Position the module (1) on the front and rear brackets.

---




- Position the end clamps (1) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the middle clamps (2) flush with the module.
- Position the following module (3) on the front brackets and rear brackets.

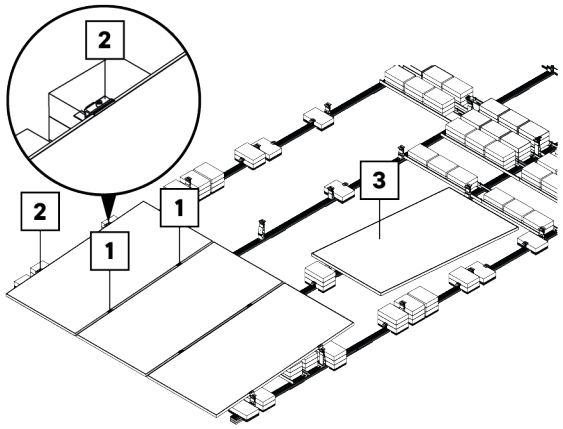
---



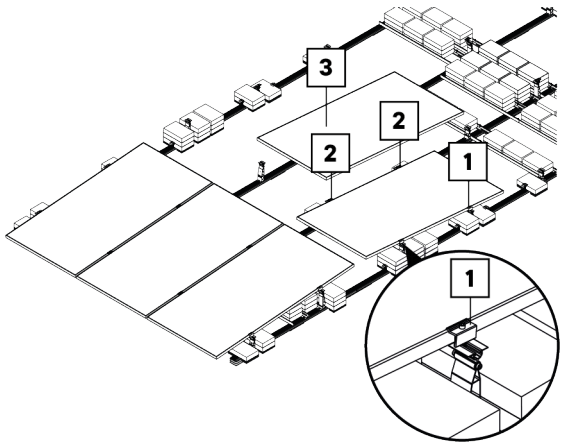

- Position the middle clamps (1) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the middle clamps (2) flush with the module.
- Position the following module (3) on the front brackets and rear brackets.

# Assemble second module row

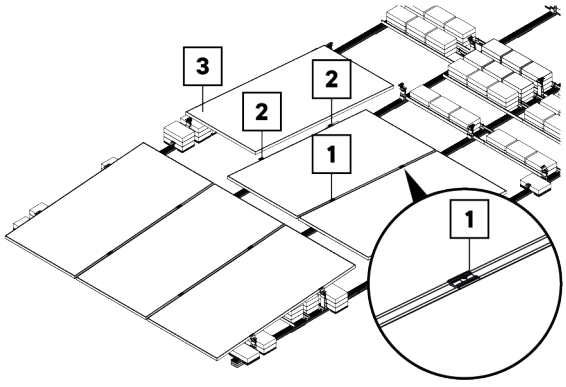
- Position the middle clamps (1) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the end clamps (2) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the following module (3) on the front brackets and rear brackets.




- Position the end clamps (1) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the middle clamps (2) flush with the module.
- Position the following module (3) on the front brackets and rear brackets.




- Position the middle clamps (1) flush with the module and then tighten to a torque of 15 Nm or 11 lb-ft.
- Position the middle clamps (2) flush with the module.
- Position the following module (3) on the front brackets and rear brackets.



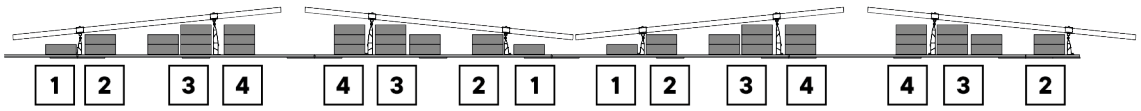

ⓘ Install the other module rows in the **same sequence**.

# BALLASTING

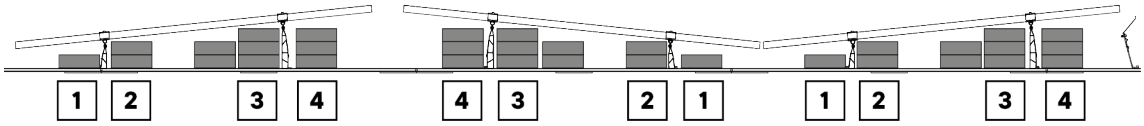
### POSITIONING BALLAST

ⓘ The system is ballasted differently depending on the circumstances. The exact number and position of the ballastings are specified in the planning documents.

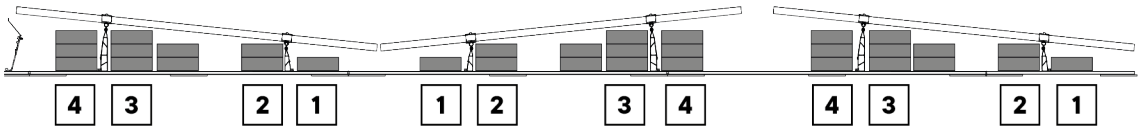
### STANDARD




### CLOSED START




### OPEN START

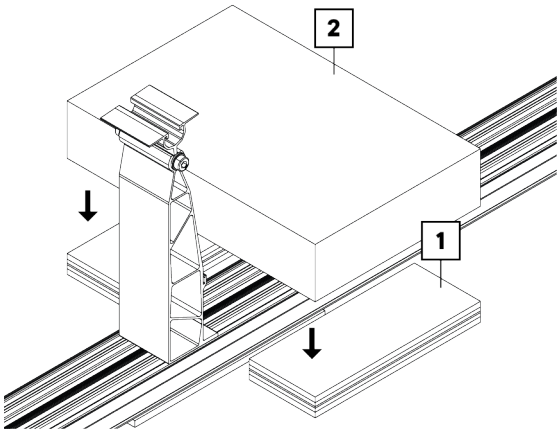



The ballast can be placed at the following positions:

(**1**) in front of the module (east / west side)
(**2**) under the module (module eave side)
(**3**) under the module (module ridge side)
(**4**) between the module rows

---

### PLACE BALLAST BLOCK




☐ Place the building protection pads (1) to the left and right of the base rail.

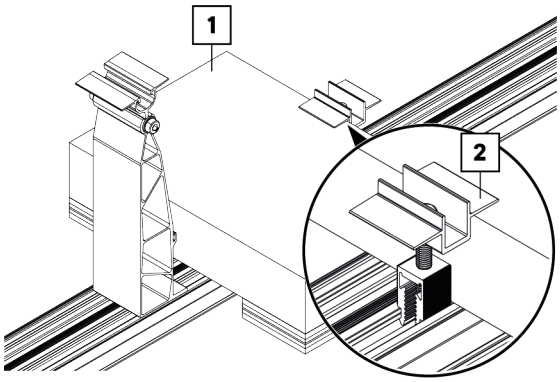
ⓘ The **number** of building protection pads is to be determined accordingly in order to reach the level of the base rail (upper edge).

☐ Then place the ballast block (2) on top.

### MOUNT THE BALLAST CLAMP

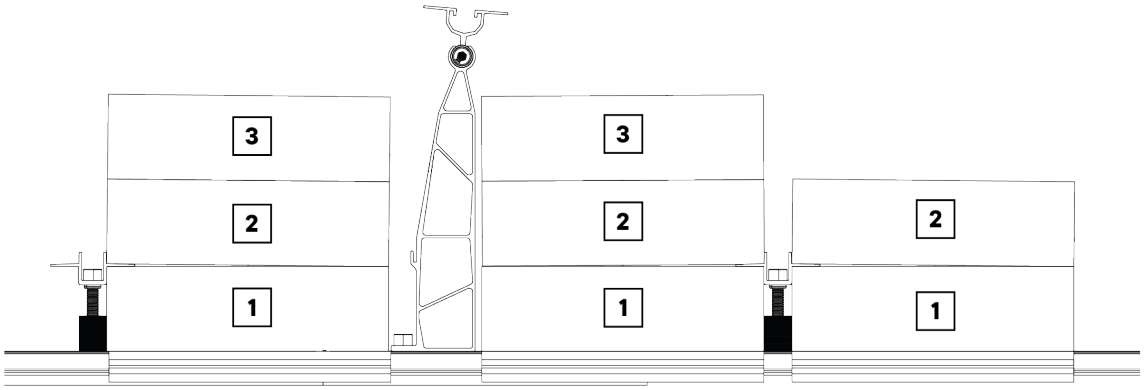
ⓘ With the ballast clamp the ballast blocks can be attached to the base rail.

- ☒ Guide the ballast clamp (2) to the ballast block (1) and click it into one of the two channels of the base rail.
- ☒ Then tighten the ballast clamp (2) so that the wings of the clamp are flush with the ballast block (1).




### ASSEMBLE SECOND AND THIRD ROW BALLAST BLOCKS

ⓘ The ballast clamp can be used to attach up to **two** ballast blocks. It is possible to arrange several ballast blocks on top of each other. From the **third layer** onwards, secure fastening is the responsibility of the **specialist personnel**.




- ☒ Place the second row (2) and third row (3) ballast blocks.

ⓘ **Attention:**
Make sure that the ballast blocks rest on each other over their entire surface.

# CROSS STRUTS

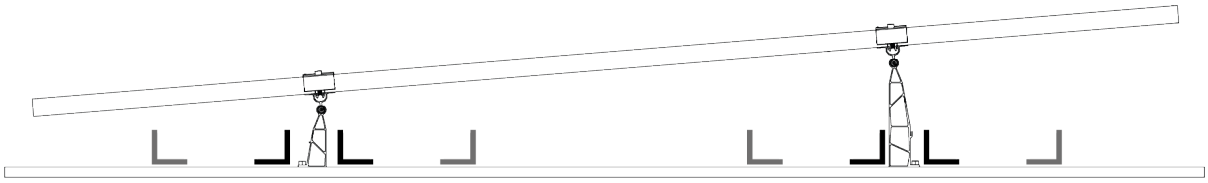
Depending on the planning variant for **connecting the base rails, the** cross struts will be **fixed** with the option pre-assembled, **bond** and ballast. The position and number of cross struts in the module field can be seen in the planning documents.

## Positioning of the cross struts

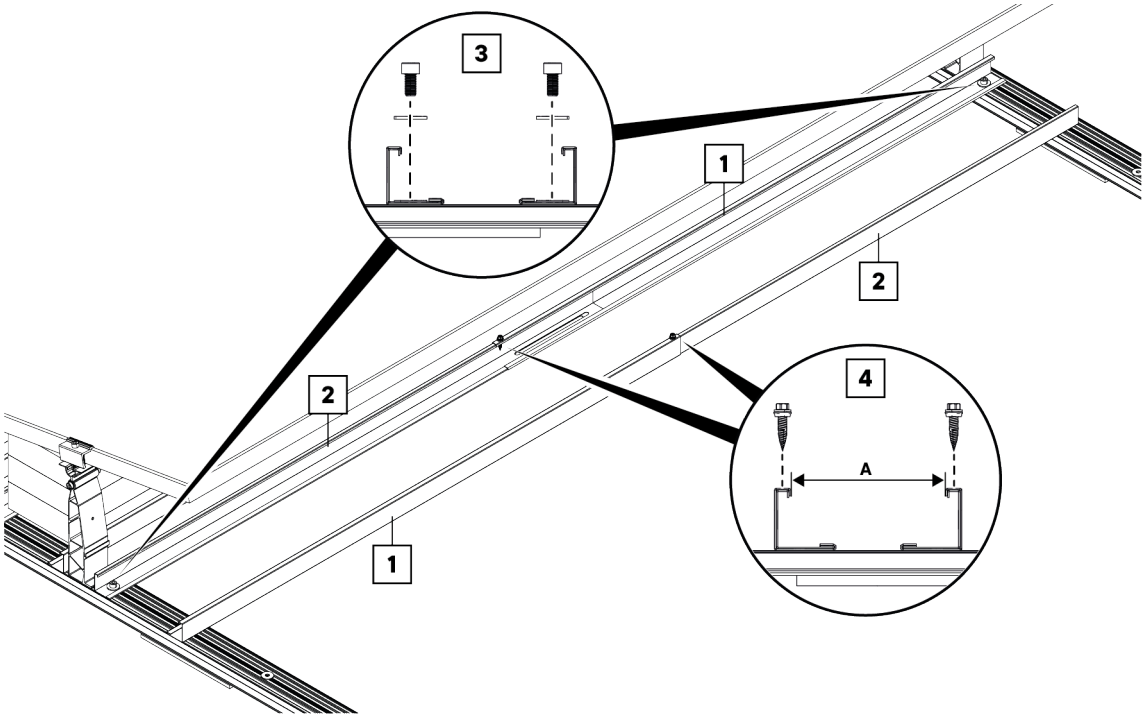
The arrangement and quantity of the cross struts in the module field can be seen in the planning documents.

Cross struts is used to fix ballast

Cross strut is used for joining, connecting the base rails as well as bonding purposes and/or fixing the ballast



## Mount cross struts



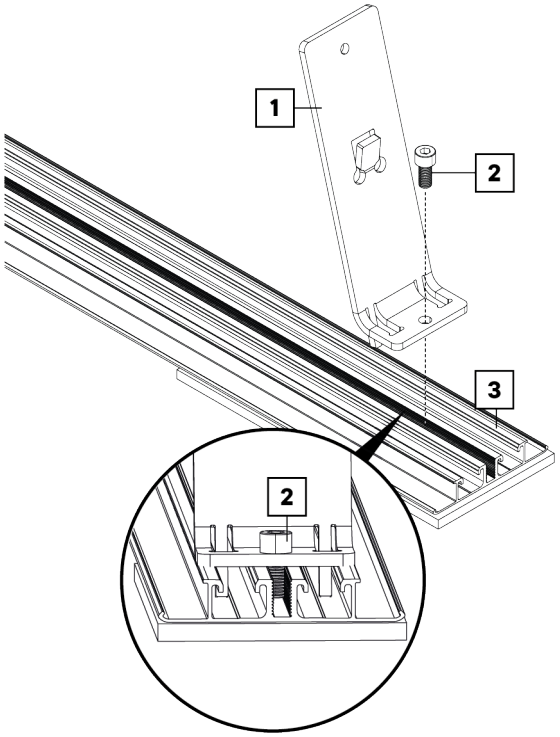

- Use the outer part (1) and inner part (2) of the cross struts alternately and push them into each other.
- Position the cross struts on the outer edge of the module flush with the base rail.
- The distance between the cross struts (A) must correspond to the width of the ballast stones.
- In the overlapping area (4), fasten the cross struts with thin metal sheet screws. The sealing washer must be compressed **by approx. 30%**.
- For the base rails, attach the cross struts with Allen screws (AB8x18S) and washer.
- Then tighten the screws (3) with a torque of 10 Nm or 7.3 lb-ft.

# MOUNT WIND DEFLECTOR

**Attention:**
Do not leave the construction site until the wind deflectors have been fully installed to prevent potential personal injury

and damage to property. All the cabling work must be completed before the wind deflectors are fitted.

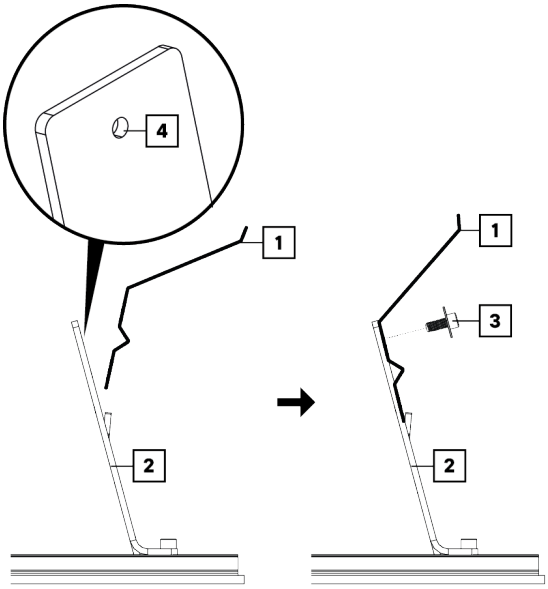
- Place the wind deflector bracket (1) against the rail (3).
- Then tighten the screw (2) with a torque of 15 Nm or 11 lb-ft.



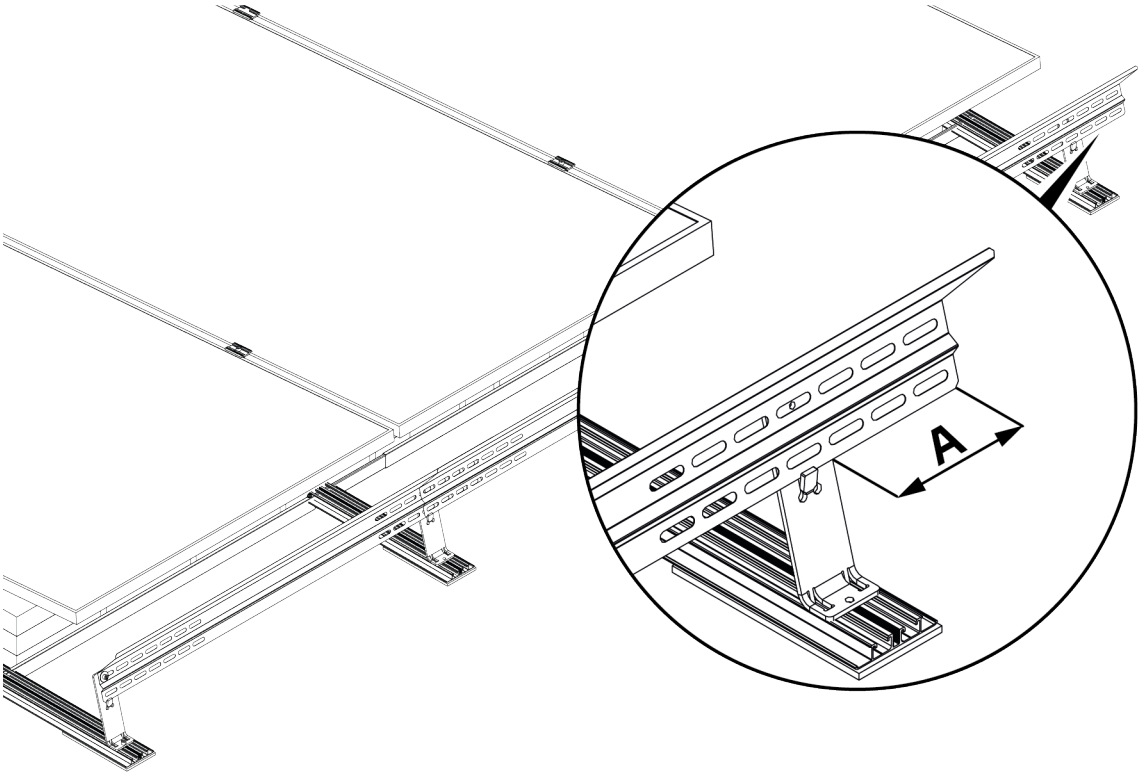

- Hook the wind deflector (1) onto the wind deflector holder (2).

The wind deflector bracket (2) has a hole (4) which is used to attach the wind deflector.

- Screw the wind deflector (1) to the wind deflector bracket (2).
- Tighten the screws with a torque of 10 Nm or 7.3 lb-ft.



**PROTRUSION WIND DEFLECTOR**




- Position the wind deflectors so that they overlap at the fixing points.
- The projection at the edge of the module field must not exceed **200 mm** (A).
- If the projection exceeds **200 mm** (A), the wind deflector must be cut to size.

# INSTALL SINGLE ROOF ANCHOR CONNECTION (OPTIONAL)

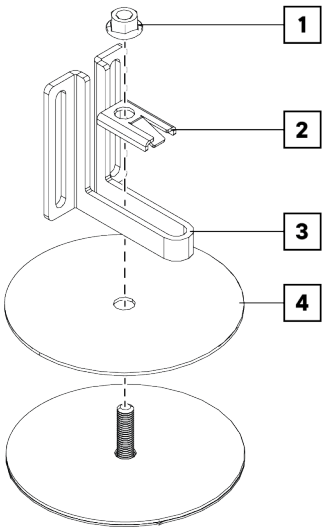
ⓘ The roof anchors are not included in the scope of delivery and must be provided by the customer. The roof anchor must be fitted with an **M10** or **M12 threaded rod** or a screw with the same diameter.

### CONNECT SYSTEM WITH SINGLE ROOF ANCHOR

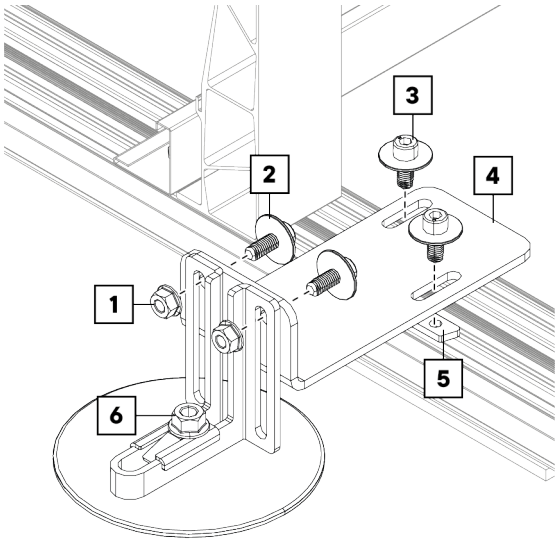
ⓘ The single roof anchor is intended for attachment to base rails. The use of the single roof anchor is particularly recommended for short base rails.

ⓘ The nut (1) is not included in the scope of delivery and must be provided by the customer.

- Attach the washer (4), bracket (3) and spacer (2) to the on-site threaded rod of the anchor.
- Make sure that the tab of the spacer (2) faces outwards.
- Fit the nut (1) - **2 to 3 threads, do not tighten.**




- To attach to the base rails, fit a sliding nut (5) in each channel next to the screw channel.
- Loosely fasten the bracket (4) to the bracket using two combination screws (2) and nuts (1).
- Fasten the bracket (4) to the base rail using the combination screws (3).
- Tighten all combination screws to a torque of 15 Nm or 11 lb-ft.
- Then tighten the nut (6) to a torque of 15 Nm or 11 lb-ft.

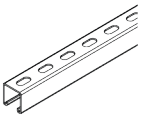


# MOUNT THE DOUBLE ROOF ANCHOR CONNECTION (OPTIONAL)

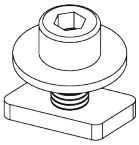
ⓘ The roof anchors are not included in the scope of delivery and must be provided by the customer. The roof anchor must be fitted with an **M10** or **M12 threaded rod** or a screw with the same diameter.

## Flat variant

**REQUIRED COMPONENTS**

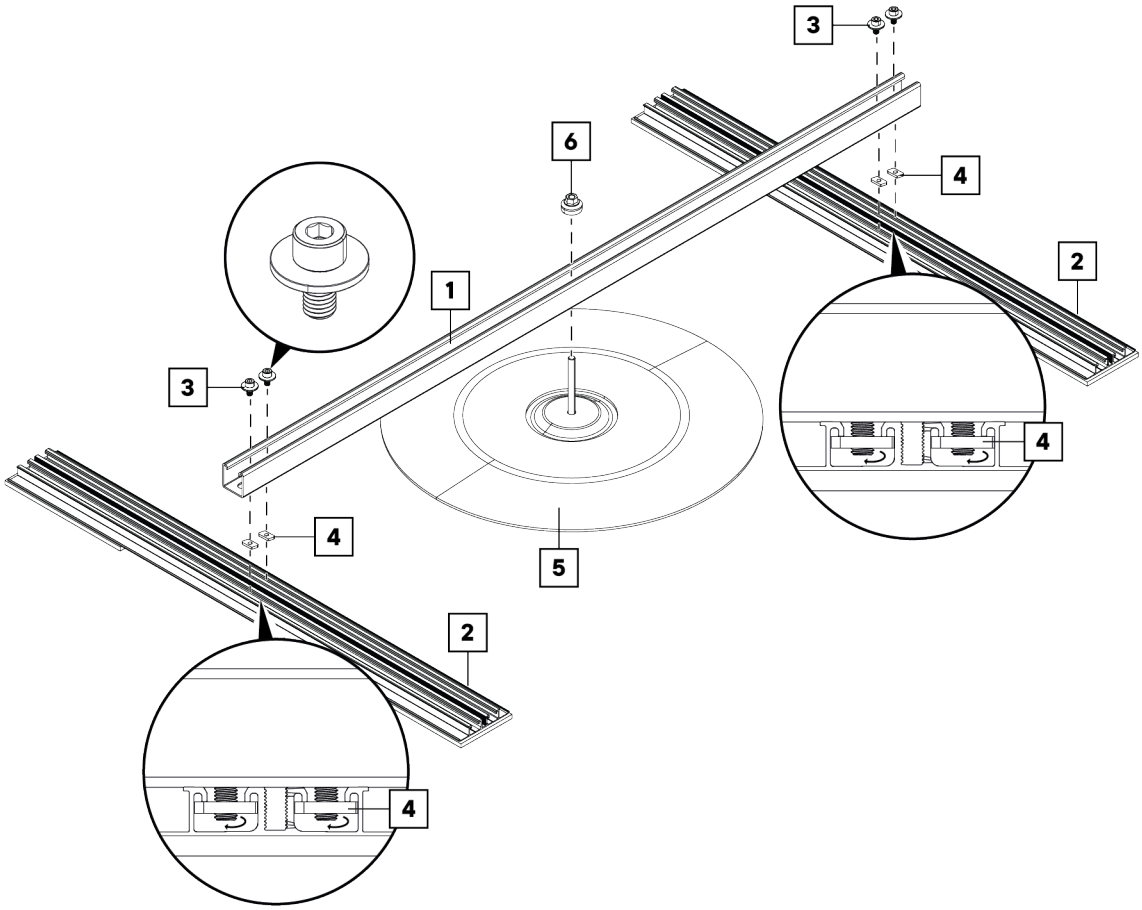


**AR1352 | AR1652 | AR2552**
Rail for anchor attachment in the lengths 1352 mm, 1652 mm, 2552 mm



**SCR-GA**
Bolting set module accessories

**ASSEMBLY**

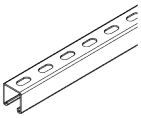



- ☐ Place the anchor rail (1) on the base rails (2) as shown in the illustration and insert it into a suitable slot in the roof anchor (5).
- ☐ Fasten the anchor rail (1) to both base rails using two screws (3) and threaded plates (4).
- ☐ Then tighten the screw (3) with a torque of 15 Nm or 11 lb-ft.
- ☐ Observe the torques specified by the manufacturer when fastening the roof anchor (5).

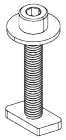
ⓘ **Caution!**
The roof anchor (5) and the corresponding nut (6) are not included in the scope of delivery.

# Upright variant

**REQUIRED COMPONENTS**

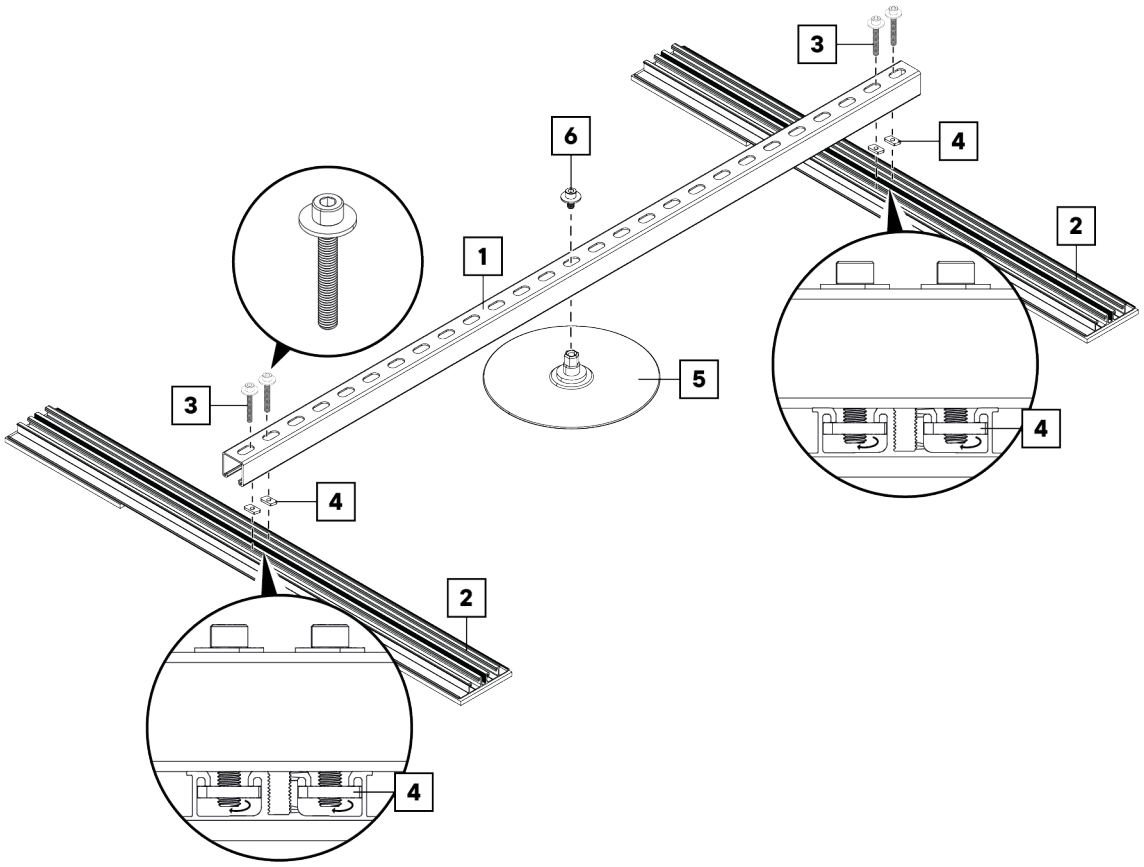


**AR1352 | AR1652 | AR2552**
Rail for anchor attachment in the lengths 1352 mm, 1652 mm, 2552 mm



**SCR-DA**
Bolting set for anchor channel AR1352 | AR1652 | AR2552

**ASSEMBLY**



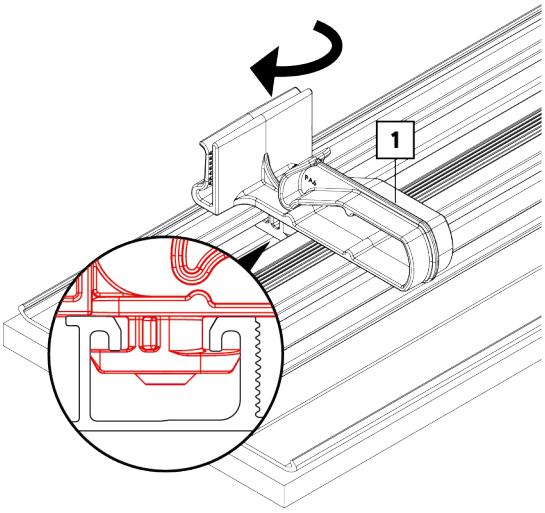

- Place the anchor rail (1) on the base rails (2) as shown in the illustration and insert it into a suitable slot in the roof anchor (5).
- Fasten the anchor rail (1) to both base rails using two screws (3) and threaded plates (4).
- Then tighten the screw (3) with a torque of 15 Nm or 11 lb-ft.
- Observe the torques specified by the manufacturer when fastening the roof anchor (5).

**Caution!**
The roof anchor (5) and the corresponding nut (6) are not included in the scope of delivery.

# SN2 CABLE MANAGEMENT

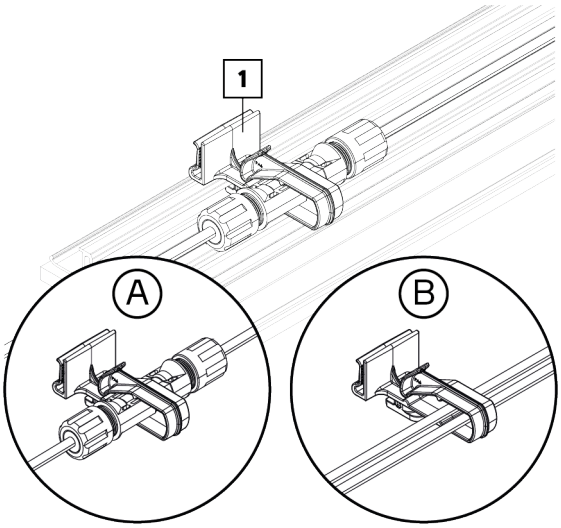
**MOUNT THE CLP-U CABLE CLIP TO THE BASE RAIL**

- Insert the cable clip (1) into the base rail from above.
- Rotate the cable clip by 90°.



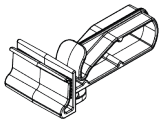

**Attention:**
Make sure that the cable clip is fully engaged in the rail channel.

- The CLP-U (1) is suitable for:
  **A** - Solar connectors (e.g. MC4)
  **B** - Solar wire



### CABLE CLIP CLP-U FOR MODULES

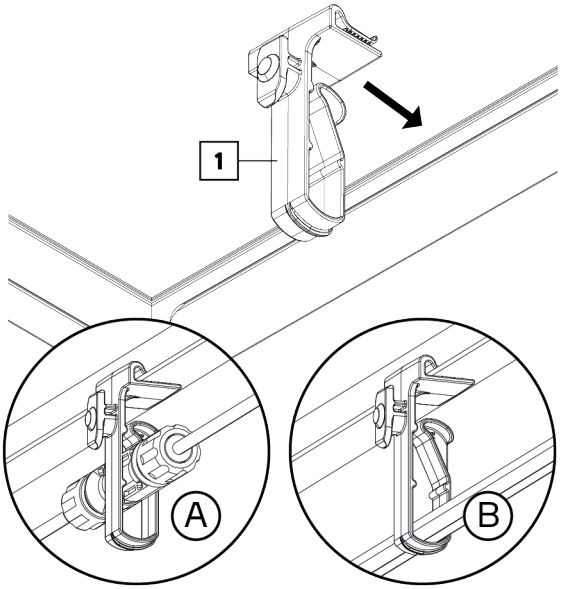
ⓘ The **CLP-U cable clip** is suitable for module frames with a sheet thickness of **1.5 - 3 mm.**



**CLP-U**
Cable clip universal

### ASSEMBLY

- Insert the CLP-U (1) into the module frame.
- The CLP-U is suitable for:
  **A** - Solar connectors (e.g. MC4)
  **B** - Solar wire



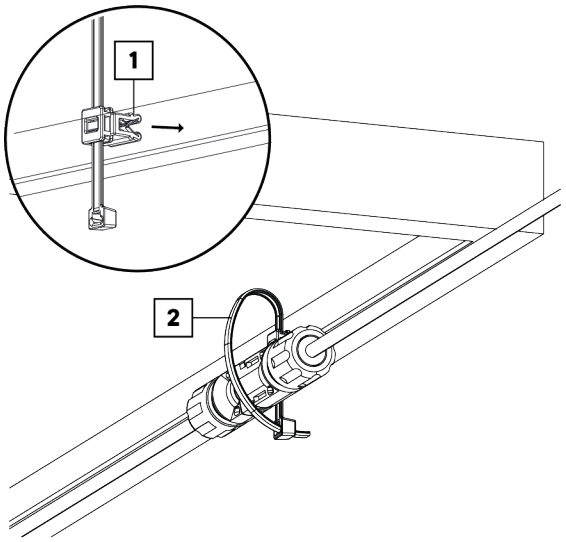

### CABLE CLIP CLP-M FOR MODULES

ⓘ The **CLP-M cable clip** is suitable for module frames with a sheet thickness of **1 - 3 mm.**

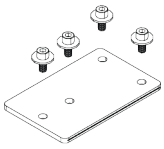
**CLP-M**
Cable tie clip for module frames with a thickness of 1 - 3 mm

### ASSEMBLY

- Insert the CLP-M (1) into the module frame.
- The CLP-U is suitable for:
  - Solar plug (e.g. MC4)
  - Solar cable
- Then tighten the cable tie (2).

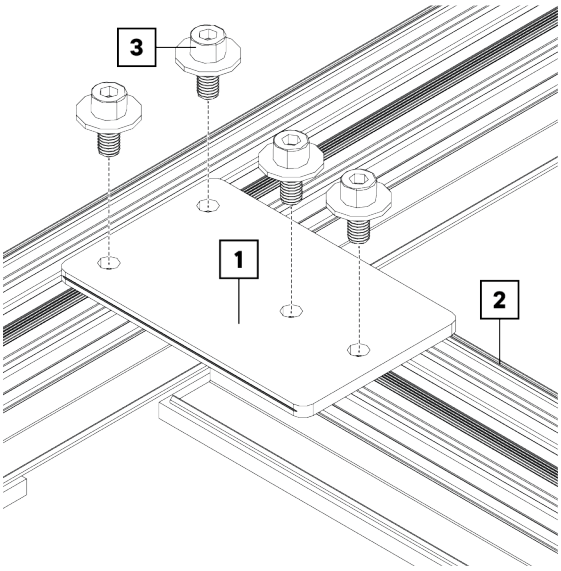


## FITTING THE SNCP125 CONNECTING PLATE FOR BASE RAILS



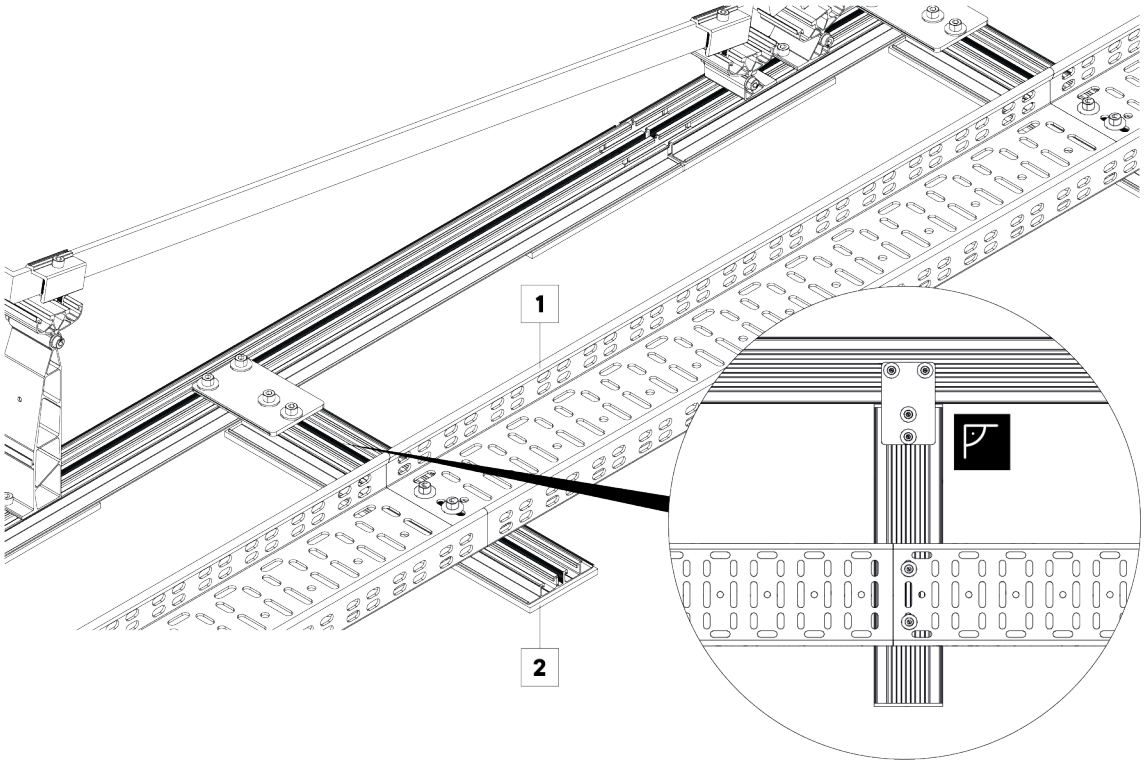
**SNCP125**
Connecting plate BR125x80

- Position the base rail (2) rotated by 90° (front side) as shown in the illustration.
- Place the connecting plate (1) in position and then screw tight with 4 pcs. M8x18 screws (3).
- The tightening torque of the screws (3) is 15 Nm or 11 lb-ft.



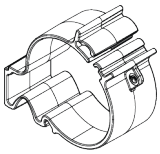

4 pcs. **M8x18 mm** screws (1) are used to fasten the connecting plate. **Important** - The screws for the cable tray must be organized by the customer.

## INSTALLING THE CABLE TRAY




The cable tray (1) and the fastening material must be organized by the customer, which means that the ballasting must also be planned by the customer; **no** ballasting specifications are provided in the planning documents from AEROCOMPACT Europe GmbH. The base rail (2) is included in the scope of delivery and is available in lengths of **450 mm** or **900 mm**.

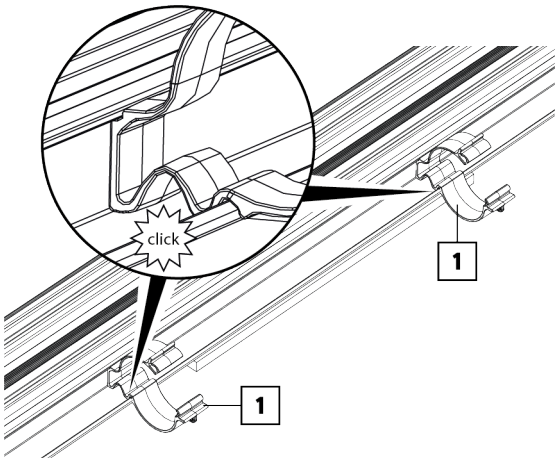
### FITTING THE SNCLP-R CABLE CLIP



**SNCLP-R**
Cable clip SN2 rail

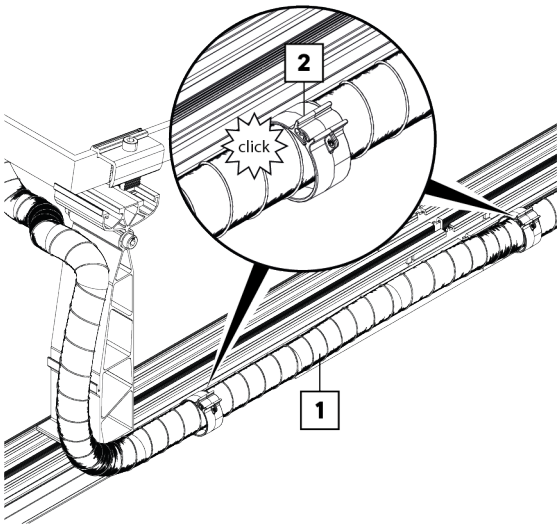
### CLICK IN SNCLP-R

☐ Click in the SNCLP-R (1).



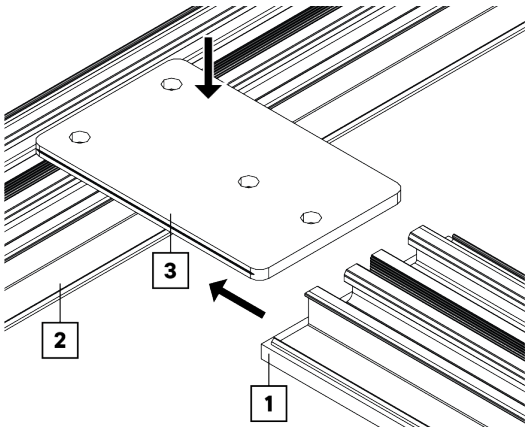

### ATTACH CABLE PIPE

☐ Place the cable pipe (1) on the cable clips (2).
☐ Then engage the cable clip lock (2).

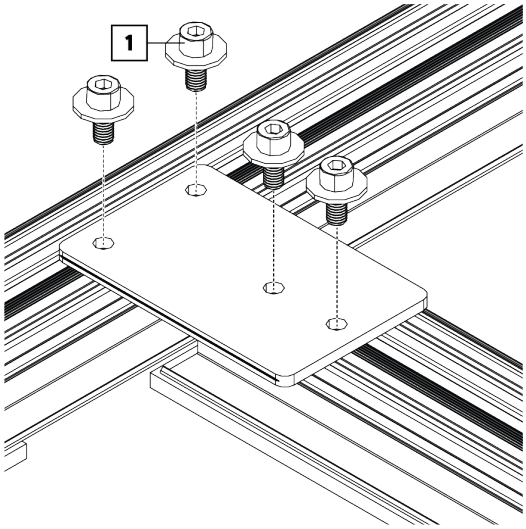


**CONNECTING PLATE SNCP125 FOR BASE RAILS**

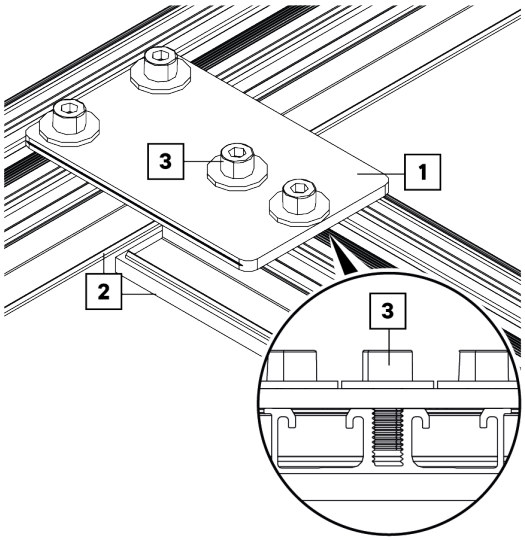
- The assembled base rail (1) must be rotated by 90° and placed against the base rail (2).
- Place the connecting plate (3) in the connection as shown in the illustration.

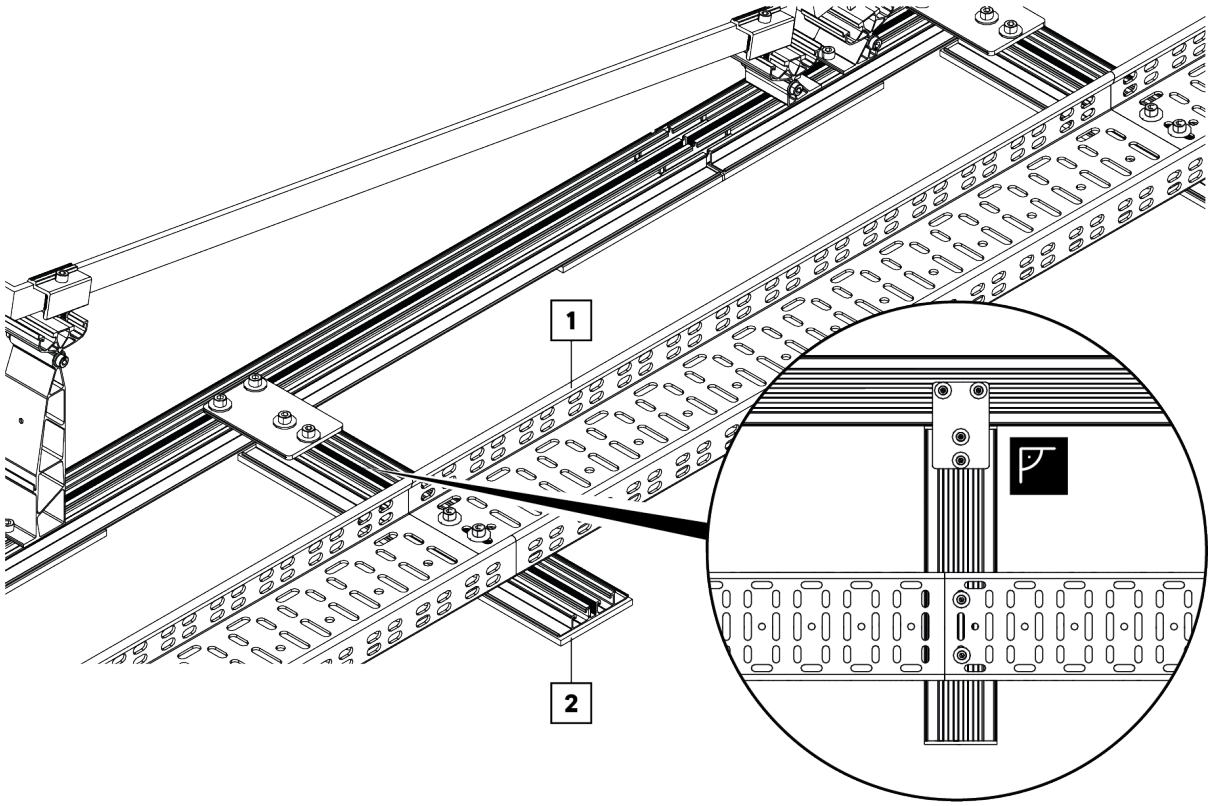



- 4 pcs **M8x18 mm** screws (1) are used to fasten the connecting plate. **Important** - The screws for the cable tray must be organized by the customer.



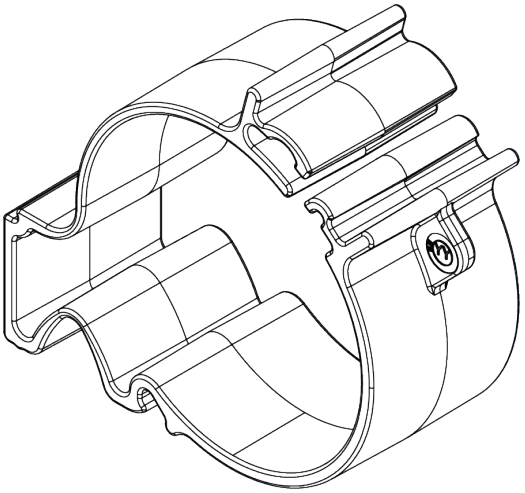

- Fasten the connecting plate (1) to both base rails (2) with the screws (3). It is important to note that the screws (3) are screwed into the center channel of the base rails (2).
- The tightening torque of the screws (3) is 15 Nm or 11 ft lb.






ⓘ The cable route (1) and the fastening material must be organized by the customer, consequently the ballasting must also be planned by the customer, for this **no** ballasting specifications are issued from the planning documents of AEROCOMPACT Europe GmbH. The base rail (2) is included in the scope of delivery and is available in the lengths **450 mm** or **900 mm**.

**CABLE CLIP SNCLP-R FOR BASE RAILS**



ⓘ The cable clip is designed for laying flexible and rigid cable conduits along the SN2 base rail. The cable conduits must be organized by the customer and be suitable for the intended use.

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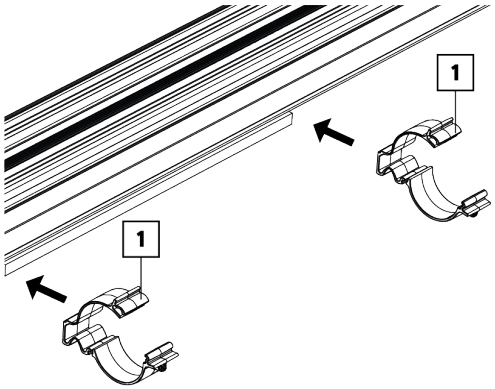


☐ Guide the cable clips (1) to the side of the base rail.

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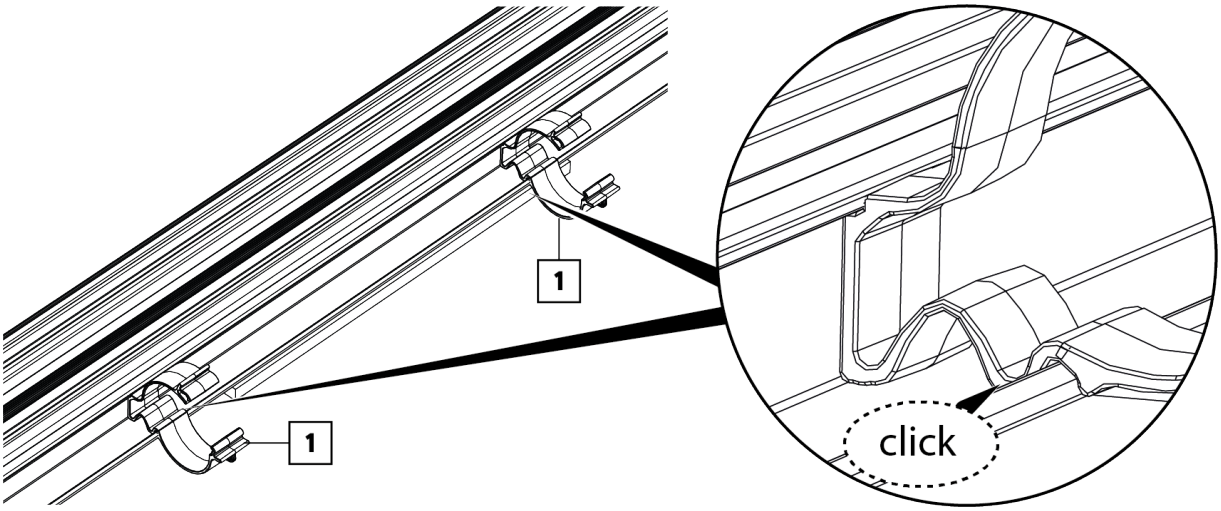
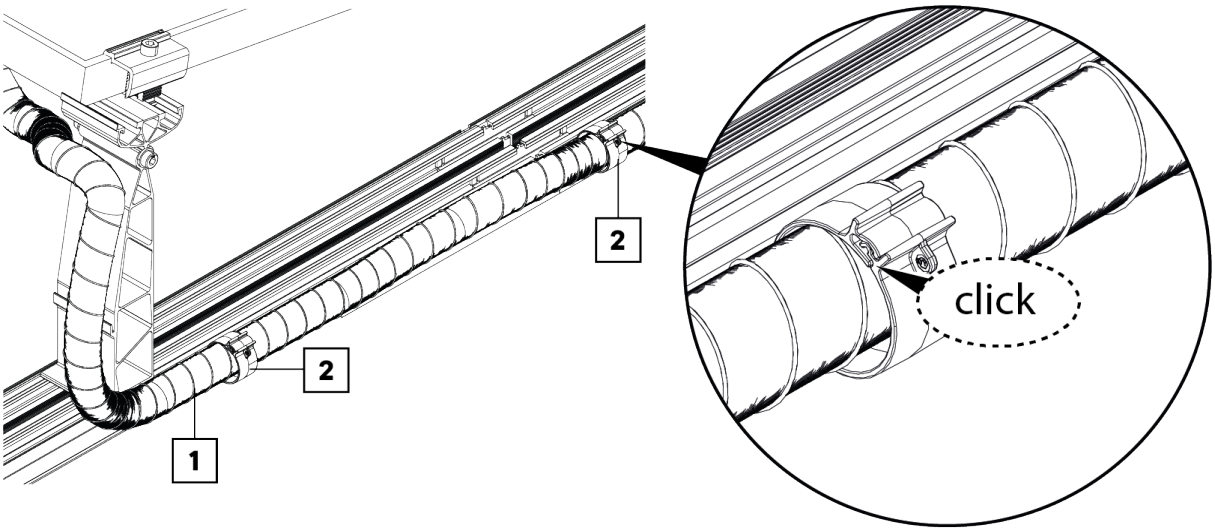


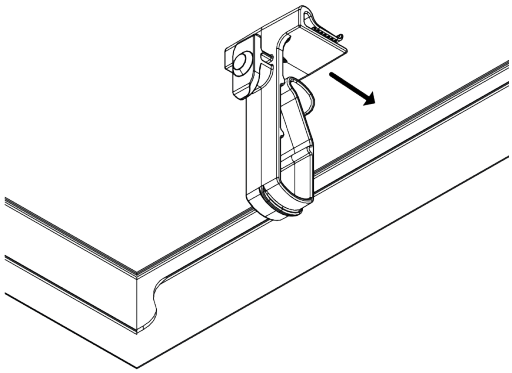

☐ Fully engage the cable clips (1) with the base rail.




- Place the cable pipe (1) by the cable clips (2).
- Then snap in the closure of the cable clip (2).

### CABLE CLIP CLP-U FOR MODULES

Guide the cable clip to the module frame.



The **cable clip CLP-U** is suitable for module frames that have a sheet thickness of 1.5 - 3 mm.

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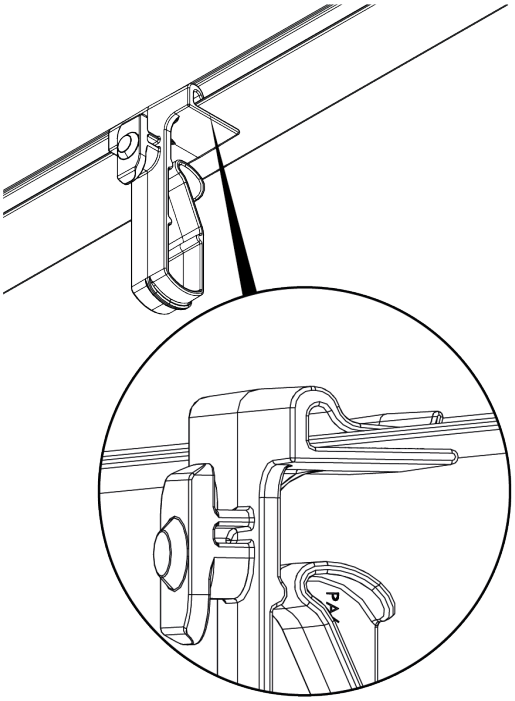
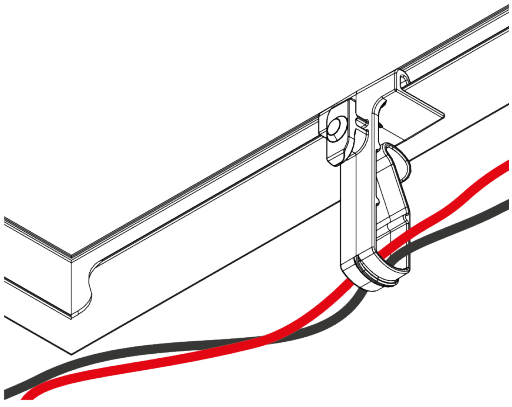
**Attention**
It is important to ensure that the cable clip is fully inserted.



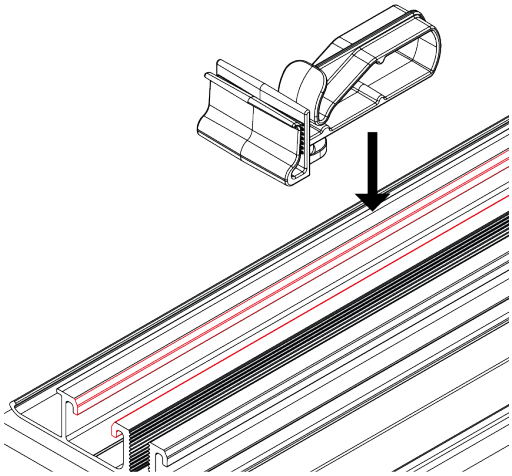
---

Then lay the cables at the cable clip.



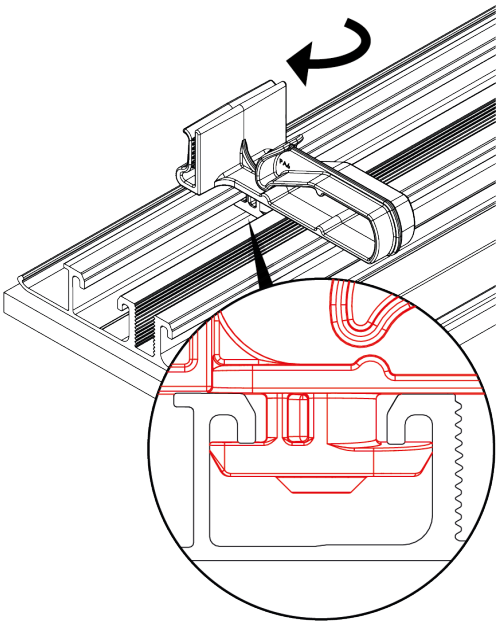
### CABLE CLIP CLP-U FOR BASE RAILS

☐ Approach the cable clip on the base rail from above.

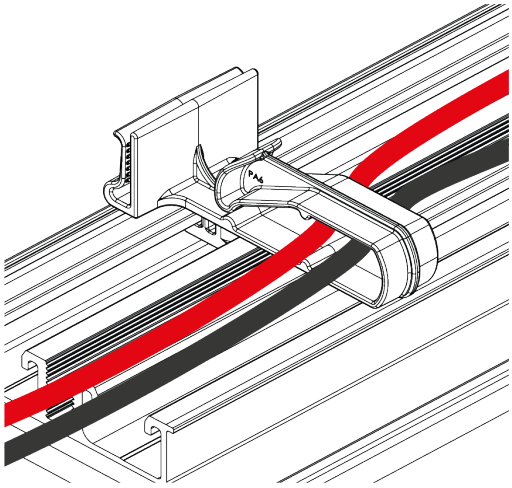


☐ Rotate the cable clip by 90 °.

ⓘ It is important to ensure that the cable clip is fully engaged in the rail chamber.



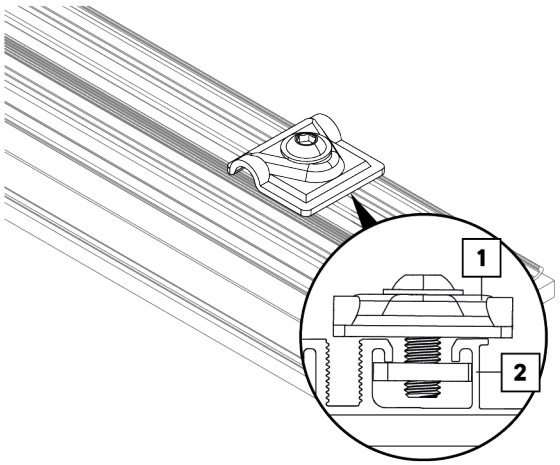
☐ Then lay the cables at the cable clip.



# POTENTIAL EQUALIZATION AND LIGHTNING PROTECTION

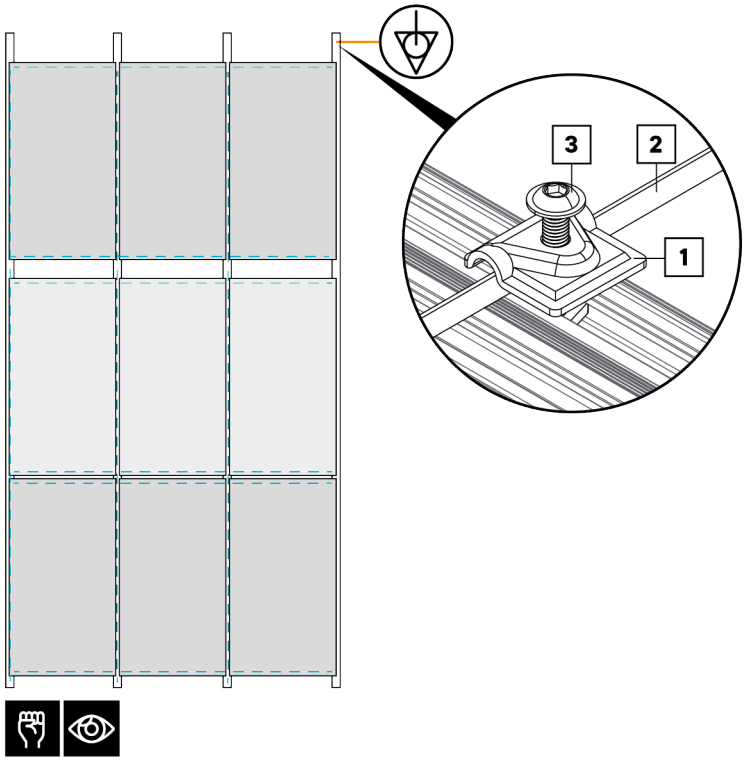
### INSERT WIRE CLAMP

- Insert the wire clamp (1) into the base rail (2)




Depending on the requirements, either the right or left channel of the base rail can be used to insert the wire clamp (1).

### POTENTIAL EQUALIZATION



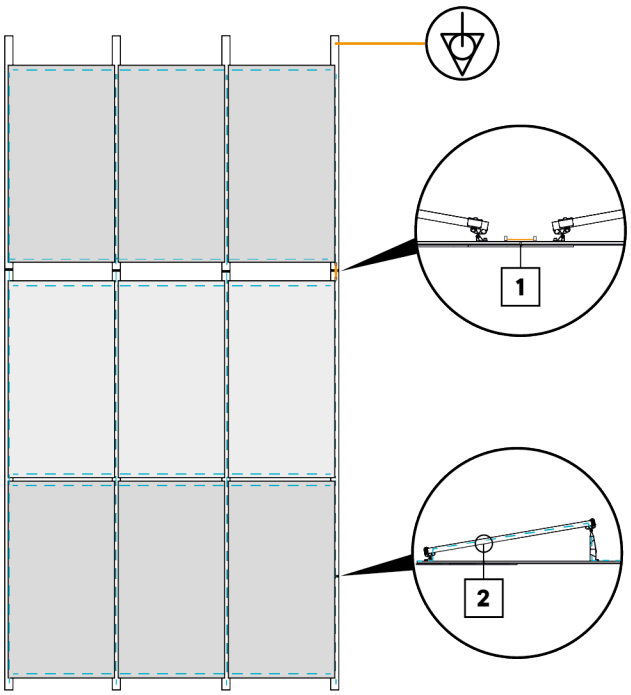



- Attach the grounding clamp (1) to the respective locations on the base rail.
- Insert the ground wire (2) and tighten the ground clamp (1) to a torque of 10 Nm or 7.37 ft lb.

## POTENTIAL EQUALIZATION CONNECTED RAIL

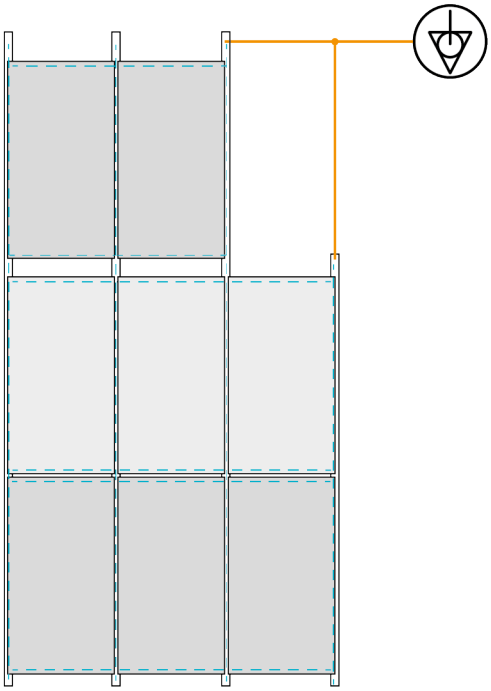
ⓘ To ensure the connection between the module rows, it is necessary to establish a connection to the rail joints located outside the modules (1). It is **not necessary** to make a connection for rail joints that are located under a module (2).

- Rail joints (1) that are not located under a module must be connected using two wire clamps and an grounding wire.
- If the rail joints (2) are located under a module, **no further action** is required.




## EQUIPOTENTIAL BONDING DURING MAINTENANCE WORK

ⓘ **Caution!**
To ensure that the connection between the remaining modules and the potential equalization is guaranteed, additional earthing terminals and earthing wire must be attached when a module is removed.



# MAINTENANCE, DISASSEMBLY AND DISPOSAL

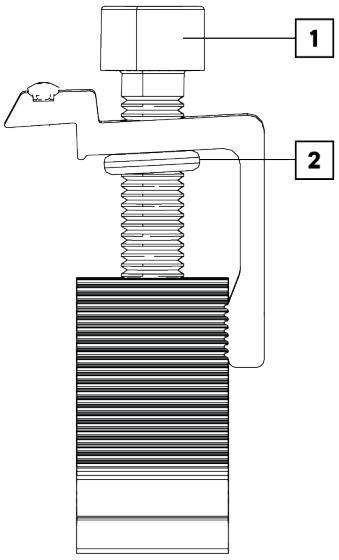
## MAINTENANCE

To prevent personal injury and damage to property, the system must be checked regularly by qualified personnel and annual maintenance is required.

- Check all system components for damage. In the event of damage, replace the affected component immediately.
- Check all screw connections. Tighten loose screw connections, observing the tightening torque specified in the installation instructions.
- Checking all components for damage caused by the weather, animals, dirt, deposits, build-up, vegetation, roof penetrations, seals, stability and corrosion. In the event of damage, clean, repair or replace the affected component.

## DISASSEMBLY

**DISMANTLING THE CLAMPS (EXAMPLE)**




ⓘ To disassemble the system, carry out the assembly steps in reverse order.

☑ Unscrew the screw (1) on the clamp.
☑ When reusing the clamp, ensure that the O-ring (2) is not lost.

ⓘ If the components are reused, it must be noted that these are wearing parts. Therefore, the AEROCOMPACT Europe GmbH cannot assume any responsibility for checking the degree of wear. For this reason, any liability or warranty of AEROCOMPACT Europe GmbH in case of reuse is excluded and reuse is at the installer's own responsibility.

## DISPOSAL

Unless a take-back or disposal agreement has been made, disassembled components should be recycled:

- Give metals and plastic elements for recycling.
- Dispose of remaining components sorted according to material composition.

ⓘ Incorrect disposal may result in hazards to the environment. In case of doubt, obtain information on environmentally sound disposal from the local municipal authority or from specialized disposal companies.

# APPENDIX

## DECLARATION OF PERFORMANCE

| | |
|---|---|
| Manufacturer: | **AEROCOMPACT Europe GmbH** |
| Designation: | **CompactFLAT SN2 PLUS and CompactFLAT SN2 Q PLUS rail system for flat roofs** |
| Identification code: | **SN2 PLUS, SN2 Q PLUS** |
| Applied standard: | **EN 1090-1** |
| Certification body: | **2397** |

To the declaration of performance

## REVISION HISTORY

| Version | Chapter | Modification |
|---|---|---|
| v3.1 | "Mount the double roof anchor connection (optional)" on page 28 | Anchor variants added |
| | | |
| | | |
| | | |
| | | |

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