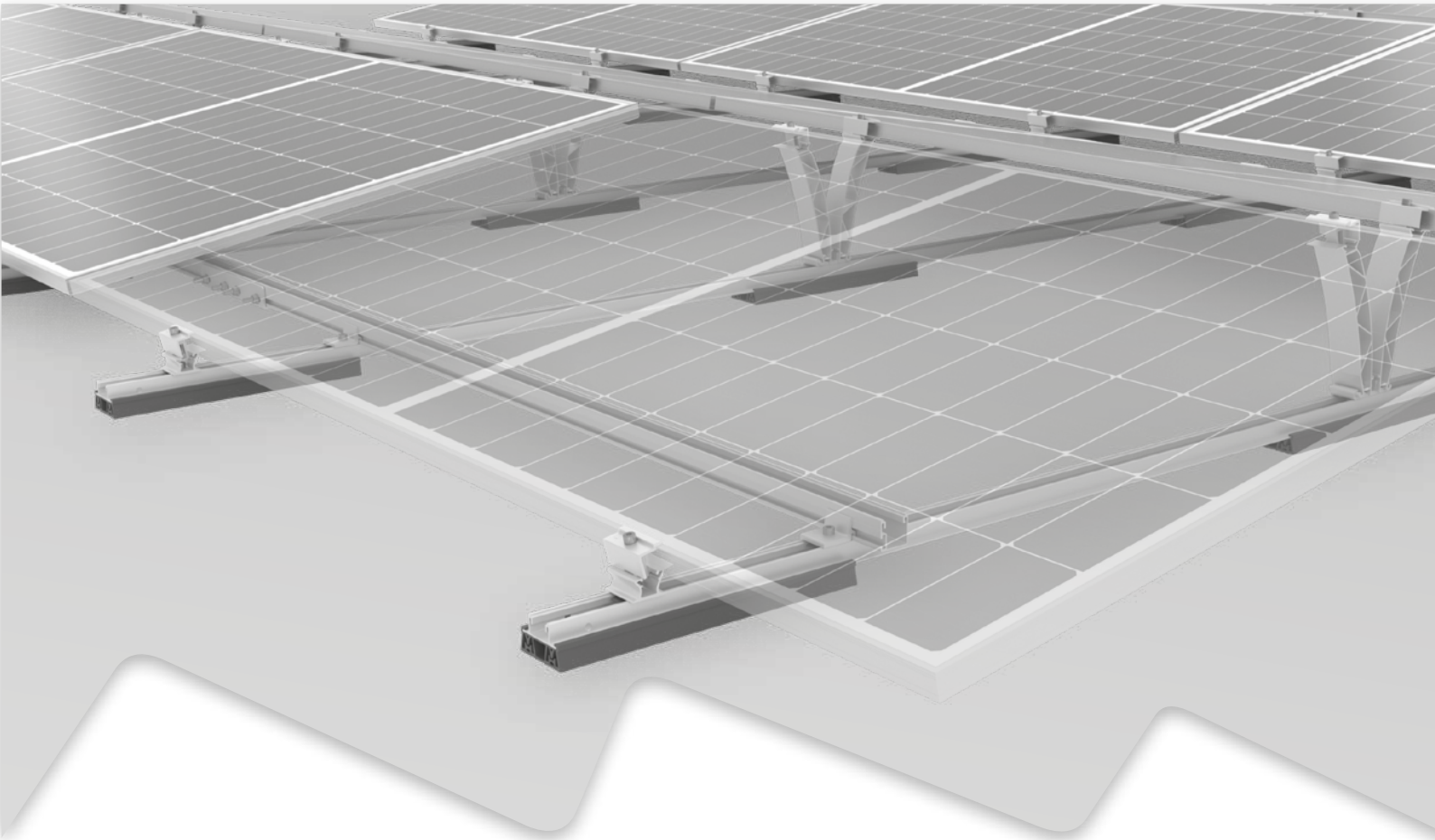





**Connecting Strength**



 Assembly manual

# **D-Dome 6 System**

## **Xpress LS**

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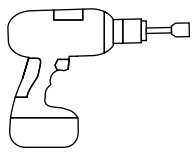
## Quality tested - several certifications

K2 Systems stands for secure connections, highest quality and precision. Our customers and business partners have known that for a long time. Independent institutes have tested, confirmed and certified our capabilities and components.

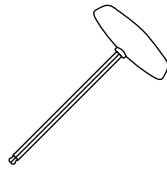
Please find our quality and product certificates under:

[k2-systems.com/en/technical-information](https://k2-systems.com/en/technical-information)

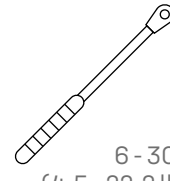
# Tools overview



6 mm



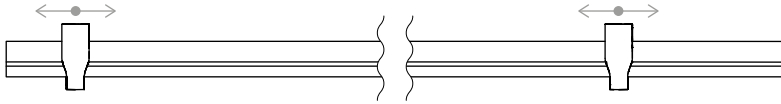
6 mm



6 - 30 Nm  
(4.5 - 22.2 lb-ft)



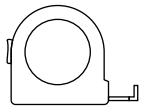
6 mm



**Dome Speed Spacer 2.50** · 2004129  
Distance template for module lengths



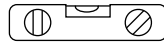
13/16 - 19 mm



≥ 3.0 m



≥ 6.0 m



## Digital Toolbox



**Do you already know our digital services?** Use our K2 DocuApp now and record the first important data directly at the customer or project site.

Simply transfer the data to our online planning software K2 Base. Here you can plan your project easily, safely and quickly. You receive a detailed project report with assembly plan and static report. The K2+ interface enables seamless project data transfer to the planning tools of well-known inverter manufacturers or yield planning tools.

With the K2 DocuApp, project documentation is done quickly and easily - without any annoying paperwork.

**Get started and register now:**

[docuapp.k2-systems.com](https://docuapp.k2-systems.com) →

[base.k2-systems.com](https://base.k2-systems.com) →

# General safety information

Please note that our general mounting instructions must be followed at all times and can be viewed online at [k2-systems.com](https://k2-systems.com)

- The equipment may only be installed and operated by qualified and adequately trained installers.
- Prior to installation, ensure that the product complies with on-site static loading requirements. For roof-mounted systems, the roof load-bearing capacity must always be checked.
- National and local building regulations and environmental requirements must be adhered to.
- Compliance with health and safety regulations, accident prevention guidelines and applicable standards is required.
  - Protective equipment such as safety helmet, boots and gloves must be worn.
  - Roofing works must be in accordance with roofing regulations utilising fall protection safeguards when eaves height exceeds 3 m.
  - At least two people must be present for the duration of the installation work in order to provide rapid assistance in the event of an emergency.
- K2 mounting systems are continuously developed and improved and the installation process may thereby change at any time. Prior to installation consult our website at [k2-systems.com/en/technical-information](https://k2-systems.com/en/technical-information) for up-to-date instructions. We can send you the latest version on request.
- The assembly instructions of the module manufacturer must be adhered to.
- Equipotential bonding/grounding/earthing between individual parts is to be performed according to country specific standards, as well as national laws and regulations.
- At least one copy of the assembly instructions should be available on site throughout the duration of the installation.
- Failure to adhere to our general safety and assembly instructions and not using all system components, K2 is not liable for any resulting defects or damages. We do not accept liability for any damage resulting in the use of competitor's parts. Warranty is excluded in such cases.
- K2 Systems GmbH reserves the right to exclude liability in case of disregard of our General Safety Instructions as well as in case of installation or mounting of components of a competitor.
- If all safety instructions are adhered to and the system is correctly installed, there is a product warranty entitlement of 12 years! We strongly recommend reviewing our terms of guarantee, which can be viewed at [k2-systems.com/en/warranty-terms-and-conditions](https://k2-systems.com/en/warranty-terms-and-conditions). We will also send this information on request.
- Dismantling of the system is performed in reverse order to the assembly.
- K2 stainless steel components are available in different corrosion resistance classes. Each structure or component must be carefully checked for possible corrosion exposure.

# The following guidelines apply



This system can be used without further testing by K2 Systems under the following standard conditions. It is also suitable for higher requirements, however if a value exceeds the standard conditions, please contact K2 Systems.



## Planning with K2 Base

We recommend our free online software K2 Base for the planning. In five steps, you can plan the right assembly system and get a construction recommendation, parts list and the structural analysis report. Simply register and start planning: [base.k2-systems.com](https://base.k2-systems.com)



## Roof requirements

- This system can be installed on all common flat roofs with a pressure-resistant substrate and a roof pitch of  $\leq 3^\circ$  without a fixed connection.
- Fixed connection  $> 3^\circ$  to  $\leq 10^\circ$ 
  - Up to  $\leq 5^\circ$  combinations with ballast possible
  - $> 5^\circ$  to  $\leq 10^\circ$  only without ballast
- The roof surface must be clean and dry. Roof irregularities must be corrected or removed where appropriate.
- In the case of bitumen roofing, the roof waterproofing must be professionally inspected and additional protective measures must be taken if necessary.
- The coefficient of friction of the roof must be determined on-site. See video [k2-systems.com/en/friction-coefficient](https://k2-systems.com/en/friction-coefficient)



## Static requirements

- It is essential to check that the roof structure has sufficient residual load capacity and that the pressure capacity of the roof insulation (where present) is not exceeded.
- Suitable for framed modules with a frame height 30 - 50 mm
- Permissible module dimensions:  
width 1134 mm, max length 2500 mm



## Important mounting instructions

### Mounting system

- A minimum distance to the roof edge of 600 mm must be maintained. For building heights below 5 m, the minimum distance can be reduced.
- The compatibility of the roof covering and the Mat S support pad must be checked.
- At least two elevations must be mounted together in order to use this system.
- In the event of exceptional circumstances (such as storms, heavy rain, earthquakes, etc.), the system should be checked by a specialist. Should an inspection find damage or plastic deformation (such as in the module clamp area) the components must be replaced.

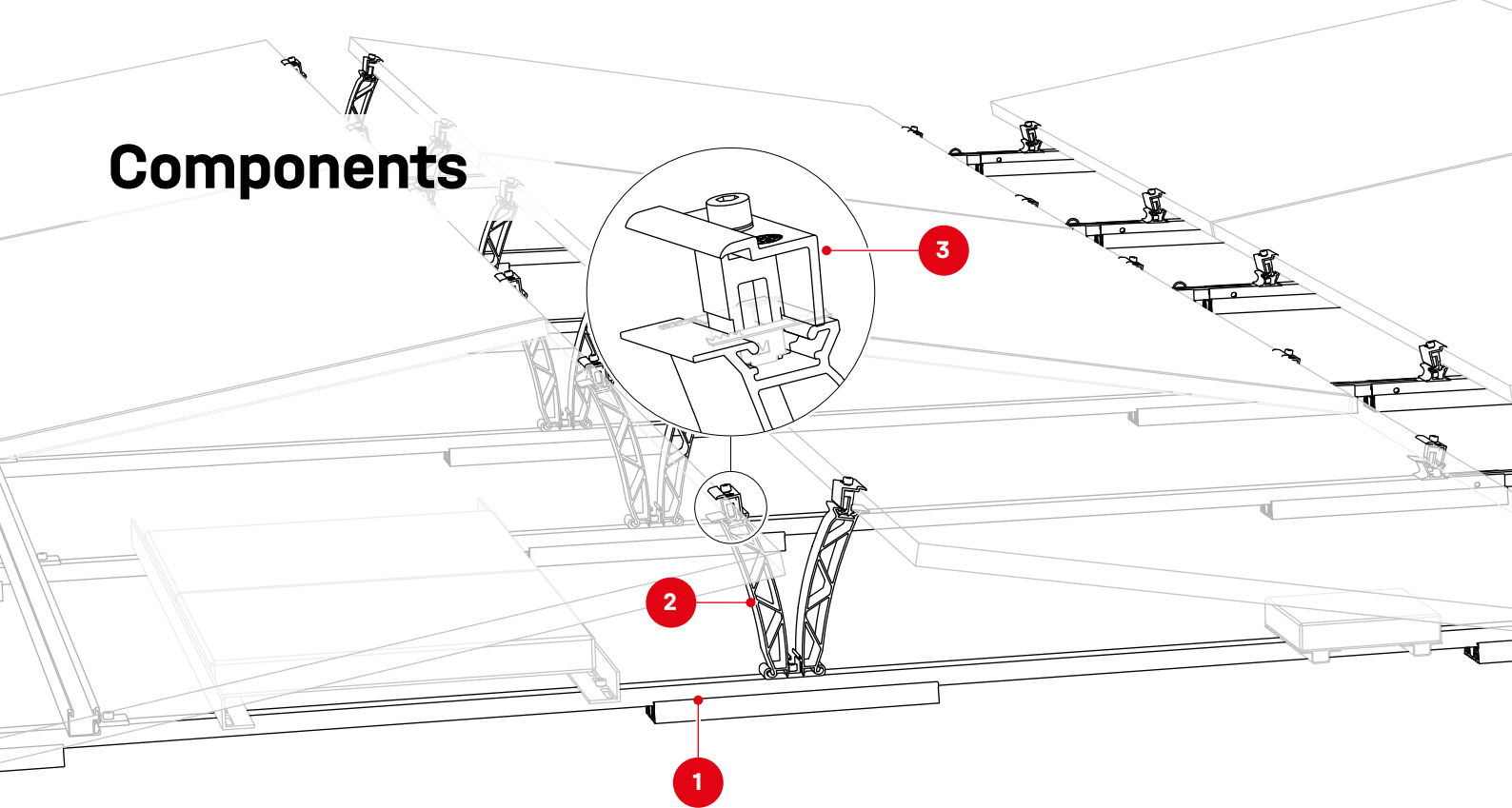
### Modules and clamping

- Adhere to module manufacturer recommendations for clamping area and module installation (see module manufacturer instructions).

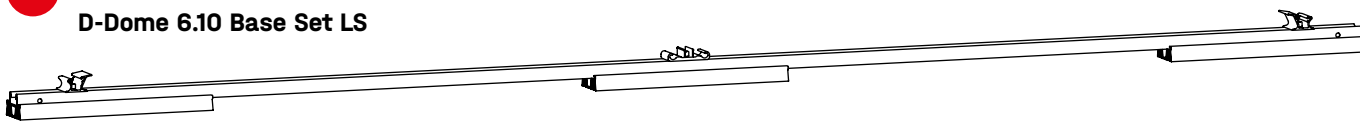
### General information

- External influences that act on this system are only reflected in the design of the ballast to a limited degree. For instance, unevenness, thermal elongation, moss, water accumulation and ageing of the sheeting cannot be considered, although these factors might also precipitate system displacement under certain circumstances. We therefore recommend regular maintenance of the system or to check whether additional mechanical fastening is necessary.
- It is important to ensure that the rain water flow is not hindered.
- Because of the different orientation of the solar modules, the string and inverter connection must be appropriately observed. It is recommended that the inverters and strings are connected separately.
- On-site general standards and regulations for lightning protection must be observed and consultation with a specialist to create a lightning protection concept is recommended (use lightning protection clamp if necessary).

# Components



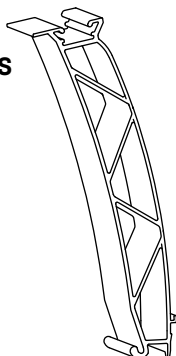
**1** 2004714  
**D-Dome 6.10 Base Set LS**



2004129 **Dome Speed Spacer Large**, more informationen [page 10](#)

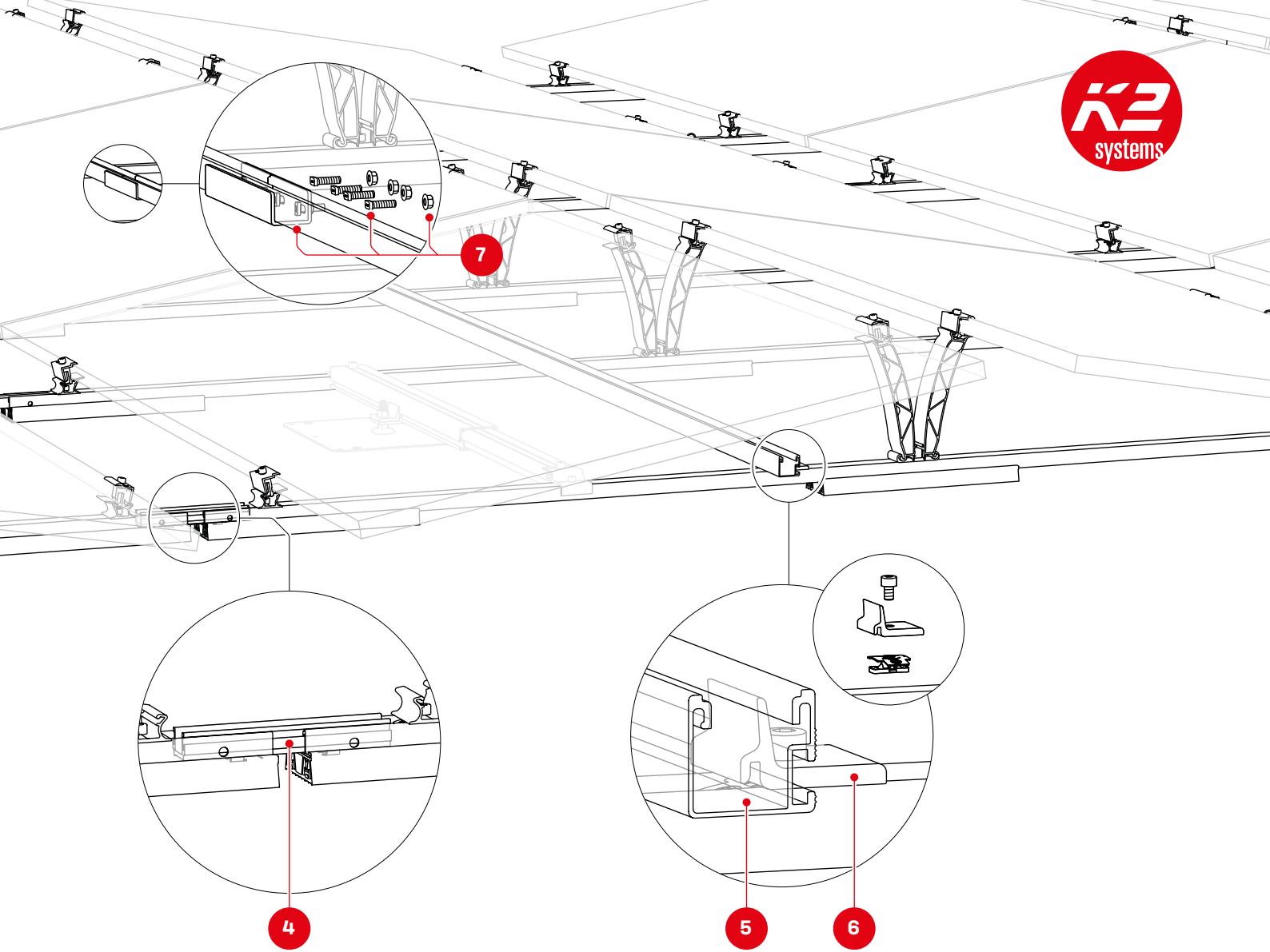


**2** 2004711  
**Dome 6.10 Peak LS**



**3** 2002559/2002610  
**DomeClamp EC 30-50 mm,  
silver/black**

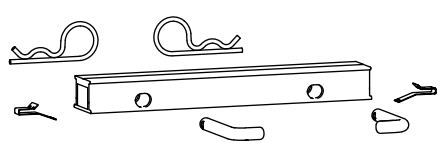




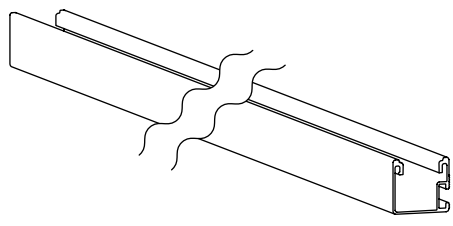
**4** 2004819  
**Dome 6 Xpress Connector**



2004123  
**Dome 6 Connector 195 Set**



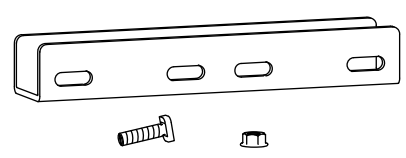
**5** 2004413  
**SingleRail 36 Light; 4,80 m**



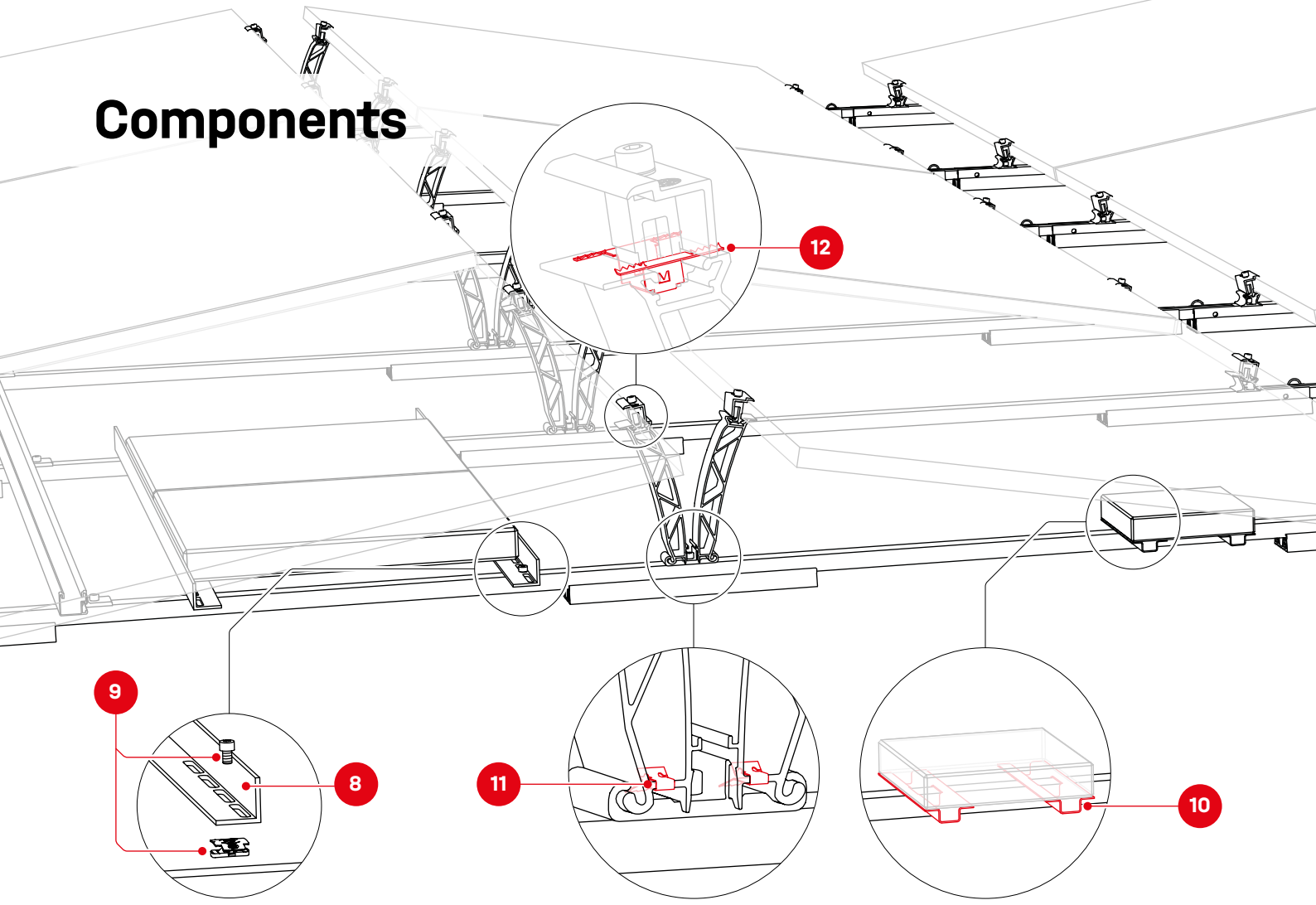
**6** 2003145  
**Climber 36/50 Set**



**7** 2001976  
**Rail connector Set  
SingleRail 36**



# Components



## Ballasting

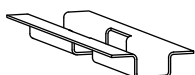
- 8 2004157  
Dome Porter Flex



- 9 1001643/2001729  
MK2 insertion nut/Hexagonal socket head cap screw M8 x 20



- 10 2002300  
Dome SpeedPorter



## Optional

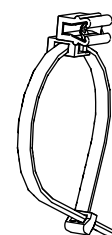
- 11 2004102  
TerraGrif PL

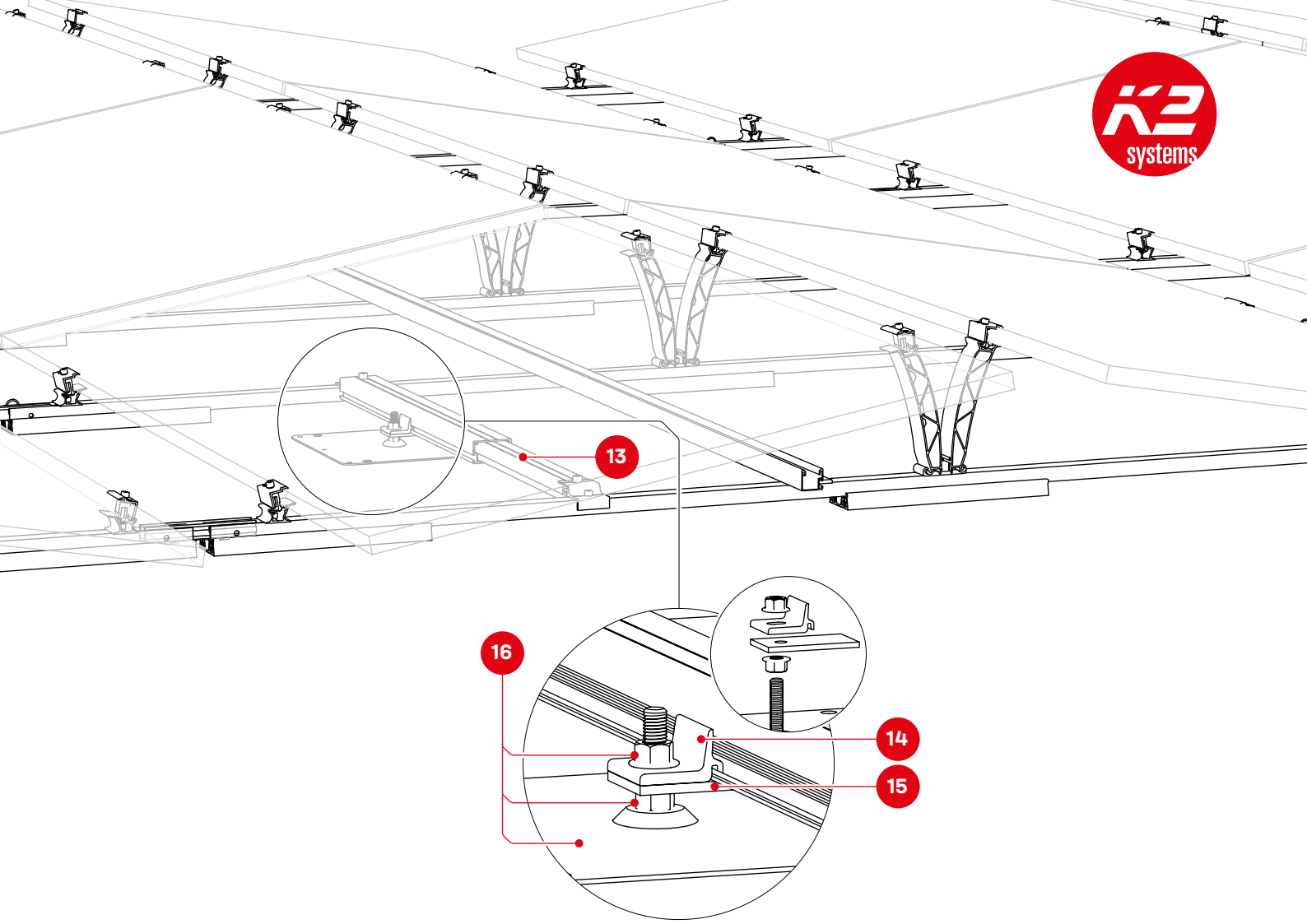


- 12 2003542  
TerraGrif K2MI Duo 18



- 2002870  
Cable Manager





## Fixed connection to the roof

**13** 2003384  
Dome FixPro S



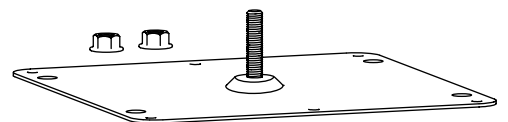
**14** 2003146 / 2003147  
Climber M10/M12



**15** 2002546 / 2002547  
Adapter plate M10/M12



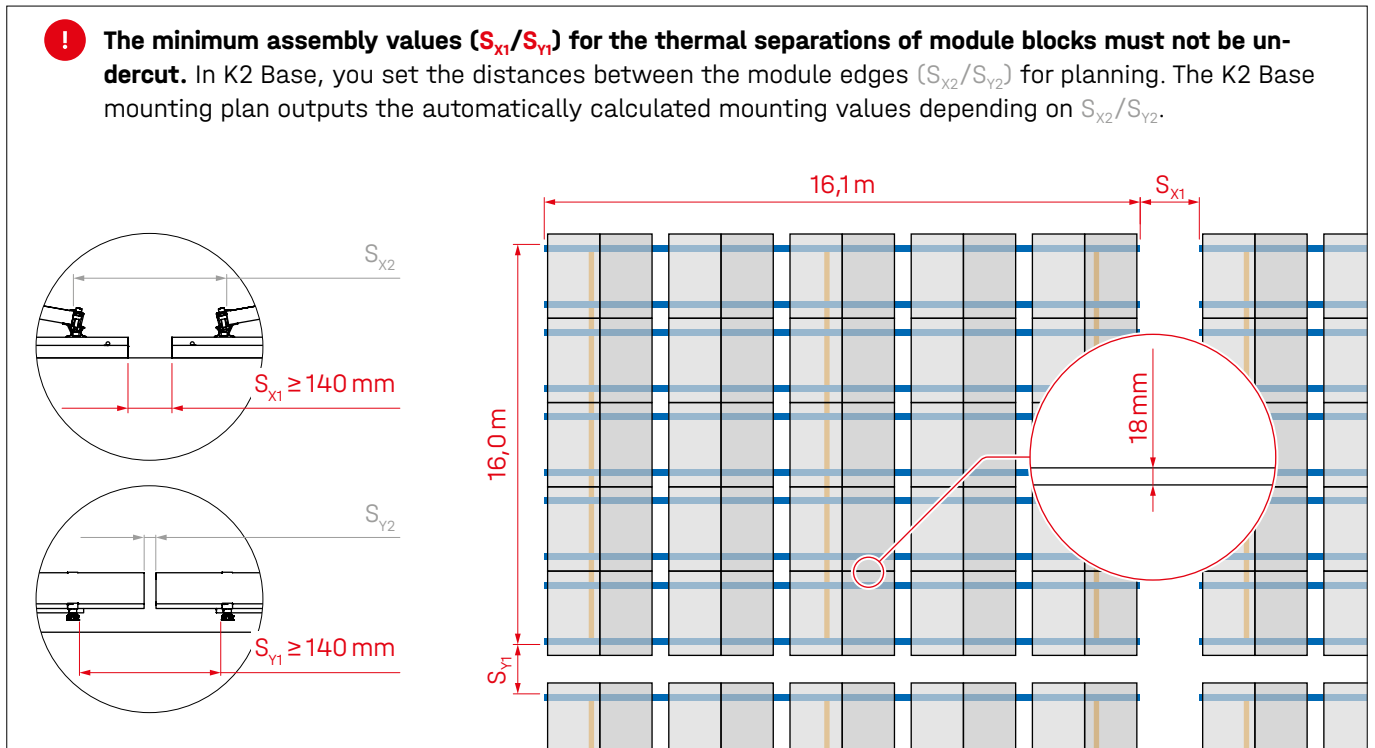
**16** **Roof anchor plate**  
Not included in the K2 product portfolio. Manufacturer: Sika, CW Lundberg, Solmont etc.  
Other fastening elements (e.g. threaded rod - min 50 mm, screws and self-locking hexagon nuts) for fixing to the roof anchor plate must be provided by the customer.



# Assembly

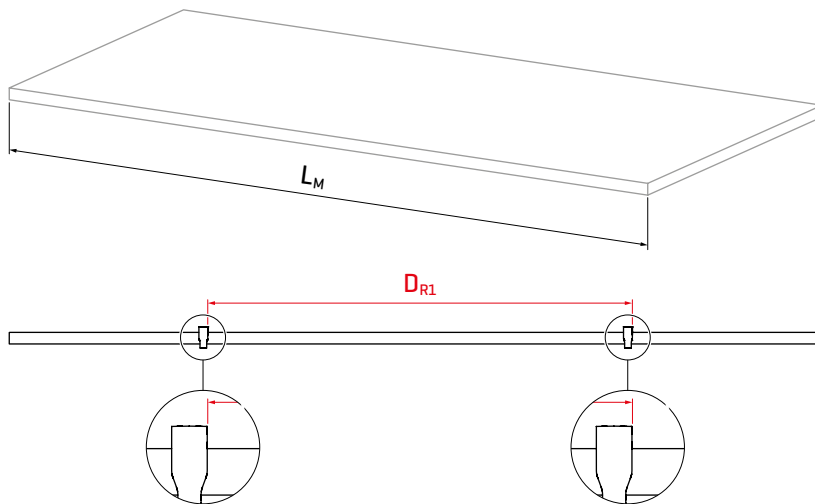
## Installation of module field and thermal separations

**!** The minimum assembly values ( $S_{x1}/S_{y1}$ ) for the thermal separations of module blocks must not be undercut. In K2 Base, you set the distances between the module edges ( $S_{x2}/S_{y2}$ ) for planning. The K2 Base mounting plan outputs the automatically calculated mounting values depending on  $S_{x2}/S_{y2}$ .

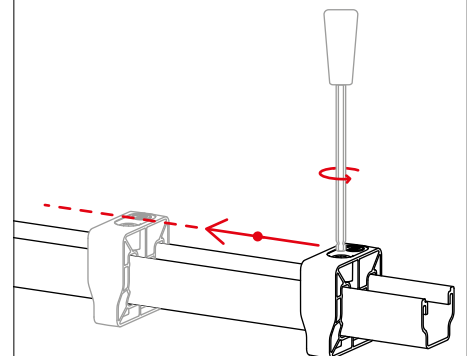


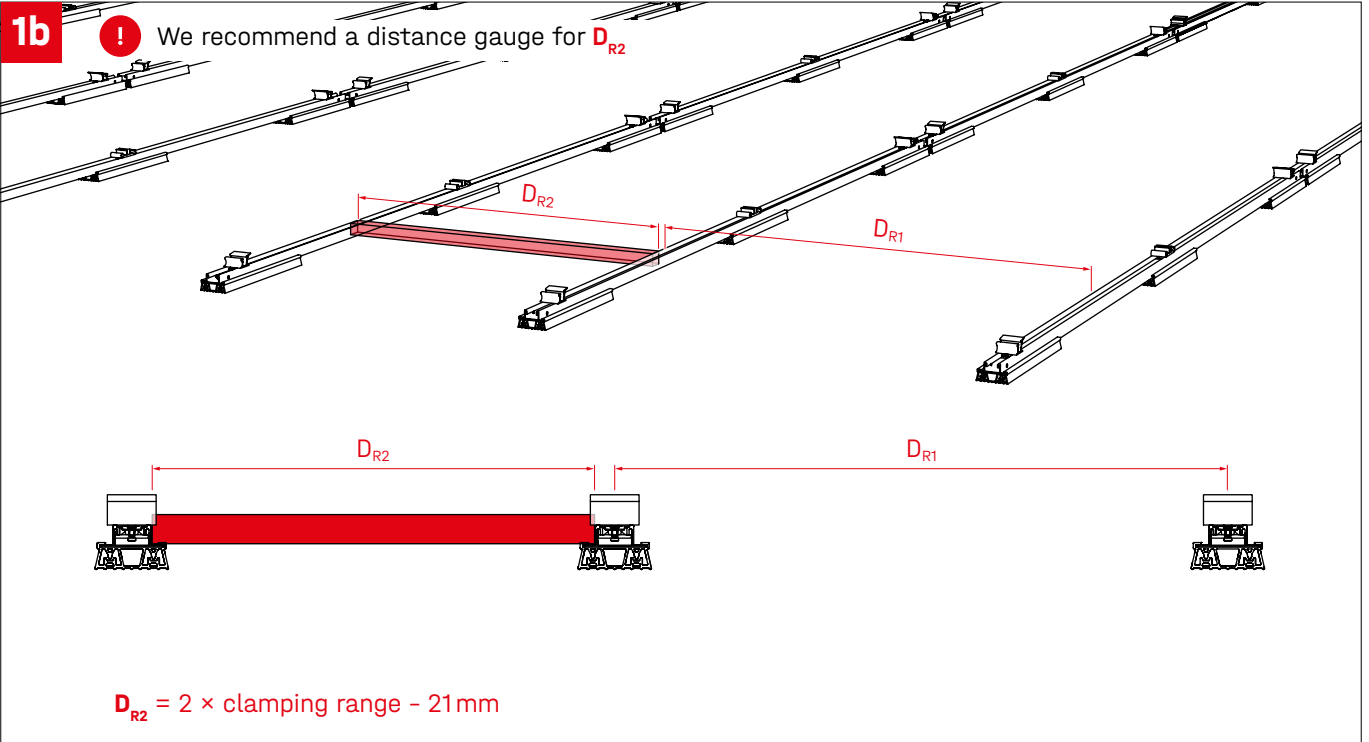
## Setting the distance dimensions

**1a** **!** Set the Dome SpeedSpacer to the distance  $D_{R1}$

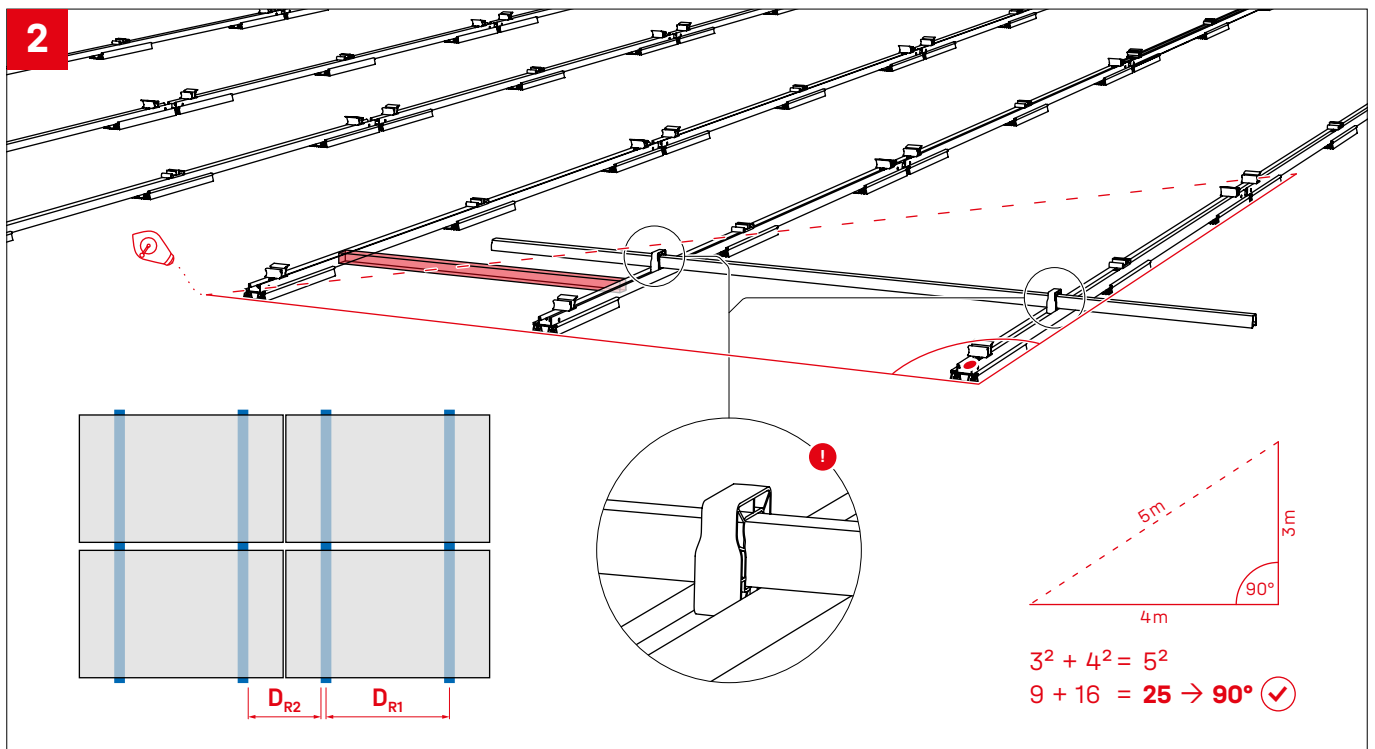


$$D_{R1} = L_M - (2 \times \text{module manufacturer clamping range})$$

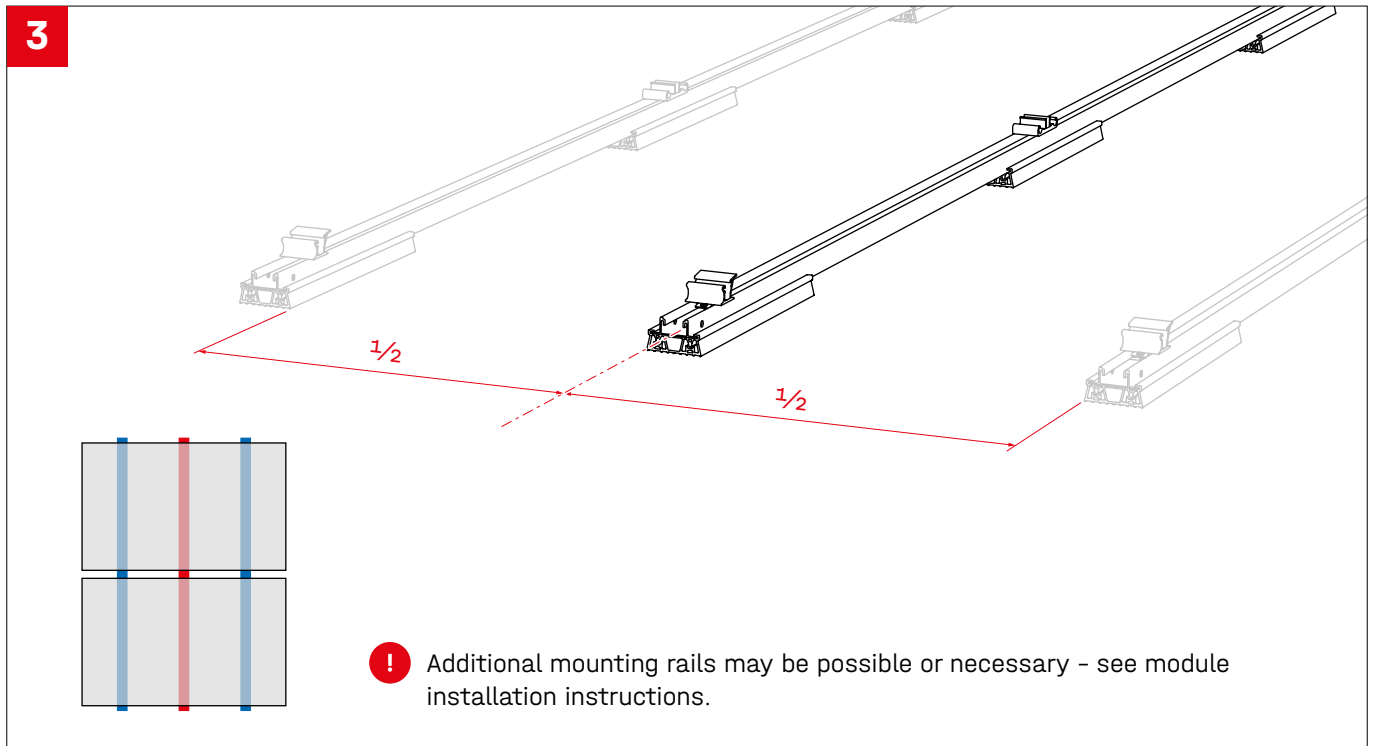




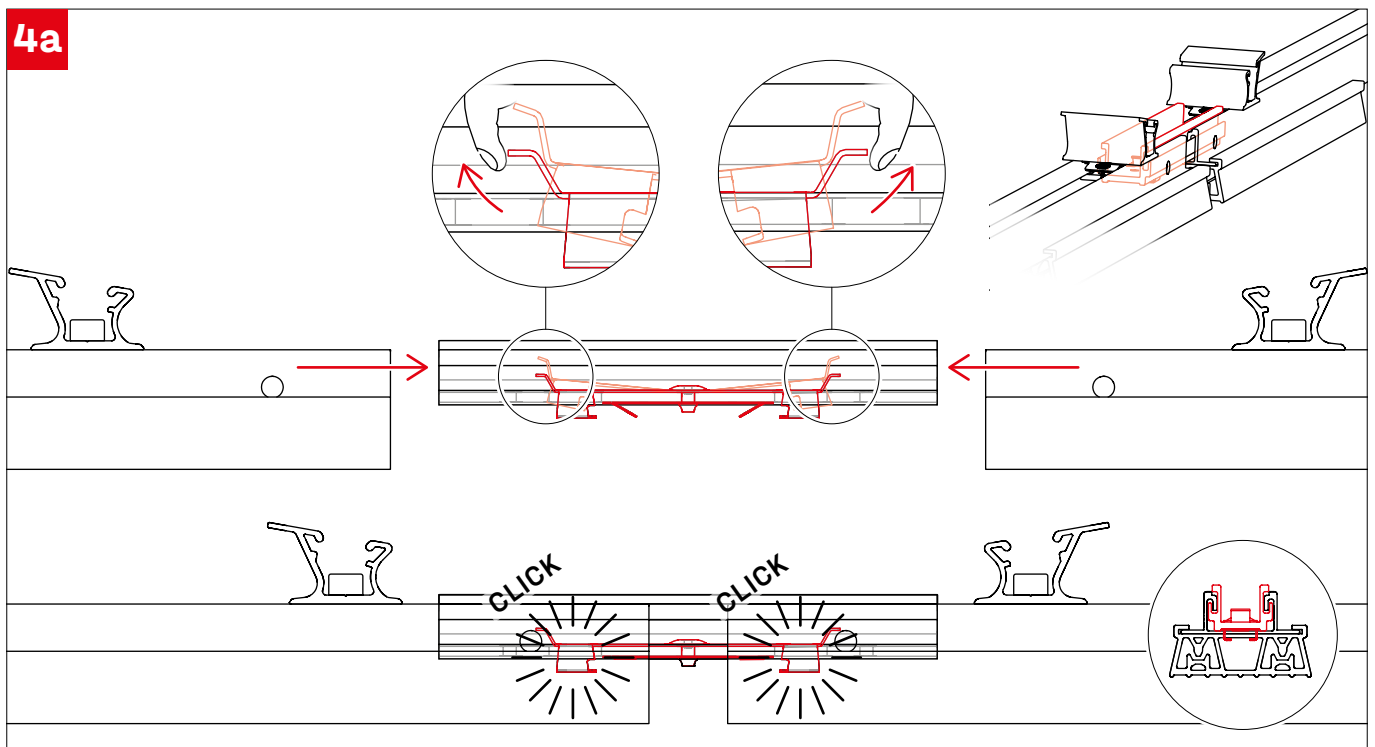
## Set up rails



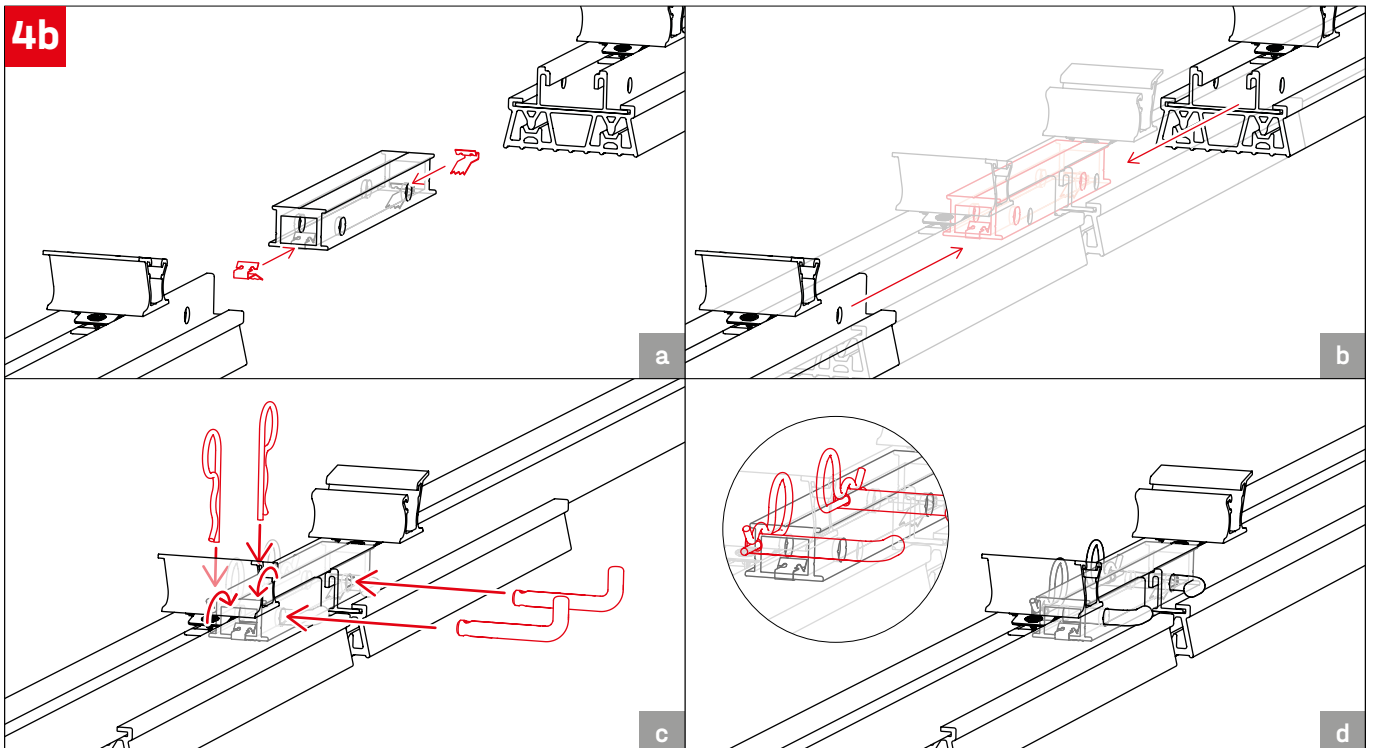
## Positioning additional rails for high loads



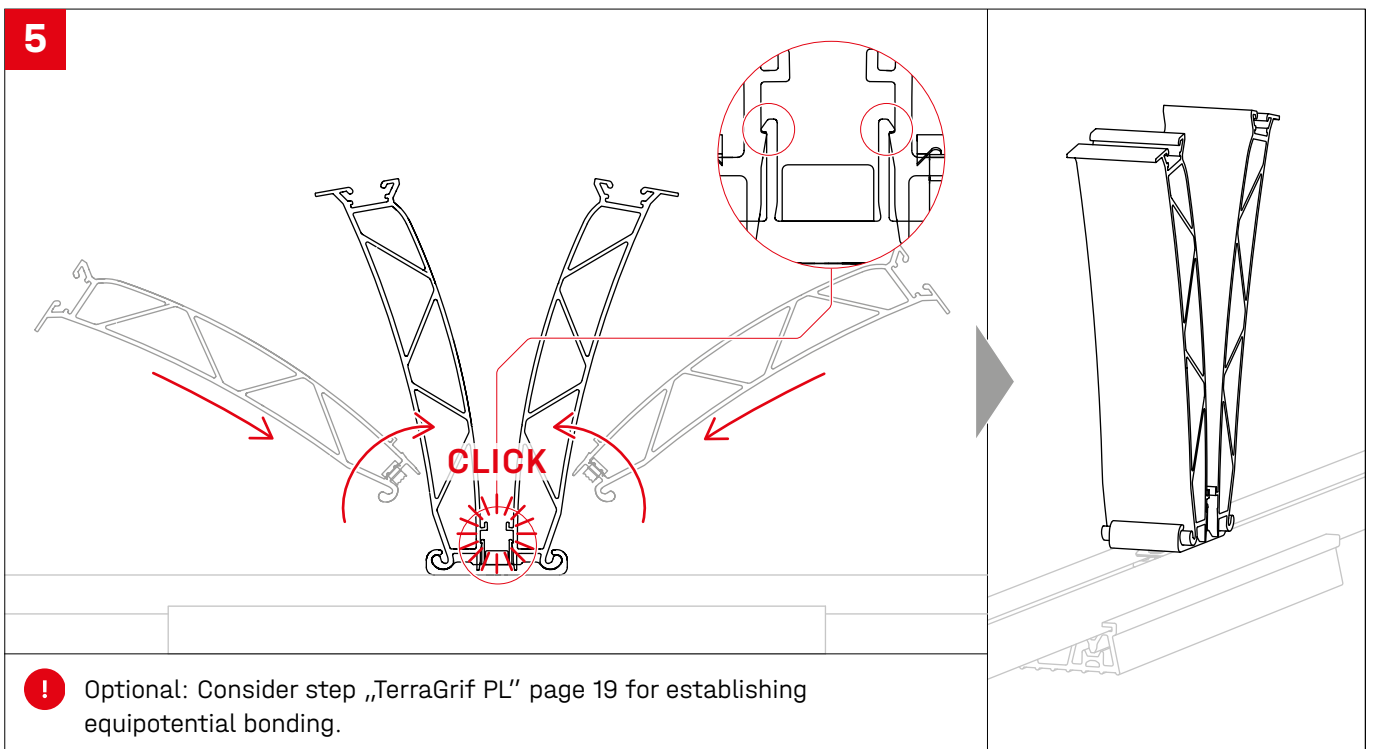
## Connecting rails with Dome 6 Xpress Connector



## Connecting rails with Dome 6 Connector 195 Set

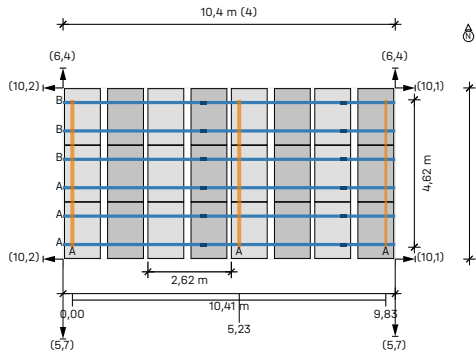


## Insert Peaks

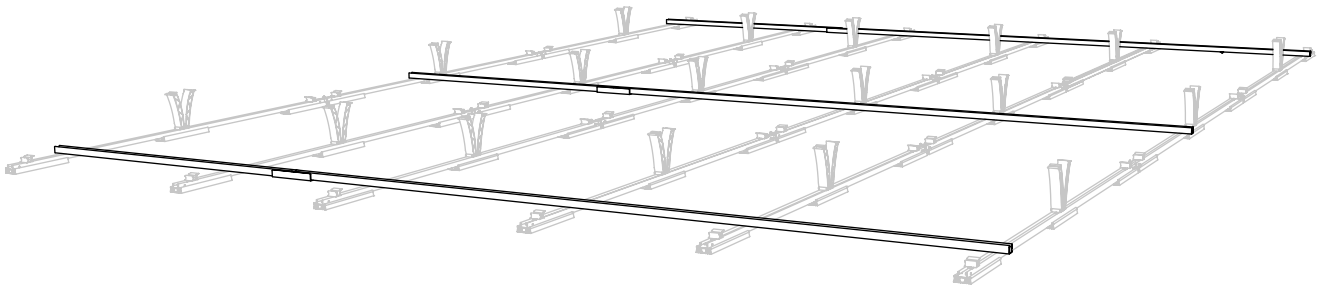


## Bracing with SingleRail 36 light

6a

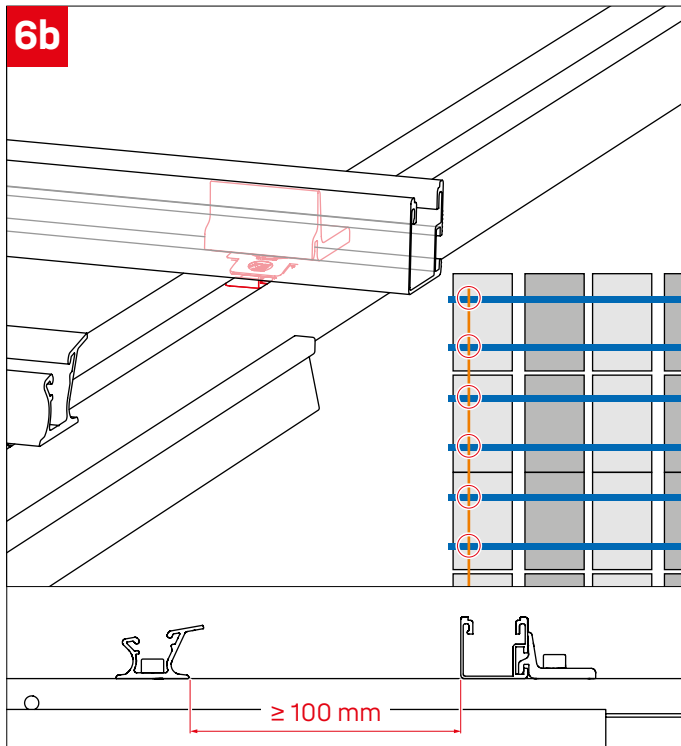


! The K2 Base installation plan (left) shows in orange, where row connections with SingleRail 36 Light are to be placed.

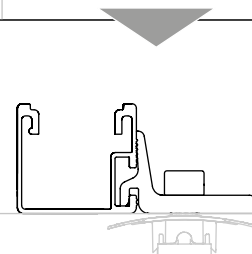
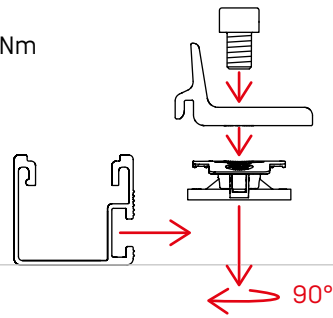


## Bracing with SingleRail 36 light

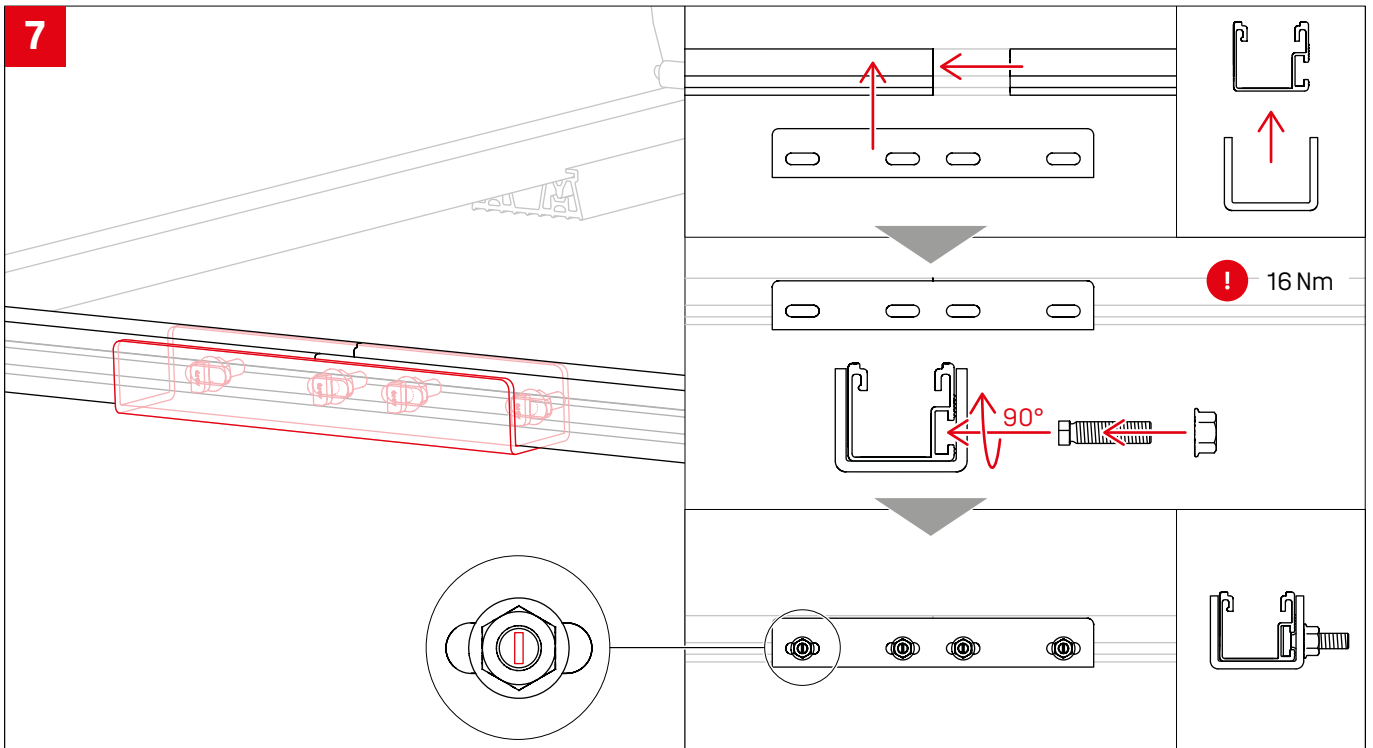
6b



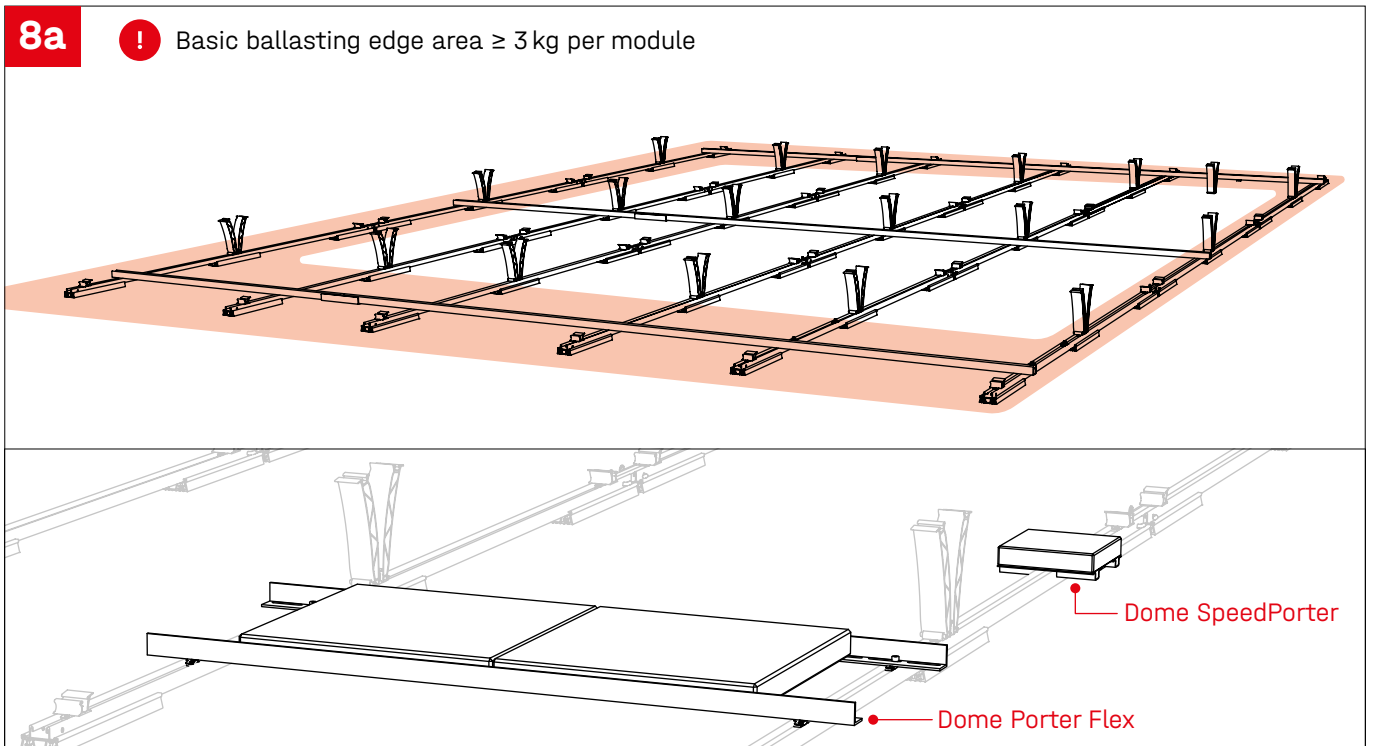
! 16 Nm



## Connecting rails with Rail connector Set SingleRail 36



## Ballasting options and specifications

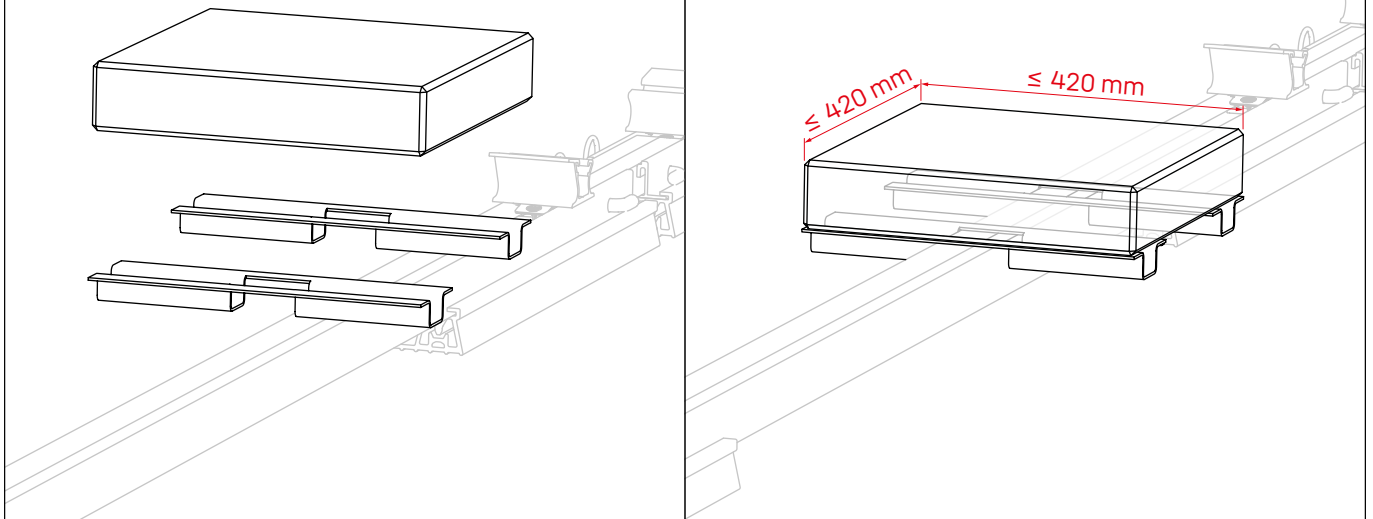


## Ballasting with SpeedPorter

**8b**

! ≤ 40 kg

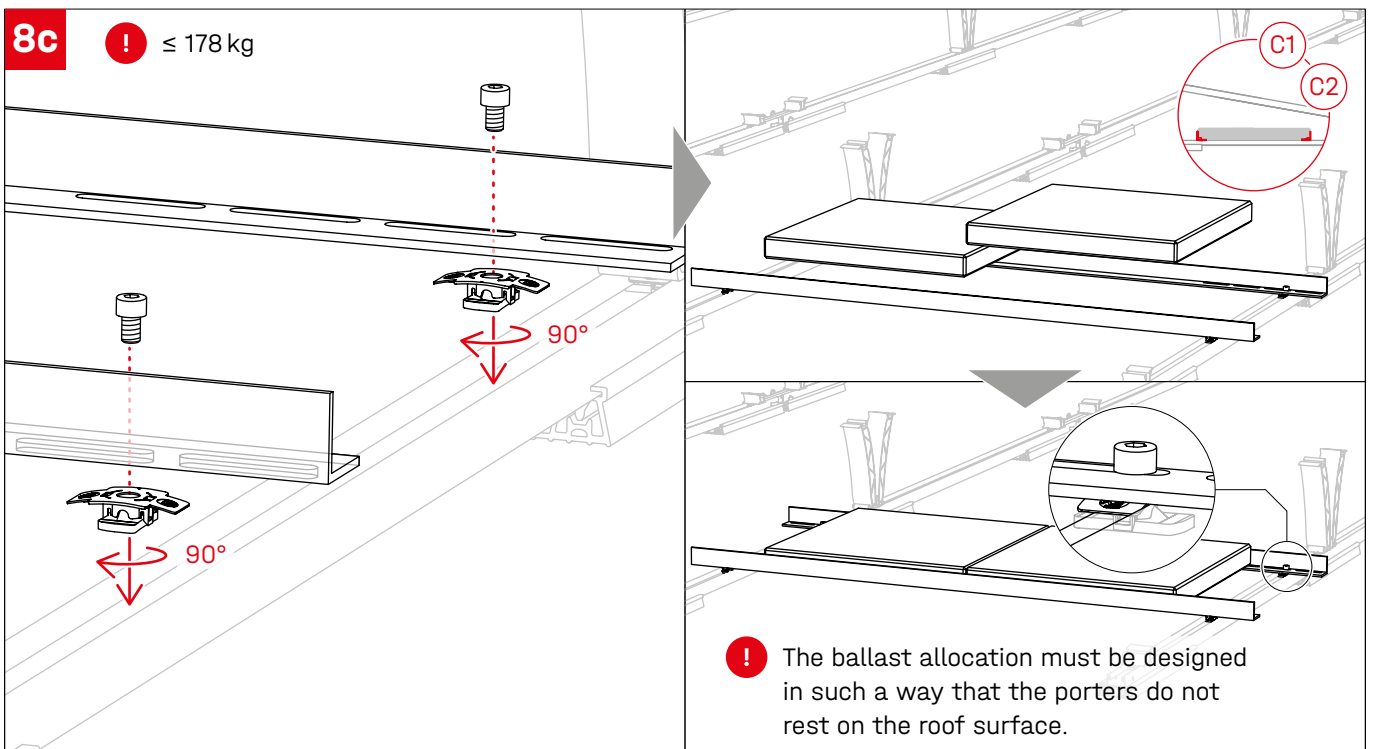
Two SpeedPorters per ballasting position



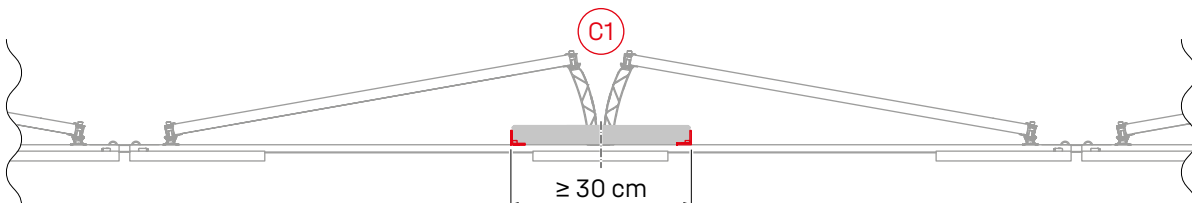
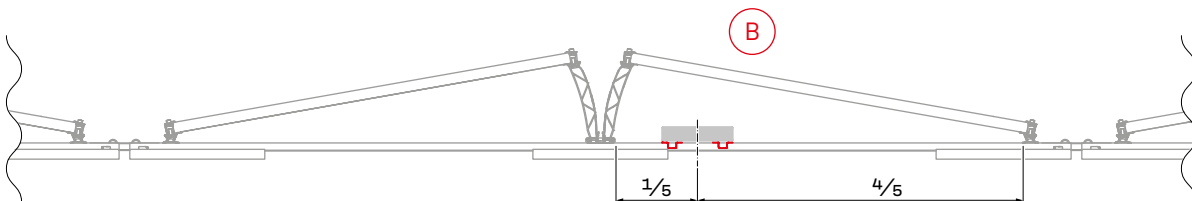
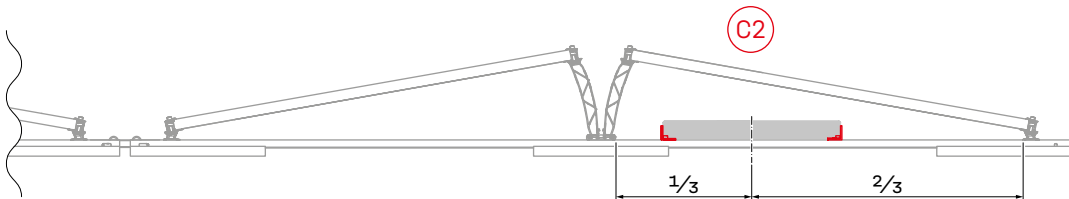
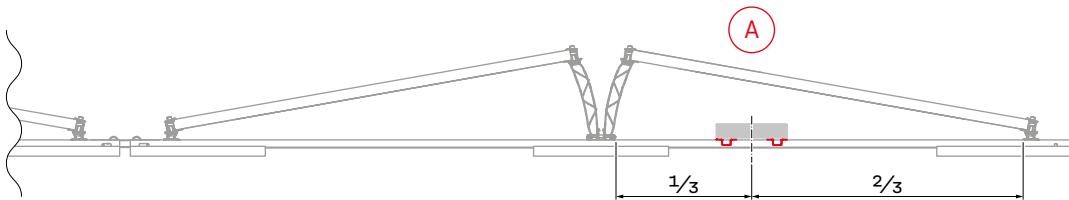
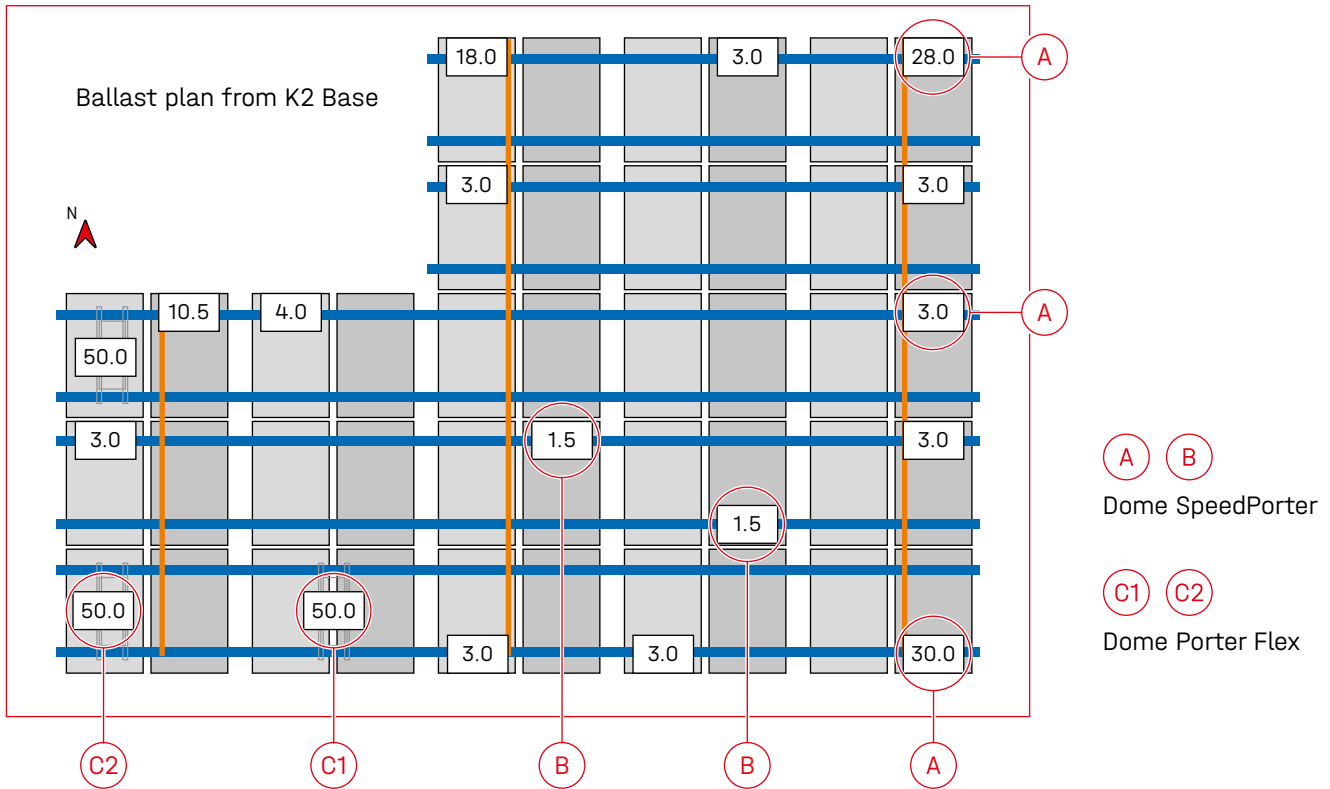
## Ballasting with Dome Porter Flex

**8c**

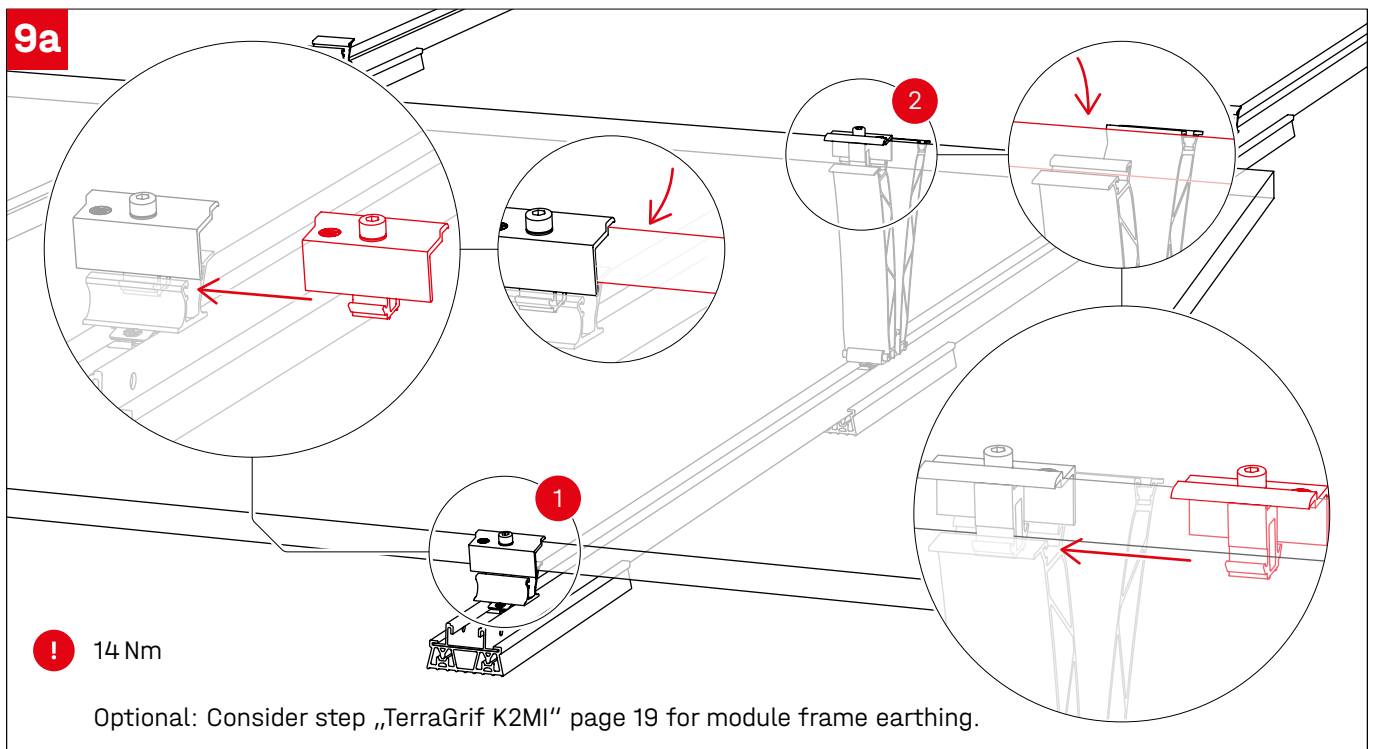
! ≤ 178 kg



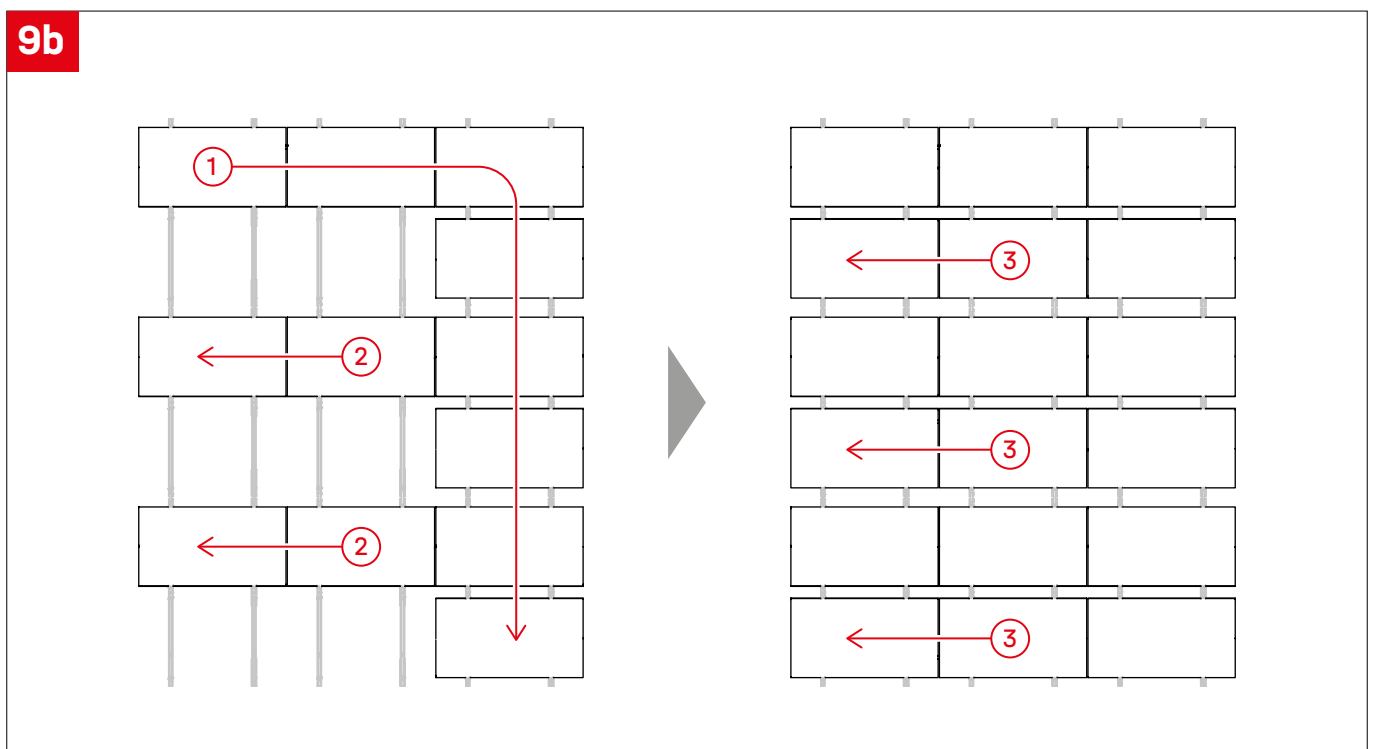
Positioning of ballasting according to K2 Base



## Module assembly

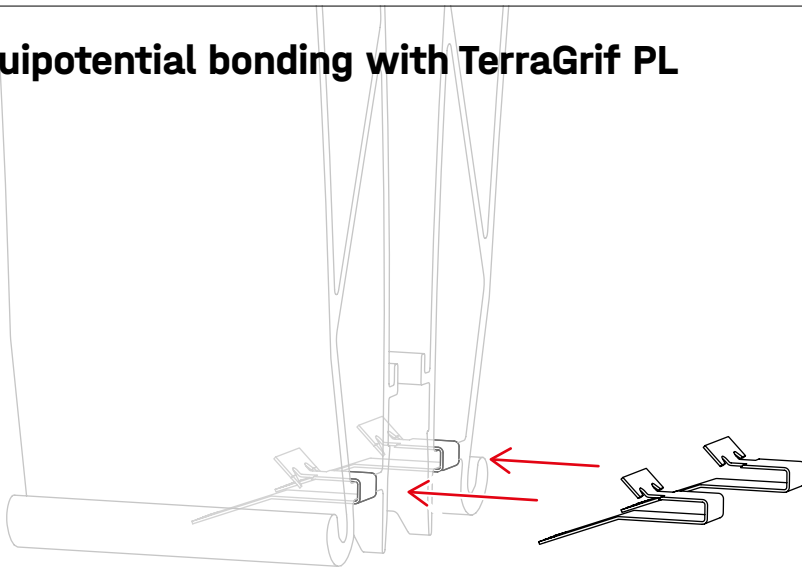



## Module assembly sequence



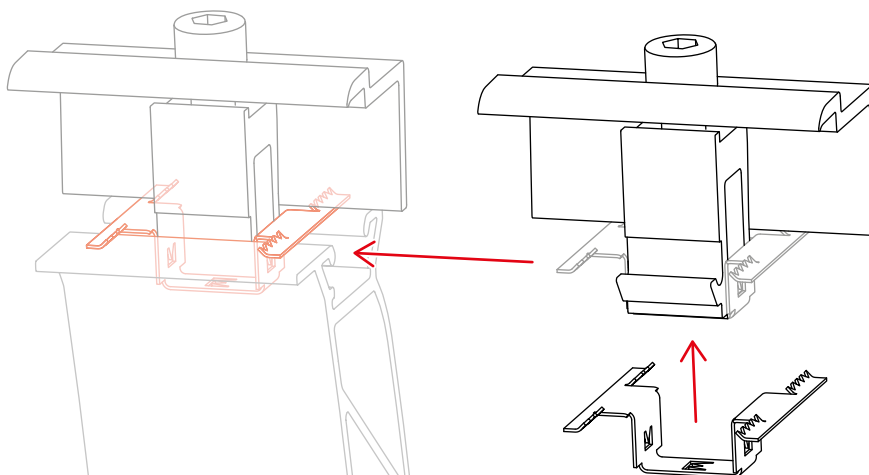
# Equipotential bonding / Module frame earthing

## Equipotential bonding with TerraGrif PL



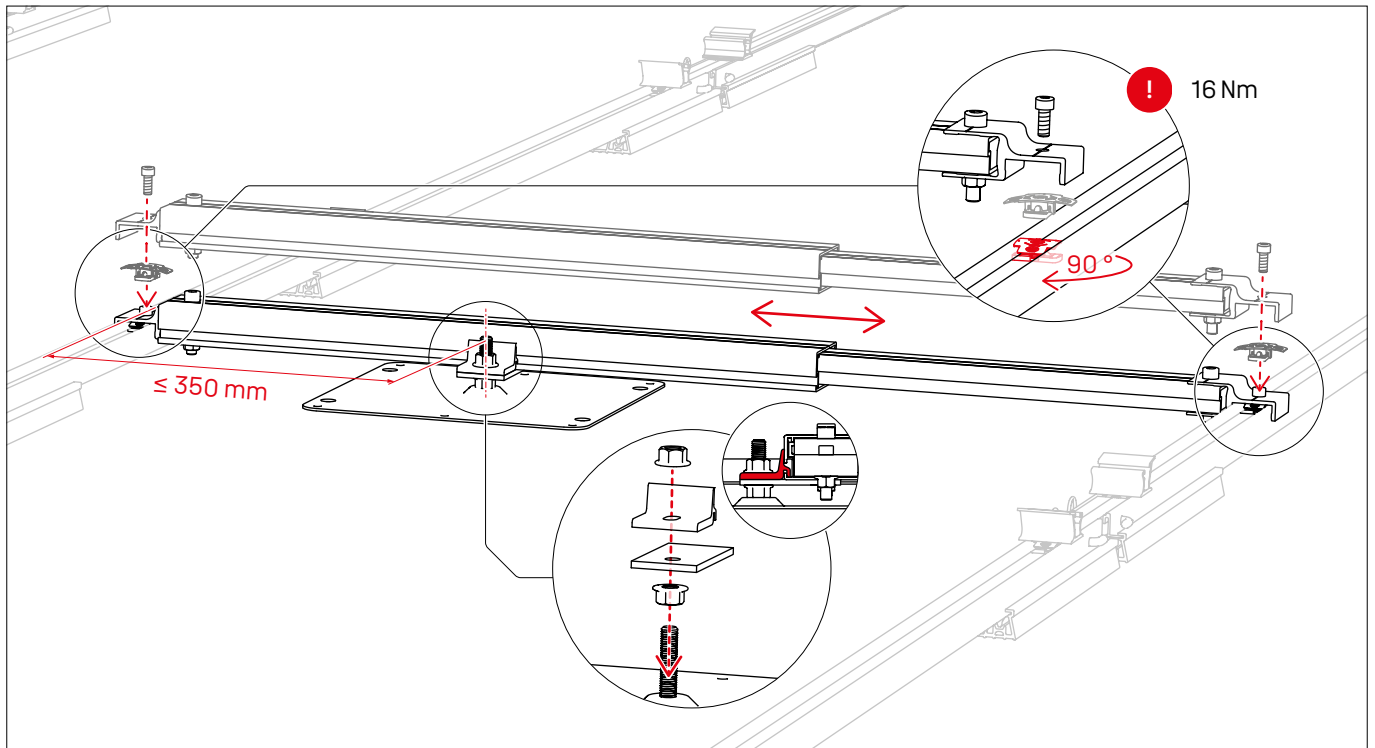
 The insertion of the TerraGrifs takes place before the peaks are installed.

## Module frame earthing with TerraGrif K2MI

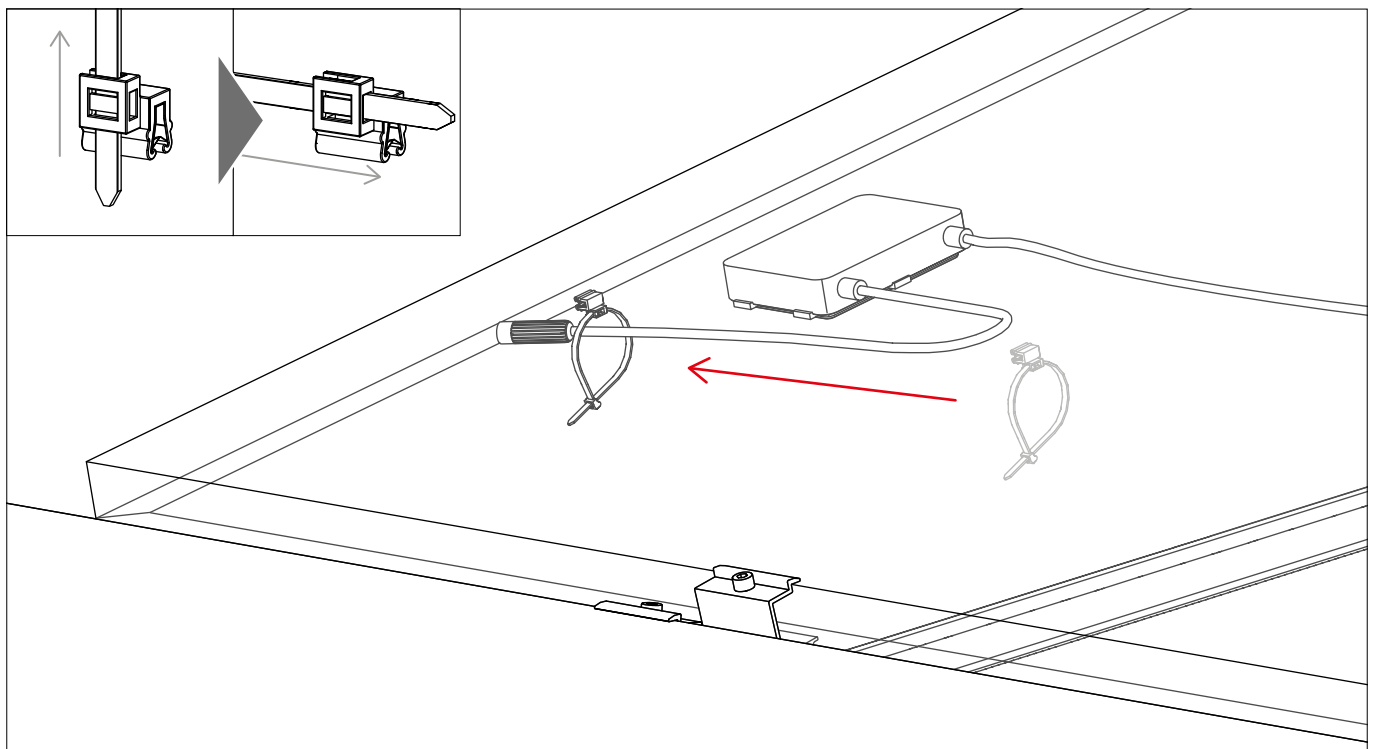


# Optional

## Fixed connection with Dome FixPro using Solmont mounting base



## Cable management with Cable-Manager







# Connecting Strength

## Thank you for choosing a K2 mounting system.

Mounting systems from K2 Systems are quick and easy to install. We hope these instructions have helped. Please contact us with any questions or suggestions for improvement. Our contact data:

- [k2-systems.com/en/contact](https://k2-systems.com/en/contact)
- **Service Hotline: +49 7159 42059-0**

Our General Terms of Business apply. Please refer: [k2-systems.com](https://k2-systems.com)

### K2 Systems GmbH

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+49 (0) 7159 - 42059 - 0 · [info@k2-systems.com](mailto:info@k2-systems.com) · [k2-systems.com](https://k2-systems.com)

D-Dome 6 Xpress LS Assembly EN V2 | 0626 · Subject to change  
Product illustrations are exemplary and may differ from the original.