

Assembly manual

D-Dome 6 System

Xpress LS



Connecting Strength

k2-systems.com

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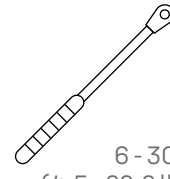
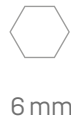
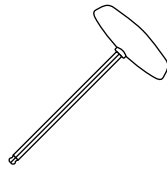
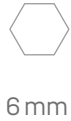
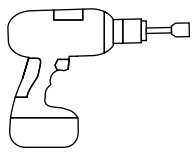
Quality tested - several certifications

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.

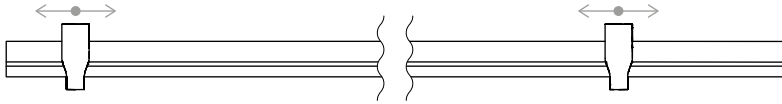
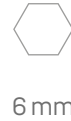
Please find our quality and product certificates under:

k2-systems.com/en/technical-information

Tools overview



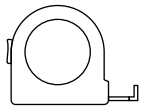
6 - 30 Nm
(4.5 - 22.2 lb-ft)



Dome Speed Spacer 2.50 · 2004129
Distance template for module lengths



13/16 - 19 mm



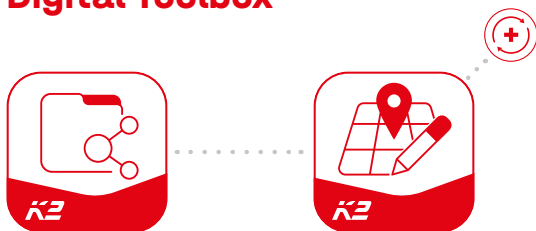
≥ 3.0 m



≥ 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 →

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

- 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 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. 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



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



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.

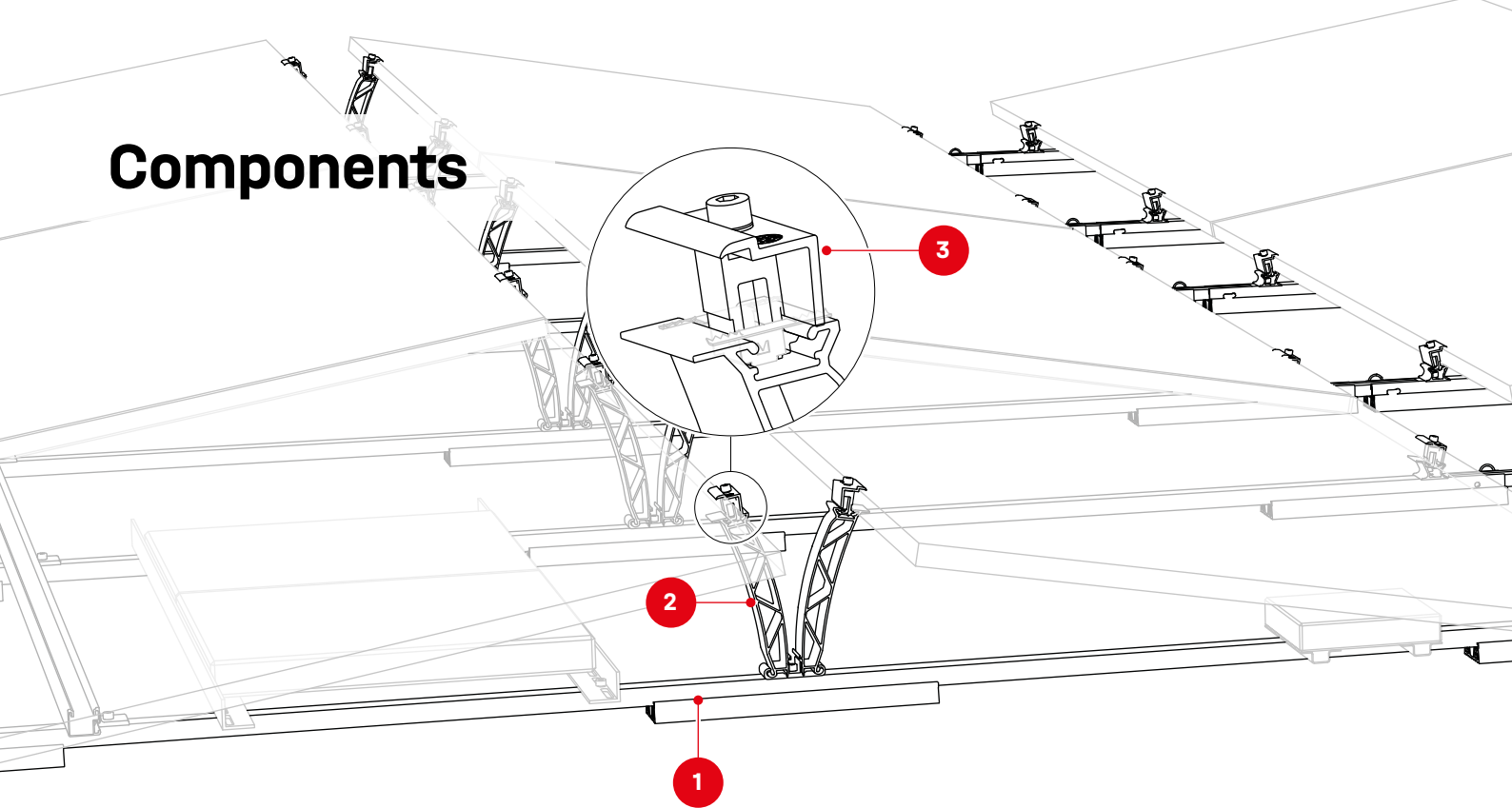
Modules and clamping

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

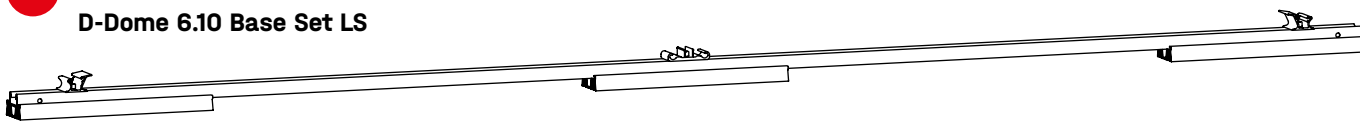
General information

- 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



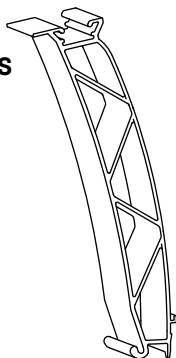
1 2004714
D-Dome 6.10 Base Set LS



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

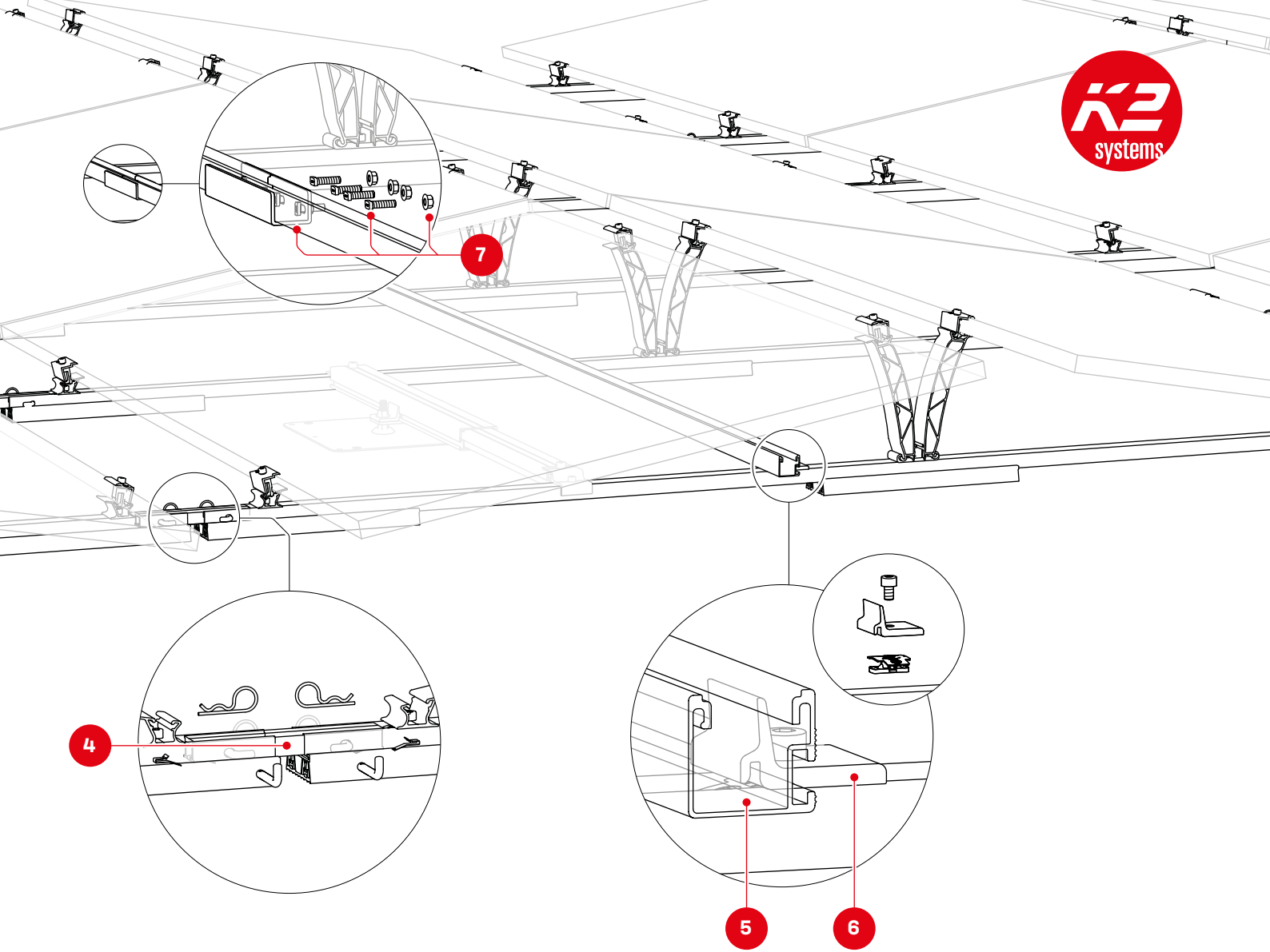


2 2004711
Dome 6.10 Peak LS

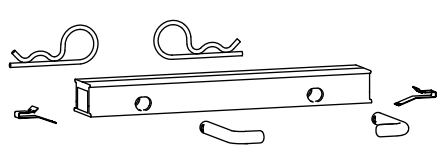


3 2002559/2002610
**DomeClamp EC 30-50 mm,
silver/black**

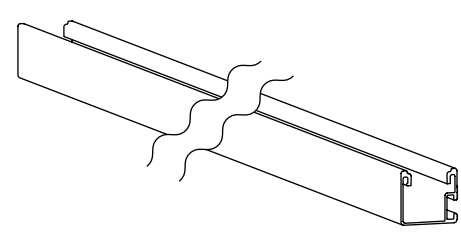




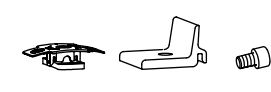
4 2004123
Dome 6 Connector 195 Set



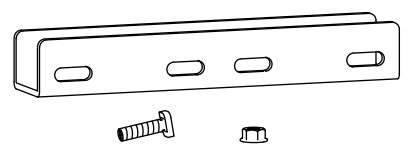
5 2004413
SingleRail 36 Light; 4.80 m



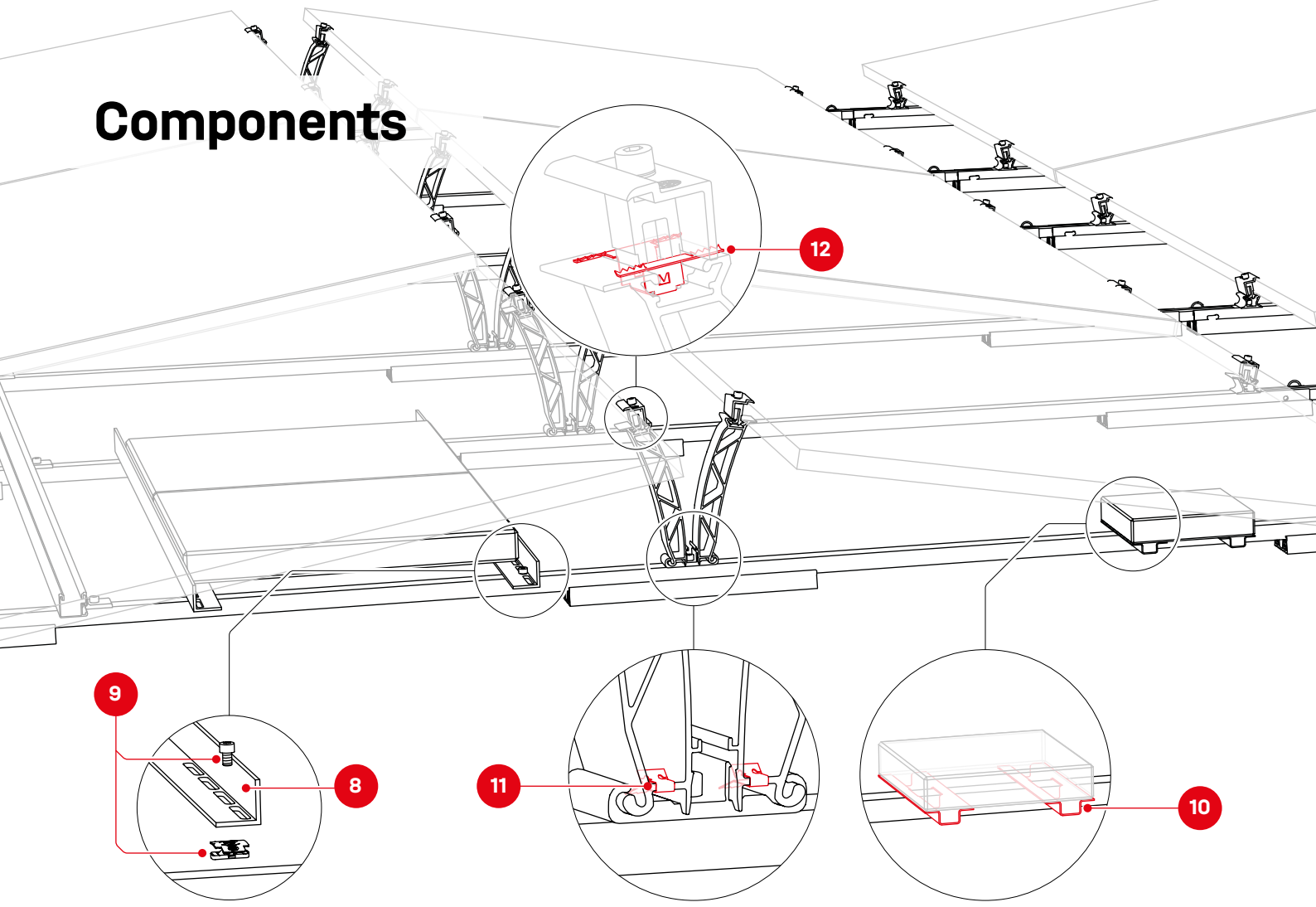
6 2003145
Climber 36/50 Set



7 2001976
Rail connector Set
SingleRail 36



Components



Ballasting

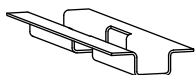
- 8 2004157
Dome Porter Flex



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



- 10 2002300
Dome SpeedPorter



Optional

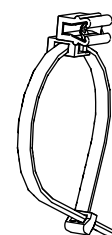
- 11 2004102
TerraGrif PL

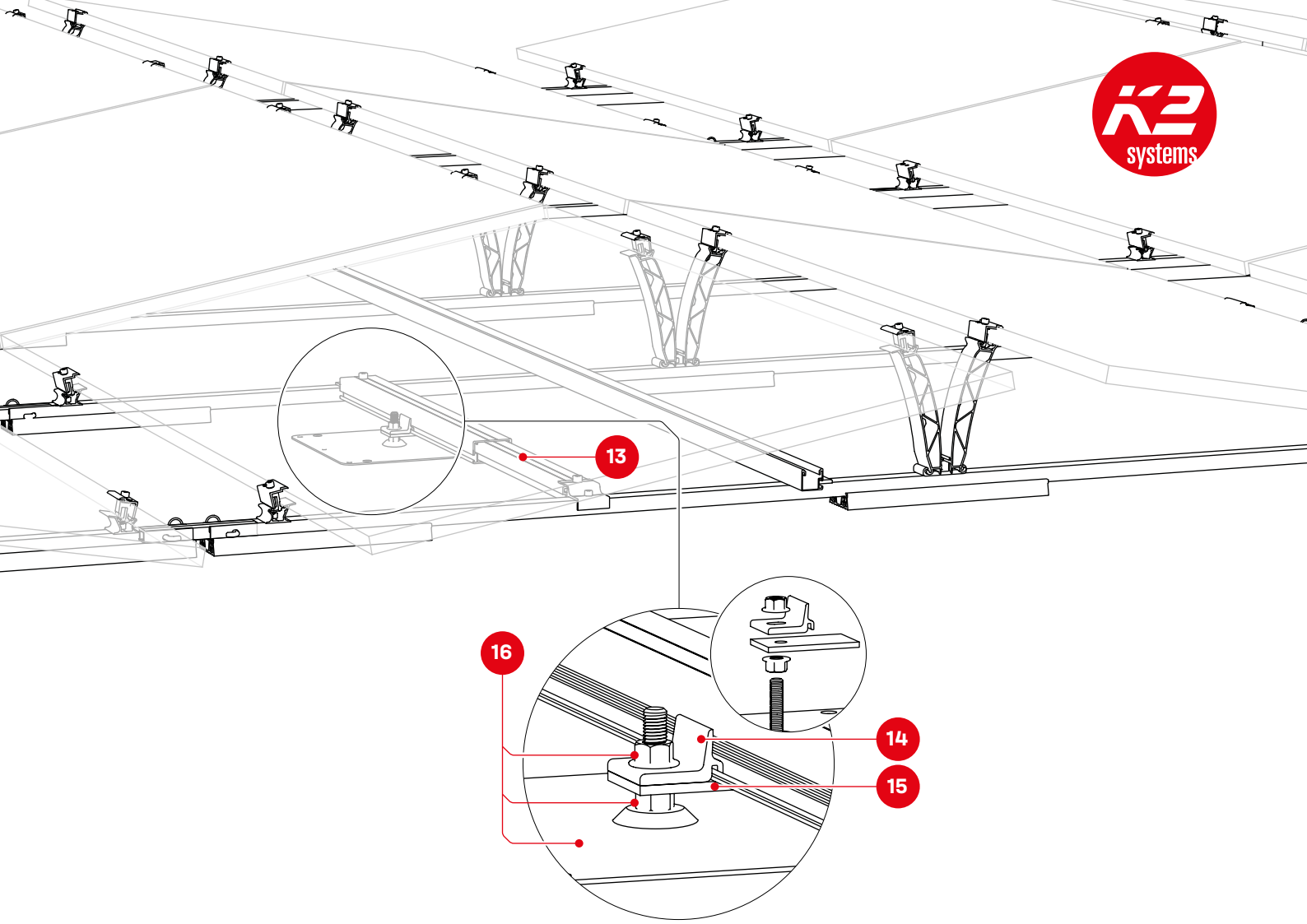


- 12 2003542
TerraGrif K2MI Duo 18



- 2002870
Cable Manager





Fixed connection to the roof

13 2003384
Dome FixPro S



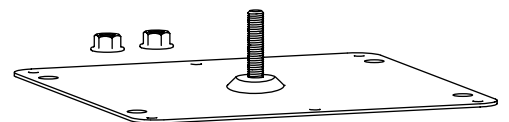
14 2003146 / 2003147
Climber M10/M12



15 2002546 / 2002547
Adapter plate M10/M12



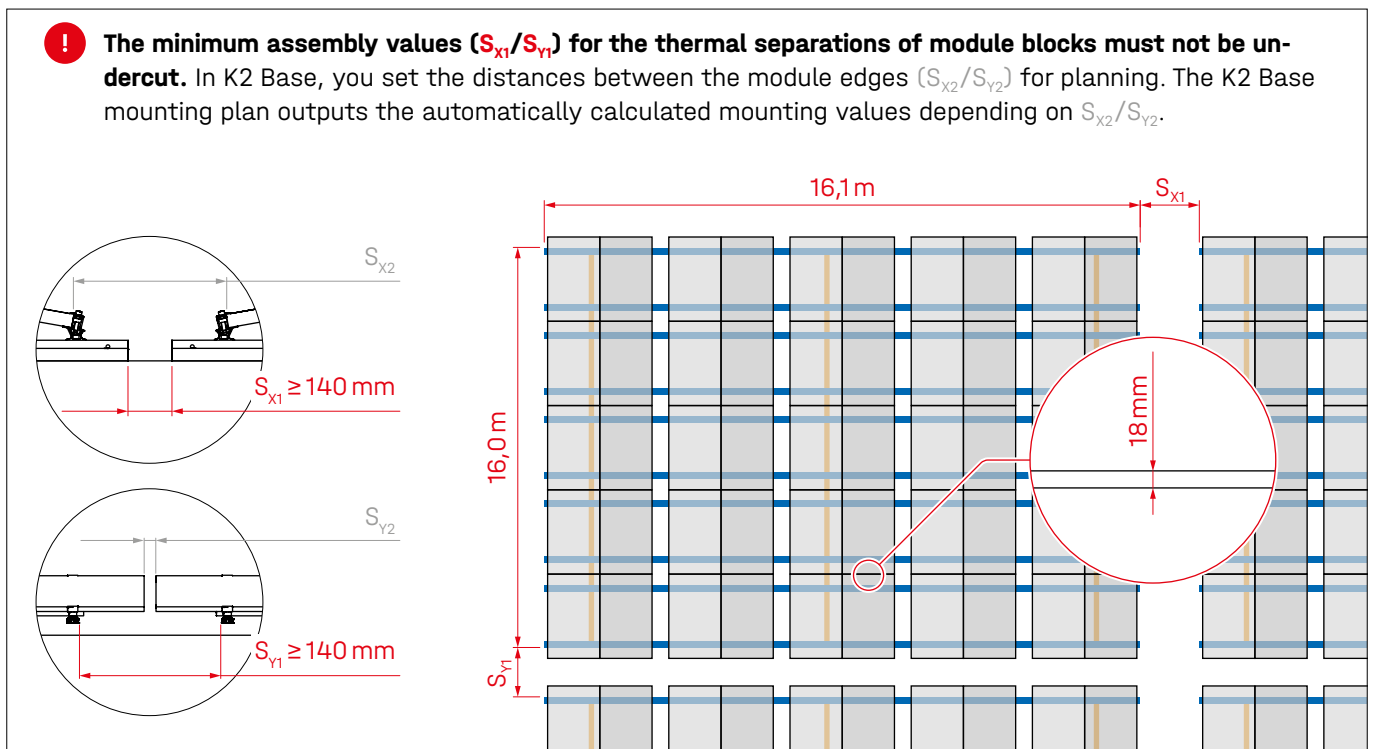
16 **Roof anchor plate**
Not included in the K2 product portfolio. Manufacturer: Sika, CW Lundberg, Solmont etc. Other fastening elements (e.g. threaded rod - min 50 mm, screws and self-locking hexagon nuts) for fixing to the roof anchor plate must be provided by the customer.



Assembly

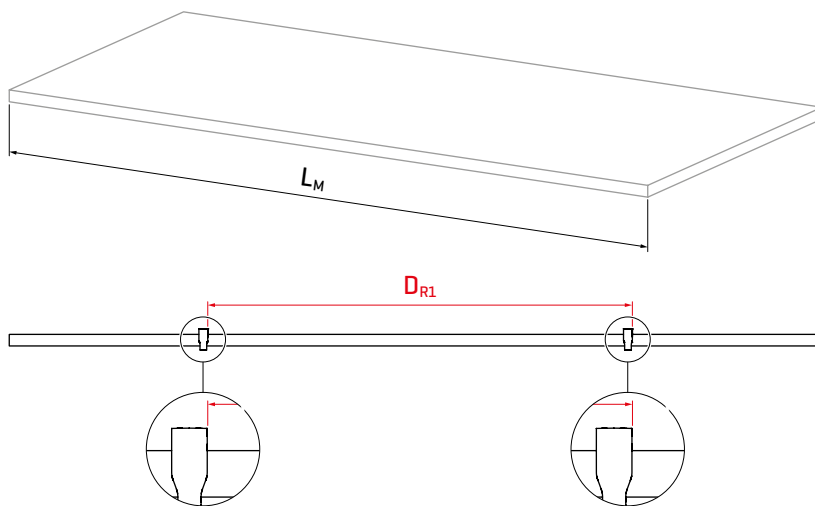
Installation of module field and thermal separations

! 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} .

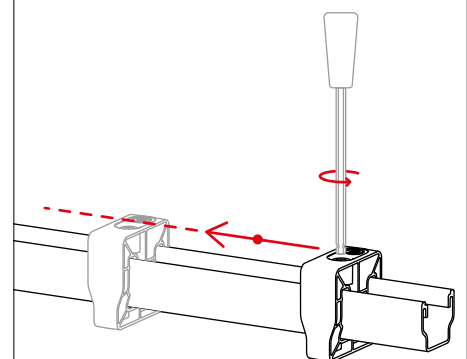


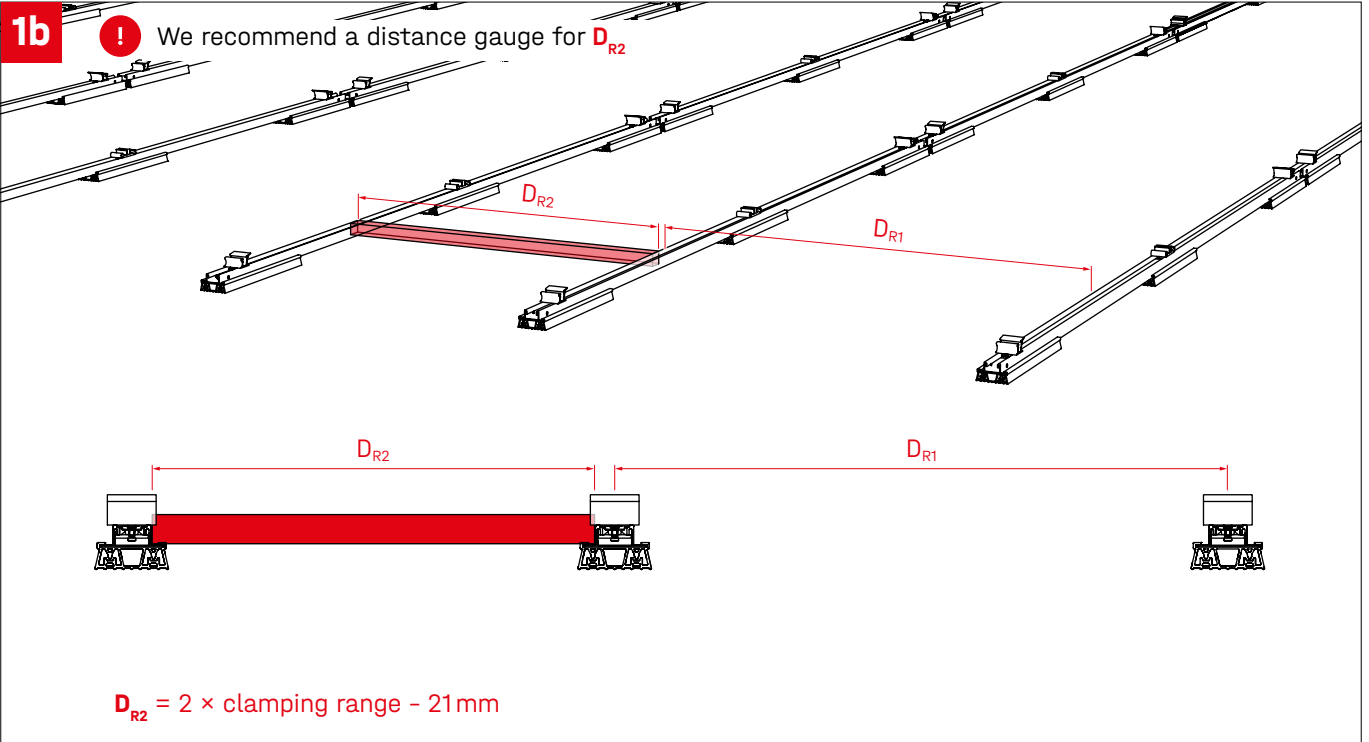
Setting the distance dimensions

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

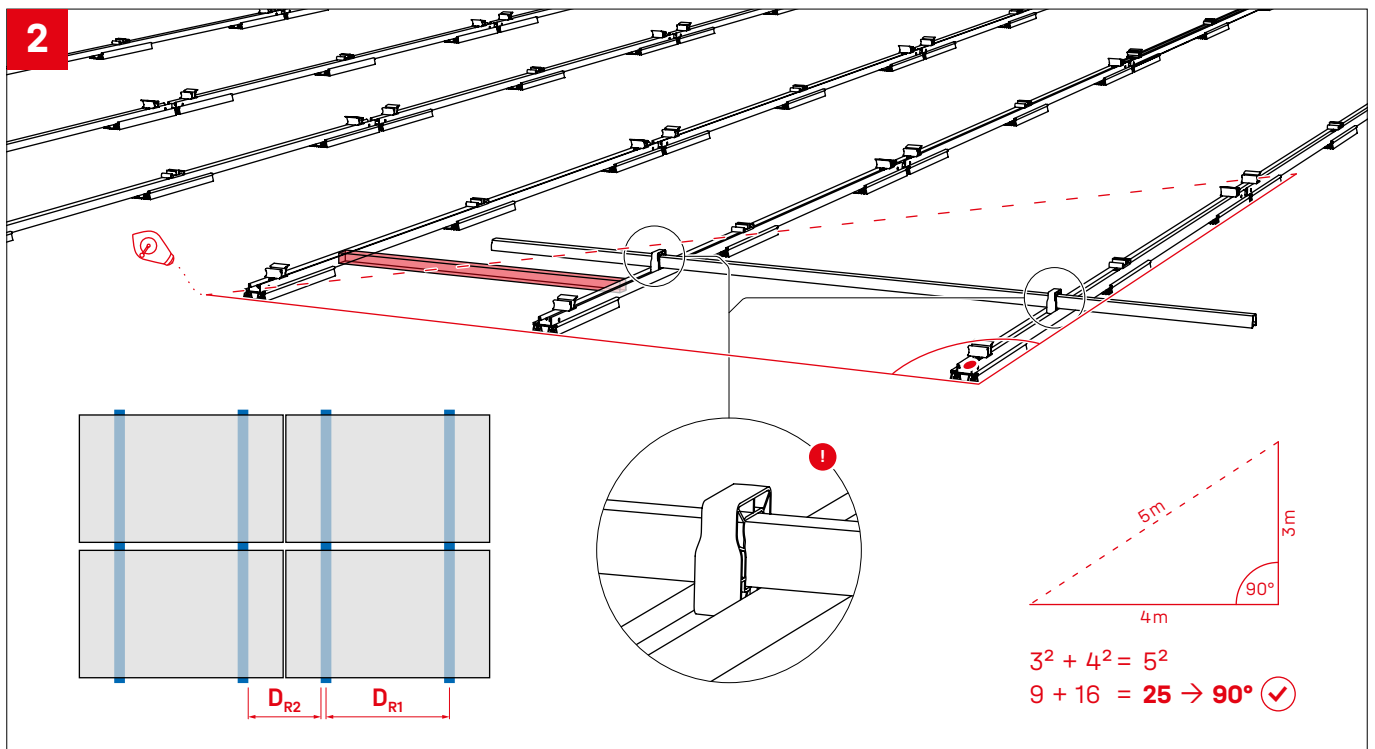


$$D_{R1} = L_M - (2 \times \text{module manufacturer clamping range})$$

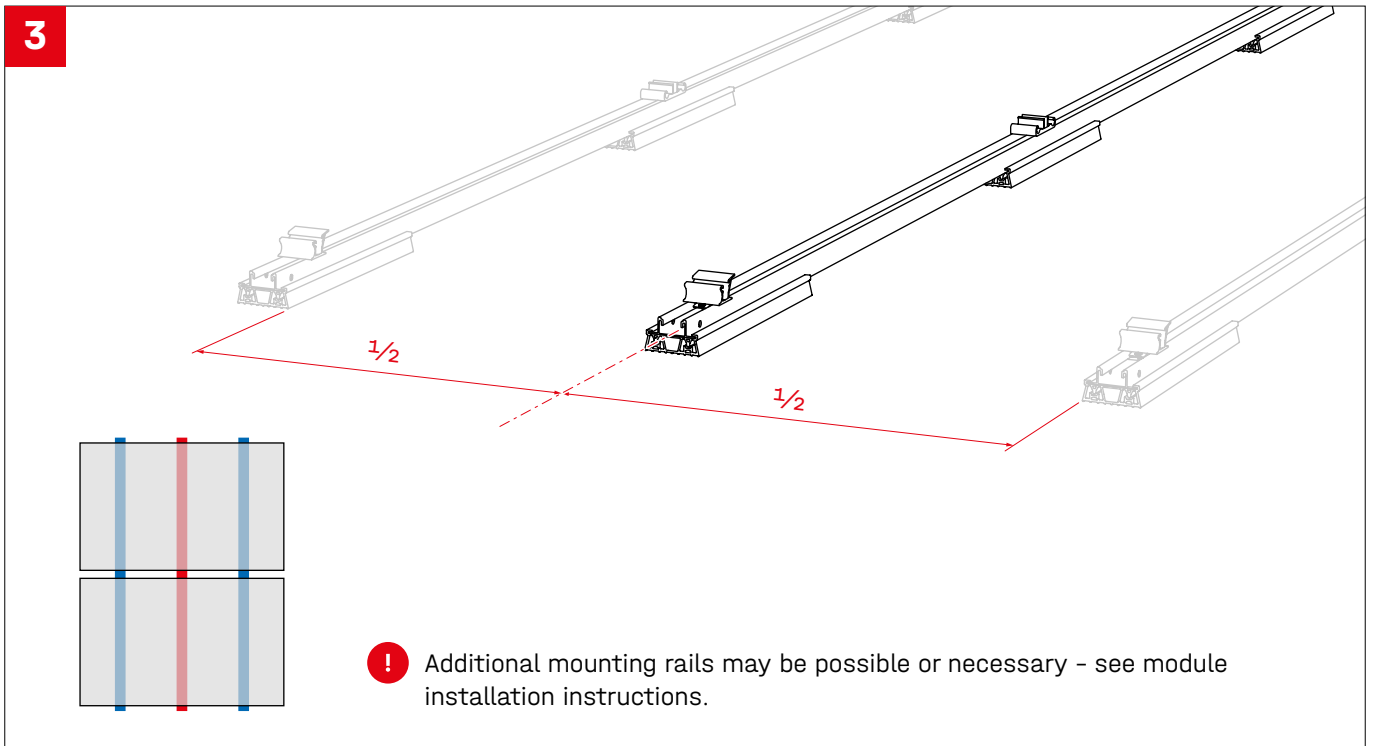




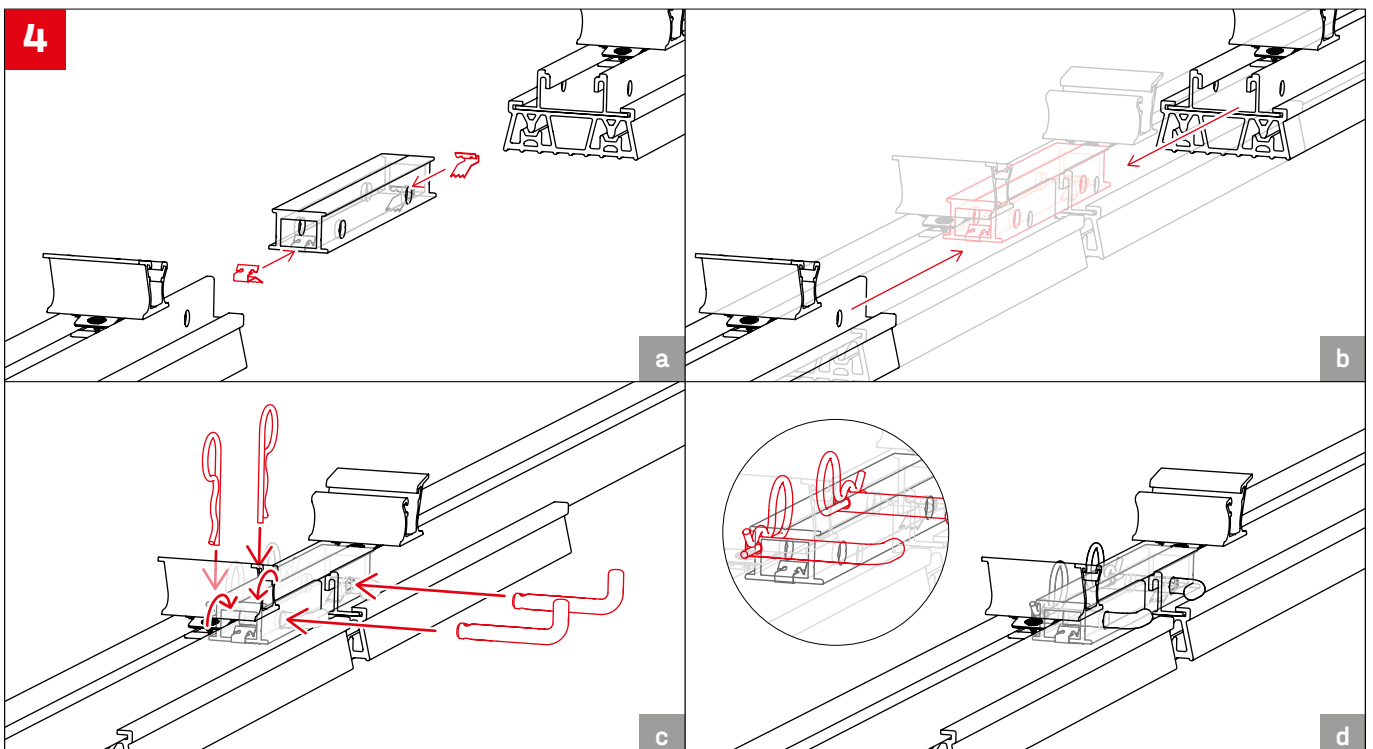
Set up rails



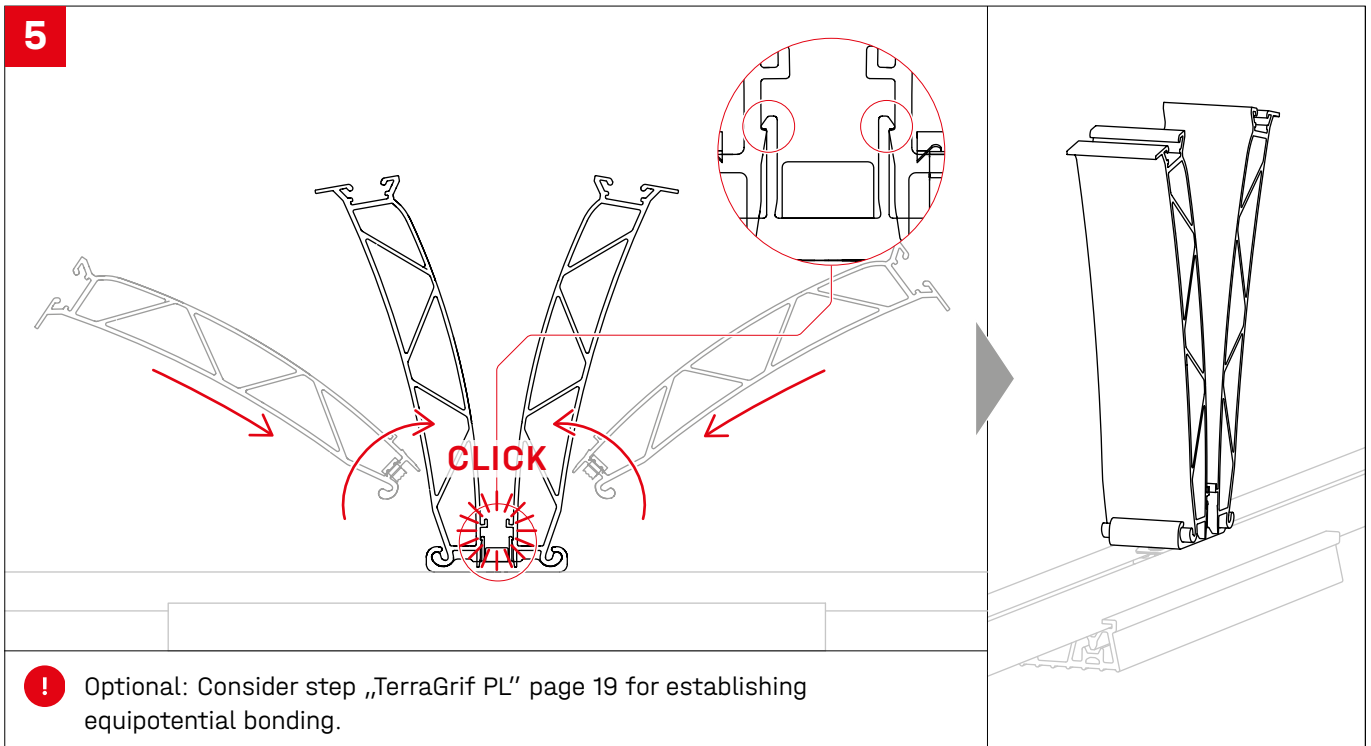
Positioning additional rails for high loads



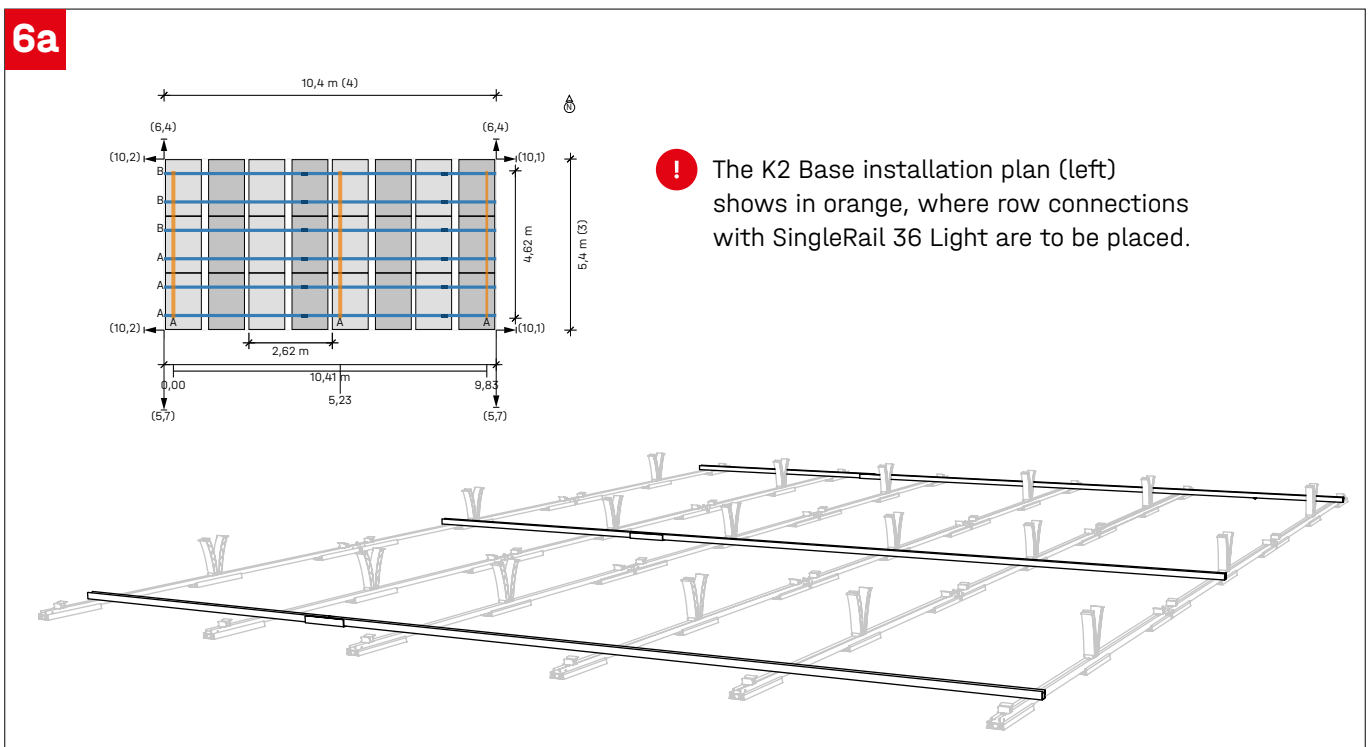
Connecting rails with Dome 6 Connector 195 Set



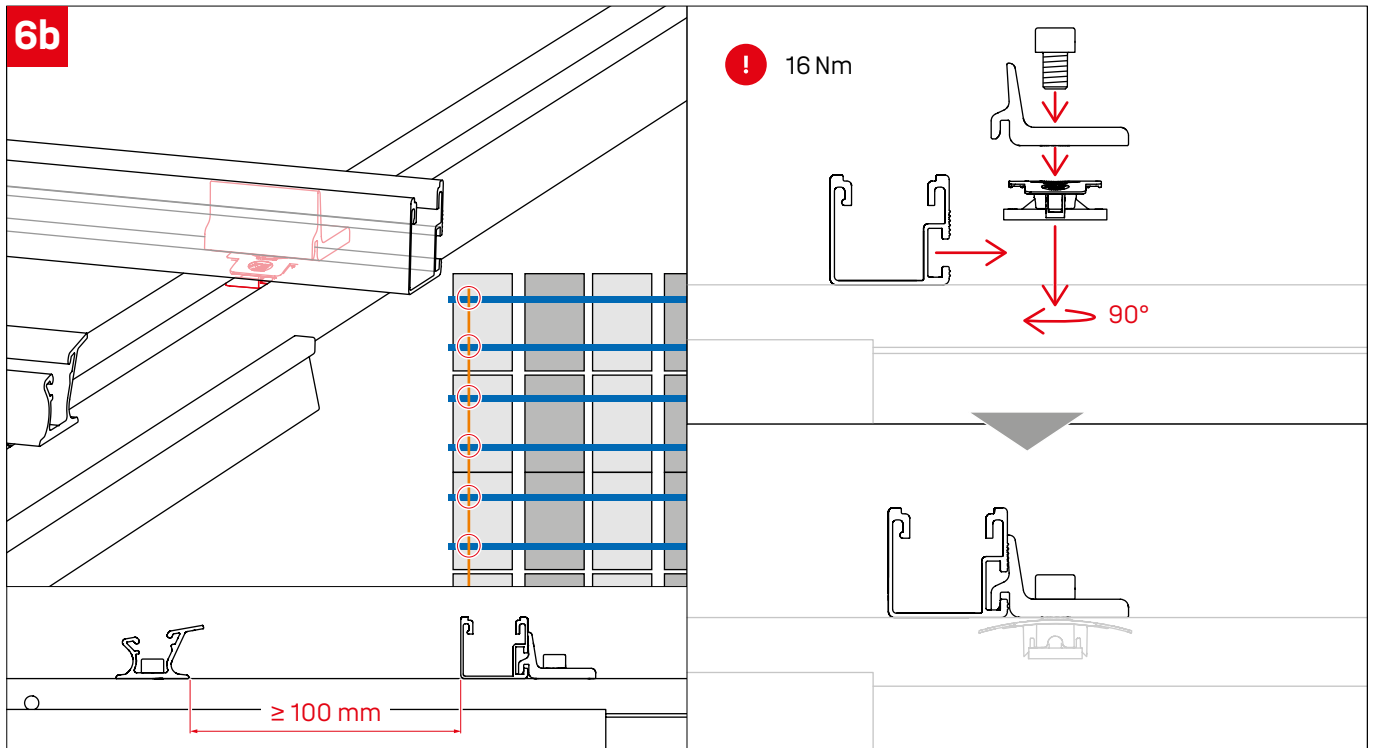
Insert Peaks



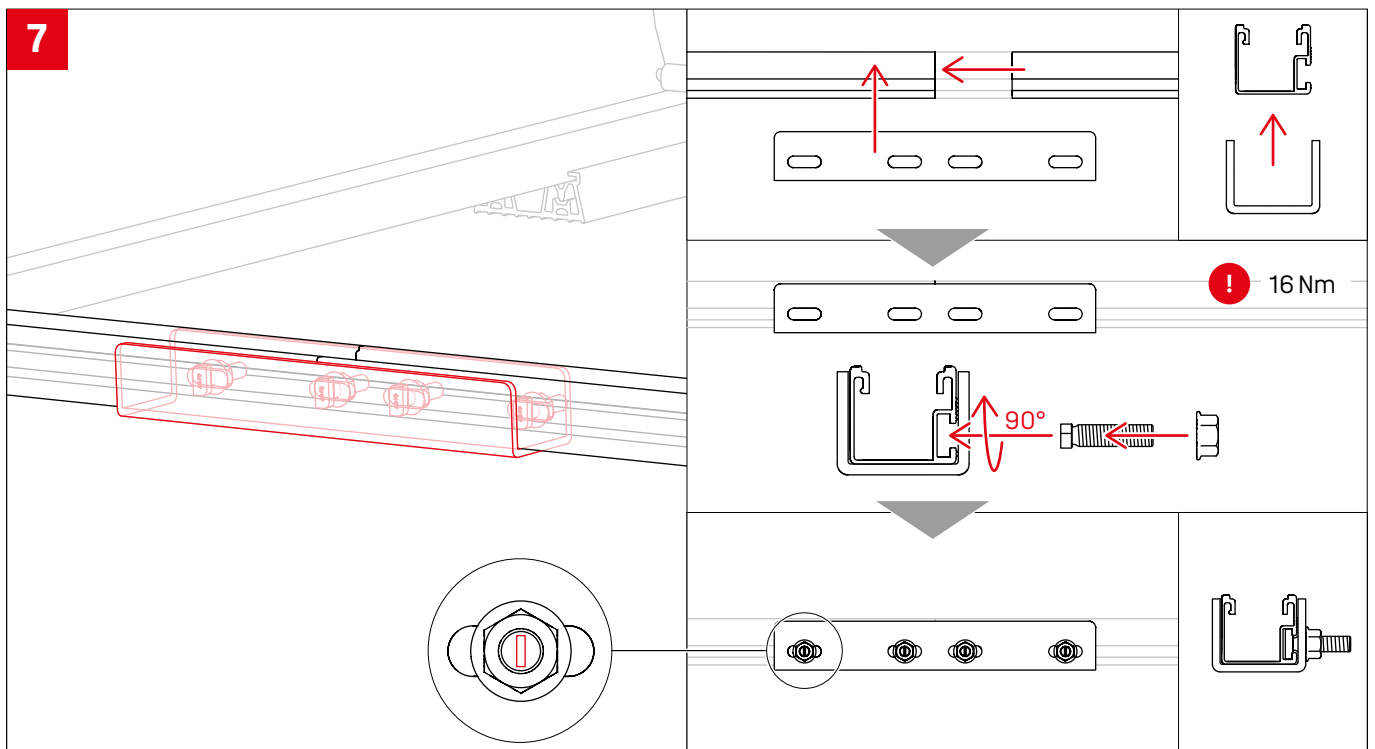
Bracing with SingleRail 36 light




Bracing with SingleRail 36 light

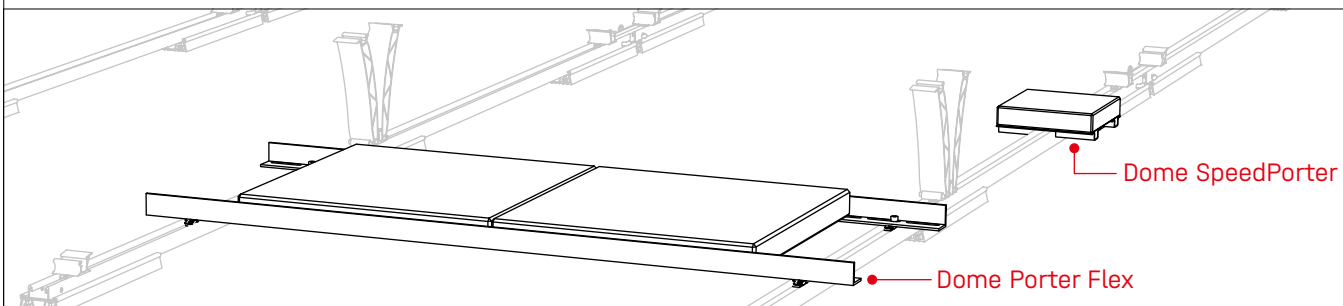
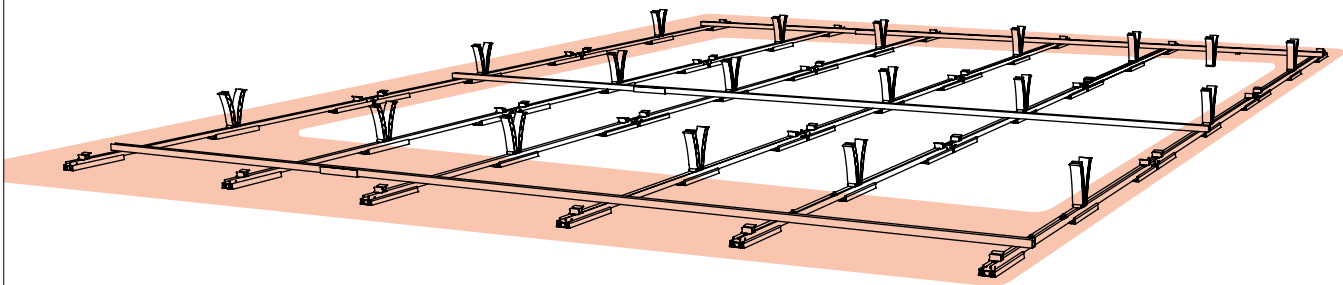


Connecting rails with Rail connector Set SingleRail 36



Ballasting options and specifications

8a  Basic ballasting edge area ≥ 3 kg per module

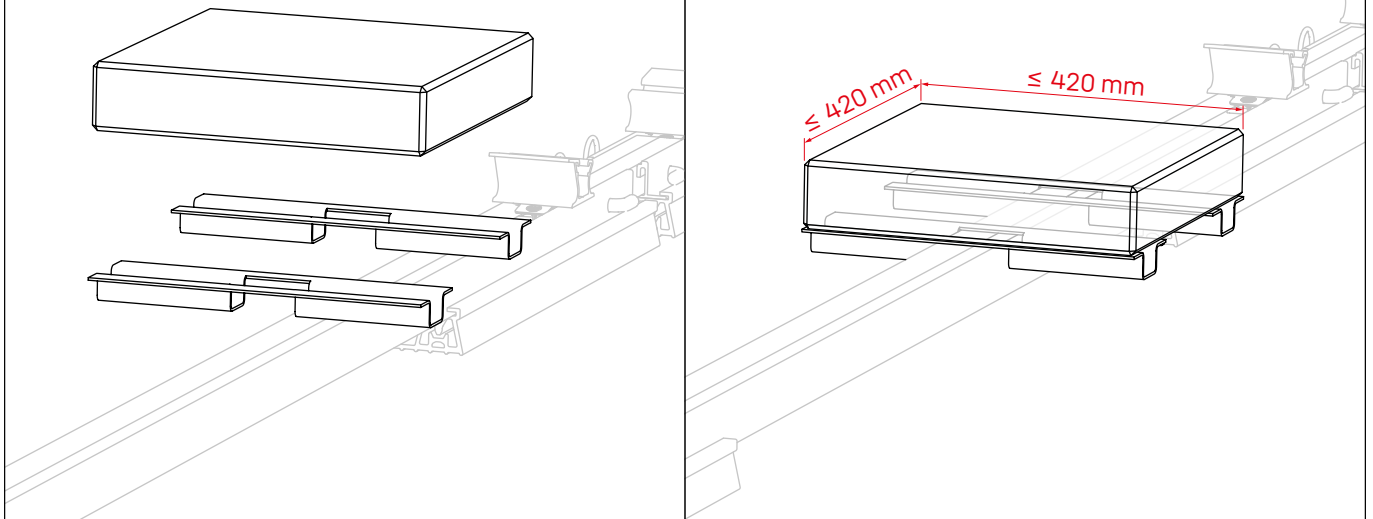


Ballasting with SpeedPorter

8b

! ≤ 40 kg

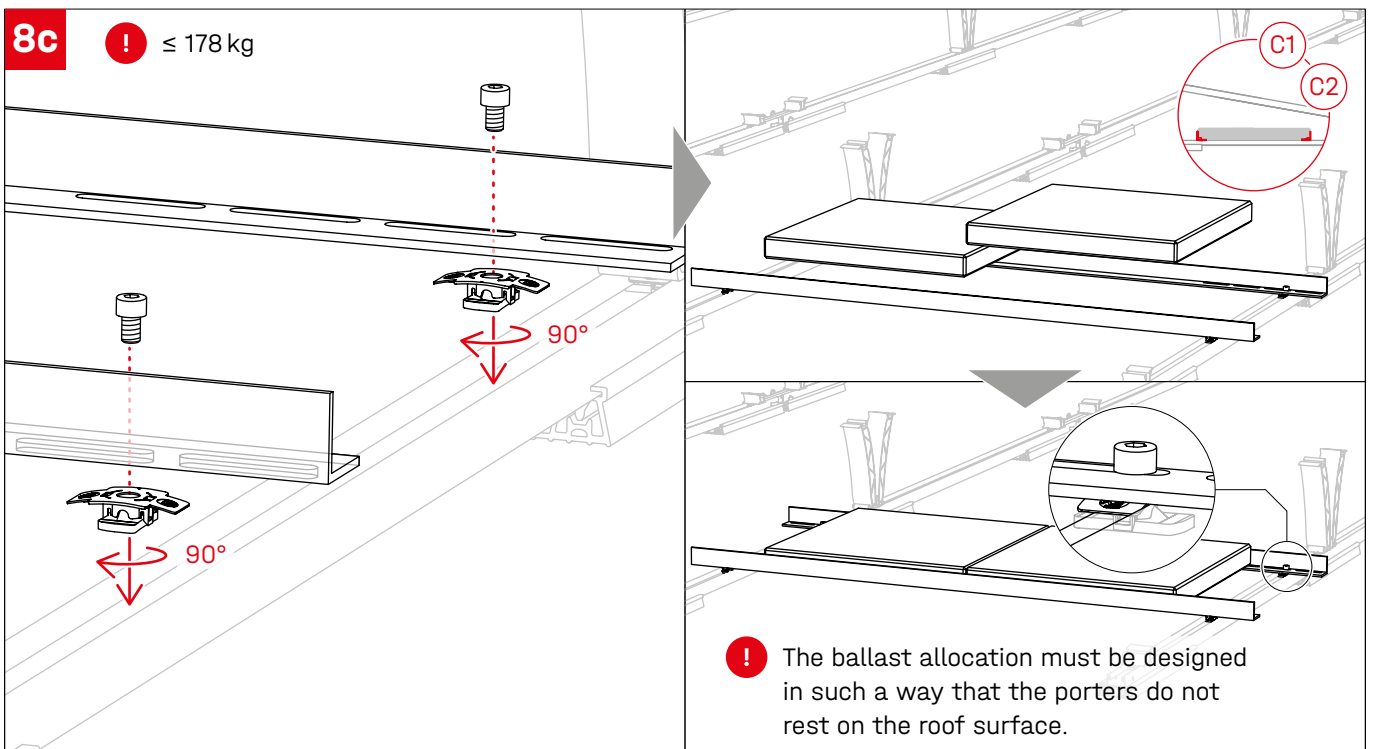
Two SpeedPorters per ballasting position



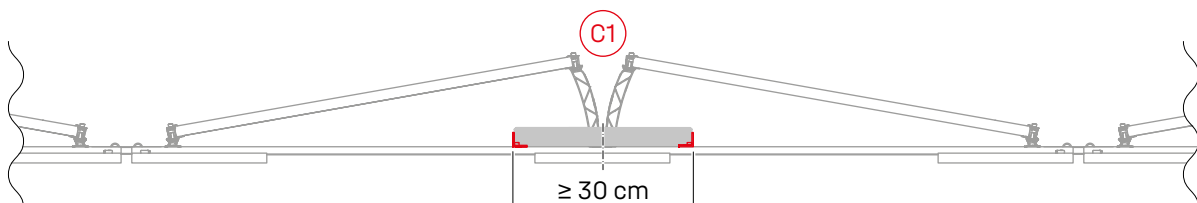
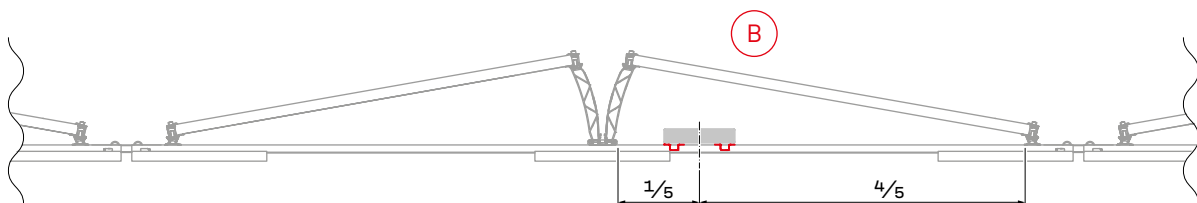
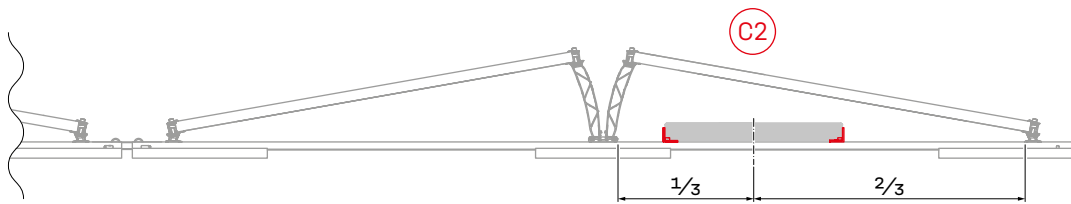
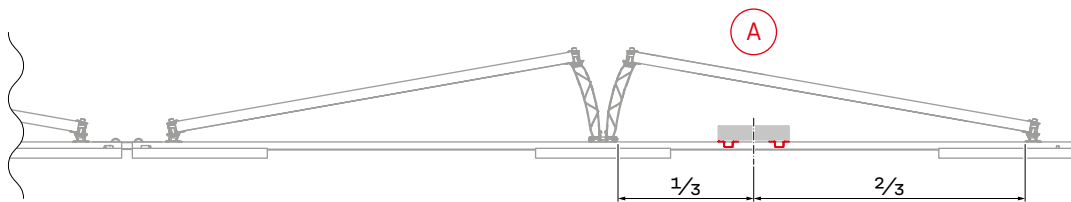
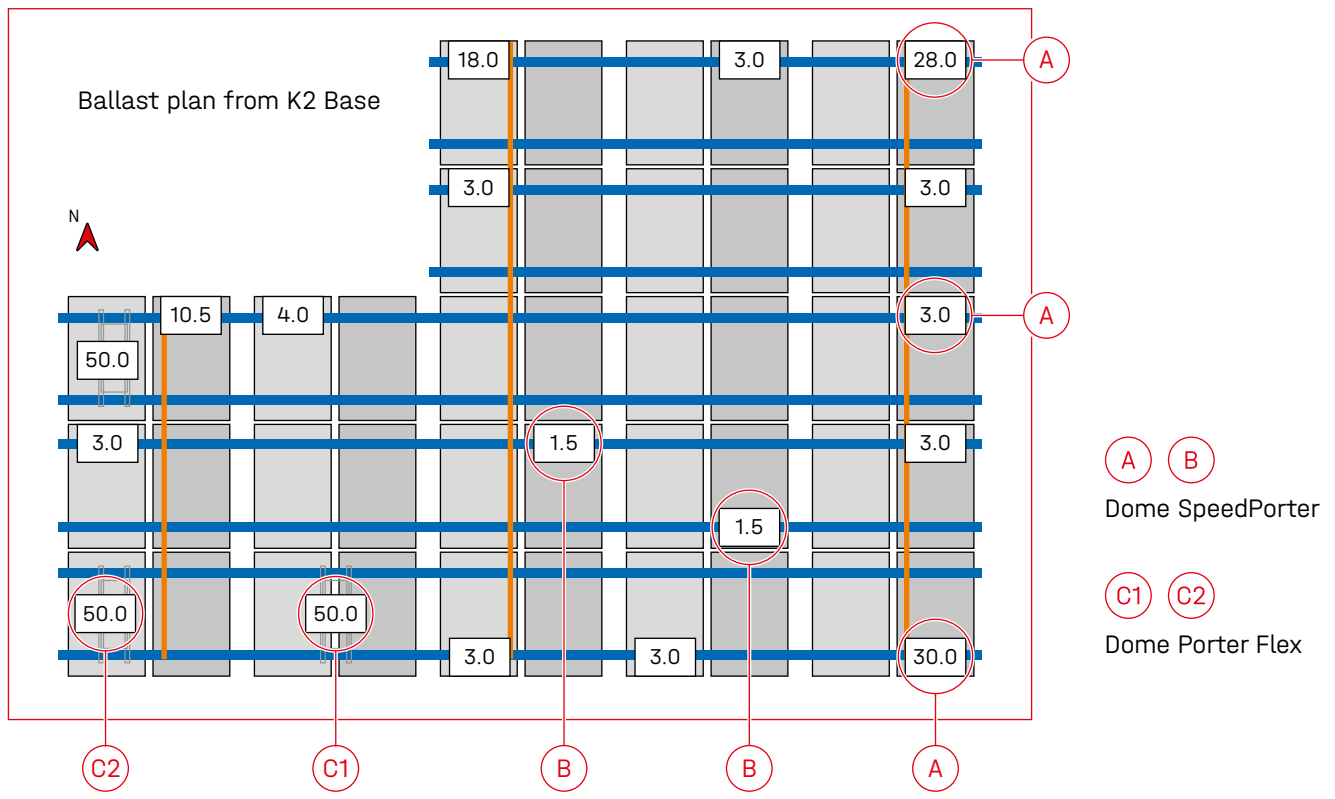
Ballasting with Dome Porter Flex

8c

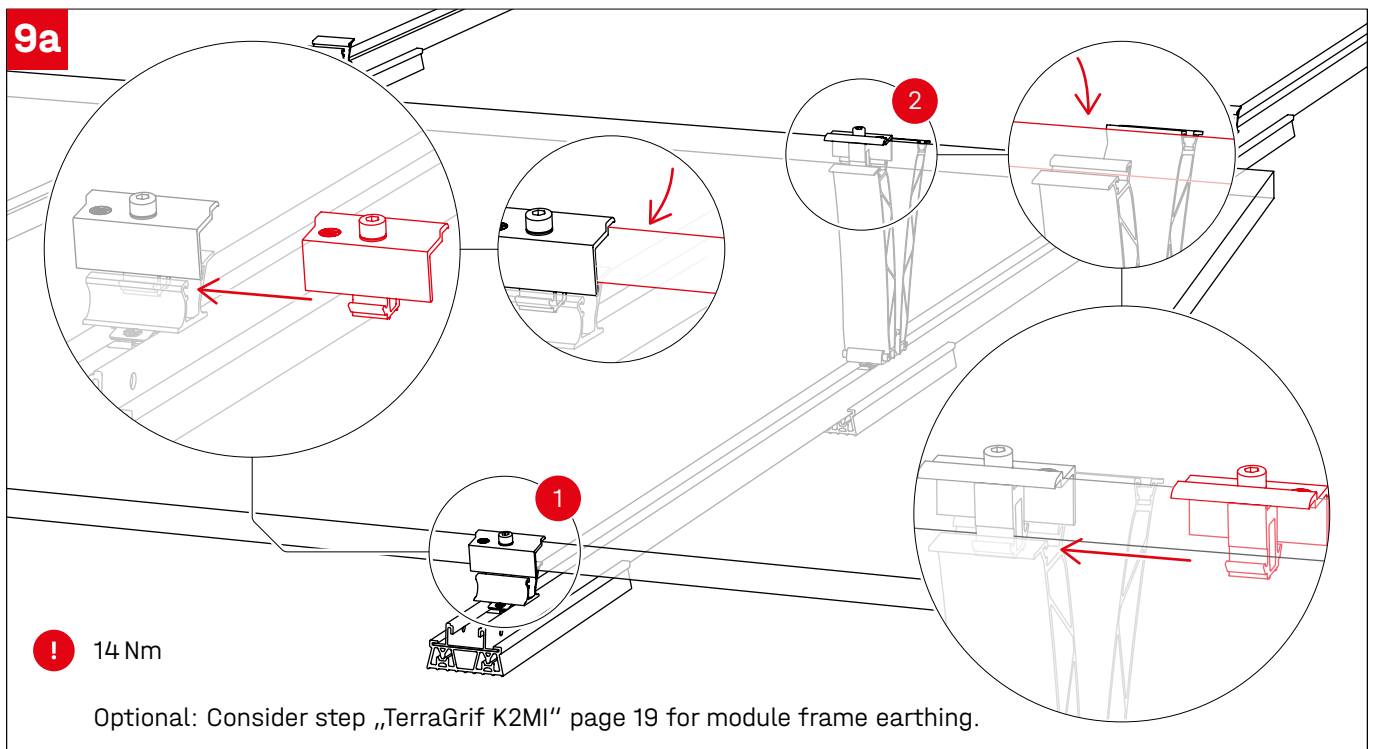
! ≤ 178 kg



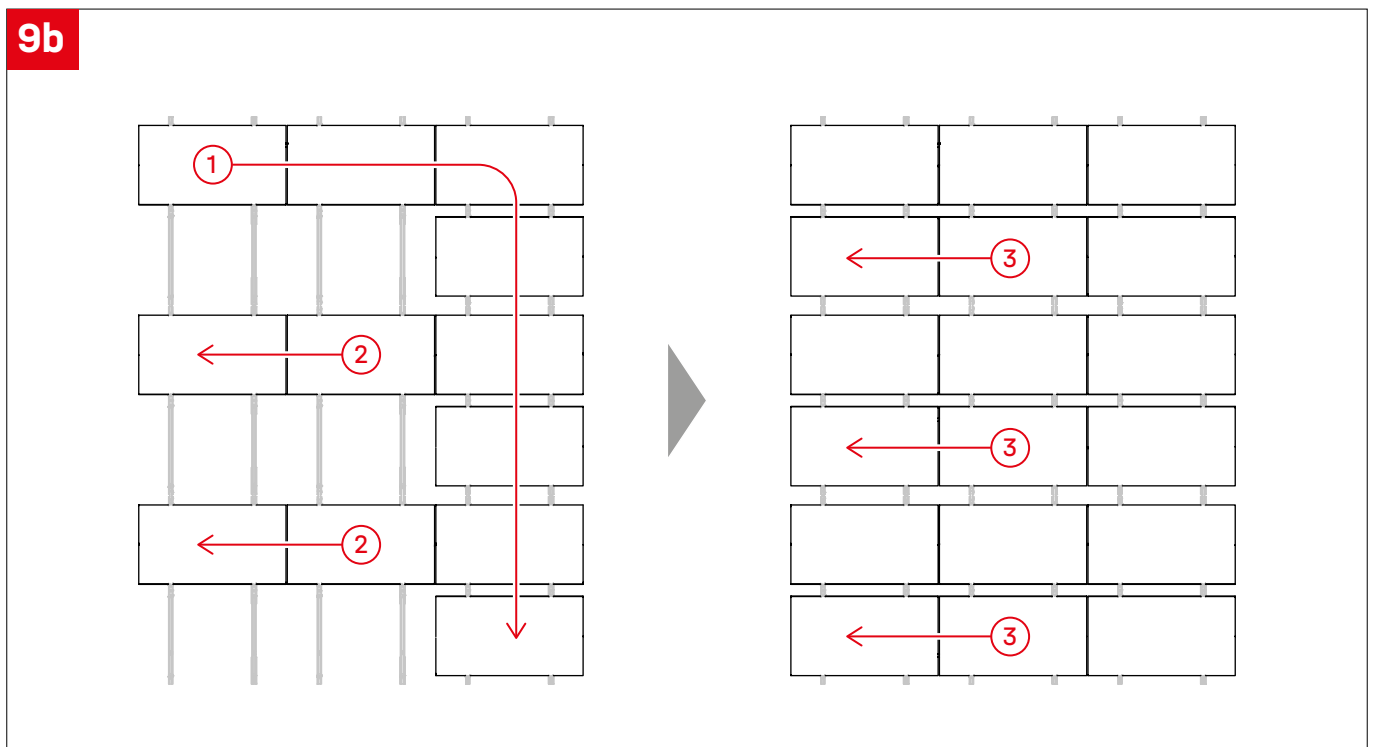
Positioning of ballasting according to K2 Base



Module assembly

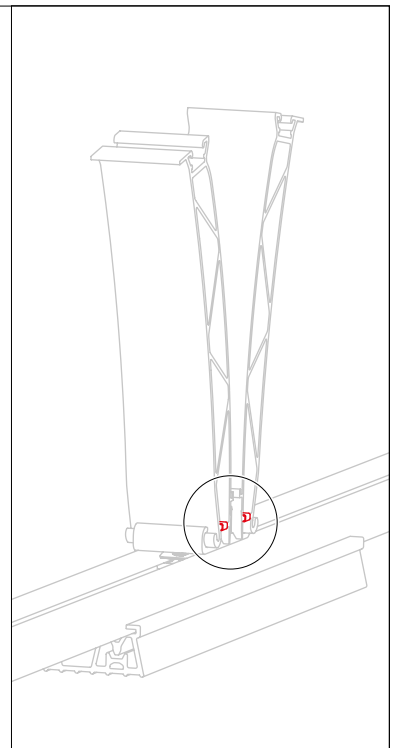
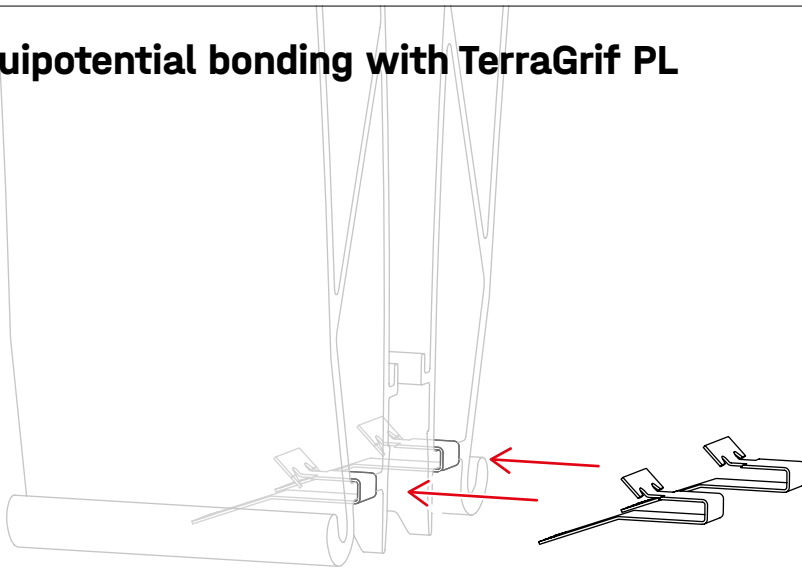


Module assembly sequence



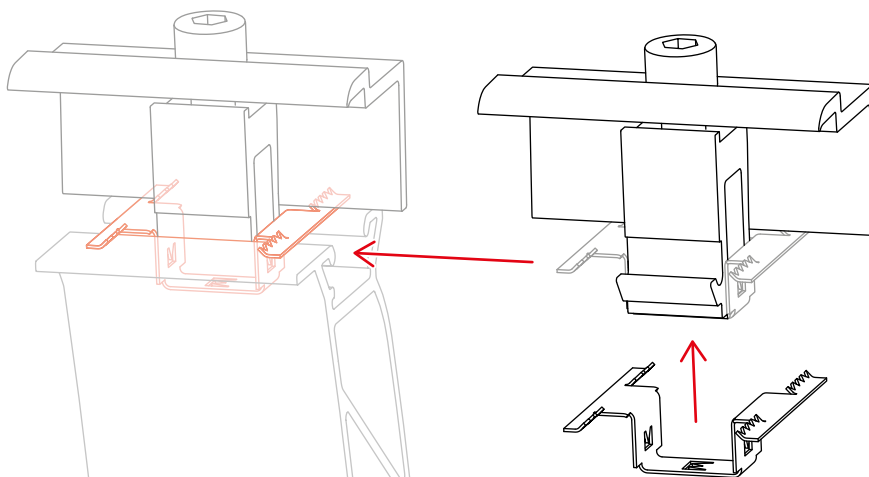
Equipotential bonding / Module frame earthing

Equipotential bonding with TerraGrif PL



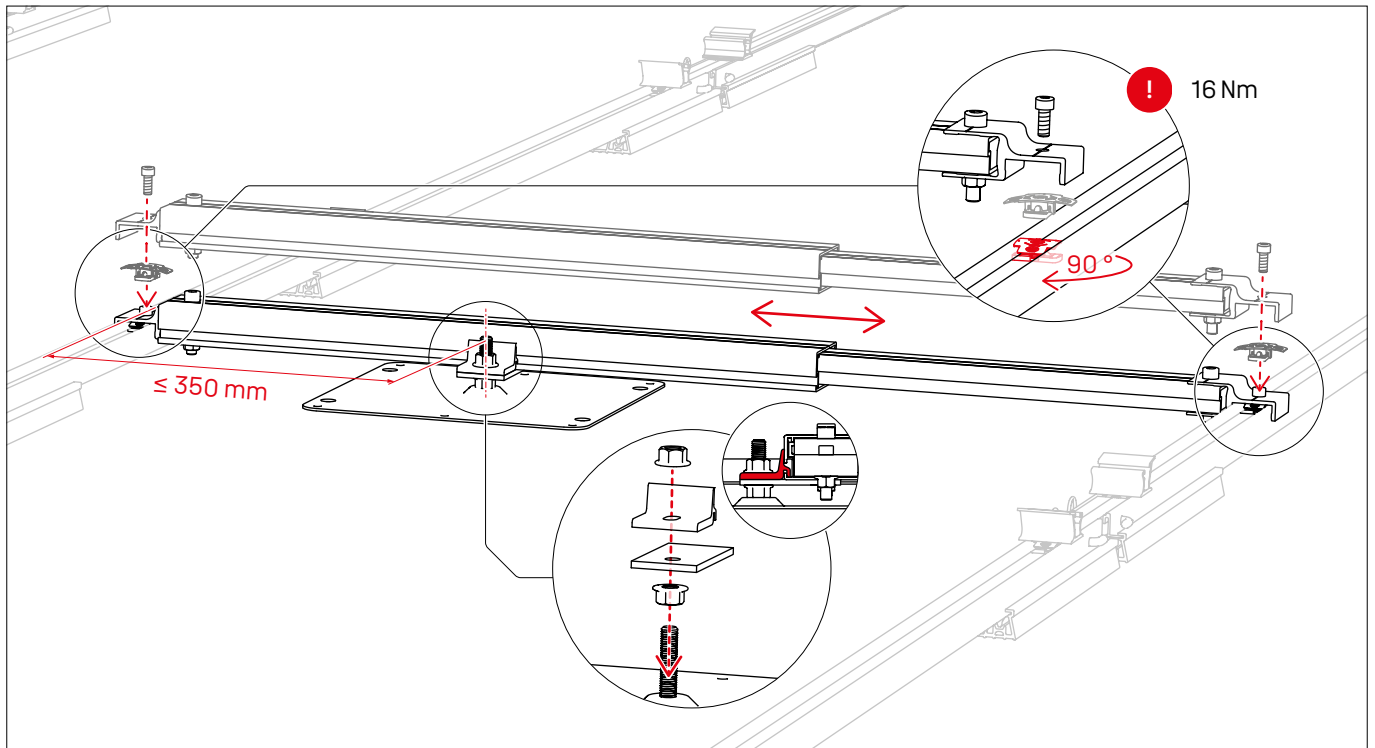
! The insertion of the TerraGrifs takes place before the peaks are installed.

Module frame earthing with TerraGrif K2MI

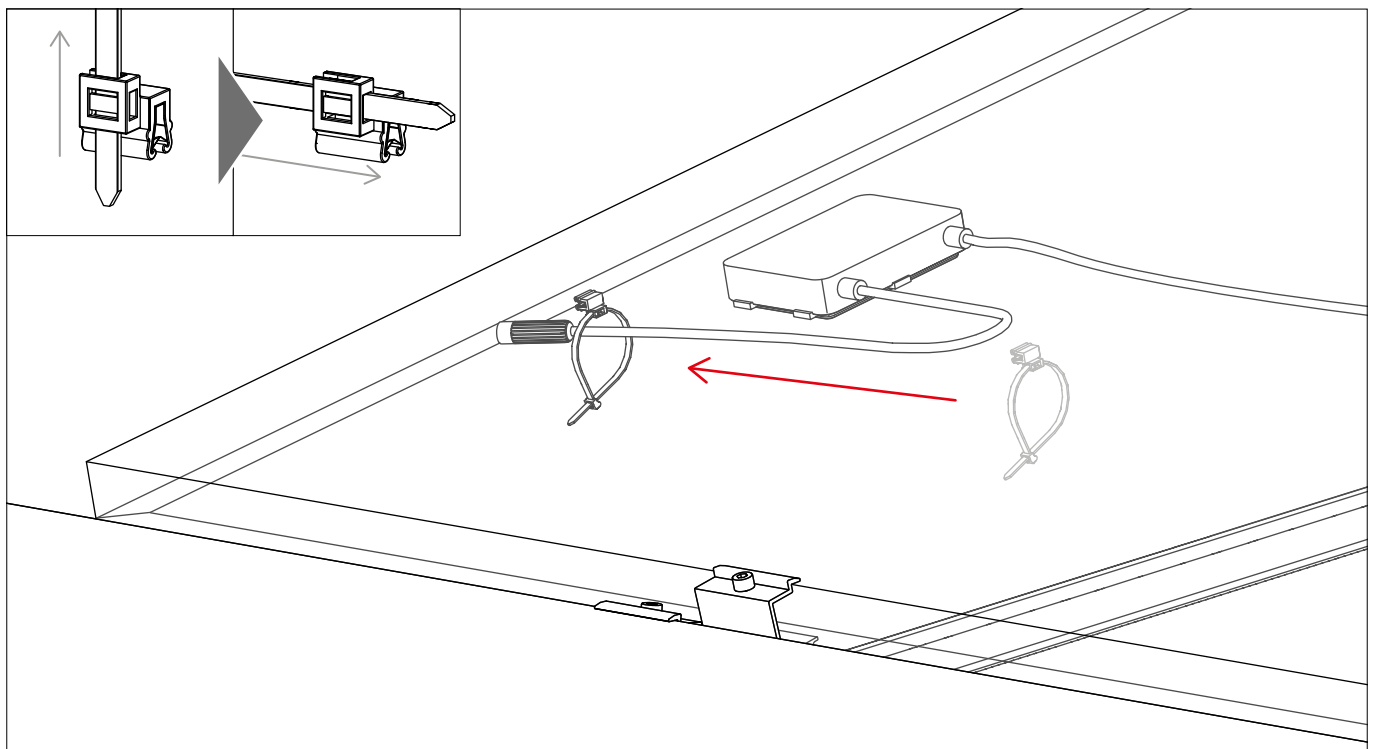


Optional

Fixed connection with Dome FixPro using Solmont mounting base



Cable management with Cable-Manager



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
- **Service Hotline: +49 7159 42059-0**

Our General Terms of Business apply. Please refer: k2-systems.com

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D-Dome 6 Xpress LS Assembly EN V1 | 0426 · Subject to change
Product illustrations are exemplary and may differ from the original.



Connecting Strength

k2-systems.com