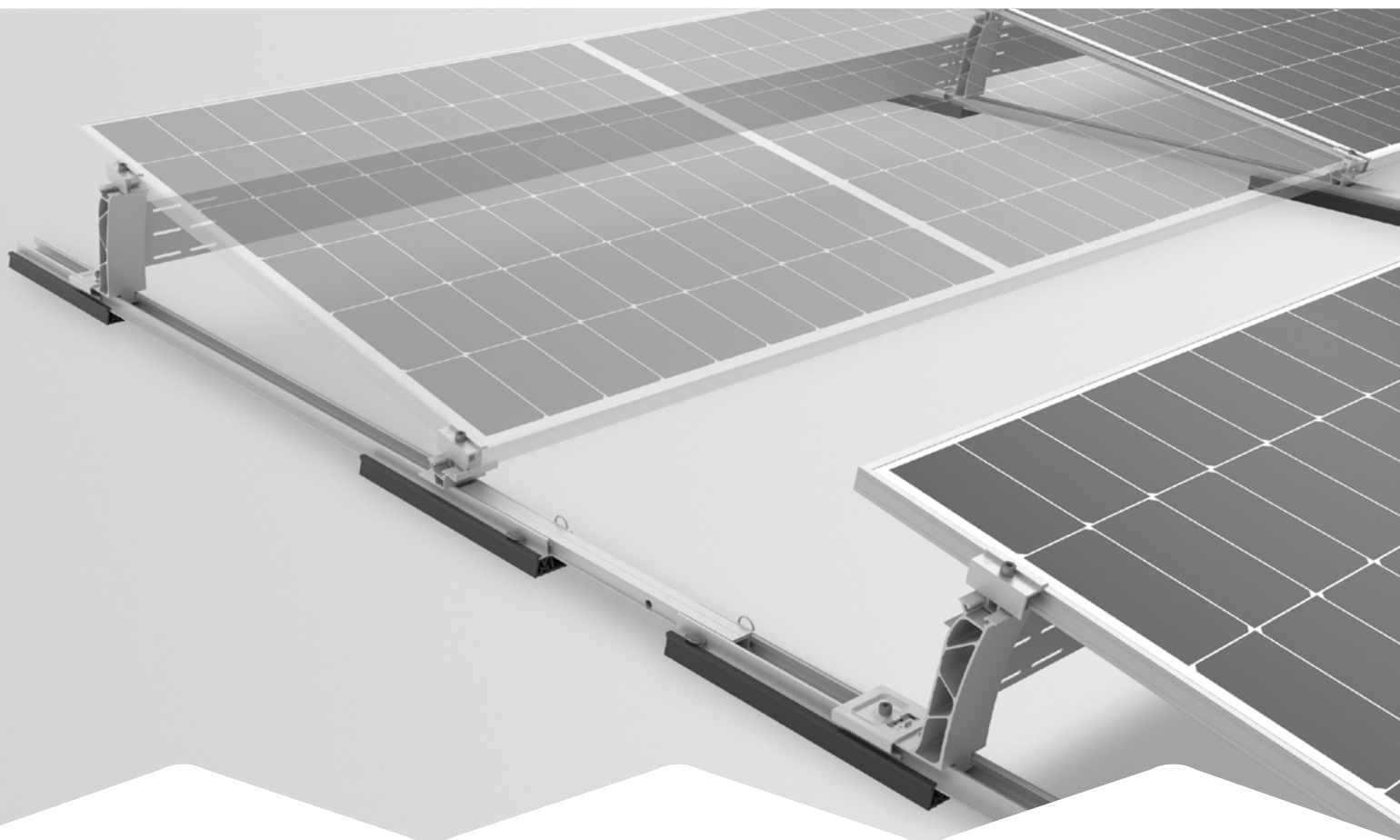




**Connecting Strength**



 Assembly instructions

# **S-Dome 6 System**

## **Xpress**

# Content

• Tools overview	3
• General safety information	4
• The following guidelines apply	5
· Planning with K2 Base	5
· Roof requirements	5
· Static requirements	5
· Important mounting instructions	5
• Components	6
· Base components	6
· Ballasting	8
· Fixed connection to the roof	9
• Assembly	10
· Installation of module field and thermal separations	10
· Module blocks	11
· Row spacing settings	12
· Ballasting options and specifications	16
· Module assembly	18
· Assembly Windbreaker	19
• Optional assembly steps	20
· Fixed connection with Dome FixPro using Solmont mounting base	20
· Module frame earthing with TerraGrif	21
· Cable management with Cable-Manager	21
• Notes	22

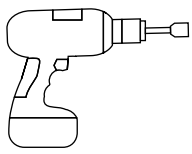
## Quality tested - several certifications

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



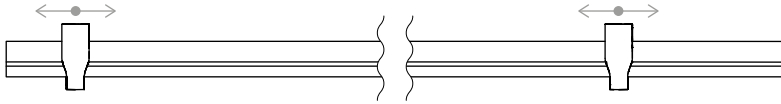
6 mm



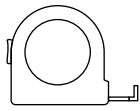
6 - 30 Nm  
(4.5 - 22.2 lb-ft)



6 mm



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

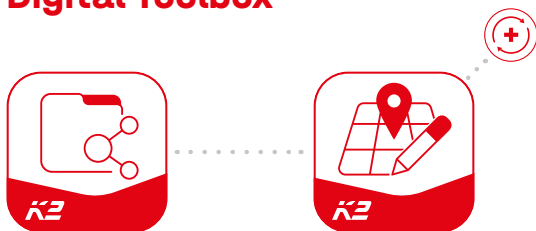


≥ 3.0 m



≥ 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](http://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  $< 10^\circ$ 
  - Up to  $\leq 5^\circ$  combinations with ballast possible
  - $> 5^\circ$  to  $< 10^\circ$  only without ballast
- The roof surface must be clean and dry. Roof irregularities must be corrected or removed where appropriate.
- The coefficient of friction of the roof must be determined on-site. See video [k2-systems.com/en/friction-coefficient](http://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:
  - length 1448 - 2390 mm,
  - width 960 - 1170 mm



## Important mounting instructions

### Mounting system

- A minimum distance to the roof edge of 600 mm must be observed. 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.
- A module block must consist of at least two elevations must for this mounting system to be properly utilized.
- Ensure a thermal separation (distance between module blocks) after a maximum of 15 m in the module row direction and in the direction of the base rail.
- 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

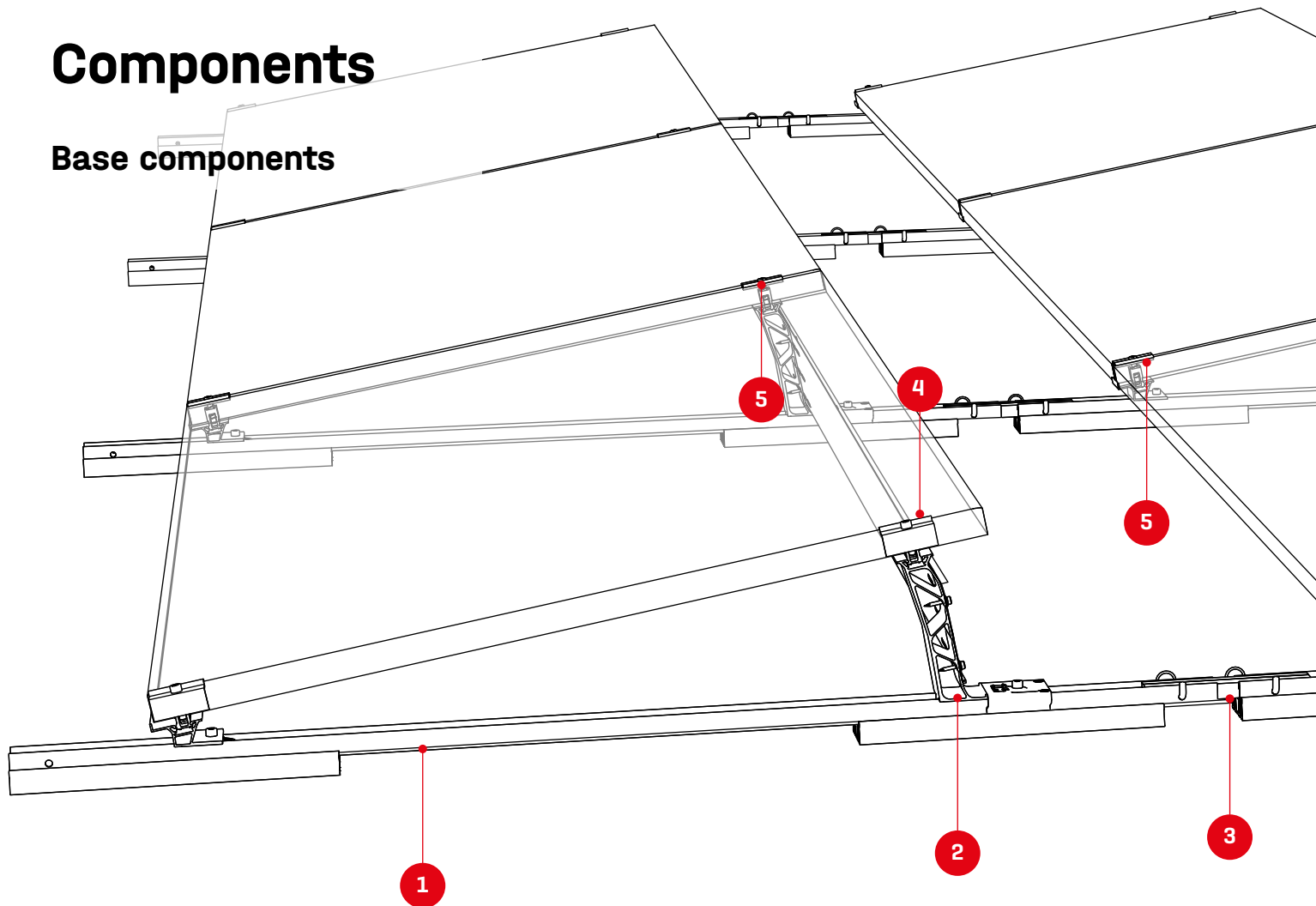
- Tightening torque of 14 Nm for all module clamps.
- Adhere to module manufacturer recommendations for clamping area and module installation (see module manufacturer instructions). Check whether manufacturer approval is available for clamping on the short module side. See [k2-systems.com/en/approved-modules-dome-6](http://k2-systems.com/en/approved-modules-dome-6)

### 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.
- 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).

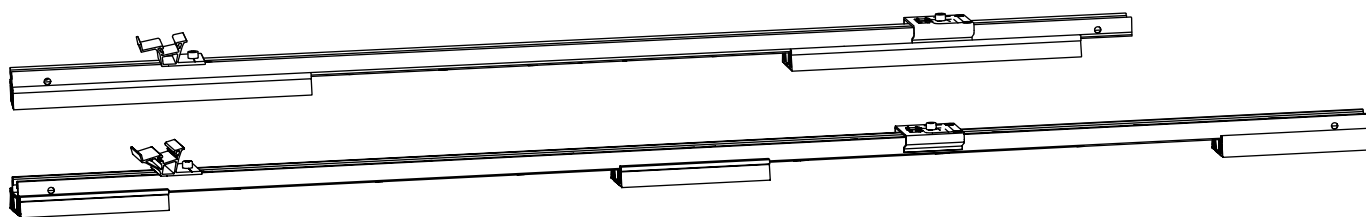
# Components

## Base components

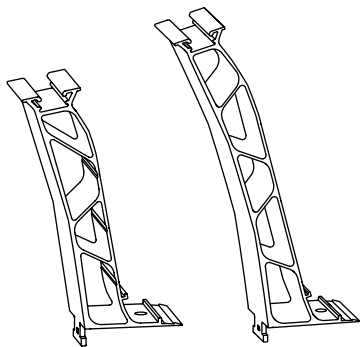


- 1 Article number see table!  
**S-Dome 6 Base Sets**

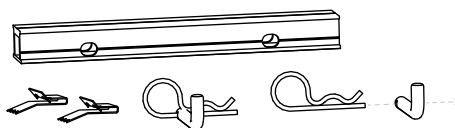
Type	Length [mm]	Article number
S-Dome 6.10 Base Set	1500	2003621
S-Dome 6.15 Base Set	1820	2004501



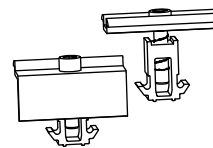
- 2 2004125 / 2004174  
**Dome 6.10 / 6.15 Peak**

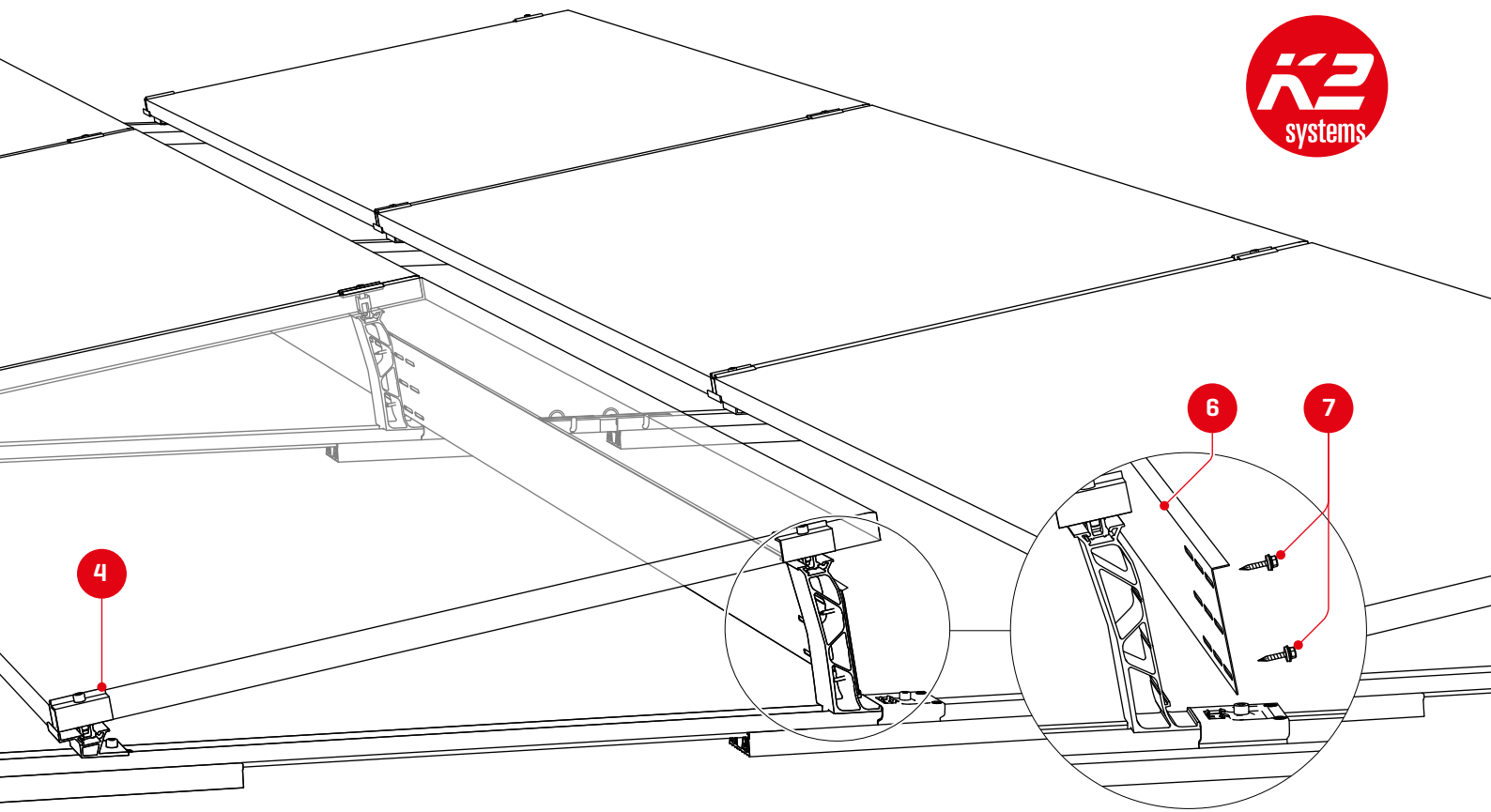


- 3 2004123 / 2004178  
**Dome 6 Connector  
195 / 495 Set**



- 4 5 **DomeClamp EC  
DomeClamp MC**

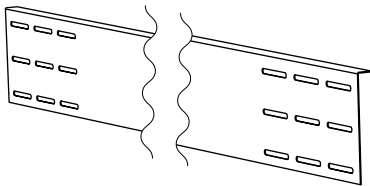




**6 S-Dome 6.10/6.15 Windbreaker**

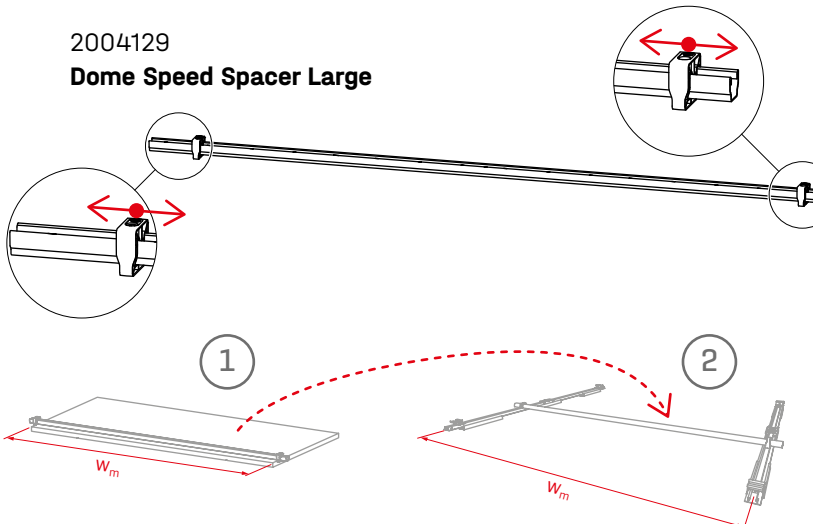
Type (Modulbreite)	10°	15°
Short (1448 - 1799 mm)	2003249	2004179
Long (1799 - 2150 mm)	2003250	2004180
X-tra Long (2045 - 2398 mm)	2004103	2004181

**7 Article number system-specific Thread-forming tapping screw with sealing, 6 × 25**



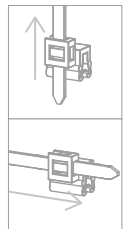
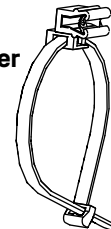
**Dome 6 distance template**

2004129  
**Dome Speed Spacer Large**



**Optional**

2002870  
**Cable-Manager**

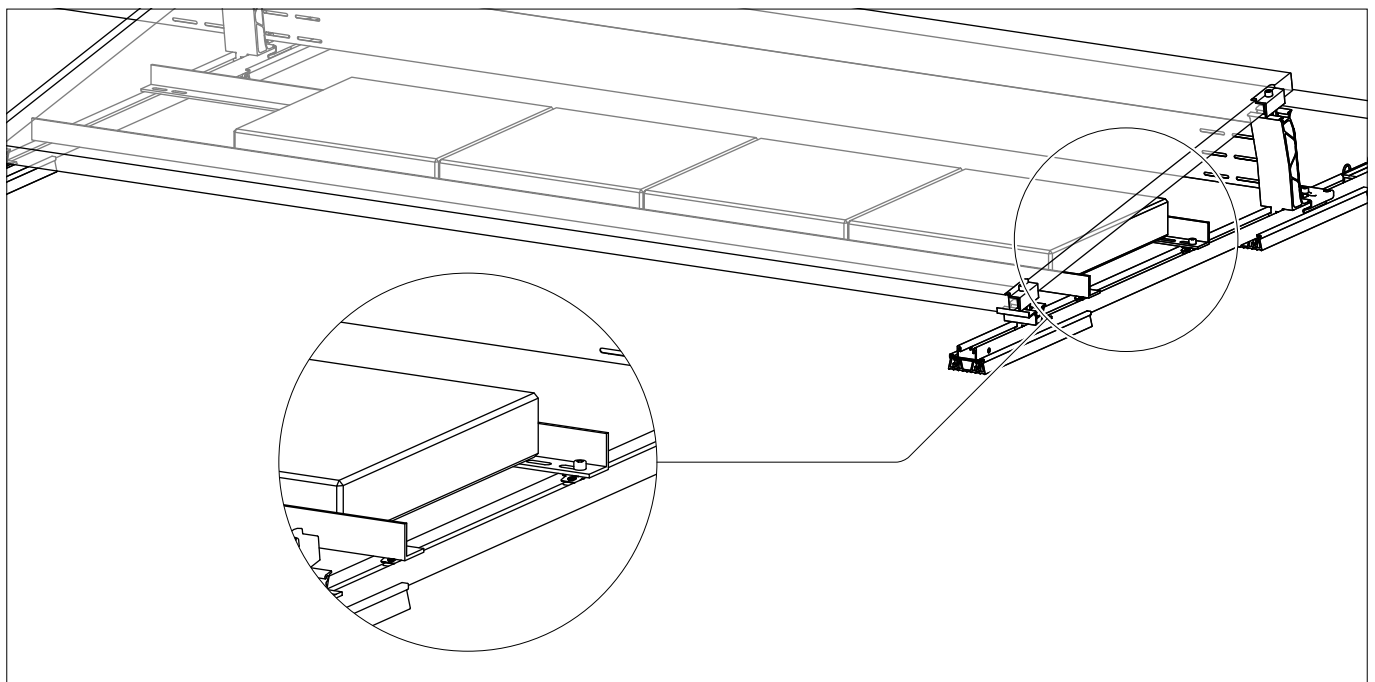
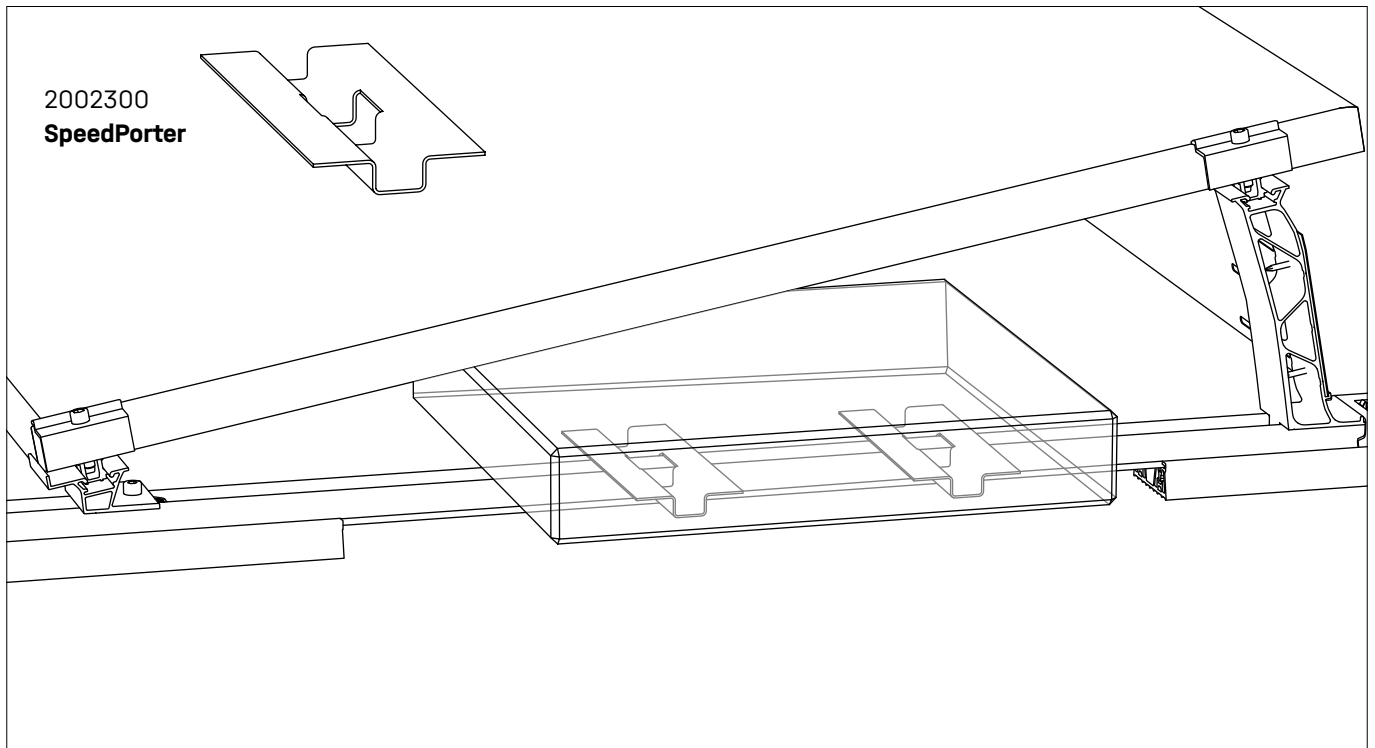


2003542  
**TerraGrif K2MI Duo 18**

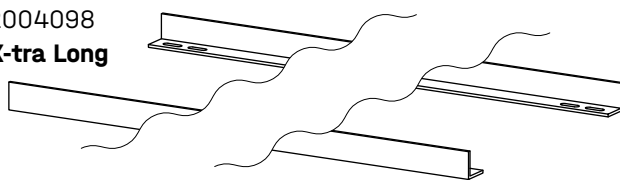


# Components

## Ballasting



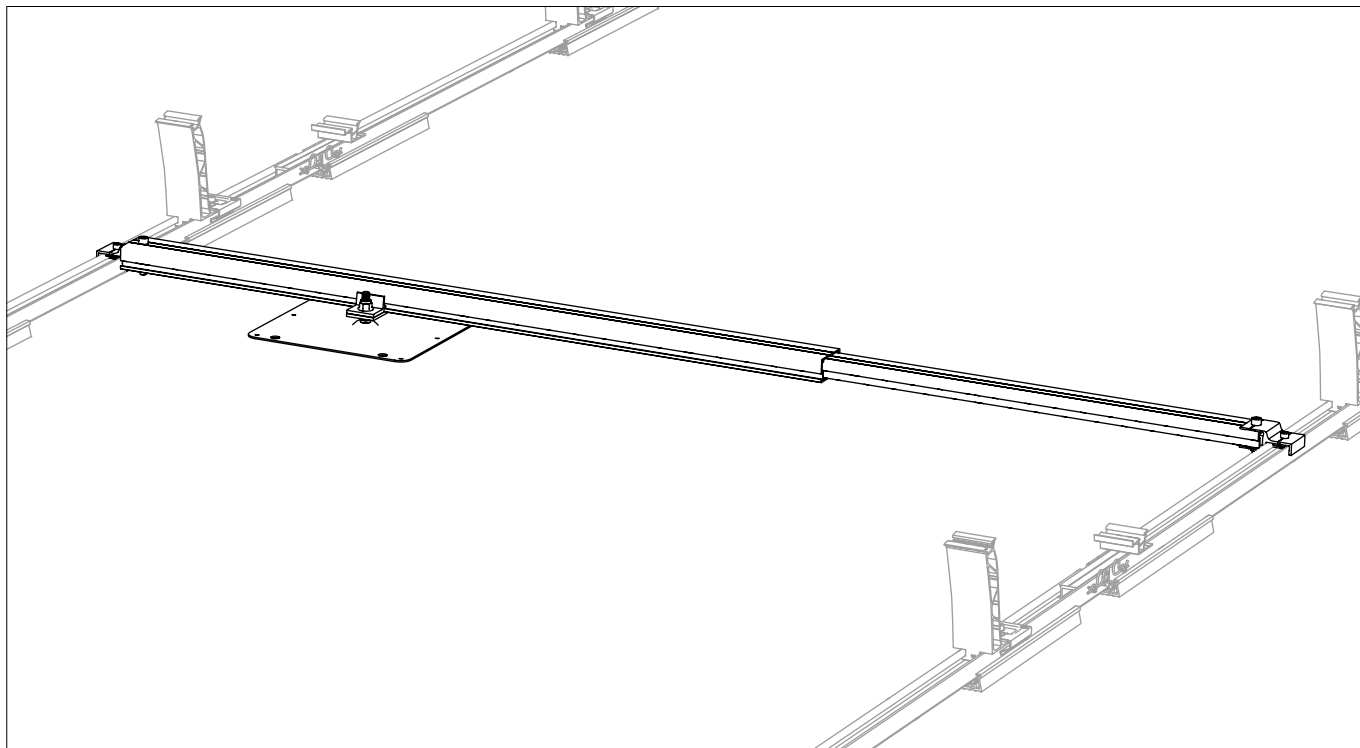
2003150 / 2003151 / 2004098  
Porter Short / Long / X-tra Long



1001643 + 2001729  
MK2 Slot nut with clip  
+ Allen bolt M8×20

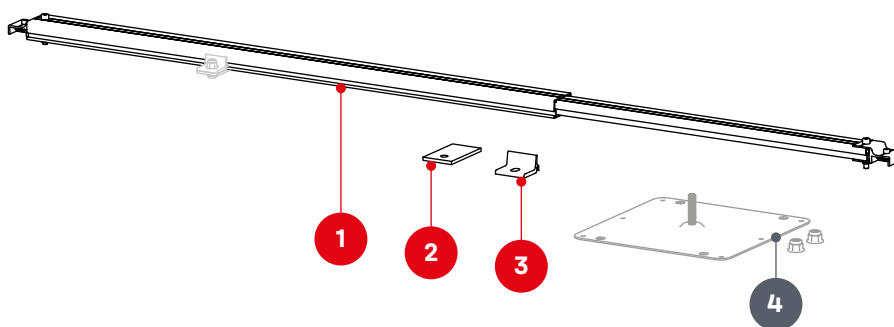


## Fixed connection to the roof



- 1** 2004144  
**Dome FixPro L**
- 2** 2002546 / 2002547  
**Adapter plate M10/12**
- 3** 2003146 / 2003147  
**Climber M10/12**

- 4** **Roof anchor plate**  
Not included in the K2 product portfolio.  
Other fastening elements (e.g. screws and nuts) for fixing to the fastener 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  $S_{x2}/S_{y2}$ .

$S_{y2}$

$S_{y1} \geq 140 \text{ mm}$

$S_{x2}$

$S_{x1} \geq 140 \text{ mm}$

max. 15.0 m

max. 15.0 m

$S_{y1}$

$S_{x1}$

**1** **!** The module width  $w_m$  is adjusted with the narrow ends of the Dome Speed Spacer measuring clamps.

$w_m$

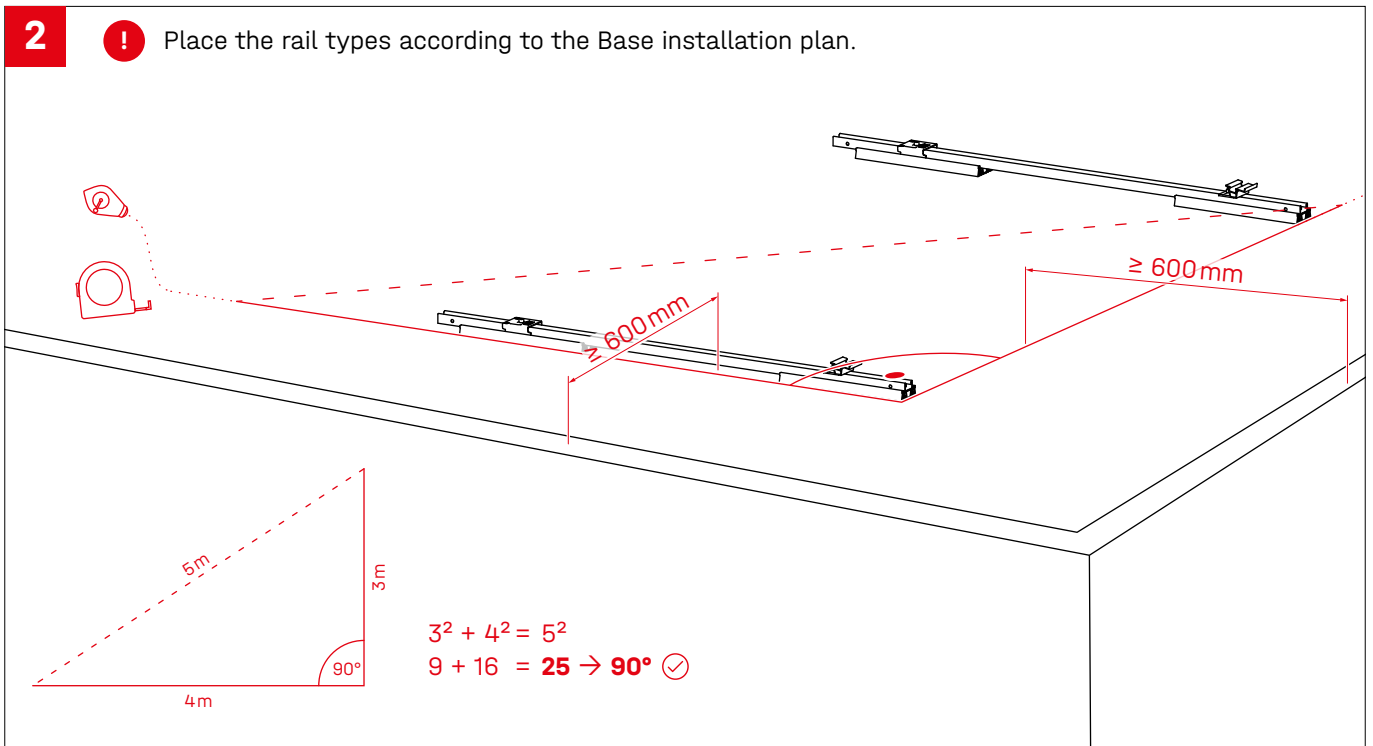
**!**

**!**

## Module blocks

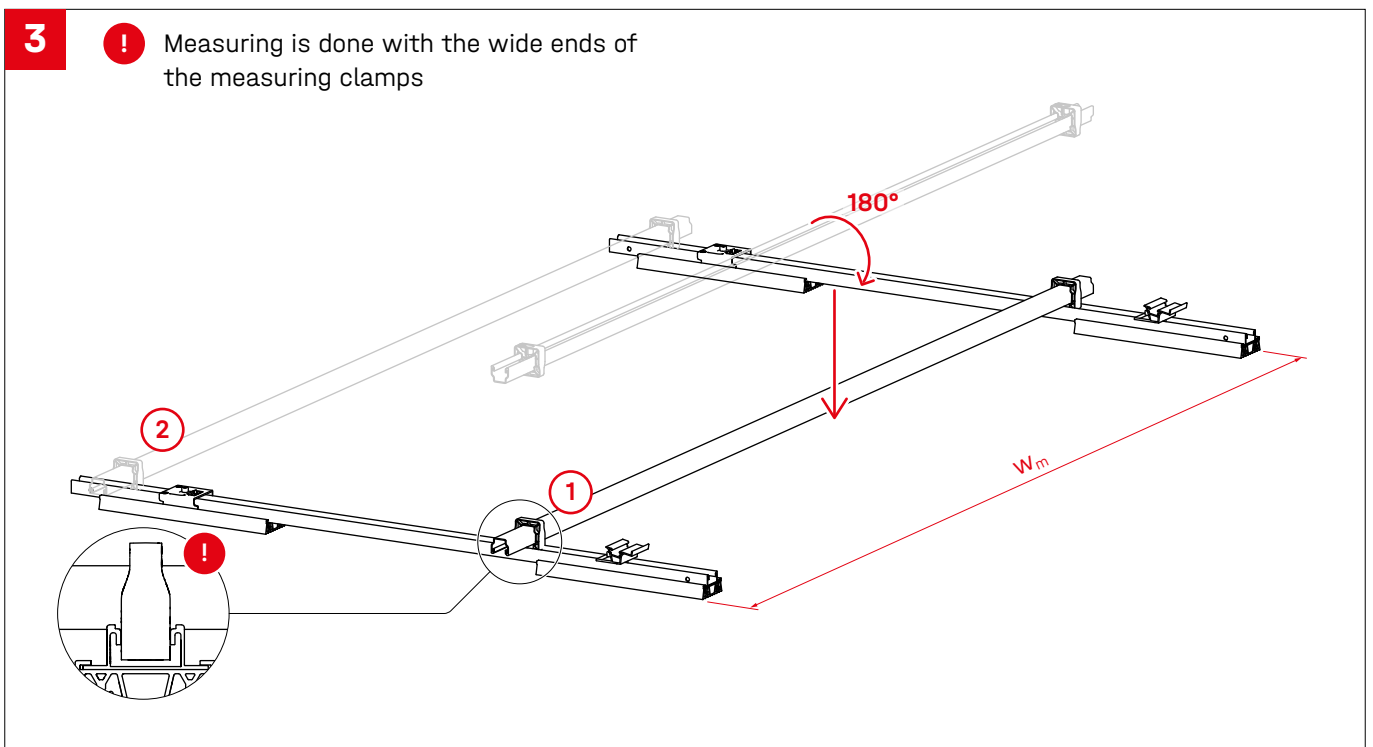
2

! Place the rail types according to the Base installation plan.



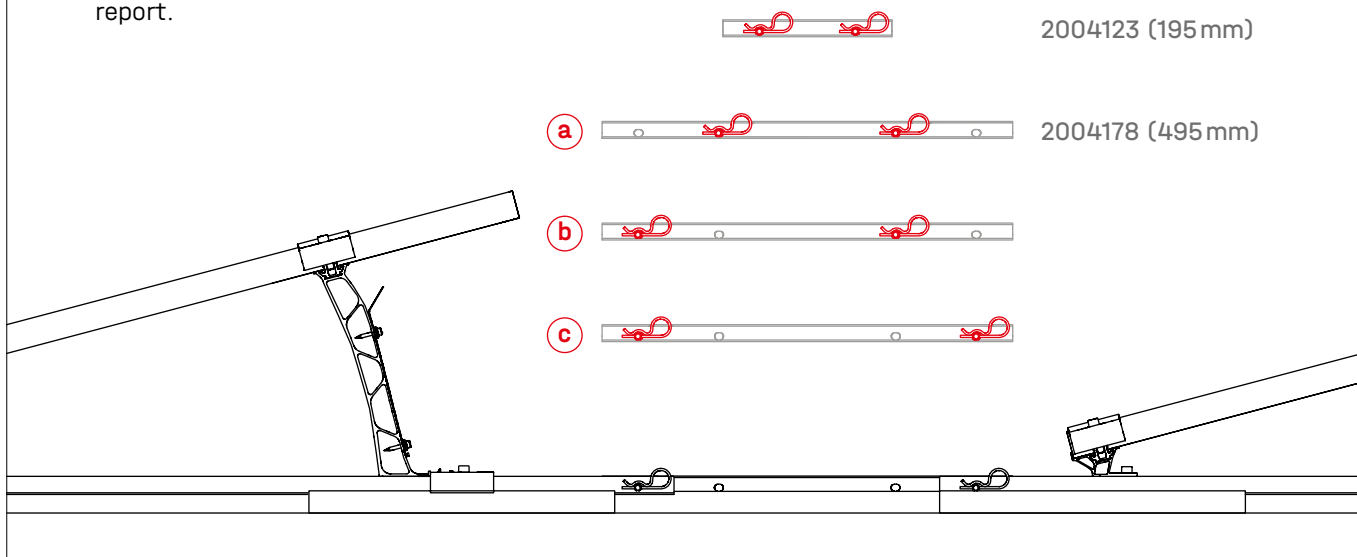
3

! Measuring is done with the wide ends of the measuring clamps



## Row spacing settings

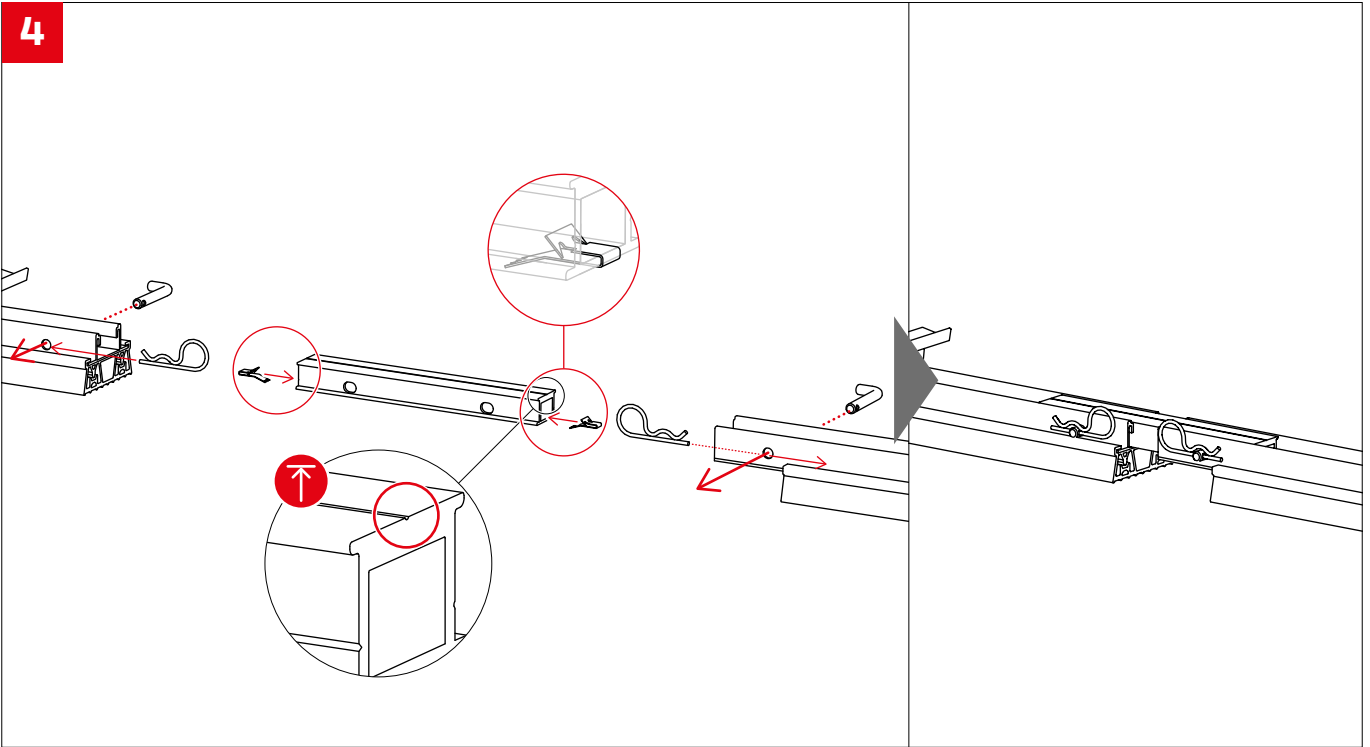
**!** With Connector Sets 2004123 and 2004178, different row spacings are possible. These are listed in the following table and the default for your project can be found in the K2 Base report.



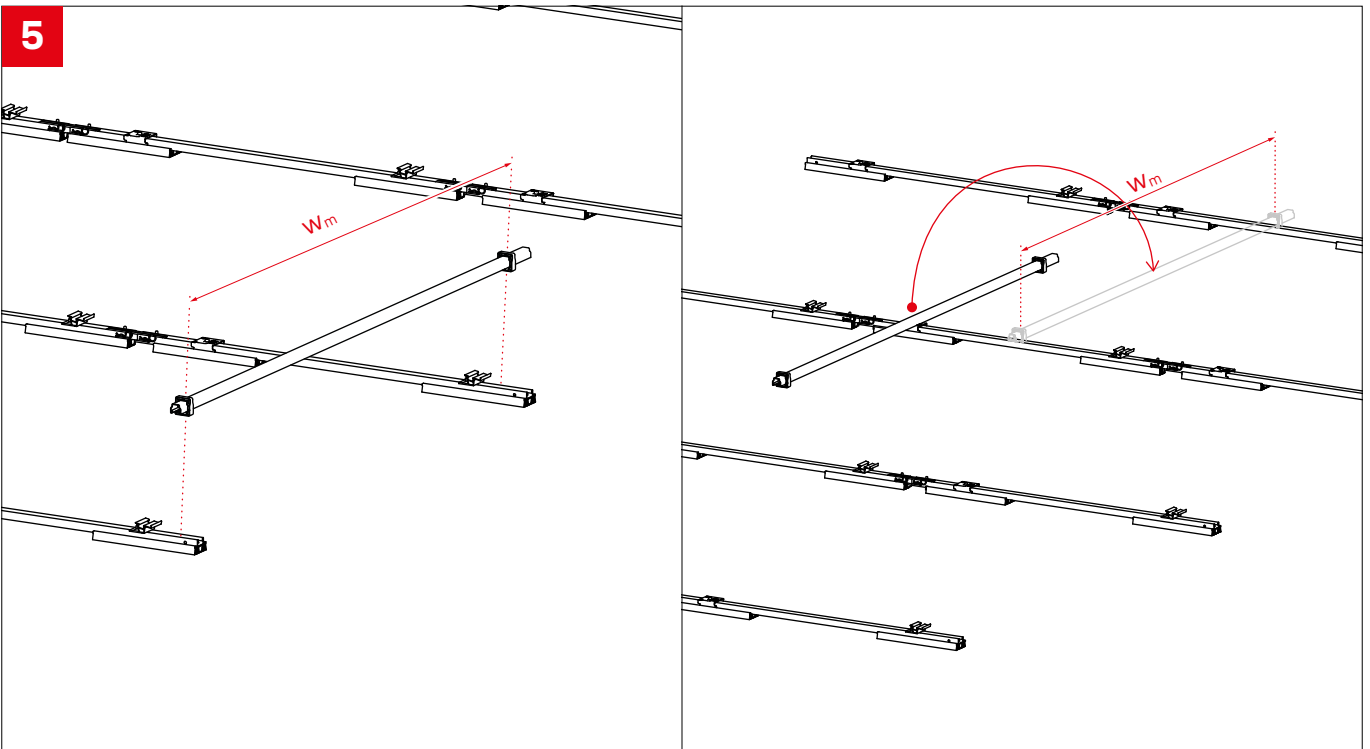
### Row spacing in relation to Connector Set

Rail Set		Permissible module widths [mm]	Row spacing with Connector Set [mm]			
			2004123	2004178 <b>a</b>	2004178 <b>b</b>	2004178 <b>c</b>
<b>S-Dome 6.10 Base Set</b>	2003621	960 - 1170	1480	1580	1680	1780
<b>S-Dome 6.15 Base Set</b>	2004501	1061 - 1170	1850	1950	2050	2150

4

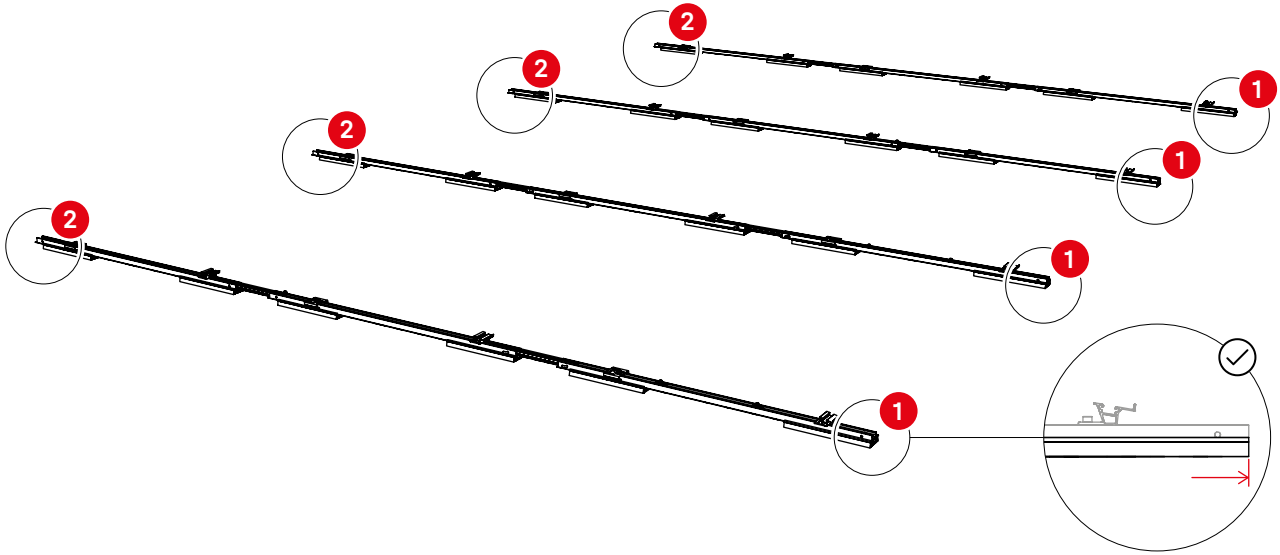


5



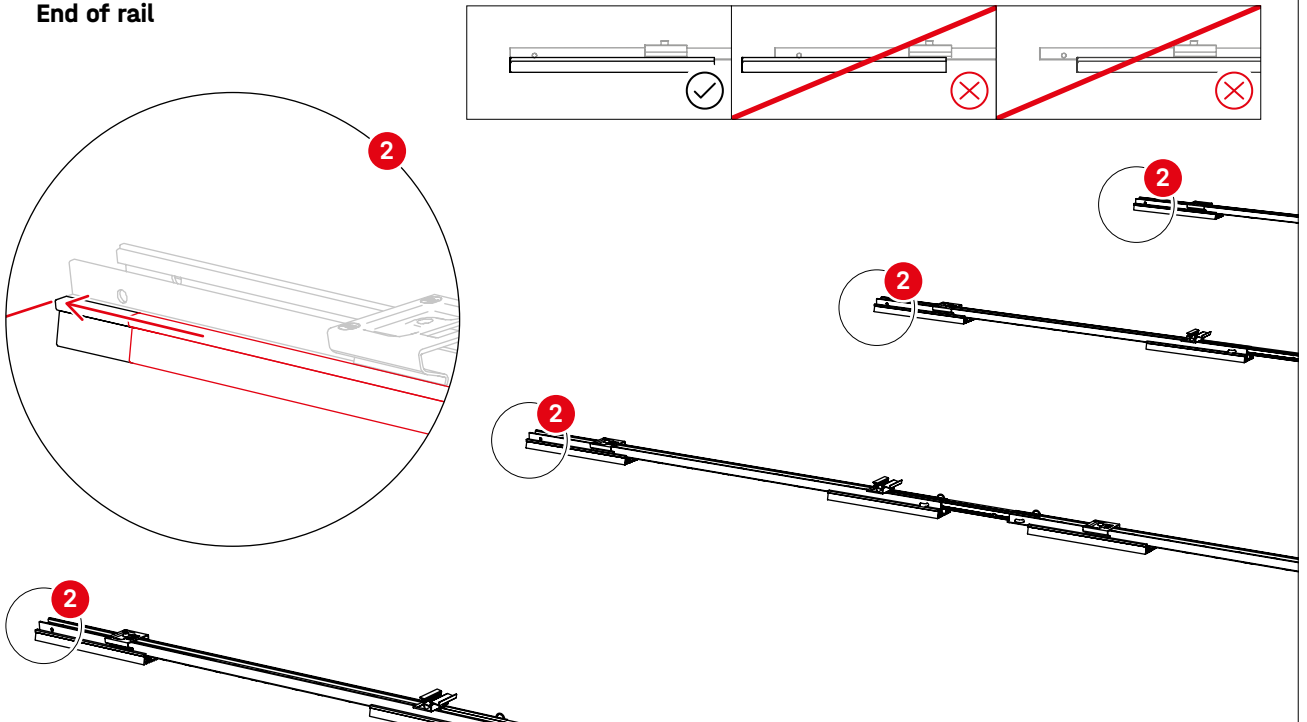
# 6a

**!** S-Dome 6.10 Base Set: (1) Check position  
(2) Moving required, step 6b

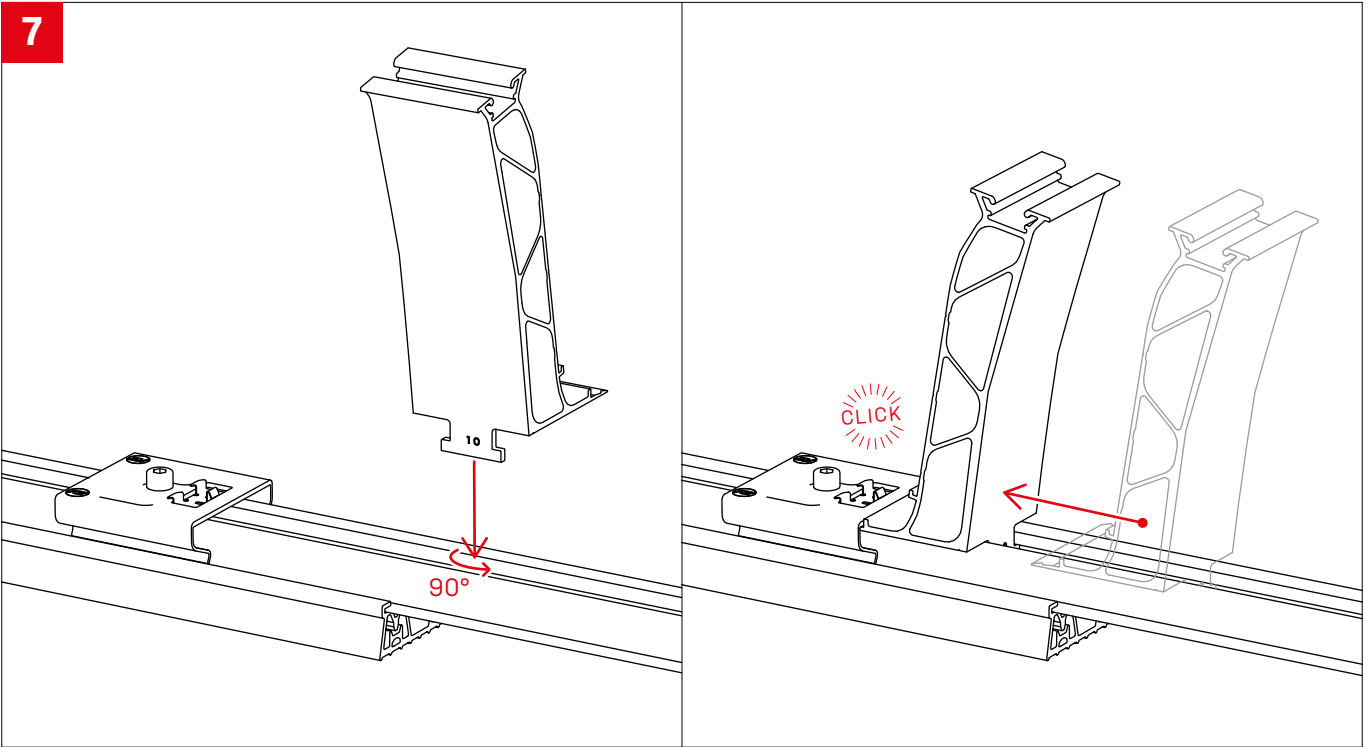


# 6b

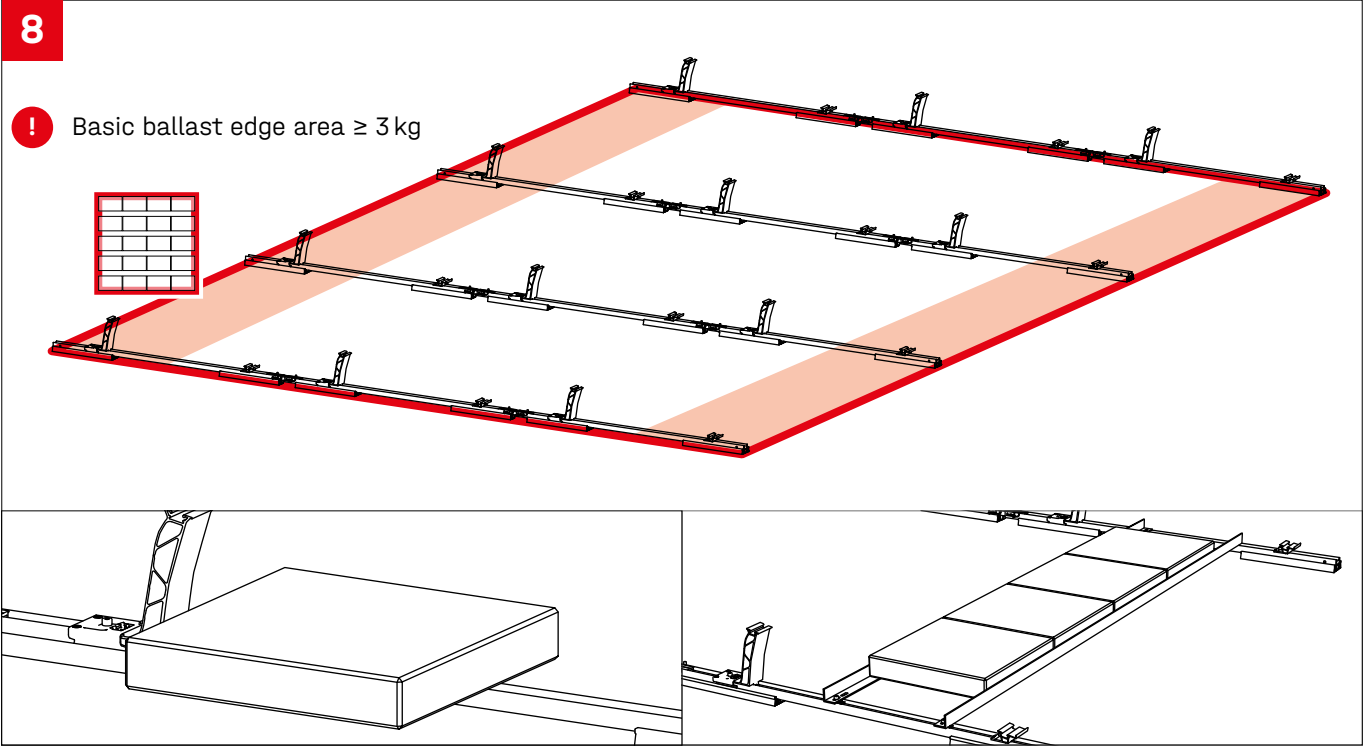
End of rail



7

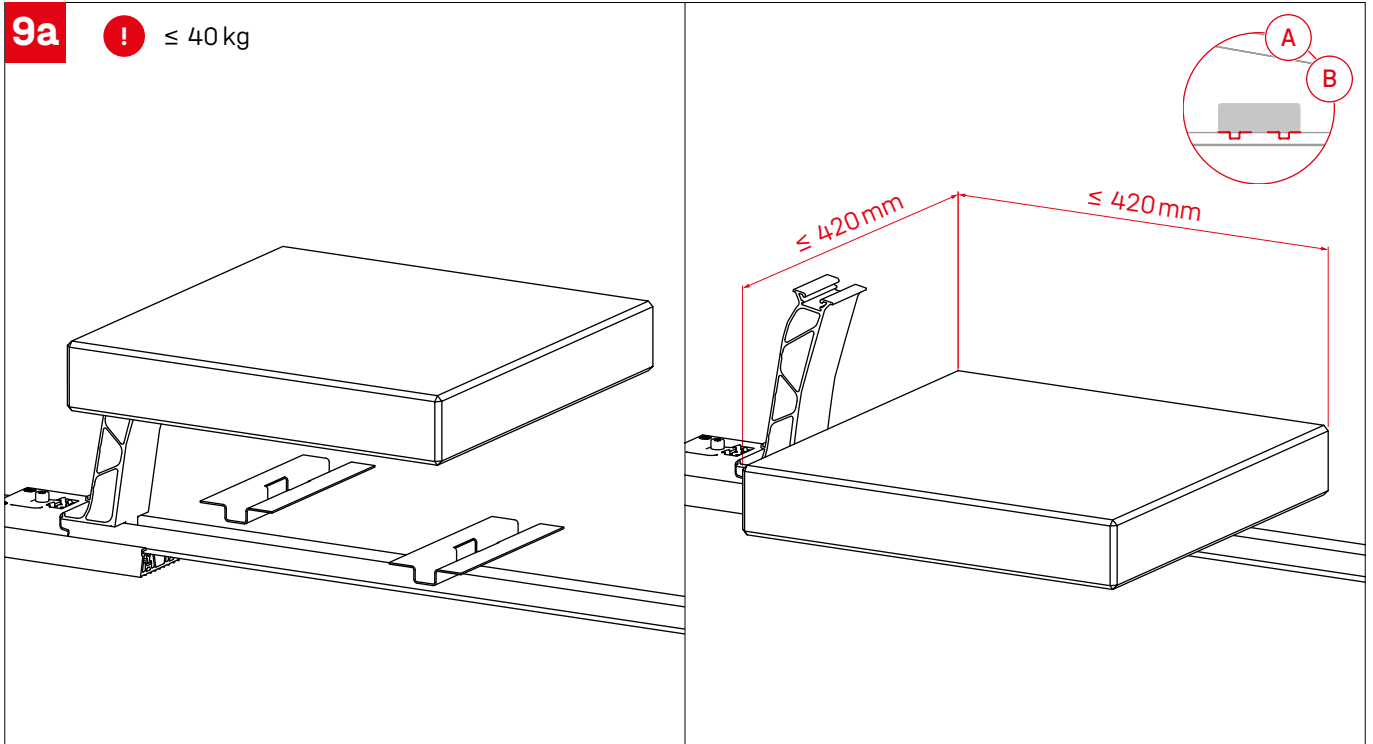


8

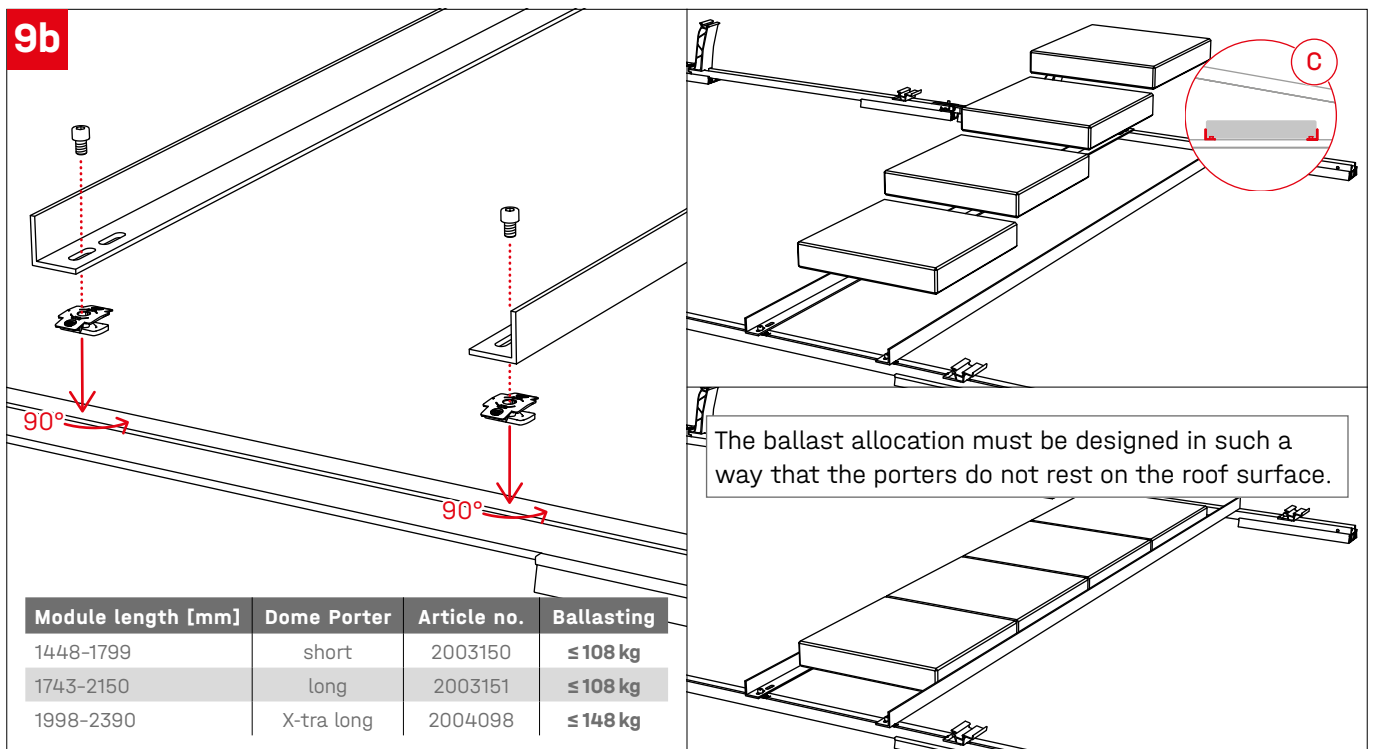


## Ballasting options and specifications

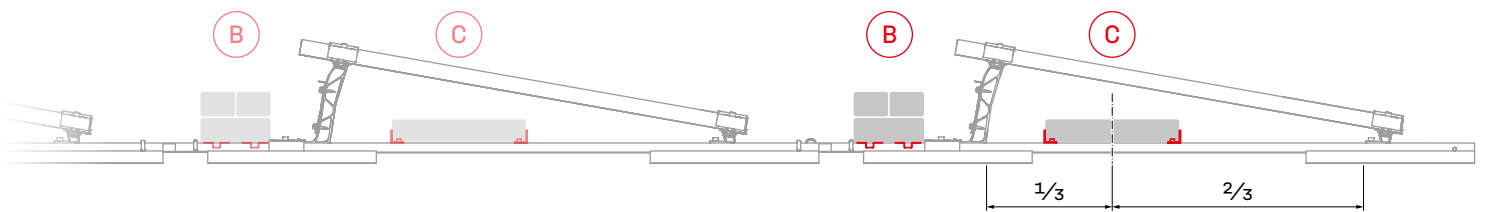
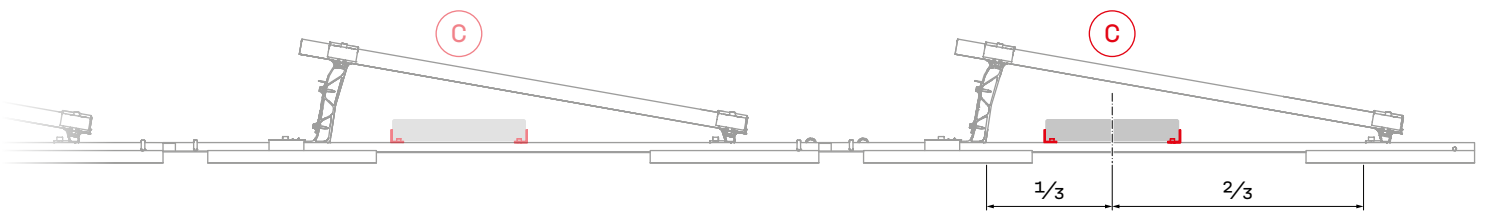
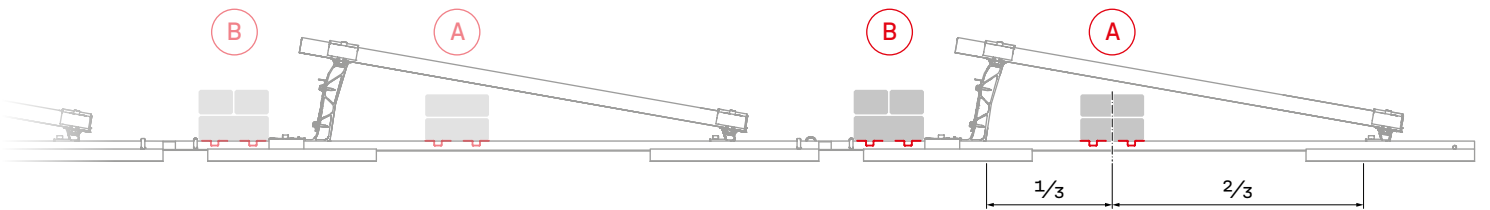
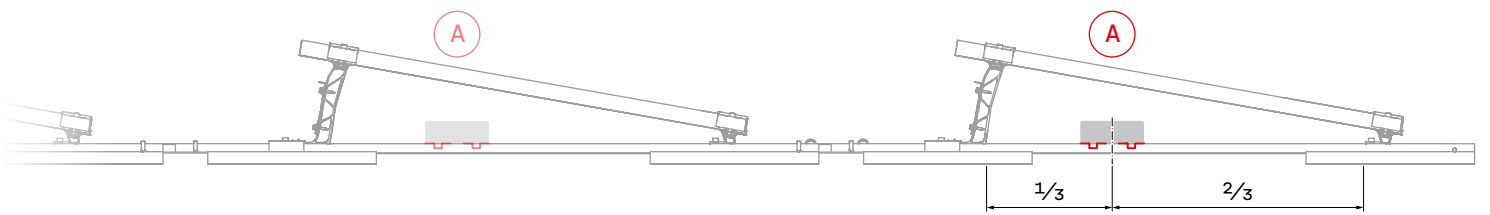
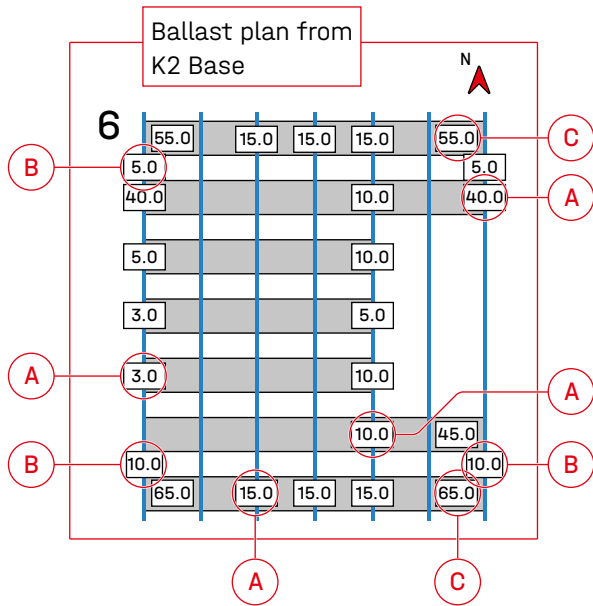
**9a** ! ≤ 40 kg



**9b**



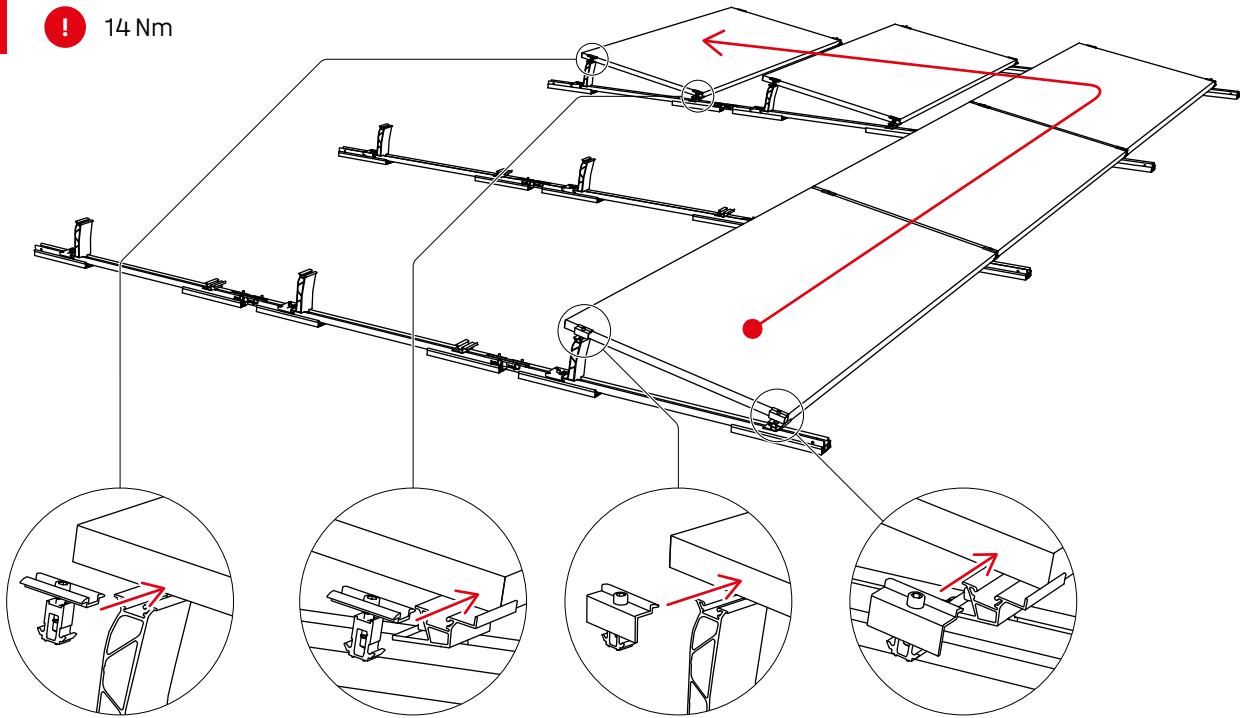
Module length [mm]	Dome Porter	Article no.	Ballasting
1448-1799	short	2003150	≤ 108 kg
1743-2150	long	2003151	≤ 108 kg
1998-2390	X-tra long	2004098	≤ 148 kg



## Module assembly

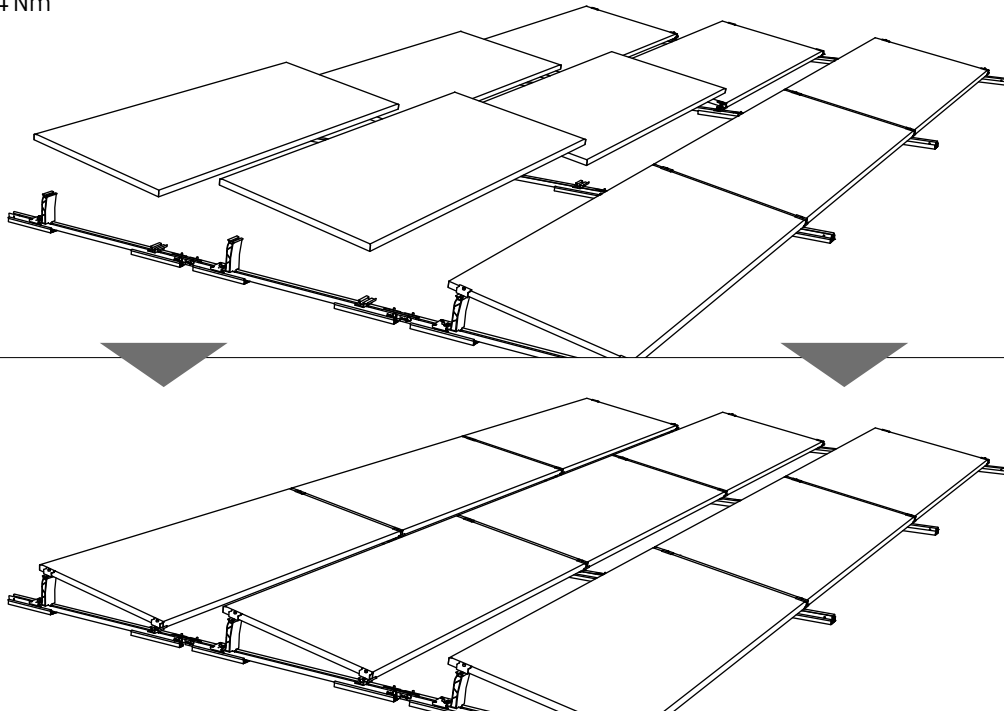
10

! 14 Nm



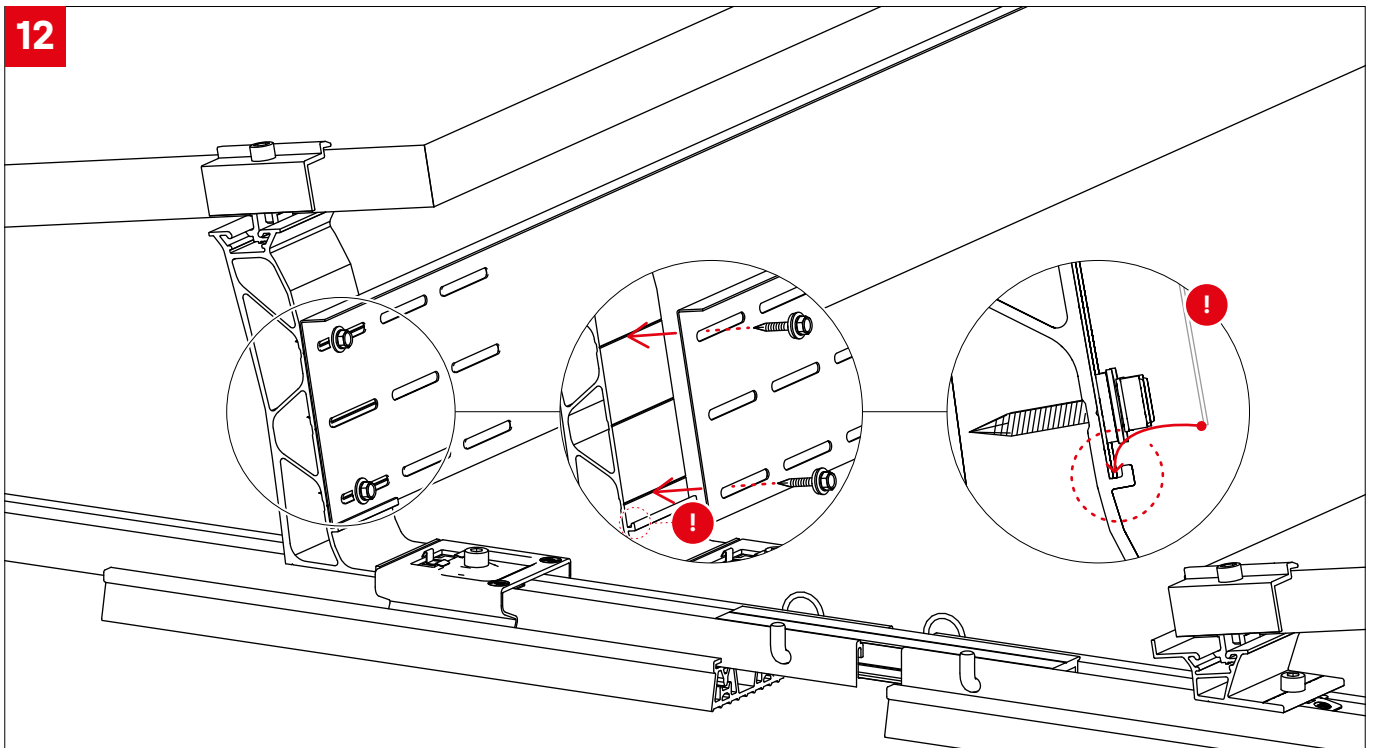
11

! 14 Nm

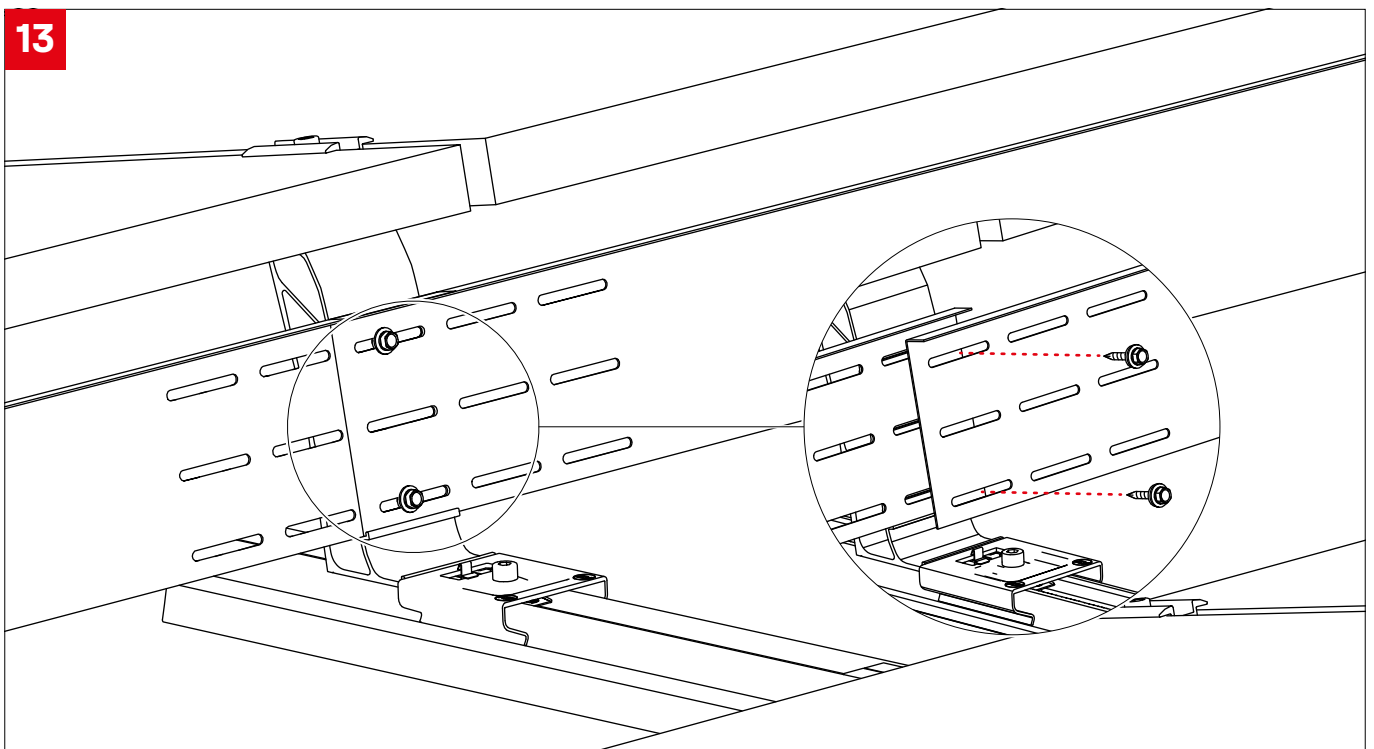


## Assembly Windbreaker

12

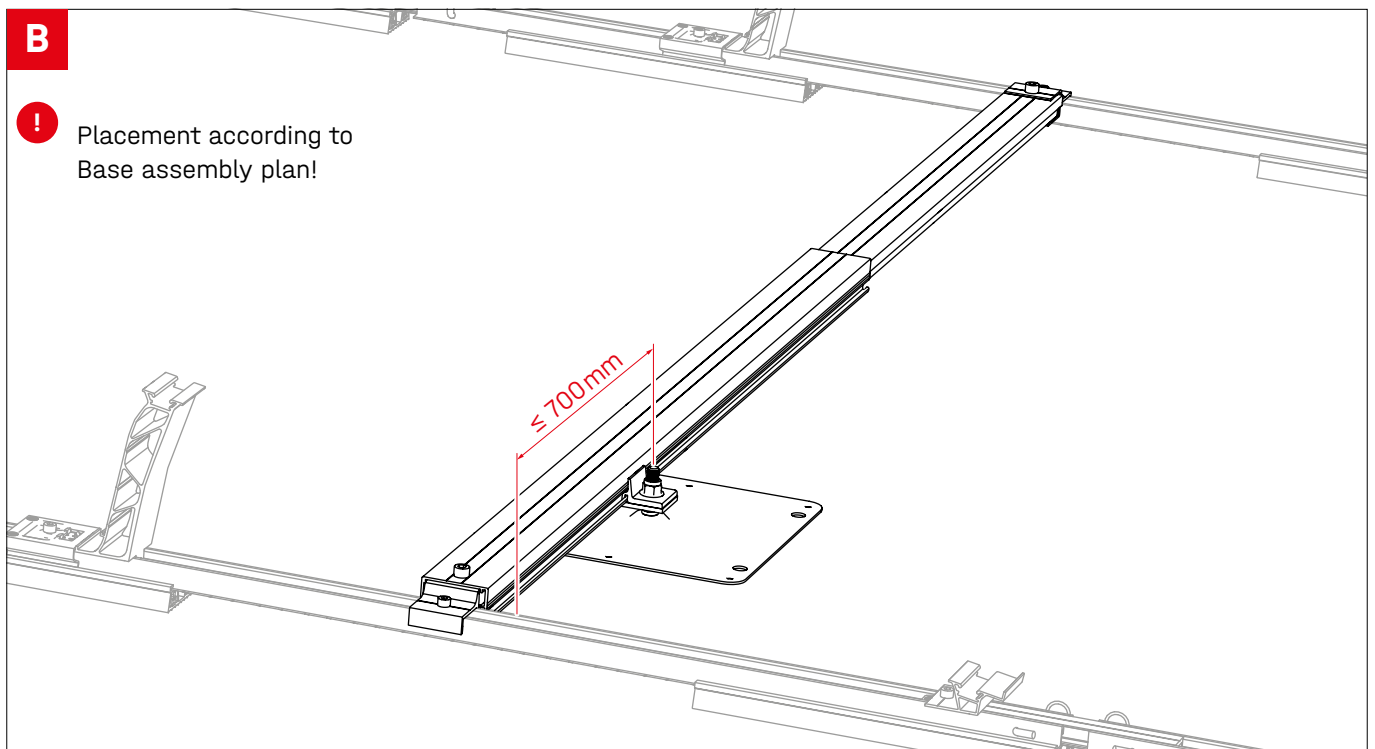
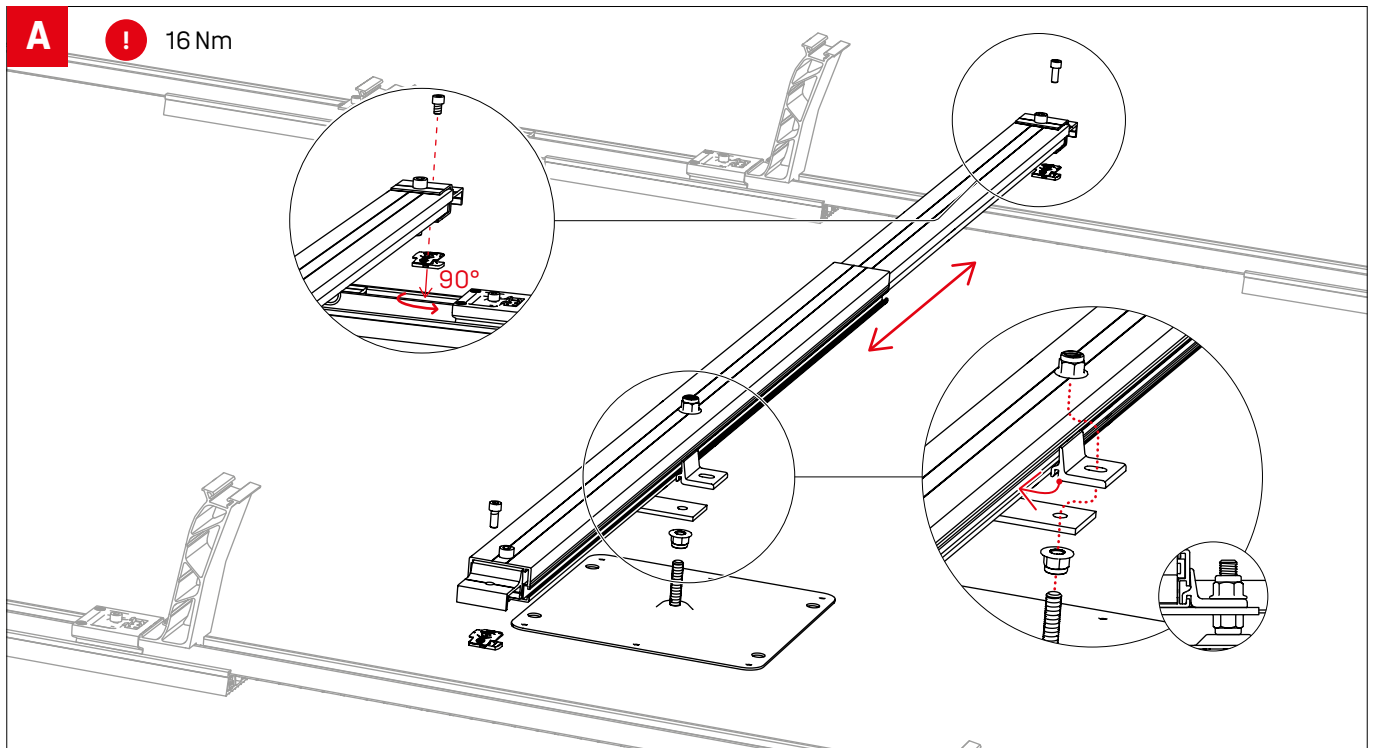


13

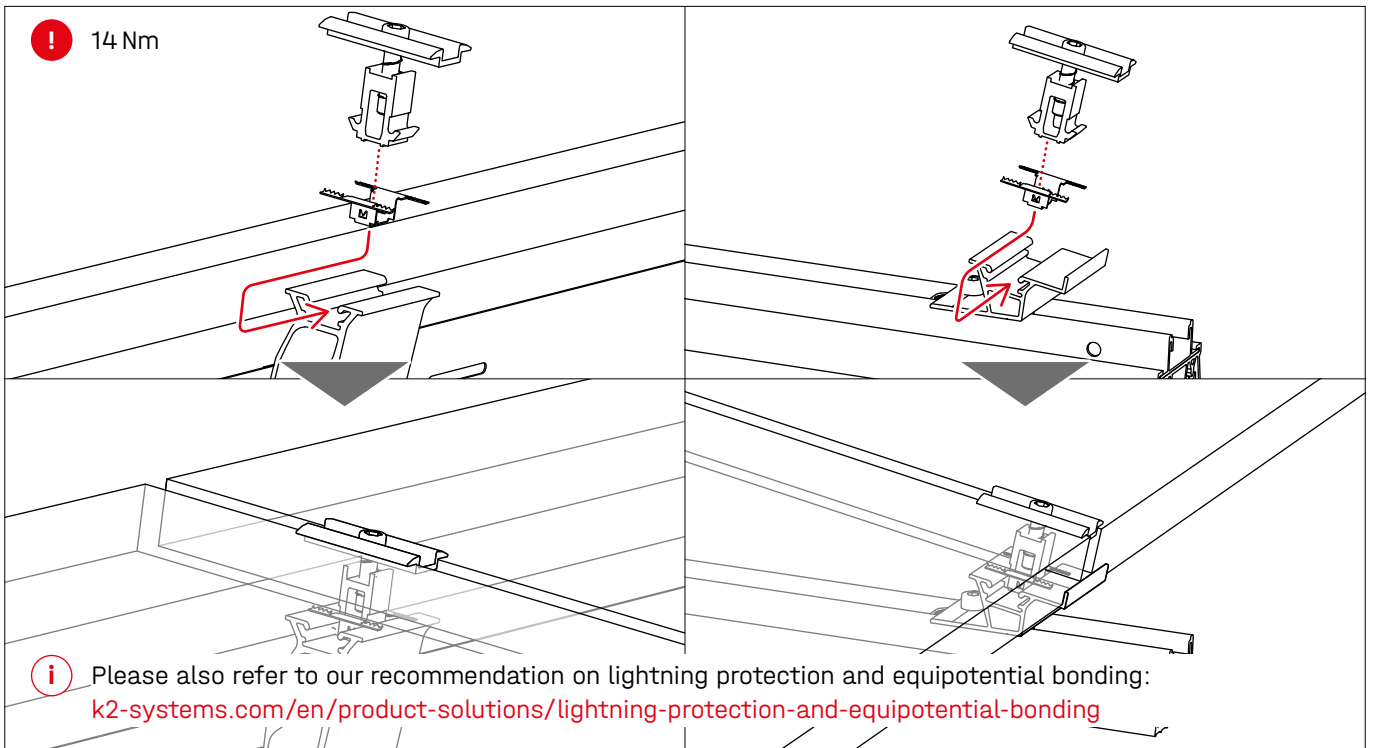


# Optional assembly steps

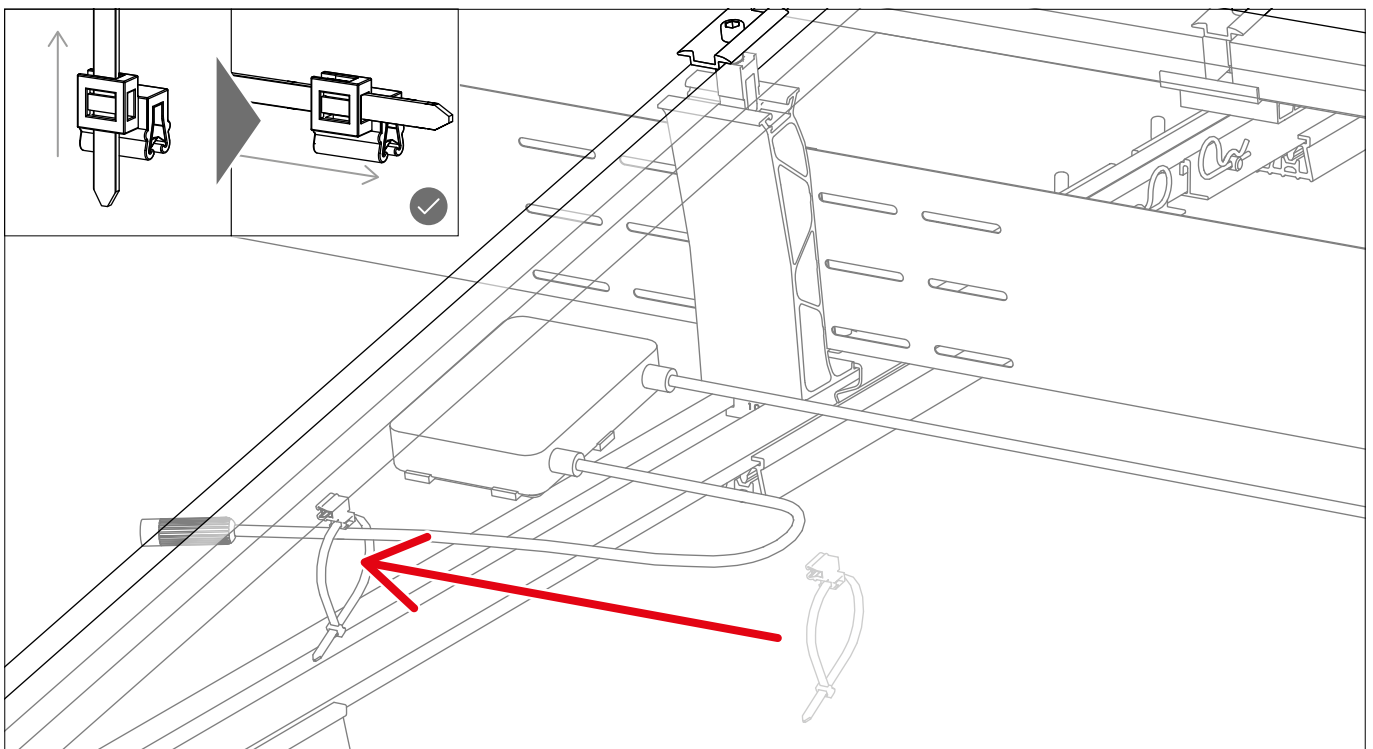
## Fixed connection with Dome FixPro using Solmont mounting base



## Module frame earthing with TerraGrif



## Cable management with Cable-Manager



# Notes







# 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)

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S-Dome 6 Xpress Assembly EN V2 | 0426 · Subject to change  
Product illustrations are exemplary and may differ from the original.