

Assembly Manual

# BasicRail System

with D-Dome 6.10 elevation



Connecting Strength

[k2-systems.com](http://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](http://k2-systems.com)

Übereinstimmungszeichen (Ü-Zeichen)



The BasicRail system BasicRail/BasicClip has the German general building authority technical approval Z-14.4-603.

# Tools overview



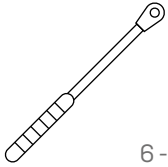
5 + 6 mm



8 mm



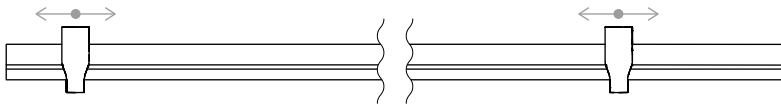
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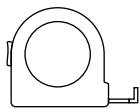
6 - Nm  
(4.5 - 22.2 lb-ft)



6 mm



**Dome Speed Spacer 2.25 / 2.50** · 2003253 / 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 other manufacturers. With the K2 DocuApp, project documentation is done quickly and easily - without annoying paperwork.

**Get started and register now:**

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[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://www.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](https://www.k2-systems.com) 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.
- German law shall apply excluding the UN Convention on CISG. Place of venue is Stuttgart. Our General Terms of Business apply.
- 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](https://www.k2-systems.com). 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 in the following standard conditions. The system is also suitable for higher requirements. However, if a value exceeds the standard conditions, please contact K2 Systems.



## Planning with K2 Base

Please plan a flat roof with covering "membrane, gravel..." and Dome 6 Classic/Classic LS system. Pay attention to the correct roof pitch and direction of the roof pitch. After completing the calculation, download the base file (your-file.k2o) and send it to [service@k2-systems.de](mailto:service@k2-systems.de) or your personal contact. Be sure to include the high bead spacing and width as well as the sheet metal quality and thickness. We will then generate a manual calculation for you and send it to you.



## Roof requirements

- This system can be installed on all trapezoidal sheet metal roofs with a roof pitch of up to 10°. The angle of elevation is 10°.
- Minimum tensile strength aluminium: 165 N/mm<sup>2</sup>; steel grade at least S235 GD.
- Min. 22 mm high crest width



## Static requirements

- Sufficient holding force of the roof covering on the supporting or substructure.
- For framed modules with a frame height of 30 - 50 mm
- Modules with the following dimensions can be used:
  - length 1448 - 2390 mm
  - width 950 - 1170 mm



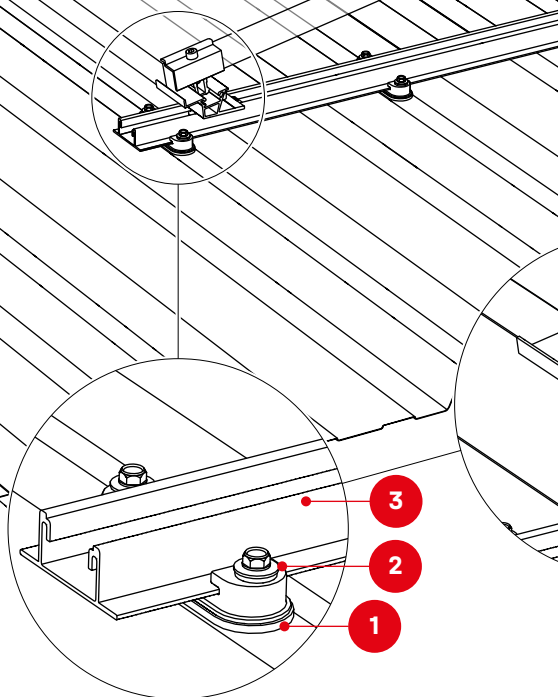
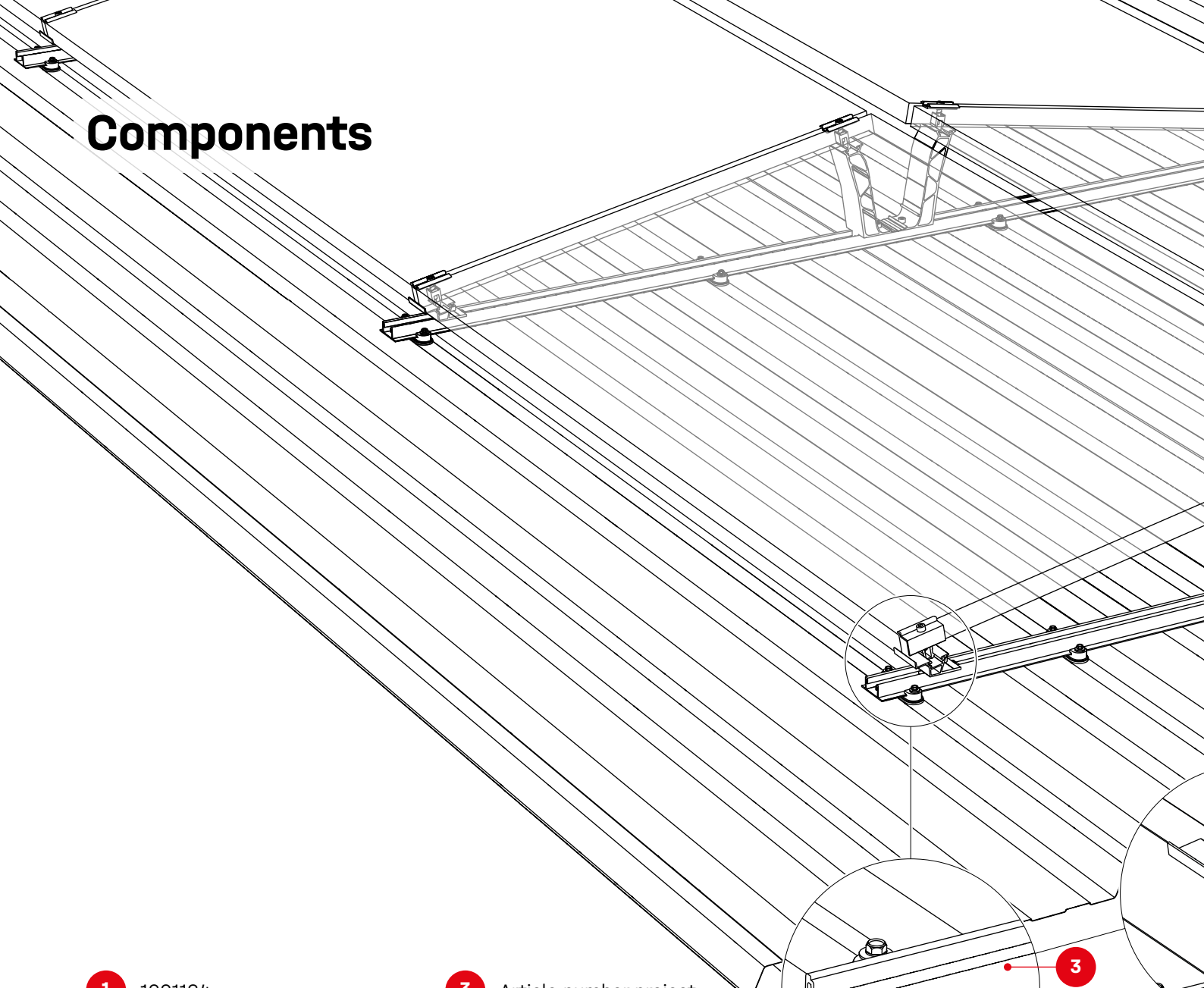
## Important installation instructions

- On site, the general standards and regulations for lightning protection must be observed and, if necessary, a lightning protection concept must be drawn up by a specialist (use lightning protection clamp if necessary). Country-specific regulations must be observed.
- If the trapezoidal sheet metal is fastened with calottes, do not screw the BasicClips onto them. Instead, mount all BasicClips

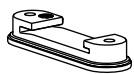
of this row offset on the trapezoidal sheet metal.

- At least every fourth or a quarter of all BasicClips must be mounted rotated by 180°.
- In the case of rail joints, it is imperative that the BasicClips are fastened to the nearest high crests on both sides.
- After 8.80 m, a thermal break must be made. The minimum distance between two rails should be 30 mm.
- Attention. The modules must never be clamped over the thermal expansion joint.
- The number of BasicLocks per module block can be taken from the static calculation of K2 Systems static calculation.
- The minimum distance from components/ MK2 to the end of the rail must be 20 mm.
- A minimum distance of 600 mm to the roof edge must be maintained for building heights > 5 m.
- Tightening torque of all module clamps 14 Nm.
- After extraordinary events, such as storms, heavy rain, earthquakes, etc., the system must be inspected by a specialist company. If plastic deformation, e.g. in the area of the module clamps, or damage is detected during the inspection, these components must be replaced with new ones.
- Observe the module manufacturer's specifications for the clamping area and the installation of the modules (see the manufacturer's installation instructions). Check whether there is a manufacturer's approval for clamping in the corner area.
- Make sure that the drainage of rainwater is not obstructed.
- The lightning current carrying capacity of the system has been verified according to the test procedures of DIN EN 50164-1 (see "Recommendation potential equalisation and lightning protection").

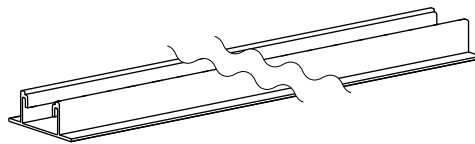
# Components



**1** 1001164  
**BasicClip**



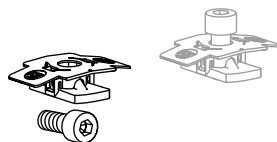
**3** Article number project  
specific!  
**BasicRail**



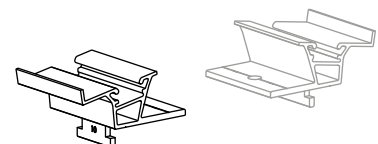
**2** 1005193  
**Thread-forming screw**  
incl. sealing washer  
**6×38**

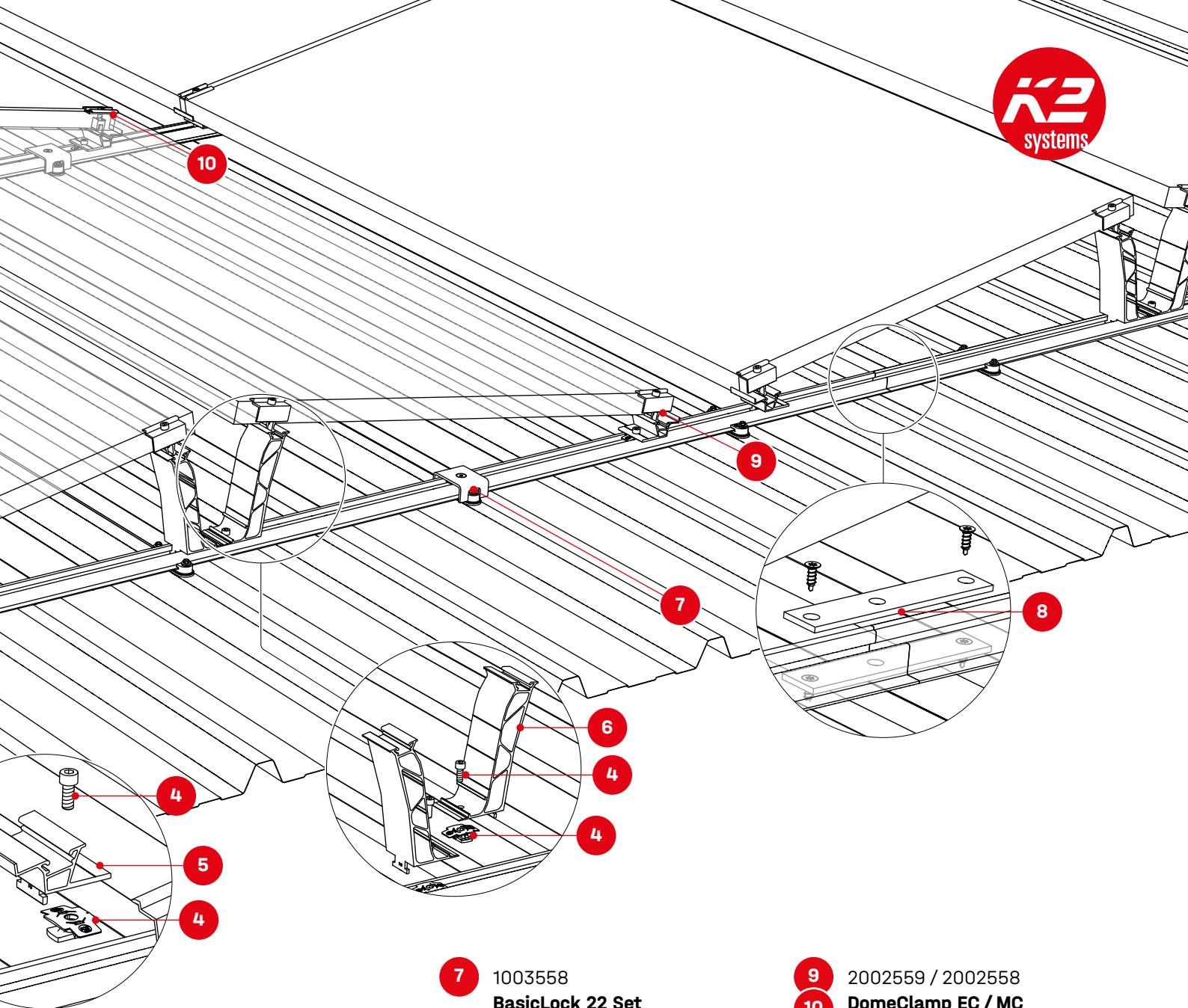


**4** 1001643 + 2001729  
**MK2 Slot nut with clip +**  
**Allen bolt M8×20**



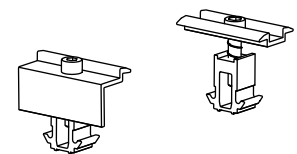
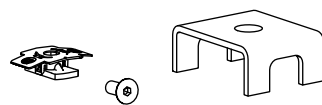
**5** 2003243  
**Dome 6.10 SD**





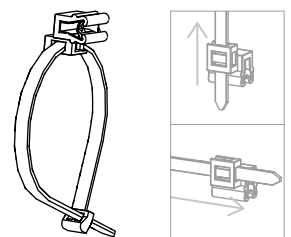
**7** 1003558  
BasicLock 22 Set

**9** 2002559 / 2002558  
**10** DomeClamp EC / MC

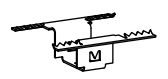


### Optional

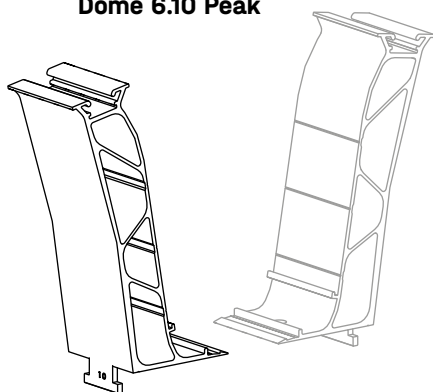
2002870  
Cable-Manager



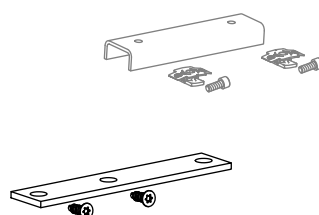
2003542  
TerraGrif K2MI  
Duo 18



**6** 2004125  
Dome 6.10 Peak

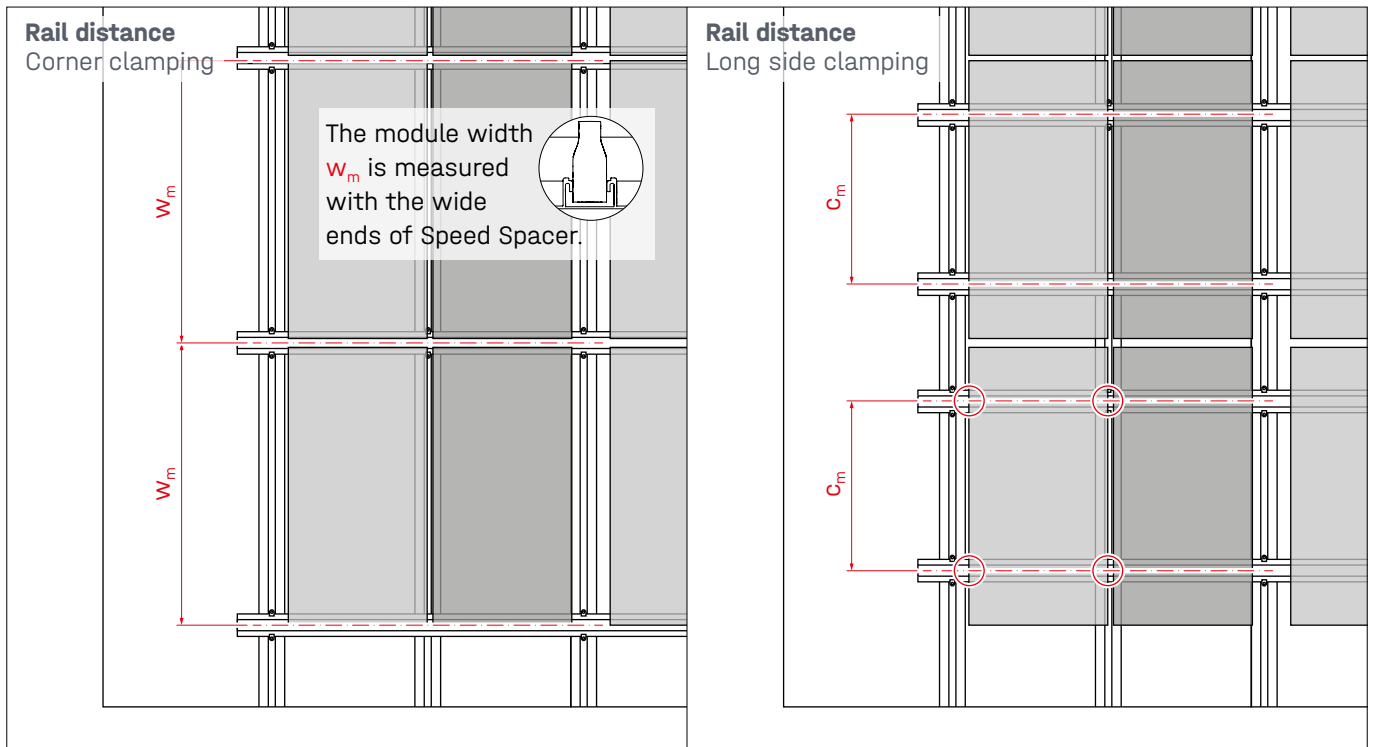
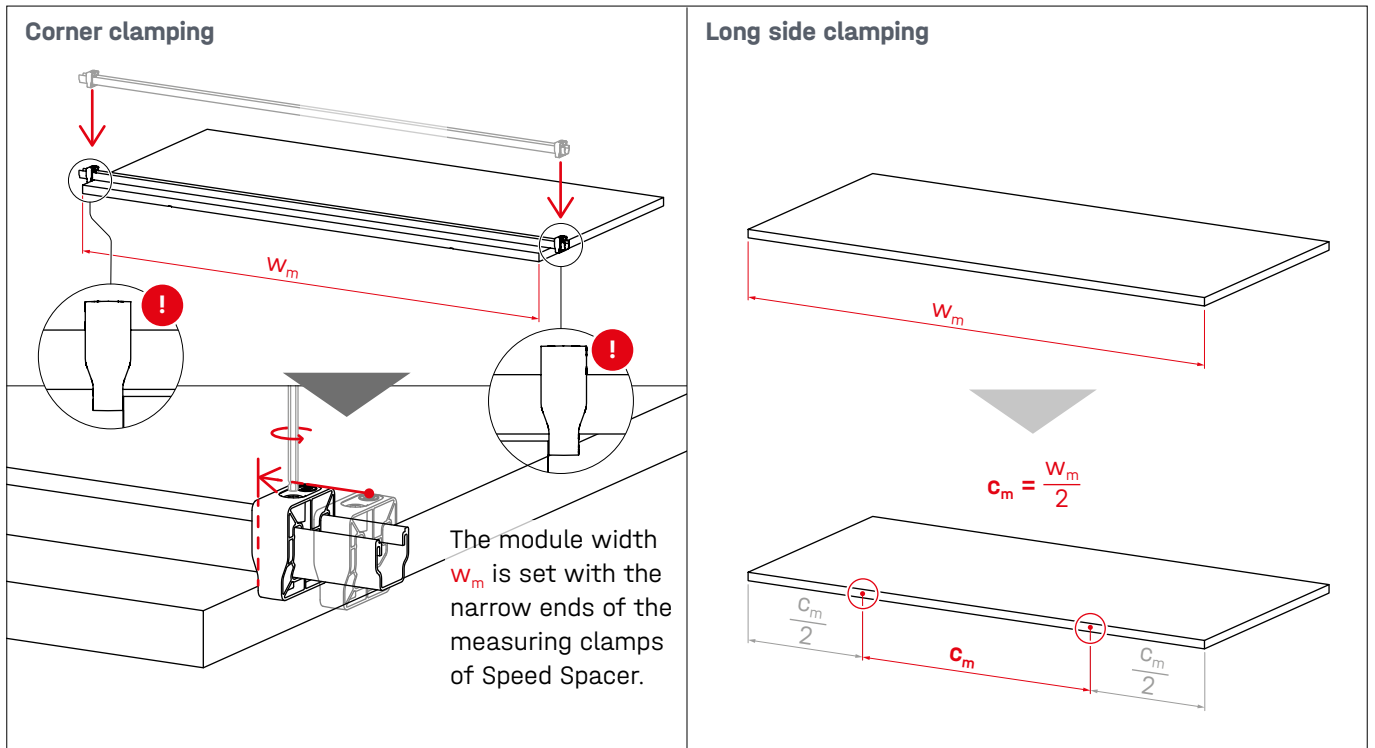


**8** 1003571 / 1006039  
Rail connector set  
BasicRail / Dome  
FlatConnector Set



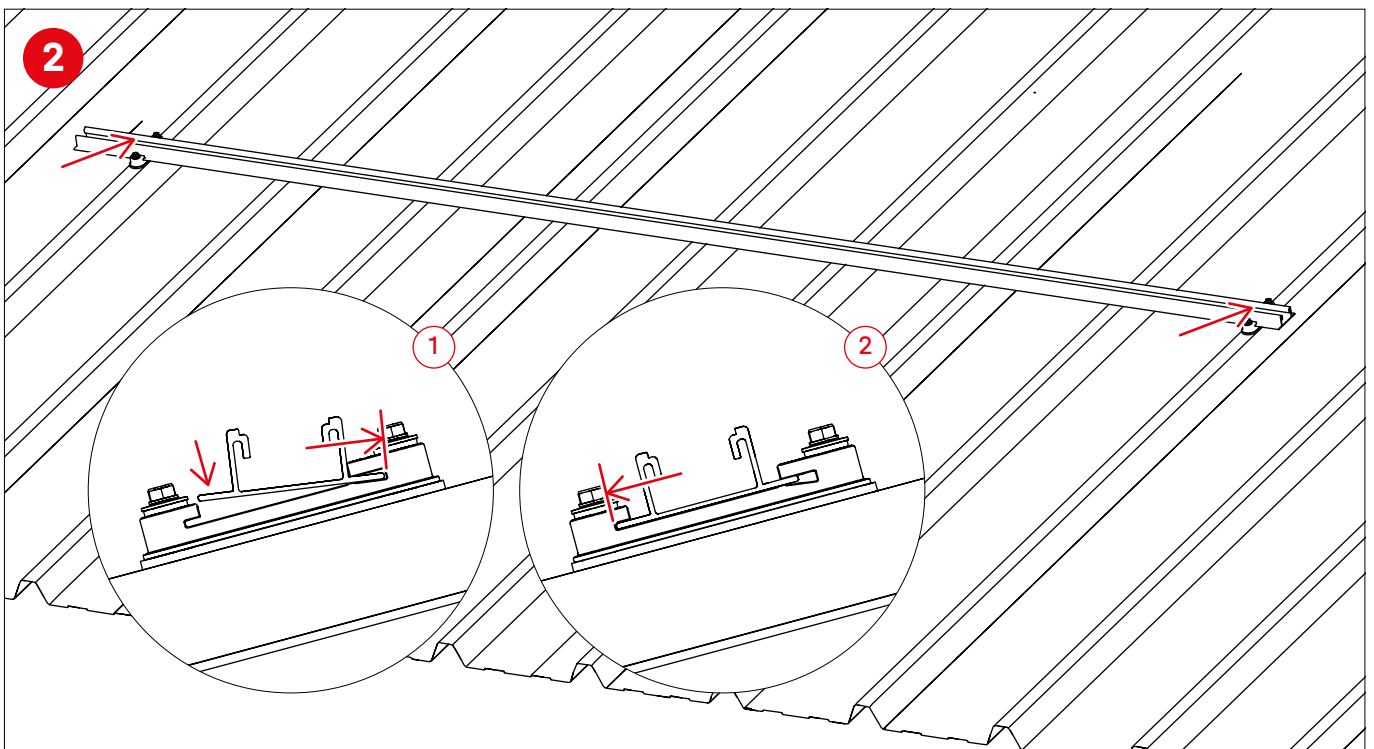
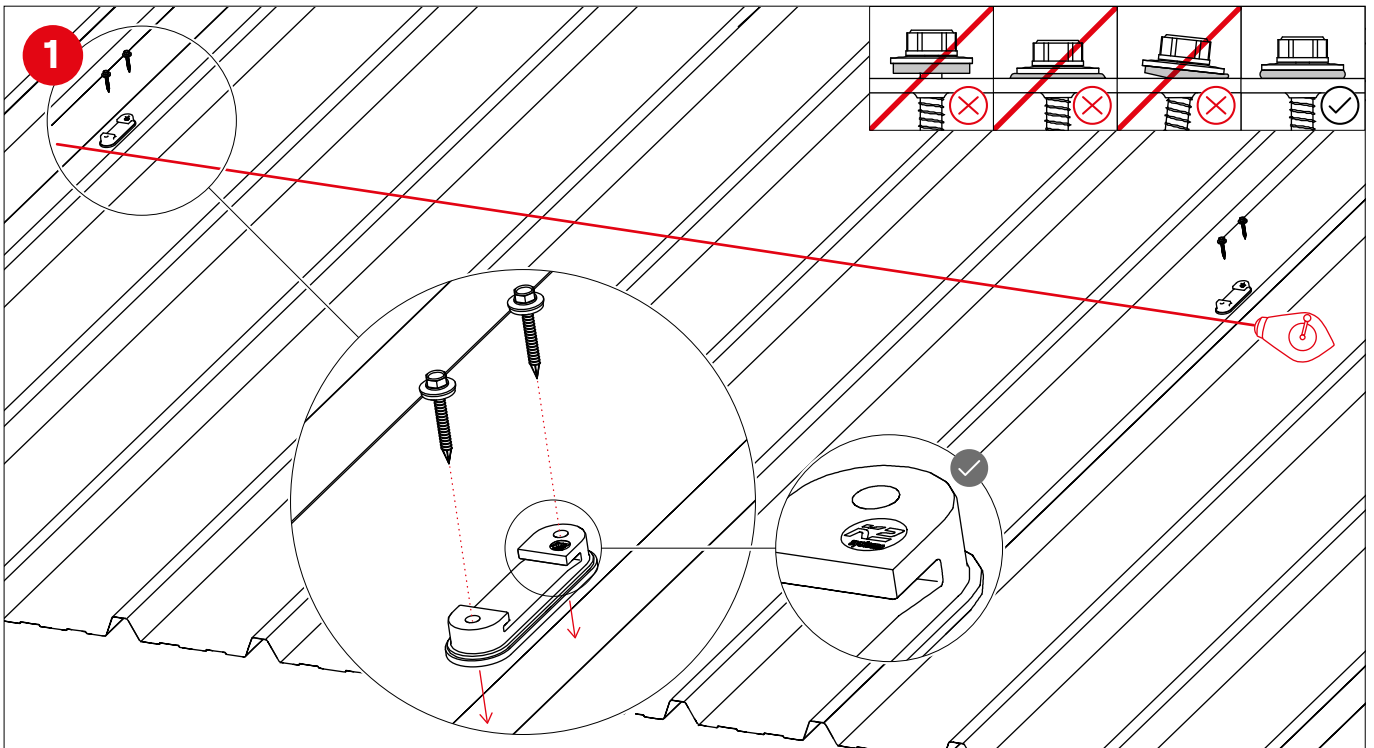
# Assembly

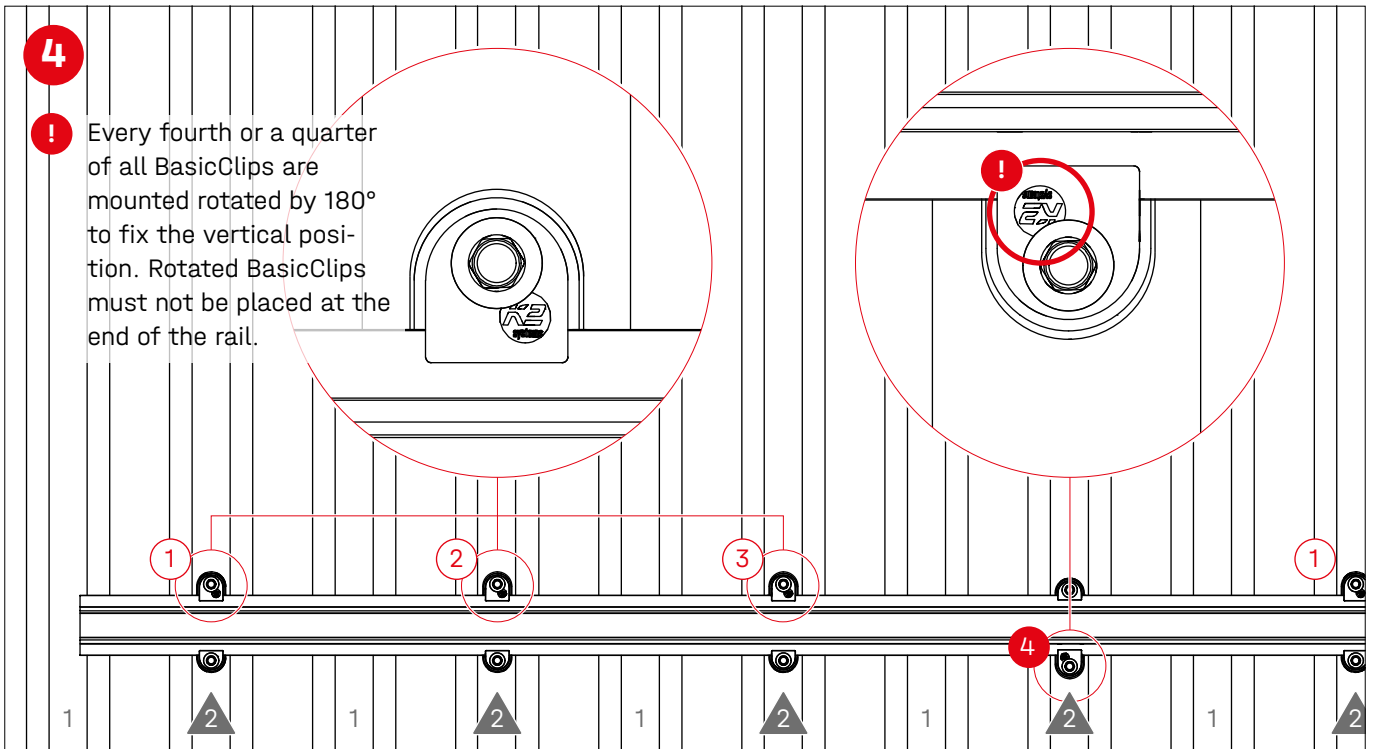
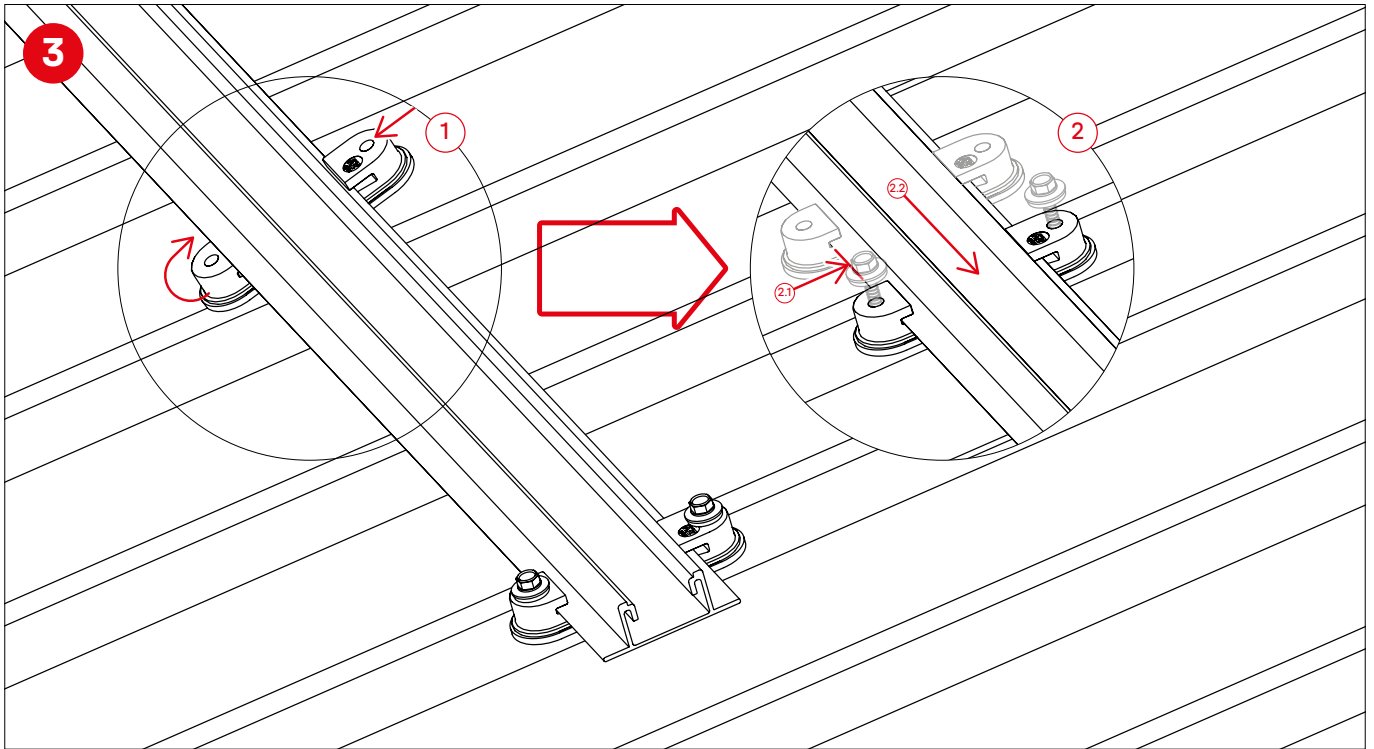
## Module fixation and distances mounting rails

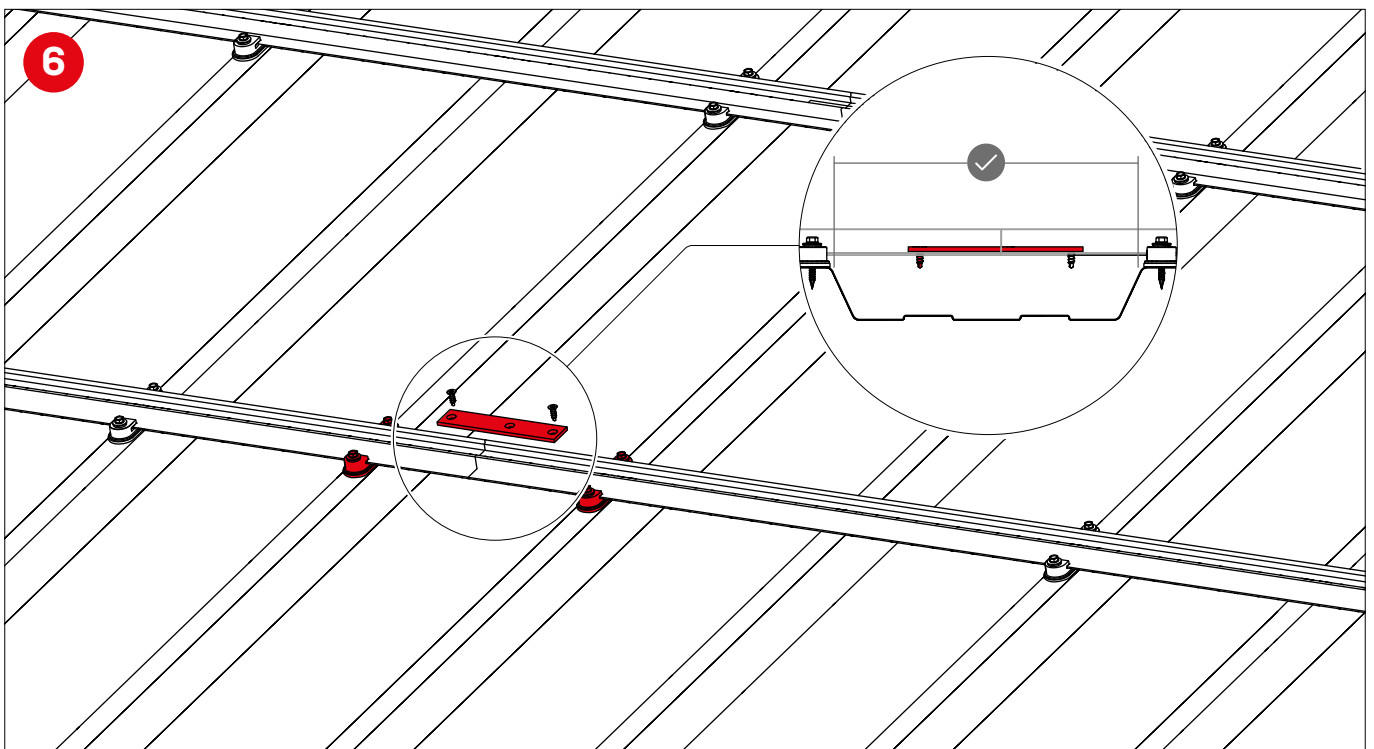
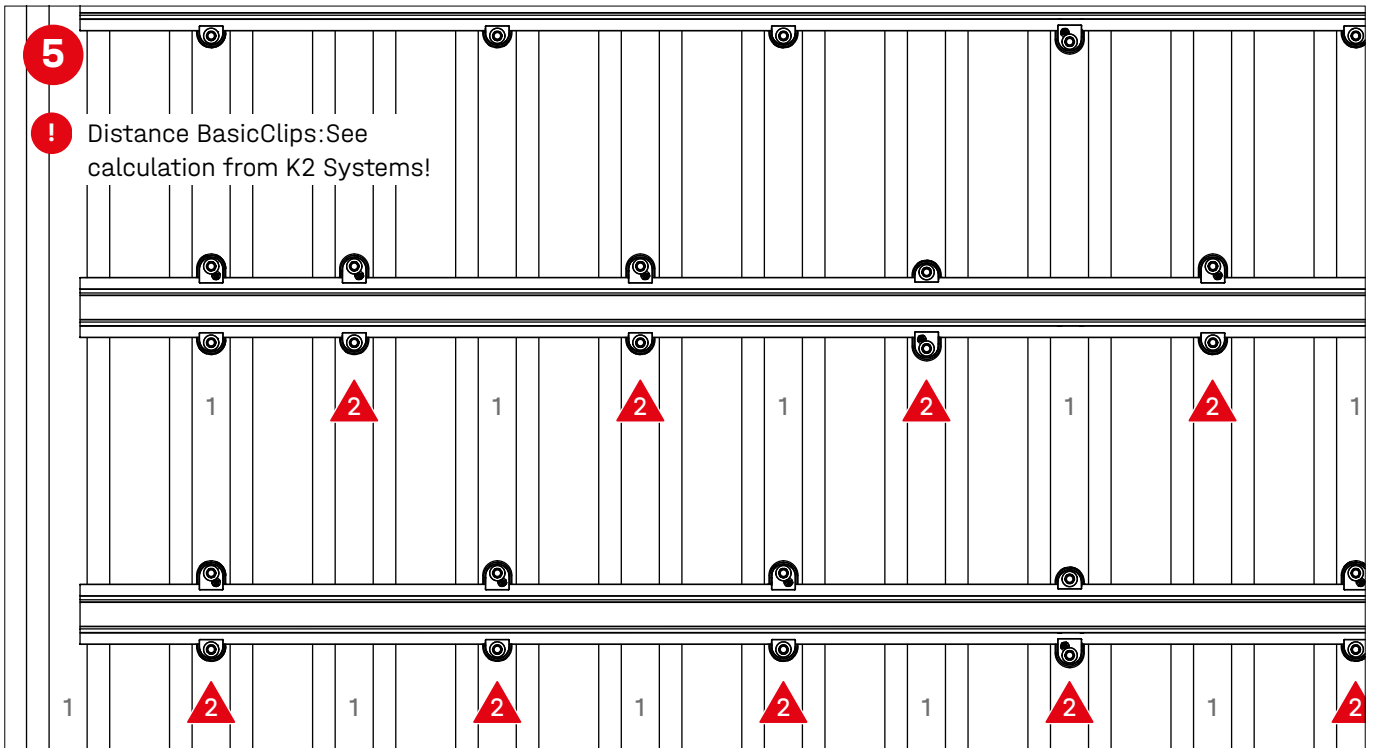


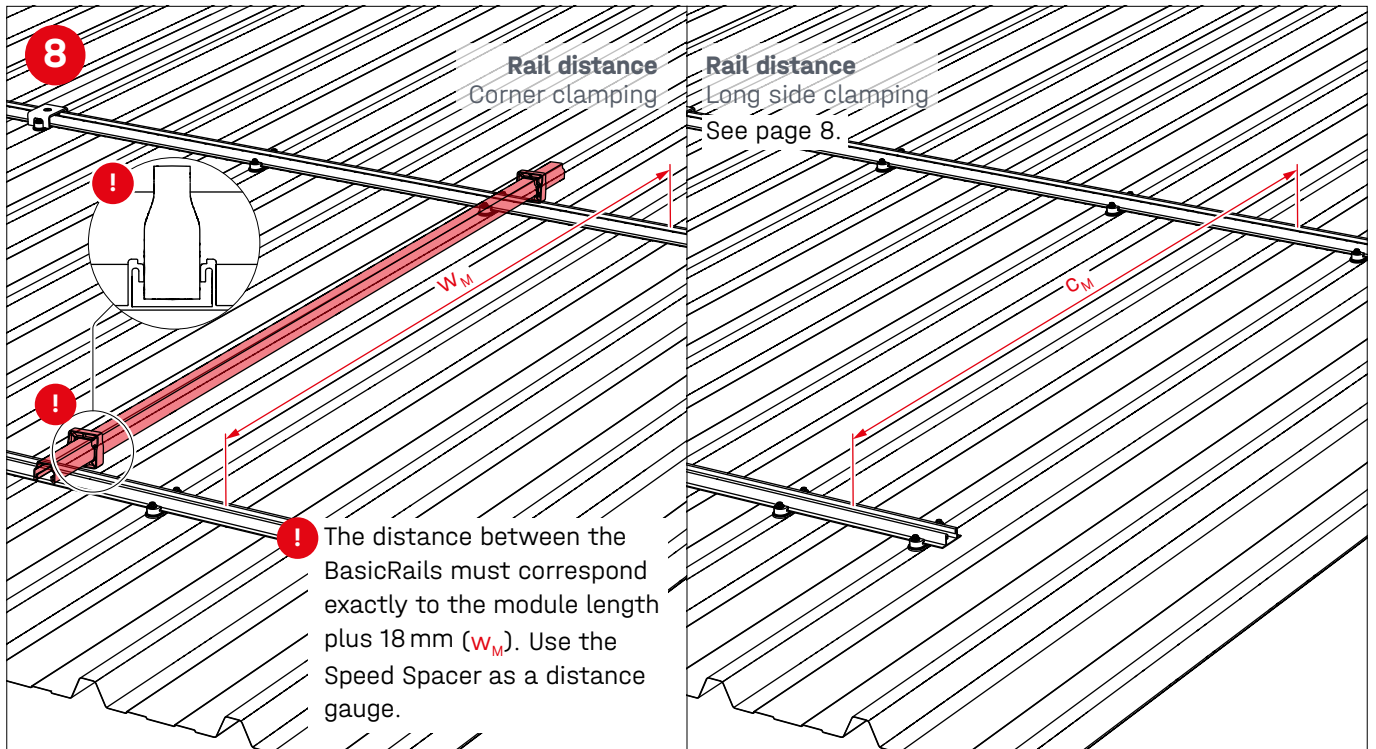
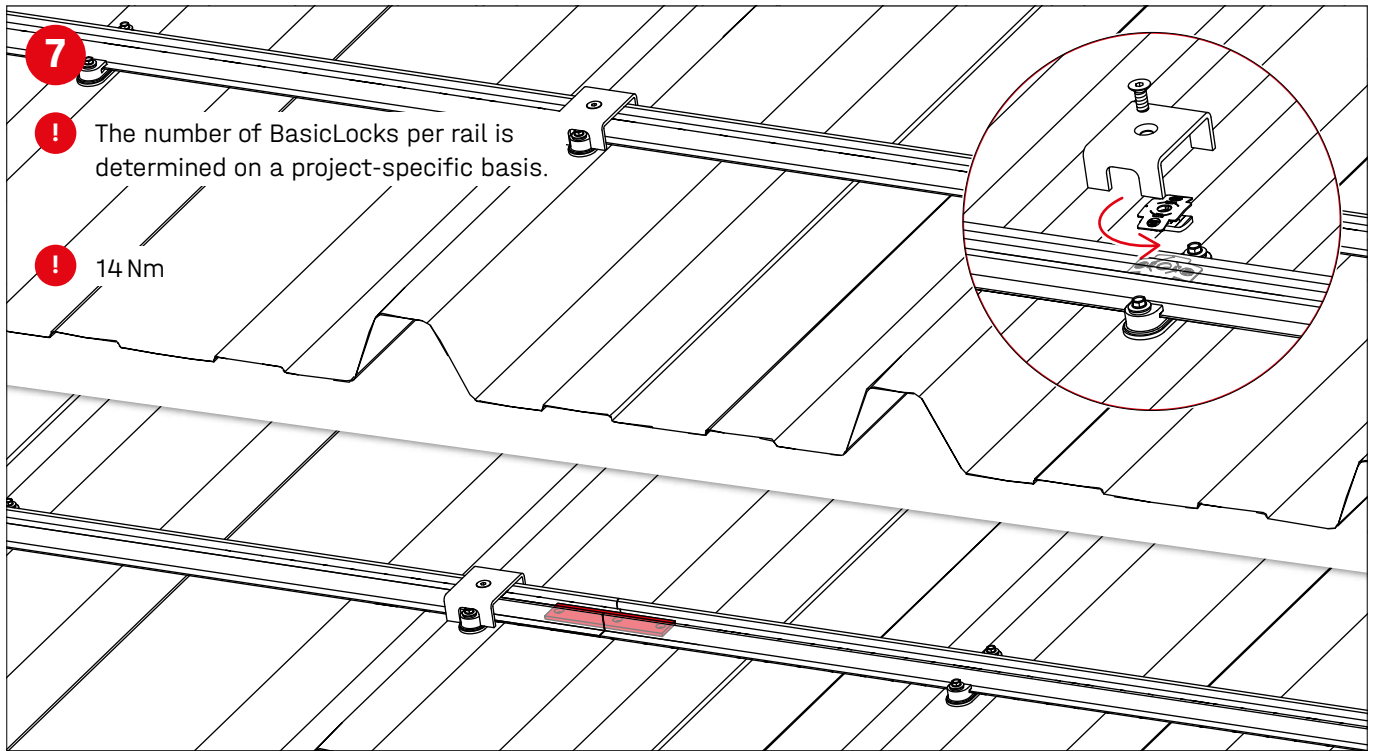


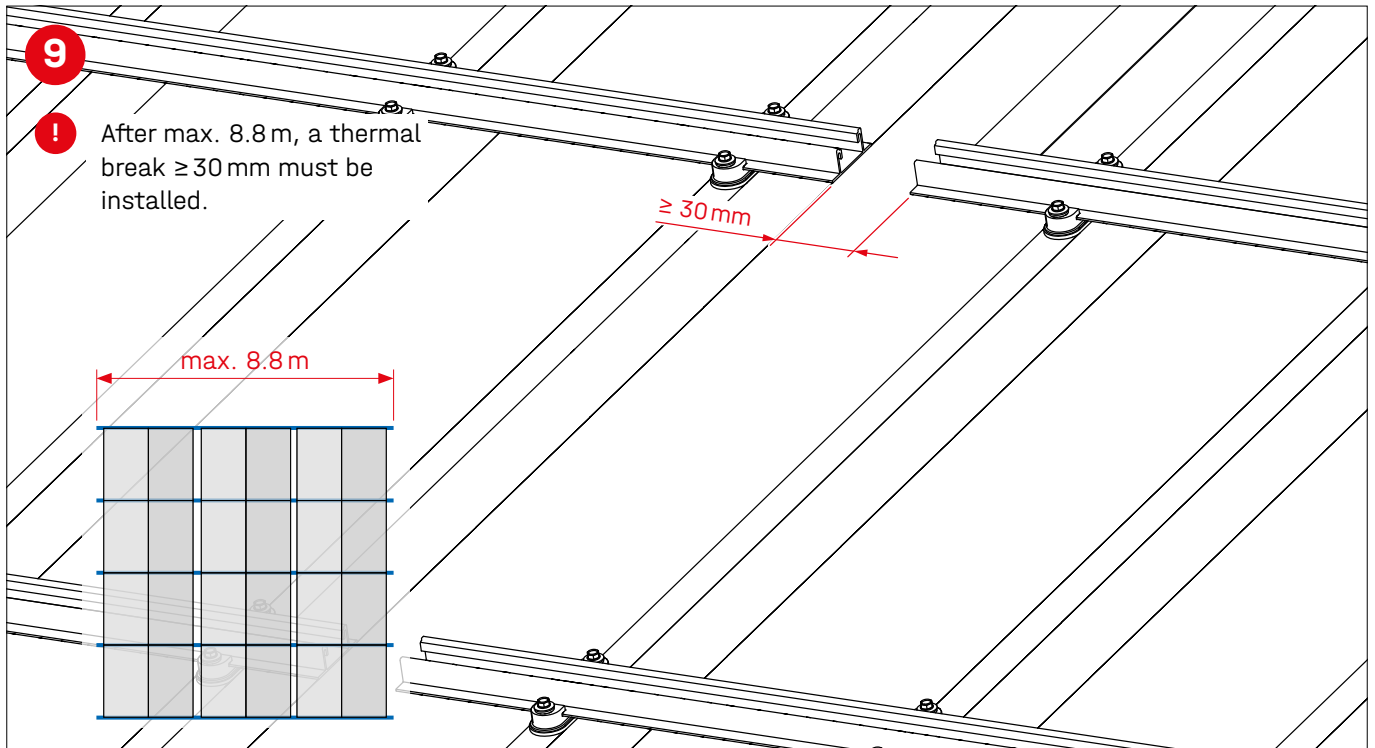
## Installation BasicRail base rails







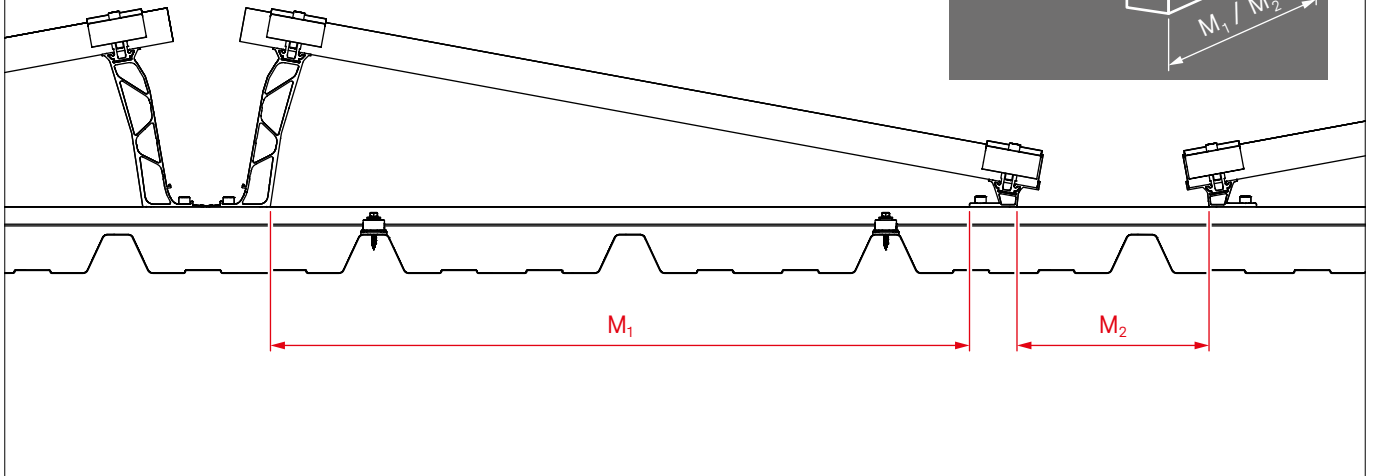
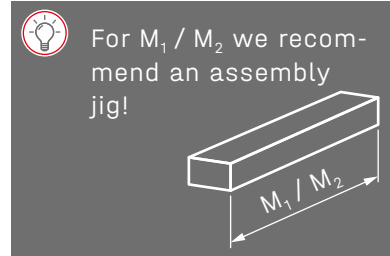




## Assembly D-Dome 6 elevation

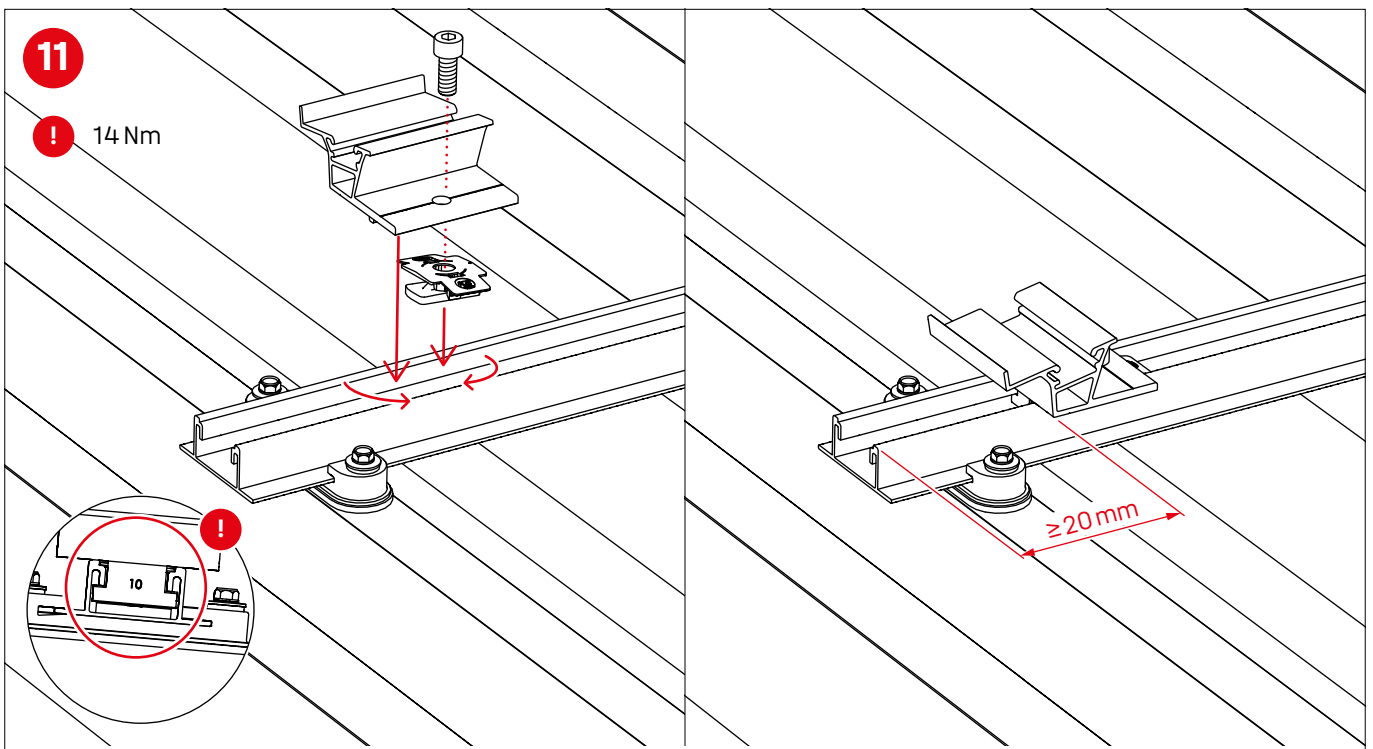
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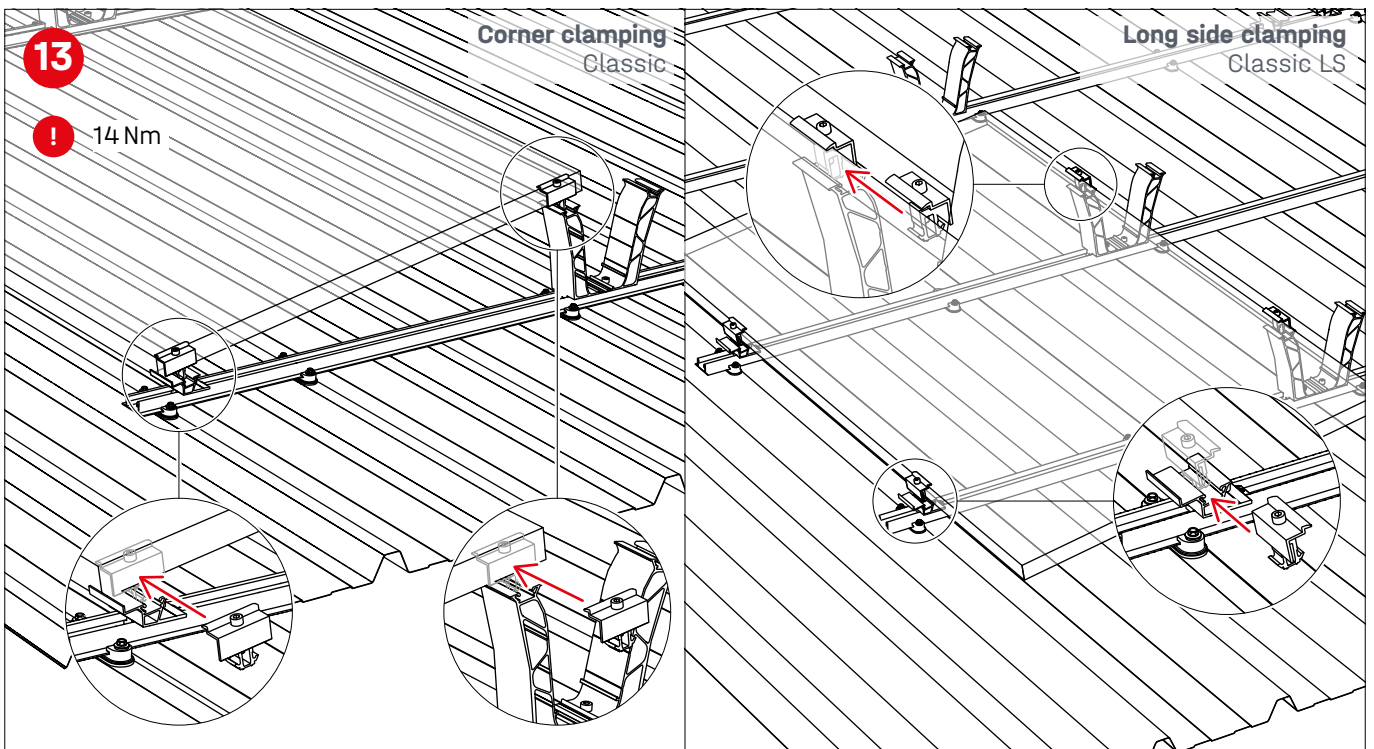
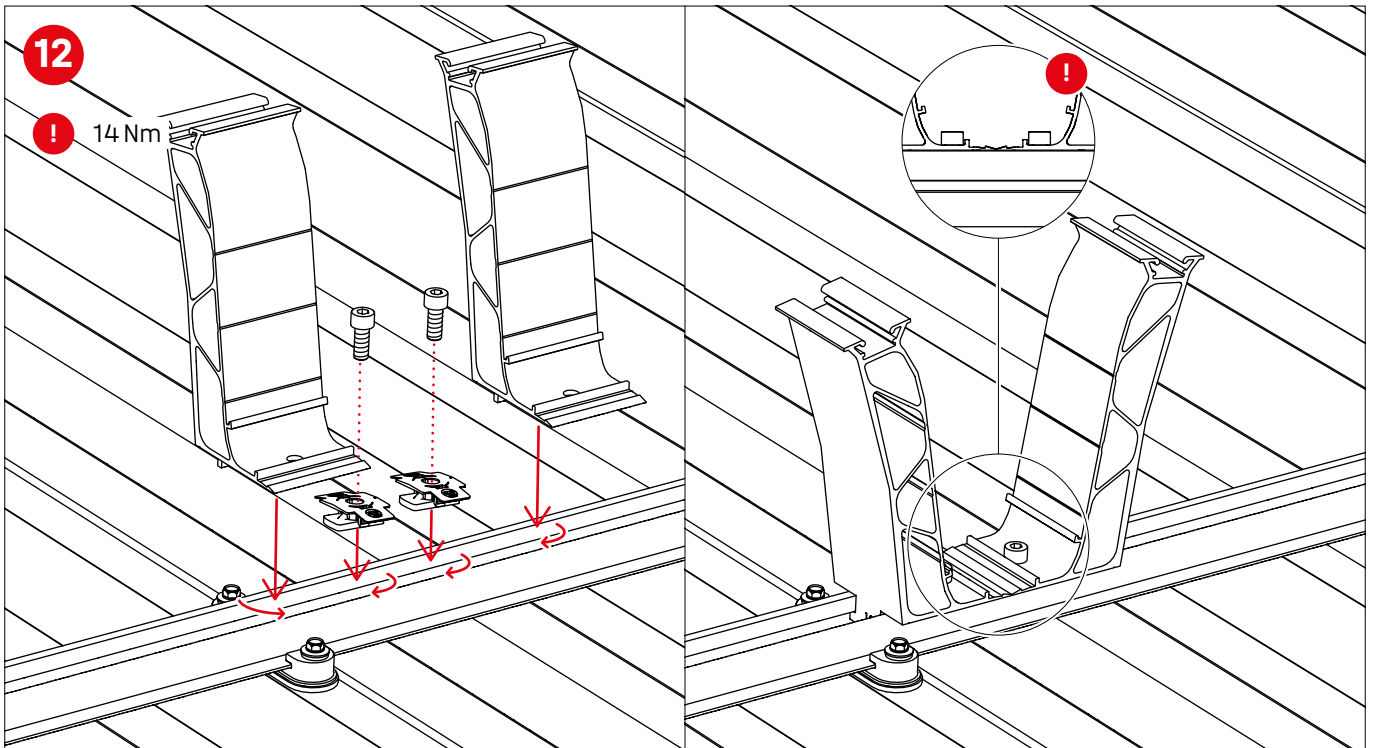
! K2 Base automatically calculates the pre-assembly dimensions  $M_1 / M_2$  and outputs them in the assembly plan. These must be adhered to during assembly.

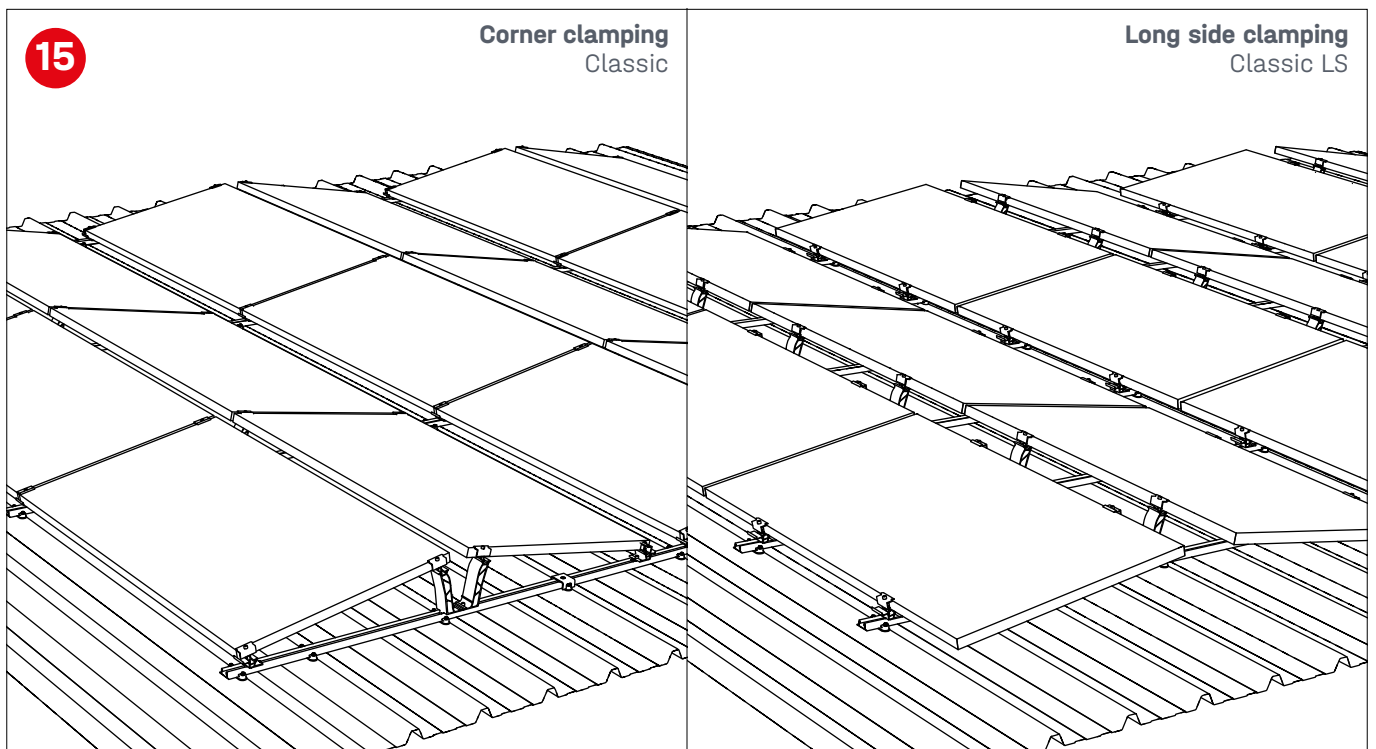
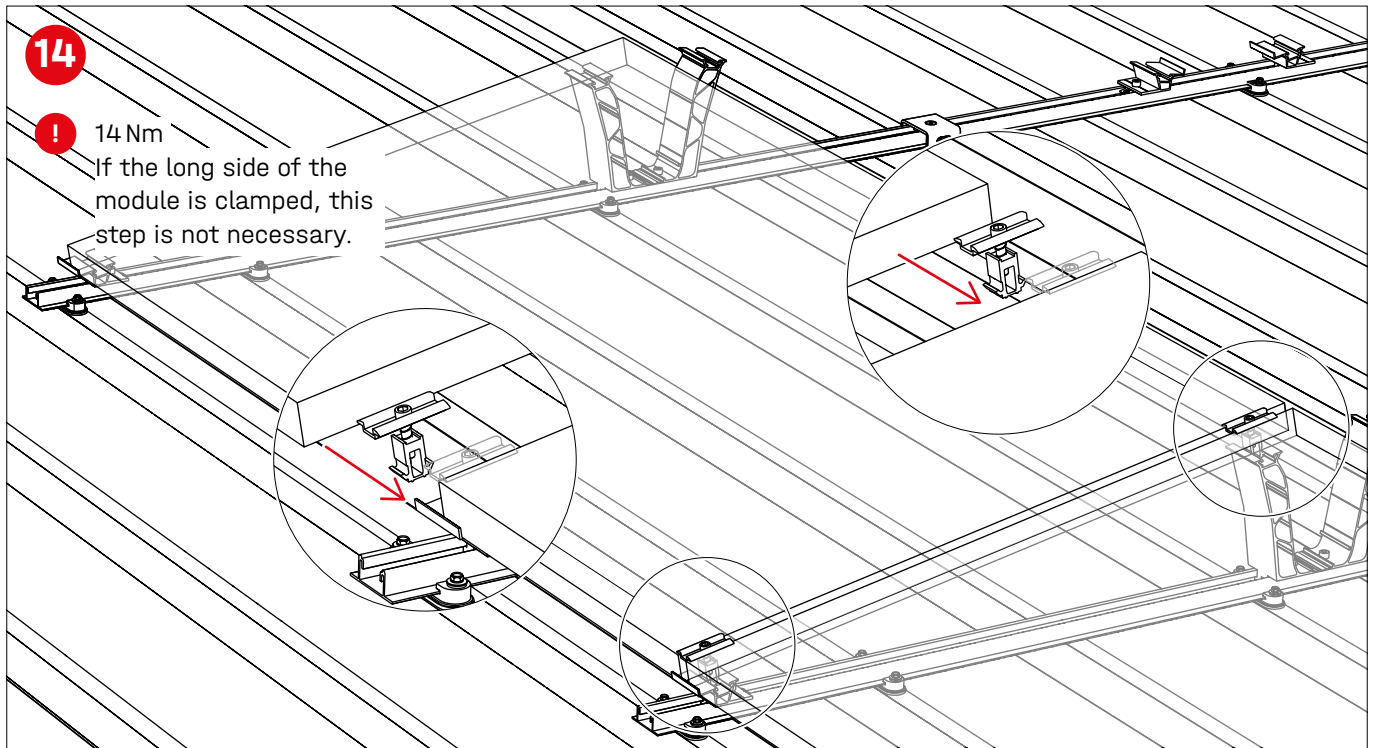


11

! 14 Nm



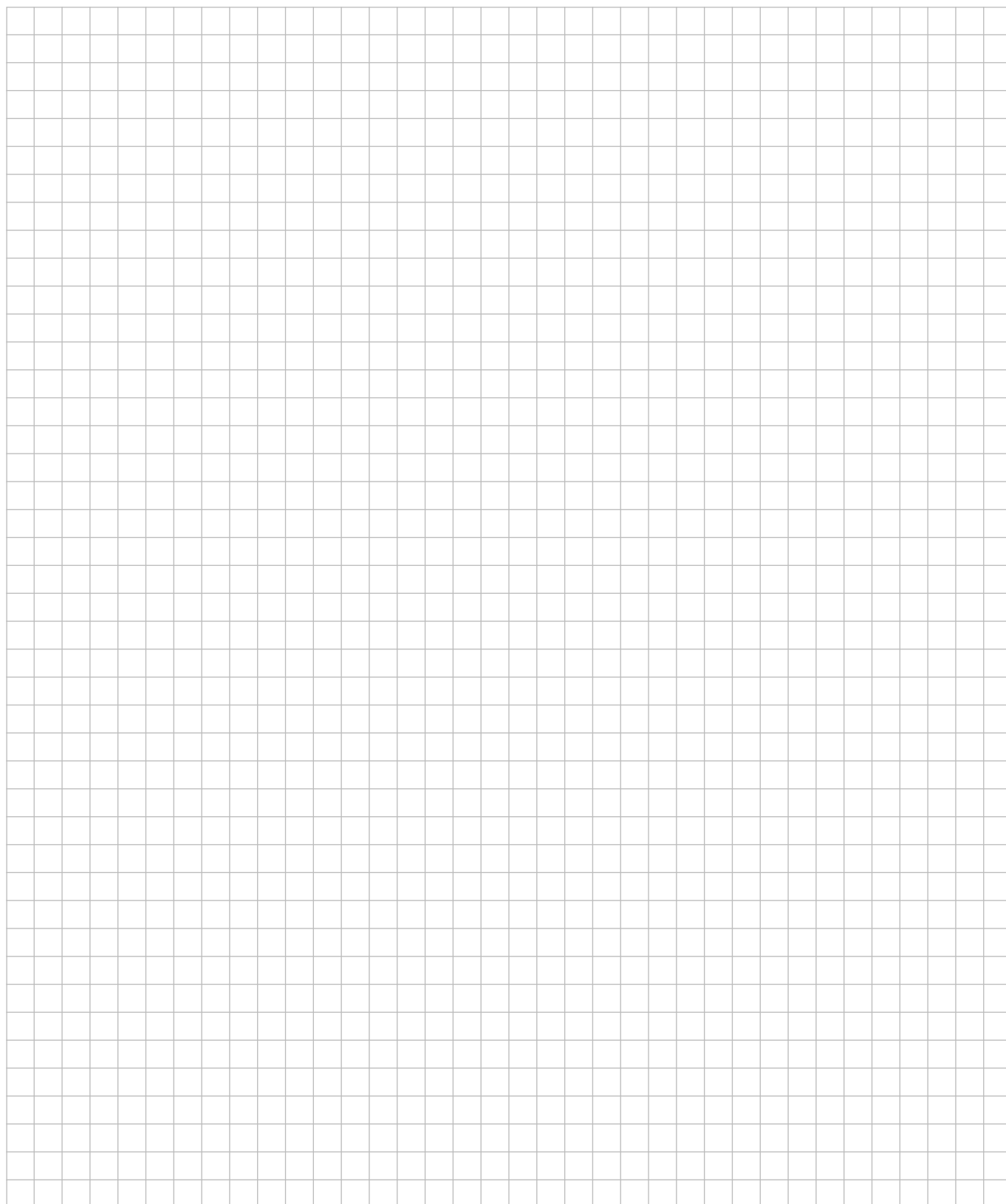


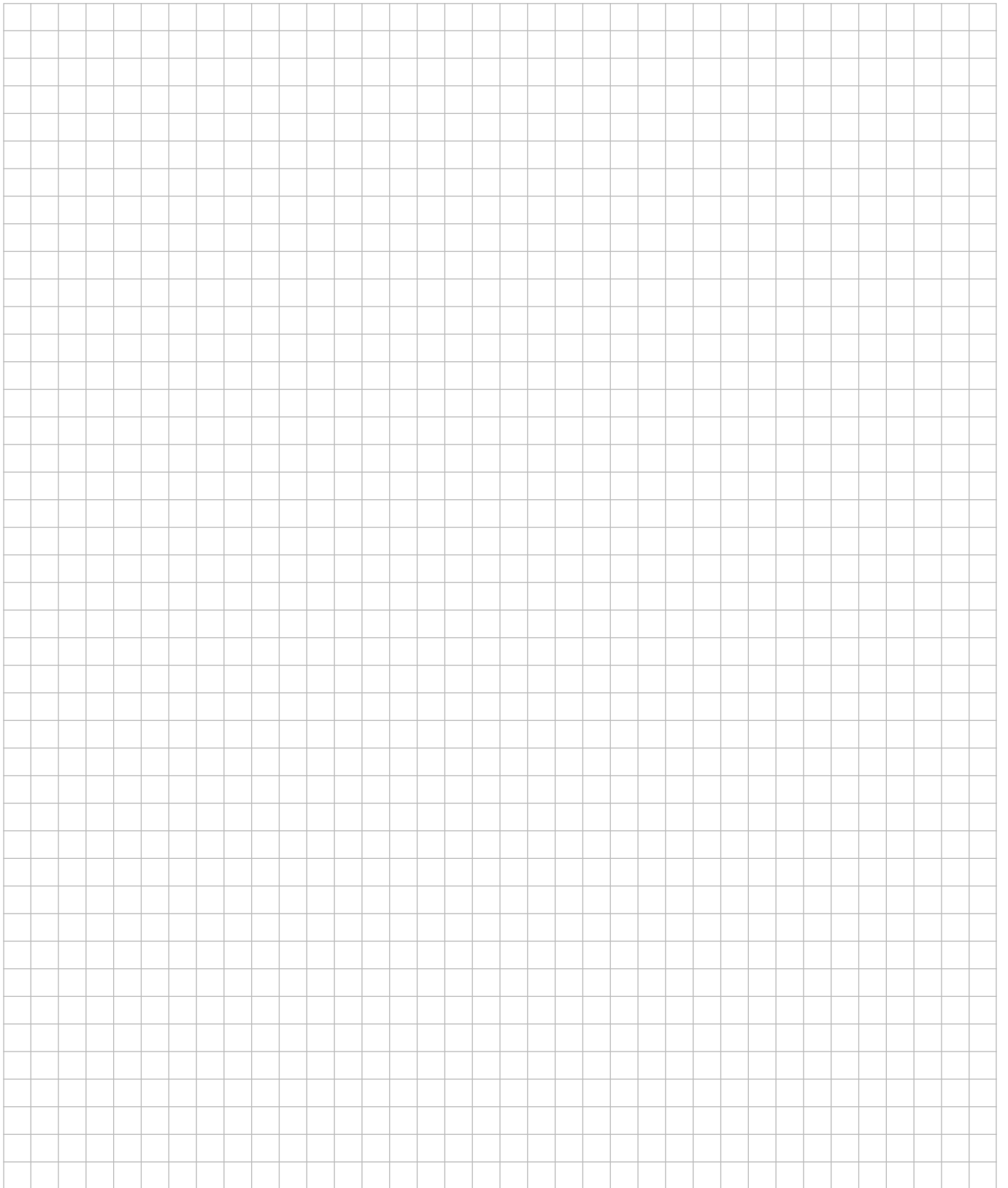






# Notes





## 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 (0)7159 42059-0**

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

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BasicRail D-Dome 6 Assembly EN V1 | 0423 · Subject to change  
Product illustrations are exemplary and may differ from the original.



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