

Assembly Manual

SpeedRail System



Connecting Strength

k2-systems.com

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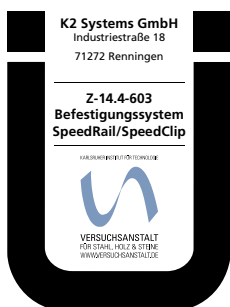
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Quality tested - multiple certifications

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

Übereinstimmungszeichen (Ü-Zeichen)



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

Tools overview



5/6 mm



8 mm



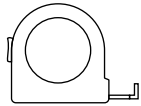
25



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



5/6 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.

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 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. 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



The SpeedRail 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

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

- Sheet thickness: Aluminium ≥ 0.5 mm and steel ≥ 0.4 mm
- Minimum tensile strength for aluminium: 165 N/mm²; steel grade minimum S235
- Minimum 22 mm crest width
- Roof pitch inclination: 5 - 75°



Structural requirements

Sufficient holding force of the roof covering on the support or substructure

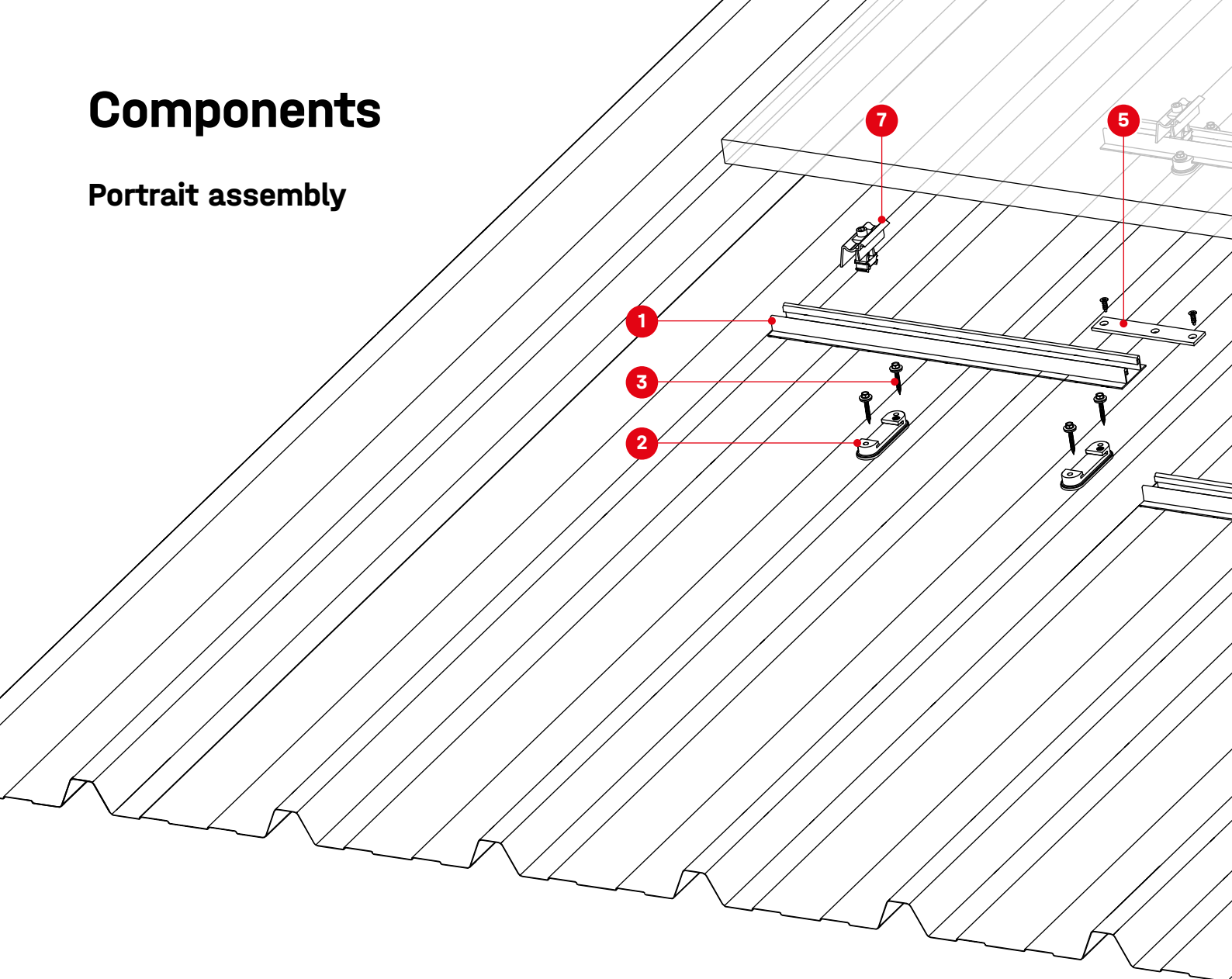


Important mounting instructions

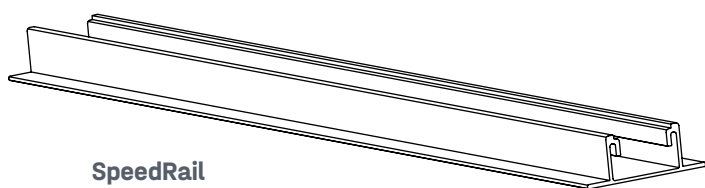
- Earthing must be ensured (use lightning arrestor clamp if necessary).
- If the troughed sheet is to be fastened with calottes, please never bolt the SpeedClips to the calottes! Instead of this, mount all SpeedClips staggered in this sequence on the troughed sheet.
- Every fourth or quarter of all SpeedClips is mounted rotated 180° to fix vertical position. Rotated SpeedClips must not be placed at the end of the rail; see assembly step 5.
- For rail joints, SpeedClips must be attached to the nearest high crest on both sides.
- Ensure a thermal separation after 8.80 m. The minimum distance between two rails should be 3 cm.
- Attention: Modules must never be clamped over the thermal expansion joint.
- A SpeedLock per SpeedRail up to 8.80 m in total length, is required (SpeedRail connected via a rail connector counts as a SpeedRail).
- When laying frameless modules vertically, always build in a stopper to prevent sliding-off for each module.
- MK2 insertion nuts and module clamps at rail joints must be avoided!
- A minimum mounting distance of 60 mm from the end of the rail / rail joint to the module frame.
- No pre-drilling required! Pre-drill only with overlapping sheets to reduce spacing.

Components

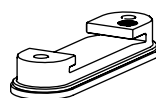
Portrait assembly



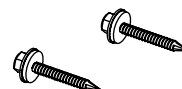
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system-specific



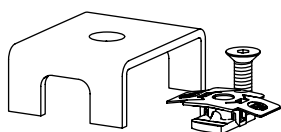
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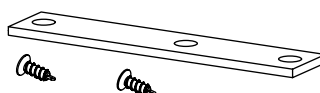
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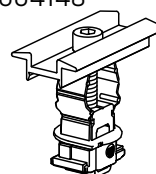
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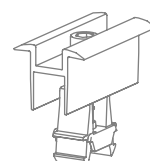
- 5** 1003571

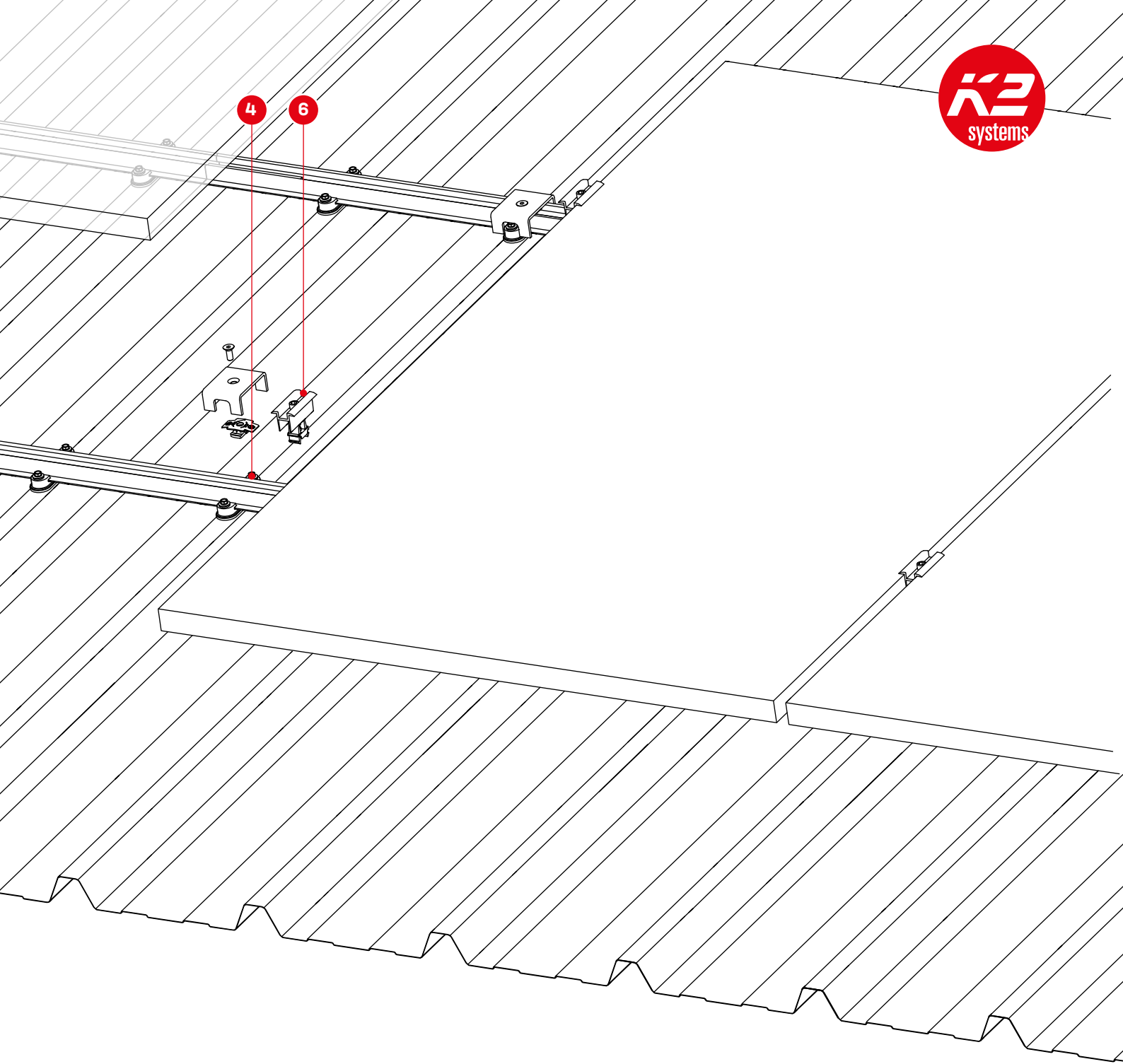


- 6** 2004146 /
2004148



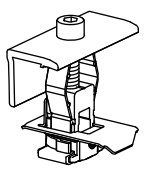
- 2003071 /
2003072



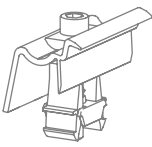


Optional components

See page 17 + 18!

- 7** 2004147 / 2004149 2002514 / 2002589
- 

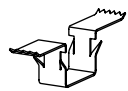
**K2 Clamp EC
25 - 40**
silver / black




OneEnd
silver / black

- 2003191
- 

RailUp Set

- 2001881
- 

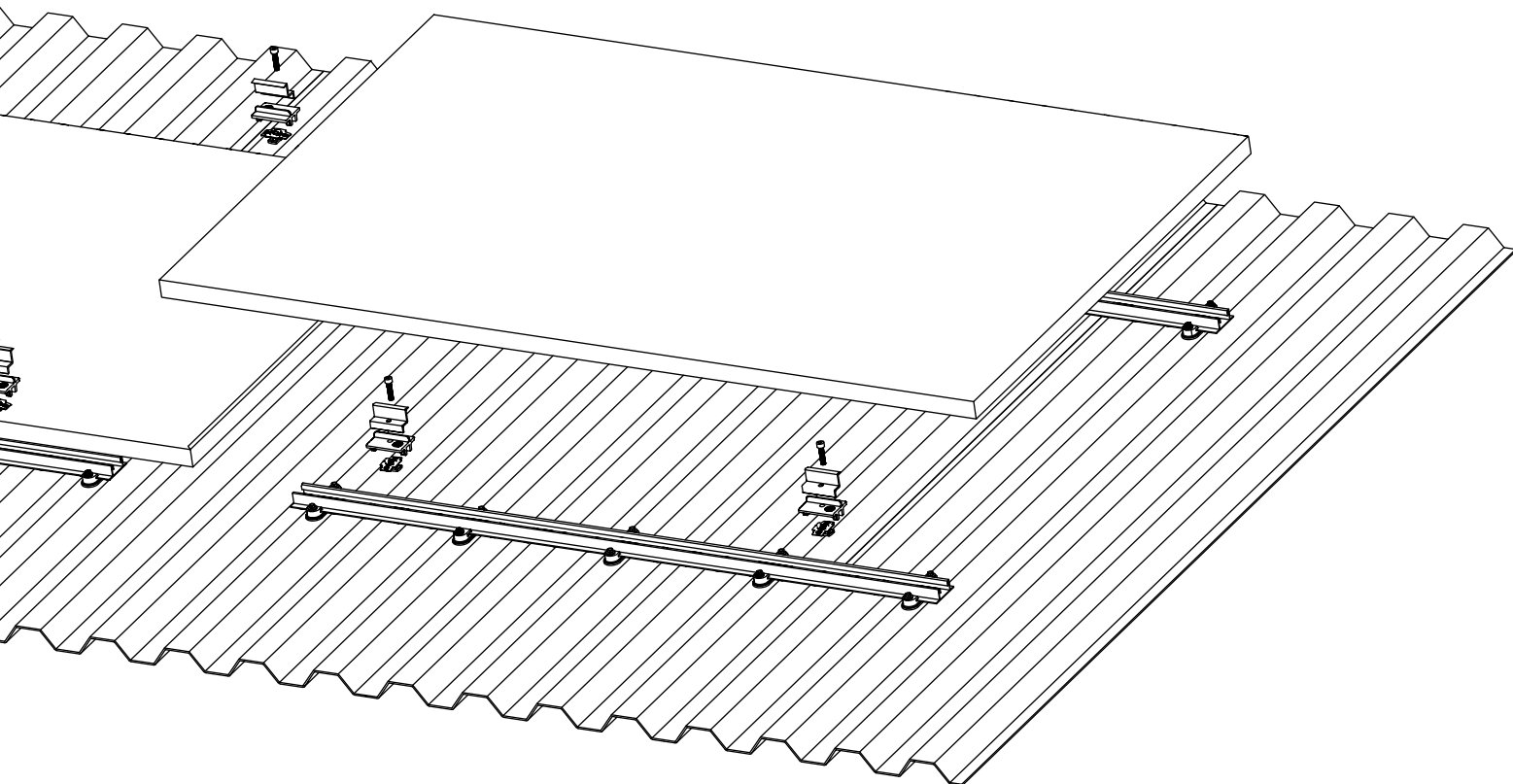
TerraGrif K2SZ

- 2000055
- 

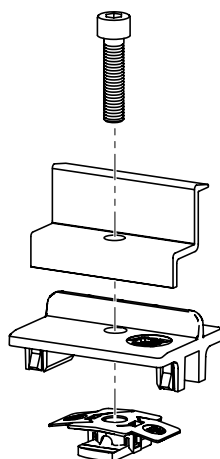
TerraGrif K2PA

Components

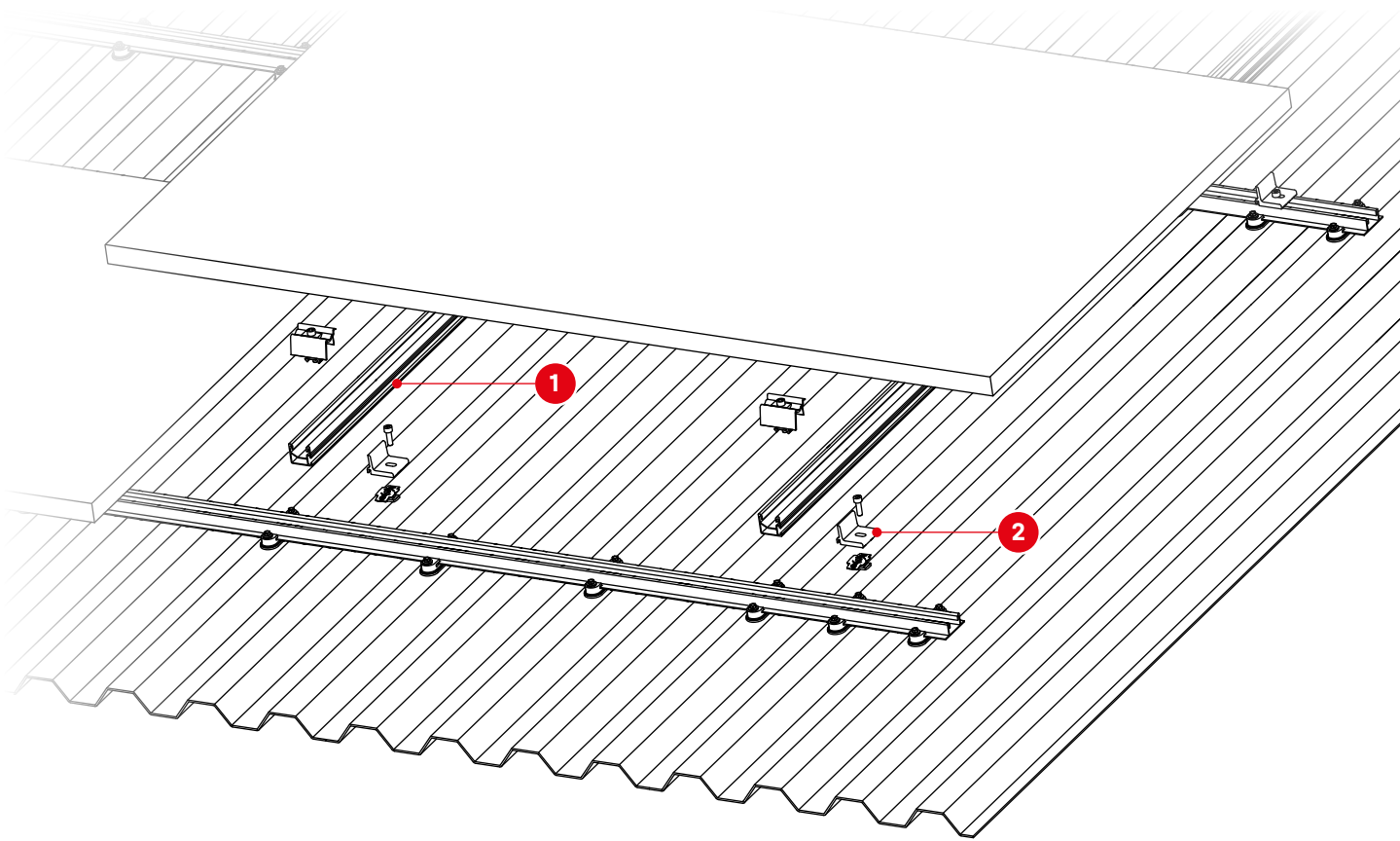
Landscape assembly with AddOn



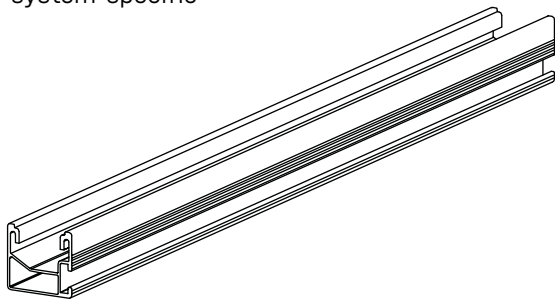
- 1 Screw length
module frame specific
socket head cap screw M8
- 2 1005131 **middle clamp**
module frame specific **end clamp**
- 3 module frame specific
AddOn 22/25 or 30
- 4 1001643
MK2 insertion nut



Landscape assembly with two layers of rails

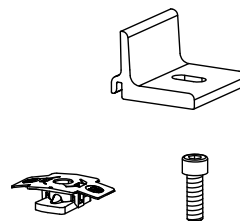


1 Item number
system-specific



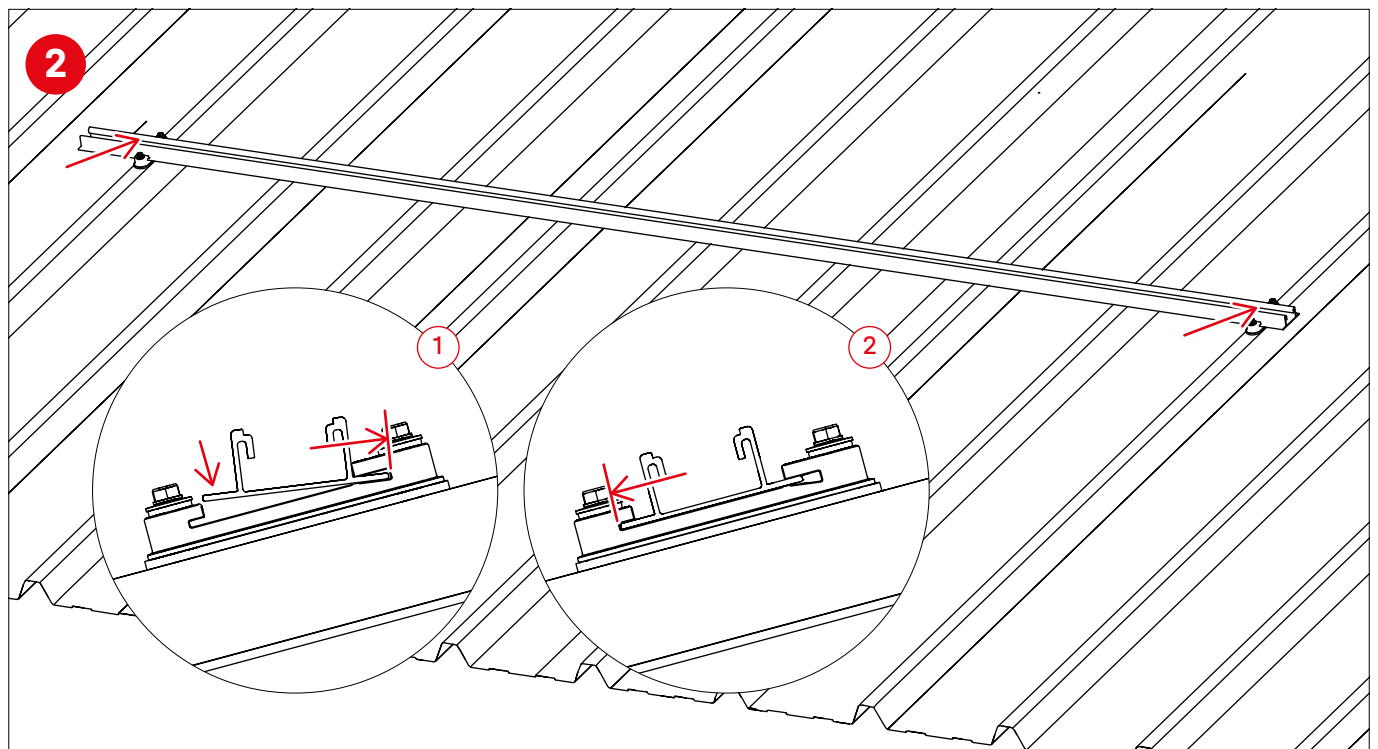
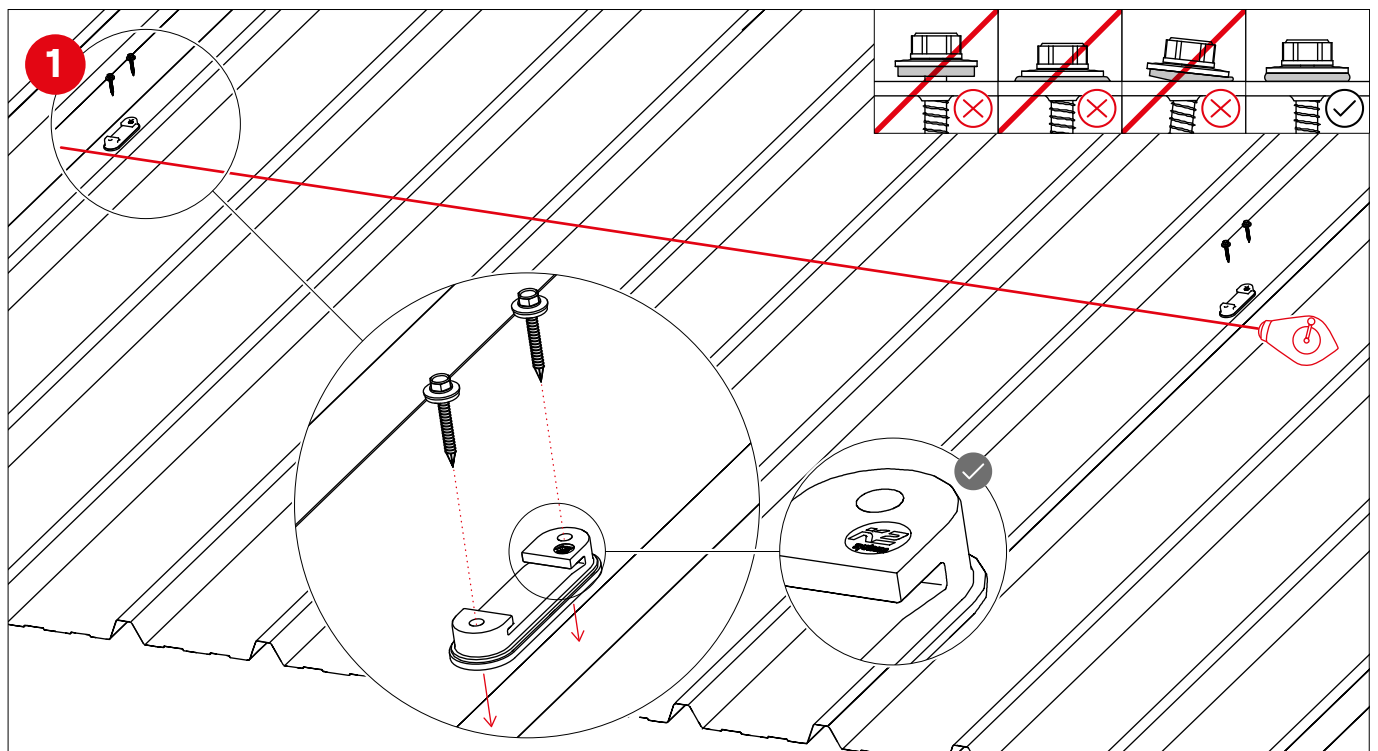
SingleRail

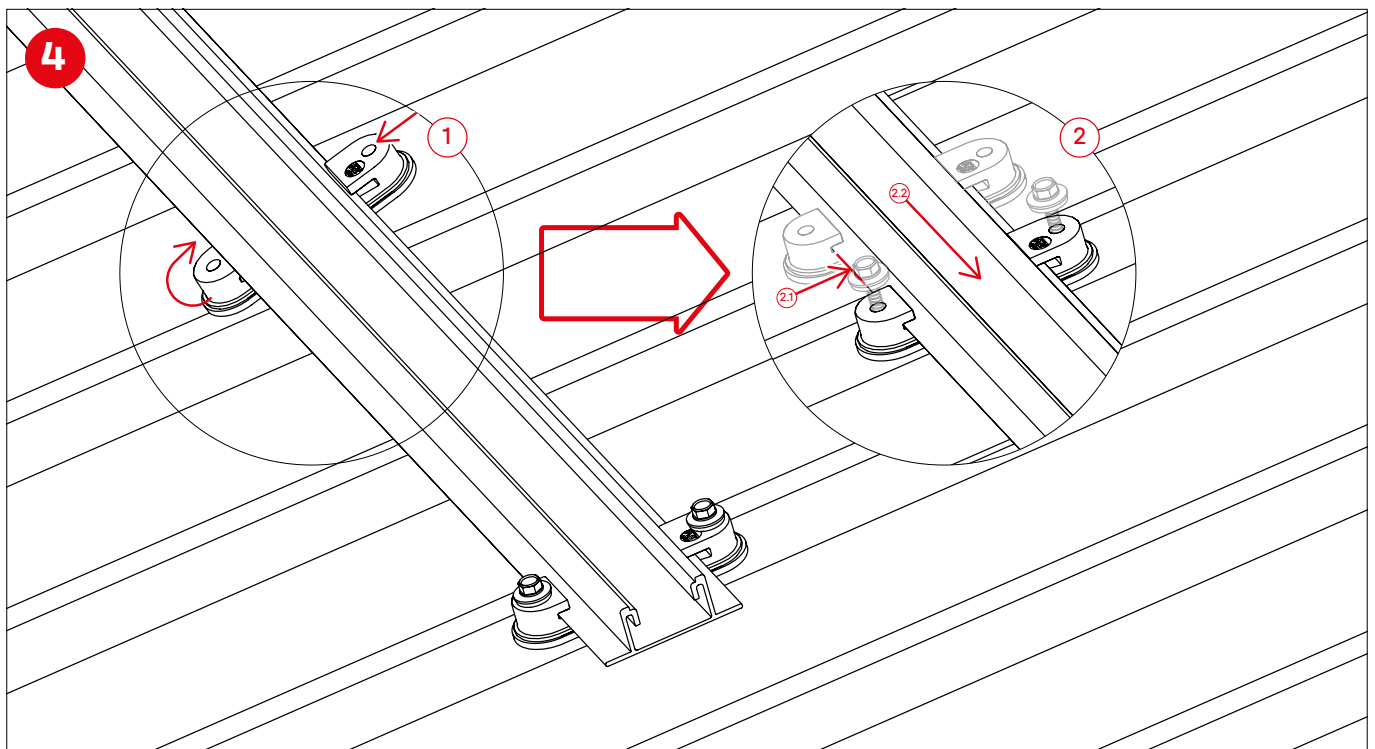
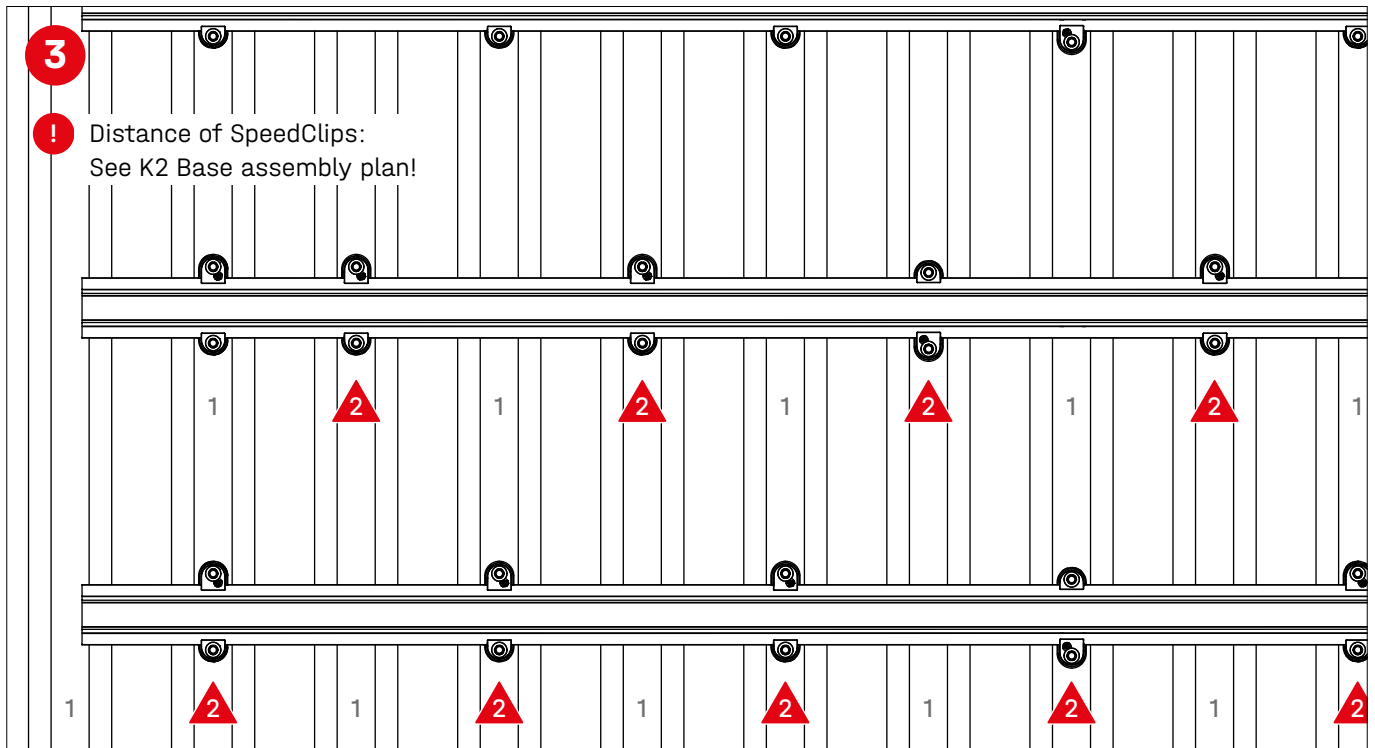
2 2003145

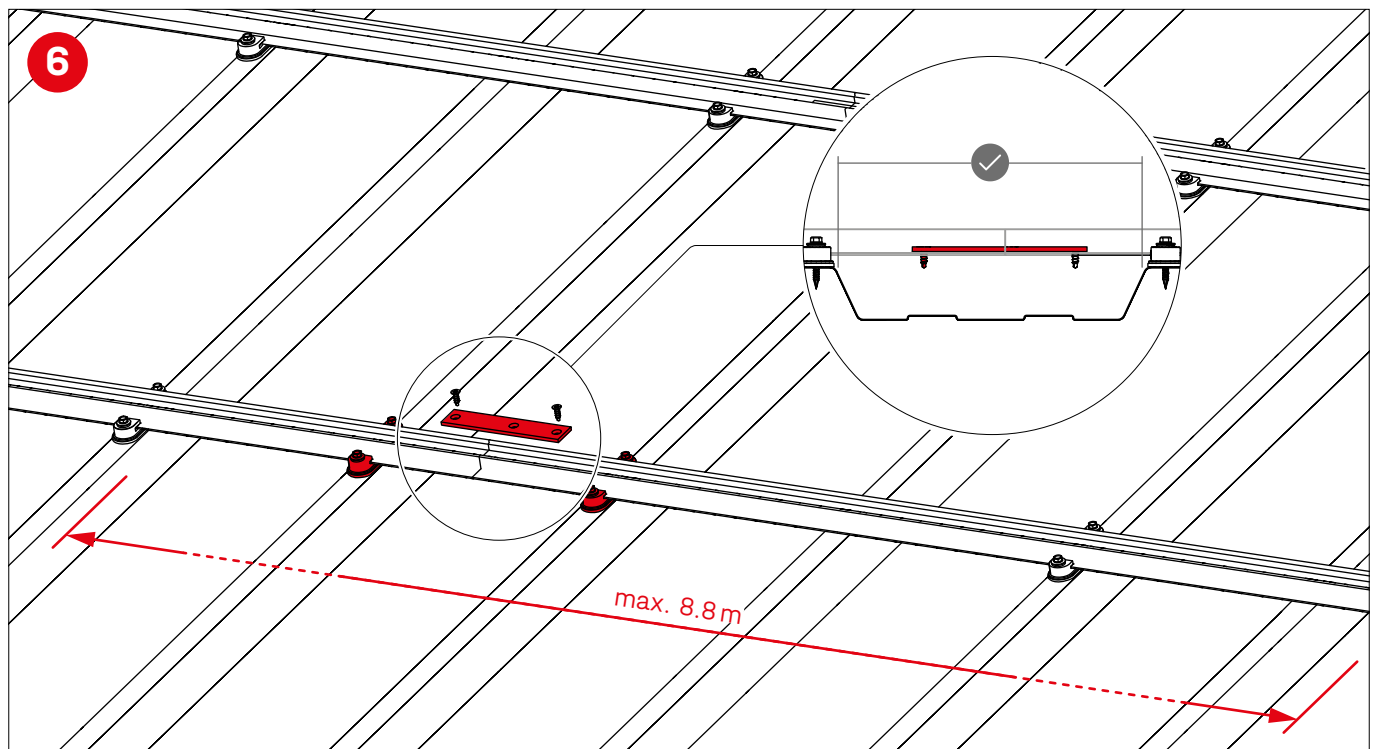
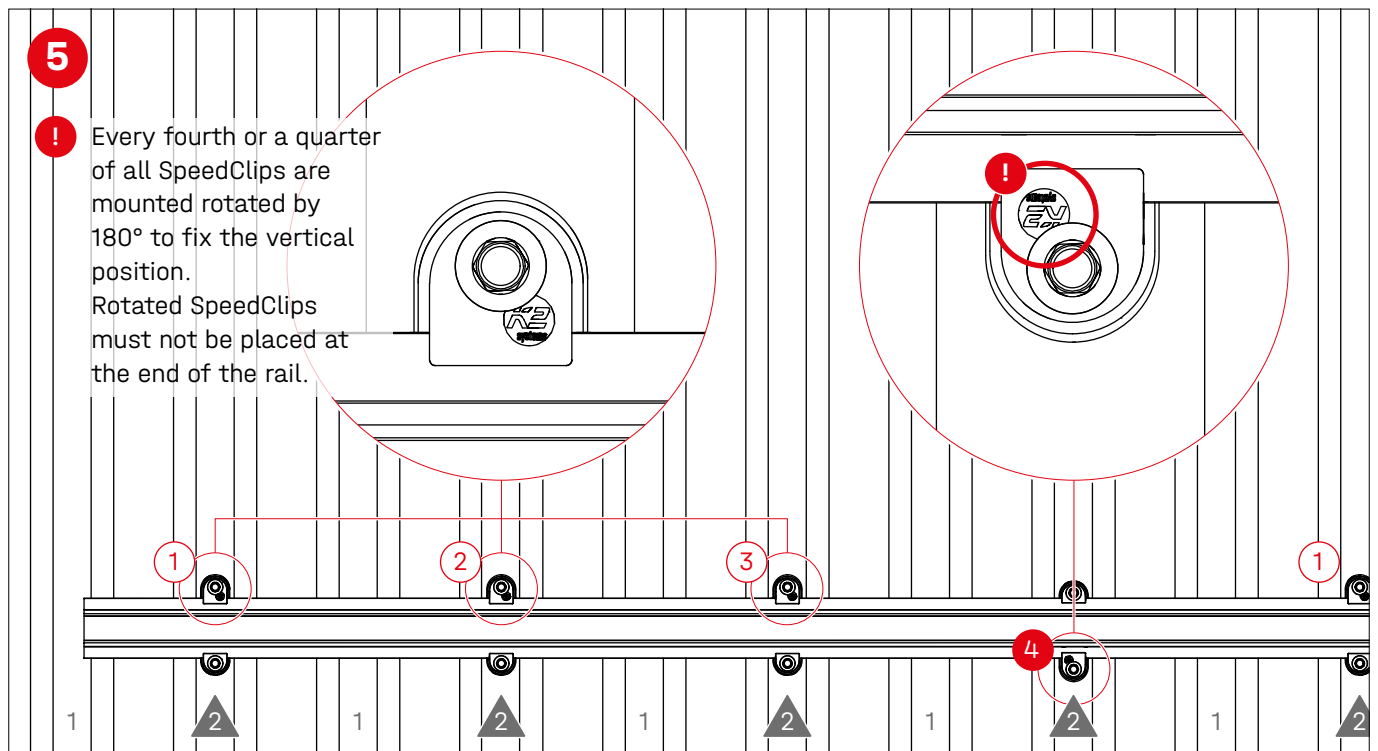


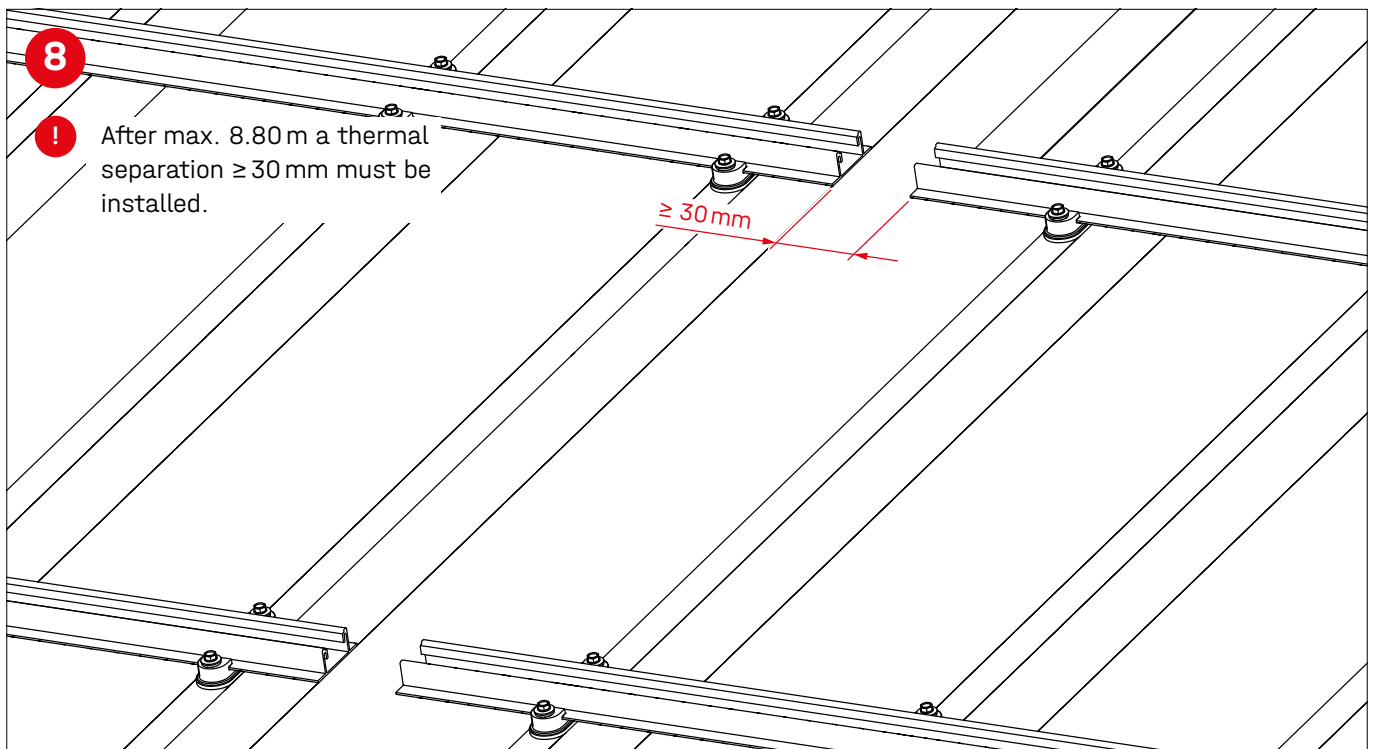
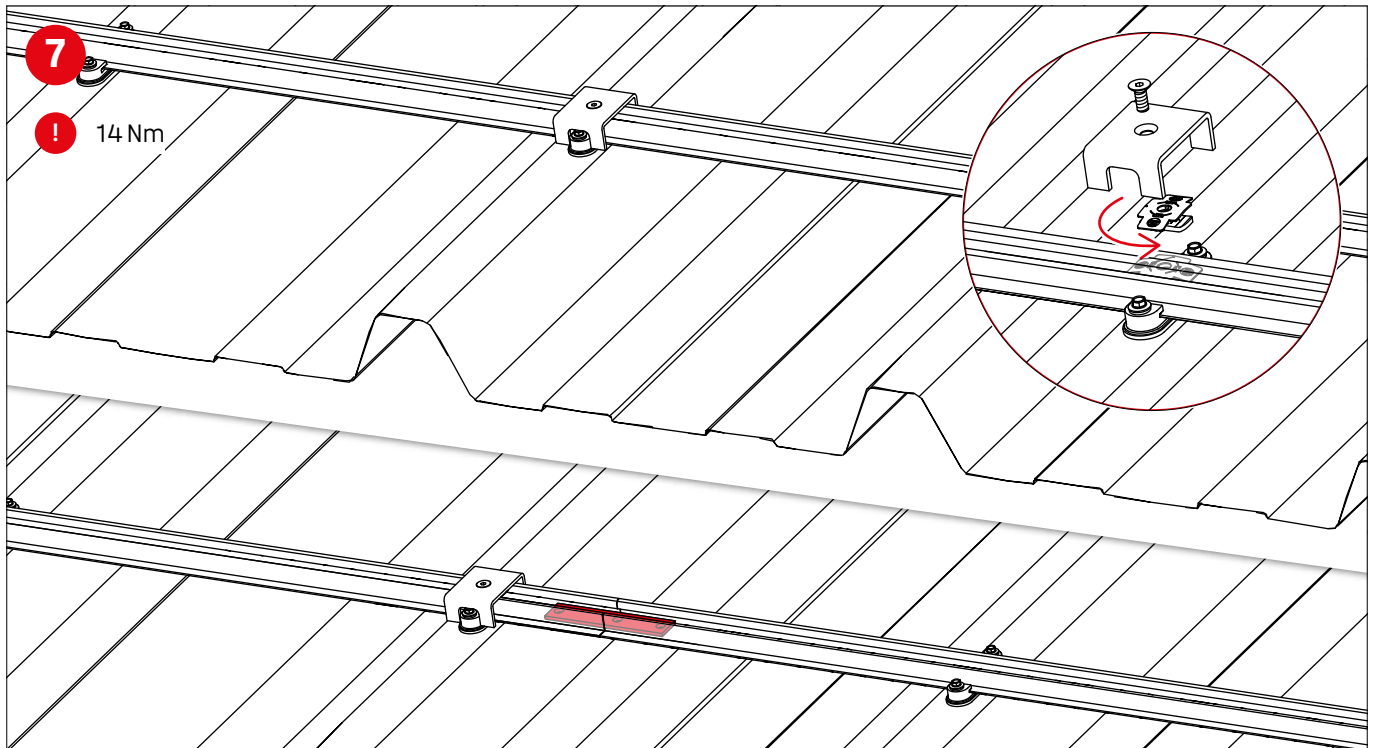
Climber Set

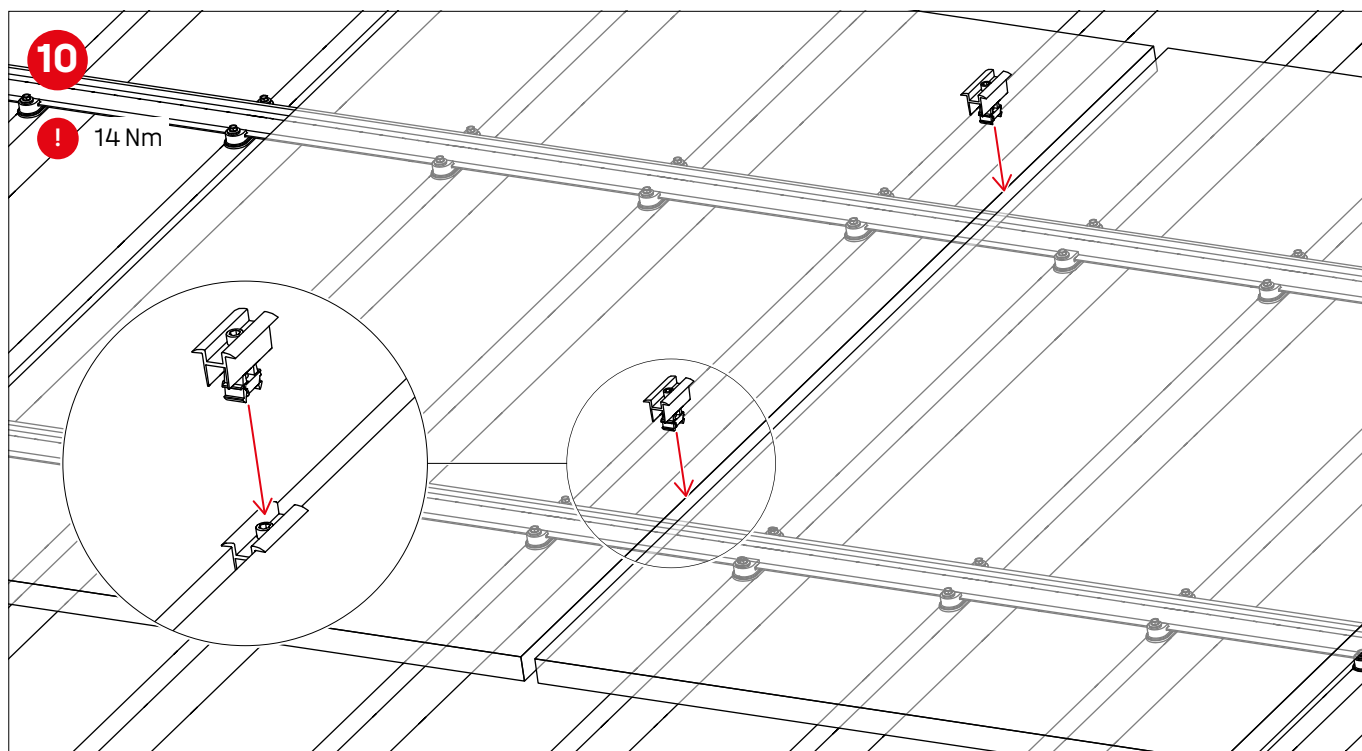
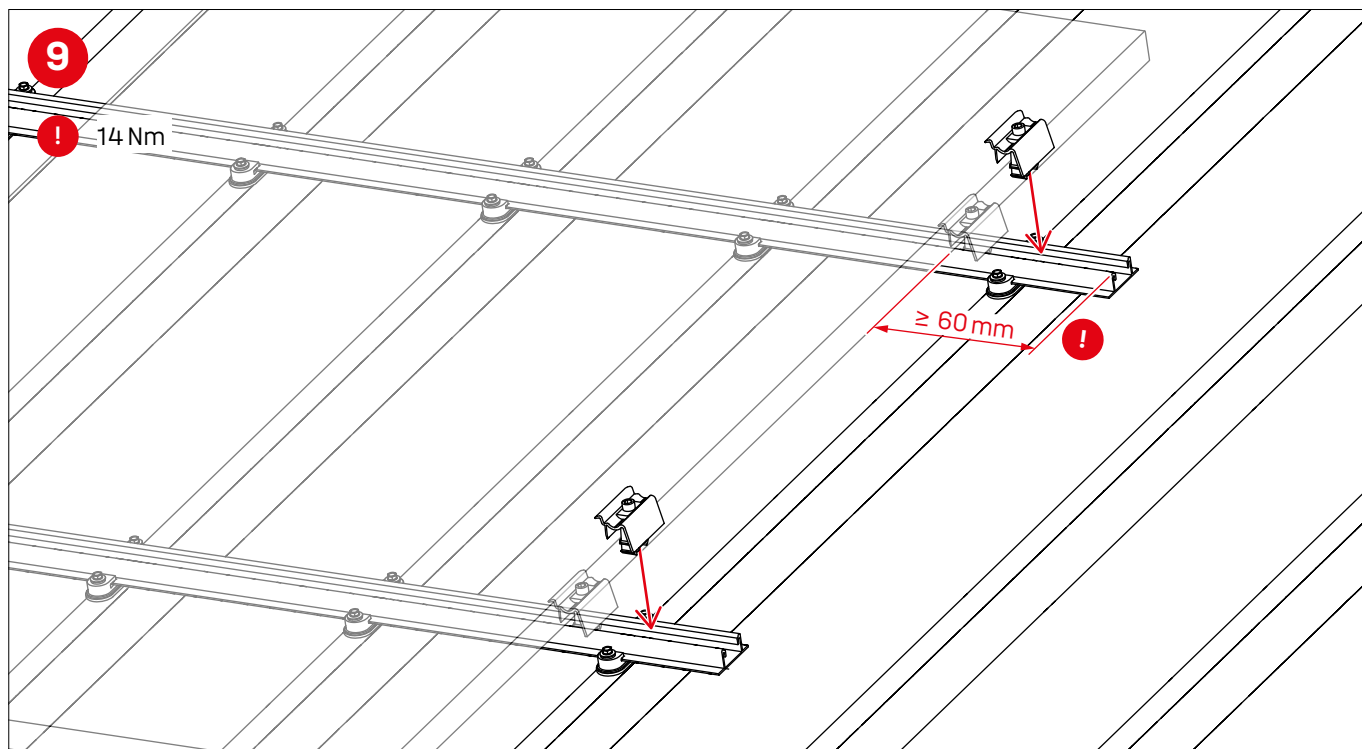
Assembly



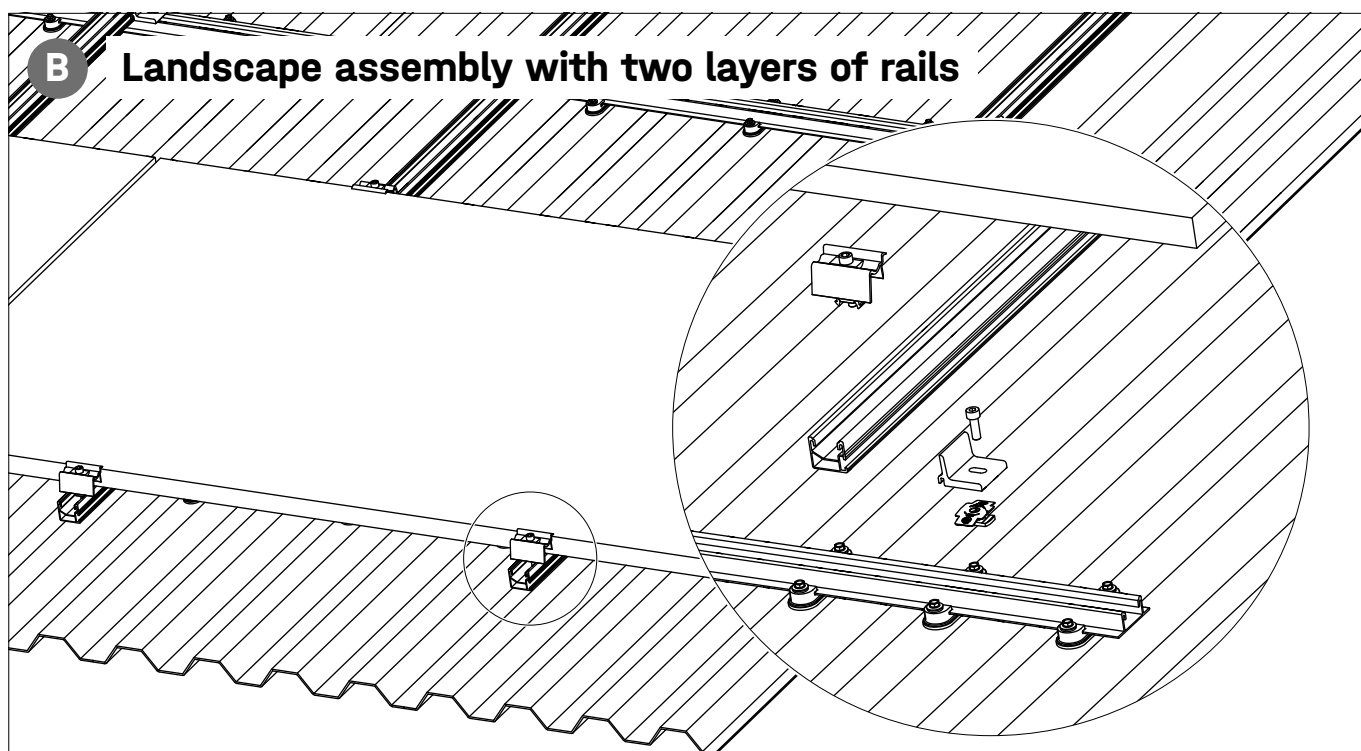
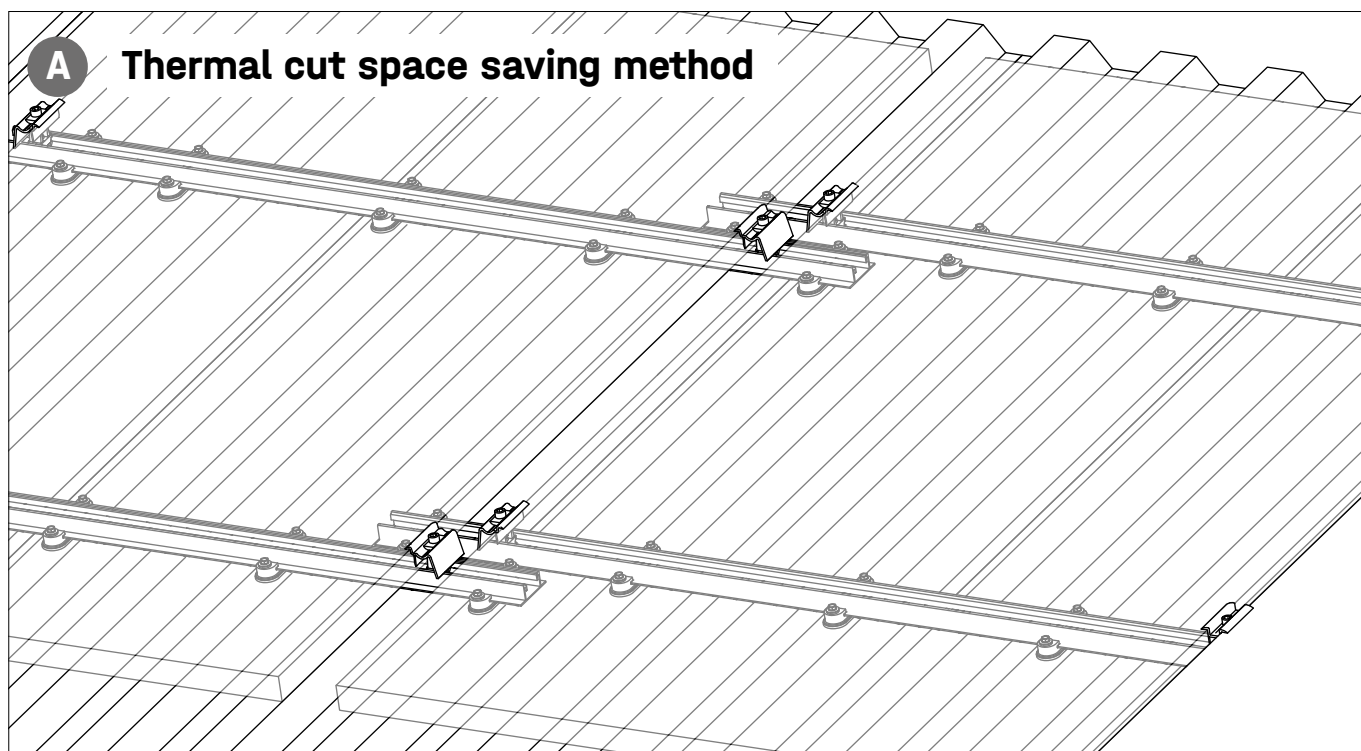




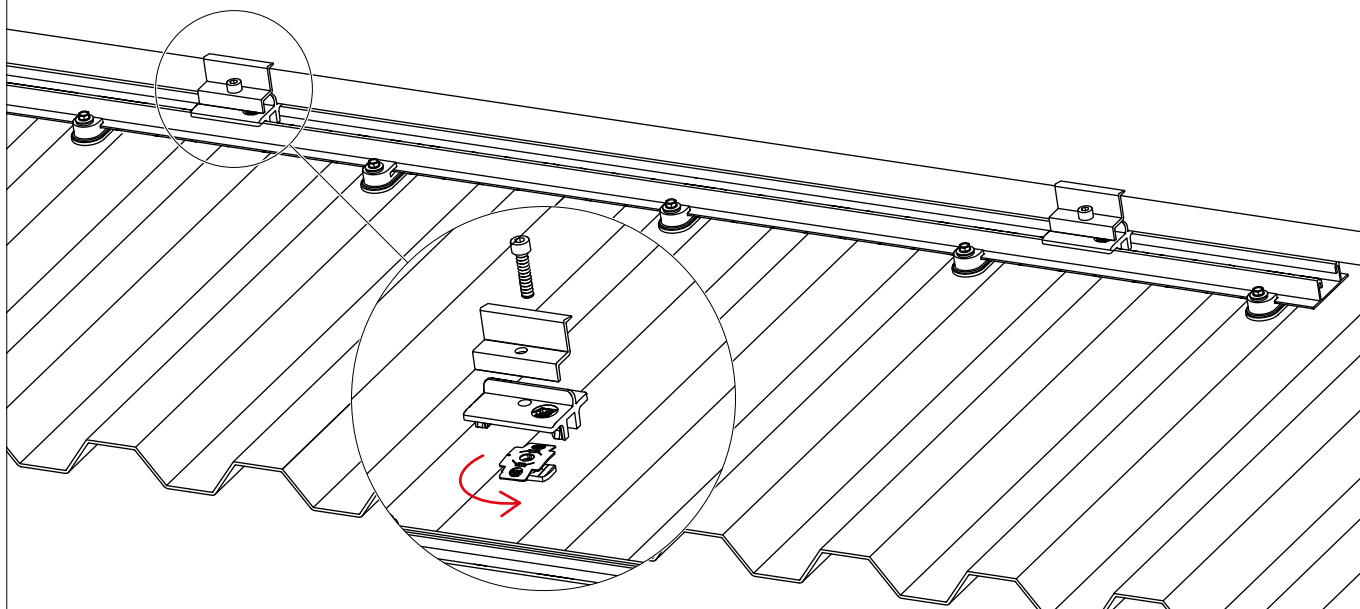




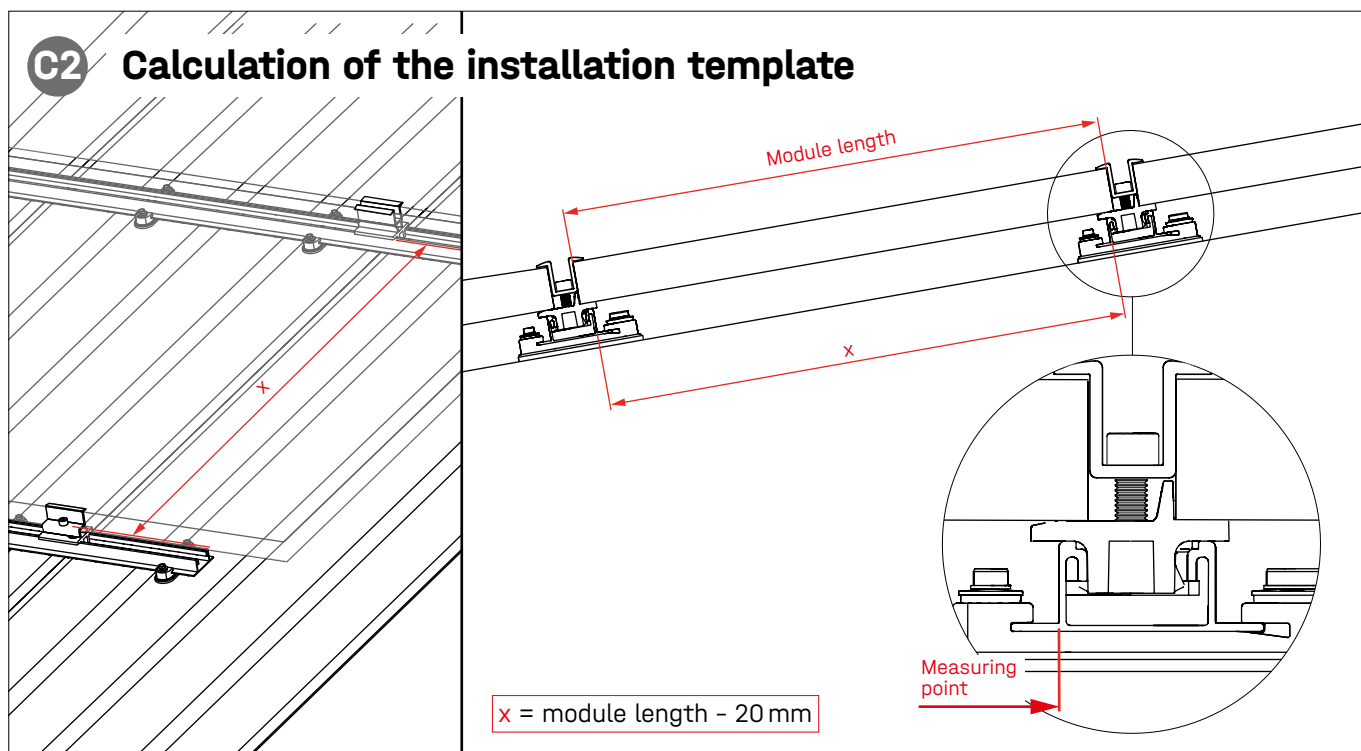
Alternative system assemblies



C1 Landscape assembly with AddOn



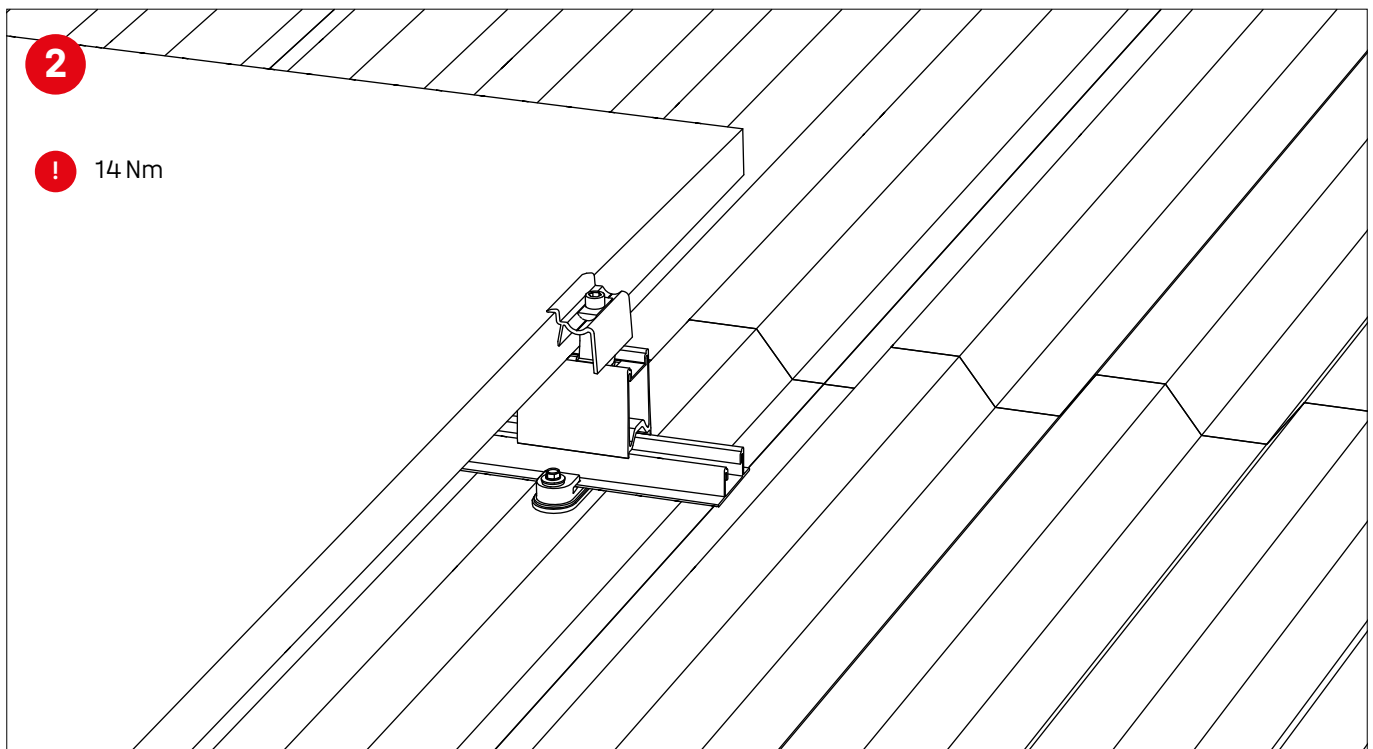
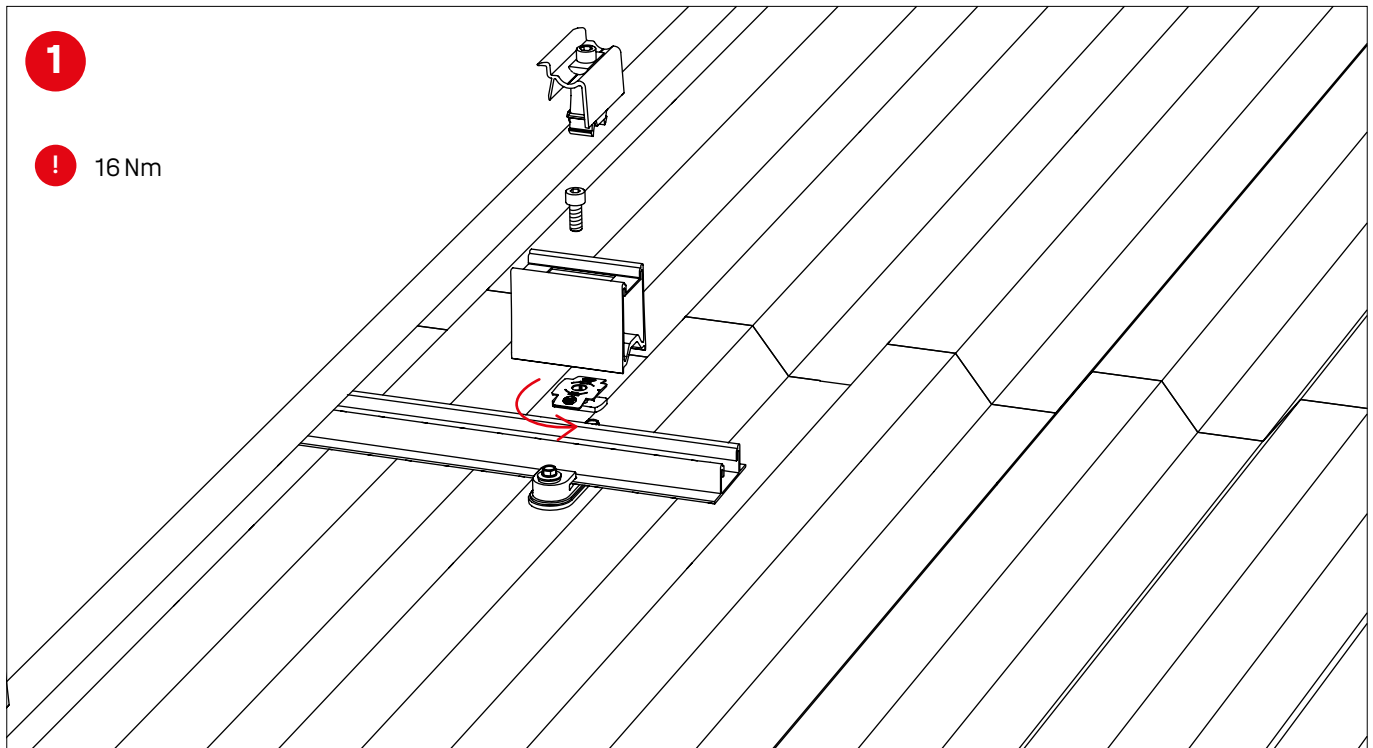
C2 Calculation of the installation template



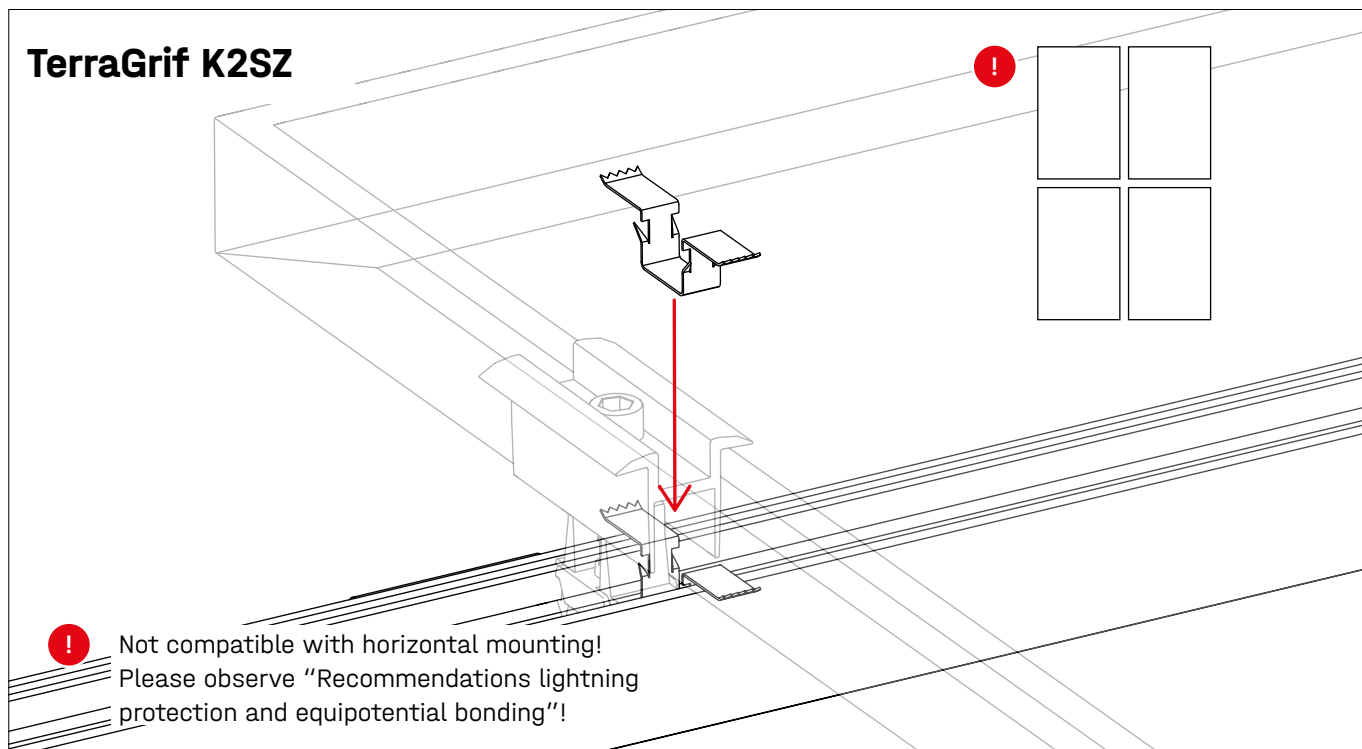
Optional installation steps



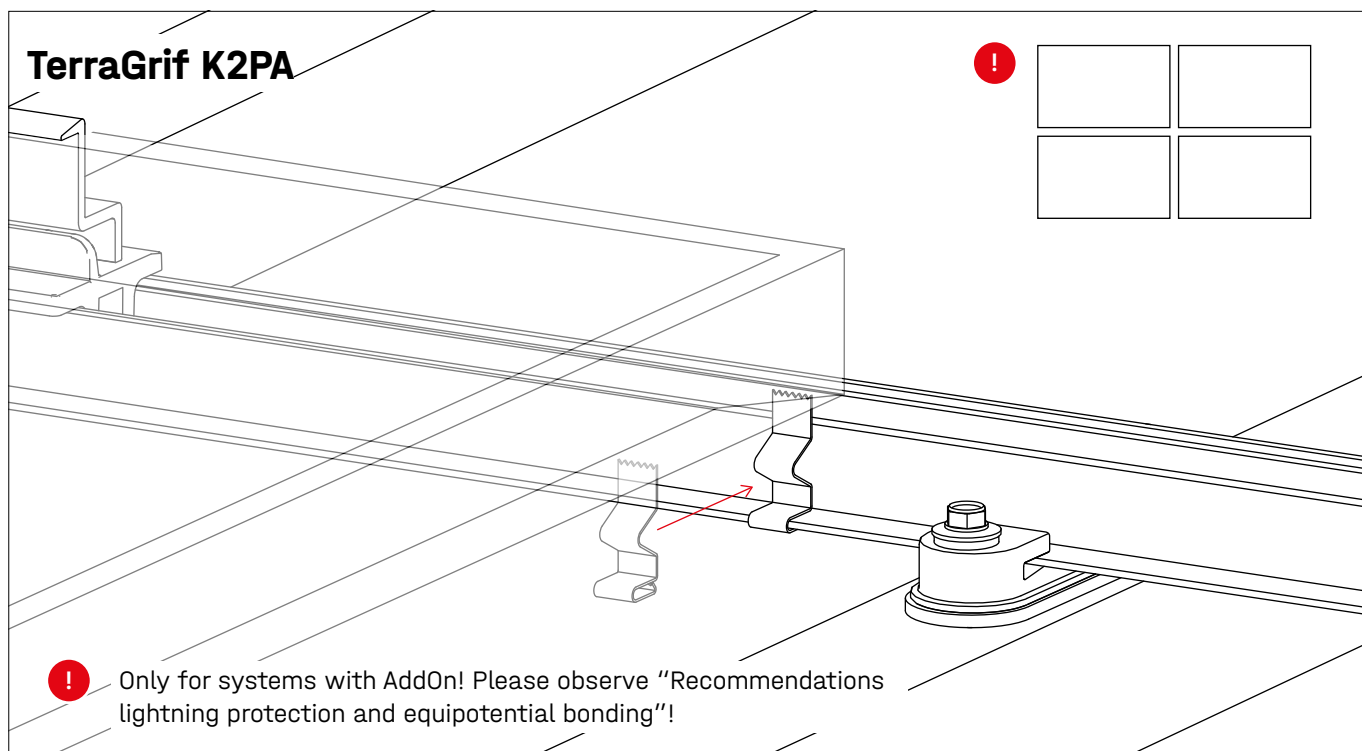
Roof-parallel elevation with RailUp



TerraGrif K2SZ



TerraGrif K2PA



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

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

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SpeedRail Assembly EN V20 | 0123 · Subject to change
Product illustrations are exemplary and may differ from the original.



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