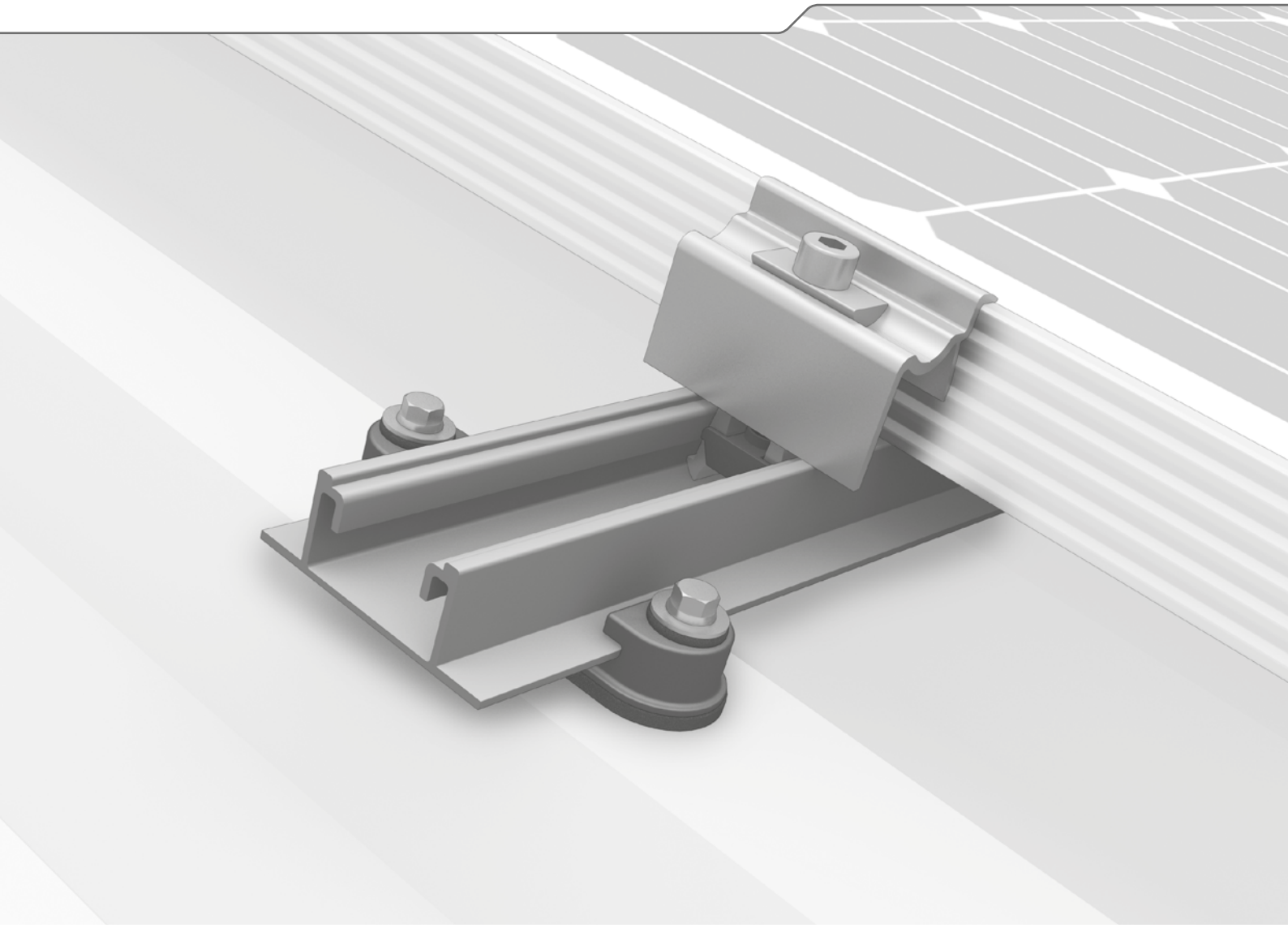
Mounting systems for solar technology



ASSEMBLY INSTRUCTIONS

SpeedRail System

Content

- Tools overview 3
- General safety information 4
- Guidelines 5
- Components: Portrait assembly 6
- Components: Landscape assembly 8
- Assembly 10
- Alternative system assemblies 15
- Notes 18

QUALITY TESTED – MULTIPLE CERTIFICATIONS

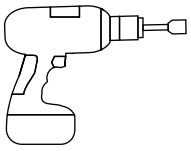
K2 Systems stands for secure connections, highest quality and precision. Our customers and business partners have known that for a long time. Independent institutes have tested, confirmed and certified our capabilities and components.

Please find our quality and product certificates under:
www.k2-systems.com/en/technical-information

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

Übereinstimmungszeichen (Ü-Zeichen)

Tools overview



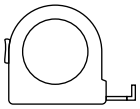
6 mm

8 mm

25

6 - 30 Nm
(4,5 - 22,2 lb-ft)

6 mm



≥ 3,0 m

≥ 6,0 m

General safety information

Please note that our general mounting instructions must be followed at all times and can be viewed online at www.k2-systems.com/en/technical-information

- 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 www.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.

- 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 www.k2-systems.com/en/technical-information
  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.

ROOF REQUIREMENTS

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

STRUCTURAL REQUIREMENTS

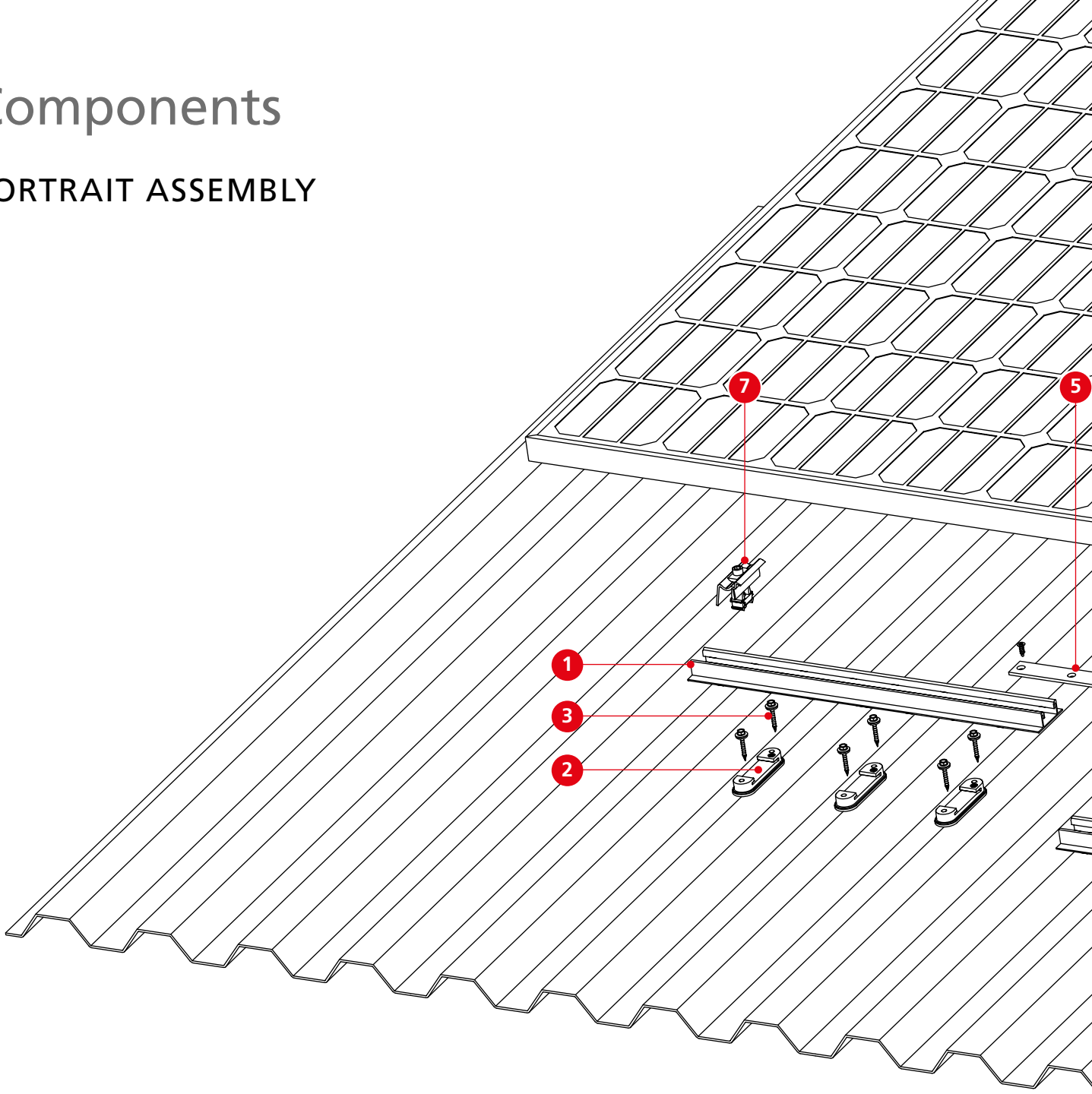
Sufficient holding force of the roof covering on the support or substructure

IMPORTANT MOUNTING INSTRUCTIONS

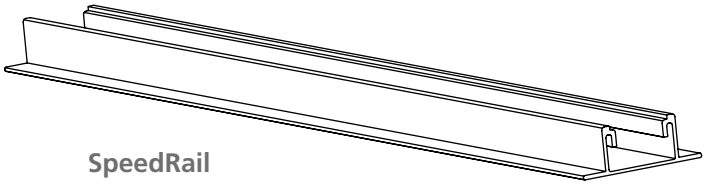
- Earthing must be ensured (use lightning arrestor clamp if necessary).
- If the troughed sheet is to be fastened with calottes, please never bolt the SpeedClips to the calottes! Instead of this, mount all SpeedClips staggered in this sequence on the troughed sheet.
- Mount every fourth SpeedClip rotated by 180°; see assembly step 4.
- For rail joints, SpeedClips must be attached to the nearest high crest on both sides.
- Ensure a thermal separation after 8.40 m. The minimum distance between two rails should be 3 cm.
- The modules may never be fixed over the thermal expansion joint.
- A SpeedLock per SpeedRail up to 8.40 m in total length, is required (speed rail 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 slot nuts and module clamps at butt joints of the rails must be avoided!
- Ensure a minimum distance of 60 mm from the module edge to the rail end.
- No pre-drilling required! Predrill only with overlapping sheets to reduce spacing.

Components

PORTRAIT ASSEMBLY

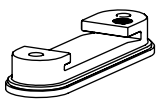


1 Item number system-specific



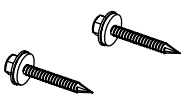
SpeedRail

2 1001164

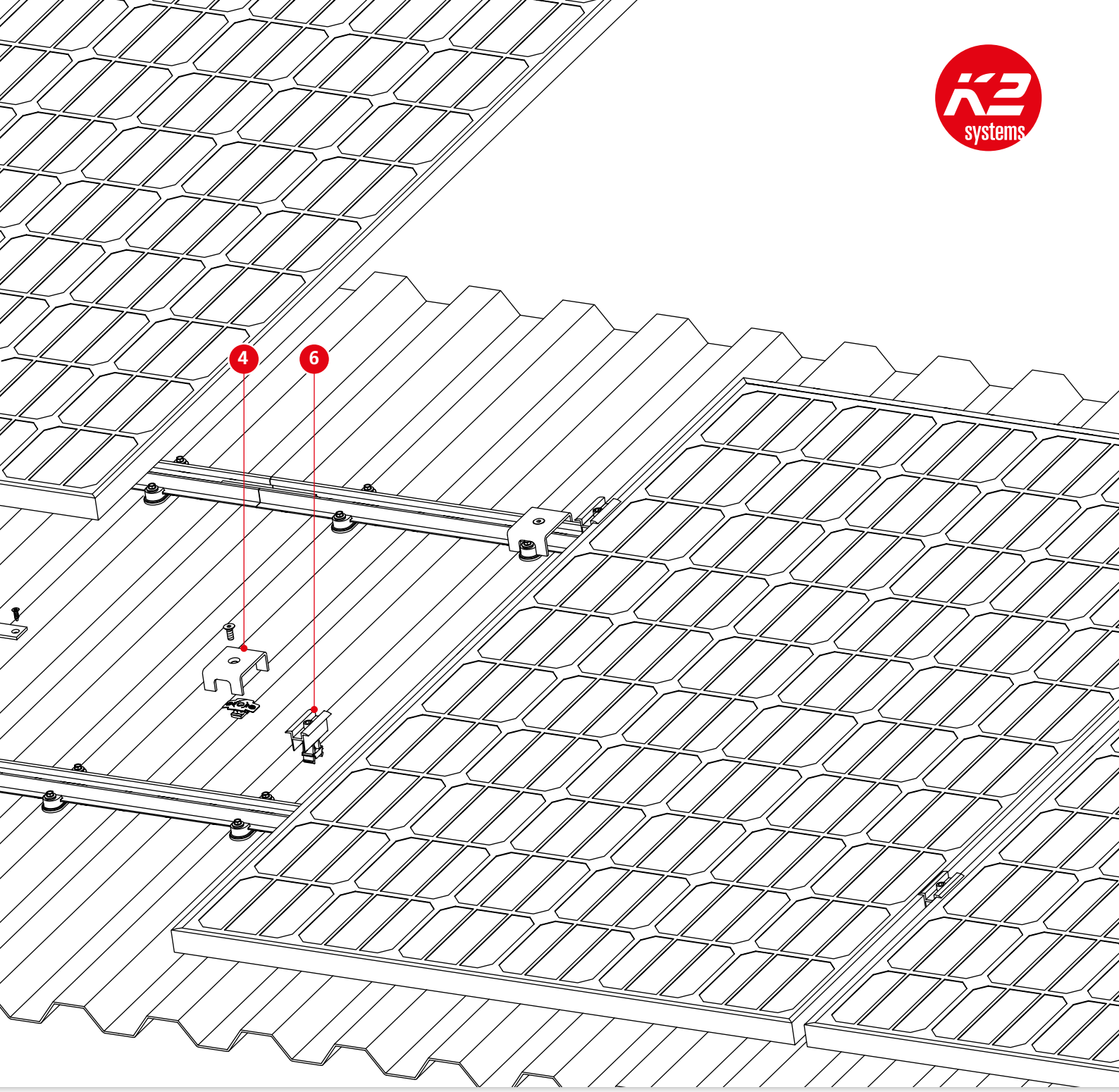


SpeedClip

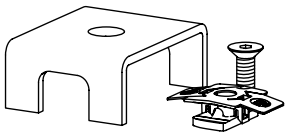
3 1005193



Self-tapping screws with sealing washer 6×38 mm

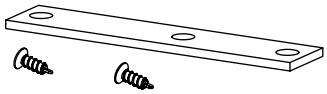


4 1003558



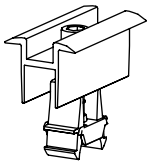
SpeedLock Set

5 1003571



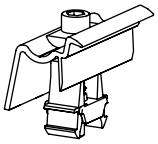
SpeedConnector Set

6 2002515 / 2002588



OneMid
aluminium mill finish / black anodised

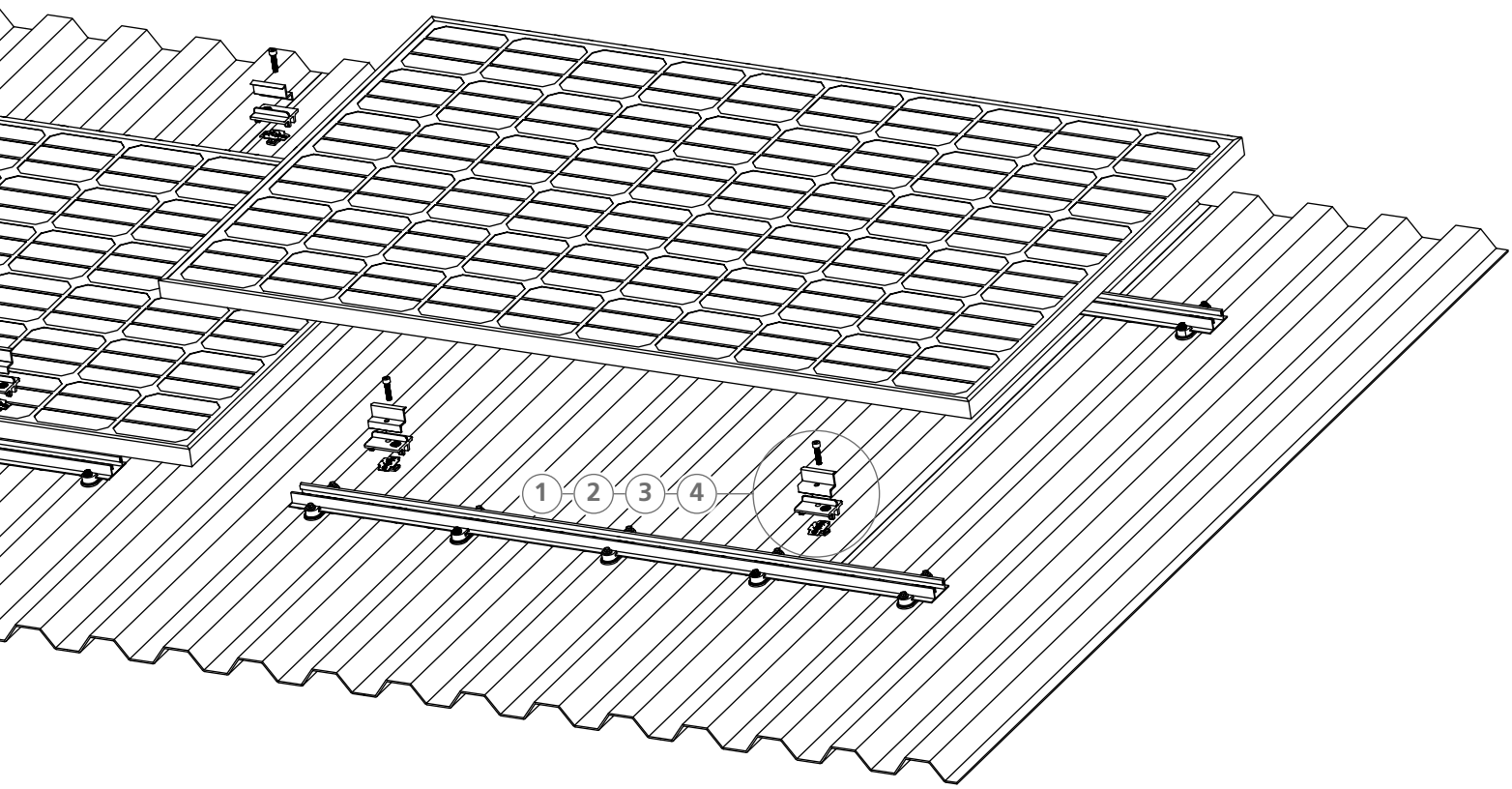
7 2002514 / 2002589



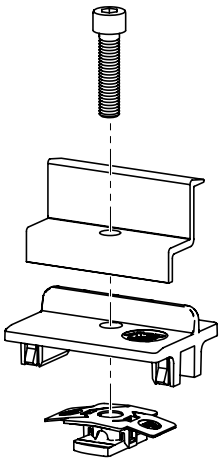
OneEnd
aluminium mill finish / black anodised

Components

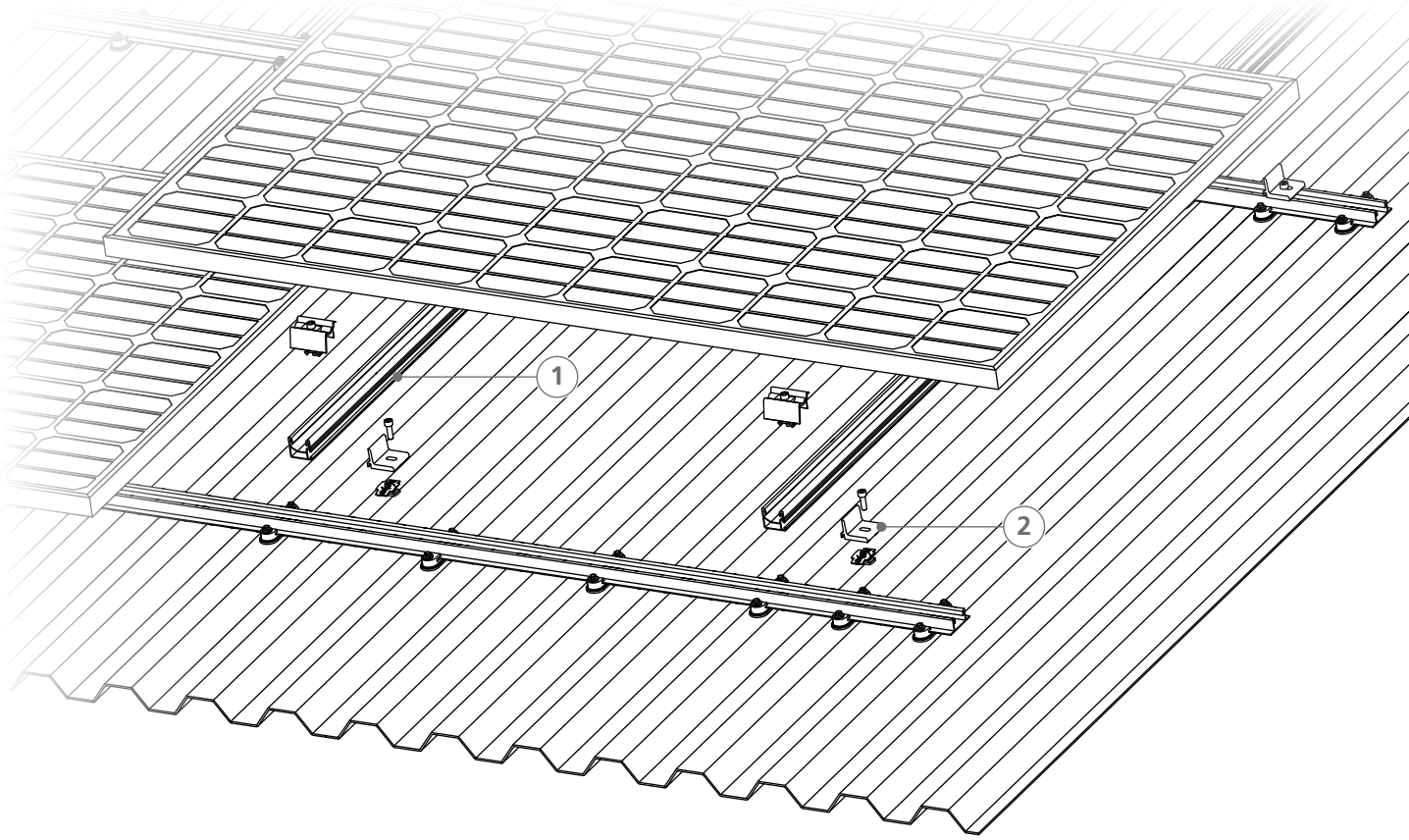
LANDSCAPE ASSEMBLY WITH ADDON



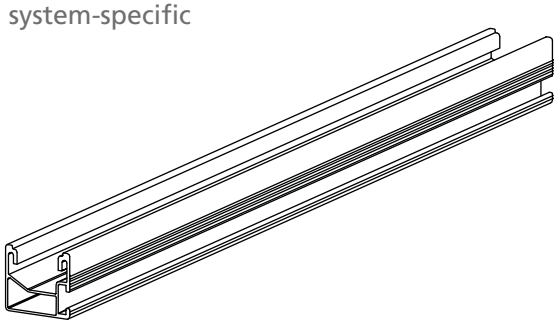
1. Screw length module frame specific **socket head cap screw**
2. End clamp and middle clamp module frame specific
3. 1005530 / 2001707 **AddOn 22/30**
4. 1001643 **MK2 slot nut**



LANDSCAPE ASSEMBLY WITH CROSS-BRACING

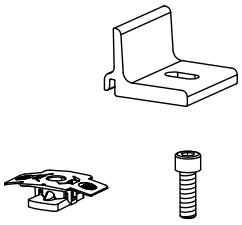


(1) Item number
system-specific



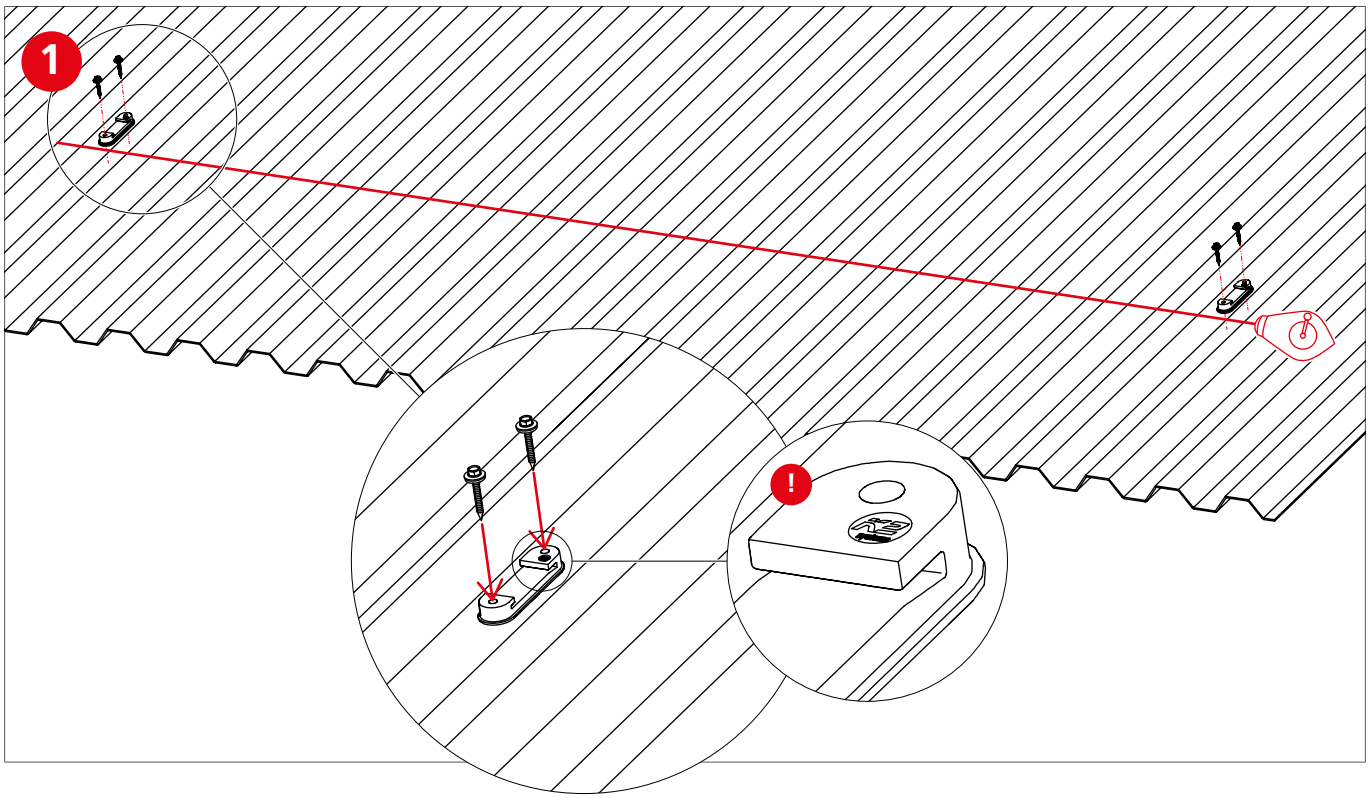
SingleRail

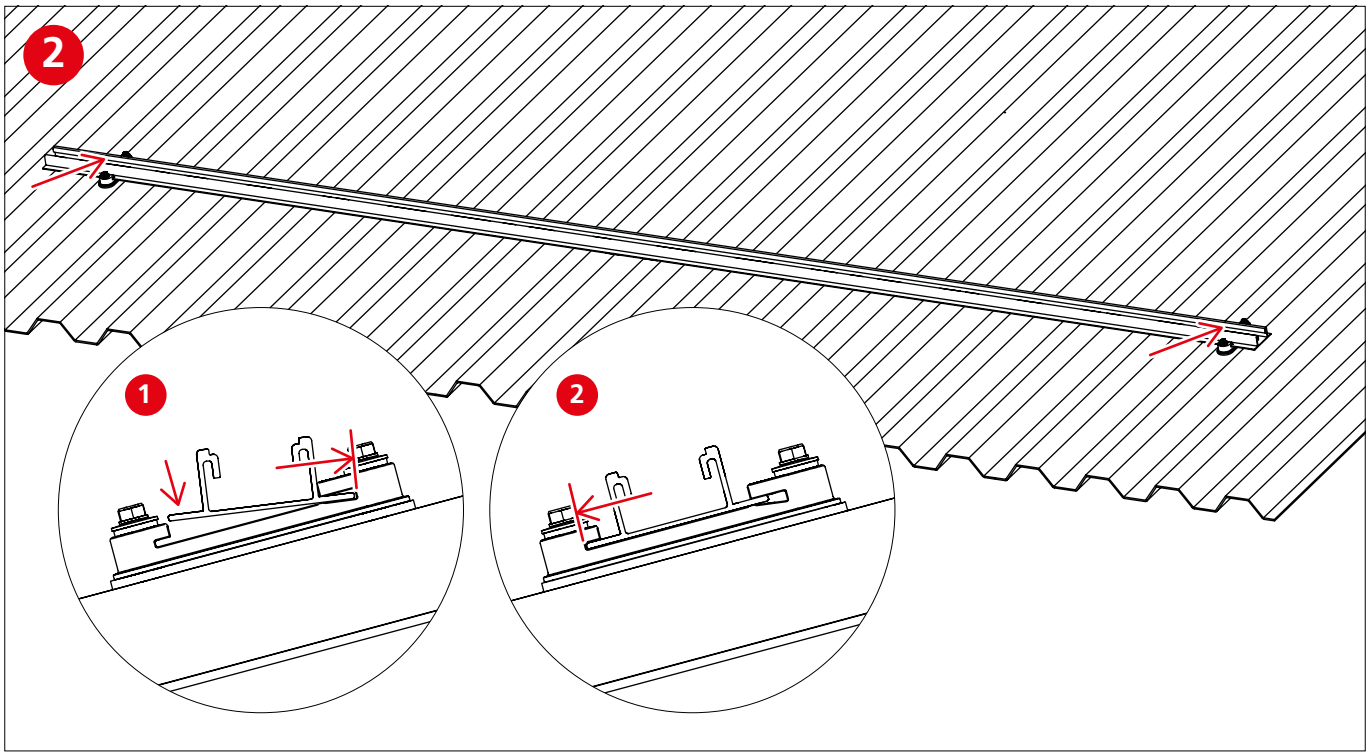
(2) 1006041

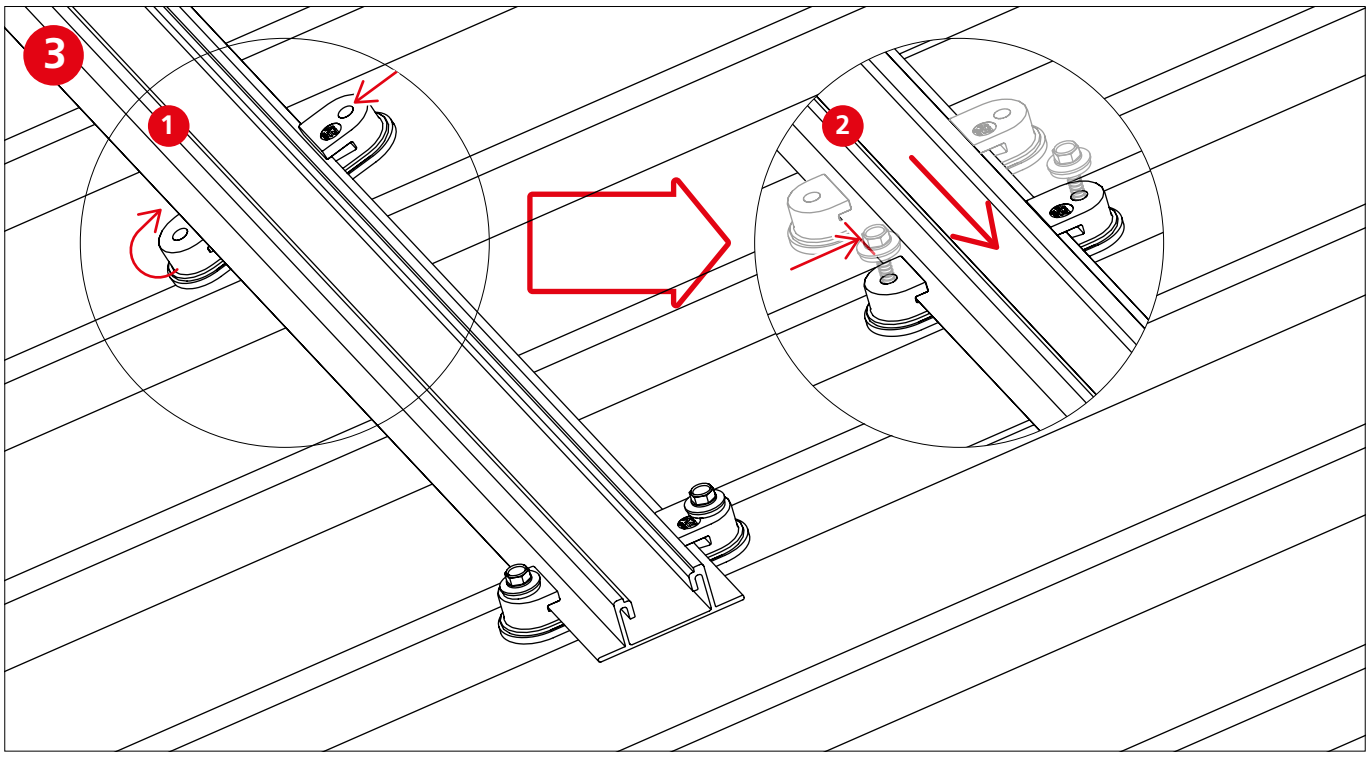


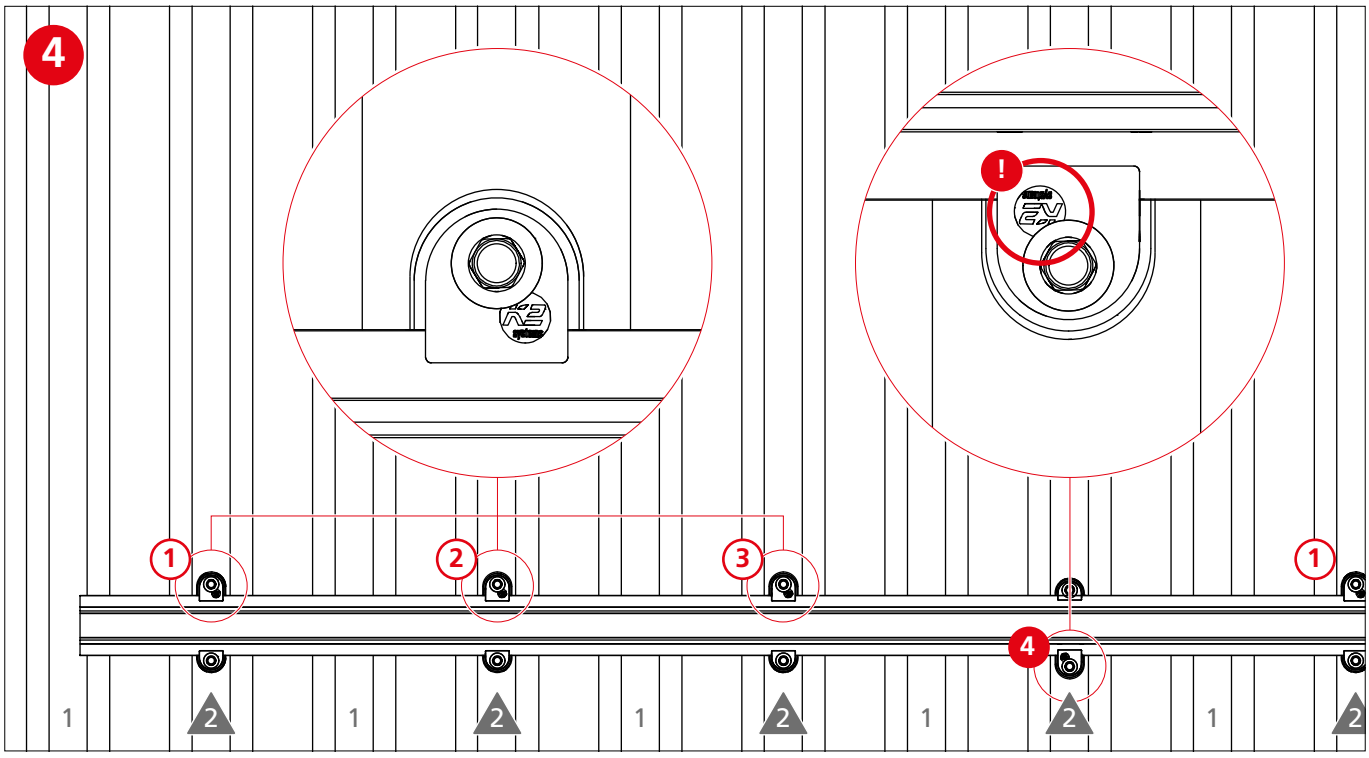
Climber Set

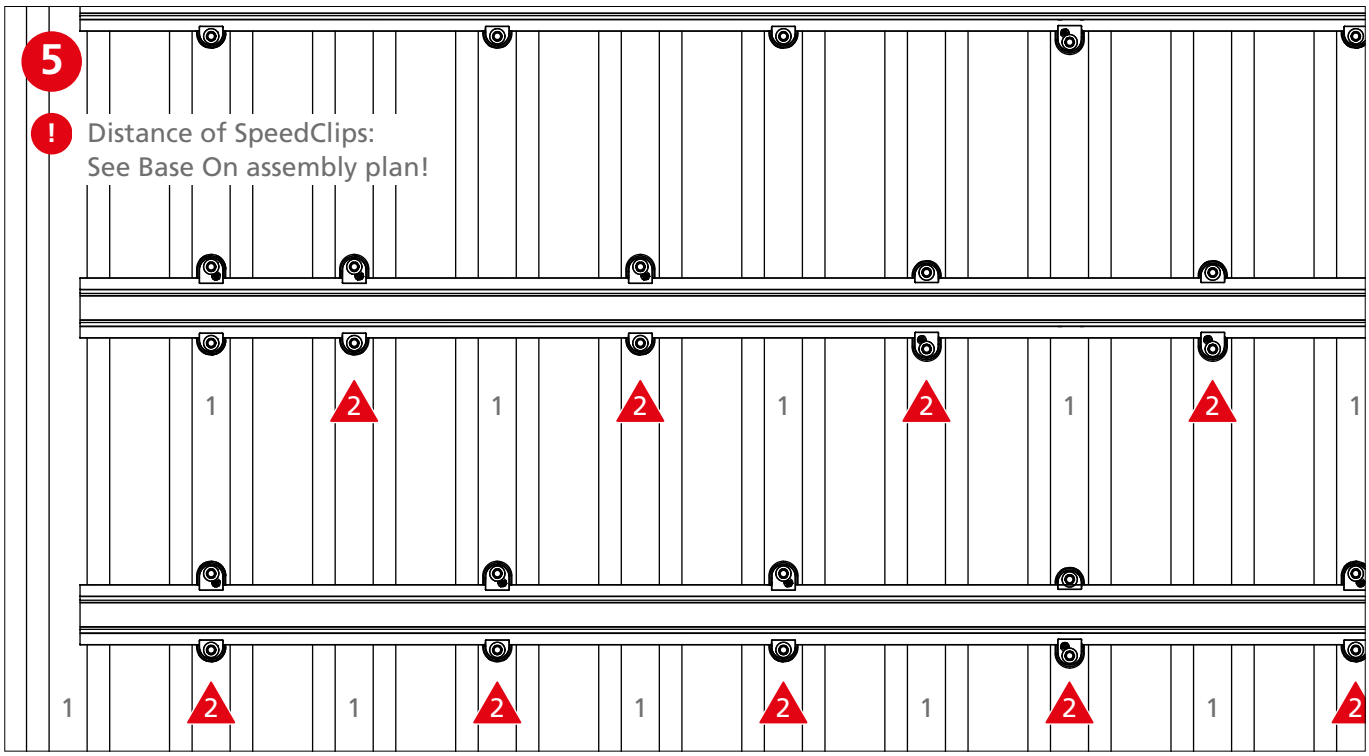
Assembly

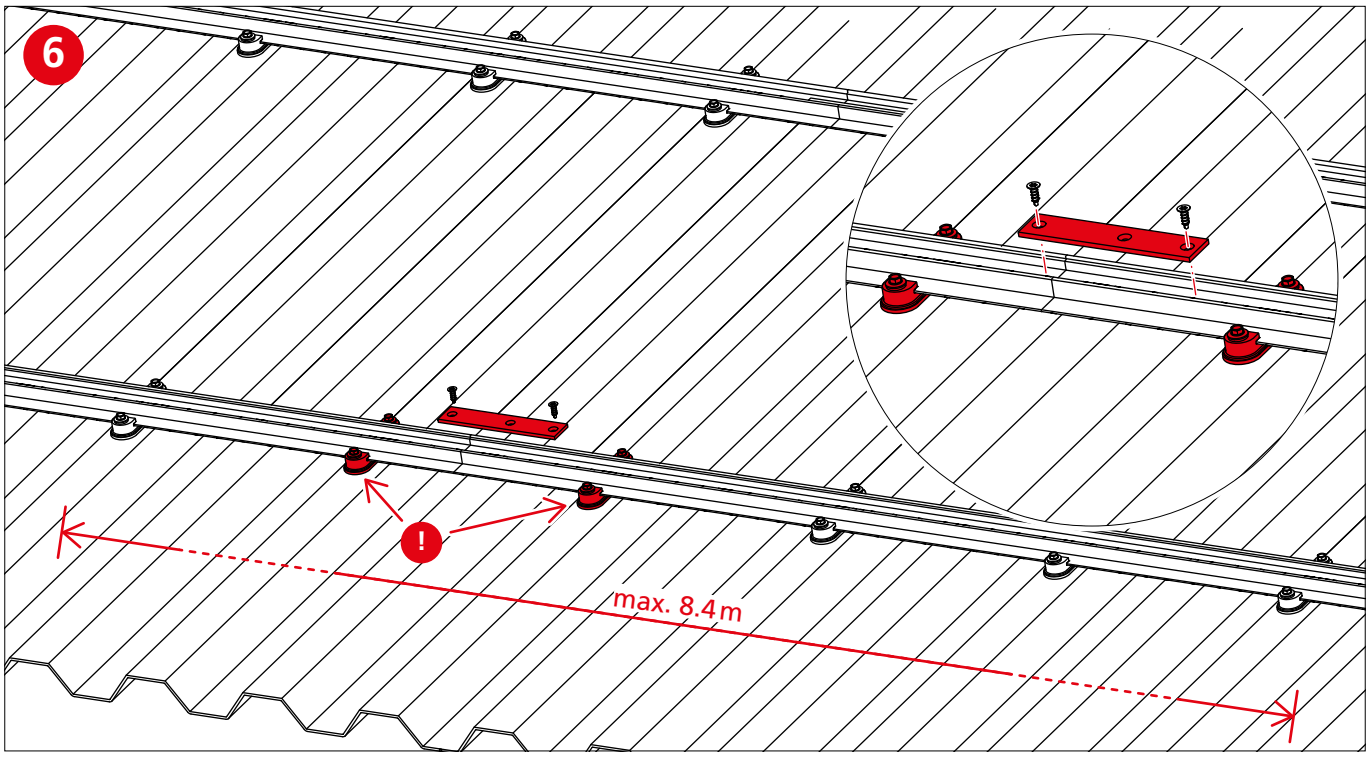


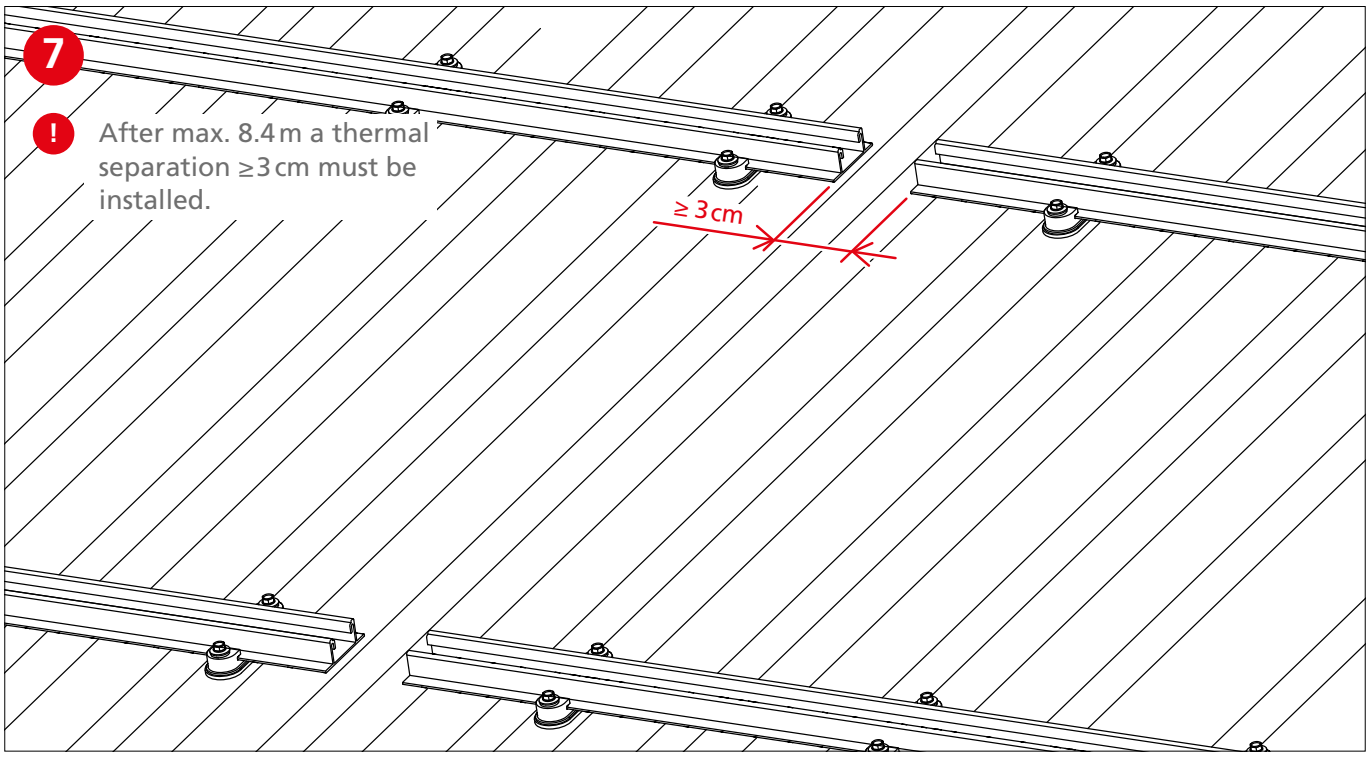


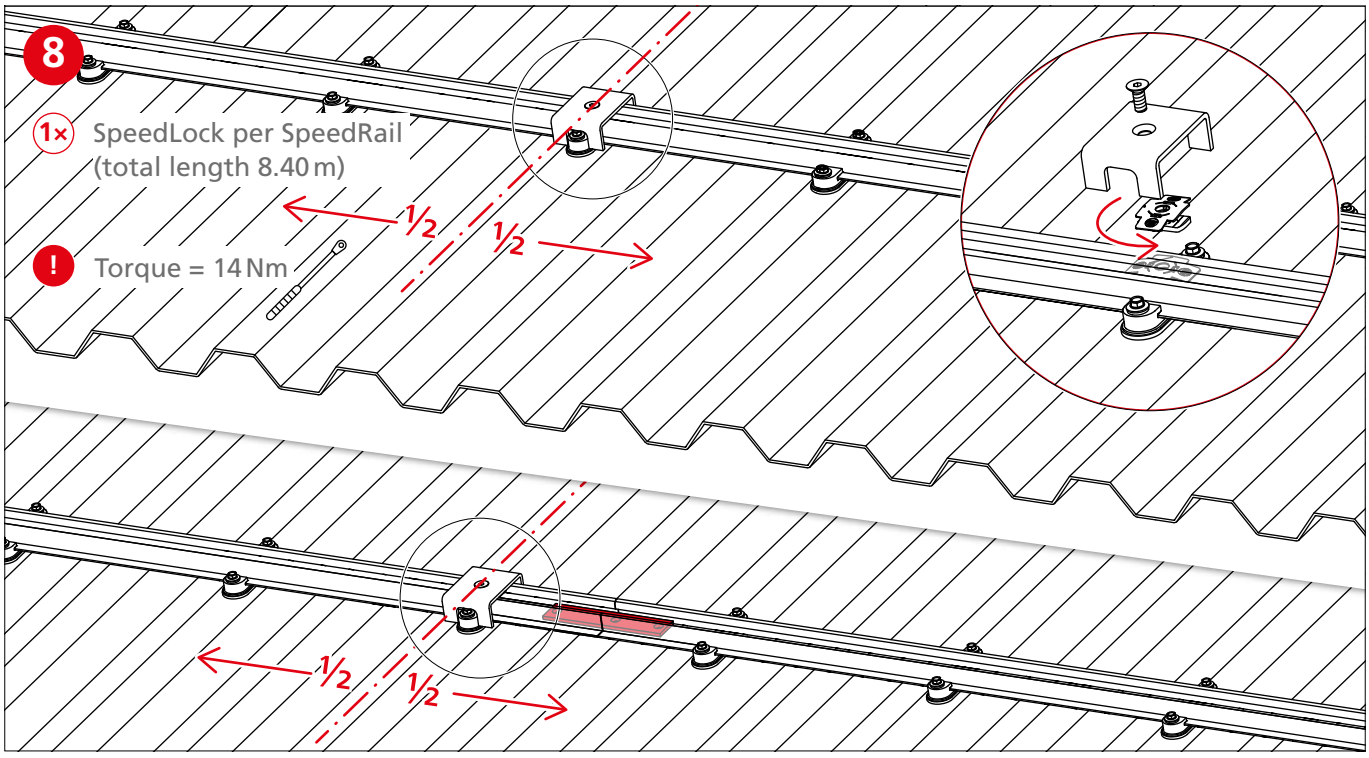

3
1
2

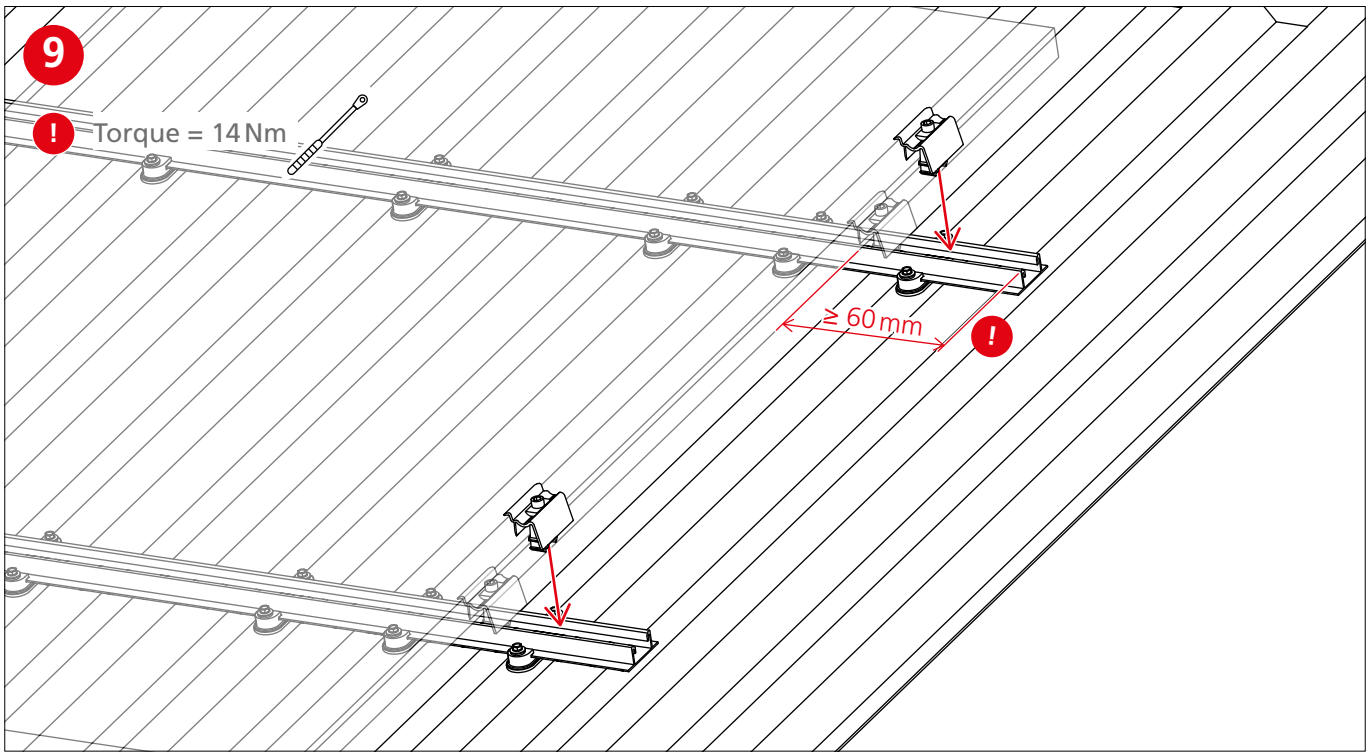

4
!
1
2
3
1
4
1
2
1
2
1
2
1
2

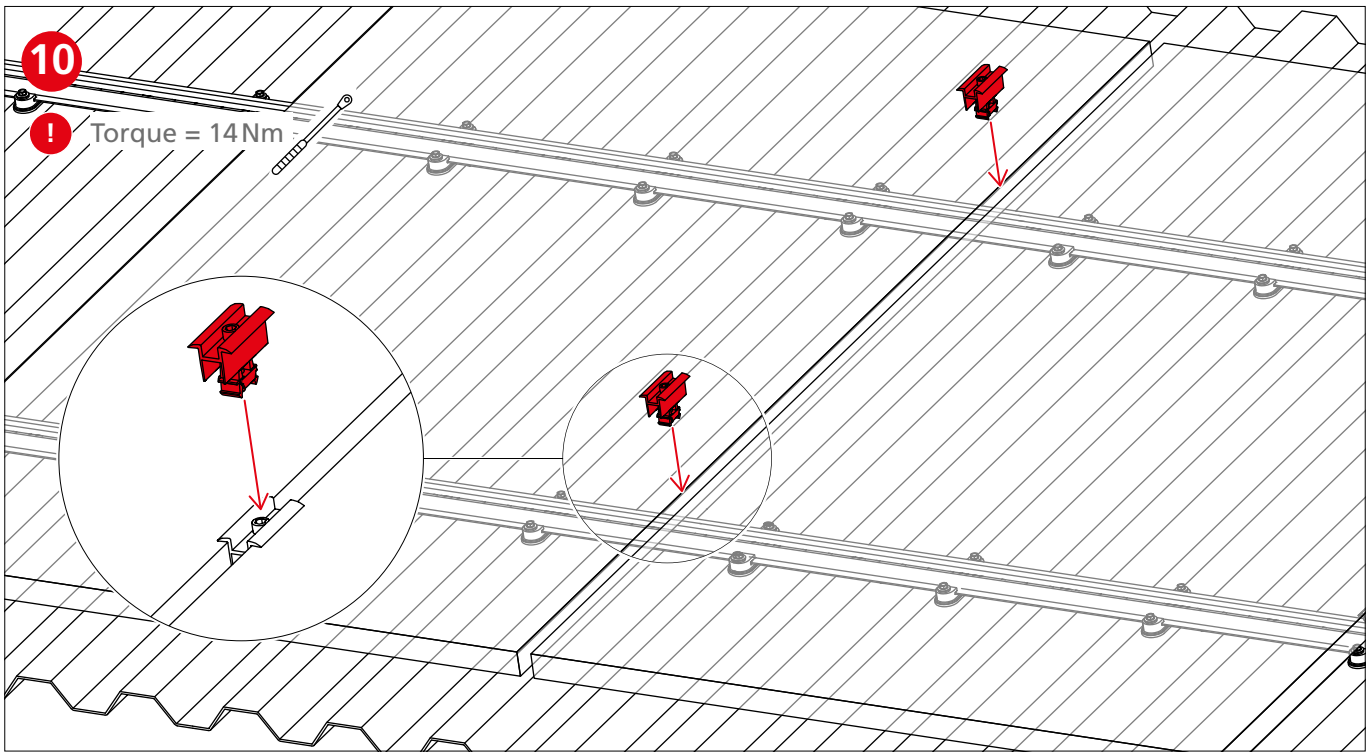

5
Distance of SpeedClips:
See Base On assembly plan!
1
2


6
max. 8.4 m

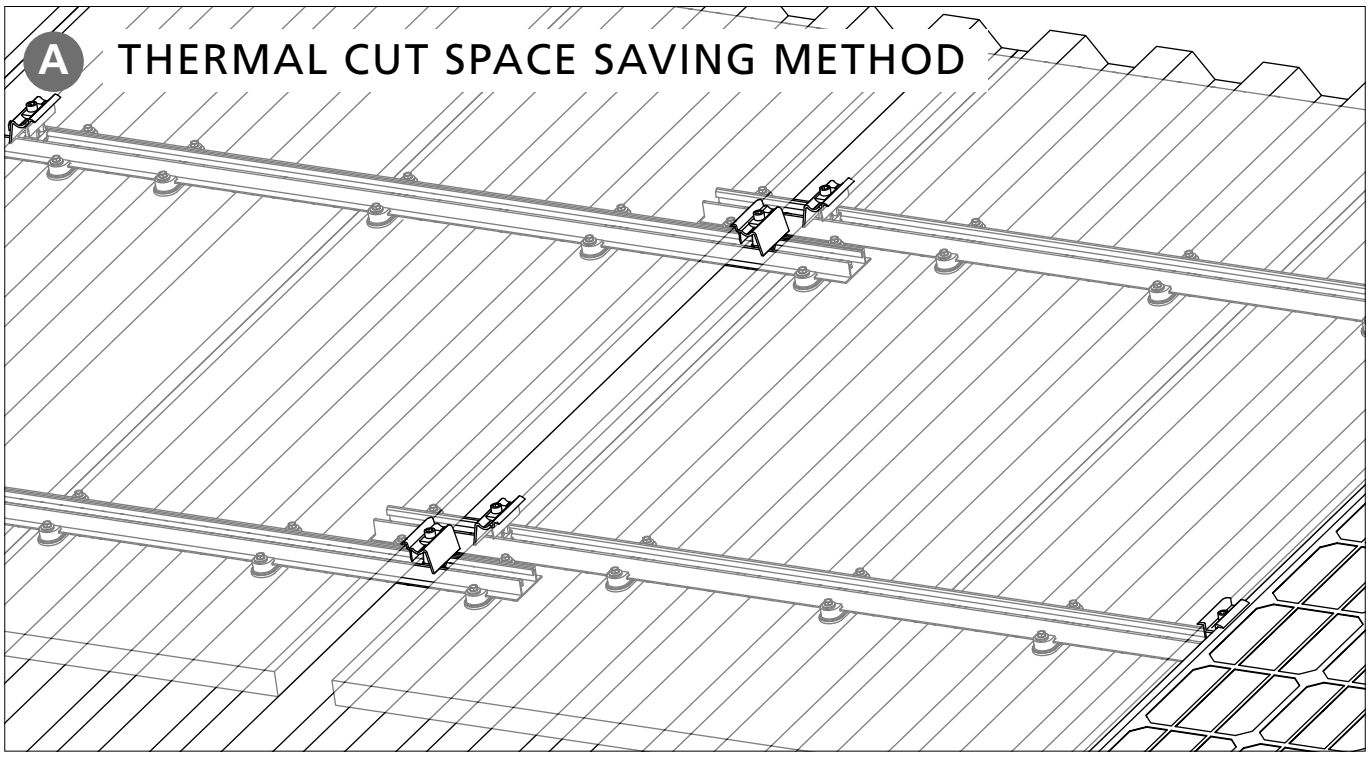

7
After max. 8.4 m a thermal separation ≥ 3 cm must be installed.
≥ 3 cm

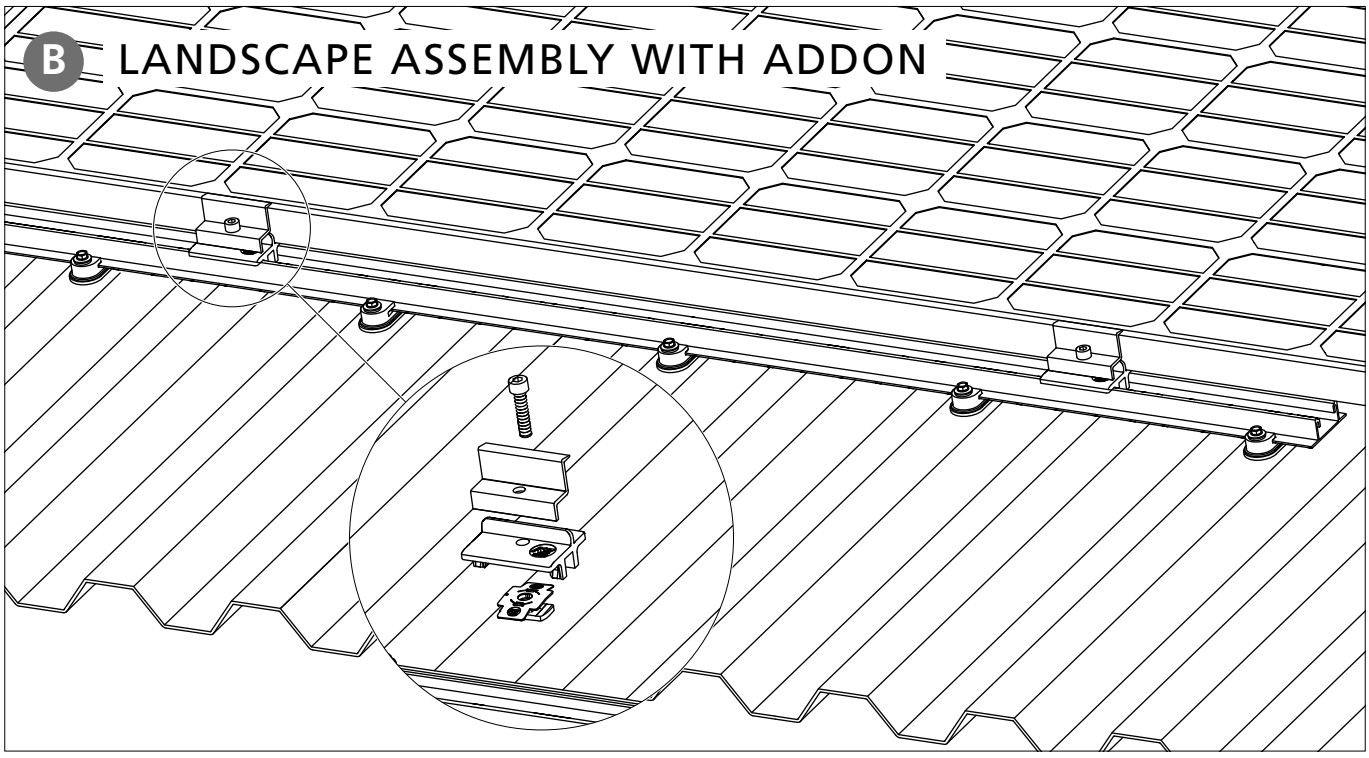

8
1× SpeedLock per SpeedRail (total length 8.40 m)
Torque = 14 Nm
½
½
½
½


9
!
Torque = 14 Nm
≥ 60 mm
!

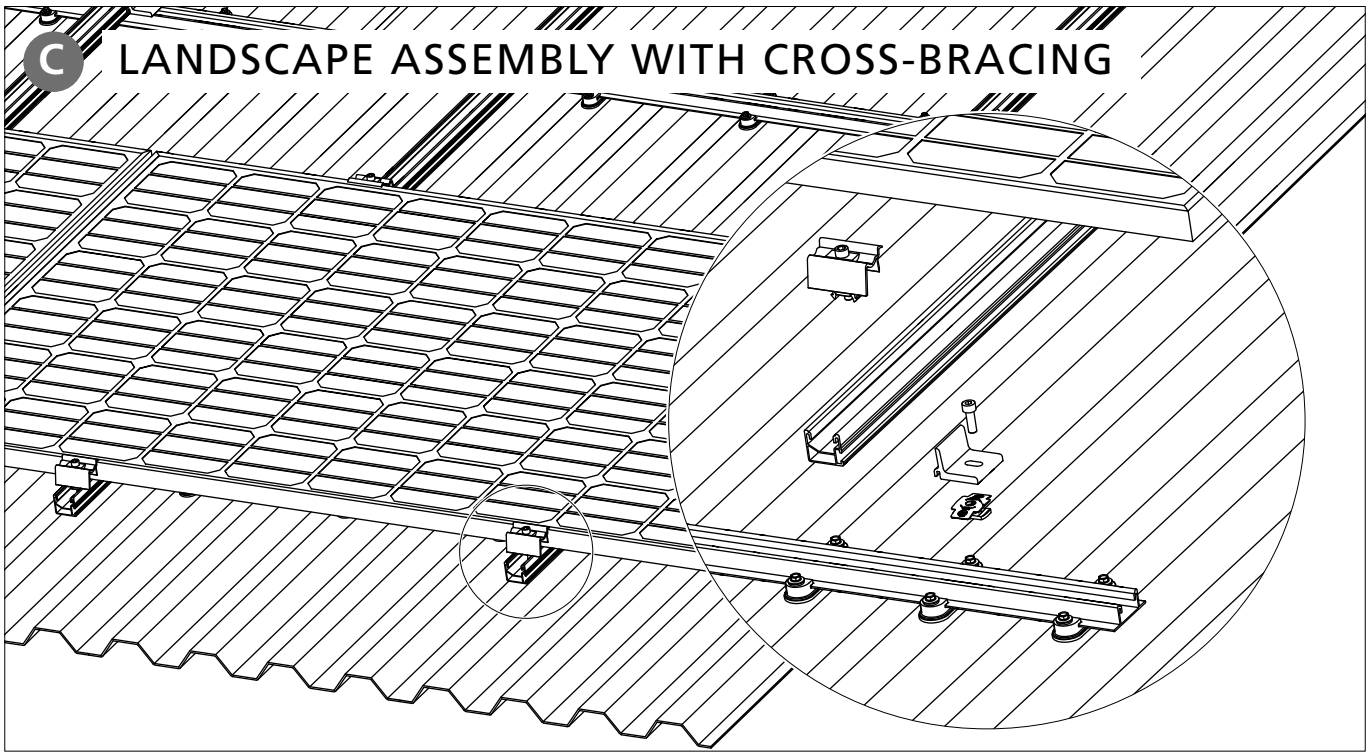

10
!
Torque = 14 Nm

Alternative system assemblies





C LANDSCAPE ASSEMBLY WITH CROSS-BRACING



Notes

Notes

THANK YOU FOR CHOOSING A K2 MOUNTING SYSTEM.

Mounting ystems 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:

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

German law shall apply excluding the UN Convention on CISG.
Place of venue is Stuttgart.

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

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