

Assembly manual

# Insertion System on trapezoidal sheet metal



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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:  
[www.k2-systems.com/en/technical-information](http://www.k2-systems.com/en/technical-information)



# Tools overview



3/4/5 mm



TX25/40



7/8/9/13 mm



6 - 35 Nm  
(4.5 - 22.2 lb-ft)



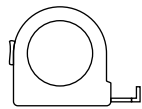
3/5/6 mm



7/9/13 mm



15/19 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](http://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](http://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](http://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 Insertion Rail with MultiRail can be used on trapezoidal sheet metal roofs 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

- ▶ Sufficient holding force of the roof covering on the supporting or substructure
- ▶ Roof pitch: 5-75°
- ▶ Trapezoidal sheet thickness  $\geq 0.4$  mm steel and  $\geq 0.5$  mm aluminium
- ▶ Steel grade min. S235 according to DIN EN 10025-1
- ▶ Minimum tensile strength aluminium 165 N/mm<sup>2</sup>
- ▶ Minimum crest width 22 mm, plane support around the borehole:  $\varnothing \geq 20$  mm
- ▶ If the roof pitch is less than 12°, the module must be secured against upward migration by means of a module earthing clip or by pulling a wire rope in the insertion profile.



## Structural requirements

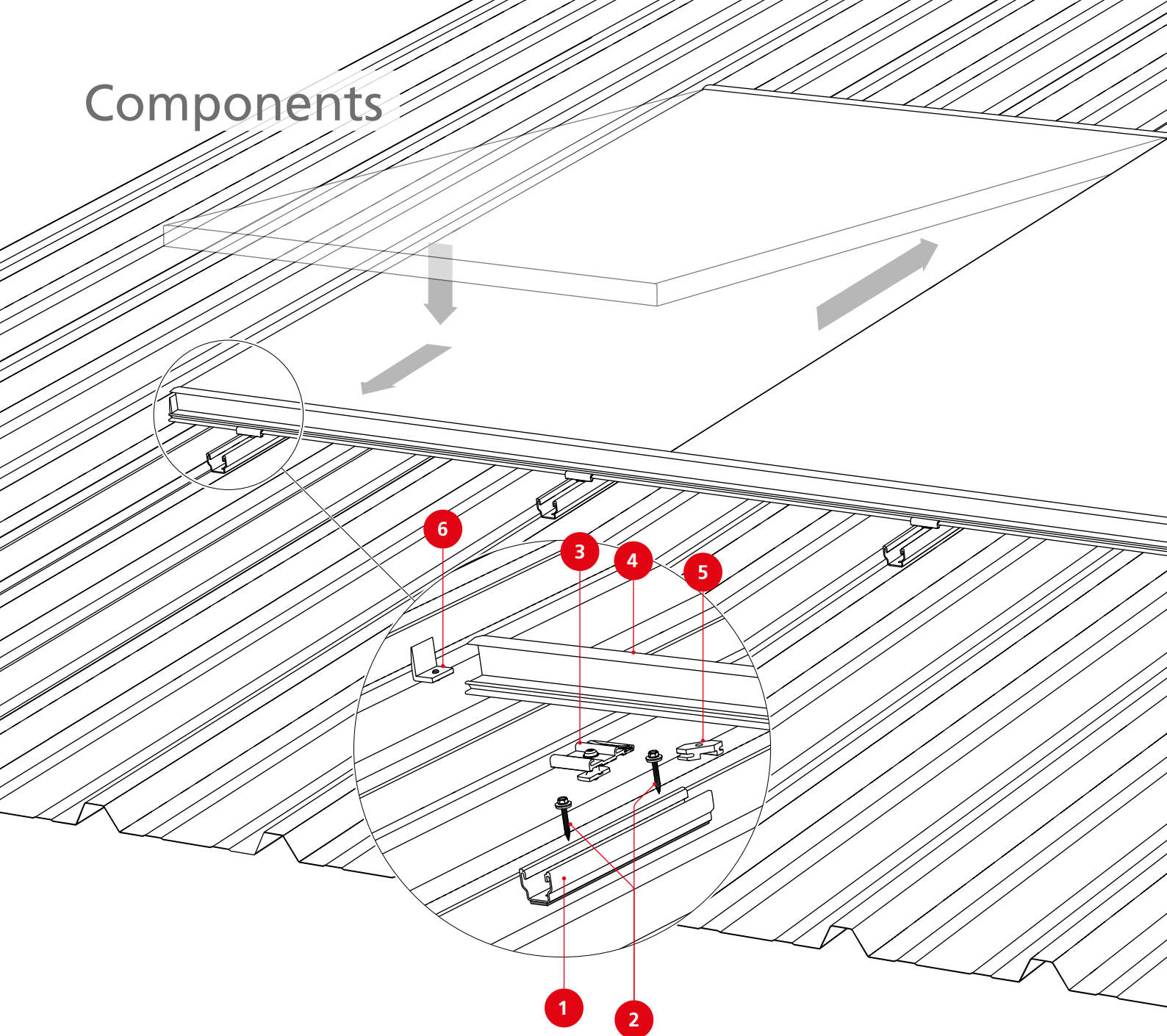
The static verification of the components is automatically calculated for the respective location by the K2 Base planning software. The design is provided by means of a project report and must be adhered to.



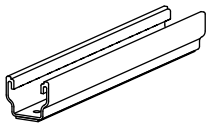
## Important mounting instructions

- ▶ On site, the general standards and regulations for lightning protection must be observed and, if necessary, a specialist must be called in to draw up a lightning protection concept (use lightning protection terminal if necessary). Country-specific regulations must be observed.
- ▶ If the trapezoidal sheet metal is fastened with calottes, the MultiRails must not be screwed onto them. It is absolutely necessary to measure the distances in advance.
- ▶ Fastening of the MultiRails on trapezoidal sheet metal with building authority approved thin sheet metal screws.
- ▶ At gaps the minimum distance between two horizontal rails is 7 mm.
- ▶ After a maximum of 21.0m in the horizontal axis, thermal separation of the components in the direction of the rails must be carried out and a new module field with a new insertion rail must be started.
- ▶ Dimensioning and positioning of the deployed wood screws according to the relevant applicable regulations.

# Components

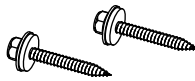


1 2002793



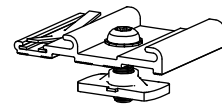
**MultiRail 25/4**

2 1005207



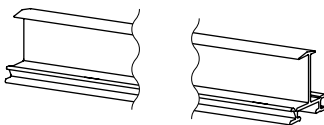
**Self-tapping screw with  
sealing washer**

3 2002762/2002763



**CrossConnector**  
aluminium mill finish/black  
anodised

4 Item number system-  
specific!



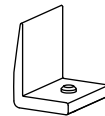
**InsertionRail**  
35/40 mm module frame height

5 2002766

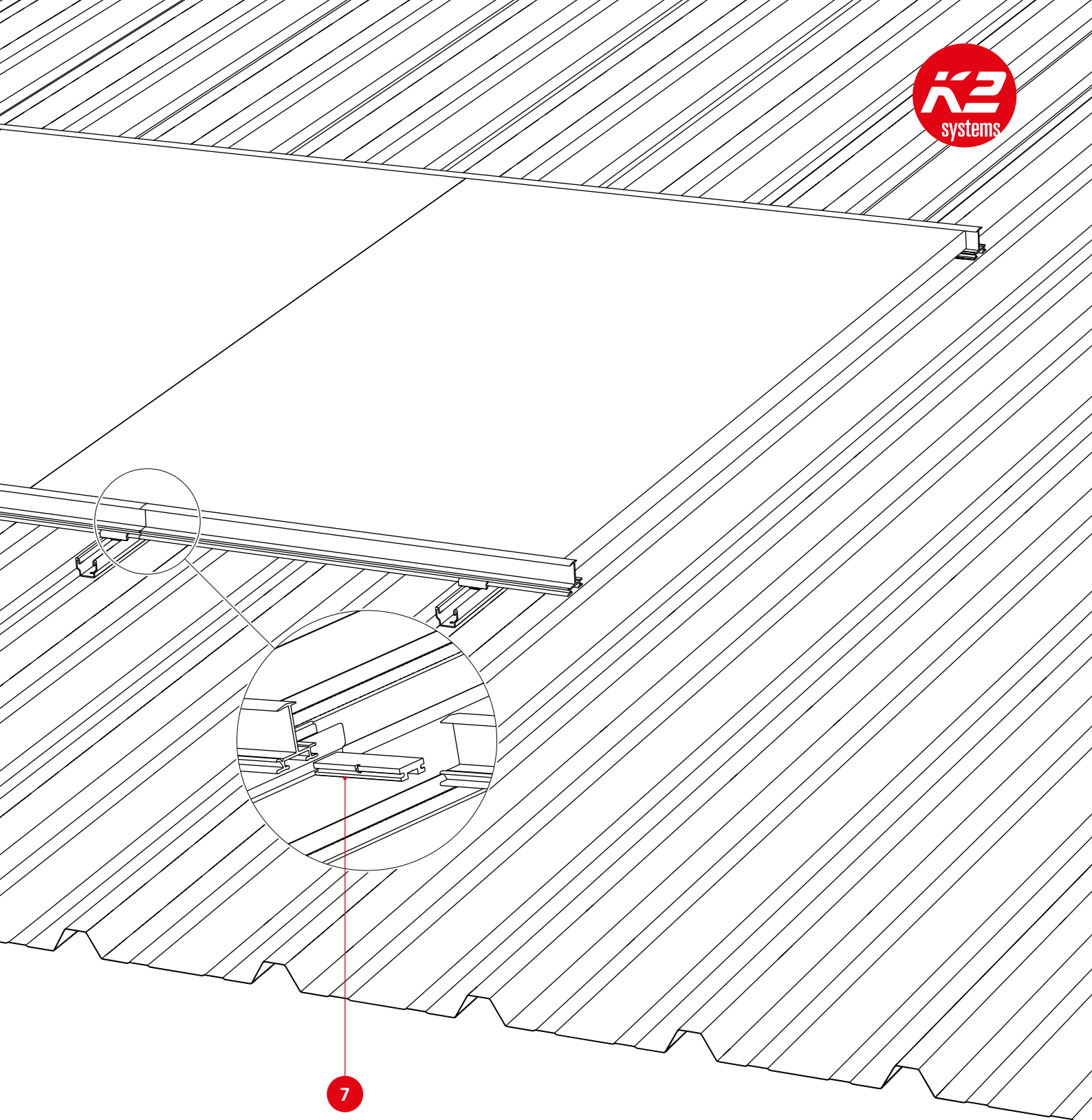


**InsertionRail Fix Stop**

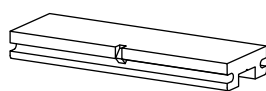
6 2002760/2002761



**InsertionRail End Stop**  
aluminium mill finish/black  
anodised



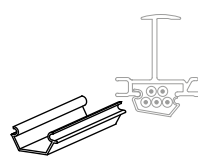
7 2002764



InsertionRail Connector

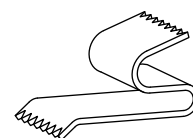
### Optional Components

2002767



InsertionRail Cable Clip

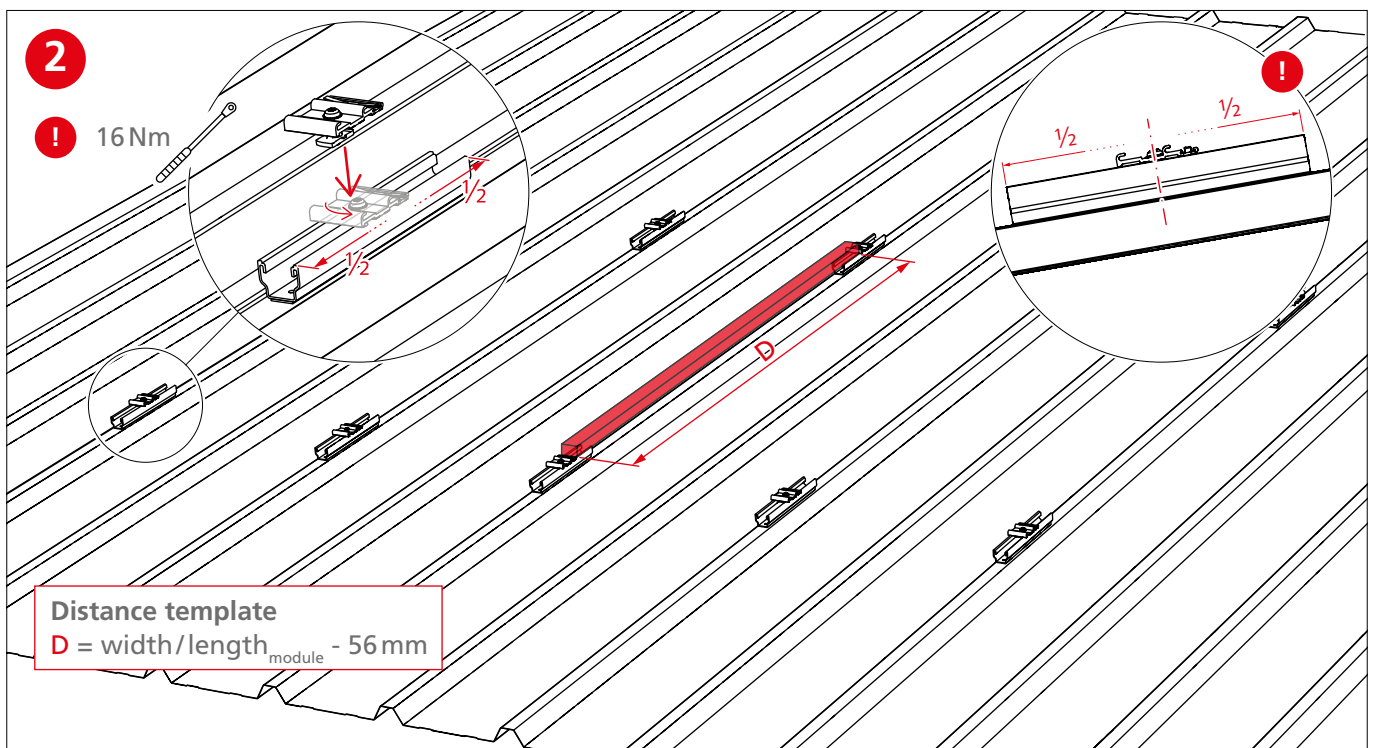
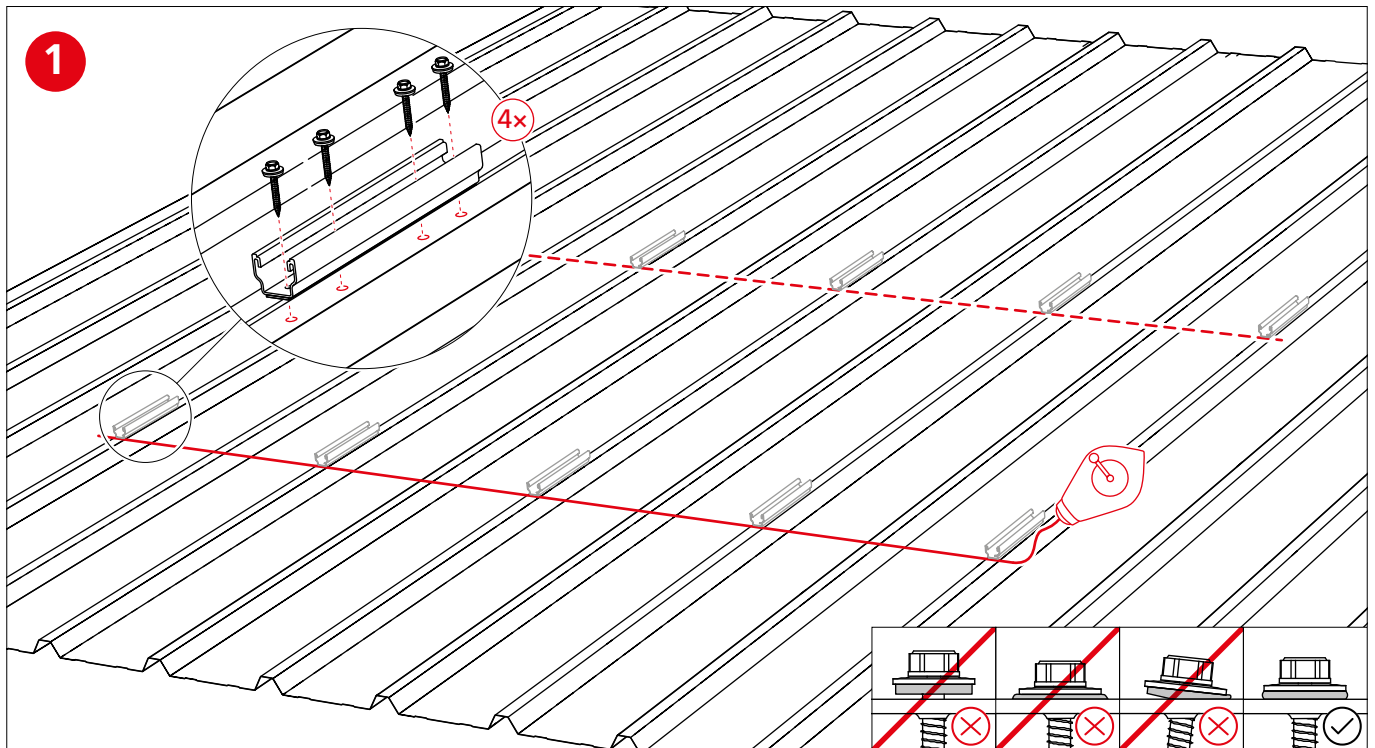
2002397



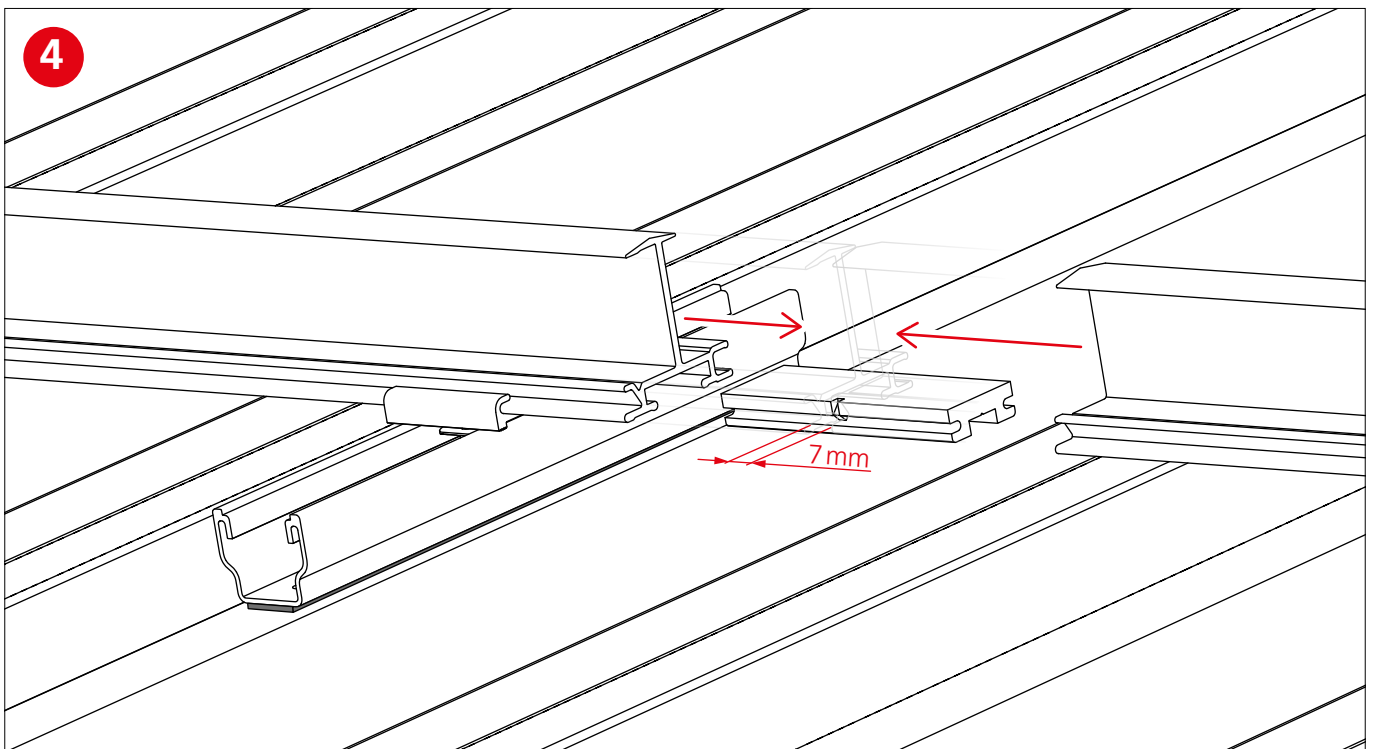
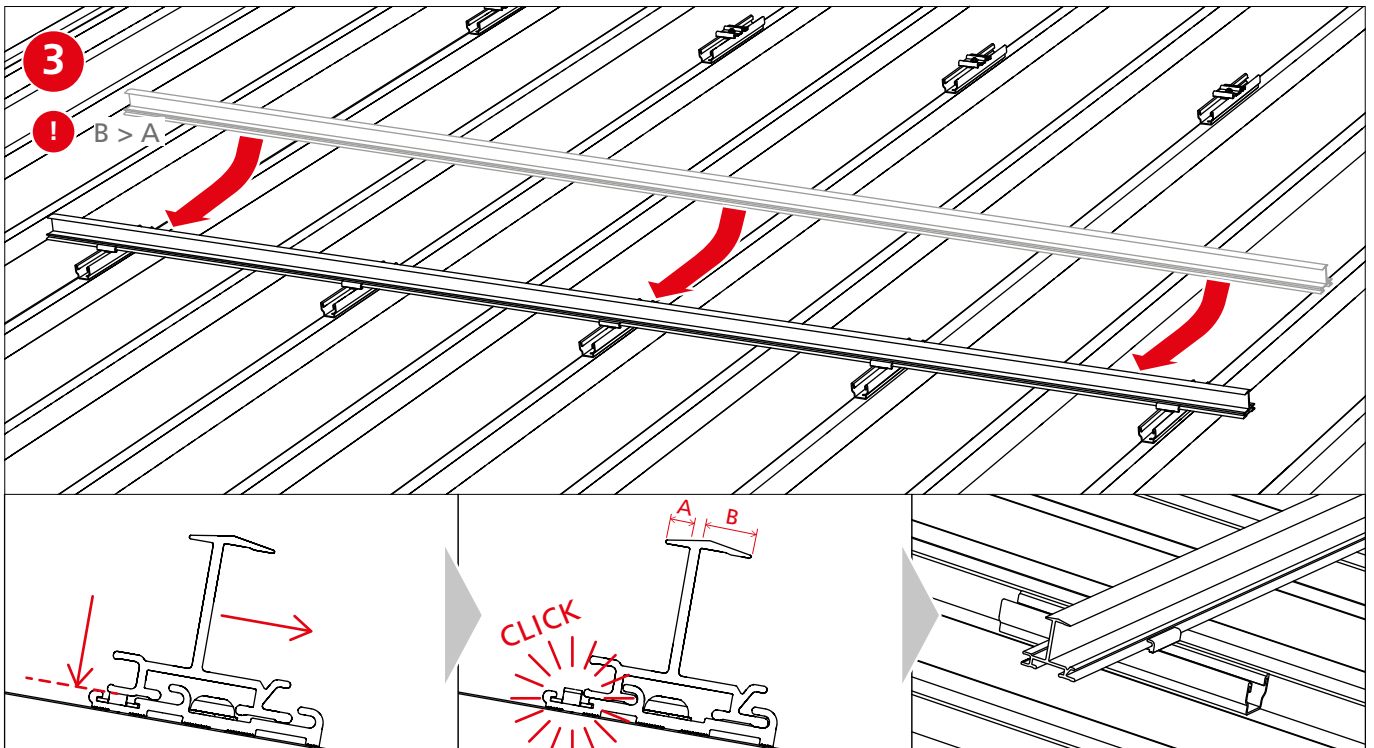
TerraGrif S

# Assembly

## Portrait and Landscape

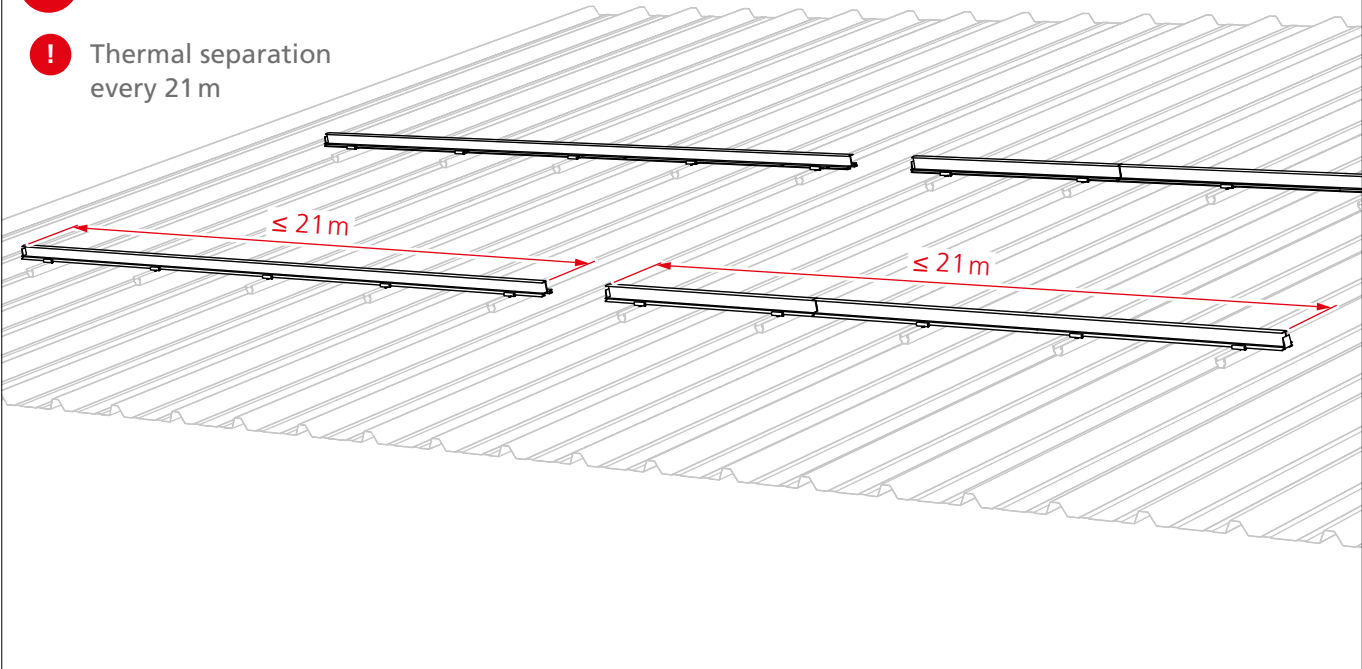






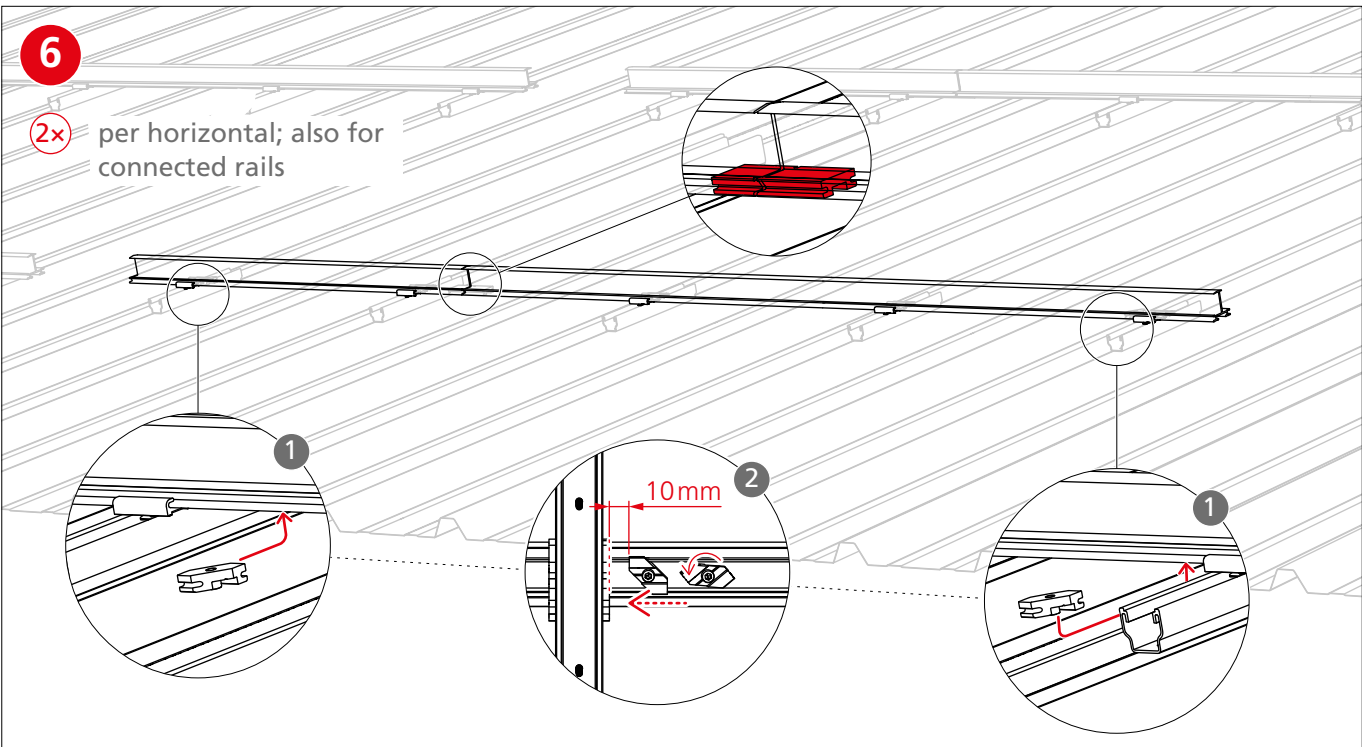
5

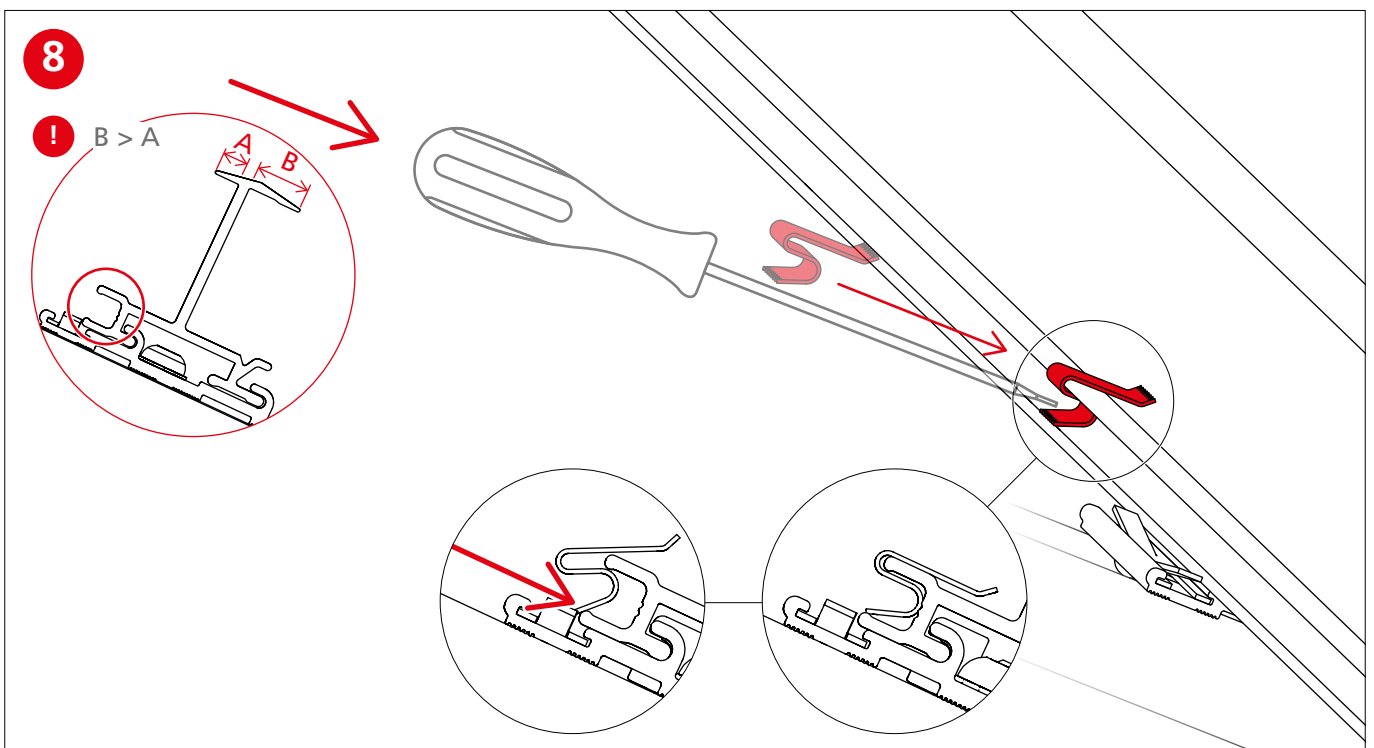
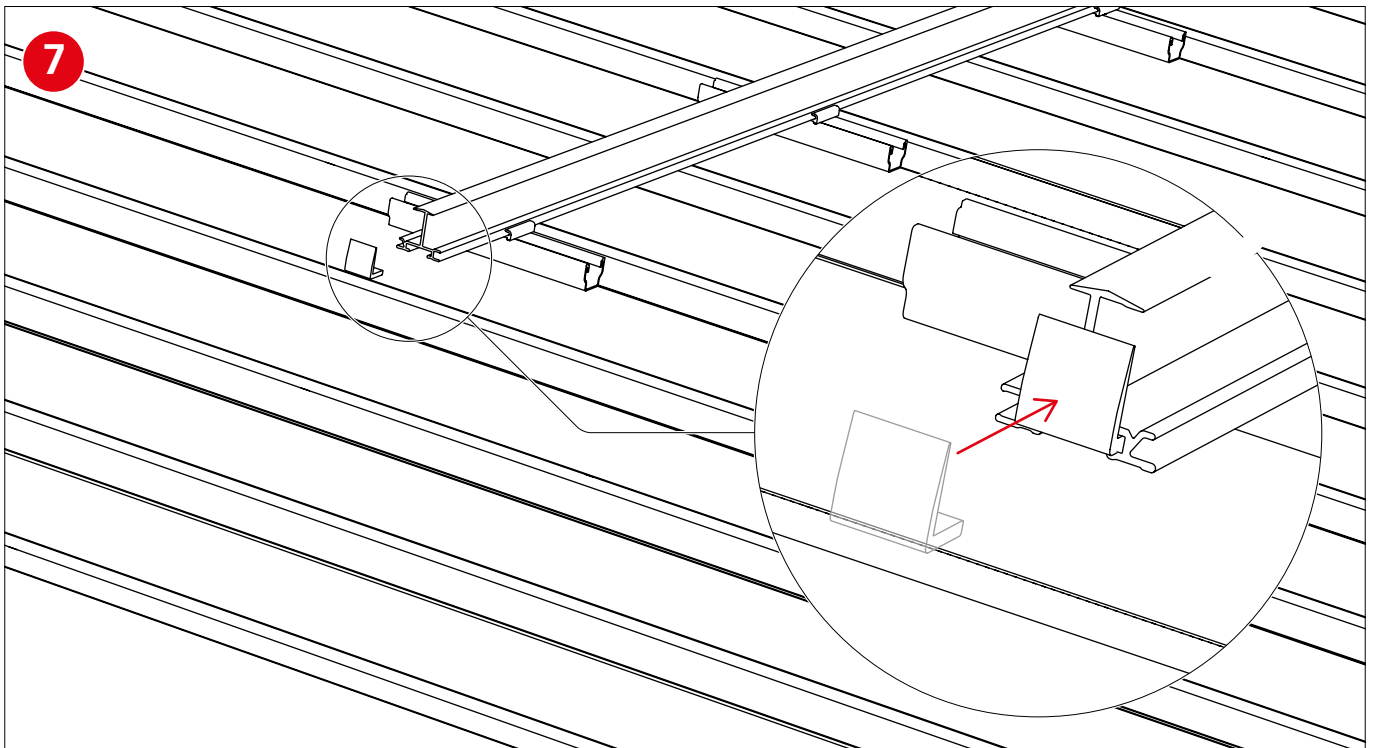
! Thermal separation every 21 m

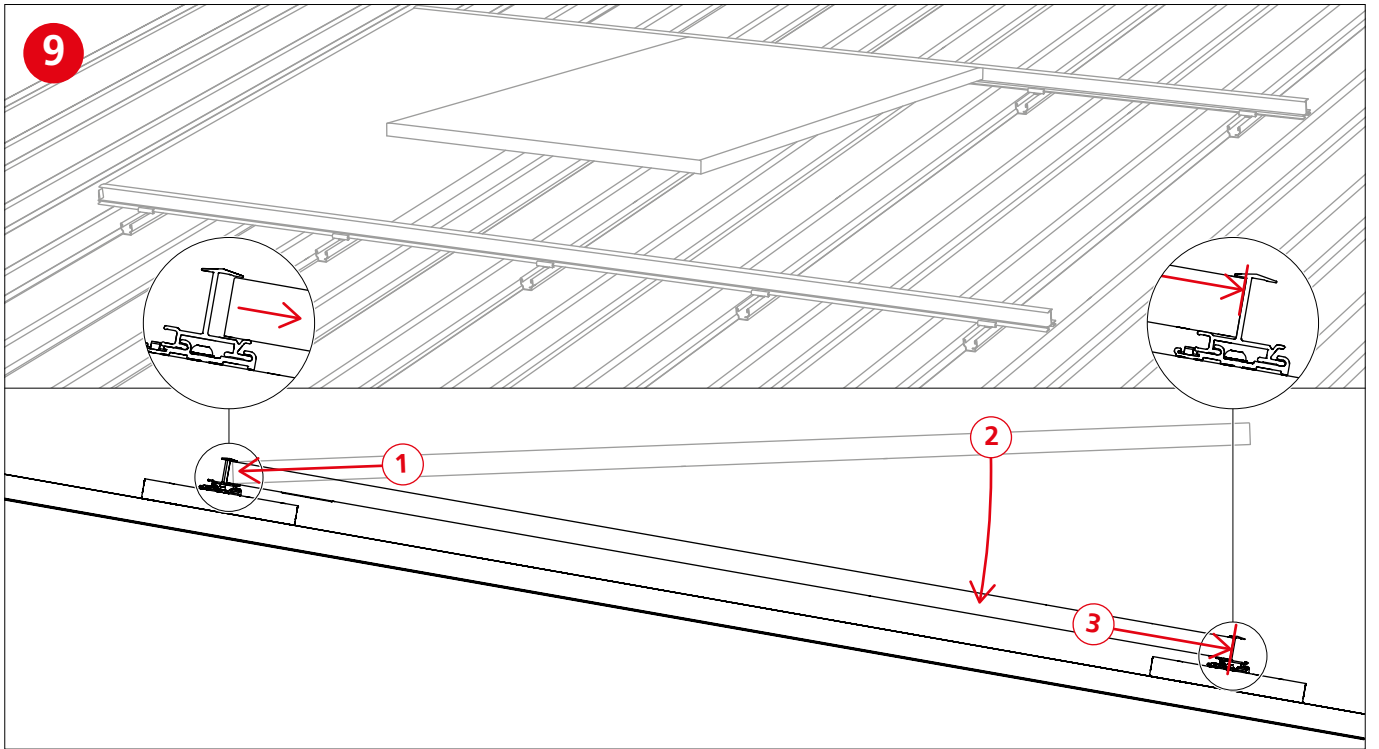


6

2x per horizontal; also for connected rails









## Thank you for choosing a K2 mounting system.

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:

- ▶ [www.k2-systems.com/en/contact](http://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:  
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