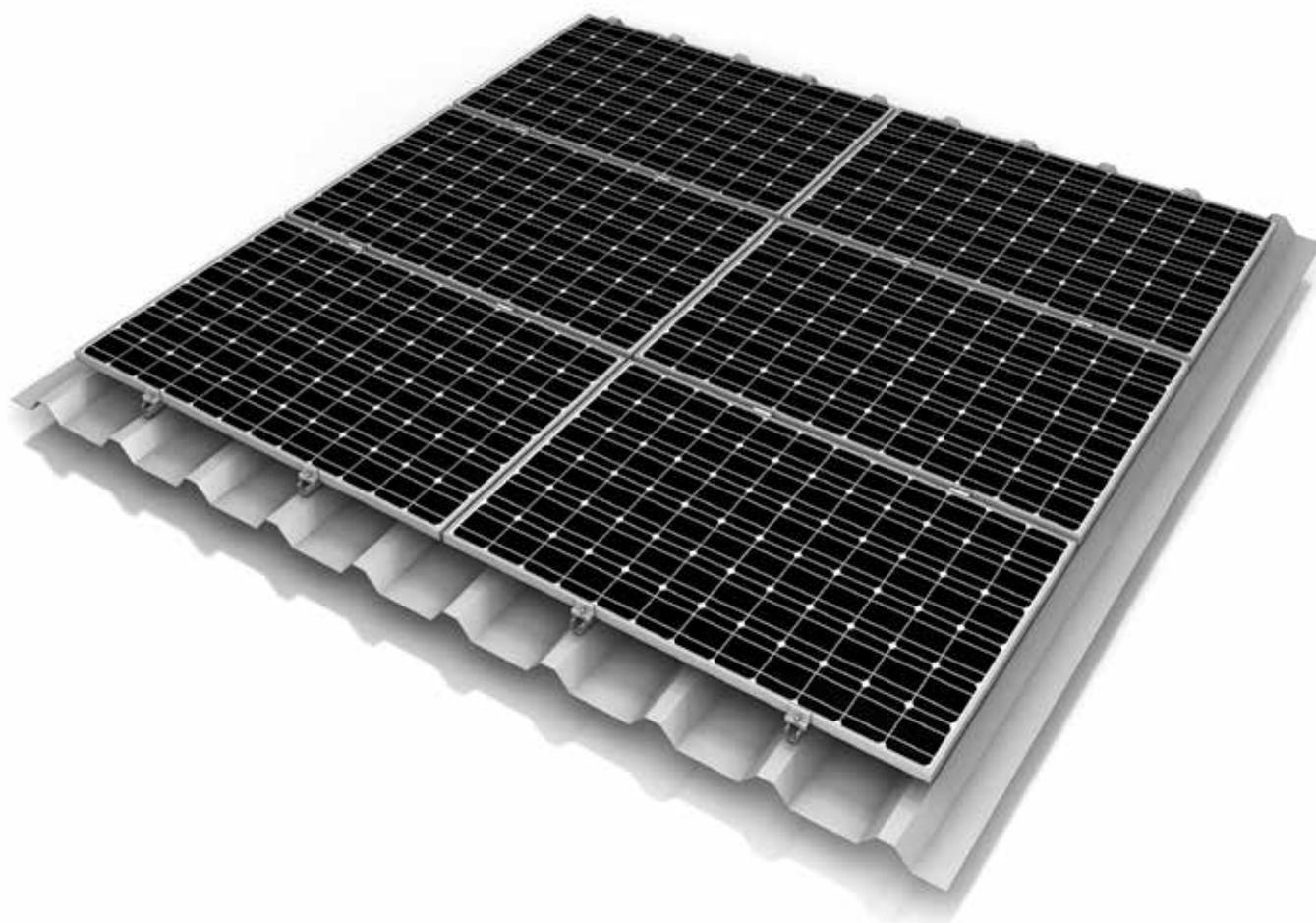


Mounting systems for solar technology



ASSEMBLY INSTRUCTIONS
MULTIRAIL SYSTEM

GB

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PARTNER WITH A SYSTEM

With sophisticated, fully developed product ideas and obvious customer-orientation, K2 Systems is your friendly partner in the field of mounting systems for solar technology. International customers appreciate the tried and tested designs for use on roofs and in outdoor and individual solutions.

Mounting systems from K2 Systems impress with their attractive design and many well thought-out details. High grade materials and quality workmanship guarantee outstanding functionality and durability.

Our products consist of few yet perfectly matching components - this reduces the amount of material used, simplifies assembly while saving time and money.

As an energetic, experienced company, and in keeping with the times, we benefit from cooperation as partners in order to ensure the dynamic development of our company. The experiences from the personal dialogue with our customers forms the basis for permanent optimisation of our range of products. The team of K2 Systems looks forward to a successful cooperation with you.

TESTED QUALITY – FOUR CERTIFICATIONS

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



GENERAL SAFETY INSTRUCTIONS

Please be aware that our General Assembly Regulations must be adhered to.

They can be viewed under www.k2-systems.com/en/downloads/product-information.html

In general, the following applies:

- Systems may only be installed and put into use by people who can ensure the proper carrying-out of the work due to their technical suitability (e.g. training or occupation) and/or experience.
- Before assembly, it must be checked that the product meets the local static requirements. For roof systems, the load-bearing capacity of the roof has to be checked in principle.
- National and local building regulations, standards and environmental regulations are always to be adhered to.
- Work safety and accident prevention regulations and corresponding standards and regulations of occupational associations are to be adhered to! In particular, it is to be ensured that:
 - Safety clothing is worn (especially safety helmets, work shoes and gloves).
 - For work on roofs, the regulations for working on roofs are to be adhered to (e.g. use of anti-fall guards, scaffolding with arrestor equipment from an eaves height of 3m etc.)
 - Presence of two people is vital for the entire course of the assembly, so that swift help can be ensured in the case of an accident.
- K2 mounting systems are constantly being developed further. Because of this, assembly procedures can change. Therefore, before assembly, always check that the assembly instructions are up-to-date under www.k2-systems.com/en/downloads/product-information.html. We can also send you the latest version on request.
- The assembly instructions of the module manufacturer are to be adhered to.
- Earthing must be ensured, use lightning arrestor clamp if necessary.
- During the entire assembly time it is to be ensured that at least one copy of the assembly instructions is available on site.
- In the event of non-adherence to our General Safety Instructions and if competitor's parts are built in or attached, K2 Systems GmbH reserves the right to refuse liability.
- With disregarding our general installation and assembly instructions and not using all system components and assemblies according to these instructions as well when components are used, which were not obtained from us, K2 Systems is not liable for any resulting defects and damages. Warranty is excluded in such cases.
- If all safety instructions are adhered to and the system is correctly installed, there is a product warranty entitlement of 12 years! Please read out Terms and Conditions of Warranty which can be viewed under www.k2-systems.com/en/downloads/product-information.html. We can also send them to you on request.
- The dismantling of the system takes place according to the assembly steps, in reverse order.
- K2 components made of stainless steels are available in different corrosion resistance classes. In every case, the expected corrosion exposure of each structure or component must be checked.

ESSENTIAL: THE MATERIALS REQUIRED

In order to install the K2 Systems MultiRail installation system, the following listed system components are essential. The item quantities are calculated on the basis of the respective requirements. The listed item numbers facilitate the comparison of items.

	MultiRail 10; 100 mm Material: Aluminium EN AW-6063 T66	2001300
	ALTERNATIV: MultiRail 25; 250 mm Material: Aluminium EN AW-6063 T66	2001301
	K2 Self-tapping screw 6 x 36 Material: Stainless steel, Jointing Material: EPDM, WS 8 mm Alternative: Self-tapping moulded screw 6 x 38 Material: Stainless steel, EPDM, WW 8	1001622 1005193
	End clamps Set Standard Material: Aluminium Alternatively: End clamps Set XS	Article number system-specific
	Middle clamps Standard set Material: Aluminium Alternatively: Middle Clamp Set XS	Article number system-specific

ADDITIONAL MATERIAL FOR CROSS BRACING

	Mounting rail CrossRail 36 Material: Aluminium	Article number system-specific
	M K2 slot nut Material: Stainless steel, plastic Alternatively, also slot nut made of galvanized steel can be used.	1001643
	Climber 36/48 (with long slot) Material: Aluminium	1002286
	Allen Bolt DIN 912 EN ISO 4762 M8 Material: stainless steel	item number system-specific
	Washer Material: stainless steel	1000473

AT A GLANCE: OVERVIEW OF THE TOOLS

K2 Systems mounting systems are designed to ensure effortless assembly. The required tools are not included in the scope of supply. Here we have listed them together for ease of reference.



Torque wrench

With attachment for SW 6, SW 13



Measuring tape



Cordless screwdriver

With attachment for T-40



Angle grinder

IN GENERAL:

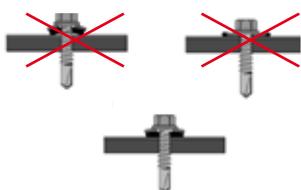
Please carefully read through all the steps first to ensure safe and correct assembly of the system. The required material is listed for each step. Should you have any problems during assembly or questions relating to the system please contact us on our

SERVICE HOTLINE: +49 (0) 7152-3560-0

IMPORTANT:

- The grounding must be prepared on site and carried out in accordance to the respective national regulations.
- If the the trapezoidal sheet is fixed with calottes, never connect the MultiRail directly with the calottes
- The General Installation Instructions must be adhered to.
These can be found at: www.k2-systems.com/en/downloads/product-information.html
- This system can be installed on most trapezoidal sheet metal roofs (min. thickness for steel sheets 0.5mm (S235) and 0.8mm for Aluminium sheets (min. tensile strength 195N/mm²))

INSTALLATION MULTIRAIL SYSTEM: STEP BY STEP

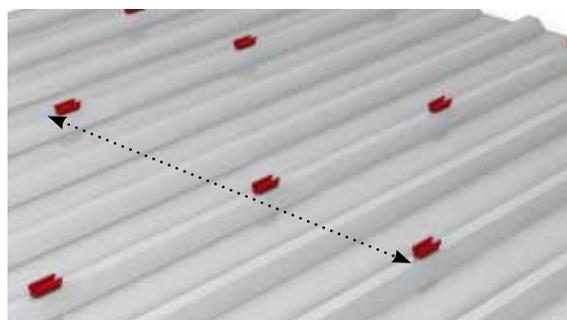
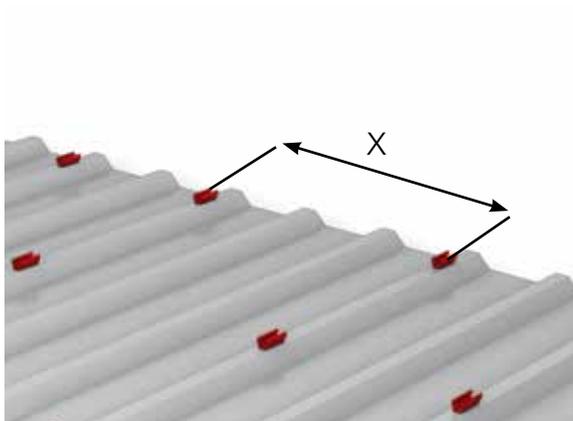


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MOUNTING THE MULTIRAIL 10/25

Use two self-tapping screws to fasten the MultiRail rail to the center of the crest. Minimum width of the crest: 22mm. The EPDM seal under the rail may be compressed to a maximum of 50%. The seal of the screw should not be too tightly compressed. Fix rail along the centre of the crests and tighten screw/washer carefully until flush.

Materials required: K2 MultiRail 10 or 25, self-tapping sheet-metal screws



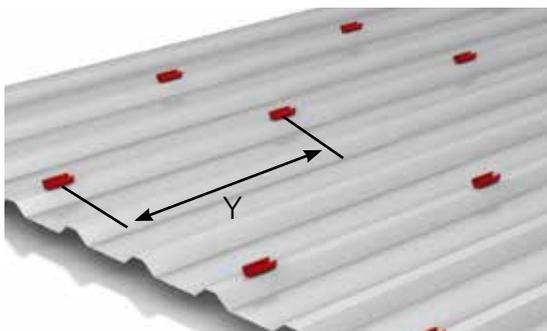
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MEASURING THE RAILS

The horizontal spacing X of the MultiRail rails is defined by the dimensions of the modules and their maximum clamping range. As a rule the recommended spacing is half the length of the module. In individual cases the assembly instructions of the modules must be followed with respect to the clamping range.

Use a chalk line to align the rails in a row.

Materials required: K2 MultiRail 10 or 25, self-tapping sheet-metal screws



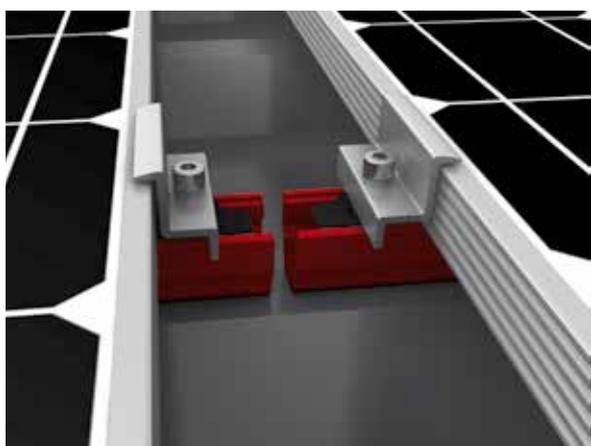
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MEASURING AND FASTENING THE OTHER RAILS

The vertical spacing Y of one row of rails is approx. the width of the module +19 mm.

Repeat steps 1 and 2 to assemble the other rows.

Materials required: K2 MultiRail 10 or 25

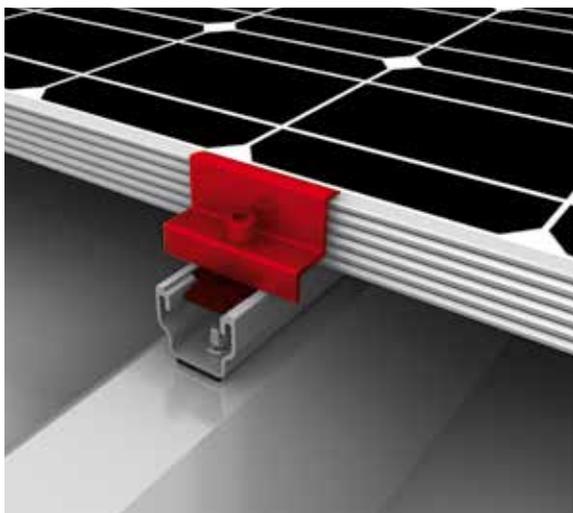


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PLEASE NOTE IMPLICITLY:

We strongly recommend a thermal cut in a module column after max. 18m of total length. Two MultiRails 10/25 have to be fixed one above the other on a crest with a minimum distance of 10mm. Fasten end clamps as per Step 5. Alternatively fix the upper MultiRail offset on the next crest to the left/right to also achieve a thermal cut.

Without using a cross layering of rails (see Step 7) only a layout with modules in landscape is allowed.



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FASTEN MODULE

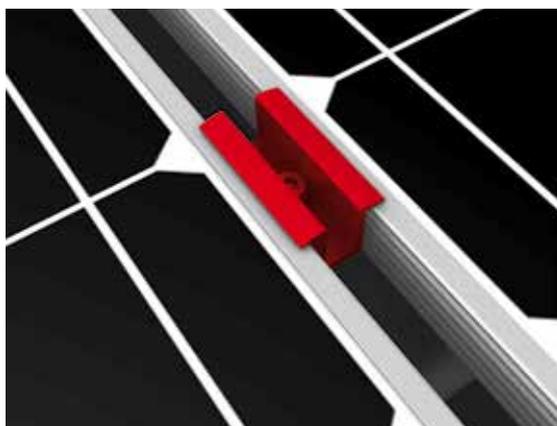
First of all, insert the slot nut M K2 in the MultiRail and turn 90° clockwise. If the end and middle clamps are supplied as a set, please fix the whole set in the rail. Fasten the solar modules onto the rails according to the manufacturer's information.

Each module at the end of a row is to be fastened with end clamps and Allen bolts ISO 4762 M8 and slot nuts. Never mount end clamps directly onto the rail joint or rail end! (Distance: min. 20 mm from end clamp)

Please also note the fastening guidelines of the module manufacturer!

Tightening torque moment 14 Nm.

Materials required: slot nut, module end clamp set



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FASTEN MODULE GAPS WITH MODULE MIDDLE CLAMP STANDARD

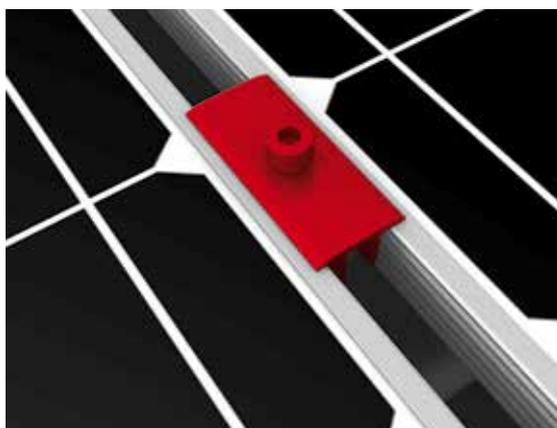
Between two modules, each time use two module middle clamps standard, which are to be bolted with Allen bolts ISO 4762 M8 in the slot nuts.

Never mount middle clamps directly onto the rail joint or rail end! (Distance: min. 20 mm from end clamp)

Please also note the fastening guidelines of the module manufacturer!

Tightening torque moment 14 Nm.

Materials required: slot nut, module middle clamp set standard, Allen bolt M8, locking washer S8



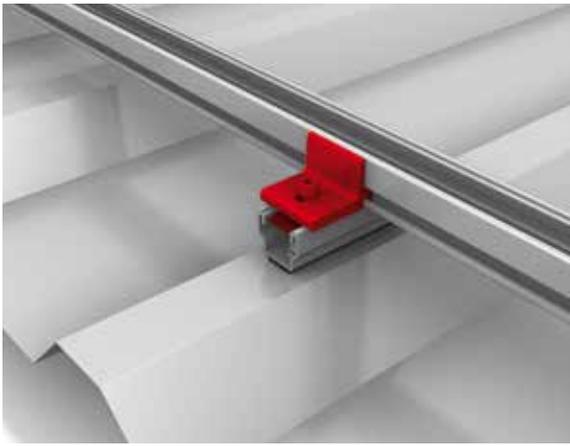
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FASTEN WITH XS MODULE MIDDLE CLAMP

Between two modules, each time use two XS module middle clamps, which are also to be bolted in the slot nuts with bolts ISO 4762 M8. With the XS module middle clamp, longer bolts are required than for the module middle clamp Standard.

Tightening torque moment 14 Nm.

Materials required: module middle clamp set XS



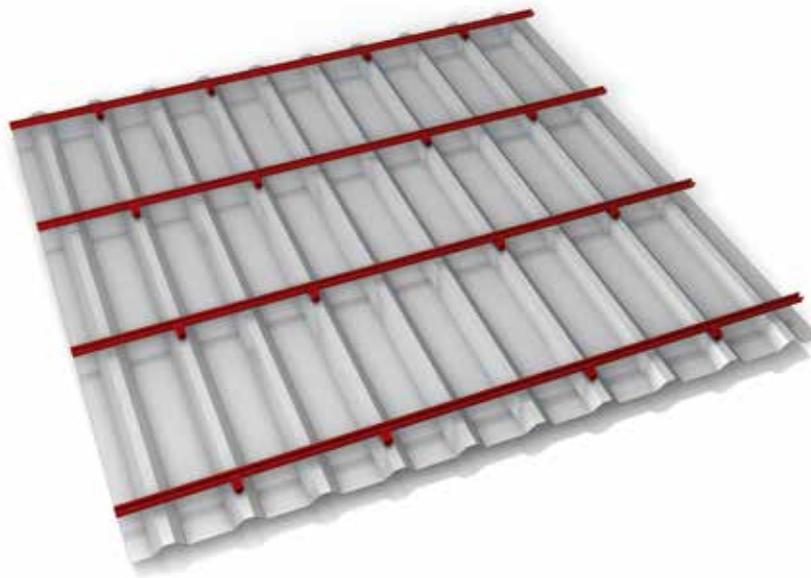
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MOUNT RAILS WITH CROSS BRACING

In cross bracing, the upper rail position is fitted using the slot nut M K2 and the mounting bracket climber to the desired location, with appropriate spacing. The slot nut M K2 must not protrude beyond the rail ends, also the CrossRail has to sit properly with its full profile width on the MultiRail.

Tightening torque 16 Nm.

Required materials: CrossRail, Climber, M K2, Hexagon socket head cap screw M8, Washer



Ready!

THANK YOU FOR CHOOSING A K2 MOUNTING SYSTEM.

Systems from K2 Systems are fast and simple to install. We hope these instructions have helped you in this. Please contact us if you have any questions or suggestions for improvements. We are looking forward to receive your call on our

Service-Hotline +49 (0) 7152-3560-0

Our General Terms of Business apply. Please refer to <http://www.k2-systems.com/en/gsc.html>. German Law shall apply excluding the UN Convention on CISG. Place of venue is Stuttgart.

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Montageanleitung MultiRail | GB2 | 1113 | Subject to change.
Product illustrations are exemplary illustrations and may differ from the original.

