Mounting systems for solar technology

K2 SYSTEMS
PRODUCTS

GB

Mutual trust is the basis of success.

Like with mountain climbing, we also take mutual trust very seriously. This trust holds true when dealing with our customers, as well as regarding K2 employees. After all, only a trustful partnership leads to success.

Partner with system

With sophisticated product ideas and a noticeable customer focus, K2 Systems is the sympathetic partner in the mounting systems for solar technology sector. International customers value our tried and tested designs for use on roofs and walls, as well as ground mounted solutions and individual solutions. K2 mounting systems impress with their appealing design and many well thought out details. High quality materials and a quality-conscious finish guarantee the highest functionality and durability.

Our range is comprised of just a few, perfectly coordinated components. This lowers the cost of materials, simplifies installation and saves time and money.
As a young company with branches in Italy and France, we believe in cooperation in a spirit of partnership. In order to endure the dynamic development of our company, we permanently strive to further optimise our product range. The knowledge we gain from personal interaction with our customers also has an influence in this process.

K2 SYSTEMS
THE COMPANY

ISO 9001 certificate

K2 Systems has been certified by TÜV Rheinland AG with the testing standard ISO 9001:2008 in the sector of development, manufacture and distribution of solar mounting systems. Our quality management system (QM system) was thus validated by an independent body. Our endeavour to continuously improve in all our internal and external activities is now subject to on-going external control by the TÜV testing laboratory.

TÜV Certificate

The TÜV Rheinland Group first tests a representative product selection on the basis of specific criteria. So that the certificate does not only represent a snap-shot, TÜV employees then monitor the manufacturing sites of the company at regular intervals and check whether the products manufactured there match the examined test samples.

VDE Certificate

The VDE Prüf-und Zertifizierungsinstitut GmbH is a national and international testing and accreditation institute for the testing and certification of electronic equipment, components and systems. The safety, electromagnetic compatibility and further features of these products are tested.

RAL Certificate

Quality is compliance with agreements.
Companies with the RAL Solar Quality Stamp show their binding recognition of this tried and tested quality philosophy and are independently monitored.

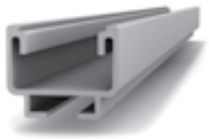
K2 Systems quality has four certifications

K2 Systems stands for secure connection, high quality and precisely manufactured and exact fit components. Our customers and business partners have known that for a long time.
Three independent authorities have tested, confirmed and certified our competencies and components. However, we do not just rely on external authorities.
Our internal quality assurance standards ensure that all components manufactured by us undergo an extensive testing process. This leads to the high quality standards of the K2 Systems, which we achieve, in part, by almost completely implementing only „Made in Germany“ or „Made in Europe“. Our customers can rely on our high quality, and they appreciate that we offer a 12 year manufacturer‘s warranty on all our components.

K2 SYSTEMS
THE QUALITY

K2 SYSTEMS **MOUNTING RAILS**

SolidRail UltraLight 32



Span width:	130 cm
Height:	32 mm
Length:	6,10 m
Weight:	0,7 kg/m
Material:	Aluminium

SolidRail Light 37

Span width:	145 cm
Height:	37 mm
Length:	2,10 | 3,43 | 4,35 | 5,40 6,10 m
Weight:	0,85 kg/m
Material:	Aluminium

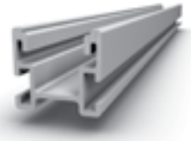
SolidRail Medium 42

Span width:	200 cm
Height:	42 mm
Length:	2,10 | 3,43 | 4,35 | 5,40 6,10 m
Weight:	1,3 kg/m
Material:	Aluminium

SolidRail XL 140

Span width:	690 cm
Height:	140 mm
Length:	6,00 m
Weight:	4,96 kg/m
Material:	Aluminium

CrossRail 36



Span width:	160 cm
Height:	36 mm
Length:	4,20 | 6,10 m
Gewicht:	0,96 kg/m
Material:	Aluminium

SolidRail Alpin 60

Span width:	260 cm
Height:	60 mm
Length:	6,10 m
Weight:	1,7 kg/m
Material:	Aluminium

SolidRail LS 85

Span width:	445 cm
Height:	85 mm
Length:	6,00 m
Weight:	2,95 kg/m
Material:	Aluminium

SolidRail L 85

Span width:	450 cm
Height:	85 mm
Length:	6,00 m
Weight:	3,368 kg/m
Material:	Aluminium

CrossRail 48

Span width:	210 cm
Height:	48 mm
Length:	6,10 m
Weight:	1,24 kg/m
Material:	Aluminium

CrossRail 62

Span width:	290 cm
Height:	62 mm
Length:	6,10 m
Weight:	2,03 kg/m
Material:	Aluminium

CrossRail 90

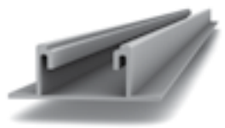
Span width:	450 cm
Height:	90 mm
Length:	6,10 m
Weight:	3,07 kg/m
Material:	Aluminium

The K2 SolidRail range of rails is connected to the relevant K2 substructure with the hammer head bolt at the underside of the rail. The CrossRail range of rails can be completely installed from above with the K2 CrossHook and Climber. Rail connector sets are available for all K2 rails.

Example calculation of UK:
Definition of axes: I = geometrical moment of inertia; W= axial section modulus | Span width: The rail span follows from an 85 percent utilisation in the elastic-plastic calculation to K2 standard conditions. The K2 standard conditions for span calculations consist of:
Height above sea level: 100 m | Roof pitch: 30 ° | max. Snow load 0,650 kN/m² (equiv. UK Snow Load Zone IV) | max. Wind Load 1,05 kN/m² (equiv. Wind Speed 22,7 m/s) | Distance to Shoreline: >10000 m | Terrain Category: Rural Area | Building height: max. 10 m | Rail as continuous beam (3 fields) | Central Roof Area | Weight of Solar Module: 20 kg | Solar module: 1650 x 810 mm.
Regardless of the specified standard conditions, all K2 rails can generally be used in all snow and wind load zones. All aluminum profiles are made of AL EN AW 6063 T66.

K2 SYSTEMS **MOUNTING RAILS**

SpeedRail 22

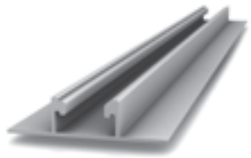


Span width:	105 cm
Height:	22,5 mm
Length:	2,10 | 4,20 | 6,10 m
Weight:	0,64 kg/m
Material:	Aluminium

SpeedRail 36

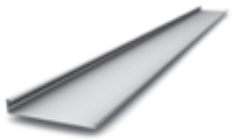
Span width:	150 cm
Height:	36 mm
Length:	4,20 | 6,10 m
Weight:	0,84 kg/m
Material:	Aluminium

FlatRail 22



Span width:	110 cm
Height:	22,5 mm
Length:	6,10 m
Weight:	1,0 kg/m
Material:	Aluminium

LevelRail



Height:	32 mm
Length:	5,00 m
Weight:	1,5 kg/m
Material:	Aluminium

K2 SYSTEMS **ROOF ATTACHMENTS**

Roof Fastener for Pan Tile

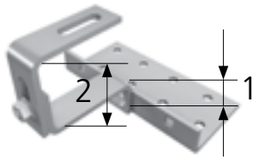
Base plate	Bracket	Height under bracket	Roof lath height*	Overall height approx.
150 x 60 x 5 mm	30 x 6 mm	47 mm	30 mm	133 mm
180 x 80 x 4 mm	35 x 6 mm	38 mm	24 mm	124 mm
180 x 80 x 4 mm	30 x 6 mm	42 mm	28 mm	127 mm
180 x 80 x 4 mm	30 x 6 mm	47 mm	30 mm	133 mm
180 x 80 x 4 mm	35 x 6 mm	47 mm	30 mm	150 mm
180 x 80 x 4 mm	35 x 6 mm	38 mm	24 mm	150 mm
180 x 80 x 4 mm	30 x 6 mm	57 mm	40 mm	144 mm
180 x 80 x 5 mm (Alpin)	40 x 8 mm	47 mm	30 mm	121 mm

*Provided that the tile thickness is between 12 and 15 mm, Material: Stainless steel (1.4016) welded both sides

Vario 1

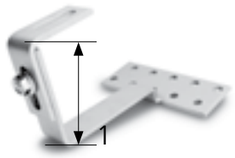
1. Bracket:	min. 55 max. 90 mm
Base plate:	150x60x5 mm
Bracket:	30x6 mm
Height under bracket:	43 mm
Overall height:	approx. 112-145 mm
Material:	Stainless Steel (1.4016)

Vario 2



1. Bracket:	min 47 max 59 mm
2. Bracket:	min 57 max 97 mm
Base plate:	140x55x5 mm
Bracket:	30x6 mm
Height under bracket:	47-59 mm
Overall height:	approx. 105-155 mm
Material:	Stainless Steel (1.4016)

Coppo



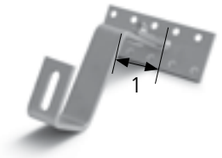
1. Bracket:	min. 106 max. 136 mm
Base plate:	150 x 60 x 5 mm
Bracket:	30 x 5 mm
Height under bracket:	18 mm
Overall height:	approx. 137-167 mm
Material:	Stainless Steel (1.4016)

K2 stainless steel roof fastener can be combined with the SolidRail range of rails. The connection to the rail is performed with a hammer head bolt in to the underside of the rail.

Portoghese

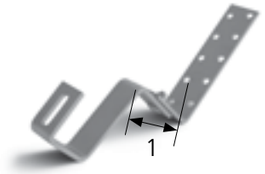
Base plate:	150 x 60 x 5 mm
Height under bracket:	30 mm
Bracket:	30 x 5 mm
Overall height:	approx.135 mm
Material:	Stainless Steel (1.4016)

Spanish tile roof, rafters or concrete



Base plate:	150 x 60 x 5 mm
Height under bracket:	approx. 108 - 137 mm,
Bracket:	35 x 6 mm
Overall height:	approx. 190 - 220 mm
Material:	Stainless Steel (1.4016)

Spanish tile roof, purlins



Base plate:	201 x 50 x 5 mm
Height under bracket:	approx. 100 - 129 mm,
Bracket:	35 x 6 mm,
Overall height:	approx. 180 - 210 mm
Material:	Stainless Steel (1.4016)

Roof Fastener for Flat Tile

Bracket:	40 x 6 mm
Height under bracket:	33 mm
Overall height:	approx. 122 mm
Material:	Stainless Steel (1.4016)

Roof Fastener for Flat Tile (double roofing)

	for 30 mm timber batten (only usable for flat tile)
Width:	150 mm
Height under bracket:	33 mm
Overall height:	approx. 103 mm
Material thickness:	2 mm
Material:	Stainless Steel (1.4301)

Roof Fastener Slate

Bracket:	40 x 250 x 6 mm
Overall height:	70 mm
Material:	Stainless Steel (1.4301)

K2 SYSTEMS **ROOF ATTACHMENTS**

CrossHook 2
(flat concrete interlocing tiles)

Base Plate:	150x128x2 mm with round elongated hole
Contact area:	150x116 mm
Height under bracket:	44 mm
Overall height:	approx. 100 mm
Material:	Stainless Steel (1.4301)

Vario 2S
(narrow rafters)

1. Bracket:	min. 49 max. 58,5 mm
2. Bracket:	min. 59,4 max. 88,4 mm
Base Plate:	140 x 114 x 5 mm with round elongated hole
Bracket:	30 x 6 mm
Height under bracket:	49 - 58,5 mm
Overall height:	approx. 118 -156,5 mm
Material:	Stainless Steel (1.4301)

Rafter Screw
(pre-assembled)

For fastening of K2 System parts on trapeze and wave shape roofs.

M10x180, Hexagonal SW 7
M10x200, Hexagonal SW 7
M10x250, Hexagonal SW 7
M12x200, Hexagonal SW 9
M12x250, Hexagonal SW 9
M12x300, Hexagonal SW 9
M12x350, Hexagonal SW 9
M12x400, Hexagonal SW 9

SpeedClip

Glass fibre reinforced clip for direct mounting the SpeedRail on sheet metal.
Material: glass fibre reinforced polyamid, EPDM

Solar fastener for steel

Solar fastener (stainless steel) for mounting K2 system components on roofs with sheet metal or trapeze or wave shaped roofs (for steel substructure). Building authority-certified.

Solar fastener for timber

Solar fastener (stainless steel) for mounting K2 system components on roofs with sheet metal or trapeze or wave shaped roofs (for timber substructure). Building authority-certified.

Solar fastener for concrete

Solar fastener (stainless steel) for mounting K2 system components on roofs with sheet metal or trapeze or wave shaped roofs (for concrete substructure). Building authority-certified.

The K2 CrossRail range of rails is mounted with these roof fasteners with the K2 Climber completely from above.

K2 SYSTEMS **ROOF ATTACHMENTS**

K2 Metal Clamp

For fastening of K2 System parts on standing seam metal roofs.
Material: Stainless Steel A2

S-5! Clamp

For fastening of K2 System parts on standing seam metal roofs.

K2 Kalzip Claw

For fastening of K2 System parts on rounded standing seam metal roofs.

S-5! Clamp (Kalzip)

For fastening of K2 System parts on rounded standing seam metal roofs.

K2 SYSTEMS **MOUNTING MODULE**

Module Middle Clamp Standard Set

For mounting of modules with module frame depths of 35 - 50 mm. The set is preassembled and can be easily mounted with every K2 rail.
Material: Aluminium

Module Middle Clamp XS Set

For mounting of modules with module frame depths of 35 - 50 mm. The set is preassembled and can be easily mounted with every K2 rail.
Material: Aluminium

Module End Clamp Standard Set

For mounting of modules with module frame depths of 35 - 50 mm. The set is preassembled and can be easily mounted with every K2 rail.
Material: Aluminium

Module Middle Clamp First Solar

Aluminum module laminate middle clamps. EPDM allowed for First Solar and Calyxo thinfilm modules. Smaller module spacing.
Material: Aluminium plate finished, EPDM

K2 Module End Clamp First Solar

End Clamp First Solar for fixing thinfilm modules, approved for First Solar and Calyxo thinfilm modules.
Material: Aluminium plate finished, EPDM

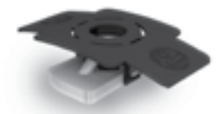
K2 Slideguard

Slide guard for additional use in vertical assembly of laminated modules with glass thickness of 6 - 9 mm.
Material: Stainless Steel 1.4016, EPDM

K2 Mid and End Clamps are available for various module frame heights. This is only an excerpt from the variety of standard and laminate clamps available. All K2 standard clamps are also available anodized in black.

K2 SYSTEMS **SCREWS & NUTS**

M K2 slot nut with clip



The Fast-installation M K2 slot nut can be put into any part of the K2 rail. The slot nut will adjust itself in the rail and can be readjusted to any part of the rail.
Material: Stainless Steel 1.4301, PA

Self-drilling wood screw

Self-drilling wood screw, Heco. Building authority-certified.
Material: Stainless Steel A2

Allen bolt DIN 912 - EN ISO 4762

The cylinder head stud with hexagon socket is available in different sizes in coordination with all K2 system connections.
Material: Stainless Steel A2

Self-tapping screw with mounted EPDM supported washer

Hexagon screws for the connection of mounting rails and rail connectors, as well as for the SpeedClip assembly.
Material: Stainless Steel A2, EPDM

K2 Multi Monti fastener

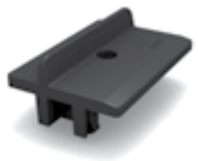
'Multi Monti' - fastner (Heco) to fasten in concrete. Drilling depth: 55mm, Drive: T30, head size: 17 mm, Drilling measurement: 6mm; Steel surface: galvanised and blue passivated

K2 safety screw Deter Bolt Free

Screw to prevent the theft of modules. The patented head can only be removed with the respective Deter Bolt Wrench.

K2 SYSTEMS **ACCESSORIES**

K2 AddOn



The K2 AddOn mounting adapter enables the grid mounting or insertion mounting possibility without any additional rails or clamps. Fits with all K2 Systems mounting systems.
Material: glass fibre reinforced polyamid

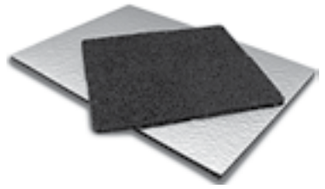
K2 Pad Spacer PA

PA spacer shim to compensate height differences on mounting K2 threaded roof hooks and K2 rails (except Solid). Any number of spacer shims can placed on top of each other for individual height compensation.
Material: glass fibre reinforced polyamid

K2 Lightning protection clamp multi, half part

Lightning protection clamp for clamping Ø 8mm lightning protection cables.
For universal use as a T, cross, parallel and impact clamp.
Material: Aluminium

Solar building protection mat



The K2 building protection mat protects the roof sealing from damage by mounting system platforms. The aluminium coating on the underside counteracts the otherwise occurring plasticizer loss of many roof sealers that do not tolerate rubber.

SpeedLock Set

"SpeedLock" for securing the K2 SpeedRail in case of thermal expansion.

K2 EndCaps

K2 End Cap for K2 SolidRail Light, Medium, Alpin and CrossRail 36 and 48.
Material: glass fibre reinforced polyamid

WEEB Clip

WEEB Clip – potential equalization between panel and rail, suitable for K2 SolidRail Ultralight, Light, SpeedRail 22 & 36, CrossRail 36 & 48 and FlatRails.
Material: Stainless Steel

Omega Kabel-Clip

External cable clip of solar cables for cable runs outside of K2 rails.
Fixation in the C-chamber of the profile.
Material: Polypropylen with UV stabiliser, black

K2 Climber

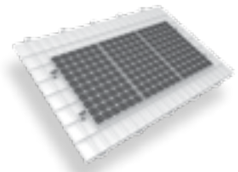
K2 Climber 36/48 and 62/90, aluminium brackets for fastening of the K2 CrossRails 36, 48, 62 and 90; or for direct mounting with K2 CrossHook and Vario 2s.

K2 SYSTEMS **SYSTEM OVERVIEW**

Pitched Roof Systems

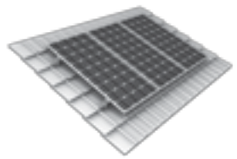
SpeedRail System

Sloped roof system for quick and easy mounting on trapezoidal sheet metal. CSTB and CIEAB certified.



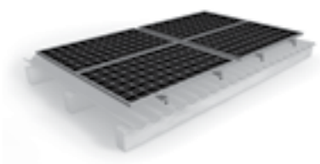
CrossRail System

Sloped roof system for roofs with tile roofing. Assembly completely from above to CrossRail and Climber.



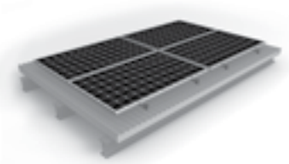
Roof Hook System

Sloped roof system for roofs with tile roofing. Assembly with SolidRail.



Rafter Screw System

Sloped roof system for corrugated fibre cement roofing, also for large span widths with K2 Bridge.

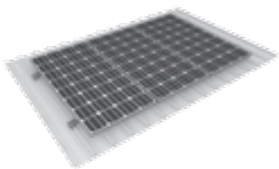


Solar fastener System

For roofs with steel or aluminium profile or fibre cement roofing, even for large span widths with K2 Bridge.

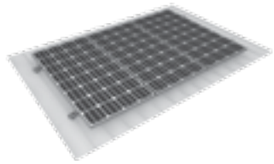
Flat Roof System

Sloped roof system for quick and easy mounting on trapezoidal sheet metal.



Kalzip Claw System

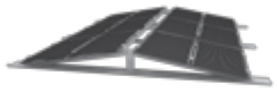
For quick assembly on Kalzip roofs. Clamping beneath the fold.



Seam Metal System

Mounting system for tin joint roofs. Clamping beneath the fold.

Flat roof Systems



D-Level System

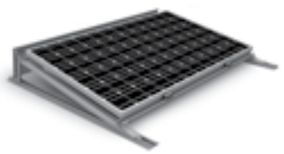
Double-sided module layout with LevelRail base rail. 10 ° elevation angle. Tested in wind tunnel

S-Dome System

10 ° southern elevation angle, complete installation from above, without module carrier rail. Tested in wind tunnel.

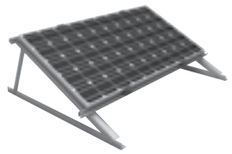
D-Dome System

Double-sided module layout 10 °, complete installation from above, without module support rail. Tested in wind tunnel.



S-Level System 2.11

20 ° south elevation angle with SpeedRail base rail or flat rail. Tested in wind tunnel.



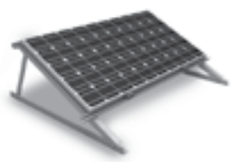
Triangle System

Custom made sloped and flat rail system for lying and standing module assembly. Ballast option.

Supplementary Systems

Cross Bracing with CrossRail

CrossRail mounting system - Climber is ideal for assembly in cross bracing. Quick and easy assembly of horizontal modules.



AddOn System

Sloped roof system for roofs with tile roofing. Quick assembly, completely from above with CrossRail and Climber.

K2 SYSTEMS **SYSTEMS**

Ground Mounted Systems

N-Rack System

Ground-mounted system for rotating or concrete foundation, also for difficult soil classes.

T-Rack System 2.11

Ground-mounted system with pile-driven foundation. Low driving depth possible, wind tunnel tested.

N-Rack System Mono

Coordinated component system for concrete foundations. Statically calculated for different European countries.

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Produktbroschüre | GB3 | 0412 | Subject to change
Product illustrations are exemplary illustrations and may differ from the original.