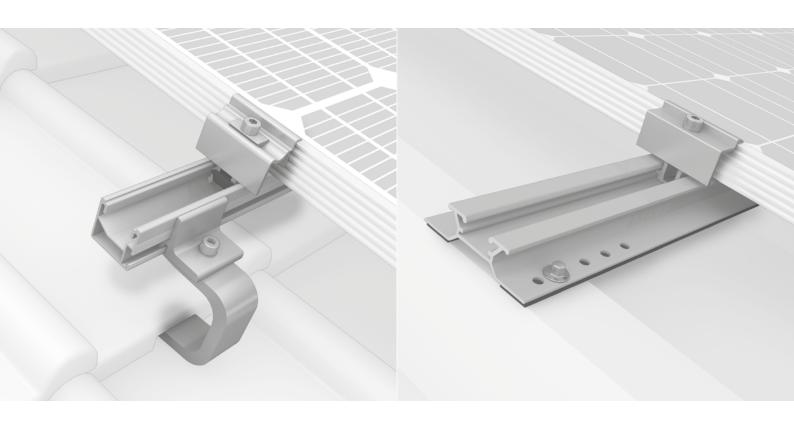
Mounting systems for solar technology



Pitched roof systems









Content



| | A | o A | Tain tile | Poetoidal shee | Sandwich Sandwich | pring ted shee | TUGATED FIBRE | Standing see | 3th 100x |
|-----------------------------|----|-----|-----------|----------------|-------------------|----------------|---------------|--------------------------|----------|
| | | | | | | | | | |
| ► SingleRail System | 4 | • | 0 | 0 | 0 | 0 | • | • | • |
| ► SolidRail System | 6 | • | • | • | • | 0 | • | • | • |
| Insertion System | 8 | • | 0 | 0 | 0 | 0 | • | • | 0 |
| ► MiniRail System | 10 | 0 | 0 | 0 | • | • | 0 | 0 | 0 |
| ► SpeedRail System | 12 | 0 | 0 | 0 | • | • | 0 | 0 | 0 |
| ► MultiRail System | 14 | 0 | 0 | 0 | • | • | 0 | 0 | 0 |
| ► S-Dome Small System | 16 | 0 | 0 | 0 | • | 0 | 0 | 0 | 0 |
| Overview of roof fastenings | 18 | | | | | | | | |
| ► Accessories | 22 | | | | | • Su | table | Unsuit | able |

Warranty

We offer a 12-year warranty on all K2 system components. k2-systems.com/en/guarantee



Statics and design loads

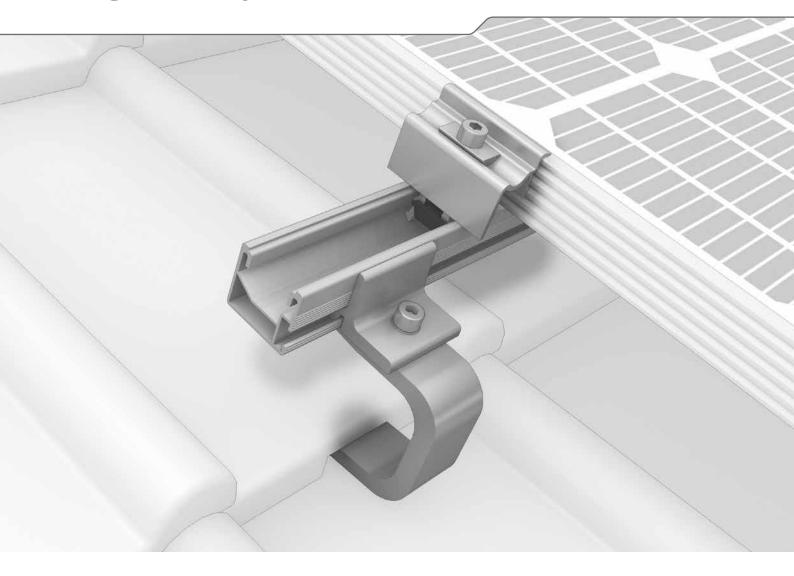
K2 mounting systems fulfil the calculation principles in accordance with Eurocode 1 and 9.

Pallet delivery

Many mounting systems are delivered in pallets to save space and costs.



SingleRail System



- Quick and low-cost with direct lateral connections to the rail including customised height adjustment
- ► Secure snap-in assembly without needing to be screwed into the base plate
- ▶ The SingleRail in combination with CrossHook roof hooks is very durable and versatile













Roof fastenings



SingleHook 1.1

- For pantiles
- ► Easy height adjustment with slotted bore hole
- Also suitable for narrow rafters
- ► Connects directly to SingleRail



SingleHook Vario

- ▶ For flat tiles and pantiles
- ► Height-adjustable at rail connection and battens
- Connects directly to SingleRail



SingleHook FT

- ▶ For flat tiles and pantiles
- Applicable on small rafters and independent from rafters
- ► Connects directly to SingleRail



CrossHook 3S

- For pantiles
- ▶ 3 height adjustments in the base plate
- Also suitable for narrow rafters



CrossHook 4S

- For pantiles
- ▶ 3 height adjustments in the base plate
- Further height adjustment at the bracket itself.
- Also suitable for narrow rafters



CrossBoard

- ► The easy solution for nogging, skylights etc.
- ► Complements CrossHook 3S and 4S



Hanger bolts SR

- For corrugated fibre cement roofing with wooden substructures
- With building approval



0

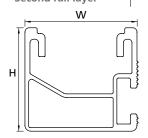
Standing seam clamps

- For many different seam types
- ▶ Direct lateral connection

Technical data

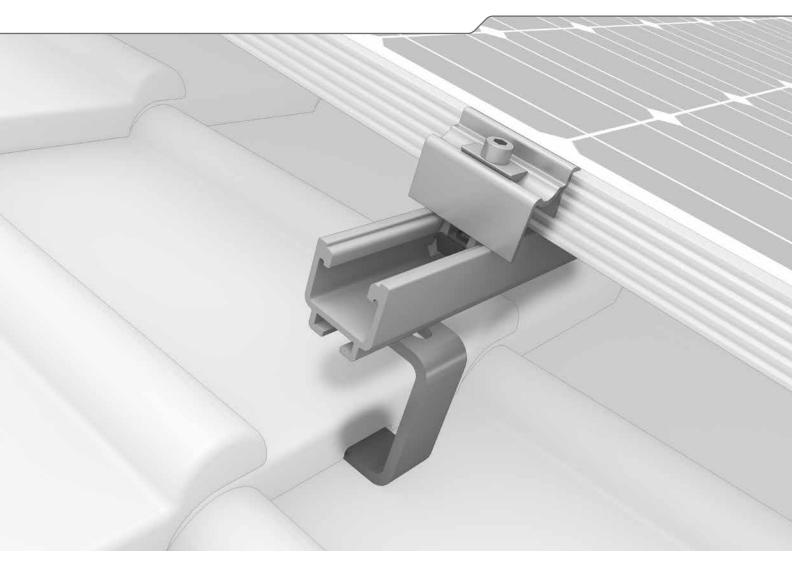
| | SingleRail 36 | SingleRail 50 | SingleRail 63 | |
|-------------------|----------------------------|---------------|---------------|--|
| Figure | | | | |
| Material | Aluminium (EN AW-6063 T66) | | | |
| W = width [mm] | 39.4 | 39 | 47 | |
| H = height [mm] | 36 | 50 | 63 | |
| Lengths [m] | 2.10/3.15/4.15/ 6.10 | 6.10 | 6.10 | |
| Weight [kg/m] | 0.76 | 1.0 | 1.51 | |
| Second rail layer | SingleRail or SolidRail | | | |





For heavy loads and large spans!

SolidRail System



- ▶ Comprehensive range of mounting rails for varying load profiles
- ▶ Robust and structurally proven
- ▶ High flexibility for a diverse range of widths















Roof fastenings



Roof hook for pantiles

- Various sizes
- Solid stainless steel design



Vario 1 and 2 roof hooks

- ▶ For pantiles
- Height-adjustable under bracket and at battens



Roof hook for plain tile roofing

Also for double roofing



Roof hook for slate roofing

Three boreholes for a secure fit



Roof hook for Coppo roofing

- ▶ Height-adjustable under bracket
- ► Flexible placement on rafters



Hanger bolts

- ► For corrugated fibre cement or corrugated sheet roofing with wooden substructure
- Custom height adjustment



Solar fastener

- ► For trapezoidal sheet metal, corrugated sheet metal, or corrugated fibre cement roofing
- ▶ For steel and timber



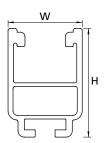
Standing seam clamps

Seam metal clamps for popular standing seam roofs such as Kalzip or Rib-Roof

Technical data

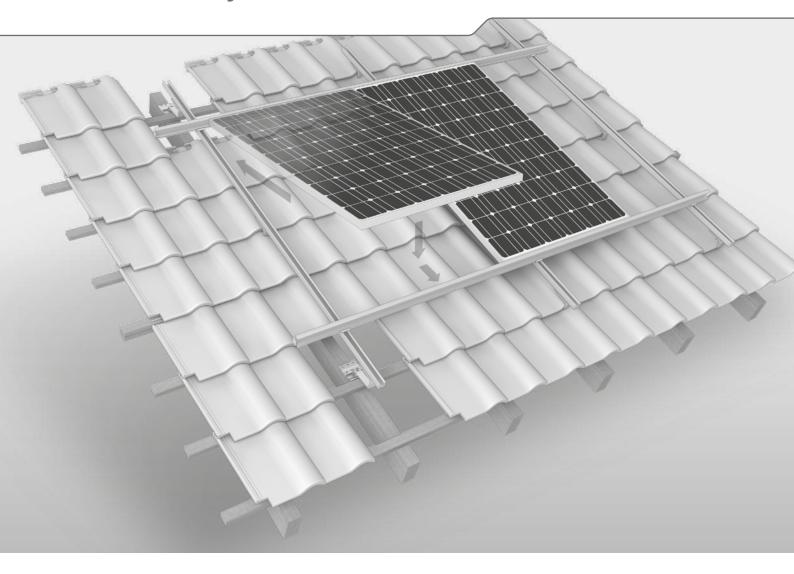
| | UltraLight 32 | Light 37 | Medium 42 | Alpine 60 | | |
|-------------------|----------------------------|----------|-----------|-----------|--|--|
| Figure | | | | | | |
| Material | Aluminium (EN AW-6063 T66) | | | | | |
| W = width [mm] | 39 | 39 | 41 | 41 | | |
| H = height [mm] | 32 | 37 | 42 | 60 | | |
| Lengths [m] | 2.10/3.15/4.15/6.10 | | | | | |
| Weight [kg/m] | 0.7 | 0.85 | 1.3 | 1.7 | | |
| Second rail layer | SingleRail | | | | | |







Insertion System



- Without having to apply clamps eliminates the need for assistance ensuring lightning-fast installation
- ▶ Easy to assemble with few components and without special tools
- ▶ Sleek design with continuous closed surface adds further
- Insertion profile provides additional frame reinforcement







In cooperation with solarteam • •



Components



Insertion rails

- ▶ Intelligent solution for efficient module installation
- ▶ Seals surface
- Available in black



CrossHook 3S+/4S+

- ▶ Height-adjustable and laterally adjustable
- rafters



Cross connector

- ▶ Fixation for insertion rail on SolidRail
- Simple mounting



SolidRail

- ▶ Robust mounting rail
- ▶ Different load conditions
- ▶ For large spans
- Available in black



Cable management

- Quick cable connection beneath the insertion rail
- ▶ Up to 5 cables



• Also suitable for narrow



Hanger bolt with adapter

For corrugated fibre cement roofing with wooden substructures

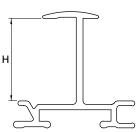


Accessories

- ▶ Connector insertion rail
- ▶ Side stopper
- ▶ Horizontal end bracket

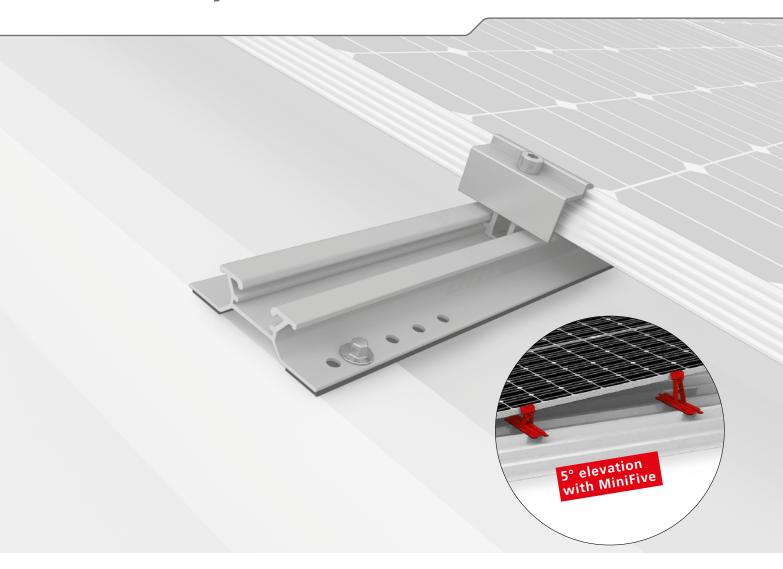
Technical data

| | Insertion system |
|----------------------------------|--|
| Scope of application | Pitched roofs with pan tiles or corrugated fibre cement |
| Fastening type / roof connection | Roof hooks or hanger bolts |
| Module frame heights (H) | → 35 mm → 40 mm → More heights on request |
| Requirements | 7 mm spacing between insertion rails |
| Module orientation | Landscape and portrait |
| Material | ➤ Mounting rails and cross connector: Aluminium EN AW-6063 T66 ➤ Components: stainless steel (1.4301) A2-70 |
| SolidRail lengths [m] | Aluminium mill finish: 4.15 and 6.10 Black anodised: 6.10 |
| Insertion rail lengths [m] | Aluminium mill finish: 5.10 Black anodised: 5.10 |





MiniRail System



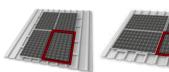
- ▶ Innovative and statically optimised short rail system that is quick and easy to mount
- ▶ Universal module clamps and suitable for portrait and landscape orientation
- ▶ 5° elevation with MiniFive: significantly more output thanks to improved ventilation and optimised module angle
- Optimised for storage and transport











The MiniRail System allows portrait and landscape mounting in the form of grid mounting thanks to the universal module clamps, which are rotatable by 90°.



Components



MiniRail

Landscape and portrait mounting with
MiniClamp MC/EC



MiniClamp MC/EC 30-50 mm

- Universal module clampClamp is rotatable



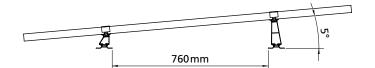
- Self-tapping screws
 ► Included in MiniRail MC/EC set
- With sealing washers





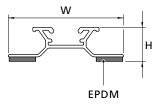
MiniFive front and end

- ▶ Single-sided easy elevation with insertable supporting element
 • Improved ventilation and higher yield
- Optimised module angle



Technical data

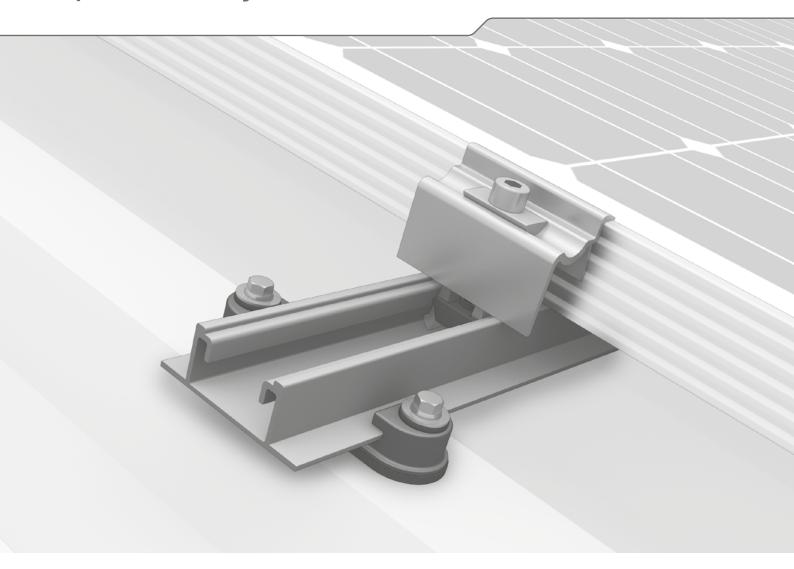
| | MiniRail System |
|--------------------------------|---|
| Scope of application | Pitched roofs with trapezoidal sheet metal or sandwich panels Roof inclination: 5-75° |
| Fastening type / roof fixture | Screws in roofing with self-tapping thin sheet screws |
| Requirements | Sheet thickness: ≥ 0.5 mm (steel and aluminium) Sandwich panel: Approval from manufacturer required Crest width: At least 22 mm * Crest spacing: 101-350 mm depending on crest width Flush area surrounding the bore hole: Ø ≥ 20 mm Module frame height: 30-50 mm |
| Module orientation | Vertical or horizontal |
| Material | Aluminium (EN AW-6063 T66/ EN AW-6082 T6); EPDM |
| Dimensions MiniRail W×H×L [mm] | 78.2×23×385 |
| Elevation with MiniFive | approx. 5° |





* The project-specific minimum high crest width dimension can be found in the Base On report.

SpeedRail System



- ▶ The proven long rail system for trapezoidal sheet applications as well as floating suspension with controlled thermal linear expansion
- ▶ Our most popular system over 1 GW installed worldwide
- ► All-rounder with only 4 installation steps also suitable for high loads









Components



SpeedRail

- ► Mounting rail with easy insertion mounting into SpeedClips
- Various lengths available



SpeedClip

- Mounting brackets for SpeedRail
- ▶ Simple insertion feature
- ► Glass fibre reinforced polyamide with EPDM seals
- Fastened with self-drilling screws for trapezoidal sheet metal



SpeedLock

- Mounting lock for SpeedRail in case of thermal expansion
- ▶ In a set with MK2 slot nut and stainless steel screw



SpeedConnector

- Rail connector for SpeedRail
- ► Three boreholes for flexible mounting
- In a set with countersunk screws

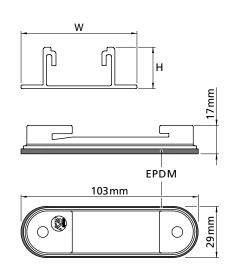


AddOn

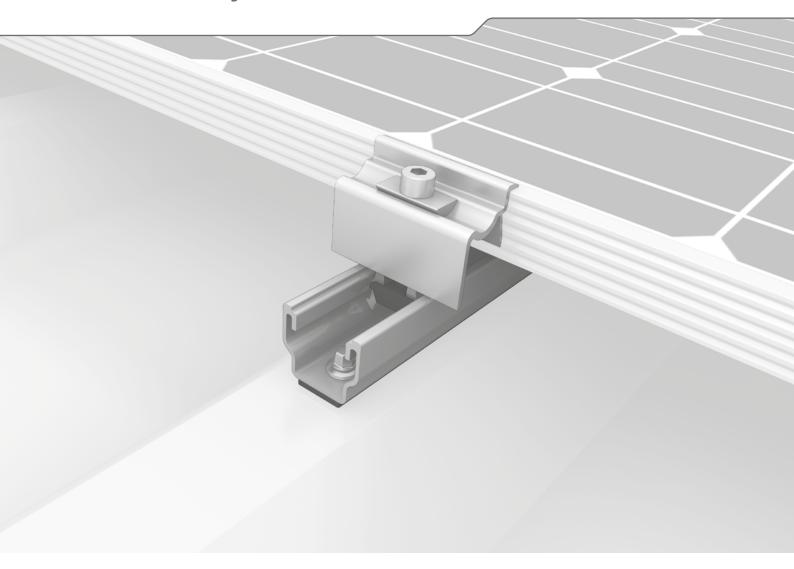
- ► For grid mounting and ensures easy sharedrail mounting
- Glass fibre reinforced polyamide

Technical data

| | SpeedRail / SpeedClip |
|---|--|
| Scope of application | Trapezoidal sheet roof |
| Fastening type / roof fixture | Insertion mounting into SpeedClips and screws in the roofing |
| Material | SpeedRail: Aluminium (EN AW-6063 T66; 0.64kg/m) SpeedClip: Glass fibre reinforced polyamide with EPDM |
| SpeedRail dimensions W = width [mm] H = height [mm] L = lengths [m] | 63 22.5, 2.1 / 3.15 / 4.15 / 6.1 |
| SpeedClip dimensions | See drawing |
| Second rail layer | SingleRail or SolidRail |



MultiRail System



- ► Easy and proven as a short rail or a flexible component in various lengths
- ▶ Quick planning with less material and greater effectiveness











MultiRail Versions



MultiRail 10

- ► Length 100 mm ► Horizontal module orientation



MultiRail 25/4

- Length 250 mm
 For more flexibility and high load demands at horizontal module orientation

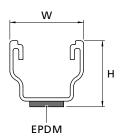


MultiRail 4.20

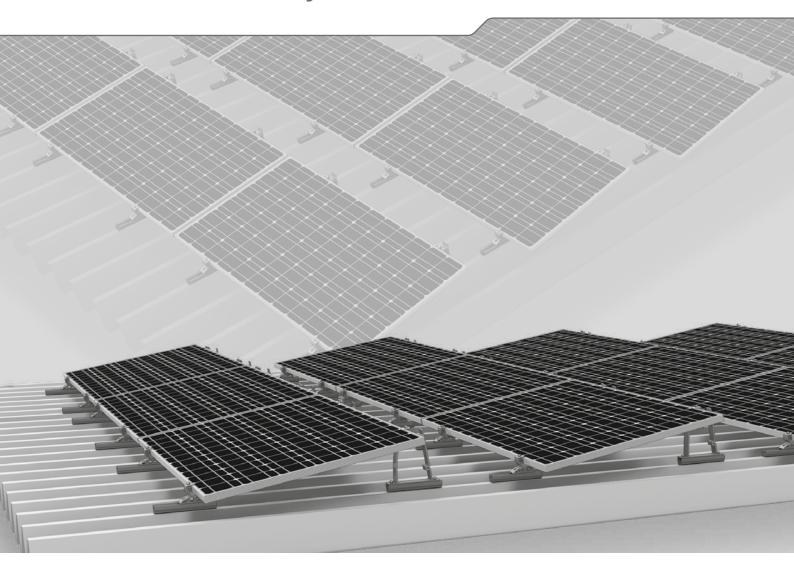
- Length 4200 mm
 Long rail for cutting to customised sizes
- ▶ Without EPDM seal; to be fastened manually with adhesive

Technical data

| | MultiRail 10, 25/4, 4.20 |
|-------------------------------|--|
| Scope of application | Pitched roofs, 5-75°, with trapezoidal sheet metal or sandwich panel |
| Fastening type / roof fixture | Fastened with self-tapping sheet screws |
| Requirements | Sheet thickness: ≥0.5 mm (steel and aluminium) Sandwich panel: approval from manufacturer required Crest width: at least 22 mm Maximum crest width: independent of crest distance |
| Material | Aluminium (EN AW-6063 T66); EPDM |
| W = width [mm] | 39 |
| H = height [mm] | 35 |
| L=rail length [mm] | MultiRail 10: 100 MultiRail 25/4: 250 MultiRail 4.20: 4200 |
| Second rail layer | SingleRail |



S-Dome Small System



- ▶ For a roof inclination of up to 15° on trapezoidal sheet metal
- Economical in terms of materials and transportation; clever connections and strong holding power
- ▶ The perfect combination of the all-round MultiRail component and load-optimised, slim elevations













Components



Dome S1000 Small Narrow elevation module support element



Dome SD Small Narrow module support element



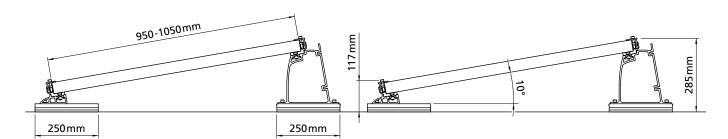
MultiRail 25/4

Length 250 mmWith four boreholes for roofs with up to 15° inclination



- FlexClamp Small

 ▶ For clamping on the long side of module
- Height adjustable



Technical data

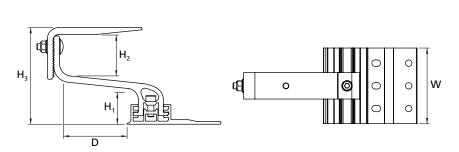
| | S-Dome Small |
|-----------------------------|--|
| Scope of application | Flat or pitched roofs ≤15° with trapezoidal sheet metal roofing |
| Fastening type/roof fixture | Attached with drilling screws in trapezoidal sheets, parallel to raised crests |
| Requirements | Sheet thickness for aluminium/steel: min. 0.5 mm Tensile strength for aluminium: 165 N/mm² Tensile strength for steel: acc. to approval min. 5235 in acc. with DIN EN 10025-1 Crest width: min. 22 mm Crest spacing: independent of crest distance |
| Inclination angle | 10° |
| Material | Mounting rails, Dome SD Small, Dome S1000 Small, FlexClamp Small: Aluminium (EN AW-6063 T66/ EN AW-6082 T6); EPDM Small parts: Stainless steel (1.4301) A2 |

Overview of roof fastenings

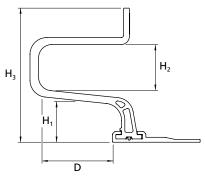
CrossHooks and SingleHooks for SingleRail

| Type / image | Material | Base plate width [W] | Height under bracket [H ₁] Bracket height [H ₂] Total height [H ₃] | Bracket depth [D] | Item no. |
|--------------------------------|--------------------|-------------------------|--|-------------------------|---------------------|
| CrossHook 3S Set/3S+ | Aluminium | 100 mm | → 40/47/54 mm → 56 mm → approx. 123/130/137 mm | 83 mm | 2001672/ 2002390 |
| CrossHook 45 Set/4S+ | Aluminium | 100 mm | → 40/47/54 mm → 55-85 mm → 120.5-165 mm | 83 mm | 2001821/ 2002402 |
| SingleHook 1.1* | Aluminium | 100 mm | → 47.1 mm → 56 mm → 162.9 mm | 83 mm | 2001928 |
| CrossBoard für CrossHook 35/45 | Aluminium | 2100 mm | → 40/47/54 mm → 56/55-85 mm → approx. 123/130/137/ 120.5-165 mm | 83 mm | 2001972 |
| CrossHook 2G | Aluminium | 100 mm | ▶ 40/47/54 mm ▶ No spacing ▶ 89.2 mm | - | 2000636 |
| CrossHook 2 (BS EN 490) | Aluminium | 150 mm | ▶ 44 mm ▶ 46 mm ▶ 100 mm | 116 mm | 1004900 |
| SingleHook FT* | Stainless steel | 30 mm | ▶ 16 mm ▶ 68 mm ▶ 141 mm | 120 mm | 2002568 |
| SingleHook Vario * | Stainless steel | 100 mm | ► 45-65 mm ► 68 mm ► 172-192mm | 110 mm | 2002651 |

Dimension drawing for CrossHook



Dimension drawing for SingleHook



^{*} Suitable exclusively for SingleRail

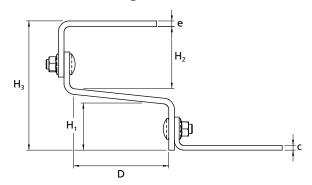


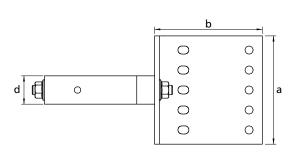
SolidHooks for SolidRail

| Type /Figure | Base plate [a x b x c] | Bracket [d x e] | Bracket [H₁]/[H₂] | Total height approx. [H ₃] | Bracket depth [D] | Item no. |
|----------------------------|---------------------------|--------------------|----------------------|--|-------------------------|----------|
| Pantiles | 150 × 60 × 5 mm | 30×6 mm | 47/65 mm | 134 mm | 98 mm | 1000001 |
| | 180×80×4mm | 35×6 mm | 38/69 mm | 124 mm | 91 mm | 1000096 |
| | 180×80×4mm | 35 × 6 mm | 38/89 mm | 150 mm | 91 mm | 1000653 |
| | 180×80×5 mm | 40 × 8 mm | 47/55 mm | 121 mm | 87 mm | 1000764 |
| Vario 1 | 150×60×5 mm | 30×6mm | 43/41-71 mm | 112-145 mm | 95 mm | 1000125 |
| Vario 2 | 140 × 55 × 5 mm | 30×6mm | 49-57/41-69 mm | 108-137 mm | 94 mm | 1000107 |
| Plain tile | 40×50 mm | 40×6mm | 33/62 mm | 122 mm | 189 mm | 1000214 |
| Plain tile, double roofing | 75×52×4mm | 75×4mm | 34/62 mm | 119 mm | 234 mm | 2003073 |
| Slate roofing | 40 × 250 mm | 40×65 mm | -/60 mm | 72 mm | 72 mm | 1000373 |
| Сорро | 150 × 60 × 5 mm | 30×5mm | 18/88-118 mm | 123-153 mm | 120 mm | 1001068 |

All roof hooks made of stainless steel.

Dimension drawing





Overview of roof fastenings

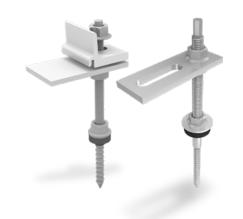
Hanger bolts

For timber substructures

For fastening the K2 SolidRail, SingleRail and CrossRail mounting rails on roofs with corrugated fibre cement or sheet metal on timber substructures. The K2 hanger bolts are equipped with an extra-long metric thread for installation height adjustment. Hanger bolts are outfitted with a pre-mounted adapter plate.







CrossRail/SingleRail Hanger Bolts

| Туре | Item number |
|----------------------------|-------------|
| M10×180, hexagonal SW 7 mm | 1006166 |
| M10×200, hexagonal SW 7 mm | 1006167 |
| M10×250, hexagonal SW 7 mm | 1006168 |
| M12×200, hexagonal SW 9 mm | 1006169 |
| M12×250, hexagonal SW 9 mm | 1006170 |
| M12×300, hexagonal SW 9 mm | 1006171 |
| M12×350, hexagonal SW 9 mm | 1006172 |
| M12×400, hexagonal SW 9 mm | 1006173 |

SolidRail Hanger Bolt

| Туре | ltem number |
|----------------------------|-------------|
| M10×180, hexagonal SW 7 mm | 2000120 |
| M10×200, hexagonal SW 7 mm | 2000121 |
| M10×250, hexagonal SW 7 mm | 2000122 |
| M12×200, hexagonal SW 9 mm | 2000123 |
| M12×250, hexagonal SW 9 mm | 2000124 |
| M12×300, hexagonal SW 9 mm | 2000125 |
| M12×350, hexagonal SW 9 mm | 2000126 |
| M12×400, hexagonal SW 9 mm | 2000127 |

Solar fastener

For steel, timber and concrete substructures

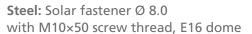
Solar fasteners (stainless steel) for attaching the K2 mounting rails on roofs with trapezoidal sheet metal, corrugated fibre cement or corrugated sheet metal. Matching M10/M12 adapter plates are available separately.



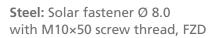








| Туре | Item number |
|---------------------------|-------------|
| 8×85 / 50, length 135 mm | 2003018 |
| 8×115 / 50, length 165 mm | 2003019 |
| 8×155 / 50, length 205 mm | 2003020 |
| 8×195 / 50, length 245 mm | 2003021 |



| Туре | Item number |
|---------------------------|-------------|
| 8×85 / 50, length 135 mm | 2003013 |
| 8×115 / 50, length 165 mm | 2003012 |
| 8×155 / 50, length 205 mm | 2003016 |
| 8×195 / 50, length 245 mm | 2003017 |





Timber: Solar fastener Ø 8,0 mm M10×50/70 mm, metric thread E14 calotte or FZD sealing made of EPDM On request



SingleRail standing seam and system clamps



Standing SeamClamp CF:x

- ▶ For double folded seam roofing
- Material: Aluminium
- Item 2003024



SeamClamp CF:x

- ▶ For round seam roofing
- Material: Aluminium
- Item. 2002859



SeamClamp CF:x

- ▶ For single-fold and snap together profiles
- Material: Aluminium
- Item 2003083



SolidRail standing seam and system clamps



Standing SeamClamp S-5! Round SeamClamp S-5!

- ▶ For double folded seam roofing
- Material: Aluminium
- Item 1001052

- ▶ For round seam
- ▶ Material: Aluminium
- Item 1000888

Snap SeamClamp CF:x

- ▶ For single-fold and snap together profiles
- Material: Aluminium
- Item 2003082

Standing SeamClamp

- ▶ For standing seam roofing
- Material: Stainless steel
- Item 2001712



Rib-Roof Evolution Clamp

- ▶ For Rib-Roof Evolution with rounded profile
- Material: Aluminium
- Item 2002226

Rib-Roof 500 Clamp

- ▶ For Rib-Roof Speed 500 trapezoidal profile
- Material: Aluminium
- ▶ Item 2002225

Rib-Roof 465 Clamp

- ▶ For Rib-Roof 465 trapezoidal profile
- Material: Aluminium
- Item 2002118

Round SeamClamp

- ▶ For Kalzip roofs with rounded seam ends
- Material: Stainless steel
- Item 2001853









Accessories

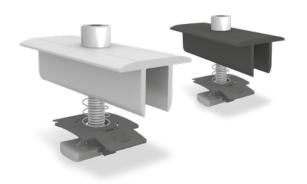
| ► Module clamps | 22 |
|---|----|
| Self-drilling wood screw, flange head | 24 |
| Self-tapping hexagon screw with sealing washer | 24 |
| ▶ T-bolt and flange nuts with serration | 24 |
| MK2 slot nuts with assembly clip | 24 |
| Self-drilling wood screw, flange head, underhead secondary thread | 25 |
| Self-drilling wood screw, countersunk head | 25 |
| Screw anchor, Multi Monti | 25 |
| CrossRail/SingleRail End Caps | 26 |
| SolidRail End Caps | 26 |
| Lightning protection clamp Multi Sets | 26 |
| ▶ TerraGrif equipotential bonding | 26 |
| ▶ Pad spacer | 27 |
| ▶ Height Compensator for aluminium roof hooks | 27 |
| L-Adapter SR Set | 27 |
| Cable clips | 27 |

Module clamps

Our module clamps can be easily mounted to any K2 rail. The MK2 slot nut automatically locks in place and can be moved in the rail by pressing lightly on the Allen bolt.

Module middle clamps XS

| Module frame height / description | Item number |
|---------------------------------------|-------------|
| 30-33 mm/M8×50, aluminium mill finish | 1005156 |
| 30-33 mm/M8×50, black anodised | 1005157 |
| 39-44 mm/M8×60, aluminium mill finish | 1004908 |
| 39-44 mm/M8×60, black anodised | 1005159 |
| 45-48 mm/M8×65, aluminium mill finish | 1005143 |
| 45-48 mm/M8×65, black anodised | 1005160 |
| 49-50 mm/M8×70, aluminium mill finish | 1004407 |
| 49-50 mm/M8×70, black anodised | 1005161 |





Universal module clamps OneMid and OneEnd

These module clamps are suitable for the most common module frame heights of 30-42 mm.

Compatible with SingleRail, CrossRail, SpeedRail,

MultiRail, SolidRail plus S- and D-Dome.

DescriptionItem numberOneMid, mid clamp, aluminium mill finish2003071OneMid, mid clamp, black anodised2003072

2002514

2002589

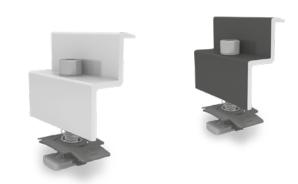
OneEnd, end clamp, aluminium mill finish

OneEnd, end clamp, black anodised



Module end clamps

| Module frame height / description | Item number |
|---------------------------------------|-------------|
| 30-31 mm/M8×30, aluminium mill finish | 1005345 |
| 30-31 mm/M8×30, black anodised | 1005347 |
| 42-44 mm/M8×35, aluminium mill finish | 1005291 |
| 42-44 mm/M8×35, black anodised | 1005295 |
| 45-47 mm/M8×40, aluminium mill finish | |
| 45-47 mm/M8×40, black anodised | 1005270 |
| 48 mm/M8×40, aluminium mill finish | 1005292 |
| 48 mm/M8×40, black anodised | 1005296 |
| 49-50 mm/M8×45, aluminium mill finish | 1005172 |
| 49-50 mm/M8×45, black anodised | 1005271 |



Module clamps for laminate modules

Module middle clamps for fastening laminate modules; approved for First Solar and Calyxo thinfilm modules; small module spacing. Material: Aluminium mill finish, EPDM

Please note: For additional anti-slip protection the K2 Slideguard is suitable for vertical mounting of laminate modules with a glass thickness of 6-9 mm. Material: Stainless steel 1.4016, EPDM

| Type / accessory | Item number |
|---------------------|-------------|
| Module middle clamp | 1003157 |
| Module end clamp | 1003158 |
| Slideguard | 1005828 |



Accessories

Self-drilling wood screw, flange head

Self-drilling wood screw with flange head (Topix) and star socket (Torx) from Heco. With European Technical Assessment (ETA) approval. Material: Stainless steel A2, matches TX 25/40 screwdrivers

| Туре | Item number |
|-------|-------------|
| 6×80 | 1005837 |
| 6×100 | 1004978 |
| 8×80 | 1000642 |
| 8×100 | 1000656 |
| 8×120 | 1001525 |
| 8×160 | 1002366 |
| 8×180 | 1002367 |



Self-tapping hexagon screw with sealing washer

Approved for steel sheets with a minimum thickness of 0.5 mm and aluminium sheets with a minimum thickness of 0.7 mm (MiniRail 0.5 mm).

Material: Stainless steel A2, EPDM

| Туре | Item number |
|--|--------------------|
| Drilling screw, SW 8, sealing washer Ø 16 mm 6 × 25 mm 6 × 36 mm | 1000212 1001622 |
| Thin sheet screw, virtually chip-free, SW 8, sealing washer Ø 16 mm 6×25 mm 6×38 mm | 1005207 1005193 |



T-bolt and flange nuts with serration

T-bolt for use in the lower chamber of K2 SolidRail

rails. Head form: 28/15;

head dimensions: $22.5 \times 10.5 \times 4$ mm Material: Stainless steel A2 1.4301

| Туре | Item number |
|----------|-----------------|
| M10×20 | 1000637 |
| M10×30 | 1000041 |
| M8×20/30 | 1000614/1000368 |



The flanged nut with serration (similar to ISO 4161) prevents it from loosening.

Material: Stainless steel A2

| Туре | Item number |
|------|-------------|
| M8 | 1000043 |
| M10 | 1000042 |



MK2 slot nuts with assembly clip

The MK2 slot nuts can be used at any point on the K2 rails. They automatically lock in place. Subsequently, they can easily be moved about in the rail by pressing them lightly.

Material: Stainless steel 1.4301 + PA or aluminium + PA; Item number: 1001643 (stainl. steel) 2000034 (aluminium)



Self-drilling wood screw, flange head, underhead secondary thread

Self-drilling wood screw (Heco) with flange head (Topix) and star socket (Torx). With building approval. For mounting with over-rafter insulation. Fixes the counterbattens in place using a second screw thread under screw head. Material: Stainless steel A2; matches TX 40 screwdrivers



| Туре | Item number |
|-------|-------------|
| 8×240 | 1003437 |
| 8×300 | 1003438 |
| 8×360 | 1003439 |

Self-drilling wood screw, countersunk head

Self-drilling wood screw with countersunk head (Heco). With building approval. Material: Stainless steel A2; matches TX 25 screwdrivers



| Туре | Item number |
|-------|-------------|
| 6×120 | 1004443 |
| 6×160 | 1001607 |

Screw anchor, Multi Monti

Multi Monti screw anchor (Heco) for fastening to concrete; min. borehole depth 40 mm. Steel surface: galvanised and blue passivated, head diameter 17 mm, nominal bore diameter 6 mm

Material: galvanised steel

Drive: TX 30



Accessories

CrossRail/SingleRail End Caps

End caps for K2 CrossRail and SingleRail. Material: Glass fibre reinforced polyamide

| Туре | Item number |
|-------------------------|-------------|
| CrossRail/SingleRail 36 | 1004767 |
| CrossRail 48 | 1004768 |





SolidRail End Caps

End caps for K2 SolidRail.

Material: Glass fibre reinforced polyamide

| Туре | Item number |
|--------|-------------|
| Light | 1004765 |
| Medium | 1004766 |
| Alpine | 1005053 |





Lightning protection clamp Multi Sets

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



| Image | Туре | Components | Item number |
|-------|---|--|-------------|
| | Lightning protection clamp Multi Alu 8 mm Set | Lightning protection clamp Multi (1003151), aluminium Slot nut (1001643), stainless steel, PA Washer (8,4×20×1.2 mm), stainless steel A2 Allen Bolt (M8×30), stainless steel A2 | 2002473 |
| | Lightning protection clamp 8mm Double Set | ➤ 2× lightning protection clamps Multi (1003151), Aluminium ➤ Hexagon flange nut with serration M8 (100043); stainless steel A2 ➤ 2× washers (8.4×20×1.2 mm), stainl. steel A2 ➤ Allen Bolt (M8×40), stainless steel A2 | 2002474 |

TerraGrif equipotential bonding

Equipotential bonding between module and rail. Material: Stainless steel

| Туре | Item number |
|-----------------------------------|-------------|
| TerraGrif K2MI Landscape/Portrait | 2002649 |
| TerraGrif K2PA 32 Landscape | 2000055 |
| TerraGrif U17 Portrait | 2000056 |
| TerraGrif K2SZ Landscape/Portrait | 2001881 |





Pad spacer

PA spacer shim to compensate for height differences when mounting K2 roof hooks with screw threads and K2 rails (except SolidRail).

Any number of spacer shims can be stacked to provide customised height.

Material: Glass fibre reinforced PA

Material thickness: 2 mm

Item no.: 1002361



Height Compensator for aluminium roof hooks

To compensate for batten differences so that the bracket height of each roof hook can be individually adjusted.

Material: Aluminium Material thickness: 4mm Item no.: 2002332



L-Adapter SR Set

Connection set to attach the SingleRail to SolidHooks.

Material: Aluminium + stainless steel

Item no.: 2002683



Cable clips

| Туре | Item number |
|--|-------------|
| Cable Manager Solar Cable Manager with connecting possibility for outdoor-installation L×W: 200×4.6 mm | 2002870 |
| Omega Cable Clip Suitable for CrossRail, SingleRail, SolidRail; 4 cables with Ø 6 mm Material: Polypropylene with UV stabiliser | 1005394 |













Mounting systems for solar technology



Other K2 systems



▶ Flat roof systems





Ground mounted systems



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