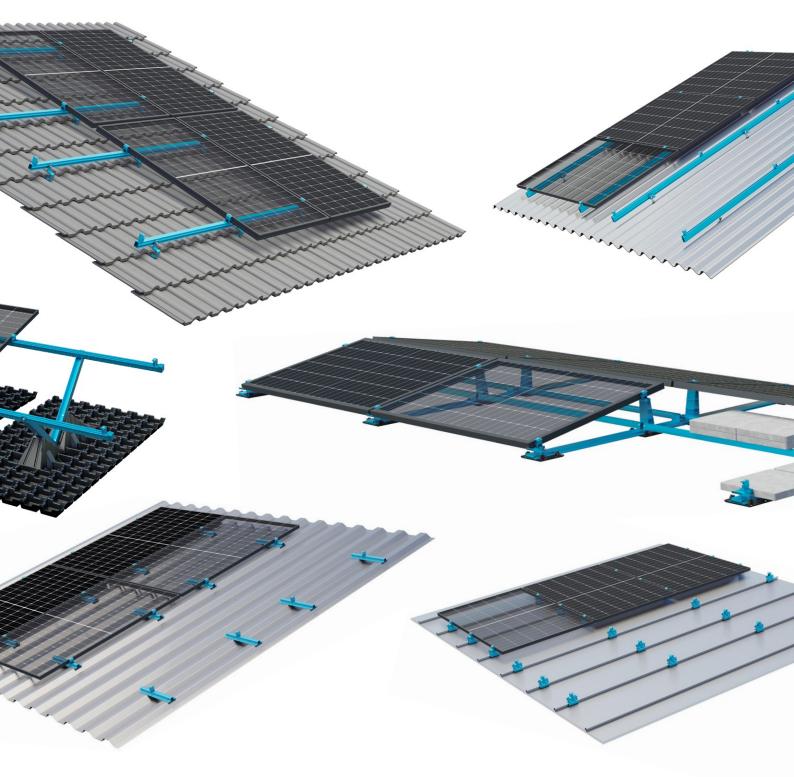


S:FLEX System Solutions



Flat roof, pitched roof, façade and ground mount structures for flexible and fast installations



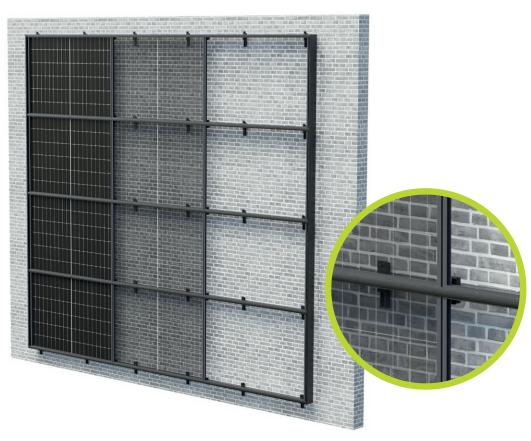


| Insertion system ELS | 04 |
|---|--|
| Roof Integration System In-roof system INmount | 05 |
| Pitched Roof Systems Hanging roof hook Clip Roof hooks Roof hooks Hybrid/XL Roof hook plain tile Standing seam clamps Standing seam clamps with rails High-bead rail HK 125/172 High-bead rail HK 125 XL 50/100 Bracket for sheet metal High-bead rail Lift Trapezoidal sheet metal rail Lift Trapezoidal sheet metal rail Vario Trapezoidal sheet metal rail Hanger bolts and solar fasteners Flat Direct for foil/bitumen roofs and sandwich elements Flat Direct with assembly posts Delta triangles with trapezoidal sheet metal rails | 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 |
| Flat Roof Systems LEICHTmount RAIL 2.1 S/EW with low ballast Green roof Delta Concrete | 24, 25 26 27 |
| Ground-Mount Systems Delta Concrete Carport Single / Double LEICHTmount G S / EW with ballast | 28 29 30, 31 |
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PV frame technology by professionals for practitioners — from pre-assembled components to fully customised solutions!









ELS rail







ELS eaves cladding







ELS cross adapter clamp

Application:

Façades, noise protection walls and massive balustrades or pitched roofs with roof tiles, sheet metal roofs

Fastening:

Façade: on-site

Pitched roof: compatible with all S:FLEX fastening solutions for tiled roofs and metal sheet roofing

Roof pitch:

10 to 75 degrees

Module type:

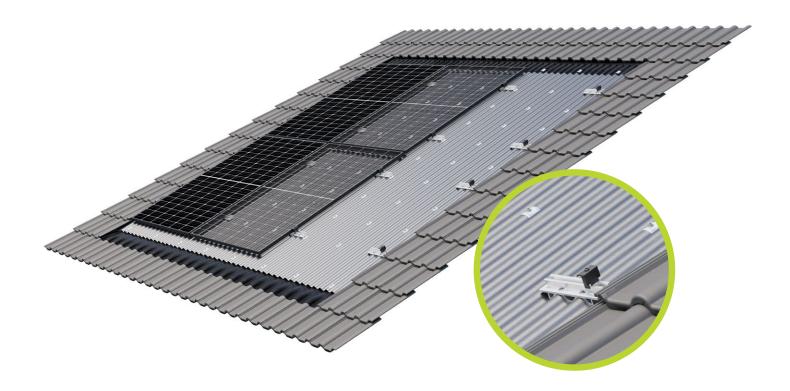
Framed modules, all common sizes

Module orientation:

Portrait/landscape

- Aesthetically pleasing modular surfaces with clean finishes
- All components for a special look available in black
- Suitable for module frame heights of 25 to 45 mm using just one type of insertion rail
- Newly developed module clamps that prevent rattling of the modules and thermally induced glass breakage/cracks
- Simple grounding, optimized service-friendliness











Mid clamp AK II Klick 30-50 A

Application:

Pitched roofs with tile/concrete tile roof covering

Roof construction:

Battening analogue to tile roofing

Roof pitch:

10° to 45 degrees (above on request)

Module type:

Framed and frameless modules, all common sizes

Module orientation:

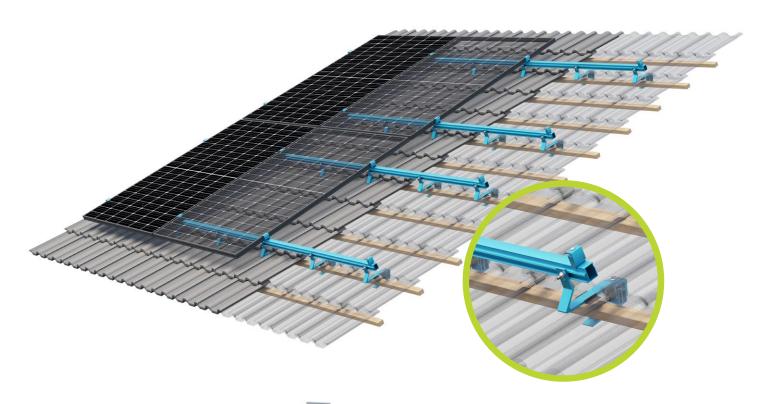
Portrait/landscape

Module layout:

Contiguous surfaces, covering of the entire roof surface and integration of skylights possible (prior inspection required)

- Simple and quick to install solution for visually appealing roof integration in old and new buildings
- Replaces conventional roof covering
- Connection to existing battens optimises force transmission and avoids thermal bridges











Mid clamp AK II Klick 30-50 A

Application:

Pitched roof with concrete pan tiles

Roof pitch:

Up to 75 degrees

Module type:

Framed and frameless modules

Module orientation:

Portrait/landscape

Layers of rails:

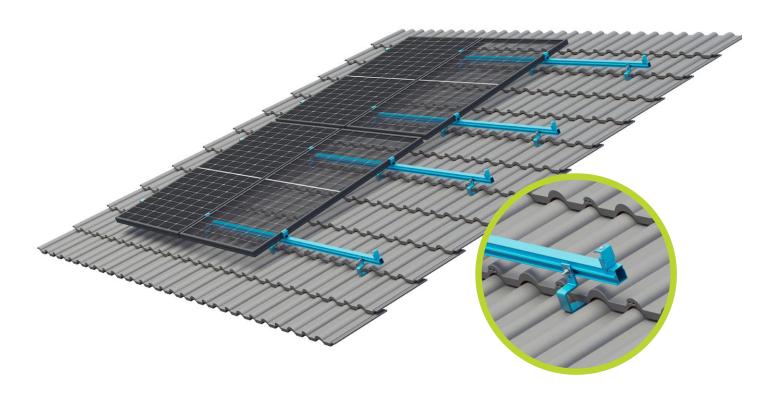
Single / double layer

Height adjustment:

Up to 21 mm

- Easy installation in just a few steps with fewer tools
- Does not require wood screws for attachment to the rafters
- Saves installation time and material costs
- An EPDM clip attached to the aluminium leg of the roof hook protects the surfaces of the roof tiles from damage caused by friction and pressure







Pitched roof with tiles

Fastening:

Roof hook on rafters (min. rafter width 36 mm)

Roof pitch:

Up to 75 degrees

Module type:

Framed and frameless modules

Module orientation:

Portrait/landscape

Layers of rails:

Single / double layer

- Every size of module array possible
- Height compensation: 40-58 mm in the batten zone /
 21 mm in the rail zone
- For all common rafter distances



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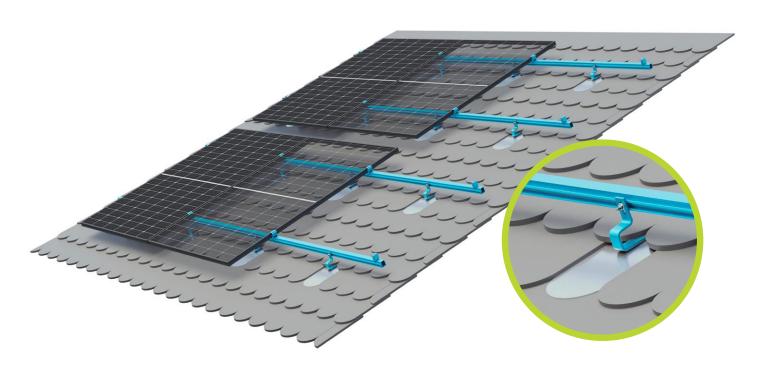


Roof hook on rafters (min. rafter width 45 mm)

- Suitable for particularly high loads
- Also available as XL version for large-format tiles
- Use of metal roof tiles provides additional protection
- Every size of module array possible
- Height compensation in the batten zone: 46-61 mm (DH Hybrid) / 56-72 mm (DH Hybrid XL)
- For all common rafter distances

Metal roof tile e.g. concrete type







Pitched roof with plain tiles

Fastening:

Roof hook on rafters (min. rafter width 48 mm) with matching metal roof tile

Roof pitch:

Up to 75 degrees

Module type:

Framed and frameless modules

Module orientation:

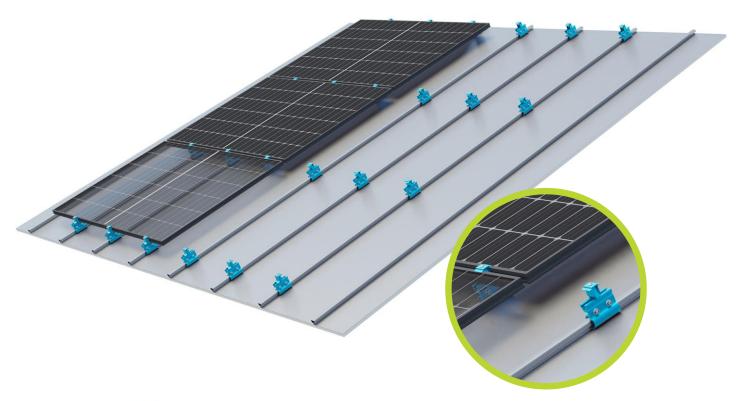
Portrait/landscape

Layers of rails:

Single/double layer

- Every size of module array possible
- For all common rafter distances







Standing seam clamp 2.1





Standing seam clamp CL

End clamp AK II Klick 30-50 A





Mid clamp AK II Klick 30-50 A

Application:

Standing seam clamp 2.1: Seamed roofing, e.g. standing seam, round seam, angle seam

Standing seam clamp DCO and CL: Industrial metal roof systems, e.g. Domitec/GBS, Klip-Lok 700, RibRoof 465

Fastening:

Non-penetrative

Module type:

Framed modules

Module orientation:

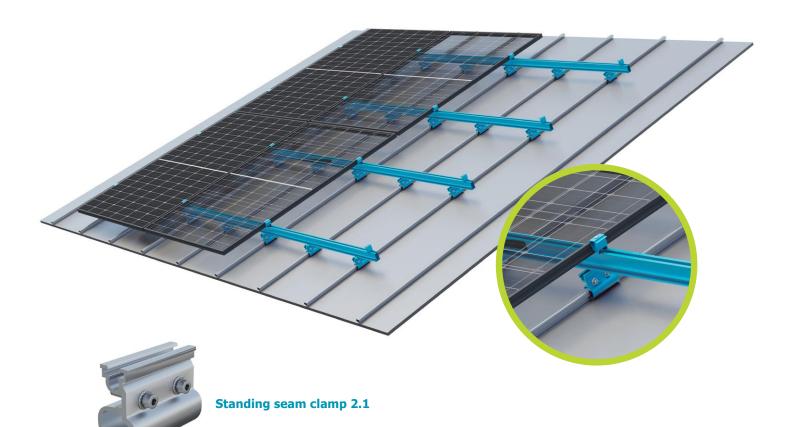
Landscape/portrait (for clamping on the short side)

Layers of rails:

Single layer

- Modules mounted directly to the standing seam clamps
- No rails necessary
- Low material/logistics/installation costs
- Quick mounting
- No roof penetration























Mounting rail ST-AK 13/60

Standing seam clamp 2.1: Seamed roofing, e.g. standing seam, round seam, angle seam

Standing seam clamp DCO and CL: Industrial metal roof systems, e.g. Domitec/GBS, Klip-Lok 700, RibRoof 465

Fastening:

Non-penetrative

Module type:

Framed modules

Module orientation:

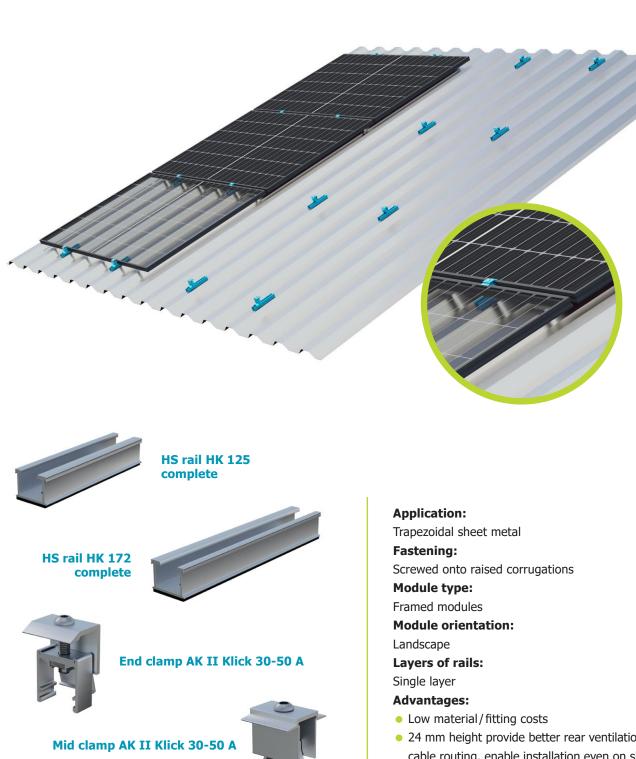
Landscape/portrait (for clamping on the short side)

Layers of rails:

Double layer

- Low material/installation costs
- Length of rails 3150 mm to 6200 mm
- High rigidity rails suitable for heavier loads
- No roof penetration



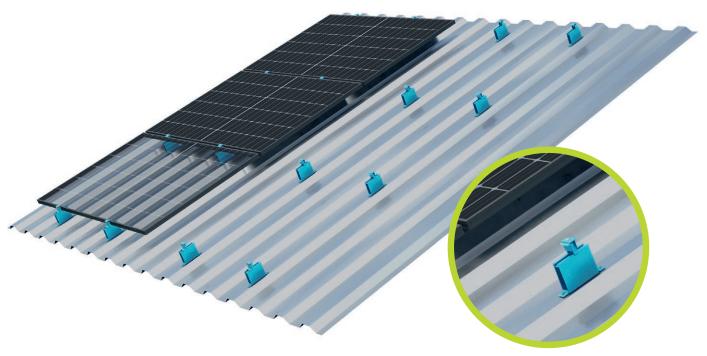


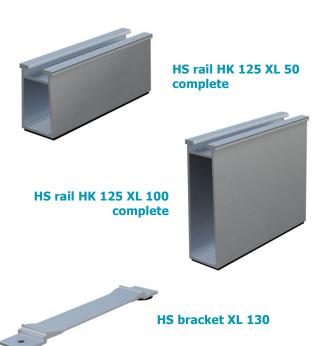
- 24 mm height provide better rear ventilation, simplify cable routing, enable installation even on slightly corrugated roof coverings and offer more space for power optimizers or micro-inverters
- Rail lengths of 125 mm, 172 mm, 295 mm and 3300 mm
- High-bead rails HS HK I=125mm and I=172mm are supplied pre-fabricated with EPDM sealing tape, the 125 mm rail comes with 2x2 holes (5/6 mm), the 172 mm version has 2x4 pre-drilled holes (5/6 mm)

Sheet metal srew 4,5x25

Sheet metal srew 6x25









Trapezoidal sheet metal

Fastening:

Screwed or riveted onto raised corrugations

Module type:

Framed modules

Module orientation:

Landscape

Layers of rails:

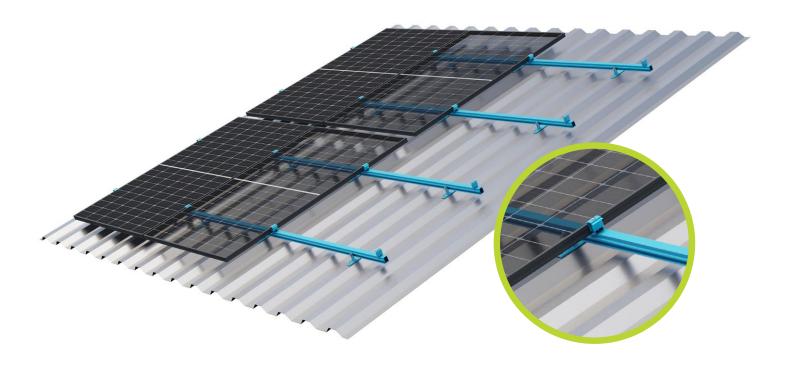
Single layer

- Low material/fitting costs
- Rail heights of 50 or 100 mm guarantee a sufficient distance from the roof covering for optimal rear ventilation and use at high temperatures
- Floating mounting with brackets reduces the number of expansion joints and enables optimal use of the roof area
- High-bead rails covered with protective fleece
- Brackets come pre-drilled and with EPDM sealing tape covered bottom side

System for trapezoidal sheet and corrugated sheet roofs

Mounting on sheet metal using brackets

















Application:

Trapezoidal and corrugated sheet metal

Fastening:

Screwed or riveted onto raised corrugations

Module type:

Framed and frameless modules

Module orientation:

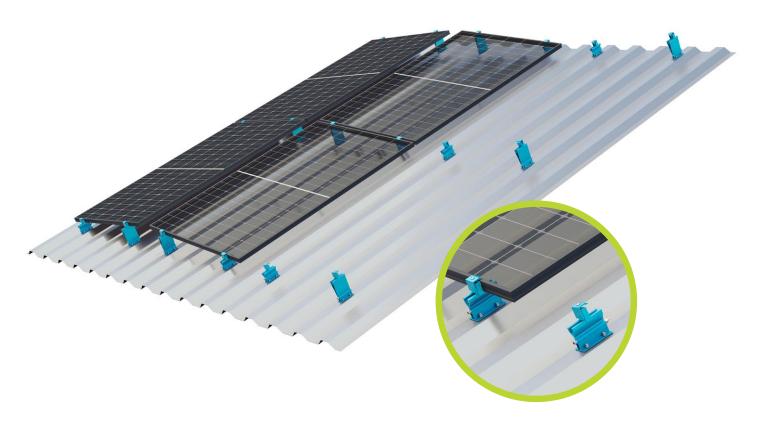
Portrait/landscape

Layers of rails:

Single/double layer

- Low fitting costs
- Every size of module array possible
- Height adjustable via elongated hole in the sheet metal bracket
- Sheet metal brackets are supplied prefabricated with 2 holes (5 mm) and EPDM sealing tape covered bottom side







Front rail with small adapter







End clamp AK II Klick 30-50 A



Trapezoidal sheet metal

Fastening:

Screwed with sheet metal screws to the raised seams

Options:

South and East-West orientation

Module type:

Framed and frameless modules, all common sizes

Module orientation:

Portrait/landscape

Module pitch Lift:

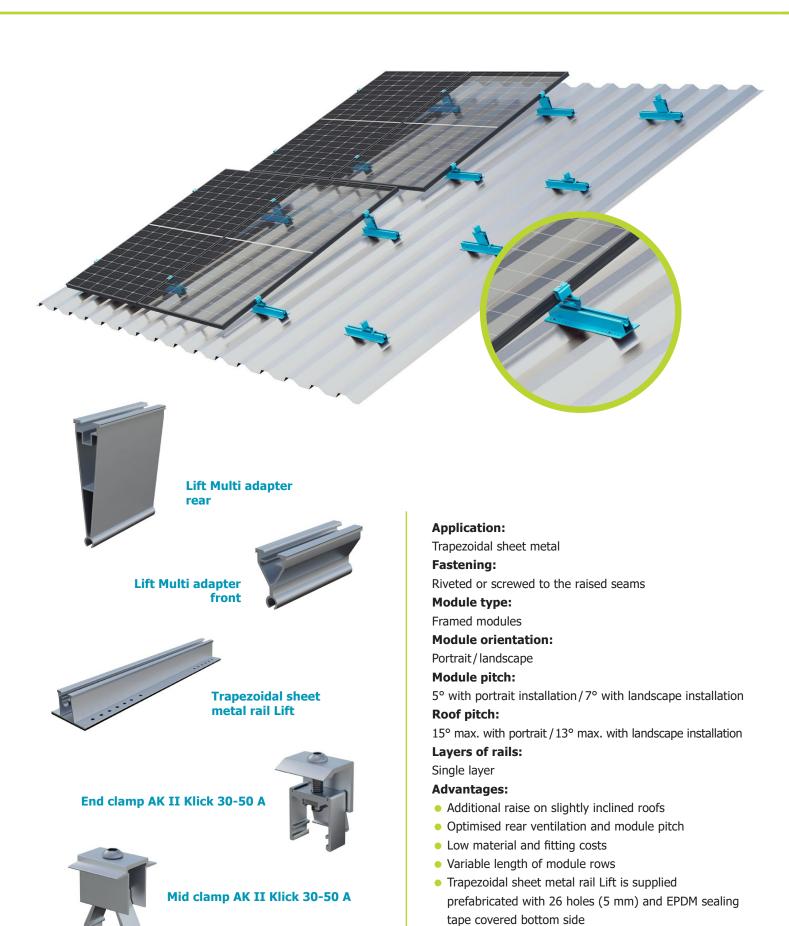
5° with portrait installation/7° with landscape installation

Roof pitch:

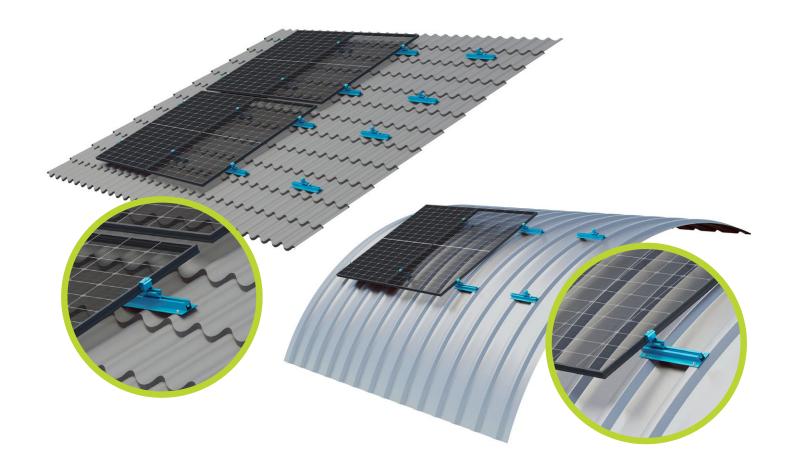
20° max.

- Low material and fitting costs
- Optimised irradiation angles for higher yields
- Better self-cleaning
- Maximum use of space through optional East-West orientation
- Prefabricated with holes and EPDM sealing tape













Corrugated roof tile and curved trapezoidal sheet metal (barrel roofs with a radius larger than 3.5 m)

Fastening:

Riveted or screwed with sheet metal screws to the raised seams

Module type:

Framed modules

Module orientation:

Portrait/landscape

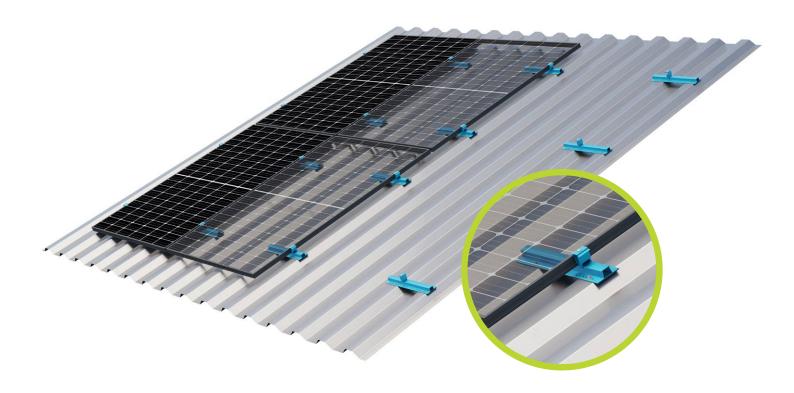
Layers of rails:

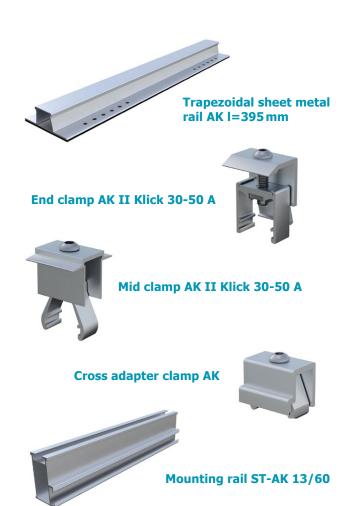
Single layer

- Tension-free installation on curved roofs
- Tension-free installation on corrugated roof tiles
- Perfectly adapted to the roof shape
- Trapezoidal sheet metal rail Vario is supplied prefabricated with 26 holes (5 mm) and EPDM sealing tape covered bottom side

System for trapezoidal sheet and corrugated sheet roofs







Application:

Trapezoidal and corrugated sheet metal

Fastening:

Screwed or riveted onto raised corrugations

Module type:

Framed and frameless modules

Module orientation:

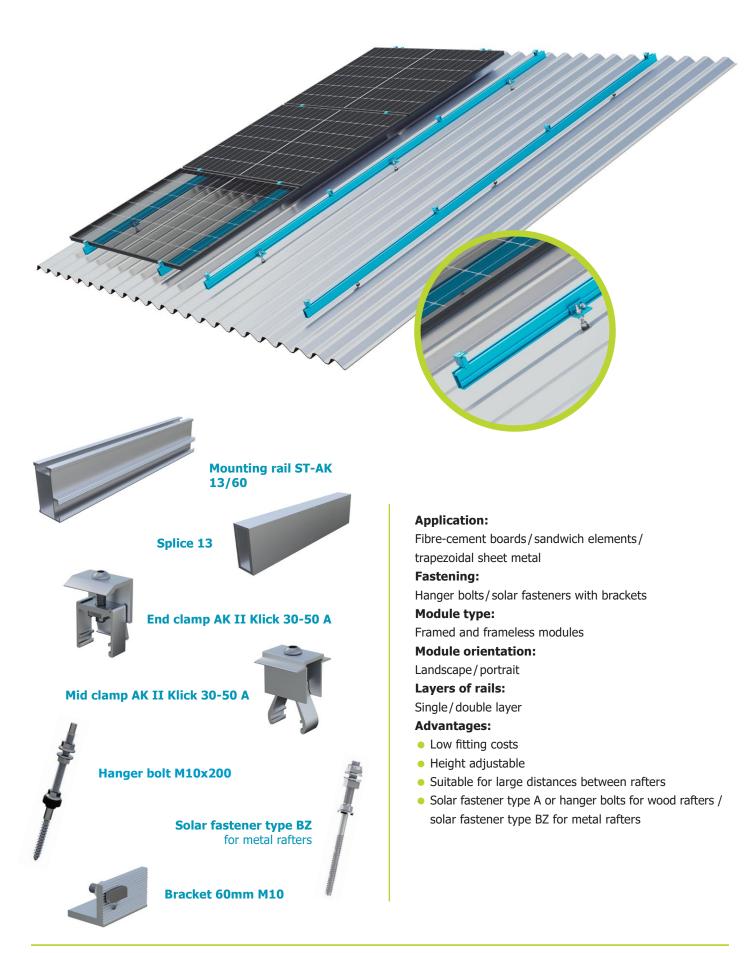
Landscape/portrait

Layers of rails:

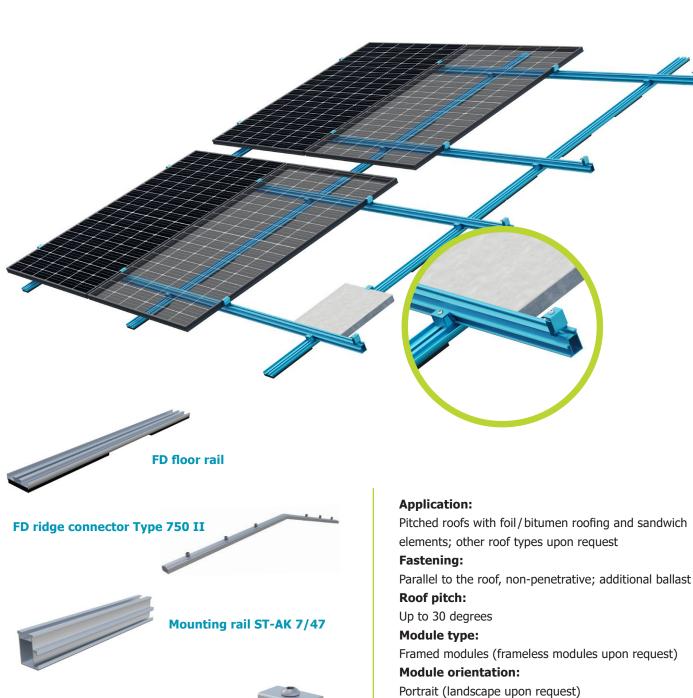
Single/double layer

- Low material/fitting costs
- Every size of module array possible
- Rail lengths of 395 mm, 3150 mm and 6200 mm
- High rigidity rails suitable for heavier loads
- Rail segments 395 mm (Trapezoidal sheet metal AK complete / I=395 mm) are supplied prefabricated with 24 holes (5 mm) and EPDM sealing tape covered bottom side









Cross adapter clamp AK





End clamp AK II Klick 30-50 A

Mid clamp AK II Klick 30-50 A

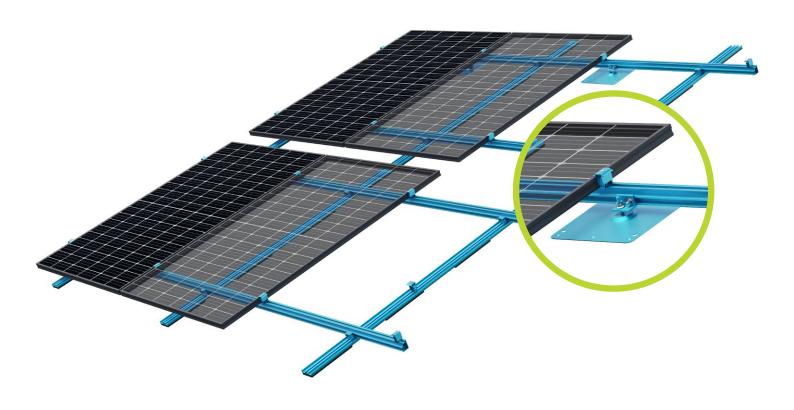


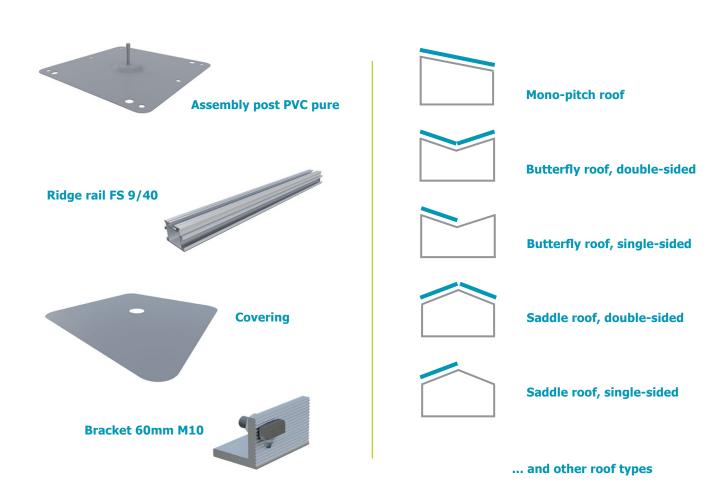
Layers of rails:

Double layer

- No roof penetration
- Minimised additional ballast thanks to aerodynamic optimisation
- Perfect for east-west orientation like saddle roof, double-sided
- Has lightning-current-carrying capacity
- Optional roof connection points extend potential uses



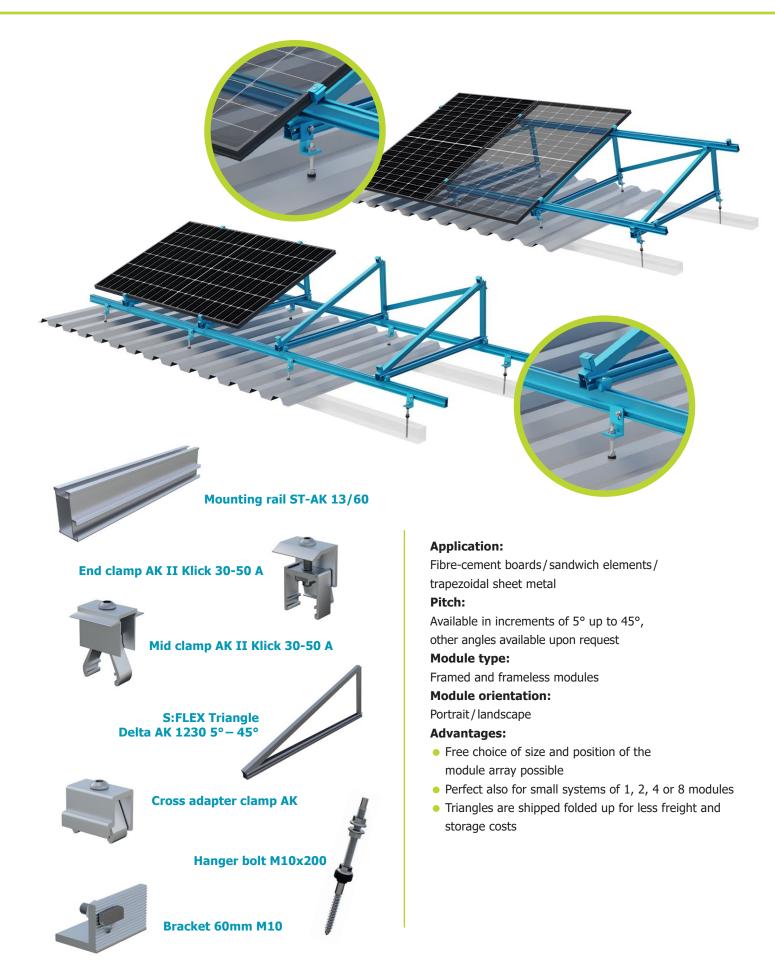




System for fibre-cement, trapezoidal sheet and sandwich roofs

Mounting with hanger bolts and Delta triangle









Trapezoidal sheet metal rail I=395

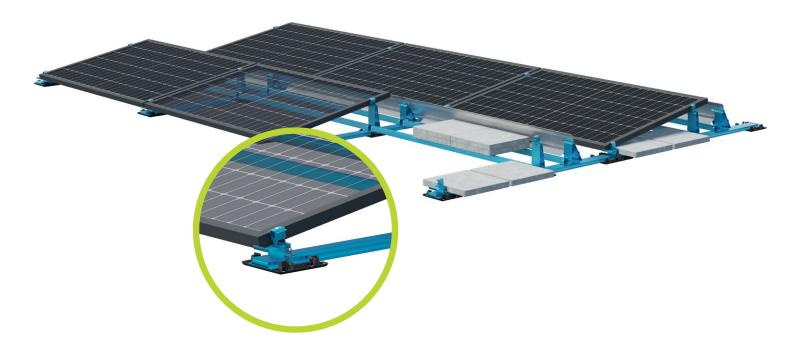
Trapezoidal and corrugated sheet metal

Available in increments of 5° up to 45°, other angles available upon request

Framed and frameless modules

- Free choice of size and position of the module array possible
- Perfect also for small systems of 1, 2, 4 or 8 modules
- Triangles are shipped folded up for less freight and







Mid clamp AK II Klick 30-50 A

Application:

Flat roof with foil, bitumen, gravel, green roof, concrete

Module orientation:

South

Inclination:

10°/15°

Module type:

Franed modules

Building height:

25 m max. (up to 50 m upon request)

Roof inclination:

5° max. (up to 10° upon request)

Edge clearance:

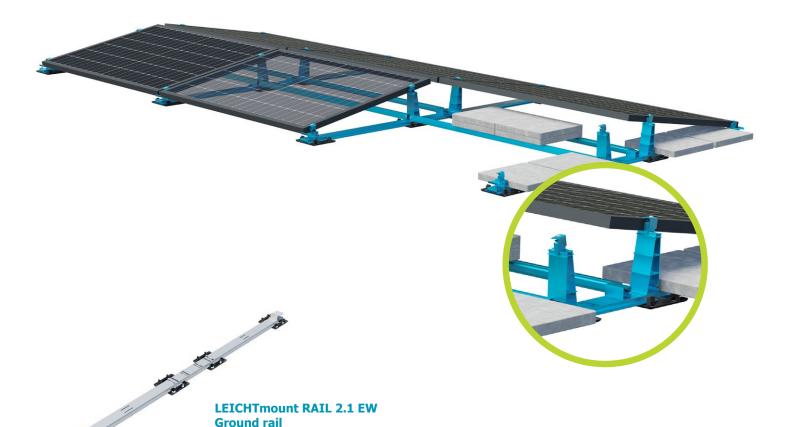
Fitting in the roof edge and corner regions possible

System size:

20 x 20 m module area max.

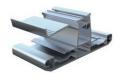
- Installation without roof penetration possible
- Low area load / minimised ballast thanks to aerodynamic design
- Optimised load distribution through ground rails/foot plates
- Suitable for all common module sizes
- Has lightning-current-carrying capacity





LEICHTmount RAIL 2.1 Foot plate





LEICHTmount RAIL 2.1 Base







End clamp AK II Klick 30-50 A

Mid clamp AK II Klick 30-50 A



Application:

Flat roof with foil, bitumen, gravel, green roof, concrete

Module orientation:

East-West

Inclination:

10°/15°

Module type:

Franed modules

Building height:

25 m max. (up to 50 m upon request)

Roof inclination:

5° max. (up to 10° upon request)

Edge clearance:

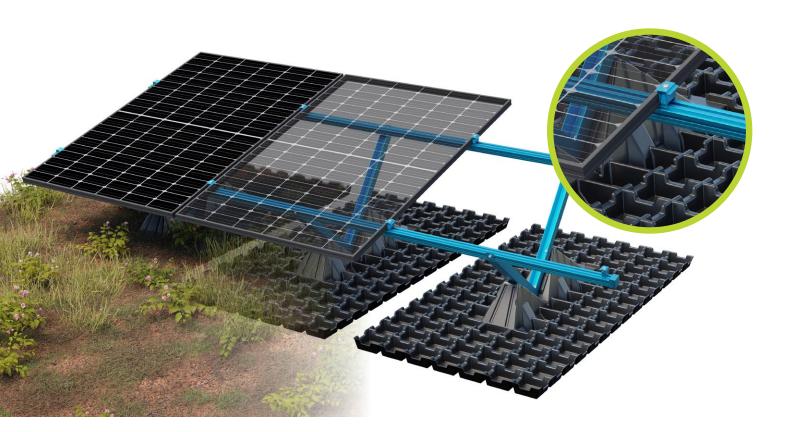
Fitting in the roof edge and corner regions possible

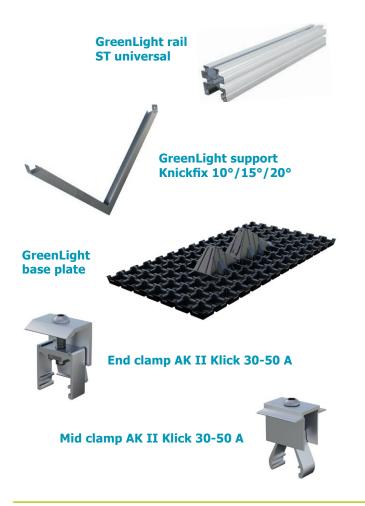
System size:

20 x 20 m module area max.

- Installation without roof penetration possible
- Low area load / minimised ballast thanks to aerodynamic design
- Optimised load distribution through ground rails/foot plates
- Suitable for all common module sizes
- Has lightning-current-carrying capacity







Green roof (extensive)

Fastening:

Without roof penetration, ballasted

Options:

South and East-West orientation

Module pitch:

10°, 15°, 20°

Module type:

Framed modules

Module orientation:

Landscape/portrait

Roof pitch:

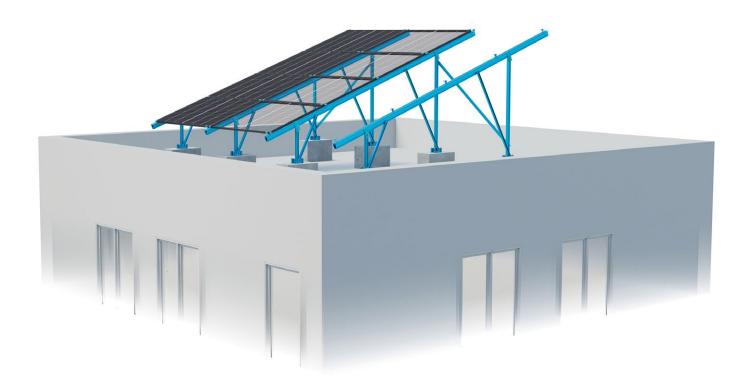
5° max.

System size:

2 modules min.

- No roof penetration
- High water storage volume
- Extremely fast installation
- Suitable for all common module sizes
- Integrated fall protection (optional)







Flat roof

Fastening:

Concrete, screw fastening

Options:

South and East-West orientation

Module type:

Framed, frameless (additional horizontal rail), bifacial

Module orientation:

Landscape/portrait

Module pitch:

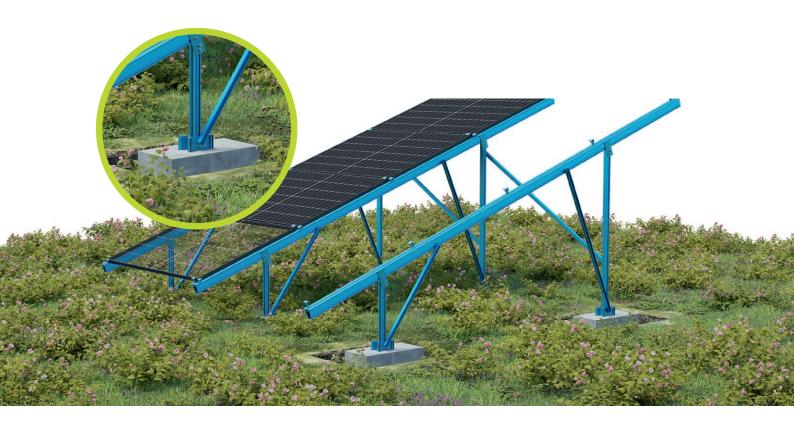
up to 20°

Maximum module field size:

12x4 modules (landscape) / 12x3 modules (portrait)

- Designed to be used on flat concrete roofs
- Excellent rear ventilation ensuring high yields, making it particularly suitable for hot regions
- Light-weight, material-saving design
- Offers the possibility to build over obstacles
- No drilling of aluminium on site







Ground mount system

Fastening:

Concrete, screw fastening

Options:

South and East-West orientation

Module type:

Framed, frameless (additional horizontal rail), bifacial

Module orientation:

Landscape/portrait

Module pitch:

up to 20°

Pitch:

N-S: any; E-W: module area 1°/ terrain 10°

Maximum module field size:

12x4 modules (landscape) / 12x3 modules (portrait)

- Designed for ground-mount on concrete foundations
- Light-weight, material-saving design
- Offers the possibility to build over obstacles
- No drilling of aluminium on site

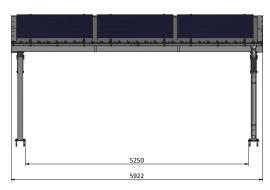




Dimensions – side view



Carport Single dimensions – front view



Carport Double dimensions – front view

Parking lots:

1 or 2 parking spaces, expendable up to 12 freely combinable single/double segments for a maximum of 24 parking spaces

Foundation:

Anchored in the ground/concrete

Height:

Headroom: 2.09 m / Max. height: 2.95 m

Roof area / Module field size:

Single: 22 m²/10 modules; Double: 35 m²/15 modules

Roof pitch:

6°

Module orientation:

Landscape/portrait

Module size:

All common sizes

Materials:

Carport: hot-dip galvanized steel, powder coated

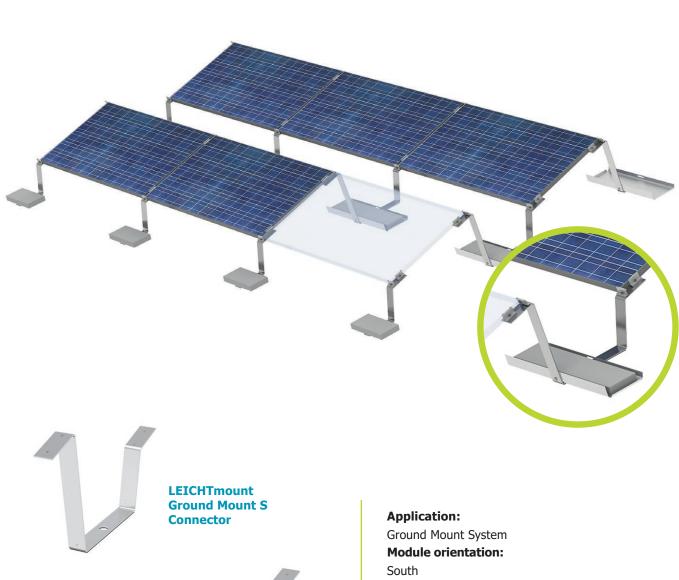
Sheet metal: continuous, 0.75 mm thick

Solar fastening: aluminium

Colour:

Matt black (RAL 9005), anthracite trapezoidal sheet





Module tilt:

15°/20°

Module type:

Framed modules

Max. ground slope:

20°

System size:

2 x 3 modules min.

Advantages:

- No pile driving or major excavation work needed
- Suitable for a wide range of surfaces such as earth, gravel, concrete
- Reduced transport and storage costs thanks to low volume packaging



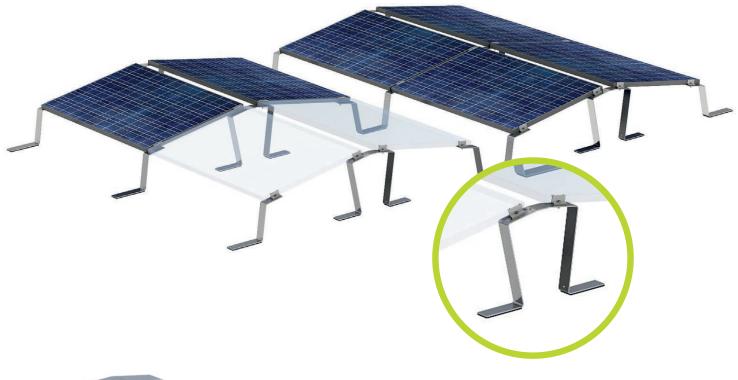
LEICHTmount G S

End Part

LEICHTmount G S

Front Part







LEICHTmount G EW Front Part





Mid clamp 80mm with grounding pins

Application:

Ground Mount System

Module orientation:

East-West

Module tilt:

10°

Module type:

Framed modules

Max. ground slope:

วก๑

System size:

2 x 4 modules min.

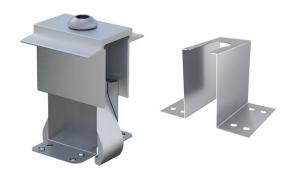
- No pile driving or major excavation work needed
- Suitable for a wide range of surfaces such as earth, gravel, concrete
- Reduced transport and storage costs thanks to low volume packaging











Grounding clamp DEHN Uni

- To integrate the mounting system into the building's equipotential bonding system and to connect it to earth
- Stainless steel to prevent contact corrosion
- Connection by means of hammerhead bolt and locking nut (positive and frictional locking)
- Diameter of clamping area for aluminium round wire: 8-10 mm / Connection cross-section of equipotential bonding conductor: 4-50 mm²

OBO equipotential bonding clamp

- For equipotential bonding of the mounting rails by means of aluminium round wire
- Connection by means of hammerhead bolt and locking nut (positive and frictional locking)
- Diameter of clamping area for aluminium round wire: 8-10 mm

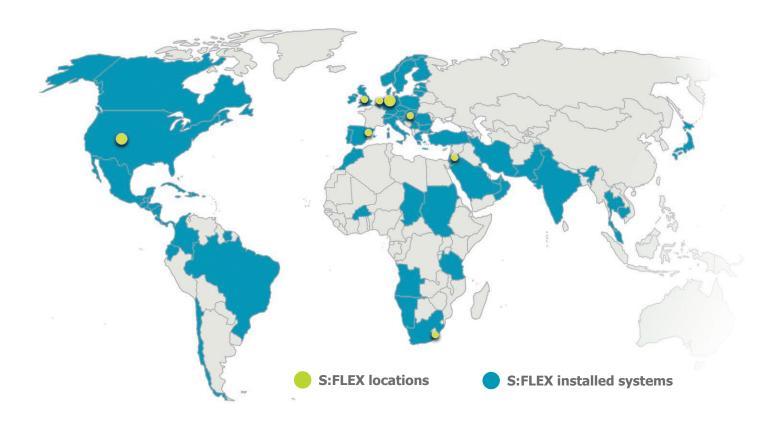
Splice 5/7/13 Grounding

 Equipotential bonding between the rails by means of a corresponding connector with stainless steel earthing blades

MH AK Klick 30-50 Earthing plate / Earthing plate 4x2

- For integration of the module frames into the equipotential bonding system
- Equipotential bonding between the module frame and substructure
- Breaks through the anodised layer
- Stainless steel
- For pre-assembly and installation on site





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S:FLEX Pitched Roof Systems





S:FLEX Standing Seam Clamps





S:FLEX HS Rails HK 125/172





S:FLEX HS Rail HK 125 XL





S:FLEX Bracket for Sheet Metal Installation





S:FLEX Trapezoidal Sheet Metal Rail LIFT/VARIO





S:FLEX Trapezoidal Sheet Metal Rail







S:FLEX Hanger Bolt Systems





S:FLEX Flat Direct





S:FLEX LEICHTmount RAIL 2.1 S





S:FLEX LEICHTmount RAIL 2.1 EW





S:FLEX GreenLight





S:FLEX Delta Concrete





S:FLEX Carport Single/Double



