ALUMERO

SOLAR

EN

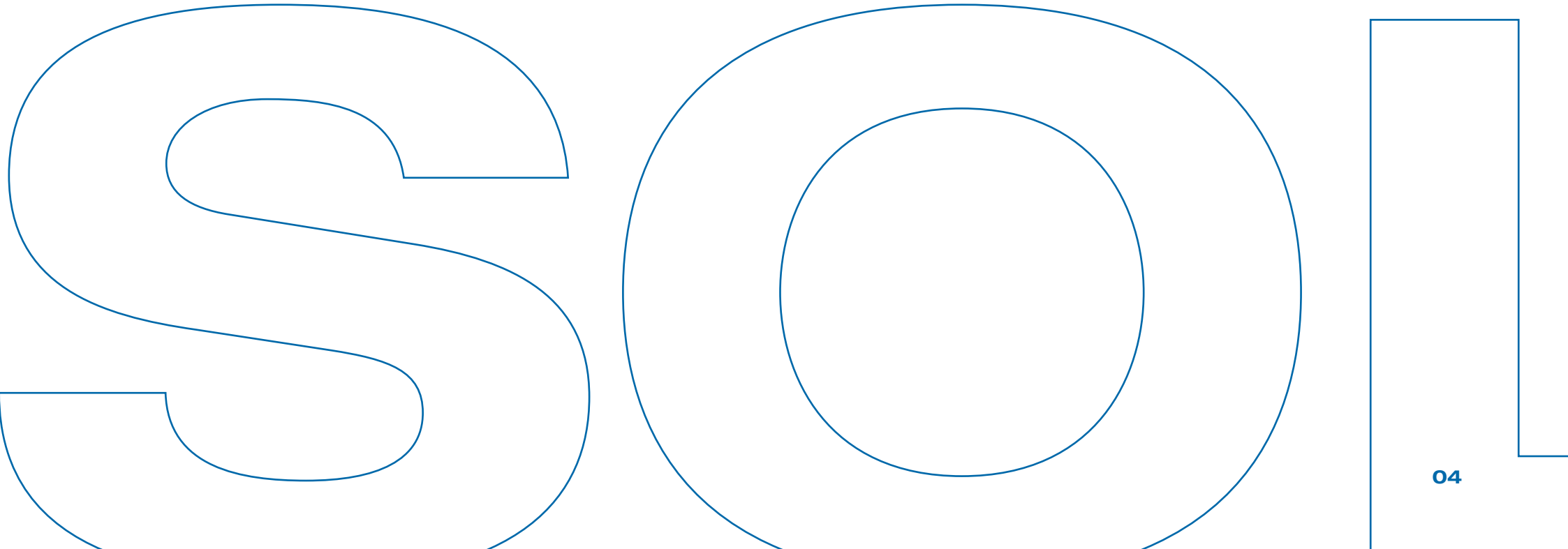
SOLAR SYSTEMS & TECHNOLOGIES

Renewable energy sources are not subject to availability restrictions and are key pillars of sustainable energy policy. ALUMERO has committed itself to such responsible policies and is working tirelessly and with absolute dedication on the development of new ideas and technologies.

ALUMERO is specialised in the production of formwork technology and mounting frames for photovoltaic and solar power systems, outdoor ground-mounted solutions, and ones for flat and for pitched roofs. Individual laminate and modular clamping technology and bespoke, non-standard solutions for customers are also well within our scope of expertise.

makes us  **.**

CONTENT




DAIKIN

PITCHED ROOF AS 2.1

The innovative pitched roof mounting system

ALUMERO offers an affordable, simply and quickly assembled system for pitched roofs. AS 2.1 includes statically-optimised profiles and pre-assembled components. ALUMERO supports customers laying out the mounting system with ALUMERO.PRO.TOOL. The software creates project reports, part lists and testable structural statics for every project.

- light and strong aluminium alloy
- quick and easy mounting with pre-assembled components
- extreme hold and stability due to innovative module clamps
- statically tested components
- recyclable and non-corrosive

MADE IN EUROPE

APPROVED PRODUCT

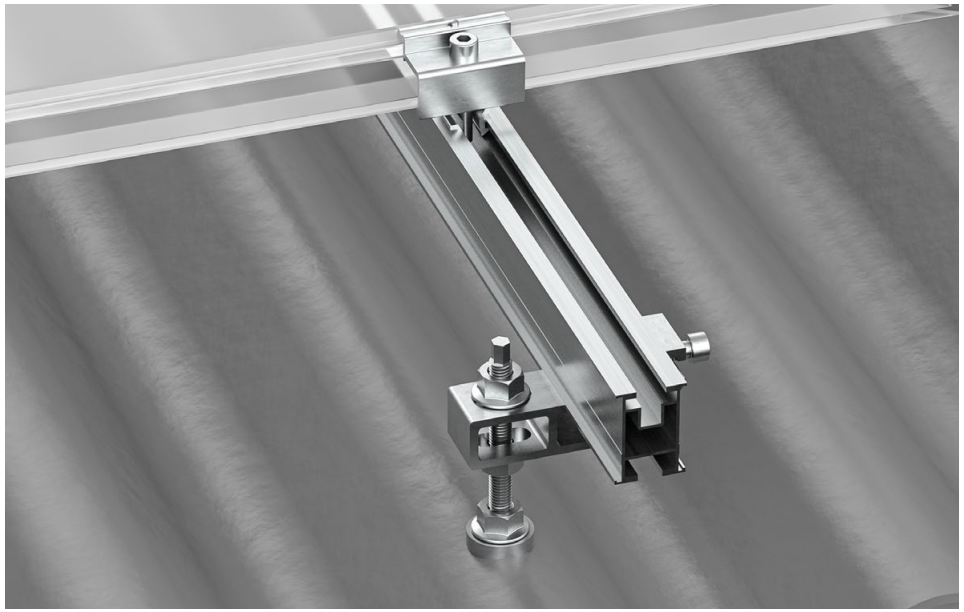
Certificate No. MCS IKO201/1 + MCS IKO201/2 Pitched Roof Installation Kit

TILED ROOF

+ a variety of roof hooks for tiled, slated and beaver tail roofs
+ adjustable aluminium roof hooks with pre-assembled components
+ Truss profiles can be mounted as single-direction rails or as a lattice construction
+ Module can be mounted horizontally or vertically
+ lightweight and stress-resistant
+ stronger version with harder aluminium alloy
+ designed for roof gradients of 10° to 60°
+ beavertail and brick replacement boards available as additional accessories

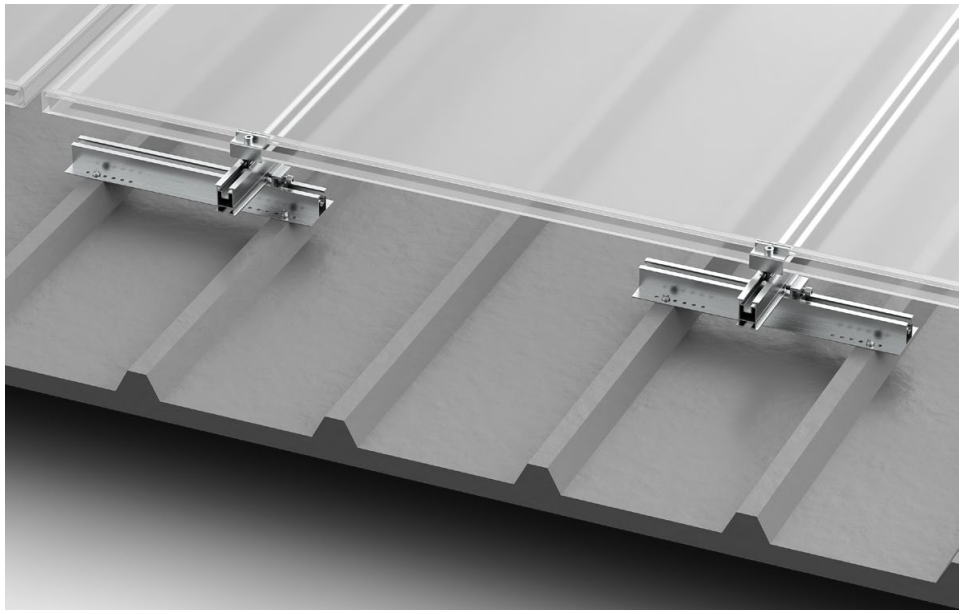
HANGER BOLTS AND SOLAR FASTENERS

+ simple truss profile mounting due to pre-mounted rapid installation adapter
+ includes pre-installed EPDM rubber
+ Truss profiles can be mounted as single-direction rails or as a lattice construction
+ Module can be mounted horizontally or vertically
+ designed for roof gradients of 10° to 60°



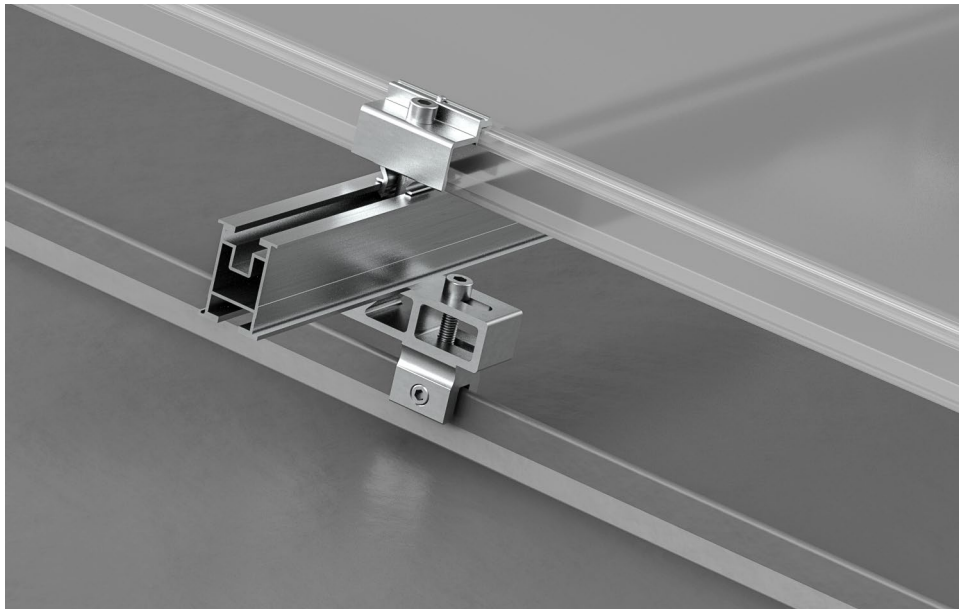
SANDWICH ROOF

+ load transferred straight to the purlins via drilled-in screws with support threads
+ variety of truss profile dimensions allow for greater gaps along purlins
+ additional sealing between roof cladding and trapezoidal bridge ‚Plus‘ via pre-installed EPDM rubber
+ horizontal module mounting and clamping along the long side of the module
+ designed for roof gradients of 5° to 35°



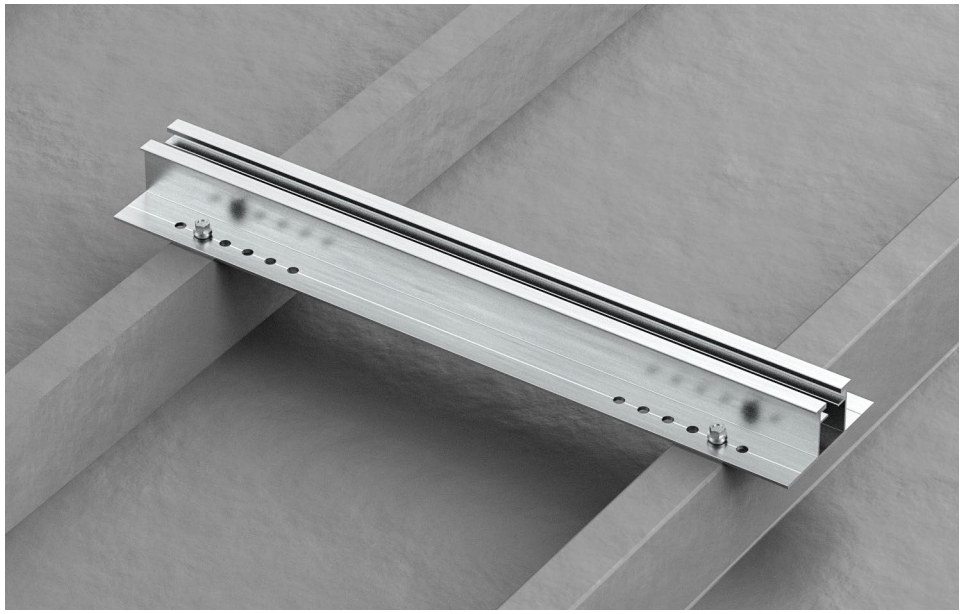
STANDING SEAM SHEET METAL ROOF

+ Sheet metal folding clamps for a wide variety of folds
+ simple truss profile mounting due to pre-mounted rapid installation adapter
+ non-penetrative attachment via fixing screw
+ tested and statically approved sheet metal fold clamps
+ Module can be mounted vertically or horizontally
+ designed for roof gradients of 7° to 60°



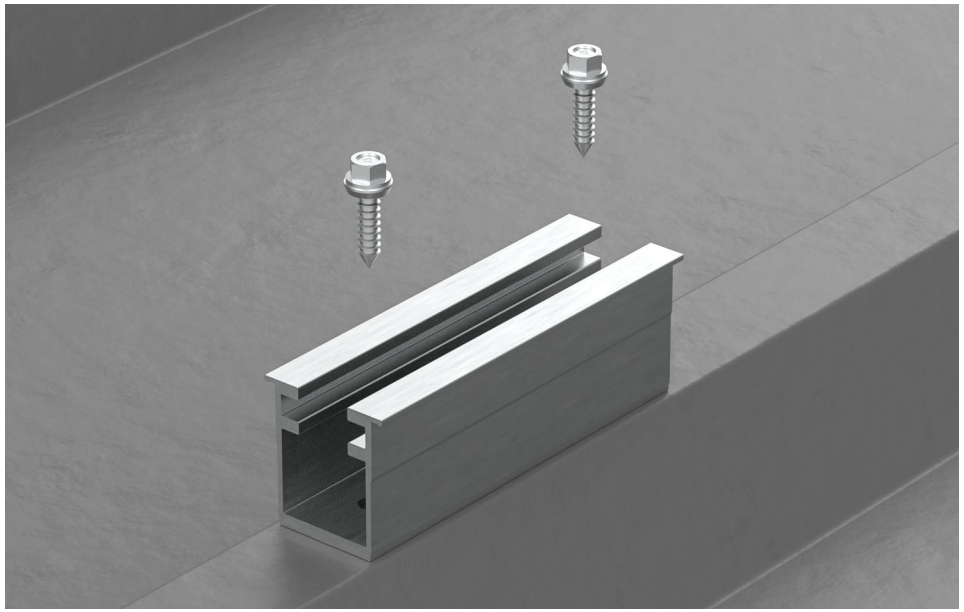
TRAPEZOIDAL BRIDGE

+ simple mounting on aluminium and steel trapezoidal sheet roofing
+ non-shearing attachment via special drilling screws
+ pre-installed EPDM rubber provides additional sealing between roofing and trapezoidal bridge
+ Module can be mounted vertically or horizontally
+ designed for roof gradients of 5° to 35°



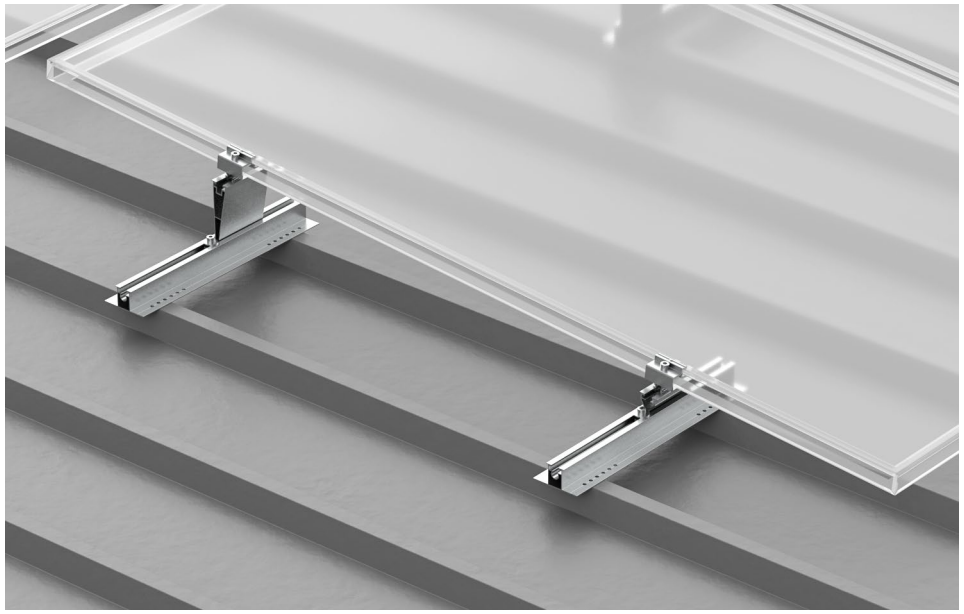
SHORT RAIL

+ simple mounting on aluminium and steel trapezoidal sheet roofing
+ non-shearing attachment via special drilling screws
+ pre-installed EPDM rubber provides additional sealing between roofing and short rail
+ Module mounted horizontally
+ Clamping on the long side of the module
+ designed for roof gradients of 5° to 25°



TRAPEZOIDAL BRIDGE ‚PLUS‘ (extra tilt)

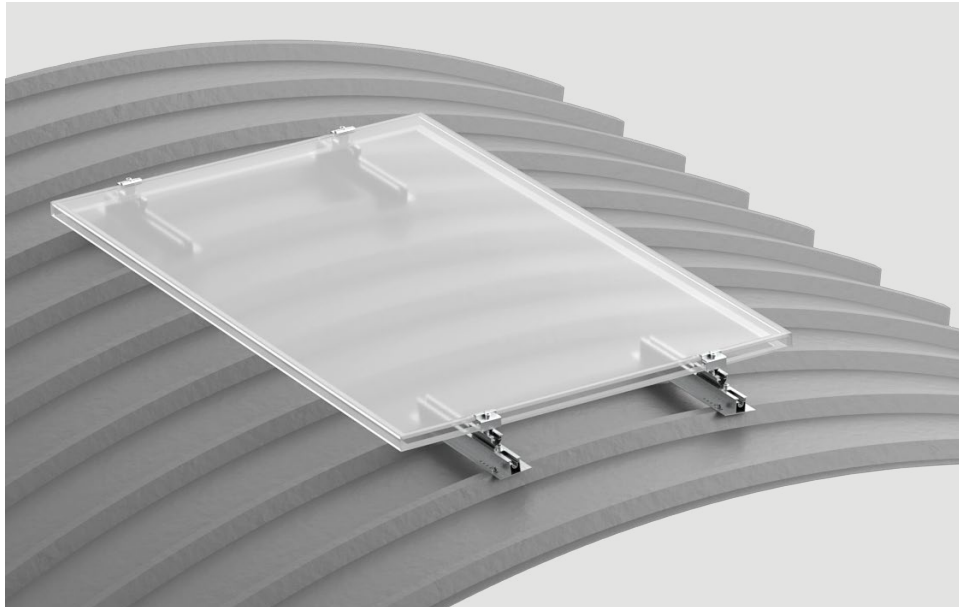
+ non-shearing attachment via special drilling screws
+ additional adapters allow modules to be raised another 5°- 7°
+ pre-installed EPDM rubber provides additional sealing between roofing and trapezoidal bridge
+ Module can be mounted vertically or horizontally
+ maximum roof gradient including additional module tilt of 20°



TRAPEZOIDAL BRIDGE ‚PLUS‘ (extra tilt)

for curved roofs

+ additional adapters compensate the curvature of barrel roofs
+ Modules can be mounted to roofs with a radius of > 3.5m parallel
+ non-shearing attachment via special drilling screws
+ pre-installed EPDM rubber provides additional sealing between roofing and trapezoidal bridge
+ Module can be mounted vertically or horizontally



FLAT ROOF AC 2.1

Aerodynamic frame for flat roofs

On top of the simplicity and reliability our customers expect, this latest version is mounted with a larger gap to the roofing to allow optimum water drainage, compensate roof unevenness and simplify cable management. Additional ballast trays are compatible with the entire range of systems. Where high winds are an issue, extra ballast can be added, and the burden on all points of contact to the roof surface is distrubuted evenly. The row distancing remains optimised for an 18° shade angle, and now there‘s another version optimised for 25° insolation. Furthermore, structure-protective polyester fleece mats with a special adhesive provide additional grip and guarantee material compatibility on a whole range of roof foils.

- quickly and simply installed - 1 kWp in 5 minutes with 2 people
- larger gap to roof surface
- new ballast tray compatible with all systems
- the row distancing optimised for 18° and 25° shade angles
- structure-protective polyester fleece mats with special adhesion
- few individual components
- Corrosion resistant
- optimal drainage
- Wind tunnel tested and statically inspected
- inspected according to ‚Fire Test‘ UL1703 and the IEC 61215 (TÜV-Rheinland) stress stest

Technical data

	2.1S	2.1+
Applications:	Foil bitumen roofs, concrete roofs (can be adapted for gravel and greened roofs on request)	
Module dimensions:	950 - 1150 mm x 1500 - 2250 (width x length)	
Module tilt:	10° & 15° (south-facing)	10° (east/west-facing)
Row distancing:	18° shade angle 527 mm 25° shade angle 380 mm	18° shade angle 464 mm 25° shade angle 297 mm
Distance to roof surface:	Approx. 60 mm	
Distance to roof edge:	1200mm, F & G areas of the roof can be covered according to EN 1991-1-4 (minimum gap to edge 600mm)	
Building height:	25m (adaptions on request)	
Roof gradient:	Up to 5° possible without a roof anchor depending on roof conditions, over 5° with roof anchor only	
Maximum field size:	12 x 10 rows, 120 modules	12 x 8 double modules, 192 modules
Minimum field size:	2 rows each with 2 modules	2 rows each with 2 double modules
Wind load:	Suction load up to 2.4 kN/m²	
Snow load:	Standard up to 2.4 kN/m², alpine version up to 4.4 kN/m²	
Structural statics:	Software-supported data based on wind tunnel tests	
Roof conditions:	The building owner must establish the static load capacity of the roof construction, the building‘s load-bearing structures, and the weight tolerance of the heat insulation.	
Substructure material:	Aluminium EN AW 6060; sheets made of steel with aluminium & zinc coating; small parts made of stainless steel A2-70; polyester fleece structure-protective mat	
Accessories:	Alpine terrain supports, ballast trays, earthing clamps for electrical bonding, connector for attachment to the roof	
Transport volume:	Approx. 40 kW per pallet; 700 kW per HGV	

2.1S

2.1+

GROUND-MOUNTED GMS MAX

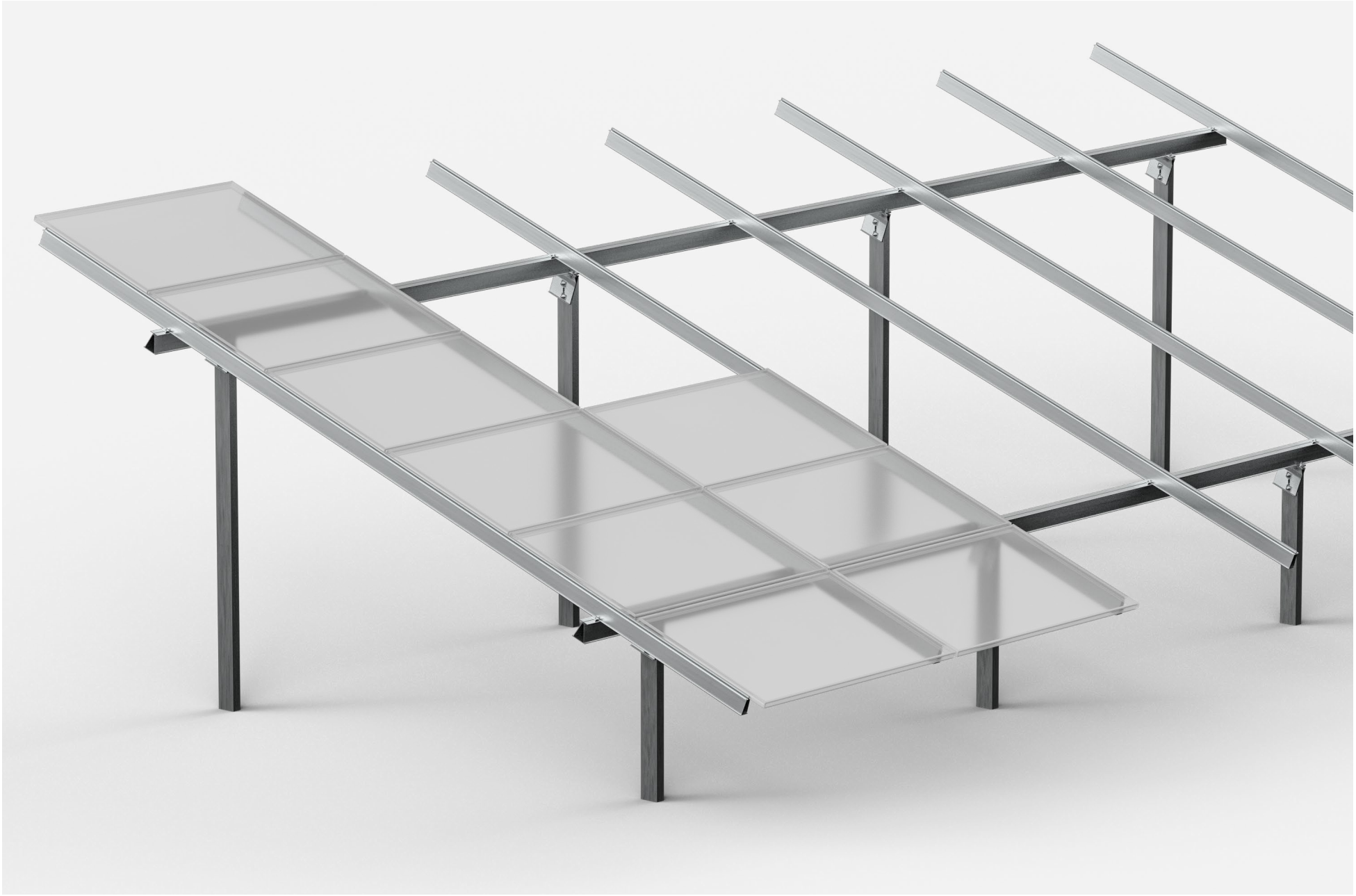
Ground-mounted systems

As the price of solar modules falls, land prices, mounting systems and labour costs account for a larger percentage of overall solar panel system expenditure. This has resulted in increasingly dense building, and to minimise the loss of light caused by shade the modules are commonly set up in horizontal rows. Larger constructions with 4 to 6 module rows reduce the frame costs per module. The GMS MAX mounting system was developed with this in mind. Horizontal and vertical frames along two rows of posts guarantee the necessary flexibility and exploitation of space. The system complies with the highest industrial standards, has been tested in a wind tunnel, and is calculated and statically optimised for each project with our ALUMERO.PRO.TOOL software.

- tested in a wind tunnel
- Module clamps including earthing pins
- standardised components
- rapid delivery times
- suitable for all ground conditions
- includes static layout
- long-term protection from corrosion
- maximum use of space
- complete recyclability
- high resale value

Technical data

Installation method:	Piledriven posts, concrete foundations, drilled holes	
Terrain gradient:	North- / south-facing - gradient up to +/- 45° east- / west-facing - gradient up to +/- 8°	
Material:	Galvanised steel posts (EN ISO 1461) Longitudinal frame, module frame: Aluminium 6063 T66 Fixing elements: Stainless steel 1.4301	
Module frame height:	30 – 50 mm	
Module mounting direction:	Horizontal	Vertical
Module layout:	4 – 6 modules stacked	3 modules stacked
Module type:	60, 72, 120 and 144 cells, framed and frameless	
Tilt:	Flexible angle, 10° - 20°	
Max. wind tolerance/snow load:	Wind tolerance up to 250 Km/h Snow load up to 2.4 KN	
Module clamps:	Available with and without earthing pins	



GROUND-MOUNTED 2.2

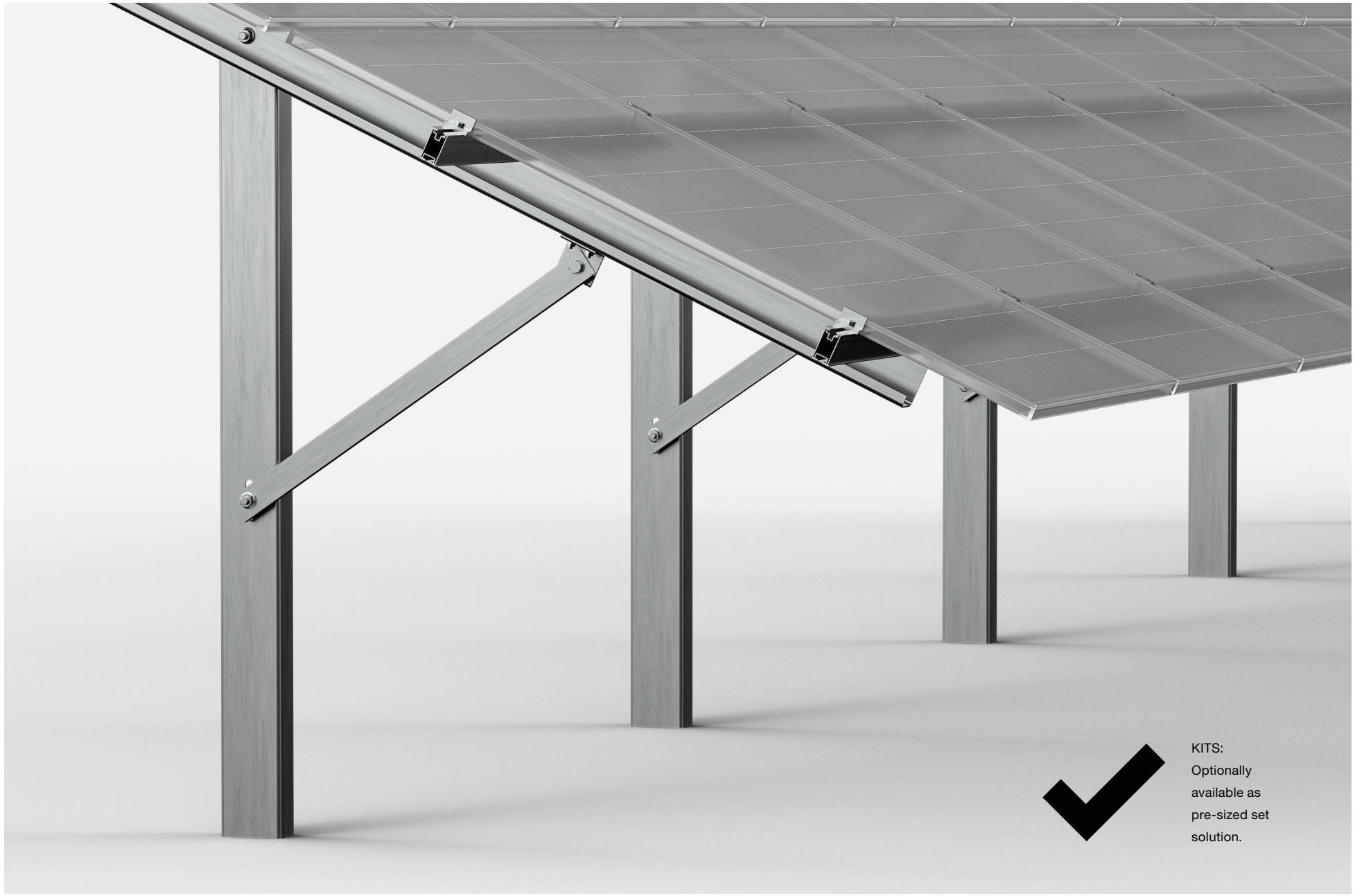
The classic outdoor ground-mounted system

The ALUMERO ground-mounted 2.2 system features a clever combination of steel components and innovative aluminium structural parts for an otimum response to your needs. As is the case across the entire ALUMERO portfolio, ease-of-installation for the ground-mounted system is of utmost importance. Pre-assembled components make extremely speedy mounting a reality. Sophisticated standard components allow a variety of table layouts to be configured straight from the factory. In addition, resetting positions is simple too, so it‘s easy to adapt the position of each panel table to suit the topology of the area - for an optimally set-up PV park, even in tough terrain.

- several options for making optimum adjustments to compensate for unevenness in terrain
- effective use of materials
- quick and easy installation
- limited number of individual components
- project-related planning and statics
- no sealing of soil surfaces
- superior-quality components guarantee excellent longevity
- Corrosion resistant
- ground, soil and fields can be easily cultivated
- complete recyclability
- high resale value

Technical data

Panel table layout:	2 modules upright - one above the other
Tilt angle:	10° - 25°
Panel table lengths:	Up to 25 m
Piledriving depth:	Standard 1,750 mm or according to specifications
Height of lower table edge:	Variable
Bridge gaps:	Calculated according to project specifics and dependant on local wind and snow conditions
Superstructure:	Calculated according to project specifics and dependant on local wind and snow conditions
Material for module bridge:	Hot-dip galvanised steel
Material for superstructure:	EN AW 6063 / T66
Material for attaching elements:	A2-70
Accessories:	Earthing clamps for linking up to electrical bonding network, components for cable conduits, components for internal electrical bonding, earthing wire, clamps for all types of module


KITS:
Optionally
available as
pre-sized set
solution.

GROUND-MOUNTED AC G

The new ground-mounted solution

Our smallest ground-mounted system is the AC G. This simple set-up is available as a G15, 20° in a south-facing version, and G+ in the east/west-facing version with a gap to the ground of 400mm. The east/west version can accommodate 30% more modules in the same space than the south-facing version. The fastest ground-mounted system on the market allows up to 1 MW in to be loaded into an HGV, so it‘s an innovative ground-mounted system that doesn‘t just save money, installation is extremely quick and transportation costs are low. It‘s firmly attached with a ground anchor with the option of optimised ballast distribution.

+ no ground ramming required
+ minimal penetration depth of ground anchors
+ fastest of all outdoor ground installations
+ patented system
+ project-related planning and statics
+ TÜV-certified according to UL 2703
+ tested in a wind tunnel
+ Module clamps with earthing pins
+ very low transport costs
+ 1 MW per HGW or 40-ft container

Technical data

	G	G+
Area of application:	Grassland and farm land, sand, gravel, angular rock, concrete and tarmac	
Module dimensions:	950 - 1150 mm x 1500 - 2250 mm (width x length)	
Module gradient:	15° & 20°	10°
Row distancing:	18° shade angle 797 mm, 25° shade angle 555 mm	18° shade angle 609 mm
Distance to roof surface:	Approx. 400 mm	
Ground tilt:	Up to 10° without anchor, over 10° with anchor only	
Max. field size:	G 15: 12 x 20 rows, 240 modules	12 x 16 double modules, 384 modules
Min. field size:	3 rows of 2 modules or 2 rows of 3 modules	
Wind load:	Suction load up to 2.4 kN/m²	
Snow load:	Pressure load G15: Up to 1.6 kN/m²	Pressure load G+: Up to 2.4 kN/m²
Stability information:	Software-supported based on wind tunnel tests	
Ground conditions:	The owner is responsible for establishing how much weight and pressure the ground can withstand.	
Material for the substructure:	Aluminium EN AW 6060; steel sheets with aluminium-zinc coating. Small parts made of rust-proof steel A2-70. Ground anchors from cast aluminium.	
Accessories:	Ballast trays, earthing clamps for electrical bonding	
Transport volume:	Approx. 1 MW per HGV or 40 ft container	

G

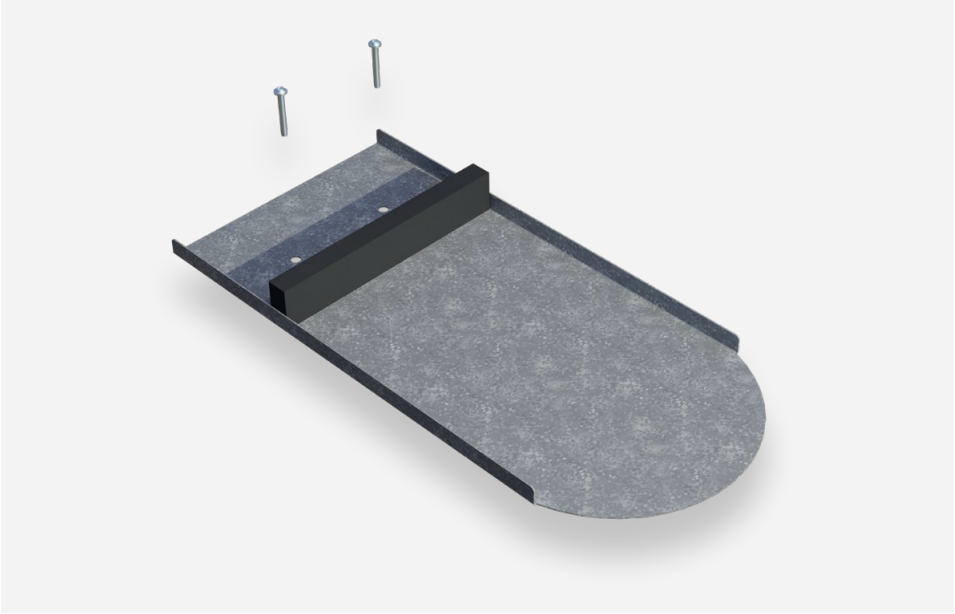
We recommend using a growth-inhibiting fleece when installing on grassy surfaces.

G+

BEAVERTAIL AND TILE REPLACEMENT BOARD AS 2.1

Maximum sealing.

Our Beavertail and Tile Replacement Boards are used for corresponding roof tiling in order to mount roof hooks or to create the space required for them without affecting the roof's sealing capabilities. Our Beavertail Replacement Board is made of galvanised steel and therefore very durable and long-lasting. In addition to two sizes, our Tile Replacement Board also comes in red and black to blend in stylishly with the look of existing roofs, and both ensure that your PV roof - with compatibility to the most common tile types - remains watertight. For many years!



Beavertail Replacement Board AS 2.1

+ For use on beavertail roofs
+ Lightweight and robust
+ Sealing by compressor tape
+ Quick and easy mounting
+ Corrosion and wear resistant due to high-quality galvanized surface

Tile Replacement Board AS 2.1

+ Flexibly adaptable to almost any type of roof tile
+ Quick and easy mounting
+ Effortless mounting without the need to cut roof tiles
+ Cost-efficient, elegant design
+ No slump formation with waterlogging
+ High stability due to sturdy kick plate
+ Sealing by compressor tape

LAMINATE CLAMPS

Superior-quality extruded wrought aluminium alloy clamps

Our unique laminate clamps CLICK and SECURITAS are superior-quality extruded wrought aluminium alloy clamps with a built-in contact seal. The elastic seal made of UV-resistant elastomers is responsible for optimised and suitably powerful clamping. Our clamps can be mounted quickly and easily, function excellently and offer other benefits. Their versatility allows them to be adapted to the specific requirements of each customer, while offering top quality and short delivery times.

ALUMERO Laminate Clamps: Click

+ convenient clip connector
+ delivered in a fully assembled state
+ E6/C35 anodised coating on request
+ short delivery times

ALUMERO Laminate Clamps: Securitas

+ single piece for easy mounting
+ excellent functional security
+ guarantees an excellent fit

ALUMERO SMART PV-CARPORT

Full power for your car park.

Parking space does not have to remain wasted space. With the ALUMERO Smart PV-Carport, you benefit from areas that would otherwise only incur costs.

The construction is easy to assemble and does not require an expensive concrete foundation or large-scale earthworks. The screw foundations only require a drill hole, which is why the Smart PV carport can also be easily retrofitted to existing parking areas.

Any and all further informations can be found on **smart-pvcarport.com.**

- Low-effort assembly
- Amortization
- Self-sufficiency coverage
- Long lifetime
- Integrated advertising space
- Internal cable routing and drainage
- Modular construction
- Versatility


ALUMERO

ALUMERO PV-FENCE SYSTEM

Modularity starts with the first post.

Easy to assemble and beautiful to look at thanks to internal cable routing, bifacial double glass modules and timeless design. In this way, the garden can also become a part of your own personal energy revolution. And thanks to the sustainable metagreen aluminium construction for many, many years. Regular aluminium fence panels of a suitable design can be installed in shaded areas.

The innovative fence-system with fully integrated photovoltaics

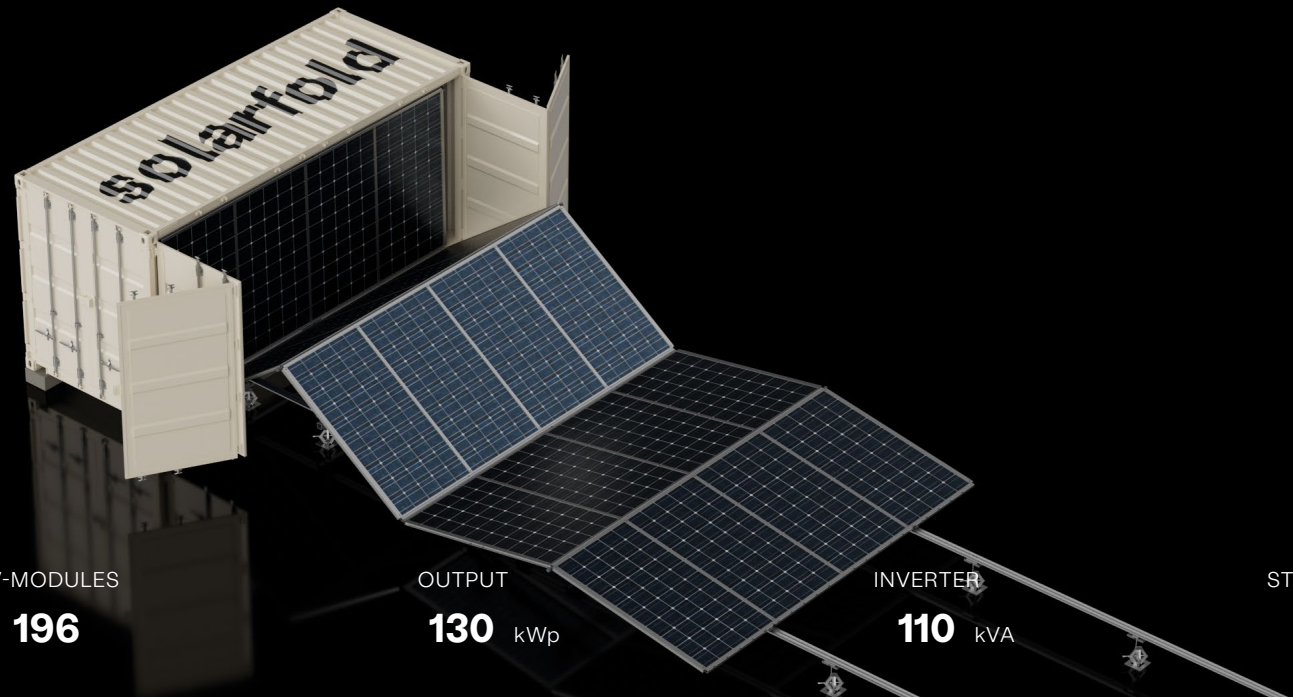
Based on a tried and tested aluminium design garden fence from our own production, we took the next logical step and expanded the system with integrated photovoltaics. In order to save costs, PV panels are only installed in areas that are not very shaded, where they also generate electricity and where it pays best.

+ Undisturbed optics thanks to internal cable routing
+ Light and strong thanks to aluminium
+ Quick and easy installation thanks to pre-assembled components
+ Statically tested components
+ Corrosion-free and recyclable
+ Large selection of colors and fillings

solarfold

MOBILE
SOLAR
CONTAINER

www.solarfold.eu



PV-MODULES
196

OUTPUT
130 kWp

INVERTER
110 kVA

STORAGE FROM
160 kWh

ALUMERO.PRO.TOOL

Plan solar projects quickly and precisely

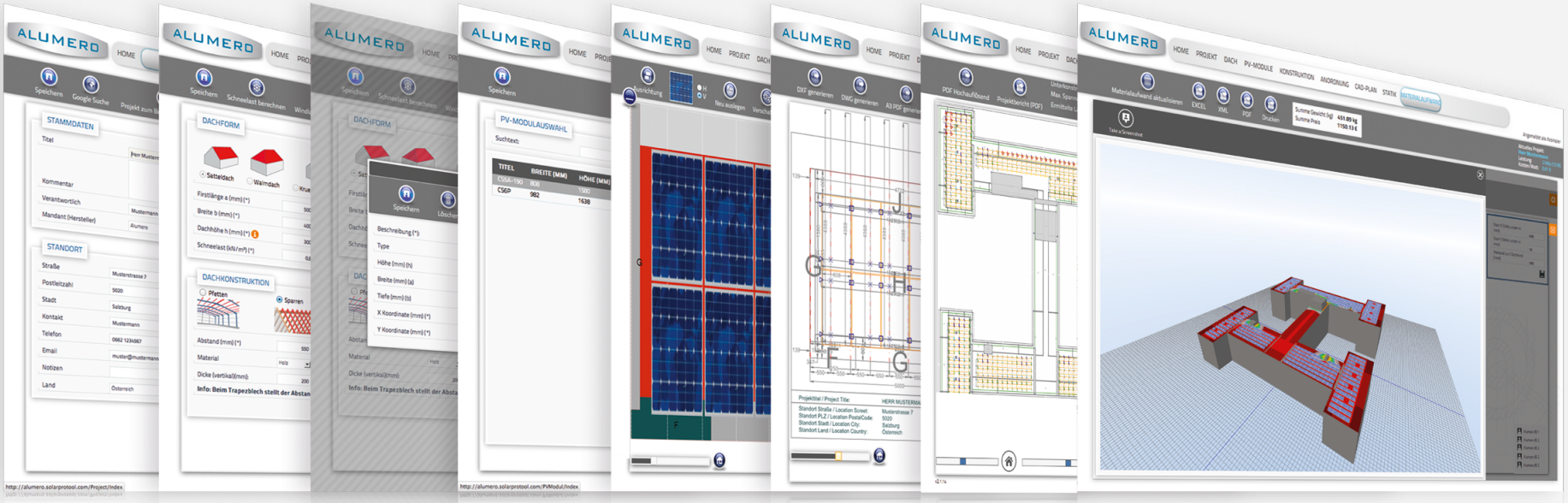
ALUMERO.PRO.TOOL is software that facilitates simple analysis and rapid planning for our PV mounting systems. Once the requirements of a project have all been recorded, a module plan is produced. Shade is simulated and an editable CAD construction drawing is generated with a material list and a project report. The results are based on the selected ALUMERO mounting system, the concomitant static calculations and the relevant integrated calculation norms. ALUMERO.PRO.TOOL makes planning and the calculation of statics for subconstructions childsplay.

- \+ quick and easy project surveying and planning
- \+ EN-normed statics calculations for every project
- \+ integration of shade considerations
- \+ central project management
- \+ resources saved
- \+ layout and installation plan for every project
- \+ individual planning with parts list
- \+ 3D visualisation
- \+ simple roof surveying with Google Fast Draw
- \+ Web application
- \+ built-in Polysun yield calculation

8-step project planning

1 Key data
2 Roof data
3 Roof surveying
4 PV modules
5 Technical designs
6 CAD plan
7 Statics
8 Material list

ALUMERO.Pro.Tool makes planning and the calculation of statics for subconstructions childsplay.



TECHNOLOGY

ALUMERO transforms innovative ideas into sustainable solutions. We see it as our task and obligation to work with our clients as closely as possible. The results are sophisticated, functional solutions that guarantee optimum project workflow and competitive benefits. Accordingly, whatever the task or challenge, our specialists develop supreme-quality, highly-affordable solutions, and uncover opportunities for even greater savings. ALUMERO is now one of the first companies contacted by clients requiring custom-tailored solutions.

Extrusion presses

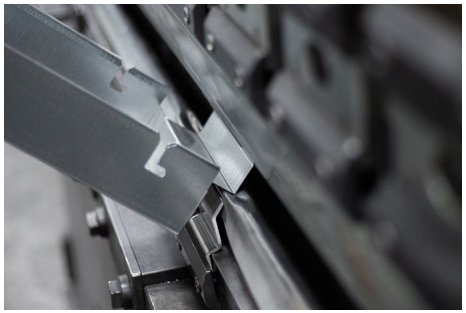
Precision to the most minute details.

+ Structural profiles according to EN 15088
+ Alloys in 3000 and 6000-series, special alloys upon inquiry

Profile processing

Qualified professionals and state-of-the-art machinery guarantees highest quality.

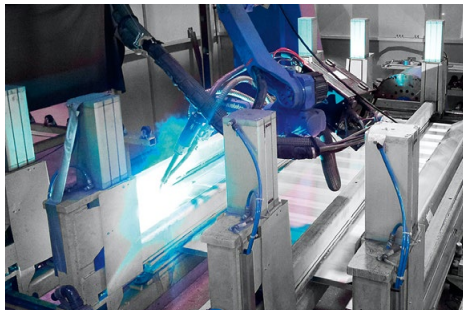
+ Cutting
+ Milling
+ Punching
+ Bending
+ Stud welding



Sheet metal shaping

Up to the highest standards.

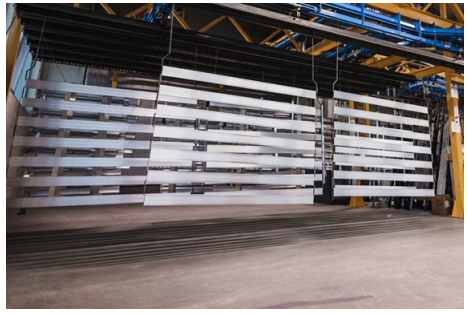
+ Laser machining
+ Die cutting / nibbling
+ Bending



Welding technology

Pristine welds guaranteed by EN ISO 3834-2.

+ MIG
+ MAG
+ WIG
+ Fusion gas welding (oxyfuel)
+ Manual electric welding
+ Stud welding



Surface finishing

High-end surfaces.

+ Eloxal, organic and inorganic colourized
+ Powder coating, available in special colours
+ Trowalizing
+ Execution as bar and piece surface

Component groups

End-to-end solutions with modern manufacturing techniques.

+ Upon inquiry

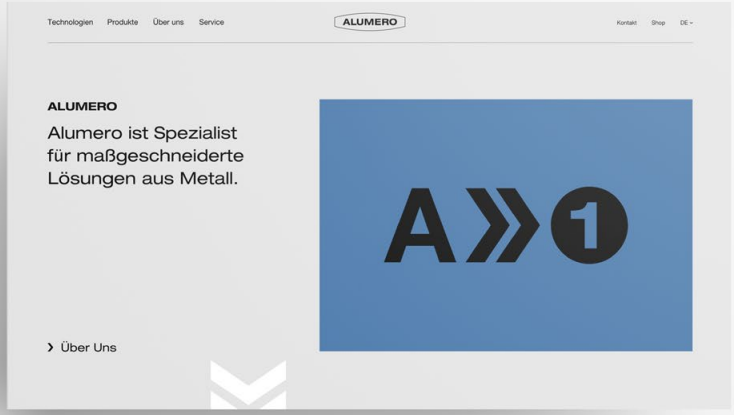
Development and consultation

Successful through your ideas and our know-how.

+ Functional testing on the 3D model
+ 3D assemblies
+ Static calculations

We always have a solution.

ALL INFO AND MORE ONLINE



All the product lines in this catalogue can also be viewed online at www.alumerogroup.eu (available in English).

THIS IS METAGREEN.

Recycling produces sustainable secondary aluminium.

metagreen is the ALUMERO Group's concept for sustainability. Most of the aluminium industry's emissions are generated in the production of primary aluminium. Raising the amount of recycled aluminium used helps to reduce the entire sector's CO_2 footprint significantly. In contrast to primary metals, metagreen enables us to reduce energy consumption by up to 95% and CO_2 emissions by up to 80%.

- ✔ The perfect choice as a sustainable material
- ✔ Up to 95% less energy required in production
- ✔ Excellent quality

Why aluminium?

+ a light metal with 1/3 the weight of steel
+ excellent strength and rigidity
+ corrosion resistant
+ sophisticated look
+ easy to shape
+ easy to process
+ excellent product longevity
+ reflects light
+ good heat conductor
+ good electrical conductivity
+ environmentally friendly and recyclable

Think of tomorrow - build with aluminium today!

18

Tons of CO_2 per Ton of Aluminium

7

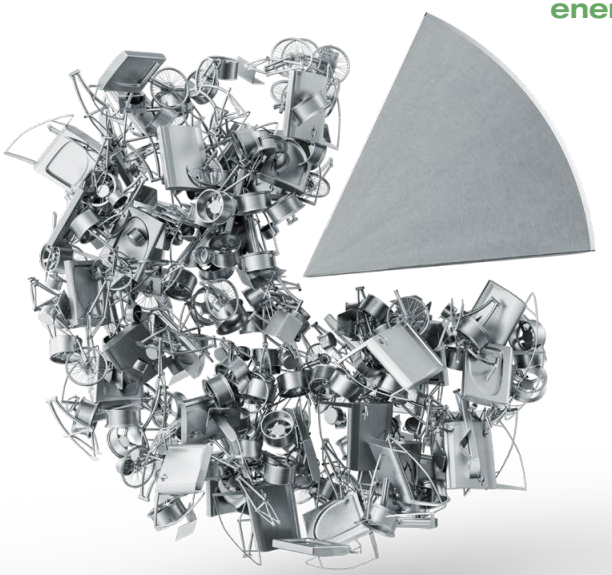
2

Ø Worldwide

Ø Europe

metagreen

20%
primary aluminium from renewable energies



80%
recycled aluminium

ALUMERO GROUP

Development, design and production

ALUMERO specialises in bespoke aluminium solutions, winning over customers as a manufacturer of superior-quality aluminium extrusion profiles, aluminium component groups and mechanical integration, and as a system provider for several sectors, including solar and photovoltaic, living, industry and building - with ALUMERO.

ALUMERO turns innovative ideas into sustainable solutions based on functional design and effective machinery. We believe customers should be provided with a convincing solution that meets every requirement to the fullest extent.

Quality management

Quality is never a question of luck. It‘s the sum of the details that make a product valuable, functional, technically tailored and attractively shaped. ALUMERO quality management ensures the company can offer professional and reliable services on an international stage, today, tomorrow and for many years to come. Sustained high quality is the result of a carefully devised corporate philosophy and the right to bear the ISO 9001:2008 seal.

+ modern quality management in compliance with EN-ISO 9001:2008
+ our success is guaranteed by delivering top quality
+ customer-orientated quality agreements
+ quality management as an active and dynamic process
+ welding according to the EN-ISO 3834-2 quality standard
+ TQM from planning to purchasing and final delivery
+ load-bearing structures produced in compliance with EN 1090
+ manufacture of pitched-roof solar mounting system AS 2.1 in compliance with MCS
+ time-orientated business operations and agile process management

Austria

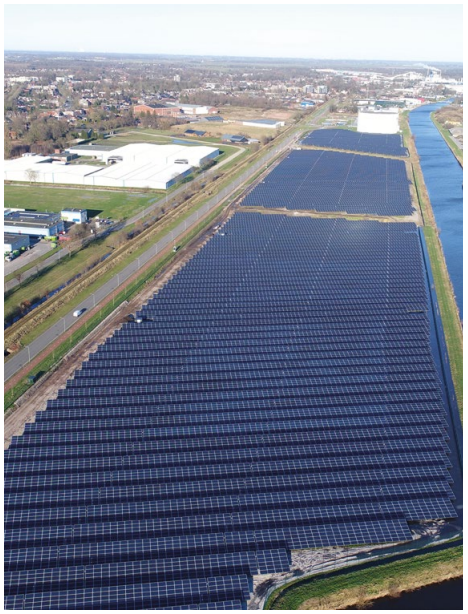
Poland

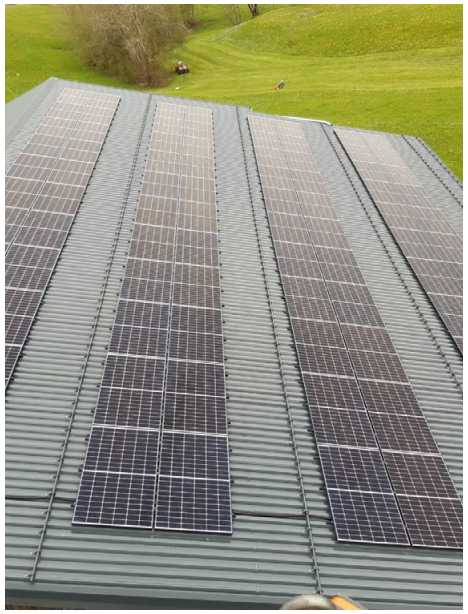
Slovenia

Netherlands







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