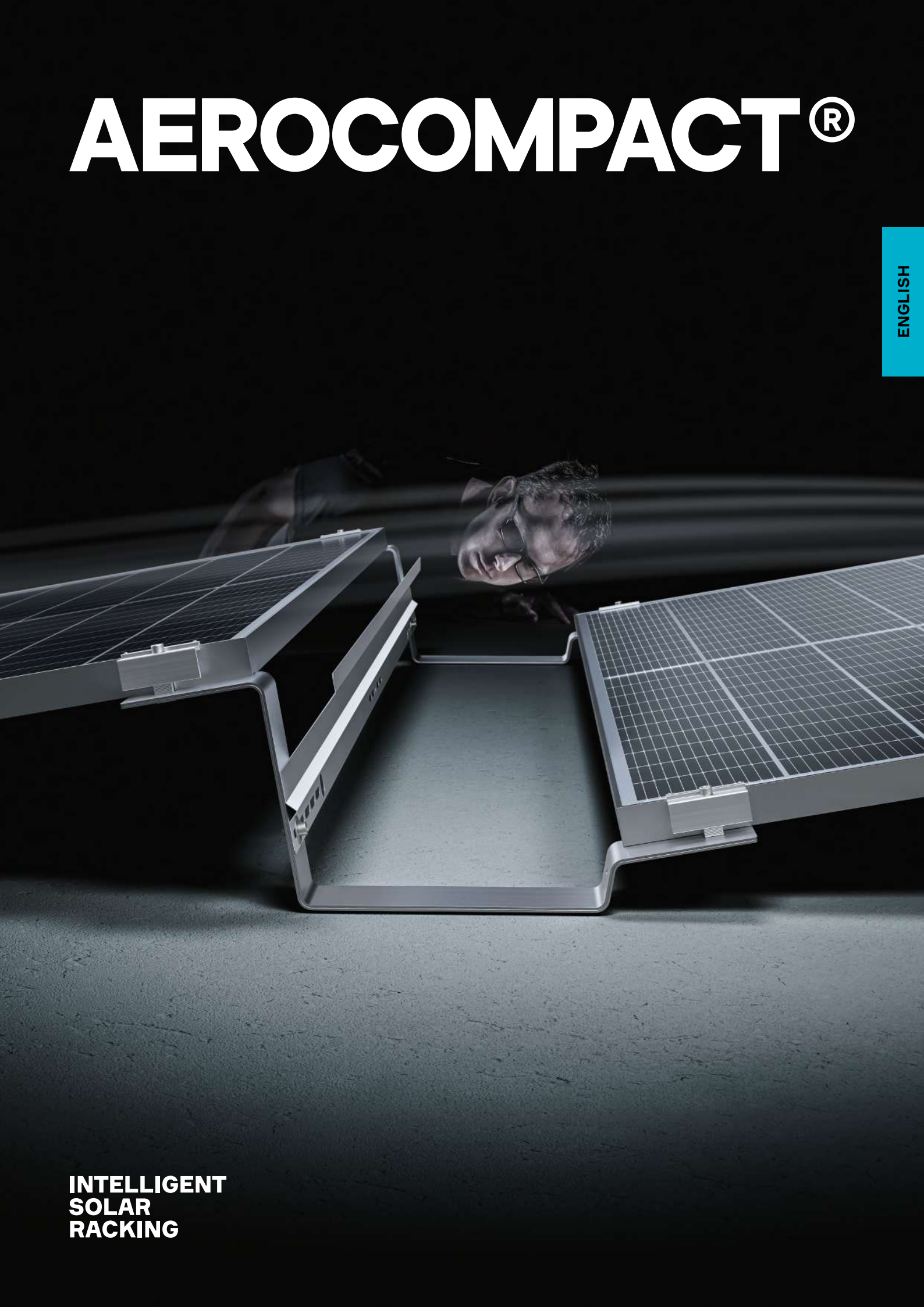
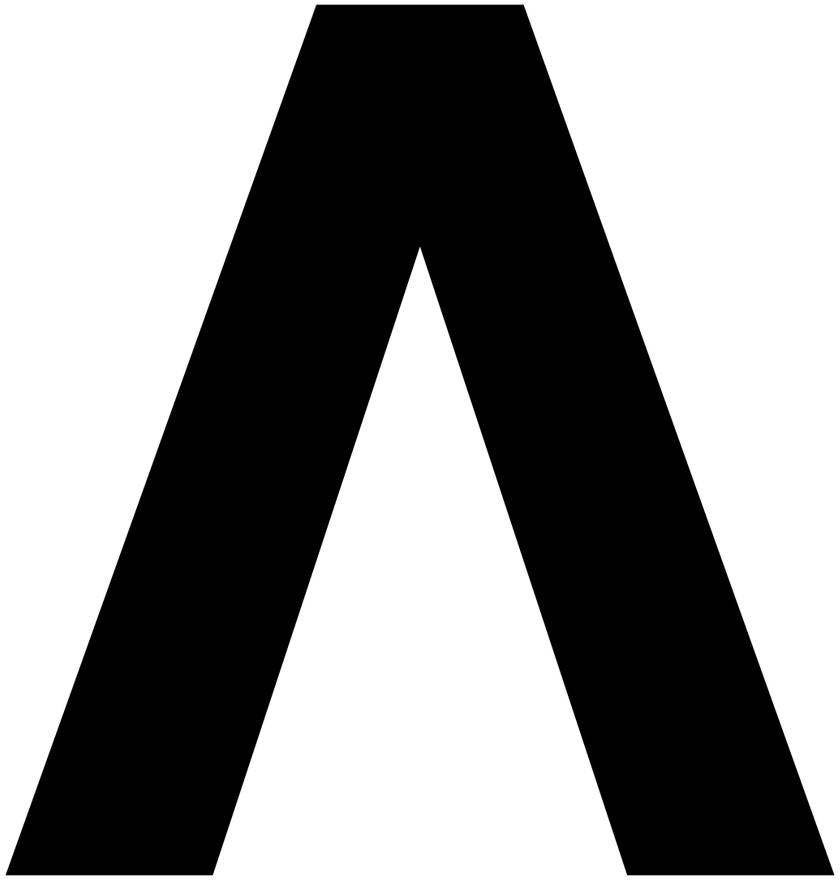
AEROCOMPACT®

ENGLISH



INTELLIGENT
SOLAR
RACKING



INTELLIGENT SOLAR RACKING

WE DESIGN AND MARKET COMPETITIVE RACKING SOLUTIONS WITH NO COMPROMISE IN SAFETY.

NAVIGATION.

VISION & MISSION.

WITH INTELLIGENT SOLAR RACKING AND SOFTWARE SOLUTIONS, WE EMPOWER PEOPLE TO INSTALL SOLAR SYSTEMS SAFELY.

As a manufacturer of intelligent racking solutions, we know the difficult requirements for mounting photovoltaic modules on different surfaces and structures. With clever solutions and engineering services, we help you with the planning and construction of photovoltaic systems. With our aerodynamically optimised substructures for solar modules, you will find the safety and mechanical stability that you as an installer, planner or wholesaler need on a project-specific basis.

IN USE WORLDWIDE.

THE UNIQUE COMBINATION OF ENGINEERING EXPERTISE AND OUR PROPRIETARY AEROTOOL PLANNING SOFTWARE MAKES US A GLOBAL PLAYER.

We have an international market presence in all climate zones of the world: our products have been successfully installed in over 60 countries worldwide. Since our foundation in 2014, we have grown far above the industry average in a dynamic market. We are committed to sustainability and renewable energy and have designed our products to help ensure the transition to clean energy.

FOCUS ON.

SUPEREASY.

FOR US, SUPEREASY STANDS FOR 100% CUSTOMER FOCUS AND PERFECT PLANNING SOLUTIONS. OUR INNOVATIVE MOUNTING SYSTEMS, IN COMBINATION WITH OUR PLANNING SOFTWARE AEROTOOL AND OUR SERVICES, FORM THE BASIS OF THE SAFE, COST AND TIME-SAVING INSTALLATION OF PV SYSTEMS.

SUPERSTRONG.

BASED ON APPLIED RESEARCH IN THE FIELD OF PV STATICS, WE CAN EVIDENCE THAT OUR INTELLIGENT MOUNTING SOLUTIONS WILL WITHSTAND EVEN THE HARSHEST ENVIRONMENTAL CONDITIONS. OUR 25-YEAR GUARANTEE IS A CLEAR PROMISE OF QUALITY ON ALL OUR SYSTEM COMPONENTS.

SUPERSAFE.

SAFETY IS A PRIORITY FOR US ALONG WITH A HOLISTIC VALUE SYSTEM. WE DO EVERYTHING WE CAN TO FULLY PROTECT YOUR INVESTMENT IN A PV SYSTEM. THIS APPLIES TO PRODUCT, QUALITY AND SOFTWARE SAFETY. SIMPLE, UNCOMPROMISING, SAFE!

INTELLIGENT SOLAR RACKING

ADVANTAGE THROUGH QUALITY.

Our success story began with an innovative bracket system for mounting solar panels that reduces the amount of material required in the substructure for photovoltaic systems by a third. Along with the mounting components, we launched a specially developed visualisation and planning software that set new standards: AEROTOOL is a proprietary digital platform that allows solar systems to be planned quickly and easily, taking into account all structural requirements.

Within a short time, AEROTOOL has become the world's leading platform in this market segment. Our aerodynamically optimised PV mounting solutions are patent-protected and offer safety and mechanical stability. All products are tested according to the highest industry standards and are particularly economical.

01 **INNOVATIVE SYSTEMS**

AEROCOMPACT mounting solutions are developed by our engineers together with our partners. The combination of expertise and practical experience makes AEROCOMPACT mounting systems easier and faster to install than comparable systems on the market.

02 **HIGH-QUALITY COMPONENTS**

Made in Europe: The high quality manufacturing of all AEROCOMPACT system components ensures a long product life. We give a 25-year warranty and 30-year functional reliability on all our components. We prove the mechanical stability and high product reliability by tests and test seals.

03 **DIGITAL PROJECT PLANNING**

With the help of our digital platform AEROTOOL, solar systems can be planned quickly and easily, and the AEROCOMPACT products required for mounting can be ordered in a straightforward manner.

04 **PERSONAL CONSULTING**

In addition to high product quality, consulting is an important part of our corporate performance. We provide support with the appropriate system selection and components as well as with individual adjustments in the course of the respective project and with sensitive framework conditions.

05 **RAPID AVAILABILITY**

Our pre-assembled modules are real time-savers. AEROCOMPACT solutions can be combined with one another and assembled in a modular system, which increases the effectiveness and productivity of our customer's workflow.

WHEN PROJECTS ARE PLANNED AND DESIGNED IN AEROTOOL AND PROFESSIONALLY INSTALLED YOU RECEIVE A 25-YEAR GUARANTEE.

AEROTOOL

THE PLANNING SOFTWARE FOR PROFESSIONALS.

THE WORLD'S LEADING AND MOST RELIABLE SOFTWARE FOR PLANNING HIGHLY ENERGY AND ECONOMICALLY EFFICIENT SOLAR SYSTEMS.

Thanks to its realistic 3D-simulation, AEROTOOL makes it possible to prepare quotations and plans without an on-site appointment. This saves time and money. Comprehensive planning plays a key role in the safety and efficiency of large photovoltaic systems. With AEROTOOL we support the planning of solar systems - quickly, easily and in detail.

Thanks to the integration with Google Maps, the area of a planned project can be captured in record time. In order to work efficiently with a variety of roof types, AEROTOOL offers a selection of six different roof shapes as well as a function for a free form.

Our software offers a preview of the solar radiation and the potential annual yield of the system as early as the design phase. Local climatic conditions such as wind, snow and rain are taken into account. In addition, static calculations are carried out on the basis of the highest safety standards. AEROTOOL creates CAD drawings, the electrical planning as well as finished installation plans including material lists.

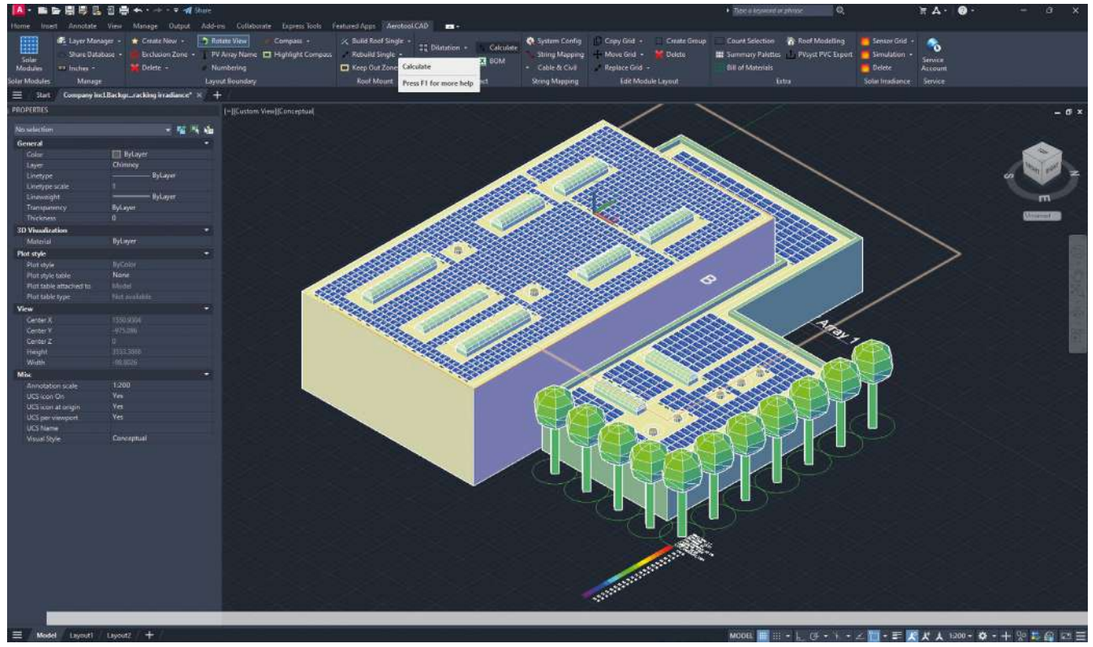
THE BENEFITS OF AEROTOOL.

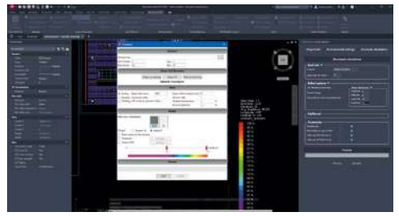
AEROTOOL OFFERS PLANNING RELIABILITY, MAXIMUM EFFICIENCY AND INNOVATIVE CENTRALISED PROJECT MANAGEMENT WITH THE GREATEST POSSIBLE FLEXIBILITY.

+ Central project planning and management
+ Google Maps roof layout and recording of roof dimensions
+ Consideration of shading
+ Static calculations according to EN and ASCE standards
+ Occupancy and assembly plan for each project
+ Complete parts list output for each project
+ Optimal saving of resources, minimisation of planning errors
+ High planning reliability
+ Highest quality standards in the verification of the software's calculation results and methods

AEROTOOL fulfils all applicable EU product requirements.

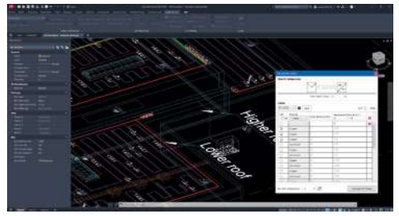
CHECK THE FULL VERSION OF AEROTOOL.CAD





AEROTOOL.CAD enhances your design process with a stable plug-in for faster ballast calculations and on-demand bom results.

Discover all the super features included when planning in AutoCAD or BricsCAD. A true **one-stop planning solution** embedded in your preferred drafting ecosystem. AEROTOOL.CAD revolutionizes the automated planning of even the largest substructures – taking into account current Eurocode design criteria and standards.



AUTODESK
Sustainability Tech Partner

NEW CAD-SOFTWARE PLUG-IN

YOUR ADVANTAGES

- + FULL RACKING DESIGN AND BALLAST PLAN
- + EXPORT PROJECT REPORT AND BALLAST PLAN DRAWINGS
- + AUTOMATED BALLASTING AND ANCHORING
- + ENERGY PRODUCTION PLANNING WITH EXPORT TO PVSYST
- + IRRADIATION AND SHADING SIMULATION
- + 3D BUILDING MODELING (WITH 3D CIVIL)
- + ELECTRICAL STRING, CABLE TRAY, AND INVERTER PLANNING
- + FUTURE PRODUCT INTEGRATION FOR ALL AEROCOMPACT OFFERINGS
- + COMPATIBLE WITH AUTOCAD AND BRICSCAD

360° PROVIDER

WE ARE A 360° PROVIDER AND STAND FOR A HOLISTIC CONCEPT THAT OFFERS OUR CUSTOMERS PLANNING SECURITY, SAVES RESOURCES AND MINIMISES ERRORS.

We not only provide stable and aerodynamic racking solutions for the photovoltaic modules for practically all roof types and ground mount surface, but also deliver the entire package: from planning to installation technology, depending on the surface and the sub-structure. The planning concept is created using our AEROTOOL project software - quickly, easily and in great detail. The software produces an editable CAD file as well as a detailed construction drawing. The integration of Google Maps enables a pictorial representation of the roof layout.

FOR SOLAR TECHNICIANS AND INSTALLERS

OPTIMISED WORKING.

By using pre-assembled components, installers save valuable time when installing solar modules. The fact that our metal roof solutions can be combined with one another and assembled in a modular system increases the effectiveness and productivity of our customers' systems.

YOUR BENEFITS

+ Modular system for easy installation
+ Rust-free design and material
+ Pre-assembled components
+ Short assembly times
+ Easy handling thanks to aluminium components
+ Comprehensive technical documentation

FOR WHOLESALE CUSTOMERS

FLEXIBILITY THANKS TO GREATER AVAILABILITY.

Wholesalers benefit not only from our quick delivery capacity, but also from our lightweight components, the compact transport containers and thus also from the low transport costs of our products. We have designed our partner program especially for this customer group so that they are optimally supported in the system planning and engineering as well as with sales and service, in the form of external presentations and advertising, internet presence and training.

YOUR BENEFITS

+ AEROCOMPACT partner programme
+ High delivery capacity
+ Compact transport containers
+ Pre-assembled components
+ Engineering services
+ Comprehensive marketing tools
+ Project planning

FOR PROJECT DEVELOPERS

CREATING VALUE THROUGH DIALOGUE

The planning of photovoltaic systems often poses major challenges. We are happy to be involved in the planning process and support project developers in the design and calculation of systems. Our experience in the EPC area – specifically in the process steps of planning, procurement and construction of large systems - qualifies us as a specialised contact in the area of racking technology.

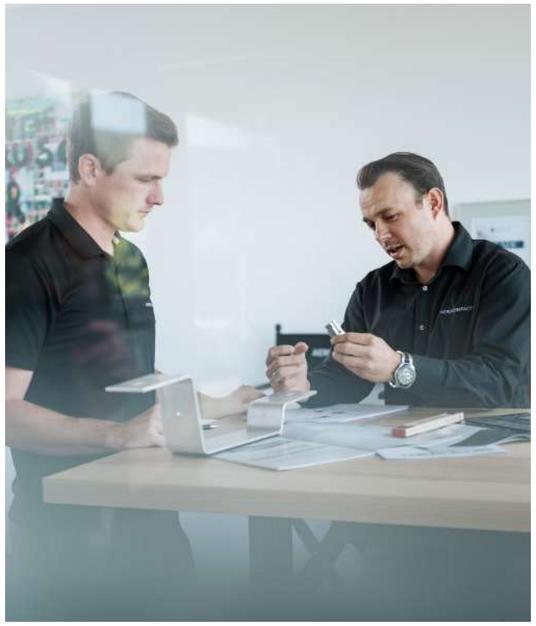
YOUR BENEFITS

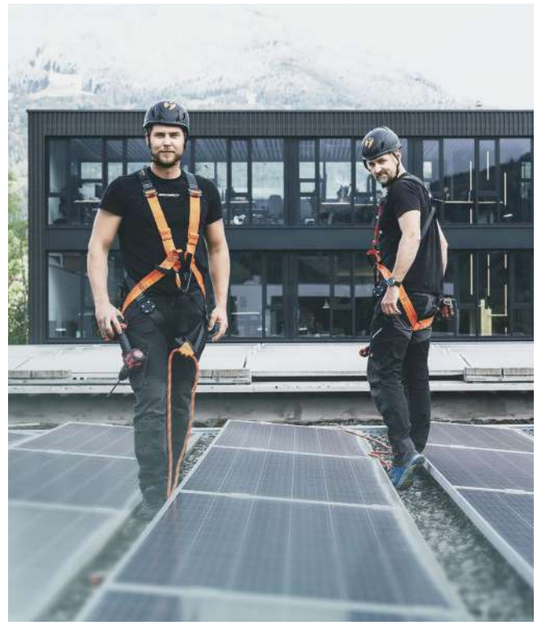
+ Support by professionals
+ High-performance product portfolio
+ Proven tested safety
+ 25-year guarantee
+ 3D-supported calculation and statics software AEROTOOL
+ Short assembly times due to pre-assembled components
+ Comprehensive technical documentation

PV-TRAININGS

OUR OFFICIAL SOLAR RACKING TRAINERS VISIT YOU DIRECTLY AND SUPPORT YOUR INSTALLATION TEAM ON SITE WITH COMPLEX AND EXTENSIVE PROJECTS.

FIND YOUR
PV CONSULTANT HERE.





THE AEROCOMPACT SERVICE PROGRAMME.

WATCH VALUE FILM WITH
PATRICK THEINER HERE

01 WE PLAN. YOU RACK.

ON REQUEST, WE CAN PLAN YOUR FIRST PV PROJECTS IN AEROTOOL AS A CUSTOMISED OVERALL SOLUTION.

With our proprietary AEROTOOL software, we offer the perfect option for your PV project planning: you receive a complete component list including a project report. From webinars to one-on-one remote trainings by our PV trainers, we offer you comprehensive support services.

02 CONSULTING FROM OFFICE TO ROOF

FROM CONSULTATION TO INSTALLATION, OUR PV CONSULTANTS AND PV TRAINERS ARE THERE TO SUPPORT YOU.

As specialists in photovoltaic substructures and their installation, our PV consultants will visit you directly and present our entire product portfolio. We also offer on-site support during installation to ensure that your project is implemented in the best possible way. Whether you need advice or support, simply contact our PV consultants by scanning the QR code on the left!

03 VISIT OUR TRAINING CENTRES

LEARNING BY DOING: WE TRAIN YOU AND YOUR TEAM IN THE EFFICIENT HANDLING AND SAFE INSTALLATION OF OUR MOUNTING SYSTEMS.

Visit one of our AEROCOMPACT training centres at our headquarters in Satteins, Vorarlberg, or our brand new flagship office in the Ares Tower, Vienna. We present the entire range of our products in specially designed showrooms. Contact your personal PV consultant and arrange an appointment.

04 ONE CLICK IN THE ONLINE DOWNLOAD CENTRE

BENEFIT FROM OUR PRACTICAL DOCUMENTATION MATERIAL FOR PROBLEM-FREE INSTALLATION OF OUR PRODUCTS.

The online download centre gives you free and detailed access to all the assembly instructions, checklists and product information. No matter where you are: In our online download centre you will find the initial support you need for your projects - anytime and anywhere.

COMPACT**FLAT**

COMPACT**FLAT S**

AERODYNAMIC.
ADAPTABLE.
TESTED.

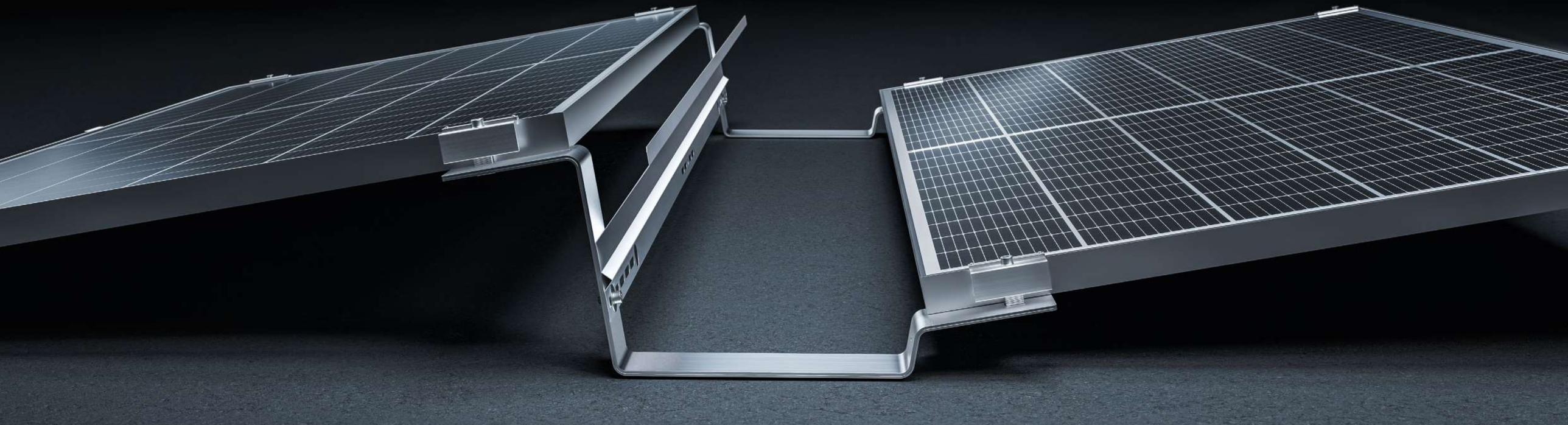
FLAT ROOF BRACKET SYSTEM
Safe and tested substructures for mounting photovoltaic modules on flat roofs

The COMPACTFLAT system family offers systematically structured substructures for the effortless installation of photovoltaic modules on flat roofs. The aerodynamic design boasts exceptional structural properties and requires considerably less ballast than other systems on the market. Due to the special “spring effect” of the feet, the substructure adjusts optimally to the conditions of the surface structure. Since the design is not rail-bound, water drainage is provided on all sides.

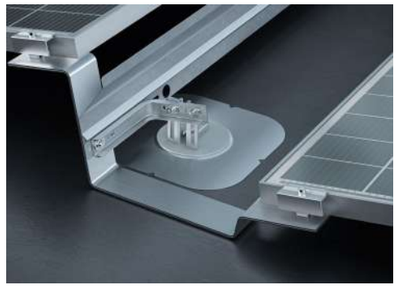
MORE EFFICIENCY
Short assembly times and lower transport costs due to fewer components.

SAFETY
Certified and wind tunnel tested.

RELIABILITY
AEROTOOL offers planning security, maximum efficiency and innovative centralised project management with the greatest possible flexibility.



ADDITIONAL COMPONENTS

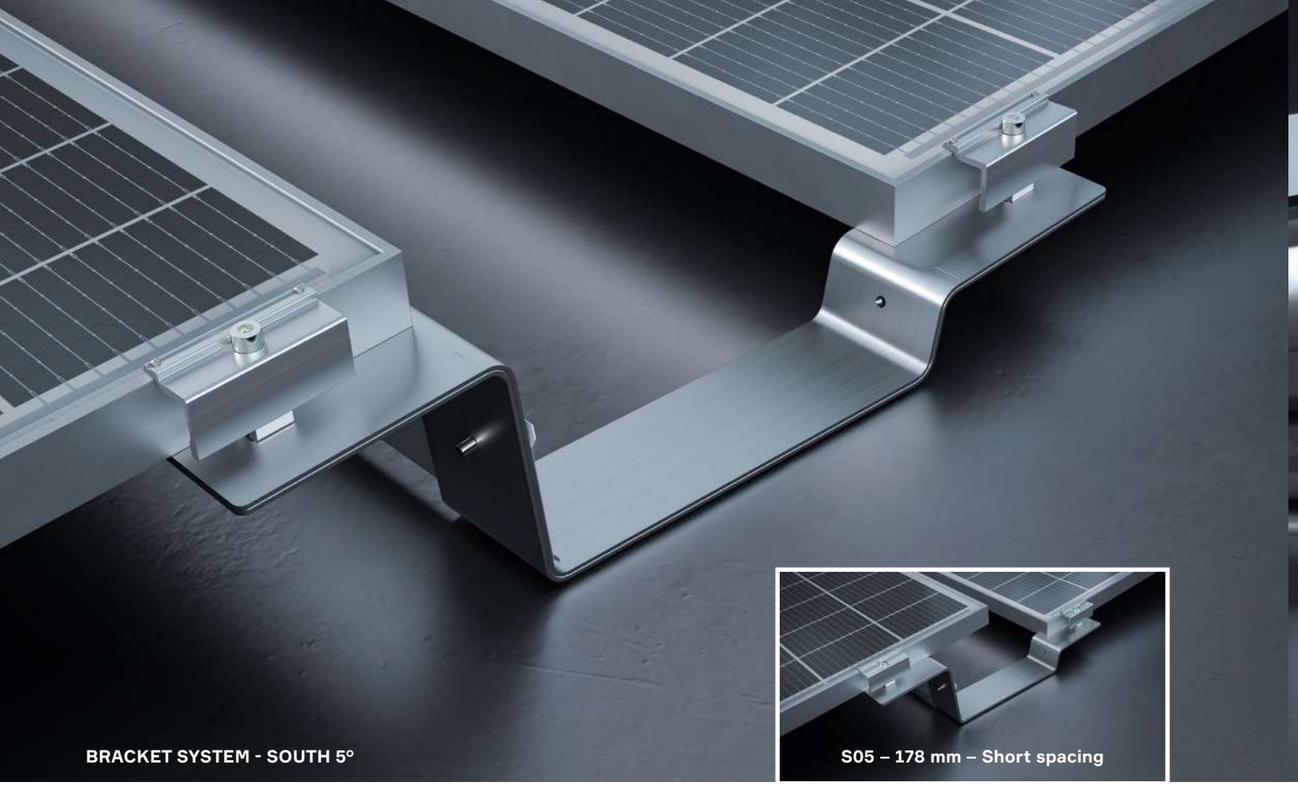


ROOF CONNECTION
AEROCOMPACT offers a sophisticated hybrid solution for roofs that cannot withstand the additional weight of a photovoltaic system. The combination of roof fastening points and ballast reduces the overall weight of the system. This option can also be used in areas with seismic activity to prevent the system from shifting due to earthquake influences.

ALPINE VERSION
Our alpine version is used from a certain snow load, which is calculated by our online software AEROTOOL based on the project.

BALLAST TRAYS
This system variant with ballast trays, available in various sizes, is mainly used in areas with high wind loads and roofs with low point loads. The main advantages of this installation variant are, on the one hand, the additional ballast that can be installed per module and, on the other hand, the even distribution of the concentrated load on the roofing. The ballast tray can also be used for ballasting on gravel roofs by putting the gravel into the ballast trays. With the additional ballast securing bracket, the ballast stones are secured against slipping from the tray and ideally distributed.

CABLE MANAGEMENT
The cable management solution for string cabling of the rows is UL-certified and available as a standard product.

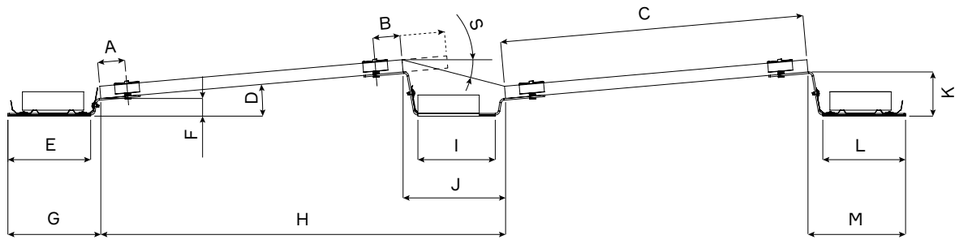


BRACKET SYSTEM - SOUTH 5°

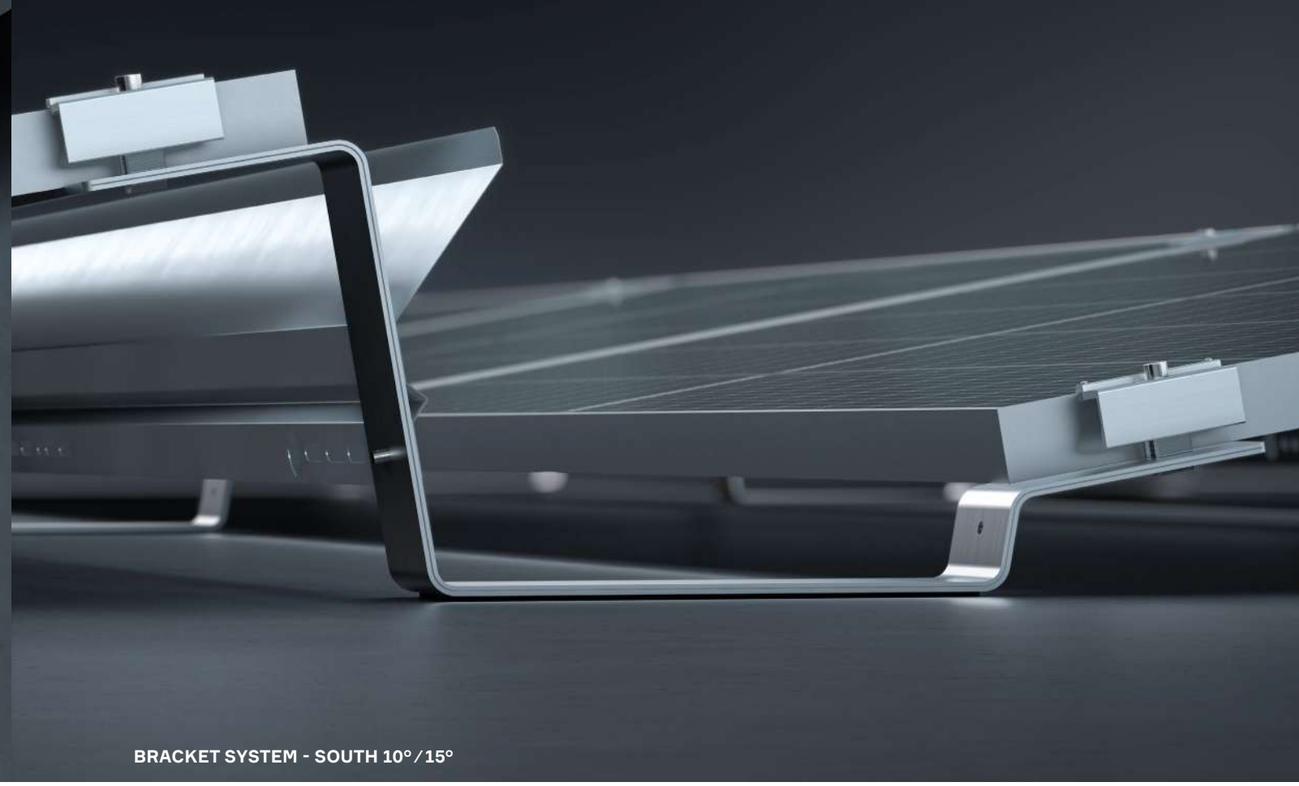
S05 – 178 mm – Short spacing

COMPACT**FLAT** S05

The COMPACTFLAT S05 is a south-facing aerodynamic flat roof fastening system including pre-assembled PES building protection mat for framed PV modules. The module inclination is 5° and results in row spacings of 178 mm and 335 mm. The row spacing of 178 mm with a shading angle of 30° is achieved by moving the modules back on the connector. It is also available as an alpine version.



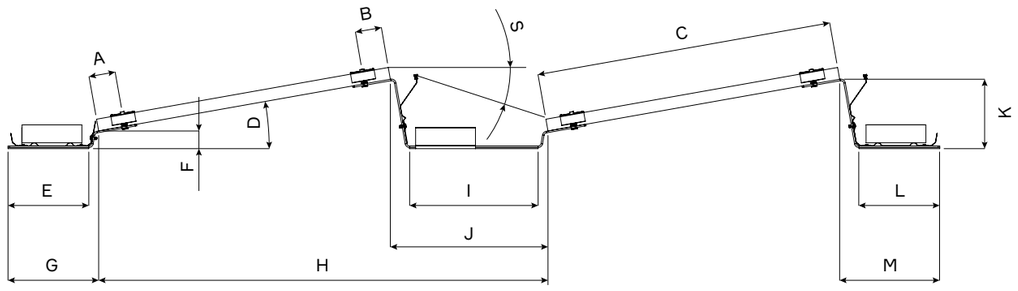
	A [mm]	B [mm]	C* [mm]	D [°]	E [mm]	F [mm]	G [mm]	H* [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	S [°]
S05 – 178 mm – Short spacing	88,5	245	950–1150	5	270	58	303	1124–1325	252	178	144	270	318	30
S05 – 335 mm – Long spacing	88,5	88,5	950–1150	5	270	58	303	1281–1482	252	335	144	270	318	15



BRACKET SYSTEM - SOUTH 10° / 15°

COMPACT**FLAT** S10 / S15

The COMPACTFLAT S10 / 15 is another south-facing aerodynamic flat roof fastening system including pre-assembled PES building protection mat for framed PV modules. It is available with an inclination of 10° and 15°, as well as various row spacings and is available as an alpine version as well.

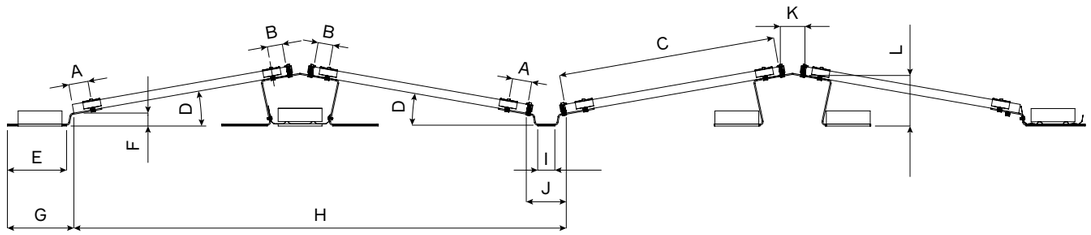


	A [mm]	B [mm]	C* [mm]	D [°]	E [mm]	F [mm]	G [mm]	H* [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	S [°]
S10 – 380 mm – Short spacing	88,5	88,5	950–1150	10	270	60	303	1314–1517	282	380	232	270	334	25
S10 – 527 mm – Long spacing	88,5	88,5	950–1150	10	270	60	303	1461–1664	429	527	232	270	334	18
S15 – 571 mm – Short spacing	88,5	88,5	950–1150	15	270	60	303	1486–1692	458	571	317	270	350	25
S15 – 790 mm – Long spacing	88,5	88,5	950–1150	15	270	60	303	1705–1911	677	790	317	270	350	18

* depending on the PV-module dimensions

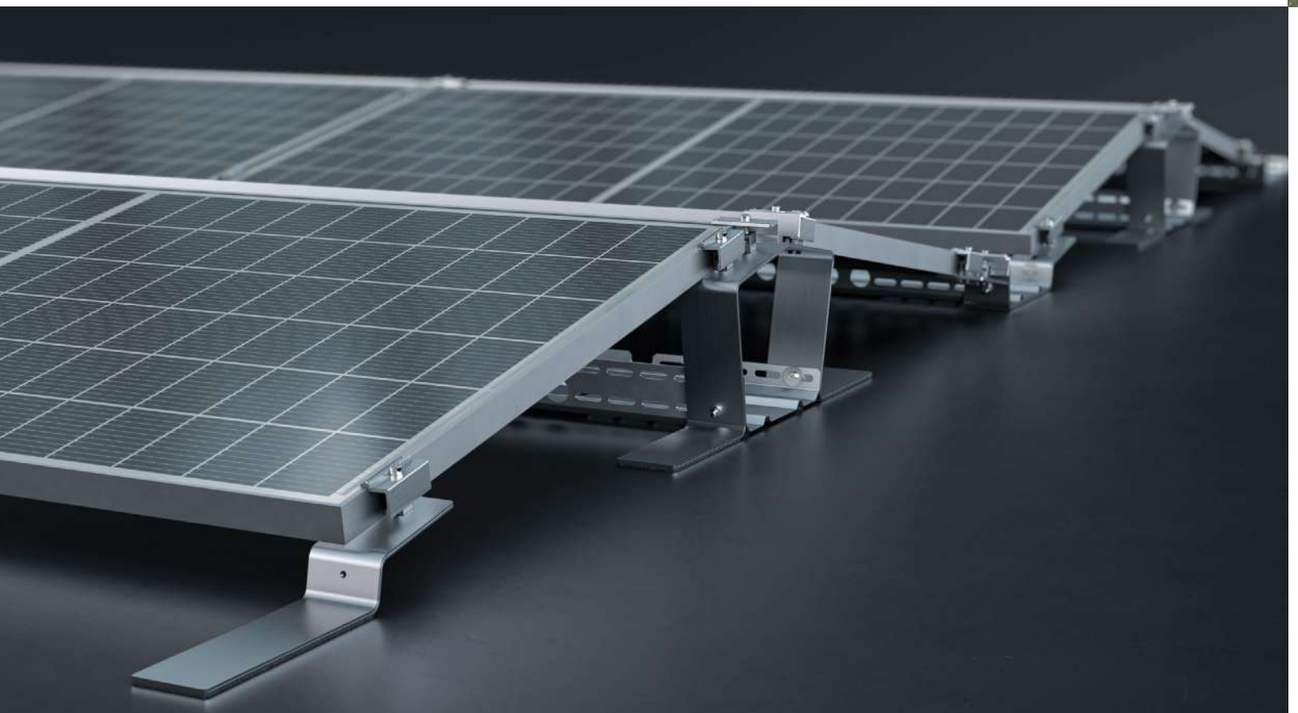
COMPACT**FLAT S10 PLUS**

The system, as part of the COMPACTFLAT product range, is an aerodynamic east–west-substructure for the fixing and aligning of PV modules on flat roofs. The module inclination is 10° and results in row spacings of 297 mm and 464 mm. The aerodynamic design has outstanding static properties and requires surprisingly little ballast. This system is also available as an alpine version.



	A [mm]	B [mm]	C* [mm]	D [°]	E [mm]	F [mm]	G [mm]	H* [mm]	I [mm]	J [mm]	K [mm]	L [mm]
S10 PLUS – 182 mm – Short spacing	88,5	69	950–1150	10	270	59	303	2163–2568	78	182	112	230
S10 PLUS – 350 mm – Long spacing	88,5	69	950–1150	10	270	59	303	2331–2736	245	350	112	230

* Depending on the PV-module dimensions



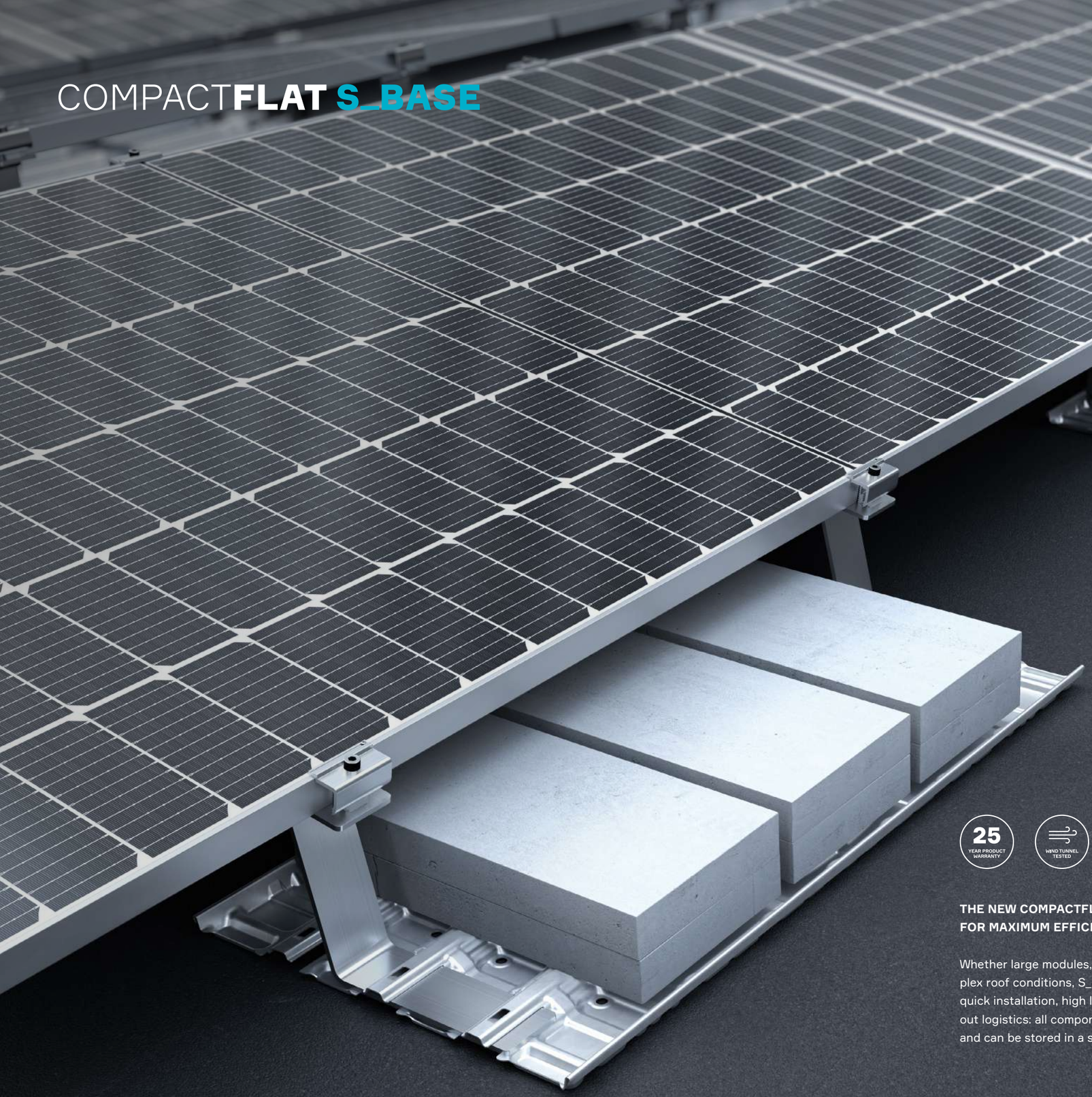
BRACKET SYSTEM – EAST / WEST 10°

AUSTRIA / 799,92 KWP / S05

AUSTRIA / 546,30 KWP / S10

COMPACT**FLAT** S_BASE

SIMPLE.
STRONG.
FAST.



25 YEAR PRODUCT WARRANTY

WIND TUNNEL TESTED

1 KWP/ 2,5–5 MIN.

CE

THE NEW COMPACTFLAT S_BASE – DEVELOPED FOR MAXIMUM EFFICIENCY ON ANY FLAT ROOF.

Whether large modules, limited load-bearing capacity or complex roof conditions, S_BASE impresses with its easy handling, quick installation, high load-bearing capacity and well thought-out logistics: all components are supplied compactly on pallets and can be stored in a space-saving manner.

+ Cost-efficient
+ „One-size-fits-all“
+ Space-saving logistics
+ Fast & easy installation
+ Versatile anchoring
+ Loadable & Adaptable
+ Efficient assembly

THE R_EVOLUTIONARY S_BASE QUICK-CLICK PV MOUNTING SYSTEM.

THE CHALLENGE

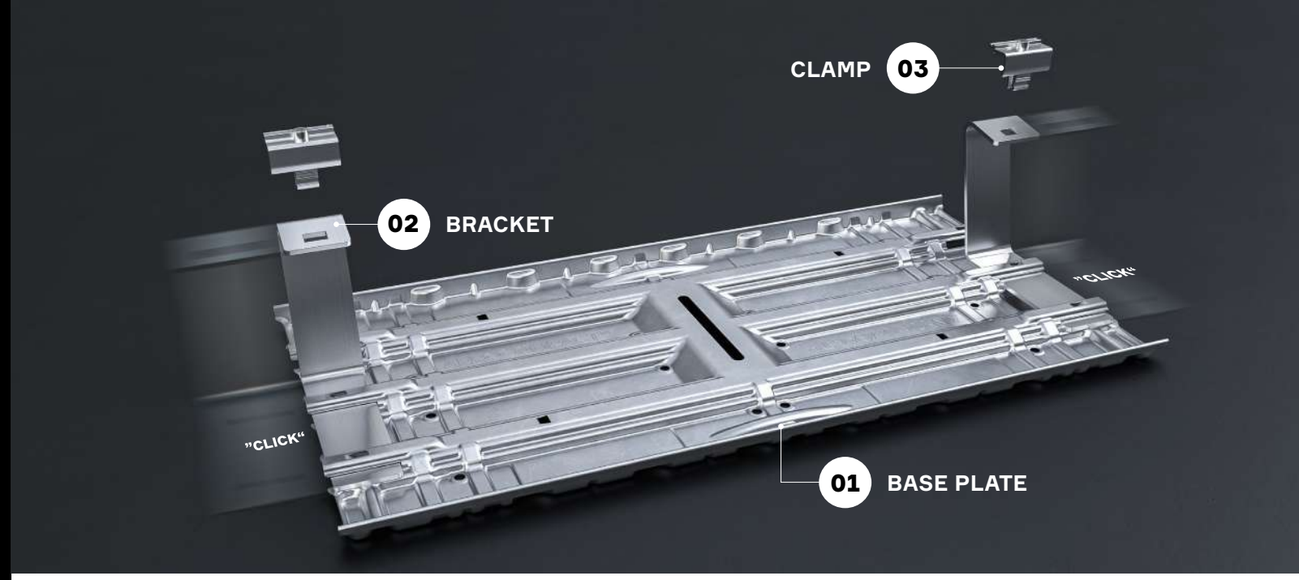
The market continues to develop with the trend towards ever larger PV modules, conventional short-sided clamping systems are reaching their limits.

Especially in combination with high wind and/or snow loads and weak load-bearing capacity of the building insulation. Standard market rail systems are often inflexible, expensive and complex to install. What is missing? A cost-effective, easy-to-install alternative with minimal component costs. This is exactly where we come in!

THE SOLUTION

With S_BASE, we have redefined and optimized our tried-and-tested COMPACTFLAT S system. As a cost-efficient mounting system for large modules and/or limited building load-bearing capacities. It sets new standards in cost savings for long-side clamping, simple installation, logistics and storage. Our bracket system absorbs thermal expansion (no limit to the field size), yet withstands high snow loads – even with large modules – and distributes these evenly across the roof cladding – even if the load-bearing capacity of the building insulation is unfavorable.

The 1-tool assembly enables quick and uncomplicated installation. Logistically, S_BASE impresses with its space-saving packaging (up to 75 kWp base plates on one pallet). The long-side clamping provides additional stability and also supports medium modules and high loads. Hybrid anchoring options provide stability for roof pitches up to 5° or limited load-bearing capacity, and even uneven roofs are no obstacle. Thanks to its top price-performance ratio for long-side clamping, S_BASE is the ideal solution for stock-holding customers who can cover all flat roofs with just one system - “one-size-fits-all” as an efficient stock product for every application!



LIGHT, SIMPLE AND FAST.
THE SMART BASE FOR YOUR SYSTEM.

01 BASE PLATE
The newly developed, patent-pending base plate impresses with its innovative design: light, stable and easily stackable for optimal storage. It enables easy trans-portation and offers maximum stability – perfect for carrying ballast or as a secure base for anchored connection points.

02 BRACKET
Simply click into place with S_BASE! The 100% aluminum bracket offers maximum corrosion resistance, exceptional durability and maximum flexibility in the event of thermal expansion – for reliable and fast installation.

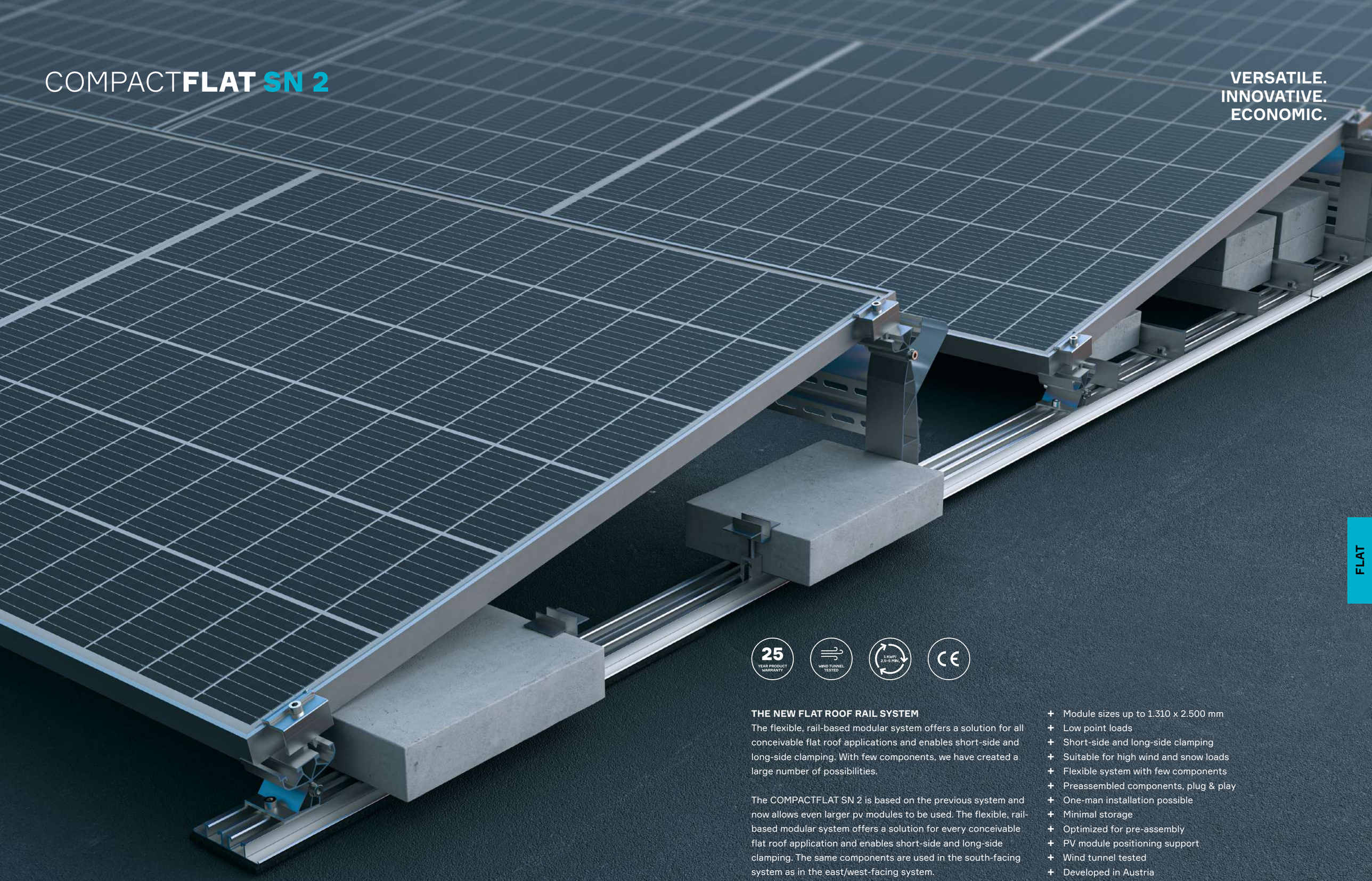
03 CLAMP
Simply fasten securely! The entire S_BASE system can be effortlessly fixed to the PV module frame with just one tool – quickly, reliably and efficiently.

ADVANTAGES AT A GLANCE

+ **COST-EFFICIENT –** The most economical mounting system for large modules or limited building load-bearing capacities
+ **“ONE-SIZE-FITS-ALL” –** Perfect for customers with stock
+ **SPACE-SAVING LOGISTICS –** All components on pallets
+ **FAST & EASY INSTALLATION –** Intuitive, even by untrained subcontractors
+ **LOADABLE –** large modules, no point load restrictions
+ **VERSATILE ANCHORING –** to reduce ballast or large roof pitches
+ **ADAPTABLE –** no size restrictions on the module fields, integrated thermal expansion, flexible adaptation to uneven roofs
+ **EFFICIENT ASSEMBLY –** 1-product assembly

COMPACT**FLAT SN 2**

VERSATILE.
INNOVATIVE.
ECONOMIC.



25 YEAR PRODUCT WARRANTY

WIND TUNNEL TESTED

1 KWP/ 2,5–5 MIN.

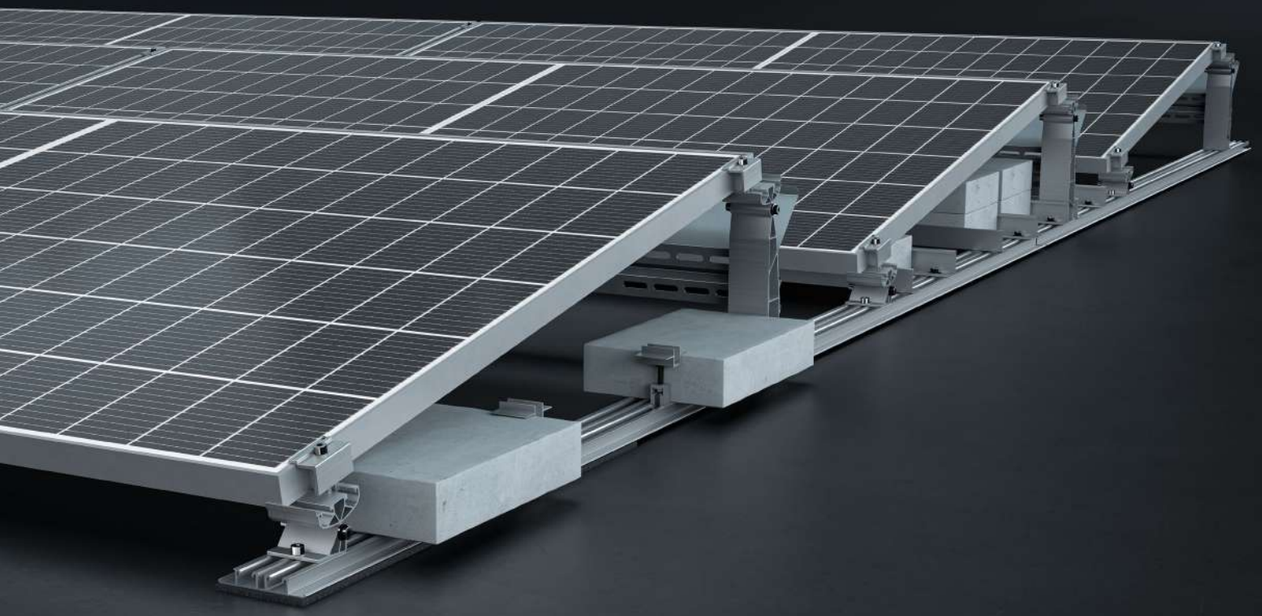
CE

THE NEW FLAT ROOF RAIL SYSTEM
The flexible, rail-based modular system offers a solution for all conceivable flat roof applications and enables short-side and long-side clamping. With few components, we have created a large number of possibilities.

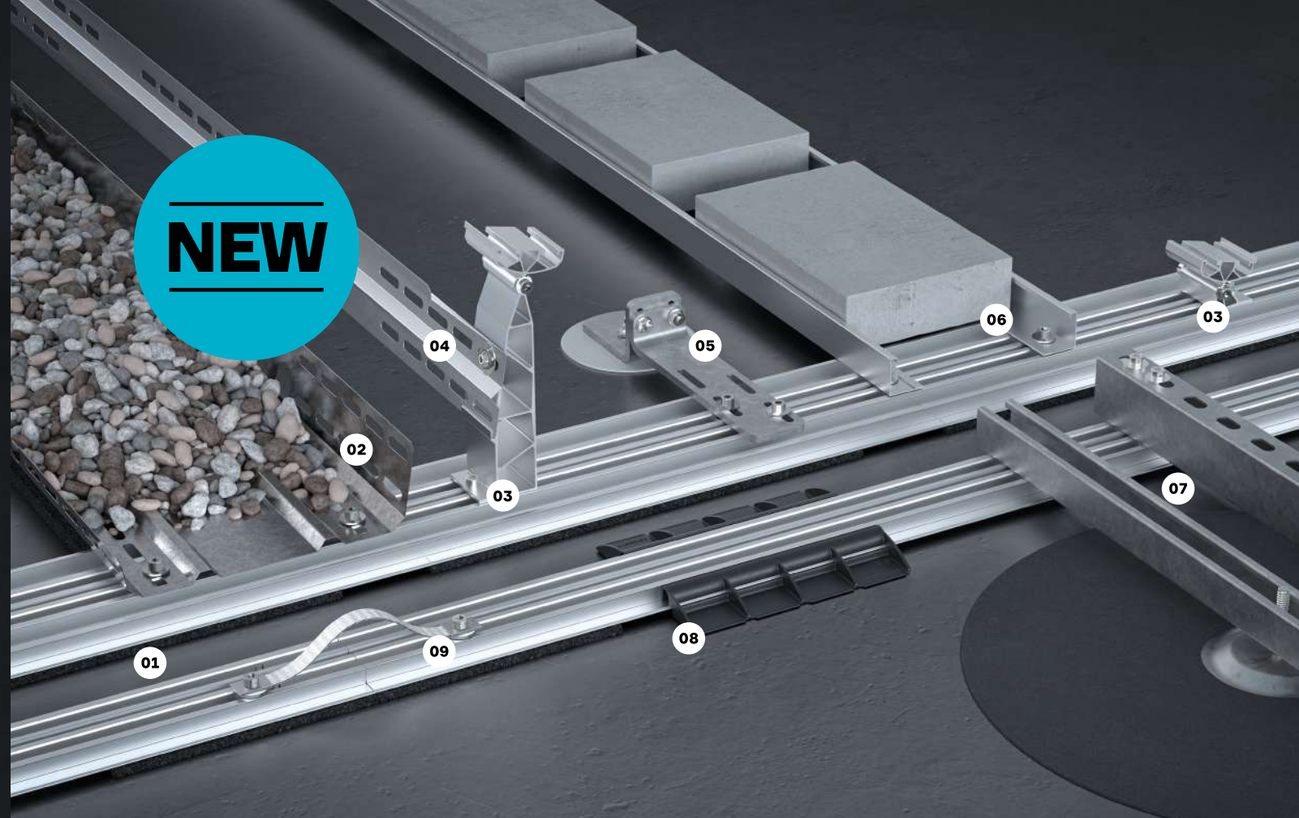
The COMPACTFLAT SN 2 is based on the previous system and now allows even larger pv modules to be used. The flexible, rail-based modular system offers a solution for every conceivable flat roof application and enables short-side and long-side clamping. The same components are used in the south-facing system as in the east/west-facing system.

- \+ Module sizes up to 1.310 x 2.500 mm
- \+ Low point loads
- \+ Short-side and long-side clamping
- \+ Suitable for high wind and snow loads
- \+ Flexible system with few components
- \+ Preassembled components, plug & play
- \+ One-man installation possible
- \+ Minimal storage
- \+ Optimized for pre-assembly
- \+ PV module positioning support
- \+ Wind tunnel tested
- \+ Developed in Austria

COMPACT**FLAT SN 2**



South-facing modules (SN 2)
with short-side clamping and connected rail structure



*Roof connection for anchors and double anchors
must be provided by the customer

THE CHALLENGE

The steadily growing size of modules poses particular challenges for manufacturers of racking systems. There is an increasing demand for racking systems that are not only reliable and flexible enough to endure heavy snowfall and severe winds but also facilitate swift and straightforward mounting, ultimately resulting in cost savings during assembly.

THE SOLUTION

The trimmed-down product concept for the COMPACTFLAT SN 2 is impressive due to its high load-bearing capacity and resistance to extreme weather conditions. This cost-optimized system can be quickly and easily attached to flat roofs in just a few simple steps. It now allows PV-module sizes of up to 1.310 x 2.500 mm. Thanks to pre-assembled components of the further developed fastening system, only one fitter is required for installation. This effectively saves both time and costs during assembly.

31
SYSTEM COMPONENTS

=

21
SYSTEM VARIANTS

01 The base rail with its threaded channel enables flexible installation and is supplied pre-assembled with building protection mats. The wide base rail is 173 mm wide and can also bear snow loads of >5.4KN/m (test load) and is also suitable for very soft insulation materials (e.g. Rockwool® Durock) with very low load-bearing capacities.

NEW
02 A suitable building protection mat ensures optimum protection of the roof skin for gravel ballasting.

03 To prevent tension in the module frame, the pre-assembled foot rocker adjusts to the correct angle depending on the module width. Two grooves enable short-side and long-side clamping and provide tolerance compensation during assembly.

04 The wind deflector can be placed in the guide and is fastened with just one magnetic combination screw (pre-assembled washer).

NEW
05 The optimized *single anchor fixing now also allows subsequent anchor installation next to the standard base rail (depending on the anchor construction) and can also be used for the wide base rail.

06 The cross struts can be infinitely adjusted and fixed for quick and easy pre-assembly of the system. They are also used to connect the system for long-side clamping and as ballast supports.

NEW
07 The new *double anchor fixing enables flexible pre-assembly and precise positioning – regardless of the assembly. With three lengths and a stronger version, it covers all assembly variants and offers a cost-effective solution depending on the wind load.

NEW
08 The load distribution plate with tool-free click installation and UV-resistant high-tech plastic ensures safe force transmission, high durability and quick installation on roofs with limited load-bearing capacity.

NEW
09 With the help of the flexible grounding strip, electrical requirements such as potential connection and lightning current carrying capacity can be reliably and safely established in an installation-friendly manner.

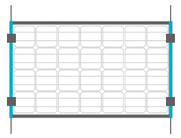
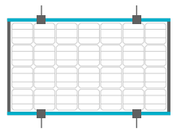
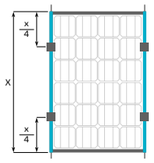
THE OPTIONS

The systems variety allows perfect adjustments for every single project. Two clamping options can be combined with three rail structure options as desired. This means all advantages are used in an optimal matter. Despite all these possibilities, only a few components are required.

IT'S YOUR CHOICE

1. CLAMPING OPTION

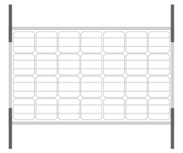
In the event of moderate snow loads, the PV modules can be clamped on the short side, saving material. Long-side clamping is recommended if the pressure load increases or large modules are used. Quarter Clamping offers higher loads than short-side clamping with a lower cost than long-side clamping.

			2. Rail structure (see below)		
			Short	Connected	Long
SHORT-SIDE CLAMPING + Quick assembly + Reduced material costs		South-facing modules (SN 2)	●	●	●
		East / west-facing modules (SN 2 PLUS)	●	●	●
LONG-SIDE CLAMPING + High loads + Large modules		South-facing modules (SN 2)	○	●	●
		East / west-facing modules (SN 2 PLUS)	○	●	●
LONG-SIDE QUARTER CLAMPING + High loads + Reduced material costs		East / west-facing modules (SN Q 2 PLUS)	○	●	●

2. RAIL STRUCTURE

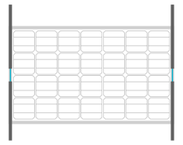
As there are different possibilities for the rail structure, the system can be individually configured to suit the respective application, regardless of the project's scale.

SHORT RAIL STRUCTURE
+ Reduced material costs
+ Easy shipping
+ No caterpillar effect



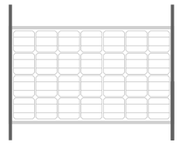
MAX. 900 mm RAIL LENGTH

CONNECTED RAIL STRUCTURE
+ High load capacity
+ Preassembly without module
+ Easy shipping



MAX. 1.980 mm RAIL LENGTH

LONG RAIL STRUCTURE
+ Fastest assembly time
+ High loads
+ Preassembly

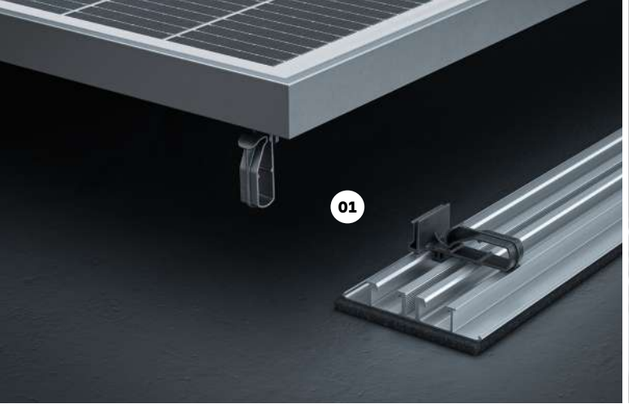


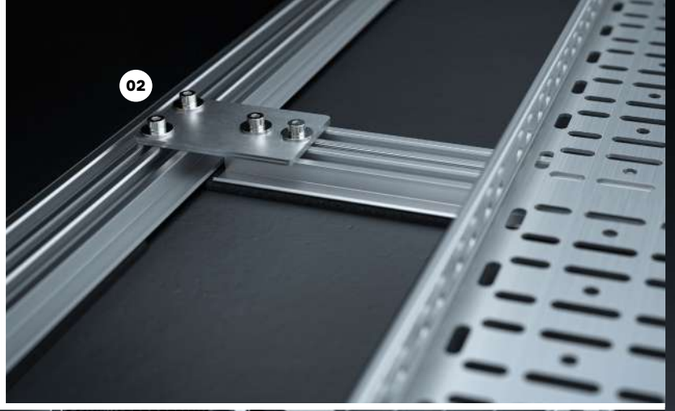
5.800 mm RAIL LENGTH

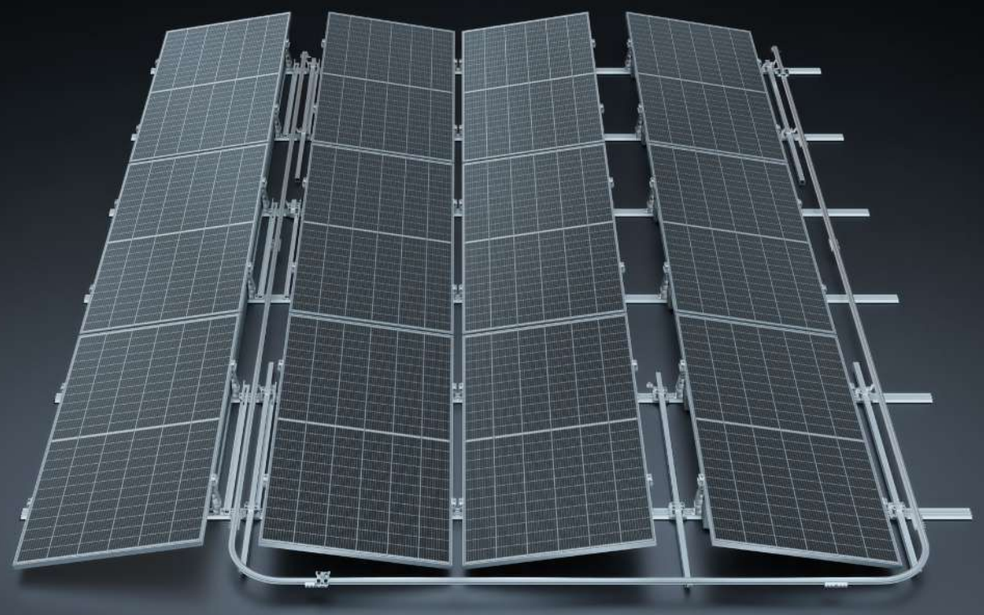
FLAT

East / west-facing modules (SN 2 Q PLUS)
with quarter clamping and connected rail structure

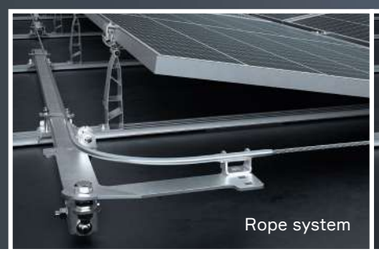
East / west-facing modules (SN 2 PLUS)
with long-side clamping and long rail structure







Protection – rail system



Rope system

Rail system

Protection – single anchor point

INTELLIGENT CABLE MANAGEMENT SYSTEM

The COMPACTFLAT SN 2 range is extended with a high-quality cable management system, fall protection and lightning protection elements. The assembly is, as usual, simple and time-saving.

01 The universal cable clip enables an easy fixing of the cables. It can be fixed either to the module frame or to the rails. The universal cable clip can be used for all existing flat roof systems.

02 The cable connection plate allows the adaptation of a 450 mm rail to the SN 2 system. Any cable tray can be attached to this rail.

03 The rail clip is ideal for laying cables along the SN 2 rail. The cables can be laid directly on the rail or protected in a cable conduit.

LIGHTNING PROTECTION OPTION

The mounting system features certified lightning current carrying connections with which the SN2 system can be integrated into lightning protection systems.

A lightning protection clamp specially developed by AEROCOMPACT saves time and costs in the installation process.

The rails of the SN2 system allow for the versatile installation of down conductors or connections. This guarantees environmentally friendly and cost-effective planning of external lightning protection.

SYSTEM-INTEGRATED FALL PROTECTION

The demand for an effective fall protection is increasing. If the guarding is not attached directly to the system, valuable space is lost. The integrated solution is available for all SN 2 variants with long rails and is produced and supplied by Innotech.

SOPV-AERO-TAURUS RAIL SYSTEM
This rail system can be installed with a mounting distance of up to 3 m along the outside of the PV system. In addition, a separate connector in the rail system compensates for the expansion joint of the PV system. Suitable for roofs with a pitch of up to 5°.

SOPV-AERO-AIO ROPE SYSTEM CAN BE DRIVEN OVER
A cable glider enables the intermediate brackets and curves to be driven over. This means that it is no longer necessary to change or unhook the rope. The fall protection cable system secures not only the the PV system and the rest of the roof area thanks to modular components and a fastening distance of up to 7.5 m. Suitable for roofs with a pitch of up to 5°.

INNOTECH SO SICHERN SIE LEBEN

PARTNERSHIP WITH INNOTECH
FOR ALL STANDING SEAM ROOFS | INNOTECH.AT

COMPACT**FLAT GS**

**EFFICIENT.
UNCOMPLICATED.
UNIVERSAL.**

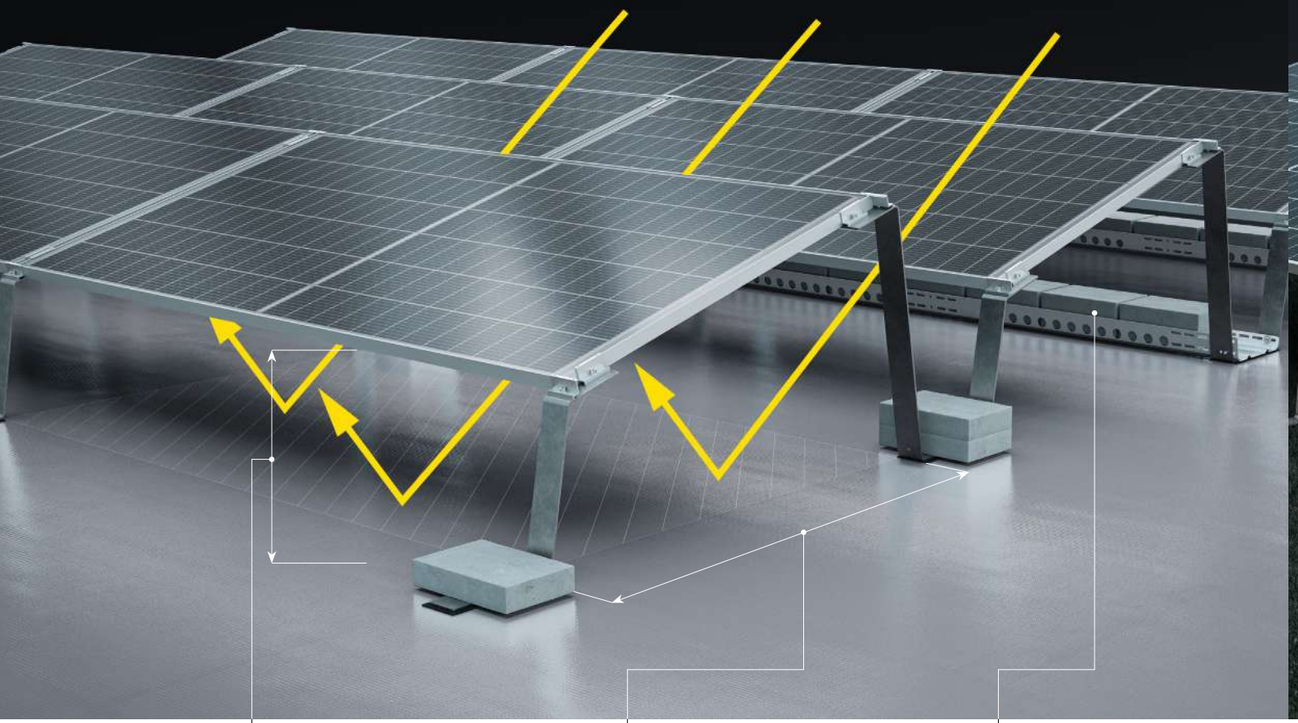
25 YEAR PRODUCT WARRANTY · WIND TUNNEL TESTED · FAST INSTALLATION · CE

THE BRACKET SYSTEM FOR GREEN ROOFS AND BIFACIAL PV MODULES

The COMPACTFLAT GS system is a highly elevated flat roof system specifically developed for mounting on green roofs and for applications with bifacial modules. This mounting solution achieves performance enhancing effects of the PV modules and provides the necessary distance to green roof surfaces.

The COMPACTFLAT GS system is a highly elevated flat roof system, which has been specifically developed for installation on green roofs as well as for applications with bifacial modules. With this racking solution, performance-enhancing effects of the PV modules are achieved and the necessary distance to green roof surfaces can be maintained.

- \+ Perfect for bifacial modules
- \+ High stability at moderate costs
- \+ Fast assembly
- \+ Based on the proven bracket system
- \+ Up to 20 %* more yield
- \+ Few components, no long rails
- \+ Can be assembled by one person
- \+ Minimal storage
- \+ Stable and corrosion-resistant
- \+ Developed in Austria
- \+ Wind tunnel tested
- \+ UL mark



High elevation to reflect light perfectly

No ballast under the bifacial module – a free reflective surface is therefore guaranteed

No rear wind deflectors required – allows an unimpeded access of light under the module

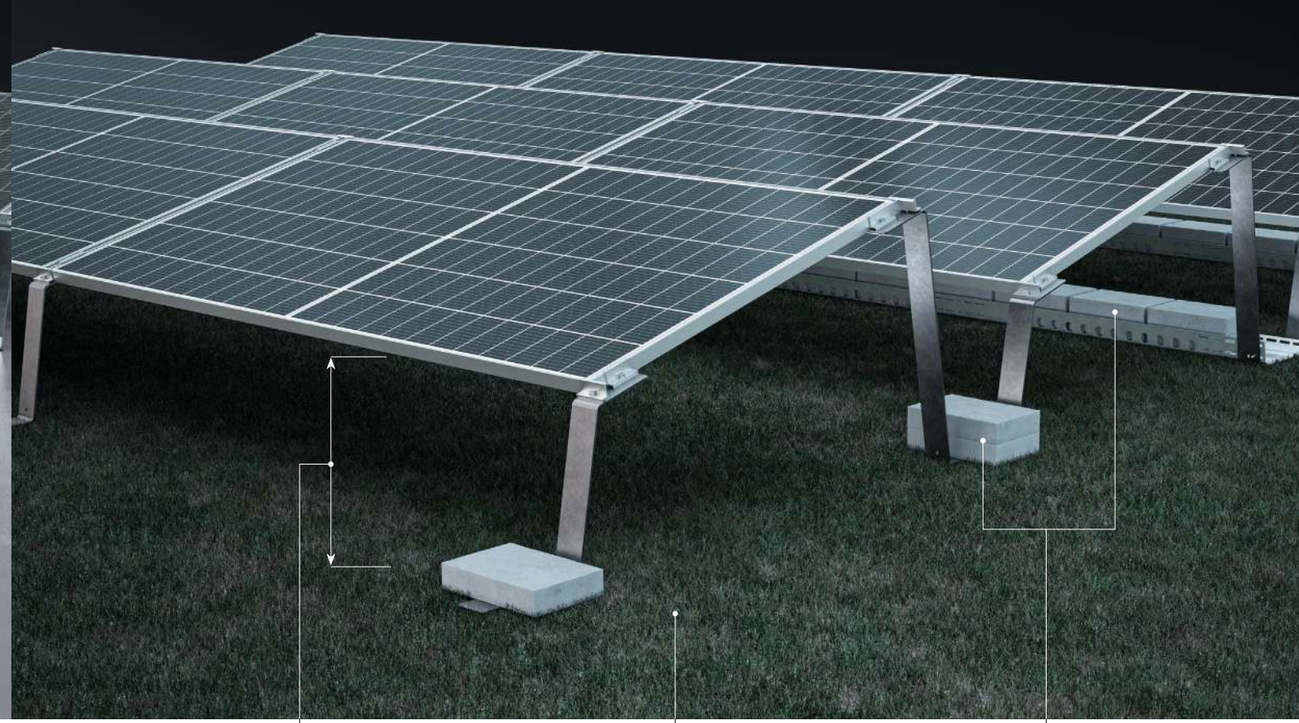
FOR BIFACIAL PV MODULES

Customary glass-foil modules are being increasingly replaced by bifacial modules and differ only slightly in terms of costs. Many module manufacturers are completely switching to bifacial modules. The COMPACTFLAT GS model has been specially developed for flat roof applications in combination with bifacial modules. Independent laboratory tests have shown that yield increases of up to 20 %* can be achieved by reflecting light with a bright roof surface.

WITH BIFACIAL PV-MODULES UP TO **20 %*** **MORE YIELD**

Comparison – Commercial system amortization based on a 12% additional perfomance yield according W. Mühleisen et al. (2020)*: 144 modules, 375 Wp, 19,5 kg, 1.755 x 1.038 mm; East-West-facing; roof with 28 m x 18 mincluded in CA.

System	Price racking	Amortization
COMPACT**FLAT S10 PLUS**	Base	Base
COMPACT**FLAT GS10 PLUS**	+ approx. 25 %	**Less than 2 years**



High elevation guarantees light for planting and accessibility for maintenance

Perfect solution for green roofs

Can carry loads with ballast on brackets or in ballast trays

FOR GREEN ROOFS

Flat roofs are widely vegetated, but traditional flat roof systems have limited suitability for green roof applications. The plant cover requires light and care. This can only be ensured with a highly elevated system with good accessibility.

* W. Mühleisen et al. (2020): Operation and Evaluation of a Bifacial PV Module Test Setup

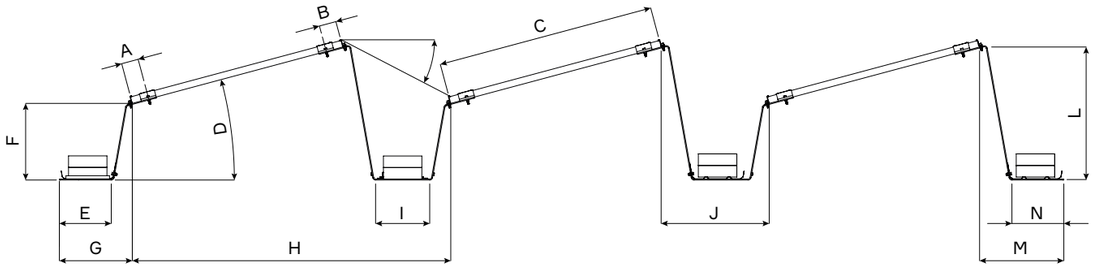
SOUTH-FACING

EAST / WEST-FACING

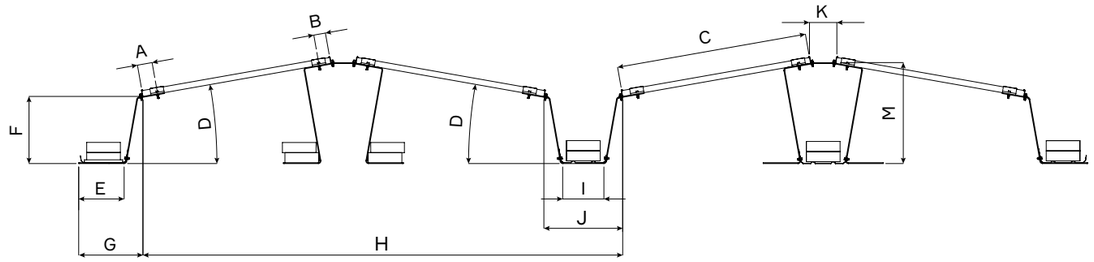
THE VERSIONS

The COMPACTFLAT GS as a system solution for flat roofs is available in two versions: the model for a south-facing solution with a module inclination of 15° (COMPACTFLAT GS15) and the model for an east/west-facing solution with a module inclination of 10° (COMPACTFLAT GS10 PLUS).

COMPACT**FLAT** GS15



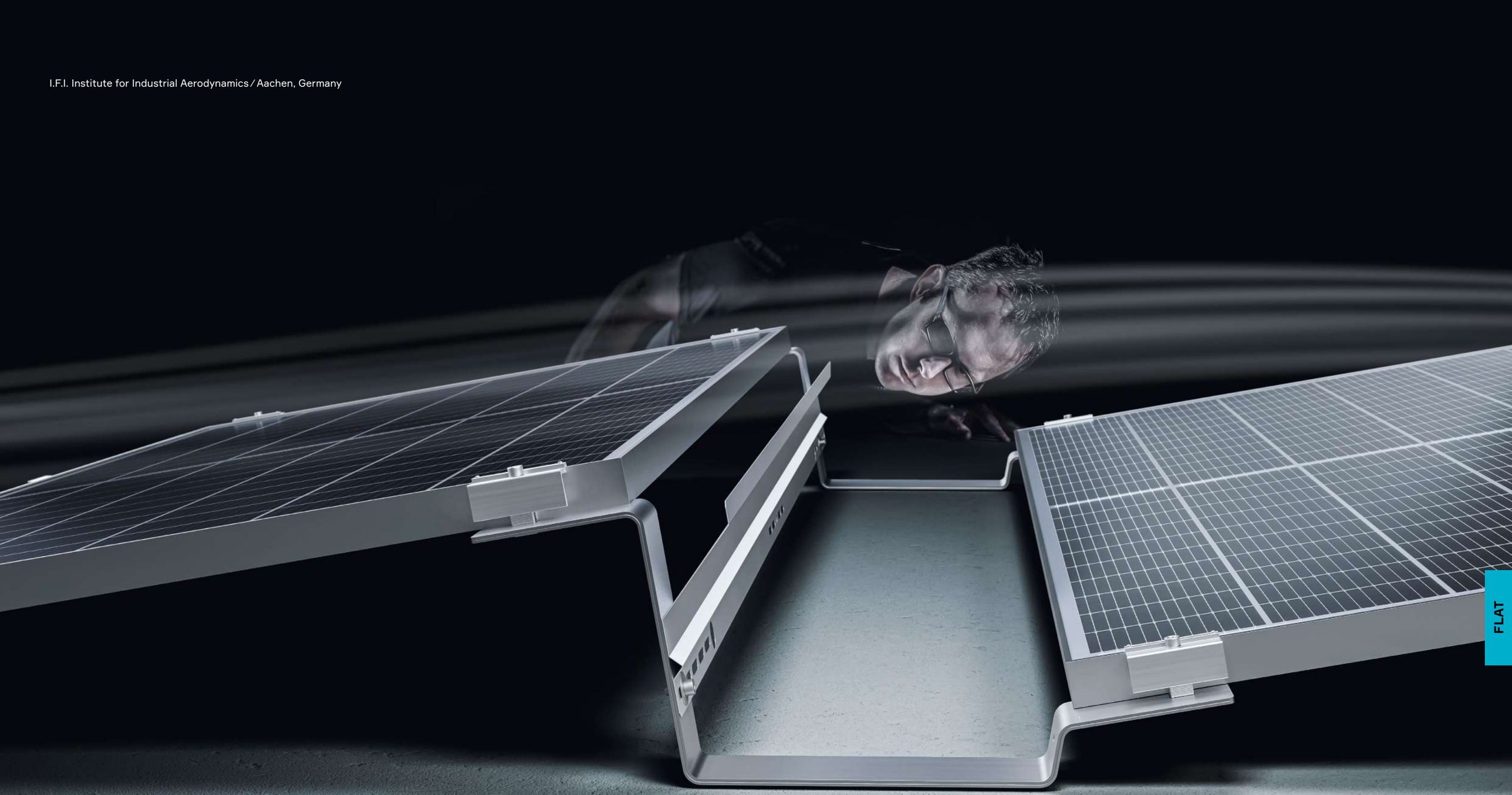
COMPACT**FLAT** GS10 PLUS



	A [mm]	B [mm]	C** [mm]	D [°]	E [mm]	F [mm]	G [mm]	H** [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	N [mm]
GS15	88,5	88,5	950–1150	15	270	399	380	1466–1674	282	562	–	692	438	270
GS10 PLUS	88,5	70	950–1150	10	270	399	382	2490–2897	245	468	163	–	–	–

** Depending on the PV module size

I.F.I. Institute for Industrial Aerodynamics / Aachen, Germany



COMPACT**GROUND**

COMPACT**GROUND G**

LIGHTWEIGHT.
ROBUST.
INTELLIGENT.

25
YEAR PRODUCT WARRANTY

WIND TUNNEL TESTED

GROUND-MOUNTED SYSTEM
Safe and tested substructures for the elevated mounting of photovoltaic modules on open spaces

The COMPACTGROUND solution for open spaces has outstanding static and aerodynamic properties. It requires considerably less ballast than other systems on the market. The product family impresses with its unique flexibility and is known for its easy assembly. Planning can be easily and conveniently implemented in just a few steps with the AEROTOOL 3D online software. The software provides extensive information in a project report with structural data as well as a material list with price for the automated ordering of AEROCOMPACT products.

MORE EFFICIENCY
Short assembly times and lower transport costs due to fewer components.

FLEXIBILITY
Different ballast options.

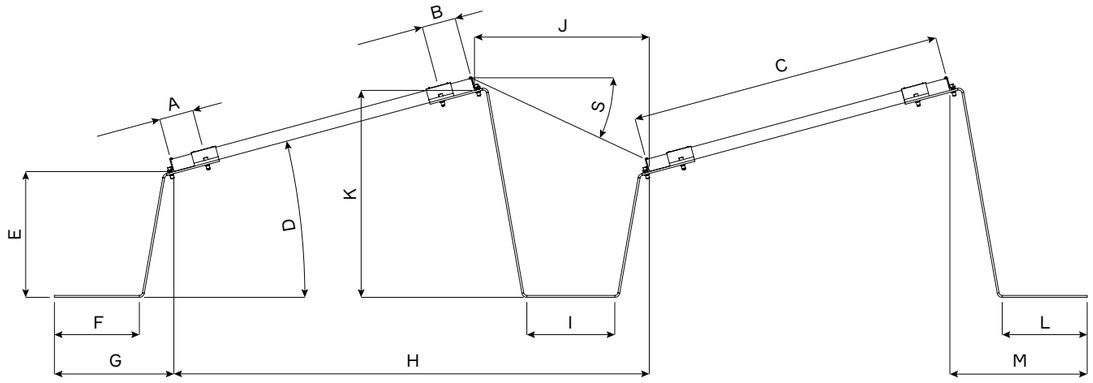
RELIABILITY
AEROTOOL offers planning security, maximum efficiency and innovative centralised project management with the greatest possible flexibility.

BRACKET SYSTEM - SOUTH 15° / 20°

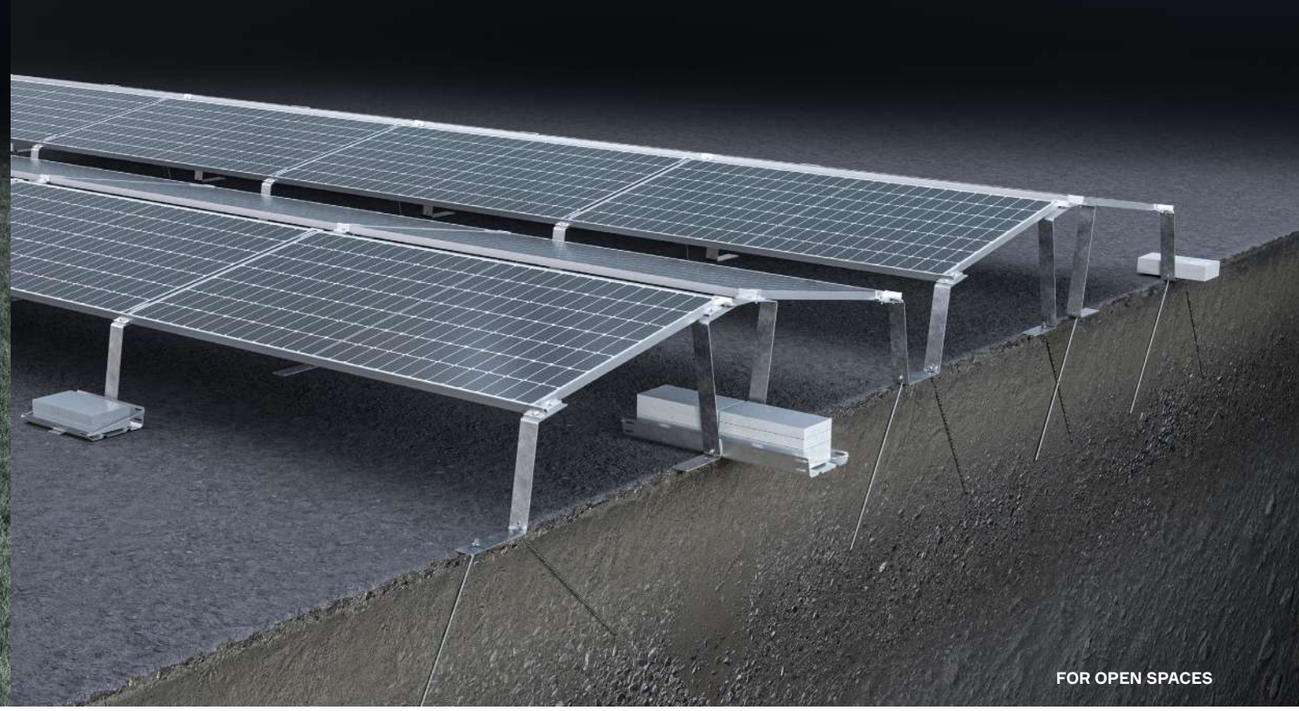
COMPACT**GROUND** G15 / G20

COMPACTGROUND G is our south-facing ground-mount system with an inclination of 15° and 20°. As the fastest ground-mounted system on the market, it is also possible to load up to 700 kWp into a truck. The system is built with ground anchors or ballast stones.

	A [mm]	B [mm]	C* [mm]	D [°]	E [mm]	F [mm]	G [mm]	H* [mm]	I [mm]	J [mm]	K [mm]	L [mm]	M [mm]	S [°]
G15 – 555 mm – Short spacing	108	108	950–1150	15	400	270	380	1470–1676	279	555	658	270	436	25
G15 – 797 mm – Long spacing	108	108	950–1150	15	400	270	380	1711–1918	521	797	658	270	436	18
G20 – 735 mm – Short spacing	108	108	950–1150	20	318	270	363	1622–1834	474	735	658	270	436	25
G20 – 1054 mm – Long spacing	108	108	950–1150	20	318	270	363	1941–2153	793	1054	658	270	436	18



* depending on the PV-module dimensions



COMPACT**GROUND GS10 PLUS**

THE CHALLENGE

Ground substrates are extremely variable - this is the main challenge for many PV projects. Not every ground mounting project allows for pile drive foundations.

This is often due to limited project sizes, geological restrictions or special subsoils such as sand or karst rock. Pile driving systems require a geological survey and are often not an option on landfill sites. For smaller projects under 2 MW in particular, the question arises: How can a stable, cost-efficient and easy-to-install alternative be found?

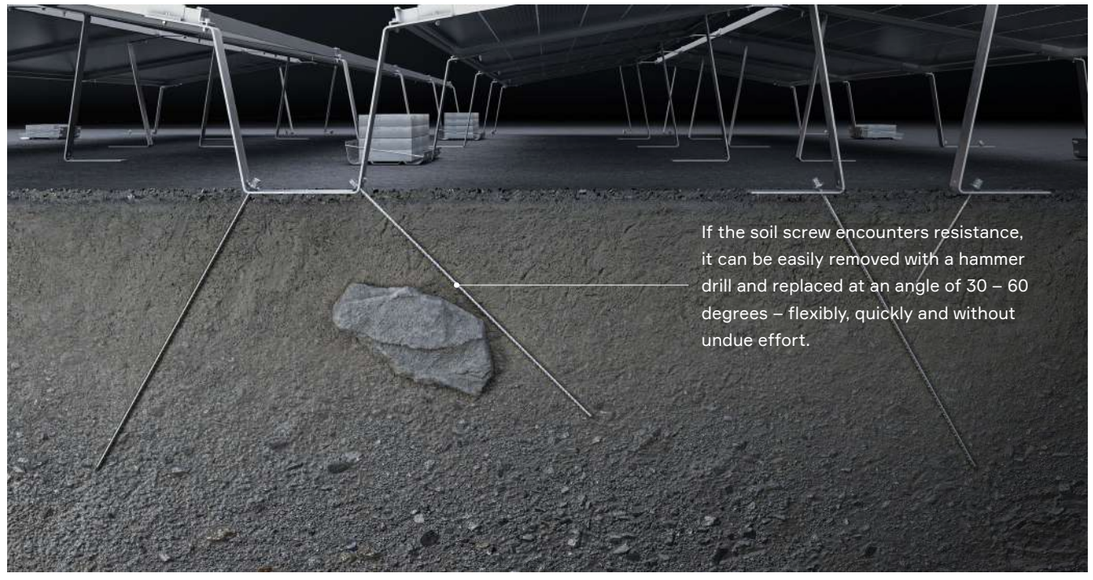
THE SOLUTION

The GS system offers a flexible and cost-effective solution for open space projects of any size.

The ground pegs are inexpensive and easy to drive in with a hammer drill and can be easily removed from the ground in the event of obstacles thanks to the embossed external thread. The hot-dip galvanized surface of the stirrups and ground pegs ensures corrosion resistance. Compared to conventional ground screws, the cost-effective ground pegs in combination with ballast trays offer the possibility of optimally distributing fastening points and ballast in line with wind loads, therefore achieving ideal positional stability. Thanks to the optimized design, each module can now be nailed, which saves material and costs. Two nail lengths – 800 mm to prevent frost heave, 450 mm for landfills and ballast trays - offer flexible fastening options, even for the most difficult conditions.

THE VERSIONS

The GS system with 10° east/west orientation secures position with ballast or a hybrid solution of ground nails and ballasting. Depending on the project requirements, two variants of nails (800 mm to prevent frost heave, 450 mm for waste disposal sites) and two options for ballast trays are available. This allows maximum flexibility to be combined with optimum stability.



COMPACT**PITCH**

COMPACT**PITCH**

LIGHTWEIGHT.
STABLE.
INTELLIGENT.

25 YEAR PRODUCT WARRANTY

WIND TUNNEL TESTED

1 KWP/ 2,5-3 MIN.

CE

PITCHED ROOF MOUNTING SYSTEM
Simple and robust installation of PV modules on pitched roofs

The COMPACTPITCH system family is used to attach framed photovoltaic modules to pitched roofs. It is characterized by the many mounting options. In this way the system enables the installation of the PV modules in vertical and horizontal format. The components can also be combined in different ways. Planning can be easily and conveniently implemented in just a few steps with the AEROTOOL online software. The software provides extensive information in a project report with statics data as well as a material list with price for the automated ordering of AEROCOMPACT products.

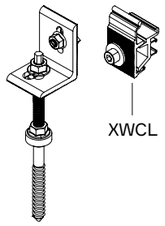
SIMPLE ASSEMBLY
Fast and user-friendly assembly.

MORE YIELD
The system enables optimized rear ventilation and thus an increase in yield.

The components of the COMPACTPITCH modular system offer the possibility of being combined with one another in different ways.

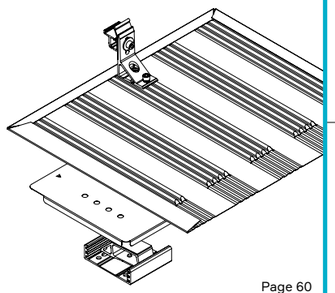
FOR CORRUGATED ROOFS

XW
Hanger-bolt



XW Page 56

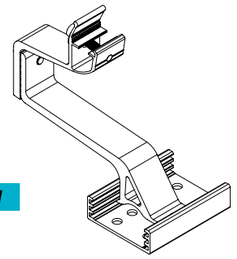
XM-F
Universal replacement tile



XM-F Page 60

SDS-W

XT-R
Roof hook

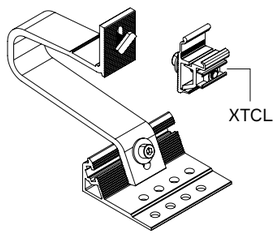


NEW

XT-R Page 62

FOR TILED ROOFS

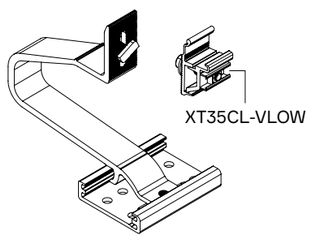
XT
Roof hook



XT Page 64

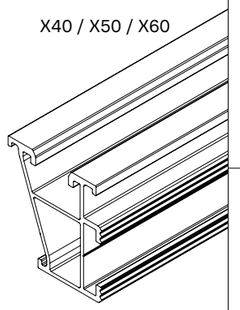
GSC10x16

XT35-VLOW
The quick mounting hook

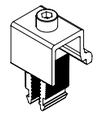


XT-VLOW Page 68

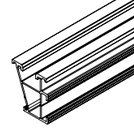
X40 / X50 / X60



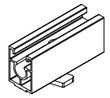
XDL



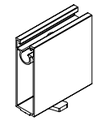
X40 / X50 / X60



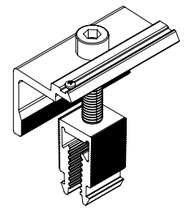
EL05



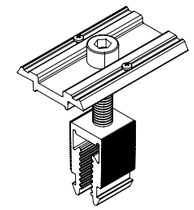
EL10



CLE



CLM



PITCH

COMPACT**PITCH XW**

NEW
XWS
WITH OPTIMISED STATICS

COMPACTPITCH XW is a rail-based racking system for framed or frameless PV modules on corrugated sheet metal, trapezoidal sheet metal or sandwich sheet metal roofs, as well as on corrugated fibre cement panels. In this impressively coherent concept the central structural element is the aluminium mounting rail, which offers a higher static load-bearing capacity due to its distinctive triangular shape.

+ Modular mounting rail system
+ Height-adjustable rails
+ High static stability
+ Long thread for height adjustment
+ Simple and fast assembly
+ 25-year product warranty

THE CHALLENGE

Corrugated sheet metal, trapezoidal sheet metal and sandwich sheet metal roofs, along with corrugated fibre cement panels demand an intelligent racking system and simple installation. Many existing systems on the market have obvious weaknesses in terms of stability. We have been searching for an optimised solution to this problem.

THE SOLUTION

Compared to other rail systems, the COMPACTPITCH XW requires less mounting material while maintaining the same product performance. The rail sits on a sturdy hanger bolt, which ensures a firm connection to the roof. This racking system provides a perfect solution for every area of application: the cost-optimised XW version, designed for regions with little wind and snow, is just as convincing as the new XWS version, which was specially designed for high snow and wind loads and has the highest static values.

CLICK CLAMP
The PV modules can be affixed to the mounting rails using the click clamp with integrated earthing pins. The universal clamp for all systems is height-adjustable from 30–46 mm and can be conveniently clicked into place.

MOUNTING RAIL
The very high static load-bearing capacity of the aluminium X40, X50 and X60 mounting rails is achieved via a distinctive triangular shape. Both product versions are also available in black.

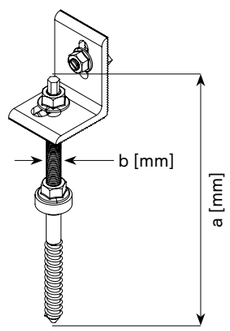
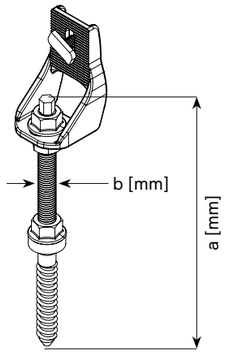
THE HAMMER HEAD SCREW
The standard version has a hammer head screw and nut. Installation is quick and easy at any position of the rail without threading at the end of the rail.

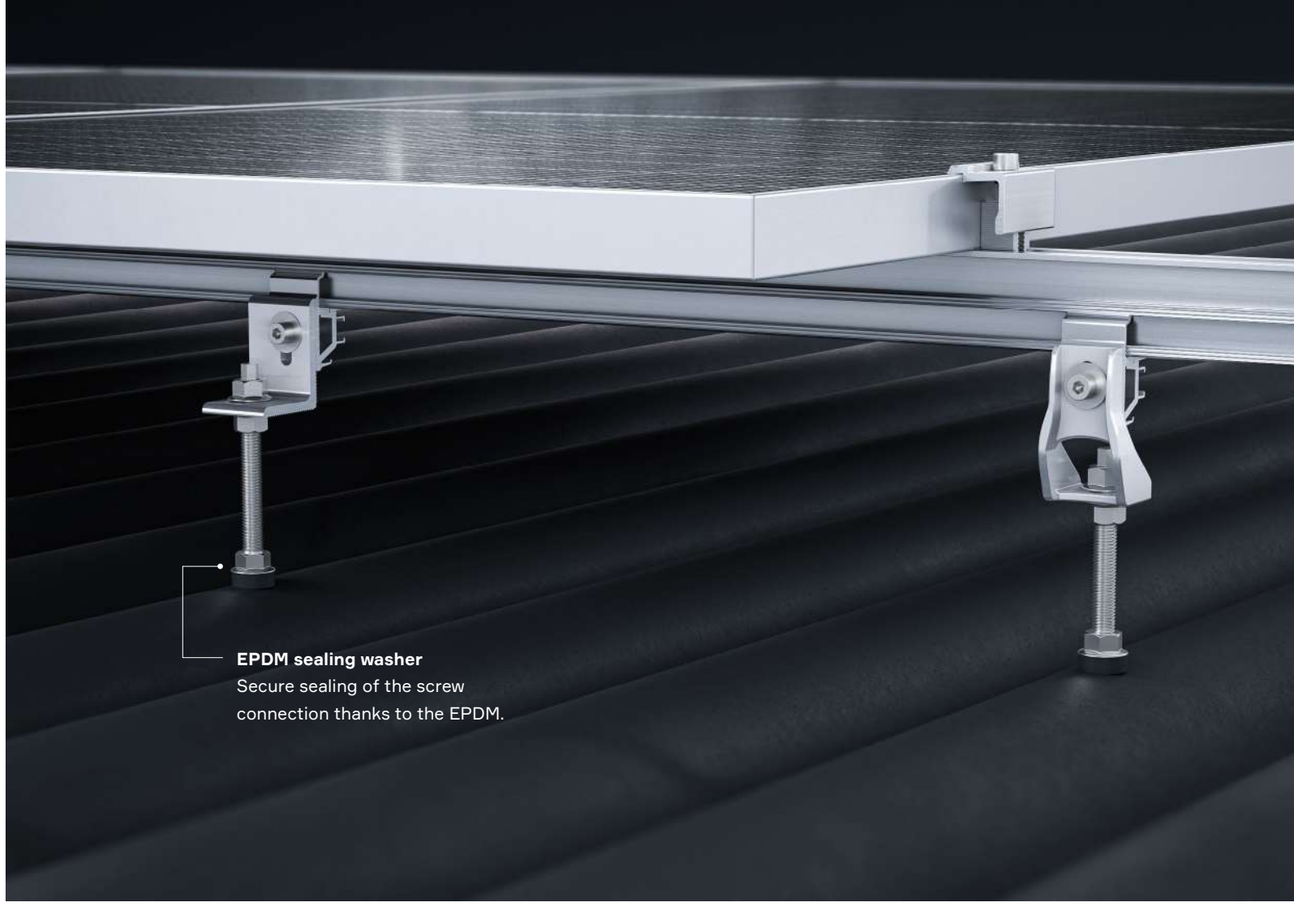
CL CLICK FAST FIXATION
When you need to get things done even faster! If that's the case, the XW hanger bolts with the pre-mounted CL click fast fixation are available as an alternative. It is able to accommodate all X-mounting rails quickly and conveniently using the innovative click mechanism.

THE HANGER BOLT
The rail sits on a sturdy hanger bolt, which ensures a firm connection to the roof. A long, metric thread on the hanger bolt allows the whole system to be mounted horizontally and to compensate for any unevenness.

THE VERSIONS

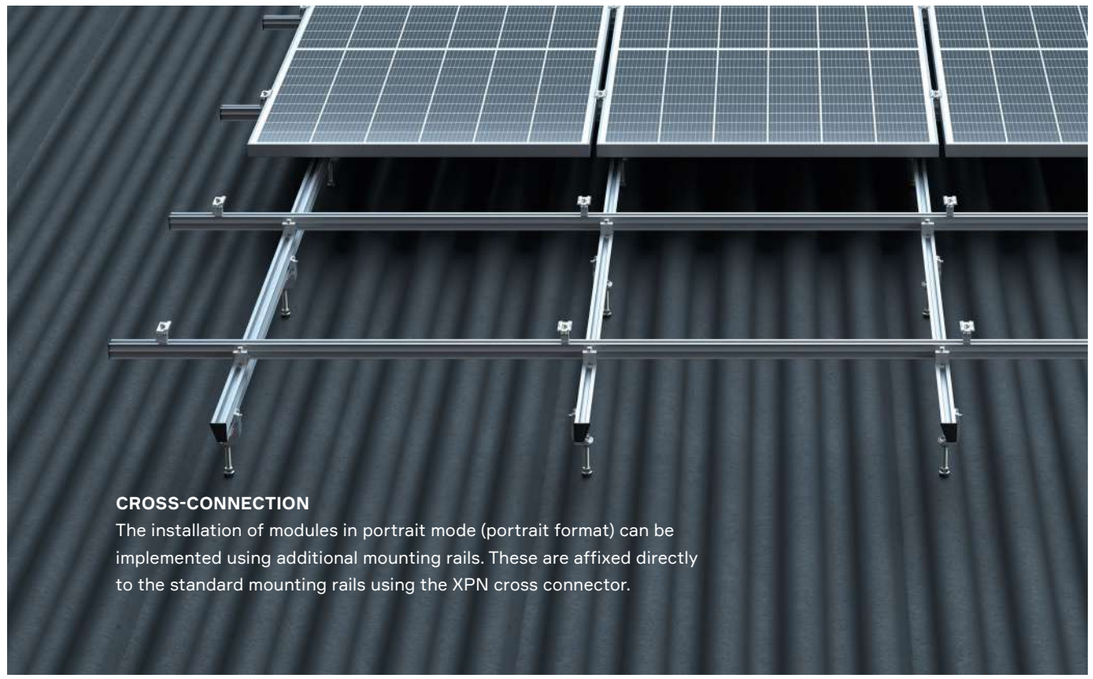
The addition of the new COMPACTPITCH XWS hanger bolt set now also guarantees the challenging use of PV installations in snowy regions. The original, already proven COMPACTPITCH XW product version will continue to be the solution for roof installations in areas with little snow.

Version	XW	XWS
Legend		
Available hanger bolt lenghts a [mm]	180 mm, 200 mm, 250 mm, 300 mm	180 mm, 200 mm, 250 mm, 300 mm
Available hanger bolt diameter b [mm]	M10, M12	M10, M12
CL click fast fixation possible	Yes	Yes
Distance from the roof surface	At least 100 mm	At least 100 mm
Area of application	With reduced wind and snow loads	With high wind and snow loads
Minimum screw-in depth in roof battens	M10: min. 40 mm; M12: min. 48 mm	M10: min. 40 mm; M12: min. 48 mm



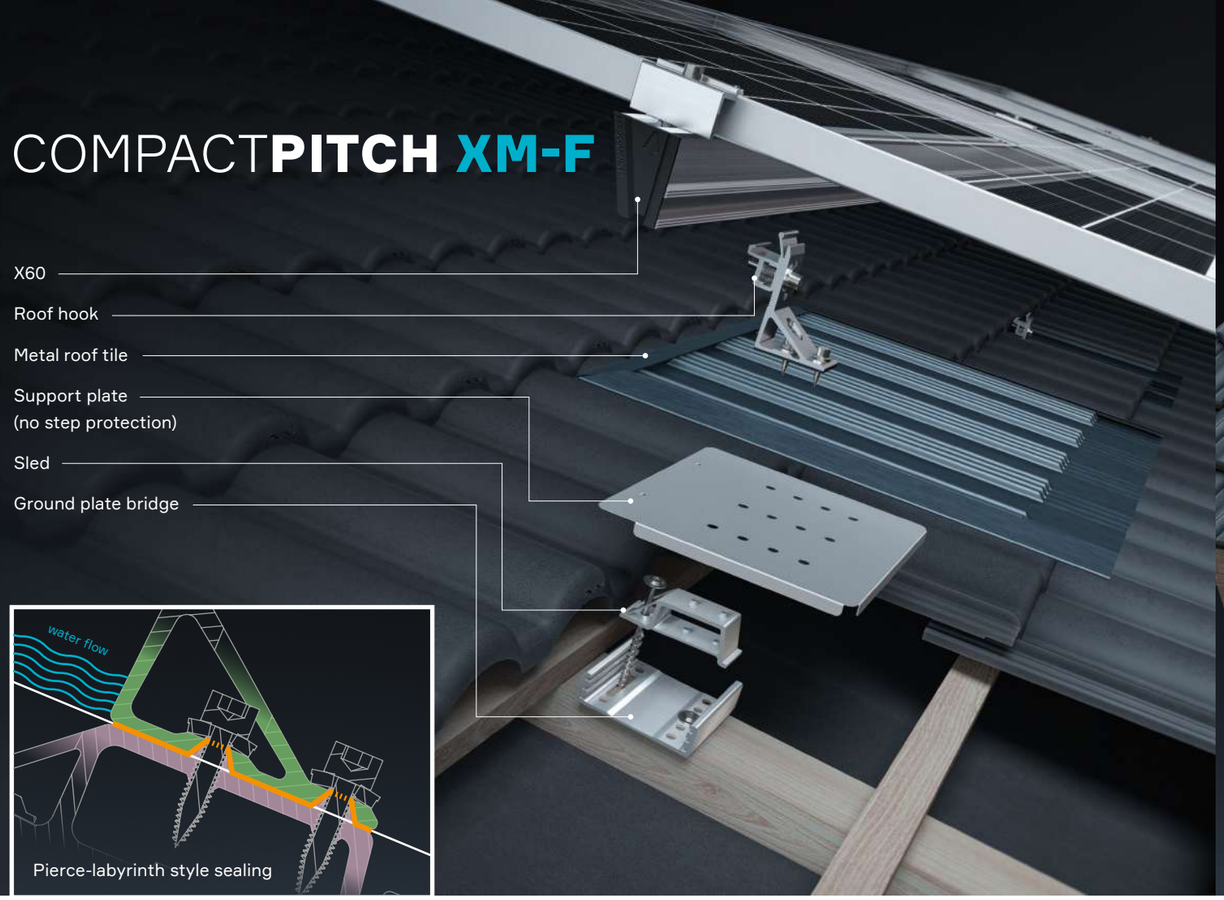
EPDM sealing washer
Secure sealing of the screw connection thanks to the EPDM.

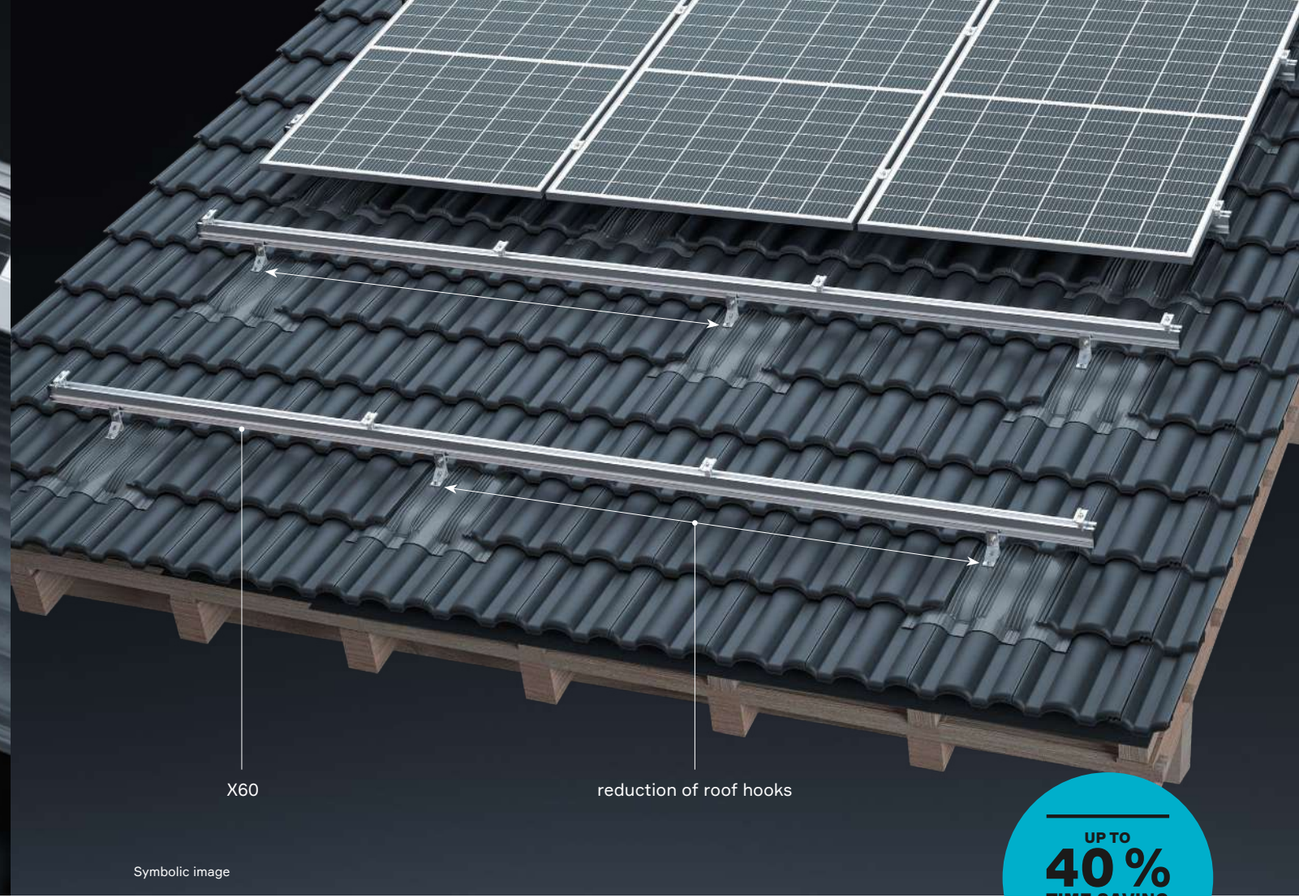
Symbolic image. The versions are not mixed with each other.



CROSS-CONNECTION
The installation of modules in portrait mode (portrait format) can be implemented using additional mounting rails. These are affixed directly to the standard mounting rails using the XPN cross connector.

COMPACT**PITCH** XM-F





THE CHALLENGE

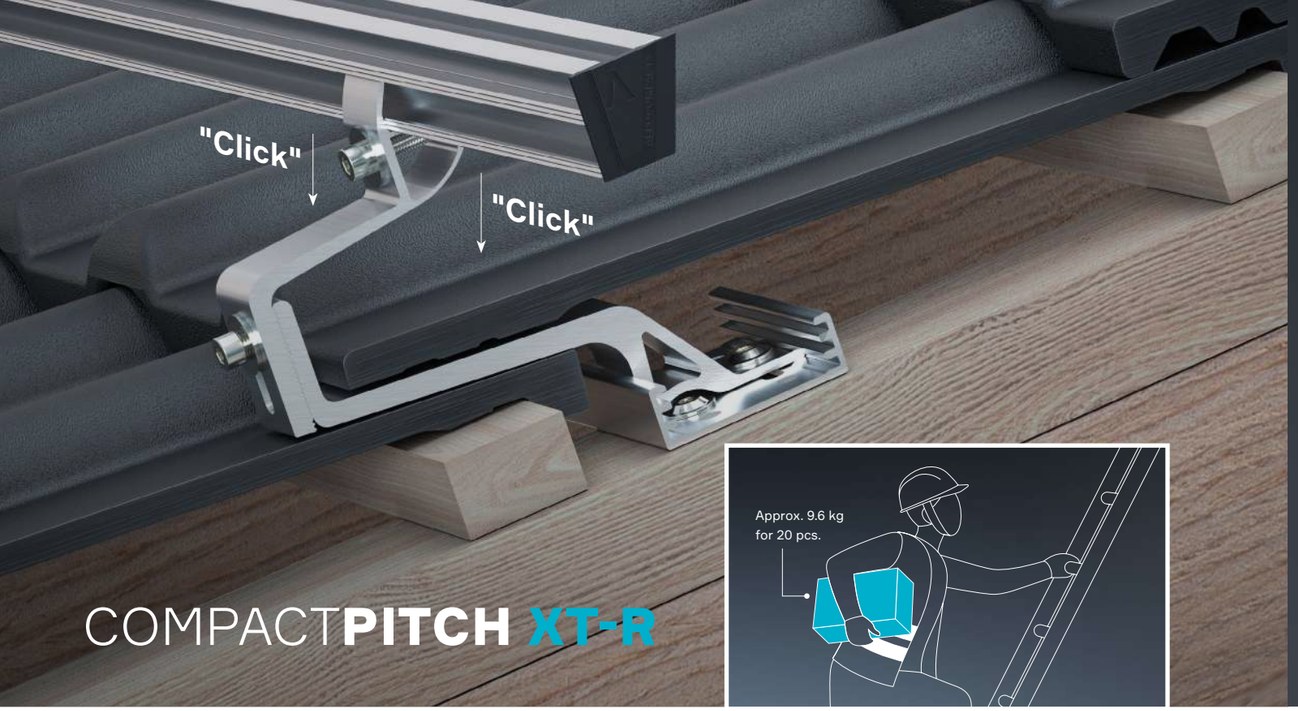
The installation of roof hooks usually requires a wide variety of tools and machines. With conventional roof hooks, the roof tiles must be machined with an angle grinder in order to reinsert the tile flush over the roof hook. When working, there is a risk that they will break and leak over time. The positioning of the roof hook depends on the tile, so the forces are not optimally transferred into the roof structure via the rafter. The use of sheet metal substitute tiles results in high storage costs for the installer and, due to the large variety of types, especially on the European market, increases the risk of complications and thus delays in delivery and installation.

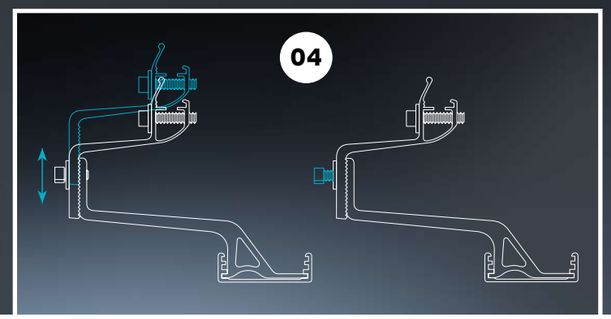
THE SOLUTION

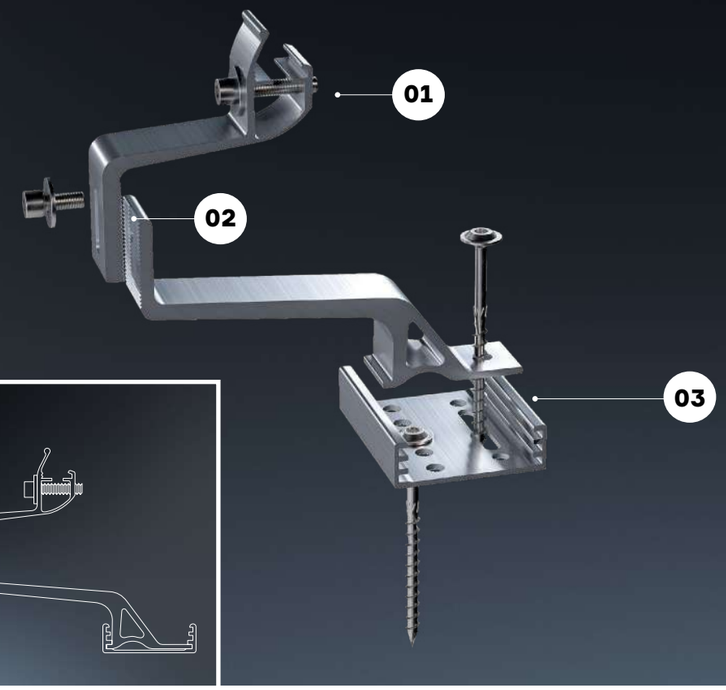
The XM-F REPTILE system offers an innovative solution for a wide range of different roof tiles on pitched roofs: With a flexible cover that adapts to the shape of the tile. AEROCOMPACT's Pierce Labyrinth Seal allows flexible positioning of the roof hook on the flashing. The roof hook can therefore always be mounted centrally on the rafter, regardless of the tile position, thus guaranteeing optimal force transmission. This results in an enormous load-bearing capacity of the roof hook and, depending on the area of application and system combination, leads to a significant reduction of fastening points. A support plate (no step protection) is only required to prevent accumulation due to snow loads if the cover plate is located outside the module field. The slide can be adjusted to three different heights and adapted to the roof batten height. Fine adjustment of the engaged rail is possible with the pre-assembled quick connector. With our specially developed thin sheet metal screw, installers only need one bit to tighten all screws. The XM-F REPTILE system is a novel roof hook design that is particularly strong due to the optimized force transmission into the rafters. This makes it much easier to install in areas with high snow loads. In areas with lower snow loads, the number of roof hooks can be significantly reduced by combining them with the X60 rail, thus saving installation time and construction costs.

THE VERSIONS

Compared to replacement metal roofing tiles, the reduction to just one variant reduces storage costs many times over. The flexible solution is available in brown, red and anthracite. A roof hook for every requirement simplifies logistics and work preparation. For customers who use sheet metal replacement tiles, the reduction in the number of variants makes purchasing, storage costs and planning easier. **New:** There is now also a larger version of the cover plate – available in anthracite and red – for an extended range of applications.







THE CHALLENGE

Bulky or inflexible parts on commercially available roof hooks make transportation to the construction site difficult. The large number of product parts makes quick installation difficult.

Additional process steps in production have an impact on production costs and therefore on the final price for customers. Current roof hook series increase the transport volume due to their bulky components. Smaller assemblies, such as the quick release, could not be adequately secured during delivery.

THE SOLUTION

Thanks to the intelligent reduction of product elements and an integrated quick-release clamp, AEROCOMPACT optimizes the installation process and makes assembly much more efficient.

The proven three-stage AEROCOMPACT grid of the base plate enables uncomplicated adjustment to the height of the roof battens and ensures high stability. The new COMPACTPITCH XT-R roof hook is an improved alternative to its predecessor models and makes installation considerably easier: simply attach the XT-R roof hook to the rafter, snap in the rail, align horizontally, tighten – done! The XT-R series therefore positions itself as an extremely efficient solution for use on tiled roofs and scores points above all with its quick and easy installation.

ONE HOOK FOR EVERYTHING

01 **THE QUICK RELEASE**
The XT-R roof hook is supplied with an integrated quick release. The click mechanism makes installation and handling much more efficient.

02 **SPACE-SAVING PRODUCT COMPONENTS**
Thanks to the new product design, the XT-R roof hook can be easily folded. This reduces transportation and storage costs.

03 **QUICK FIXING**
The base plate is positioned and fixed to the rafter with just one screw. After adjustment to the roof batten height using 3-level structuring, the roof hook is fixed in place.

04 **INTELLIGENT ADJUSTMENT**
The small-tooth ratchet in combination with the disc spring allows the rail to be easily leveled and prevents the upper part of the hook from slipping during installation.

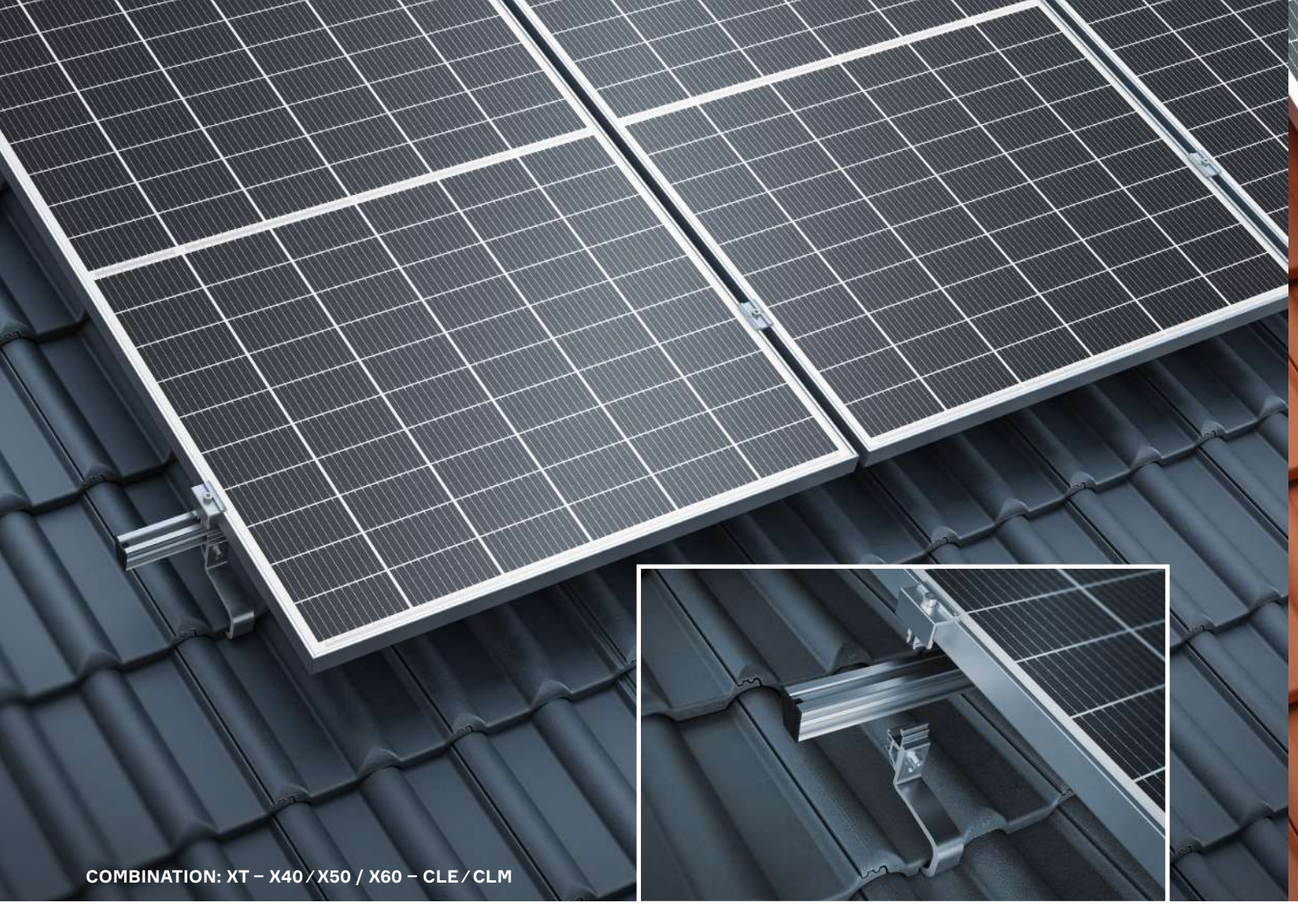
COMPACTPITCH XM-B

The XM-B replacement tile system works in conjunction with the XT-R hook to replace the original concrete or clay tile.

The XM-B family can be used for the most common roof tile types in Europe and supports their durability. Especially in regions where high snow loads are to be expected, metal replacement tiles guarantee a reduced risk of breakage in contrast to conventional tiles.

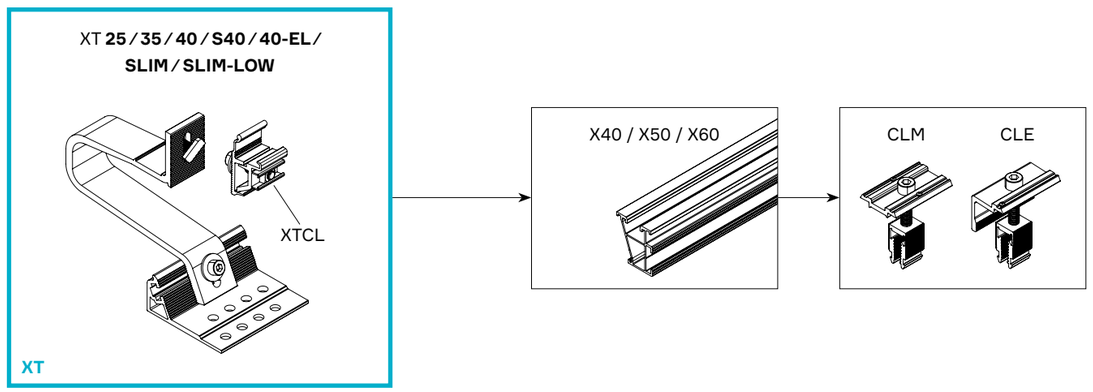
A foam wedge is also included for optimum sealing against water ingress (tested watertightness in accordance with prEN15601), and the adjustable metal apron means that the XM-B can be fitted easily and without tools – eliminating the need for mechanical processing of the roof tiles and making installation safer overall.

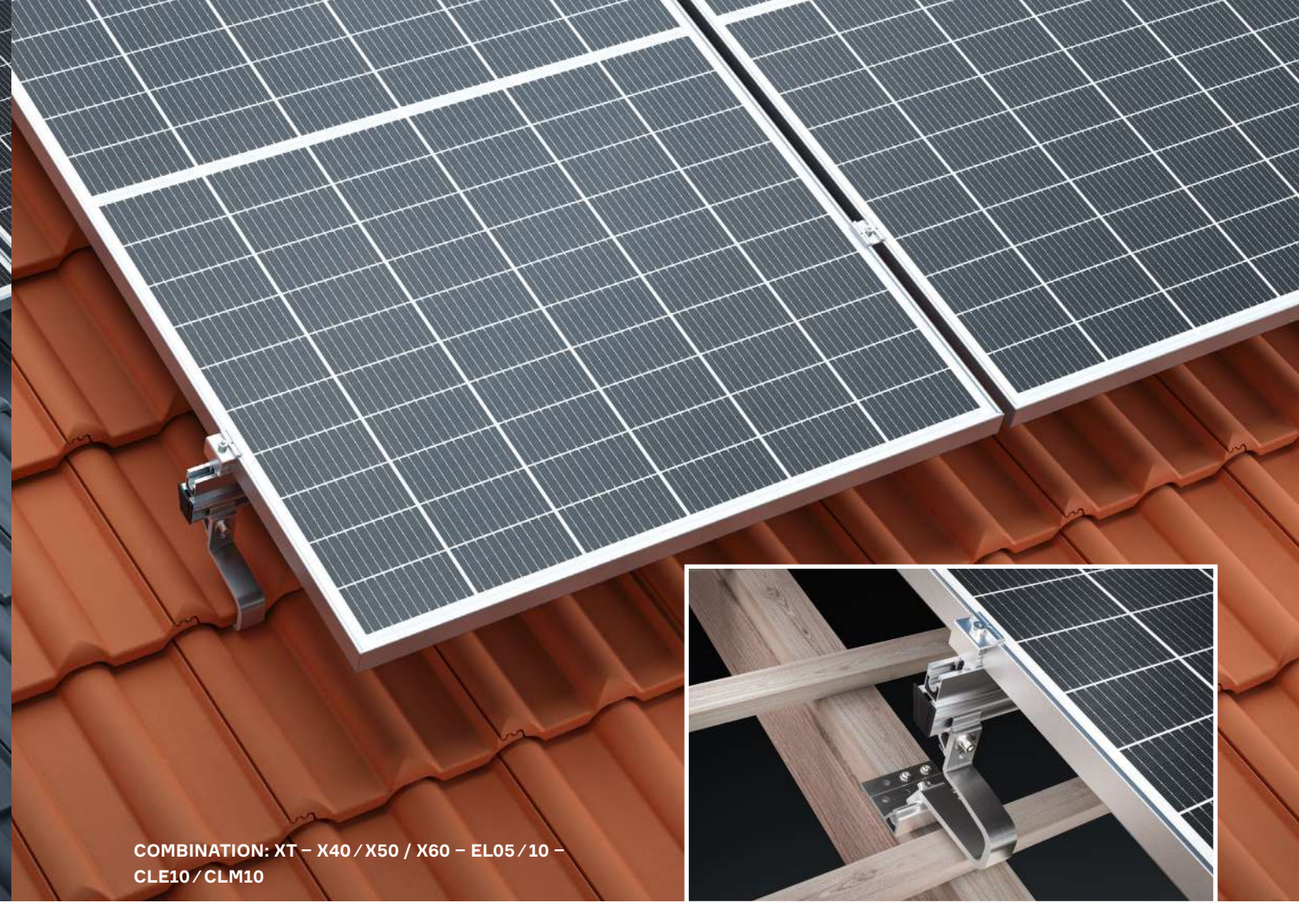
Here you will find a detailed list of suitable tile types



COMPACT**PITCH XT**

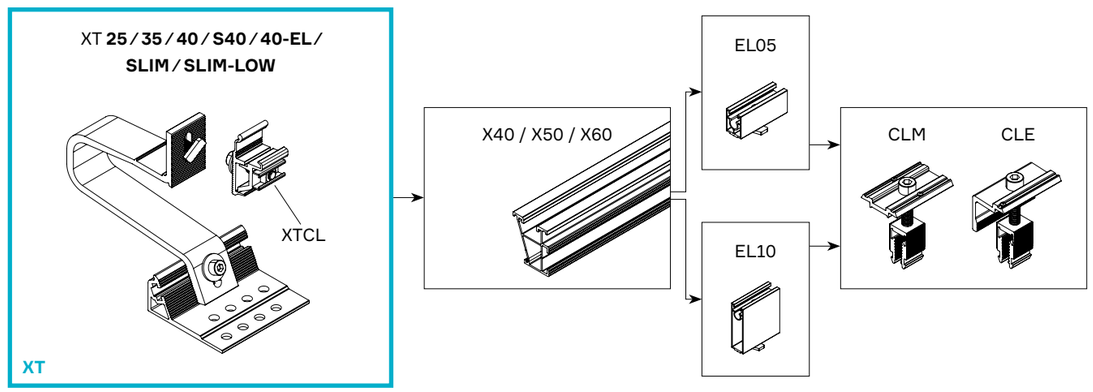
+ XT roof hook with quick click assembly
+ X40 / X50 / X60 mounting rail
+ CLE end clamp Click 30–46 mm /
  CLM middle clamp Click 30–46 mm





COMPACT**PITCH XT**

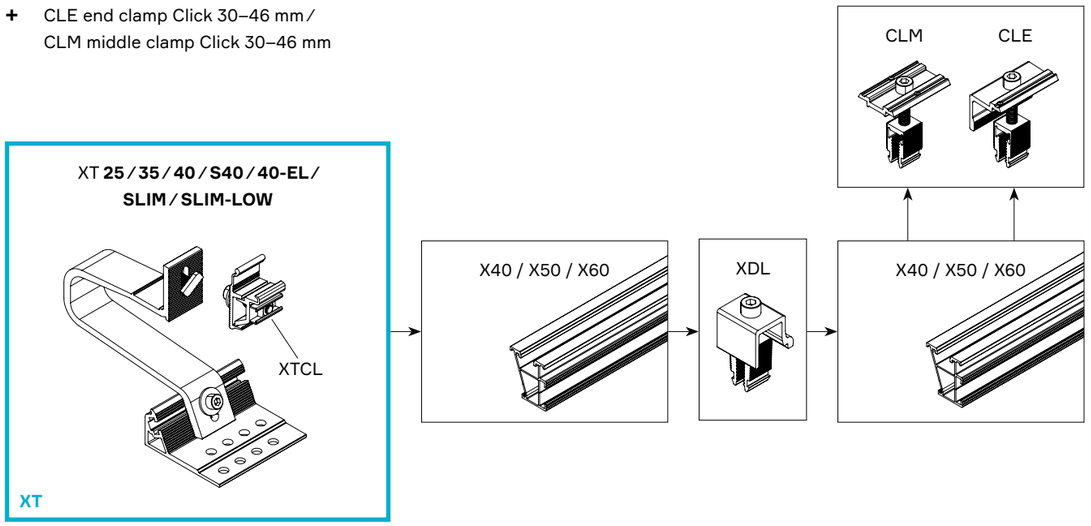
+ XT roof hook with quick click assembly
+ X40 / X50 / X60 mounting rail
+ EL05 / 10 height adapter
+ CLE end clamp Click 30–46 mm /
+ CLM middle clamp Click 30–46 mm



COMBINATION: XT – X40 / X50 / X60 – XDL – X40 / X50 / X60 – CLE / CLM

COMPACT**PITCH XT**

- + XT roof hook with quick click assembly and cross-connection
- + X40 / X50 / X60 mounting rail (2x)
- + XDL cross connector
- + CLE end clamp Click 30–46 mm / CLM middle clamp Click 30–46 mm

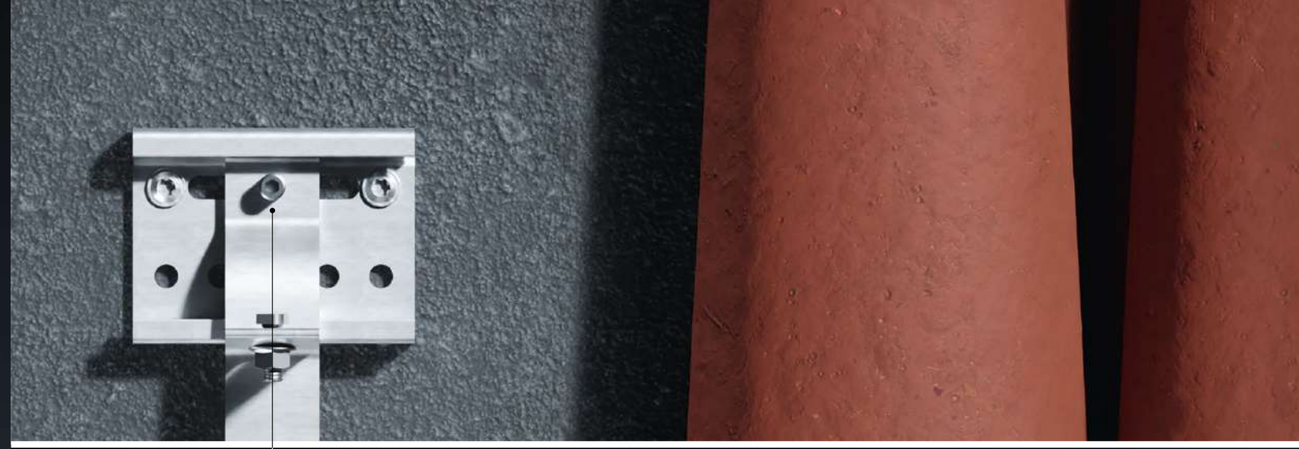


AUSTRIA / 5,25 KWP

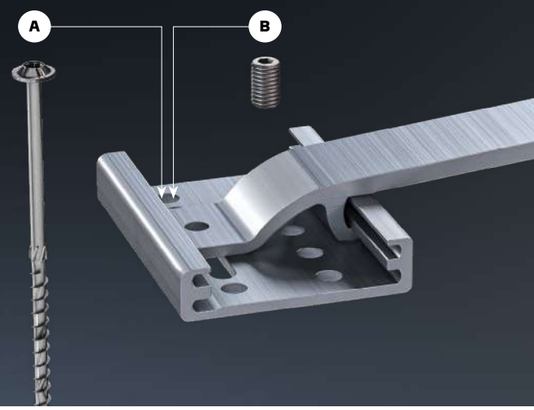
AUSTRIA / 10 KWP

COMPACT**PITCH XT-VLOW**

The XT-VLOW quick mounting hook delivers what it promises - fast and powerful mounting options with high flexibility and multiple adjustment options. For roofing with Mediterranean tiles or for applications with low roof battens such as Portuguese, the aluminum hook can fully maximize all its possibilities. The roof hook is a member of the COMPACTPITCH product family and is compatible with all X-mounting rails and components from the modular system. The XT-VLOW quick-assembly hook is stored and programmable in the planning and engineering software AEROTOOL.



BASE PLATE FIXING IN CONCRETE
The base plate can be anchored in concrete without any problems using the appropriate concrete anchoring technology. The positioning screw is used to easily control the lateral positioning. Height adjustability is also unrestricted on concrete surfaces.



THE 3-IN-1 HOOK

The sophisticated design of the base plate and the XT-VLOW roof hook allows for tool-free assembly. The hook must only be inserted from the side into the guides of the base plate - done. Depending on the application, the appropriate type of screw for hook anchoring is selected.

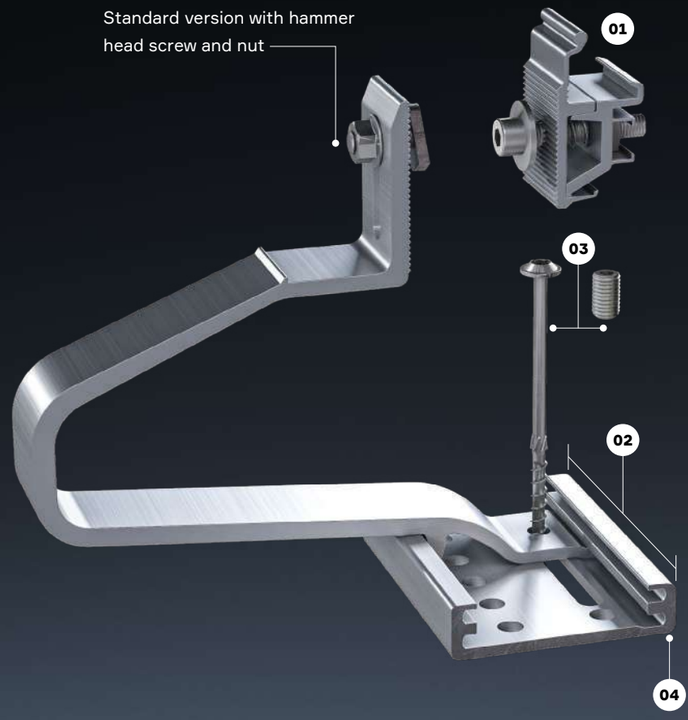
CENTERED BASE PLATE / MOUNTING SCREW
The fastening of the base plate is fixed by wood screws. Fine adjustment of the hook is made by moving it horizontally along one of the two guide planes. The final fastening is done with a single wood screw. This pulls the hook towards the base plate and prevents it from moving laterally. This function can be used at both guide levels.

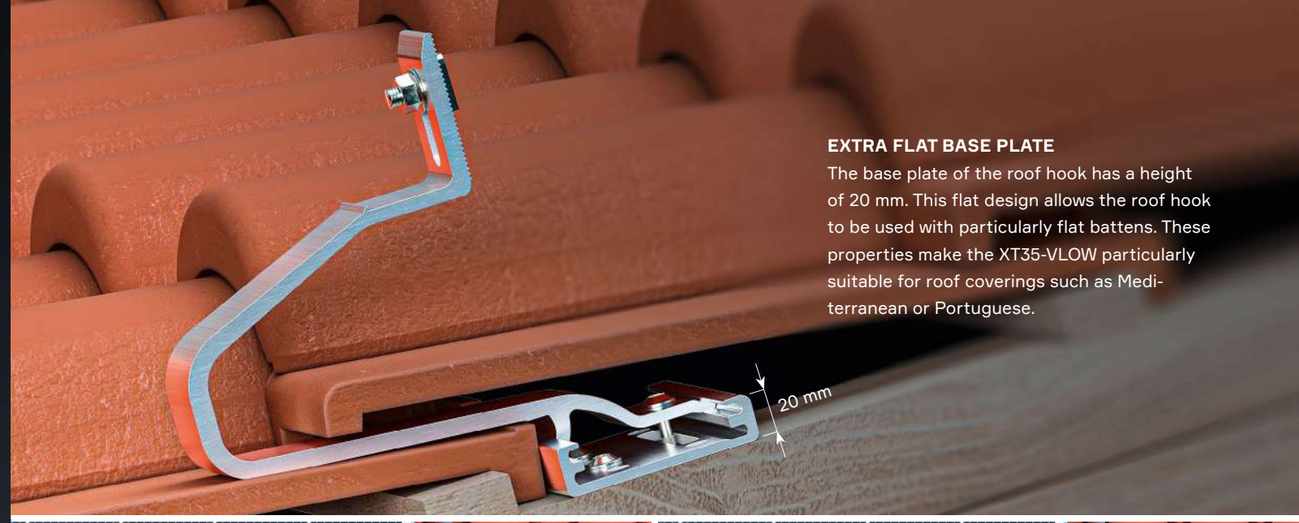
DECENTRALIZED BASE PLATE / POSITIONING SCREW
If decentralized mounting of the base plate is necessary, this can be done quickly and easily. Wood screws are used to attach the cantilever base plate to the substructure. The decentralized fastening of the roof hook is done with a threaded pin with an internal hexagon included in the delivery. This is fixed in the base plate by tightening. Shifting in a lateral direction is thus no longer possible.

SELECTION OF FASTENING SCREWS
Fastening screws and positioning screws are available as accessories for the XT-VLOW quick-assembly hook. All three positioning options are possible with these screws.

A **FASTENING SCREW**
for simultaneous positioning and mounting of the roof hook

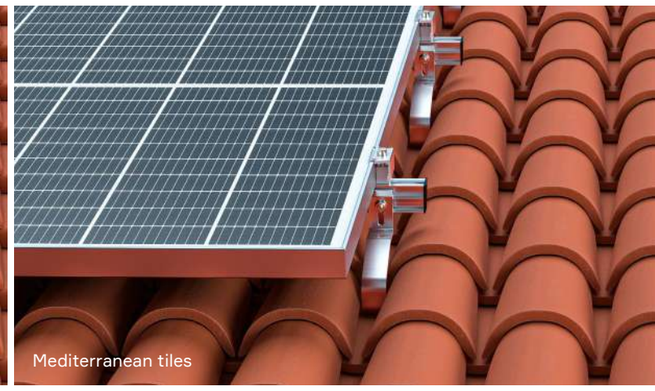
B **POSITIONING**
screw for positioning the roof hook for decentralized base plate and for concrete anchoring.





EXTRA FLAT BASE PLATE
The base plate of the roof hook has a height of 20 mm. This flat design allows the roof hook to be used with particularly flat battens. These properties make the XT35-VLOW particularly suitable for roof coverings such as Mediterranean or Portuguese.


Portuguese tiles


Mediterranean tiles

THE QUICK MOUNTING HOOK

01 **THE CL QUICK RELEASE ADAPTER**
When it has to go even faster! In this case, the XT35-VLOW roof hook with pre-mounted quick-release CL adapter is available as an alternative. It is able to accommodate all X-mounting rails quickly and conveniently using the innovative click mechanism.

02 **POSITIONING**
With the help of the integrated guides in the base plate, lateral adjustment is made easy. For height adjustment, one of the two guides can be used for height adjustment.

03 **ATTACHMENT**
For final fixing, a single screw is sufficient to utilize the full static capacity of the hook.

04 **HEIGHT ADJUSTMENT**
Unlike standard roof hooks for PV systems on pitched roofs, the XT35-VLOW has two vertical positions instead of the usual plates with serrations and screws. This design saves installers on the roof a lot of time adjusting the hooks in relation to each other.

CROSS-CONNECTION
Using the optionally available X40 / X50 / X60 mounting rail, it is possible to install modules in landscape mode. The additional module rails are attached directly to the base rails with the XPN cross connector. This variant is also possible for the roof hook with quick-release fastener and can be planned in AEROTOOL.

AUSTRIA / 7 KWP

AUSTRIA / 5 KWP

AUSTRIA / 5,2 KWP

AUSTRIA / 5,2 KWP

COMPACT**METAL**

COMPACT**METAL**

SIMPLE.
STABLE.
PROVEN.

25 YEAR PRODUCT WARRANTY · WIND TUNNEL TESTED · 1 KWP/ 2,5–5 MIN. · PATENTED · CE

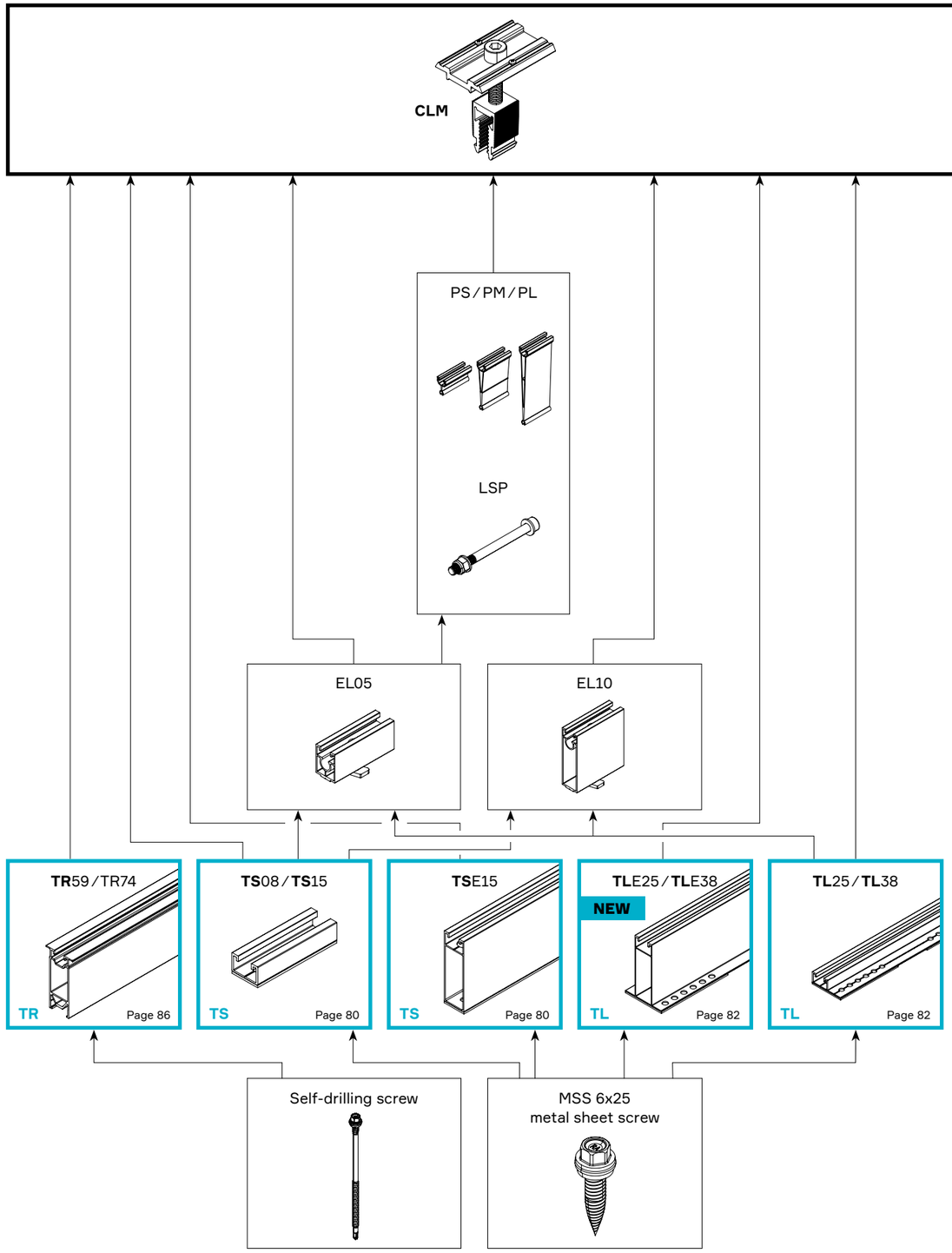
METAL ROOF SYSTEM
Compact and robust installation of PV modules on metal roofs

The COMPACTMETAL system family is used to attach framed photovoltaic modules to metal roofs and enables the PV modules to be installed in vertical and horizontal format. It is characterized by its simple and modular system. The components offer the possibility of being combined in different ways. Planning can be easily and conveniently implemented in just a few steps with the AEROTOOL 3D online software. The software provides extensive information in a project report with structural data as well as a material list with price for the automated ordering of AEROCOMPACT products.

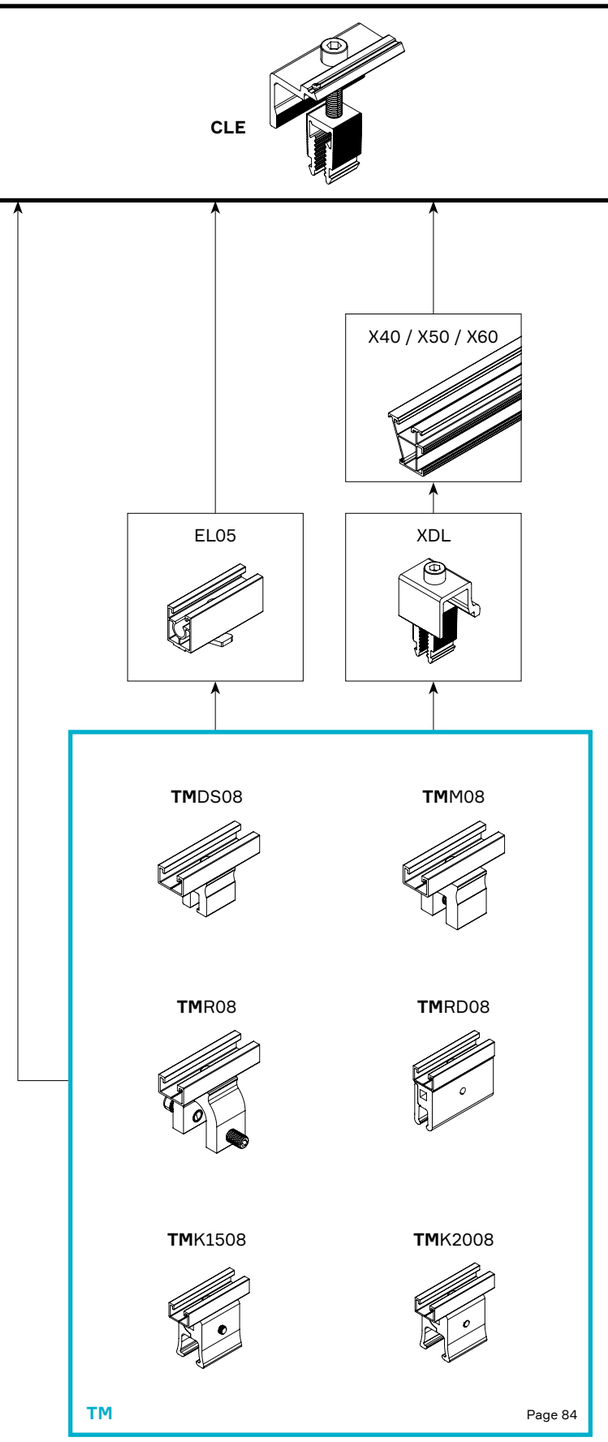
FLEXIBILITY
COMPACTMETAL offers solutions for all types of metal roofs.

MORE PROFIT
The system enables optimized rear ventilation and thus an increase in yield.

RELIABILITY
AEROTOOL offers planning security, maximum efficiency and innovative centralised project management with the greatest possible flexibility.



FOR TRAPEZOIDAL SHEET AND SANDWICH ROOFS



FOR STANDING SEAM METAL ROOFS

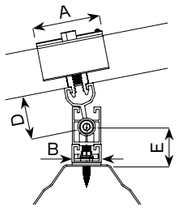
COMPACT**METAL** TS

TRAPEZOIDAL SHEET ROOF – SHORT RAIL SYSTEM
The COMPACTMETAL TS08 and TS15 are our trapezoidal sheet short rails with the best price-performance rate. The rails are pre-assembled with sealing tape.

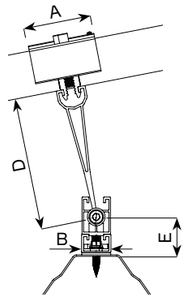
TSE15 RAISED SHORT RAILS
The product range is extended by a rail with a height of 80 mm in order to comply with roof clearances, to ensure rear ventilation and to enable the installation of optimizers.The raised short rail can be installed without additional major assembly effort - only a bit extension is required. The appropriate bit extension is suggested during project planning in the AEROTOOL so that it is always available on site.

TS08 SHORT RAILS
Direct mounting with module clamps on 80 mm short rails minimizes material costs and labor time. Full safety and fast installation at the best price.

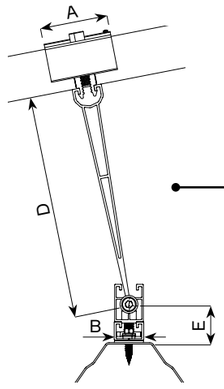
TS15 SHORT RAIL
The slightly longer short rail offers more mounting tolerance as well as the possibility to achieve a higher load capacity per fastening by using 3 instead of the usual 2 thin sheet metal screws. This short rail is optimized for use on trapezoidal sheets with low sheet thickness.



PS



PM

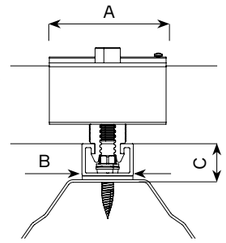


PL

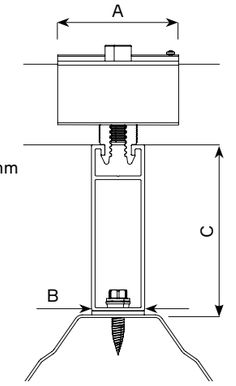
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
TS08/TS15	60	26	18,5	–	–
TSE15	60	26	82	–	–
TS08/TS15 – EL05	60	26	52	–	–
TS08/TS15 – EL10	60	26	102	–	–
TS08/TS15 – EL05 – PS	60	26	–	38	34
TS08/TS15 – EL05 – PM	60	26	–	118	34
TS08/TS15 – EL05 – PL	60	26	–	204	34

THE VERSIONS

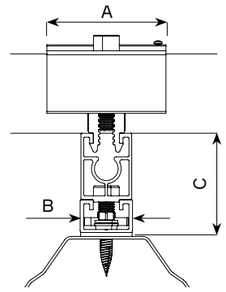
TS08 / TS15
+ TS08 trapezoidal sheet short rail, length 80 mm / TS15 trapezoidal sheet short rail, length 150 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



TSE15
+ TSE15 trapezoidal sheet short rail, length 150 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



TS08 / TS15 – EL05 / EL10
+ TS08 trapezoidal sheet short rail, length 80 mm / TS15 trapezoidal sheet short rail, length 150 mm
+ EL05 / EL10 height adapter
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



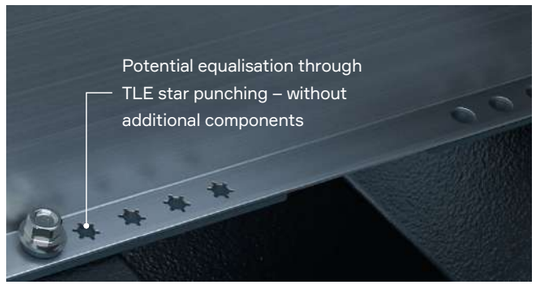
TS08 / TS15 – EL05 – PS / PM / PL
+ TS08 trapezoidal sheet short rail, length 80 mm / TS15 trapezoidal sheet short rail, length 150 mm
+ EL05 height adapter
+ PS front inclination adapter
+ PM rear inclination adapter
+ PL rear inclination adapter
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ LSP locking screw set to secure the inclination adapters
+ MSS 6x25 metal sheet screw

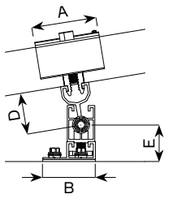
COMPACT**METAL** TL

TRAPEZOIDAL SHEET ROOF – BRIDGE SYSTEM
The COMPACTMETAL TL25 and TL38 trapezoidal sheet bridges are for longitudinal and transverse mounting of modules. The bridges are pre-assembled with sealing tape.

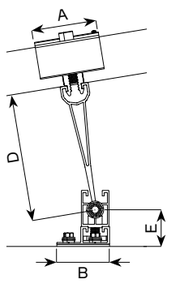
TL25/TL38 TRAPEZOIDAL SHEET BRIDGE
Direct mounting with module clamps on trapezoidal sheet metal bridges minimizes material costs and working time. Full safety and fast installation at the best price.

TLE25/TLE38 RAISED TRAPEZOIDAL SHEET METAL BRIDGE
A rail with a height of 80 mm has been added to the product range to ensure better rear ventilation and enable the installation of optimisers. The TLE bridge thus minimises installation work.

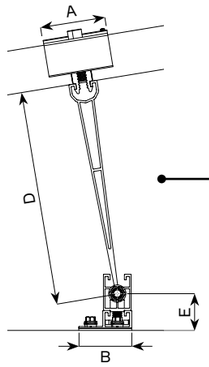




PS



PM

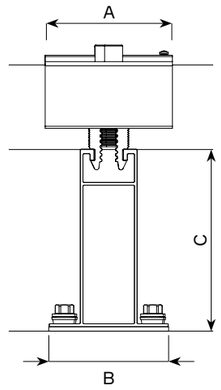


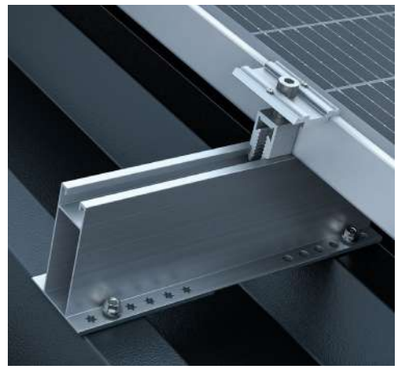
PL

	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
TL25/TL38	60	49	18,5	–	–
TLE25/TLE38	60	54	82	–	–
TL25/TL38 – EL05	60	49	52	–	–
TL25/TL38 – EL10	60	49	102	–	–
TL25/TL38 – EL05 – PS/PL	60	49	–	38	34
TL25/TL38 – EL05 – PS/PM	60	49	–	118	34
TL25/TL38 – EL05 – PS/PL	60	49	–	204	34

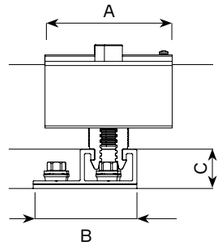
THE VERSIONS

TLE25/TLE38
+ TLE25 trapezoidal sheet bridge, length 250 mm/ TLE38 trapezoidal sheet bridge, length 380 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw

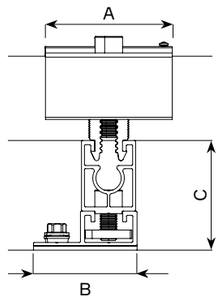




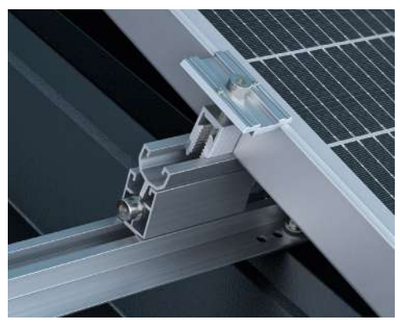
TL25/TL38
+ TL25 trapezoidal sheet bridge, length 250 mm/ TL38 trapezoidal sheet bridge, length 380 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



TL25/TL38 – EL05/EL10
+ TL25 trapezoidal sheet bridge, length 250 mm/ TL38 trapezoidal sheet bridge, length 380 mm
+ EL05/EL10 height adapter
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



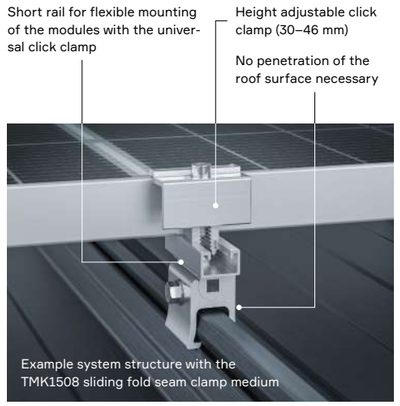
TL25/TL38 – EL05/EL10 – PS/PM/PL
+ TL25 trapezoidal sheet bridge, length 250 mm/ TL38 trapezoidal sheet bridge, length 380 mm
+ EL05 height adapter
+ PS front inclination adapter
+ PM rear inclination adapter
+ PL rear inclination adapter
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ LSP locking screw set to secure the inclination adapters
+ MSS 6x25 metal sheet screw



COMPACT**METAL** TM

SEAM CLAMPS SERIES

With the standing seam series COMPACTMETAL TM, the installation of PV modules on practically all seam sheet roof types is possible. Clamps with the pre-assembled short rail are designed for direct fastening of PV modules. By optionally attaching the X40 / X50 / X60 mounting rail, the alignment of the modules is also possible in portrait mode (portrait format).



Example system structure with the TMK1508 sliding fold seam clamp medium

	TMDS08			TMM08		TMR08	TMRD08	TMK1508		TMK2008
Max. pressure [kN]	1,5	1,5	2,79	1,5	2,54	2,38	1,5	1,5	1,75	2,36
Max. shear force [kN]	1,94	1,53	1,56	1,94	2,24	2,69	0,8	0,41	0,59	0,43
Max. pull [kN]	0,97	1,33	2,97	0,97	2,54	2,38	1,16	1,29	1,75	2,36
Tested on	Prefalz®10 roof, 0.7 mm, aluminum	Rheinzink®11 roof, 0.7 mm, titanium zinc	600LMR®12 roof, 0.66 mm, galvanised steel	Handcrafted angle seam roof, 0.7 mm, aluminum	Nordic Klick Falz®1 roof, 0.6 mm, galvanised steel	RIB-ROOF Evolution®5 roof, 0.8 mm, aluminum	GBS®6 roof, 0.8 mm, aluminum	Domitec6 roof, 0.5 mm, aluminum	KLIP-LOK 406®7 roof, 0.5 mm, galvanised steel	KLIP-LOK 980®7 roof, 0.5 mm, galvanised steel
a [mm]	7			14		24	8	15		20
b [mm]	14,5			24		36	16	23		23
c [mm]	9			-		-	12	22,5		26

25 YEAR PRODUCT WARRANTY

1 kWp/ 2,0–5 min.

CE

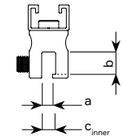
DSA10 STAINLESS STEEL SADDLE

The stainless steel saddle enables the TM standing seam series to be used on copper roofs. It prevents direct contact between the aluminum of the clamps and the copper of the covering and thus prevents electrochemical corrosion.

PORTRAIT MODE WITH X RAIL

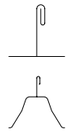
The installation of modules in portrait mode (portrait format) is easily possible using the X40 / X50 / X60 mounting rail from the COMPACTPITCH modular system. The rail is attached directly to the standing seam clamp with the XPN cross connector provided for this purpose. This variant can be planned in AEROTOOL.

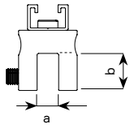
THE SEAM CLAMP KITS



TMDS08 DOUBLE SEAM CLAMP

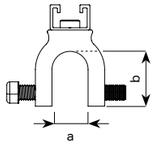
Penetration-free fastening on the handcrafted double lock standing seam, optimum form fit due to convex/concave preformed fixing screws.





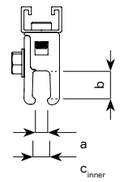
TMM08 ANGLE AND SNAP SEAM CLAMP

Penetration-free fastening on the craftsman angled standing seam and snap seam profiles such as Nordic Klickfalz®1, etc. Optimum form fit due to convex/concave preformed fixing screws.



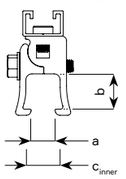
TMR08 ROUND SEAM CLAMP

Penetration-free fastening to round seam roofs like BEMO®2, Kalzip®3, Aluform®4 or RIB-ROOF Evolution®5. Optimal form fit thanks to convex/concave preformed fixing screws.



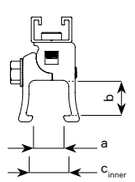
TMRD08 SLIDING FOLD SEAM CLAMP SMALL

Two-piece and form-fitting clamp, especially designed for system sliding fold seam roofs such as RIB-ROOF 465®5 and GBS®6.



TMK1508 SLIDING FOLD SEAM CLAMP MEDIUM

Two-piece and form-fitting clamp, especially designed for system sliding fold seam roofs such as Domitec®6, KLIP-LOK 406®7, SAFLOK 410®8, etc.



TMK2008 SLIDING FOLD SEAM CLAMP LARGE

Two-piece and form-fitting clamp, especially designed for system sliding fold seam roofs such as KLIP-LOK 980 Optima®7, KLIP-LOK 700®7, WeatherClip 655®9, WeatherClip 700®9, etc.

Registered trademarks, by company:

[1] DS Stahl GmbH; [2] BEMO SYSTEMS GmbH; [3] Kalzip GmbH; [4] Aluform System GmbH & Co. KG; [5] Zambelli Holding GmbH; [6] DOMICO Dach-, Wand- und Fassadensysteme KG; [7] BLUESCOPE STEEL LIMITED; [8] Safintra South Africa (Pty) Ltd; [9] DMI Building Products (M) Sdn Bhd.; [10] PREFA Aluminiumprodukte GmbH; [11] RHEINZINK AUSTRIA GMBH; [12] Astron Buildings GmbH

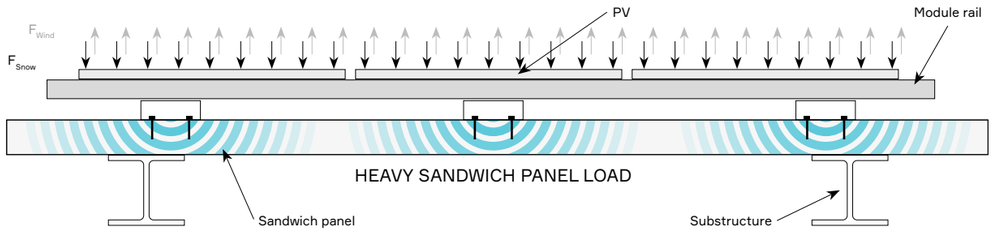
COMPACT**METAL** TR

SANDWICH SHEET METAL ROOF SERIES

THE CHALLENGE

A common way of attaching PV systems to sandwich panels is to screw the substructure directly onto the top layer of the panels with thin sheet metal screws. The interaction of forces caused by snow and wind can in the long run lead to permanent damage to the upper level.

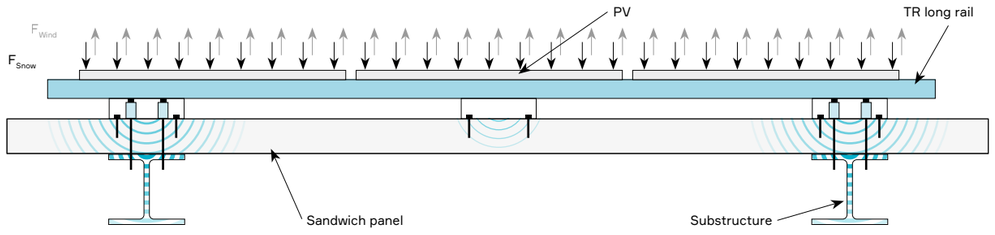
The result is leakage, detachment of the outer shell and the resulting “static uncertainty”. Sandwich panel manufacturers report of extensive damage to building roofs.



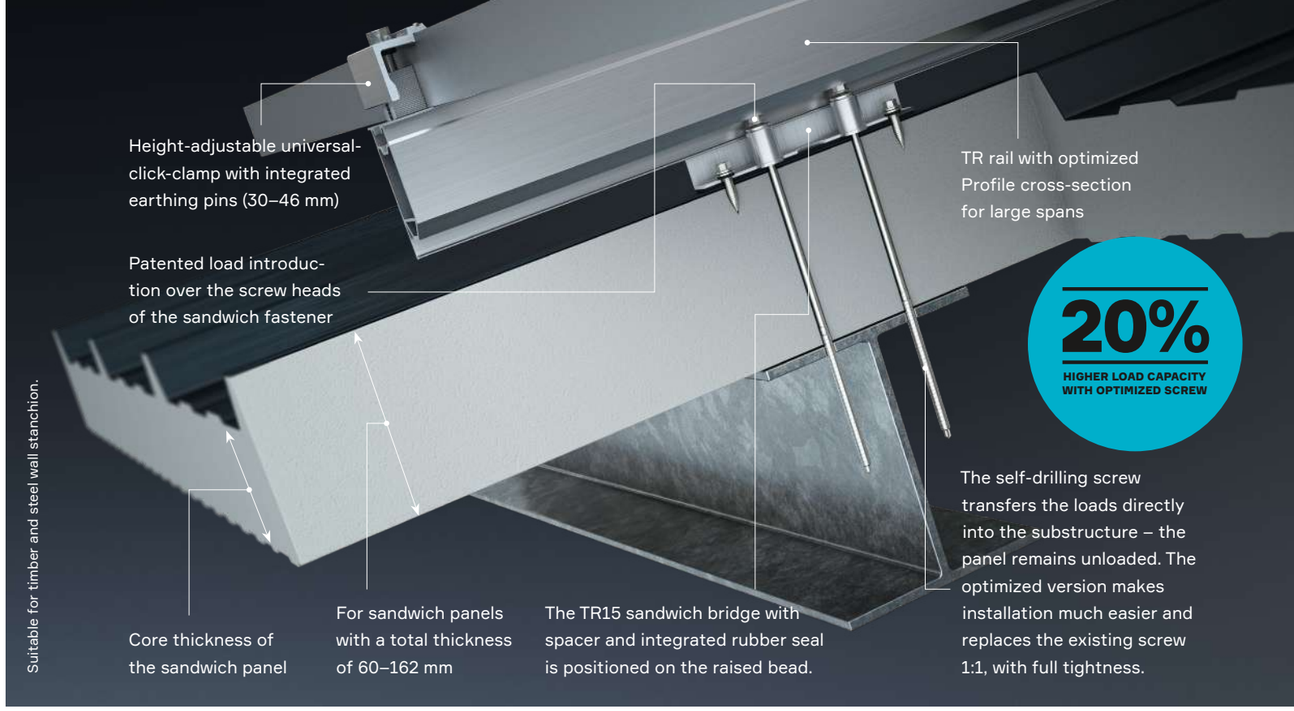
THE SOLUTION

AEROCOMPACT has developed a revolutionary fastening solution for PV modules on sandwich sheet metal roofs. By using innovative and patented components from the COMPACTMETAL modular system, the panels are only activated up to their permitted load limit.

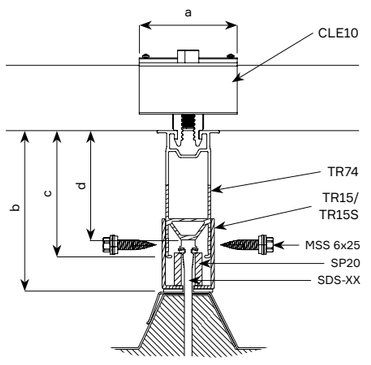
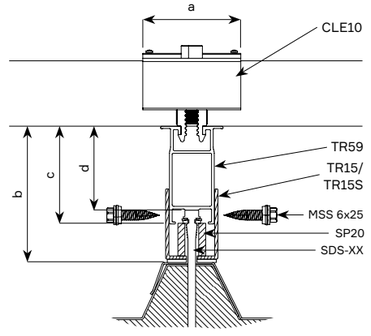
The main role in the system is assumed by the TR long rail, which can assume loads over large distances. Wind loads are only absorbed via the sandwich fasteners and the rail. Snow loads are introduced directly into the substructure using a patented support concept. A patented structural algorithm regulates the maximum permissible bearing load for the intermediate bearings.



Intermediate support positions are statically determined and prevent the rail from touching the roof. This prevents damage to the panel. Self-tapping screws make assembly quick, easy and efficient. The clearly structured concept of the system is easy to understand and assembly errors are therefore minimized. Only self-tapping screws are used.



THE VERSIONS

Version	TR74	TR59
Legend		
a [mm]	60	60
b [mm]	99	87
c [mm]	78	63
d [mm]	67	52
Application	With high wind and snow loads	With reduced snow load

The PV modules can be attached to the TR long rails using the click clamp with integrated earthing pins. The cross-system universal clamp is height adjustable between 30 and 46 mm and can be conveniently clicked into place.

ITALY / TL38

INDIA / TL38

USA / TL38

ITALY / TL38

COMPACT**WALL**

COMPACT**WALL**

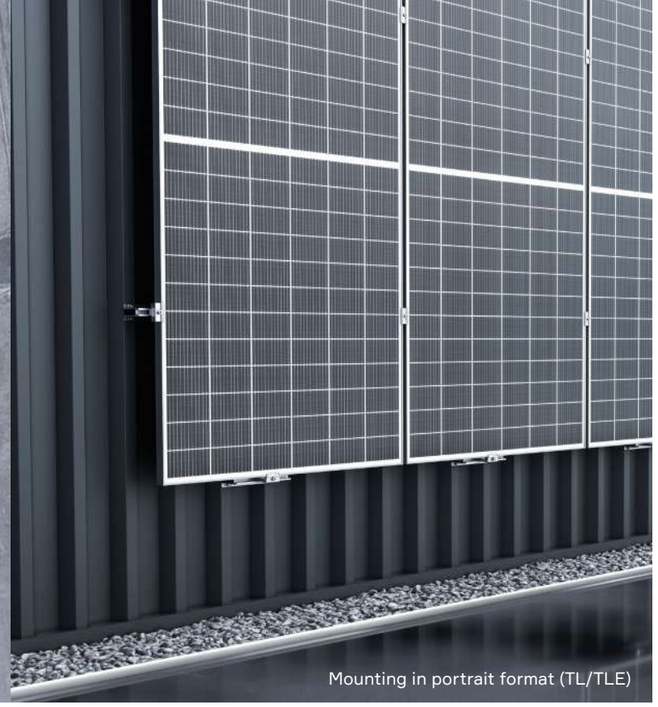
**SIMPLE.
MINIMALISTIC.
EFFICIENT.**

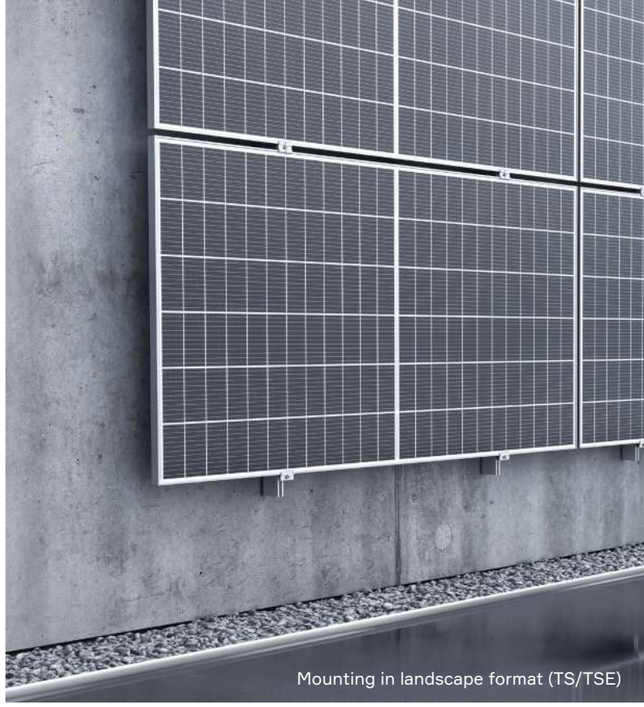
25 YEAR PRODUCT WARRANTY

CE

FACADESYSTEM

The COMPACTWALL systems offer maximum flexibility and efficiency when mounting photovoltaic modules on facades. Our solutions are based on the proven COMPACTMETAL components. They significantly reduce installation times, protect the building fabric and offer maximum safety thanks to their proven quality and durability. This makes every facade installation simple, safe and efficient.


Mounting in portrait format (TL/TLE)


Mounting in landscape format (TS/TSE)

THE CHALLENGE

The vertical alignment of PV modules presents mounting systems with challenging tasks. Technical designs and special mounting challenges must be taken into account.

This includes compliance with building standards and fire protection guidelines, which differ from conventional roof installations. The mounting systems must guarantee optimum rear ventilation for high performance and withstand increased wind loads. Overheating and thermal expansion can lead to stresses that cause cracks in the facade and serious damage. Poor sealing allows moisture to penetrate the facade and can damage the building fabric, while the reduced yield of conventional PV roof systems in winter due to the low sun is another point in favor of installing facade systems.

THE SOLUTION

With COMPACTWALL TS/TL, we are making a statement on the market. The installation solution for a wide variety of façade types impresses with its high cost-effectiveness and maximum security.

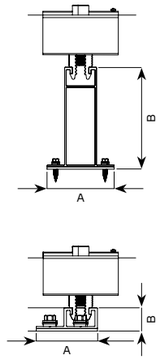
Cost-efficient, optimum fastening is achieved through the reduced use of materials with COMPACTMETAL components, while the lightweight construction significantly reduces the load on the façade. The raised rail design generates optimum cooling of the PV modules. This ensures increased performance and service life of the PV modules and prevents potential façade damage.

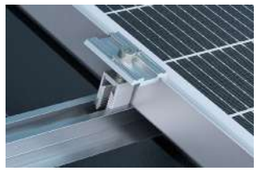
Mounting solutions can also be offered for sandwich applications on request via our support team.

THE VARIANTS

COMPACTMETAL TL*/TLE FOR MOUNTING IN PORTRAIT FORMAT

The new, raised rail systems TLE25 and TLE38 further optimize the installation steps for portrait format alignments of PV modules on trapezoidal sheet metal façades and roofs. The reduction in product components minimizes the installation effort and simplifies the individual work steps. Thanks to the star punching in the TLE and without additional accessories for potential equalization, time and costs are reduced. Both TL and TLE variants are available in lengths of 250 mm and 380 mm.

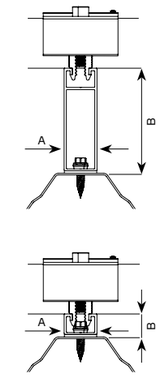




COMPACTMETAL TS*/TSE FOR MOUNTING IN LANDSCAPE FORMAT

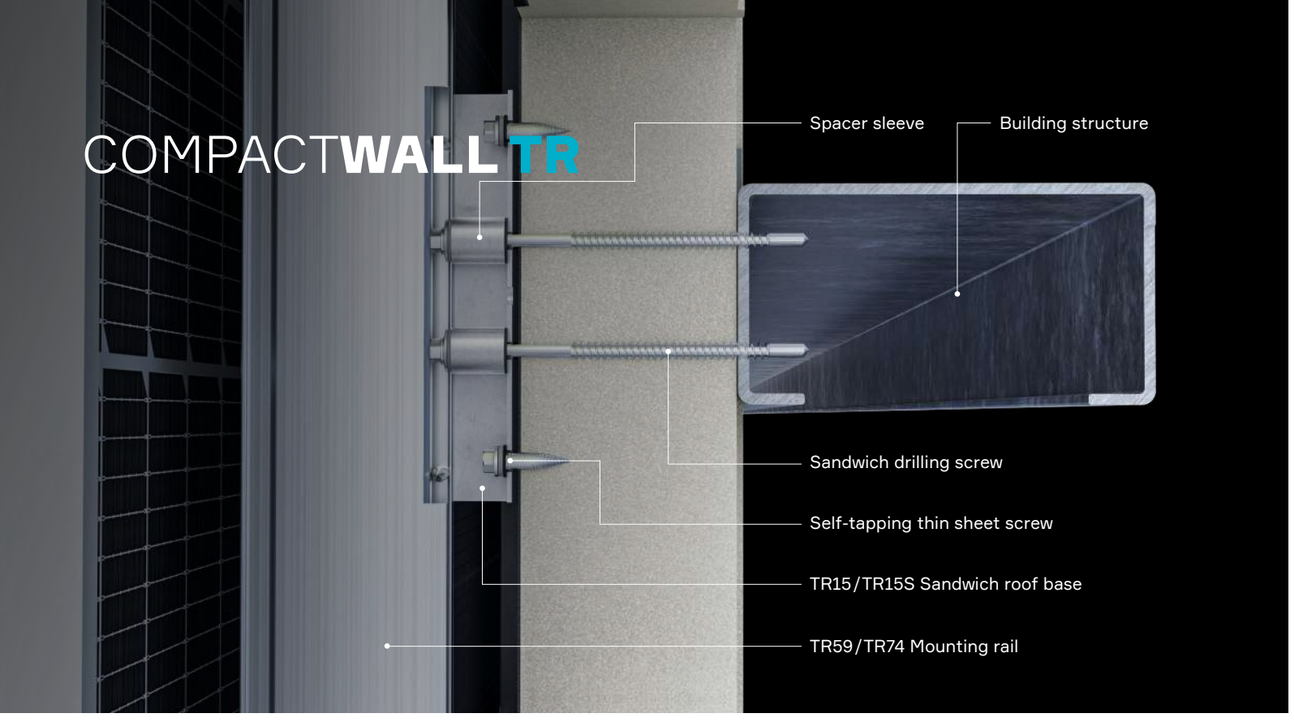
The two short rail variants allow the PV modules to be mounted in landscape format. The raised short rail TSE is 80 mm high to ensure sufficient rear ventilation for the full performance of the PV modules. This makes it easy to install optimizers. Both TS and TSE variants are available in lengths of 150 mm.

	A [mm]	B [mm]
TLE	54	82
TL*	49	18,5
TSE	26	82
TS*	26	18,5



*** The two variants TS and TL in low version are only available on request.**

For efficient and reliable planning, we offer a free step-by-step guide on our website with the new planning guide.



THE CHALLENGE

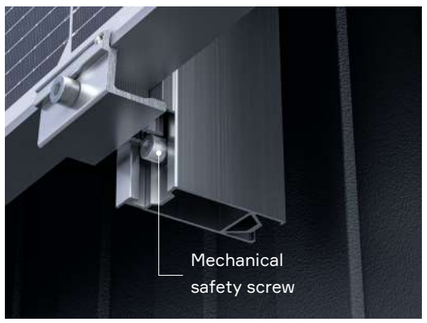
Safely mounting PV systems on sandwich facades without weakening the structure? The vertical installation of PV systems poses a real challenge – reducing stress, ensuring stability and creating sustainable solutions.

Sandwich panels are not designed for additional loads. This means that the installation of PV modules can lead to deformation or damage to the façade. Secure fastening must be ensured without impairing the load-bearing capacity of the panels. Improper fastenings can damage the insulation or increase the risk of fire. Poor rear ventilation leads to higher module temperatures, which reduces the efficiency and service life of the PV system. Penetrating moisture can lead to long-term damage to the building fabric.

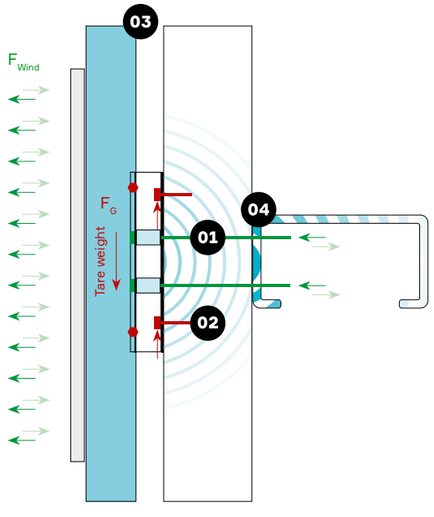
THE SOLUTION

With COMPACTWALL TR, we supply the tailor-made installation solution for generating energy from solar energy on sandwich facades.

The extremely stable TR rail consolidates the loads caused by wind, suction and pressure forces and transfers them to the wall stanctions via the intelligent load transfer. Due to the vertical installation of the system, there are no snow loads, which means that only the low dead weight of the system is absorbed by the thin sheet metal screws. The sandwich core of the facade panels remains completely unaffected. Optimum load transfer is guaranteed for all spans of the wall stanctions. The raised rail design ensures optimum ventilation of the PV modules and is designed for high wind loads. This maximizes the performance and service life of the modules – without compromising on safety, quality or installation speed. In addition, long rails can be seamlessly integrated into the lightning protection system if required.



FORCE APPLICATION



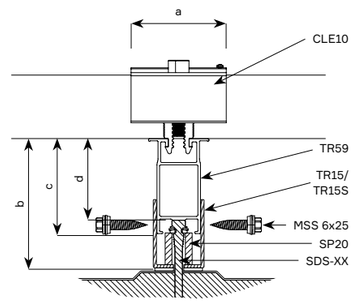
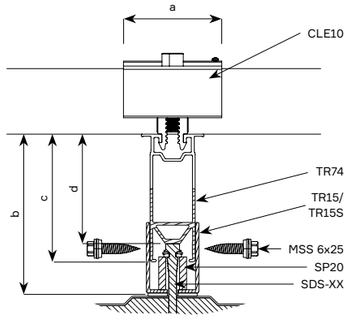
01 The sandwich drilling screw transfers the wind loads directly into the building structure. Suitable for timber and steel wall stanchions.

02 Patented load application via the screw heads of the sandwich drilling screw. The thin sheet metal screw absorbs the shear forces.

03 The force transmission via the stable TR rail enables module installation regardless of the span width.

04 The sandwich panel is not subjected to any additional loads due to the direct application of force to the building structure.

THE VERSIONS

Variant	TR59	TR74
Legend		
a [mm]	60	60
b [mm]	87	99
c [mm]	63	78
d [mm]	52	67

COMPACTMETAL TR PATENT PENDING AEROCOMPACT®

The system's clearly structured concept is easy to understand. Only self-tapping screws are used for efficient and simple installation.

MODULE CLAMPS

CROSS-SYSTEM CLICK-CLAMPS

Not all click clamps are alike. The difference is in the details.

Due to the optimized spring legs and the preformed click area an easy assembly is possible. The retaining ring makes the positioning of the PV modules easier. Due to the massive pressure piece, there is a clamping and form-firm connection with the mounting bracket. The stable clamp has two pins which break through the anodized layer and thus enable a good electrical contact and grounding. They also counteract the high torque and allow for easy positioning, thus ensuring greater safety during dynamic mounting.

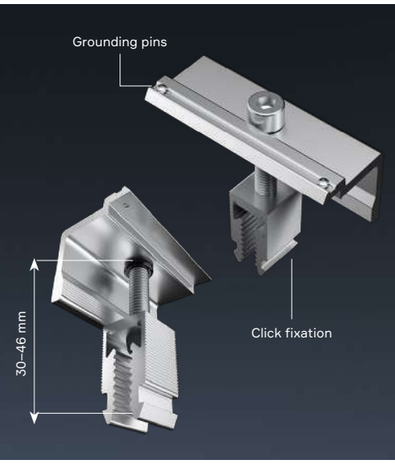
The popular flat roof bracket system uses only two types, the end and middle clamp. This saves storage costs and the installer always has the right clamp at hand. The click clamp is the heart and forms a stable unit with the substructure.

PROFIT FOR THE BUYER

+ Cost savings due to reduced inventory
+ Only 3 types
+ Cross-System

INCREASED PERFORMANCE FOR THE CUSTOMER

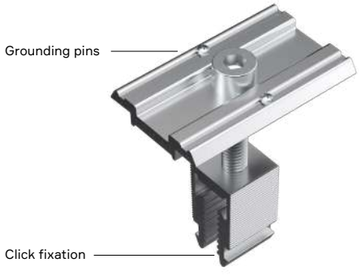
+ System compatibility: Always the right clamp with you
+ Final screw fixation entails locking of the clamp and screw
+ Stiffness of the connection of the substructure (bracket system)
+ Soft spring legs: Effortless assembly
+ Massive design of the click part (jamming and „straightening“ when screwing) as well as screw guidance through formed thread.
+ Positioning aid for module mounting
+ Robust design: Allows dynamic assembly (cordless screwdriver)



END CLAMP CLE10
AEROCOMPACT click-clamp for PV module racking on endpositions, with the length of 60 mm. 30–46 mm adjustable with integrated grounding pin. The clamp is also available in black (CLEB10).

END CLAMP CLE10+
AEROCOMPACT click-clamp for PV module racking on endpositions, with the length of 80 mm. 30–46 mm adjustable with integrated grounding pins. The clamp is also available in black (CLEB10+).

MIDDLE CLAMP CLM10
AEROCOMPACT click-clamp for PV module racking at midpositions, with the length of 60 mm. 30–46 mm adjustable with integrated grounding pins. The clamp is also available in black (CLMB10).



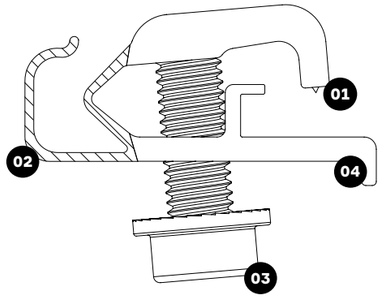

Attachment to the system bracket


Attachment to the module frame

OPTIMIZER CLAMP

Until now, there was no efficient solution for mounting microinverters and optimizers. The clamps available on the market were expensive, inflexible and not suitable for mounting on the module frame. In addition, the installation consisted of many individual parts, which made the process complicated and time-consuming.

The new optimizer clamp offers universal mounting and is compatible with module frames, S-brackets, SN2 and GS brackets. Thanks to fixing with just one screw, installation is quick and easy. The main component of the optimizer clamp is a monolithic component and offers integrated cable management with an insulated holder for up to two cables as well as optional cable tie fixation - for maximum order and stability. Two stainless steel earthing pins ensure potential equalization and therefore maximum safety. Pre-assembly makes the installation process more efficient, and thanks to the use of the 6 mm Allen key, as with our clamps, handling remains familiar – no need to change tools. This solution saves you time, reduces costs and optimizes your installation process.



01 Two stainless steel earthing pins ensure potential equalization and therefore maximum safety.

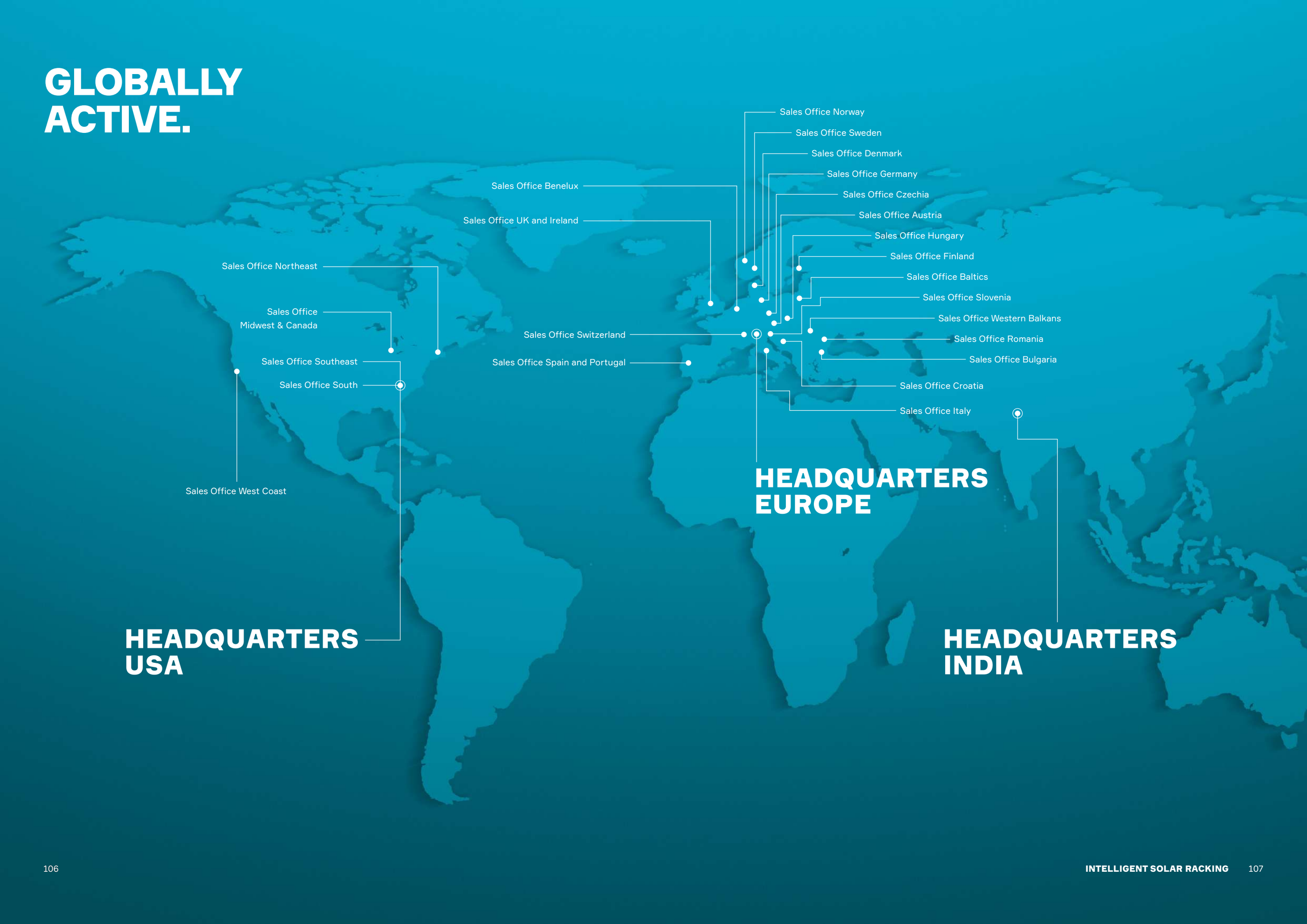
02 The integrated cable duct – for up to two cables and optional cable tie fixation. The partial powder coating provides electrical insulation.

03 Hexagon socket screw with flange and serration for easy installation.

04 Monolithic body made of extruded aluminum with broken edges.

+ **Universal mounting:** Module frame or bracket – unlimited possibilities
+ **Integrated cable management:** Insulated holder for up to two cables
+ **Quick and intuitive installation:** Fasten optimizer and clamp with just one screw

GLOBALLY ACTIVE.



NOTES

PB EN V3 05-2025

EUROPE
AEROCOMPACT® Europe GmbH
Gewerbestrasse 14
6822 Satteins, Austria
+43 5524 22 566
office@aerocompact.com

USA / CANADA
AEROCOMPACT® Inc.
901A Matthews Mint Hill Road
Matthews, NC 28105, USA
+1 800 57 80 474
office.us@aerocompact.com

INDIA
AEROCOMPACT® India Private Ltd.
Hub and Oak / C-360, Defence Colony
New Delhi, 110024, India
+91 888 26 32 902
office.in@aerocompact.com

FOR THE ENERGY OF THE FUTURE.

AEROCOMPACT.COM