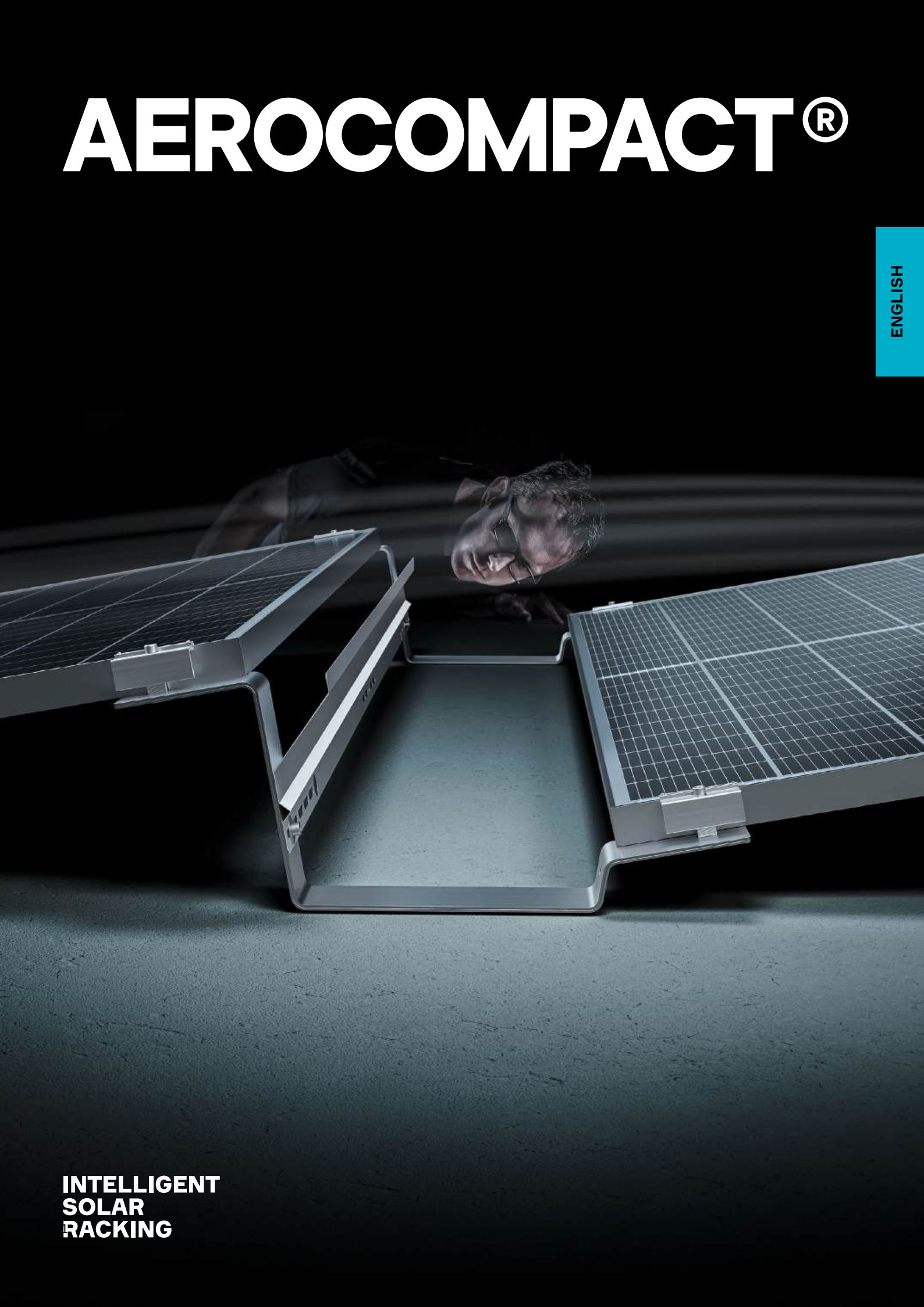
AEROCOMPACT®

ENGLISH



INTELLIGENT
SOLAR
RACKING

COMPACT**PITCH**

COMPACT**PITCH**

LIGHTWEIGHT.
STABLE.
INTELLIGENT.

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.

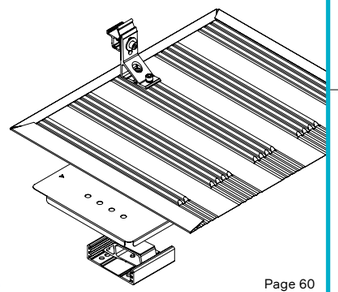
ARTICLE OVERVIEW
COMPACT**PITCH**

FÜR TILED ROOFS

SDS-W

XM-F

Universal replacement tile

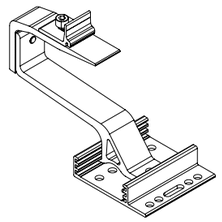


XM-F

Page 60

XT-R 2.0

Roof hook



NEW

XT-R 2.0

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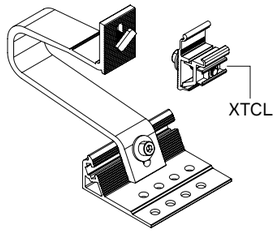
XT

Roof hook



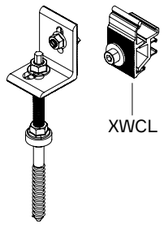
XT

Page 64

FÜR CORRUGATED ROOFS

XW

Hanger-bolt



XW

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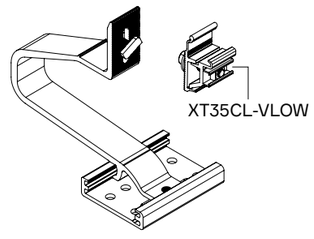
XT35-VLOW

Roof hook



XT-VLOW

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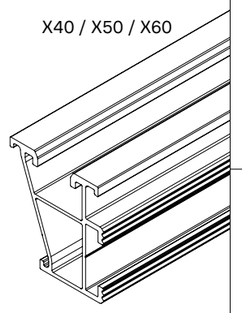
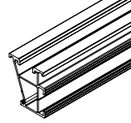
X40 / X50 / X60

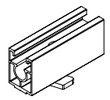


XDL

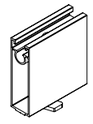
X40 / X50 / X60



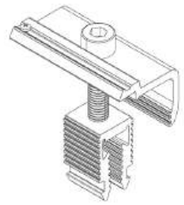
EL05



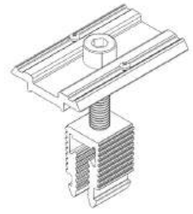
EL10



CLE20

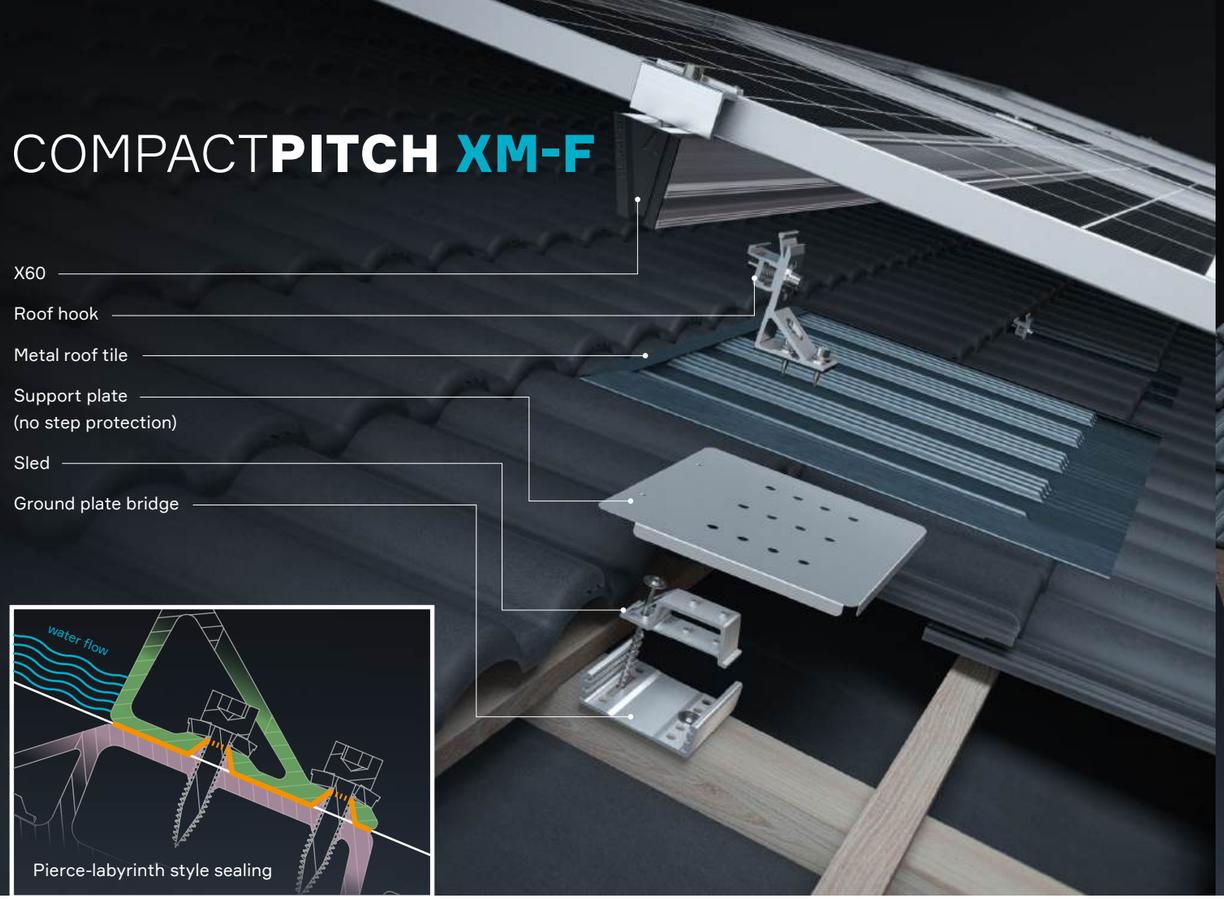


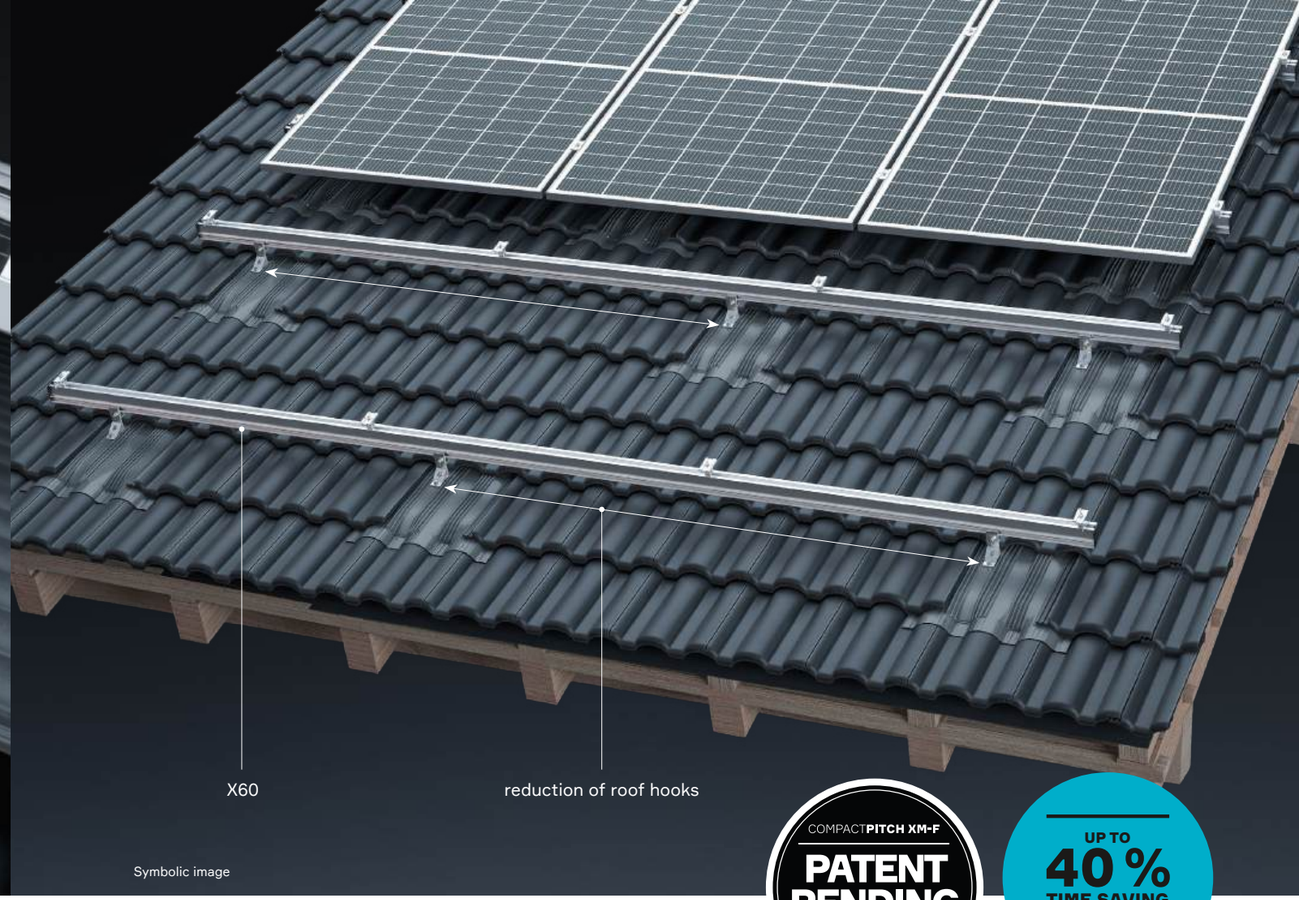
CLM20



PITCH

COMPACT**PITCH XM-F**





Symbolic image

COMPACT**PITCH XM-F**
PATENT PENDING
AEROCOMPACT®

UP TO
40 %
TIME SAVING
IN ASSEMBLY

THE CHALLENGE

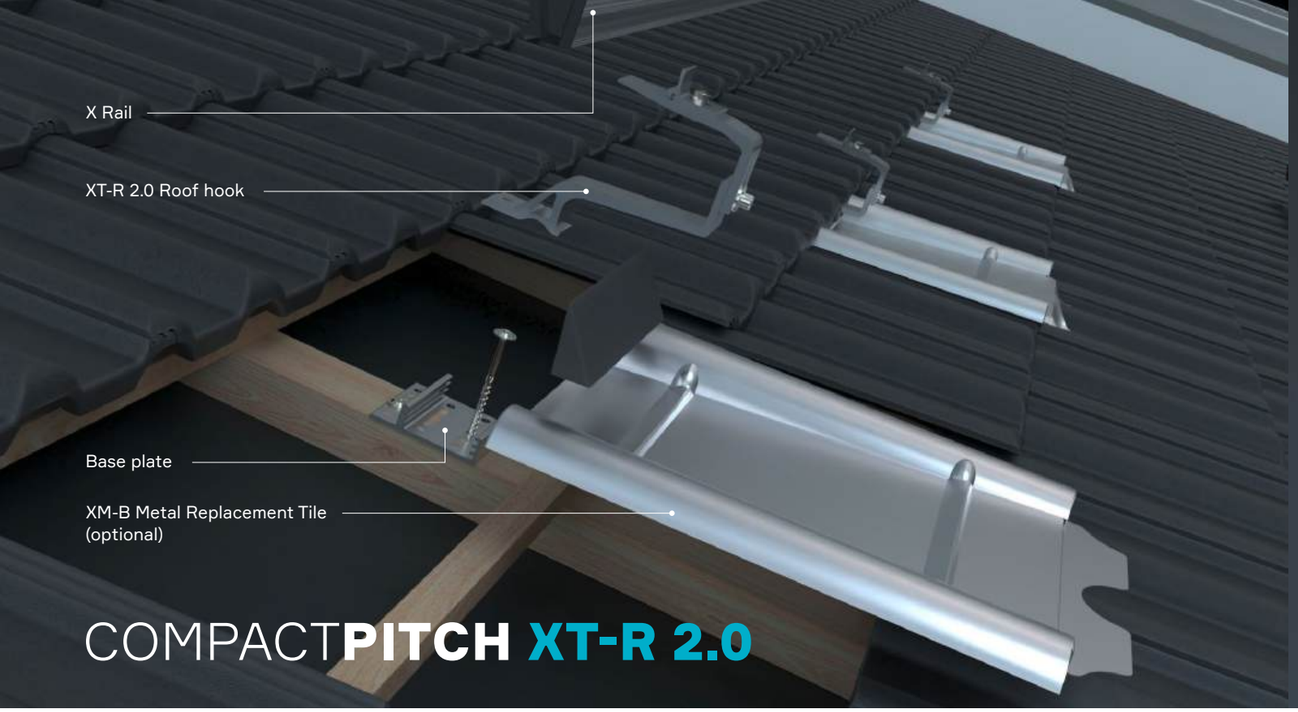
The installation of roof hooks usually requires a wide variety of tools and machines. With conventional roof hooks, the roof tiles must be machined with an angle grinder in order to reinsert the tile flush over the roof hook. When working, there is a risk that they will break and leak over time. The 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

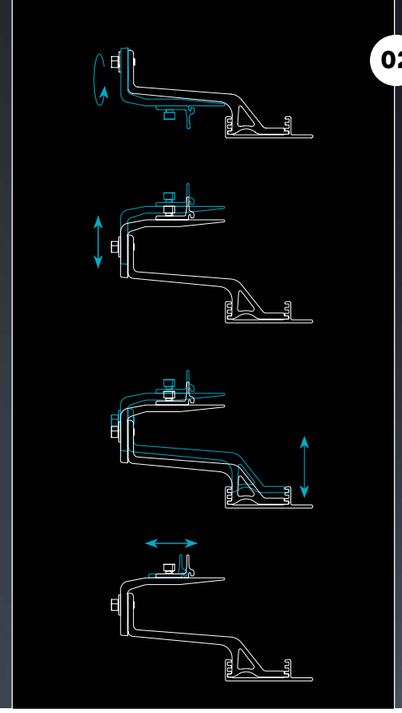
The XM-F REPTILE system offers an innovative solution for a wide range of different roof tiles on pitched roofs: With a flexible cover that adapts to the shape of the tile. AEROCOMPACT's Pierce Labyrinth Seal allows flexible positioning of the roof hook on the flashing. The roof hook can therefore always 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.

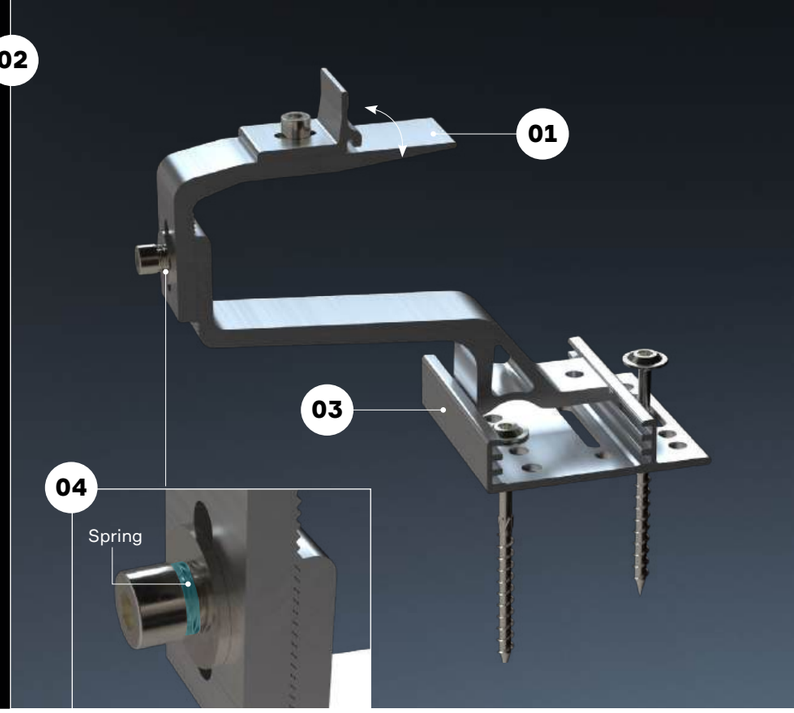
THE VERSIONS

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. Additionally, a larger version of the cover sheet – available in anthracite and red – is available for an extended range of applications.



COMPACT**PITCH** XT-R 2.0





THE CHALLENGE

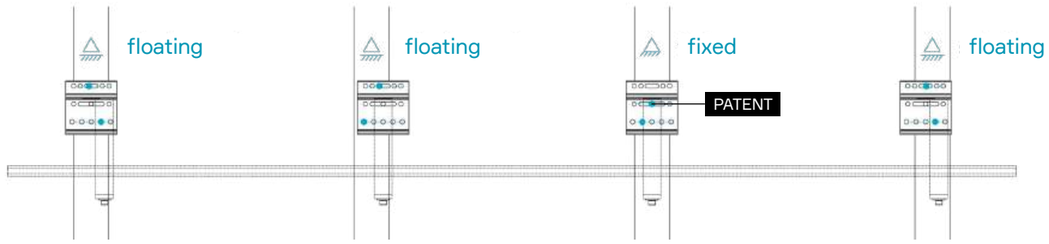
Uneven roof constructions and asymmetrical tile layouts on rafters make PV installation time-consuming and expensive.

Many conventional roof hooks offer only limited adjustability. This makes efficient installation difficult – especially when structural deviations occur such as uneven roof geometry, warped rafters in existing buildings, older roof structures or additional insulation layers. Transportation can also be complicated and costly due to bulky components.

THE SOLUTION

The compact, well-designed construction of the XT-R 2.0 enables quick, safe and intuitive installation.

The pre-assembled COMPACTPITCH XT-R 2.0 reduces the number of components to a minimum and simplifies installation with its foldable design and optimized grid spacing, requiring only one tool. Five degrees of freedom allow precise adjustment, improved rail clamping for maximum tolerance and intuitive, fast installation – even with warped rafters. The option of floating installation with only one fixation per rail saves time. Optimized load distribution ensures stable performance – even under high wind suction and snow loads.



Intuitive patent, large time savings, low material use.
With one screw both the hook and the base plate are fixed.

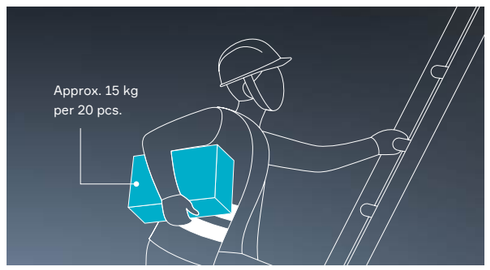
ONE HOOK FOR EVERYTHING

01 **TOLERANCE ABSORPTION**
Even warped rafters or continuous battens can be connected easily with our new quick-clamping rail system.

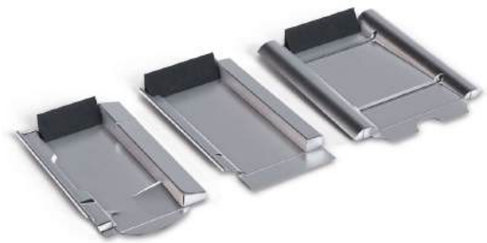
02 **ONE-PERSON INSTALLATION – SPRING-ASSISTED LEVELING**
The fine adjustment grid combined with the wave spring allows easy leveling of the rail and prevents slipping of the hook element during installation.

03 **SPACE-SAVING PRODUCT COMPONENTS**
Thanks to the product design, the XT-R 2.0 roof hooks can be stacked compactly.
This reduces transport and storage costs.

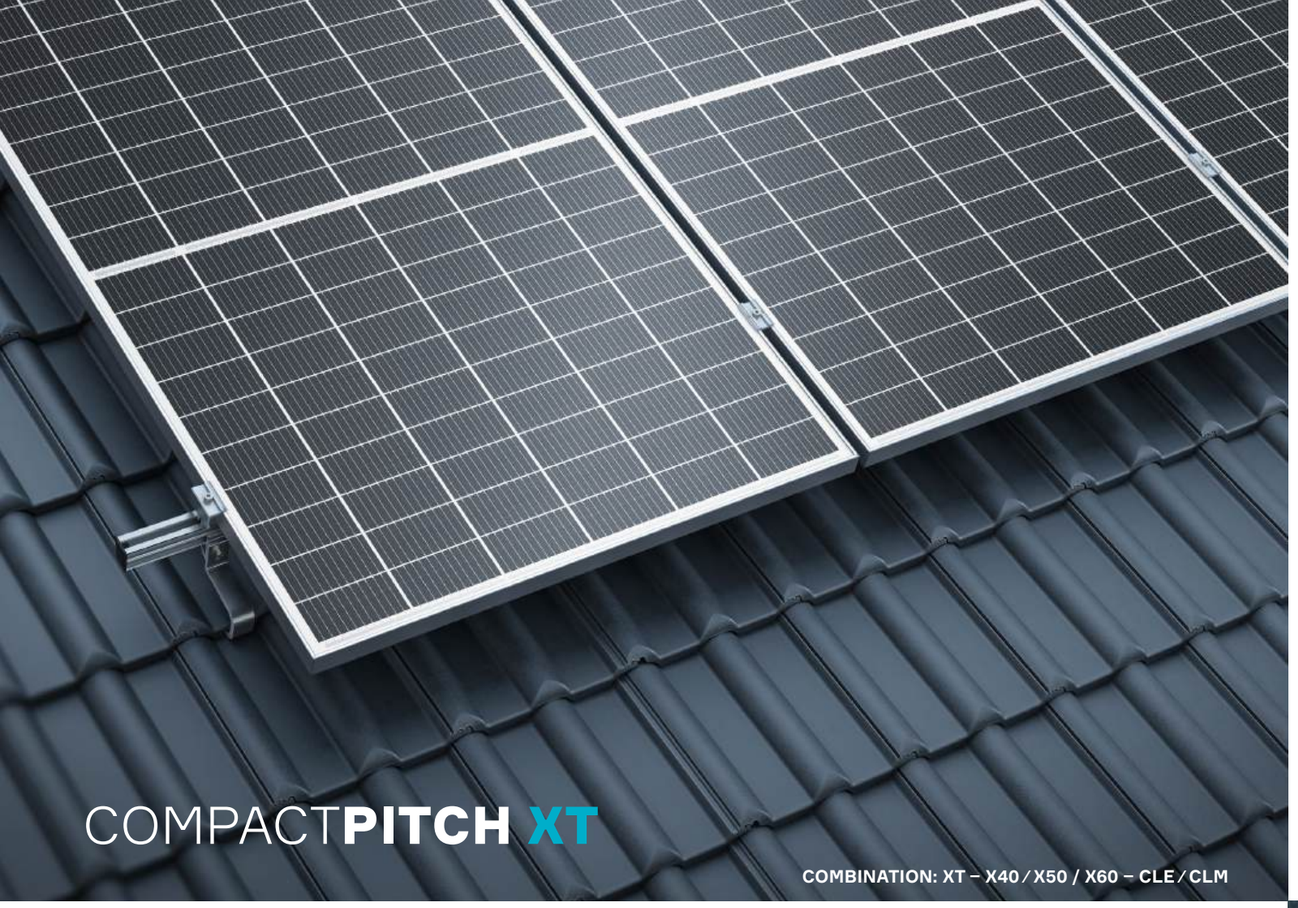
04 **FLEXIBLE FIXING**
The base plate is positioned and fixed to the rafter with two 8 mm drill screws.
Adjustment to the batten height is achieved via the 3-level structure and can float, requiring only one fixation per rail.



COMPACTPITCH XM-B
The XM-B metal replacement tiles are installed underneath the roof hook if required and replace the original concrete or clay tile.



Scan here for a detailed list of compatible roof tile types.



COMPACT**PITCH XT**

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

AUSTRIA / 5,25 KWP

AUSTRIA / 10 KWP

- 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

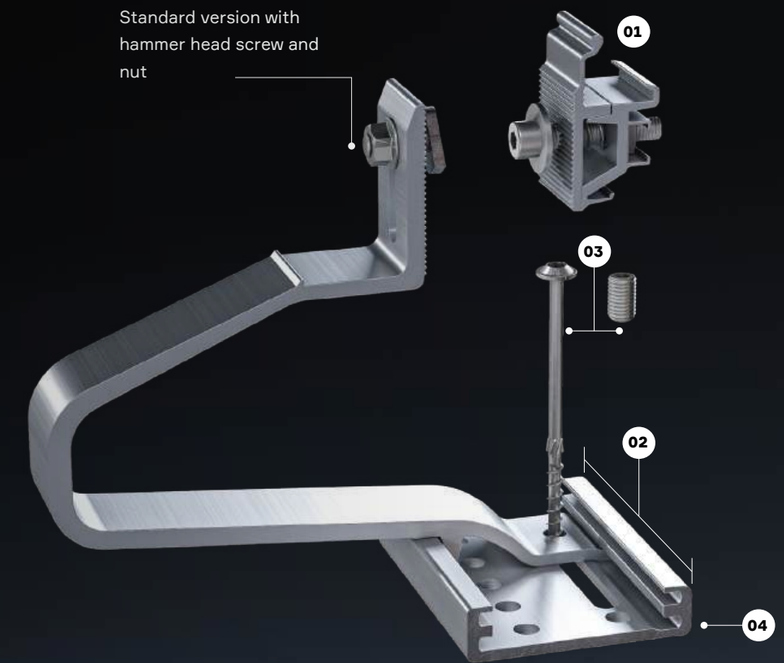
- XT roof hook with quick click assembly
- X40 / X50 / X60 mounting rail
- EL05 / 10 height adapter
- CLE end clamp Click 30–46 mm / CLM middle clamp Click 30–46 mm

- 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

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.

COMBINATION: XT-VLOW – X40 / X50 / X60 – CLE / CLM



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.

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.

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**

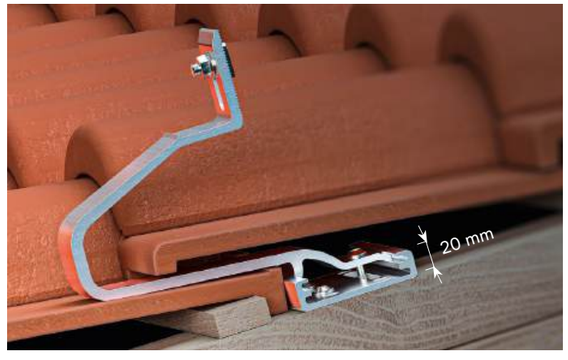
With the help of the integrated guides in the base plate, lateral adjustment is made easy. For height adjustment, one of the two guides can be used for height adjustment.

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.



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.

COMPACT**PITCH XW**

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 grounding 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.

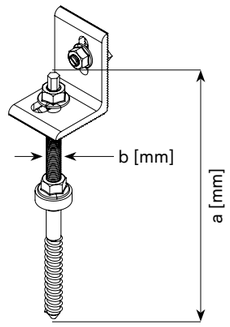
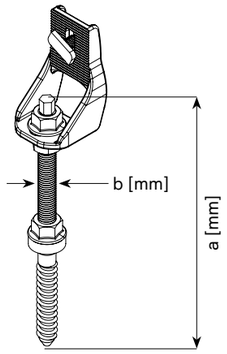
THE HAMMER HEAD SCREW
The standard version has a hammer head screw and nut. Installation is quick and easy at any position of the rail without threading at the end of the rail.

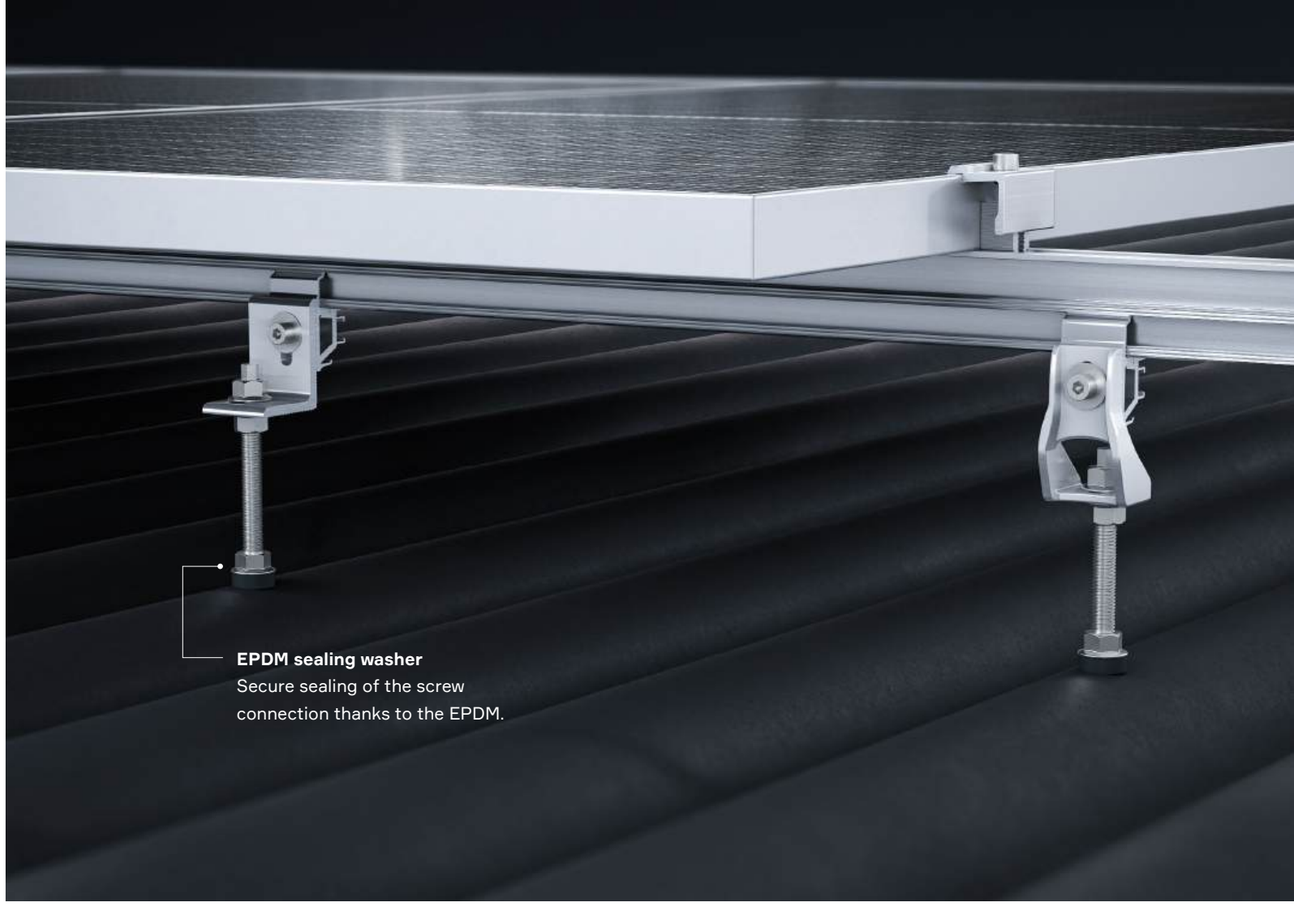
CL CLICK FAST FIXATION
When you need to get things done even faster! If that's the case, the XW hanger bolts with the pre-mounted CL click fast fixation are available as an alternative. It is able to accommodate all X-mounting rails quickly and conveniently using the innovative click mechanism.

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.

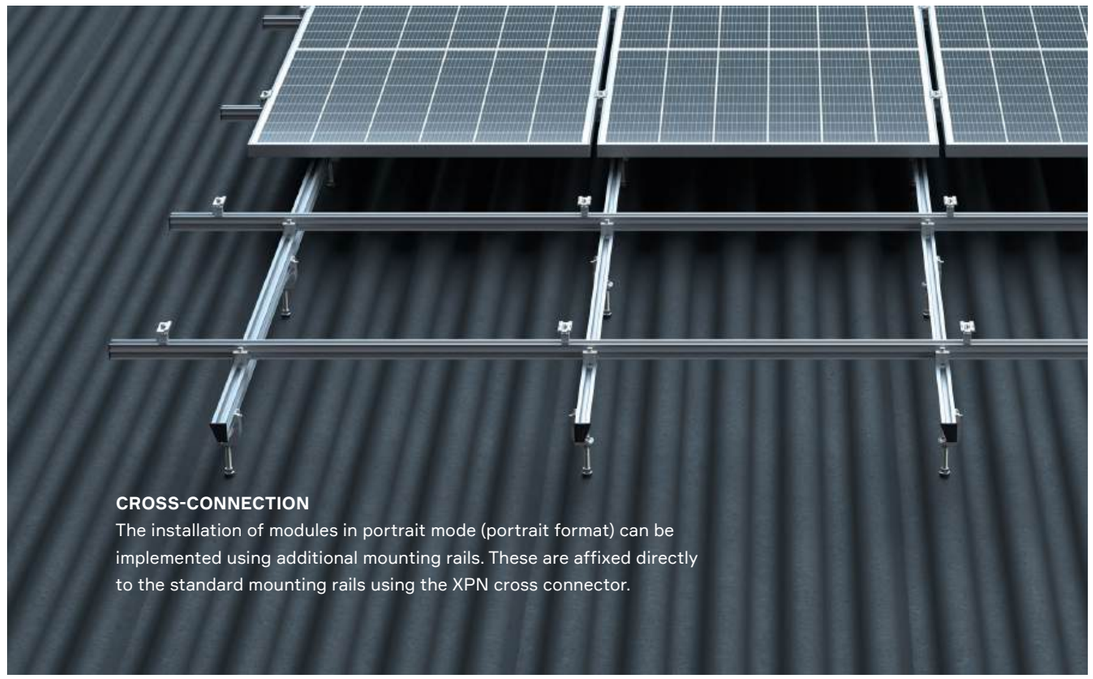
THE VERSIONS

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



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



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 · 3 KWP/ 2,5–5 MIN. · PATENTED · CE

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

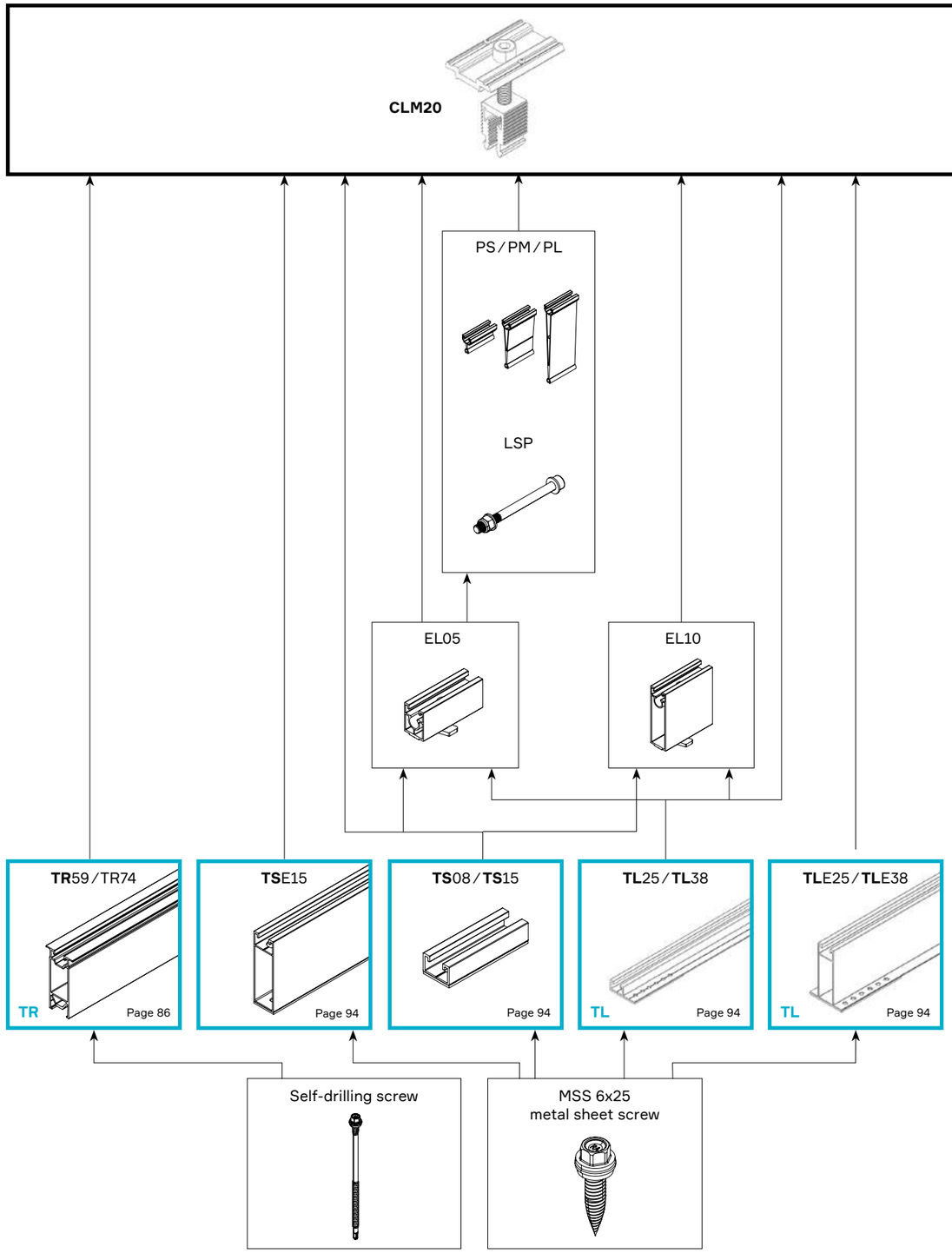
The COMPACTMETAL system family is used to attach framed photovoltaic modules to metal roofs and enables the PV modules to be installed in vertical and horizontal format. It is characterized by its simple and modular system. The components offer the possibility of being combined in different ways. Planning 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.

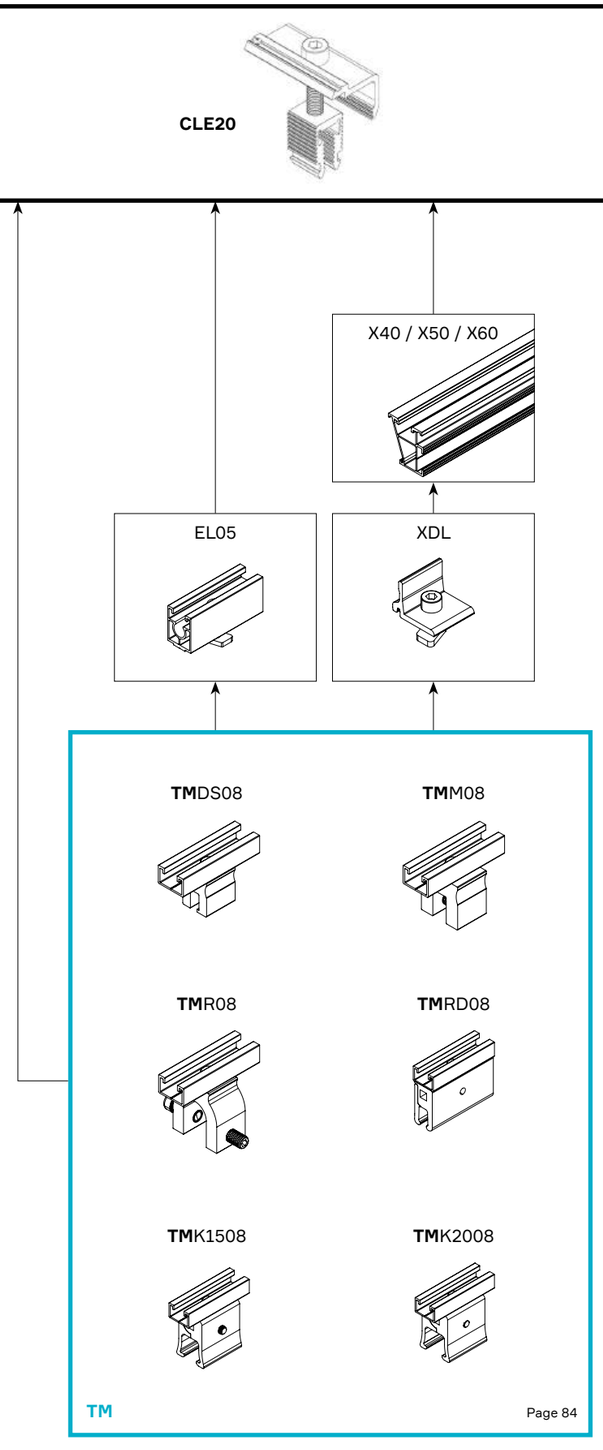
MORE PROFIT
The system enables optimized rear ventilation and thus an increase in yield.

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

ARTICLE OVERVIEW
COMPACT**METAL**



FOR TRAPEZOIDAL SHEET AND SANDWICH ROOFS



FOR STANDING SEAM METAL ROOFS

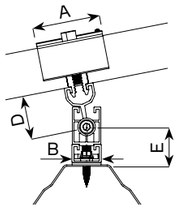
COMPACT**METAL** TS

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.

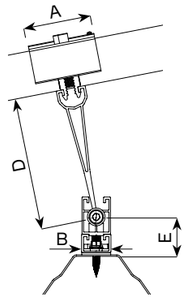
TSE15 RAISED SHORT RAILS
The product range is extended by a rail with a height of 80 mm in order to comply with roof clearances, to ensure rear ventilation and to enable the installation of optimizers. The raised short rail can be installed without additional major assembly effort – only a bit extension 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.

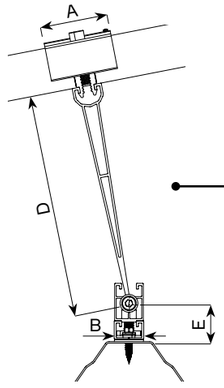
TS15 SHORT RAIL
The slightly longer short rail offers more mounting tolerance as well as the possibility to achieve a higher load capacity per fastening by using 3 instead of the usual 2 thin sheet metal screws. This short rail is optimized for use on trapezoidal sheets with low sheet thickness.



PS



PM

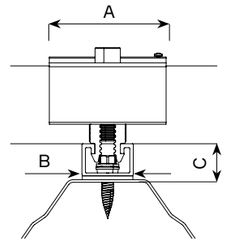


PL

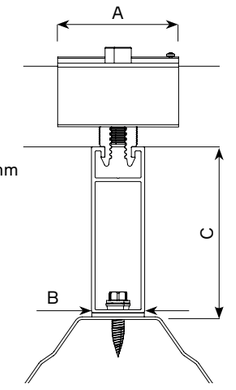
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
TS08/TS15	60	26	18,5	–	–
TSE15	60	26	82	–	–
TS08/TS15 – EL05	60	26	52	–	–
TS08/TS15 – EL10	60	26	102	–	–
TS08/TS15 – EL05 – PS	60	26	–	38	34
TS08/TS15 – EL05 – PM	60	26	–	118	34
TS08/TS15 – EL05 – PL	60	26	–	204	34

THE VERSIONS

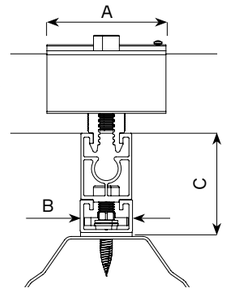
TS08 / TS15
+ TS08 trapezoidal sheet short rail, length 80 mm / TS15 trapezoidal sheet short rail, length 150 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



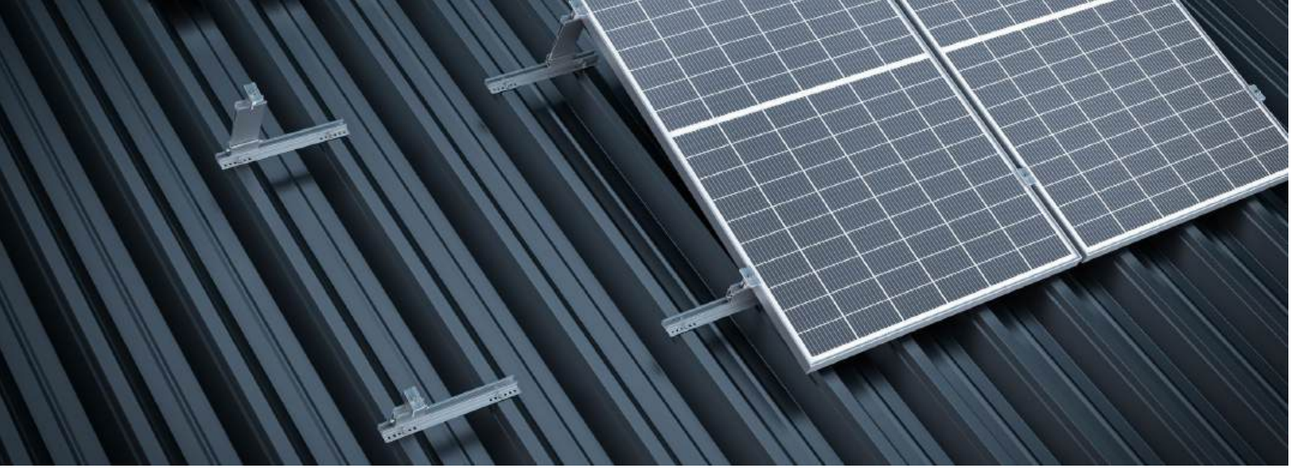
TSE15
+ TSE15 trapezoidal sheet short rail, length 150 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw



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

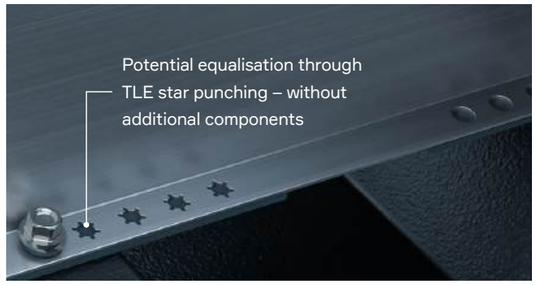


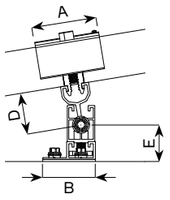
COMPACT**METAL** TL

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.

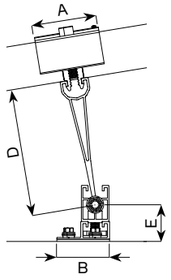
TL25/TL38 TRAPEZOIDAL SHEET BRIDGE
Direct mounting with module clamps on trapezoidal sheet metal bridges minimizes material costs and working time. Full safety and fast installation at the best price.

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.

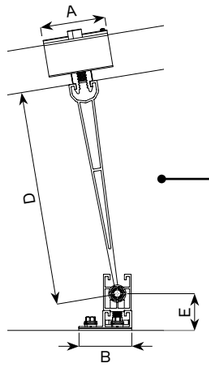




PS



PM



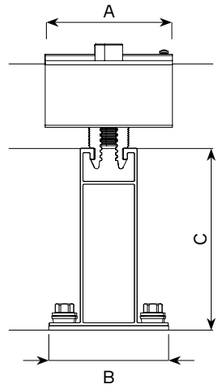
PL

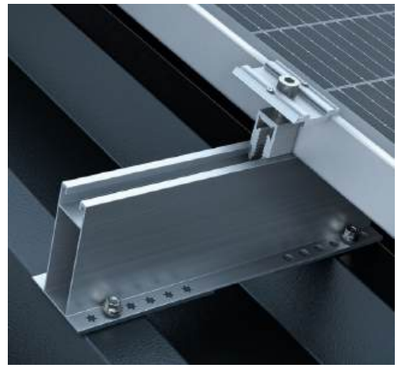
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
TL25/TL38	60	49	18,5	–	–
TLE25/TLE38	60	54	82	–	–
TL25/TL38 – EL05	60	49	52	–	–
TL25/TL38 – EL10	60	49	102	–	–
TL25/TL38 – EL05 – PS/PL	60	49	–	38	34
TL25/TL38 – EL05 – PS/PM	60	49	–	118	34
TL25/TL38 – EL05 – PS/PL	60	49	–	204	34

THE VERSIONS

TLE25/TLE38

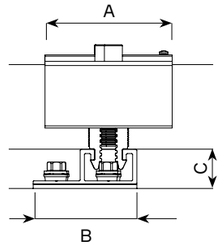
+ TLE25 trapezoidal sheet bridge, length 250 mm/ TLE38 trapezoidal sheet bridge, length 380 mm
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ MSS 6x25 metal sheet screw





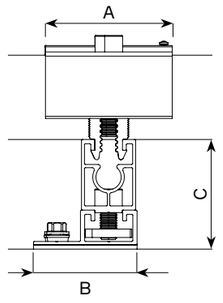
TL25/TL38

+ 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



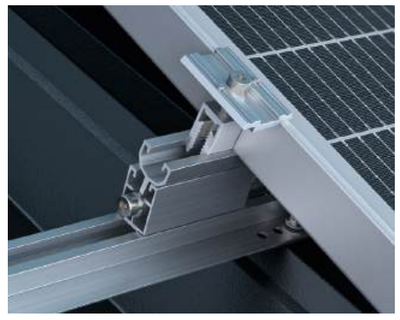
TL25/TL38 – EL05/EL10

+ 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

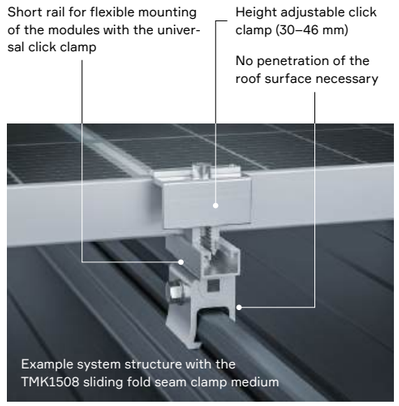
+ TL25 trapezoidal sheet bridge, length 250 mm/ TL38 trapezoidal sheet bridge, length 380 mm
+ EL05 height adapter
+ PS front inclination adapter
+ PM rear inclination adapter
+ PL rear inclination adapter
+ CLE10 end clamp Click 30–46 mm
+ CLM10 middle clamp Click 30–46 mm
+ LSP locking screw set to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

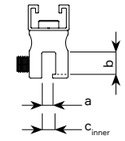
DSA10 STAINLESS STEEL SADDLE

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

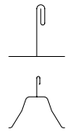
The installation of modules in portrait mode (portrait format) is easily possible using the X40 / X50 / X60 mounting rail from the COMPACTPITCH modular system. The rail is attached directly to the standing seam clamp with the XDL cross connector provided for this purpose. This variant can be planned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

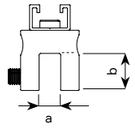
THE SEAM CLAMP KITS



TMDS08 DOUBLE SEAM CLAMP

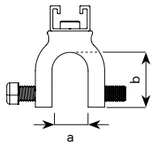
Penetration-free fastening on the handcrafted double lock standing seam, optimum form fit due to convex/concave preformed fixing screws.





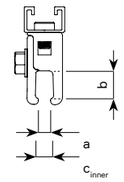
TMM08 ANGLE AND SNAP SEAM CLAMP

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.



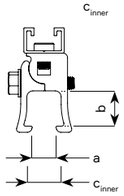
TMR08 ROUND SEAM CLAMP

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.



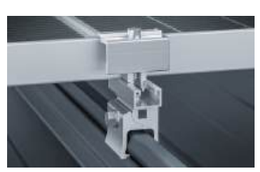
TMRD08 SLIDING FOLD SEAM CLAMP SMALL

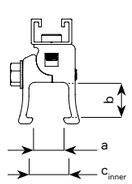
Two-piece and form-fitting clamp, especially designed for system sliding fold seam roofs such as RIB-ROOF 465®5 and GBS®6.



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

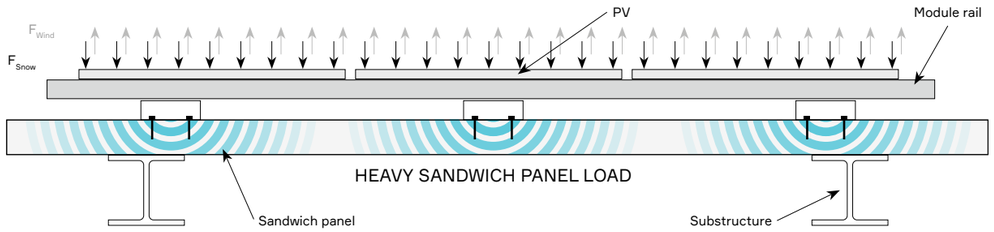
COMPACT**METAL TR**

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.

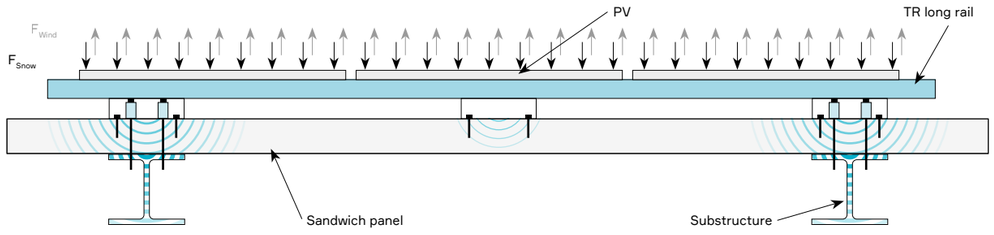
The result is leakage, detachment of the outer shell and the resulting “static uncertainty”. Sandwich panel manufacturers report of extensive damage to building roofs.



THE SOLUTION

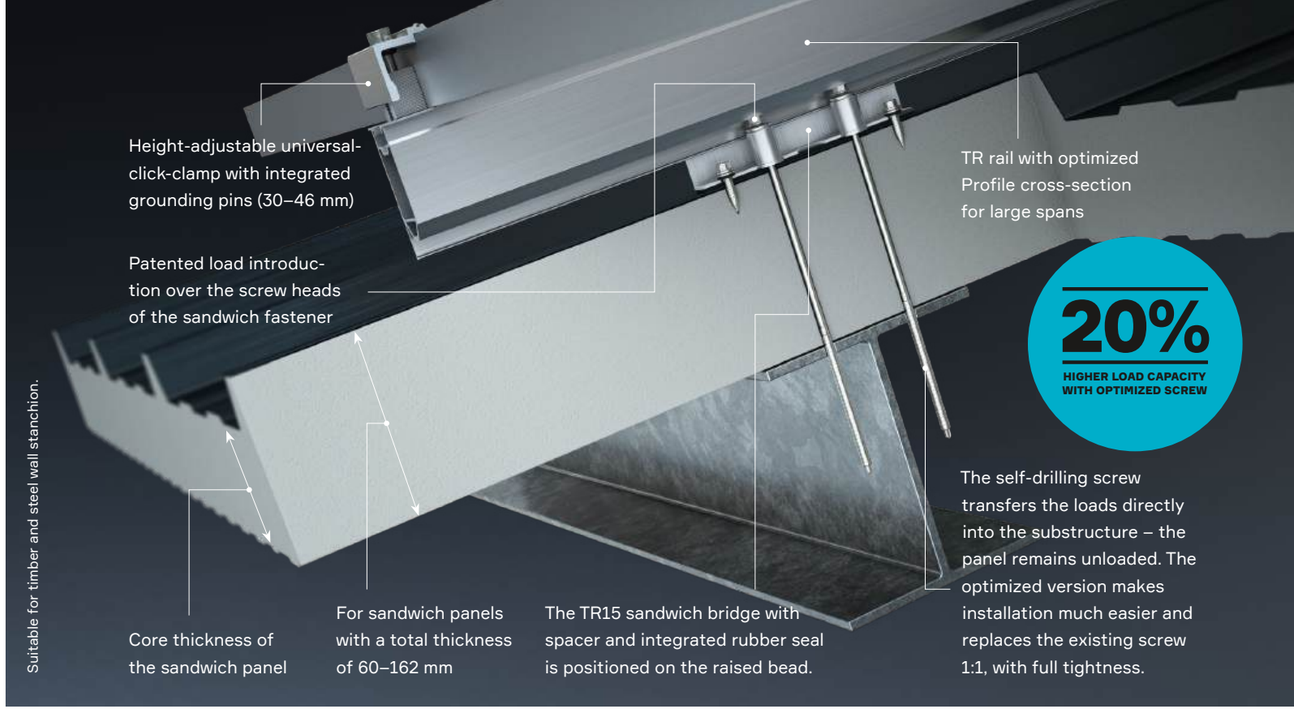
AEROCOMPACT has developed a revolutionary fastening solution for PV modules on sandwich sheet metal roofs. By using innovative and patented components from the COMPACTMETAL modular system, the panels are only activated up to their permitted load limit.

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.

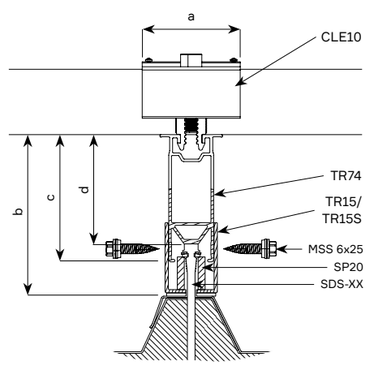
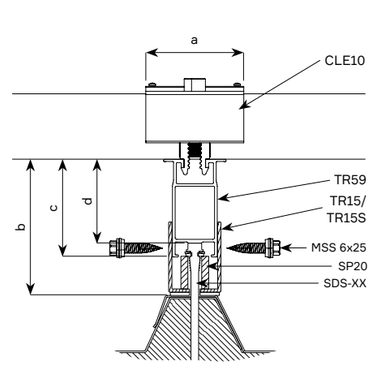


PATENTED

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 grounding pins. The cross-system universal clamp is height adjustable between 30 and 46 mm and can be conveniently clicked into place.

METAL

ITALY / TL38

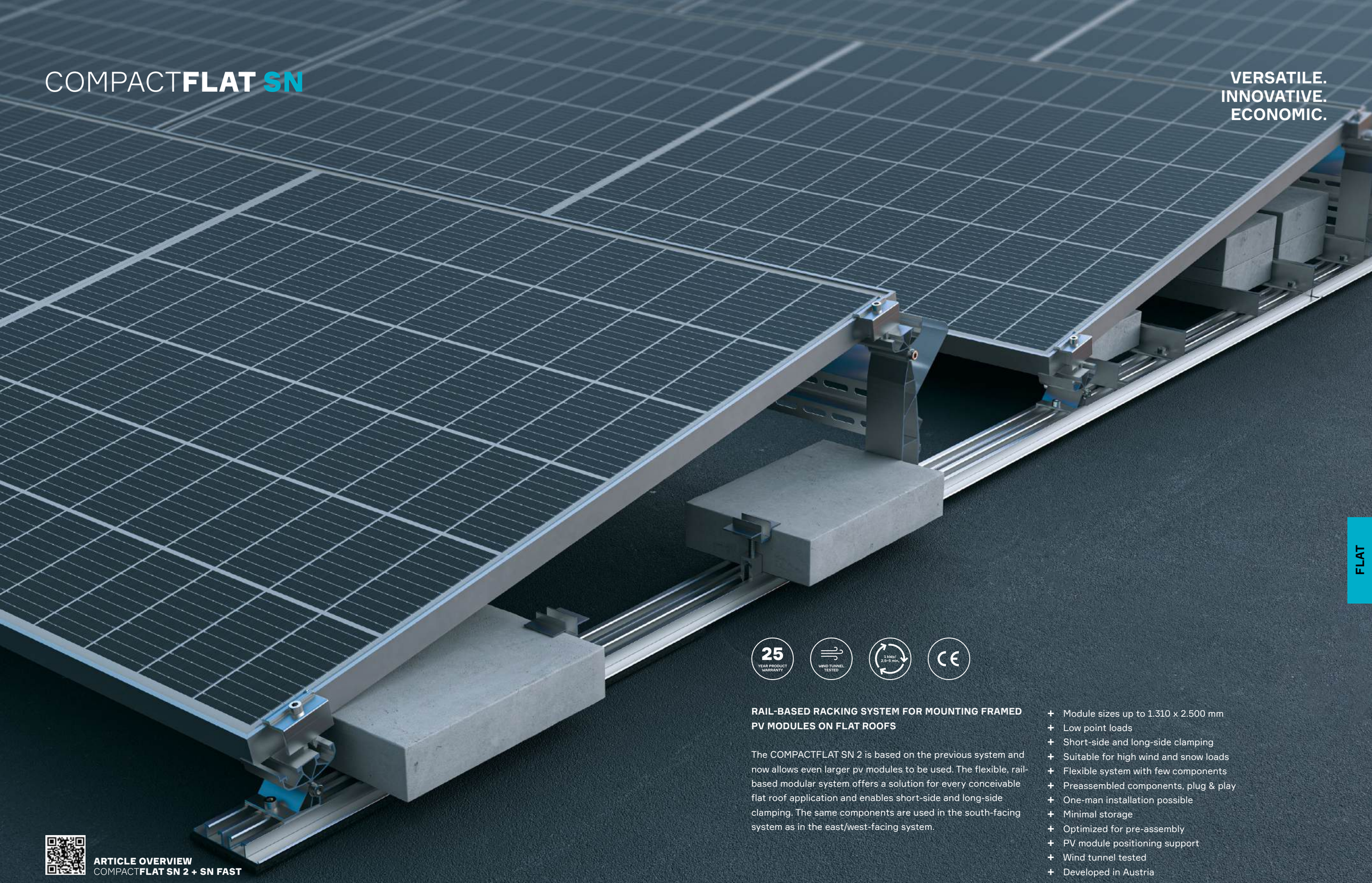
INDIA / TL38

USA / TL38

ITALY / TL38

COMPACT**FLAT SN**

**VERSATILE.
INNOVATIVE.
ECONOMIC.**



25 YEAR PRODUCT WARRANTY

WIND TUNNEL TESTED

1 kWp/ 2,5–5 min.

CE

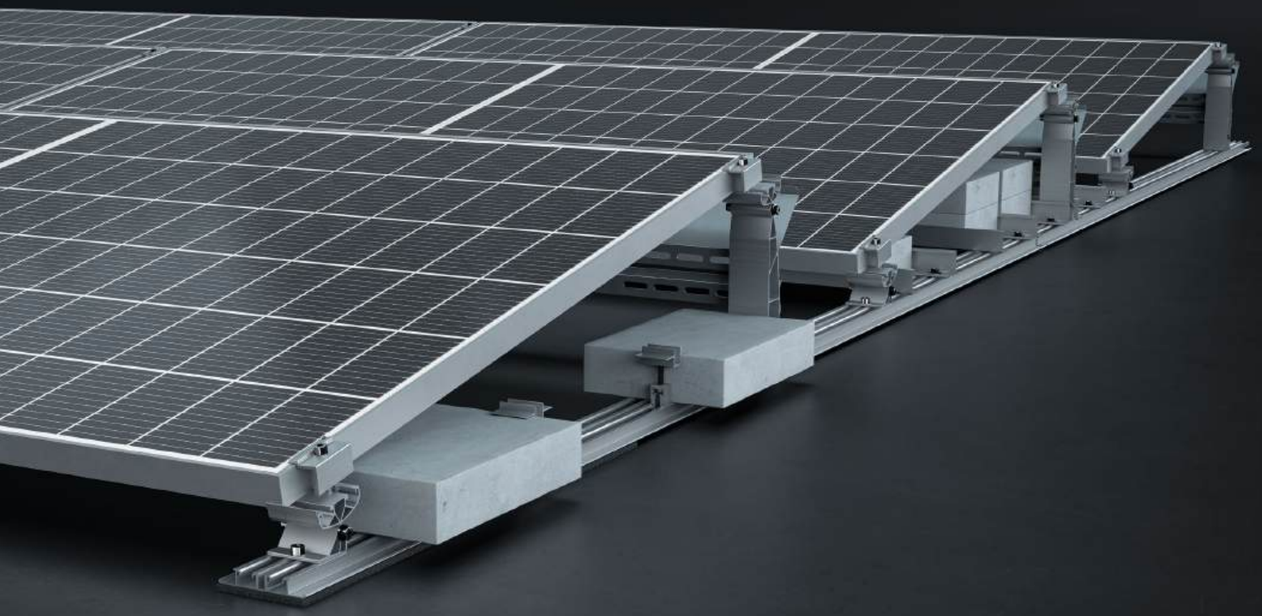
RAIL-BASED RACKING SYSTEM FOR MOUNTING FRAMED PV MODULES ON FLAT ROOFS

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.

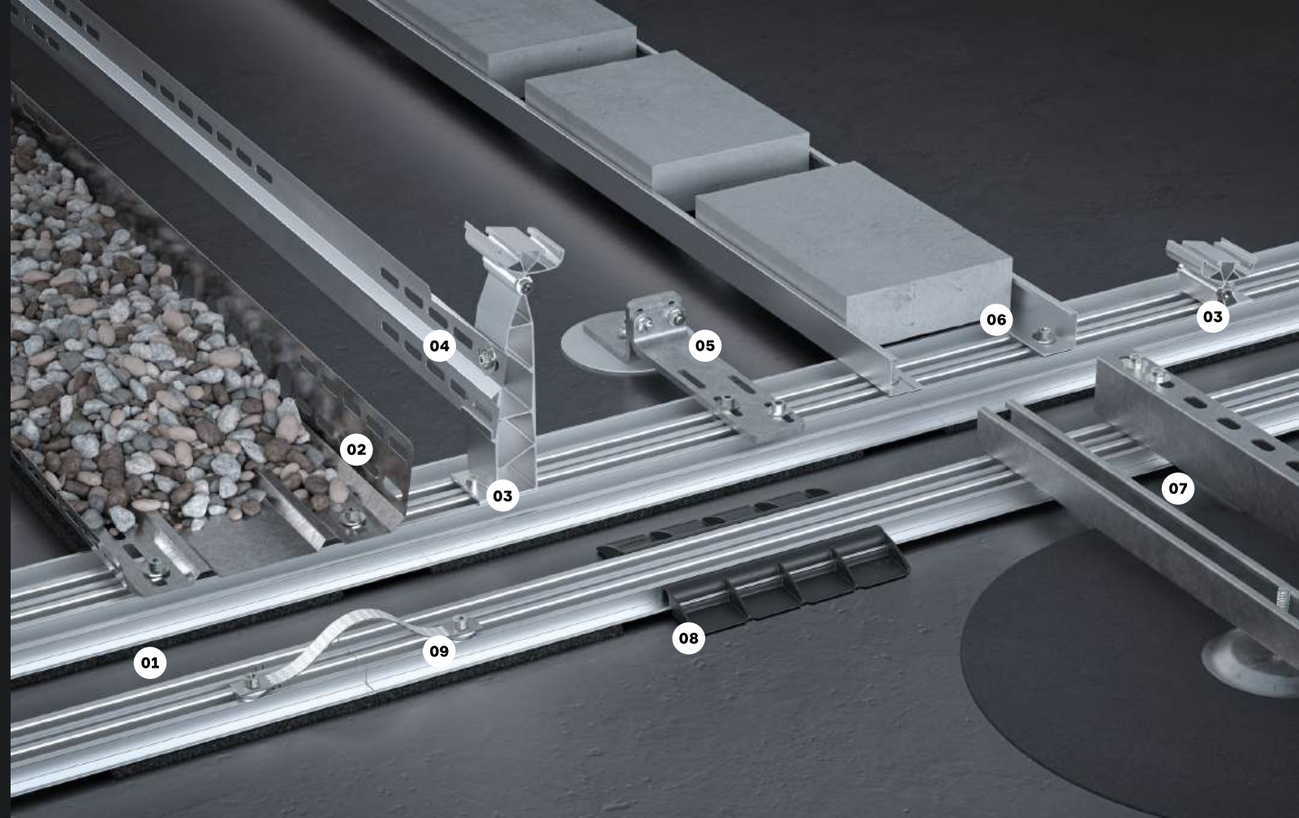
- \+ Module sizes up to 1.310 x 2.500 mm
- \+ Low point loads
- \+ Short-side and long-side clamping
- \+ Suitable for high wind and snow loads
- \+ Flexible system with few components
- \+ Preassembled components, plug & play
- \+ One-man installation possible
- \+ Minimal storage
- \+ Optimized for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

ARTICLE OVERVIEW
COMPACT**FLAT SN 2 + SN FAST**

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
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.

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).

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.

07 The *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.

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.

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.

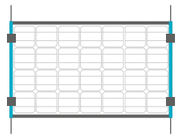
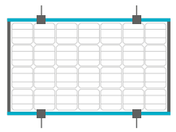
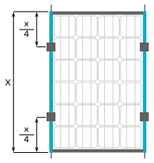
THE OPTIONS

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

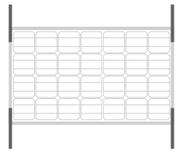
In the event of moderate snow loads, the PV modules can be clamped on the short side, saving material. Long-side clamping is recommended if the pressure load increases or large modules are used. Quarter Clamping offers higher loads than short-side clamping with a lower cost than long-side clamping.

			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

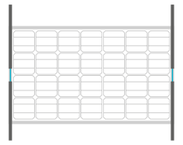
As there are different possibilities for the rail structure, the system can be individually configured to suit the respective application, regardless of the project's scale.

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



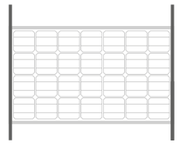
MAX. 900 mm RAIL LENGTH

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

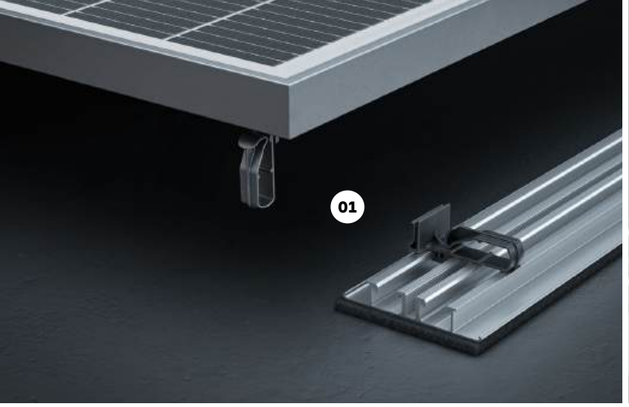


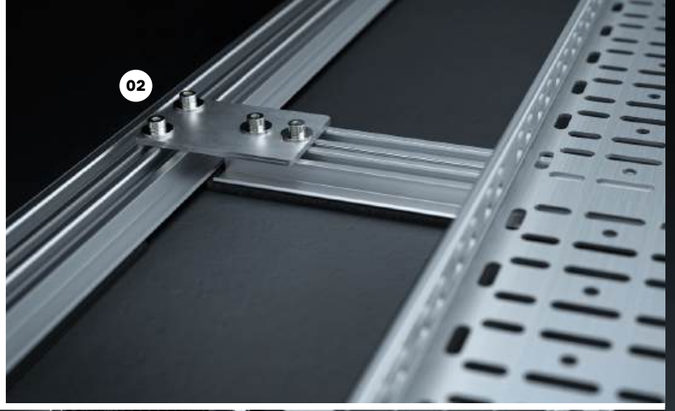
5.800 mm RAIL LENGTH

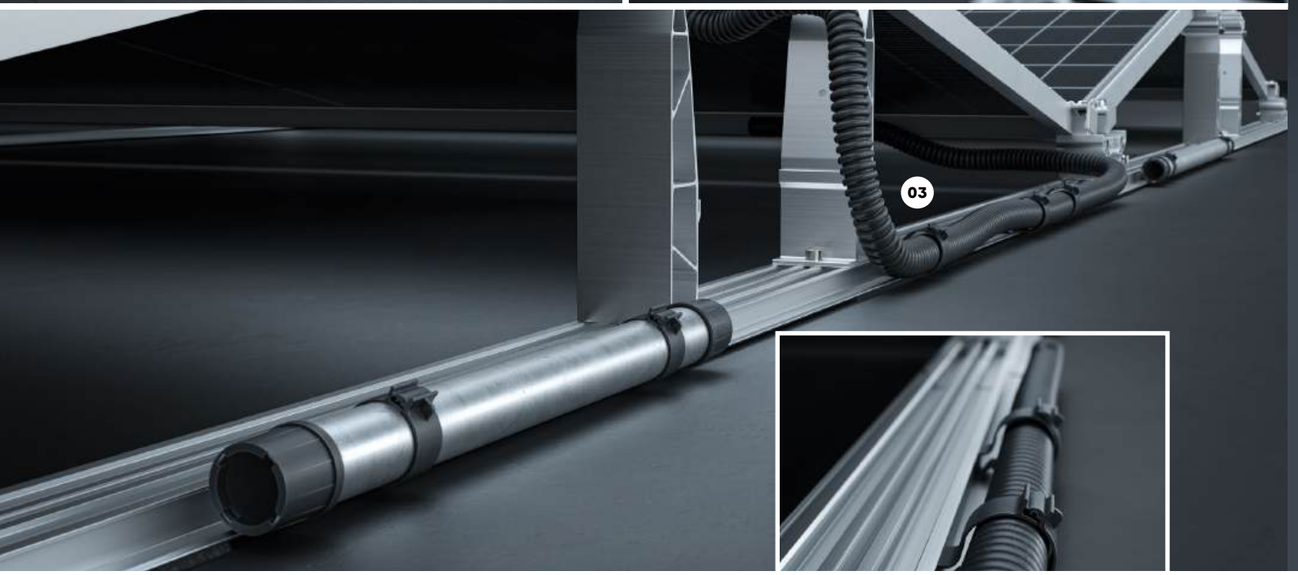
FLAT

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

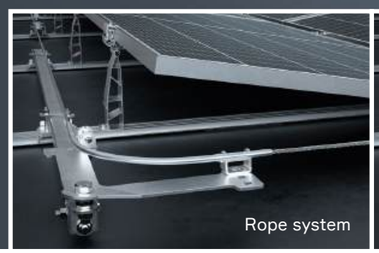
East / west-facing modules (SN 2 PLUS)
with long-side clamping and long rail structure







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°.

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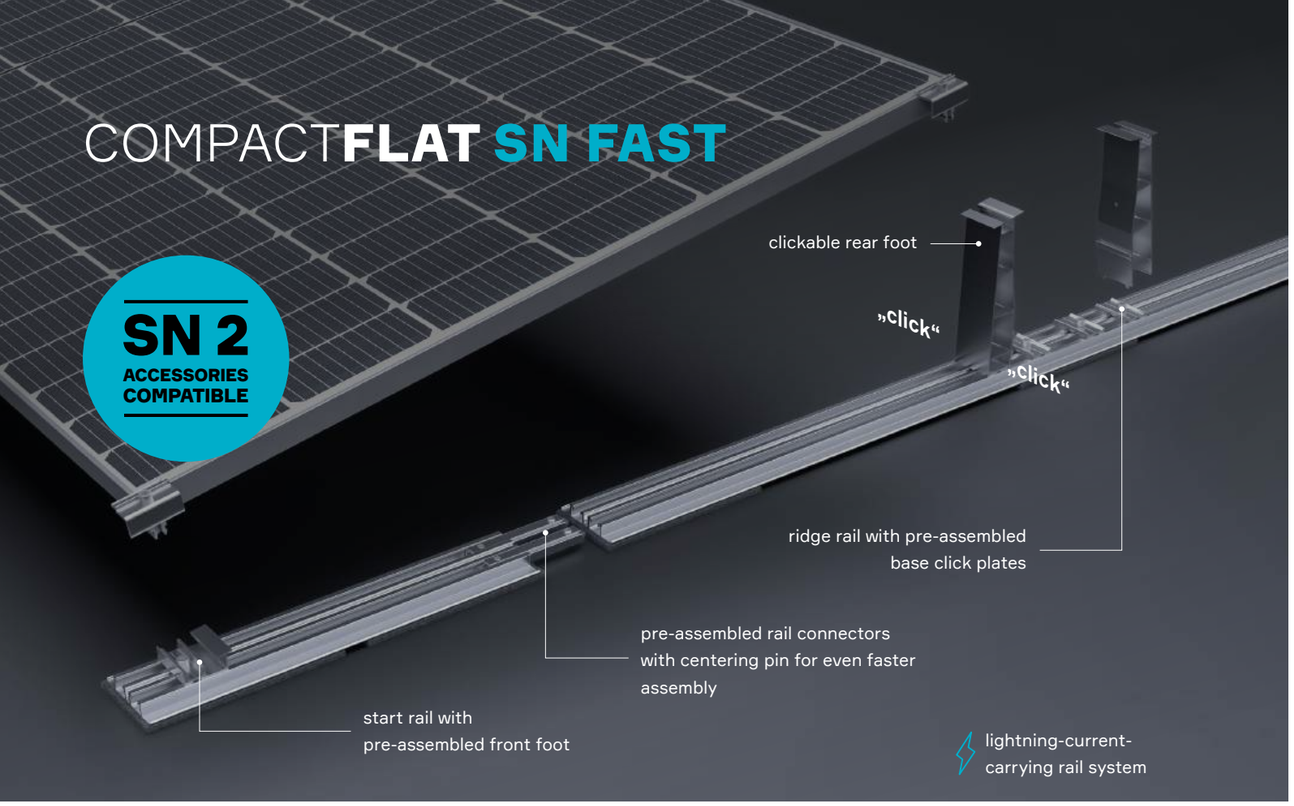


THE CHALLENGE

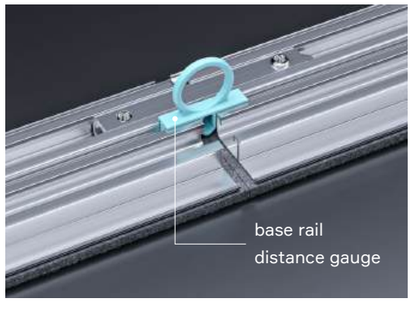
With growing time and cost pressures on construction sites, PV substructures must now deliver not only safety but also maximum efficiency.

The demand is clear: solutions that minimize work steps, enable quick and error-free installation, and are easy to handle even without extensive prior knowledge. At the same time, they must reduce logistical effort by saving space, while guaranteeing consistently high structural safety and quality.

THE SOLUTION

The pre-assembled COMPACTFLAT SN FAST builds on the proven COMPACTFLAT SN 2 system and has been further developed for especially fast and easy installation.

Thanks to just three rail types, a screwless click system, and delivery on Euro pallets, the COMPACTFLAT SN FAST can be installed quickly and without errors. It is compatible with east/west alignment and allows modules to be clamped on either the short or long side. For short-side installation, two row spacings are available — perfect for high module density or easy maintenance. Nearly all SN 2 accessories, including cable management, load distribution plates, roof anchor connections, and fall protection, are fully compatible. The SN FAST system reduces assembly time, complexity, and storage costs — all without compromising stability or flexibility.



THE VARIATIONS

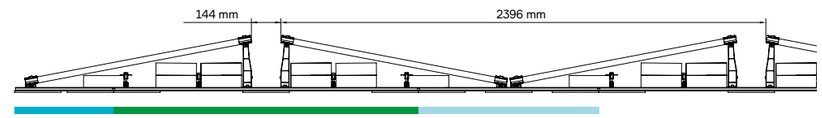
FOUR
PRE-ASSEMBLED RAIL ELEMENTS

The COMPACTFLAT SN FAST offers three configuration options, allowing perfect customization for each project. In regions with low snow or wind loads, short-side clamping provides a cost-efficient solution, while narrow ridge spacing maximizes space utilization. For projects requiring maximum strength, long-side clamping ensures that the module's full load-bearing capacity is utilized.

Configurations

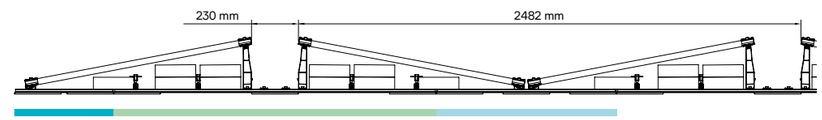
SHORT-SIDE CLAMPING
NARROW RIDGE SPACING

+ Maximum design density
+ Reduced material costs
+ Most cost-efficient option



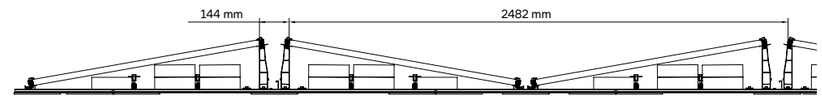
SHORT-SIDE CLAMPING
WIDE RIDGE SPACING

+ Reduced material costs
+ Improved accessibility
+ Uses the same eaves rail as long-side clamping

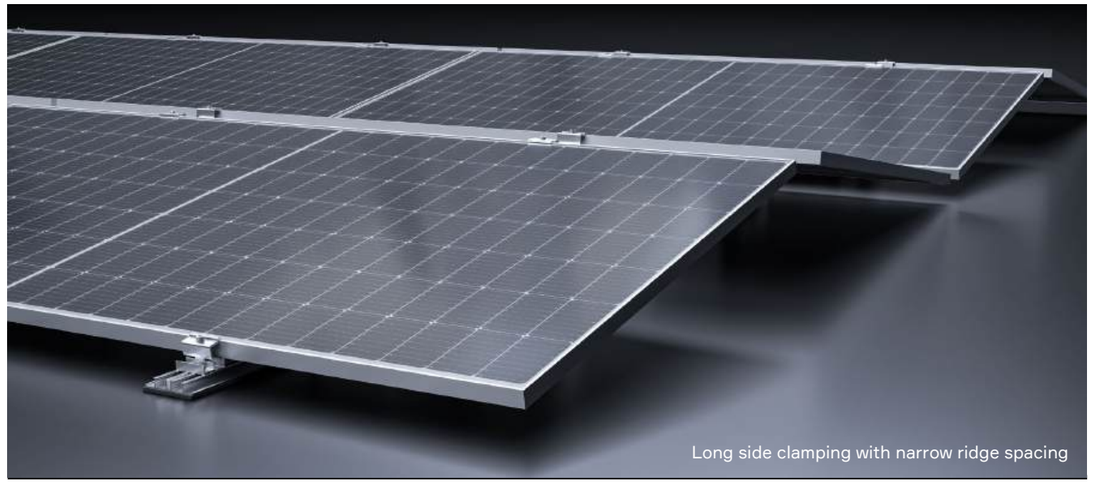


LONG-SIDE CLAMPING
NARROW RIDGE SPACING

+ High design density
+ Maximum load-bearing capacity
+ Ideal for large modules



Start and end rail · Ridge rail (2 variations) · Eave rail


Long side clamping with narrow ridge spacing

FLAT