



Bespoke project  
planning

Declaration of  
performance and  
CE marking

To mount on the  
ground or any  
type of roof

Optimization of  
costs

## ASSEMBLY SYSTEM FOR PHOTOVOLTAIC MODULE STRUCTURES



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## GUARANTEED STRUCTURES

According to European Directive (EU) 305/2011, to sell a construction product in the European Union, the manufacturer is obliged to issue a Declaration of Performance and to bear the CE mark. At the same time, the distributor must ensure that the product, if necessary, bears the CE mark, accompanied by the necessary justification.

Solarstem is homologated by the TÜV Rheinland organisation and can bear the mark on its structures.

Likewise, the company has a homologated quality system for designing and manufacturing structures according to the ISO 9001:2000 standard.

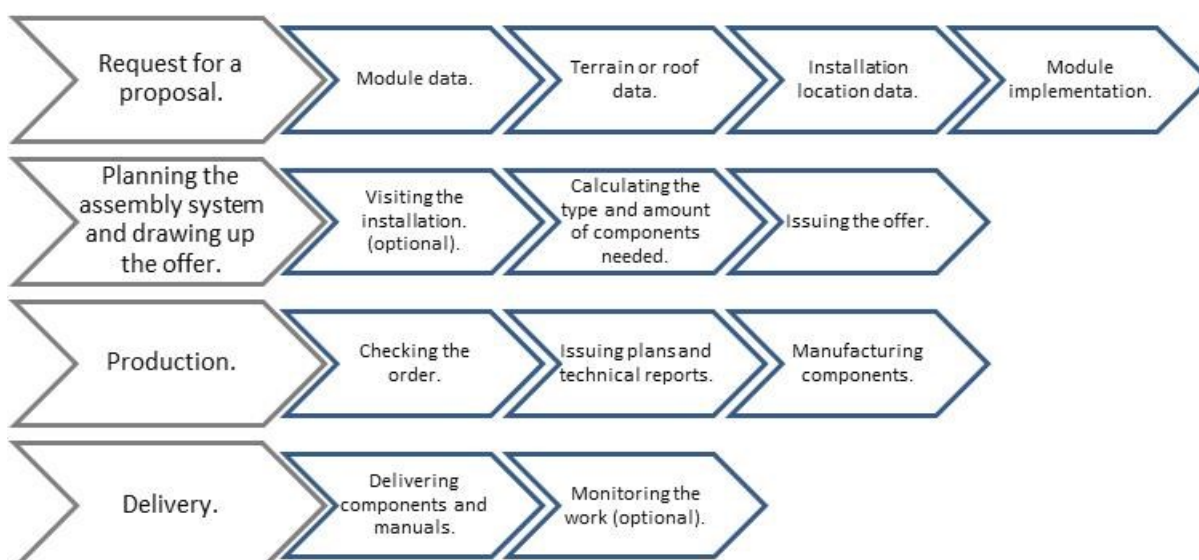


## PLANNING THE MOUNTING SYSTEM

Mounting systems are designed by our technical department, based on data provided by the client.

This process calculates the amount and type of components needed to make the structure, in accordance with current regulations.

It may be more efficient to plan small installations with the Mid-range system, which can be done by the client and delivered immediately.



## DESCRIPTION OF THE SYMBOLS



### Aluminium

Profiles made of 6082 and T6 tempered alloy, this is the superior alloy of series 6 aluminium and enables lighter sections.



### Stainless steel

Fasteners and/or components manufactured in austenitic AISI304 or A2-70 stainless steel.



### Weather proofing

Gaskets made of EPDM rubber, offering very good weather and UV resistance.



### Optimised profiles

Profiles designed to facilitate the installer's work, with asymmetrical faces to make installation more intuitive as well as guides to secure the bolts with a single tool.



### Quick inserting nuts

Sections with guides for inserting T-SLOT nuts. These nuts can be located at any point of the profile and have a locking system to avoid them moving during assembly.



### Hot dip galvanizing

Protecting the steel against corrosion. After machining, the steel sections are dipped in zinc so they acquire a 70µ layer on all sides and edges. This protection guarantees long-life, even in saline environments.



### CE Marking

System with CE mark, in compliance with European Directive (EU) 305/2011.



### Photovoltaic module guarantee

The component has been especially designed to fit photovoltaic modules according to the instructions of the principal manufacturers.



### Guarantee

The systems and components have a limited 15-year guarantee. You can download the guarantee conditions from [www.solarstem.com](http://www.solarstem.com)

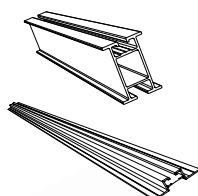


### Mid-Range

Mounting system with the possibility of designing with Mid-range components and the configuration



# MOUNTING SYSTEMS COMPONENTS



## PS aluminium profiles

in different sections to adapt to any need.



## Direct aluminium profiles

to install in coplanar systems.



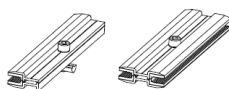
## Struts

to brace A-frames.



## A-Frames

to tilt the modules on flat surfaces, roofs and on the ground.



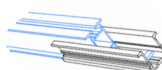
## Clamps for modules with a frame

End and intermediate flanges for photovoltaic modules with a frame.



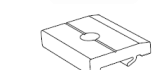
## Clamps for modules with a frame

Homologated end and intermediate flanges for frameless photovoltaic modules



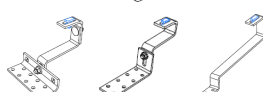
## Universal clamp

Flange for any type of photovoltaic module with a frame, it works can work as an intermediate and or end flange.



## Linear profile joint assembly

to join PS aluminium sections linearly.



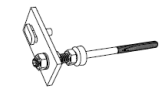
## Cross joint assembly

to join PS aluminium sections perpendicularly.



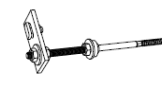
## Securing to tiled roof assembly

to secure the base profiles to a tiled roof. With different versions for different types of roof tiles.



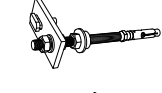
## Assembly for securing to a trapezoidal sheet metal roof

to secure the base profiles to a sheet metal roof.



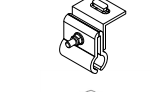
## Assembly for securing to steel straps

to secure the base profiles to steel straps.



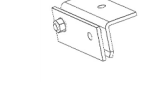
## Wood screw securing assembly

to secure the base profiles to wooden bases or to use with a chemical wall plug.



## Assembly for securing with a metal wall plug

to secure the profiles to concrete strips.



## Assembly for securing to a KalZip roof

to secure the profiles to KalZip type roofs.



## Tab securing assembly

to secure the profiles to roof with tab type projections.

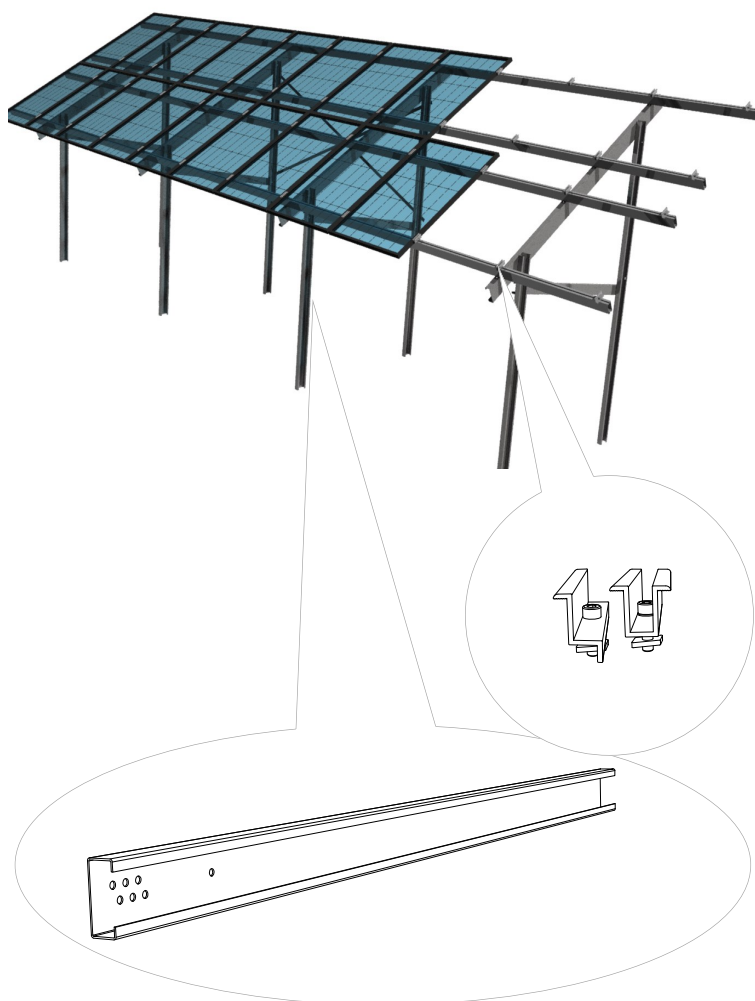


## Self-tapping stainless A2 screws

to secure the Direct profiles to a steel or aluminium strips and roof.

More information: [www.solarstem.com](http://www.solarstem.com)

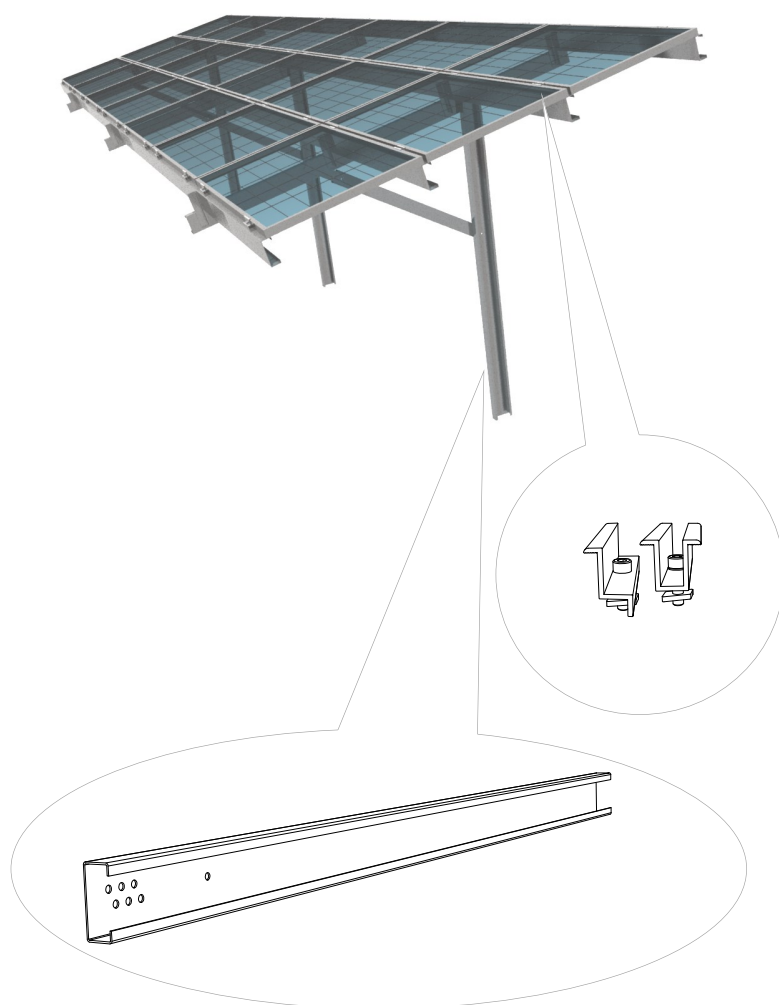
# BP FIELD



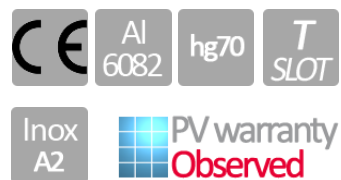
- A system with two posts that can have concrete foundations, piles or bolts.
- The length of the table has no limit, thus reducing the amount of material needed.
- Made entirely of hot-dip galvanized steel or combined with aluminium.
- Reduced assembly time, as all the components are prefabricated.
- Made to measure for each project.



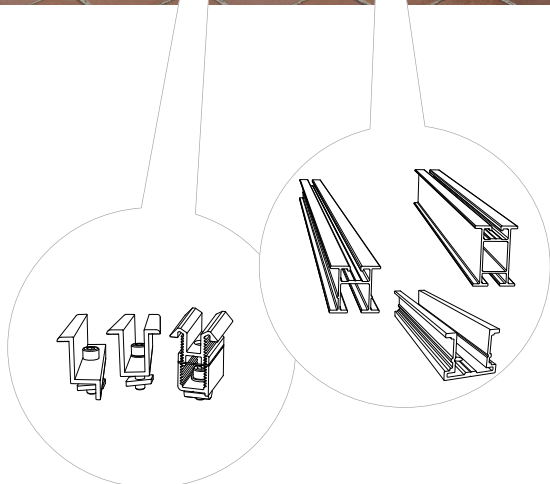
# MP FIELD



- Single post system that can be used with concrete foundations, piles or with bolts.
- The length of the table has no limit, thus reducing the amount of material needed.
- Made entirely of hot-dipped galvanized steel or combined in aluminium.
- Reduced assembly time, as all the components are prefabricated.
- Made to measure for each project.



# AF FLAT

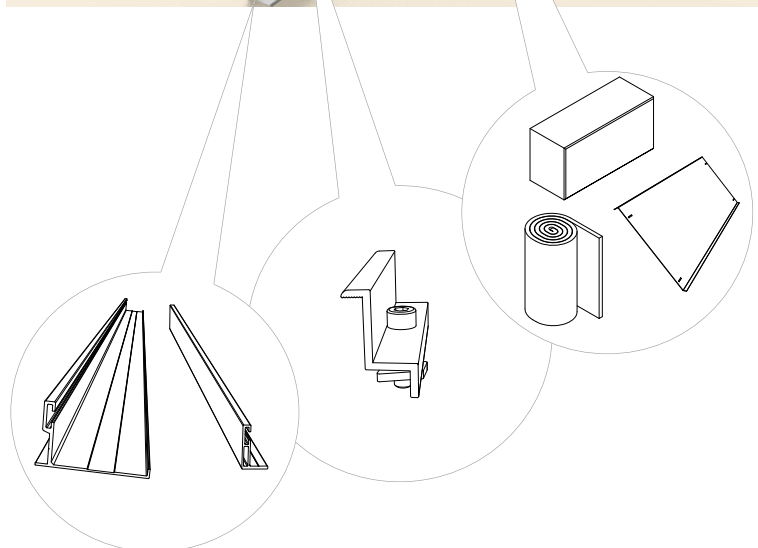
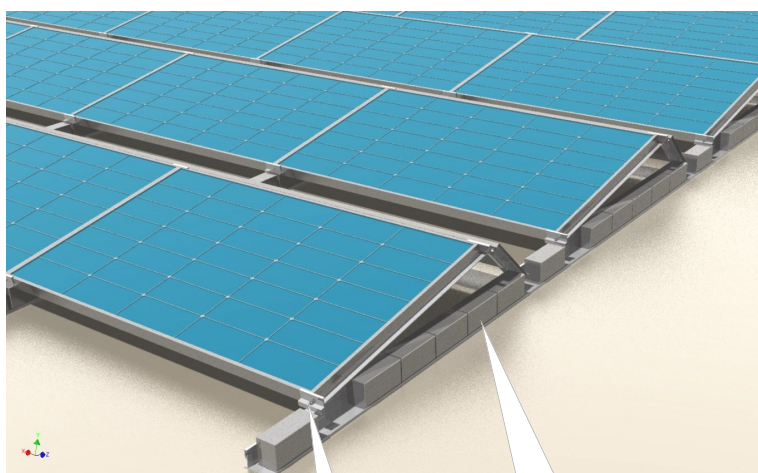


- This system consists of triangles that are individually secured to the roof and load bearing profiles for the modules.
- The triangles can be secured to the roof with ballasts or different types of fasteners.
- The system can be used with any triangle on our catalogue, with this system it is also habitual to fit special double height triangles, etc.
- Possibility of planning the structure with the auto-configuration application.





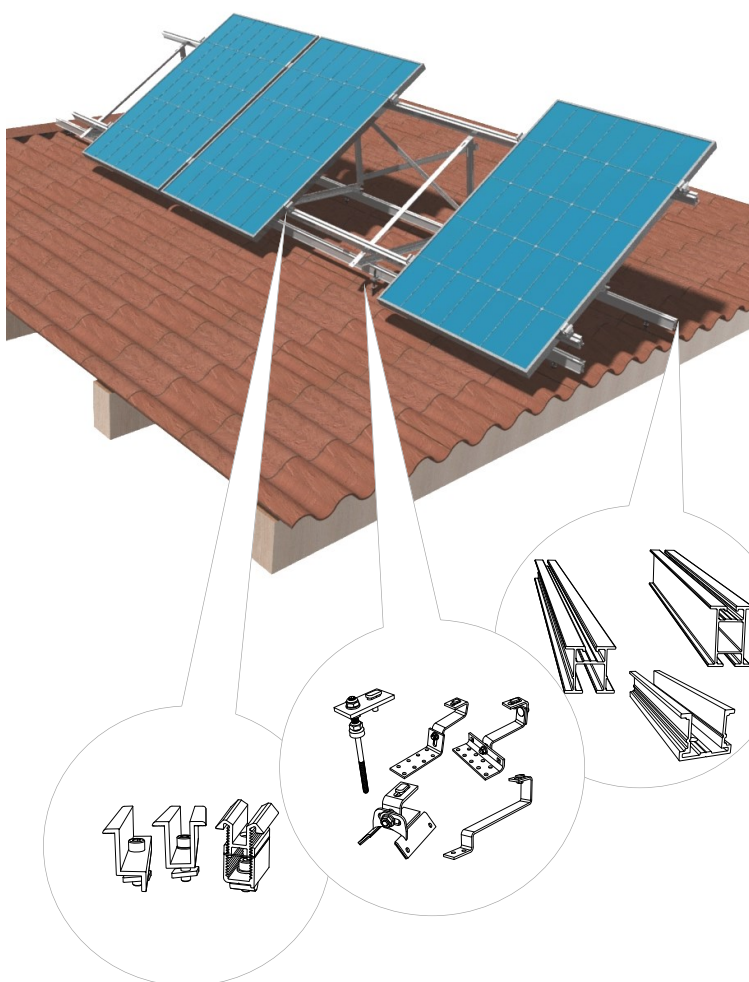
# AF AERO



- Ideal for roofs with low ballast potential nor can they be perforated.
- Aerodynamically designed to reduce the effect of wind and friction with the minimum weight and without perforations.
- Enables modules to be placed in different positions and inclinations.
- Standard ballasts are used to save logistical and planning costs.



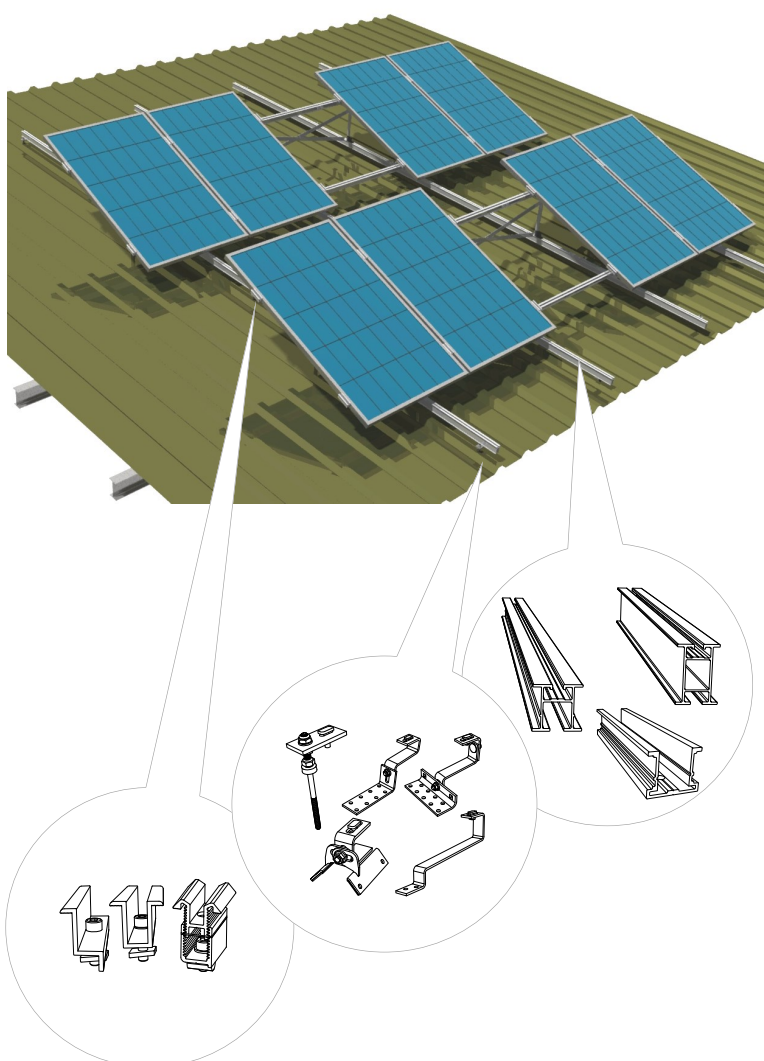
# AF ROW



- System with the triangles of the same row connected together with base profiles.
- Useful when the separation between rows is very large or they are isolated rows and it is not possible to freely secure the triangles to the roof.
- Compatible with the entire catalogue of fixing elements and triangles.
- Possibility of planning the structure with the auto-configuration application.



# AF-GRID

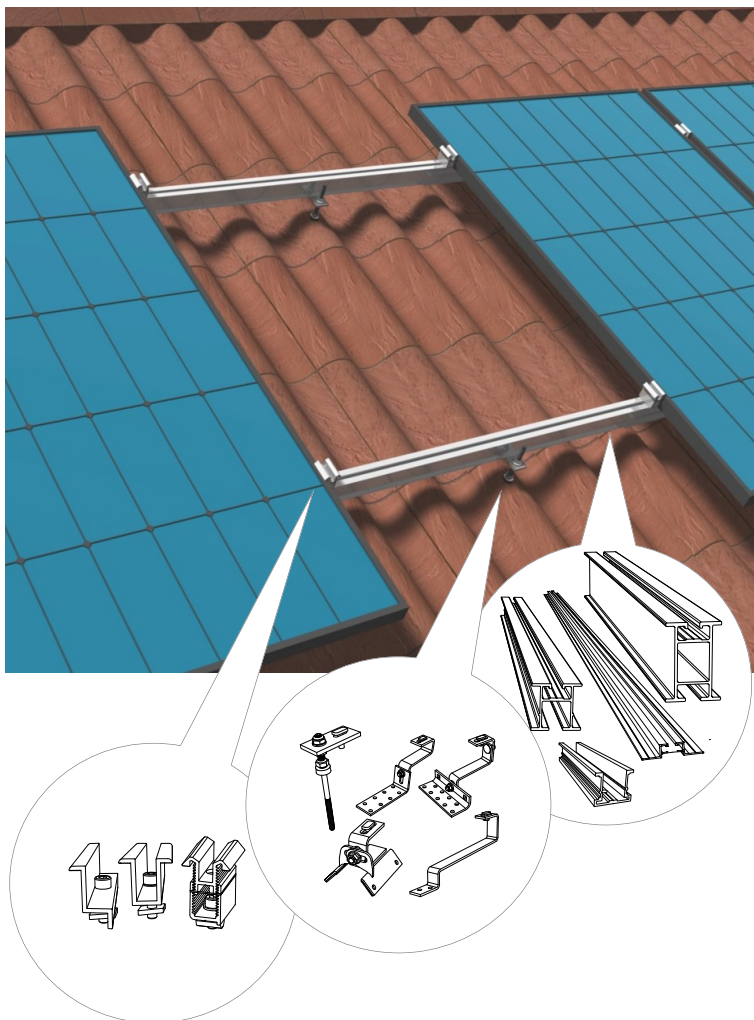


- A system with rows of triangles connected together with base profiles.
- Optimum distribution of loads in the entire structure, in some cases it is possible to reduce the anchoring points in comparison to other systems.
- Compatible with the entire catalogue of fixing elements and triangles.
- Possibility of planning the structure with the auto-configuration application.





# OR·ROW

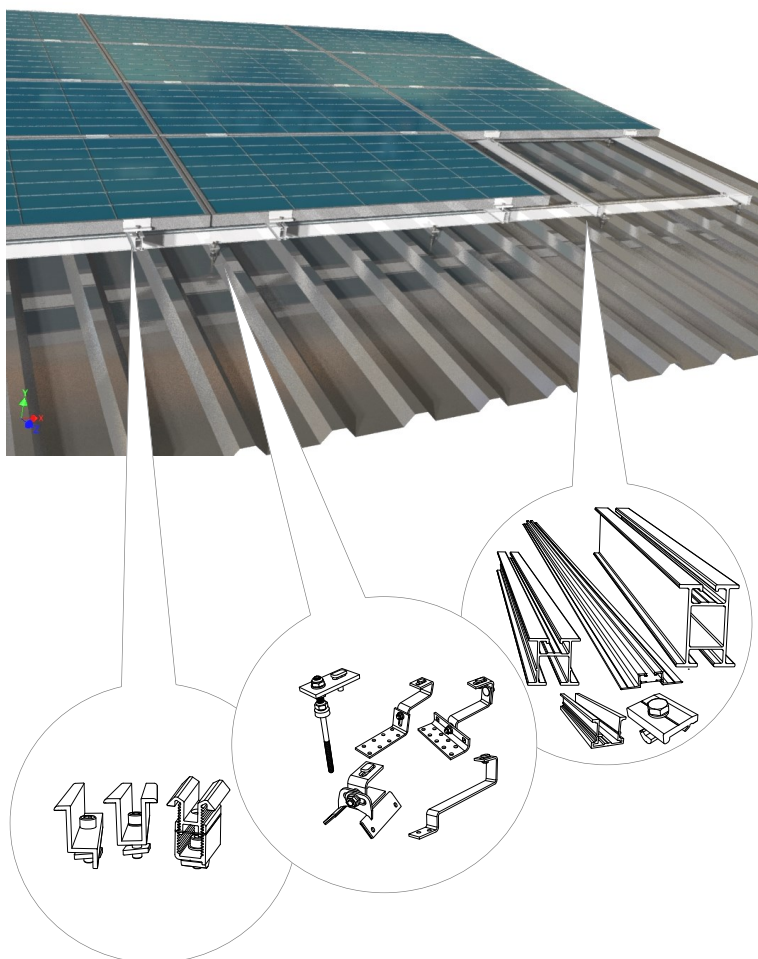


- Coplanar system with two load bearing profiles for each row of modules.
- This system is recommended when the profiles can be freely secured to any point of the roof.
- In some cases the load bearing sections can be shared between rows of modules.
- Securing with fasteners to straps, hooks for fitting to roof tiles or directly to the roof with Direct profiles.
- Possibility of planning the structure with the auto-configuration application.





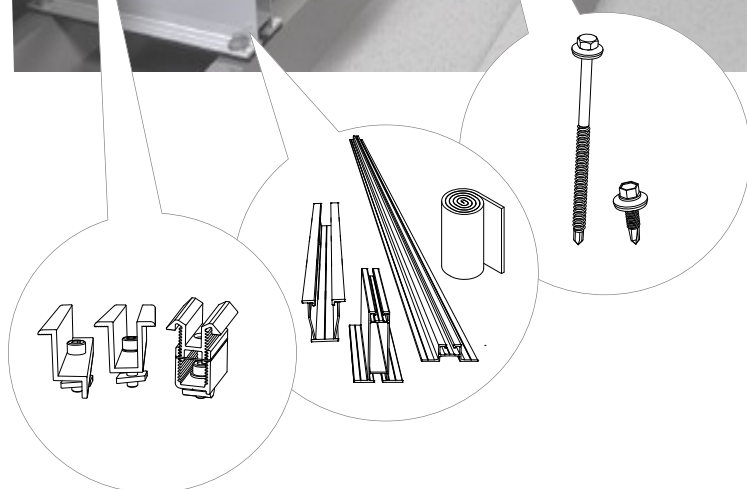
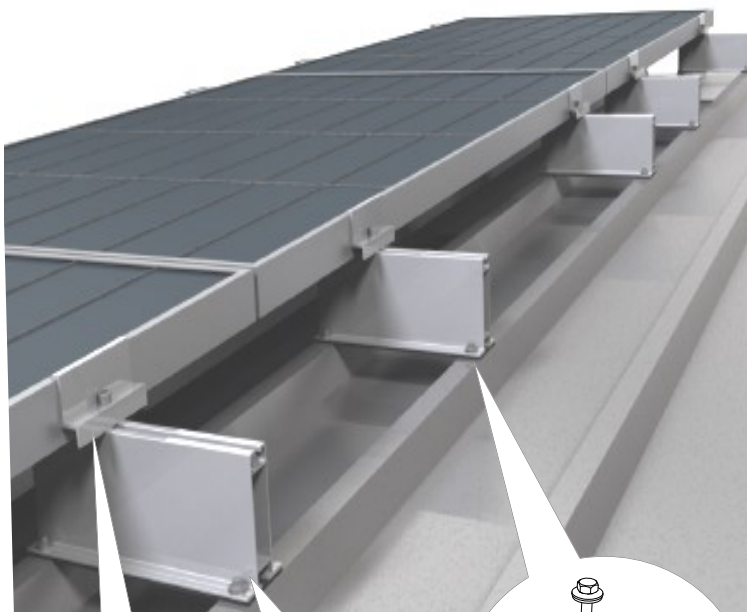
# OR GRID



- Coplanar system with a double structure in which the load bearing profiles are resting on transversal base profiles.
- This system is recommended when the load bearing profiles cannot be freely secured to any point of the roof.
- In some cases, the rows of modules can share the load bearing profiles
- Securing with fasteners to straps, tile protection hooks or directly to the roof with Direct profiles.
- This system can sometimes reduce the number of securing elements.



# OR·MINI



- Coplanar system for sloping roofs made of trapezoidal sheet metal. The profiles are only located at the attachment points of the modules.
- This is recommended when the profiles can be freely fitted to any point on the roof.
- A system that is very economic and quick to install.
- Possibility to fit the Direct MX profile when extra ventilation in the lower part of the modules is required.



## NOTES

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