



**STRUCTURES FOR
PHOTOVOLTAIC INSTALLATIONS**

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Who we are

Solutions in load-bearing structures in photovoltaic installations

At **Sun Support** we design, manufacture and deliver **photovoltaic panel support structures**.

Our main factory is located in Jerez del Marquesado (Granada), where the central offices and the factory for machining aluminium and metal elements in general are located.

Sun Support develops its activity in the **design, manufacturing and supply of photovoltaic structures with amjor focus on R&D activities**.

We have a team of specialists made up of engineers and technicians with extensive experience in the sector.



Production Lines



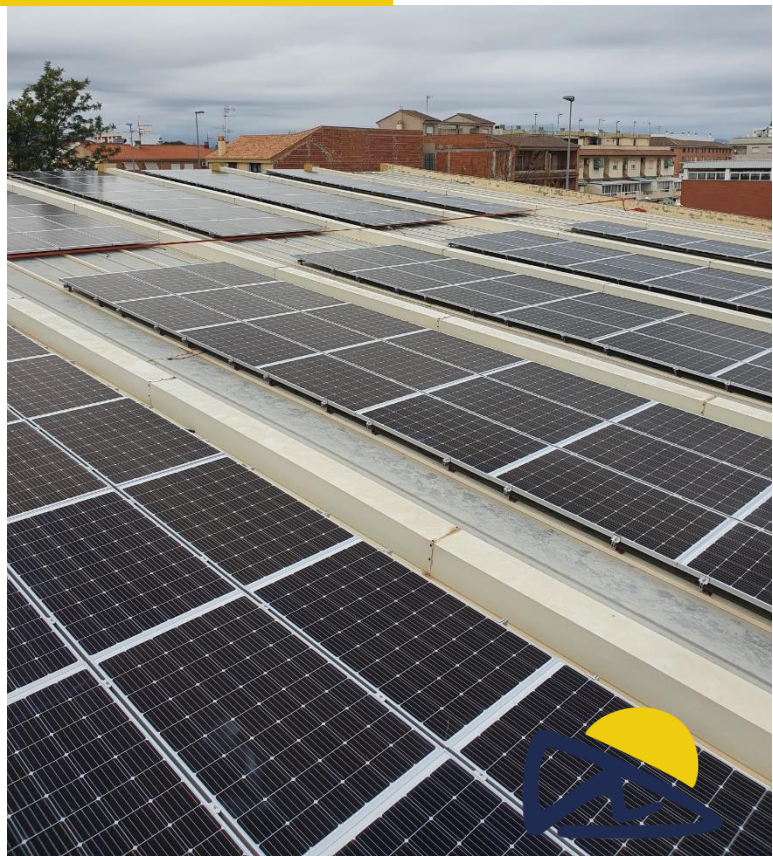
Sun Support has two production lines, one located in Granada and the other in Ciudad Real.

One line specialises in roof coverings and the other in ground-mounted structures.

Experience

Our team has extensive experience in the development of structures adapted to different types of installations, locations and weather conditions.

We have delivered **+500 MWp** in projects located in **Europe, Central America** and **Africa**.



Installations

Photovoltaic installation with ground-mounted fix structure in Navarra



This Sun Support structure has 25-year corrosion warranty. The installation has a total of 4,628 modules and a power of 1.8 MWp.



Photovoltaic installation with coplanar structure for self-consumption in Cordoba



Coplanar structures are structures without added tilt. The installation has a total of 320 modules and an output of 100.8 kWp.



Installations

Photovoltaic installation with coplanar structure for self-consumption in Granada



This Sun Support coplanar structure ensures optimum solar radiation incidence for photovoltaic production. The system has a total of 252 modules and an output of 70.56 kWp.



Photovoltaic installation with Sierra Nevada structure for self-consumption in Guadalajara



For this project, Sun Support's Sierra Nevada tilt mounting structure model has been chosen. This structure is used to fix a large number of PV modules on large flat surfaces.

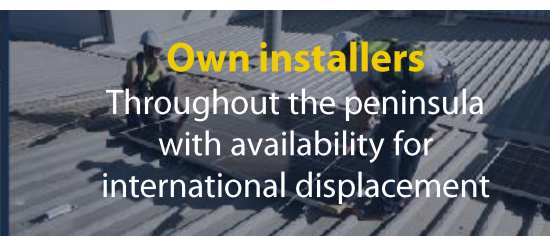




What we offer



Design
Design, manufacture, delivery and installation of photovoltaic systems



Own installers
Throughout the peninsula with availability for international displacement



Manufacturing
Structures for installation



R&D
We offer our customers the best structural solution for their installations



Integral service
And calculation of the installation



Marketing
Specialized, fast and effective advice





Project and Service

All sort of mounting structures, order preparation and transportation

At **Sun Support** we design and manufacture the mounting structures for photovoltaic projects.

We **constantly updated our product catalog** to meet your needs for photovoltaic structures; we stock products, manufacture and prepare your order with or without transportation, with the speed required by your demand.



Products

sunsupport.es

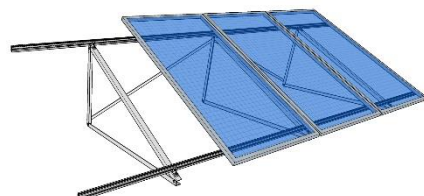
Coplanar
Alcázar



Microrail
Alhorí



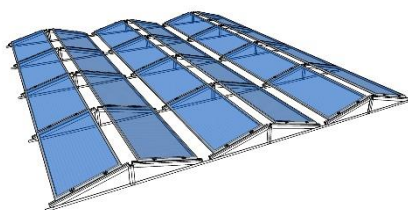
Triangular
Veleta



Continuous
Triangular
Sierra Nevada



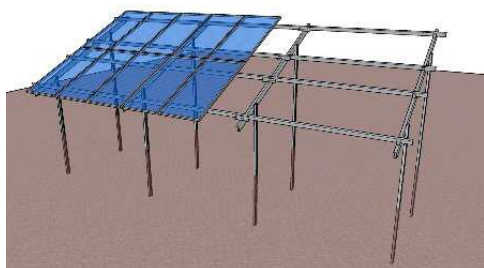
East-West triangular
Picón



Double triangular
Mulhacén



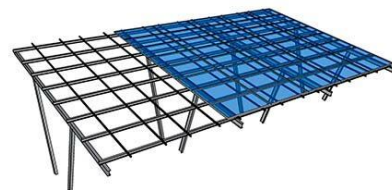
Fixed tilt
Alrután



Marquee
Postero Alto



Carport
Jérez



System
Sol'ô





Coplanar Structure
“Alcázar”



Coplanar Structure "Alcázar"

Coplanar structure "Alcazar" is used to fix the PV modules on pitched roofs, positioning the modules with an inclination equal to the inclination of the roof.

The modules are attached to the profiles by means of lateral and central fixings. The FL120 fastening secures the profiles to the roof surface.

Depending on the type of pitched roof (tile, ceramic tile, sandwich sheet metal, corrugated sheet metal, single sheet metal, deck type roof, etc.), the appropriate fasteners (not included in the structure offered) will be used.



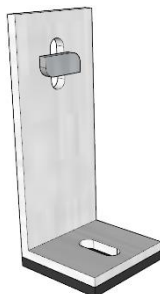
Coplanar structure Alcázar



Metal cover brackets

Continuous coplanar support for fastening to metal roof purlins. .

- All kinds of light metal covers.
- Anchoring to metal and concrete belts.
- For modules of 60 and 72 cells (1650/2120mmx992/1135mm) 33 to 50 mm thick.
- Possibility to put the modules in landscape or portrait orientation.
- EPDM gasket. Watertightness assured.



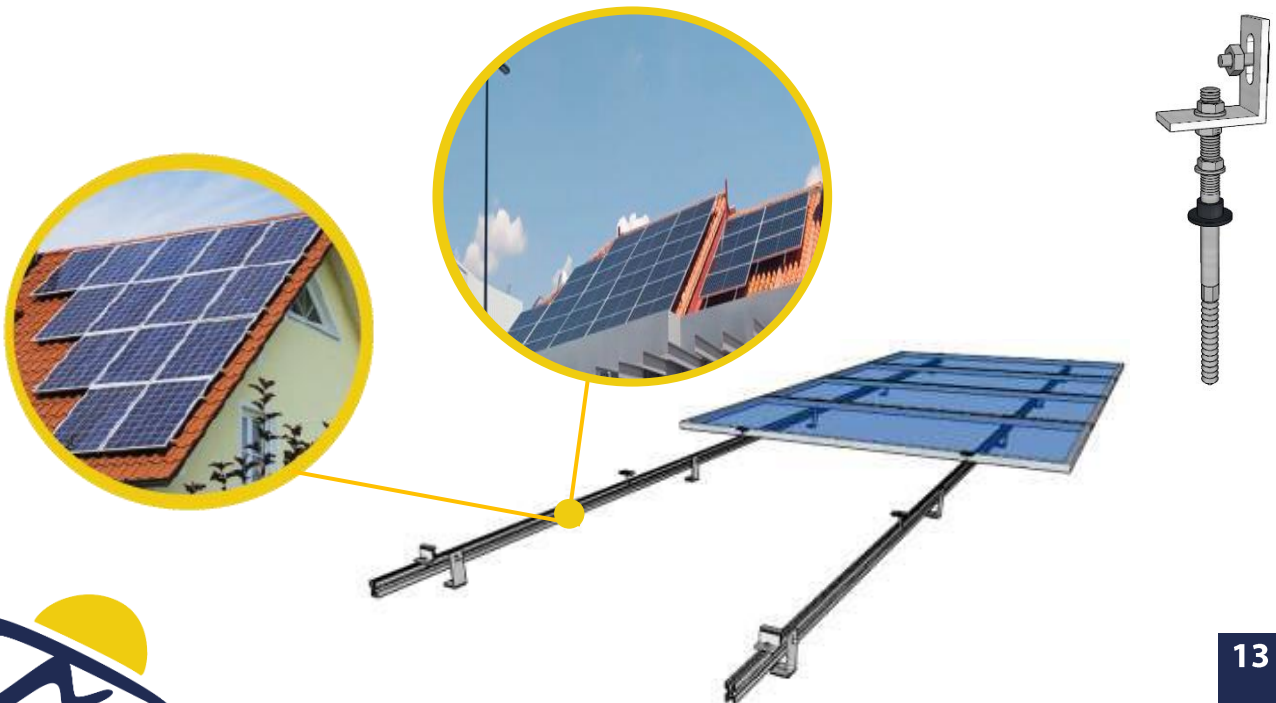
Coplanar structure Alcázar



Supports for pitched tile roofs

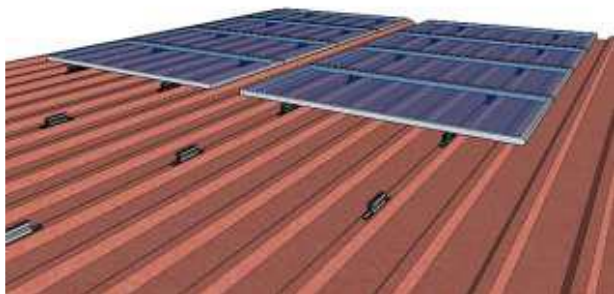
Continuous screwed coplanar support for pitched roofs with anchorage to concrete or wood.

- All types of non-light covers (Light covers: structural system by metal straps).
- For modules of 60 and 72 cells (1650/2120mm x 992/1135mm) 33 to 50 mm thick.
- Forging fastening or slope formation possibility on wooden straps.
- Not recommended for pre-tensed concrete stains.
- EPDM gasket, secured sealing.
- Possibility to arrange the modules horizontally or vertically.
- In the case of wood anchorage it is not necessary to perform a previous drill.
- The use of chemical anchor is recommended in the case of concrete. Depending on the condition of the concrete, possibility of use of nylon plug).





Microrail Structure
"Alhorí"

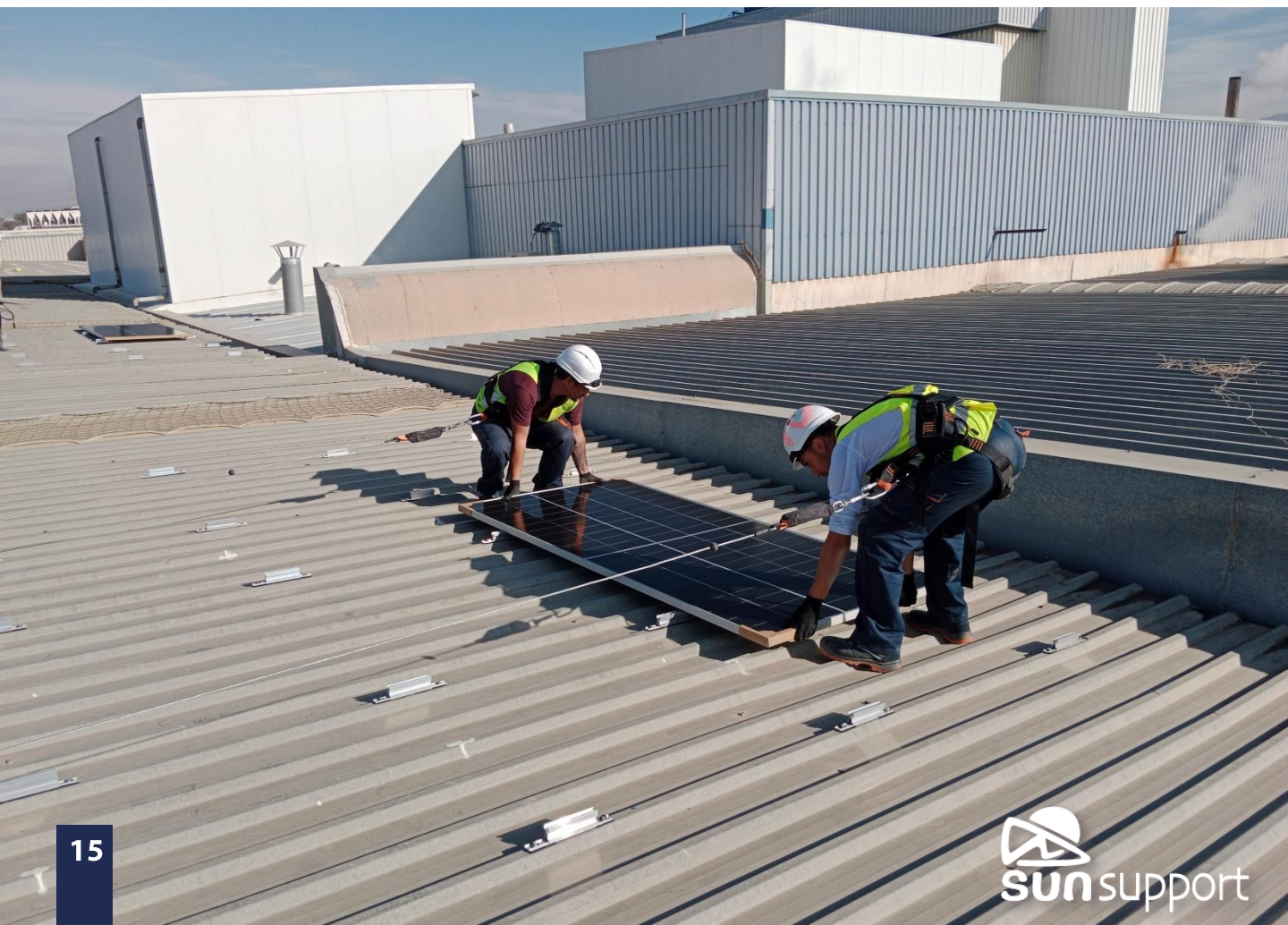


Micro-rail Structure "Alhorí"

The **"Alhorí" micro-rail structure** is used to fix the PV modules on pitched roofs, positioning the modules with an inclination equal to that of the surface.

The modules are attached to the micro-rails by means of lateral and central fixings. The fastening to the roof surface is done with screw connections directly to the roof.

Depending on the type of roof (tile, ceramic tile, sandwich sheet metal, corrugated sheet metal, simple sheet metal, deck type roof, etc.) the appropriate screws will be used (not included in the structure offered).





Triangular Structure
"Veleta"



Triangular Structure "Veleta"

The triangular structure "Veleta" is used to fix the PV modules on flat roofs or roofs with minimum inclination, it gives the modules an inclination equal to the sum of the angle of the triangle (standardised between 15° and 35° in intervals of 5°) plus the inclination of the surface.

The modules are attached to the profiles by means of the side and central clamps, which in turn are fastened to the triangles by means of the included special screws. Depending on the roof surface, the triangles are fixed to the roof directly or on the PH profile plus the FL120 fastening.

Depending on the roof construction (tile, ceramic tile, sandwich sheet, corrugated sheet, single sheet, deck type roof, etc.) the appropriate screws (not included in the offered structure) will be used.



Triangular Structure "Veleta"



Triangular Structure "Veleta"

Triangular support for flat or pitch roofs.

- Lightweight and non-lightweight flat roof (substructure).
- Anchoring to concrete and metal purlins.
- Pre-assembled system.
- For modules up to 1150 mm wide, 35 to 40 mm thick.
- Arrangement of modules in landscape or portrait orientation.
- Anchoring screws NOT included.
- Any gradual tilt available.



Vertical



**Horizontal
with crossbars**



**Horizontal
without crossbars**





Continuous Triangular
Structure **"Sierra Nevada"**



Continuous triangular structure "Sierra Nevada"



The continuous triangular structure "Sierra Nevada" is used to install a large number of PV modules on a large horizontal surface, the modules are positioned with a tilt of 10° to 15° to the roof. The modules are attached to the profiles by means of the central fixings. The profiles can be bolted or ballasted to the roof.

Each module will be supported on two profiles, with the support coinciding with the adjacent module. They will be arranged landscape and will always be fastened on the short side of the panel, so it will be necessary to check the module manufacturer's warranty conditions to verify their compatibility with this structure.





Triangular Structure
East-West "Picón"



Triangular Structure East-West "Picón"

The triangular east-west "Picón" structure is used to maximize the use of the sun's path by arranging the photovoltaic modules to the east and west, so that we produce energy more evenly throughout the day. The modules are attached to the profiles by means of central clamps. The profiles can be bolted or ballasted to the roof.

There is no shading between rows, which allows a larger number of modules to be placed in the same space.

Various models are available which allow the module to be attached on the short or long side depending on the warranty requirements of the PV module manufacturer.





Double Triangular Structure
"Mulhacén"



Double Triangular Structure "Mulhacén"

The "Mulhacén" structure is used to install PV modules on a horizontal surface or with a minimum tilt, giving the modules an inclination equal to the sum of the angle of the triangle plus the inclination of the surface. It is used to place a large number of modules on a very small surface, such as terraces of private homes or small buildings. Its 2P arrangement and the over-elevation of the lower fixed modules allows to avoid the shadows produced by walls or machinery.



Double Triangular Structure "Mulhacén"



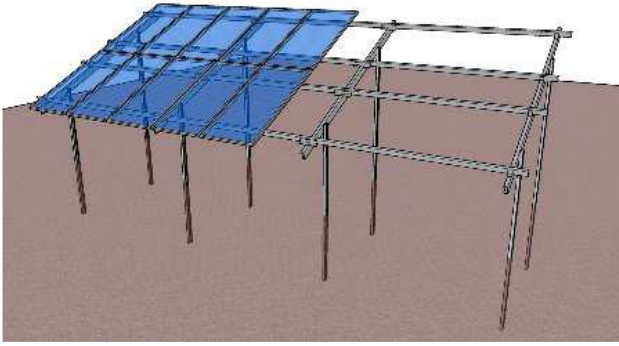
Inclined ground support

- Anchorage to concrete.
- Support for rows of 2 modules.
- Portrait or landscape module arrangement.
- Module ground clearance 3m.
- For modules of 60 and 72 cells (1650/2120mmx992/1135mm) from 33 to 50mm thick.
- Wide range of tilts available.
- Anchoring screws NOT included.





Fixed Tilt Structure
"Alrután"



Fixed Tilt Structure "Alrután"

The "Alrután" fixed tilt structure is a structure fixed directly to the ground by direct ramming, ground-screw piles, micro-piling or concrete footing.

Composed of "C" section steel profiles of Magnelis® quality and anti-corrosion treatment or similar, this type of structure is easy to install and very light.

This structure allows for variations in the inclination of the panels, which is essential to obtain a more efficient incidence of the sun's rays.



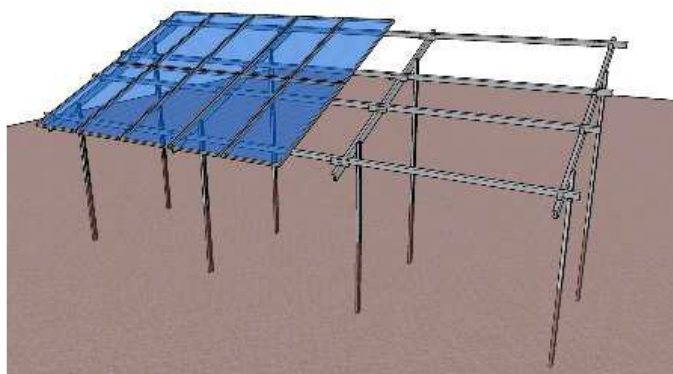
Fixed Tilt Structure Alrután



Fixed Tilt Structure

For module rows, in portrait or landscape orientation.

- Ground-mounted by direct ramming, micro-piloting ground screws or concrete footing .
- Minimum 50 cm of ground clearance from the lower module.
- For all available PV modules in the market.
- Portrait or landscape module arrangement.





Marquee Structure
"Postero Alto"



Marquee Structure "Postero Alto"

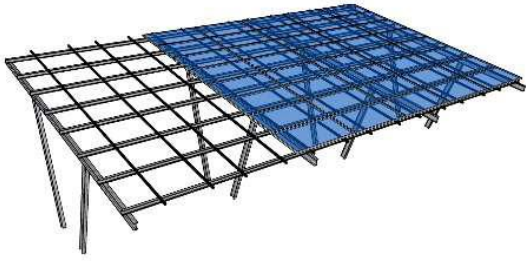
The marquee structure "Postero Alto" is an elevated structure for 10, 12 or 15 photovoltaic modules in portrait or landscape orientation (depending on the model) with variable tilt.

Its function is to cover an area and make it usable under the modules. It has the capacity to house pumping stations, individual parking spaces, huts and small buildings underneath and to supply them with energy. Ground anchored structure.

This tailor-made hybrid solution guarantees a stable and reliable power supply.







Carport Structure "Jérez"

The **carport structure "Jérez"** are canopies built to cover vehicle parking areas. This type of structure has a dual function of generating energy and providing shade shelter for vehicles.

There are different structural designs depending on the number of modules, the space available, the optimum slope of the area or the rows of parking spaces to be shaded, so the design of the structure is made specifically for each project.



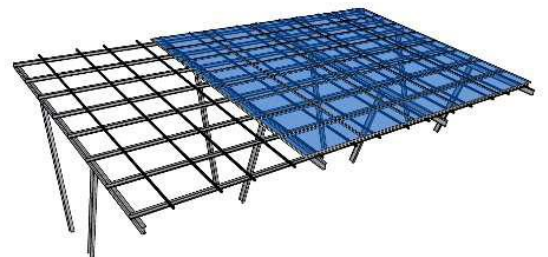
Carport Structure "Jérez"



Parking structures

Elevated super structure

- Study of the area and customised design.
- Structural study taking into account climatic factors such as wind , snow and seismic.
- Portrait or landscape module orientation.
- Attachment of modules directly to the steel structure or on additional aluminium substructure, depending on design.
- For all available PV modules in the market.
- Clearance to the ground of 2.5 metres or more.

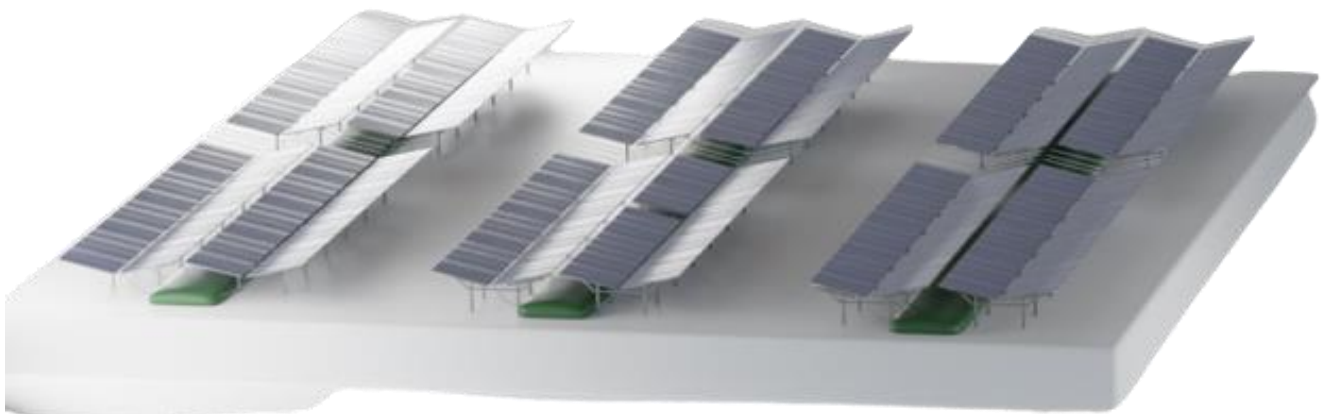


System SOL'Ô



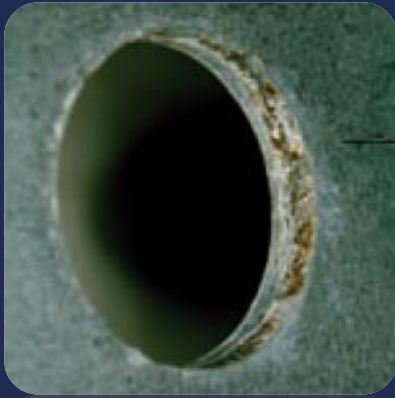
Our system uses photovoltaic solar panels that collect rainwater, which is then stored in tanks.

This type of structure serves to contribute to climate change mitigation, the conservation of natural resources, and access to energy and water. It is a sustainable, economical, and useful solution that meets essential needs for both energy and water.





Meet an **innovative coating** that offers protection in the harshest environments



6 months
30-40% red rust
60% white rust



16 months
10% red rust
70% white rust

Outdoor exposure over different periods of time of Magnelis® ZM250 with a thickness of 2mm in Brest (France)
Marine category C5-M (most severe)
French Corrosion Institute (independent laboratory)

Metallic steel coating that provides extra protection to Sun Support structures, "Alrután" canopy "Postero alto" and "Jérez" carports.

- **Highest Corrosion Resistance: up to 20 times better than galvanised steel**
- **Best suited to withstand the harshest environments**
- **The most cost-effective alternative to post-galvanising.**

Magnelis® is produced on a classic hot-dip galvanising line, but is immersed in a molten bath with a special chemical composition of zinc, 3.5% aluminium and 3% magnesium.

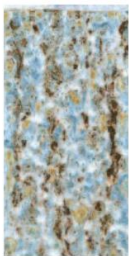
The 3% magnesium is crucial as it creates a stable and durable layer over the entire surface and provides much more effective corrosion protection than coatings with a lower magnesium content.

Hence, ArcelorMittal's Magnelis® enables significantly better results than alternative European products.

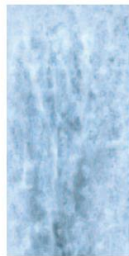
Salt spray test



Hot dip galvanised
20µm after 6 weeks



Post galvanised 85µm
after 12 weeks



Magnelis® 20µm
after 34 weeks





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T.: +34 951 92 50 41
info@veruscert.com www.veruscert.com

CERTIFICATE OF CONFORMITY
OF FACTORY PRODUCTION CONTROL No.

2449/CPR/AC-RT80

In compliance with Construction Products Regulation (EU) 305/2011 of the European Parliament and of the Council of 9 March 2011, the notified body VERUS (nº 2449), issues this certificate that applies to the construction product:

EXECUTION OF STEEL STRUCTURES AND ALUMINIUM STRUCTURES. PART 1: REQUIREMENTS FOR CONFORMITY ASSESSMENT OF STRUCTURAL COMPONENTS.

Method of CE marking declaration: 2. Execution class: EXC2. EN 1090-2. EN 1090-3

placed on the market:

SUN SUPPORT, S.L.



Camino de las Viñas S/N, Parcela 137
18518 Jerez del Marquesado - Granada

and produced in the manufacturing plant:

SUN SUPPORT, S.L.

Camino de las Viñas S/N, Parcela 137
18518 Jerez del Marquesado - Granada

This certificate attests that all provisions concerning the assessment and verification of the constancy of performance described in Annex ZA of the standard(s)

EN 1090-1:2009+A1:2011

under system 2+ are applied, **and that the factory production control is assessed to be in conformity with the applicable requirements.**

This certificate was first issued on the date indicate below, and will remain valid until its validity date, as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified factory production control certification body.

First issued date

January 8, 2021

Last issued date

March 1, 2024

Validity date

January 31, 2025

Alfonso Valenzuela García
Managing Director



Use this QR code to check the validity of the certificate at all times, even after the validity date has expired

Failure to comply with the conditions established in the contract may result in cancellation of the certificate.
This certificate may not be reproduced in part. Ed: 04 01/03/19 PG ELA-CER-02

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Quality Assurance



At Sun Support SL we are **committed** to the **quality** of our products, to the protection of the environment and of course to the safety of all our employees, which is why our company is **ISO 9001, 14001 and 45001 certified**.

What does ISO 9001 certify? This is the most widely recognised quality management standard in the world and certifies that at Sun Support SL we have all the elements necessary to have an effective system that allows us to manage and improve the quality of our products and services, in other words, **our commitment to excellence**.

And ISO 14001? That we are responsible and committed to the **protection of the environment**.

ISO 450001? ISO 45001 is the international standard for **occupational health and safety management systems, designed to protect workers and visitors from occupational accidents and diseases**.





Confidence of our
customers



Customers

Customers who have already placed their trust in the quality of Sun Support structures for their photovoltaic installations:



SACYR



ZENER



ISE
energia



ecotelia



renovWa



CLEANERGY
MOROCCO
solar solutions



talio
ingeniería



elecnor



CHINT
CHINT ELECTRIC



SENS
Iqony Solar Energy Solutions



Redexis



SferaOne



Magtel



ENGIE
Ineo



Boquet[®]
100 Anys





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