The success of a solar project depends on who you partner with.
Atex Solar is a prepared partner dedicated to customer value and profitability.

EPC Partner Benefits

+ CAPEX (structura l cost) reduced by 18% through design optimization
+ Reduced procurement management costs via package sourcing
+ 20% shorter construction period enabled by precision-fabricated components

Customer Value

+ 25-year long-term durability ensured through PosMAC application
+ Genuine structural materials directly produced by AJUSTEEL
+ Direct supply and quality control of accessories (brackets and bolts)
+ Reliable after-sales support through modules supplied in partnership with major corporations

AJUSTEEL

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AJUSTEEL building solusion & design center Vol.1.0 2026/6

From structural design to manufacturing,
and full package supply of
modules, inverters, and accessories.

AJUSTEEL

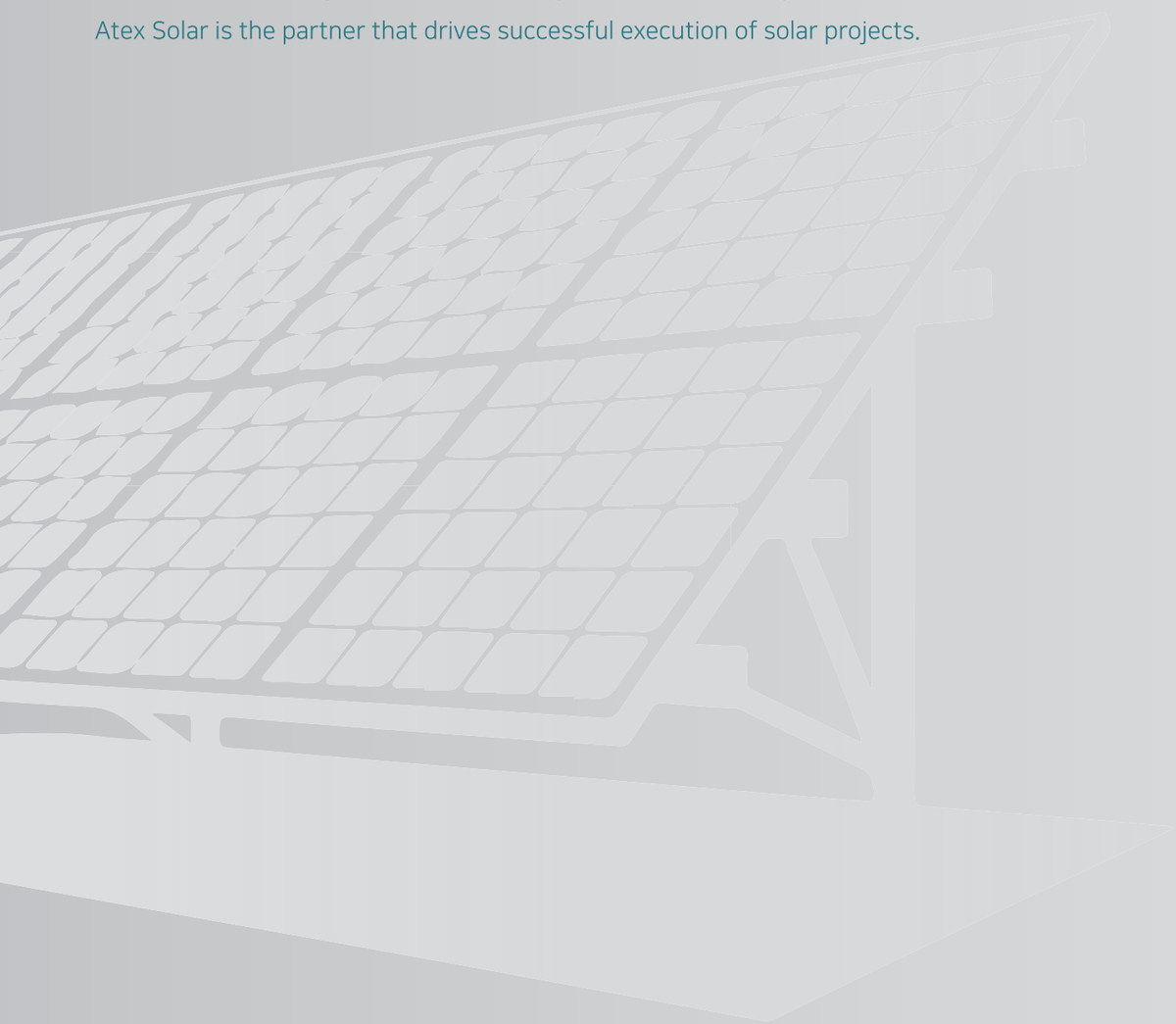
Atex Solar

Innovative Solar Total solution

DONGKUK STEEL GROUP

One-Stop
Solar Mounting Solution

From structural design and manufacturing to complete package supply,
Atex Solar is the partner that drives successful execution of solar projects.

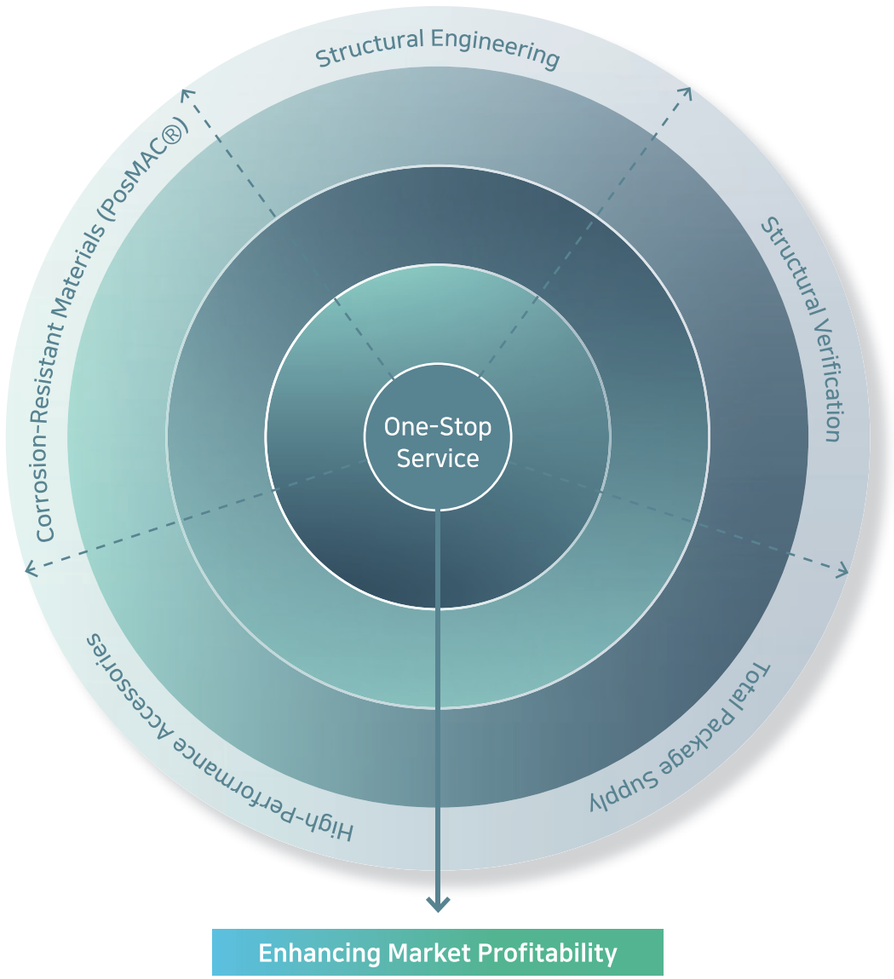


Contents

As the Solar Market Evolves,
Integrated Solutions Lead the Way.

In today's solar market, competitiveness depends not on installation alone, but on optimizing every stage of the project.

AJUSTEEL leverages its engineering expertise and integrated capabilities to solve the complex design and procurement challenges faced by EPC contractors and project developers.



Innovative Solar Total Solution
Five Key Elements for Successful Solar Projects

1. Engineering Excellence

- ☑ **Data-Driven Optimization**
  By conducting precise analyses of site-specific climate conditions—including wind loads and snow loads—we design structural systems optimized for each project environment.
- ☑ **Maximized Profitability**
  Through optimized structural engineering tailored to each site, we eliminate overdesign and reduce material quantities by up to 12%, lowering initial investment costs and improving project profitability.

2. Smart Manufacturing

- ☑ **Integrated Production System**
  From direct procurement of POSCO steel coils to slitting, roll forming, precision punching, and laser processing, all manufacturing processes are integrated within our smart factory in Gimcheon.
- ☑ **Reliable Delivery & Quality Assurance**
  By eliminating intermediary distribution channels, we minimize delivery risks and ensure consistent supply of certified steel products manufactured under strict KS and ISO quality management systems.

3. Total Material Package

- ☑ **Streamlined Procurement**
  Beyond mounting structures, we provide comprehensive package solutions including modules and inverters from global leading brands such as Hanwha Solutions, HD Hyundai Energy Solutions, and Huawei.
- ☑ **Unified Purchasing Process**
  A single procurement channel simplifies ordering, settlement, and inventory management while eliminating specification mismatch risks across project components.

4. Specialized Accessories

- ☑ **Corrosion Prevention Solution**
  MAC-coated bolts with electrochemical properties similar to PosMAC steel effectively prevent galvanic corrosion, ensuring long-term structural integrity and fastening performance.
- ☑ **Enhanced Installation Efficiency**
  Precision-engineered brackets featuring slotted-hole technology enable rapid correction of on-site dimensional tolerances, reducing installation time by approximately 20%.

5. High-Durability Material

- ☑ **Self-Healing Technology**
  The magnesium-based protective layer, Simonkolleite, forms a self-healing barrier that protects cut edges and scratched areas from corrosion, delivering outstanding durability without the need for hot-dip galvanizing (HDG).
- ☑ **Long-Term Corrosion Resistance**
  Offering 5–10 times greater corrosion resistance than conventional galvanized steel, PosMAC ensures reliable performance for over 20 years, even in harsh environments such as coastal regions and livestock facilities, while minimizing maintenance costs.

Atex Solar's strongest competitive edge is **its structural engineering capability.**

In solar projects, structural engineering is more than a technical requirement — it is a key factor that determines both profitability and structural stability.

"Atex Solar, Engineering Support You Can Rely On"

While many EPC contractors rely on external engineering firms for structural design, this approach often leads to longer lead times, slower responses to design changes, and additional costs.

Atex Solar provides direct structural engineering support, enabling faster feasibility reviews and delivering optimized structural solutions tailored to each project's specific requirements.

By thoroughly analyzing site conditions at the design stage, we eliminate unnecessary overdesign and ensure that only the required structural components are applied. As a result, projects can achieve the required performance while reducing material quantities and improving overall cost efficiency.

Structural Engineering Solutions Tailored to Every Site, from Greenhouses and Agrivoltaics to Livestock Facilities and Floating Solar Systems.

Specialized structural engineering is essential for diverse applications such as greenhouses, agrivoltaics, livestock facilities, and floating solar systems.

As the solar market expands, the ability to respond to unique environmental conditions becomes a key competitive advantage.

Atex Solar designs optimized structural systems tailored to each site by considering load conditions, corrosion exposure, and installation requirements.

By balancing structural reliability, constructability, and long-term durability, we deliver solutions optimized for every project environment.

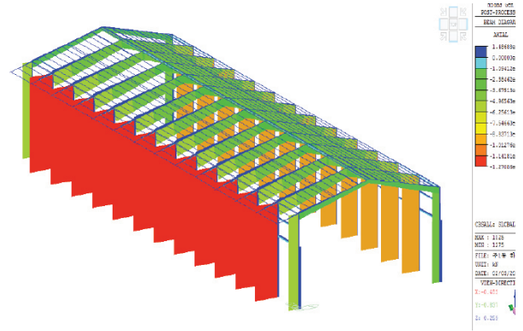

Greenhouse

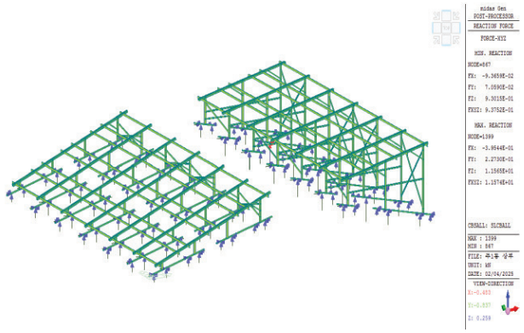

Agrivoltaics


Floating Solar

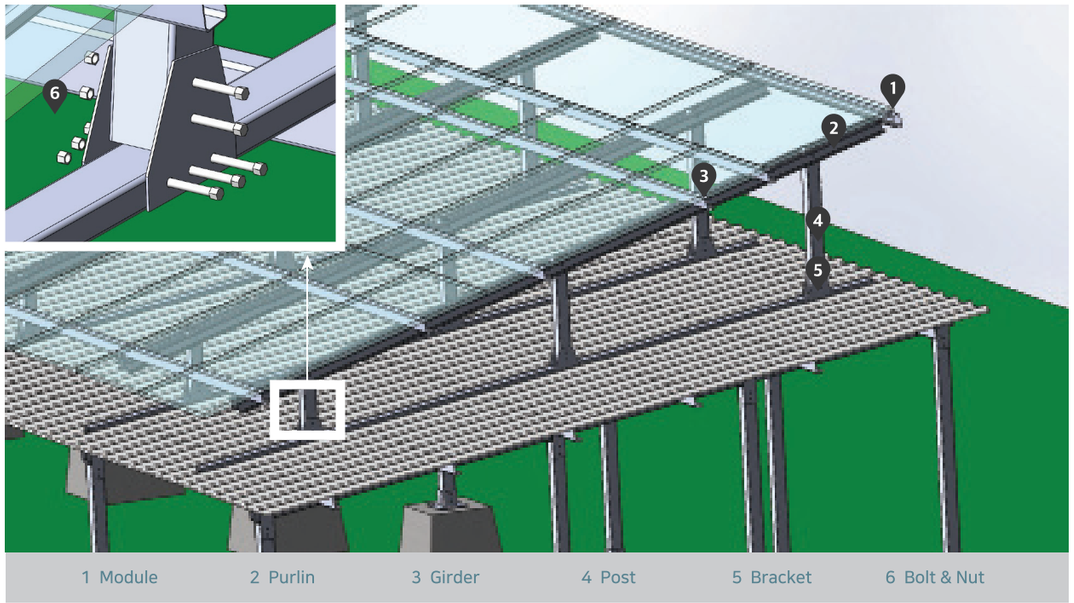
Structural Review of Existing Buildings and Solar Mounting Structures

- [x] Providing optimal total solutions from design to structural review.
- [x] Ensuring structural stability by considering site-specific environmental conditions and proposing the minimum required reinforcement measures.





Names of Solar Mounting Structure Components

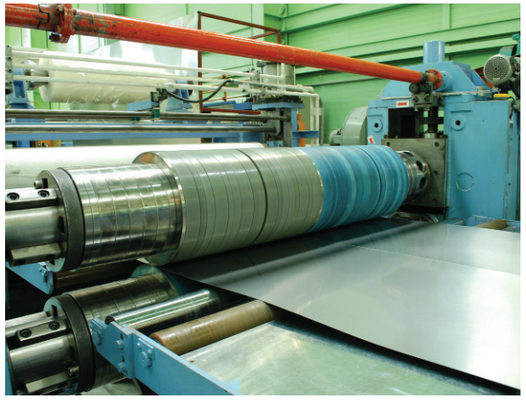


1 Module 2 Purlin 3 Girder 4 Post 5 Bracket 6 Bolt & Nut

Providing Optimal Delivery Response
Through an In-House Manufacturing System

We maintain inventory in a wide range of sizes and carry out the entire production process in-house, from primary processing (slitting) of raw materials to secondary processing, including pipes, C-channels, and laser punching.

To support this capability, Atex Solar operates all key processing facilities in-house, enabling greater flexibility and responsiveness throughout the project lifecycle. This manufacturing foundation serves as a key differentiator in our project execution capability.



Slitter

Equipment used to cut steel coils into specified widths.

Tube Mill

Automated equipment that continuously manufactures round and square tubes using steel skelp.

Features

- Capable of producing various shapes, including round and square tubes
- Equipped with a high-precision welding system
- Maintains high production speed and consistent quality
- Includes post-weld cooling and sizing processes

Pre-Punched Tube Mill

Equipment that performs precision hole punching at designated positions using a flying punching system before the roll-forming process, ensuring both high production efficiency and machining accuracy.

Features

- Equipped with a high-speed automatic punching system
- Enables precise hole punching operations
- Supports production of square tubes in various sizes
- Improves productivity and reduces manufacturing costs

C-Channel Roll Forming Line

Equipment that produces C-channels by performing hole punching at designated sizes and positions using a hydraulic press before the roll-forming process.

Features

- Capable of producing high-strength C-channels
- Equipped with an automated hydraulic press system
- Supports various thicknesses and dimensions
- Ensures precise and consistent punching quality

Laser Processing System

Equipment that precisely cuts tube lengths and processes holes in round and square tubes using a high-power laser system.

Features

- Enables high-speed, precision cutting
- Supports processing of various materials, including steel and aluminum
- Capable of machining complex shapes and patterns
- Minimizes material deformation through a non-contact processing method

A total package solution that simplifies
procurement and improves efficiency.

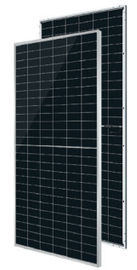
Total Material Package

All Components in One Package, Delivering Both Durability and Efficiency

AJUSTEEL manufactures forming products essential for solar power systems—including C-channels, square tubes, and round tubes—at its Gimcheon plant, and supplies complete solar mounting systems in package form, including brackets, bolts, and other installation accessories.

Going beyond mounting structures, AJUSTEEL also provides key power generation components such as solar modules and inverters through strategic partnerships with leading domestic companies. By offering a one-stop package solution covering mounting structures, modules, and inverters, we simplify the purchasing process and maximize management efficiency for our customers.

Solar Modules



- **Partnerships with Leading Domestic Companies :** Reliable product lineup and stable supply.
- **Consistent Specification Management :** Minimizes system losses through uniform specifications and matched BIN configurations .
- **Verified Quality and Reliability :** Compliant with international standards and backed by long-term manufacturer performance warranties.
- **Site Compatibility :** Suitable for various installation environments, including rooftop, ground-mounted, and tilted systems.

Solar Module Manufacturers

· We supply only products from manufacturers that offer reliable power generation performance, comprehensive warranties, and dependable after-sales support.

한화솔루션 HD현대에너지솔루션 JinKO Solar JA SOLAR SHINSUNG E&G Trinasolar

Inverters

- **Proven Partners** : Reliable products backed by trusted service networks.
- **Efficiency and Stability** : Compliant with international standards and available in various power and voltage configurations for greater design flexibility.
- **Operational Convenience** : Easy integration with monitoring and communication systems, simplifying operation and maintenance.

Inverter Manufacturers

· We provide a wide range of inverter capacities and types at competitive prices.
· We carefully select and supply only products from manufacturers that offer product warranties and reliable after-sales support policies.

한화솔루션 HD현대에너지솔루션 HUAWEI SUNGROW GROWATT solis

Mounting Structures

- **KSD 3030 Certified Steel** : Ensures superior corrosion resistance through magnesium-aluminum-zinc alloy coating.
- **Premium Raw Material Brand** : Utilizes POSCO PosMAC® for outstanding corrosion protection at cut edges and scratched areas, delivering excellent outdoor durability and corrosion resistance.
- **Precision Forming** : Automated production of C-channels, square tubes, and round tubes ensures dimensional accuracy and structural strength.
- **Delivery and Procurement Efficiency** : Standardized component systems enable fast supply and easy scalability.

Brackets

- **POSCO PosMAC® Material** : Same high-corrosion-resistant steel as the structure.
- **Installation-Friendly Design** : Precision slots and hole positions improve installation speed and fastening stability.
- **Standardized Compatibility** : Matched with structure and fasteners to minimize galvanic corrosion risk.

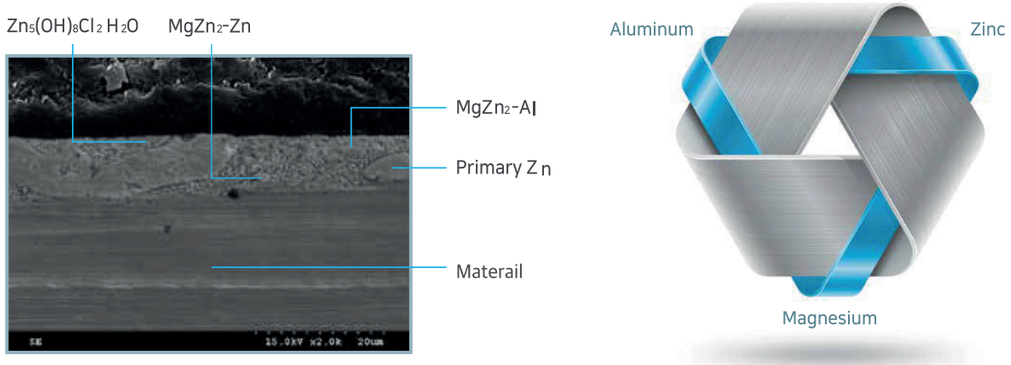
Bolts & Nuts

- **High-Corrosion-Resistant MAC Coating (In-House Developed)** : PosMAC-compatible bolts that prevent galvanic corrosion and ensure superior durability.
- **Torque Retention & Reusability** : Maintains fastening stability under vibration and temperature changes.
- **Standardized Specifications** : Unified standards and batch-controlled production for easier maintenance.

Outdoor structures require **high corrosion resistance.**

A ternary alloy coating is applied to all structural members and components to ensure sufficient corrosion resistance and prevent galvanic corrosion.

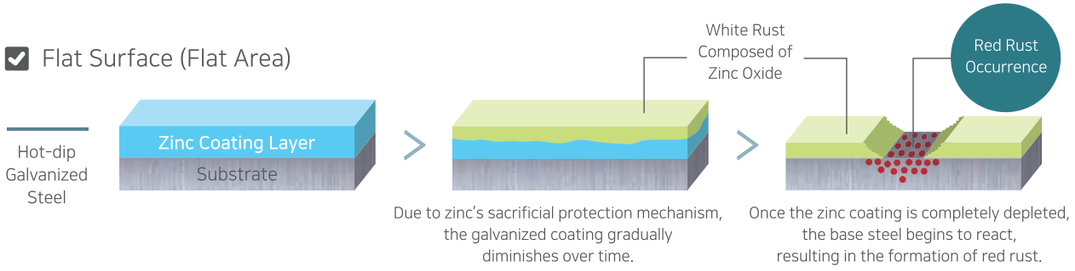
Atex Solar Cross-Sectional Coating Structure Diagram



Atex Solar Flat Surface Corrosion Protection Mechanism

In galvanized coatings, the zinc layer gradually thins over time due to zinc oxidation (white rust), eventually leading to red rust formation. In ternary alloy coatings, zinc and magnesium oxides form a protective film that prevents zinc oxidation, thereby significantly extending the lifespan of the base steel.

☑ Flat Surface (Flat Area)



The PosMAC® coating layer contains magnesium-based zinc and a zinc-aluminum layer, which forms a Simonkolleite film on the upper surface of the coating, preventing zinc consumption over time.

Atex Solar Cross-Sectional Corrosion Protection Mechanism

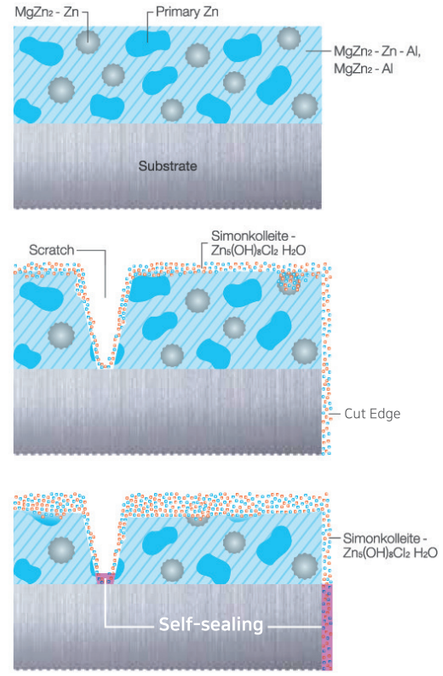
Atex Solar effectively prevents corrosion in cross-sections, punched areas, and scratched surfaces through a self-sealing function that protects the structure from corrosion.

How does Atex Solar prevent corrosion of the base steel at cut edges and scratched areas?

1 The ternary alloy coating layer effectively protects the base steel, preventing corrosion.
When corrosion begins under natural exposure after installation, magnesium zinc alloy ($MgZn_2$) reacts first.

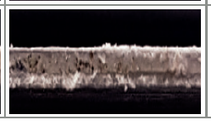
2 $MgZn_2$ promotes the formation of Simonkolleite, a corrosion product.
This Simonkolleite forms a film-like protective layer on exposed areas, preventing corrosion at cut edges and scratched surfaces.

3 Afterward, zinc in the coating is consumed through sacrificial corrosion, while part of the aluminum forms a passive film that protects the steel substrate from external environmental exposure.
The interaction of zinc, aluminum, and magnesium effectively protects the base steel even under more severe and harsh environmental conditions.



Salt Spray Test Results on Cut Edges

Atex Solar delivers corrosion resistance that is 5–10 times higher than conventional galvanized products, significantly extending the service life of structural components.

Classification	Over 1,000H	Over 3,000H	Result
GI			In conventional GI products, once red rust begins to form on the exposed base steel, corrosion continues to progress without stopping.
Atex Solar			In contrast, Atex Solar even when red rust partially occurs on exposed cut edges in air, the zinc coating containing magnesium immediately covers the exposed area, effectively slowing down the progression of corrosion.

※ Test Sample: Coating mass 300 g / Cr post-treatment / 1.6T

Product

Material & Surface Specification

Applied Material	PosMAC® 3.0 / 5.0 (Highly corrosion-resistant ternary alloy-coated steel sheet)
Material Characteristics	Applied zinc (Zn), magnesium (Mg), and aluminum (Al) ternary alloy coating technology delivers corrosion resistance that is 5–10 times higher than conventional hot-dip galvanized steel (GI).
Surface Characteristics	A dense protective film (Simonkolleite) forms on the surface to prevent corrosion, and its self-healing function generates a protective layer on cut and punched edges, eliminating the need for additional anti-corrosion treatment after processing.

Application Types (Rooftop, Ground-Mounted, Agrivoltaic, Floating, etc.)

Roof-top	Application on factory roofs and building tops (protection against acid rain and atmospheric pollutants)
Ground-mount	General ground applications (long-term durability against soil moisture and outdoor exposure)
Agrivoltaics	Application over agricultural land (excellent chemical resistance against fertilizers, ammonia gas, and farming environments)
Floating	Floating applications such as dams and reservoirs (strong waterproofing and anti-corrosion performance gainst high humidity and water ingress)

Key Products

C-Channel (Perforated / Non-Perforated)

- **Shape :** C-shaped open section
- **Feature :** Integrated production through punching and roll-forming system

Outer Diameter	Thickness (T)	Length (M)	Remarks
125 x 50 x 20	1.5T ~ 3.2T	0.6 ~ 11.0M	Integrated Punching and Forming System
100 x 50 x 20	1.5T ~ 3.2T		
75 x 45 x 15	1.5T ~ 3.2T		

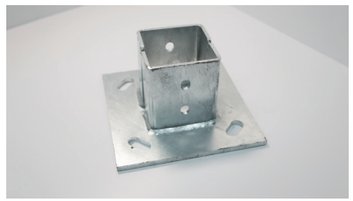
Square Tube (Perforated / Non-Perforated)

- **Shape :** Square closed section (square and rectangular tubes)
- **Feature :** Integrated punching and roll-forming production system

Outer Diamete	Thickness (T)	Length (M)	Remarks
50 x 50	1.2T ~ 3.0T	0.2M-10.0M	Integrated Punching and Forming System
75 x 75	1.8T ~ 3.2T		
100 x 50	1.8T ~ 3.2T		
100 x 100	1.8T ~ 3.2T		
125 x 75	1.8T ~ 3.2T		

Product

Accessories (PosMAC® 3.0)

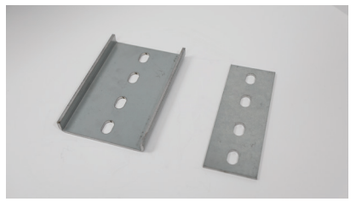


BASE FRAME (Hot-Dip Galvanized (HDG))

Used for the lower support of vertical structural posts and anchoring to concrete foundations.

L-Bracket (Angle Bracket)

Connection between structural members at 90-degree vertical/horizontal intersections (used for fastening position adjustment and fine leveling through slotted holes).



U-Bracket

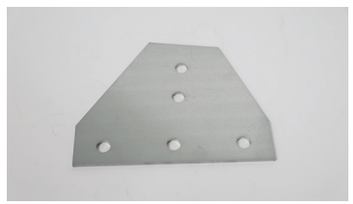
Used for straight-length extension (splice) of C-channels or square tubes, and for strong surface-to-surface connection between members.

TOP PL

Application Area: Connection and fastening between vertical posts and horizontal girders at the upper section of the structure.

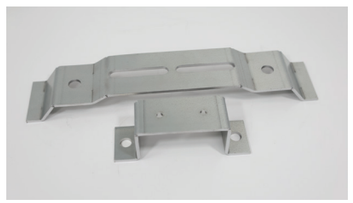
Post-Brace Bracket

Connection and fastening between vertical posts and braces.



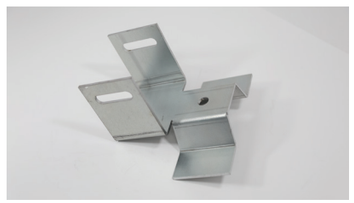
BASE PL

Connection and fastening between the lower end of vertical posts and rails.



Rail Bracket 1

Connection between existing building roof and rails (designed to prevent leakage caused by roof penetration).



Rail Bracket 2

Connection between existing building roof and rails (Prevents potential leakage caused by roof penetration)

※ In addition to the above products, customized specifications and configurations are also available upon request.

Accessories (Bolts / Nuts)

- Main Specifications & Sizes : Standard sizes such as M8 and M10 are always available for each product line. Custom specifications (e.g., length) can be produced upon request based on site design, load conditions, and rail specifications.

- Application Areas : PosMAC® posts, girders, purlins, etc.
Used for overall structural assembly and final fastening between solar modules and structural components.

Material & Surface Treatment

(Three Optimized Solutions for PosMAC®)

Our bolts and nuts are designed to support the long service life of PosMAC® structures, offering three surface treatment options tailored to site conditions.

- ☑ **SUS (Stainless Steel)** : Utilizing the material's inherent high corrosion resistance, it is optimized for highly corrosive environments such as coastal areas and livestock facilities.
- ☑ **Hot-Dip Galvanized** (HDG) : A thick zinc alloy layer is formed on the steel surface, ensuring stable compatibility with PosMAC® structures and excellent durability under long-term outdoor exposure.
- ☑ **Lintas (MAC Coating)** : This high-performance eco-friendly coating prevents galvanic corrosion caused by contact between dissimilar metals such as PosMAC® structures and aluminum module frames, and ensures strong fastening performance without thread seizure.

※ Application Areas : PosMAC® posts, girders, purlins, and other primary structural assemblies / final fastening points between solar modules and structural components

Lintas (MAC Coating) Bolt

Developed with an electrochemical potential similar to PosMAC®, this dedicated bolt suppresses galvanic corrosion caused by potential differences and ensures excellent corrosion resistance through the sacrificial protection of Zn & Al flakes.

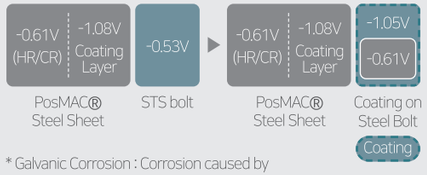
Surface Treatment Material and Method

Coating Composition

- Binder : Epoxy Type
- Main Compone nts : Zn & Al Flake Mixture + Nano Powder
- Features : A coating layer is formed by optimizing the mixture of sacrificial anodes Zn and Al flakes, and filling the voids between the flakes with nano powder to achieve excellent corrosion resistance.

①	②	③	④	⑤	⑥
Pre-Treatment (Blasting)	1st Coating	Drying (230~250℃)	2st Coating	Drying (230~250℃)	Quality Inspection

Natural Potential and Corrosion Inhibition in 5% NaCl Solution



* Galvanic Corrosion : Corrosion caused by electrochemical reactions occurring when two different metals come into contact.w

Application

Optimized Structural Design for Diverse Installation Conditions

Solar mounting structures are applied across a wide range of installation environments, including rooftop and ground-mounted systems.

From rooftop installations on factories, warehouses, logistics centers, schools, and public buildings to ground-mounted systems where site shape and soil conditions are critical, each project has different requirements such as structural loads, corrosion environments, wind and snow loads, construction accessibility, and maintenance routes.

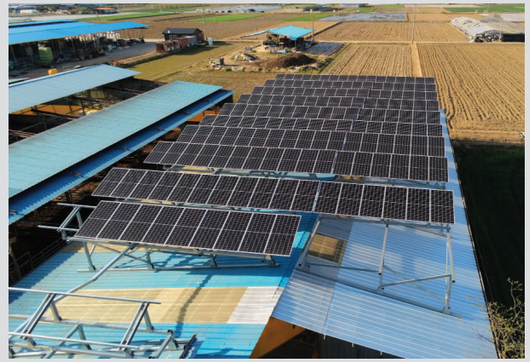
Based on structural design that accounts for these differences, Atex Solar applies site-optimized structures and component packages to ensure stable construction and efficient operation.

From self-consumption rooftop solar systems to large-scale ground-mounted power generation projects, we deliver proven structural solutions across diverse environments.

Solar Mounting Structure (Rooftop Type)





Application

Solar Mounting Structure (Ground-Mounted Type)






Solar Mounting Structure (Greenhouse / Agrivoltaic / Floating Type)






Certification

Atex Solar products are quality-certified
through verification by recognized and accredited institutions.

POSCO Innobuild

POSCO-certified
manufacturer of steel
construction materials

High-corrosion-resistant solar
mounting structures

Disaster-resistant Smart Farm
agricultural facilities

ISO 9001 / ISO 14001

ISO 14001

ISO 9001

From structural design to manufacturing and package supply.
Atex Solar, a partner that enhances the execution capability of solar projects.