

固耐安 **FIXDEX**

MAKING FIXING DEXTERITY

PHOTOVOLTAIC BRACKET&
SUPPORTING&ANTI-SEISMIC
SYSTEM



Shenzhen Goodfix Industrial Co., Ltd
Hebei Goodfix Industrial Co.,Ltd
Hebei Goodfix Industrial tech Co.,Ltd
Hebei Goodfix New Material Co.,Ltd
Goodfix (JIJE) Hardware Manufacture Co.,Ltd
Hebei Matrix Power Mechanical Equipment Co.,Ltd

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Company INTRODUCTION

With the tenet of being strong, durable and safe, GOODFIX&FIXDEX GROUP is determined to provide safe and reliable system services for the construction industry. Our products range includes post-anchoring systems, mechanical connection systems, photovoltaic support systems, seismic support systems, installation, positioning and screw fixing systems and etc. Our company focuses on product and technology R&D, equipment automation improvement, digital innovation, and systematic services, and is committed to improve productivity, provide better services, more efficient and smart corresponding solutions, strong technical support and comprehensive solutions for the construction industry. By using strong, durable and safe products to extend the vitality of buildings and enterprises, GOODFIX&FIXDEX GROUP is striving for becoming a global advancer in the construction hardware industry and doing its best to serve customers in the best way.



Hebei Goodfix New Material Co., Ltd.:
yearly output 400,000 tons i.e 10GW.
focuses on the development of
photovoltaic system patents, large-scale
production of photovoltaic brackets and
accessories, anti-seismic (finished)
brackets and accessories, pipe gallery
brackets, etc.

Sufficient Stock

Certificate fully equipped

High-Quality

Advanced Equipment

Professional enough

Support customization

PROFESSIONAL CERTIFICATION

- FIXDEX, our own brand, has been registered and sold in over 70 countries worldwide.
- The company has passed three system certification, and its products have passed EU ETA CE and US ICC UL FM certification.
- The company has a doctoral workstation.
- FIXDEX attaches great importance to testing and inspection, actively applies for CMA and CNAS certification, and actively applies for national key laboratories.



The company has a deep strategic cooperation relationship with China Academy of Engineering Physics (the Ninth Institute of Nuclear Engineering) and Hebei University of Engineering. The company is a national high-tech enterprise and a national specialized and new enterprise. It has Class A industrial enterprise R&D institutions, Handan Anchor Bolt and Equipment Technology Innovation Center, Hebei Anchor Bolt Industry Technology Innovation Alliance, and has undertaken key scientific and technological projects in Handan. At the same time, the company has participated in the compilation of national standards such as "Test Method Standards for Prefabricated Supports and Hangers" and "Installation and Acceptance Regulations for Seismic Supports and Hangers".



Centralized Photovoltaic System

Ground-fixed single-pole system FX-GS I

Ground-fixed double-pole system FX-GD I

Flat single-axis tracking bracket system FX-TB I

Flexible bracket system FX-FB I

Ground-fixed single-pole system



System Overview

The ground photovoltaic support system is mainly made of carbon steel, and the surface is treated with hot-dip galvanizing or magnesium-aluminum-zinc plating, which has good stability, formability and corrosion resistance. The system is suitable for installation in centralized power stations. The main body is fixed with cement. The structural design ensures the strength of the system while taking into account flexibility and cost performance. It is compatible with different photovoltaic modules on the market.



Product advantages

- Unique design**
The system uses C-shaped columns to be driven into the ground, or cement is poured without additional foundation installation. The structure has strong adaptability and can be installed in a variety of soils and slopes.
- Stable structure**
The structure made of carbon steel is hard and stable and has strong corrosion resistance.
- Flexible adjustment**
The structural design is simple, and the installation angle can be flexibly adjusted to further increase the lighting time of the components.
- Pre-assembled components**
Most components are pre-assembled before leaving the factory and only need to be spliced, which reduces the difficulty of on-site installation, saves time and cost, and improves cost performance.



Technical Parameters

Product name	Ground-fixed single-pole system FX-GS I
Installation Location	Desert, plain, mountain
Installation angle	60°
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement pouring
Bracket material	Hot-dip galvanizing, zinc aluminum magnesium
Applicable life	25 years

Ground-fixed double-pole system



System Overview

This product is suitable for installation areas with higher requirements for wind and snow resistance. It has a high degree of pre-installation characteristics. The bracket system can be adjusted in the front and rear, left and right, and up and down directions. It is suitable for the installation of medium and large photovoltaic power stations. Professional structural design On the premise of ensuring system strength, it effectively improves the timeliness of project installation and greatly reduces installation costs.



Product advantages

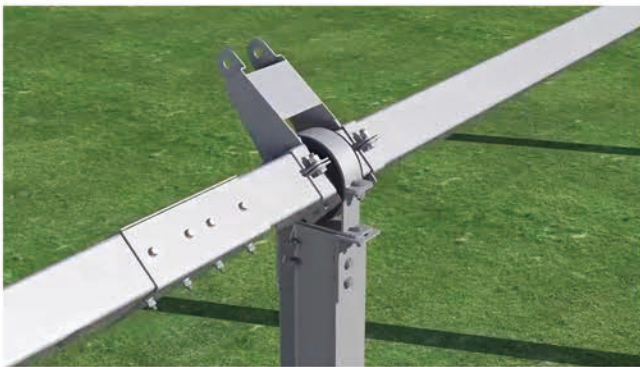
- Highly pre-assembled to save installation time**
There are few installation spare parts, and it is highly pre-assembled in the factory. No on-site cutting or drilling is required, which reduces the difficulty and construction time of on-site construction and greatly reduces the project cost.
- Flexible adjustments on site**
Industry-leading professional design, according to the terrain adjustment design, can realize vertical, east-west, southwest, and north-south adjustment, simplify installation, and maximize photovoltaic power generation.



Technical Parameters

Product name	Ground-fixed double-pole system FX-GD I
Installation Location	Desert, plain, mountain
Installation angle	0-45° customized
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement pier, cement pouring, spiral ground pile
Bracket material	Hot-dip galvanizing, zinc aluminum magnesium
Applicable life	25years

Flat single-axis tracking bracket system



Product advantages

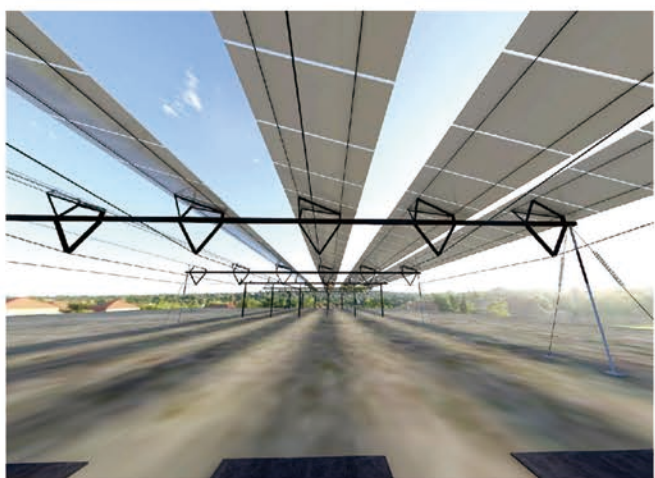
- It automatically tracks sunlight without manual intervention, has good environmental adaptability, is not disturbed by rainy days, and can provide a wide range of tracking angles.
- Compared with the fixed bracket system, the power generation capacity is increased by 20–30%.
- The system temperature is between -30 and 75 degrees.
- The ventilation channel design between adjacent panels reduces the windward load and improves balance.
- Excellent electromagnetic compatibility The EMC design ensures the safety of the power station.
- Equipped with a GPS system to ensure the running accuracy of the clock, long-distance communication, group control of multiple devices, automatic identification of faults, automatic protection, automatic alarm, and quadruple over-current protection design to ensure the safety of the overall system.



Technical Parameters

Product name	Flat single-axis tracking bracket system FX-TB I
Installation Location	Desert, plain, mountain
Installation angle	Horizontal axis, north-south direction
Tracking angle and range	-60° ~ 60°
Control system	PLC control, frequency converter drive, using tilt sensor feedback
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement pouring, spiral ground piles
Bracket material	Hot dip galvanized, zinc aluminum magnesium, stainless steel
Applicable life	25years

Flexible bracket system



Product advantages

- **Large span**
The large-span design of nearly 40m is suitable for high-rise photovoltaic projects such as agricultural photovoltaic and fishery photovoltaic and can reduce the number of pile foundations to as low as 90–100 piles per megawatt.
- **Adapt to large inclination angles.**
It can achieve a larger inclination angle for the module and increase power generation capacity.
- **Easy to install**
The tension adjustment of steel strands is realized through a special tension structure and threads.
- **Strong wind resistance**
The lower floor adopts a unique double-cable, bell-mouth suspension structure, which effectively improves the overall ability to resist horizontal wind load forces. The front and rear truss connections, as well as the upper and lower double-layer cable structures, effectively reduce the overhang ratio and lift of large-span structures. The overall wind resistance of the bracket has been significantly reduced.
- **Lower cost**
By optimizing the structure, optimizing the layout of steel strands, etc., while reducing the amount of pile foundations, the investment cost is reduced by 2 to 5% compared to traditional power stations.

Technical Parameters

Product name	Flexible bracket system FX-FB I
Installation Location	Fishing ponds, sewage plants, complex mountains, barren slopes, etc.
Installation angle	0–15° customized
Wind load	42m/s
Snow load	1.6KN/m ²
Arrangement of solar modules	Single board horizontal/Single board vertical
Solar module installation method	Back lock installation
Applicable components	Compatible with all components
Installation base	Concrete pouring, spiral ground piles
Installation base	Hot dip galvanized, zinc aluminum magnesium, stainless steel
Applicable life	25 years

Distributed Photovoltaic System

Flat roof triangular bracket system FX-FR I

Ballast bracket system FX-FR II

Metal roof triangle bracket system FX-MR I

Metal roof clamp system FX-MR II

Metal roof hanger bolt bracket system FX-MR III

Tile roof hanger system FX-TR I

Photovoltaic building integration system FX-BP I

Flat roof triangular bracket system



Product advantages

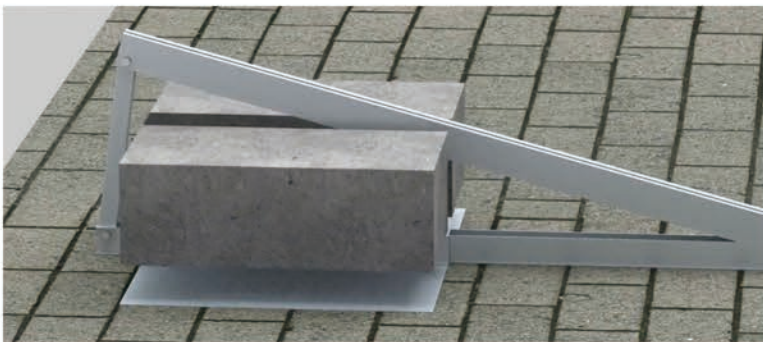
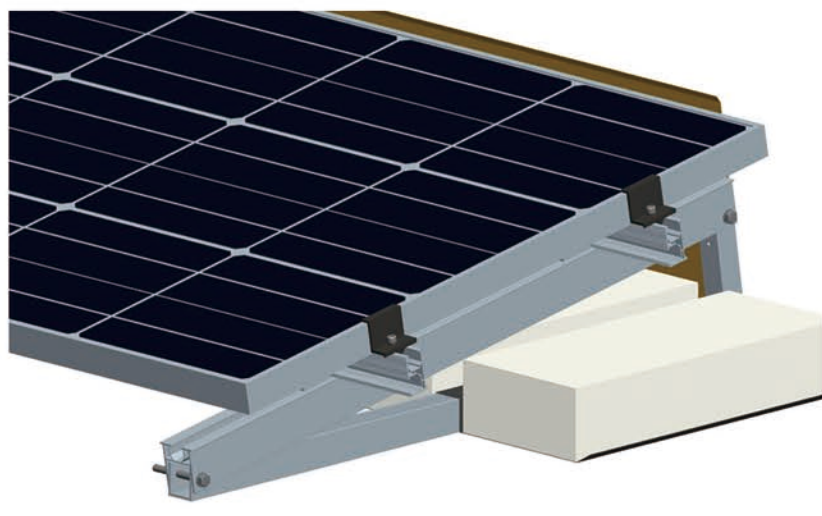
- **Professional structural design to ensure system strength**
The excellent structural design makes on-site installation faster and can be used for different flat roof project installations. The battery panels have strong compatibility.
- **Unique base design**
The tripod base structure can be freely installed on flat roofs and floors, and is firmly connected to cement foundations or steel foundations. The unique base structure uses materials to save costs and lower costs.
- **Flexible installation method of battery panels**
Meet the requirements for horizontal or vertical arrangement of components.
- **Single and double rows, adjustable structure**
Single-row and double-row installation structures can be freely combined, as well as adjustable structures to meet customer needs to a greater extent.



Technical Parameters

Product name	Flat roof triangular bracket system FX-FR I
Installation Location	Flat roofs of industrial plants, hospitals, schools, residences, etc.
Installation angle	0-45° customized
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement piers, expansion bolts
Bracket material	Aluminum alloy, hot dip galvanized, zinc aluminum magnesium, stainless steel
Applicable life	25 years

Ballast bracket system



Product advantages

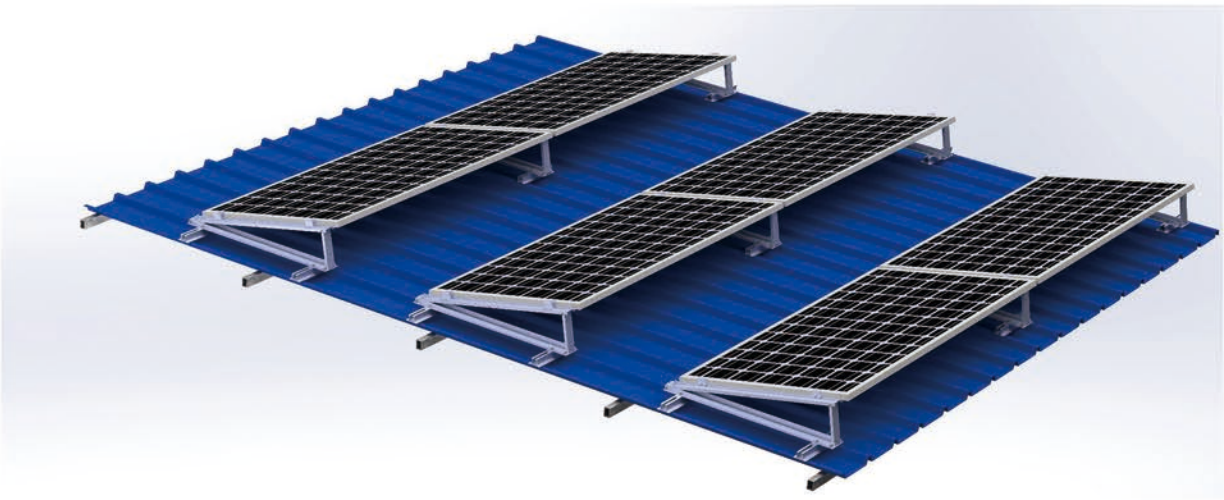
- **Matrix design**
There is no need to penetrate the roof for installation, and there are three ballast methods to choose from, which can copy the matrix structure and reduce the ballast weight of the system.
- **High wind resistance**
There are wind deflectors on both sides and back, which combined with matrix ballast can improve the wind resistance of the system.
- **Quick installation** The fixture limit component can quickly assemble the connector without tools, improving installation efficiency.
- **Cost savings**
The highly pre-assembled and tool-free assembly of connectors reduces the difficulty of on-site construction and greatly reduces costs.
- **Waterproof protection**
There is no need to penetrate the roof, so there will be no injuries when installing the roof, and there is no need to worry about water leakage.



Technical Parameters

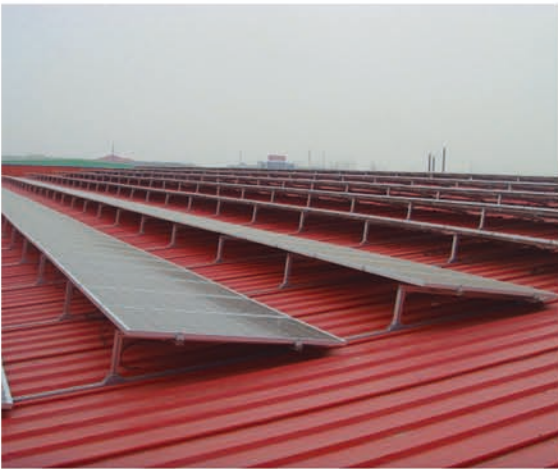
Product name	Ballast bracket system FX-FR II
Installation Location	Flat roof, open flat land
Installation angle	0-30° customized
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement foundation ballast
Bracket material	Aluminum alloy, stainless steel, hot dip galvanized, zinc aluminum magnesium
Applicable life	25years

Metal roof triangle bracket system



Product advantages

- The blocks and slots adopt a symmetrical design, and there is no direction requirement during installation, making it more convenient.
- The color steel tile clamp is used to fix the bottom to ensure the stability of the system;
- There are few installation spare parts and it is highly pre-assembled . No on-site cutting is required, which reduces the difficulty and time of on-site construction;
- Flexible adjustment on site, enabling vertical, east-west, southwest, and north-south adjustment.



Technical Parameters

Product name	Metal roof triangle bracket system FX-MR I
Installation Location	Industrial factory building, color steel tile roof
Installation angle	0-45° customized
Wind load	42m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Aluminum alloy clamp, double-head suspension bolt
Bracket material	Aluminum alloy, hot dip galvanized, zinc aluminum magnesium, stainless steel
Applicable life	25 years

Metal roof clamp system



Product advantages

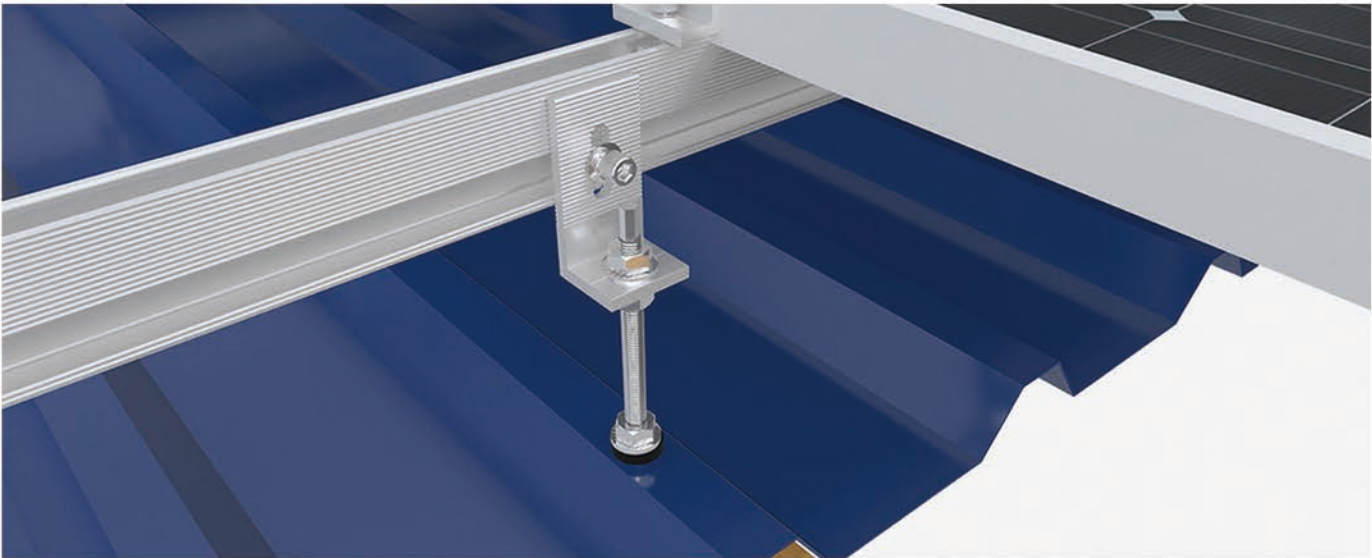
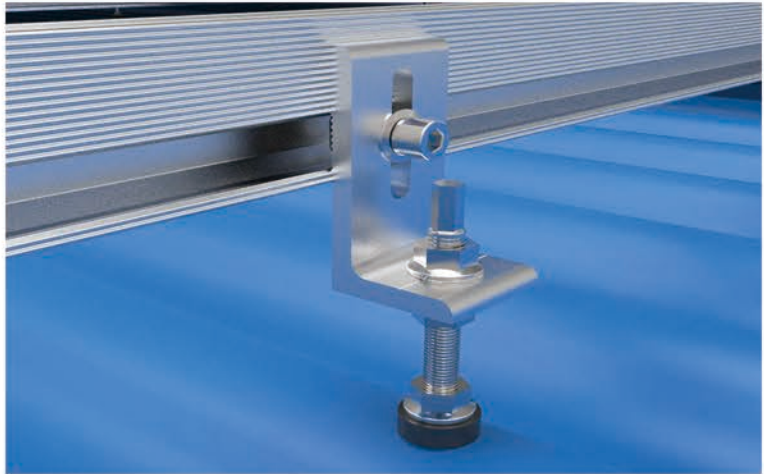
- **Easy to install**
There are various types of color steel tile clamps such as corner, upright, and T-shaped. The clamps are available in a variety of thicknesses and can match various conventional color steel tile roofs on the market, with tight fit and high matching.
- **Wide range of application**
A wide range of options are available to accommodate a variety of roof structures.
- **Rich roof fixings**
A variety of mounting metal parts can correspond to various roof structures.



Technical Parameters

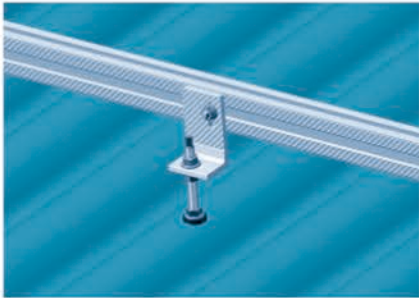
Product name	Metal roof clamp system FX-MR II
Installation Location	Industrial factory building, color steel tile roof
Installation angle	Same angle as the roof
Wind load	42m/s
Snow load	1.6KN/m ²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Aluminum alloy clamp
Bracket material	Aluminum alloy, stainless steel
Applicable life	25year

Metal roof hanger bolt bracket system



Product advantages

- Suitable for corrugated or trapezoidal metal roofs.
- Our L-foot boom bolts and rails allow for a quick and easy installation process.
- Made of high-quality AL6005-T5 aluminum (surface anodized), which has corrosion resistance and anti-rust properties.
- Rubber gasket helps prevent rainwater penetration.
- Vertically adjustable.
- Can be firmly locked on wooden rafters or steel purlins.



Technical Parameters

Product name	Metal roof hanger bolt bracket system FX-MR III
Installation Location	Industrial factory building, color steel tile roof
installation angle	Same angle as the roof
Wind load	42m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Stainless Steel Suspension Stud Bolts
Bracket material	Aluminum alloy, stainless steel
Applicable life	25years

Tile roof hanger system



Product advantages

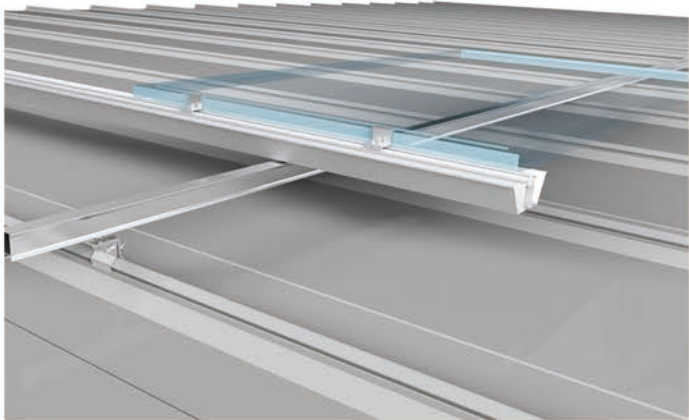
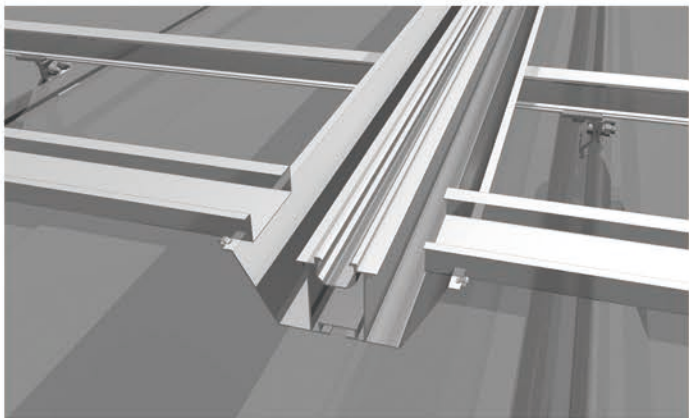
- Compatible with all types of photovoltaic solar panels;
- A variety of roof hooks are suitable for different tile roofs, such as ceramic tiles, Spanish tiles, flat tiles, slate tiles and glazed tiles;
- Custom designed tile hooks to specific tile specifications;
- No need to drill holes in the tiles;
- High degree of pre-assembly makes on-site installation easy. There are many types of hooks and strong optionality.
- Rich options can correspond to various roof structures.
- Various mounting metal parts can correspond to various roof structures.



Technical Parameters

Product name	Tile roof hanger system FX-TR I
Installation Location	Residential tile roof structure
Installation angle	Same angle as the roof
Wind load	42m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Hook up
Bracket material	Aluminum alloy, stainless steel, hot dip galvanized
Applicable life	25years

Photovoltaic building integration system



Product advantages

- Photovoltaic panels and drainage channels form structural waterproofing. It is easy to install and can be used directly as a roofing material instead of colored steel tiles.
- Most of the brackets are pre-assembled in the factory. No cutting or welding is required on site. Installation can be completed by simply tightening the bolts. The construction is quick, and subsequent maintenance is convenient.
- It saves the cost of roof laying and renovation, greatly reduces construction costs, extends the service life of the roof to more than 25 years, is waterproof and heat-insulated, and adds double protection.
- The arrangement of the system can be flexibly adjusted according to the actual situation of the building, which can improve indoor brightness, enhance lighting, and perfectly integrate with the building, giving the building a high-end appearance.



Technical Parameters

Product name	Photovoltaic building integration system FX-BP I
Installation Location	Carports, greenhouses, industrial plants, etc. can be used instead of roofs
Installation angle	Same angle as the roof
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal /Vertical
Applicable components	Compatible with all components
Installation base	Cement piers, spiral ground piles, concrete pouring, expansion bolts
Bracket material	Stainless steel, hot dip galvanized, zinc aluminum magnesium
Applicable life	25years

Photovoltaic Car Parking Shed System

Carport single-pole system FX-CS I

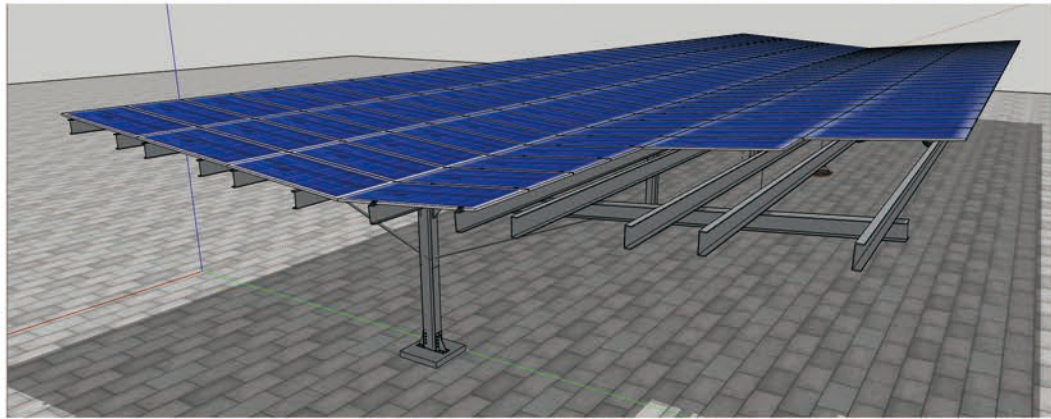
Carport double-pole system FX-CD I

Carport single-pole system



Product advantages

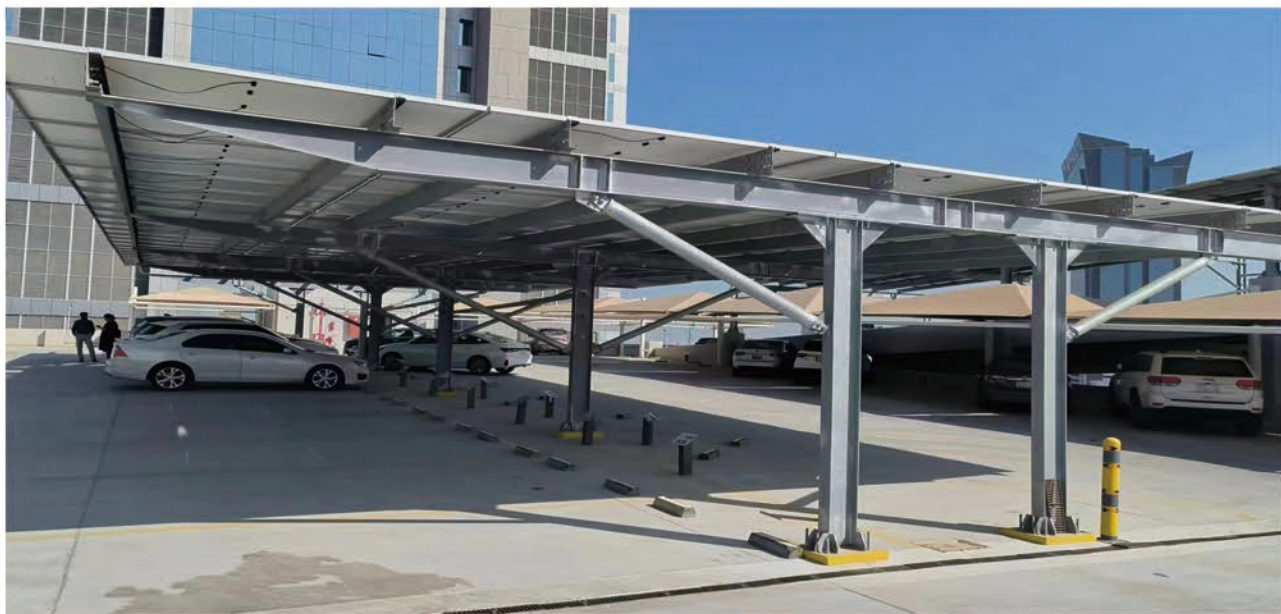
- Strong adaptability to the environment and high power generation efficiency. Suitable for different ground environments.
- **Professional structural design**
To ensure the overall stability and strength of the system, prefabrication is completed in the factory, and installation only requires fasteners to be fixed and spliced on site to complete the installation.
- **Adopt single column structure design**
Multiple angle adjustments can be achieved according to the prefabricated adjustment holes.
- **Fully compatible with different photovoltaic modules**
Various types of photovoltaic modules can be supported freely and flexibly.



Technical Parameters

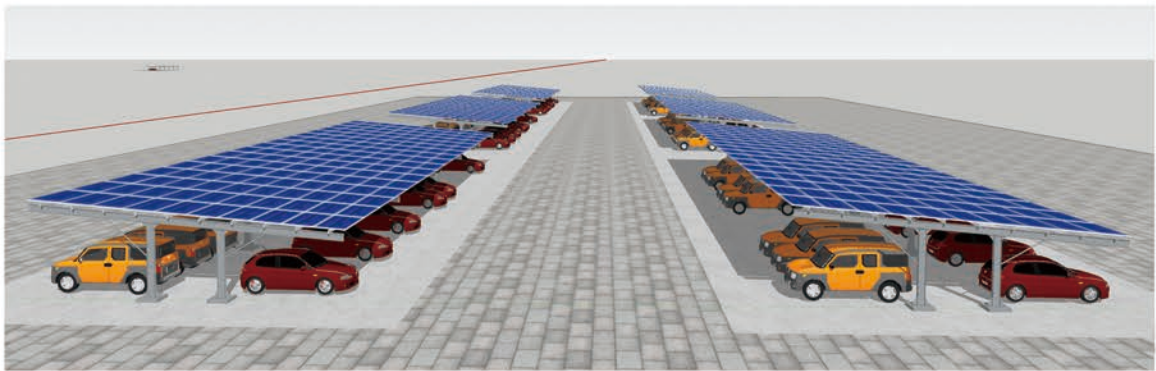
Product name	Carport single-pole system FX-CS I
Installation Location	Self-use, factory area, public parking lot
Installation angle	0-30° customized
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement pouring, spiral ground piles
Bracket material	Hot-dip galvanizing, zinc aluminum magnesium
Applicable life	25years

Carport double-pole system



Product advantages

- There is no directional requirement during installation to improve installation efficiency.
- Highly pre-assembled to save installation time
- There are few installation spare parts and it is highly pre-assembled in the factory. No on-site cutting or drilling is required, which reduces the difficulty and construction time of on-site construction and greatly reduces the project cost.
- According to the terrain structure design, vertical, east-west, southwest, and north-south adjustments can be realized to simplify installation and maximize photovoltaic power generation.
- More stable and solid structural design.



Technical Parameters

Product name	Carport double-pole system FX-CD I
Installation Location	Self-use, factory area, public parking lot
Installation angle	0-30° customized
Wind load	60m/s
Snow load	1.6KN/m²
Arrangement of solar modules	Horizontal/Vertical
Applicable components	Compatible with all components
Installation base	Cement pouring, spiral ground piles
Bracket material	Hot-dip galvanizing, zinc aluminum magnesium
Applicable life	25 years



● Project name

Guangdong hydropower bachu county 2 million kilowatt integrated
optical storage project

● Position

Kashi bachu county, xinjiang

● Installed capacity

2GW

● Project name

Awati county guangdong hydropower 400 MW photovoltaic project

● Position

Akesuawati county, xinjiang

● Installed capacity

400MW



- Project name

600MW photovoltaic power generation project in jiashi county, tarim oilfield

- Position

Jiashi county, tarim oilfield, xinjiang

- Installed capacity

600MW

- Project name

Usitong photothermal and photovoltaic integration project in tuokexun county, turpan city

- Position

Tuokexun county, turpan city, xinjiang

- Installed capacity

900MW