FLAT ROOF Ballasted System

The concrete ballast ensures exceptional wind resistance and swift on-site installation. Its unique dual-orientation design promotes more efficient utilization of rooftop space and enhanced power generation.

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Unique dual-orientation matrix design
This unique design requires reducing structural costs and ballast weight. It also maintains flexible compatibility with concrete blocks or ballast foundations.

Fully-Railed Systemand Shared-Rail System

- **Fully-Railed System:** This system necessitates two rows of rails for each module of panels, enhancing the strength of the mounting brackets.
- **Shared-Rail System:** In this configuration, every two panels share a middle rail, reducing the overall number of rails and attachments. This not only saves on installation time but also lowers costs.

Save time with pre-assembled components
Pre-Assembled for efficiency, saving your time!

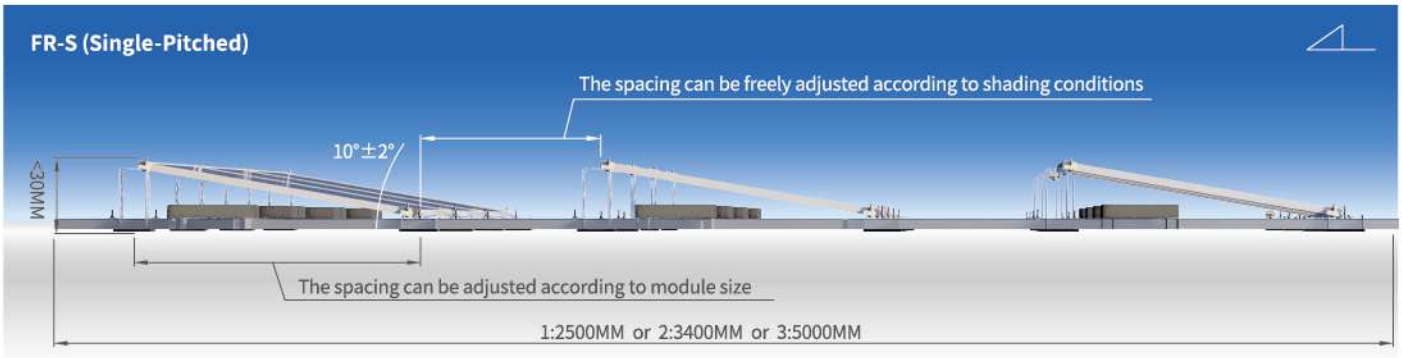
High durability ensures structural strength
Professional design and the use of durable Zn-Al-Mg coated steel guarantee the stability and robustness of the structure.

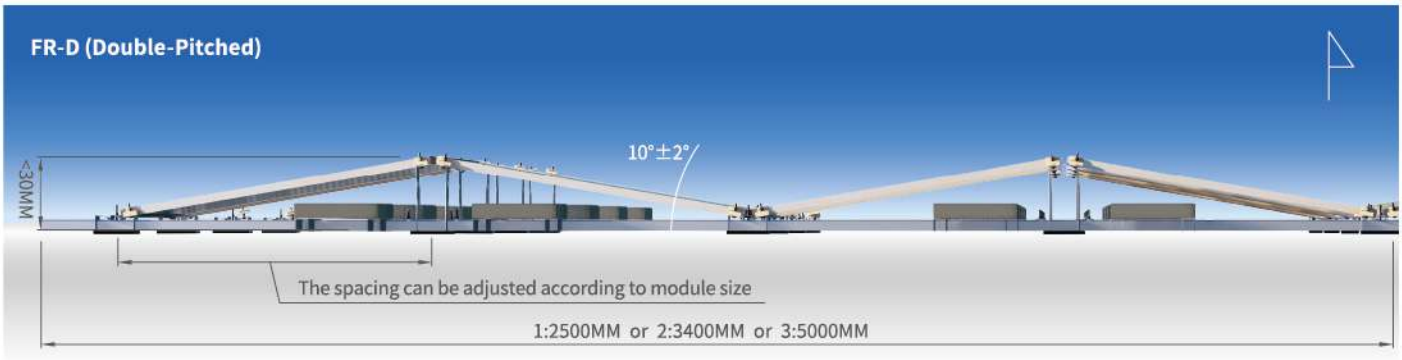

Fully-Railed System
FR-S (Single-Pitched)


Shared-Railed System
FR-D (Double-Pitched)

Technical Data

System Name	**Flat Roof (Ballasted System)**	**Module Dimension**	Length: 1650-2400 mm
Roof type	Flat roof		Width: 950-1400 mm
Tilt Angle	10°(standard) (can be customized)	**Facing Orientation**	South, East- West
Wind Load	< 60 m/s (can be customized)	**Material**	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX YiehPhui Corp. PhuizerMax®(PM)
Snow Load	< 1.6 kN/m2 (can be customized)	**Fastener Material**	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Applicable Solar Module	All available modules	**Warranty**	25 years quality assurance under certain environment
Panel Layout	Landscape/ Portrait		

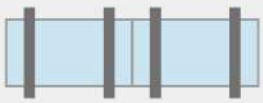




Product Specification

Facing Orientation	**Single-Pitched**		**Double-Pitched**	
Rail System	**Shared-Rail System**	**Fully-Railed System**	**Shared-Rail System**	**Fully-Railed System**
Compatible module dimension	< 2000mm	> 2000mm	< 2000mm	> 2000mm
Clamping side of module	Both long side and short side		Both long side and short side	

Multi-type

Long side	**Continuous type**	**Mountain-shaped type**	**Canyon-shaped type**	**D-Monolithic type**	**S-Monolithic type**
 **2 rails for each panel**					
 **3 rails for 2 panels**					

PITCHED METAL ROOF

The elevated design of our bracket ensures sufficient space between the roof and solar modules. Four attachment points enhance its holding strength.

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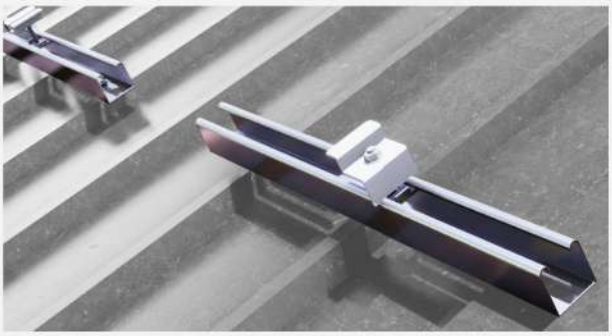
The unique design clamps can be customized to match specific trapezoidal sheet specifications.
We not only offer clamps compatible with various metal roofs but also allow you to choose your preferred rail length, accommodating one to three panels.

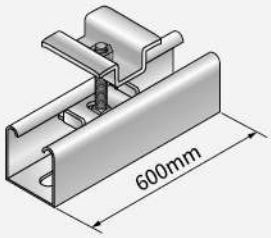
Save time with pre-assembled components
Pre-Assembled for efficiency, saving your time!

High durability ensures structural strength
It provides a streamlined and straightforward installation method for maintenance, relocation, and repairs.

Technical Data

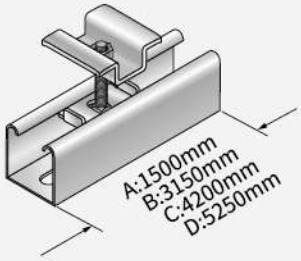
System Name	**Pitched Metal Roof**	**Module Dimension**	Length: 1650-2300 mm
Roof type	Pitched Metal Roof		Width: 950-1200 mm
Tilt Angle	According to the roof slope (can be customized)	**Material**	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX YiehPhui Corp. PhuizerMax®(PM)
Wind Load	< 60 m/s (can be customized)	**Fastener Material**	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Snow Load	< 1.6 kN/m2 (can be customized)	**Patent**	Patent no.102020100144
Applicable Solar Module	All available modules	**Warranty**	25 years quality assurance under certain environment
Panel Layout	Landscape/ Portrait		





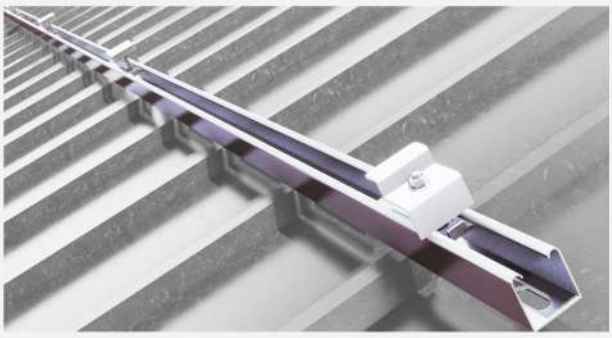
Spacing Rail

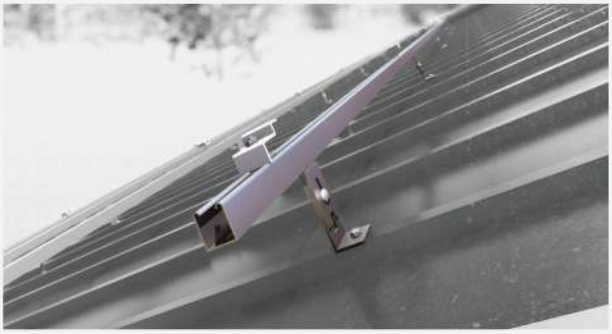
The spacing rails show the best cost-efficiency in this system. If the spacing distance between two rails is less than 1100mm. It can be fitted in this system.

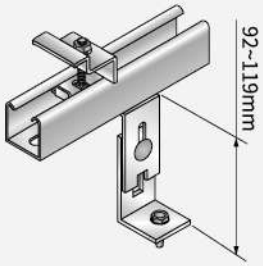


Continuous Rail

Ensure a robust structure with the continuous rail, which can be customized based on specific needs and conditions.







Elevated Base

Lift the rail height with the elevated base for enough space between the roof and solar modules, ensuring effective performance.

PITCHED TILE ROOF

Engineered for exceptional durability and easy installation, our roof hooks are designed to support heavy loads and accommodate solar panels on various tile types.

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The optional elevated component allows for an increase in the system's height

We offer this component, which can elevate the system by 4.5mm, promoting enhanced ventilation between the roof and solar modules.

Compatible with all types of tile roofs without drilling holes.

Our unique design can be smoothly fitted without the need for drilling, eliminating the risk of leaks.

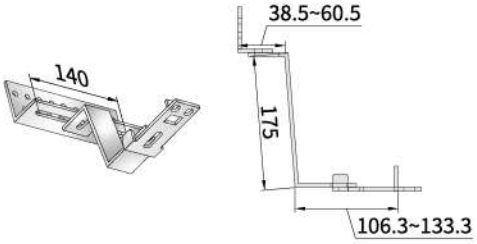
High durability ensures structural strength

Professional design and the use of durable Zn-Al-Mg coated steel guarantee the stability and robustness of the structure.

Technical Data

System Name	Pitched Tile Roof
Roof type	Pitched Tile Roof
Tilt Angle	According to the roof slope (can be customized)
Wind Load	< 60 m/s (can be customized)
Snow Load	< 1.6 kN/m² (can be customized)
Applicable Solar Module	All available modules

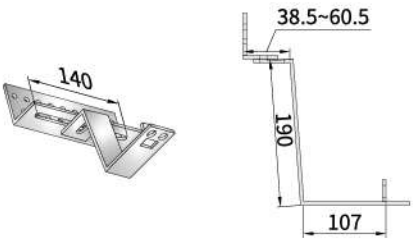
Panel Layout	Landscape/ Portrait
Module Dimension	Length: 1650-2300 mm
	Width: 950-1200 mm
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Warranty	25 years quality assurance under certain environment



Type A

Fully Adjustable Type Hook

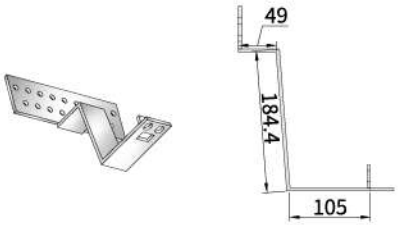
This hook offers flexibility in both height and width adjustments. With two individual parts adjustable in height and one in width, it is suitale for various tile roofs.



Type B

Tile Thickness Adjustable Type Hook

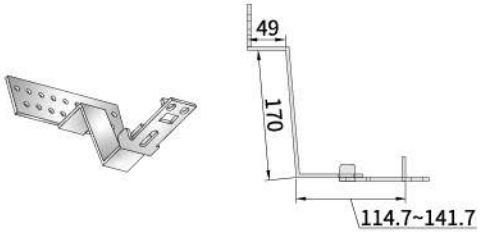
This hook can be adjusted based on the thickness of the tile, providing adaptability to different roofing materials.



Type C

Fixed Type Hook

Designed for different roof types, we offer various fixed hooks.



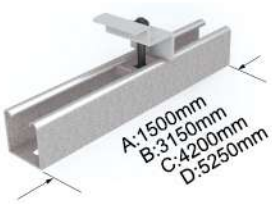
Type D

Height Adjustable Type Hook

With multiple height options, this hook is suitable for various tile roof installation systems.

Elevating Component

It can increase the height by 4.5 mm.



Rail Length

Offer four rail dimension length options.

GROUND MOUNTING SYSTEM

Resistance to the high wind load and lower ground clearance. It can be installed with a steel sheet piles foundation or a concrete foundation, making it suitable for various soil conditions and corrosive environments.

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Fastener Adjustability: Convenient for On-site Construction
Various fasteners enhance the mounting system's flexibility during installation and minimize discrepancies in construction and measurement.

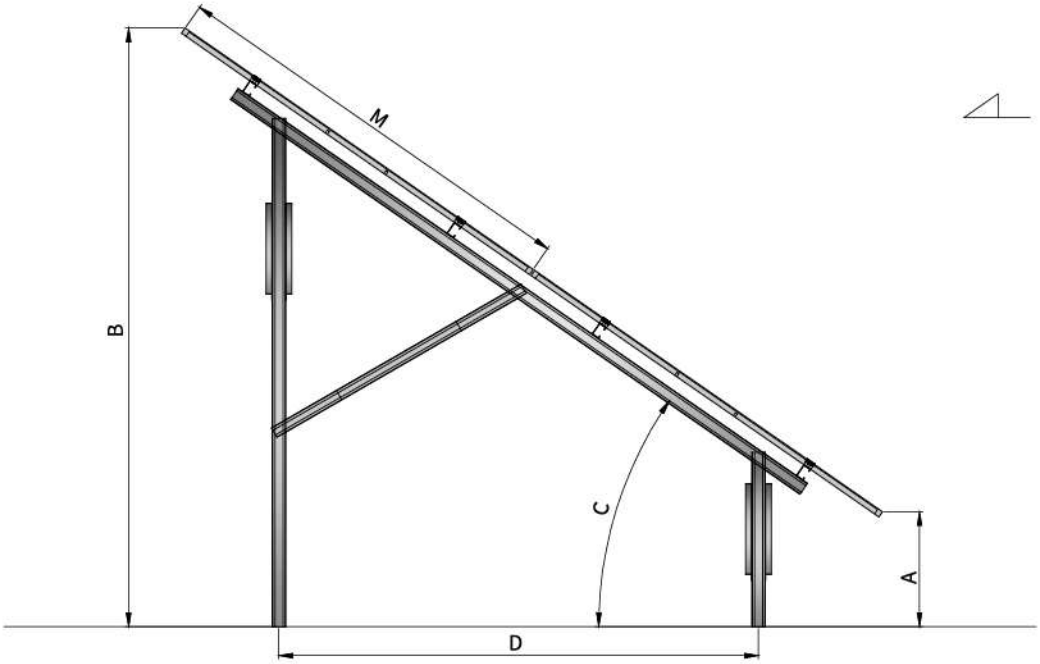
System Compatibility
Suitable for diverse terrains and compatible with a wide range of module types.

A patented and certified design.
It ensures project safety and demonstrates adaptability.

Technical Data

System Name	Ground Mounting System
Installation Site	Ground-mount, Flat roof of factories, Flat floor, Hillside
Tilt Angle	5°-35° (can be customized)
Wind Load	<60 m/s (can be customized)
Snow Load	0-150cm (can be customized)
Applicable Solar Module	All available modules
Panel Layout	Landscape/ Portrait
Module Dimension	Length: 1650-2400 mm
	Width: 950-1400 mm
Construction height	300mm-2000mm
Foundation	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation

Columns steel	C-shape Steel
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Patent	Patent no.202017106429 Patent no.202017106048 Patent no.102020115582 Patent no.US11585092 Patent no.M615366
TUV Certificate	Certificate no. R50468759
Warranty	25 years quality assurance under certain environment

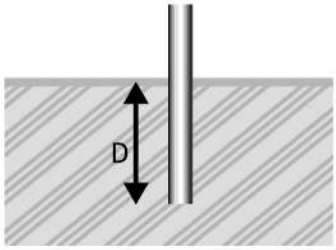


Product Specification

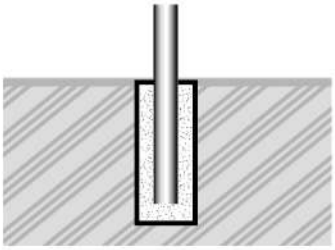
Unit: mm

M	1600~1800				1800~2100				2100~2400			
A	656	594	533	474	685	628	572	517	648	583	519	457
B	1876	2105	2324	2531	1787	2390	2661	2917	2262	2583	2889	3180
C	20°	25°	30°	35°	20°	25°	30°	35°	20°	25°	30°	35°
D	2050	2000	1900	1800	2750	2650	2550	2400	3100	3000	2850	2700

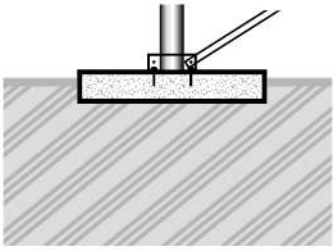
Foundation Types



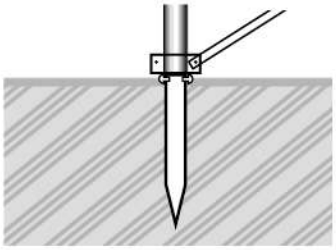
Steel Sheet Pile Foundation



Steel Sheet Foundation Embedded In Concrete



Concrete Foundation



Screw Pile Foundation

GREENHOUSE

The greenhouse system addresses the increasing demand for sustainable agriculture by integrating bifacial transparent panels with traditional greenhouse farming to create the best growing environment for plants.

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Bifacial Transparent Solar Panel
With bifacial solar panels, sunlight can pass through, allowing crops to receive sufficient sunlight for growth.

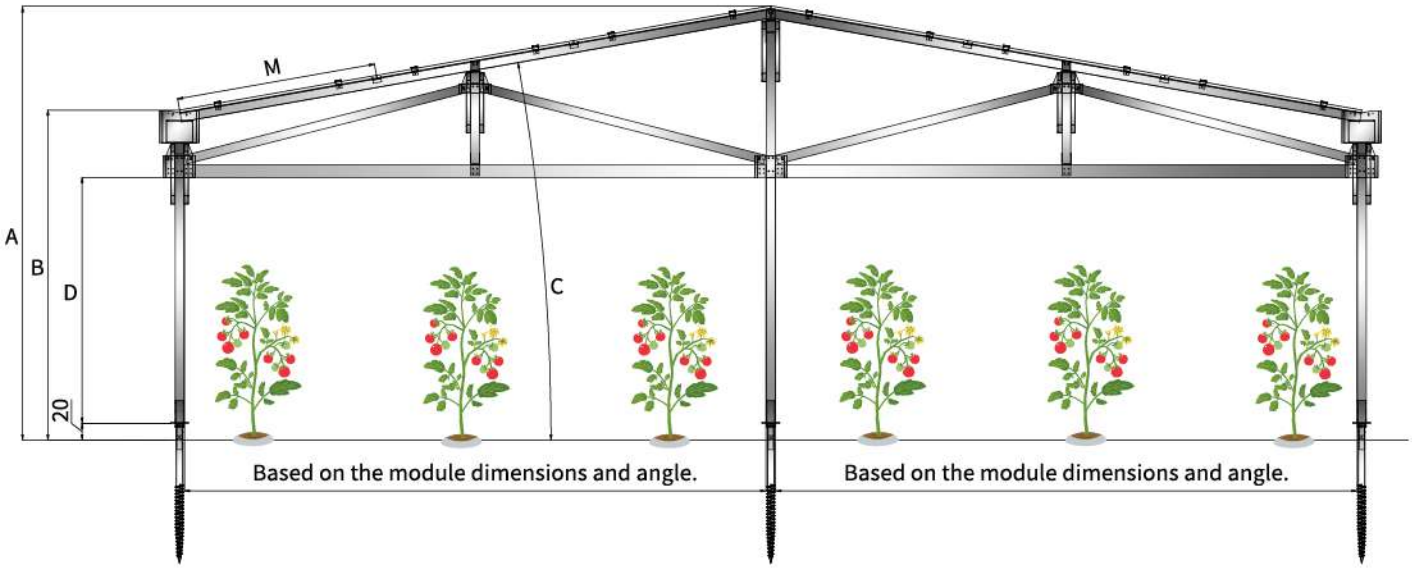
The simple installation method of the joint greatly improves the construction efficiency.
It offers a convenient approach to connecting components, contributing to a more efficient overall construction process.

Adjustable solar panel height gaps make harvesting easy and help crops grow.
The gap between the solar panels allows sunlight to reach crops. Additionally, the panel height can be adjusted to accommodate project requirements, facilitating the movement of machinery and people during harvesting.

Technical Data

System Name	**Greenhouse System**
Installation Site	Agriculture land, Ground
Tilt Angle	5°-15° (can be customized)
Wind Load	< 46m/s (can be customized)
Snow Load	~2.5kN/㎡ (can be customized)
Applicable Solar Module	All available modules
Panel Layout	Landscape/ Portrait
Construction height	2500 mm-4500 mm

Foundation	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation
Column spacing	Based on the module dimensions and angle
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Warranty	25 years quality assurance under certain environment

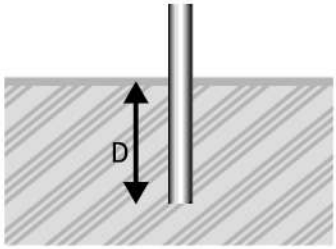


Product Specification

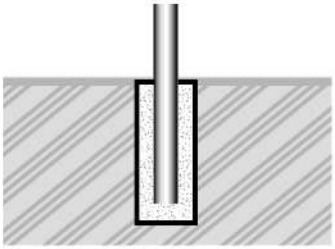
Unit: mm

M	1600~1800			1800~2100			2100~2400		
A	2143	2190	2236	2151	2206	2259	2159	2221	2283
B	2096	2096	2096	2096	2096	2096	2096	2096	2096
C	5°	10°	15°	5°	10°	15°	5°	10°	15°
D	2000	2000	2000	2000	2000	2000	2000	2000	2000

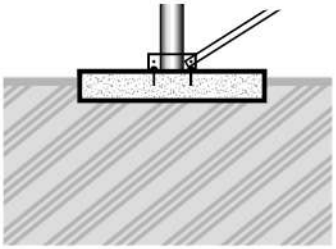
Foundation Types



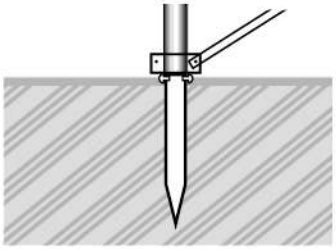
Steel Sheet Pile Foundation



Steel Sheet Foundation Embedded In Concrete



Concrete Foundation



Screw Pile Foundation

AGRIVOLTAIC SYSTEM

The systems create optimal conditions for improved crop growth, protecting against heat, sun, and drought. Additionally, they offer shade, benefiting crop yields.

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Bifacial Transparent Solar Panel

With bifacial solar panels, sunlight can pass through, allowing crops to receive sufficient sunlight for growth.

The simple installation method of the joint greatly improves the construction efficiency.

It offers a convenient approach to connecting components, contributing to a more efficient overall construction process.

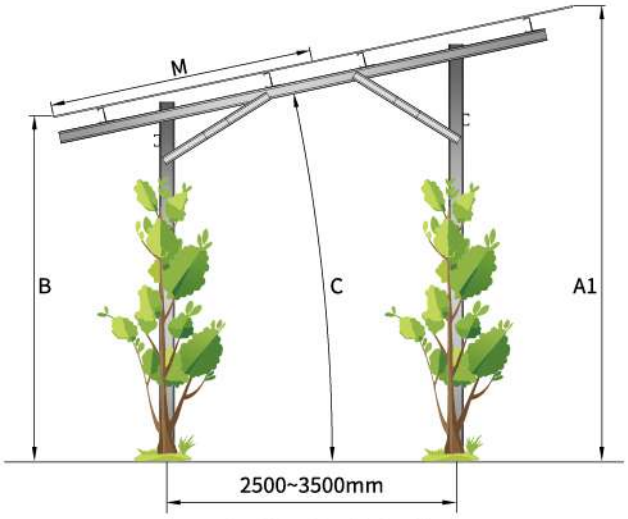
Adjustable solar panel height gaps make harvesting easy and help crops grow.

The gap between the solar panels allows sunlight to reach crops. Additionally, the panel height can be adjusted to accommodate project requirements, facilitating the movement of machinery and people during harvesting.

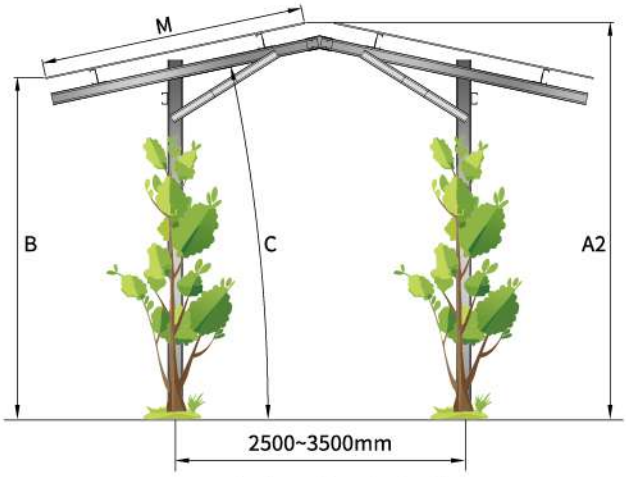
Technical Data

System Name	**Agrivoltaic System**
Installation Site	Agriculture land, Ground
Tilt Angle	5°-30° (can be customized)
Wind Load	< 46m/s (can be customized)
Snow Load	< 200cm (can be customized)
Applicable Solar Module	All available modules
Panel Layout	Landscape/ Portrait
Module Dimension	Length: 1650-2300 mm
	Width: 950-1200 mm
Construction height	1500 mm-4500 mm

Foundation	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation
Column spacing	Maximum 3900 mm (can be customized)
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Patent	Patent no. 202017106429 Patent no. 202017106048
Warranty	25 years quality assurance under certain environment



Agri-S (Single-Pitched)



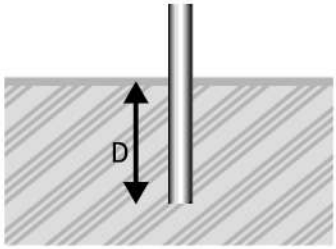
Agri-D (Double-Pitched)

Product Specification

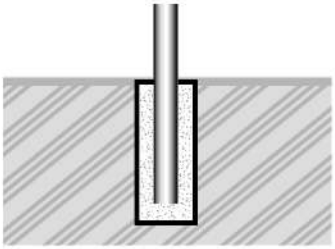
Unit: mm

M	1600~1800				1800~2100				2100~2400			
A1	3982	4240	4478	4700	4068	4336	4602	4856	4142	4442	4732	5008
A2	3516	3630	3729	3820	3524	3623	3726	3823	3521	3626	3728	3823
B	3050	3020	2980	2940	2980	2910	2850	2790	2900	2810	2724	2638
C	15°	20°	25°	30°	15°	20°	25°	30°	15°	20°	25°	30°

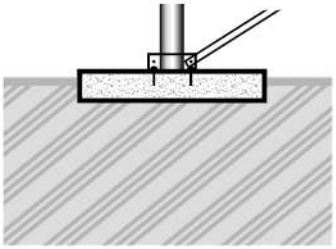
Foundation Types



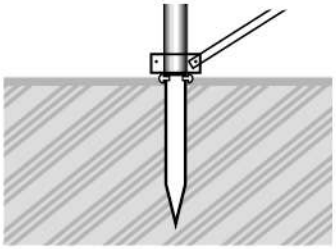
Steel Sheet Pile Foundation



Steel Sheet Foundation Embedded In Concrete



Concrete Foundation



Screw Pile Foundation

SOLAR FENCE

Optimally utilizing land for both agricultural and energy purposes, achieving a high land use rate with minimal impact on agricultural yield.

PATENT
J-Systems

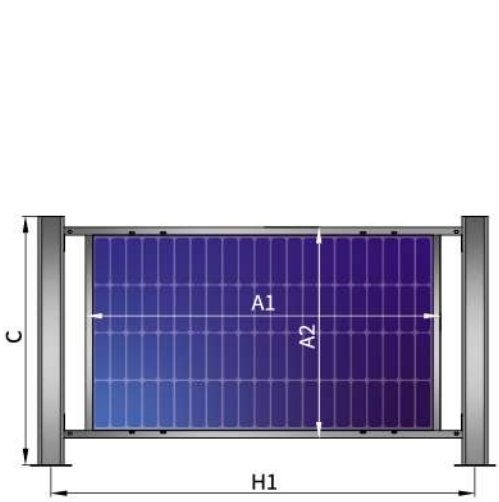
Minimizing shadow impact on panels through optimized design with bifacial modules
It enhances the overall sunlight utilization rate, ensuring optimal energy production and efficiency for the solar panels.

Minimal accumulation of dirt and snow on the panels
It maintains the panels, contributing to the long-term performance and reducing the necessity for frequent cleaning or snow removal.

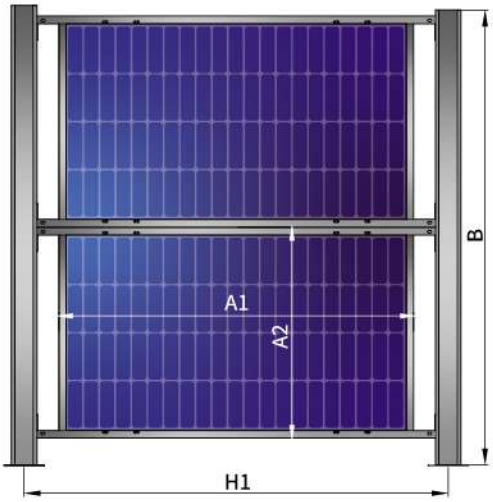
Simplified Setup and Maintenance
It provides a streamlined and straightforward installation method for maintenance, relocation, and repairs.

Technical Data

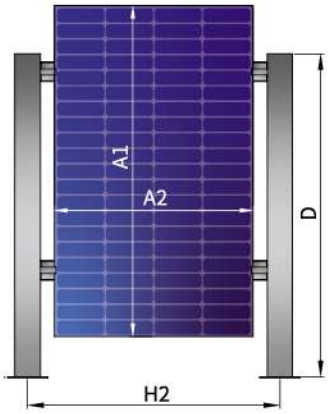
System Name	**Solar Fence**	**Fastener Material**	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Installation Site	General terrain, Flat floor, Hillside	**Module Dimension**	Length: 1650-2400 mm
Tilt Angle	90°		Width: 950-1400 mm
Applicable Solar Module	All available modules	**Patent**	Patent no. M636783
Panel Layout	Landscape/ Portrait	**Warranty**	25 years quality assurance under the certain environment
Material	**Zn-Al-Mg Coated Steel,** Nippon Steel Corp. ZAM®-EX YiehPhui Corp. PhuizerMax®(PM)	**Foundation**	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation



SF-L1 (1 module in Landscape)



SF-L2 (2 modules in Landscape)



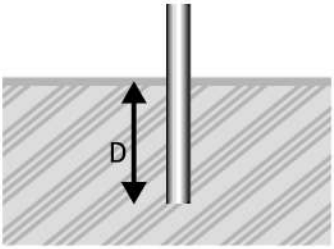
SF-P (Portrait)

Product Specification

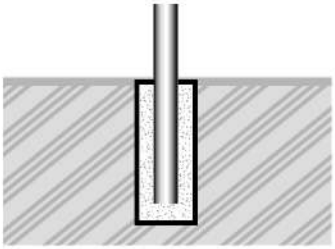
Unit: mm

A1	A2	B	C	D	H1	H2
1600~1800	950~1100	2300	1200	1400	2200	1500
1800~2100	1100~1250	2600	1350	1700	2500	1650
2100~2400	1250~1400	2900	1500	2000	2800	1800

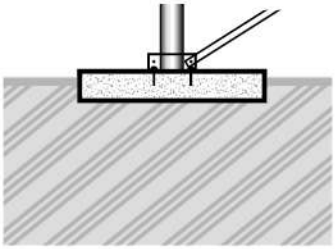
Foundation Types



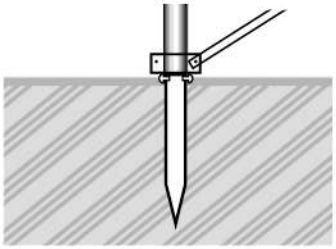
Steel Sheet Pile Foundation



Steel Sheet Foundation Embedded In Concrete



Concrete Foundation



Screw Pile Foundation

SOLAR TRACKER

One control system can control several push-pull rods, enabling the entire solar module array to track the sun automatically. It causes a low rate of failure and reduced maintenance costs. It provides a streamlined and straightforward installation method for maintenance, relocation, and repairs.

PATENT J-Systems® | PENDING TÜV 6 Types 9 Cert. J-Systems® | PENDING ISO J-Systems® | PENDING EN1090 J-Systems® | PENDING CE J-Systems®

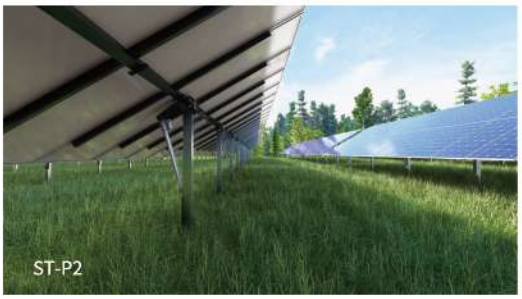
Optimized Power Generation:
The system's rotation, guided by the Astronomical algorithm, maintains consistent sunlight exposure, ensuring stable power generation.

Wind Speeds Safety Protection:
Modules go horizontal at high wind speeds to minimize damage.

Automatic Tracking without Manual Adjustments:
A tracking angle of 45°-135° improves power generation by 20% - 30%.

Customized System Specifications Available:
It can be designed according to the customer's specific requirements.

Reduced Snow and Dust Accumulation:
The rotating feature minimizes the build-up of snow and dust.

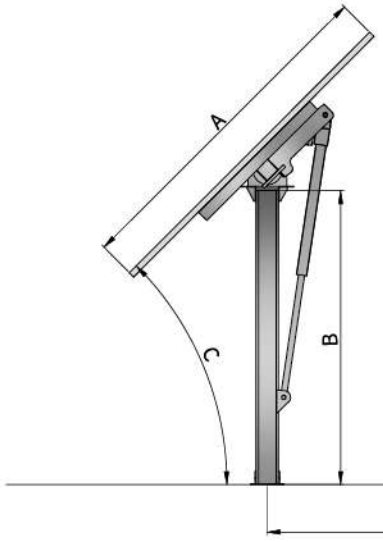


Technical Data

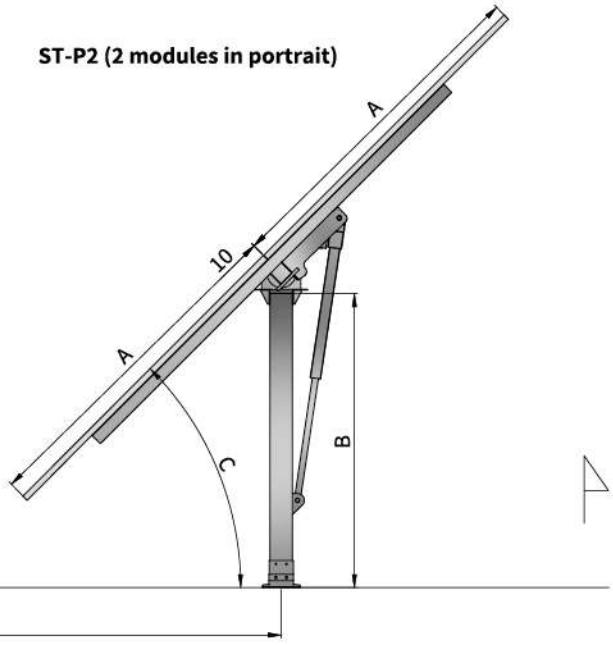
Tracking type	**Single Axis Tracker**
Installation Site	Flat floor, General land
Tilt Angle	45°-135° (can be customized)
Applicable Solar Module	All available modules
Panel Layout	Portrait
Module Dimension	Length: 1650-2300 mm
	Width: 950-1200 mm
Ground clearance	170cm-210cm
Array configuration	1 module in portrait or 2 modules in portrait
Ground Coverage Ratio	Freely configurable, typical 33%-52%
Wind Load	Based on the local wind load
Snow Load	Based on the local snow load

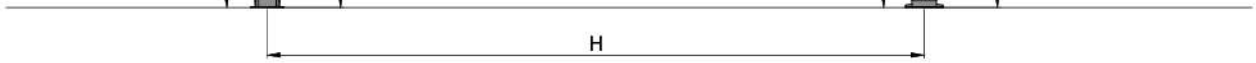
Foundation	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation
Drive	Actuator
Time to recover	Adjustable
Sensors	Wind direction, wind speed, and tilt angle.
Stow position	Flat stow
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel (Tin-zinc alloy plating), SUS 304
Warranty	25 years quality assurance under certain environment
Motor type	DC and AC available

ST-P1 (1 module in portrait)



ST-P2 (2 modules in portrait)

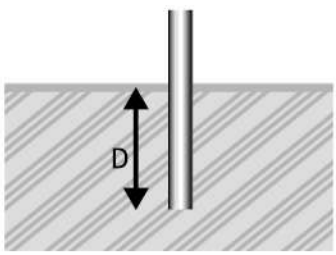




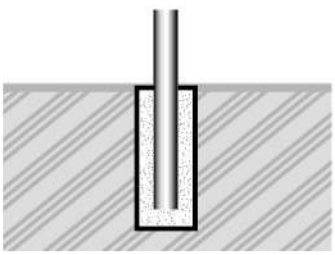
Product Specification

	1 module in Portrait						2 modules in Portrait			
A	1600 ~ 1800		1800 ~ 2100		2100 ~ 2400		1600 ~ 1800		1800 ~ 2100	
B	1700 ~ 2100						1700 ~ 2100		1800 ~ 2100	
C	30°	45°	30°	45°	30°	45°	30°	45°	30°	45°
H	3400	3900	4000	4500	4500	5100	6700	7700	7900	8900

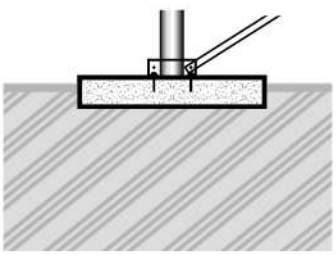
Foundation Types



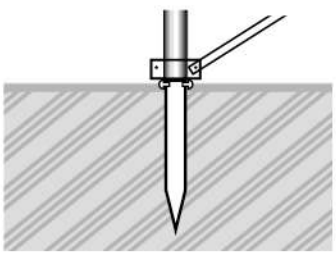
Steel Sheet Pile Foundation



Steel Sheet Foundation Embedded In Concrete



Concrete Foundation



Screw Pile Foundation

CARPORT

The waterproof solar carport incorporates specialized components to efficiently drain rainwater, offering excellent protection against rain and water leakage through its unique gutter design.

PATENT
J-Systems

Waterproof design
The innovative waterproof structure includes guiding gutters to enhance its waterproof function effectively.

Customized Solutions for both one and two vehicles parking space.
Our customized solutions cater to different customer projects, featuring mounting systems specifically designed for accommodating dual vehicles.

Compatibility for typical shed frame design.
It provides a streamlined and straightforward installation method for maintenance, relocation, and repairs.

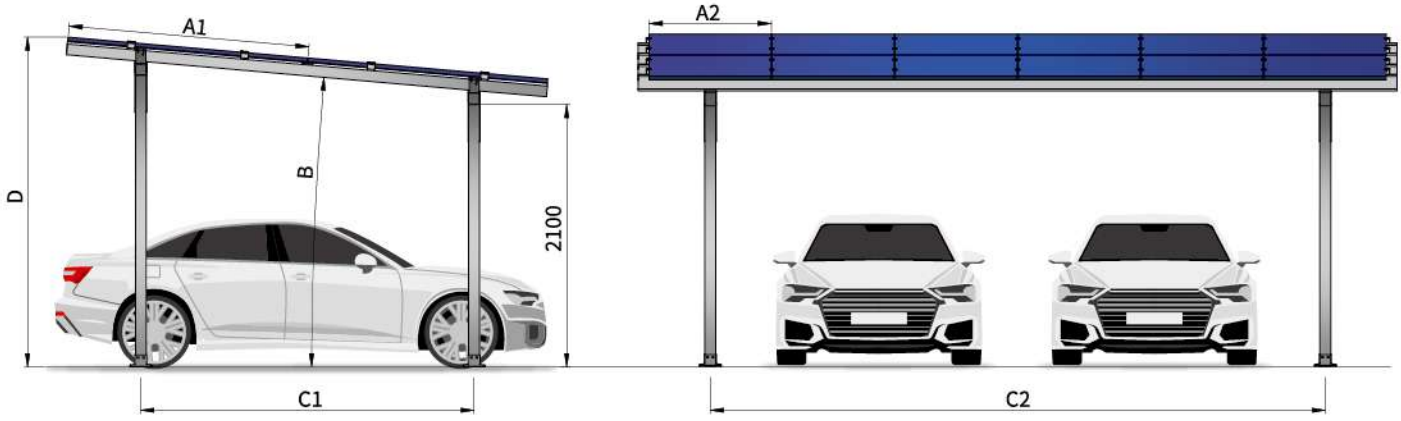

Carport System


Waterproof Carport

Technical Data

System Name	**Carport System** **Waterproof Carport**
Installation Site	Ground, Flat roof of factories, residences and parking lots
Tilt Angle	5°-25° (can be customized)
Wind Load	<60 m/s (can be customized)
Snow Load	<1.6 kN/m2 (can be customized)
Waterproof rate	95%
Applicable Solar Module	All available modules
Panel Layout	Carport: Landscape/ Portrait Waterproof carport: Portrait
Module Dimension	Length: 1650-2400 mm Width: 950-1400 mm

Foundation	Steel Sheet Pile Foundation, Steel Sheet Foundation Embedded In Concrete, Concrete Foundation, Screw Pile Foundation
Construction height	Minimum 2100 mm
Column spacing	Minimum 5200 mm
Column steel	Square Steel
Material	**Zn-Al-Mg Coated Steel** Nippon Steel Corp. ZAM®-EX, YiehPhui Corp. PhuizerMax®(PM)
Fastener Material	Medium carbon steel(Tin-zinc alloy plating), SUS304
Patent	Patent no. 202017106429 Patent no. 202017106048 Patent no.1801229
Warranty	25 years quality assurance under certain environment

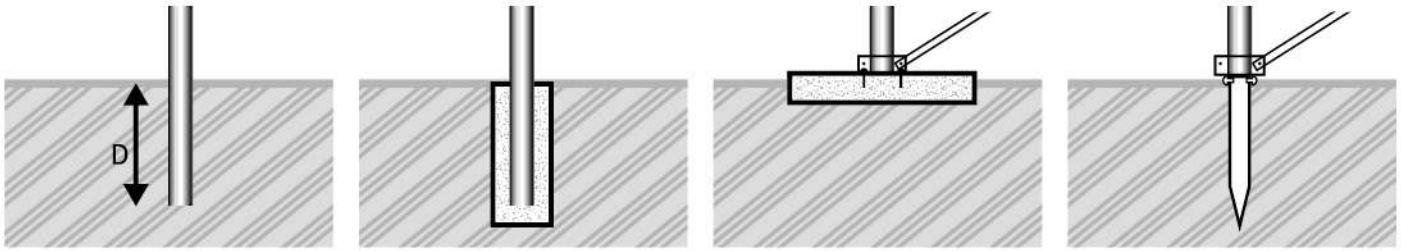


Product Specification

Unit: mm

A1	1600~1800			1800~2100			2100~2400		
A2	950~1100			1100~1250			1250~1400		
B	5°	10°	15°	5°	10°	15°	5°	10°	15°
C1	3500	3500	3500	4000	4000	4000	3500	3500	3500
C2	<5500	<5500	<5500	<6250	<6250	<6250	<5600	<5600	<5600
D	<2800	<3200	<3600	<2900	<3300	<3700	<2800	<3100	<3400

Foundation Types



Steel Sheet Pile Foundation

Steel Sheet Foundation Embedded In Concrete

Concrete Foundation

Screw Pile Foundation

RELATED PRODUCTS

C-shaped steel

Material: Magnesium-aluminum-zinc steel sheet
Note: Standard Specifications with Customizable Options Available.

Unit: mm

Product Specification	Thickness	Product Specification	Thickness
60*30*15	1.5	150*65*20	2.3 or 3.2
75*30*15	2.3	200*100	1.6
75*45*15	2.3 or 3.2	200*200	1.6
100*50*17	2.3 or 3.2	300*100	1.6
125*50*17	2.3 or 3.2	400*100	1.6

Rectangular steel

Material: Magnesium-aluminum-zinc steel sheet
Note: Standard Specifications with Customizable Options Available.

Product Specification (mm)	Thickness (mm)
100*100	2.3
125*100	2.3
150*100	2.3

Wireway

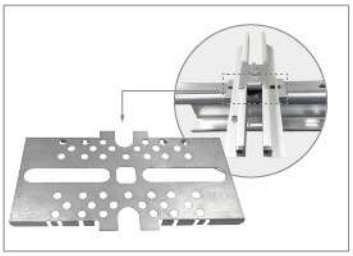
Material: Magnesium-aluminum-zinc steel sheet
Note: 1.All these wireways come with a cover, and you can utilize connecting pieces along with terminal sealing plates.
2.Standard Specifications with Customizable Options Available.

Product Specification (mm)	Thickness (mm)	Length (m)
50*50	0.5 or 1.6	3m
100*50	0.5 or 1.6	
100*100	0.5 or 1.6	
100*200	1.6	
150*100	1.6	
200*100	1.6	
200*200	1.6	
300*100	1.6	
400*100	1.6	

Grounding Accessories

Grounding Accessories: Ensure system safety and reduce the risk of electric shock.
Functions of the lightning protection grounding accessories:
Primarily used for lightning protection, grounding, ensuring equipotential bonding, reducing the risk of electric shock, minimizing electromagnetic interference, and lowering fire hazards.

Item number	Material	Weight (g)	Dim. W × H × D (mm)
JDP-9	Nippon steel Corp. ZAM-EX/ Medium carbon steel (Tin-zinc alloy plating) SUS304	15	80*45*6



Item number	Material	Weight (g)	Dim. W × H × D (mm)
JDP-11	Nippon steel Corp. ZAM-EX/ Medium carbon steel (Tin-zinc alloy plating) SUS304	20	110*60*5.3

Item number	Material	Weight (g)	Dim. W × H × D (mm)
LITP-1	Nippon steel Corp. ZAM-EX/ Medium carbon steel (Tin-zinc alloy plating) SUS304	126	48*48*55

Item number	Material	Weight (g)	Dim. W × H × D (mm)
LITP-2	Nippon steel Corp. ZAM-EX/ Medium carbon steel (Tin-zinc alloy plating) SUS304	92	43*43*56

Item number	Material	Weight (g)	Dim. W × H × D (mm)
LITP-3	Nippon steel Corp. ZAM-EX/ Medium carbon steel (Tin-zinc alloy plating) SUS304	114	72*48*55

Solar Panel Wire Clip

Material: SUS304

Thickness	Product Specification	Weight
0.6mm	2*4mm wires	3g/pc

MICROGRID APPLICATION

Microgrid Application

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