

LESSO

Stock Code: 2128.HK

SOLAR MOUNTING SYSTEM BRACKET AND ACCESSORIES



LESSO

Guangdong Lesso Safety & Fire Protection Technology Co., Ltd.

A Subsidiary of LESSO (Stock Code: 2128.HK)

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LESSO Group Official
WeChat Account



Introduction to LESSO
Fire Products

COMPANY PROFILE



Guangdong Lesso Safety & Fire Protection Technology Co., Ltd. is a subsidiary of LESSO Group Holdings Limited

(referred to as "LESSO", Hong Kong Listed Company Code: 2128).

The company has a modern management system, implementing information-based management and automated production systems;

Boasting a professional technical team, LESSO has established complete production workshops and product testing laboratories. The company always adheres to the spirit of "Forging ahead, seeking truth and innovation, scientific management, and striving for excellence",

and implements a quality policy designed to "Survive by quality, develop by quality, pursue benefits by quality, meet and exceed customers' requirements and expectations, all employees believe quality, and strive to create first-class products in China". LESSO adheres to the service tenet that "Technology creates quality, service pursues satisfaction" in order to provide customers with high-quality products.

PRODUCTION OVERVIEW



SOLAR MOUNTING SYSTEM BRACKET AND ACCESSORIES

Production Workshop

Covers an area of approximately 10,000 m². Features a selection of advanced equipment, including C-type single-point precision punch presses, U-channel steel production lines, cold rolling forming machines, slitting machines, and integrated punching and cutting machines.

10000

Floor Area



Mold Workshop

Covering an area of approximately 8,880 m². Total of 83 sets of equipment, including various CNC machining centers (including horizontal and gantry machining centers), CNC lathes, EDM forming machines, pneumatic punch presses, wire cutting machines, CNC double-head milling machines, injection molding machines, compound grinders, centerless grinders, and CNC engraving machines, as well as general-purpose processing equipment such as lathes, drilling machines, milling machines and grinders.

8880

Floor Area

83

Processing Equipment

PRODUCTION EQUIPMENT



Welding Manipulator



U-channel Steel Production Line



Integrated Punching and Cutting Machine for Aluminum Parts



Laser Cutting Machine



Automatic Welding Machine



C-type Single-point Precision Punch Press

TESTING EQUIPMENT



Metallographic Microscope

LESSO 联盟
金相显微镜操作规程

一、产品简介
金相显微镜是一种用于观察金属、合金、陶瓷、塑料等材料的显微结构的仪器。它由目镜、物镜、载物台、底座、光源等组成。主要用于观察金属材料的显微组织、晶粒大小、夹杂物、相组成等。

二、主要用途
1. 观察金属材料的显微组织、晶粒大小、夹杂物、相组成等。
2. 观察金属材料的表面形貌、缺陷、裂纹等。
3. 观察金属材料的断口形貌、断裂机理等。
4. 观察金属材料的腐蚀产物、腐蚀机理等。
5. 观察金属材料的焊接接头、焊缝组织等。
6. 观察金属材料的表面处理层、涂层等。
7. 观察金属材料的失效分析、失效原因等。

三、操作规程
1. 使用前应检查显微镜各部分是否正常，如光源、物镜、目镜、载物台等。
2. 使用前应检查显微镜的清洁度，如物镜、目镜、载物台等。
3. 使用前应检查显微镜的校准情况，如物镜、目镜、载物台等。
4. 使用前应检查显微镜的润滑情况，如物镜、目镜、载物台等。
5. 使用前应检查显微镜的电源情况，如物镜、目镜、载物台等。

四、使用步骤
1. 打开电源开关，检查光源是否正常。
2. 将待测样品放在载物台上，并用夹子固定。
3. 选择合适的物镜，并调整物镜与样品的距离。
4. 调整目镜，使视野清晰。
5. 调整载物台，使样品位于视野中心。
6. 观察样品的显微组织，并记录观察结果。
7. 观察结束后，关闭电源开关，并将显微镜恢复到初始状态。

五、注意事项
1. 使用前应仔细阅读说明书，并严格按照操作规程进行操作。
2. 使用前应检查显微镜的清洁度，如物镜、目镜、载物台等。
3. 使用前应检查显微镜的校准情况，如物镜、目镜、载物台等。
4. 使用前应检查显微镜的润滑情况，如物镜、目镜、载物台等。
5. 使用前应检查显微镜的电源情况，如物镜、目镜、载物台等。

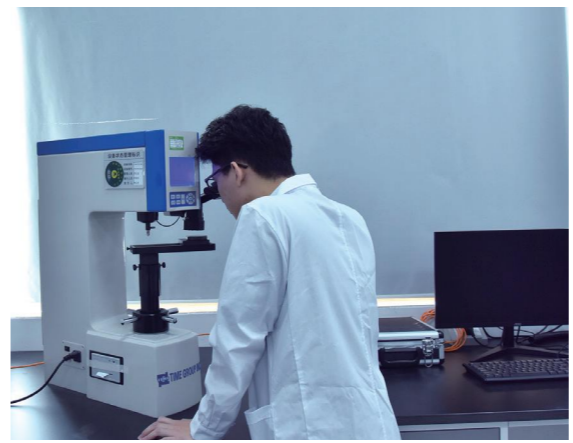
Spectrometer ▶



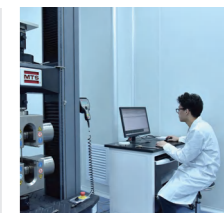
Environmental Testing Chamber



Coating Thickness Gauge ▶



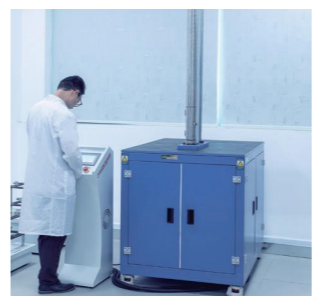
Intergranular Corrosion Tester



Multi-purpose Hardness Tester

Microcomputer-controlled Electronic Universal Testing Machine

Salt Spray Test Chamber ▶



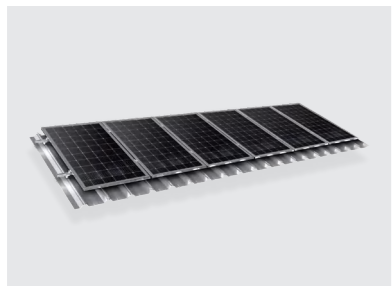
Chemical Laboratory ▶

Material Impact Tester



CONTENTS

01



SOLAR MOUNTING SYSTEM FOR 13/14
COLOR STEEL TILE ROOF

02



SOLAR MOUNTING SYSTEM FOR 15/16
CONCRETE ROOF

03



SOLAR MOUNTING SYSTEM FOR 17/18
GLAZED TILE ROOF

04



SOLAR MOUNTING SYSTEM 19/20
FOR AGRICULTURE AND
AQUACULTURE FARM

05



SOLAR MOUNTING SYSTEM 21/22
FOR BIPV

06



SOLAR MOUNTING SYSTEM 23/36
ACCESSORIES

COLOR STEEL TILE AND 37/38
ACCESSORIES



SOLAR MOUNTING SYSTEM FOR COLOR STEEL TILE ROOF

[LS001]

System Introduction

The solar mounting system for color steel tile roofs is suitable for distributed color steel tile roof power stations. The main material is aluminum alloy profiles, which are light in weight and have low load requirements on the roof.

System Features

- All-aluminum structure, light weight, reducing roof load, simple and reliable, sturdy and durable.
- Suitable for large-area color steel tile roof PV power stations in factories or warehouses.
- Multiple clamps are available for different color steel tile profiles.
- Fully universal upper structure with excellent component compatibility.
- Unique lightning protection and grounding design, significantly reducing lightning protection construction costs.

Product Description

Installation Location Color Steel Tile Roof	Snow Load Capacity 70kg/m ²	Material Aluminum Alloy Profile	Service Life 25 Years
Tensile Force 1000N	Wind Load Capacity 40m/s, 32.5kg/m ² , Level 13	Bracket Type Frame	Color Natural Color

Main Components

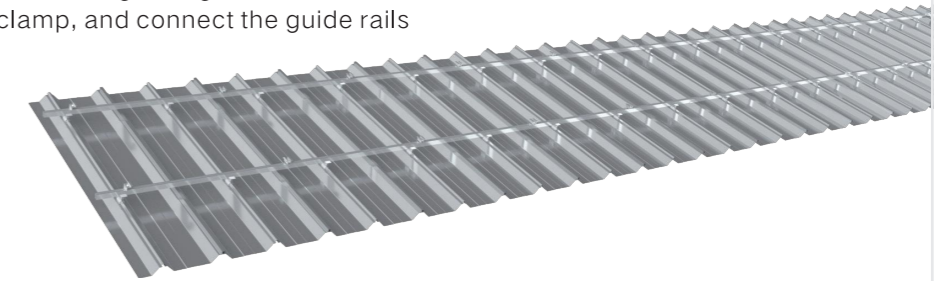


Installation Steps:

Step 01.

Fix the clamp on the color steel tile using hexagon socket head bolts, fix the guide rail on the clamp, and connect the guide rails with connectors.

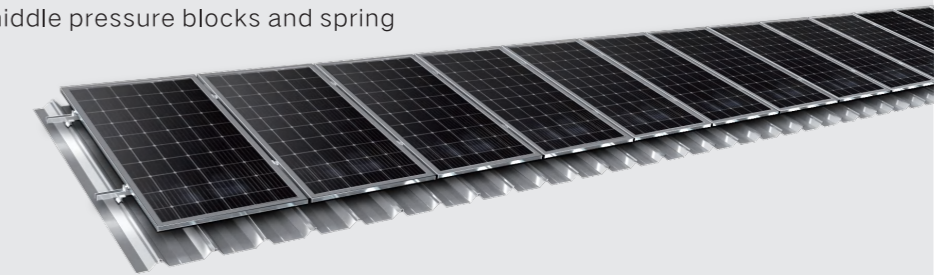
Method of use 01



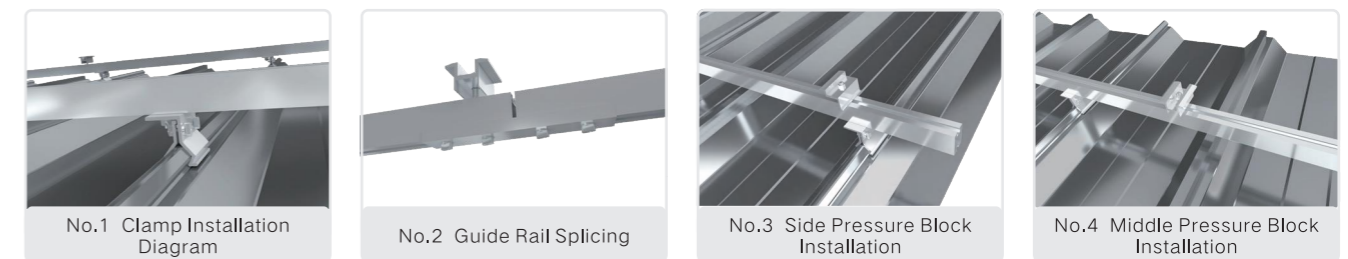
Step 02.

Fix the PV modules on the guide rail using hexagon socket head bolts, side pressure blocks, middle pressure blocks and spring washers.

Method of use 02



Node Diagrams





SOLAR MOUNTING SYSTEM FOR CONCRETE ROOF

[LS002]

System Introduction

Suitable for ground-mounted PV power stations and concrete flat roof PV power stations. This system offers outstanding wind resistance, is cost-effective, and can meet most customers' needs.

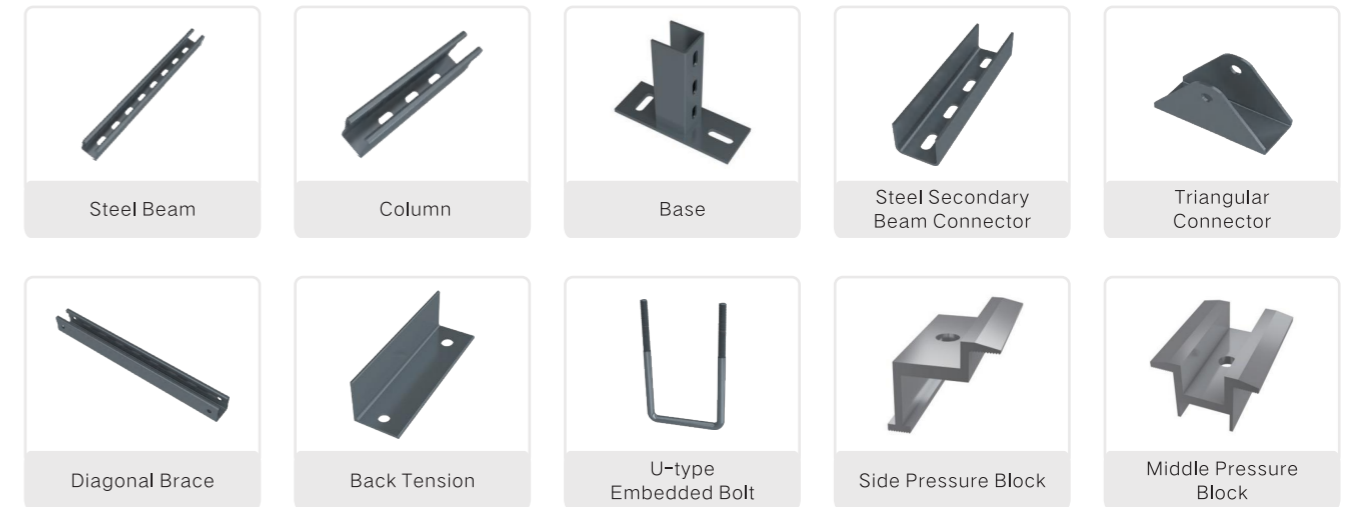
System Features

- Light weight and strong structure, reducing roof load.
- Prefabricated concrete foundation, reducing on-site installation procedures and working hours, without damaging the original building structure.
- Bracket structure with inclination angle, ensuring greater power generation.
- Unique lightning protection and grounding design, significantly reducing lightning protection construction costs.

Product Description

Installation Location Flat Ground/Flat Roof	Snow Load Capacity 1.4Kg/m ²	Material Carbon Steel	PV Module Specification Unrestricted
Tensile Force 1000N	Wind Load Capacity 40m/s	Surface Treatment Hot-Dip Galvanizing/ Galvanized Aluminum- Magnesium	Module Inclination Angle According to Customer Requirements
PV Module Arrangement Horizontal Arrangement/ Vertical Arrangement	Design Life 25 Years		

Main Components

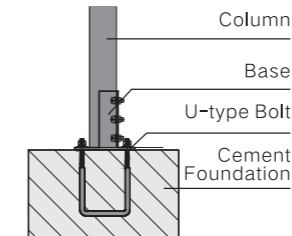


Installation Steps

Step 01.

Fix the base on the cement foundation, and connect the column and the base.

Method of use 01



Step 02.

Fix the diagonal brace on the column and steel beam using triangular connectors.

Method of use 02



Step 03.

Fix the PV modules on the steel beam using side pressure blocks and middle pressure blocks.

Method of use 03



Node Diagrams





SOLAR MOUNTING SYSTEM FOR GLAZED TILE ROOF

[LS003]

System Introduction

The solar mounting system for glazed tile roofs is suitable for distributed glazed tile roof power stations. This system uses stainless steel hooks with aluminum alloy profiles, making them ideal for glazed tile roofs and low load requirements on the roof.

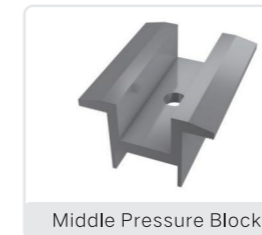
System Features

- Suitable for various conventional glazed tile roofs, with tile profiles of different heights, offering good flexibility in terms of bracket installation and convenient construction.
- The main load-bearing components can be made of materials of different specifications according to different load conditions, ensuring structural safety while controlling the bracket cost.
- Made of stainless steel and anodized aluminum alloys, it has an attractive appearance and excellent anti-corrosion performance.

Product Description

Installation Location Glazed Tile Roofs	Snow Load Capacity 70kg/m ²	Material Aluminum Alloy Profile	Service Life 25 Years
Tensile Force 1000N	Wind Load Capacity 40m/s, 32.5kg/m ² , Level 13	Bracket Type Frame	Color Natural Color

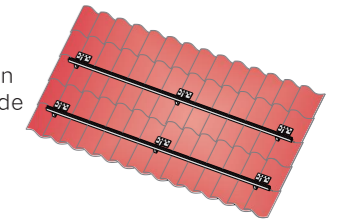
Main Components



Installation Steps

Step 01.

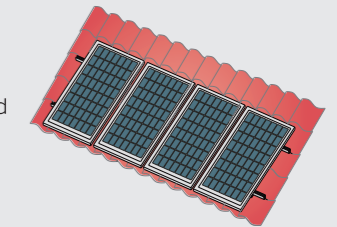
Fix the hook on the wooden beam, and then fix the guide rail on the hook.



Method of use 01

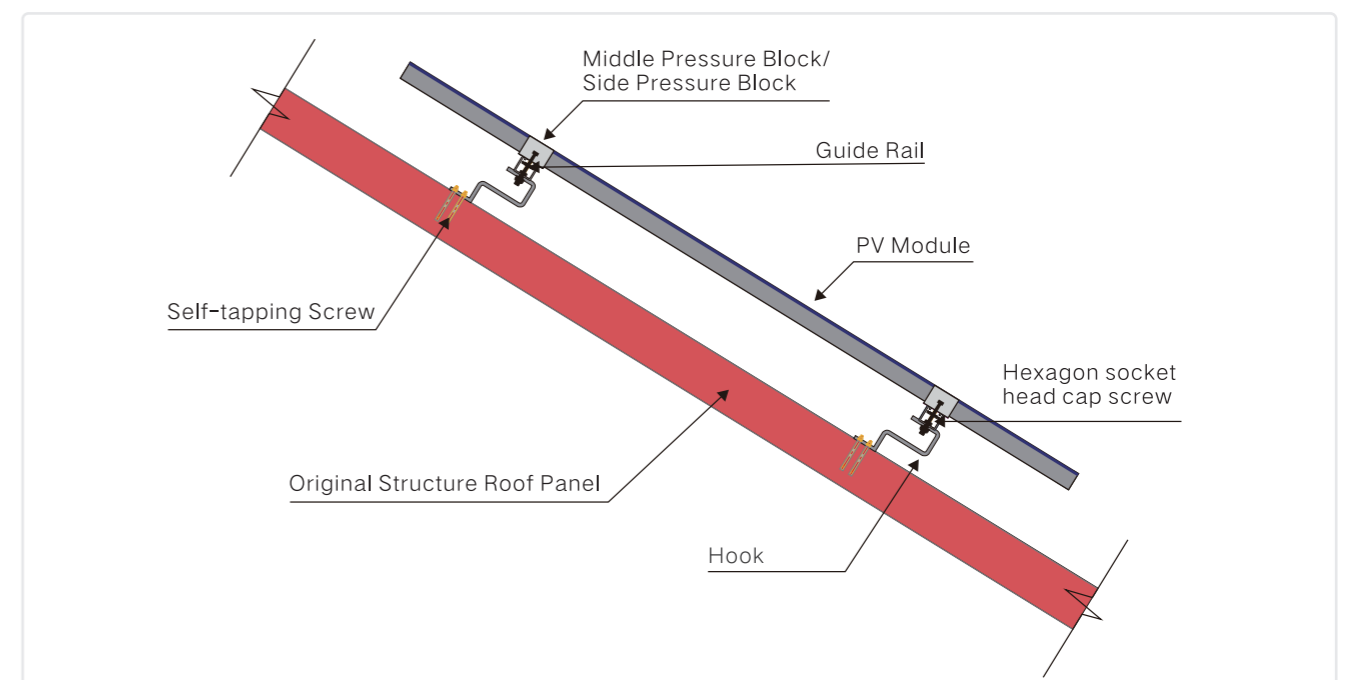
Step 02.

Fix the PV modules on the guide rail using middle and side pressure blocks.



Method of use 02

Node Diagrams





SOLAR MOUNTING SYSTEM FOR AGRICULTURE AND AQUACULTURE FARM

[LS004]

System Introduction

This single-column solar mounting system is suitable for fishery-PV complementary PV power stations and large-scale mountain PV power stations. It has low topographic requirements, can be adapted to various complex terrains, is convenient and quick to install, and can meet various customer needs

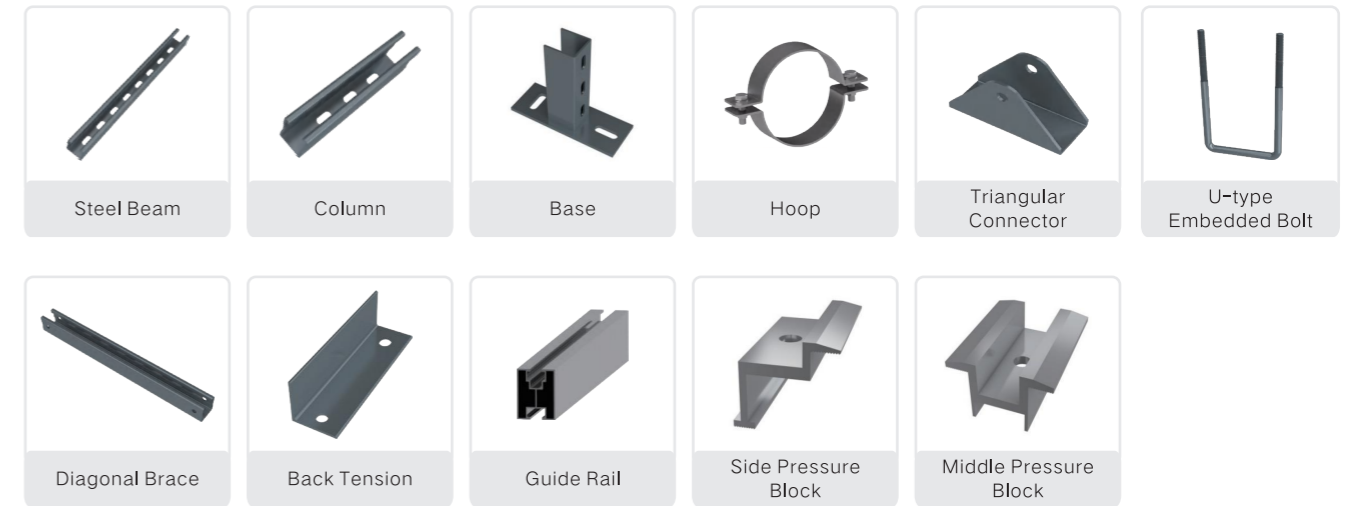
System Features

- Single-column structure, small area occupied by the foundation.
- Power generation on the top, fish farming (vegetable planting) at the bottom; multiple production procedures on one piece of land, greatly improving the utilization efficiency of land resources.
- Prestressed concrete pile foundation, with flexible bracket heights according to water depth and crop growth needs.
- Prestressed concrete piles offer outstanding corrosion resistance, meaning they can resist the erosion of acidic soil containing chemical fertilizers and long-term immersion in water.

Product Description

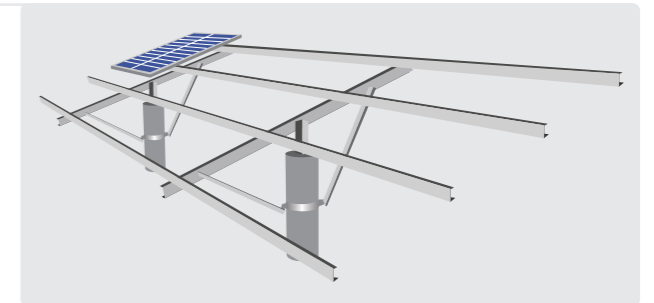
Installation Location Fishponds or Ground	Snow Load Capacity 0.5KN/m ²	Material Carbon Steel	PV Module Specification Unrestricted
Tensile Force 1000N	Wind Load Capacity 40m/s	Surface Treatment Hot-Dip Galvanizing/ Galvanized Aluminum- Magnesium	Module Inclination Angle According to Customer Requirements
PV Module Arrangement Horizontal Arrangement/ Vertical Arrangement	Design Life 25 Years		

Main Components

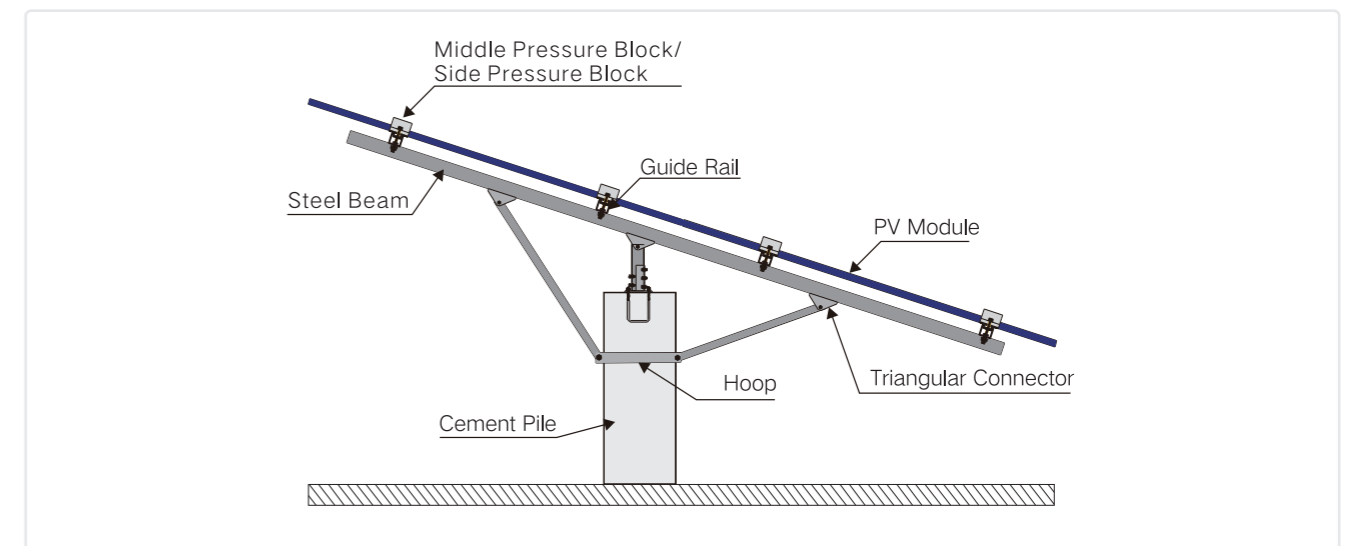


Installation Steps

- Embed U-type bolts in the pipe pile;
- Fix the base and column on the pile;
- Install the steel beam and guide rail;
- Install the hoop, and then connect the diagonal brace, steel beam and hoop with triangular connectors;
- Install the PV modules on the guide rail with side and middle pressure blocks.



Node Diagrams





SOLAR MOUNTING SYSTEM FOR BIPV

[LS005]

System Introduction

BIPV brackets are suitable for sun rooms on cement roofs, BIPV commercial factories, PV waterproof carports, and similar applications.

System Features

- Stable structure and good corrosion resistance.
- Convenient installation, reducing labor costs.
- Overlapping module layout with multiple waterproof protections, providing good waterproof performance.
- Can be designed according to site requirements to fully use the area assigned and meet customer requirements.

Product Description

Application Site Factories, Carports, Sun rooms, etc.	Snow Load Capacity Determined by the Project	PV Module Arrangement Unrestricted	Material Zinc-Aluminum-Magnesium, Aluminum Alloy, Stainless Steel
Wind Load Capacity Determined by the Project	PV Module Specification Unrestricted	Design Life 25 Years	Installation Angle Determined by the Project



BIPV Factory Building

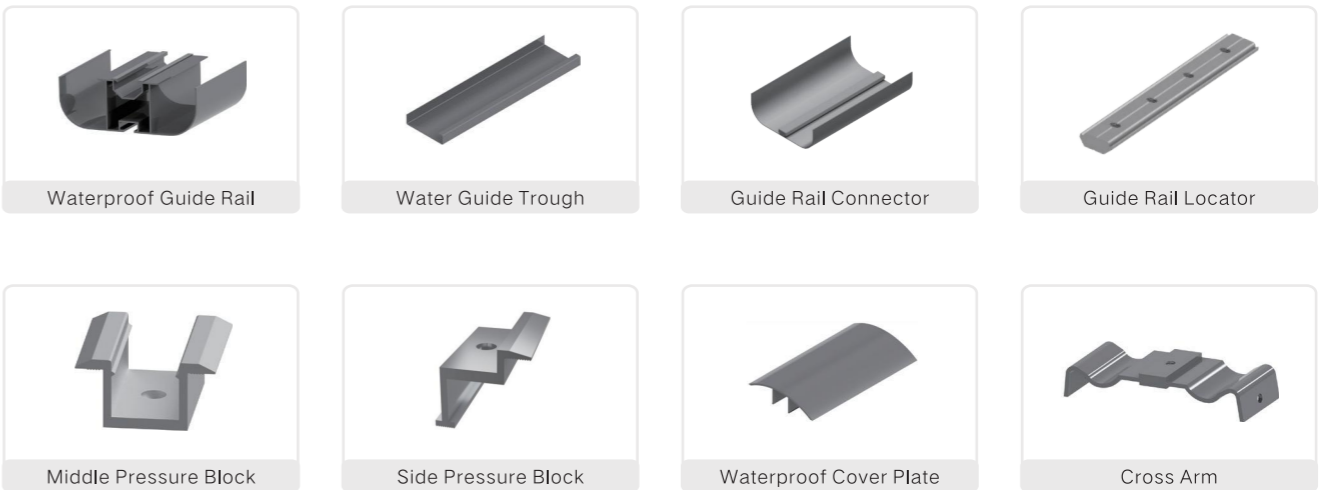


PV Waterproof Carport



BIPV Sun Room

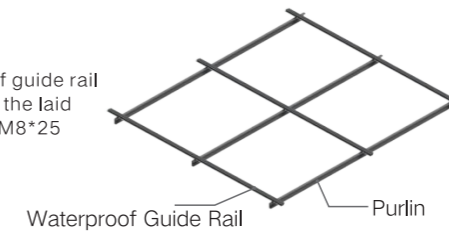
Main Components



Installation Steps

Step 01

1. Install the waterproof guide rail (main water trough) on the laid horizontal purlin using M8*25 T-type screw sets.



Installation Node Diagram of Waterproof Guide Rail and Purlin:

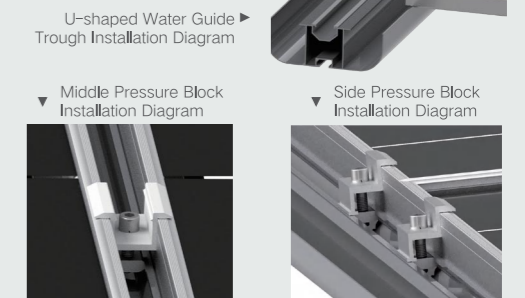


Step 02

2. Install the PV modules on the waterproof guide rail starting from top to bottom and from left to right. Before installing the side and middle pressure blocks, place the water guide trough under the PV modules and install it in place. (Note: When placing the modules horizontally, it is necessary to apply weather-resistant sealant at the gap between the upper and lower modules to strengthen waterproofing and reduce water flow; in addition, vertical supports must be added in the middle under the modules to avoid module sinking and hidden cracks.)

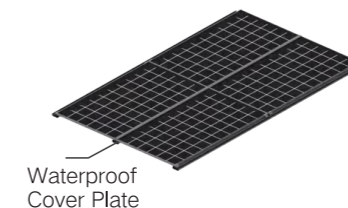


PV Module Installation Node Diagram:

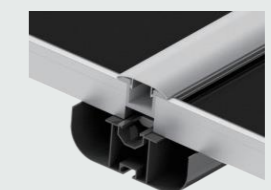


Step 03

3. Finally, install the waterproof cover plate at the gap between the PV modules. It can be clamped tightly with the middle pressure block by directly pressing down on the plate or by using a rubber hammer.



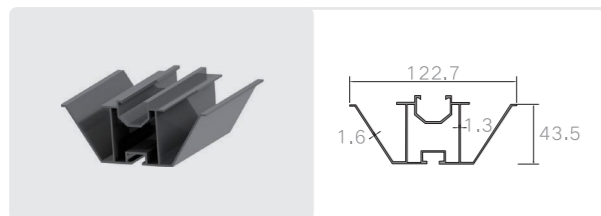
Waterproof Cover Plate Installation Node Diagram:



SOLAR MOUNTING SYSTEM ACCESSORIES

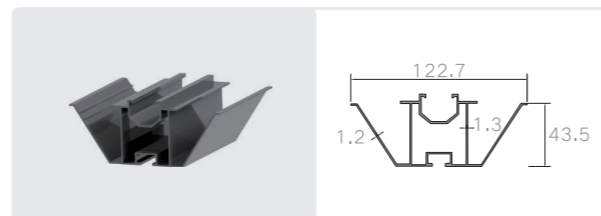


Waterproof Guide Rail



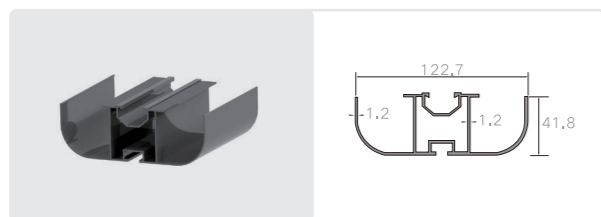
Waterproof Guide Rail A

Material: Aluminum Alloy



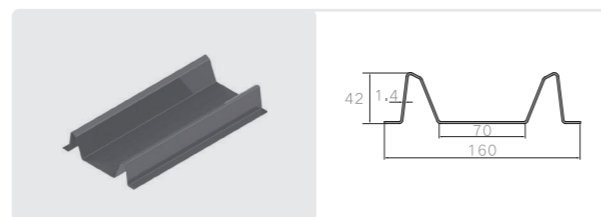
Waterproof Guide Rail B

Material: Aluminum Alloy



Waterproof Guide Rail C

Material: Aluminum Alloy



M-type Waterproof Guide Rail

Material: Aluminum Alloy

Waterproof Accessories



L-shaped Aluminum Adapter

Material: Aluminum Alloy



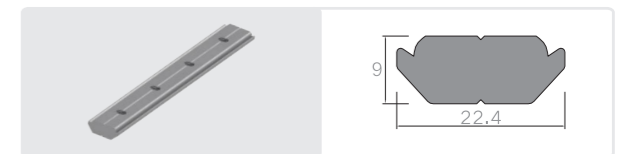
Slider Nut (for Guide Rail 4)

Material: Aluminum Alloy



Guide rail connector

Material: Aluminum Alloy



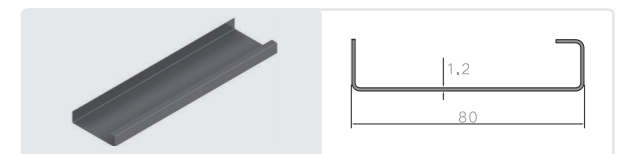
Guide Rail Locator (for Guide Rail 4)

Material: Aluminum Alloy



U-shaped Water Guide Trough A

Material: Aluminum Alloy



U-shaped Water Guide Trough B

Material: Aluminum Alloy



U-shaped Water Guide Trough C

Material: Aluminum Alloy



U-shaped Water Guide Trough D

Material: Aluminum Alloy



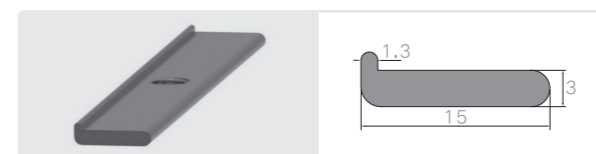
U-shaped Water Guide Trough E

Material: Aluminum Alloy



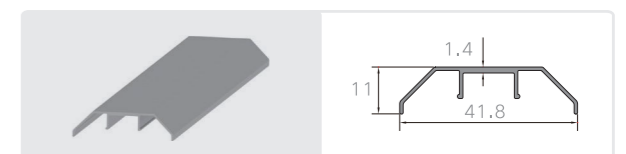
Cross Arm

Material: Aluminum Alloy



Spacer Block

Material: Aluminum Alloy



M-type Waterproof Cover Plate

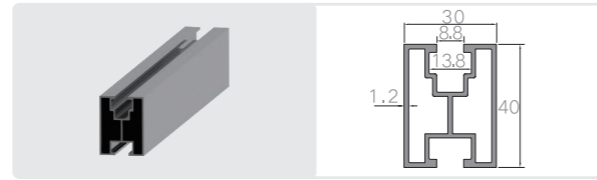
Material: Aluminum Alloy

Guide Rail/Purlin/Column/Main Beam/Diagonal Brace/Inclined Beam



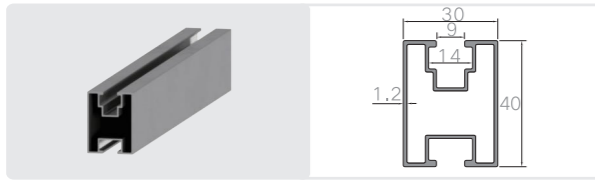
Guide Rail 1

Material: Aluminum Alloy



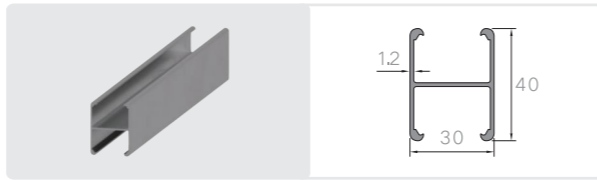
Guide Rail 2

Material: Aluminum Alloy



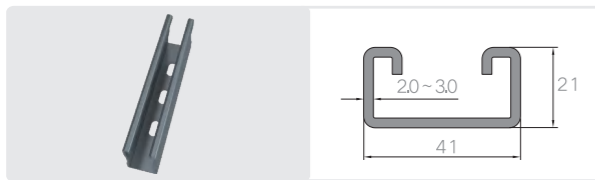
Guide Rail 3

Material: Aluminum Alloy



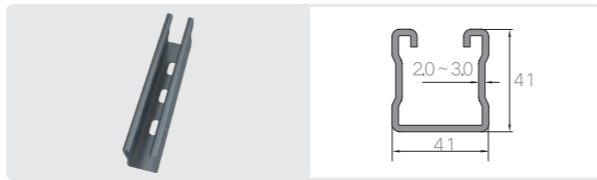
Guide Rail 4

Material: Aluminum Alloy



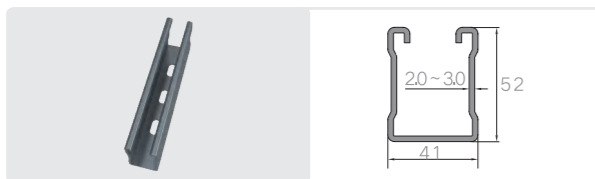
U41x21

Material: Q235B (Galvanized Aluminum-Magnesium, Hot-Dip Galvanizing)



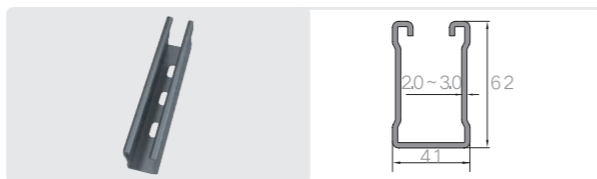
U41x41

Material: Q235B (Galvanized Aluminum-Magnesium, Hot-Dip Galvanizing)



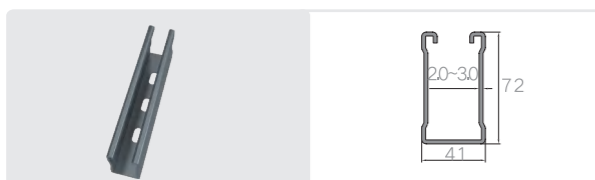
U41x52

Material: Q235B (Galvanized Aluminum-Magnesium, Hot-Dip Galvanizing)



U41x62

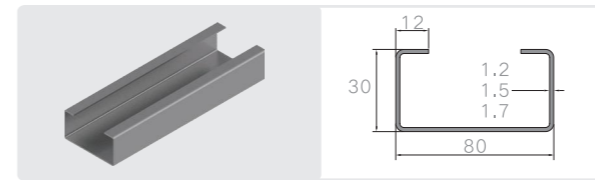
Material: Q235B (Galvanized Aluminum-Magnesium, Hot-Dip Galvanizing)



U41x72

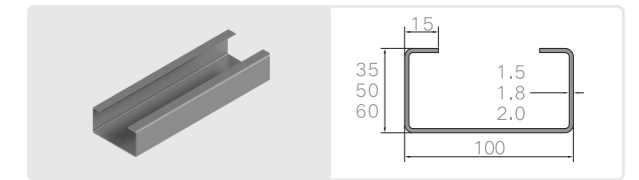
Material: Q235B (Galvanized Aluminum-Magnesium, Hot-Dip Galvanizing)

SOLAR MOUNTING SYSTEM ACCESSORIES



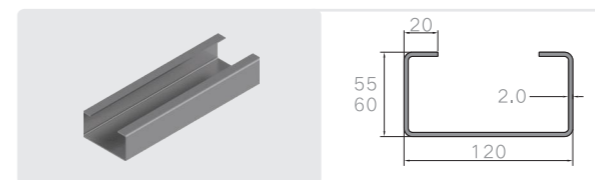
C-type Steel 1

Material: Q235B Hot-Dip Galvanizing



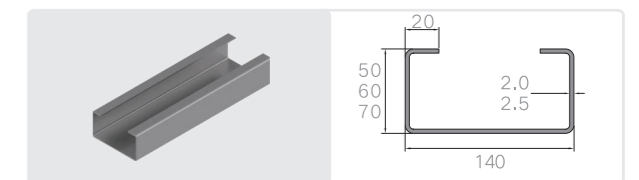
C-type Steel 2

Material: Q235B Hot-Dip Galvanizing



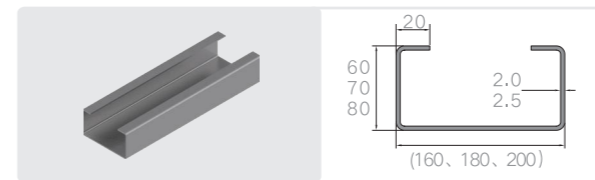
C-type Steel 3

Material: Q235B Hot-Dip Galvanizing



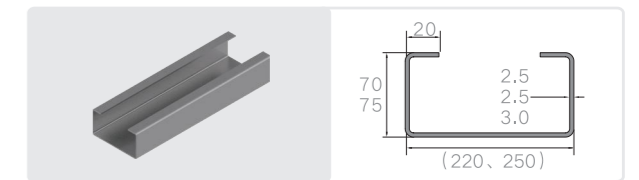
C-type Steel 4

Material: Q235B Hot-Dip Galvanizing



C-type Steel 5

Material: Q235B Hot-Dip Galvanizing



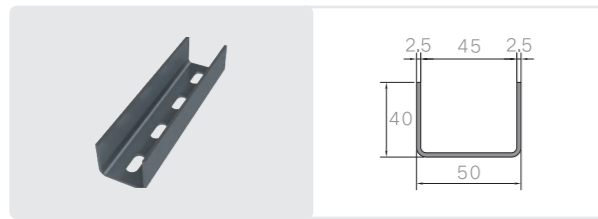
C-type Steel 6

Material: Q235B Hot-Dip Galvanizing

SOLAR MOUNTING SYSTEM ACCESSORIES

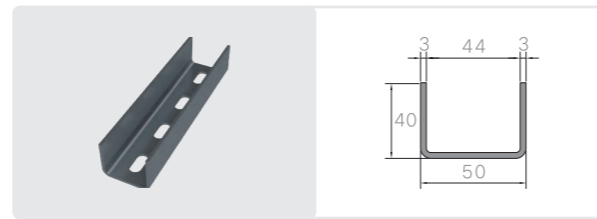


Guide Rail Connector



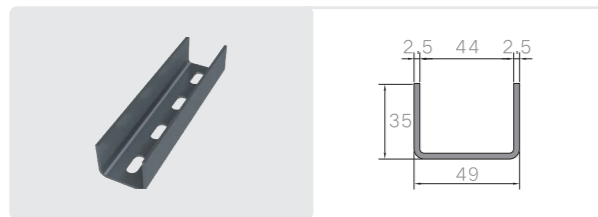
Guide Rail Connector 1

Material: Q235B Hot-Dip Galvanizing



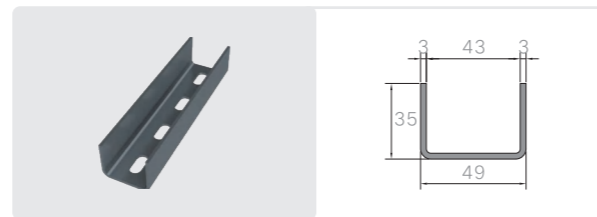
Guide Rail Connector 2

Material: Q235B Hot-Dip Galvanizing



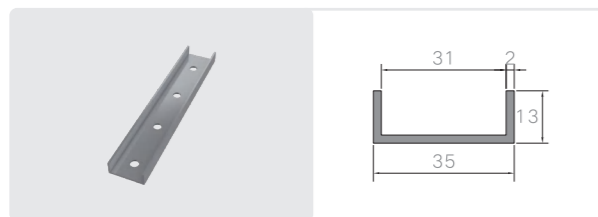
Guide Rail Connector 3

Material: Q235B Hot-Dip Galvanizing



Guide Rail Connector 4

Material: Q235B Hot-Dip Galvanizing



Guide Rail Connector 5

Material: Aluminum Alloy

Triangular Connector



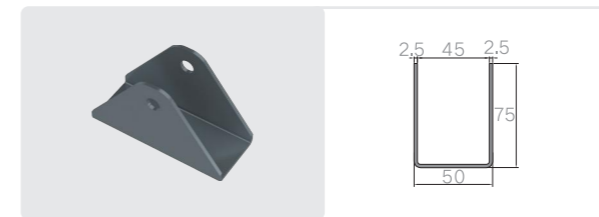
Triangular Connector 1

Material: Q235B Hot-Dip Galvanizing



Triangular Connector 2

Material: Q235B Hot-Dip Galvanizing



Triangular Connector 3

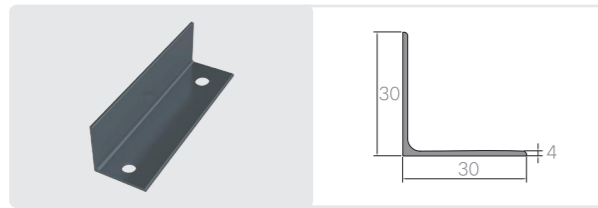
Material: Q235B Hot-Dip Galvanizing



Triangular Connector 4

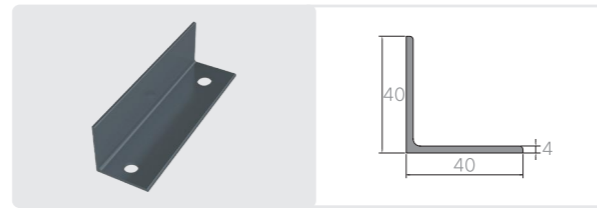
Material: Q235B Hot-Dip Galvanizing

L-type Steel



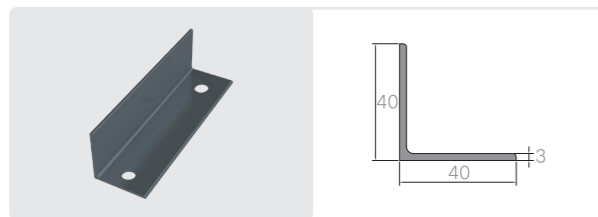
L-type Steel

Material: Q235B Hot-Dip Galvanizing



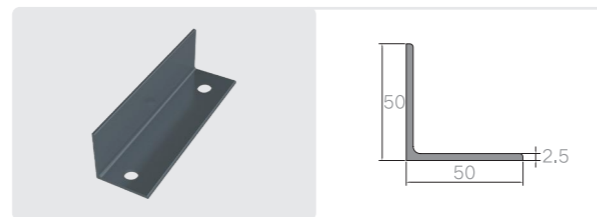
L-type Steel

Material: Q235B Hot-Dip Galvanizing



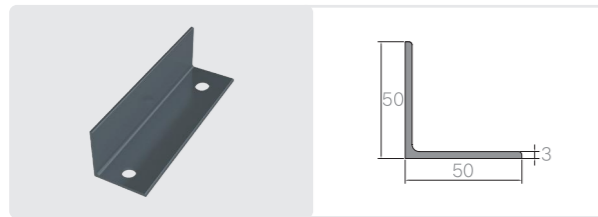
L-type Steel

Material: Q235B Hot-Dip Galvanizing



L-type Steel

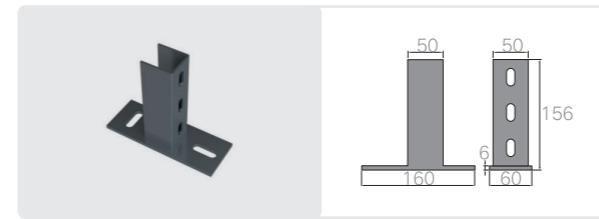
Material: Q235B Hot-Dip Galvanizing



L-type Steel

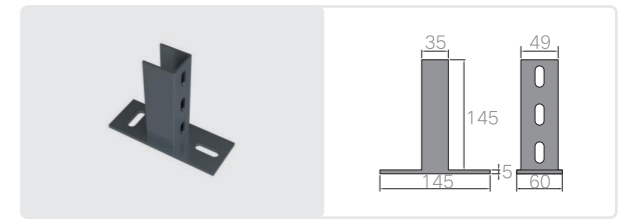
Material: Q235B Hot-Dip Galvanizing

Base



Column Base 1

Material: Q235B Hot-Dip Galvanizing



Column Base 2

Material: Q235B Hot-Dip Galvanizing



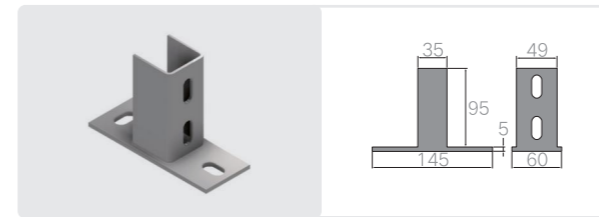
Column Base 3

Material: Q235B Hot-Dip Galvanizing



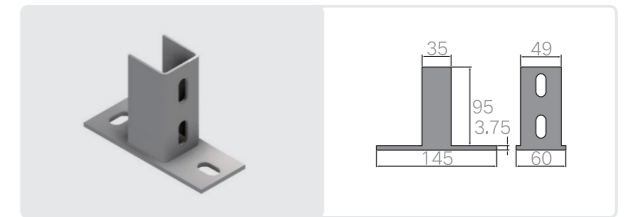
Column Base 4

Material: Q235B Hot-Dip Galvanizing



Column Base 5

Material: Q235B Hot-Dip Galvanizing



Column Base 6

Material: Q235B Hot-Dip Galvanizing

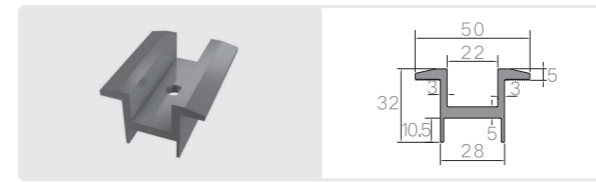
SOLAR MOUNTING SYSTEM ACCESSORIES



SOLAR MOUNTING SYSTEM ACCESSORIES

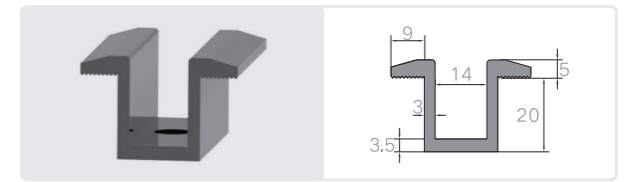


Middle Pressure Block



Middle Pressure Block 1

Material: Aluminum Alloy



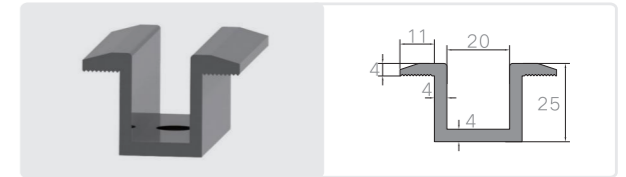
Middle Pressure Block 2

Material: Aluminum Alloy



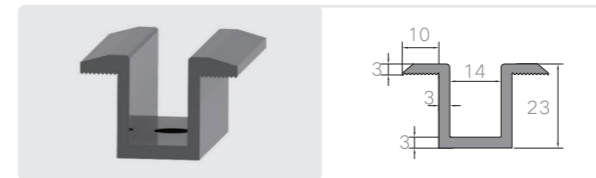
Middle Pressure Block 3

Material: Aluminum Alloy



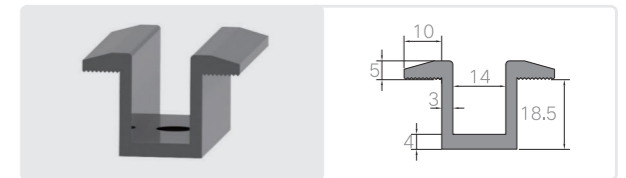
Middle Pressure Block 4

Material: Aluminum Alloy



Middle Pressure Block 5

Material: Aluminum Alloy



Middle Pressure Block 6

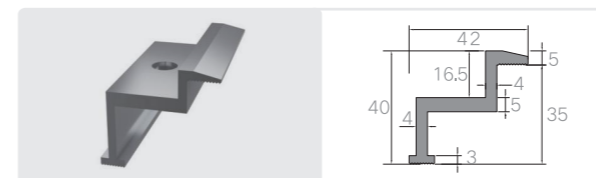
Material: Aluminum Alloy



Middle Pressure Block 7

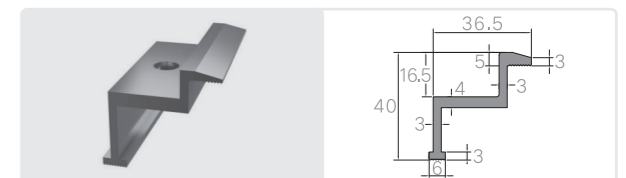
Material: Aluminum Alloy

Side Pressure Block



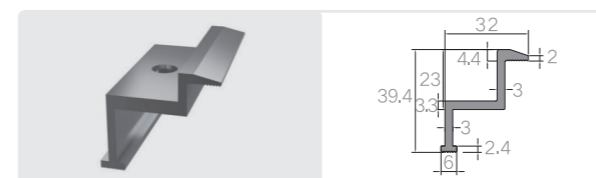
Side Pressure Block

Material: Aluminum Alloy



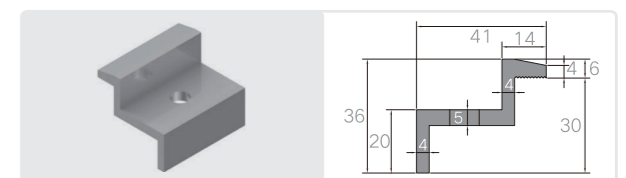
Side Pressure Block

Material: Aluminum Alloy



Side Pressure Block

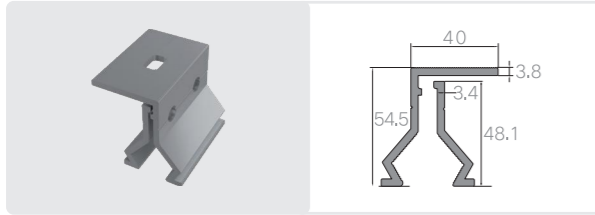
Material: Aluminum Alloy



Side Pressure Block

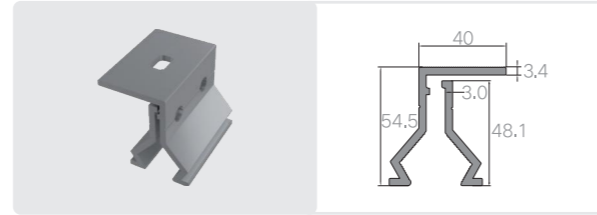
Material: Aluminum Alloy

Clamp



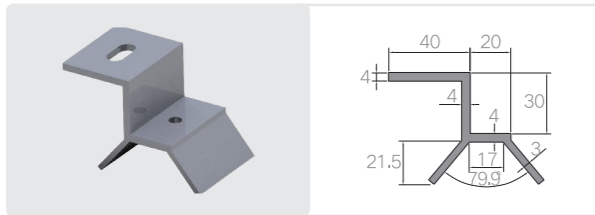
Angle Clamp

Material: Aluminum Alloy



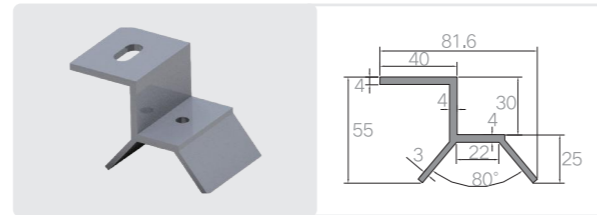
Angle Clamp

Material: Aluminum Alloy



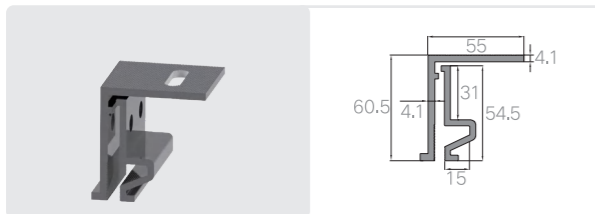
Trapezoidal Clamp 058

Material: Aluminum Alloy



Trapezoidal Clamp 063

Material: Aluminum Alloy



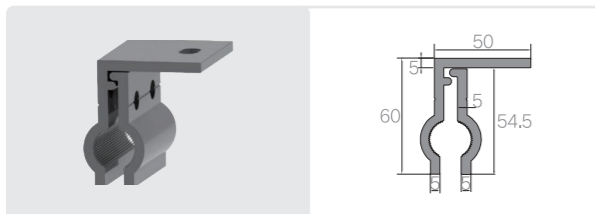
Vertical Locked Edge Clamp 478

Material: Aluminum Alloy



Vertical Locked Edge Clamp 470

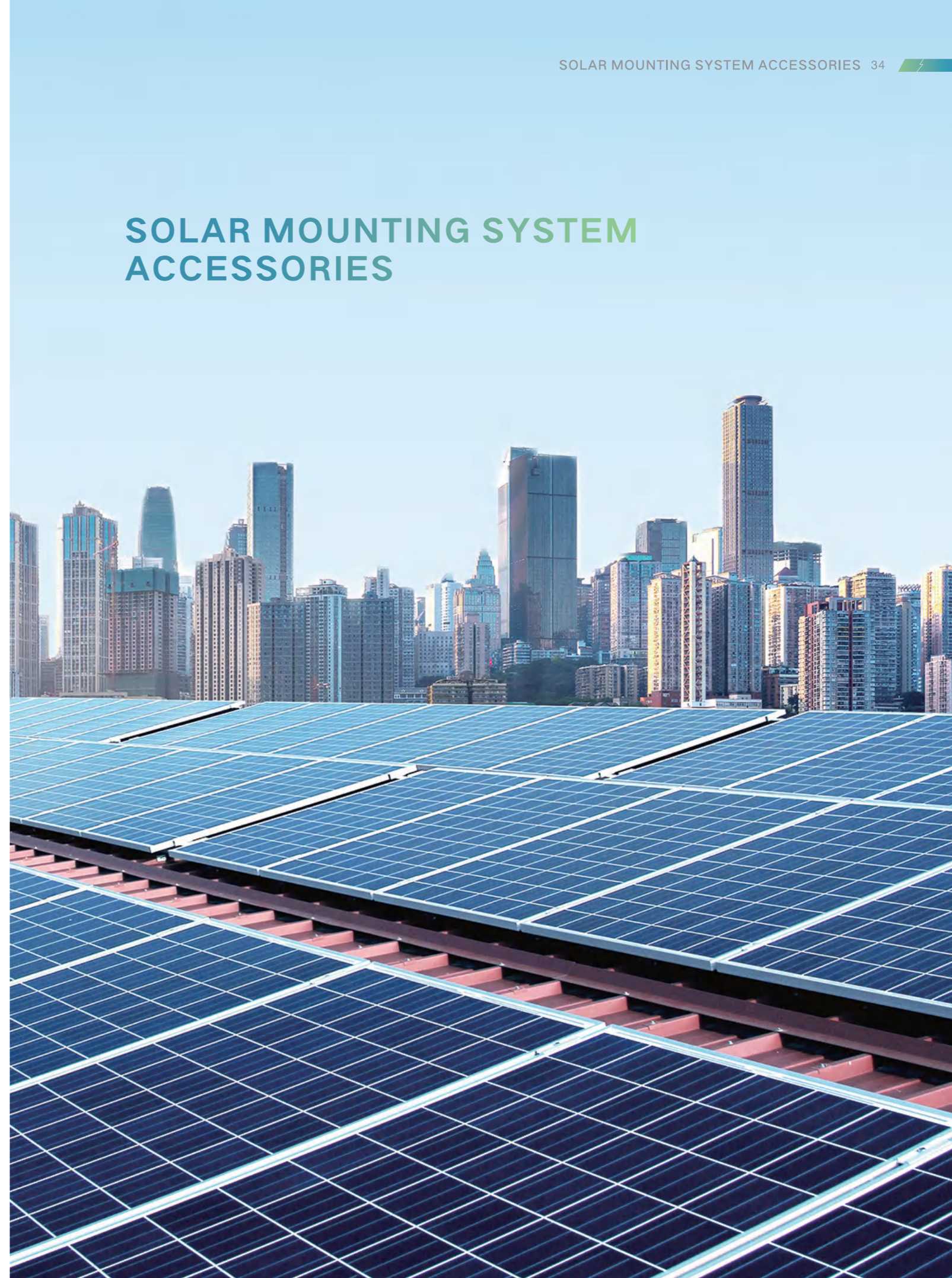
Material: Aluminum Alloy



Vertical Locked Edge Clamp 430

Material: Aluminum Alloy

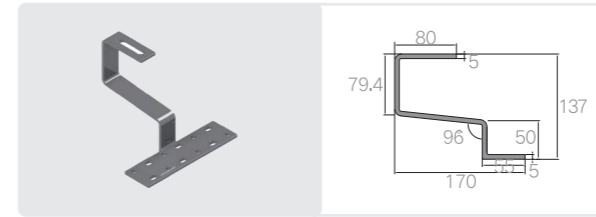
SOLAR MOUNTING SYSTEM ACCESSORIES



SOLAR MOUNTING SYSTEM ACCESSORIES

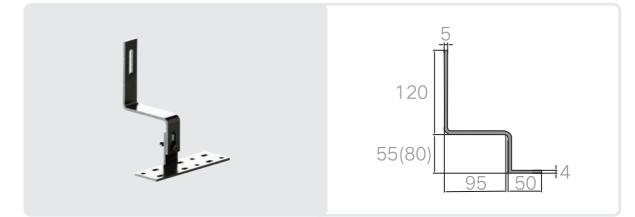


Hook



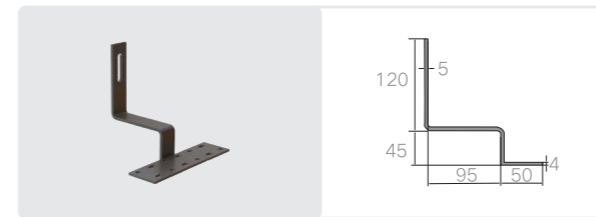
Flat Hook

Material: Stainless Steel



Adjustable Hook

Material: Stainless Steel



Straight Hook

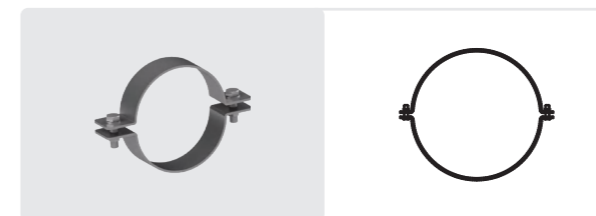
Material: Stainless Steel



Vertical Side Hook

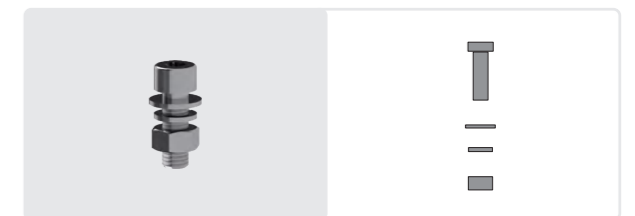
Material: Stainless Steel

Other Accessories



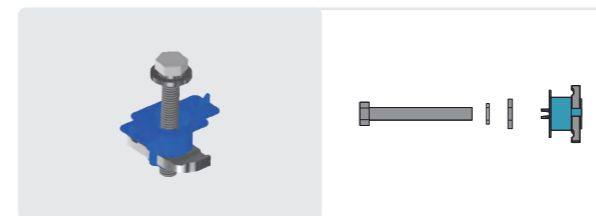
Hoop

Material: Q235B Hot-Dip Galvanizing



Hexagon Socket Head Bolt Kit

Material: Stainless Steel



Plastic Wing Nut Kit

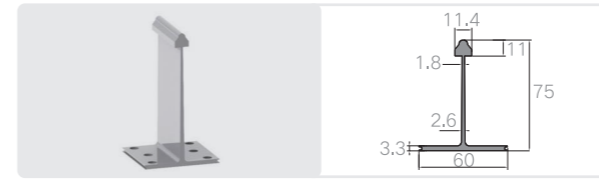
Material: Stainless Steel

※Note: Other auxiliary materials such as bolts, nuts, screws, and washers are configured according to project requirements.

COLOR STEEL TILE AND ACCESSORIES

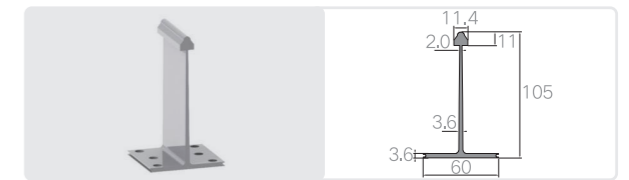


T-type Support



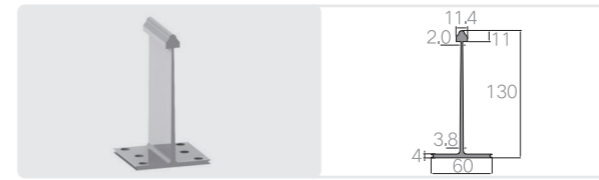
T-type Support 1

Material: Aluminum Alloy



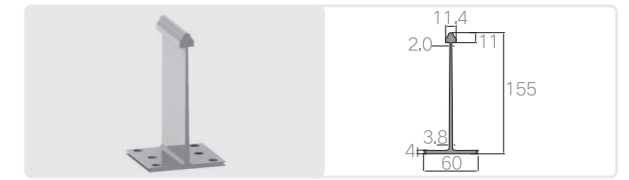
T-type Support 2

Material: Aluminum Alloy



T-type Support 3

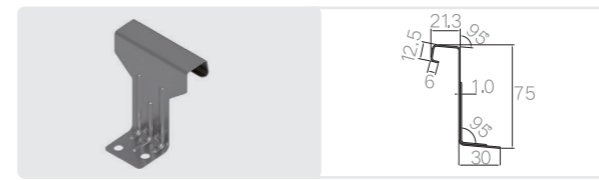
Material: Aluminum Alloy



T-type Support 4

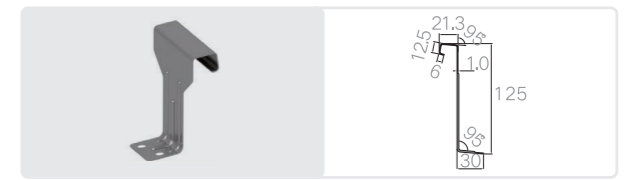
Material: Aluminum Alloy

Side Bracket



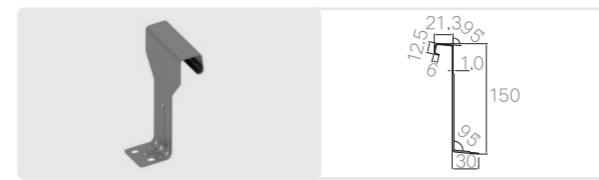
Side Bracket 1

Material: Q235B (Galvanized Aluminum-Magnesium)



Side Bracket 2

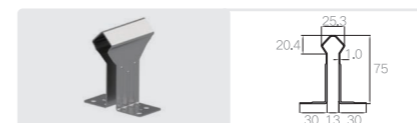
Material: Q235B (Galvanized Aluminum-Magnesium)



Side Bracket 3

Material: Q235B (Galvanized Aluminum-Magnesium)

Middle Bracket



Middle Bracket 1

Material: Q235B (Galvanized Aluminum-Magnesium)



Middle Bracket 2

Material: Q235B (Galvanized Aluminum-Magnesium)



Middle Bracket 3

Material: Q235B (Galvanized Aluminum-Magnesium)

Engineering Case Examples



Hunan Chemical Industry Co., Ltd.

9751.32 KW Distributed PV Power Generation Project

📍 Ningxiang City, Changsha City, Hunan Province



Guangdong Haitian Machinery

6139.65KW Distributed PV Power Generation Project

📍 Shunde District, Foshan City, Guangdong Province



Ding'an County, Hainan Province

5990.22KW Distributed PV Power Generation Project

📍 Dingcheng Town, Ding'an County, Hainan Province



Ducheng Town, Yunan County, Guangdong Province

4997.7KW Distributed PV Power Generation Project

📍 Ducheng Town, Yunan County, Yunfu City, Guangdong Province



Zhuhai AVIC General Aviation, Guangdong Province

2675.16KW Distributed PV Power Generation Project

📍 Jinwan District, Zhuhai City, Guangdong Province



Guangdong Chemical Enterprise

2196.29KW Distributed PV Power Generation Project

📍 Shunde District, Foshan City, Guangdong Province



Gaoming Industrial Avenue, Guangdong Province

1279.85KW Distributed PV Power Generation Project

📍 Gaoming District, Foshan City, Guangdong Province



Hunan Dongqing Trading

1164.24KW Distributed PV Power Generation Project

📍 Huaihua City, Hunan Province



Hubei Tianfeng Rice Industry

1007.16KW Distributed PV Power Generation Project

📍 Jiangling County, Jingzhou City, Hubei Province

STRATEGIC PARTNERS

LESSO 联塑班皓



中国华能
CHINA HUANENG



中国建筑
CHINA STATE CONSTRUCTION



CGE 中绿能集团
CHINA GREEN ENERGY

