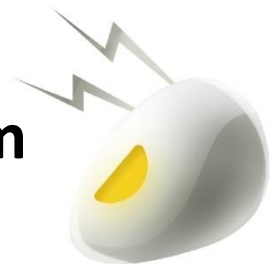


INSTALLATION INSTRUCTION

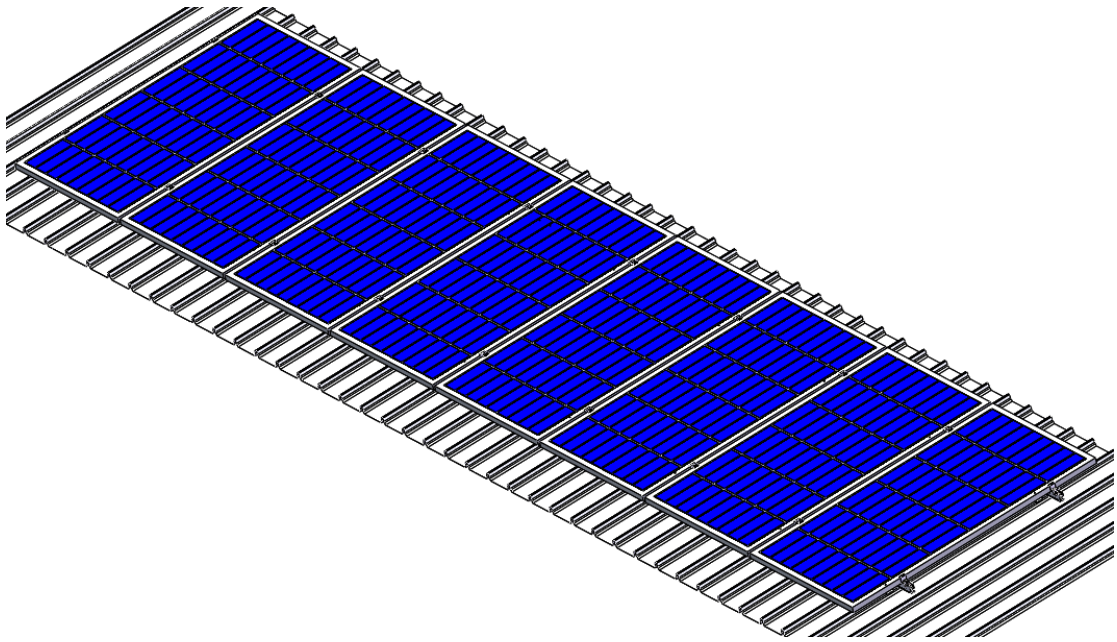


Installation Manual

Clamp & L feet Roof mounting system



ANTAI
Aluminum & AI Tech for Solar



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I. Safety Precautions

Thank you for purchasing Antai solar mounting system products. Please refer to this installation instruction before installation, operation, maintenance, and inspection.

● General considerations

The installation is limited to those who have professional experience and can carry out construction according to the specified items.

Please abide by the local national or local building regulations and environmental protection regulations.

Please comply with the regulations on the prevention of industrial accidents and the relevant regulations of the insurance union.

Please wear safety clothes. (Especially protective helmets, work boots and gloves)

There must be at least 2 operators during installation to prevent accidents.

Please always prepare at least one installation work instruction when installing.

- When working at heights, please set up scaffolds and carry out construction after eliminating the danger of falling. Please use gloves and seat belts.
- In order to prevent accidents and failures, please do not arbitrarily change the product style.
- Please pay attention to the profile section and sharp parts, and avoid collision and injury during construction.
- Please pay attention to tightening the bolts, nuts, self-tapping screws, etc. of each part, and pay great attention to whether they are locked.
- When working on electrical wiring works, please pay attention not to touch the profile section, which may damage the wiring.
- Please do not use damaged, faulty, or deformed products in case injury or accident happens.

Requirement





- Please use the accessories designated by our company for construction parts, and do not arbitrarily transform and change the products.
- Please avoid hitting strongly on the profile as aluminum profile is easy to deform and scratch.
- This information is related to the installation of the system. Please consider the characteristics of the stand during the construction of the foundation, components, inverter, and electrical wiring.

II. Instruction

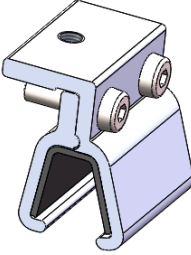
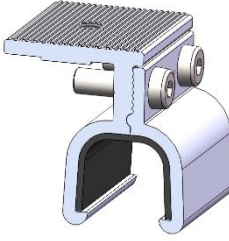
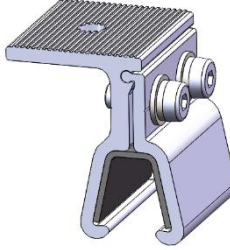
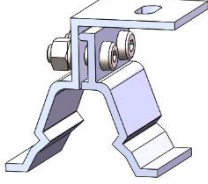
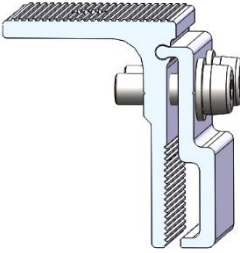
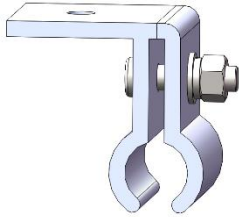
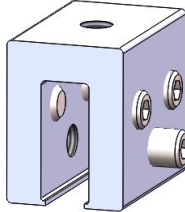
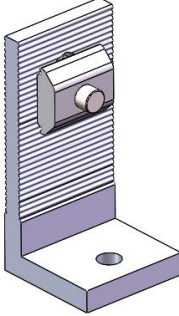
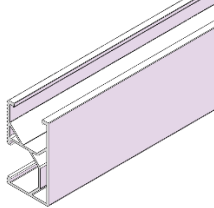
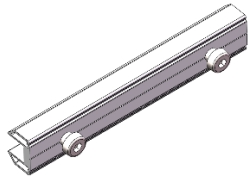
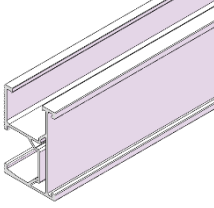
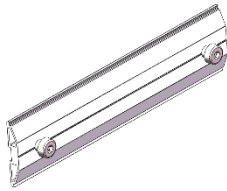
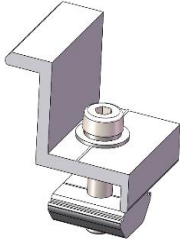
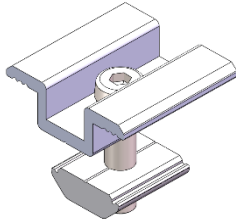
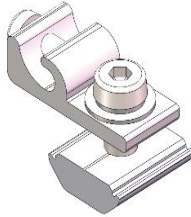
Antai metal mounting system is a mounting system applied to metal roof. The roof clamp will be designed according to different metal roof, which greatly improves the firmness of the connection between the system and the roof. Different type of clamp and rails can meet different demand in different countries and regions. Suitable mounting system design provided by Antaisolar improves the stability and saves installation time and cost.

Please read the installation manual carefully before installation!

III. Tools

			
<p>6mm Inner Hexagon Spanner</p>	<p>Electric Drill</p>	<p>Tape Measure</p>	<p>Thin Marker</p>
			
<p>Torque Spanner</p>	<p>String</p>	<p>Adjustable Wrench</p>	<p>Rope (M8)</p>

IV. Components

			
TYN19/26	GN-004/005	TYN-364/365	GN-043/044
			
GN-009/010	TYN85/86	TYN-60	L feet
			
Rail 1	Rail splice 1	Rail 2	Rail splice 2
			
End clamp	Mid clamp	Grounding lug	

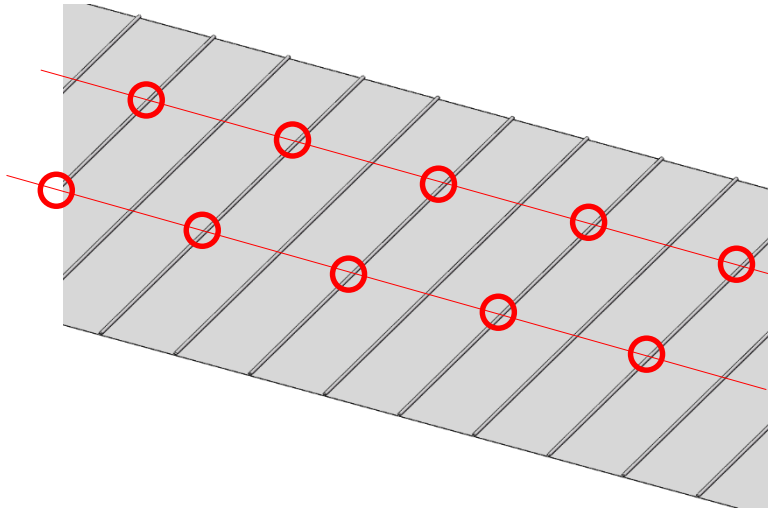
V. Installation introduction

5.1 Clamp Installation

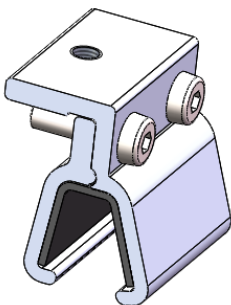
After pre-install clamp, mark the position of clamp according to drawing. Make sure all clamps are installed on the same horizontal line. Install the clamps accordingly and fasten by bolt.

Shown as bellow:

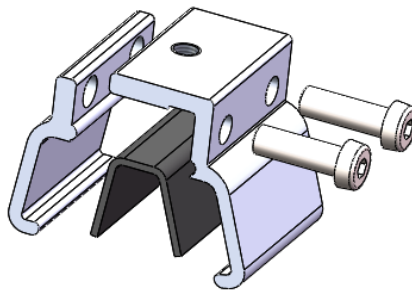
5.1.1 Mark the location of clamp on metal roof. And have them at the same the same horizontal line.



Installation of clamp: (Bolt torque value: 8~10N*M)

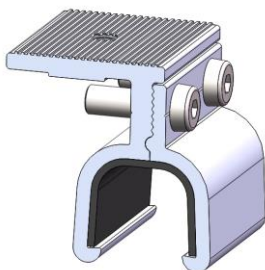


TYN19/26

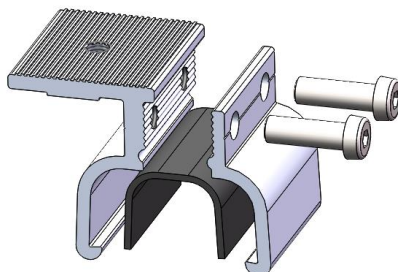


M8×25 Hexagon socket bolt

Rubber gasket

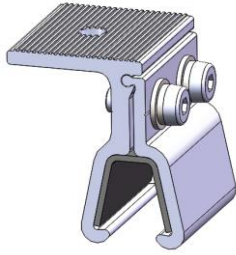


GN-004/005

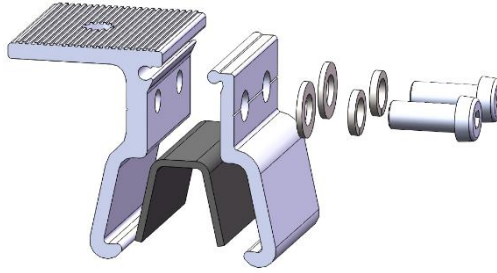


M8×25 Hexagon socket bolt

Rubber gasket



TYN-364/365

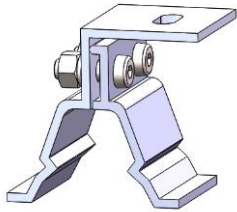


M8×20 Hexagon socket bolt

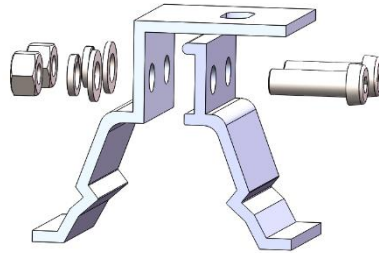
M8 Spring washer

M8 Flat washer

Rubber gasket



GN-043/044

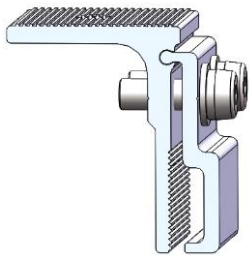


M8×25 Hexagon socket bolt

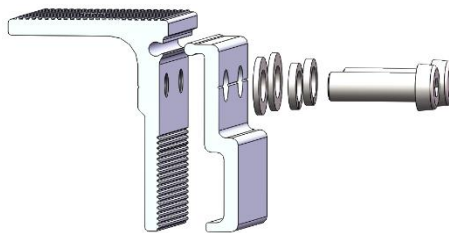
M8 Flat washer

M8 Spring washer

M8 Nut



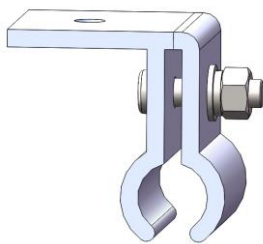
GN-009/010



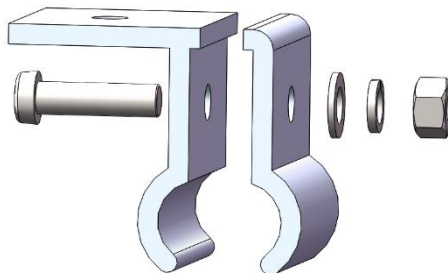
M8×25 Hexagon socket bolt

M8 Spring washer

M8 Flat washer



TYN85/86

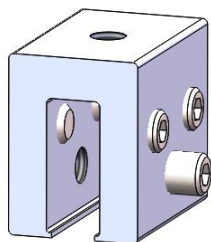


M8×25 Hexagon socket bolt

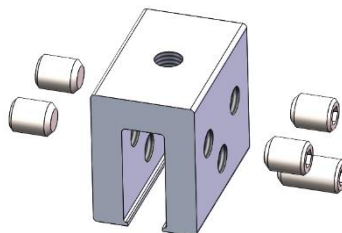
M8 Flat washer

M8 Spring washer

M8 Nut



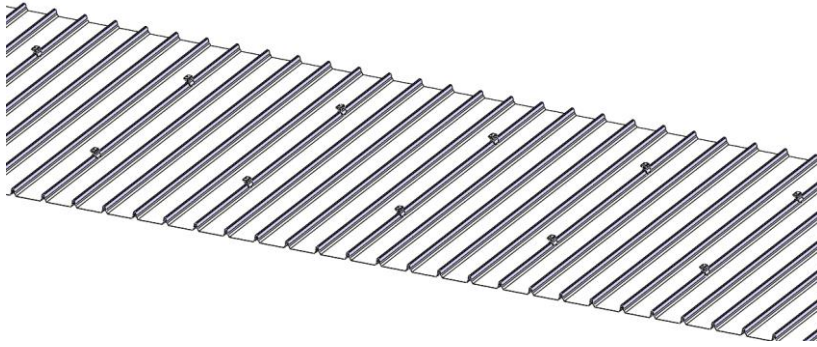
TYN-60



M8×10 Hexagon socket bolt

M8×15 Hexagon socket bolt

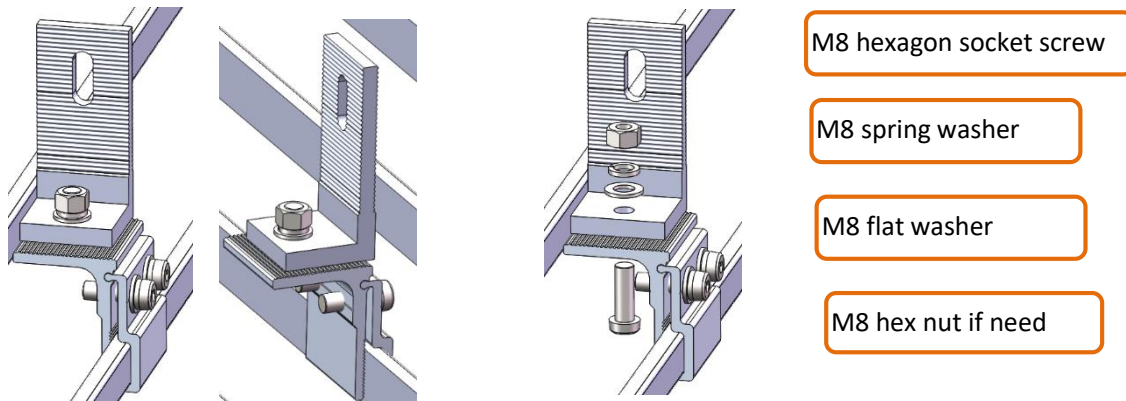
5.1.2 Install the fixture until The clamps are installed, as shown below:



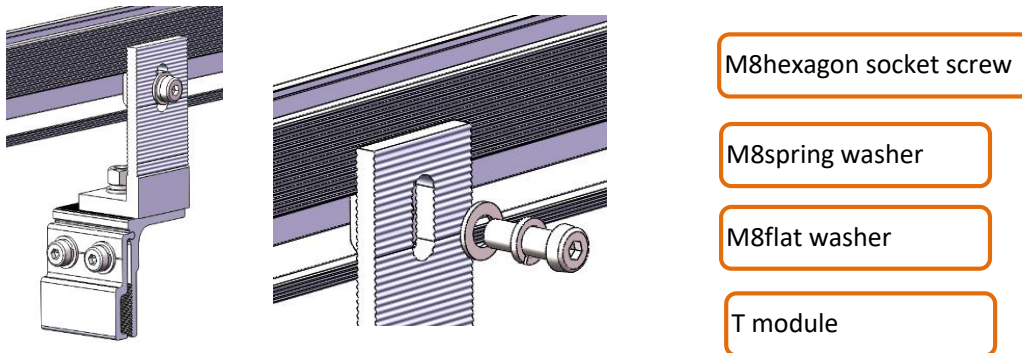
5.2 Rail Installation

Fix the L foot to the clamp first, then adjust the length and height of the guide rail and fix it to the L feet, and finally tighten the bolts.

5.2.1 Place the L feet on the clamp, pay attention to the direction of the L feet, and fix the L feet and clamp together by tighten the bolts.



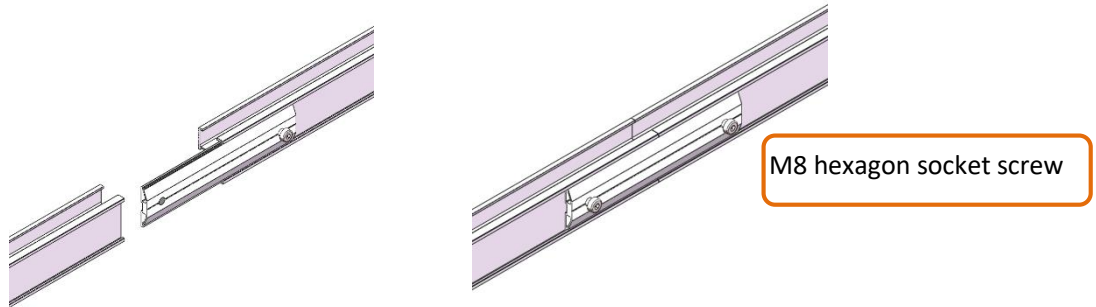
5.2.2 After fixing the L feet on the clamp, adjust the height of rail, slide the guide into the T module, and lock the bolt after adjusting location. The length of guide shall be selected according to the corresponding drawing.



5.3 Rail Splice Installation

Rails should be connected by rail splice if needed, as shown below:

5.3.1 Slide half of the rail splice into the first rail, adjust the fixed position, and lock the bolts. Slide the second rail into this guide rail splice. After adjust the location of rail splice, lock the bolt.



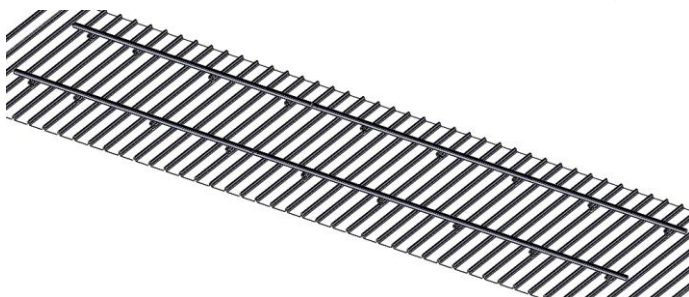
Used by TYN53、CG019、TYN28 rails etc. (External lock connection)



Used by CG010、TYN305、TYN355 rails etc. (Internal lock connection)

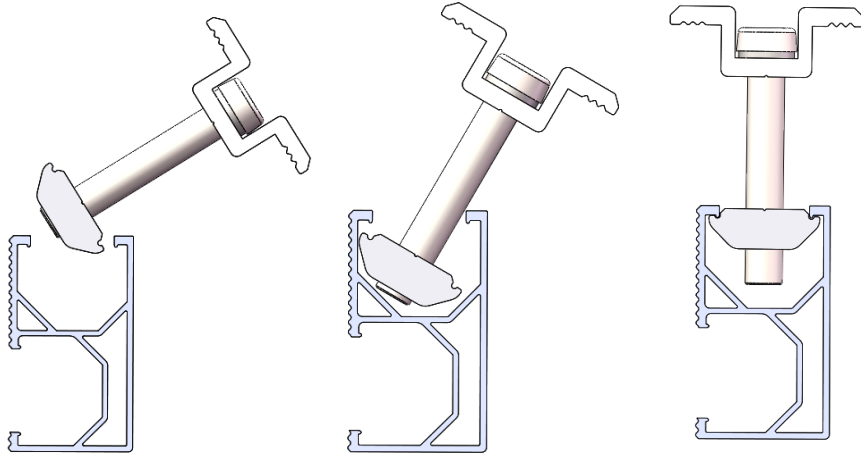


5.3.2 After installation, as shown on the right.

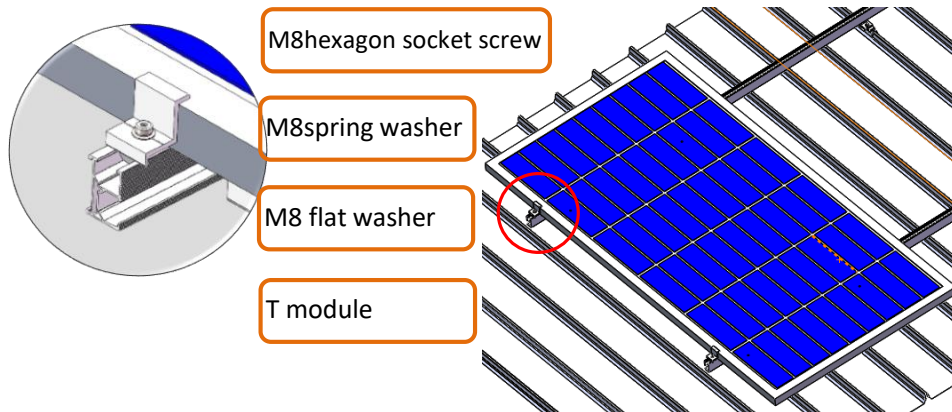


5.4 Components Installation

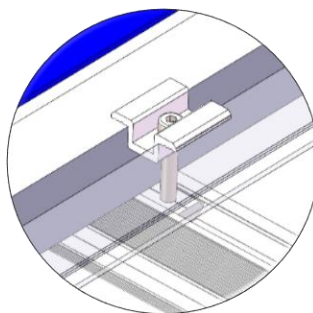
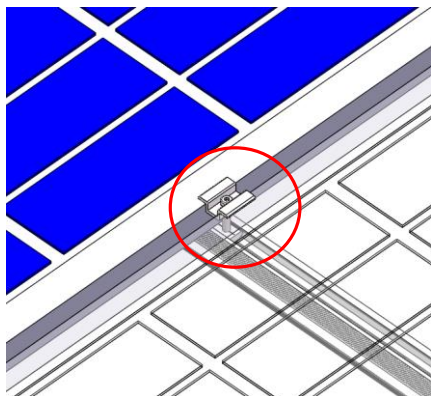
According to the installation dimensions of the drawings, place the components on the guide rails, and fix them with the end clamps and mid clamps.



5.4.1 Place PV module on the rail and adjust position according to the drawing. Fix the end clamp with PV module by tightening the bolts.



5.4.2 After first PV module installation, place the second PV module on the rail. Adjust the position and fix the first and the second module by mid clamp.

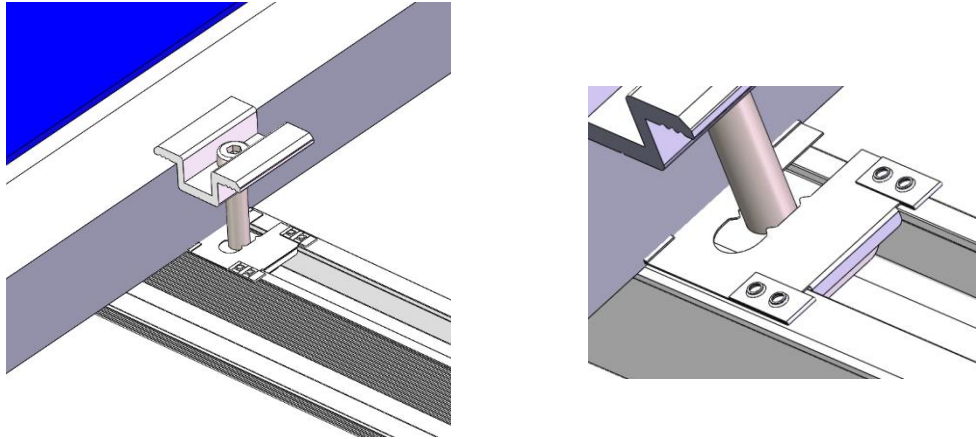


M8 spring washer

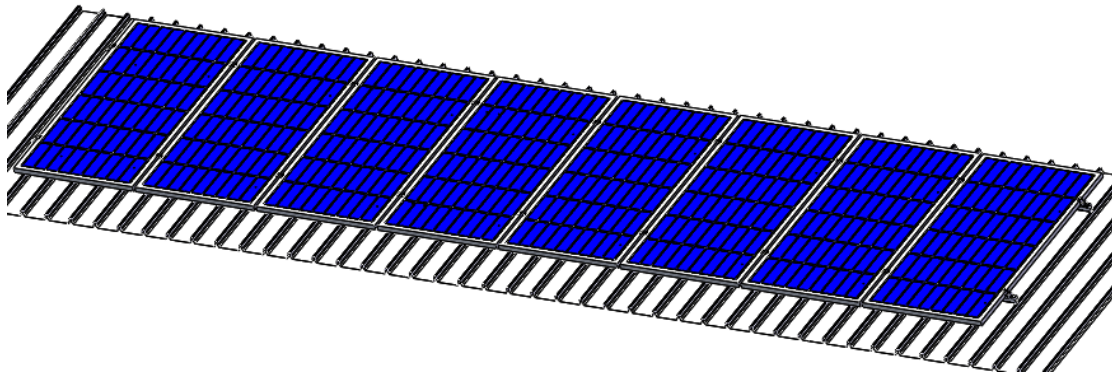
T module

M8 hexagon socket screw

5.4.3 If there is an earthing clip, place it in the middle of the module and the rail when install mid clamp. Adjust the position and lock the bolt.



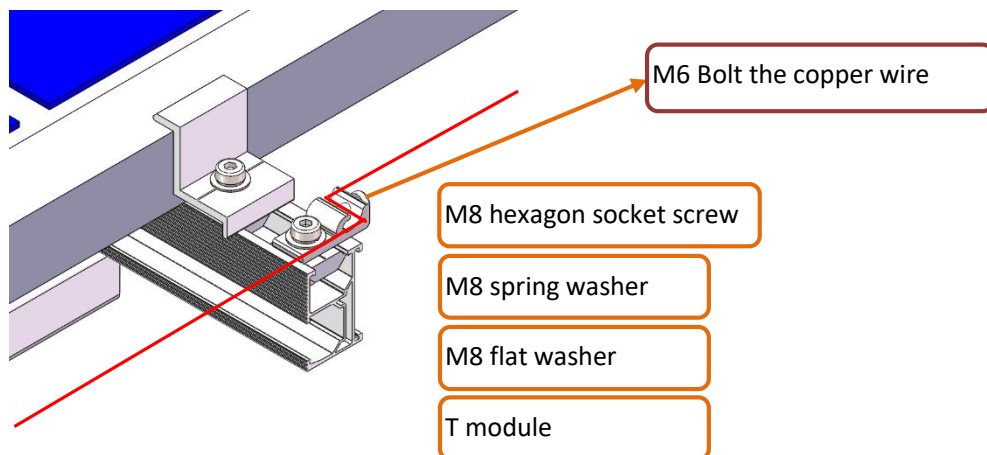
5.4.4 Install all PV modules following the above steps.



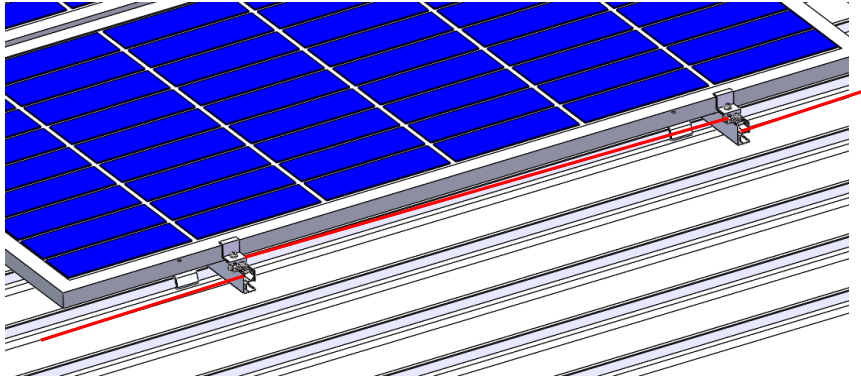
5.5 Grounding Lug Installation

(If no grounding lug is required, can also skip this step.)

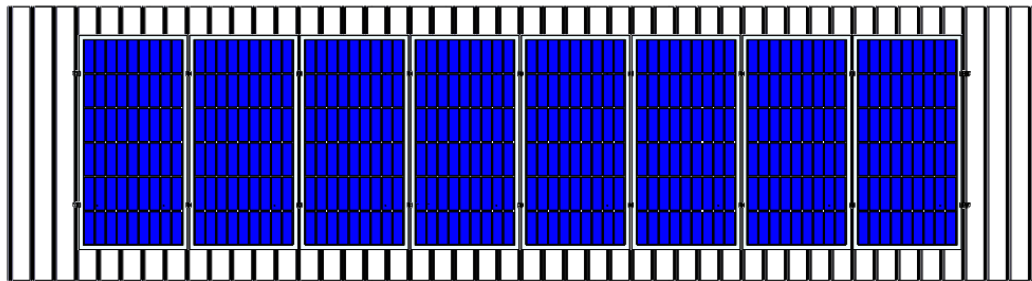
5.5.1 Put the grounding lug on the edge slot of the rail as shown below, and fix it with bolts.



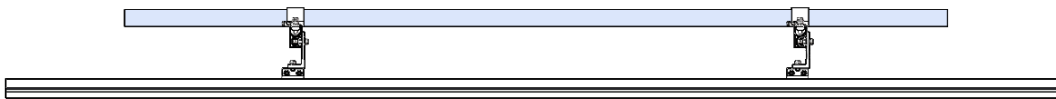
5.5.2 Connect each grounding lug at the edge with copper wires, fix the copper wires with M6 bolts, and ground the copper wires at the end.



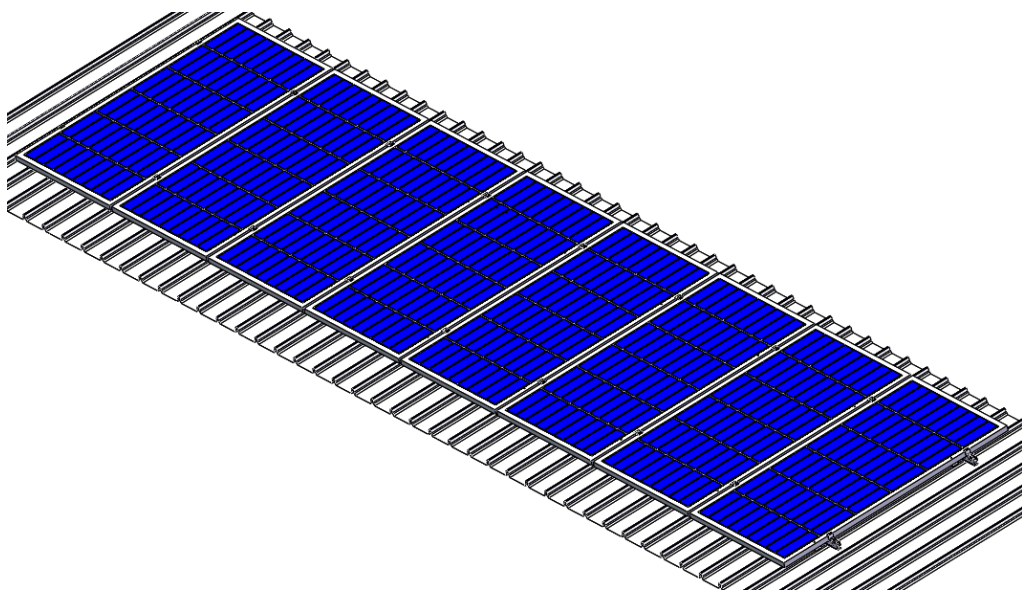
5.6 View of the Installation



Top view



Side view



Axonometric view

VI. Notice

1. Installation dimension

The specific dimensions of engineering installation shall be subject to the engineering construction drawings. This installation instruction is only for the instruction of product installation method.

2. Attention for stainless steel fasteners installation

Because of the good ductility for stainless steel, the fasteners have big difference with carbon steel one in nature. If use in improper way, it will result in bolt and nut being "locked" which commonly known as "seizure". Prevention of lock basically has the following the basic prevention ways from locked.

2.1 Reducing the friction coefficient:

- (1) Ensure that the screw thread surface is clean (no contrast, clutter);
- (2) Recommend that installation surface use water wax or add lubricant on surface during installation. (Such as butter, 40 # engine oil);

2.2 The correct method of operation:

- A. Must be perpendicular to the axis of the screw thread when screwing, can never be tilt.
- B. In the process of tightening, the strength needs to be balanced, tightening torque shall not exceed the prescribed safety torque value;
- C. Choose torque wrench or socket wrench as far as possible, avoid using adjustable wrench or electric wrench.
- D. Do not use it when the temperature is high; do not use it with high speed spin; avoid to be locked by rapid rise of temperature. (Such as electric wrench, etc.

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Changtai County, Zhangzhou, China

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