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I. Safety Precautions

Thank you for purchasing our 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








TYN-326-OP3 / OP4 **Clamp systems** are specifically designed for the LATAM market, tailored for standing seam metal roofs. Its design is based on extensive market feedback, featuring:

- Non-perforating technology
- Universal compatibility for the region
- Only requires M8 bolts, minimizing the need for tools and simplifying installation

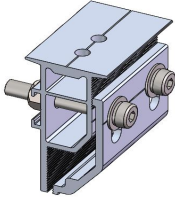
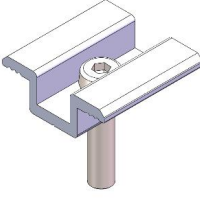
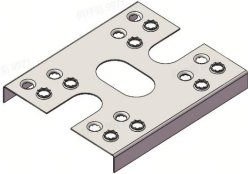

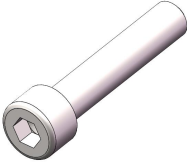
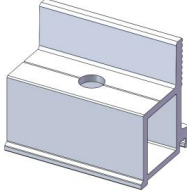
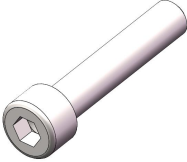
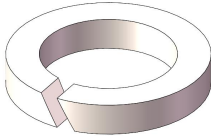
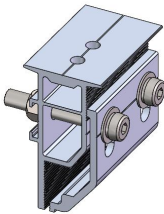
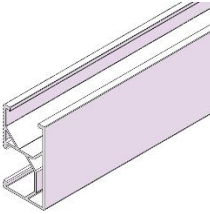
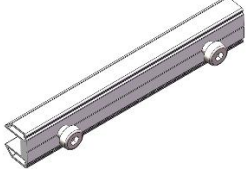

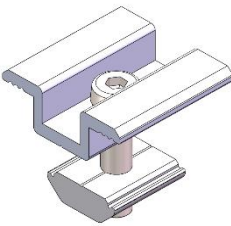


This manual includes both rail-less and rail installation plans for your reference.

Important: Please read the installation manual thoroughly before beginning installation!

III. Tools

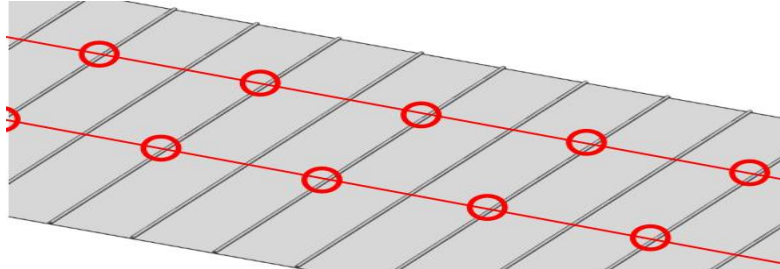
			
6mm Inner Hexagon Spanner	Electric Drill	Tape Measure	Thin Marker
			
Torque Spanner	String	Adjustable Wrench	Rope (M8)

IV. Components

Rail-less Solution(Plan A-Rail less)			
			
TYN-326-OP3	End clamp	Mid clamp	Grounding clip
With Rail Solution(Plan B-with rail)			
With L foot to connect the rail (Optional)			
	Rail	M8*25/30	
Default Setting (Rail clamp)			
	TYN-326-OP4 (Upper)	M8*40	
			
Spring washer (Optional)	TYN-326-OP4 (Lower)	Rail	Rail splice
			
End clamp	Mid clamp	Grounding clip	Grounding lug

v. Installation

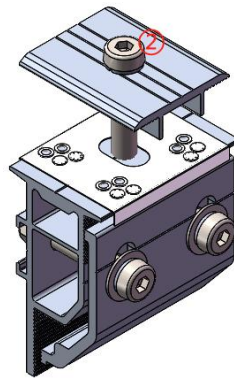
Mark the location of clamp on metal roof according drawing. And have them at the same horizontal line.



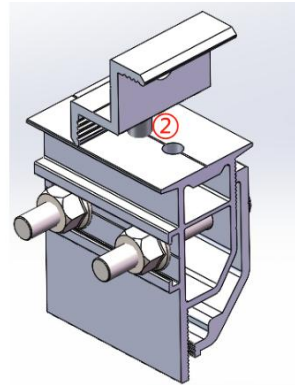
5.1 Prepare clamp sets according to respective plans.

5.1.1 Rail less plan

Pre-assemble the sets as shown below. Keep the bolts ② loose to enable quick adjustment and secure fastening during installation.



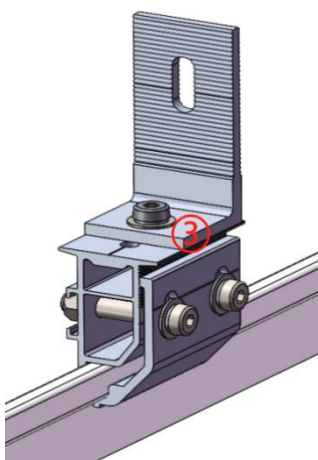
KR clamp+grounding clip+mid clamp



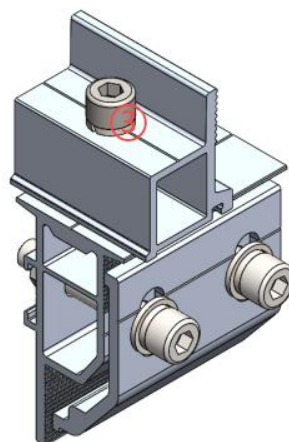
KR clamp+end clamp

5.1.2 Rail plan

Pre-assemble the L-foot/rail clamp to the main clamp with a bolt (loosely tightened). Position the assembly on the metal deck ribs.



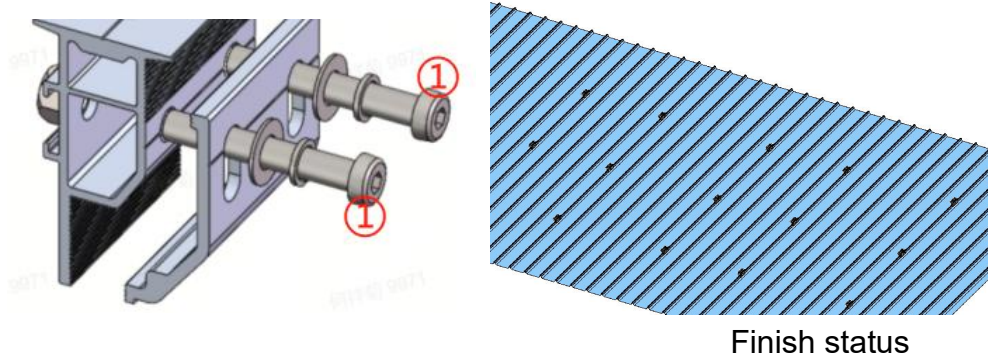
KR clamp with Lfoot



KR clamp with rail clamp

5.2 KR Clamp Installation

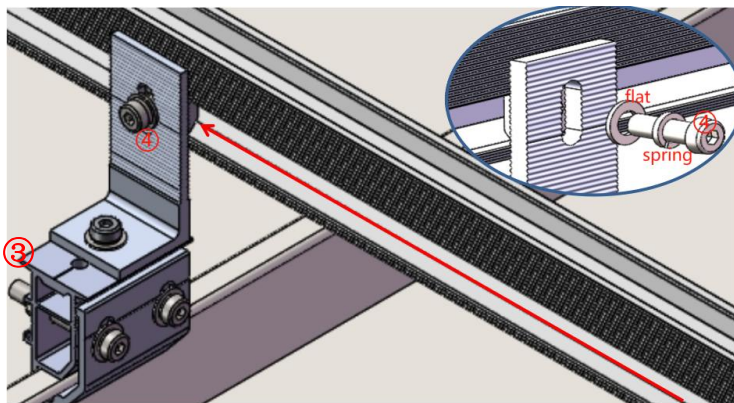
Loosen the KR clamp, position it on the metal deck and secure with two bolts ① while maintaining its pre-assembled condition. After located, tighten to 8-9 N • m torque.



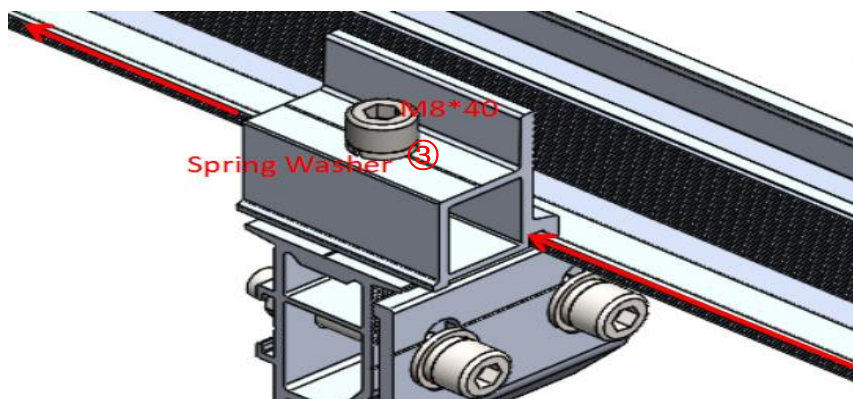
5.3 Rail Installation(with rail plan)

- Prepare rails (measure length/quantity) and splices
- Level rails to specified alignment
- Secure T-nuts for module stability

5.3.1 Slide the rails into the L-foot's T-nuts or clip them using rail clamps (as shown). Loosely secure to permit leveling adjustments prior to module installation. When fixture, tighten bolt ③ with a torque of 10-12 N • m, tighten bolt ④ with a torque of 8-10 N • m.



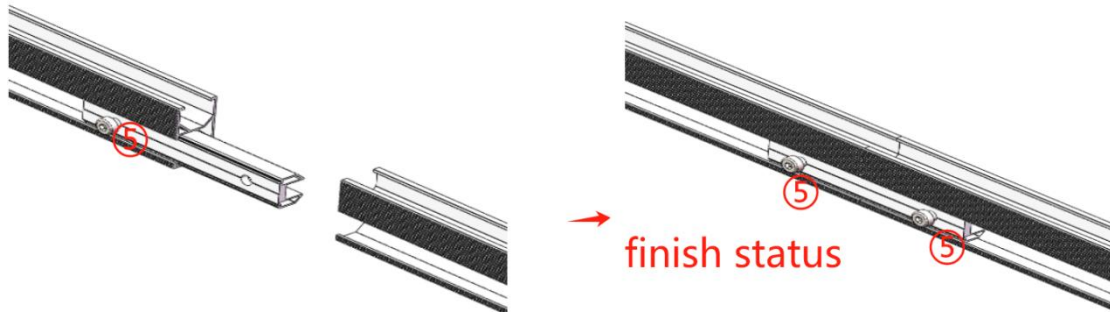
with L foot fixture



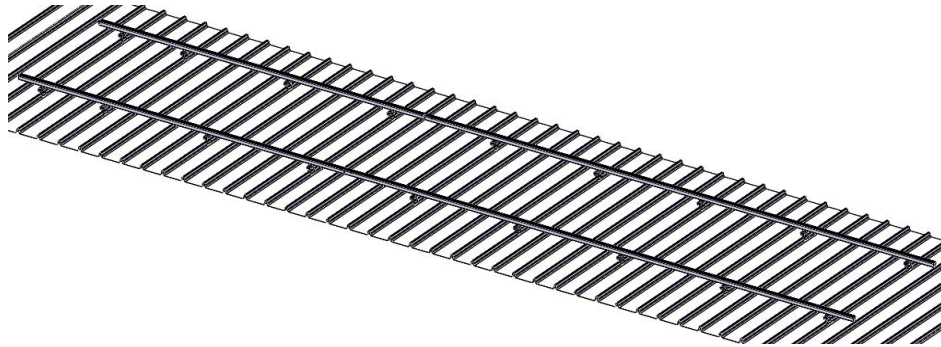
with rail clamp fixture

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

Slide half of the rail splice into the first rail and pre-lock the bolt to allow for adjustments later. Then, slide the second rail through the splice. After adjusting the splice position so that it evenly connects both rails, fully tighten the two bolts ⑤ to a torque of 6-8 N.m.



5.3.3 Complete the rail installation as shown below:

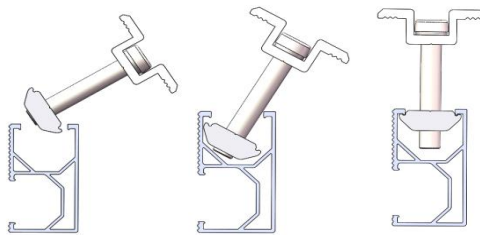


5.4 Module Installation

5.4.1 Positioning and adjustment:

Determine the optimal position for the module on the rails or KR clamps following modules supplier's instruction, align and adjust it to ensure it is level, and then position it in place.

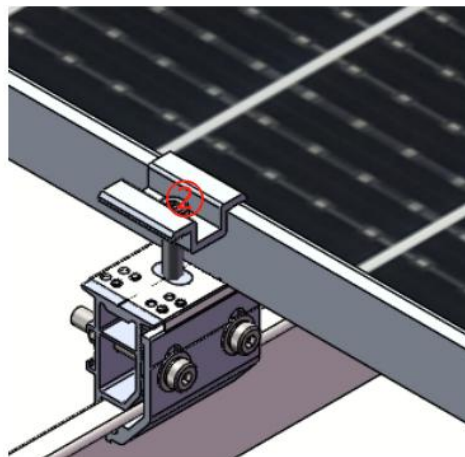
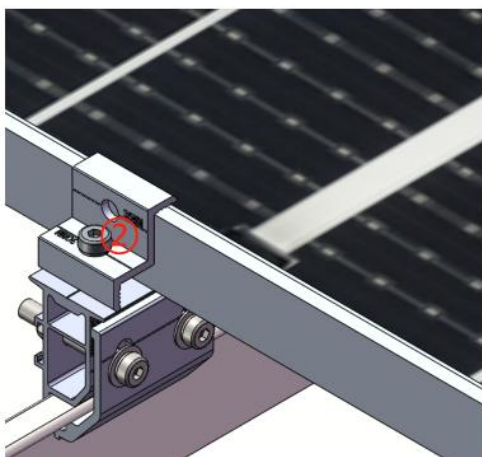
5.4.2 T-nut installation tips:



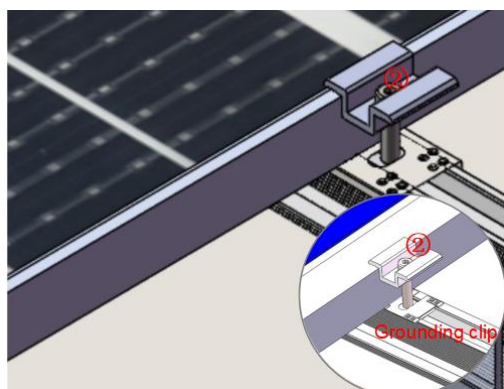
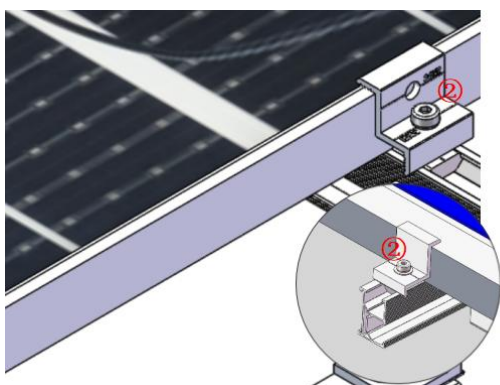
5.4.3 Module fixture with mid and end clamp:

The first module's side will fixed with end clamp, and between modules with mid clamp as below note.

Please ensure the grounding clips placed between module frames/clamp and rails.



Rail less fixture note

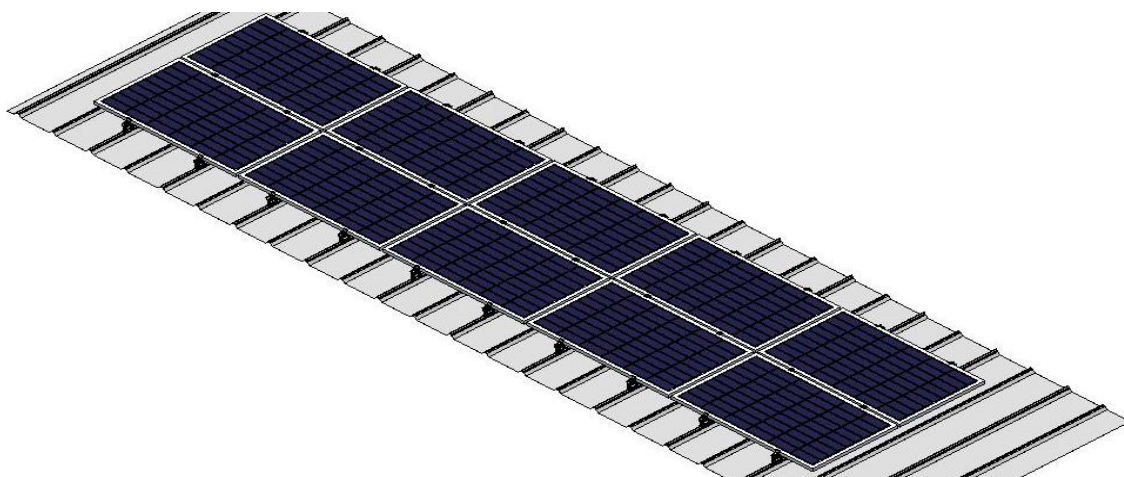


With rail fixture note

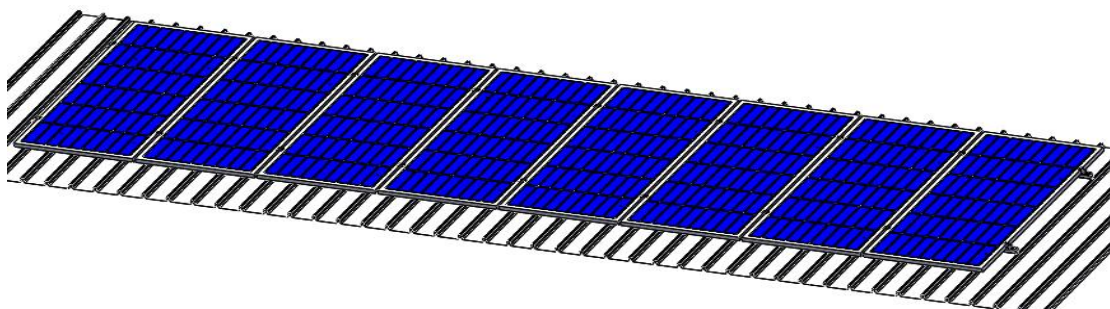
5.4.4 Fixture

Fix the end and mid clamp with PV module by tightening the bolts ② with 8-10 N • m.

5.4.5 Finish status



Rail less

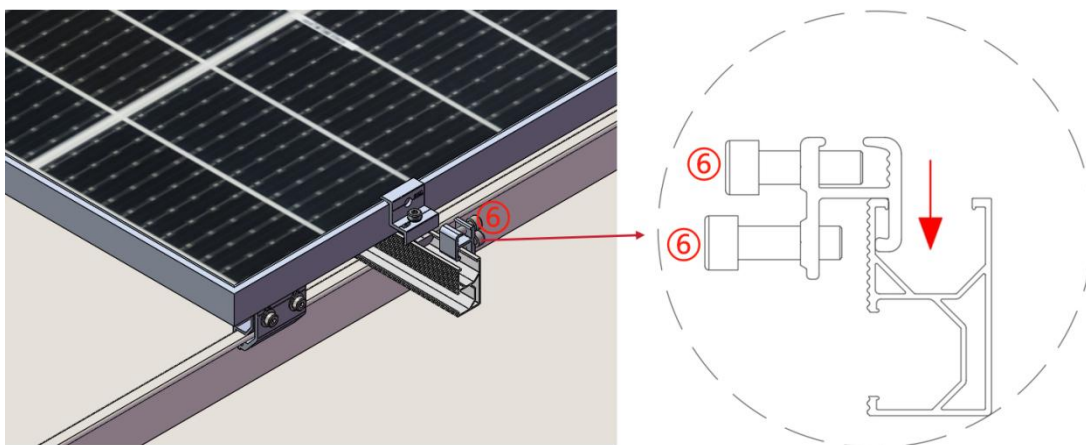


With rail

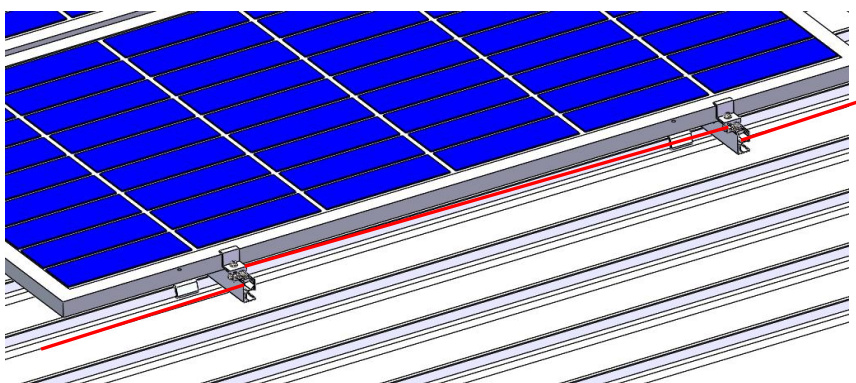
5.5 Grounding Lug Installation (rail plan only)

(If no grounding lug is required, or for rail-less plan, please skip this step.)

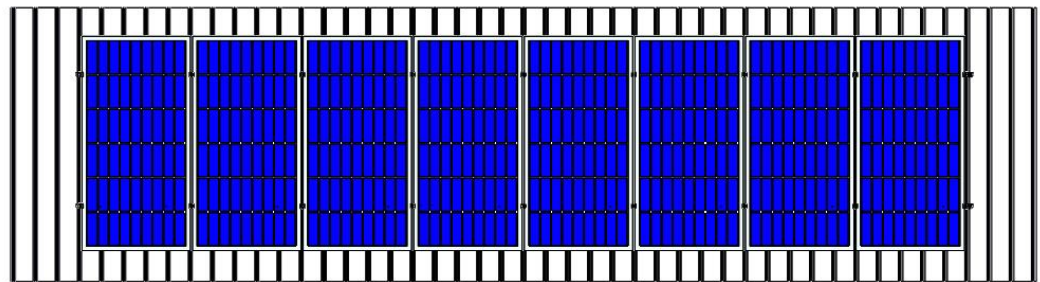
5.5.1 Put the grounding lug on the edge slot of the rail as shown below, and fix it with bolts⑥ with 4~6 N • m.



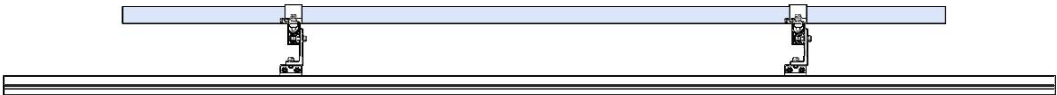
5.5.2 Connect each grounding lug at the edge with copper wires, fix the copper wires with M6 bolts, and ground the copper wires at the end.



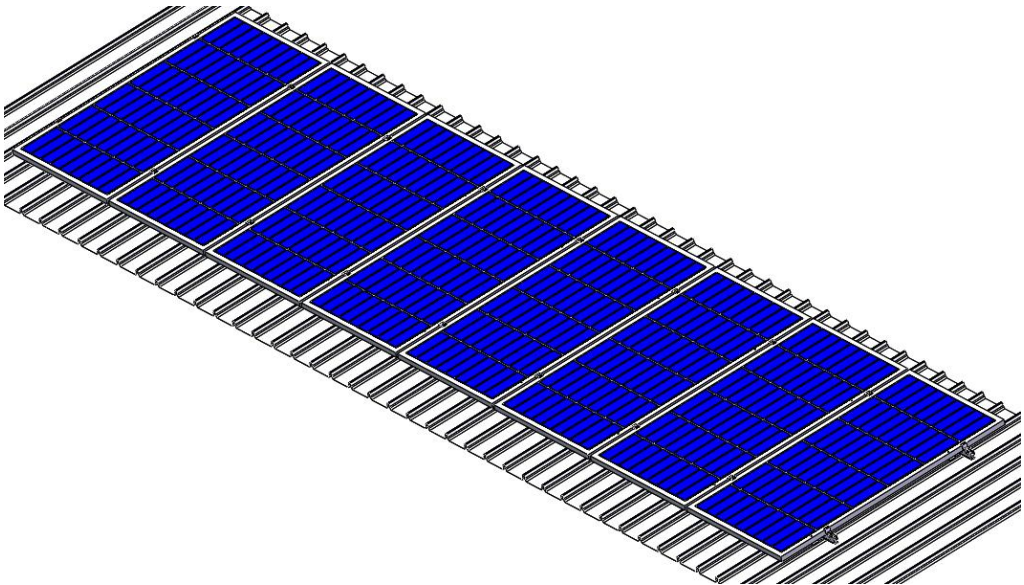
5.6 View of the Installation



Top view



Side view



Overhead view

VI. Notice

6.1 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.

6.2 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.