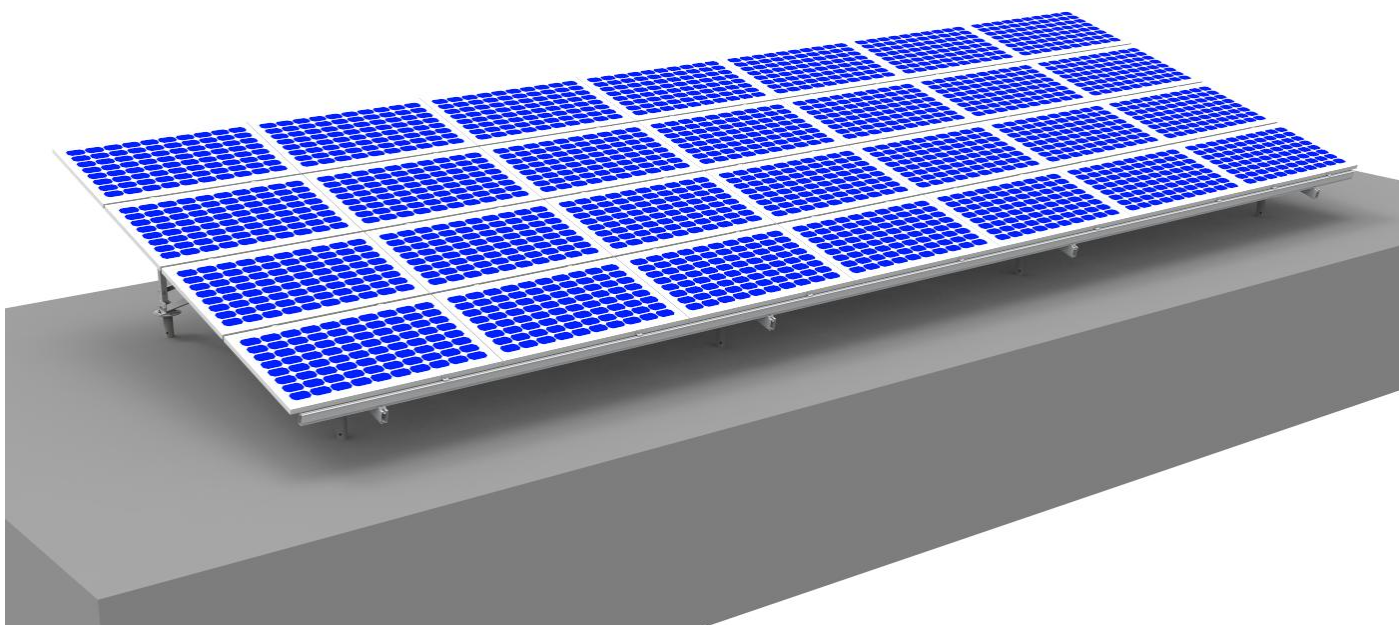
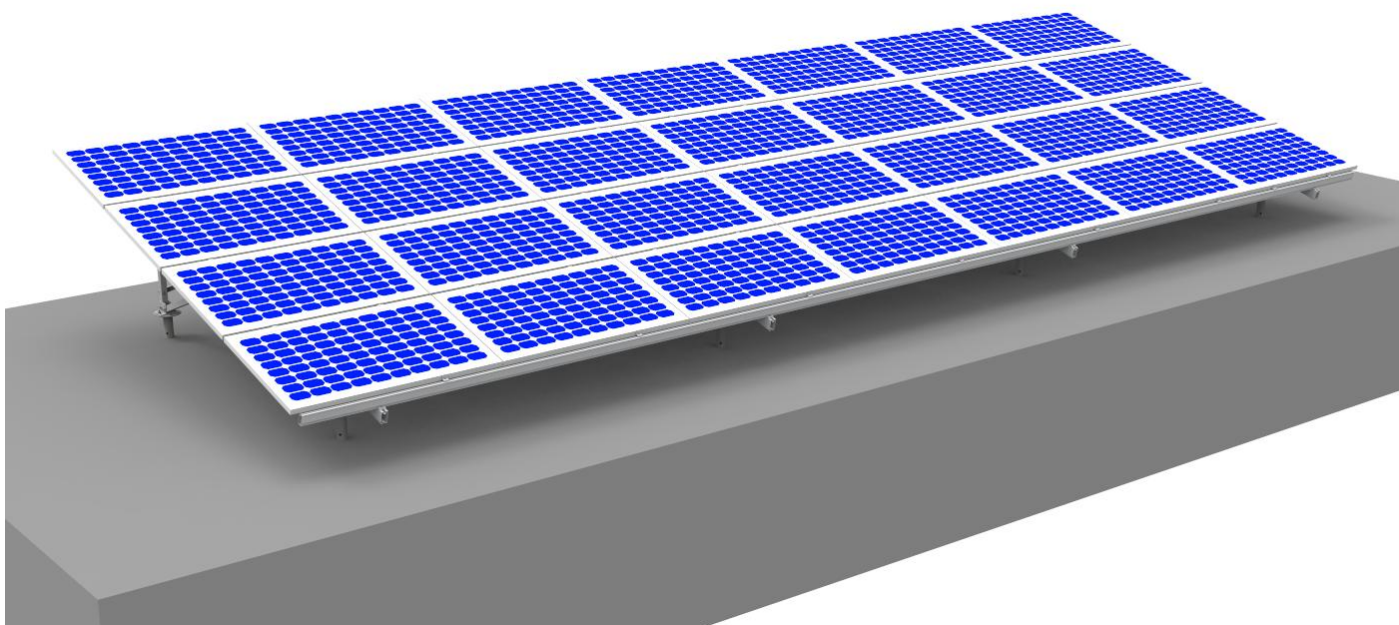


Aluminum ground mounting 4*7 installation manual

(Ground pile foundation)



The leonsolar aluminum ground mounting is all made of aluminum and uses stainless steel bolts. Beautiful appearance, strong structure, service life can reach more than 25 years, can cope with kilowatt to megawatt level of solar power station project needs. Most of the parts of the product are shipped after pre-assembly in the factory, and the pre-assembly part reaches 90%. The on-site installation is simple and convenient, saving the on-site installation time and labor cost. Before installing this system, please read the following installation manual carefully. Be sure to follow the local

The installation instructions apply to solar panels size 1640*992*40mm, arranged in 4 row and 7 columns. The panels should be installed landscape at an angle of 15 degrees, withstanding wind speeds of over 45m/s and snow depths exceeding 50mm.

1. Introduction

- a) Thank you for purchasing the Leon solar aluminum ground mounting system.
- b) In addition to the standard mounting system, the company can also be customized according to the requirements of customers to provide long-term reliable use of solar photovoltaic brackets.
- c) This manual records the important information and safety information required before the installation of the product. Before installing and using this product, please read this installation manual carefully.
- d) This manual does not guarantee the product. We are not responsible for any loss, damage or expense incurred during installation or maintenance.
- e) Please understand in advance that the contents of this manual are subject to change without prior notice.

2. Applicable products

- a) This manual describes the installation method and precautions of LS solar photovoltaic system ground support manufactured and sold by LS. This manual applies to the following products.
- b) Product name: LS Solar photovoltaic system ground support

3. Safety warnings/precautions

3-1 Warnings:

- a) Please read and understand this manual carefully before installing and maintaining the product.
- b) Wear safety equipment during construction
- c) Installation workers should receive installation training in advance.
- d) Pay attention to the surrounding environment during installation and transportation to prevent accidents.

- e) If the solar power generation system is in operation or exposed to sunlight, there is a direct current (DC) flow in the panel, which is dangerous.

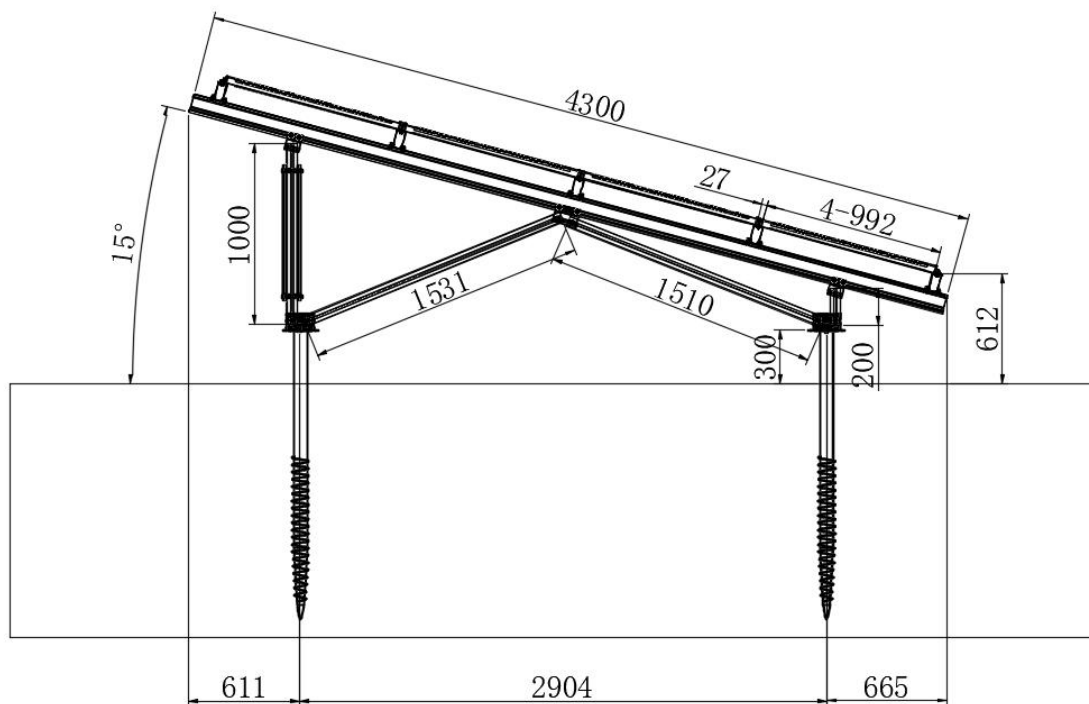
3-2 Attention::

- f) Trained personnel shall be present during construction.
- g) All installation work shall comply with the regulations of the local government
- h) This product can only be used in intended cases.
- i) The allowable tolerance range of the mounting Angle of the pedestal is $\pm 2^{\circ}$.
- j) The allowable tolerance of the machining size of the bracket shall be carried out in accordance with the tolerance standard of China
- k) The allowable tolerance for the installation of the bracket is $\pm 5\text{mm}$.
- l) Construction workers are requested to make adjustments only within the permitted range according to the site conditions. It is prohibited to install in a rough and violent manner.

*** If you have any questions about the installation, please contact us.**

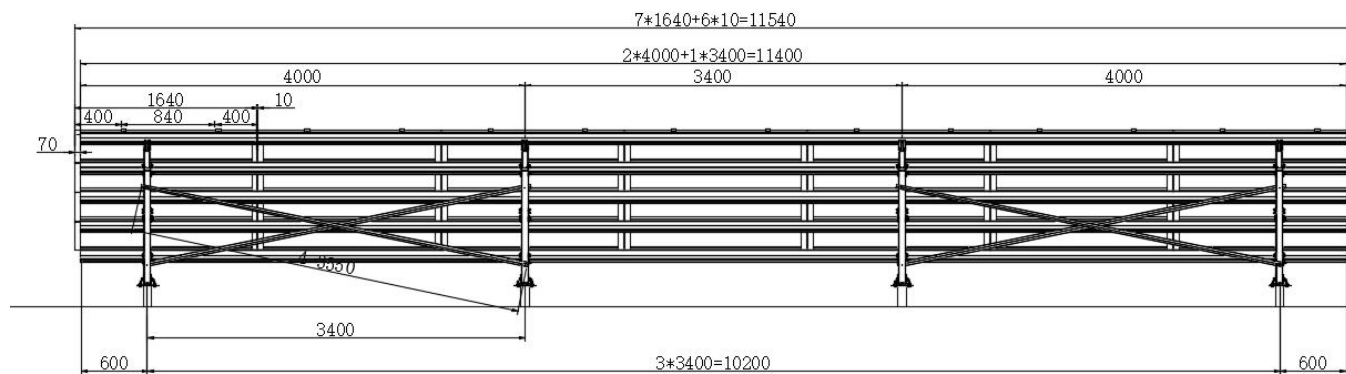
Option Array size diagram

Before installation, remember the dimensions indicated on the installation drawings



below.

Side view



Rear view

Installation tool

Hex key 6mm



Wrench
(Outer hexagon bolt
M8~M12)



Torque wrench
(external hex bolt
M8~M12)



Tape measure(5-7.5m)



1~2Horizontal meter stick



Suitable for M8~M12 bolt
sleeves



Rope



Wooden hammer



Electric wrench



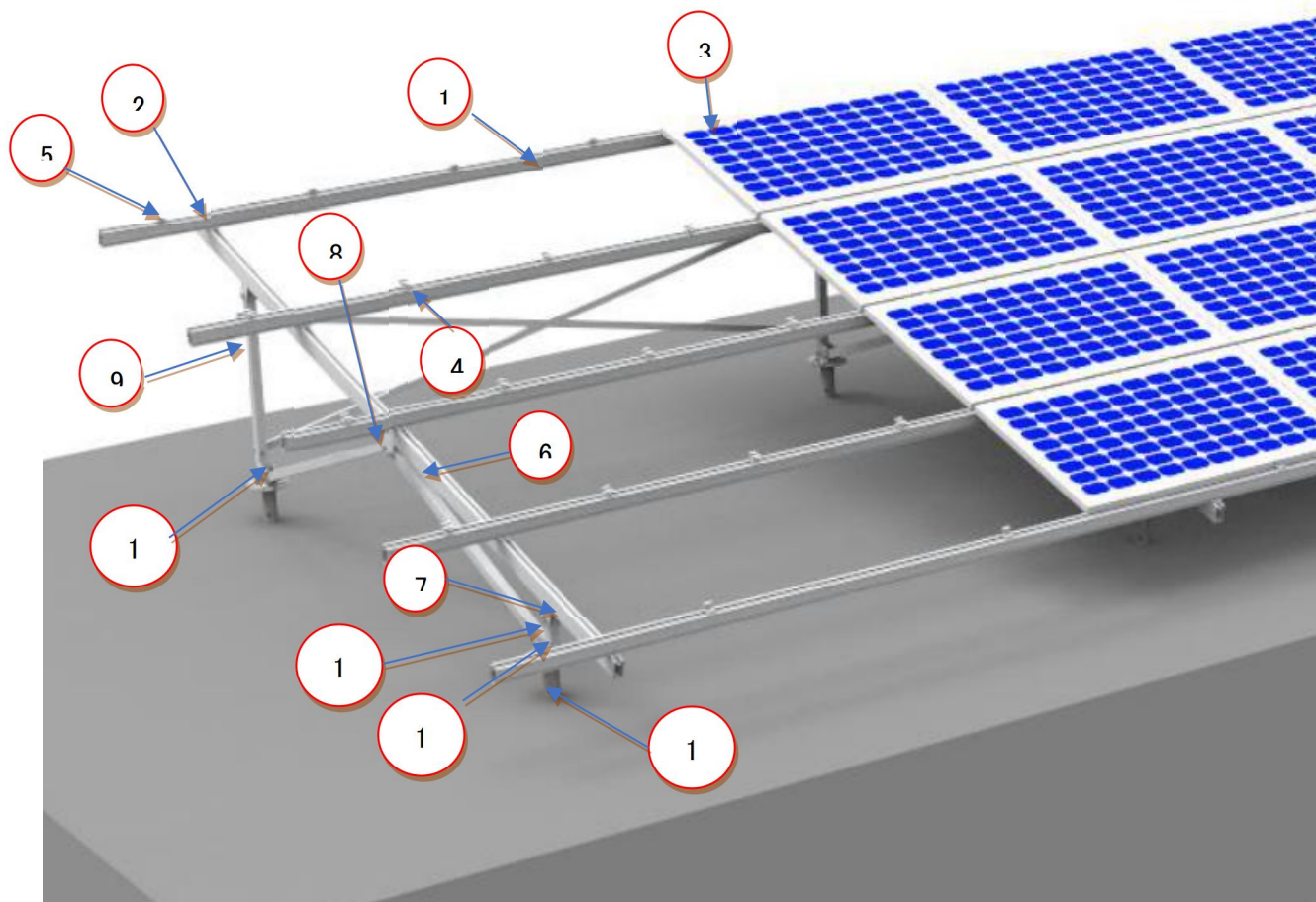
Electric wrench head (for hex
boltsM8-M12)

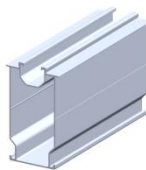

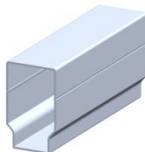


Drill for electric screwdriver (5
mm)



Support appearance



No.	Item Number	Item name	Photos
1	LS-KAR-57*105	KAR Rail	
2	LS-KAR-C50	Rail clamp	
3	LS-KAR-SP	KBR connector	

4	LS-KIC-F35	Minddle clamo	
5	LS-KEC-F35	End clamp	
6	LS-GM02B-4300	Beam	
7	LS-GM02-H-80	GM02 beam connector-80	
8	LS-GM02-H-120	GM02 beam connector-120	
9	LS-T50-1000	Pile-1000	
10	LS-T50-200	Pile-200	
11	LS-GM02-B150-01	Front base-150	
12	LS-GM02-B150-01	Rear base-150	
13	LS-F76A-1600-T3	Ground Screw	

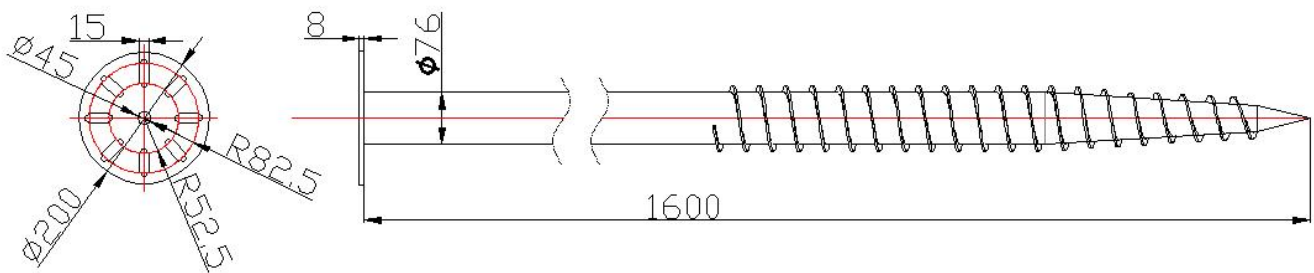
Installation sequence

Attention

During the assembly process, people may be injured due to burrs in the assembly parts. Please take protective measures and install with care.

Step1: Driven pile

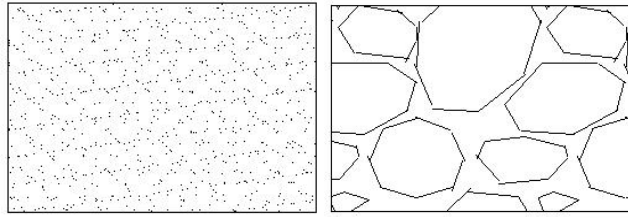
This project is based on the ground pile. To ensure the integrity of the support, please test the soil before installation.



The style: $\phi 76 \times 1600 \times 3\text{mm}$, Surface treatment is hot dip galvanized
(The length of the pile is selected according to the ground survey)

- ① Drive the pile into the ground with the following special instruments. Please consult your local construction company for specific usage methods



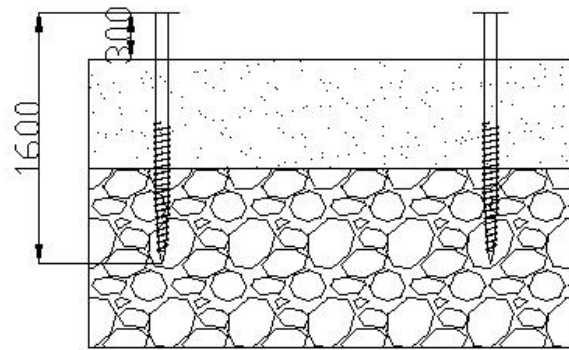
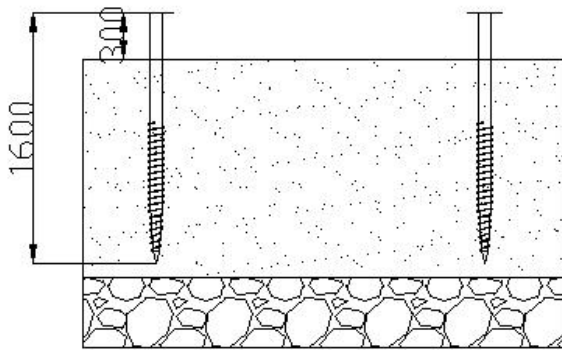


For sandy soil,
drive the pile directly into the ground.

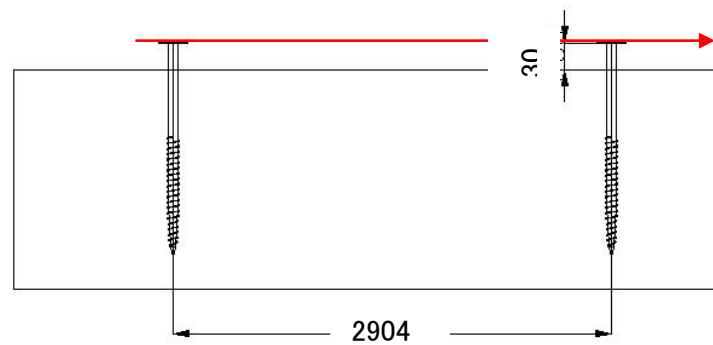
For rocky soil, pre-drilling is required
before driving the pile into the ground

Case1

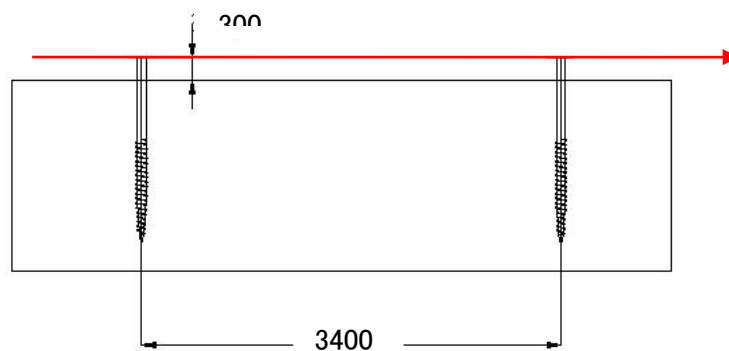
Case2



- ② According to the span value of north-south direction and east-west direction on the design drawing, the screw ground pile is driven into the ground. The flange surface of the screw pile should be kept at the same level.

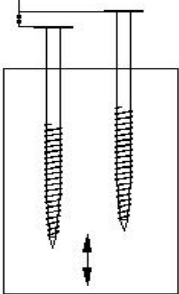




North-south span



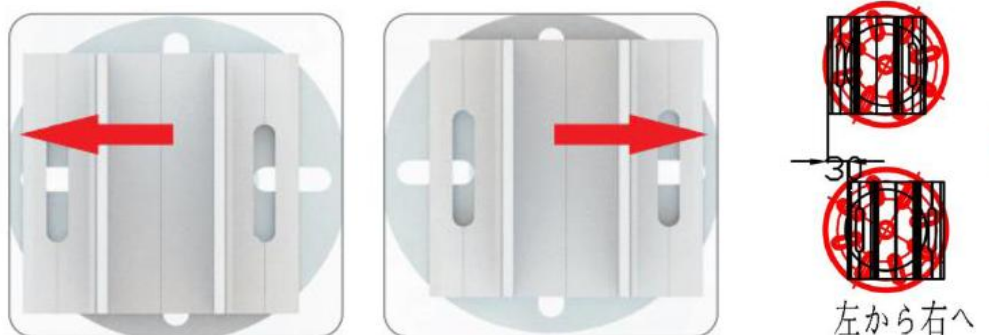
East-west span

Tolerance map of ground pile during construction

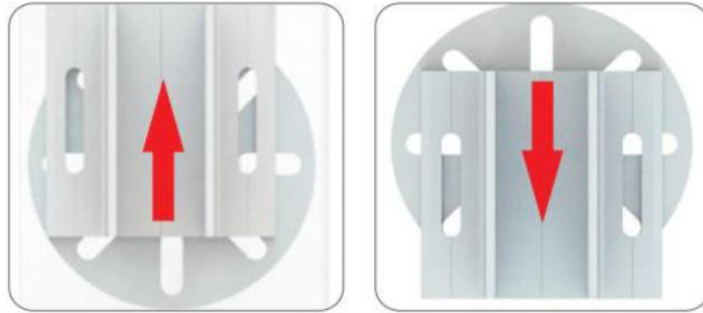
高さ	東西方向	南北方向
$+10\text{mm}$ 	$\pm 2\text{deg}$ 	$\pm 1\text{deg}$ 

- ① Allowable height error of pile after driving: $\pm 10\text{mm}$: $\pm 10\text{mm}$
- ② Allowable Angle error of pile after driving: East-west $\pm 2^\circ$ 、South-north ± 1
- ③ Allowable error of ground pile in east-west direction after driving: $\pm 15\text{mm}$
- ④ Allowable error of ground pile in north-south direction after driving: $\pm 30\text{mm}$

Flange and base of pile can be adjusted



Adjustable by 30mm in the East-west direction



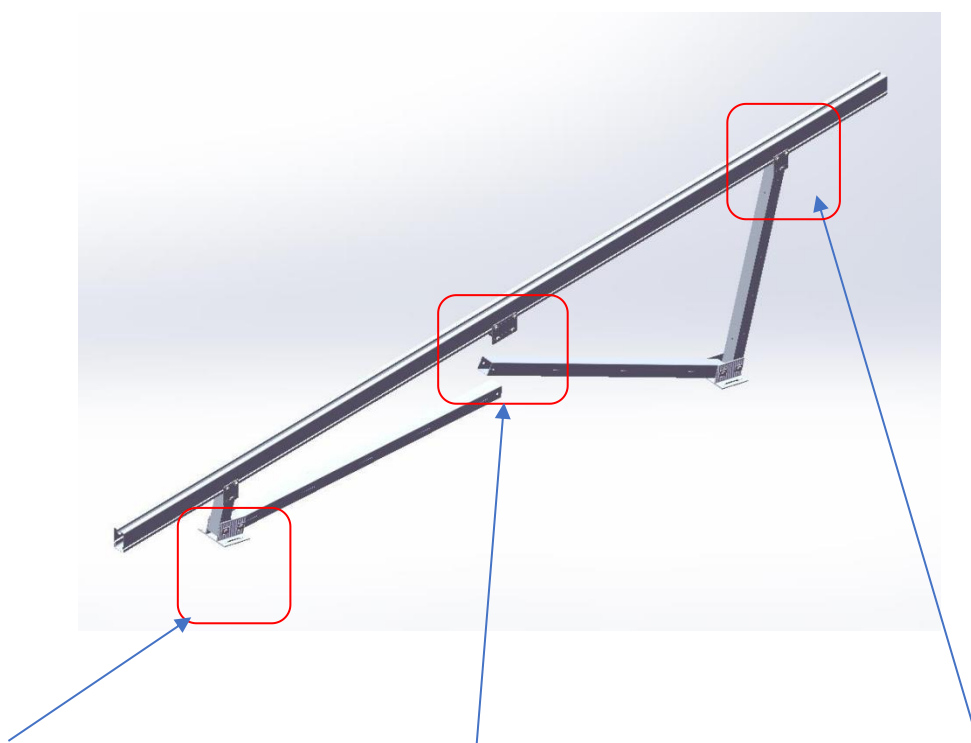
Adjustable by 60mm in the north-south direction

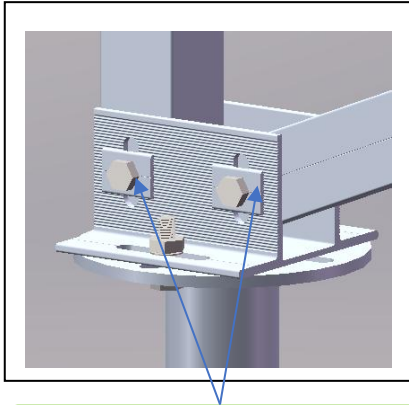
Step2: Beam installation

- ① Before the product leaves the factory, the longitudinal beam, jacket, square pipe and base will be pre-assembled to reduce the construction difficulty and labor cost

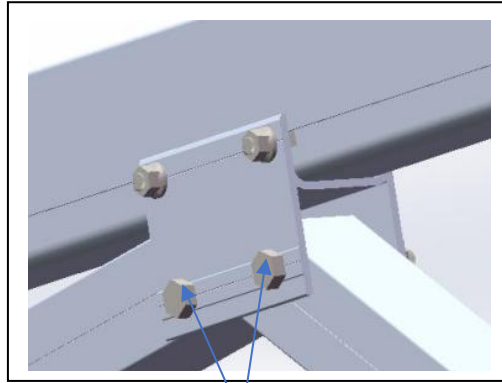


- ② Open the pre-assembled support and lock the bolts according to the picture below.

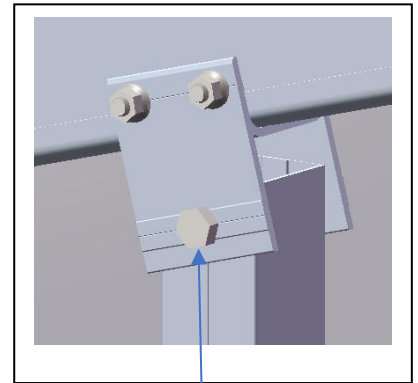




Stainless steel M10*90 bolts



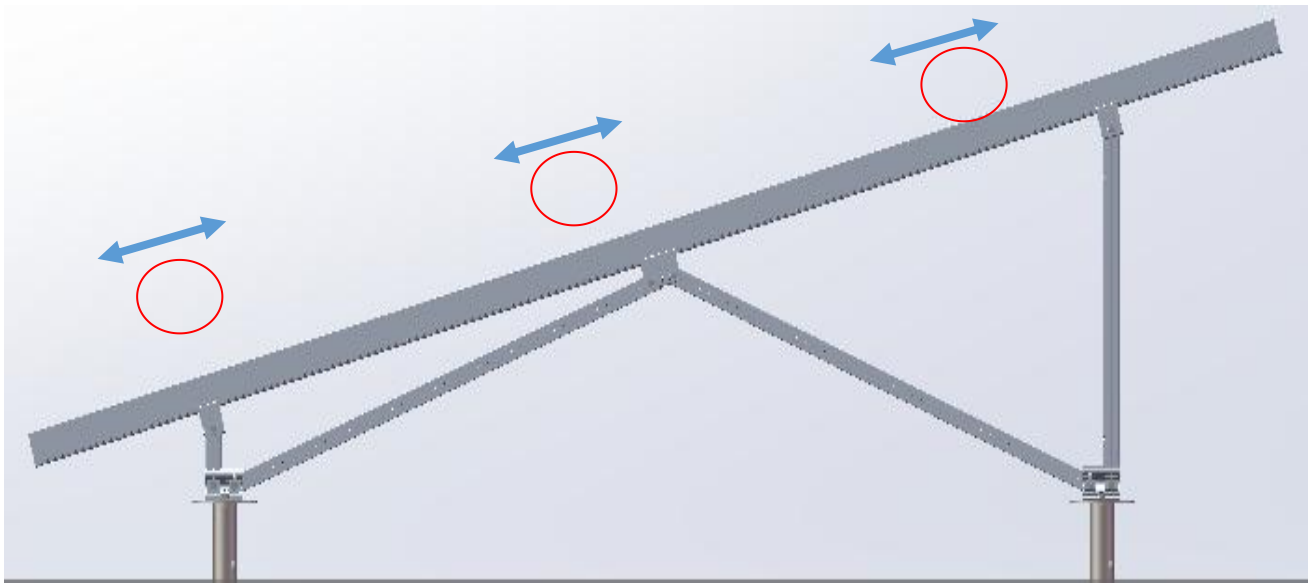
Stainless steel M10*80 bolts



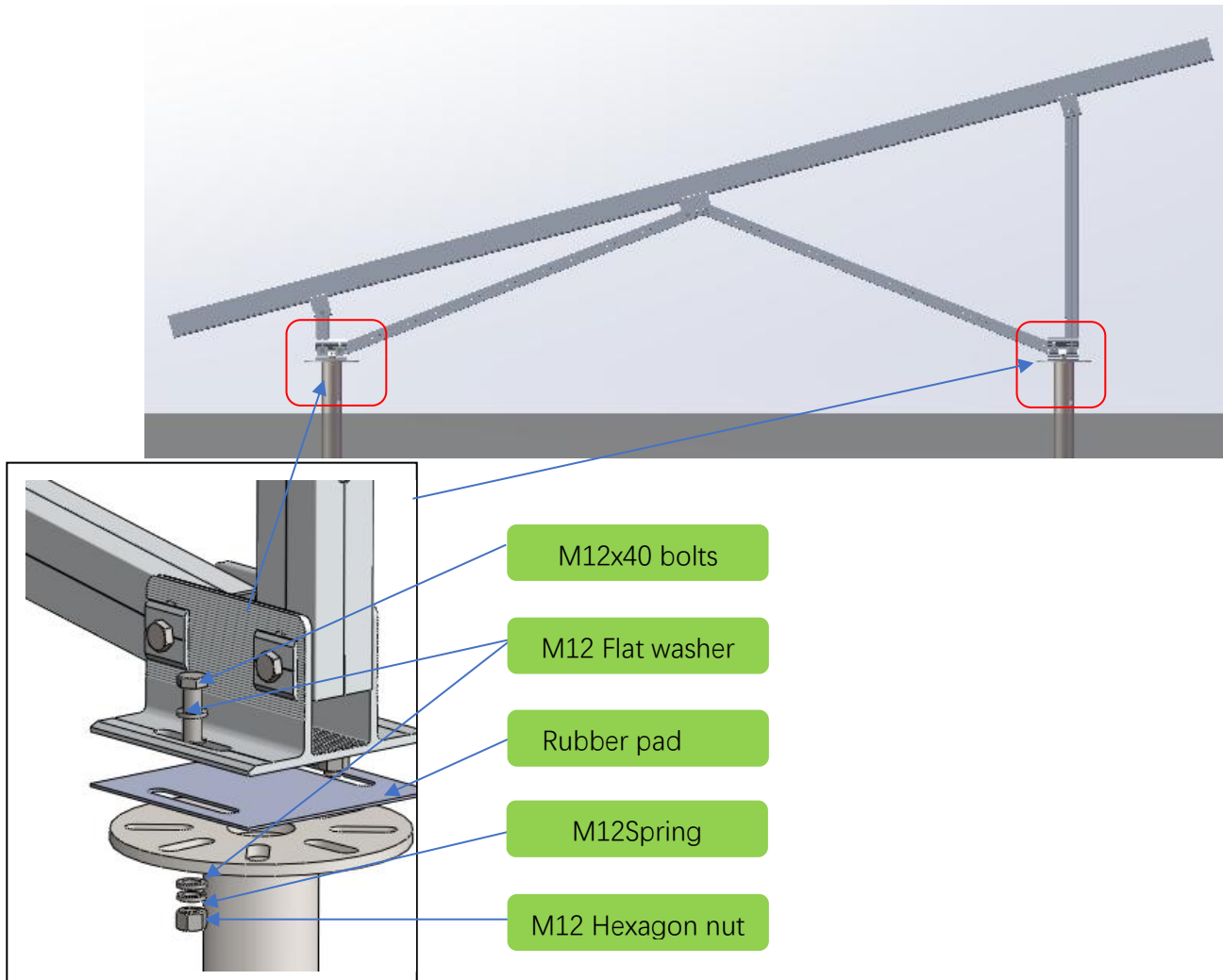
Stainless steel M10*80 bolts

◎The H-jacket can be adjusted slightly

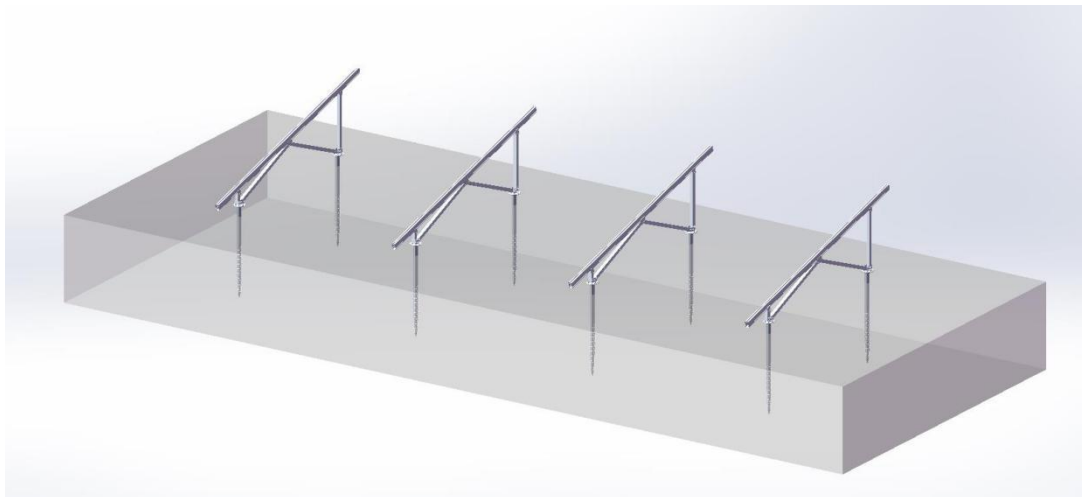
The H-type jacket of the longitudinal beam is a sliding type, and the hexagon nut of the H-type jacket can be loosened according to the demand, and then the H-type jacket is slid along the longitudinal beam to achieve the fine adjustment of the installation Angle of the support. (* Tolerance: H-type jacket $\pm 5\text{mm}$ / longitudinal tilt Angle $\pm 2^\circ$)



- ③ Place the assembled support on the flange of the ground pile (please put EPDM rubber pad between the base and the ground pile), and fix the base with M12X40 bolts.

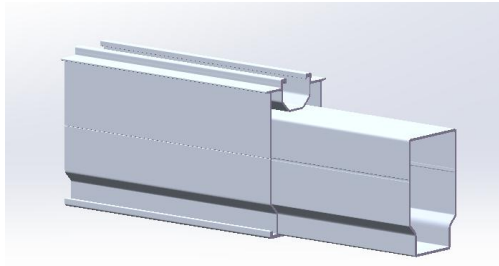


Use the same method to install the assembled longitudinal beam on the screw pile

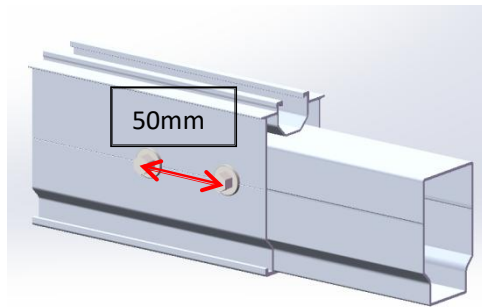


Step3: Rail installation

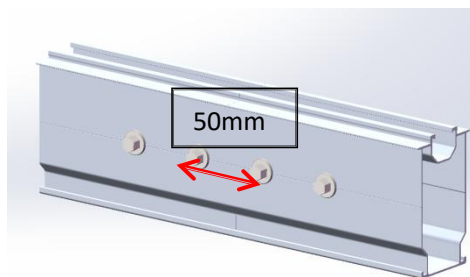
- ① The rail connector is used between two rails



Insert the rail connector into the rail and drill two holes (5 mm) at 50 mm

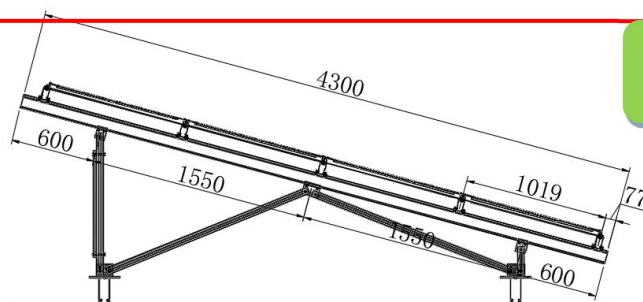


Screw the screw into the other rail

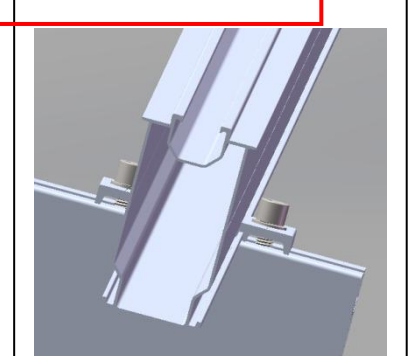
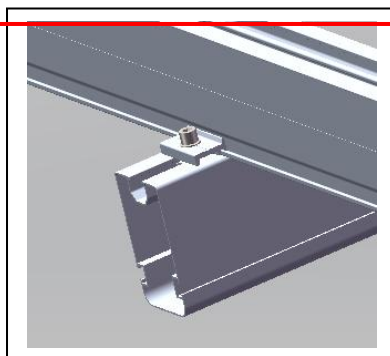
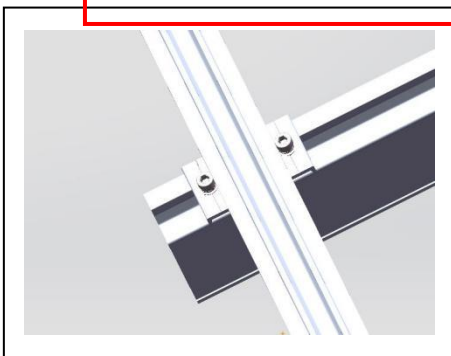


Tighten the screws (double-sided drawing, a total of 8 self-tapping nails)

- ② According to the drawing, place the rail on the beam and fix it with the rail pressing part.

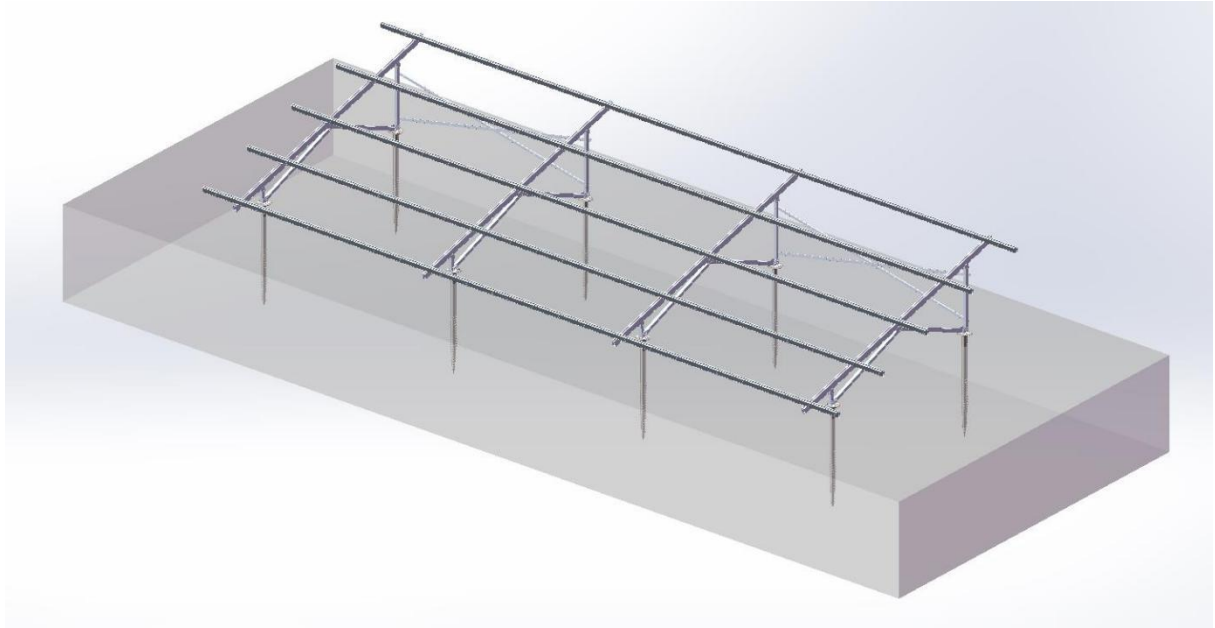
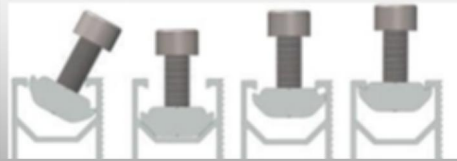


Position of rail



Easy installation :

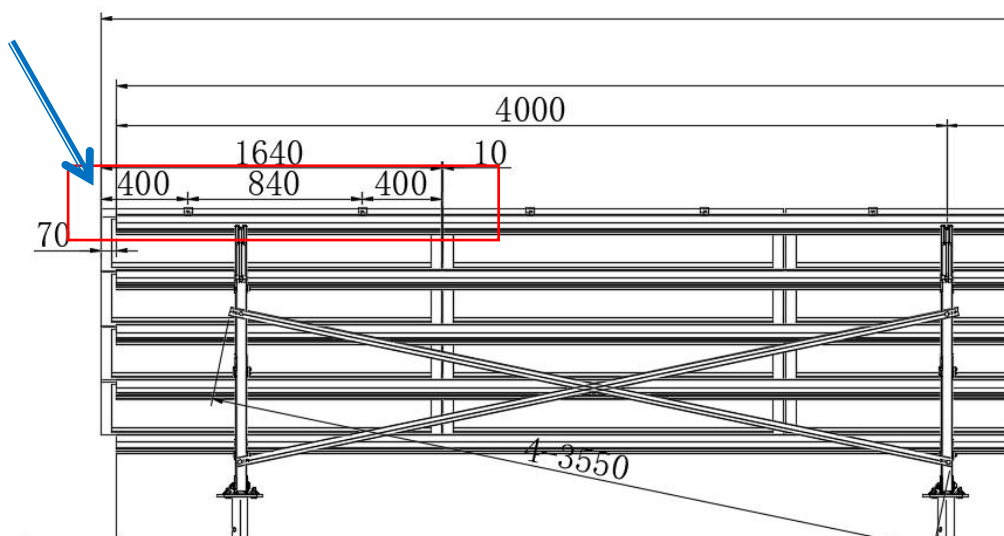
Remember the simple installation sequence for connecting card blocks



Step4: Panel installation

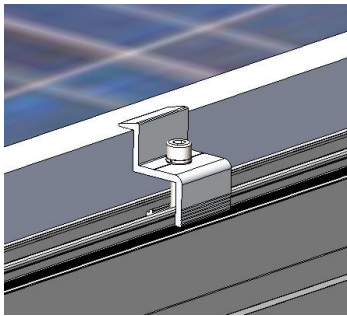
- ① Install the panel from the side. Install against the values on the design drawing. 对照设计图上的数值进

Position of end clamp and mid clamp

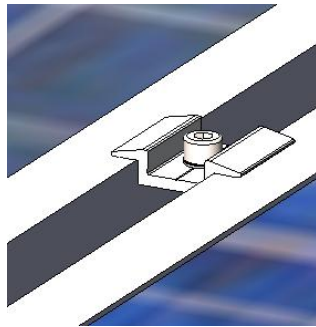


- ② The position of the end of the panel is fixed with the end pressing block.
- ③ The middle of the panel is fixed with an intermediate press block. If you need to use a conductive plate, it should be installed with a medium pressure block.

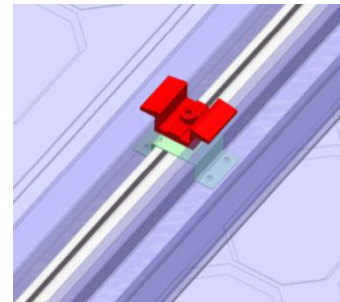
Mid clamp and end clamp installation;



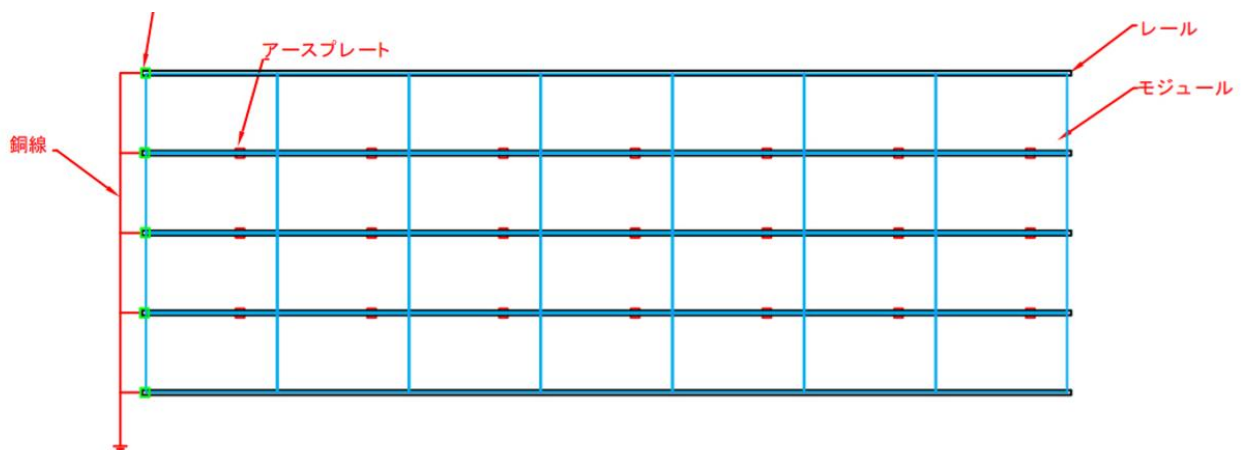
End clamp



Middle clamp

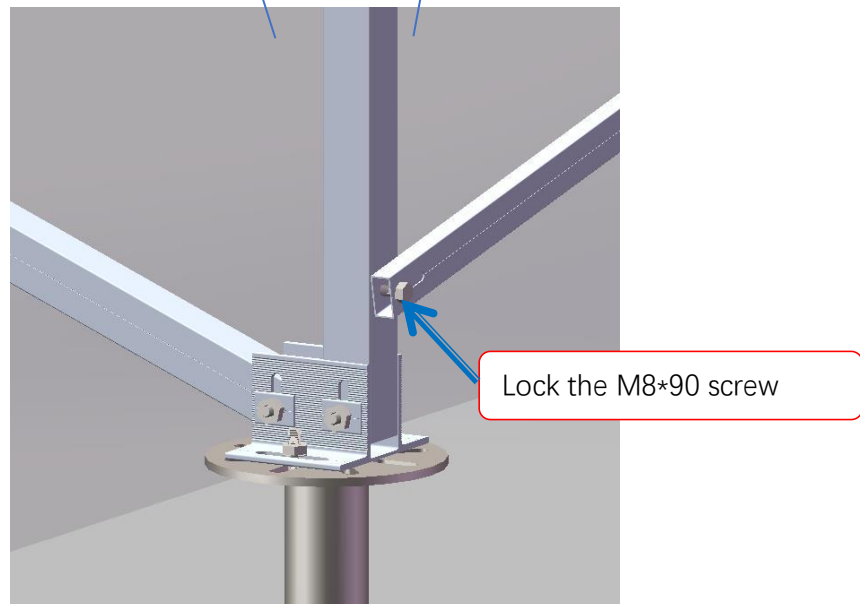
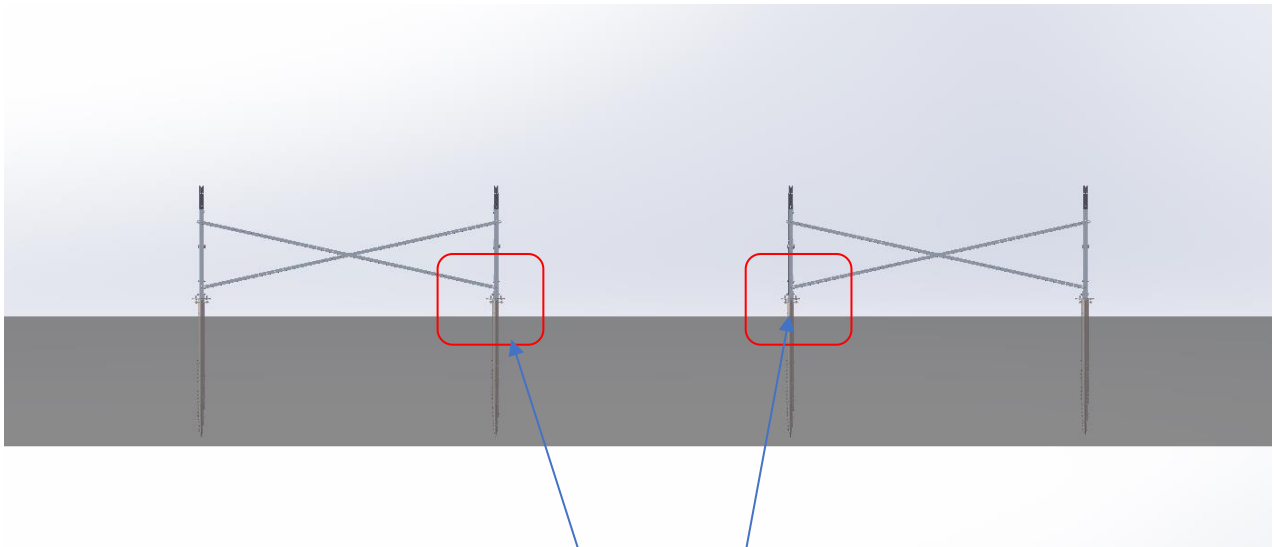


Earthing washer

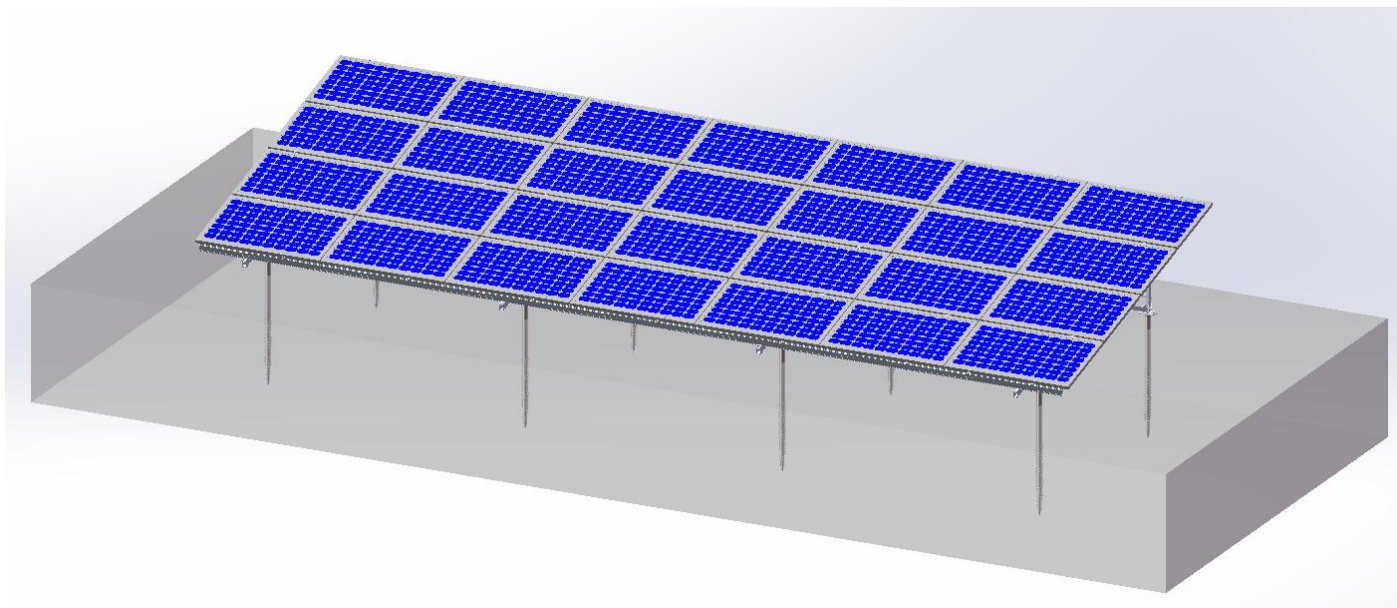


Step5: Complete installation

After installation, to ensure the safety of the support, lock all bolts and mark them to prevent bolts from loosening.



The installation is complete as shown in the figure



Attention please:

1.A2-70The tightening torque of the bolt is as follows.

M8 Bolt: 20N*m

M10 Bolt: 40N*m

M12 Bolt: 55N*m

2. 1) The mounting Angle tolerance of the bracket is $\pm 2^\circ$

3. 2) The allowable tolerance of the processing size of the bracket shall be implemented in accordance with the Chinese tolerance standard

3) The mounting tolerance of the bracket is $\pm 5\text{mm}$.

4) The construction personnel should make adjustments only within the permissible range according to the site conditions. Random and rough installation is prohibited. If you have any questions about the installation, please contact us.