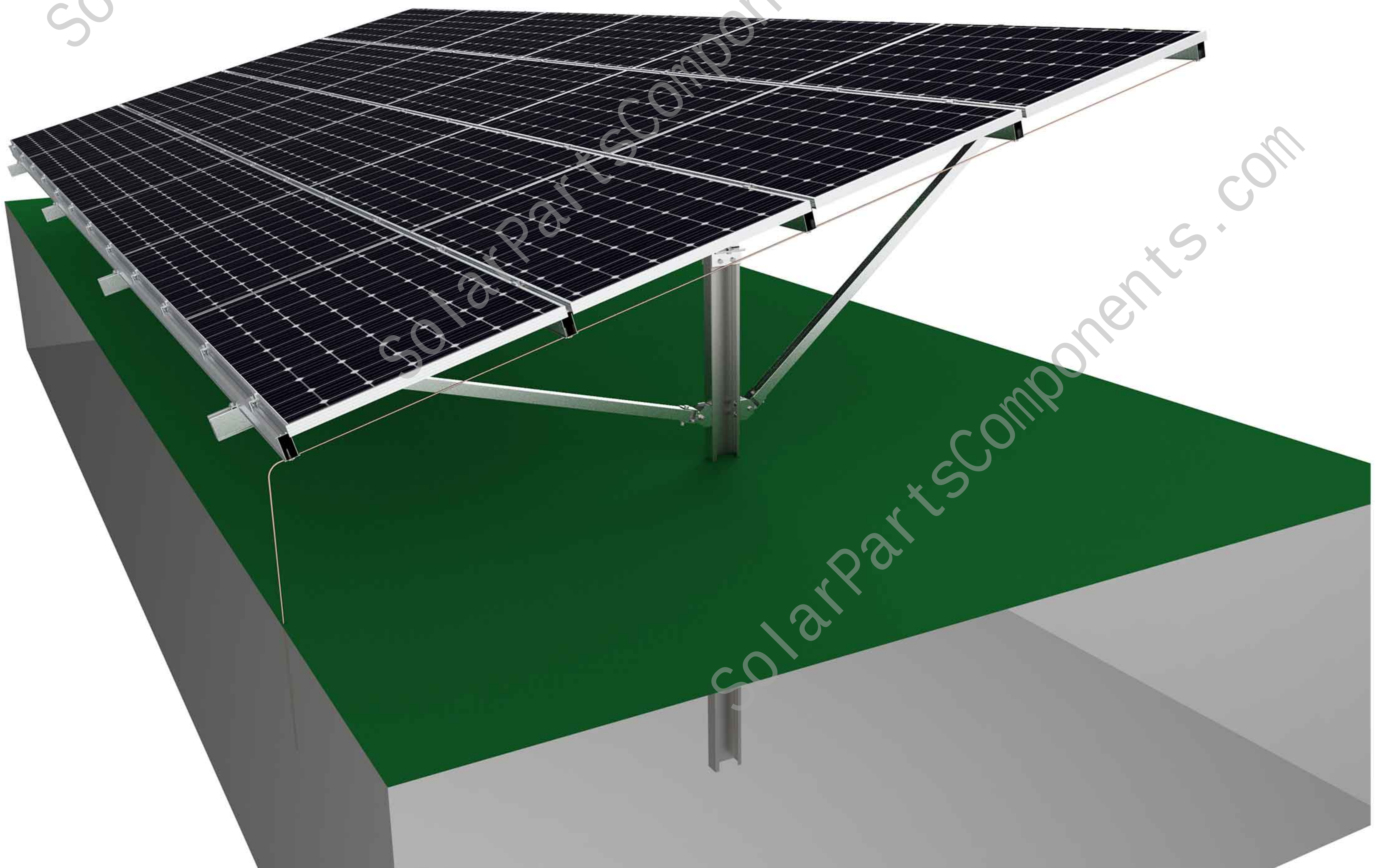




GROUND SOLUTION

Installation Instructions

SPC-CA-4H-PCW

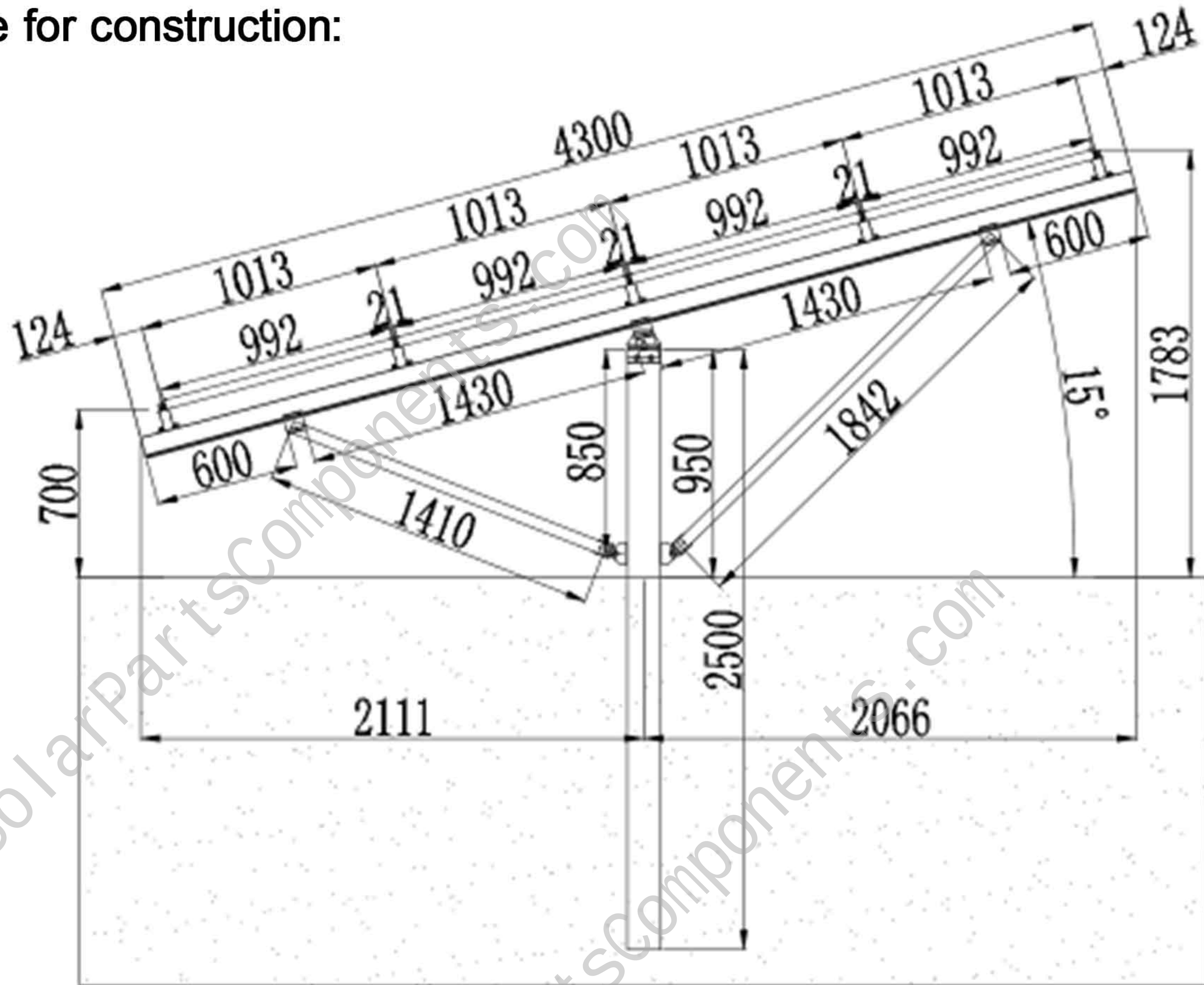


The single pole carbon-aluminum bracket uses 100% aluminum structure and stainless steel bolts except for the pole. It is lightweight, corrosion-resistant, beautiful in appearance, and has a service life of more than 25 years. Most parts of the product are pre-assembled in the factory, which saves assembly time on site and labor costs. Before installing this system, please read the following installation instructions carefully. In addition, please be sure to perform construction in accordance with local laws.

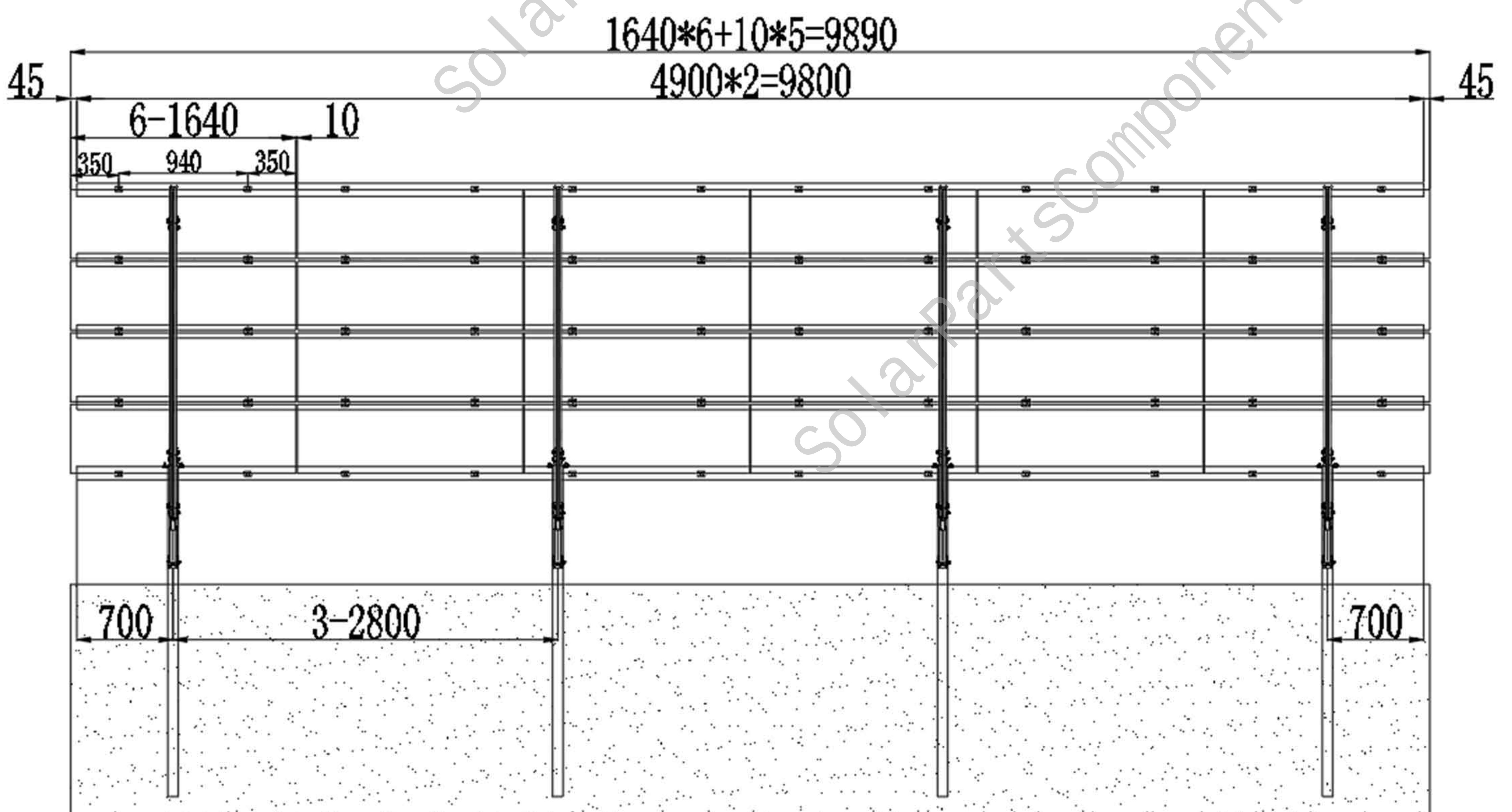
Design And Construction Drawings

Front/side view of the whole bracket

When installing, please follow the installation position size shown in the figure for construction:



Side view



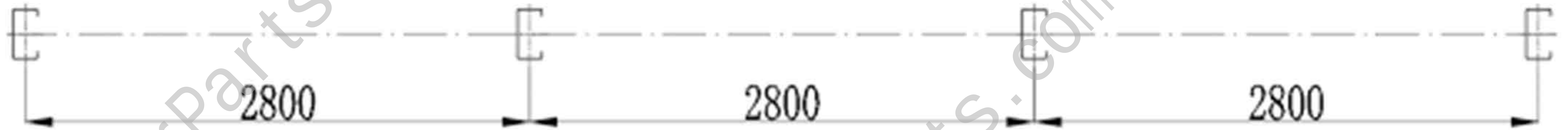
Front view

Basic Installation

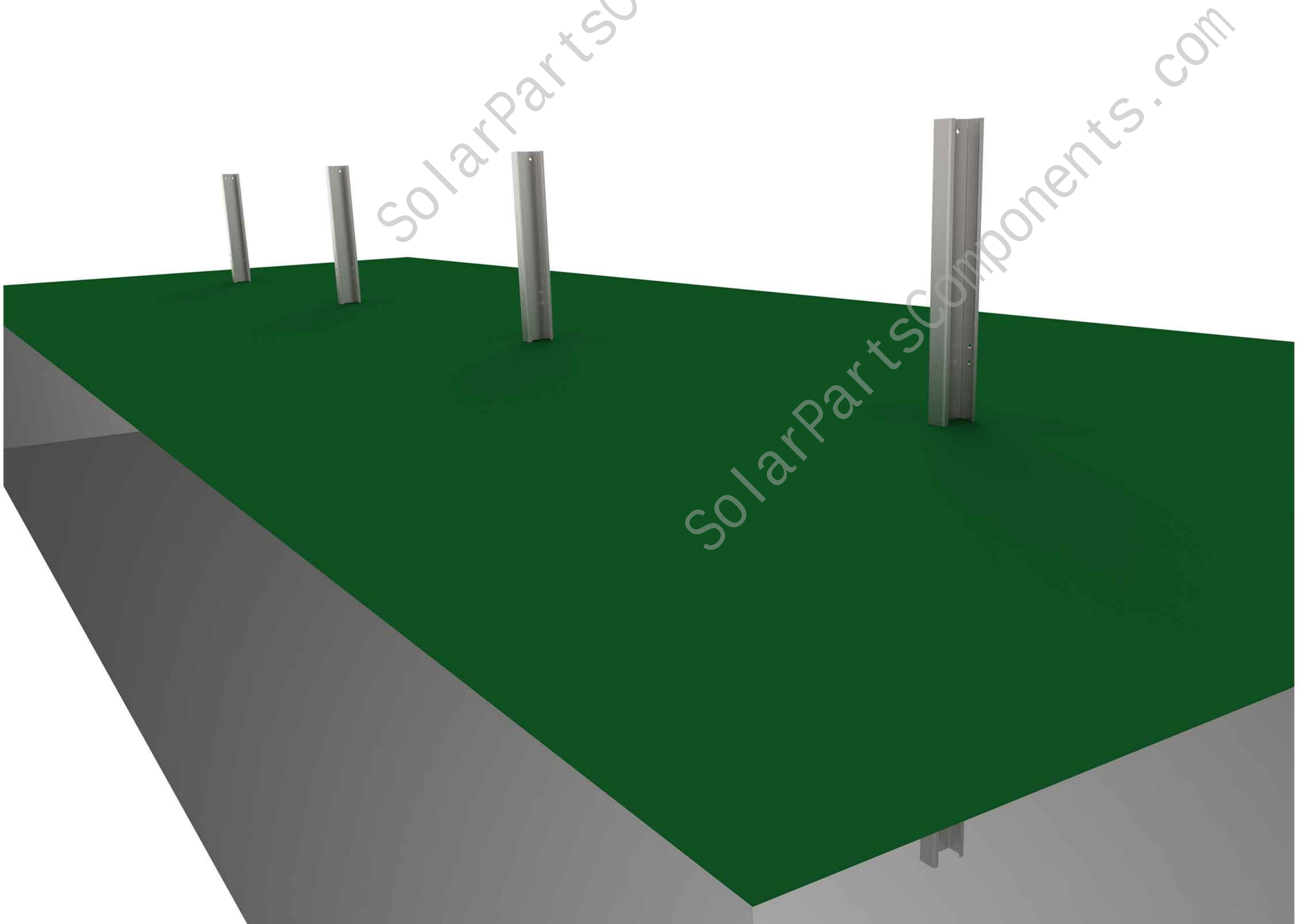
Step 1, This case is a grounding screw foundation. Before installation, the site needs to be cleaned up, and the objects affected by the installation must be cleaned up. Some soil mounds or ditches that will affect the installation are flattened and filled. Before installation, the soil quality of the installation site needs to be tested and compiled into a soil report to verify whether the soil can withstand the entire platform. For the construction of the piles, you can consult the local reliable construction unit.

Step 2, Install the grounding screw

The c-steel is driven into the ground by a special machine, and the centerline of the C-steel is always perpendicular to the ground. Please refer to the following design drawings for the dimensions of the installation interval. The total length of the C-steel is 2500mm, the driving depth is 1550mm, and the ground is exposed about 950 mm, but please make sure that the driving depth of all piles is the same, and they are on the same horizontal line.



Top view



Installation steps

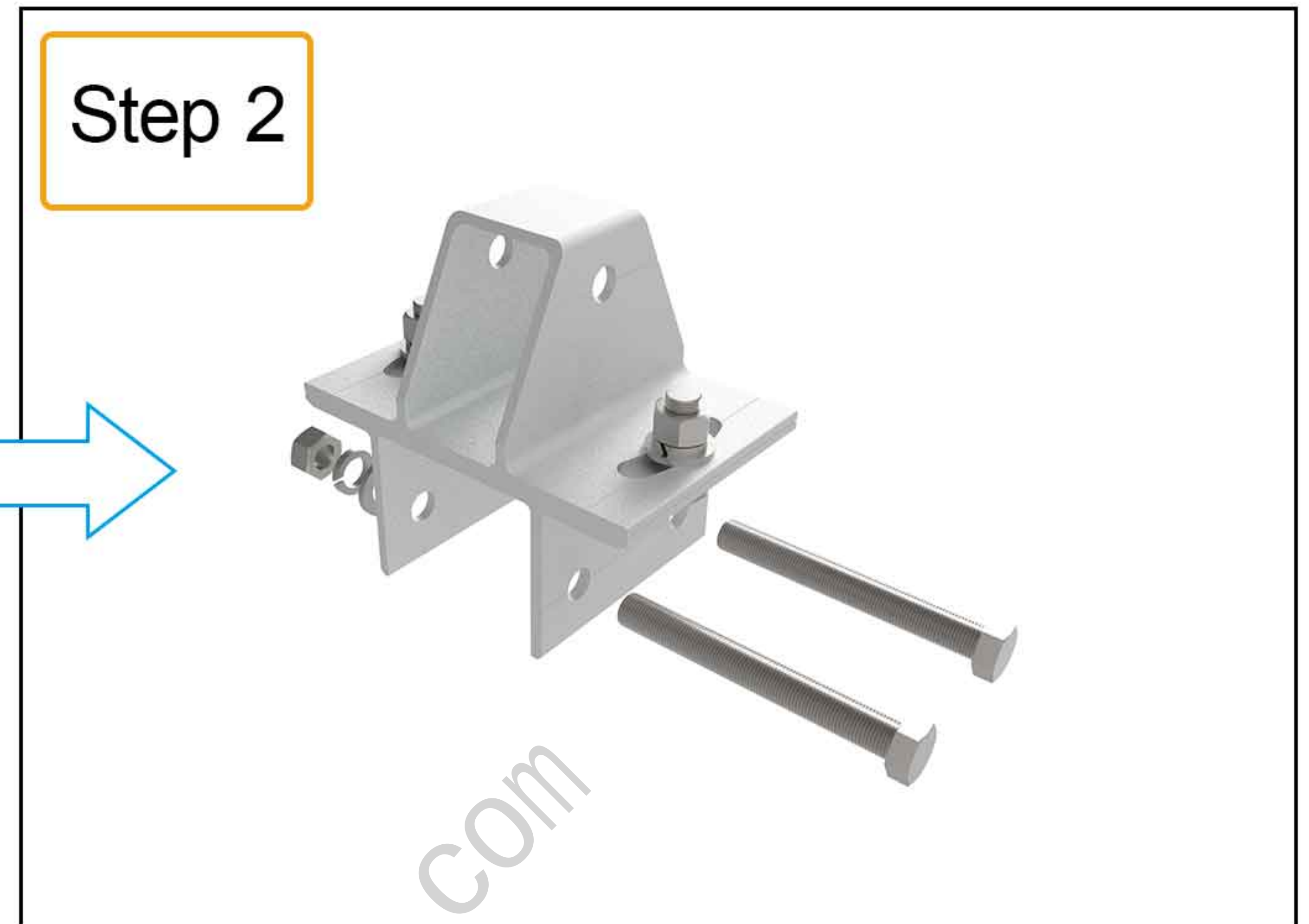
Step 1: Install the connector

Pole joints and diagonal brace joints are generally packed in cartons when shipped. After the I-steel pole is driven into the soil according to the construction drawings, install the joints at the joints of the purlin and the poles and the joints at the joints of the diagonal braces and the poles on the pole. Specific steps as follows.



Step 1

1. Take out the joint between the purlin and the pole



Step 2

2. Loosen the bottom bolt



Step 3

3. Install the joint at the C-steel punching place



Step 4

4. Fix the joint and the pole with the bolt assembly



Step 5

5. Take the diagonal brace joint out of the carton and loosen all the bolts above



Step 6

6. The joint at the diagonal brace is installed on the 2 holes under the pole



Step 7

7. Use 2 M10 carriage screws to fix the U-shaped base of the joint



Step 8

8. The U-shaped base is fixed



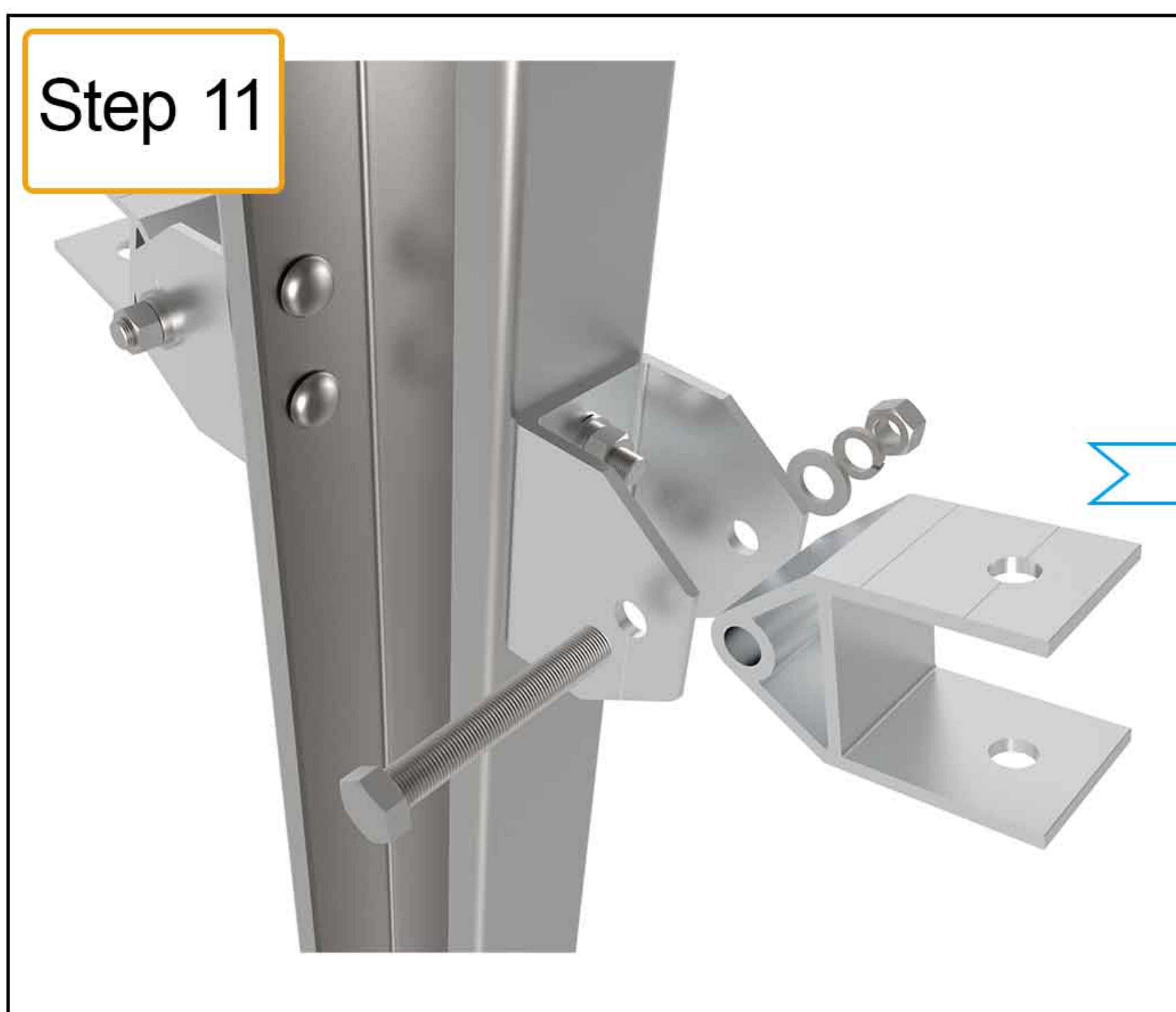
Step 9

9. Fix the rotating part with bolts



Step 10

10. The rotating part is installed



Step 11

11. In the same way, install and fix the diagonal brace joint on the other side

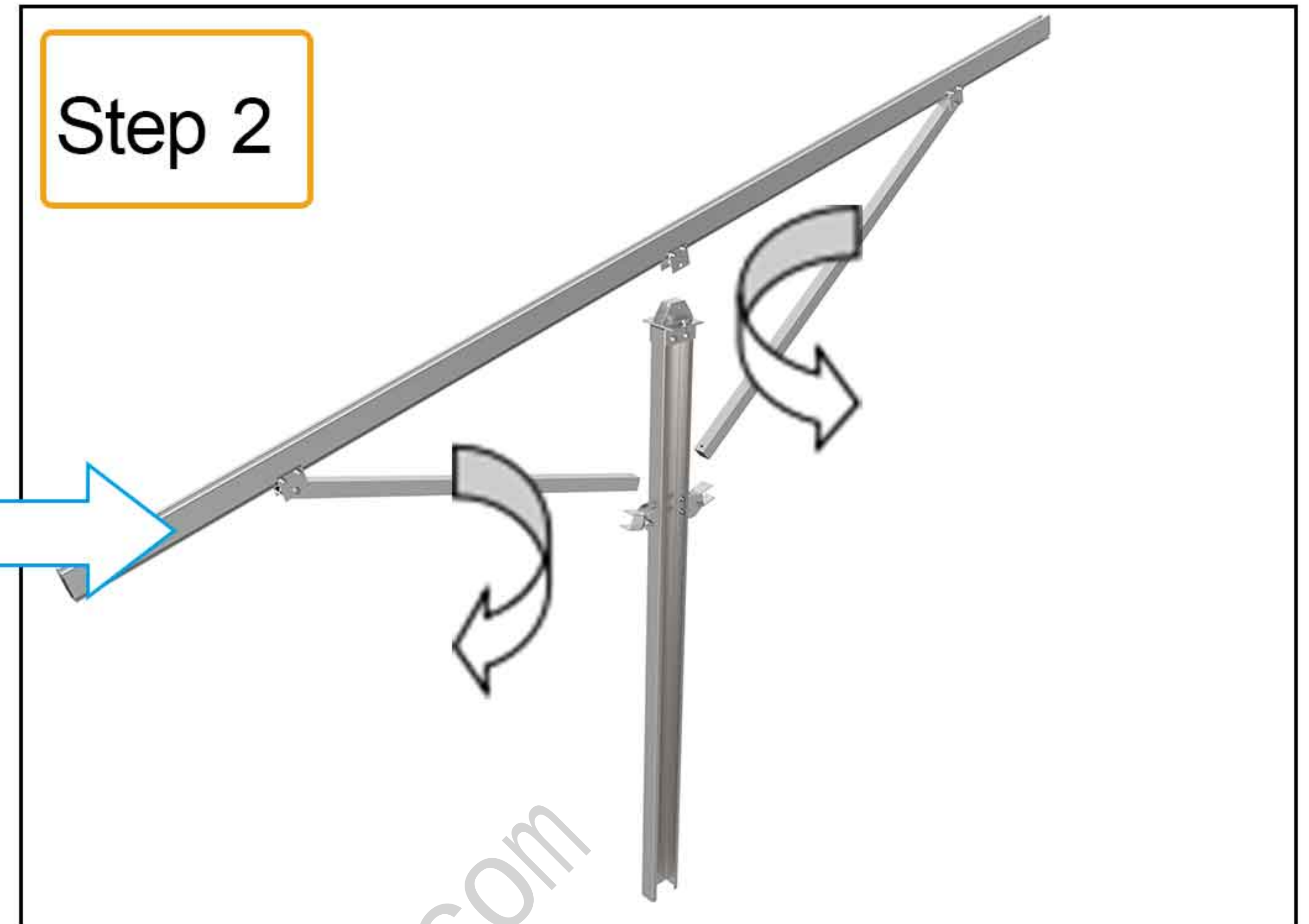


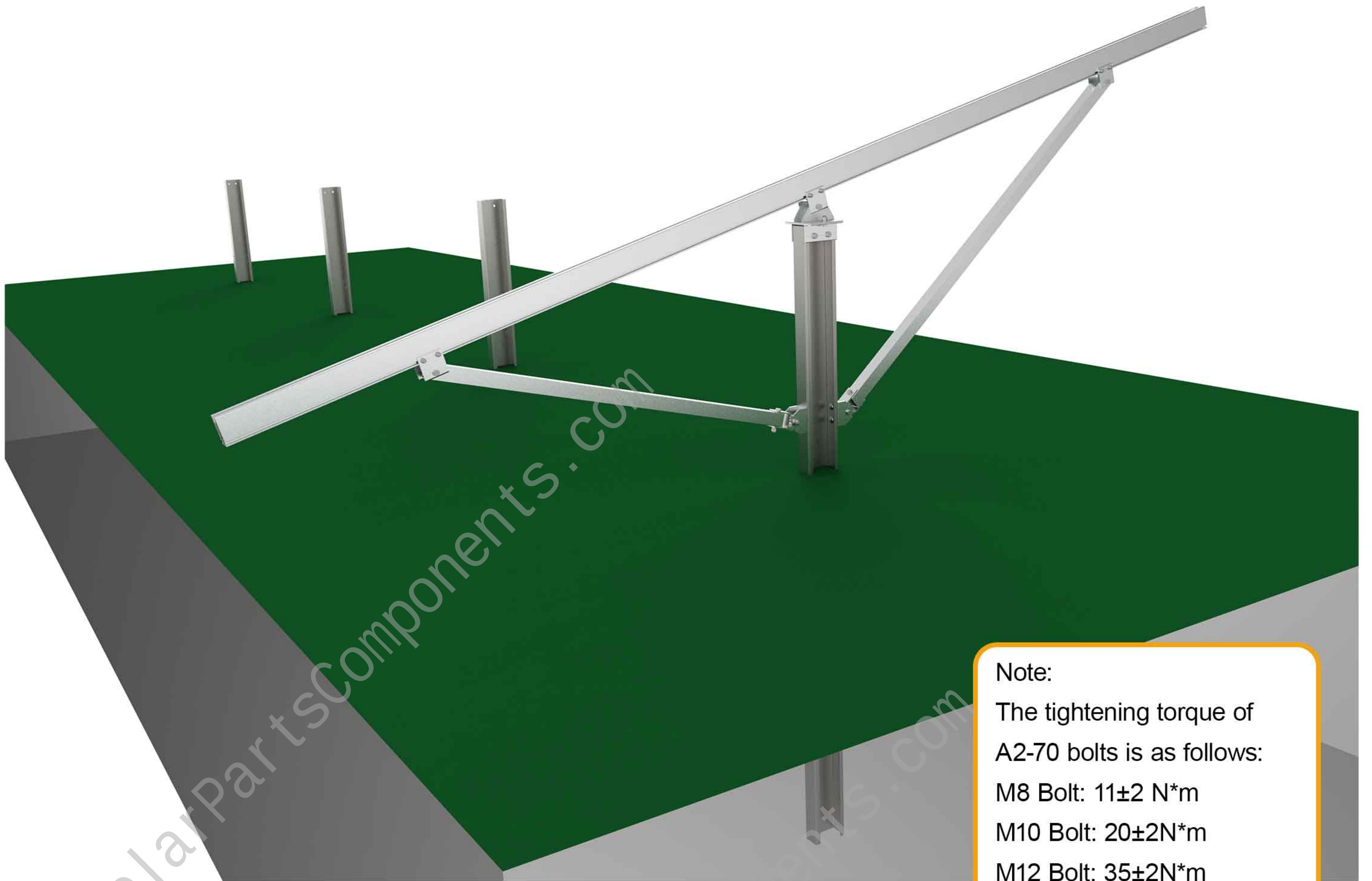
Step 12

12. The installation of the two diagonal brace joints is complete

Step 2: Pre-assembly and installation of purlin

When shipping, the factory has pre-assembled the purlin, jackets, columns, and grounding screws with bolts. After the bracket arrives on site, only need to open the pre-assembly, rotate the square tube in the direction on the drawing, and then remove the pre-assembled Bolts, lock the square tube on the base, and finally tighten all the bolts with a torque wrench.





Note:

The tightening torque of A2-70 bolts is as follows:

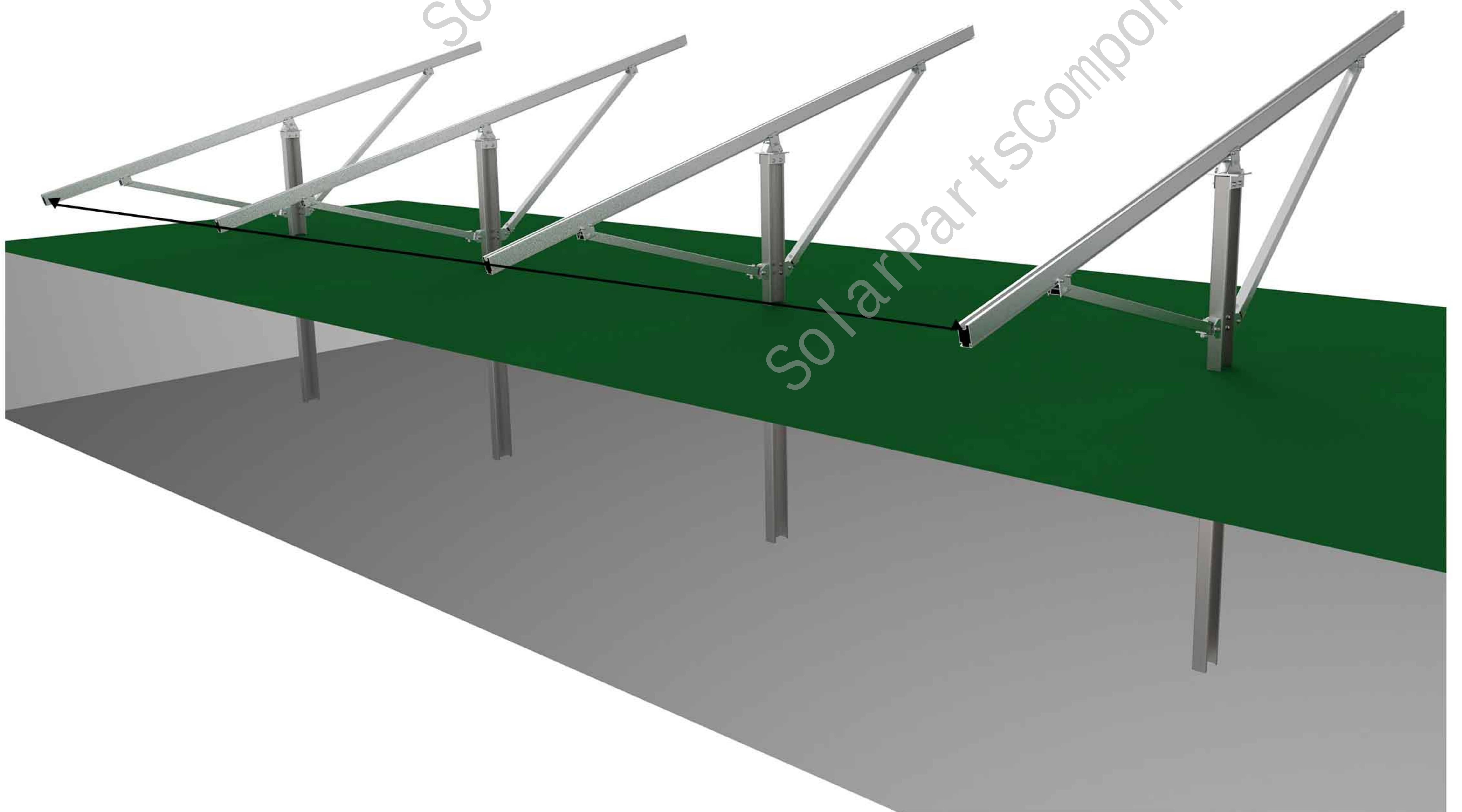
M8 Bolt: $11 \pm 2 \text{ N} \cdot \text{m}$

M10 Bolt: $20 \pm 2 \text{ N} \cdot \text{m}$

M12 Bolt: $35 \pm 2 \text{ N} \cdot \text{m}$

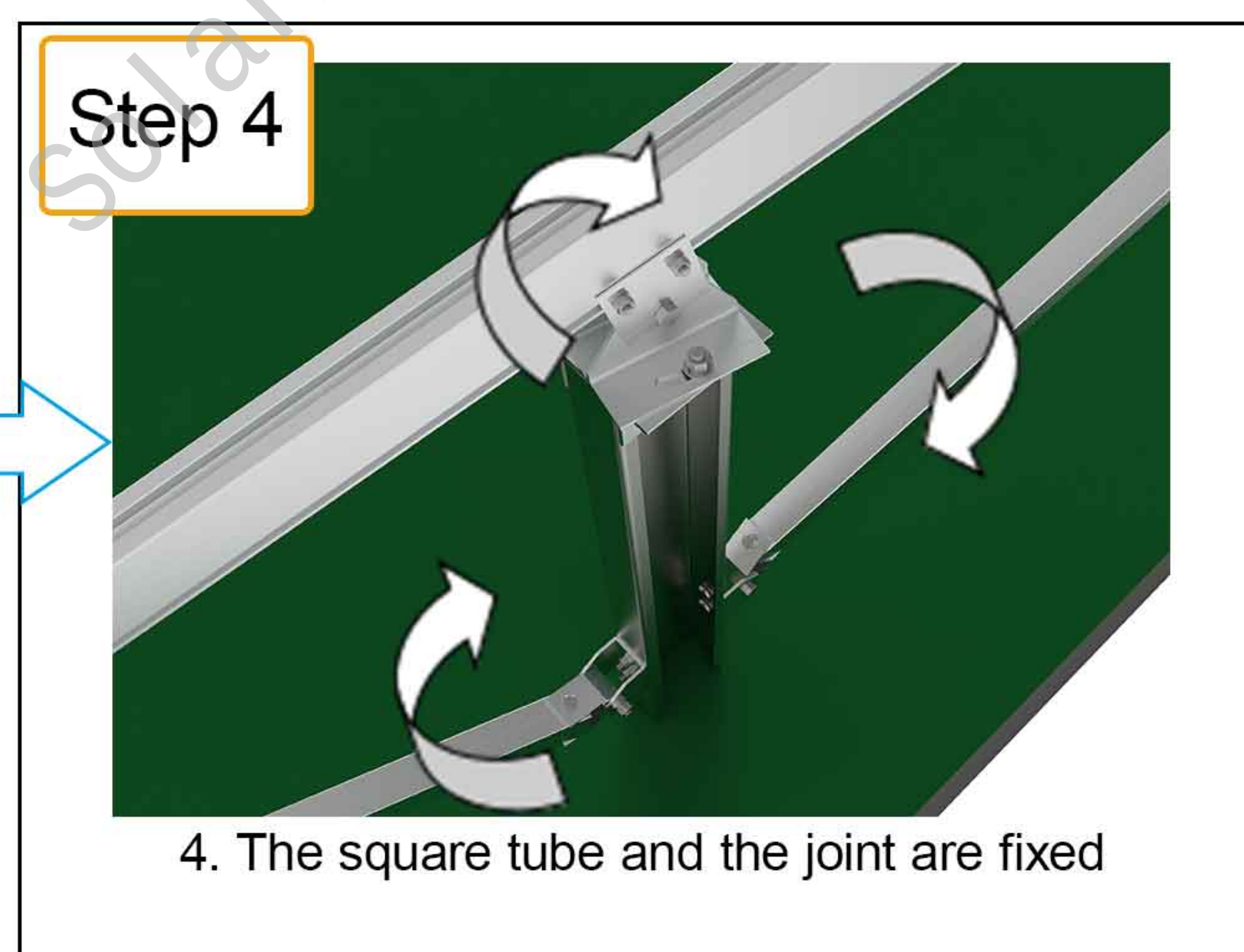
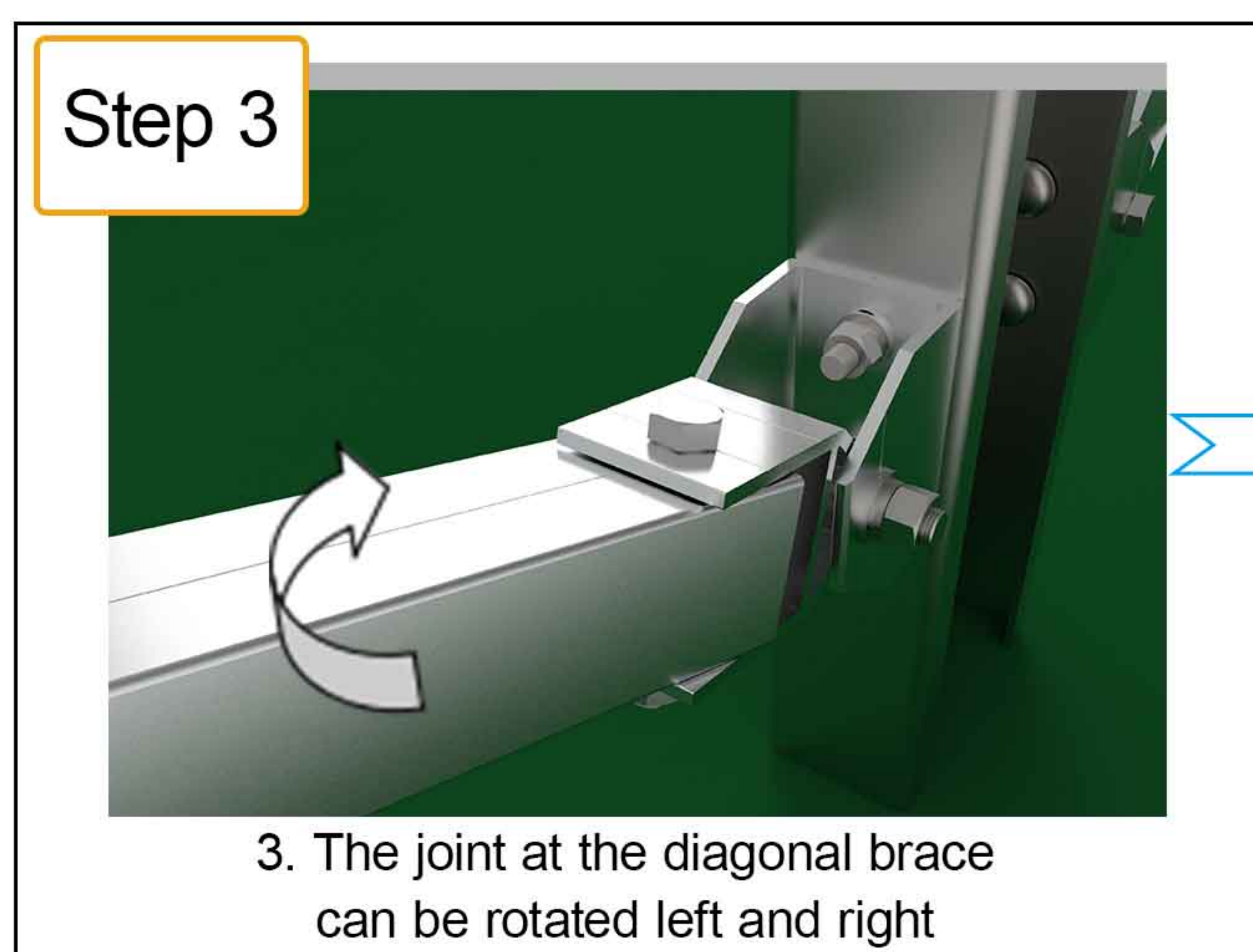
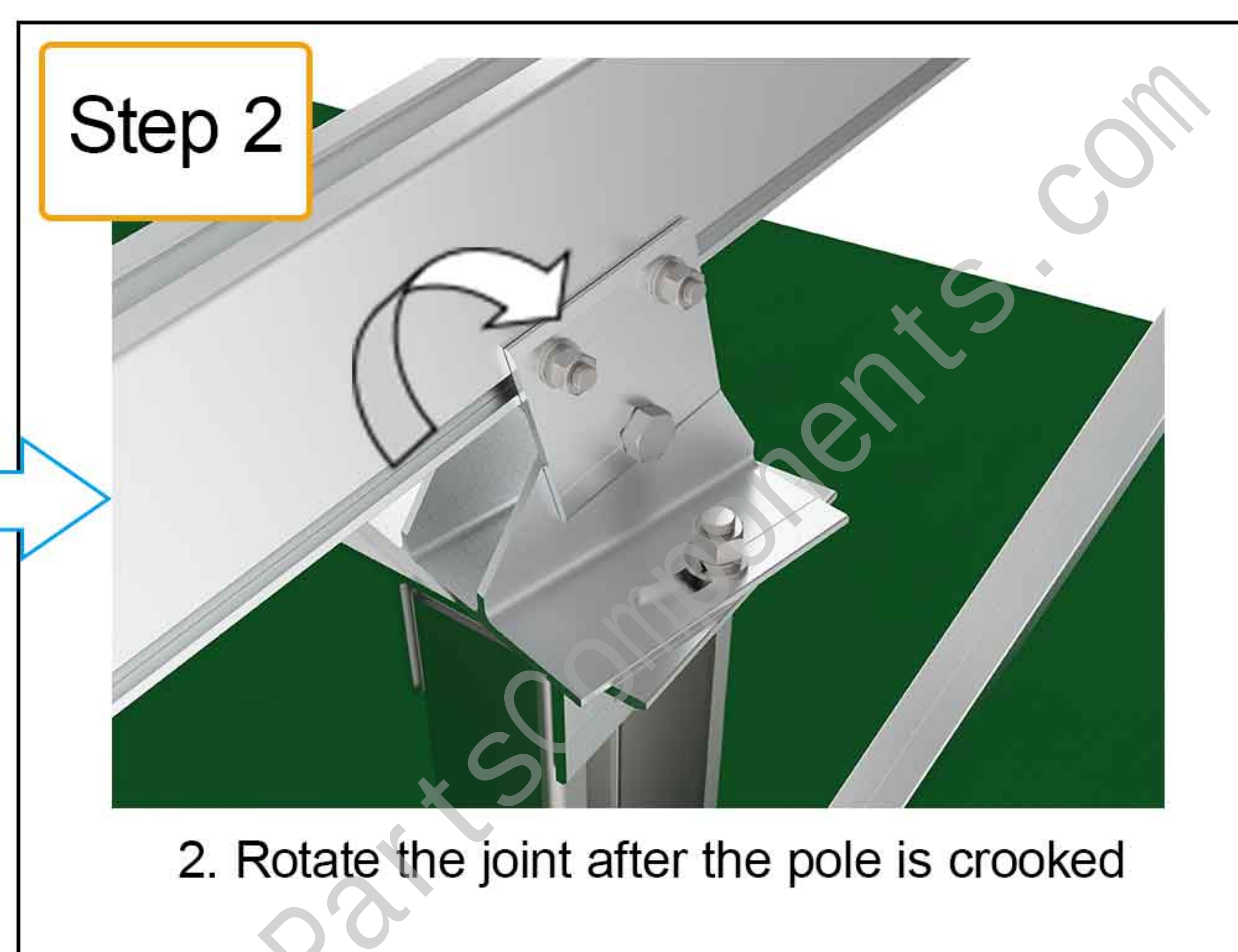
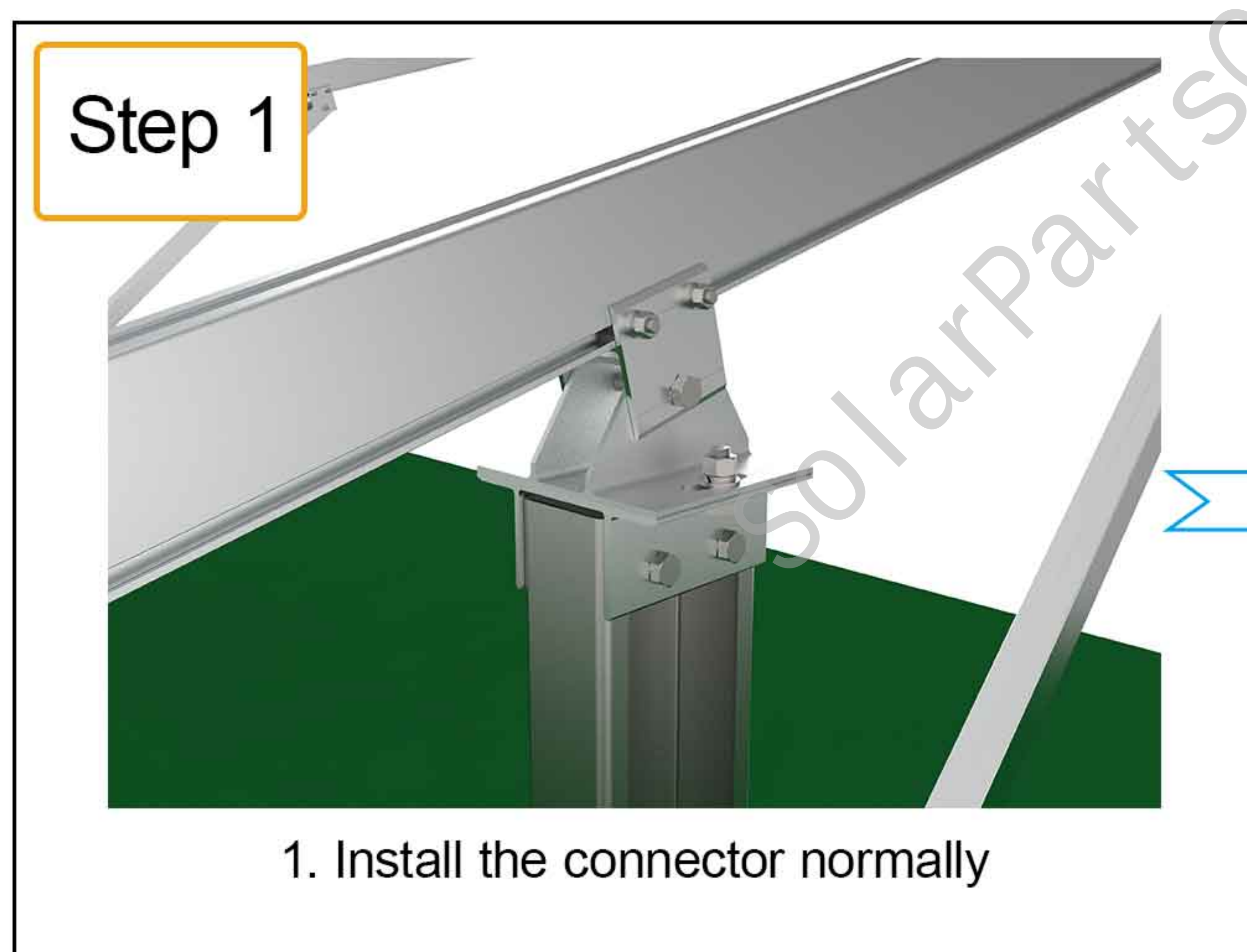
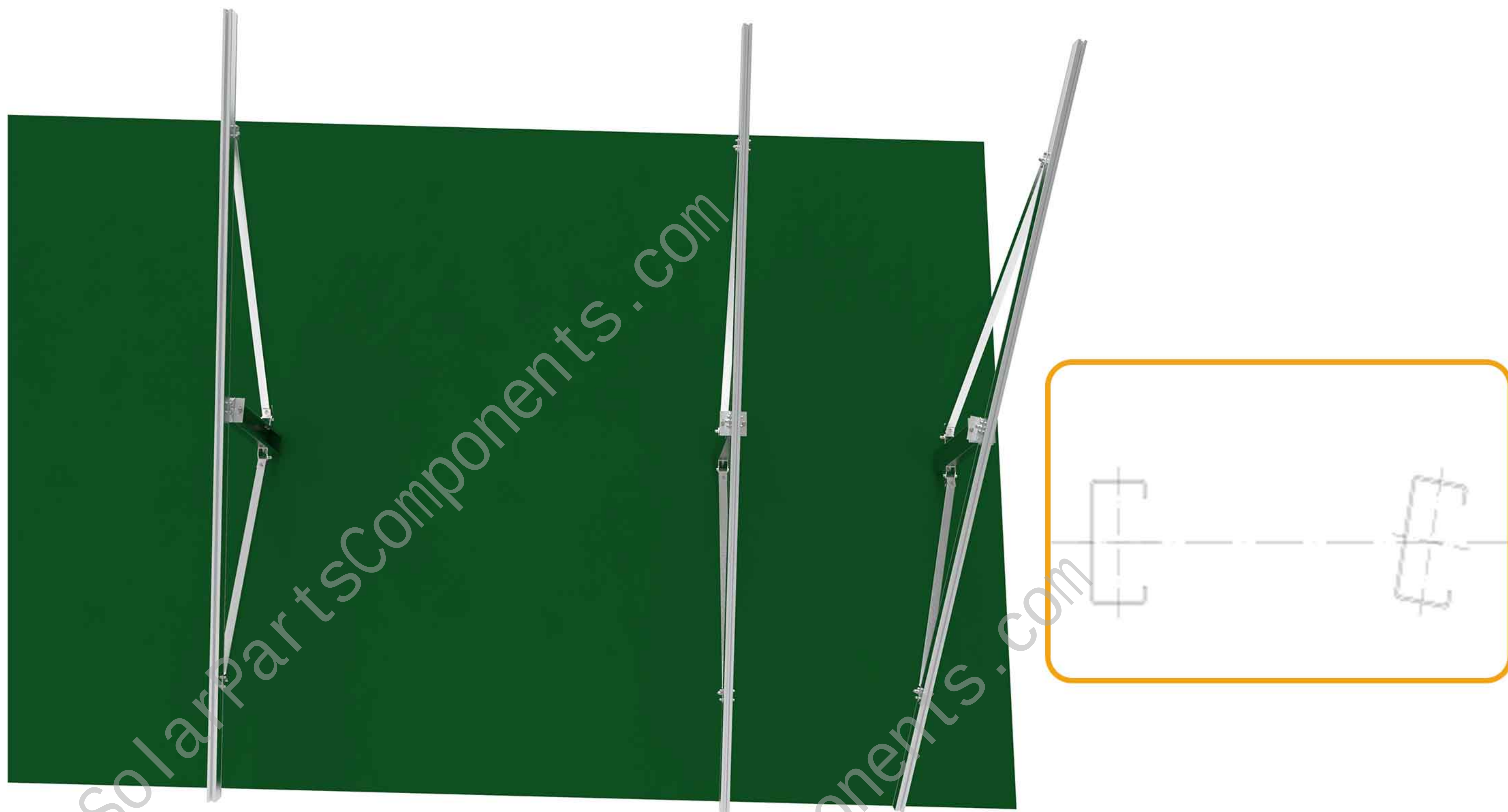
Step 3 Adjust the purlin pre-assembly

According to the above steps, all the purlin are pre-assembled and installed on the ground screws. Note that after all the purlin are pre-assembled and installed on the poles, the front ends of the purlin should be on the same line. The upper surface of the stringer also needs to be on the same plane. If it is not on the same plane, you can loosen the bolts at the joints, fine-tune the pre-assembled bracket up and down, and then tighten the bolts after adjusting to the same level.



Note:

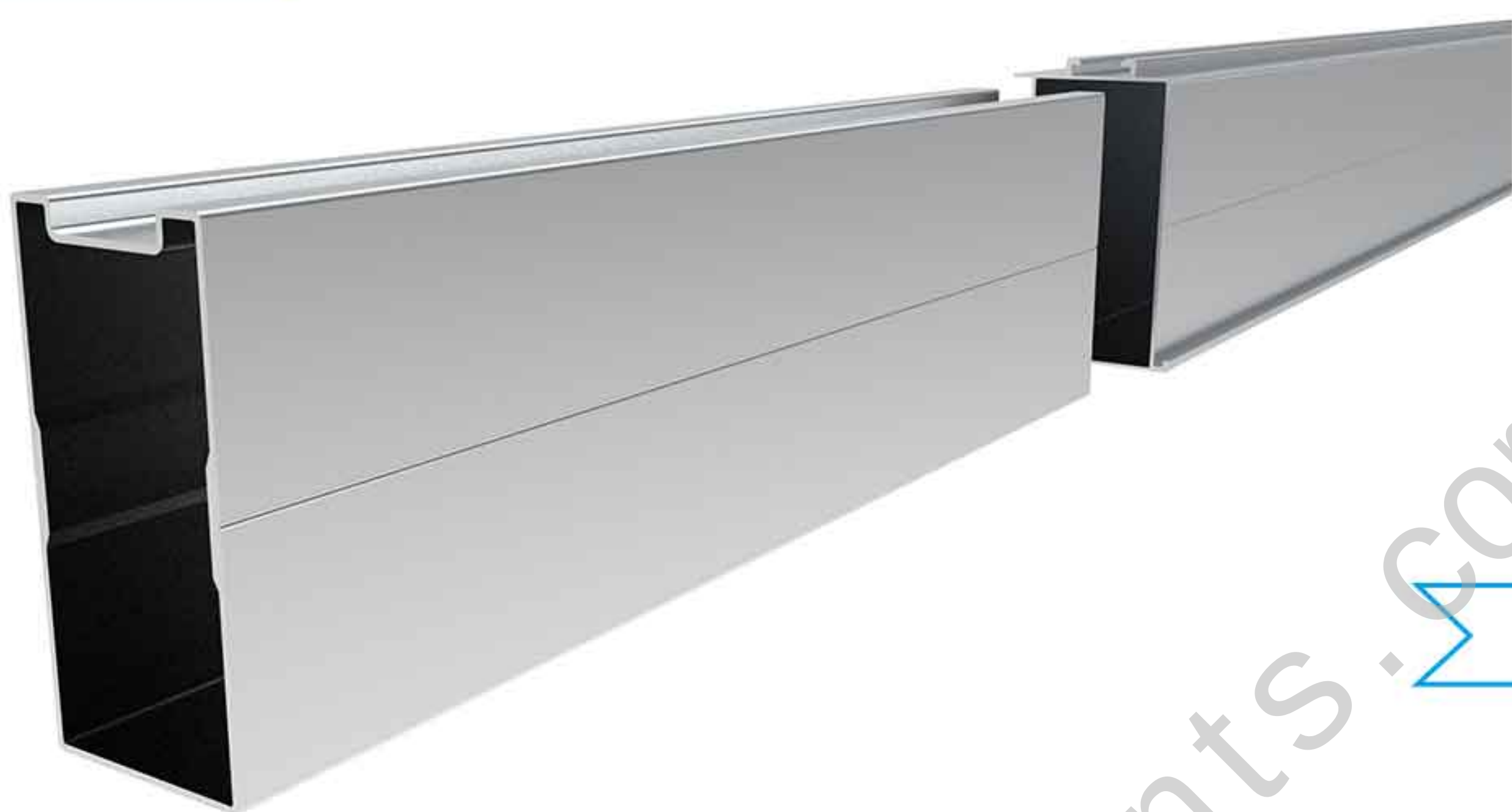
If the pole is skewed during the piling process, after the installation pre-assembly is completed, it is not parallel to the other pre-assembly, you can rotate the pre-assembly to be parallel to the other pre-assembly through the joint



Step 4, Splicing Beams

The steps of rail connection are as follows:

Step 1



1. The length of the connecting piece is 300mm, and the depth of plugging the connecting piece into the inner cavity of the track is 150mm

Step 2



2. Fix the connecting piece with 2 self-tapping screws

Step 3



3. Splicing the other rail

Step 4



4. Fix the other track with 2 self-tapping screws

Step 5



5. Side view of rail connection completed

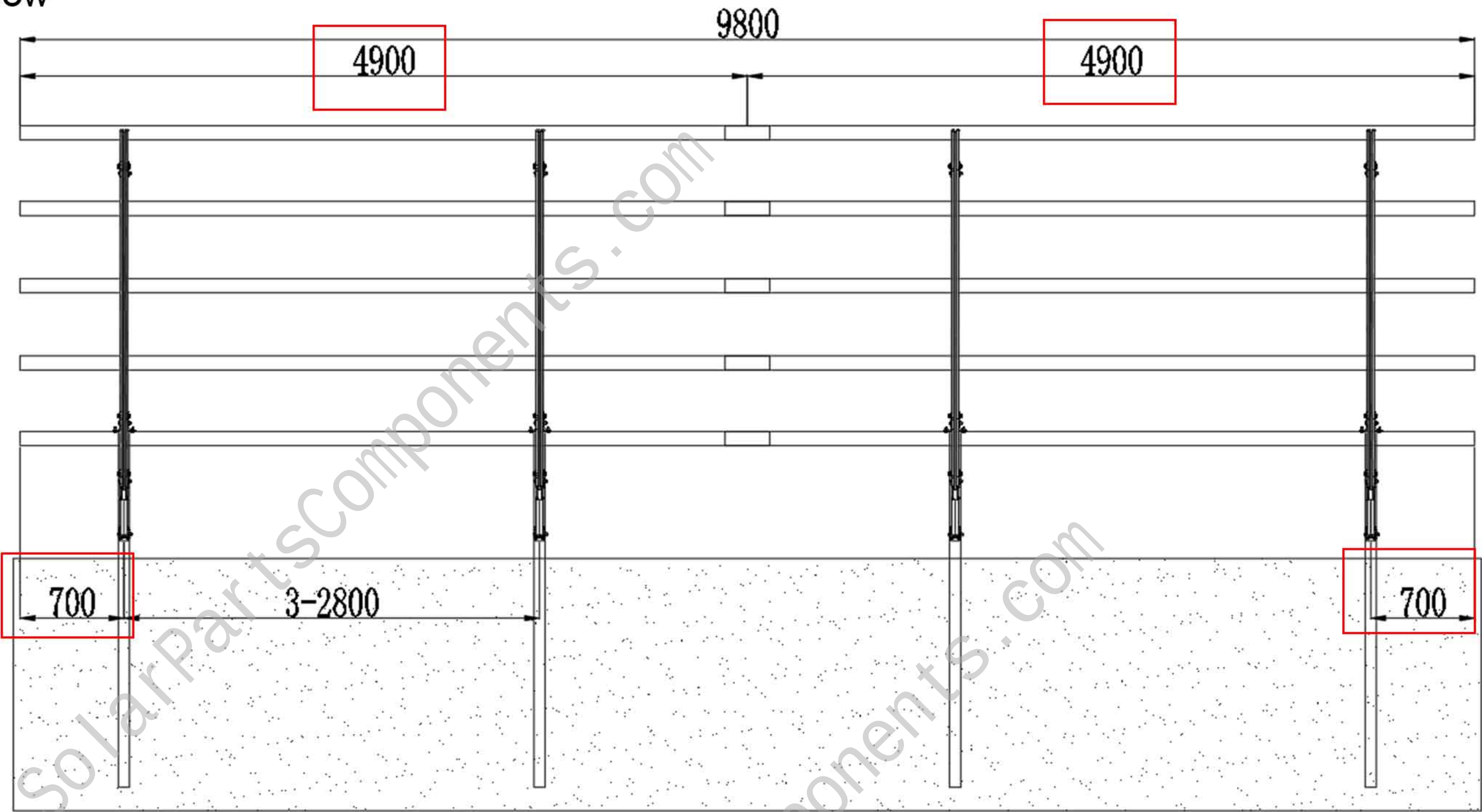
Step 6



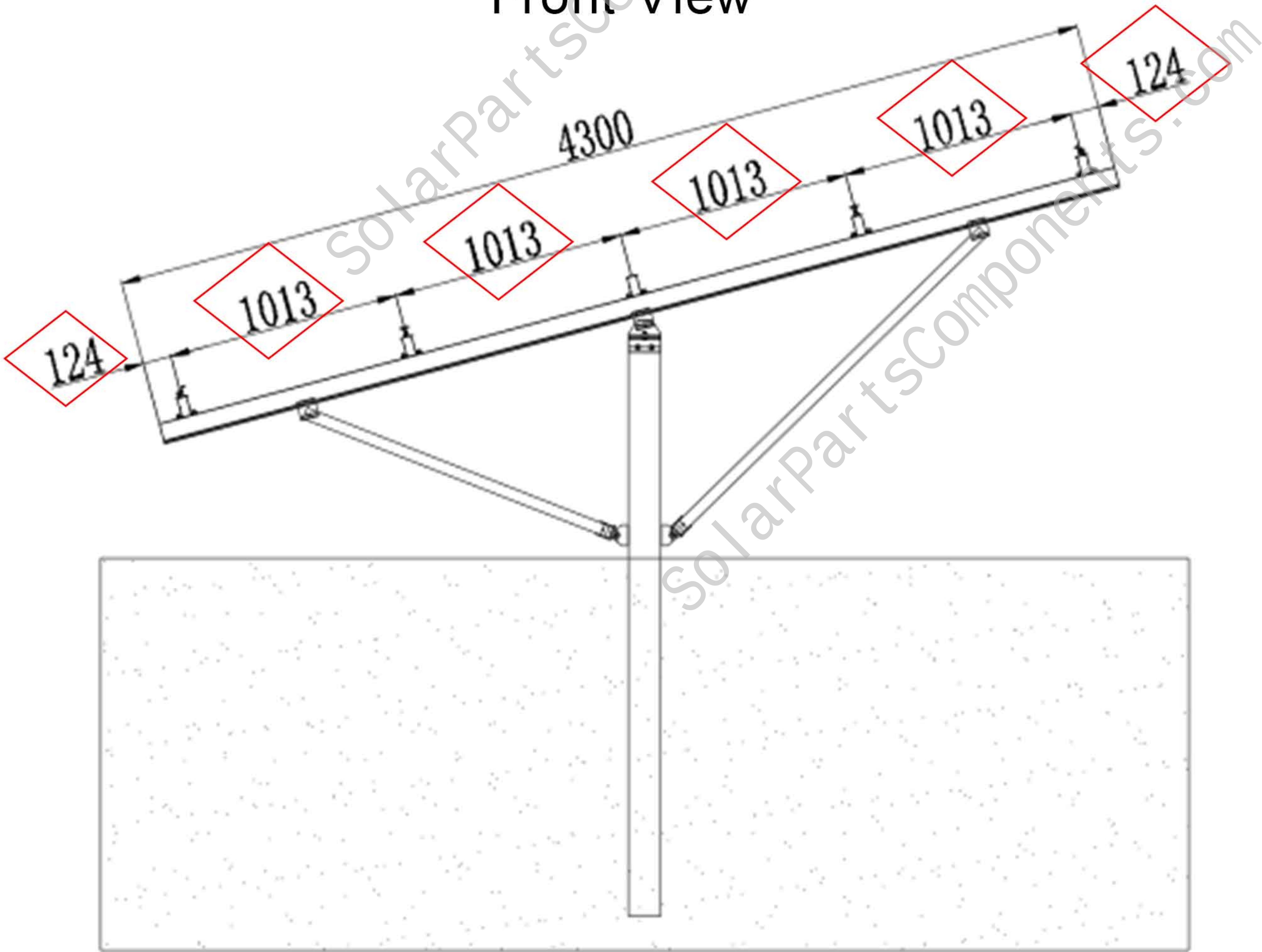
6. Use the same method to fix the other side with self-tapping screws

Step 5 Determine the position of the beam on the purlin

According to the construction drawings, first connect two L4900 rails according to the above rail connection method. Then the cantilever is exposed by 700mm, and the distance between the front and rear of the purlin is 124mm, and then install a whole rail at an interval of 1013mm. The fixing method of the beam and the purlin is shown in the figure below



Front View



Side View

Step 6 Fix the beam

The beam is fixed with a crossbeam. There is a slot at the bottom of each rail. First put the spliced rail on the purlin. The placement position is as above. Put the pressure block sideways into the groove in the middle of the purlin, and then press the block. Press down the groove at the bottom of the beam, and then use an Allen key to lock the pressure block tightly, press a beam fixing piece on each side of the rail.

Step 1



Step 2



Step 3



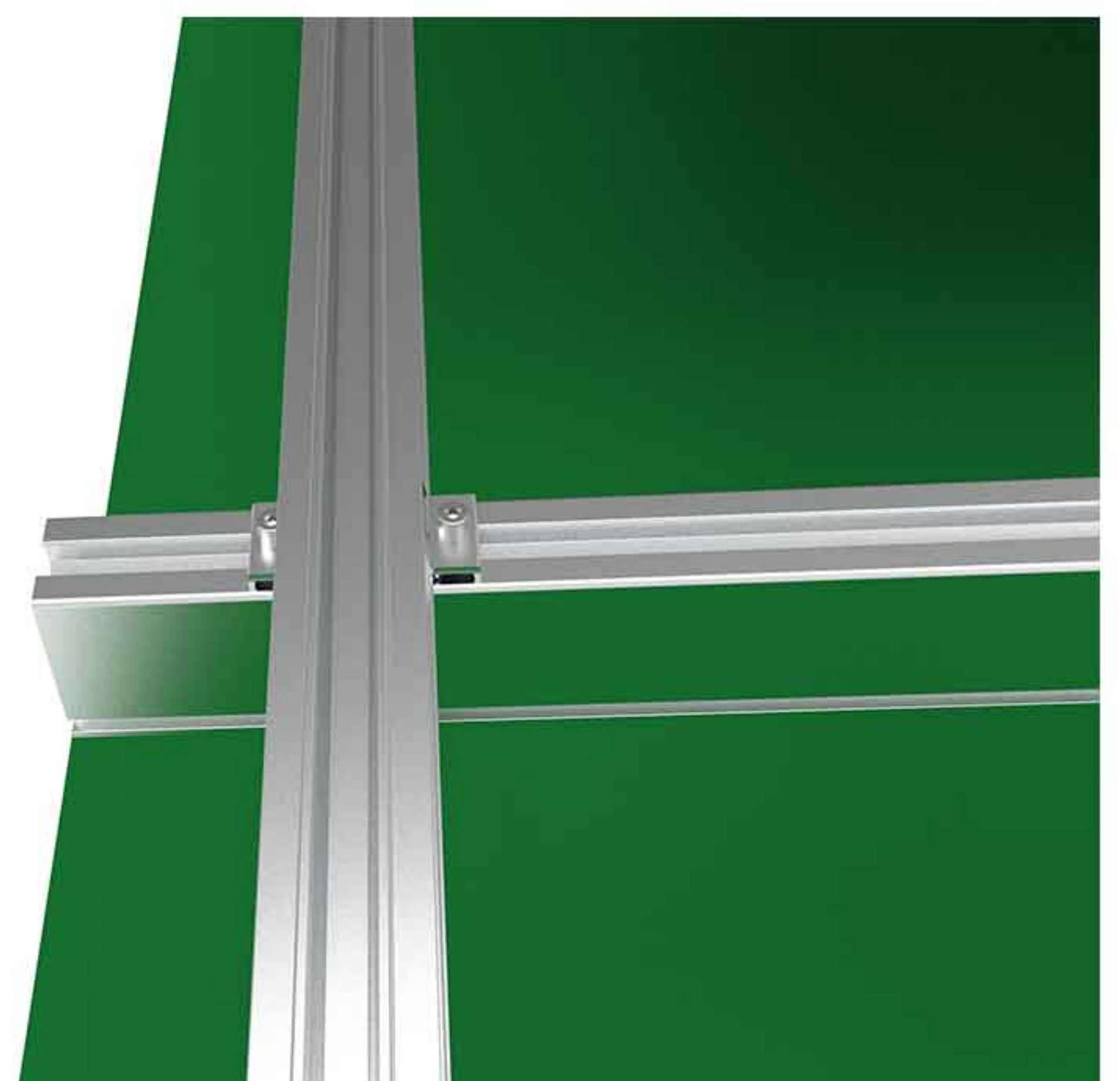
Step 4



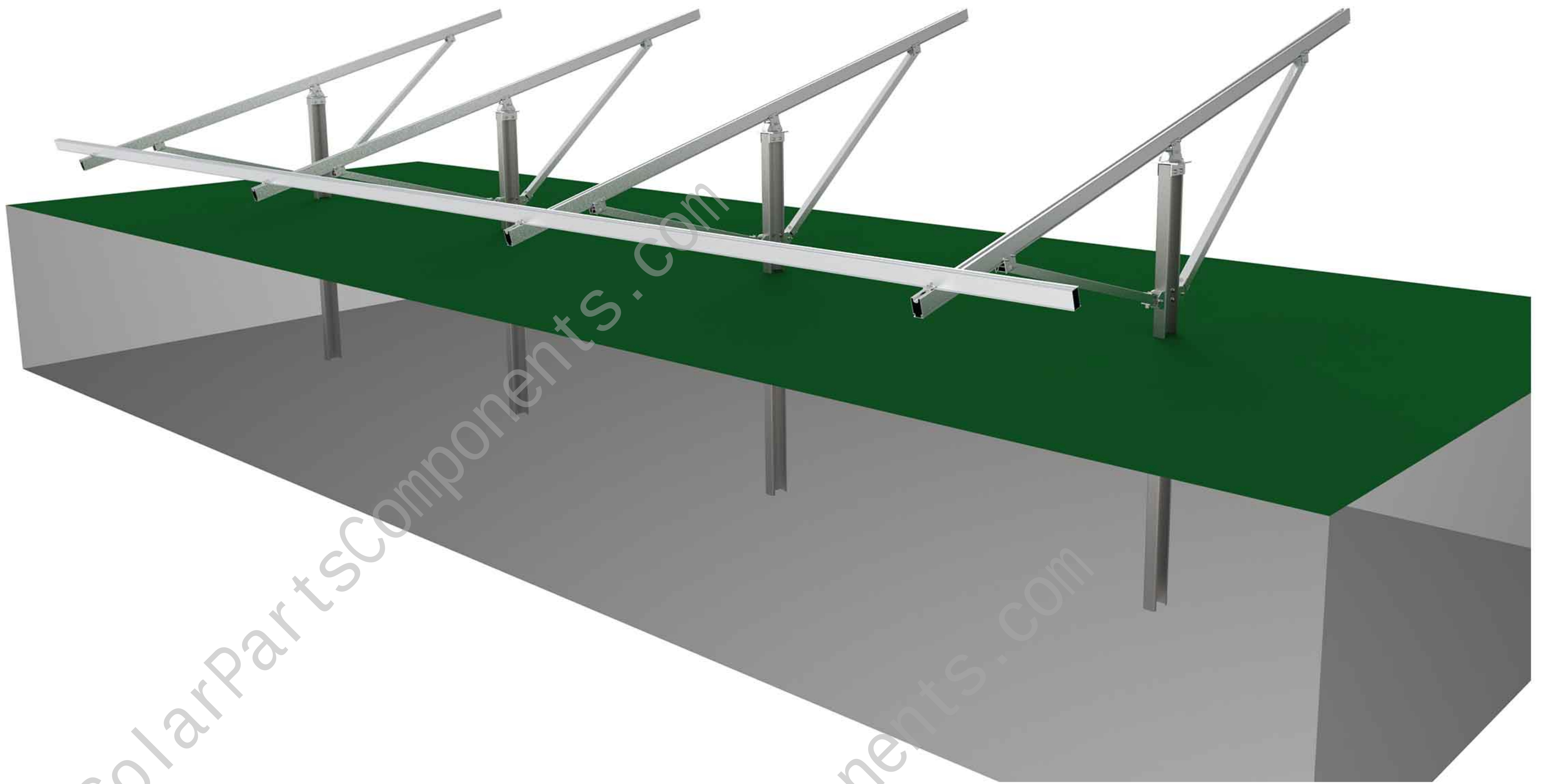
Step 5



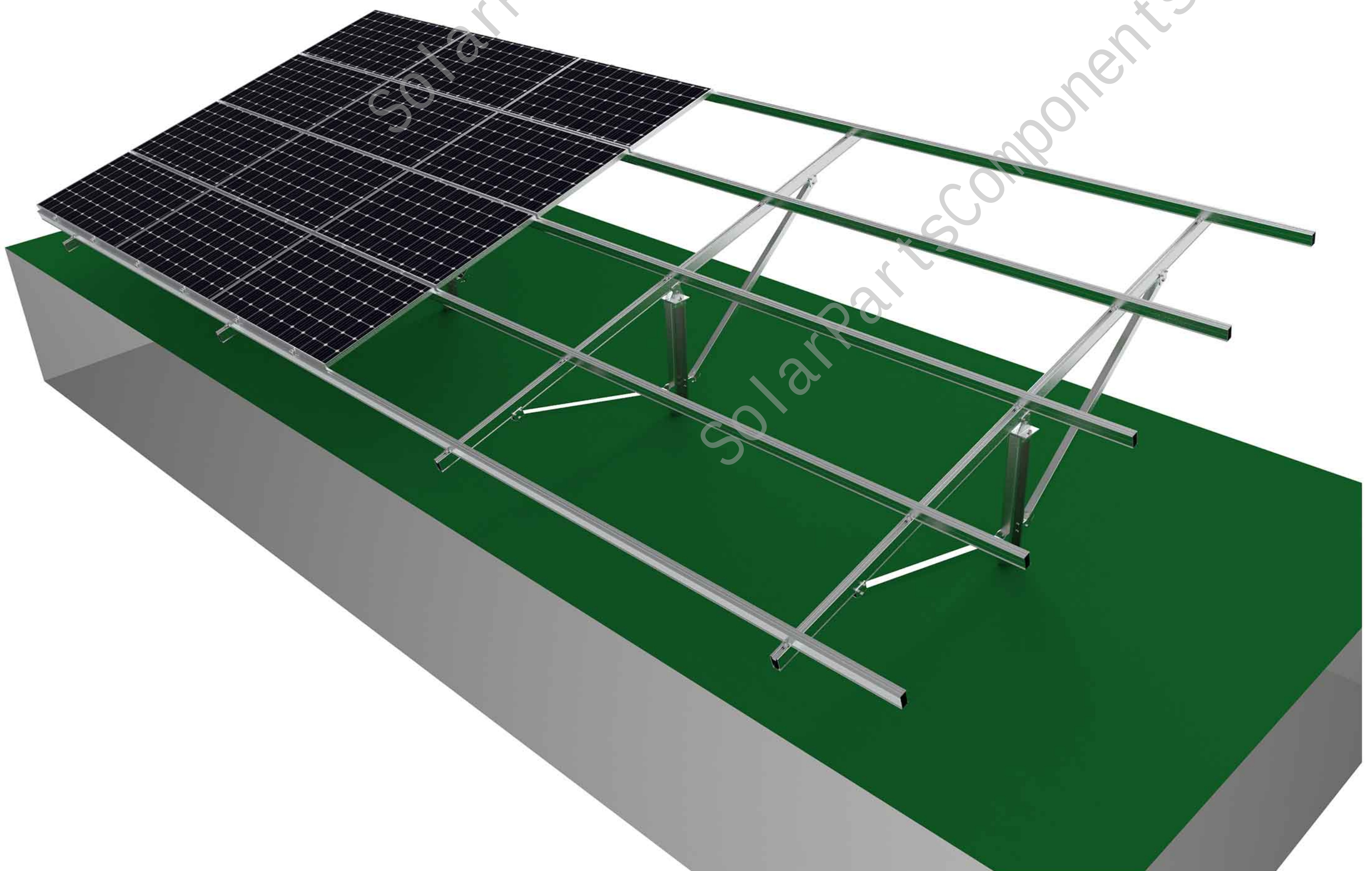
Step 6



After the beam is fixed, the following picture is shown:

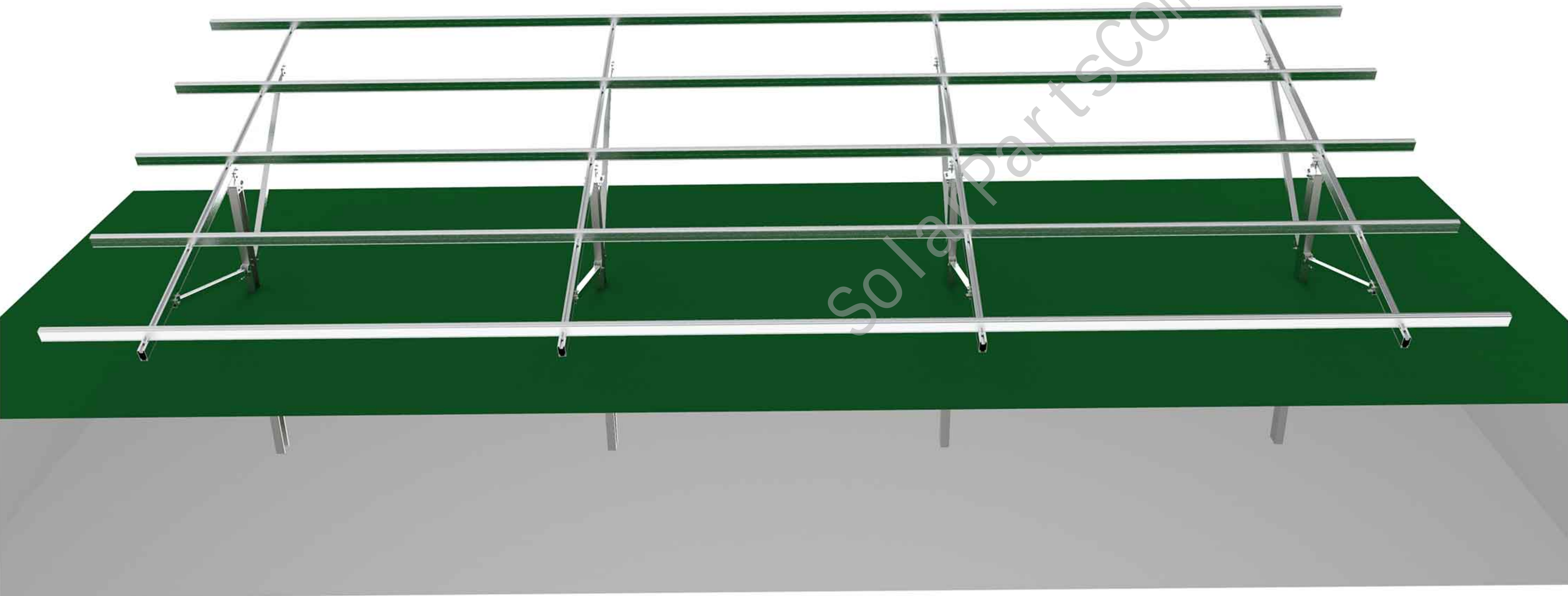
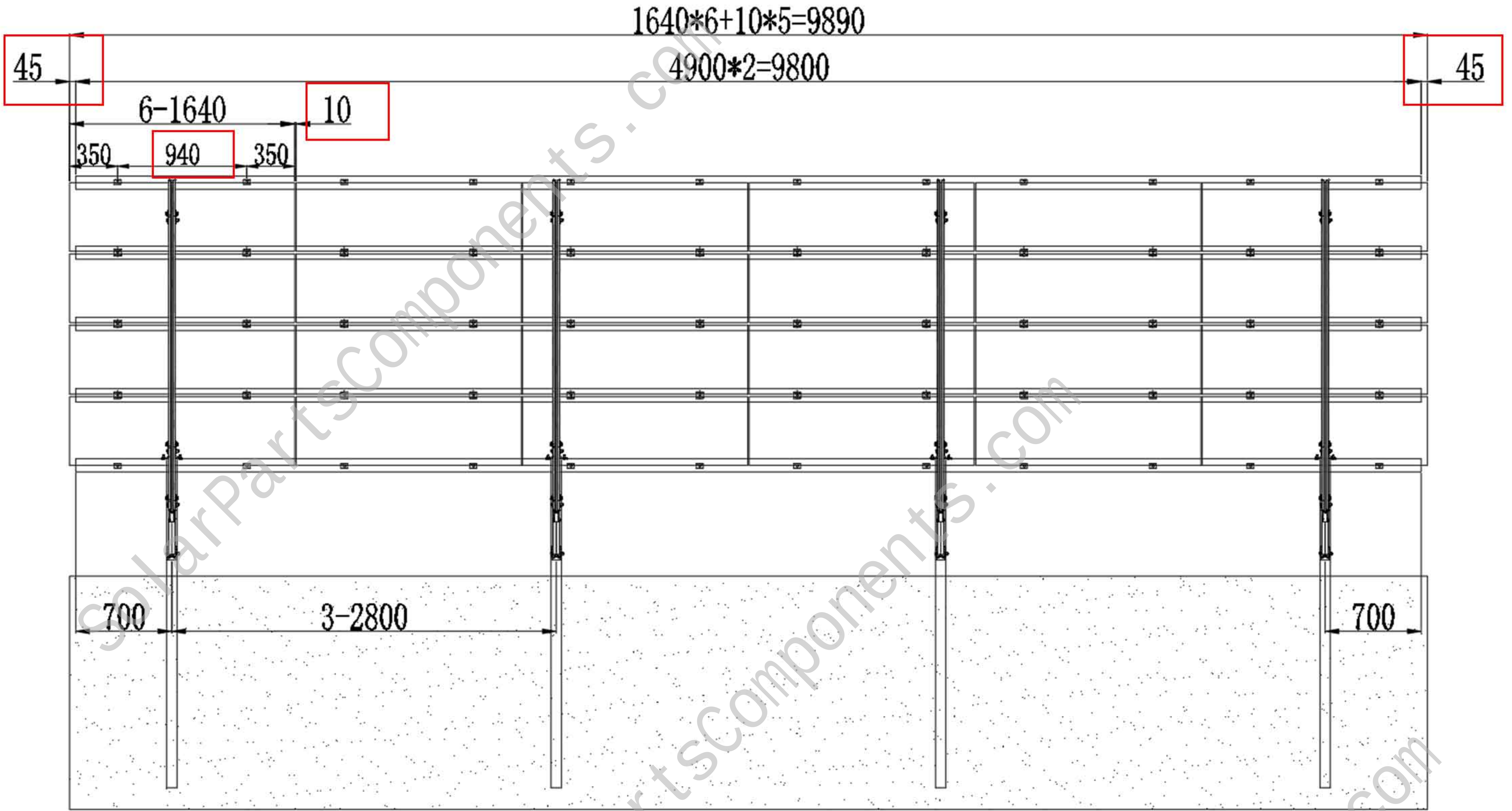


Fix the remaining 4 splicing rails on the purlins according to the above installation steps. After the installation is completed, the following picture is shown:



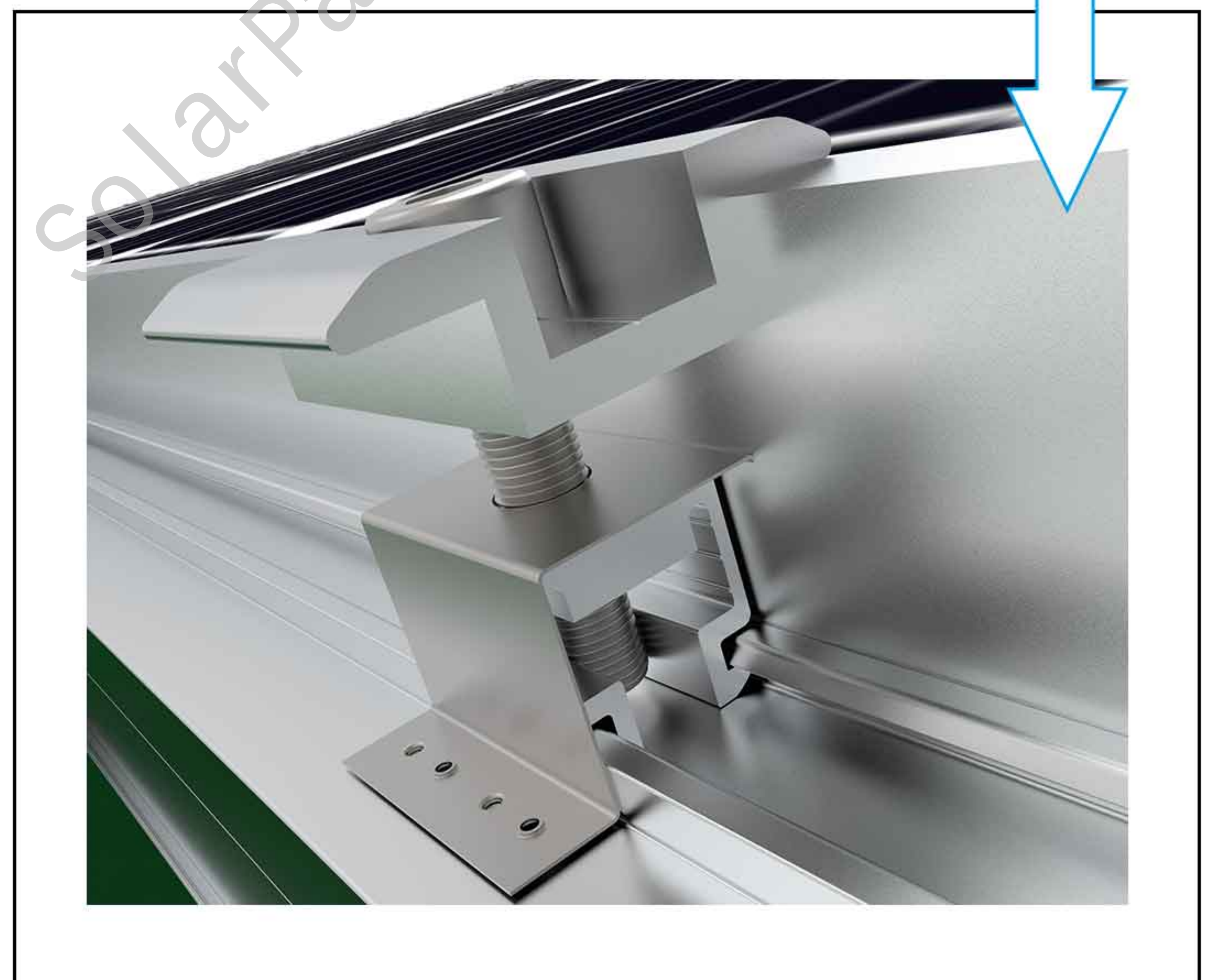
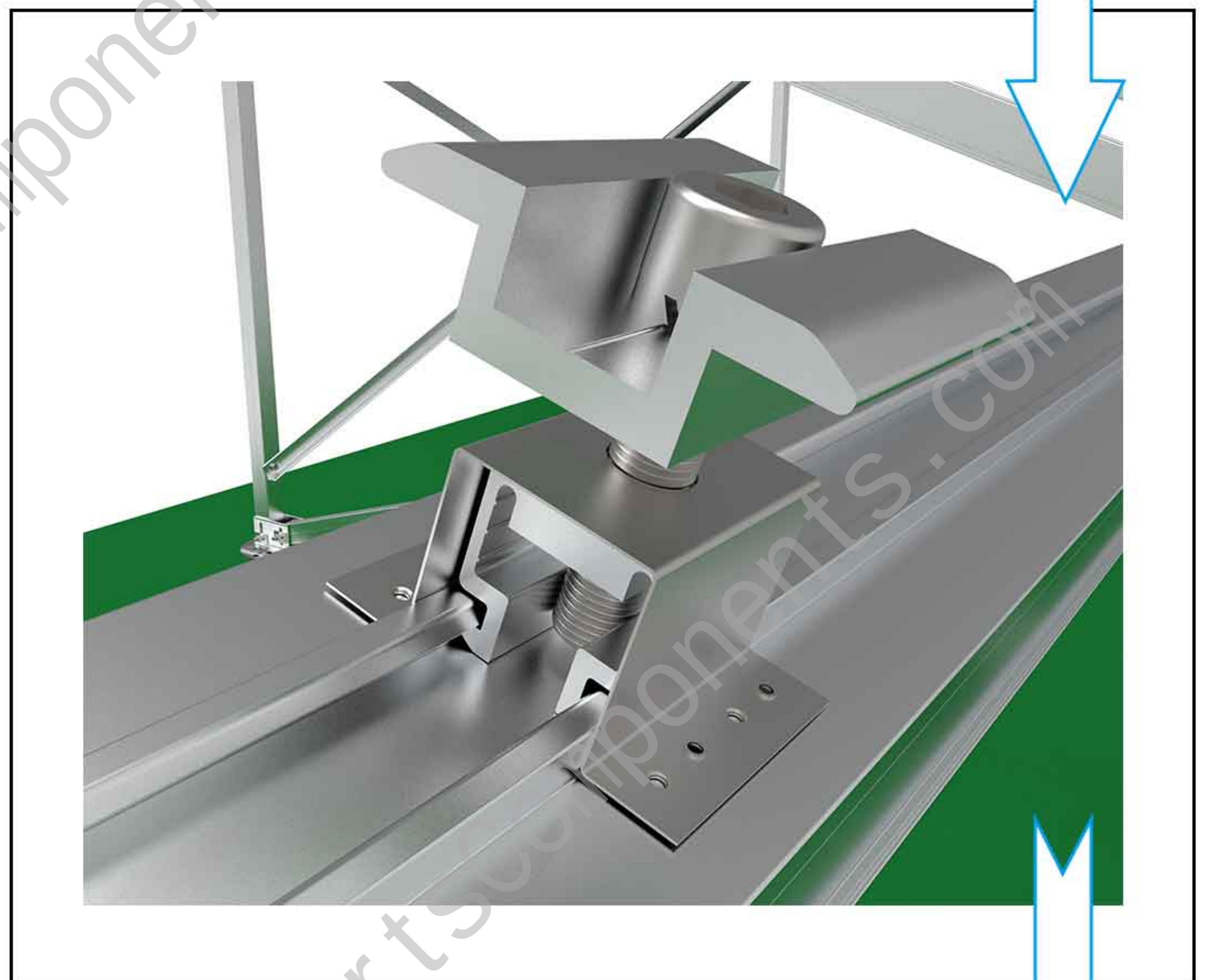
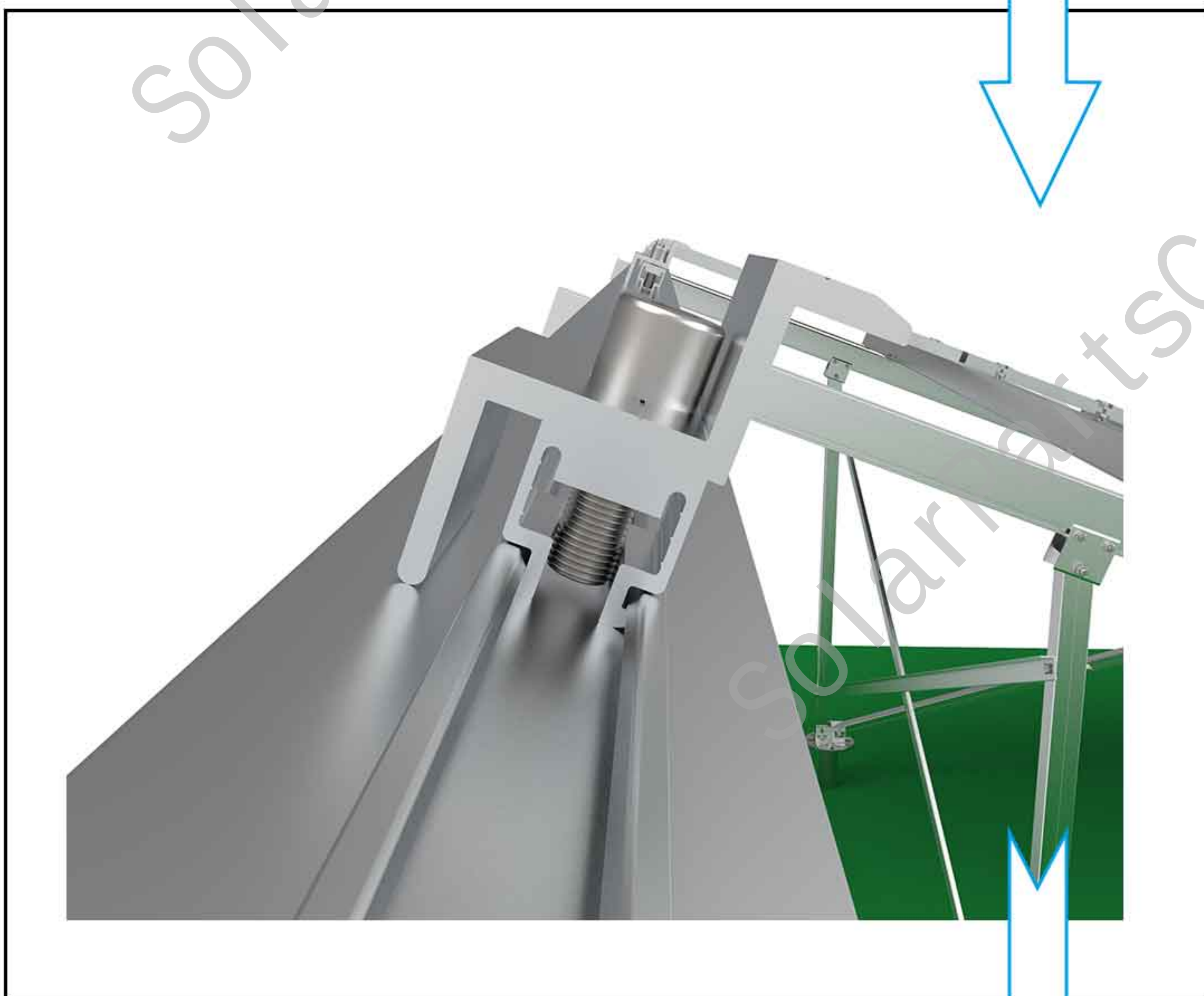
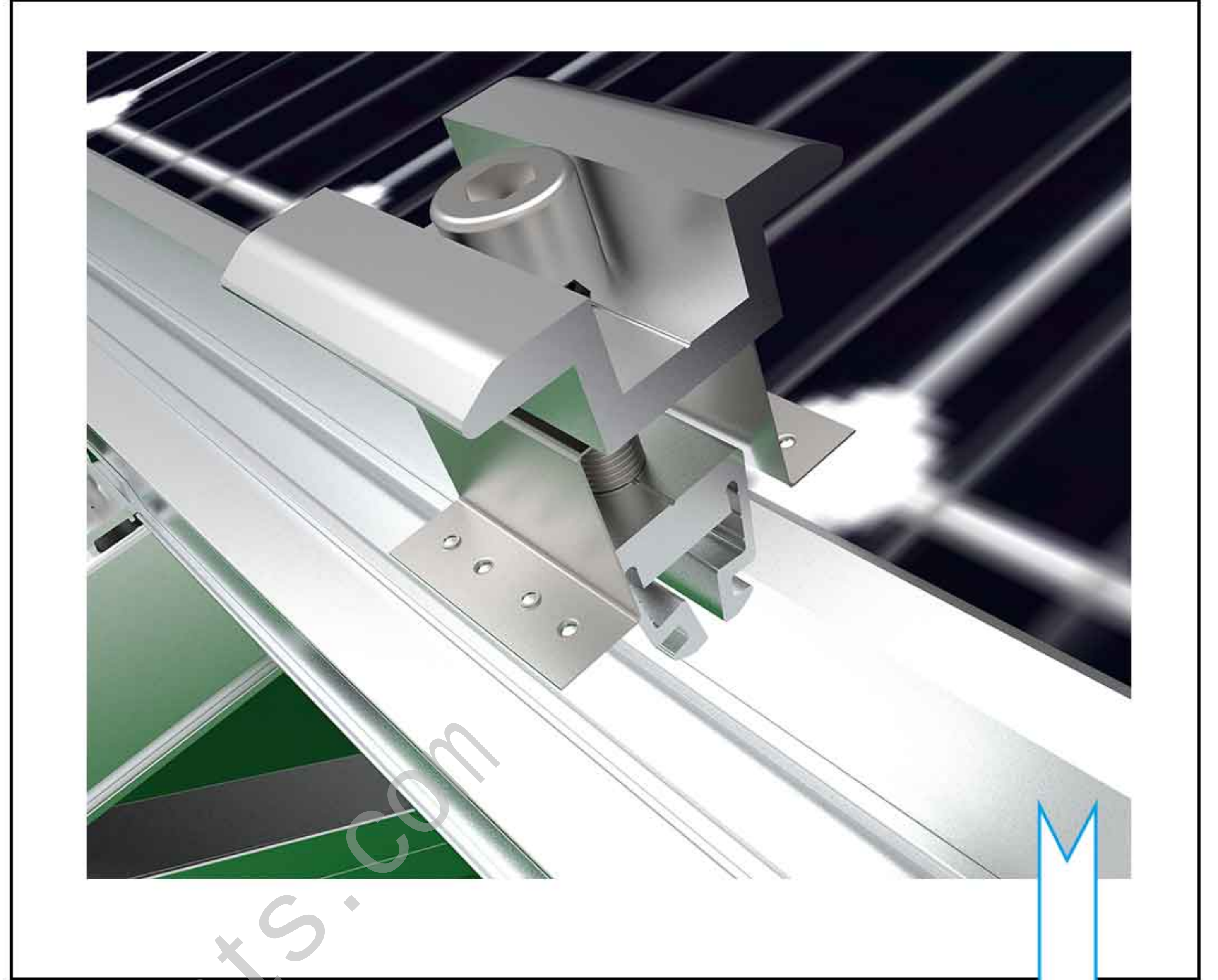
Step 7 install solar panels

According to the construction drawings, we can see that the solar panels are placed horizontally on the rail, from bottom to top, from right to left, or in the opposite direction. The solar panel frame on the outermost side exposes the rail 45mm, and the distance between the horizontal panels is 10mm. The position of the mid /end clamp is 940mm in the center, or adjust the position of the mid /end clamp according to the site



Step 8, Fix the solar panel with mid/end clamp

The solar panel is fixed by mid/end clamp, the two rails are fixed by end clamp, and the middle 3 rails are fixed by mid clamp . When installing, you only need to press the mid/end clamp to the side so that the block is locked into the groove of the beam, without sliding in from the side of the rail. There is a grounding clip on the mid clamp. The grounding clip needs to be pressed between the rail and the panel, and the bumps on the grounding clip can pierce the surface of the rail to conduct electricity.





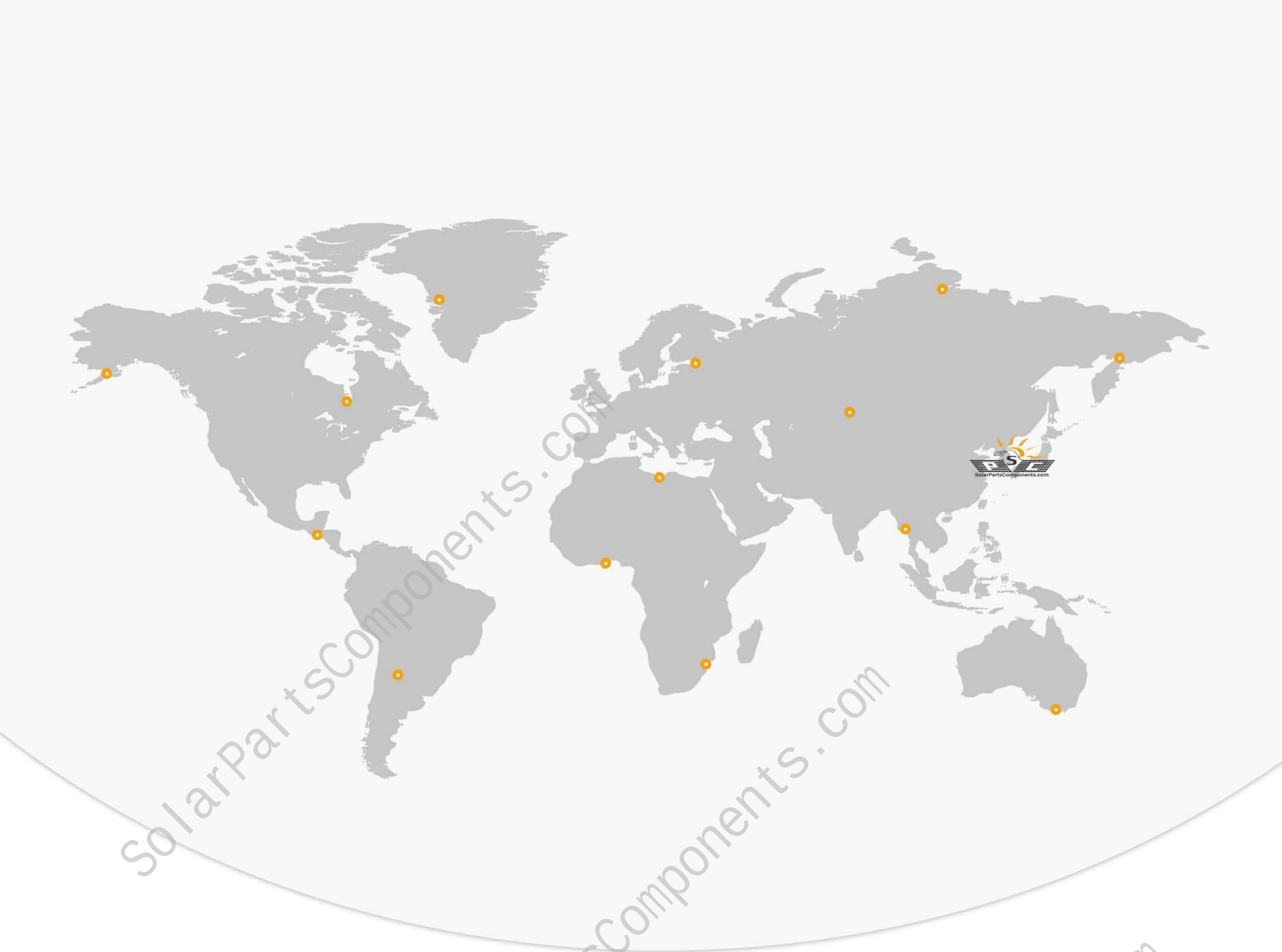
Step 9, Fix the grounding clip

Use self-tapping screws to fix the grounding clip on the bottom of the rail, install one on each beam, and install each grounding clip in the same position. Then pass the copper wire through all the grounding clips, tighten the M6 bolts on the side of the grounding clip, fix the copper wire on the grounding clip, and finally lead the copper wire into the ground



After the overall installation is complete, as shown below





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