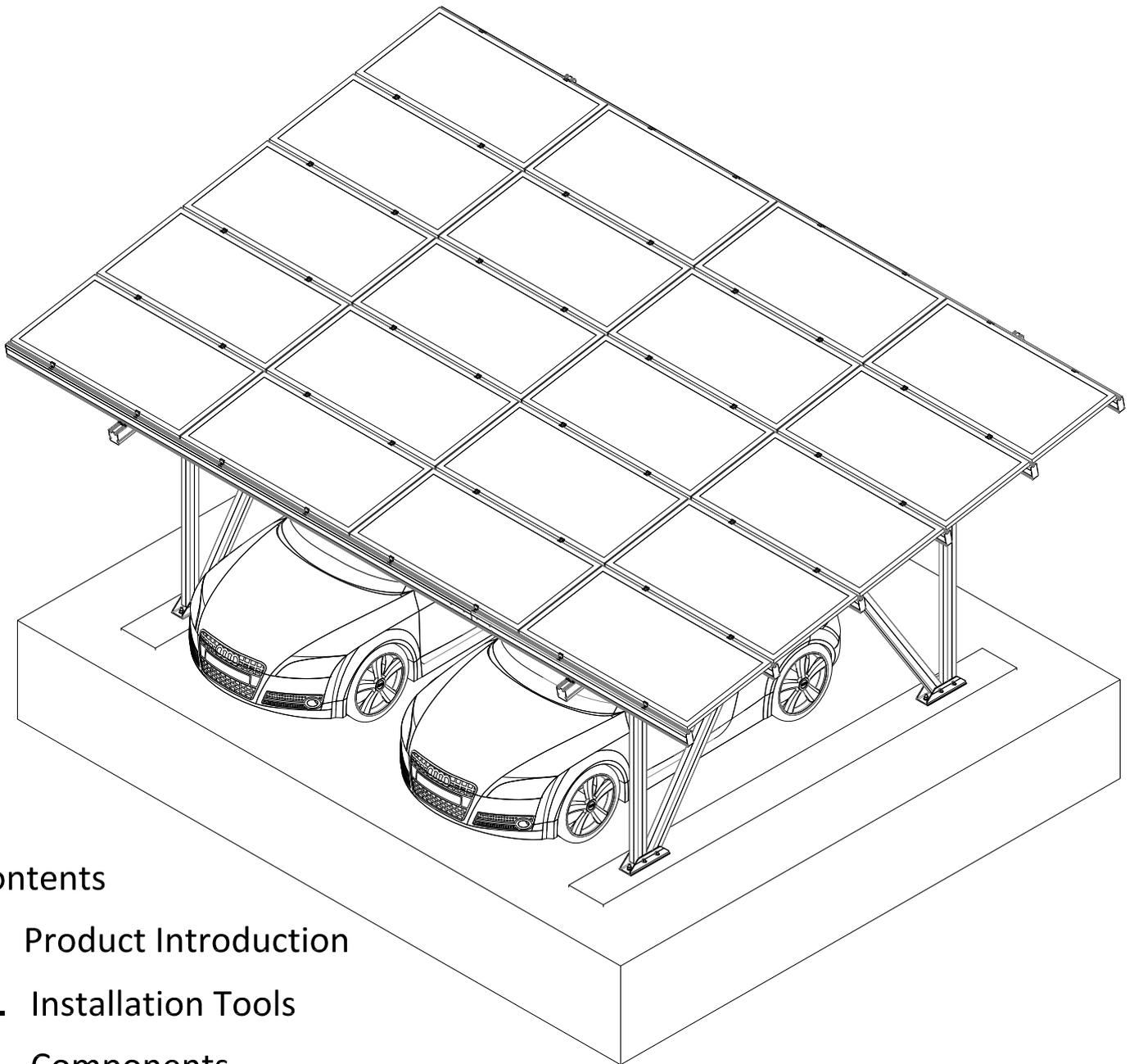


# Solar Carport **iBPC GmbH** System

## Installationshinweise

### Installation Manual V1.2



#### Contents

- 1 . Product Introduction
- 2 . Installation Tools
- 3 . Components
- 4 . Installation Instructions
- 5 . Notice
- 6 . Warranty Clause

# 1.Introduction

Carport Solution is an all-aluminium mounting system based on concrete foundation, which applies to large-scaled commercial and multi-functional installation as well as different kinds of PV modules. The innovative and unique T rail simplifies installation and increases precision, saving time and cost greatly.

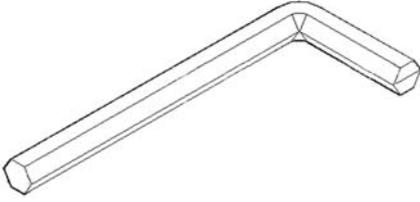
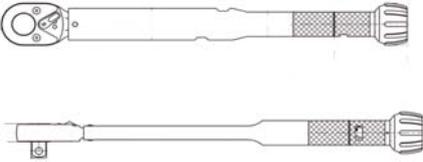
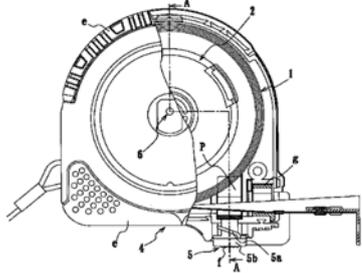
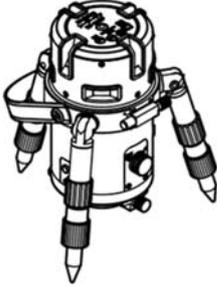
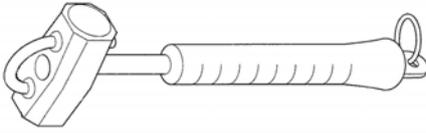
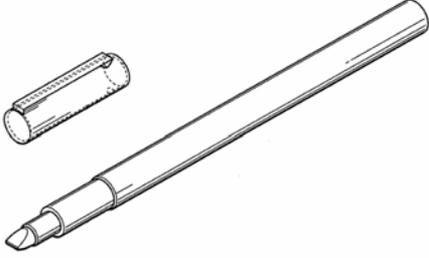
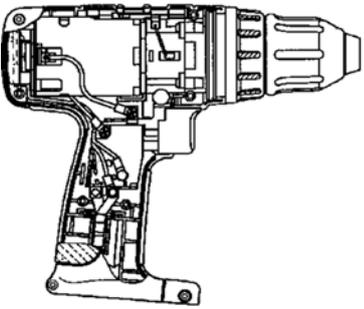
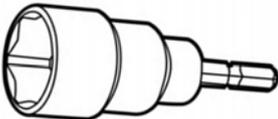
Please read carefully the Installation Manual(including Carport designing and installation manual) before starting installation work.

Install in strict accordance with the Installation Manual will meet the demand of product structure and comply with standard code. All installation work should be carried under relevant safety regulations and other local regulations. Please contact local agents to make sure that the Installation Manual you hold is the latest one.

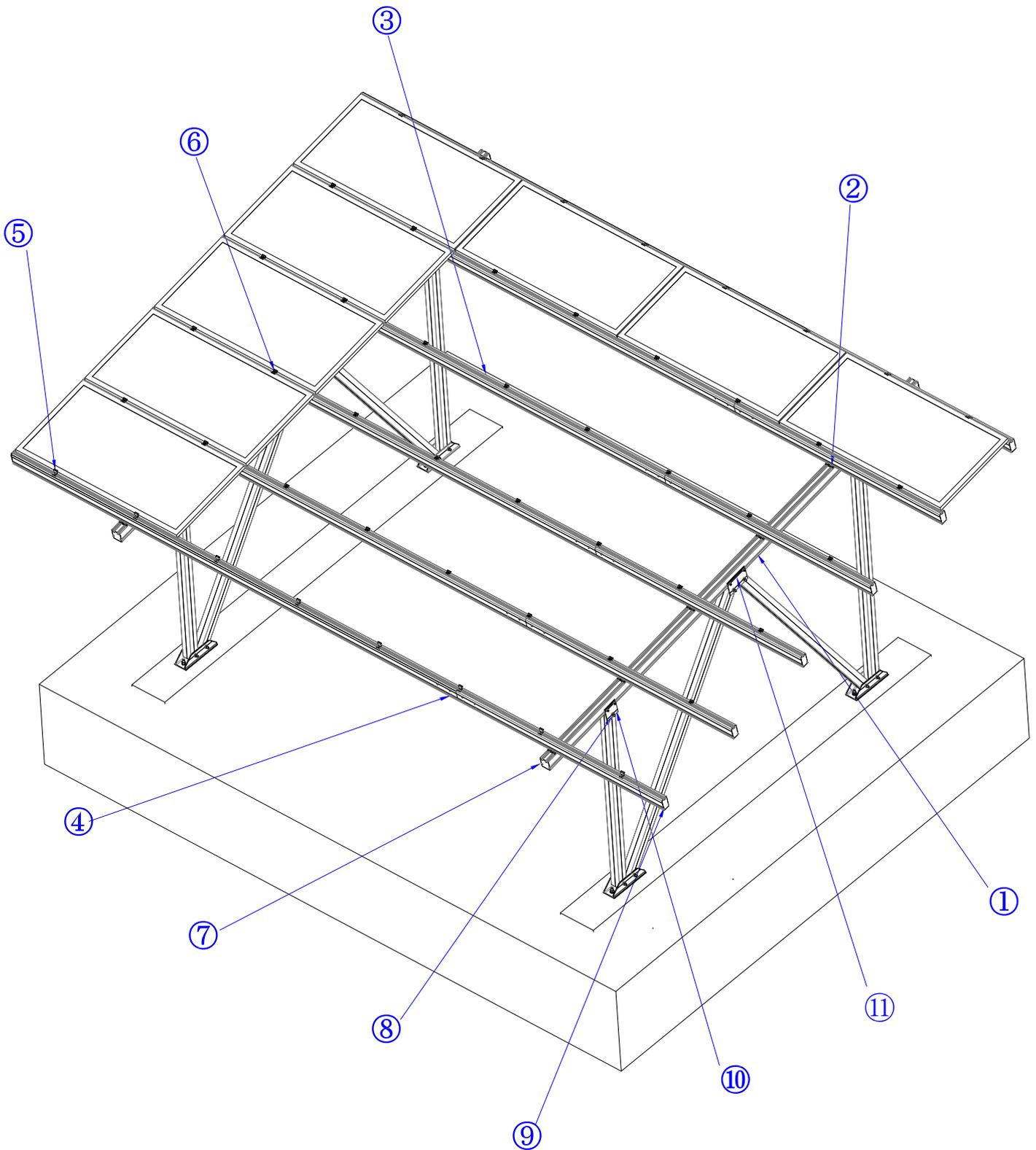
Installers should obey the following practice code:

- Comply with local building regulations;
- Make sure that products can work under specific on-site environment;
- Please use accessories offers(suppose any other brand's accessories are applied, we would take no responsibility);
- Obey local regulations about recycling;
- Disassembling should be guided by corresponding installation steps;
- At least two professional installers are required;
- Make sure electrical equipment is installed by professional electrician;
- Ensure the safe installation of all electrical components;

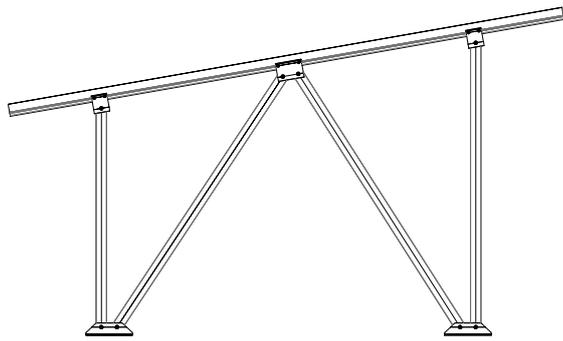
## 2. Installation Tools

		
<p>Hexagon Wrench</p>	<p>Cocket Wrench</p>	<p>Measuring Tape</p>
		
<p>Laser Leveler</p>	<p>Mallet</p>	<p>Mark Pen</p>
		
<p>Power Tool</p>	<p>Sleeve</p>	

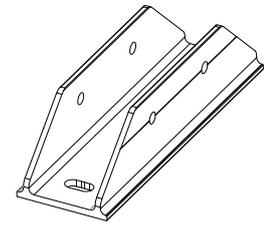
### 3. System Components



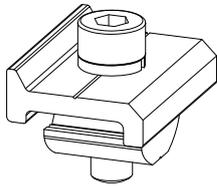
# 33. System Components



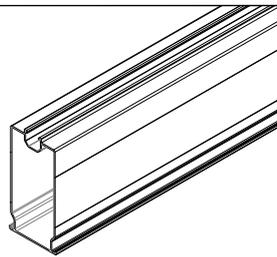
01 CP Pre-assembled Support



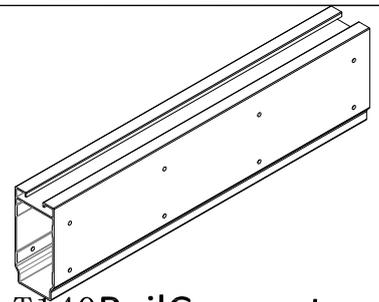
CP Basement



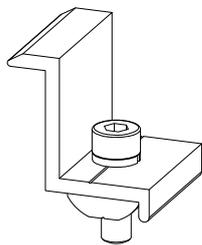
02 T Rail Clamp Kit



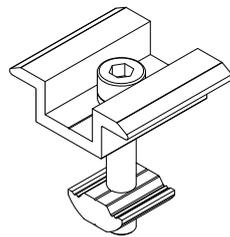
03 T140 Rail



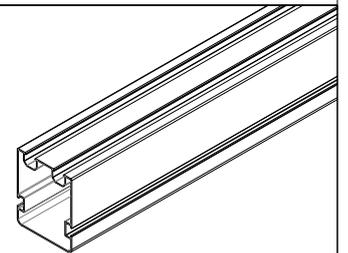
04 T140RailConnector



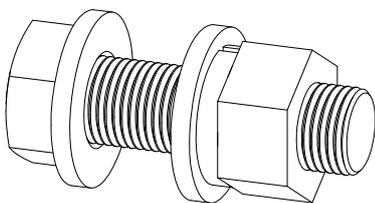
05 End Clamp Kit



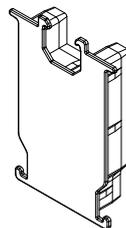
06 U25 Inter Clamp Kit



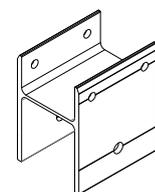
07 CP 120 Beam



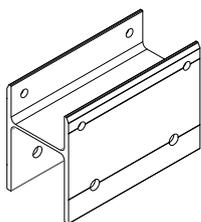
08 Hexagon Bolt M16\*150



09 T140 Rail Cap



10 H100 Rear Joint (back)



11 H100 Rear Joint (front)

12

# 4. Installation Instruction

## ■ 4.1 Foundation Installation (Concrete Base)

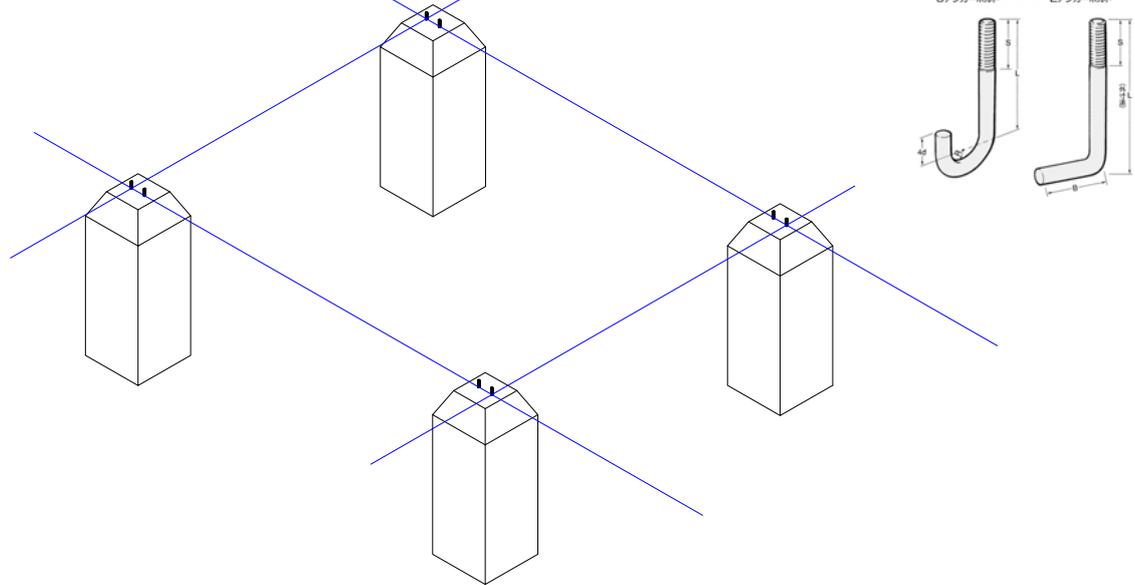
### ◎Pre-burying L Type Foundation Bolt

Flattening ground and marking concrete base position according to drawing;

Installing concrete model, pouring concrete and burying L type embedded bolt;

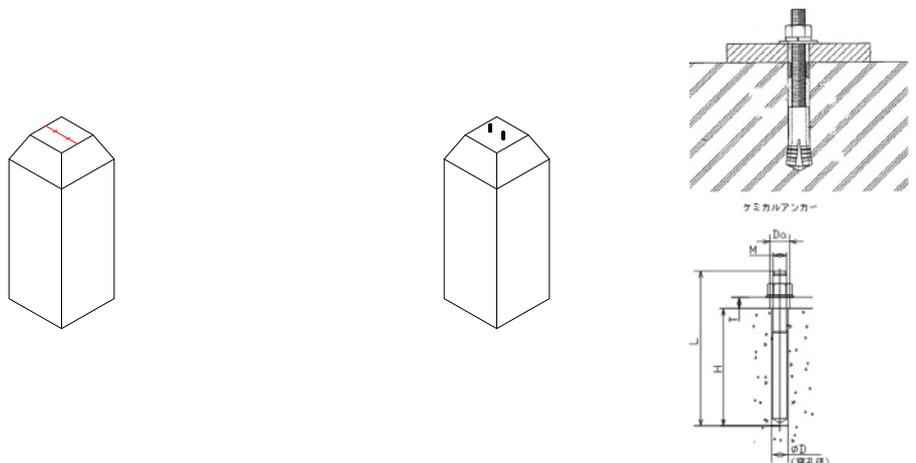
Moving model after concrete becomes hard;

※Remark:Make sure the size of concrete is enough to bear carport bracket.



### ◎Installing Expansion or Chemical Bolt

Measuring bolt hole position after concrete foundation is hard and then installing expansion or chemical bolt if the embedded bolts are not used while pouring concrete.

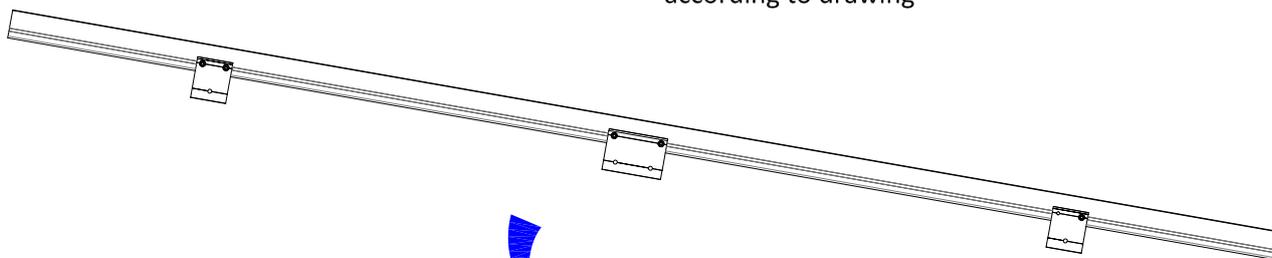


# 4. Installation Instruction

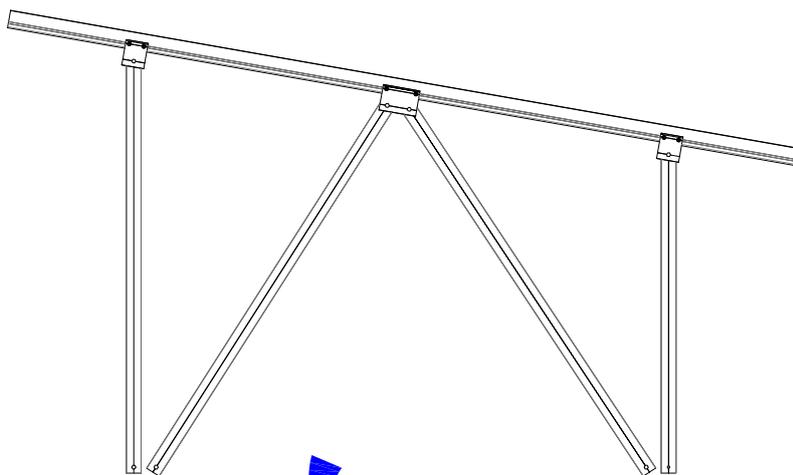
## ■4.2.1 Pre-assembled Support Installation

### ◎Installing pre-assembled support

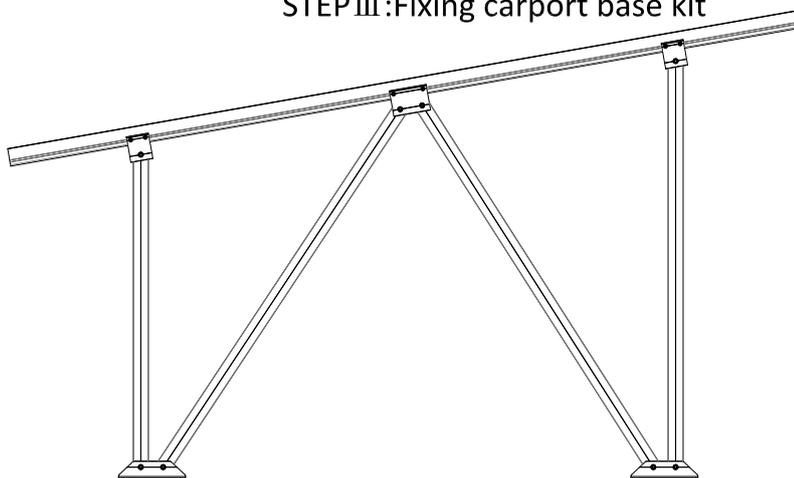
STEP I :Fixing joint on girder with M12\*30 flange bolt  
according to drawing



STEP II :Fixing square tube on H100 joint with M16\*150 flange bolt



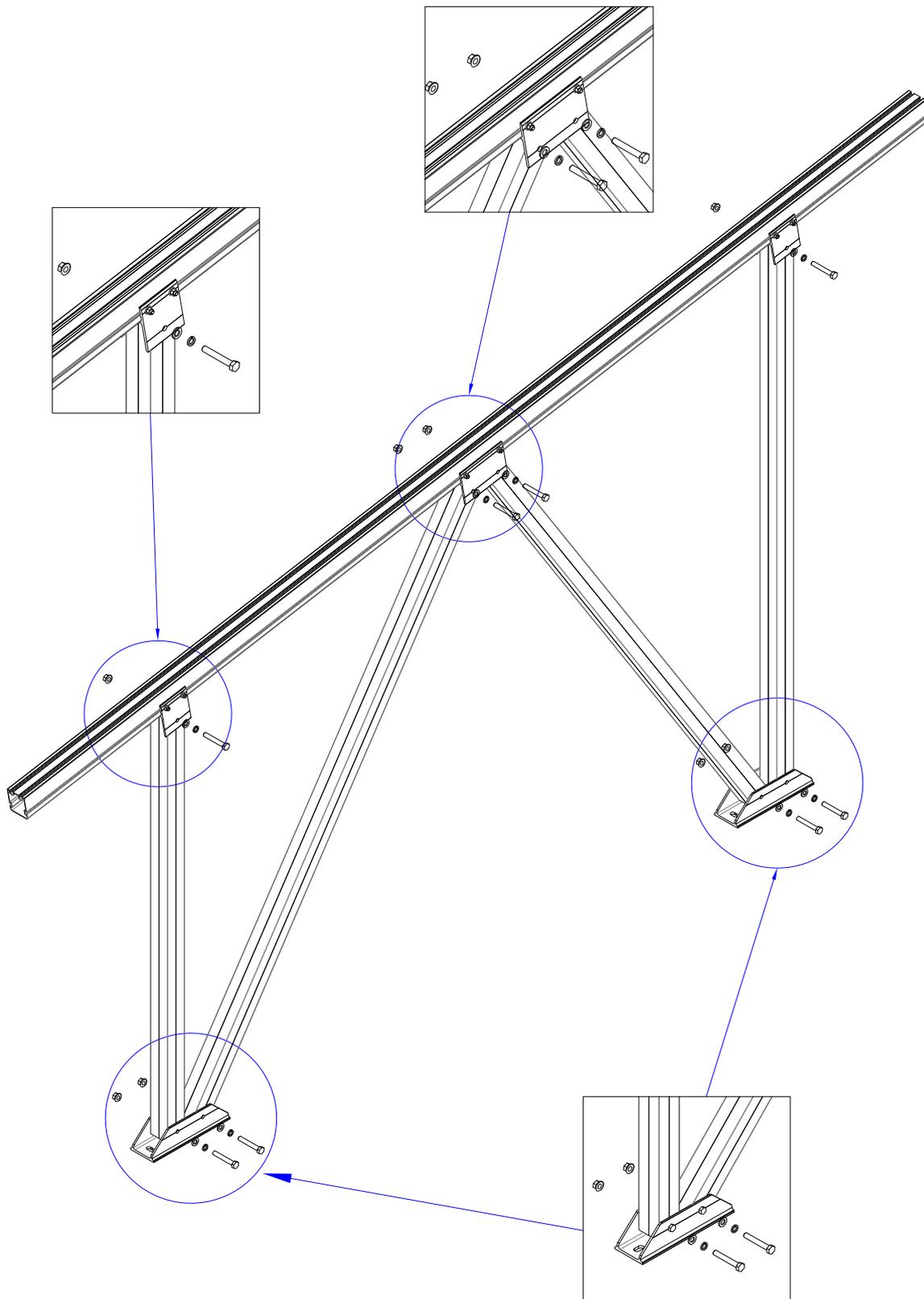
STEP III:Fixing carport base kit



# 4. Installation Instruction

## ■4.2.2 Pre-assembled Support Installation

### ◎ Installing pre-assembled support



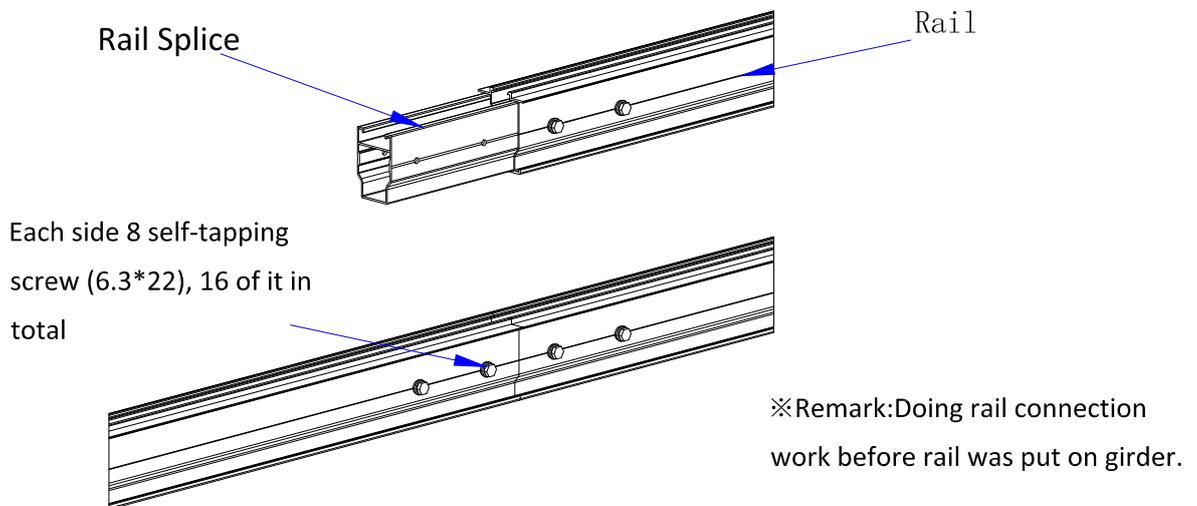
# 4. Installation Instruction

## ■4.3.1 Installing Rails

Checking the length of rail before installation. Using rail splice if the length is not enough.

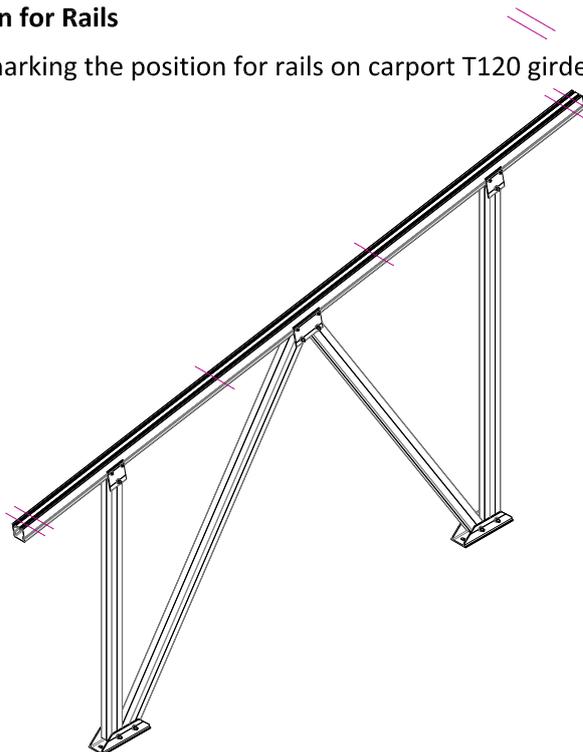
Installation of Rail Splice:

Inserting T rail splice into T rail and then locking with two self-tapping screws on both sides of T rail respectively. Then connecting another T rail in the same way.



### ◎Setting Position for Rails

Measuring and marking the position for rails on carport T120 girder according to drawing.



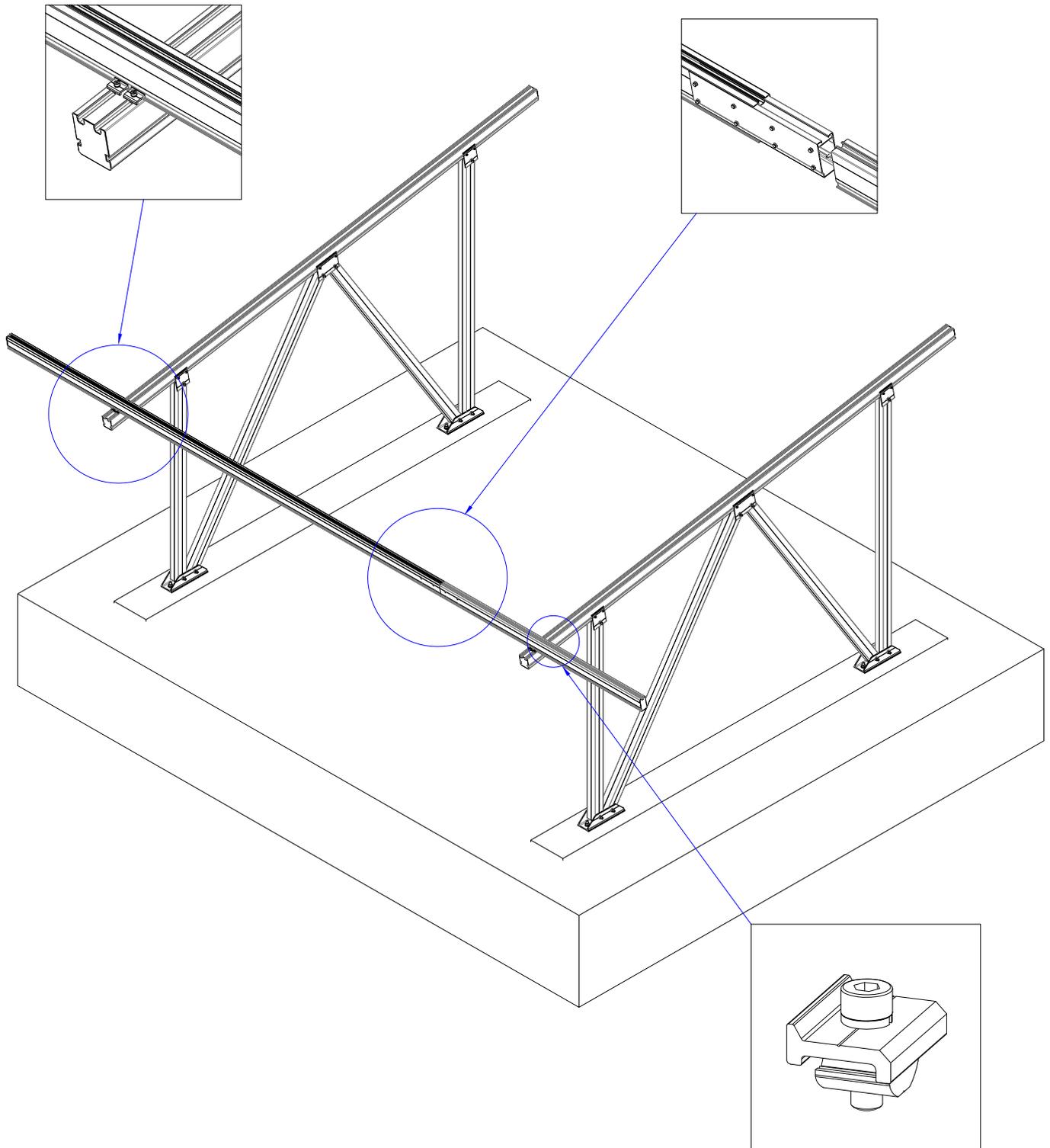
# 4. Installation Instruction

## ■ 4.3.2 Rail Installation

### ◎ Fixing Rails

Putting T rail on carport T120 girder and adjusting the length of overhung. Then Fixing rail on girder with rail clamps.

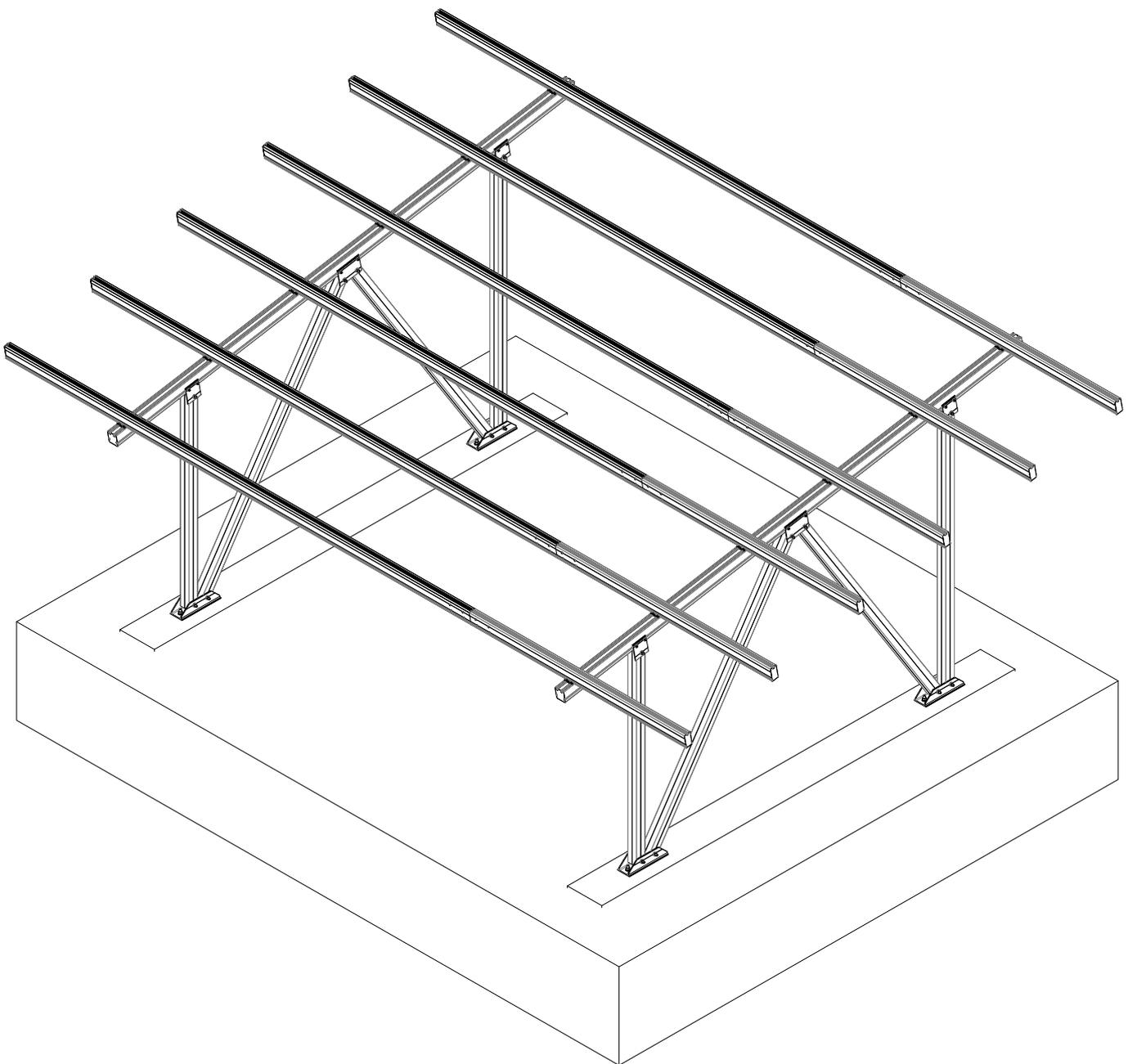
Remark: Both sides of rail need two rail clamps respectively.



## 4. Installation Instruction

### ■4.3.3 Rail Installation

© Finishing installation of the rest T rail (aligning the end of rails as flat as possible).

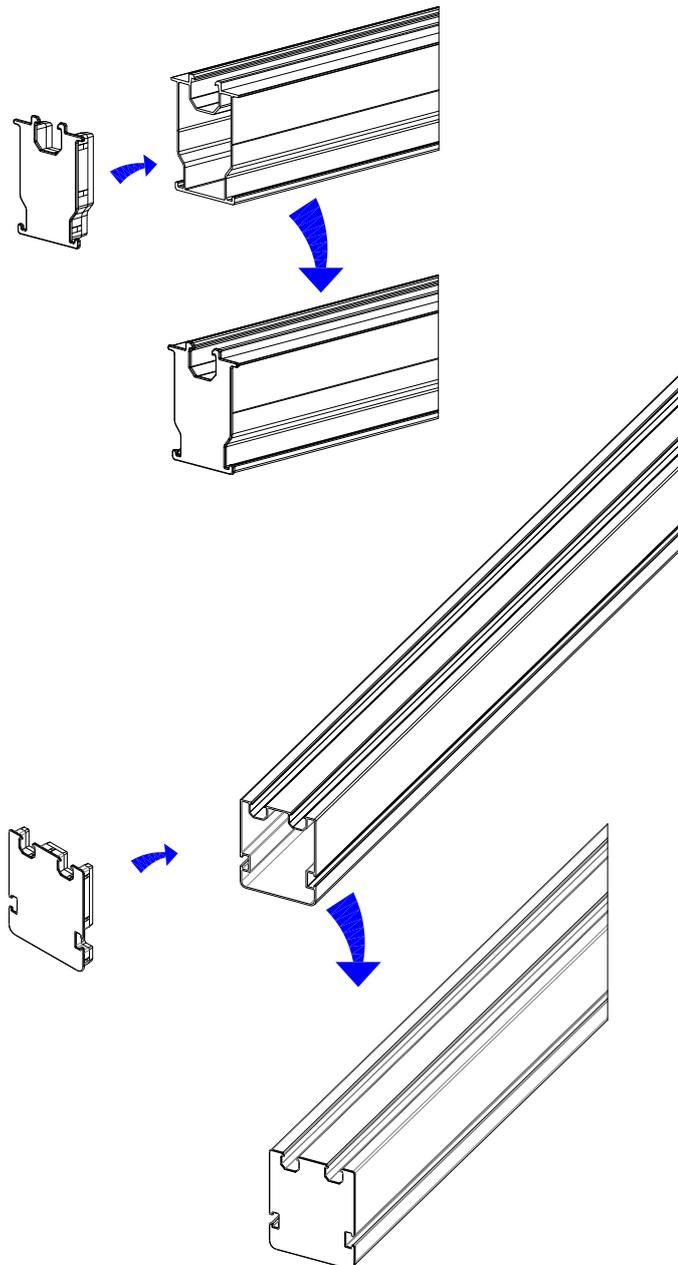


## 4. Installation Instruction

### ■ 4.3.4 Rail Installation

#### © Installing Cap

Installing cap on both ends of rails after rail installation

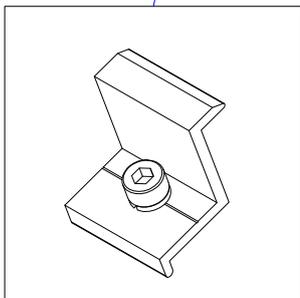
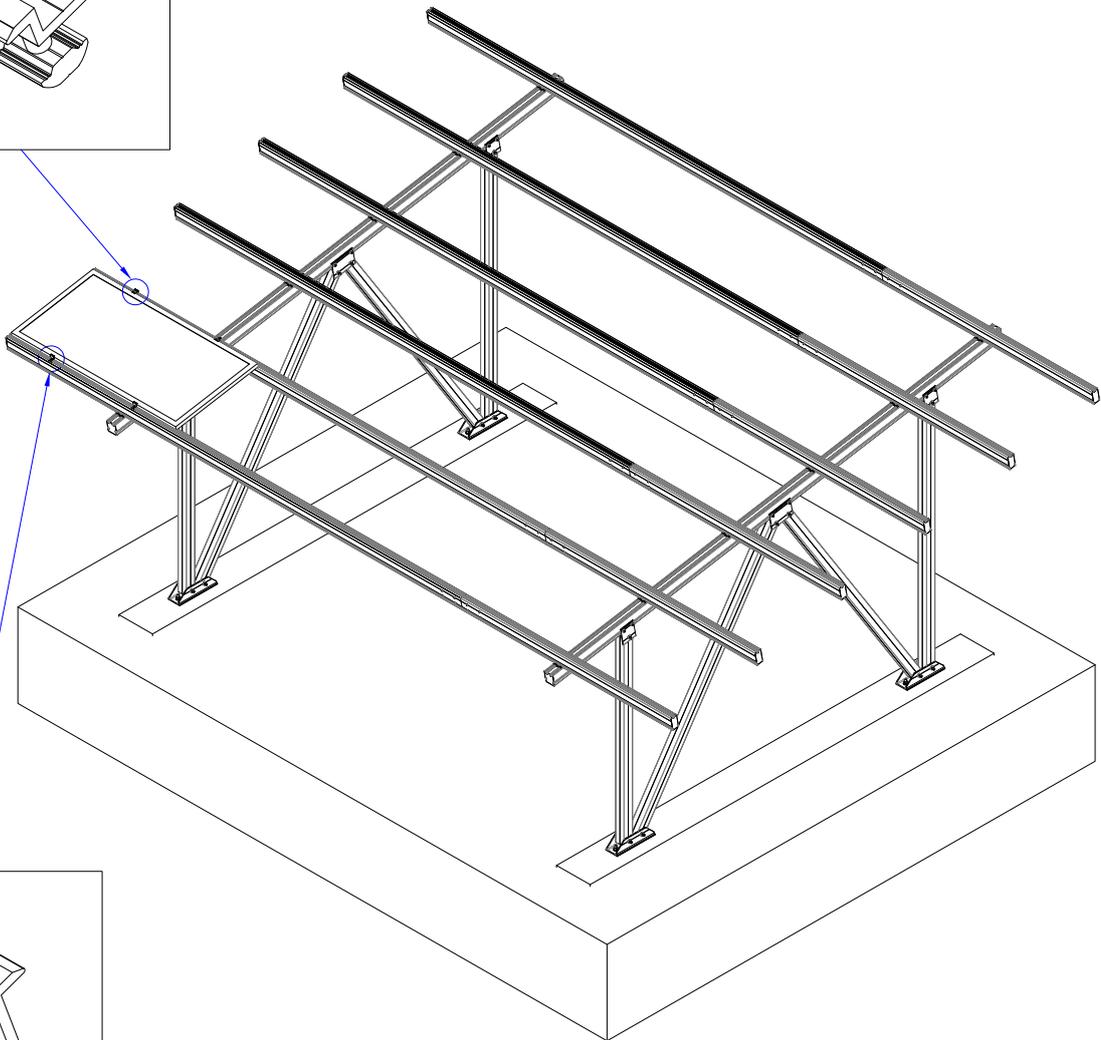
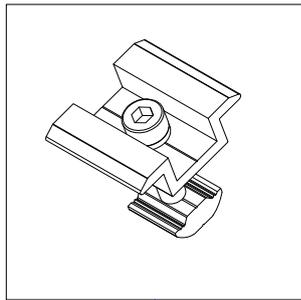


# 4. Installation Instruction

## ■4.4.1 Solar Panels Installation

### ◎Installing the first solar panel

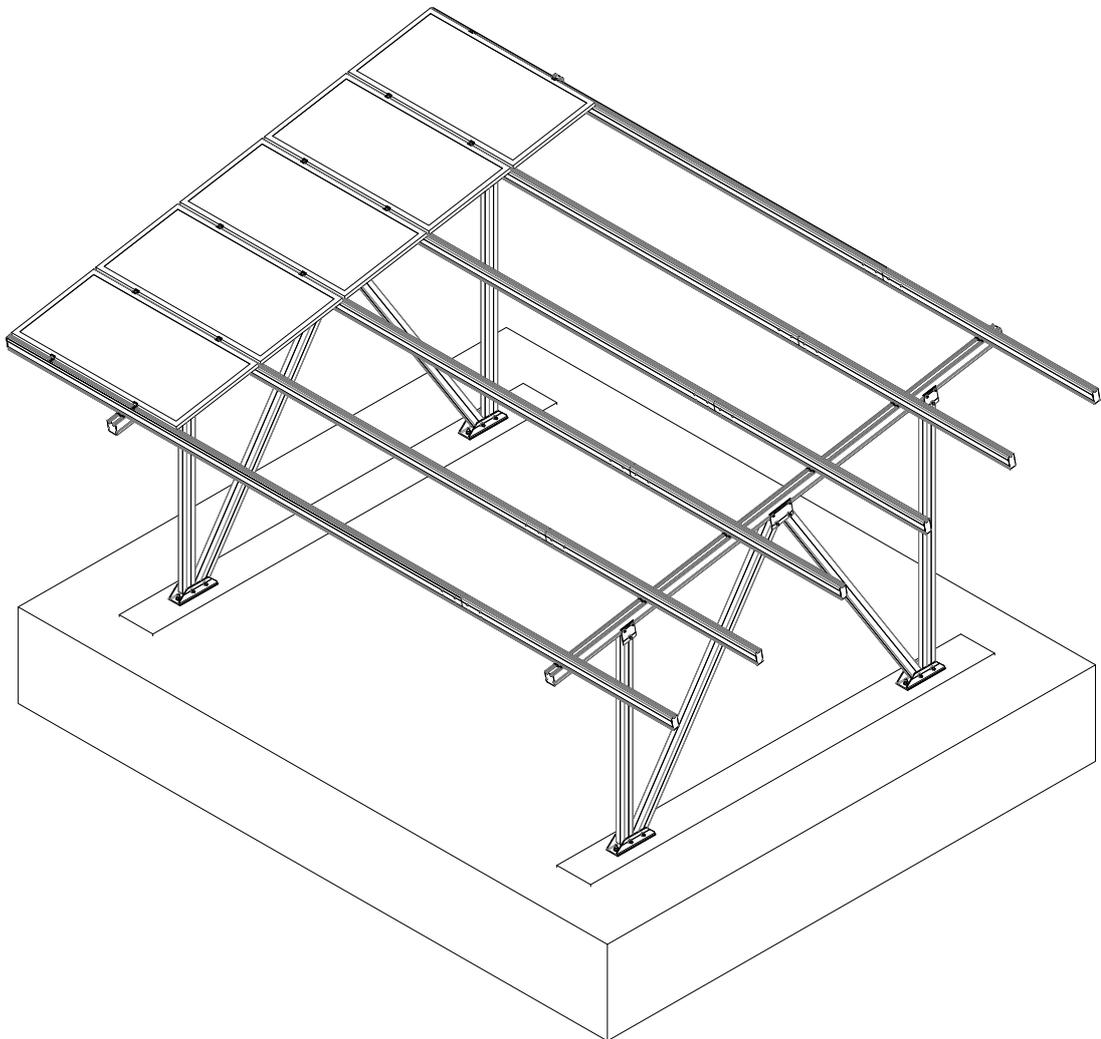
Placing the first panel of the first array on the right position according to drawing and fixing it on the rail with end clamp kits and inter clamp kits.



## 4. Installation Instruction

### ■4.4.2 Solar Panels Installation

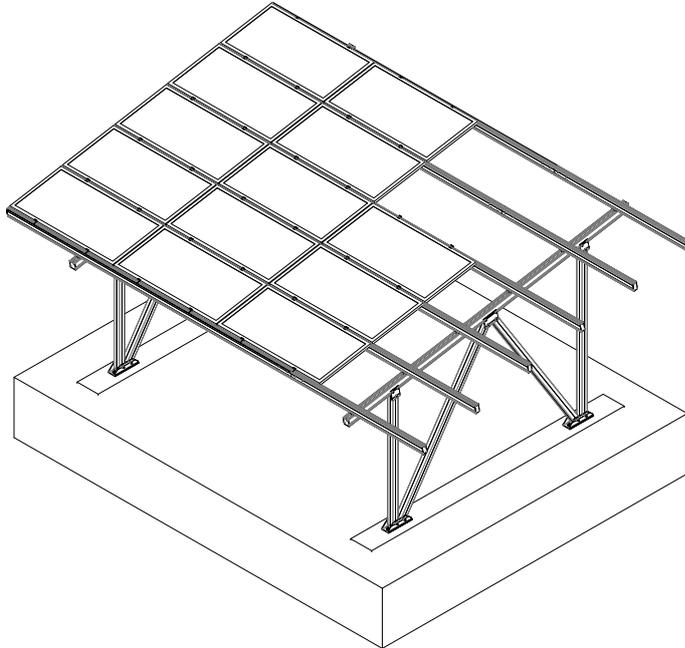
© Installing the rest panels of the first array in the same way. Leaving 20mm between contiguous panels.



## 4. Installation Instruction

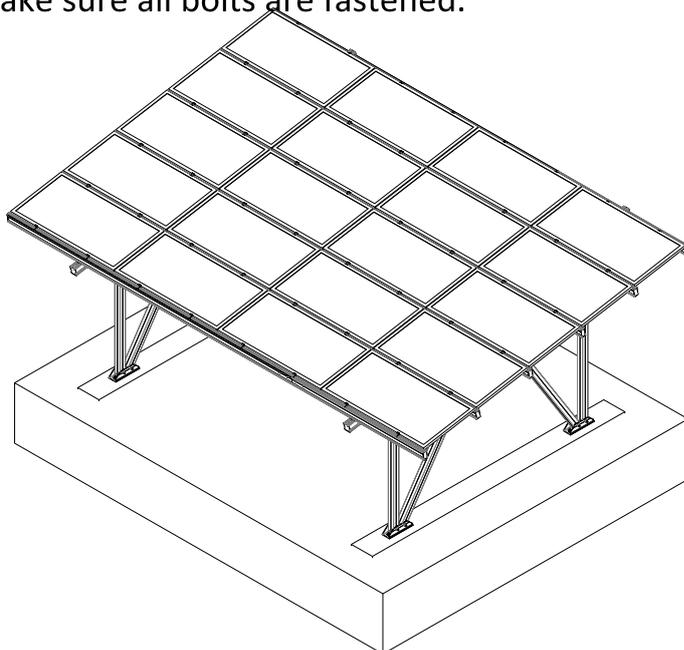
### ■ 4.4.3 Solar Panels Installation

© Installing the rest panels with the same steps.



※ Remark: Recommended panels installation order: from up to down and from left to right.

© Finally, make sure all bolts are fastened.



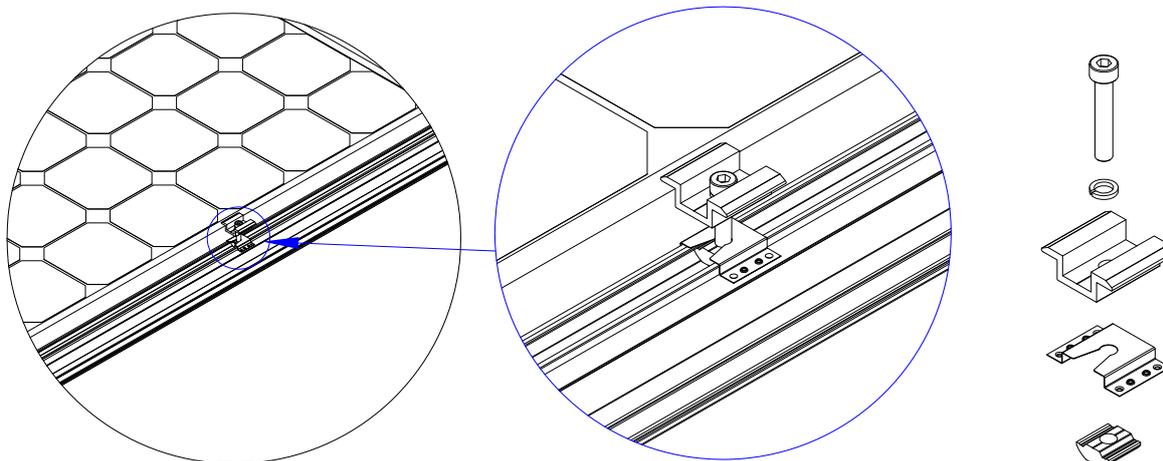
## 4. Installation Instruction

### ■4.5.1 Grounding System Installation

#### ◎Grounding Clip Installation

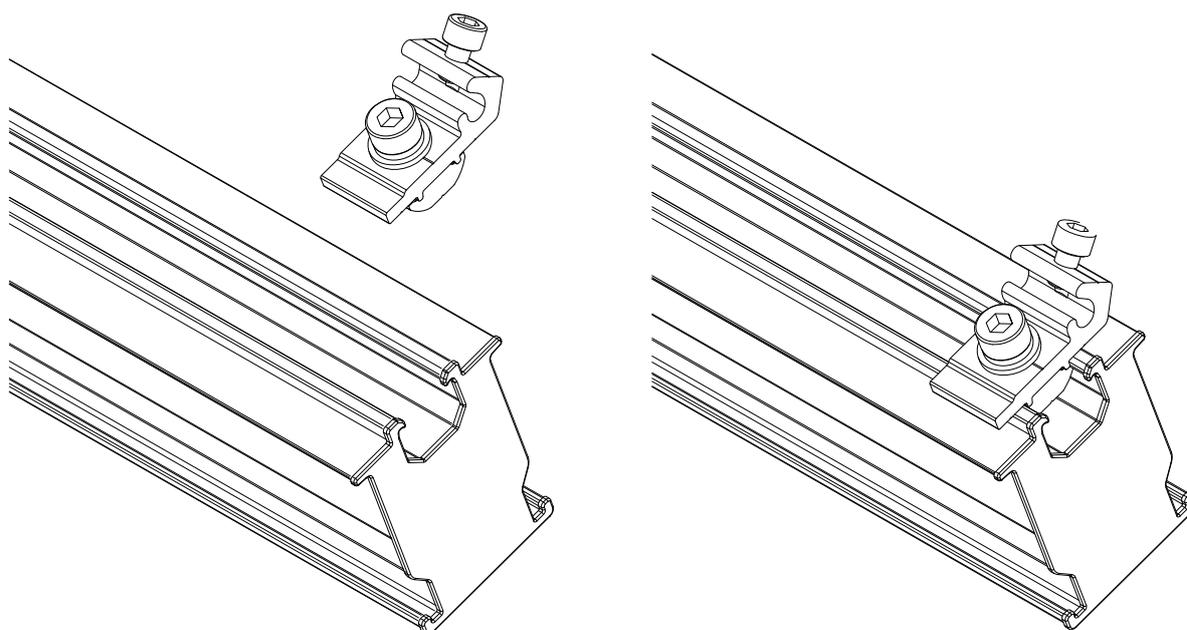
Putting grounding clip between inter clamp kit and nut, then fixing the set on rail as shown on picture.

Finally, fixing panels on it.



#### ◎Grounding Lug Installation

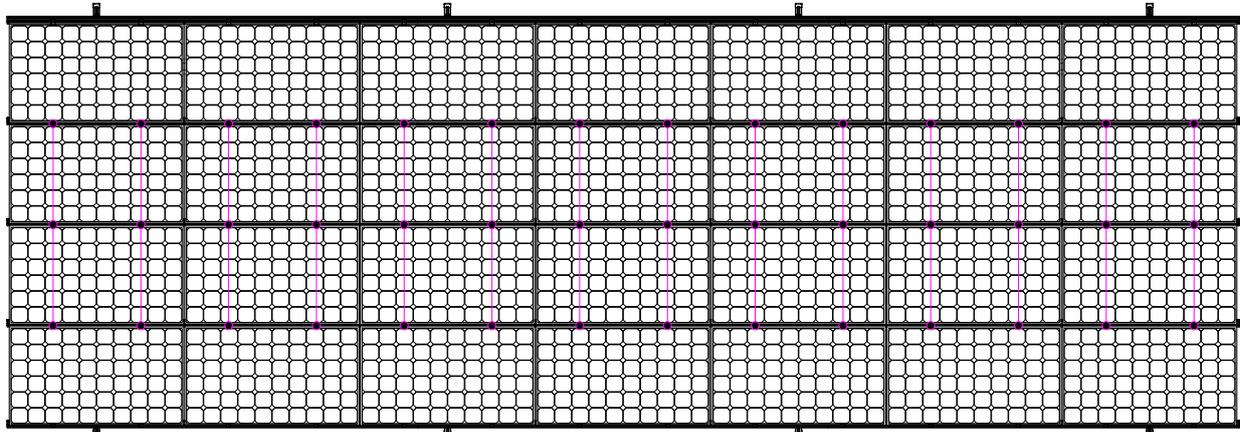
After finishing installing all panels, fixing grounding lug on the end of rail as shown on picture, connecting grounding lugs with copper strips and burying the end of copper strip in earth.



## 4. Installation Instruction

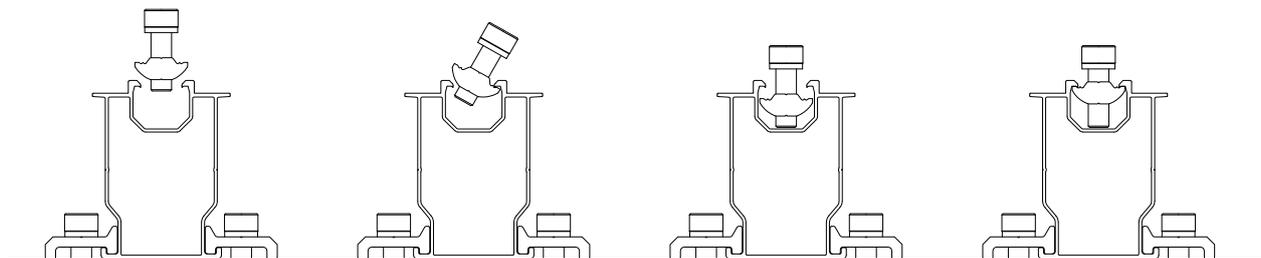
### ■4.5.2 Grounding System Installation

©Grounding clip installation position



### ■4.6.1 Installation of Nut

©Installing rail clamp, inter clamp kit and end clamp kit under the guidance of shown picture.



## 5. Notice

### ■5.1 Notes for Pre-assembling Bolt

"seizure of thread". Followed are notices about how to avoid seizure:

a.Reducing coefficient of friction:

- (1)Ensuring clean thread surface(no sand or debris);
- (2)Painting wax or lubes like butter and 40# oil during installation;

b.Correct operational Methods:

- (1)The nut should be screwed into stud perpendicularly without slant;
- (2)Screwing with even force within the safe torque value;
- (3)Using power tool slowly to avoid roaring temperature causing seizure;

c.Safe Torque:Doing installation of fasteners according to the safe torque shown in Installation Manual.

Pay particular attention to above installation notices when both bolt and nut are stainless steel.

When "seizure" happened, using tools to unscrew or cut bolt is ok, but do not damage the oxide layer on aluminum bracket surface.

### ■5.2 Notes for Engineering Installation Dimensions

Specific installation size should be based on drawing.

The Installation Manual is for the reference of installation of this product.

# 15 Years' Warranty, 5 Years' Post-sale Service

We guarantee all end users, agents and wholesalers that the oxidation layer will not come off or crack within 5 years from the purchasing date if the bracket is oxidized. Except for the oxidation layer, 10 years' quality guarantee is given since installation completed.

Manual damage and corrosive conditions is excluded from post-sale service. Please refer to Construction Aluminum Profile Practice AAMA 609&610-02 for the installation, cleaning and maintenance of bracket, which can also be found on [www.aamanet.org](http://www.aamanet.org). We will offer service for any damage during transportation, storage and installation except for those done by human.

We bears no responsibility if clients fail to follow correct operation steps in manual during installation, or alter, rework, repair without authorization of Our, or the bracket is damaged due to client's design error.

This quality guarantee claim is available to bracket system. The related solar panel and flashing board should be guaranteed by corresponding suppliers.