



WEEE Number: 80133970

## INSTALLATION INSTRUCTION

### SOLAR ROOF MOUNTING

#### INTRODUCTION & WARRANTY

Thank you for selecting and buying V-TAC product. V-TAC will serve you the best. Please read these instructions carefully before starting the installation and keep this manual handy for future reference. If you have any another query, please contact our dealer or local vendor from whom you have purchased the product. They are trained and ready to serve you at the best. The warranty is valid for 20 years from the date of purchase. The warranty does not apply to damage caused by incorrect installation or abnormal wear and tear. The company gives no warranty against damage to any surface due to incorrect removal and installation of the product. This product is warranted for manufacturing defects only.

#### WARNING!

1. Please make sure to turn off the power before starting the installation.
2. Installation must be performed by a qualified electrician.
3. Proper grounding should be ensured throughout the installation.
4. Do not throw or roughly handle any V-TAC solar components.
5. Do not bring V-TAC solar system into contact with sharp or heavy objects.
6. Do not modify V-TAC solar components in any way. The exchange of bolts, drilling of holes, bending or any other physical changes not described in standard installation procedure will void the warranty.
7. It is the installer's responsibility to verify the integrity of the structure to which V-TAC solar components is fixed. Roofs or structures with rotten/rusted bearers, undersized bearers, excessively spaced bearers, or any other unsuitable substructure cannot be used with V-TAC solar components, and installation on such structures will void the warranty, and could result in death or serious injury.
8. Determining the wind pressures applies to your V-TAC solar system install site, taking into account roof shape and geographic location. Sufficient guidance is given in this document, but you may wish to procure a copy of these standards.
9. REMEMBER average wind speeds are higher for structures mounted closer to the roof perimeter zone (edge). Refer to 'Fixing within Roof Installation Zone' for more information
10. Make sure your installation complies with local and national building codes. Take into account relevant design parameters (wind speed, exposure and topographic factor) when determining the loading for the installation.
11. If alternative fasteners are used to fix the framing to the roof (assuming supplied fasteners are unsuitable for any reason), all screw fasteners must be of equal or greater strength to those supplied with your V-TAC solar system order.

**20** YEARS  
WARRANTY



**IP68**  
RATING



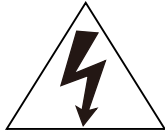
**UK**  
**CA**



IN CASE OF ANY QUERY/ISSUE WITH THE PRODUCT, PLEASE REACH OUT TO US AT: [SUPPORT@V-TAC.EU](mailto:SUPPORT@V-TAC.EU)  
FOR MORE PRODUCTS RANGE, INQUIRY PLEASE CONTACT OUR DISTRIBUTOR OR NEAREST DEALERS.  
V-TAC EUROPE LTD. BULGARIA, PLOVDIV 4000, BULL.KARAVELOW 9B



This marking indicates that this product should not be disposed of with other household wastes.



Caution, risk of electric shock.

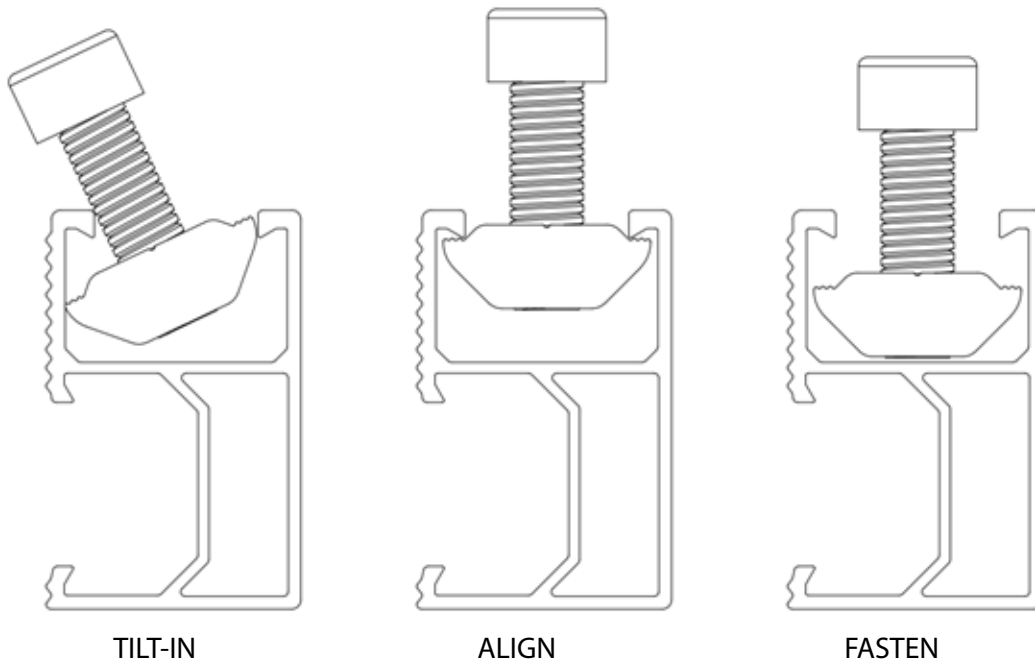


MULTI-LANGUAGE MANUAL QR CODE

Please scan the QR code to access the manual in multiple languages.

## GENERAL INFORMATION

Made from custom-built aluminum extrusions and components, V-TAC Solar's innovated design and improved frame strength greatly simplify solar panel installation. The easy installation in three steps make the D-Modules to be put into the SR Rail on any position quickly. So, the D-Modules is pre-assembled with the clamp to save your installation time.



V-TAC solar's versatile design makes it suitable for a wide variety of building types and zones including residential, commercial and remote environments.

## FEATURES

- 6005-T5 Aluminum extrusion
- Innovated designed of the D-Modules, which can be pre-assembled with the clamp, making the installation easy and quick.
- Suitable for different conditions and the most solar panels at present market.
- Significantly higher strength-to-weight ratio than other framing products, providing improved efficiency due to greater frame spans, inherent corrosion resistance resulting in low ongoing maintenance and an extended product life.
- Anodized finish

## APPLICATIONS

- Commercial and residential buildings
- Marine applications and remote areas






## TECHNICAL SPECIFICATIONS

Material	Tensile strength	
	Ultimate	Yield
6005-T5 Aluminum Extruded	260MPa	240Mpa
Stainless Steel 304	635MPa	235MPa
Stainless Steel A2-70	700MPa	450Mpa



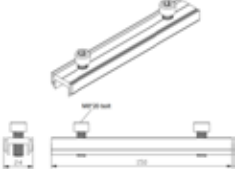
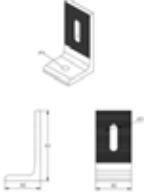

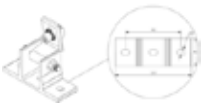


## ELECTRIC PERFORMANCE SAFETY


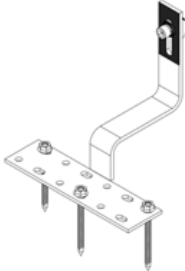
Roof slope	0°to 60°
Building height	Up to 20m
Mounting structure	Timber
Roof types	Flat or pitched steel
System angle	Flushed with the roof

## TOOLS FOR INSTALLATION (NOT INCLUDED)

6 mm Allen key or hexagonal driver bit. If using a 6mm driver bit, make sure the cordless power tool used for the driving has a hand-tight clutch setting a fine (soft) impact drive to prevent damage to the fragile glass panels and threads on the Structure.		<b>Gloves</b> Protect the hazard of the sharp corners.	
<b>Cordless drill</b> Drill or impact driver for driving roof material fixings.		<b>Cord or color pen</b> Mark the installation position.	
<b>Angle grinder</b> For terracotta tile roof installation, and angle grinder fitted with a continuous edge diamond tipped tile cutting blade; gloves, hearing protection, a face protection mask, and a suitably rated breathing protection mask for all people in proximity of grinding.		<b>Spirit level</b>	
		<b>Measuring Tape</b>	

## COMPONENTS DESCRIPTION

<p><b>Sliver Rail</b></p> <ul style="list-style-type: none"> <li>• Holds each panel row.</li> <li>• Length can be customized.</li> <li>• 6005-T5 extruded aluminum.</li> </ul>		<p><b>Grounding Clip</b></p> <ul style="list-style-type: none"> <li>• Electric Conduction</li> <li>• Material: Stainless steel</li> </ul>	
<p><b>Splice for SR Rail</b></p> <ul style="list-style-type: none"> <li>• Extend SR Rail to any length as required by the quantity or width of the solar panels.</li> <li>• Include M8*20 bolts (2Pcs).</li> </ul>		<p><b>L Feet Group</b></p> <ul style="list-style-type: none"> <li>• Include M8*25 bolt (1Pc), M8 spring washer (1Pc), Flange washer (1Pc), and Nut (1Pc)</li> </ul>	
<p><b>Middle Clamp Kit</b></p> <ul style="list-style-type: none"> <li>• Fit between two panels</li> <li>• Fastened with a 6mm Allen key</li> <li>• Standard pre-assembly for the usual panels</li> <li>• Include M8 bolt (1Pc), M8 spring washer (1Pc), and Nut (1Pc)</li> </ul>		<p><b>Adjustable Front Leg</b></p> <ul style="list-style-type: none"> <li>• Include M8*25 bolt (1Pc), M8 spring washer (1Pc), M8 flange washers (1Pc), M8*55 bolt (1Pc), flange nut with M8 locking (1Pc), and Nut (1Pc)</li> </ul>	
<p><b>End Clamp Kit</b></p> <ul style="list-style-type: none"> <li>• Hold the edge of each end panels</li> <li>• Fastened with a 6mm Allen key</li> <li>• Standard pre-assembly for the usual panels</li> <li>• Include M8*25 bolt (1Pc), M8 spring washer (1Pc), and Nut (1Pc)</li> </ul>		<p><b>Teeth</b></p> <p><b>Adjustable Rear Leg</b></p> <ul style="list-style-type: none"> <li>• Include M8*25 bolt (1Pc), M8 spring washer (1Pc), M8 flange washers (2Pcs), Nut (1Pc), M8*55 bolt (1Pc), flange nuts with M8 locking teeth (4Pcs), M8*20 bolt (1Pc), and M8*15 bolt (1Pc)</li> </ul>	

<p><b>Adjustable Triangle Support</b></p> <ul style="list-style-type: none"> <li>• Include M8*50 bolts (3Pcs), M8 spring washers (3Pcs), flat washers (3Pcs), M8 nuts (3Pcs), and st6.3*25 screw (1Pc)</li> <li>• The size can be Customized</li> </ul>	
<p><b>Hook Group</b></p> <ul style="list-style-type: none"> <li>• Include M8*25 bolt (1Pc), M8 spring washer (1Pc), M8 flange washers (2Pcs), nut (1Pc), and st6.3*50 screw (3Pcs)</li> </ul>	

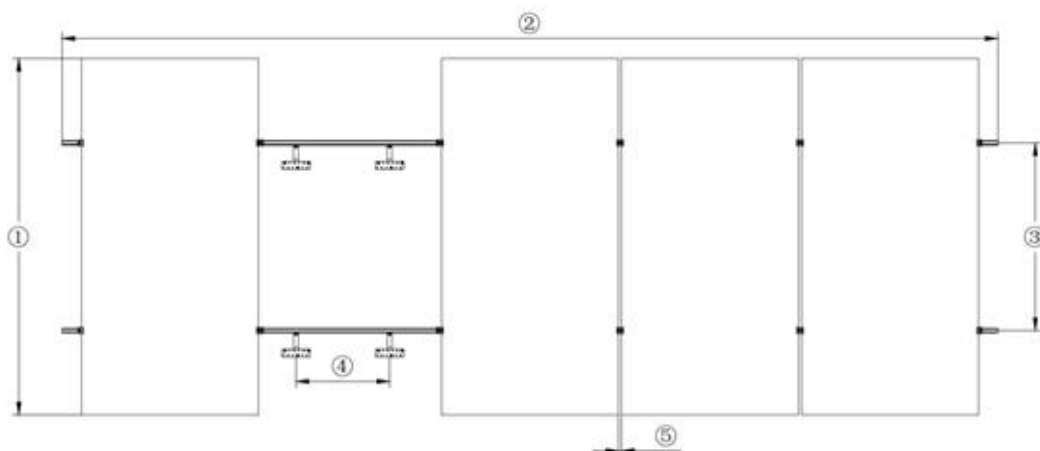
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## DETERMINE THE TYPE OF CONCEALED ROOF

The best way to identify the type of concealed roof installed is to check the label normally located underneath the roofing sheet. Otherwise, you can contact the builder or check the building plan to find out the exact type of the roofing sheet.

## DESIGNING THE MODULE FIELD

Diagram below, the distances between roof connections for a portrait installation are specified. Clamp on roof hooks need to be installed in specific distances, depending on the distance of rafters and the stoical conditions.



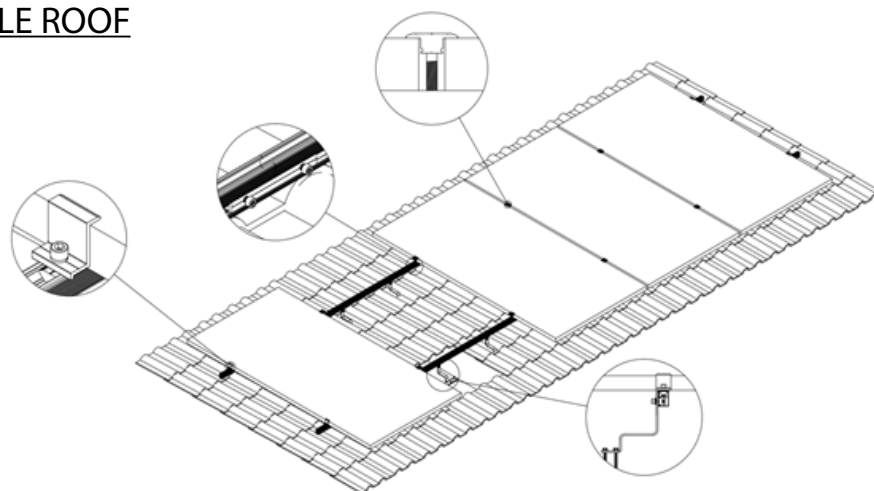
- ① Height of the module field: module height x number of modules vertically
- ② Width of the module field: number of modules horizontally x (width of the module + 20 mm) + 80 mm
- ③ Distance between roof connections vertically (according to the clamping points pre-defined by the module producer): Quarter-points of the modules, about 1/2 of module height.
- ④ Distance between roof connections horizontally: Depending on the distance between rafters and on the static requirements .
- ⑤ Distance between modules: 20 mm

When positioning the modules, please take into consideration

- ※ That the values above are
- ※ That dimensions of roof covering and the position of the rafters define the precise actual horizontal distance between roof connections
- ※ That the distance between roof laths defines the precise actual vertical distance between roof connections.

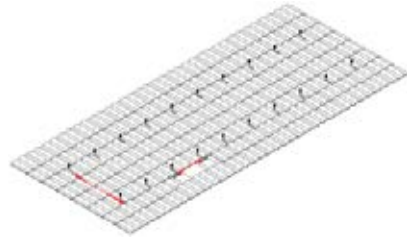
## 3 WAYS OF INSTALLATION

### INSTALL ON TILE ROOF



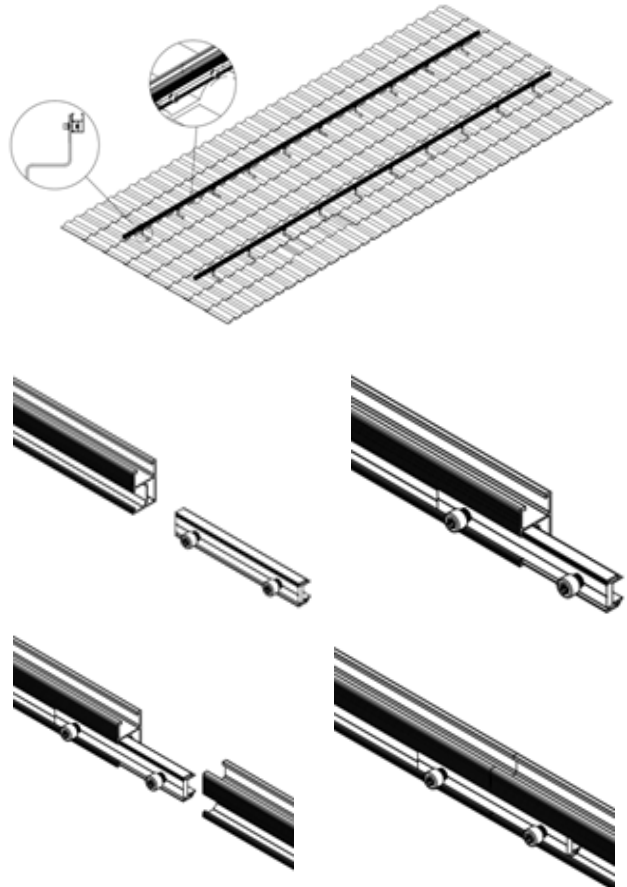
**1. Install Hook**

First determine the distance between rafters and on the static requirements, then fasten the hook with st6.3\*50 screw.



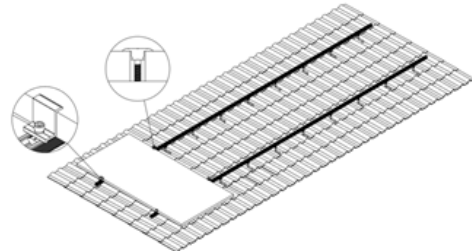
**2. Install SR Rail**

- a. Insert the TT-Nut into the side channel of the SR rail C1 C2
- b. Adjust the SR Rail to be level, then fasten the bolt.
- c. First put the TT Rail Splice into the side channel of the SR Rail about 75mm, then fasten the M8 Bolt. Finally put the other SR Rail into the C3 C4 other side of the SR Rail Splice and fasten the other M8 bolt.
- d. Safety Torque: 20 N.m

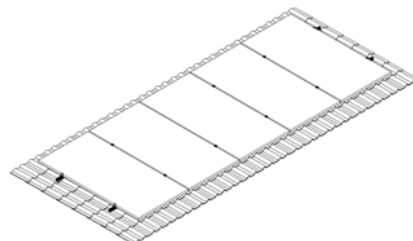


**3. Install modules**

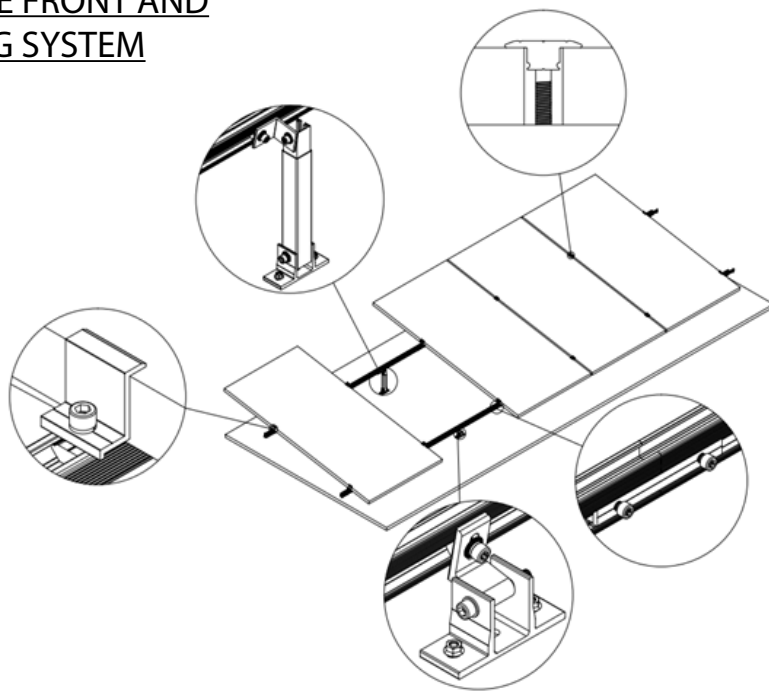
- a. Fixing the outer modules by End clamp kit
- b. Fixing the inter modules by middle clamp kit
- c. Fasten the bolts
- d. Safety Torque: 20 N.m



**4. Finished**

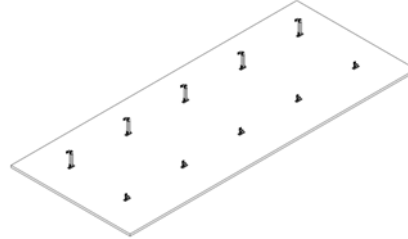


## INSTALL ADJUSTABLE FRONT AND REAR LEG MOUNTING SYSTEM



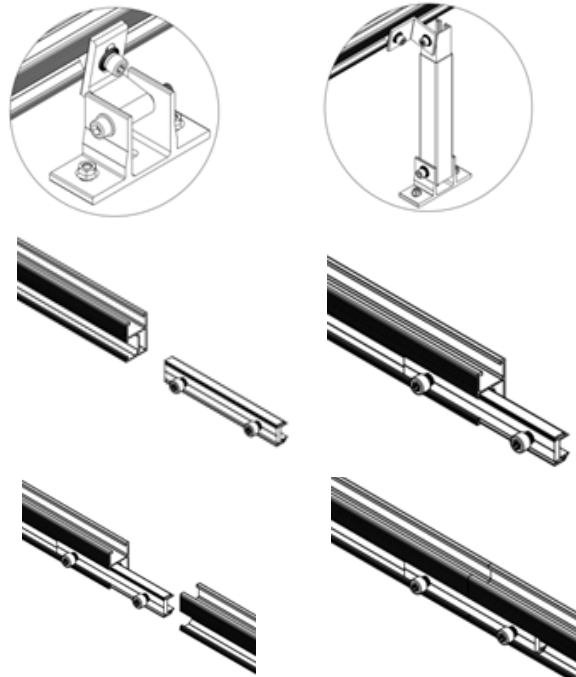
### 1. Install Front and Rear Leg

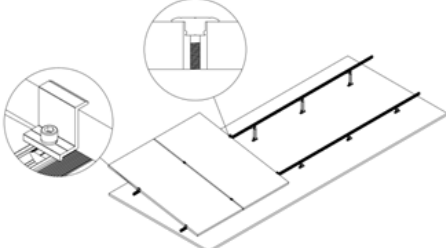
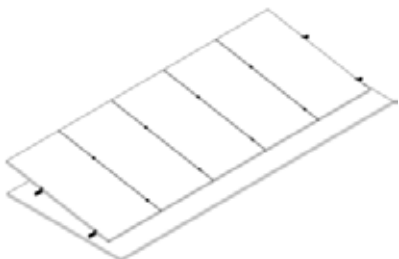
- a. First of all, please confirm the installation site and select the appropriate screws to fix the front and rear leg. For example, it's best to use st6.3\*50 for metal sheet.
- b. According to the design drawing, install the front and rear leg in the corresponding position



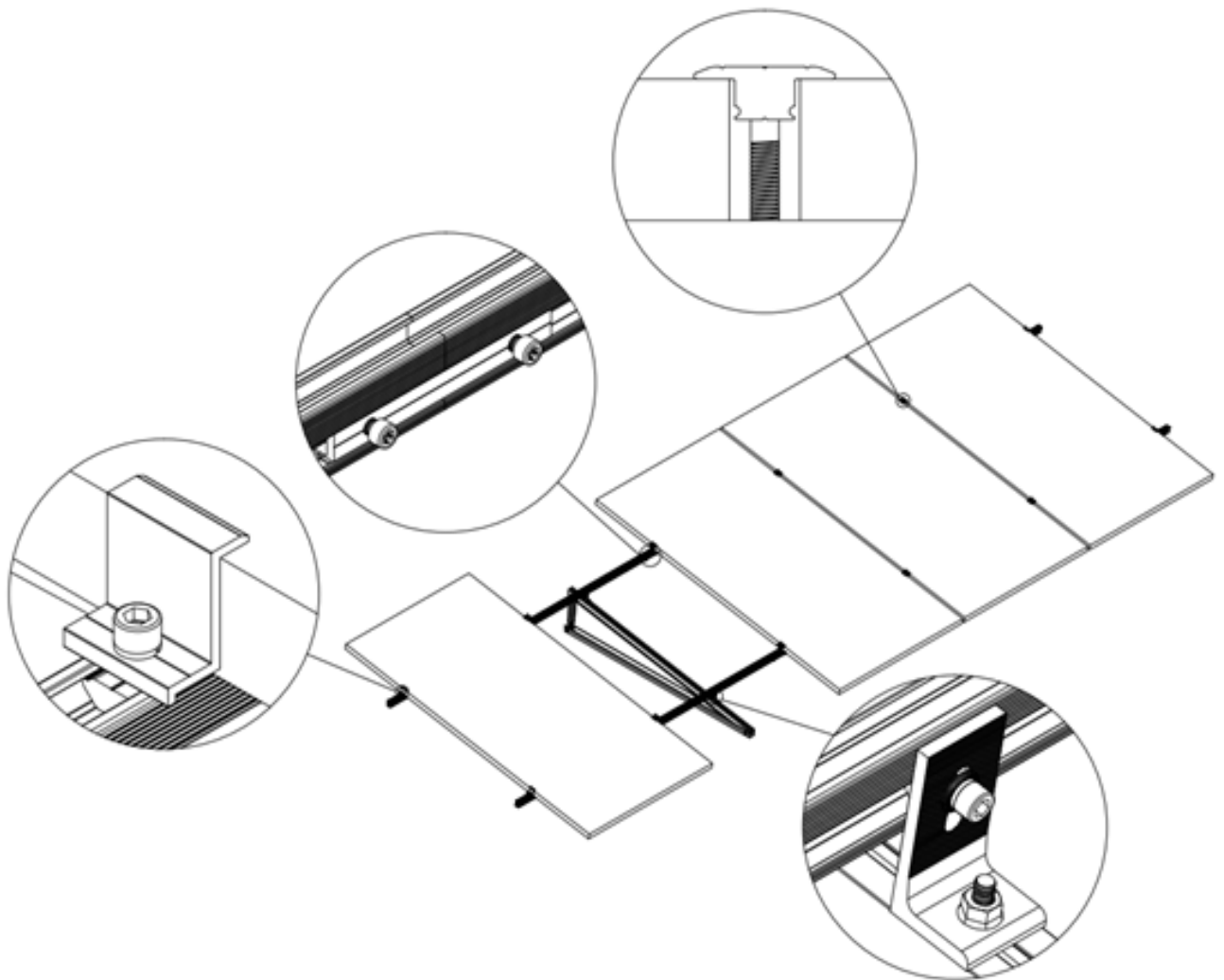
### 2. Install SR rail

- a. Insert the TT-Nut into the side channel of the SR rail
- b. Adjust the SR Rail to be level, then fasten the bolt.
- c. First put the TT Rail Splice into the side channel of the SR Rail about 75mm, then fasten the M8 Bolt. Finally put the other SR Rail into the other side of the SR Rail Splice and fasten the other M8 bolt.
- c. Safety Torque: 20 N.m



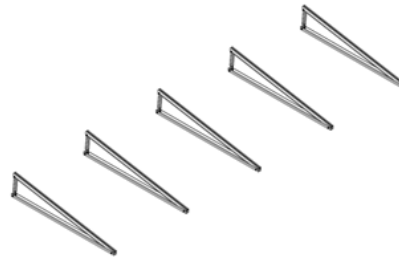
<p>3. Install modules</p> <p>a. Fixing the outer modules by End clamp kit</p> <p>b. Fixing the inter modules by middle clamp kit</p> <p>c. Fasten the bolts</p> <p>Safety Torque: 20 N.m</p>	
<p>4. Finished</p>	

INSTALL ADJUSTABLE TRIANGLE SUPPORT MOUNTING SYSTEM

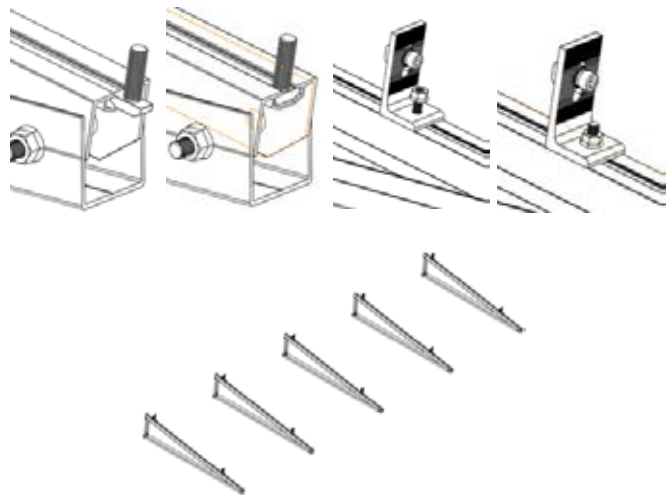




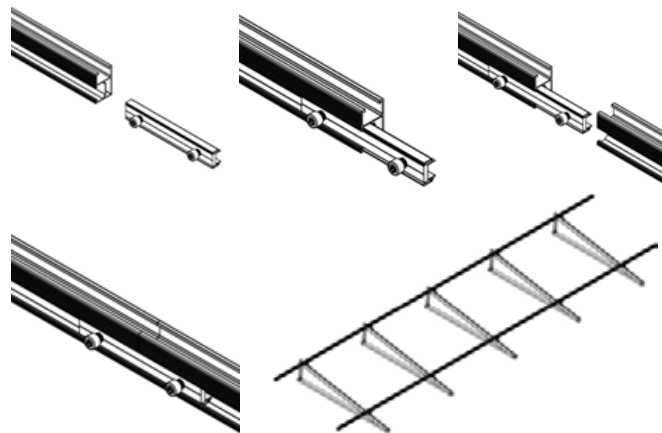
1. Install Triangle Support
  - a. Open the triangle support, fix it in the position of the design drawing, and fasten the all bolts.
  - b. Safety Torque: 20 N.m



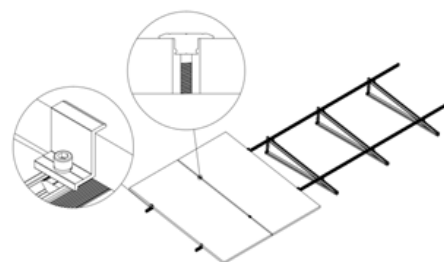
2. Install L Feet Group
  - a. First slide the bolt in along the groove of the inclined beam of triangle support, and then rotate the T-bolt perpendicular to it. Finally install l feet group, and fasten the bolt. Refer to a1 a2 the four steps on the right.
  - b. Safety Torque: 20 N.m



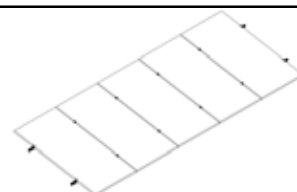
3. Install SR Rail
  - a. Insert the TT-Nut into the side channel of the SR rail C1 C2
  - b. Adjust the SR Rail to be level, then fasten the bolt.
  - c. First put the TT Rail Splice into the side channel of the SR Rail about 75mm, then fasten the M8 Bolt. Finally put the other SR Rail into the other side of the SR Rail Splice and fasten the other M8 bolt.
  - a. Safety Torque: 20 N.m



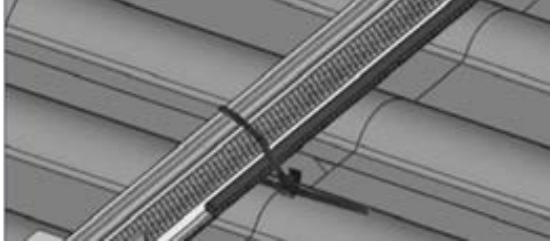
4. Install modules
  - a. Fixing the outer modules by End clamp kit
  - b. Fixing the inter modules by middle clamp kit
  - c. Fasten the bolts
 Safety Torque: 20 N.m



5. Finished



## CABLE TIE AND GROUNDING

<p>Tie cable with the rail using the zip tie</p>	
<p>Solar groundin system installation guide.</p>	