Setsolar Installation Manual

MA H47 Rail Tin Roof Solar Mounting System

🕮 Catalogue

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1. Product Introduction

MRac L feet & MA rail H47 mounting system is specially designed by Setsolar for metal roof. The system mainly suitable for metal roof PV systems. The product is consistent with the metal roof, which makes it very tight and has good wind resistance.

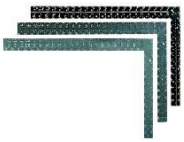
Before installing MRac L feet & MA rail H47, please read the entire manual carefully. This manual provides: planning and installation instructions for the standing seam.

please use the L-Feet system according to this installation instruction manual, which complies with building codes such as AS/NZS1170. Please pay attention to safety when installing this product, and please follow the relevant local safety regulations. If necessary, the latest version of the installation guide can be confirmed at www.setsolar.co.za

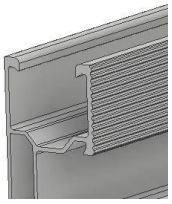
The installer is solely responsible for ：

- Complying with all applicable local or national building codes, including any that may supersede this manual;
- Ensuring that MRac and other products are appropriate for the particular installation and the installation environment；
- Ensure that the roof, purlin, main beam and other supporting structures can firmly support the PV modules. (These are all considered as roof mounts installation);
- Using only MRac parts and installers-supplied parted as specified by MRac (Substitution of parts may void the warranty and invalidate the letter of certification on page 2)；
- Ensure that the self-tapping screws and the L Feet have enough strength and shear during construction.；
- Keep the roof waterproof system intact；
- How to recycle: According to the local relative statute；
- How to disassemble: Countermove with installation；
- Ensure that there are no less than two professional workers in panel installation；
- Ensure the installation of relative electrical equipment is performance by professional electrician

2. Installation Tool

			
L-shaped hexagon wrench	Adjustable wrench	Torque wrench	Electrical Tools
			
Laser level	Nylon thread	Tape measure	L-square

3. Components

Components		
		
MA Rail H47	Spice for MA Rail	MA Inter Clamp Kit
		
MA End Clamp Kit	L Feet Kit	Water-proof Pad

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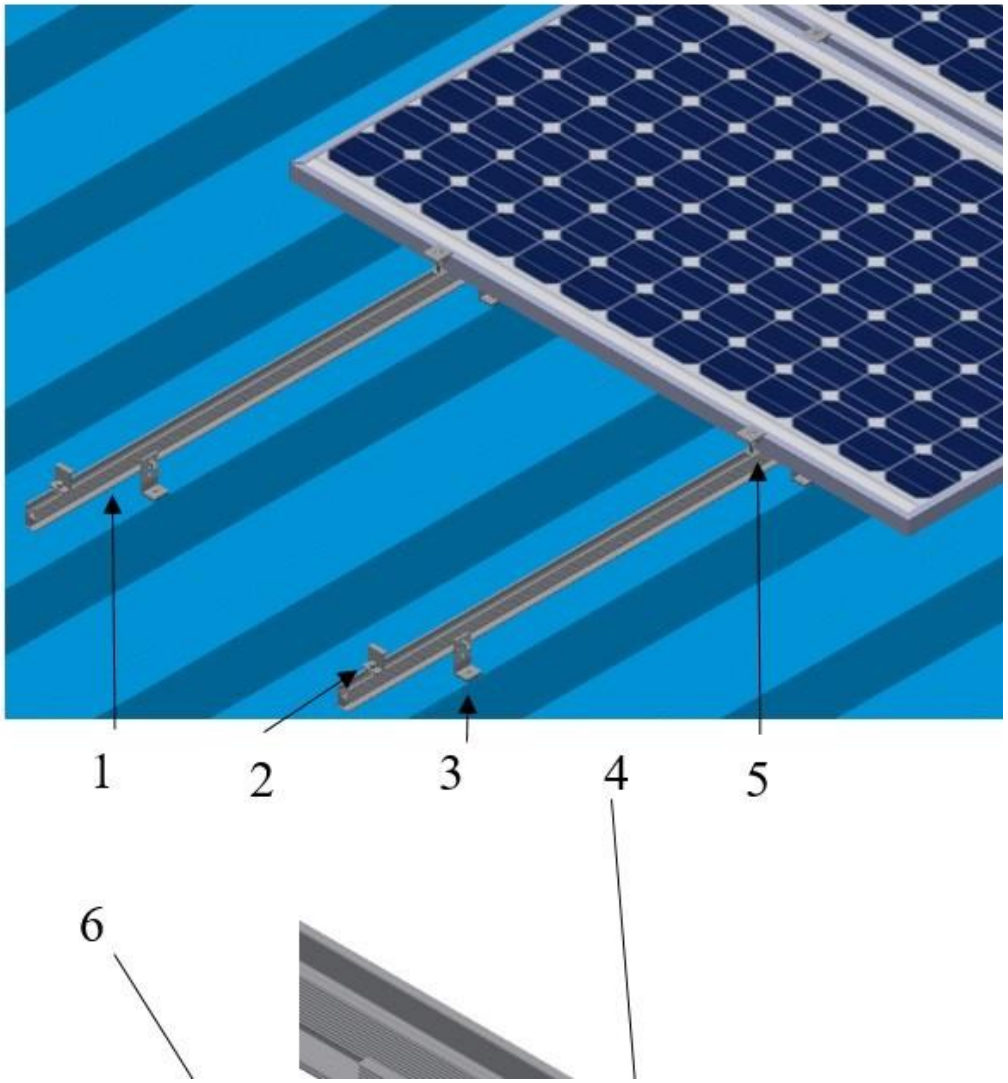
4. System Overview

1. MA Rail H47
2. MA End Clamp Kit
3. L Feet Kit
4. Spice for MA Rail
5. MA Inter Clamp Kit
6. Water-proof Pad



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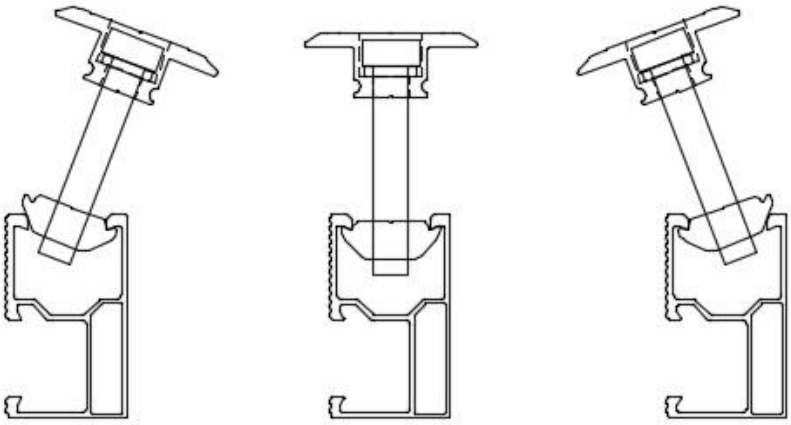
5. Installation Guide

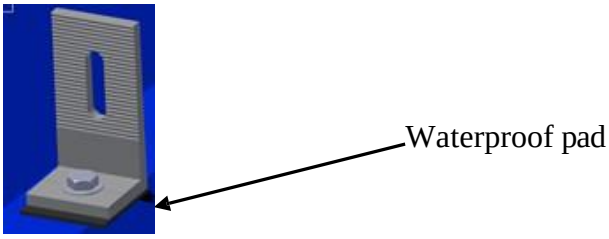
5.1 Installation of MA Clamp Kit

5.1.1 The picture on the right shows how to install the MA Clamp. You must ensure that the thread of the hexagon socket bolt does not pass through the bottom of the MA Clamp. Position the MA Clamp in the groove of the rail and gently screw the bolt 2 to 3 turns. At this point, the bolt can still slide freely in the rail, slide the bolt to the position where the Inter Clamp, End Clamp or hook is finally connected, screw the bolt and lock. (Recommended torque: 10-12 N·m).



5.2 Installation of L Feet

5.2.1 According to the plan size of the drawing, install the L Feet on the metal roof and pre-lock it as shown in the picture.



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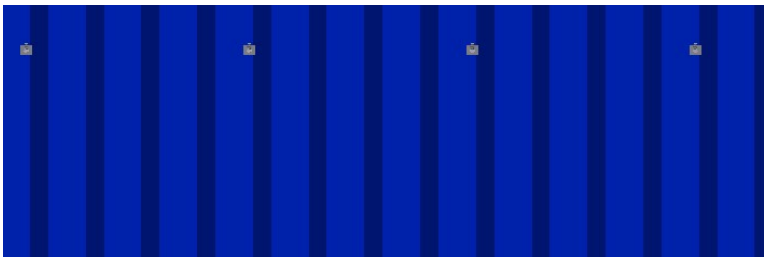
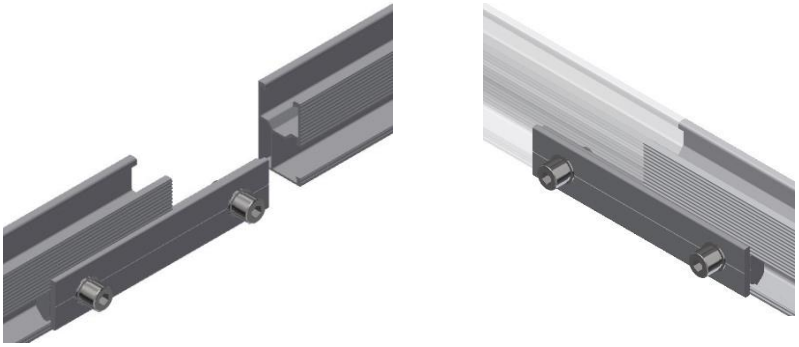
5.2.2 According to the installation plan, the L Feet is mounted on metal roof with a self-tapping screw as the picture shows.	

5.3 Installation of MA Rail H47

5.3.1 According to the plan, if the rail is not long enough, please connect the MA Rail with the Splice for MA Rail as shown on the right, and lock it with one hexagon bolt on each side. (Recommended torque: 13-15N·m).	
5.3.2 MA rail splice also has a conductive function. By locking the serrated washer as shown in the picture, the oxide film of the corrugated sheet can be punctured to enable the two bolts to conduct through the corrugated sheet. The end of the bolt can then pierce the oxide film of MA rail H47. So electric current can flow through two rails.	

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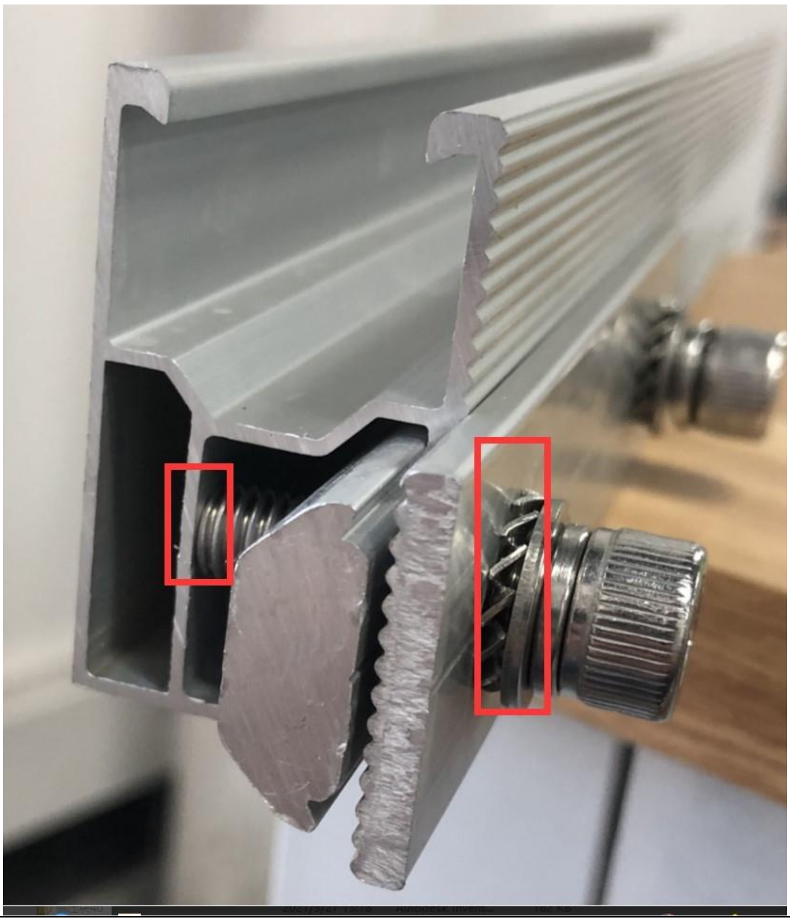
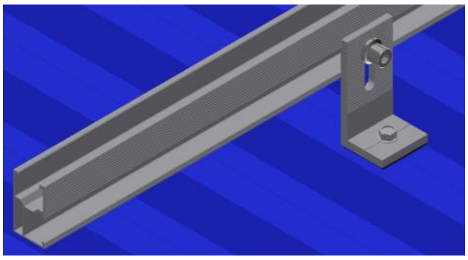
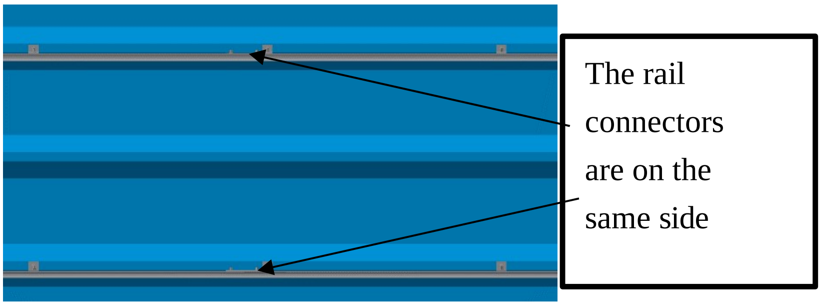
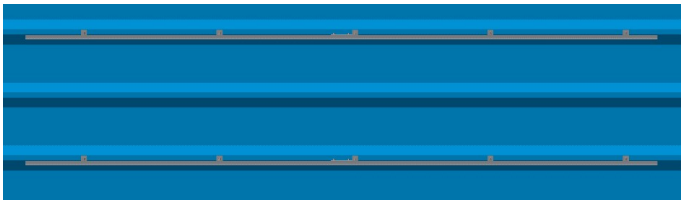
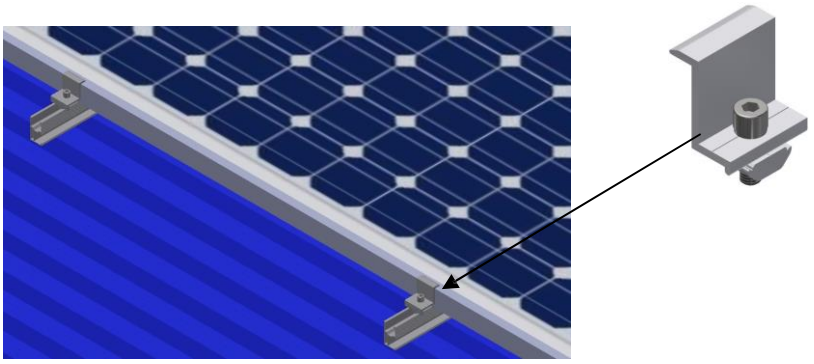
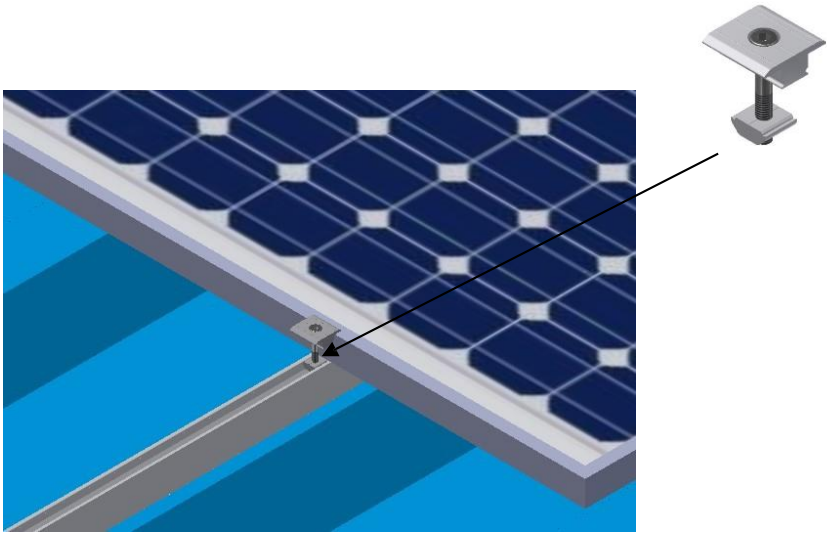
	
5.3.3 Place the MA rail on the side of the L Feet support and fasten them with the M8 bolt assembly. The rail connectors are on the same side, as shown on the right The rail connectors are on the same side. (Recommended torque: 10-12N·m)	 

5.3.4 Install the planned location according to the engineering plan and install all the rails in step four to ensure that the bolts are locked.	
5.4 Installation of Solar Panels	
5.4.1 According to the plan, put the panel flat on the rail, slide the MA End Clamp Kit, tightly attach the solar panel assembly, and then tightly lock the bolt (recommended torque: 10-12N·m)	
5.4.2 Put the pre-installed MA Inter Clamp Kit from the top and bottom into the rails, and firmly attach the solar panel assembly, then gently tighten (about 2-3 turns), as shown on the right.	

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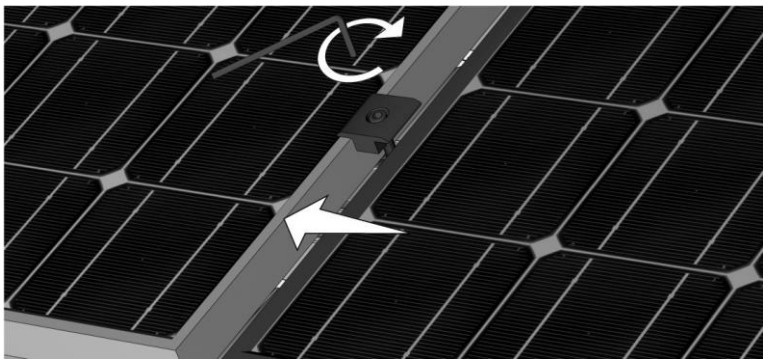
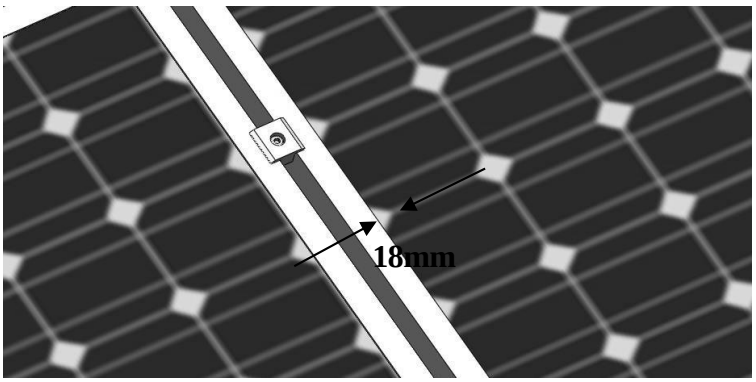
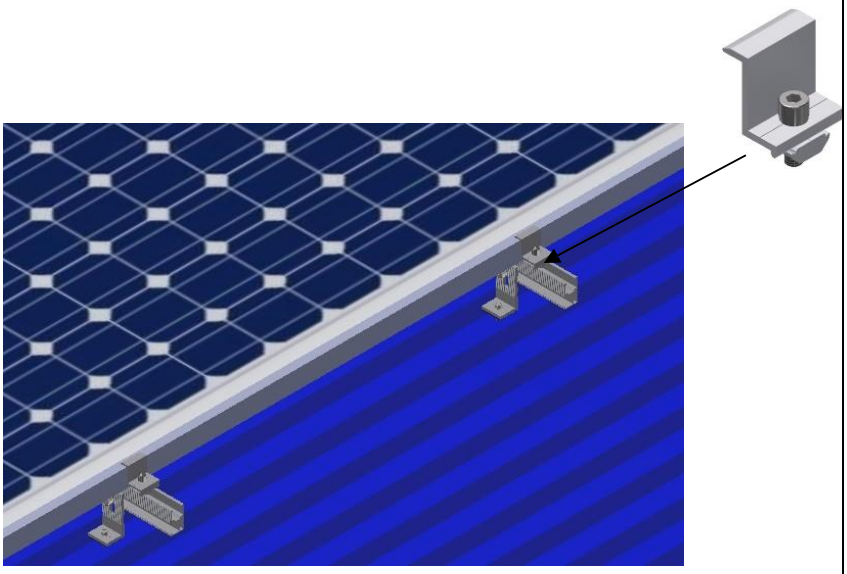
5.4.3 Then slide another solar panel assembly to the side of the previously installed solar panel assembly and lock the MA inter clamp assembly (recommended torque: 10-12 N·m). Please note that the anti-skid protection device should fall in the middle of the slot of the bottom row rail. As shown on the right.	 
5.4.4 Place the last solar panel in each row on rail and lock with end clamp (MA). (Recommended torque force:10-12N·m)	

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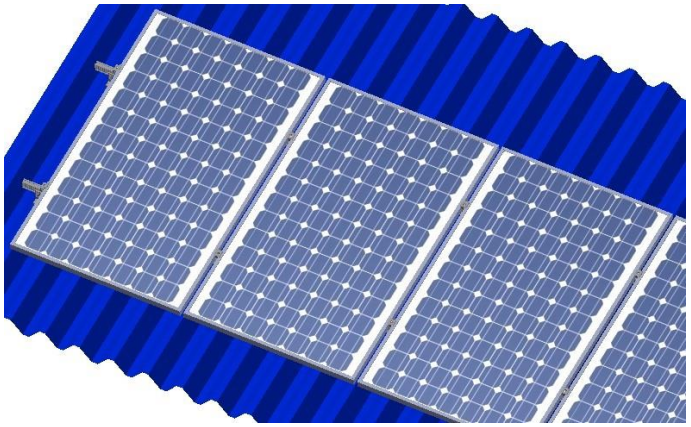
5.4.5. Slide the first solar panel in the next row from top to bottom to the row below the corresponding solar panel. Because of the light, some space from the solar panel on the bottom row is required. Inter Clamp Kit (MA) can be used as a separator to keep the solar panel evenly spaced vertically and horizontally. Continue above steps to install the solar panel until all solar panel are installed.	

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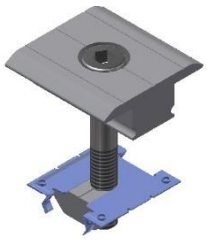
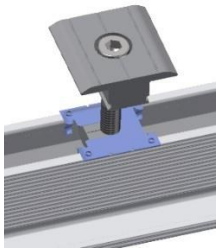
5.5 Installation of Grounding System

5.5.1 If there are Grounding Clip and Grounding Lug in the project design, please insert Grounding Clip into Mid Clamp Kit before installation (Picture 1), and then install Mid Clamp Kit with Grounding Clip into the rail. After that, please lock Inter Clamp kit with panel and notice the Grounding Clip is under Panel frame as picture 3.

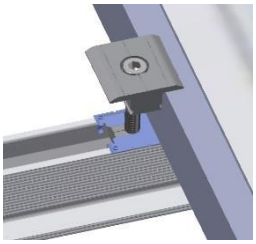
Install all Grounding Clip according to above steps.



Picture 1

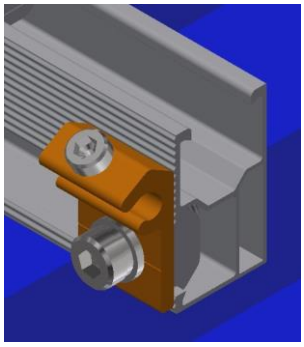


Picture 2

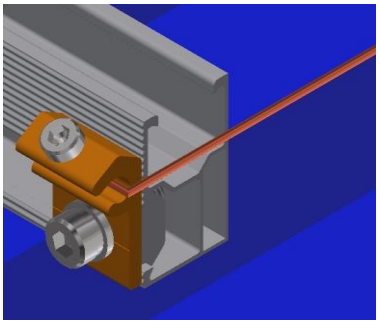


Picture 3

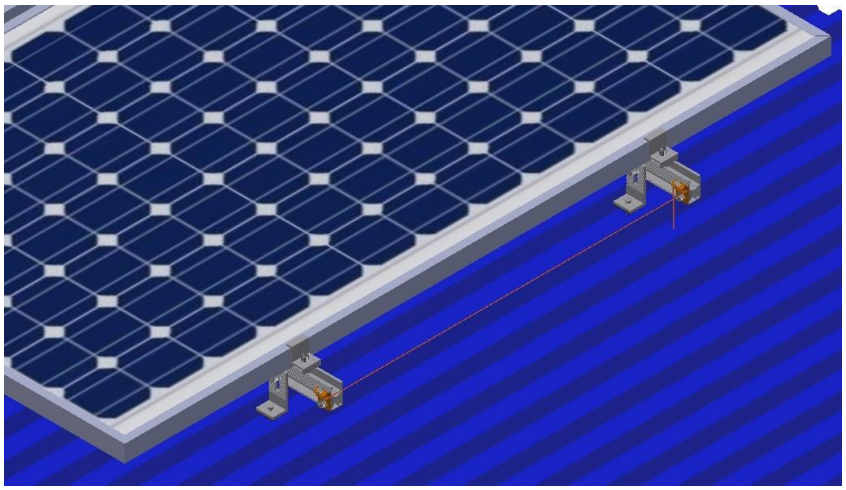
5.5.2 Then install the two sets of Grounding Lug on the edges of the two rails (Picture 1), and then use copper wires to bend and wrap them on Grounding Lug (Picture 2). The effect is shown in Picture 3.。



Picture1



Picture2



Picture 3

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6. Maintenance

In order to ensure the reliable operation of the solar mounting structure and improve the safety of the equipment, a daily patrolling inspection system should be established in the daily operation and maintenance work. Patrolling inspection should be conducted at least once every month. The purpose of inspection work is to discover hidden troubles in time, prevent them before occurrence, and effectively improve the reliability of solar mounting structure.

Please take note that after severe conditions such as strong winds above level 6, tropical storms, heavy snow weather and earthquakes etc., maintenance and repair personnel should be organized to conduct a thorough inspection of the solar mounting structure and write down corresponding inspection records. If the solar mounting structure is found to be damaged, it should be reported immediately for the handling of issues.

Check whether there is rubbish or debris on the surface; check whether the entire structure of the solar mounting system is corroded, or any part is missing or falling off; pay attention to the sealing tightness of places where they have been sealed, and repair if necessary.

When the height of solar mounting structure exceeds 2.5m, the dressing of the climber shall meet the climbing requirements. They should be equipped with safety belts before installation. All on-site maintenance and inspection personnel must wear safety helmets and other protective equipment. Maintenance and inspection work are prohibited when there are strong winds above grade 4, there is rain and snow weather or there are no night-time construction lighting facilities in the evening. Maintenance and inspection personnel are strictly prohibited from smoking and drinking during installation time.

For pv modules, rain shields and other related products involved in the construction process, please ask your suppliers to issue a warranty statement. We are only responsible for the mounting system.