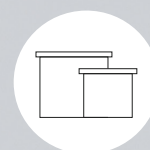
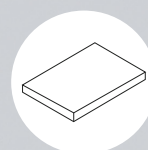
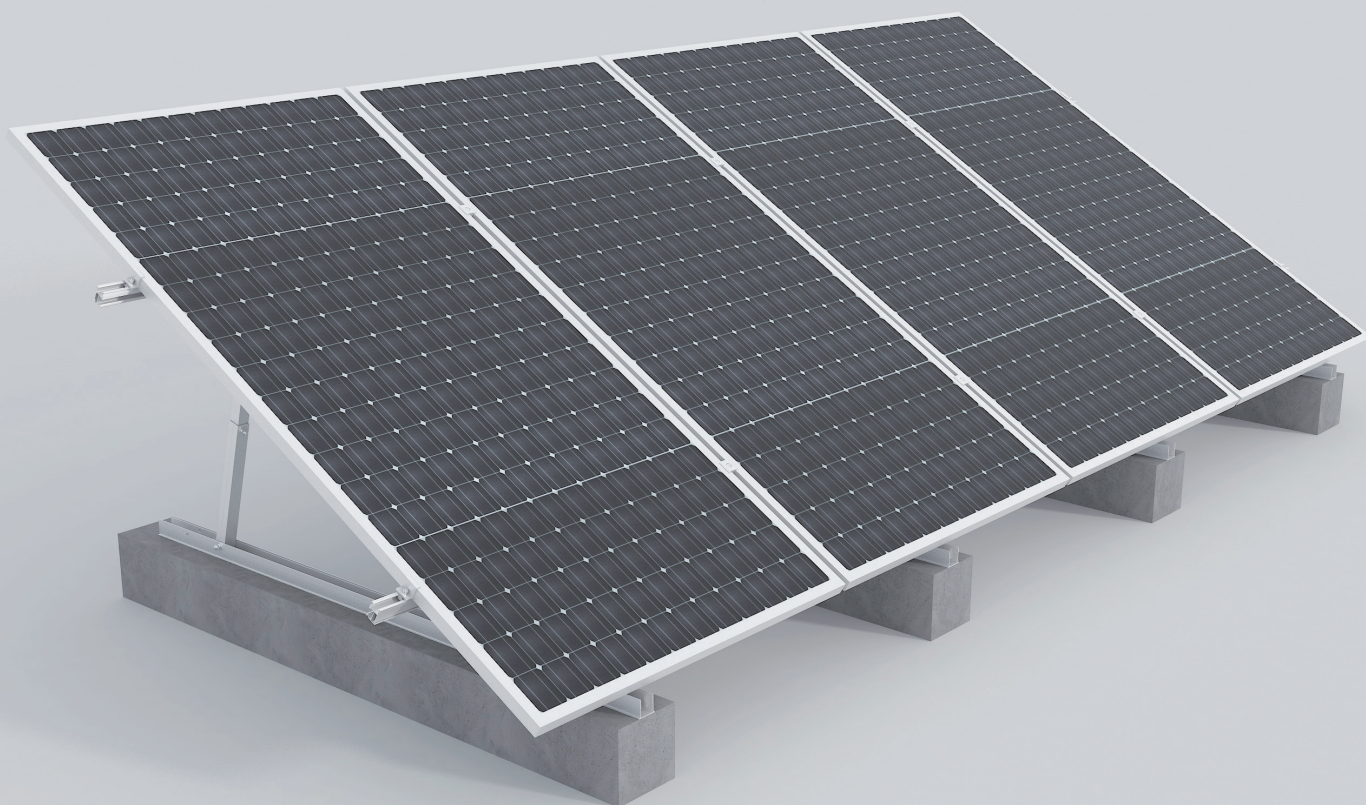




MRac[®] Adjustable Tripod 15-30° - Vertical

INSTALLATION INSTRUCTION



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We sincerely thank you for choosing our company's products. The quality of all products sold by our company meets relevant requirements. If there are any abnormalities in the products you purchased, please contact us in time, or log on to our official website for consultation: www.mbt-energy.com.



Product description

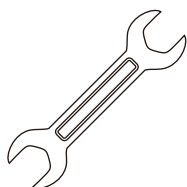
MRac Adjustable tripod system (also known as roof tripod system) is suitable for a variety of flat roof installations, including small domestic PV systems, large commercial PV systems and power station scale PV systems. The roof tripod system is available in two mounting modes, namely single-row longitudinal installation and double-row longitudinal installation. The biggest advantage of the support system is the pre-installation of its support structure, which greatly saves the time and manpower required for system installation.

Before installing the tripod system, please review this installation guide carefully. This manual provides the following contents: (1) Actual installation planning; (2) Product installation instructions; When installing this product, pay attention to safety and perform construction according to local safety regulations. The latest installation guide can be found at www.mbt-energy.com.

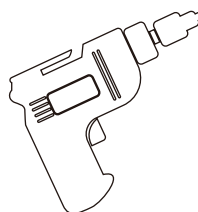
The product has been certified by TUV, SGS and qualified consultants in AU, JP, ASEAN, CN, UK, EU, US



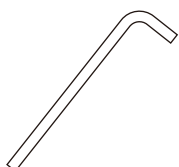
Installation tools



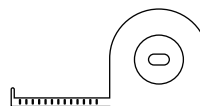
Hexagon Socket Wrench (6mm)



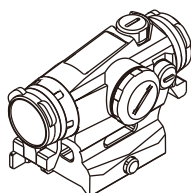
Electric tool



Monkey Wrench (14 mm)

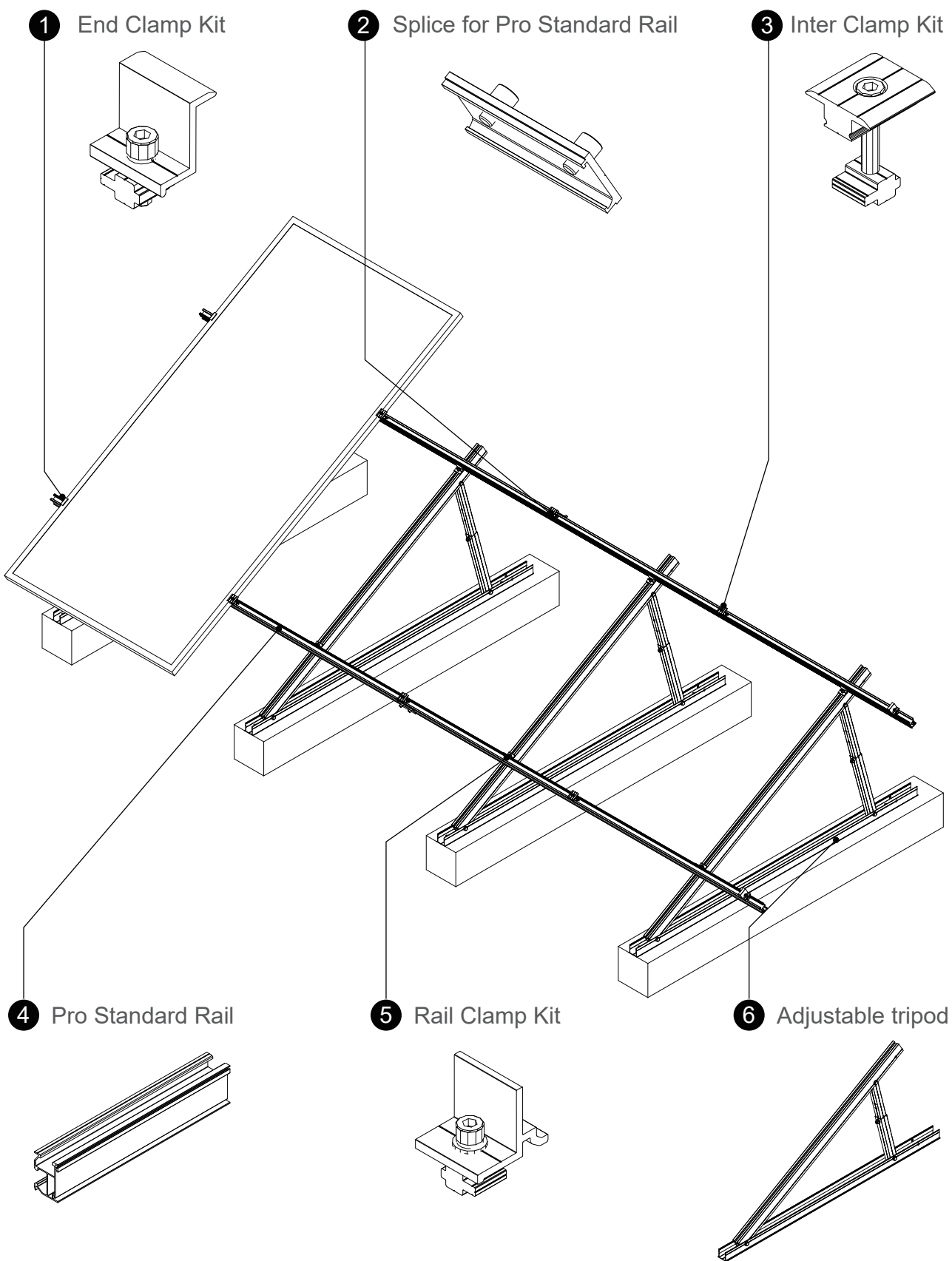


Measure Tape



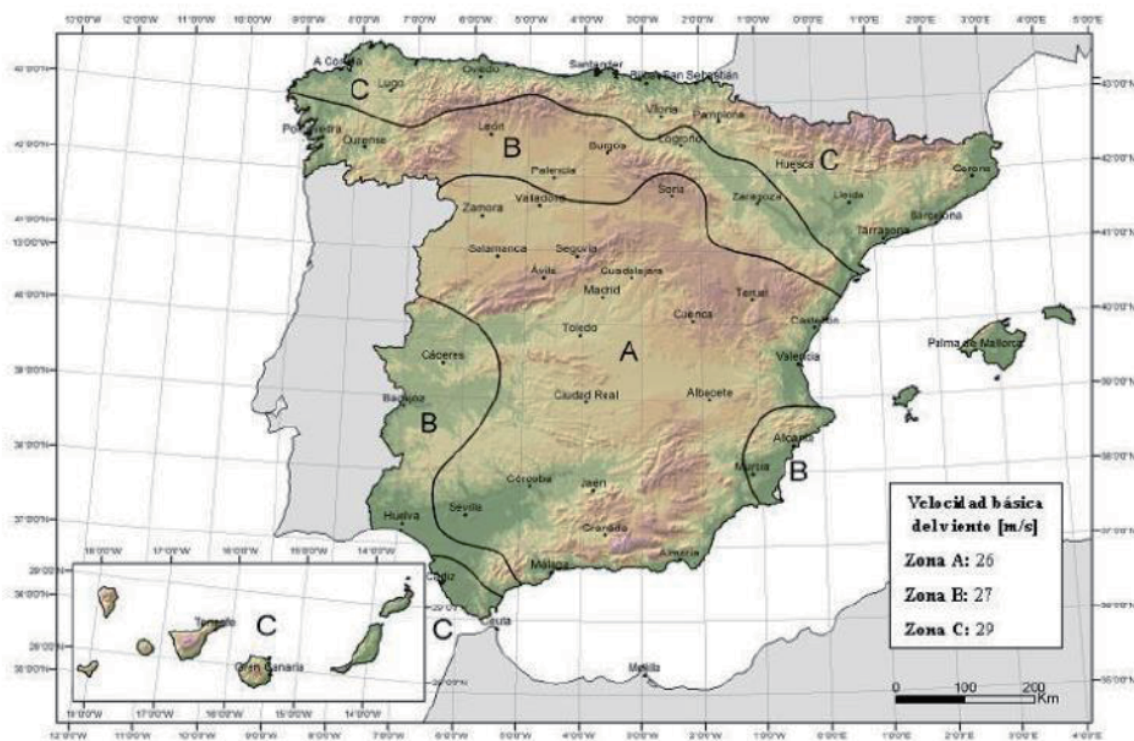
Infrared Calibrator

Components



System Overview

A. Determine the wind region of installation site



CTE wind speed map

B. Determine the Terrain Category

A most applicable terrain category needs to be determined before installation. See below the terrain category to Eurocode

Tabla D.2 Coeficientes para tipo de entorno

Grado de aspereza del entorno		Parámetro		
		k	L (m)	Z (m)
I	Borde del mar o de un lago, con una superficie de agua en la dirección del viento de al menos 5 km de longitud	0,156	0,003	1,0
II	Terreno rural llano sin obstáculos ni arbolado de importancia	0,17	0,01	1,0
III	Zona rural accidentada o llana con algunos obstáculos aislados, como árboles o construcciones pequeñas	0,19	0,05	2,0
IV	Zona urbana en general, industrial o forestal	0,22	0,3	5,0
V	Centro de negocios de grandes ciudades, con profusión de edificios en altura	0,24	1,0	10,0

C. Determine the height of installation site

This document provides sufficient information for installation up to 20 meter height. Please contact Mibet to obtain additional engineering certificate to support your installation if it is more than 20 meters.

D. Determine the bracket angle

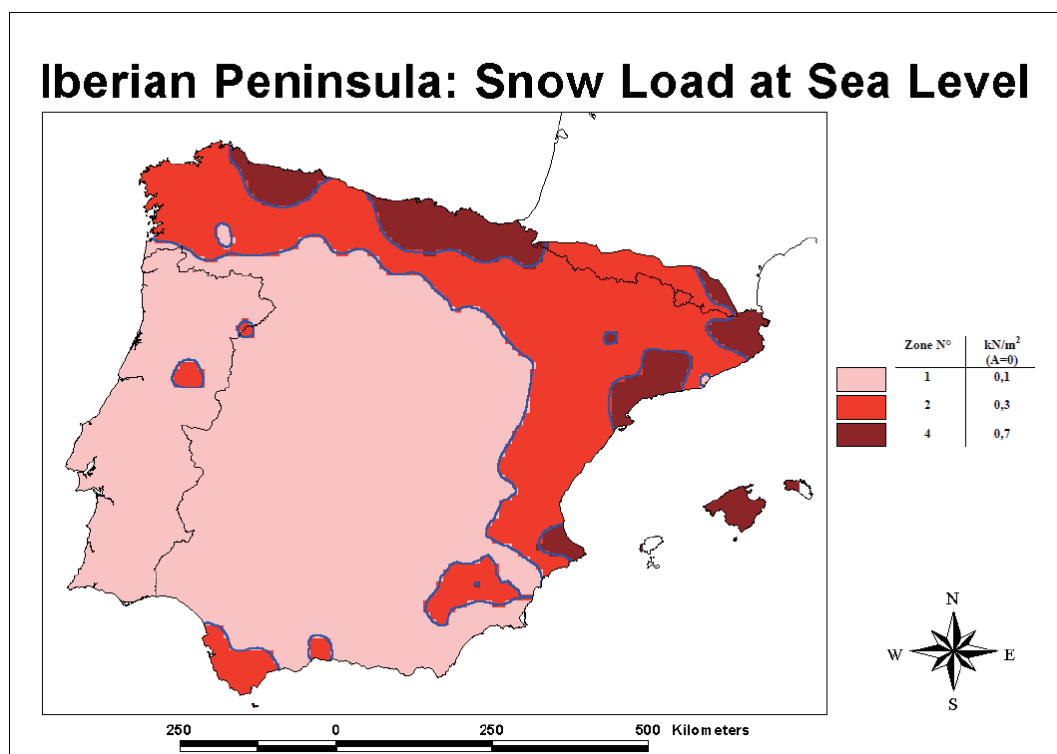
The bracket can be adjusted between 15-30 degrees. The column needs to be adjusted according to actual needs to achieve the required angle.

E. Applicable range of solar panel size

According to the specifications of the adjustable tripod, the width of the solar panel must be within 1190mm.

F. Snow confirmation

Select the snow load in the area according to the standard as the basis for calculation.



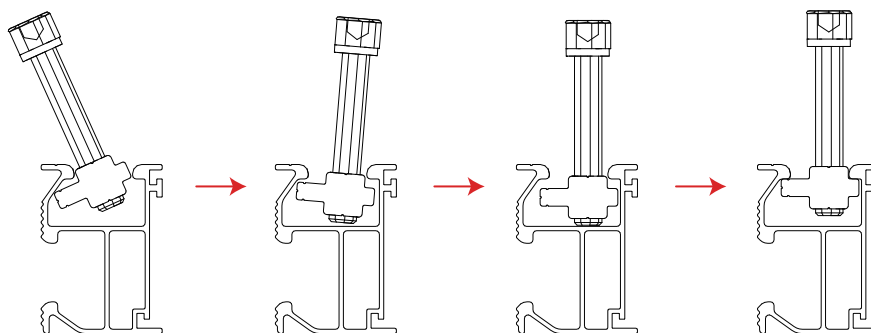
Fill in the above data into the span calculation table to get the final confirmed maximum span distance.

Installation instructions

Installation of Cross Clamp Kit

1

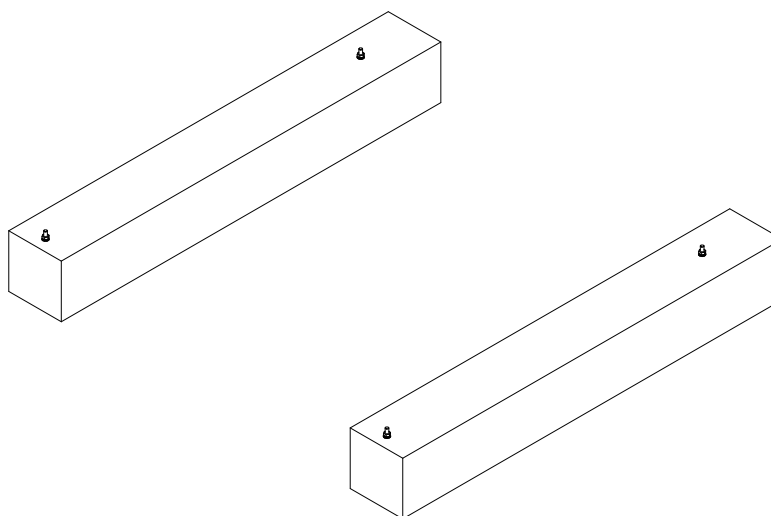
The figure on the right shows the installation method of the cross clamp. The end clamp kit and inter clamp kit are installed in this way.



Install Tripod

1

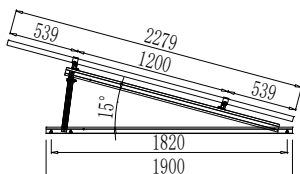
According to the installation requirements of solar panel, decide the cement distance between the two sets of tripods under one panel. Insert two embedded bolt kits or expansion bolt kits with a diameter of M10 on the cement foundation.



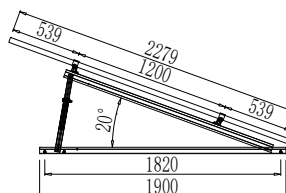
2

The distance between the bolts is determined by the angle of the tripod, as shown in the picture below.

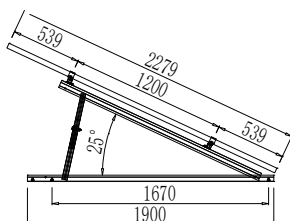
15° ▶



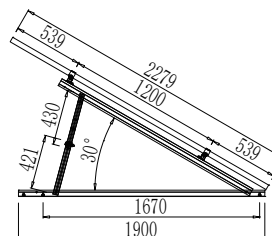
20° ▶



25° ▶

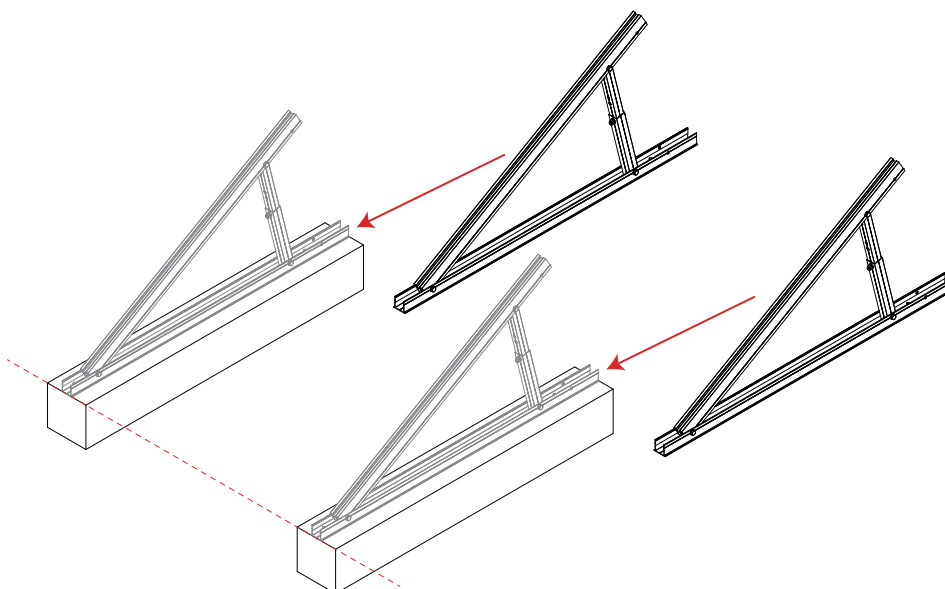


30° ▶



3

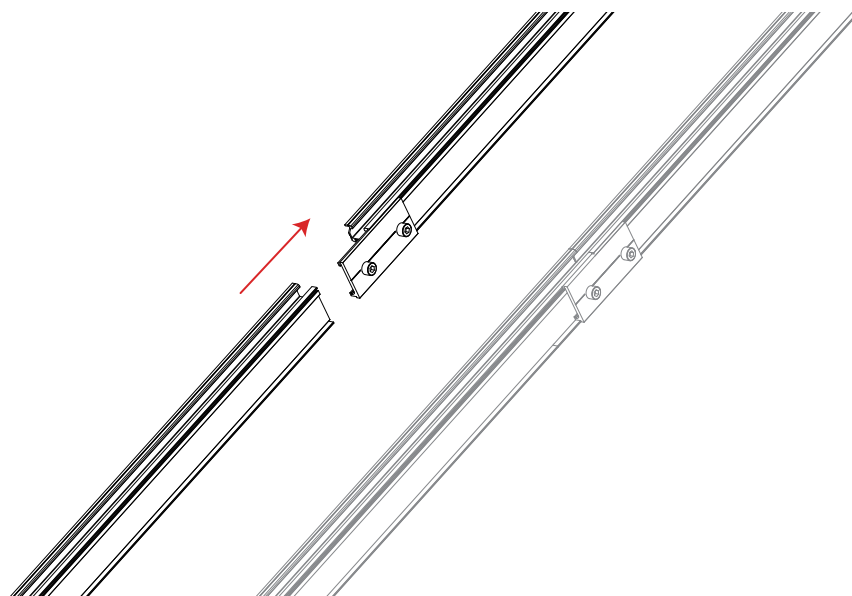
Place the pre-assembled tripod on the cement foundation and pre-lock it with nuts. Place the base on the same horizontal line according to the drawing dimensions, as shown in the figure.



Installation of Rail

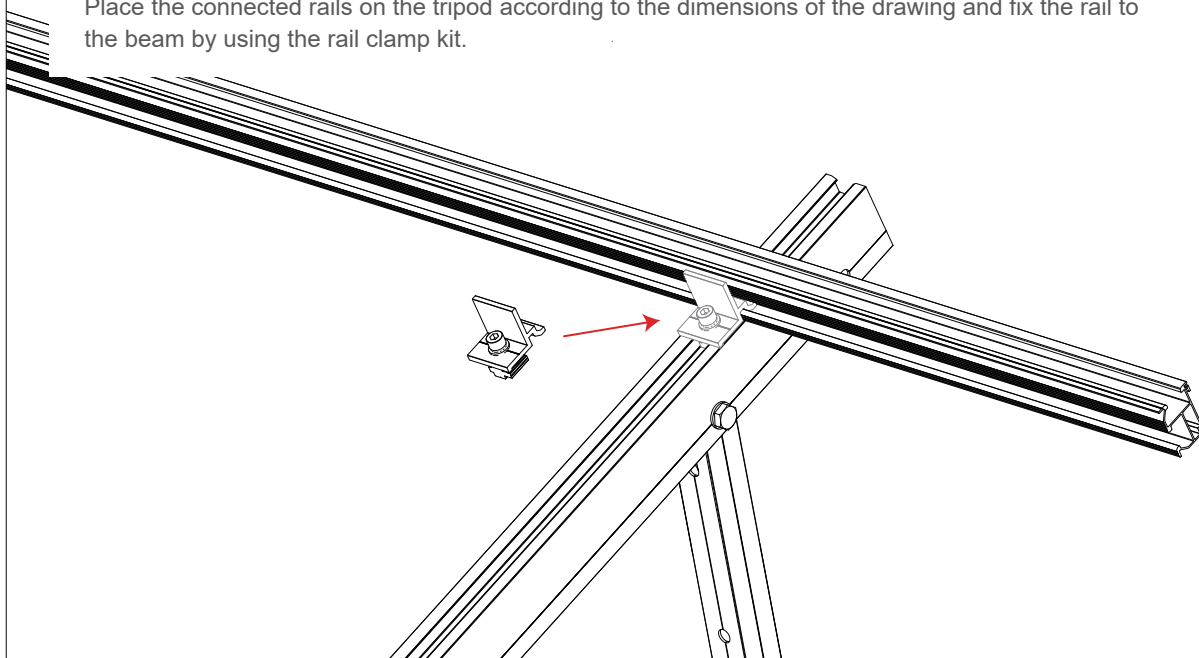
1

According to the plan, if the rail is not long enough, connect two rails with splice kit, and lock each side with an hexagon socket bolt M8x28.



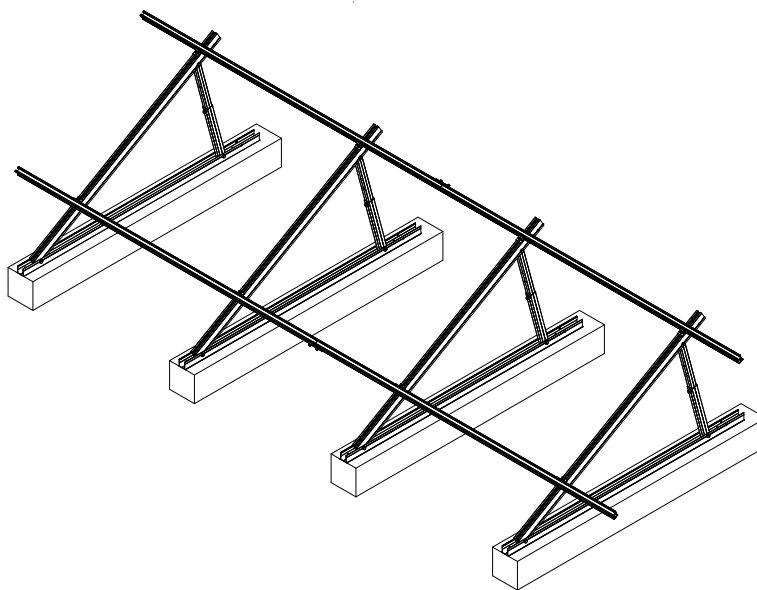
2

Place the connected rails on the tripod according to the dimensions of the drawing and fix the rail to the beam by using the rail clamp kit.



3

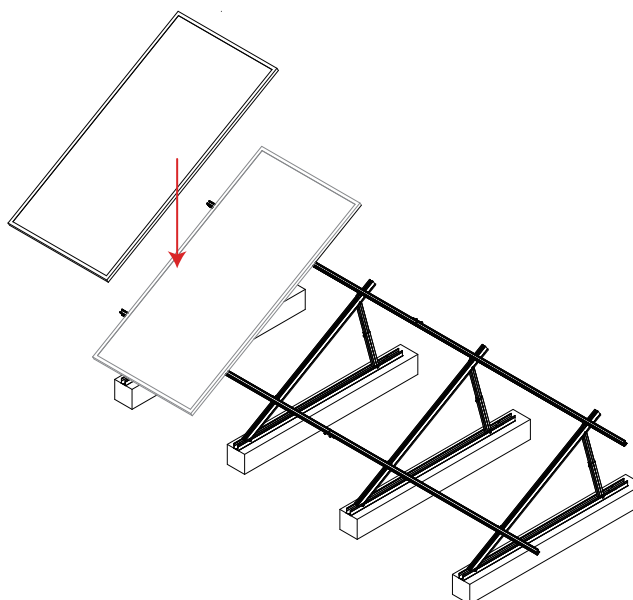
Finish the installation of all the rails.



Installation of solar Panels

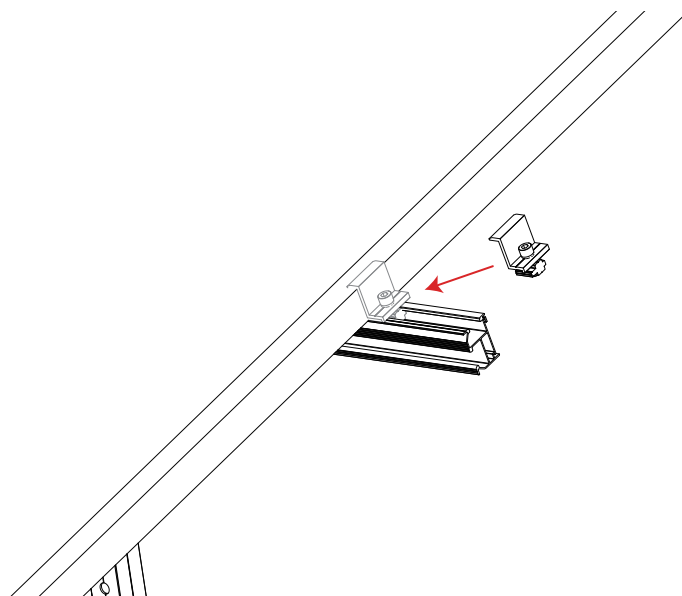
1

Lay the panels flat on the rail according to the dimensions of the drawing.



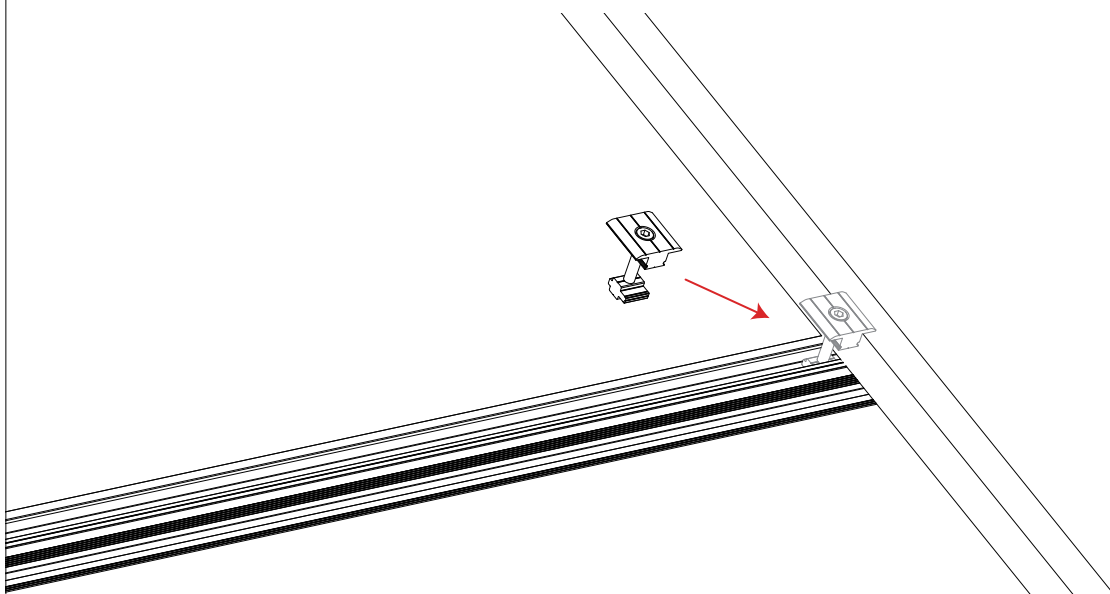
2

Slide the end clamp kit, stick it tightly against the solar panel, then lock the bolt tightly (recommended torque: $8\text{N}\cdot\text{m}$)



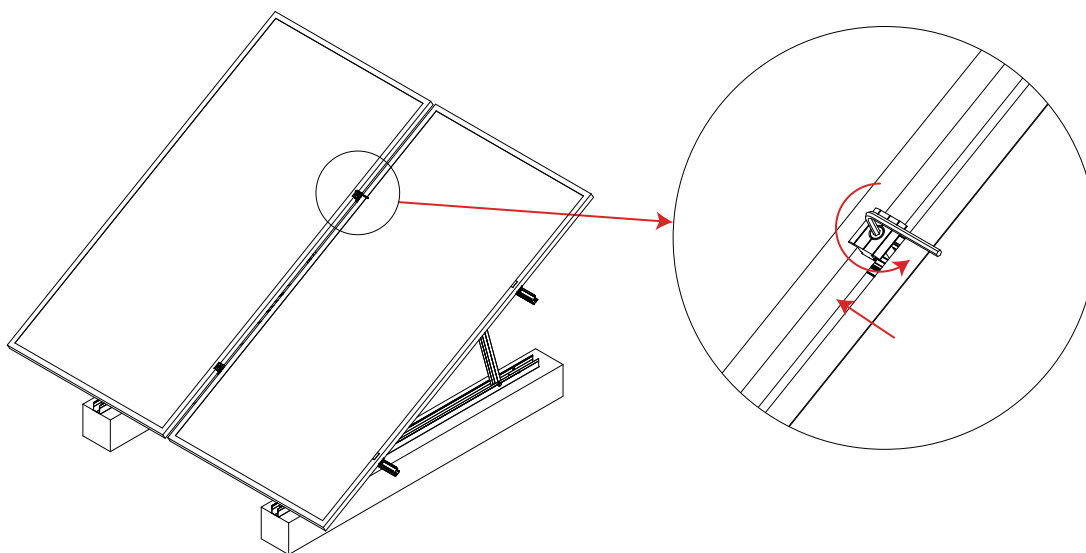
3

Put the inter clamp kit into the rail from top to bottom, stick it tightly against the solar panel, and then tighten it gently (about 2-3 turns).



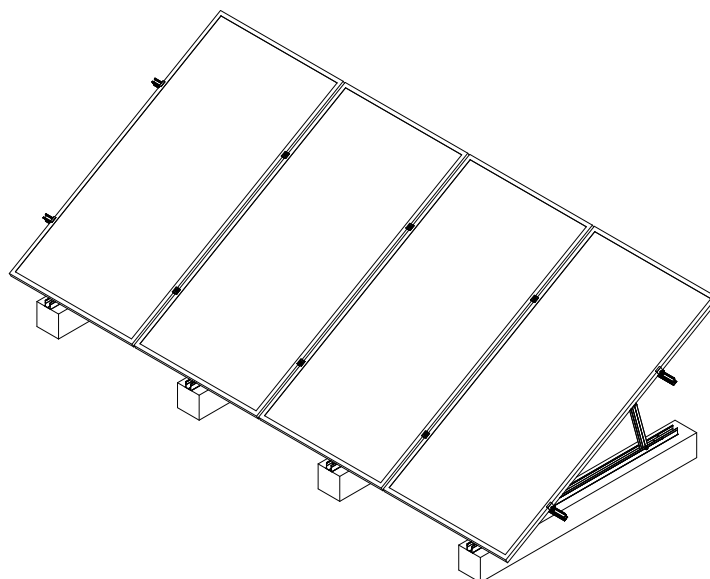
4

Then slide the other solar panel to one side of the previously installed solar panel and lock the inter clamp kit (recommended torque: 8N·m).



5

Place the last solar panel in each row on the rail and lock it with the end clamp kit (recommended torque: 8N·m). The effect after installation is shown below.



Maintenance

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 troubles 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.

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do My BesT , to be the best!



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