

Installation Manual on the Ground or Concrete Flat Roof Mounting System


Step1: we must prepare the tools.



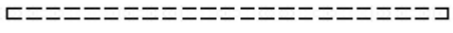
Step2: we must know the Components List.

Mounting rail/ Main beam/Pose	Hinge	Base bracket
		
Rail Splice	End Clamp Kit	Mid Clamp Kit
		

Step 3: Check drawing (include array layout and the section drawing)

A  represents a concrete foundation.

A  represents a PV module.

A line like this  , represent a mounting rail.

Please read and understand the drawings. We can learn the following information.

How many concrete foundations or the posts in a row at the each array?

How long is it between concrete foundations or the poses (including from east to west and from south to north).

Concrete foundation size: 400mm (L) x 400mm (W) x 400mm (H)

Base bracket or pose will be connected to the concrete foundation with expansion bolts or U-bolt. If in this order, we designed U-bolt. Please put U-bolt in concrete foundation, fix steady.

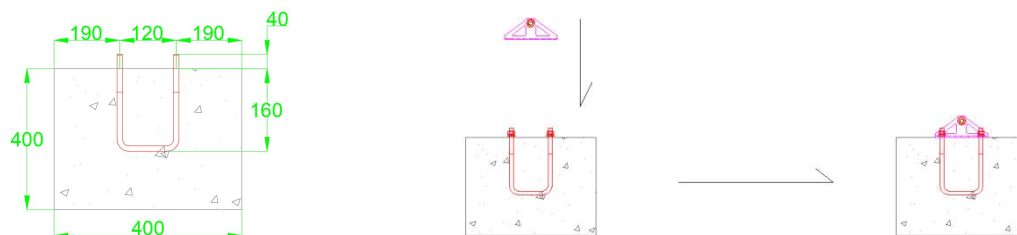
We must know the length of per rail main beam, rear posts, diagonal brace ,back brace at the each array according to the section drawing.

Then we will give you how many cold bending steels in a row as follows.

Array	Name	Total length	Comprise
6*1	Rail	6500	2000*3+500

Step 4:Installing front post and rear post as bellow:

4.1 Install front post at first.



In this type mounting system, we will use hinge as a front post.

Make front post upon this concrete foundation, by expansion bolts or U-bolt to fix.

4.2 Install rear post as bellow

We just only need to know how to install, and here we use expansion bolts or U-bolt kit to fix.

Rear post kit will be joined to base bracket as bellow:

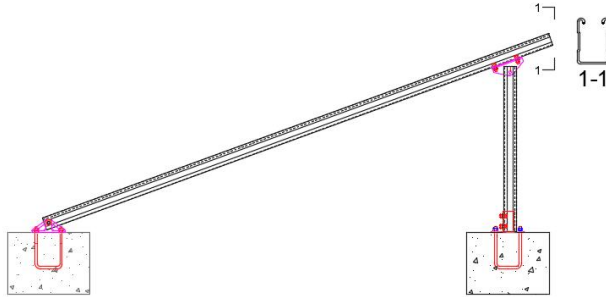


Install base bracket with expansion bolts or U-bolt to fix.

And then attach post to the base bracket by inner-hexagonal socket bolts M10*30 kits (contain 2 flats, 1spring, 1nut).

Remark, the posts opening side will face outside, if in the order there are some diagonal brace. Otherwise it isn't enough spare nuts to fix this mounting system.

Step 5 :Installing hinge and main beam



5.1 Installing the front hinge and main beam

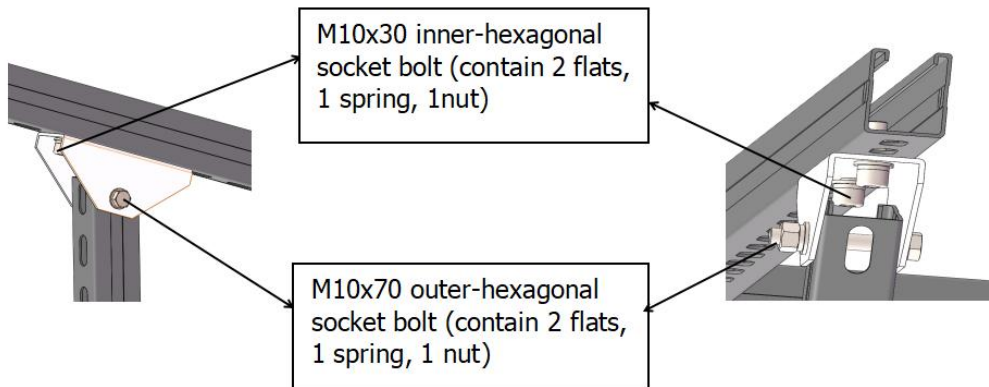


Here need to notice: The main beam will be installed as shown in the left image.

Use M10x70 outer-hexagonal bolt (contain 2 flats, 1spring, 1nut) to connect hinge and the mail beam.

Remark: main beam opening side will be up to sky.

5.2 Installing the rare pose and main beam

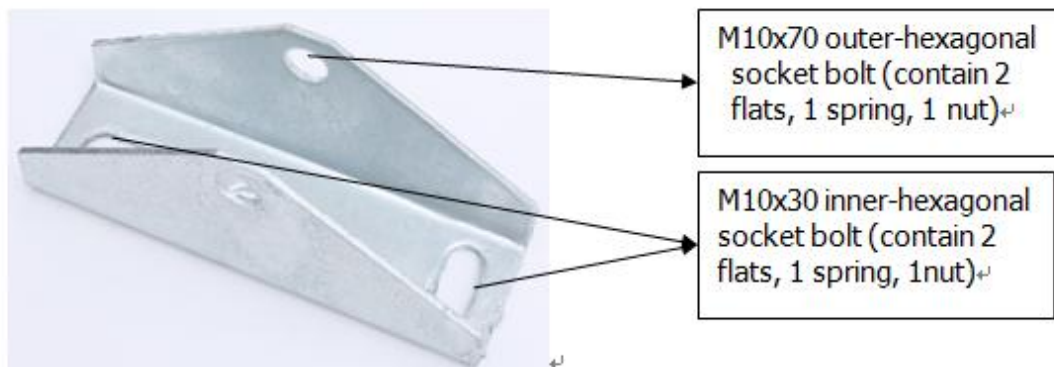


Hinge connected to post as the up image:

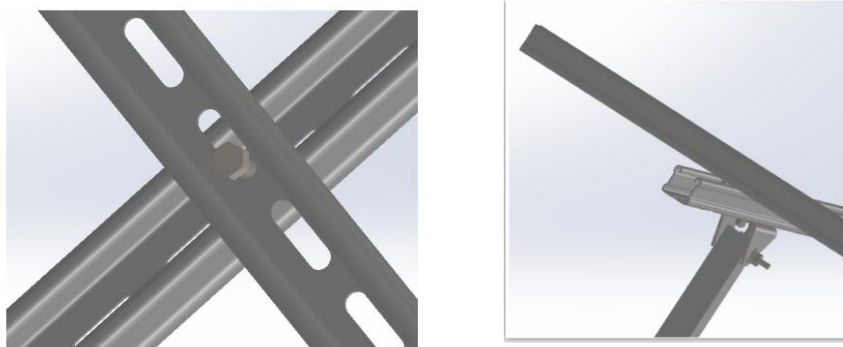
Use M10x70 outer-hexagonal socket bolt (contain 2 flats, 1spring, 1nut) to connect hinge and post, and use M10x30 inner-hexagonal socket bolt (contain 2 flats, 1spring, 1nut) to connect main beam on hinge.

Remark: main beam opening side will be up to sky.

Hinge as bellow:



Step 6 : Installing mounting rail upon main beam.



Use M10 square nut as nut to connect main beam and rail.

As we need, main beam opening side is to up, and mounting rail's opening side up to sky too.

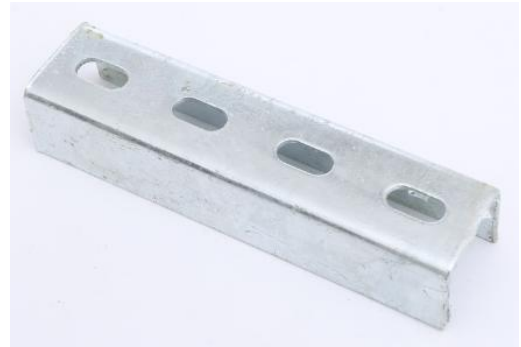
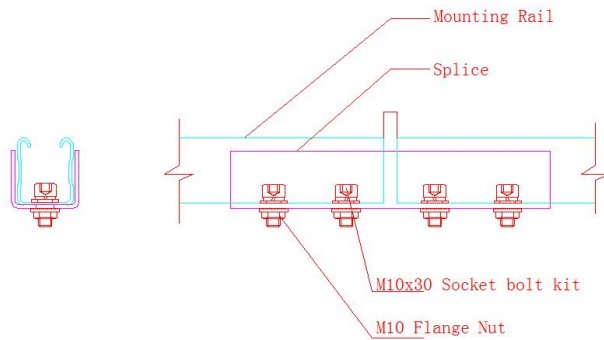
So, we need make inner-hexagon socket bolt M10*30 through from mounting rail waist hole to the main beam channel, and use square nut to fix.



The space between each 2 rails should be between 65%~75% of the modules length.

Square nuts as left: need to be set into U-channel

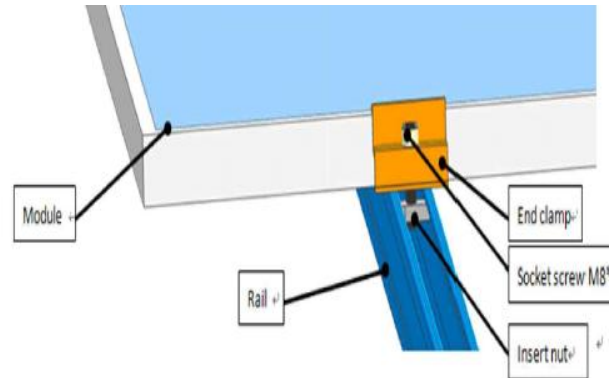
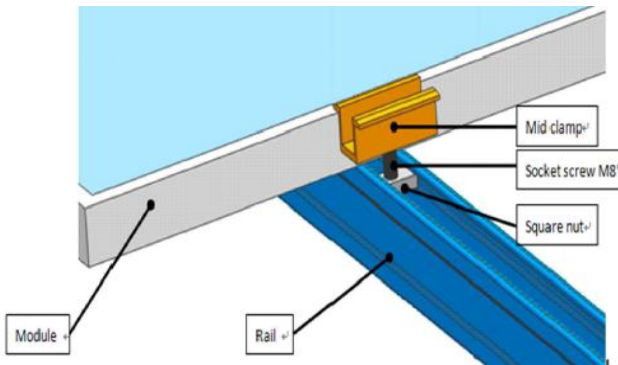
Step 7: Use rail splice to connect each 2 rails as bellow:



Rail splice is outside of the ends of the rails. We will use M10x30 inner-hexagonal socket bolt (contain 2 flats, 1spring, 1nut) to connect the rail splice and the rails

Step 10: Installing PV panel by End clamp and mid clamp.

also use M8*40 inner-hexagonal socket bolt through mid clamp or end clamp to U-channel, and use square nut to fix, like as below:



Make sure all parts fixed steady.

End...