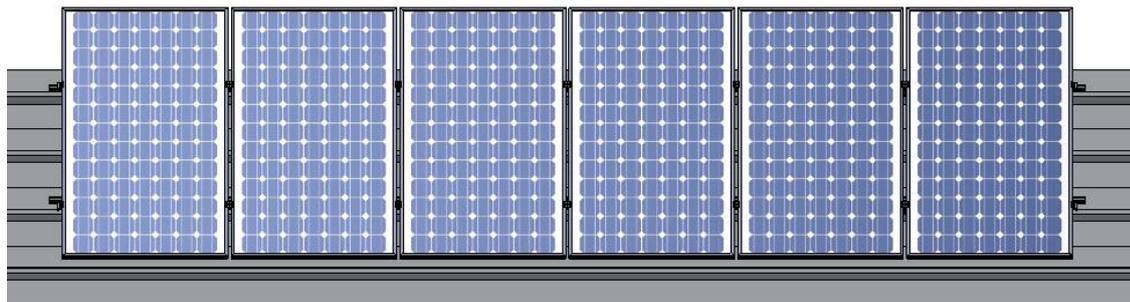


MA Tilt Legs Mounting System

Installation Guide



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1. Product Introduction

The MRac Angle-Adjustable Mounting System is specially developed for flat rooftop solar system installation on residential, commercial and utility scale. The greatest characteristic of this mounting system is that its angle can be adjusted, and its simplified structural design will ensure quick and easy installation onsite, which will minimize the material usage and labor cost onsite. Please read this installation guide carefully before installing and using MRac Adjustable Legs.

This guide provides the following contents: a). Practical Installation Plans; b). Installation Instructions.

The MRac Tilt Legs Mounting System, when installed in accordance with this guide, conforms to AS/NZS 1170 and other building standards. During installation, especially when working on the roof, please observe the applicable safety regulations of your local region. Please ensure that you are using the newest version of the installation guide through contacting Mibet Energy by email to sales@mbt-energy.com or your local representative.

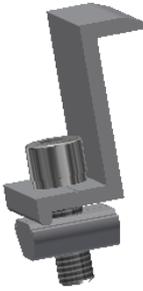
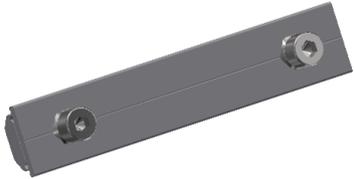
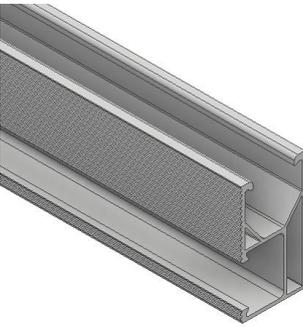
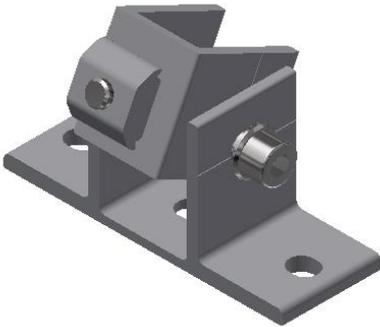
The installer should comply with the following rules:

- 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 the roofs, rafters, connecting girders and other supporting structures can stably support a photovoltaic module. (These are considered to be roof mounting);
- Using only MRac parts and installers-supplied parted as specified by MRac (Substitution of parts may void the warranty);
- Ensure the wood screws have enough strength and shear force in installation;
- Maintain the integrity of the roof waterproof system;
- 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.

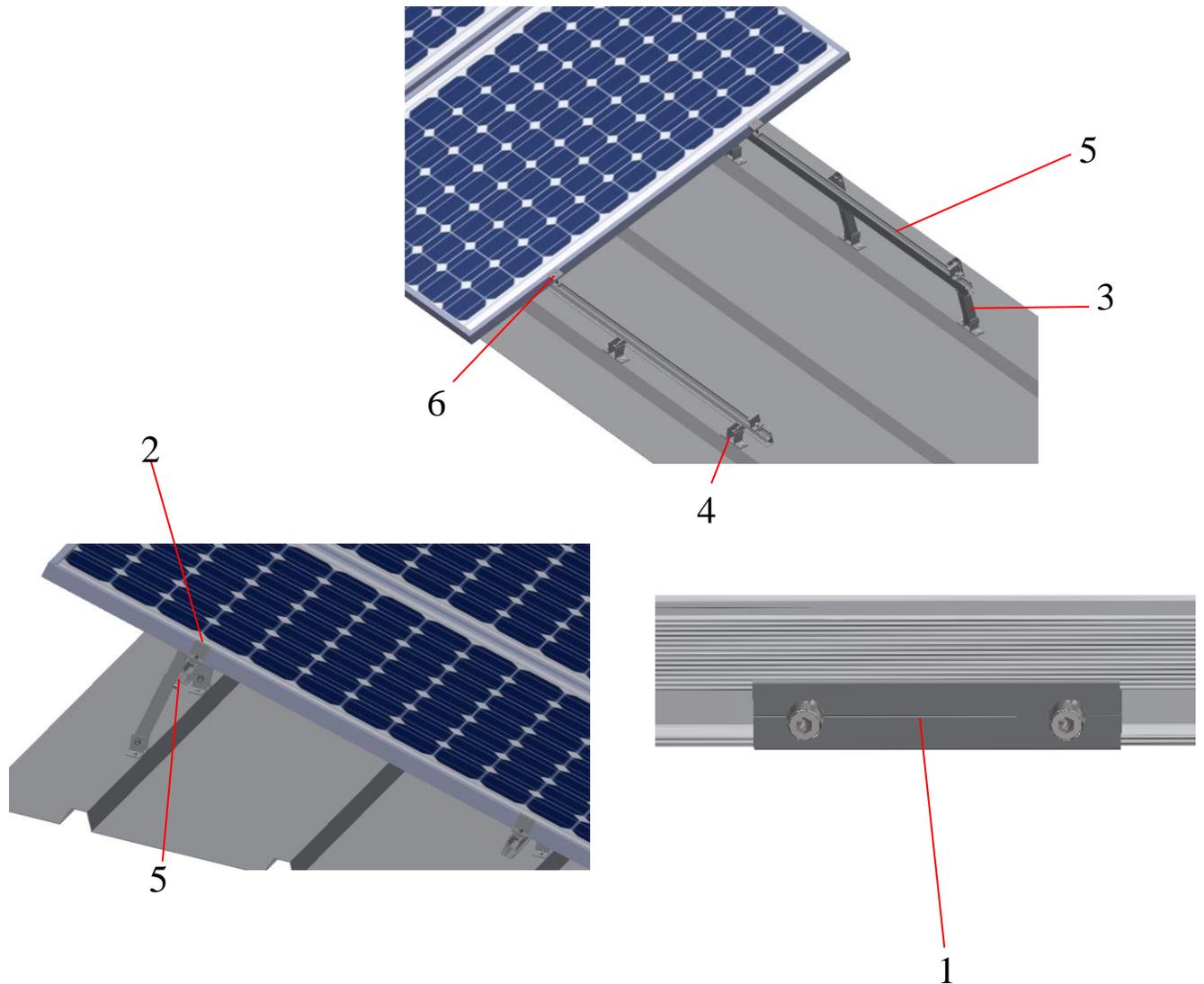
2. Installation Tools

- 8mm Inner hexagon spanner;
- Adjustable spanner with adjustable range of 0-8mm;
- Electrical Tools;
- 5m Tapeline;
- Laser Level.

3. Components

Main components		
		
Inter Clamp Kit (MA)	End Clamp Kit (MA)	<i>Splice for MA Rail</i>
		
MA Rail	Front Leg	Back Leg

4. System Overview



- 1) Splice for MA Rail
- 2) End Clamp Kit (MA)
- 3) Back Leg
- 4) Front Leg
- 5) MA Rail
- 6) Inter Clamp Kit (MA)

5. Installation Guide

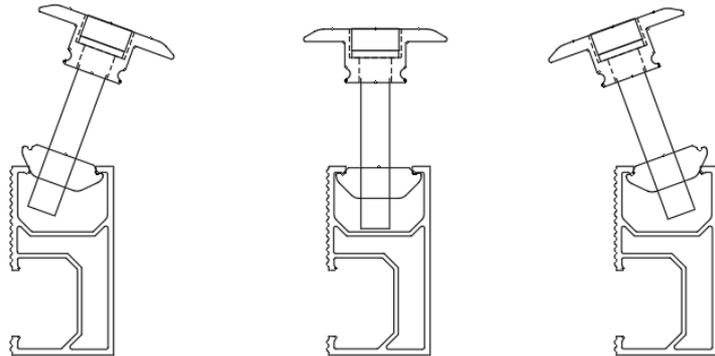
5.1 Installation of MA Nut

5.1.1

The Installation of MA Nut is shown in the right picture. please ensure that the teeth of the hexagon socket head bolt do not pass through the hole bottom of the MA nut.

Position the MA nut in the groove of the rail and gently screw in the bolt for 2 to 3 turns. At this point, the bolt can still slide freely in the Rail. Slide the bolt to the final position to fix the inter clamp, end clamp or tile hook, then lock the bolt tightly.

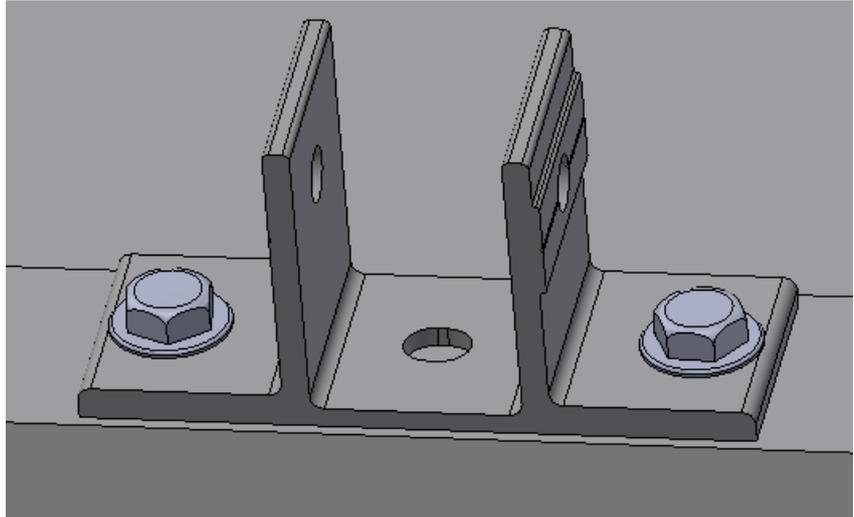
(Recommended torque force: 8 N·m)



5.2 Installation of Tilt Legs

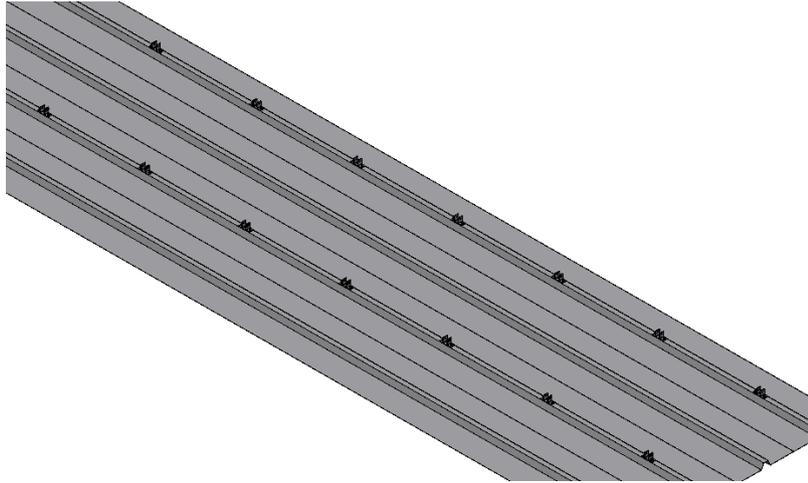
5.2.1

According to drawing, using wood screw M6*80 to fix the front leg and back leg onto the trapezoidal metal sheet. (Under the position where wood screw is fixed is wooden beam.)



5.2.2

Repeat above step to fix all front legs and back legs.



5.3 Installation of Splice for MA Rail

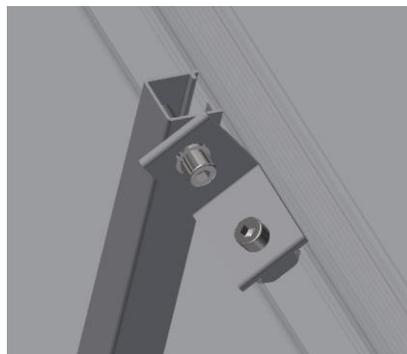
5.3.1

According to plan, if the rail is not long enough, use splice for MA rail to contact rails. Lock the two M8*20 bolt on both sides.



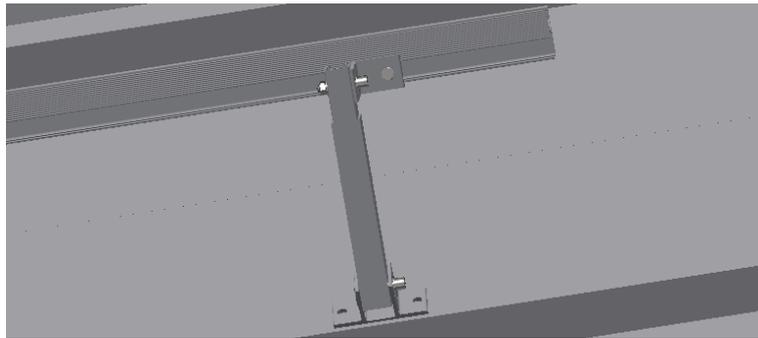
5.3.2

After contacting the rails, fix the rails on all front legs and back legs by putting MA nuts in the right positions and lock the M8*20 hexagon socket bolts.

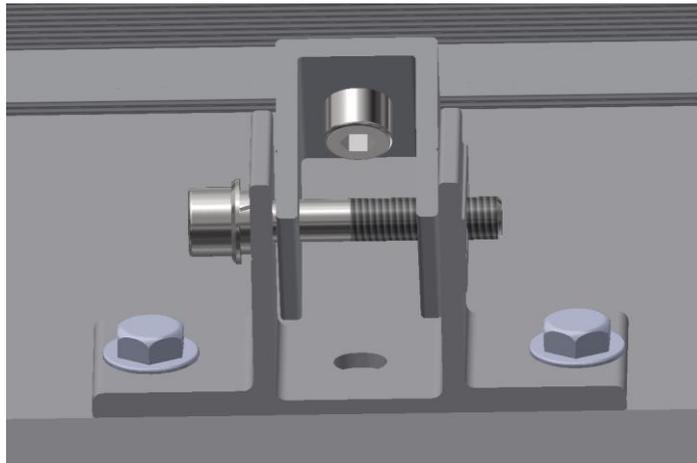


5.3.3

Lock the M8*45 bolt to fix the front/back leg and its base.



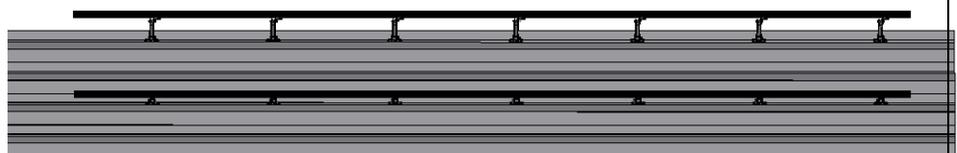
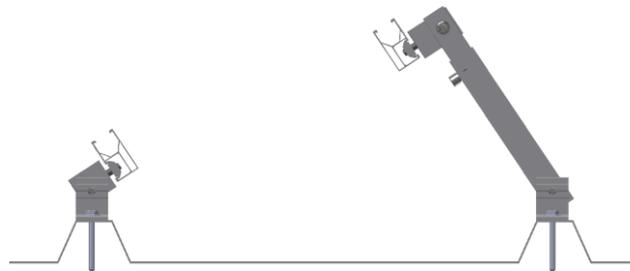
Back Leg



Front Leg

5.3.4

Repeat above steps to install all MA Rails.

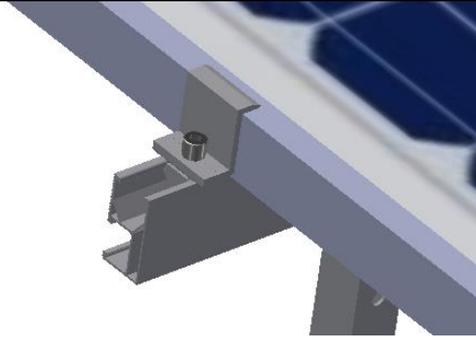


5.4 Installation of Solar Panels

5.4.1

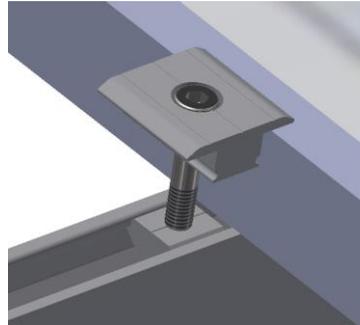
According to the plan, place the PV Panel on the rail, slip the End Clamp Kit to tightly stick on the solar panel, and lock the bolt tightly.

(Recommended torque force:8N·m)



5.4.2

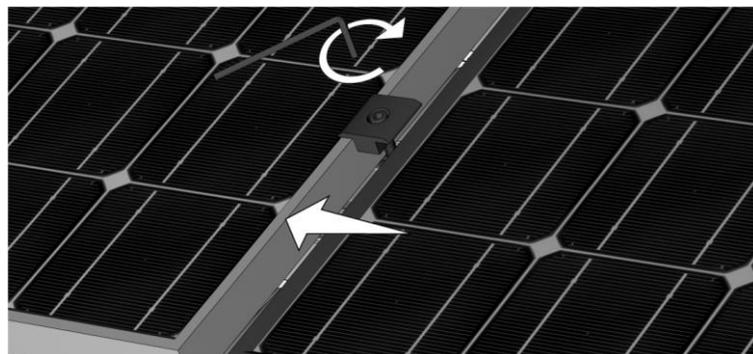
Place the Inter Clamp into the rail and tightly attach to the edge of solar module. Then pre-lock the bolt (Bolt down around 2 to 3 screw threads).



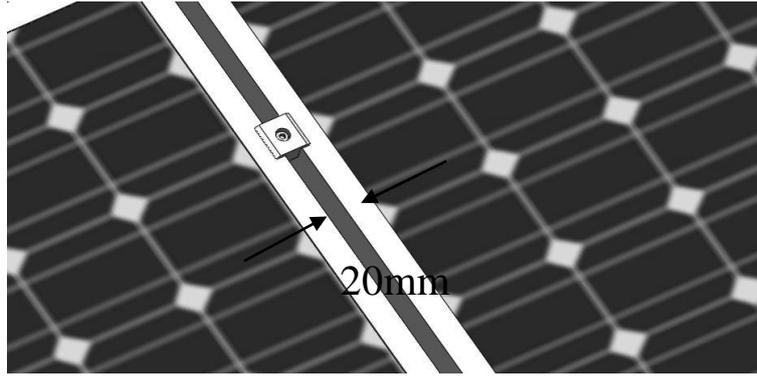
5.4.3

Then slide another solar panel to close to one side of the previously installed solar panel and lock the Inter Clamp tightly.

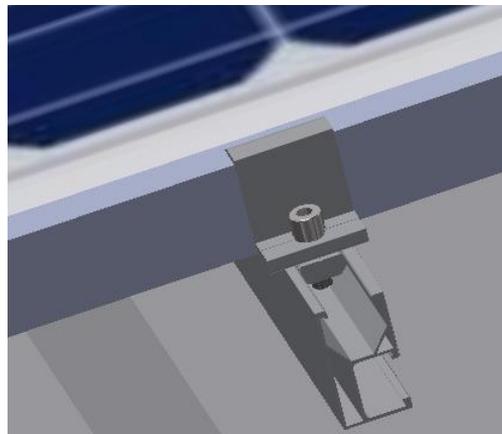
(Recommended torque



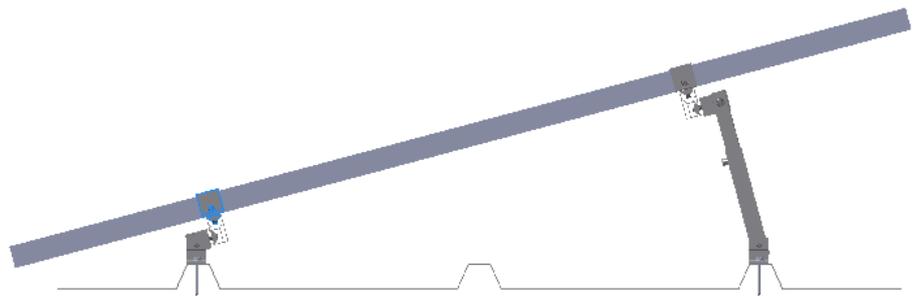
force:8N·m)
Please note that the anti-skid protection device should fall in the middle of the slot of the lowest rail.



5.4.4
Place the last solar panel of each row on the rail and fix with End Clamp.
(Recommended torque force:8N·m)



5.4.5
Repeat above steps and complete the installation.



<p>5.4.6 By extending or shortening the back support, DC Adjustable Support is able to get the best tile all the year around. Mibet provide three types of mounting system: Adjustable Support 10-15 degree, Adjustable Support 15-30 degree, Adjustable Support 30-60 degree.</p>	<p style="text-align: center;">Lowest Point</p>



Highest Point



Xiamen Mibet New Energy Co.,Ltd.

10 Year Limited Product Warranty, 5 Year After Sales Service

Mibet (Xiamen) New Energy Co., Ltd. warrants to the original purchaser of products that the Product with Oxidation treatment on surface shall be free from shedding and cracks for a period of 5 years. Additionally, Mibet (Xiamen) New Energy Co., Ltd. provides 10 years of quality assurance.

The Finish Warranty does not apply to any foreign residue deposited on the finish. All installations in corrosive atmospheric conditions are excluded. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 –“Cleaning and Maintenance for Architecturally Finished Aluminum” (www.aamanet.org) are not followed by Purchaser. This Warranty does not cover damage to the Product that occurs during its shipment, storage, or installation.

This Warranty shall be VOID if installation of the Product is not performed in accordance with Mibet’s written installation instructions, or if the Product has been modified, repaired, or reworked in a manner not previously authorized by Mibet IN WRITING, or if the Product is installed in an environment for which it was not designed. Mibet shall not be liable for consequential, contingent or incidental damages arising out of the use of the Product by Purchaser under any circumstances.

Manufacturers of related items, such as PV modules and flashings, may provide written warranties of their own. Mibet’s limited Warranty covers only its Product, and not any related items.