

PV-ezRack SolarMatrix Installation Guide V2.0

NO.:PZ06-IM02-20



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1. Product Introduction





Clenergy PV-ezRack SolarMatrix is a mounting system with tilt angle 5 °, 10 °, 15 ° and 20 ° and suitable for non-penetrating roof in medium wind load region where wind speed is within 40m/s. The system could be installed easily with simple tools.

Please review this manual thoroughly prior to installing PV-ezRack SolarMatrix. This manual provides supporting documentation for building permit applications relating to PV-ezRack SolarMatrix Mounting system.

When installed in accordance with this guide, the PV-ezRack SolarMatrix parts will be structurally adequate and adhere to AS/NZS1170, IBC2006 and California 2007 building code. During installation please comply with the appropriate occupational health and safety regulations. Please also pay attention to other relevant regulations of your local region. Please check that you are using the latest version of the installation manual by contacting Clenergy via email at sales@clenergy.com, or by contacting your local distributor.

2. Tools and Components

2.1 Tools

			
Allen Key for 6&8mm	String	Torque Wrench	5m Tape

Note: The above tools are used for mounting system installation only and not included in supply scope. Any tools for electronic parts installation please consult system installer.

2.2 Components

		
ER-IC-SM Inter Clamp	ER-EC-SM End Clamp	ER-L-SM Front Leg
		
ER-RC-SM Rail Cross Connector	ER-L-SM Back leg	ER-R-MT MT-Rail
		
ER-CT-SM Clamp Tray	ER-WD-SM Wind Deflectors	

3. System Overview

3.1 Overview of PV-ezRack SolarMatrix



3.2 Stainless Steel Fastener Installation Precautions

Improper operation may lead to deadlock of Bolts and Nut. Follow the steps below to reduce this risk

1. Reduce the friction coefficient:

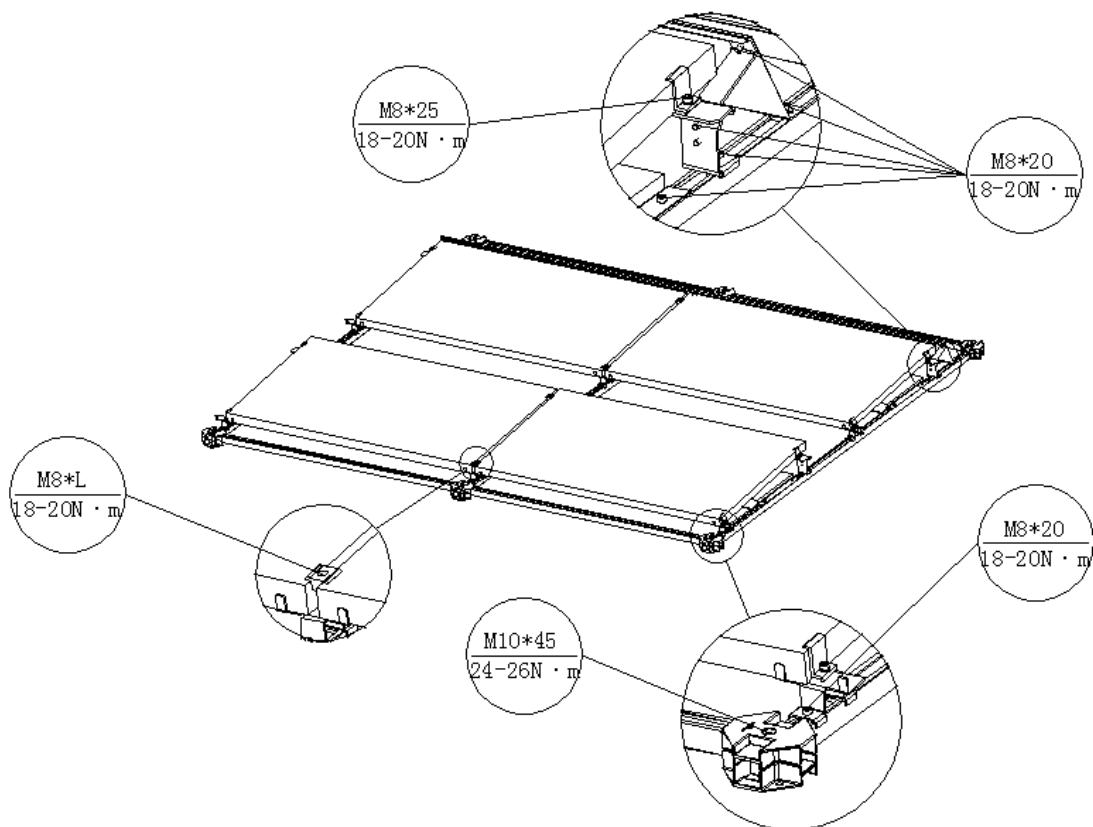
- (1) Ensure that the thread surface is clean and free of dirt or contaminant;
- (2) Apply lubricant (grease or 40# engine oil) to fasteners prior tightening to avoid galling or seizing in the threads;

2. General installation instructions:

- (1) Apply force to fasteners in the direction of axis of thread;
- (2) Apply force uniformly, to maintain required torque;
- (3) Professional tools and tool belts are recommended;
- (4) Avoid using electric tools for final tightening;
- (5) Avoid working at high temperatures;

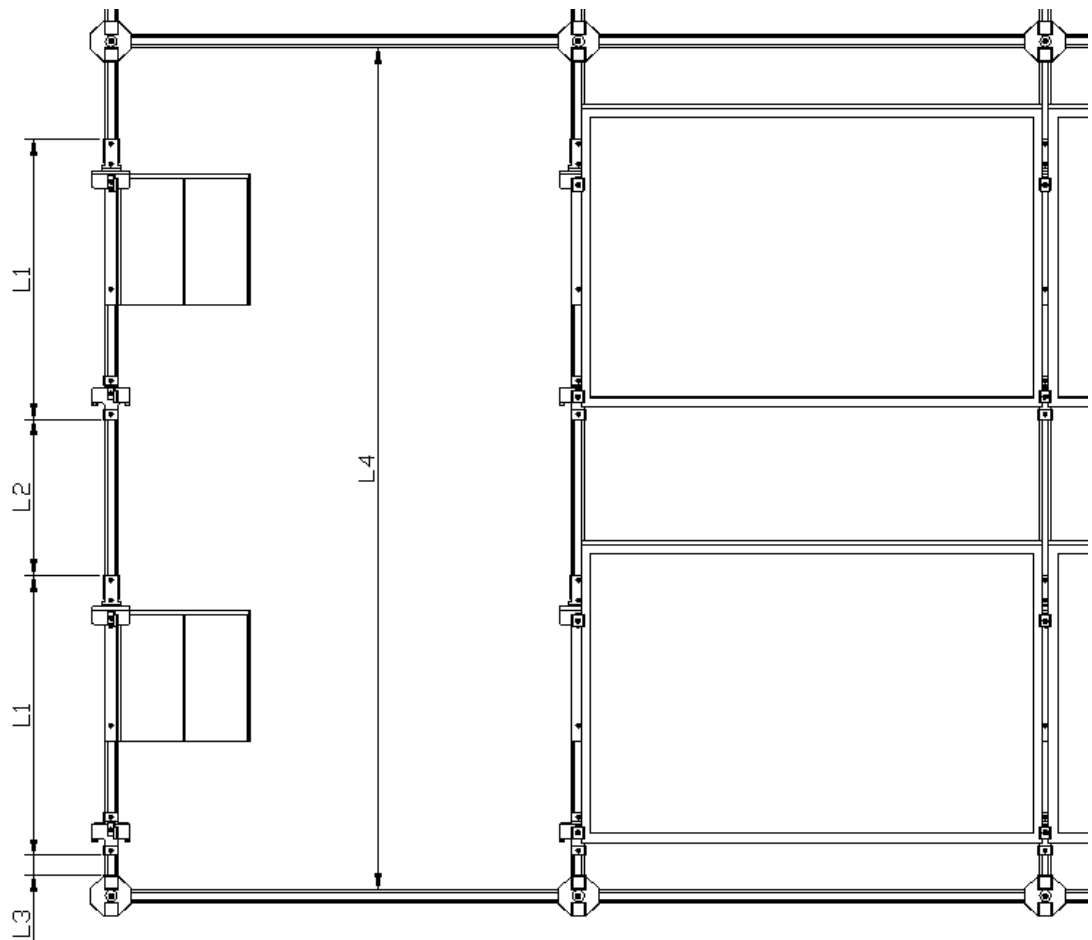
3. Safe Torques

Please refer to safe torques defined in this guide as shown below; In case power tools are required, Clenergy recommends only low-speed tools. High-speed and impact drivers increase the risk of bolt galling (deadlock). If deadlock occurs, you need to cut fasteners please make sure that there is no load on the fastener before you cut it. Avoid damaging the anodized or galvanized surfaces.



4. These steps should be applied for every stainless steel nut and bolt assembly.

3.3 Installation Planning



Refer to the above drawing to make out installation planning:

- 1) PV module orientation: Landscape (Length A * Width B * Height H)
- 2) The installation span L1 between Front Leg and Back Leg is 900mm;
- 3) The installation span L2 between Front Leg and Back Leg is up to specific engineering requirements.
- 4) The installation span L3 between Front Leg and Rail Cross Connector is 30mm.
- 5) End Clamp or Inter Clamp is installed on Front Leg and Back Leg to fasten PV modules.

3.4 Installation Dimensions

All drawings and dimensions in this installation guide are for a generic reference. The Clenergy PV-ezRack SolarMatrix is optimized to suit specific conditions for each project and documented in a construction drawing. As a result, major components of the Clenergy PV-ezRack SolarMatrix may be provided in section sizes and lengths that

vary from those shown in this guide. The installation process detailed in this instruction guide remains the same regardless of the component size. In case you need to do any on-site modifications or alteration of the system in a way that would be different from the construction drawing please provide marked up drawings/sketches for Clenergy's review prior to modification for comment and approval.

4. Installation Instruction

4.1 Install MT-Rail

4.1.1 Place MT-Rail along both length and width direction according to your planning as shown in Figure 1.

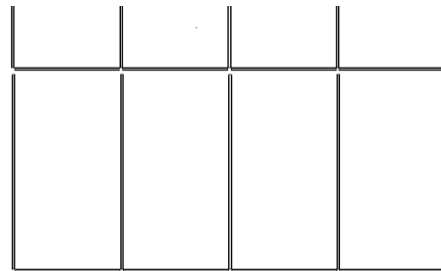


Figure 1

4.1.2 Use Rail Cross Connector to connect MT-Rails and fasten with Bolts M10*45 tightly as shown in Figure 2 and 3.

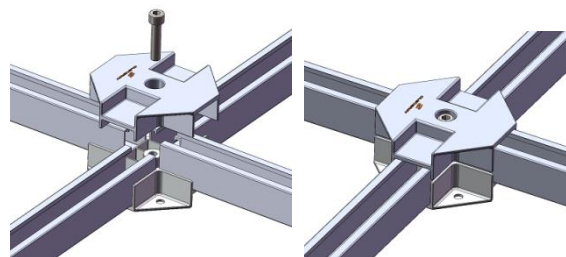


Figure 2

Figure 3

Recommended torque for Bolts M10*45 is 24-26N·m.

4.2 Install Clamp Tray

4.2.1 According to your plan, fix the Clamp Tray on MT-Rail along length direction and fasten with Bolts M8*20 tightly, and load specified ballast blocks on Clamp Tray as shown in Figure 4 and 5.

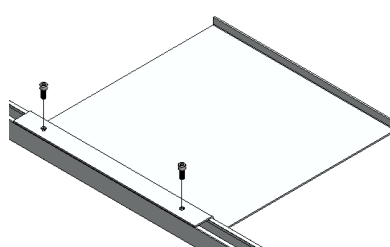


Figure 4

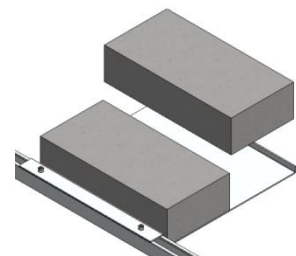


Figure 5

Recommended torque for Bolts M8*20 is 18-20 N·m.

4.3 Install Front Leg and Back Leg

4.3.1 Fix the Front Leg or Back Leg on MT-Rail along length direction and fasten with Bolts M8*20 as shown in Figure 6 and 7.

Note: please pay attention to the installation direction of Front Leg and Back Leg.

Recommended torque for M8*20 is 18-20 N·m.

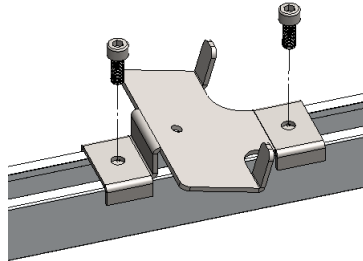


Figure 6

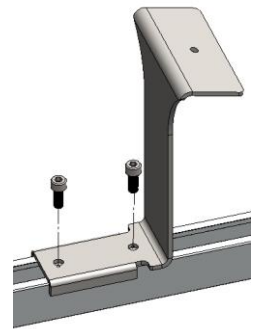


Figure 7

4.4 Install PV module

4.4.1 Place the PV module on Front Leg and Back Leg and fasten with End Clamp and Inter Clamp tightly as shown in Figure 8 and 9.

Recommended torque for Bolts M8 of End and Inter Clamp is 18-20 N·m.

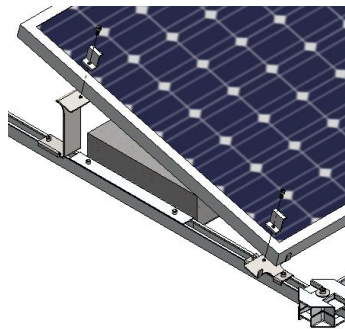


Figure 8

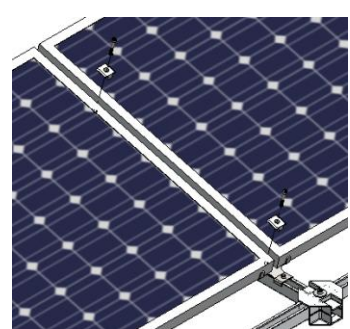


Figure 9

4.5 Install Wind Deflector

4.5.1 Fix the Wind Deflector Connector on Back Leg of the last row and fasten with Bolts M8*20 tightly as shown in Figure 10.

Recommended torque for Bolt M8*20 is 18-20 N·m.



Figure10

4.5.2 Fasten Wind Deflector, Wind Deflector Connector and MT-Rail along length direction with Bolts M8*20 tightly as shown in Figure 11 and 12.

Recommended torque for Bolts M8*20 is 18-20 N·m.

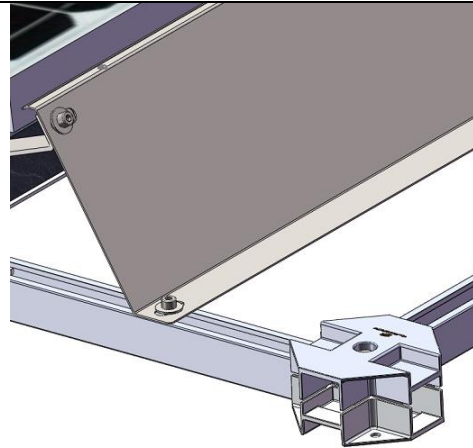


Figure 11



Figure 12

5. Warranty

10 year limited Product Warranty, 5 year limited Finish Warranty

Clenergy co. Ltd warrants to the original purchaser ("Purchaser") of product(s) that it manufactures ("Product") at the original installation site that the Product shall be free from defects in material and workmanship for a period of ten (10) years, except for the anodised finish, which finish shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of five (5) years, from the earlier of 1) the date the installation of the Product is completed, or 2) 30 days after the purchase of the Product by the original Purchaser ("Finish Warranty").

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 Clenergy's written installation instructions, or if the Product has been modified, repaired, or reworked in a manner not previously authorized by Clenergy IN WRITING, or if the Product is installed in an environment for which it was not designed. Clenergy shall not be liable for consequential, contingent or incidental damages arising out of the use of the Product by Purchaser under any circumstances. If within the specified Warranty periods the Product shall be reasonably proven to be defective, then Clenergy shall repair or replace the defective Product, or any part thereof, in Clenergy's sole discretion. Such repair or replacement shall completely satisfy and discharge all of Clenergy's liability with respect to this limited Warranty. Under no circumstances shall Clenergy be liable for special, indirect or consequential damages arising out of or related to use by Purchaser of the Product. Manufacturers of related items, such as PV modules and flashings, may provide written warranties of their own. Clenergy's limited Warranty covers only its Product, and not any related items.