

NSPIRE SOLAR MOUNTING CREATIVITY

At Clenergy, our philosophy is simple: Your renewable energy project should be aesthetically pristine & functional.

That's why we've developed Clenergy Hollywood – our black series range with smart features and clean lines to give your panels a plush look. Immerse yourself in form, function and flair for the ultimate indulgent solar experience.

From elegant rails for a minimalist design to clamps for a luxurious interface, elevating your solar experience is within reach.



[Photo Credit] Platinum Solar Designs Front Cover: (Top) Gedlec Energy / (Middle) SEM Solar

Streamlined Simplicity

A solar system should be a statement on your roof and Clenergy Hollywood makes sure it's one of the most striking features holding up your solar panels. The series is available for tile, tin and flat roofs for a seamless and elegant look.



[Photo Credit] Gedlec Energy

Stylish & Smart

Clenergy continues to lead the way with class-leading solar mounting design, enhancing the appearance of your premium panels, without compromising on structural performance. Striking a perfect balance of innovation and intuition with a contemporary appeal.



[Photo Credit] Platinum Solar Designs



Lifestyle Integration

Our innovative end caps provide rich aesthetics whilst providing added security to your system by sealing ends from debris. They can be installed by your certified installer effortlessly to give a complete luxurious finish.

Designed Just For You

We are constantly improving our exceptional products whilst doing so in a way that is least impactful on the environment. We use methods of production that save resources, as well as producing solar mounting gear which sets new standards in aesthetics.

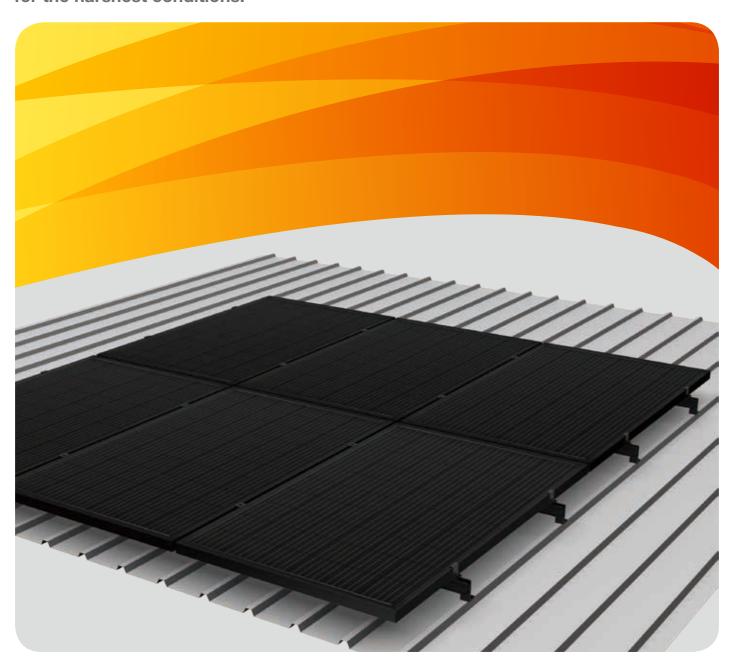






PV-ezRack SolarRoof-Black Anodized

Reliable, robust roof mounting system with high quality components designed for the harshest conditions.



PV-ezRack SolarRoof-Black Anodized

PV-ezRack SolarRoof is an universal mounting system for PV installation on roof, which is available for black and silver. The components are easy to install and can be used for flush as well as tilted systems, on a large variety of roof types. The interfaces, rails and clamps use high quality, robust and corrosion resistant materials including structural grade aluminium alloy (AL6005-T5) and stainless steel (SUS304).

Main Benefits

Quick and easy installation

Innovative and internationally patented, the Z-Module technology is used in almost all SolarRoof components. The Z-Module provides a quick, easy and safe installation method. It can be inserted in to the rail at any given point, and secured with just three hand grips.

Versatility

A large variety of tin roof fixings, tilt legs and adapters help ensure that you will find a suitable fixing method for almost every roof, where fixing with or without penetration is required.

Wide range of tilting

With three adjustable tilt legs, these parts can tilt panels from between 10-60 degrees. Through its innovative design, the tilt legs can cope with all common purlin distances.

Universal

SolarRoof has suitable mid and end clamps for every size of solar panel including frameless, thin film panels or special clamps for cyclonic regions. In the growing range of clamps, cable clips, adapters and accessories you're sure to find the parts you require for your residential rooftop mounting needs.



International Patent PCT/AU2009/000616



C-U/30/46/BA C-U/30/46-G/BA

Universal Clamp

PV-ezRack Universal Clamp, with dual functionality (inter and end clamp), is applicable with most common framed PV modules from 30 mm to 46mm in height. Inbuilt grounding clip is also available.





ER-EC-STXXB

Inter and End Clamps

The PV-ezRack Inter and End clamps offer a simple, easy to use and robust fixing of the PV panels (of all sizes) using the patented Clenergy Z-module. Compatible clamps for thin film modules are also available.



ER-TL-10/15/BA ER-TL-15/30/BA

Tilt Legs

The available adapters, non-penetration clamps and base rails make the application of this part truly universal.





ECO Rail

Specifically developed to achieve larger spans, the SolarRoof ECO-Rail has reduced the number of required fixings. The ECO-Rails have two patented Z-Module channels with one at top for panel mounting and the second on side for connecting to the roof interface. The ECO-Rail comes in 4200mm and 4400mm lengths.



Splice for ECO Rail

ER-SP-ECO/BA

Using high-quality aluminum material and stainless steel bolts, the ECO Rail Splice allows for convenient extension of rails without on-site cutting and processing.



Tin Interface

The robust aluminium L-feet, which provides a height adjustment of almost 30mm, is designed for corrugated and trimdek type tin roofs. It comes with a Z-Module or Click Module plus bolt preassembled, with a screw which includes bonded sealing washer plus an EPDM rubber pad.

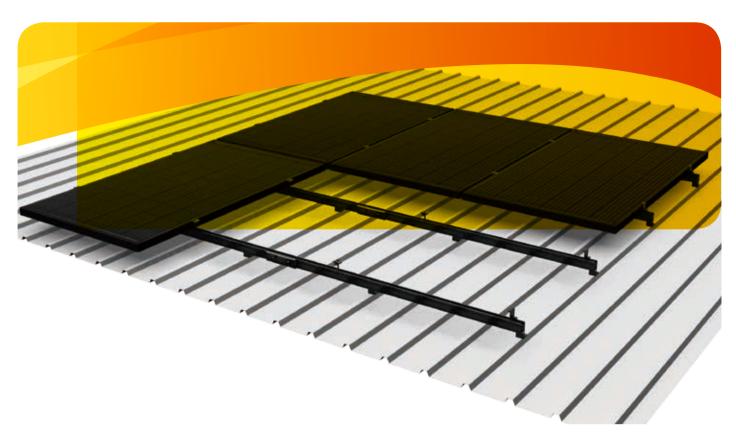
Materials

AL6005-T5 | SUS304

Contact us or one of our qualified resellers for a personalised quotation today.



*see Clenergy PV-ezRack warranty for further details





Clenergy Australia

1/10 Duerdin Street, Clayton VIC 3168 Australia Tel: +61 3 9239 8088 Fax: +61 3 9239 8024 E-mail: sales@clenergy.com.au www.clenergy.com.au

Clenergy China

999-1009 Min'an Rd, Huoju Hi-tech Ind. Dev. Zone Xiang'an District 361101, Xiamen, Fujian, China Tel: +86 592 311 0088 Fax: +86 592 599 5028 E-mail: sales@clenergy.com.cn www.clenergy.com.cn

Clenergy EMEA

Esplanade 41, 20354 Hamburg, Germany Tel: +49 (0) 40 3562 389 00 E-mail: sales.emea@clenergy.com

Clenergy Japan

Nittochi Yamashita Building 5th Floor 23 Yamashita-cho, Yokohama, 231-0023 Japan Tel: +81 45 228 8226 Fax: +81 45 228 8316 E-mail: sales@clenergy.co.jp www.clenergy.jp

Clenergy Philippines

145 Yakal St., San Antonio village, Makati City, Philippines Tel: +63 977 8407240 E-mail: sales_ph@clenergy.com www.clenergy.ph

Clenergy Thailand

9/2, 5th Floor, Vorasin Building, Soi Yasoob 2, Viphavadee-Rungsit Road, Chomphon Sub-district, Chatuchak District, Bangkok 10900 Tel: +66 (0) 2 277 5201, +66 (0) 6 3228-0200 E-mail: sales_th@clenergy.com, support_th@clenergy.com www.clenergythailand.com

Clenergy Singapore

24 Raffles Place #28-01 Clifford Centre Singapore 048621 Tel: +65 9743 1425 E-mail: vincent.chan@clenergy.com

Clenergy Malaysia

Tel: +86 18750231005 E-mail: sales_em@clenergy.com

Clenergy Vietnam

Tel: +86 592 3110095 E-mail: sales_vietnam@clenergy.com; susie.chen@clenergy.com

Worldwide Network



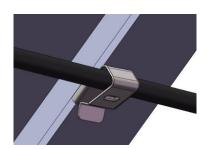
Intertek Clenergy PV-ezRack SolarRoof Black Anodized brochure 202009-AU

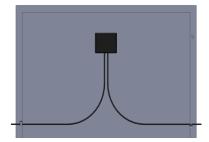
SGS



PV-ezRack Universal Cable Clip for PV Panels for holding 2 cables, Landscape

- Assembly -





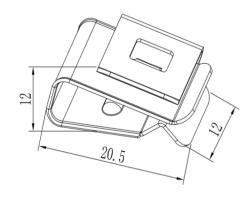
- Component -



Universal Cable Clip for PV Panels for holding 2 cables, Landscape Part No.: EZ-CC-PV/2/L

- Technical Specification -

Fixing method	Fixed on the frame of PV module, holding two cables		
PV Module Type	For framed PV Module only		
Max Cable Size	10 mm ²		
Dimensions	L20.5mm*W12mm*H12mm		
Weight	0.003kg		
Packaging	900 pcs per pack; 4 packs (3600		
1 ackaging	pcs) per carton		
Material	SUS304 3/4H		
Color	Silver		
Standard	AS NZS1170.2-2011		

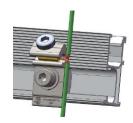




PV-ezRack Grounding Lug

- Assembly -





Fix into the top channel of Rail

Fix into the side channel of Rail

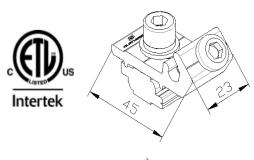
- Component -

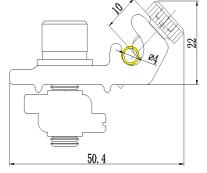


PV-ezRack Grounding Lug Part No.: EZ-GL-ST

- Technical Specification -

Application	For Clenergy' s PV Mounting System		
Fixing method	Fixing into ECO/T50/T110 Rail with Z module		
Max Cable Size	10 mm ²		
Dimensions	W23mm*L45mm		
Weight	0.095 kg		
Packaging	80 units per pack, 4 packs (320 units) per carton		
Material	Lug and pipe: Hpb59-1; Bolt/Washer: SUS304; Z module: AL6005-T5		
Certification	Approved by ETL according to UL467-2013		
Standard AS NZS1170.2-2011			



















PV-ezRack SolarRoof Isolator Shade Installation Guide

Code-Compliant Planning and Installation Guide V1.0 Complying with AS/NZS 5033: 2014 AMDT 2: 2018



Introduction



1. Introduction

Clenergy PV-ezRack SolarRoof Isolator Shade is an accessory in the PV-ezRack roof-top PV-mounting system, suitable for PV array AC/DC isolators. Utilising our patented Z-Module technology, the Isolator Shade is easily fixed to the rail and provides earthing continuity through the rail.

When correctly installed, the Isolator Shade is designed to function as a shroud to protect isolator and its enclosure from direct exposure to sunlight and rain as required by clause 4.3.3.3.2 of AS/NZS 5033:2014 Amdt 2: 2018. The isolator must have a suitable enclosure conforming to clause 4.3.3.3.1 of AS/NZS 5033:2014 Amdt 2: 2018. The isolator and its enclosure fit inside the Isolator Shade.

Please review this guide thoroughly before installing PV-ezRack SolarRoof Isolator Shade.

List of Contents

Introduction	01
Tools & Components	02
System Overview	03
Installation Instructions	06

The installer is solely responsible for:

- Complying with all applicable local or national building codes, including any that may supersede this manual
- Ensuring that PV-ezRack and other products are appropriate for the particular installation and the installation environment
- Using only PV-ezRack parts and installersupplied parts as specified by the PV-ezRack project plan. (substitution of parts may void the warranty and invalidate the letter of certification)
- Recycle according to the local relevant statutes
- Removal by reversing the installation process
- Ensure that there are no less than two professionals working on panel installation
- Ensure the installation of related electrical equipment is performed by licenced electricians
- Ensuring safe installation of all electrical aspects of the PV array. This includes adequate earth bonding of the PV array and PV-ezRack[®] components as required in AS/NZS 5033-2014 AMDT 2 2-2018.

Tools & Components



2. Tools & Components

2.1 Tools



2.2 Components

Components



Note: Angle Bracket is an optional component when fixing the Isolator Shade at the end of rail.

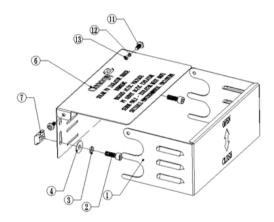
System Overview



3. System Overview

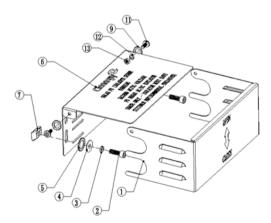
3.1 Overview of Isolator Shade

- To be Fixed Along the Rail
- a) Isolator Shade (mill finish)



Item	Part Name	Spec. (mm)
1	Isolator Cover, 280*155.5*114mm	280*155.5*114
2	Hexagon socket head cap screw M8*25	M8*25
3	Washer 8	8
4	Plain washer large 8*24	8*24
5	External Teeth Lock Washer 12	12
6	Isolator Bracket, 265*155*111.5mm	265*155*111.5
7	Z Module(grounding)	L20
11	Hexagon socket head cap screw M6*14	M6*14
12	Washer 6	6
13	Hexagon nut M6	M6

b) Isolator Shade (black anodized)

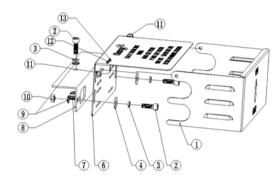


Note: For the Isolator Shade (black anodized), lock washers (no. 5 in the image above) are required to achieve earthing continuity.

System Overview

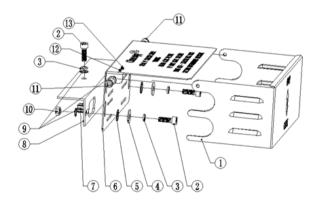


- To be Fixed at Rail End
- a) Isolator Shade (mill finish)



Item	Part Name	Spec. (mm)	
1	Isolator Cover, 280*155.5*114mm	280*155.5*114	
2	Hexagon socket head cap screw M8*25	M8*25	
3	Washer 8	8	
4	Plain washer large 8*24	8*24	
5	External Teeth Lock Washer 12	12	
6	Isolator Bracket, 265*155*111.5mm	265*155*111.5	
7	Z Module(grounding)	L20	
8	Angle Bracket for Isolator Shade, 260 mm Length	260*50.8*2.8	
9	External Teeth Lock Washer 8	8	
10	Hexagon nut M8	M8	
11	Hexagon socket head cap screw M6*14	M6*14	
12	Washer 6	6	
13	Hexagon nut M6	M6	

b) Isolator Shade (black anodized)



Note: For the Isolator Shade (black anodized), lock washers (no. 5 in the image above) are required to achieve earthing continuity.

System Overview



3.2 Precautions During Stainless Steel Fastener Installation

Improper operation may lead to deadlock of Nuts and Bolts. The steps below should be applied to every stainless steel nut and bolt assembly to reduce this risk.

3.2.1 Reduce the friction coefficient:

- 1 Ensure that the thread surface is clean (no dirt or contaminant);
- 2 Apply lubricant (grease or 40# engine oil) to fasteners prior to tightening to avoid galling or seizing of threads;

3.2.2 General installation instructions:

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

3.2.3 Safe Torques

Please refer to safe torques defined in this guide.



4. Installation Instructions 4.1 To be Fixed Along the Rail

4.1.1

According to your plan, assemble the Isolator Shade step by step as shown in Figure 1.

Recommended torque for M6 bolts is 4-5 N·m, which allows for optimal opening and closing of the isolator cover.

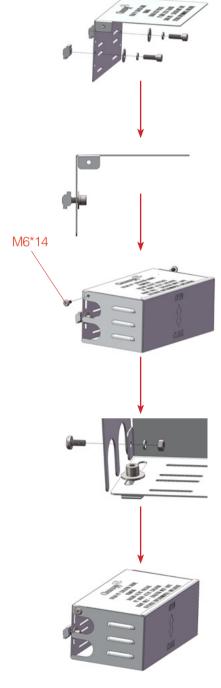


Figure 1



4.1.2

According to your plan, mark out the position for Isolator Shade installation on the Rail.

Note: Allow space above the Rail for the Isolator Shade Cover to open fully (Figure 2).

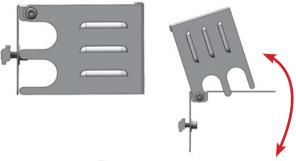


Figure 2

4.1.3

Rotate up the Cover and fix the Isolator to the Isolator Shade according to the Isolator Installation Guide (Figure 3).

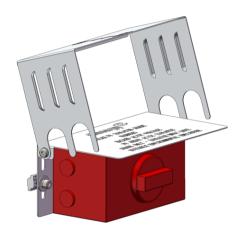


Figure 3

4.1.4

Once the Isolator is fixed properly, position the Z Module in the Rail channel and fix the Isolator Shade with the bolts supplied (Figure 4).

Recommended torque for M8 bolts is 4-5 Nm.

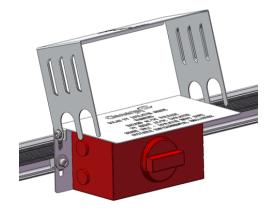


Figure 4

4.1.5

After cable installation, close the Isolator Cover (Figure 5).



Figure 5



4.2 To be Fixed Rail End (Optional)

An alternative option for fixing the isolator shade is at the end of the rail using the Angle Bracket.

4.2.1

According to your plan, assemble the Isolator Shade step by step as shown in Figure 6. Recommended torque for M6 bolts is 4-5N·m, which allows for optimal opening and closing of the isolator cover.

Note: When using Isolator Shade (black anodized), please apply External Teeth Lock Washers between Plain washer and Isolator Bracket as highlighted in 3.1 (Overview of Isolator Shade).

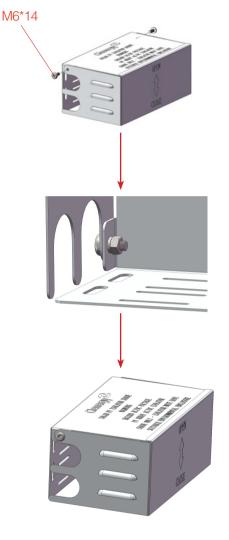
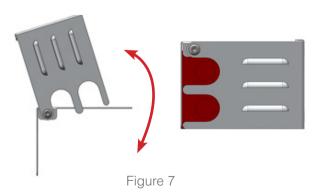


Figure 6







4.2.3

Fix the Angle Bracket to the Isolator Shade and then fix the assembled Isolator Shade on the Rail as shown in the Figure 8.

Note: Allow space above the Rail for the Isolator Shade Cover to open fully (Figure 2).

Recommended torque for M8 Bolts for fixing Angle Bracket on Isolator Shade is 8-10 N·m.

Recommended torque for M8 Bolt for fixing Isolator Shade on the Rail is 16-20 N·m.

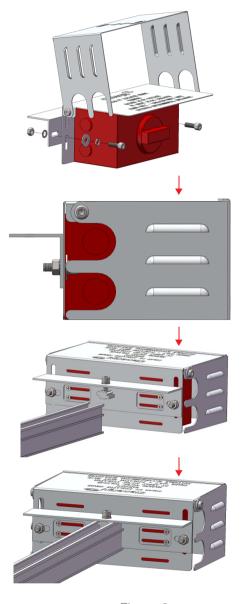


Figure 8

4.2.4 After cable installation, close the Isolator Cover as shown in the Figure 9.



Figure 9





Worldwide Network













Clenergy Installation Guide PV-ezRack SolarRoof Isolator Shade 201911

Clenergy Australia

1/10 Duerdin Street, Clayton VIC 3168 Australia Tel: +61 3 9239 8088 Fax: +61 3 9239 8024 E-mail: sales@clenergy.com.au www.clenergy.com.au

Clenergy China

999-1009 Min'an Rd, Huoju Hi-tech Ind. Dev. Zone Xiang'an District 361101, Xiamen, Fujian, China Tel: +86 592 311 0088 Fax: +86 592 599 5028 E-mail: sales@clenergy.com.cn www.clenergy.com.cn

Clenergy EMEA

Esplanade 41, 20354 Hamburg, Germany Tel: +49 (0) 40 3562 389 00 E-mail: sales.emea@clenergy.com

Clenergy Japan

Nittochi Yamashita Building 5th Floor 23 Yamashita-cho, Yokohama, 231-0023 Japan Tel: +81 45 228 8226 Fax: +81 45 228 8316 E-mail: sales@clenergy.co.jp www.clenergy.jp

Clenergy Philippines

145 Yakal St., San Antonio village, Makati City, Philippines Tel: +63 977 8407240 E-mail: sales_ph@clenergy.com www.clenergy.ph

Clenergy Thailand

9/2, 5th Floor, Vorasin Building, Soi Yasoob 2, Viphavadee-Rungsit Road, Chomphon Sub-district, Chatuchak District, Bangkok 10900 Tel: +66 63 228 0200, +66 81 969 5152

E-mail: sales_th@clenergy.com,support_th@clenergy.com

Clenergy Singapore

24 Raffles Place #28-01 Clifford Centre Singapore 048621 Tel: +65 9743 1425

E-mail: vincent.chan@clenergy.com

Clenergy Vietnam

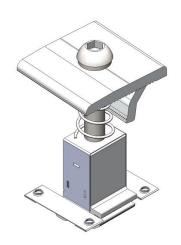
Tel: +86 592 3110095

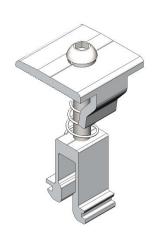
E-mail: sales_vietnam@clenergy.com; susie.chen@clenergy.com; ducnguyen@clenergy.com



Universal Clamp Installation Guide V1.0

NO.: PZ01-IM11-10





Content

1	Introduction	1
2	Tools & Components	2
3	System overview	3
4	Installation Instructions	5
5	Warranty	8



1. Introduction

PV-ezRack Universal Clamp (C-U/30/46-G or C-U/30/46) is designed for fastening framed PV modules starting from 30mm up to 46mm height. One clamp with both inter clamp and end clamp as well as height adjustable functionality is a good choice for most common framed PV modules over the market.

Please review this guide thoroughly prior to installing PV-ezRack Universal Clamp. This guide provides supporting documentation for installing PV-ezRack Universal Clamp.

The PV-ezRack Universal Clamp, when installed in accordance with this guide, will be structurally adequate and adhere to standard AS/NZS1170, IBC2006 and California 2007. 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 guide, which you can do by contacting Clenergy via email on sales@clenergy.com.au, or contacting your local distributor.

18/20 Duerdin ,

Fax: +86-592-5782298 Email: sales@clenergy.com.cn Website: www.clenergy.com.cn

Xiamen China 361006

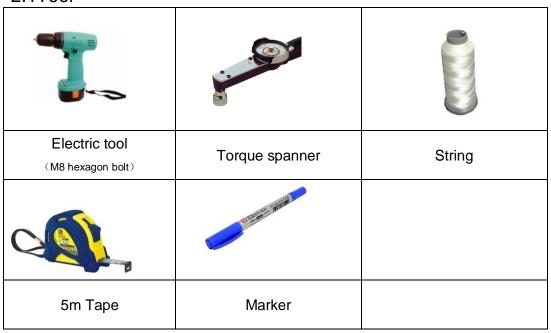
Tel: +86-592-5781288

No. 999-1009, Min'an Avenue, Xiang'an



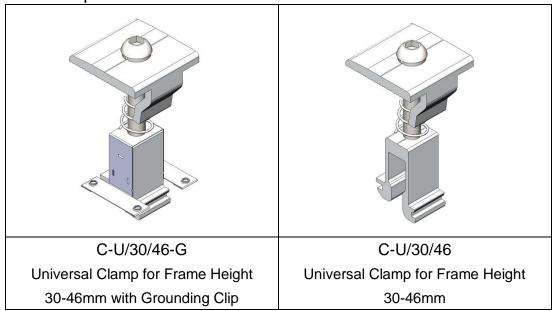
2. Tools and Components

2.1Tool



Note: Tools in the figure are only used for rack system (not included in Clenergy supply scope); Consult system installer about electronic parts installation tools.

2.2 Component

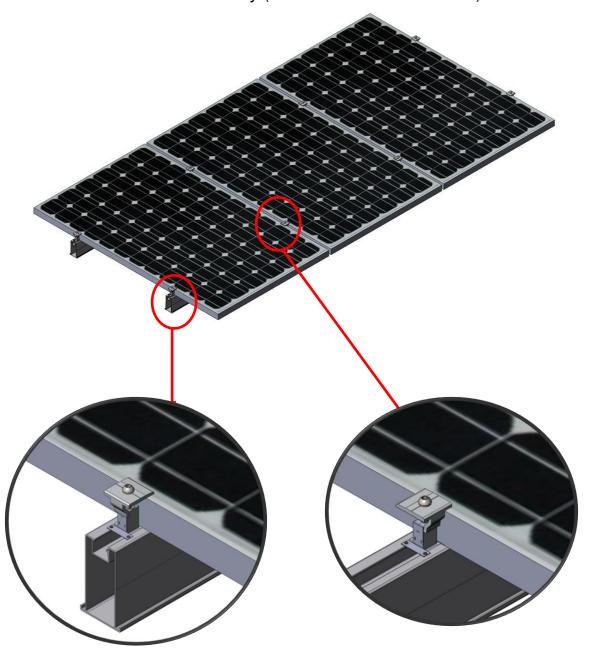


18/20 Duerdin , Clayton VIC 3168 Tel: +61-3-90176688 Fax: +61-3-90176668 Email: <u>sales@clenergy.com.au</u> Website: www.clenergy.com.au



3. System Overview

3.1 Overview of Assembly (Illustrated with C-U/30/46-G)



End Clamp Installation

Inter Clamp Installation

3.2 Precautions during Stainless Steel Fastener Installation

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

No. 999-1009, Min'an Avenue, Xiang'an Xiamen China 361006

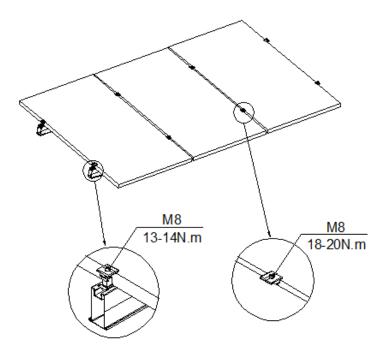
Tel: +86-592-5781288
Fax: +86-592-5782298
Email: sales@clenergy.com.cn
Website: www.clenergy.com.cn



- 1. Reduce the friction coefficient:
- (1) Ensure that the thread surface is clean (no 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 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 in below; In case power tools are required, Clenergy recommends the use of low speed only. High speed and impact drivers increase the risk of bolt galling (deadlock) If deadlock occurs and 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.



3.3 Installation Dimensions

All drawings and dimensions in this installation guide are for a generic reference. The Clenergy PV-ezRack Universal Clamp is to be optimized to suit specific conditions for

Email: <u>sales@clenergy.com.cn</u> Website: <u>www.clenergy.com.cn</u> 18/20 Duerdin , Clayton VIC 3168 Tel: +61-3-90176688 Fax: +61-3-90176668 Email: sales@clenergy.com.au

Website: www.clenergy.com.au



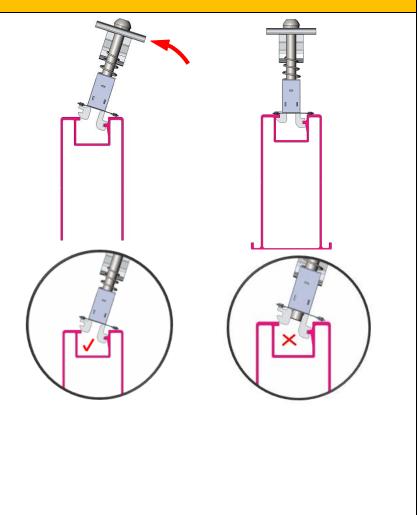
each project and documented in a construction drawing. As a result, major components of the Clenergy PV-ezRack Universal Clamp may be provided in section sizes and lengths that vary from those shown in this guide. The installation process detailed in this instruction guide remains the same regardless 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 modification for comment and approval.

4. Installation Instruction

4.1 Universal Clamp Installation

4.1.1 Inclining the
Universal Clamp to make
the channel on its lower
part against the lower
channel of T rail, and
press down the Universal
Clamp towards other
side to make the channel
on its upper part against
the upper channel of T
Rail as shown in right
figure.

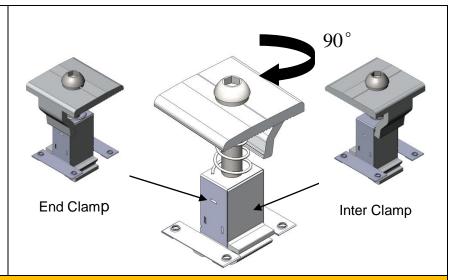
Note: before installing, make sure there will be enough clearance between screw and module of Universal Clamp as shown in right figure.



Fax: +86-592-5782298 Email: sales@clenergy.com.cn Website: www.clenergy.com.cn

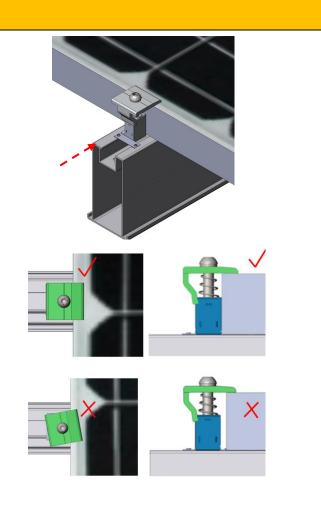


4.1.2 Twisting the head of Universal Clamp changes functionality from end to inter clamp as shown in right figure.



4.2 PV Module Installation

4.2.1 When using as End Clamp, slide the Universal Clamp to the position to be fastened, and then slightly slide the framed PV Module on grounding clip of Universal Clamp (ignore this step if C-U/30/46 is applied). Make sure the frame of PV Module is fully in contact with the Universal Clamp as shown in right figure. Visually check the Universal Clamp and PV module are properly positioned, and then hold Universal Clamp and fasten the M8 bolt

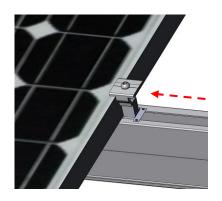


Fax: +86-592-5782298 Email: sales@clenergy.com.cn Website: www.clenergy.com.cn

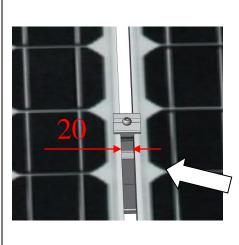
with13~14N.m.

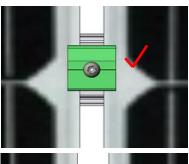


4.2.2 When using as inter Clamp, slide the Universal Clamp into position on rail to be installed, slightly lift the framed PV module to make sure the Grounding Clip of Universal Clamp will be fully covered (ignore this step if C-U/30/46 is applied) and ensure the frame of PV Module is fully in contact with Universal Clamp as shown in right figure.



4.2.3 Slightly slide the next framed PV Module into the other side of Universal Clamp, make sure the Grounding Clip of Universal Clamp will be fully covered (ignore this step if C-U/30/46 is applied) and ensure the frame of PV Module is closely in contact with Universal Clamp as shown in right figure. Visually check Universal Clamp and PV module are properly positioned and then hold Universal Clamp and fasten its bolts with 18~20 N.m.







Email: sales@clenergy.com.cn Website: www.clenergy.com.cn 18/20 Duerdin , Clayton VIC 3168 Tel: +61-3-90176688 Fax: +61-3-90176688 Email: <u>sales@clenergy.com.au</u> Website: www.clenergy.com.au



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.

Xiamen China 361006

No. 999-1009, Min'an Avenue, Xiang'an

Website: www.clenergy.com.au



PV-ezRack ECO Rail

Black Anodized

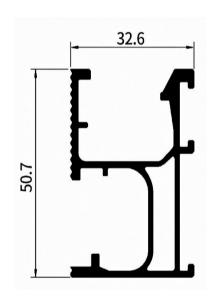
Component



Part No.: ER-R-ECO/XXXX/BA

Technical Specification

Application For Clenergy' s PV Mounting System			
Dimensions	W32.6mm*H50.7mm		
	Standard Length: 4200 and 4400mm		
Packaging	90 pcs per pack; 4 packs (360 pcs) per pallet		
Weight	0.826kg/m		
Material	AL6005-T5 (Black Anodized)		
Color	Black (anodized, no less than 10μm)		
Standard	AS NZS1170.2-2011		

















PV-ezRack[®] 10 Year Product Warranty

As the manufacturer of quality solar mounting systems, Clenergy Australia provides a warranty for all PV-ezRack products it supplies in Australia and New Zealand ("Products"). The warranty provided by Clenergy Australia is subject to the conditions contained in this document ("Warranty"). No other warranty provision implied or otherwise is to be assumed. Your Warranty coverage is in accordance with this document.

Product Warranty Table for Installations in Corrosivity Category 1, 2, 3, 4 and 5 (ISO 9223)

# Product			Chandand an	Product Warranty		
		Material	Standard or Customized Product	Corrosivity Category 1, 2 and 3	Corrosivity Category 4	Corrosivity Category 5
		6005CL-T5 mill finish	Standard	10 years	10 years*	10 years*
,	Aluminium Components	6005-T5 anodized to 10 microns	Standard	10 years	10 years*	10 years*
I		6005-T5 anodized to 15 microns	Customized	10 years	10 years	10 years*
		6005-T5 anodized to 20 microns	Customized	10 years	10 years	10 years
2	Galvanized Steel Components	Galvanized Steel at 85 microns in average	Standard	10 years	10 years	Not warranted
3	Stainless Steel Components	SUS304	Standard	10 years	10 years	10 years
4	Fasteners (bolts/ nuts/washers)	SUS304	Standard	10 years	10 years	10 years
4		SUS316	Customized	10 years	10 years	10 years
5	Buildex Screws for Tile Interface	Carbon Steel SAE 1022 with Climaseal 3 Finish	Standard	10 years	10 years**	10 years**
6	Buildex Screws for Tin Interface	Carbon Steel SAE 1022 with Climaseal 3 Finish	Standard	10 years	Not wa	rranted

^{*} Subject to interface spacing reduction as advised by Clenergy Australia. Please contact us for more details.

Warranty Scope:

Your solar mounting Product has been manufactured to high standards, however, should any manufacturing defect arise, please contact Clenergy Australia. We will arrange for an inspection of the affected Product(s) to determine the extent of the problem.

Details are provided below as to the extent of your Warranty coverage and any exclusions that may apply. Please read these provisions carefully to ensure you receive the appropriate assistance and support in a timely manner. Please also contact Clenergy Australia if any part of this Warranty is unclear, or you wish to discuss your rights and remedies under this Warranty.

If your Product fails during the Warranty periods set out in the Warranty table above due to a defect in:

(a) materials and/or workmanship on and from the date of the Product's delivery; or

(b) structural integrity on and from the date of the Product's installation,

Clenergy Australia will at its election either repair or resupply the defective Product provided that:

- The Product was installed correctly by a Clean Energy Council ("CEC") accredited or equivalent accreditation installer, following the Clenergy installation manual provided at time of purchase.
- The Product has been maintained correctly in accordance with section "Care of your Product" below.

Warranty Conditions:

- Any and all costs for repair or replacement outside the Warranty period are the responsibility of the customer.
- Where Clenergy attends a site and finds that the Product is not faulty, the costs for the visit will be payable by the customer.
- Defective Products shall be uninstalled and/or reinstalled at the customer's expense and risk.
- Under certain conditions, the Warranty can be extended to more than 10 years at an extra cost, available upon request.

Warranty Exclusions:

- Product finish (natural surface oxidation) or any natural impairment or surface corrosion that does not compromise the structural integrity.
- Products sold or installed outside of Australia and New Zealand unless approved previously in writing by Clenergy Australia.
- Damage caused by transport, mishandling, incorrect storage, improper loading or willful conduct.
- Any Product not correctly installed in accordance with our installation manual, or any specific design instruction or special conditions as advised by Clenergy Australia.
- Damage caused by the Product being modified in any way unless previously agreed to in writing by Clenergy Australia.
- The use of the Product for purposes other than the mounting of PV solar panels.
- Installations where the environment is excluded in the "Products Warranty Table" above, and for galvanized steel ground system Products, where the pH level is outside the range of 6-8, unless agreed to in writing by Clenergy Australia prior to installation.

^{**}The screws under tile interface are assumed to be installed in category 1, 2 or 3 micro-climate within the roof structure.

- Damage caused by extreme weather conditions or any other natural or man-made event outside of our control.
- Damage caused by attachments not designed or approved for connection to the Product.
- Damage caused by lightning strikes or excessive currents through the earthing/grounding clamps, clips or lugs.

Our Products may come with guarantees that cannot be excluded under the Australian Consumer Law. You may be entitled under statute to a replacement or refund for a major defect in the Products. You may also be entitled under statute to have the products repaired for any defect which does not amount to a major defect. The benefits given by this Warranty are in addition to any statutory rights and remedies you may have under Australian law.

Clenergy Products are designed to be durable with minimal care, however it is important that you maintain your mounting Product in accordance with proper practices. This includes regular maintenance and inspection to avoid damage.

The aluminum components are made from either AL 6005CL-T5 or AL6005-T5 and may also have a clear anodization. The aluminum may undergo some surface oxidization in service. Please note that this is normal and part of the natural ageing process. The result may even be beneficial to the longevity of the Product, as the oxidization can provide additional protection against degradation by pollution and atmospheric corrosion.

- The torque values of fastener connections on mounting system must be checked annually and corrected if needed in accordance with Clenergy Australia's installation manual.
- Regular cleaning to remove any soil or other possible contaminants must also be performed. Cleaning should be performed in accordance with guidelines recommended by the Galvanizers Association of Australia (GAA) (for Products supplied in Australia) or the Galvanizers Association of New Zealand (GANZ) (for Products supplied in New Zealand) or any other similar organisations (as applicable). When using tin interfaces for installation works, screws not exposed to frequent rain should be washed down with fresh water at least every 6 months.
- You should not use harsh chemicals or highly abrasive materials that may damage Product surfaces. Use only cleaners that are designed for aluminium and always wash them off with clean water afterwards. Steel components should be inspected before and after installation and any damage to the galvanizing should be treated immediately to prevent rusting. It is normal for galvanized Products to develop a surface barrier (the 'patina'), which helps to protect the surface from contaminants in the atmosphere and does not adversely affect the Product.
- You should also ensure that if the Product is stored prior to installing that it is not contaminated by contact with rusty items or other impurities such as dirt and chemicals. Should this occur, you must clean the Product and make any repairs using approved methods such as galvanized paint and antirust treatments immediately before installation.







