PROINSO PV Rack

SEAM CLAMP

INSTALLATION MANUAL

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CONTENT:

1. INTRODUCTION

PROINSO PV RACK offers structural solutions, which are MORE ROBUST, MORE FLEXIBLE, AND MORE COST-EFFECTIVE.

PROINSO PV RACK has been customized to combine easy assembly with high quality materials. All our products are delivered in a convenient-sized box which contains all items for installation.

The versatility of the roof system from PROINSO PV RACK allows an easy adaptation to most locations, complying with the applicable regulations in each area.

2. DESCRIPTION SYSTEM

PROINSO PV RACK rooftop structures are installed by means of hollowed aluminium profiles bolted together, with enough ability to support photovoltaic modules with standard commercial dimensions. These profiles with the aluminium triangles allow the lifting of the structure until desired inclination, what allows PROINSO PV RACK adapting their kits to the majority of existing roofs.

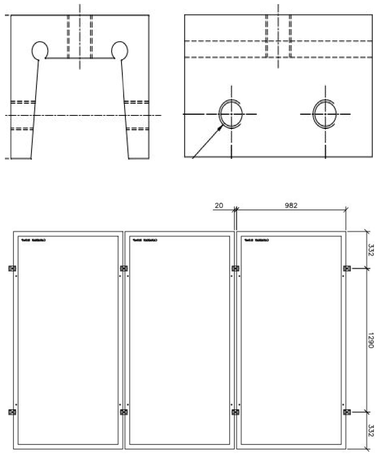
The versatility of the roof system from the PROINSO PV RACK firm allows an easy adaptation to most locations, complying with the applicable regulations in each area of installation.

Roof systems from PROINSO PV RACK firm allow a quick assembly. All elements are easily manipulated by the workshop staff.

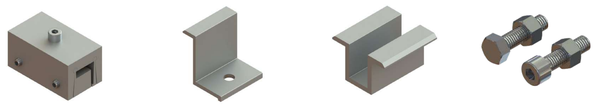
Structure systems are made up of 6063-T5 Aluminium and Anchorages of CORROSHIELD BRAND Self Drilling Screw, which gives a higher Sto the system.

3. MAIN COMPONENTS ARE LISTED BELOW :

PART NAME	MATERIAL
Standing seam clamp	AW 6063 T5
End clamp	AW 6063 T5
Mid clamp	AW 6063 T5
Allen head M8x1 15B	SS304
Allen head M8x1 30B	SS304
Grub screw M8x35	SS304
Grub screw M8x20	SS304
Cable clip	SS304



EACH 1 KW BOX CONTAINS THESE ELEMENTS



Seam Clamp End Clamp Mid Clamp Fasteners

3.2 Mounting Process

In order to perform the mounting process, assembly drawings will be provided by PROINSO PV RACK.

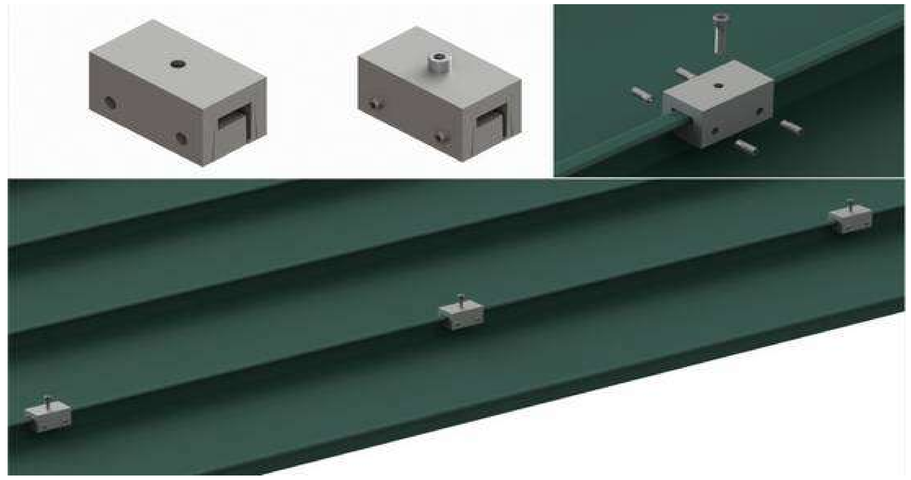
Before starting the assembly of the structure:

1. Ensure all required components and tools are present to start the process.
2. An individual kit should be assembled in order to make position marks for the different components.

All necessary steps for assembly are described below.

3.2.1 Fixing the roof anchorages to the Standing Seam Roof:

This solution only applies to Standing Seam Roof Sheet with thicknesses from 0.5mm and aluminium sheet thicknesses from 0.8mm, as long as the roof has enough self-supportive capacity to hold the loads from the new structure.



In order to install the fixations, Four Grub Screw of M8 to fasten the Clamp with the roofing sheet will be used. During bolting threading, stop blocks will be used to avoid any damage to the sheet, losing its mechanical properties.

As the system is designed as a Non Penetrative Solution, it is recommended for Reputed manufacturer of Standing Seam roofing sheet, with a proper anchorage of Standing Seam roof with the Roof Purlin.

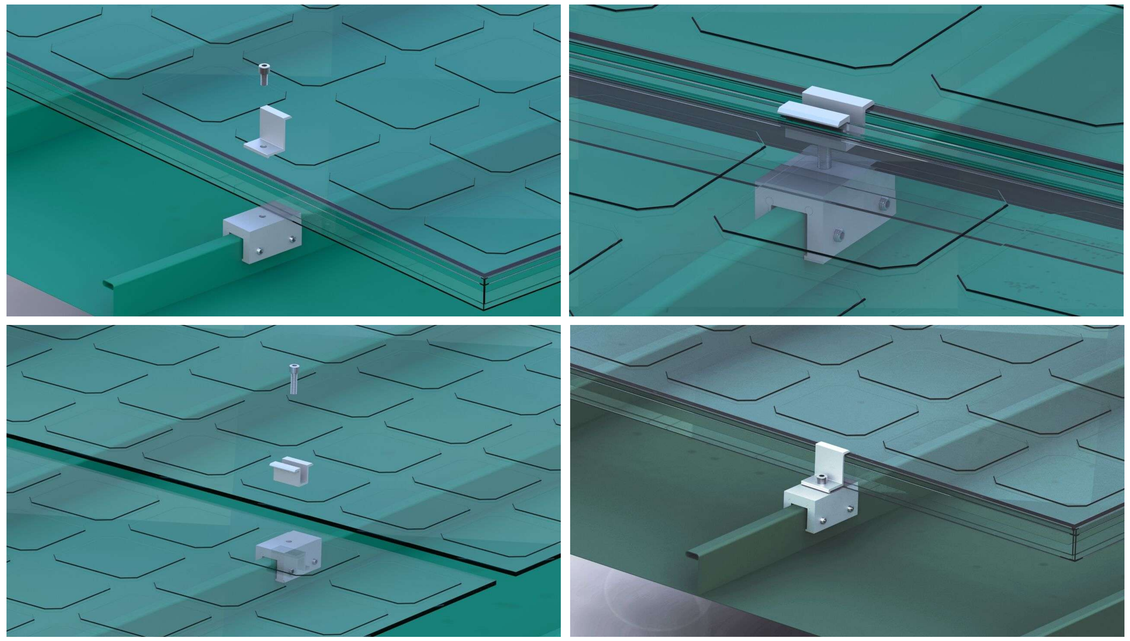
TOOLS REQUIRED FOR THIS STEP:

- 4mm Allen Key.

3.2.2 Assembly of PV modules on Standing Seam Roof Clamp:

Installation of PV modules directly onto aluminium Standing Seam Clamp is performed with PV modules in Landscape mode. PV modules will be fixed at 4 attachment points, as shown in the kit drawing.

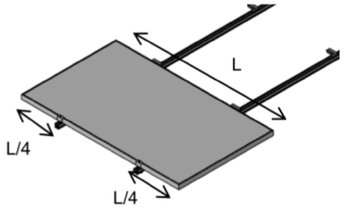
The assembly of PV modules is completed with :"Z" aluminium pieces (individual fixations), "U" aluminium pieces (double fixations), DIN 912 M8x15 & 30 A2 bolts, DIN 6798A as shown in images above.



TOOLS REQUIRED FOR THIS STEP:

- 6mm Allen Key.

3.2.3 General considerations:



Torque settings for fasteners:

1. M8 nuts and bolts: 23 Nm.
2. M10 nuts and bolts: 43 Nm.

PV modules attachment points:

Attachment points of PV modules are approximately at ¼ of the longest side measured from the end of the module, always prevailing manufacturer recommendations over this issue.

Minimum distances for anchorages position:

The minimum distance to be kept from the end of the aluminium profile to place any anchorage or fixation is 50mm.

4. DO'S AND DON'TS :

- Installation of PROINSO PV RACK intended to be Performed by Trained Installers.
- Please Ensure all Safety Equipment shall be use by Installers.
- Please Ensure Substructure , Super Structure of Roof can with stand load of PROINSO PV RACK and Live load during Installation.
- Do not modify any Product of Proinso PV RACK without any Prior Approval by Engineers.
- Please follow recommended instructions of solar module manufacturer during handling and installation.
- Please ensure Solar module can Install on Rail one at a time, Please take care for slipping of module.

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