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ALUMSOLAR

Solar mounting system



FROM 2012 ALUMSOLAR





2012

Incorporation of Alumsolar

Being awarded as mounting system supplier and solution provider for 20MW Grounded Solar Farm in Qinghai, 20MW Solar System for roofs in Australia and 4MW Grounded solar farm in Japan.

2013

Obtained ISO9001 and annual volume reaches 80MW

explored Counter Weighed aluminum mounting system for America 2014

obtained CE certification, and Japan branch office is incorporated in Kobe

developed solar mounting system market in UK and annual volume hits 100MW 2015

obtained CSA certification for North America

2016

Solar PV System integration division is incorporated and signed supply agreements with many domestic EPCs. Annual volume hits 160MW

Singapore branch office is incorporated and explored South Asia market with annual volume 20MW

2017

annual volume hits 240MW and developed Middle East and South America Makrets



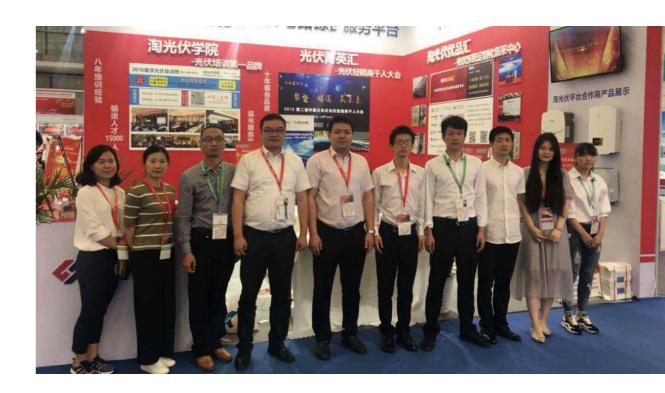




"TOP WORKMANSHIP

RELIABLE PERFORMANCE

PROFESSIONAL ENGINEERING."



| Company Profile | (p07-08) |
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Alumsolar Pv Engineering Co.,Ltd, was established in 2012, with a registered capital of RMB 2 million, focusing on the development and fabrication of solar mounting system with value added technical services





Quality is our culture in Alumsolar.

Alumsolar Pv Engineering Co.,Ltd was established in 2015, with a registered capital of RMB 2 Million, focusing on the development and fabrication of solar PV mounting systems with value added technical services.

Provides all kinds of solar mounting bracket in Alumsolar. One of market leader for solar mounting structure Since 2000. With 2 factories 5000 workers and more that 10000 solutions, Professional produce and design, ensure that the best solutions suit to each clients` projects.

High-quality, innovative, strong and extremely flexible in terms of application – these are the features of the ALUMSOLAR's PV mounting systems. Whether you need steel or high-strength aluminum, an individual mounting profile or a small fastening screw – everything we offer has to meet requirements that are not merely high, but the very highest.

Designed for a service life of at least 25 years of perfect functionality, even in extreme conditions. For flat roofs, pitched roofs, solar parks and carports. For large scale solar farms, we can also take care of designing, calculating and supervising complete solar and photovoltaic plants. From the soil investigations and calculation of all structural analyses to site design, logistics and a version which is ready to release and transfer to the customer. The company has built a strong manufacturing capacity and complete industrial chain system, after years of accumulation and precipitation, with research and innovation as a source of power, and constantly promotes product upgrading; we gather a wide range of customer resources at domestic and abroad.

In China, we work closely China State Power, Huaneng Energy, Zhonghang Power, CSIC, Trina Solar, Canadian Solar, etc. Overseas, our mounting systems are installed for IKEA, Pepsi, etc., we have customers worldwide, including Japan, Singapore, Philippine, Indonesia, India, Middle East, North and South America, etc. At present the company's annual production of 500MW solar racking capacity, and provide design and development, as well as some customized technical services for domestic and oversea customers.



CE Certificate



CSA Certificate



ISO 9001 Certificate

ISO9001

As the international standard that specifies requirements for a quality management system (QMS). Organizations use the standard to demonstrate the ability to consistently provide solar mounting structure products and services that meet customer and regulatory requirements.

CE marking with European standard

CE marking is a certification mark that indicates conformity with health, safety, and environmental protection standards for solar mounts sold within the European Economic Area. The CE marking is also found on solar mounts sold outside the EEA that are manufactured solar mounts in, or designed to be sold in, the EEA.

GSA

CSA International (Canadian Standards Association), a member of the CSA Group, is a provider of solar mounts testing and certification services for electrical, a variety of other products. Recognized in the U.S., Canada and around the worldS., Canada and around the world

cetificates







Patent for Wind Load Reducing Mounting System



Patent for Leakage Free Mounting System



Patent for Easy Connection Mounting System



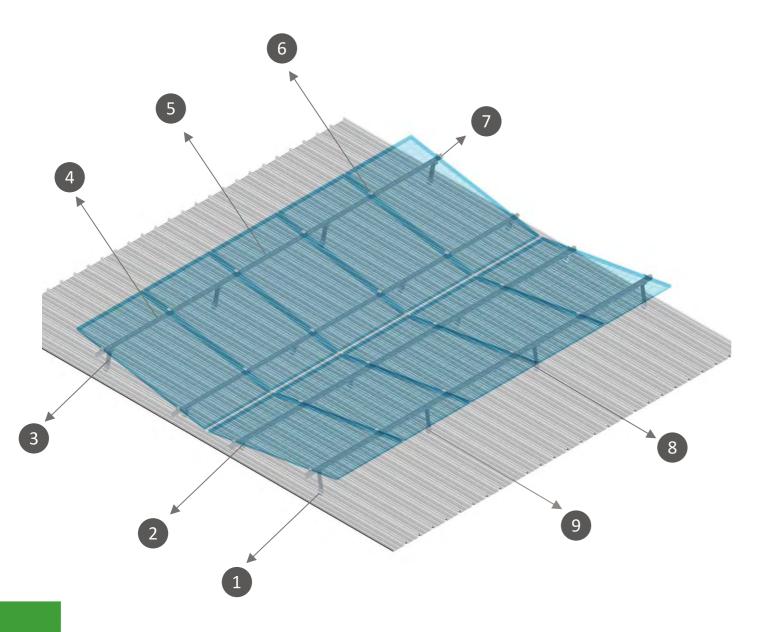
Patent for Quick Installation Mounting System

Alumsolar is Certified and Honored!

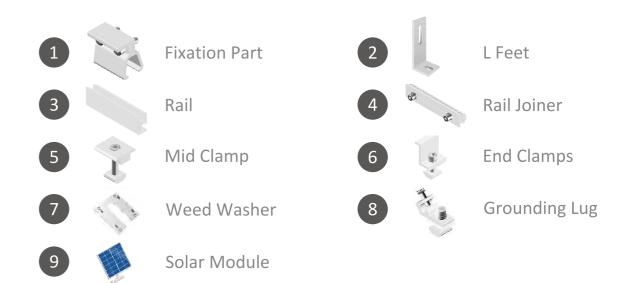


Metal Roof Solution M2

Module has angles to the Roof Proifile $5^{\circ}/10^{\circ}/15^{\circ}$



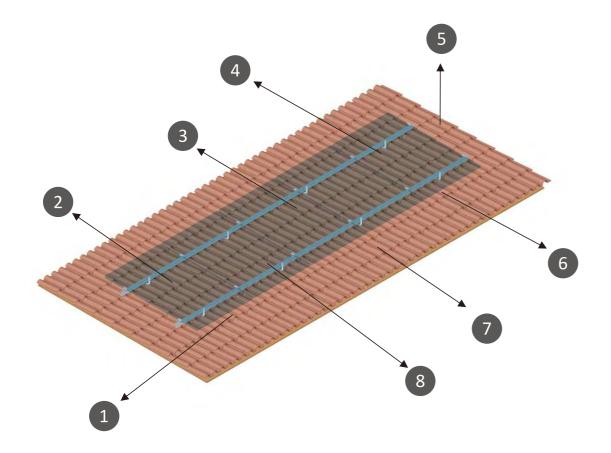






Tile Roof Solution

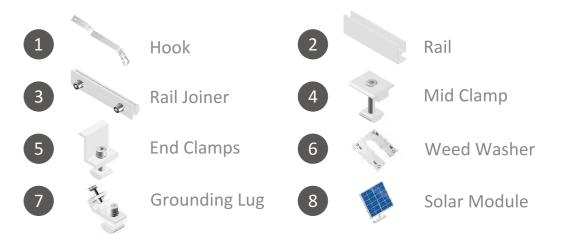
Module follow Roof Profile 0°







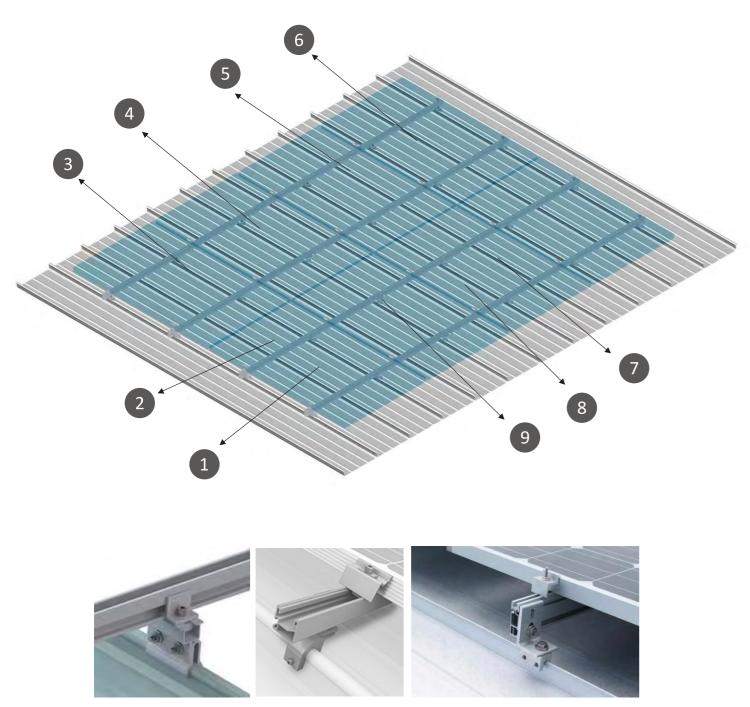






Metal Roof Solution M1

Module follow Roof Profile 0°



Seam Clamp

Rail with Cable Tray

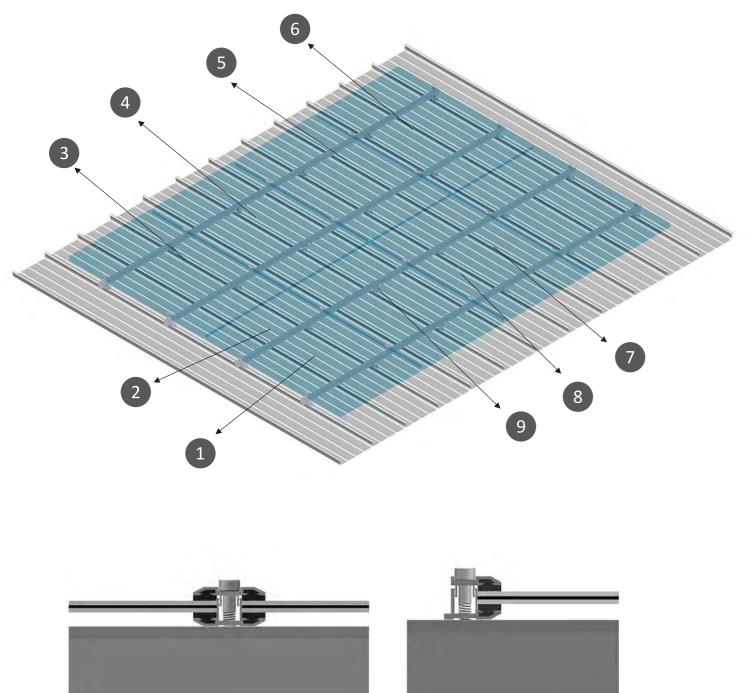
Standing Seam Type





Metal Roof Solution M2

Module follow Roof Profile 0° Thin solar panels installation





End clamp fixed thin solar panels





Rail



L Feet





Mid Clamp



End Clamps

Rail Joiner





Weed Washer

Solar Module





Grounding Lug

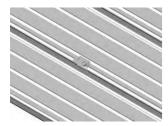




Metal Roof Solution

Simple Installation Process





Step 1:

Identify the location for the 1st clamps as specified in the drawing and fix the clamp on the metal roof



Step 4:

Secure the rails on the seam clamp and tighten the rail clip



Step 7:

Fix the 1st Mid clamp with weed washer as location specified in the drawing and do not tighten it



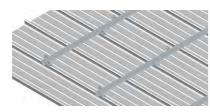
Step 2:

Mount the rail clip on the seam clamp (not tighten)



Step 5:

connect the rails and repeat the process, lay all the rails on the roof



Step 8:

Fix all the other mid and end lamps for the 1st module installation





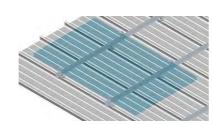
Step 3:

Repeat the process and spread the fixation parts all over the roof with locations as specified in the drawing



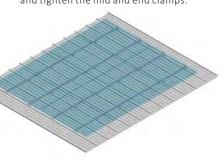
Step 6:

Fix the 1st end clamp as location specified in the drawing and do not tighten it



Step 9:

Mount the 1st Module on the rail and tighten the mid and end clamps.



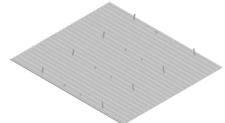




Step 1:

Identify the location for the front leg as specified in the drawing and fix the clamp on the metal roof

Identify the location for the rear leg as specified in the drawing and fix the clamp on the metal roof



Step 4:

Repeat the process and spread the fixation parts all over the roof with locations as specified in the drawing



Step 7:

Repeat the process and spread it over for all the legs on the roof



Step 2:

Fix the front leg on the seam clamp



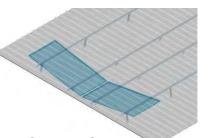
Step 5:

Fix the rail clip on the front leg but not tighten it



Step 8:

Fix the 1st end clamp as location specified in the drawing and do not tighten it



Step 10:

Mount the 1st Module on the rail and tighten the mid and end clamps.





Step 3:

Fix the rear leg on the seam clamp



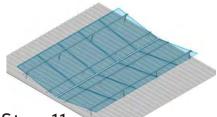
Step 6:

Fix the rail clip on the rear leg but not tighten it



Step 9:

Fix the 1st Mid clamp with weed washer as location specified in the drawing and do not tighten it



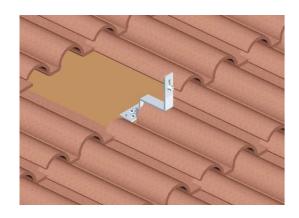
Step 11:

repeat the process and complete all installations.



Tile Roof Solution

Simple Installation Process



Step 1:
Identify the 1st hook location as specified in the drawing, remove a few pieces of tiles and mount 1st hook



Step 2:
Re-instate the Tiles

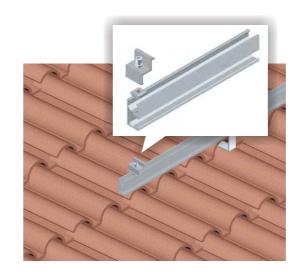


Step 3:

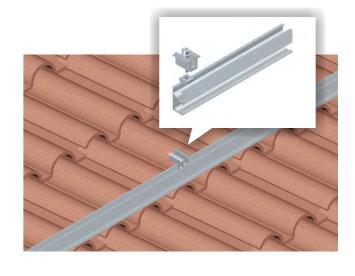
Mount all the hooks with spacing as specified in the drawing with good alignment



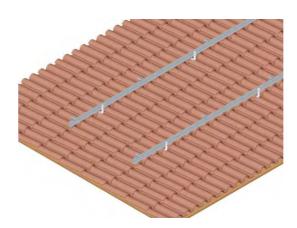
Step 4: Secure the rail on the hooks



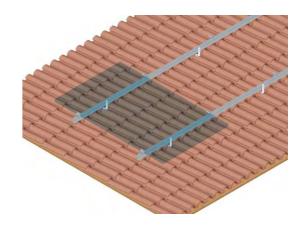
Step 5:
Fix the 1st end clamp but not tighten at location as specified in the drawing



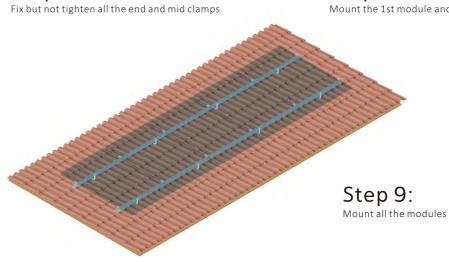
Step 6:
Fix the 1st mid clamp but not tighten at the location as specified in the drawing



Step 7:



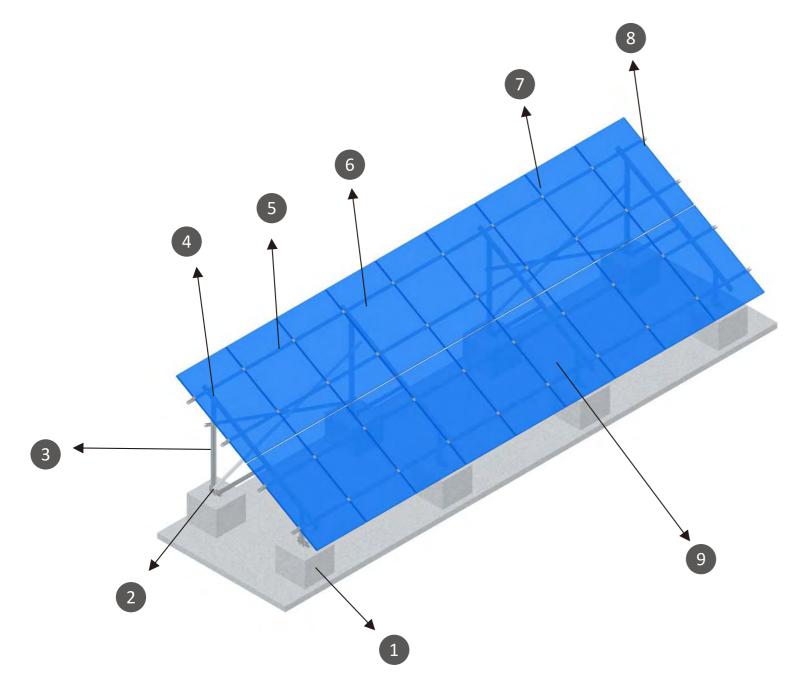
Step 8:
Mount the 1st module and tighten the screws with specified torques



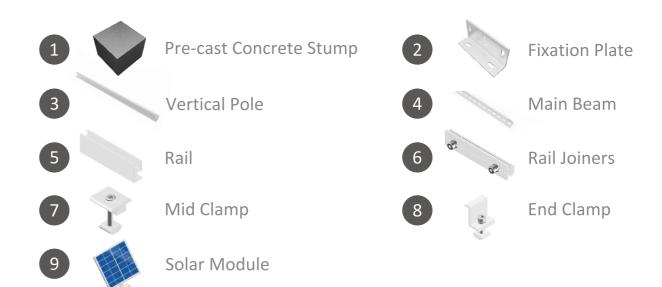


RC Roof Solution

Traditional 10° / 20° /30°+









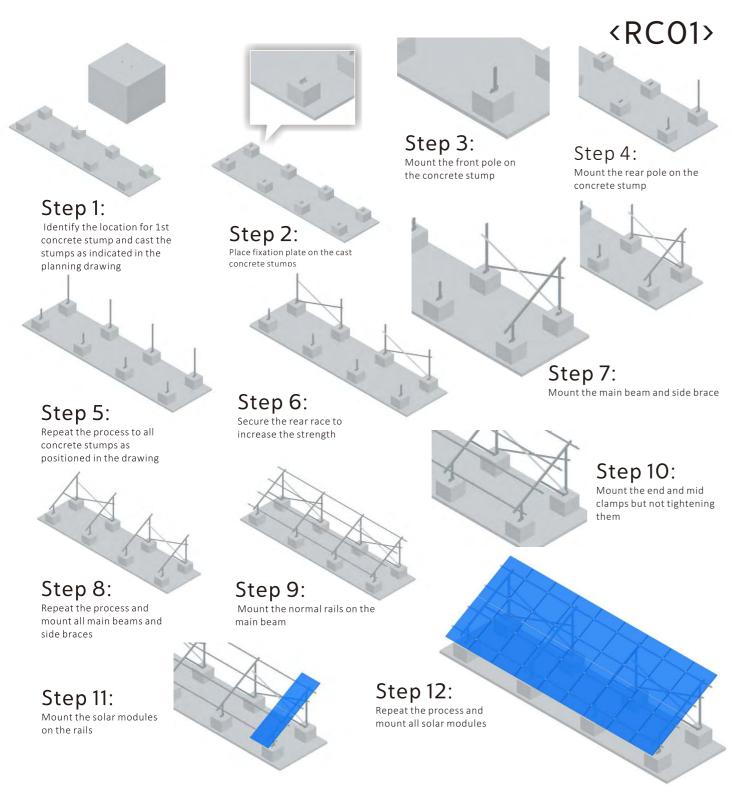
RC Roof Solution

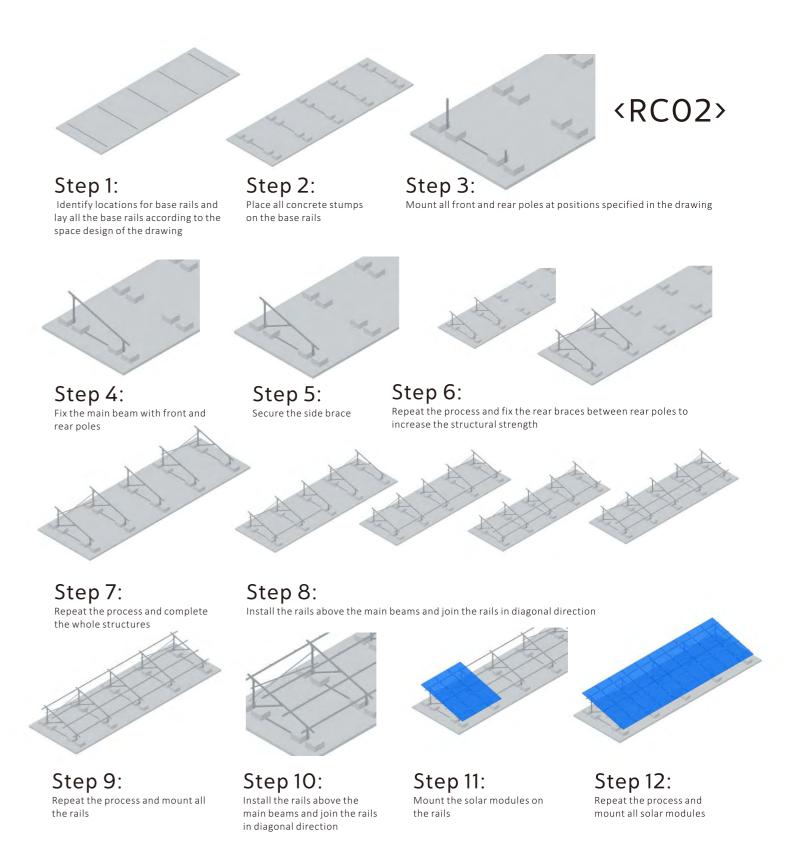
Counter Weighed 10° / 20° /30°+ Sit-on Concrete Stumps Base Rail Vertical Pole Main Beam Rail Joiners Rail End Clamp Mid Clamp Solar Module



RC Roof Solution

Simple Installation Process

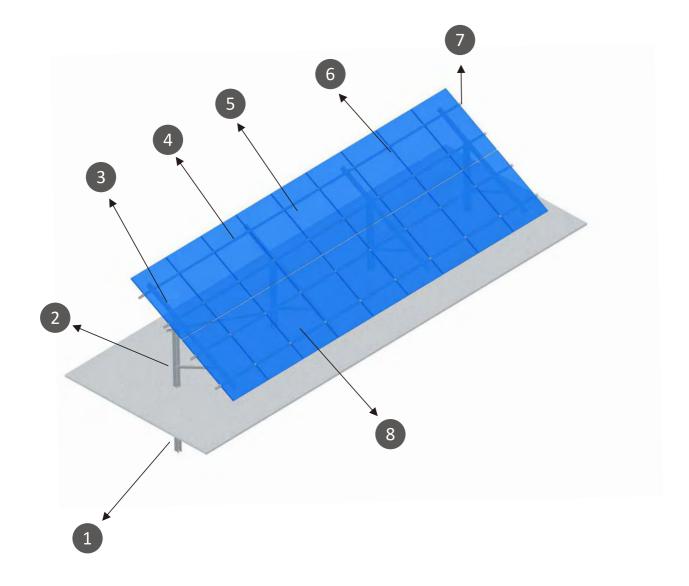




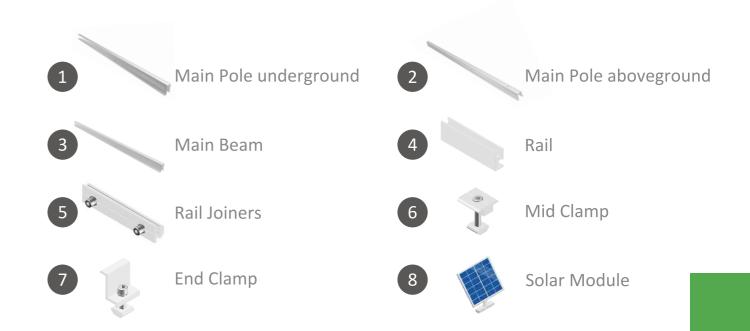


Ground Mounted Solar Racking

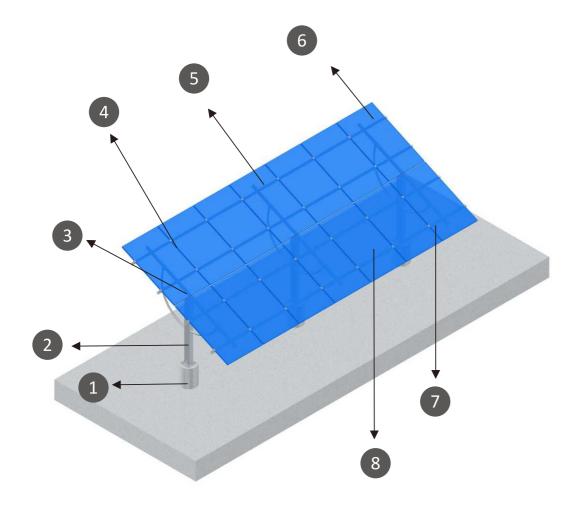
Type A: 10° / 20° /30°+

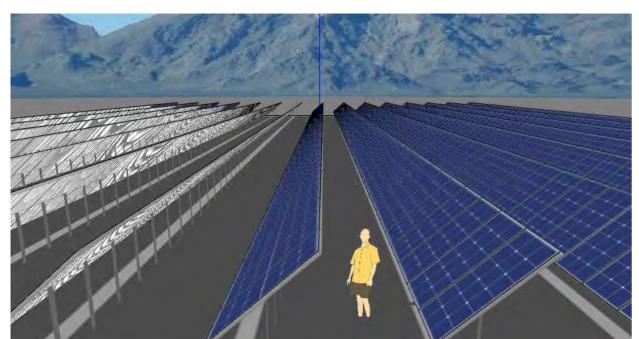












Ground Mounted Solar Racking

Type B: 10° / 20° /30°+







Ground Mounted Solar Racking

Simple Installation Process

<G01>



Step 1: Identify the location for 1st main pole and install the pole according to the drawing



Step 2:
Install all the poles at locations as specified in the planning drawing



Step 3:
Mount the main beam with side support on the main pole



Step 4:
Repeat the process and complete the 2nd pole structure



Step 5: Secure the rear brace and increase the structural strength



Step 6:
Repeat the process and mount all pole structures with layout designed in the drawing



Step 7: Secure the normal rail on the main beams

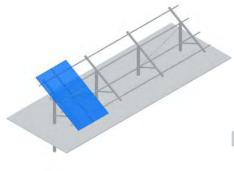


Step 8:
Repeat the process and mount all the rails



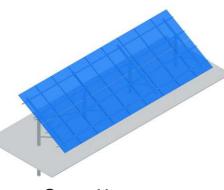
Step 9:

Mount the end and mid clamps but not tightening them



Step 10:

Mount the solar modules on the rails



Step 11:
Repeat the process and mount all solar modules





Step 1: Identify the location for 1st main pole and install the po according to the drawing



Step 2: Install all the poles at location as specified in the planning drawing



Step 3:

Mount the main beam with side support on the main pole



Step 4: t epeat the process and complete he main structure



Step 5:
Mount the adjustable structure with main beam on the main



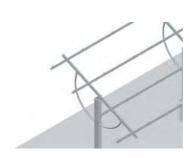
Step 6:
Repeat the process and complete the full adjustable structure installation



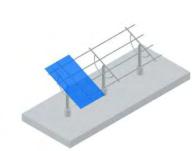
Step 7:
Secure the normal rail on the main beams



Step 8:
Repeat the process and mount all the rails

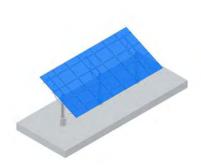


Step 9:
Mount the end and mid clamps
but not tightening them



Step 10:

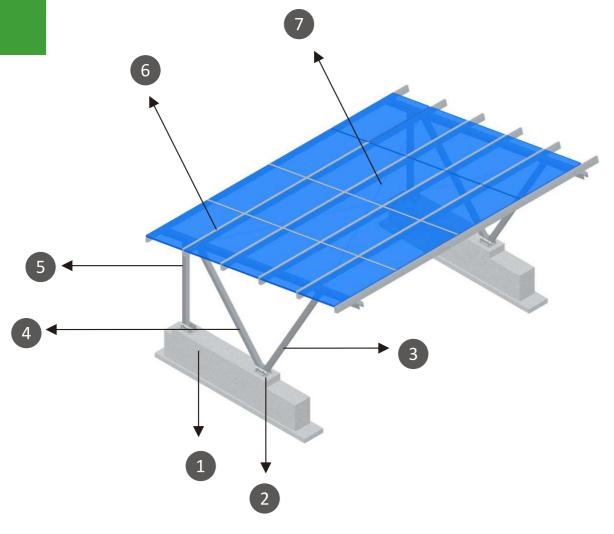
Mount the solar modules on the rails

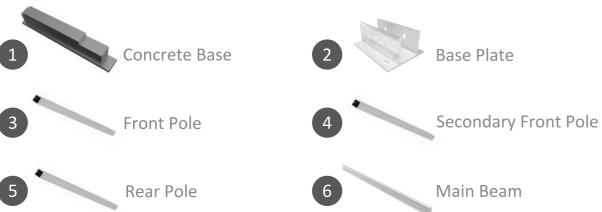


Step 11:
Repeat the process and mount all solar modules



Solar Carport Solution









Step 1: Identify the location for the first concrete base and cast the concrete base as designed in the shop drawings



Step 2:
Repeat the process and set out the concrete base at distance and location specified in the drawing

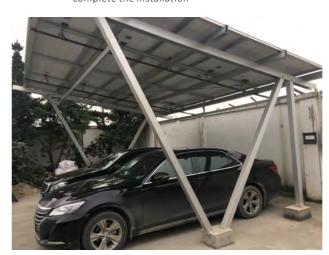


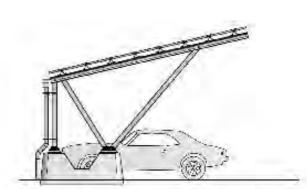
Step 3: Mount the main support structure with tightening rod



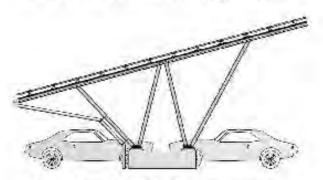


Step 5: Mount the solar modules and complete the installation

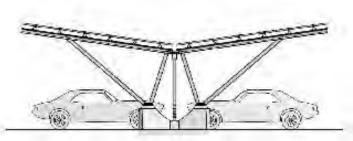




B1: 1 Row Vehicle Arrangement



B2: 2 Row Vehicle Arrangement



B3: 2 Row Vehicle Arrangement (North/South Facing)

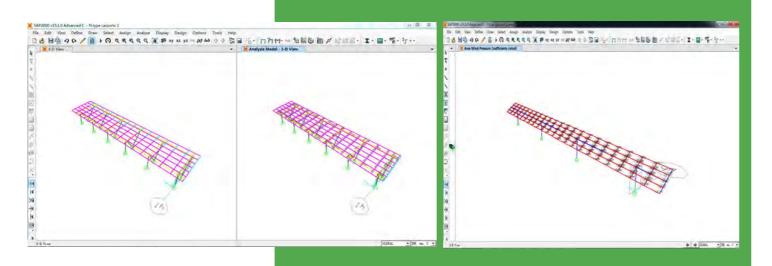






Professionalism

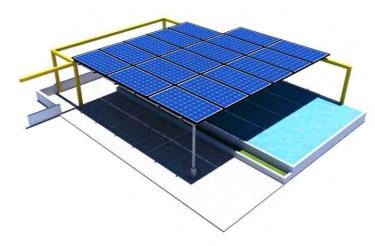
We have in-house engineers who are able to do structural designs to meet different standards of different countries by using the software SAP2000.





The working procedures are as follows:

- Alumsolar will issue a standard questionnaire to the customer
- Customer shall complete the questionnaire and furnish PVSolver required documents, include but not limited to module datasheet, maximum wind speed, applied standards, roof profile details, soil report, etc
- Alumsolar will work out basic design with simple prelim calculations for customer review
- Detailed calculation book will be provided upon confirmation of the project





Products

< Seam Clamp for Metal Roofs >

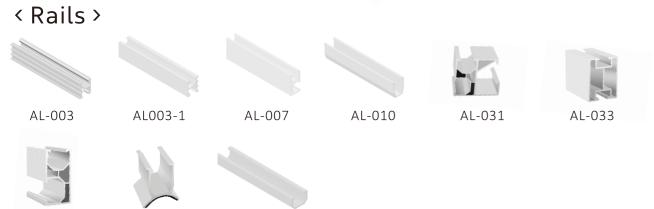


< Hooks for Tile Roofs >

AL-052

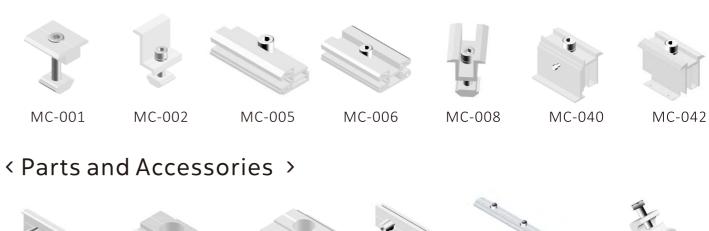


AL-051



AL-055

< Mid and End Clamps >



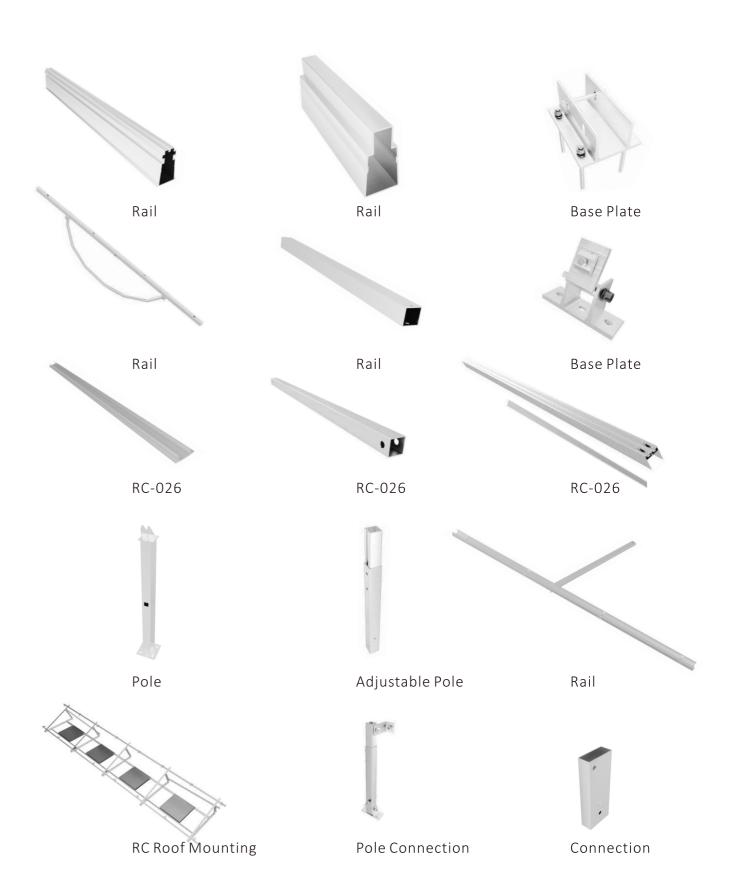






Products











Project Location: Shanghai, China Capacity: 60MWp Completion Year: 2018 Type: Concrete Roof Mounted



Project Location: Singapore Capacity: 1.6MWp Completion Year: 2017 Type: Metal roof Mounted



Project Location: Iloilo, Philippines
Capacity: 1.9MWp
Completion Year: 2016
Type: Metal roof Mounted



Project Location: Shanghai, China Capacity: 4.3MWp Completion Year: 2016 Type: Concrete Roof Mounted



Project Location: Shiga-ken, Japan Capacity: 2MWp Completion Year: 2015 Type: Metal Roof Mounted



Project Location: Cebu, Philippines Capacity: 2.5MWp Completion Year: 2017 Type: Metal roof Mounted



Project Location: Tuas, Singapore Capacity: 1MWp Completion Year: 2017 Type: RC Roof Mounted



Project Location: Iloilo, Philippines
Capacity: 1.9MWp
Completion Year: 2016
Type: Metal roof Mounted



Project Location: Africa Capacity: 1.6MWp Completion Year: 2015 Type: Metal Roof Mounted



Project Location: Singapore Capacity: 221Wp Completion Year: 2017 Type: Metal roof Mounted



Project Location: Cebu, Philippines Capacity: 2.5MWp Completion Year: 2017 Type: RC Roof Mounted



Project Location: USA
Capacity: 2.5MWp
Completion Year: 2015
Type: Ground Mounted







Project Location: Shanghai, China

Capacity: 60MWp
Completion Year: 2018
Type: Ground Mounted



Project Location: Singapore

Capacity: 1.6MWp
Completion Year: 2017
Type: Metal roof Mounted



Project Location: Klang, Malaysia

Capacity: 426kWp
Completion Year: 2016
Type: Metal roof Mounted



Project Location: Shiga-ken, Japan

Capacity: 2MWp
Completion Year: 2015
Type: Ground Mounted



Project Location: Tuas, Singapore

Capacity: 1MWp

Completion Year: 2017
Type: Metal roof Mounted



Project Location: Singapore

Capacity: 221Wp

Completion Year: 2017
Type: Metal roof Mounted



Project Location: Africa
Capacity: 1.6MWp
Completion Year: 2015
Type: Ground Mounted



Project Location: USA
Capacity: 2.5MWp
Completion Year: 2015
Type: RC roof Mounted

