



# Renewable Energy



# 1. Roof solar mounting system

## 1.1. Residential roof solar mounting system

### 1.1.1. Metal roof solar mounting

Aluminum structure with stainless steel accessories.

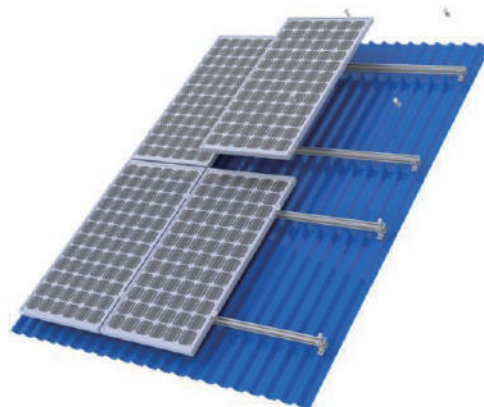
With variety of different tin roof brackets, Greensun Solar tin roof mounting system can meet trapezoid/corrugated metal roof and standing seam roof demand with or without penetrating on the roof. GreensunSolar has the excellent engineer team and quality management system to provide the perfect service.

#### Specification:

Wind Speed: < 60m/s    Snow load: 1.4 KN/m<sup>2</sup>    Standard: AS1170.2  
 Degree: 0°    Arrangement: Vertical or Horizontal    Warranty: 10 years

#### Installation Manual:

1. Fix L-feet by tapping screw, ensure waterproof by rubber plate.
2. Installing rail by side of L-feet, L-feet's hole can adjust the height of rail.
3. Two rails supported each panel, fix panels by mid clamp and end clamp kit.



Normal metal roof mounting accessories shown as below:

Rail	L-feet kit	End clamp kit	Mid clamp kit
			

By different section of metal roof, also we can choose other types of brackets:

Trapezoid roof bracket (Normal type):



Part No.	
Material	Stainless steel +Tapping screw+ Socket bolt kit
Finish	N/A
Remark	By short Tapping screw to fix bracket



Corrugated metal roof bracket (Normal type):



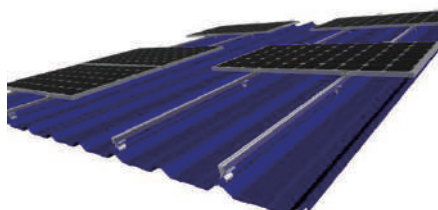
Part No.	
Material	Stainless steel +hanger bolt+ Socket bolt kit
Finish	N/A
Remark	Drilled into purlin of metal roof



Seam Clamp (Normal type):



Part No.	
Material	Aluminum alloy +Socket bolt kit
Finish	N/A
Remark	Seam clamp



### 1.1.2. Tile roof solar mounting

**Tile roof solar mounting system** mainly used for residential roof, and use aluminum alloy rail with stainless steel roof hook to install.

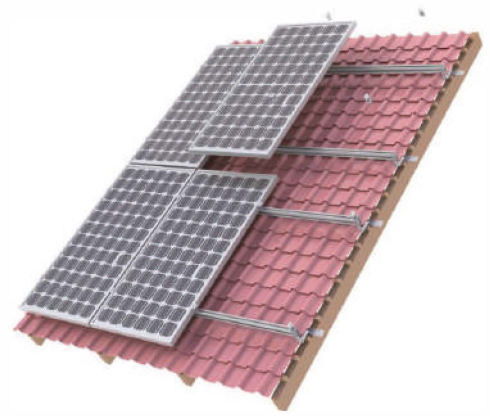
GreensunSolar has the excellent engineer team and quality management system to provide the perfect service.

Specification:





Wind Speed: < 60m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°      Arrangement: Vertical or Horizontal      Warranty: 10 years

Installation manual:

1. Installing roof hook by tapping screws;
2. Installing rail by side of roof hook, hook's hole can adjust the height of rail.
3. Two rails supported each panel, fix panels by mid clamp and end clamp kit.




Normal tile roof mounting accessories shown as bellow:

Mounting rail	Roof hook kit	End clamp	Mid clamp kit
			


By different section of tile roof, also we can choose other types of brackets:

Roof hook 02 (Normal type):

	Part No.	
	Material	Stainless steel +Tapping screw+ Socket bolt kit
	Finish	N/A
	Remark	The length of tile is long than normal








Roof hook 03 (Normal type):

	Part No.	
	Material	Stainless steel +Tapping screw+Socket bolt kit
	Finish	N/A
	Remark	Used for another type rails



Also we can choose others according to other actual section of tile roof as bellow:

				
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## Asphalt shingle roof solar mounting

### Use flashing to ensure waterproof

Greensun Solar provided new type Asphalt shingle roof solar mounting system for our customers.

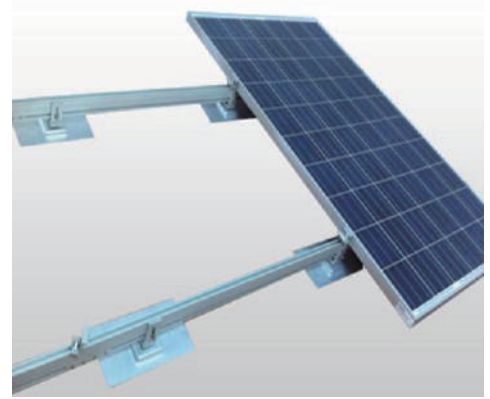
#### Specification:

Wind Speed: < 60m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2

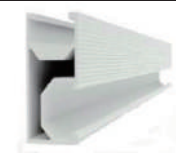

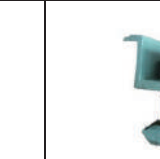
Degree: 0°      Arrangement: Vertical or Horizontal      Warranty: 10 years

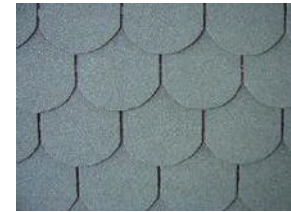
#### Installation manual:

1. Installing flashing kit at first by tapping screws;
2. Installing rail by side of L-feet , L-feet's hole can adjust the height of rail.
3. Two rails supported each panel, fix panels by mid clamp and end clamp kit.



Asphalt shingle roof mounting accessories shown as below:

Mounting rail	Flashing	End clamp	Mid clamp kit
			



Asphalt shingle roof type

Case Shown:



### RFQ for all types of pitched roof solar mounting system

For all roof solar mounting inquiry, please let us know necessary information as below:

Necessary info. for us to design and quote

.What is your PV panels dimension? \_\_\_\_mm Length x \_\_\_\_mm Width x \_\_\_\_mm Thickness

.How many panel are you going to mount? \_\_\_\_Nos.

.What kind of roof do you have? \_\_\_\_ (Tin/metal/tile/slate/shingle roof)

.What is your planned array ? \_\_\_\_ (1x4, 1x5, 1x6 etc.)

.How is weather there, such as wind speed and snow load? \_\_\_\_m/s anit-wind speed and \_\_\_\_KN/m<sup>2</sup> snow load.

## 1.2. Commercial roof solar mounting system

### 1.2.1. Concrete slab flat roof solar mounting

Flat roof with concrete slab installation site

Greensun Solar usually use concrete block as ballast or concrete foundation to fix solar mounting structure and panels.

#### Simple triangle solar mounting system (Without lowest side of PV panel height demand)

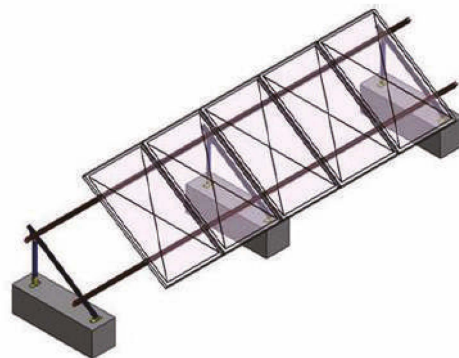
Mainly it's triangle structure, by this type, mounting brackets will be very steady, and ensure resist big wind and snow etc.

**Specification:**






Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install front bracket and rear post on concrete block, and then install main beam on the top of post, other terminal connect with front bracket.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



Main parts shown as below: (if no concrete block, install on roof surface by expansion bolt directly.)

Mounting rail/Main beam	Front bracket/Connection	Rear Post	End clamp	Mid clamp kit
				

By customers' different requirements, also we can provide other types as below:

#### Simple triangle solar mounting system (With lowest side of PV panel height demand)

Also it's triangle structure, just only we added front post which instead of front bracket.

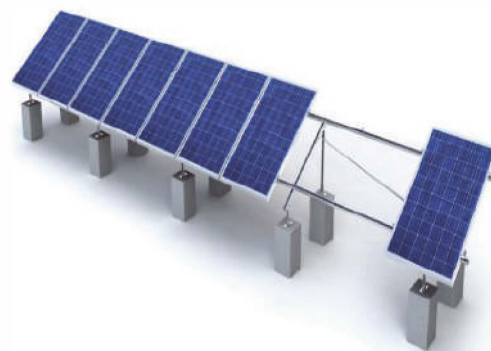
By this type, mounting brackets will be very steady, and ensure resist big wind and snow etc.

**Specification:**



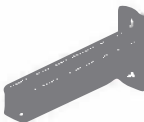


Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install front post and rear post on concrete block by hex bolt, and then install main beam on the top of posts by connection parts.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



Main parts shown as below: (According to the distance between 2 front/rear posts, we need consider to add back support or not)

Mounting rail, Main beam	Connection	Front Post, Rear Post	End clamp kit	Mid clamp kit
				

**C-channel structure triangle solar mounting system (No height demand, lowest side of PV panel from GL)**

This type solar mounting brackets is very steady and no need to destroy rooftop.

When installed, use concrete blocks as ballast to fix all solar mounting structure, easy to install and save cost.

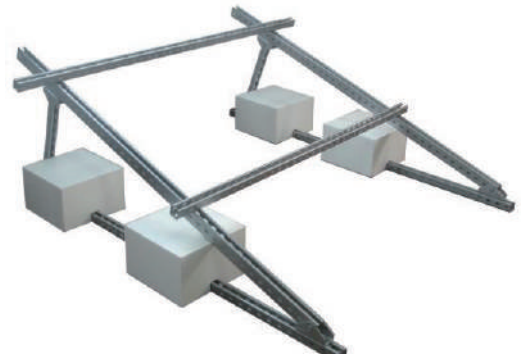
**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install front bracket and rear post on ballast beam by connection, and then install main beam on top of post, another end connect with front bracket.
2. Install mounting rail upon main beam by hex bolt and square nut.
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as below:**

Mounting rail, Main beam, Rear Post	Front bracket, Connection	Down Beam	End clamp	Mid clamp kit
				

**C-channel structure triangle solar mounting system (With height demand, lowest side of PV panel from GL)**

For this type solar mounting structure, we need to install ballast beam with vertical at first,

and when all triangle brackets installed completely, we need to install secondary ballast beam again.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install ballast beam first, and then install front post and rear post on beam, and then install main beam on top of posts.
2. Install mounting rail upon main beam by hex bolts and square nuts.
3. Install PV panels by mid clamp and end clamps.
4. Install secondary beam with landscape, and then use concrete block as ballast to fix all structure.



**Main parts shown as below:**

Front Post, Rear Post	Mounting rail, Main beam	Ballast Beam	End clamp kit	Mid clamp kit
				

### Simple aluminum alloy triangle structure solar mounting system

Mainly this type solar mounting system used for flat roof which area nearby sea.

When installed, use concrete blocks as ballast to fix all solar mounting structure, no need to drill roof surface.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install triangle mount kit, which include bottom beam, main beam and rear post. All parts connected by bolts group.
2. Install mounting rail upon main beam by L-connection or bolts group directly.
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as bellow (Splice used for each 2 rails connected)**

Triangle mount kit	Mounting rail	Splice	End clamp kit	Mid clamp kit
				

**As bellow, GreensunSolar provide some other types of flat roof solar mounting system**

**Two rows with landscape solar mounting system**

**Specification:**






Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 10°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install ballast beam, and then install front bracket and rear post on this beam, and then install main beam on top of post, another end connect front bracket.
2. Install mounting rail upon main beam, and then install secondary ballast beam on last ballast beams. 3. Install PV panels by mid clamp and end clamps.



**Main parts shown as bellow**

Main beam. Rear Post	Front bracket. Connection	Ballast beam	End clamp kit	Mid clamp kit
				

Some area with big wind, Greensun Solar will provide one solution as bellow:

**One row with landscape solar mounting system-ballast type**

By this type, make all mounting structure steady and avoid big wind speed.

Specification:






Wind Speed: < 42m/s      Snow load: 1.4 KN/m2      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Horizontal      Warranty: 10 years

Installation Manual:

- 1.Install bottom beam first, and then install front bracket and rear post on beam;
- 2.Install ballast beam upon bottom beam, and then use block as ballast
- 3.And then install PV panels on top of rear post and front bracket directly. Install windshield back of PV panels finally. (Here no need to use mounting rail)



Main parts shown as bellow:

Ballast beam、Bottom Beam、Rear Post	Front bracket	Deflector	Connection part	End clamp/Mid clamp kit
				

**1.2.2. Metal flat roof solar mounting**

**Steel structure metal roof solar mounting system**

This type used for big power station, and the load of rooftop is very strong. Save cost and easy to install

Specification:

Wind Speed: < 60m/s      Snow load: 1.4 KN/m2      Standard: AS1170.2  
 Degree: 0°      Arrangement: Vertical or Horizontal      Warranty: 10 years

Installation Manual:

- 1.Fix L-feet by tapping screw, ensure waterproof.
- 2.Installing rail by side of L-feet, L-feet's hole can adjust the height of rail.
- 3.Two rails supported each panel, fix panels by mid clamp and end clamp kit.

Notice, here we can use L feet or seam clamp, etc. By actual factors.



Main parts shown as bellow:

Mounting rail	L-FEET (Refer)	Seam clamp (Refer)	End clamp kit	Mid clamp kit
				



### Aluminum alloy solar mounting system with triangle structure on metal Roof

Mainly used for South America area, Australia, and so on, for this structure, easy to install and save labor cost.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 10°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years

**Installation Manual:**

1. Install triangle bracket at first, here triangle bracket contains bottom L-profile, rear post and main beam.
2. Install mounting rail upon main beam, 2 rails per row
3. Install PV panels by mid clamp and end clamps.



Main parts shown as below:

Triangle bracket profile	Mounting rail	Rail splice	End clamp kit	Mid clamp kit
				

## 2 Ground solar mounting system

### 2.1 Base type: Pile

Ground screw solar mounting system is one normal type solar mounting system, used for ground open field.

#### Ground screw 1 row with portraitsolar mounting system

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install Pile first, and then install column upon pile. And then install main beam and diagonal brace on this column.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



#### Ground screw 1 row with vertical solar mounting system

Mounting rail、Main beam、 Diagonal brace、Back support	Ground screw	Single Post	End clamp kit	Mid clamp kit
				

Two rows panels with vertical, this is normal type solar mounting system for ground.

**Ground screw 2 rows panels with vertical solar mounting system**

Specification:

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2

Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

Installation Manual:

1. Install Piles first, and then install column upon pile. And then install main beam and diagonal brace. Diagonal brace from rear post to main beam.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



Main parts shown as bellow:

Mounting rail, Main beam, Diagonal brace, Back support	Ground screw	Front, Rear Post	End clamp kit	Mid clamp kit
				

**Ground screw 3 rows with landscape solar mounting system**

According to actual factors and requirements, sometimes 3 panels with landscape type will be used.

Specification:

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Horizontal      Warranty: 10 years

Installation Manual:

1. Install Piles first, and then install column upon pile. And then install main beam (horizontal) and back support on 2 rear columns. Here Diagonal brace will be connected from rear post to front post.
2. Install mounting rail upon main beam.
3. Install PV panels by mid clamp and end clamps.



Main parts shown as bellow :

Main beam	Ground screw	Front and Rear Post	Mounting rail	Mid clamp kit, End clamp
				

### Ground screw 4 rows with landscapesolar mounting system

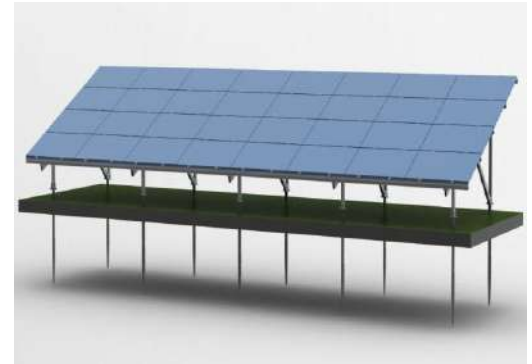
This 4 panels with landscape will be used usually on open filed and big power station.

**Specification:**






Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Horizontal      Warranty: 10 years

**Installation Manual:**

- 1.Install Piles first, and then install posts upon pile. Install main beam and diagonal brace. Here Diagonal brace will be connected from rear post to main beam.
- 2.Install mounting rail upon main beam, here notice there are 5 mounting rails.
- 3.Install PV panels by mid clamp and end clamps.



**Main parts shown as bellow :**

Main beam、 Mounting rail	Ground screw	Front、 Rear Post	Connection	Mid clamp and end clamp
				

### Ground screw 4-5 rows with vertical solar mounting system

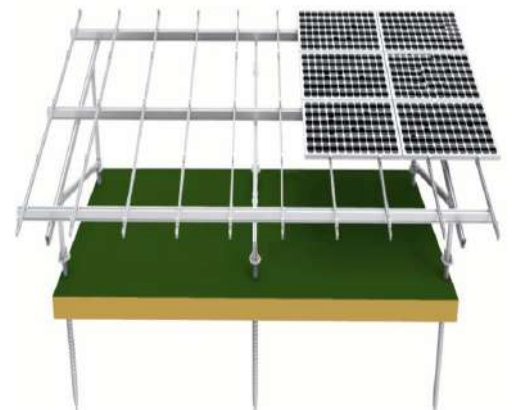
Greensun Solar also provide aluminum alloy structure 4-5 rows of panels with landscape array.

**Specification:**






Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Horizontal      Warranty: 10 years

**Installation Manual:**

- 1.Install Piles first, and then install column upon pile. And then install main beam, and then install secondary beam with landscape.
- 2.Install mounting rail upon secondary beam.
- 3.Install PV panels by mid clamp and end clamps.



**Main parts shown as bellow**

Main beam、 secondary beam	Ground screw	Front、 Rear Post	Base bracket	Mid clamp kit、 End clamp
				

### E-pile solar mounting system with 2 rows

This type of solar mounting system usually used for Europe market big power station. Easy to install and save labor cost.

**Specification:**

Wind Speed: < 42m/s    Snow load: 1.4 KN/m2    Standard: AS1170.2

Degree: 0°-70    Arrangement: Vertical    Warranty: 10 years

**Installation Manual:**

- 1.Install Pile first, And then install main beam and diagonal brace on this column.
- 2.Install mounting rail upon main beam
- 3.Install PV panels by mid clamp and end clamps.
- 4.Here for pile, we can use “Σ” or “Л” type



Main parts shown as bellow:

Mounting rail	Pile (“Σ” “Л”)	Main beam、 Post	Connection	Mid clamp kit、 End clamp

### Concrete pile solar mounting system

This type solar mounting system mainly use for some area which is hard to use normal pile or concrete foundation as base.

Also its structure usually used for lake or low-lever ground area.

**Specification:**

Wind Speed: < 42m/s    Snow load: 1.4 KN/m2    Standard: AS1170.2

Degree: 0°-70    Arrangement: Vertical    Warranty: 10 years

**Installation Manual:**

- 1.Install Concrete and Pile first, make concrete pile and take steel pile in it. and then install column upon pile. And then install main beam and diagonal braces on this column.
- 2.Install mounting rail upon main beam
- 3.Install PV panels by mid clamp and end clamps.



Main parts shown as bellow

Mounting rail	Concrete and pile	Main beam、 Post	Diagonal brace	Mid clamp kit、 End clamp

## 2.2 Base type: Concrete block

Most of power station use concrete block as concrete foundation to fix solar panels

### Concrete foundation 1 row of panel with vertical solar mounting system

Aluminum structure, mainly used for some area nearby sea. It's very easy to install, strong structure, and save labor cost.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Portrait      Warranty: 10 years

**Installation Manual:**

1. Install down beam, and then install main beam and rear post on this down beam.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



Main parts shown as below:

Mounting rail	Main beam	Down Beam	Rear Post	Mid clamp, End clamp
				

### Concrete foundation 2 rows of panels with portrait solar mounting system

Aluminum structure, strong structure, easy to install and save your labor cost, mainly used for ground area which nearby sea.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2






Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install base brackets first, and then install column upon brackets. And then install main beam and diagonal brace on 2 columns.
2. Install mounting rail upon main beam.
3. Install PV panels by mid clamp and end clamps.



Main parts shown as below:

Mounting rail	Main beam	Base bracket	Front, Rear Post, Diagonal brace	Mid clamp, End clamp
				

### Single column 2 rows of panels with portrait solar mounting system

Aluminum structure, used for some area which low wind speed and nearby sea.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70              Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install base brackets first, and then install post upon brackets. And then install main beam and diagonal brace on single column.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as below:**

Single Post	Main beam	Base bracket	Diagonal brace	Mid clamp, End clamp kit

### Normally 4 rows of panels with landscape solar mounting system

Aluminum structure

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 10°-70°              Arrangement: Horizontal      Warranty: 10 years

**Installation Manual:**

1. Install base brackets first, and then install column upon brackets. And then install main beam on top of columns. And then install diagonal brace from rear post to main beam.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as below:**

Front, Rear Post, Diagonal brace	Main beam	Base bracket	Mounting rail	End clamp, Mid clamp

### Concrete foundation 2 rows with vertical solar mounting system

Steel structure 2 rows of panels with portrait, which is very popular for big power station.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 10°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

1. Install posts first, and then install main beam and diagonal brace on 2 columns.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as below:**

Mounting rail, Main beam, Diagonal brace, back support	Splice	Front, Rear Post	Connection	End clamp, Mid clamp kit

### Concrete foundation 3-4 rows of panels with landscape solar mounting system

Steel structure, and use pole as front post and rear post, main beam. Just only mounting rail will use U-channel steel.

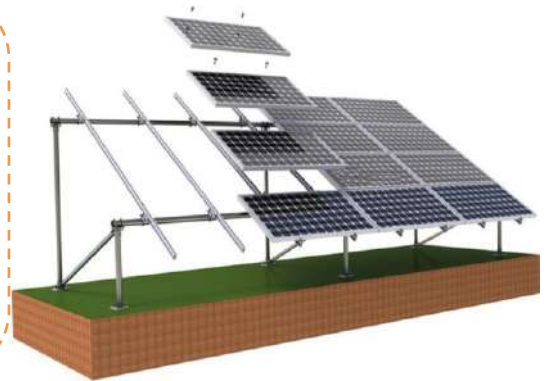
Also it's very popular in Europe market, which build big solar power station.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Horizontal      Warranty: 10 years

**Installation Manual:**

1. Install posts first, and then install main beam and diagonal brace on 2 columns. Here main beam will be installed from left to right, no from front to rear.
2. Install mounting rail upon main beam
3. Install PV panels by mid clamp and end clamps.



**Main parts shown as below:**

Mounting rail	Main beam	Front/Rear Post	Hoop	End clamp, Mid clamp kit

### Single Poststeel structure solar mounting system

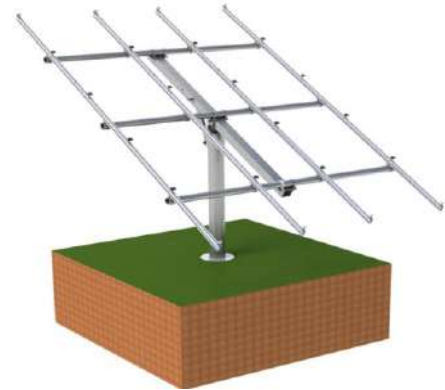
According to customers 'different requirements, also sometimes Greensun Solar need to provide Single post type solar mounting system.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m2      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years

**Installation Manual:**

1. Install single post at first, and then install main beam and secondary beam.
2. Install mounting rail upon secondary beam
3. Install PV panels by mid clamp and end clamps on rails.



Main parts shown as bellow:

Mounting rail	Main beam (Welding)	Single Post	Hoop	End clamp, Mid clamp kit

## 3 Solar carport mounting system

### 3.1 Residential solar carport

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m2      Standard: AS1170.2  
 Degree: 10°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years

**Installation Manual:**

Universal steel structure carport solution.

Here, Fix N-bracket kit on concrete foundation, and fix main beam on N-bracket, fix mounting rail upon main beam, fix mounting rail upon main beam, and then fix panels by clamps. Used for 1-2 cars' parking.



Main parts shown as bellow:

Mounting rail	N-bracket	Base bracket	Main beam	Mid clamp, End clamp kit



### 3.2 Commercial solar carport

For commercial solar carport, Greensun Solar provide one solution which can be parked double side.

Use "W"-bracket as main structure to fix all solar carport structure, steady and easy to install.

Specification:

Wind Speed: < 42m/s    Snow load: 1.4 KN/m<sup>2</sup>    Standard: AS1170.2

Degree: 0°-70    Arrangement: Vertical or Horizontal    Warranty: 10 years






Installation Manual:

Universal aluminum structure carport solution.

Here, Fix W-bracket kit on concrete foundation, and fix main beam on W-bracket, fix mounting rail upon main beam,, fix mounting rail upon main beam, and then fix panels by clamps.



Main parts shown as bellow:

Mounting rail	W-bracket	Main beam	Base bracket	Mid clamp、 End clamp kit
				

### 3.3 Single column solar carport

For some area which just only allow to build one single column structure solar carport,

Greensun solar provide one normal solution, easy to install, steady and save labor cost.

Specification:

Wind Speed: < 42m/s    Snow load: 1.4 KN/m<sup>2</sup>    Standard: AS1170.2

Degree: 0°-30    Arrangement: Vertical or Horizontal    Warranty: 10 years




Installation Manual:

Universal steel structure carport solution.

Here, Fix T-bracket kit on concrete foundation, and fix main beam on T-bracket, fix mounting rail upon main beam,, fix mounting rail upon main beam, and then fix panels by clamps.



Main parts shown as bellow:

Mounting rail	Post Structure	Main beam	Secondary beam	Mid clamp、 End clamp kit
				

## 4 Adjustable solar mounting system

### 4.1 Ground adjustable solar mounting

For ground adjustable solar mounting system, Greensun Solar provide one type with Semi-circle structure.

**Semi-circle structure** which is easy to adjust from 0 degree to 60 degree, and 5 degrees adjusted each space.

Specification:

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years

Installation Manual:






Universal adjustable type solution.

Here, Semi kit: Post, Semi-circle bracket with main beam.

Fix Semi-circle kit on concrete foundation, and fix mounting rail upon main beam, and then fix panels by clamps.



Main parts shown as bellow:

Mounting rail	Post kit	Main beam	Semi-circle	Mid clamp. End clamp kit
				

### Adjustable triangle solar mounting system

Here, Greensun Solar also provide another type with triangle structure to show our customer.

And it's easy to adjust from 0 degree to 60 degree, just only move diagonal brace, we can do adjust easily.

Specification:

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years


Installation Manual:

Universal adjustable type solution.

1. Install Post structure at first;
2. Install main beam and diagonal brace
3. Install mounting rail and back support



Main parts shown as bellow:

Mounting rail	Post	Main beam	Connection	Mid clamp. End clamp kit
				

### Semicircle triangle structure adjustable solar mounting system

From Semi-circle structure to design, GreensunSolar also provide one structure which has much more strong than other adjustable structures.

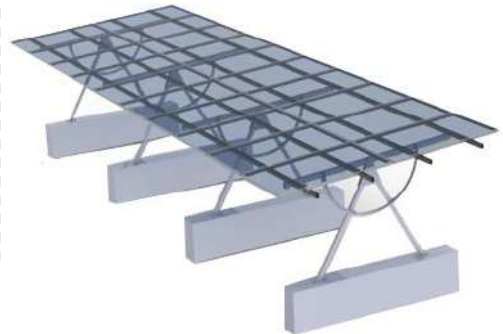
**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical or Horizontal      Warranty: 10 years





**Installation Manual:**

Universal adjustable type solution.

Here, Semi kit: 2 Posts, Semi-circle bracket with main beam. Fix Semi-circle kit on concrete foundation, and fix mounting rail upon main beam, and then fix panels by clamps.



Main parts shown as bellow:

Mounting rail	Post	Main beam	Semi-circle	Mid clamp, End clamp
				

### 4.2 Roof adjustable solar mounting

Roof adjustable solar mounting system, which is popular for Australia and South America market.

**Specification:**

Wind Speed: < 42m/s      Snow load: 1.4 KN/m<sup>2</sup>      Standard: AS1170.2  
 Degree: 0°-70      Arrangement: Vertical      Warranty: 10 years

**Installation Manual:**

Universal adjustable type metal roof solution.

Installing front bracket and rear bracket upon metal roof by tapping screw, fix adjustable rear post kit into bracket, install rail on the top of post for rear row, install rail upon front bracket, install panels by clamps.



Main parts shown as bellow:

Mounting rail	Front bracket	Rear Post	Mid clamp kit	End clamp
				

### Flat roof triangle structure adjustable solar mounting system

This type solar mounting system can be adjusted by rear adjustable post.

Steady, and easy to install, save your labor cost.

**Specification:**

Wind Speed: < 42m/s    Snow load: 1.4 KN/m2    Standard: AS1170.2

Degree: 0°-70    Arrangement: Vertical    Warranty: 10 years






**Installation Manual:**

Universal adjustable type flat roof solution.

Installing front bracket and rear bracket upon down beam by tapping screw, fix adjustable rear post kit into bracket, install rail on the top of post for rear row, install rail upon front bracket, install panels by clamps.



Main parts shown as bellow:

Mounting rail	Main beam	Rear Post	Down Beam	End clamp
				

### 4.3 Led solar mounting

**Led solar mounting system**, which install easily, save labor cost, and steady.

**Specification:**

Wind Speed: < 42m/s    Snow load: 1.4 KN/m2    Standard: AS1170.2

Degree: 10°-70    Arrangement: Vertical or Horizontal    Warranty: 10 years

**Installation Manual:**

Universal steel structure solution.

Installing circle brackets kit around the lamp post, and then install triangle brackets on the side of circle brackets, fix panels upon mounting rail by installing holes.







Main parts shown as bellow:



Main beam	Diagonal brace	Hoop	Mounting rail	Bolts group
				



## 5 Solar mounting accessories


### 5.1 Aluminum mounting rail & splice



Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5		Inside Connection	1
	Finish	Anodizing		Outside Connection	1
	Size	28x55mm		Bolts group	2
	Remark			Remark	

Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5		Inside Connection	0
	Finish	Anodizing		Outside Connection	1
	Size	31x38mm		Bolts group	2
	Remark			Remark	

Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5		Inside Connection	1
	Finish	Anodizing		Outside Connection	0
	Size	40x40mm		Hex Bolts group	2
	Remark			Remark	

Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5		InsideConnection	1
	Finish	Anodizing		OutsideConnection	0
	Size	40x40mm		Hex Bolts group	2
	Remark			Remark	

Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5	No need attached Splice	Inside Connection	0
	Finish	Anodizing		Outside Connection	0
	Size	29x40mm		Bolts group	0
	Remark			Remark	

Mounting rail	Part No.		Attached Splice	List	
	Material	6063-T5 / 6005-T5		Inside Connection	1
	Finish	Anodizing		Outside Connection	0
	Size	40x70mm		Tapping screw kit	2
	Remark			Remark	

For mounting rail, roof hook kits and other accessories, also it's accepted to order separately, and we will consider all angles for you, whatever you order whole mounting kits or just only purchase any accessories from us. We're factory, also we can accept OEM according to your requirements.



## 5.2 Mid clamp & End clamp




	Part No.			Part No.	
	Material	6063-T5 / 6005-T5		Material	6063-T5 / 6005-T5
	Finish	Anodizing		Finish	Anodizing
	Size	mm		Size	mm
	Remark			Remark	
Mid clamp kit	Part No.		End clamp	Part No.	
	Material	6063-T5 / 6005-T5		Material	6063-T5 / 6005-T5
	Finish	Anodizing		Finish	Anodizing
	Size	mm		Size	mm
	Remark			Remark	
AdjustableEnd clamp1	Part No.		AdjustableEnd clamp-2	Part No.	
	Material	6063-T5 / 6005-T5		Material	6063-T5 / 6005-T5
	Finish	Anodizing		Finish	Anodizing
	Size	mm		Size	mm
	Remark			Remark	
Thin filmMid clamp	Part No.		Thin filmEnd clamp	Part No.	
	Material	6063-T5 / 6005-T5		Material	6063-T5 / 6005-T5
	Finish	Anodizing		Finish	Anodizing
	Size	mm		Size	mm
	Remark			Remark	
Square Nut	Part No.		Insert Nut	Part No.	
	Material	6063-T5 / 6005-T5		Material	6063-T5 / 6005-T5
	Finish	Anodizing		Finish	Anodizing
	Size	mm		Size	mm
	Remark			Remark	

## 5.3 Grounding parts & MC4









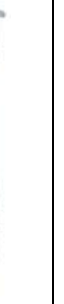
	Part No.			Part No.	
	Material	6063-T5 / SUS304		Material	SUS304
	Finish	Anodizing & N/A		Finish	N/A
	Size	mm		Size	mm
	Remark			Remark	
Bonding jumper kit	Part No.		MC4 Kit	Part No.	
	Material	6063-T5 / SUS304		Material	銅
	Finish	Anodizing & N/A		Finish	N/A
	Size	mm		Size	mm
	Remark			Remark	

## 5.4 PV Cable & Fence

PV cable	Part No.		Fence	Part No.	
	Material	Cu		Material	Q235b
	Finish	N/A		Finish	N/A
	Size	PV1-F1*4		Size	Customers' demand
	Remark			Remark	

PV solar CableTray			Part No.		Introduction
			Material	Steel	Cable Support Systems are designed and manufactured with a structural integrity normally only associated with steel and aluminium, but without their corrosion, weight and electrical conductivity problems.
			Finish	Coating	
			Size	200*50*2000mm	
			Remark		

## 5.5 Pile

Part No.									
Images									
Size	Ground screw we choose according to actual soil factors or customers' requirements.								
Finish	HDG	HDG	HDG	HDG	HDG	HDG	HDG	HDG	HDG
Price									
Remark	Normal size:Φ76*3*1600mm/1800mm/2000mm; Big blades or small blades; With flange or without flange.								