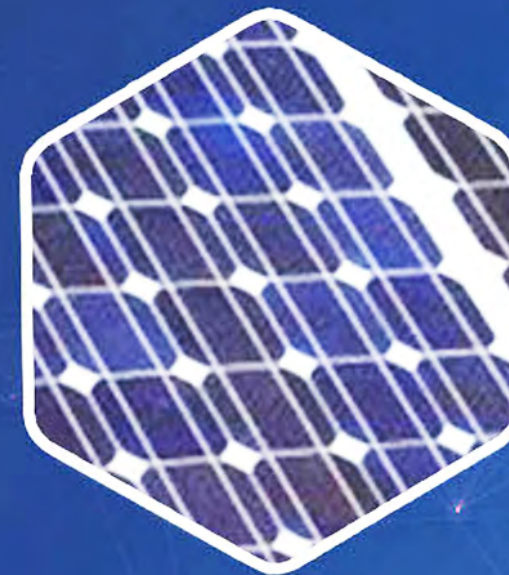


ALUMSOLAR



SOLAR MOUNTING STRUCTURE DETAILING



Alumsolar Group Co., Ltd

Address: No.7 Industry Zone, Jiutoushan Road, Yufeng
District, Liuzhou, Guangxi Province, China P.X. 545000
Tel: +86 186-0217-5688
Email: info@alumsolar.com
Web: www.alumsolar.wixsite.com/alumsolar





AS solar mounting system, Photovoltaic ridge !!!

>> > COMPANY PROFILES

About us

Alumsolar enables its customers to power the world with clean, abundant energy by creating dependable, innovative mounting solutions.

We aspire to:

Create enthusiastic customers through providing ease of installation, responsive services, and competitive value based on decades of trusted experience.

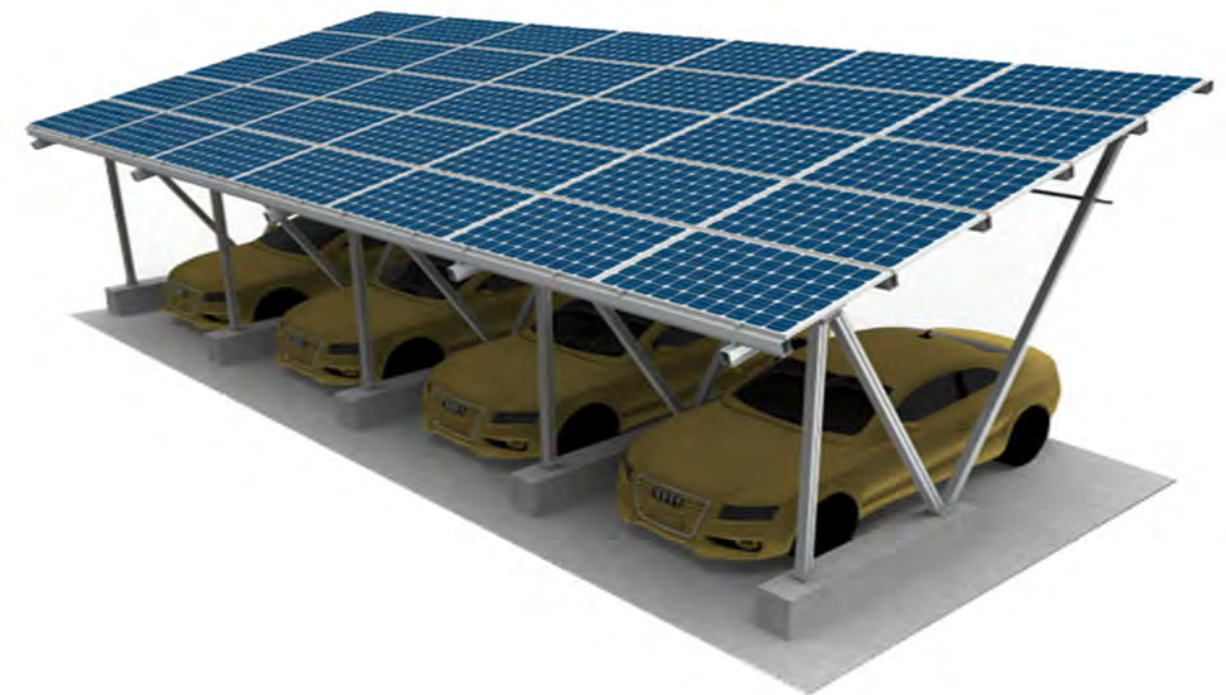
Cultivate a high performing, ethical culture centered around an entrepreneurial spirit and challenging work.

Deliver positive value for our shareholders through excellence in innovation, industry collaboration and execution.

We designs and manufactures high quality solar mounting systems for pitched roof, flat roof and groundopen areas. Whether for small or large-scale projects, standard models or tailor-made systems, we deliver what your need.

Alumsolar is a leading manufacturer in solar industry. We provide design & manufacture & sales & service customers support from our headquarter in Jiangsu.

We are working with companies from USA, Mexico, Germany, UK, Brazil, Korea, Thailand, Australia, South Africa, Japan etc to provide best services.





2012
Headquarters established

2012
Received 20MW ground solar power in Qinghai China and then also supported 20 MW roof projects in Australia and Japanese power station

2013
Passed ISO certification, and successfully open British market

2013
Successfully developed the ballast flat roof aluminum alloy solar mounting system that use to USA

2014
Successfully R&D plug solar mounting system, and supported distributor 2MW in British

2014
Passed CE European certification, and supported many EPC design more solution for tin roof solar mounting system.

2015
Successful R&D solution to tegula master tiles in North America, and obtaining CSA certification, advanced in domestic

2015
Establish PV division. concentrate on R&D roof solar energy solar mounting. signed cooperation agreement with many EPC companies, supported solar mounting achieved 160MW in this year

2016
Establish office in Singapore, Developed the market of Southeast Asia, achieved 200MW in this year

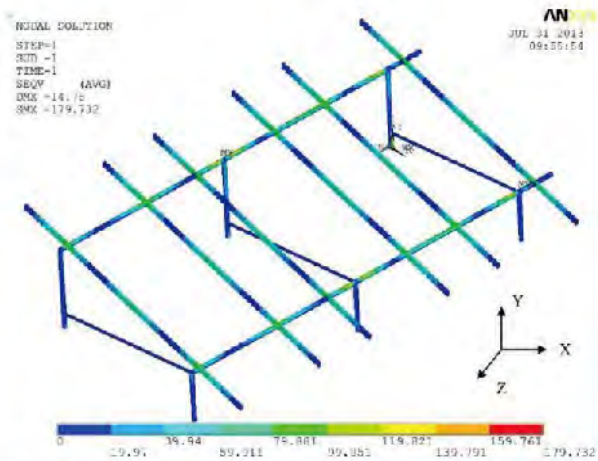
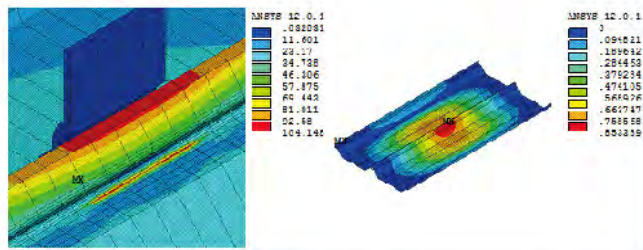
2017
Establish office in America, Developed the market of South America, Predict to achieve 300MW in this year

Corporate Philosophy



R&D System

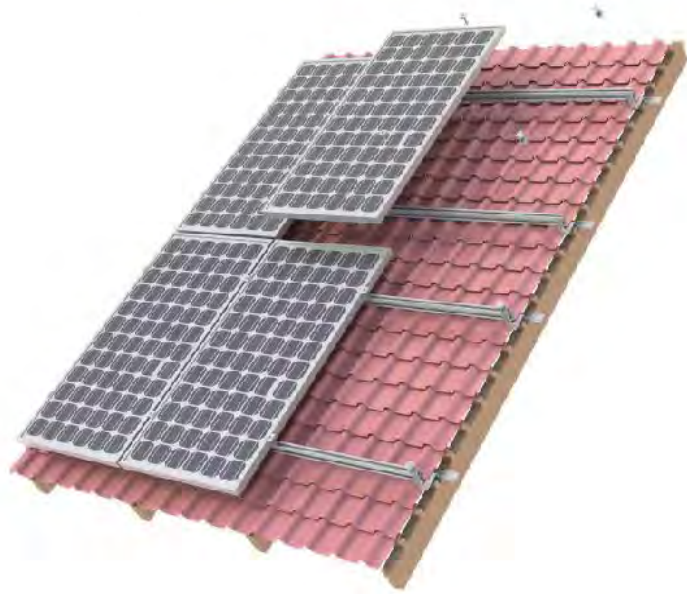
Product development design not only increase solution of bracket system, optimal design, ensure safety and stability of complete system



CONTENTS

- Tile roof solar mounting system-----page 7
- Tin roof solar mounting system-----Page 9
- Heigh tin roof solar mounting system-----page 11
- Flat roof solar mounting system-----page 12
- Flat roof ballast diversion solar mounting system-----page 13
- Concrete foundation steel solar mounting system-----page 15
- Concrete foundation aluminum solar mounting system-----page 16
- Ground screw steel solar mounting system-----page 17
- Ground screw aluminum solar mounting system-----page 18
- Strike screw steel solar mounting system-----page 19
- adjustable ground solar mounting system-----page 20
- Carport solar mounting system-----page 21
- Sunhouse solar mounting system-----page 23
- Roof hook types-----page 25
- Roof rail types-----page 26
- Roof projects-----page 27
- Ground projects-----page 29

Installation Design



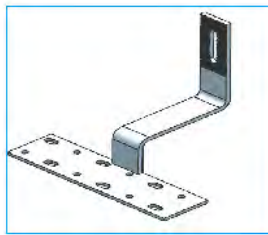
Technical Parameters

Installing type	tile roof top
Angle	Tile on roofing
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixing
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

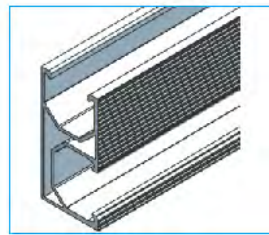
Alumsolar Tile roof solar mounting system-AS-TL-0001

Alumsolar tile roof solar mounting structure used to tile roof top. suit to all solar module with and without frame. Complete solar mounting system preassemble provided simple installation on roof in advance, insure that it's function and completeness. used for routine tile roof top, in order to simplified to contact aluminum rails and structrue. adopt to fix nut, and then contact the rails by rotated in alumsolar tile roof solar mounting system

MAIN PARTS



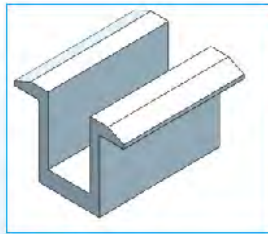
Roof Hook



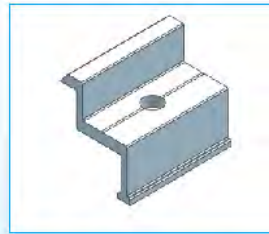
Aluminum Rail



Rail Joiner



Mid Clamp



End Clamp

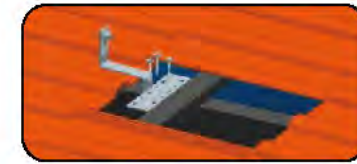


Earthing Core Lug

Installing Process



1. According to drawing, move the tile on roof



2. Fixed roof hook on beam of roof top or cement roof by screw



3. Fixed aluminum rails on roof hook by installing tool



4. Fixed solar modules on aluminum rail by clamp

Roof Hook

tile type	code	tile type	code
Standard tile	AS-S-025	rome tile	AS-S-040
plane tile	AS-S-024	Tegula Master tiles	AS-S-076
double channels tile	AS-S-078	slate tiles	AS-S-075
slab tile	AS-S-053	round tiles	AS-S-021

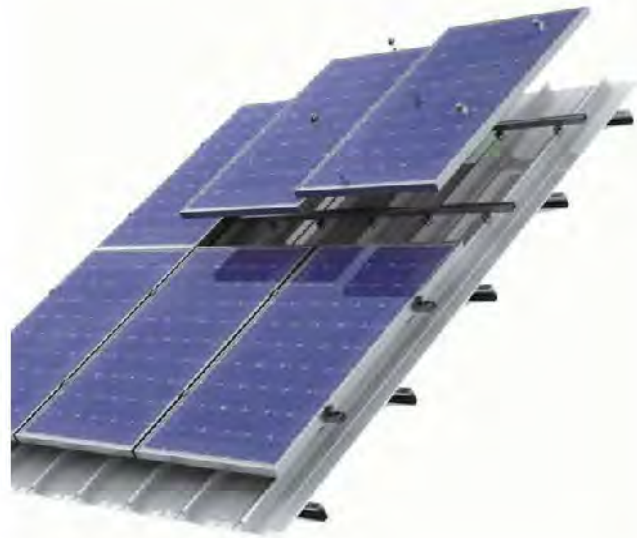
Roof Hook installation



15 YEARS
生产产品 质量保证

30 YEARS
设计系统 质量保证

Installation Design



Technical Parameters

Installing type	tin roof top
Angle	Tile on roofing
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixing
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Installing Process



1、Used opposite klip lok according to tin roof type



2、Pass especial screw to fixed rail and clamp



3、Used clamp to fix solar module on rails

Roof Hook

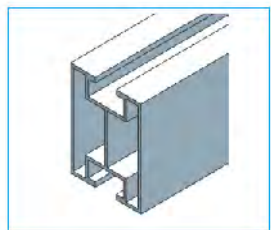
Alumsolar Tin roof solar mounting system-AS-TN-0001

Alumsolar tile roof solar mounting structure used to routine tin roof top. suit to all solar module with and without frame. Complete solar mounting system preassemble provided simple installation on roof in advance, insure that it's function and completeness. used for all tin rooftop, in order to simplified to contact aluminum rails and structrue. adopt to fix nut, and then contact the rails by rotated in alumsolar tile roof solar mounting system

MAIN PARTS



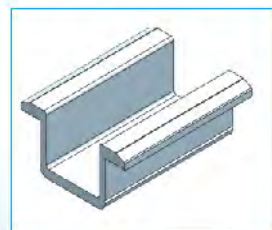
Roof Hook-Klip lok



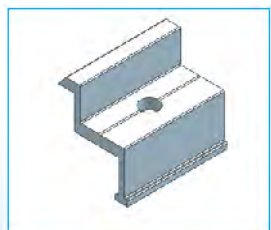
Aluminum Rail



Rail Joiner



Mid Clamp



End Clamp



Earthing Core Lug

Roof Hook installation



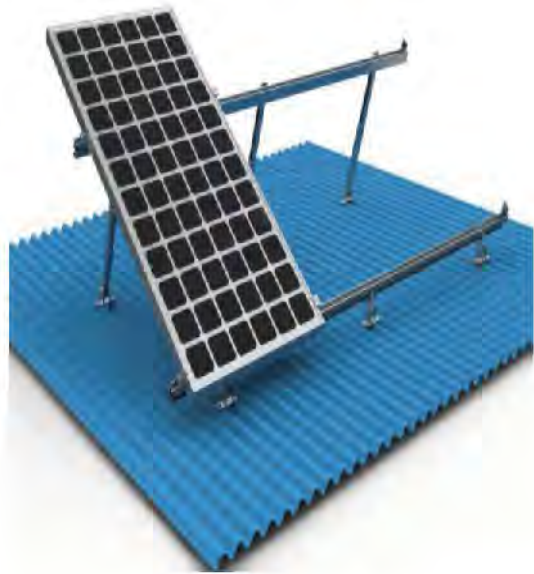
彩钢瓦瓦型对应

Klip lok tin roof		klip lok tin roof	
Half klip lok tin roof		trapezoid tin roof - 22	
stato-lok side tin roof		trapezoid tin roof - 27	
Kalzip tin roof		trapezoid tin roof / pitch tin roof	

15 YEARS
生产产品
质量保证

30 YEARS
设计系统
质量保证

Installation Design



Installing Process

1. Depend on drawin request, fixed front foundation on tin roof, and joint sets
2. Depend on drawin request, In relevant location fixed back lug on tin roof, and adjust relevant height
3. As above, the rails fixed on front lug and back lug in separately
4. Fixed solar modules on aluminum rails by mid clamp and end clamp

Alumsolar Height tin roof solar mounting system-AS-TN-0001

Alumsolar tile roof solar mounting structure used to routine tin roof top. suit to all solar module with and without frame. adopt modularity design, accessories instal a part in factory, reduce insatlling quantity in project place.increase installing efficiency. meanwhile, satisfied different degree of installing. 0~15 degree, 15~30 degree.

Technical Parameters

Installing type	tin roof top
Angle	Degree with roof
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixing
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Main Parts



15 YEARS 30 YEARS
生产产品 设计系统
质量保证 质量保证

Installation Design



Installing Process

1. Fixed aluminum triangle bracket on founation of coment
2. Fixed aluminum rails on triangle bracket
3. Fixed solar panels on aluminum rails by mid clamp and end clamp

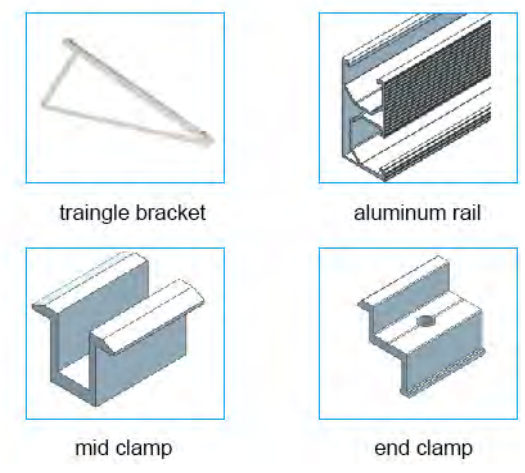
Alumsolar flat roof solar mounting system-AS-FL-0001

Alumsolar flat roof solar mounting structure suit to all kinds of flat roof. according weight capacity and waterproof requests, fixed solar mounting system on roofing, adopt bear load way or chemistry anchor bolt etc. Used advantage structure design, aluminum rail and u-nit desig by ourselves. without destroy roof structure and secondary operation to accessories in installing place, speedy installing

Technical Parameters

Installing type	flat roof top
Angle	Degree with roof
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Main Parts



Installing Process



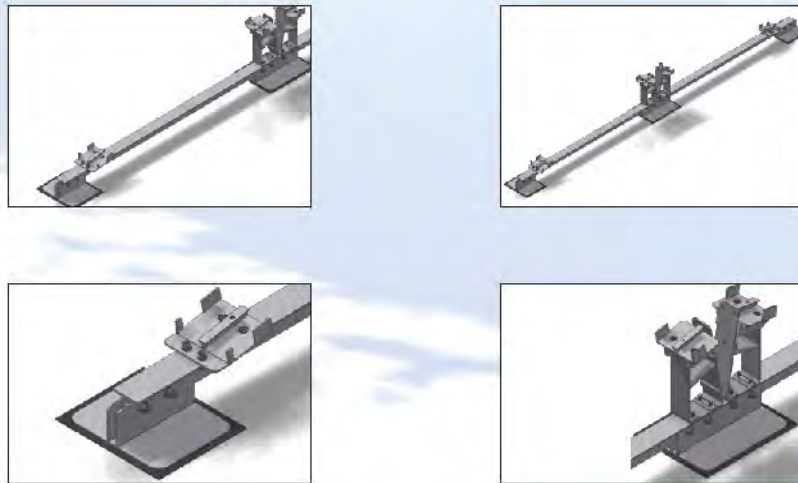
Alumsolar flat roof ballast diversion solar mounting system-AS-BD-0001

Common flat roof solar mounting system used bottom contacting and add bear load, two fixed ways. the front way destroy roofing, the back way need definite request of load. ballast diversion solar mounting system used hydromechanics, which Alumsolar independent research and development, adopt bottom add wide of aluminum rails and the back of wind screen. without add bear load. without destroy any place on roofing

Technical Parameters

Installing type	cement roof
Angle	Degree with roof
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Main Parts



Installation Design



Installing Process



1. Rely on request of drawing. fixed clamp on relevant place of tin roof

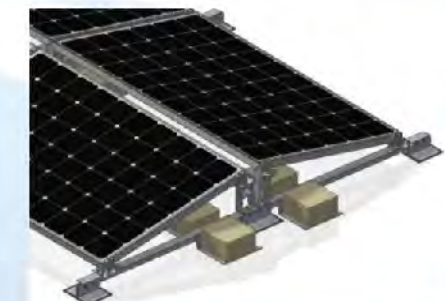


2. Using end clamp and mid clamp fixed solar module on aluminum rails

Single type



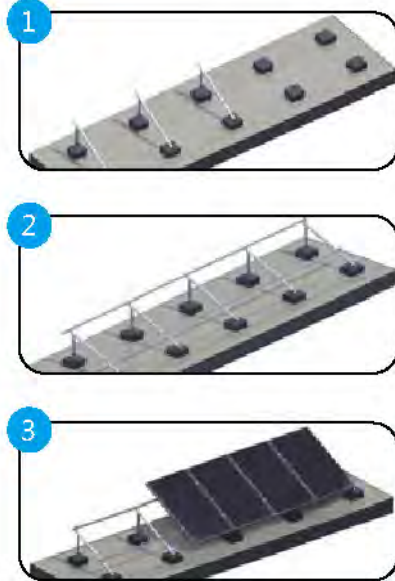
double type



Installing Process



Installing Process



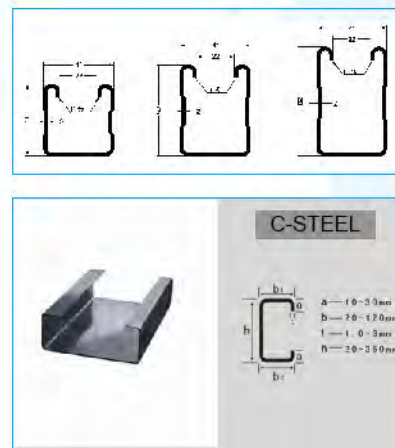
Concrete foundation steel solar mounting system-AS-GS-0001

Used cement block load type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used Q235B steel material., surface treatment is Heat invasion zinc, more than 25 years lifetime. according to actual requests design installing angle, such as roofing installation, then without destroy original waterproof..

Technical Parameters

Installing type	concrete flat roof or ground
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m ²
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

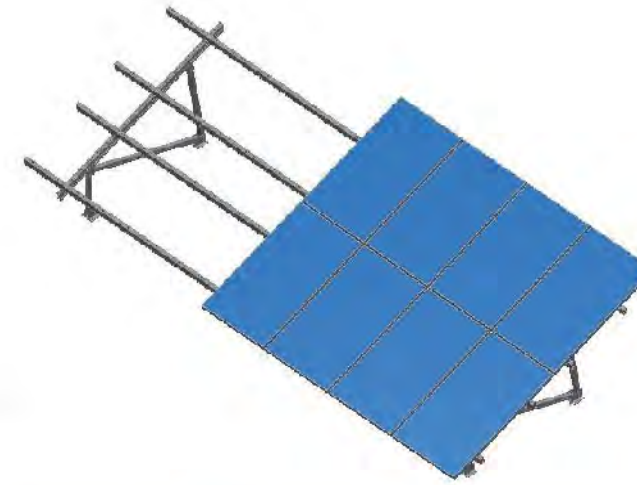
Main Parts



15 YEARS
生产产品 质量保证

30 YEARS
设计系统 质量保证

Installing Process



Technical Parameters

Installing type	concrete flat roof or ground
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m ²
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

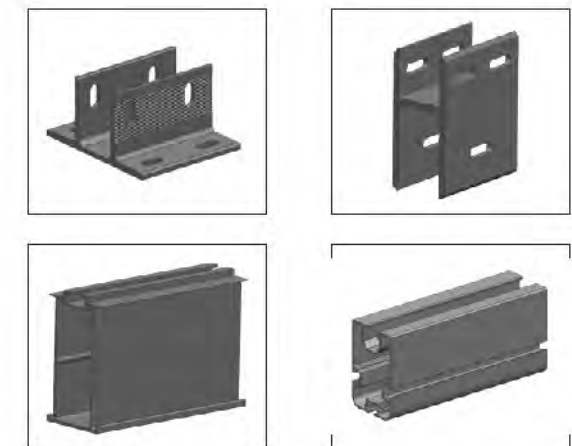
Concrete foundation aluminum solar mounting system-AS-GA-0001

Used cement block load type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used 6005-T5 anodized aluminum, surface treatment is Heat invasion zinc, more than 25 years lifetime. according to actual requests design installing angle, such as roofing installation, then without destroy original waterproof..

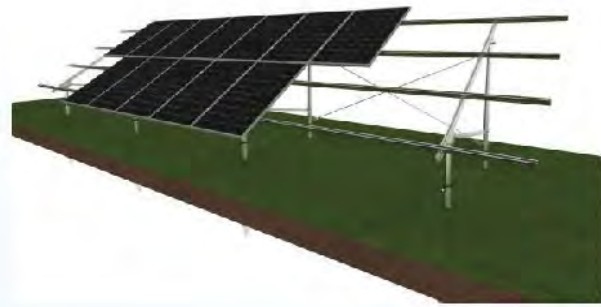
Installation structure



Main Parts



Installing Effect



Installing Process



Ground screw steel solar mounting system-AS-GSS-0001

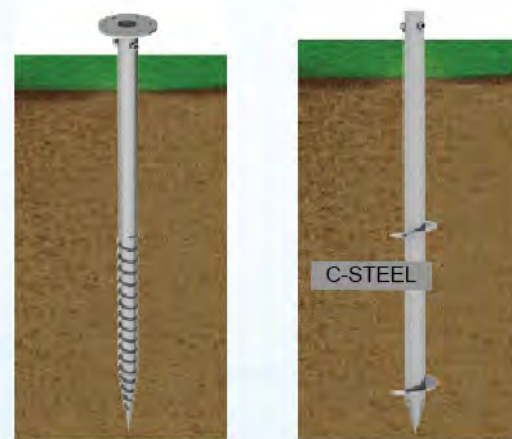
Used ground screw type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used Q235B steel material., surface treatment is Heat invasion zinc, more than 25 years lifetime. according to actual requests design installing angle, such as roofing installation.

Technical Parameters

Installing type	ground or mountain
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Main Parts

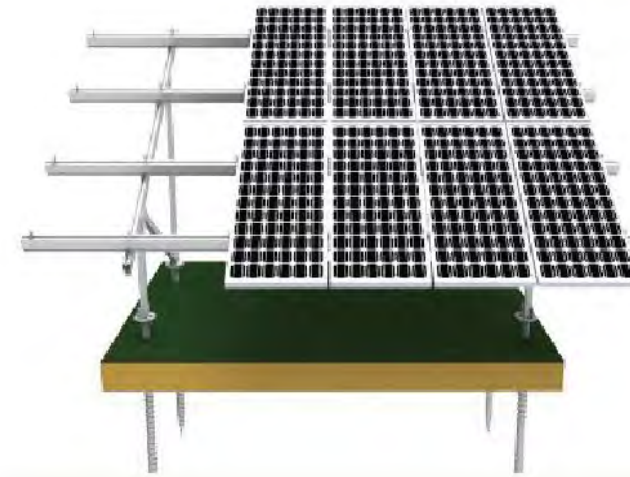
Ground screw types



15 YEARS
生产产品
质量保证

30 YEARS
设计系统
质量保证

Installing Effect



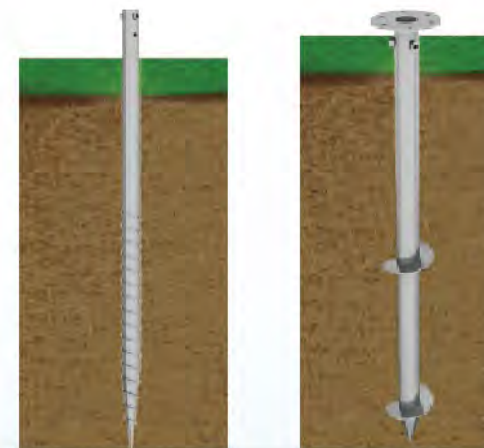
ground screw aluminum solar mounting system-AS-GA-0001

Used cement block load type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used 6005-T5 anodized aluminum, surface treatment is 8~15 μm anodized, more than 25 years lifetime. according to actual requests design installing angle.

Technical Parameters

Installing type	ground
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Ground screw types



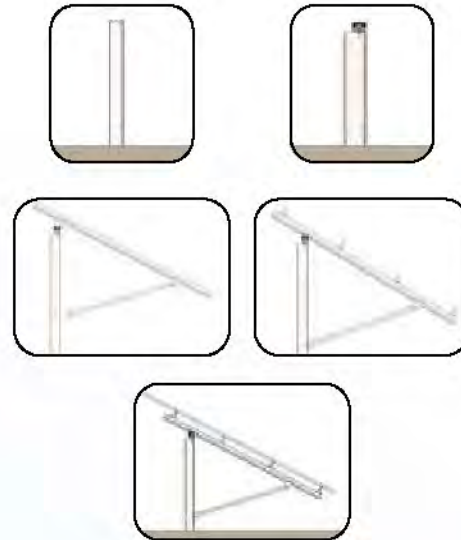
Installing structure



Installing Effect



Installing structure



Strike screw steel solar mounting system-AS-GSS-0001A

Used strike screw type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used Q235B steel material., surface treatment is Heat invasion zinc, more than 25 years lifetime. according to actual requests design installing angle, such as roofing installation.

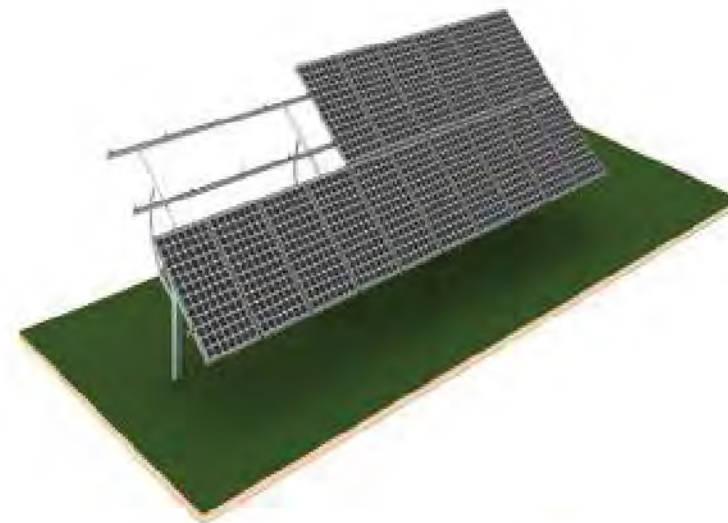
Technical Parameters

Installing type	ground or mountain
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Installing Effect



Installing Effect



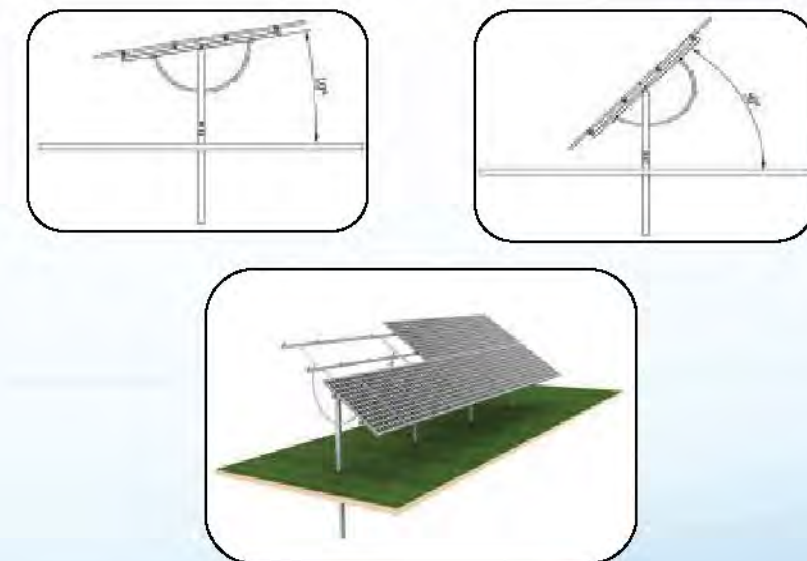
Technical Parameters

Installing type	ground
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m2
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Adjustable ground solar mounting system-AS-GA-0001

Used cement block load type to fix system, easy installing, lowly cost, fit for large solar power station construction. main beam used 6005-T5 anodized aluminum, surface treatment is 8-15 μm anodized, more than 25 years lifetime. according to actual requests design installing angle.

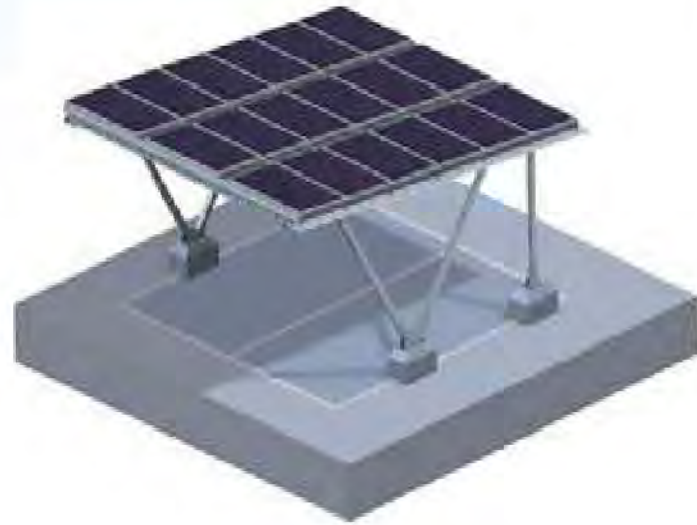
Installing Effect



15 YEARS
生产产品 质量保证

30 YEARS
设计系统 质量保证

Installing Effect



Technical Parameters

Installing type	ground or mountain
Angle	Any degree
Wind speed	<42m/s
Snow load	0.55KN/m ²
material	aluminum alloy 6005-T5 or 6063-T5 and SS304
layout of module	vertical or horizontal
module type	frame panel or double glasses
Fixed type	clamp fixed
Standard	GB5009、JIS8955、ASCE7-05、AS/NZ1170

Carport solar mounting system-AS-CS-0001A

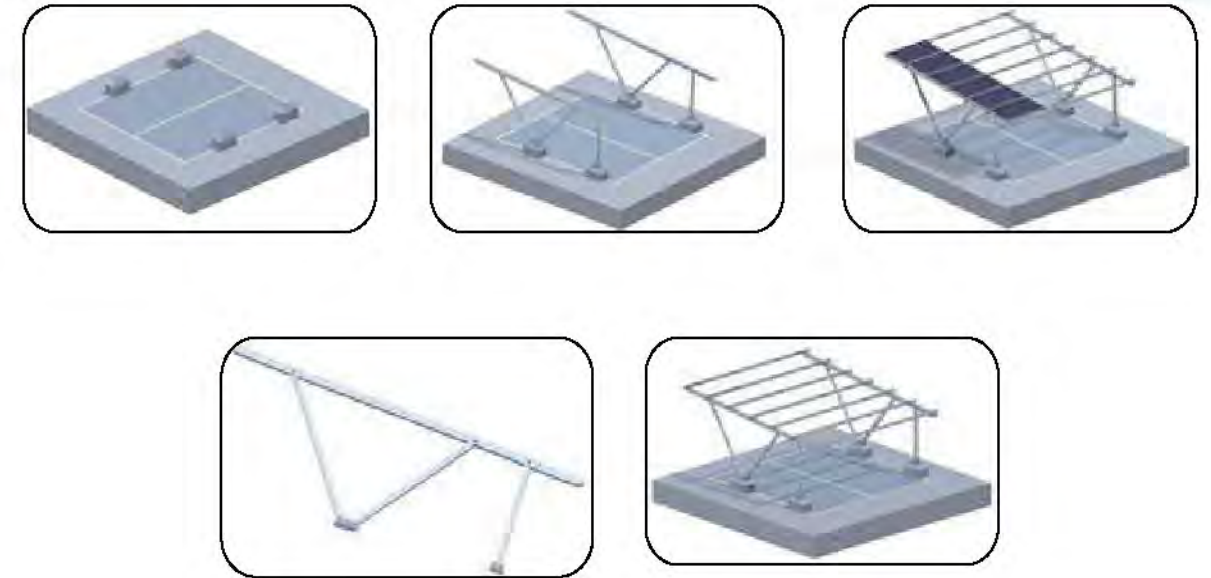
Alumsolar carport solar mounting system is a combinative system of PV power and carport. even if keep out wind and rain,, also used renewable energy PV provide electric power to electrocar and lamp or on-line power, system is built with almost no geographical restrictions, flexible and convenience. aluminum and steel two material, and kinds of designs is choosed, not only satisfied appearance request, but also application requests

Main Parts

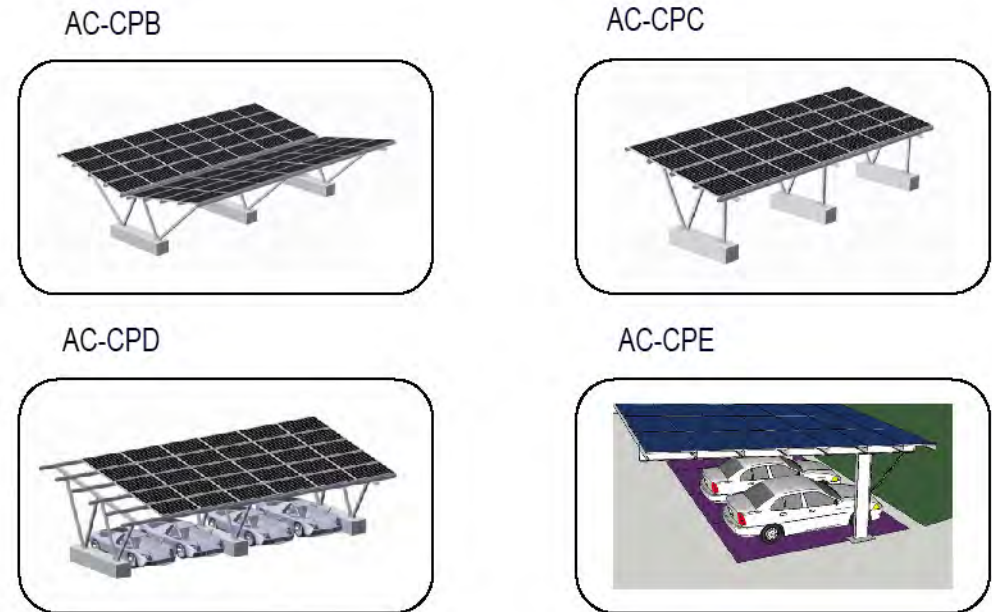


15 YEARS 生产产品 质量保证
30 YEARS 设计系统 质量保证

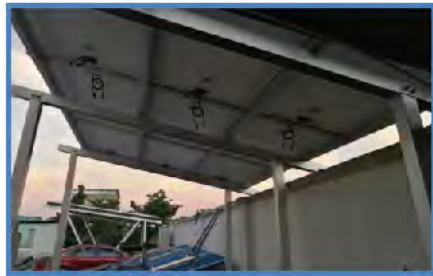
Installing Effect



Carports types



Installing Effect

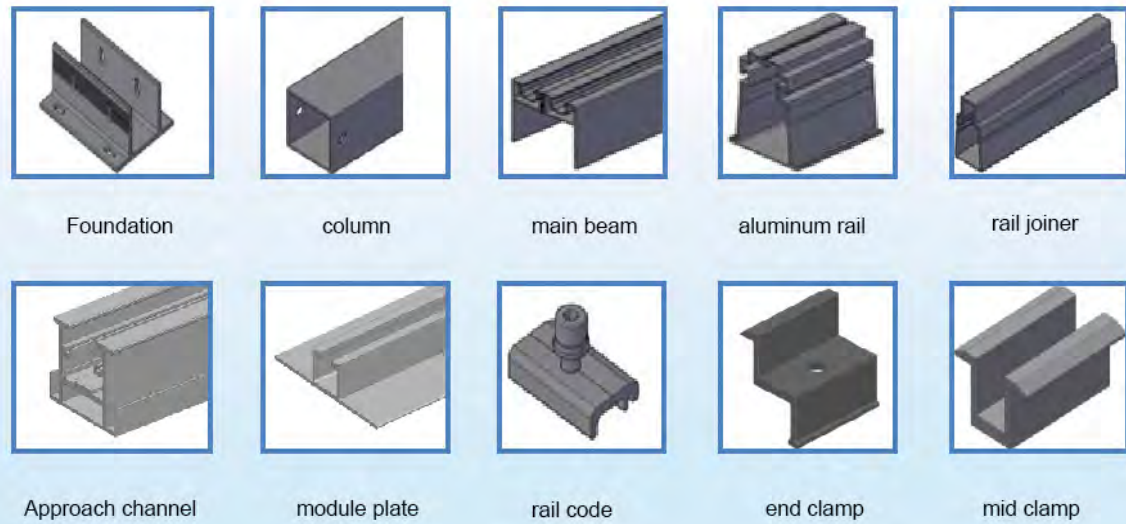


sunhouse solar mounting system-AS-SH-0001A

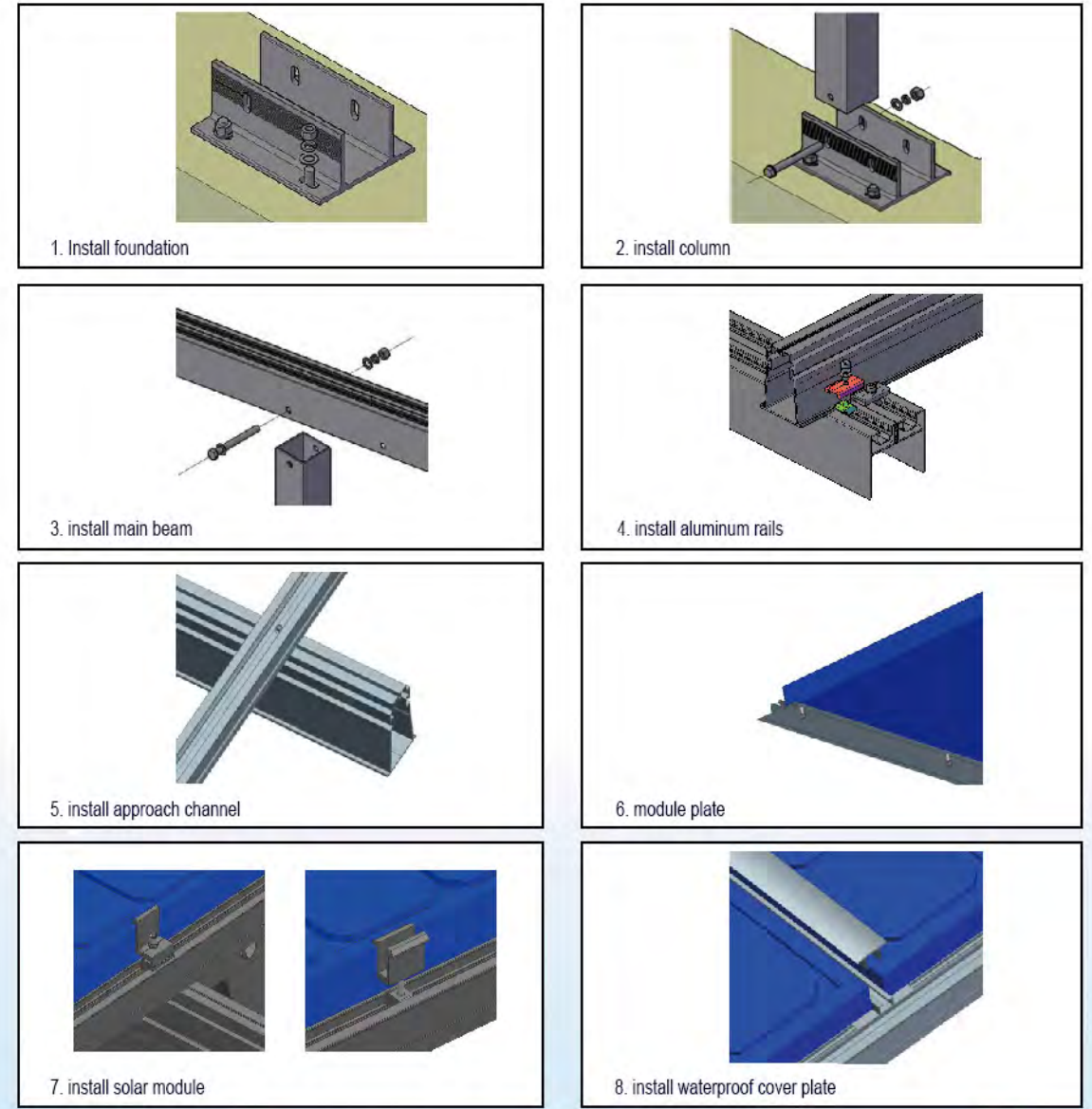
Technical Parameters

- ◆ **Wide range of application**
High strength, high corrosion resistance, suit to hostile installing environment, also used in broad ground and flat roof type
- ◆ **Easy installing**
Easy installing process in installation place, effective increased installing efficiency, such that adjusting time and labor costs for PV installation engineering
- ◆ **Reliable waterproof**
Reliable design of waterproof, solve the question of waterproof on basically
- ◆ **Design standard**
GB5009-2012
ASCE7-10 : 2010
JIS C8955 : 2011
AS/NZS 1170

Main Parts



Installation Process



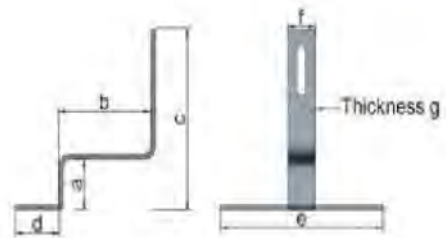
10年品质保证 安心 长期

安装角度 5°

最大风速 35 m/s

最大荷载 0.55kN/m²

Roof Hook Types-horizontal



- Hook A-1 standard model type** Code SP-S-024

mm	a	b	c	d	e	f	g
	46	100	166	50	180	30	5

Package: 60 pc/box weight: 0.5kg
- Hook A-2 Fixed size side type** Code SP-S-053

mm	a	b	c	d	e	f	g
	46	105	166	50	180	30	5

Package: 60 pc/box weight: 0.5kg
- Hook A-3 Adjustable cement roof type** Code SP-S-027

mm	a	b	c	d	e	f	g
	45-65	105	165-185	50	90	30	5

Package: 100 pc/box weight: 0.45kg
- Hook A-4 Adjustable wood roof type** Code SP-S-052

mm	a	b	c	d	e	f	g
	45-75	110	170-200	50	180	30	5

Package: 50 pc/box weight: 0.55kg
- Hook A-5 Adjustable wood roof side hook type** Code SP-S-054

mm	a	b	c	d	e	f	g
	45-75	110	170-200	50	180	30	5

Package: 50 pc/box weight: 0.6kg
- Hook A-6 plain tile roof type** Code SP-S-021

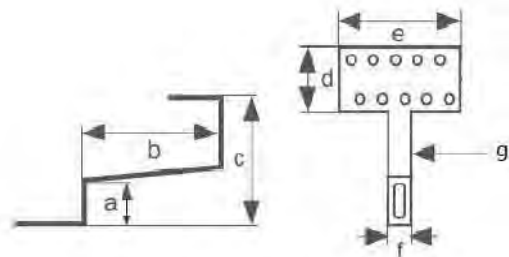
mm	a	b	c	d	e	f	g
	30	195	167	80	30	30	5

Package: 50 pc/box weight: 0.45kg
- Hook A-7 slate tile roof type** Code SP-S-075

mm	a	b	c	d	e	f	g
	/	200	120	/	30	30	5

Package: 50 pc/box weight: 0.4kg

Roof Hook Types-Vertical



- Hook B-1 Fixed size type** Code SP-S-022

mm	a	b	c	d	e	f	g
	46	100	128	50	180	30	76

Package: 40 pc/box weight: 0.55kg
- Hook B-2 Adjustable wood roof type** Code SP-S-077

mm	a	b	c	d	e	f	g
	45-75	105	130-160	50	180	30	76

Package: 40 pc/box weight: 0.6kg
- Hook B-3 Adjustable wood roof type** Code SP-S-078

mm	a	b	c	d	e	f	g
	45-75	105	170-200	50	180	30	76

Package: 40 pc/box weight: 0.65kg
- Hook B-4 plain tile roof type** Code SP-S-040

mm	a	b	c	d	e	f	g
	30	195	125	62	30	30	65

Package: 30 pc/box weight: 0.5kg
- Hook B-5 slate tile roof type** Code SP-S-076

mm	a	b	c	d	e	f	g
	/	200	74	/	30	30	84

Package: 30 pc/box weight: 0.45kg

Roof Rail Types

- | | | | |
|------------|--------------|----------|--------------|
| | Code: AL-007 | | Code: AL-003 |
| a(mm) 28 | b(mm) 55 | a(mm) 31 | b(mm) 38 |
| | Code: AL-033 | | Code: AL-010 |
| a(mm) 30 | b(mm) 40 | a(mm) 29 | b(mm) 40 |
| | Code: AL-051 | | Code: AL-031 |
| a(mm) 30 | b(mm) 58 | a(mm) 64 | b(mm) 58 |
| | Code: AL-052 | | Code: AL-026 |
| a(mm) 39.2 | b(mm) 51.2 | a(mm) 42 | b(mm) 55 |

Tin roof bracket

- | | | | |
|-------------------------------------|--------------|---------------------------------|--------------|
| | Code: RC-001 | | Code: RC-010 |
| Application: Klip lok III tin roof | | Application: kalzip tin roof | |
| | Code: RC-022 | | Code: RC-002 |
| Application: MR-24 | | Application: half Klip lok tile | |
| | Code: RC-026 | | Code: RC-043 |
| Application: klip lok tile | | Application: klip lok tile | |
| | Code: RC-015 | | Code: RC-035 |
| Application: 22 type trapezoid tile | | Application: trapezoid tile | |

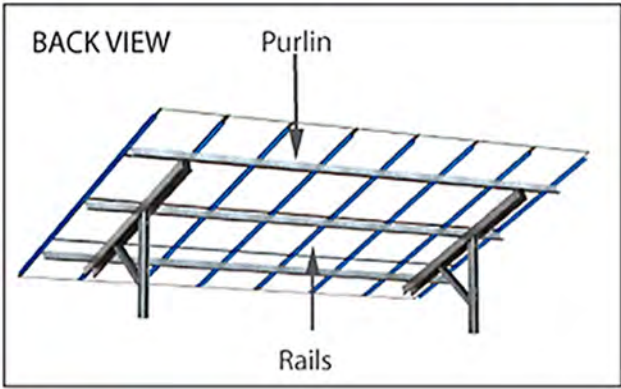
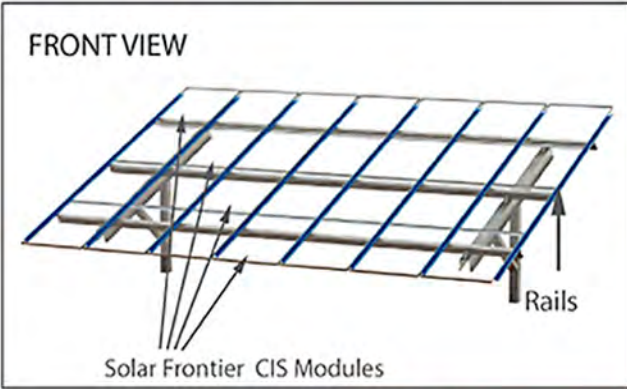
Our Projects



Project details

Installing type	flat roof triangle solar mounting system
Angle	10 degree
Wind speed	35m/s (3 second gust) - average 6m/s
Snow load	0.15KN/m2
material	aluminum alloy 6005-T5 and SS304
layout of module	vertical, No-regulation
module type	frame panel
Fixed type	clamp fixed
Solar module	270W Jinko JKM270PP- 60, 1650*992*40mm
Foundation	triangle bracket - roof hook, cement block ballast
project place	Super market, California, USA
Total Watt	1.5MW
Standard	GB5009, JIS8955, ASCE7-05, AS/NZ1174

Our Projects



Project details

Installing type	Single column triangle ground solar mounting system
Angle	15 degree
Wind speed	32m/s
Snow load	0.25KN/m2
material	anodized aluminum 6005-T5, steel Q235
layout of module	vertical, 65X1 row
module type	frame panel
Fixed type	clamp fixed
Solar module	300W
Foundation	cement block
project place	Sydney, Australia
Total Watt	3MW
Standard	GB5009, JIS8955, ASCE7-05, AS/NZ1174

Nature, the gentlest mother

_____Emily dickinson



Alumsolar Group



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