



Product Catalog

Solar Mounting Solutions



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Disclaimer :

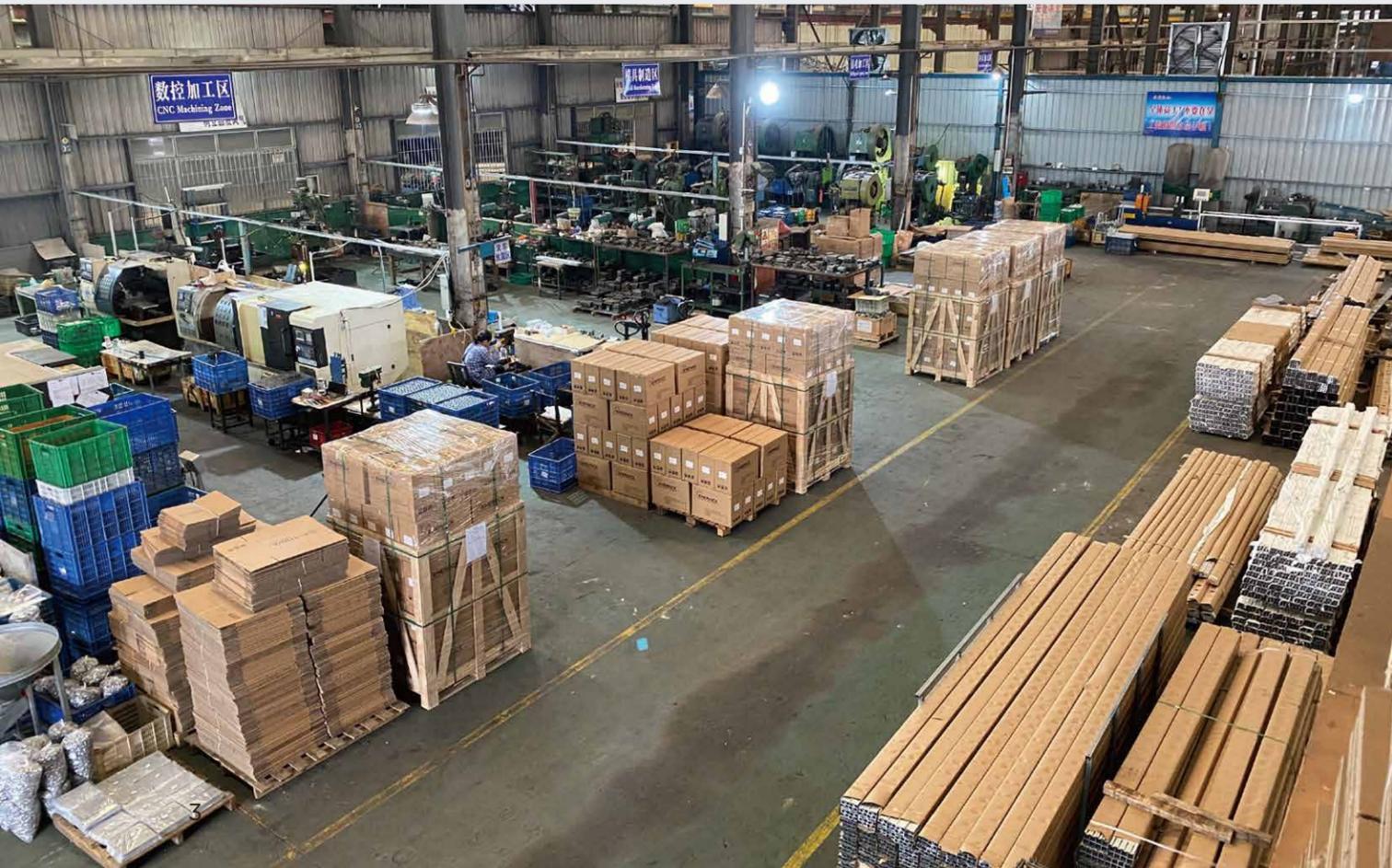
We make every effort to ensure that all the information contained within our catalogue is complete and accurate. Due to continuous product optimization we reserve the right to make any changes or corrections to our products and this catalogue as well as individual product information at any time without prior notice. All previous catalogues and individual product information become invalid upon the release of the later publications.

ABOUT SUNPAL

Specialize in research, design, development, production, and service of solar PV Mounting systems. We are committed to providing customers with stable, reliable and cost-effective solutions of roof mounting system, ground mounting system, and construction of various photovoltaic power stations for civil and commercial use, government departments, power stations projects etc.

Sunpal owns a solar mounting factory, more than 80 skilled workers, have over 10 years solar products production experience. With a complete R& D processing and high manufacturing capacity, strictly following ISO9001 quality control system. Our products design strictly in accordance with Australia AS/NZS1170.2, JIS C 8955, MCS012, TUV, UL2703, European building codes and other standards. Ensure that every code and regulation is fully complied with all applicable local or national building codes.

Sunpal offering innovative design and integrative settlement solution to our customers based on years of experiences on design, production and sale. We achieved good trust from customers because of our stable and excellent products. We will try our best to become a world leading level of solar photovoltaic systems integration solutions supplier.



Manufacturing facilities for both aluminum and steel products



Global service



Direct racking supply



Experienced team since 2010



Design standard: TUV, AS 1170.2:2011, JIS C 8955:2011, UL 1703/2703



15 Years warranty

Global Roofing

We have worked with roofing manufacturers and professional installers across the globe to develop, produce and deliver roof solar mounting solutions for variety kind of roof. Mounting solutions are available for popular and common roofing profiles manufactured from Africa, Europe, Middle East, Asia, America, Australia and New Zealand.

AU/NZ

Lysaght
revolution roofing
Stramit
Apexsteel
Mcelroymetal
Fielders
Dimond Roofing
Foofing Industries Ltd
Metalcraft roofing
JCP roofing

European

Domico
Kingspan
Kalzip
Riverclack
Rukki
Versasteel
Phoenix Steels
Cladco Profiles Ltd
Accord Steel Cladding Ltd-C
German-Münker Metallprofile
Zambelli

North America

ASC Profiles
Butler Manufacturing
ATAS International
VP Buildings
Metal Depots
Metal Sales
Mcelroy Metal
Fabral
Flatiron Steel
Vicwest
CBS Sheetmetal
Lakefront Roofing & Siding Supply
unioncorrugating
NCI Building Systems-
Bridger Steel

Japan

Kyowa
Nihon Teppan
Sanko
Jfe-Nikkenban

South-east Asia

Lysaght
Tata steel
Good Steel
Kextra
GAF

Latin America

Bluescope
Armco

Africa

Safintra
DURObuild
Classecon Roofing





Global Service & Proven Records

Sunpal clamps and solar roof mount has been installed worldwide, from South Africa, Tanzania, Kenya of Africa, Netherlands, Hungary, Belgium, Sweden, Norway, Poland, Ukraine, Romania of Europe, Oman, Qatar, Dubai or Middle East, Sri Lanka, India, Indonesia, Malaysia, Thailand, Philippines, Singapore, Japan, Korea, China of Asia, Australia and New Zealand, to Canada, USA, Mexico, Panama, Costa Rica, Guatemala, Honduras, Colombia, Argentina, Brazil, Uruguay or America. manufactured from Africa, Europe, Middle East, Asia, America, Australia and New Zealand.





Metal Roof Mount-Cambodia



Pole Mount-Australia



Metal Roof Mount-China



East & West Ballasted Mounting-Bulgaria



Metal Roof Mount-Hungary



Ground Mount-Romania

Rail & Accessories

1
Item No. ERK-R52
Description Sunpal 52mm Rail



2
Item No. ERK-R52L
Description Sunpal 52mm L Rail



9
Item No. ERK-R29
Description Sunpal 29mm Rail



10
Item No. ERK-R26
Description Sunpal 26mm Rail



3
Item No. ERK-R62
Description Sunpal 62mm Rail



4
Item No. ERK-R62C
Description Sunpal 62mm C Rail



11
Item No. ERK-SFR-01
Description Splice for Rail Kit 01



12
Item No. ERK-SFR-02
Description Splice for Rail Kit 02



5
Item No. ERK-R60
Description Sunpal 60mm Rail



6
Item No. ERK-R46
Description Sunpal 46mm Rail



13
Item No. ERK-AEC
Description Universal Adjustable (30-40mm) End Clamp Kit



14
Item No. ERK-AIC
Description Universal Adjustable (30-40mm) Inner Clamp Kit



7
Item No. ERK-R42
Description Sunpal 42mm Rail



8
Item No. ERK-R41
Description Sunpal 41mm Rail (T-Bolt)



15
Item No. ERK-EIC
Description Universal Adjustable (30-40mm) Inner Clamp Kit (Include Spring & Earthing Clip)



16
Item No. ERK-FEC
Description General End Clamp Kit



Rail & Accessories

17 Item No. ERK-RCN
Description Standard Rail Clamp with ERK Nuts



18 Item No. ERK-RCB
Description Standard Rail Clamp with T-Bolt Kit



25 Item No. ERK-REL-A
Description Standard Rail Earthing Plate Type A



26 Item No. ERK-REL-B
Description Standard Rail Earthing Plate Type B



19 Item No. ERK-TEC
Description Thin Film Double-glazed Module End Clamp Kit



20 Item No. ERK-TIC
Description Thin Film Double-glazed Module Inner Clamp Kit



27 Item No. ERK-CCP-01
Description Cable Clip for PV Panels for Holding 3 Cables



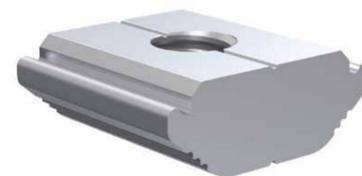
28 Item No. ERK-CCP-02
Description Cable Clip for PV Panels for Holding 2 Cables



21 Item No. ERK-ELG
Description Earthing Lug Kit



22 Item No. ERK-NUT
Description ERK Nuts



29 Item No. ERK-CCP-03
Description Cable Clip for PV Panels for Holding 3 Cables



30 Item No. ERK-CCP-04
Description Cable Clip for PV Panels for Holding 2 Cables



23 Item No. ERK-NBW
Description ERK Nuts Assembly with Bolt and Washer Kit



24 Item No. ERK-TBK
Description T-Bolt Kit



31 Item No. ERK-CCP-06
Description Cable Clip for PV Panels for Holding 3 Cables



32 Item No. ERK-CCP-05
Description Cable Clip for PV Panels for Holding 4 Cables



Metal Roof Attachment

Tin roof systems divided into two fixing methods:

1. Drilling solutions, like bracket L-feet, hanger bolt, T type hook etc.
2. Standing seam clamp, direct mounting, no damage to the roof.

A design that includes major specifications saves you inventory cost, quick and easy to install. Innovative design of rail connect base-support can effectively increase the product strength, ensure the safety of the product use. Sunpal have a large variety of tin roof brackets provide customers options. Customized allowed according to customer needs to meet special installation requirements.

Technical features:

Product name	Metal roof mounting system
Application	Metal roof
Inclination	Parallel to the roof
Material	AL 6005-T5, SUS 304, EPDM
Finish	AL 6005-T5 Anodized, SUS 304 Shot blasting
Module orientation	Landscape or Portrait



Item No. ERK-TRB-D01
Description L Feet for Corrugated or Trapezoidal Sheet Metal



Item No. ERK-TRB-D03
Description Hanger Bolt L Feet for Corrugated Fibre Cement, Corrugated or Trapezoidal Sheet Metal



Item No. ERK-TRB-D05
Description Hanger Bolt for Corrugated Fibre Cement, Corrugated or Trapezoidal Sheet Metal



Item No. ERK-TRB-D09
Description Asphalt Shingles Interface



Item No. ERK-TRB-D07
Description 7# Tin Roof Hook for Trapezoidal Sheet Metal



Item No. ERK-TRB-D08
Description 8# Tin Roof Hook for Trapezoidal Sheet Metal



Item No. ERK-TRB-D18
Description 18# Tin Roof Hook for Trapezoidal Sheet Metal



Item No. ERK-TRB-D06
Description 6# Tin Roof Hook for Trapezoidal Sheet Metal



Metal Roof Attachment

9
 Item No. ERK-TRB-D13
 Description 60mm Mini Rail for Corrugated or Trapezoidal Sheet Metal



10
 Item No. ERK-TRB-D10
 Description 26mm Mini Rail for Corrugated or Trapezoidal Sheet Metal



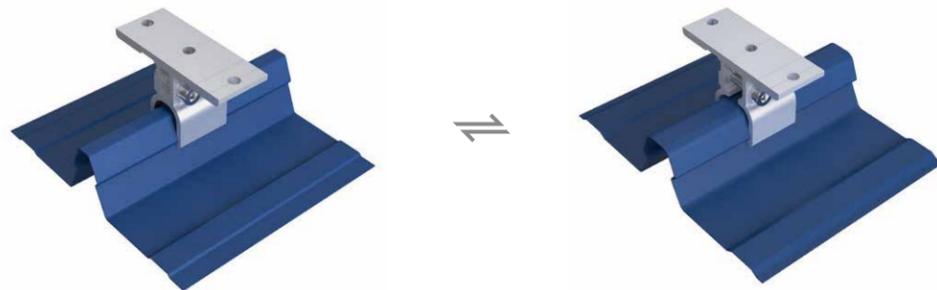
11
 Item No. ERK-TRB-D11
 Description 29mm U Type Rail for Corrugated or Trapezoidal Sheet Metal



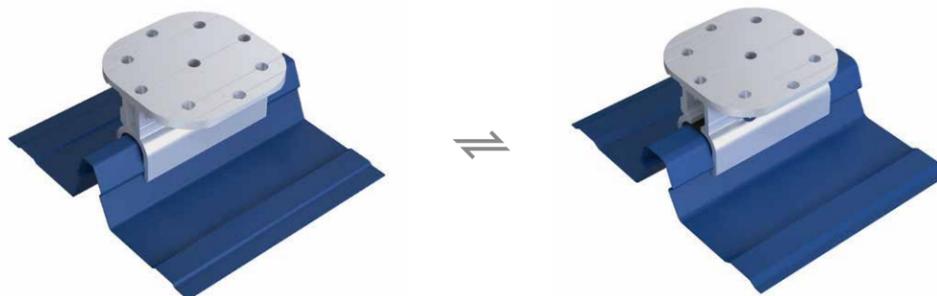
12
 Item No. ERK-TRB-D14
 Description 46mm Mini Rail for Corrugated or Trapezoidal Sheet Metal



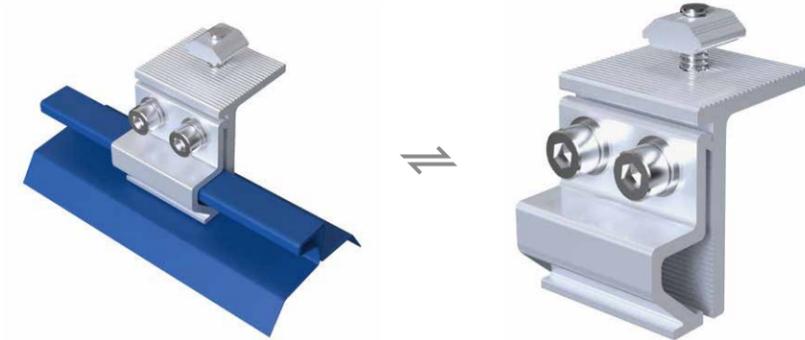
13
 Item No. ERK-TRB-C01
 Description Klip Lok 406 & 700 Interface



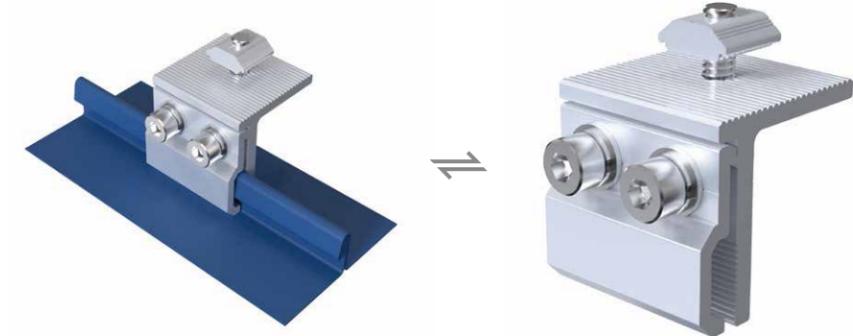
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 Item No. ERK-TRB-C02
 Description Klip Lok 406 & 700 Interface



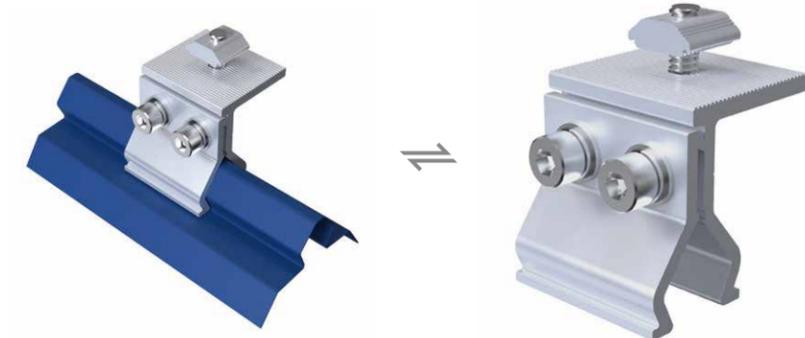
Item No. ERK-TRB-C04
 Description Standing Seam Clamp



Item No. ERK-TRB-C05
 Description Standing Seam Clamp



Item No. ERK-TRB-C06
 Description Standing Seam Clamp



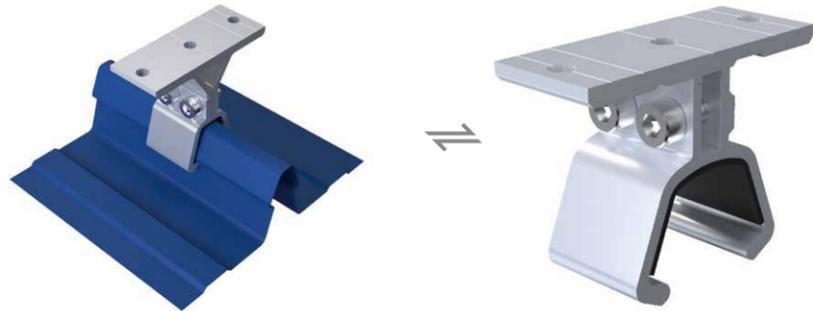
Item No. ERK-TRB-C10
 Description Stainless Steel Tin Interface Bracket



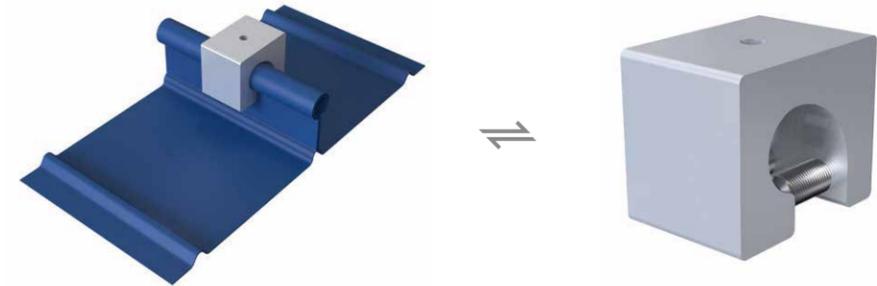
Metal Roof Attachment

19

Item No. ERK-TRB-C14
Description Metdek 855 Dimondek 630 Interface



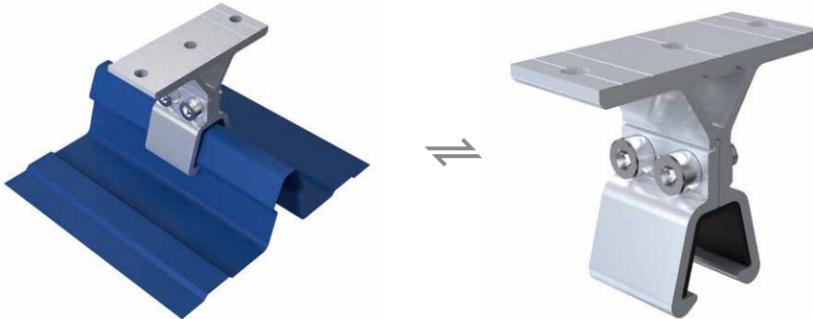
Item No. ERK-TRB-C21
Description Standing Seam Clamp



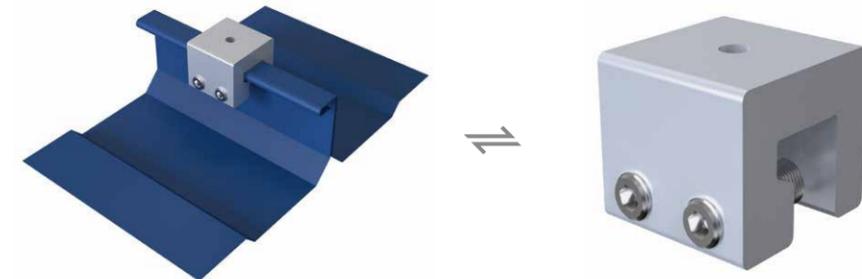
23

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Item No. ERK-TRB-C15
Description Metdek 500 Interface



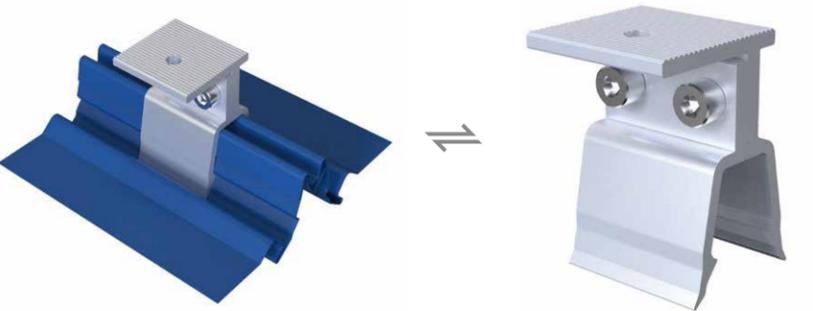
Item No. ERK-TRB-C22
Description Standing Seam Clamp



24

21

Item No. ERK-TRB-C16
Description RiverClack Roofing Profile



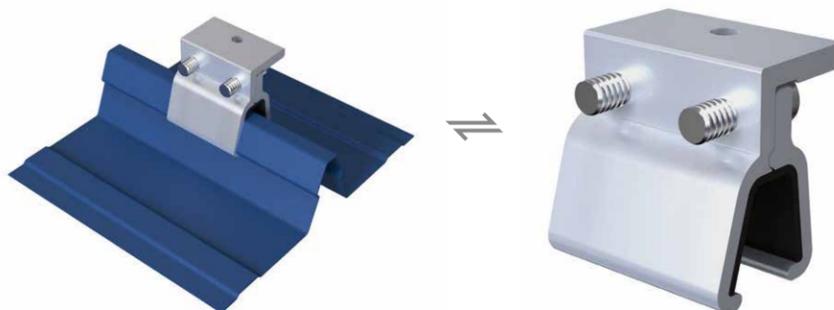
Item No. ERK-TRB-C23
Description Klip Lok 700 Interface



25

22

Item No. ERK-TRB-C20
Description Lysaght Klip-lok 406 Interface



Item No. ERK-TRB-C24
Description Standing Seam Clamp



26

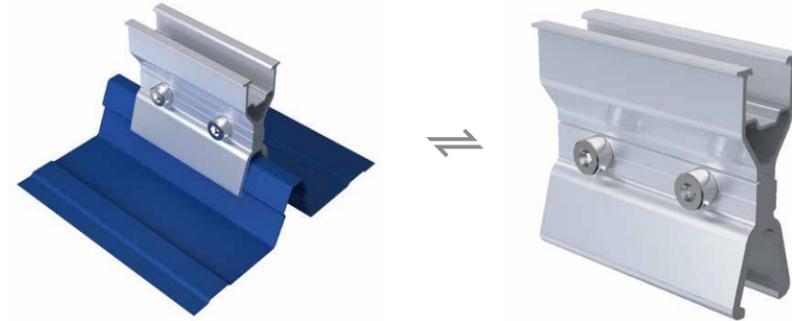
Metal Roof Attachment

27

Item No. ERK-TRB-C25
Description Klip Lok 700 Interface



Item No. ERK-TRB-C13
Description Lysaght Klip-lok Interface



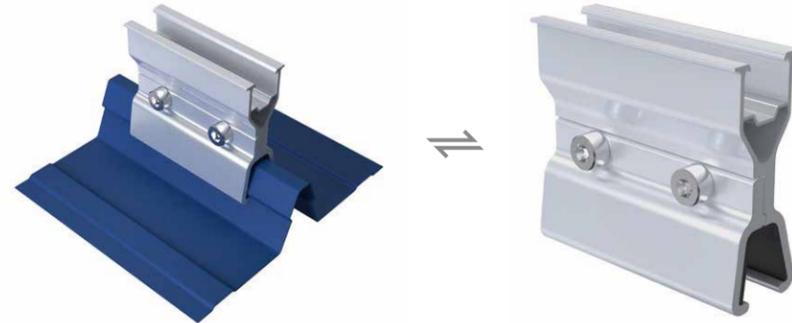
31

28

Item No. ERK-TRB-C26
Description WeatherClip II 700 Interface



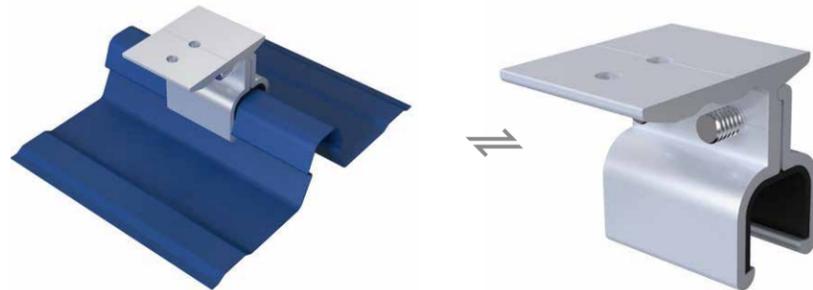
Item No. ERK-TRB-C29
Description Lysaght Klip-lok 406 Interface



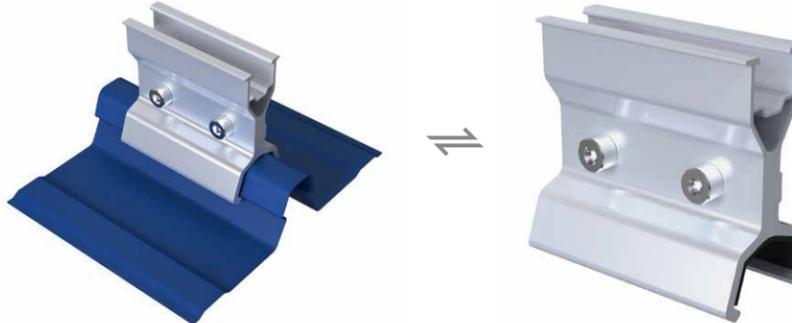
32

29

Item No. ERK-TRB-C27
Description Klip Lok 700 Interface



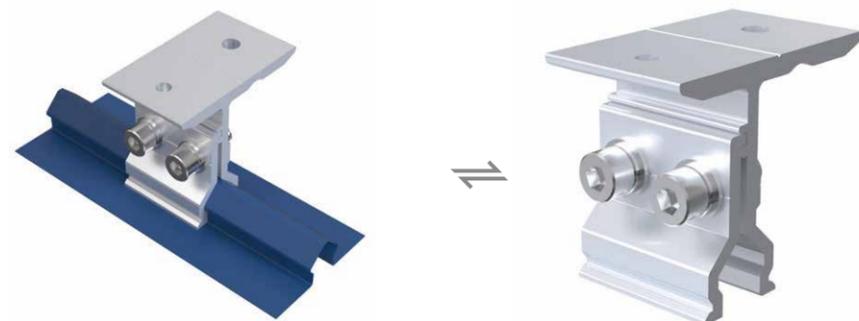
Item No. ERK-TRB-C30
Description WeatherClip II 700 Interface



33

30

Item No. ERK-TRB-C28
Description Valio Metal Sheet Roof Interface



Tile Roof Attachment

Sunpal have many types of tile roof hooks, suitable for most roof types of tile, flat tile, slate tile, asphalt shingle tile. A design that includes major specifications saves you inventory cost, quick and easy to install. Innovative design of rail connect base-support can effectively increase the product strength, ensure the safety of the product use. Sunpal have a large variety of roof hooks provide customers options. Customized allowed according to customer needs to meet special installation requirements.

Technical features:

Product name	Tile roof mounting system
Application	Tile roof, Flat tile roof, Slate roof
Inclination	Parallel to the roof
Material	AL 6005-T5, SUS 304
Finish	AL 6005-T5 Anodized, SUS 304 Shot blasting
Module orientation	Landscape or Portrait



Item No. ERK-TRH-T02
Description Tile Roof Hook



2

Item No. ERK-TRH-T01
Description Tile Roof Hook



1

Item No. ERK-TRH-T04
Description Tile Roof Hook



4

Item No. ERK-TRH-T03
Description Tile Roof Hook



3

Item No. ERK-TRH-T06
Description Tile Roof Hook



6

Item No. ERK-TRH-T05
Description Tile Roof Hook



5

Item No. ERK-TRH-T08
Description Tile Roof Hook



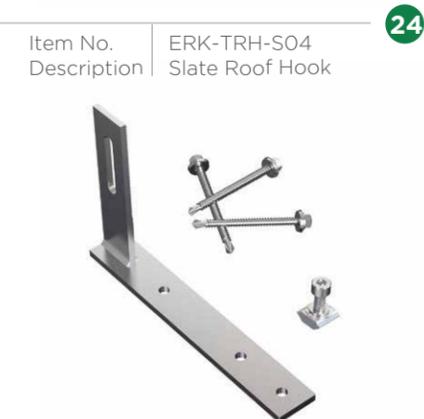
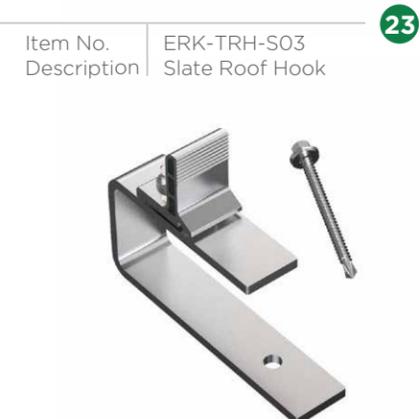
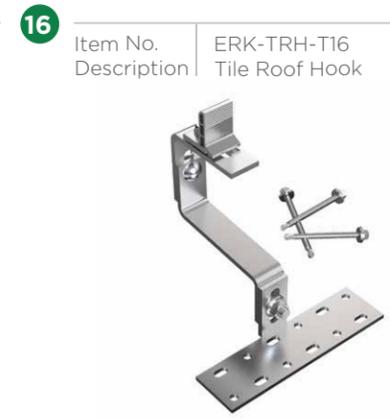
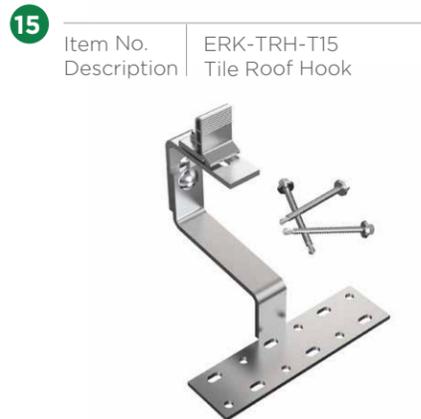
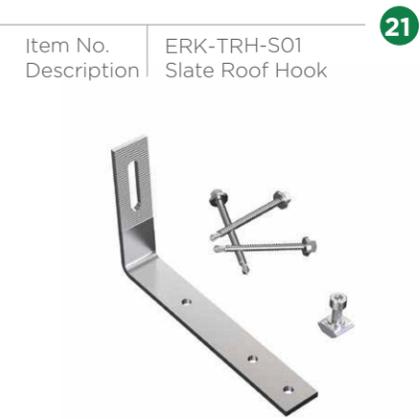
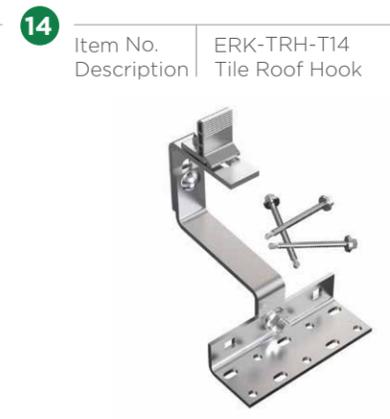
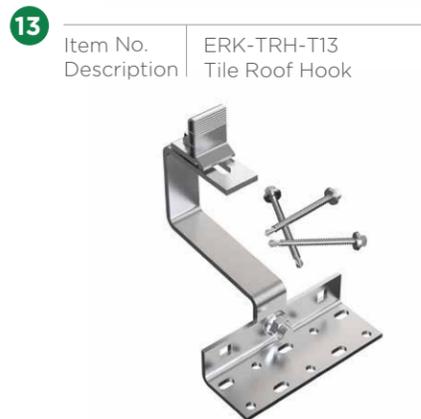
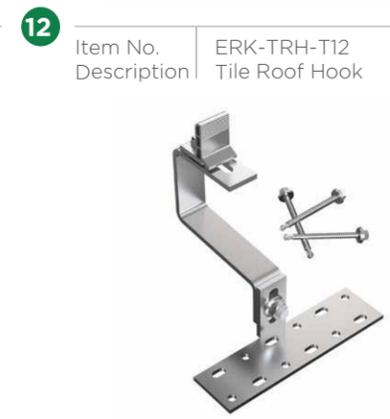
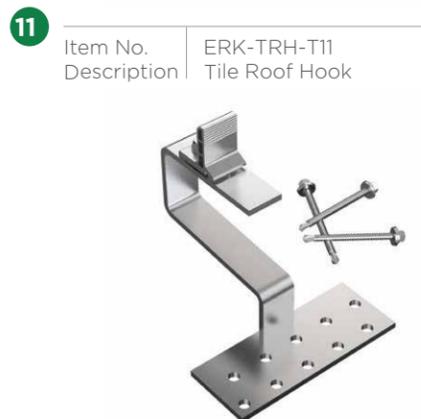
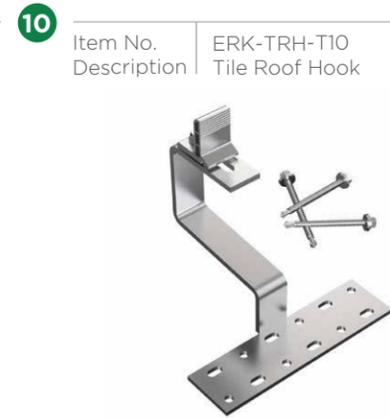
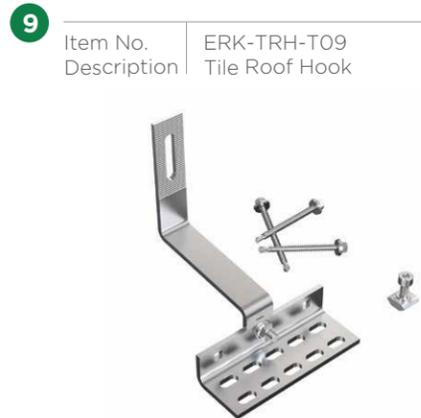
8

Item No. ERK-TRH-T07
Description Tile Roof Hook



7

Tile Roof Attachment



Tilt Mounting



Sunpal adjustable tilt system is used for metal roof concrete roof, you can fixed or adjustable angle as 10-15deg, 15-30deg and 30-60deg options to maximize energy production. All Products pre-assembled before shipment, to make the installation easy and quickly. Unique design of inner and outer tube with adjustable Joint, made structure stronger, different from the same type products on the market today, and widely compatible with standing seam clamp.

Technical features:

Product name	Adjustable tilt mounting system
Application	Flat concrete roof, metal roof
Inclination	10-15°, 15-30°, 30-60° or customized
Material	AL 6005-T5, SUS 304, EPDM
Finish	AL 6005-T5 Anodized
Module orientation	Landscape or Portrait

1 Assembly

Item No. | ERK-AFL
Description | Adjustable Front Leg



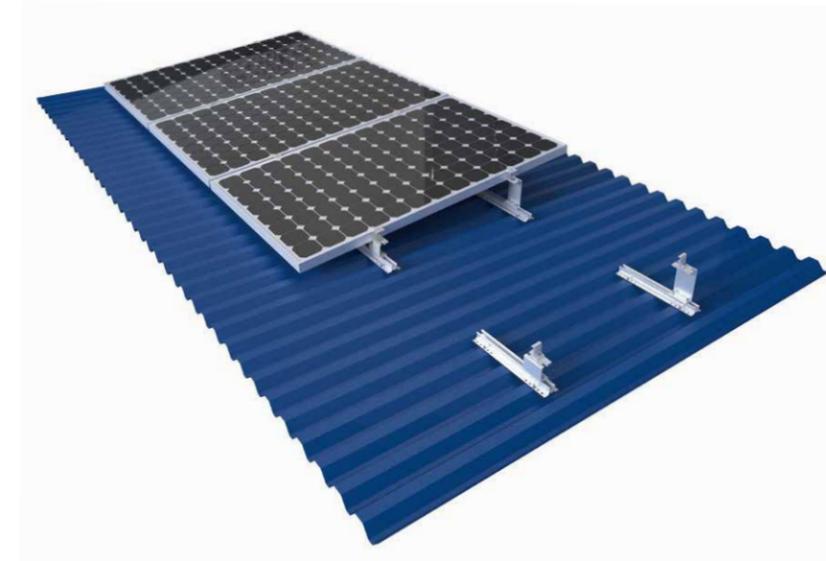
Item No. | ERK-FEC
Description | General End Clamp Kit



Item No. | ERK-EIC
Description | Universal Adjustable (30-40mm) Inner Clamp Kit (Include Spring & Earthing Clip)



Item No. | ERK-ARL-1015
ERK-ARL-1530
ERK-ARL-1530
Description | 10-15° Adjustable Rear Leg
15-30° Adjustable Rear Leg
30-60° Adjustable Rear Leg



Mini Rail with 5 degree support base, lift up the height of the solar panel to achieve cooling conditions, thus maximizing power generation. Simple design, easy to install, with good price.

Technical features:

Product name	Mini Rail 5° Support mounting system
Application	Metal roof
Inclination	5°
Material	AL 6005-T5, SUS 304
Finish	AL 6005-T5 Anodized
Module orientation	Portrait

1 Assembly

Item No. | ERK-FEC-BS
Description | General End Clamp Kit



Item No. | ERK-AIC-BS
Description | Universal Adjustable (30-40mm) Inner Clamp Kit



Item No. | ERK-TRB-D10
Description | 26mm Mini Rail for Corrugated or Trapezoidal Sheet Metal



Item No. | ERK-MRS-5
Description | Mini Rail 5° Support Rear Leg



Item No. | ERK-MFS-5
Description | Mini Rail 5° Support Front Leg



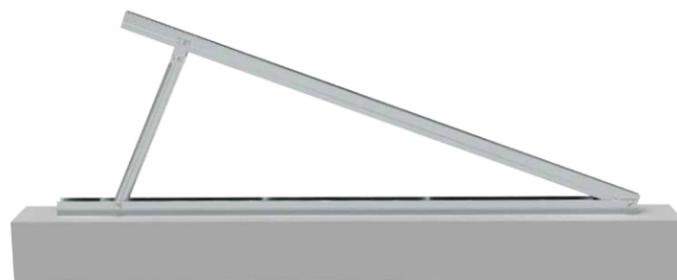
Tilt Mounting



Sunpal Tripod system is used for metal roof concrete roof, you can adjustable angle as 10-15deg, 15-30deg and 30-60-deg options to maximize energy production. All Products pre-assembled before shipment, to make the installation easy and quick for saving your labor cost and time. Customized angle allowed according to customer needs to meet special installation requirements.

Technical features:

Product name	Tripod mounting system
Application	Flat concrete roof, metal roof, open terrain
Inclination	Customized
Material	AL 6005-T5, SUS 304
Finish	AL 6005-T5 Anodized
Module orientation	Landscape or Portrait



1 Assembly

Item No. | ERK-FTP
Description | The Fixing Angle Tripod



Item No. | ERK-ATP
Description | The Adjustable Angle Tripod



Item No. | ERK-R52
Description | Enerack 52mm Rail



Item No. | ERK-EIC
Description | Universal Adjustable (30-40mm) Inner Clamp Kit (Include Spring & Earthing Clip)



Item No. | ERK-FEC
Description | General End Clamp Kit



Sunpal Tripod systems have fixed angle and adjustable angle design for options.



1.Fixed Angle Tripod system(ERK-FTP-X): According to customer need,we customize different sizes and angles to make a fast, easy and lower cost installation, this is Suitable for installation at known building angle.



2.Adjustable Angel Tripod (ERK-ATP-X): According to the site need to adjust the tripod angle for installation demand. It is suitable for multi-angle installation projects.

2 Assembly

Beam



U Base



32-32 AL Tube



3 Assembly

Beam



U Base



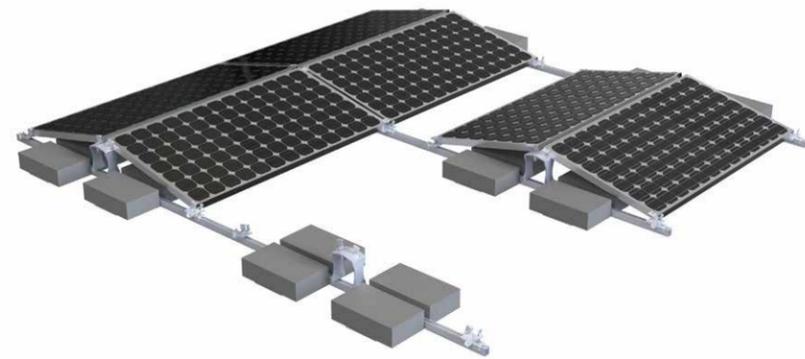
32-32 AL Tube



27-27 AL Tube



East & West Ballasted Mounting



East & West ballasted mounting system

Technical features:	
Product name	East & West ballasted mounting system
Application	Flat concrete roof, metal roof, open terrain
Inclination	10°, 15° or customized
Material	AL 6005-T5, AL5052-H32, SUS 304
Finish	AL 6005-T5 & AL5052-H32 Anodized
Module orientation	Landscape



1 Assembly

Item No. | ERK-BSF-10
Description | Ballasted 10°Front leg



Item No. | ERK-BSR-10
Description | Ballasted 10°Rear leg



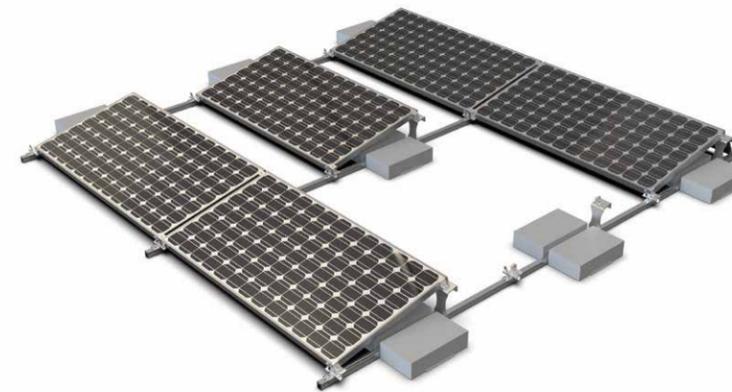
Item No. | ERK-BSR-15
Description | Ballasted 15°Rear leg



Item No. | ERK-BST
Description | Ballast Tray



Item No. | ERK-BSW
Description | Ballast Wind Shield

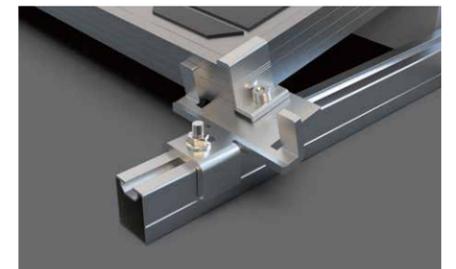
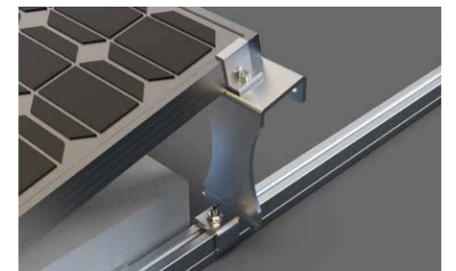
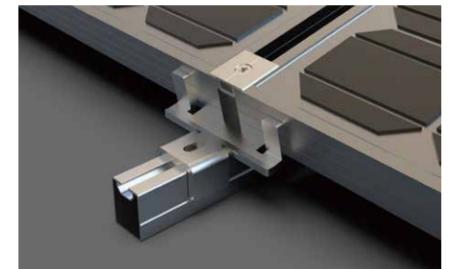


South or North ballasted mounting system

Technical features:	
Product name	East & West ballasted mounting system
Application	Flat concrete roof, metal roof, open terrain
Inclination	10°, 15° or customized
Material	AL 6005-T5, AL5052-H32, SUS 304
Finish	AL 6005-T5 & AL5052-H32 Anodized
Module orientation	Landscape



2 Assembly



Ground Mounting



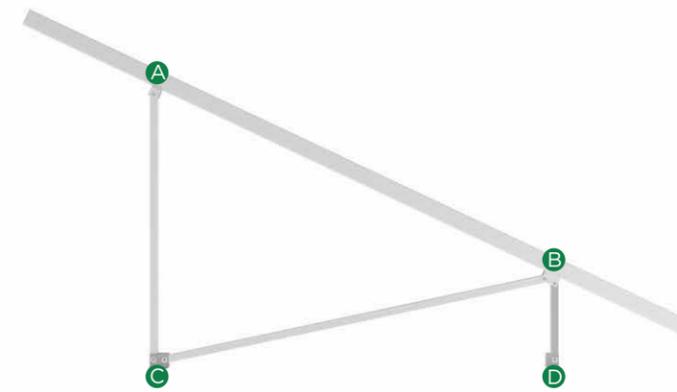
Standard Ground Mounting System

Aluminum ground mount, optimized for lightweight, quick and efficient installation with flexible on engineering upon site conditions. Optional on foundation by ground screw or concrete. Maximize pre-assembled before shipment.

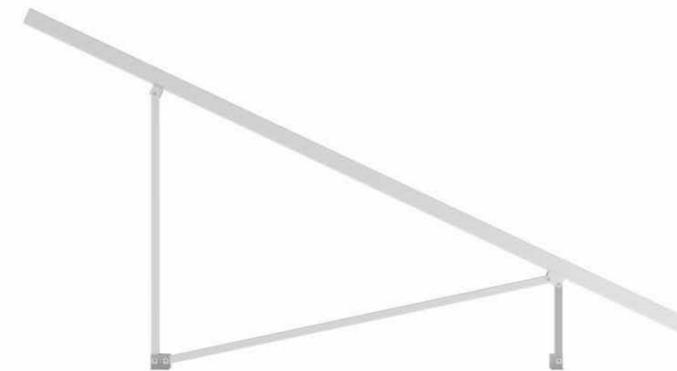
Technical features:

Product name	Standard ground mounting system
Application	Flat concrete roof, open terrain
Inclination	Customized
Material	AL 6005-T5, SUS 304, Q235
Finish	AL 6005-T5 Anodized, Q235 Hot-dip galvanizing
Module orientation	Landscape or Portrait

1 Assembly



Ground mounting system has been maximize pre-assembly before shipment, which make it install more convenient.



N-Type

W-Type

2 Assembly



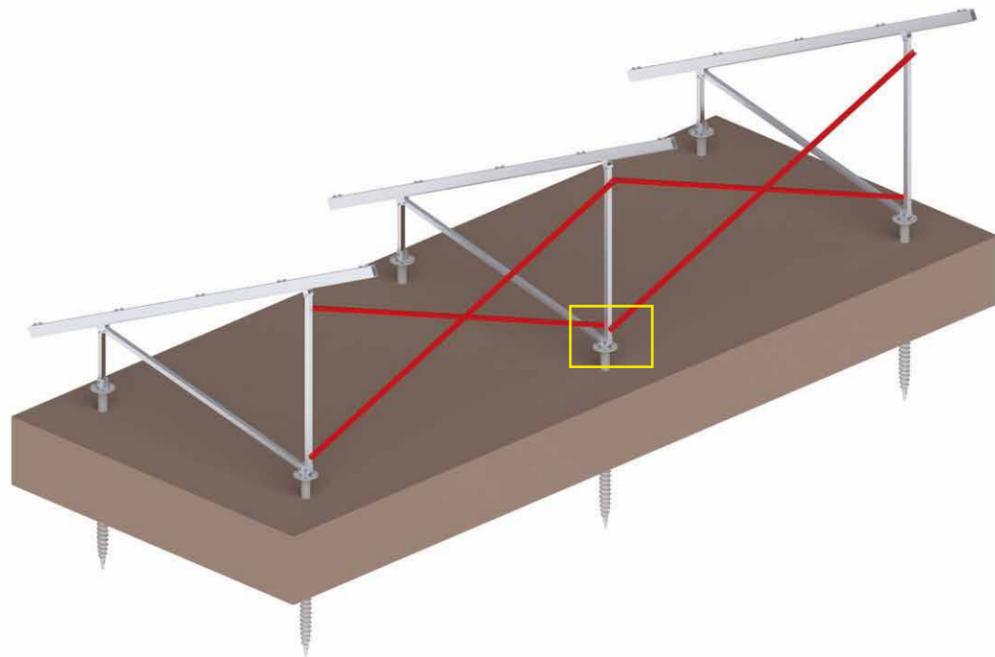
Depending on the different design conditions, pre-assembly support are generally designed into the following two shapes:

The N-Type pre-assembly support is mainly used for the small wind & snow load condition projects.(2-4 columns)

The W-type pre-assembly Support is mainly for the 4-5 columns wind & snow load condition projects. We will add cross support to make the structure stronger if the ground height is higher or wind & snow load is larger.

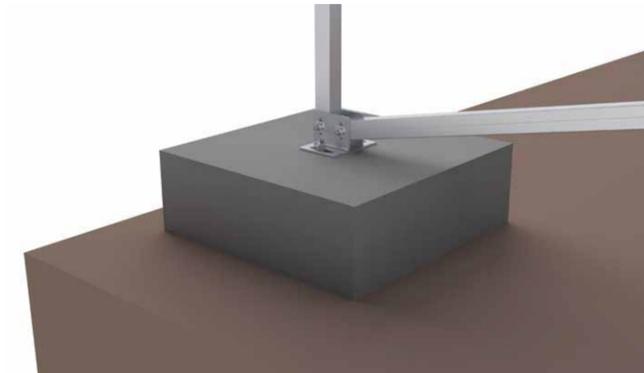
Ground Mounting

3 Cross

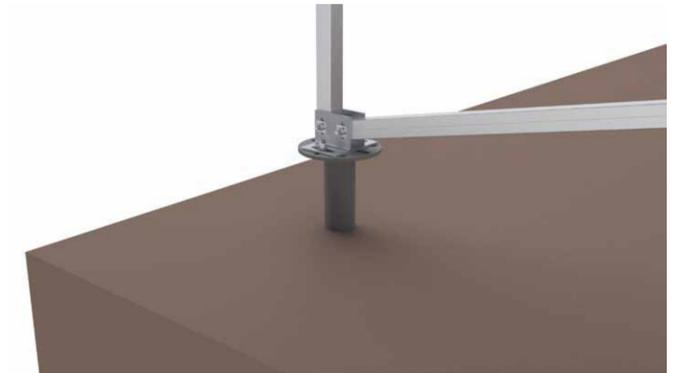


4 Foundation

Ground mounting system are commonly used for Concrete Foundation and Screw Foundation.



Concrete Foundation



Screw Foundation

Item	Concrete Foundation	Screw Foundation
Applicable terrain	Flat, Even Tilt, Ladder	
Applicable geology (reference)	Random	SWS3 ≤ N ≤ 10 SWS Test, cohesive soil 3 ≤ N ≤ 10
Difficult or Easy Degree	Complicated	Easy
Cost	Higher	Lower
Adjustment range	Not convenient to adjust the height of base	Larger
Corrosion resistance	Anti-Corrosion	Hot-dip galvanizing on the surface of the screw foundation, which has met the anti-corrosion requirements of the service life

Conventional pile compression and tensile strength reference values(KN)								
Ground Screw Length	N=3		N=5		N=7		N=10	
	Resistance	compression Resistance						
1600	8.7	9.1	14.6	15.2	20.4	21.4	29.2	30.6
1800	9.9	10.2	16.5	17.1	23.1	24	33	34.4
2000	11	11.4	18.4	19	25.8	26.7	36.8	38.2
2200	12.2	12.5	20.3	21	28.4	29.4	40.6	42
2500	13.9	14.2	23.2	23.8	32.4	33.4	46.4	47.8

Remarks: The N value of the soil in this table are based on the Swedish penetration test (SWS).

Ground Mounting

1 Assembly

Mid clamp



Rail



End clamp



Rail fixing clamp

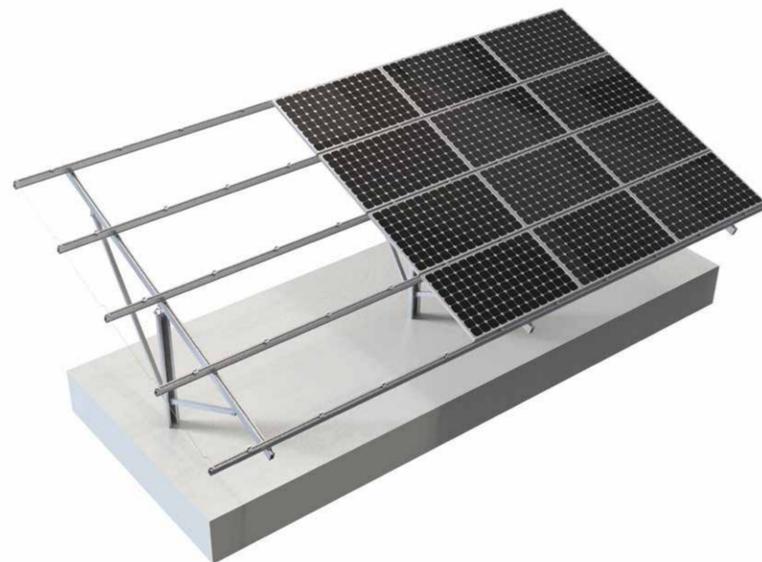


Main structure



U Pile Ground Mounting System

Sunpal U Pile Ground Mounting Systems suitable for large scale power station installation, Pile to the ground made install faster and lower cost than others. Each components are Maximize pre-assembled, widely save your labor cost and install time. Customized allowed according to project wind & snow load, provide economic & effective solutions.



2 Main structure & components

U Pile



Beam



Square tube



Holder



H Support



The U type Pile Ground Mounting System has been folded into a rectangular shape before shipment. Easy to transport.

Technical features:

Product name	U Pile ground mounting system
Application	Open terrain
Inclination	Customized
Material	AL 6005-T5, SUS 304, Q235
Finish	AL 6005-T5 Anodized, Q235 Hot-dip galvanizing
Module orientation	Landscape or Portrait

Penetration depth	Conventional U pile compression and tensile strength reference values (KN)							
	N=3		N=5		N=7		N=10	
	Resistance	Compressi on Resistance	Resistance	Compressi on Resistance	Resistance	Compressi on Resistance	Resistance	Compressi on Resistance
1500	9.5	11.5	15.7	19.3	21.9	27	31.1	38.6
1600	10.1	12.3	16.7	20.6	23.3	28.8	33.2	41.2
1700	10.8	13.1	17.8	21.8	24.8	30.6	35.3	43.7
1800	11.4	13.9	18.8	23.1	26.2	32.4	37.3	46.3
2000	12.6	15.4	20.8	25.7	29.1	36	41.4	51.5
2200	13.8	17	22.9	28.3	32	39.6	45.6	56.6
2500	15.7	19.3	26	32.1	36.3	45	51.7	64.3

Remarks: The N value of the soil in this table are based on the Swedish penetration test (SWS).

Carport Mounting

1 Structure & components



Carport Mounting System

Mid clamp



Rail



End clamp



Rail fixing clamp



Main structure



2 Main structure & components

Beam



Square tube



H Support



Base



Highly pre-assembled main structure for solar modules landscape or portrait 5°/ 8°/10°inclination or custom customized and engineered to project maximal span up to 5.4m cover up to 2 parking spaces per span.

Technical features:

Product name	Carport mounting system
Application	Solar parking structure
Inclination	5°, 8°,10° or customized
Material	AL 6005-T5, SUS 304
Finish	AL 6005-T5 Anodized
Module orientation	Landscape



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