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24-11

MIBET ENERGY

MIBET ENERGY

Solar PV Mounting System Solutions

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MIBET ENERGY

Headquartered in southern part of China, Xiamen City, Mibet Energy is the Top 10 solar mounting system manufacturer with branch office in Japan, Australia and Germany. Focusing on engineering design, manufacturing and supplying mounting system for rooftop, ground mount, floating PV installations, Mibet Energy is committed to producing high-grade steel, anodized aluminum and HDPE floaters, aiming to build reliable, constant quality, progressive installations of the highest quality, flexible within clients' budget for all installations. The products have been accredited by international standards & certifications including ISO, CE, UL, TUV, MCS, AS/NZS, JIS etc.

CONTENTS

MRac® Tile Roof Solar PV Mounting System

Technical Parameters

System Name	MRac Tile Hook	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Tile, Flat Tile, Slate Tile, Asphalt Shingle Tile		California Building Code CBC 2010
Tilt Angle	5-45°	Hook Material	SUS304 & AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10 Years

Overview

MRac Tile Roof Hook Solar PV Mounting System is applied to tile roof residential and commercial solar projects. The system can achieve stable and strong connection between the roof support structure and solar modules with modular Patented design. Pre-assembled kits save the installation time and cost onsite.

Advantages

> Applicable for Different Tile Roofs
Design project by project, selecting configuration of mounting system components flexibly.

> Save Installation Time and Cost
Pre-assembled components and clear installation manuals are supplied to save the onsite installation time and cost, lead to better ROI.

> Compatible to Different Types of Solar Modules
Compatible to most kinds of framed 60-cell, 72-cell, half-cut cells modules and frameless modules.

Components


Tile Hook 1


Universal Clamp Kit H28-46


End Clamp Kit


Inter Clamp Kit


Splice for MA Rail


MA Rail


MA Rail H60

Optional Hook Type


Tile Hook 1


Tile Hook 3


Tile Hook H120


Tile Hook H117V


Tile Hook H145


Adjustable Tile Hook 1


Adjustable Tile Hook H132


Flat Tile Hook H107


Asphalt Shingle Hook H75


Slate Tile Hook-02


Slate Tile Hook-04


Adjustable Tile Hook 8


Alu Tile Hook E

MRac® Balcony Solar Mounting System

Technical Parameters

System Name	MRac Balcony Solar Mounting System	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Balcony		International Building Code IBC 2009,
Installation Base	Metal Railings，Wall，Concrete Roof		California Building Code CBC 2010
Mounting Angle	10°-30°	Material	Steel & AL6005-T5
Wind Load	≤30m/s	Fastener	SUS304
Snow Load	≤1.0KN/m²	Small Components	AL6005-T5
Applicable Solar Module	Framed	Color	Natural Silver or Customized
Panel Layout	Horizontal	Warranty	10-Year Warranty

Overview

MRac Balcony Solar Mounting System is a Solar Mounting System product installed on balcony railings, which can easily realize the construction of photovoltaic power plants on the balcony. The system is all bolted and fixed, eliminating the need for welding and drilling during installation.
The unique telescopic tube support leg design allows the angle of the panel to be adjusted at any time.

Advantages

> Quick installation
Installation and removal are very simple and fast, 1-2 people can complete the installation.

> Adjustable angle
The tilt angle of the panels can be flexibly adjusted according to the installation site to obtain the best power generation efficiency, with a maximum tilt angle of 30°.

> No welding required
The system is all bolted and fixed, eliminating the need for welding and drilling during installation.

> Stable and reliable
Optimized structural design and material selection ensure the strength and stability of the system, suitable for a variety of different climatic environments.

Structure

1 Installed on balcony with curved hook

2 Installed on wall with expansion bolts

3 Installed on concrete roof with expansion bolts

Component Details

1 

Curved Hook
Material : Zn-Al-Mg Coating Steel

2 

U-shaped Hoop
Material : Zn-Al-Mg Coating Steel

3 

Longitudinal Beam H50
Material : Zn-Al-Mg Coating Steel

4 

30*30 Square Tube
Material : Zn-Al-Mg Coating Steel

5 

U-shaped Base Beam H50
Material : Zn-Al-Mg Coating Steel

6 

Pro-U shaped Adjustment Tube
Material : Zn-Al-Mg Coating Steel

Installation Guide

1 

Install the tripod on the ground.

2 

Adjust the preset Angle.

3 

Lock the part of the Curved Hook.

4 

Find the 30*30 square tube also placed under the base beam of the tripod.

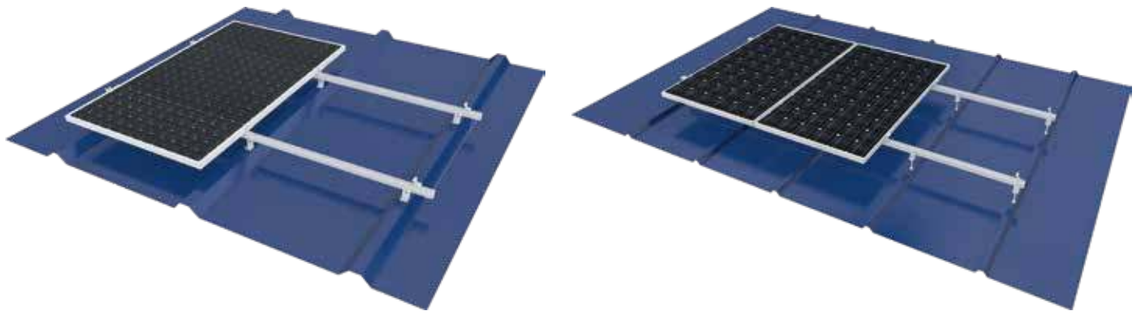
5 

Repeat the above steps to complete the installation of another set of tripod.

6 

Install the panel.

MRac® L Feet and Hanger Bolt Kit Metal Roof PV Mounting System



Overview

MRac L feet Kit and Hanger Bolt Kit is applied in most Corrugated Metal Roof commercial and industrial solar projects. The system can achieve stable and strong connection between the roof support structure and solar modules with modular Patented design. Pre-assembled kits save the installation time and cost on site.

Technical Parameters

System Name	MRac L Feet Kit & Hanger Bolt Kit	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Trapezoidal Roof and Flat Concrete Roof		California Building Code CBC 2010
Tilt Angle	0°	Material	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Component Details

L Feet Kit | Hanger Bolt | Hanger Bolt Kit | Universal Clamp Kit H28-46 | End Clamp Kit (MA) | Inter Clamp Kit (MA) | Splice for MA Rail | MA Rail

MRac® Adjustable Support Kit Solar PV Mounting System

Overview

MRac Adjustable Support Kit Solar PV Mounting System is applied in most Corrugated Metal Roof and Flat Roof commercial and industrial solar projects. The system can achieve stable and strong connection between the roof support structure and solar modules with modular Patented design. Adjustable angles can reduce the stock SKU and flexible for onsite installation. Pre-assembled kits save the installation time and cost onsite.

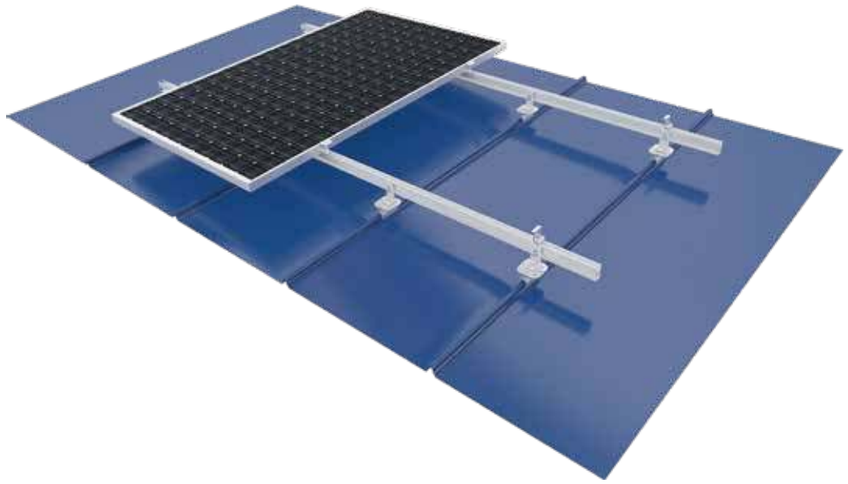
Technical Parameters

System Name	Adjustable Support	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Metal Roof and Flat Concrete Roof		California Building Code CBC 2010
Tilt Angle	10-60°	Rail	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Landscape or Portrait	Warranty	10-Year Warranty

Component Details

Front Support | Adjustable Back Support | End Clamp Kit (MA) | Inter Clamp Kit (MA) | Splice for MA Rail | MA Rail

MRac® Kliplok Metal Roof Mounting System



Technical Parameters

System name	MRac Kliplok	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Metal Roof		California Building Code CBC 2010
Tilt Angle	0-15°	Material	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Module	Framed or Frameless	Color	Silver or Customized
Panel Orientation	Portrait or Landscape	Warranty	10 Years

Overview

MRac Kliplok is mainly applied to metal roofs, and its material is Al6005-T5. With its professional design, it can realize the perfect connection between roof support and roof to meet customer installation requirement. Professional solution and structure design can save your installation time and cost. Moreover, patented and unique design can bring you a good installation experience.

Advantages

> Applicable for different metal roofs
According to customer requirement, choose different roof mounting system flexibly.

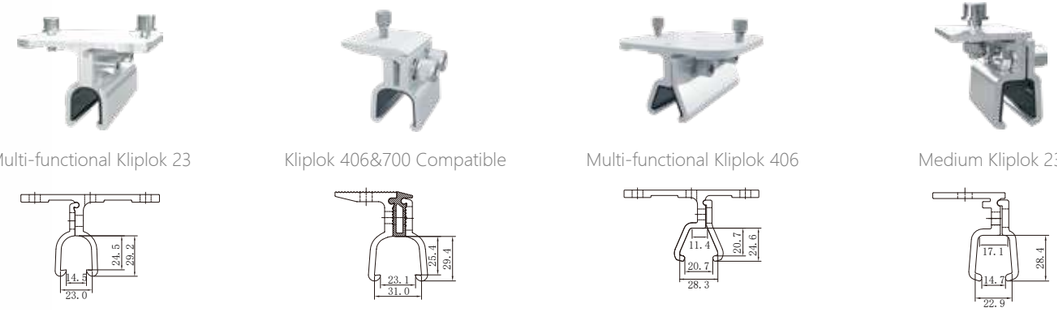
> Save installation time and cost
Save the installation time and cost by offering installation manual and solution.

> Compatible with different types of solar modules
Free and flexible to choose different types of solar modules.

Components

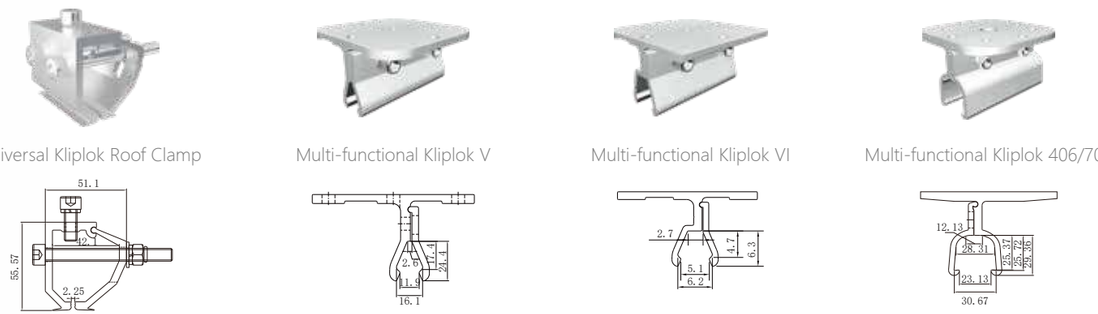
L Feet Kit | Multi-functional Kliplok 406/700 | End Clamp Kit (MA) | Inter Clamp Kit (MA) | Splice for MA Rail | MA Rail | MA Rail H60

Applicable Kliplok Roof Support



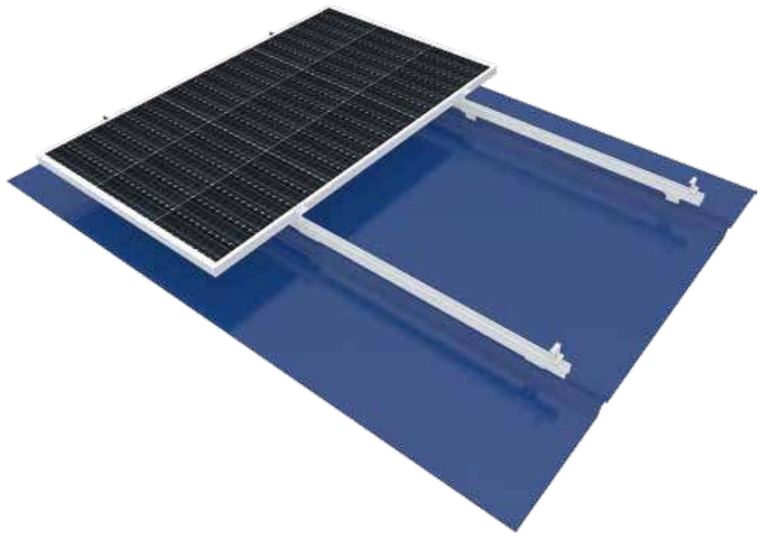
Multi-functional Kliplok 23 | Kliplok 406&700 Compatible | Multi-functional Kliplok 406 | Medium Kliplok 23

Kliplok 25B | Kliplok 700 | Kliplok longline 305 | Kliplok 18



Universal Kliplok Roof Clamp | Multi-functional Kliplok V | Multi-functional Kliplok VI | Multi-functional Kliplok 406/700

MRac® Standing Seam Metal Roof Mounting System



Technical Parameters

System name	MRac Standing Seam Roof Support	Design Standard	AS/NZS 1170，DIN 1055，JIS C8955：2017，
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Trapezoidal Metal Roof Support		California Building Code CBC 2010;
Tilt Angle	0-15°	Material	Q235B(Hot-Dip Galvanized) & Al6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304&Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	Al6005-T5(Anodized)
Applicable Module	Framed or Frameless	Color	Silver or Customized
Panel Orientation	Portrait or Landscape	Warranty	10 Years

Overview

MRac Standing Seam is applied to Standing Seam Metal Sheet Roof commercial and industrial solar projects. The system can achieve stable and strong connection between the roof support structure and solar modules with modular Patented design. Pre-assembled kits save the installation time and cost onsite.

Advantages

> Applicable for different metal roofs
According to customer requirement, choose different roof mounting system flexibly.

> Save installation time and cost
Save the installation time and cost by offering installation manual and solution.

> Compatible with different types of solar modules
Free and flexible to choose different types of solar modules.

Components

Standing Seam Roof Support

End Clamp Kit

Inter Clamp Kit

MD Rail

Splice for MD Rail

Applicable Kliplok Roof Support

Standing Seam 8

Standing Seam 9

Standing Seam 10

Standing Seam 11

Standing Seam 14

Standing Seam 15

Standing Seam 20

Standing Seam 22

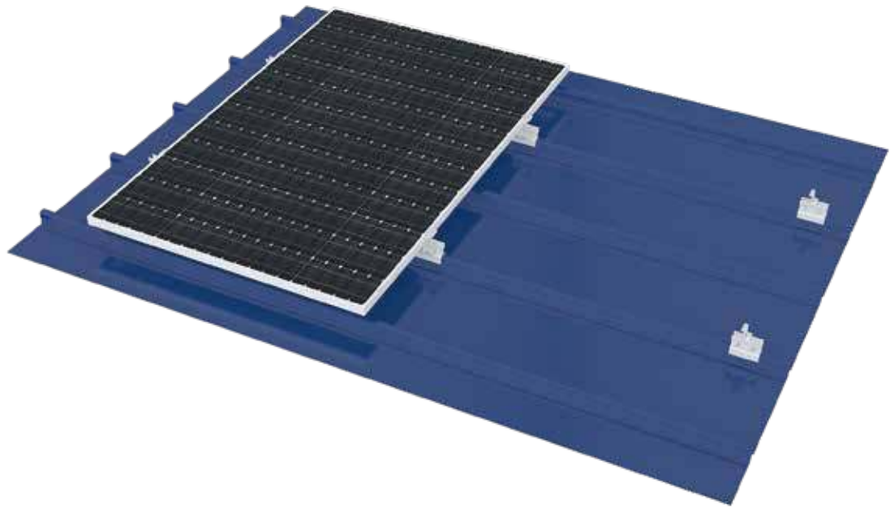
Standing Seam Multi Clamp Kit L

Facade Standing Seam Clamp Kit 11

Standing Seam Roof Clamp

Universal Kliplok Roof Clamp

MRac® Kliplok / Standing Seam



Technical Parameters

System name	MRac Kliplok / Standing Seam	Design Standard	AS/NZS 1170，DIN 1055，JIS C8955：2017，
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Metal Roof		California Building Code CBC 2010;
Tilt Angle	0-15°	Material	Q235B(Hot-Dip Galvanized) & Al6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304&Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	Al6005-T5(Anodized)
Applicable Module	Framed or Frameless	Color	Silver or Customized
Panel Orientation	Portrait or Landscape	Warranty	10 Years

Overview

MRac Kliplok / Standing Seam is mainly applied to Kliplok, and its material is Al6005-T5. With its professional design, it can realize the perfect connection between roof support and roof to meet customer installation requirement. Professional solution and structure design can save your installation time and cost. Moreover, Patented and unique design can bring you a good installation experience.

Advantages

> Applicable for different metal roofs
According to customer requirement, choose different roof mounting system flexibly.

> Save installation time and cost
Save the installation time and cost by offering installation manual and solution.

> Compatible with different types of solar modules
Free and flexible to choose different types of solar modules.

Components

Kliplock Support Kit

End Clamp Kit

Inter Clamp Kit

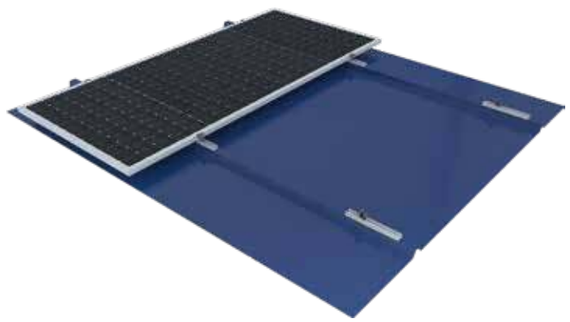
Applicable Kliplok Roof Support

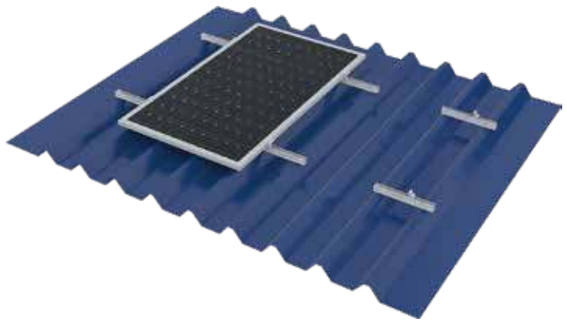
Kliplock 700 Support Kit L100/L50

Medium Round Shape Kliplock Support L100

Kliplock longline 305 Support Kit

MRac® Mini-Rail Kit Metal Roof PV Mounting System





Technical Parameters

System Name	Mini-Rail Kit	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Roof Type	Trapezoidal Roof		California Building Code CBC 2010
Tilt Angle	0°	Material	Q235B(Hot-Dip Galvanized) & AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscap	Warranty	10-Year Warranty

Overview

MRac Mini-Rail Kit is mainly applied to Trapezoidal Metal Roof commercial and industrial solar projects. The system can achieve stable and strong connection between the roof support structure and solar modules with modular Patented design. Pre-assembled kits save the installation time and cost onsite.

Advantages

> Applicable for Different Metal Roofs
Design project by project, selecting configuration of mounting system components flexibly.

> Save Installation Time and Cost
Pre-assembled components and clear installation manuals are supplied to save the onsite installation time and cost, lead to better RoI.

> Compatible to Different Types of Solar Modules
Compatible to most kinds of framed 60-cell, 72-cell, half-cut cells modules and frameless modules.

Components

Mini-Rail Kit

End Clamp Kit

Inter Clamp Kit

End Clamp Kit(MA)

Inter Clamp Kit(MA)

Optional

Mini-Rail Kit

MA Mini Rail H18.5A

MA Mini Rail H25

MA Mini Rail H30

MA Mini Rail H30B

MA Mini Rail H45

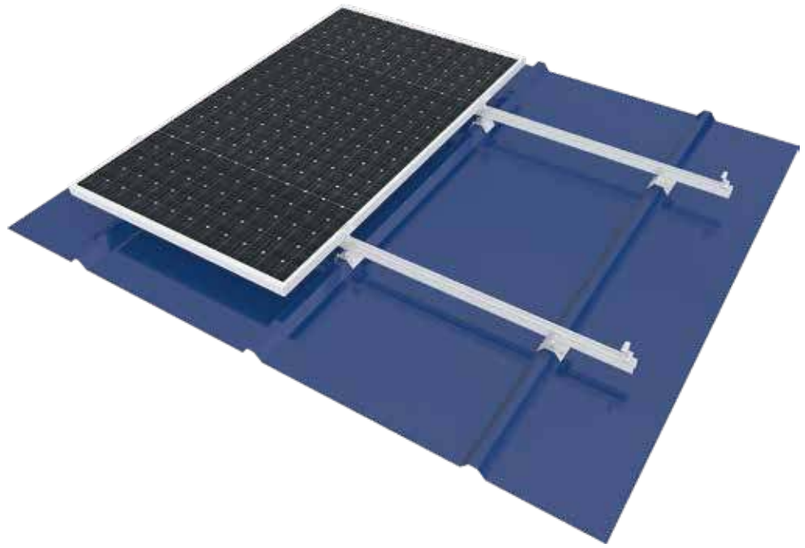
MA Mini Rail H45A

MA Mini Rail H50

MA Mini Rail H90

※ The length of Mini-Rail can be customized as needed, from 150mm to 6500mm.

MRac® Trapezoidal Metal Roof Solar PV Mounting System



Technical Parameters

System Name	MRac Trapezoidal Metal	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Pitched Roof		International Building Code IBC 2009,
Foundation	Trapezoidal Metal Roof Support		California Building Code CBC 2010;
Tilt Angle	0-15°	Material	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Trapezoidal Metal Roof Clamp Solar PV Mounting System is mainly applied to metal roof, and its main material is aluminium alloy. With its professional design, it can realize the perfect connection between kliploks and roof to meet customer installation requirement. Professional solution and structure design can save your installation time and cost. Moreover, Patented and unique design can bring you a good and fast installation experience.

Advantages

> Applicable for different metal roofs
According to different metal roof types, making professionally design and achieve perfectly connection between the kliploks and roof tiles.

> Save installation time and cost
Patented structure design and system solutions will reduce on-site installation time and cost.

> Compatible to different types of solar modules
By its independent researched clamps, it is compatible to various solar modules in the market.

> Excellent structure design
Professional structure design will meet components installation requirements of tiled or with angle, as well as the installation in landscape and portrait orientation.

Components

Adjustable Trapezoidal Roof Support

End Clamp Kit

U20 Inter Clamp Kit

Splice for Light Symmetrical Rail

Light Symmetrical Rail

Tile's Structure

Applicable Standing Seam Support

Trimdeck Roof Hook-07-A

Trimdeck Roof Hook

Trimdeck Roof Hook-07-B

Trimdeck Roof Clamp AP

Trapezoidal Roof Support E

Trapezoidal Roof Support F

Trapezoidal Roof Support G

Trapezoidal Roof Support I

Trapezoidal Roof Support J

Trapezoidal Roof Support K

Trapezoidal Roof Support L

Trapezoidal Roof Support N

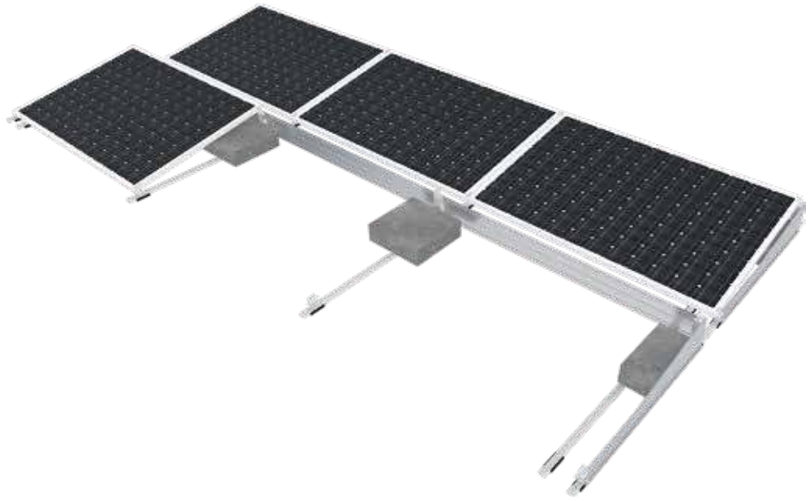
Trapezoidal Roof Support M

Trapezoidal Roof Support P

Adjustable Trapezoidal Roof Support

Trapezoidal Roof Support A

MRac® Ballasted Roof Flax S10 - Single Side



Technical Parameters

System Name	Flax S10	Design Standard	AS/NZS 1170、DIN 1055、JIS C 8955：2017
Installation Site	Flat Concrete roof, Flat ground, Membrane roof		International Building Code：IBC 2009
Roof Type	Concrete Ballast		California Building Code：CBC 2010
Tilt Angle	10°	Material	AL6005-T5(Anodized)&Zn-Al-Mg coating Steel
Wind Load	≤45m/s	Fastener	SUS304&Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)&Zn-Al-Mg coating Steel
Applicable Solar Module	Framed	Color	Silver or Customized
Panel Layout	Landscape	Warranty	10-Year Warranty

Overview

Flax S10 is a non-penetration solution for flat rooftop, an extension from RMI, to meet different tilt angles installation. It is applicable to the roof areas with medium wind load. Quick installation and stable structure are assured by the modular patented design.

Advantages

> High Durability Ensure the Structure Strength

Professional structure design and high-density aluminum material ensure the stability and strength of the structure.

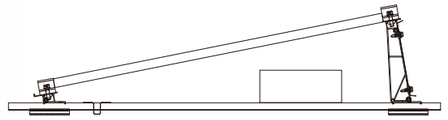
> Unique Matrix Design

The matrix design further assures the stability of the whole system, and flexibly compatible with concrete block or ballast foundation.

> Reasonable Installation and Package Design

Simplified components configuration lead to quicker installation and smaller package size, saving installation cost and freight.

Structure



Component Details

1

Pre-assembled bracket

Mudsill H18.5 Front Support Rear Base

2

Back / Side Wind Deflector

Material : Zn-Al-Mg Coating Steel

3

Rubber Pad

Material : PP

4

Back Support

Material : AL6005-T5(Anodized)

5

Two Side Ballast Plate

Material : Zn-Al-Mg Coating Steel

6

Ballast Support

Material : Zn-Al-Mg Coating Steel

7

Angle Aluminum

Material : AL6005-T5(Anodized)

8

End / Inter Clamp Kit

Components : End / Inter Clamp
Spring Washer M8
Hexagon Socket Bolt

Installation Guide

1

Put the Pre-assembled bracke.t

2

Connect the Pre-assembled bracket withAngle Aluminum.

3

Install Back Support.

4

Put the cement pier.

5

Install Back Wind Deflector.

6

Fasten modules by Inter Clamp Kits & EndClamp Kits.

7

Install Side Wind Deflector.

8

Complete installation.

MRac® Ballasted Roof Flax S10 - East West / Two-Side

Technical Parameters

System Name	Flax S10	Design Standard	AS/NZS 1170 、DIN 1055 、JIS C 8955：2017
Installation Site	Flat Concrete roof, Flat ground, Membrane roof		International Building Code：IBC 2009
Roof Type	Concrete Ballast		California Building Code：CBC 2010
Tilt Angle	10°	Material	AL6005-T5(Anodized)&Zn-Al-Mg coating Steel
Wind Load	≤45m/s	Fastener	SUS304&Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)&Zn-Al-Mg coating Steel
Applicable Solar Module	Framed	Color	Silver or Customized
Panel Layout	Landscape	Warranty	10-Year Warranty

Overview

Ballasted Roof Flax S10 - East West / Two-Side is a non-penetration solution for flat rooftop， an extension from RMI, to meet different tilt angles installation. It is applicable to the roof areas with medium wind load. Quick installation and stable structure are assured by the modular patented design.

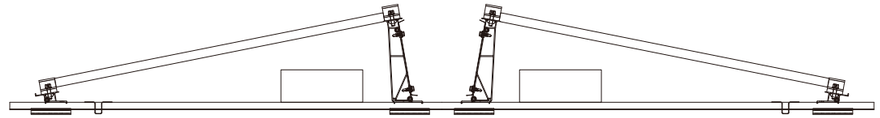
Advantages

> High Durability Ensure the Structure Strength
Professional structure design and high-density aluminum material ensure the stability and strength of the structure.

> Unique Matrix Design
The matrix design further assures the stability of the whole system, and flexibly compatible with concrete block or ballast foundation.

> Reasonable Installation and Package Design
Simplified components configuration lead to quicker installation and smaller package size, saving installation cost and freight.

Structure



Component Details

1

Pre-assembled bracket

Mudsill H18.5 Front Support Rear Base

2

Back / Side Wind Deflector

Material : Zn-Al-Mg Coating Steel

3

Rubber Pad

Material : PP

4

Back Support

Material : AL6005-T5(Anodized)

5

Two Side Ballast Plate

Material : Zn-Al-Mg Coating Steel

6

Ballast Support

Material : Zn-Al-Mg Coating Steel

7

Angle Aluminum

Material : AL6005-T5(Anodized)

8

End / Inter Clamp Kit

Components : End / Inter Clamp
Spring Washer M8
Hexagon Socket Bolt

Installation Guide

1

Put the Pre-assembled bracket.

2

Connect the Pre-assembled bracket withAngle Aluminum.

3

Install Back Support.

4

Put the cement pier.

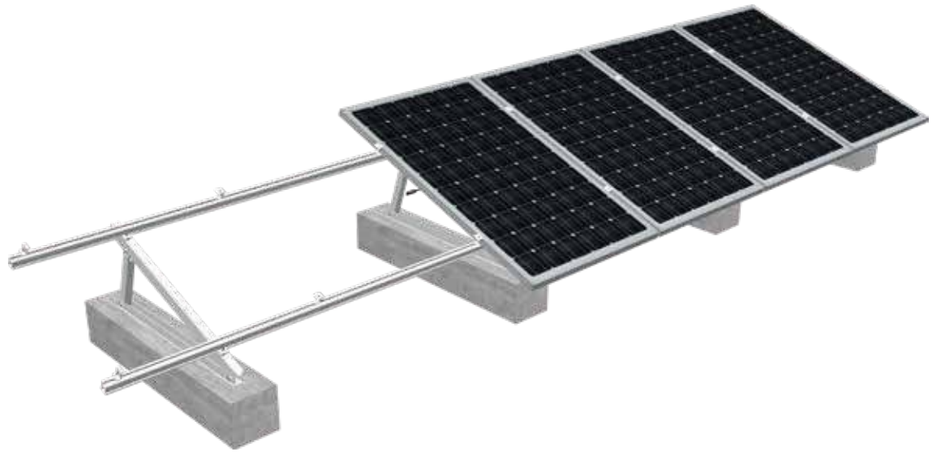
5

Fasten modules by Inter Clamp Kits & EndClamp Kits.

6

Install Side Wind Deflector. Installation is done.

MRac® Roof Solar PV Mounting System Matrix II



Technical Parameters

System Name	MRac RMII	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Flat Roof, Pitched Roof		International Building Code IBC 2009,
Roof Type	Concrete Roof, Metal Roof		California Building Code CBC 2010
Tilt Angle	0-60°	Material	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Roof Solar PV Mounting System Matrix II is derived from RM I to meet different roof projects demands. Solar modules can be arranged with single or double rows of landscape or portrait orientation. Quick installation and stable structure are assured by the modular Patented design.

Advantages

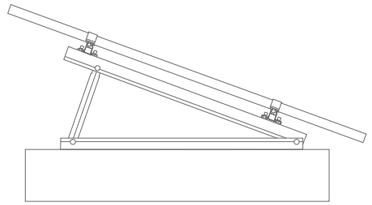
> System Compatibility
Components mostly pre-assembled in factory to assure quick and reliable installation on site. Suitable for different flat rooftop, and compatible to different types of solar modules.

> Unique Mudsill Design
The mudsill can be fixed to flat roof or pitched roof with concrete foundation or steel foundation.

> Solar Module Layout Flexibility
Both landscape and portrait solar module layout are suitable. Both single row and double rows layout can be achieved separately or combined.

> Adjustability
Tilt angle can be adjustable.

Structure



Component Details

1

Pro Rail 50

Specification : 3100、4100、5100mm
Material : AL6005-T5(Anodized)

2

Splice for Pro Rail 50

Specification : Standard length 260mm
Flange Head Self-taping Screw ST6.3*19
Material : AL6005-T5(Anodized)

3

End / Inter Clamp Kit

Components : End / Inter Clamp
Cross Module
Spring Washer M8
Hex Socket Head Bolt

4

C Clamp Kit

Components : C Clamp
Cross Module
Spring Washer M8
Hex Socket Head Bolt

5

Angle Aluminum Tripod Support

Components : Angle Aluminum Beam
Angle Aluminum Mudsill
Angle Aluminum Side Beam
flat washerM8
spring washerM8
Hexagon Bolt M8*2.5

6

Single Tripod Support

Components : Tripod Support Beam
Tripod Support Mudsill
Tripod Support SquareTubeA
HJointer
Flat Washer M10
Spring Washer M10
Hexagon Bolt M10*65

7

Double Tripod Support

Components : Tripod Support Beam
Tripod Support Mudsill
Tripod Support Square Tube A/B
H Jointer
Flat Washer M10
Spring Washer M10
Hexagon Bolt M10*65

8

Adjustable Tripod

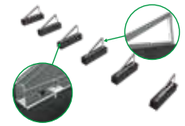
Components : Tripod Support Beam
Tripod Support Mudsill
Tripod Support Square Tube A
H Jointer
Flat Washer M10
Spring Washer M10
Hexagon Bolt M10*65

Installation Guide

1

Place the concrete base at the position indicated on the solution drawings.

2

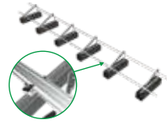


Fasten the preassembled supports on the expansion bolts by C Clamps.

3

Install splices.

4

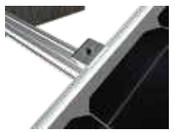


Fasten the rails by C Clamp Kits.

5

Install modules on the rails.

6



Fasten modules by Inner Clamp Kits.

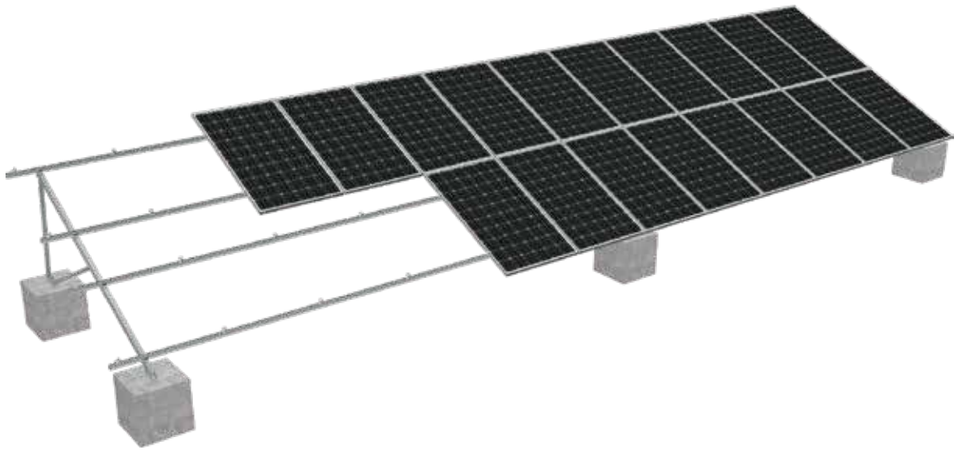
7

Fasten modules by End Clamp Kits.

8

Complete installation.

MRac® Double-row Tripod Base-beam-free RMIV



Technical Parameters

System Name	MRac Double-row Tripod Base-beam-free RMIV	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Flat roof, ground		International Building Code IBC 2009,
Roof Type	Concrete foundation, steel foundation		California Building Code CBC 2010
Tilt Angle	0-60°	Material	AL6005-T5(Anodized)
Wind Load	≤60m/s	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Snow Load	≤1.6KN/m²	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Double-row Tripod Base-beam-free RMIV is derived from RM II to meet different roof projects demands. Solar modules can be arranged with single or double rows of landscape or portrait orientation. Quick installation and stable structure are assured by the modular Patented design.

Advantages

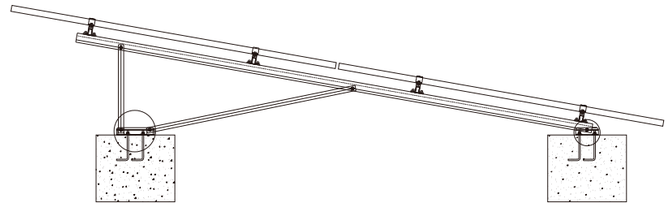
> System Compatibility
Components mostly pre-assembled in factory to assure quick and reliable installation on site. Suitable for different flat rooftop, and compatible to different types of solar modules.

> Unique Mudsill Design
The mudsill can be fixed to flat roof or pitched roof with concrete foundation or steel foundation.

> Solar Module Layout Flexibility
Both landscape and portrait solar module layout are suitable. Both single row and double rows layout can be achieved separately or combined.

> Adjustability
Tilt angle can be adjustable.

Structure



Component Details

1


MA Rail
Specification : 3100、4100、5100mm
Material : AL6005-T5(Anodized)

2


Splice kit for MA Rail
Specification : L200
Material : AL6005-T5(Anodized)

3


End clamp kit(MA)
Components : End Clamp
Cross Module
Spring Washer M8
Hex Socket Head Bolt

4


Inter Clamp Kit(MA)
Components : Inter Clamp
Cross Module
Spring Washer M8
Hex Socket Head Bolt

5


Rail Clamp
Material : AL6005-T5(Anodized)

6


RMIV Back Base
Material : Steel Q235B
(Hot-Dip Galvanized)

7


RMIV Front Base
Material : Steel Q235B
(Hot-Dip Galvanized)

8


Pre-assembled Structure
Material : AL6005-T5(Anodized)

Installation Guide

1


Place the concrete base and install the anchor base.

2


Install pre-assembled structure.

3


Install the rail.

4


Install the panels.

5


Complete installation.

MRac® Manually Adjustable Ground Mounting

Technical Parameters

Installation Site	Ground	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	Concrete Base		International Building Code IBC 2009,
Tilt Angle	10-40°		California Building Code CBC 2010
Wind Load	≤40m/s	Material	Q235B(HDG) & Q355(HDG)
Snow Load	≤0.8KN/m^2	Fastener	SUS304 & Nickle-Zinc Alloy & Q355(HDG)
Ground Clearance	≤1000+mm	Small Components	Q235B(HDG)
Applicable Solar Module	Framed	Color	Silver or Customized
Panel Layout	Portrait	Warranty	10-Year Warranty

Overview

MRac Manually Adjustable Ground Terrace is suitable for the installation of large-scale commercial and utility solar power stations. The product has a firm structure with strong stability. The main parts are made of carbon steel, which has good corrosion resistance. The product is flexible in design, and the angle of the panel can be adjusted manually, making the power generation more efficient and profitable. The optimized design of the structure effectively improves the installation time and greatly reduces the installation cost.

Advantages

> Strong adaptability to the environment, high power generation efficiency
Suitable for different ground environments.

> Professional structural design
It can ensure the overall stability and strength of the system. It was pre-assembled in the factory prior to delivery and the installation only needs to be fixed and spliced with fasteners on site.

> Adjustable angle design
The entire system can manually adjust the required angle, making power generation more efficient and more profitable.

> Fully compatible with different PV modules
It is compatible with various types of PV modules freely and flexibly.

Structure

Component Details

1

Square Steel
Material: Steel Q235B (Hot-Dip Galvanized)

2

Angle Bar
Material: Steel Q235B (Hot-Dip Galvanized)

3

Control Box
Material: Steel Q235B (Hot-Dip Galvanized)

4

Post
Material: Steel Q235B (Hot-Dip Galvanized)

5

Holder for Post of Push Rod
Material: Steel Q235B (Hot-Dip Galvanized)

6

Bearing's Plate
Material: Steel Q235B (Hot-Dip Galvanized)

7

Bearing base
Material: Steel Q235B (Hot-Dip Galvanized)

8

U-shape Bolt
Material: Steel Q235B (Hot-Dip Galvanized)

9

Electric Push Rod
Material: Steel Q235B (Hot-Dip Galvanized)

10

Hoop Kit
Material: Steel Q235B (Hot-Dip Galvanized)

Installation Guide

1

Install Posts according to the engineering drawing.

2

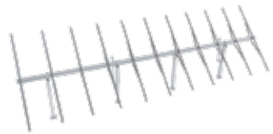
Install motor and bearing sleeve.

3

Install main beams.

4

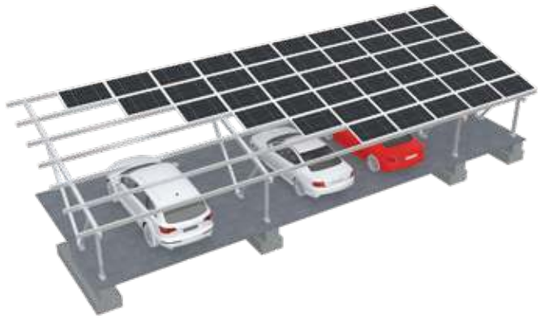
Install damper.

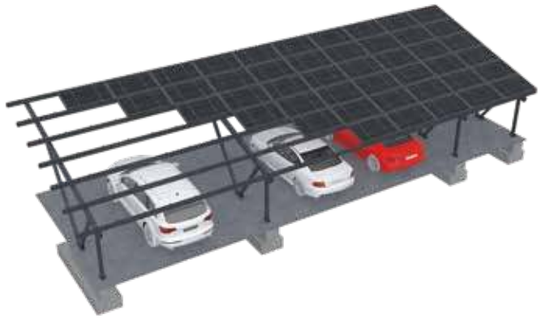
5

Install portrait beams.

6

Use Inter Clamp Kits and End Clamp Kits to fix panels.

MRac® Solar Carport System II





Technical Parameters

Installation Site	Open Area	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	Concrete foundation		International Building Code IBC 2009,
Tilt Angle	5-15°		California Building Code CBC 2010
Wind Load	≤45m/s	Material	AL6005-T5(Anodized)
Snow Load	≤1.2KN/m²	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Ground Clearance	≤2000mm+	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Solar Carport System II is a pre-assembled ground solar mounting system which is ideal for large commercial and utility-scale solar PV projects. The system has been developed for various photovoltaic modules and will be customized to fit into the parking lot or designed according to specific requirements. The Carport System can protect the cars to avoid damage from sunshine, wind, rain water, and snow. Mibet's engineers continue to optimize the design of system, the quality of product and service, and also provide the best solution for your Solar Carport System.

Advantages

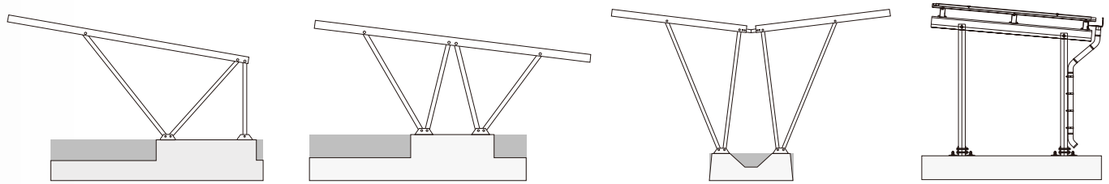
> Customized Solution
Design case by case, making a good utilization of ground resource and pursuit for easy and quick installation.

> High Waterproof
The special waterproof conforms to the structure of system, which make the performance Stronger.You can add flume structure to enhance the waterproof performance if you need.

> Save Installation Time and Labor Cost on Site
With installation manuals and system solution, the construction on site will be simple.Less construction time directly reduces project costs.

> Compatible to Varied Solar Modules
With Mrac module clamps, the system compatible with most kinds of framed and frame and frameless modules.

Structure



Component Details

1

Conical Symmetric Cross Beam 135

Specification : L*58*135
Standard Length : 3300mm
5000mm

2

Square Tube

Specification : L*100*100
Material : AL6005-T5（Anodized）

3

Beam 160

Specification : L*100*100
Material : AL6005-T5（Anodized）

4

C Clamp Kit

Components : C Clamp
Symmetric Cross Module
Spring Washer M8
Hexagon Socket Bolt

5

End/Inter Clamp Kit

Components : Wide End Clamp
Symmetric Cross Module
Spring Washer M8
Hexagon Socket Bolt

6

Splice for Conical Symmetric Cross Beam 135

Specification : L260mm
Components : Hexa Self-Tapping Screw
With EPDM Washer
ST6.3*19

7

Anchor Plate for Carport

Material : AL6005-T5（Anodized）

8

Transverse Flume

Material : AL6005-T5（Anodized）

9

山-Shaped Flume

Material : AL6005-T5（Anodized）

10

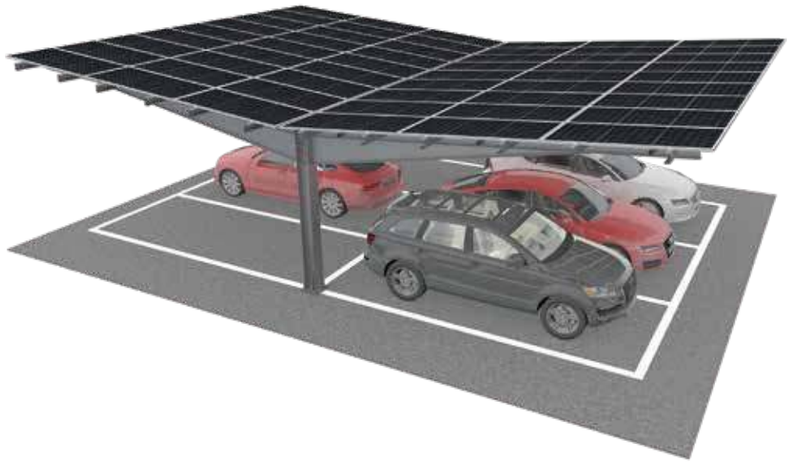
Waterproof for Cross Beam

Specification : L*100*100

Installation

BIPV Water-Proof Carport

MRac® Mono Carport System



Technical Parameters

Installation site	Open Area	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	Concrete Foundation		International Building Code IBC 2009,
Tilt Angle	5-15°		California Building Code CBC 2010
Wind Load	≤80m/s	Material	Zn-Al-Mg Coating Steel & HDG Steel
Snow Load	≤1.6KN/m²	Fastener	Zn-Ni Alloy & SUS304 & HDG Steel
Ground Clearance	≤1800mm~3000mm	Small Components	AL6005-T5 (Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-year

Overview

MRac Pro Mono Carport System is mainly customized according to customer site requirements, which is convenient parking, beautiful appearance. PV carport not only has the function of ordinary carport, but also can generate electricity and income through solar power generation. Professional solutions bring you a simple and convenient installation experience, Mibet engineers have been committed to optimize the system design, products and service quality, and provide you with the best quality solutions of photovoltaic shed.

Advantages

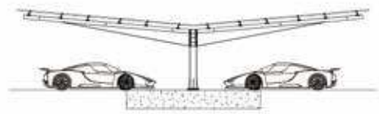
> Customized Solution
Design case by case, making a good utilization of ground resource and pursuit for easy and quick installation.

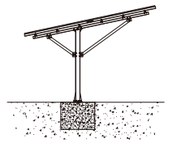
> Convenient parking and beautiful appearance
The single column design makes the structure simpler, minimizes obstruction, and facilitates parking and access.

> Save Installation Time and Labor Cost
Pre-assembled Components Save Onsite Installation Time Solution design case by case, most components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Compatible to Varied Solar Modules
With MRac module clamps, the system compatible with most kinds of framed 60-cell, 72-cell.

Structure





Component Details

1

76 steel tube
Material: HDG Steel

2

Mono post with welding plate
Material: Zn-Al-Mg Coating Steel

3

Splick for Rail
Material: Zn-Al-Mg Coating Steel

4

Rail Connector
Material: Zn-Al-Mg Coating Steel

5

H-shape Steel
Material: HDG Steel

6

H-shape Steel with Welding Plate
Material: HDG Steel

7

Pull Rod kit-A
Material: Zn-Al-Mg Coating Steel

8

Pull Rod kit-B
Material: Zn-Al-Mg Coating Steel

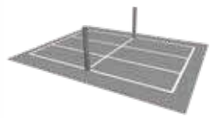
9

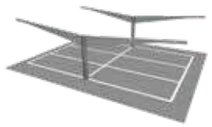
Inter Clamp kit
Material: AL6005-T5 (Anodized)
SUS304

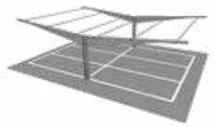
10

End Clamp kit
Material: AL6005-T5 (Anodized)
SUS304

Installation Guide

1

Fix the H-shape Steel Welding Plate.

2

Install the H-shape Steel.

3

Install the 76 steel tube.

4

Install the Pull Rod kit A&B.

5

Install the module.

6

The installation is done.

MRac® Ground Mounting GT2

Technical Parameters

Installation Site	Ground	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	U Post		International Building Code IBC 2009,
Tilt Angle	0-60°		California Building Code CBC 2010
Wind Load	≤60m/s	Material	Steel Q235B(Hot-Dip Galvanized),AL6005-T5(Anodized)
Snow Load	≤1.6KN/m²	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Ground Clearance	≤500-2000mm	Small Components	AL6005-T5 (Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Ground Terrace GT2 is a highly pre-assembled ground mounting system, which can be applied to the installation of large commercial and utility scale solar PV projects. Made of high quality aluminum material, GT2 has excellent corrosion resistance performance. The single-pile patented structure design saves installation time and cost, with good compatibility to varied solar modules.

Advantages

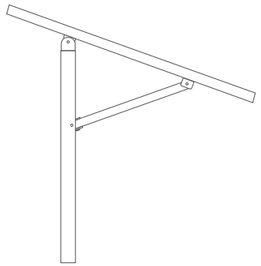
> Pre-assembled Components Save Onsite Installation Time
Solution design case by case, most components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Single-Pile Design
Single-pile design reduce half of the ramming time, saving the construction cost.

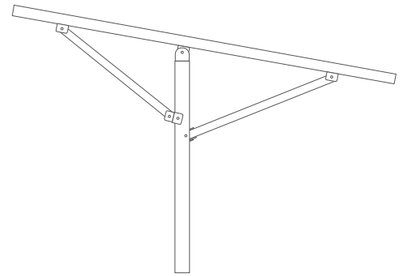
> Structure Configuration Multi-Options
Single or double embrace bars structure configuration available to meet varied projects requests.

> Flexibility and Adjustability
The structure can be adjusted with some tolerance with east-west, west-south and south-north directions, assuring flexible on-site installation to achieve best yield for solar modules.

Structure



Single Arm Side Support



Double Arms Side Support

Component Details

1

Rail 85

Specification : L*63.5*85
Standard Length : 3100mm
4100mm
5100mm

2

Splice for Rail 85

Specification : L260mm
Components : Hexa Self-Tapping Screw With EPDM Washer ST6.3*19

3

GT2 Pre-assembled Support

Components : U Beam ; T Shape Jointer ; C clamp Kit Pre-Assembled Square Tube Spring WasherM12 ; Washer M12 Hexagon Nut M12 ; Hexagon Bolt M12*95 Hexagon Bolt M12*75

4

C Clamp Kit

Components : C Clamp
Cross Module
Spring Washer M8
Hexagon Socket Bolt

5

End Clamp Kit

Components : End Clamp
Cross Module
Spring Washer M8
Hexagon Socket Bolt

6

Inter Clamp Kit

Components : Inter Clamp
Cross Module
Spring Washer M8
Hexagon Socket Bolt

7

Post Plate

Material : AL6005-T5 (Anodized)
Specification : Plate A: L90
Plate B: L70

8

U Post

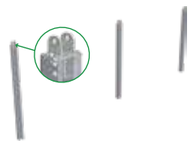
Material : Steel Q235B
(Hot-Dip Galvanized)

Installation Guide

1

Install the U post with driven pile based on project solution.

2



Install Post Plate onto U post.

3

Install the Pre-assemble Support on the Post Plate & U post.

4

Fasten the rail with C Clamp Kit.

5

Fix the solar module with Inter Clamp Kit & End Clamp Kit.

6

Installation is done.

MRac® Ground Mounting GT4

Technical Parameters

Installation Site	Ground	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	Concrete Base or Ground Screw		International Building Code IBC 2009,
Tilt Angle	0-60°		California Building Code CBC 2010
Wind Load	≤60m/s	Material	AL6005-T5(Anodized)
Snow Load	≤1.6KN/m²	Fastener	SUS304 & Zinc-Nickel Alloy Electroplated Steel
Ground Clearance	≤500-2000mm	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Ground Terrace GT4 is a highly pre-assembled ground mounting system, with strong wind load and snow load resistance. The system can achieve minor adjustment onsite with special design of Anchor Plate to adapt to different sites, and is mainly applied to medium to large scale solar PV projects. Patented and certified system design ensure projects safety and quick installation.

Advantages

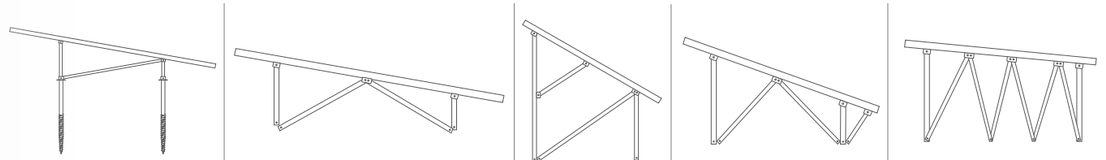
> Pre-assembled Components Save Onsite Installation Time
Solution design case by case, most components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Flexibility and Adjustability
The structure can be adjusted with some tolerance with east-west, west-south and south-north directions, assuring flexible on-site installation to achieve best yield for solar modules.

> Quick Modular Kit Fixation
Most of the components are designed as modular kit with anodized aluminum to further ensure easy and fast construction on site.

> No Drill on Portrait Beam
It improves the strength of the system to fix the portrait beam onto the post by special designed clamps, with force at the same direction of the gravity.

Structure



N Shape Preassembled Supports | W Shape Preassembled Supports | Multiple Support I | Multiple Support II | Multiple Support III

Component Details

1

Cross Beam 85

Specification : L*71*85
Standard Length : 3100mm
4100mm
5100mm

2

Splice for Cross Beam85

Specification : L260mm
Components : Hexa Self-Tapping Screw
With EPDM Washer ST6.3*19

3

GT4 Preassembled Support

Components : Cross Beam 80
C Clamp 80
T Front Jointer
T Back Jointer
Flat Washer M8
Spring Washer M8
Flat head Hexagon Bolt
External Hexagon Bolt M12
External Hexagon Bolt Kit M12*90
GT4 Square Tube A
GT4 Square Tube B
GT4 Square Tube C
Flat Washer M12
Spring Washer M12

4

C Clamp Kit

Components : C Clamp
Cross Module
Spring Washer M8
Hexagon Socket Head Bolt M8*28

5

Wide End Clamp Kit

Components : Wide End Clamp
Cross Module
Spring Washer M8
Hexagon Socket Head Bolt

6

U25 Inter Clamp Kit

Components : Inner Clamp
Cross Module
Spring Washer M8
Hexagon Socket Head Bolt

7

GT4 Corrugated T Anchor Plate Kit

Components : Corrugated Gasket
Corrugated T Plate
Hexagon Bolt Kit
Material : AL6005-T5 (Anodized)

8

GT4 Corrugated U Anchor Plate Kit

Components : Corrugated Washer
Corrugated U Anchor Plate
M12*95 External Hexagon Bolt Kit
Material : AL6005-T5 (Anodized)

Installation Guide

1

Install the ground screw based on project solution.

2

Fix Corrugated U Anchor Plate Kit & Corrugated T Anchor Plate Kit on ground screw.

3

Install the Pre-assemble Support on ground screw.

4

Install Back Side Support.

5

Install Beam.

6

Fix the solar module with Inter Clamp Kit & End Clamp Kit.

MRac® Ground Mounting GT7

Technical Parameters

Installation Site	Ground	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Foundation	C-shape, I-shape, Л-shape Piles		International Building Code IBC 2009,
Tilt Angle	0-60°		California Building Code CBC 2010
Wind Load	≤60m/s	Material	Q235B(Hot-Dip Galvanized)
Snow Load	≤1.6KN/m²	Fastener	SUS304 & Hot Dip Galvanized
Ground Clearance	≤500-2000mm	Small Components	AL6005-T5(Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Ground Solar PV Mounting System GT7 is applied for the installation of large-scale and utility-scale solar PV power plant. Main components are made of hot-dip galvanized steel, with good performance of structure strength, stability, and anti-corrosion. Compatible with varied solar modules. Unique piles and structure design save installation time and cost.

Advantages

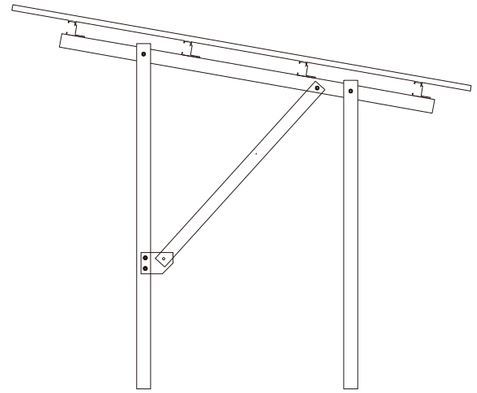
> Unique Pile Design
Unique post design suitable for varied soil conditions and strengthen the whole structure stability.

> Pre-assembled Components Save Onsite Installation Time
Solution design case by case, most components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Flexibility and Adjustability
The structure can be adjusted with some tolerance with east-west, west-south and south-north directions, assuring flexible on-site installation to achieve best yield for solar modules.

> Compatible to Varied Solar Modules
With MRac module clamps, the system compatible with most kinds of framed 60-cell, 72-cell, half-cut cells modules and frameless modules.

Structure



Component Details

1

Rail

Material : Steel Q235B (Hot-Dip Galvanized)

2

Beam Connector

Material : Steel Q235B (Hot-Dip Galvanized)

3

C-shape Pile

Material : Steel Q235B (Hot-Dip Galvanized)

4

Pile

Material : Steel Q235B (Hot-Dip Galvanized)

5

Inter Clamp Kit

Components : Inter Clamp
Spring Washer M8
Hexagon Socket Bolt

6

End Clamp Kit

Components : End Clamp
Spring Washer M8
Hexagon Socket Bolt

Installation Guide

1

Install the C-shape Pile based on project solution.

2

Install Inclined Support.

3

The installation of Inclined Support is done..

4

Installation the Beam.

5

Fix the solar module with Inter Clamp Kit & End Clamp Kit.

6

Installation is done.

MRac® Concrete Pile High Elevation Mounting System

Technical Parameters

Installation Site	Ponds, Reservoirs	Design Standard	AS/NZS 1170，DIN 1055，JIS C8955：2017，
Foundation	Pre-stressed Concrete Pile		International Building Code IBC 2009,
Tilt Angle	0-45°		California Building Code CBC 2010；
Wind Load	≤60m/s	Material	Q235B (Hot-Dip Galvanized) & Al6005-T5(Anodized)
Snow Load	≤1.4KN/m²	Fastener	Q235B (Hot-Dip Galvanized) & Zinc-Nickel Alloy Electroplated Steel
Ground Clearance	According to project's information	Small Components	AL6005-T5 (Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Concrete Pile High Elevation Mounting System is applied to fish Pond, flood area and sandy land solar PV projects. Main components are made of hot-dip galvanized steel, with good performance of structure strength, stability and anti-corrosion, compatible with varied solar modules. Unique piles and structure design save installation time and cost.

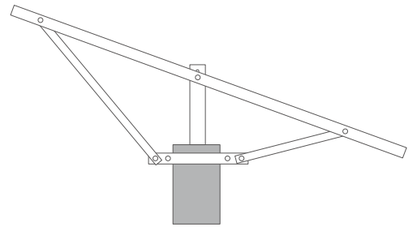
Advantages

> Pre-assembled Components Save Onsite Installation Time
Solution design case by case, most components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Dual-Use of Land or Utilize Waste Land Improve the Economic Benefit
Install solar projects above the fishpond, achieving the dual-use of land to improve the economic benefit. This system can utilize waste land like flood area or sandy area to save land resources.

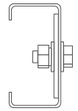
> Quick Modular Kit Fixation
Most of the components are designed as modular kit with anodized aluminum to further ensure easy and fast construction on site.

Structure



Concrete Pile High Elevation Mounting System structures

Hoop Kit



Beam (Side viewing)

Component Details

1

Beam

Hoop Spec: C100*50*15*2*L4500
Material: Q235B(Hot-Dip Galvanized)

2

Side Beam

Hoop Spec: C10*50*15*2*L2800
Material: Q235B(Hot-Dip Galvanized)

3

Front/Back Post

Components: Front Support
Back Support
Material: Q235B (Hot-Dip Galvanized)

4

Hoop Kit

Hoop Spec: Hoop Spec: 300*5.0*100
Components: Flat Washer M14
Spring Washer M14
Hexagon Socket
Head Bolt M12*65

5

End / Inter Clamp Kit

Components: End / Inter clamp
Cross Module
Spring Washer M8
Hexagon Socket Bolt

6

Post

Hoop Spec: C100*50*15*2*L557
Components: Flat Washer M16
Spring Washer M16
Hexagon Socket
Head Bolt Nut M16
Hexagon Socket
Head Bolt M16*50

7

Small Connector

Hoop Spec: 80*40*5*40
Components: Flat Washer M12
Spring Washer M12
Hexagon Socket
Head Bolt Nut M12
Hexagon Socket
Head Bolt M12*30

8

Big Connector

Hoop Spec: 80*40*5*100
Components: Flat Washer M12
Spring Washer M12
Hexagon Socket
Head Bolt Nut M12
Hexagon Socket
Head Bolt M12*30

Installation Guide

1

Install concrete pillar based on project solution.

2

Install Post and Hook Kit.Then install Front & Back Support and Inclined Support.

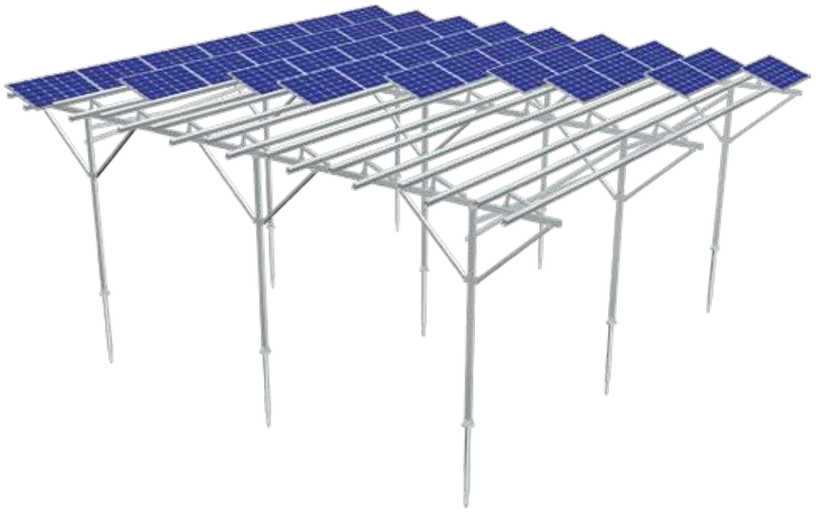
3

Install beam.

4

Fix the solar module with Inter Clamp Kit & End Clamp Kit.Installation is done.

MRac® Agricultural Greenhouse Mounting System



Technical Parameters

Installation Site	Ground	Design Standard	AS/NZS 1170 , DIN 1055 , JIS C 8955： 2017,
Foundation	Concrete foundation, Ground screw		International Building Code IBC 2009 ,
Tilt Angle	0-30°		California Building Code CBC 2010
Wind Load	≤80m/s	Material	AL6005-T5 (Anodized)
Snow Load	≤1.6KN/m²	Fastener	Zinc-Nickel Alloy Electroplated Steel
Ground Clearance	1800mm+	Small Components	AL6005-T5 (Anodized)
Applicable Solar Module	Framed or Frameless	Color	Silver or Customized
Panel Layout	Portrait or Landscape	Warranty	10-Year Warranty

Overview

MRac Agricultural Greenhouse Mounting System is mainly applied to the installation agricultural solar PV farms, achieving the dual-use of lands. It solves the conflict between photovoltaic power generation and planting use. The design of system structure is based on the layout of panels, the sunshine amount by plants and the entrance size of farming machine which provides a suitable mounting system solution with highly pre-assembled structure to guarantee easy and quick installation.

Advantages

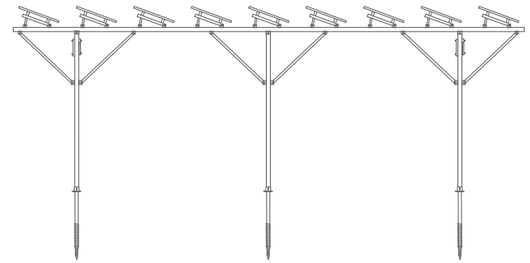
> Dual-use of land, improve the economic benefit
Agricultural greenhouse system no occupation of land and change it's using nature. Rational use of land while photovoltaic power generation.

> Create different growing conditions for different plants
To satisfy the different light exposure requirements of varied plants, MRac agricultural greenhouse mounting structure system can be installed with different transmittance of solar module and module arrays.

> Pre-assembly components save onsite installation time
Most of components pre-assembled in factory, no onsite cut and drill request, saving the onsite installation time and cost.

> Interval type design satisfy lighting requirements
Interval type module array's shading rate is 30%-70%, can satisfy different lighting requirements.

Structure



Component Details

1

Sub-beam 80

Specification: L*71*80
Material: AL6005-T5（Anodized）

2

Sub-beam 80 splice kits

Specification: L260mm
Material: AL6005-T5（Anodized）

3

C clamp

Components: C Clamp
Cross Module
Spring Washer M8
Hexagon Socket Bolt

4

Lock hook kits

Components: Landscape block W45
Sub-beam clamp
Spring washer M8
Hexagon screwM8*20

5

Post kits A/B/C

Material: AL6005-T5（Anodized）

6

Pre-assembly support beam

Material: AL6005-T5（Anodized）

7

Square tube & T-shape bolts kits

Specification: L*45*20
Material: AL6005-T5（Anodized）

Installation Guide

1

Install Post and Hook Kit.

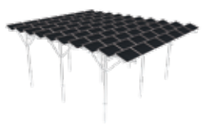
2

The installation of Front & Back Support and Inclined Support is done.

3

The installation of beam is done.

4



Fix the solar module with Inter Clamp Kit & End Clamp Kit.Installation is done.

MRac® Ground Vertical Solar Mounting System

Technical Parameters

Installation Site	Farm land, wide field	Design Standard	AS/NZS 1170，DIN 1055，JIS C8955：2017，
Foundation	C Post, H Post, Cement		Euro Code, ASCE
Tilt Angle	90°	Material	Q355B & Aluminum
Wind Load	≤45m/s	Fastener	SUS304
Snow Load	≤1.6KN/m²	Clamps	Al6005-T5(Anodized)
Ground Clearance	300-600mm	Color	Silver or Customized
Applicable Solar Module	Different Bifacial solar panel	Warranty	10-Year Warranty
Panel Layout	Landscape 2		

Overview

MRac Ground Vertical Solar Mounting System developed for large scale solar farms to sustain for a long services in farmland and wide field of application, adapting to almost every terrain and can easily be mounted on wide farmland site with some essential components. Also, an anodized aluminum of the material surface provides additional protection against external influences. Rammed steel post represents a cost-effective foundation into terrain soil. Ramming and concrete foundations solution are also possible as an adaption to local conditions.

Advantages

> Unique design, optional foundations, high strength.

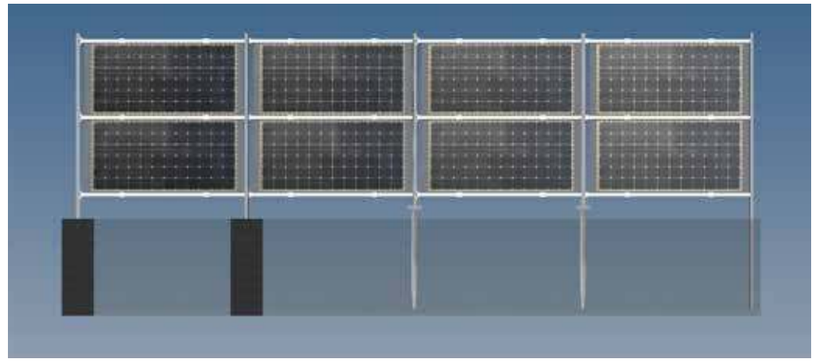
> Suitable different type dual-glass panel, easy frame and module assembly.

> Height levelled for adjustment to different terrain conditions.

> Customized special solutions.

> Shading-free installation of bifacial glass-glass modules.

Structure



Component Details

1

L Support Kit

Material： AL6005-T5（Anodized）
SUS304

2

Panel Clamp Kit

Material： AL6005-T5（Anodized）
SUS304

3

Support Mounting Rail

Material： AL6005-T5（Anodized）

4

C Post

Material： Q235B (Hot-Dip Galvanized)

5

H Post

Material： Q235B (Hot-Dip Galvanized)

Installation Guide

1

Install concrete pillar based on project solution.

2

Install Post and Hook Kit.

3

Install Front & Back Support and Inclined Support.

4

The installation of Front & Back Support and Inclined Support is done.

MRac® Ground Screw

Soil test data

Soil type	Force	MRac-76*1200	MRac-76*1600
Gravel	Uplift resistance	24.1（KN）	32.3（KN）
	Uplift resistance	14.3（KN）	19.9（KN）
Sandy	Uplift resistance	20.8（KN）	28.8（KN）
	Uplift resistance	15.0（KN）	21.0（KN）
Clay	Uplift resistance	15.1（KN）	20.2（KN）
	Uplift resistance	12.2（KN）	16.0（KN）

Overview

MRac Ground Screw is specially developed for solar mounting system. Various series can be applied to different soil condition. Furthermore, it can be customized.

Advantages

> Good corrosion resistance performance
Industry leading hot dip galvanization ensures the corrosion resistance performance and prolong its lifetime.

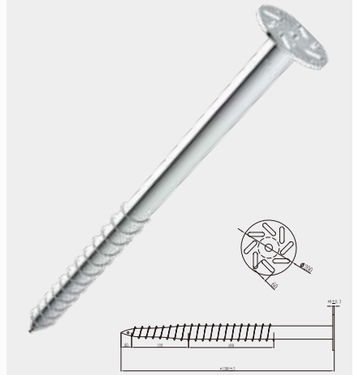
> Save installation time and cost
Different from the construction of concrete base, each one can be piled by pile machine about 2 minutes, which save the construction time and cost.

> Optimized structure design
Unique design ensures the performance of pull-out force.

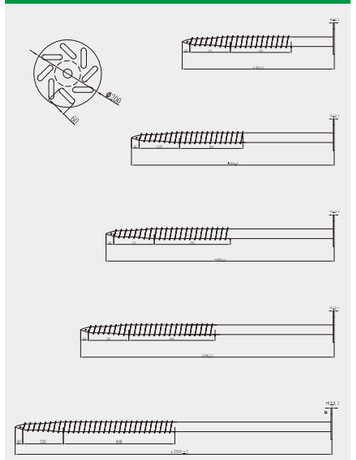
> Economy and Environmental protection
Different from concrete base, MRac ground screw will not produce any waste, and can be recycled.

MR-GS-07 New Ground Screw

Length	Diameter	Material	Applicable Soil
1200-2500mm	Φ76mm	Steel Q235B (Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc

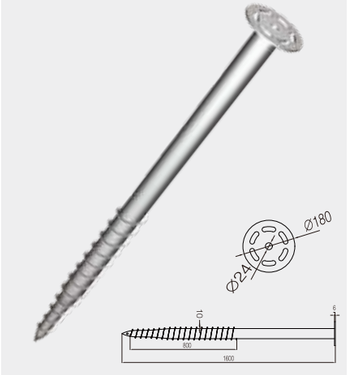


MR-GS-07 New Ground Screw



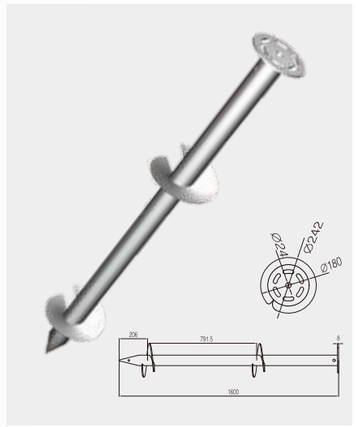
MR-GS-01 Standard Ground Screw

Length	Diameter	Material	Applicable Soil
1200-2500mm	Φ76mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



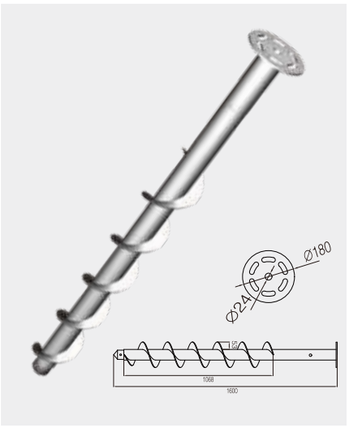
MR-GS-03 Double Blade Ground Screw

Length	Diameter	Material	Applicable Soil
1200-2500mm	Φ76mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



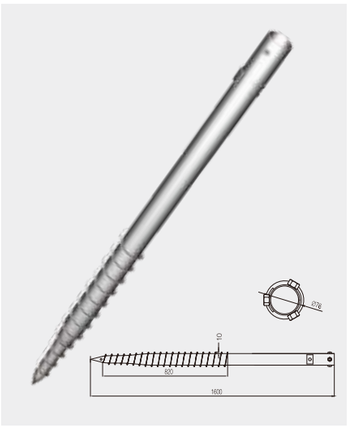
MR-GS-02 Large Blade Ground Screw

Length	Diameter	Material	Applicable Soil
800-2500mm	Φ102mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



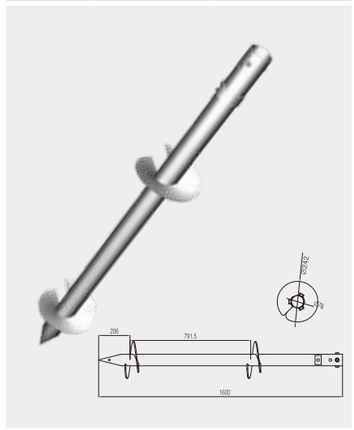
MR-GS-04 Standard Flangeless ground screw

Length	Material	Applicable Soil
1200-2500mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



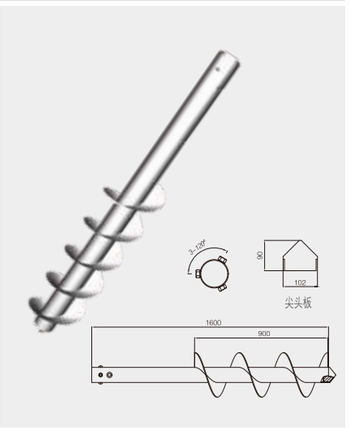
MR-GS-05 Flangeless Double Blade Ground Screw

Length	Material	Applicable Soil
800-2500mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



MR-GS-06 Flangeless Large Blade Ground Screw

Length	Material	Applicable Soil
1200-2500mm	Q235B(Hot-Dip Galvanized)	Gravel, Sandy Soil, Clay, etc



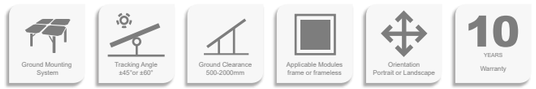
MRac® Smart Tracking Solar PV System

Technical Parameters

GPS Module	Automatically obtain latitude and longitude and precise time Compatible with GPS + Beidou satellite positioning system	Design Support	Support Wind Protection Snow Removal Mode
Installation Capacity	Maximum 90 solar modules per row		Rain Cleaning Mode
Tracking Angle	±60°		Position Return Mode
Wind Resistance	47m/s design standard ASCE7-10,	Drive Method	Slewing Speed Reducer
	<18m/s (shelter from wind)	Structure Material	Hot-dip Galvanized + POSMAC Steel
Tracking Algorithm	Astronomical Algorithms +Tilt Sensors	Control System	Micro Controller Unit
Drive Device	Slewing Drive, 24V DC motor	Protection Level	IP65
Power Supply	Self-powered/External Connection	System Warranty	10 Years
Communication Method	LoRa wireless communication or 485 bus (Modbus protocol)	System Daily Power Consumption	≤0.1Kwh

Overview

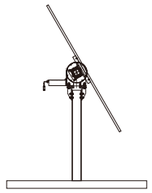
MRac Smart Tracking Solar PV System is mainly applied to large-scale solar plant with its most affordable, efficient and sustainable solutions. System combining with single row, 1 controller per tracker, multipoint parallel drive with backtracking mode, having strong wind-resistance capability.
Comparing to fixed mounting system, MRac Smart Single-axis Tracker is first option for LSS, could increase nearly 20% power generation under same conditions.



Advantages

- Debugging by automatic tracking
- Profitability and reliability for different conditions
- Easy to install, lower O&M costs
- Multipoint parallel drive, strong wind-resistance capability
- Strong adaptability of terrain up to 25% N-S slope

Structure



Component Details

1 

Post
Material: Q235B/Q355B (Hot-Dip Galvanized)

2 

Controller
Material: Q235B(Hot-Dip Galvanized)

3 

Motor
Spec: 7-9 inches

4 

Putter Spindle Fastener
Material: Q235B(Hot-Dip Galvanized)

5 

Bearing base
Material: Q235B (Hot-Dip Galvanized)

6 

Putter
Customized according to actual needs

7 

Tilt Sensor
Material: Q235B (Hot-Dip Galvanized)

8 

Angle Steel
Material: Q235B(Hot-Dip Galvanized)

9 

Motor Base
Material: Q235B/Q355B (Hot-Dip Galvanized)

10 

Putter Post Fastener
Material: Q235B(Hot-Dip Galvanized)

11 

Bearing Sleeve
Material: Q235B (Hot-Dip Galvanized)

12 

U-shaped support
Material: Zn-Al-Mg Coating Stee Q355B (Hot-Dip Galvanized)

13 

U-shaped Rail
Material: Zn-Al-Mg Coating Steel Q355B (Hot-Dip Galvanized)

14 

Spindle
Spec: 120*120, 140*140
Material: Q355B(Hot-Dip Galvanized)

Installation Guide

1 
Install the Posts according to design drawings

2 
Install the Motor Base&Bearing bases on the Posts

3 
Install the Motor in the Motor base

4 
Install the Bearing Sleever on the Bearing bases

5 
Install the Spindle through the Bearing Sleever&Motor

6 
Install the Putter Spindle Fastener in the Spindle

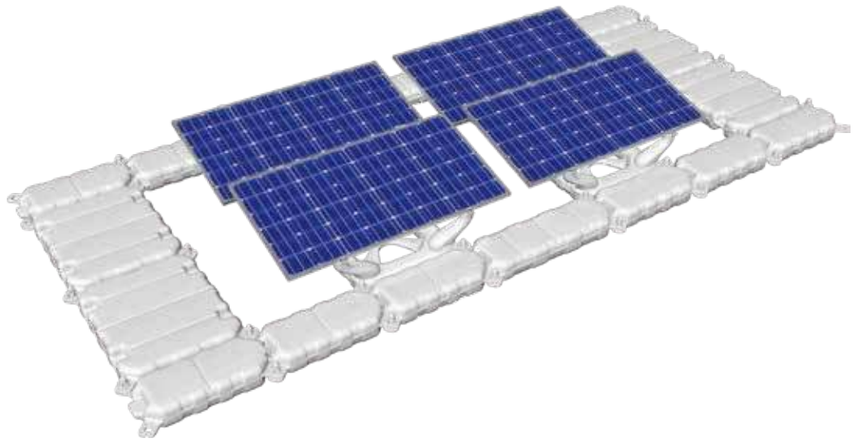
7 
Install the Putters

8 
Install the U-shaped Rail

9 
Install the Controller

10 
Install the modules，then installation is done.

MRac® Floating PV Mounting System G4N



Technical Parameters

Product Name	MRac Floating PV Mounting System G4N	Design Standard	Euro Code/EN1991/1993/1994, BS 6399, ASCE 7-10
Installation Site	Lake, Reservoir		International Building Code IBC 2009,
Tilt Angle	5°、10°、15°		California Building Code CBC 2010
Wind Load	≤42m/s	Material	HDPE
Snow Load	≤1KN/m²	Fastener	Zinc-Nickle Alloy & HDPE&Q235B
Water Surface Clearance	> 300mm	Small Components	AL6005-T5（Anodized）
Module Type	Frame or Frameless	Color	Gray or Customized
Panel Orientation	Landscape, Double Row	Bearing Weight	Module Floater 70KG/m², Walkway Floater 155KG/m²

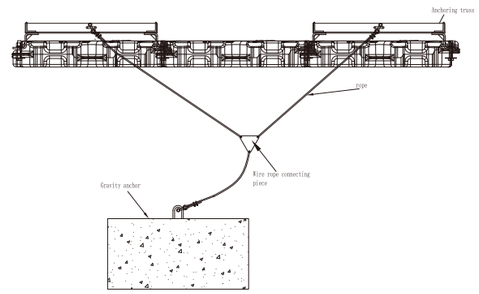
Overview

MRac Floating PV Mounting System G4N is applied to solar pv power plant installation on the water. Adopting HDPE material, it has passed the Hunt Water Absorption Test, Anti-Aging Test, Anti-UV Test etc. Moreover, it can bear the pulling force that is much higher than other products. Adopting new module design in floater and main floater, it can realize the array of double row in the same facing or in symmetrical facing, which can increase the efficiency of solar power generation and installation capacity, be easily installed, and save the cost. and its lifetime has more than 25 years.

Advantages

- Modular design, simple and convenient splice installation.
- Increase the volume of floater to add the buoyant force of floater.
- The floater is made of high density polyethylene, which ensures its long service time.
- Various array design, easier to combine.
- Realize symmetrical facing array, increase the installation capacity, maximize the efficiency of power generation.
- Compatible with various solar module, save the cost.
- Strong weather ability, easy to operation and maintenance.

Structure



Component Details

1

Portrait Walkway Floater

Material : HDPE

2

Short Horizontal Walkway Floater

Material : HDPE

3

Long Horizontal Walkway Floater

Material : HDPE

4

Module Floater

Material : HDPE

5

Support

Material : HDPE

6

Plastic Bolts and Nuts

Material : HDPE

7

Module Clamp

Material : AL6005-T5（Anodized）

8

End Clamp Kit

Material : AL6005-T5（Anodized）
SUS304

Installation Guide

1

Module Floater.

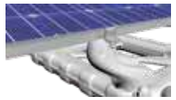
2

Install Support.

3

Install Module Clamp.

4



Install Module.

5

Connect the Module Floater with Walkway Floater.

6

Connect the Floaters with Plastic Bolts and Nuts

7

Finish the installation of floaters.

8

Installation is done.

Service and Support

Pre-sale service

Mibet Energy's first-class sales team provides basic product introductions and systematic training.

Project Design

Mibet Energy's professional technical team provides customized designs.

After-sales service

Mibet Energy will provide clear and professional installation instructions, online guidance and 24-hour response service.

Warranty

Mibet Energy provides 10-year Warranty.

Service Line: +86-592-3754999

Xiamen Mibet New Energy Co., Ltd.

MIBET ENERGY