



**WE CARRY SUN'S ENERGY**

**SOLAR PANEL SUPPORT SYSTEMS**



[kiracmetal.com](http://kiracmetal.com)







Kıraç Group was established in 1981 with the vision to become a leading actor in the electrical market. The group includes separate entities titled as Kıraç Elektrik, Kıraç Metal, Kıraç Otomasyon, Kıraç Galvaniz, Emcekare, Pioneer Metal, Kıraç Group İnşaat and Kıraç Bilişim interconnected with each other creating a culture of inhouse support across eight different sectors. The Group invests in the future by prioritizing customer satisfaction through top quality products and services it offers since its establishment. The Group is conducting successful operations in Europe, Asia, Middle East and North America.

Kıraç Metal Ürünleri San. ve Tic. Ltd. Şti. was established in 2002 in order to manufacture cable trays. The Company has completed successful projects with its experienced and dynamic team. Its main manufacturing facility is located in Eskişehir Organized Industrial Zone. The facility is established on a total area of 20,250 sq.m having an indoors space of 12,150 sq.m. With a manufacturing capacity of 1,000 Tones/Month, Kıraç Metal produces Solar Panel Support and Mounting Systems, Cable Trays and Ladders, Supporting Components and Fittings plus Industrial-Type Electrical Panels. The facility is also designed to incorporate flexibility to adjust its manufacturing flow for tailored products. As one of the leading global manufacturers, Kıraç Metal is the choice of consumers for its high quality and customer oriented product and services, on time delivery policy and its pre/post-sales services. Kıraç Metal Ürünleri San. ve Tic. Ltd. Şti.'s primary export market is Europe while its products reach numerous other countries around the world.





After solar panels and invertors, the most crucial equipment in a solar power plant are solar panel support systems. The reliability and effectiveness of a power plant is directly correlated with how support systems are designed in terms of strength and durability. Any mistake made during design phase may cause substantial damage to the facility. Furthermore, mounting equipment utilized in installing and connecting support equipment shall be selected from corrosion resistant materials which can withstand severe ambient conditions.

Kiraç Metal offers optimal solutions for support systems design by incorporating high-tech equipment to its advanced engineering capabilities. Variable and constant loads such as ground structure, snow load, earthquake load, wind load etc. are important in selecting support systems. Kiraç Metal has developed specific solutions for all types of land and roof applications. Kiraç Metal has a pioneering role in sector's development due to its capacity to manufacture support systems essential for solar power plants according to international standards enabling the meeting of varying market demand.

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## Our Services



**GEOTECHNICAL & STRUCTURAL  
SITE EVALUATION**

**STRUCTURAL DESIGN  
& SYSTEM INTEGRATION**

**TESTING**

**ADVANCED SOLAR  
MOUNTING SYSTEM  
MANUFACTURING**

**SEAMLESS DELIVERY  
SOLUTIONS**

**PILE INSTALLATION**

**ON-SITE SUPPORT**

**SUPERSTRUCTURE  
INSTALLATION**

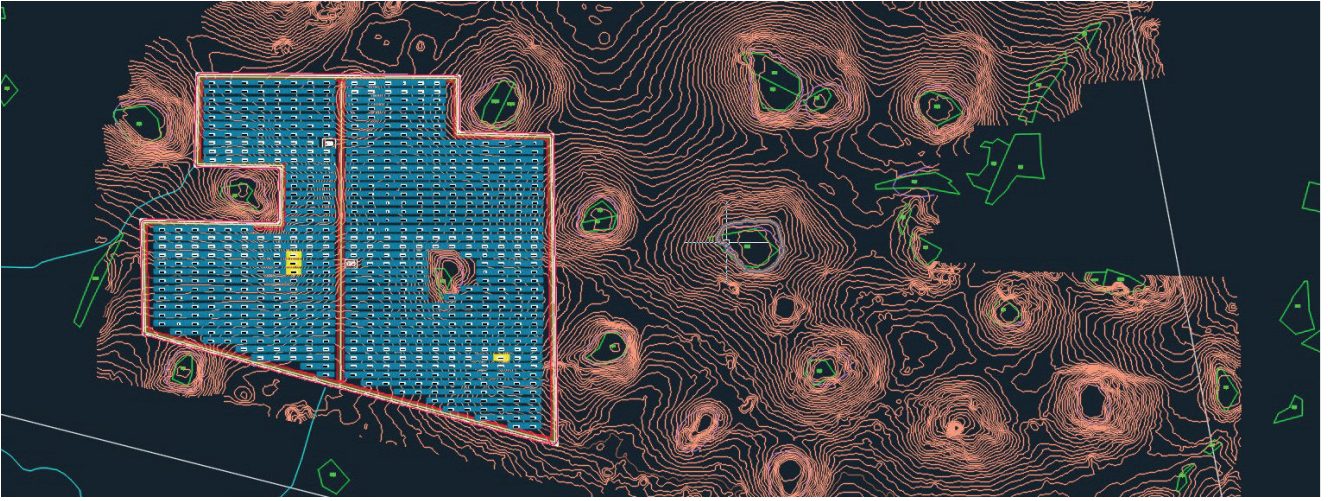
**DC INSTALLATION**

## 1 - Geotechnical & Structural Site Evaluation

**At Kiraç Metal, our design process begins where it matters most  
— with the land itself.**

We start by conducting a meticulous analysis of geotechnical, topographical, and foundation data to fully understand the unique characteristics of each site. This insight allows us to engineer tailored foundation solutions, optimized structural designs, and robust corrosion protection systems — all built to last.

By investing in this level of detail from day one, we deliver more than just mounting systems — we deliver long-term value. Our precision-driven approach minimizes risks, maximizes performance, and ultimately saves our customers money over the lifetime of their solar project.



## 2 - Testing

### Pull-Out Testing

Pull-Out Testing is a crucial step in our preparation process, involving the installation and removal of test piles. This procedure plays a vital role in assessing the soil's tension, lateral, and uplift capacities.

It's not just about ensuring the foundation can support solar panels; it's about ensuring the structure can withstand additional environmental stresses, such as wind and weight loads.

By conducting thorough pile testing, we guarantee the long-term stability and reliability of your project, ensuring it performs optimally in all conditions.

This service is not available in all countries, please contact us for information.





### 3 - Structural Design & System Integration

#### Precision-Engineered. Effortlessly Installed. Guaranteed to Last.

At Kiraç Metal, every system is expertly engineered for performance and designed for ease — delivering tailored solar mounting solutions backed by warranties of up to 10 years.

Using advanced technology and precision modelling, our engineers fine-tune each design to meet the unique demands of your site and environmental conditions, ensuring maximum efficiency and long-term reliability.

Installation is made simple. Our systems are developed with practical innovation at their core: one fixing size across the board, outstanding adjustability, and clever design features that significantly reduce the need for working at height — saving time, cost, and improving safety.

As an ISO 9001-certified company Kiraç Metal stands behind the quality and integrity of everything we deliver — from concept to completion, and beyond.

With **Kiraç Metal**, you're never on your own — because real support starts on site.



## 4 - Advanced Solar Mounting System Manufacturing

Our state-of-the-art manufacturing facilities, based in Turkey and managed by our in-house team of experts, boast an annual production capacity of over 2 GW for solar PV mounting system.

With cutting-edge technology and a dedicated team, we ensure high-quality production at scale, meeting the growing demand for sustainable energy solutions worldwide.



## 5 - Seamless Delivery Solutions

We ensure your orders arrive on time, every time. Committed to transparency—no hidden fees, no delays—we guarantee a smooth delivery process, giving you the peace of mind that your products will reach you reliably and without surprises.

With our efficient logistics network and clear communication, we prioritize customer satisfaction by providing prompt and dependable delivery for every order.





## 6- On-Site Support – We're With You Every Step of the Way

Every system we deliver comes with a clear, step-by-step installation guide designed for quick and easy setup. But we know that sometimes, you need more than just instructions.

That's why our experienced on-site support team is always ready to assist — whether it's a quick call to walk you through the process or a site visit to provide hands-on help.

Our goal is to ensure your installation runs smoothly and efficiently, minimizing downtime and eliminating guesswork. From start to finish, we're committed to delivering reliable, solution-driven support tailored to your project's unique needs.

This site support is not available in all countries, please contact us for more information.



## 7 - Pile Installation – Building a Solid Foundation for Solar Success

Our pile installation process is designed to adapt seamlessly to diverse terrain conditions, utilizing advanced pile driving techniques to establish a strong and stable foundation for solar energy systems.

Equipped with state-of-the-art machinery capable of handling post lengths up to 4-6 meters, our expert team ensures the deep, secure, and precise installation of all standard pile profiles. This enables us to deliver maximum structural integrity and long-term performance, even in the most challenging environments.

As a crucial first step in any solar project, proper pile installation plays a vital role in ensuring the long-term stability and durability of the system, tailored to meet the unique demands of each site.

This service is not available in all countries, please contact us for information.





## 8 - Superstructure Installation – Perfect Fit on a Solid Foundation

Following the secure driving of the foundation pile into the ground, Kiraç Metal's expert teams begin the superstructure assembly, forming the main structure of the support system. At this stage, horizontal beams, diagonal supports and purlin profiles are installed according to a project-specific layout plan.

All components are manufactured from high-strength materials with multiple configuration options and are implemented based on wind and snow load calculations specific to the project location. All bolted connections are tightened with torque-controlled precision, and the structural integrity of the system is thoroughly inspected.

Thanks to the modular design approach, fast installation, flexible adaptation, and significant time savings on-site are achieved.

With Kiraç Metal, experience engineering excellence built on a strong foundation.

This service is not available in all countries, please contact us for information.



## 9 - DC Installation – Safe and Efficient Power Transfer

At Kiraç Metal, we carry out DC installation processes in solar energy projects in full compliance with high technical standards. From PV modules to inverters, we ensure maximum system efficiency and safety through proper cable sizing, voltage drop optimization, UV-resistant components, and well-organized cable routing.

All connections are tailored to site-specific conditions to enable fast installation, long service life, and minimal maintenance requirements.

With the assurance of Kiraç Metal, your DC infrastructure stays strong on site, and your energy flow remains uninterrupted.

This service is not available in all countries, please contact us for information.

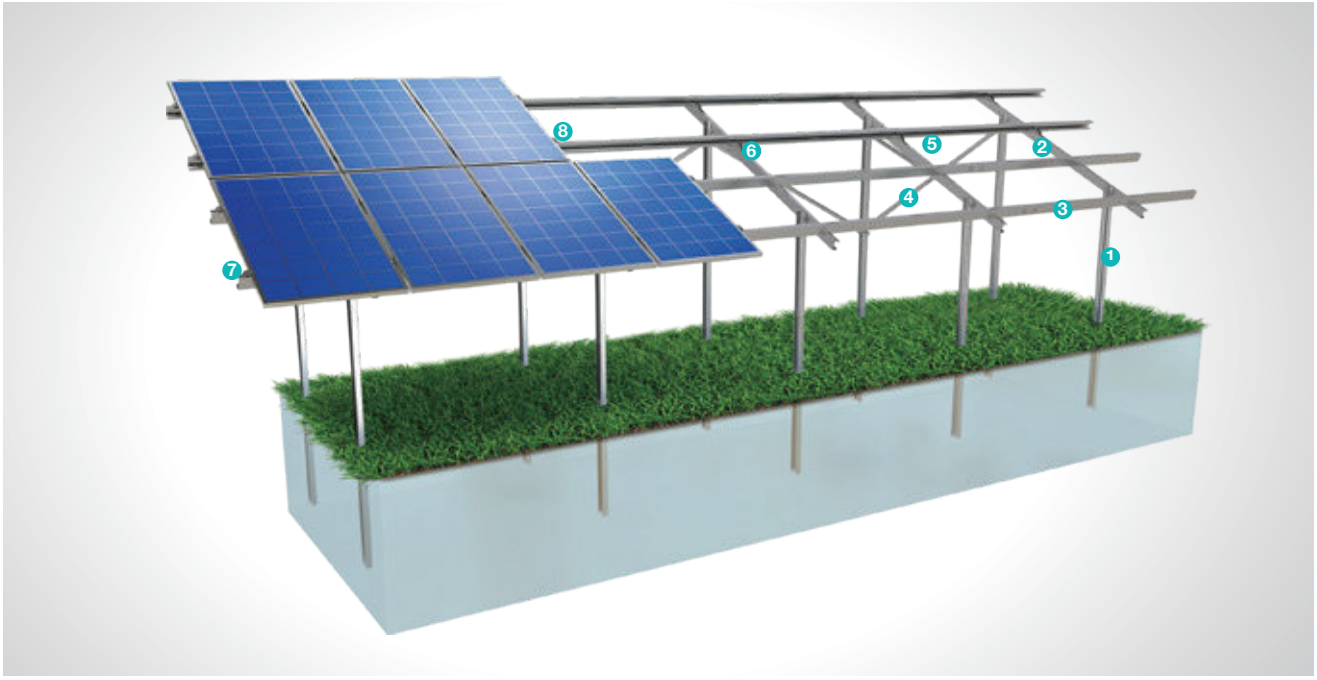




## (KPT1) Ground Driven Steel Mounting System with 2 Vertical Panels

### Overview

**KPT1**, is a ground driven steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE



- **C90 / C100 / C110**  
M12X30 Hex Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR



- **U40**  
M8X30 Hex Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT



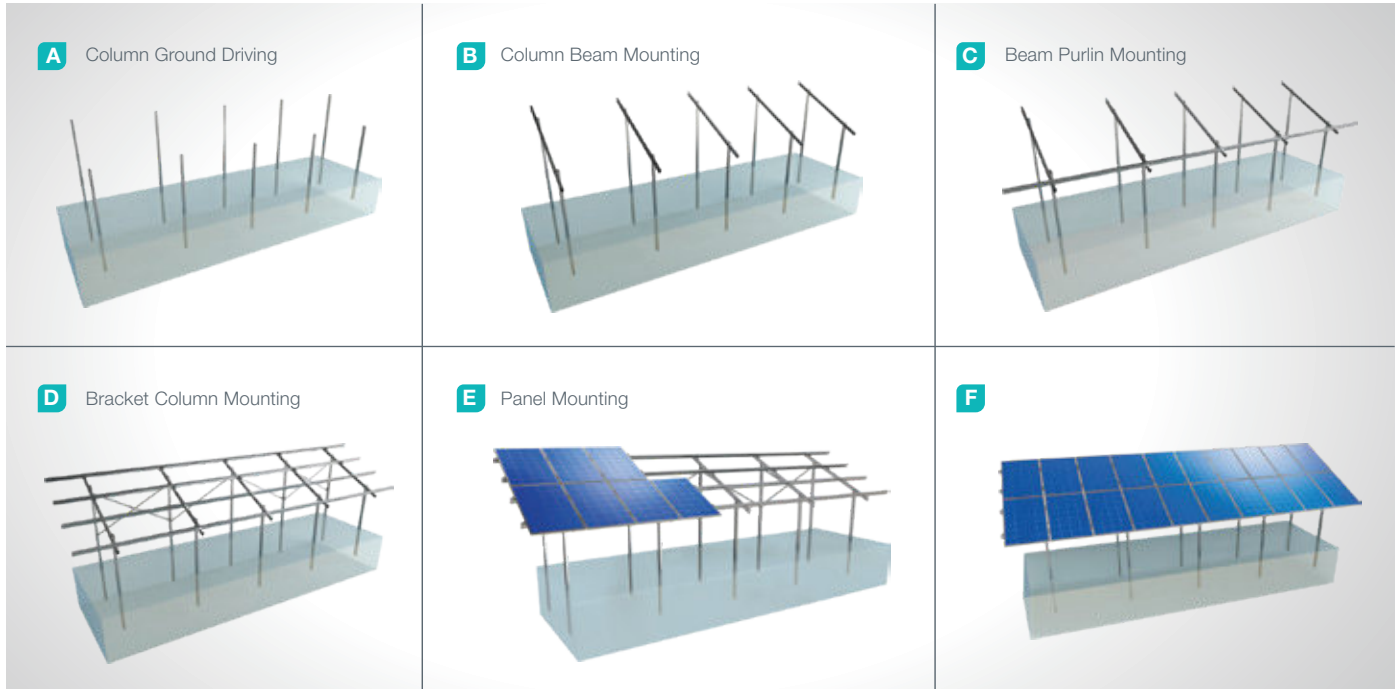
- **U-40X34**  
M12X30 Hex Bolt  
M12 Flanged Nut  
M12 Washer  
M8/M12 Spring Washer

#### PANEL CENTER RETAINER



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable solutions for combiner box and inverter installation
- Tailored design solutions for customer
- Customer oriented engineering solutions

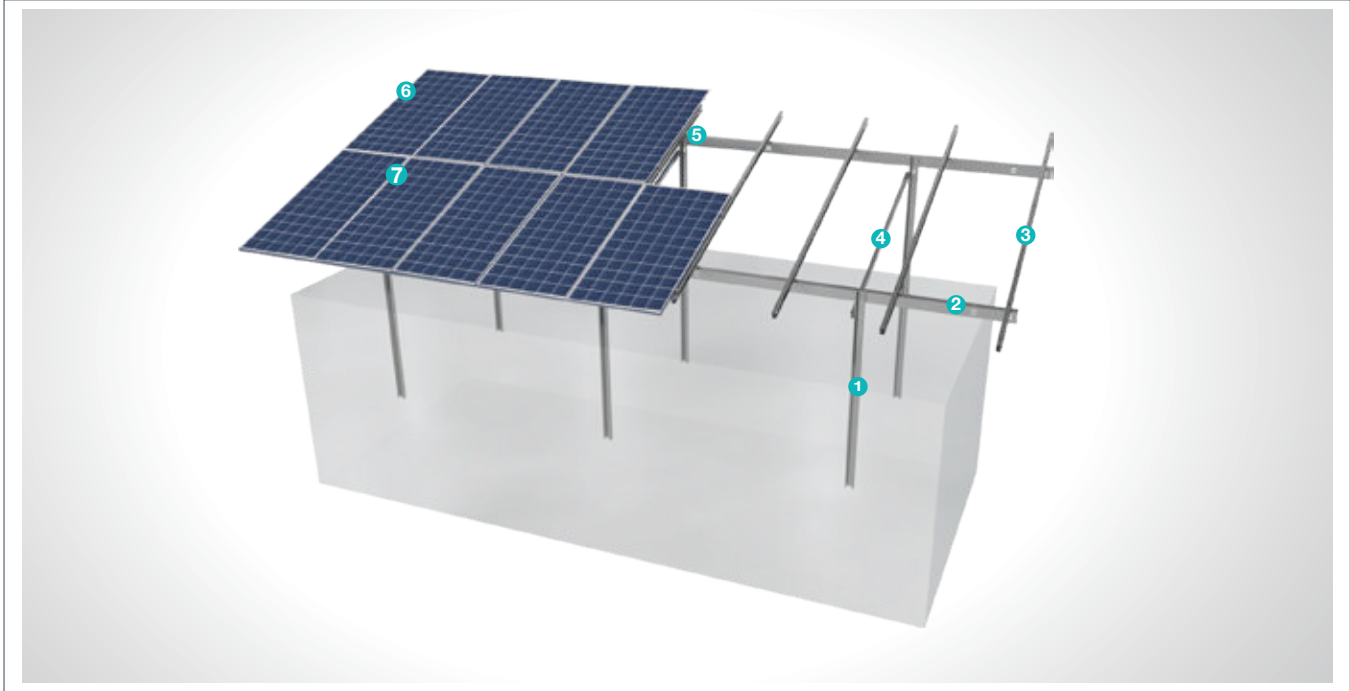
## Technical Specifications

Description:	(KPT1) Ground Driven Steel Mounting System with 2 Vertical Panels
Mounting Method:	Ground Driving
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT1B) Ground Driven Steel Mounting System with 2 Vertical Panels

### Overview

**KPT1B**, is a ground driven steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains . After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### Steel Column

1



- **CC-90 / CC-100 / CC-120**
- M12x30 Hex Head Bolt
- M12 Washer
- M12 Spring Washer
- M12 Flanged Nut

#### Steel Beam

2



- **CC-100 / CC-110 / CC-120**
- M12x30 Hex Head Bolt
- M12 Washer
- M12 Spring Washer
- M12 Flanged Nut
- M8x25 Hex Head Bolt
- M8 Washer
- M8 Spring Washer
- M8 Flanged Nut

#### Steel Purlin

3



- **CC-80 / CC-90 / CC-100 / CC-120**
- M12x30 Hex Head Bolt
- M12 Washer
- M12 Spring Washer
- M12 Flanged Nut

#### Steel Support

4



- **U- 40X34**
- M12x30 Hex Head Bolt
- M12 Washer
- M12 Spring Washer
- M12 Flanged Nut

#### Connector Joining Piece

5



- **C90 / C100 / C110**
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### Panel Side Retainer

6



- **H30-H32-H40**
- M8X50 Socket Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

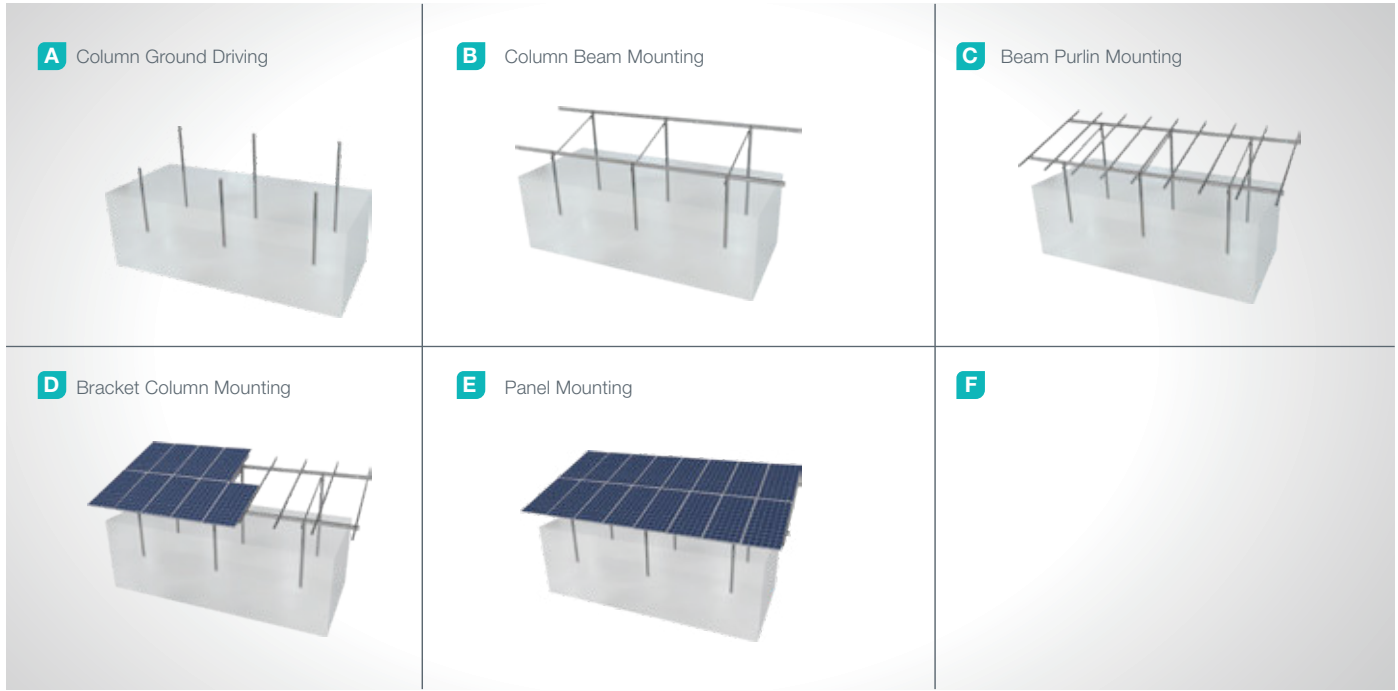
#### Panel Middle Retainer

7



- **L60**
- M8X30 Imbus Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable solutions for combiner box and inverter installation
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

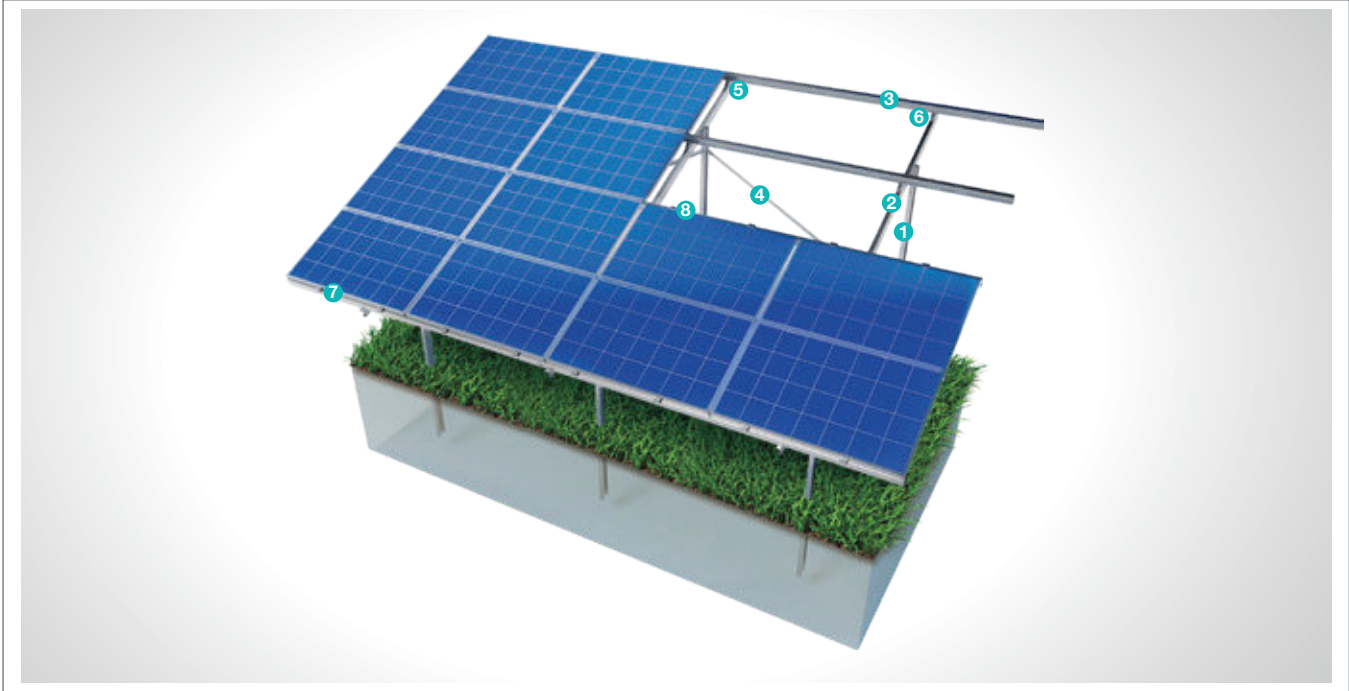
Description:	(KPT1B) Ground Driven Steel Mounting System with 2 Vertical Panels
Mounting Method:	Ground Driving
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021



## (KPT2) Ground Driven Steel Mounting System with 4 Horizontal Panels

### Overview

**KPT2**, is a ground driven steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN



- **CK-90 / CK-100 / CK-120**  
M12x30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X30 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL PURLIN



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X30 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL SUPPORT



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR PIECE



- **U40**  
M8X30 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL SIDE RETAINER



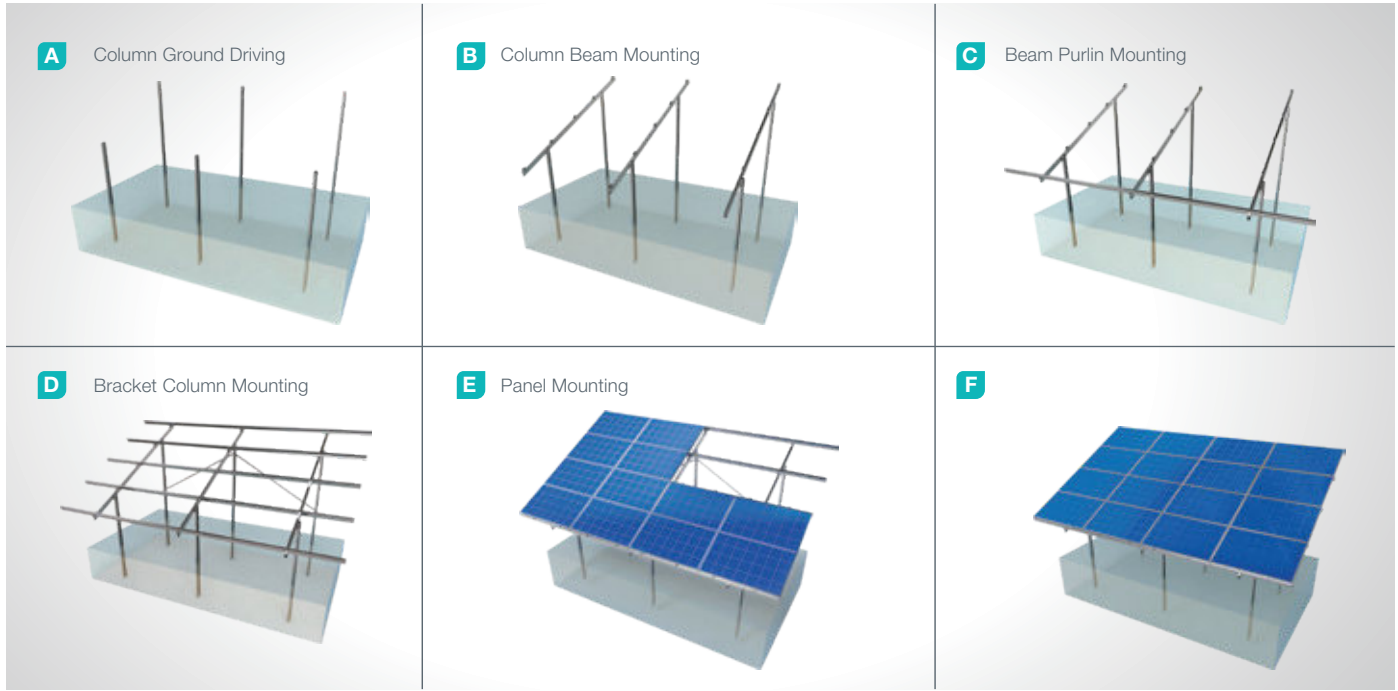
- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL CENTER RETAINER



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable solutions for combiner box and inverter installation
- Tailored design solutions for customer
- Customer oriented engineering solutions

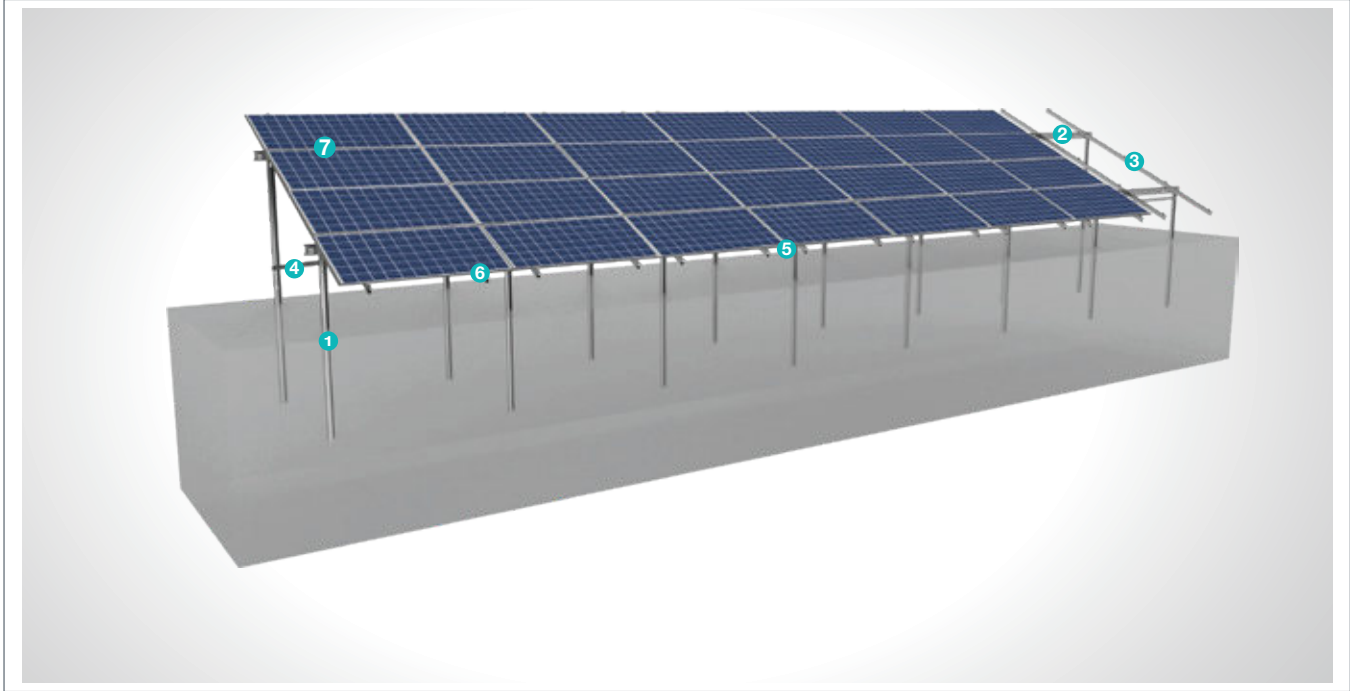
## Technical Specifications

Description:	(KPT2) Ground Driven Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Ground Driving
Tilt angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## (KPT2B) Ground Driven Steel Mounting System with 4 Horizontal Panels

### Overview

**KPT2B**, is a ground driven steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### Steel Column



- **CC-90 / CC-100 / CC-120**  
M12x30 Hex Head Bolt  
M12 Washer  
M12 Spring Washer  
M12 Flanged Nut

#### Steel Beam



- **CC-100 / CC-110 / CC-120**  
M12x30 Hex Head Bolt  
M12 Washer  
M12 Spring Washer  
M12 Flanged Nut  
M8x25 Socket Head Bolt  
M8 Washer  
M8 Spring Washer  
M8 Flanged Nut

#### Steel Purlin



- **CC-80 / CC-90 / CC-100 / CC-120**  
M12x30 Hex Head Bolt  
M12 Washer  
M12 Spring Washer  
M12 Flanged Nut

#### Steel Support



- **U-40X34**  
M12x30 Hex Head Bolt  
M12 Washer  
M12 Spring Washer  
M12 Flanged Nut

#### Connector Joining Piece



- **C90 / C100 / C110**  
M12x30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

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#### Panel Side Retainer



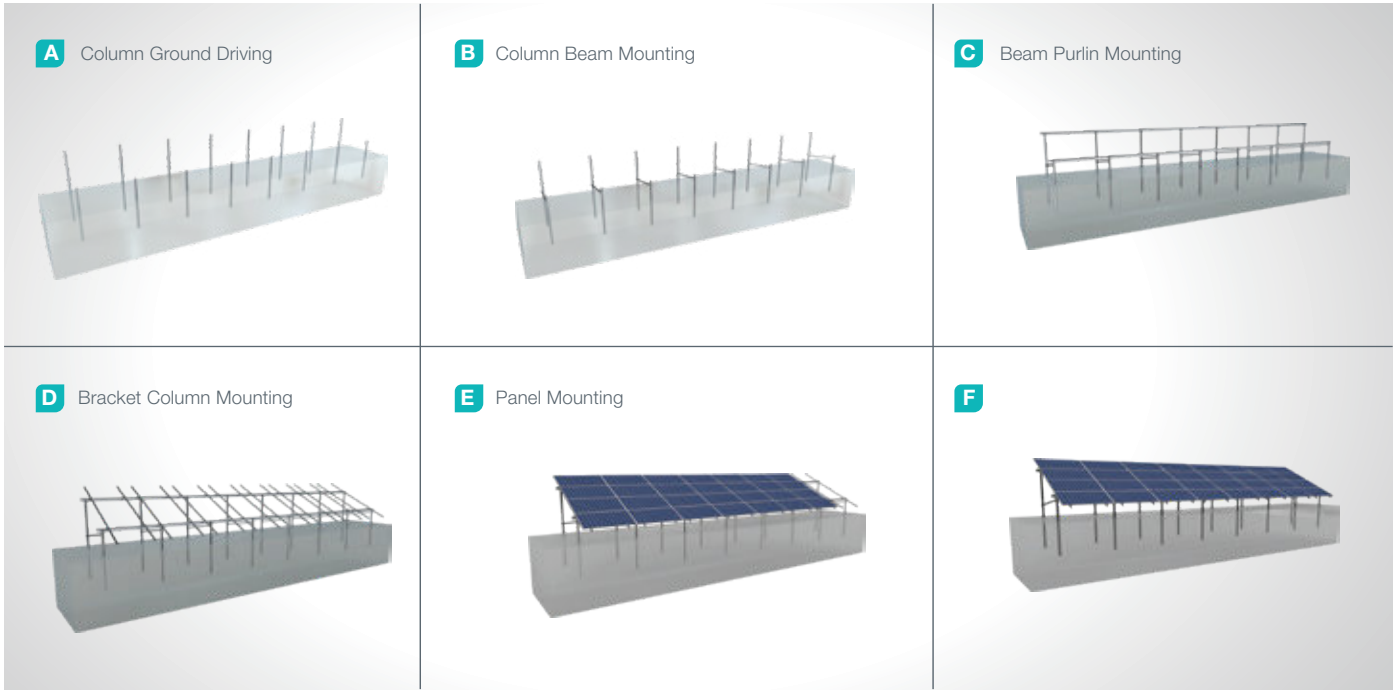
- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### Panel Middle Retainer



- **L70**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable solutions for combiner box and inverter installation
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

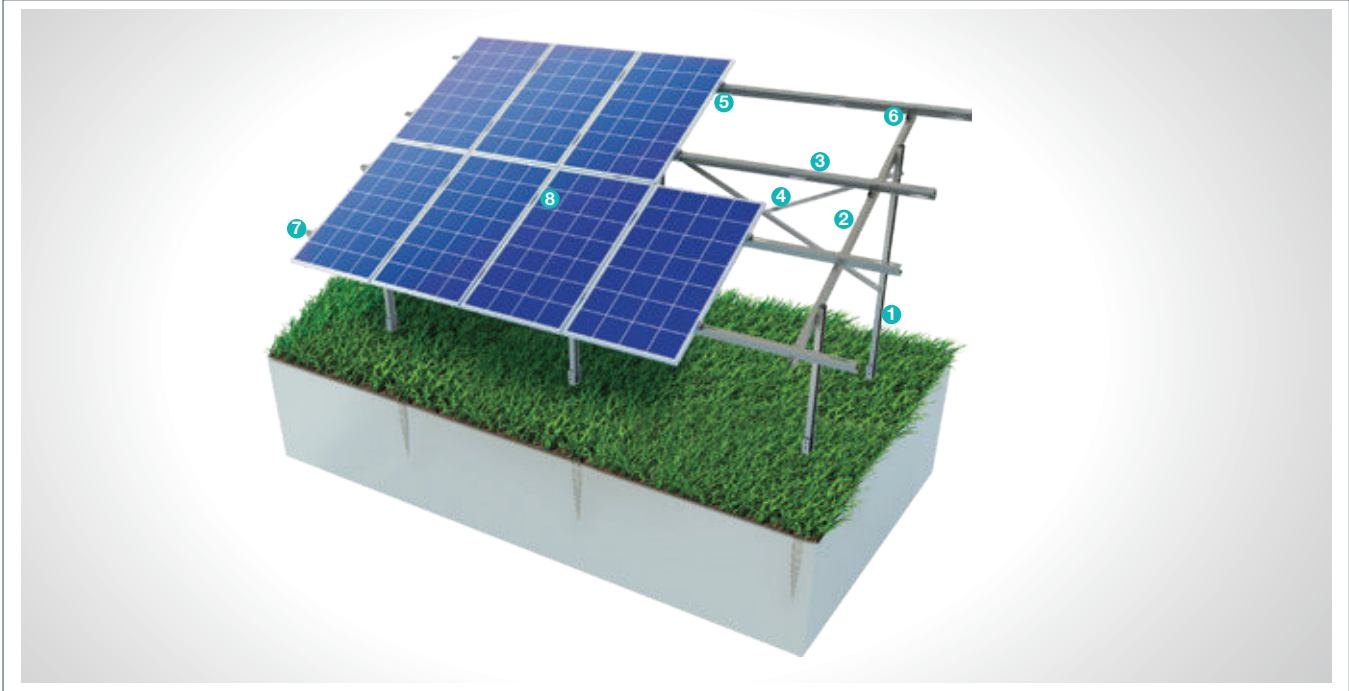
Description:	(KPT2B) Ground Driven Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Ground Driving
Tilt angle:	0-60 Degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021



## (KPT3) Ground Screwed Steel Mounting System with 2 Vertical Panels

### Overview

KPT3, is a steel support and mounting system for open terrain solar panels with 2 vertical panels installed to the ground with screw piles. The system is an optimal application solution for installations of PV projects on irregular terrains. The screw piles have high strength properties and can be used any time of the year for application purposes. They are not affected by vibrations generated by ambient conditions such as wind or storm due to their high load strength. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- **U40**  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

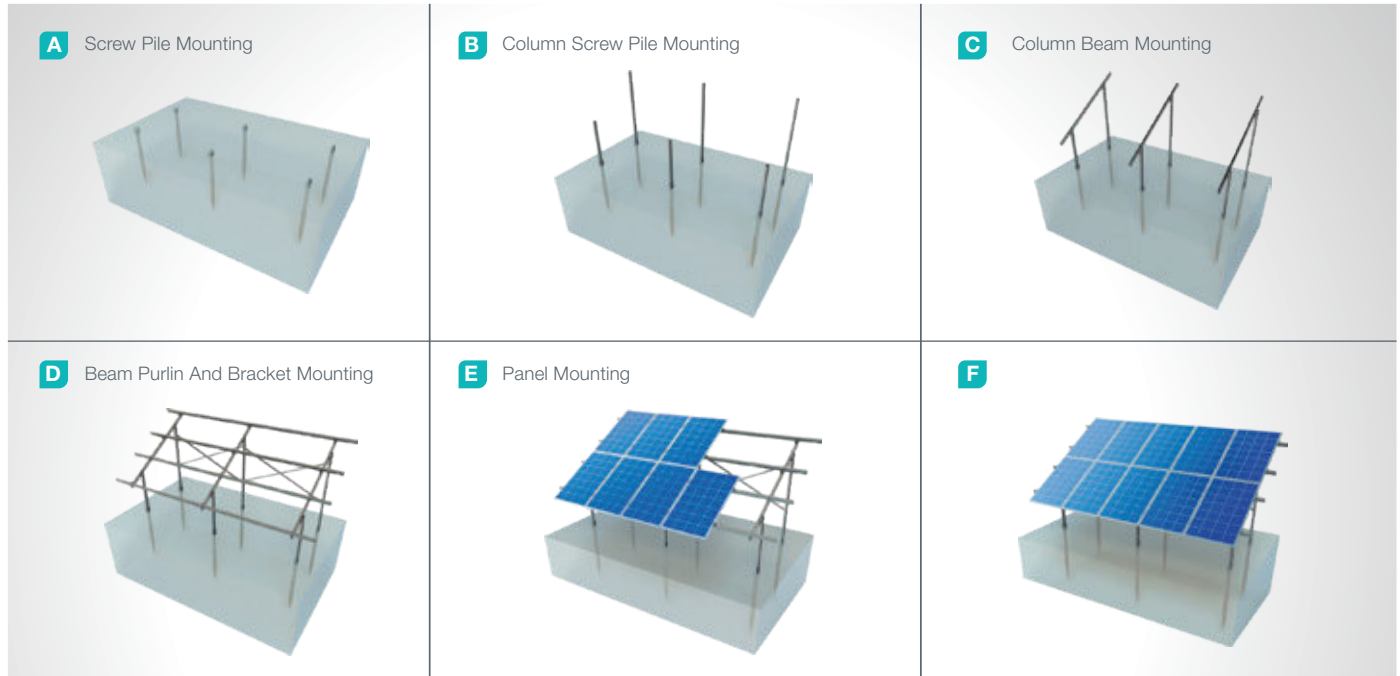
#### PANEL CENTER RETAINER

8



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Screw Piles do not require preliminary drilling and concrete
- All year round mounting capability
- Assembly can be commenced immediately
- After screw pile mounting on ground
- Re-use opportunity in some cases
- Screw pile vibration damping
- Tailored design solutions for customer
- Customer oriented engineering solutions

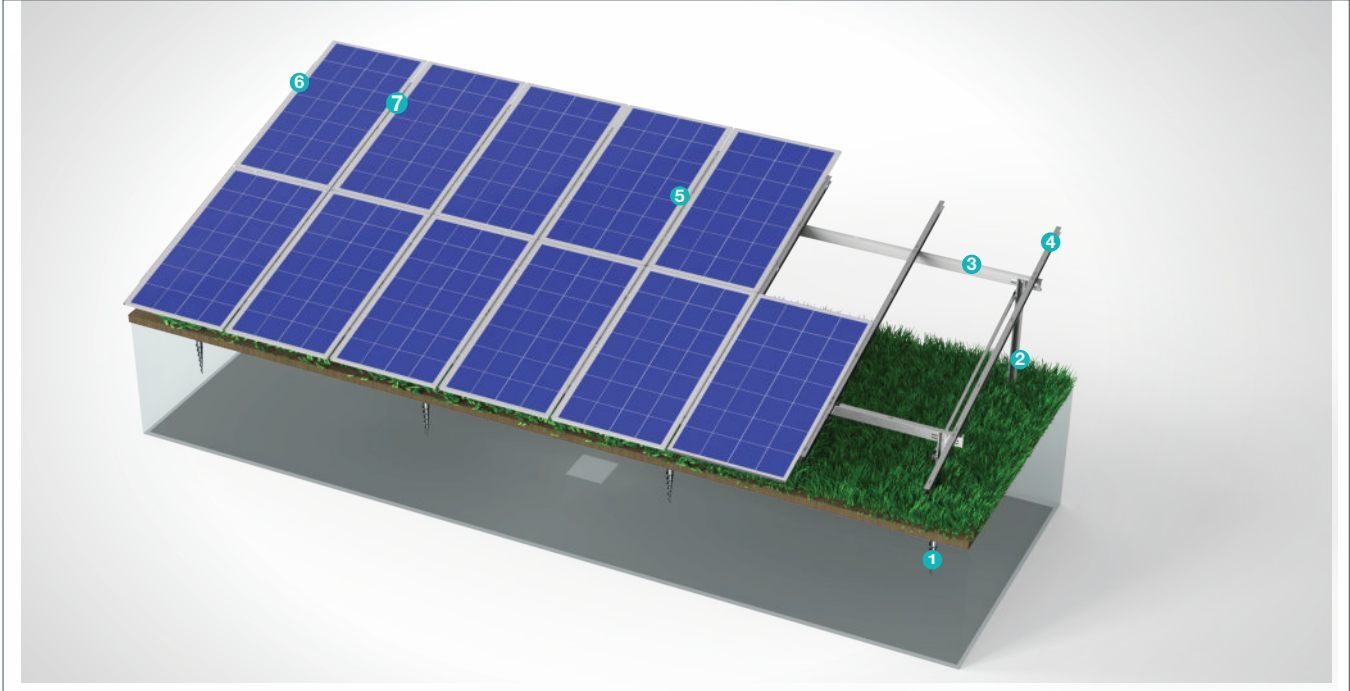
## Technical Specifications

Description:	(KPT3) Ground Screwed Steel Mounting System with 2 Vertical Panels
Mounting Method:	Ground Screwing
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT3B) Ground Screwed Steel Mounting System with 2 Vertical Bifacial Panels

### Overview

**KPT3B**, is a steel support and mounting system for open terrain solar panels with 2 vertical panels installed to the ground with screw piles. The system is an optimal application solution for installations of PV projects on irregular terrains. The screw piles have high strength properties and can be used any time of the year for application purposes. They are not affected by vibrations generated by ambient conditions such as wind or storm due to their high load strength. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL CENTER RETAINER



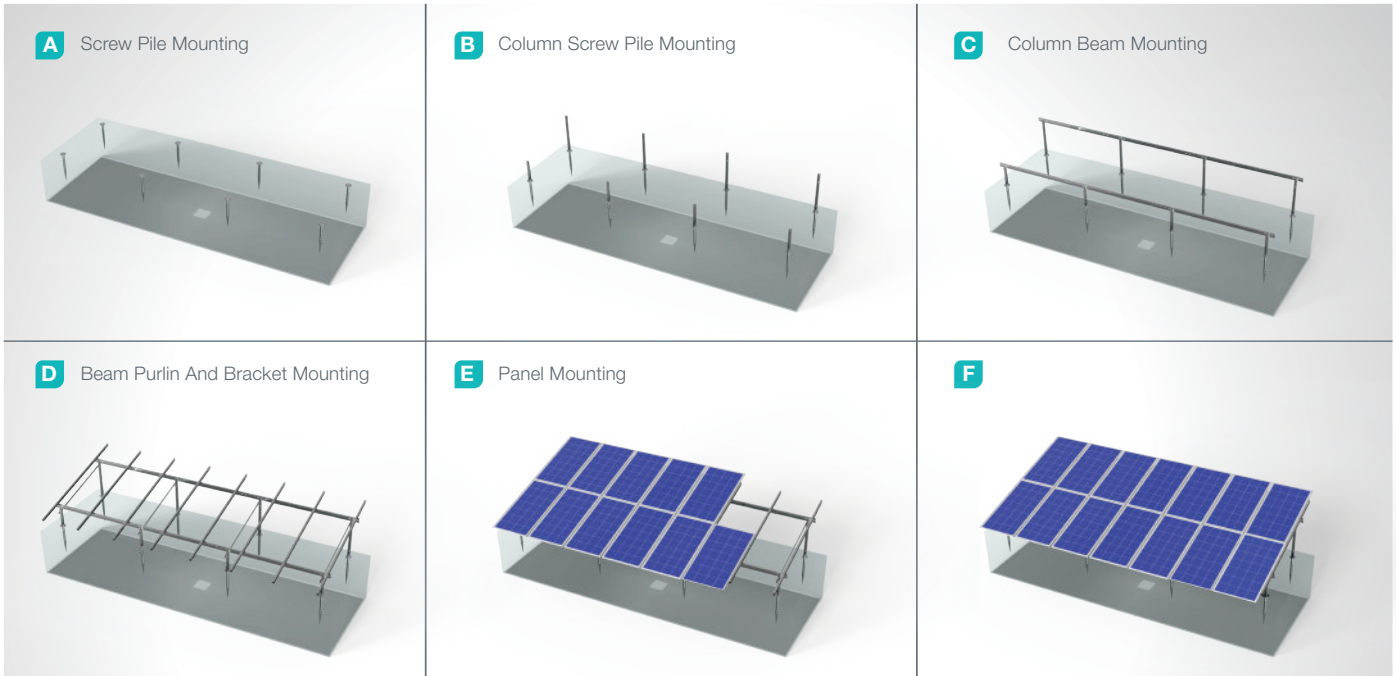
- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Screw Piles do not require preliminary drilling and concrete
- All year round mounting capability
- Assembly can be commenced immediately
- After screw pile mounting on ground
- Re-use opportunity in some cases
- Screw pile vibration damping
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

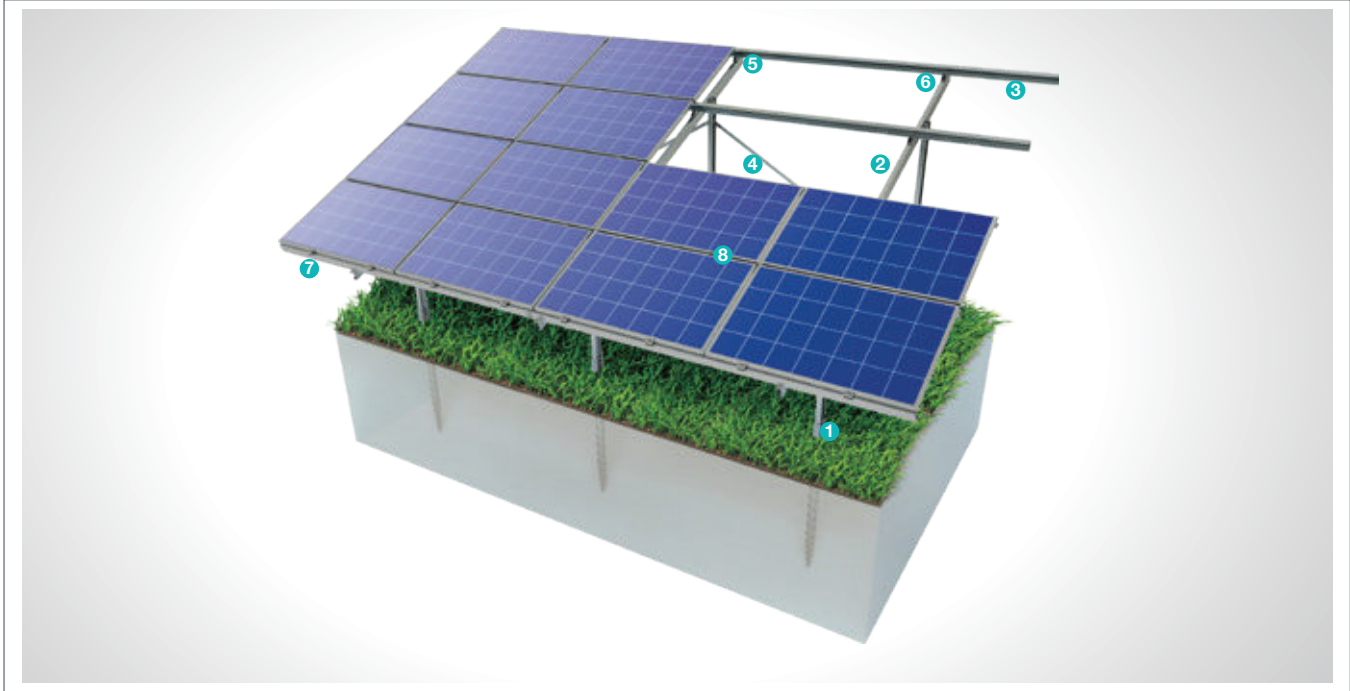
Description:	(KPT3B) Ground Screwed Steel Mounting System with 2 Vertical Panels
Mounting Method:	Ground Screwing
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021



## (KPT4) Ground Screwed Steel Mounting System with 4 Horizontal Panels

### Overview

KPT4, is a ground driven steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on irregular terrains. The screw piles have high strength properties and can be used any time of the year for application purposes. They are not affected by vibrations generated by ambient conditions such as wind or storm due to their high load strength. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- CK-90 / CK-100 / CK-120  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- CR-100 / CR-120  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL PURLIN

3



- CA-90 / CA-100 / CA-110  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL SUPPORT

4



- U-40X34  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- C-90 / C-100 / C-110  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- U40  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL SIDE RETAINER

7



- H30-H32-H40  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

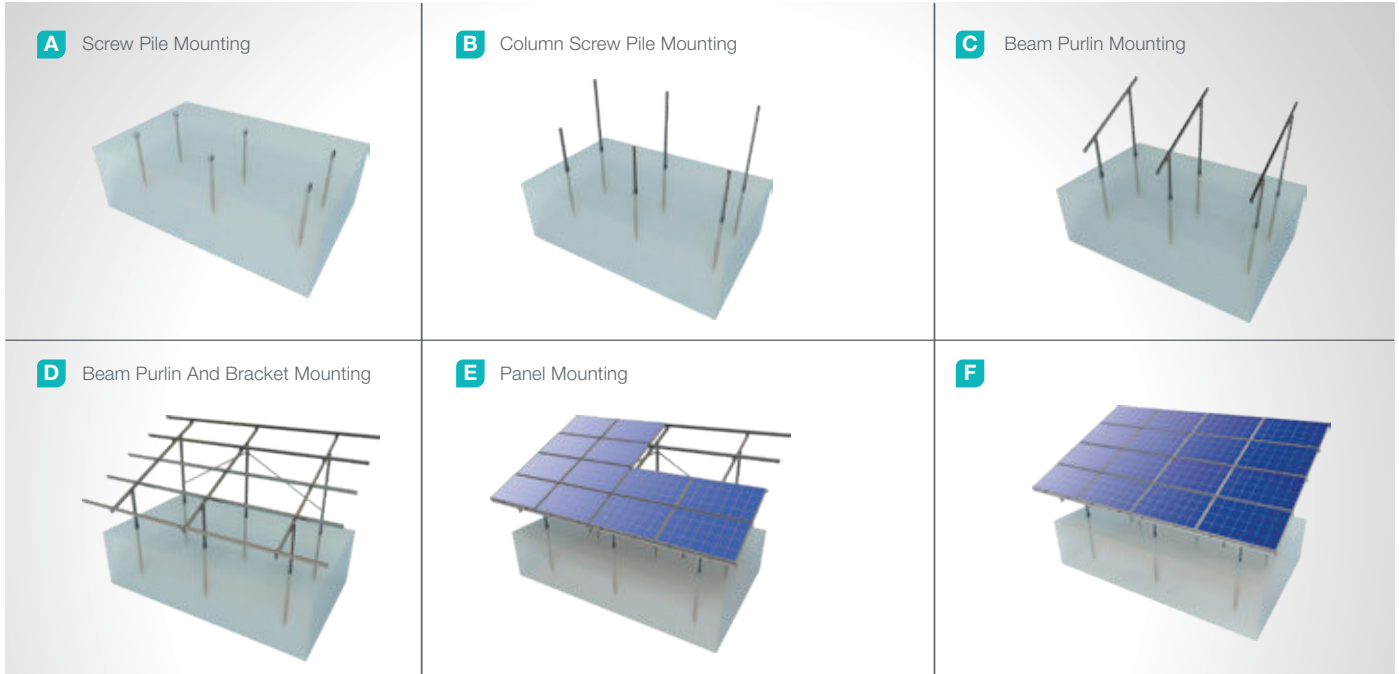
#### PANEL CENTER RETAINER

8



- L60  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Screw Piles do not require preliminary drilling and concrete
- All year round mounting capability
- Assembly can be commenced immediately
- After screw pile mounting on ground
- Re-use opportunity in some cases
- Screw pile vibration damping
- Tailored design solutions for customer
- Customer oriented engineering solutions

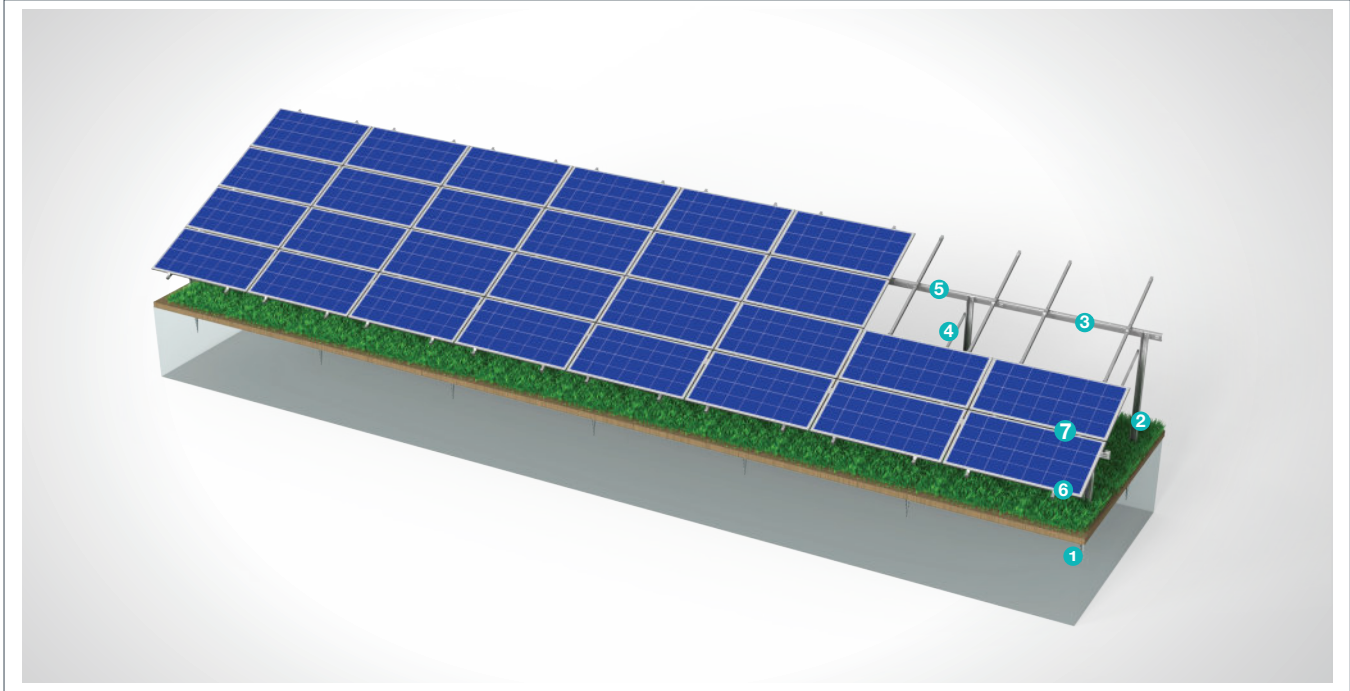
## Technical Specifications

Description:	(KPT4) Ground Screwed Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Ground Screwing
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT4B) Ground Screwed Steel Mounting System with 4 Horizontal Panels

### Overview

KPT4B, is a ground driven steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on irregular terrains. The screw piles have high strength properties and can be used any time of the year for application purposes. They are not affected by vibrations generated by ambient conditions such as wind or storm due to their high load strength. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PANEL SIDE RETAINER

6



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

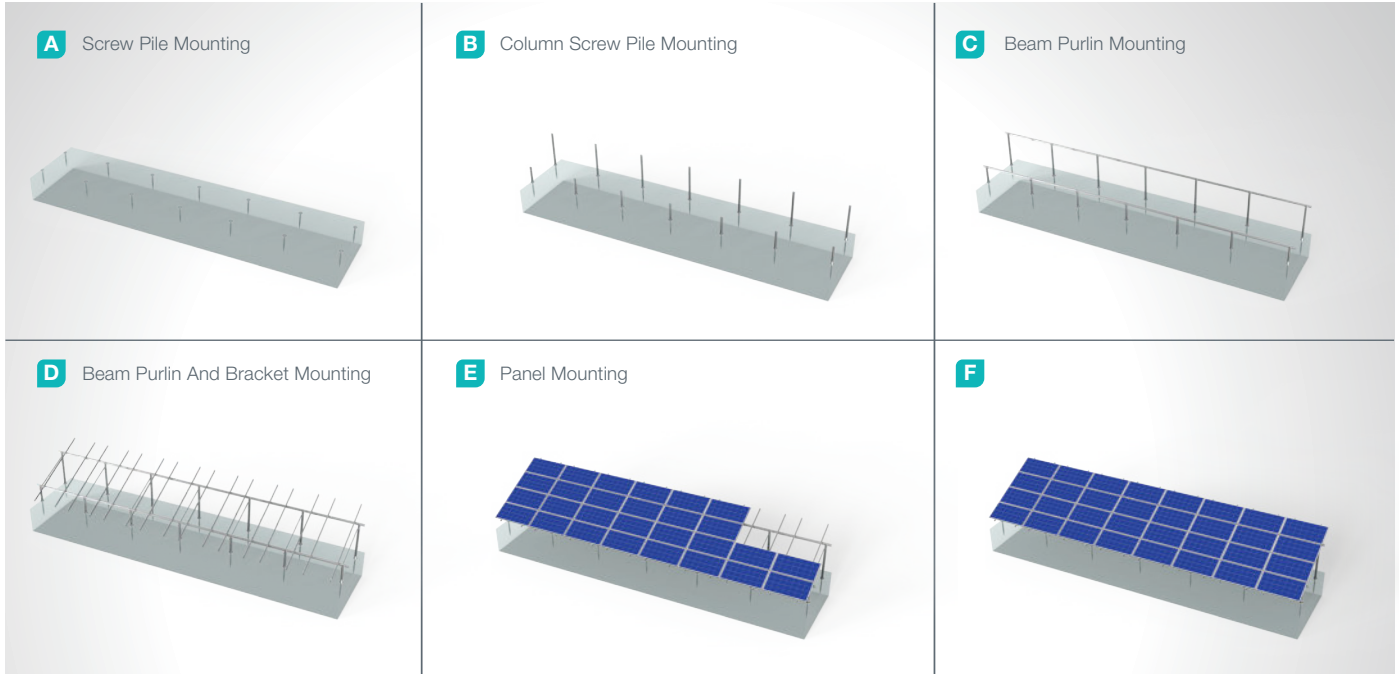
#### PANEL CENTER RETAINER

7



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Screw Piles do not require preliminary drilling and concrete
- All year round mounting capability
- Assembly can be commenced immediately
- After screw pile mounting on ground
- Re-use opportunity in some cases
- Screw pile vibration damping
- Tailored design solutions for customer
- Customer oriented engineering solutions

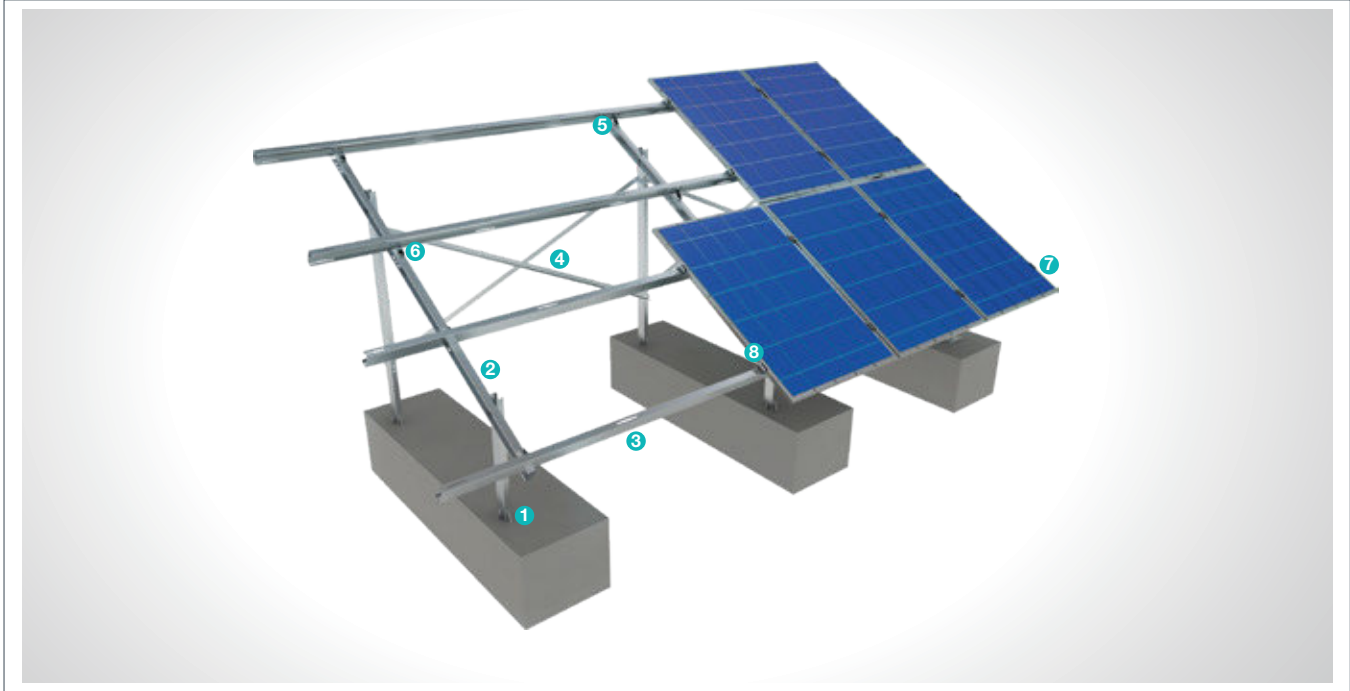
## Technical Specifications

Description:	(KPT4B) Ground Screwed Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Ground Screwing
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT5) Concrete Base Anchored Steel Mounting System with 2 Vertical Panels

### Overview

**KPT5**, is a concrete base anchored steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on sloped medium and large sized terrains. It provides the necessary strength and stability for application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- **U40**  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PANEL CENTER RETAINER

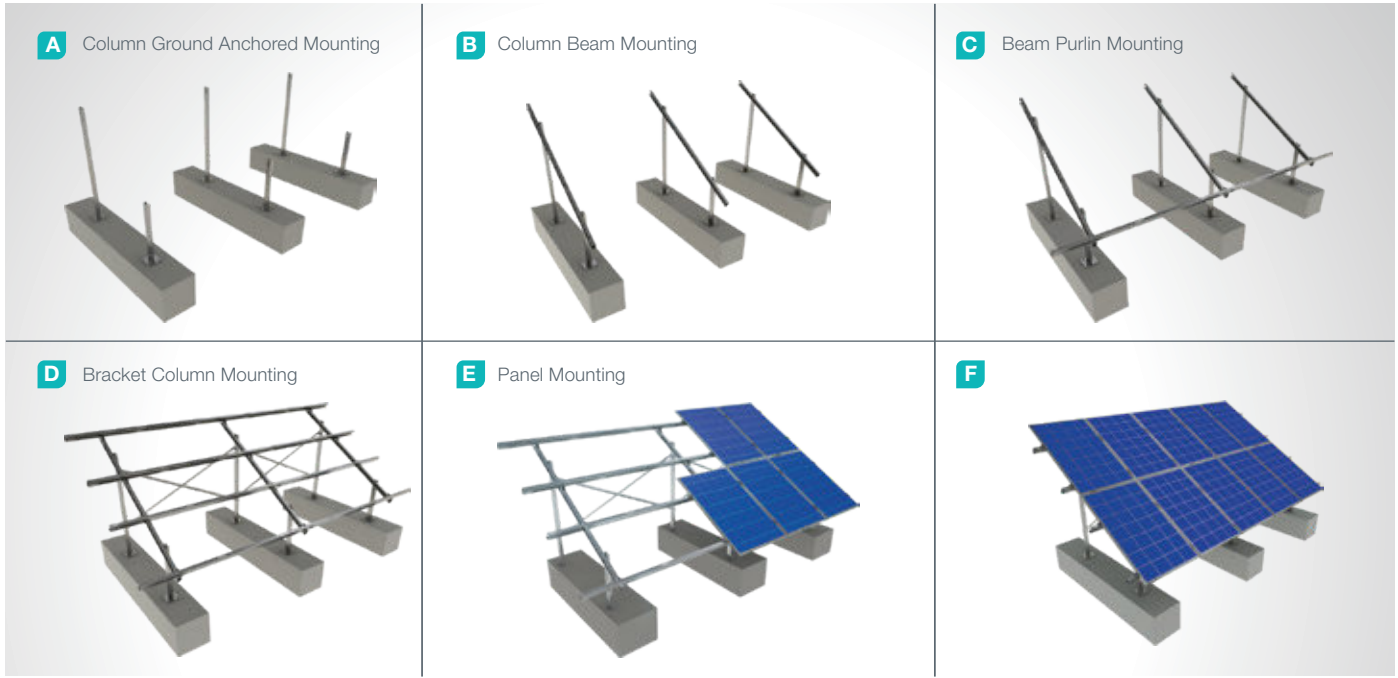
8



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable for loose ground
- Suitable for slopped terrains
- Tailored design solutions for customer
- Customer oriented engineering solutions

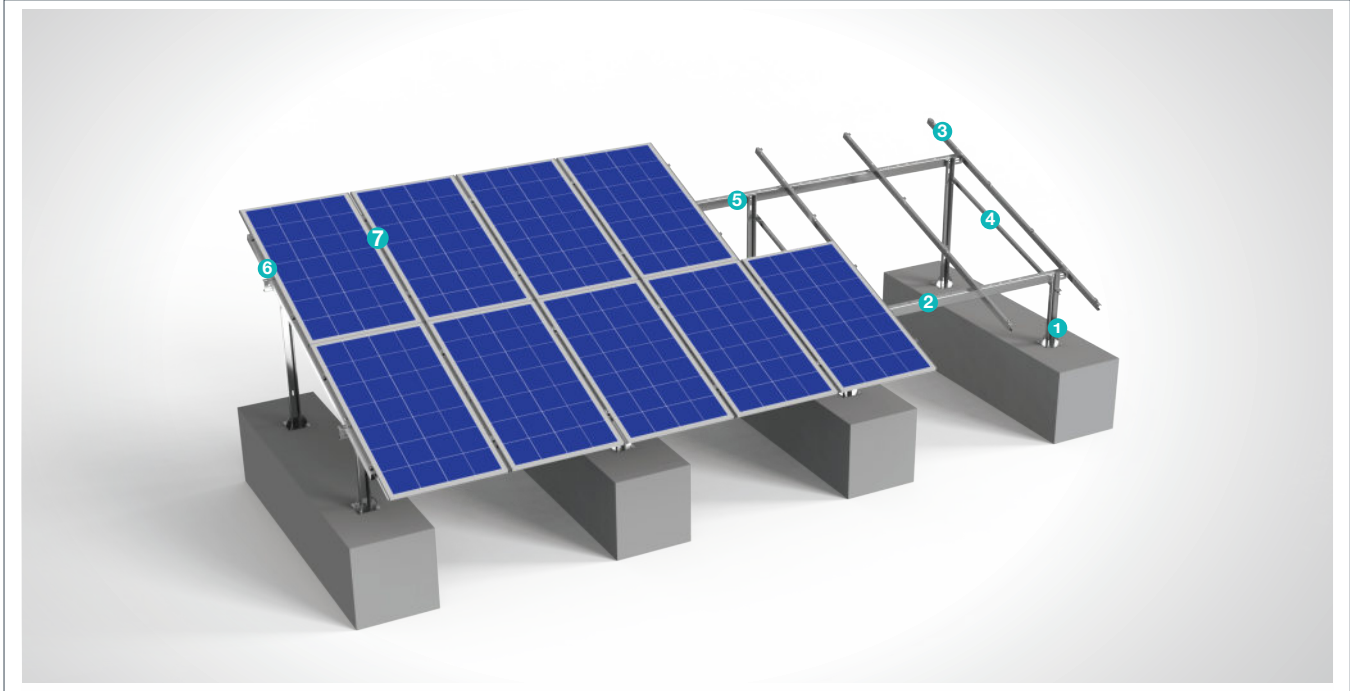
## Technical Specifications

Description:	(KPT5) Concrete Base Anchored Steel Mounting System with 2 Vertical Panels
Mounting Method:	Anchor on Concrete Base
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## (KPT5B) Concrete Base Anchored Steel Mounting System with 2 Vertical Bifacial Panels

### Overview

KPT5B is a concrete base anchored steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on sloped medium and large sized terrains. It provides the necessary strength and stability for application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- CK-90 / CK-100 / CK-120  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- CR-100 / CR-120  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL PURLIN

3



- CA-90 / CA-100 / CA-110  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### STEEL SUPPORT

4



- U-40X34  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- C-90 / C-100 / C-110  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PANEL SIDE RETAINER

6



- H30-H32-H40  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL CENTER RETAINER

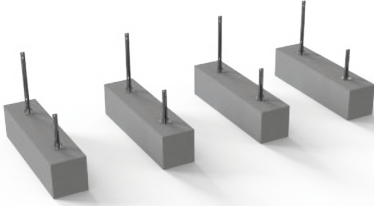
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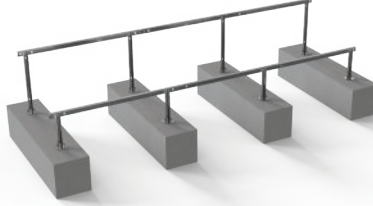
- L60  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase

**A** Column Ground Anchored Mounting



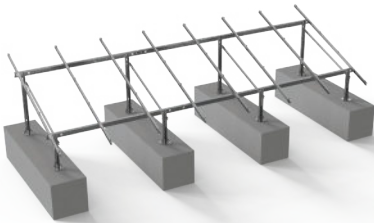
**B** Column Beam Mounting



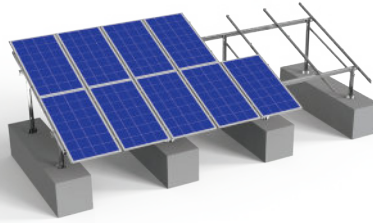
**C** Beam Purlin Mounting



**D** Bracket Column Mounting



**E** Panel Mounting



**F**



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable for loose ground
- Suitable for slopped terrains
- Tailored design solutions for customer
- Customer oriented engineering solutions

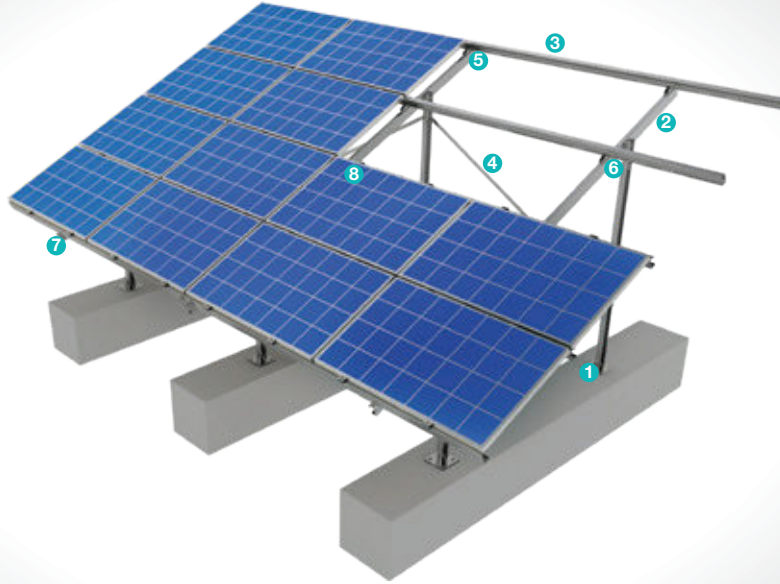
## Technical Specifications

Description:	(KPT5B) Concrete Base Anchored Steel Mounting System with 2 Vertical Panels
Mounting Method:	Anchor on Concrete Base
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## (KPT6) Concrete Base Anchored Steel Mounting System with 4 Horizontal Panels

### Overview

KPT6, is a concrete base anchored steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on slopped medium and large sized terrains. It provides the necessary strength and stability for application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- CK-90 / CK-100 / CK-120
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- C-90 / C-100 / C-110
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### STEEL BEAM

2



- CR-100 / CR-120
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M8X25 Hex Head Bolt
- M8 Flanged Nut
- M8/M12 Washer
- M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- U40
- M8X25 Hex Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

#### STEEL PURLIN

3



- CA-90 / CA-100 / CA-110
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M8X25 Hex Head Bolt
- M8 Flanged Nut
- M8/M12 Washer
- M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



- H30-H32-H40
- M8X50 Socket Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

#### STEEL SUPPORT

4



- U-40X34
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### PANEL CENTER RETAINER

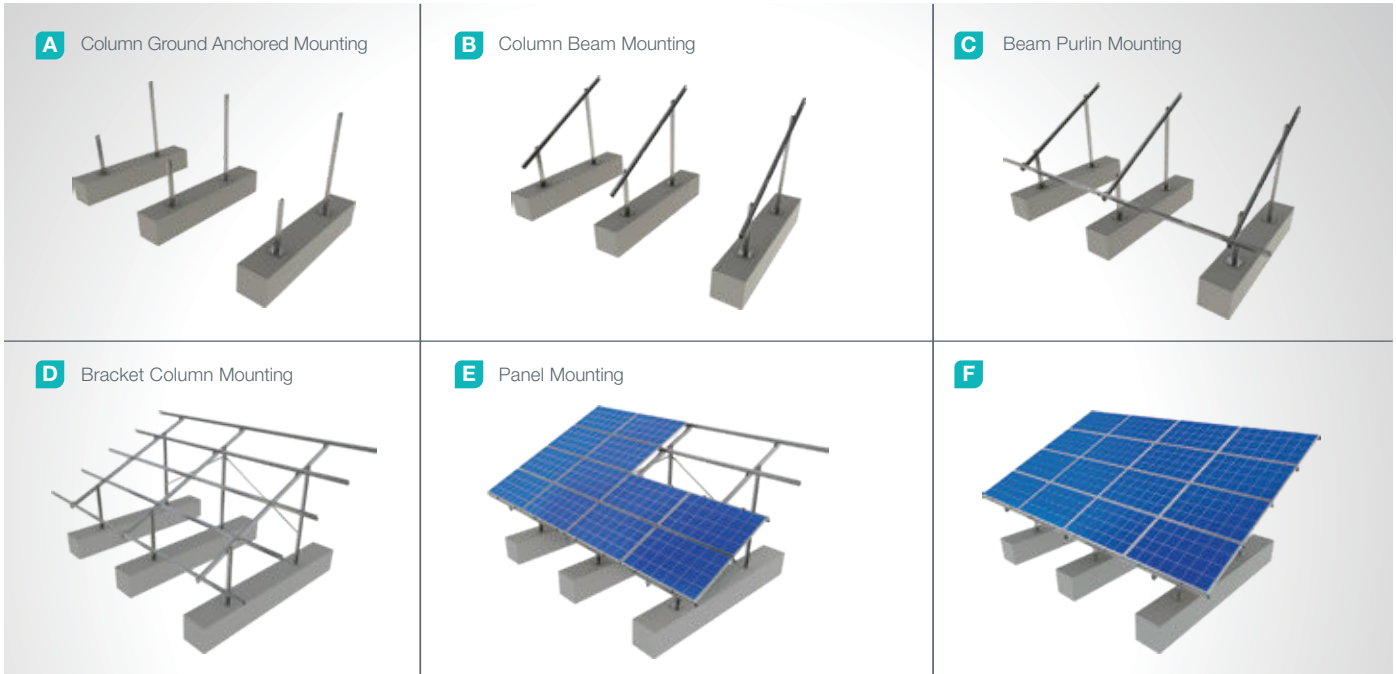
8



- L60
- M8X50 Socket Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable for loose ground
- Suitable for slopped terrains
- Tailored design solutions for customer
- Customer oriented engineering solutions

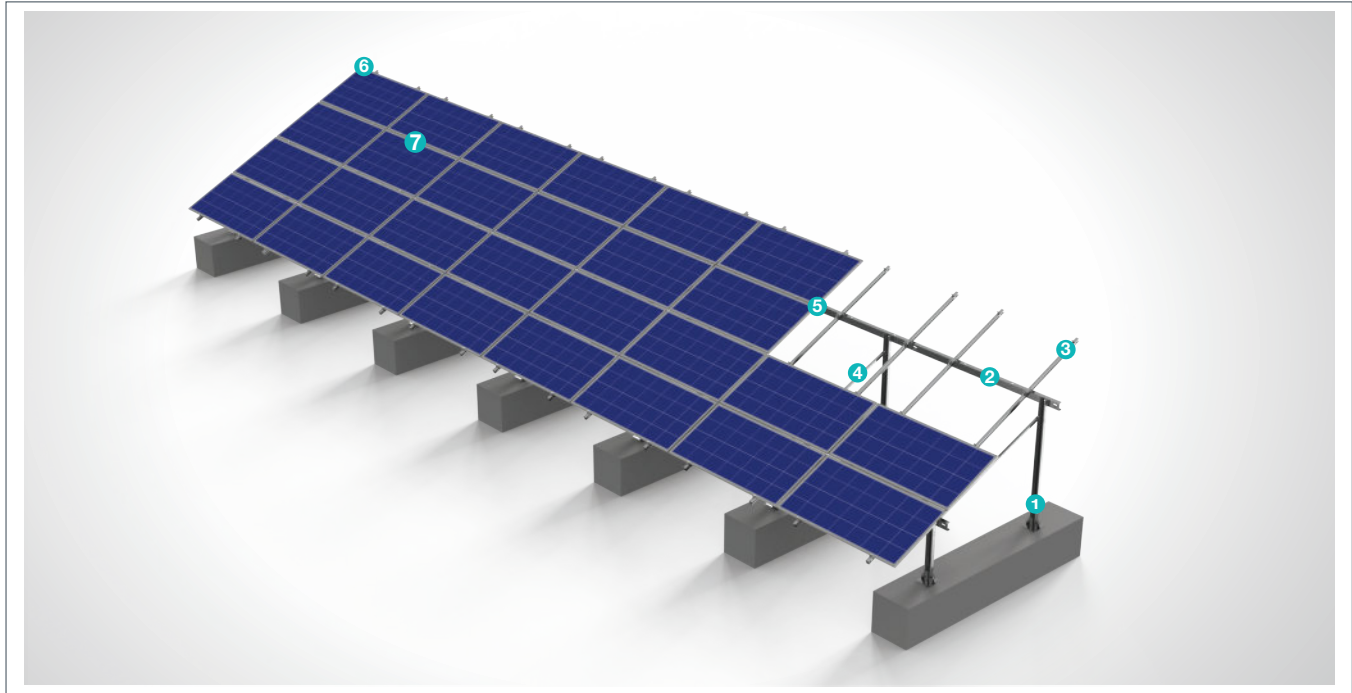
## Technical Specifications

Description:	(KPT6) Concrete Base Anchored Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Anchor on Concrete Base
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT6B) Concrete Base Anchored Steel Mounting System with 4 Horizontal Panels

### Overview

KPT6B is a concrete base anchored steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on slopped medium and large sized terrains. It provides the necessary strength and stability for application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- CK-90 / CK-100 / CK-120
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- C-90 / C-100 / C-110
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

#### STEEL BEAM

2



- CR-100 / CR-120
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M8X25 Hex Head Bolt
- M8 Flanged Nut
- M8/M12 Washer
- M8/M12 Spring Washer

#### PANEL SIDE RETAINER

6



- H30-H32-H40
- M8X50 Socket Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

#### STEEL PURLIN

3



- CA-90 / CA-100 / CA-110
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M8X25 Hex Head Bolt
- M8 Flanged Nut
- M8/M12 Washer
- M8/M12 Spring Washer

#### PANEL CENTER RETAINER

7



- L60
- M8X50 Socket Head Bolt
- M8 Flanged Nut
- M8 Washer
- M8 Spring Washer

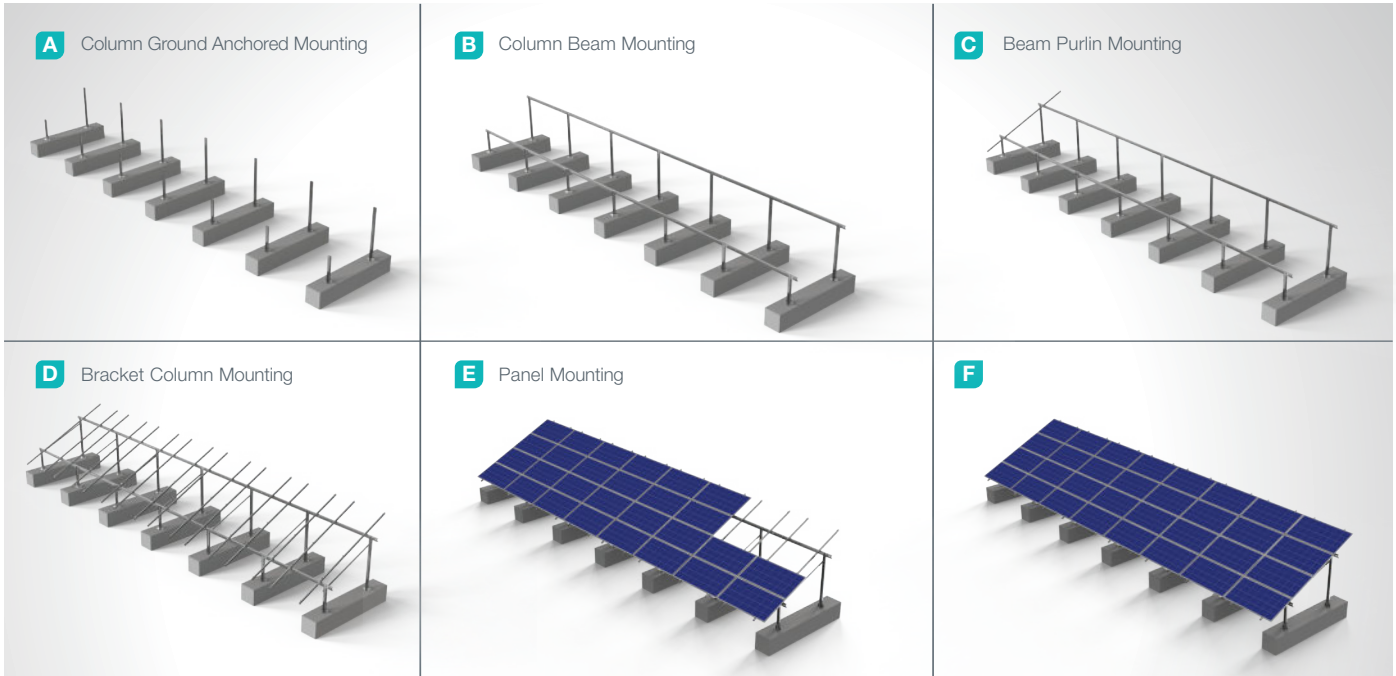
#### STEEL SUPPORT

4



- U-40X34
- M12X30 Hex Head Bolt
- M12 Flanged Nut
- M12 Washer
- M12 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Suitable for loose ground
- Suitable for slopped terrains
- Tailored design solutions for customer
- Customer oriented engineering solutions

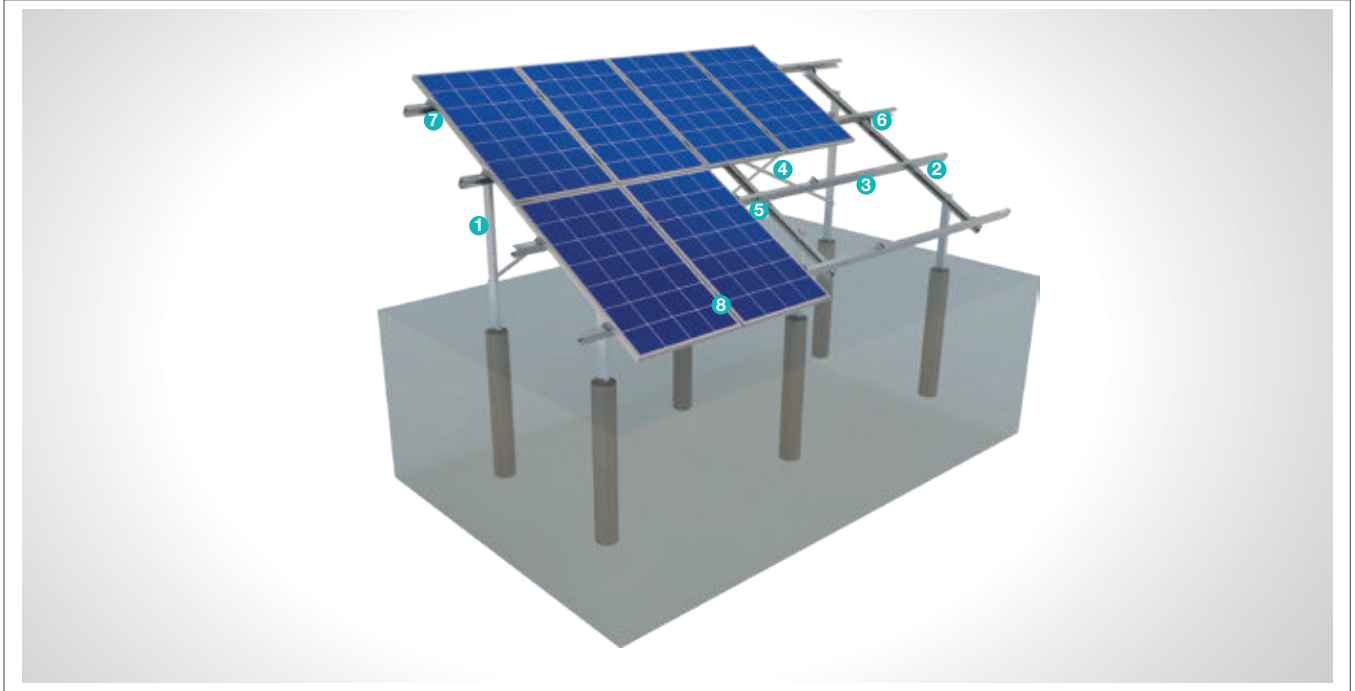
## Technical Specifications

Description:	(KPT6B) Concrete Base Anchored Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Anchor on Concrete Base
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT7) Concrete Embedded Steel Mounting System with 2 Vertical Panels

### Overview

**KPT7**, is a concrete embedded steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on medium and large sized terrains with loose ground. Necessary strength is achieved by application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- **U40**  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PANEL CENTER RETAINER

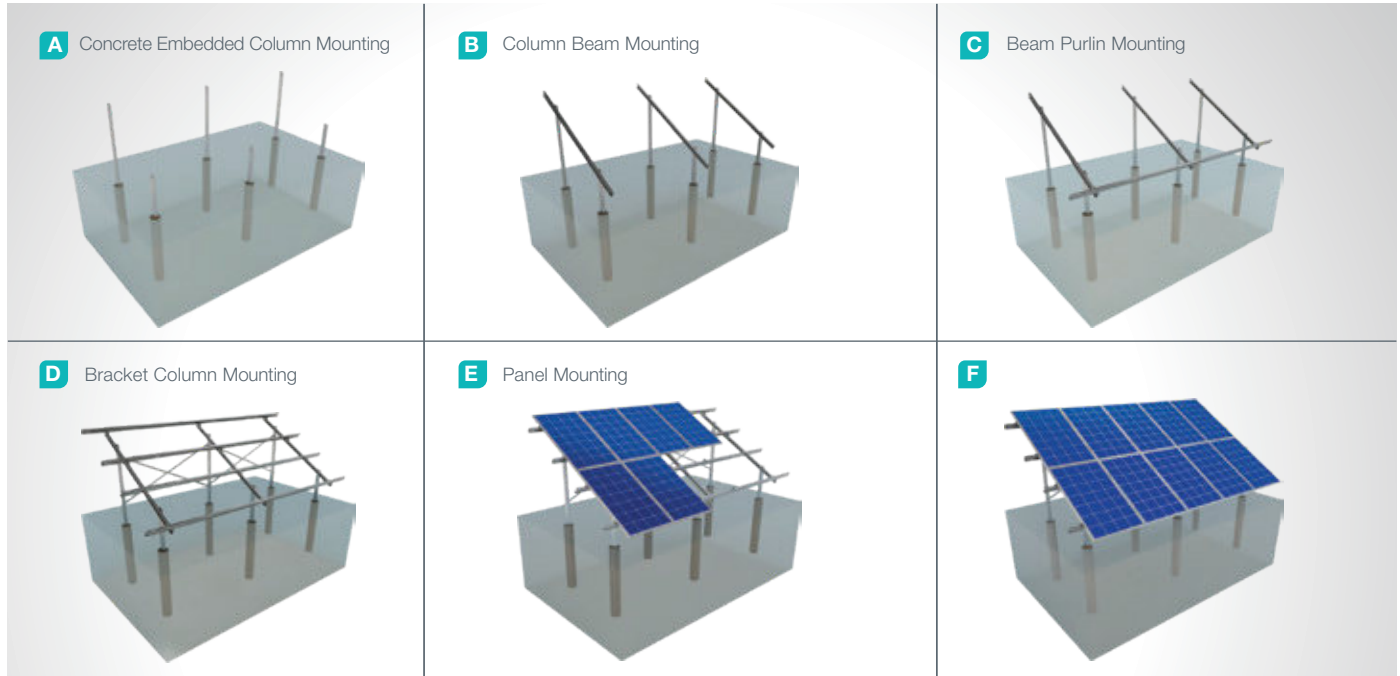
8



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable solutions for combiner box and inverter installation
- Suitable solutions for different terrains
- Suitable for loose ground
- Tailored design solutions for customer
- Customer oriented engineering solutions

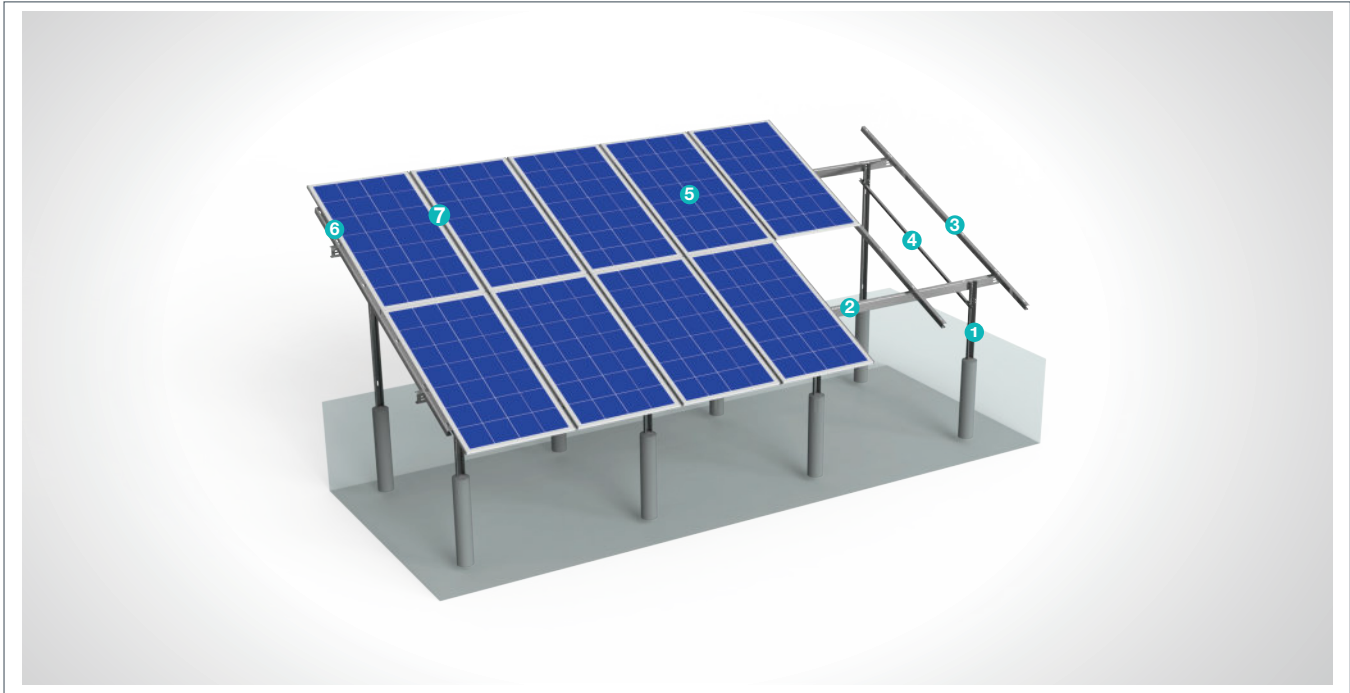
## Technical Specifications

Description:	(KPT7) Concrete Embedded Steel Mounting System with 2 Vertical Panels
Mounting Method:	Concrete Embedded Column
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT7B) Concrete Embedded Steel Mounting System with 2 Vertical Bifacial Panels

### Overview

KPT7B is a concrete embedded steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on medium and large sized terrains with loose ground. Necessary strength is achieved by application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

6



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL CENTER RETAINER

7



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

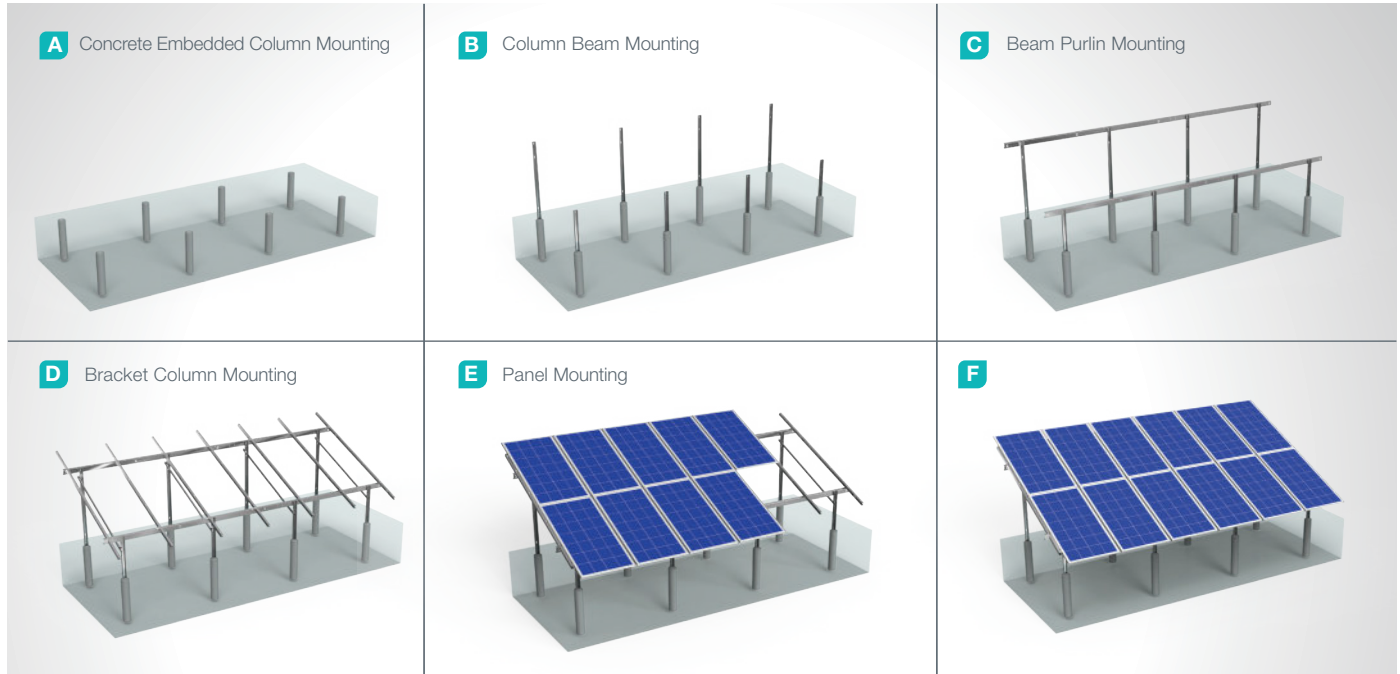
#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable solutions for combiner box and inverter installation
- Suitable solutions for different terrains
- Suitable for loose ground
- Tailored design solutions for customer
- Customer oriented engineering solutions

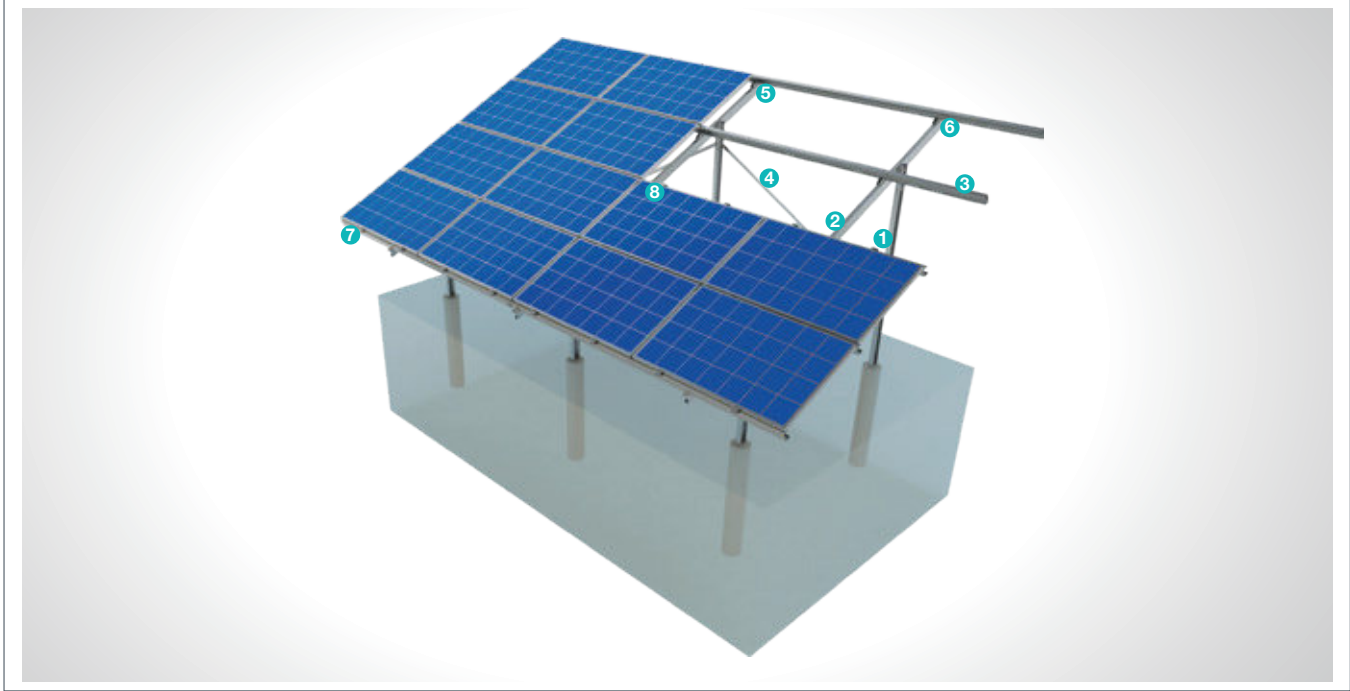
## Technical Specifications

Description:	(KPT7B) Concrete Embedded Steel Mounting System with 2 Vertical Panels
Mounting Method:	Concrete Embedded Column
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT8) Concrete Embedded Steel Mounting System with 4 Horizontal Panels

### Overview

**KPT8**, is a concrete embedded column steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on medium and large sized terrains with loose ground. Necessary strength is achieved by application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



#### ■ CK-90 / CK-100 / CK-120

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



#### ■ C-90 / C-100 / C-110

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



#### ■ CR-100 / CR-120

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



#### ■ U40

M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



#### ■ CA-90 / CA-100 / CA-110

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



#### ■ H30-H32-H40

M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

4



#### ■ U-40X34

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PANEL CENTER RETAINER

8

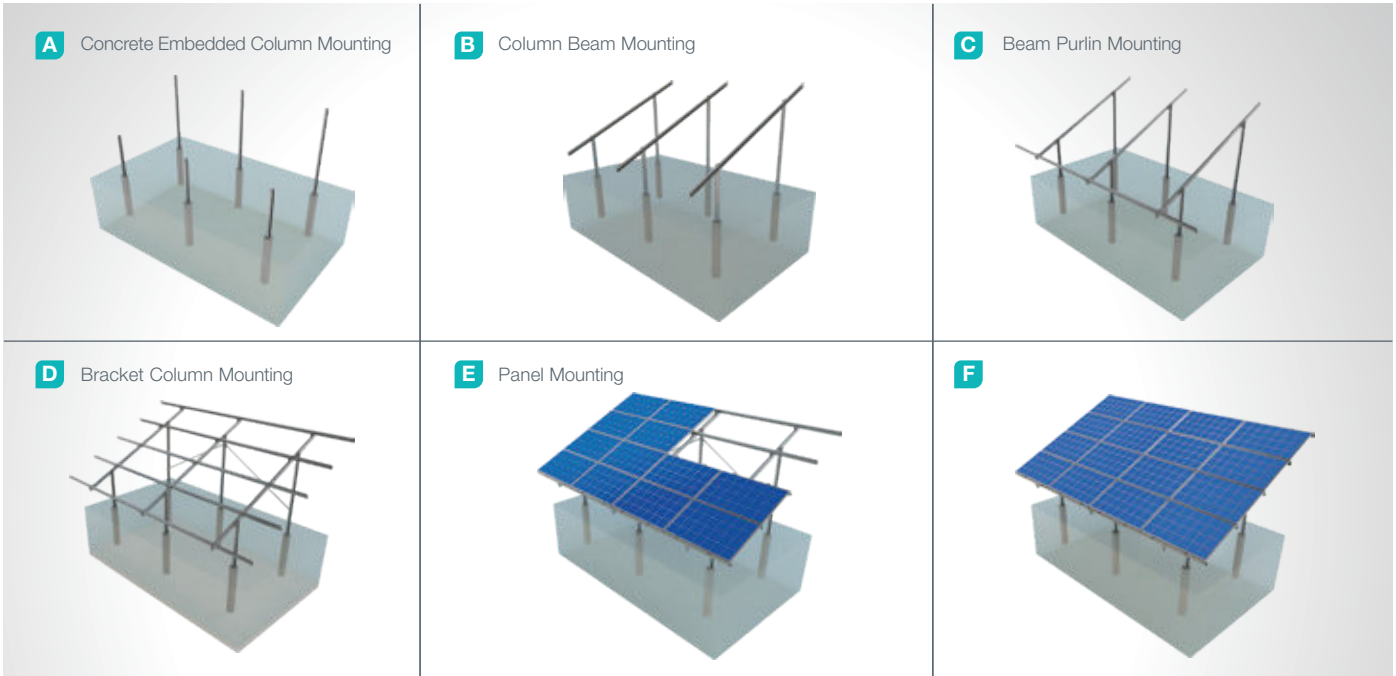


#### ■ L60

M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable solutions for combiner box and inverter installation
- Suitable solutions for different terrains
- Suitable for loose ground
- Tailored design solutions for customer
- Customer oriented engineering solutions

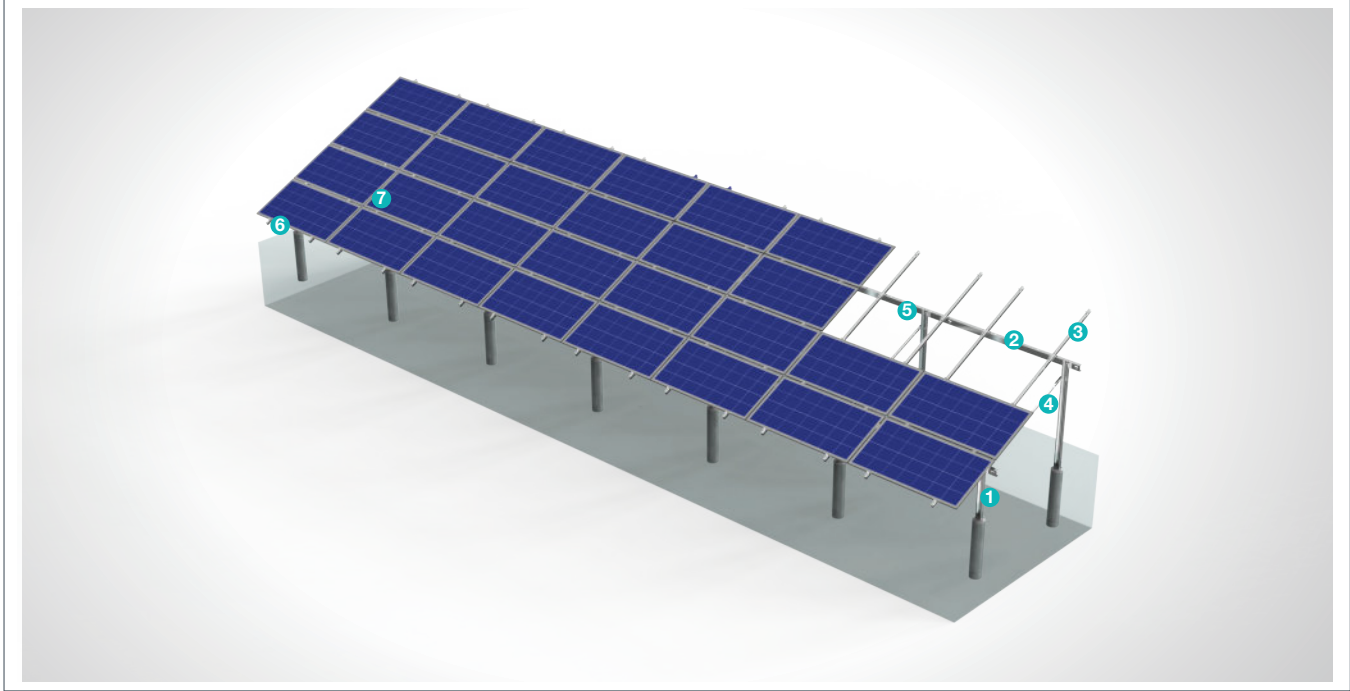
## Technical Specifications

Description:	(KPT8) Concrete Embedded Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Concrete Embedded Column
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT8B) Concrete Embedded Steel Mounting System with 4 Horizontal Panels

### Overview

KPT8B is a concrete embedded column steel support and mounting system with 4 horizontal panels for open terrain solar panels. The system is an ideal application solution for PV projects installations on medium and large sized terrains with loose ground. Necessary strength is achieved by application in loose ground. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



#### ■ CK-90 / CK-100 / CK-120

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



#### ■ C-90 / C-100 / C-110

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



#### ■ CR-100 / CR-120

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

6



#### ■ H30-H32-H40

M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



#### ■ CA-90 / CA-100 / CA-110

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL CENTER RETAINER

7



#### ■ L60

M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

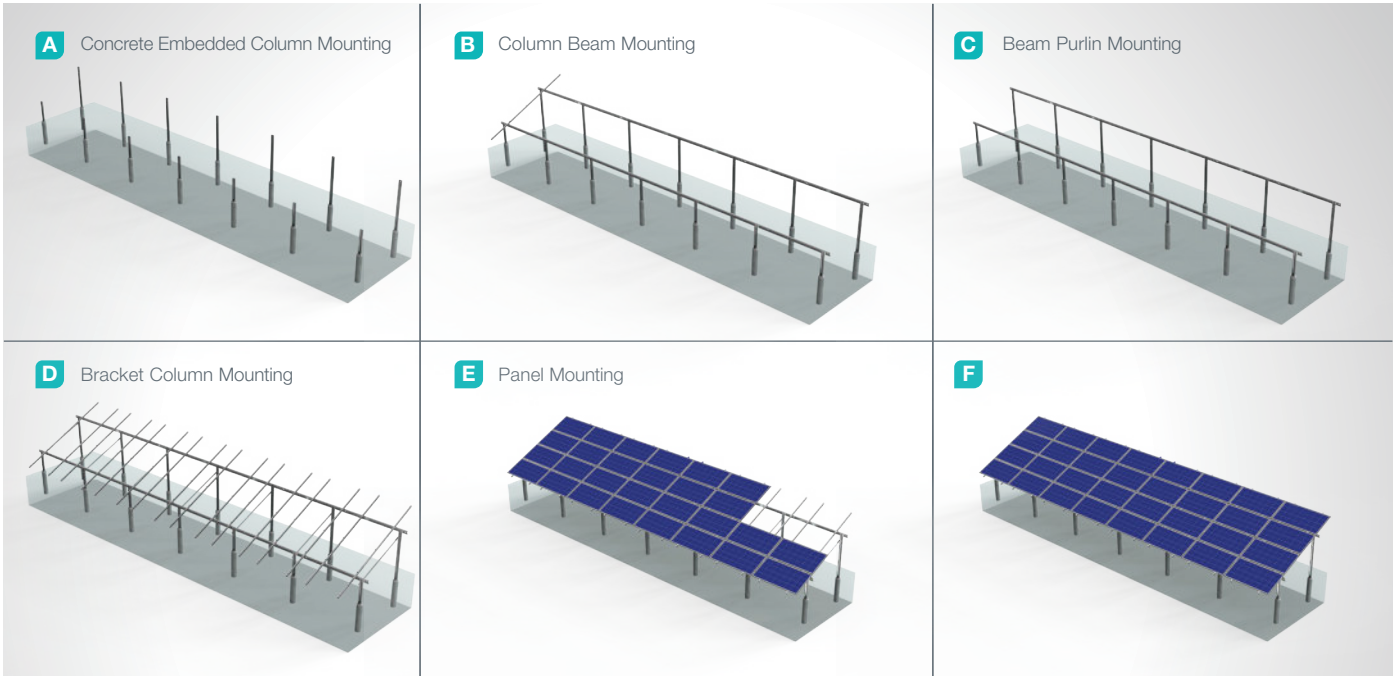
4



#### ■ U-40X34

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable solutions for combiner box and inverter installation
- Suitable solutions for different terrains
- Suitable for loose ground
- Tailored design solutions for customer
- Customer oriented engineering solutions

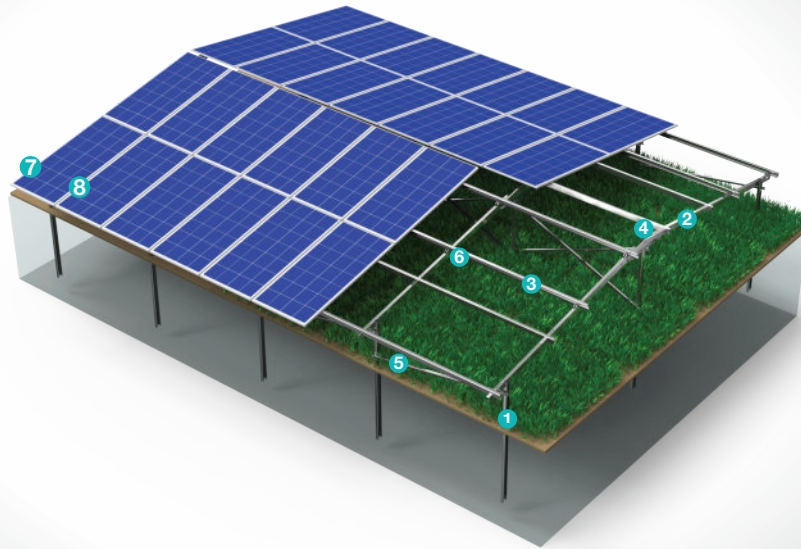
## Technical Specifications

Description:	(KPT8B) Concrete Embedded Steel Mounting System with 4 Horizontal Panels
Mounting Method:	Concrete Embedded Column
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021

## (KPT9) Ground Driven East-West Steel Mounting System with 2 Vertical Panel of Each Side

### Overview

KPT9 is a steel-structured, ground-mounted open field solar panel support and installation system, assembled using the East-West Vertical Panel Pile Driving method. This system offers an ideal application solution for large and medium-scale ground-mounted PV projects with east-west orientation. The system components are manufactured with high precision using advanced machinery and equipment, then hot-dip galvanized to ensure excellent corrosion resistance. Thanks to its high-level engineering design, KPT9 provides significant advantages in terms of fast and easy installation as well as cost efficiency. Its east-west orientation allows for a more balanced utilization of sunlight throughout the day, thereby enhancing energy production efficiency. In addition, it is particularly advantageous for land-constrained areas, as it enables the installation of more panels within a limited space.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M8X25 Hex Head Bolt  
M8/M12 Washer  
M8/M12 Spring Washer  
M8/M12 Flanged Nut

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-120**  
M12X30 Hex Head Bolt  
M8X25 Hex Head Bolt  
M8/M12 Washer  
M8/M12 Spring Washer  
M8/M12 Flanged Nut

#### STEEL PURLIN

4



- **CP-1000x188**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL SUPPORT

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- **U40**  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL SIDE RETAINER

7



- **H30-H32-H35-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### PANEL MIDDLE RETAINER

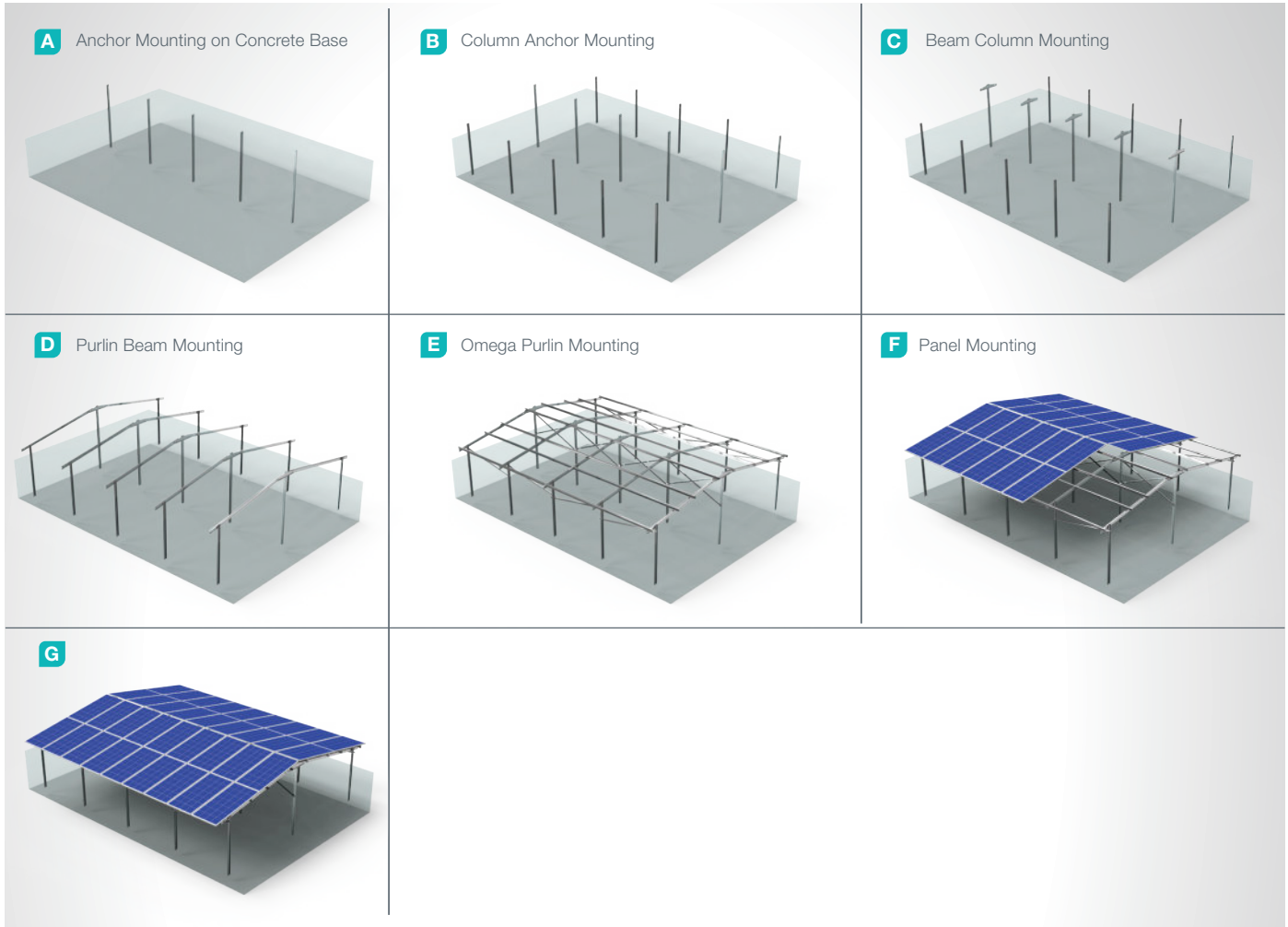
8



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer



## Installation Phase



## Advantages

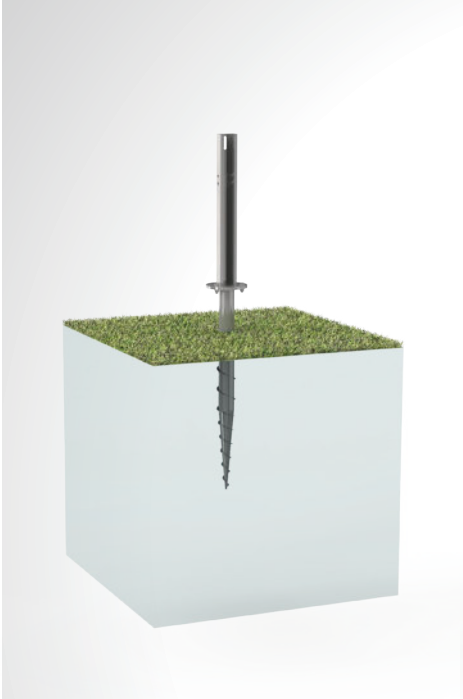
- Time saving for installation
- Cost saving for installation
- Suitable for all kinds of car parks
- Protection against sun, rain and snow
- Flexible look
- Suitable for continuous expansion
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

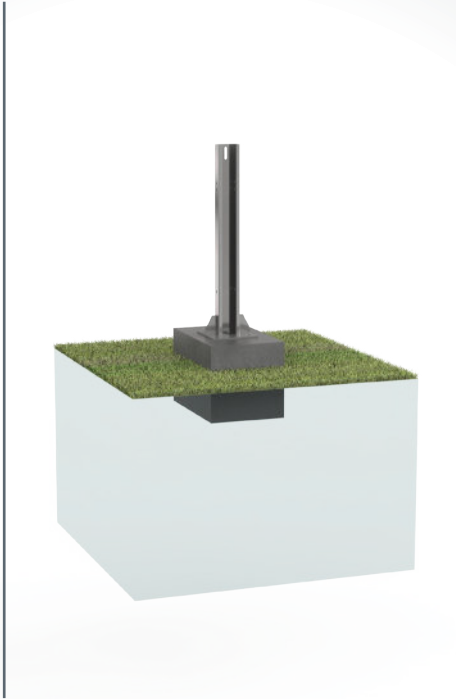
Explanation:	(KPT9) Concrete Base Anchored Steel Carport Mounting System with 4 Vertical Panels
Assembly Method:	Anchor on Concrete Base
Tilt Angle:	10 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## EAST-WEST FOUNDATION TYPES

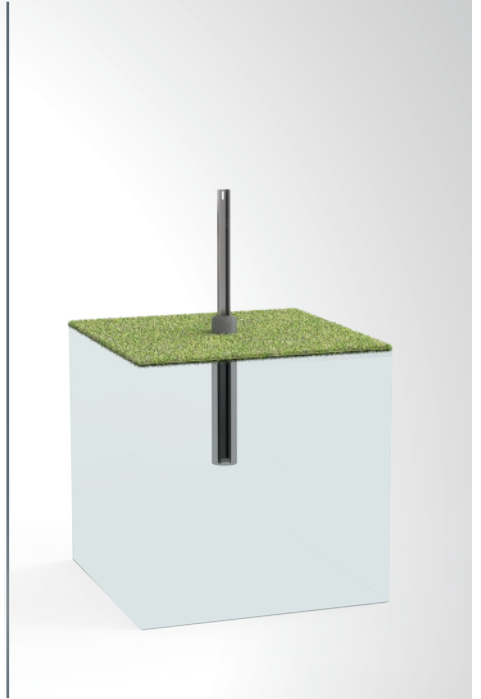
**KPT10 - GROUND SCREW**



**KPT11 - CONCRETE ANCHOR**



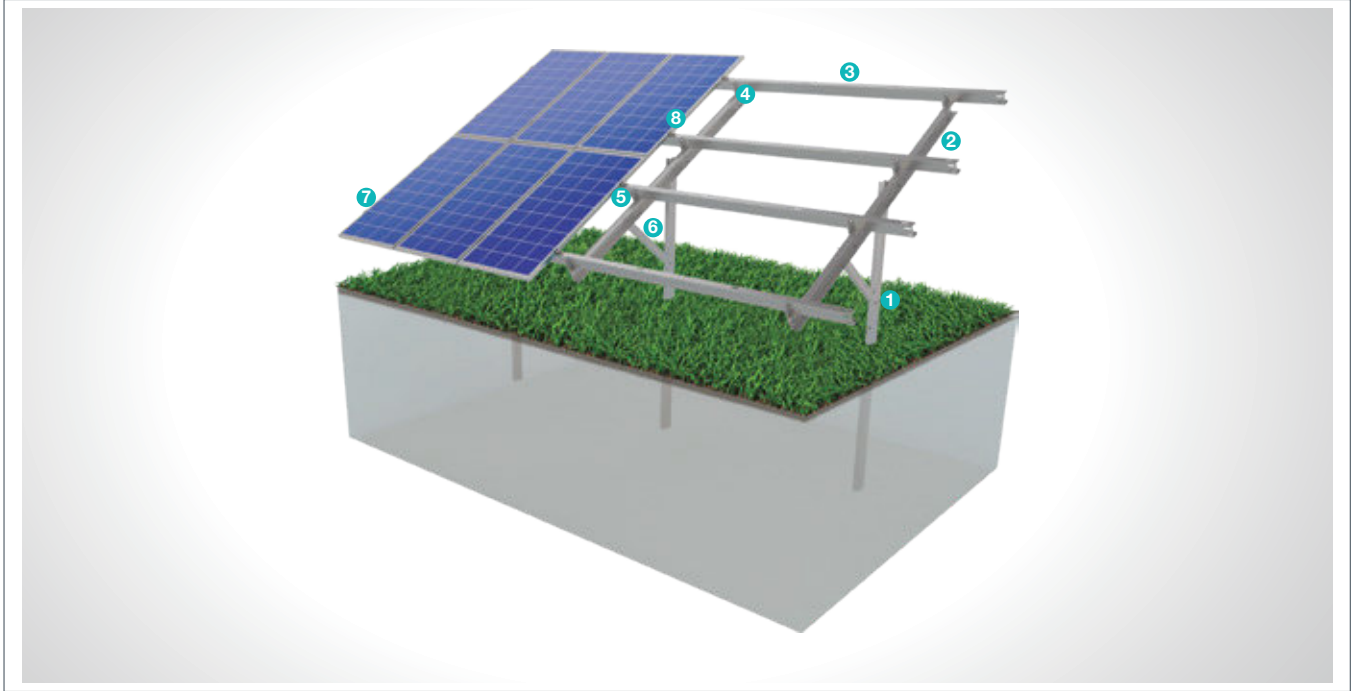
**KPT12 - CONCRETE EMBEDDED**



## (KPT13) Ground Driven Single Column Steel Mounting System With 2 Vertical Panels

### Overview

KPT13, is a ground driven single column steel support and mounting system with 2 vertical panels for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains . It is used extensively on hard ground in order to decrease the number of legs and cost. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### STEEL COLUMN

1



- **CK-90 / CK-100 / CK-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



- **C-90 / C-100 / C-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL BEAM

2



- **CR-100 / CR-120**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PURLIN CONNECTOR PIECE

6



- **U40**  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL PURLIN

3



- **CA-90 / CA-100 / CA-110**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M8X25 Hex Head Bolt  
M8 Flanged Nut  
M8/M12 Washer  
M8/M12 Spring Washer

#### PANEL SIDE RETAINER

7



- **H30-H32-H40**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

#### STEEL SUPPORT

4



- **U-40X34**  
M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

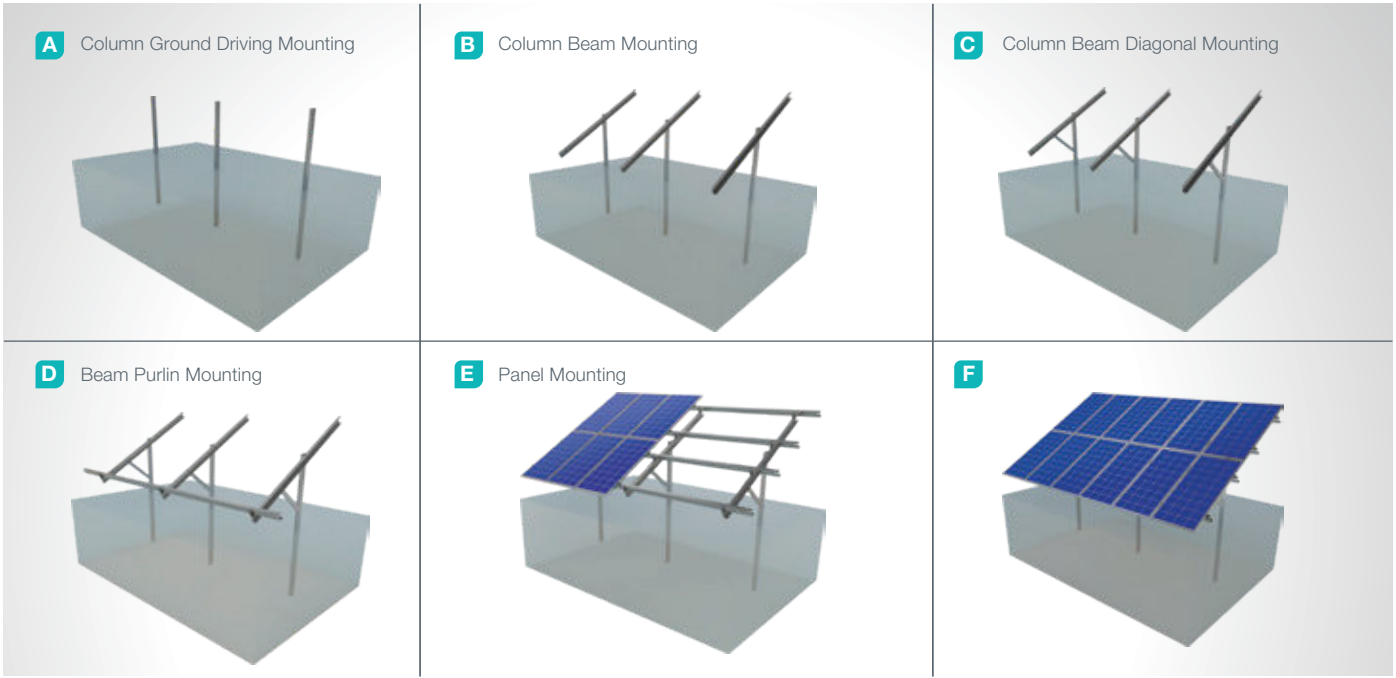
#### PANEL CENTER RETAINER

8



- **L60**  
M8X50 Socket Head Bolt  
M8 Flanged Nut  
M8 Washer  
M8 Spring Washer

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- High safety level
- High durability flexible use
- Suitable solutions for combiner box and inverter installation
- Suitable solutions for different terrains
- Suitable for loose ground
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

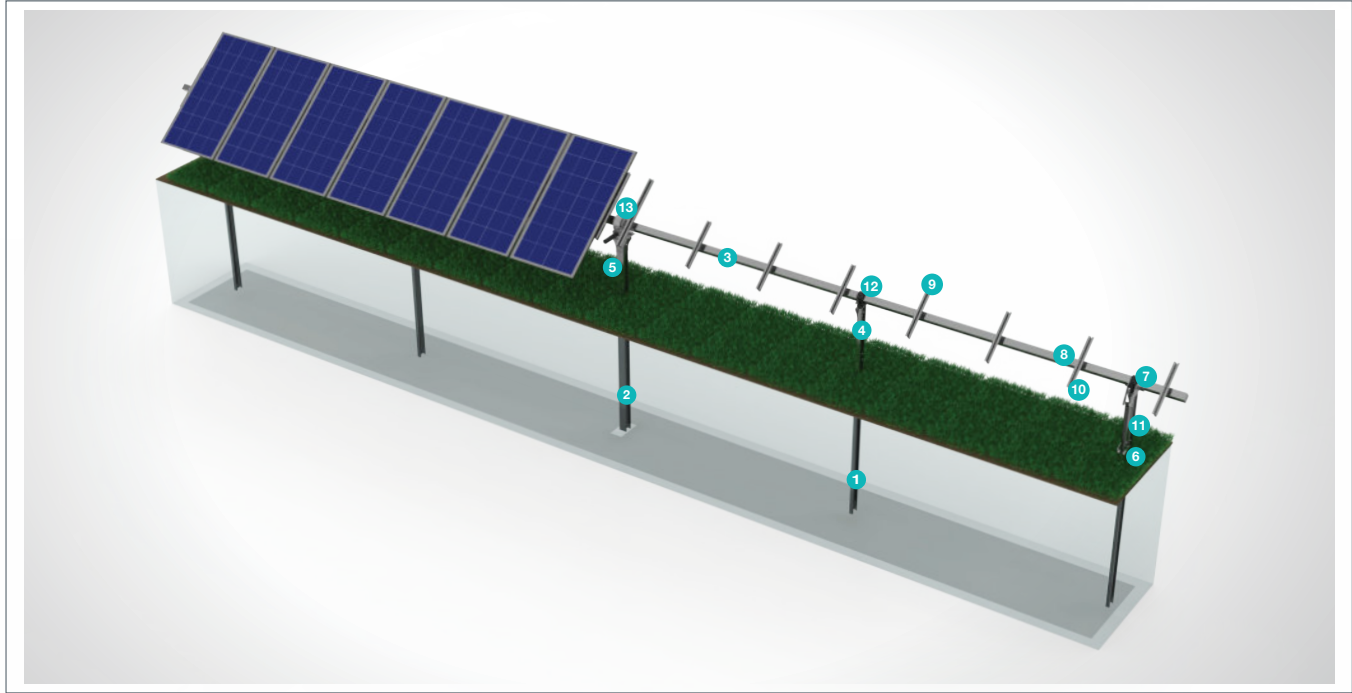
Description:	(KPT13) Ground Driven Single Column Steel Mounting System with 2 Vertical Panels
Mounting Method:	Ground Driving
Tilt Angle:	0-60 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923/ DIN 125 / DIN 127 / DIN 9021



## (KPT14) Ground Driven Steel Single Axis Solar Tracking System with 1 Vertical Panel

### Overview

KPT14, is a concrete embedded steel support and mounting system which tracks the sun with 1 vertical panel for open terrain solar panels. The system is an optimal application solution for installations of PV projects on large and medium-sized terrains . After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages. It provides a more efficient use of solar panels.



#### STEEL COLUMN

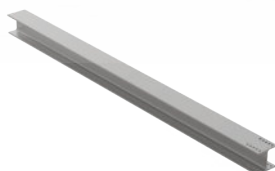
1



- CK
- M16x40 HEX HEAD BOLT
- M16 WASHER
- M16 SPRING WASHER
- M16 FLANGED NUT

#### STEEL ENGINE COLUMN

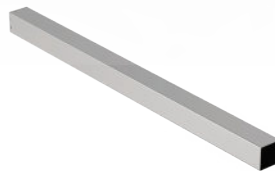
2



- CEK
- M16x40 HEX HEAD BOLT
- M16 WASHER
- M16 SPRING WASHER
- M16 FLANGED NUT

#### STEEL SQUARE PURLIN

3



- KPA
- M16x25 HEX HEAD BOLT
- M16 WASHER
- M16 SPRING WASHER

#### STEEL SUPPORT BRACKET

4



- MTD
- M16x40 HEX HEAD BOLT
- M16 WASHER
- M16 SPRING WASHER
- M16 FLANGED NUT

#### STEEL ENGINE SUPPORT

5



- NPI 336X305X8
- M20x70 HEX HEAD BOLT
- M20 WASHER
- M20 SPRING WASHER
- M20 FLANGED NUT

#### STEEL DAMPER LOWER SUPPORT

6



- AAY
- M10x145x160 U BOLT
- M10 SPRING WASHER
- M10 FLANGED NUT

#### STEEL DAMPER UPPER SUPPORT

7







- KPE
- M10x145x160 U BOLT
- M10 SPRING WASHER
- M10 FLANGED NUT

#### PURLIN CONNECTOR JOINING PIECE

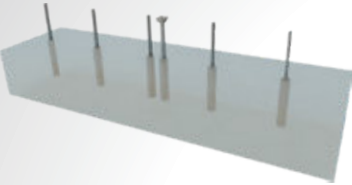
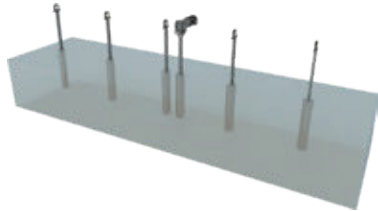

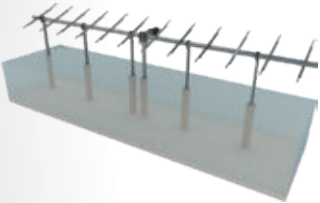
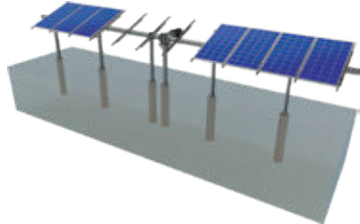
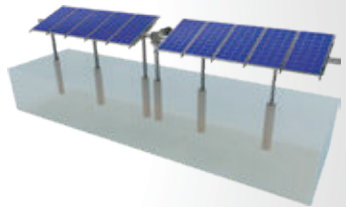
8



- DPM-80x40
- M16x40 HEX HEAD BOLT
- M16 WASHER
- M16 SPRING WASHER
- M16 FLANGED NUT

<b>STEEL PURLIN</b> <b>9</b>  <b>CA</b> M10x145x160 U BOLT 20x200 mm FLAT BAR M10 SPRING WASHER M10 FLANGED NUT	<b>STEEL STOPPER</b> <b>10</b>  <b>CS</b> M10x145x160 U BOLT M10 SPRING WASHER M10 FLANGED NUT	<b>DAMPER</b> <b>11</b>  <b>DPM</b> M14x150 HEX HEAD BOLT M14 WASHER M14 SPRING WASHER M14 FLANGED NUT	<b>PLASTBEARING</b> <b>12</b>  <b>RLM</b> M16x40 HEX HEAD BOLT M16 WASHER M16 SPRING WASHER M16 FLANGED NUT	<b>ENGINE</b> <b>13</b>  <b>SLEW DRIVE + E. MOTOR</b> M20x70 HEX HEAD BOLT M20 WASHER M20 SPRING WASHER M20 FLANGED NUT
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## Installation Phase

<b>A</b> Column Ground Mounting 	<b>B</b> TP Beam / Slew Drive + E. Motor Carrier Mounting 	<b>C</b> TP Purlin / Slew Drive + E. Motor Carrier Mounting 
<b>D</b> Steel Profile Purlin Mounting 	<b>E</b> Panel Mounting 	<b>F</b> 

## Advantages

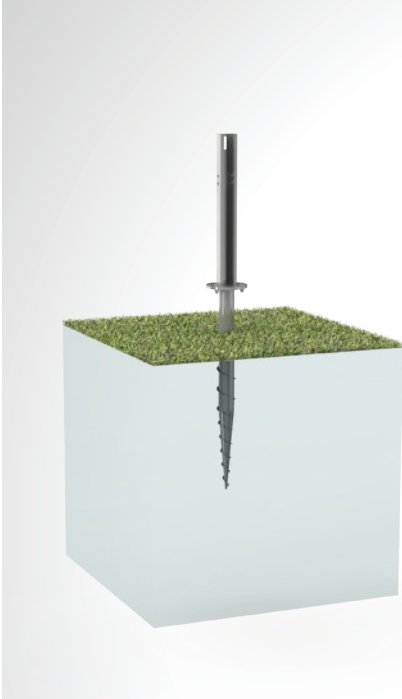
- Time saving for installation
- Cost saving for installation
- Flexible solutions for different types of terrains
- Up to 25% efficiency advantage
- Low maintenance cost
- Independent rack movements
- Aluminum based solutions
- Smart control system
- Real time tracking
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

Description:	(KPT14) Concrete Embedded Steel Single Axis Solar Tracking System with 1 Vertical Panel
Mounting Method:	Concrete Embedded
Tilt Angle:	-55 +55 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	60 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## SINGLE AXIS TRACKER FOUNDATION TYPES

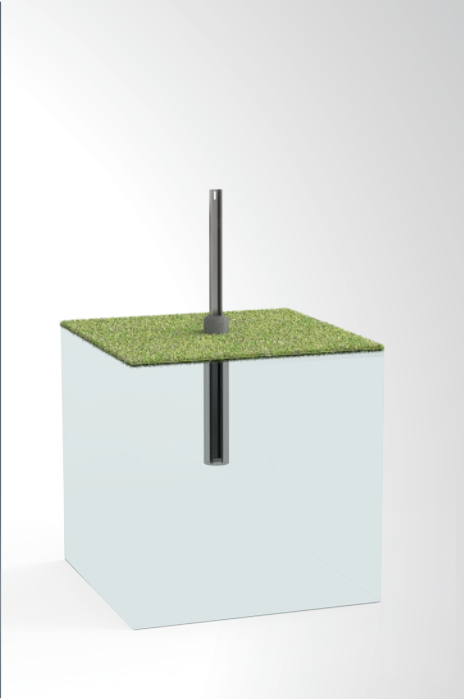
**KPT15 - GROUND SCREW**



**KPT16 - CONCRETE ANCHOR**



**KPT17 - CONCRETE EMBEDDED**



## (KPT18) Concrete Anchor Steel Car Park Mounting System for 2 Cars with 3 or 4 Vertical Panels

### Overview

**KPT18**, is a concrete base anchored steel support and mounting system with 3 or 4 vertical panels for carport. The system is an optimal application solution for installations of PV projects in car parks. It provides strength and stability in carports. After manufacturing the system components with high-technology machines and equipment, an excellent corrosion resistance is then achieved through hot-dip galvanized coating. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### U-TYPE CARPORT STEEL ANCHORAGE PIECE

1



##### ■ U-ANC

M16x300 Anchor Bolt  
M12x30 Hex Head Bolt  
M12/M16 Flanged Nut  
M12/M16 Washer  
M12/M16 Spring Washer

#### PURLIN CONNECTOR JOINING PIECE

5



##### ■ C-90 / C-100 / C-110

M12X30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### STEEL COLUMN

2



##### ■ KLN-200x90x25x3

M12x30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### ALUMINUM PURLIN

6



##### ■ AP

M8X25 T Bolt  
M8 Washer  
M8 Spring Washer  
M8 Flanged Nut

#### STEEL BEAM

3



##### ■ KRS-200x90x25x3

M12x30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer

#### ALUMINUM MIDDLE PURLIN

7



##### ■ AMP

#### STEEL PURLIN

4



##### ■ ASK-200x90x25x3

M12x30 Hex Head Bolt  
M12 Flanged Nut  
M12 Washer  
M12 Spring Washer



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable for all kinds of car parks
- Protection against sun, rain and snow
- Flexible look
- Suitable for continuous expansion
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

Explanation:	(KPT18) Concrete Base Anchored Steel Carport Mounting System with 4 Vertical Panels
Assembly Method:	Anchor on Concrete Base
Tilt Angle:	10 degrees
Module Application:	Framed and Unframed
Panel Height From Ground:	250 cm
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 6923 / DIN 125 / DIN 127 / DIN 9021

## (KPT21) Flat Roof Aluminium Mounting System

### Overview

**KPT21**, is a flat roof aluminium mounting system for 1 horizontal panel which is fixed by balast system. The system is an optimal application solution for installations of PV projects on large and small-sized roofs. It does not require any fastener for installation. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### Aluminium Middle Clamp



- H35-Middle Panel Clamp
- M8X35 Imbus Bolt
- M8 Nut
- M8 Spring Washer DIN 128

#### Aluminium Side Clamp



- H35-Side Panel Clamp
- M8X35 Imbus Bolt
- M8 Bolt
- M8 Spring Washer DIN 128

#### Mounting Rail



- EN AW 6063 T6
- 3X20 EPDM Tape

#### Windshield



- DX51D+Z
- 5,5X25 Trapezoid Roof Screw

#### Panel Front Holder



- Angle Adjustment Tool
- M8X35 Imbus Bolt
- M8 Washer
- M8 Nut

#### Panel Back Holder



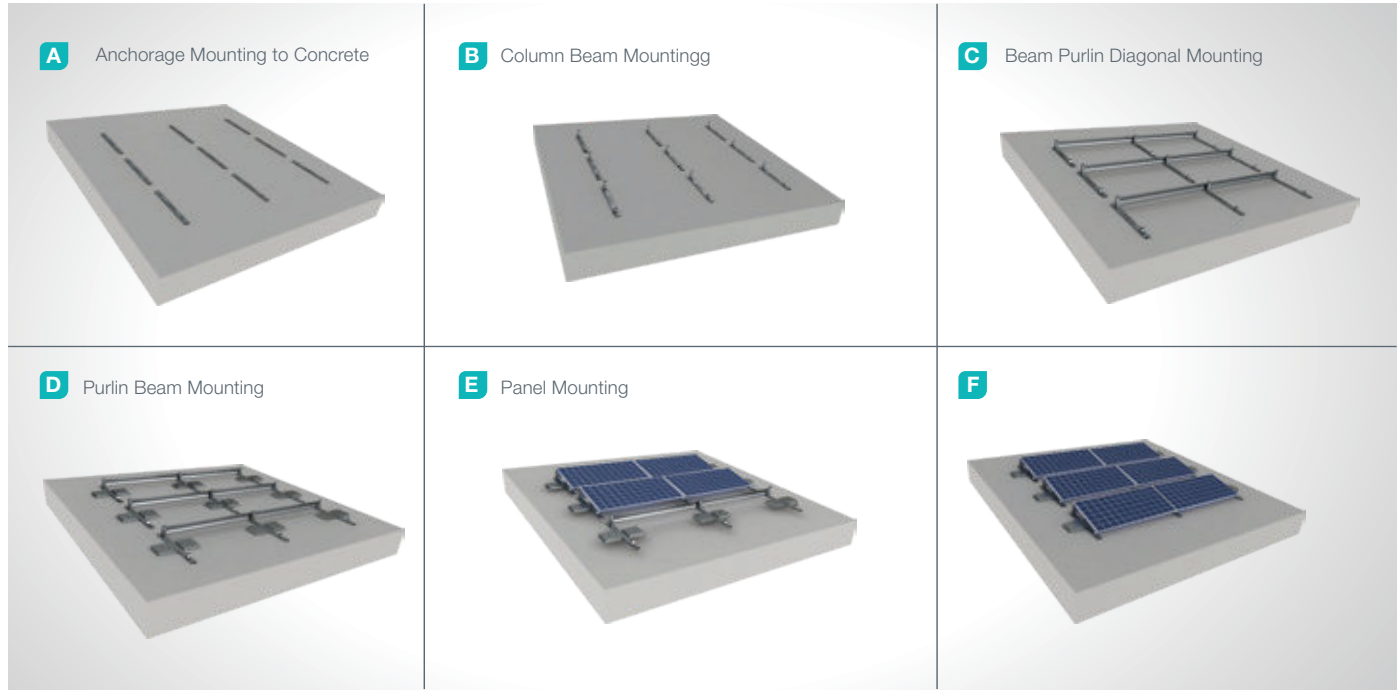
- Angle Adjustment Tool
- M8X35 Imbus Bolt
- M8 Washer
- M8 Nut

#### Balast Holder



- DX51D+Z

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Suitable solutions for different roof types
- 3 different types of angular adjustment
- Ballasted mounting
- Tailored design solutions for customer
- Customer oriented engineering solutions

## Technical Specifications

Description:	(KPT21) Flat Roof Aluminium Mounting System
Mounting Method:	Blast system
Module Application:	Framed and Unframed
Column and Beam Coating:	EN ISO 1461
Column and Beam Material:	EN 10025 / EN 10029
Optional Beam Material:	EN 10346
Panel Retainer:	EN AW 6063
Purlin Material:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 125 / DIN 127

## (KPT29) Trapezoid Roof Mounting System

### Overview

KPT29, Tis the aluminium mounting system for trapezoid roof. is a flat roof aluminium mounting system for 1 horizontal panel which is fixed by balast system. The system is an optimal application solution for installations of PV projects on large and small-sized roofs. It does not require any fastener for installation. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### Mounted Set Middle Clamp

1



■ KS-Middle Retainer  
M6X40 Imbus Bolt  
Oring  
KLP 101

#### Mounted Set Side Clamp

2



■ KS-Side Retainer  
M6X40 Imbus Bolt  
Oring  
KLP 101

#### Roof Profile (TCAA)

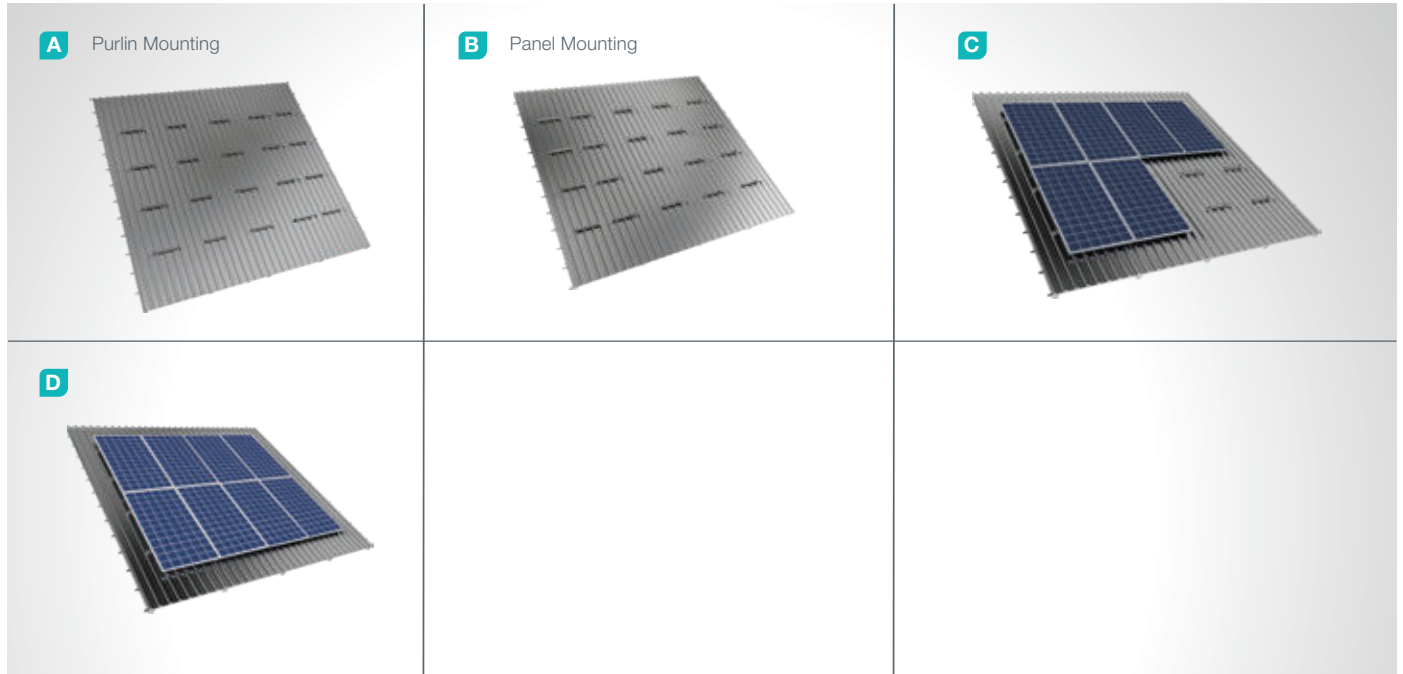
3



■ EN AW 6063 T6  
JF3-2-5.5



## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Horizontal and Vertical positioning
- Suitable solutions for different roof types
- Tailored design solutions for customer
- Customer oriented engineering solutions

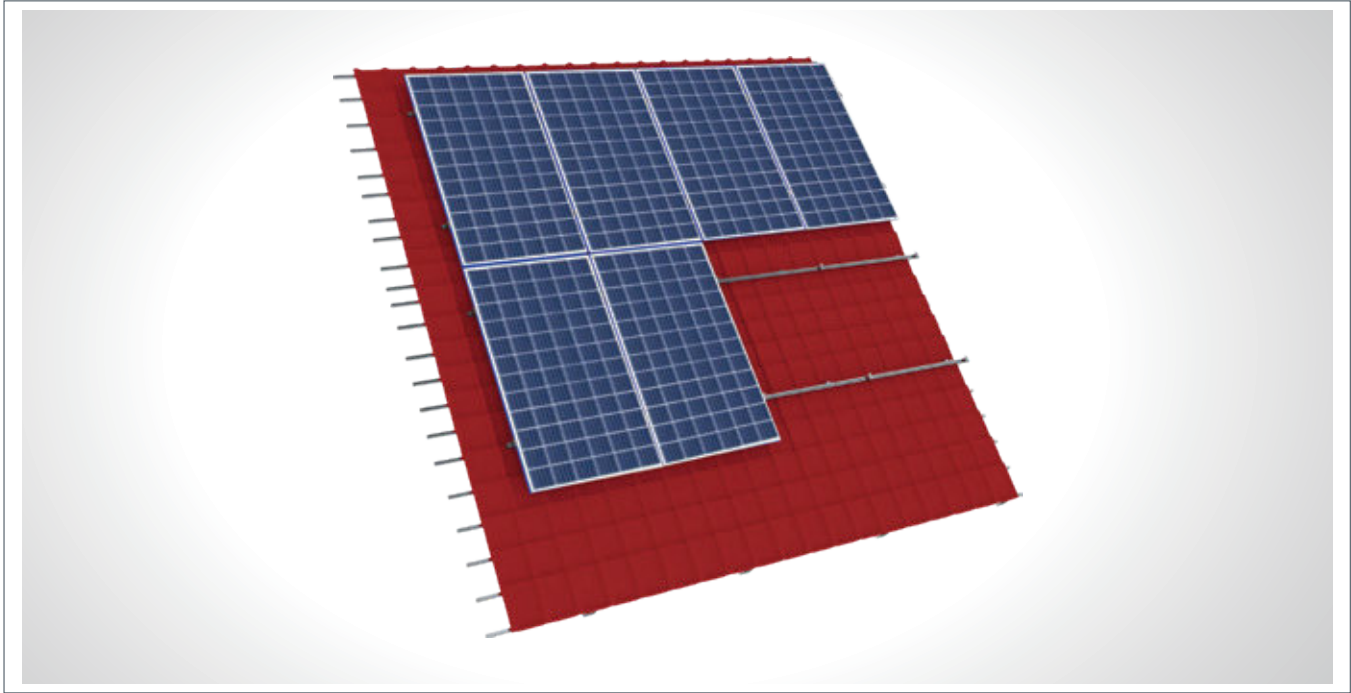
## Technical Specifications

Description:	(KPT29) Trapezoid Roof Mounting System
Mounting Method:	Pitched Roof Mounting
Module Application:	Framed and Unframed
Beam Material:	EN AW 6063
Panel Retainer:	ASTM A 304 / A 316
Purlin Material:	EN AW 6063
Connector Equipment:	DIN 934 / DIN933 / DIN 912, A2-70

## (KPT30) Tile Roof Steel And Aluminum Mounting System

### Overview

KPT30, is a steel and Aluminum structured mounting system and for tile type roofs. The system is an optimal application solution for installations of PV projects on large and small-sized roofs. The system, incorporating a high-level engineering design, provides assembly and cost advantages.



#### Mounted Set Middle Clamp



- KS-Middle Retainer  
M6X40 Imbus Bolt  
Oring  
KLP 101

#### Mounted Set Side Clamp



- KS-Middle Retainer  
M6X40 Imbus Bolt  
Oring  
KLP 101

#### Clamp Roof Hook



- EN AW 6082 T6 DIN 562  
A2 M10x20 Inox Screw DIN 6921  
A2 Tee-head Inox Screw M8x25 DIN 9097 A2  
M10 Inox Square Nut DIN 557  
A2 M8 Inox Flanged Hexagon Nut DIN 6923  
Lag Screw 8x100

#### Roof Profile (KCAA)



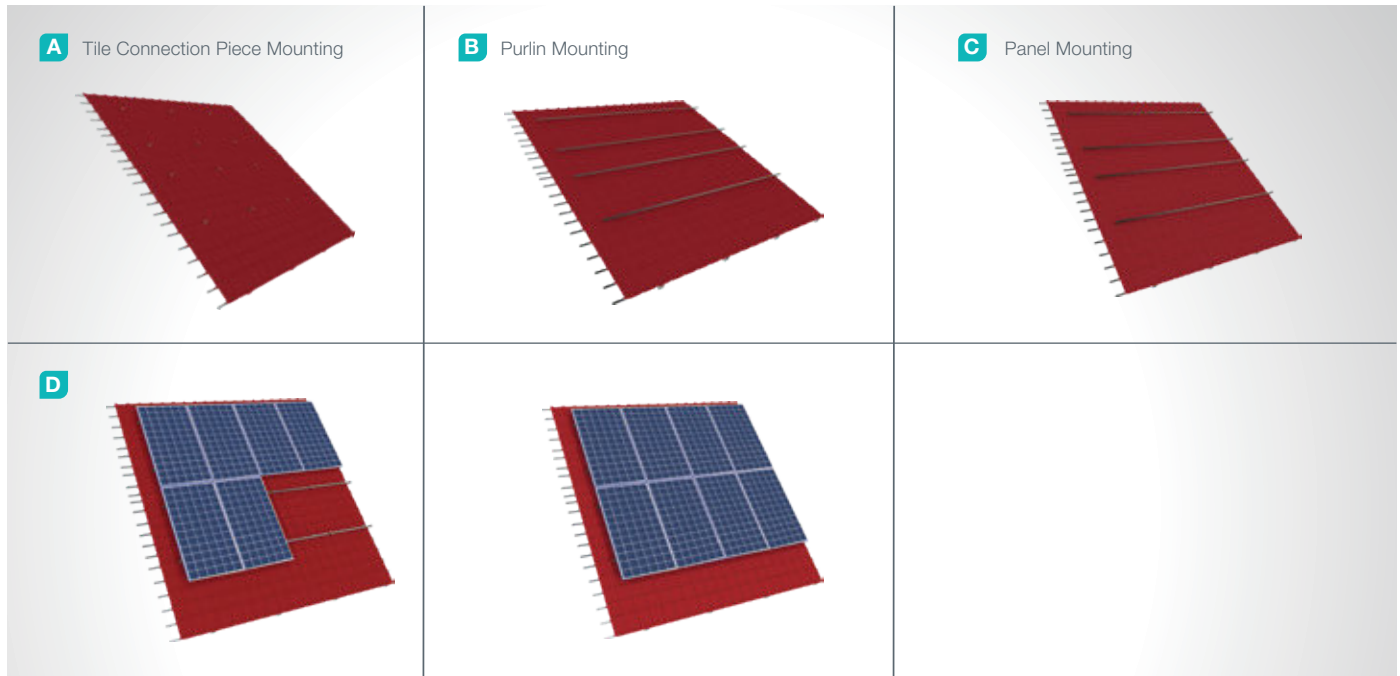
- EN AW 6063 T6

#### Connector



- EN AW 6063 T6  
5,5X25 Trapezoid Roof Screw

## Installation Phase



## Advantages

- Time saving for installation
- Cost saving for installation
- Horizontal and vertical positioning
- Suitable positioning according to roof tilt
- Suitable solutions for different roof types
- Tailored design solutions for customers
- Customer oriented engineering solutions

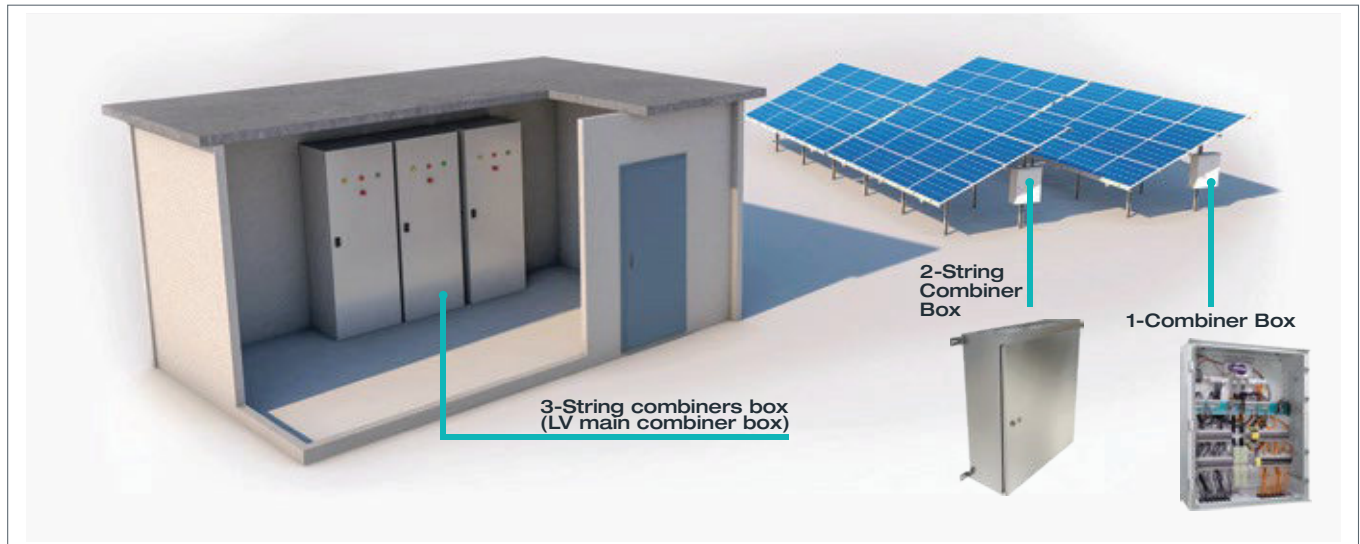
## Technical Specifications

Description:	(KPT30) Tile Roof Steel And Aluminum Mounting System
Mounting Method:	Assembly to Tile Roof
Module Application:	Framed and Unframed
Beam Retainer:	EN AW 6063
Beam Retainer Coating:	EN ISO 1461
Beam Retainer Material:	EN 10025 / EN 10029
Panel Retainer:	EN AW 6063
Fitting Equipment:	DIN 934 / DIN933 / DIN 912, A2-70 DIN 50979

## 1-Combiner box (DC Combiner)

### Overview

In systems using a central inverter, it bundles cables and energy coming from panel groups in one combiner box. Stringing out solar cables, consisting of positive and negative lines, to the battery or inverter causes power loss and an increase in cable amount and costs. Therefore, a particular panel group shall be combined on a single positive/negative line. SCADA monitoring equipment can be installed in Combiner Boxes at the same time which facilitates service, maintenance and remote maintenance operations on line enabling deenergizing when a problem occurs. Another important feature of Combiner Box is the option to add surge protective devices (SPDs) for protection against lightning and power surges and this feature is crucial for solar power plants.



### Advantages

- Protection for electrical equipment used as waterproof and dustproof
- Easy installation
- Simplified system cabling
- Decrease in the amount of cabling and cable costs advantage
- Easy service, maintenance and remote maintenance operations on line
- Protection against lightning and power surges
- Tailored design solutions for customers

### Technical Specifications

Protection:	IP54 IK10
Product Structure:	The product has a modular design, installation modules are available for all equipment.
Materials Used :	The product is manufactured with cold-rolled steel (EN 10130) in a totally rigid structure.
Coating / Paint :	Electrostatic Powder Polyester paint / Hot-dip galvanized coating (EN 10130)
Handling:	Lifting lugs for lifting and handling.



## 2- String Combiners box: (AC -- Field Combiner Box)

### Overview

In systems using series inverter, these type of combiner boxes bundle AC line cables and making connections thereof. The energy collected in these boxes are transferred to the Main Combiner Box via one line. It does not contain interconnection additional security and switching mechanisms. In string systems, AC power is collected with interconnection equipment before reaching the Main AC Combiner Box.

### Advantages

- Protection for electrical equipment used as waterproof and dustproof
- Easy installation
- Simplified system cabling Suitable cabling
- Decrease in the amount of cabling and cable costs advantage
- Tailored production according to customer demand

### Technical Specifications

Protection:	IP65 IK10
Material used:	Cold rolled steel
Coating / Paint :	Electrostatic Powder Polyester paint / Hot-dip galvanized coating (EN 10130).

## 3- AG Main Combiner Box

### Overview

Power collected from String Combiner Boxes or at the output of central inverter is transferred to Main Combiner Box with power cables for security and control. Main Combiner is equipped with equipment necessary for power quality measurement, system security and in-house demand. The power collected at the Main Combiner Box is directed to the AG switch and transformer operable at heavy current limits in order to increase voltage value.

### Advantages

- Modular form and easy installation
- Installation modules suitable for all electrical equipment.
- Protection for electrical equipment used as waterproof and dustproof
- Tailored design solutions for customers

### Technical Specifications

Protection:	IP54 IK10
Product Structure:	The product has a modular design, installation modules are available for all equipment.
Materials Used :	The product is manufactured with cold-rolled steel (EN 10130) in a totally rigid structure.
Coating / Paint :	Electrostatic Powder Polyester paint
Handling:	Lifting lugs for lifting and handling.

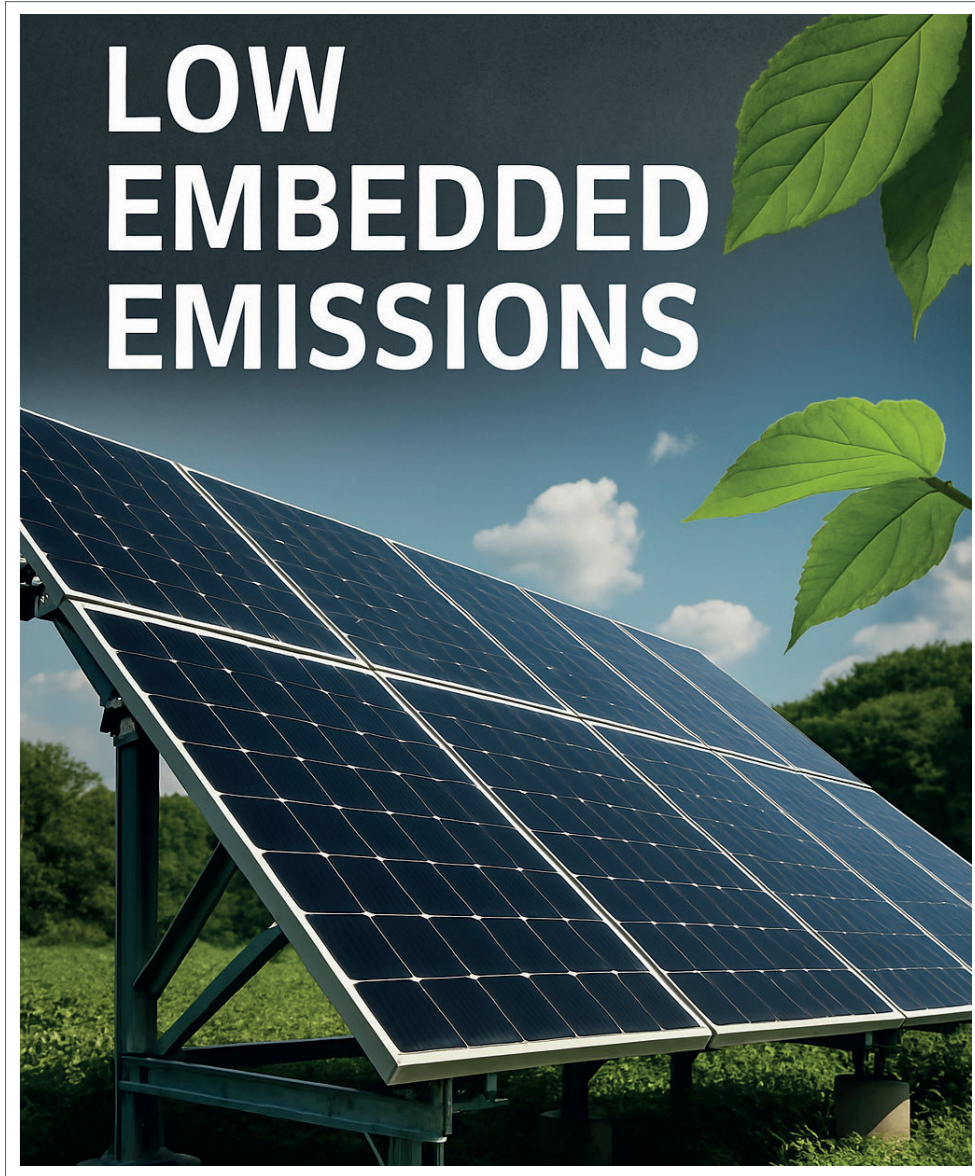
## KIRAC METAL – Photovoltaic Panel Mounting Systems

### Product Description Compliant with the 2024 EU CBAM – Including Specific Embedded Emissions

At Kiraç Metal, we are committed to sustainability and reducing carbon footprints. Our **photovoltaic panel mounting systems**, developed in line with the 2024 European Union Carbon Border Adjustment Mechanism (CBAM), are manufactured in full compliance with current regulations.

Throughout our production processes, we prioritize the use of energy-efficient technologies and low-carbon raw materials. The **specific embedded emissions** of our products are meticulously calculated and reported, ensuring verifiable and transparent data for all export operations subject to CBAM.

Our **photovoltaic mounting systems** are trusted in environmentally conscious projects for their structural durability and low carbon emission profiles. As a company leading the way in adapting to evolving environmental regulations, we continue to create value for our partners aiming to minimize carbon-related costs.



Kiraç Metal – Your Sustainable Partner in Solar Infrastructure



**EN 1090-2 & EN 1090-3**



**ISO 14001:2015**



**ISO 9001:2015**



**ISO 45001:2018**



**TS 13891**



**FIRST SOLAR COMPABILITY LETTER**



**TS EN ISO 1461**



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