HMK
DEMİR ÇELİK A.Ş.

SOLAR CONSTRUCTION MOUNTING SYSTEMS

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

HMK Demir Çelik A.Ş. specializes in the design and production of advanced and secure products for the solar energy sector through its production and R&D initiatives. Established in 2018, the company is committed to delivering rapid and reliable solutions that adhere to both national and international standards. Its primary production facility, located in Bursa, encompasses 42,000 square meters of enclosed space and 5,000 square meters of open area. Within its Steel Service Center, products are meticulously inspected in accordance with international standards, from raw materials to the final output. The company boasts a production capacity of 4,000 tons of solar energy steel construction systems per month. As one of the world's leading manufacturing firms, HMK Demir Çelik is favored for its high-quality, customer-centric products and services, timely deliveries, and comprehensive pre- and post-sales support. The company's products are exported to numerous countries, with Europe being the primary market.

ABOUT US

HMK Demir Çelik A.Ş. specializes in the design and production of innovative and secure products for the Metal Products, Traffic Safety, and Solar Energy sectors through comprehensive production and R&D initiatives. Established in 2018, the company is committed to delivering prompt and dependable solutions in accordance with national and international standards.

TEAM

Experienced, brimming with positive energy, and functioning as an exceptional team. We share a unified objective, and due to the uniqueness of each individual, we combine the complementary skills essential for attaining that objective.

MISSION

We advocate for environmental protection by providing innovative frameworks for investors and contractors in renewable energy sources. Our solutions enhance the security and profitability of investments.

CUSTOMER

We adopt an open approach to addressing our customers' needs. We regard everyone as a business partner. We are confident that we can cultivate long-term business relationships through the demonstration of honesty and respect.

VISION

We are a trusted and esteemed business partner. As a premier supplier of floor structures in Turkey and a significant contributor to the European market, we deliver innovative solutions that establish market trends.

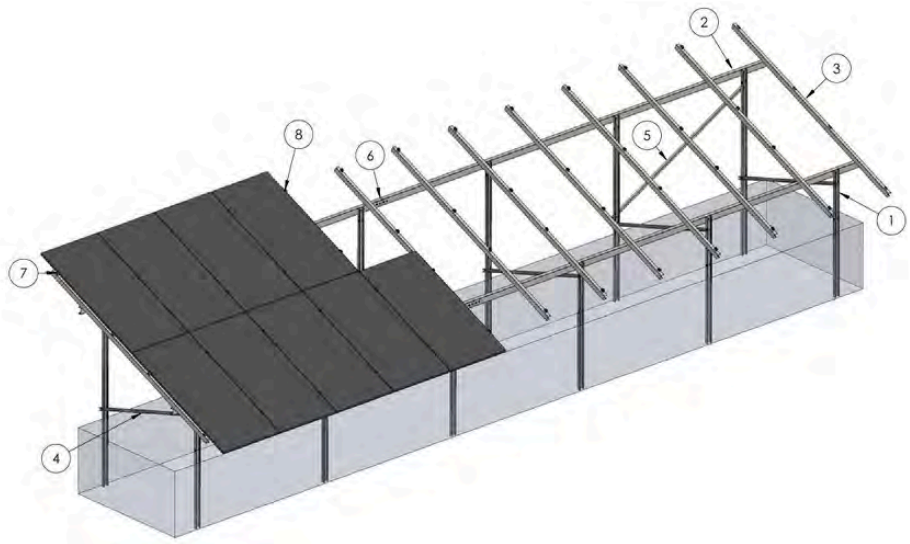
PRODUCT

Security, precision, economy, innovation, and accessibility are the fundamental attributes we consider in the development of our products for you.

HMK
demir çelik a.ş.

DPK2 2-Piece Vertical Panel Pile Installation

DPK2 is a steel-structured, open-field solar panel assembly system that utilizes a double vertical pile driving method. This system serves as an optimal solution for the installation of large and medium-scale land-based photovoltaic projects. Following the production of system components using advanced technological machinery, they are treated with hot-dip galvanization to ensure superior corrosion resistance. The system's high engineering design offers both assembly and cost efficiencies.



1-Column

- C 90/100/120/150

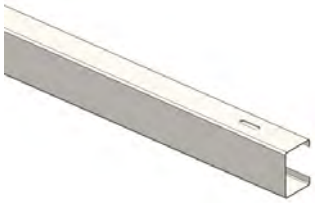
M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

- C 90/120

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

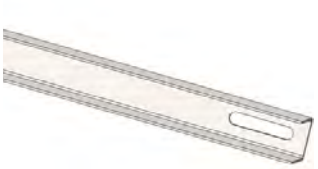
3-Purlin



- C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

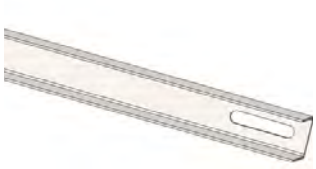
4- Cross



- U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

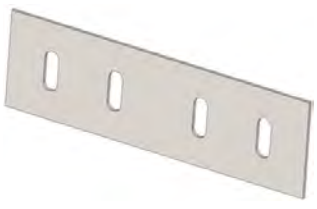
5-Cross



- U 40/50

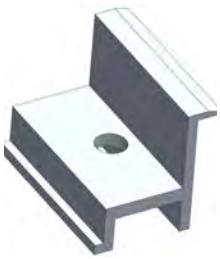
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Beam Connection Supplementary Component



M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

7-Sided Panel Holder

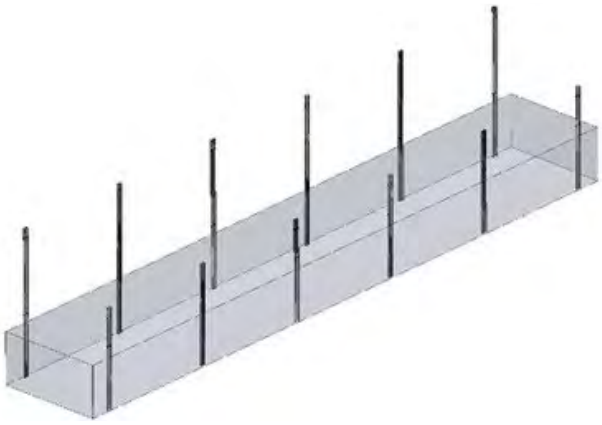


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

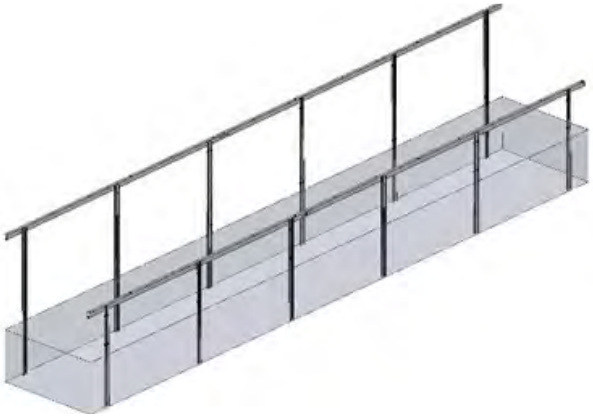
8-Middle Panel Support

M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

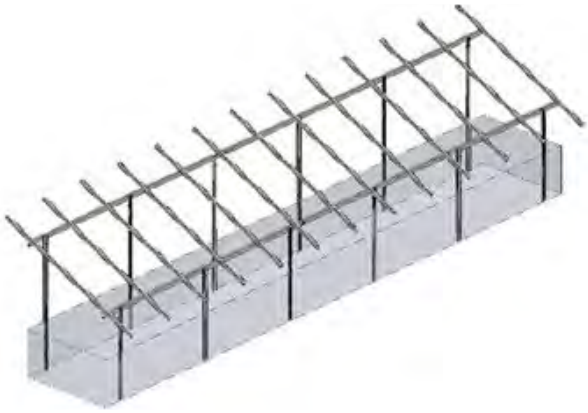
Securing the Column to the Ground



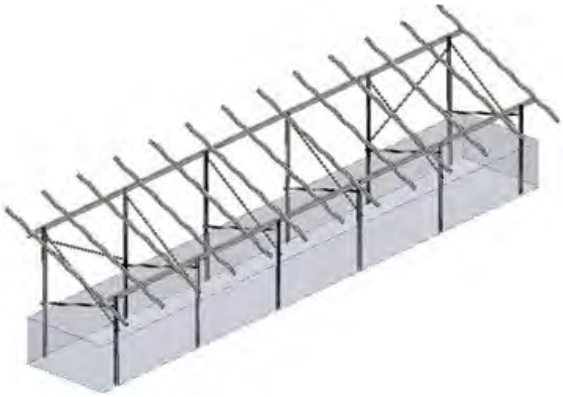
2. Installation of Columns and Beams



3. Beam-Purlin Installation



4. Column-Ring and Cross Assembly



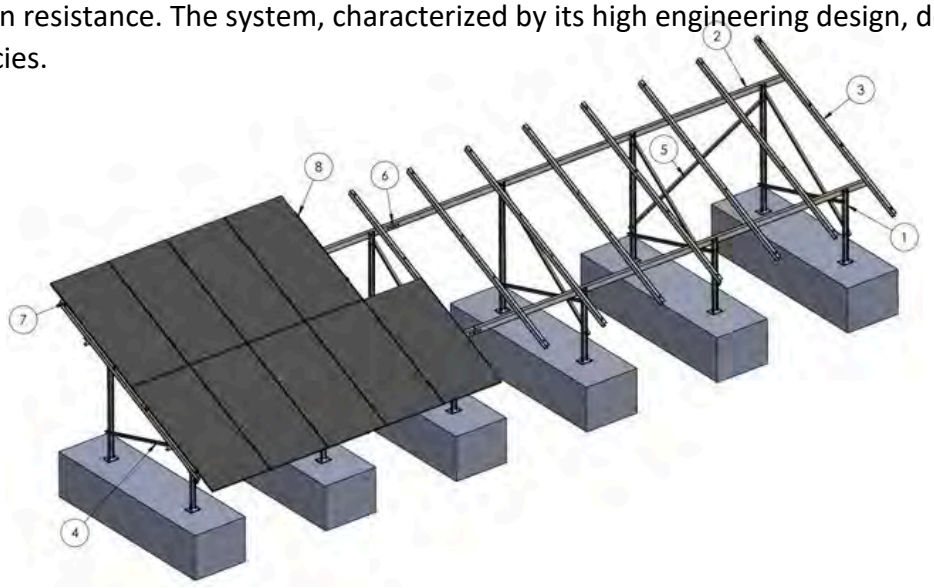
5. Installation of Panels

Description Mounting	DPK2 Two-Piece Vertical Panel Pile
Technique Tilt Angle	Driving Ground Driving
Panel Elevation from	0-60° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

DPB2 2-Ply Vertical Panel Concrete

It is a steel-structured, open-field solar panel assembly system anchored to the concrete ground with two vertical panels utilizing the anchoring method. This system serves as an optimal solution for the installation of photovoltaic projects on medium to large tracts of land, particularly in areas with steep terrain. It offers the requisite strength and stability for application on loose soils. Following the production of system components using advanced technological machinery and equipment, they are treated with hot-dip galvanization to ensure superior corrosion resistance. The system, characterized by its high engineering design, delivers both assembly and cost efficiencies.



1-Column

C 90/100/120/150

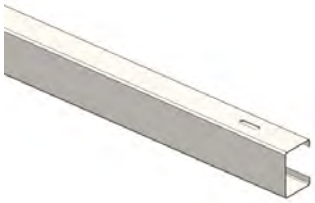
M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

C 90/120

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin



C 90/100/110

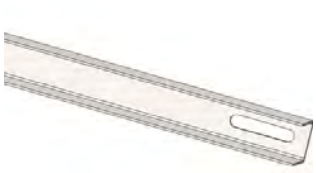
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

4- Buttress

U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

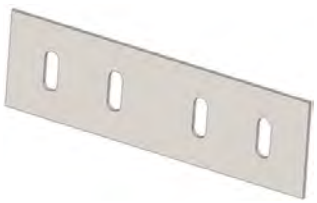
5-Cross



U 40/50

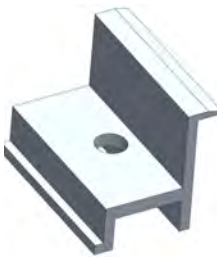
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Beam Connection Supplementary Component



M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

7-Sided Panel Holder

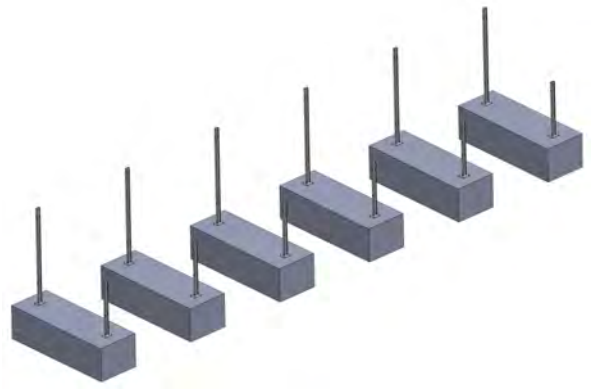


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

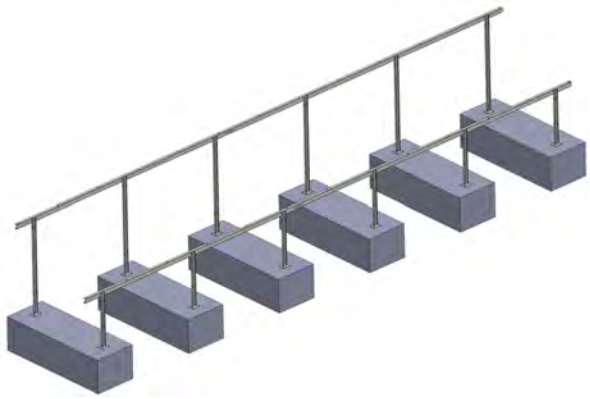
8-Middle Panel Support

M8x40 Hex Bolt M8 Nut M8 Washer M8 Nut

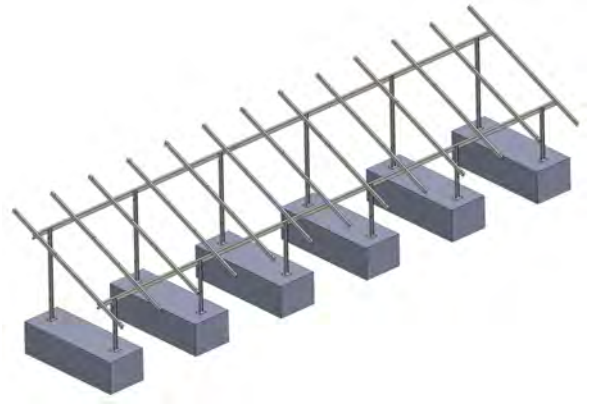
Column Installation Utilizing Ground Anchor



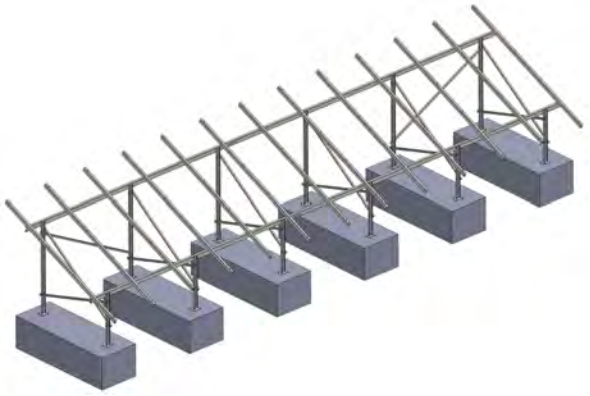
2. Installation of Columns and Beams



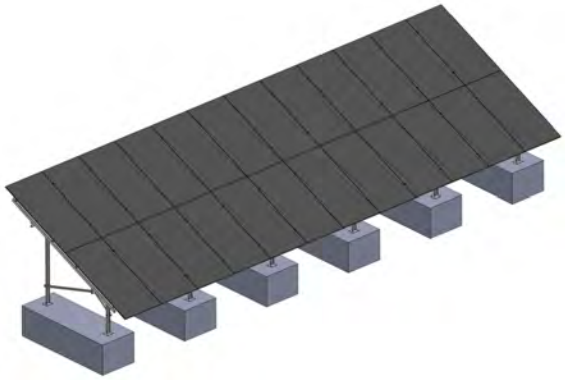
3. Beam-Purlin Installation



4. Column-Ring and Cross Assembly



5. Installation of Panels

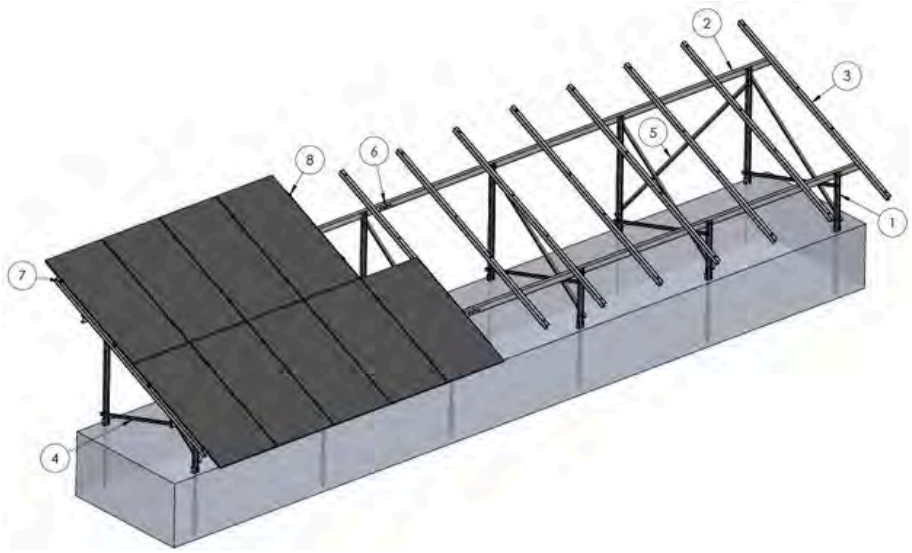


Description Mounting	DPB2 2-Pack Vertical Panel Concrete Foundation
Technique Tilt Angle	Anchor
Panel Elevation from	0-60° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

DPH2 2 Vertical Panel Ground Screw

This is a steel-structured, open-field solar panel assembly system anchored to the ground using the Vertical Panels Screw Pile method. The system serves as an optimal solution for the installation of photovoltaic projects on uneven terrain. Screw piles possess high strength and can be utilized throughout the year. Due to their exceptional load resistance, they remain unaffected by vibrations caused by wind and storms. Once the system components are manufactured using advanced technological machinery and equipment, they undergo hot-dip galvanization, ensuring superior corrosion resistance. The system, characterized by its advanced engineering design, offers both assembly and cost efficiencies.



1-Column

C 90/100/120/150

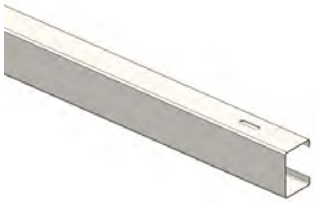
M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

C 90/120

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

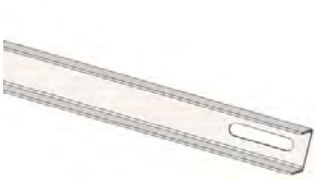
3-Purlin



C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

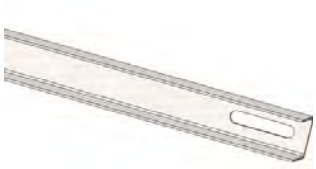
4- Buttress



U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

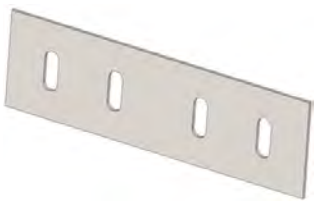
5-Cross



U 40/50

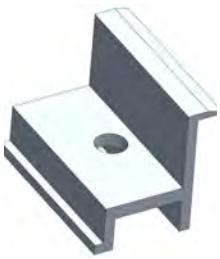
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Beam Connection Supplementary Component



M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

7-Sided Panel Holder



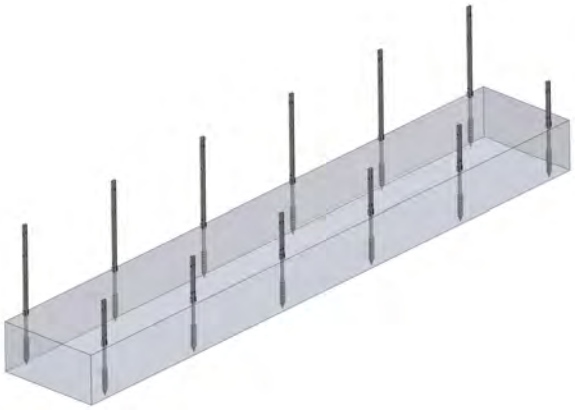
M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

8-Middle Panel Support

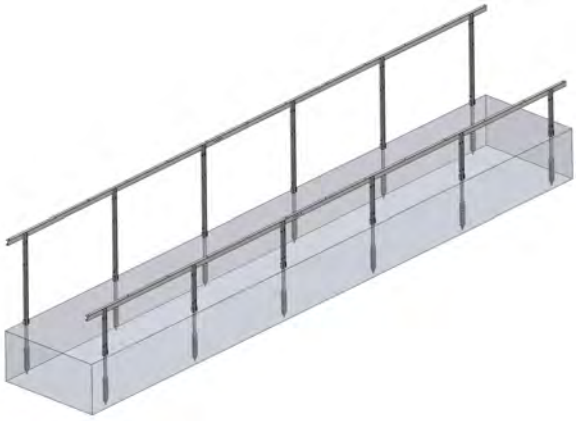
M8x40 Hex Bolt M8 Nut M8 Washer M8 Nut

Screw Pile Installation

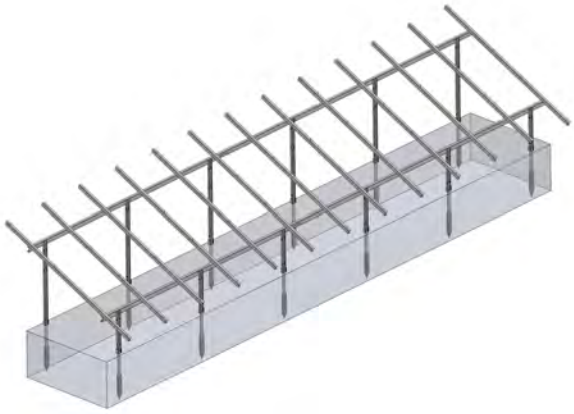
2. Installation of Column-Screw Piles



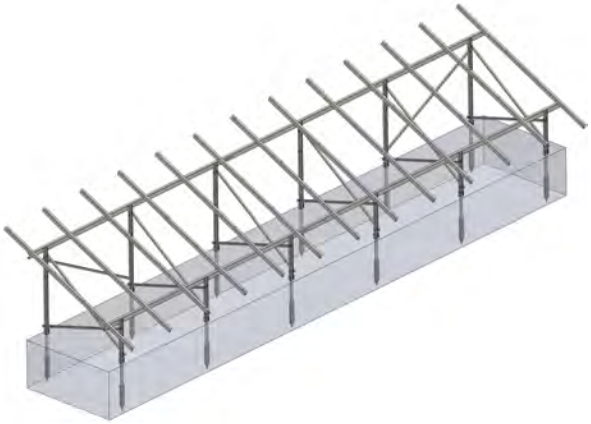
3. Column and Beam Installation



4. Beam-Purlin Installation



5. Column-Bracket and Rear Cross Assembly of Panels



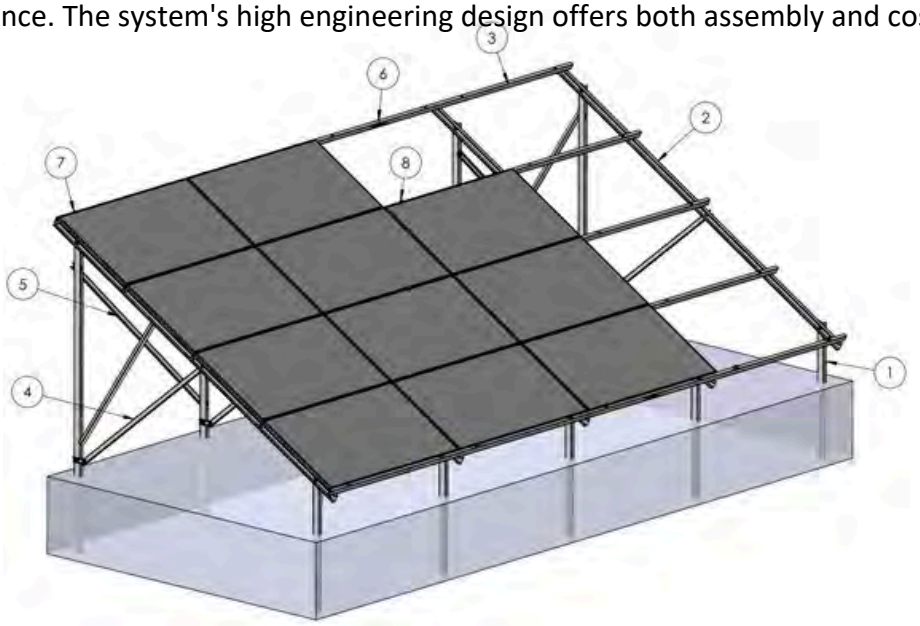
6. Installation of Panels

Description Mounting Technique Tilt Angle	DPH2 2-Piece Vertical Panel Ground Screw
Panel Elevation from Ground Column and	0-60° Degrees
Beam Finish Column and Beam Composition	60 cm ISO 1461 EN 10025 / EN 10029 EN AW 6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN 50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

YPK4 4 Horizontal Panel Pile Installation

It is a steel-structured, open-field solar panel assembly system equipped with four horizontal panels and utilizing a ground nailing method. This system serves as an optimal solution for the installation of large and medium-scale land-based photovoltaic projects. Once the system components are manufactured using advanced technological machinery and equipment, they undergo hot-dip galvanization to ensure superior corrosion resistance. The system's high engineering design offers both assembly and cost benefits.



1-Column

C 90/100/120/150

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

C 90/120

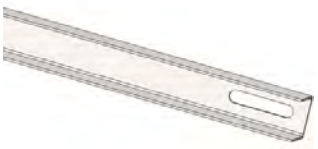
M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

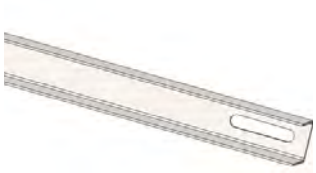
4- Buttress



U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

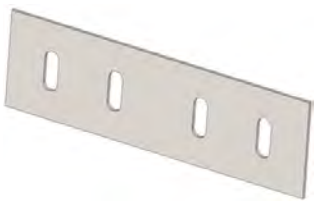
5-Cross



U 40/50

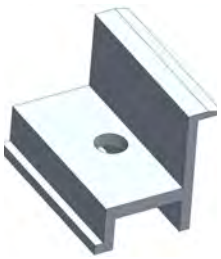
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Purlin Connection Supplementary Component



M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

7-Sided Panel Holder

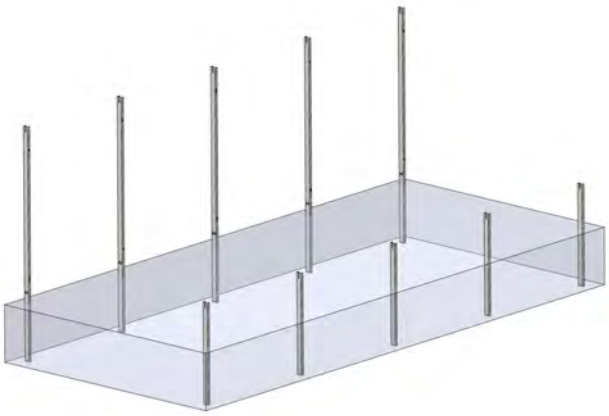


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

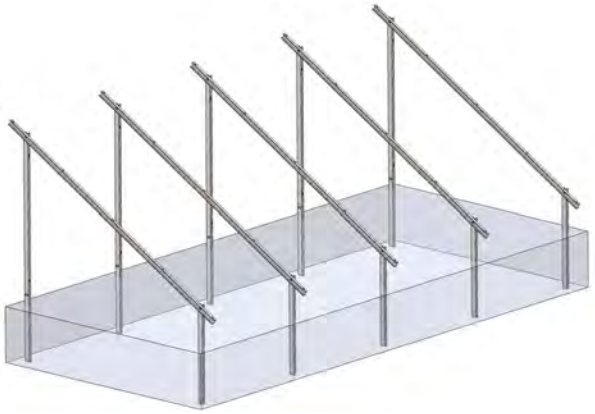
8-Middle Panel Support

M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

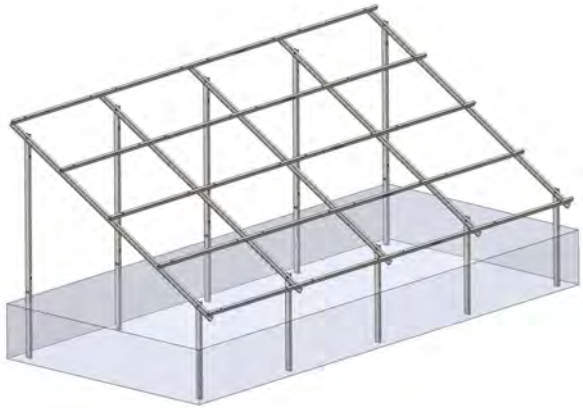
Securing the Column to the Ground



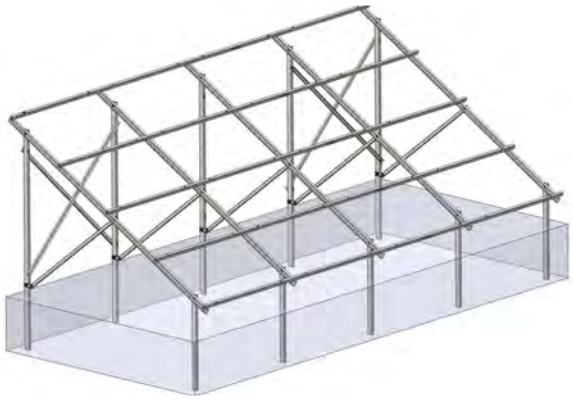
2. Installation of Columns and Beams



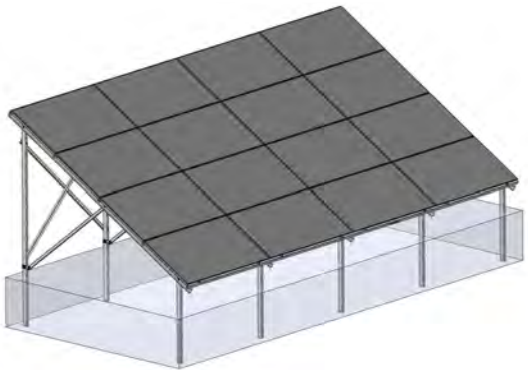
3. Beam-Purlin Installation



4. Column-Ring and Cross Assembly



5. Installation of Panels

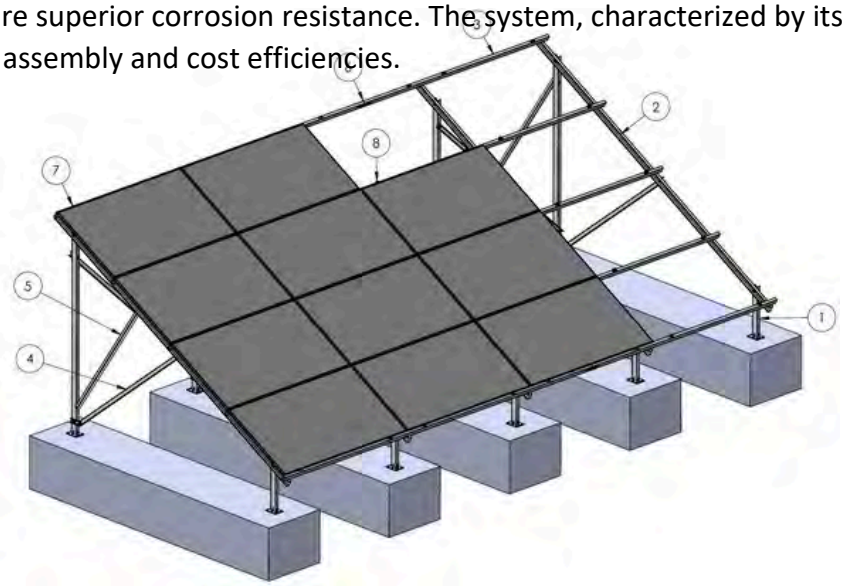


Description Mounting	YPH4 4-Piece Horizontal Panel Pile
Technique Tilt Angle	Installation into the Ground
Panel Elevation from	0-60° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

YPB4 4 Horizontal Panel Concrete

It is a steel-structured, open-field solar panel assembly system anchored to the concrete ground with four horizontal panels utilizing the anchoring method. This system serves as an optimal solution for the installation of photovoltaic projects on medium to large tracts of land, particularly on terrains with steep slopes. It offers the requisite strength and stability for application on loose soils. Following the production of system components using advanced technological machinery and equipment, they are treated with hot-dip galvanization to ensure superior corrosion resistance. The system, characterized by its high engineering design, delivers both assembly and cost efficiencies.



1-Column

C 90/100/120/150

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

C 90/120

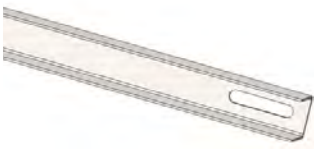
M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

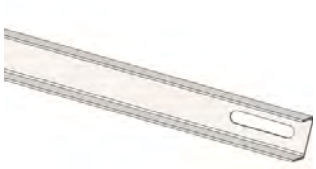
4- Buttress



U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

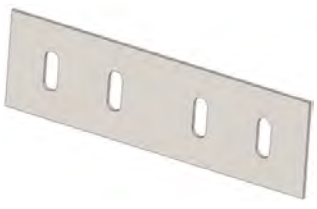
5-Cross



U 40/50

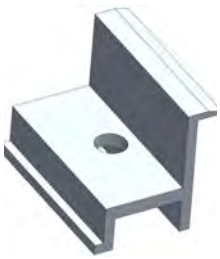
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Purlin Connection Supplementary Component



M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

7-Sided Panel Holder

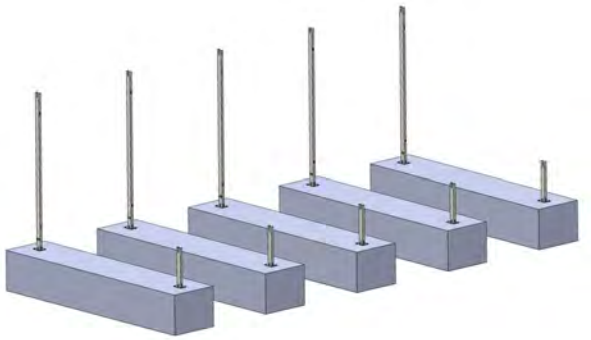


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

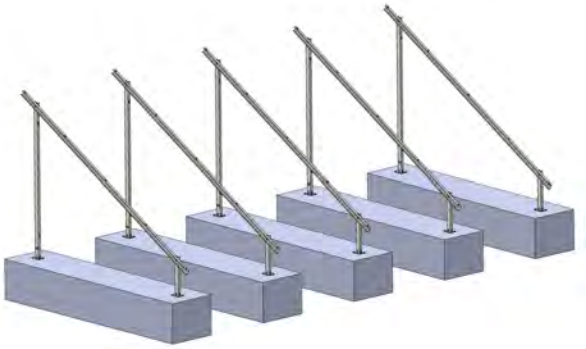
8-Middle Panel Support

M8x40 Hex Bolt M8 Nut M8 Washer M8 Nut

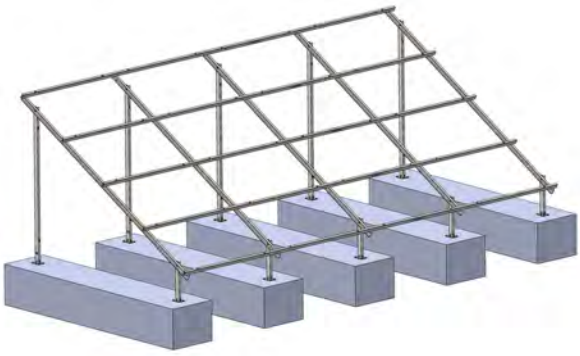
Securing the Column to the Ground



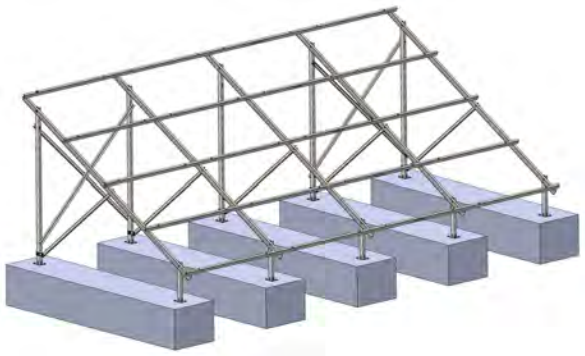
2. Installation of Columns and Beams



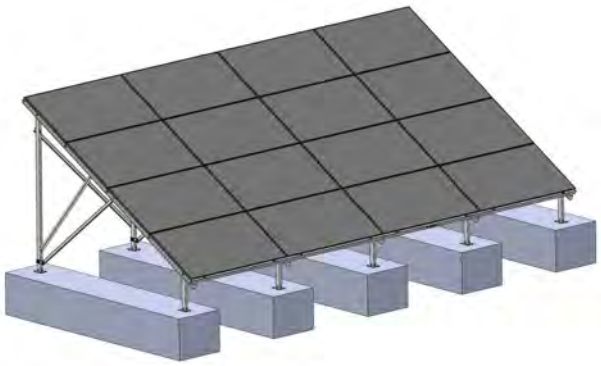
3. Beam-Purlin Installation



4. Column-Ring and Cross Assembly



5. Installation of Panels

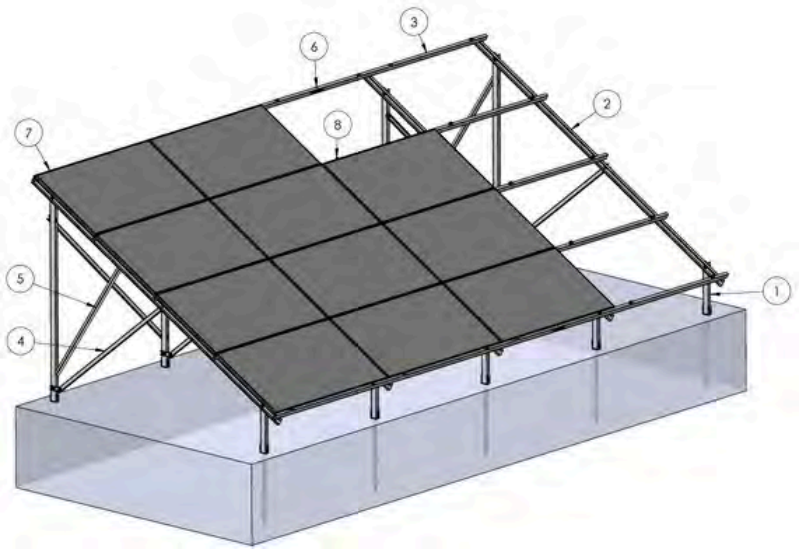


Description Mounting Technique Tilt Angle	YPB4 4-Pack Horizontal Panel Concrete Foundation Anchor
Panel Elevation from Ground Column and	0-60° Degrees
Beam Finish Column and Beam Composition	60 cm ISO 1461 EN 10025 / EN 10029 EN AW 6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN 50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

YPH4 4 Horizontal Panel Spiral

This is a steel-structured, open-field solar panel assembly system anchored to the ground using the four Horizontal Panels Screw Pile method. The system serves as an optimal solution for the installation of photovoltaic projects on irregular terrain. Screw piles possess high strength and can be utilized throughout the year. Due to their exceptional load resistance, they remain unaffected by vibrations caused by wind and storms. Once the system components are manufactured using advanced technological machinery and equipment, they undergo hot-dip galvanization, ensuring superior corrosion resistance. The system, characterized by its advanced engineering design, offers both assembly and cost efficiencies.



1-Column

C 90/100/120/150

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

2-Beam

C 90/120

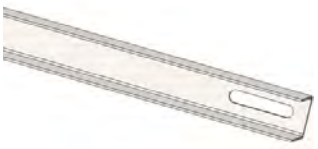
M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

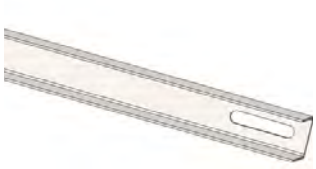
4- Buttress



U 40/50

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

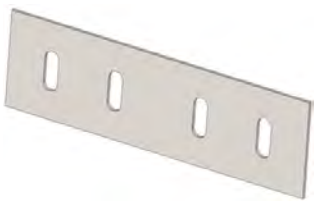
5-Cross



U 40/50

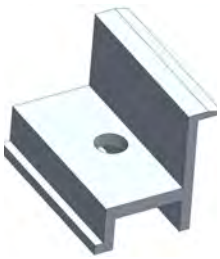
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Purlin Connection Supplementary Component



M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

7-Sided Panel Holder



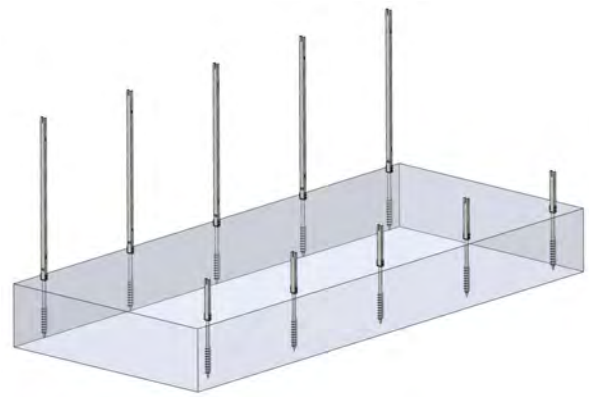
M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

8-Middle Panel Support

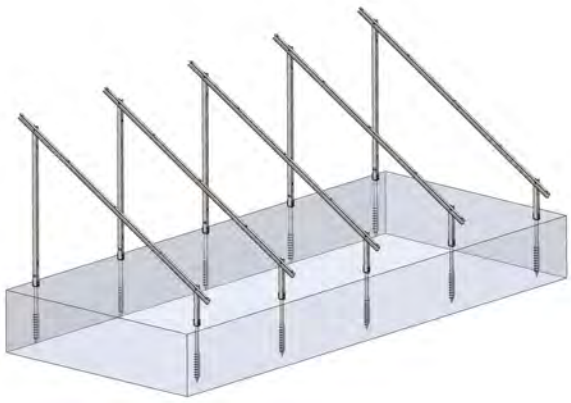
M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

Screw Pile Installation

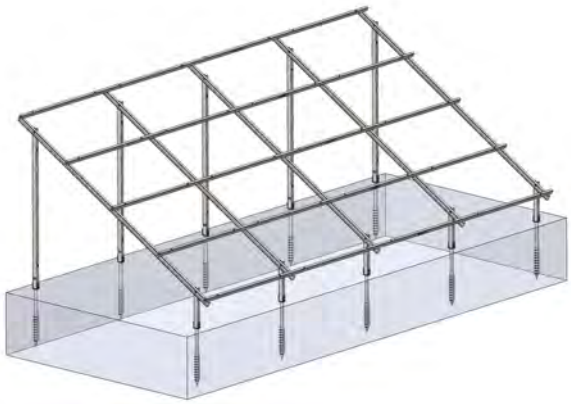
2. Installation of Column-Screw Piles



3. Column and Beam Installation



4. Beam-Purlin Installation



5. Column-Bracket and Rear Cross Assembly

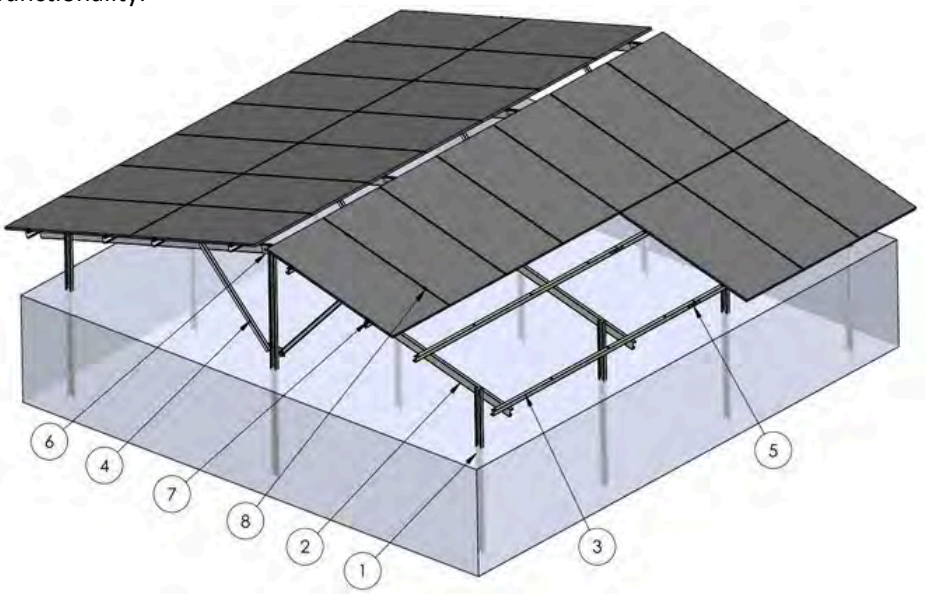
6. Installation of Panels

Description Mounting	YPH4 4-Pack Horizontal Panel Ground
Technique Tilt Angle	Screws
Panel Elevation from	0-60° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdem rcel k.com +90.224.441 19 63 nfo@hmkdem rcel k.com

DBDPK4 East-West Four-Way Vertical Panel Pile Driving

DBDPK4 represents a cutting-edge solution that maximizes efficiency for east-west oriented, ground-driven solar energy systems accommodating four vertical panels. This design is meticulously optimized to harness maximum energy, even at low sun angles during the winter months. The system, which boasts long-term corrosion resistance due to its hot-dip galvanized coating, reduces project duration and offers a cost advantage through its rapid installation capabilities. Suitable for both large and medium-scale photovoltaic projects, this structure stands out as an exemplary choice in terms of engineering and functionality.



1-Column

C 90/100/120/150

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

2-Beam

C 90/120

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlins

C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

4- Cross

U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

5-Purlin Connection Supplementary Component

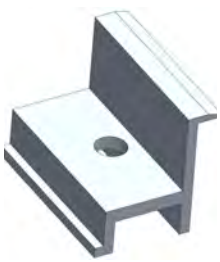
U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

6-Beam Connection Supplementary Component

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

7-Sided Panel Holder

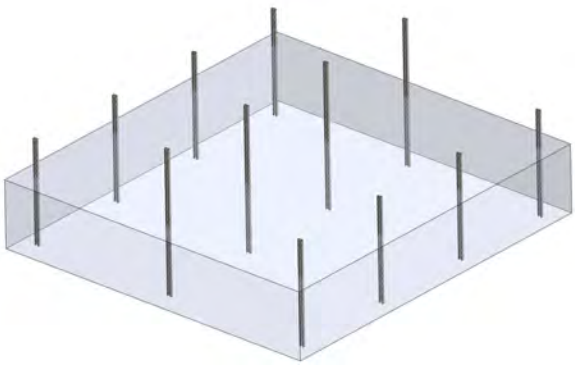


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

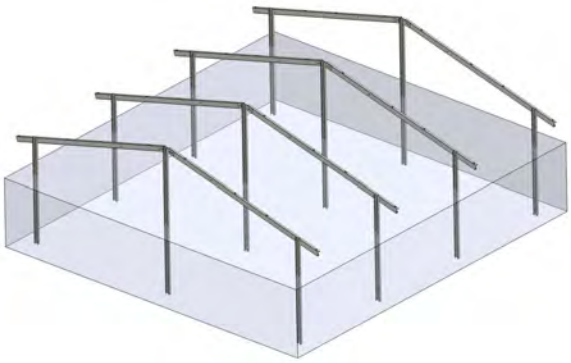
8-Middle Panel Support

M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

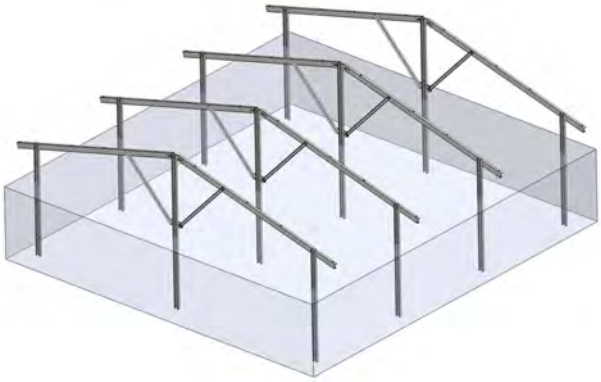
Securing the Column to the Ground



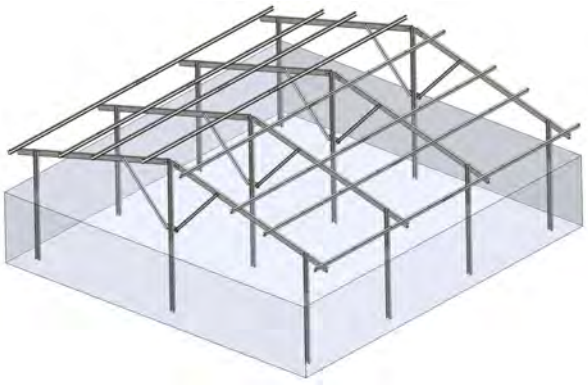
2. Installation of Columns and Beams



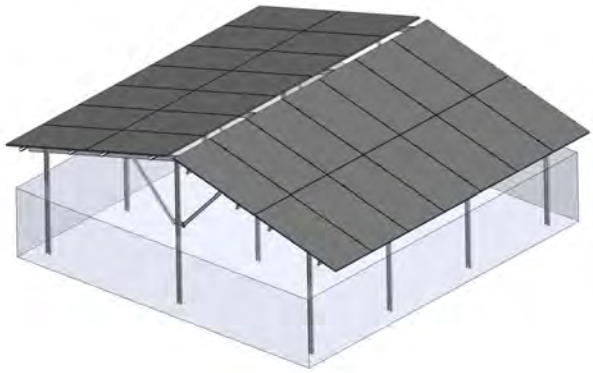
4. Installation of Column Brackets



4. Beam-Purlin Installation



5. Installation of Panels

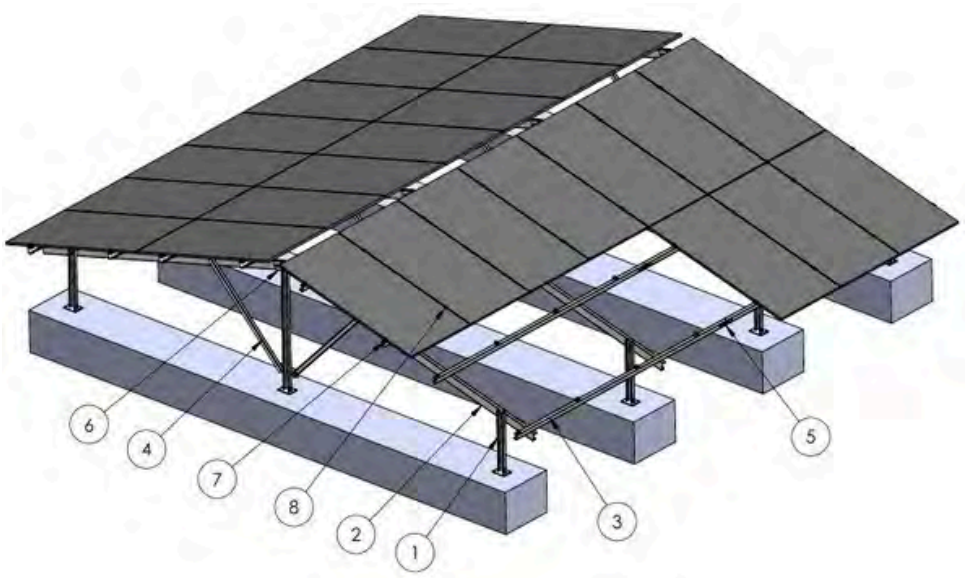


Description Mounting	DBDPK4 Four-Piece Vertical Panel Pile
Technique Tilt Angle	Driving Ground Driving
Panel Elevation from	10-25° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

DBDPB4 East-West Four-Way Vertical Panel Concrete

DBDPB4 represents a cutting-edge solution that maximizes efficiency for solar energy systems oriented east-west, utilizing a concrete ground anchor method to support four vertical panels. This design is specifically optimized to capture maximum energy, even at low sun angles during the winter months. The system, which boasts long-term corrosion resistance due to its hot-dip galvanized coating, facilitates a reduced project timeline through rapid installation and offers a cost advantage. Suitable for both large and medium-sized photovoltaic projects, this structure stands out as an exemplary choice in terms of engineering and functionality.



1-Column

C 90/100/120/150

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

2-Beam

C 90/120

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

4- Buttress

U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

5-Purlin Connection Supplementary Component

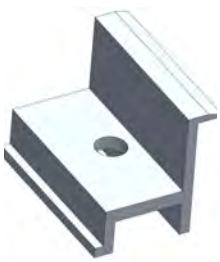
U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

6-Beam Connection Supplementary Component

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

7-Sided Panel Holder

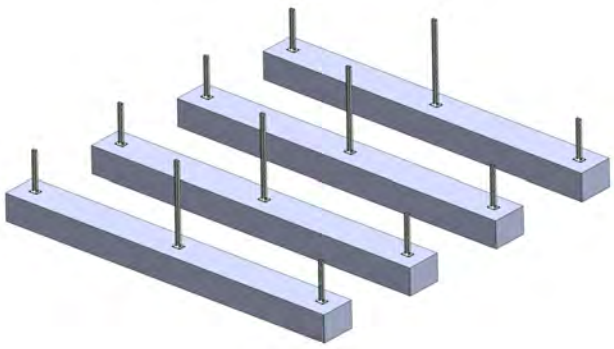


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

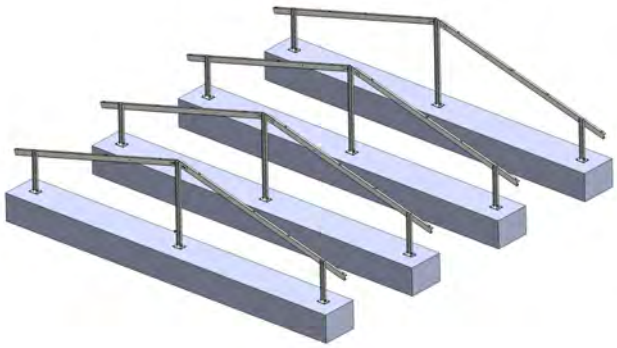
8-Middle Panel Support

M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

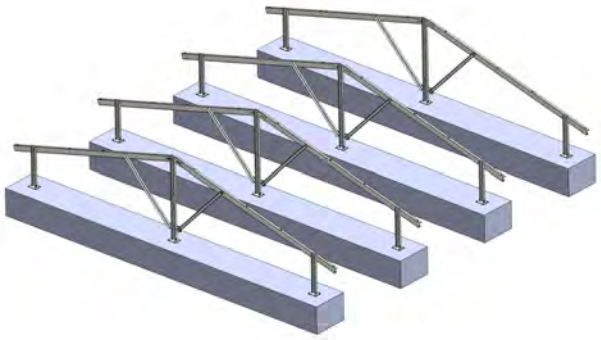
Column Installation Utilizing Ground Anchor



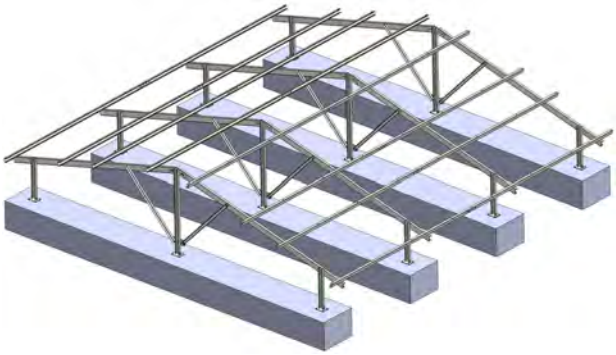
2. Installation of Columns and Beams



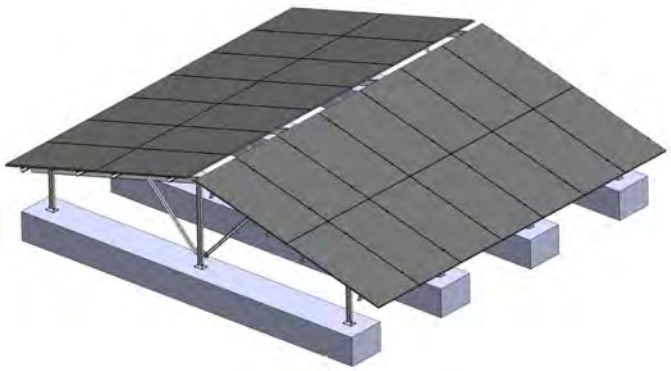
4. Installation of Column Brackets



4. Beam-Purlin Installation



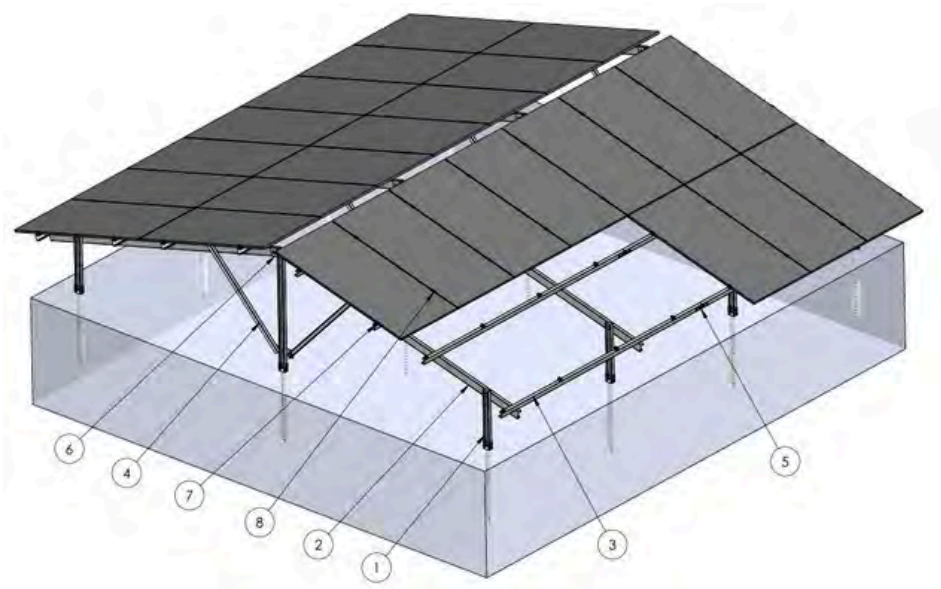
5. Installation of Panels



Description Mounting	DBDPB4 Four-Pack Vertical Panel Concrete Foundation Anchor
Technique Tilt Angle	Anchor on Concrete
Panel Elevation from	Foundation 10-25 Degrees
Ground Column and	60 cm ISO 1461 EN
Beam Finish Column	10025 / EN 10029 EN
and Beam Composition	AW 6063
Panel Holder	
Connection Apparatus	DIN 934 / DIN 933 / DIN 912, A2-70 DIN 50979

DBDPH4 East-West Four-Way Vertical Panel Helix

DBDPK4 represents a cutting-edge solution that maximizes efficiency for 4-panel vertical east-west oriented ground screw pile solar energy systems. This design is meticulously optimized to harness maximum energy, even at low sun angles during winter. The system, which boasts long-term corrosion resistance due to its hot-dip galvanized coating, reduces project duration and offers a cost advantage through expedited installation. Suitable for both large and medium-sized photovoltaic projects, this structure stands out as an exemplary choice in terms of engineering and functionality.



1-Column

- C 90/100/120/150

M14x40 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

2-Beam

- C 90/120

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

- C 90/100/110

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut, M8x40 Allen Bolt, M8 Washer, M8 Washer, M8 Nut

4- Buttress

- U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

5-Purlin Connection Supplementary Component

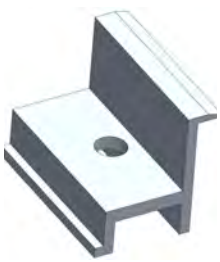
- U 40/50

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

6-Beam Connection Supplementary Component

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

7-Sided Panel Holder

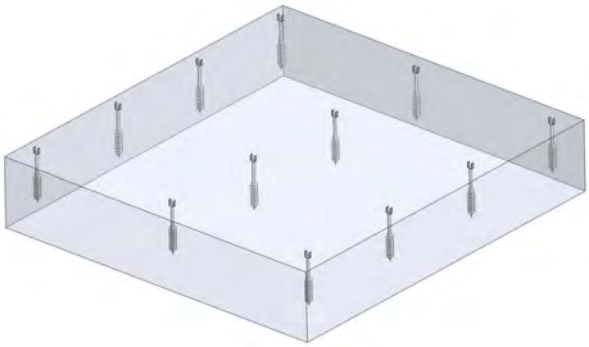


M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

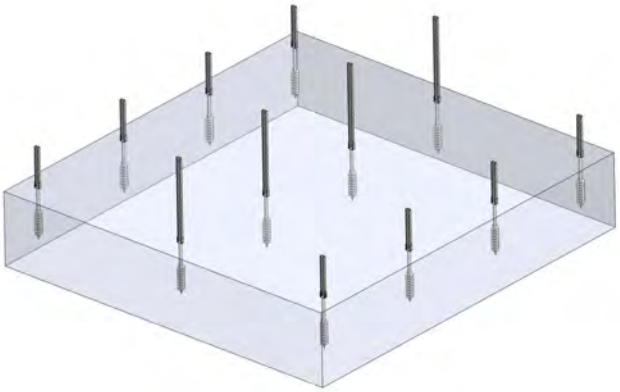
8-Middle Panel Support

M8x40 Hex Bolt M8 Washer M8 Washer M8 Nut

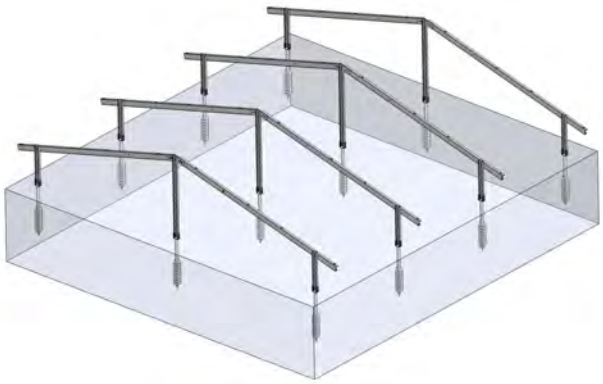
Screw Pile Installation



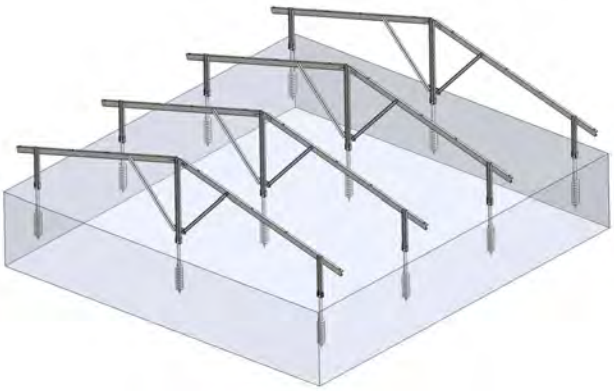
2. Installation of Column-Screw Piles



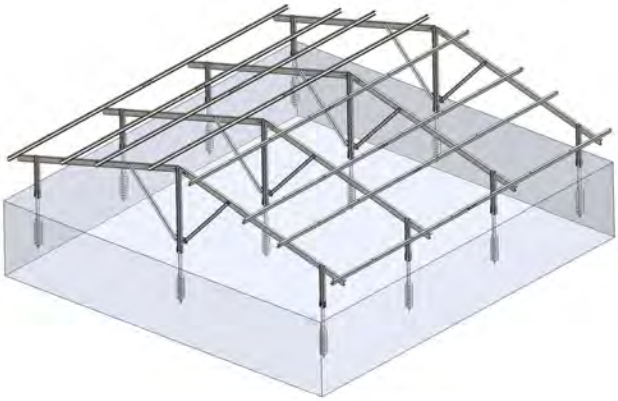
3. Column and Beam Installation



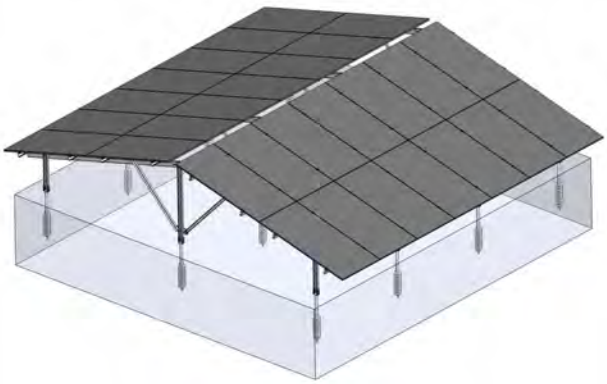
5. Installation of Column Brackets



5. Installation of Beams and Purlins



6. Installation of Panels

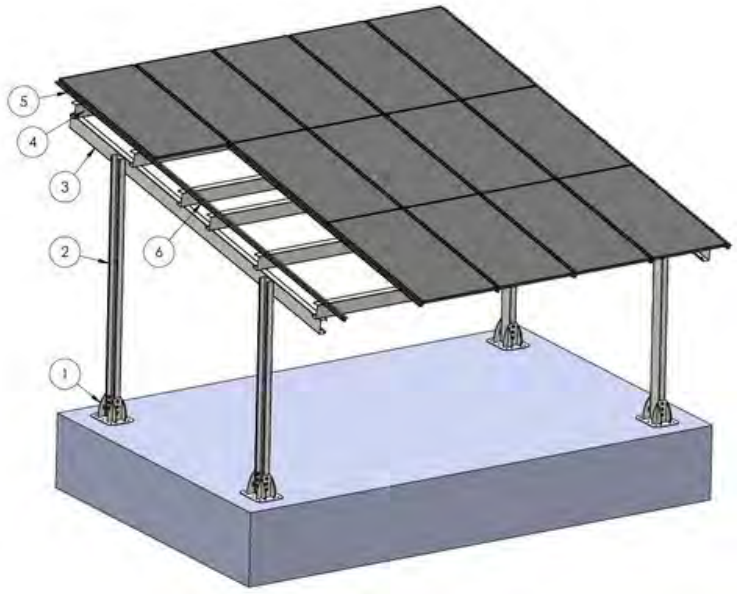


Description Mounting	DBDPH4 4-piece Vertical Panel Ground
Technique Tilt Angle	Screw
Panel Elevation from	10-25° Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

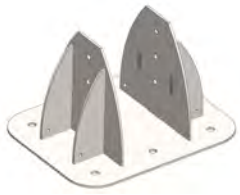
www.hmkdemircelik.com +90.224.441 19 63 nfo@hmkdem rcel k.com

C1DP3 3 Vertical Panel Concrete Parking Structure

It is a steel-structured solar carport system, a ffixed to a vertical concrete foundation using an anchoring method. This system serves as an optimal solution for the installation of photovoltaic projects in parking areas, offering both strength and stability. Following the production of system components with advanced technological machinery, they are treated with hot-dip galvanization to ensure superior corrosion resistance. The system, characterized by high engineering design, offers advantages in assembly and cost efficiency.



1-Anchor Component



- C 120/150/200

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

2-Column

- C 120/150/200

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

3-Beam

- C 120/150/200

M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

4-Purlin

- C 120/150/200

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

5-Omega

- U 40/50

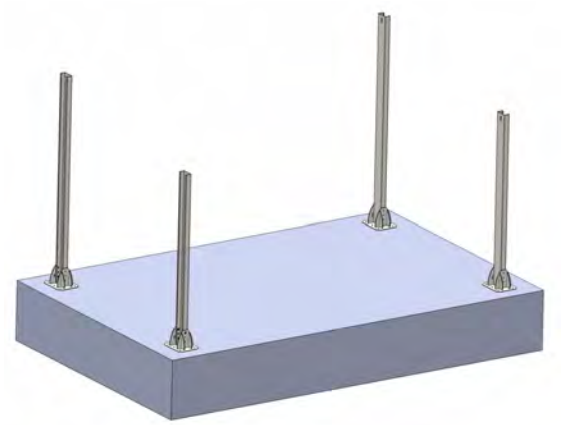
M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

6-Omega Supplementary Component

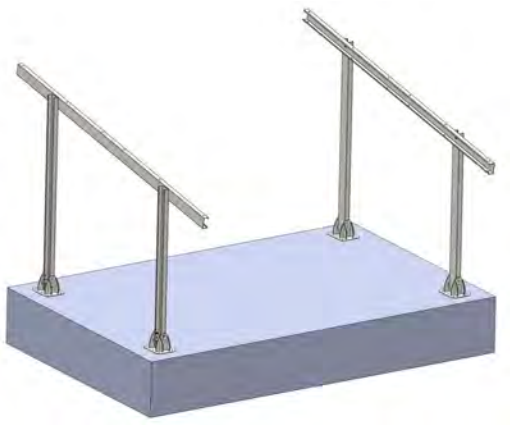
- U 40/50

M8x40 Key Head Bolt, M8 Washer, M8 Washer, M8 Nut

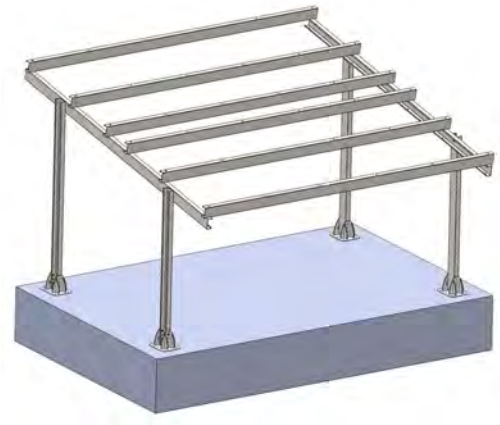
Column Installation Utilizing Ground Anchor



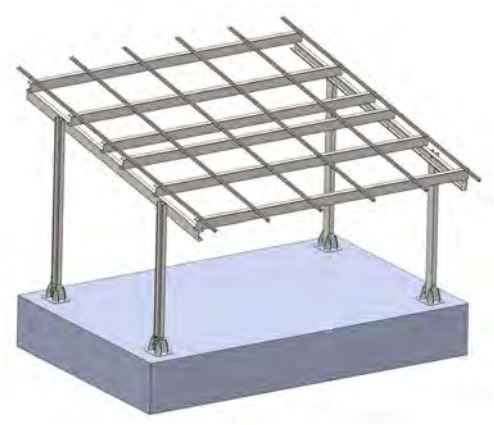
2. Installation of Columns and Beams



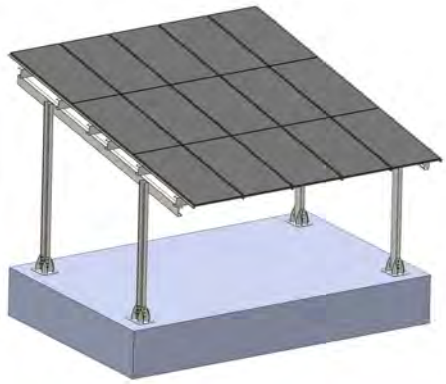
3. Beam-Purlin Installation



4. Aseembly Omega Pofiles



5. Installation of Panels

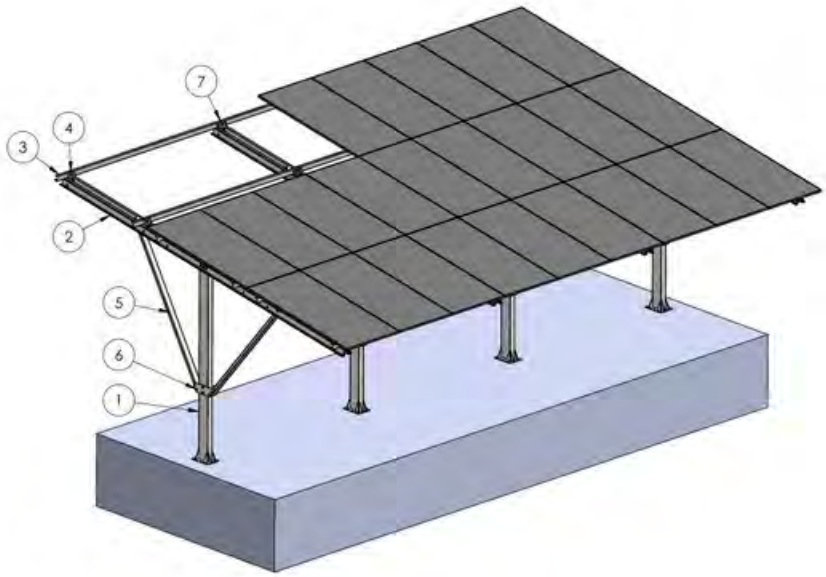


Description Mounting	C1DP3 3-Pack Vertical Panel Concrete Foundation Secured Car Park
Technique Tilt Angle	Anchor on Concrete
Panel Elevation from	Foundation 0-60 Degrees
Ground Column and	60 cm ISO 1461 EN 10025 / EN 10029 EN AW
Beam Finish Column	6063 DIN 934 / DIN 933 / DIN 912, A2-70 DIN
and Beam Composition	50979
Panel Holder	
Connection Apparatus	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

C2DP3 3 Vertical Panel Concrete Parking Structure

It is a steel-structured solar Carport system, a ffixed to a vertical concrete foundation using an anchoring method. This system serves as an optimal solution for the installation of photovoltaic projects in parking areas, offering both strength and stability. Following the production of system components with advanced technological machinery, they are treated with hot-dip galvanization to ensure superior corrosion resistance. The system, characterized by high engineering design, offers advantages in assembly and cost efficiency.



1-Column

P 120/150/200

M14x140 Key Head Bolt, M14 Washer, M14 Washer, M14 Nut, M12x140 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

2-Beam

C 120/150/200

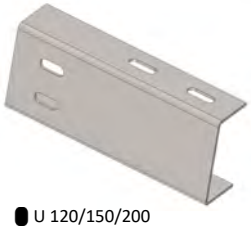
M12 x 140 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut, M10 x 40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

3-Purlin

C 120/150/200

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

4-Beam Connection Supplementary Component



U 120/150/200

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

5- Buttress

P 40/50

M12x140 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

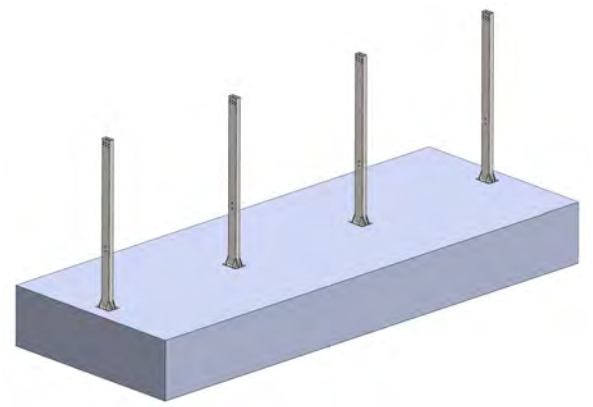
6- Supplementary Component on the Buttress

M12x140 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut

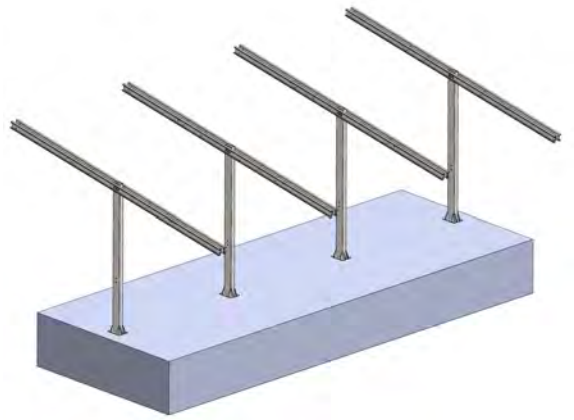
7-Purple Supplementary Component

M10x40 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut

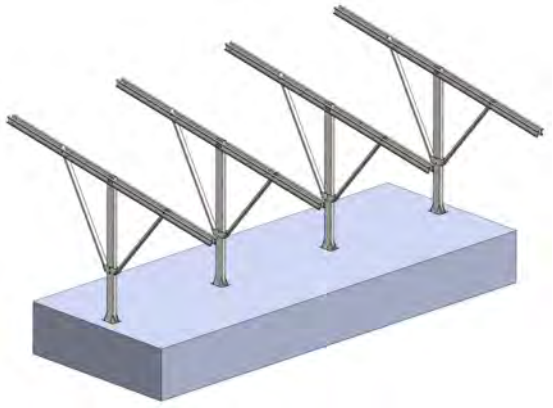
Column Installation Utilizing Ground Anchor



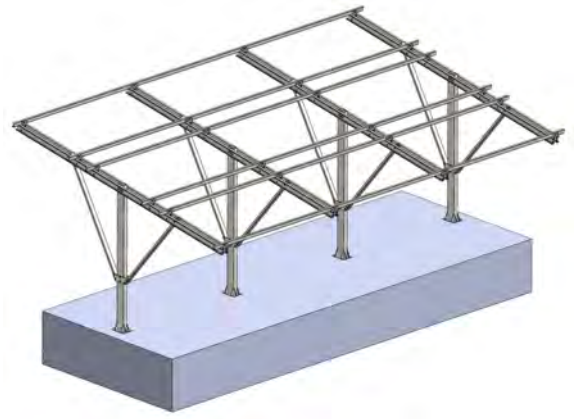
2. Installation of Columns and Beams



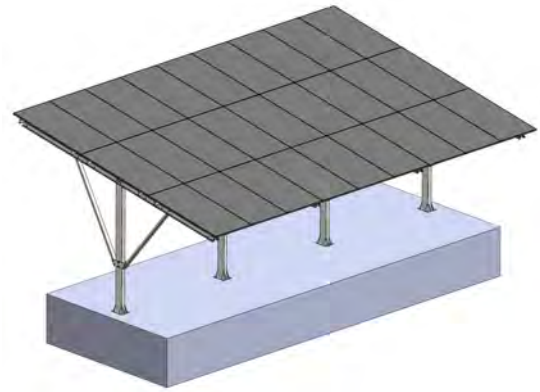
4. Installation of Column Brackets



4. Beam-Purlin Installation



5. Installation of Panels

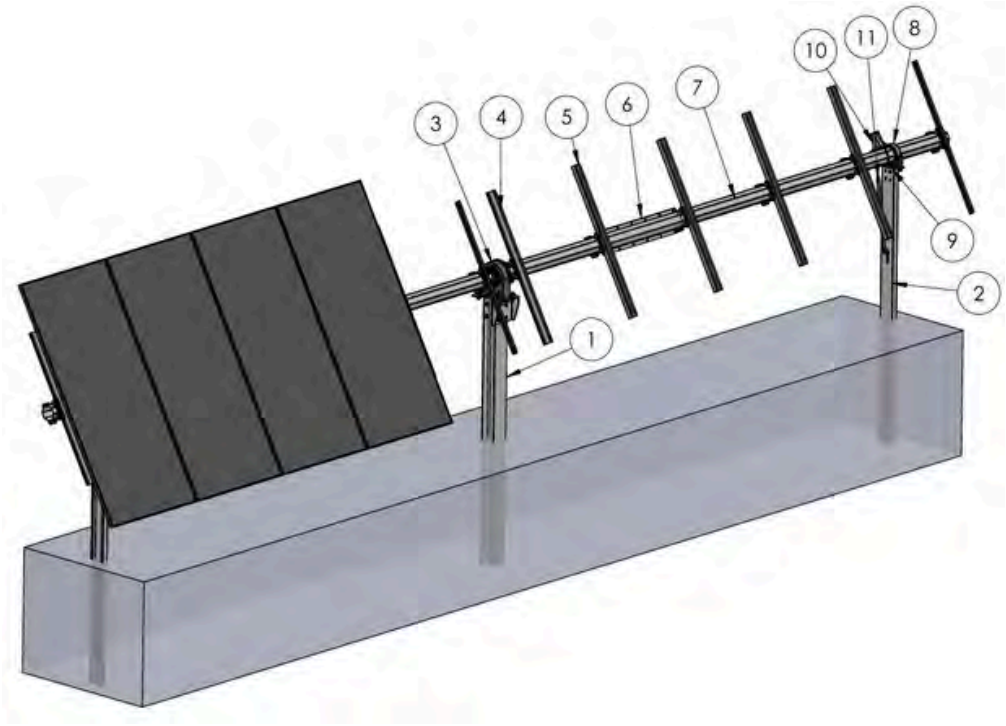


Description Mounting	C2DP3 Three-Way Vertical Panel Concrete Foundation
Technique Tilt Angle	Anchored Car Park Concrete Foundation Anchor 0-60°
Panel Elevation from	Degree 60 cm ISO 1461 EN 10025 / EN 10029 EN AW 6063
Ground Column and	DIN 934 / DIN 933 / DIN 912, A2-70 DIN 50979
Beam Finish Column	
and Beam Composition	
Panel Holder	
Connection Apparatus	

TDP1 1 Vertical Panel Single-Axis Solar Tracking System

The single-axis solar tracking system maximizes energy production efficiency by enabling solar panels to follow the sun's trajectory throughout the day. This system typically operates on a horizontal axis, optimizing energy generation by tracking the sun's movement from east to west. Particularly favored in large-scale solar energy projects, this technology can yield 20-30% more energy output compared to static systems.

It offers exceptional protection against severe weather conditions due to its robust steel construction and hot-dip galvanized coating. The single-axis tracker, which operates in conjunction with automation and control systems, facilitates straightforward installation, minimal maintenance needs, and enduring performance. These attributes render it an optimal solution for cost efficiency and sustainable energy generation.



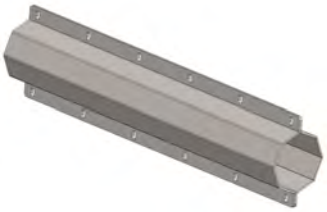
1-Engine Column	2-Column	3-Engine Transporter	4-Omega
			
HEA 160	C 150	C 150	Z 50/60
M12x40 Key Head Bolt, M12 Washer, M12 Washer, M12 Nut	M10x25 Key Head Bolt, M10 Washer, M10 Washer, M10 Nut	M12x40 Key Head Bolt M12 Washer M12 Washer M12 Nut M20x65 Allen Bolt M20 Washer M20 Washer M20 Nut	M8x20 Key Head Bolt, M8 Washer, M8 Washer, M8 Nut

5-Purlin

- U 50/60

M8x20 Key Head Bolt, M8
Washer, M8 Washer, M8
Nut

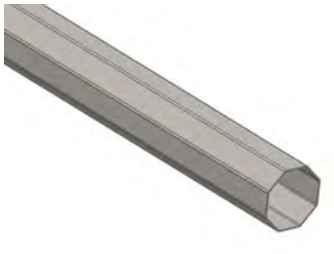
6-Profile Connection Componer



- C 120

M12x20 Key Head Bolt, M12
Washer, M12 Washer, M12
Nut

7-Octagonal Profile



- P120

M12x25 Key Head Bolt M12
Washer M12 Washer M12
Nut

8-Bed

M16x140 Key Head Bolt M16
Washer M16 Washer M16 Nut

9-Bed Connector Component

- K 150

M10x40 Key Head Bolt, M10
Washer, M10 Washer, M10
Nut

10-Support Piston Component

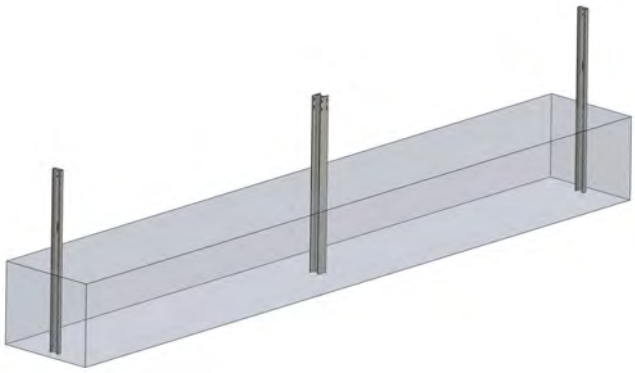
- K 120

M10x40 Key Head Bolt, M10
Washer, M10 Washer, M10
Nut

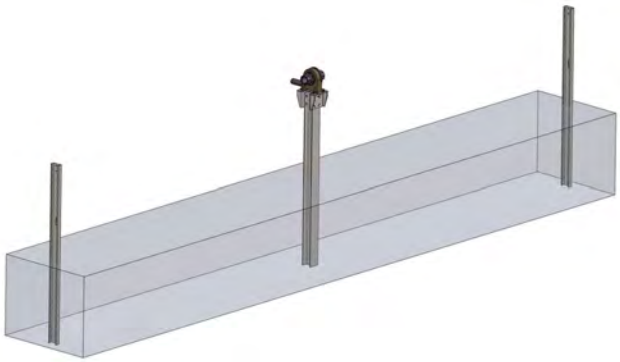
11-Support Cylinder

M8x40 Hex Bolt M8
Washer M8 Washer
M8 Nut

Securing the Column to the Ground

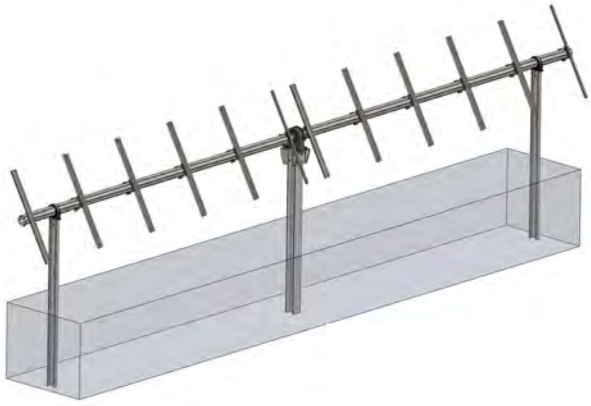


2. Column-Engine Assembly

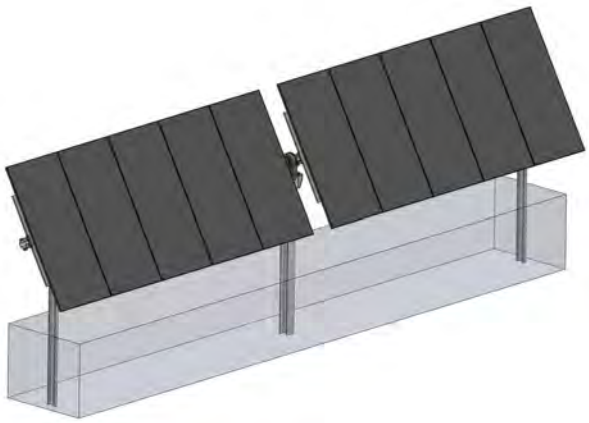


4. Motor Profile Assembly

4. Installation of Purlins



5. Installation of Panels

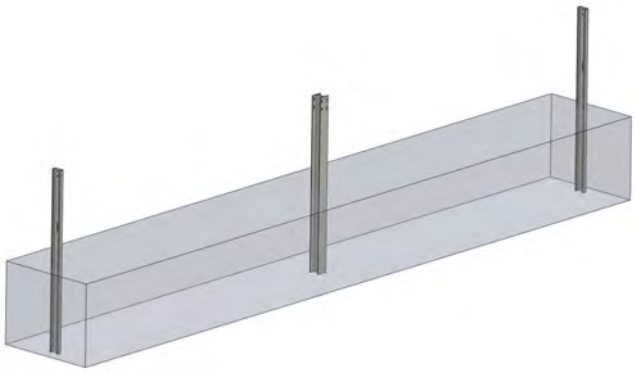


Description Mounting	TDP1 1-Pack Vertical Panel Single Axis Solar Tracking
Technique Tilt Angle	System Ground Mounting 0-60° Degree 60 cm ISO
Panel Elevation from	1461 EN 10025 / EN 10029 EN AW 6063 DIN 934 /
Ground Column and	DIN 933 / DIN 912, A2-70 DIN 50979
Beam Finish Column	
and Beam Composition	
Panel Holder	
Connection Apparatus	

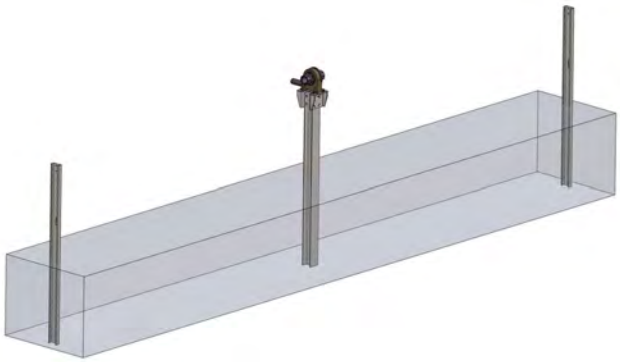
www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

T DP1 Installation Procedures

Securing the Column to the Ground

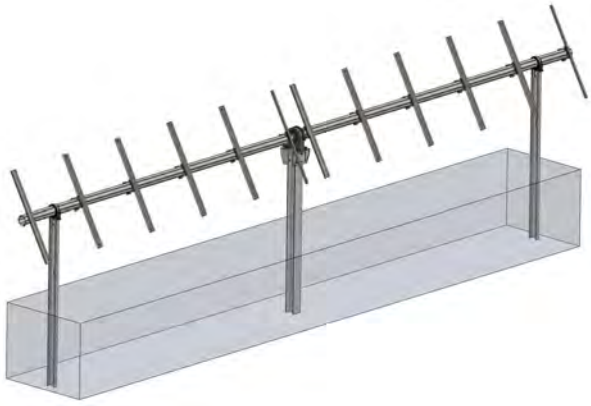


2. Column-Engine Assembly

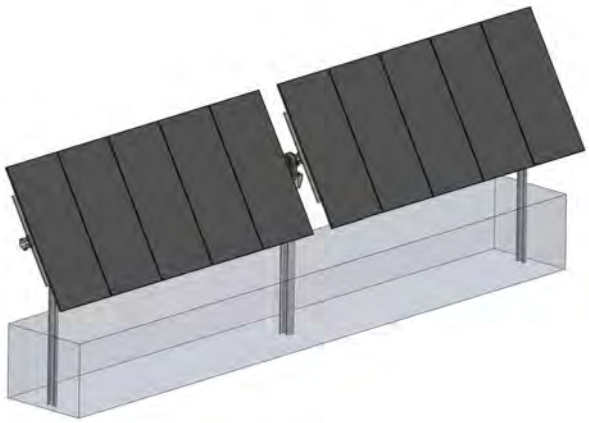


4. Motor Profile Assembly

4. Installation of Purlins



5. Installation of Panels

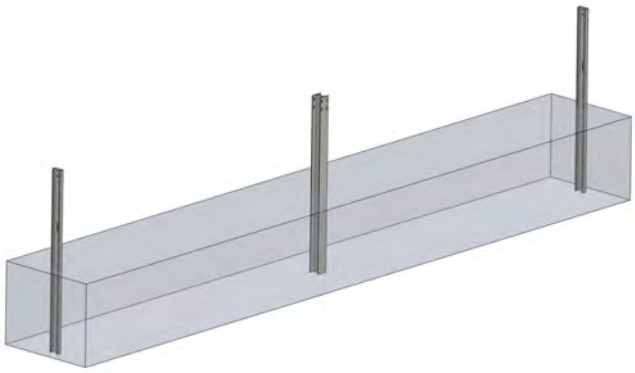


Description Mounting	TDP1 1-Pack Vertical Panel Single Axis Solar Tracking
Technique Tilt Angle	System Ground Mounting 0-60° Degree 60 cm ISO
Panel Elevation from	1461 EN 10025 / EN 10029 EN AW 6063 DIN 934 /
Ground Column and	DIN 933 / DIN 912, A2-70 DIN 50979
Beam Finish Column	
and Beam Composition	
Panel Holder	
Connection Apparatus	

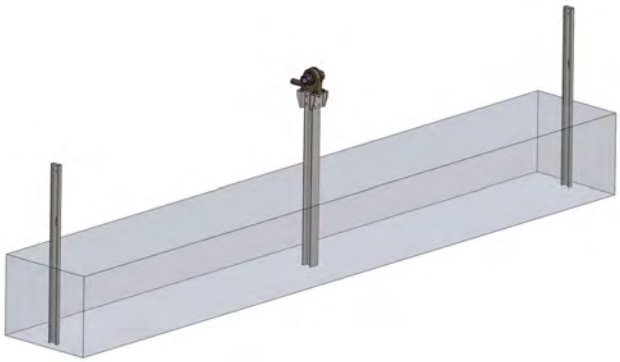
www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com

T DP1 Installation Protocols

Anchoring the Column to the Ground

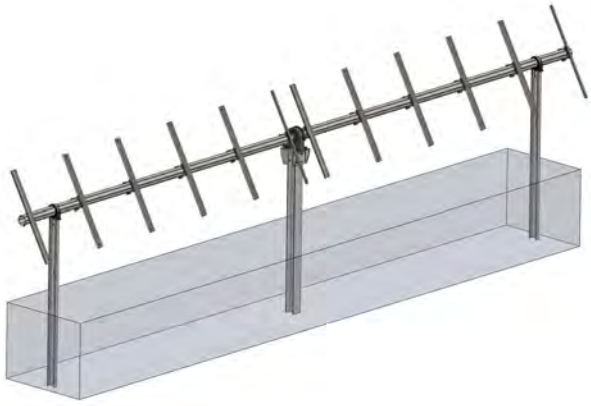


2. Column-Engine Assembly

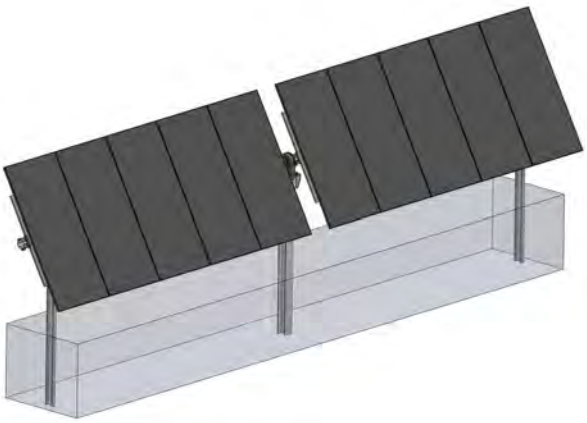


4. Engine Profile Assembly

4. Installation of Purlins



5. Panel Installation



Description of Mounting	TDP1 1-Pack Vertical Panel Single Axis Solar Tracking
Technique Tilt Angle	System Ground Mounting 0-60° Degree 60 cm ISO
Panel Elevation Above	1461 EN 10025 / EN 10029 EN AW 6063 DIN 934 /
Ground Column and	DIN 933 / DIN 912, A2-70 DIN 50979
Beam Finish Column	
and Beam Composition	
Panel Holder	
Connection Device	

www.hmkdemircelik.com +90.224.441 19 63 info@hmkdemircelik.com


HMK
DEMİR ÇELİK A.Ş.