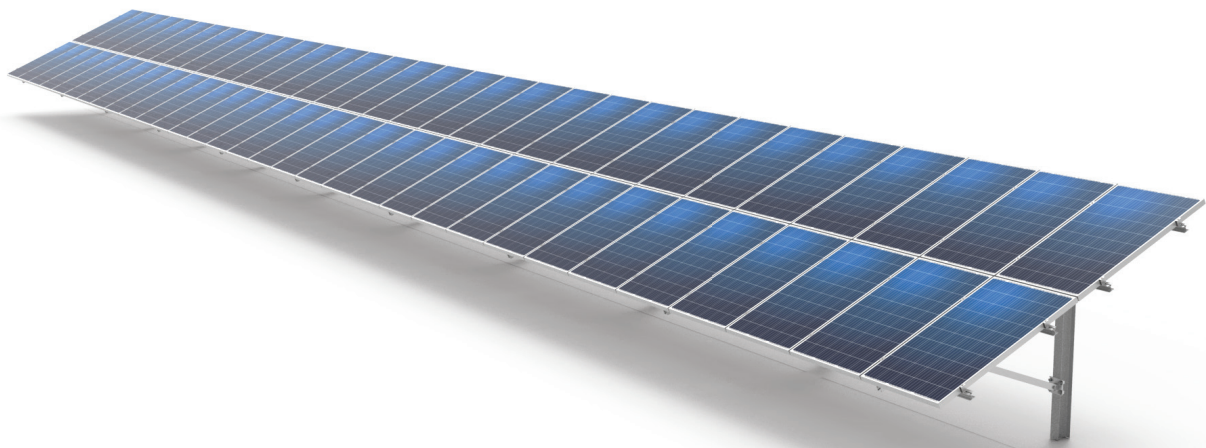




PRODUCT CATALOG



# SOLAR MOUNTING SOLUTIONS

Carports | Roof Mounts | Ground Mounts | Pole Mounts



POWER PEAK™ AL photo courtesy of 1 Source Solar.



## ABOUT PLP

PLP protects the world's most critical infrastructure by creating stronger and more reliable solutions for utilities, telecommunications, and solar systems. Our precision-engineered solutions are trusted by energy and communications providers worldwide to perform better and last longer. With offices and manufacturing facilities in over 20 countries, PLP works as a united global corporation, delivering high-quality products and unparalleled service to customers around the world.



POWER PEAK™ AL photo courtesy of Rabe Hardware.



## SALES CONTACTS



## CUSTOMER SUPPORT

### U.S. SUPPORT

Tel: 440.461.5200

Fax: 440.442.8816

Email: [solar@plp.com](mailto:solar@plp.com)

### INTERNATIONAL SUPPORT

Tel: 440.473.9294

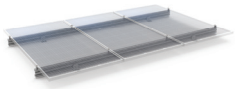
Fax: 440.461.2918

Email: [international@plp.com](mailto:international@plp.com)

## PROJECT DESIGN TOOLS



Top-of-Pole  
Mounts



POWER RAIL™  
Mounts



POWER MAX™  
Mounts



PLP  
Solar Carports



POWER PEAK™



CONTENTS

SOLAR MOUNTING SOLUTIONS

CARPORT STRUCTURES

Solar Carport.....6

ROOF MOUNT SYSTEMS

POWER MAX™ .....8  
POWER RAIL™ ..... 12

GROUND MOUNT SYSTEMS

POWER PEAK™ ..... 24  
Ballasted POWER PEAK™ ..... 26

POLE MOUNT SYSTEMS

Multi-Pole Mount..... 28  
Top-of-Pole Mount ..... 30  
Universal Top-of-Pole Mount ..... 34  
Universal Side-of-Pole Mount ..... 38



## SOLAR CARPORT

**PLP Solar Carports** provide an efficient solution to transform parking lots into a renewable energy space while providing shade to vehicles. The carports are pre-engineered and optimized to site-specific applications and PV solar installation. The modular structures feature a simplified design and integrated PV module mounting system designed to provide faster assembly rates and labor savings on every project. These solar support structures feature a 10-degree tilt angle and offer an optional gasket sealing solution. PLP's unique module clamping system provides 50 percent fewer components than traditional systems and has built-in 3/4" spacing. This system offers 3-high or 4-high in a single row, and 5-high or 6-high in a double row in portrait module mounting for a single row or double row car parking with built-in wire management channels.

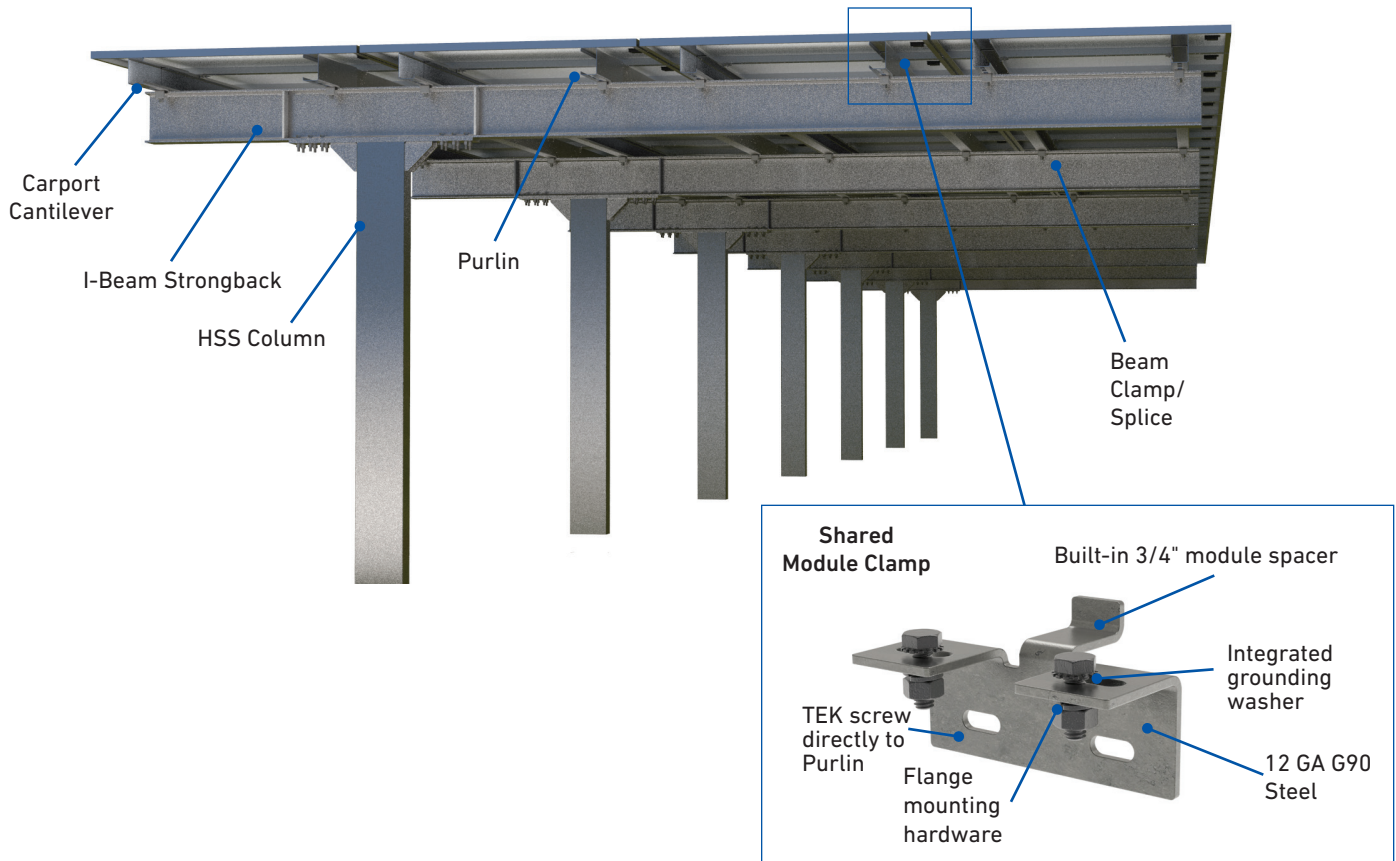
### FEATURES AND BENEFITS

- High-strength, galvanized steel construction
- Standardized/pre-engineered design for quick design and availability
- Designs for single or double rows of cars
- Standard 10-degree tilt design
- Shared module clamps – up to 50% fewer clamps
- Modular design featuring common components
- Purlin extensions adjust to any width module
- Used in residential and commercial settings
- Designed to withstand up to 50 psf snow loads





## COMPONENTS

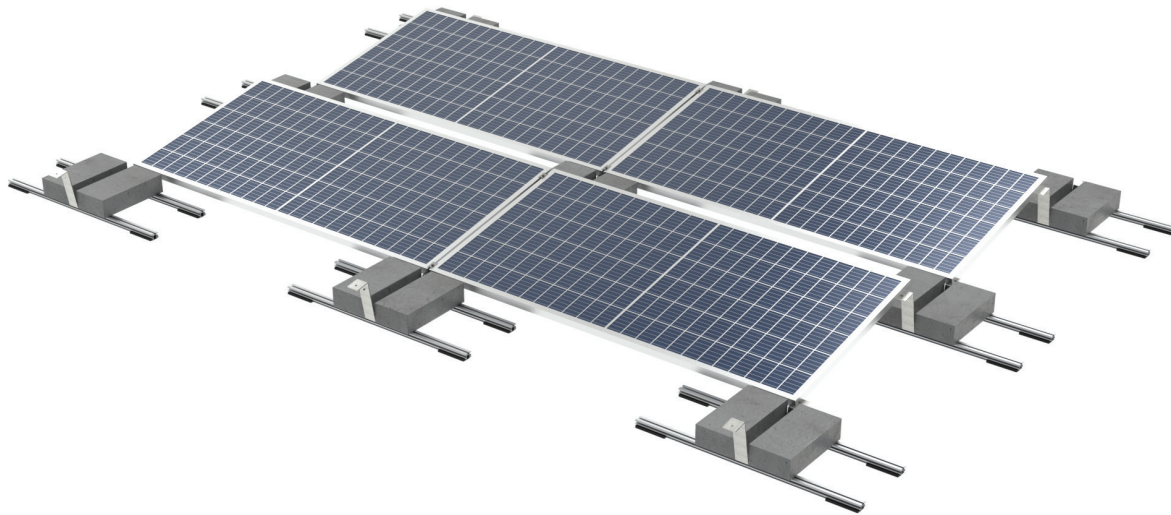


Component	Description
Carport Cantilever	Adjusts to any width, alternate extensions to create a clean aesthetic look
I-Beam Strongback	High-strength galvanized steel construction, bolt-together assembly, regional sources reduce freight costs and delivery times, longer cantilever avoids potential column impacts
HSS Column	Heavy gauge tube steel construction conceals wiring
Purlin	Pre-punched Cee Profile – No on-site drilling, G90 galvanized, 10 GA steel construction, standard lengths provide 19 feet wide parking bays with built-in wiring channels
Shared Module Clamp	Allows for 50% fewer clamps, access from the bottom with built-in 3/4" spacing
Beam Clamp/Splice	Serves as a purlin attachment and a splice point
Gasket (Optional)	Made from durable EPDM material and features a triple rib design for added waterproofing

## DESIGN YOUR SYSTEM

Create layouts, select materials, and save project details using PLP's online system configurator.





## POWER MAX™

The **POWER MAX** PV Solar Mounting System is a fully ballasted, high strength mounting structure developed with the professional installer in mind. Featuring field adjustable inter-row spacing to avoid roof obstacles, the POWER MAX system is designed to provide a faster assembly and avoid project delays. The modular design simplifies roof layouts, ordering and final installation while stackable components reduce shipping volume and provide easy transport of materials to the roof.

The **POWER MAX Plus** PV Solar Mounting System is a low-cost alternative to the standard POWER MAX with reduced ballast requirements. Utilizing all aluminum components adds ease of deflector installation and further decreases the load on the roof. This design has fixed inner row spacing and is easier to store than its predecessor, offering improved shipping volume and material transportation.

### FEATURES AND BENEFITS

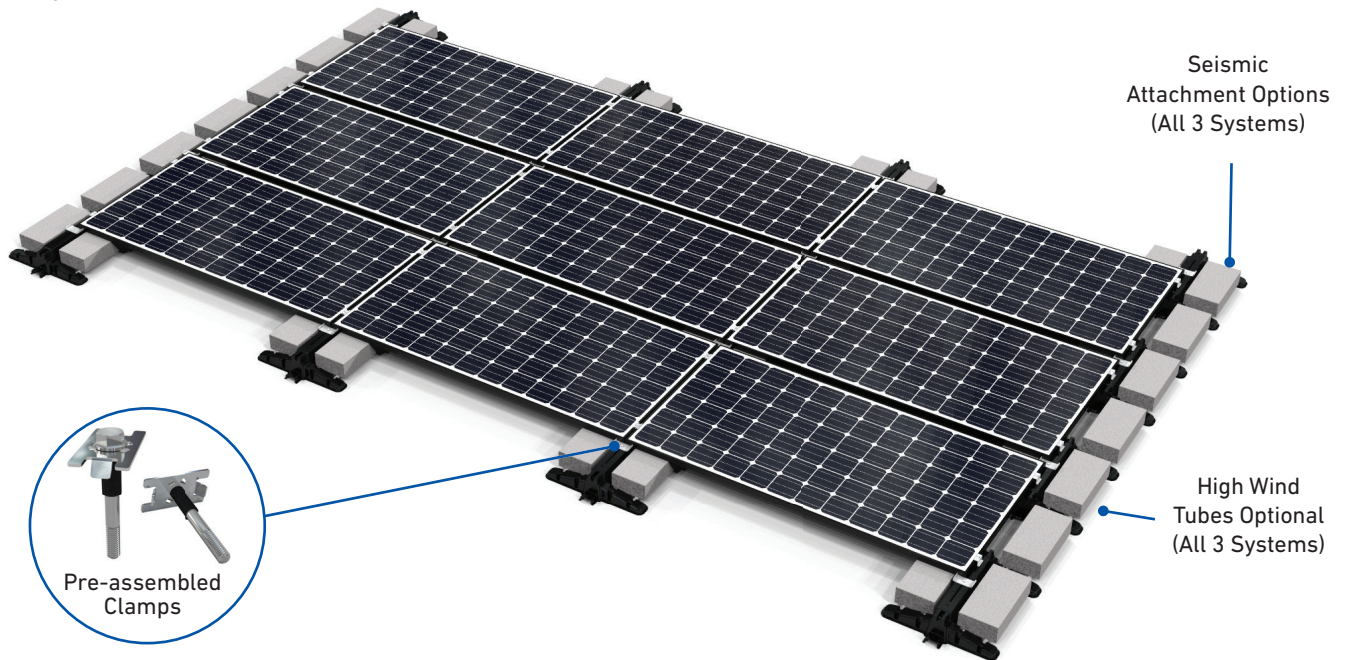
- Non-penetrating, ballasted commercial flat roof mounting system
- Three choices: flush mount, dual tilt, or one-directional tilt.
- Stackable, lightweight base for easier transport
- Wind tunnel tested and qualified – reduces ballast
- Integrated grounding, code compliant
- Preassembled clamp – no loose hardware
- Unique, adjustable inter-row spacing for maximum density and layout flexibility
- Used in residential and commercial settings



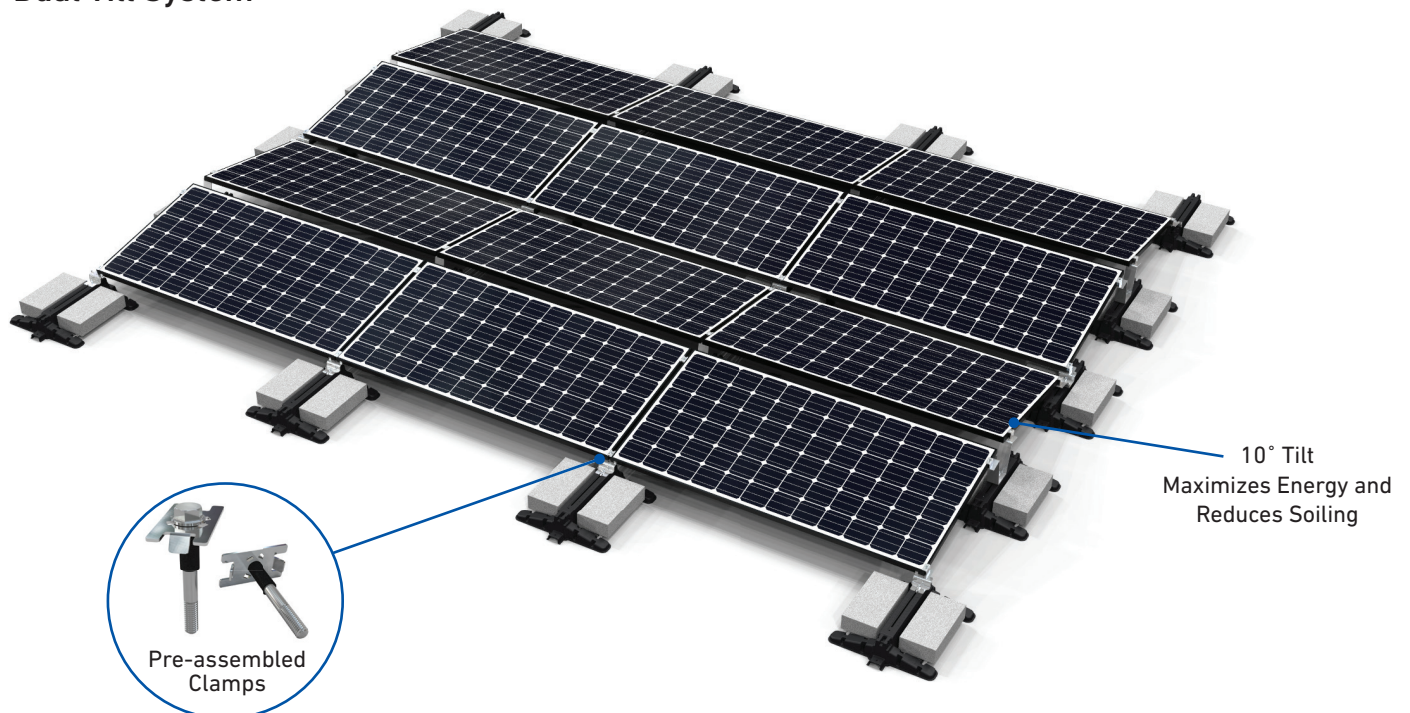


## SYSTEM OPTIONS

### Flush System



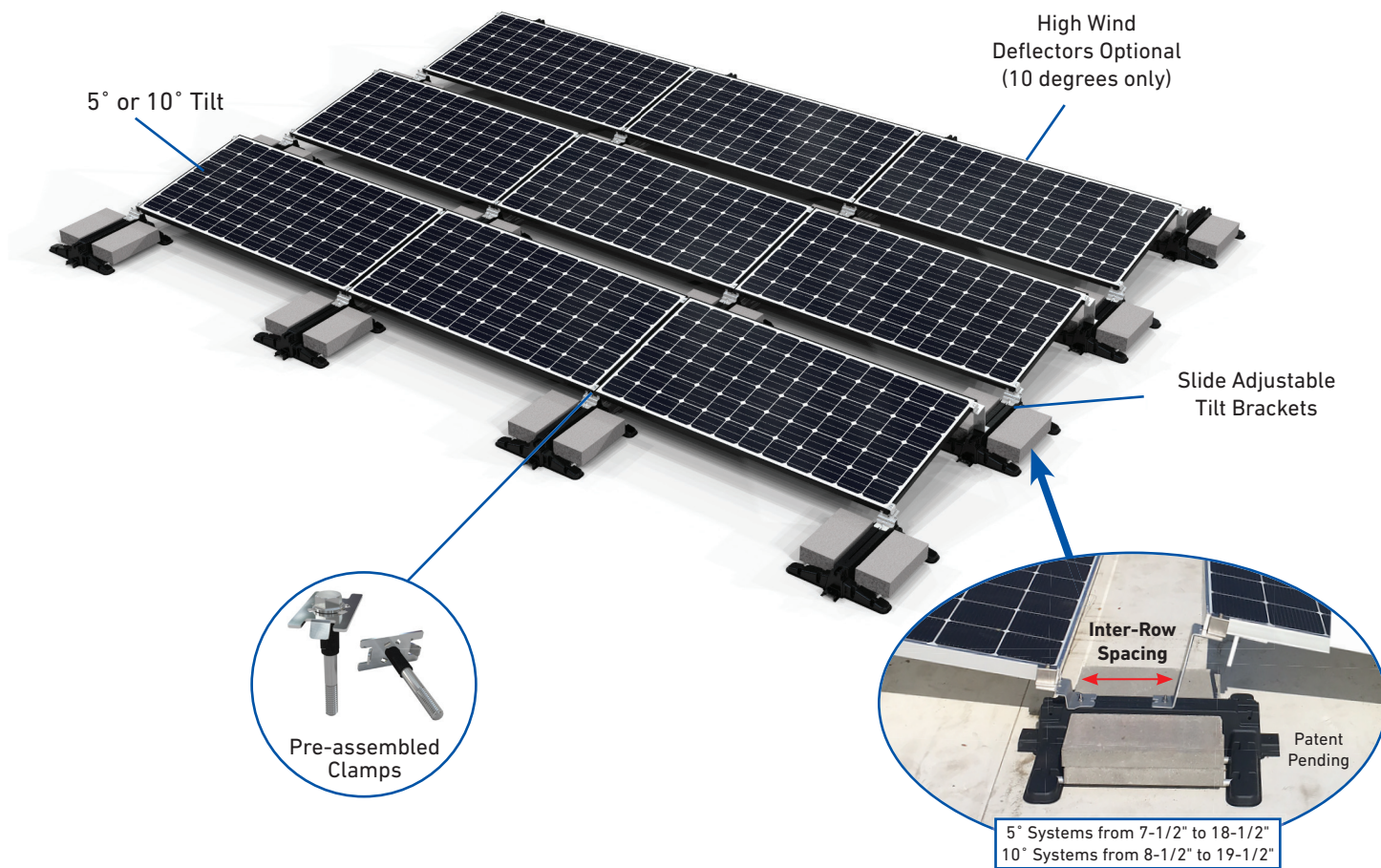
### Dual Tilt System



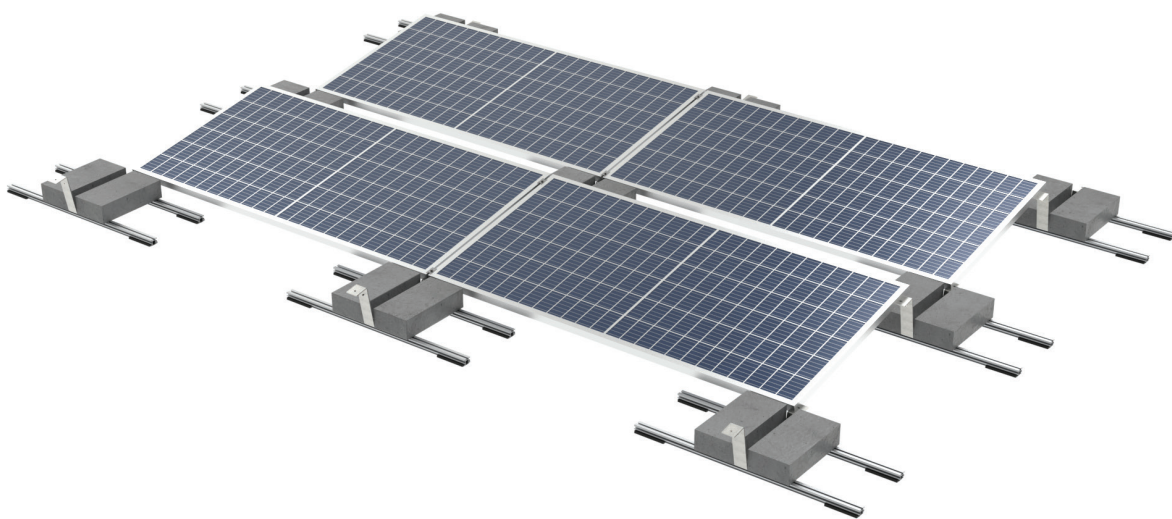


## SYSTEM OPTIONS

### Tilted System



### POWER MAX™ Plus





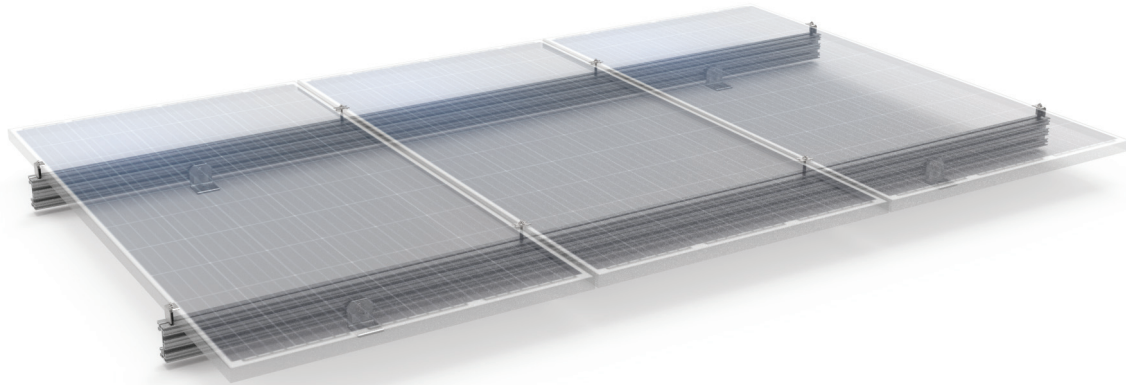
## SYSTEM SELECTION

Project Goals	Flush	Dual Tilt	Tilted	POWER MAX Plus
Increase Module Density	✓	✓	✓	
Up to 30% Faster Installation	✓			✓
Easier Access for Maintenance			✓	✓
Reduce Ballast Weight		✓		✓
Adjustable Inter-Row Spacing			✓	
33% Fewer Parts	✓			✓
Optimized for Storage and Shipping				✓

## DESIGN YOUR SYSTEM

Create layouts, select materials, and save project details using PLP's online system configurator.





## POWER RAIL™

The **POWER RAIL** top-clamping mounting system is designed with the professional PV solar installer in mind. The top-clamping rails utilize a single tool with a revolutionary RAD™ Fastener for faster bolt placement. The unique shape of the RAD provides an anti-rotation feature, locking the bolt in the proper orientation when installed. The high-strength rigid rails also include an integrated wiring channel for securing cables and providing a professional finish. The **POWER RAIL** Mounting System features the industry's broadest selection of mounting supports, designed for secure and water tight attachments to any roof style.

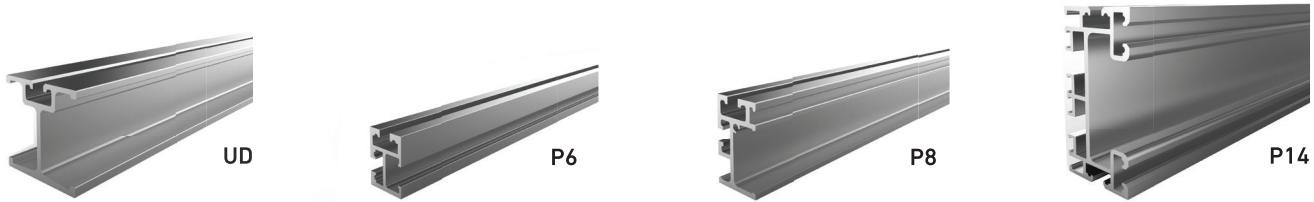
### FEATURES AND BENEFITS

- High-strength, top-clamping mounting system
- Parallel to roof or tilted applications
- Four rail options for optimal span-to-cost ratio - P6, P8, P14, and UD
- Single tool assembly
- Heavy-duty stainless steel hardware with tighter module spacing
- Mounting feet and attachment options available for any style roof application
- Patented RAD™ Lock-in-Place Bolt
- Integrated grounding
- UL 2703 Code Compliant
- Residential and commercial applications





## MOUNTING RAIL OPTIONS



Rail	Description
UD	Engineered to save cost on commercial and shade structure applications
P6	Engineered to save cost on shorter span applications
P8	Engineered for longer span and heavier snow conditions
P14	Engineered for commercial applications with greater distances between supports

**NOTE:** Reference Rail Span and Cantilever Charts located at [plp.com](http://plp.com).

Product Features	UD	P6	P8	P14
Reduced Cost		✓		
Short Spans		✓		
Medium Spans		✓	✓	
Long Spans	✓		✓	✓
Long Spans Under High Loads	✓			✓
Higher Wind and Snow Loads			✓	✓
Commercial Applications	✓	✓	✓	✓
Internal Wire Management	✓		✓	✓
Tilt Capabilities		✓	✓	
Flush Mounting Bracket	✓			

P-Series Mounting Rails are designed for residential and commercial rooftop systems, canopies, and shade structures. UD Mounting rails are designed for ground-mounted systems, canopies, and shade structures.



## MOUNTING RAIL OPTIONS

### UD POWER RAIL™ Extrusions

166" Standard Lengths

Length	Weight per Unit (lb)	Part Number
166"	17.4	UD-166

246" Standard Lengths

Length	Weight per Unit (lb)	Part Number
246"	25.9	UD-246

### P6 POWER RAIL™ Extrusions

128" Standard Lengths

Length	Weight per Unit (lb)
128"	7.5
Part Number	Finish
P6-128	Mill
P6-128-BA	Black
P6-128-CA	Clear

170" Standard Lengths

Length	Weight per Unit (lb)
170"	9.5
Part Number	Finish
P6-170	Mill
P6-170-BA	Black
P6-170-CA	Clear

211" Standard Lengths

Length	Weight per Unit (lb)
211"	11.7
Part Number	Finish
P6-211	Mill
P6-211-BA	Black
P6-211-CA	Clear

254" Standard Lengths

Length	Weight per Unit (lb)
254"	10.0
Part Number	Finish
P6-254	Mill
P6-254-BA	Black
P6-254-CA	Clear

### P8 POWER RAIL™ Extrusions

128" Standard Lengths

Length	Weight per Unit (lb)
128"	10.6
Part Number	Finish
P8-128	Mill
P8-128-BA	Black
P8-128-CA	Clear

170" Standard Lengths

Length	Weight per Unit (lb)
170"	14.1
Part Number	Finish
P8-170	Mill
P8-170-BA	Black
P8-170-CA	Clear

211" Standard Lengths

Length	Weight per Unit (lb)
211"	17.1
Part Number	Finish
P8-211	Mill
P8-211-BA	Black
P8-211-CA	Clear

254" Standard Lengths

Length	Weight per Unit (lb)
254"	21.1
Part Number	Finish
P8-254	Mill
P8-254-BA	Black
P8-254-CA	Clear

### P14 POWER RAIL™ Extrusions

128" Standard Lengths

Length	Weight per Unit (lb)
128"	23.6
Part Number	Finish
P14-128	Mill
P14-128-BA	Black
P14-128-CA	Clear

170" Standard Lengths

Length	Weight per Unit (lb)
170"	31.3
Part Number	Finish
P14-170	Mill
P14-170-BA	Black
P14-170-CA	Clear

211" Standard Lengths

Length	Weight per Unit (lb)
211"	38.9
Part Number	Finish
P14-211	Mill
P14-211-BA	Black
P14-211-CA	Clear


254" Standard Lengths

Length	Weight per Unit (lb)
254"	46.8
Part Number	Finish
P14-254	Mill
P14-254-BA	Black
P14-254-CA	Clear

## POWER RAIL™ TILT KITS

### Low-Profile Tilt Kits - One High Portrait Mounting


The all aluminum Low-Profile Tilt Kits mount a set of POWER RAIL extrusions (sold separately) at the tilt angle specified. Tilt kits are designed for portrait module mounting and aid in increasing energy production.

Part Number	Description	Image
P6-OP15	Low-Profile P6 15° Tilt Kit	
P6-OP25	Low-Profile P6 25° Tilt Kit	
P6-OP35	Low-Profile P6 35° Tilt Kit	
P6-OP45	Low-Profile P6 45° Tilt Kit	
P8-OP15	Low-Profile P8 15° Tilt Kit	
P8-OP25	Low-Profile P8 25° Tilt Kit	
P8-OP35	Low-Profile P8 35° Tilt Kit	
P8-OP45	Low-Profile P8 45° Tilt Kit	

**NOTE:** P6/P8 Low-Profile Tilt Kits includes Strongback, Fixed Leg, Mounting Feet, Rail Brackets, and Hardware.

### Two-Tier Tilt Kits - Two High Portrait Mounting

The all aluminum Two-Tier Tilt Kits mount two sets of POWER RAIL extrusions (sold separately) at the tilt angle specified. Tilt kits are designed for portrait module mounting and aid in increasing energy production.

Part Number	Description	Image
P14-OP15-72	Two-Tier 15° Tilt Kit 72 Cell Module	
P14-OP25-72	Two-Tier 25° Tilt Kit 72 Cell Module	
P14-OP35-72	Two-Tier 35° Tilt Kit 72 Cell Module	
P14-OP45-72	Two-Tier 45° Tilt Kit 72 Cell Module	

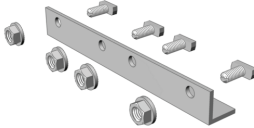
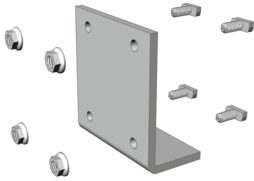
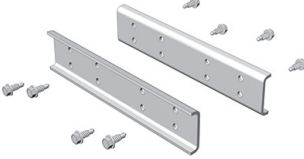
**NOTE:** Two-Tier Tilt Kit includes Strongback, Fixed Leg, Mounting Feet, Rail Brackets, and Hardware. P8 POWER RAIL Extrusions ordered separately. Cross Bracing is required. See Assembly Instructions.



## POWER RAIL™ MOUNTING ATTACHMENTS

### POWER RAIL Splice Kits

The POWER RAIL Splice Kits are made from high-strength aluminum. Includes hardware.

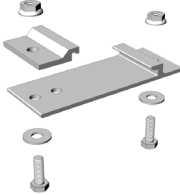
Part Number	Description	Image
P6-4HSPK-SS	Splice Plate for P6	
P8-SPK-SS	Splice Plate for P8	
P-14SPK-SS	Splice Plate for P14	
UD-SPK	Splice Plate Set for UD	

**NOTE:** 5/16" Hardware Included (P-Series Splice Plates only).

**NOTE:** Each kit includes 2 splice plate with self-tapping screws (UD-SPK only).

### D-Series Mounting Base Brackets

Mounting base brackets are fabricated from Series 6000 structural marine grade aluminum. 5/16" hardware included.

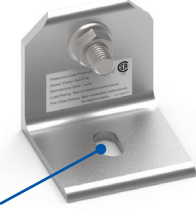
Part Number	Description	Image
MBB-XD-UD	UD Mounting Base Bracket	 with 5/16" Coated Hardware



## POWER RAIL™ MOUNTING ATTACHMENTS

### P14 “L” Foot

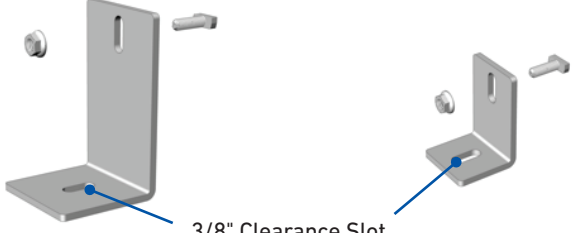
P14 “L” Feet are fabricated from high-strength 1/4" Series 6000 marine grade aluminum. 1/2" hardware to attach to P14 included.

Part Number	Description	Image
P14-LF	POWER RAIL P14 L-Mounting Foot	 <p>1/2" Clearance Slot</p>

**NOTE:** P14 “L” Feet are used with P14 rail only.


### “L” Feet

“L” Feet are fabricated from high-strength 3/16" aluminum and include a vertical slot for adjusting to irregular surfaces. 5/16" stainless hardware included.

Part Number	Description	Image
LF2-SS	2.5" Tall L-Mounting Foot	 <p>3/8" Clearance Slot</p>
LF3-SS	3.5" Tall L-Mounting Foot	
LF5-SS	5" Tall L-Mounting Foot	
LF6-SS	6" Tall L-Mounting Foot	

### Tilted “L” Feet

Tilted “L” Feet are fabricated from high-strength 3/16" aluminum and include a vertical slot for adjusting to irregular surfaces. 5/16" stainless hardware included.


Part Number	Description	Image
FF5-SS	5° Front Foot	 <p>3/8" Clearance Slot</p>
BF5-SS	5° Back Foot	
FF10-SS	10° Front Foot	
BF10-SS	10° Back Foot	



## POWER RAIL™ MOUNTING ATTACHMENTS

### Easy Feet™

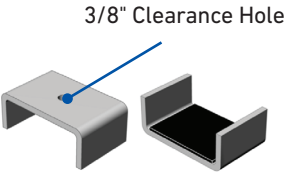
Easy Feet mount directly over metal and composite shingles into roof decking and do not require attachment to a roof structural member. Sealing butyl mastic backing and 1.5" or 2" Stainless Steel Deck screws are included.

Part Number	Description	Image
PEF-1.5-SS	Pivot Easy Mounting Foot with 1.5" Screws	
PEF-2.0-SS	Pivot Easy Mounting Foot with 2.0" Screws	

**NOTE:** Pre-applied Butyl Mastic, Turn Bolt, Roof Screws, and Neoprene Washers Included.

### Corrugated Roof Mounts

The CMB offers high-strength solid aluminum and provides a mounting bride over the peak of a metal corrugated roof keeping the penetration above the water diverting valleys. Includes Butyl Mastic, L-Foot separately.


Part Number	Description	Image
CMB	Mounting Bridge to Span Peaks of Corrugated Metal Roofs	

**NOTE:** Not all corrugated metal roofs are the same. Please contact PLP to design mounting bridges that are specific to your application.

## POWER RAIL™ MOUNTING STANCHIONS

### Super Post™ Stanchions

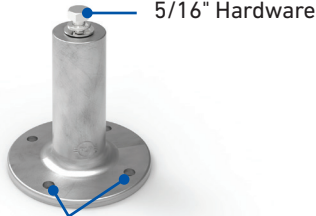
Super Posts offer high-strength cast aluminum construction for larger arrays and higher roof clearance.

Part Number	Description	Image
SP7	7" Super Mounting Post	 <p>1/2" Hardware</p> <p>5/16" Clearance Holes</p>
SP8	8" Super Mounting Post	
SP9	9" Super Mounting Post	
SP10	10" Super Mounting Post	

**NOTE:** Only for use with P14 L Feet.

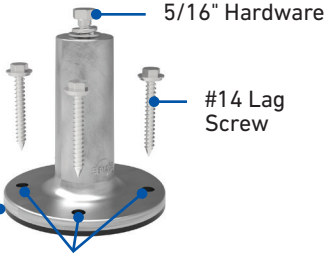
### Power Post™ Stanchions

Power Posts offer high-strength cast aluminum construction and may be used with flashing cones or with built-up roofs.

Part Number	Description	Image
PP4	4" Power Post	 <p>5/16" Hardware</p> <p>5/16" Clearance Holes</p>
PP6	6" Power Post	

### Easy Power Post™ Stanchions

Easy Power Posts mount directly to the roof deck. Sealing butyl mastic backing and stainless steel deck screws are included.

Part Number	Description	Image
EP4	4" Easy Post	 <p>5/16" Hardware</p> <p>#14 Lag Screw</p> <p>Butyl Rubber Pad</p> <p>5/16" Clearance Holes</p>
EP6	6" Easy Post	

**NOTE:** Butyl Mastic, Hex Bolt, Roof Screws, and Neoprene Washers included.



## POWER RAIL™ MODULE CLAMPS

### Pre-Assembled Module Clamps with RAD™ Hardware

Module Clamps are Type 304 Stainless Steel for higher yield strength and durability. Pre-assembled module clamps feature no loose parts and a coated stainless nut to reduce the occurrence of galling, and a spacer that keeps free standing clamps in place for a quicker module installation. Patent Pending.

Part Number	Hardware/Finish	Description	Image
PA-EC-#-RAD <sup>1</sup>	Coated	Pre-Assembled Module End Clamp with RAD Hardware	
PA-EC-#-RAD-SS <sup>1</sup>	Stainless Steel		
PA-EC-#-RAD-B <sup>1</sup>	Black		
PA-GMC-28-33-RAD	Coated	Pre-Assembled Module Mid Clamp for 28-33 mm Thick Frame	
PA-GMC-28-33-RAD-SS	Stainless Steel		
PA-GMC-28-33-RAD-B	Black		
PA-GMC-34-40-RAD-SS	Stainless Steel	Pre-Assembled Module Mid Clamp for 34-40 mm Thick Frame	
PA-GMC-34-40-RAD-B	Black		
PA-GMC-40-46-RAD-SS	Stainless Steel	Pre-Assembled Module Mid Clamp for 40 - 46 mm Thick Frame	
PA-GMC-40-46-RAD-B	Black		
PA-GMC-47-52-RAD	Coated	Pre-Assembled Module Mid Clamp for 47 - 52 mm Thick Frame	
PA-GMC-47-52-RAD-SS	Stainless Steel		
PA-GMC-47-52-RAD-B	Black		
PA-GMC-53-59-RAD-SS	Stainless Steel	Pre-Assembled Module Mid Clamp for 53 - 59 mm Thick Frame	
PA-GMC-53-59-RAD-B	Black		


**<sup>1</sup>NOTE:** Replace # with module depth from the Solar Module Specification Sheet.

**EXAMPLE:** PA-EC-35-RAD end clamp for 35 mm module.

## POWER RAIL™ MODULE CLAMPS

### Pre-Assembled Purlin Through Hole Clamps

Purlin Through Hole Clamps are Type 304 Stainless Steel for higher strength and durability. The clamp allows for direct PV module mounting to purlins and other structural members. The patent pending Pre-Assembled Clamps eliminate handling small parts on the job site and provide for a faster installation.

Part Number	Description	Image
PA-EC-#-PT <sup>1</sup>	Module End Clamp with Carriage Bolt Hardware	
PA-EC-#-PT-SS <sup>1</sup>		
PA-EC-#-PT-B <sup>1</sup>		


<sup>1</sup>**NOTE:** Replace # with module depth from the Solar Module Specification Sheet.

**EXAMPLE:** PA-EC-35-RAD end clamp for 35 mm module.

**FOR ORDERING SPECIFY:** Standard Coated Finish (-PT suffix), Black Finish (-B suffix), Stainless Steel Finish (-SS suffix)

### Universal Module End Clamps

Universal End Clamps secure the lower flange of module frames to rails simply by driving a set screw. Since they are installed inboard of the module, no additional rail surface is required beyond the edge of module row ends. 304 Stainless Steel.

Part Number	Description	Image
P6-ECU	Universal End Clamp with Set Bolt for P6	
P8-ECU	Universal End Clamp with Set Bolt for P8	

**FOR ORDERING SPECIFY:** Standard Stainless Steel Finish (no suffix), Black Finish (-B suffix)



POWER RAIL™ ACCESSORIES

Grounding Hardware

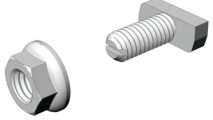
Part Number	Description	Image
WEEB-11.5 <sup>1</sup>	Splice Plate Grounding Clip	
WEEBL-8.0-KIT-SS <sup>1</sup>	Rail Grounding Lug	
WEEB-8.0-RBJ-KIT <sup>1</sup>	Rail Bonding Jumper	

**NOTE:** Cable Clips snugly hold 1 or 2 designated cables.  
<sup>1</sup>MUST be ordered in quantities of 10.




## POWER RAIL™ ACCESSORIES

### Turn Bolts

Part Number	Hardware/Finish	Description	Image
TB-SS	Stainless Steel	5/16" x 3/4" Turn Bolt with Flange Nut	
TB-1-SS	Stainless Steel	5/16" x 1" Turn Bolt with Flange Nut	

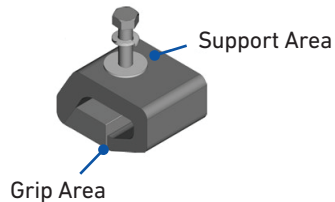
### Wire Management Clips

Wire management clips are made from stainless steel and secure cables to PV modules and mounting rails to simplify wire management.

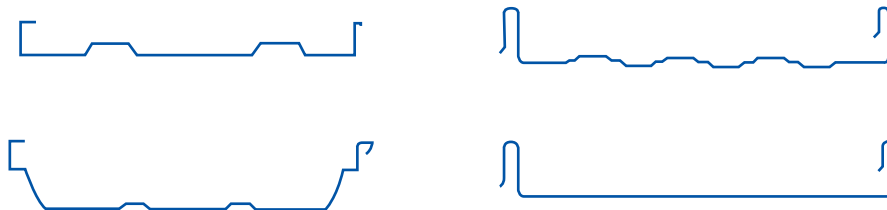
Part Number	Description	Image
UD-WC	UD Wire Management Clip	

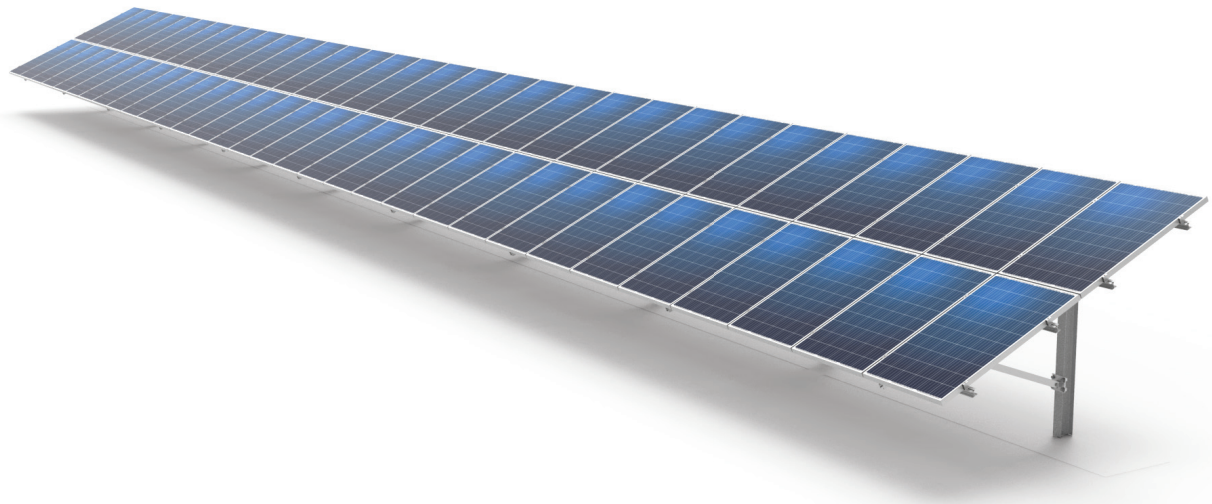
### POWER RC

The POWER RC (Roof Clamp) offers the advantage of a wide gripping-area to avoid penetrating the metal seam roof. The single-bolt design attaches quickly to standard POWER RAIL™ L-Foot and provides a reliable mounting attachment.

Part Number	Description	Image
MSRC	POWER RC Assembly - Standing Seam Metal Roof Clamp	

**NOTE:** For attachment to standing seam metal roofs with vertical ribs from 1" to 3" tall and thickness of 22, 24, or 26 gauge. Compatible with following roof panel profiles:





## POWER PEAK™

The **POWER PEAK** mounting system is designed for residential, commercial, and utility-scale ground mount installations. The system's single row, vertical post design dramatically reduces the number of ground penetrations and provides increased ground clearance. POWER PEAK structures are easily assembled without lifting equipment and do not require field modifications, including drilling or welding. Pre-assembled components, including patented module clamps, significantly reduce installation time and labor, and the system's unique module rail design incorporates built-in wire channels to increase efficiency and provide a professional-looking appearance.

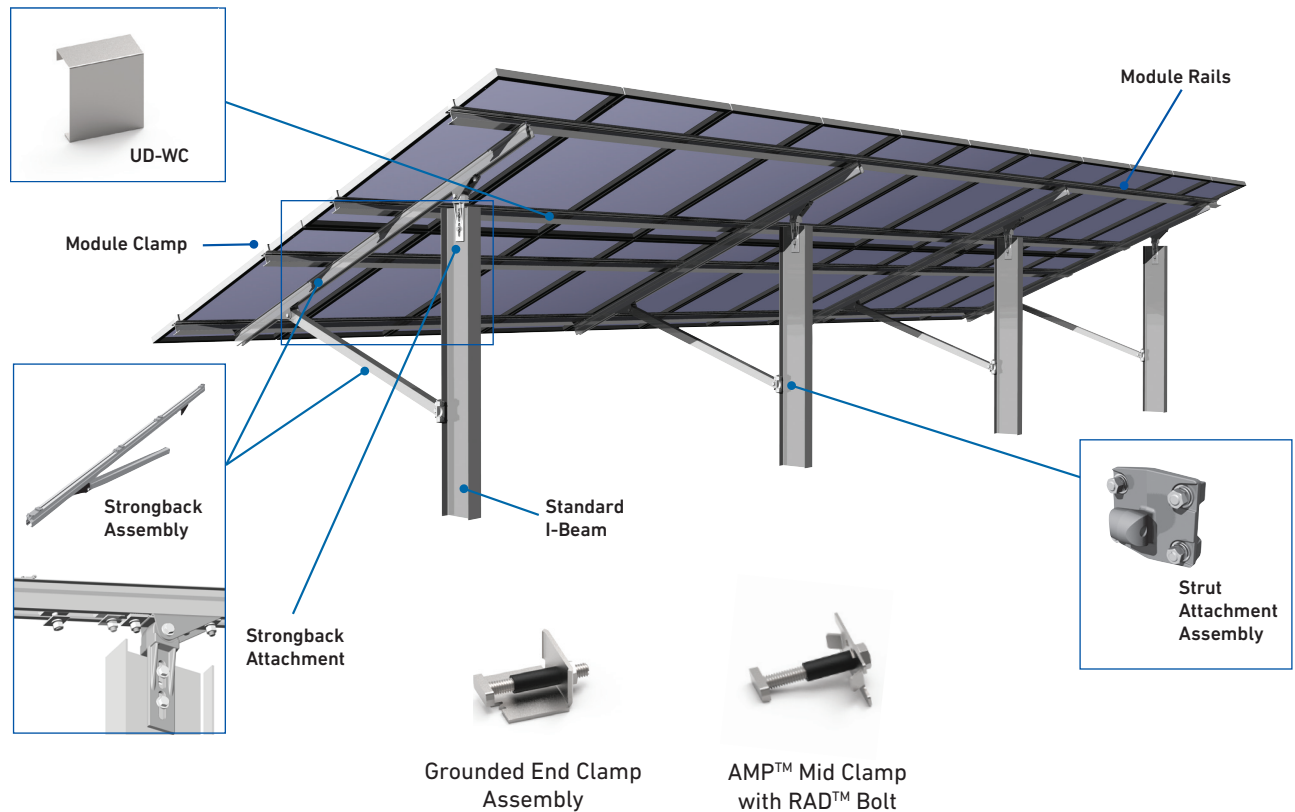
### FEATURES AND BENEFITS

- Featuring high-strength, lightweight aluminum components
- Optimized for site-specific conditions
- Pre-assembled components
- High-strength aluminum or steel attachments
- Integrated wire management channels
- Wind tunnel tested
- Code compliant



## COMPONENTS

### POWER PEAK AL – Aluminum Ground Mount System



Component	Features
Standard I-Beam	<ul style="list-style-type: none"> <li>• Pile driven with standard equipment</li> <li>• Sized per site conditions to reduce overall system costs</li> <li>• Sourced locally to reduce freight costs and delivery times</li> <li>• Pre-punched and galvanized - <b>Ready to install</b></li> </ul>
Strut Attachment Assembly	<ul style="list-style-type: none"> <li>• Field adjustable</li> <li>• Captive bolts – <b>No loose parts</b></li> <li>• High-strength aluminum corrosion protection</li> <li>• Lateral adjustments resolve twisted posts</li> </ul>
Strongback Attachment	<ul style="list-style-type: none"> <li>• Vertical field adjustments (2.5 inches)</li> <li>• High-strength aluminum corrosion protection</li> <li>• Built in articulation for twisted posts (+/- 5 degrees)</li> </ul>
Strongback Assembly	<ul style="list-style-type: none"> <li>• Unfold and hang for easy assembly to posts</li> <li>• Factory pre-assembled – strongback/strut/rail brackets</li> <li>• Field adjustable for easy alignment</li> <li>• Lightweight, high-strength aluminum UD Power Rail</li> </ul>
Module Rails	<ul style="list-style-type: none"> <li>• Lightweight, high-strength aluminum</li> <li>• Built-in wire channels</li> <li>• Long lengths minimize splices</li> </ul>
Module Clamps	<ul style="list-style-type: none"> <li>• Heavy-duty stainless steel</li> <li>• Factory pre-assembled – Lock-in-Place RAD™ Clamp, patented</li> <li>• Built-in electrical bonding</li> <li>• Secure module clamping</li> </ul>

**OPTIONAL:** Wire Management Clip (UD-WC)





## BALLASTED POWER PEAK™

The **Ballasted POWER PEAK** system is designed for project sites with unfavorable soil or ground conditions that prohibit pile driving. Each Ballasted POWER PEAK system is engineered to site-specific environments and arrives at the project site ready to assemble on precast or poured-in-place concrete bases. PV modules are mounted in a two-row portrait configuration with the number of modules in each row matching the string size, enabling easy and efficient wire management.

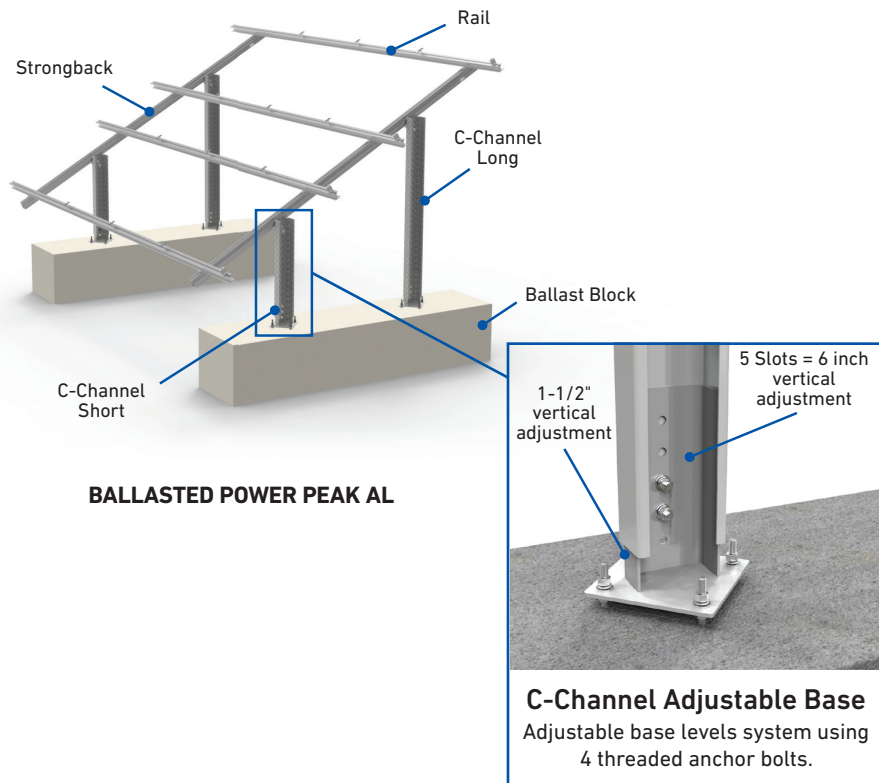
The system features bottom access PV module clamping, eliminating the need for ladders. The Ballasted POWER PEAK system also features C-Channel verticals with adjustable bases that allow for uneven ballast blocks and terrain changes. Integrated vertical and horizontal adjustability enables table tops to be quickly squared, resulting in faster PV module placement and a professional finish.

### FEATURES AND BENEFITS

- Optimized for site specific conditions
- Adjusts to rolling or uneven terrain
- String size matched sub-arrays
- Pre-drilled C-Channel vertical posts
- Pre-assembled module clamps
- Integrated wire management
- Wind tunnel tested
- Tested to UL 2703 requirements



## COMPONENTS



## BALLASTED POWER PEAK

Component	Features
<b>Ballast Block</b>	<ul style="list-style-type: none"> <li>• No ground penetration</li> <li>• Adjusts to rolling terrain</li> <li>• PLP or Customer supplied</li> </ul>
<b>C-Channel Short</b>	<ul style="list-style-type: none"> <li>• Pre-drilled C-Channel vertical posts</li> <li>• Racking adjustment slots</li> <li>• Lightweight</li> <li>• Vertical adjustment</li> </ul>
<b>C-Channel Long</b>	<ul style="list-style-type: none"> <li>• Pre-drilled C-Channel vertical posts</li> <li>• Racking adjustment slots</li> <li>• Lightweight</li> <li>• Vertical adjustment</li> </ul>
<b>Strongback</b>	<ul style="list-style-type: none"> <li>• Field adjustable for easy alignment</li> <li>• Lightweight, high-strength marine grade aluminum</li> </ul>
<b>Module Rails</b>	<ul style="list-style-type: none"> <li>• Lightweight, high-strength aluminum</li> <li>• Built-in wire channels</li> <li>• Long lengths minimize splices</li> </ul>

## DESIGN YOUR SYSTEM

Contact PLP's technical support team to help design your system:

+1 440 461 5200

SOLAR@PLP.COM



## MULTI-POLE MOUNT

The **Multi-Pole Mount (MPM)** is designed to install quickly and provide a secure mounting structure for PV modules on a single row of vertical pipe. In addition to generating solar power, the MPM can also be used as a small carport or shade structure, including shading livestock. The module specific design reduces the number of components and provides for an easier assembly. The MPM utilizes high-strength welded steel components and corrosion resistant hardware for long term reliability. Nine positive locking tilt angle settings provide seasonal adjustability to maximize production.

### FEATURES AND BENEFITS

#### DURABLE DESIGN

- Designs available to withstand high wind loads
- MIG welded steel pipe caps and rail brackets with powder coat finish
- 6000 series structural aluminum mounting rails
- Stainless steel module clamps and rack assembly hardware

#### APPLICATION FLEXIBILITY

- Available in multiple sizes - supporting 2 to 4 modules high
- Designed for 3", 4" or 6" Schedule 40 or 80 vertical steel pipe and 4" x 4" square or 5" x 4" rectangular horizontal steel tube (installer supplied)
- Eight adjustable positive lock tilt angles from 0 to 55 degrees



## EASE OF ASSEMBLY

- One row of vertical pipe reduces ground work
- Top-clamping module attachment
- Fewer ground penetrations than traditional ground mounts
- Patented RAD™ Twist-In Bolts easily lock clamps in place
- 0° tilt setting to ease module installation
- Integrated grounding



Underside of Multi-Pole Mount

## UPGRADE OPTIONS

- Hot dip galvanized finish on steel components
- Anodized or powder coat finish on module rails

## DESIGN YOUR SYSTEM

Contact PLP's technical support team to help design your system:

**+1 440 461 5200**

**SOLAR@PLP.COM**



## TOP-OF-POLE MOUNT

The **Top-of-Pole Mount (TPM)** is designed to install quickly and provide a secure mounting structure for PV modules on a single pole. The TPM is used extensively for off-grid properties, traffic controls, livestock watering, lighting systems, and many other commercial and residential applications. The module specific design reduces the number of components and provides for an easier assembly. The TPM utilizes high-strength welded steel components and corrosion resistant hardware for long-term reliability. Seasonal adjustability for maximizing production is provided by six different tilt-angle settings and is a single-person operation.

### FEATURES AND BENEFITS

#### DURABLE DESIGN

- Standard mounts designed to withstand (ASCE 7-10) 105 MPH wind zones
- MIG welded steel strongbacks and mounting sleeves with powder coat finish
- Stainless steel module mounting hardware

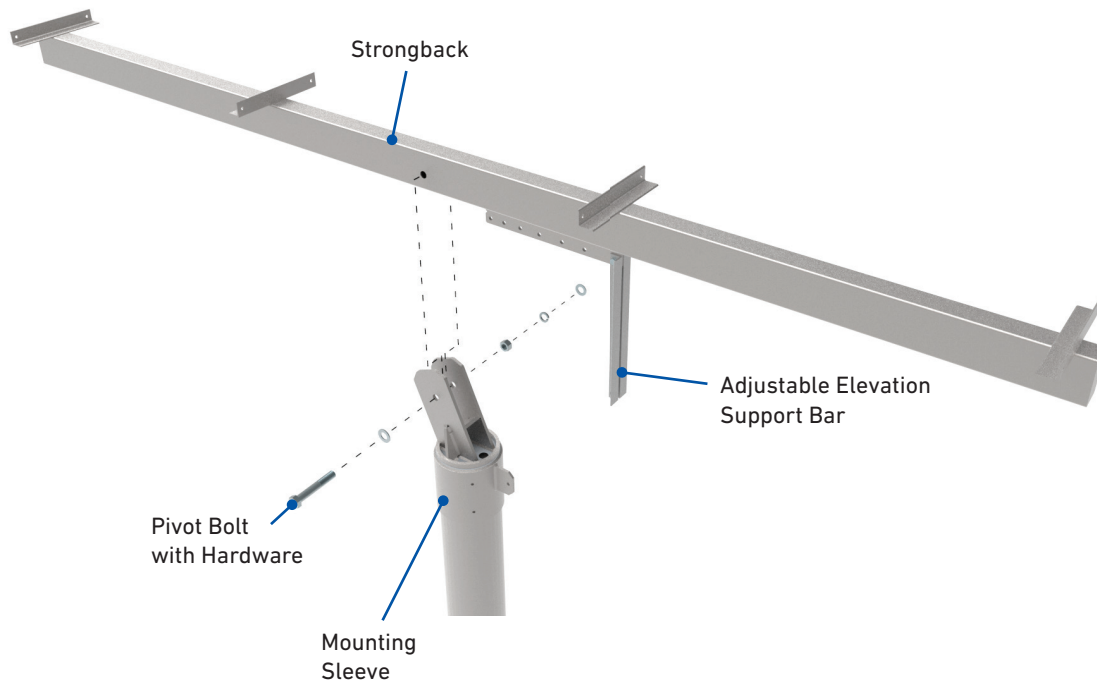
#### APPLICATION FLEXIBILITY

- Single ground penetration with seasonal elevation adjustments ranging from 15° to 65° tilt angle settings
- Available in multiple sizes - supporting 1 to 15 modules
- Installs over standard Schedule 40 or 80 rigid steel pipe (installer supplied)
- Mount up to 5.4kW on a single pole
- High-wind versions (HWV) available





## COMPONENTS



### TOP-OF-POLE MOUNT

Component	Features
Strongback	<ul style="list-style-type: none"> <li>• Powder coated steel</li> <li>• MIG welded</li> <li>• Includes adjustable elevation tilt angles - 15 to 65 degrees (10 degree increments)</li> <li>• Galvanized steel option</li> </ul>
Pivot Bolt with Hardware	<ul style="list-style-type: none"> <li>• Plated components</li> <li>• Includes all assembly hardware</li> </ul>
Module Rails	<ul style="list-style-type: none"> <li>• Not shown</li> <li>• Structural grade aluminum angle or channel</li> </ul>
Mounting Sleeve	<ul style="list-style-type: none"> <li>• MIG welded</li> <li>• Powder coated</li> <li>• High-strength Grade-8 set bolts</li> </ul>

**NOTE:** Top Clamp mounting solutions available. Contact PLP for additional information.



## ORDERING INFORMATION

### Top-of-Pole Mount Catalog Number

**TPM**     X     -     X     -     XXX     -     XX     -     XXX    
 (Section 1) (Section 2)                      (Section 3)                      (Section 4)  
 # of                      PLP                      Upgrade Options                      Mounting Sleeve Upgrades  
 Modules                      Module                      Series

**Catalog Number Example: TPM8-D-HWV-AA-8IN**

8 Modules, Module Series D, High-Wind Option, Anodized Aluminum Components to fit 8" Mounting Sleeve Upgrade

**SELECTION GUIDE INSTRUCTIONS:**

1. Select number of modules to mount
2. Determine Module Series by matching dimensions to size range per Section 2 table below.
3. Add upgrade options (Add to Catalog # in order shown)
4. Add Mounting Sleeve Upgrade (Optional)

**NOTE:** Include module manufacturer's specification sheet with PO.

**Section 1**

Number of Modules									
1	2	3	4	6	8	9	10	12	15
2" Pipe 1hx1w-P	2" Pipe 1hx2w-P	2.5" Pipe 1hx3w-P	3" Pipe 1hx4w-P	4" Pipe 2hx3w-P	4" Pipe 2hx4w-P	N/A	6" Pipe 5hx2w-L	6" Pipe 6hx2w-L	N/A
2" Pipe 1hx1w-P	2.5" Pipe 1hx2w-P	3" Pipe 1hx3w-P	4" Pipe 2hx2w-P	4" Pipe 2hx3w-P	6" Pipe 4hx2w-L	6" Pipe 3hx3w-P	6" Pipe 5hx2w-L	6" Pipe 6hx2w-L	N/A
2" Pipe 1hx1w-P	3" Pipe 1hx2w-P	4" Pipe 1hx3w-P	4" Pipe 2hx2w-P	6" Pipe 2hx3w-P	6" Pipe 4hx2w-L	6" Pipe 3hx3w-P	8" Pipe 5hx2w-L	8" Pipe 3hx4w-P	8" Pipe 5hx3w-L
2" Pipe 1hx1w-P	3" Pipe 1hx2w-P	4" Pipe 1hx3w-P	4" Pipe 2hx2w-P	6" Pipe 3hx2w-L	6" Pipe 4hx2w-L	8" Pipe 3hx3w-P	8" Pipe 5hx2w-L	8" Pipe 3hx4w-P	8" Pipe 5hx3w-L
2.5" Pipe 1hx1w-P	3" Pipe 1hx2w-P	4" Pipe 1hx3w-P	6" Pipe 2hx2w-P	6" Pipe 3hx2w-L	8" Pipe 4hx2w-L	8" Pipe 3hx3w-P	8" Pipe 5hx2w-L	8" Pipe 3hx4w-P	N/A
3" Pipe 1hx1w-P	4" Pipe 2hx1w-L	6" Pipe 3hx1w-L	6" Pipe 2hx2w-P	8" Pipe 3hx2w-L	8" Pipe 4hx2w-L	8" Pipe 3hx3w-P	8" Pipe 5hx2w-L	N/A	N/A
4" Pipe 1hx1w-P	6" Pipe 1hx2w-P	6" Pipe 3hx1w-L	8" Pipe 2hx2w-P	8" Pipe 3hx2w-L	N/A	N/A	N/A	N/A	N/A

**Section 2**

Module Series	Module Size Range (W x L)
B	20-26" x 39-53"
C	22-27" x 56-63"
D	31-33" x 60-67"
G	37-42" x 51-67"
H	38-42" x 67-82"
I	50-52" x 65-79"
J	38-52" x 82-98"

ALL PIPE RECOMMENDATIONS CONFORM TO ASCE 7-05, ASCE 7-10, and ASCE 7-16. Pipe size may vary per your site specific conditions. Verify by using the online TPM design tool at [PLP.COM](http://PLP.COM).

**TPM Configuration Key**

X" Pipe	Standard Pipe Size	Example: 6" Pipe
Xh x Xw-L	Array Layout and Module Orientation (P=Portrait, L=Landscape)	Example: 4h x 2w-L
<b>NOTE:</b> Based on standard design – (ASCE 7-10) 105 mph, 30 psf ground snow load.		

## ORDERING INFORMATION

### Section 3

Upgrade Options	
HWV	High-Wind Version – (up to [ASCE 7-10] 142 mph) or 60 psf Ground Snow Load. Sites that exceed conditions for HWV will require a review by PLP Solar.
SSH	Stainless Steel Hardware for Rack Assembly – SSH Package includes 100% stainless hardware for the structure
TRH	Tamper Resistant Hardware for Module Mounting – TRH Package includes stainless steel pin-in-hex machine screws with nylon-insert lock nuts and matching hex-key
HGS	Hot dip Galvanized Steel Components
PCA	Powder Coated Aluminum Components <b>NOTE:</b> Powder Coated Steel Components are Standard
AA	Anodized Aluminum Components

### Section 4

Mounting Sleeve Upgrade				
2.5IN	3IN	4IN	6IN	8IN
2.5" Steel Pipe	3" Steel Pipe	4" Steel Pipe	6" Steel Pipe	8" Steel Pipe



## UNIVERSAL TOP-OF-POLE MOUNT

The **Universal Top-of-Pole Mount (UTPM)** is designed to install quickly and provide a secure mounting structure for PV modules on a single pole. The universal design adapts to most 60- and 72-cell modules and provides for an easy assembly. The TPM utilizes high-strength welded steel components and corrosion resistant hardware for long term reliability. Seasonal adjustability for maximizing electrical production is provided by six different tilt-angle settings and is a single person operation.

### FEATURES AND BENEFITS

#### DURABLE DESIGN

- Standard mounts designed to withstand 105 MPH ASCE 7-10 wind zones
- Welded steel strongbacks and mounting sleeves
- 6000 series structural aluminum mounting rails
- Stainless steel module mounting hardware

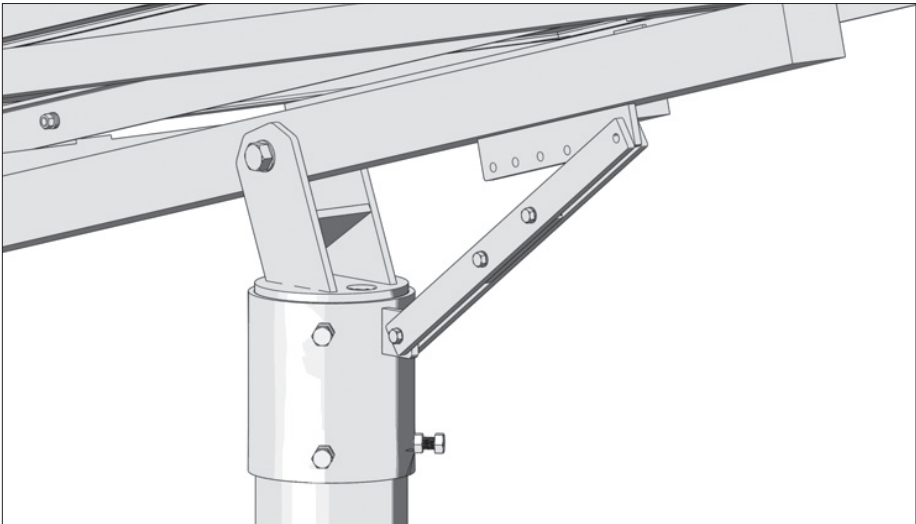
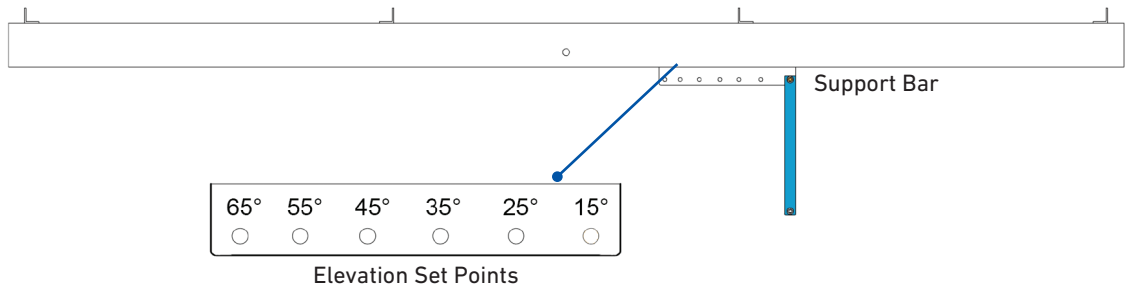
#### APPLICATION FLEXIBILITY

- Available in multiple sizes - supporting 4 to 15 modules
- Installs over standard Schedule 40 or 80 rigid steel pipe (installer supplied)
- 15° to 65° tilt angle settings (10° increments)
- Mount up to 6 kW on a single structure



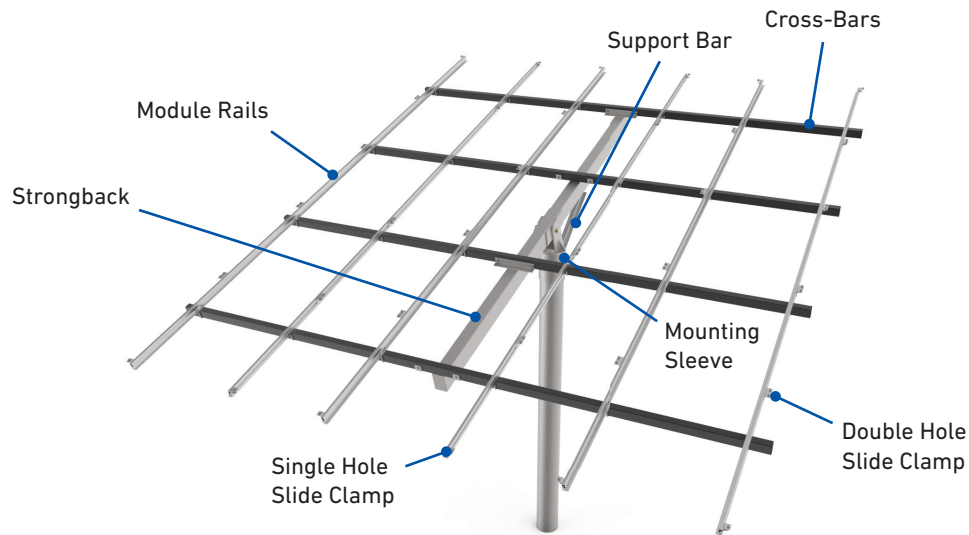
# ADJUSTABLE TILT ANGLES

The rack tilts to the desired angle of 15 - 65-degrees (increments of 10-degrees) for adjustable seasonal elevation.





## COMPONENTS



### UNIVERSAL TOP-OF-POLE MOUNT

Component	Features
Module Rails	Infinite Two-Way adjustability to adapt to varying width/length modules
Cross-Bars	High-strength powder coated steel
Support Bar	Adjustable tilt angle adjustments - 15 to 65 degrees
Mounting Sleeve	MIG-Welded powder coated steel with high-strength Grade-8 set bolts
Double Hole Slide Clamp	Mid-Clamp slides along length of Module Rails
Single Hole Slide Clamp	Adjustable End-Clamp
Strongback	High-strength MIG-Welded powder coated steel

## ORDERING INFORMATION

### Universal Top-of-Pole Mount Catalog Number

**UTPM**      **X**      -      **X**    
 (Section 1)                      (Section 2)  
    # of                      PLP  
    Modules                      Module  
       Series

**Catalog Number Example: UTPM8-G**  
8 Modules, G Module Series

#### SELECTION GUIDE INSTRUCTIONS:

1. Select number of modules to mount
2. Determine Module Series by matching dimensions to size range per Section 2 table below.

**NOTE:** Include module manufacturer's specification sheet with PO.

#### Section 1

Number of Modules					
4	6	8	10	12	15
4" Pipe 2hx2w-L	6" Pipe 3hx2w-L	6" Pipe 4hx2w-L	8" Pipe 5hx2w-L	8" Pipe 3hx4w-L	8" Pipe 5hx3w-L
6" Pipe 2hx2w-L	6" Pipe 3hx2w-L	8" Pipe 4hx2w-L	8" Pipe 5hx2w-L	8" Pipe 6hx2w-L	N/A

#### Section 2

Module Series	Module Size Range (W x L)
G	37-42" x 51-67"
H	38-42" x 67-82"

ALL PIPE RECOMMENDATIONS CONFORM TO ASCE 7-05, ASCE 7-10, and ASCE 7-16. Pipe size may vary per your site specific conditions.

#### UTPM Configuration Key

X" Pipe	Standard Pipe Size	Example: 6" Pipe
Xh x Xw-L	Array Layout and Module Orientation (P=Portrait, L=Landscape)	Example: 4h x 2w-L
<b>NOTE:</b> Based on standard design – (ASCE 7-10) 105 mph, 30 psf ground snow load.		



## UNIVERSAL SIDE-OF-POLE MOUNT

The **Universal Side-of-Pole Mount (USPM)** is designed to install quickly and provide secure PV module mounting on a single pole. The unique slotted rail design and universal clamps adapt to most 60-cell and 72-cell PV modules. The universal designs also adapt to a wide range of pole diameters to reduce the number of SKUs and inventory for distributors. The center arm construction is aesthetically pleasing and provides seasonal adjustability for maximizing energy production. The USPM is manufactured of high strength aluminum rails, powder-coated steel brackets, and corrosion resistant stainless steel hardware for long-term service and reliability.

### FEATURES AND BENEFITS

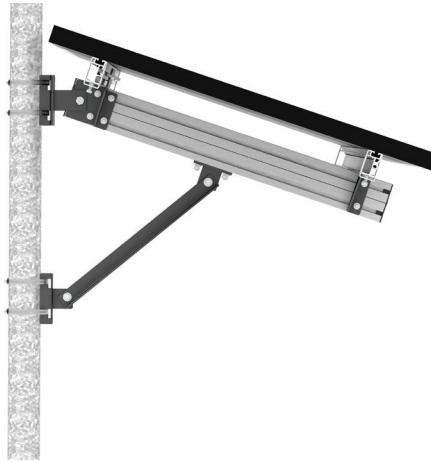
#### DURABLE DESIGN

- Standard Design
  - 105 MPH EXP C (ASCE 7-10) wind zones
  - 30 PSF snow loads
- High Wind Version (HWV) Upgrade Kit
  - 142 MPH EXP C (ASCE 7-10) wind zones
  - 60 PSF snow loads
- 6000 series structural aluminum rails
- Welded and powder-coated steel brackets
- Stainless steel hardware

#### APPLICATION FLEXIBILITY

- Single SKU for most 60-cell and 72-cell modules
- Pole size ranges (Installer supplied pole and bands)
  - 2" to 6"
  - 6" to 12"
- 30° to 60° tilt angle adjustment (full range)
- Installations up to 30 feet above grade
- Factory set module hole placement creates uniform spacing
- Easy access bottom flange module attachment

## ADJUSTABLE TILT RANGE

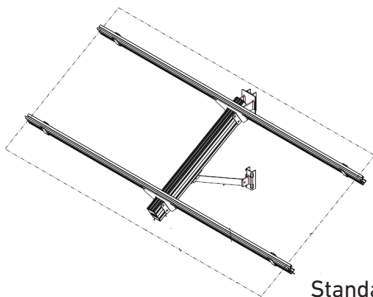


30° tilt

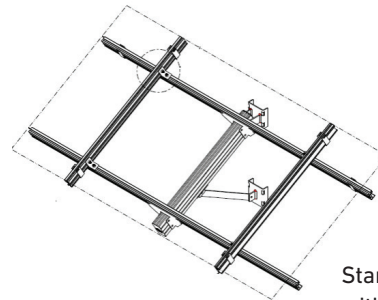


60° tilt

## DESIGN OPTIONS



Standard design

Standard design  
with High-Wind Kit

## ORDERING INFORMATION

### Universal Side-of-Pole Mount

Part Number	Description
USPM1-D-H-6	Universal Side-of-Pole Mount, D-H series modules, 2" - 6" pole diameters
USPM1-D-H-12	Universal Side-of-Pole Mount, D-H series modules, 6" - 12" pole diameters
USPM1-HWV-Kit	Universal Side-of-Pole Mount High-Wind Version Kit



GLOBAL HEADQUARTERS  
660 BETA DRIVE  
CLEVELAND, OHIO 44143

+1 440 461 5200  
SOLAR@PLP.COM  
PLP.COM

© 2023 Preformed Line Products  
Printed in U.S.A.  
SL-CA-1026-1  
10.23.2C