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 integral 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 watertight attachments to any roof style.
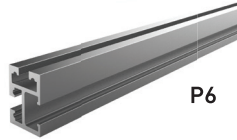
FEATURES AND BENEFITS

- 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

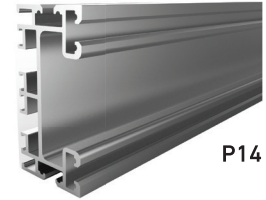SL-CA-1026-2

MOUNTING RAIL OPTIONS

UD

P6

P8

P14

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.

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.

DESIGN YOUR SYSTEM

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

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	
P14-SPK-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).
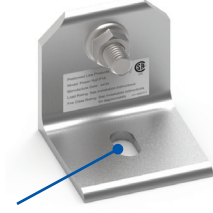
D-Series Mounting Base Brackets

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	1/2" Clearance Slot

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	
LF3-SS	3.5" Tall L-Mounting Foot	
LF5-SS	5" Tall L-Mounting Foot	3/8" Clearance Slot
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	
BF5-SS	5° Back Foot	
FF10-SS	10° Front Foot	
BF10-SS	10° Back Foot	3/8" Clearance Slot

POWER RAIL™ MOUNTING ATTACHMENTS
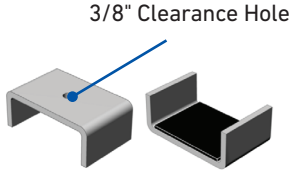
Easy Feet™

Easy Feet mount directly over metal and composite shingles into roof decking and do not require attachment to a roof structural member or flashing. 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	3/8" Clearance Hole

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	
SP8	8" Super Mounting Post	1/2" Hardware
SP9	9" Super Mounting Post	
SP10	10" Super Mounting Post	5/16" Clearance Holes

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	5/16" Hardware
PP6	6" Power Post	5/16" Clearance Holes

Easy Power Post™ Stanchions

Easy Power Posts mount directly to the roof deck without the need for flashing. Sealing butyl mastic backing and stainless steel deck screws are included.

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

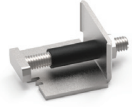**NOTE:** Butyl Mastic, Hex Bolt, Roof Screws, and Neoprene Washers included.

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-SS[1]	Stainless Steel	Pre-Assembled Module End Clamp with RAD Hardware	
PA-EC-#-RAD-B[1]	Black		
PA-GMC-28-33-RAD-SS	Stainless Steel	Pre-Assembled Module Mid Clamp for 28-33 mm Thick Frame	
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-SS	Stainless Steel	Pre-Assembled Module Mid Clamp for 47 - 52 mm Thick Frame	
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		

[1]**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-SS[1]	Module End Clamp with Carriage Bolt Hardware	
PA-EC-#-PT-B[1]		

[1]**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	

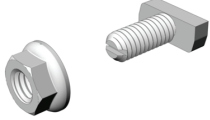**FOR ORDERING SPECIFY:** Standard Stainless Steel Finish (no suffix), Black Finish (-B suffix)

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SOLAR ROOF MOUNTS

POWER RAIL™ ACCESSORIES

Grounding Hardware

Part Number	Description	Image
WEEB-11.5[1]	Splice Plate Grounding Clip	
WEEBL-8.0-KIT-SS[1]	Rail Grounding Lug	
WEEB-8.0-RBJ-KIT[1]	Rail Bonding Jumper	

[1]MUST be ordered in quantities of 10.

POWER RAIL™ ACCESSORIES

Turn Bolts

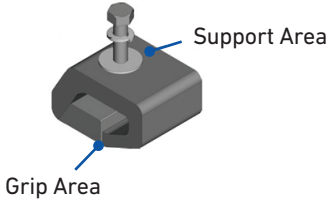| Part Number	Hardware/Finish	Description	Image
TB-SS	Stainless Steel	5/16" x 3/4" Turn Bolt with Flange Nut	
TB1-SS	Stainless Steel	5/16" x 1" Turn Bolt with Flange Nut	

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-Feet and provides a reliable mounting attachment.

Part Number	Description	Image
MSRC	POWER RC Assembly - Standing Seam Metal Roof Clamp	Support Area / Grip Area

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: