



SOLAR
PREFORMED LINE PRODUCTS



PV SOLAR MOUNTING SYSTEMS



INTRODUCTION

“PLP Solar specializes in engineering, designing and manufacturing a wide array of photovoltaic racks and equipment enclosures for residential, commercial and utility scale industrial applications”

PLP Thailand

PLP Thailand is a wholly owned subsidiary of Preformed Line Products Co, headquartered in Cleveland, Ohio. PLP was founded in 1947 and now has 18 manufacturing facilities in 20 different locations with over 2,800 employees.

PLP Thailand is ISO 9001 & ISO 14000 certified and is located in the tax free zone of Lardkrabang Industrial Estate approximately 15 km from Bangkok’s Suvarnabhumi International Airport.

PLP Thailand product lines include line hardware fittings and accessories for the following:

- ▶ Power Transmission Networks
- ▶ Power Distribution Networks
- ▶ Substations
- ▶ Rail Networks
- ▶ Communication Networks
- ▶ System Enclosures
- ▶ Alternative Energy
- ▶ Solar Hardware Fittings

Capabilities Include:

- ▶ Wire Forming
- ▶ Forging
- ▶ Aluminum and Steel Welding (Included robot)
- ▶ Aluminum Casting: Gravity and Pressure Die Cast (PDC)
- ▶ Earth Rods and Accessories (Copper and Steel Rods)
- ▶ Assembly
- ▶ PVC Extrusion
- ▶ Plate Cutting
- ▶ Hardware machining
- ▶ Testing
- ▶ Tool Design and Manufacturing

PLP Solar provides innovative mounting solutions for any PV solar application including commercial, industrial, government, utility and residential applications. PLP’s product line sets the standard for the solar industry in terms of high strength and easy installation.

In addition, PLP Solar provides consultation on system design and installation. It delivers added value to its customers through expertise and unparalleled customer support.

PLP’s value proposition focuses on maximizing the industry’s long-term viability, both financially and environmentally. With reliable products, dedicated services, and professional experience, PLP Solar can provide an effective solution, making the choice for solar energy a worthwhile investment.



INTRODUCTION

Power Rail™ top-clamping PV mounting system is designed with the professional PV solar installer in mind. The rails are engineered to allow greater spans between supports, thus minimizing roof penetrations, reducing installation time, and lowering overall costs.

Power Rail™ is available in lengths up to 6 m allowing for fewer field splices and longer span lengths. The end result is fewer hardware components and reduced assembly thus saving the installer both valuable time and money.



Mounting Kits

The mounting kits products offer improved strength, longer life and are easier to install. We offer field proven solutions for securing any solar module in a variety of applications for utility scale, commercial, residential, government and industrial markets. Installers from the Asia Pacific region rely on the strength and hassle-free quick assembly of our PV mounting structures.

High Strength and Durable Design:

- ▶ Engineered rail profile for maximum strength to weight ratio
- ▶ High strength 6000 Series structural aluminum rail construction
- ▶ All fastening hardware is made of durable 304 stainless steel

Reduced Installation Time and Costs:

- ▶ Top-Clamping System design for fast installation and easier access
- ▶ Up to 6 m rail lengths eliminate costly rail splices
- ▶ Tighter module spacing offers higher density
- ▶ Greater span lengths reduce roof penetrations and mounting components
- ▶ Mounting Kits offer all hardware components in a single part number

PRODUCTS GUIDE

ROOF MOUNT SYSTEMS



CRS Mounts (CRS-G2)

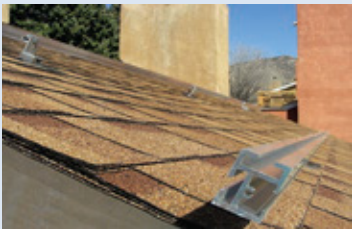
- **Non-penetrating**, 5" or 10" tilted mount commercial flat roof system
- Wind tunnel tested and qualified – low ballast weight
- Secure bolt-together construction - no field drilling, cutting or measuring
- EPDM rubber base (included) protects roof surfaces
- Integrated grounding tested to UL standards
- Ballast pans accept standard concrete "cap" blocks

Ballasted Power Rail™ Mounts (BPRM)

- **Non-penetrating**, flush mount commercial flat roof system
- Power Rail™ top-clamping system with Lock-in-Place RAD™ Bolts
- High density, high energy output per square foot
- EPDM rubber (included) protects roof surfaces
- Wind tunnel tested – low ballast weight

Ballasted Roof Mounts (BRM)

- **Non-penetrating**, ballasted, flat roof system
- Module tilt angles up to 45° - Adjustable tilt legs
- Power Rail™ top-clamping system with Lock-in-Place RAD™ Bolts
- Ballast pans accept standard concrete "cap" blocks
- EPDM rubber base (included) protects roof surfaces



Power Rail™ Mounting System (PRM)

- P4, P6, P8, P14, LD and MD rail options for optimal span-to-cost ratio
- High strength, top-clamping mounting system with Lock-in-Place RAD™ Bolts
- Parallel to roof or tilted mount applications
- Single tool assembly
- Attachment options for any style roof application
- Integrated grounding using Burndy WEEBS



Power Rail™ KTS Mounts (KTS)

- Landscape tilted commercial mounting system
- 5°-25° tilt options to maximize energy production
- Ideal for East/West pitching roofs or structures
- Mounts directly to metal roof attachment hardware, structure or roof substrate
- Power Rail™ top-clamping system with Lock-in-Place RAD™ Bolts*

* Lock-in-Place RAD™ Bolts are now patented.

PRODUCTS GUIDE

GROUND AND POLE MOUNT SYSTEMS

Power Peak™

- Designed for large scale applications featuring fewer components
- Install over pile driven standard I-Beams
- Mounting structures optimized to specific site requirements
- Field adjustable – fast installation
- Features Lock-in-Place RAD™ Bolts*
- Integrated grounding



Multi-Pole Mounts (MPM-G2)

- Designed to mount on 3" or 4" SCH 40/80 pipe pipe (installer supplied)
- Fewer ground penetrations than traditional ground mount systems, saving labor and materials
- Optional ground clearance – ideal for shade structures or car ports
- Power Rail™ top-clamping system with Lock-in-Place RAD™ Bolts
- Seasonal elevation adjustments – positive locking brackets



Large Ground Mounts (LGM)

- Fixed tilt, easy to assemble pipe structures
- Designed to specific site requirements
- Power Rail™ top-clamping system
- TIG-welded, high strength aluminum fittings
- Schedule 40 pipe supplied by installer



Top-of-Pole Mounts (TPM)

- Heavy gauge steel and aluminum construction
- Securely mount 1 to 24 modules on a single pole
- Module-specific design reduces parts and assembly time
- Preset holes eliminate measuring and drilling
- Seasonal elevation adjustments from 15° to 65°
- Mounts on standard schedule 40 or 80 rigid steel pipe



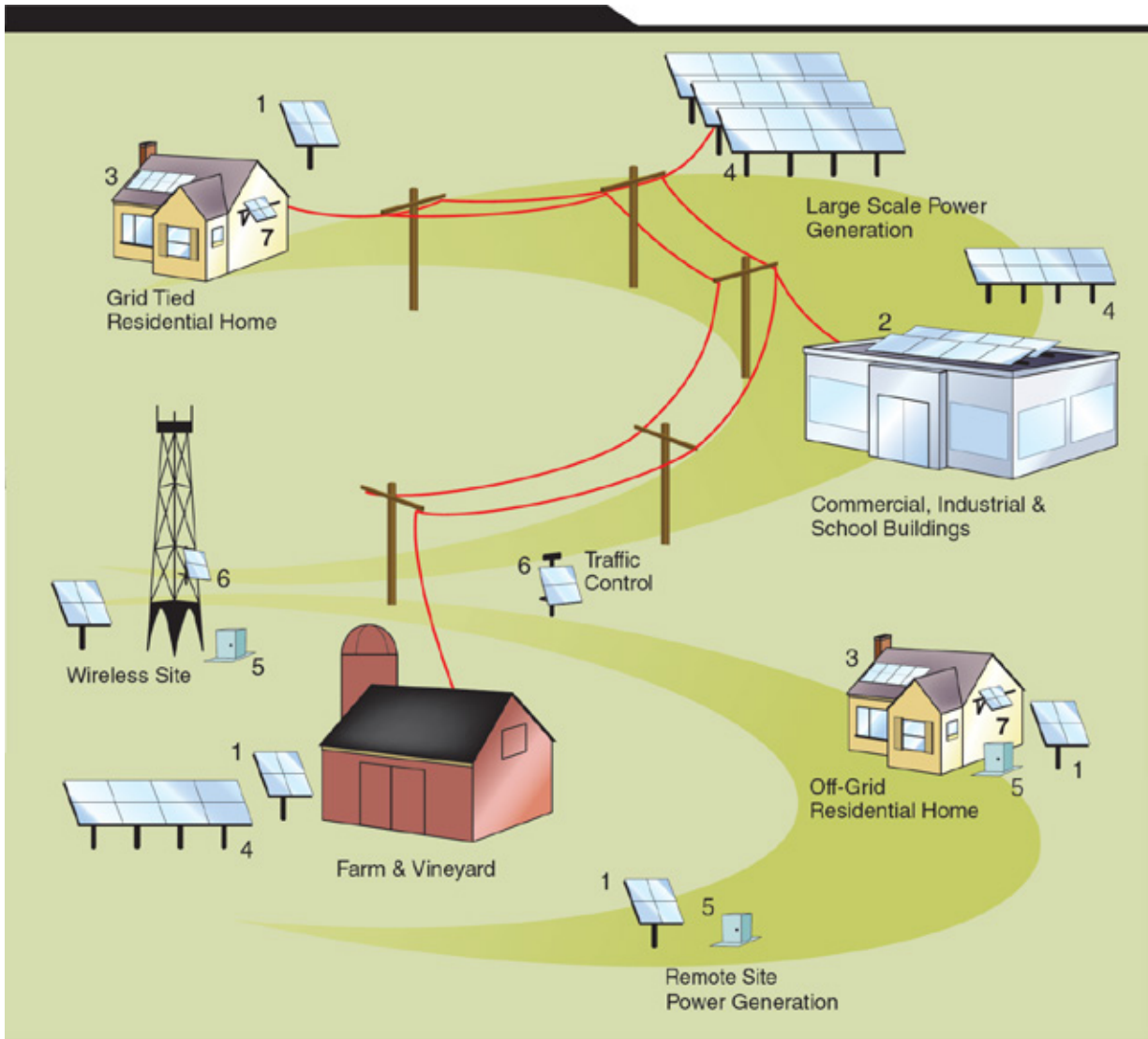
Side-of-Pole Mounts (SPM)

- Available in painted steel or mill-finish aluminum construction
- Mounting options include band clamps, u-bolts or through bolts
- Adjustable tilt angle
- Heavy duty stainless steel mounting hardware
- Tower mounting options available



* Lock-in-Place RAD™ Bolts are now patented.

SOLUTIONS FROM PLP



Solutions Key



1. Top-of-Pole Mounts



2. Ballasted Roof Mounts
 - POWER-FAB® CRS
 - Ballasted Power Rail



3. Power Rail™ Mounts



4. Ground Mounts
 - Power Peak™
 - Multi-Pole Mounts
 - Large Ground Mounts



5. Power Box™ Enclosures



6. Side-of-Pole Mounts



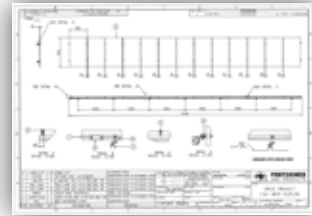
7. Power Rail™ Awning Mounts

SOLUTIONS FROM PLP

Supports

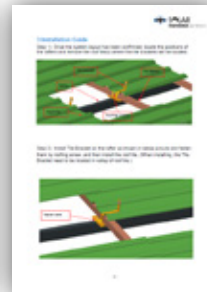
PLP Thailand provides team support to make sure that all product designs and solutions meet customer requirements:

- ▶ Local Sales Team
- ▶ Local Engineering Team
- ▶ On-Site Survey
- ▶ Technical Team Support
- ▶ System Solution Drawing



Standard documentation are well prepared to cover customer needs:

- ▶ Product Brochure
- ▶ Product Catalogue
- ▶ Step-by-Step Installation Manual
- ▶ Test Report



Various demonstration sets are ready for presentation:

- ▶ Compact standard demo sets
- ▶ Mobile demo for Tile Roof
- ▶ Mobile demo for Metal Sheet Roof
- ▶ As requested



We have standard in-house Testing Facilities to fulfill prototype testing, product testing, solution verification, and customized testing as customer requests:

- ▶ 600kN Vertical Tensile Machine
- ▶ 400kN Horizontal Tensile Machine
 - ▶ Tensile testing
 - ▶ Slip Testing
 - ▶ Destructive Testing
- ▶ Hardness Testing
- ▶ Resistance Verification
- ▶ Galvanized Verification



PowerPeak™

The Power Peak™ PV Solar Mounting System

The Power Peak™ PV mounting system is designed for larger scale ground mount installations that require faster build rates. Combining high strength steel attachment components, lightweight module rails and the Lock-in-Place RAD™* clamp, the Power Peak provides a fast and secure mounting structure for most PV modules.

Power Peak mounting structures are optimized to site-specific conditions and assemble over pile driven galvanized “I” beams. Component attachments feature built-in field adjustments for post misalignment and include captive bolts. The single row, vertical post design greatly reduces the number of ground penetrations while providing increased ground clearance options. The Power Peak mounting system assembles without any lifting equipment or machinery and pre-assembled components significantly reduce installation time and labor. Structures are specified and manufactured to match module string counts to reduce wiring time and materials. The unique module rails feature built in wire channels for a professional appearance.

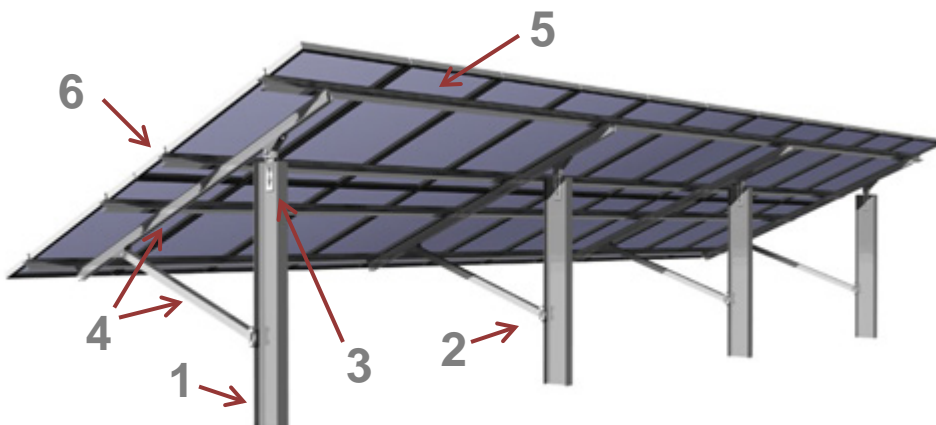
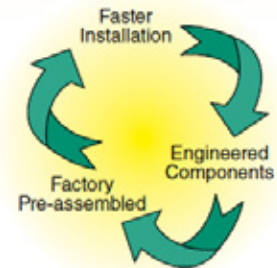


Technical Services Offered

- § Permit ready drawings
- § Quick turnaround on proposals
- § Foundation designs
- § Pile driving proposals
- § Rack assembly proposals

Key Benefits

- | | |
|---|---|
| <ul style="list-style-type: none"> § Site Optimized Designs
Reduces overall material costs § Factory Pre-assembled Components
Eliminates field measurements and handling of small hardware § String Size Matched Sub-arrays
Faster repetitive layouts, easier wiring § Local Pre-drilled I-Beam Vertical Posts
Eliminates on-site fabrication and reduces freight costs | <ul style="list-style-type: none"> § Racking Adjustments
Easier to square the structure when posts twist or misalign § Lightweight Components
Eliminates heavy-duty lifting equipment and promotes “assembly-line” installation § Integral Wire Management
Reduces labor, meets code and provides a clean and professional appearance § Module Clamp Assemblies
Faster installation with a 1/4” turn and no loose parts |
|---|---|



* Lock-in-Place RAD™ Bolts are now patented.

PowerPeak™

Performance and Simplicity Connect

1 Standard I Beams

- Pile Driven with standard equipment
- Sized per site conditions to reduce overall system costs
- Sourced locally to reduce freight costs and delivery times
- Predrilled and galvanized - **Ready to install**



2 Strut Attachment

- Field adjustable
- Captive bolts – **No loose parts**
- Hot dip galvanized corrosion protection
- Lateral adjustments resolve twisted posts



3 Strongback Attachments

- Vertical field adjustments (2.5 inches)
- Hot dip galvanized **corrosion protection**
- Built-in articulation for twisted posts (± 5 degrees)
- High strength steel



4 Strongback Assembly

- Unfold and hang for easy assembly to posts
- Factory pre-assembled – strong back / strut / rail brackets
- **Field adjustable for easy alignment**
- Lightweight, High Strength Aluminum



5 Module Rails

- Lightweight, High Strength Aluminum
- **Built-in Wire channels**
- Lift into place
- Long lengths minimize splices



6 Module Clamps

- Pre-install clamps in rail then slide module in place.
- Heavy-duty stainless steel
- Factory pre-assembled – Lock-in-Place RAD™ Bolts clamp
- Built-in electrical grounding option
- Secure module clamping



PowerPeak™

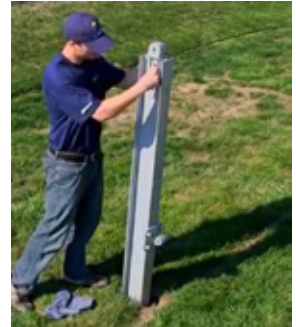
Performance and Simplicity Connect



Step 1
Pile-drive I-Beams



Step 2
Slide on Strut Attachment



Step 3
Secure Strongback Attachment



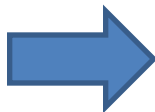
Step 6
Twist-in module clamps
And secure modules



Step 5
Hand-lift module rails
into place



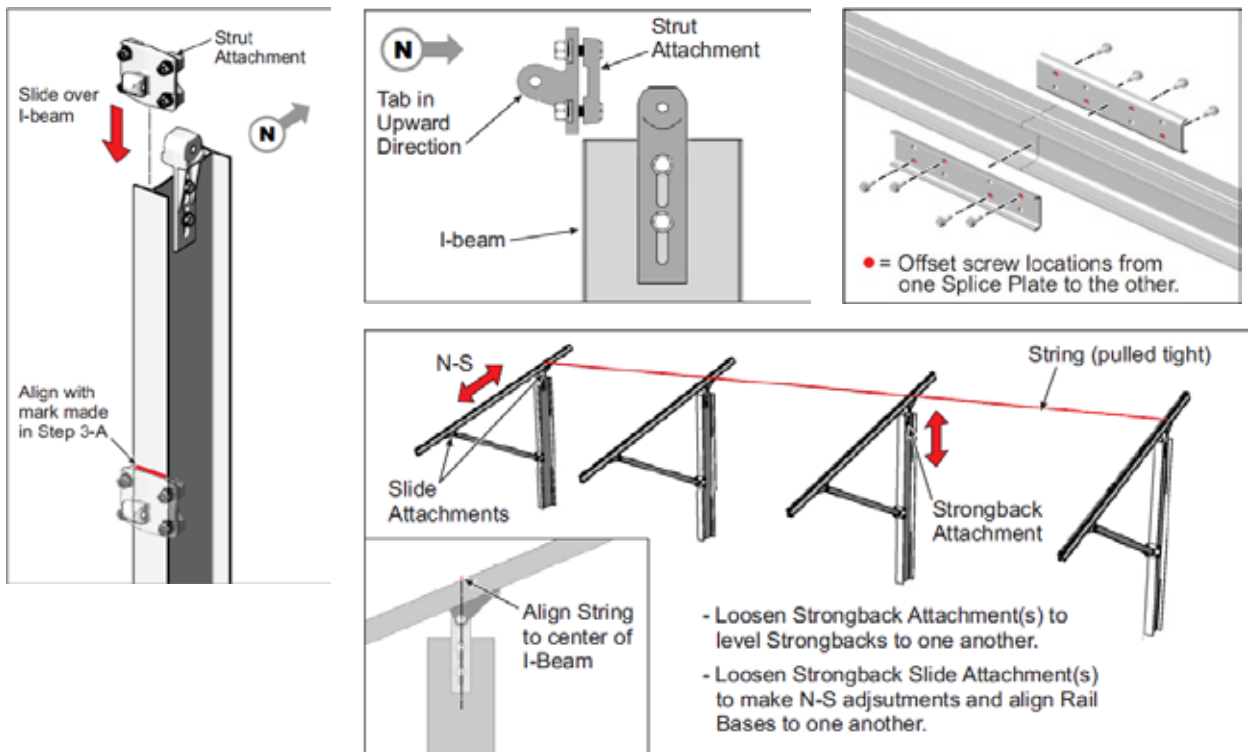
Step 4
Hang & Attach
Strongback Assembly



Performance and Simplicity Connect



Assembly Instruction Manual is available



PowerPeak™

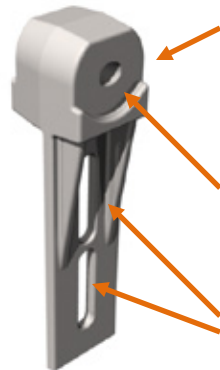
Strongback & Strut Attachment - Features & Benefits

The main attachments: strong, durable and designed with built-in adjustability



Tapered/Hourglass Pivot Hole
 Provides ± 5 lateral movement of the Strongback for twisted Piles.

Strongback Attachment



Large Heavy Head

Without using hardware the installer can temporarily hang the Strongback Attachment on the I-beam until next person can follow-up with through bolts.

Tapered/Hourglass Pivot Hole

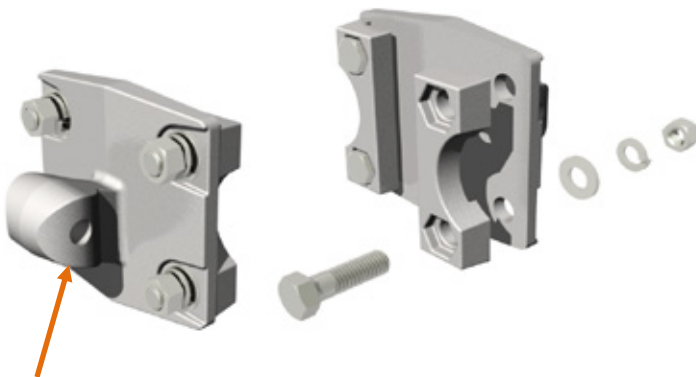
Provides ± 5 lateral movement of the Strongback for twisted I-beams.

Mounting Slots

Vertical adjustments of ± 1.25 " to compensate for out-of-level I-beams.

Strongback Attachment

Ships pre-assembled no gathering of hardware or assembly required.

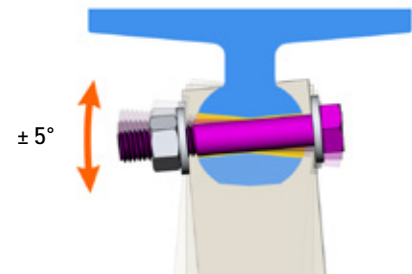


Tapered/Hourglass Pivot Hole
 Provides ± 5 lateral movement of the Strongback for twisted I-beams.

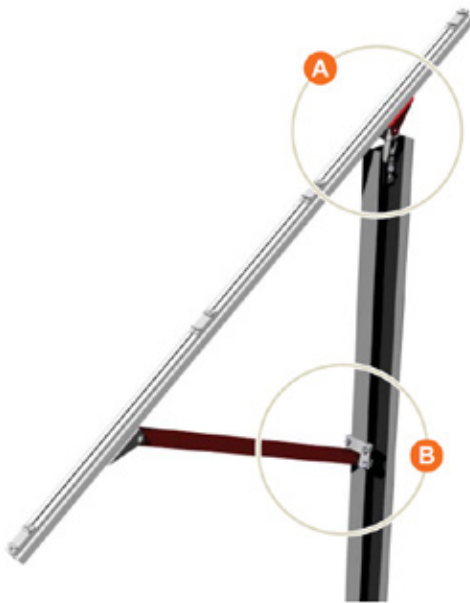
Clamps to I-beams

- Provides unlimited vertical adjustments along I-beams.
- Installs fully assembled. Slips onto I-beams, no disassembly required.
- Back Bracket captures head of bolt eliminating need for two wrenches.

Lateral Movement Cutaway
 When desired lateral position is achieved, tighten the Pivot Bolt to lock position.

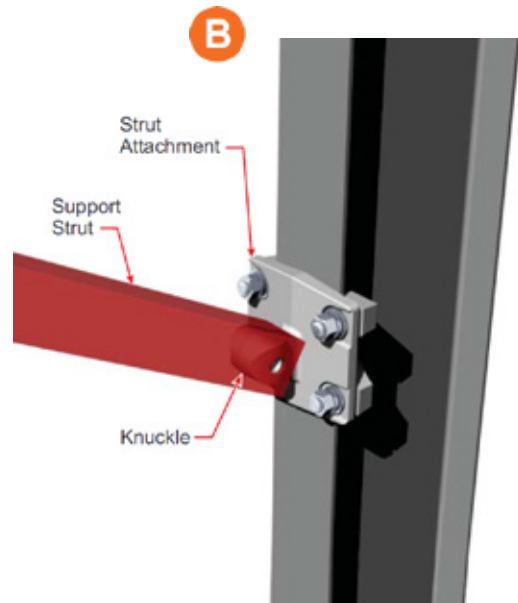
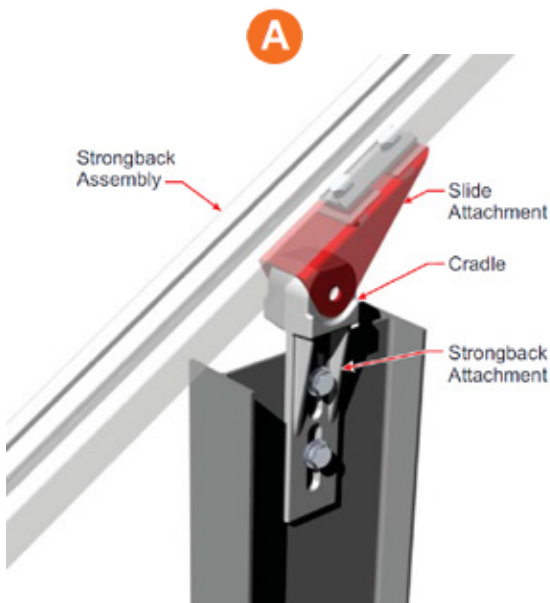


PowerPeak™



To reduce installation costs, the lightweight components of the **Strongback Assemblies** allow them to be easily lifted by one person and pre-hung on the I-beams; after which through Bolts and hardware are installed to secure it in place. This sets the stage for one person or team to pre-hang the **Strongback Assemblies** While a second person or team follows up with through bolts and hardware. There is no need for heavy-duty lifting equipment.

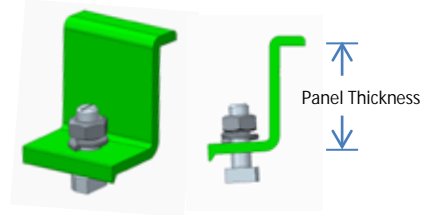
How it works: At the top of the I-beam, the **Strongback Attachment** has a cradle which accepts and holds the **Strongback Assembly** in place via the **Slide Attachment**. Midway down the I-beam, the **Strut Attachment** includes a knuckle shaper protrusion that accepts the lower end of the **Support Strut**. These two attachment points allow the **Strongback Assembly** to freely hang in place awaiting the through bolts and attaching hardware.



COMPONENTS

End Clamp

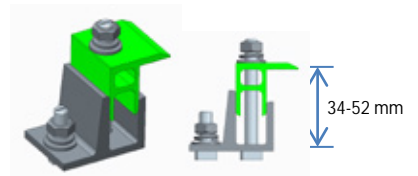
Aluminum for strength and durability with 304 stainless steel fastening hardware. Universal patent pending design allows any solar module to be mounted securely. This allows a single kit component list to cater for any project. A range of locking bolts provides installation preset positioning of module alignment and can handle panels from 22 mm to 52 mm.



Part No.	Description
P02293-000	End Clamp for Panel thickness range 22-28 mm
P02294-000	End Clamp for Panel thickness range 29-34 mm
P02295-000	End Clamp for Panel thickness range 35-40 mm
P02296-000	End Clamp for Panel thickness range 41-46 mm
P02297-000	End Clamp for Panel thickness range 47-52 mm

End Clamp (Adjustable)

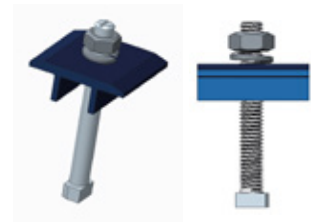
Flexible end clamp for using with wide range of the solar panel thickness between 34-52 mm.



Part No.	Description
F89036-000	End Clamp for Panel thickness range 34-52 mm (Adjustable type)

Mid Clamp

Aluminum for strength and durability with 304 stainless steel fastening hardware. The low profile design and slim 20 mm gap between modules provide a professional appearance and higher density.

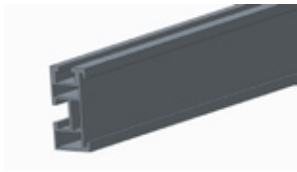


Part No.	Description
P02276-000	Mid Clamp Top Plate for Panel thickness range 24-33 mm
P02313-000	Mid Clamp Top Plate for Panel thickness range 34-44 mm
P02169-000	Mid Clamp Top Plate for Panel thickness range 45-52 mm

COMPONENTS

Power Rail™ R2

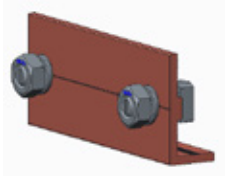
Power Rail™ is an engineered profile extrusion made from Series 6000 structural aluminum. Power Rail™ R2 is designed for 2 meters maximum span range.



Part No.	Description
P02500-000	Aluminum Rail 6063T5 Length 1.100 M
P02710-000	Aluminum Rail 6063T5 Length 2.120 M
P02332-000	Aluminum Rail 6063T5 Length 3.160 M
P02331-000	Aluminum Rail 6063T5 Length 4.160 M
P02370-000	Aluminum Rail 6063T5 Length 5.190 M
P02371-000	Aluminum Rail 6063T5 Length 6.200 M

Rail Joiner-Power Rail™ R2

Joining components to extend rail length for Rail R2.



Part No.	Description
P02220-000	Rail Joiner for Rail R2

Cable Clip-Power Rail™ R2

Cable clip will secure cable properly in the side of rail for Rail R2.



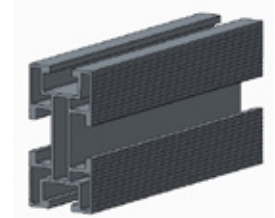
Part No.	Description
P02181-000	Cable Clip for Cable Management for Rail R2

COMPONENTS

Power Rail™ R3

Power Rail™ is an engineered profile extrusion made from Series 6000 structural aluminum. Power Rail™ R3 is designed for 1.7 meters maximum span range.

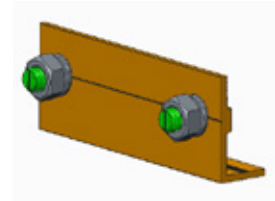
Part No.	Description
P02500-000	Aluminum Rail 6005 Length 1.100 M
P02710-000	Aluminum Rail 6005 Length 2.120 M
P02332-000	Aluminum Rail 6005 Length 3.160 M
P02331-000	Aluminum Rail 6005 Length 4.160 M
P02370-000	Aluminum Rail 6005 Length 5.190 M
P02371-000	Aluminum Rail 6005 Length 6.200 M



Rail Joiner-Power Rail™ R3

Joining components to extend Rail R3 length.

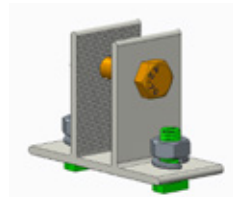
Part No.	Description
P02220-000	Rail Joiner for Rail R3



T-Support-Power Rail™ R3

T-Support to lock both sides of the Rail R3 and uses for Tilt application

Part No.	Description
P02181-000	Cable Clip for Cable Management for Rail R3



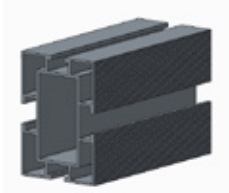
Cable Clip-Power Rail™ R3

Cable clip will secure cable properly in the side of Rail R3.

Part No.	Description
P02181-000	Cable Clip for Cable Management for Rail R3



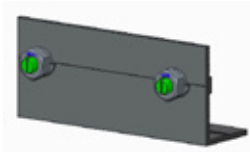
COMPONENTS



Power Rail™ R4

Power Rail™ is an engineered profile extrusion made from Series 6000 structural aluminum. Power Rail™ R4 is designed for 3 meters maximum span range.

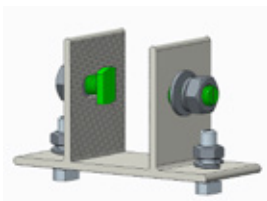
Part No.	Description
P02500-000	Aluminum Rail 6005 Length 1.100 M
P02710-000	Aluminum Rail 6005 Length 2.120 M
P02332-000	Aluminum Rail 6005 Length 3.160 M
P02331-000	Aluminum Rail 6005 Length 4.160 M
P02370-000	Aluminum Rail 6005 Length 5.190 M
P02371-000	Aluminum Rail 6005 Length 6.200 M



Rail Joiner-Power Rail™ R4

Joining components to extend rail R4 length.

Part No.	Description
P02220-000	Rail Joiner for Rail R4



T-Support-Power Rail™ R4

T-Support to lock both sides of the Rail R4 and uses for Tilt application

Part No.	Description
P02181-000	Cable Clip for Cable Management for Rail R4



Cable Clip-Power Rail™ R4

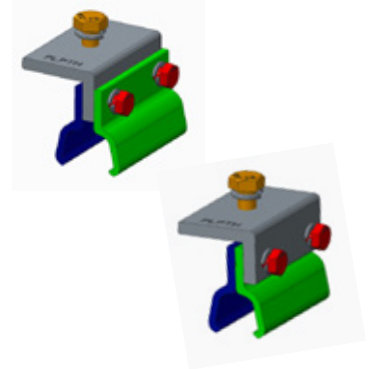
Cable clip will secure cable properly in the side of Rail R4.

Part No.	Description
P02181-000	Cable Clip for Cable Management for Rail R4

COMPONENTS

KLIPIKOK

Provides the flexibility to clamp on different types of metal sheet roof providing a reliable holding system; the bracket is made of high quality corrosion resistant aluminum. No need to drill the roof. Two assembly options available for adapting to different roof types.



Part No.	Description
P01991-000	KLIPIKOK for Solar Roof 20.2/27.7 mm (Standard Size)
P02437-000	KLIPIKOK for Solar Roof 5/12.5 mm (for Small gap Roof)

L-Bracket

L-Brackets are fabricated from high strength aluminum and designed for mounting on various types of surfaces.

Part No.	Description
P02176-000	L-Bracket with RAD™ Bolt M10, Hole Ø 7 mm
P02177-000	L-Bracket with RAD™ Bolt M10, Hole Ø 11 mm, H=76 mm
P02463-000	L-Bracket with RAD™ Bolt M10, Hole Ø 11 mm, H=130 mm



L-Bracket with 2 RAD™ bolts

L-Brackets are fabricated from high strength aluminum and designed for mounting on various types of surfaces with 2 RAD™ bolts assembly.

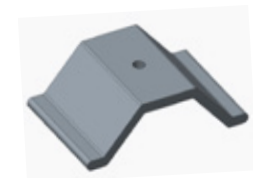
Part No.	Description
P02357-000	L-Bracket with 2xRAD™ Bolts M8, H=76 mm
P02248-000	L-Bracket with 2xRAD™ Bolts M10, H=76 mm



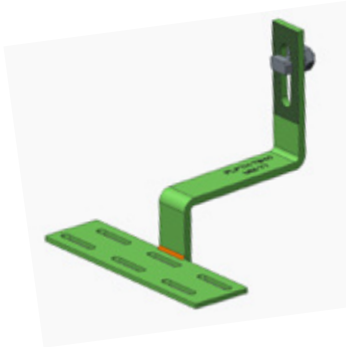
Mounting Bridge

Assembles with L-Bracket to reduce compression load on the drill point in roof deck.

Part No.	Description
P02349-000	Mounting Bridge for Trapezoidal Roof Height = 20 mm
P02352-000	Mounting Bridge for Trapezoidal Roof Height = 30 mm
P02354-000	Mounting Bridge for Trapezoidal Roof Height = 40 mm



COMPONENTS



Tile Bracket

Designed for tile roof mounting. Easy to install and set up.

Part No.	Description
P02536-000	Tile Bracket with RAD™ Bolt M10, Height = 40 mm
P02018-000	Tile Bracket with RAD™ Bolt M10, Height = 45 mm



Adjustable Tile Bracket

Adjustable roof tile mounting bracket provides flexibility to secure the mounting rails in different style roof tiles.

Part No.	Description
P02728-000	Adjustable Tile Bracket size 40-62 mm. with RAD™ Bolt M10



Ground Plate

Creates electrical grounding between rail and solar panel.

Part No.	Description
P02546-000	Grounding Plate



Ring Terminal

Electrical Grounding Ring Terminal.

Part No.	Description
P02733-000	Electrical Grounding Ring Terminal

COMPONENTS

EPDM Rubber

High quality insert to shield drilled hole and avoid water leakage.

Part No.	Description
978486-000	EPDM Rubber Size 51x45x3 mm
P02525-000	EPDM Rubber Size 51x45x3 mm with one side adhesive
P02351-000	EPDM Rubber Size 28x50x3 mm (Suite with Mounting Bridge)



BUTYL Rubber

High quality insert to shield drilled hole and avoid water leakage.

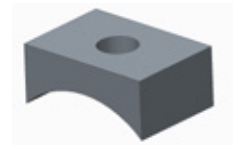
Part No.	Description
P02429-000	Butyl Rubber for Support L Bracket 51x45x3 mm
P02430-000	Butyl Rubber for Support L Bracket 28x50x3 mm (Used with Mounting Bridge)



EPDM Rubber for Tile Roof

High quality insert to shield drilled hole and avoid water leakage. Suitable for Roman-Tile roof.

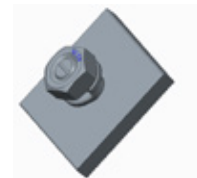
Part No.	Description
P02497-000	EPDM Rubber for Tile Roof



Bracing Plate

Installs on the rail to provide reinforcement for tilt angle mounting.

Part No.	Description
P02361-000	Bracing Plate with RAD™ Bolt M10



COMPONENTS

Self Drilling Screw



Fastener for direct drilling into Metal Purlin.

Part No.	Description
P02406-000	Self Drilling Screw 12-14x50 with Rubber
P02540-000	Self Drilling Screw 12-14x65 with Rubber
P02651-000	Self Drilling Screw 12-14x100 with Rubber

Hanger Bolt



Fastener for direct drilling into Wooden Purlin.

Part No.	Description
P02627-000	Hanger Bolt M10, Length 200 mm with Fastener and Rubber for Roman Tile Roofs

Stud M10



Bolt and Nut assembly for Roman Tile Roofs.

Part No.	Description
P02495-000	Stud M10 with Fastener and Rubber for Roman Tile Roofs

COMPONENTS

I-Beam

The I-beam structure can be pile driven with standard equipment, which is sized per site conditions to reduce overall system costs

Part No.	Description
P03100-000	I-Beam 150 mm x 75 mm , Length 3.5 M
P03101-000	I-Beam 150 mm x 75 mm , Length 4.0 M
P03102-000	I-Beam 150 mm x 75 mm , Length 4.5 M



I-Beam with holes

The I-beam structure can be pile driven with standard equipment, which is sized per site conditions to reduce overall system costs

Part No.	Description
P03714-000	I-Beam 150 mm x 75 mm with 4 holes, Length 2.4 M
P03715-000	I-Beam 150 mm x 75 mm with 4 holes, Length 2.6 M
P03716-000	I-Beam 150 mm x 75 mm with 4 holes, Length 2.8 M
P03717-000	I-Beam 150 mm x 75 mm with 4 holes, Length 3.0 M
P03718-000	I-Beam 150 mm x 75 mm with 4 holes, Length 3.2 M
P03719-000	I-Beam 150 mm x 75 mm with 4 holes, Length 6.0 M



Strongback Attachment

Strongback Attachment is a built-in articulation for twisted posts (± 5 degrees) made from high strength steel, which supports Vertical field adjustments

Part No.	Description
P03161-000	Strongback Attachment Assembly



Strongback Attachment R2

Strongback Attachment is a built-in articulation for the posts made from high strength steel

Part No.	Description
P03744-000	Strongback Attachment Assembly R2



COMPONENTS

Strongback Assembly

Factory pre-assembled strong back / strut / rail brackets.
Supports field adjustable for easy alignment



Part No.	Description
P03313-000	Strongback Assembly Length 2.8 M, Tilt 10 Degree
P03315-000	Strongback Assembly Length 2.8 M, Tilt 15 Degree
P03317-000	Strongback Assembly Length 2.8 M, Tilt 20 Degree
P03319-000	Strongback Assembly Length 2.8 M, Tilt 25 Degree
P03321-000	Strongback Assembly Length 2.8 M, Tilt 30 Degree
P03303-000	Strongback Assembly Length 3.2 M, Tilt 10 Degree
P03305-000	Strongback Assembly Length 3.2 M, Tilt 15 Degree
P03307-000	Strongback Assembly Length 3.2 M, Tilt 20 Degree
P03309-000	Strongback Assembly Length 3.2 M, Tilt 25 Degree
P03311-000	Strongback Assembly Length 3.2 M, Tilt 30 Degree

Strongback Kits Set R2

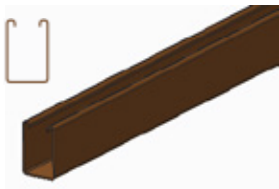
Strong back / strut / rail brackets Kits Set R2



Part No.	Description
P03747-000	Strongback Assembly Length 2230 mm.
P03746-000	Strongback Assembly Length 4174 mm.

U-Steel Strongback R2

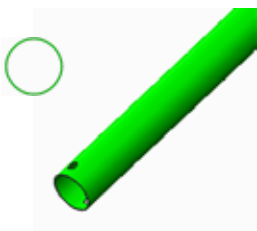
U-Steel Strong back R2



Part No.	Description
P03750-000	U-Steel Strongback Length 2230 mm.
P03751-000	U-Steel Strongback Length 4174 mm.

Strut Tube R2

Strut Tube made from Galvanized Steel R2



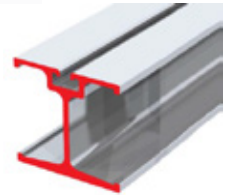
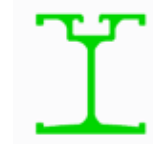
Part No.	Description
P03752-000	Strut Tube Length 823 mm.
P03753-000	Strut Tube Length 1117 mm.
P03754-000	Strut Tube Length 1120 mm.
P03755-000	Strut Tube Length 1461 mm.

COMPONENTS

LD Rail

LD Rail is Lightweight high strength aluminum module rail

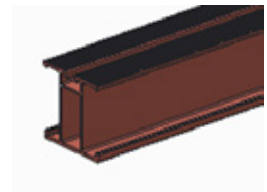
Part No.	Description
P03103-000	Aluminum Extrusion LD Rail Length 2,120 mm.
P03295-000	Aluminum Extrusion LD Rail Length 3,160 mm.
P03297-000	Aluminum Extrusion LD Rail Length 4,160 mm.
P03299-000	Aluminum Extrusion LD Rail Length 5,190 mm.
P03301-000	Aluminum Extrusion LD Rail Length 6,200 mm.



LD Rail R2

LD Rail is Lightweight high strength aluminum module rail

Part No.	Description
P03726-000	Aluminum Extrusion LD Rail R2 Length 3,760 mm.
P03728-000	Aluminum Extrusion LD Rail R2 Length 4,120 mm.
P03730-000	Aluminum Extrusion LD Rail R2 Length 4,138 mm.
P03732-000	Aluminum Extrusion LD Rail R2 Length 7,338 mm.
P03734-000	Aluminum Extrusion LD Rail R2 Length 9,000 mm.
P03736-000	Aluminum Extrusion LD Rail R2 Length 9,600 mm.
P03738-000	Aluminum Extrusion LD Rail R2 Length 10,538 mm.



Strongback Slide Attachment

Strongback Slide Attachment made from Galvanized Steel

Part No.	Description
P03748-000	Strongback Slide Attachment



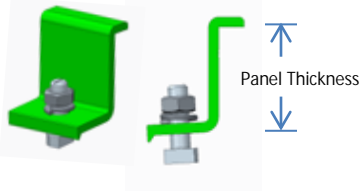
Nut Plate Set

Nut Plate Set is used with U-Rail

Part No.	Description
P03779-000	Nut Plate Set



COMPONENTS

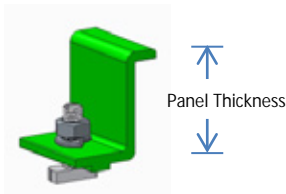


End Clamp for PowerPeak™

Aluminum for strength and durability with 304 stainless steel fastening hardware. Universal patent pending design allows any solar module to be mounted securely with PowerPeak™ products. A range of locking bolts provides installation preset positioning of module alignment and can handle panels from 22 mm to 52 mm. This can be applied for both normal and R2 rail version for vertical or horizontal panel layout.

Part No.	Description
P03367-000	End Clamp for Panel thickness range 22-28 mm (Pre-assembly)
P03369-000	End Clamp for Panel thickness range 29-34 mm (Pre-assembly)
P03371-000	End Clamp for Panel thickness range 35-40 mm (Pre-assembly)
P03373-000	End Clamp for Panel thickness range 41-46 mm (Pre-assembly)
P03375-000	End Clamp for Panel thickness range 47-52 mm (Pre-assembly)
P03816-000	End Clamp for Panel thickness range 22-28 mm
P03817-000	End Clamp for Panel thickness range 29-34 mm
P03818-000	End Clamp for Panel thickness range 35-40 mm
P03819-000	End Clamp for Panel thickness range 41-46 mm
P03820-000	End Clamp for Panel thickness range 47-52 mm

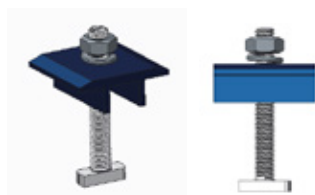
End Clamp (H) for PowerPeak™



Aluminum for strength and durability with 304 stainless steel fastening hardware. Universal patent pending design allows any solar module to be mounted securely with PowerPeak™ products. This special design can be applied for R2 Rail version for horizontal panel layout.

Part No.	Description
P03762-000	End Clamp for Panel thickness 40 mm
P03764-000	End Clamp for Panel thickness 46 mm

Mid Clamp for PowerPeak™



Aluminum for strength and durability with 304 stainless steel fastening hardware. The low profile design and slim 20 mm gap between modules provide a professional appearance and higher density. This can be applied for both normal and R2 Rail version.

Part No.	Description
P03387-000	Mid Clamp for Panel thickness range 24-33 mm (Pre-assembly)
P03389-000	Mid Clamp for Panel thickness range 34-44 mm (Pre-assembly)
P03391-000	Mid Clamp for Panel thickness range 45-52 mm (Pre-assembly)
P03756-000	Mid Clamp for Panel thickness range 24-33 mm
P03758-000	Mid Clamp for Panel thickness range 34-44 mm
P03760-000	Mid Clamp for Panel thickness range 45-52 mm

COMPONENTS

Strut Attachment

Field adjustable Strut Attachment with captive bolts (No loose parts) will support lateral adjustments resolve twisted posts

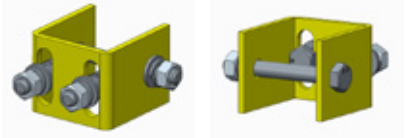
Part No.	Description
P03159-000	Strut Attachment Assembly



Strut Attachment R2

Field adjustable Strut Attachment with captive bolts (No loose parts) will support lateral adjustments resolve twisted posts

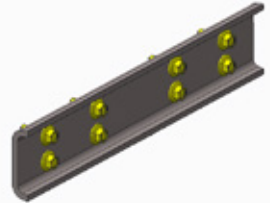
Part No.	Description
P03742-000	Strut Attachment Assembly



Splice Plate for Rail LD

Joining components to extend rail length for Rail LD.

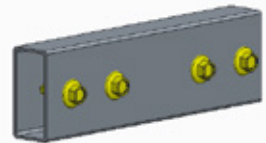
Part No.	Description
P03397-000	Splice Plate for Rail LD



Splice Plate for Rail LD R2

Joining components to extend rail length for Rail LD R2.

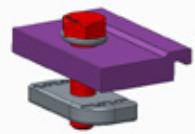
Part No.	Description
P03774-000	Splice Plate for Rail LD R2



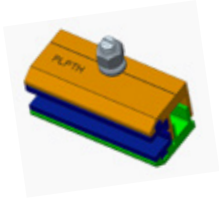
Rail Clamp

Clamp for locking with the LD Rail

Part No.	Description
P03777-000	Rail Clamp



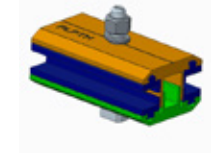
COMPONENTS



End Clamp for Thin Film

End Clamp designed for securing Thin Film Solar Panel.

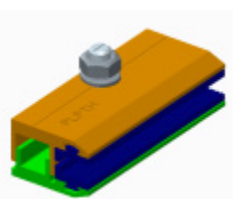
Part No.	Description
P02414-000	End Clamp for Thin Film Module



Mid Clamp for Thin Film

Mid Clamp designed for securing Thin Film Solar Panel.

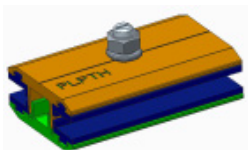
Part No.	Description
P02112-000	Mid Clamp for Thin Film Module



End Clamp for Thin Film (200mm)

End Clamp designed for securing Thin Film Solar Panel (200mm).

Part No.	Description
P03814-000	End Clamp for Thin Film Module, Length 200 mm.



Mid Clamp for Thin Film (200mm)

Mid Clamp designed for securing Thin Film Solar Panel (200mm).

Part No.	Description
P03815-000	Mid Clamp for Thin Film Module, Length 200 mm.



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