INTRODUCTION

PT Philosophy

·Responsibility
·Customer Oriented
·Share Value

PT is a professional solar mounting system manufacturer with over 9 years experience in the design and manufacturing of aluminum and steel solar mounting system with more than 400 employees globally designed, developed and produced solar mounting systems on roofs and ground mounted systems.

In order to come up with the right solution to customers in the world, PT dedicate to design locally as local code in the combination of international code and provide with variable solution to adapt to actual installation condition. Meanwhile PT offer products with high level pre-assemble in house to reduce installation cost.

The completed production line from aluminum extrusion,anodizing,steel parts production to packing enables us to control quality in house.

1 Pitched & Flat Roof Racking System

Introduction

The PT systems are designed from the onset to be very flexible . The Pitched Roof Racking system is suitable for both commercial and residential applications .

Our framed module is available for flush mounting to the roof. Installation costs are minimised through the use of our aluminium rails, pre-assembled clamps, roof hooks and "tilt in" module clamps. The cut to length rails eliminate on site cutting and welding leading to an exceptionally neat and strong installation.

Features

Easy Installation The Tilt In Module can be pre-assembled with clamps and roof hooks to enable a quick installation.

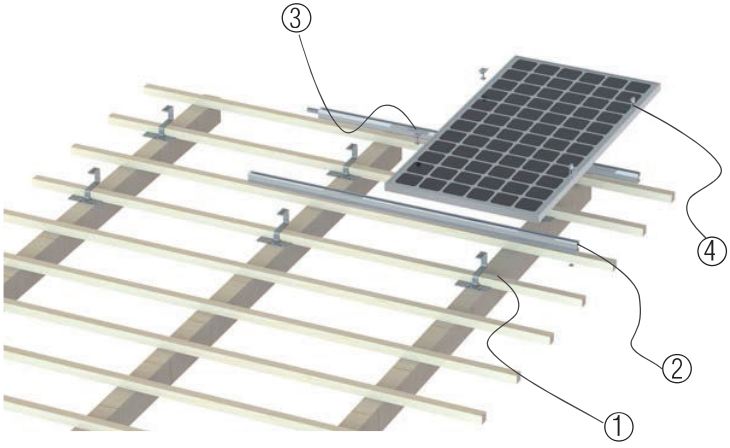
Flexibility and Adjustment The PT Pitched Roof Racking System will accommodate most commercially available framed and frameless solar panels and roof types .

Safety & Reliability The PT Pitched Roof Racking System has been designed to withstand extreme weather conditions in accordance with WINDACTIONS: EU,UL,JISC,AS/NZS and other international Standards .

	Specifications
Installation Type	Pitched and flat roof
Inclination	Flush with roof, up to 60 degrees
Building Height	20 metres max
Wind Velocity	80 m/s max
Snow Load	2.4 kN/m^2 max
Design Standards	EU,UL,JISC,AS/NZS and other international Standards
Material	Aluminium alloy and stainless steel
Color	Natural
Surface Finish	Anodised parts
Warranty	10 years
Life	In excess of 20 years

Standard Flush Mount System

Easy Installation for any pitch,Flexibility and Adjustment,Cost-effecitve,custom solution for residential roof



We offer mix and match components. Our solution is able to meet almost any roof type and module layout All flush mount include three key components as below,

1.Roof Attachment
2. Rail
3.Middle Clamp
4.End Clamp

Rail for Rooftop

Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Lengths Up to 7.6 m on special order
Note A Heavier Rail can be supplied.
Pack Qty 40

	Ordering Code	Length (mm)
tandard Rail	PT-2R-2560mm	2560
	PT-2R-3405mm	3405
	PT-2R-4200mm	4200

	Ordering Code	Length (mm)
Standard Rail	PT-SA2-2560mm	2560
	PT-SA2-3405mm	3405
	PT-SA2-4200mm	4200

	Ordering Code	Length (mm)
Standard Rail	PT-1R-2560	2560
	PT-1R-3450	3450
	PT-1R-4200	4200

	Ordering Code	Length (mm)
Standard Rail	PT-SA-2560	2560
	PT-SA-3450	3450
	PT-SA-4200	4200

SSK Rail Splice Kit

Material Extruded aluminium section Grade Al 6005-T5
Finish Anodised
Colour Natural
Box Qty 50
Ordering Code SSK

SIC Mid Clamp or Inter Clamp

Material • Extruded aluminium section Grade Al 6005-T5
• A2-70 stainless steel M8 socket head bolts
Finish Anodised
Colour Natural
Box Qty 100
Weight 0.067kg
Note • Pre-assembled to be compatible with most framed modules.
• Available in black as well.
These are made to order.

Ordering Code	Description
PT-IC-F30	30 mm Mid Clamp
PT-IC-F32	32 mm Mid Clamp
PT-IC-F35	35 mm Mid Clamp
PT-IC-F38	38 mm Mid Clamp
PT-IC-F40	40 mm Mid Clamp
PT-IC-F45	45 mm Mid Clamp
PT-IC-F50	50 mm Mid Clamp

SEC End Clamp

Material • Extruded aluminium section Grade Al 6005-T5
• A2-70 stainless steel M8x25 socket head bolts
Finish Anodised
Colour Natural
Weight 0.056kg
Note Also available in black.
These are made to order.

Ordering Code	Description
PT-EC-F30	30 mm End Clamp
PT-EC-F32	32 mm End Clamp
PT-EC-F35	35 mm End Clamp
PT-EC-F38	38 mm End Clamp
PT-EC-F40	40 mm End Clamp
PT-EC-F45	45 mm End Clamp
PT-EC-F50	50 mm End Clamp

SIC Mid Clamp or Inter Clamp

Material
- Extruded aluminium section Grade Al 6005-T5
- A2-70 stainless steel M8 socket head bolts
- EPDM Pad

Finish Anodised

Colour Natural

Box Qty 100

Note
- Pre-assembled to be compatible with most unframed modules.
- Available in black as well. These are made to order.

Ordering Code	Description
PT-TF	Thin Film Mid Clamp

SEC End Clamp

Material
- Extruded aluminium section Grade Al 6005-T5
- A2-70 stainless steel M8x25 socket head bolts
- EPDM Pad

Finish Anodised

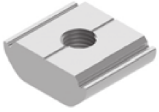
Colour Natural

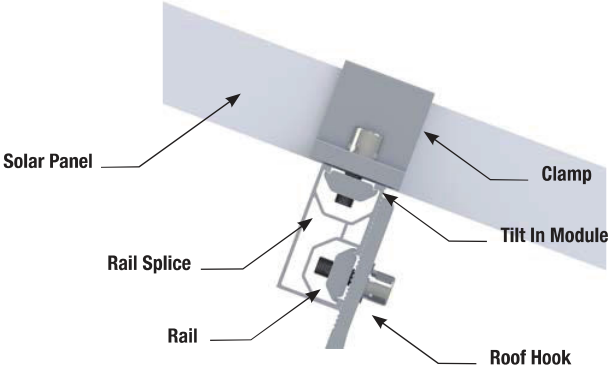
Note Also available in black. These are made to order.

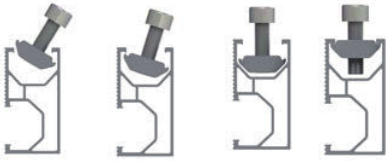
Ordering Code	Description
PT-EF	Thin Film End Clamp

SATM Tilt In Module for Rail & Accessories

Ordering Code	Description
SATM01	Width 20mm, M8 Threaded Hole





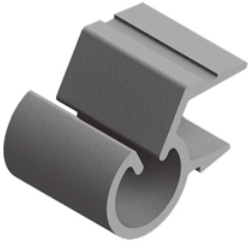


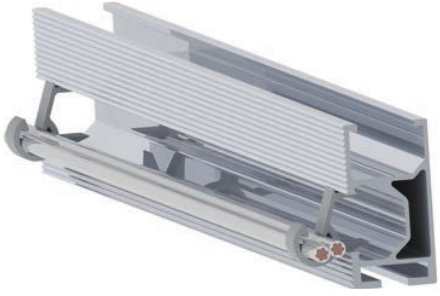
Installing the Tilt In Module into the Rail

SCC-P Plastic Cable Clip

The Plastic Cable Clip, clips onto the Rail providing a neat cable run. The material is a high performance weather resistant plastic. It can be installed and removed by hand without the use of tools and can be reused. The design fits most modules and can accommodate two cables.

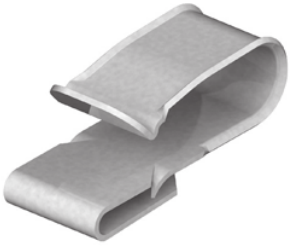
Material Nylon
Weight 0.0022 Kg

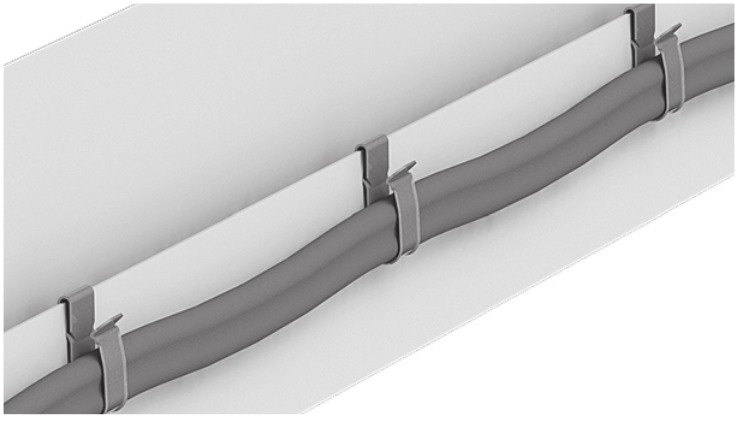




SUP GS Stainless Steel Under Panel Cable Clip

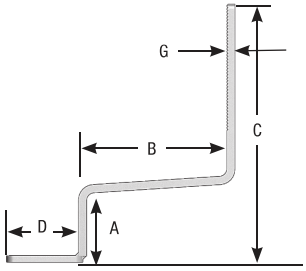
Material Stainless steel 304

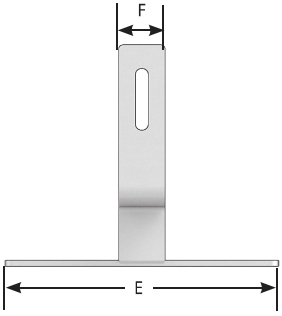




Material Extruded aluminium section Grade Al 6005-T5
Stainless steel grade,A2-70 Stainless steel 304 bolts

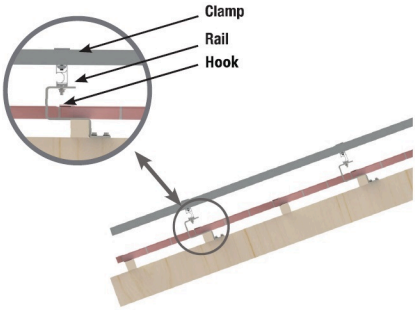
Note
- Pre-assembled with the Tilt In Module or screw
- Select according to roof type
- Select according to weather condition
- Includes 3/8" head x 80mm wood screws





	A	B	C	D	E	F	G
PT-AIK-17	52-64	114	127~168	48	150	30	6.5
PT-AIK-17A	52-64	114	127~168	48	90	30	6.5
PT-AIK-01	52-64	114	171~181	48	150	30	6.5
PT-HK-03B	38-58	120	117~137	135	50	50	6.5
PT-HK-02	46	101	166	50	180	30	5
PT-HK-03	30	190	166	80	30	30	5
PT-HK-04	30	101	166	50	30	30	5
PT-HK-06	46	70	166	50	180	30	5
PT-HK-09	46	111	200	60	180	35	8
PT-HK-12	38-50	101	158-170	55	140	30	5

Tile Roof Hook Installation



PT-AIK-17 Tile Roof Hook

- For fixing rails to Roman tile roof
- For high and low snow loads and wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws

PT-AIK-17A Tile Roof Hook

- For fixing rails to Roman tile roof
- For high and low snow loads and wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws

PT-AIK-28 Tile Roof Hook

- For fixing rails to Roman tile roof
- For high and low snow loads and wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws

PT-AIK-01 Tile Roof Hook

- For fixing rails to Roman tile roof
- For high and low snow loads and wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws

PT-HK-03B Tile Roof Hook

- For fixing rails to Roman tile roof
- For high and low snow loads and wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws

PT-HK-02 Stainless Steel Hook 1#

- For fixing rails to Roman tile roof.
- For low snow loads and normal wind loads.
- Box quantity 40

PT-HK-16 Stainless Steel Hook 16#

- For fixing rails to Roman tile roof.
- For low snow loads and normal wind loads.
- Box quantity 40

PT-HK-03 Stainless Steel Hook 2#

- For fixing rails to flat tile roof
- For low snow loads and normal wind loads
- Box quantity 60
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

PT-HK-03B Stainless Steel Hook 2#

- For fixing rails to flat tile roof
- For low snow loads and normal wind loads
- Box quantity 60
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

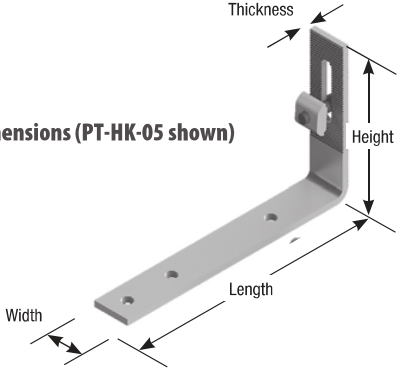
PT-HK-04 Stainless Steel Hook 3#

- For fixing rails to Roman tile roof
- For low snow loads and normal wind loads
- Box quantity 24
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

PT-HK-06 Stainless Steel Hook 6#

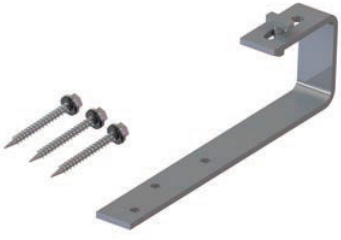
- For fixing rails to Roman tile roof
- For low snow loads and normal wind loads
- Box quantity 40
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

Typical dimensions (PT-HK-05 shown)



	Length	Height	Width	Thickness
PT-HK-05A	200	120	30	5
PT-OP01	90	90	50	4

Note Limited stocks held



PT-HK-15

PT-HK-05A Stainless Steel Hook 5# A Type

- For side fixing rails to Pan tile roof
- For low snow loads and normal wind loads
- Box quantity 80
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

PT-AP01 Stainless Steel Hook Side Adjust Plate 1#

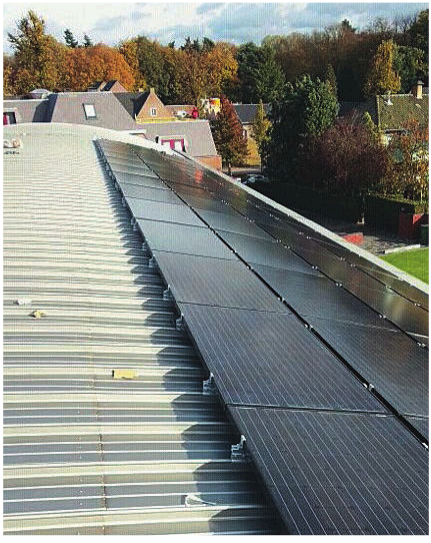
- Stainless steel hook Monch Nonne
- Used for side fixing the Hook to the rafter
- For low snow loads and normal wind loads
- Box quantity 40
- Limited stocks held

PT-HK-14A Stainless Steel Hook 14#A Type

- For side fixing rails to Pan tile roof
- For low snow loads and normal wind loads
- Box quantity 80
- Includes 3/8" head x 80mm wood screws
- Limited stocks held

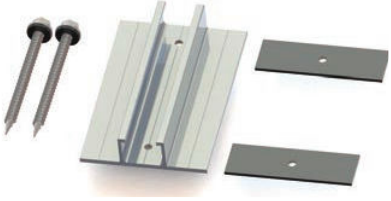
PT-HK-14B Stainless Steel Hook 14#B Type

- Stainless steel hook Monch Nonne
- Used for fixing the Hook to the rafter
- For low snow loads and normal wind loads
- Box quantity 40
- Limited stocks held



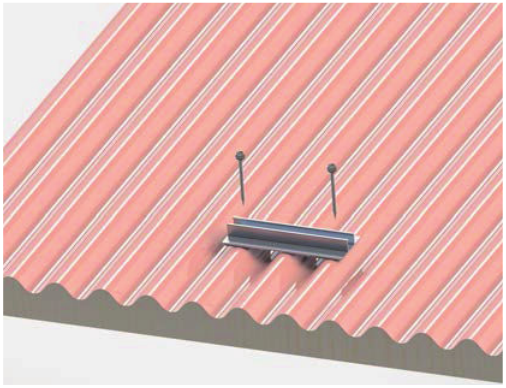
Free from Rails,Assemble with Clamps to secure modules

Ordering Code	Description
PT-IK-FR01	Trapezoid and Corrugated Metal Roof Hook
PT-IK-FR02	Trapezoid and Corrugated Metal Roof Hook

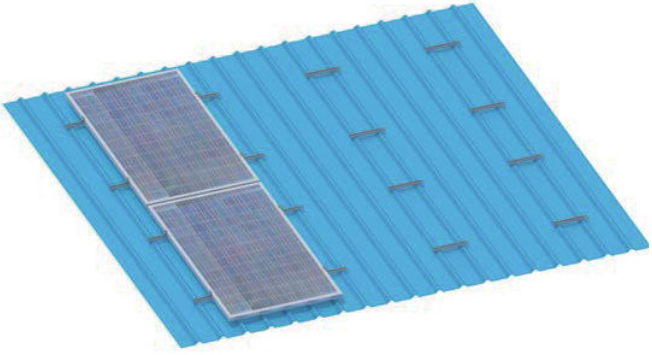


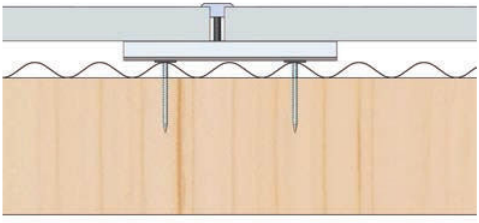
PT-IK-FR01

PT-IK-FR02

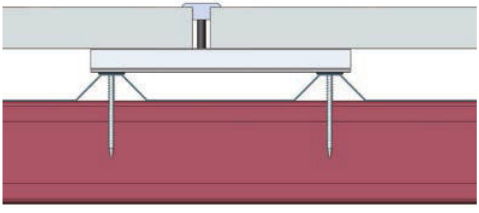


Universal Solution to Trapezoid Metal Roof and Corrugated Metal Roof





Wood Purlins



Steel Purlins

Material Extruded aluminium section Grade Al 6005-T5
Stainless steel grade 304 bolts
Colour Natural
Finish Anodised
Note Angle plate can be pre-assebled with standoff

PT-SF

Standoff	Description
2"	51 mm
4"	102 mm
6"	152 mm
8"	203 mm
10"	254 mm
12"	304 mm

PT-FLASH

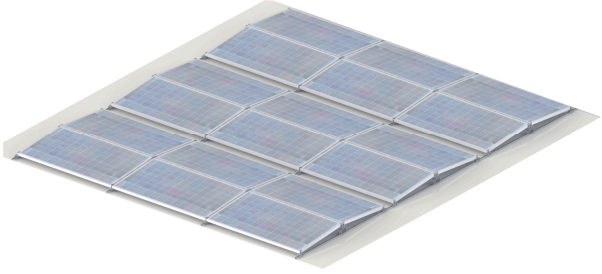
PT-YZF-10°, PT-YZF-15°

Material Extruded aluminium section Grade Al 6005-T5

Colour Stainless steel grade 304 bolts

Note

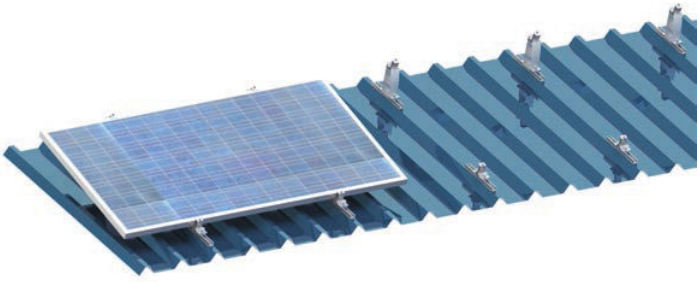
- Pre-assembled in house to reduce labor cost in installation
- Without penetrating on the roof
- One side or double side configuration
- Statics and Design Loads

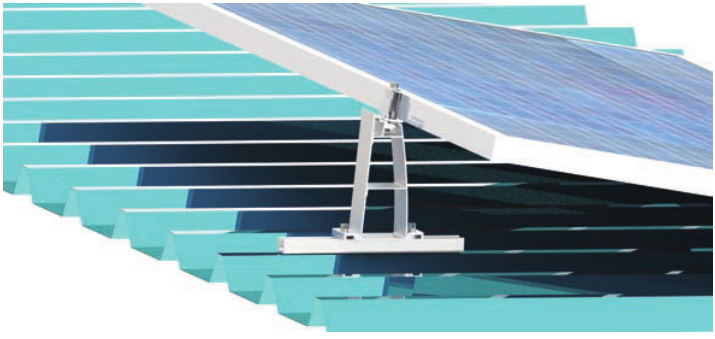


Solution for East-West

Introduction

Numbe	Ordering Code	Name
1	PT-YZF10°	Supporter for the first line
2	PT-YZM10°	Supporter for the middle line
3	PT-YZM10°	Supporter for the last line
4	PT-IC-F40	End Clamp
5	PT-HL-C60	Supporter Clamp
6	PT-WD10	Wind Breaker
7		Brick

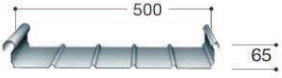
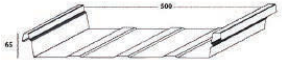




PT-YZF-10°, PT-YZF-15° Application on Metal Roof

- For a roof inclination of up to 15° on trapezoidal sheet metal
- Economical in terms of materials and transportation

PT Metal Roof Attachment System Overview

 Butler-roof 	 PT-BTR-S01
	 PT-HK-08
	 PT-HK-S08
 KalZip-roof	 PT-SAF-S02
	 PT-SAF-S02-A
 Zambelli Rib Roof Speed 500	 PT-ZR-S03
	 PT-ZR-S03-A

PT Metal Roof Attachment System Overview

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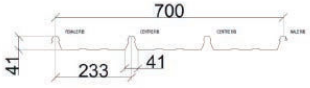
<td rowspan="2"> 

Klip-lok 700</td>
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PT-KHD-SK7</td>
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PT-KHD-SK7-A</td>
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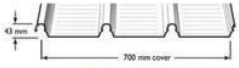
<td rowspan="2"> 

Klip-lok 700 Hi-Strength</td>
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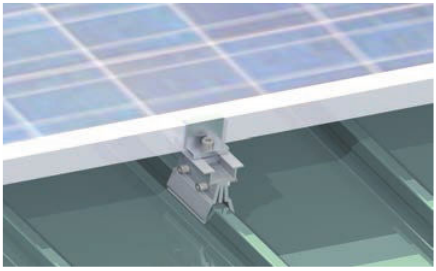


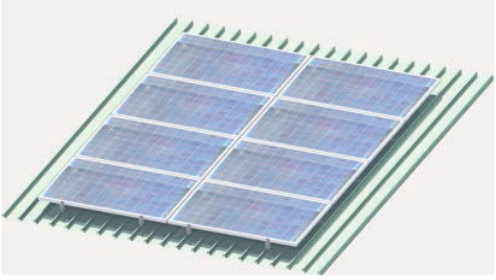
Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Note
- Pre-assembled with the Tilt In Module
- Customised according to the section profile of the sheet metal roofing
- The standard aluminium Hook is made to fit the roof sheet profile as shown in the illustration.
- For other roof profiles, manufactured against firm orders only and may incur additional tooling costs.

Ordering Code	Description
PT-KHD-SK7-A	Lock 700 Roof Attachment
PT-KHD-SK7	Lock 700 Roof Attachment 2#

PT-KHD-SK7-A

PT-KHD-SK7

Klip Lock 700 Roof



Across

Parallel

Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Note
- Pre-assembled with screws
- Customised according to the section profile of the sheet metal roofing
- The Klip-lock 700 Hi Strength is made to fit the roof sheet profile as shown in the illustration.
- For other roof profiles, manufactured against firm orders only and may incur additional tooling costs.

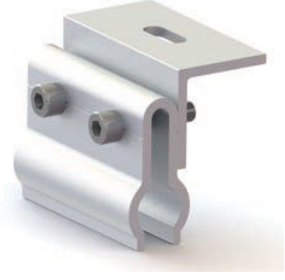
Ordering Code	Description
PT-KH-S07	Klip-lock 700 Hi Strength Roof Attachment 1#
PT-KH-S07-A	Klip-lock 700 Hi Strength Roof Attachment 2#

PT-KH-S07-A

PT-KH-S07

Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Note
- Pre-assembled with screws
- Customised according to the section profile of the sheet metal roofing
- The standard Aluminum Attachment is made to fit the roof sheet profile as shown in the illustration.
- For other roof profiles, manufactured against firm orders only and may incur additional tooling costs.

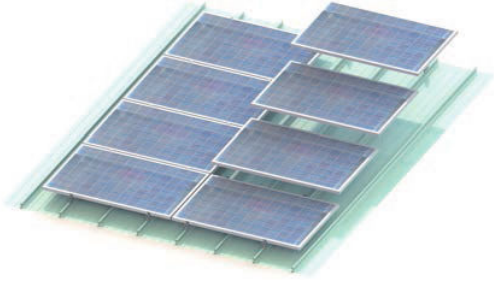
Ordering Code	Description
PT-SAF-S02	Kal-Zip Roof Hooks
PT-SAF-S02-A	Kal-Zip Roof Hooks



PT-SAF-S02

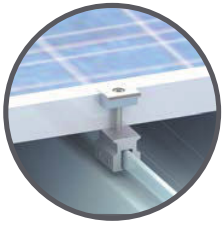
PT-SAF-S02-A

KalZip-roof profile



Across

Parallel



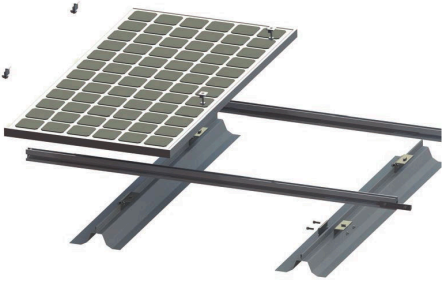
Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Note
- Pre-assembled with the Tilt In Module
- Customised according to the section profile of the sheet metal roofing
- The standard aluminium Hook is made to fit the roof sheet profile as shown in the illustration.
- For other roof profiles, manufactured against firm orders only and may incur additional tooling costs.

Ordering Code	Description
PT-BTR-S01	Standing Seam Roof Hook

Standing Seam Roof

Across

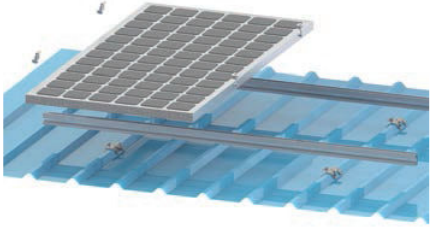
Parallel

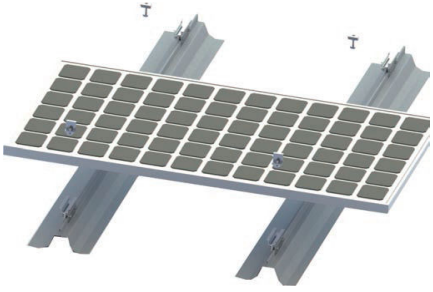


Ordering Code	Description
PT-HK-08	Standing Seam Roof Attachment
PT-HK-07A	Trapezoid Roof Attachment

PT-HK-08

PT-HK-07A





Material Extruded aluminium section Grade Al 6005-T5
Colour Natural
Note
- Pre-assembled with the Tilt In Module
- Customised according to the section profile of the sheet metal roofing
- The standard aluminium Hook is made to fit the roof sheet profile as shown in the illustration.
- For other roof profiles, manufactured against firm orders only and may incur additional tooling costs.

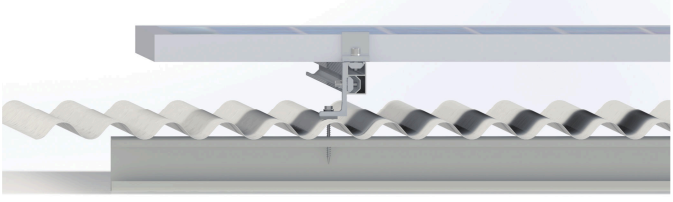
Ordering Code	Description
PT-IK-S08-03	Standing Seam Roof Hook

Material	Extruded aluminium section Grade Al 6005-T5 Stainless steel grade 304 bolts EPDM Pad
Colour	Natural
Finish	Anodised
Note	Pre-assembled with the Tilt In Module

PT-LK-01 L Feet Kit,Compatible with flashing protect

- For fixing rails to corrugated sheet roof
- Includes 3/8" head x 80mm wood screws
- Rubber pad included

Installation on trapezoid and corrugated metal roof



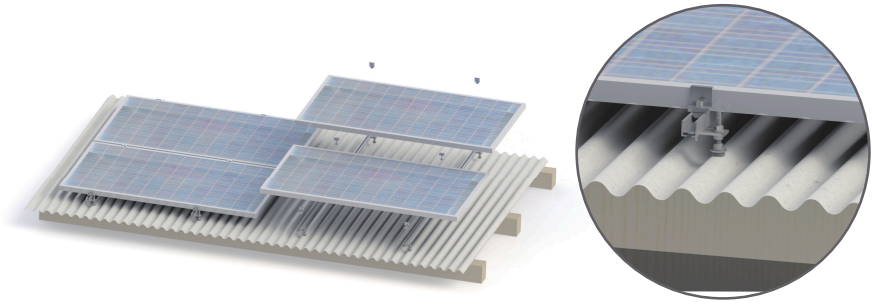
Material	Stainless steel grade 304
Colour	Natural
Finish	Anodised
Note	Pre-assembled with the Tilt In Module

PTH01 Hanger Bolt Hook 1#

- Fox fixing rails to fibre cement roof
- M10x200 Hanger Bolt Kit with Angle Plate Kit.
- Manufactured against firm order only.

PTH02 Hanger Bolt Hook 2#

- For fixing rails to corrugated sheet roof.
- M12x200 Hanger Bolt Kit with Angle Plate Kit.
- Manufactured against firm order only.



Material Stainless steel grade 304
Colour Natural
Note Pre-assembled with the Tilt In Module.

PTH03 Hanger Bolt Hook 3#

- For fixing rails to corrugated sheet roof.
- M12x300 Hanger Bolt Kit with Angle Plate Kit.
- Manufactured against firm orders only.

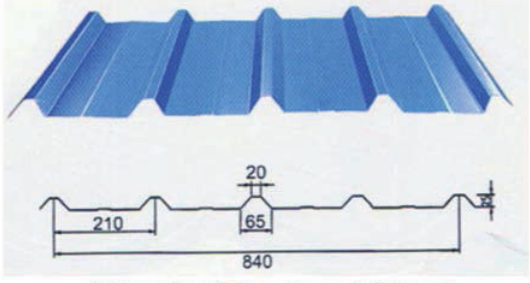
PTH04 Hanger Bolt Hook 4#

- For fixing rails to corrugated sheet roof.
- M10x200 Hanger Bolt Kit with L Feet Kit Angle Plate Kit.
- Manufactured against firm orders only.

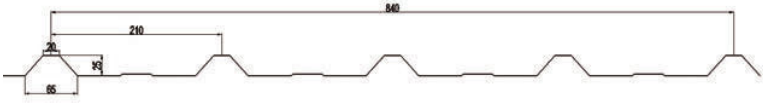
Ordering Code	Description	Description
PTM6X80	Stainless Sheet Metal Interface Kit	Wood Screw M6x80
PTH01	Hanger Bolt Hook 1#	Hanger Bolt M10x200
PTH02	Hanger Bolt Hook 2#	Hanger Bolt M12x200
PTH03	Hanger Bolt Hook 3#	Hanger Bolt M12x300
PTH04	Hanger Bolt Hook 4#	Hanger Bolt M10x200 & L Feet

Ordering Code	Description
PT-IK-07-AL	Aluminum Trapezoid Metal Roof Attachment

PT-IK-07-AL



Standard Trapezoid Roof



Across

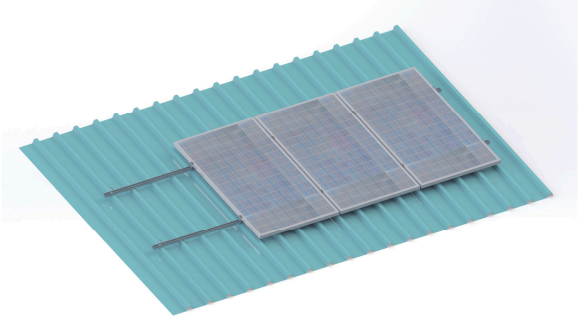
Parallel

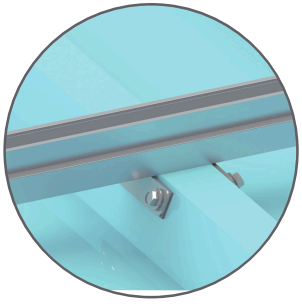
Material	Stainless steel grade 304 Stainless steel grade 304 bolt EPDM Pad
Colour	Natural
Finish	Stainless
Note	compatabile with SA-2 and SA rails

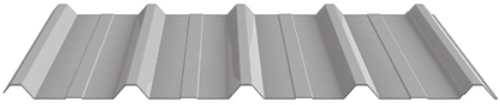
PT-UT-90 Attachment to the trapezoid metal roof

- For fixing rails to trapezoid metal roof
- Include ST6.3X25 self tapping screws
- EPDM pad included

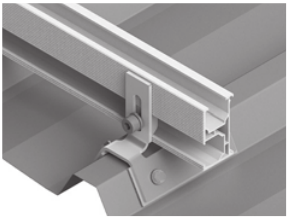
Installation on trapezoid metal roof







Standard roof sheet profile



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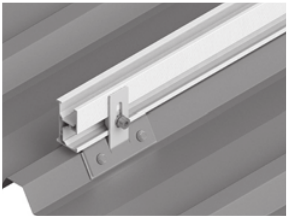


Parallel

(continued)

SHSB Socket Head Screw

Ordering Code	Description
SHSB20S	Socket Head Screw M8x20
SHSB25S	Socket Head Screw M8x25
SHSB28S	Socket Head Screw M8x28
SHSB30S	Socket Head Screw M8x30
SHSB35S	Socket Head Screw M8x35
SHSB40S	Socket Head Screw M8x40
SHSB45S	Socket Head Screw M8x45
SHSB50S	Socket Head Screw M8x50
SHSB55S	Socket Head Screw M8x55
SHSB60S	Socket Head Screw M8x60
SHSB65S	Socket Head Screw M8x65

Material: Stainless Steel A2-70

HN & HNF Nut

Ordering Code	Description
HN8S	Hexagon Nut M8
HNF8S	Hexagon Nut M8

HN Series **HNF Series**

Material: Stainless Steel A2-70

SW & FW Washer

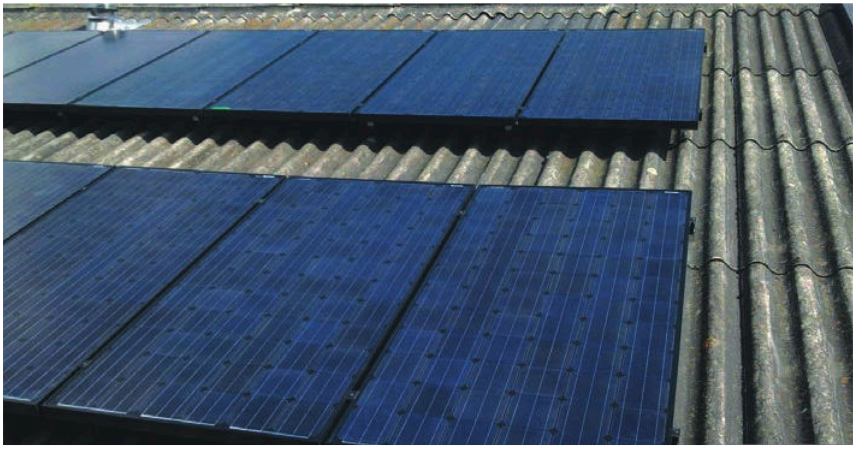
Ordering Code	Description
SW8S	Spring Washer M8
FW813S	Lock Washer M8 OD13
FW818S	Lock Washer M8 OD18

SW series **FW series**

Material: Stainless Steel A2-70

ST Self Tapping Screw

Ordering Code	Description
ST625S	Self Tapping Screw St6.3x25



GWS Wood Screw - Stainless 410

Ordering Code	Description
GWS680PS	Stainless 410 Wood Screw St6.3x80 with Pad
GWS880PS	Stainless 410 Wood Screw M8x80 with Pad
GWS1080PS	Stainless 410 Wood Screw M10x80 with Pad
GWS1080PS	GWS3/8PS:Stainless 410 Wood Screw 3/8" with pad

Manufactured against firm orders if the fasteners are ordered separately from the brackets.

HB Hanger Bolt - Stainless Steel

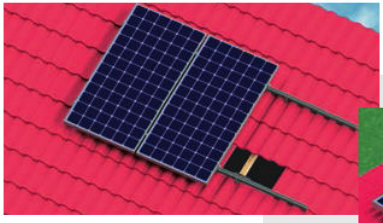
Ordering Code	Description
HB10200S	Hanger Bolt M10x200 Stainless Steel A2-70
HB12200S	Hanger Bolt M12x200 Stainless Steel A2-70
HB12300S	Hanger Bolt M12x300 Stainless Steel A2-70

Manufactured against firm orders if the fasteners are ordered separately from the brackets.

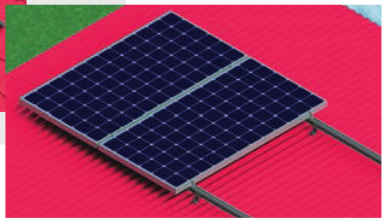
HBK Hanger Bolt Assembly - Stainless Steel

Ordering Code	Description
HBK10200S	Hanger Bolt Kit M10x200 Stainless Steel A2-70
HBK12200S	Hanger Bolt Kit M12x200 Stainless Steel A2-70
HBK12300S	Hanger Bolt Kit M12x300 Stainless Steel A2-70

Framed Module Project



Tile Roof

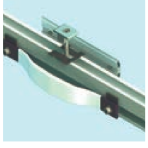


Corrugated metal Roof

Solar Panel Dimensions	Rail	Roof Hook	Inter Clamp	End Clamp	Rail Splice
1650 x 992 x 45	PT-1R-XXX	PT-HK-xxx (Tile) PT-HK-01 (Sheet Metal)	PT-IC-F45	PT-EC-F45	SSK
Tile Roof 3 panels	3200 mm 2 length	6	4	4	0
Tile Roof 4 panels	4200 mm 2 length	6	6	4	0
1585x826x45	PT-1R-XXX	PT-HK-xxx (Tile)	PT-IC-F45	PT-EC-F45	SSK
Tile Roof 3 panels	2560 mm 2 length	6	4	4	0
Tile Roof 4 panels	3400 mm 2 length	6	6	4	0

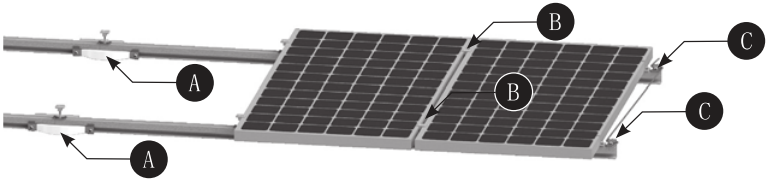
Note: This layout is applicable to low snow loads and normal wind loads. Actual layout subject to Maximum Rail Support Spacing According to Wind Regions in chart 4

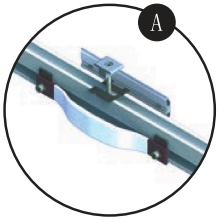
2 Earthing system



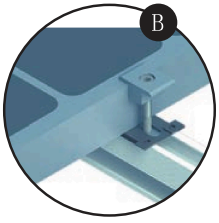
Introduction

The PT Earthing System is used to bond the solar modules to the aluminium rails and the aluminium rails to earth so that the entire system is electrically earthed . The Earthing system complies with international code for bonding and Earthing systems .

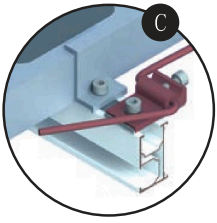




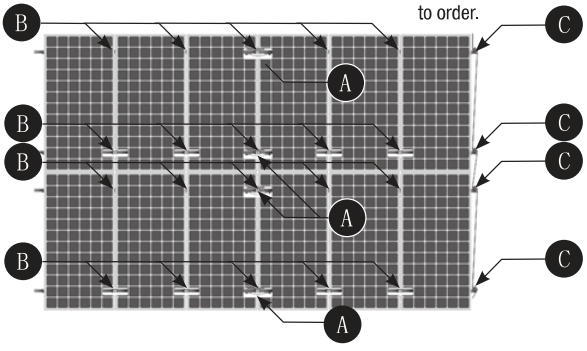
PTJUM PT Bonding Jumper



PT Grounding Clip



PT Grounding Lug
Available in aluminium and copper. Copper Lug is made to order.



PT-CLIP Earthing Clip

Material Stainless steel grade 304

Note
- Special rib on both surfaces which pierces through the anodising layer.
- Used in conjunction with Inter Clamp for installation on the Rail.

PT-LUG Earthing Lug

Material Al6005-T5 aluminium lay in lug; A2-70 stainless steel clip and bolt.

Note Used to electrically bond the system to the ground conductor.

PT-SGCLUG Copper Earthing Lug

Material Copper lay in lug; A2-70 stainless steel clip and bolt.

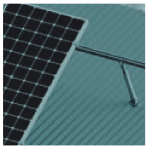
Note
- Used to electrically bond the system to the ground conductor.
- Made to order.

PT-JUM Bonding Jumper

Material Braided Copper strap; A2-70 stainless steel clip and bolt.

Note Used to electrically bond the spliced rails.

3 Tilt Racking System



Introduction

The Tilt Racking System has been developed for mounting the solar panel modules at an angle on flat roofs, tilt roofs and on The solar panel modules can be mounted at a range of angles, from 10 degrees to 60 degrees. Three different lengths of adjustable legs are available. The shortest leg provides a range of angles from 10 - 15 degrees; the mid-size leg provides a range of angles from 15 - 30 degrees and the longest length provides a range of 30 - 60 degrees.

The rails, tilt in modules, clamps and legs are Pre-assembled which makes for a quick and easy installation. The pre-cut rails eliminate on site welding and cutting resulting in superior structural strength and corrosion resistance.

Features

Easy Installation The Tilt In Modules, Rails and Legs are Pre-assembled resulting in shorter installation times.

Flexibility and Adjustment The Tilt Racking System accommodates most commercially available framed and frameless solar panels and roof types.

Safety & Reliability The Tilt Racking System has been designed to withstand extreme weather conditions in accordance with EU,UL,JISC, AU/NZ and other international Standards

	Specifications
Installation	Flat profile roofs
Angle	10 to 60 degrees
Building Height	20 m max
Wind Speed	60 m/s max
Snow Load	2.4 kN/m2 max
Design Standards	EU,UL,JISC,AU/NZ and other international Standards
Material	Aluminium alloy and stainless steel
Colour	Natural
Surface Finish	Anodised
Warranty	10 years
Life	In excess of 20 years

PT-KT-FL Adjustable Front Leg

Material Aluminium Grade Al 6005-T5
A2-70 stainless steel bolts
Colour Natural
Note Box quantity 80

PT-KT-BL Adjustable Rear Leg

Material Aluminium Grade Al 6005-T5
A2-70 stainless steel bolts.
Colour Natural

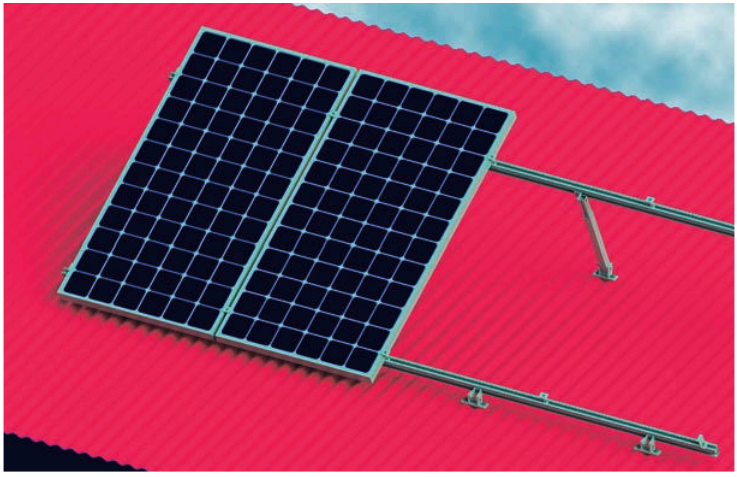
Ordering Code	Description	Box Quantity
PT-KT-BL10/15	Adjustable Rear Leg 10-15 Degrees	20
PT-KT-BL15/30	Adjustable Rear Leg 15-30 Degrees	20
PT-KT-BL30/60	Adjustable Rear Leg 30-60 Degrees	20

PT-KT-BL 10/1

PT-KT-BLL15/30

PT-KT-BL30/60

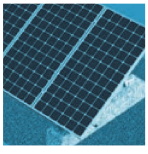
Adjustable Tilt System

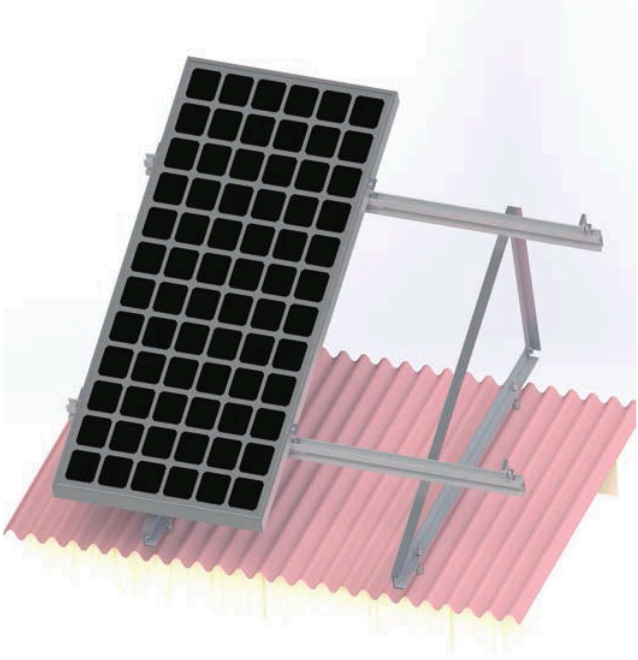


Solar Panel Dimensions	Rail	Legs	Inter Clamp	End Clamp	Rail Splice
1650 x 992 x 45	PT-1RXXX	PT-KT-FL PT-KT-BL	PT-IC-45	PT-EC-45	PT-1R-SP
Adjustable 10/15 3 Panel Installation	3405 mm 2 pcs	3	4	4	0
Adjustable 10/15 4 Panel Installation	4200 mm 2 pcs	4	6	4	0
Adjustable 10/15 8 Panel Installation	4200 mm 4 pcs	8	14	4	2

Note **This layout is applicable to low snow loads and normal wind loads. Actual layout subject to Maximum Rail Support Spacing According to Wind Regions in chart 4**

5 Triangle Mounting System



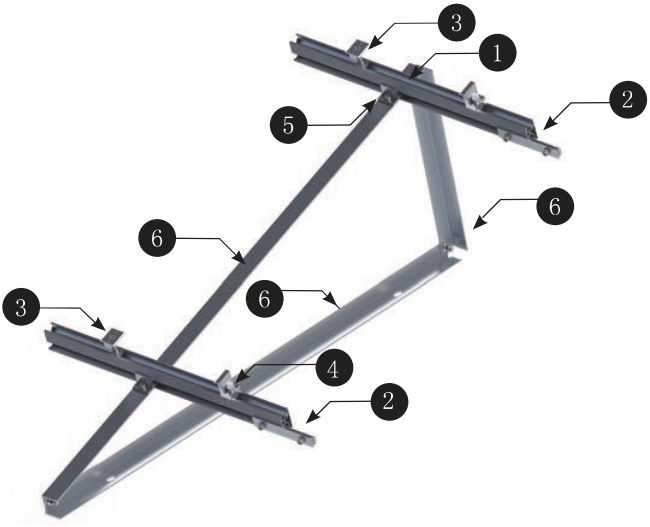


Ordering Code
PT-FT-10
PT-FT-20
PT-FT-30

Note Sold in pairs

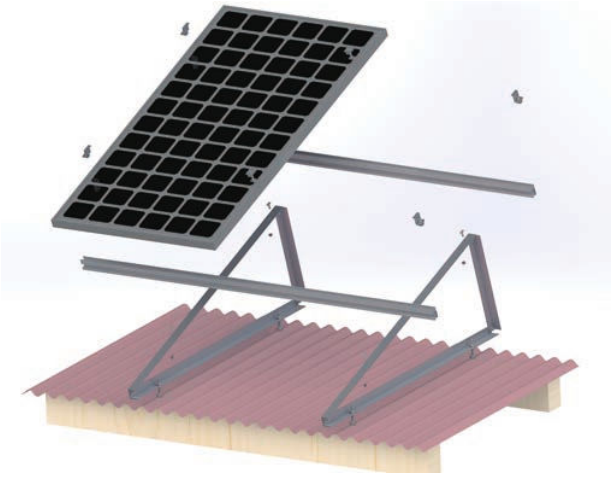
Warranty

10 year limited product warranty. Life in excess of 20 years.



Component Number	Component Name
1	Rail
2	Rail Splice Kit
3	Inter Clamp
4	End Clamp
5	L Connector
6	Support Beam Assembly Kit

Triangle Tilt System

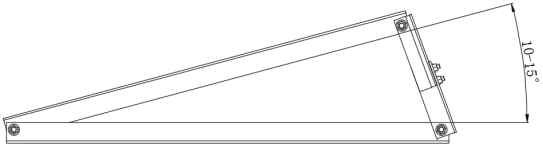


Solar Panel Dimensions	Rail	Adjustable Triangle Bracket 1#	Inter Clamp	End Clamp	Rail Splice
1580 x 808 x 45 or 1585 x 826 x 45	PT-1RXXX SIC46	PT-FT-10 PT-FT-20 PT-FT-30	PT-IC-F45	PT-EC-F45	PT-1R-SP
Fixed 30 deg 3 Panel Installation	2560 mm 2 pcs	2	4	4	0
Fixed 30 deg 4 Panel Installation	3405 mm 2 pcs	3	6	4	2

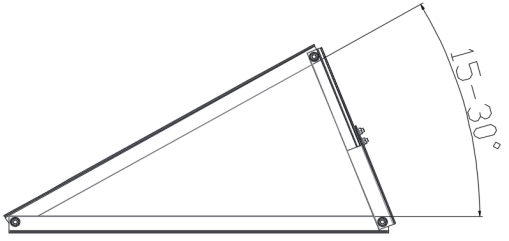
Note **Manufactured against firm orders only.**

More options of Triangle Mounting System:

• Adjustable triangle

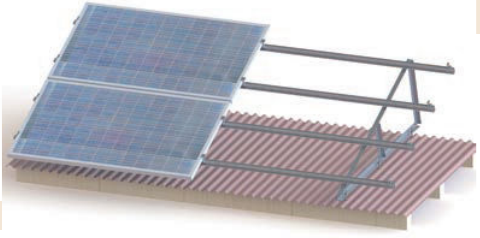


PT-FT10-15°



PT-FT15-30°

• Array by two rows



Ordering Code

PT-FTD-10

PT-FTD-20

PT-FTD-30

PT Open Terrain Mounting System Overview

Soil	Foudation Type	Product
Soft soils Installation sites with a low anchoring depth	Ground Screw	PSG Aluminium, PSG Steel, PSG3
Near-surface bedrock Block-like alteration zone	Pile-driving with pre-drilling	PSF Steel, PSF Aluminium, PSF3
Bedrock • Soils with little load-bearing capacity • Landfi ll with very shallow anchoring depth • Landfi ll sites with stone cover • Industrial wasteland with reinforced surface areas	Pre-cast concrete blocks Cast-in-place concrete	PSC Aluminum, PSC Steel, PSF Cast in
Soil with load bearing capacity	pile and ground screw	PSF Aluminium, PSF Steel, PSF3, PSG Aluminium , PSG Steel, PSG3
Soils that are suitable for pile-driving (grown, filled)	Pile	PSF Steel, PSF Aluminium, PSF3

Ordering Process

From Planning to Completion

Project Checklist

In order to provide accurate quotes quickly, PT has developed an easy-to-complete project checklist that can be obtained by email from any sales representative. While some off-the-shelf projects

While some off-the-shelf projects may not require it, the checklist is essential for custom-designed projects in order to ensure that the designs meet both code and customer expectations.

Ordering Process

1.PT offers design services for mounting systems at no charge. When working with our sales and engineering departments, projects are generally handled as outlined below:

2.The project checklist is completed and submitted to technical sales. Technical sales creates an initial design and pricing then submits to customer as a formal offer or quote.

3.Once the offer is signed, any applicable geotechnical testing will be conducted.

4. The initial offer will be modified, if necessary, based on the results of geotechnical testing.

5. Project is manufactured and preassembled to exact specifications, and a delivery schedule is cooperated with the customers. necessary, based on the results of geotechnical testing.

6. Delivery of material, ready for quick installation.

PT Catalogue

6 Ground System PSG & PSC

Introduction

The PSG Ground Mounting System is specifically designed for mounting a solar panel array on ground screws

Features

Easy Installation Quick mounting by ground screws. A high level of pre-assembly allows quick installation.

Flexibility and Adjustment Flexble design of base and connectors allow for tolerance in installaiton

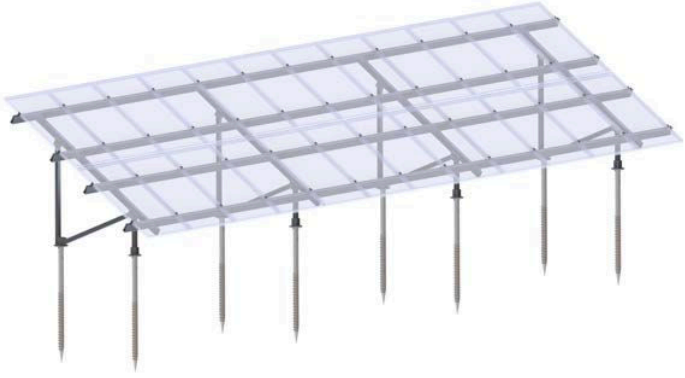
	Specifications
Installation Type	Open Terrain
Inclination	Up to 45°
Wind Velocity	70m/s
Snow Load	2.4kN/m²
Design Standards	EU,UL,JISC,AS/NZS
Material	Anodised aluminium, hot dip galvanised steel & stainless steel
Panel Orientation	Portrait&Landscape
Warranty	10 years
Lifetime	In excess of 25 years

Low anchoring depth due to screw foundation

PSG Aluminum Ground Screw Driven System

Material Aluminum Frame
Hot Dip Galvanised Steel Ground Screw
A2-70 Stainless Screws and Bolts

·Adjustment options to equalize ground unevenesses
·Low anchoring depth due to screw foundation
·Maximum structural safety and durability
·Especially for applications on landfill sites
·Simple deconstruction



PSG Steel Ground Screw Driven System

Material Aluminum Frame
Hot Dip Galvanised Steel Ground Screw
A2-70 Stainless Screws and Bolts

·Unbeatable product longevity and cost through economy of scale
·100% galvanized steel mounting system
·High level of pre-fabrication for faster field installations
·Increased distances between foundation supports further aides in cost reduction
·Especially for applications on landfill sites

Introduction

The PSC Ground Mounting System is specifically designed for mounting a solar panel array on concrete foundation

Features

Concrete ballast ground mount system
Ideal for landfill sites, rocky terrain, and residential locations
No heavy machinery required
Both aluminum and steel structure at options

Flexibility and Adjustment Flexble design of base and connectors allow for tolerance in installaiton

Note All PSC Mounting Systems are manufactured against firm orders only

Specifications	
Installation Type	Open Terrain
Inclination	Up to 45°
Wind Velocity	70m/s
Snow Load	2.4kN/m²
Design Standards	EU,UL,JISC,AS/NZS
Material	Anodised aluminium, hot dip galvanised steel & stainless steel
Panel Orientation	Portrait&Landscape
Warranty	10 years
Lifetime	In excess of 25 years

PSC Concrete Foundation Aluminum Mounting System

Material Aluminum Frame
A2-70 Stainless Screws and Bolts

Corrosion resistant,all-aluminum construction
Short mounting time with partially pre-assembled support frames
High level of factory pre-assembly
Fully adjustable for a perfect straight installation

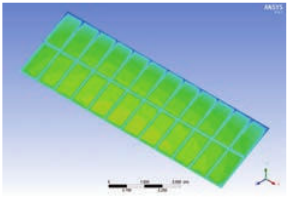
PSC Concrete Foundation Steel Mounting System

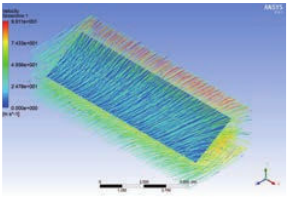
Material Hot Dip Galvanised Steel
A2-70 Stainless Screws and Bolts

·Unbeatable product longevity and cost through economy of scale
·100% galvanized steel mounting system
·High level of factory pre-assembly
·Fully adjustable for a perfect straight installation

Optimization of Connections

- Optimized profile geometries,rationalized production
- Wider spans to reduce the number of supports and foundations
- Pre-assembled support kits
- Considerable minimization of the mounting effort
- Competitive price:performance ratio
- Attractive design





Adapted to variable ground condition

Products Series
Technical Data Sheet C Series

Basic Info

PSR-C 76x2000	PSR-C 76x1600	PSR-C 76x1200
Nominal length (mm) 2000	1600	1200
Tube diameter (mm) 76	76	76
Tube thickness(mm) 3, 3.5,4	3,3.5,4	3,3.5,4
Helix diameter(mm) 96	96	96
Thread M12x45	M12x45	M12x45
Item number PSR-C-76X2000	PSR-C-76X1600	PSR-C-76X1200

Construction

With flange

Continuous welded helix

Coating hot-dip galvanized

According to DIN EN ISO 1461

Application
Sandy Soil, Clay Soil

Products Series
Technical Data Sheet C Series

Basic Info

PSR-C-2 76x2000	PSR-C-2 76x1600	PSR-C-2 76x1200
Nominal length (mm) 2000	1600	1200
Tube diameter (mm) 76	76	76
Tube thickness(mm) 3, 3.5,4	3,3.5,4	3,3.5,4
Helix diameter(mm) 96	96	96
Item number PSR-C-76X2000-2	PSR-C-76X1600-2	PSR-C-76X1200-2

Construction

Without flange

Continuous welded helix

Coating hot-dip galvanized

According to DIN EN ISO 1461

Application
Sandy Soil, Clay Soil

Products Series
Technical Data Sheet L Series

Basic Info

PSR-L 76x2000	PSR-L 76x1600	PSR-L 76x1200
Nominal length (mm) 2000	1600	1200
Tube diameter (mm) 76	76	76
Tube thickness(mm) 3, 3.5,4	3,3.5,4	3,3.5,4
Helix diameter(mm) 250	250	250
Item number PSR-L-76X2000	PSR-L-76X1600	PSR-L-76X1200

Construction

With flange	Coating hot-dip galvanized
One helix	According to DIN EN ISO 1461

Application
Sandy Soil, Clay Soil

Products Series
Technical Data Sheet L Series

Basic Info

PSR-L-2 76x2000	PSR-L-2 76x1600	PSR-L-2 76x1200
Nominal length (mm) 2000	1600	1200
Tube diameter (mm) 76	76	76
Tube thickness(mm) 3, 3.5,4	3,3.5,4	3,3.5,4
Helix diameter(mm) 176	176	176
Item number PSR-L-2-76X2000	PSR-L-2-76X1600-2	PSR-L-2-76X1200-2

Construction

With flange	Coating hot-dip galvanized
Two helix	According to DIN EN ISO 1461

Application
Sandy Soil, Clay Soil

Products Series
Technical Data Sheet L Series

Basic Info

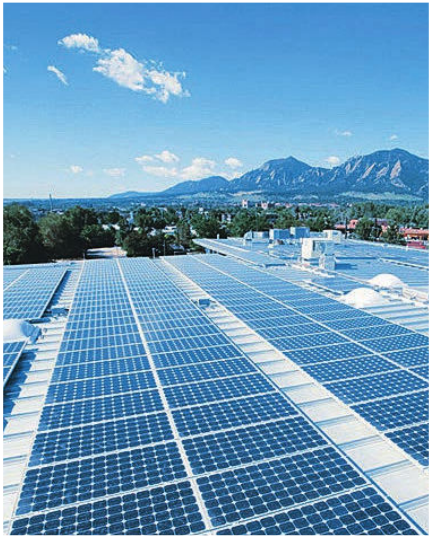
PSR-L 76x1600	PSR-L 76X1200
Nominal length (mm) 1600	1200
Tube diameter (mm) 80	80
Tube thickness(mm) 3, 3.5,4	3,3.5,4
Helix diameter(mm) 120	120
Item number PSR-L-76X1600	PSR-L-76X1200

Construction

With flange	Coating hot-dip galvanized
Continuous welded helix	According to DIN EN ISO 1461

Application
Sandy Soil, Clay Soil

Projects Reference



Pile System PSF1

Sold in kits for wholesalers.
Large Utility project can be designed specially.

installation

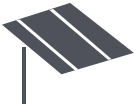
	installation
Application	Open terrain – ground mount
PV modules	Framed, unframed
Module layout	Single-row or multi-row,endless aligment
Module orientation	Portrait, landscape
Module inclination	Up to 60 degree
Profile	Extruded aluminium (AL 6005 T5) Hot dip galvanized Stee
Pile	Galvanised steel
Hardware	Stainless
Pile spacing	Depends on site condition, module type
Standards	IBC, Eurocode, ASCE,NBCC,OBC,JISC,AU/NZ and other international code
Structural analysis	Individual terrain structure analysis
Surface finish	annodizing aluminum in normal condition, electrophoresis aluminum in high salt content condition, hot dip galvanizing pile
Warranty	10 years

PSF Pile Driven Grounding System

Aluminum PSF Pile Driven System

Steel PSF Pile Driven System

Extensive Flexibility
Outstanding Adjustability
High Pre-assembly
No Soil Sealing

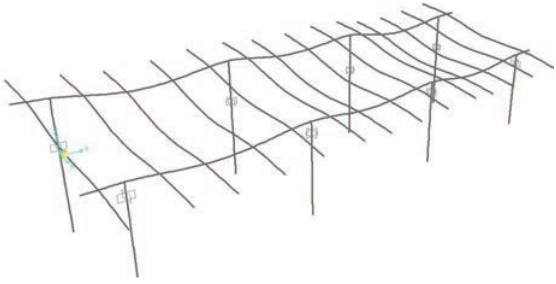
Configuraton	Modules	Image
PSF 1 in Portrait	Framed and Unframed modules	
PSF 2 in Landscape	Framed and Unframed modules	

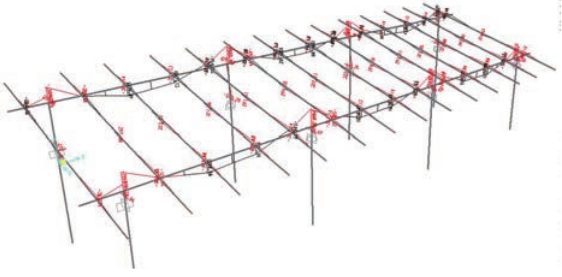
Feature

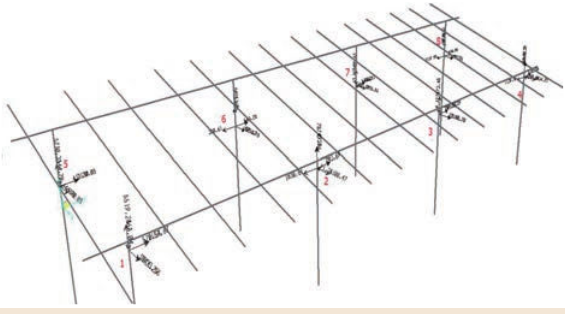
Flexble in grounding condition,available for concrete, rammed and cast in foundation

Industry leading installation times

Structure Analysis according to current national code







Ordering Code PSF 3

Fit your landscape,
East-west, North-South Adjustment maximize installation tolerance

PSF 3 Pile Drive System, Aluminum frame and steel pile

PSF 3 offers cost-down solution for thin film applications

Build a solar park with 6 components only

Allow Compensation for uneven ground

Pre-assembled parts ensure quick and efficient installation

Concrete, cast in and rammed foundation are at your opinions

High quality pile offers maximum soil anchoring strength

PT Slope Mounting System Advantage

No extra components required to cause extra installation cost

East-west, South-North connectors allow compensation for uneven ground

Application

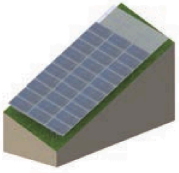
Ground Screw,pile driven,concrete foundation and cast in foundation adapt to installation requirements

Project Reference

Capacity: 1MW
Installation Site:
Hyou Ko ken Japan
Installation
date:March 2016

Slope Mounting System Introduction

PSG with east-west adjustment connectors



PSG3

PSF3

	PSG	PSG3	PSF3
Foundation	Ground Screw and Concrete	Ground Screw and Concrete	Pile Driven
Installation	Install longitudinal channel first	Transversal Setup, install transversal channel first then longitudinal channel	
Adjustment Degree	0-40°	0-40°	0-40°

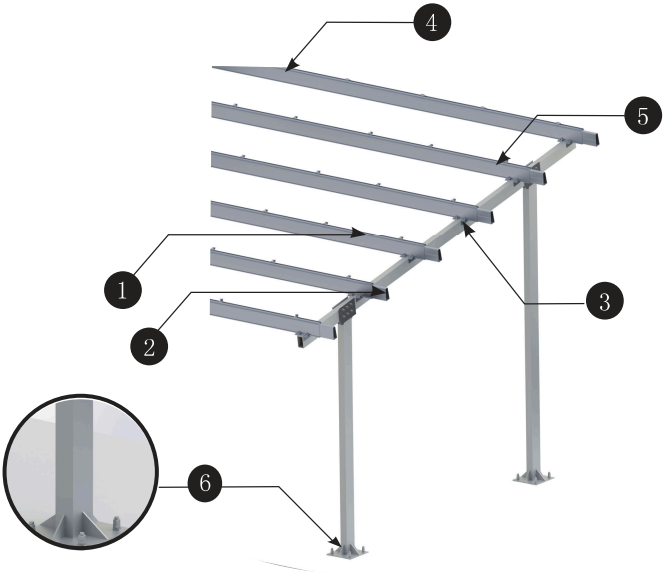
Projects Reference

8 Carport

Introduction

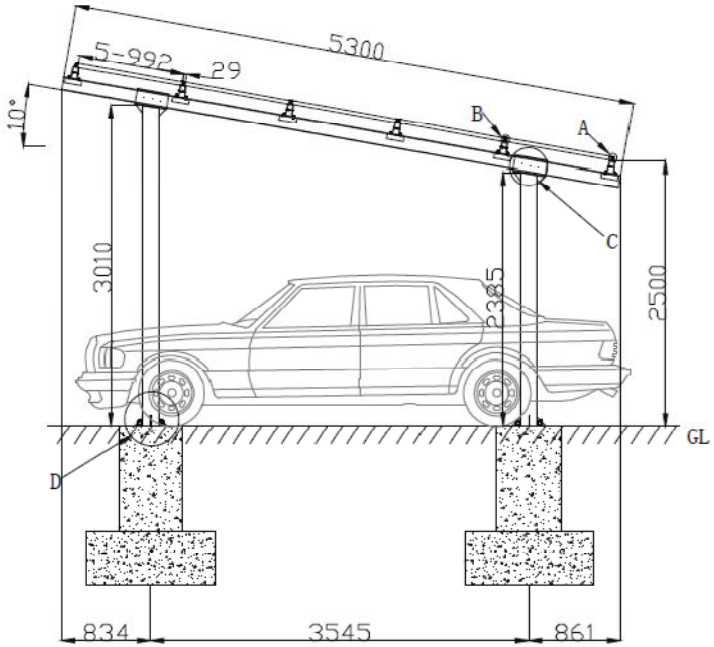
The Solar X-Carport System is a revolutionary system for mounting solar panels configured as carports.

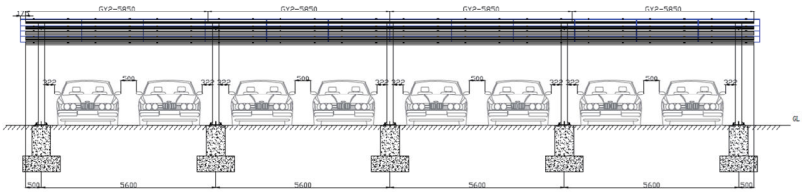
Constructed of anodised aluminium ,galvanized steel and mounted on concrete footings, the Solar X-Carport System is strong, durable and attractive.

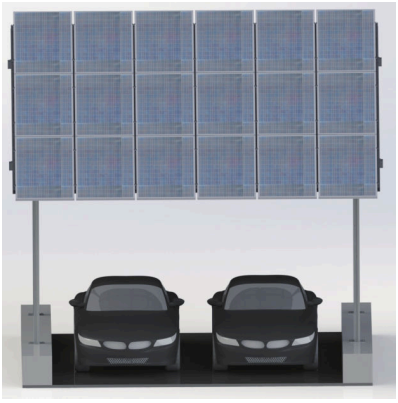


Number	Ordering Code	Name
1	PT-SF	Rail
2	PT-SF-SP	Rail Splice
3	PT-HX-ZL2	Beam
4	PT-IC-F40	Middle Clamp
5	PT-EC-F40	End Clamp
6	PT-ZC-Z	Leg&Base

Double Legs



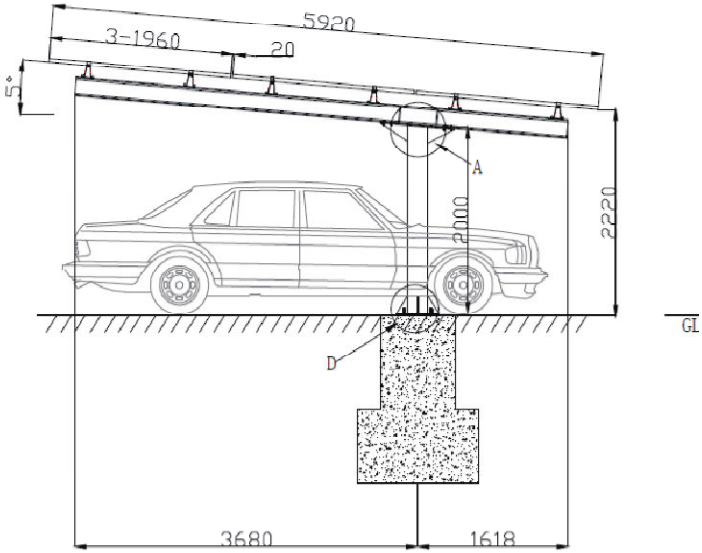


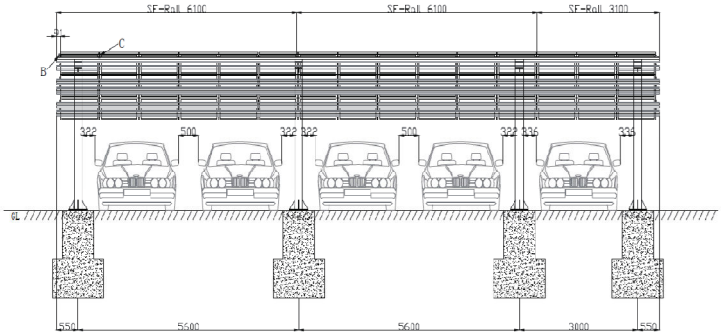


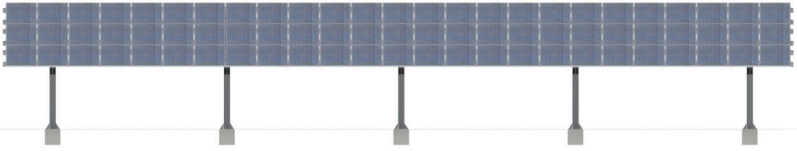
PT Carport Double Legs	
Solar Panel Dimensions	1970 x 992 mm
Roof Inclination	10 degree
Span	5600mm
Panel Array	3x6
Wind Velocity	60 metres per sec
Panel Orientation	Portrait
Flood Height	2500mm

Ordering Code	Component	Dimension	Quantity
PT-S F-R	Rail	3100 mm	6
PT-S F-R	Rail	6100 mm	12
PT-S F-SP	Rail Splice		12
PT-HL-C60-D	Rail Clamp		96
PT-I C-F40	Middle Clamp		84
PT-E C-F40	End Clamp		12
PT-HX-ZL2	Beam	5300 mm	4
PT-Z C-Z	Leg&Base	2000 mm	4

Single Leg


5920
3-1960
20
5°
A
2000
2220
GL
D
3680
1618


SF-Roll 6100
SF-Roll 6100
SF-Roll 3100
B'
C
B
322
500
322
322
500
322
336
336
GL
550
5600
5600
3000
550



	Single Le
Solar Panel Dimensions	1960 x 992 mm
Roof Inclination	20 degree
Span	5600 mm
Panel Array	3x25
Panel Orientation	Landscape
Flood Height	2220 mm

Ordering Code	Component	Dimension	Quantity
PT-GY2-R	Rail	5850 mm	24
PT-GY2-SP	Rail Splice		18
PT-HL-C60-D	Rail Clamp		120
PT-IC-F40	Middle Clamp		96
PT-EC-F40	End Clamp		48
PT-YB-ZL	Beam	5300 mm	5
PT-ZC-Z	Leg&Base	3010 mm	5
PT-ZC-Z	Leg&Base	2385 mm	5

Introduction

PT Floating Mounting System is specifically designed for mounting solar panels on lake and pool.

Features

Degree Adjustment
Flexble design of structure allow for degree adjustment

Easy Installation

A high level of pre-assembly allows quick installation

	Specifications
Installation Type	Lake and Pool
Inclination	Up to 45°
Wind Velocity	70m/s
Snow Load	2.4kN/m²
Design Standards	EU,UL,JISC,AS/NZS
Material	Anodised aluminium,
	hot dip galvanised steel &
	stainless steel ,PE, EPS
Panel Orientation	Portrait&Landscape
Warranty	10 years
Lifetime	In excess of 25 years