

Trapezoidal Roof Solar Structure

SOLAR KIT™
INNOVATIVE SYSTEMS **INDIA**



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise and Innovations of Competitiveness
No. of project: CZ.01.2.111/0.0/0.0/18_167/0014065



**BEST IN
MARKET
WARRANTY**



**DESIGN
WIND SPEED
200 KMPH**



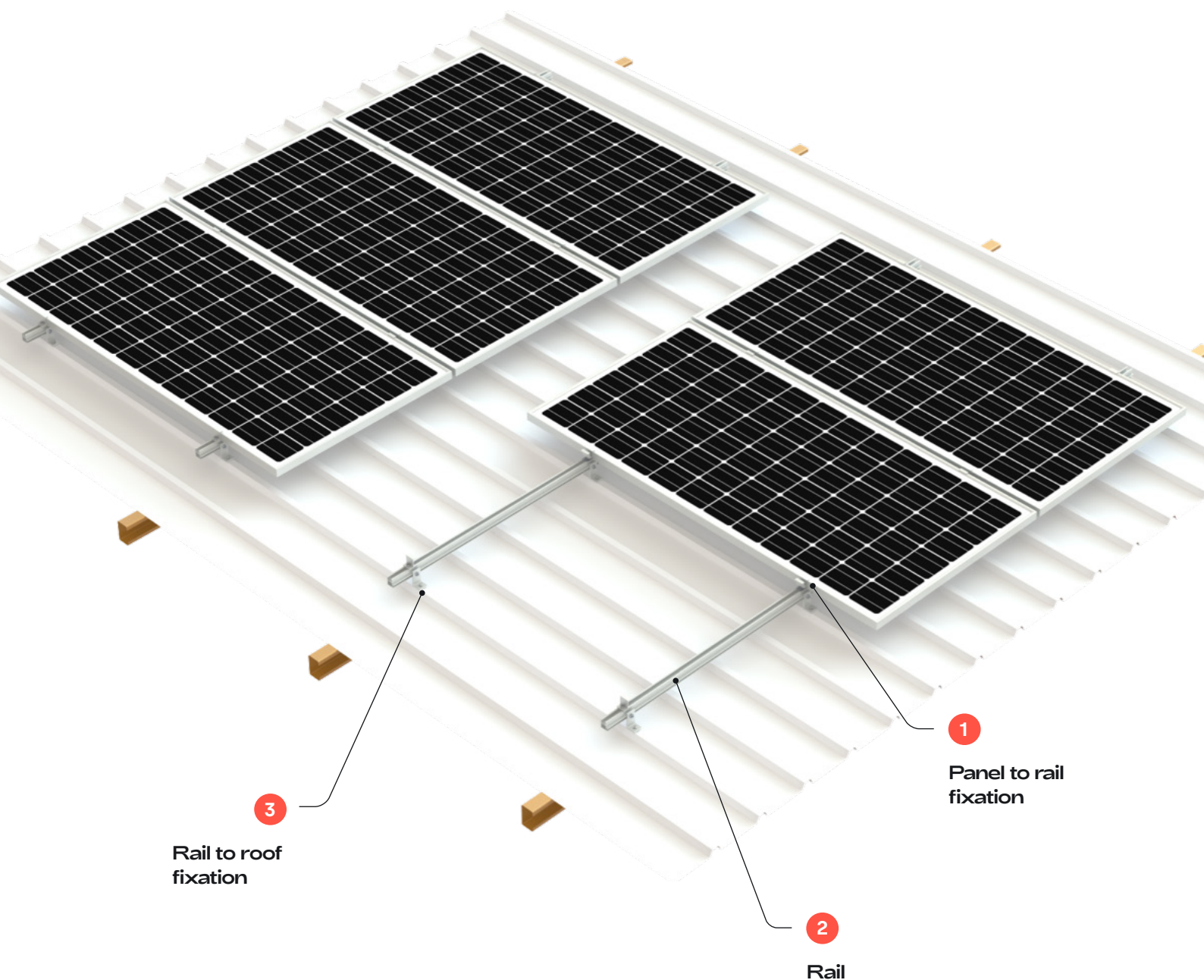
**QUICK
INSTALLATION**

Portrait orientation

Portrait orientation on trapezoidal metal roof solar system is a lightweight complex mounting system suitable for a large scale of applications. Its easy installation allows to install high capacity of solar panels in reasonably short amount of time.

Properties

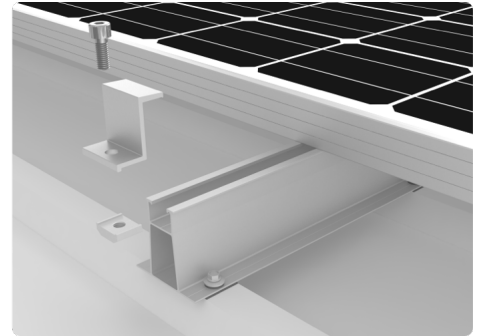
- Lightweight system
- Easy installation
- Structure installation parallel to roof
- Inbuilt panel to panel grounding available



1 Panel to rail fixation

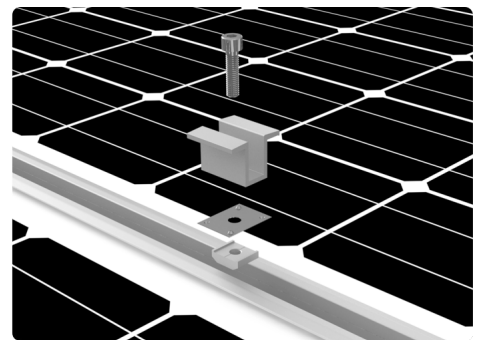
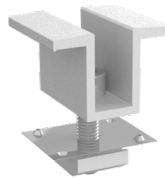
End Clamp fixation

Panel to rail fixation provided by end clamp. Suitable for 30 mm, 35 mm and 40 mm thickness of solar panel.



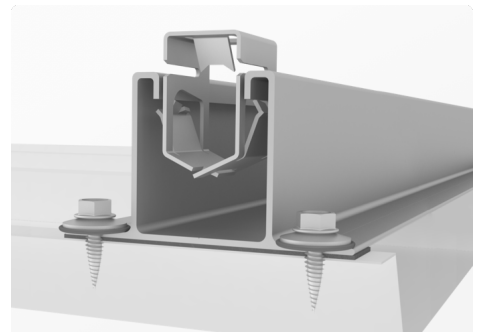
Mid Clamp fixation

Panel to rail fixation provided by mid clamp with grounding plate. Suitable for 30 mm, 35 mm and 40 mm thickness of solar panel.



Panel Clamp fixation

Any thickness of solar panel is suitable for this type of fixation and has inbuilt grounding system.



2 Rails

Short Rails

Low roof clearance

Available lengths

250 mm, 300 mm, 350mm, 400 mm
Depending on crest to crest distance

Thickness

1,5 mm

Raw material used

Aluminium 6063 T6

Cost effective solution

Low roof clearance



SHORT RAIL (portrait)
30 mm height



SHORT RAIL
41 mm height

Short Rails

High roof clearance

Available lengths

250 mm, 300 mm, 350mm, 400 mm
Depending on crest to crest distance

Thickness

1,5 mm

Raw material used

Aluminium 6063 T6

Increased height for thermal stability of the system and easy installation

High roof clearance



SHORT RAIL (portrait)
65 mm height



SHORT RAIL
100 mm height

Long Rail

Available lengths

Customized as per requirement

Thickness

1,5 mm

Raw material used

Aluminium 6063 T6

Increased height for thermal stability of system and easy installation

Purlin mounted robust system for high wind loads



LONG RAIL
40 mm height

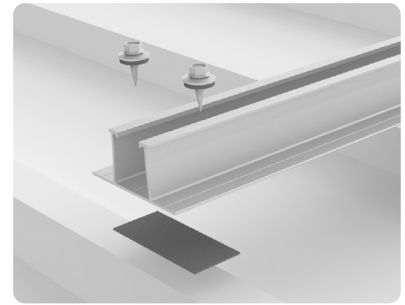
3 Rail to roof fixation

Self Stitching Screw

- Fast installation
- Up to 15 years warranty *
- One tool approach
- Easy maintenance

Pullout strength
SSS - A > 3270 N

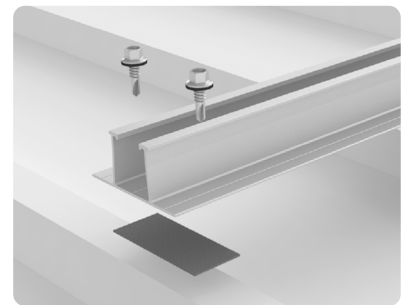
TÜV certified
TUV/8117614562
/DA/DEC-802



Self Drilling Screw

- Cost effective
- Easy installation
- One tool approach
- Easy removal

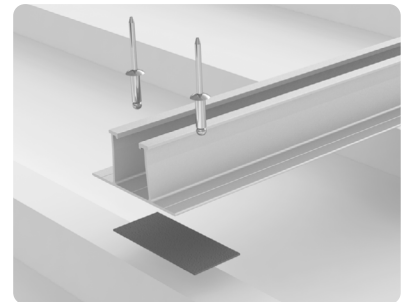
Pullout strength
SSS - SS > N/A
SDS - GI > N/A



Rivet

- Cost effective
- Up to 5 years warranty *
- Well recognized

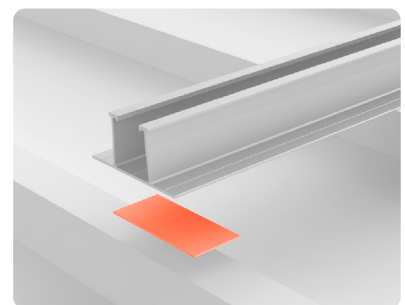
Pullout strength
Rivet - SS > 1480 N
Rivet - AL > 2680 N



Adhesive Glue

- Non-penetrative
- Robust
- 12 years lifespan

Pullout strength
Glue > 6500 N

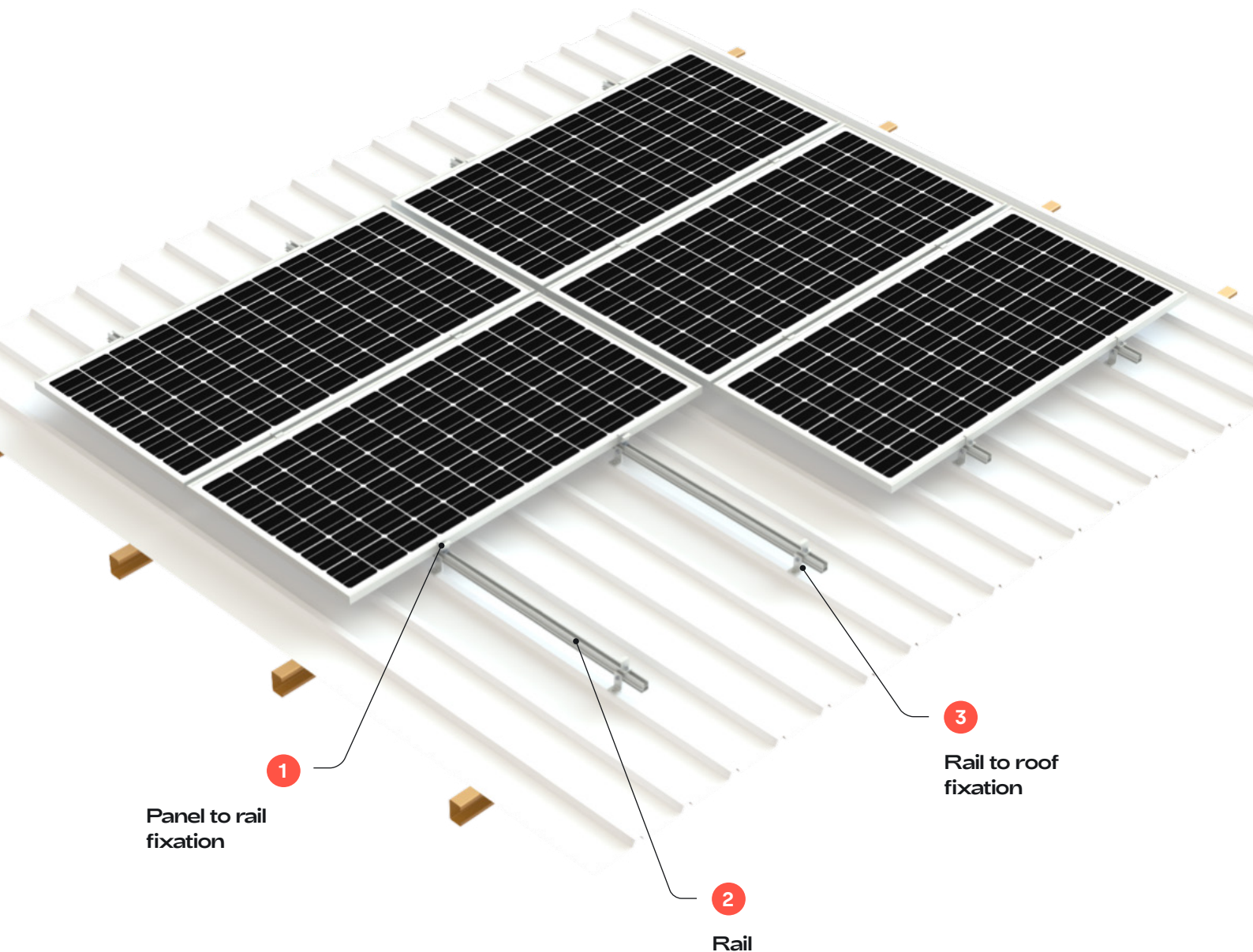


Landscape orientation

Landscape orientation on trapezoidal metal roof solar system is a lightweight complex mounting system suitable for a large scale of applications. Its easy installation allows to install high capacity of solar panels in reasonably short amount of time.

Properties

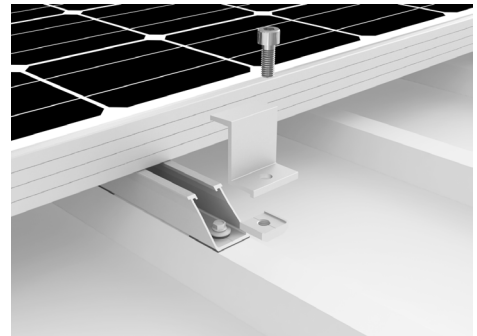
- Lightweight system
- Easy installation
- Structure installation parallel to roof
- Inbuilt panel to panel grounding available



1 Panel to rail fixation

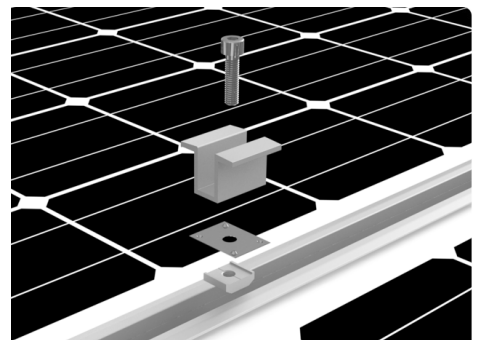
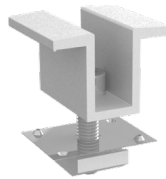
End Clamp fixation

Panel to rail fixation provided by end clamp. Suitable for 30 mm, 35 mm and 40 mm thickness of solar panel.



Mid Clamp fixation

Panel to rail fixation provided by mid clamp with grounding plate. Suitable for 30 mm, 35 mm and 40 mm thickness of solar panel.



Panel Clamp fixation

Any thickness of solar panel is suitable for this type of fixation and has inbuilt grounding system.



2 Rails

Short Rails

Low roof clearance

Available lengths

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Depending on crest to crest distance

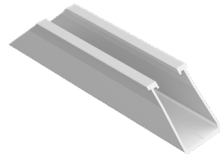
Thickness

1,5 mm

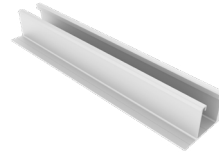
Raw material used

Aluminium 6063 T6

- Cost effective solution
- Low roof clearance



SHORT RAIL (landscape)
30 mm height



SHORT RAIL
41 mm height

Short Rails

High roof clearance

Available lengths

250 mm, 300 mm, 350mm, 400 mm
Depending on crest to crest distance

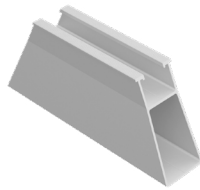
Thickness

1,5 mm

Raw material used

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- Increased height for thermal stability of system and easy installation
- High roof clearance



SHORT RAIL (landscape)
65 mm height



SHORT RAIL
100 mm height

Long Rail

Available lengths

Customized as per requirement

Thickness

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Raw material used

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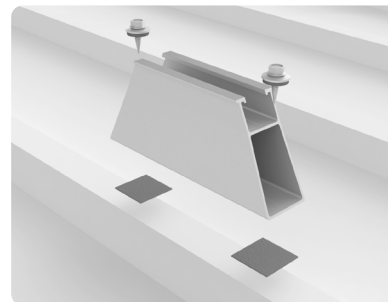
LONG RAIL
40 mm height

3 Rail to roof fixation

Self Stitching Screw

- Fast installation
- Up to 15 years warranty *
- One tool approach
- Easy maintenance

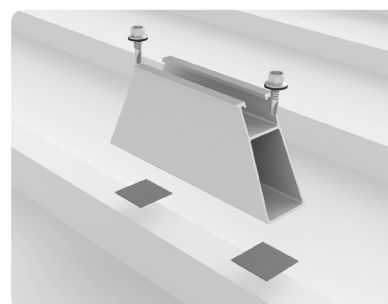
Pullout strength
SSS - SS > 1635 N



Self Drilling Screw

- Cost effective
- Easy installation
- One tool approach
- Easy removal

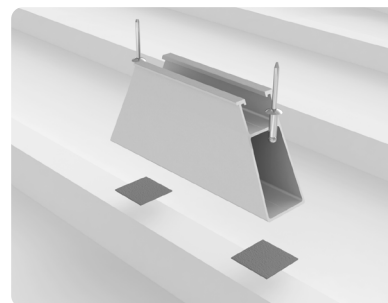
Pullout strength
SSS - SS > N/A
SDS - GI > N/A



Rivet

- Cost effective
- Up to 5 years warranty *
- Well recognized

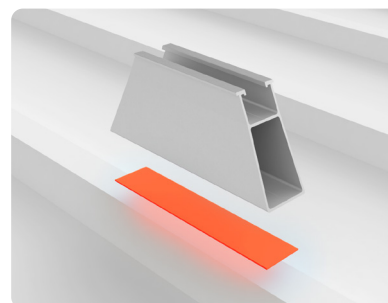
Pullout strength
Rivet - SS > 740 N
Rivet - AL > 1430 N



Adhesive Glue

- Non-penetrative
- Robust
- 12 years lifespan

Pullout strength
Glue > 6500 N



TÜV certification for panel clamp solution

Component Analysis:

1. FEA analysis of All Rails.
2. FEA analysis of All Fixations (End & Mid clamps, Power Clamps)
3. FEA analysis of All Fasteners.

Wind Analysis Report:

1. End & Mid Clamp Assembly - With different variations of fixations
2. Power Clamp Assembly - With different variations of fixations

Pullout test Report:

1. Pullout Test report - SSS
2. Pullout Test report - Rivet AL
3. Pullout Test report - Rivet SS
4. Pullout Test report - Adhesive Glue

Technical Specification

Scope of Application	Pitched Roof with Trapezoidal sheet metal
Rail to Roof Fixation	Self Stitching Screw / Self Drilling Screw / Rivet / Adhesive Glue
Panel to Rail Fixation	End Clamp / Mid Clamp / Panel Clamp
Roof Slope	5° to 25°
Min. Sheet Thickness	0.4 mm Steel and \geq 0.5 mm Aluminium
Crest to Crest Distance	200 mm to 350 mm
Crest Width	At least 22 mm
Building Height	Up to 20 meter
PV - Modules	Framed
Module Orientation	Portrait / Landscape
Tilt Degree	Along the Roof (Flush Mount)
Size of Module Array	Any Size Possible
Materials	EN AW 6063 T6 / SS 304 / EPDM
Design Windspeed	Up to 200 kmph *



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Social networks

