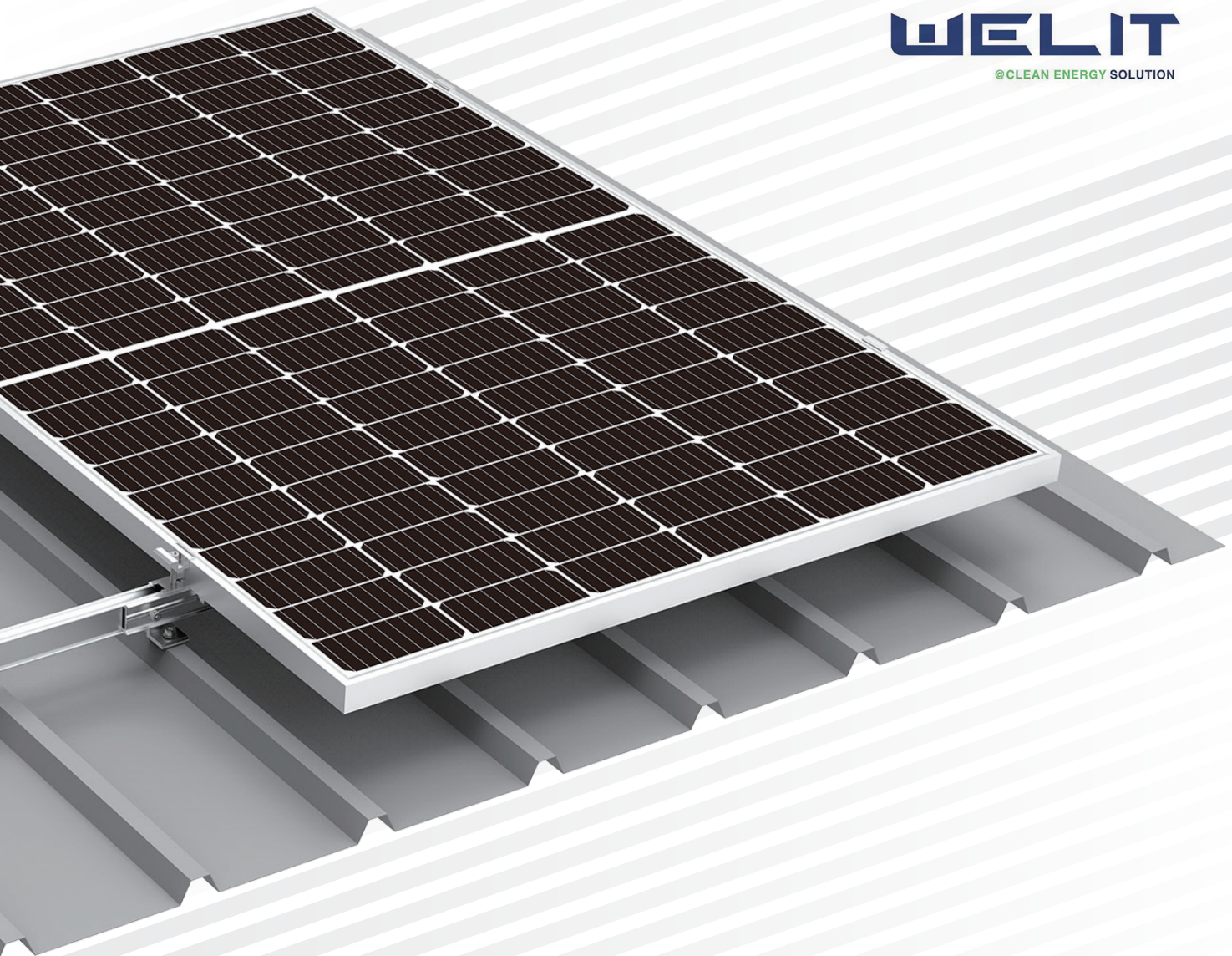




PENETRATING **SOLAR METAL ROOF MOUNTING SOLUTION**

Professional PV Mounting Solution for Trapezoidal Metal Roofs



2026 V1.0

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Product Introduction

The Penetrating Solar Metal Roof Mounting Solution is a professional photovoltaic mounting system designed for trapezoidal metal roof applications. As one of the installation solutions of the Solaris WAVE Series, it provides reliable mechanical fixing for commercial, industrial, and other metal roof PV projects. With pre-assembled components, optimized structural design, and high-quality aluminium materials, the system enables efficient installation, long-term durability, and stable performance under various environmental conditions.

Key Advantages

EASY INSTALLATION



COST EFFECTIVE



LONG-TERM DURABILITY



CORROSION RESISTANT



Component Technical Parameters

Application	Trapezoidal Metal Roof
Mounting Type	Penetrating Installation
Module Type	Framed Module
Module Orientation	Landscape / Portrait
Material	AL6005-T6 Aluminum / SUS304 Stainless Steel
Surface Treatment	Anodized $\geq 10\mu\text{m}$
Tilt Angle	0°-45°
Standards	JIS C 8955 : 2017; AS/NZS 1170; DIN1055; ASCE/SEI 7-05; International Building Code: IBC 2009

Product Configuration

6 Panels Tin Kit 30/35mm

Product Name	6 Panels Tin Kit 30/35mm			
Material	AL6005-T6 & SUS304			
Surface Treatment	Anodizing 10 μm			
Contents	T18 Middle Clamp 31-35/40 Kit (Mid Clamp 30/35mm) x 10pcs Share End Clamp 30&35/40 Kit (End Clamp 30/35mm) x 4pcs Grounding Clip SE47(Grounding Clip) x 5pcs Base Rail SE Jointer-150 Kit(Base Rail SE Jointer) x 2pcs T6 L Feet Kit-L40 (Tin Roof Brackets) x 12pcs Grounding Lug x 1pcs GD-SE47E-KL (Rail) Cable Clip 4# (Cable Clip) x 12pcs			
Tin 30/35 6 Panels Kit	 x 12  x 12	 x 12  x 4	 x 5  x 1	 x 10  x 2

8 Panels Tin Kit 30/35mm

Product Name	8 Panels Tin Kit 30/35mm			
Material	AL6005-T6 & SUS304			
Surface Treatment	Anodizing 10µm			
Contents	T18 Middle Clamp31-35/40Kit (Mid Clamp 30/35mm) x 14pcs Share End Clamp 30&35/40 Kit (End Clamp 30/35mm)x 4pcs Grounding Clip SE47(Grounding Clip) x 7pcs Base Rail SE Jointer-150 Kit(Base Rail SE Jointer) x2pcs T6 L Feet Kit-L40 (Tin Roof Brackets) x 16pcs Grounding Lug x1pcs GD-SE47E-KL (Rail) Cable Clip 4# (Cable Clip) x16pcs			
Tin 30/35 8 Panels Kit		 x 16	 x 7	 x 14
	 x 16	 x 4	 x 1	 x 2

10 Panels Tin Kit 30/35mm

Product Name	10 Panels Tin Kit 30/35mm			
Material	AL6005-T6 & SUS304			
Surface Treatment	Anodizing 10µm			
Contents	T18 Middle Clamp31-35/40Kit (Mid Clamp 30/35mm) x 18pcs Share End Clamp 30&35/40 Kit (End Clamp 30/35mm)x 4pcs Grounding Clip SE47(Grounding Clip) x 9pcs Base Rail SE Jointer-150 Kit(Base Rail SE Jointer) x4pcs T6 L Feet Kit-L40 (Tin Roof Brackets) x 20pcs Grounding Lug x1pcs GD-SE47E-KL (Rail) Cable Clip 4# (Cable Clip) x20pcs			
Tin 30/35 10 Panels Kit		 x 20	 x 9	 x 18
	 x 20	 x 4	 x 1	 x 4

Installation Instructions

Before installation, please read the following information carefully.

Preparation Notes:

- **Roof Inspection:**
Confirm roof load capacity ($\geq 30 \text{ kg/m}^2$), surface flatness, and repair any corrosion or damage before installation.
- **Material Check:**
Verify that all components, including clamps, rails, connectors, mid clamps, end clamps, bolts and rubber pads, are complete, and ensure that the galvanized coating is intact with no missing plating or signs of corrosion.
- **Tool Preparation:**
Ensure all tools (drill, level, torque wrench, etc.) are calibrated and meet installation accuracy requirements.

Installers are fully responsible for:

- Complying with all applicable local or national building codes, including any that may superseded this manual;
- Ensuring that WELIT SolarRoof and other products are appropriate for the particular installation and the installation environment;
- Ensuring that the roof, its rafters, connections, and other structural support members can support the array under building live load conditions;
- Using only WELIT SolarRoof parts and installer-supplied parts as specified by WELIT SolarRoof (substitution of parts may void the warranty and certification);
- Ensuring that lag screws have adequate pullout strength and shear capacities as installed;
- Maintaining the waterproof integrity of the roof, including selection of appropriate flashing. Ensuring safe installation of all electrical aspects of the PV array.

Installation Tools



Electric drill



Tape measure



Combination Spanner



Torque Wrench

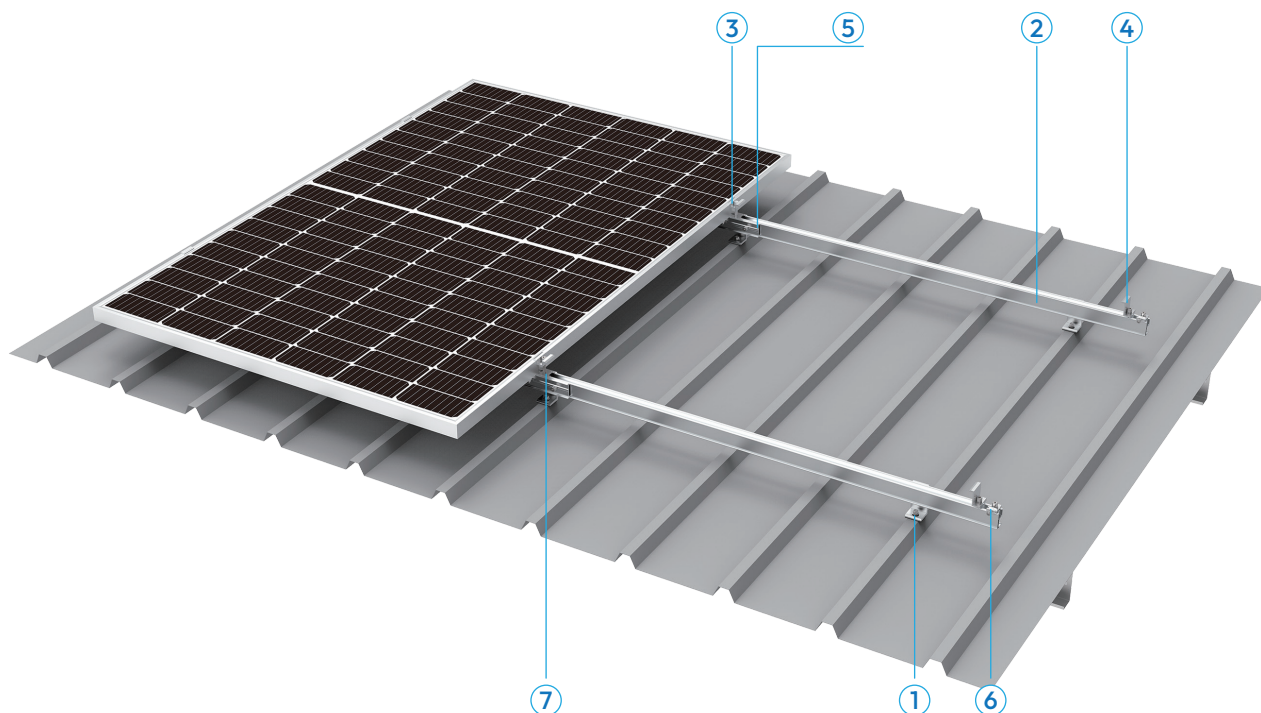


String line



Hex wrench

System Overview



Component List

①	②	③	④	⑤	⑥	⑦
L Feet (Pre-assembled)	Rail	Mid Clamp (Pre-assembled)	End Clamp (Pre-assembled)	Connector (Pre-assembled)	Grounding Lug	Grounding Clip

NOTE



•Components (①③④⑤) are pre-assembled, eliminating on-site assembly steps, significantly improving installation efficiency, and reducing labor costs.

Installation Steps

01

Determine the roof mounting positions according to your plan, and mark the corresponding positions with lines.

(Note: If you choose clamp-type L-feet or adjustable kits, select positions with beams underneath the marked spots.)

02

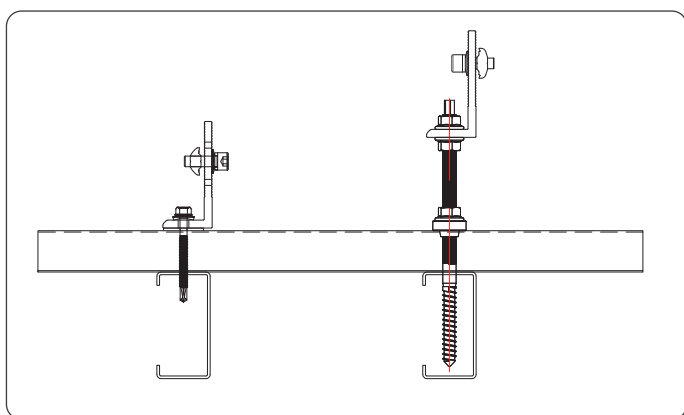
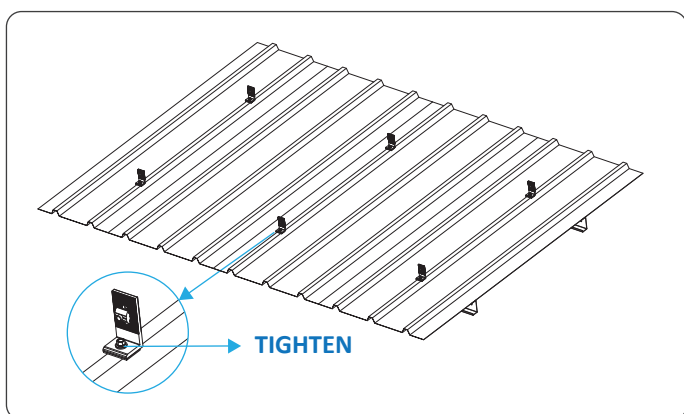
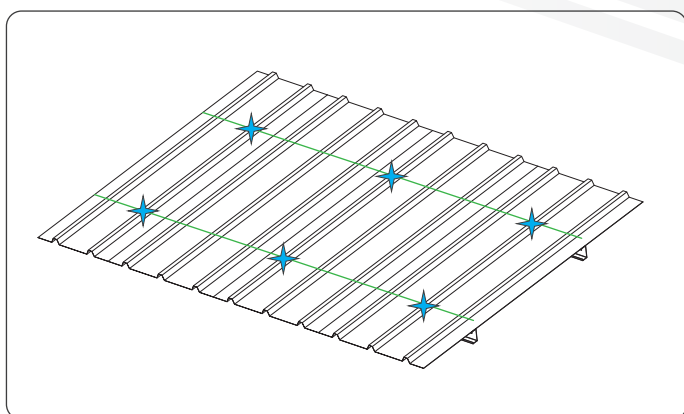
Fix the clamps you selected onto the tile crests, adjust the positions, tighten the nails, and ensure the installation is neat with uniform orientation.

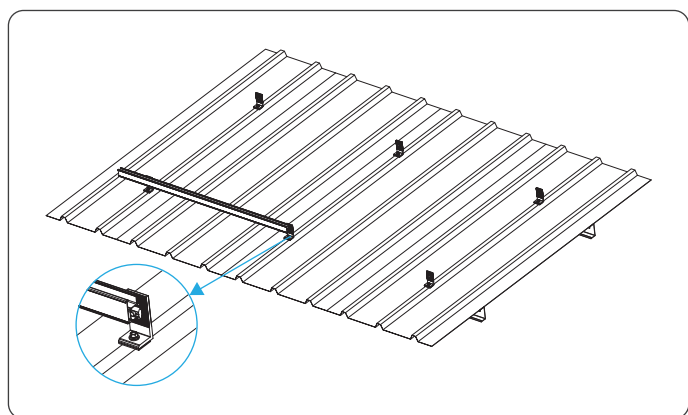
(Recommended torque: 14 N*m)

03

For installing L-shaped bases, double-threaded bolts, or adjustable feet, they should be mounted on the tile crests. Nails or bolts must pass through the tiles and fasten to the underlying steel beams.

(Note: Tighten the bolts to ensure the joints fit closely and prevent water leakage.)

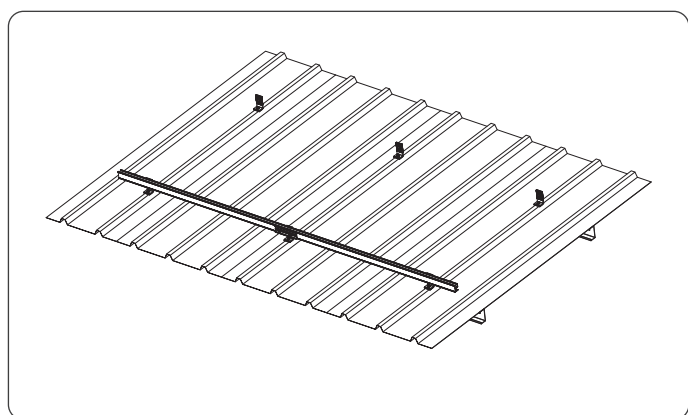




04

Install the guide rails: engage the clips on the clamps into the guide rail grooves, then tighten the clip bolts.

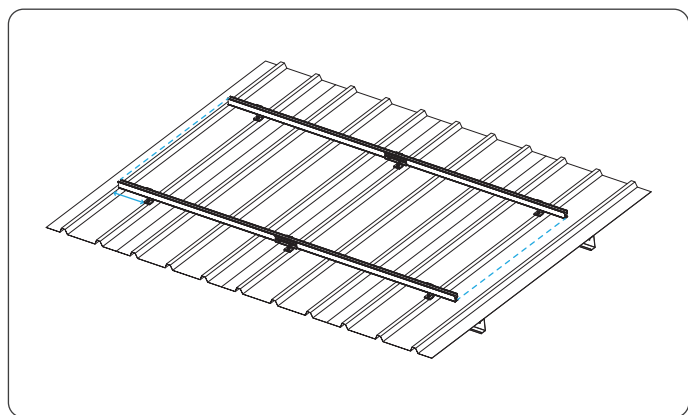
(Recommended torque: 14 N*m)



05

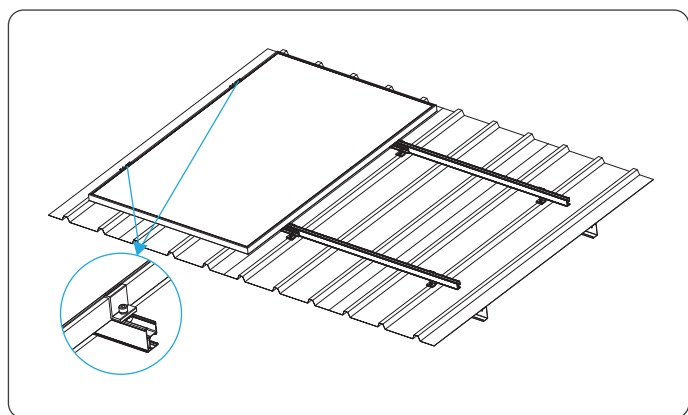
Install connectors to join multiple rails together. Position the connectors on the middle side of a rail, then place other rails in the middle position. Use tools to tighten the bolts on the connectors.

(Recommended torque: 14 N*m)



06

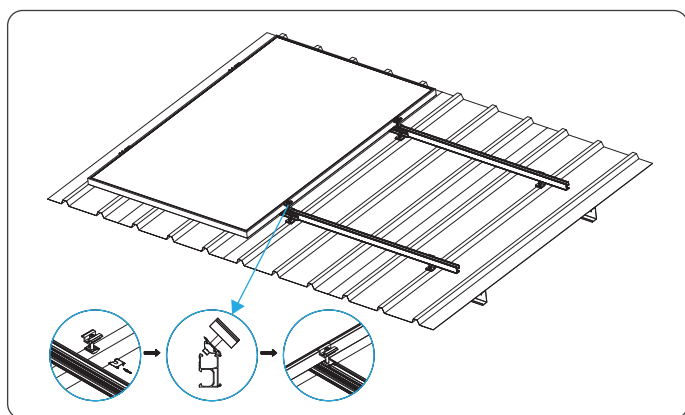
Complete the guide rail installation. Note: Align the ends of the two rows of rails (dotted line: -----) and ensure uniform overhangs on both ends (↔).



07

Place the solar modules and adjust to the correct position. Install mid-clamps or end-clamp kits at the corresponding positions, then tighten the end-clamp bolts.

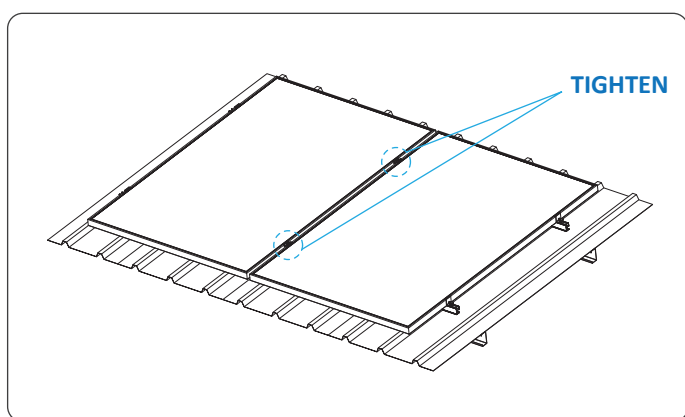
(Recommended torque: 14 N*m)



08

Install the mid-clamps, but do not fully tighten the bolts yet. Then install grounding clip at the mid-clamp positions.

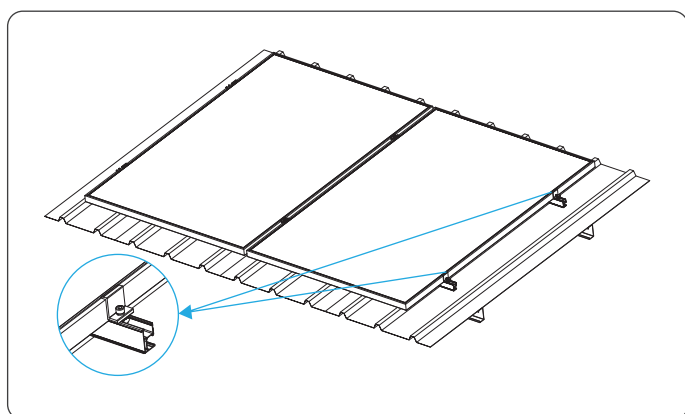
(Note: The conductive plates must be pressed by the module frames.)



09

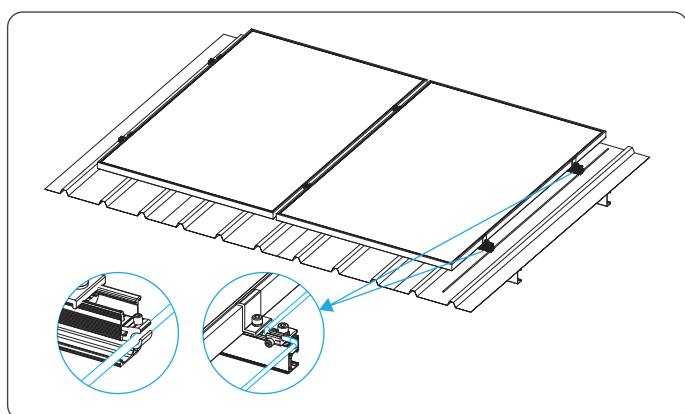
Place the second module, then tighten the mid-clamp bolts between the two modules to secure them to the guide rails.

(Recommended torque: 14 N*m)



10

Repeat Steps 8 and 9 until all modules are installed, then tighten the bolts of the final end-clamps.



11

Install grounding lug kits at the ends of each guide rail. (Recommended torque: 14 N*m)

Installation is complete.