

## Roof Mounting System NSR Rail Installation instructions



Mounting system for installing framed PV modules with heights between 30 and 50 mm on pitched roofs with the following characteristics:

- Roof pitch 5° - 60° (solar fasteners), 20° - 60° (Roof hooks)
- Single and double roman, plain tile, natural slate, and flat tiles with wooden substructures.
- PV-panel landscape and portrait oriented

Static calculation must exist and be considered according to local regulations.

### Installation guidelines

Ensure that the roof construction is suitable for the introduction of forces at the fixing points and their subsequent transmission. In order to compensate thermal expansion, included a break every

12 meters when planning the PV-system. For module positioning/fastening points please refer to manufacturers recommendations. Please follow your local timber construction standard. Please do not use installed roof connections as ladder. If installation is located within 10km from the coast, we advise not to use zinc coated material. For further information please contact your sales representative or the technical department at Hopergy.



The structural stability of the PV-system must be verified before installation. The building must be able to support the additional weight safely.

### Installation notes

Please read these installation instructions carefully before starting the installation and familiarise yourself with the system components. During the installation and in particular whilst working on the roof, ensure to work according to the relevant health and safety guidelines, safety guidelines and please follow the current rules and regulations for your corresponding region.

The individual installation instructions are merely recommendations in accordance with the current state of technology and are based on previous experiences of how Hopergy systems can be installed.

If any special characteristics of the roof or object need to be taken into account, we recommend you to consult specialists such as roofers or structural engineers where necessary. Please check that the applied manual which is up to date. All manuals are available in the download area at [www.hopergy.com](http://www.hopergy.com)

### Testing/certification:

- TÜV
- MCS012 (IK0197)
- ISO 9001

### Applicable Documents

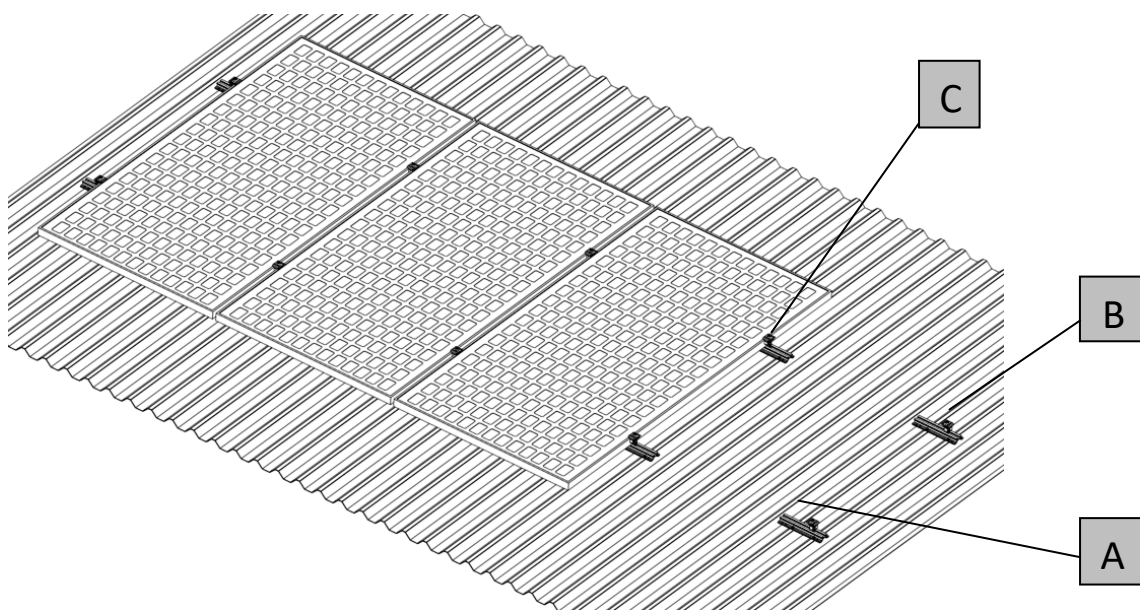
"General installation, maintenance and as-sembly instructions"  
"Safety Instructions for Installation Instructions"  
"Warranty and Disclaimer."  
These documents are available at [www.hopergy.com](http://www.hopergy.com)

### Warranty:

The warranty only applies if an original and complete Hopergy system is used, with a layout designed by Hopergy.

Hopergy is not accountable for the roof's capability to maintain the introduced forces. Please check the roof's compatibility with a static engineer.

# NOVA MINI Rail System



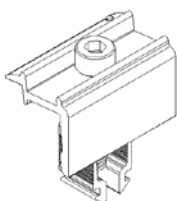
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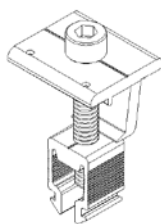
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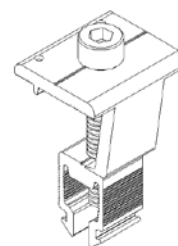
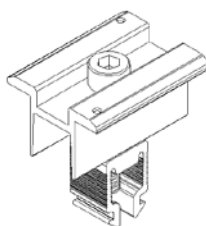
B



OR



C



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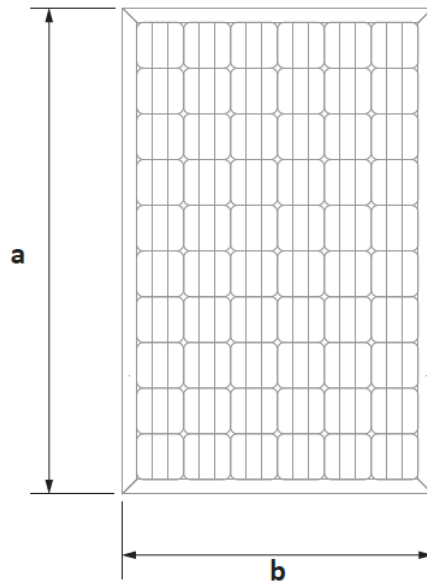
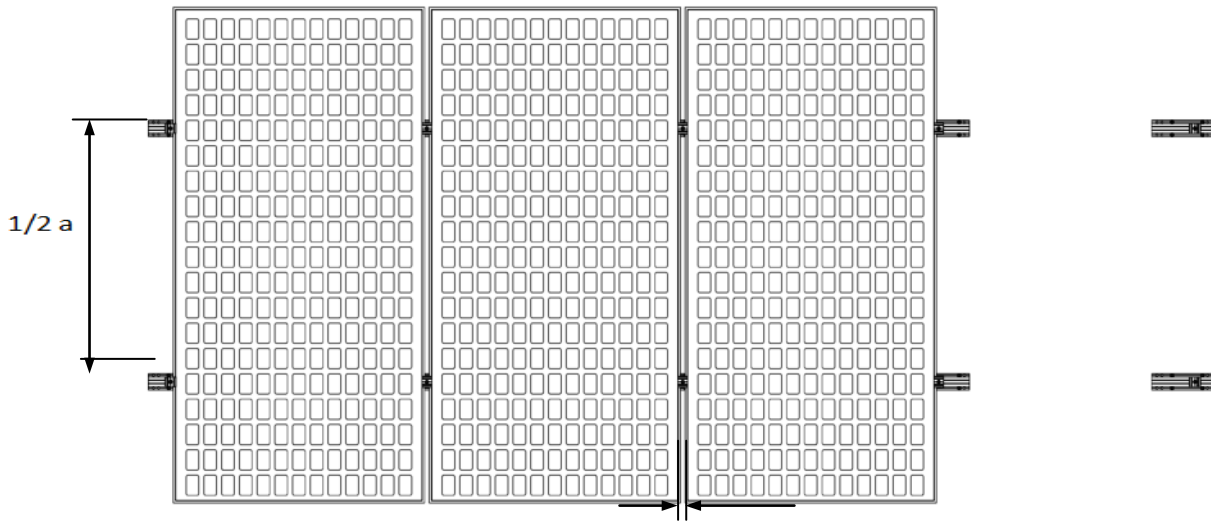


M8



13mm

# SOLAR PANELS LAYOUT

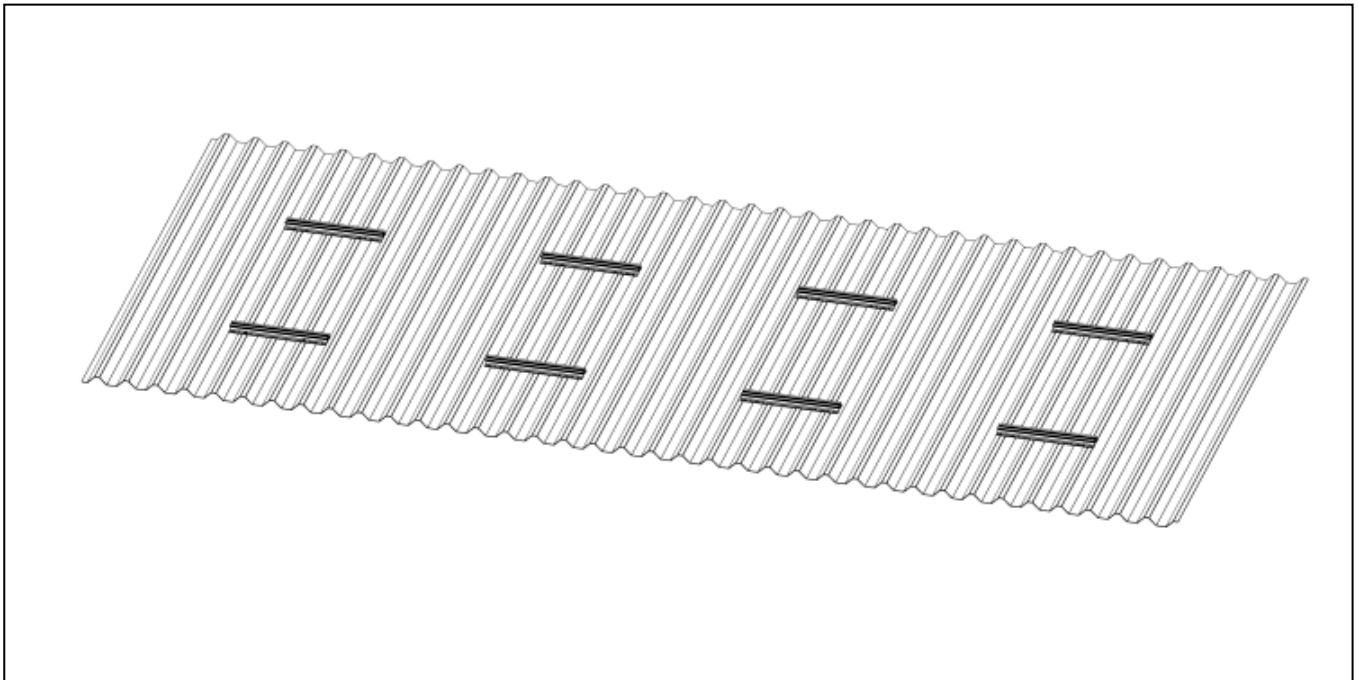
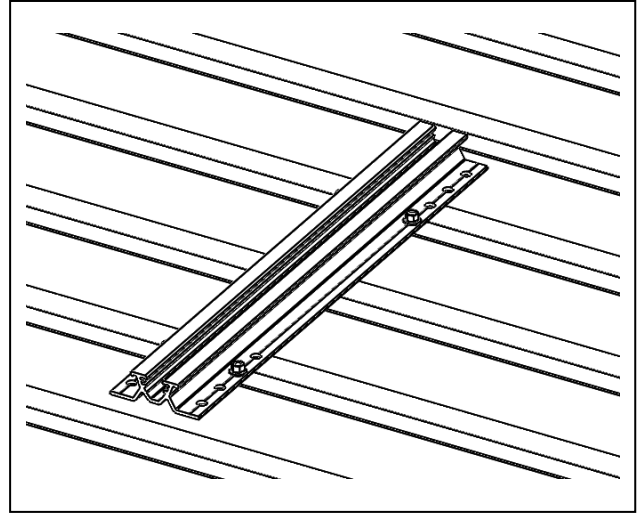
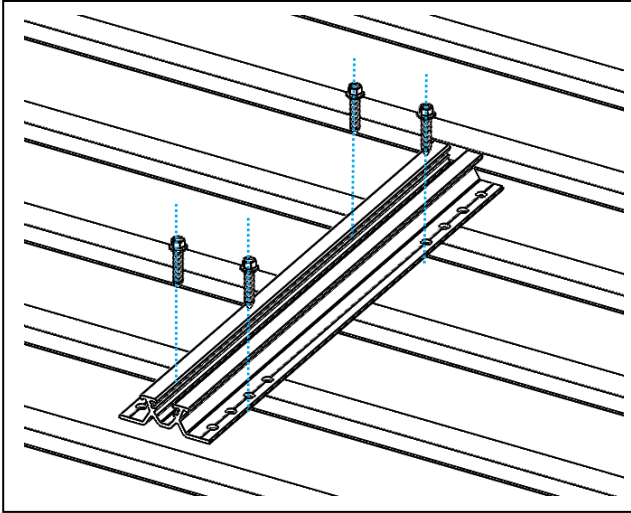


Solar panels layout

## Installing NSR Rail

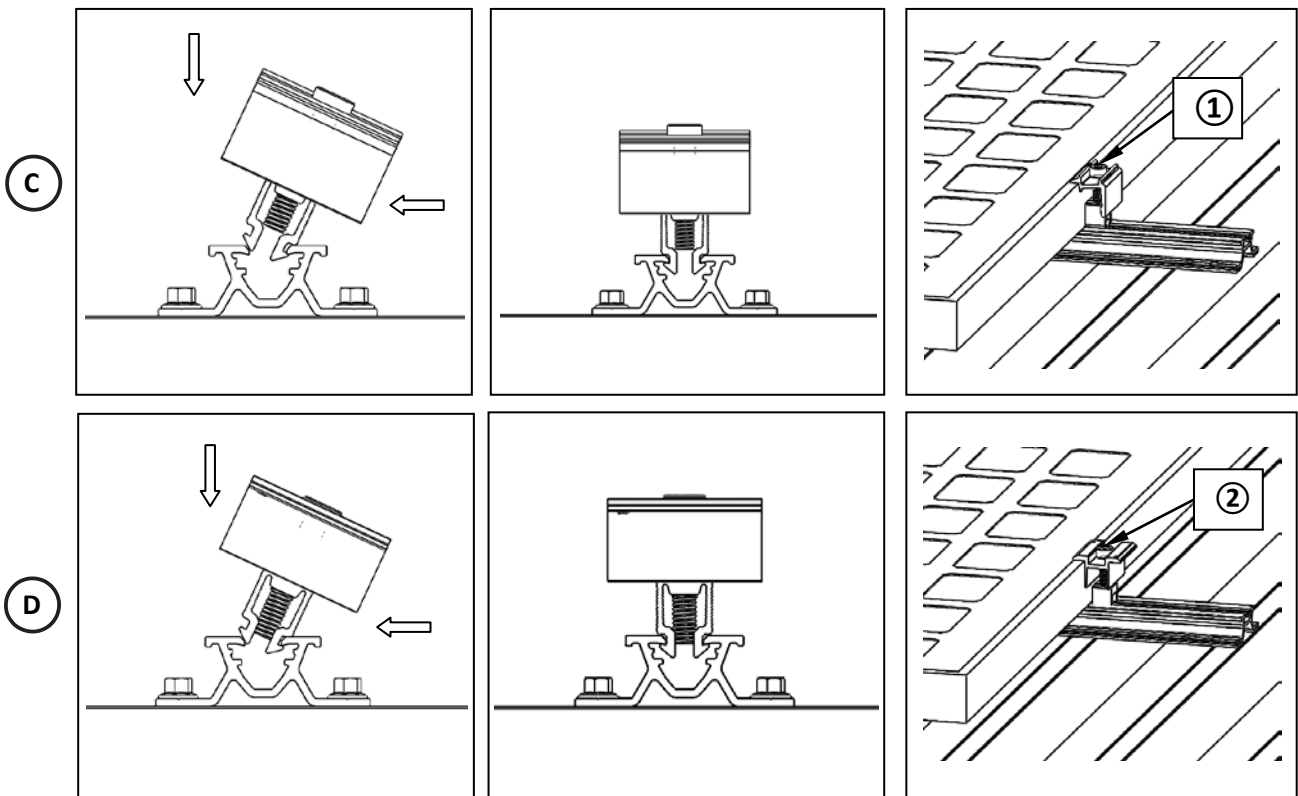
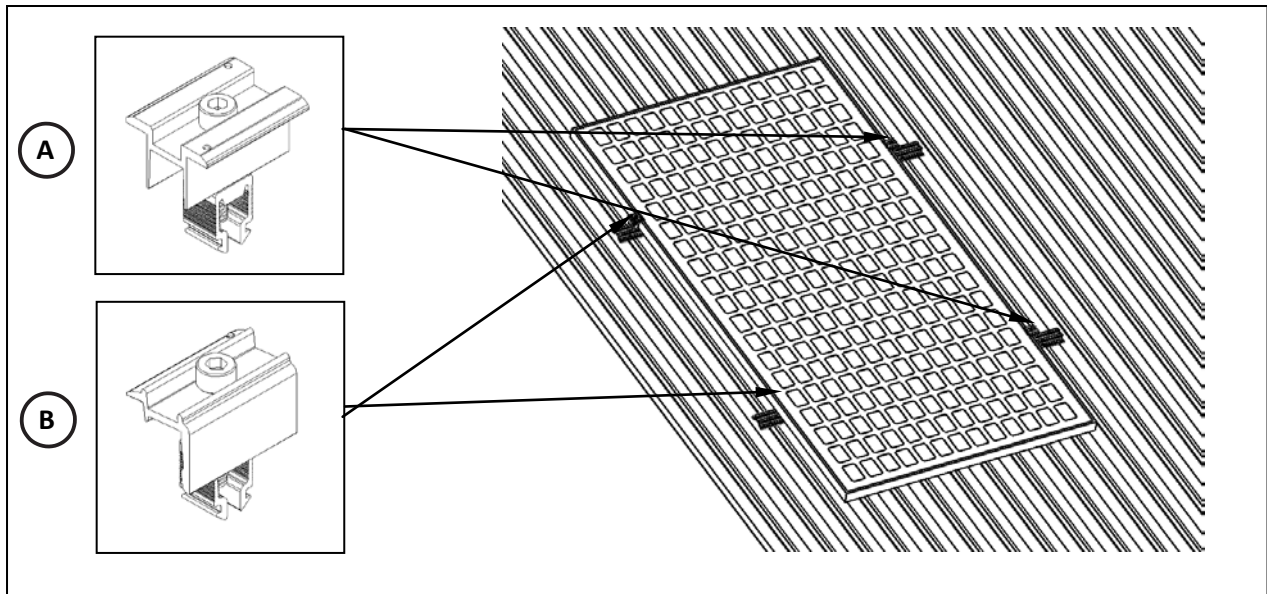
**Step.1 Use Self-Tapping Screw ST6.3\*25 to installing the NSR Rail;** (Recommended Torque: 9-11N.M)

**It is recommended to apply polyurethane(PU) waterproof glue to achieve complete waterproofing, if the roof involves perforated installation.**



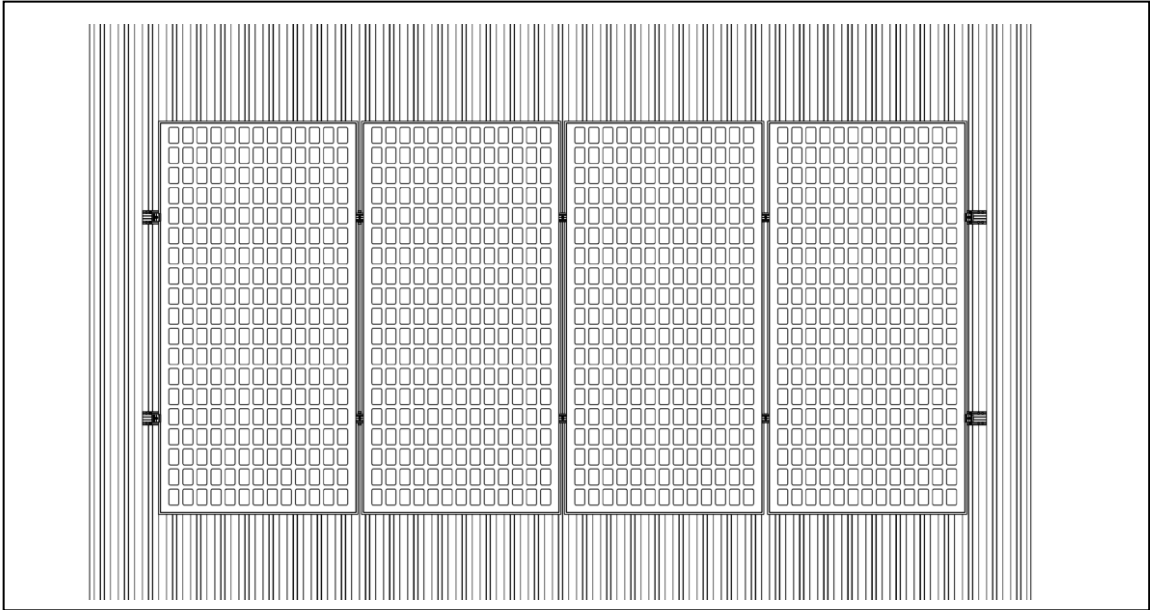
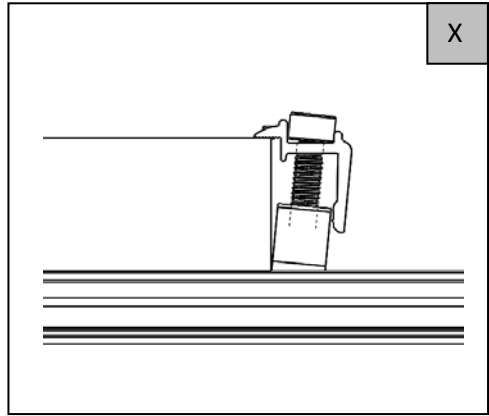
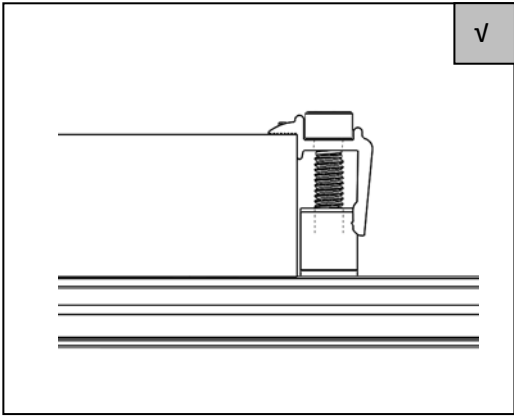
## STEP.2 install ultimate panel clamps;

When install the first panel, adjust the position of the solar panel according to the technical drawings, fix the panel on the rails by panel clamps.




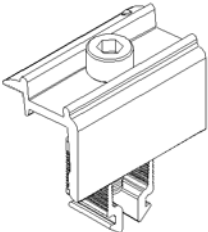
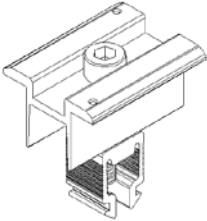
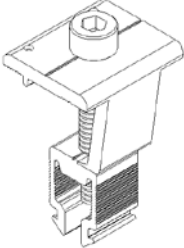
**Attention:**

- 1.The panel clamps close against the solar panel.
- 2.Tighten the bolt slowly, until the clamp in holding position.
- 3.Then use 12-14N.M torque to tighten the bolt.





## Components

<b>Part name</b>	<b>NSR Rail</b>		
<b>Part No.</b>	<b>RA-NSR-0400</b>		
<b>Figure</b>			
<b>Part name</b>	<b>NOVA End Clamp (30-40mm)</b>	<b>NOVA Inner Clamp (30-40mm)</b>	<b>NOVA Universal Clamp (30-40mm)</b>
<b>Part No.</b>	<b>PC-NEC40-NS6</b>	<b>PC-NIC40-NS6</b>	<b>PC-NPC50-NS6</b>
<b>Figure</b>			<div style="text-align: center;">OR</div> 

# Hopergy

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