

# Installation Manual

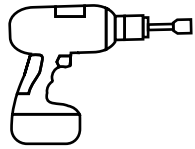
## - Stainless Steel Hook Mounting System

[www.apex-solar.de](http://www.apex-solar.de)

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# Tools overview



TX25/40



SW 13 mm

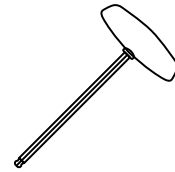


6 mm



8,5 mm

Electric Drill



6 mm

Wooden Hammer



Wrench



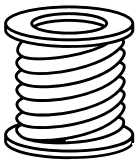
hexagon



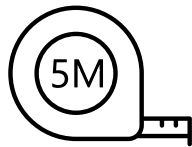
rotundity



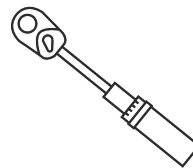
Spirit Level



Rope



Tape Measure



Torque Wrench



Adjustable Wrench

## Tested for quality - multiple certifications

The system is characterized by secure connections, the highest quality and precision. Our customers and business partners have known this for a long time. Functions and components have been tested, validated and certified by independent institutes.

# General safety information

Please note that our general mounting instructions must be followed at all times.

- The equipment may only be installed and operated by qualified and adequately trained installers.
- Prior to installation, ensure that the product complies with on-site static loading requirements.
- National and local building regulations and environmental requirements must be adhered to.
- Compliance with health and safety regulations, accident prevention guidelines and applicable standards is required.
  - Protective equipment such as safety helmet, boots and gloves must be worn.
  - Roofing works must be in accordance with roofing regulations utilising fall protection safeguards when eaves height exceeds 3m.
  - At least two people must be present for the duration of the installation work in order to provide rapid assistance in the event of an emergency.
- The assembly instructions of the module manufacturer must be adhered to.
- Failure to adhere to our general safety and assembly instructions and not using all system components, system is not liable for any resulting defects or damages. We do not accept liability for any damage resulting in the use of competitor's parts. Warranty is excluded in such cases.
- Dismantling of the system is performed in reverse order to the assembly. Stainless steel components are available in different corrosion resistance classes. Each structure or component must be carefully checked for possible corrosion exposure.

# Guidelines

The system with roof hooks can be used in the following standard conditions. If maximum distances between supports exceeds the standard conditions, please contact us.

## Roof requirements

- The sufficient holding force of the roof covering at the support or substructure must be ensured on site.
- Roof pitch of 5-75°
- Sufficient load reserves to support the PV system.

## Important mounting instructions

- On-site general standards and regulations for lightning protection must be observed and consultation with a specialist to create a lightning protection concept is recommended (use lightning protection clamp if necessary).
- Please refer to our Handbook for the installation of all roof hooks systems.
- A minimum mounting distance of 50 mm from the end of the rail / rail joint to the module frame.
- Follow the prompts to tighten torque for module clamps.
- In order to avoid damage under high snow loads, replace the clay/concrete roof tile with metal roof plate or sheet metal replacement tile under the bracket of the roof hook.
- Do not step on roof hooks or rails, as these are not climbing assists.
- Sizing and positioning of the wood screws are subject to the relevant regulations.
- In the case of pressure-soft rooftop insulation, especially that made of mineral fibres, care must be taken to ensure a suitable spacer screw connection of the counter batten to the rafter.
- The following applies to all insulation materials: With counter-batten thicknesses greater than 40mm, the roof hooks can also be fastened exclusively into the counter-batten if it is sufficiently shear-and pressure-resistant.

# Solution details

Application Area: Pantile Roof

Module Type: Framed

Module Orientation: Landscape/Portrait

Main Material: Anodized AL6005-T5

Fasteners: SUS304

Warranty: 25 years warranty and Whole Service Life

## Introduction

This adjustable hook can be adjusted up and down, left and right to avoid interference with the tile. The bottom plate can be used as a universal component, with different upper hooks to meet different installation requirements and adapt to different styles of rails.

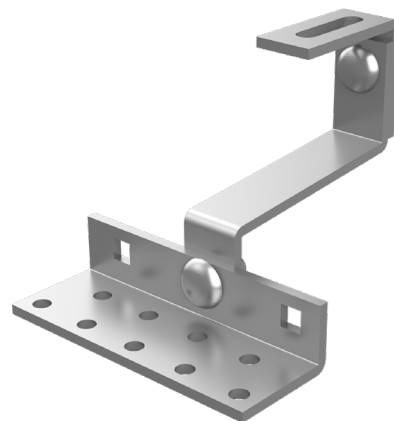
## Advantage

- ✓ Adjustable in horizontal and vertical directions
- ✓ Easy to install
- ✓ Highly pre-assembled
- ✓ Lightweight

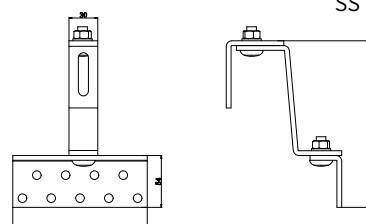
# Part summary

## Hook

- Economical and reliable Allrounder
- Suitable for all common tile roofs/snow load zones
- Optimal adaptability to the roof with 2 mm or 5 mm shims
- Height of rail easily adjustable with pre-installed
- Clamp Combination (switch with Clamp Combination vertical for a vertical rail installation)
- Installer-friendly "top-down" design: just place the rail onto the Clamp Combination. One screw fixates the rail and locks in the height at the same time.
- Only one tool required: Torx TX40
- Installation as single- or cross-rail system
- Material: Stainless steel, welded



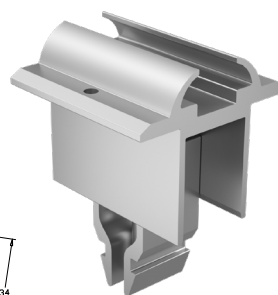
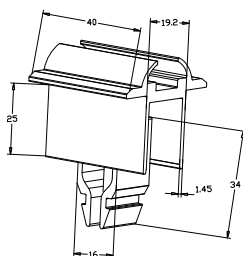
Product number:  
SS Hook 5



Product number: SS Hook 5	Hook SS Hook 5	20 pcs. per PU
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## Mid clamp

- Universal mid and end clamp for panel thickness 30-40mm
- Highly pre-assembled; Adaptable to different rails
- Convenient snap-on installation;
- Mid clamp available with grounding pin
- Available in black anodized
- Material: Aluminum alloy



Product number:  
APEX-MC15-DG-30-50

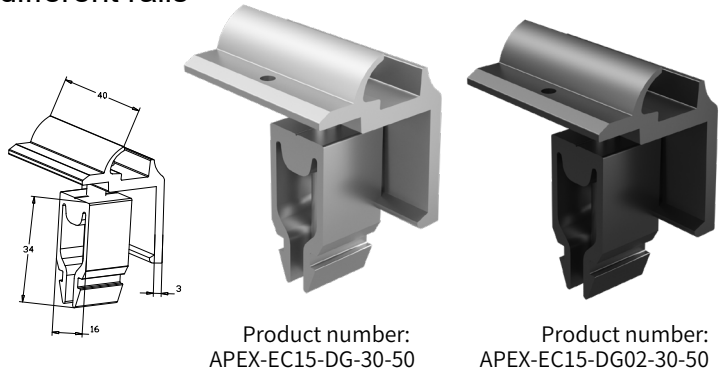


Product number:  
APEX-MC15-DG02-30-50

Product number: APEX-MC15-DG-30-50	Mid clamp APEX-MC15-DG-30-50	100 pcs. per PU
Product number: APEX-MC15-DG02-30-50	Mid clamp APEX-MC15-DG02-30-50	100 pcs. per PU

# End clamp

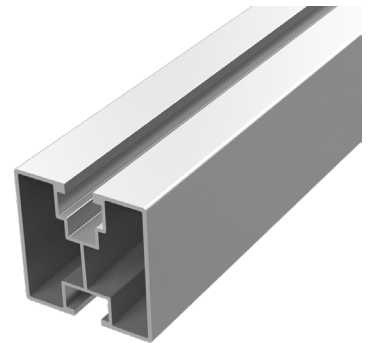
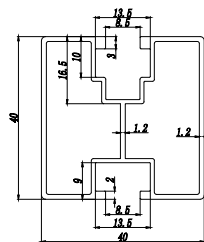
- Universal mid and end clamp for panel thickness 30-40mm
- Highly pre-assembled; Adaptable to different rails
- Convenient snap-on installation;
- Available in black anodized
- Material: Aluminum alloy



Product number: APEX-EC15-DG-30-50	End clamp APEX-EC15-DG-30-50	100 pcs. per PU
Product number: APEX-EC15-DG02-30-50	End clamp APEX-EC15-DG02-30-50	100 pcs. per PU

# Rail

- Convenient and time-saving installation from the top  
long rail can span over several ribs
- Installation on top of the rib ensures best accessibility and  
greatest possible distance from the water-bearing layer
- Vertical module mounting
- Material: Aluminum alloy



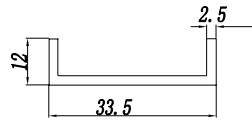
Product number: APEX-R37

Product number: APEX-R37	Rail APEX-R37	100 pcs. per PU
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# Rail connector

- Extremely sturdy, for quick and accurate joining of profiles
- Time-saving
- For connecting module mounting profiles without possibly interfering external structure
- Material: Aluminum alloy

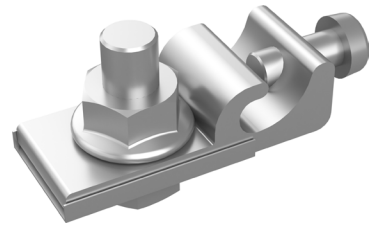
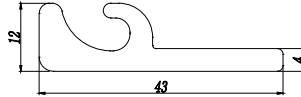


Product number:  
APEX-GJ-04

Product number: APEX-GJ-04	Rail Connector 30 - 40	200 pcs. per PU
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# Grounding lug

- Fixed line, prevent line clutter
- Material: Aluminum alloy

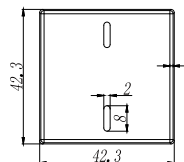


Product number:  
APEX-GL-01

Product number: APEX-GL-01	Grounding Lug APEX-GL-01	200 pcs. per PU
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# Rail cap

- Greatly reduce the damage caused by foreign body intrusion
- Reduce the accumulation of foreign matter, dust prevention
- Avoid rain accumulation during thunderstorms
- The total length of the standard guide rail is not changed
- Make the rotation of the main rail smooth
- Material: EPDM

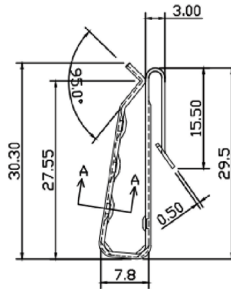


Product number:  
APEX-R37-DG

Product number: APEX-R37-DG	Rail Cap APEX-R37-DG	400 pcs. per PU
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# PV cable clip

- Fixed line, prevent line clutter
- Material: Stainless steel

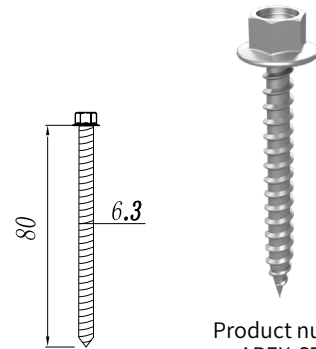


Product number:  
APEX-XJ-A

Product number: APEX-XJ-A	PV cable clip APEX-XJ-A	4000 pcs. per PU
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# Bolt

- The screw is with coarse threads most suitable for timber substructure and of high load-bearing capacity values. It can be drilled, tapped and fastened in one go.
- Material: Stainless steel

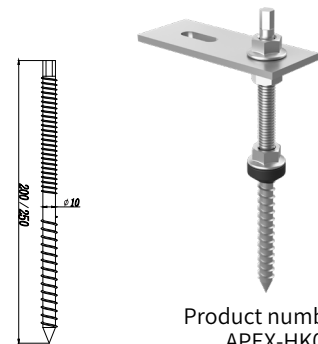
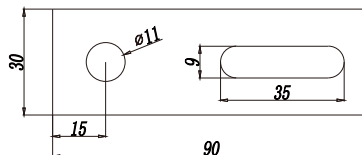


Product number:  
APEX-ST6.3\*80

Product number: APEX-ST6.3*80	Bolt APEX-ST6.3*80	1360 pcs. per PU
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# Hanger Bolt

- The SS304 stud bolt with point is suitable for ply and timber substructure. Applying a plate with stripe hole makes it easily adapt to the rail and adjusted.
- Material: Stainless steel

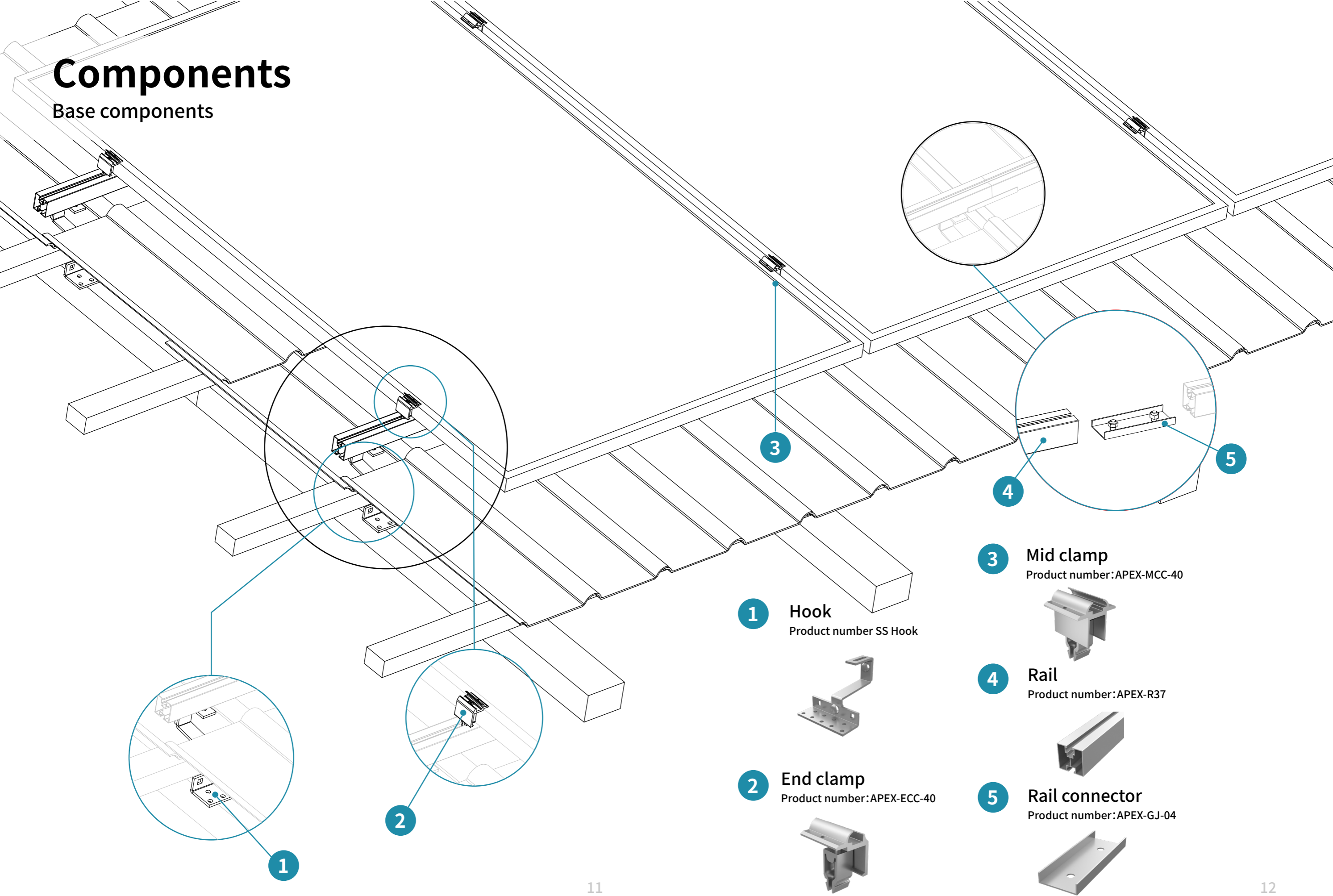


Product number:  
APEX-HK01-A

Product number: APEX-HK01-A	200MM Hanger Bolt APEX-HK01-A	800 pcs. per PU
Product number: APEX-HK01-B	250MM Hanger Bolt APEX-HK01-B	800 pcs. per PU

# Components

## Base components



**1** Hook  
Product number SS Hook



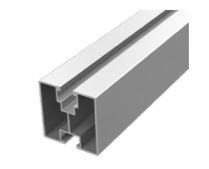
**2** End clamp  
Product number: APEX-ECC-40



**3** Mid clamp  
Product number: APEX-MCC-40



**4** Rail  
Product number: APEX-R37

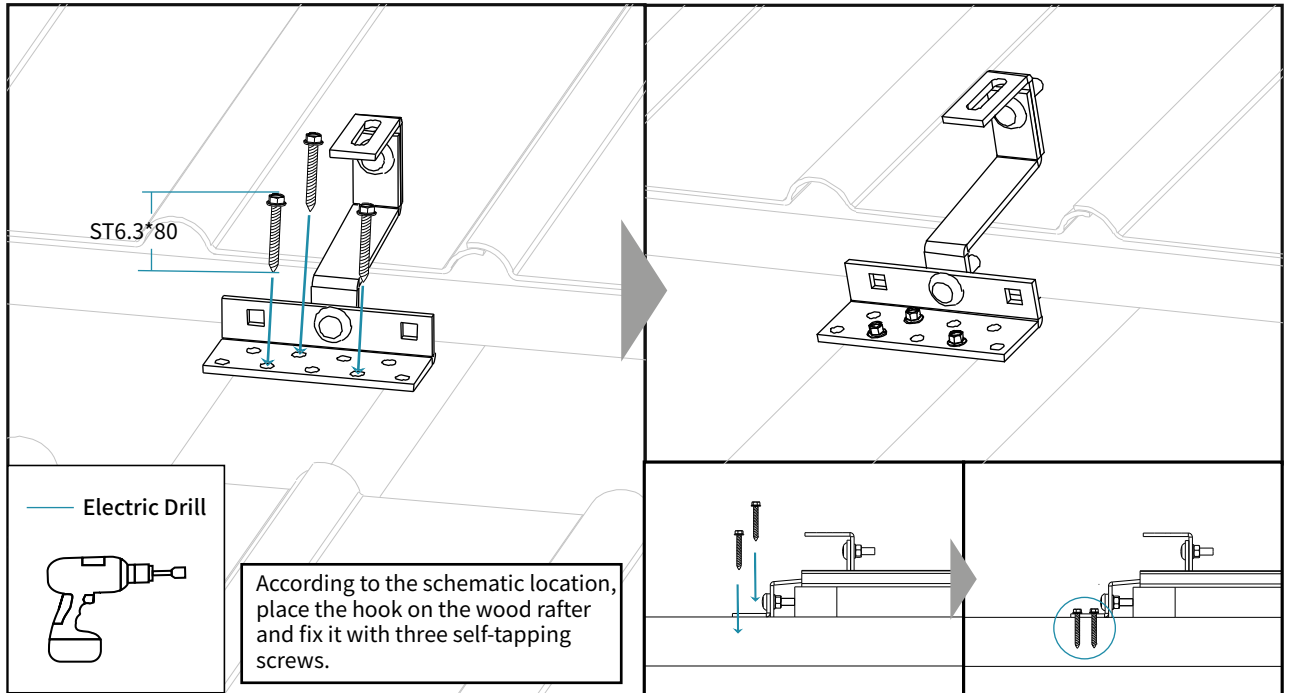


**5** Rail connector  
Product number: APEX-GJ-04

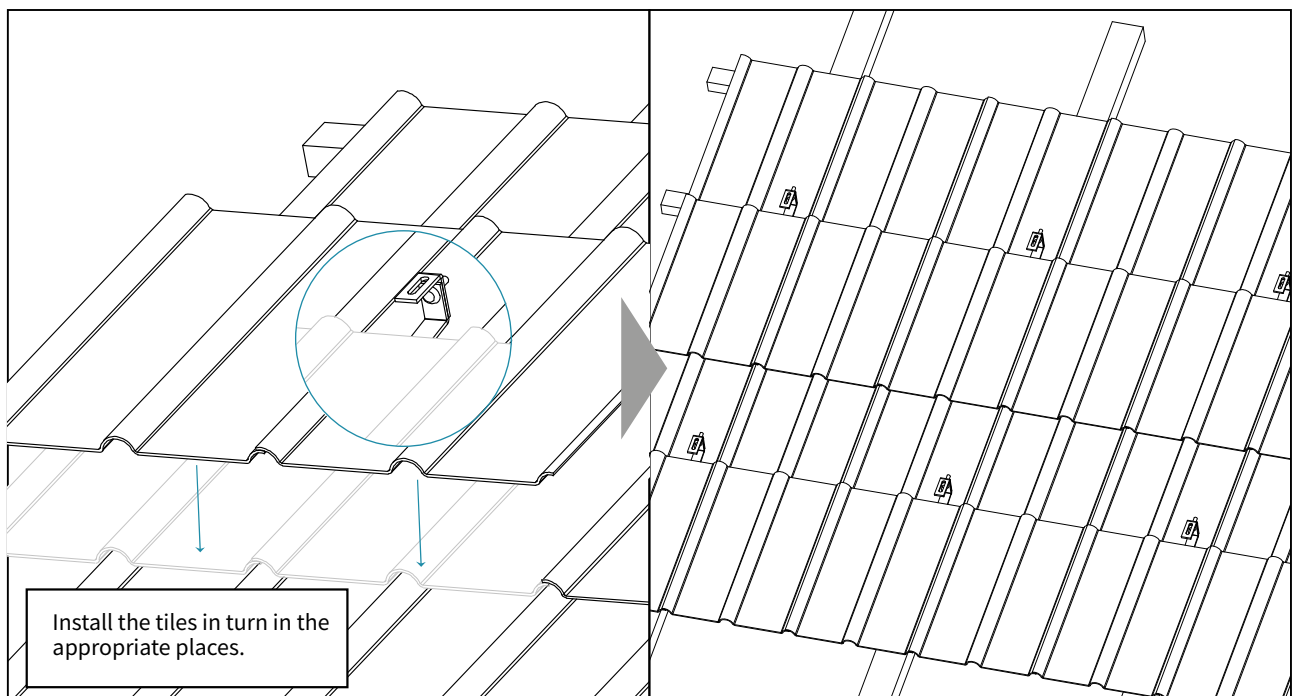


# Installation process

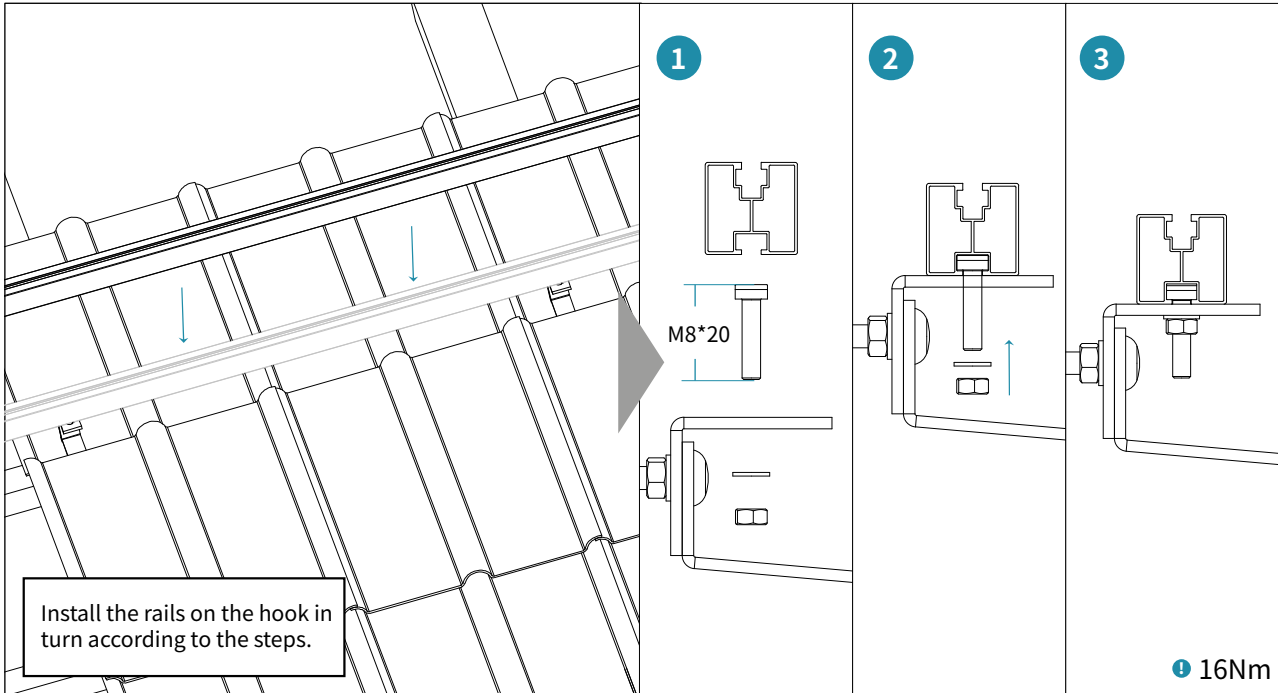
## Hook - fix self-tapping screws



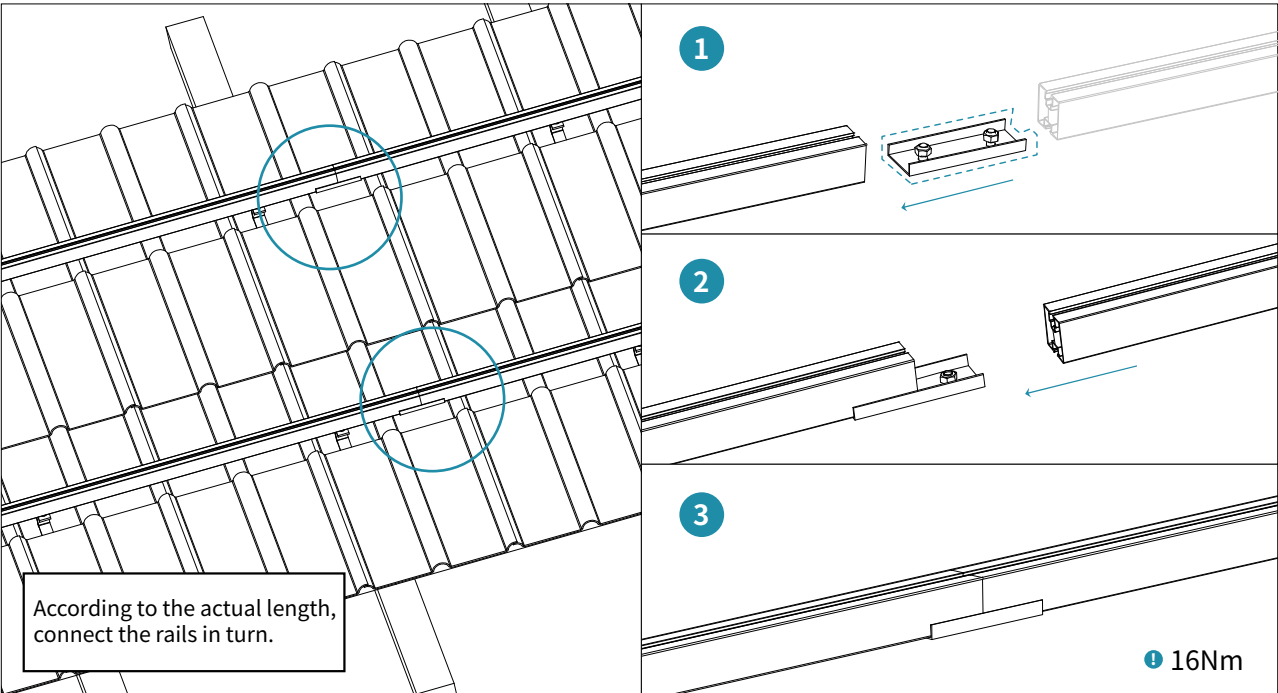
## Hook - cover with tiles



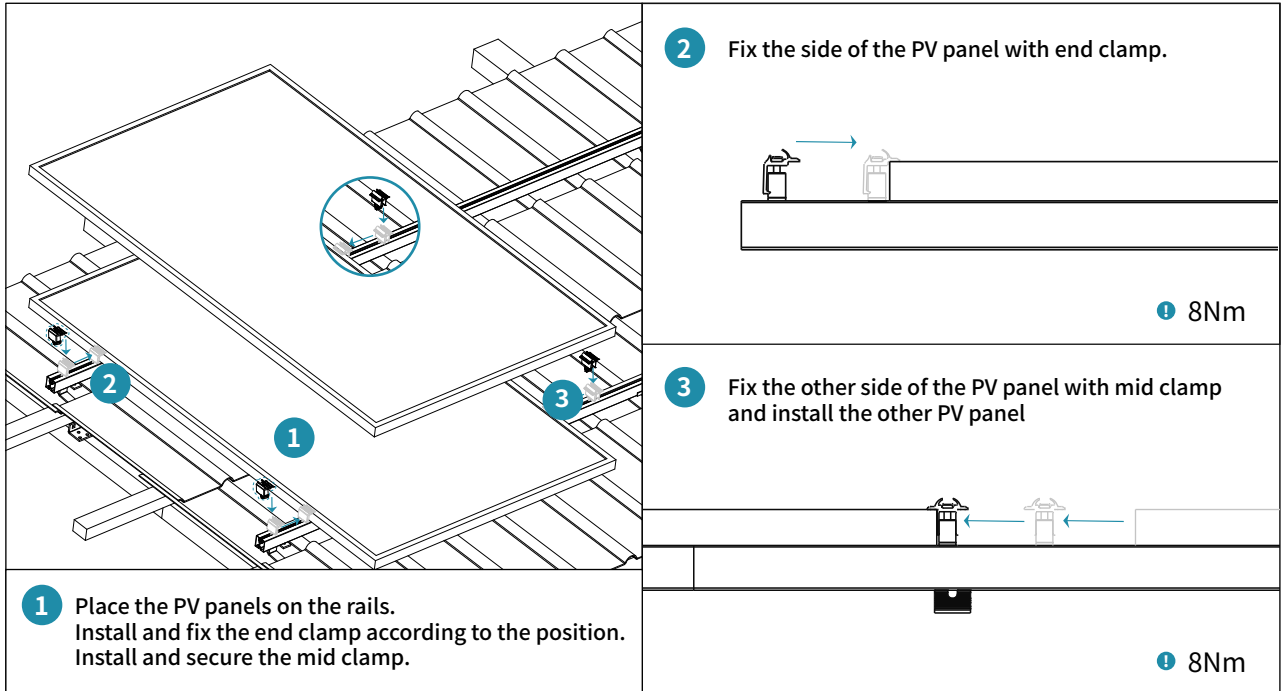
# Rail - install the rails



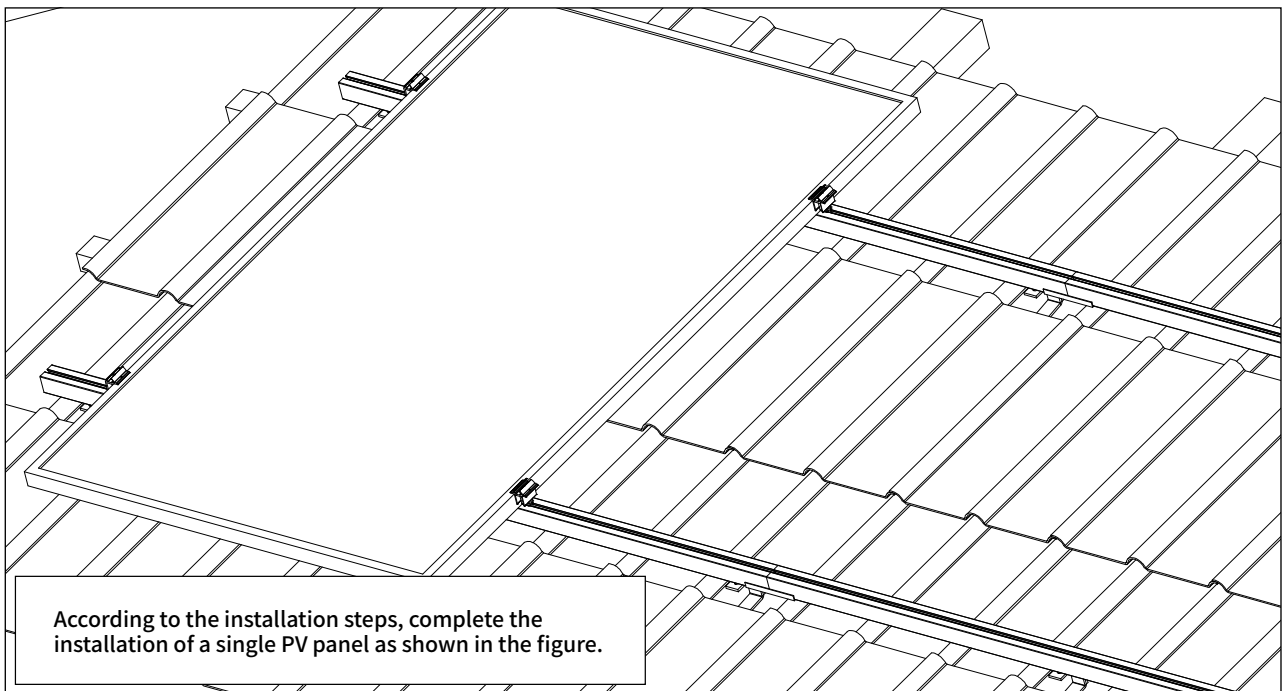
# Rail - connect rails



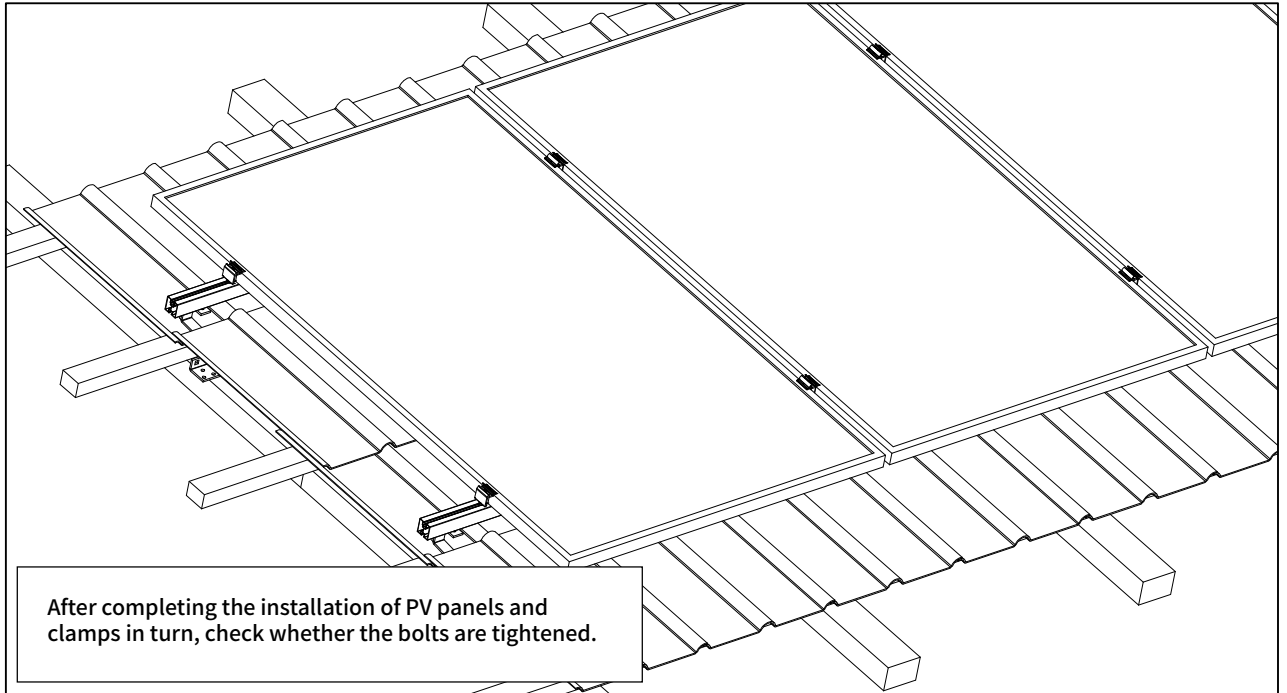
## Clamps - install clamps & PV panels



## Clamps - single PV panel installation



## Clamps - complete the installation



# Thank you for choosing Apex stainless steel hook mounting system.

Stainless steel hook mounting system are quick and easy to install. We hope these instructions have helped. Please contact us if any questions or suggestions for improvement.

Our contact details:

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- Office: Weinhütten 16 91330 Eggolsheim



Stainless steel hook

Product illustrations are exemplary and may differ from the original.