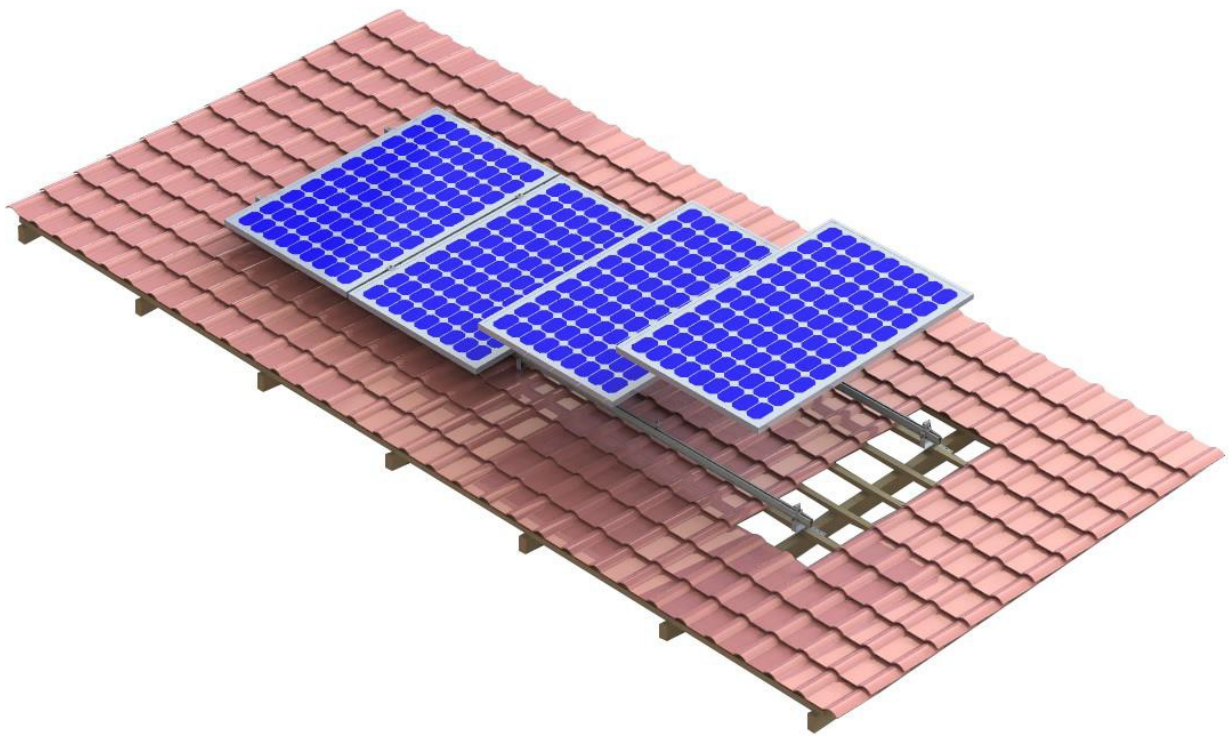# Tile Roof Installation Manual

WHY HULK

We deliver mounting solution with best quality, lower cost and better service, provide support with availability and flexibility and guide you during the whole design process. Using advanced mounting technology, the products can satisfy the requirement of the customers not only with a variety of structures, but also the high quality products which are durable, long lasting, efficient and include 10 years of material warranty.

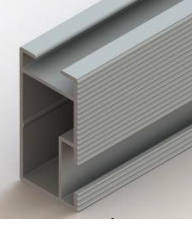| Reliable | All the products are made of high quality aluminum alloy 6005-T5, stainless steel SUS 304 to guarantee anti-corrosion. |
Universal	Hulk have several types of roof hooks to satisfy any application.
Fast	Only a single tool is required for the installation, even faster and more efficient work.
Simple	Easier installation, lower cost, fewer screw joints. Designed and patented screw and nut from Hulk simplify the assembly and reduce the assembly time.
Accredit	Hulk products are in compliance with GB50009, AS/NZS 1170.2 standard.

For Safe Installation

Work

This manual contains critical information regarding electrical and mechanical installation and safety information which you should know before starting installation.

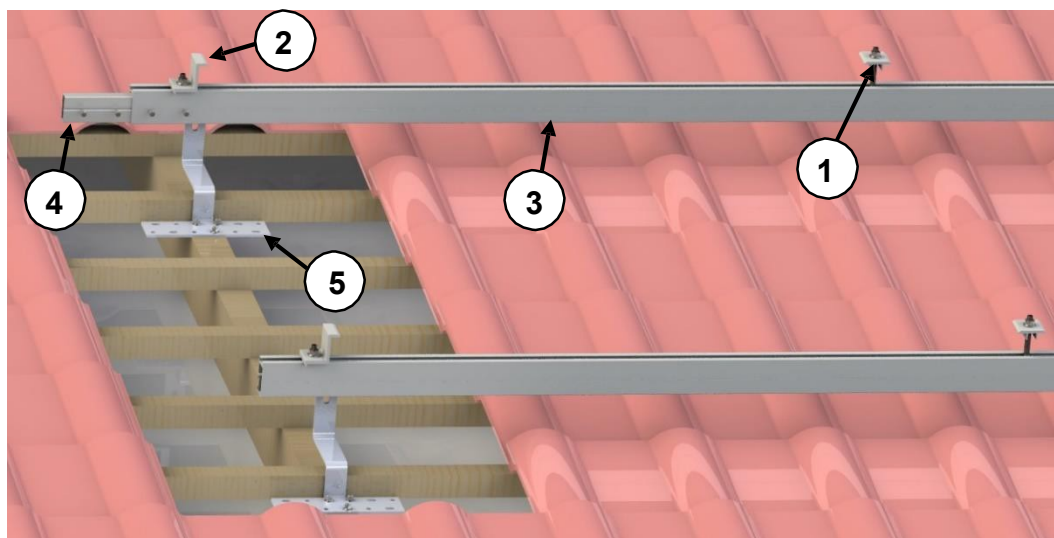⚠ **CAUTIONS REGARDING INSTALLATION OF HULK**

- Stop work during stormy weather. Solar modules may be blown away in the wind, which could cause you to fall.
- Never step or sit on the glass surface of a solar module. The glass may break, resulting in shock or body injury. The module may also stop generating power.
- Always use the supplied parts to attach the solar modules and mounts. Usage of weaker parts, for example, screws are too short, it is dangerous and may cause the solar modules or mounts to fall.
- Always use the specified tools. The solar modules or mounts may fall if the installation is not strong enough, for example, when parts are not tightened sufficiently.
- Do not modify or cut parts. Doing so is dangerous. Safety cannot be guaranteed.
- Product should be installed and maintained by qualified person. Keep unauthorized person away from solar modules.

1. Components List

Part name	Inter Clamp (HQ-S-IC01)	End Clamp (HQ-S-EC01)	Rail (HQ-S-RR01)	Connector (HQ-S-RR01C)	Hook (HQ-S-H01)
Picture					
Material	AL 6005-T5	AL 6005-T5	AL 6005-T5	AL 6005-T5	SUS304

Overview of system components

1. Inter Clamp
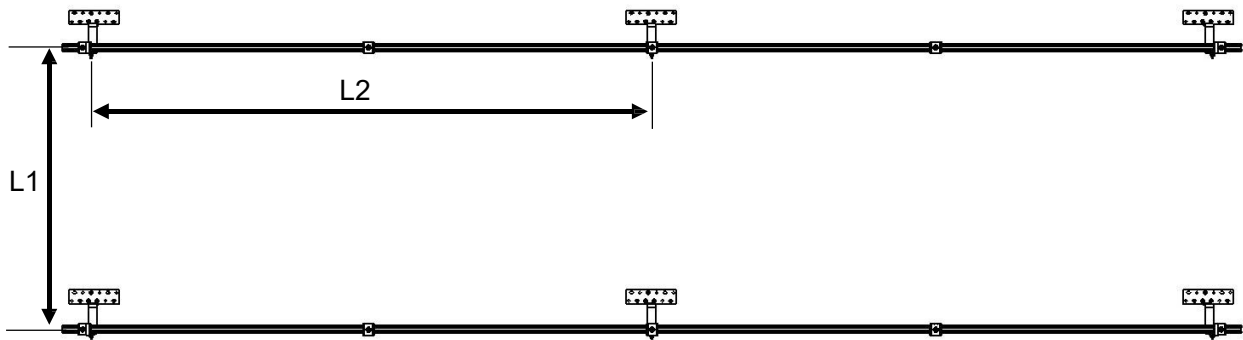2. End Clamp
3. Rail
4. Connector
5. Hook

Tools

Hexagon socket wrench	Electrical drill	Tape measurement	Chalk

2. Tile roof hook installation

2.1 Confirm the hook position according to beam spacing.
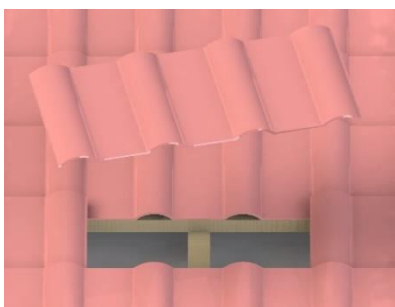

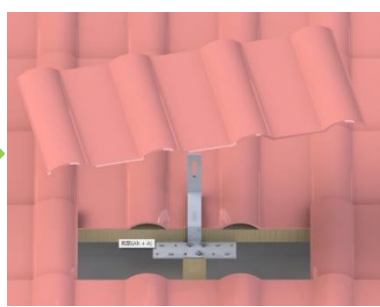L1: Distance between rails is approximately 0.6* panel length.

L2: Distance between roof hooks, usually 1000mm< L2 <1500mm is taken into account.

2.2 Tile Roof Hook Installation

Remove the roof tiles, and fix roof hook on the roof beam with three pieces of wooden screw, then cover the tiles.

Remove the roof tiles at the marked positions or simply lift them up slightly.

Insert the roof hook to the wooden beam. Fix the roof hooks with screws.

Cover the hooks with tile.

Note:

1. When fix the hook on a wooden beam, the bottom of hook and wooden beams need to be parallel (not tilt), then use the wooden screw to fix. Add boards mat at the bottom of hook if there is a gap between hook and roof beam.
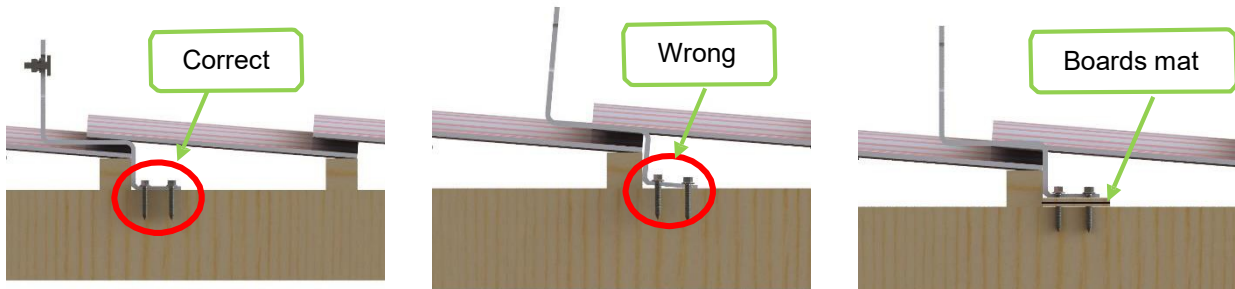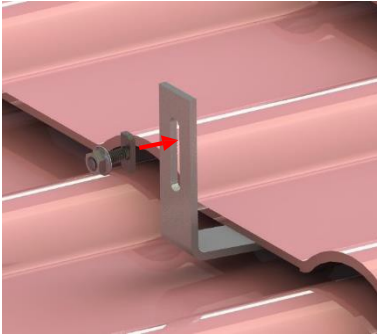

2. The length of wooden screw is dependent of the thickness of roof beam (THK).
   - If 50 mm < THK ≤ 80 mm, the length of wooden screw will be 50mm.
   - THK > 80mm, the length of self-tapping screw will could be 50 or 80mm.

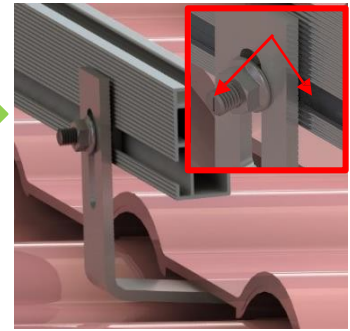thickness of roof beam (THK)
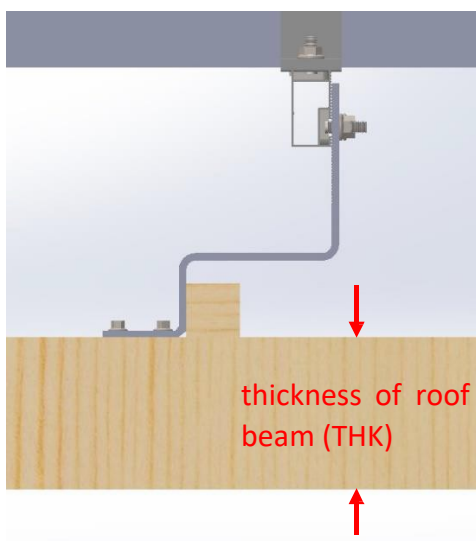
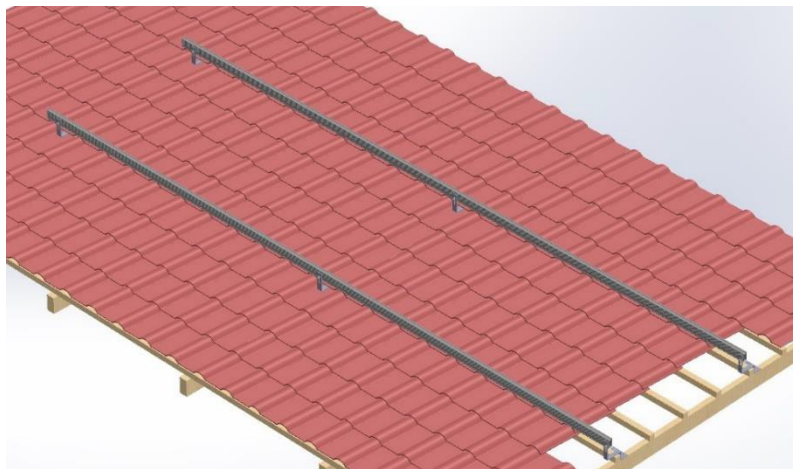# 3. Rail installation

3.1 Fix the rail to the hook

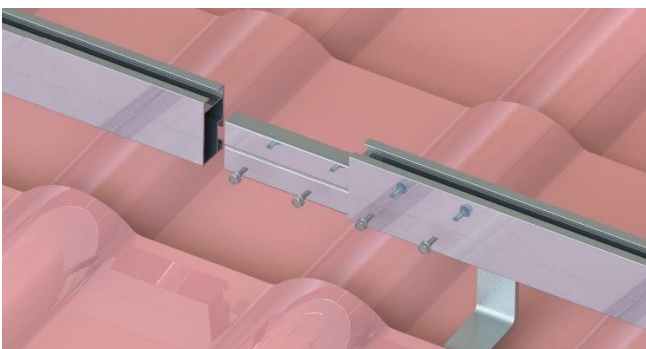Plug the bolt through the groove of hook.
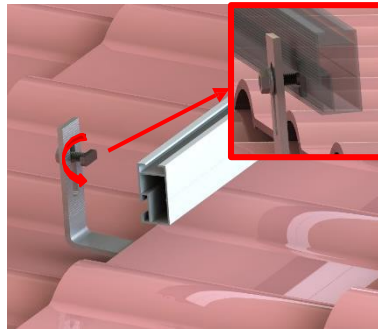
Attach the bolt into the groove of rail, rotate the bolt to engage the groove.

Fasten the bolt to fix the rail, make sure the mark at the bottom of the bolt is vertical to the groove.
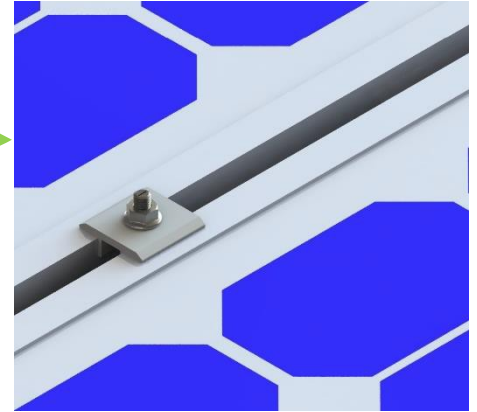

3.2 Installation of two rails with connector

Connect two rails together, slide the connector on the rear side of the pre-assembled rails halfway to the side, then fasten with four pieces of self-tapping screw firmly.
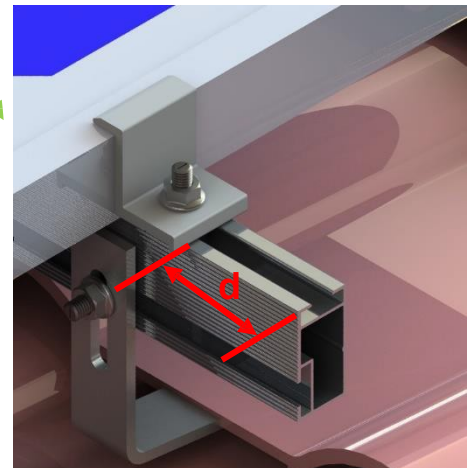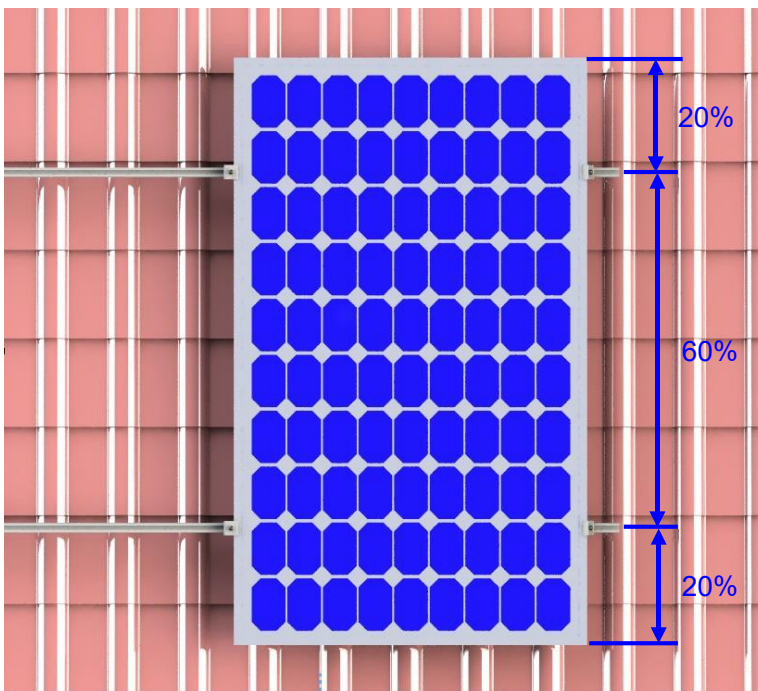
4. Solar panel installation

4.1 Fix the solar panel to the rail with inter clamp and end clamp.
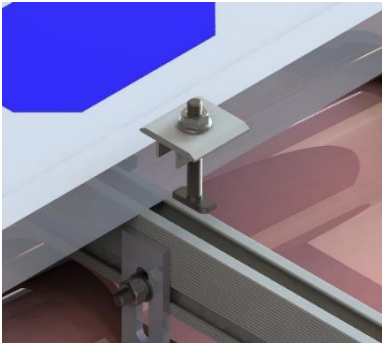

Slide the next panel against the installed panel, then fasten the inter clamp.

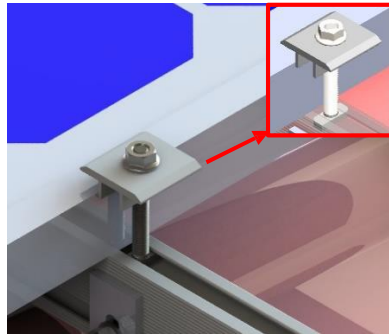Start to install solar panel, place the first panel of the bottom row.

20%

60%

20%

Slide the end clamp tightly against the panel and fasten it. There should be a margin of d = 25mm – 30mm.
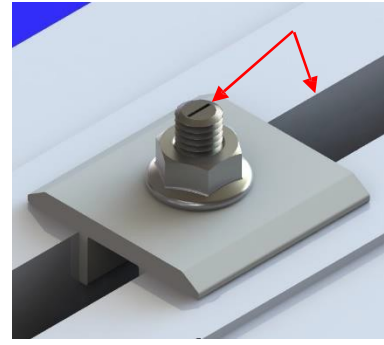
4.2 Inter clamp installation details.

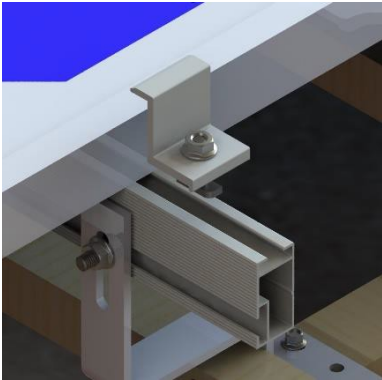Put the bolt into the groove of rail.

Slide the bolt to the position close to the solar panel. Engage the bolt head with groove.

Fasten the inter, make sure the mark at the bottom of the bolt is parallel to the edge to solar panel.

4.3 End clamp installation details.

Put the bolt into the groove of rail.

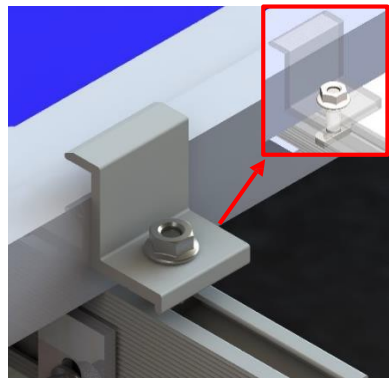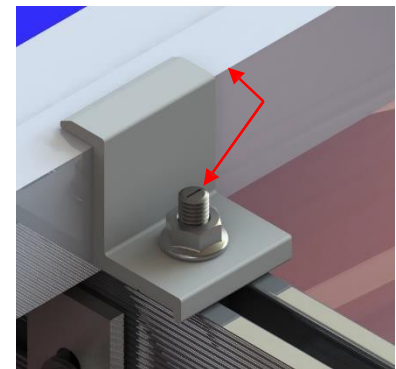Slide the bolt to the position close to the solar panel. Engage the bolt head with groove.

Fasten the end clamp, make sure the mark at the bottom of the bolt is parallel to the edge to solar panel.

4.4 Finished panel installation.