



## Samil Power

Expert for PV Mounting System



- Tile Roof Mounting System
- Tin Roof Mounting System

# COMPANY INTRODUCTION



Samil Power is dedicated in developing and producing panel mounting systems suitable for a variety of building types and climate zones. After years of efforts and accumulation of in-depth experience, Samil Power was able to form a system of effective solutions for multifarious power plants which include flat roof mounting system, pitched roof mounting system, open ground mounting system ,etc.

From design, test, manufacture to installation, we strive to ensure our mounting systems offer world-class safety and reliability.



## Product features:

- Fast and simple installation
- High quality components
- Suitable for all roof types and all PV modules
- Mechanical calculation and reliability tested to ensure highest product quality
- 10 years product warranty

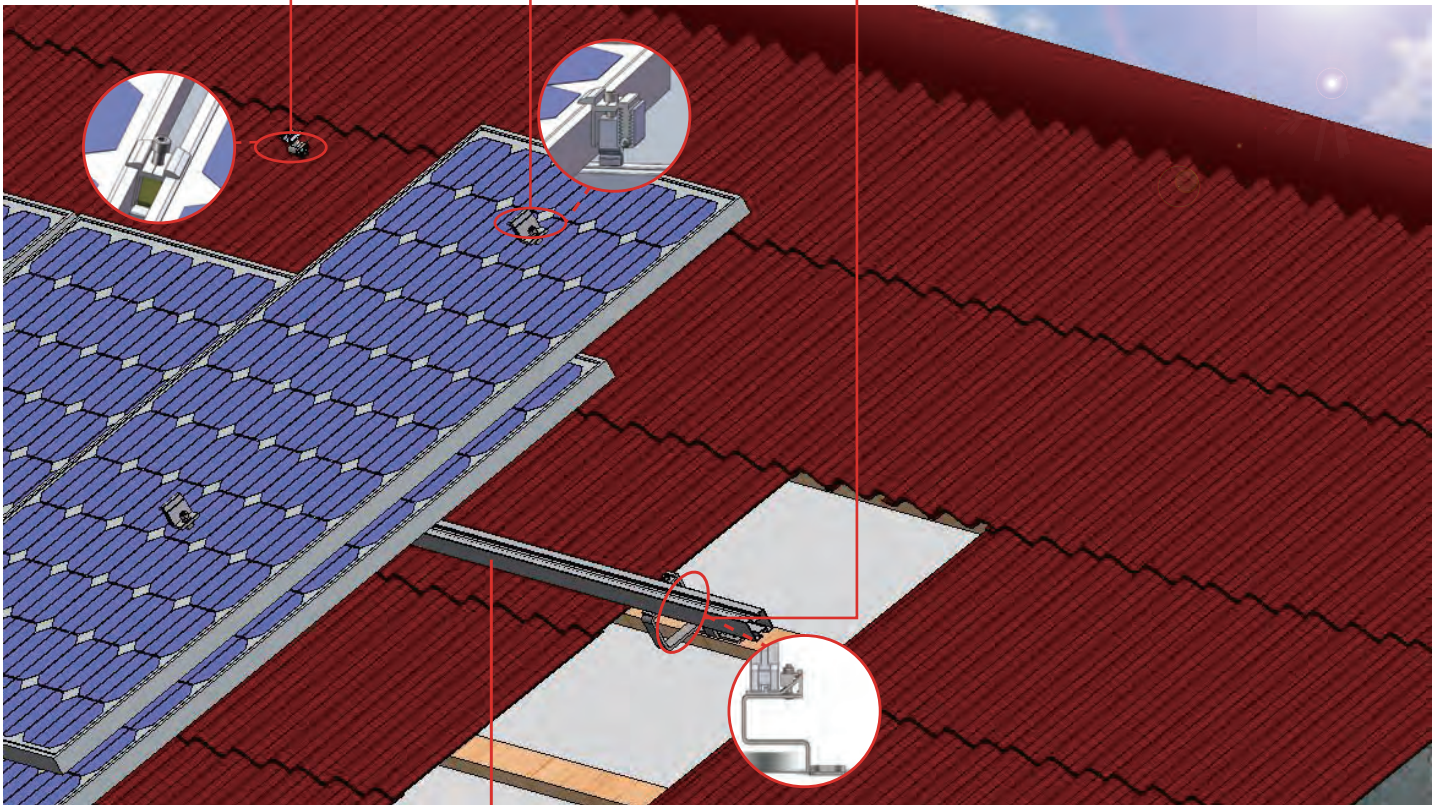


### 3. Roof Hook

Once fastening the bolt, hook could be directly fixed to the rail. Samil Power offers a wide range of roof hooks with different strength limits and structures, available for different roof types and load capacity.

### 2. Click-in End / Middle clamp

Modules can be fastened by clicking clamps into rails. The height of end clamp is adjustable to fit any thickness modules from 30mm to 50mm.

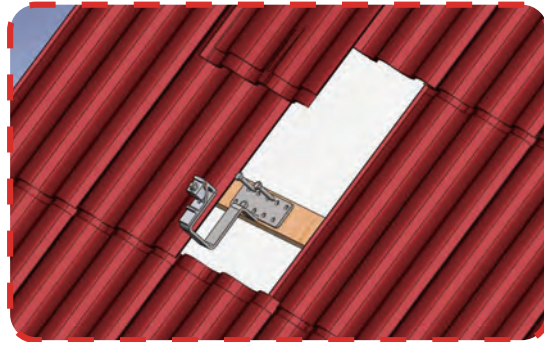


### 1. Rail

6063-T6 Aluminum rails are standard components for different types of mounting system solutions. With its optimized innerstructural design, rails have stronger strengths with lighter weight.

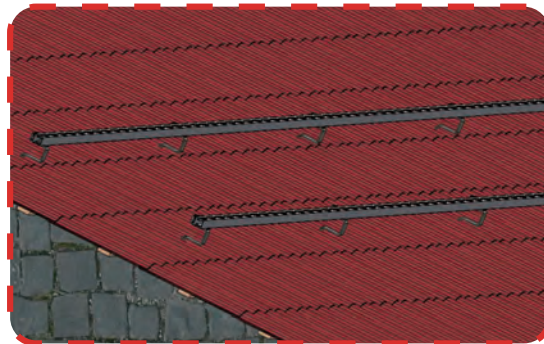
### Installation Guidance

1. Open tiles, the connecting parts should be connected on the roof beams with tapping screws.

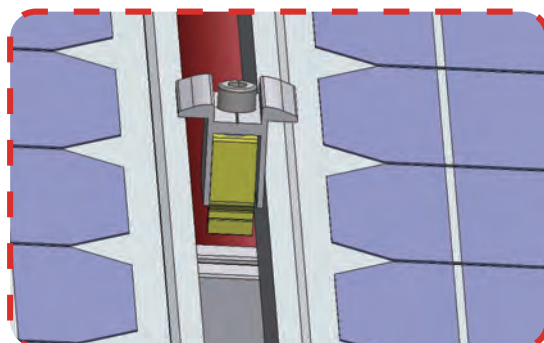
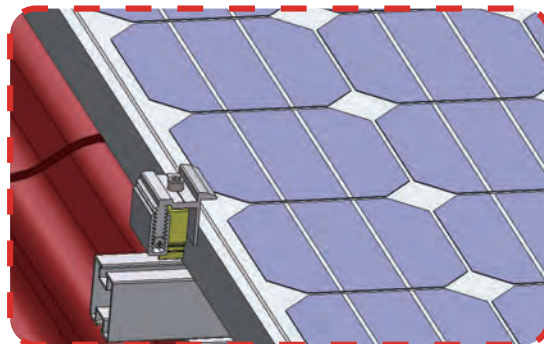
**Advantage:**

- The hooks can be adjusted to cater for tiles with different thickness
- This system is 100% water-proof, no water penetration to the roof.
- Pre-assembly
- Light weight




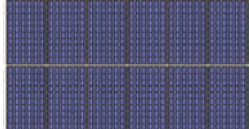
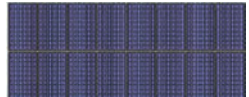
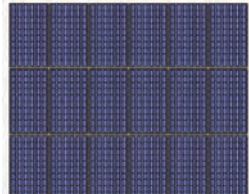

2. Fasten top screw of the roof hook to fix rails.



3. Install modules onto mounting system.



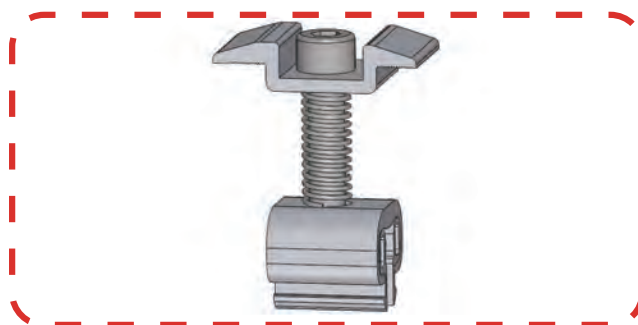
### Tile Roof PV System Installation Data

| PV Array   | 185Wp Module | Installation Manpower | Installation time | Installation tool |
|--|--------------|-----------------------|-------------------|-------------------|
| <br>1.1KW PV Array   | 6            | 2 persons             | 20Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 2            | 6                     | 4                 | 10                |
| <br>1.5KW PV Array   | 8            | 2 persons             | 26Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 4            | 10                    | 4                 | 14                |
| <br>1.9KW PV Array  | 10           | 2 persons             | 32Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 4            | 12                    | 4                 | 18                |
| <br>2.2KW PV Array | 12           | 2 persons             | 40Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 4            | 12                    | 8                 | 20                |
| <br>3KW PV Array   | 16           | 2 persons             | 52Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 4            | 20                    | 8                 | 28                |
| <br>3.3KW PV Array | 18           | 2 persons             | 60Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 6            | 18                    | 12                | 30                |
| <br>3.7KW PV Array | 20           | 2 persons             | 60Min             | Electric Drill    |
|  | Rail         | Hook                  | End Clamp         | Middle Clamp      |
|  | 8            | 24                    | 8                 | 36                |

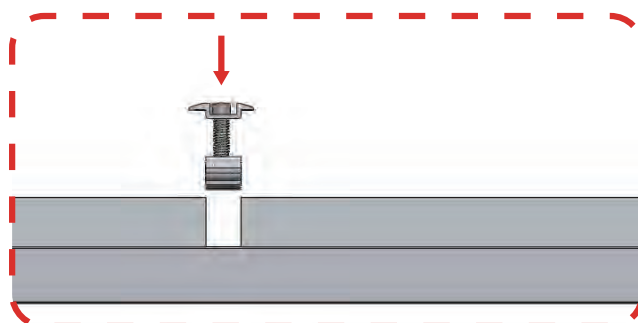


### Click-in Middle Clamp MCA-Q01

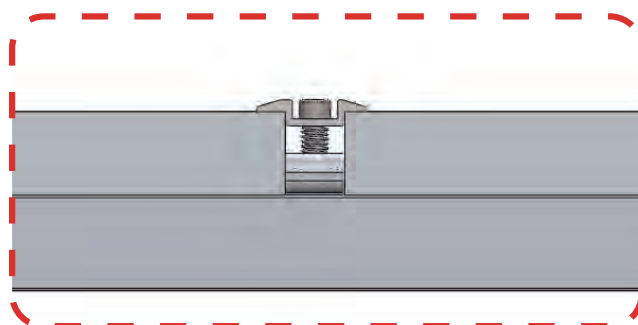
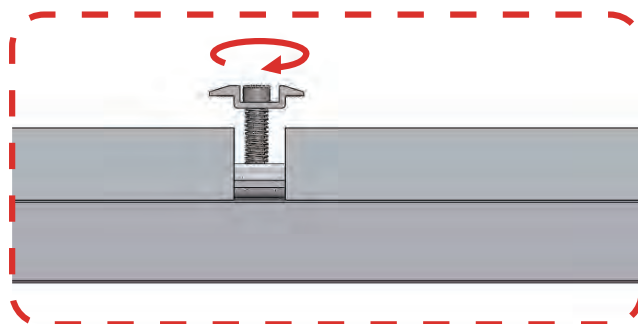
The Material is AL6063-T6. The Modules can be fastened by clicking the clamps into rails.



1. Click the clamp, fasten the module to the rail.

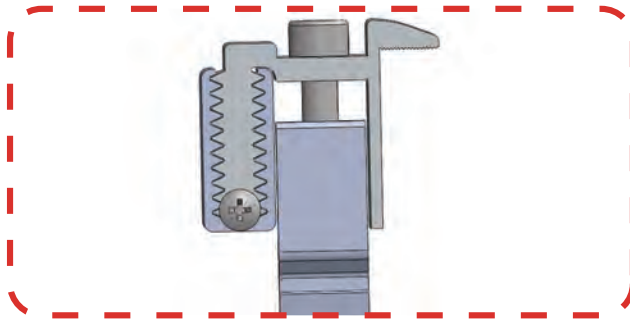


2. Fasten the top screw.

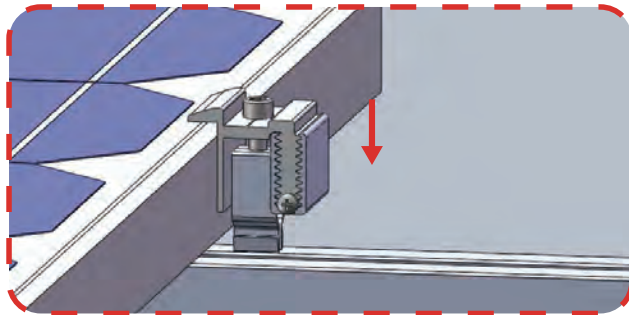


### Click-in End Clamp ECA-Q01

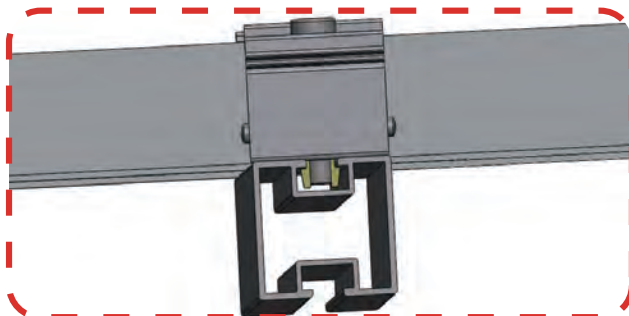
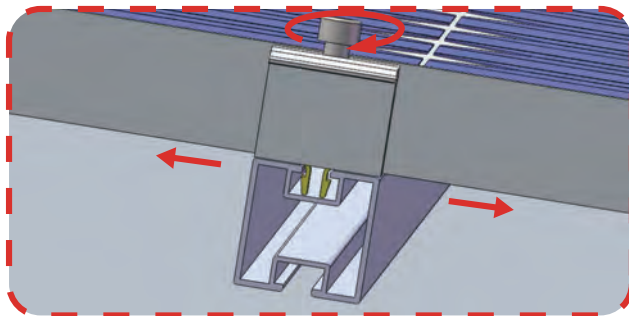
The Material is AL6063-T6, the Clamp can be adjusted to cater for modules with thickness from 30mm to 50mm. The Modules can be fastened by clicking the clamps into rails.



1. Put the PV module on the rail. Click the clamp, fasten the module to the rail.

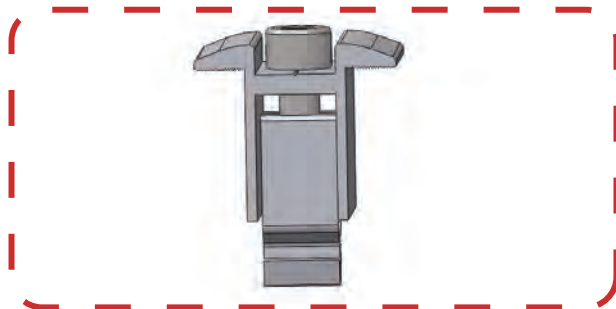


2. Fasten the top screw.

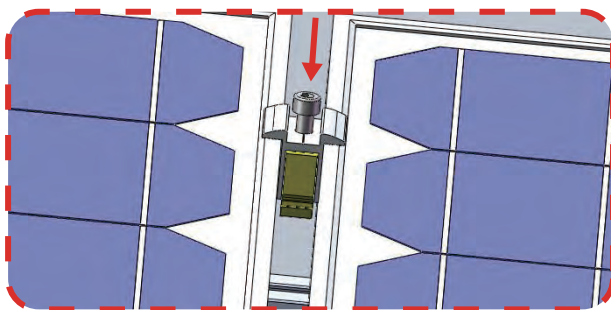


### Click-in Middle Clamp MCA-Q02

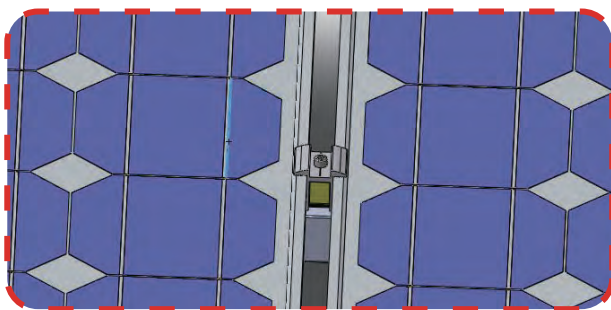
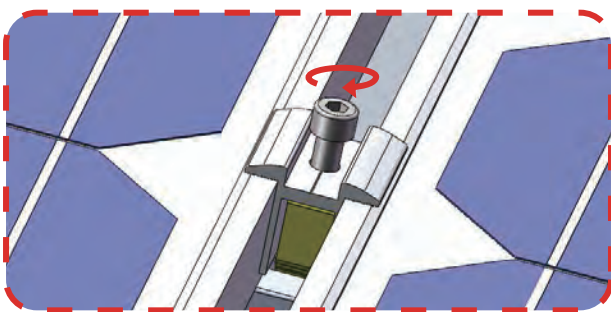
The Material is AL6063-T6, The Modules can be fastened by clicking the clamps into rails.  
put the PV module on the rail.



1. Click the clamp, fasten the module to the rail.



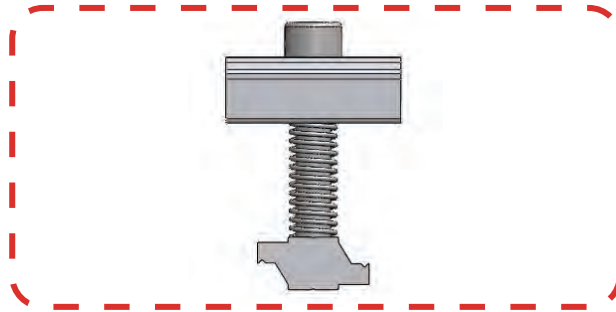
2. Fasten the top screw.



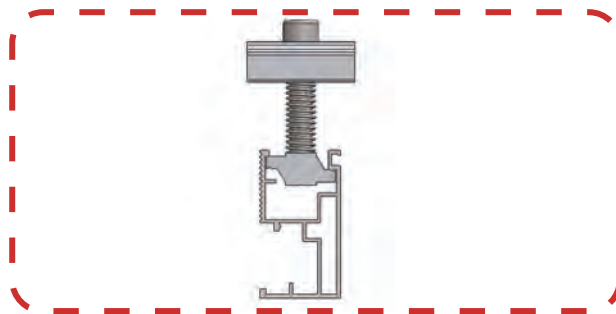


### T-type Middle Clamp MCA-001

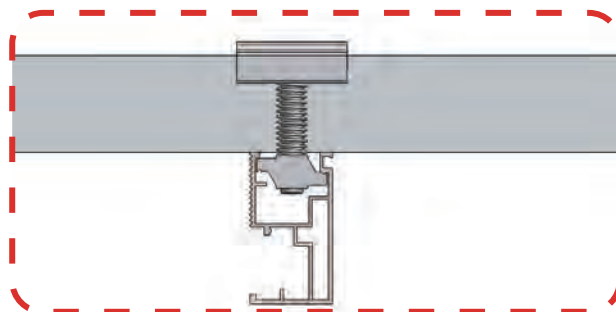
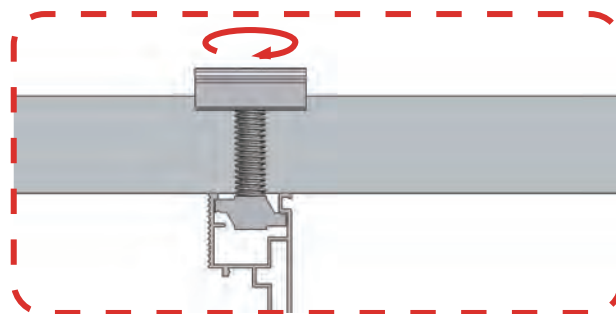
The Material is AL6063-T6, with the T-bot, it can be easily fastened into the rail to fix the module.



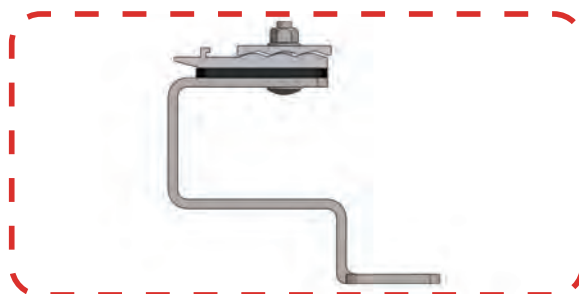
1. Put T-Middle clamp into the rail.



2. Fasten the top screw.

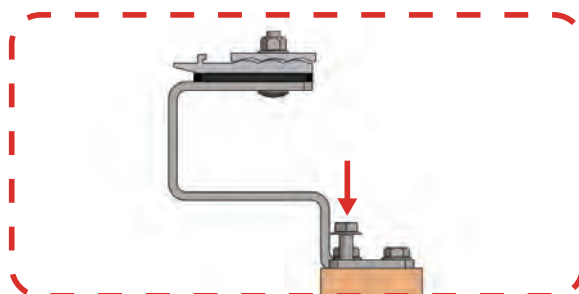


### Quick-Fasten Hook HOU-Q01

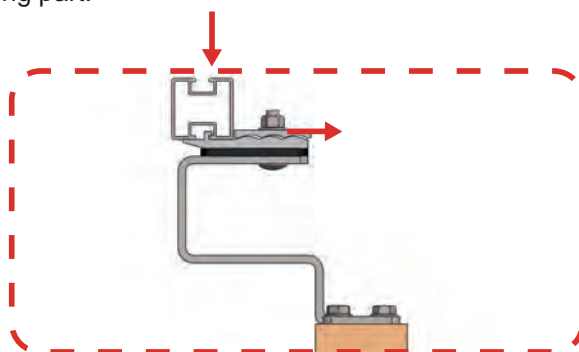
**Material:**

- Hook part: SUS304
- Connecting part: AL6063-T6
- Rubber cushion: EPDM Rubber

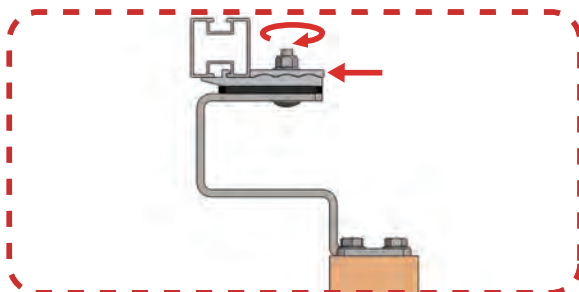
1. Fasten the bottom screw, fix hook to the wood beam.



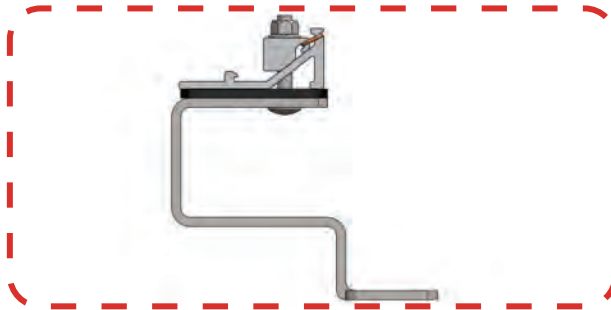
2. Put the rail on the connecting part.



3. Fasten the top screw, fix hook to the rail.

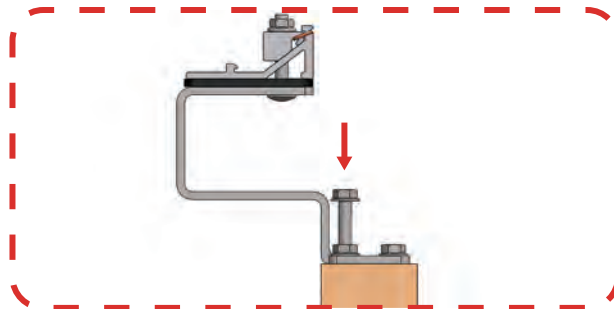


### Quick-Fasten Hook HOU-Q02

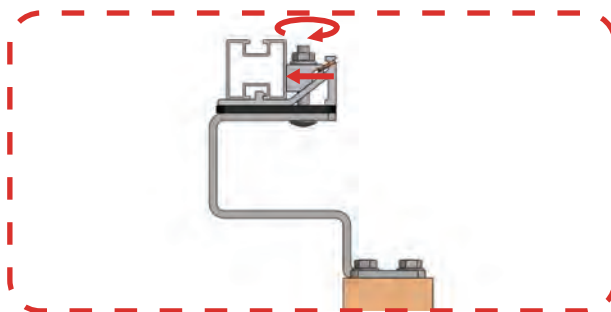
**Material:**

- Hook part: SUS304
- Connecting part: AL6063-T6
- Rubber cushion: EPDM Rubber

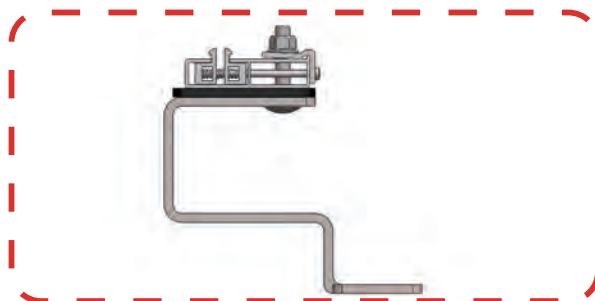
1. Fasten the bottom screw, fix hook to the wood beam.



2. Put the rail on the connecting part. Fasten the top screw, fix hook to the rail.

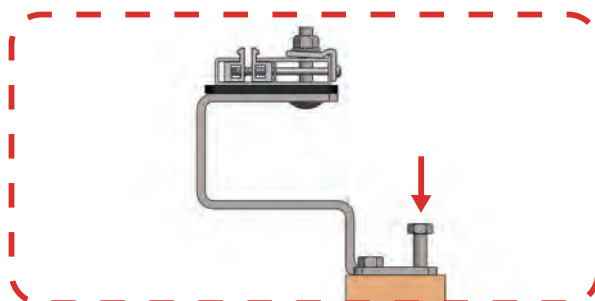


### Quick-Fasten Hook HOU-Q03

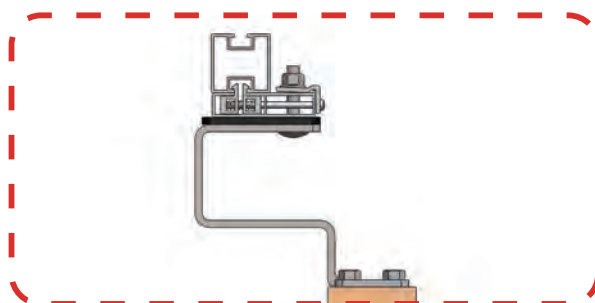
**Material:**

- Hook part: SUS304
- Connecting part: AL6063-T6
- Rubber cushion: EPDM Rubber

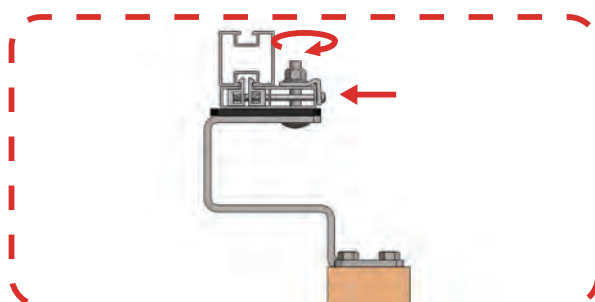
1. Fasten the bottom screw, fix hook to the wood beam.



2. Put the rail on the connecting part.




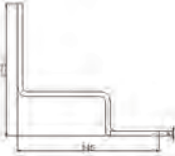

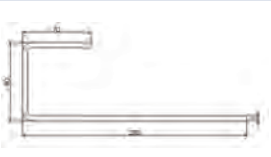



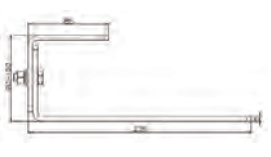



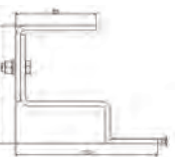

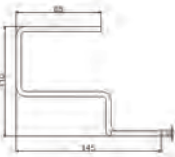
3. Fasten the side screw and top screw, fix hook to the rail.





### Optional Hook

Roof hooks with different strength limits and structures are available for different roof types and load capacity.

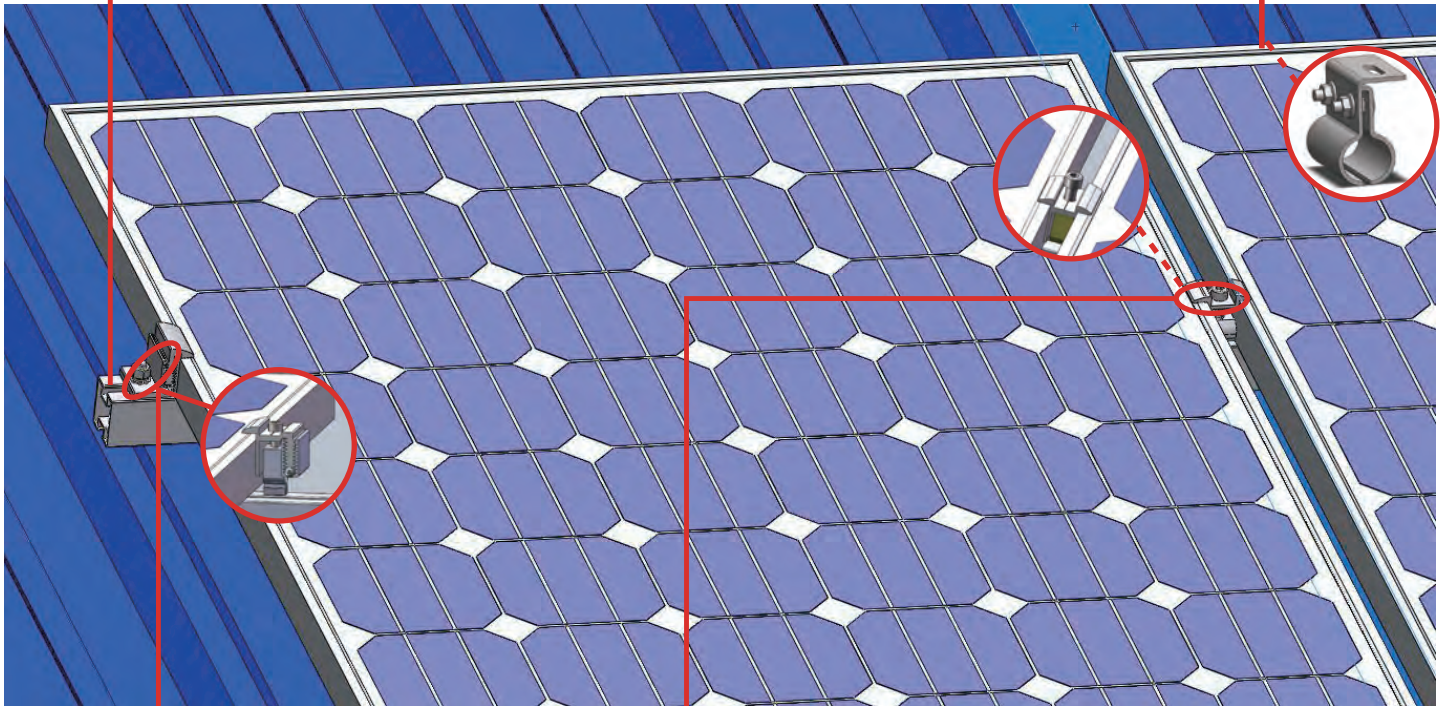
| Hook type   | Part NO. | Drawing   | Dimension(mm)      | Material |
|---|----------|---|--------------------|----------|
|    | HOU-001  |    | 135*145*5          | SUS304   |
|    | HOU-002  |    | 230*80*70*5        | SUS304   |
|   | HOU-003  |   | 80*230*5           | SUS304   |
|  | HOU-004  |  | (90~130)*80*235*5  | SUS304   |
|  | HOU-005  |  | 80*85*5            | SUS304   |
|  | HOU-006  |  | (125~165)*85*150*5 | SUS304   |
|  | HOU-007  |  | 110*145*85*5       | SUS304   |

### 1. Rail

6063-T6 Aluminum rails are standard components for different types of mounting system solutions. With its optimized innerstructural design, rails have stronger strengths with lighter weight.

### 3. Metal Sheet Clamp

Once fastening the bolt, metal sheet clamp could be directly fixed to the rail. Samil Power offers a wide range of metal sheet clamp with different strength limits and structures, available for different roof types and load capacity.

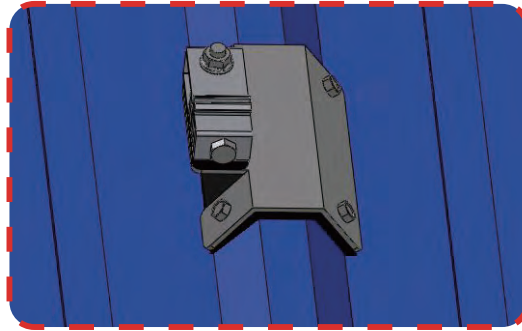


### 2. Click-in End/Middle clamp

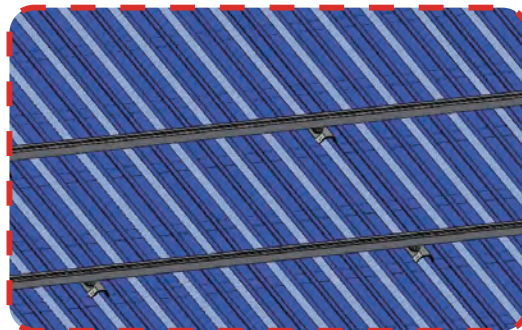
Modules can be fastened by clicking clamps into rails. The height of end clamp is adjustable to fit any thickness modules from 30mm to 50mm.

### Installation Guidance

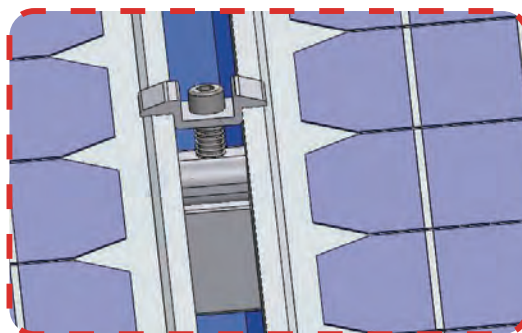
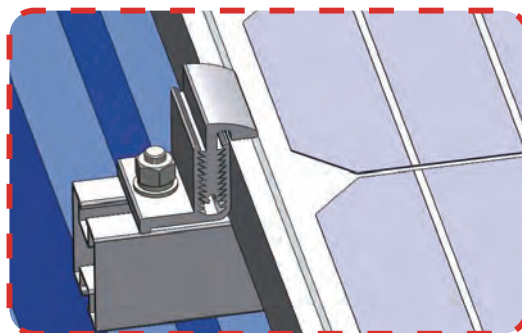
1. The metal sheet clamp should be connected on the beams of roof with screws.






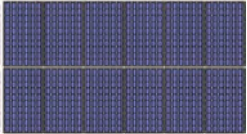
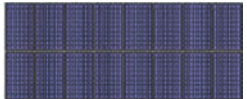
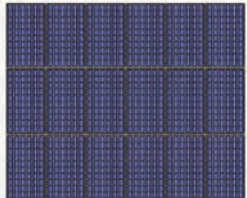

2. The rails should be installed on the metal sheet clamp.



3. The modules should be installed on rails with middle clamps and end clamps.

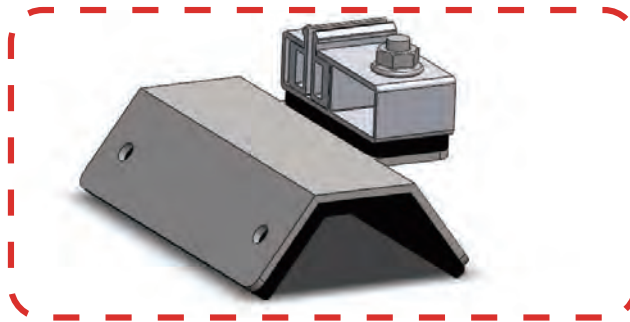


### Tin Roof PV System Installation Data

| PV Array   | 185Wp Module | Installation Manpower | Installation time | Installation tool |
|--|--------------|-----------------------|-------------------|-------------------|
| <br>1.1KW PV Array   | 6            | 2 persons             | 20Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 2            | 6                     | 4                 | 10                |
| <br>1.5KW PV Array   | 8            | 2 persons             | 26Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 4            | 10                    | 4                 | 14                |
| <br>1.9KW PV Array  | 10           | 2 persons             | 32Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 4            | 12                    | 4                 | 18                |
| <br>2.2KW PV Array | 12           | 2 persons             | 40Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 4            | 12                    | 8                 | 20                |
| <br>3KW PV Array   | 16           | 2 persons             | 52Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 4            | 20                    | 8                 | 28                |
| <br>3.3KW PV Array | 18           | 2 persons             | 60Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 6            | 18                    | 12                | 30                |
| <br>3.7KW PV Array | 20           | 2 persons             | 60Min             | Electric Drill    |
|  | Rail         | Metal Sheet Clamp     | End Clamp         | Middle Clamp      |
|  | 8            | 24                    | 8                 | 36                |



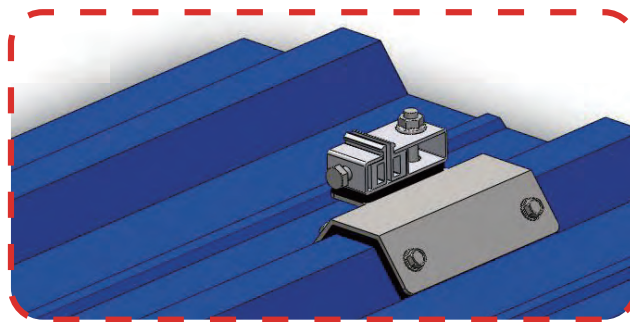
### Quick-Fasten Metal Sheet Clamp MSA-Q01



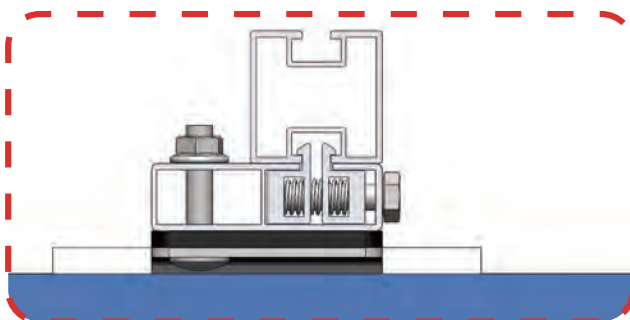
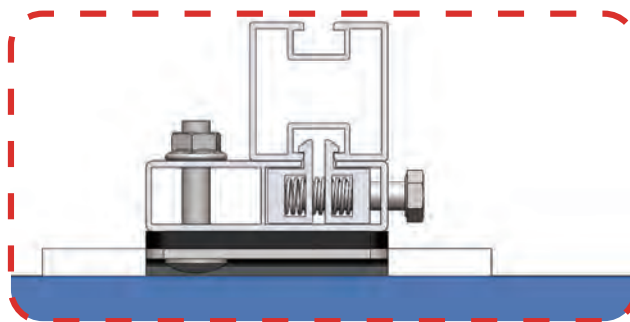
**Material:**

- AL6063-T6
- Rubber cushion: EPDM Rubber

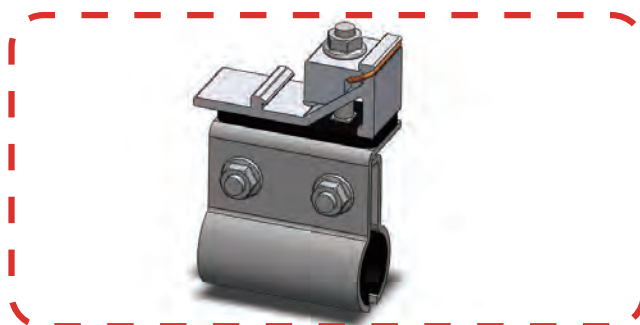
1. Fasten the bottom screw, fix metal sheet clamp to the beam.



2. Put the rail on the connecting part. Fasten the side screw, fix metal sheet clamp to the rail.

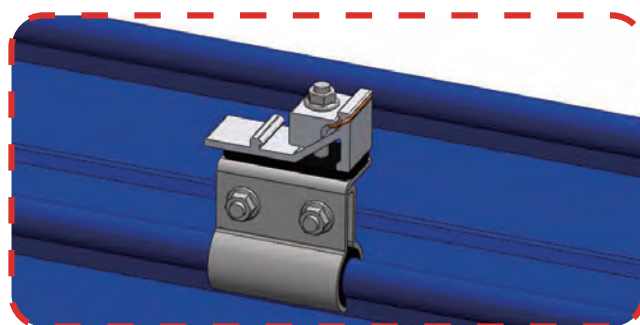


### Quick-Fasten Metal Sheet Clamp MSA-Q02

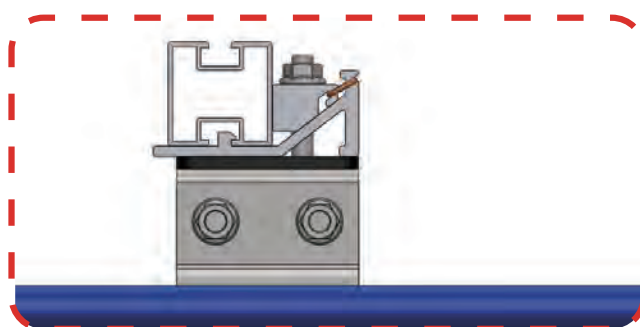
**Advantage:**

- Ease for installation
- This system is 100% water-proof, no water penetration to the roof.
- Pre-assembly
- Light weight

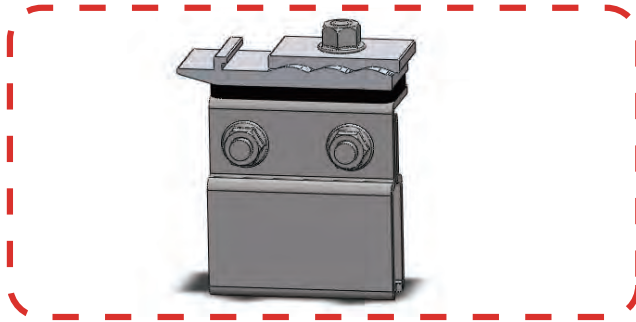
1. Fasten the bottom screw, connect the metal sheet clamp to the Tin roof.



2. Fasten top screw of the clamp to fix rails.

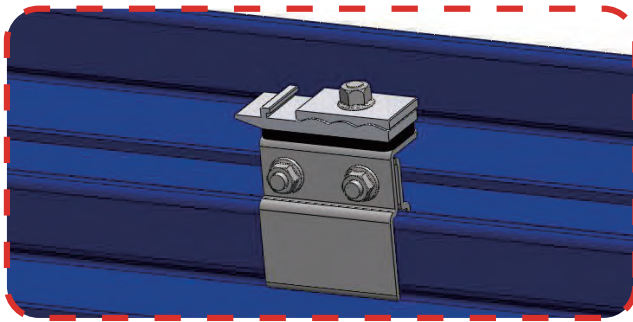


### Quick-Fasten Metal Sheet Clamp MSA-Q03

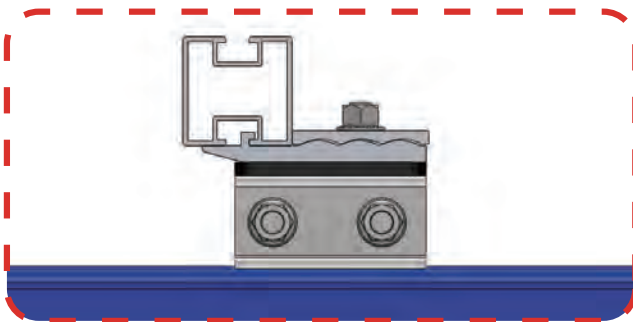
**Advantage:**

- Ease for installation
- This system is 100% water-proof, no water penetration to the roof.
- Pre-assembly
- Light weight

1. Fasten the bottom screw, connect the metal sheet clamp to the Tin roof.




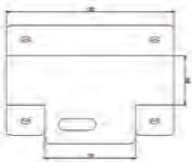

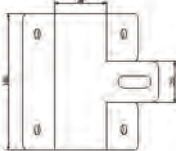

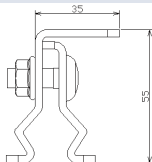

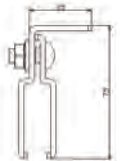

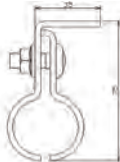


2. Fasten top screw of the clamp to fix rails.



### Optional Metal Sheet Clamp

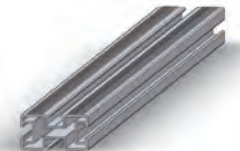
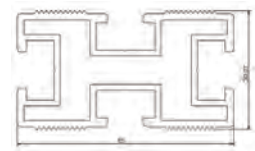
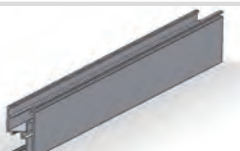
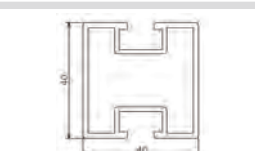
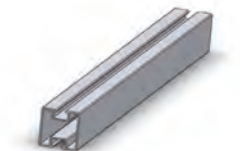
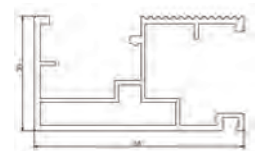
Metal Sheet Clamp with different strength limits and structures are available for different roof types and load capacity.

| Metal Sheet Clamp type  | Part NO. | Drawing   | Dimension(mm)      | Material |
|---|----------|---|--------------------|----------|
|    | MSA-001  |    | 135*145*5          | SUS304   |
|    | MSA-002  |    | 230*80*70*5        | SUS304   |
|   | MSA-003  |   | 80*230*5           | SUS304   |
|  | MSA-004  |  | 70*35*55*3         | SUS304   |
|  | MSA-005  |  | 70*35*55*3         | SUS304   |
|  | MSA-006  |  | (125~165)*85*150*5 | SUS304   |




### Rail

Rail is used to support PV modules. Usually one PV module shall be fastened with two rails by clamps.

| Rail type  | Part NO. | Drawing  | Dimension(mm) | Material |
|--|----------|--|---------------|----------|
|   | RAA-001  |   | 30.27*55      | 6360-T6  |
|   | RAA-002  |   | 40*40         | 6360-T6  |
|  | RAA-003  |  | 30*55         | 6360-T6  |

### Clamp

To ensure module and the whole system stability, we design clamps suitable for C-Si and TF modules.

| Clamp type  | Part NO. | Drawing   | Dimension(mm) | Material |
|---|----------|---|---------------|----------|
|    | ECA-Q03  |    | 30~50         | 6063-T6  |
|    | ECA-Q01  |    | 30~50         | 6063-T6  |
|  | MCA-Q01  |  | 30~50         | 6063-T6  |
|  | MCA-Q02  |  | (30~50)*25    | 6063-T6  |
|  | MCA-001  |  | 30~50         | 6063-T6  |
|  | ECA-002  |  | 30~50         | 6063-T6  |
|  | MCA-Q03  |  | 30~50         | 6063-T6  |

### Screw Bolt

Screw Bolt is made of 304 stainless steel.

Samil Power always provides high quality screw bolts which conform to GB to ensure high reliability of the whole system.

| Screw Bolt  | Part NO.                               | Dimension (mm)                          | Material |
|---|--|---|----------|
|    | Hexagon socket screw/bolt              | M8*25/30/35/40/45/50                    | SUS304   |
|    | Step bolt                              | M8*40/M8*45                             | SUS304   |
|  | T-bolt                                 | M8*25/M8*30/M8*35/<br>M8*40/M8*45/M8*50 | SUS304   |
|  | Hexagon self-tapping screw             | M8*25/M8*45                             | SUS304   |
|  | Cross recessed head self-tapping screw | ST3.5*9.5                               | SUS304   |
|  | Hexagon FLANGE nut                     | M8/M10                                  | SUS304   |
|  | Hexagon socket nut                     | M6/M8                                   | SUS304   |



# **Samil Power**

Expert for PV Mounting System

## **Samil Power Co., Ltd.**

### **Marketing & Sales Office**

Add: No.52,Huigu Innovation Park, Huishan District,  
Wuxi,Jiangsu Province,P.R.China 214174

Tel: +86 510 83593131

Fax: +86 510 81819678

E-mail:info@samilpower.com

<http://www.samilpower.com>

### **Factory**

Add: No.66 Taihangshan Road,  
Suyu Economic Development Zone, Suqian City,  
Jiangsu Province, P.R.China 223800

Tel: +86 527 88754666

Fax: +86 527 84453877

### **SAMIL POWER GmbH**

Address: Landsberger Str. 302, 4th Floor  
D-80687 Munich  
Germany

Tel: +49 (0) 89 9040 5182

Fax: +49 (0) 89 9040 5066

E-mail: germany@samilpower.com

### **Samil Power Australia Pty. Ltd.**

Address: Sydney Business and Technology Centre  
Unit 5, 2 Railway Parade,  
Lidcombe, NSW, 2141  
Australia

Postal Address: PO BOX 693  
Lidcombe, NSW, 1825

Office Number: +61 1300 134 793  
+61 (0)2 9643 7788

Fax Number: +61 (0)2 9643 7788

E-mail: Australia@samilpower.com

### **Samil Power France SAS**

Adress:1,Place Joseph Bermond –Ophira 1-06560  
Sophia Antipolis-France

Cell:+33 (0)6 89 64 55 14

Fax:+33 (0)4 89 73 23 48

Email: patrice.lambert@samilpower.fr

