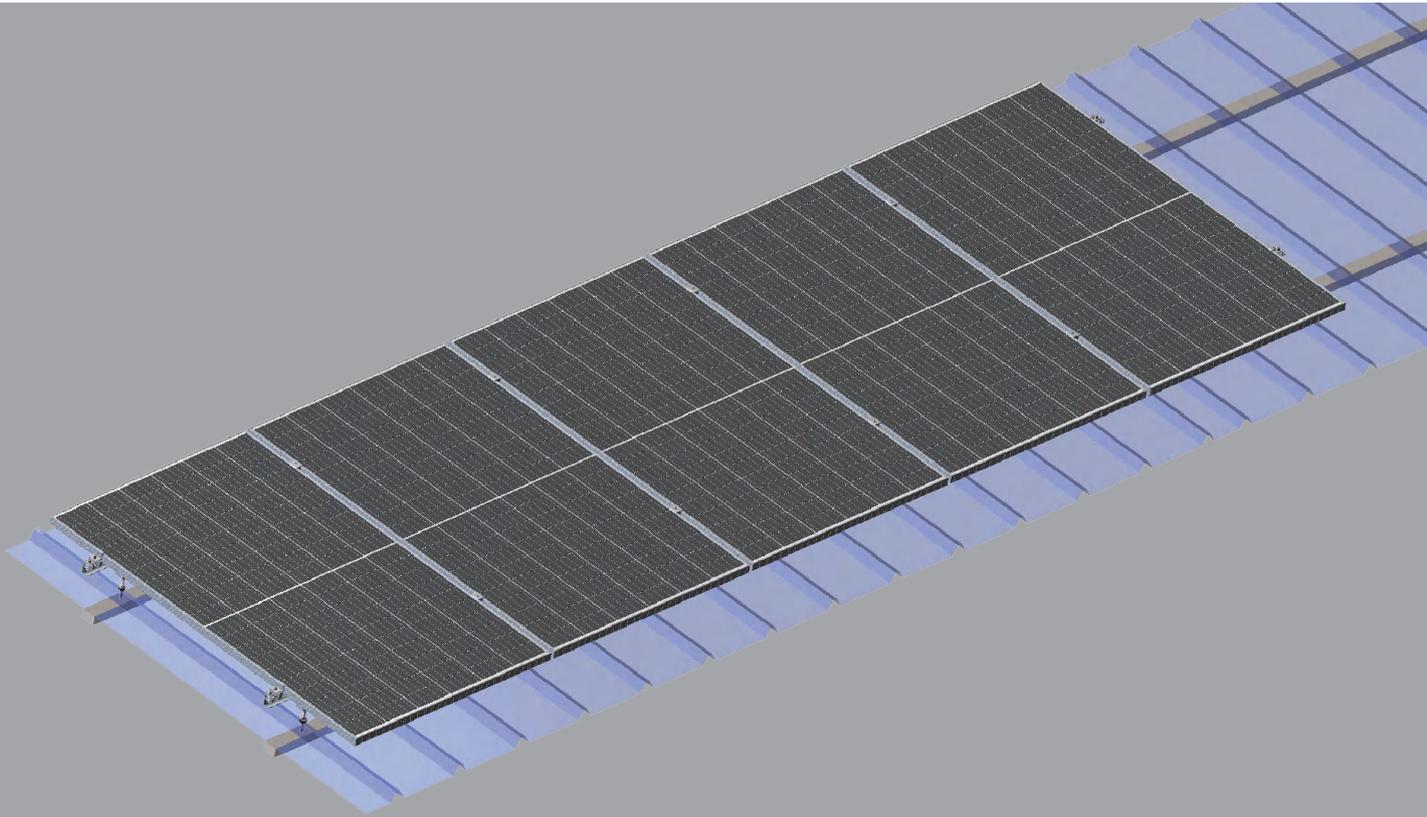




SOLAR MOUNTING SYSTEMS



Uranus Installation Manual

(L feet + hanger bolt system)

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TECHNICAL SPECIFICATIONS

Applications

- Commercial and residential buildings
- Marine applications and remote areas

Features

- Anodized 6005-T6 aluminum extrusion.
- Suitable for difference conditions and the most solar panels at present market.
- Significantly higher strength-to-weight ratio than other framing products, providing improved efficiency due to greater frame spans, inherent corrosion resistance resulting in low ongoing maintenance and an extended product life.
- Complies with Australian/New Zealand Standard on Wind Actions, AS/NZS1170.2.2011(R2016).
- 10 year limited warranty supported by Jiangsu Uranus Solar Technology Co.,Ltd.

Material

Material	Tensile strength	
	Tensile	Yield
6005 T6 aluminum extruded	≥260Mpa	≥225Mpa
Stainless steel 304	625.55Mpa	263.8Mpa
Stainless steel A2-70	700MPa	450MPa

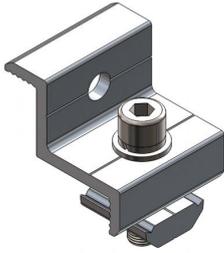
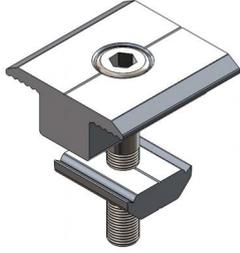
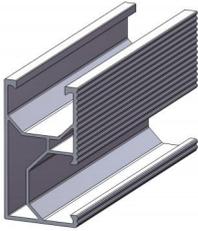
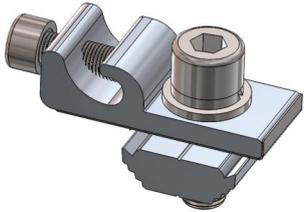
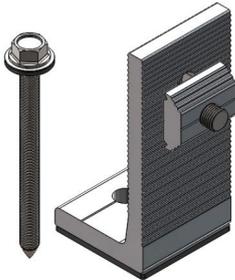
Installation condition

Roof slope	Up to 60°
Building height	Up to 20m
Mounting structure	Timber / steel
Roof types	Metal roof
System angle	Flush with roof

*Note: If the condition is beyond the table list, please contact us for confirmation.

COMPONENTS LIST

Overview of system components

Part name	Picture	Part name	Picture
End Clamp		Inter Clamp	
Rail		Grounding Lug	
L Foot		Hanger Bolt	

* Note: The quantity of requested components depends on the system you ordered.

BEFORE INSTALLING

Receipt of goods

Check that the URANUS equipment is undamaged and that the order is complete.
Check for correct quantities of the items.

Check the torque value of SS304 bolt before installing L feet

Torque value of SS304(a2-70) bolt	
Bolt specification	Torque values (N.M)
M8	8~10
M10 (For Base)	25~28
M10(For Article aluminum nut)	18~20
M10(For Reinforcement angle aluminum)	8~10
M12	50~55
M14	70~75
M16	90~95

Notice for Project Installation Measurement

All installation measurements are subject to shop drawing. This instruction is only guidance for installation method.

Notice for Installation of Stainless-Steel Fasteners

Different from carbon steel, stainless steel has good ductility, which may result in deadlock if improperly used. Following tips for deadlock.

Prevention

Reducing friction factor:

- Make sure the screw thread surface is clean (no dust or sand, no sundries, etc.)
- Liquid wax or lubricant (butter, 40#engine oil, etc.) on surface while installing is recommended.

Operating correctly:

- Must be perpendicular to the axis of the screw thread when screwing, and do not incline;
- In the process of tightening, the strength needs to be balanced, tightening torque shall not exceed the prescribed safety torque value;
- Choose torque wrench or socket wrench as far as possible, avoid using adjustable wrench or electric wrench;
- Do not use it when the temperature is high; do not use it with high speed spin, avoiding to be locked by rapid rise of temperature (Such as electric wrench, etc)

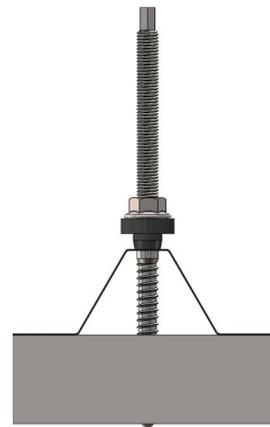
INSTALLATION INSTRUCTION

1. Mark the position of each hanger bolt and insert the bolts into the roof purlins.

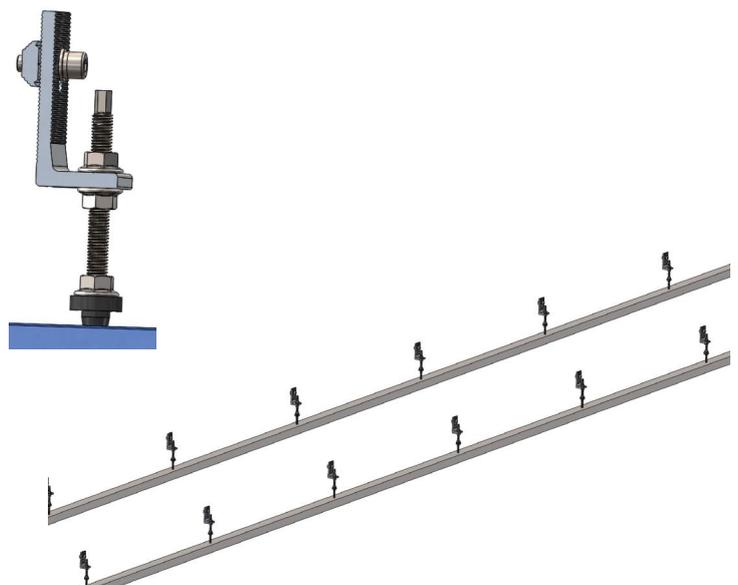
*Note: Put one hanger bolt per 1.2 meter distance or according to installation condition.



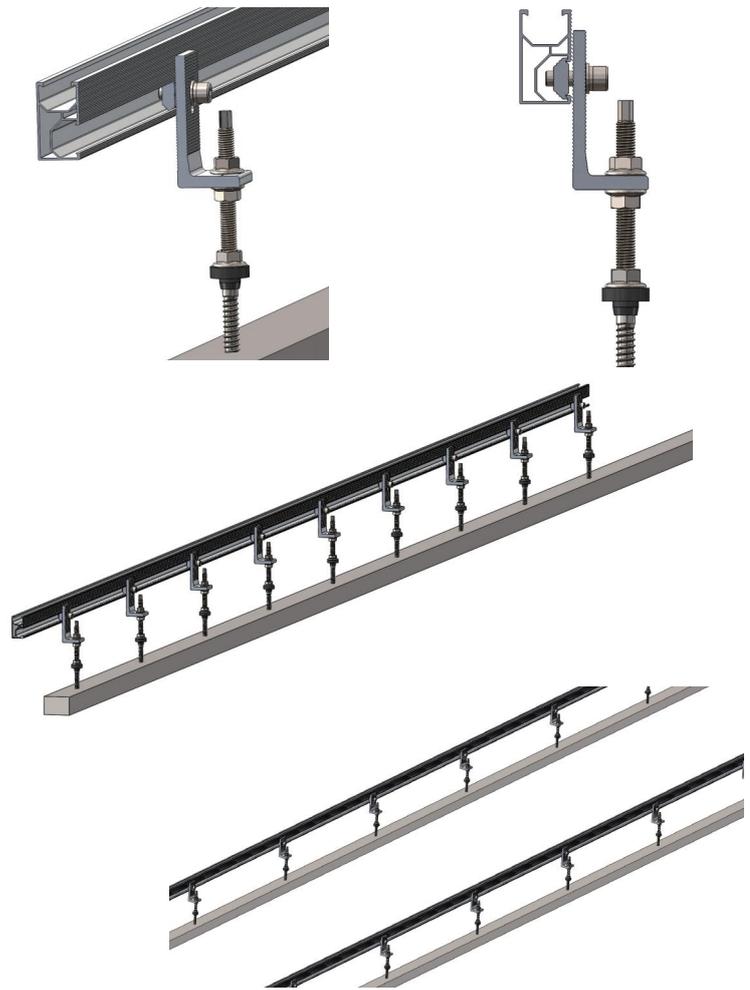
2. Place waterproof rubber pad close to the rooftop sheet and lock with flange nuts.



3. Install the L-foot assembly on the hanger bolt to ensure that the L-foot is on the same plane as possible.



4. Slide the rail into the L foot and lock the T module on the L foot. The upper surfaces of the two rails must be on the same plane to ensure that the panel can be laid flatly.



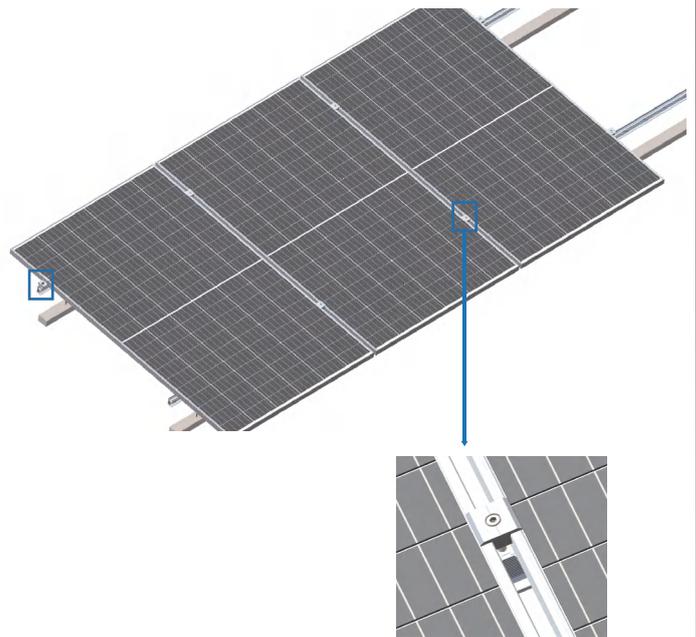
5. The panel is placed on the rail as shown below. It is recommended to install the panel in the order of left to right.

End reserved dimensions as showed in engineering drawings so that it can be used to install grounding blocks.

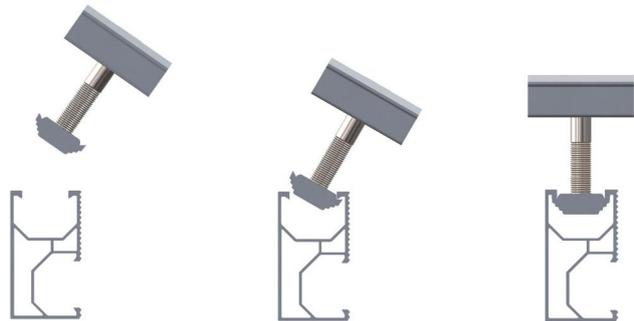


6.1 Installation of End clamp, place the T module to the end of bolt, and then put T module sideways into rail groove. Move the end clamp to a fixed position for locking.

6.2 B. Installation of mid clamp and grounding clip. Place the T module to the end of the bolt, and then put the T module sideways into the rail groove. Move the mid clamp to the fixed point and tight the bolt.



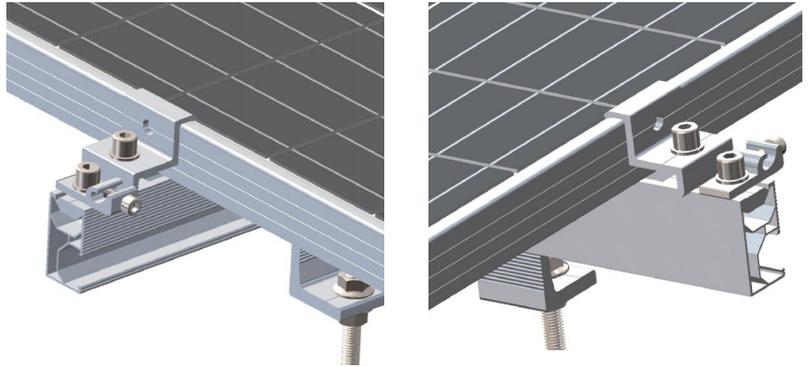
7. Lay the whole row of panels, adjust the position and lock the bolts of each mid clamp and end clamp. (notice the orientation of T module)



8. According to the above installation method, install all components in sequence.

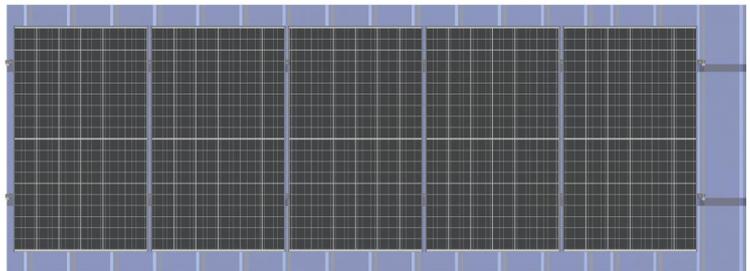


9. The grounding lug is installed at the end of the rail and connected as shown below.



10. Complete installation, view from different perspectives.

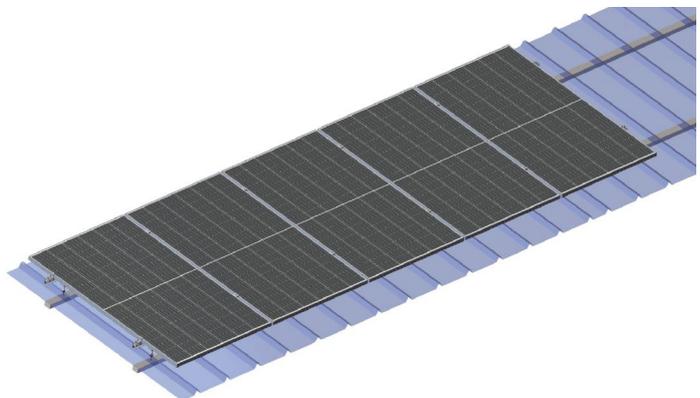
Front view



Left view



Side view



WARRANTY

In so far as Jiangsu Uranus Solar Technology Co.,Ltd. grants the customer a 10 year warranty to solar mounting systems, except for the anodized finish, which finish shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of five (5) years. The Warranty Start Date is the date of delivery of the Product(s) to the Buyer or 2 months after the date of Product(s) dispatch from Uranus manufacturing site, whichever date is earlier.

Warranted Products

All anodized aluminum products and stainless steel 304 components in the solar mounting systems.

Exclusions and Limitations

In the event that damage is caused to a purchased item, despite proper installation and handling and in the context of normal use and maintenance, Uranus will immediately exchange the respective component within the warranty period. The following terms shall apply:

- 1 Failure to comply with Uranus' installation manual;
- 2 Service by service technicians who are not qualified under the relevant law and/or applicable regulations at the place of installation;
- 3 The warranty period for each component defined in the respective product sheet by Uranus shall apply. The warranty period commences with the transfer of risk of the respective component; if, for particular components, generally or for a particular type of use a possible shorter life is expressly indicated within Uranus' individually-generated plans, an exchange is scheduled within a shorter period, the warranty period shall be restricted to such life or period.
- 4 The warranty is limited to additional delivery for the defective components upon notification of the damage within the warranty period. Any statutory guarantee or liability claims shall remain unaffected.
- 5 The obligation to fulfill the warranty shall not apply if the damage has arisen in connection with exceptional stress (e.g. storm damage, impact of instability of the sub-surface, particular chemical or biological effects). Or in such conditions, accident, force of nature (such as lightning strike, earthquake), influence from chemical products or other acts beyond Uranus' reasonable control (including damage by fire, flood, etc.)
- 6 With regard to installation and handling, the technical product descriptions and installation instructions regarding the respective products as supplied by us shall apply, as shall the statutory and generally-recognized standards and principles of building and construction work in local market as well as, as appropriate, on a priority basis, the plans, statics and instructions prepared by us individually for the customer.
- 7 No claims shall exist if the damage is covered or can usually be covered by insurance against storm and similar events (natural-peril insurance).
- 8 This warranty shall only be applied to solar mounting systems designed by Uranus. Custom design products if suggestions by Uranus are declined, this product is excluded in this warranty.
- 9 This warranty shall only establish claims of Uranus' customer, via which all warranty claims are to be settled. Assertion by third parties shall only be possible if Uranus agrees thereto.
- 10 Limited Warranty does not apply to any Products which have been subjected to use of the Products in such a manner as to infringe Uranus' or any third party's intellectual property rights (e.g. patents, trademarks).

Repair, Replacement or Refund Remedy

- 1 As Buyer's sole and exclusive remedy under this Limited Warranty (though Buyers should note paragraph 4 below regarding the potential existence of other statutory rights), Uranus will, in its sole discretion, either, with regard to the applicable Product (or component thereof in the case of Mounting Product):
 - a) refund the historical purchase price of the relevant Product(s); or
 - b) repair the defective Product(s) at no charge (subject to the following paragraph); or
 - c) replace the defective Product(s) or part thereof by a new or remanufactured equivalent at no charge (subject of the following paragraph).

In the event that Uranus opts for options b) or c), Uranus shall bear all insurance and transportation charges (except air freight, courier freight), customs clearance and any other costs for returning the defective Product(s) to Uranus and shipping the repaired or replaced Product(s) to Buyer (a Buyer may claim reimbursement by Uranus for these charges by contacting Uranus and providing proof to Uranus that these charges were incurred, e.g. an invoice from the relevant service provider). The costs and expenses for their removal, installation or reinstallation shall remain with Buyer.

- 2 The warranty period(s) shall not extend or renew upon the repair or replacement of a defective Product by Uranus. The warranty period for replaced or repaired Product(s) is the remainder of the warranty on the original new Product(s).
- 3 All other claims under this Limited Warranty against Uranus shall be excluded. Under this Limited Warranty, Uranus is not responsible for any special, incidental or consequential damages (including loss of profits, harm to goodwill or business reputation, or delay damages) whether such claims are based in contract, warranty, negligence or strict tort. This exclusion applies to the extent permissible by law, and even if the remedies set forth below herein are deemed to have failed of their essential purpose.

Rights and Remedies against Third Parties

This Limited Warranty shall be construed as a separate warranty and independent from any other contractual arrangement with third parties relating to the Product(s). It shall not affect any rights, obligations and remedies of the Buyer, if any, with regard to third parties for defects or non-conformity or non-compliance of the Products, notwithstanding its legal basis. The rights and remedies provided hereunder are in addition to any other rights and remedies against third parties to which Buyer may be entitled by agreements with such third parties or by law.

Claims Procedure, Notice Periods, Expiration of Warranty Claims and Limitations

- 1** Buyer shall notify Uranus immediately after discovery of any claim under this Limited Warranty by letter, facsimile or e-mail specifying each alleged claim including evidence of the claims and the serial numbers of the Product(s) at issue.
- 2** Any claim for breach of this Limited Warranty must be brought within three (1) months after discovery of the breach.
- 3** The return of any defective Product(s) will not be accepted unless prior written authorization has been given by Uranus.

Force Majeure

Uranus shall not be responsible or liable in any way to the Buyer for any non-performance or delay in performance under this Limited Warranty due to occurrences of force majeure such as, war, riots, strikes, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective Product(s) or the notification of the relevant warranty claim under this Limited Warranty.

Warranty Assignment

This Limited Warranty is only applied when the Products remain installed in their original installation location.

Validity

This Limited Warranty shall apply to Product(s) manufactured after 1st January 2020. This Limited Warranty shall be valid until a new revision is issued by Uranus.

No other Warranty

Unless modified in a writing signed by an officer of Uranus, the Limited Warranty set forth herein is the only express warranty (whether written or oral) by Uranus applicable to the Products and no one is authorized to restrict, expand or otherwise modify this Limited Warranty.

Miscellaneous

If any provision of this Limited Warranty is held invalid, unenforceable or contrary to law then the validity of the remaining provisions of this Limited Warranty shall remain in full force and effect.

MAINTENANCE AND CLEANING

6005-T6 anodized aluminium is largely maintenance free. Only in highly polluted or marine conditions is rinsing with clean water required, during scheduled panel cleaning.

REFERENCES

AS/NZS 1170.2:2011/Amdt 3:2012 on wind actions
AS/NZS 1664.1:1997 on aluminium structures
AS 1720.1:2012 on timber structures
AS/NZS 4600:2005 on cold-formed steel structures
AS 3566-2011, self-drilling screws for the building and construction industries.

CONTACT DETAILS

Jiangsu Uranus Solar Technology Co., Ltd
Address: Xi Xiang Village, Hengshan Town, Changzhou Economic Development Zone, Jiangsu Province
Tel: 0519-88668996

APPENDIXES

ARRAY FRAME ENGINEERING CERTIFICATES
Installation of flush mounted solar array frame on Tin Roof
Installation of Flush mounted solar array frame on Tile Roof
Installation of Flush mounted solar array frame on Tin Roof with Kliplok 700 and Kliplok 406 Roof Clamps

These Engineering Certificates contain important installation requirements. Please obtain these certification from your distributor.