



IR-T1A INSTALL INSTRUCTIONS



IntegraRack[®] backs all of its products with a 25 year limited product warranty. We fully stand by the quality and guarantee that they will hold up under the harshest conditions when properly installed.

Disclaimer

The instructions detailed in this manual will provide the knowledge and requirements necessary for proper installation of the given product. Be sure to read them thoroughly and make sure that you fully understand them before proceeding with installation. Any improper use or installation of these products will void any and all warranty coverage, and may cause failure, property damage or personal injury. IntegraRack is not responsible for any damages caused by improper use.

IT IS THE RESPONSIBILITY OF THE INSTALLER TO:

- Comply with any and all applicable local or national codes and regulations.
- Ensure all products are appropriate for the installation according to the environmental and loading conditions.
- Ensure roof structure is in good condition prior to installation
- Disconnect AC power before servicing or removing modules, micro-inverters or power optimizers.
- Review manufacturer's documentation for compatibility and compliance for solar modules and 3rd party systems.
- If loose components or loose fasteners are found during periodic inspection, re-tighten immediately. Any components showing signs of corrosion or damage that compromise safety shall be replaced immediately.
- Provide an appropriate method of direct-to-earth grounding according to the latest edition of the National Electrical Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems.
- Ensure safe installation of all electrical aspects of the solar system (All electrical installation and procedures should be conducted by a licensed and bonded electrician or solar contractor). Regular maintenance of a module or panel shall not involve breaking or disturbing the bonding path of the system. All work must comply with national, state and local installation procedures, product and safety standards.
- Ensure bare copper grounding wire does not contact aluminum and zinc-plated steel components, to prevent risk of galvanic corrosion.
- Ensure provided information is accurate. Issues resulting from inaccurate information are the installer's responsibility.

- (1) IR-T1A TileBallast Solar Mounting Bracket
- (1) IR-L1 Universal L-Foot Bracket
- (2) Black Tile Tension Bolts
- (2) Carriage Bolts
- (2) Serrated Nuts



IR-T1A TileBallast Solar Mounting Bracket



IR-L1 Universal L-Foot Bracket

Required Tools & Materials

- IntegraRack IntegraGel Epoxy (One tube for every ten mounts)
- 1/2" Wrench or Screw Gun
- Caulk Gun
- Claw Hammer
- Tape Measure
- Carpenter's Pencil / Permanent Marker (for marking adhesive locations)
- Small Brush/Microfiber Rag (for cleaning under tiles)



Installation



1.Plan Layout

The IR-T1A is designed to take the place of traditional tile roof hooks and works with all rail-based solar mounting systems. Each mount must be spaced 4-6 feet along the length of the rails (See our datasheets for detailed snow and wind load requirements).



2.Assembling IR-T1A Brackets

Assemble all IR-T1A with the included IR-L1 L-Foots using the Assembly & Fastener Locations Diagram on page 3. Make sure that all L-Foots are in the same position along the adjustable slot to maintain a uniform height across the system. When attaching the L-Foots, slide the heads of both carriage bolts into the large opening at the top of the IR-T1A and slide it to the desired position. You can then push both of the carriage bolts up into the slot and tighten the nuts by hand, before tightening them down with a screw gun or a wrench.



3.Mark Tiles For Adhesive Bonding Areas

Use chalk to draw vertical lines marking the placement of each IR-T1A. Then, draw horizontal lines along the bottom edge of both tiles where the mount will be installed. This line should be drawn where the upper tile makes contact with the lower tile and will mark where the epoxy will be applied on the tiles.



4. Apply Our Test Proven Adhesive

Use a rag or brush to clean underneath the tiles before applying the epoxy. Then, use the claw end of a hammer to lift the upper tile and use a caulk gun to apply a bead of IntegraGel Epoxy just above the drawn line. Each bead should extend 4 inches on either side of the center line and should bond all of the tiles together around each IR-T1A. *One tube of IntegraGel Epoxy will be needed for every ten IR-T1A mounts.

Installation



5.Install IR-T1A Bracket

Slide the tabs of the IR-T1A under the upper and lower tiles of the roof where the two beads of adhesive were applied. The IR-T1A may need to be lightly tapped into the wet epoxy using a hammer or rubber mallet. Repeat this until all brackets are in place.



6.Tighten Tension Bolts

The two tension bolts will provide sufficient strength to install solar modules before adhesive has fully cured. Once all IR-T1A Brackets are in place, tighten both tension bolts.

*The IR-T1A is designed with a flex point to prevent the tension bolts from cracking the tiles. The flat plate at around the tension bolts will flex up when proper tension is applied instead of breaking the tiles. The IntegraGel Epoxy can take up to 1 hour to set up.



7.Attach Rails

Using the hardware provided with your rail system, attach the rail to the upright bracket by inserting the bolt through the open slot. The height of the rail can be adjusted along this slot.



8.Install Solar Modules

Now that all rails are in place, install micro-inverters and solar modules in accordance with the manufacture's specifications for the rail system.



View Installation Video



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