

Roof Rod Installation Guidelines

Installing Roof Rod on a clay or ceramic tile roof

NOTE:
Roof Rods are to be used only on parallel-to-roof arrays.

Roof Rods can be attached to the roof using “Decking Attached Fasteners” (see below) and without locating any rafters. However, the decking beneath the substrate must be of adequate thickness for a given type of material. Please consult a local engineer or fastener manufacturer for additional guidance if needed.

These guidelines begin after the mounting locations have been marked for each of the Roof Rods to be installed. For questions about layout see our publication “Power Rail™ Design Guidelines”.

Decking Attached Fasteners:

Decking Attachment Fasteners are typically supplied by DPW Solar/POWER-FAB® with the specific support as a kit. The specific fasteners supplied are from the GRK Fasteners Company. The specific product is an RSS™ screw. GRK provides excellent documentation of their fasteners' capacities, including references to ICC-ES™ testing and selection criteria for various decking substrates. DPW Solar provides the RSS screws in the PHEINOX™ configuration with 1/4" diameter. For additional information, please reference:

http://www.grkfasteners.com/en/selection_guide_RSS.htm

Each Roof Rod kit includes the following items. If any items are missing, call us toll free at 800-260-3792.

Qty	Description
1	Roof Rod (mounting plate & threaded rod) with pre-applied butyl mastic
1	“L” Foot
2	1/2” Stainless steel flange nuts
6	1/4” x 2” RSS PHEINOX stainless steel screws (longer screws available when specified)
6	1/4” Neoprene bonded stainless steel washers

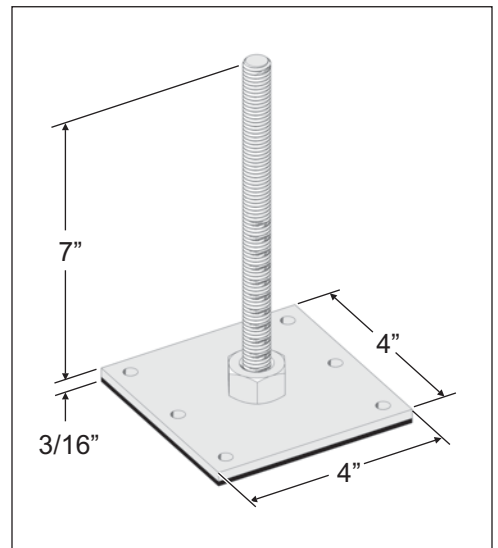


Figure 1: Roof Rod Dimensions

Preparing and Attaching Roof Rod to Substrate

Installing the Roof Rod requires drilling a 9/16” clearance hole in the tile where the threaded rod will pass thru the tile. Tiles can be fragile, it’s recommended to use a ceramic drill bit and test drill a scrap piece of tile before proceeding.

NOTE:

Be sure to test drill a scrap piece of tile before proceeding. Ceramic drill bits are recommended.

- A. Drill a 9/16” hole thru the tile where the Roof Rod will be installed. Allow the drill bit to lightly touch the roof substrate to leave a mark. (See Figure 2)
- B. Remove the tile.
- C. From the bottom of the Mounting Plate, Peel off the protective paper backing of the butyl mastic. (See Figure 3)
- D. Align the Mounting Plate to the mark on the roof substrate and press it firmly to stick to roof.
- E. Install the neoprene bonded washers onto the RSS *PHEINOX* screws with the rubber side down.
- F. Drive the RSS *PHEINOX* screws into the substrate until the neoprene rubber protrudes from the washer edges. (See Figure 4)

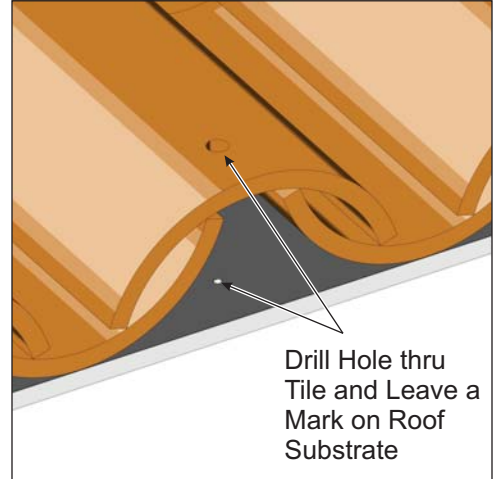


Figure 2: Drill Hole & Mark Location

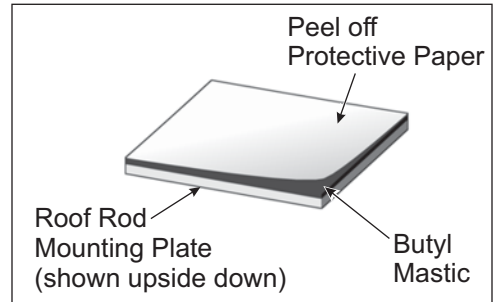


Figure 3: Remove Protective Paper

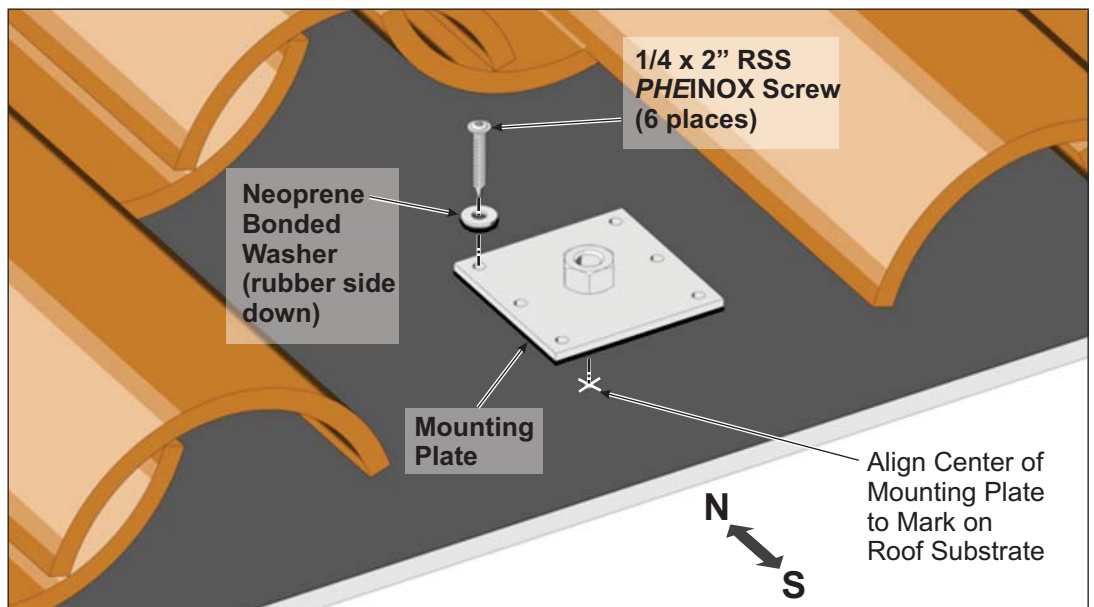


Figure 4: Attaching Mounting Plate to Roof Substrate

- G. Replace tile and pass Threaded Rod thru hole in tile, threading it into Mounting Plate receiver. It may be helpful to temporarily thread the two ½” flange nuts onto the Rod and lock them together so a wrench can be used to drive the Rod into place. (See Figure 5)

CAUTION:

Make certain that the Threaded Rod is threaded fully into the Mounting Plate receiver.

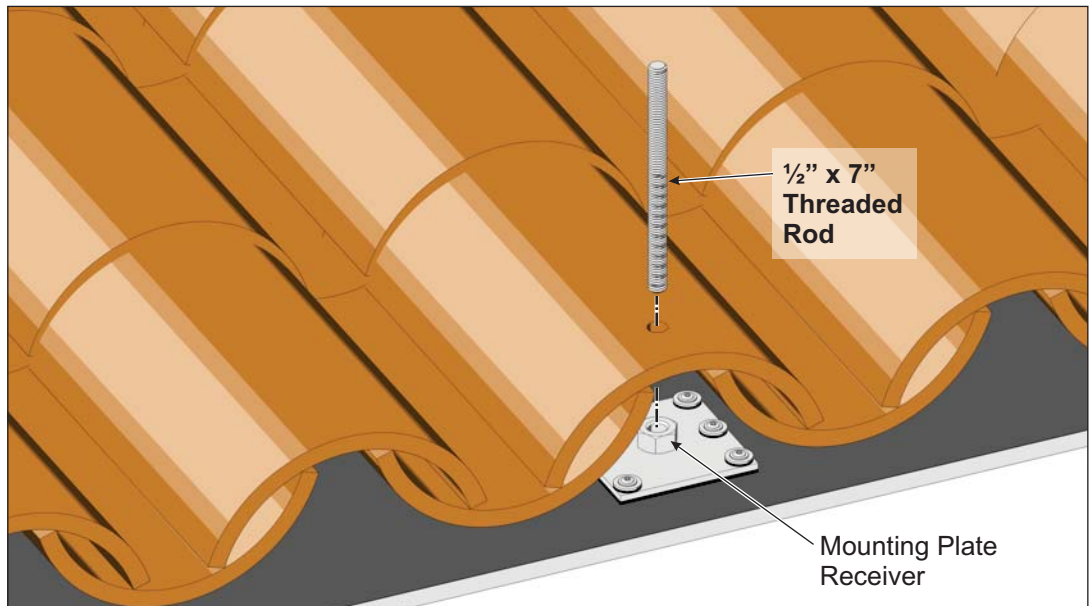


Figure 5: Inserting the Threaded Rod into Mounting Plate

- H. Seal hole in tile using roofing contractor’s preferred sealant.
- I. Attach the “L” Foot. First thread one ½” flange nut onto Threaded Rod with flange up. Place “L” Foot onto Threaded Rod and secure in place with the second ½” flange nut. Use the flange nuts to adjust the elevation of the “L” Foot as needed. Then lock the “L” Foot into position by back-driving the two flange nuts into the “L” Foot. (See Figure 6)

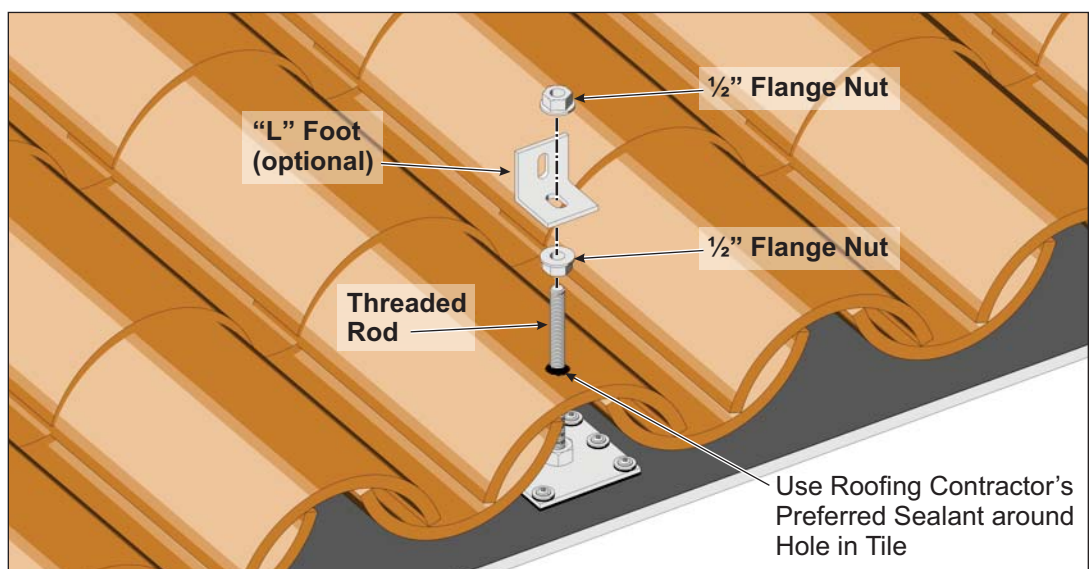


Figure 6: Attach “L” Foot & Seal Hole in Tile



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