



Quick Start Guide



Shipping Dimensions:

44 1/4" long

9" wide

9 3/8" tall

weight 50lbs





Open by cutting straps, and along exposed flap edges





Open and located instructions and technical installation details, remove card board inserts.

Unpack contents:

- 2 solar panel racks
- 2 inverters
- 8 roof flashings
- 2 inverter trunk cables
- 2 start brackets
- 2 small bolts
- 8 lag bolts





2 start brackets

Bag of 8 lag bolts and 2 brace bolts





Remove 2 small bolts from the packet of bolts

Cut zip tie on rack





Unfold Rack, until center  
brace is straight



Insert small bolt in pre  
drilled hole at hinge point  
on center brace

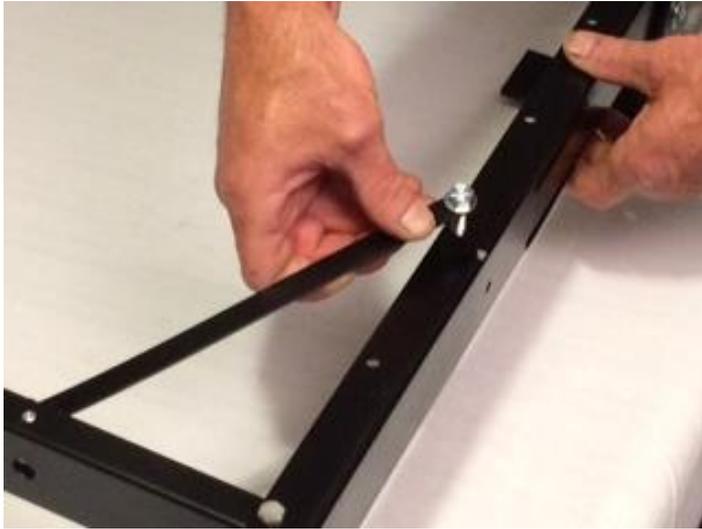




Fully tighten the small bolt



Unfold arm braces from within the center brace to the point on the main rail arm



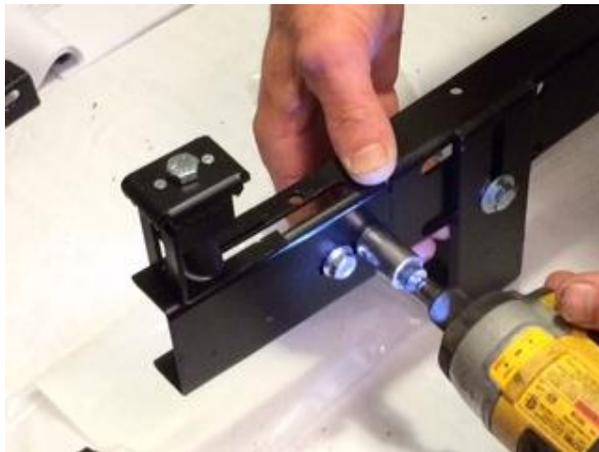
Adjust main rail until it aligns with the prepositioned hole.



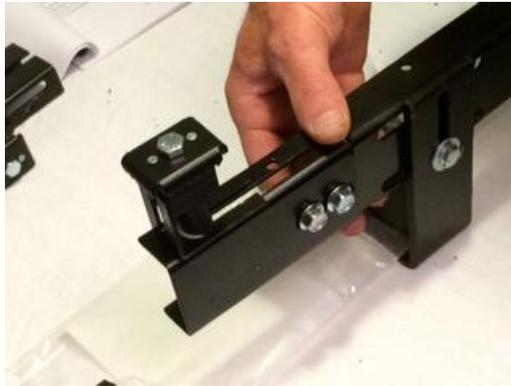
Tighten fully, and repeat on both main rail arms



Place start bracket on main rail of rack



Tighten fully



The placement of the feet allow for multiple positions that are preset based upon 16",24", and 48" spacing of roof rafters, the feet can be easily adjusted if from position to position, but in most cases width adjustment to match roof rafters will not be needed.

Obtaining ASCE7-05 Category B & C wind rating only requires anchor feet on 48" on center, obviously more can be placed, dependent on placement of feet, and the fact that the main arm rail is less than 48" it is acceptable to allow a complete arm to not have installed anchor feet, provided feet are at each end of the attached additional rails.

Spacing of feet options, in extreme situations where the prespaced feet do not align with roof rafters, the main arm can be drilled with a metal drill bit to allow placement of the anchor foot

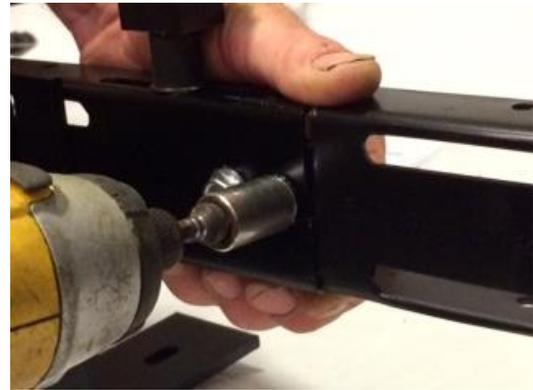
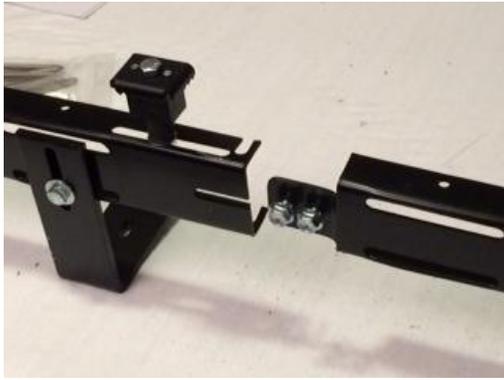
The prepositioned slot allows for up to 3" of adjustment of the anchor foot left or right, to compensate for most all adjustments due to roof rafter spacing





The anchor feet also allow for vertical adjust to compensate for variances in roof levels, while maintaining minimum height distance from roof to the bottom of the solar panel

At its max level, the slot is designed not exceed the height of the rail and interfere with the solar panel, when the solar panel is placed on top



When two racks are connected together, the main rails become aligned for squaring purposes allowing the seamless flow of connecting racks together across a roof, as many as 18 one racks can be assembled in a line, see layout details

Slide joint together, tighten the joint completely.

## Adjusting for Panel Width

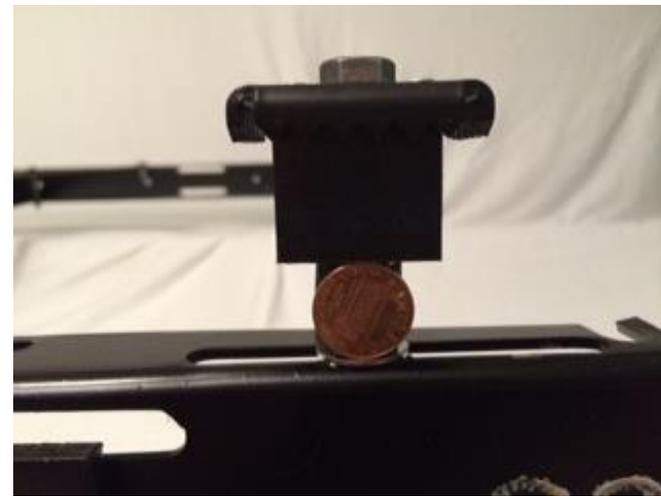
1000mm Panel Width



When determining start position for panel placement, there are adjustment points based on solar panel width measuring 1000mm at max or a narrow solar panel of 982mm

Adjustment to 1000mm panel width, is to move the Panel clamp fully away from the middle of the main arm rail, (or to the right in the above picture) and simply rotate the panel spacer to its widest position, this allows maximum width panels to be installed without changing any hardware

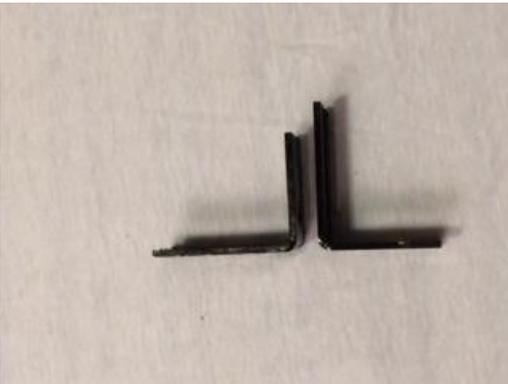
982mm Panel Width



When determining start position for panel placement, there are adjustment points based on solar panel width measuring 1000mm at max or a narrow solar panel of 982mm

Adjustment to 982mm panel width, is to move the Panel clamp all the way toward middle of the main arm rail, (or to the left in the above picture) and simply rotate the panel spacer to its widest position, this allows minimum width panels to be installed without changing any hardware

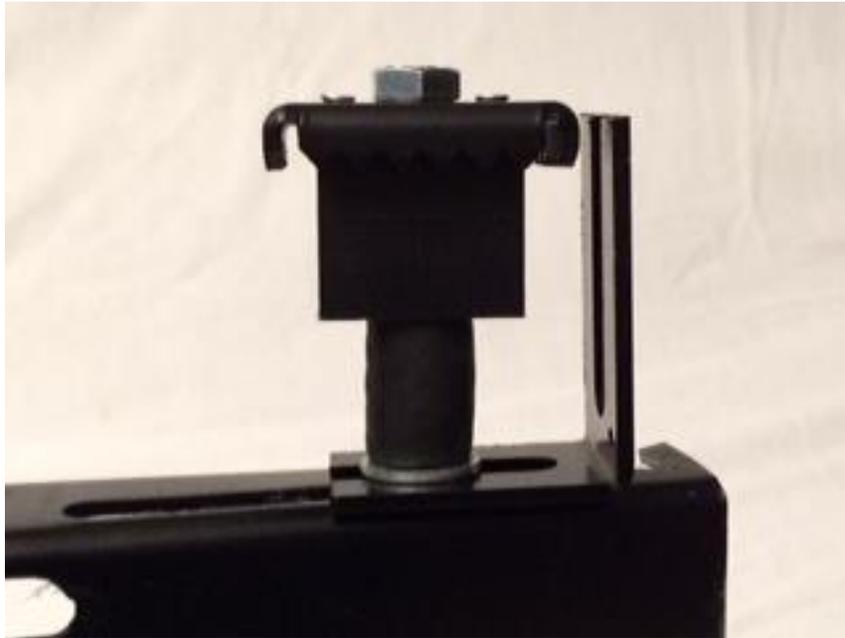
## Adjusting for Panel Height



Panel heights have no changes in hardware for all panels in the middle of a row of panels, but on each end of a row, the panel clamp must be supported to maintain proper positioning,

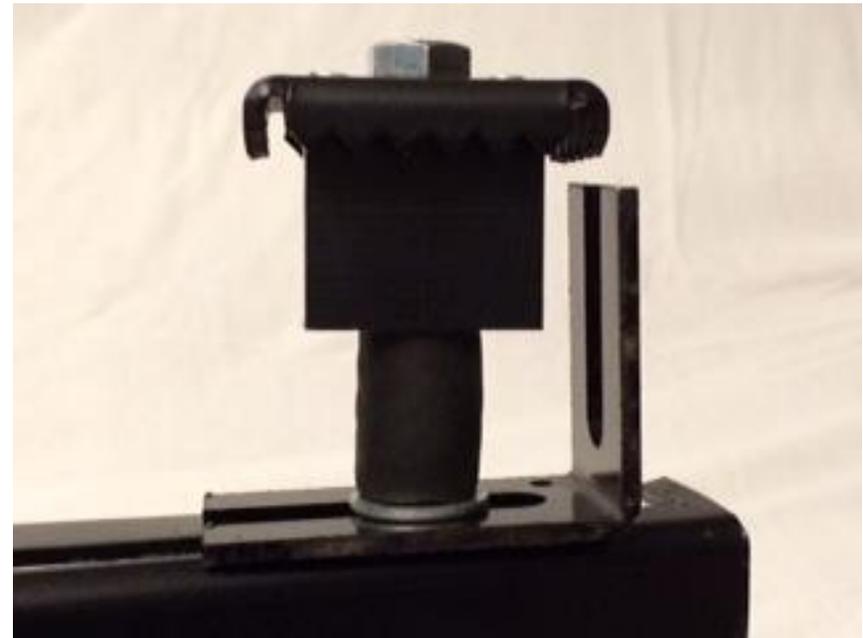
The panel clamps on the ends of rows come with this device already installed, this device pictured here, is the exact same piece shown next to each other, so you may see differences

Another view of the same piece, with a drilled hole to identify the long side of the piece



In the picture to the left, as with the below picture, the panel clamp remains at the same height to help illustrate the differences, note the height bracket remains under the washer at all times, In this position this bracket is set to hold a Solar Panel with a thickness 50mm

In the picture to the right, this position allows for panel height differences down to 35mm, simply by flipping and reinserting the bracket, no additional hardware is needed to compensate for panel height changes



## Finding Roof Rafters



An industry standard way to locate roof rafters is to utilize a hammer and strike the roof while listening for sound differences, once the rafter location is determined a predrilled 1/4" hole should be made

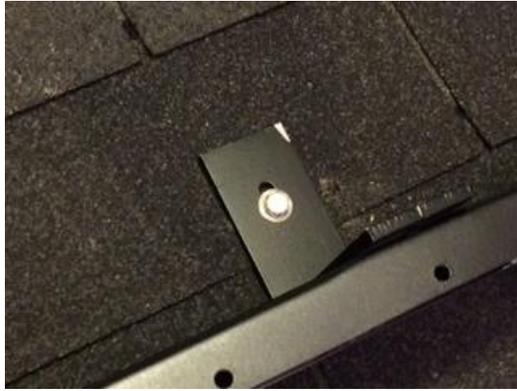




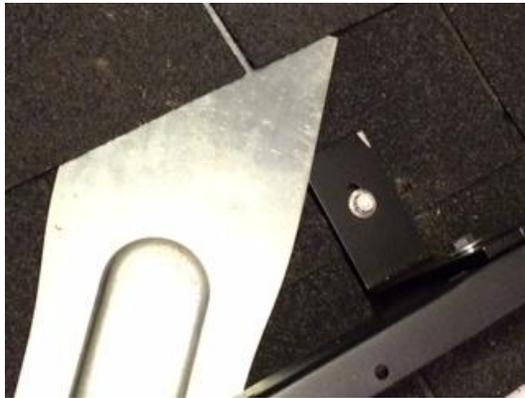
If the rafter is missed, small adjustments can be made to properly locate the rafter, these small adjustments will be protected by the anchor foot flashing to be installed later



Confirmation of roof rafter can be determined by looking up at the roof rafters to determine if any Solar Lag bolts have “missed” the roof rafters



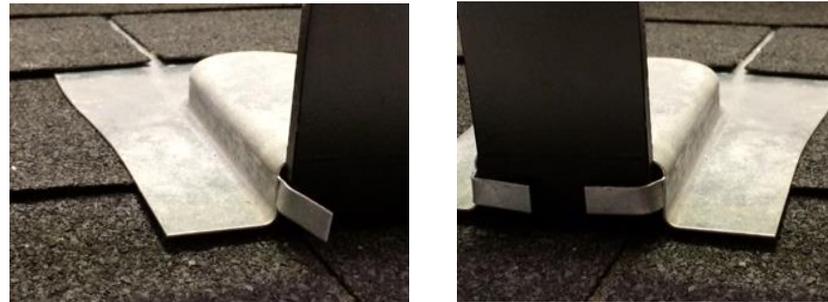
Once the anchor foot has been properly bolted to the roof rafters water protection or roof flashing can be placed. Unlike the majority of other racking systems, The RAQ, uses a Mechanical method of water proofing, not a chemical protection.



Begin by inserting the flashing under the shingle line above the anchor foot location



Continue to rotate the flashing under the shingle line until it is fully seated over the anchor foot



Once fully seated over the Anchor foot, bend the tabs to secure the flashing around the anchor foot

## Inverter Placement



Each rack comes with a pre placed anchor spot for the inverters, with a bolt provided in position, although this bolt can be moved to any predrilled location in the main rail, 1<sup>st</sup> loosen the bolt

Slide the inverter under the bolt, then tighten the bolt to hold the inverter in place, the inverter may be positioned on either side of the rail





Connect the inverter cables to the inverters per the inverter instruction manuals for proper connections

Connected inverters are now in place to be connected to the solar panels

