



Patent Pending

*Your **sole** supplier for residential solar mounting solutions*

We are grateful you have chosen our Sol Attach product for your tilted roof solar needs. We believe you will not only find that our product is the most economical and aesthetically pleasing solution for your company, but also that with these simple instructions will prove our product is the easiest mounting solution on the market.

### **Installer Responsibilities:**

To be assured that the Sol Attach mount is used correctly, it is necessary that installers follow these guidelines. To disregard them will void the limited manufacturer's warranty and may prove hazardous.

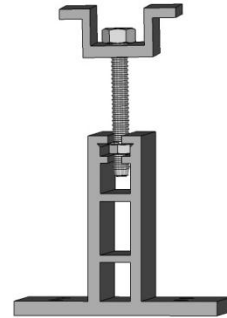
1. Have the system designed by a qualified professional who takes into consideration snow load, wind speed, necessary pull out strengths of fasteners, types of substrates, and structural integrity of the building to which the array is being mounted.
2. It is incumbent upon the installer to perform a pre-installation inspection of the building roof structure and to insure that it is sound and adequate to support the weight of the array and that the Sol Attach mount chosen is the correct product for the job. It is also the installer's responsibility to insure that the roof substrate and rafters are in good condition and that the mounting feet are adequately secured to the substrate or rafters according to local and national building codes.
3. The installer is responsible to obtain all necessary building permits and comply with all local and national building codes.
4. Chose and use appropriate sealants and or flashings in accordance with the respective manufacturers' particular instructions and guidelines.
5. Only use parts included with the Sol Attach mount purchased and insure that the Sol Attach mounts have not been damaged in shipping or storage or transit to the jobsite.
6. Insure the mounting feet set flat on the roofing surface. In the event that it is necessary to trim part of the top layer of a shingle so the foot does not rock or set unevenly, it is the installer's responsibility to insure it is trimmed and sealed in accordance with approved roofing techniques and guidelines.
7. Insure that the Sol Attach mounts chosen and installed do not compromise or hinder the proper installation of the photovoltaic electrical system.
8. These instructions do not address wire management. It is the installer's responsibility to secure wiring in accordance with the module manufacturers' instructions as well as local building codes.
9. These mounts are not intended to ground the photovoltaic modules or system. Each module must be grounded to each other with bare copper wire according local building codes.

## Composition Roof Mount

The Sol Attach end-clamps and mid-clamps are much like “traditional” rail system clamps. However, instead of using t-bolts which stick upward and give a rather unfinished look, the Sol Attach system uses ¼ -20 bolts which are screwed downward into the clamps when they are tightened (Fig 1).

- First, insert the bolt end down through the appropriate sized mid-clamp or end-clamp.
- Then turn a Kep nut, with its integrated star washer, loosely onto the end of the bolt.
- Finally, slide the Kep nut/ bolt assembly into the top groove of the Sol Attach mount and tighten once the modules are in place.

Fig 1



### Mounting hole assembly option

Another key difference between the Sola Attach system and “traditional” systems is that while end-clamps can be used (fig 3), a better solution is that the modules on the perimeter of the array can have their mounting feet attached directly to the outer edge of the module frames through the manufacturer supplied mounting holes (fig 2). This negates the necessity of purchasing and stocking various size end-clamps and allows for an installer’s assistant to install these feet from the safety of the ground.

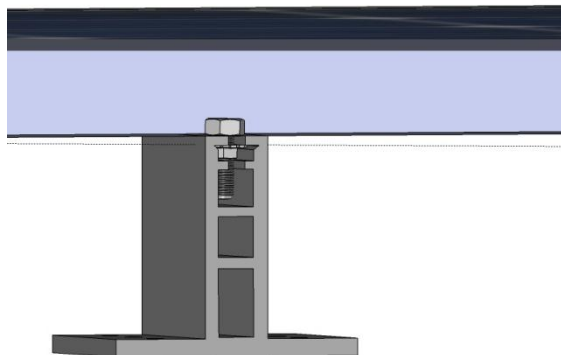
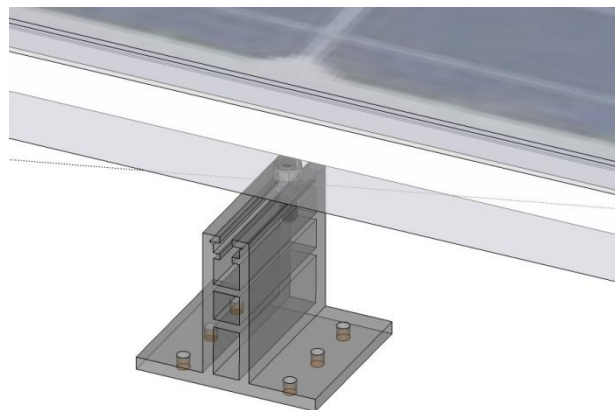
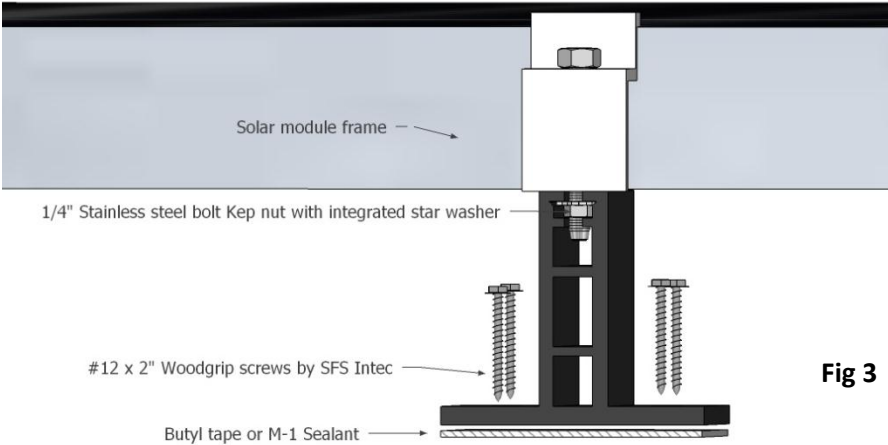


Fig 2



**Traditional end-clamp assembly option**



**Fig 3**

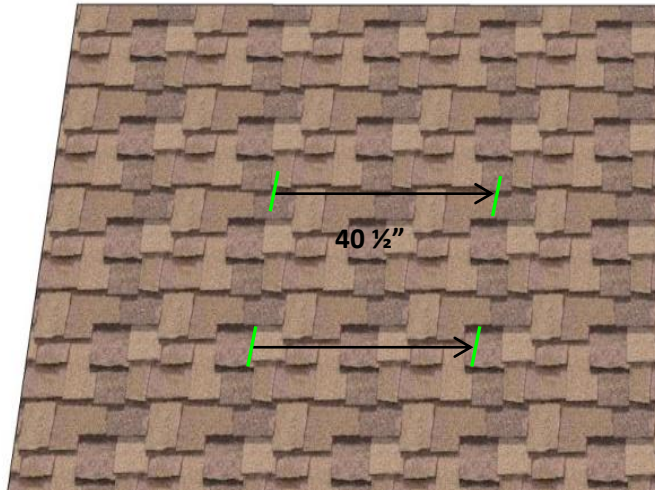
**Mid-clamp assemblies**



**Fig 4**

**Composition Roof Installation Description** (For flashing instructions see last two pages of this document)

1. Mark the location of the first module on the roof and measure over from the edge of the first module the width of the module plus one and one half inch (i.e. 40 ½"). Make a mark opposite the location of the first mounting feet (fig 4).



**Fig 4**

2. a. **Mounting hole option:** Secure first panel with perimeter edge mounting feet to the outside marks from step one with deck screws provided (4 per mount).



**Fig 5**

**b. End-clamp option:**

Secure four Sol Attach mounting feet with sealant or butyl tape and four #12 screws provided (two screws on each side of the mount), perpendicular to the module frames, roughly centered on this mark (fig 6).



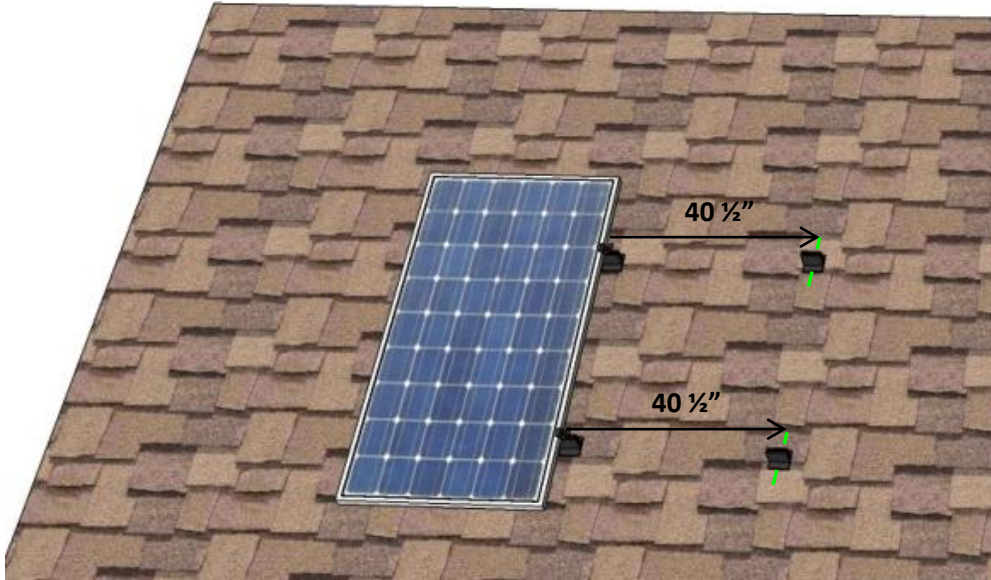
**Fig 6**

Secure the first module with end-clamps on each of the outer two mounting feet (fig 7).



**Fig 7**

- Slide two mid-clamp assemblies with bolts and nuts through the top groove of the second set of mounting feet snug to the side of the first module. Leave loose until step 6 (fig 8).
- Measure over from the frame of the first module the width of the module plus  $1\frac{1}{2}$ " (i.e.  $40\frac{1}{2}$ " ) and make another mark for each of the next feet (fig 8).



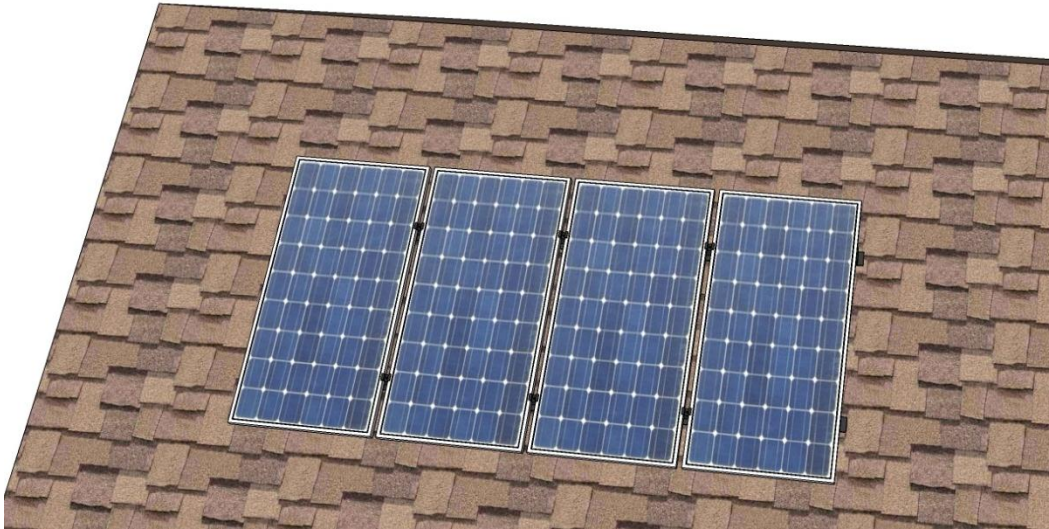
**Fig 8**

- Secure this set of mounting feet with sealant or butyl tape and four #12 screws for each mount (fig 8).
- Set the next module on the four mounting feet and secure the first side with the mid-clamp along with the first module (fig 9).



**Fig 9**

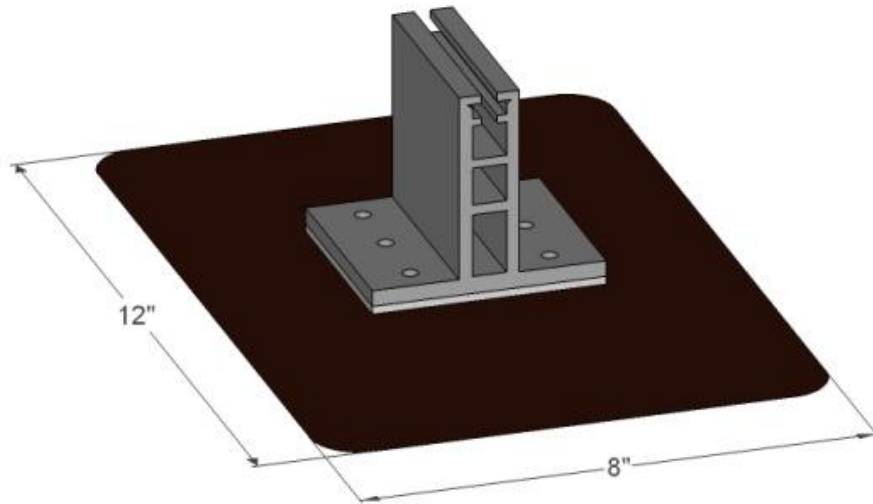
7. Continue with each subsequent module following steps 3-6 until you are ready for the final module.
8. For the final module, follow steps 1-7 but either secure the final two mounts to the outer frame edge (fig 5) or use end-clamps (fig 7) to secure the outside edge of the final module (fig 10).



**Fig 10**

## Aluminum or Polyethylene slip sheet flashing Installation Instructions

When flashing is desired, follow the following simple guidelines for flashing each Sol Attach mounting foot.



1. Locate the placement of each feet on the roof according to solar module mounting instructions included with your Sol Attach order (i.e. fig 1).
2. Without damaging the shingle uphill of the position of each mounting foot, carefully peel the above shingle up with a putty knife.
3. Apply a bead of quality sealant to the underside of the flashing on the top and left and right undersides of the flashing. Do not put sealant on the downhill side of the flashing so that any moisture buildup under the flashing will have a means of escape.
4. Carefully slide the sheet of flashing under the shingle uphill of the shingle where the mounting foot is to be installed and press the flashing down against the shingle where the mounting foot is to be installed.
5. Seal the uphill shingle down over the uphill portion of the shingle with sealant.
6. Seal the mounting foot to the flashing with sealant or butyl tape and secure with four mounting screws as instructed in the Sol Attach mounting instructions.