

# Installation Manual

## Ground Mount

[www.mtsolar.us](http://www.mtsolar.us)  
844-MT-SOLAR (687-6527)

2019 V2.1

Page intentionally left blank.

## Thank you for choosing MT Solar Ground Mounts.

It is the installer's responsibility to determine the foundation parameters based on local site conditions, such as wind speed, snow load, soil type, exposure category, etc. Installations also must comply with local building regulations and permitting requirements.

We recommend consulting a licensed engineer to determine appropriate foundation dimensions and/or depth of pile. MT Solar can also provide a stamped drawing engineered for site-specific requirements for an additional fee. Please contact us to find out more.

PROJECT INFORMATION	DATE: 4/25/2019
Customer:	MT Solar
Email Address:	sales@mtsolar.us
Phone Number:	844-687-6527
Project Name:	Sample
Project Address:	54179 He... Rd
City/State/ZIP:	Cl... M... 9824
Solar Module:	MM 40
Solar Module C...	MM 40

Array Center Height  
5.3 ft. Above Grade

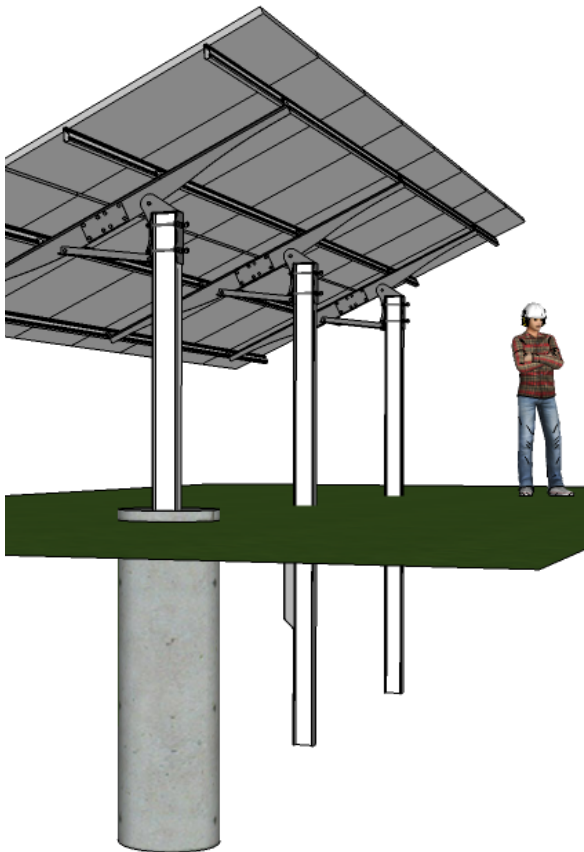
Min. Vert. Beam W6x9

Tilt 30 Degrees

24 in. ground clearance

Concrete Per Pole  
0.18 cu. yards.

12 in. Hole Size or Spade Width  
6.2 ft ground embedment

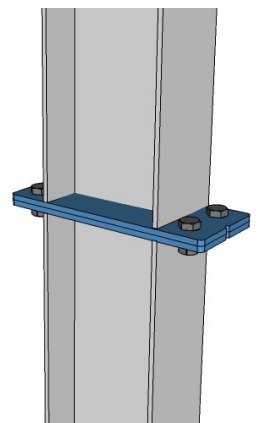
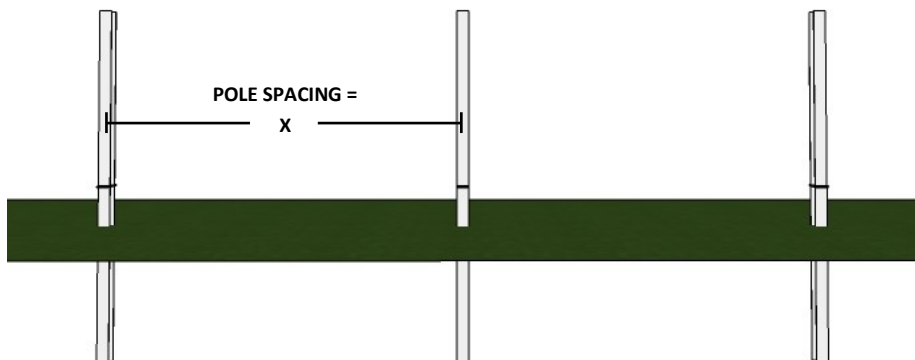


### Pole spacing.

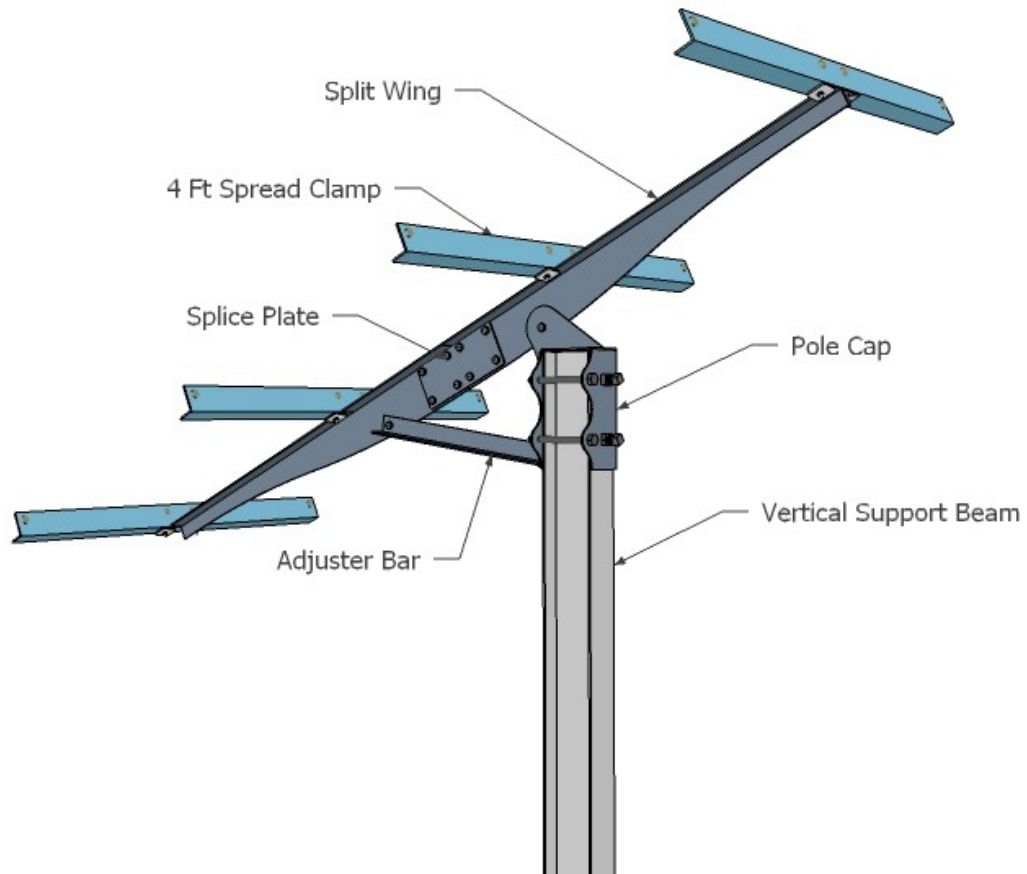
Mark post locations in an E/W line according to the predetermined pole spacing diagram array layout plan provided by MT Solar. Ensure spacing is from center of post to center of post.

### Flexible Foundation Options.

We offer two options for installing the vertical posts. Using a pile driver or post pounder, the posts can be driven directly into the earth. Or using an auger or backhoe, foundations can be excavated and posts poured in concrete. Vertical posts come in two pieces, the bottom section is installed below grade with 6 - 36 inches remaining above grade. The top section is spliced on with four 1/2" bolts and flange nuts and tightened to 55 ft. lbs.



# Ground Mount Components



## Components List, Per Post:

Qty	Description
2	Split Wings
1	Pole Cap
1	Splice Plate
1	Adjuster Bar
4	4 Ft Spread Clamps
1	Bolt Kit

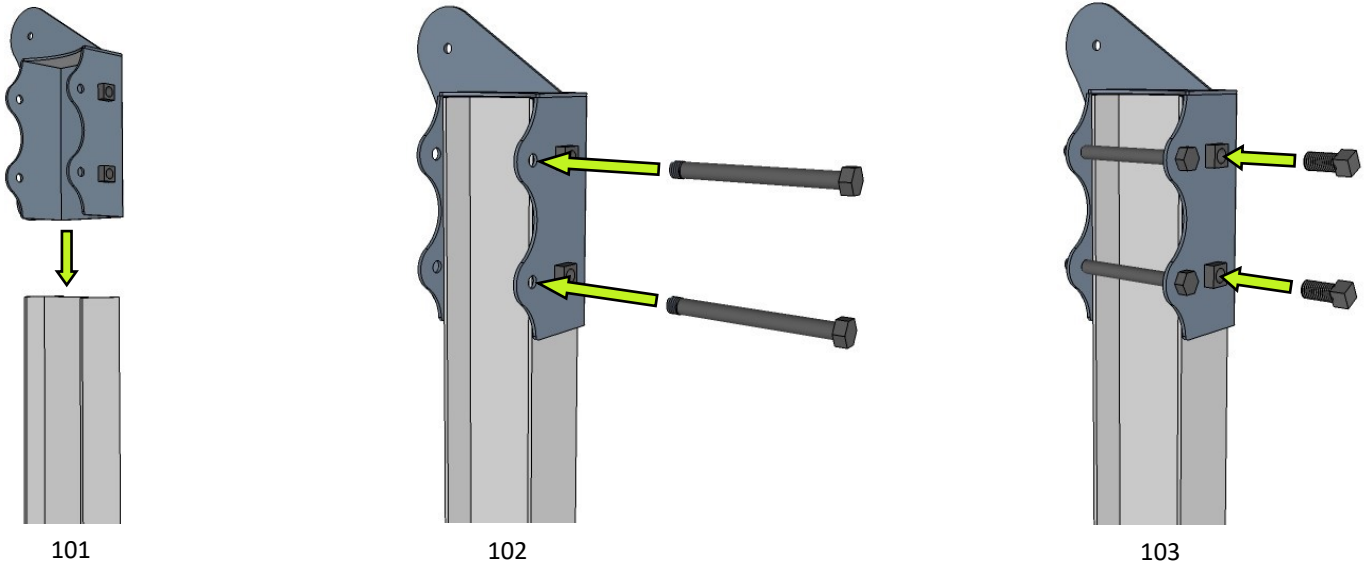
## Tools Required:

- 15/16" Socket
- 3/4" Socket
- 9/16" Socket
- Crescent Wrench
- Torque Wrench
- Tape Measure
- Compass
- String line

\*\* Aluminum rail lengths and clamp quantities vary depending on the number, size and layout of modules.

See packing list for Quantity.

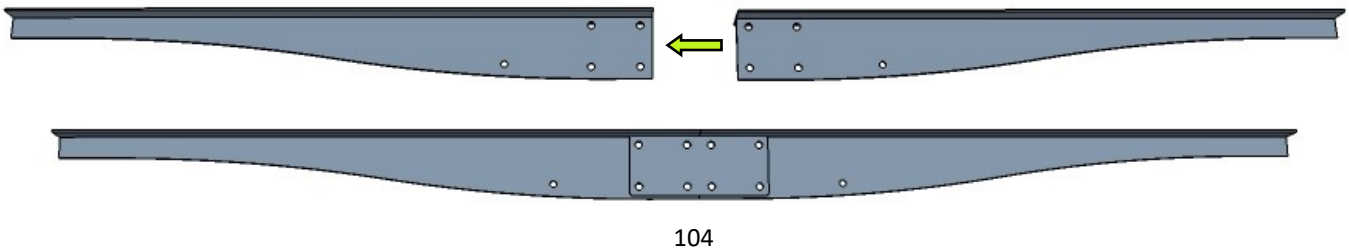
# Installation Guide



**101:** With the vertical support post installed in the ground, place the pole cap on the top of the post with the mounting and angle support tab oriented south.

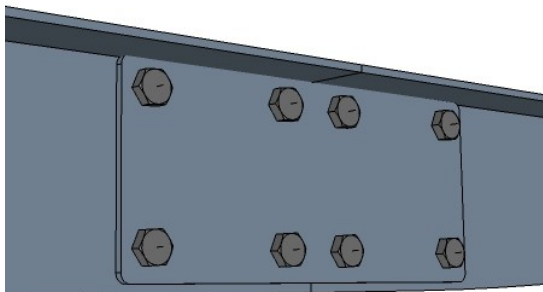
**102:** Insert the two 5/8" cross bolts through the holes in the sides of the pole cap and tighten the 5/8" flange nuts to 110 ft lbs.

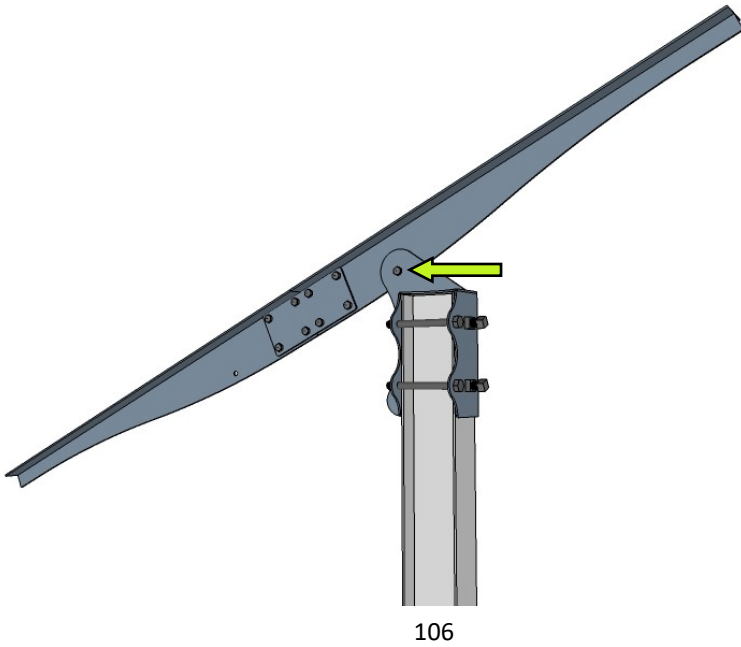
**103:** Insert two 3/4" x 3" Square head set bolts in side of the pole cap and tighten to 160 ft. lbs.



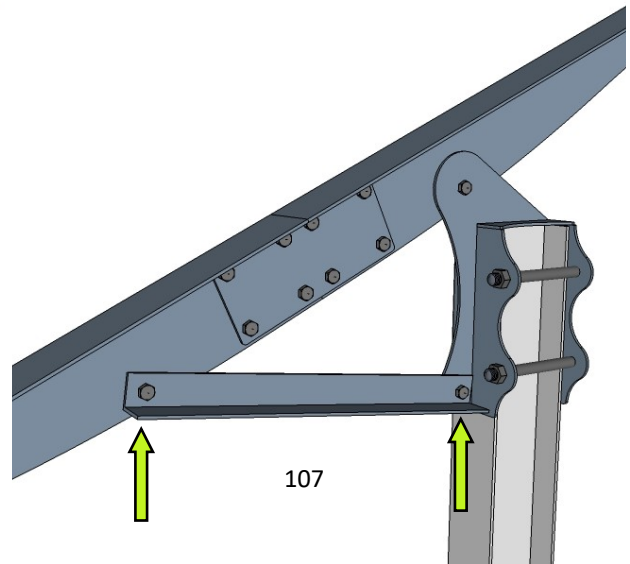
**104:** Connect the two split wings together on the ground or a separate flat surface.

**105:** Align the holes in the splice plate with the holes in the split wings and insert eight of the 1/2" bolts and flange nuts. Tighten to 55 ft. lbs.





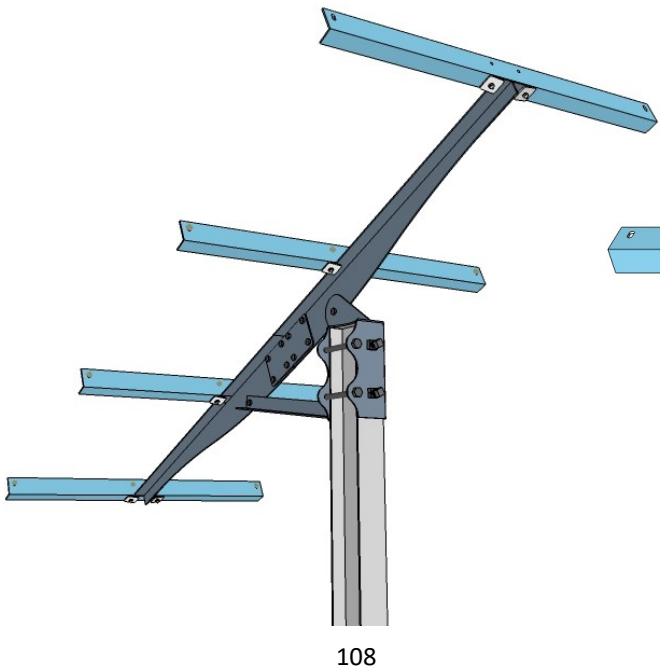
106



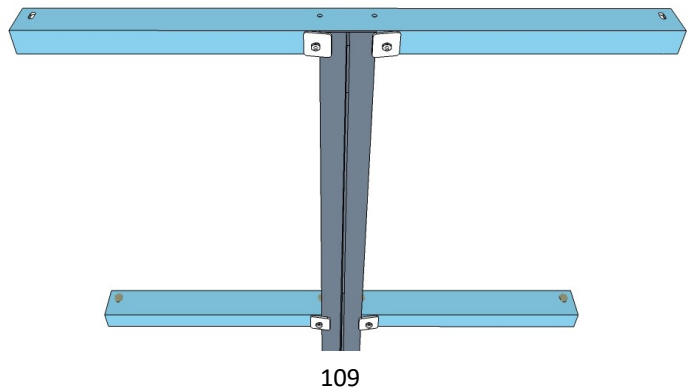
107

**106:** Attach the spliced split wings to the pole cap through the upper (North) hole of the split wings using a 1/2" bolt and flange nut. Leave the bolt finger tight.

**107:** Install the adjuster bar between the pole cap and the lower (South) hole of the split wings using two 1/2" bolt and flange nuts. Tighten all three 1/2" bolts to 55 ft lbs.



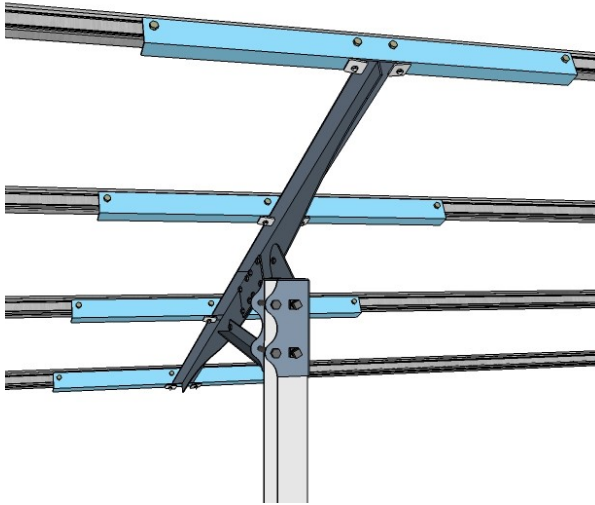
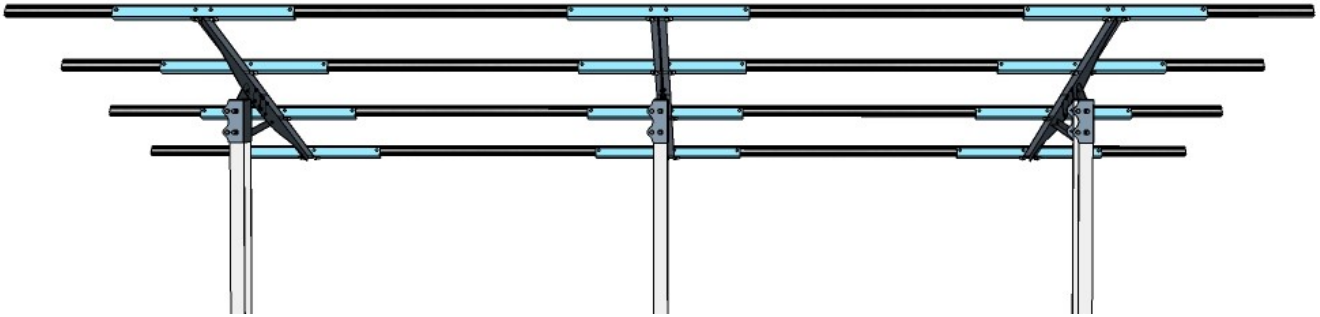
108



109

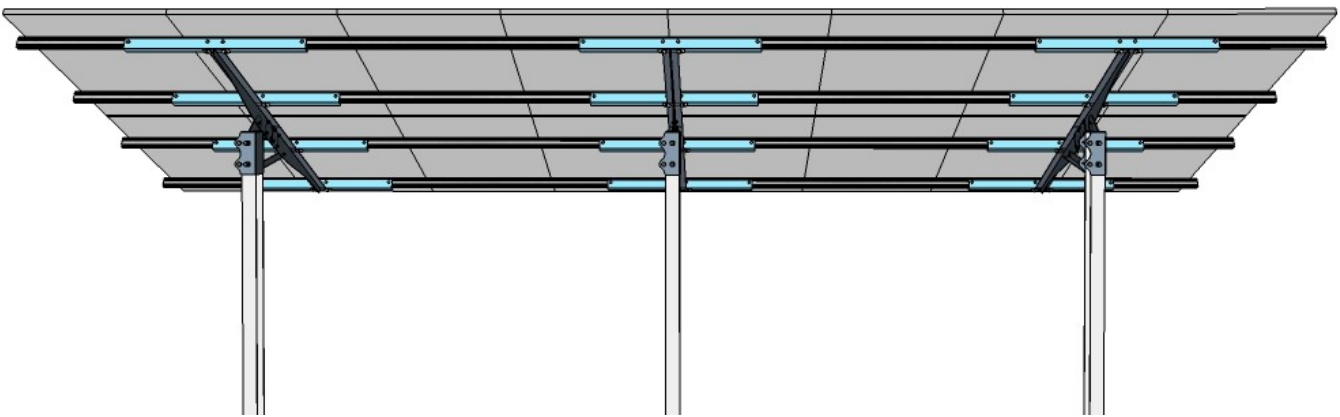
**108:** Plan the layout and vertical (North / South) spacing of your rails according to your module manufacturer's recommendation.

**109:** Attach the 4 Ft long angle-shaped spread clamp to the flange of the split wings using the square plates provided and the 3/8" x 1 1/4" bolts and 3/8" flange nuts.



110

**110:** Install the Mounting Rail into the 4 Ft spread clamp slots as per Mounting Rail instructions. Use 3/8" x 1" stainless steel bolts and 3/8" serrated flange nuts.



111

**111:** Install Solar Modules as per Mounting Rail and module manufacturer instructions.



**844-MT-SOLAR (687-6527)**

**[sales@mtsolar.us](mailto:sales@mtsolar.us)**

**[www.mtsolar.us](http://www.mtsolar.us)**

**54179 Herak Road**

**Charlo, MT 59824**