

Installation Manual

Blade Series Top of Pole Mount

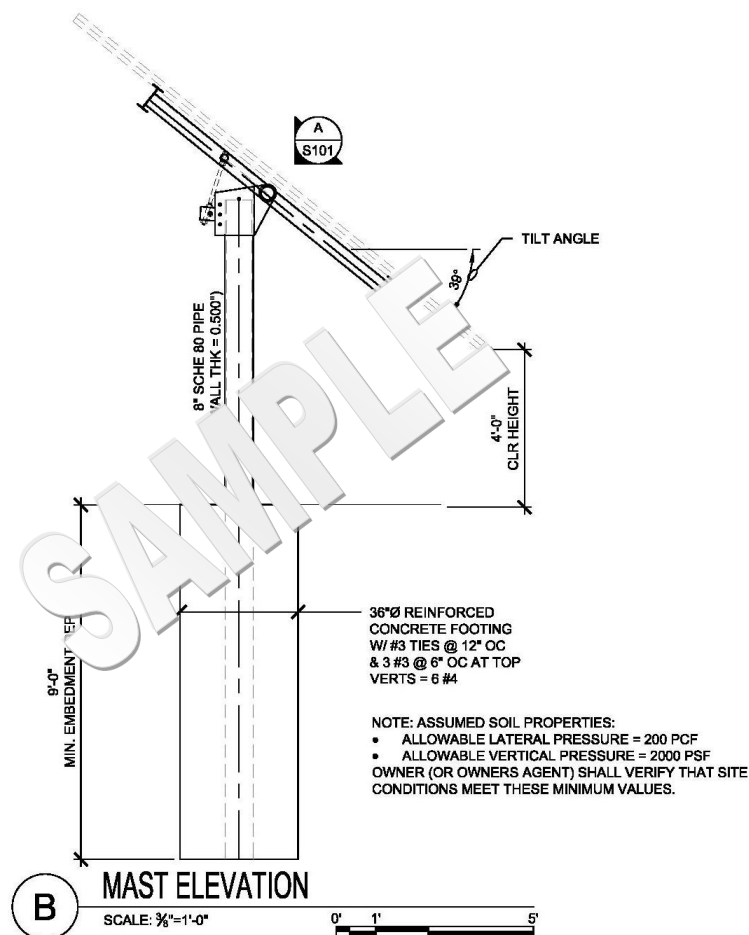
www.mtsolar.us
844-MT-SOLAR (687-6527)

2017 V3.2

Thank you for choosing MT Solar Pole Mounts.

It is the installer’s responsibility to determine 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 requirements.

We recommend consulting an engineer for a recommendation on foundation dimensions and pipe size and thickness. MT Solar can also provide a stamped drawing engineered for site-specific requirements for an additional fee. Please contact us to find out more.



Tools Required:

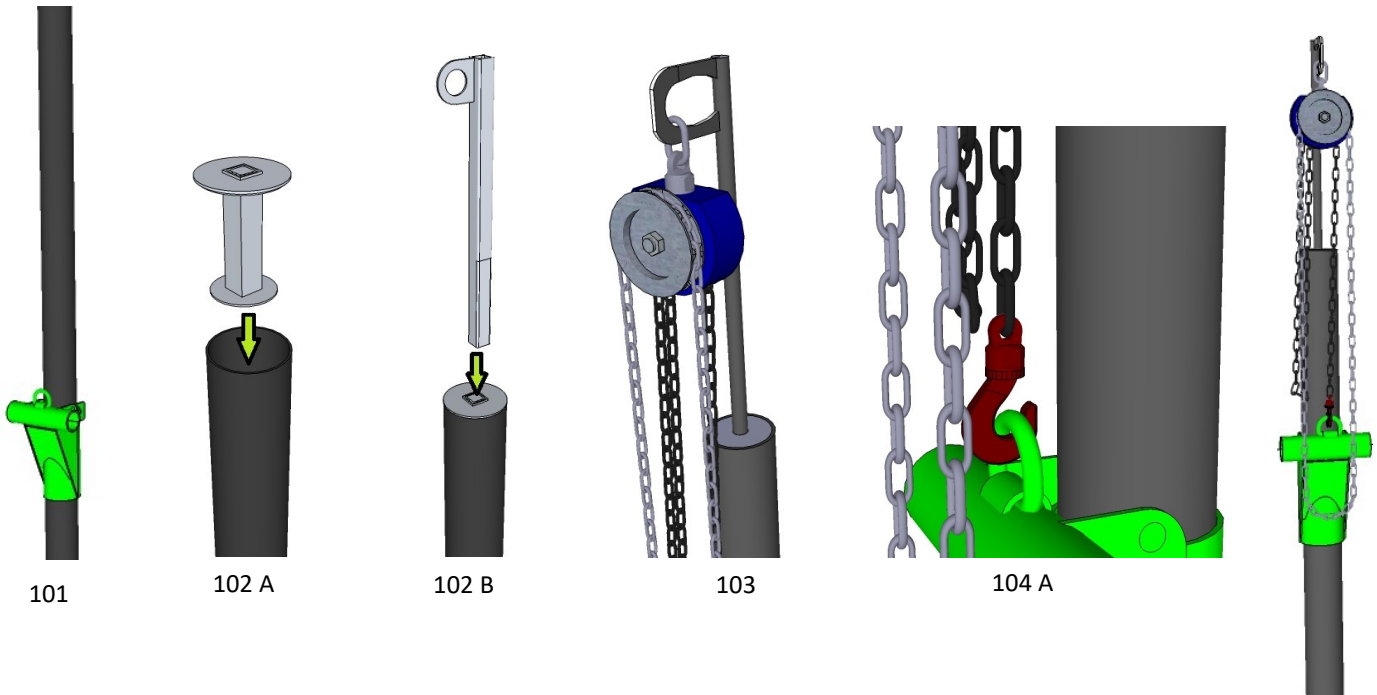
- 3/4" Socket
- 9/16" Socket
- Crescent Wrench
- Torque Wrench
- Tape Measure
- Angle Finder
- Compass
- Ladder

Tips for Conventional Pipe Installation:

- Dig hole according to recommended depth and diameter.
- Set pipe in hole and use a level to ensure it is plumb and vertical to the ground.
- If installing multiple poles, use a string to line up pipes.
- Brace pipe to prevent it from moving while pouring concrete.
- Proper compaction of backfill around sonotube or form is recommended, unless pouring so that concrete is in direct contact with the soil.
- Allow concrete to cure for recommended length of time.

Installation Guide

The 4" Series Top of Pole Mount does not come standard with the lifting bracket and chain hoist. If you choose to add this option, follow steps 101 to 104 to install the lifting assembly.

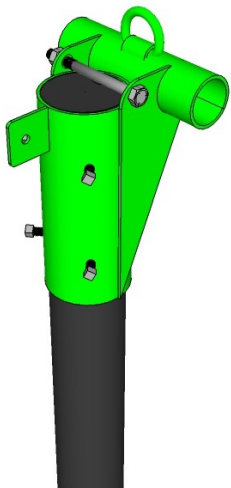


101: With the 4" Sch 40 or Sch 80 steel pipe installed in the ground, slide the pole cap over the pipe.

102: Place the lifting insert into the top of the pipe until it sits flush. Place the lifting bracket into the lifting insert with the eye facing south.

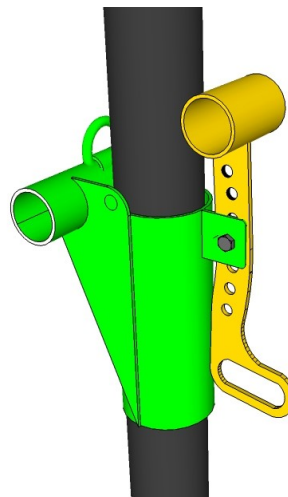
103: Hang a 1 ton or greater chain fall hoist from the lifting eye.

104: Hang the U-Bracket Assembly on the Chain Hoist.



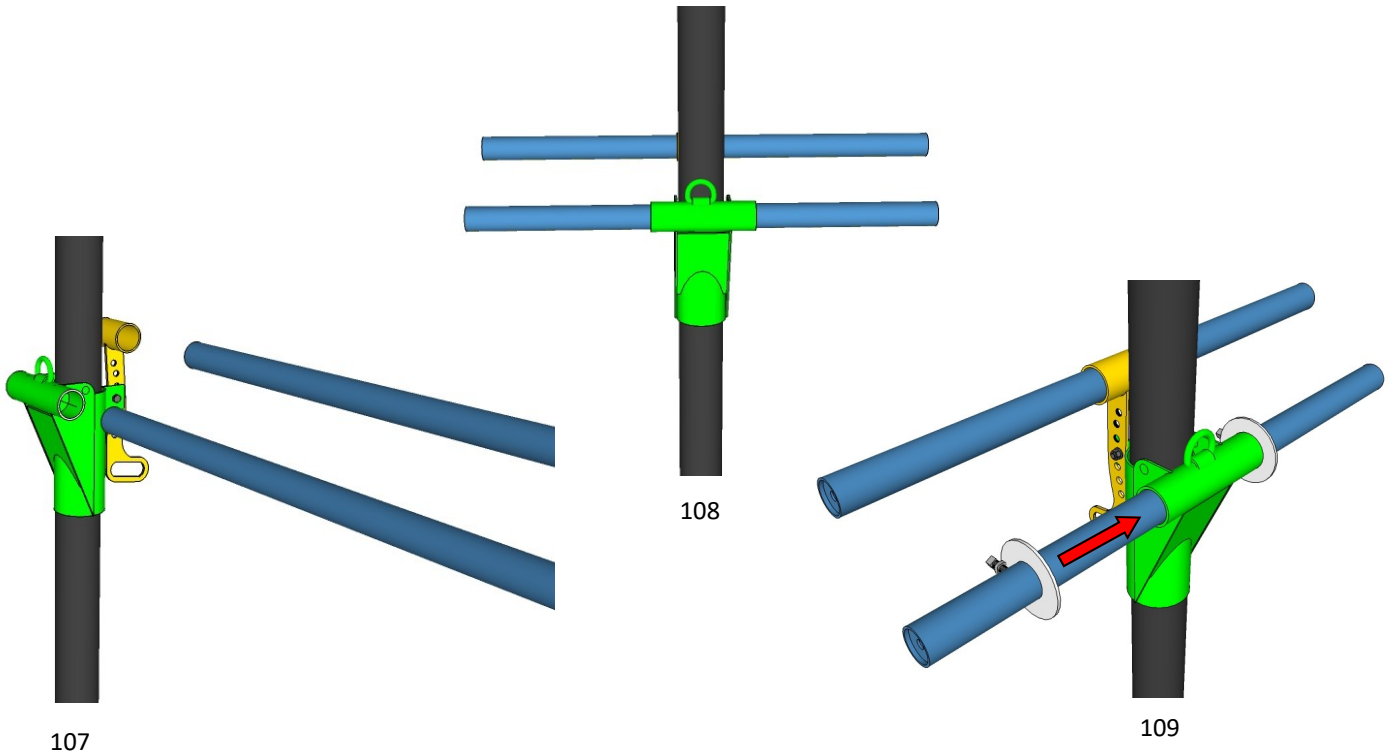
105

105: If you do not have a chain fall hoist, install pole cap at the top of the pole, insert the 5/8" x 6" bolt, two 5/8" flat washers and 5/8" nut and four 1/2" x 1" set screws. Tighten all. Proceed with installation of all components at the top of the pole.



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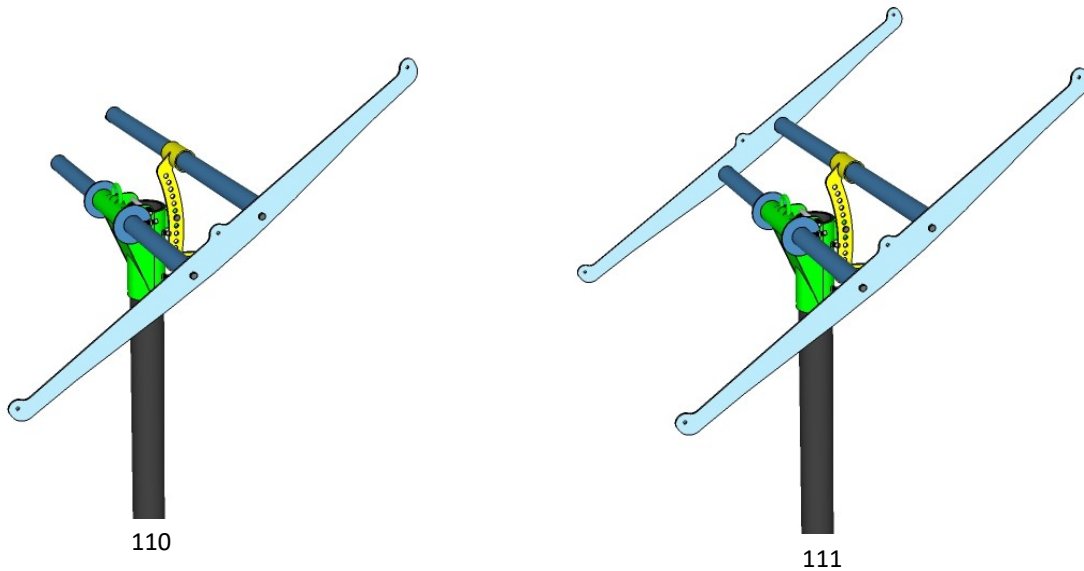
106: Attach the Tilt Adjuster Handle to the tab on the Back Plate with the 1/2" x 1 1/2" Bolt, two 1/2" flat washers and 1/2" Nylock Nut.



107: Slide one of the 2" pipes through the tilt adjuster and the other 2" pipe through the U Bracket Assembly sleeve.

108: Center pipes in sleeves. There should be equal length of pipe on either side of the sleeve.

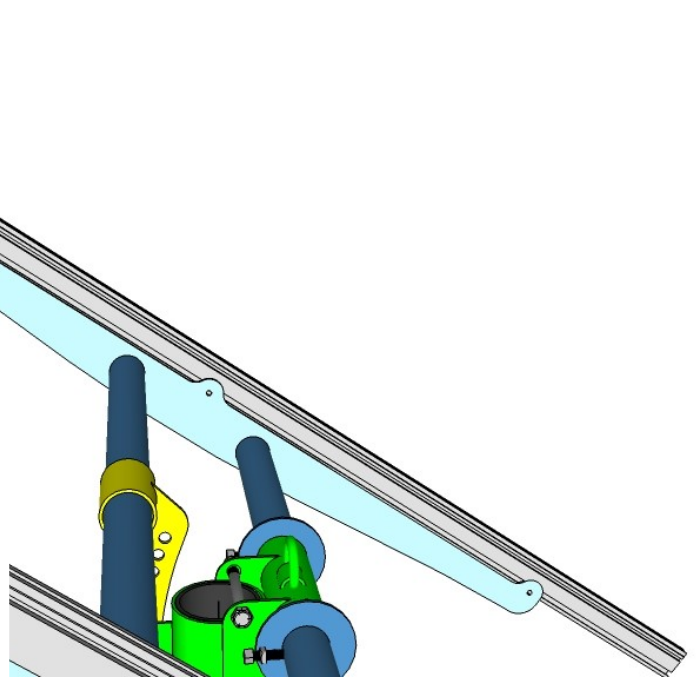
109: Slide collars on the 2" pivot pipe and tighten with 1/2" x 1" square head set bolts. Hold collar firm against the sleeve when tightening.



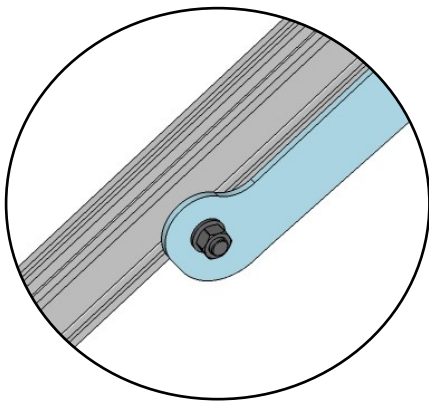
110: Attach one of the 5 Ft. Rail Adapters to the 2" pipes using the 1/2" x 1 1/4" Bolts .

111: Install the remaining 5 Ft. Rail Adapter.

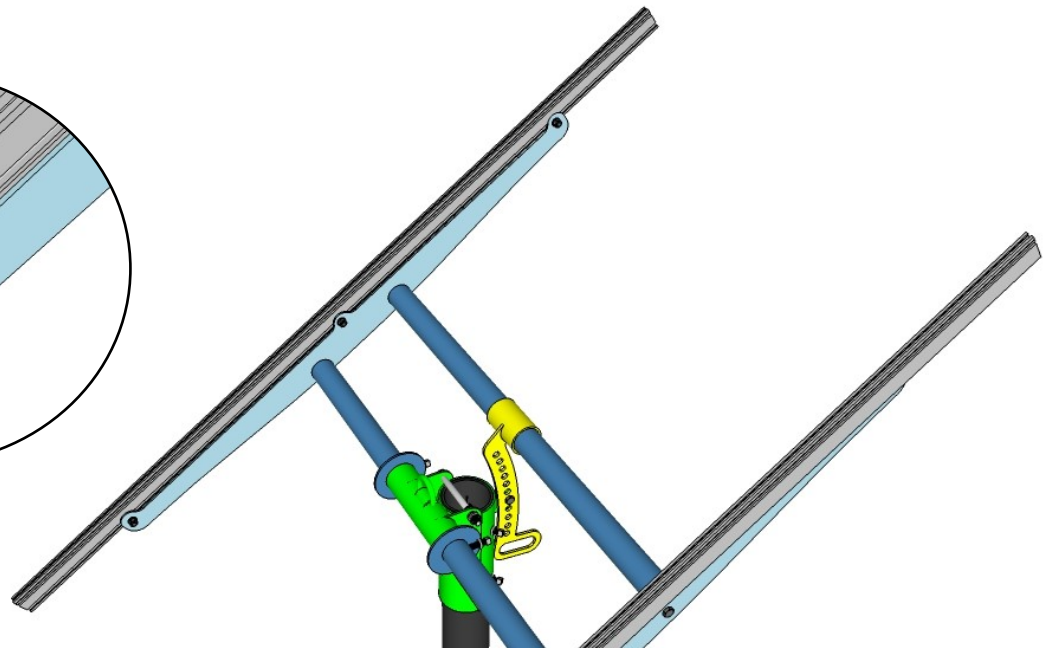
112: Align the bottom slot in the aluminum Rails with the 3 holes in the 5 Ft. Rail Adapter.



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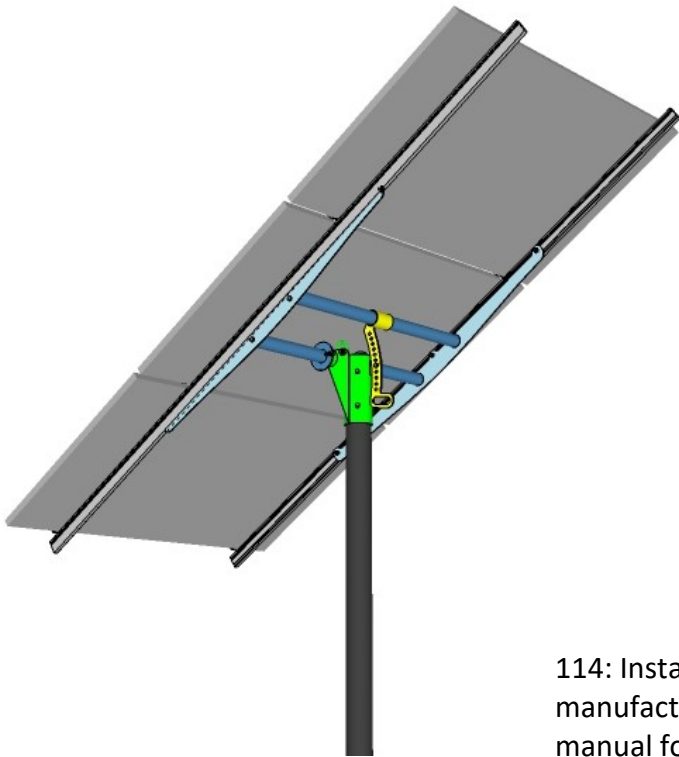


113 A

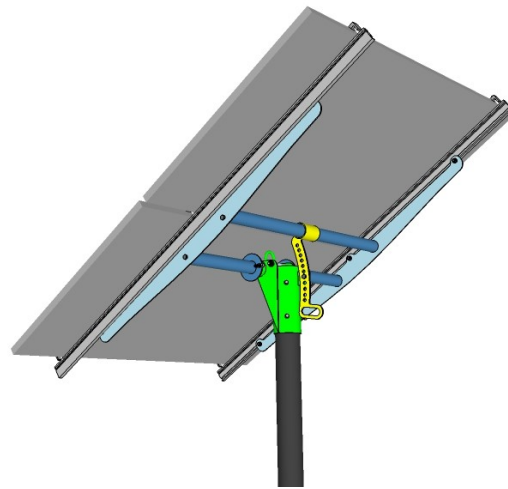


113 B

113: Install the Aluminum Rails to the 5 Ft. Rail Adapters using the 3/8" x 1" stainless bolts and 3/8" flange nuts.

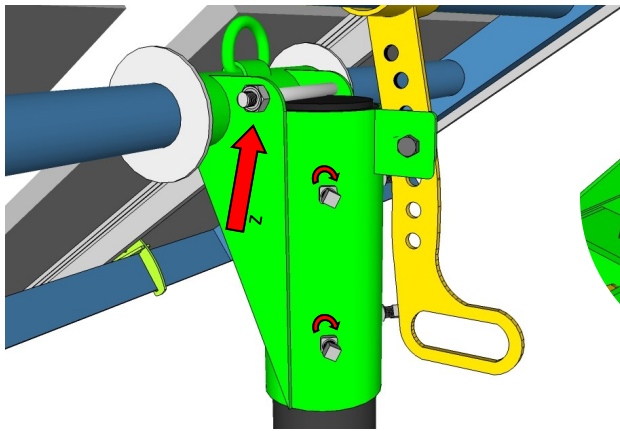


114A

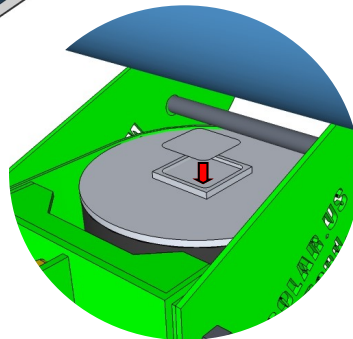


114B

114: Install Solar Modules as per Mounting Rail and module manufacturer instructions using top clamps. See last page of manual for Iron Ridge Rail and Clamp instructions.



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115: Insert the 5/8" x 7" bolt over the top of the pole with the 5/8" flat washers and 5/8" nut. Securely tighten the 4 tension bolts in the back of the pole cap to 200 ft-lb.

116: Remove the chain hoist and lifting bracket and place the 1 3/8" diameter round cap in place.



Using an angle finder, adjust array to proper tilt. Installation is complete.

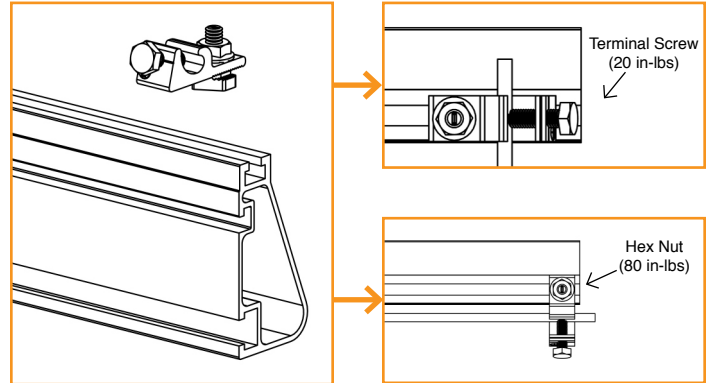
3. SECURE LUGS

Insert T-bolt in top rail slot and torque hex nut to **80 in-lbs**. Install a minimum 10 AWG solid copper or stranded grounding wire. Torque terminal screw to **20 in-lbs**.

💡 Grounding Lugs are only needed on one rail per row of modules (unless frameless modules are being used, see [Page 8](#)).

💡 If using Enphase microinverters, Grounding Lugs may not be needed. See [Page 8](#) for more information.

💡 Grounding Lugs can be installed anywhere along the rail and in either orientation shown.



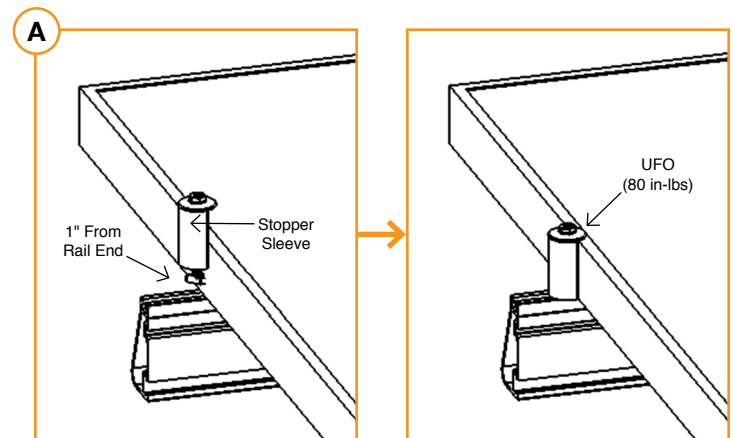
4. SECURE MODULES

A. SECURE FIRST END

Place first module in position on rails, a minimum of 1" from rail ends. Snap Stopper Sleeves onto UFO. Fasten module to rail using the UFO, ensuring that the UFO is hooked over the top of the module. Torque to **80 in-lbs**.

💡 Ensure rails are square before placing modules.

💡 Hold Stopper Sleeves on end while torquing to prevent rotation.

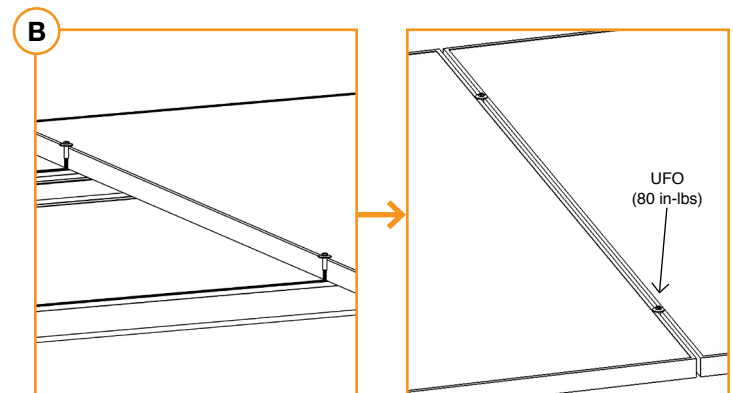


B. SECURE NEXT MODULES

Place UFO into each rail, placing them flush against first module. Slide second module against UFO. Torque to **80 in-lbs**. Repeat for each following module.

💡 When reinstalling UFO, move modules a minimum of 1/16" so UFOs are in contact with a new section of module frame.

💡 If using Wire Clips, refer to [Page 7](#).

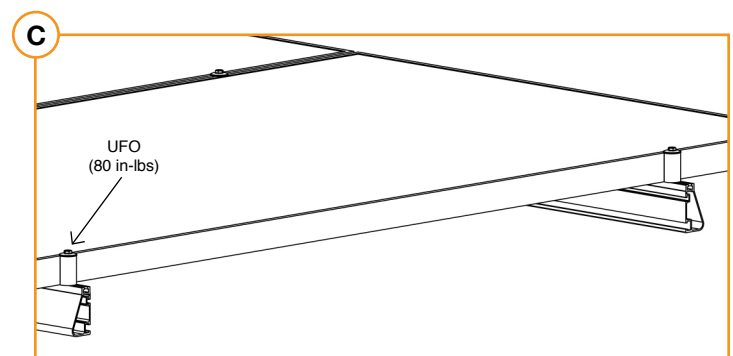


C. SECURE LAST END

Place last module in position on rails, a minimum of 1" from rail ends. Snap Stopper Sleeves onto UFO. Secure UFO Clamps on rails, ensuring they are hooked over top of module. Torque to **80 in-lbs**.

💡 Hold Stopper Sleeves on end while torquing to prevent rotation.

💡 Repeat all steps for each following row of modules.



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