



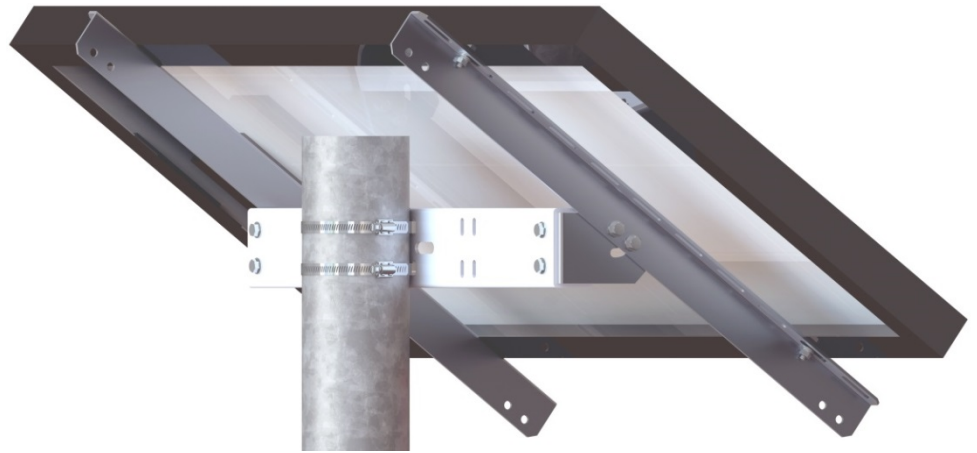
Installation Manual

2019 Edition

UNI-SP01A-MAN v1.3

For model:

UNI-SP/01A



Contents

Introduction	1
Customer Support	1
Tools Required and Torque Specifications	1
Components List	2
Component views	2
Step 1. Measure PV Mounting Hole Distance	3
Step 2. Mounting Rail Supports on PV Module	3
Step 3. Attaching Clips to Rails	5
Step 4. Attaching Bucket to Pole	6
Step 5. Mounting PV Assembly on Pole	7
Installer Responsibility	8
Warranty Information	8

Introduction

The UNI-SP/01A Side of Pole Mount is a simple and universal pole mounting solution for PV modules with an area of less than 7 square feet. With its user-adjustable angle settings, the Side of Pole Mount can support installations in a wide range of locations. These can be installed on 2 to 4 inch schedule 40 pipe which have an outside diameter of 2.375 inches to 4.5 inches, flat surfaces, and a 25G ROHN tower frame. The module support rails can be adjusted to 0° to 90°.

Customer Support

Tamarack Solar makes every effort to ensure your mounting kit is easy to install. If you need assistance at any point with your installation or have suggestions on how we can improve your experience, call our customer support at **1-800-819-7236** or email us at info@tamaracksolar.com.

Tools Required and Torque Specifications

Torque values are “dry”, add 15% if using anti-seize lubricant on **Stainless** hardware (Recommended).

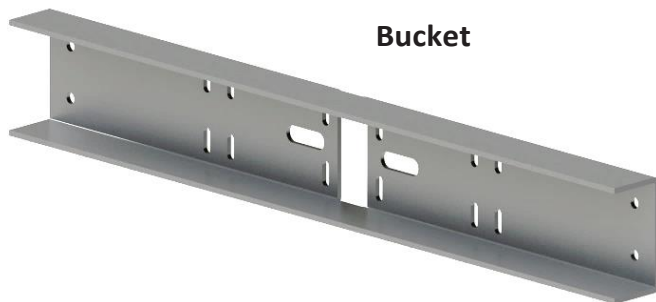
A torquewrench with a range of up to 144 inch-pounds or 12 Ft-Lbs:

5/16" socket (for the hose clamps)	torque to 35 Inch-pounds
7/16 " socket	torque to 84 inch-pounds (7 Ft-Lbs).
1/2 " socket	torque to 144 inch-pounds (12-Ft Lbs).

Components List

ITEM	PART NUMBER	DESCRIPTION	QTY
1	51-3517-200	Bucket, 25.5"	1
2	51-3517-243	Clip, Left End	1
3	51-3517-244	Clip, Right End	1
4	51-0527-000	Rail, 27.5"	2
5	23-2520-050	Bolt, 1/4-20 x .75" Stainless steel	4
6	25-2502-000	Washer, flat 1/4" Stainless steel	8
7	25-2501-000	Washer, lock 1/4" Stainless steel	4
8	24-2520-440	Nut, 1/4-20 Hex Stainless steel	4
9	23-3118-021	Bolt, 5/16-18 x .75" Stainless steel	8
10	25-3102-000	Washer, flat 5/16" Stainless steel	16
11	25-3101-000	Washer, lock 5/16" Stainless steel	8
12	24-3118-440	Nut, 5/16-18 Hex Stainless steel	8
13	27-5000-010	Hose Clamp, 1/2" x 3-5/8" - 6-1/2"	2
14	29-5002-000	Kit, Spare (1/4" + 5/16") x 3/4"	1

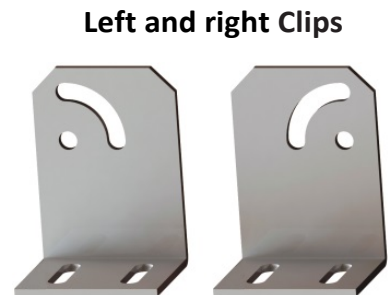
Component views



Bucket



Hose clamps



Left and right Clips

Panel Support Rails



Optional Components for mounting (Not included)

Depending on mounting surface:
1 : 1/2" - 13 x 2", 3", or 4" U-Bolts
with Flats and Locks washers and
nuts per bucket

-OR-

2 sets: 1/2" lag bolts and washers,
-OR-

2 ea 1 9/16" to 2 1/2" hose clamps

For 25G Rohn tower

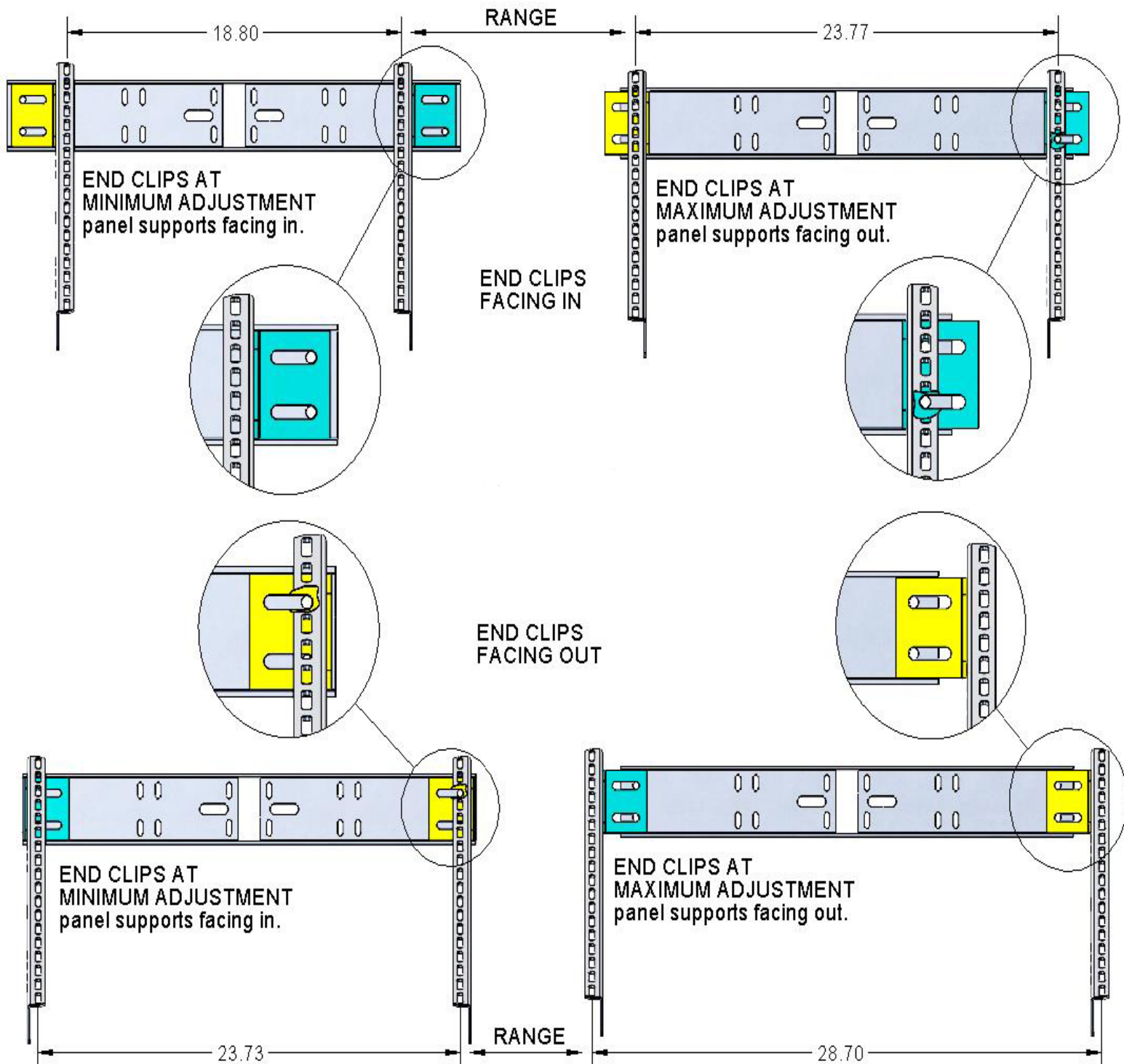


Step 1. Measure PV Mounting Hole Distance

- A. Lay the module(s) face down on a protected surface in the suitable orientation.
- B. Measure the center to center distance between the inside mounting holes on the back of the PV module as shown and make a note of it.

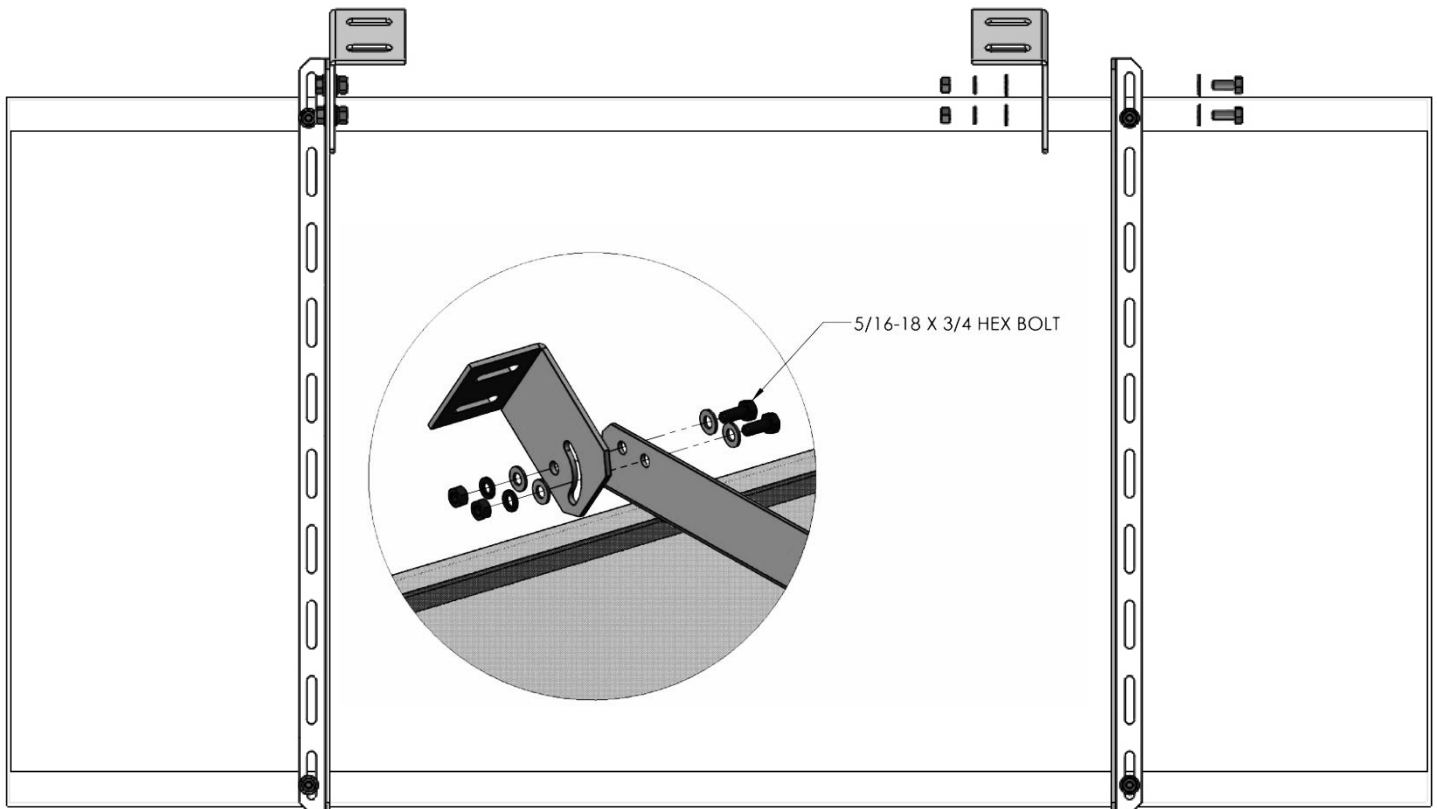
**Step 2. Mounting Rail Supports on PV Module**

- A. Review the reference diagrams on next page to determine the orientation of the panel support rails (facing in or out) and the end clips (facing in or out), based on the center to center hole spacing of your solar module
- B. Secure the rails to the solar module with a 1/4-20 x 3/4 inch bolt, lock washer, and hex nut in each of the solar module mounting holes. See the top of page 5 for reference view.
- C. Torque the bolts to 84 in-Lbs



Step 3. Attaching Clips to Rails

- A. Attach the clips to the rails as determined by the bucket range diagrams (shown in previous step). Example shown has the clips facing in on the inside of the rails that are facing out.
- B. In each of the clip mounting holes, use a 5/16-18 x 3/4" bolt and flat washer on one side and a flat washer, lock washer and nut on the other. Tighten these bolts finger tight only at this time (these will torque to 144 in-lbs. after assembly is finished and the tilt angle is final.)
- C. **Note: over the pole option,** attach on the middle set of holes on the panel supports, see view on manual cover.



Step 4. Attaching Bucket to Pole

A. Un-screw the hose clamp to release the end and thread each hose clamp through one of the sets of narrow center holes in the bucket(s) as shown and place at the desired location on the pole. **Keep the solid section of the clamp thru the holes on the bucket.**

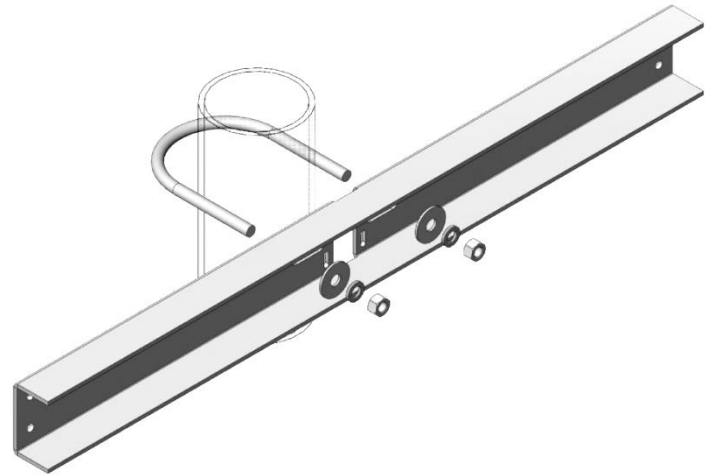
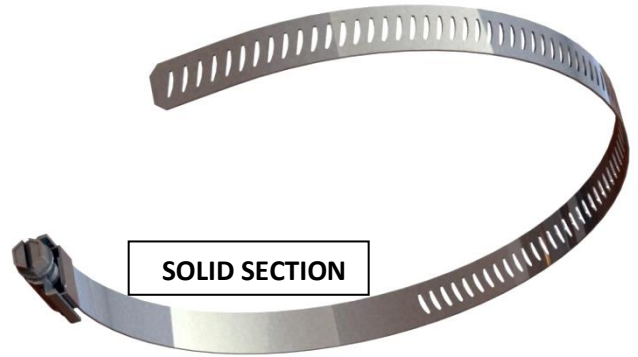
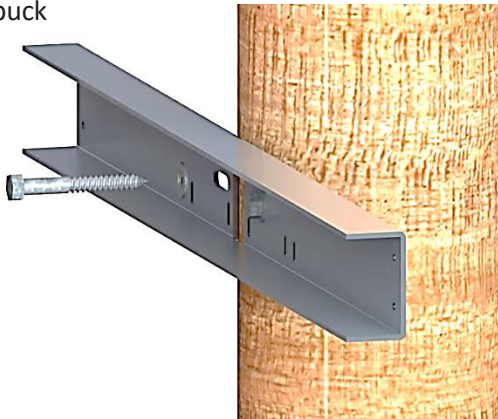
B. Once the hose clamps are in the desired position, tighten the hose clamp screws to 35 in-lbs

NOTE: ALWAYS RECHECK TORQUE ON HOSE CLAMPS AFTER EXPOSURE TO WINDY CONDITIONS.

Optional hardware mounting not included

C. In high loading conditions, in conjunction with the hose clamps, add the optional the optional 1/2-13 U-Bolts as appropriate for the pipe size being used, (2" to 4" pipe size) Tighten securely but take care not to deform the bucket

D. Use 1/2" lag bolts as appropriate to a wooden structure being mounted to (telephone pole or post Etc.). Tighten securely but take care not to deform the buck



E. Use (optional) hose clamps to attach buckets to a 25G Rohn tower.

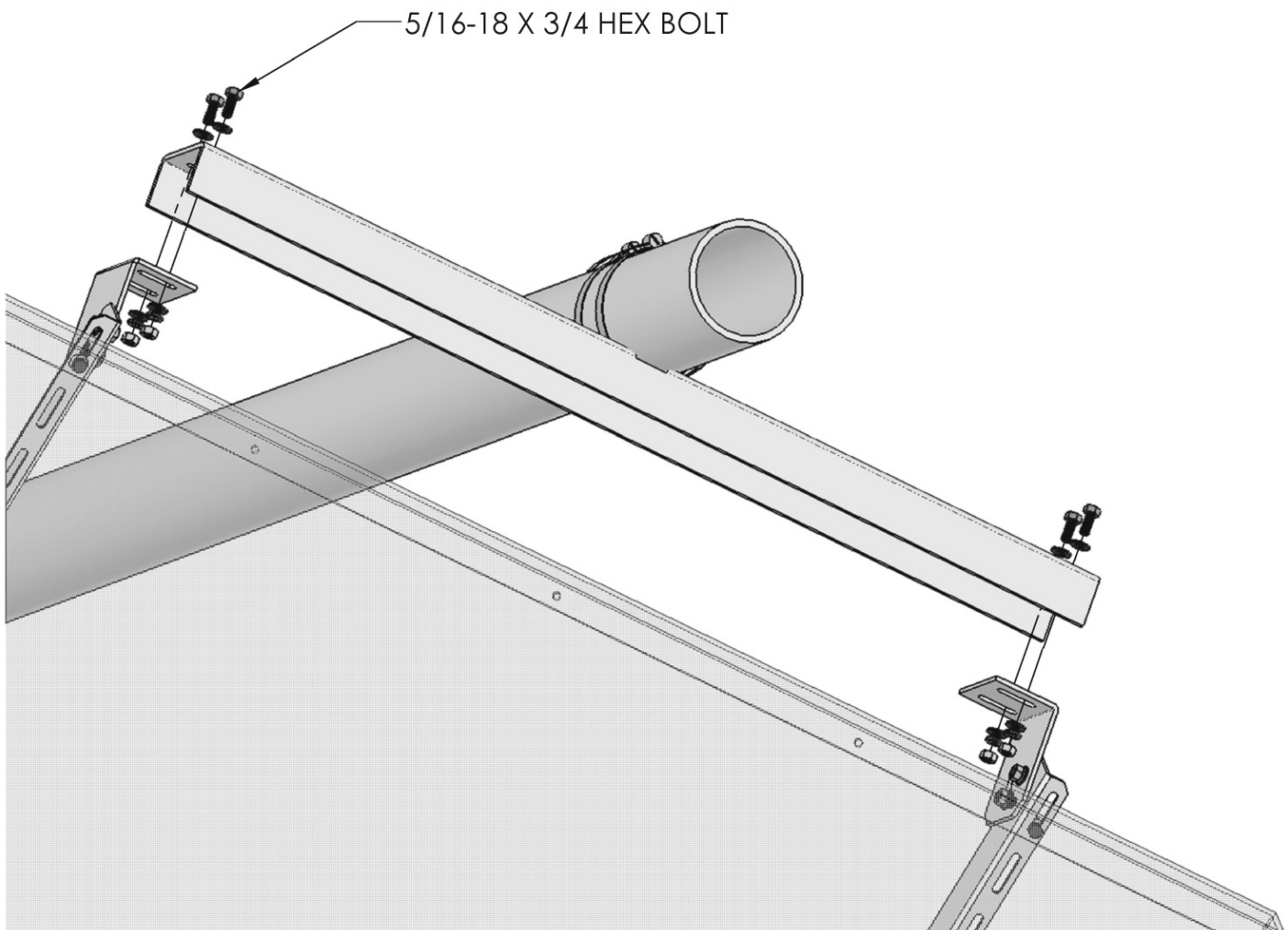


Step 5. Mounting PV Assembly on Pole

- A. Place the PV module assembly so the holes on the clips line up with holes in the inside of the bucket.

Depending on the size of the panel you started with, your assembly may look different than what is shown in the provided view, with the clips and rails facing in the opposite direction.

- B. Attach the clips to the bucket. In each of the 4 mounting holes, use a 5/16-18 x 3/4" bolt and flat washer on one side and a washer, lock washer and nut on the other. Tighten bolts to 144 in-lbs.
- C. Set desired angle and Tighten bolts to 144 in-lbs.



Installer Responsibility

The installer is solely responsible for:

- i. Complying with all applicable local or national building codes, including any that may supersede this manual;
- ii. Ensuring that Tamarack Solar and other products are appropriate for the particular installation and the installation environment;
- iii. Using only Tamarack Solar parts and installer-supplied parts as specified by Tamarack Solar. Substitution parts may void warranty;
- iv. Ensuring safe installation of all electrical aspects of the PV array; and
- v. Ensuring correct and appropriate design parameters are used in determining the design loading used for the specific installation. Parameters, such as snow loading, wind speed, exposure and topographic factor should be confirmed with the local building official or a licensed professional engineer.

NOTE:

ALWAYS RECHECK TORQUE ON HOSE CLAMPS AFTER EXPOSURE TO WINDY CONDITIONS

Warranty Information

Tamarack Solar warrants each Mounting Structure to be free from defects in materials and workmanship for ten (10) years from the date of first purchase ("Warranty Period"), when installed properly and used for the purpose for which it is designed, except for the finish, which shall be free from visible peeling, or cracking or chalking under normal atmospheric conditions for a period of three (3) years, from the earlier of 1) the date the installation of the Product is completed, or 2) 30 days after the purchase of the Product by the original Purchaser ("Finish Warranty"). The Finish Warranty does not apply to any foreign residue deposited on the finish. All installations in corrosive atmospheric conditions are excluded. The Finish Warranty is VOID if the practices specified by AAMA 609 & 610-02 – "Cleaning and Maintenance for Architecturally Finished Aluminum" (www.aamanet.org) are not followed by Purchaser for Tamarack Solar's aluminum based products.

The warranty covers the replacement cost of parts to repair the product to proper working condition. Transportation and incidental costs associated with warranty items are not reimbursable. The warranty does not cover normal wear, or damage resulting from misuse, abuse, improper installation, negligence, or accident. The warranty does not cover any defect that has not been reported in writing to Tamarack Solar within ten (10) days after discovery of such defect. Furthermore, it does not cover units that have been altered, modified or repaired without written authorization from the manufacturer or its authorized representative, or units used in a manner or for a purpose other than that specified by the manufacturer. Tamarack Solar's entire liability and Purchaser exclusive remedy, whether in contract, tort or otherwise, for any claim related to or arising out of breach of the warranty covering the Mounting Structures shall be correction of defects by repair, replacement, or credit, at Tamarack Solar's discretion. Refurbished Mounting Structures may be used to repair or replace the Mounting Structures.

Tamarack Solar shall have no liability for any injuries or damages to persons or property resulting from any cause, whatsoever, or any claims or demands brought against Tamarack Solar by Purchaser, any employee of Purchaser, client of Purchaser, end-user of the Product or other party, even if Tamarack Solar has been advised of the possibility of such claims or demands (collectively, "Third Party Claims"). This limitation applies to all materials provided by Tamarack Solar during and after the Warranty