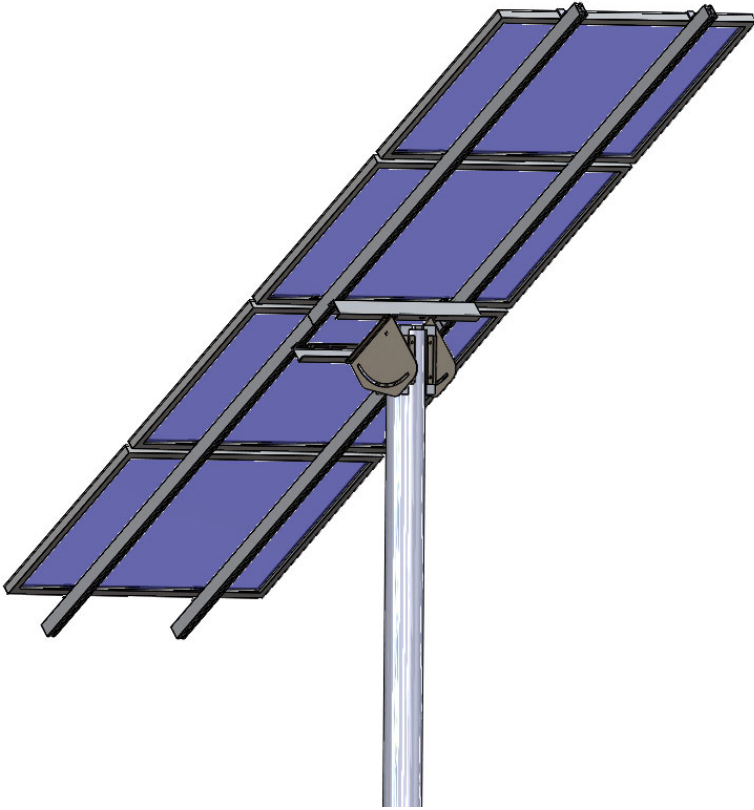


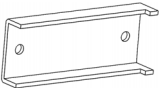
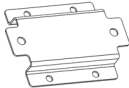



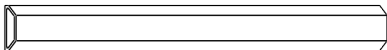



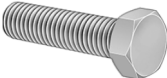

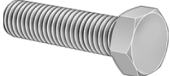



RURAL  
POWER  
SYSTEMS



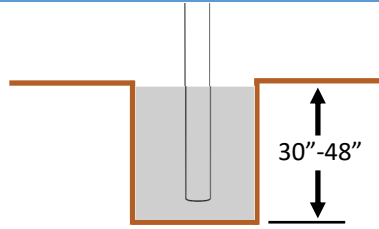
# Four Panel Top of Pole Adjustable Mount RPS-TPM-4

# Kit Contents

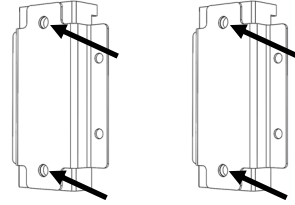
Item	Qty	Image
Pole Bracket	2	
Pole Clamp	2	
Tilt Bracket (left and right)	2	
Extension Rail	2	
Panel Rail	4	
Rail Joining Inserts	4	
Panel End Clamp w/Short Socket Head Bolt and Nut	4	
Panel Mid Clamp w/ Long Socket Head Bolt and Nut	6	
5/16"-18 x 3.5" Hex Bolt	4	
5/16"-18 x 3/4" Hex Bolt	8	
5/16" Hex Nut	12	
3/8"-16 x 3/4" Hex Bolt	4	
3/8"-16 Flange Nut	4	

# Assembly

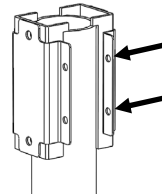
**Step 1:** Installation requires a "4 inch steel pipe" (4.5in outside diameter, 4in inside diameter) . Bury the pipe between 30 to 48 inches in the ground. It is recommended to use at least two 60lb bag of concrete for secure mounting, especially in areas with high winds, soft ground or high snow loads. If concrete is not available, ensure the pole is buried at least 3 feet.



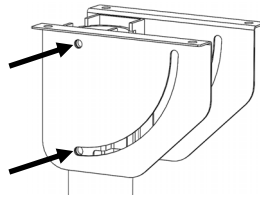
**Step 2:** Place one of the pole clamps over the pole bracket so the holes align. Place two of the 3/8" bolts through each of the holes, so the head of the bolt is on the inside of the bracket and the threads are sticking out. Temporarily place a 3/8" flange nut on the bolt to hold the brackets together. Finger tighten and perform the same for the other two brackets.



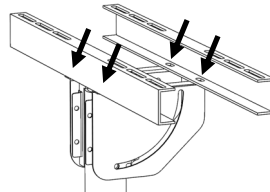
**Step 3:** Place the two clamp assemblies over the end of the pole. The top tabs should rest on the top of the pole. Use four of the 3/8" x 3.5" bolts and nuts to clamp the assemblies to the pole. Tighten the nuts so the brackets clamp the pole, but not enough to significantly bend the brackets. The clamps should not be able to rotate on the pole once tightened.



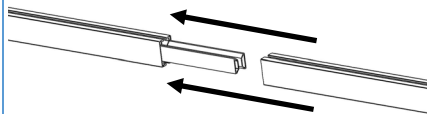
**Step 4:** Remove the finger tight 3/8" flange nuts, previously used to hold the brackets together. Add one tilt bracket to each side and use the flange nuts, to hold the tilt brackets in place. The top bent portions of the tilt brackets should be facing away from each other, as shown in the image. With the brackets horizontal, tighten the four 3/8" flange nuts to hold the brackets place.



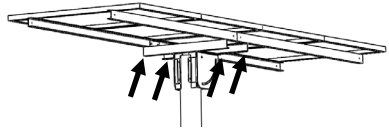
**Step 5:** Using four 5/16" bolts and nuts, attach the two extension rails to the flange on the tilt brackets. Align the two rails so they extend the same amount on both sides. Tighten the bolts.



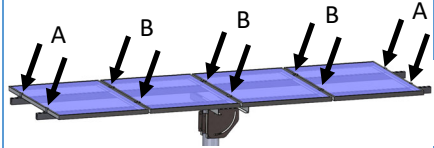
**Step 6:** Create a long rail by joining two panel rails end to end using the rail joining inserts. Insert two rail joining inserts into the end of a panel rail until they stop. Then insert the second panel rail. There may be a small gap which should be closed by tapping the two rails together on a hard surface. Do this again, so you end up with 2 long rails.



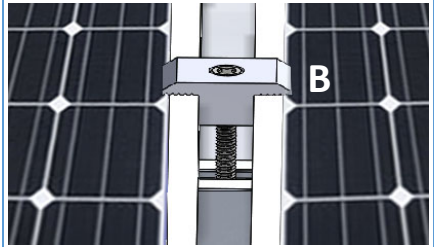
**Step 7:** Bolt the panel rails to the extension rails using four 5/16" nuts and bolts. The bolt heads must be slid in the end of the panel rails. Squeeze the bolts in-between the rail and the end of the slot to help hold them in place when tightening the nuts. Space the rails about 19" apart (or about 1/4 the way in from the edge of your panel). Make sure the rails are parallel.



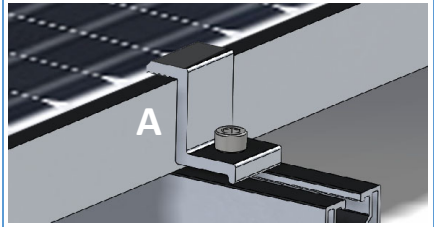
**Step 8:** With a helper, lift one solar panel and set it on the rail. Starting with an end clamp, bolt and T-Hammer nut (which can insert and lock in the rail slots, or slide down the length of the rail) secure the end of the first panel (A). Add the second panel and secure the first and second with a mid clamp (B). Continue adding one panel at a time until all panels are secured.



**Note:** Make sure the center hammer nut does not land on top of the rail splice. Offset any bolts from splice by at least 0.5in.



Tighten all bolts and use the flange nuts to adjust to the appropriate angle.



# Solar Panel Angle

Latitude	Option 1: Fixed Position		Option 2: Seasonal Change*		
	Full year fixed angle	Avg. insolation	Summer Angle	Winter Angle	Avg. insolation
25° (Key West)	22.1°	6.2	2.3°	41.1°	6.6
30° (Houston)	25.9°	6.1	6.9°	45.5°	6.4
35° (Albuquerque)	29.7°	6.0	11.6°	49.8°	6.2
40° (Denver)	33.5°	5.7	16.2°	54.2°	6.0
45° (Minneapolis)	37.3°	5.4	20.9°	58.6°	5.7
50° (Winnipeg)	41.1°	5.1	25.5°	63°	5.3

\*Adjust Summer angle on March 30th, Adjust Winter angle on September 12th

**Need Help? Don't worry!**

**Watch our installation video at <https://youtu.be/4ZxA8AQPG00>**

**Rural Power Systems**

[www.RuralPowerSystems.com](http://www.RuralPowerSystems.com)

[Support@RuralPowerSystems.com](mailto:Support@RuralPowerSystems.com)