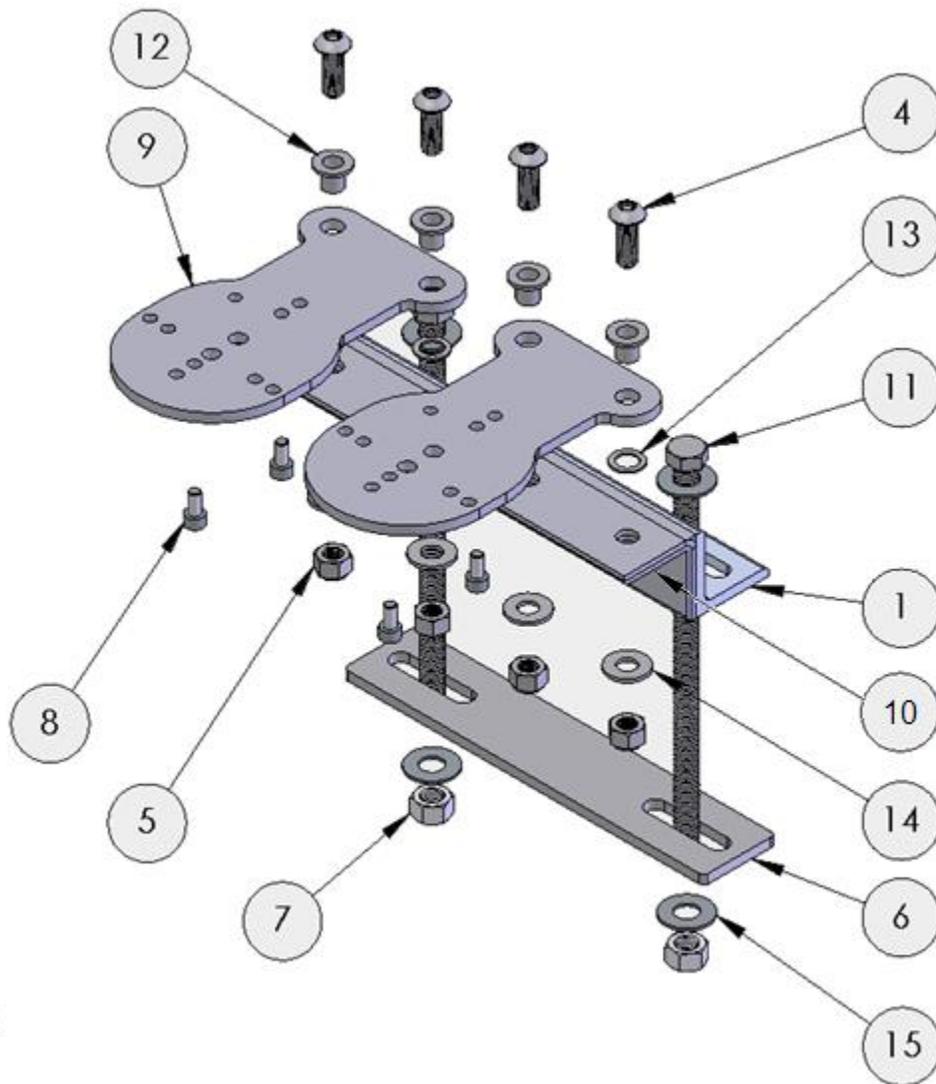




# Solar | #16884 Double POA Assembly, Square Torque Tube

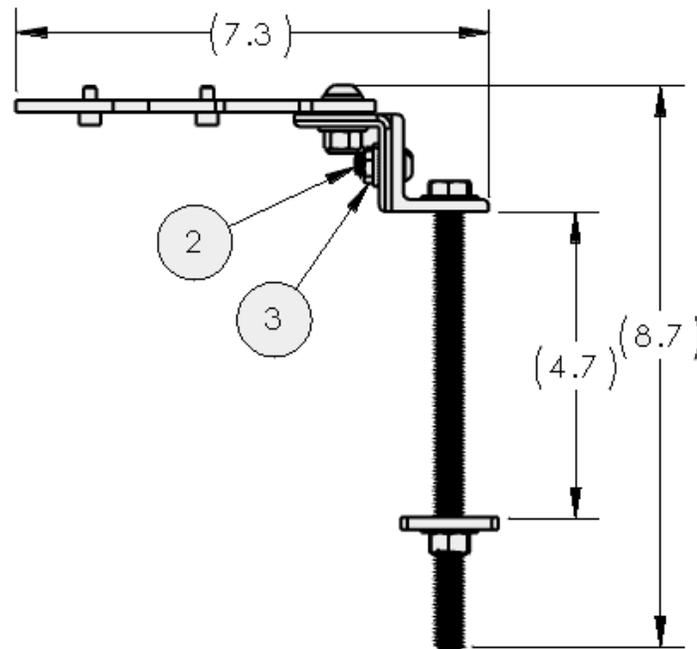
## INTRODUCTION

Kit #16884 was designed to mount two pyranometers to a square torque tube using 7" hex bolts and a backing plate to clamp.





Solar | #16884 Double POA Assembly, Square Torque Tube



#16884: Parts/BOM

| NRG Part Number | Part Description              | Part Specification Notes                           | Qty | Diagram Key |
|-----------------|-------------------------------|--|-----|-------------|
| 15821           | Angled Bracket                | Pre-drilled   Aluminum                             | 1   | 1           |
| 12022           | Button Head Screw             | 1/4" - 20 x 3/4" length   Stainless                | 2   | 2           |
| 15869           | Serrated Flange Nut           | 1/4" - 20   Stainless                              | 2   | 3           |
| 14980           | Button Head Screw             | 5/16" - 18 x 7/8" length                           | 4   | 4           |
| 14979           | Nylock Nut                    | 5/16" - 18   Stainless                             | 4   | 5           |
| 16091           | Clamp Plate                   | Bottom Plate   Square Torque Tube POA   Universal  | 1   | 6           |
| 16101           | Hex Nut                       | 3/8" - 16   Stainless                              | 2   | 7           |
| 14397           | Socket Head Screw             | M5 x .8mm x 10mm length   Stainless                | 4   | 8           |
| 15498           | Universal Pyranometer Bracket | Bracket   Pyranometer   Universal                  | 2   | 9           |
| 16596           | Angled Bracket                | 1.5 Angle   2 POA Pyranometers                     | 1   | 10          |
| 17245           | Hex Head Screw                | 3/8" - 16 x 7" length   Fully threaded   Stainless | 2   | 11          |
| 18251           | Nylon Washer & Sleeve         | 5/16" ID   Nylon                                   | 4   | 12          |
| 18250           | Nylon Washer                  | 3/8" ID   Nylon                                    | 4   | 13          |
| 18249           | Nylon Washer                  | 17/50" ID   Nylon                                  | 4   | 14          |
| 12095           | Washer                        | 3/8"   7/8" OD   Stainless                         | 4   | 15          |



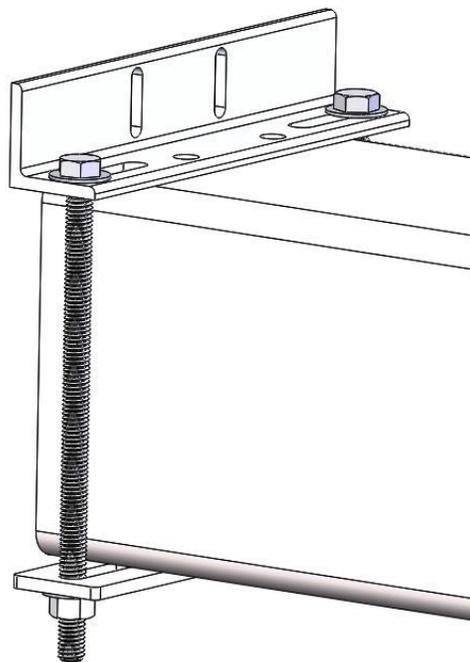
## Solar | #16884 Double POA Assembly, Square Torque Tube

### Tool List



### Procedure

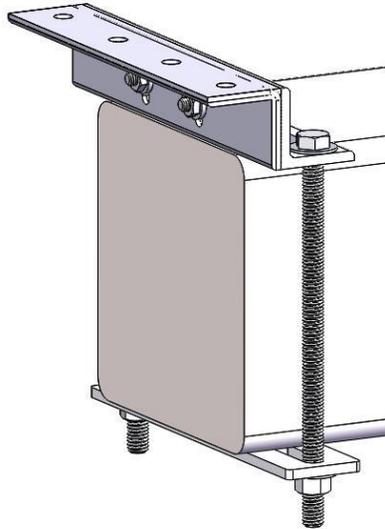
- 1) Assemble the #15821 angled bracket and the #16091 bottom plate using the long #17245 hex head screws, the #12095 washers, and the #16101 nuts as shown below. Slide the assembly onto the torque tube with the vertical slots positioned away from the panels. Tighten the nuts enough to hold the assembled brackets securely before final adjustments.



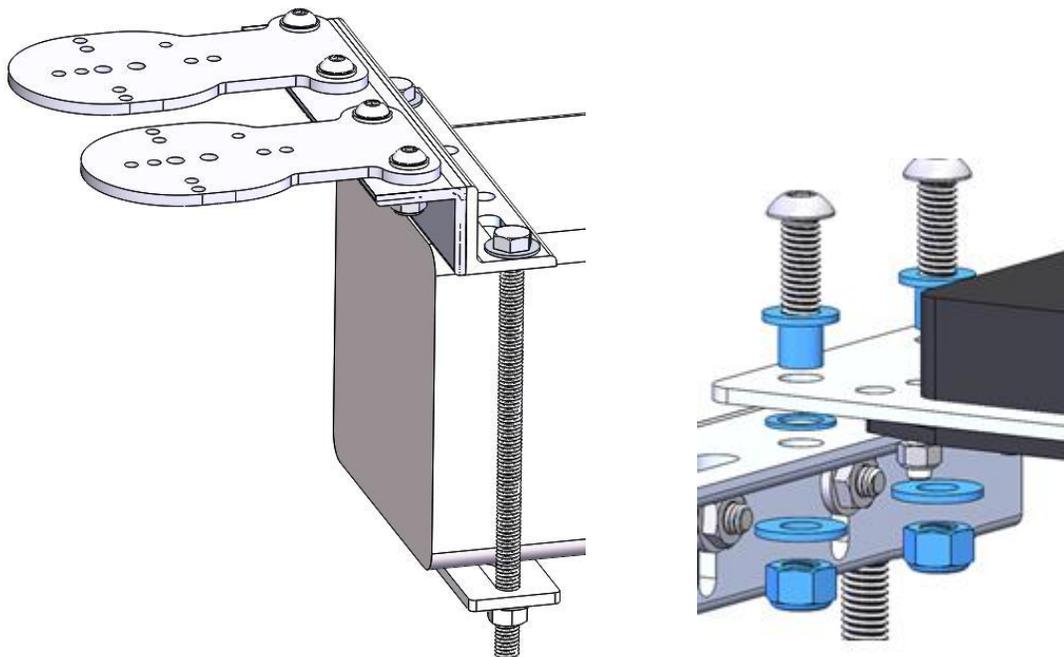


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- 2) Attach the **#16596** angled bracket with the **#12022** screws and **#15869** nuts oriented as shown below. Leave slightly loose for final adjustment at the end.



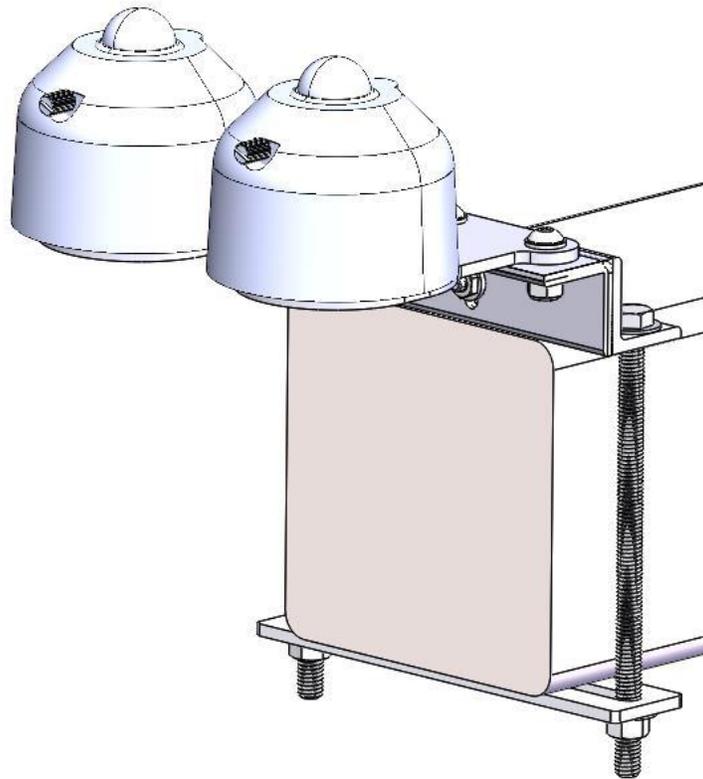
- 3) Insert the **#14980** screws into the nylon sleeve washers **#18251** and then through the holes in the Universal Mounting Plate **#15498**. Add nylon washers **#18250** to the ends of the screws, and insert the screws through the holes in the angle bracket **#18519**. Add nylon washers **#18249** to the ends of the screws before adding the **#14979** nuts as shown below. Nylon washers are represented below in blue. Repeat for second Universal Mounting Plate **#15498**.





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- 4) Remove the pyranometer feet. The pyranometers mount directly to the brackets. Attach the pyranometer to the Universal Mounting Plate #15498 using #14397 M5 stainless screw. Install the sensor with the cable exiting towards the nearest pole.



- 5) With a level, check that the pyranometers are at the correct angle along both axes. Adjust the hardware as necessary. Once proper alignment is confirmed, tighten all assembly screws and recheck leveling. Readjust as necessary.



***It is critical that the pyranometer be at the same angle/level as the plane of PV panels.***

***If possible, level the array table and then install the sensor, taking care that the pyranometer mount is in plane with the PV panels.***



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#### **Additional Configurations**

Pyranometer Mount #**15845** can be assembled in several ways for more adjustability. RPOA (not shown) is also possible, as Universal Mounting Bracket #**15498** is identical on both faces.



*When used for RPOA, the white sun shield should be removed and the sensor cable should exit along the array, typically north or south.*