

| | |
|---|----|
| IronRidge Pole Mount Installation Guide | 2 |
| IronRidge Certification Letter | 9 |
| IronRidge Wet Stamped Drawing | 10 |



Installation Manual
Universal Single-Arm Side-of-Pole Mount
UNI-SA/21.5



Solar Mounting Solutions

Introduction

The Universal Single-Arm Side-of-Pole Mount UNI-SA/21.5 is a simple and straightforward pole mounting solution for small area solar photovoltaic (PV) needs. With its user settable angle adjustment, it can support installations in a wide range of locations.

In addition, the UNI-SA/21.5 supports:

- ◆ PV panels with an inside extrusion dimension of between 12.6 inches and 21.1 inches
- ◆ Pole diameters of between 2.0 inches to 4.5 inches.

1. Installer Responsibility

The installer is solely responsible for:

- ◆ Complying with all applicable local or national building codes, including any that may supersede this manual
- ◆ Ensuring that IronRidge and other products are appropriate for the particular installation and the installation environment
- ◆ Ensuring that the selected pole mount can support the array under live load conditions
- ◆ Using only IronRidge parts and installer-supplied parts as specified by IronRidge. Substitution parts may void the warranty
- ◆ Ensuring safe installation of all electrical aspects of the PV array.

2. Customer Support

IronRidge 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 IronRidge customer support: (800) 227 9523

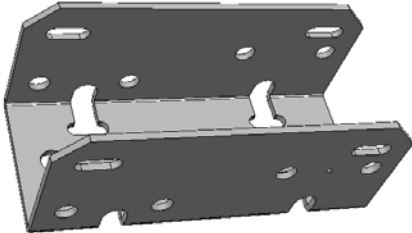

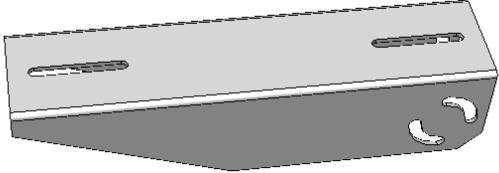
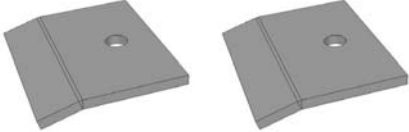
3. Tools Required For Assembly

The following tools are required to assemble the Universal Single-Arm Side-of-Pole Mount.

| Tool | Use for |
|--|---|
| Wrenches Open-end wrench, Box-end wrench, or 3/8" or greater socket drive with sockets to support the following size hex heads: <ul style="list-style-type: none"> ◆ 5/16" ◆ 7/16" ◆ 1/2" | <ul style="list-style-type: none"> ◆ 5/16-18 cap-end screws ◆ 5/16-18 bolts ◆ 1/4-20 cap-end screws ◆ 1/4-20 bolts ◆ Cap-end screws on hose clamps |
| Screwdriver Slotted, 1/4" | <ul style="list-style-type: none"> ◆ Cap-end screws on hose clamps |

4. Component List

The Universal Single-Arm Side-of-Pole Mount kit contains the following parts:

| | |
|---|---|
| <p>Bracket (51-3517-020)</p> <p>Attaches to the pole with the hose clamps, providing the link between the pole and the module/arm assembly</p>  | <p>Hose Clamps (27-5000-010) x2</p> <p>Attach to the pole and hold the Bracket. These hose clamps are compatible with poles ranging from 2.0 inches to 4.5 inches</p>  |
| <p>Arm (51-3517-010)</p> <p>Attaches to the bracket, supporting the PV Module.</p>  | <p>PV Module Clamps (50-8001-051) x2</p> <p>Attach the PV Module to the Arm by clamping to the module's extrusion</p>  |

| Part | Qty | Part Number |
|--------------------------------|-----|-------------|
| PV Module Clamp Hardware Kit | 1 | 29-5003-005 |
| 1/4-20 x 3/4" SS hex-cap bolt | 2 | 23-2520-050 |
| 1/4 flat washer, SS | 4 | 25-2502-000 |
| 1/4 split lock washer, SS | 2 | 24-2501-000 |
| 1/4 hex nut, SS | 2 | 24-2520-440 |
| Arm to Bracket Fastening Kit | 1 | 29-5005-000 |
| 5/16-18 x 3/4" SS hex-cap bolt | 4 | 23-3118-021 |
| 5/16 flat washer, SS | 8 | 25-3102-000 |
| 5/16 split lock washer, SS | 4 | 25-3101-000 |
| 5/16 hex nut, SS | 4 | 25-3118-440 |

5. Assembly

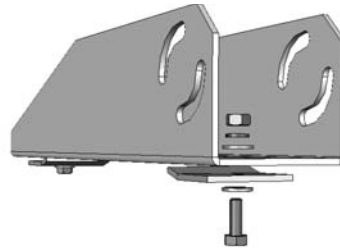
Step 1 - mounting the arm to the PV module

| Parts Required | Qty | Part Number |
|-------------------------------|-----|---------------|
| PV Module | 1 | User-supplied |
| Arm | 1 | 51-3517-010 |
| PV Module Clamps | 2 | 50-8001-051 |
| 1/4-20 x 3/4" SS hex-cap bolt | 2 | 23-2520-050 |
| 1/4 flat washer, SS | 4 | 25-2502-000 |
| 1/4 split lock washer, SS | 2 | 24-2501-000 |
| 1/4 hex nut, SS | 2 | 24-2520-440 |

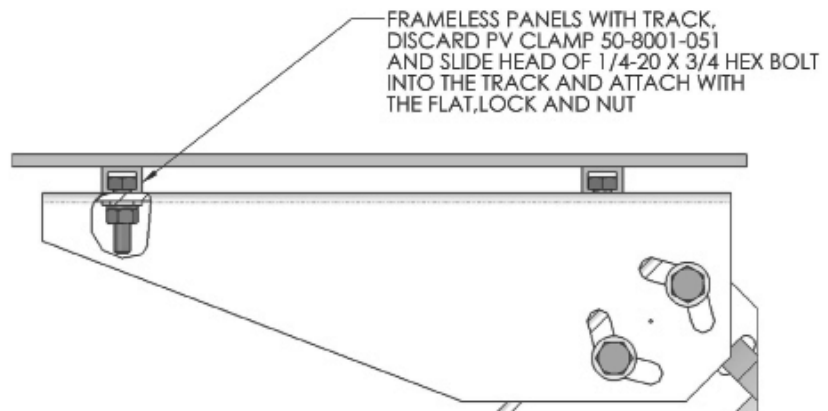
1. With the arm oriented as shown, insert a 1/4" bolt, washer and PV module clamp through one of the slots.

Place a washer, lock washer and hex nut on the end of the bolt, and tighten loosely.

Note: Some modules can be attached by bolting through panel directly to arm.

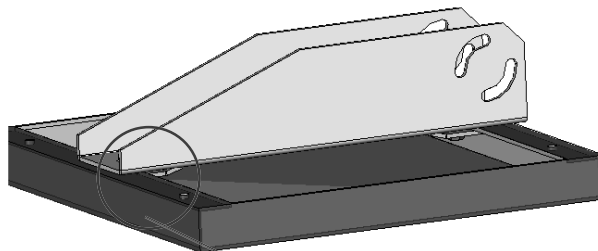


2. Repeat step 1 attaching the remaining clamp to the other slot on the arm.



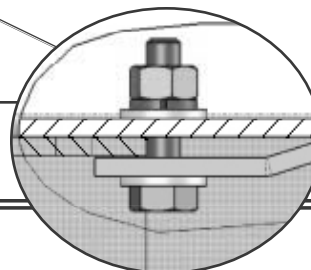
3. Lay the PV Module face-down on a protected flat surface.

Center the arm on the back of the panel as shown and position the clamps under the edges of the module's flange.



Make sure that the clamp bolts are resting against the module's flange before tightening.

4. Tighten the clamp bolts to 7 ft-lbs.



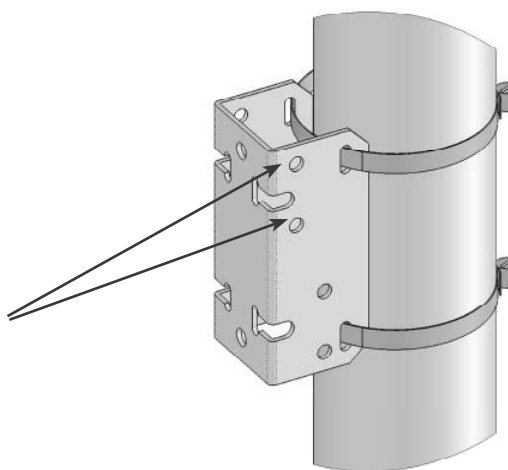
Step 2 - attaching the bracket to the pole

| Parts Required | Qty | Part Number |
|----------------|-----|-------------|
| Hose Clamp | 2 | 27-5000-010 |
| Bracket | 1 | 51-3517-200 |

5. Thread each hose clamp through one of the sets of narrow center holes and place the bracket on the pole as shown.

When placing the bracket on the pole, ensure that:

- ◆ The flat side of the bracket is away from the pole, and
- ◆ The end of the bracket with the arm mounting holes nearest to the edge is up, as in the illustration to the right.



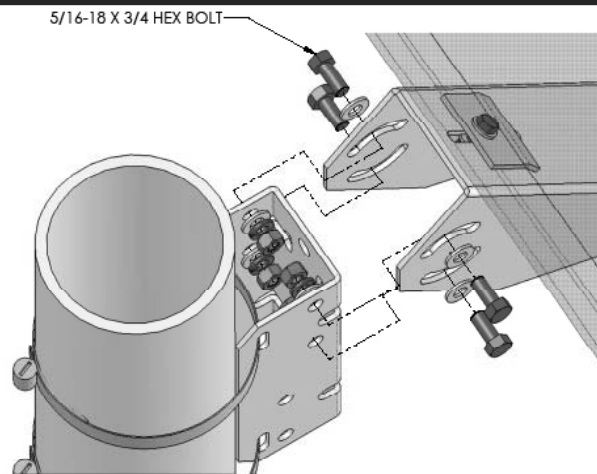
This hose clamp is only compatible with poles ranging from 2.0 inches to 4.5 inches.

6. Tighten the hose clamp screws to 70 inch-lbs.

Step 3 - attaching the panel/arm assembly to the bracket

| Parts Required | Qty | Part Number |
|--------------------------------|-----|-------------|
| 5/16-18 x 3/4" SS hex-cap bolt | 4 | 23-3118-021 |
| 5/16 flat washer, SS | 4 | 25-3102-000 |
| 5/16 split lock washer, SS | 4 | 25-3101-000 |
| 5/16 hex nut, SS | 4 | 25-3118-440 |

1. Place the panel/arm assembly on the bracket as shown.



2. Insert the 5/16 - 18 x 3/4" bolt and flat washer from the inside out. Place a flat washer, lock washer, and hex nut on the outside. This orientation allows you to tighten the bolt with just one wrench.
3. Adjust the tilt of the panel as desired, and tighten the bolts to 8.3 ft-lbs.