PᴠLESIDES™

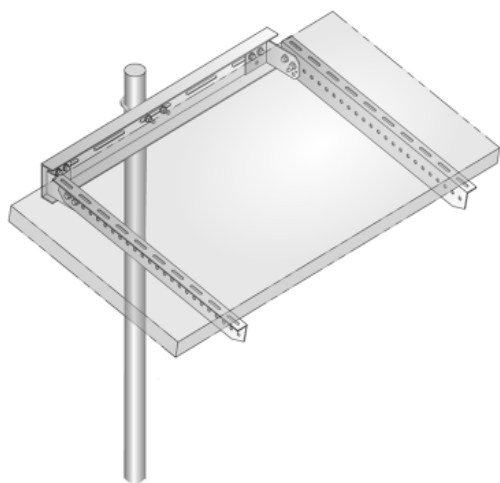## Series 4000 Side-of-Pole PV Module Rack

(Formerly U-05)

Installation Sheet 406.2

Thank you for purchasing a UniRac. Please review this manual completely before proceeding.

The installer is solely responsible for:

- **Complying with all applicable local or national building codes, including any that may supercede this manual;**

- **Ensuring that UniRac and other products are appropriate for the particular installations and are designed for the installation environment;**

- **Using only UniRac parts and installer-supplied parts as specified by UniRac (substitution of parts will void the warranty);**

- **Ensuring safe installation of all electrical aspects of the PV array.**

Before assembly

This rack is intended for side mounting on a 2-inch Schedule 40 or Schedule 80 steel pole (2 ⅜″ O.D.), which is not included with the rack. UniRac supplies hardware that fits a 2-inch pole. U-bolts for poles up to 4 inches are available at extra cost.

Use the Parts List to verify that all parts are present.

If desired, excess rail length can be cut off. Cut between rail slots—never through a slot.

Parts List

Part	Qty.	Part	Qty.	Wrench size	Recommended torque (ft-lbs)
Channel	1	Hex-head bolt, ¼″	4	⁷⁄₁₆″	15
Bracket, left-hand	1	Hex-head bolt, ⁵⁄₁₆″	8	½″	20
Bracket, right-hand	1	U-bolt, ⅜″	1		
Rail	2	Flange nut, ¼″	4	⁷⁄₁₆″	15
		Flange nut, ⁵⁄₁₆″	8	½″	20
		Flange nut, ⅜″	2	⁹⁄₁₆″	30

Caution

Stainless steel hardware can seize up, a process called galling. To significantly reduce the likelihood of galling, apply a small drop of anti-seize lubricant to the threads of all bolts before installation. Anti-seize lubricants are readily available in auto parts and hardware stores. In their absence, any lubricant will reduce chances of galling.

Mounting pole guidelines

The installer is solely responsible for use of the information below. These are general guidelines for normal installations. The following variances can affect your installation:

- The required diameter and depth of the hole are dependent on soil type, which varies by locale. An installation in loose, sandy soil will require larger, deeper holes and, therefore, more concrete than an installation in soil of average density.

- The depth and width of the hole should also be increased in areas subject to winds in excess of 90 mph, particularly if the location of the mounting pole is open and unprotected.

- Poles taller than 6 feet above ground require that the depth of the hole be increased.

If in doubt, consult a professional civil engineer who is familiar with local soil conditions and wind load requirements.

1. Dig a hole 8 to 12 inches in diameter and 36 to 40 inches deep. Fill the bottom with 4 inches of gravel.

2. Stand the pipe in the hole. Brace the pole so that it is plumb. Pour concrete around the pipe, filling the hole to ground level. Add an inch or two of extra concrete above the hole. Use a trowel to slope the concrete around the pole.

3. Allow the concrete to set up for at least 24 hours before installing your UniRac.

Assembly

The exploded view illustrates the relationship of the parts. Assembly order is not critical. You may work either from the pole outward, or assemble the rack, PV module, and electrical components before mounting the rack/PV module assembly on the pole.

Loosely assemble all components.

The U-bolt and ⅜-inch flange nuts attach the channel to the pole. Be certain that the channel is centered on the pole, then securely tighten the flange nuts.

The 5/16-inch hardware attaches the brackets to the channel and the rails to the brackets. Ensure that:

- brackets sit with the pivot hole above the arc hole;
- rail slots face upward.

The ¼-inch hardware attaches the PV module to the rack. Ensure that you:

- center the module on the channel;
- place the module as close as possible to the pole end of the rails.

Final adjustments

Once the rack/PV module assembly is attached to the pole, raise and rotate the rack/PV module assembly as needed. ***Never let the assembly slide down the pole.*** Torque the flange nuts on the U-bolt to 30 foot-pounds and the channel bracket bolts to 20 foot-pounds. Then tilt the rails to bring the module to the desired angle. Torque the bracket/rail bolts to 18–20 foot-pounds.

Torque module bolts to 15 foot-pounds.

Channel

Bracket

Mounting pole

Pivot hole

Arc hole

Rail
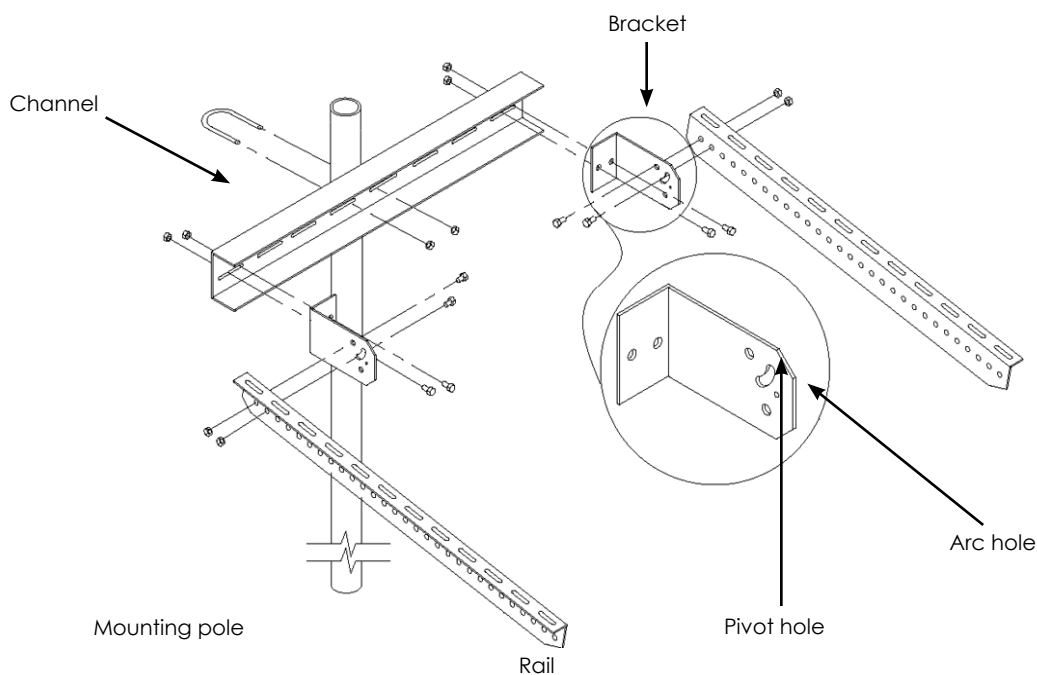
10 year limited Product Warranty

UNIRAC® THE ~~NEW~~ STANDARD IN PV MODULE RACKS™