

# Series 4012 Fixed Tilt Side-of-Pole Rack Installation Manual 404.3

For a Single PV Module on 2-Inch Pole



**PV** **POLESIDES™**

**Unirac Installation Manual**

## Parts List

Part	Qty	Wrench size
Upper bracket	1	
Welded lower bracket	1	
Saddle clamp w/ $\frac{5}{16}$ " hardware	2	$\frac{1}{2}$ "
Flat Washer $\frac{5}{16}$ "	4	
Hexhead bolt, $\frac{1}{4}$ "	4	$\frac{7}{16}$ "
Flange nut, $\frac{1}{4}$ "	4	$\frac{7}{16}$ "

## Caution

Stainless steel hardware can seize up, a process called galling. To significantly reduce its likelihood, (1) apply lubricant to bolts, preferably an anti-seize lubricant, available at auto parts stores, (2) shade hardware prior to installation, and (3) avoid spinning on nuts at high speed.

## Before assembly

This rack is intended for mounting on a 2-inch Schedule 40 or Schedule 80 steel pole (O.D. 2.375), which is not included with the rack. To the greatest extent possible, the installation site should allow unshaded exposure to the sun throughout daylight hours.

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

### The installer is solely responsible for:

- Complying with all applicable local or national building codes, including any that may supersede 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.

  
A HILTI GROUP COMPANY

See [www.unirac.com](http://www.unirac.com) for your nearest Unirac distributor.

Unirac welcomes input concerning the accuracy and user-friendliness of this publication. Please write to [publications@unirac.com](mailto:publications@unirac.com).

Pub 090616-3ii  
June 2009

© 2009 by Unirac, Inc.  
All rights reserved.

## 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 or clay 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. 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.
2. Allow the concrete to set up for at least 24 hours before installing your PoleSide™ rack.

## Assembly

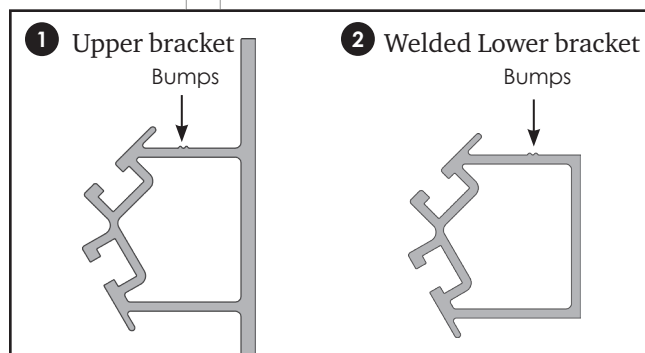
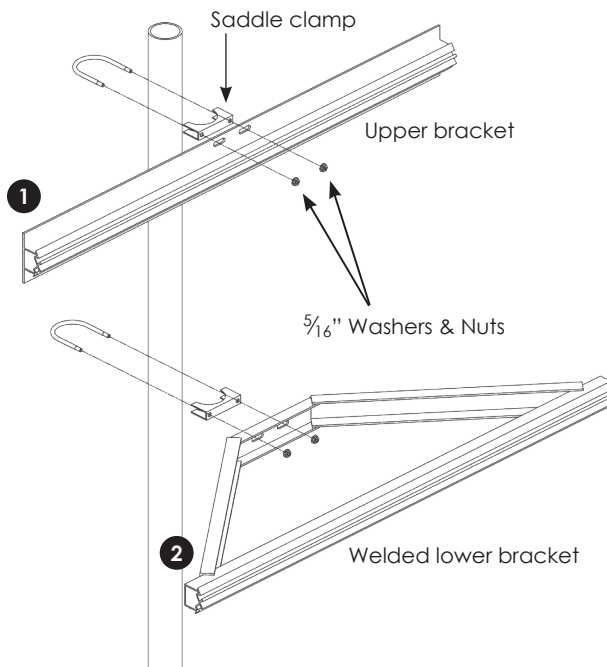
Lay module face down on a suitable surface. Slide the 1/4" hex bolts into the slot on the upper and lower brackets. Center the bolts in the slot at the same distance as the module mounting holes. Attach the brackets to the module taking into account the two bumps on the bracket. Loosely fasten the 1/4" nuts to the bolts. Center the upper and lower brackets with respect to the module and tighten the nuts.

Mount the rack and module to the pole with the u-bolts, clamps, 5/16" washers and nuts.

Ensure the panel is facing south and then tighten the 5/16" nuts.



Please be advised that rack numbers (401260, 401264, 401274, 401276 and 401278) are 45° mounts and should be mounted on the pole with the two bumps on the rails **facing up** and rack numbers (401262, 401266, 401275, 401272 and 401279) are 60° mounts and should be mounted with the two bumps on the rails **facing down**.



## 10 year limited Product Warranty

Unirac, Inc., warrants to the original purchaser ("Purchaser") of product(s) that it manufactures ("Product") at the original installation site that the Product shall be free from defects in material and workmanship for a period of ten (10) 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. This Warranty does not cover damage to the Product that occurs during its shipment, storage, or installation.

This Warranty shall be VOID if installation of the

Product is not performed in accordance with Unirac's written installation instructions, or if the Product has been modified, repaired, or reworked in a manner not previously authorized by Unirac IN WRITING, or if the Product is installed in an environment for which it was not designed. Unirac shall not be liable for consequential, contingent or incidental damages arising out of the use of the Product by the Purchaser under any circumstances.

If within the specified Warranty period the Product shall be reasonably proven to be defective, then Unirac

shall repair or replace the defective Product, or any part thereof, in Unirac's sole discretion. Such repair or replacement shall completely satisfy and discharge all of Unirac's liability with respect to this limited Warranty. Under no circumstances shall Unirac be liable for special, indirect or consequential damages arising out of or related to use by Purchaser of the Product.

Manufacturers of related items, such as PV modules and flashings, may provide written warranties of their own. Unirac's limited Warranty covers only its Product, and not any related items.