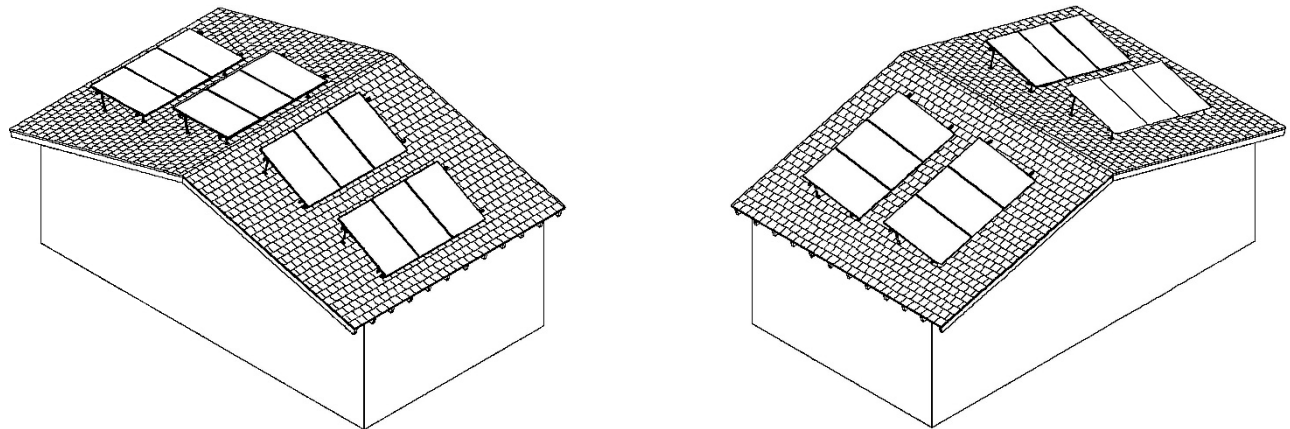


# SERIES 100 TILT KIT GUIDE

## SnapNrack Residential PV Mounting Systems

**STEP 1:** Determine relationship between modules and selected roof surface(s).



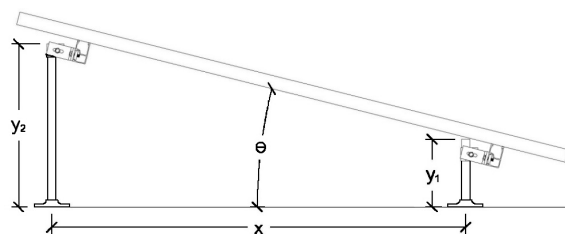
**STEP 2:** Determine structural member spacing and orientation.

- 16" rafter spacing
- 24" rafter spacing
- Other
- Racking rails run parallel to rafters\*
- Racking rails run perpendicular to rafters

**STEP 3:** Identify desired module tilt (from roof surface) and determine standoff heights.

$$y_2 = y_1 + x \tan\theta \quad \text{Excel: } =Y1+X*(\text{TAN}(\text{RADIANS}(\text{THETA})))$$

Where  $y_2$  is the height of the rear standoff,  $y_1$  is the height of the front standoff,  $x$  is the N-S span between standoffs, and  $\theta$  is the desired module tilt off the roof surface. See the image below.



\*When rails run parallel to rafters, North-South spacing  $x$  will be determined by rafter spacing.

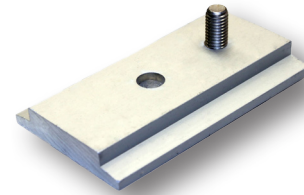
**STEP 4a:** Determine which standoff base to use.



**232-01039** SNAPNRACK,  
STANDOFF BASE, 4-HOLE



**232-04038** SNAPNRACK, HD  
STANDOFF BASE, 6-HOLE



**242-00018** SNAPNRACK, STAND-  
OFF BASE ASSEMBLY, 1-HOLE

**STEP 4b:** Determine which standoffs to use. The lengths will be based on the calculations performed in Step 3. Note that standard standoff shafts also double as extensions, and multiple standoff shafts may be used to reach desired total length. (Maximum total standoff height is 18" and is not to be exceeded.)

**232-01053**

SnapNrack, Standoff Spacer 1"

**232-01048**

SnapNrack, Standoff Shaft, 3"

**232-01054**

SnapNrack, Standoff Shaft 5½"

**232-01055**

SnapNrack, Standoff Shaft, 7"

**232-01056**

SnapNrack, Standoff Shaft, 8½"

**232-01057**

SnapNrack, Standoff Shaft, 10"

**232-01062**

SnapNrack, HD Standoff Shaft, 7"

**232-02408**

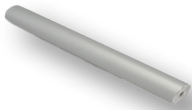
SnapNrack, HD Standoff Shaft 9½" Mill

**232-01063**

SnapNrack, HD Standoff Shaft, 12"

**232-01021**

SnapNrack, HD Standoff Shaft, 18"



**STEP 4c:** Include standoff clamp assemblies, along with the rest of the racking components needed to finish the installation.



**242-09002**

SnapNrack, Standoff Clamp  
Assembly w/ L-Foot, Clear



**162-07301**

SCREW, SET, 5/16IN -18 X 1IN, SS

**STEP 5:** Tilt kits are also available with other SnapNrack components, like seam clamps. Please contact the SnapNrack Applications Engineering team if you would like to look at those other options, or if you have any other questions at all. The team can be reached at [appeng@snapnrack.com](mailto:appeng@snapnrack.com).

**SnapNrack**  
PV Mounting Systems

(877) 732-2860 [www.SnapNrack.com](http://www.SnapNrack.com)

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