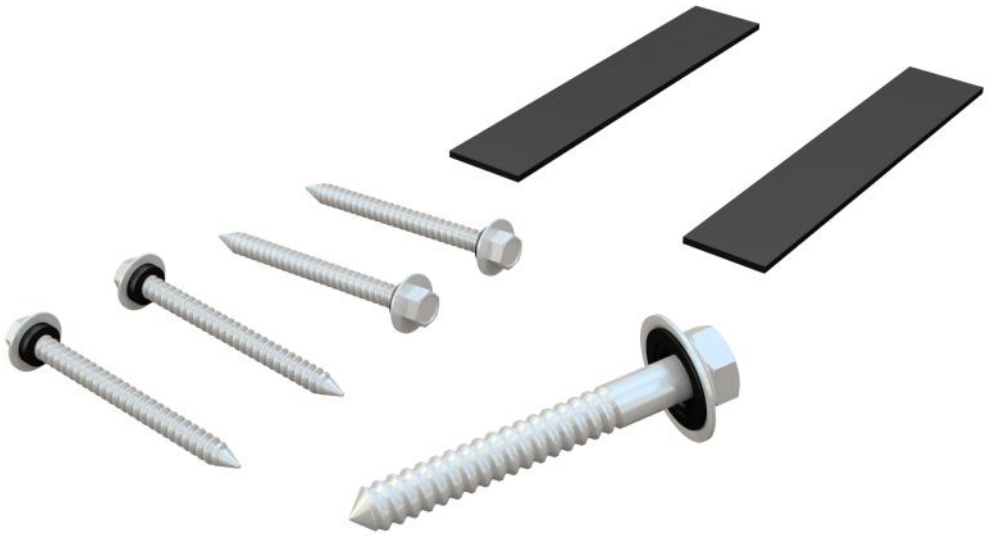
Installation Guide Addendum - Deck Mounts



Deck Mount
(Part Number ES10222)

Ecolibrium Solar

Deck Mounting Applications

Included in the Composition Shingle Base (part number ES10222) are four deck mounting fastener holes in its bottom flange. These holes can be used to mount the Base to a roof with the Composition Deck Attachment Kit (part number ES10105).

We offer three applications for deck mounting:

1. Primary installation method on composition shingle roofs.
2. Primary installation method on metal roofs (see figure 4).
3. As a method to address unacceptable cantilever on composition shingle roofs. (See next page)

To the right is detailed information on the first two of these three applications.

Shown below are various roof types and attachment methods using their structural members. See page 3 for installation steps.

	Composition Shingle Roofs	Metal Roofs
Decking and Framing For roofs framed with a purlin, flat rafter or TJI, Bases can be installed such that two of the four Roofing Screws are driven into that framing member and the remaining Roofing Screws are driven into the roof sheathing (see figures 1 & 2).	**Full Spacing** The full spacing allowed by the EcoX Online Calculator may be used (see Figure 2). Lag is driven into roofing sheathing. Lag into framing acceptable but not required.	**Full Spacing** The full spacing allowed by the EcoX Online Calculator may be used (see Figure 1). Lag is not used.
Decking Only In cases where there is no suitable framing member, the EcoX Base may be installed with all four Roofing Screws in the roof sheathing (see figure 3). Requires 15/32" or greater OSB or plywood (see Figure 3).	**Reduce Spacing to 1/3** The spacing allowed by the EcoX Online Calculator or Span Tables must be reduced to 1/3 of the given value. Allowable cantilever is not reduced (see Figure 3). Lag is driven into roofing sheathing.	**Reduce Spacing to 1/2** The spacing allowed by the EcoX Online Calculator or Span Tables must be reduced to 1/2 of the given value. Allowable cantilever is not reduced (see Figure 4). Lag is not used.

Note: Deck Mounted and purlin mounted Bases may be mixed throughout an array as long as the maximum spacing is not exceeded around any Base in the array.

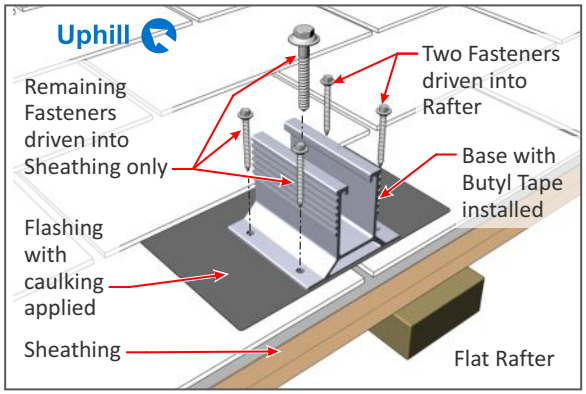


Figure 1: Deck Mount into a Flat 2x4 or TJI. Full Span.

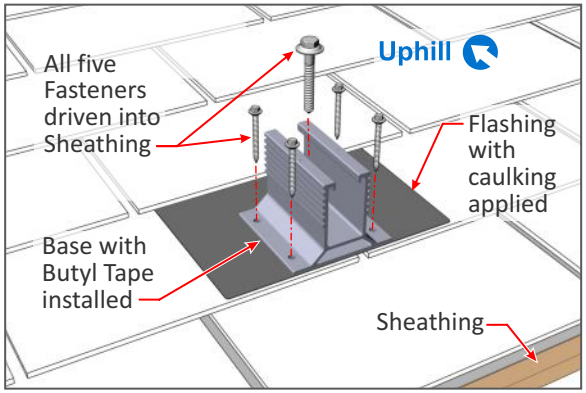


Figure 2: Deck Mount on Sheathing only. 1/3 Span.

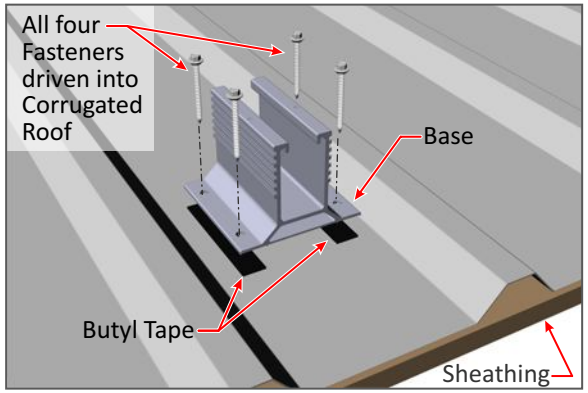


Figure 3: Deck Mount on Corrugated Roofing. 1/2 Span.

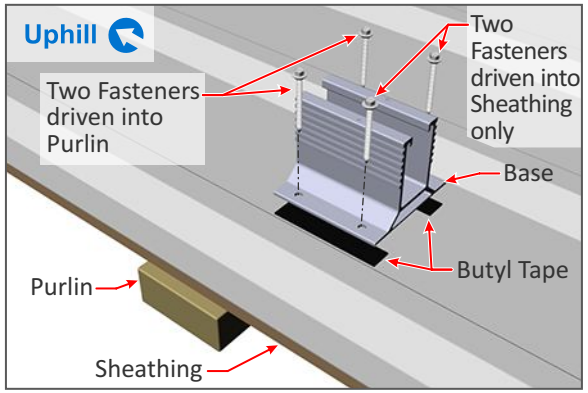


Figure 4: Deck Mount into a Purlin. Full Span.

Deck Mounting - Cantilever

Cantilever can be used as a method to address unacceptable cantilever on composition shingle roofs

The cantilever distance from module edge to the last installed base shall not exceed the module manufacturer's maximum allowable span -or- 1/3 the clamp span prescribed by Ecolibrium (whichever is shorter). If the lack of suitable framing members forces a longer than acceptable cantilever, bases may be deck mounted to support the cantilever. Spacing between lag-mounted bases and deck mounted bases may not exceed the spacing rules described in the table on the previous page.

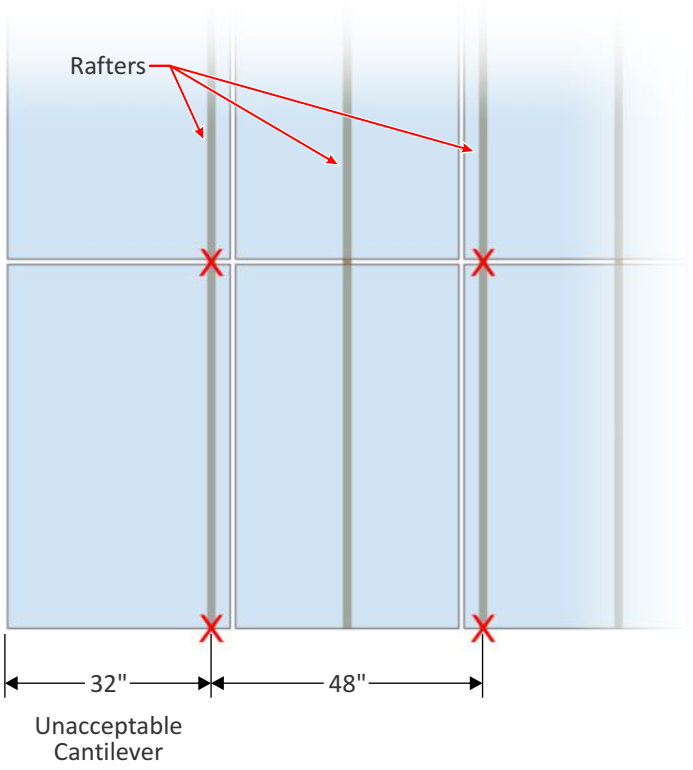
The table at right is an example of an acceptable cantilever.

Example:

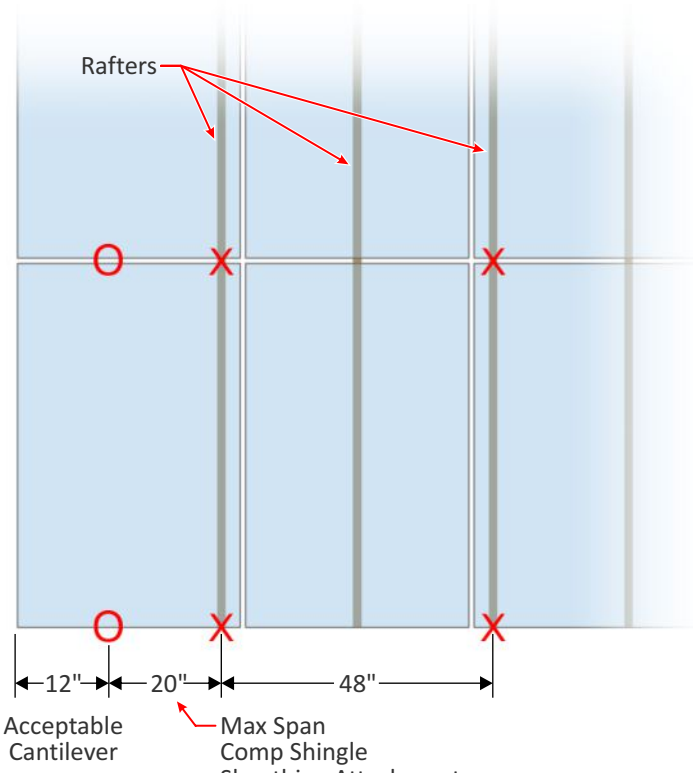
Prescribed Max Span	Span Adjusted to Rafter Spacing	Prescribed Max Cantilever	Span Reduced for Sheathing Attachment
60"	48"	20"	Comp Shingle = 20" Metal Roof = 30"

X = Standard Attachment

O = Deck Mounting Kit. Sheathing only Attachment



Unacceptable Cantilever



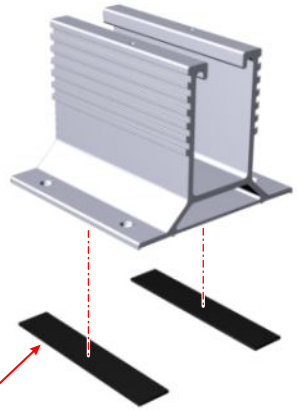
Acceptable Cantilever

Max Span Comp Shingle Sheathing Attachment

Installing the Flashing and Base

1: Apply Butyl Strips to Base.

(Base not included)

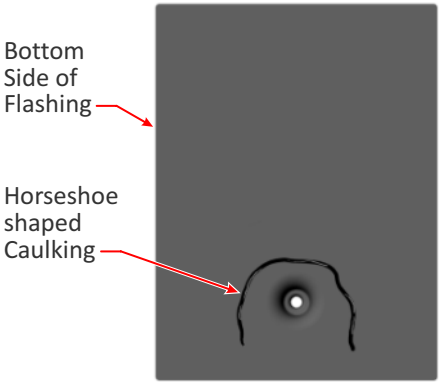


Remove backing and apply 4" Butyl Strips to Base (within the two provided channels of Base)

2: Apply Caulk to Flashing.

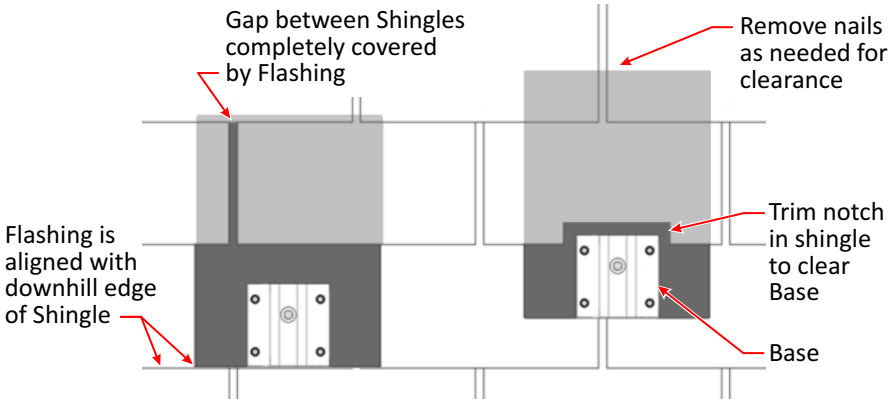
Use roof compliant sealant.

(Flashing not included)



Downhill

3: Properly Position Flashing to Shingles.



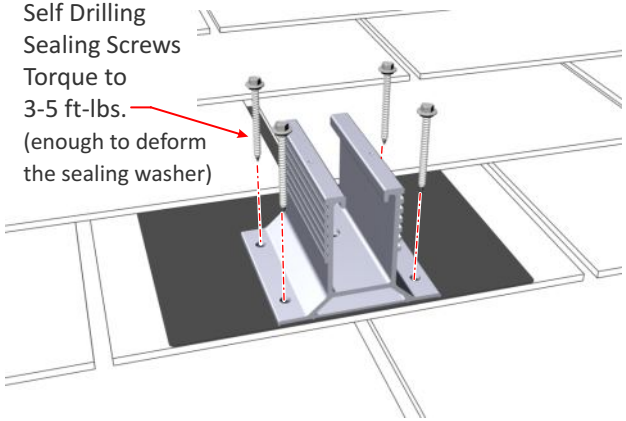
Preferred Placement

Trimming Shingles is acceptable when necessary

4: Attach Base to Roof Deck.

Drive four self-drilling sealing screws, passing through the Base, Butyl Strips, and Flashing and into the deck.

(refer to previous page for specific roof types & mounting)

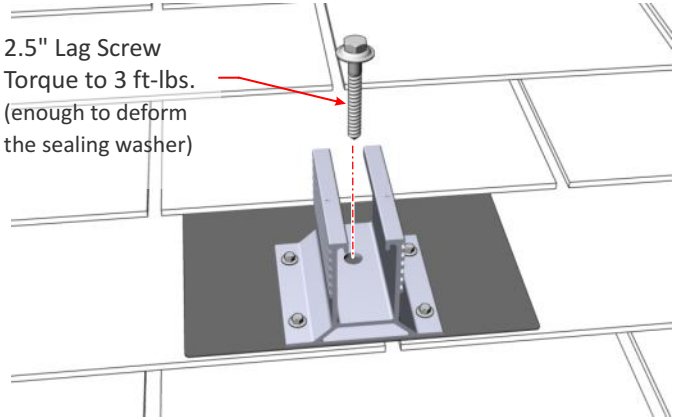


5: Drive Lag Screw into Roof Deck.

Important: Drive lag after roofing screws are installed.

Drill a 3/16" pilot hole through the flashing hole. Do not allow the drill to hit and crush the flashing hole.

Drive lag until sealing washer presses down and seals the flashing hole.



Additional information:

For full EcoX installation instructions, refer to the EcoX Installation Guide at:

http://www.ecolibriumsolar.com/support/ecox-support