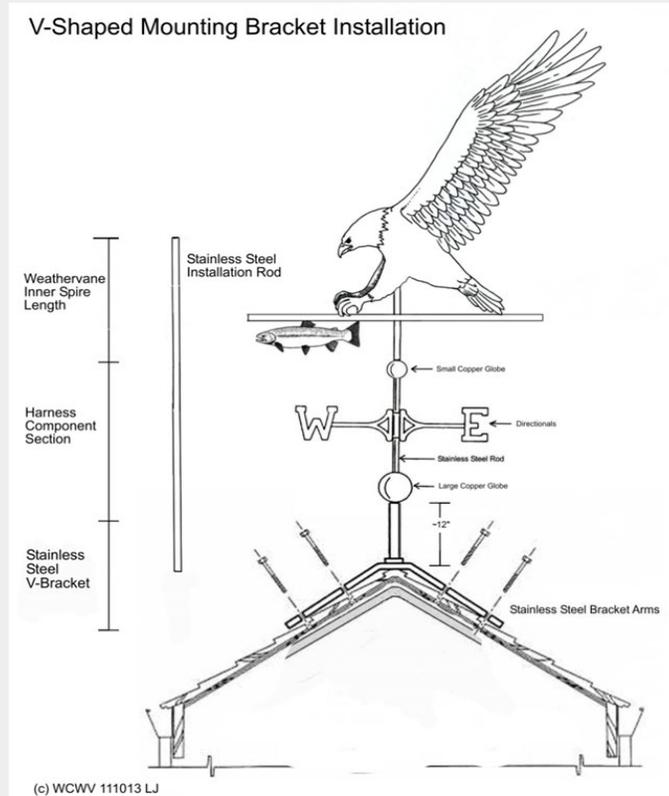


Installing a Weathervane using a V-Shaped Mounting Bracket



This illustration above shows how to attach either a two or four-sided Bracket to a roof

V-Bracket Installation Instructions:

For mounting on peaked roofs that do not have a ridge pole or internal access for additional bracing. The flanges can be adjusted to conform to the pitch of your roof.

Bolt installation requires a second person..

Note: *The use of bolts, washers and nuts is the most secure method for installation. Appropriate size bolts, washers and nuts for your specific roofing requirements are available at local hardware stores. We include the appropriate number of stainless steel screws when the use of bolts, washers and nuts is not possible. **Make sure screws are securely attached to the framing.***

Tools and supplies recommended for mounting your weather vane using a V-Bracket:

- Electric drill with 1/4 inch drill bit for bolts (or 9/64 inch for screws)
- Level
- Medium size slotted screwdriver
- Small Crescent wrench
- Flashing Caulk
- Heavy grease
- Compass
- Appropriate sized bolts, washers and nuts (when you have internal access to mounting surface)

1. Bend flanges evenly to conform to roof pitch. Using a level, check to make sure mounting tube is vertical.

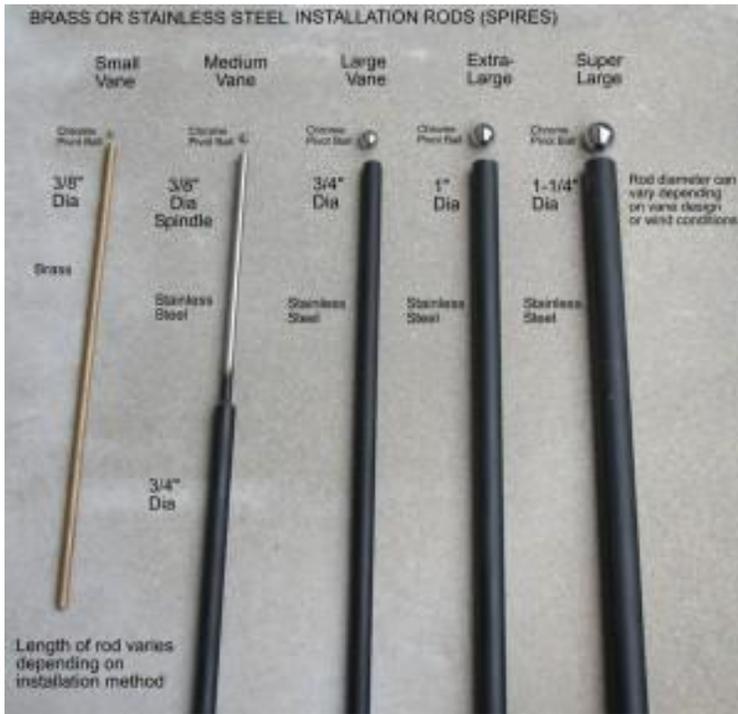
Installing with bolts: Note: a second person is needed inside the roof:

- Drill one 1/4" brass bolt test hole. Inside attic, make sure hole is located in a place free of impediments yet has enough structural support to firmly secure the bracket and weather vane.
- Drill remaining bolt holes. Slip brass bolts and washers in place. Inside Person: Slip on washers and thread nuts.
-

Installing with Screws: Note: If you are using lag screws one person can do the installation

- Drill one 9/64 inch test hole to determine if there is enough structural material to firmly attach the bracket and weathervane.
- Drill remaining screw holes.

2. Insert spire (thickest diameter, if tapered) into V-Bracket and make sure it reaches the bottom of the tube. Then check to make sure it is plumb using the level. If it is not, you will need to adjust the bracket using a shim, or adjusting the screws or bolts by tightening or backing off, to get it plumb. The spire (vertical installation rod) must be vertical in order for the new weather vane to spin freely. (Note: the rod itself does not turn, only the weathervane sculpture piece). **NEVER TUG OR PULL ON SPIRE (vertical installation rod) OR BRACKET.**



Spires (vertical installation rod):

West Coast Weather Vanes offers different diameter installation rods. The diameter selected depends on the following:

- the weathervane's size
- the sculpture piece design
- the potential for high winds

Typically, the larger the weather vane, the bigger diameter rod is selected to use.

Also, relatively heavy sculpture pieces (3-D weather vanes, for example) may require a larger diameter installation rod than their swell bodied or silhouette style counterparts.

Finally, if the weather vane is to be installed in a high wind location, a mountain top or directly along the coast, we can upgrade the weather vane to a bigger diameter rod to help compensate for occasional increased wind load.

3. Caulk around secured spire (vertical installation rod) to seal it in the bracket.

4. Assembling ring, globes and directionals on spire (vertical installation rod):

- Option 1: Slide brass spacing ring on spire. Allow it to slide down as far as it can go. *Do not tighten yet.*
- Slide on large globe. Allow it to gently slide down as far as it will go. *Do not tighten yet.*
- Option 2: Do not add the brass ring. Slide the larger copper globe onto the lip of the bracket, which will act as a semi-flashing at the top of the V-Bracket tube. (see below)



Copper Globe Flashing

- Carefully slide on interlocked brass directionals and allow to gently slide down as far as they will go, resting carefully on top of globe without denting. *Do not tighten yet.*

(See photos below for correct directional assembly)



Overhead view of interlocking directionals
 Click image to enlarge



Up Close Detail of interlocking directionals
 Click image to enlarge

- If rod is *not* reduced at the top, slide on second brass ring. Allow to slide to bottom of rod. *Do not tighten yet. Note: If rod does have a taper at the top, disregard this step.*
- Gently slide on smaller copper globe. *Note: If installed rod is a smaller diameter at the top, your small copper globe will have larger and smaller diameter holes drilled into it. Position globe so larger holed end slides on first. The small hole will come to rest where the rod flares out.*

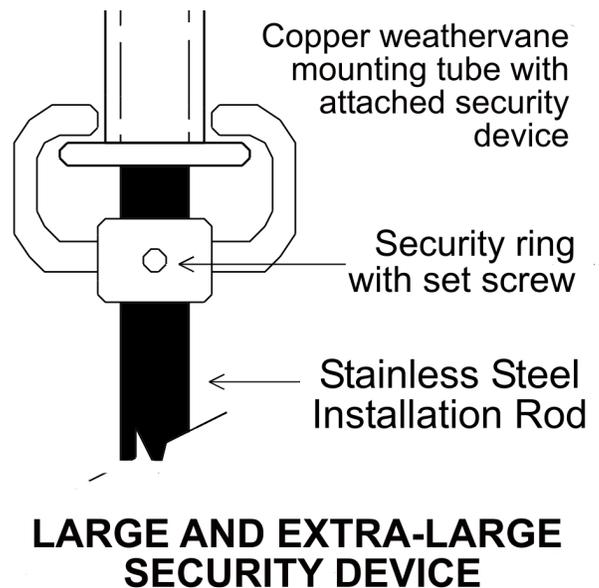
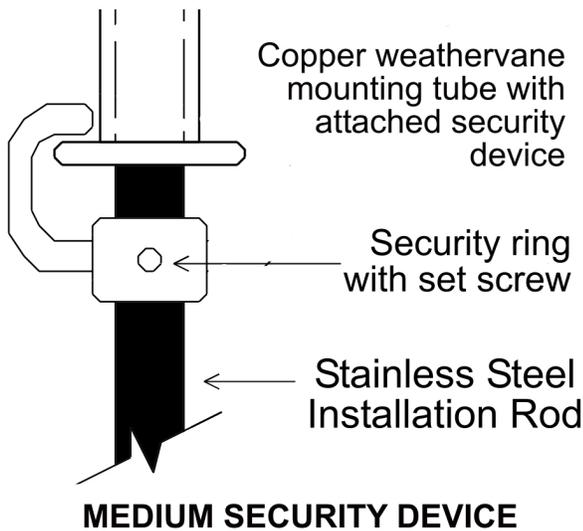
▪ *Note: Some weathervane designs come with the smaller copper globe attached to the sculpture piece. If this is the case with yours, skip last two steps above.*

5. Coat with grease the section of the spire (vertical installation rod) that will be covered by the vane sculpture piece. (Use small tub of grease included with weathervane).

6. Optional Security Device Assembly: Skip this step if your vane does not have a security device

Note: The security device is physically attached to the weathervane sculpture piece and must be added at the time the weathervane is being constructed. It cannot be added after the weathervane has shipped.

Security Device Installation Instructions



Security Device Assembly:

- Locate security ring in small parts box.
- Holding the weathervane sculpture piece upside down, dab grease inside mounting tube, push down one pivot ball, then add more grease. Note: The remaining steel ball is a spare in case you drop the first one during the installation.
- Before sliding the weather vane over the vertical installation rod, back off but don't remove set screw(s) and align the security ring just below the copper mounting tube that extends down out of the weathervane sculpture piece. Make sure security ring's arm(s) are positioned around the ring soldered to the bottom of the copper weathervane mounting tube. (See above). Don't bend arm(s).
- Hold your finger over the base of the tube containing the steel ball to keep it from falling out and slide the vane over the top of vertical stainless steel installation rod and gently slide sculpture down. Note: If your stainless steel rod is beveled and reduced from $\frac{3}{4}$ " (1.9 cm) to $\frac{3}{8}$ " (.95 cm) for the top 10" (25 cm), check to see that the vane clears the beveled section of the spire. If it does not, add the second chrome pivot ball and check again.
- Tighten security device set screw(s).
- Turn weathervane to see that it is not rubbing on the security ring.
- Proceed to Step 8.

7. Insert ONE steel ball into the mounting tube at the base of the weathervane sculpture piece. (The remaining steel balls are spares in case you drop the first one during the installation.) Hold your finger over the base of the tube containing the steel ball so it does not fall out and transfer the vane over the top of spire (vertical installation rod). Then gently slide sculpture down over spire. *Note: If your stainless steel rod reduces from 3/4" (1.9 cm) to 3/8" (.95 cm) on the top 10" (25 cm) of your rod, check to see that the vane clears the flared section of the spire. If not, add a second ball bearing and check again.*

8. Now slide harness components detailed in #4 above into place and tighten with a screwdriver. See image below for suggested vertical proportions. Use your compass to orient the brass directional letter N to true north. Depending on how accurate you want your Directionals to be, please see our [Magnetic Declination webpage](#) for details on how to precisely orient the directional letters.



Correct Harness Assembly & Placement

Directionals are interlocked

Click image to enlarge



Incorrect Harness Assembly & Placement

Directionals *are not* interlocked

Click image to enlarge