Assembly Instructions
Big Kahuna™ LITE Pergola Kit

Thank you for purchasing a do-it-yourself pergola kit from Pergola Depot!

Before beginning to install your new pergola, please read these instructions entirely to familiarize yourself with the complete process. In addition to these instructions, we have a variety of information and resources available on our website under the Resources menu, including How to Measure for a Pergola and Installation Information.

Contact us if you have questions or need help!

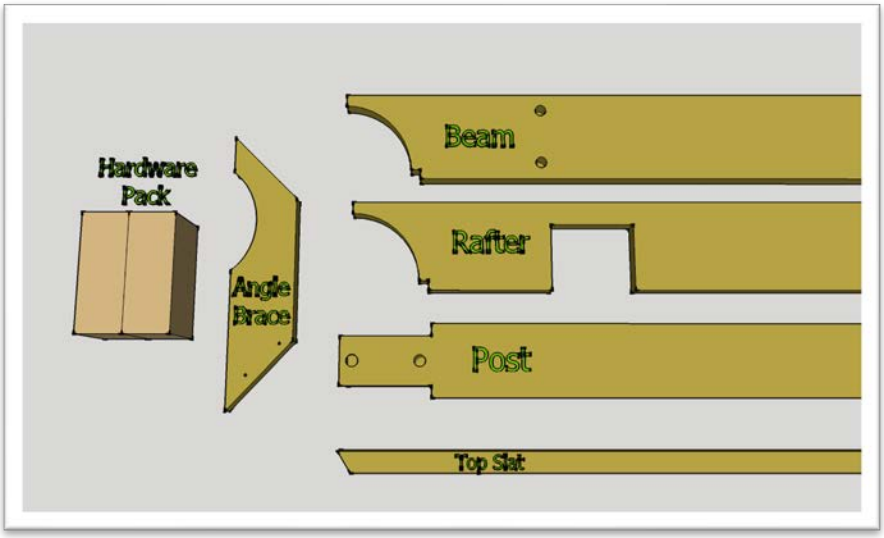
Call: 1-877-563-0002
Email: info@pergoladepot.com
Visit: https://pergoladepot.com/

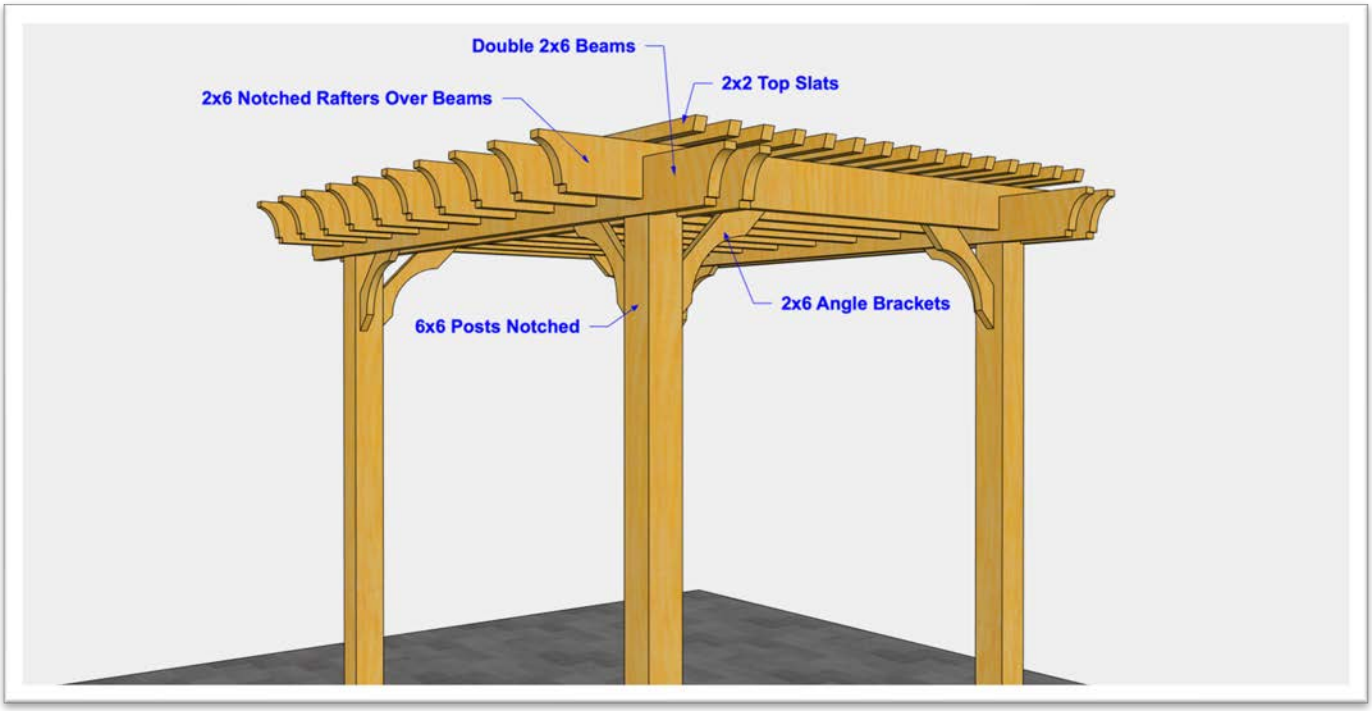
The Team at Pergola Depot

Tools and Supplies Needed

- Helper (we recommend at least 2, especially for larger kits)
- Tape measure, hammer, level
- Ladder (tall enough to work the top of your pergola during assembly)
- Screw gun (a star drive bit is supplied with kit)
- 3/4" Wrench
- For new footings: post hole digger, dry concrete mix, gravel, trowel, shovel and mixing bin or wheel barrow
- For installing rebar into post (if posts going into new concrete foundations): drill, 5/8" drill bit
- For all kits using post bases on concrete: drill; 5/8" masonry drill bit; and 15/16" wrench
- For Pressure Treated Pine kits using post bases on concrete: you will also need a 5/32" masonry drill bit, and a #2 Philips bit or #2 Philips screw driver

Kit Components





- 2x6 Beams (4 for standard size kits)
- 2x6 Notched Rafters (# depends upon kit size)
- 6x6 Notched Posts (4 for standard size kits)
- 2x6 Angle Braces (8 for standard size kits)
- 2x2 Top Slats (# depends upon kit size)
- Hardware Pack - 3" screws, 6" screws, 8" bolts nuts and washers, rebar for post install (if installing in or on new concrete foundation), star drive bit (#s depend upon kit size)
- Optional: post base trim; post base mounting hardware and Tapcons (for pine kits); concrete footing form tubes

Reference the packing list that was provided with your shipment confirmation for a complete list of kit components, including the number of each type of lumber and hardware pack components.

Instructions

For installations on top of new footings, allow the concrete to dry before completing the rest of the pergola installation. This may require that you dig holes and pour footings a few days or more prior to assembling the pergola depending upon the concrete used and climate. Additional instructions are provided below.

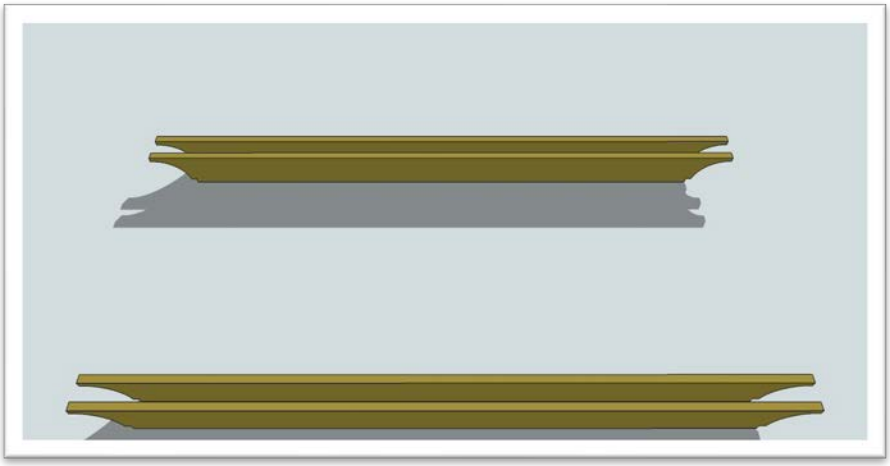
For installations on top of new or existing concrete foundations, we supply post bases, anchors and Tapcon screws as part of your kit if purchased with the option to be installed "on a concrete slab or footer". These materials can also be purchased as accessories from us or from your local hardware store. Instructions for post base installation are provided below, and we have a video on the *Installation Information* page on our website.

Please wait for the wood to dry completely before painting or staining a pressure treated pine kit, which may take several months or more depending upon climate and weather conditions.

Step by Step:

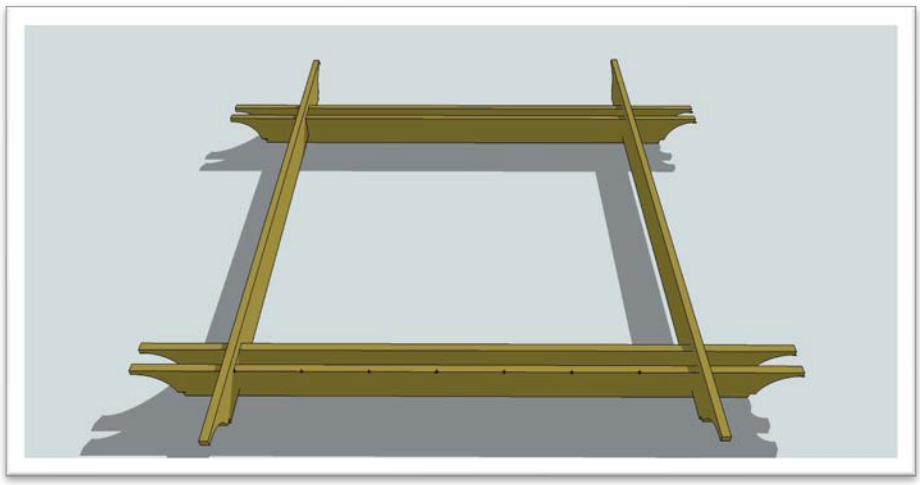
- **Step 1** – Move all parts close to where you will be installing the pergola for easy access during assembly.

- **Step 2** - Place all four beams on the ground (with the x's facing up) exactly where you would like the pergola to stand, like shown below. Position the beams perpendicular to the desired placement of the rafters.

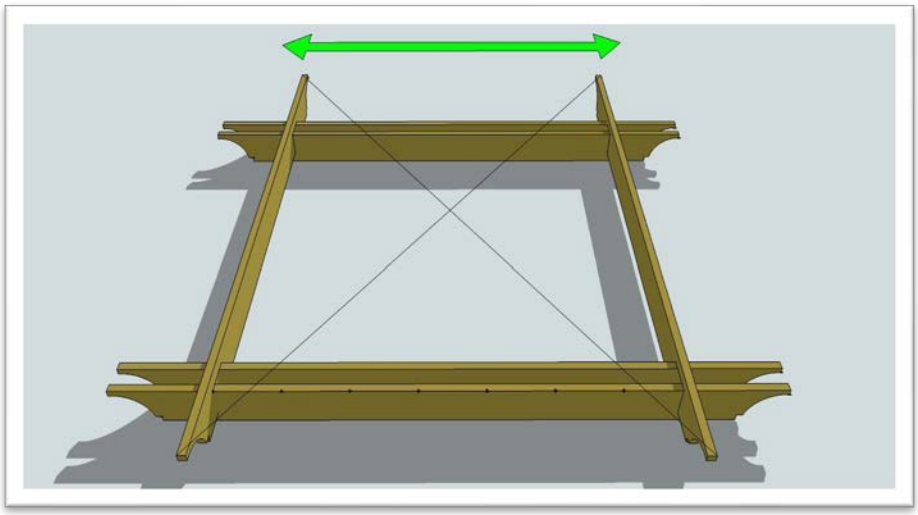


- **Step 3** - Slide two rafters over the two outermost X marks (marked like this: IXI) on the beams, positioning the notch in the rafters on top of the X on the beams. Make sure each rafter is positioned on top of the same mark on the beams so there is equal amount of beam outside of each rafter. You may need to move the beams around a little to get the rafters into place.

  Using 6" screws provided, temporarily screw each rafter through the predrilled holes into the beams. Screw them in just enough to hold the rafter in place.



- **Step 4** – To ensure the assembly is square, hook one end of a tape measure on the outside tip of the rafters and pull the tape to the opposite corner. Write down the measurement. Then repeat for the opposite corner as shown below. This is easier if you and your helper both have a tape measure and pull them across at the same time.



Adjust one or both sets of beams from side to side until you have the same measurement both ways. When you have the same measurement, it is perfectly square. Once square, make sure the assembly does not move.

- **Step 5** - Now you can see where you should dig your holes for each post. (Or mount your post bases if you're on concrete.) Look at the top of the beam just inside the first rafter where it says post. If you are on concrete, make a mark on the concrete directly in the center of the lines where it says post on all four corners. If you are on grass or dirt, stick the flags that are provided with the kit into the ground on all corners where it says post.

- **Step 6** - Unscrew and remove the rafters from the beams and move everything out of the way. Now you should be left with four marks where your holes or post bases will go.

- **Step 7** – Post hole, footing, and post base instructions:

  In-Ground

  If burying posts into concrete footings, dig footer holes with the center of the hole at the center of the four marks from above. Dig holes to a minimum of 2'4" deep (depending on the depth desired for frost line etc. – see our website under Resources>Pergola Post Guide) and min. 12" diameter. Adjust post depths to ensure tops of posts will be level with each other once installed. Pour in gravel to fill the first 4" of each post hole.

  We recommend you install a piece of 10" rebar, supplied with the kit, into the bottom of each post. Locate and mark a spot that is approximately 10" below ground level. Using a 5/8" drill bit, drill a hole through the post at the desired mark on each post. Note that the rebar will be inserted in a later step.

  New Footings

  If mounting posts using post bases on top of new footings, dig footer holes with the center of the hole, where marked, from an earlier step, minimum 2' deep (depending on the depth desired for frost line etc. – see our website under Resources>Pergola Post Guide) and min. 12" diameter. Use concrete footing form tubes and leveling line to ensure the top of each footing is level with each other.

  Mix the concrete according to the directions for the concrete purchased and fill the hole to about two-thirds of the way to the top. Use a shovel or piece of rebar to eliminate air bubbles. Insert one piece of 18" rebar supplied with the kit into the wet concrete so that it sits diagonally from the bottom of one side of the hole toward the top of the other side. Pour in more concrete to cover the rebar and until the concrete is level with the top of the form tubes. Work the top portion of concrete to eliminate bubbles and smooth the top with a trowel or shovel. Repeat for each footing. Allow concrete to dry completely, which will depend upon the concrete used and weather conditions.

  Post Bases

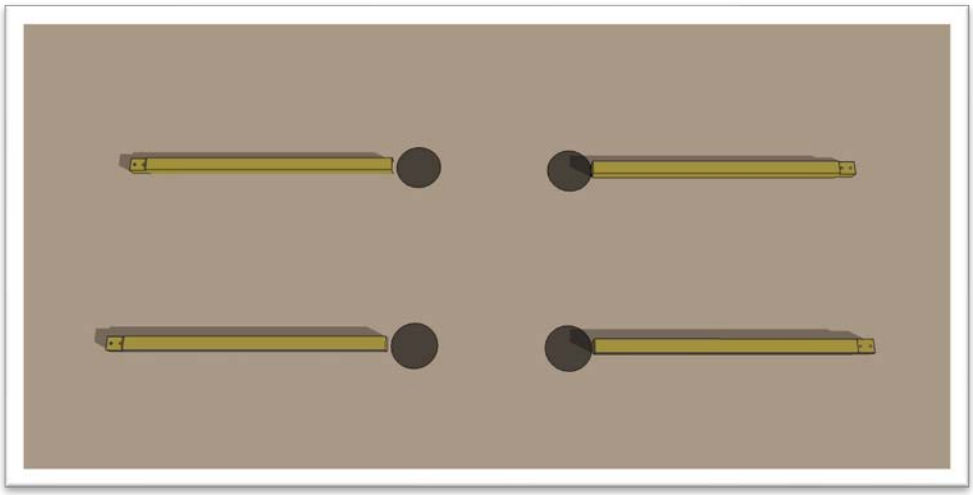
  If installing using post bases on top of an existing concrete foundation or previously poured footings, the concrete must be dry before installing post bases. Place the bases on the concrete in the exact position where they will be installed at the center of your post location marks from above. Measure the distance between the center of each post base to ensure they match the prescribed distance between the center of each post for your size pergola. The center post to post measurement (for standard sizes) is 3'6" less than the overall length of each dimension. For example, a 10x12 (rafter x beam) pergola has a center post to post measurement of 6'6" (10' rafter minus 3'6") x 8'6" (12' beam minus 3'6"). Once post base placement is confirmed, mark the concrete at the center hole at the bottom of each base.

  Remove the bases and drill into the concrete at each marked point with a 5/8" concrete drill bit to a depth of at least 4". Clear excess debris from the hole. Place the washer and nut on the concrete anchor, place the flared end of the anchor through the post base and into the hole in the concrete. Hammer the anchor down into the hole in the concrete until it is against the post base, but do not tighten. Repeat for each base.

Before tightening the anchor to the post base, turn the post bases so that the side walls (vertical pieces of the bases) are parallel with the direction of the rafters (once installed). This will allow for small adjustments in the placement of the post in the base on the rafter side of the structure. Then, square each base to the outside edge of the pergola footprint. To square bases, lay one of the beams or rafters (depending upon length needed) on the ground directly outside two of the post bases, then rotate the post bases until the outside edges of each base are touching and square with the board and the side walls are parallel with the rafters. Repeat this for the other bases. Tighten each anchor with a 3/4" socket or wrench until snug to the base.

If installing a pressure treated pine kit using post bases, install one Tapcon screw provided through one of the holes in the bottom of each post base and into the concrete. Using a 5/32" concrete bit, drill the Tapcon screw hole to a depth of at least 2". Once the hole is drilled, clear excess debris from the hole, and slowly screw the Tapcon through the post base using a #2 Philips head screw bit or screwdriver until snug to the base. Repeat for each base.

- **Step 8** - Lay the posts on the ground, with the bottoms at the edge of each hole or post base, the tops (cut ends) facing away from each other.



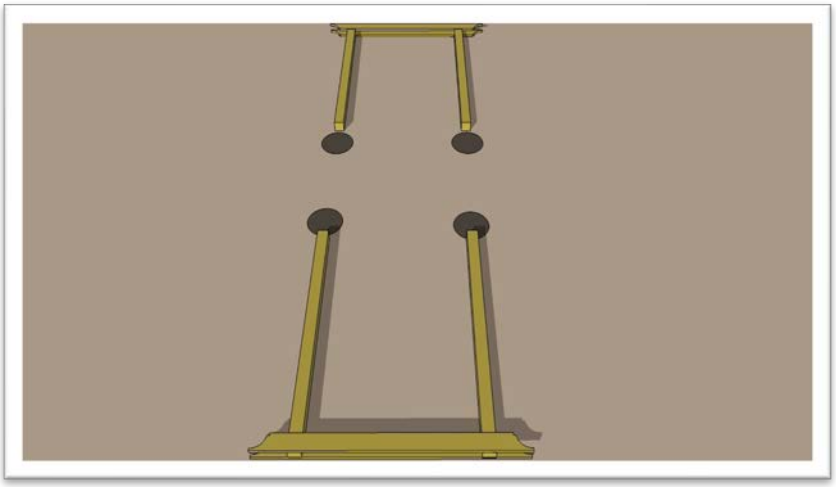
- **Step 9** - If installing post base trim, slide trim over the bottom of each post and up the post so it will be out of the way for the next couple steps. For posts being installed into the ground (into concrete footings), insert the rebar through the hole at the bottom of each post. Use a hammer to move the rebar through the hole until there are approximately equal lengths of rebar on either side of the post.

- **Step 10** - Lay one beam down on the ground near the top of the posts. Slide the posts up and onto the beam between the lines on the beam where it says post.

- **Step 11** - Set the other beam on top sandwiching the post in between the two beams.

- **Step 12** - Place 1 washer on each ½" bolt. Lift the beam assembly enough to fit the bolts between the ground and the beam and insert the bolts into the holes from the

bottom. **Hint:** You may want to use a block of wood to place on the ground under the bolt, so you can push the beam down to get the bolt to come up through the hole. Place a washer and nut on each of the bolts and make them snug but do not tighten them down yet. Now you should have this:



- **Step 13** - With one person on each side, tilt the assembly up and drop the posts into the postholes, or into the post bases if on concrete. Have your helper(s) hold the assembly plumb. (Note: for some of the larger size pergolas this step may require more help.) Refill the holes around the posts with dry concrete. **Do not water in the concrete yet**. Check for level across the top of the beam and on the sides of the posts. **Hint:** To make level, a common solution is to adjust the amount of concrete under the posts by lifting-up the low post and allowing dry concrete to fill in underneath, or if installing on top of a footer or existing slab you may need to use a shim under one or more of the posts.

  If you are installing the pergola on concrete with post bases, you will need to have your helper continue to hold the assembly or prop the assembly up so that it does not fall. Once you have the bottom of the posts in the post bases, using the 1 1/2" galvanized nails supplied with your post bases, secure the posts to the bases with one nail on each side of the bases to hold them in place until the rafters are installed.

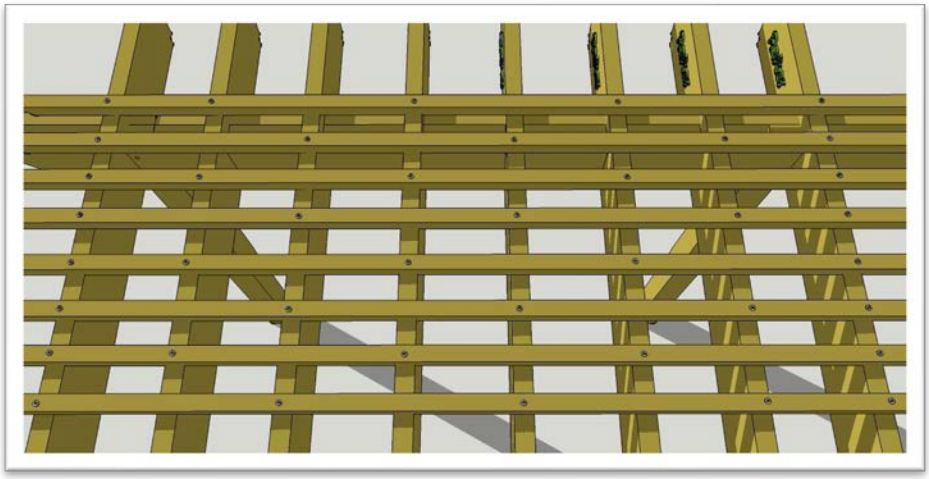
  Repeat for the other beam and post assembly.

- **Step 14** - Move your stepladder in between the two sides. Take one of the rafters and slide it onto the outermost X marks on the beams just like you did on the ground. Then secure the rafter to the beams using 6" screws provided with your kit through the predrilled holes in the rafter onto the top of the beams. Now move to the opposite side and secure another rafter into position on the outermost X marks. Now your helper should be able to let go of the assembly. Check for level and plumb on the posts, beams, and rafters. **Hint:** A common solution is to adjust the amount of

concrete under the posts until level, or if installing on top of a footer or existing slab you may need to use a shim under one or more of the posts.

- **Step 15** - Install all of the remaining rafters on the remaining X marks and secure them to the beam with 6" screws through the predrilled holes. If on concrete, now is the time to finish securing the posts to the bases using the galvanized nails supplied with your kit.

- **Step 16** - Place the top slats into position across the top of the rafters on the lines labeled with an S, making sure you have the same overhang over the rafters on both sides for all top slats. Then screw the top slats down to the rafters using 3" screws. Start on one side and make your way across to the other side screwing every other rafter. Stagger your screw pattern as pictured below:



Make sure every top slat is screwed down on both end rafters as pictured. Be careful with the screws because stainless steel is a soft metal and they strip easily. Make sure your screw gun is straight and that the bit is inserted all the way into the screw, then push down hard while screwing them in. There are extra screws in every kit just in case you strip some, but if you need more you should be able to find them at any local hardware store. **Hint:** if you are having trouble with the screws stripping, it is helpful to get a bar of soap and rub the threads of the screw across it before screwing them in. This lubricates the screw, and they will go in a little easier.

- **Step 17** - Check the whole pergola assembly and tighten down any loose nuts and screws.

- **Step 18**- Install the Angle Braces. Four of the braces will go in between the beams and the other four will attach to the inside edge of the outside rafters – like shown in the picture below. To install the first four, slide the corner braces, with the long side towards the top, in between the two pieces of wood that make up the beam until flush

with the top of the beam, then push the bottom side against the post. Make sure the angles are flush to the post and to the top of the beam. Screw in two 3" screws through the angle brace into the post through the predrilled holes, then screw the top through the face of one of the beams into the angle with four (4) 3" screws. (Note: there are no predrilled holes in the face of the beam, and you can secure the angle to either the inside or outside beam.) Repeat for three more angles at each corner of the pergola assembly. For the next four, place the angle against the post with the long side up against the inside of the first rafter. Screw into the post through the predrilled holes at the bottom end that is against the post. Screw four (4) 3"screws through the top of the angle and into the rafter board. Repeat for the other three angles.

This is what they should look like when installed correctly:

- **Step 19 -** Water in the concrete around the posts if applicable. Mix the concrete with a shovel following the directions for the concrete you purchased and eliminating air bubbles. Be sure not to move the unit around while the concrete is curing (about 24 hours depending upon concrete used and weather conditions).

Note: If installing a pressure treated pine kit, do not paint or stain until the wood is dry.

You're Done!

Thanks again for your business. We appreciate our customers and their feedback on ways to improve our products. So, after you've completed putting your kit together, sit down, have a cold drink, and drop us a line via email to tell us what you think about our products. Any feedback on how we can make our kits easier to install will be very helpful. Pictures are always welcome!

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