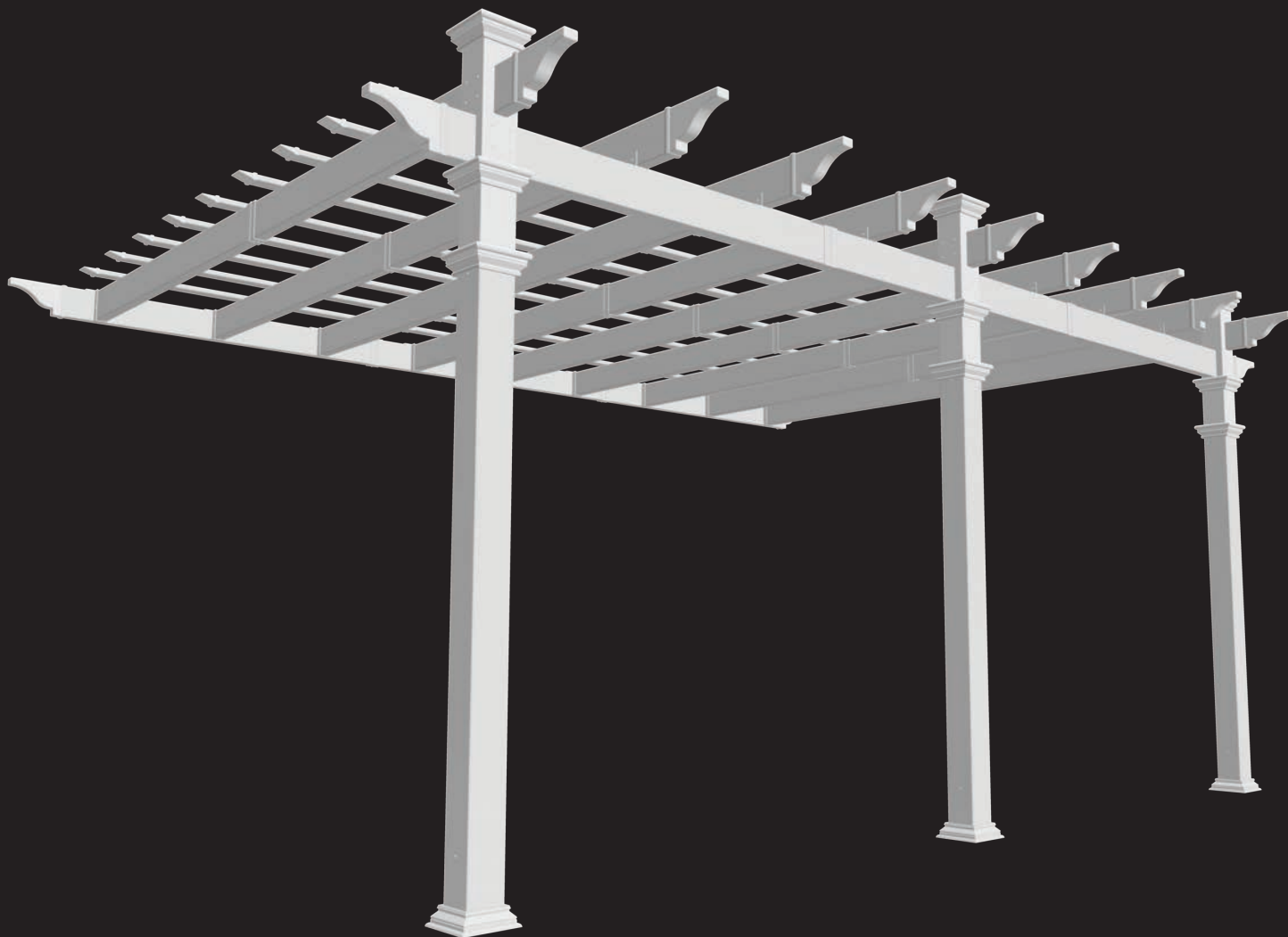


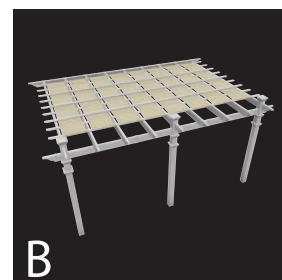
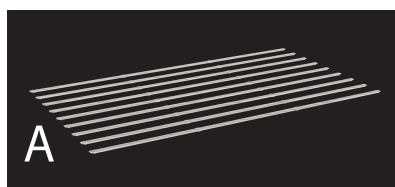
12 x 16 Attached Flat Top Pergola



ASSEMBLY GUIDE

OPTIONAL ACCESSORIES:

- A) 12 x 16 Additional Shade Slat Kit
- B) 12 x 16 Canvas Weave Kit



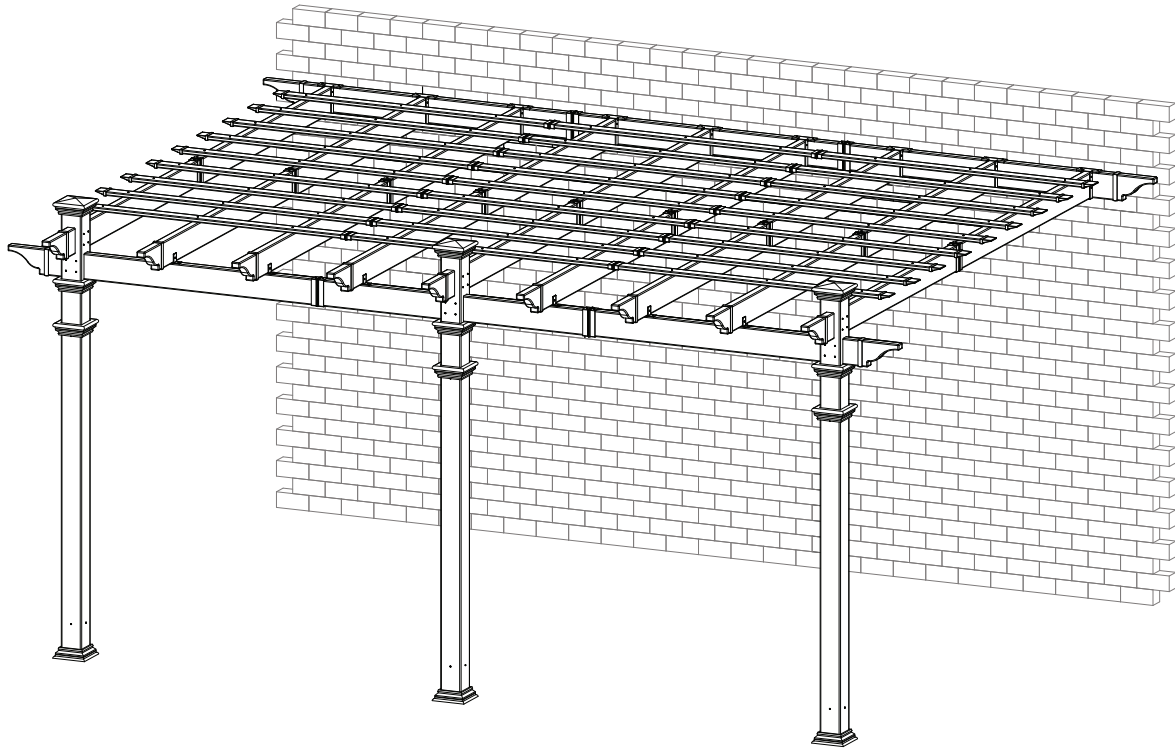
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12 x 16 Attached Flat Top Pergola

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Introduction & Overview



Getting Started

First off, allow us to say thank you for the investment you have made in one of our fine pergola kits. This kit is designed to be assembled and installed ideally by two people with basic carpentry knowledge and tools. Do not attempt alone, especially during the installation stage. Should you decide to moderately modify the dimensions of your pergola from the standard kit size, a circular saw with a sharp fine-tooth blade is all that is needed to cut, shorten or modify the vinyl components. When assembling components place on a non-abrasive surface (ie: shipping box) to avoid scratching. We recommend a 15' x 15' area for unobstructed assembling. You should not need to use excessive force when assembling any components.

Planning & Preparing

This Pergola is designed to be attached to an existing structure such as your house. Please follow this instructions closely and plan ahead to avoid confusions and issues during installation.

What looks like the toughest part of this project is actually the easiest, the graceful, solid-looking columns. We've designed these columns to simply be slipped over treated 4x4 wood posts that are either embedded in concrete or directly mounted to a concrete or wood surface using our bolt down brackets. See pages 7, 8 and 9 for more details.

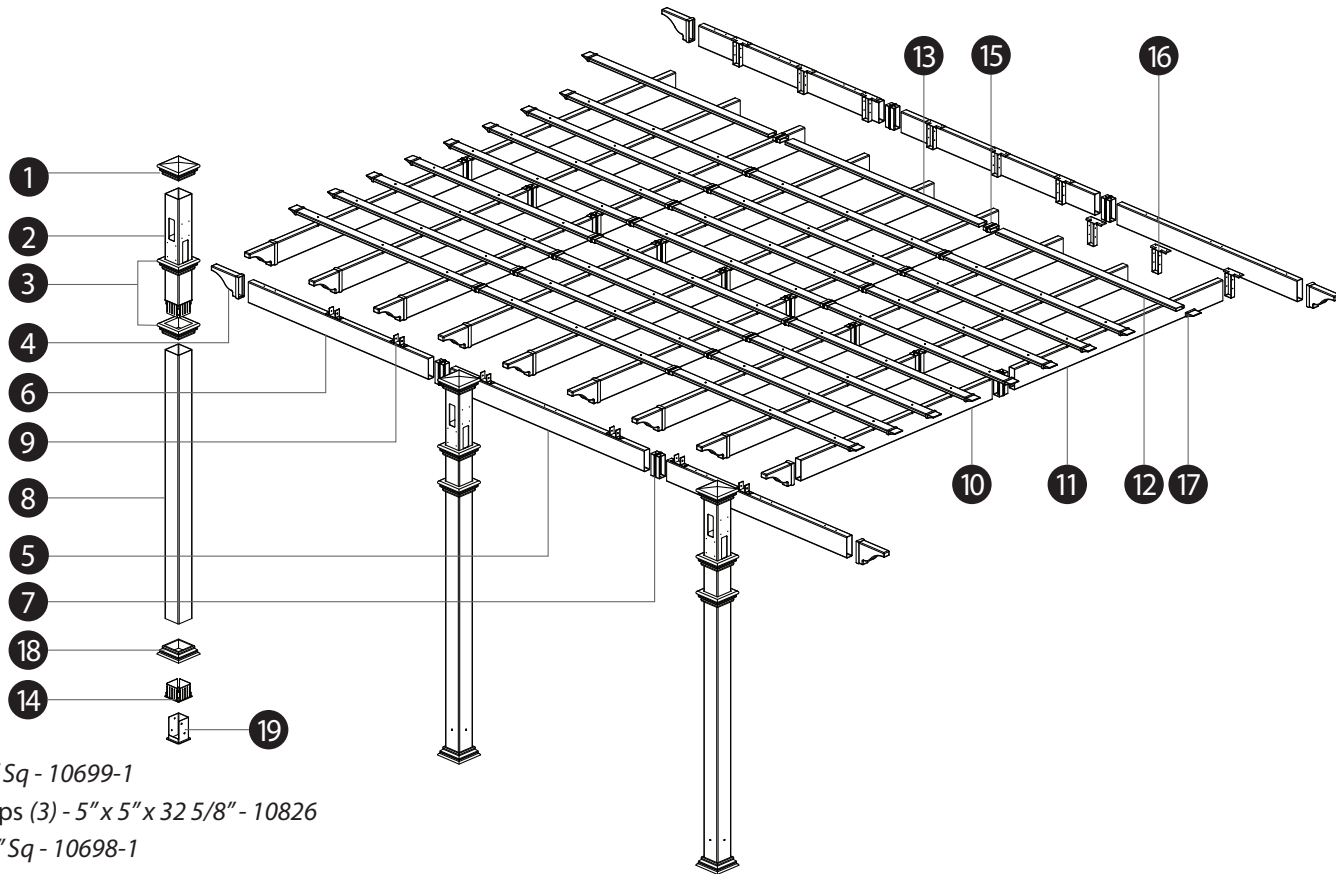
It is critical before you start that you consider the current slope of elevation where the pergola is planned - if there is any. Also utility or sprinkler line location is important to identify prior to excavating holes if necessary. You should also check to verify local building codes, ordinances, neighbourhood covenants, or height restrictions regarding this type of structure.

Restriction of Use

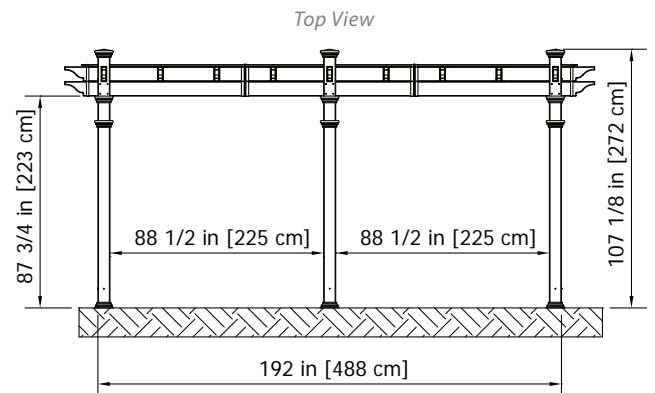
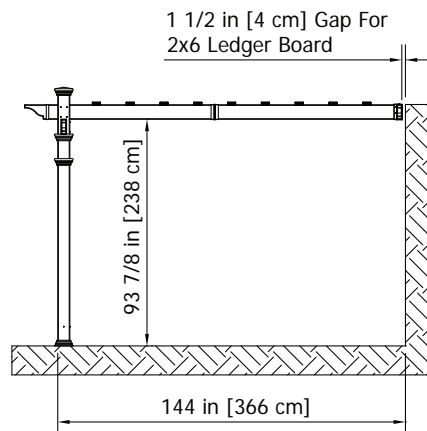
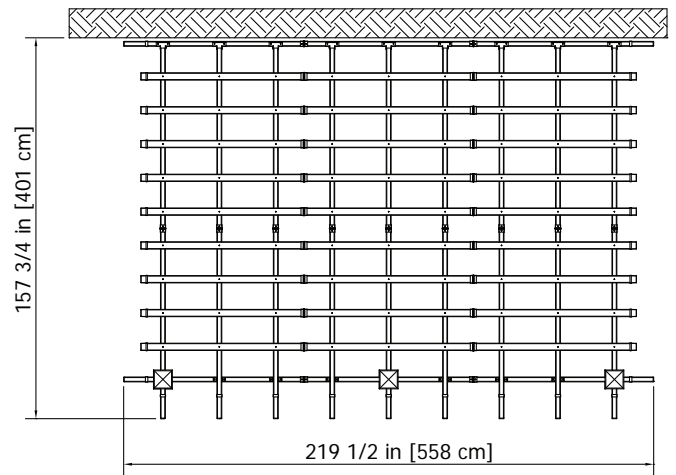
*This product **is not** designed to carry additional weight loads such as swings, people or other objects.*

Please take the time to read this instruction guide thoroughly prior to the construction of your pergola. If you have any questions, feel free to contact our technical dept by calling 1 800 282 9346 (Mon to Fri 8:00 A.M to 4:00 P.M. EST).

12x16 Attached Pergola Materials Overview



1. Post Caps (3) - 5" Sq - 10699-1
2. Main Column Tops (3) - 5" x 5" x 32 5/8" - 10826
3. Post Trims (6) - 5" Sq - 10698-1
4. Rafter & Beam Decorative End Caps (13) - 2" x 6" - 10829
5. Main Support Beams with pre-drilled holes on top - Inner (2) - 2" x 6" x 70" - 11074
6. Main Support Beams with pre-drilled holes on top - Outer (4) - 2" x 6" x 65 1/4" - 11075
7. Beam & Rafter Joiners (13) - 2" x 6" - 10820
8. Main Column Bottoms (3) - 5" x 5" x 76" - 10816
9. Rafter Brackets (6) - 10827
10. Rafters - Outer (9) - 2" x 6" x 69 1/4" - 11081
11. Rafters - Inner (9) - 2" x 6" x 75 3/8" - 10818
12. Shade Slats - Outer (18) - 7/8" x 3" x 65 1/4" - 11071
13. Shade Slats - Inner (9) - 7/8" x 3" x 70" - 11063
14. One Way 4"x4" Internal Wood Post Guide (3) - 5" x 5" - 10696-1
15. Shade Slat Joiners (18) - 7/8" x 3" - 11049
16. Rafter Hanger (9) - 10828
17. Shade Slat Decorative End Caps (18) - 7/8" x 3" - 10998
18. Base Trim Caps (3) - 10916
19. Bolt Down Brackets (3) - 80054



Side View

Front View

12x16 Attached Pergola Materials Breakdown

Check Boxes (Total of 5) for These Contents

In the event of missing or defective parts please call our customer service dept. at **1 800 282 9346** (Mon. to Fri. 8:00 AM to 4:00 PM EST).

1. Post Caps (3) - 10699-1
2. Main Column Tops (3) - 10826
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18. Base Trim Caps (3) - 10916
19. *Bolt Down Brackets (3) - 80054

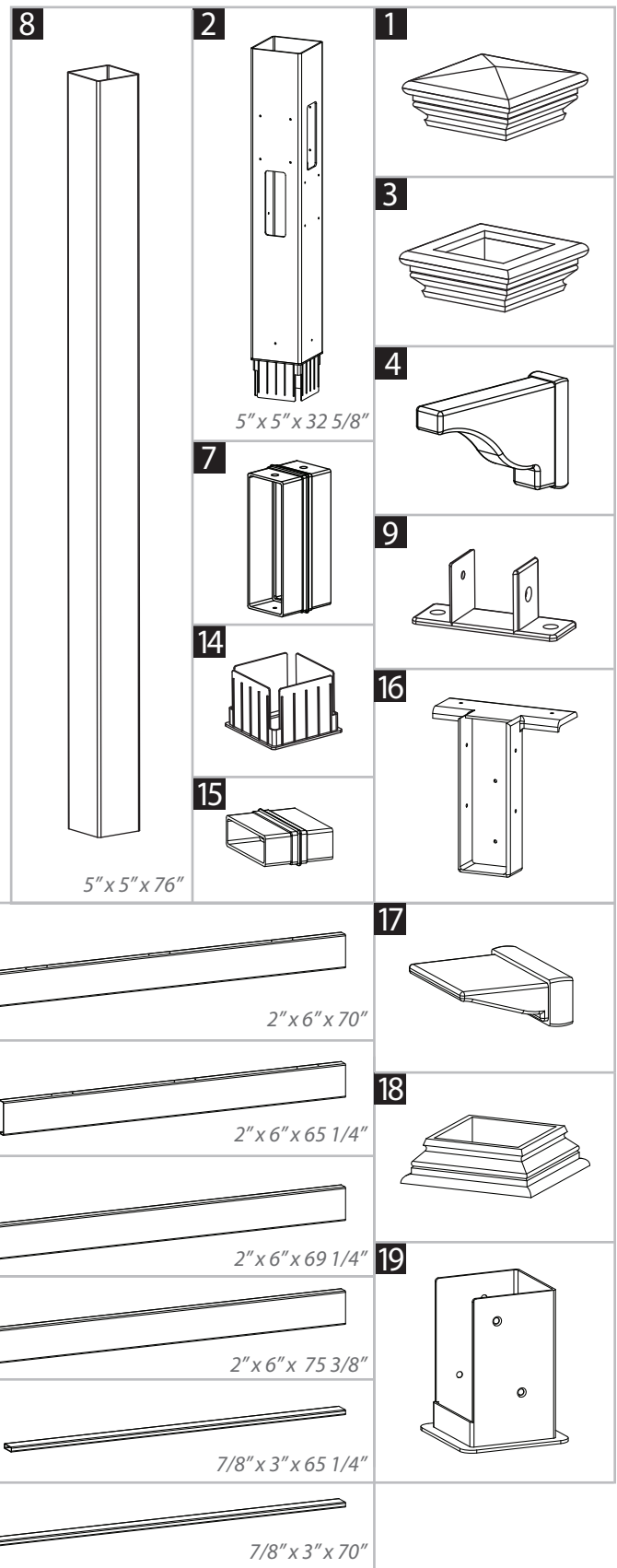
** Bolt Down Brackets are used only for installing the pergola on an existing surface such as concrete or wood deck. The pergola is not to be installed on concrete pavers, patio stones, or interlocking brick.*

Tools You Will Need

- Level
- Hammer
- Tape Measure
- String Line
- Wood Stakes (4) (temporary support for string line)
- Step Ladders (2)
- Cordless Drill

Tools You May Need

- Circular Saw with Fine Tooth Blade
- Framing Square



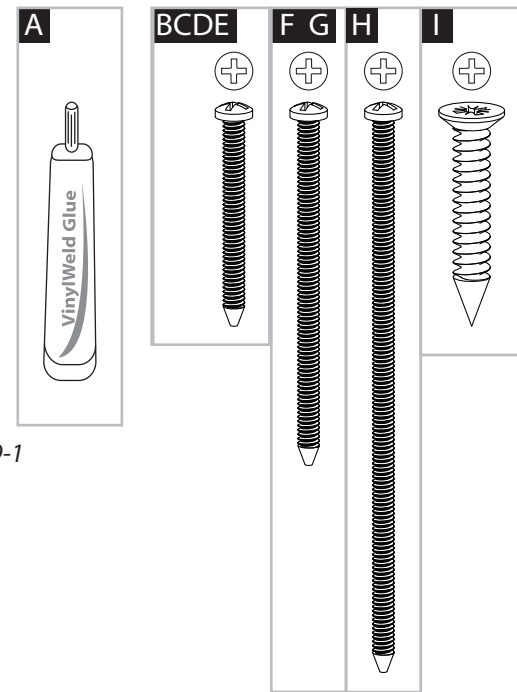
Not to Scale

Pergola Additional Materials List

Hardware *(in plastic bag)*

All Screws Included with this Kit are Self-Auguring.

- A. Vinyl Weld Glue (4) - 20000 White
- B. 1 1/2" Self-Auguring Stainless Steel Screws (12) (To lock rafter brackets to the rafters) - 20005
- C. 1 1/2" Self-Auguring Stainless Steel Screws (54) (To lock rafter hangers to the rafters) - 20005
- D. 1 1/2" Self-Auguring Stainless Steel Screws (52) (Joiner screws) - 20005
- E. 1 1/2" Self-Auguring Stainless Steel Screws (30) (Rafter hanger & Rafter Brackets screws) - 20005
- F. 2 1/2" Self-Auguring Stainless Steel Screws (24) (To lock vinyl column and wood post together at the bottom of each post and above trim cap) - 20009-1
- G. 2 1/2" Self-Auguring Stainless Steel Screws (81) (To lock the shade slats to the rafters) - 20009-1
- H. 4" Self-Auguring Stainless Steel Screws (48) (To mount the column tops to the beams) - 20006
- I. 1 1/2" Self-Auguring Stainless Steel Wood Screws (12) - 20037 (to lock the Wood Posts to the Bolt down brackets)



Extra Materials You will Need

(Purchase separately from www.newenglandarbors.com or retailer of our products)

If Mounting Pergola on Concrete (not intended to be installed on concrete pavers, patio stones, or interlocking bricks) or Wood Deck

J. 4x4x7 Pressure-Treated Wood Posts (3) *(purchase at local building center)*

If mounting pergola onto an existing concrete surface:

- 1/2" x 3 1/2" x 12" Wood Shims (24) - Can Be Cut from 1/2" Sheet of Plywood
- 1/4" x 2 3/4" Cement Screws - Countersunk Head (9)
- 3/16" Concrete drill bit. Minimum 3" long (1)

If mounting pergola onto a wooden/composite deck with

AN ACCESSIBLE UNDERSIDE:

- 1/2" x 3 1/2" x 12" Wood Shims (24) - Can Be Cut from 1/2" Sheet of Plywood
- 1/4" x 7" Bolts and Nuts - Countersunk Head (9) (Length depends on blocking material)
- 1/4" Washers (9)
- 1/4" Wood drill bit. Minimum 3" long (1)

If Mounting Pergola in Ground

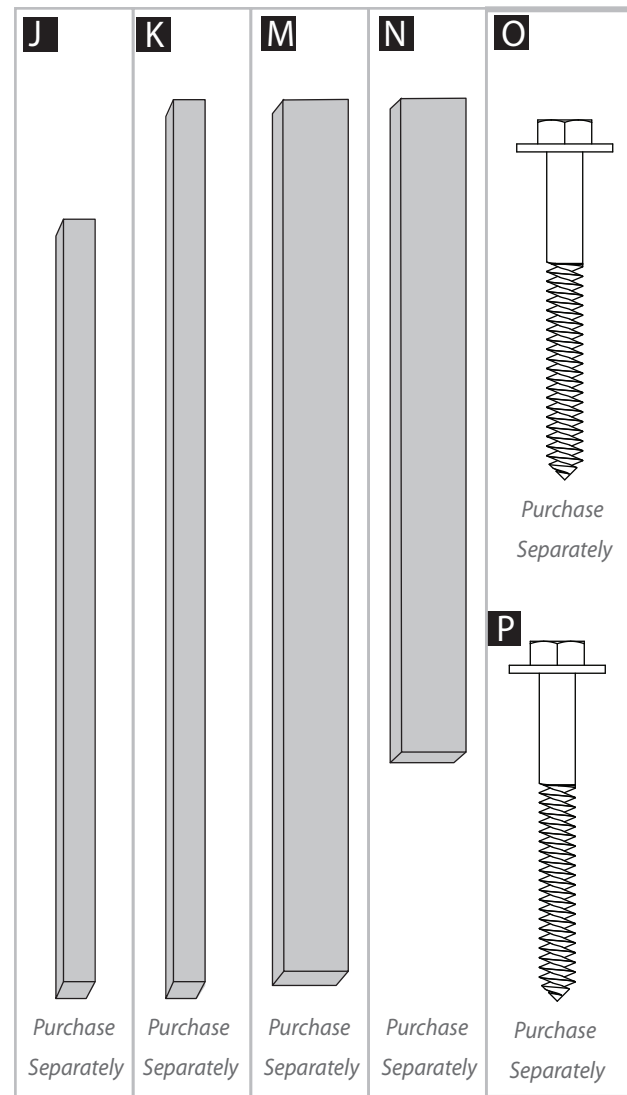
K. 4x4x10 Pressure-Treated Wood Posts (3) *(purchase at local building center)*

L. Concrete Ready Mix (3) *(purchase at local building center)*

Rafter / Beam Support (Required)

- M. 2x6x16 Pressure-Treated Boards (3) *(purchase at local building center)*
- N. 2x6x12 Pressure-Treated Boards (9) *(purchase at local building center)*
- O. 3/8" x 3 1/2" Lag Screws with Washers (8) *(purchase at local building center)*
- P. 3/8" x 3 1/2" Lag Screws (for wood wall) or Anchor Screws (for brick or concrete wall) (11) *(purchase at local building center, also purchase drill bit)**

**) Please consult your local building center for mounting anchors. These second set of screws will be used to mount your wood beam / ledger onto your structure. Refer to page 12 for more information.*



Not to Scale



Wood Post Layout & Installation for attached Pergola

This pergola can also be installed on a pre-existing wood or concrete surface using our bolt down bracket system with a 4x4 wood post (sold separate). See page eight for more details.

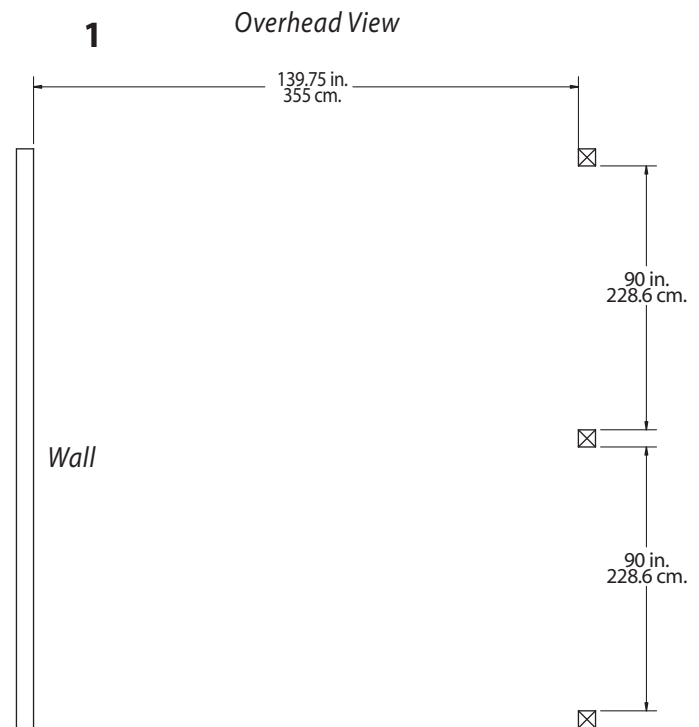
Post location and placement is the most critical step in the overall installation process. Please double check for the possibility of any underground utilities such as sprinkler, gas or telephone lines.

STEP ONE

Measure and mark out the location of the pergola posts using string line and temporary wood stakes. Adjust string lines accordingly. The inside corner of the string lines will be the post location.

Please Note:

Should you decide to moderately modify the dimensions of your pergola from the standard kit size, a circular saw with a sharp fine-tooth blade is all that you need to cut, shorten or modify the vinyl components.



STEP TWO

Install Wood Supporting Posts Directly into the Ground

1

After you have determined where the posts will be located, excavate 10" diameter x 36" deep post holes.

2

After holes are dug and cleaned, place the 4x4 wood post into a hole ensuring it's level and square to string lines. The final post height should be 84" out of the ground. If a post is higher because of obstructed excavation of footings, please cut down in height accordingly.

3

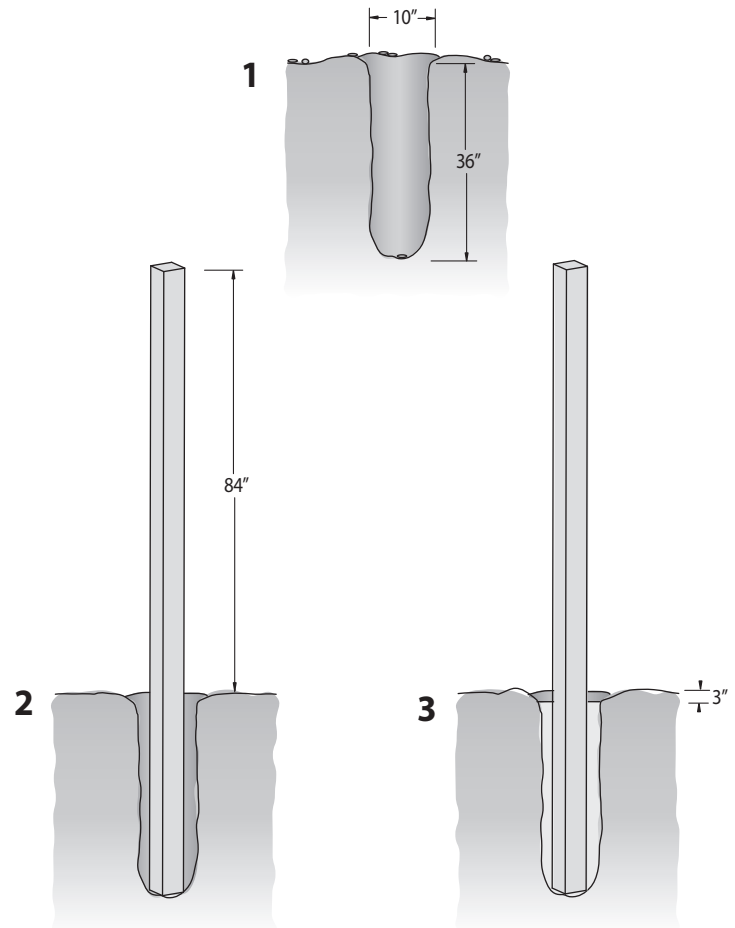
Fill the vacant hole with pre-mixed concrete all the way to within 3" of the top of the hole. Once the concrete has set, back fill the remaining 3" with soil.

4

Repeat for the remaining two posts.

Please Note:

Some 4x4 pressure treated posts can be larger than 3 1/2 x 3 1/2 square due to twisting or cracking. We have allowed a tolerance for this in the internal one way and two way 4x4 wood post guides (see page 8). However in extreme cases you may need to shave down the top of the 4x4 wood post slightly to get the vinyl post started over the wood post. Before installing your wood posts in the ground, please check to confirm this and correct at this stage if necessary.



OPTIONAL STEP

Wood Post Layout & Installation using Bolt Down Brackets for Concrete or Wood Surface for Attached Pergola

Note: for additional information on the bolt down bracket installation, refer to the bolt down bracket instructions.

1

Measure and mark out the location of the bolt down brackets using string or chalk line. Adjust string lines accordingly. The inside corner of the string lines will be the corner of the bottom flange.

2

Mark out the location of bolt down brackets accordingly using the base of the bracket accordingly.

3

Using a 3/16" masonry drill bit, drill 3" deep holes to allow installation of 2 3/4" concrete screws (Not included)

4

Proceed to install three 2 3/4" concrete screws into the bottom base of the bolt down bracket (Not included).

Please Note:

Concrete patios generally have sloped surface for water run-off. If this is the case, when you secure the bolt down bracket to the concrete, the bracket may be at an angle. This can be corrected for level using galvanized steel washers (not provided), acting as shims underneath the base to level - **VERY IMPORTANT OR PERGOLA BEAMS AND RAFTERS WILL NOT BE LEVEL.**

5

With the three bolt down brackets installed plumb, proceed to set the 4x4 x7' wood posts in place. Secure the wood posts using the screws provided with the bolt down bracket kit. Repeat for all wood posts.

6

Posts should be 84" in height.

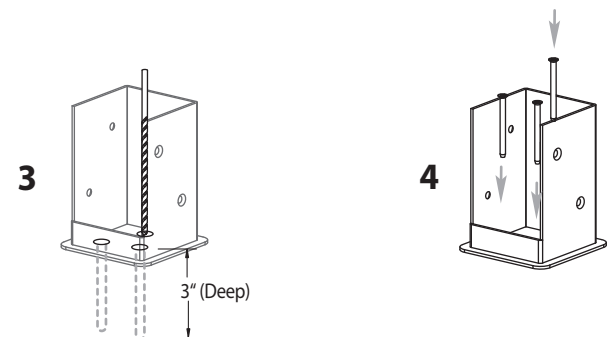
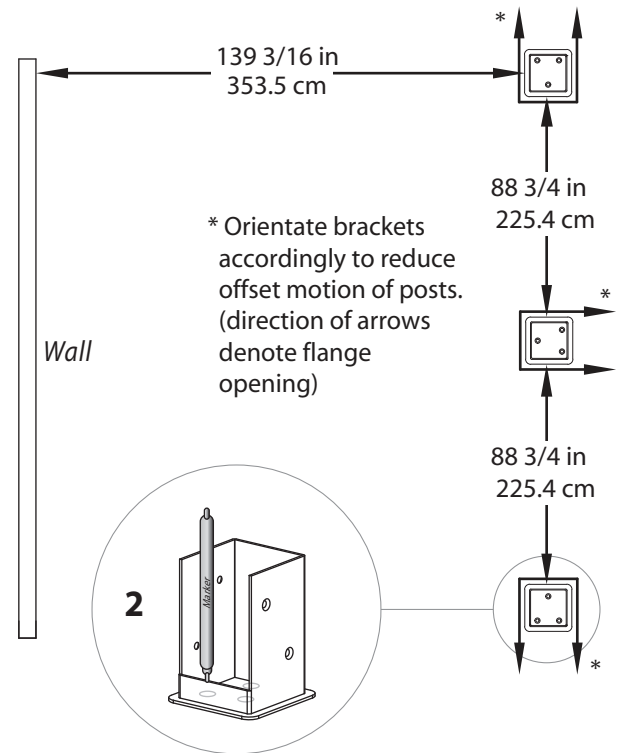
7

In order to create a snug fit between the wood posts and the inner cavity of the vinyl posts, it will be necessary to "build out" the 4x4 posts near the bottom and the top using 1/2" x 3 1/2" x 12" shims. Follow instructions as illustrated.

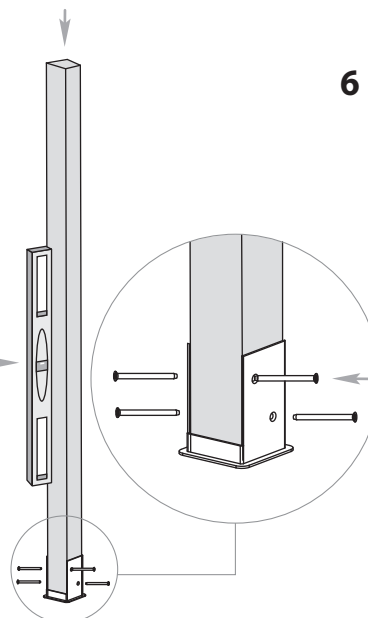
Please Note:

Some 4x4 pressure treated wood posts can be larger than 3 1/2 x 3 1/2 square due to twisting or cracking. We have allowed a tolerance for this in the post brackets and the internal one way and two way 4x4 wood post guides. However in extreme cases, you may need to shave down the end of your 4x4 wood post slightly to allow access.

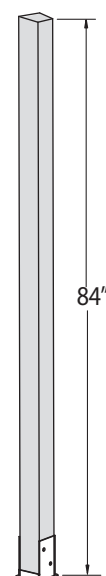
1



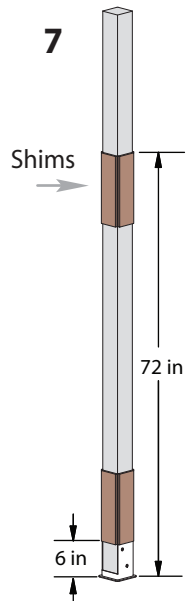
5



6



7



STEP THREE

Vinyl Column Assembly & Installation Over Wood Posts

1

Using the vinyl weld glue, insert the One Way 4"x4" Internal Wood Post Guide in the one end of the main column posts. This step is only applicable if your wood 4x4 post are embedded into the ground. If your pergola is going to be installed on wood or concrete surface, please dispose of these three pieces.

2

Using a step ladder, guide the bottom vinyl columns over the wood 4x4 posts.

3

Slide the base post trim over the vinyl post followed by the top vinyl columns over the wood 4x4 posts. You will need to use a step ladder.

Please Note:

Ensure that holes at top of column are orientated correctly for future beam and rafter placement. See diagram at top of next page.

4

Connect the bottom and top vinyl column by using vinyl weld and sliding together. **Please Note:** Vinyl Weld Glue has about a sixty second cure time and about a 20 minute dry time.

5

Slide the bottom post trim into position to cover the joint on the column.

6

Slide the top post trim into approximate position just below the bottom routed hole on the bottom of the top vinyl column assembly.

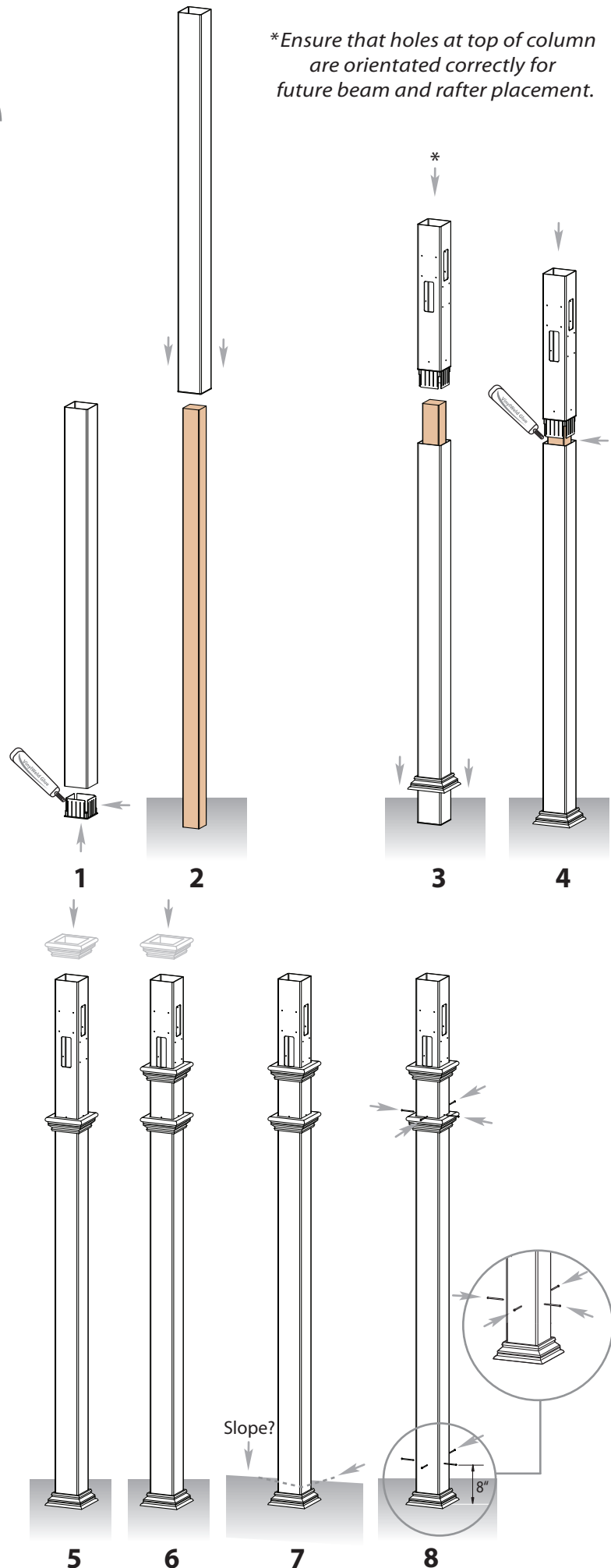
7

If necessary, adjust post heights accordingly to ensure future level installation of beams and rafters as necessary. If slope is severe causing a height difference between the posts, you may need to trim down the bottom of your vinyl columns as necessary.

8

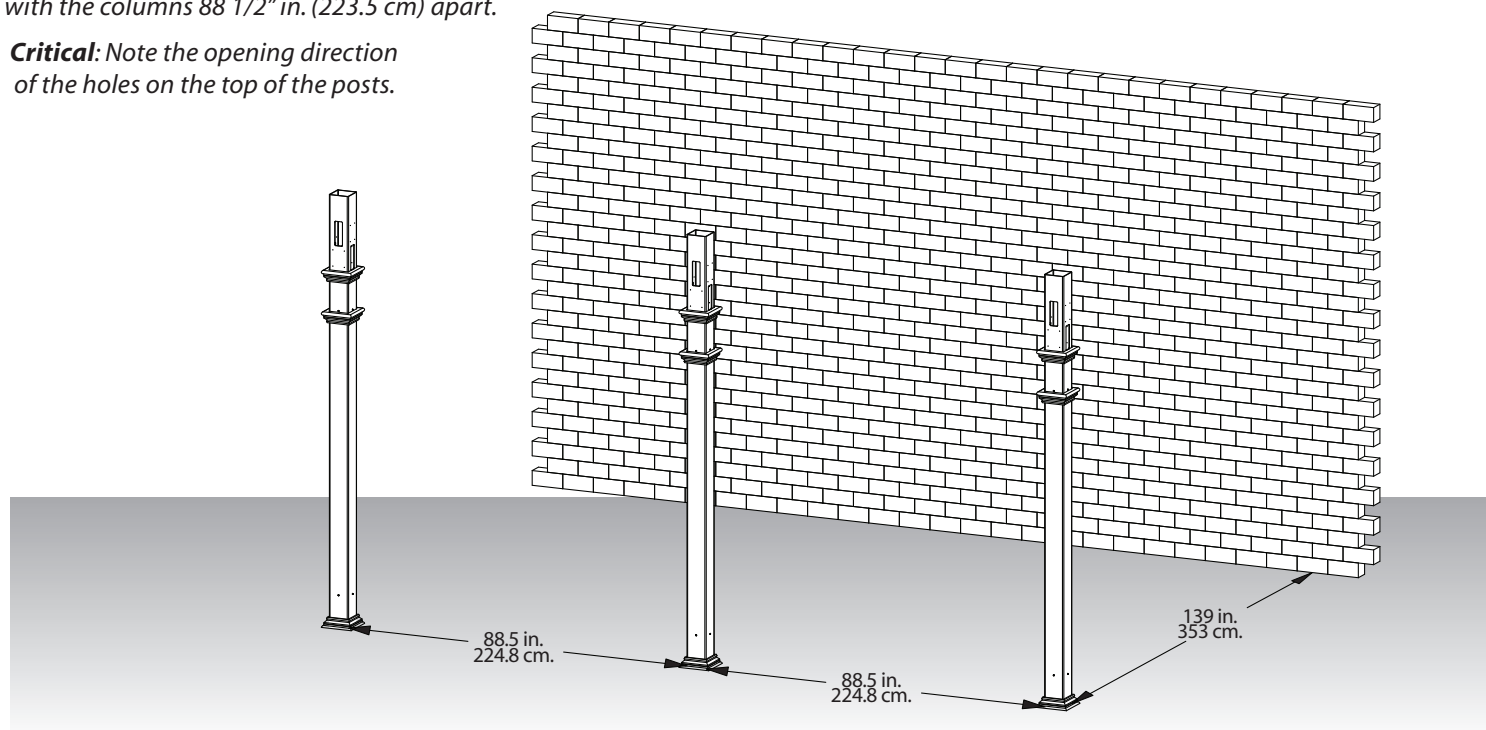
Secure the vinyl columns to the wood posts using 4 – 2 1/2" self-auguring stainless steel screws at 8" up from the base of the posts, and 4 – 2 1/2" self-auguring stainless steel screws just above the trim cap through the pre-drilled holes as illustrated. This will prevent possible uplift during high winds, etc.

*Ensure that holes at top of column are orientated correctly for future beam and rafter placement.



At this stage, the columns should be properly installed as per the following illustration, with the columns 88 1/2" in. (223.5 cm) apart.

Critical: Note the opening direction of the holes on the top of the posts.



STEP FOUR

Main Support Beam Assembly (Wall Side)

1

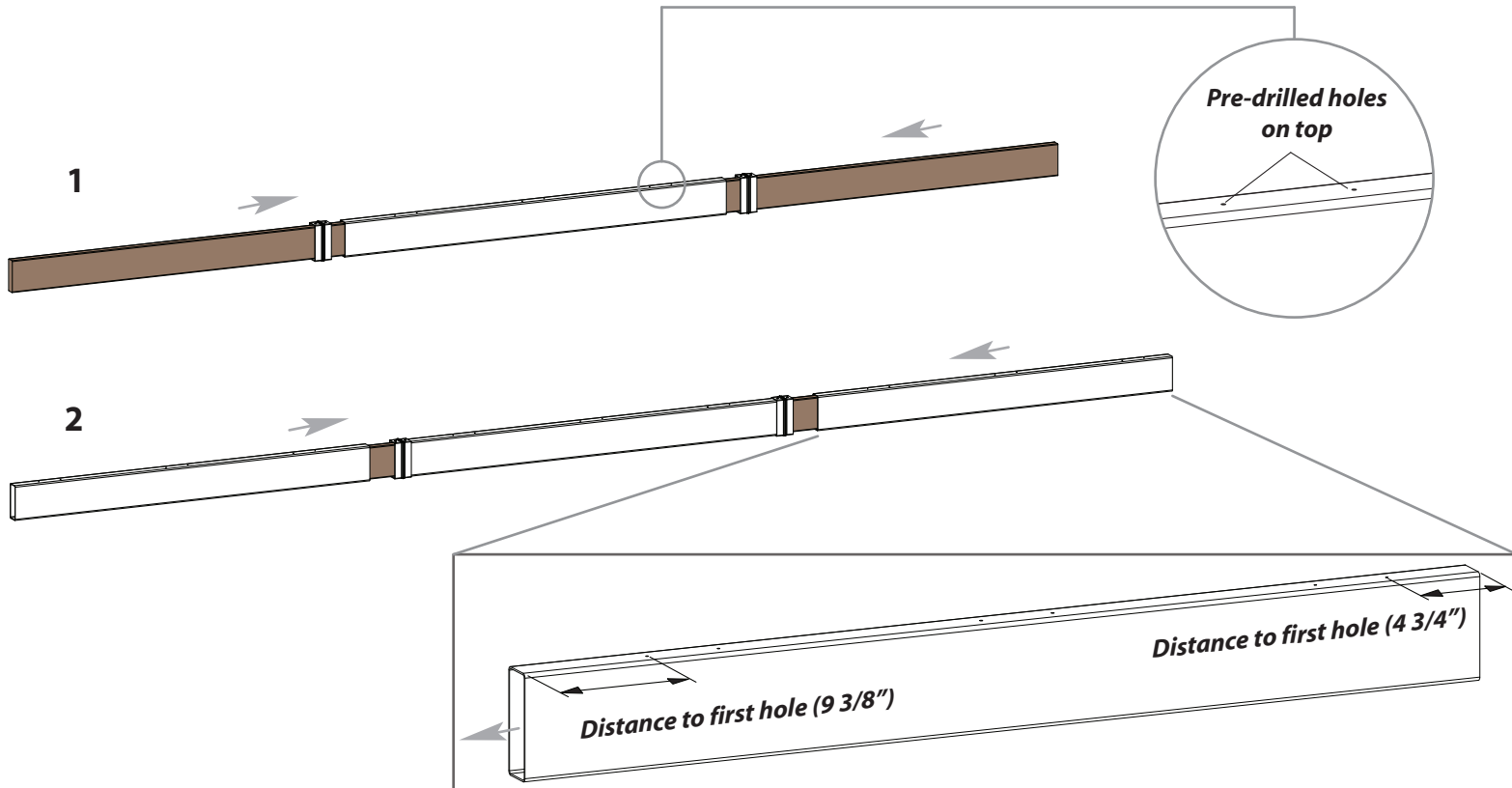
Insert one 2x6x16 pressure treated wood into an inner main support beams followed by two joiners as illustrated.

2

Insert two outer main support beams until they both butt up tight inside the joiner.

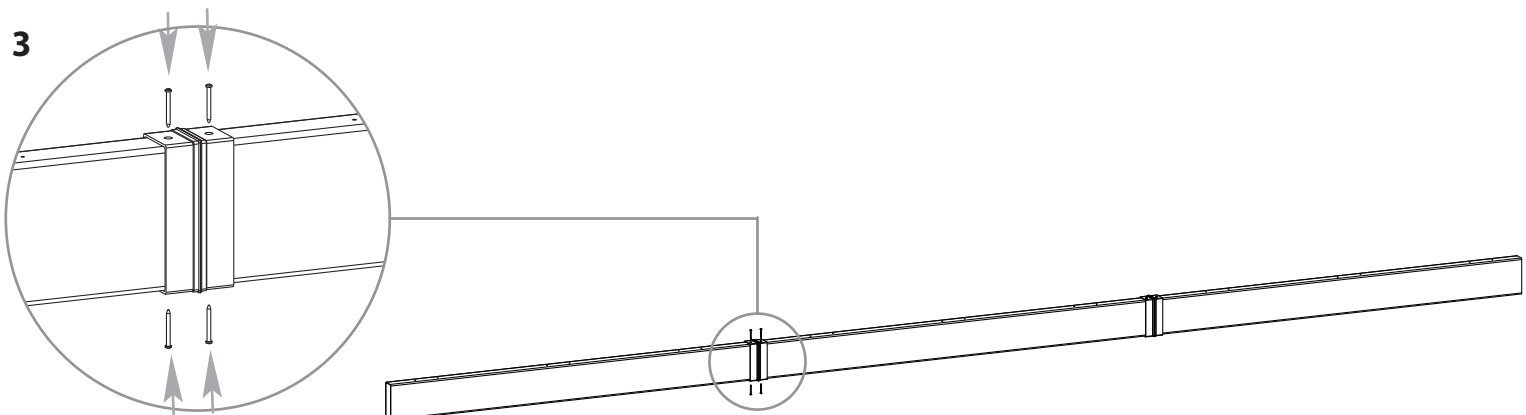
Critical Note:

Note the location of the pre-drilled holes on the top edge of the outer main support beams. As pictured below, the further distanced holes need to mate together inside the beam joiner. This is critical to ensure equal spacing of your rafters.



3

Fasten the joiners to the main support beams using four, 1 1/2" screws for each joiner as shown.

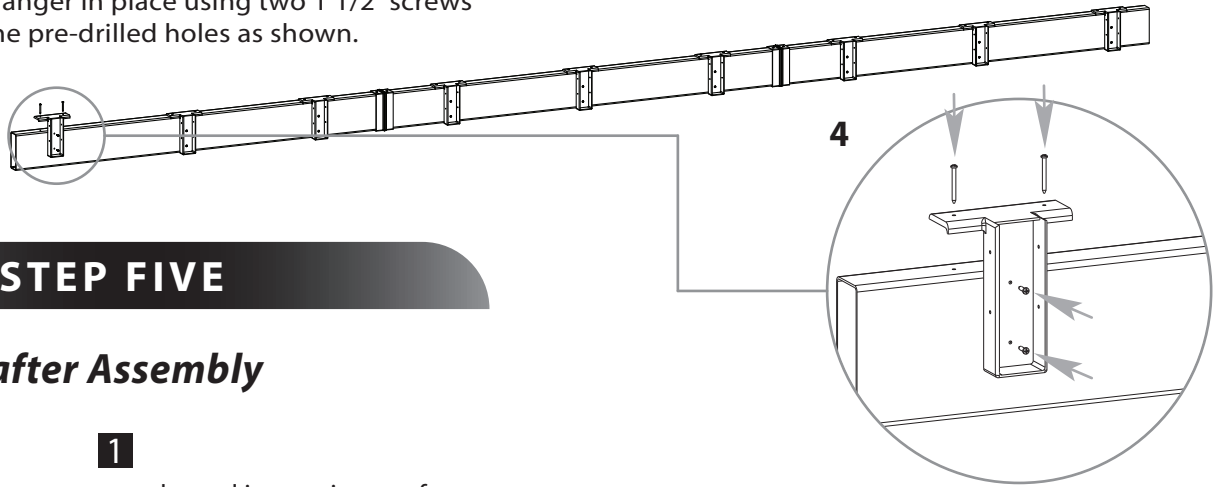


STEP FOUR

4

Attach and fasten the nine rafter hangers as shown.
Align the top holes on the rafter hangers to those on top of the main support beams and fasten with two, 1 1/2" screws each.

Secure each rafter hanger in place using two 1 1/2" screws through the pre-drilled holes as shown.



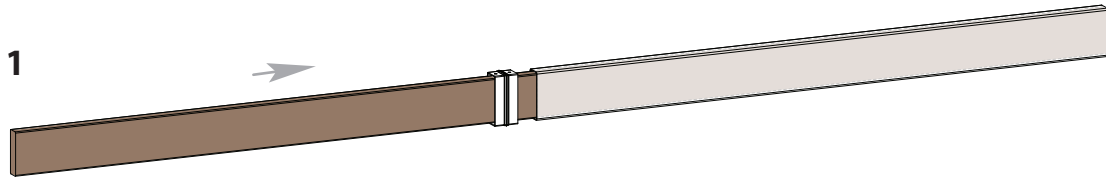
STEP FIVE

Rafter Assembly

1

Insert one 2x6x12 pressure treated wood into an inner rafter section (75 3/8" long) followed by a rafter joiner.

Make sure the wood is flush against the the edge of the inner rafter as shown.

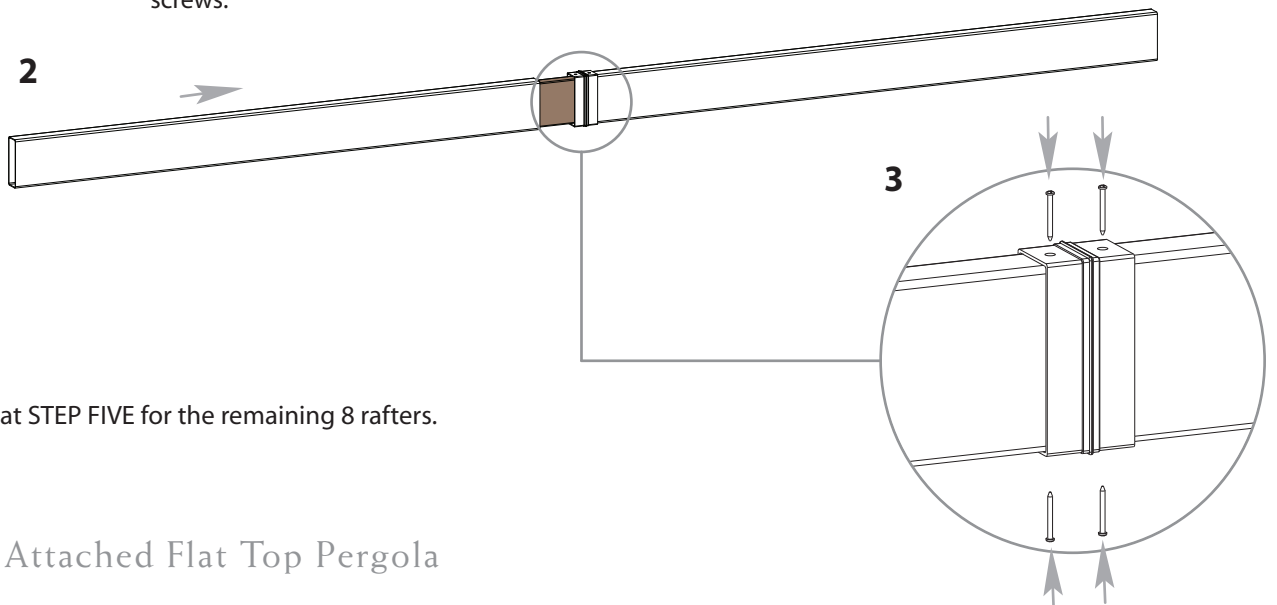


2

Insert an outer rafter section section (69 1/8" long) as shown.

3

Screw the joiner to vinyl rafters and wood insert using 1 1/2" screws.



Repeat STEP FIVE for the remaining 8 rafters.

STEP SIX

Main Support Beam Assembly (Posts Side)

1

With a helper, insert the second inner main support beam through the middle post assembly followed by a 2x6x16 pressure treated wood as shown.

Note: Make sure the pre-drilled holes on the inner main support beam is facing up.

2

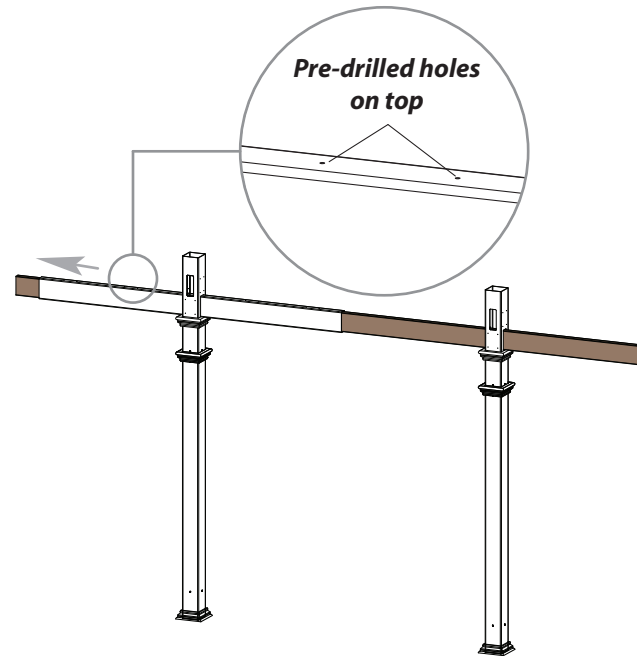
Add a joiner as shown and "thread" the pressure treated wood through an outer beam.

Note the pre-drilled holes on the outer beam. Make sure they are facing up and observe the distances of the pre-drilled holes as per Critical Note found on page 11, illustration #2.

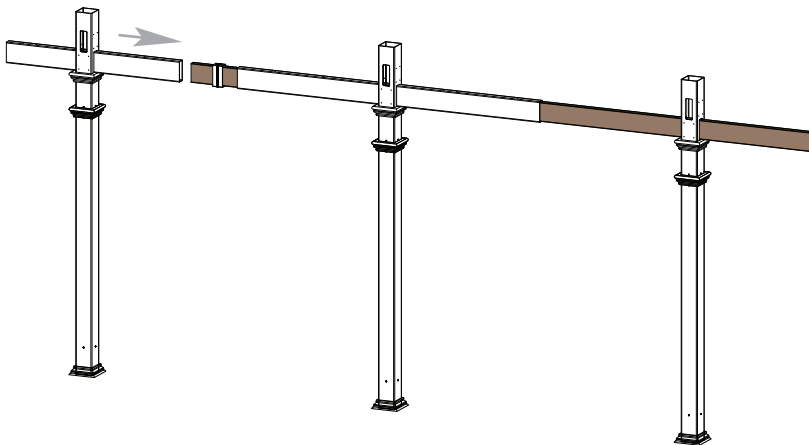
3

Push the pressure treated wood through and past the post as shown and insert another joiner and thread them through an outer beam.

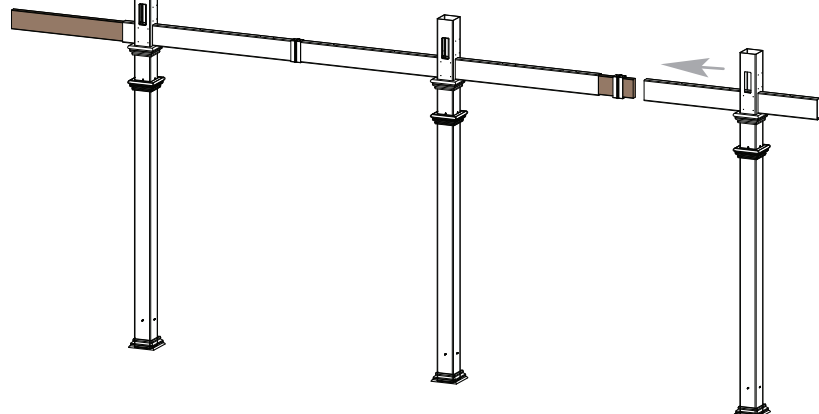
1



2



3



STEP SIX

4

Fasten the joiners to the main support beams with four 1 1/2 in screws as shown.

5

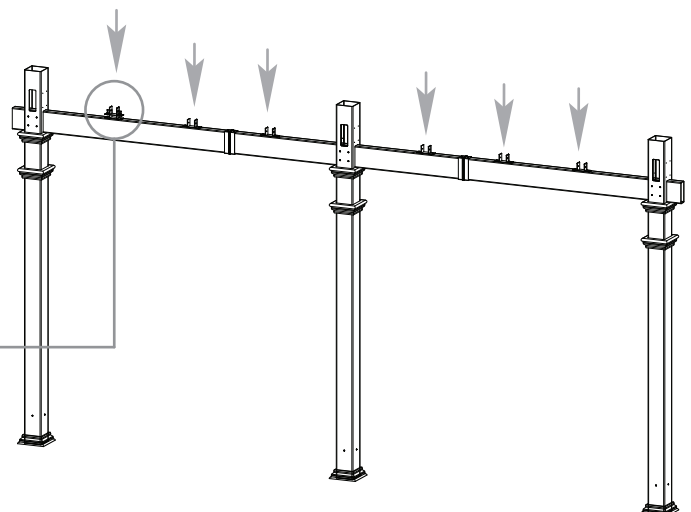
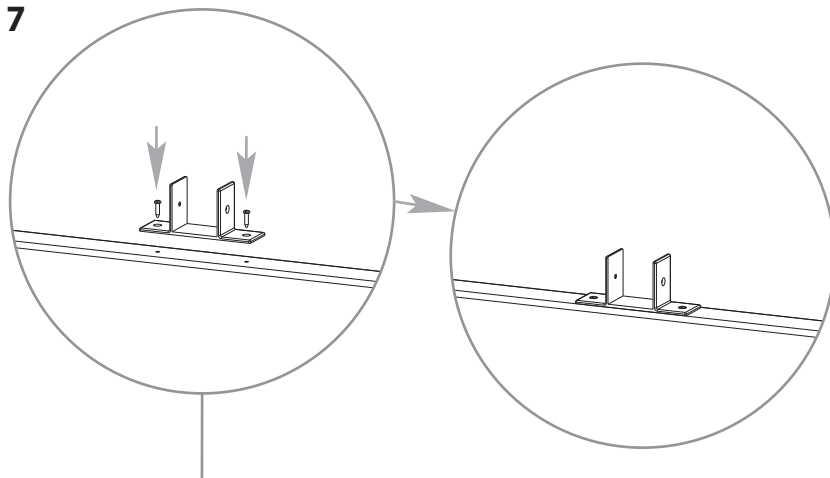
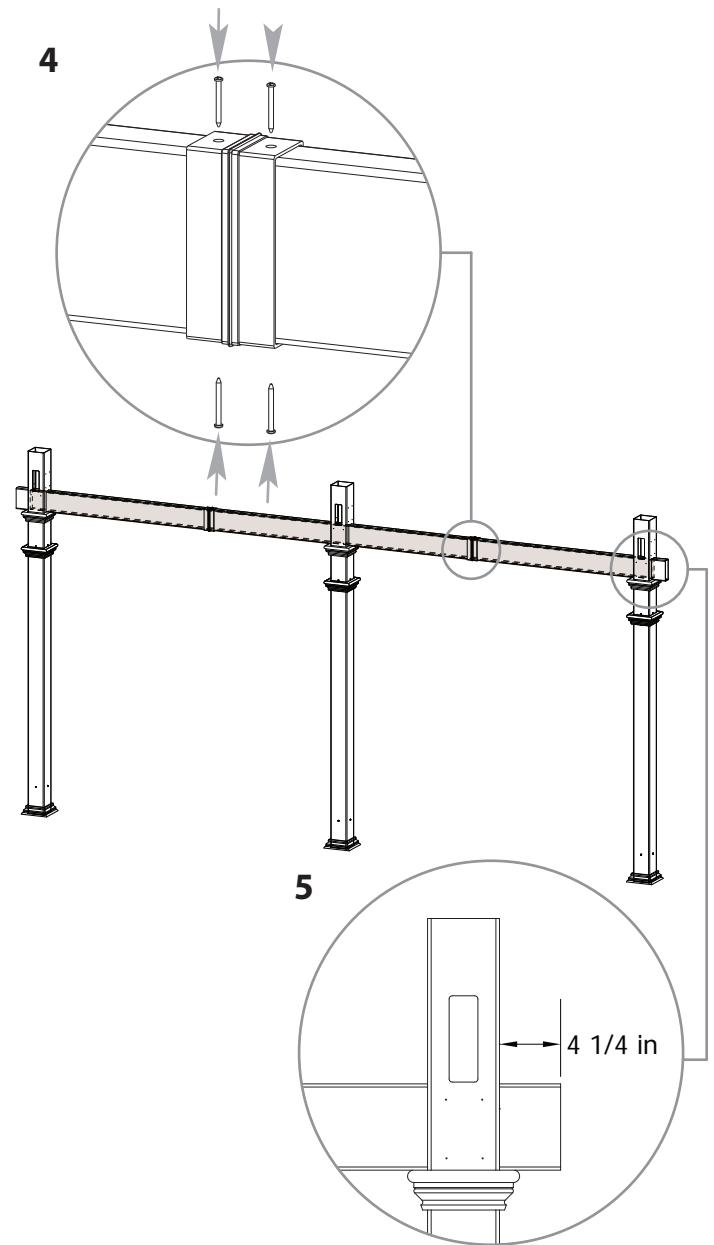
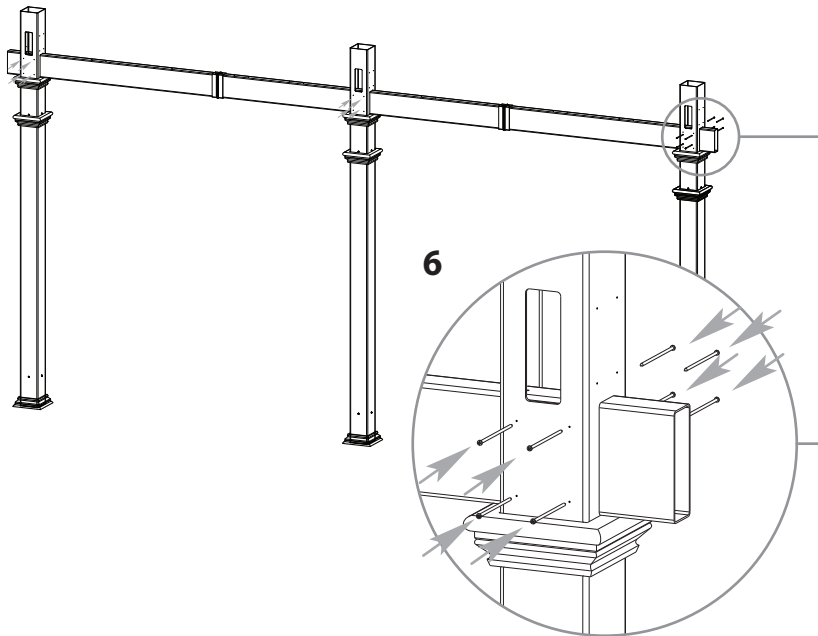
The main support beam should overhang the post by 4 1/4 in on both sides.

6

Secure the main support beam to the posts using eight, 4 in screws for each post through the pre-drilled holes as shown.

7

Align the holes on the rafter brackets to the pre-drilled holes on the main support beam and fasten with two, 1 1/2" for each of the bracket.



STEP SEVEN

Ledger Boards installation

Using a helper and two ladders proceed to complete the following steps:

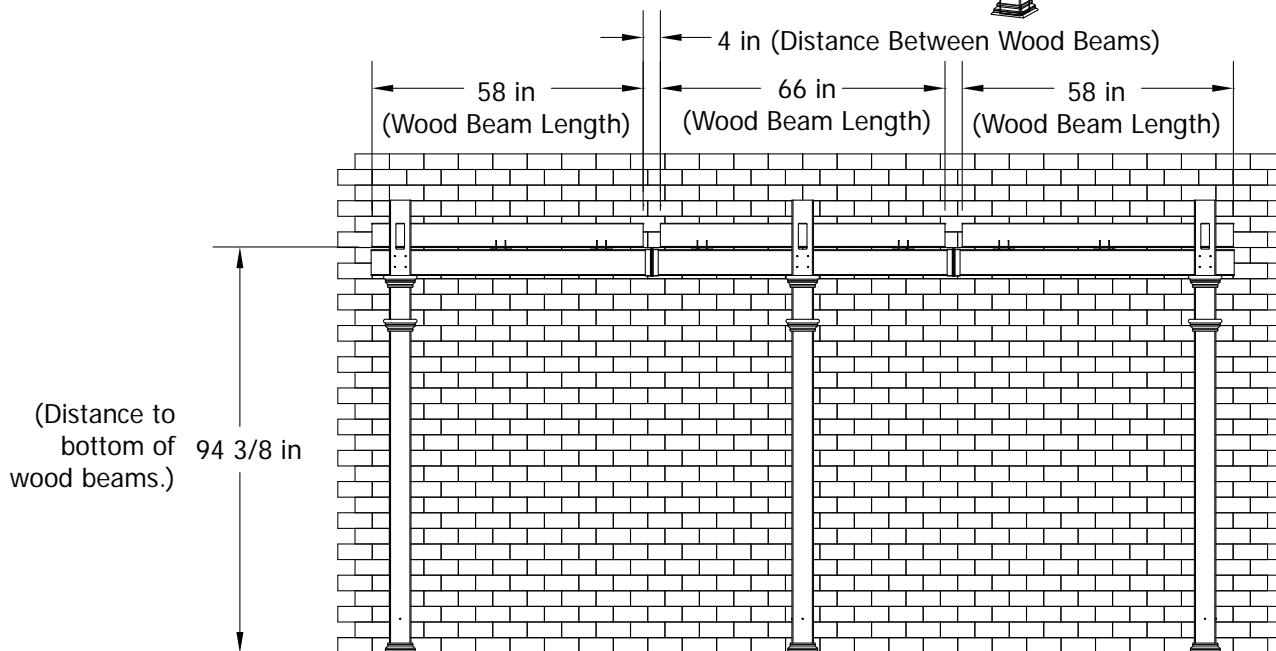
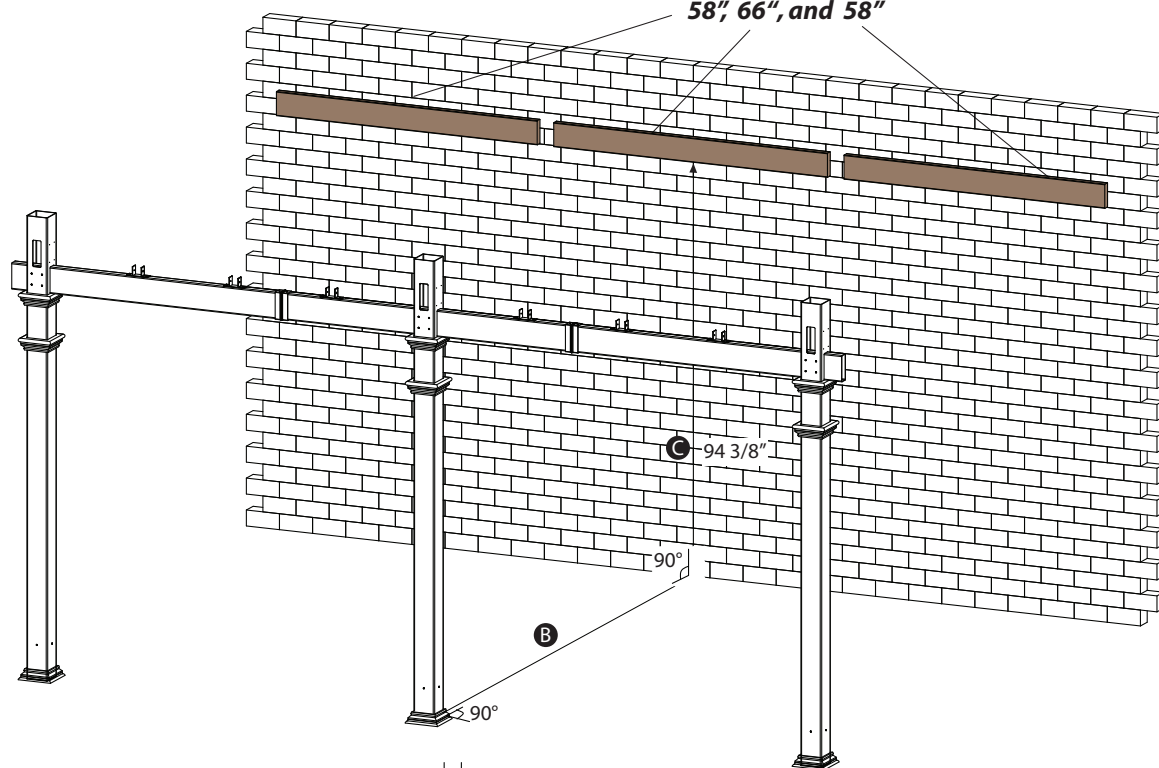
1

Mount the three 2x6 pressure treated wood boards (sold separate) on your wall surface. Please consult your local hardware store regarding methods of mounting. We recommend 11 lag screws if mounting to a wood siding or concrete/brick anchor if you are mounting to a brick wall. Screws heads should be recessed flush with the wood beam.

To locate the position of your wood beams;
 A. Measure half way between the middle vinyl post
 B. Mark and draw a string line square to the wall.
 C. Measure up 94 3/8" and mark with pencil. This would be the bottom centre of the middle wood board as shown.

2x6 x 16' Pressure Treated Board cut in three pieces

58", 66", and 58"



Front View

STEP EIGHT

Main Support Beams & Rafters Placement

Using a helper and two ladders proceed to complete the following steps:

1

Mount the main support beam which has the rafter hangers onto the wood boards as shown. The top of the wood beam should be flush with the top of the pergola beam.

Align the joiners to be between the 4" gaps between the wood boards mounted in the previous step.

To fasten, use a minimum of eight 3½" lag screws through the main support beam and wood beam. Space the lag screws between the rafter hangers.

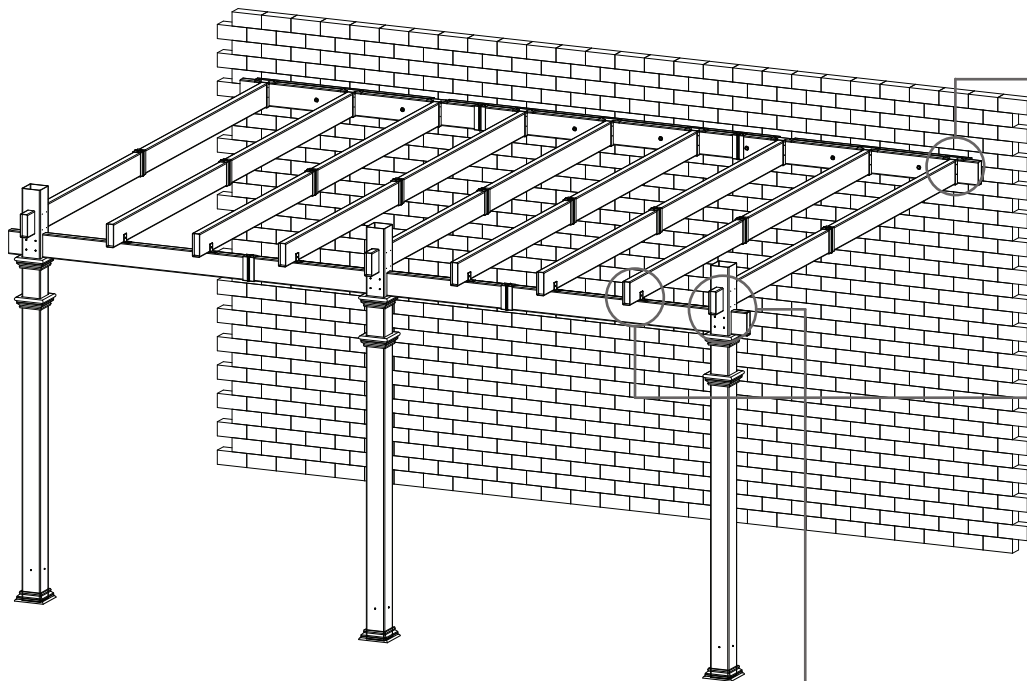
2

Place the nine rafters into the rafter hangers & rafter brackets. Ensure that they are pushed all the way in the rafter hangers.

Fasten into the rafter hanger using four - 1 1/2" screws as shown.

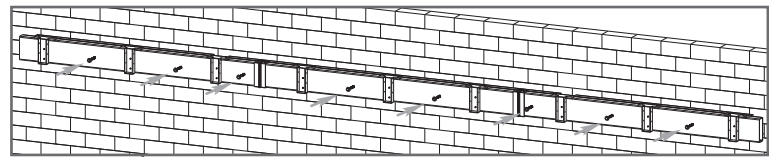
3

Fasten the rafters onto the rafter brackets using 1 1/2" screws as shown.

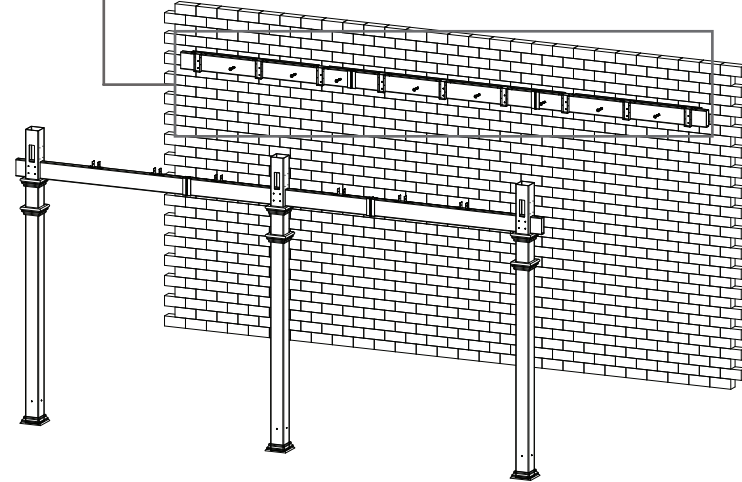


4

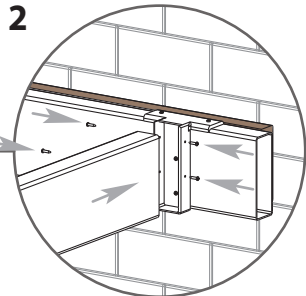
Using 4" screws, lock the rafters into position inside the posts by driving in 8 screws from the outside and 8 screws from the inside of each column.



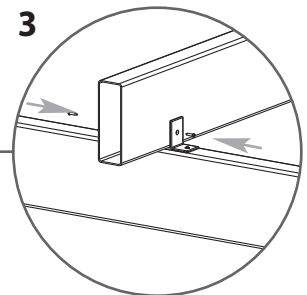
1



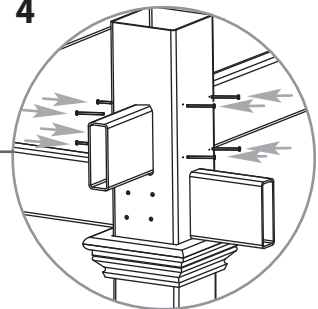
2



3



4



STEP NINE

Fastening Decorative End Caps & Post Caps

1

Install decorative pergola end caps using vinyl weld.

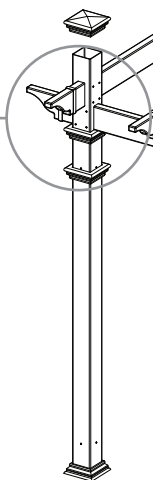
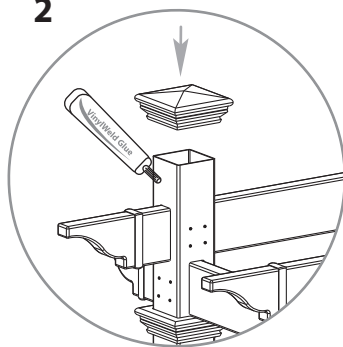
2

Install the post caps using vinyl weld.

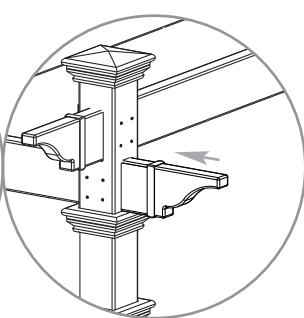
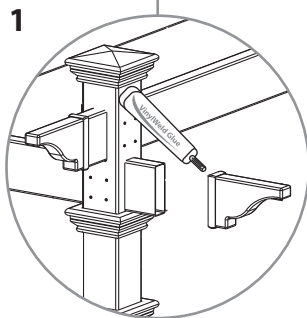
3

Final position your post trims.

2



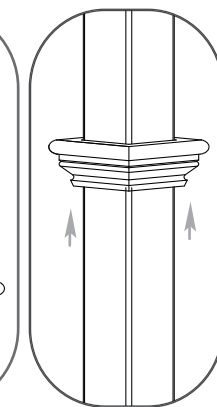
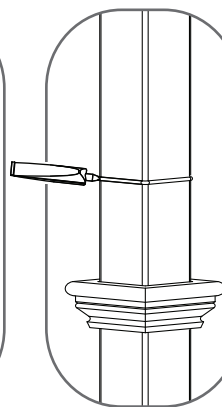
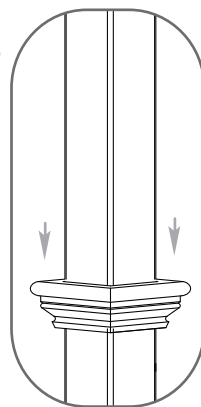
1



To glue decorative end caps place:

1. Apply a generous amount of vinyl glue to the decorative end caps as shown.
2. Slide the decorative end caps into the beam/rafter and allow a few minutes for glue to cure.

3



To position post trim in place:

1. Slide the post trim down.
2. Apply a generous amount of vinyl glue around the post.
3. Slide the post trim back up to the desired location and allow a few minutes for glue to cure.

STEP TEN

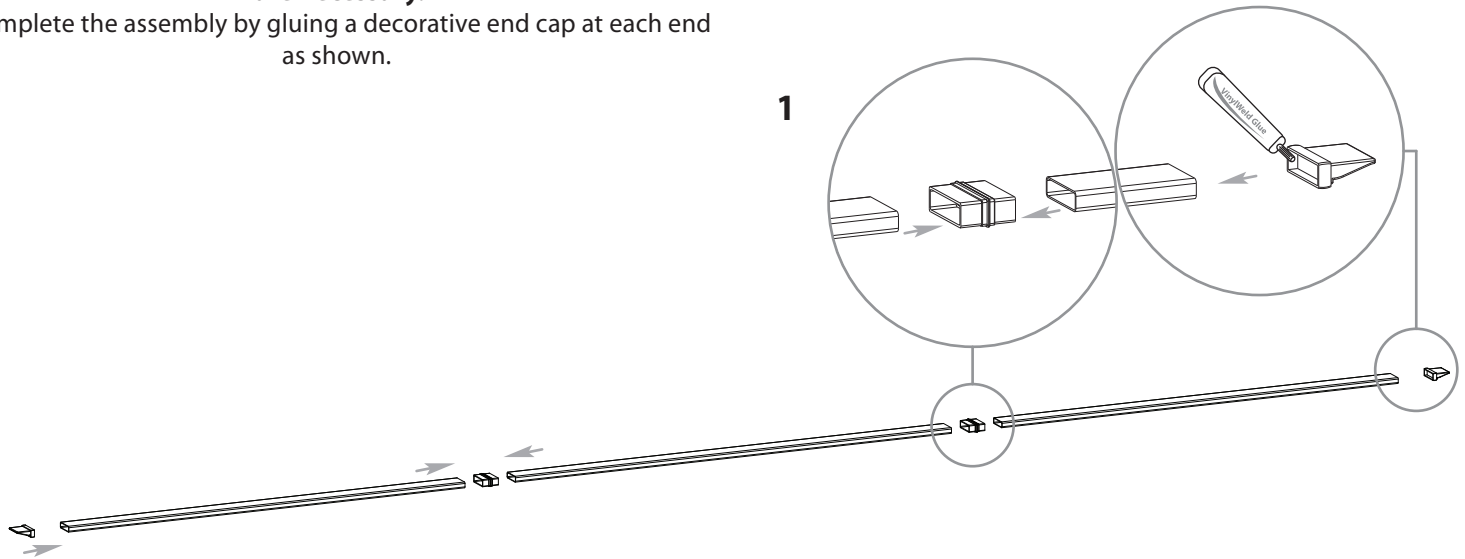
Shade Slat Assembly

1

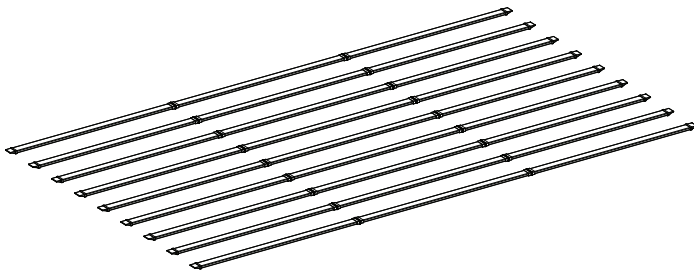
Assemble shade slats by inserting the two joiners into the inner shade slat followed by the two outer shade slats.

Push firmly until extrusion bottoms out inside joiner. **No screws are necessary.**

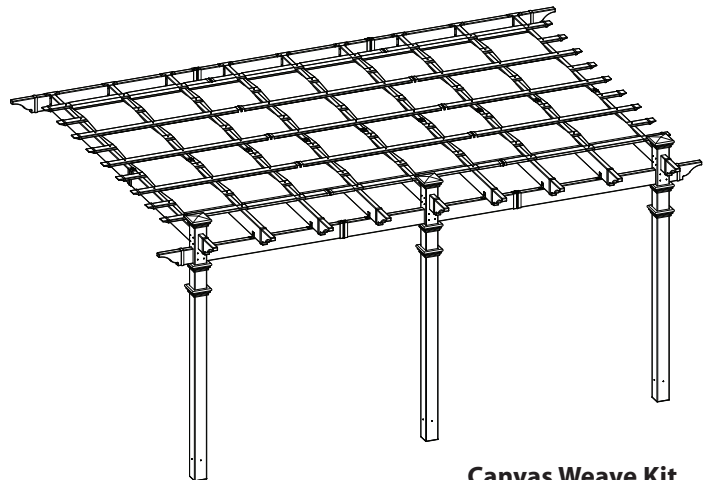
Complete the assembly by gluing a decorative end cap at each end as shown.



Note: If you purchased the Additional Shade kit or Canvas Weave kit, please consult their respective instructions at this point.



Additional Shade Kit



Canvas Weave Kit

STEP ELEVEN

Shade Slats Installation

The 7/8 x 3 shade slats are designed to be installed with 11" spacing between each slat. This spacing must be followed if you are planning to install the optional Canvas Weave Kit.

Note: Shade slats can be repositioned as needed to suit your application as there are no pre-drilled holes. Dry fit the shade slats first to ensure none of the shade slats interfere with the rafter joiners.

Shade slats are designed to extend approximately 6 3/4" past the last rafter. Measurement includes the decorative end caps. Your goal is to ensure that all the shade slats overhang equally to the eye.

1

Install first shade slat 11" away from the top of the vinyl columns.

2

Install the rest of the shade slats at 11" spacing.

3

Install one 2 1/2" screw at each intersection of rafter and shade slat.

Suggestions for Additional Shade as Necessary

- White resin lattice in variety of shapes and sizes are available at your local lumberyard. Cut to size and fasten directly to the top of shade slats using stainless steel screws.
- In areas of extreme snow or wind load, do not use tight diamond privacy lattice.

