

12 x 12 Flat Top Attached Louvered Pergola



ASSEMBLY GUIDE

Model: **Elysium**

OPTIONAL ACCESSORIES:

- Bolt Down Bracket Kit
(2 for Pergola)



- Privacy Wall



- Pergola Planter



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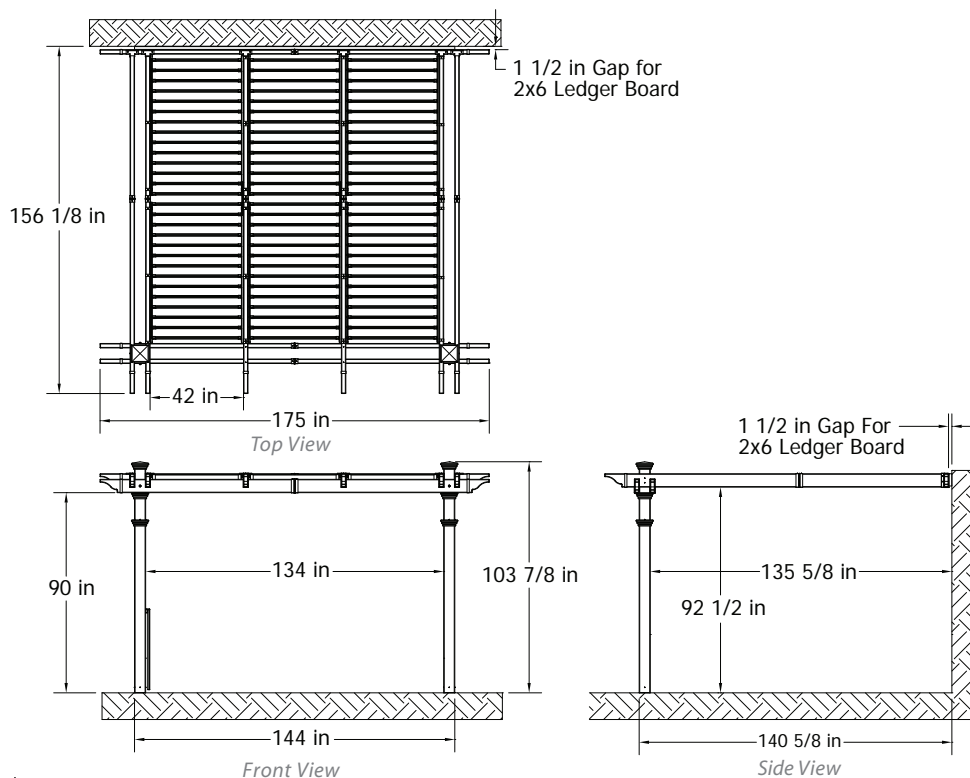
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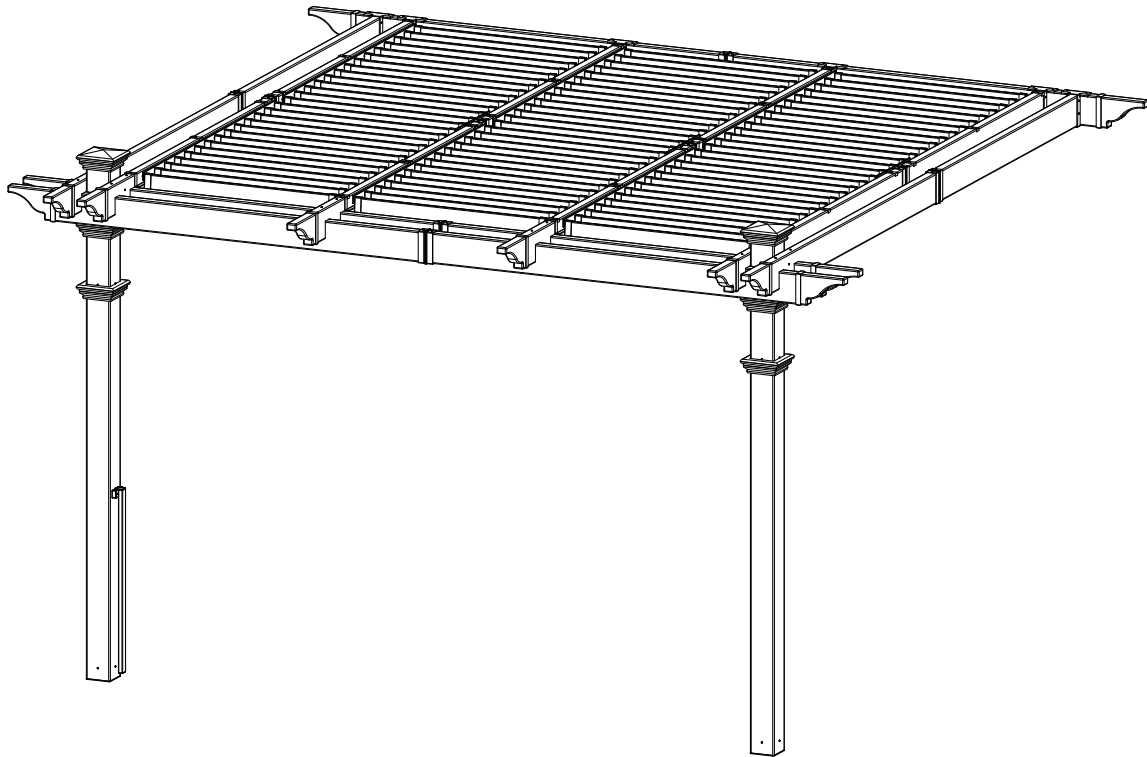
12 x 12 Flat Top Attached Louvered Pergola

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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

The Elysium 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.

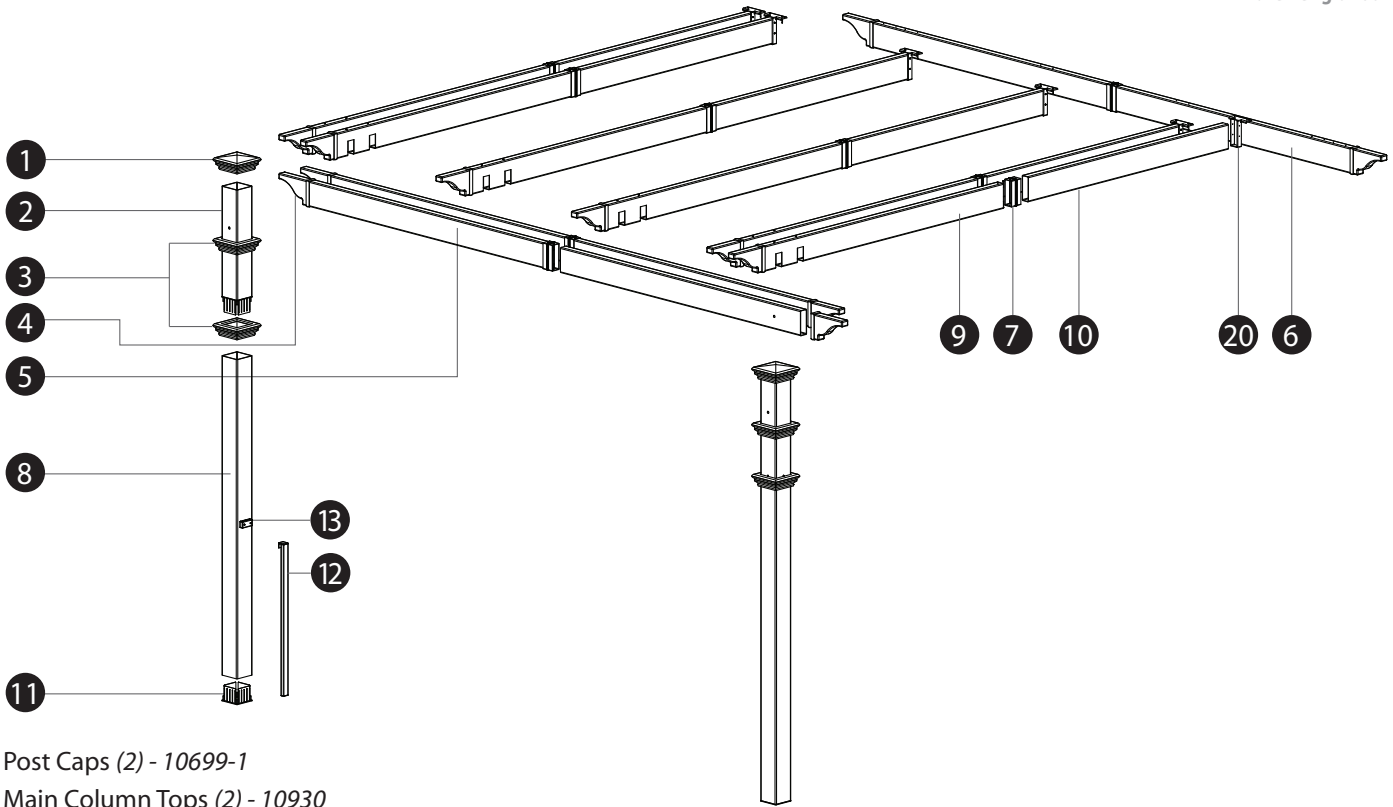
It is critical before you start that you consider the current slope of elevation where the pergola is planned - if there is any. Also utility or sprinkler line location is important to identify prior to excavating holes if necessary. You should also check to verify local building codes, ordinances, neighbourhood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

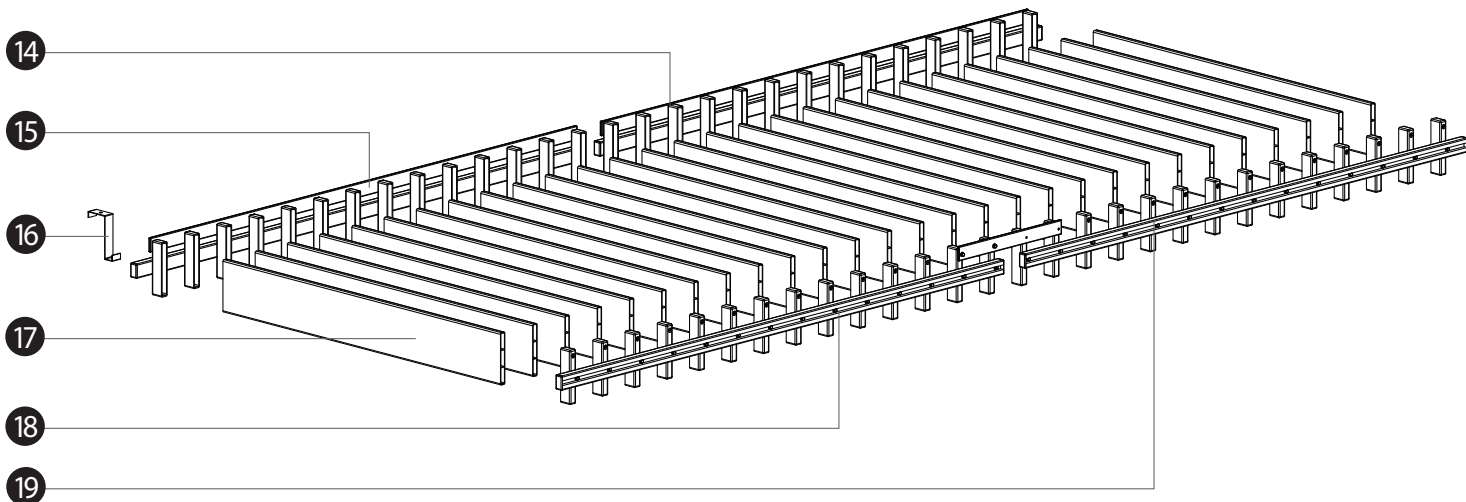
Please take the time to read this instruction guide thoroughly prior to the construction of your pergola. If you have any questions, feel free to contact our technical dept by calling 1 800 282 9346, (Mon to Fri 8:00 A.M to 4:00 P.M. EST).

Elysium Pergola Materials Overview



- 1. Post Caps (2) - 10699-1
- 2. Main Column Tops (2) - 10930
- 3. Post Trims (4) - 10698-1
- 4. Rafter & Beam Decorative End Caps (12) - 10829
- 5. Main Support Beams (4) - 10983
- 6. Main Support Beams - Attached Side (With pre-drilled holes on top) (2) - 11084
- 7. Beam & Rafter Joiners (9) - 10820
- 8. Main Column Bottoms (2) - 10816
- 9. Rafters - With Double Notches - (6) - 10984
- 10. Rafters - Attached Side (6) - 11083
- 11. One Way 4"x4" Internal Wood Post Guides (2) - 10696-1
- 12. Louver Turn Bar (1) - 10935
- 13. Turn Bar Holder (1) - Found in Box 7 - 10957

- 16. Steel Holder Brackets (36) - 10937
- 17. Louver Boards (84) - 10987
- 18. Pre-assembled Louver Bars - With Short Louver Bar (3) - 10988
- 19. Pre-assembled Louver Bars - With No Louver Bar (3) - 10989
- 20. Rafter Hangers (6) - 10828

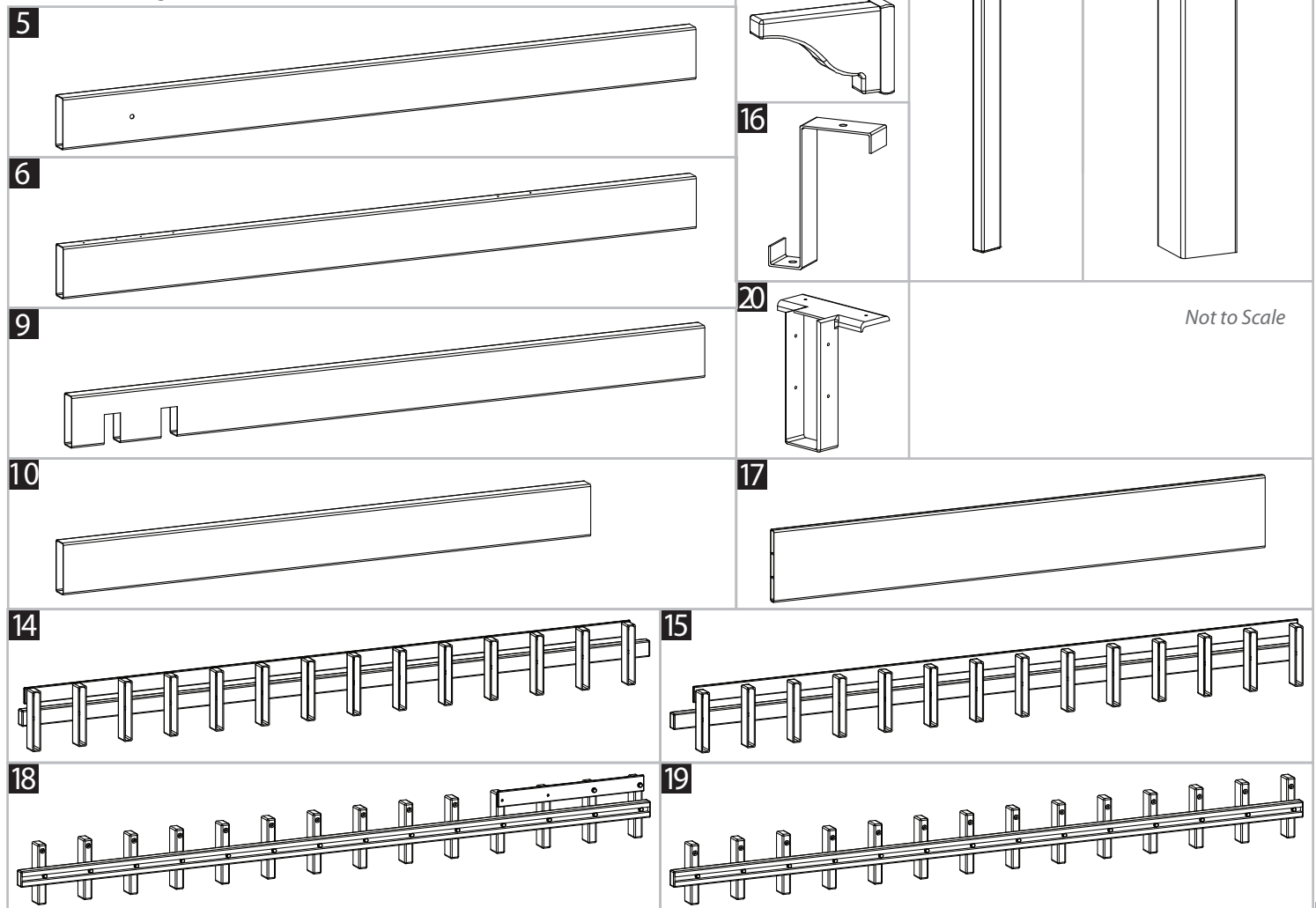


Elysium Pergola Materials Breakdown

Check Boxes (Total of 7) 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 (2) - 10699-1
2. Main Column Tops (2) - 10930
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11. One Way 4"x4" Internal Wood Post Guides (2)- 10696-1
12. Louver Turn Bar (1) - 10935
13. Turn Bar Holder (1) - Found in Box 7 - 10957
14. Pre-assembled Louver Bars (Right) - With Long Louver Bar (3) - 10986
15. Pre-assembled Louver Bars (Left) - With Long Louver Bar (3) - 10985
16. Steel Holder Brackets (36) - 10937
17. Louver Boards (84) - 10987
18. Pre-assembled Louver Bars - With Short Louver Bar (3) - 10988
19. Pre-assembled Louver Bars - With No Louver Bar (3) - 10989
20. Rafter Hangers (6) - 10828



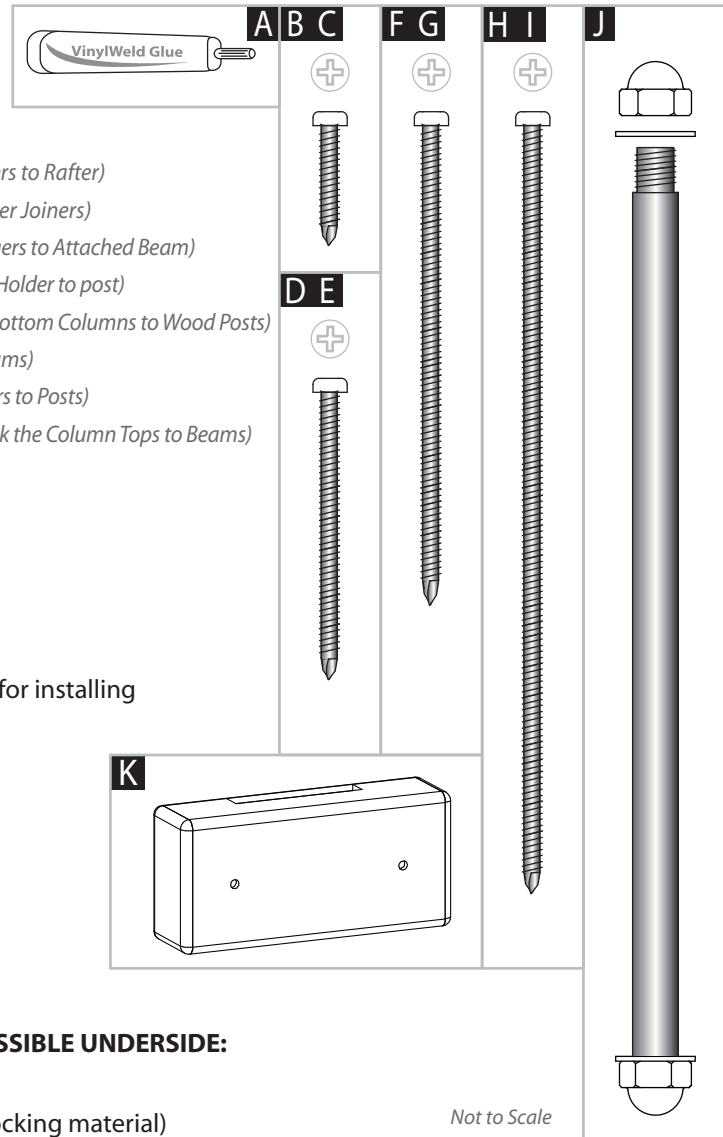
Pergola Additional Materials List

Hardware *(in plastic bag)*

NOTE: WE HAVE INCLUDED 10% EXTRA SCREWS BEYOND WHAT IS IDENTIFIED BELOW

All Screws Included with this Kit are Self-Auguring.

- A. Tube of Vinyl Weld Glue (2) - 20000
- B. 5/8" Self-Auguring Stainless Steel Screws (72) - 20016 (to lock Louver Assembly to Steel Holder brackets)
- C. 5/8" Self-Auguring Stainless Steel Screws (24) - 20016 (to lock Rafter Hangers to Rafter)
- D. 1 1/2" Self-Auguring Stainless Steel Screws (36) - 20005 (for Beam and Rafter Joiners)
- E. 1 1/2" Self-Auguring Stainless Steel Screws (24) - 20005 (to lock the Rafter Hangers to Attached Beam)
- F. 2 1/2" Self-Auguring Stainless Steel Screws (2) - 20009-1 (to fasten Turn Bar Holder to post)
- G. 2 1/2" Self-Auguring Stainless Steel Screws (16) - 20009-1 (to lock Top and Bottom Columns to Wood Posts)
- H. 4" Self-Auguring Stainless Steel Screws (12) - 20006 (to lock Rafters to the Beams)
- I. 4" Self-Auguring Stainless Steel Screws (24) - 20006 (to lock Beams and Rafters to Posts)
- J. 9" Stainless Steel Bolt Assembly with Nuts and Washers (2) - 20035 (to lock the Column Tops to Beams)
- K. Turn Bar Holder (1) * Found in Box 7 - 10957



Extra Materials You will Need

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

If Mounting Pergola on Concrete or Wood Deck

- L. 4x4x8 Pressure-Treated Wood Posts (2) *(purchase at local building center)*
- M. 4x4 Bolt Down Bracket Kit - Do not use the Bolt Down Bracket system for installing the pergola over concrete pavers, patio stones, or interlocking bricks. *(purchase from www.newenglandarbors.com or a retailer of our products)*

Refer to bolt down bracket instructions for hardware requirements, as they pertain to your application:

If mounting pergola onto an existing concrete surface:

- 1/2" x 3 1/2" x 12" Wood Shims (16) - (Can be cut, using 1/2" plywood)
- 1/4" x 2 3/4" Cement Screws - Countersunk Head (6)
- 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 (16) - (Can be cut, using 1/2" plywood)
- 1/4" x ?" Bolts and Nuts - Countersunk Head (6) (Length depends on blocking material)
- 1/4" Washers (6)
- 1/4" Wood drill bit. Minimum 3" long (1)

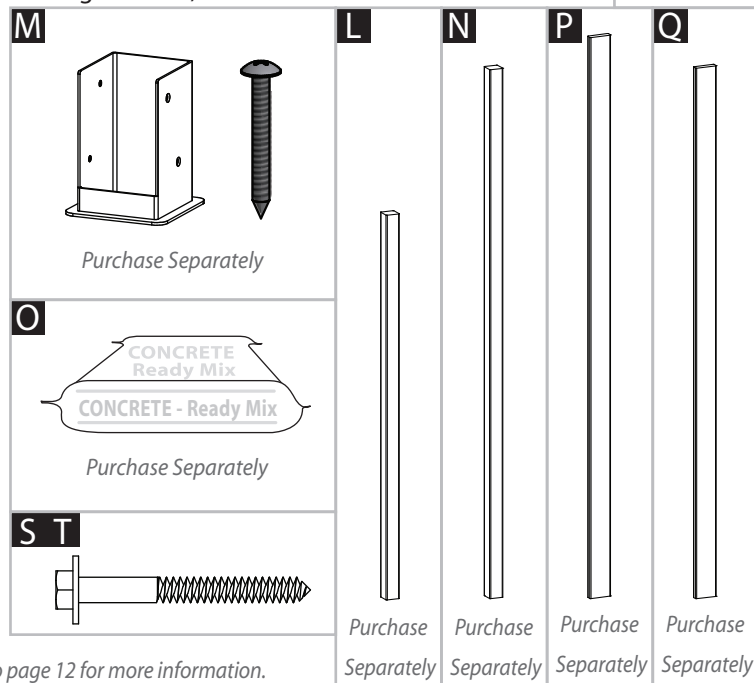
If Mounting Pergola in Ground

- N. 4x4x12 Pressure-Treated Wood Posts (2) Cut down to 11' *(purchase at local building center)*
- O. Concrete Ready Mix (2) *(purchase at local building center)*

Rafter/ Beam Support (Required)

- P. 2x6x14 Pressure-Treated Boards for Beams and Rafters (to be cut down to 13') (1) *(purchase at local building center)*
- Q. 2x6x12 Pressure-Treated Boards for Beams and Rafters (8) *(purchase at local building center)*
- R. 2x6x6 Pressure-Treated Boards (2) *(purchase at local building center)*
- S. 3/8" x 3 1/2" Lag Screw with Washers (6) *(purchase at local building center)*
- T. 3/8" x 3 1/2" Lag Screws (for wood wall) or Anchor Screws (for brick or concrete wall) (6) *(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.*



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 separately). See page eight for more details.

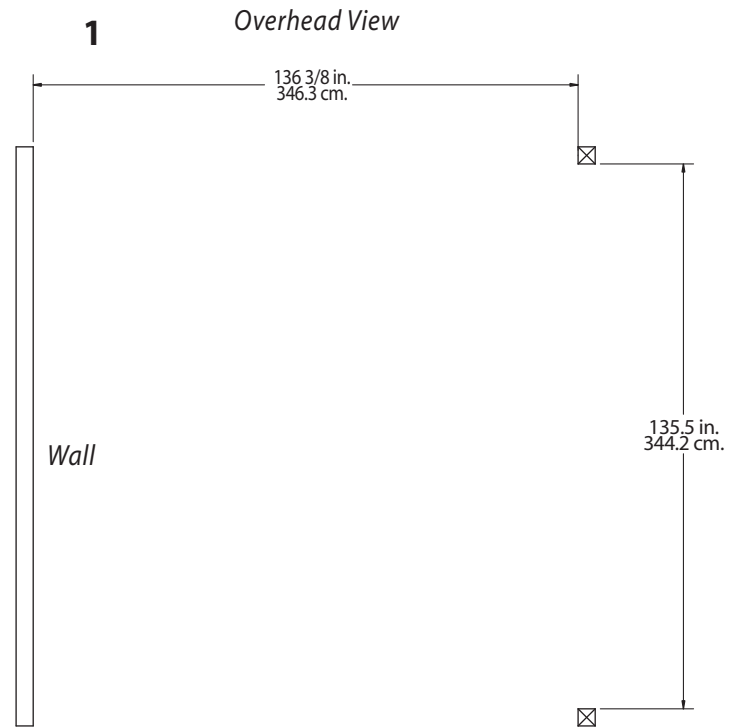
Post location and placement is the most critical step in the overall installation process. Please double check for the possibility of any underground utilities such as sprinkler, gas or telephone lines.

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 96" out of the ground. If a post is higher because of obstructed excavation of footings, please cut down in height accordingly.

3

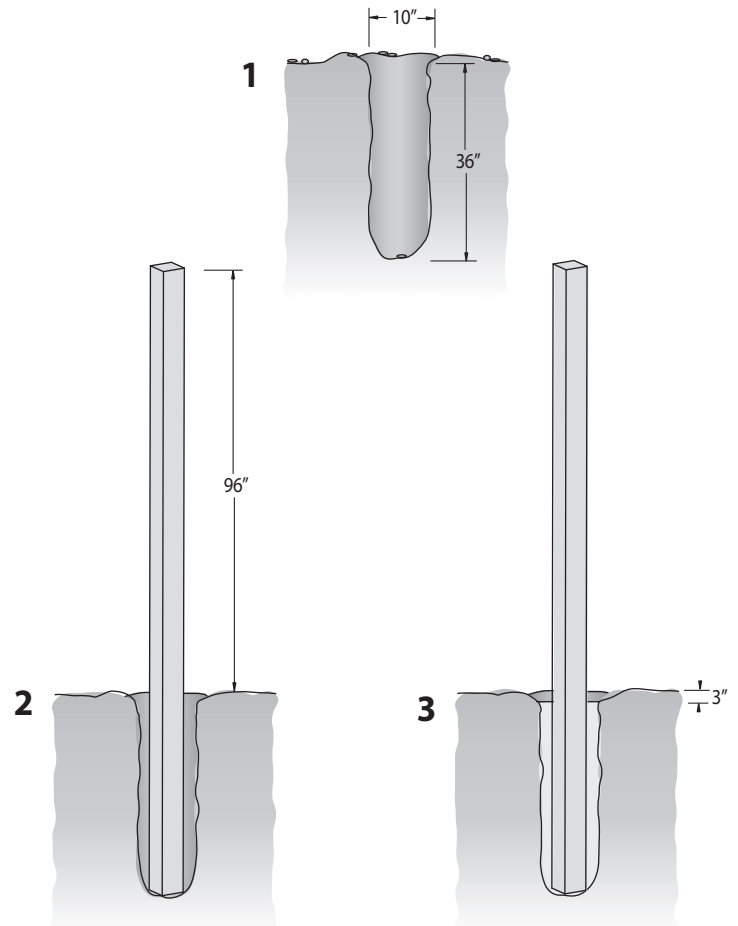
Fill the vacant hole with pre-mixed concrete all the way to within 3" of the top of the hole. Once the concrete has set, back fill the remaining 3" with soil.

4

Repeat for both 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

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 two post brackets installed plumb, proceed to set the 4x4 x7' wood post in place. Secure using the same concrete screws included in the kit. Repeat for both posts.

6

Posts should be 96" in height.

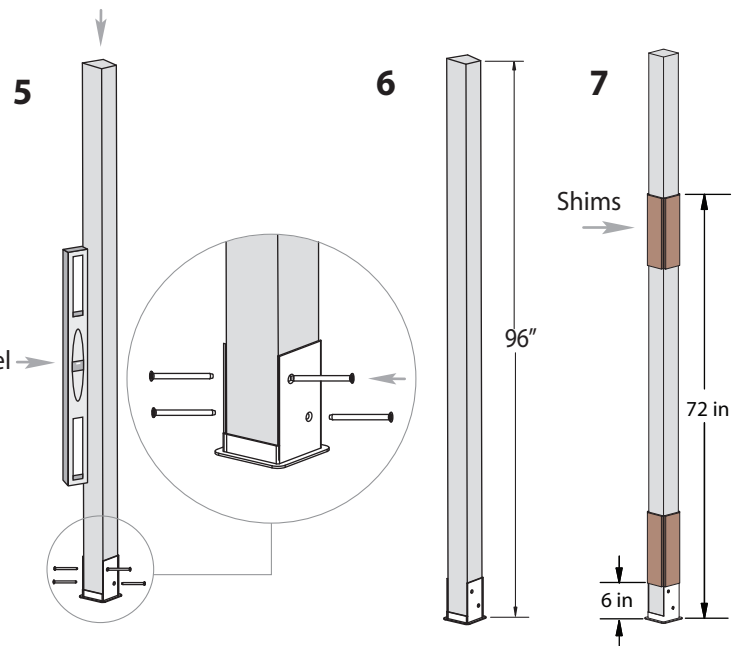
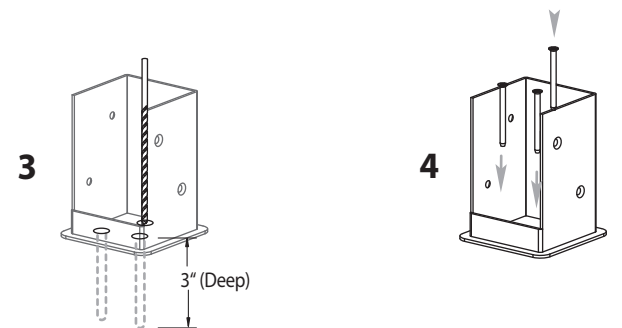
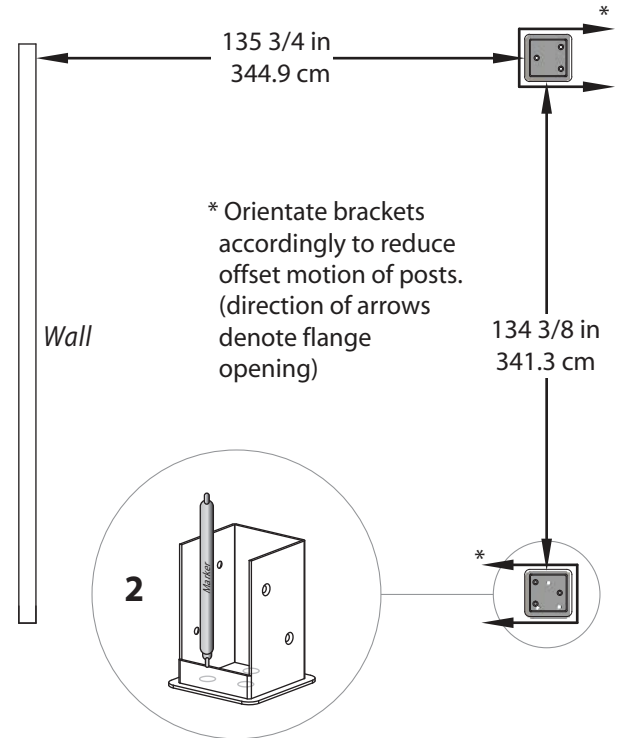
7

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



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 four pieces.

2

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

2a

If you purchased base moldings or trims, slide the molding over the post.

3

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

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 bottoms of the vinyl columns as necessary.

8

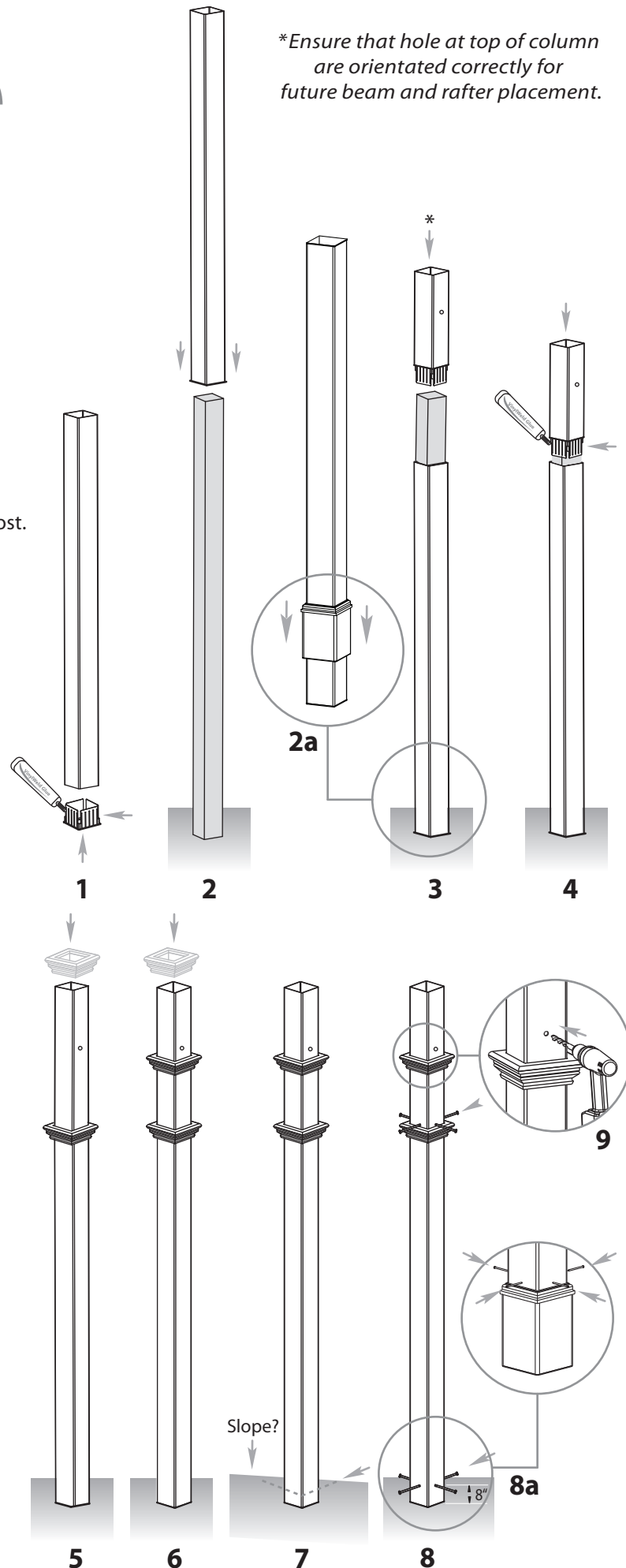
Secure the vinyl columns to the wood posts using 4 – 2 1/2" self-auguring stainless steel screws at 8" up from the base of the posts, and 4 – 2 1/2" self-auguring stainless steel screws just above the trim cap as illustrated. This will prevent possible uplift during high winds, etc.

If base moldings are installed, place screws above the base moldings.

9

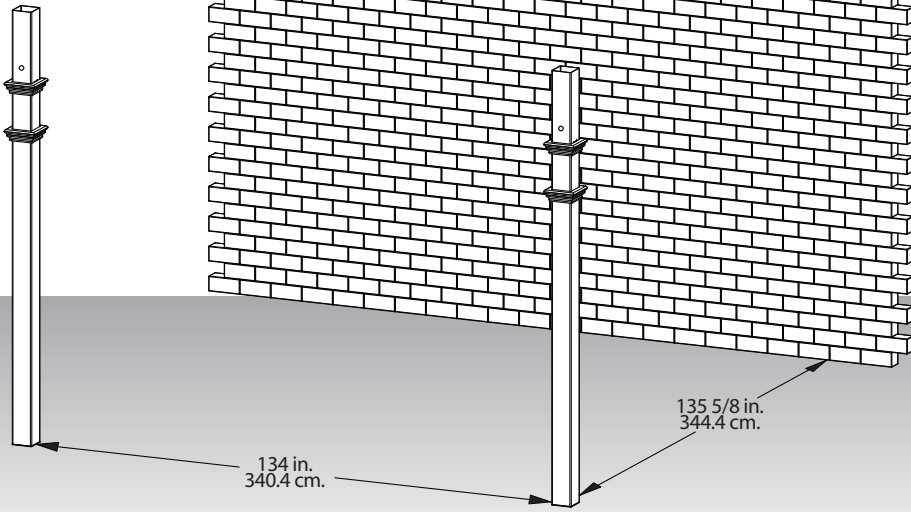
Using the predrilled hole as a template, drive a 1/2" hole through the wood post. Make sure to drill straight through to the hole on the opposite side of the post.

*Ensure that hole 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 134" in. (340.4 cm) apart.

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



STEP FOUR

Main Support Beam Assembly

1

Insert one 2x6x12 pressure treated wood into a beam followed by the joiner and another beam section. Center the 2x6x12 within the main support beam assembly.

Critical Note:

Note the location of the pre-drilled holes on the end of the main support beams. As pictured aside, the holes should be away from the joiners.

2

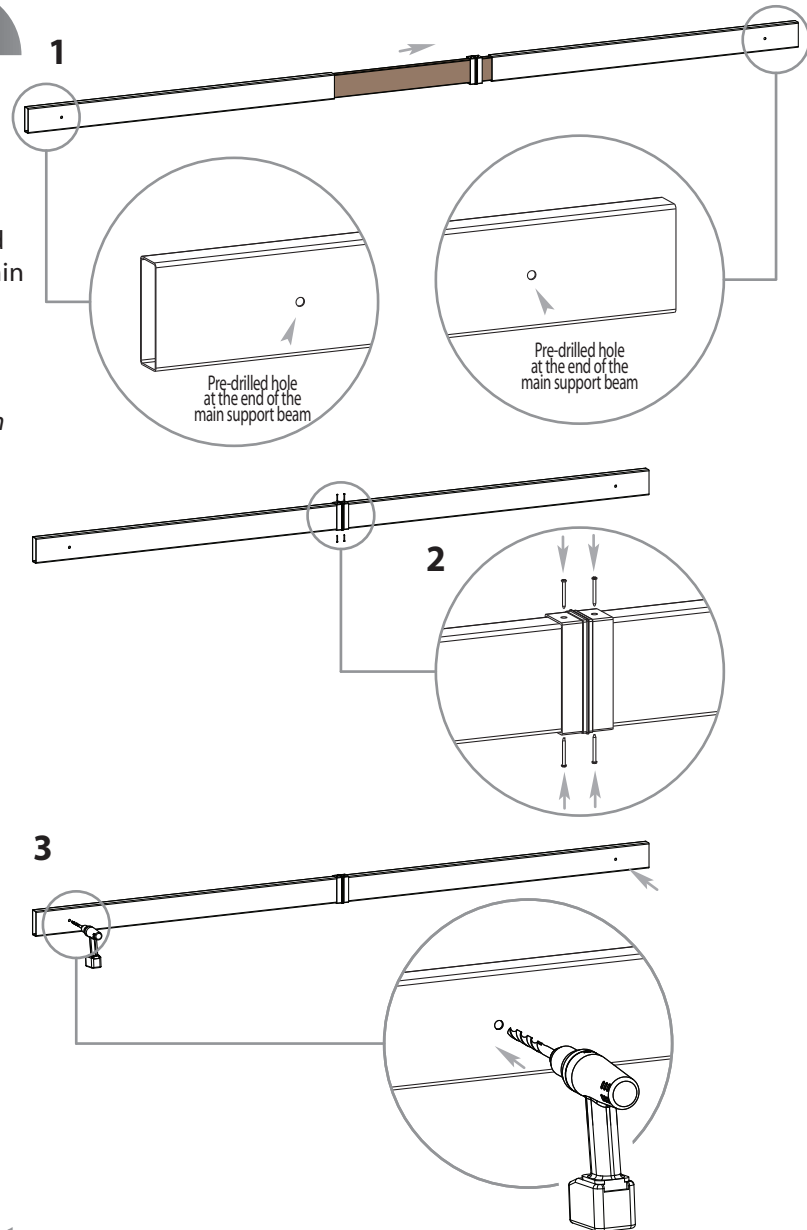
Screw the joiner to vinyl beams and wood insert using 1 1/2" screws.

3

Using a 1/2" drill bit, drill through the pre-drilled holes through the 2x6 wood as shown.

4

Repeat for second Main Support Beam assembly.



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STEP FIVE

Main Support Beam Assembly for Attached Wall Side

1

Cut the 2x6x14 to 13' in length.

2

Insert the 2x6x13 pressure treated wood into a beam followed by the joiner and another beam section. Make sure the 2x6x13 is positioned completely within the assembled main support beam assembly.

Critical Note:

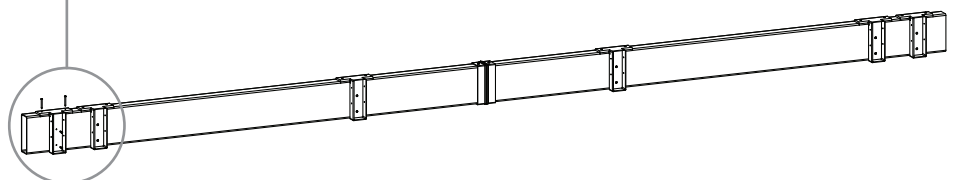
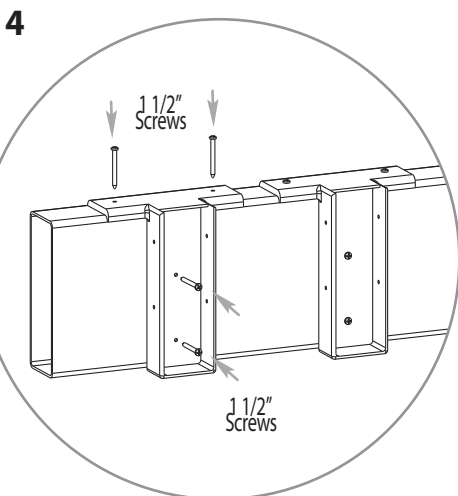
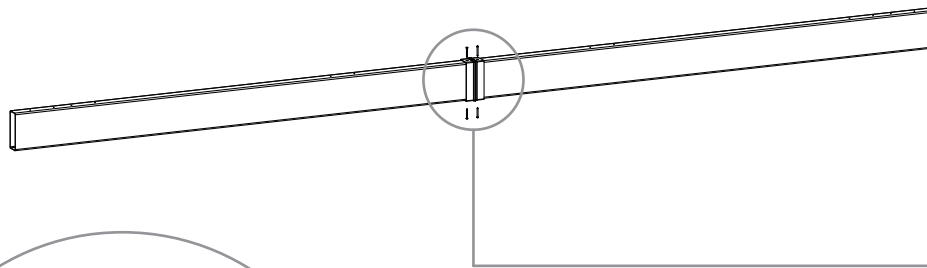
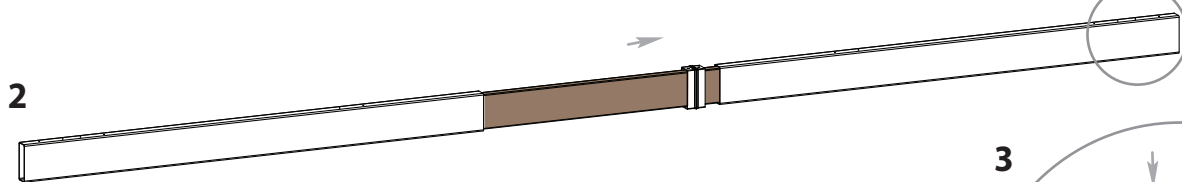
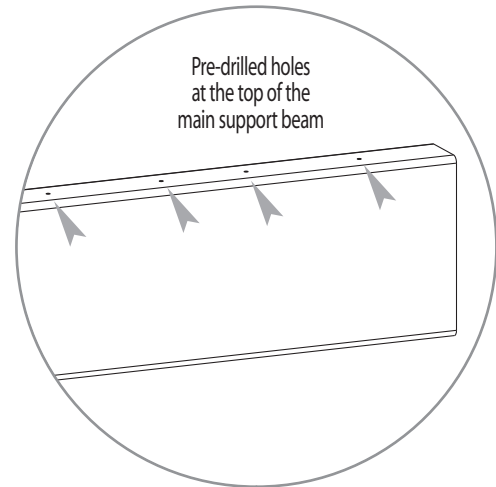
Note the location of the pre-drilled holes on the top of the main support beams. The cluster of four pre-drilled holes needs to be away from the joiner as shown.

3

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

4

Fasten the Rafter Hangers to the beam assembly as shown. Each rafter hanger will require two 1 1/2" screws from the top and two 1 1/2" screws through the side.

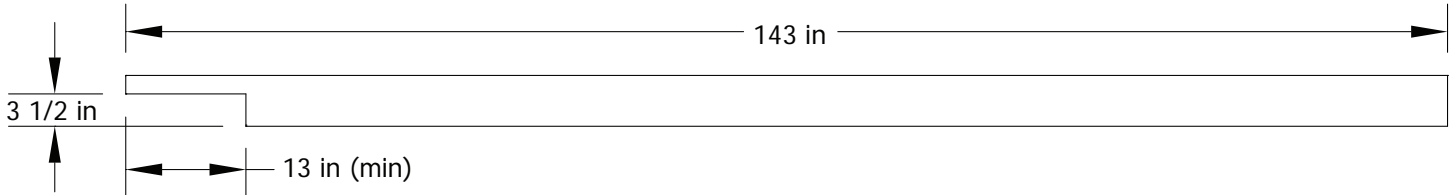


STEP SIX

Rafter Assembly

1

To accommodate the notches on the rafters, first the wood inserts must be cut down and notched out as shown below:

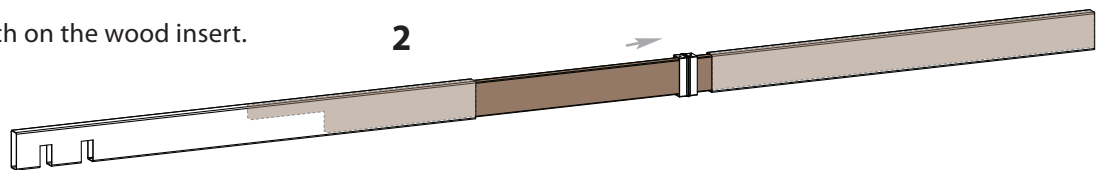


Six will be needed.

2

Insert one 2x6x12 pressure treated wood from the previous step into a beam followed by the joiner and another beam section. Make sure that 2x6x12 is positioned $\pm 1/4"$ inside the end of the rafter on the wall side.

Note the orientation of the notch on the wood insert.



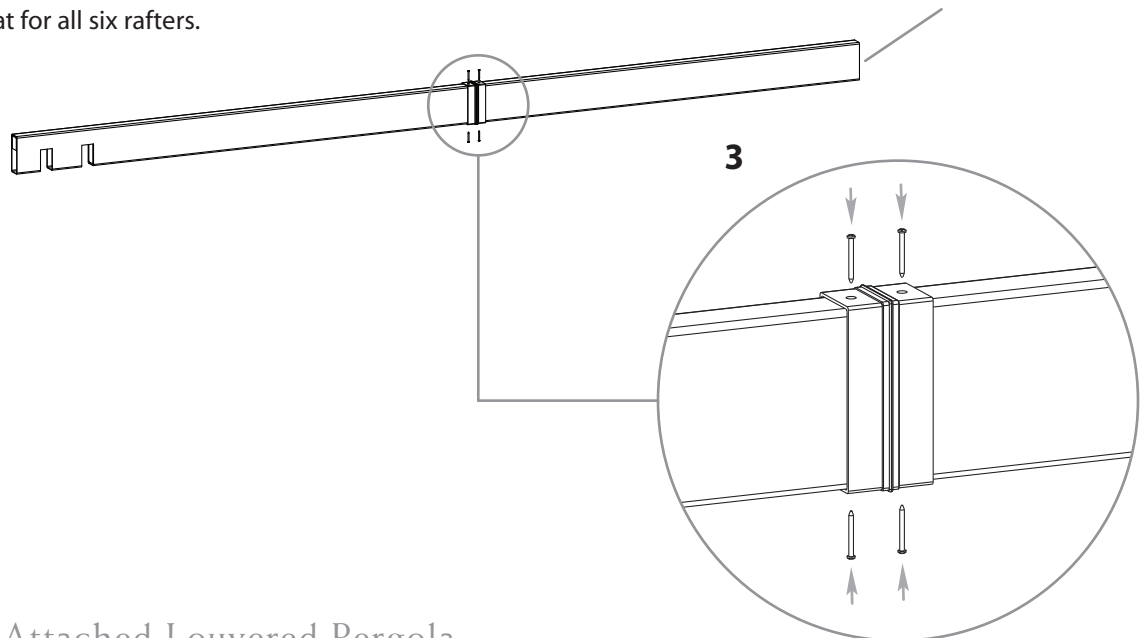
3

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

4

Repeat for all six rafters.

Wood should be inserted $\pm 1/4"$ into the end of the rafter on the wall side.



STEP SEVEN

Ledger Boards and Main Support Beam Placement

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

1

Position and place the two main support beams onto both sides of the posts.

2

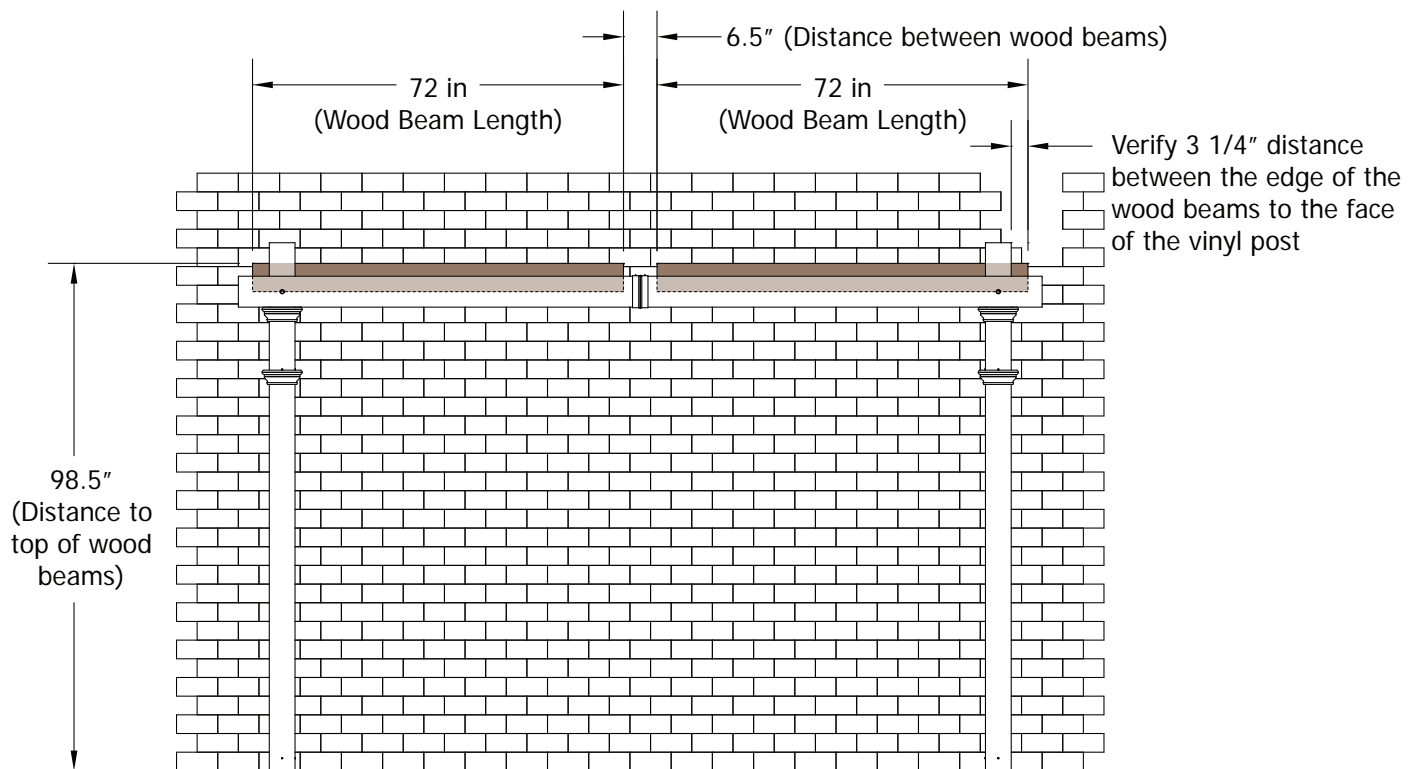
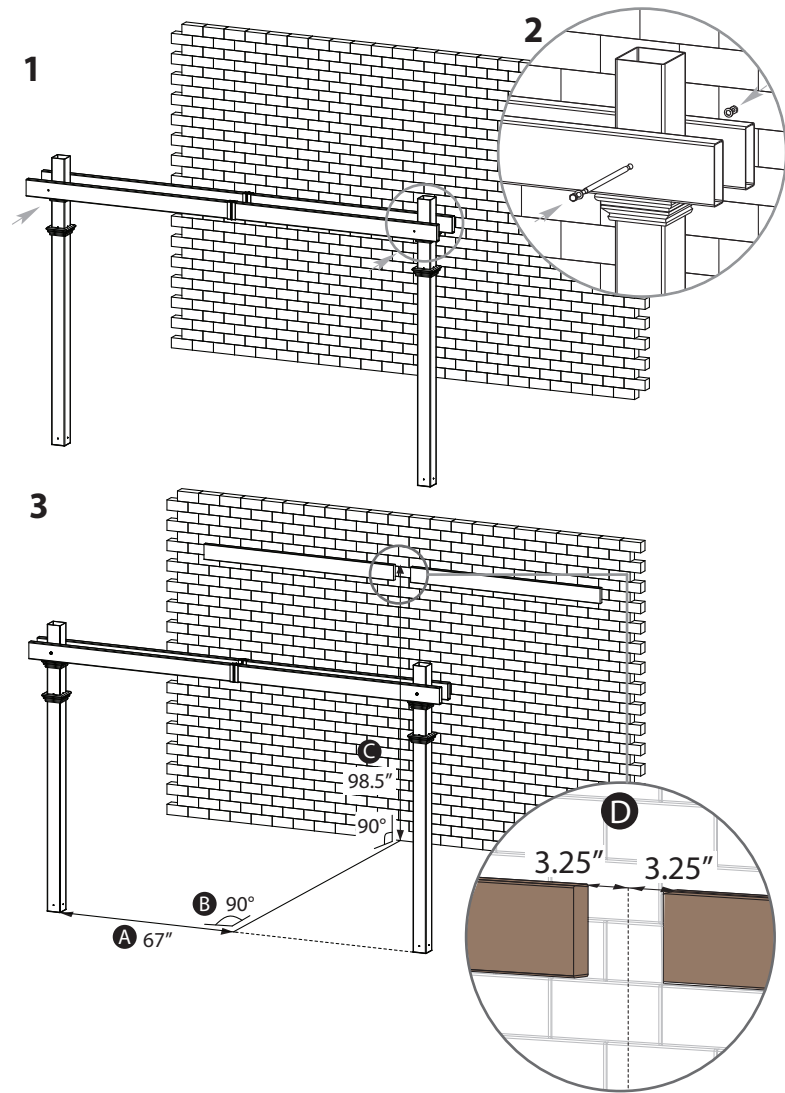
Fasten the two beams to the post by using the bolt assembly that comes with the hardware kit. You'll need two wrenches to fasten the nuts and bolt.

3

Mount the two 2x6x6' pressure treated wood pieces (sold separate) on your wall surface. Please consult your local hardware store regarding methods of mounting. We recommend 6 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 two vinyl posts (67")
- B. Mark and draw a string line square to the wall.
- C. Measure up 98 1/2" and mark with pencil
- D. Measure 3.25" on either side of the mark. This would be the top corner of the two wood beams as shown.



Front View

STEP EIGHT

Main Support Beams & Rafter 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 beam as shown. The top of the wood beam should be flush with the top of the support beam.

Fasten the main support beam attached to the wall so that it's centered to the main support beams attached to the vinyl columns.

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

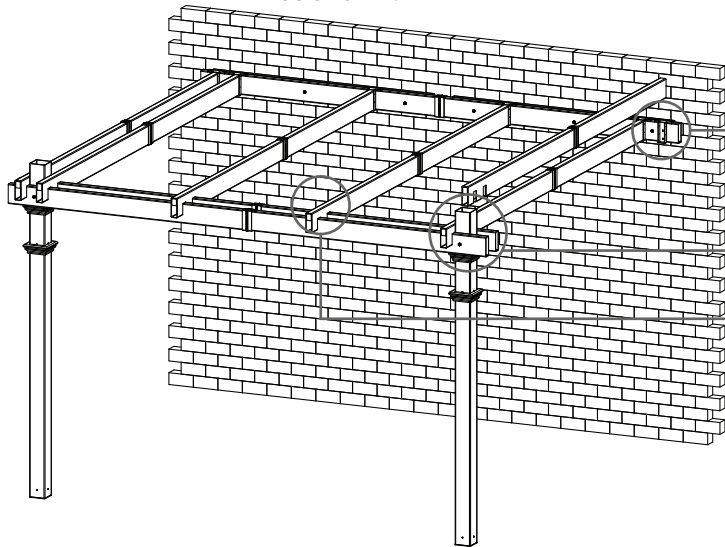
2

Place the six rafters into the rafter hangers & beams.

Ensure that they are pushed all the way in the rafter hangers. Fasten into the rafter hanger using four - 5/8" screws as shown.

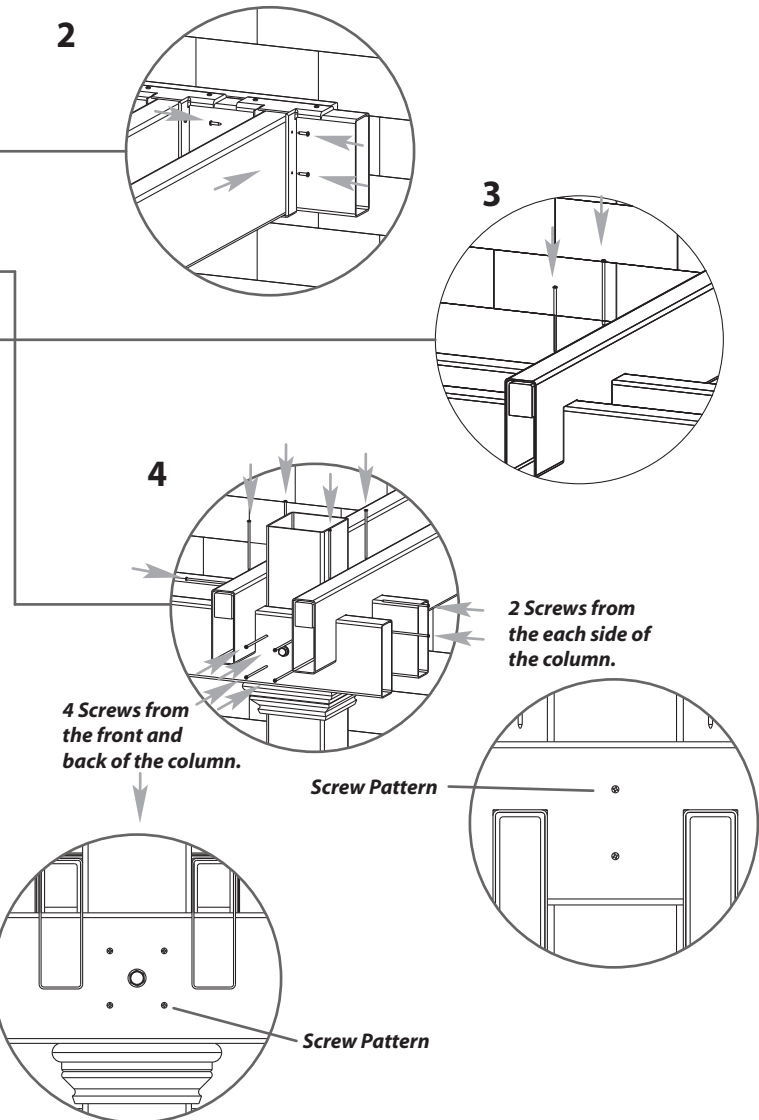
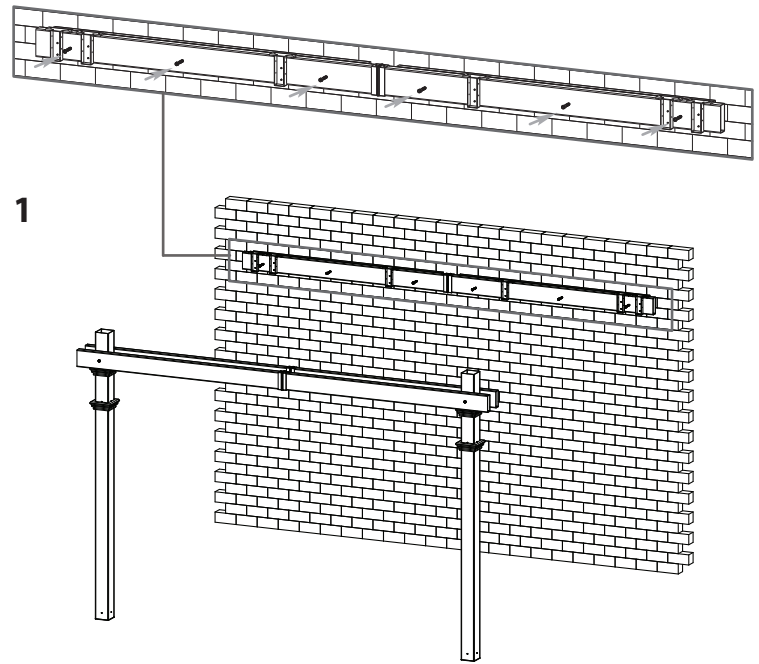
3

Fasten the rafters onto the main support beams using 4" screws as shown.



4

Using 4" screws, lock the main support beams and rafters into position inside the posts by driving in 4 screws from the front and back each, and 2 screws from the sides of each column.



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STEP NINE

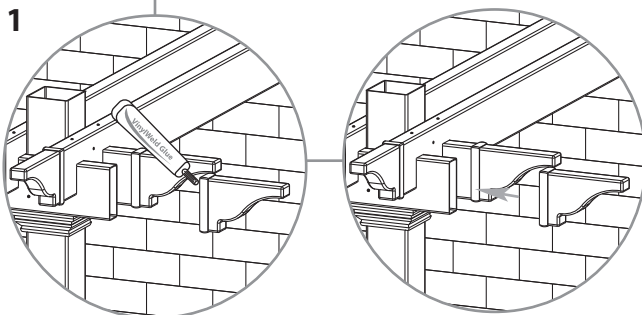
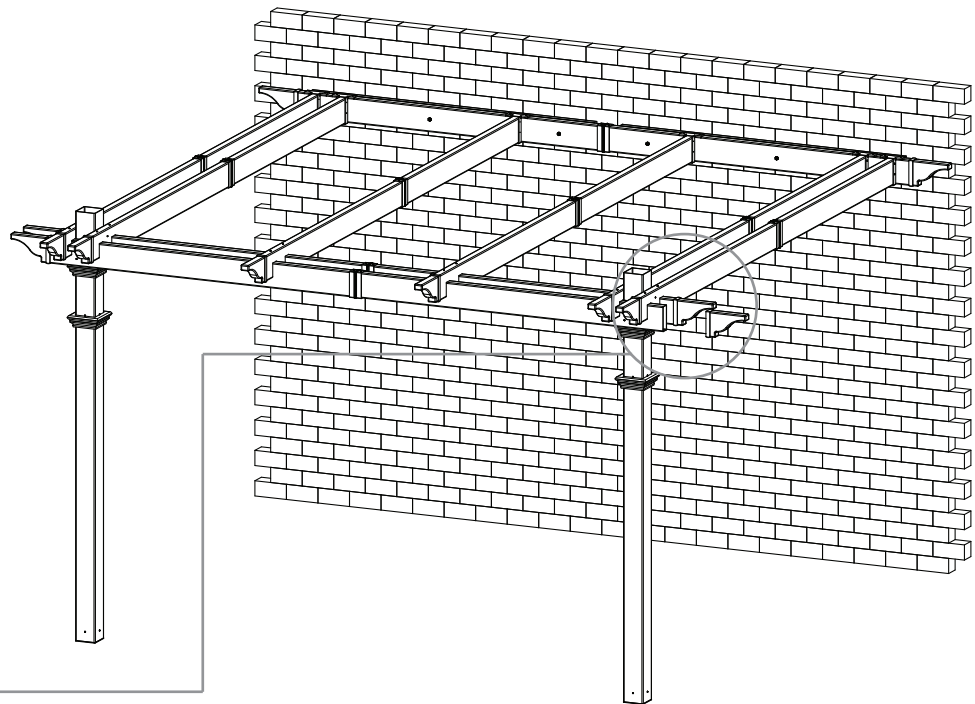
Fastening Pergola ends and Caps

1

Install decorative pergola end caps using vinyl weld.

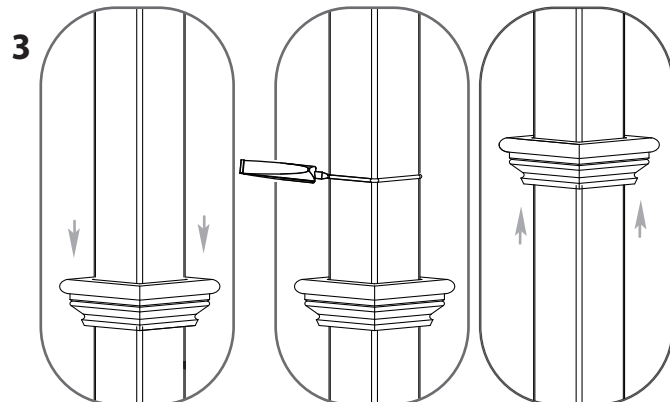
2

Final position your post trims.



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.



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

Louver Assembly

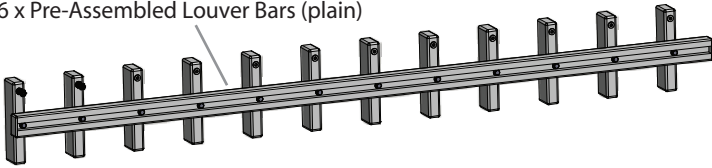
1

This kit contains four different pre-assembled Louver Bars as shown below and aside:

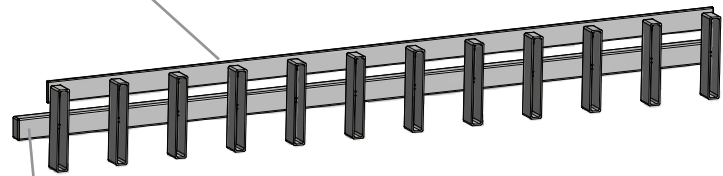
- 3 x Pre-Assembled Louver Bars (plain)
- 6 x Pre-Assembled Louver Bars with Long Louver Bar*
- 3 x Pre-Assembled Louver Bars with Short Louver Bar

**) There are two variations of Louver Bar Assemblies with Long Louver Bar.*

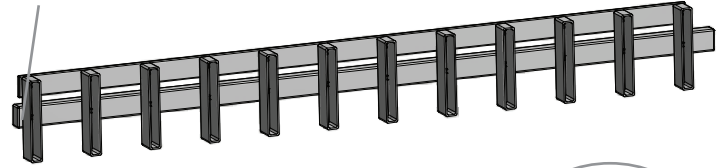
6 x Pre-Assembled Louver Bars (plain)



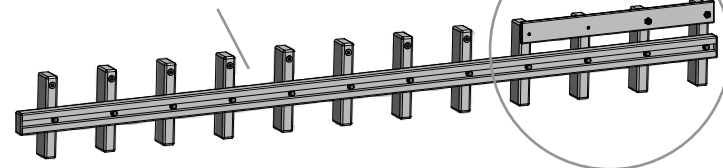
Pre-Assembled Louver Bars with Long Louver Bar



Note the difference in distance to the first Louver Bracket

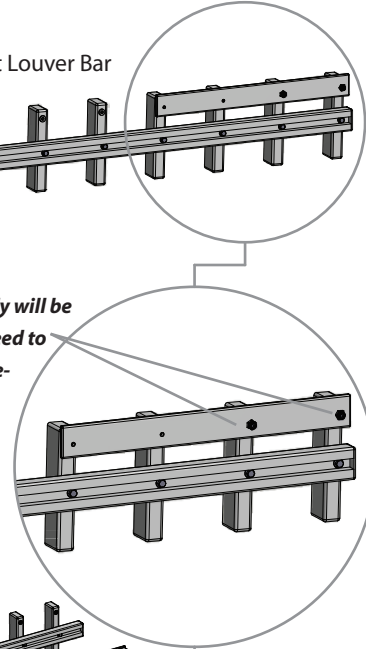


Pre-Assembled Louver Bars with Short Louver Bar

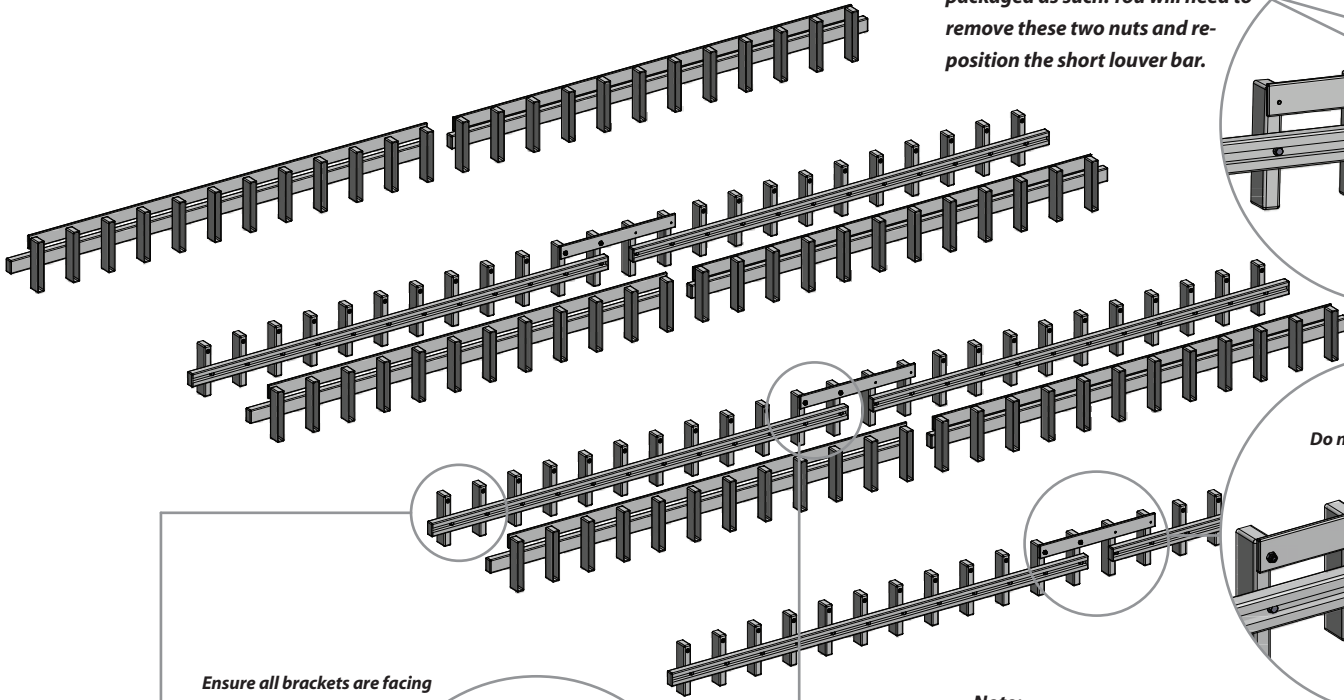


Note:

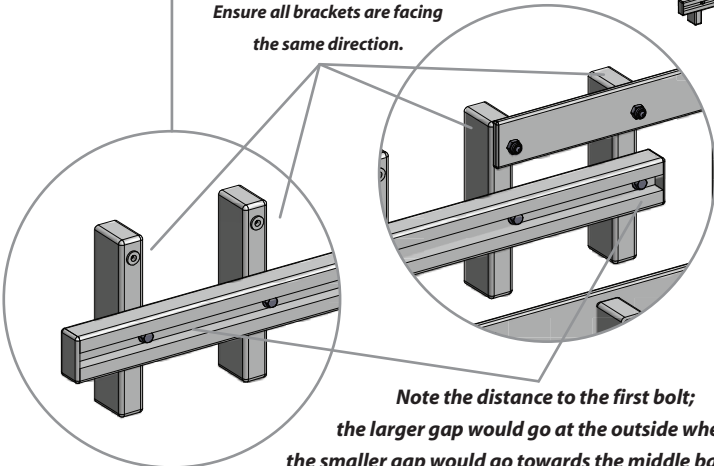
The short louver bar assembly will be packaged as such. You will need to remove these two nuts and re-position the short louver bar.



Identify and layout the twelve louver bars assembly as shown below:

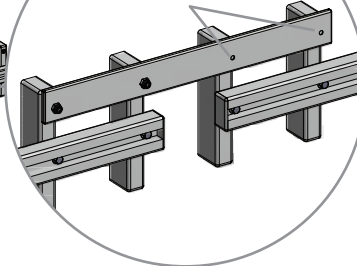


Ensure all brackets are facing the same direction.



Note the distance to the first bolt; the larger gap would go at the outside whereas the smaller gap would go towards the middle bar assembly.

Do not re-attach nuts



Note:

Reposition the short louver bar as shown but do not bolt to the adjacent louver assembly at this point. Important !: the holes on the louver bars are offset. ensure the holes are at the bottom as shown.

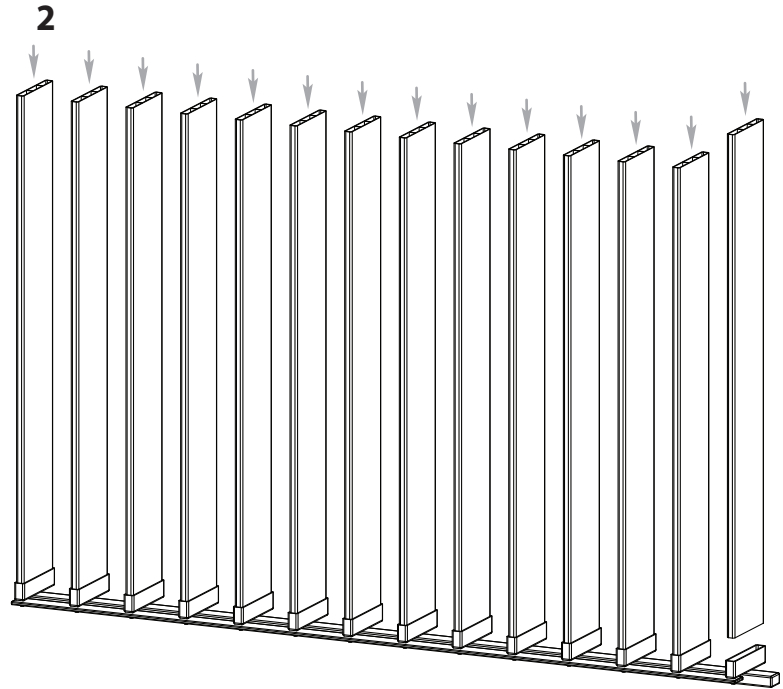
Louver Assembly

2

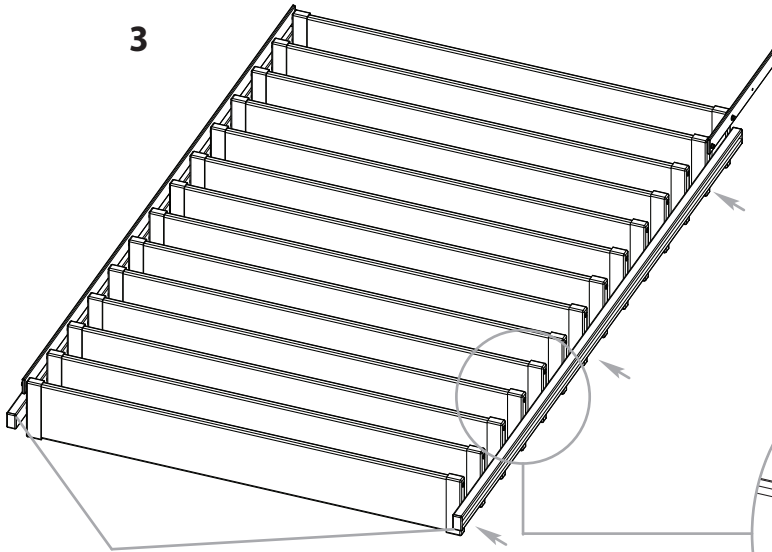
Insert the Louver Boards one by one. Make sure each board is inserted completely into the brackets.

3

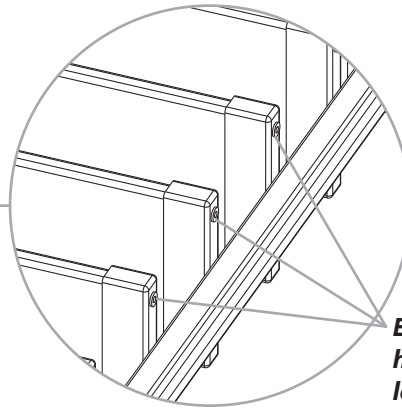
Attach the matching Pre-assembled Louver Bar. Pressure fit the boards one by one.



3



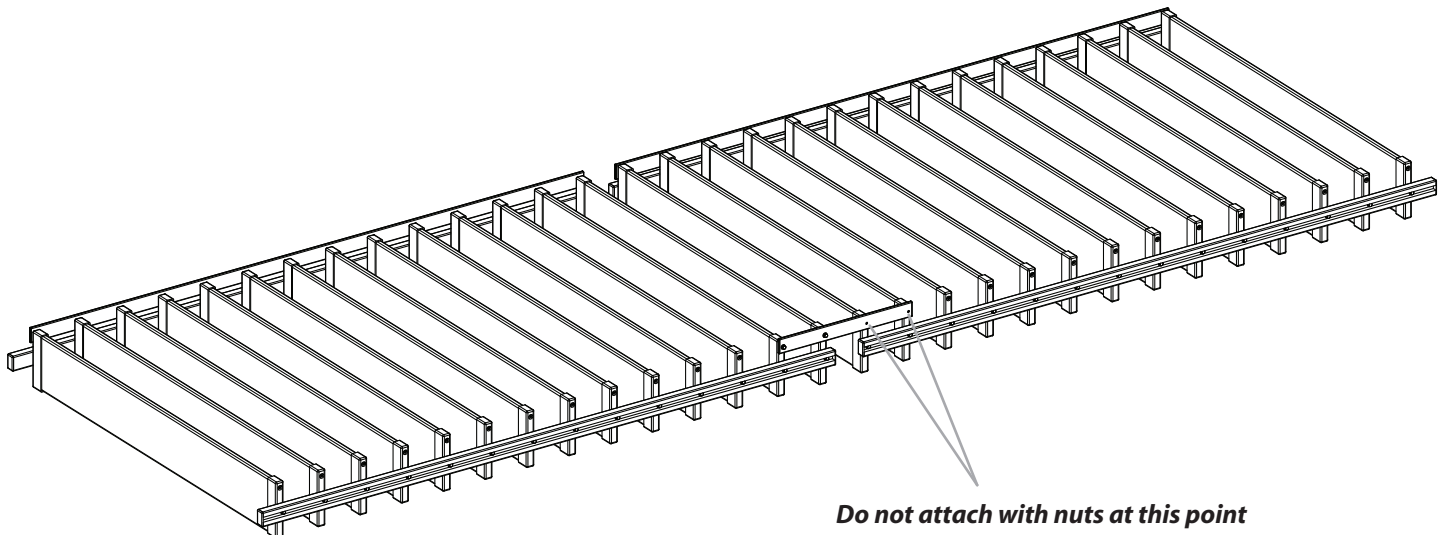
The ends of the louver bars with large space should be at the same end.



Ensure that the holes in the louver holder brackets are all on top of the louver bars assembly

4

Repeat for all six sub-sections. At this point, you should have three full sections of Louvers as shown below:

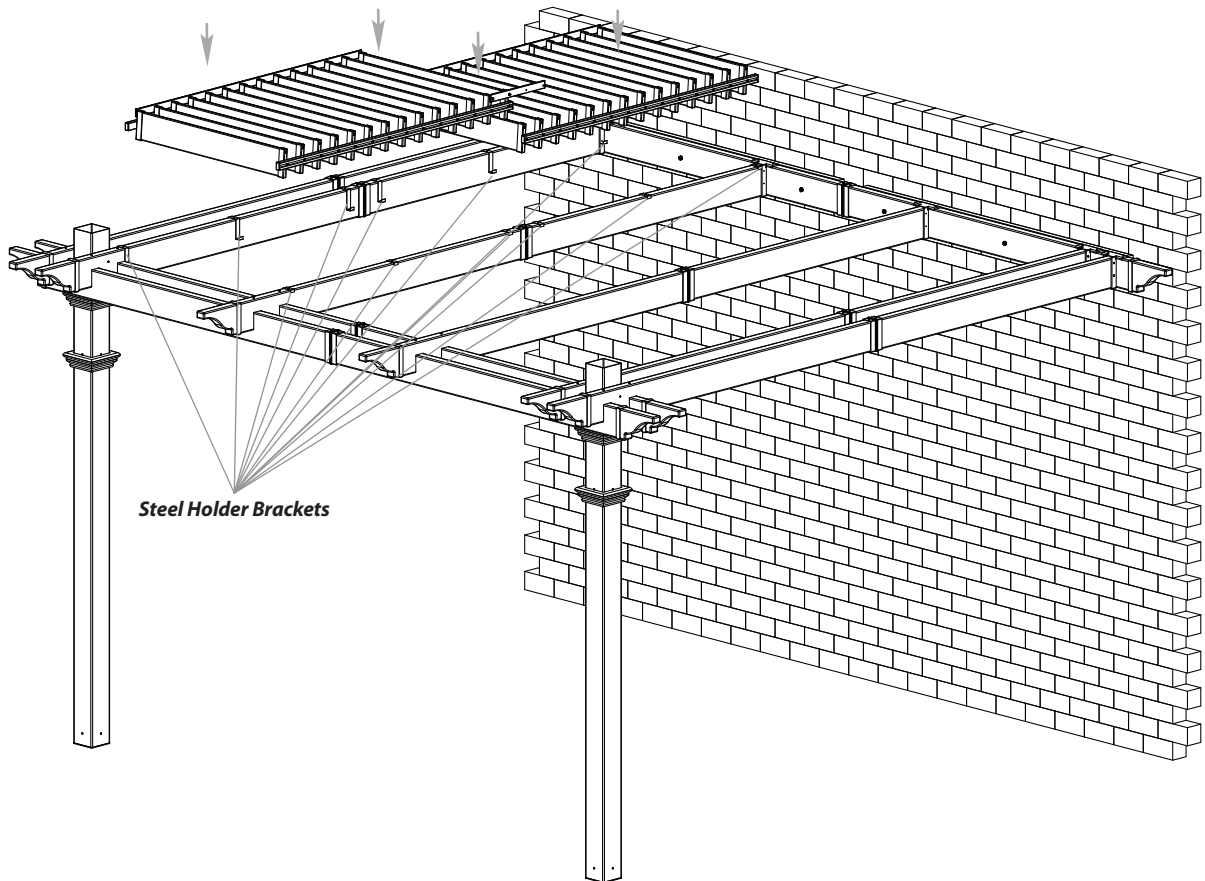


Do not attach with nuts at this point

Louver Assembly

5

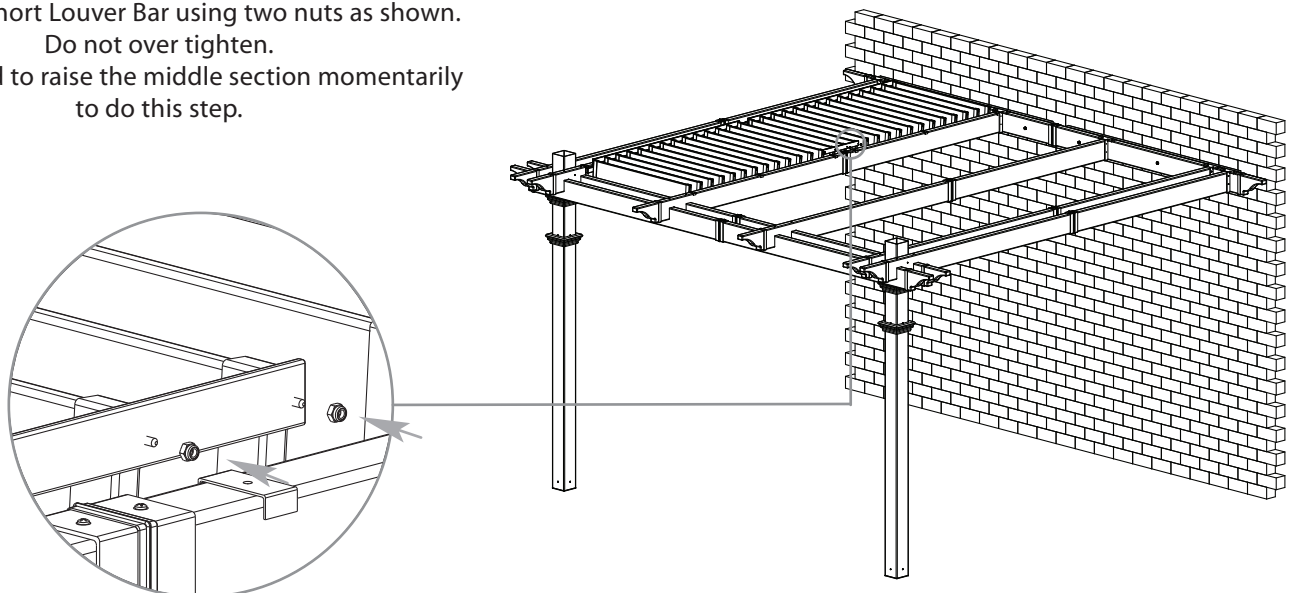
Place twelve Steel Holder Brackets as shown below and carefully lower the Louver assembly onto the steel brackets. Do not screw the Steel Holder Brackets in place at this point.



6

Fasten the Short Louver Bar using two nuts as shown. Do not over tighten. You will need to raise the middle section momentarily to do this step.

Install in order (one row at a time)



Note: check that the holes are closer to the bottom as shown.

Louver Assembly

7

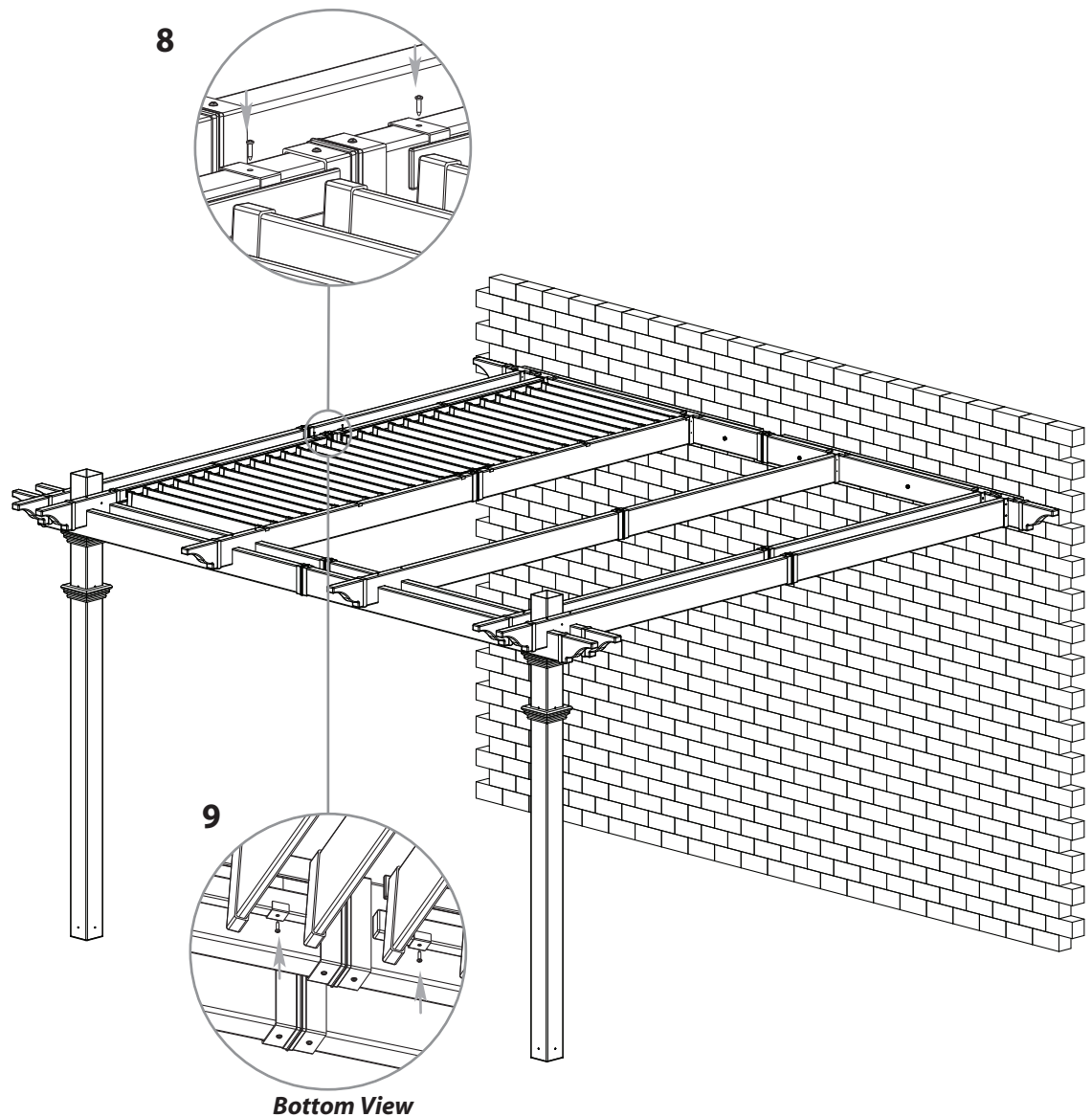
Slide the Steel Holder Brackets to a spot which will not interfere with the operations of the louvers. 'Open' and 'Close' the louvers to test and make sure the steel brackets are not constraining the operation.

8

From the top, fasten the steel brackets in place using 5/8" screws. A total of 12 screws will be needed.

9

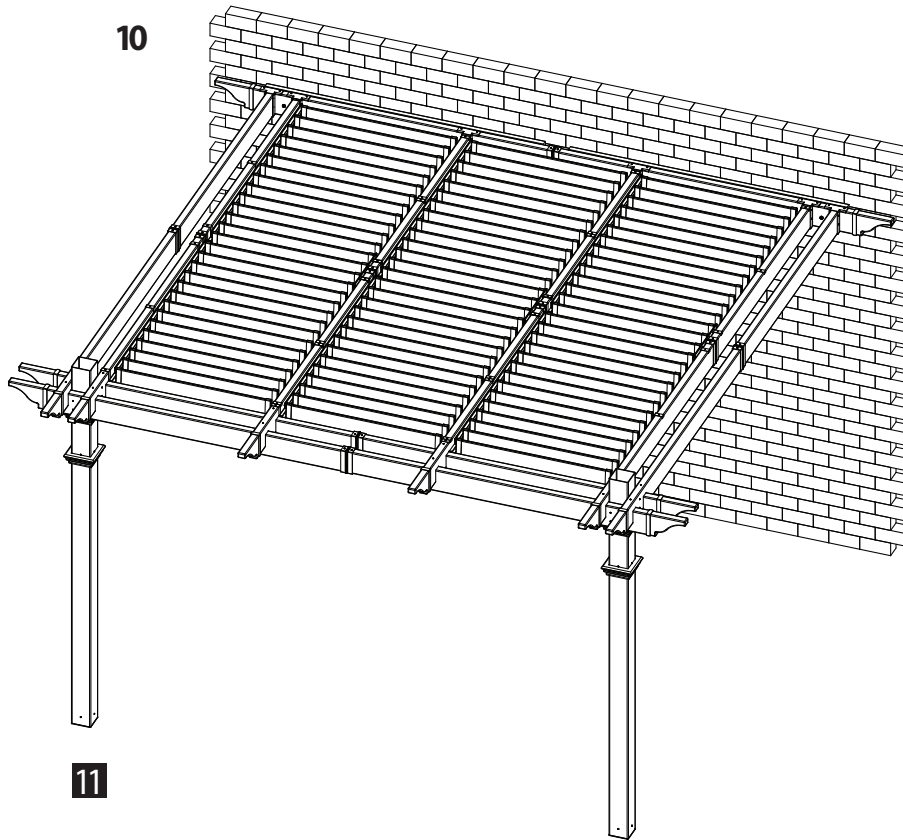
Repeat for the underside of the steel brackets. Another 12, 5/8" screws will be needed.



Louver Assembly

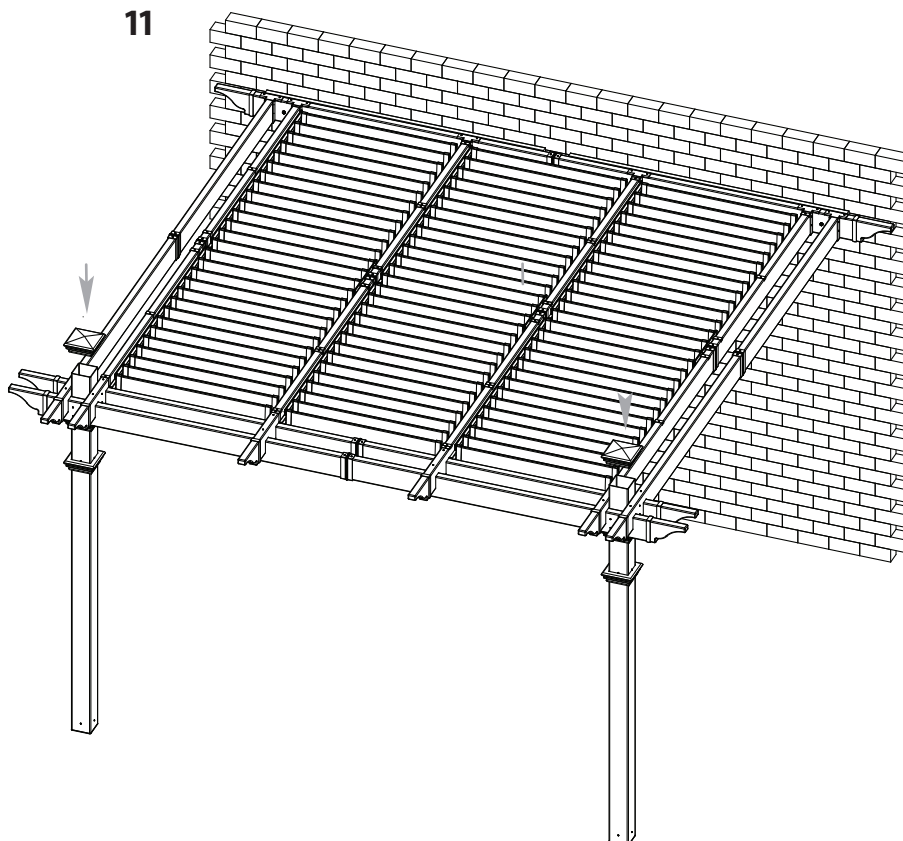
10

Repeat for other two rows.



11

Place the Post Caps onto the posts.



STEP ELEVEN

Turn Bar Holder Installation

The Turn Bar Holder is packaged in box 7 kit and is designed to provide a place to keep the Turn Bar when not in use.

1

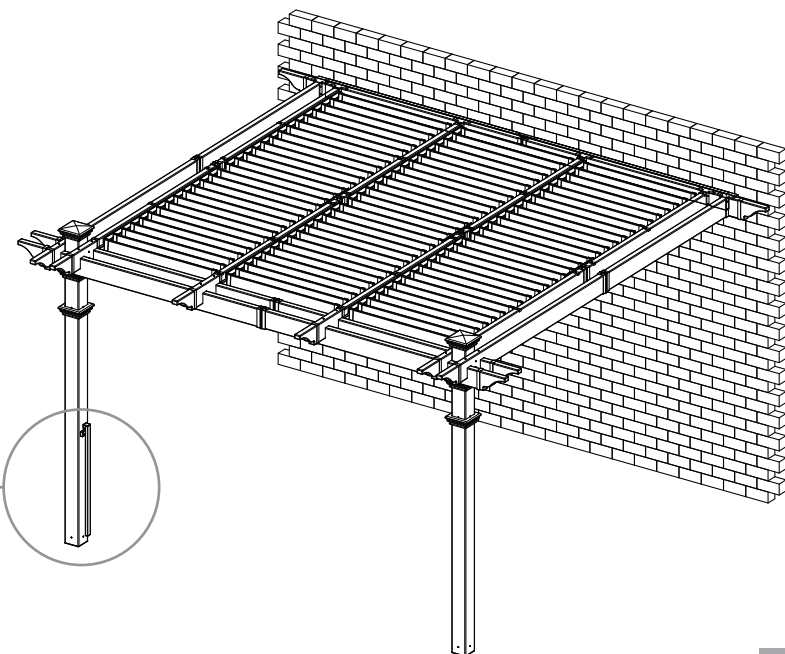
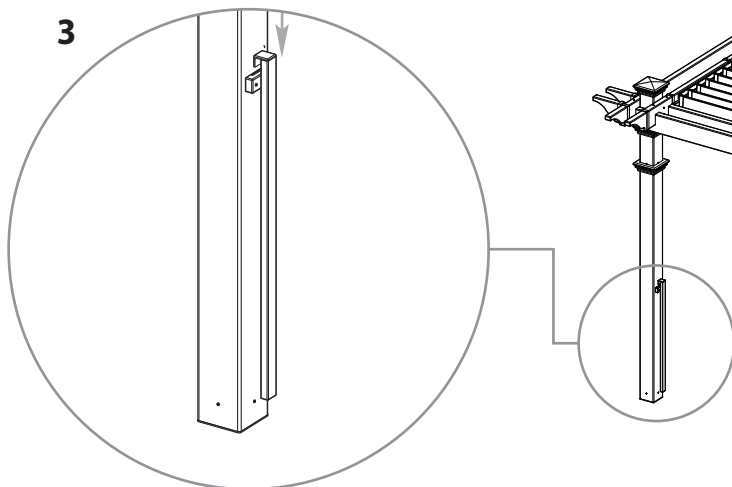
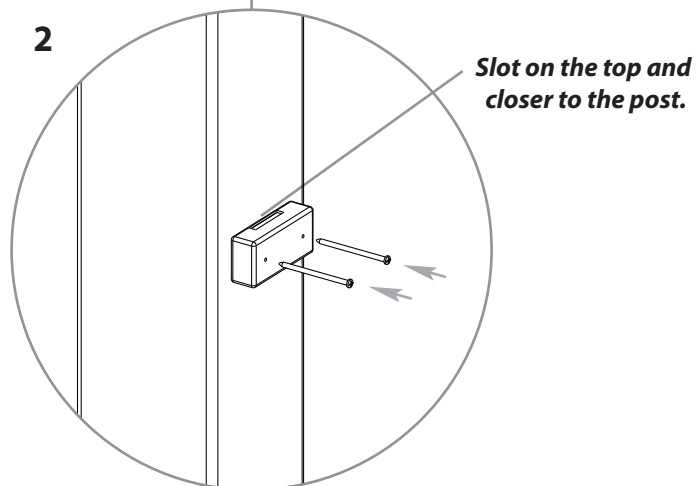
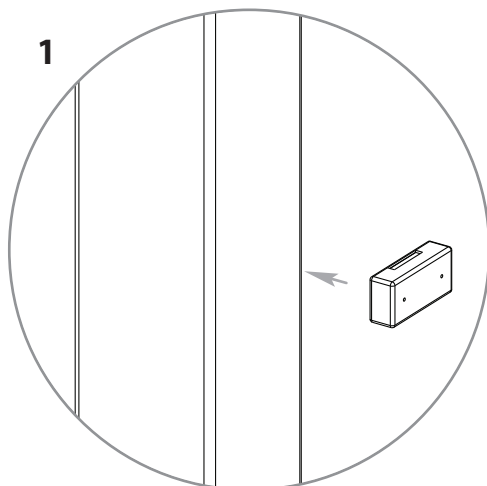
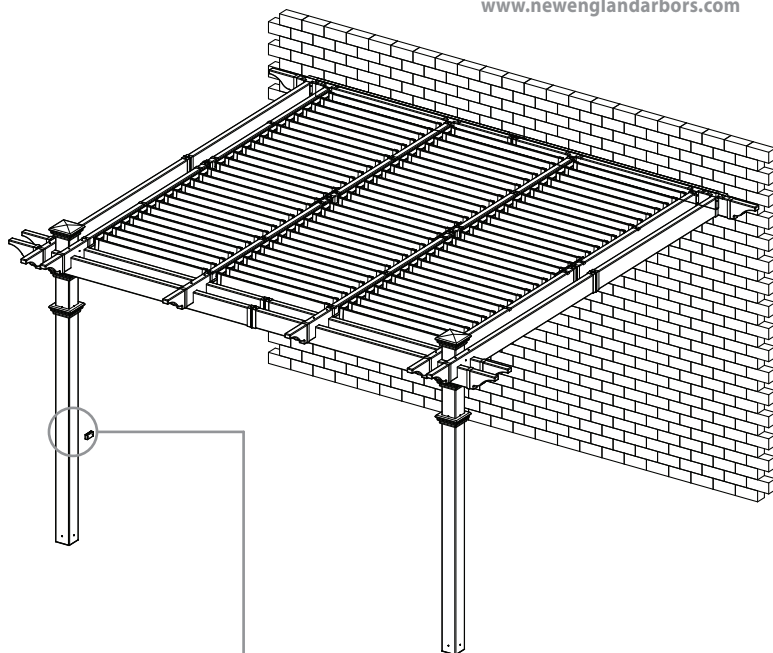
Pick a location that is easily accessible and out of the way of the louvers operation. The post is recommended as the 2 1/2" screws are used to protrude into the wooden post, providing a secure mounting support.

2

Mount with the slot on the top and closer to the post as shown. Fasten with two 2 1/2" screws provided.

3

Hang the Turn Bar as shown.



OPERATIONS

1

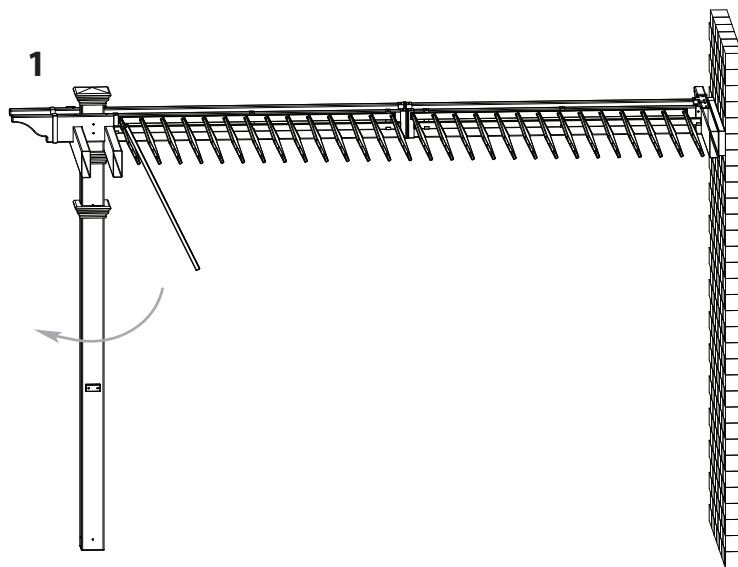
To adjust the positions of the louvers, slide the Turn Bar in between two louver boards and turn in a circular motion to the desired position. Excessive force should not be required.

2

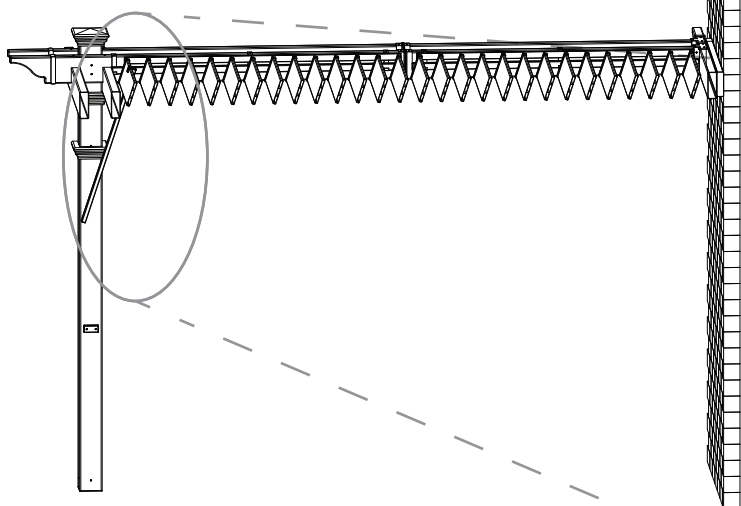
For best leverage, push with the arm of the Turn Bar as opposed to 'prying' with the Turn Bar Cap (see illustrations).

3

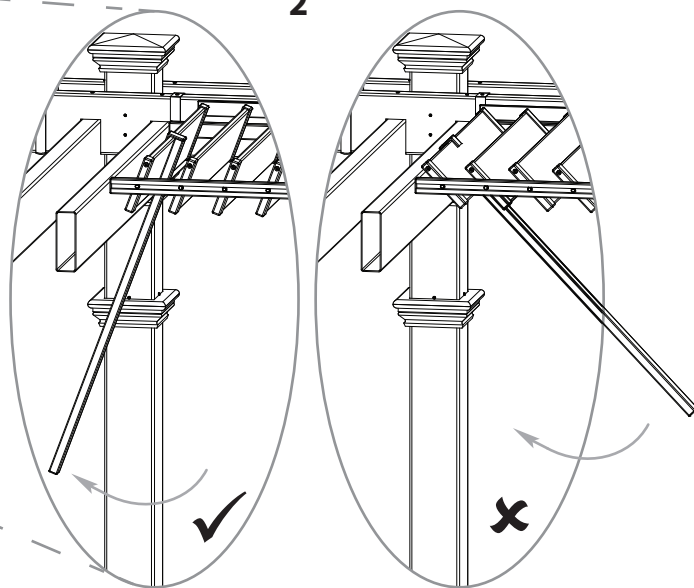
If operation proves to be difficult, this may be caused by nut(s) that are too tight. Troubleshoot which nut is too tight by turning them one by one, check for resistance, and loosen the nut slightly. Only loosen the nut a quarter of a turn at a time as it may come off.



(*) 10x10 Louvered Pergola Shown.



2



4

If your area experiences heavy snow, make sure to keep the louvers in the **OPEN** position. The accumulation of snow will cause the louvers to buckle and collapse.

