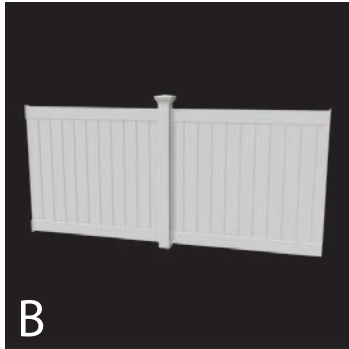


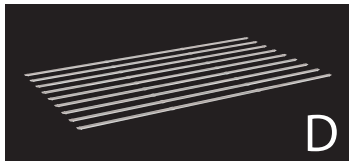
A



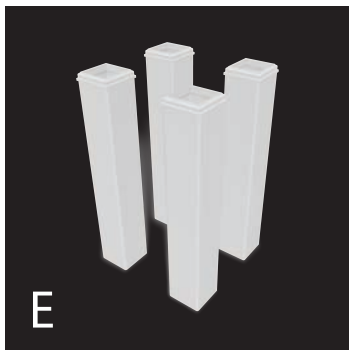
B



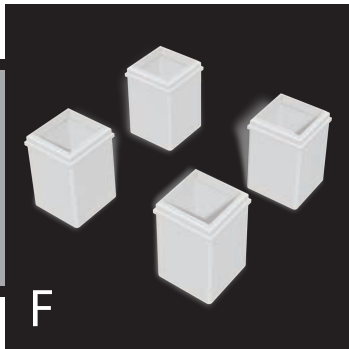
C



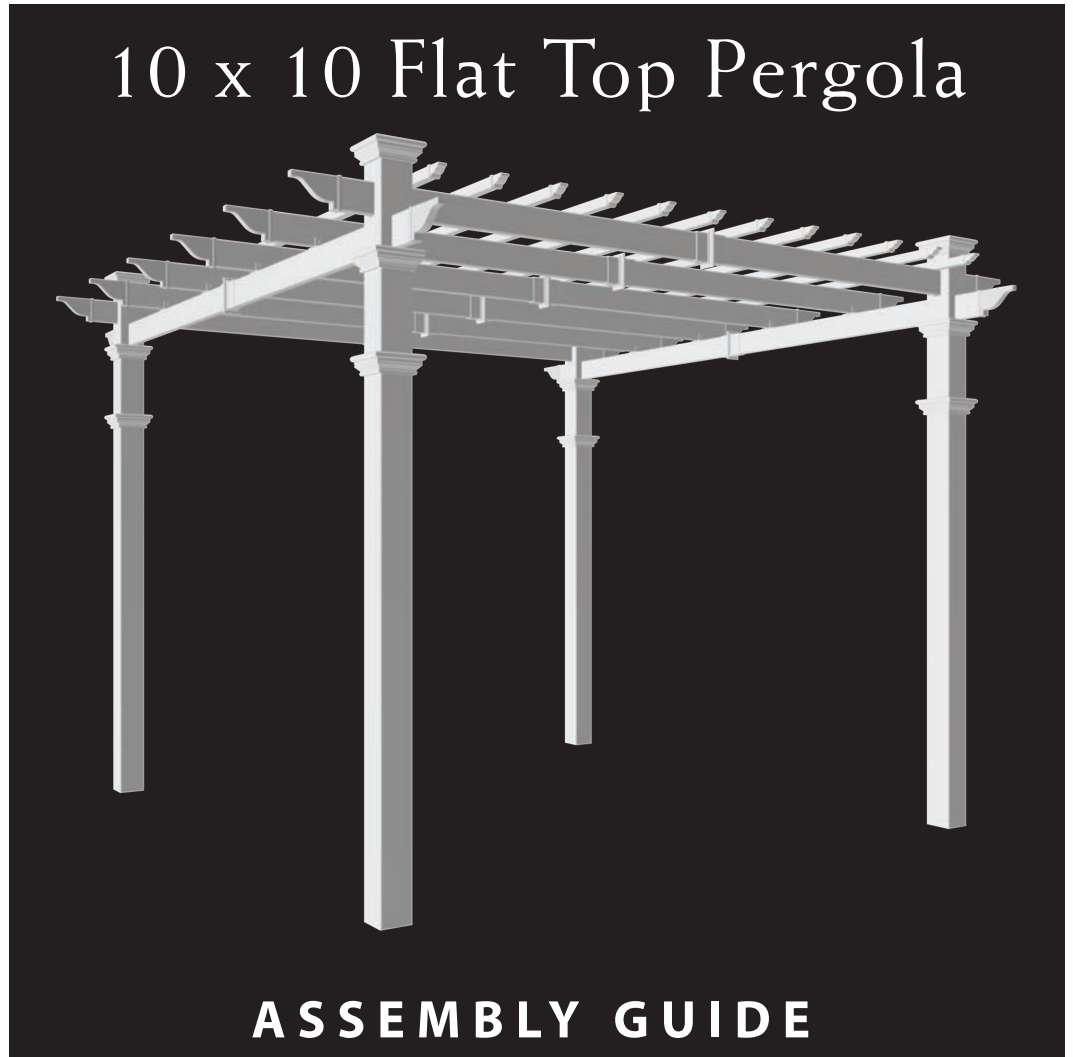
D



E



F



# 10 x 10 Flat Top Pergola

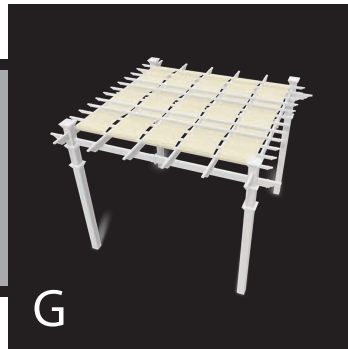
## ASSEMBLY GUIDE

Models:

Venetian, Arcadia, Malibu

### OPTIONAL ACCESSORIES

- A) Bolt Down Bracket Kit (4 for Pergola)
- B) Pergola Wall
- C) Pergola Planter - (available for Venetian & Malibu Pergola)
- D) Additional Shade Slats Kit (12)
- E) Tall Base Molding
- F) Short Base Molding
- G) 10 x 10 Canvas Weave Kit



G



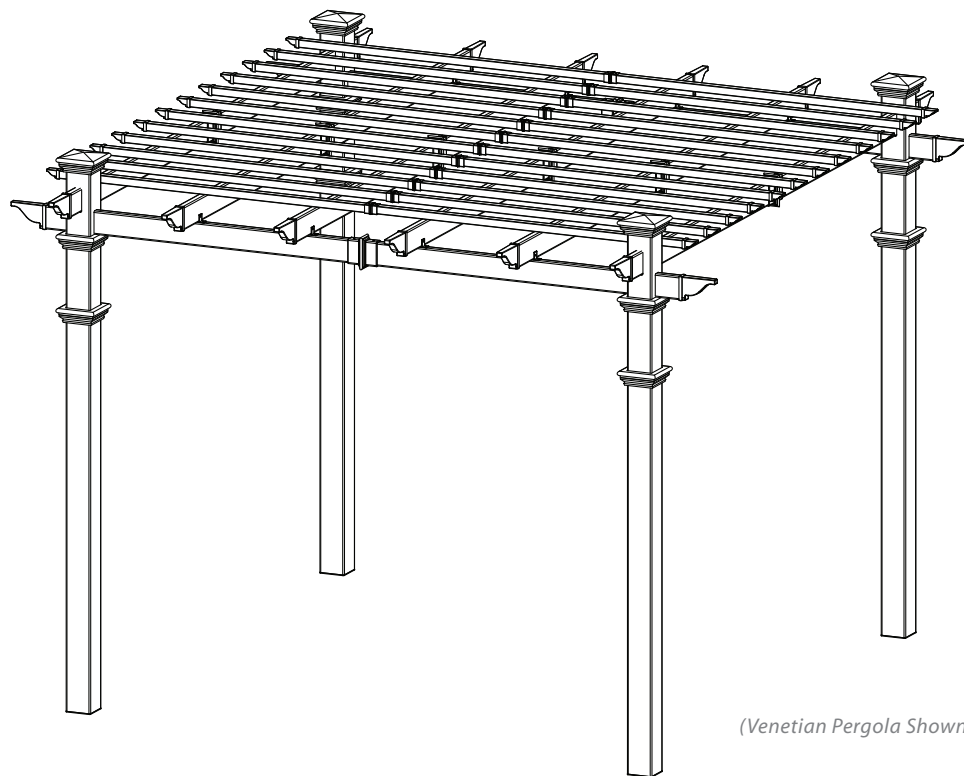
New England  
Arbors  
Leadership by Design

[www.newenglandarbors.com](http://www.newenglandarbors.com)  
[www.newenglandarbors.co.uk](http://www.newenglandarbors.co.uk)

# Table of Contents

	PAGE
<b>10 x 10 Flat Top Pergola</b>	
Introduction & Overview.....	3
Pergola Materials Overview.....	4
Pergola Materials Breakdown.....	5
Pergola Additional Materials List.....	6
Wood Post Layout & Installation for In-Ground Application.....	7
Wood Post Layout & Installation using Bolt Down Post Brackets for Concrete or Wood Surface.....	8
Vinyl Column Assembly and Installation Over Wood Posts.....	9
Main Support Beam Assembly.....	10
Rafter Assembly.....	11
Main Support Beams & Rafter Placement.....	12
Fastening Main Support Beams, Rafters & Caps .....	13
Shade Slats Installation.....	14

## Introduction & Overview



(Venetian Pergola Shown)

### 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. The steel stiffeners for the main beams and rafters can be cut down using either a hacksaw or a motorized cutting device designed to cut steel. When assembling components place on a non-abrasive surface (ie: shipping box) to avoid scratching. We recommend a 15'x15' area for unobstructed assembling. You should not need to use excessive force when assembling any components.

### Planning & Preparing

Because this project is made to stand independent of your home, you can either locate it near your house or let it stand alone in the garden. By keeping it unattached from your home you will not have to deal with moving existing gutters or matching eave heights. If you plan to build your pergola close to the house, please keep the outer extremities of the pergola a minimum of 4 inches back from your eaves.

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, to 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.*

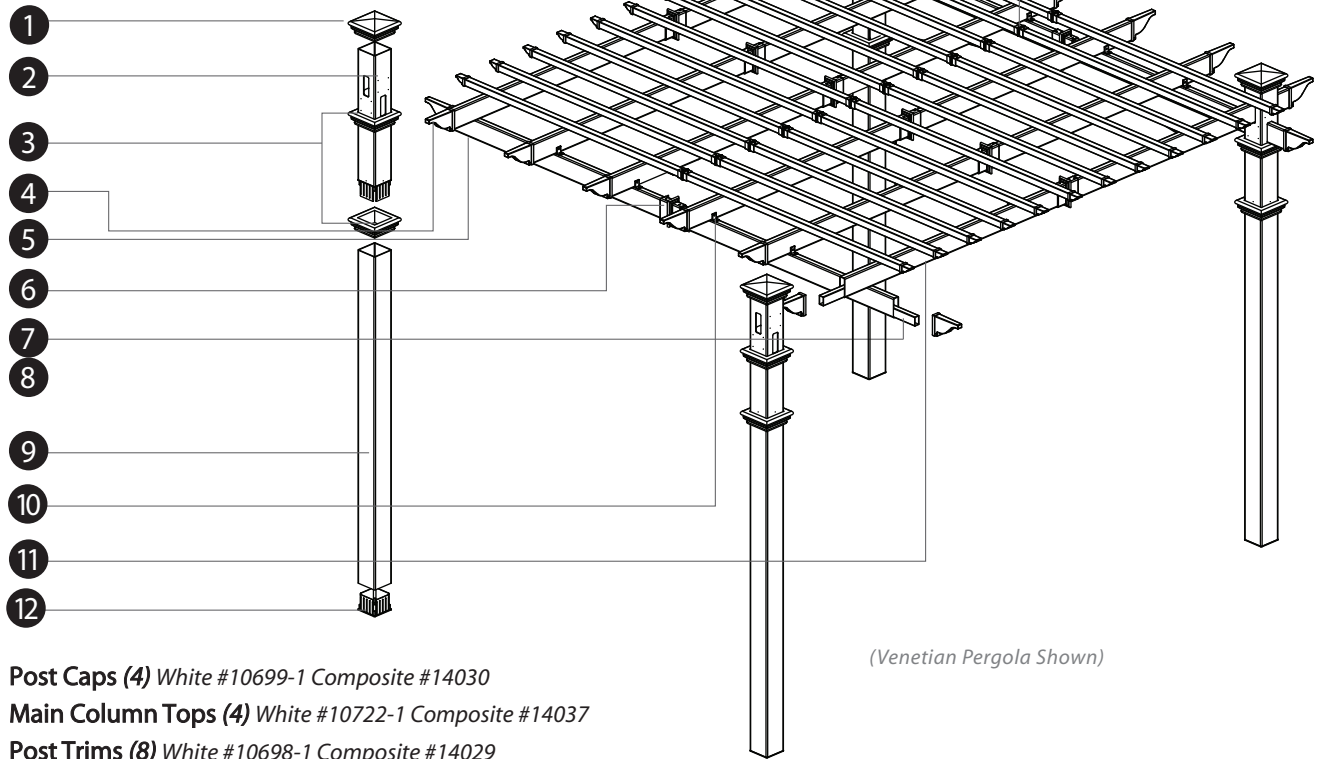
**Please take the time to read this instruction guide thoroughly prior to the construction of your pergola. If you have any questions, feel free to contact our technical dept by calling 1 800 282 9346 (Mon to Fri 8:00 A.M to 4:00 P.M. EST). (UK Tel: (44) 2038 687160 - Mon. to Fri. 1:00 PM to 10:00 PM GMT).**

**New England**  
Arbors

Leadership by Design

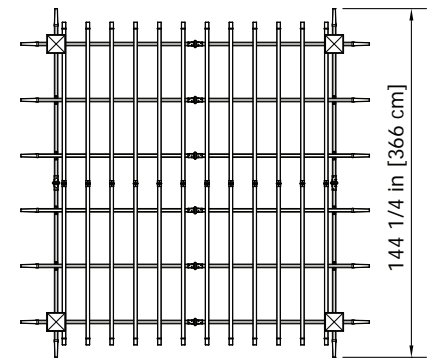
[www.newenglandarbors.com](http://www.newenglandarbors.com)  
[www.newenglandarbors.co.uk](http://www.newenglandarbors.co.uk)

# Venetian Pergola Materials Overview

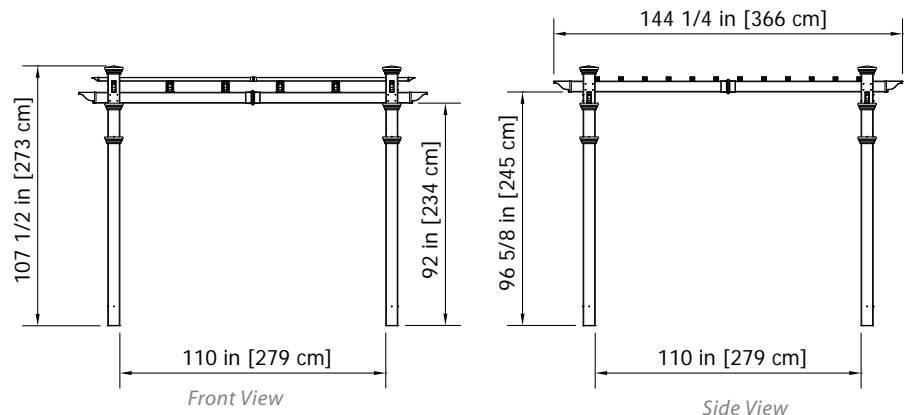


(Venetian Pergola Shown)

1. Post Caps (4) White #10699-1 Composite #14030
2. Main Column Tops (4) White #10722-1 Composite #14037
3. Post Trims (8) White #10698-1 Composite #14029
4. Rafter & Beam Decorative End Caps (16) White #10700-1 Composite #14012
5. Main Support Beams with pre-drilled holes on one side(4) White #10716-1 Composite #14038
6. Beam & Rafter Joiners (8) White #10707-1 Composite #14049
7. Long Steel Stiffeners for Main Support Beams & Rafters(8) #10996
8. Short Steel Stiffener for Main Beams(4) #10995
9. Main Column Bottoms (4) White #10690-1 Composite #14036
10. Rafter Brackets (8) White #10536 Composite #14050
11. Rafters (12) White #10713-1 Composite #14039
12. One Way 4"x4" Internal Wood Post Guide (4) White #10696-1 Composite #14027
13. Shade Slat Joiners (12) White #10600-1 Composite #14028
14. Shade Slats (24) White #10717-1 Composite #14040



Top View



Front View

Side View

# Pergola Materials Breakdown

(Pergola Accessories Not included)

Leadership by Design

www.newenglandarbors.com

www.newenglandarbors.co.uk

## 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). (UK Tel: **(44) 2038 687160** - Mon. to Fri. 1:00 PM to 10:00 PM GMT).

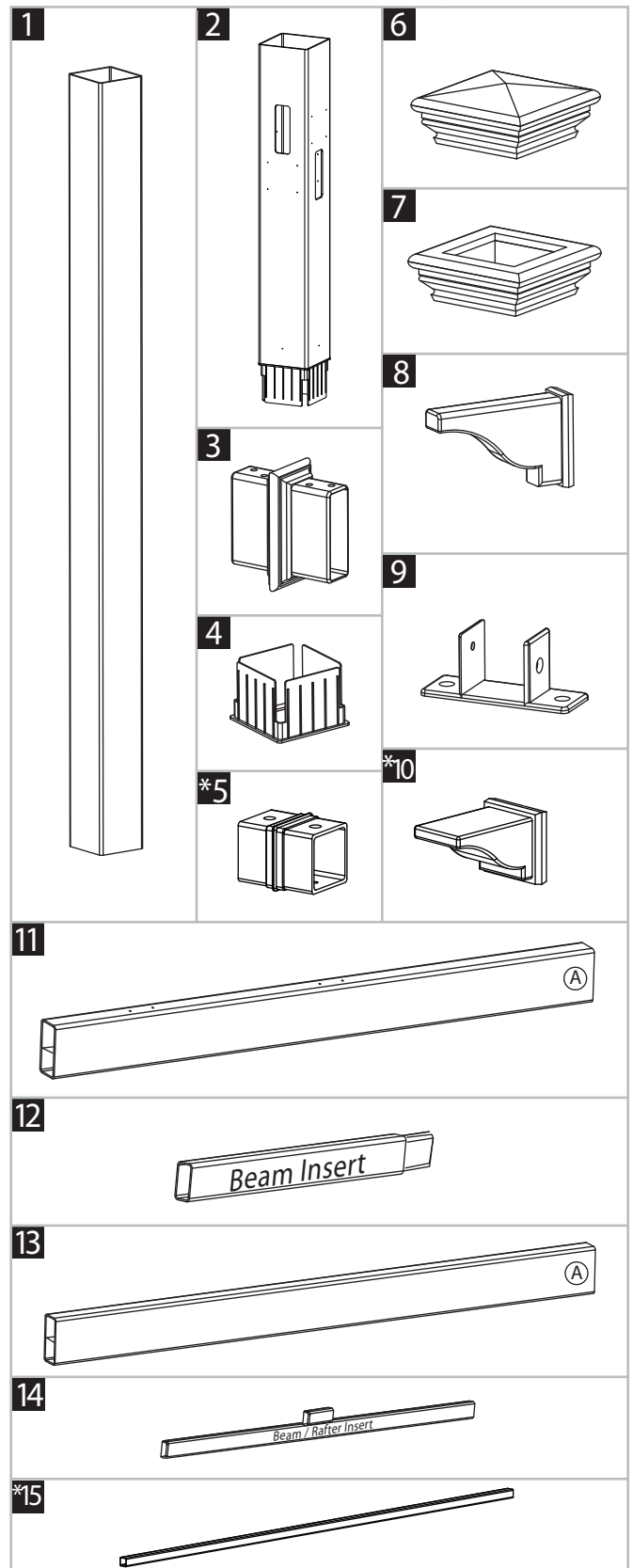
1. Main Column Bottoms (4) White #10690-1 Composite #14036
2. Main Column Tops (4) White #10722-1 Composite #14037
3. Beam & Rafter Joiners (8) White #10707-1 Composite #14049
4. One Way 4"x4" Internal Wood Post Guide (4) White #10696-1 Composite #14027
5. \*Shade Slat Joiners (12) White #10600-1 Composite #14028
6. Post Caps (4) White #10699-1 Composite #14030
7. Post Trims (8) White #10698-1 Composite #14029
8. Rafter & Beam Decorative End Caps (16) White #10700-1 Composite #14012
9. Rafter Brackets (8) White #10536 Composite #14050
10. \*Shade Slat Decorative End Caps (24) White #30030-1 Composite #14032
11. Main Support Beams (With Pre-Drilled Holes One Side) (4) White #10716-1 Composite #14038
12. Short Steel Stiffener Inserts for Main Support Beams (4) #10995
13. Rafters (12) White #10713-1 Composite #14039
14. Long Steel Stiffener Inserts for Main Support Beams & Rafters (8) #10996
15. \*Shade Slats (24) White #10717-1 Composite #14040

\* these parts are included with the Venetian and Arcadia Pergolas only

## Malibu Pergola Materials Breakdown

(Includes boxes 1-4 plus a 5th box with canvas kit)

\*Refer to instructions within box 5 for a list of parts.



Not to Scale

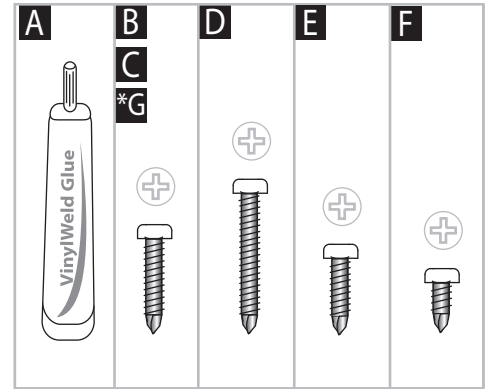
# Pergola Additional Materials List

## 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. Vinyl Weld Glue (3) White #20000 Composite #20029
- B. 2 1/2" (64 mm) Self-Auguring Stainless Steel Screws (16) White #20009-1 Composite #20032  
*(to lock vinyl column and wood post together at bottom of each post)*
- C. 2 1/2" (64 mm) Self-Auguring Stainless Steel Screws (16) White #20009-1 Composite #20032  
*(to lock vinyl column and wood post together at top of each post just above trim cap)*
- D. 4" (102 mm) Self-Auguring Stainless Steel Screws (64) White #20006 Composite #20034  
*(to lock the intersection of beams and first rafters with vinyl columns)*
- E. 1 1/2" (38 mm) Self-Auguring Stainless Steel Screws (48) White #20005 Composite #20031 *(joiner screws)*
- F. 5/8" (16 mm) Self-Auguring Stainless Steel Screws (32) White #20016 Composite #20030 *(for rafter brackets)*
- G. \*2 1/2" (64 mm) Self-Auguring Stainless Steel Screws (72) White #20009-1 Composite #20032 *(for shade slats only, not required for the Malibu Pergola)*



## Extra Materials You will Need

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

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

- H. 4x4x7' (10cm x 10cm x 213 cm) Pressure-Treated Wood Posts (4) *(purchase at local building center)*
- I. 4x4 Bolt Down Bracket Kit *(purchase from New England Arbors 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:**

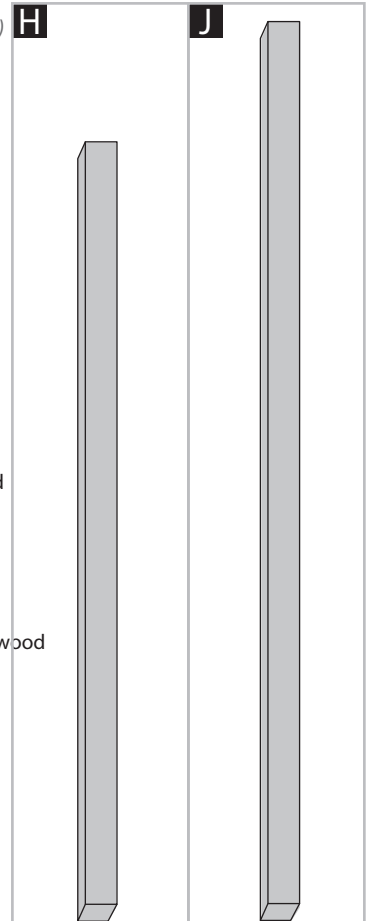
- 1/2" x 3 1/2" x 12" (1.3 cm x 8.9 cm x 30 cm) Wood Shims (32) - Can Be Cut from 1/2" (1.3 cm) Sheet of Plywood
- 1/4" x 2 3/4" (6 mm x 70 mm) Cement Screws (12)
- 3/16" (4.7 mm) Concrete Drill bit. Minimum 3" (76 mm) long (1)

**If mounting pergola onto a wooden/composite deck with AN ACCESSIBLE UNDERSIDE:**

- 1/2" x 3 1/2" x 12" (1.3 cm x 8.9 cm x 30 cm) Wood Shims (32) - Can Be Cut from 1/2" (1.3 cm) Sheet of Plywood
- 1/4" (6 mm) x ?" Bolts and Nuts - Countersunk Head (12) Length depends on thickness of blocking material)
- 1/4" (6 mm) Washers (12)
- 1/4" (6 mm) Wood drill bit. Minimum 3" (76 mm) Long (1)

**If Mounting Pergola in Ground**

- J. 4x4x10' (10cm x 10cm x 305 cm) Pressure-Treated Wood Posts (4) *(purchase at local building center)*
- K. Concrete Ready Mix (4) *(purchase at local building center)*



*Purchase Separately*

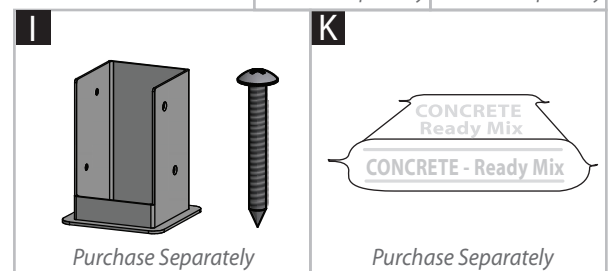
*Purchase Separately*

## Tools You Will Need

- Level
- Hammer
- Tape Measure
- String Line
- Wood Stakes (4)  
*(temporary support for string line)*
- Step Ladders (2)
- Cordless Drill
- 1/8" x 2" (3 mm x 51 mm) Drill Bit (1) *(to pre-drill holes on bottom of joiner to penetrate steel inserts as necessary)*

## Tools You May Need

- Circular Saw with Fine Tooth Blade
- Framing Level
- Framing Square
- Hacksaw *(or a motorized cutting device designed to cut steel)*



*Purchase Separately*

*Purchase Separately*

*Not to Scale*

## Wood Post Layout & Installation for In-Ground Application

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.

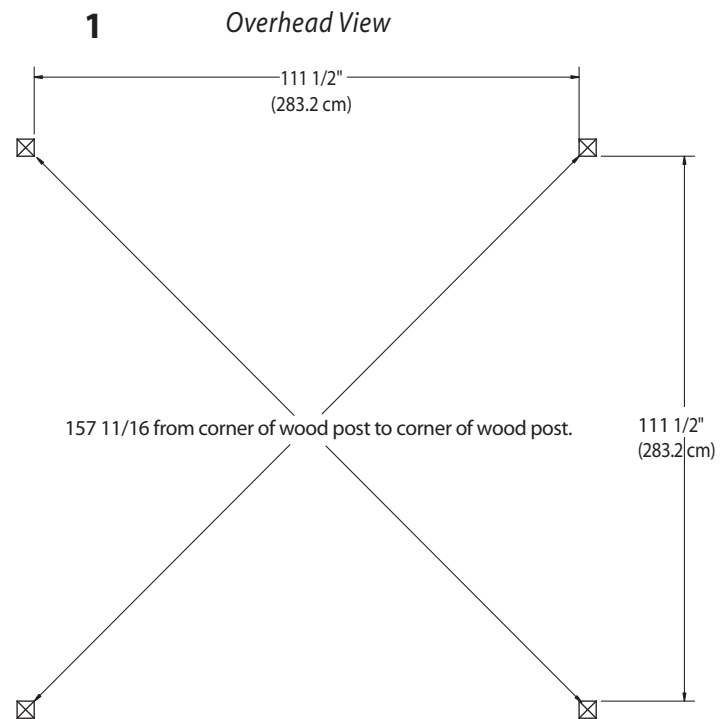
Post location and placement is the most critical step in the overall installation process. Please double check for the possibility of any underground utilities such as sprinkler, gas or telephone lines.

### STEP ONE

Measure and mark out the location of the pergola posts using string line and temporary wood stakes. Diagonal distances must be the same to ensure a square installation. 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. The steel stiffeners for the main beams and rafters can be cut down using either a hacksaw or a motorized cutting device designed to cut steel.



### STEP TWO

#### Install Wood Supporting Posts Directly into the Ground

**1**

After you have determined where the posts will be located, excavate 10" (25 cm) diameter x 36" (91 cm) 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 no more than 84" (213 cm) out of the ground.

If a post is higher because of obstructed excavation of footings, please cut down in height accordingly.

**3**

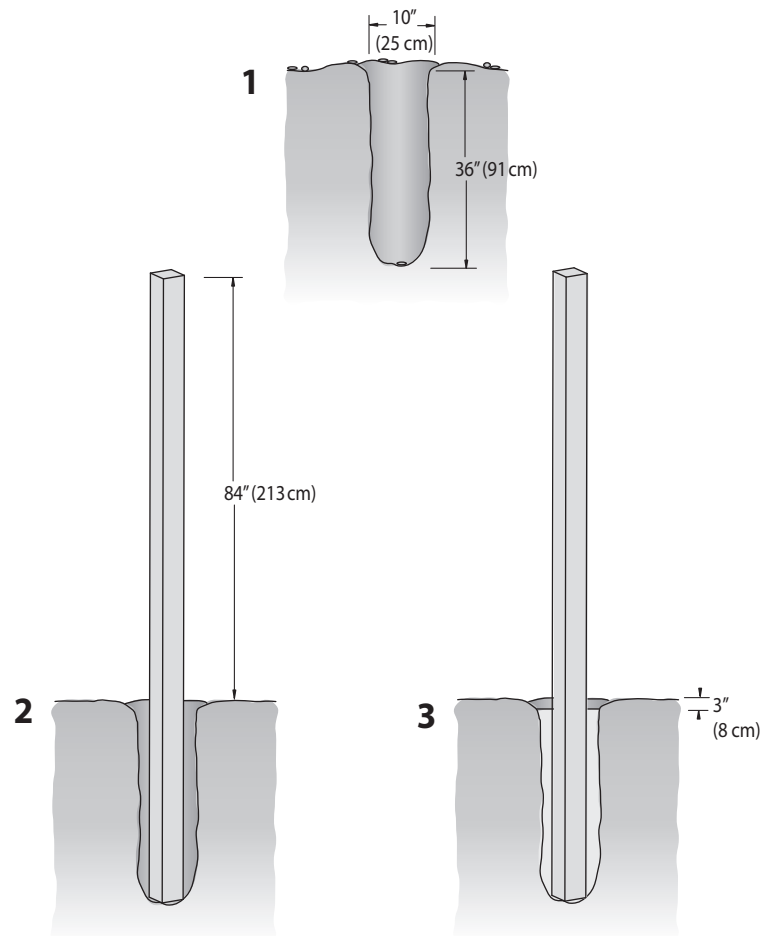
Fill the vacant hole with pre-mixed concrete all the way to within 3" (8 cm) of the top of the hole. After the concrete has set, back fill & compact the 3" (8 cm) space with soil/sod.

**4**

Repeat for all four posts.

**Please Note:**

Some 4x4 pressure treated posts can be larger than 3 1/2 x 3 1/2 (9 cm x 9 cm) 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

**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. Measure from the edges of the base plates (not the vertical side walls). Diagonal distances must be the same to ensure a square installation. 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" (4.7 mm) masonry drill bit, drill 3" (8 cm) deep holes to allow installation of 2 3/4" (70 mm) concrete screws (Not included)

**4**

Proceed to install three 2 3/4" (70 mm) 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 four post brackets installed plumb, proceed to set the 4x4 x7' (213 cm) wood post in place. Use wood screws to secure the posts to the bracket. Repeat for all 4 posts.

**6**

Posts should be approximately 84" (213 cm) in height.

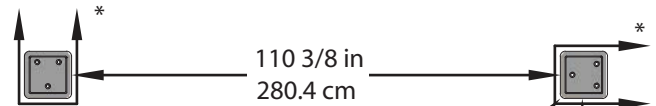
**7**

Attach 8 post shims to each of the wooden post, placing shims 6" (15 cm) on all four sides, near the bottom & top 72" (183 cm).

**Please Note:**

Some 4x4 pressure treated wood posts can be larger than 3 1/2 x 3 1/2 (9 cm x 9 cm) 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.

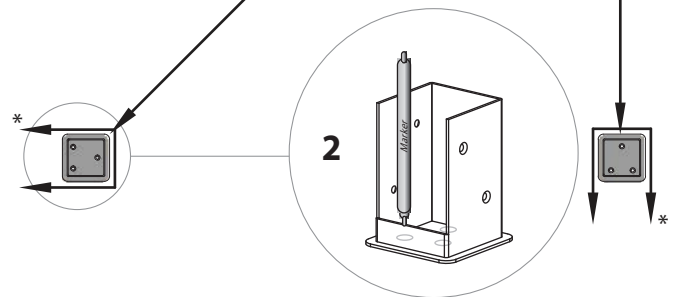
**1**



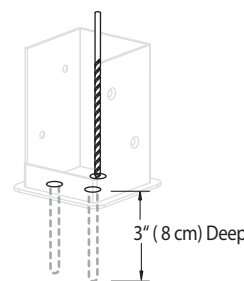
\* Orientate brackets accordingly to reduce offset motion of posts. (direction of arrows denote flange opening)

156 1/8 in (396.5 cm)  
From corner of bracket  
(Bottom of flange)  
to corner of bracket

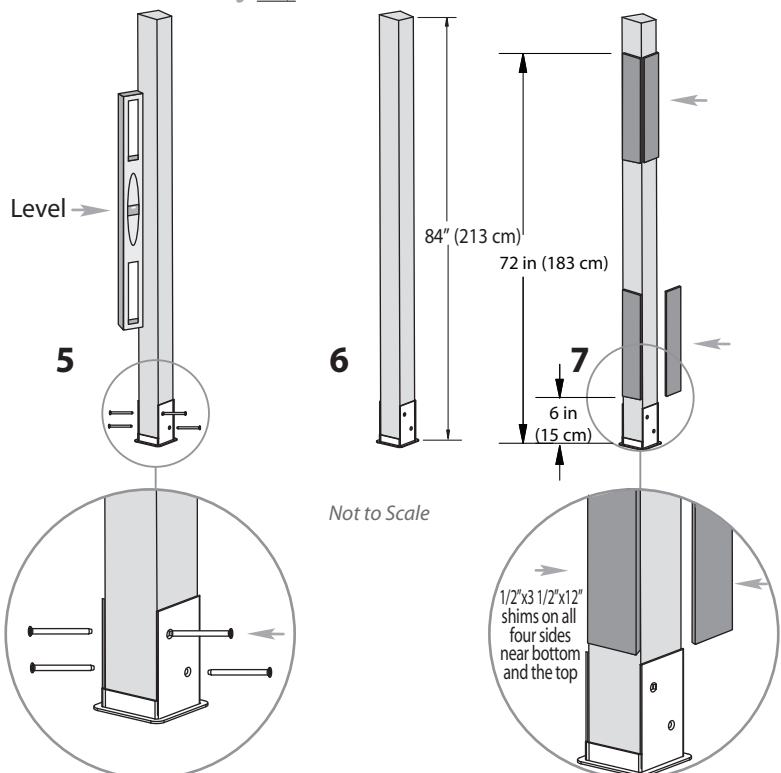
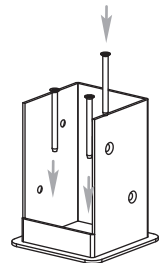
110 3/8 in  
280.4 cm



**3**



**4**





## 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.

3

If you purchased Short or Tall Base Moldings, slide the base mold on post.

**Note:** If you are installing a Privacy Wall on the pergola, do not install base mold on the posts with side panel.

4

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.

5

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.

6

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

7

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

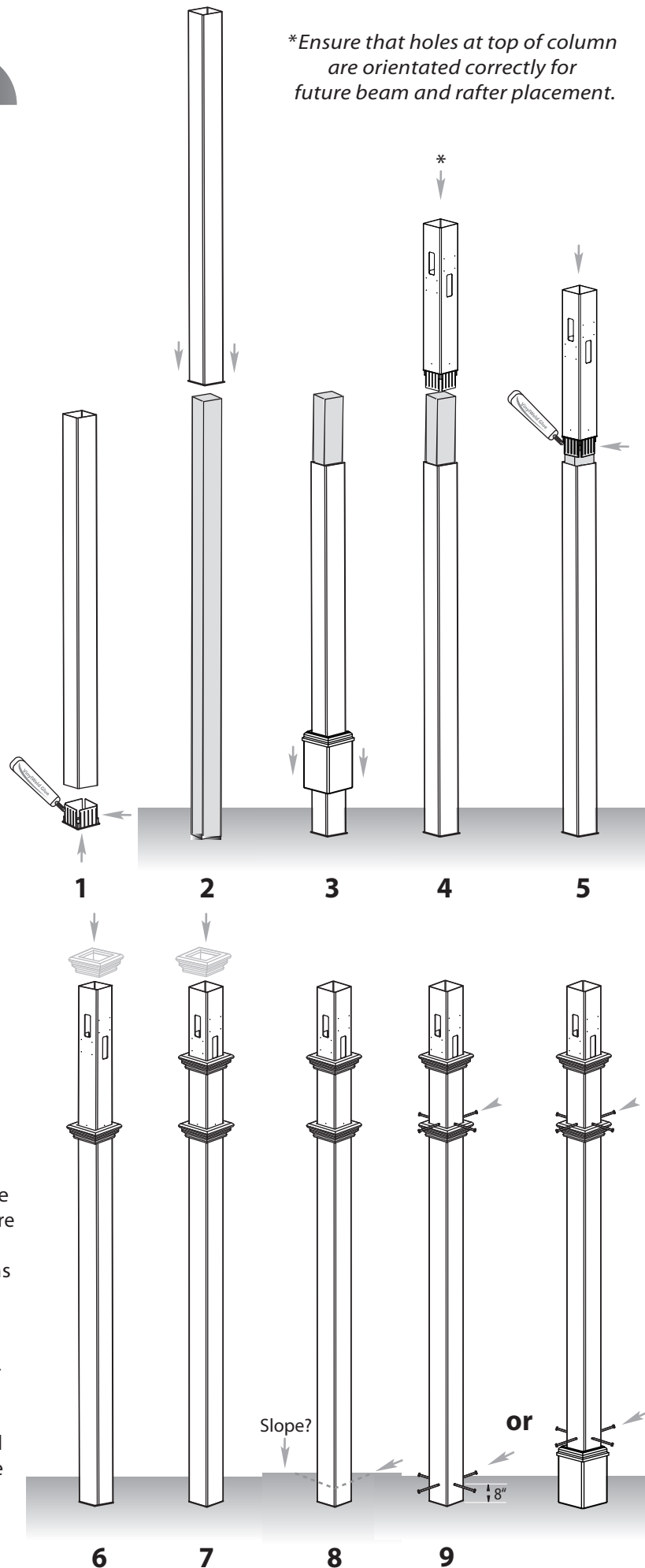
8

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 two or more of your vinyl columns as necessary.

9

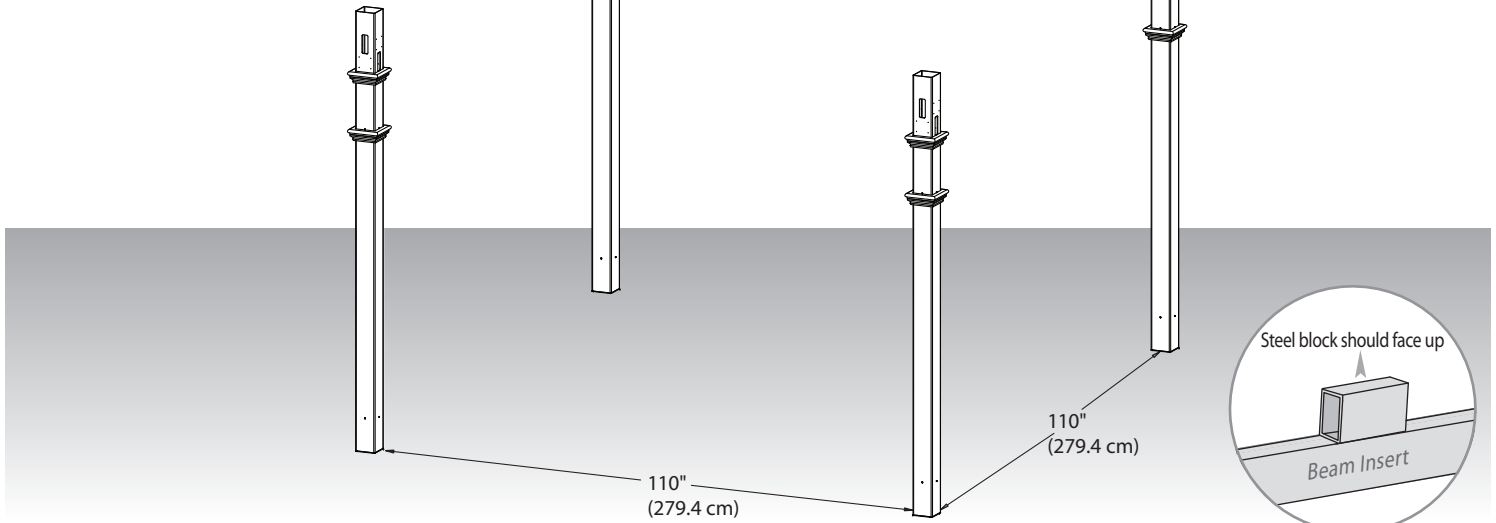
Secure the vinyl columns to the wood posts using 4 - 2 1/2" (64 mm) self-auguring stainless steel screws at 8" (20 cm) up from the base of the posts, and 4 - 2 1/2" (64 mm) self-auguring stainless steel screws just above the trim cap as illustrated. This will prevent possible uplift during high winds, etc. If base moldings are installed, position screws above the base moldings.

\*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 110" (279.4 cm) apart. Also, notice that the holes at the top of each post should be facing the same direction.

**Note:** If you have base molding on your posts, measure above moldings as the measurement is to be from post to post.



## STEP FOUR

### Main Support Beam Assembly

**1**

Insert two short steel stiffener into one long steel stiffener to create full length piece. Repeat so you have two full main support beams.

**2**

Insert the end of the main support beam marked 'A' into the joiner. Install the joiners so that the side with the four holes are facing up. Push firmly until the extrusion bottoms out inside the joiner.

**Please Note:**

Be sure to orientate the main support beams correctly so the pre-drilled holes for future installation of rafter brackets is correct.

**3**

Insert one assembled steel stiffener (with steel block facing up), into the lower pocket of the main support beam past the joiner. Push until steel block hits the internal ribbing

**4**

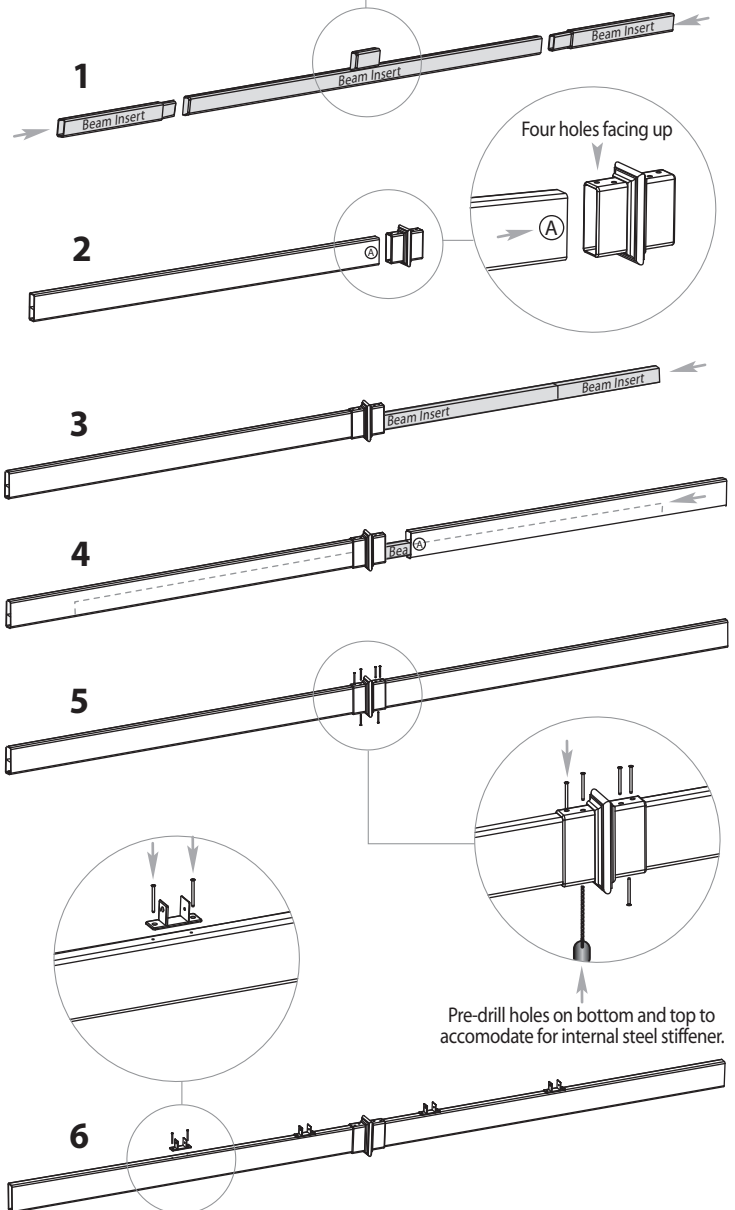
Slide the other end of the main support beam marked 'A' over the steel insert and into the joiner.

**5**

Screw the joiner to main support beams and steel insert using 1 1/2" (38 mm) screws. The bottom and top holes will need to be pre-drilled using a 1/8" (3 mm) drill bit.

**6**

Install the rafter brackets to the main beams using 5/8" (16 mm) screws. Follow the pre-drilled holes to identify locations.



## STEP FIVE

### Rafter Assembly

**1**

Insert the end of the rafter marked 'A' into a joiner. Install the joiners so that the side with the four holes is facing up. Push firmly so the extrusion bottoms out inside the joiner.

**Note:** If you purchased the Malibu Pergola, please use the plain joiners included in the Malibu box. This will allow the canopy to glide over the rafters smoothly.

**2**

Insert one steel stiffener (with steel block facing up), into the lower pocket of the rafter. Push until steel block hits internal ribbing.

**3**

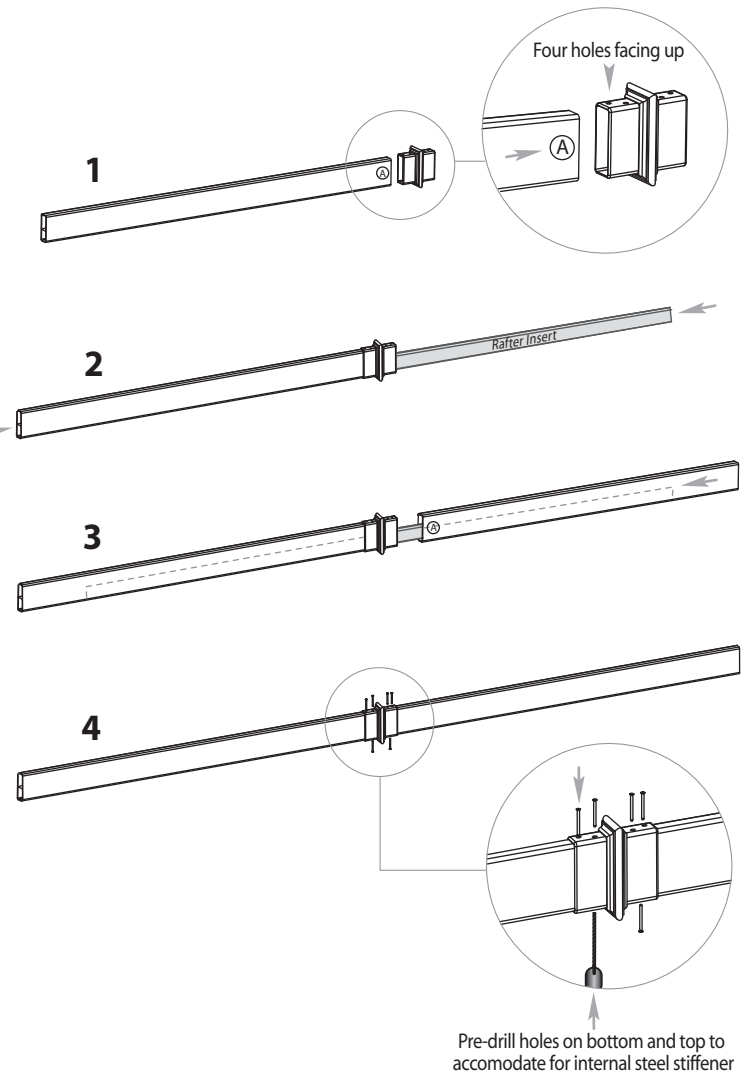
Slide the other end of rafter marked 'A' over the steel insert and into the joiner to create one full rafter. Repeat as necessary.

**4**

Screw the joiner to the rafters and steel inserts using 1 1/2" (38 mm) screws. The bottom and top holes will need to be pre-drilled using a 1/8" (3 mm) drill bit.

**5**

Repeat steps 1 to 4 for the remaining 5 rafters.



## STEP SIX

### Main Support Beams & Rafter Placement

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

**1**

Slide the main support beam with rafter clips through both holes of the vinyl column (overshooting), and then back through both holes of the opposite column. Repeat for opposite main support beam.

**Please Note:**

The top of the vinyl columns may need to be tensioned in opposite directions to each other to allow the main support beams and rafters to be installed on a slight angle. The vinyl columns naturally allow some measure of flex.

**2**

Slide the two outer rafters through both holes of the vinyl column and through both holes of the opposite column.

**3**

Final adjust the beams and rafters ensuring the overhang past the columns is equal to the eye (roughly 4" or 10 cm overhang). Using 4" (102 mm) screws lock the beams and rafters into position inside the columns by driving in 8 screws from the outside and 8 screws from the inside of each column.

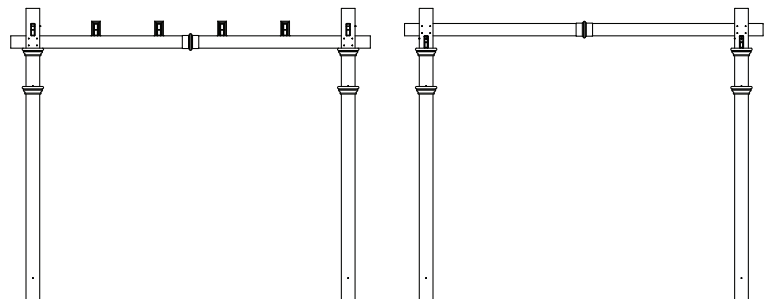
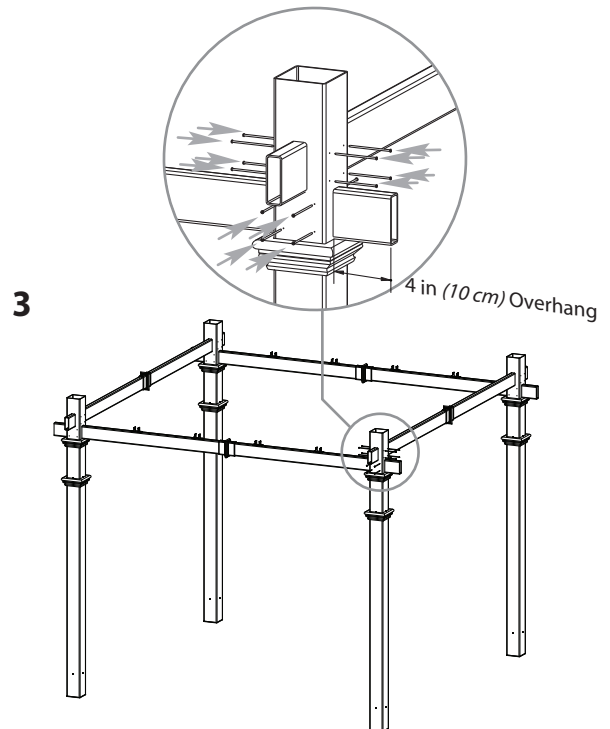
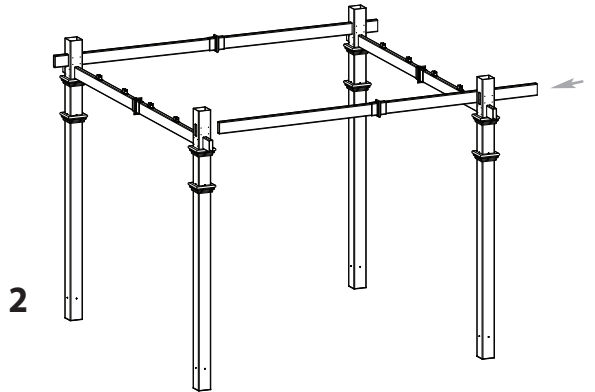
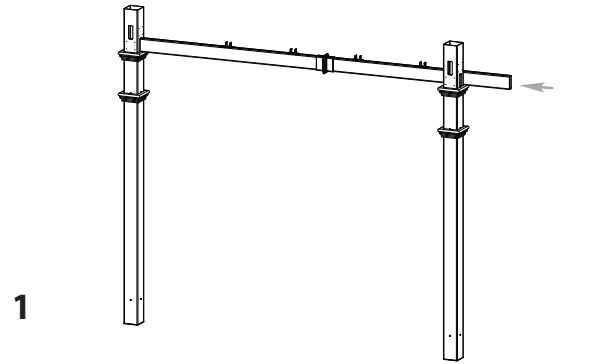
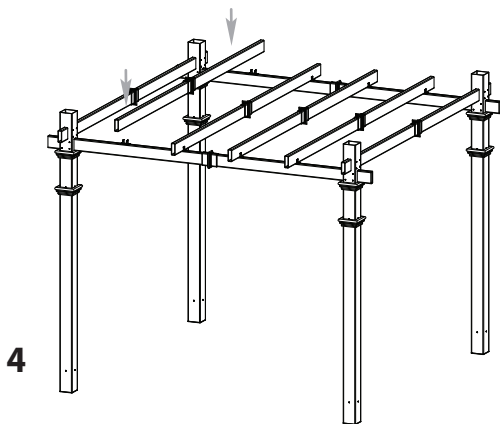
**Note:** For the Main Beams, pre-drill the lowest bottom holes (two through the outside face of the column, and two through the inside face of the column) using the 1/8" (3 mm) drill bit to accommodate for installation of screws into the steel stiffeners located in the lower pocket of the main beams.

**4**

Place the remaining rafters in the front and rear rafter brackets.

**5**

Complete a final adjustment of the remaining rafters. All spacing and overhangs past columns should be equal to the eye.



## STEP SEVEN

### Fastening Rafters & Caps

**1**

Using 5/8" (16 mm) self-auguring stainless steel screws attach the pergola rafters to the rafter brackets.

**2**

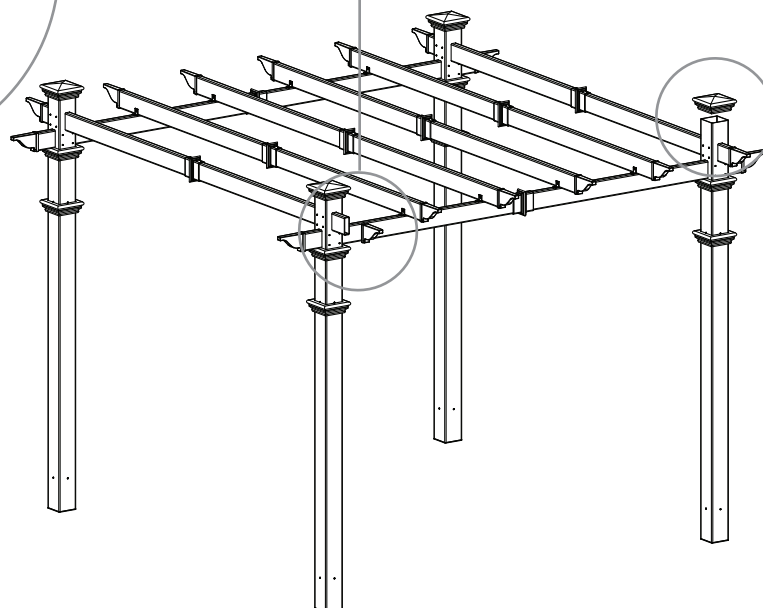
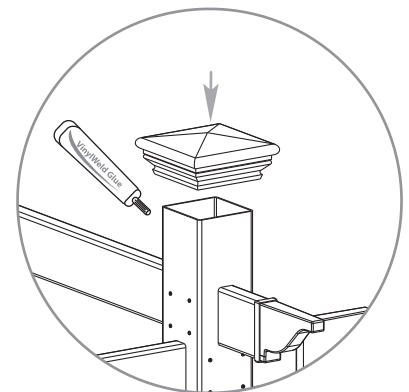
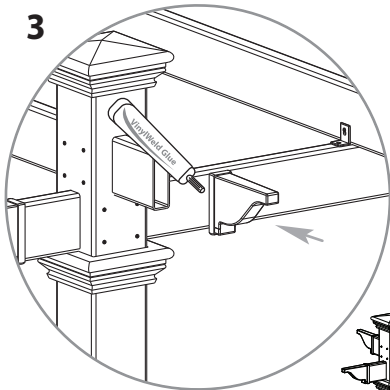
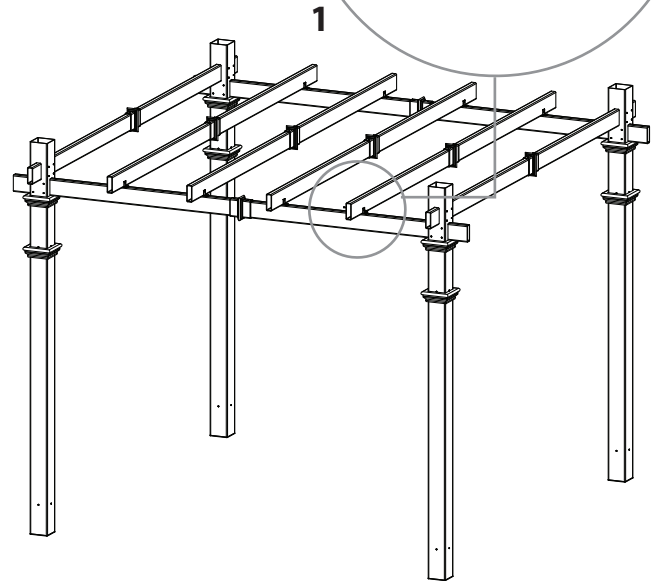
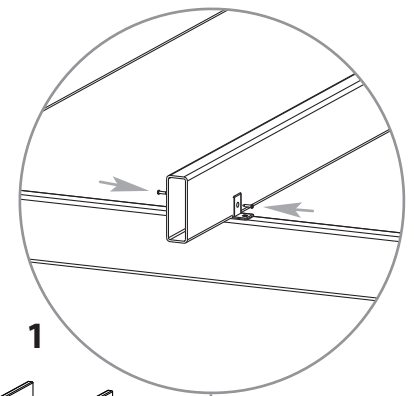
Install decorative pergola end caps using vinyl weld.

**3**

Install the post caps using vinyl weld.

**4**

Final position your post trims.



**New England**  
Arbors

Leadership by Design

[www.newenglandarbors.com](http://www.newenglandarbors.com)  
[www.newenglandarbors.co.uk](http://www.newenglandarbors.co.uk)

10 x 10 Flat Top Pergola

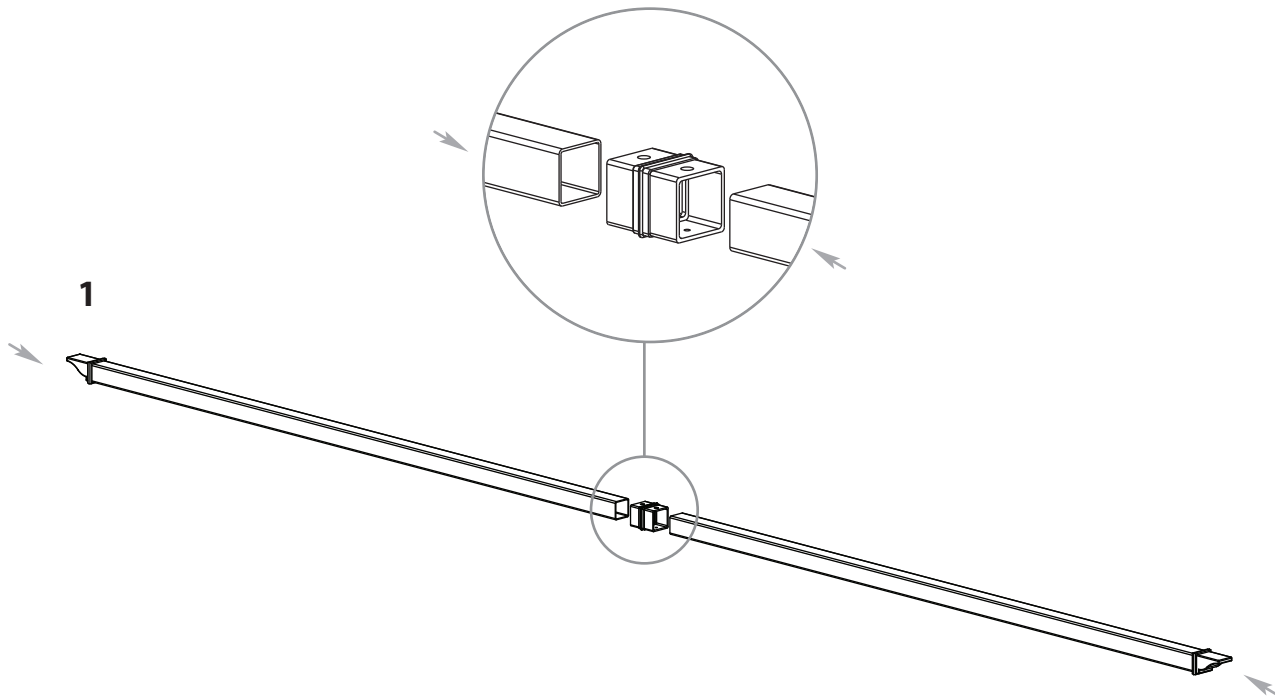
## STEP EIGHT

### Shade Slat Assembly

**Note: If you purchased the Malibu Pergola, please skip this step and refer to those instructions going forward.**

**1**

Assemble shade slats by first gluing the decorative end caps as shown, and then inserting the two slats into one joiner. Push firmly until extrusion bottoms out inside joiner. **No screws are necessary.**



## STEP EIGHT

### Shade Slats Installation

If you purchased the Canvas Weave Kit, please follow the spacing requirements for installing 12 shade slats only.

The 1 1/2 x 1 1/2 (4 cm x 4 cm) shade slats are designed to be installed with 8 3/8" (21.25 cm) spacing between each slat.

Shade slats are designed to extend approximately 8 1/4" (21 cm) past the last rafter. Measurement includes the pre-installed pergola ends. Your goal is to ensure that all the shade slats overhang equally to the eye.

2

Install first shade slat adjacent to the top of the vinyl columns.

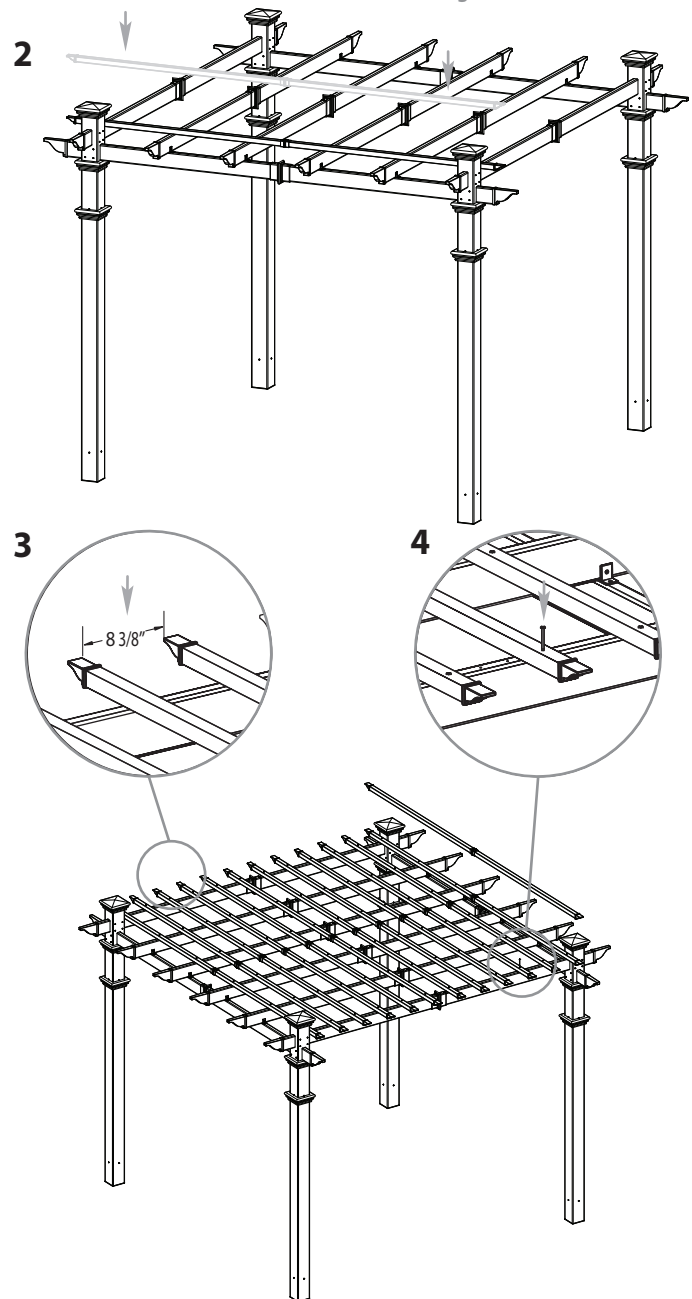
3

Install the rest of the shade slats at the 8 3/8" (21.25 cm) spacing.

**Note:** if you purchased an additional shade slat kit (24 shade slats total, install the rest of the shade slats at a 3 1/4" (8.25 cm) spacing). See image 3a below.

4

Install one 2 1/2" (64 mm) screw at each intersection of rafter and shade slat.

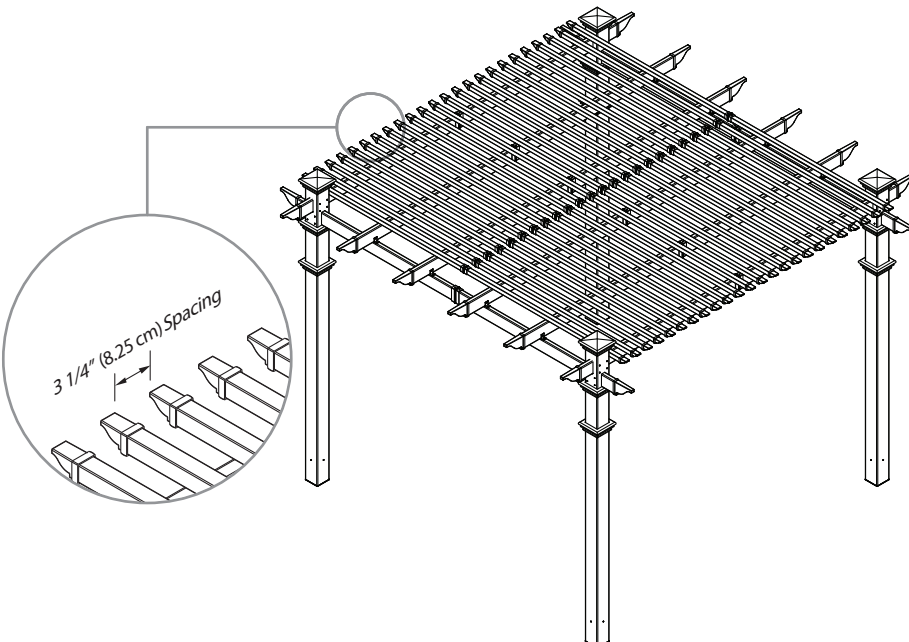


### Suggestions for Additional Shade as Necessary

Available Shade Accessories:

- Additional Shade Kit - Provides an additional 12 shade slats a total of 24 shade slats
- 10 x 10 Canvas Weave Kit - Provides 5 canvas weave strips (Can only be installed with the standard 12 shade slats provided with the pergola)

### 3a - Pergola with Additional Shade Slat Kit



#### Note:

If the additional shade slat kit is being installed retroactively, simply place one shade slat assembly in between two existing shade slats. Only 11 additional shade slats will be used in this case.

If you prefer to install all 12 of the additional shade slats, temporarily unfasten 10 of the existing shade slats. The 2 existing shade slats fastened against the columns can remain fastened. Follow the instructions detailed in Step 3 to install the remaining shade slats. To prevent moisture from entering the rafters, we recommend using small amount of bright white silicon sealant (purchased separately) to seal any exposed screw holes.