## $12 \times 12$ Round Post Louvered Pergola



## ASSEMBLY GUIDE

Model:
Aberdeen


# PERGOLA INSTALLATION TOOLS YOU WILL NEED. 



$\square$
I/2 $\times$ 6" WOOD CHISEL / PADDLE BIT
$\square$ RUBBER MALLET OR HAMMER
$\square$ LEVEL AND SQUARE
$\square$ STRING LINE \& STAKES
$\square$ STEP LADDER [2]
$\square$ JIG SAW OR CIRCULAR SAW
$\square$ RATCHET WITH I/2" SOCKET
$\square$ TAPE MEASURE
$\square$ SHOVEL
$\square$ *PREMIX CONCRETE/CEMENT


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Top View


Front View

## 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 $15^{\prime} \times 15^{\prime}$ area for unobstructed assembling. You should not need to use excessive force when assembling any components.

## Planning \& Preparing

The Aberdeen Pergola is made to stand independent of your home and 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 $4 \times 4$ wood posts that are either embedded in concrete or directly mounted to a concrete or wood surface using our mounting bracket kit 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 1800282 9346,(Mon to Fri 8:00 A.M to 5:00 P.M. EST).

## Pergola Materials Overview



1. Post Caps (4)-10095
2. Main Column Tops (4)-11142
3. Round Post Adapter (4) - 11143
4. Round Post Top Trim (4)-11136
5. Round Post Trim (4)-11138
6. Main Column Bottoms (4) - 11144
7. Round Post Base Trim (4) - 11139
8. Rafter \& Beam Decorative End Caps (20) - 10829
9. Main Support Beams (8) - 10983
10. Rafters (12) - 10984
11. Beam \& Rafter Joiners (10) - 10820
12. Louver Turn Bar (1) - 10935
13. Round Post Louver Turn Bar Holder (1) - 60081 - Found in Box 7
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


## Pergola Materials Breakdown

## Check Boxes (Total of 8) for These Contents

In the event of missing or defective parts please call our customer
service dept. at $\mathbf{1 8 0 0} \mathbf{2 8 2} 9346$ (Mon. to Fri. 8:00 AM to 5:00 PM EST)

1. Post Caps (4)-10095
2. Main Column Tops (4)-11142
3. Round Post Adapter (4) - 11143
4. Round Post Top Trim (4) - 11136
5. Round Post Trim (4) - 11138
6. Main Column Bottoms (4) - 11144
7. Round Post Base Trim (4) - 11139
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10
1
2


3


4


5
7


8


19


15


Note the distance to the first louver bracket

## Pergola Additional Materials List

## Hardware (in plastic bag)

All Screws Included with this Kit are Self-Auguring.
A. Tube of Vinyl Weld Glue (2) - 20000
B. 5/8" ${ }^{\prime \prime} 16 \mathrm{~mm}$ ) Stainless Steel Screws (72) - 20016 (to lock Louver Assembly to Steel Holder Brackets)
C. $5 / 8^{\prime \prime}(16 \mathrm{~mm})$ Stainless Steel Screws (16) - 20016 (to lock the Round Post Adapter to the Posts)
D. 1 1/2" (38mm) Stainless Steel Screws (40) - 20005 - (for Beam and Rafter Joiners)
E. 2 1/2" (64mm) Stainless Steel Screws (18) - 20009- (to fasten Turn Bar Holder to post)
F. 4" (102mm) Stainless Steel Screws (32) - 20006-(to lock Beams to the Posts)
G. 4" (102mm) Stainless Steel Screws (40) - 20006-(to lock Rafters to the Beams)
H. 9" ${ }^{\prime \prime}(229 \mathrm{~mm})$ Stainless Steel Bolt Assembly with Nuts and Washers (4) - 20035 - (to lock the Column Tops and Beams together)

## Extra Materials You will Need

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

## Pergola on Concrete or Wood Deck

I. $4 \times 4 \times 8$ ( $10 \times 10 \times 250 \mathrm{~cm}$ ) Pressure-Treated Wood Posts, cut down to $94^{\prime \prime}$ ( 239 cm ) (4) (purchase at local building center)
*IMPORTANT NOTE*
Most commercially available pressure treated $4 \times 4$ posts are milled to $31 / 2^{\prime \prime} \times 31 / 2^{\prime \prime}(8.9 \times 8.9 \mathrm{~cm})$.
The wood posts cannot exceed $35 / 8^{\prime \prime} \times 35 / 8^{\prime \prime}(9.2 \times 9.2 \mathrm{~cm})$ square in order to fit inside the round post inner channels.
J. Round Post Bracket Kit (purchase from www.newenglandarbors.com or a retailer of our products)

Included in the Round Post Bracket Kit: - Galvanized Steel Brackets (4)

$$
\begin{aligned}
& -\# 8 \times 1 \text { 1/2" (4x38mm) Wood Screws (4) } \\
& -5 / 16 \times 3^{\prime \prime}(8 \times 76.2 \mathrm{~mm}) \text { Lag Screws (12) }
\end{aligned}
$$

Refer to the Bracket Kit instructions for hardware requirements, as they pertain to your application:

## If mounting pergola onto an existing concrete surface:


-3/8" x $3^{\prime \prime}$ ( $6 \times 76.2 \mathrm{~mm}$ ) Concrete Sleeve Anchors - (16)

- $5 / 16^{\prime \prime}$ ( 8 mm ) Concrete drill bit. Minimum $3^{\prime \prime}$ ( 76 mm ) long (1)


## If mounting pergola onto a wooden/composite deck:

- $5 / 16^{\prime \prime} x$ ?" ( $8 x$ ?mm) Lag Bolts (16) (Bolt length depends on thickness of deck)
- 5/16" (8mm) Washers (32)
-9/64" (3.5mm) Wood drill bit. Minimum 3" (76mm) long (1)


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

- 5/16"x ?" (8x?mm) Bolts and Nylon-Insert Lock Nuts (16) (Bolt length depends on blocking material)
- 5/16" (8mm) Washers (32)
- 5/16" (8mm) Wood drill bit. Minimum 3" (76mm) long (1)
- $2 \times 10^{\prime \prime}(5.1 \times 25 \mathrm{~cm})$ Wood Blocks (4) to be secured between the deck joists, to provide adequate support for the pergola posts.


## If Mounting Pergola in Ground

K. $4 \times 4 \times 12$ ( $10 \times 10 \times 365 \mathrm{~cm}$ ) Pressure-Treated Wood Posts (4) (purchase at local building center)
L. Concrete Ready Mix (4) (purchase at local building center)

## Rafter/ Beam Support (Required)

M. $2 \times 6 \times 12$ ( $4 \times 15 \times 365 \mathrm{~cm}$ ) Pressure-Treated Boards for Beams and Rafters (10) (purchase at local building center)


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

This pergola can also be installed on a pre-existing wood or concrete surface using our Round Post Ground Bracket Kit with a $4 \times 4$ 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. 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.

## STEP TWO

## Install Wood Supporting Posts Directly into the Ground

## 1

After you have determined where the posts will be located, excavate 10 " $(25.4 \mathrm{~cm})$ diameter x 36 " $(91.4 \mathrm{~cm})$ deep post holes.

## 2

After holes are dug and cleaned, place the $4 \times 4(9 x 9 \mathrm{~cm})$ wood post into a hole ensuring it's level and square to string lines. The final post height should be $94^{\prime \prime}(239 \mathrm{~cm})$ out of the ground.

## 3

Fill the vacant hole with pre-mixed concrete all the way to within 3 " $(7.6 \mathrm{~cm})$ of the top of the hole.
Once concrete has set, backfill $3^{\prime \prime}(7.6 \mathrm{~cm})$ space with soil.

## 4

Repeat for all four posts.
Please Note:
Some $4 \times 4$ pressure treated posts can be larger than 3 1/2x 3 1/2 square due to twisting or cracking. We have allowed a tolerance for this in the round post, however, in extreme cases you may need to shave down the top of the $4 \times 4$ 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.


Note:
Shown is a $11^{\prime}-6^{\prime \prime}(350 \mathrm{~cm})$ length of wood, and since the $4 \times 4(9 \times 9 \mathrm{~cm})$ Pressure Treated wood comes in 12' (365 cm) lengths, do one of the following:
a. Cut the wood down to $11^{\prime}-6^{\prime \prime}(350 \mathrm{~cm})$
b. Dig $42^{\prime \prime}(107 \mathrm{~cm})$ deep holes instead of $36^{\prime \prime}$ (91.4om)


3


## OPTIONAL STEP

## Wood Post Layout \& Installation

 Using Round Post Bracket Kit for Concrete or Wood SurfaceNote: for additional information on the Round Post Bracket Kit installation, refer to the Round Post Bracket Kit instructions.

## 1

Measure and locate the centre of the wood post. Pre-drill a $1 / 16^{\prime \prime}$ [1.5mm] hole, about 1 1/2" (38mm] deep as shown.

## 2

Using the small screw provided with the ground bracket kit, fasten the bracket to the bottom of the post as shown.

## 3

Position the ground bracket so that it is square to the wood post and pre-drill $3,5 / 16^{\prime \prime}[8 \mathrm{~mm}$ ] holes for the lag bolts as shown. The holes should be approximately 3 " $[75 \mathrm{~mm}$ ] deep.

4
Using a socket wrench, fasten the 3 lag bolts supplied with the kit as shown.

$44^{4 \prime \times 4 " \times 94^{\prime \prime}(10 \times 10 \times 239 \mathrm{~cm})}$
 the center of the post is to draw an ' $x$ ' through the diagonals as shown.

5
Measure and mark out the location of the ground brackets plate using string or chalk line. Diagonal distances must be equal to ensure a square installation. Adjust string lines accordingly.
The inside corner of the string lines will be the corner of the plate.

## 6

Mark out the location of brackets using the base plate of the bracket accordingly.

## 7

Depending on where the pergola will be installed, you may need sleeve anchors if installing on a concrete surface, or lag screws if installing on a wood platform (deck). Refer to page 6 for hardware recommendations.
Mounting hardware is not included in the Round Post Bracket Kit.

## 8

Following the instructions supplied with the hardware, proceed to install four fasteners into each the base plate of the bracket.

5



## Wood Post Installation using Round Post Bracket Kit onto a wood/composite deck with an accessible underside

 Locate the position of your bracket and mark the four corner holes.
## 2

Measure the distance between your joists and fasten a $2 \times 10$ $(5.1 \times 25 \mathrm{~cm})$ wood support directly below where the bracket is to be installed. This will give the surface mount additional strength.

3
Drill four $5 / 16^{\prime \prime}(8 \mathrm{~mm})$ diameter holes through the deck and support.

4
Fasten the bracket as shown using the hardware listen on page 6.


## STEP THREE

## Vinyl Column Assembly \& Installation Over Wood Posts

## 1

With a helper and a ladder, place the round post over the wood post as shown.

## 2

Apply a small bead of glue around the base as shown, approximately $4^{\prime \prime}(10 \mathrm{~cm})$ from the ground.

## 3

Slide the Round Post Base Trim over and down the post as shown. Hold the base trim in place for about 20 seconds to allow the vinyl glue to set.
NOTE: the Base Trim and ground bracket /wood post should be square to each other.

## 4

Slide the Round Post Trim followed by the Round Post Top Trim as shown. Let the two parts slide down for now as they will be glued in place in later steps.

## 5

Attach the Round Post Adapter onto the top of the post and fasten in place with $4,5 / 8^{\prime \prime}(16 \mathrm{~mm})$ screws as shown.

## 6

Apply a small amount of glue to the inside of the Post Top Trim where it would come in contact with the Post Adapter as shown.

7

8
Apply a small amount of glue to the outside of the post where you would like the Round Post Trim to be located (shown is $3^{\prime \prime}-7.6 \mathrm{~cm}$ )

9
Slide the Post Trim in place and hold for 20 seconds.

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www.newenglandarbors.com www.newenglandarbors.co.uk


Slide the Post Top Trim in place and hold for 20 seconds, allowing the glue to set.


## Vinyl Column Assembly \& Installation Over Wood Posts

## 1

Slide the Main Column Top over the Post Adapter as shown. NOTE: Do not glue the Column Top at this point.

Note the location of the hole(s) on the Column Top and compare it to the overall layout of your pergola. The direction in which the holes face will determine the placement of the beams, rafters, and louvers.

## 2

With a pencil, make a centre mark through the hole onto the wood post.

## 3

Remove the Column Top and drill a $1 / 2^{\prime \prime}$ ( 13 mm ) hole through the wood post as shown.

4
Replace the Column top and visually check that the hole is completely drilled through.

## 5

Apply a small amount of glue to the inside of the Column Top as shown and place the Post Cap as shown.

## 6

To secure the Column to the wood post, fasten 4, 2 1/2" (64mm) screws through the column into the wood post approximately $8^{\prime \prime}(20 \mathrm{~cm})$ from the ground as shown.





At this stage, the columns should be properly installed as per the following illustration, with the columns 133" in. ( 338 cm ) apart.
Also, notice that the holes at the top of each post should be facing the same direction.


## STEP FOUR

## Main Support Beam Assembly

1
Insert and center one $2 \times 6 \times 12^{\prime}(4 \times 15 \times 300 \mathrm{~cm})$ pressure treated wood into a main support beam section followed by the joiner and another main support beam section.

## Critical Note:

Note the location of the pre-drilled hole on main support beams as pictured aside. These holes will align with the hole on the posts. Both ends of main support beam section should extend approximately $6^{\prime \prime}(15.2 \mathrm{~cm})$ over the pressure treated wood.


2
Glue and attach the Decorative End Caps onto the ends as shown.


## Main Support Beam Assembly

3
Using four 1 1/2" (38mm) screws provided, fasten the Beam Joiners, Main Support Beam, and Wood together as shown.


4
Now that the wood is secured in place, use the $1 / 2^{\prime \prime}(13 \mathrm{~mm})$ predrilled holes as templates and drill $1 / 2^{\prime \prime}(13 \mathrm{~mm})$ holes through the wood as shown. Make sure to drill straight through to the other side of the main support beam.

Note: Do not pre-drill the $1 / 8$ " screw holes through the wood. The 4" $(102 \mathrm{~mm})$ self-auguring screws provided will be set through the main beams when securing the beams to the columns.


## STEP FIVE

## Rafter Assembly

1
To accomodate the notches on the rafters, first the wood inserts must be notched out as shown below:


Six will be needed.

## Rafter Assembly

2
Insert one of the notched $2 \times 6 \times 12(4 \times 15 \times 300 \mathrm{~cm})$ pressure treated wood into a beam section follow by the joiner and another beam section.

Make sure the notch is at the bottom as shown.


3
Glue and attach the Decorative End Caps onto the ends as shown.


4
Using four 1 1/2" ( 38 mm ) screws provided, fasten the Rafter Joiners, Rafters, and Wood together as shown.


Repeat for all six rafters.

## STEP SIX

## Main Support Beams \& Rafter Placement



Place the rafters onto the main support beams as shown. Space the middle two rafters $42^{\prime \prime}(106.7 \mathrm{~cm})$ apart (Critical for louver placement)


Raise one Main Support Beam Assembly at a time and insert the 9" Bolt Assembly into the holes to hold into place as shown. Some force may be required to get the bolt through. Do not tighten the nuts until all four beams are in place, instead, simply hand-tighten them.
Note: The 9" Bolt Assembly is used to properly position the main beams on the columns.

Once all four main support beams are in position, use two wrenches to tighten the nuts. Stop once the bolts bottom out inside the nuts. Over-tightening the nuts could cause damage to the bolts.

## 2

Fasten the main support beams onto the Posts using the $4^{\prime \prime}$ (102mm) screws provided (8 screws per post) through the pre-drilled holes.

3

## Main Support Beams \& Rafter Placement

## 4

Fasten the Rafters to the Posts using the $4^{\prime \prime}$ ( 102 mm ) screws provided (4 per post).

## 5

Note: The spacing between the rafters should be $42^{\prime \prime}(106.7 \mathrm{~cm})$ as shown below.
Fasten a $4^{\prime \prime}(102 \mathrm{~mm})$ screw at each intersection where the
 Beams and Rafters intersect as shown. 24 screws will be needed.

*Important: Make sure the distances between rafters are 42"(106.7 cm).

## STEP SEVEN

## Louver Assembly <br> 1

This kit contains four different pre-assembled Louver Bars.
Pre-assembled Louver Bars (Right) - With Long Louver Bar (3) - 10986
Pre-assembled Louver Bars (Left) - With Long Louver Bar (3) - 10985 Pre-assembled Louver Bars - With Short Louver Bar (3) - 10988
Pre-assembled Louver Bars - With No Louver Bar (3) - 10989
Each pre-assembled louver bars are labelled with a lettered sticker "A", "B", "C", and "D".


When assembling, match louver bar $A$ with $B$, and $C$ with $D$.
There will be 3 A's, 3 B's, 3 C's, and 3 D's as shown below:


## STEP SEVEN

## Louver Assembly

layout the twelve louver bars assemblies as shown below:


## 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.


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

4
Repeat for all six sub-sections. At this point, you should have three full sections of Louvers as shown below:


## 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.

## 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 $5 / 8^{\prime \prime}(16 \mathrm{~mm})$ screws. A total of 12 screws will be needed.

## 9

Repeat for the underside of the steel brackets. Another 12,5/8" (16 mm) screws will be needed.


## Louver Assembly

10
Repeat for other two rows.


## STEP EIGHT

## 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" (64 mm) 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" ( 64 mm ) screws provided.
3
Hang the Turn Bar as shown.


## 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 slighty. Only loosen the nut a quarter of a turn at a time as it may come off.


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.


## MODIFICATION

The footprint of the pergola is $139^{\prime \prime} \times 139^{\prime \prime}$ measured to the centre of the posts. If a smaller dimension is required, a few guidelines should be considered:


It is easier to shorten the pergola by the way shown - by shortening the lengths of the louver boards and the beams versus shortening the lengths of the pre-assembled louver bars.

## 2

Asthetically, it is best to cut all 84 boards equally so that they are even across the three rows. However, cutting only one or two rows will involve less labor.

## 3

The beams shall be cut at the middle (away from the pre-drilled hole), and equally on both halves to ensure the symmetry of the pergola.


Note: These images are for informational purposes only and are not to scale


## MODIFICATIONS

Below is an example of resizing the pergola: [In this example, the new dimensions are 139" x 121"


