



DIMENSIONS



PERGOLA CONSTRUCTION

CUTTING THE COMPONENTS

- The Cutting Diagrams show how each piece of lumber is to be broken down.
- The components are numbered in the order they are assembled.
- The Simpson Strong-Tie hardware shown in the plan adds a decorative touch to the pergola, simplifies the joinery and speeds up the assembly.

COMPONENTS LIST # **Component Name** # **Component Name** Quantity Quantity 1 4 Post 4 Rafter 7 2 5 End Brace Beam 4 4 3 6 Side Brace 4 Purlin 13

• To maintain the integrity of the wood, all cuts made in pressure-treated lumber should be treated with a wood sealer.

CUTTING DIAGRAMS

4x4 Pressure-Treated Post

Six (6) posts 8' long are required for components #1 and 5.



2x8 Pressure-Treated Lumber

Four (4) boards 10' long are required for component #2.



2x4 Pressure-Treated Lumber

Thirteen (13) boards 10' long are required for component #6.

4x4 Pressure-Treated Post

One (1) post 10' long is required for component #3.



2x10 Pressure-Treated Lumber

Seven (7) boards 8' long are required for component #4.



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PERGOLA CONSTRUCTION

DETAIL DRAWINGS

• The Detail Drawings show the dimensions for the end profiles of the boards as they appear in the plans.



2 PERGOLA ASSEMBLY

NOTE:

- Before beginning construction, confirm that your building site is in compliance with local codes and ordinances.
- A structure the size of a pergola requires a substantial base. The posts can be set into the ground or supported using Simpson Strong-Tie APB44 Post Bases.
- Posts set in the ground must be accurately located, plumb, level, set to an appropriate depth and back-filled securely.
- Simpson Strong-Tie APB44 Post Bases allow posts to be securely connected to concrete anchor bolts or an appropriate wood base.
- A concrete or wood base must be level and constructed to meet building codes and local ordinances.
- Assembly requires at least two people as well as equipment to work safely with large boards 10' above the ground.
- Temporary bracing may be required.



• Position the Post Bases as shown and secure them with the appropriate fasteners.



2.1 Position the Joist Ties on the Posts (1) as indicated.

- **2.2** Connect the Joist Ties to the Post with 3½" Structural Wood Screws and Hex Head Washers.
- **2.3** Place the posts in the Post Base and add temporary bracing to hold them plumb.
- 2.4 Connect the posts to the Post Bases using 3½" Structural Wood Screws and Hex Head Washers.
- 2.5 DO NOT remove the bracing until ALL construction is complete.

STEP 3. CONNECT THE BEAM TO THE POSTS



- 3.1 Rest the Beams (2) on the Joist Ties.
- 3.2 Confirm that the beams are square with the posts.
- **3.3** Connect the Beams to the Posts with 5½" Structural Wood Screws and Hex Head Washers.



STEP 5. CONNECT THE END RAFTERS



- 4.1 Raise the Side Brace (3) into the space between the beams.
- **4.2** The lower end of the brace should rest flat on the face of the post.
- **4.3** The upper end of the brace should be flush with the top of the beam.
- **4.4** Secure the Braces to the Beams with 3½" Structural Wood Screws, Decorative Washers, and Hex Head Washers installed on BOTH SIDES of the beams.
- **4.5** Connect the lower end of the Brace to the Post with a 5½" Structural Wood Screw and Hex Head Washer.

- 5.1 Install Joist Ties on both sides of each post to support the Rafters (4).
- **5.2** Position the saddle of the tie flush with the top of the Beam and connect the Joist Ties with 3¹/₂" Structural Wood Screws and Hex Head Washers.
- **5.3** Rest the Rafters on the Joist Ties and check the sides and ends of the pergola to ensure they are all square and plumb.
- 5.4 Secure the Rafters with 5¹/₂" Structural Wood Screws and Hex Head Washers.



STEP 7. SET THE REMAINING RAFTERS



- 6.1 Raise the End Brace (5) into the space between the Rafters.
- 6.2 The lower end of the brace should rest flat on the face of the post.
- 6.3 The upper end of the brace should be 1/4" below top of the Rafters.
- **6.4** Secure the Braces to the Rafters with 3½" Structural Wood Screws, Decorative Washers and Hex Head Washers installed on BOTH SIDES of the Rafters.
- **6.5** Connect the lower end of the Brace to the Post with a 5½" Structural Wood Screw and Hex Head Washer.

- 7.1 Position the Angle Brackets as indicated and flush with the top edge of the beam.
- 7.2 Secure the Angle Brackets to the beam with a 1¹/₂" Connector Screw.
- **7.3** Position the remaining Rafters (4) directly above the Angle Brackets and secure them with a $1\frac{1}{2}$ " Connector Screw.



- **8.1** Place the first Purlin (6) across the CENTRE of the Rafters and secure it with 3" Coated Deck Screws.
- **8.2** Working outward from the center purlin, use 6" Spacer Blocks to position each subsequent purlin.
- 8.3 After all Purlins are secured, the temporary bracing may be removed.

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