RICK'S
CUSTOM FENCING & DECKING

Vinyl Pergola 12'x16'

a simple guide to a better pergola

Tool Check List

- ☐ Marking Pencil
- ☐ Hammer
- ☐ Square
- ☐ Screw Gun
- ☐ Tape Measure
- ☐ Post Hole Digger
- ☐ Power Saw
- ☐ Plumb Bob
- ☐ String Line
- ☐ Level
- ☐ Gloves
- ☐ Line Level

1. Where to Start

The height of your Pergola is generally determined by your preference or building constraints, such as roof height. The bottom of the ledger will be the same height as the underside of the Pergola. The support beam that supports the rafters will sit 7½" lower.

Cut the 2"x6"x16' pressure treated insert and vinyl 2"x6"x16' ledger to 14'–2 ¼". Slide the 2"x6" pressure treated insert into the vinyl 2"x6" ledger. The ends should be flush.

Lay the vinyl ledger flat. From the end, measure and mark with a pencil every 12". Using a square, extend the 12" mark. Make an X to the right of your 12" mark. **(Figure 1)**

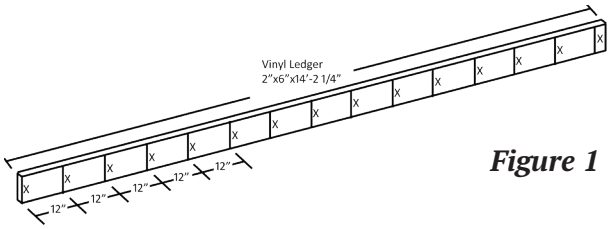


Figure 1

Glue a vinyl 2"x6" end cap on each end of the vinyl ledger, with the 2"x6" pressure treated insert inside. **(Figure 2)**

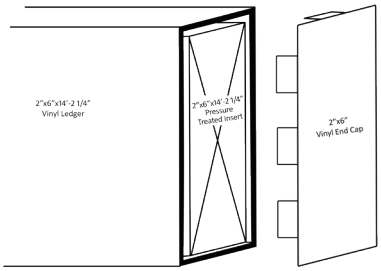


Figure 2

With the vinyl ledger on the ground, place a vinyl 2"x6" joist hanger on each end of the ledger so the bottom of the joist hanger is flush with the bottom of the ledger. Start two 3" screws through the joist hangers and into the ledger, but do not screw completely through the ledger. **(Figure 3)**

With a level, mount the ledger to the house at the correct height screwing through the end joist hangers and ledger and into the house. With the ledger in place attach the rest of the joist hangers with two 3" screws per hanger, one in the top hole and one in the bottom hole. **(Figure 4)**

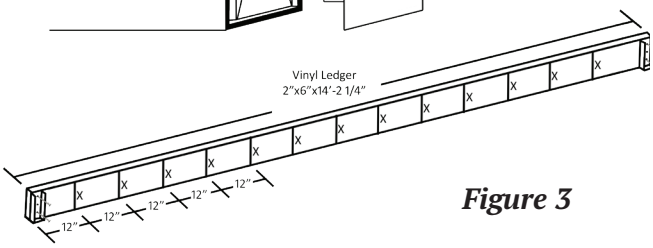


Figure 3

Do not install the ledger more then 8' in height or longer posts will be required.

2. Spacing & Squaring the Posts

Measure in 13⅛" on both ends of the ledger, hang a plumb bob and mark the house near the ground.

Pull a string line from the house 10'. Square the string line with the house by measuring a 3'x4'x5' triangle. **(Figure 5)**

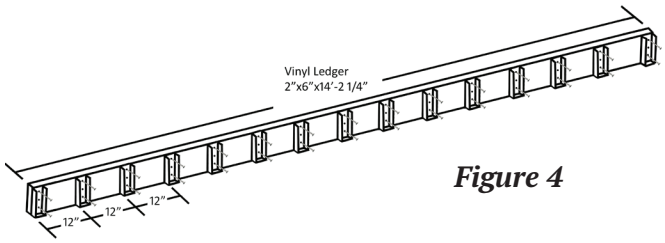


Figure 4

Pull a second string line parallel to the house, from the first string line, squaring it with a 3'x4'x5' triangle. **(Figure 6)**

Square the posts with the house by measuring diagonally from corner to corner. The measurement should be the same in both directions. **(Figure 7)**

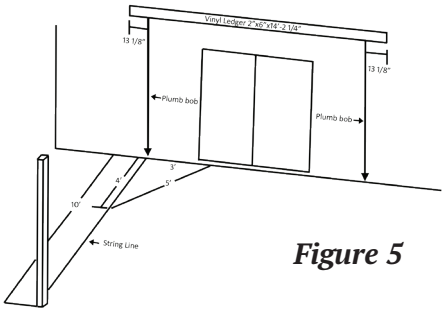


Figure 5

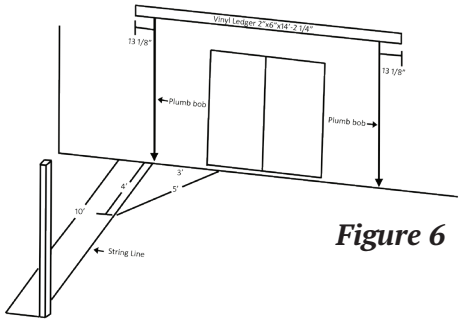


Figure 6

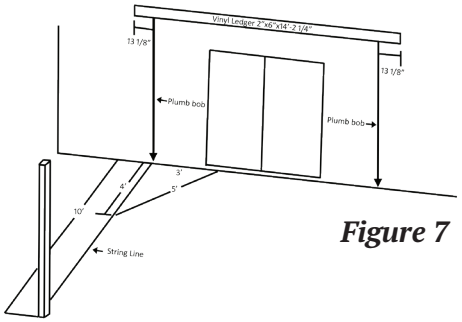


Figure 7

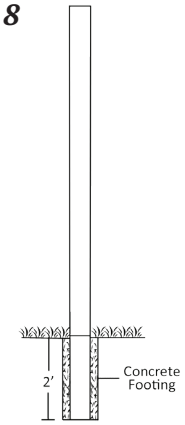
3. Setting the Posts

Posts should be set with approximately 2' of post buried in the ground and set to the desired height of your Pergola. If setting posts on a concrete patio, post brackets will be required and some trimming. Please see your sales associate.

Use a 6" or 8" post hole digger. Dig the holes 8" in diameter and straight to the proper depth and in the correct location. "Dry" set the posts by packing the posts with concrete, taking care to keep concrete along the sides but not under the posts. **(Figure 8)** Using a level, plumb the post in both directions. A helpful hint is to gently pack the concrete mix around the posts.

Double check your measurements from the house and between posts. Water down each post several times with a garden hose until water stops disappearing into the concrete. Once posts are watered down, they should not be worked on for 2 to 3 days.

Figure 8



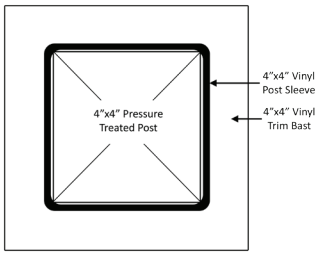
4. Install Vinyl Post Sleeve

From the base of the post, measure from the ground to the top of the 4"x4" post and cut the 4"x4" vinyl post sleeve. Slide the vinyl 4"x4" post sleeve over the pressure treated post. **(Figure 8)**

Slide two 4"x4" trim bases over each post, one facing down and one up. **(Figure 9)**

Glue the 4"x4" flat post caps to the top of the 4"x4" vinyl post sleeves.

Figure 9



5. Installing the Support Beams

Trim the 2"x8"x16' pressure treated inserts to 16'. Slide the 2"x8" pressure treated inserts into the 2"x8"x16' vinyl support beams. Glue the 2"x8" flat end caps (or optional scroll caps) to the 2"x8"x16' vinyl support beams ends.

Secure each of the 2"x6"x16' vinyl support beams, one at a time, to the posts using three 3" screws, snap caps and washers in each end of the support beam. **(Figure 10)** Line up support beams flush with top of posts. **(Figure 11)** Slide the trim base back to the top and bottom of post and glue in place.

Figure 10

6. Installing the 2x6 Rafters

Install the pergola clips **(Figure 12)** on top of the 2"x8" vinyl support beam closest to the house, one foot on center using ¾" screws and caps. **(Figure 13)**

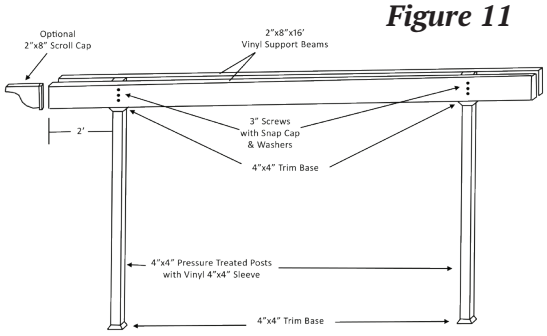
Trim the 2"x6"x12' pressure treated inserts to 12' and slide them into the vinyl 2"x6x12' rafter. Every other vinyl rafter will have a 2"x6" pressure treated insert.

Insert the first rafter with 2"x6" pressure treated insert into the joist hanger and set the other end in the pergola clip. Secure the rafter in the joist hanger with one ¾" screw and cap through the side of the joist hanger and into the rafter. **(Figure 14)**

Raise the opposite end of the rafter slightly and place a small bead of vinyl glue on the pergola clip. Set the rafter in place securing it to the pergola clip with the glue. **(Figure 15)** Continue this process on the remaining rafters, keeping in mind that every other rafter has an insert.

After the rafters are in place, glue the 2"x6" flat end caps or optional scroll caps in place.

Figure 11



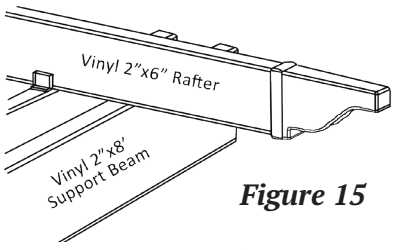


Figure 15

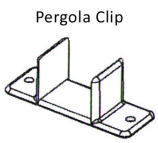


Figure 12

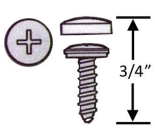
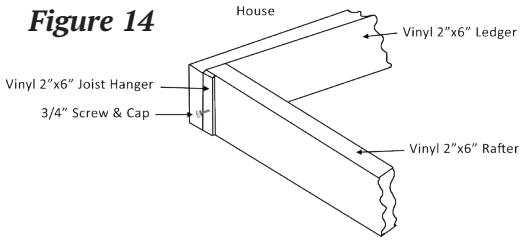


Figure 13

Figure 14



7. Installing the 2x2 Tops

The 2"x 2"s run parallel to the house and are spaced 6" on center. **(Figure 16)** Using a 3" screw, from the top screw down through the 2"x 2" and into each 2"x 6" Joist. The first 2"x2" is installed 11¼" from the house. After 2"x2" are secured, glue caps on each end.

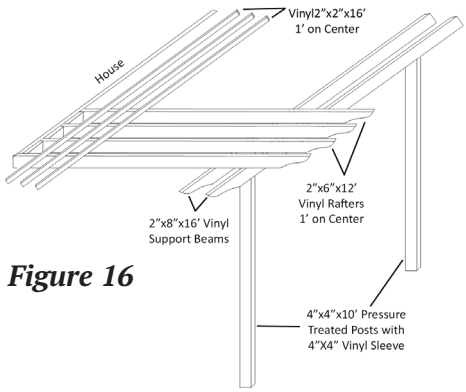


Figure 16