Home Porch & Patio Kits Inc.™

Pan System Patio Cover

W Pan & Flat Pan Systems

Installation Guidelines

Your DIY Patio Cover Kit comes with all materials, including hardware and brackets, “internal” to the kit. You will need to supply the hardware to secure backwall attachment channels and post brackets to wood decking. You probably have all the tools you will need to accomplish the installation. A list (not to be considered comprehensive) is given below. Anything else that you might need is available at any big box store.

- 4 ft. Carpenter’s level
- Chalk line (to mark level installations)
- Cordless drill/nut driver
- Caulking gun
- Chop saw with metal cutting blade (required to make accurate and precision cuts)
- Stud Finder
- Plumb Bob
- Masonry bits for drilling into concrete; masonry fasteners (if necessary)
- Safety eye-wear
- Ladder
- Metal file (to smooth cut edges)
- Hammer, Screwdrivers, Drill, tape measure
- Box knife
- Gloves

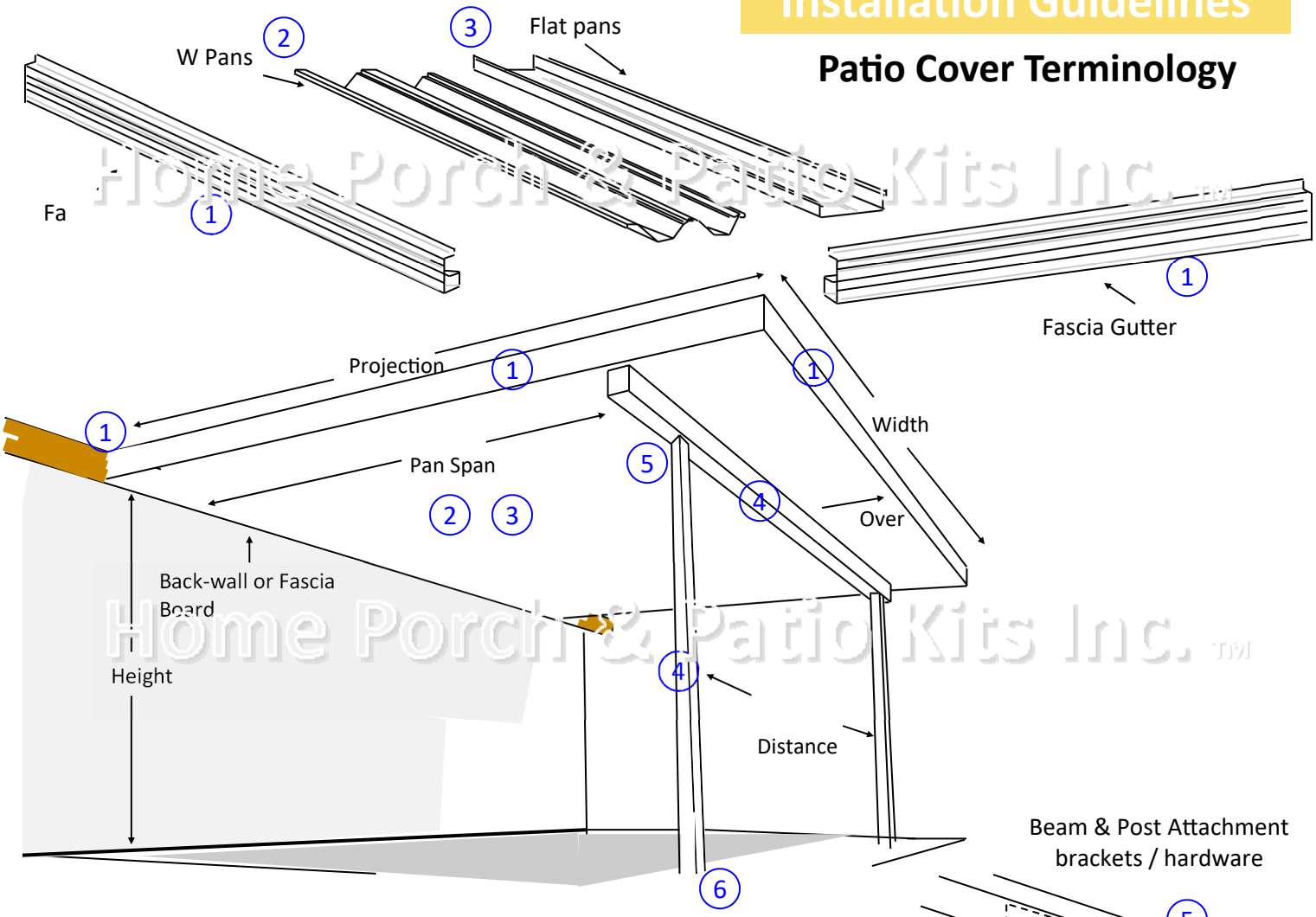
Disclaimer: *Not all parts you receive may be exactly as shown / drawn in these guidelines. However all parts that you do receive will accomplish the assembly according to your quotation. These are to be considered as general installation instructions only. You may need to make adjustments necessary to your particular circumstances.*

If you find that the materials quoted for your application are not in your order please call Home Porch & Patio Kits Inc. **first!** We will work with the manufacturer to make sure you get what you paid for as quickly as possible.

Home Porch & Patio Kits Inc.™

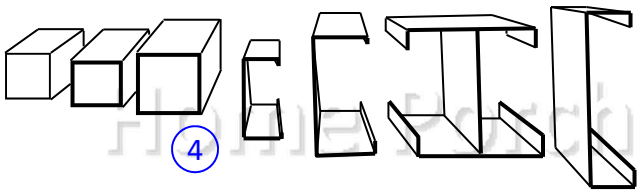
Installation Guidelines

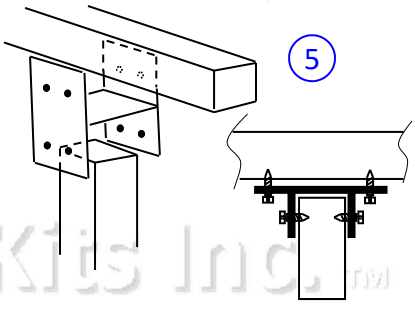
Patio Cover Terminology

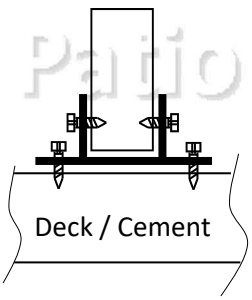


7 Different Sizes of Extruded Aluminum Beams

***Square 3”x 3” & 4”x 4” beams are also used as vertical posts**







Pan System Patio Covers

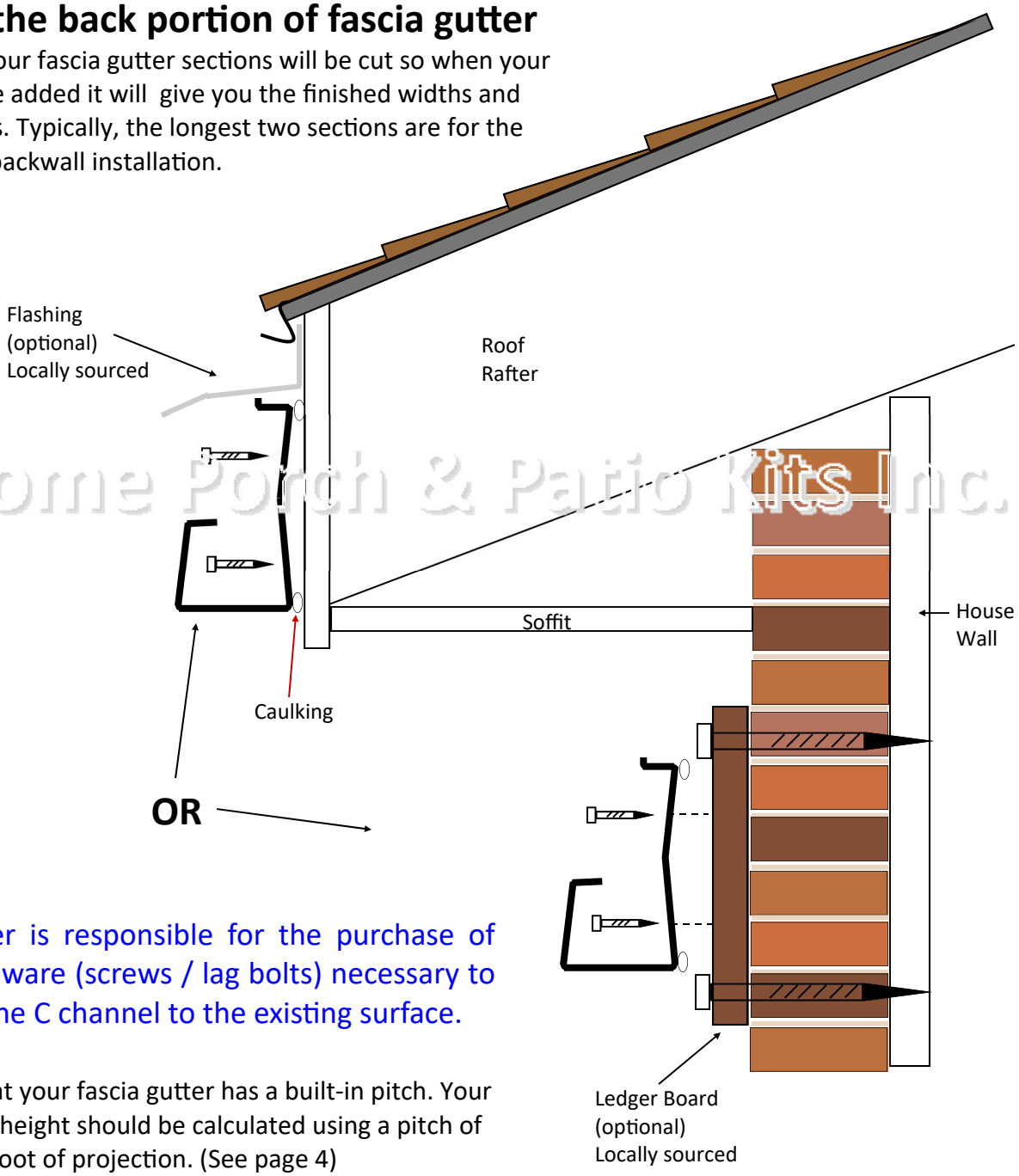
W Pan & Flat Pan roll formed aluminum pans

Instructions, fascia gutters for all four sides, 'W' pans or ‘Flat’ pans, corners, beam (where required), screws, beam to fascia hardware, sealant, scuppers, 3" x 3" or 4” x 4” posts, top and bottom brackets with hardware and fastener bars. Your unit must be anchored properly to be in accordance with all live load ratings. When a beam is used it includes angle brackets, hardware, and screws.

Installation Guidelines

Install the back portion of fascia gutter

Typically your fascia gutter sections will be cut so when your corners are added it will give you the finished widths and projections. Typically, the longest two sections are for the front and backwall installation.



Customer is responsible for the purchase of the hardware (screws / lag bolts) necessary to secure the C channel to the existing surface.

*Note that your fascia gutter has a built-in pitch. Your final post height should be calculated using a pitch of 1/4" per foot of projection. (See page 4)

Step 1

Select the spot where the rear fascia gutter will mount to the wall. Snap a level horizontal chalk line on the wall for positioning purposes. You will need to determine the exact length of the finished size of your rear fascia gutter. The finished width of your patio cover includes the corner assemblies. Therefore the corner + length of fascia gutter + corner = finished width.

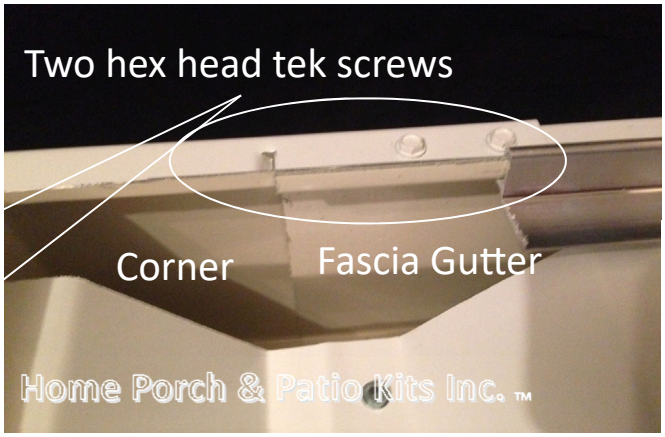
Continued on the next page...

Install the back portion of fascia gutter (cont'd)

Step 2

Depending on the size of your patio cover, it is possible that the 'finished' lengths of fascia gutter were sent to you and no trimming is necessary. Be sure to measure all lengths prior to installation and remember the finished width of your patio cover includes the corner assemblies. Therefore the corner + length of fascia gutter + corner = finished width.

Each corner piece has 'stop tabs.' This is where the fascia gutter itself stops within the corner assembly (see below). Measure the distance from the stop tab to the corner. It should be 3 1/2". This would be how much each corner contributes to the total width of your unit. Therefore if you wanted a finished width of 12' (144") it would breakdown into 3 1/2" + 137" + 3 1/2". This is each corner piece pushed on-to each end of the 137" piece of fascia gutter right up to the stop tabs.



Step 3

Corner Assembly for Rear Fascia Gutter

Slide corners onto both ends of the rear fascia gutter by inserting fascia into corner until it stop against tab. Measure rear fascia length with corners on to verify that it is the correct length. Slight corrections can be made by moving fascia away from the tab or by bending tab in slightly and sliding fascia past the tab. Once proper size is established, mark corner position and remove fascia from corners. Apply (2) two liberal beads of 'Gutterseal' one inch (1") apart and one inch (1") from end corner to all three inside corner surfaces and reinsert fascia to correct position. Use the H410 screws (painted heads) to fasten corners to fascia (see above).

If you have more that one piece of rear fascia gutter that makes up your width, you have been provided with splices and hardware with which to connect the pieces together. See Step 16 labeled "**Front & Rear Fascia Gutter Splices.**"

*The above process of including the corners in the total measurement of any side needs to be repeated for the front (assuming square it should be the same as the rear assembly) as well as for the two sides (projection). Please be sure of your math prior to cutting.

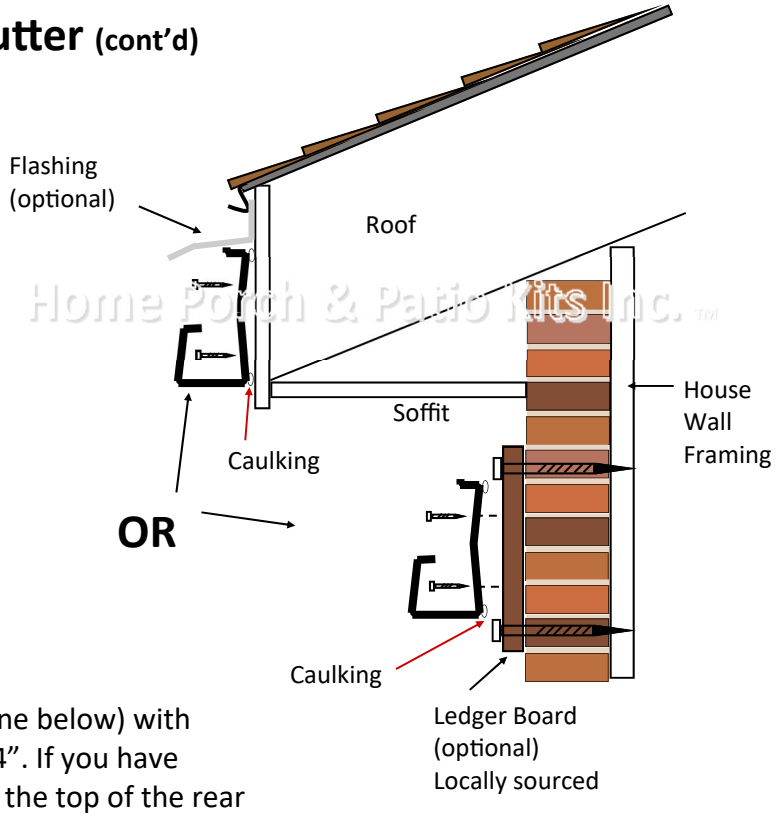
TIP : On both rear and front fascia gutter assemblies (including corners), with a pencil, starting on the left, place a mark for every pan width along the length of the assembly.

Install the back portion of fascia gutter (cont'd)

Step 4

Prior to securing your rear fascia assembly we suggest applying two beads of caulking on the back surface where it will meet the building or fascia board.

Having already determined the back-wall height of the rear fascia gutter (chalk line in Step 1), and assembled the corners (see Step 3.), with the help of one or more assistants (depending on the size of your awning) hoist the rear fascia gutter into place and lag screw it into the rafter ends (if mounting onto a fascia), the house wall or into a preinstalled ledger board on the house wall (see illustrations to the right).



We suggest two lag screws (one above and one below) with large washers at the same spot every 16" - 24". If you have room it is advisable to run a bead of caulk on the top of the rear fascia assembly once installed so as to ensure a water-tight seal. Always level and square before fastening.

*(ledger board, screws and washers purchased separately)

Step 5

Post Placements & Heights

You will now need to determine where your beam and posts are to be located. *Refer to your quotation for beam / post placement and post spacing. Each of these measurements are specific to your local load requirements.*

You will need to have your front fascia gutter assembly completed for this step. Again, if you have two or more pieces that make up the front fascia gutter assembly, see Step 16 labeled "**Front & Rear Fascia Gutter Splices.**" Assemble your front gutter assembly (see Steps 2 & 3.).

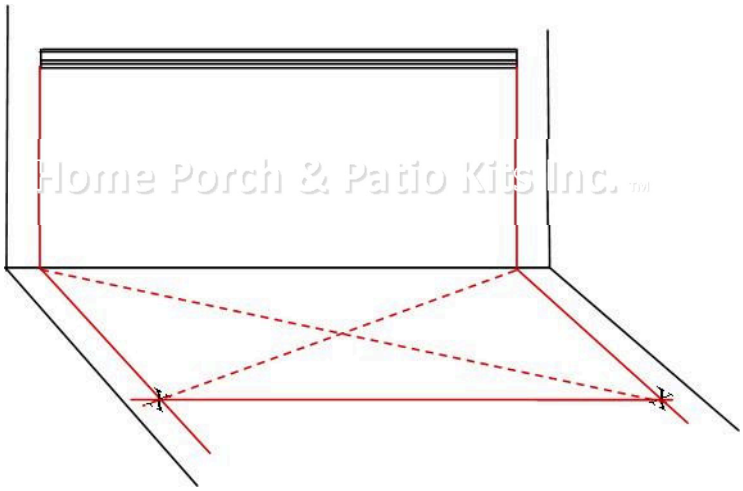
Using your quotation, determine the spacing between posts. For example if you have a 12' wide unit, with three posts and your quotation outlines a maximum spacing of 5' between posts then you would measure 1' from the left corner (on center) plus 5', plus 5'. The center of your 3" x 3" posts would sit at 1' , 6' & 11' respectively. Mark your post placement on your cement or deck.

We suggest using either of the two methods outlined in the next step to square your unit with the marks you have just made regarding your post placement.

Step 6

Post Placements & Heights (cont'd)

WARNING: Your post placements MUST be square relative to the rear fascia gutter assembly. One way to achieve this would be to temporarily insert side fascia gutters into front fascia gutter corner assemblies. Once posts are cut, with the help of one or more assistants (depending on the size of your awning) hoist the front fascia (or beam) and side fascia gutter assemblies up and support the assembly with ladders or wooden braces so that you can insert the side fascia gutters into the rear fascia corner assemblies and then put the posts into place under the front fascia gutter (or beam) **(do not do this on a windy day!).** "Square" up the awning perimeter by temporarily installing an awning pan about every 6 to 10 feet. This is IMPORTANT!



You can of course run chalk lines off the ends of the rear fascia gutter installation plumb to the deck or patio surface. Run another chalk line perpendicular from that line on the wall out along the surface of the decking or patio. Measure the exact distance of the 'on center' measurement of the distance your posts are to be installed on each of those perpendicular lines and then snap a chalk line connecting those two points. Make sure the measurement from corner to corner on the deck surface is exactly the same. This should give you a

**The main point above is to square your unit. As a DIY'er you can use whichever method you choose to achieve squaring the top portion of your installation with the [beam] & post installation!*

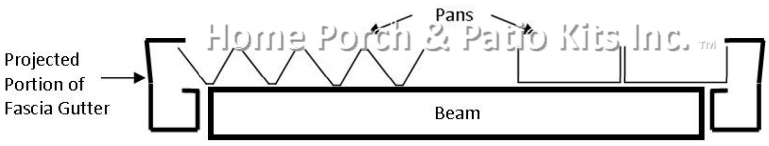
Step 7

A Point of Consideration:

As you move to calculating your post heights, remember that if your unit does **not** have a beam & post assembly, you are simply putting your posts under the front fascia gutter assembly.

If you **do have** a beam and post assembly, no matter which beam size you have (3"x3" / 4"x4" / 5"x7" / 3"x6" / 3"x10"), the beam must be cut to fit **inside** the two projection pieces of fascia gutter - - they are the ones that project away from the house wall.

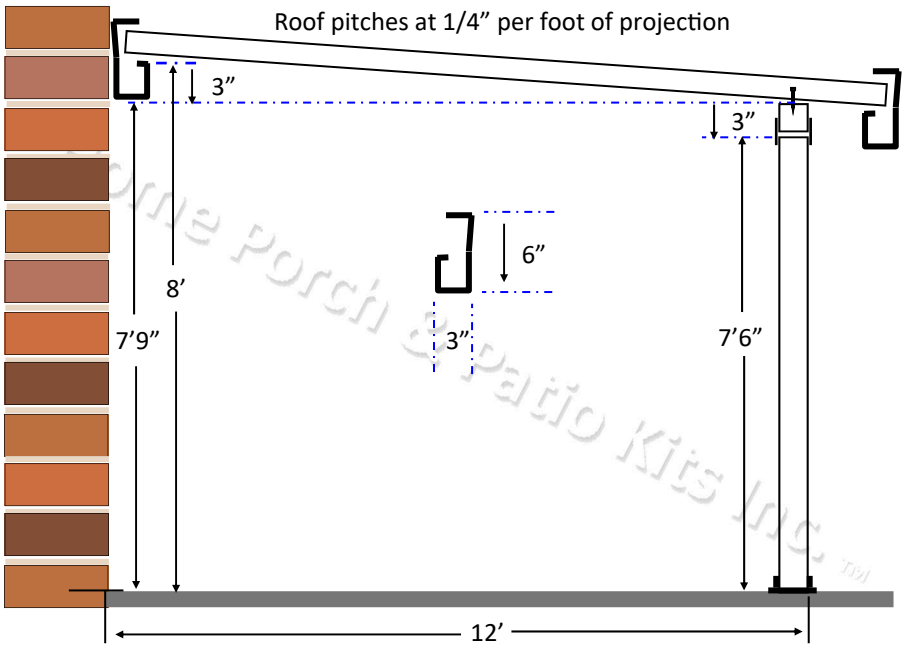
The beam must support the pans, and be directly under them as shown here. The ends of your beam will attach to the back side of the fascia gutter by means of your 4 angle pieces and supplied screws. You will use two angles per beam to fascia connection (one angle on each side of the beam). There will be two on one end, and then two on the opposite end. ***The beam size will be measured as the inside distance between the corner pieces of your front fascia gutter assembly.*



Step 8

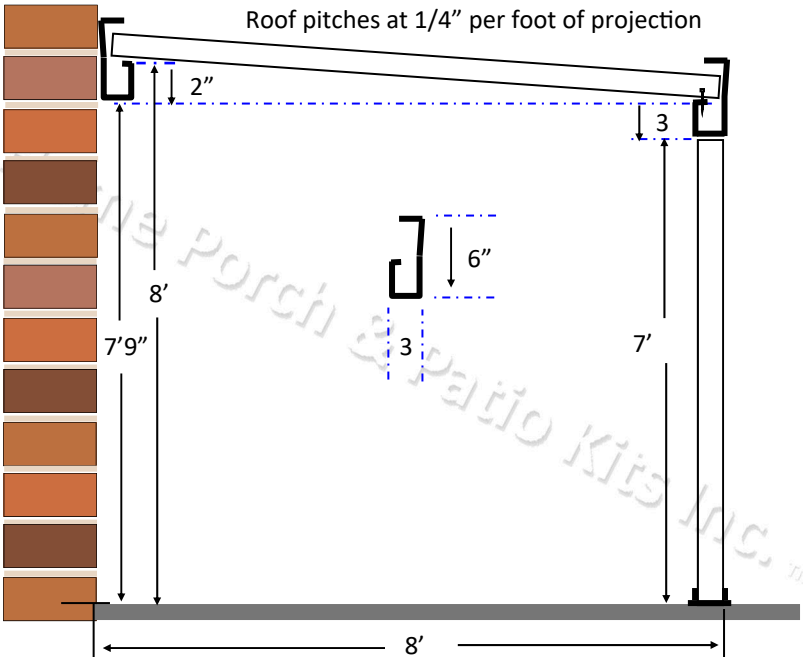
Determine Post Height

With Post & Beam: You will need to do the math to determine the finished size of your post and beam assembly. The following example is for a 13' long panel mounted at 7'9"' on the house wall. It is supported at the 12' mark by a 3" x 3" set back beam. Your numbers should be adjusted accordingly.



Using your backwall fascia gutter assembly, take the measurement from the deck / patio to the ***top of the INSIDE lip*** (that the W pan or flat pan sits on). For the purpose of this illustration, call it 8 feet. With a pitch of 1/4" per foot of projection, the total height of the post & beam assembly will be 8' minus 3 " (12 x 1/4") = 7' 9". The beam in this illustration is 3" tall which means the 8' post supplied with the kit would need to be trimmed to a finished height of 7'6". *(See illustration on the left).*

With **NO** Post & Beam: You will need to do the math to determine the finished size of your post and fascia assembly. The following example is for a panel + fascia assembly with a total 8' long projection with the unit mounted at 7'9" on the house wall. It is supported by attaching the posts directly under the front fascia gutter. Your numbers should be adjusted accordingly.



Using your backwall fascia gutter assembly, take the measurement from the deck / patio to the ***top of the INSIDE lip*** (that the W pan or flat pan sits on). For the purpose of this illustration, call it 8 feet. With a pitch of 1/4" per foot of projection, the total height of the post & beam assembly will be 8' minus 2 " (8 x 1/4") = 7' 10". This measurement is to the top of the inside lip of the front fascia gutter assembly. It is 3" from the lip to the bottom of the fascia gutter which means the 8' post supplied with the kit would need to be trimmed to a finished height of 7'7". *(See illustration on the left).*

Home Porch & Patio Kits Inc.™

Installation Guidelines

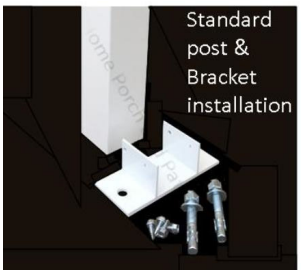
Note: On the previous page there were two examples on how to calculate your post heights. For the 3” x 3”, 4” x 4” square beams and the 5.5” x 7” I beam the same method is applied. With the 2.75” x 6.75” and 3” x 10” C-beam installation the post needs to be attached to the back side of the beam and therefore there will need to be additional post height accounted for. Page 9 (the next page) has beam to post connection illustrations to help you visualize what needs to happen.

Post & Beam Installation

Step 9

Once you have determined the finished height of your posts you can get ready to install them. Whether you are burying your posts in cement or using our bottom brackets, posts need to be installed plumb. It is best to keep installations on cement surfaces away from the edge by 3”-4” and on deck surfaces, as close to the understructure as possible. Line up the holes in our bottom post brackets along your chalk line. **Post spacing is indicated in your quotation or in pricing on our WEB site.**

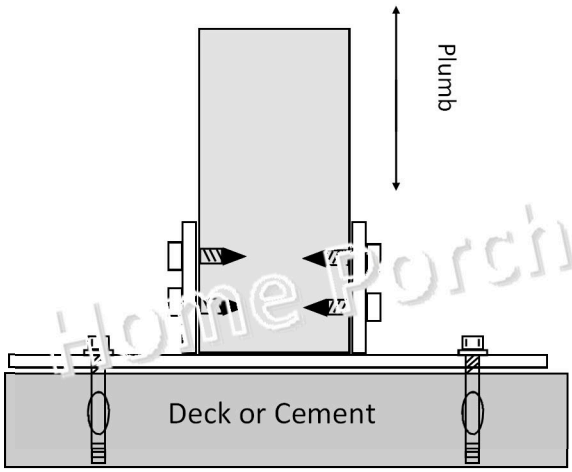
Attach the bottom brackets with the supplied hardware. For those attaching to a wood deck we suggest using nuts and bolts secured to the underside of your deck boards. Alternatively we suggest going through the deck boards with a large lag screw into the support structure below. If you are cementing your posts into the ground, we suggest you ask for posts long enough where at least 2’ of the total height of the post is in the ground.

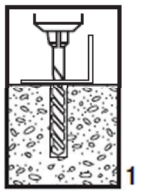


Once the bottom brackets and posts are installed, cut your beam size (if necessary). A reminder that no matter which beam size your unit requires the finished size of the beam is from inside face to inside face of the finished, assembled front section with the corners installed.

Step 10

Methods of Post Installation





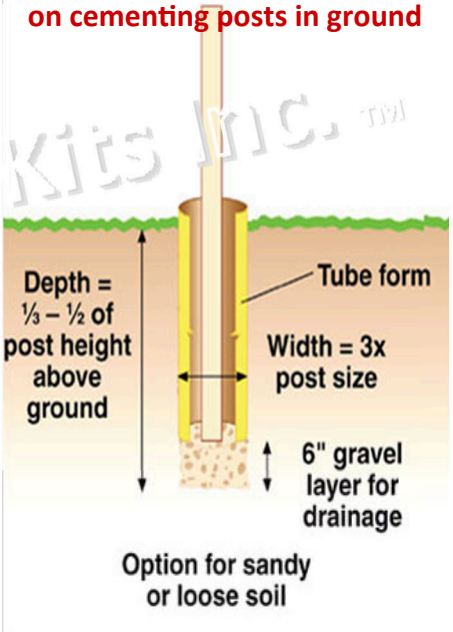
Drill hole with masonry bit at least as deep as the anchor is long.

Clean out hole by blowing out dust and debris.

Drive anchor bolt into the hole without damaging the

Tighten two or three turns from finger tight position to achieve a good

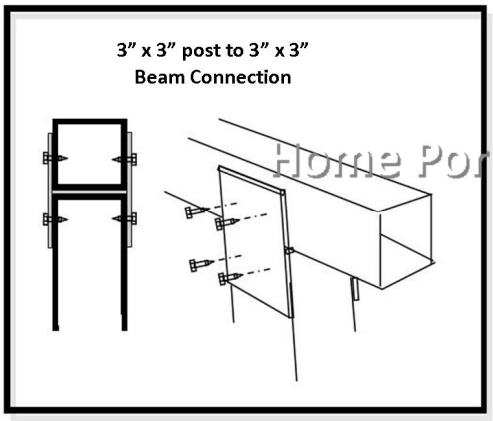
We suggest going to Quikrete.com for information on cementing posts in ground

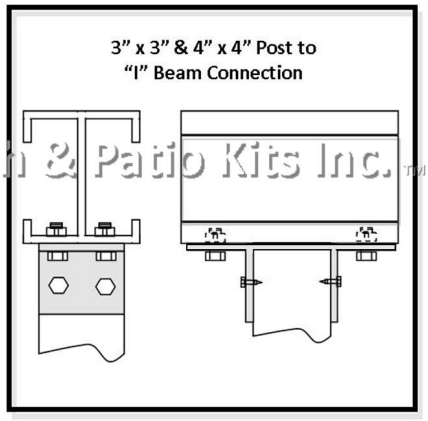


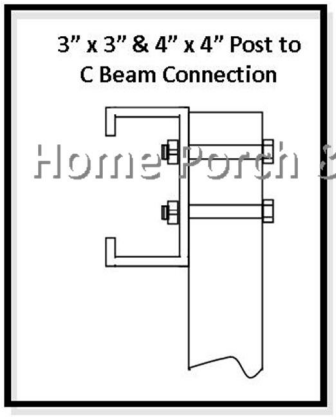
Post & Beam Installation (cont'd)

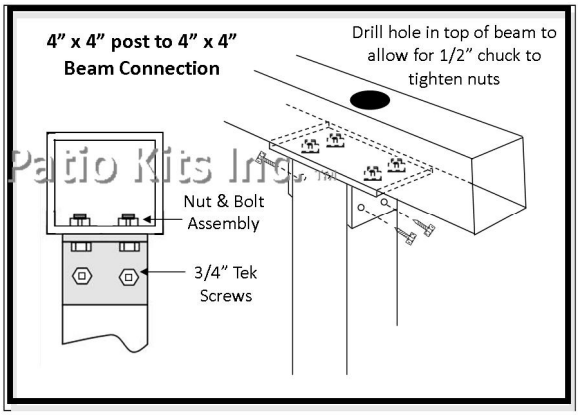
Step 11

Methods of Post To Beam Connections









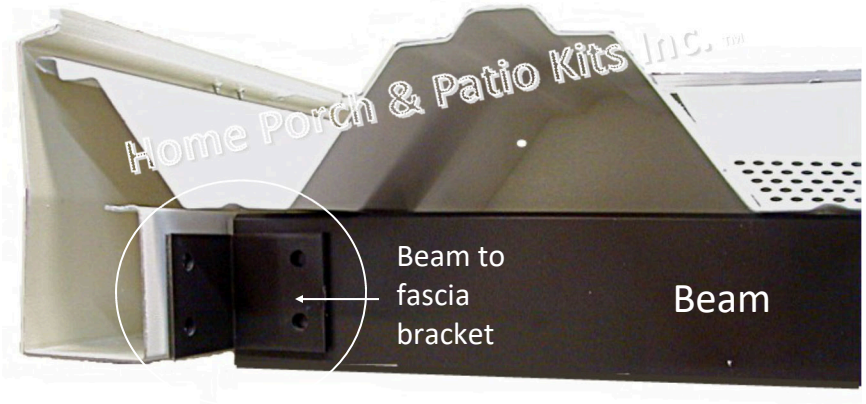
Install the supplied beam. The beam size is indicated in your quotation. You have been supplied with a beam **and** all the "beam to post" connection hardware. All square beams will also come with finishing end caps. You can see illustrations on the beam to post connections to the left.

If you do not have a beam to install, your posts are going directly under the front fascia gutter. The post to gutter brackets can be installed on the top of your installed posts at this point.

Front & Side Fascia Gutter Installation

Step 12

With the back portion of the fascia gutter already installed (steps 1-4) and your posts [and beam] installed, you can now attach the left side fascia piece. You will need to make sure that the length of your projection pieces WITH CORNERS add up to the desired finished projection.



If you have a beam and post installation, attach the projection piece to the back wall installation and connect the side fascia gutter to the end of the beam with the supplied brackets and hardware. Depending on your unit the hardware could be either TEK screws or a set of nuts and bolts. In both cases we suggest attaching the brackets to the beams first. Then secure the fascia gutter to the brackets. Repeat on the right side and then secure the front fascia gutter [and corners - Step 3] assembly to the side fascia installations.

Home Porch & Patio Kits Inc.™

Installation Guidelines

Front & Side Fascia Gutter Installation (cont'd)

Step 13

With the back portion of the fascia gutter already installed (steps 1-4) and your posts [and beam] installed, you can now attach the left side fascia piece. You will need to make sure that the length of your projection pieces WITH CORNERS add up to the desired finished projection.

If you have a front gutter & post installation, with help, attach the left side projection piece of fascia gutter to the back fascia gutter installation and at the same time attach it to the front gutter assembly, while resting the front gutter assembly gently on the post and bracket assemblies. Square the assembly and mark where the post and brackets will be attached to the underside of the front gutter assembly. Holding the left and front fascia gutters in place, before securing anything, install the right side gutter assembly to the front and back gutter assemblies. Rest the front gutter on the front posts. **Keeping things square**, attach the bottom of the front fascia gutter to the front post assemblies using the 1/4" - 20 hex D machine screws supplied. Use 'Gutterseal' around holes in brackets and attach the brackets to fascia.

Your fascia gutters should be square to the backwall and fully installed.

Suggestion: You can help "square" up the awning perimeter by temporarily installing an awning pan about every 6 to 10 feet.

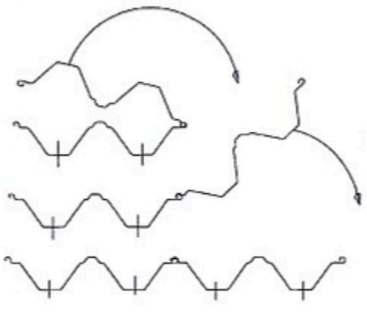
W Pan / Flat Pan Installation

Step 14

With the perimeter installed and squared up, start installing the awning pans on the left side of the awning (left is determined by standing in the backyard and looking at the awning). The edge of the very first and the very last pan ride in the upper slot of the extruded side fascia's.

You may need to "squeeze" the pans slightly as you go in order to stay on the marks (see tip in step 3) you have placed on the rear and front fascia gutters. The pans are designed to interlock by "rolling" the edge of each consecutive pan into the lock of previously installed pan.

Screw down each pan as you go. You will use the P408A #8 - 1/2" stainless TEK screws to attach the pans to the lip of front and back fascia gutters. You will use the same screws, with a liberal bead of caulk to attach the bottom of the pans to the beam. Pay attention to your spacing marks as you progress (see tip in step 3). You may want to caulk all exposed screw heads as you go. Continue installing pans, occasionally checking both corners for square-ness. If a correction needs to be made, do it immediately, as the awning becomes stronger with each screw that is applied! It is possible that the last pan may need to be ripped along its length to fit as the last pan to be rolled into place.



W Pan / Flat Pan Installation (cont'd)

Step 15

When all awning pans are securely fastened in place, install your **optional** leaf guards. Leaf guards are not available on the 12" flat pan systems. Once your leaf guards are installed, use the P408A #8 - 1/2" stainless TEK screws to screw the fastener bar to each roof panel 'interlock.'

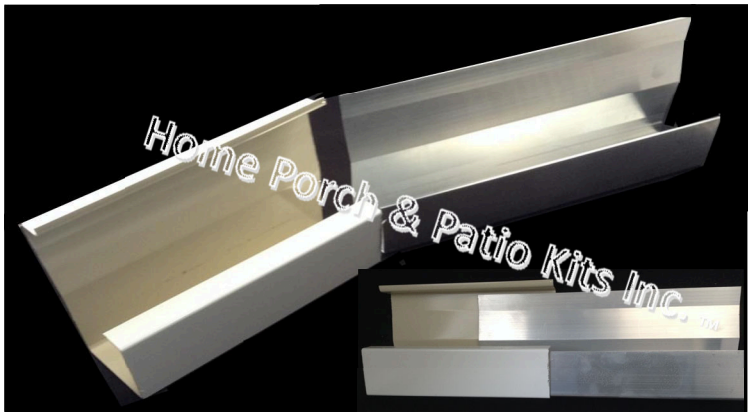
Flashing: (not supplied with the kit) Depending on your situation, you may want to install flashing. Install the flashing by tucking it under the existing drip edge or roof tiles, and securing to your home. If possible screw the flashing ONLY to the TOP OF THE INTERLOCKS of the awning pans. Caulk where necessary. If you are installing your unit directly underneath an overhang projecting 12" or more from the structure and the unit will be installed within 5 inches of the underside height of the overhang, the flashing is not normally needed.

Final Notes

Step 16

Drain Installation
You will receive 'drain scuppers' in your parts box. You can use these OR you can purchase a downspout assembly locally. Note that a minimum of 3 drain caps (scuppers) are to be installed in the front fascia gutter, one in the center and one each on either end, 12" away from each corner. One drain cap per 100 sq. ft. of canopy.

Front & Rear Fascia Gutter Splices:
For longer gutter assemblies, the front and rear fascia gutters must be "spliced." Keeping the front fascia gutter on level, caulk the outside faces of the splice piece, slide it into the first piece of fascia and then bring the second piece in from the other side. use the H410 screws (painted heads) to screw into the back and front of the gutters along the seam. Caulk all seams inside the gutter and the exterior butt joint.



Installation Guidelines

If you believe you have a problem with the materials supplied for your application please call Home Porch & Patio Kits Inc. first!
The manufacturer cannot respond to customer inquiries or phone messages.
We are well equipped to step in and solve any issue you may have with your purchase.

Now… Sit back and ENJOY!

NOTE: We have sat in a room with a dozen professional installers of these types of products and we walked away with a dozen different ways of installing them. The point is, as simple as these structures are, there are many ways of accomplishing the same thing. These pages are a compilation of methods which are to be used as a guideline for your installation. Common sense and a little forethought will easily overcome the many variables that might arise in your particular situation. These kits are very adaptable! If you find yourself with questions… no problem! We will gladly work with you toward a solution. Please call us toll free. Home Porch & Patio Kits cannot be held responsible for errors in cuts made along the way. Should you find yourself in need of additional material, again, we are only a phone call away. We will always work to minimize the cost and expedite shipments!

1.844.404.0484

www.homeporchandpatiokits.com

*DANGER! Do **NOT** attempt to walk on your pan system patio cover