



PATIO RAILING

INSTALLATION INSTRUCTIONS



Read the instructions before starting the job. They explain the steps required to produce a finished product that will meet factory specifications.



Check the material received.
Match your shipment with the Bill of Materials.
If there is a shortage or wrong material,
call Dealer Service immediately.

Safety is important!
Wear Safety Glasses and Work Gloves.
Follow all safety practices while assembling
and installing this product.

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FASTENERS	DESCRIPTION
	#10 x 1" Hex Head Screw (Magni 599 Coated)
	#12 x 1-1/4" Self Drilling Screw
	#8 x 1/2" Self Drilling Screw
	1/4"-20 x 2-1/2" Expansion Bolt
	#10-24 x 7/8" SS Truss Head Screw with #10-24 Aluminum Nut
	#14-10 x 2-1/2" Galvanized Hex Head SMS Attaches Post Foot Plate to Wooden Deck. <u>(Full Embedment Required!!!)</u>
	Plastic Lag Shield

Tools

Drill, Screw Gun, 1/4" Nut Driver, 5/16" Nut Driver, 3/8" Nut Driver, Hack Saw,
Tape Measure and Level

Drill Bits: 13/64", 3/16", 1/4" & 1/2" Masonry Bit

Installing Free-Standing Posts

Note: If you are installing Free Standing Posts on a Pressure Treated Lumber Deck. With your order you will receive a 4" x 4-1/2" piece of Black Flashing with paper coated adhesive on one side for each Free Standing Post. Peel the paper off from the Flashing and stick the Flashing to the bottom of the Free Standing Posts. Then trim the excess Flashing from around the Free Standing Posts. Left over pieces can be used under the Floor Flanges.

1. For a wooden deck locate the positions of all Free-Standing Posts and pre-drill with a 1/8" drill for the Posts Foot Plate. Fasten the Post Foot Plate in those locations using four (4) #14-10 x 2-1/2" Galvanized Hex Head SMS. **(Full Embedment Required!!!)**

On a concrete patio, mark positions of Post Foot Plate holes on concrete. Set Posts aside. Drill holes for the 1/4"-20 x 2-1/2" Expansion Bolt with a 1/2" masonry drill bit. Install 1/4"-20 x 2-1/2" Expansion Bolt in holes. Replace Posts and fasten with 1/4"-20 nuts and washers.

Helpful Hint: Do not attach Railing directly into home, use Free-Standing Posts.

Helpful Hint: To plumb the posts it may be necessary to use washers under the post base.

After completing the installation of the railing, for extra stability, especially on free standing Posts that do not have Railing attached on both sides, you can install #12 x 3/4" screws above or below the factory installed screws.

No stabilizing screw should be more than 3-1/2" above the Deck.

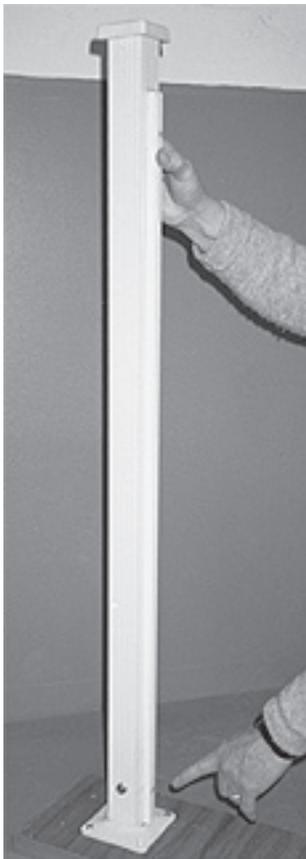
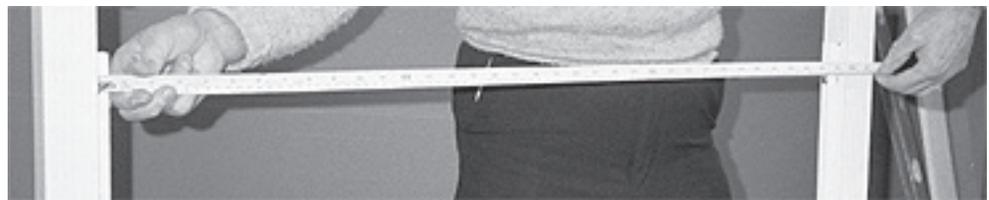
Installing Railing Between Free-Standing Posts and Awning Posts

Railing is supplied in standard lengths of 24", 36", 48", 60", 72", 84" and 96".



Step 1

All Posts need to be plumb and parallel. Check plumb with a level. Measure distance between Posts at 4" and 36" up from the deck. If Awning Posts need adjustment, at the front header back off the screws in the post insert and straighten the post to plumb. Reinstall screws. If more adjustment is needed, it is done when you trim the top and bottom rails as shown in Step 4.



Step 2

Two Mounting Spindles are included with each section of railing. They are 1/2" square and 36-1/4" long with two 13/64" holes. Hold a Mounting Spindle centered against side of Post with the bottom of Mounting Spindle 1/2" above Deck.

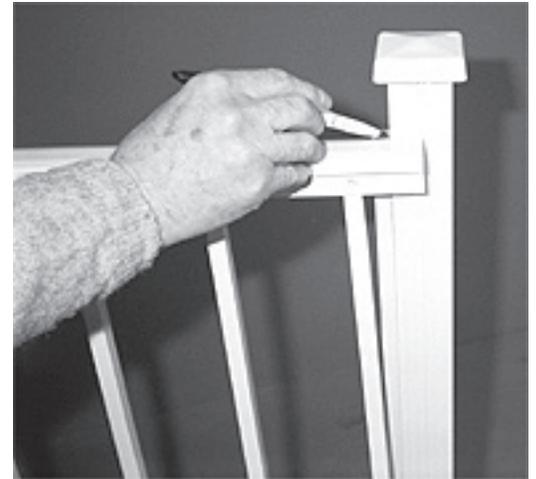
Step 3

Insert #12 x 1-1/4" screw through top hole in the Mounting Spindle, then drive the screw into post. Tighten to a snug fit. Install bottom screw as above. Fasten second Mounting Spindle to opposite Post Column in same way.



Step 4

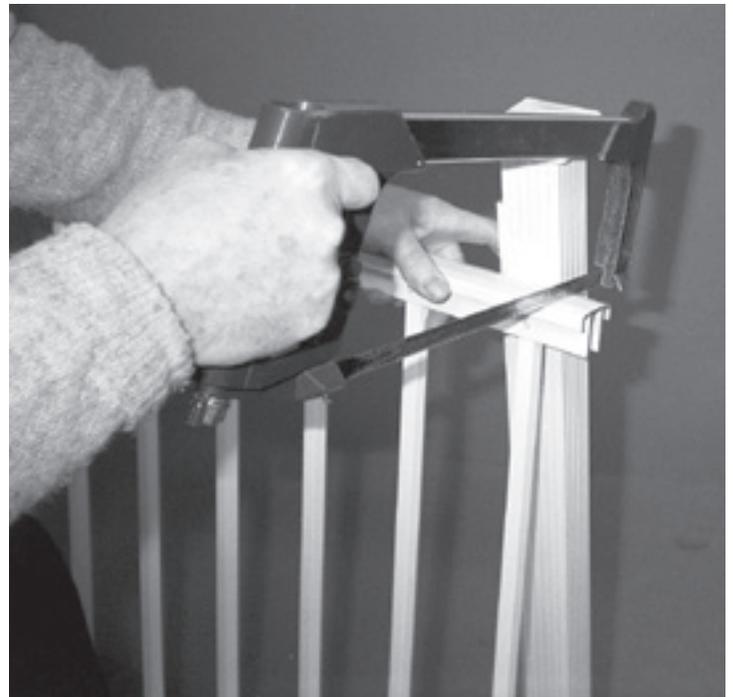
Measure distance between Posts at top and bottom of Spindles. Mark top and bottom rails of the railing section so that an equal* amount will be removed from each end. *If you are compensating for out-of-plumb posts, the amount removed from each end may be a different amount.



Step 5

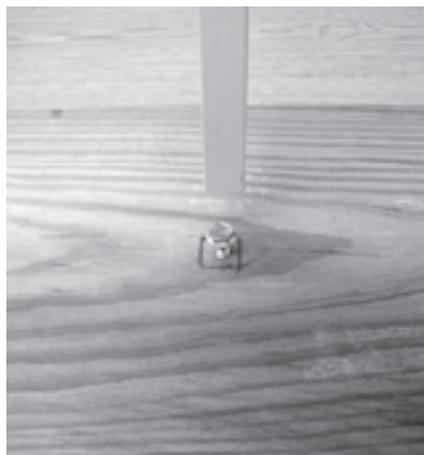
Cut Top and Bottom Rails with hacksaw or metal cutting power saw to fit between the Posts.

If it is necessary to move or remove a railing spindle, drill out the rivets using a 3/16" bit. If repositioning, drill holes in rails at new location and fasten with nut and bolt. (Not supplied)



Step 6

Rack the railing assembly slightly to start the railings on the spindles. Then insert the railing section between the Spindles and slide top of railing down over Spindle tops.



Step 7

If any of your Railing Sections have Support Spindles, trace around the spindle and remove the railing then install a #10 x 1" hex screw. The screw should stick out from the deck 1/4" to 3/8". Locate the Floor Flange in your hardware package and install a piece of black flashing on the bottom. Trim flashing to fit outside and inside of Floor Flange. Install Flange on the support spindle. Then re-install the railing making sure the support spindle goes over the #10 x 1" hex head screw.



Note: If you are installing the Railing on a concrete patio, you will have to mark the location in the same manner as above. Use a 1/4" masonry drill bit and drill 1-1/4" deep. Install a plastic lag shield and install the #10 x 1" hex head screw in the same manner as above.

STEP 8

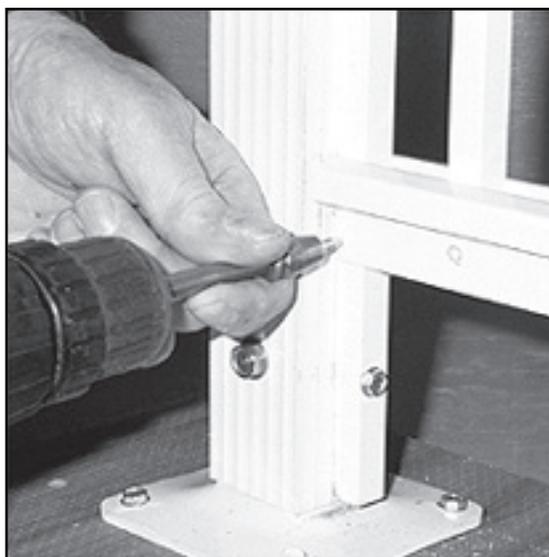
Level Railing Section and align with any adjacent railing.



STEP 9

Fasten both ends of Top Rail to Mounting Spindle using #8 x 1/2" Screws.

Follow the same procedure to fasten bottom Rails to Mounting Spindle.



Stair Railing

Installation Instructions

Installing Free-Standing Posts

Locate the positions of all Free-Standing Posts and pre-drill with a 1/8" drill for the Posts Foot Plate. Fasten the Post Foot Plate in those locations using four (4) #14-10 x 2-1/2" Galvanized Hex Head SMS. **(Full Embedment Required!!!)**

On a concrete patio or sidewalk, mark positions of Post Foot Plate holes on the concrete. Set Post aside. Drill the holes for Expansion Bolt with a 1/2" masonry drill bit. Install 1/4"-20 x 2-1/2" Expansion Bolt in holes. Replace Post and fasten with 1/4"-20 nuts and washers.

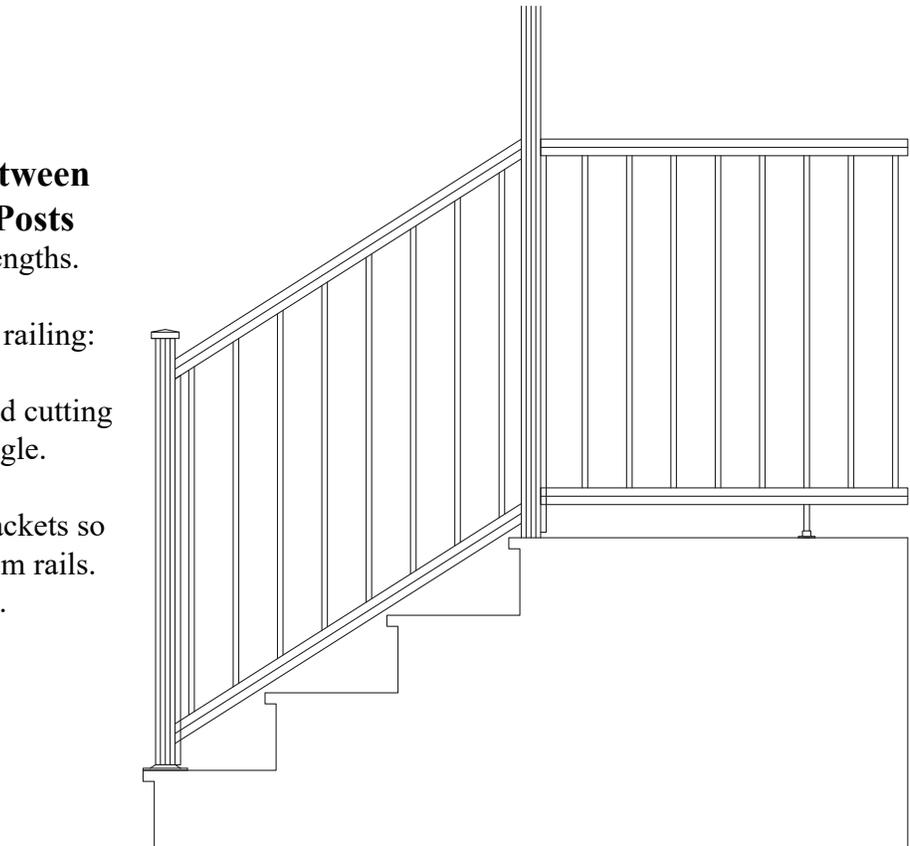
Helpful Hint: Always use Free-Standing Posts at the home.

Installing Stair Railing Between Free-Standing or Awning Posts

Railing is supplied in standard lengths.

There are two methods to install railing:

- A. Install Mounting Spindles and cutting top and bottom rails at proper angle.
- B. You have ordered Swivel Brackets so you can square-cut top and bottom rails. Instructions are on the next page.

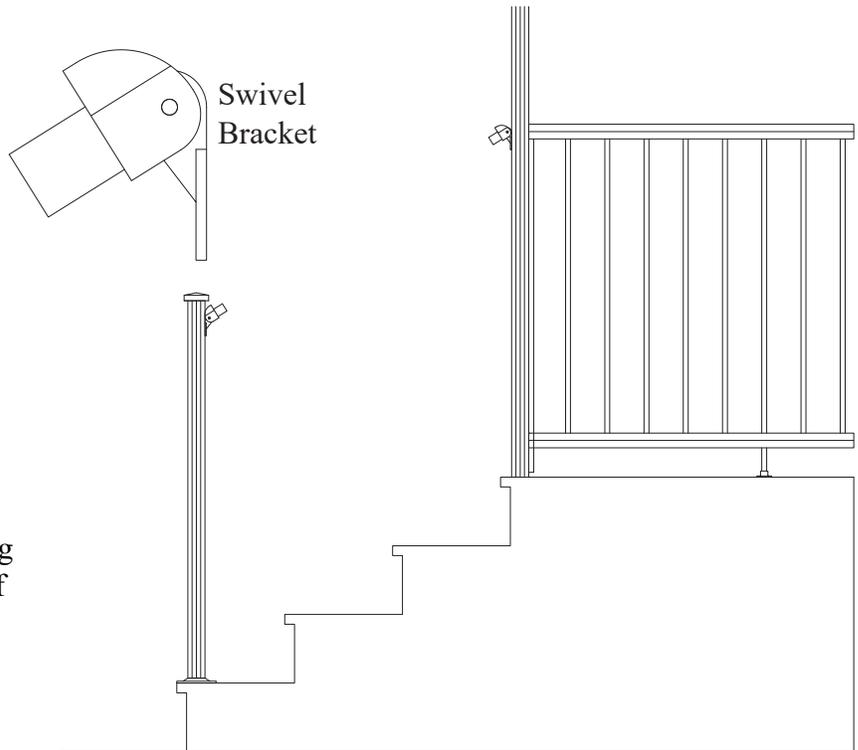


A. To install Mounting Spindles turn to the Patio Railing instructions and follow Steps 1 through 5. However, in Steps 4 & 5 you will be marking the angle on the top and bottom rails. The straight cut shown in Step 5 will be at an angle. Then continue the installation as shown in Steps 6 through 9.

Instructions to install railing using the Swivel Bracket are on Page 7.

Installing Railing using Swivel Bracket

Install a Swivel Bracket on Post at the top of the stair. Center the Swivel Bracket on side of Post where top of railing will be attached. Then raise or lower it until the rounded top of the Swivel Bracket is level with railing already installed on the Deck. See Drawing. Attach to Post with #8 x 1/2" Screws provided. Measure from Deck to bottom of Swivel Bracket. Use this measurement to position Top Bracket on other Post.



Place railing up against the Posts, leaving an equal amount of excess at each end of the railing. Mark the railing at the back end of the Swivel Bracket where the railing will be inserted. See drawing.

Cut Top and Bottom Rails with hacksaw or metal cutting power saw. If it is necessary to move or remove a railing spindle, drill out the rivets using a 3/16" bit. If repositioning, drill holes in rails at new location and fasten with nut and bolt. (Not supplied)



Slide Railing into position down over the Swivel Bracket. Now mark the Post at the bottom where Swivel Bracket is to be installed. Remove Railing and install bottom Swivel Brackets.

Slide top and bottom Rails down over the extended Swivel Brackets at each Post. The Swivel Brackets may need to be adjusted up or down for the proper angle.

Drill a 13/64" hole through the Rail and Swivel Bracket. Install a #10-24 x 7/8" SS Truss Head Screw with #10-24 Aluminum Nut for each Swivel Bracket.