



WOOD & VINYL PRODUCTS
INTERSTATE

Vinyl Fence and Railing Installation

Prior to installing your fence...

We strongly recommend that the survey of the property be used as you are responsible for the proper location of your fence.

Research your local ordinances and regulations regarding fencing and railing before installation. (You may need to know pertinent information such as height restrictions and property line setback requirements.)

KNOW WHAT'S BELOW BEFORE YOU DIG! If a digger's hotline exists in your area, call that first. If not you will most likely have to contact local utility companies to learn of any buried lines, pipes, cables, etc.

Please read the entire installation instructions before starting the installation of your fence or railing. If your installation is different than shown, please contact your dealer for assistance. Failure to follow instructions will void any warranty on the product.

Collect all necessary tools, materials and supplies before you begin. If your installation requires setting more than a few fence posts, anticipate renting or borrowing an 8" or 10" power auger. Using a power auger for your installation will significantly reduce the time and effort required to set posts and is highly recommended. As always, use appropriate tools and safety devices as per manufacturer's recommendations.

Plan ahead. Develop a good post layout sketch or drawing of the fence line, or railing line.

Determine if you are going to have to "cut down" any panels. Keep in mind that a symmetrical layout is pleasing to the eye. For example, say you have a 40' fence line on the right side of your back yard and a 28' fence line across the rear. On the right side of your back yard, you would most likely use five pre-assembled 8' panels. Regarding the rear however, your first inclination may be to use three pre-assembled 8' panels and one that you would cut in half to 4'. But cutting each panel to 7' will give the rear fence line a symmetrical look that's nearly indistinguishable from the 8' panels in the longer fence line.

"CUTTING DOWN" FENCE PANELS

Under many conditions panels may have to be "cut down" or reduced in length. Please consider the following information or suggestions regarding particular styles of fence:

Privacy Fence - Because the privacy panels include 6" wide pickets, it is best to reduce the length of the panel in increments of 6". If you do not follow this course, you would have to "rip" the pickets in the middle, which would most likely require the use of a table saw or circular saw. Once you have determined the actual length needed, cut only one end of the rails or lattice to achieve the desired measurement.

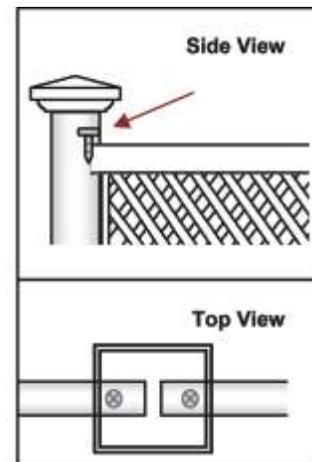
Picket Fence - You may reduce length on rails using the same method stated above. When eliminating pickets from a "scalloped" panel, remember that you will have to insert the pickets in such a way that it resembles the scallop, or slope, of the original panel.

SECURING "CUT DOWN" RAILS

In instances where rails must be cut down, if possible be sure to cut material from one end only as this will ensure that you

replace only one set of notches and not two. After cutting any rail, you will need to make accommodations to replace the notches that you have removed. Notches are required on the ends of bottom rails to keep the rail snugly inside the post.

A simple method for replacing the notches on top rails is to drive a stainless steel screw into the rail through the opening in the top of the post. Insert the screw into the rail so that the shaft or head of the screw rests close to the inside wall of the post. This will make certain that the top rail remains inside the post if force is applied to pull it out.



Another method for replacing the notches on a bottom rail also utilizes a stainless steel screw. Instead of driving the screw partially into the top wall of the rail, insert it fully into the front face of the rail as close to the end as possible. Simultaneous to inserting the rail into the post, use applied pressure from your thumbs to deflect or "bow in" the face of the rail enough so that the head of the screw passes through the routed opening of the post. This method will also ensure that the top rail remains inside the post if force is applied to pull it out.

LAYOUT OF FENCED AREA

Carefully measure off the entire area marking the location of each post. Using stakes with a straight line between them will greatly improve the final appearance of the fence. There are three basic post styles: Line posts are for use when there will be a fence panel passing straight through each side. Corner posts are for use when there is a 90-degree or right angle turning a corner. End posts are for use when there are no additional fence panels to be installed.

ROUTING END POSTS AND CORNER POSTS

To obtain a finished look for the end of your fence line, you will need to route separate end posts. Using the template provided by your dealer, you may trace the appropriate holes and use a rotary tool to make the routes. Corner posts are routed the same way using the provided template.

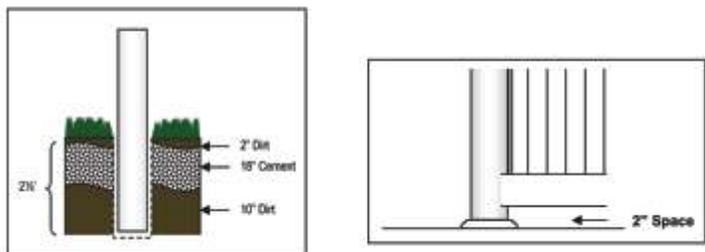
INSTALLING POSTS

After each post has been positioned and marked, use an auger or posthole digger to begin digging the required holes. Each hole should be large enough to allow for some adjustment of the post inside the hole. In general, when using a 5 x 5 post, a 12" round hole is recommended, and a 10" hole when using a 4 x 4 post. The depth of the hole will be determined by the style of fence purchased.

In general, due to the freezing and thawing in some areas, fence panels should not be installed tight to the ground. To allow for strong and secure fence systems, a 2" clearance between the bottom of the fence and the ground is recommended.

To properly install the fence panels, each post should be positioned and set in place using about 10 inches of dirt or

gravel in the bottom of the hole and then filled with concrete to within 2" to 4" of the grade level. Care should be taken that the post is positioned properly and is level before concrete has set. After the first post has been set and secured, the fence panel is inserted into the routed holes and pushed in until the locking notches are securely holding the panel. The next post is positioned in the hole to receive the fence panel rails securely, making certain the locking notches securely hold the fence panel in place. After the second post is properly positioned, make certain that the bottom of the fence panel is blocked up to maintain the 2" clearance.



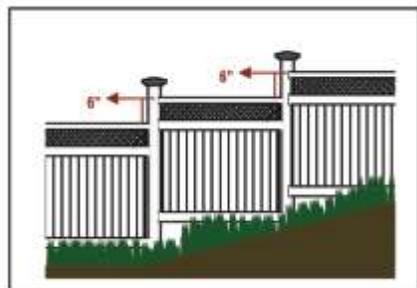
The same procedure used in the first post installation should now be completed for the second post. This routine should be continued until all post and fence panels have been installed. After the concrete has set and cured, remove any blocks. A layer of dirt should cover the concrete to grade level. Keep in mind that the concrete may take a few days to fully cure, depending on the climate.

INSTALLATION OF FENCE ON IRREGULAR TERRAIN

Racking can be done with most picket or ranch rail fence panels, to follow an irregular terrain. In general, these styles will support a rack of approximately 2" over an 8' section offence. Keep in mind that the racking of the panel will reduce the distance between posts. Depending on the amount of racking to the fence panel, you may need to enlarge the routed holes in the fence post to allow for the angle of the rails. Enlarging the holes can be done with a router or rotary tool to increase the vertical length of the opening.



The tongue-and-groove privacy panels allow for a minimal amount of racking. The maximum level of racking for these panels is 3/4" per 8' panel. To accommodate uneven terrain, it may be necessary to cut each picket to "fit" the slope.



Stepping sections on a sloped terrain generally allows a square and level look. Certain fence styles may only be properly installed in this manner. When stepping is necessary due to the grade, always make even steps, as shown below:

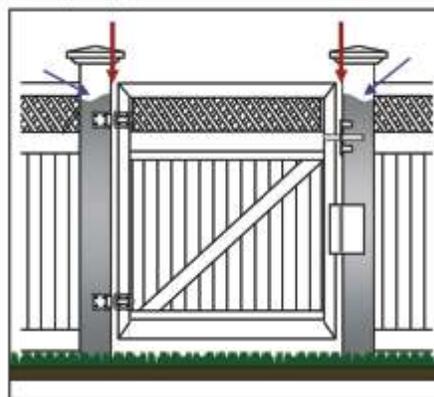
GATE INSTALLATION

Prior to installing your gate(s)....

- If you have a pool, you should check with your town's building department for regulations and/or special requirements of the gate(s).
- Note, when setting gate posts a standard walk gate opening is generally 42" or 48" from post to post.
- When planning for the gate installation. It is very important to put the gate on the flattest grade possible.

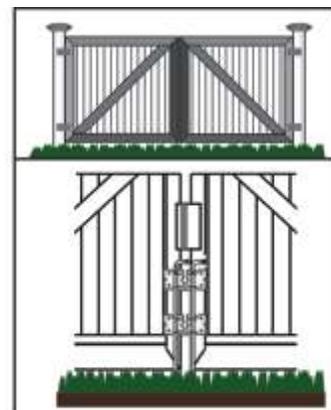
A minimum of 1" space, no more than 1 1/4", is to be maintained on each side of every gate frame being installed. For double drive gates, this includes the spacing between the two gate frames as well. In addition, be sure to allocate space to the bottom of the gate(s) to allow clearance when opening and closing.

To properly install the gate, you should set the post at a depth of 36" and the diameter should be 10" to 12" depending on the size of the post (e.g., 4" x 4" post = 10" diameter and 5" x 5" post = 12" diameter). We recommend putting two pieces of 1/2" rebar in each of the hinge and latch posts. The rebar should reach from the bottom of the hole to within 12" of the top of the post. Make sure to place rebar in opposite corners of the post. All gate posts must be filled with cement up to the bottom of the top rail of the adjoining section (both hinge and latch post) after attaching hardware. Keep in mind, the location of the gate hardware is predetermined by the desired swing of the gate. Place a block beneath your gate to keep it square with the rest of the fence.



When installing double drive gates it is important that you install both gates with back braces on the inside. Looking at the rear of the gates, the braces should look like the diagram to the right.

Double drive gates require (2) Drop Rods to keep both gates secure when closed. These drop rods should be installed on the inside of the gate. You will need to drill holes into the ground for drop rod receivers. Make sure to wait about 48 hours before hanging gates to let the cement cure. Remember to install the hardware prior to the cement drying.



POST CAPS

There are many styles of fence post caps available to give the fence that custom look. Post caps should be installed to prevent excessive moisture from penetrating the post. It is recommended that each cap installation use PVC cement to permanently attach the cap to the post. Even though PVC cement is made of a bright white material, care should be taken to remove excess cement from the joint.

POST CAP INSTALLATION

- 1) Make sure the inside walls and the mounting surface of the cap are clean and dry.
- 2) Apply glue to the inside of the post or external mounting surface of the cap.
- 3) Press cap in place.
- 4) Allow glue to dry 2-4 hours without disturbing the bond.

RAILING LAYOUT

Tip: Steel rail inserts can be cut using a circular saw equipped with a metal cut-off blade. USE CAUTION! Cutting rail inserts creates sharp edges!

Measure the locations of all posts and railings. Correct or identify any potential problems. Railings may need to be modified for the shorter span. To maintain equal picket spacing, cut both ends of top and bottom rail equally to accommodate shorter spans.

INSTALLATION OF THE RAILING SYSTEM

In the externally mounted rail system, the posts are blank to allow top and bottom rail-mounting brackets to be installed. The top rail will be a 3½" x 3½" T-rail or a 2" x 3½" standard rail and the bottom will be a 2" x 3½" standard rail. In either case the assembly will be the same.

INSTALLING FULL RAIL SECTION

- 1) Install pipe or internal post sleeves. Locate carefully. Sleeve the vinyl post over the 1 5/8" or 2" pipe using the appropriate PVC pipe mounts, or the 4" x 4" or 5" x 5" internal post sleeves. If using the optional New England Base Trim, slide it over the post and push down to the bottom. For more information on the post mount, please see the Installation of Internal Post Sleeve section.
- 2) After installing the posts and base trim (if applicable), follow these three steps for installing the rail section:
 - Locate and drill holes in posts for mounting brackets.
 - Attach top and bottom rail mounting brackets to one of the posts with #12 stainless steel pan-head screws (bottom rail not more than 3" from surface).
 - Place brackets on one end of the top and bottom rails, then slip opposite end of rails into brackets already mounted to post.

INSTALLATION OF THE STAIR RAILING SYSTEM

Prior to starting the installation of the stair railing section, it is necessary to properly install posts at the desired locations. Each end of the rail section will require a post or structural support located at the top of the stair system and bottom to receive the

railing sections. The distance should not exceed 6' measured at the angle of the stairs between these supports. Shorter distances may be accommodated by "cutting down" the railing panel.

The railing systems are mounted to the post or structural surface with the use of adjustable mounting brackets or mounting brackets that are manufactured to the standard slope of stair systems and will allow for a minimal amount of adjustment to the slope.

The top T-rail mounting bracket utilizes a top and bottom bracket that are unique for the slope of the rail. The brackets should be carefully inspected so that the proper bracket is used at the top and the other at the bottom. The bottom rail is made from 2" x 3½" rectangular material and utilizes the same bracket top and bottom angled at the standard stair slope.

POST CAP INSTALLATION

- 1) Make sure the inside walls and the mounting surface of the cap are clean and dry.
- 2) Apply glue to the inside of the post or external mounting surface of the cap.
- 3) Press cap in place.
- 4) Allow glue to dry 2-4 hours without disturbing the bond.

INSTALLING FULL STAIR RAIL SECTION

- 1) To properly fit the rail section, it will be necessary to cut or trim the top and bottom rails of the railing to the angle of the slope. The railing has been pre-routed to allow the railing to "rack" (slope) to the stair system angle. The top and bottom rail sections are strengthened with galvanized steel "J" channels that will be cut or trimmed along with the vinyl rails. To locate and measure the amount and angle to trim (cut) each end, place the rail section in place with the bottom rail resting on the stair treads directly next to the bottom and top post. Using a marker or pencil, mark the top and bottom rails using the post edge as the guide. In order to insure that the balusters are positioned evenly between the posts, inspect the location and adjust the rail up or down prior to marking the top and bottom rail. The top and bottom rail sections should be trimmed at these angles. However, it will be necessary to cut an additional 1/8' off each rail to install the bracket properly.
- 2) To locate and position the top rail brackets, place the proper bracket in position on each post or support and outline or mark the position where the bracket is to be installed. The installation process may be made easier by predrilling a pilot hole in the two top positions of each bracket while holding it in the proper position on the post.
- 3) Now that the railing sections are trimmed to size and the mounting brackets have been marked for position, all four (4) brackets should be temporarily placed on all rail ends. To attach the top rail brackets to the post, assistance from an additional person will further reduce the time and effort to finalize the installation. Holding the top rail with the brackets in place, install two #12 stainless steel pan-head screws at the top location of the brackets at each end of the railing. This will hold the railing in position while installing the balance of the fasteners. Install #12 stainless steel pan-head screws at all identified areas on the bracket.
- 4) To install the bottom rail brackets, allow the railing system to

fully expand or drop into position. The bottom brackets should be centered on the post and secured using #12 stainless steel pan-head screws at all identified areas of the brackets.

INSTALLATION OF INTERNAL POST SLEEVE

The use of internal post sleeves will be necessary when installing railing posts in the absence of a 4" x 4" wooden post. The purpose of the internal post sleeves is to create a secure mount for the vinyl post.

4" CONCRETE INTERNAL POST SLEEVE

This internal post sleeves is designed for installation of a post to a concrete surface.

- 1) The concrete internal post sleeve is installed with one fastener centered in the bottom plate of the mount. A $\frac{3}{4}$ " concrete stud fastener must be used to secure the post mount to the concrete floor.
- 2) Locate and position the post mount where needed. Normal center-to-center railing post spans range 4' to 8' between posts. The post mount has been routed to allow the bottom rail to pass through the sleeve and care should be given that the sleeve is installed to allow the bottom rail to pass through the sleeve. Note that the post sleeve configuration is a U in design, which allows for corner installation.
- 3) After the post has been positioned, mark the floor to locate the position of the fastener.
- 4) Install the concrete fastener using the installation instructions provided by the fastener manufacturer.
- 5) Using the fastener that has been installed, position the internal post sleeve on the fastener and securely tighten the internal post sleeve.
- 6) In the event internal post sleeve does not stand level and plumb, the post mount can be corrected by inserting a metal shim under the post sleeve base and screw down the outer leveling bolts. Most common is the use of steel washers to act as shims.
- 7) Continue installing each post mount as required.

4" JOIST INTERNAL POST SLEEVE

This internal post sleeve is designed for installation to the joist system under the floor or deck.

- 1) Locate and position the 4" joist mount to the joist system where needed. The internal post sleeve has been routed to allow the bottom rail to pass through the sleeve and care should be taken that the sleeve is installed to allow the rail to pass through the sleeve. Note that the internal post sleeve configuration is a U in design, which allows for a corner installation.
- 2) Securely fasten the internal post sleeve with $\frac{3}{8}$ " x 4" carriage bolt or better to the joist system utilizing all predrilled holes to receive the fasteners. Blocking may be necessary for additional support.
- 3) Continue installing each internal post sleeve as required.

The diagrams and instructions in this brochure are for illustration purposes only. Any construction or use of the product must be in accordance with all local zoning and/or building codes. Except as contained in our transferable limited lifetime warranty, Interstate does not provide any other warranty either expressed or implied, and shall not be liable for any other damages. The consumer assumes all risks and liability associated with construction or use of this product. The consumer or contractor should take all necessary steps to provide safety to everyone involved in the project, including but not limited to wearing appropriate safety equipment.



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