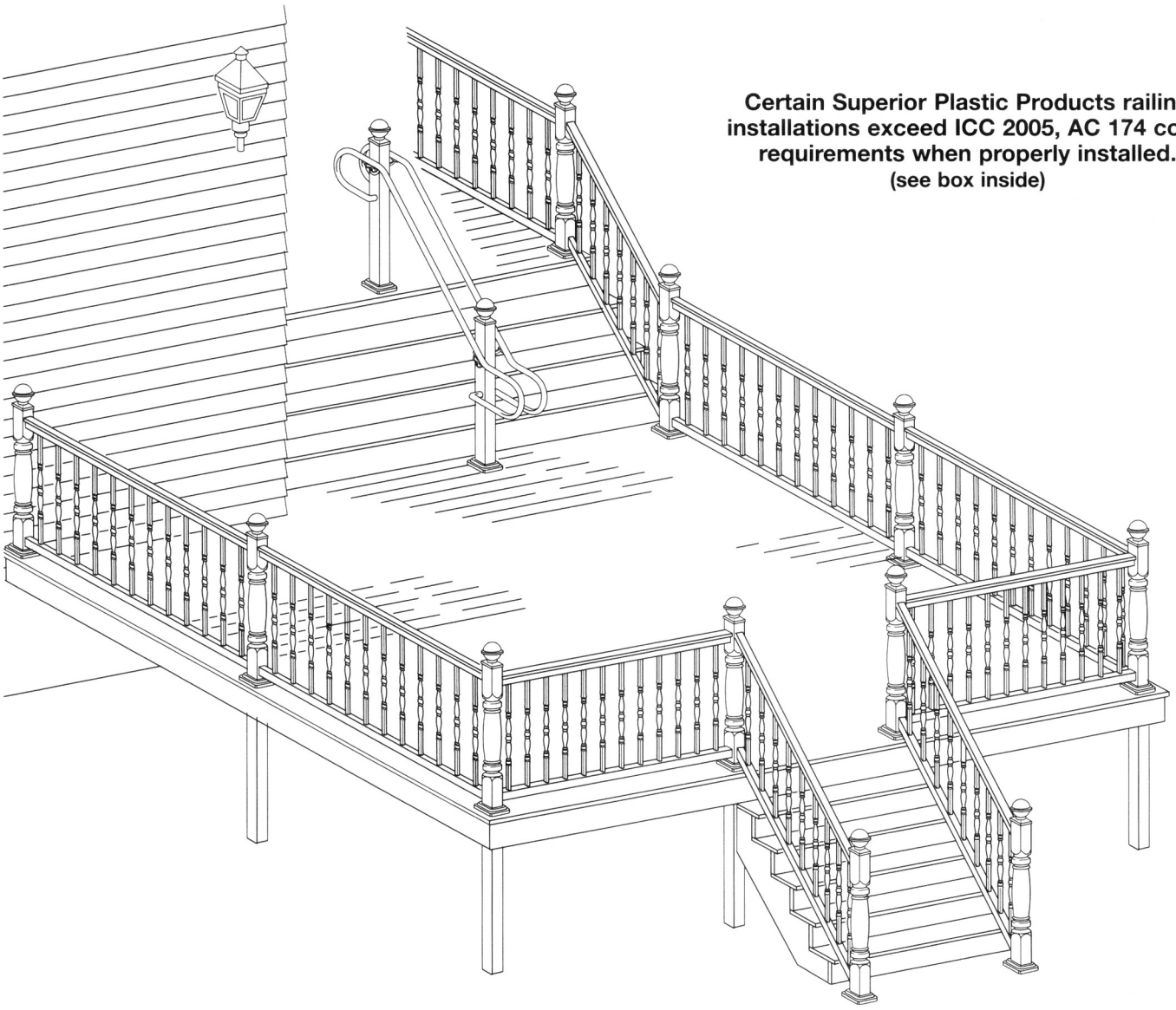
Railing Installation Instructions for 1000 and 3000 Series Railing

Superior Systems



Certain Superior Plastic Products railing installations exceed ICC 2005, AC 174 code requirements when properly installed.
(see box inside)

It is important before beginning any construction on your deck or railing installation that a plan be developed that includes all measurements and the placement of components. From that drawing a materials list can be put together and materials ordered. First determine deck support post placement, based in part on the length of the railing sections desired. Only certain lengths meet ICC code standards.

With materials on site, check to insure that all necessary supplies are on hand and that you have the required tools to do the job.

Warning

Protective clothing, ear protection, and safety glasses must be worn when using any power equipment such as power saws, drills, and grinders.

Railing Installation Instructions

1000 or 3000 Series
Concrete or Wood Deck Installations

5000 or 7000 Series
Concrete Deck Only

Certain Superior Plastic Products railing installations exceed ICC 2005, AC174 code requirements when properly installed.

The guidelines below apply to both stainless steel and galvanized post brackets

To comply with these requirements:

Wood Floor - AC174 1 or 2 Story
Concrete Floor - AC174 Residential
AC174 1 or 2 Story

- For all installations concrete decks must be at least 6" thick and 4,000 PSI. (Recommended 1/2" x 4" wedge bolts)
- Turned posts require the use of the turned Steel Post Bracket while any other 4" post requires the use of the 4" Heavy Duty Steel Post Bracket (1000 or 3000 Series).
- On wooden decks a steel post bracket adapter must be used when a steel post bracket is used (1000 or 3000 Series).
- When using a steel post bracket in *"residential"* (AC174) applications, railing must be at least 36" high but no higher than 42" in ground level installations up to 30" above ground. Above this height, installations require railings to be 42" high. The distance between in-line posts must not exceed: 4' (1000 or 3000 Series),
  10' (5000 Series), 12' (7000 Series). The distance between an end-line post and a structural member must not exceed: 8' (1000 or 3000 Series), 12' (5000 Series), 12' (7000 Series).
- When PVC Square posts are used over 4" x 4" wooden support posts in *"residential"* (AC174) applications, railing may be 36" or 42" high but no higher than 42" in ground level installations up to 30" above ground. Above this height, installations require railings to be 42" high. Railing may span up to: 8' (1000 or 3000 Series), 10' (5000 Series), 12' (7000 Series).
- When PVC Square posts are used over 4" x 4" wooden support posts in *"single or 2 family dwelling"* (AC174) applications, railing may be 36" or 42" high in a first floor or second floor installation. Railing may span up to: 10' (1000 or 3000 Series), 12' (5000 Series), 12' (7000 Series).
- When using a steel post bracket in railing installations that are *"single or two family dwellings"* (AC174) railing must be at least 36" high but no higher than 42", and can have up to a 10' (1000 or 3000 Series), 12' (5000 Series), 12' (7000 Series) span between posts. These requirements apply to both first floor and second floor installations.
- Railing must be secured to mounting bracket by driving screw though the bracket and railing into the railing aluminum insert on both sides of the bracket. (Top rail only required) (All series).

Railing Installation Instructions

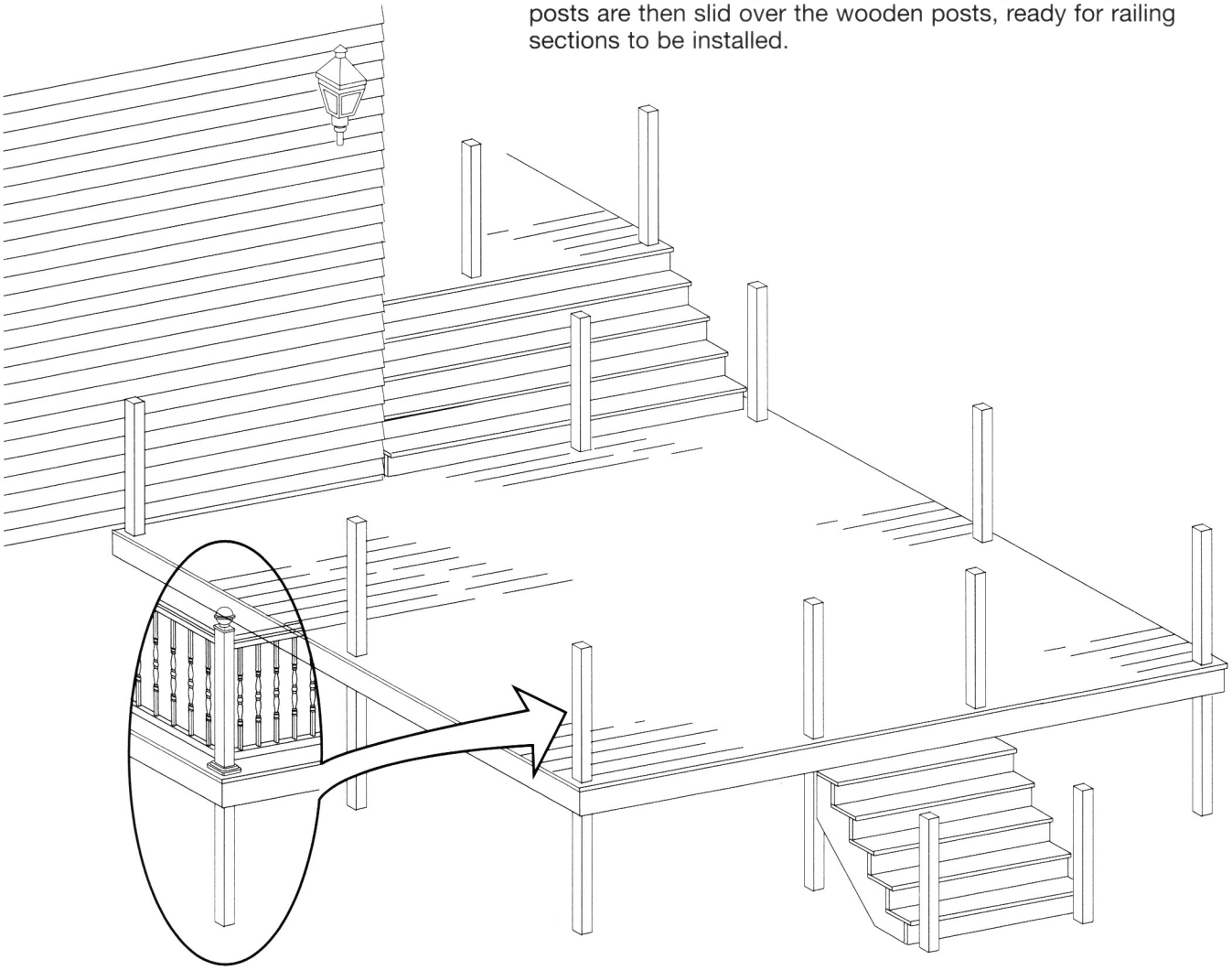
Note:

While the PVC products used in this system are extremely durable, prevent soiling or marring the railing by keeping hands clean and using a piece of carpet or cardboard under the components during assembly.

Tools that you will need to complete this installation

- Cut off saw with fine tooth blade, and/or a
- Circular saw with a carbide tip multi-purpose blade.
- Electric or battery drill.
- ½" Masonry drill bit (if mounting a post on concrete).
- #2 Square drive screw drivers or screw driver bits.
- A wrench set.
- 24" or 48" level.
- 25' Measuring tape.
- Pencils.
- Staging blocks to determine the height of the railing; 2" for 36" and 42" railing heights or 4" for 30" railing.

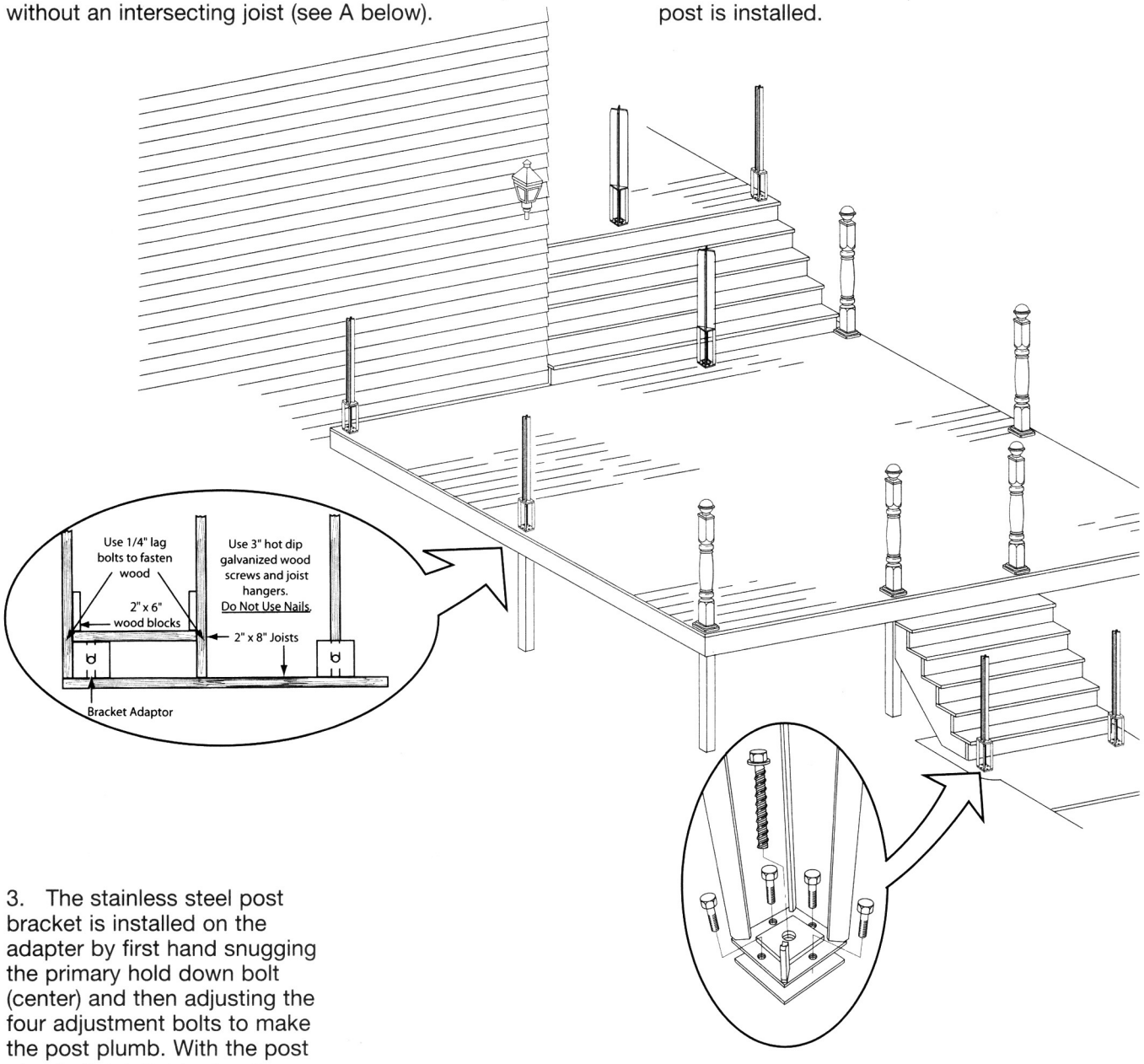
Wooden decks can accommodate both the new style design posts with coordinated railing or the old style square posts. Typically, square 4" x 4" support posts are placed according to the length of railing desired and extend through the deck and then are cut to a height to receive the railing post. Square PVC posts are then slid over the wooden posts, ready for railing sections to be installed.



Railing Installation Instructions

1. Design posts can be used on an older wooden deck with stainless steel mounting brackets. Having chosen the correct stainless steel post bracket for the location and design of the post, place and anchor the bracket to the deck. Design posts installed on wooden decks require the use of a stainless steel post adapter, concrete decks do not. Post adapters should be used only where the deck joists are 2" x 8" or more. Add bridging to the deck where an adapter is mounted in a bay without an intersecting joist (see A below).

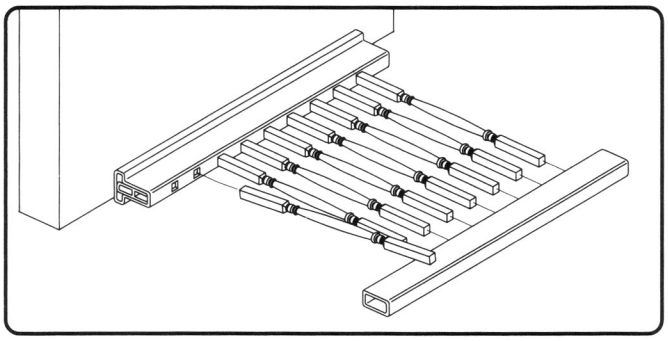
2. To comply with AC174 on wooden decks use of a stainless steel bracket adapter is required (see A below). The top of the bracket will extend above the joists an amount equal to the height of the decking material. Using the bolts included with the adapter, securely fix the adapter to the joists as shown with the center (hold down) bolt in place as shown. Decking will need to be trimmed around the adapter but will be covered with post trim when the post is installed.



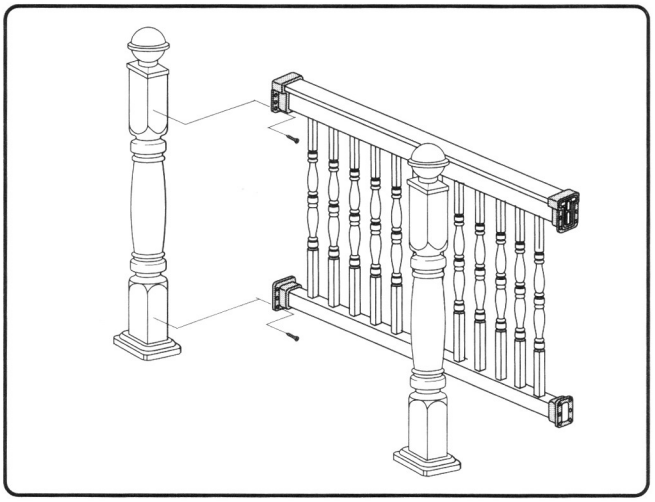
3. The stainless steel post bracket is installed on the adapter by first hand snugging the primary hold down bolt (center) and then adjusting the four adjustment bolts to make the post plumb. With the post plumb, finish tightening the hold down bolt. After brackets are plumb and secure, slide PVC posts in place. To improve bracket mounting strength, 4) poly-lumber backing plates are now inserted into the top of the post after it is positioned over the bracket.

4. When a post is installed on a concrete deck or post footer, use a ½" masonry drill and, with the post positioned properly, drill a hole for the bracket anchor. Using the wedge bolt that is provided, loosely secure the bracket. Use an impact wrench to first "pre-thread" the wedge bolt. Position the bracket in place and secure by hand-tightening the wedge bolt. Plumb the bracket using the adjusting bolts and secure the bracket fully by tightening the wedge bolt with a wrench.

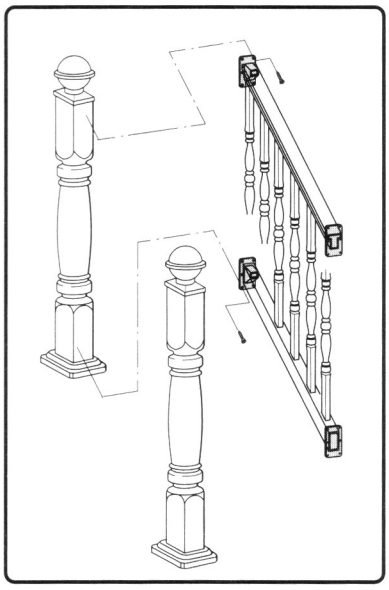
Railing Installation Instructions



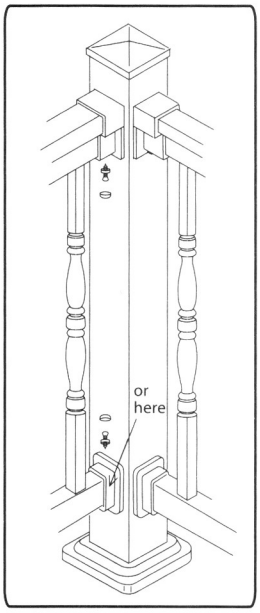
5. Railing balusters are inserted into the top rail and then the bottom, with the top rail against a wall to keep it in place. With all balusters in the top rail, cock the bottom rail slightly and insert balusters starting at one end and working your way to the other end until all balusters are in place.



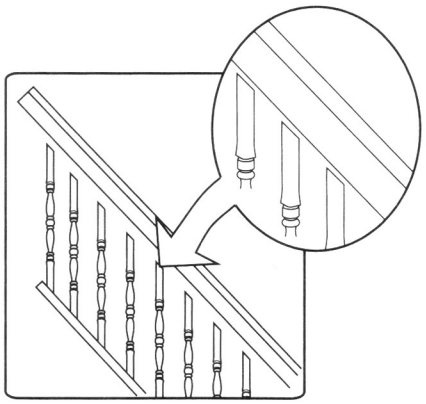
6. Mark the height of the railing bracket on each post. Place the railing brackets over the railing before positioning the sections between the posts. Secure the railing bracket in position with the bracket centered on the post.



7. Step railing is installed like inline railing, making sure that the bottom railing is parallel to the steps. Brackets are placed in the railing before they are positioned between the posts. You may find it necessary to shorten the balusters if the steps have an increased angle (step railing sections are cut to accommodate stairs with a 32° pitch). Remove equal amounts from both ends of the baluster.



8. Secure the railing to the railing bracket using the screws with washers and caps that are provided with the brackets.

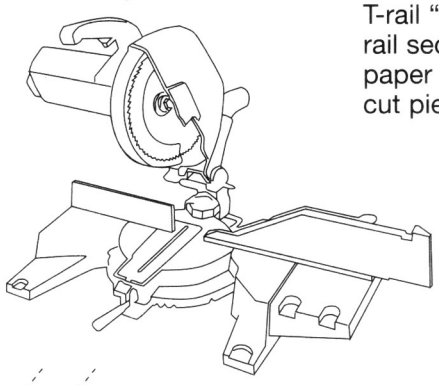


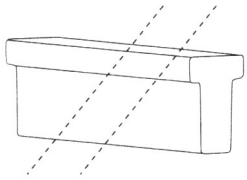
Note that baluster ends are cut on an angle. Position the balusters into the rails with the angle cut running in the same direction as the railing.

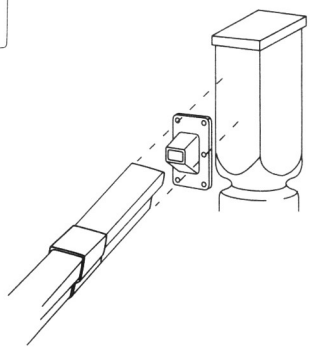
Step Rail Sleeve Over Installation Instructions

Tools Required: Measuring Tape • Miter Saw • Phillips Screw Driver • Fine Grit Sand Paper

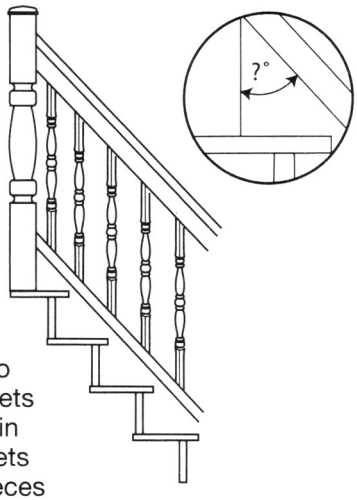
1. Determine the degree of the stairs angle and set miter saw to that degree. Measure and mark the 12" "sleeve over" section for 1½" to 2" wide angled pieces.







2. With the angle set on the miter saw cut your "sleeve over" sections according to the quantity needed to complete the installation. (Note you will need 2 bottom 2x4 and 2 top T-rail "sleeve over" pieces per step rail section.) Use fine grit sand paper to dull the sharp edges of the cut pieces before installing.



3. Slide "sleeve over" pieces onto railing, then insert mounting brackets into rail. Position railing assembly in place between post. Mount brackets onto posts. Slide "sleeve over" pieces against bracket and secure assembly using stainless steel screws and caps provided with the mounting brackets.