



COMPOSITE RAILING INSTALLATION INSTRUCTIONS

Items needed for 6' or 8' Classic Horizontal Railing

- One Classic rail kit (fig. 1), which contains:
- 1 – top rail
 - 1 – bottom rail
 - 1 – support block for 6' rail and 2 – for 8' rail
 - 4 brackets
 - 4 bracket covers
 - Screws

- Sold separately:
- 14 pack classic 39.25" baluster kit (2 kits needed for 8' rail)
 - Classic post sleeve kit 48" includes cap and skirt plus one additional post sleeve kit to end a railing section

Note: See ATI evaluation report CCRR-0171 for code details.

Items needed for 6' Classic Stair Railing

- One Classic stair rail kit (fig. 1), which contains:
- 1 – top rail
 - 1 – bottom rail
 - 1 – support block for 6' rail
 - 4 brackets
 - 4 bracket covers
 - Screws

- Sold separately:
- 14 pack classic 39.25" baluster kit
 - Classic post sleeve kit 48" includes cap and skirt plus one additional post sleeve kit to end a railing section

Note: See ATI evaluation report CCRR-0171 for code details.

Tools Needed

- | | | |
|--|------------------------------------|--|
| • Drill/power screwdriver | • #1 and #2 square head drill bits | • Carpenter's level |
| • Miter or circular saw with carbide tip blade | • 1/8" drill bit | • Carpenter's pencil |
| • Adjustable wrench or socket wrench for bolts, etc. | • Tape measure | • Safety glasses/goggles |
| • Carriage bolts | • Hammer | • Clear exterior construction adhesive |
| | • Marked speed square | • Rubber mallet |

Prior to construction, check with your local regulatory agency for special code requirements in your area. Structural support should come from either the continuation of deck support posts that extend up through the deck floor, railing posts that are bolted to the inside of the rim/outer joists or structural post mounts. The post spacing will be less for angled rail applications. Always measure prior to securing the posts when installing angled rail sections. Install railing posts before deck boards are fastened to the joists.

Horizontal Rail Installation Instructions

Note: These instructions are for a 36" rail. If you want to have your railing at a different height, use figure 3 as a planning tool to determine the height to cut post sleeves and balusters.

The railing comes with baluster connectors attached to the rails. Pre-drilling all other screw holes is essential for successful rail installation. Do not over-tighten screws. Read instructions completely to get an understanding of how the product goes together and how each piece affects the others.

Step 1: Determine the number of railing posts needed for your deck. Post spacing is either 6' on-center or 8' on-center depending on the rail length chosen. Example: A 12' x 16' deck attached to a building with a 4' access opening on one side will require a total of eight posts (fig. 5).

Classic Style Railing

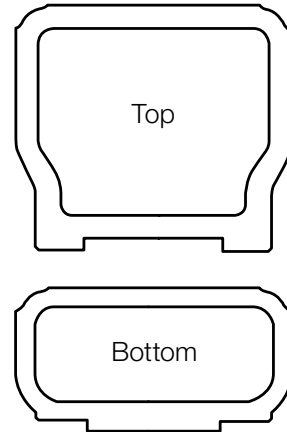


fig. 1

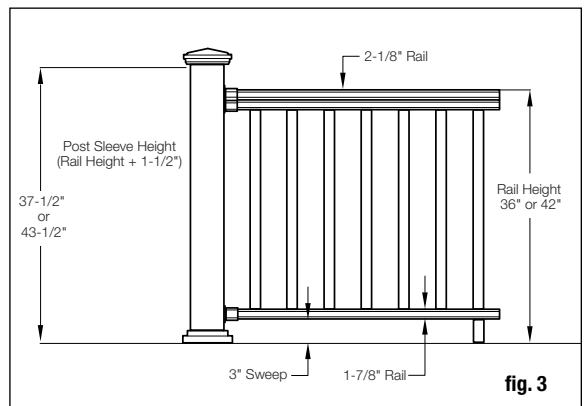


fig. 3

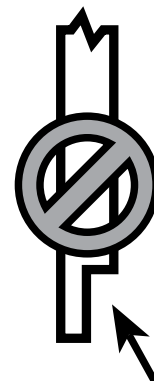


fig. 4

Step 2: Install railing posts prior to installing deck boards. Cedar or pressure-treated pine 4x4 railing posts or a post mount provides the structural strength for the railing. The length of each post is determined by the total of the joist depth (typically 7-1/4") + decking thickness (1") + railing height (36") + spacing for post cap (1-1/4") = 45-1/2". Important: Do not notch the 4x4 railing posts. Notching will reduce the strength of the post and could result in railing collapse or failure (fig. 4).

Step 3: Position, plumb with a level, and clamp the railing post on the interior face of the joist. Plumb again. The 4x4 railing post should be bolted to the inside of the joist using two 1/2" x 6" galvanized carriage bolts. Corner posts use a third carriage bolt inserted through the adjacent joist (fig. 8).

Step 4: Install decking. Notch deck boards to fit around the 4x4 railing posts. Allow 1/4" space between the deck boards and any permanent structure or post. Additional blocking may be necessary on the 4x4 for fastening deck boards.

Step 5: Trim 4x4 post sleeves to length. Post sleeves should be a minimum of 1-1/2" longer than the railing height (fig. 3). Example: For a 36" high railing, trim post sleeve to a minimum of 38-1/2" or longer if a higher railing is desired. Slide a trimmed post sleeve over each 4x4 railing post. Post sleeve should slide easily over the post. DO NOT FORCE post sleeve onto post. Twisted or crooked 4x4s should be replaced. Slide a post base trim (optional) over each post sleeve for a finished look. *Note: It is recommended to install the post base trim prior to installing the bottom rail. However, the two-piece design does allow the installer to add the post base trim after the rail has been installed. To install, apply a thin line of clear exterior construction adhesive to the inside of the post trim-where it will contact the post sleeve, and snap into place around the base.*

Step 6: Measure the distance between installed post sleeves to determine the length of the top and bottom rails. Place the bottom rail in position next to the posts and adjust so the distance between the first baluster connector and post is greater than 2" and equal on both ends (fig. 6). Mark the rail. Cut the bottom rail. Cut the top rail to the same spacing and length.

Step 7: *Note: This step is for installing the square composite balusters. To install alternative styles, please refer to the installation instructions provided with the balusters.*

Step 8: Find the center of the underside of the bottom rail and attach the baluster connector included with the support block using the screw provided. Check building code requirements for the maximum spacing between deck surface and bottom of rail (sweep). We recommend 3", but it can be less if desired. If necessary, trim the support block to the determined height (fig. 6). One support foot is required for 6' line rail while two support feet are required for 8' horizontal rail or the stair railing will not be installed correctly.

Step 9: Place the horizontal rail bracket covers and line brackets on the ends of the bottom rail. Install the support block and prop the bottom rail between the posts using blocks cut to size. Check the rail for level. Using the horizontal bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the horizontal bracket to the post sleeve using the #8-15 x 2" - #2 square drive pan head screws and then attach line bracket to rail using #10-16 x 3/4" - #2 square drive pan head self-drilling screws (fig. 6).

Step 10: Place a baluster over each baluster connector on the bottom rail. Make sure baluster is fully seated in connector. Gently tap with a rubber mallet, if needed.

Step 11: Place the horizontal rail bracket covers and horizontal brackets on the ends of the top rail. Position the top rail by placing the baluster connectors inside the balusters, while working from one end to the other. Check the rail for level. Using the line bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the line bracket to the post sleeve using the #8-15 x 2" - #2 square drive pan head screws and then attach line bracket to rail using #10-16 x 3/4" - #2 square drive pan head self-drilling screws.

Step 12: Slide the rail bracket cover over the rail bracket and snap into place.

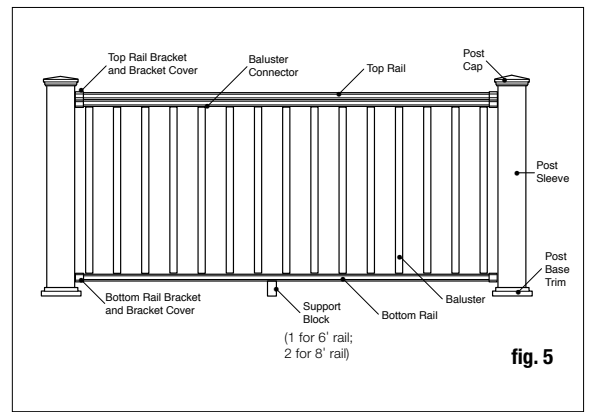


fig. 5

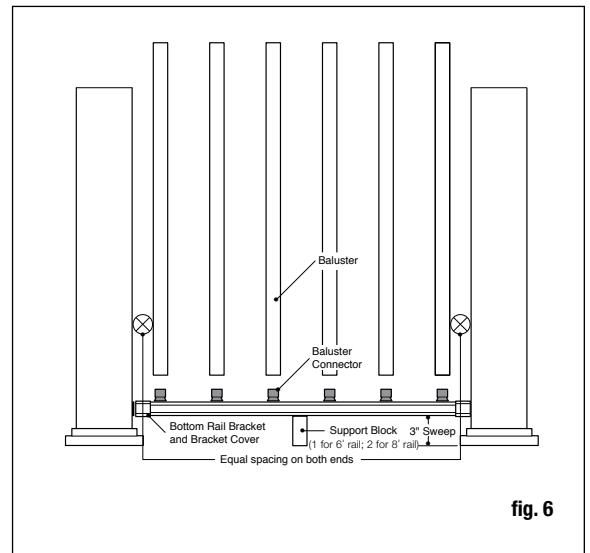


fig. 6

Step 13: Apply a thin line of clear exterior construction adhesive to the inside rim of a post cap and place firmly on the post. Repeat for each post.

Stair Railing Installation Instructions

Please note: This railing system is designed to work with a predetermined 35 degree angle.

Step 1: Determine the number of stair railing posts needed for your deck. Post spacing is 6' on-center.

Step 2: Install stair railing posts prior to installing stair treads. Cedar or pressure-treated pine 4x4 railing posts or a post mount provides the structural strength for the stair railing. The length of each post is determined by the total of the stringer width + tread thickness + stair railing height + spacing for post cap. *Important: Do not notch the 4x4 railing posts. Notching will reduce the strength of the post and could result in railing collapse or failure (fig. 4).*

Step 3: Position, plumb with a level, and clamp the stair railing post on the interior face of the stringer. Plumb again. The 4x4 stair railing post should be bolted to the inside of the stringer using two 1/2" x 6" galvanized carriage bolts. Corner posts use a third carriage bolt inserted through the adjacent joist (fig. 8). Ground-level posts should be set in concrete.

Step 4: Install treads. Notch treads to fit around the 4x4 stair railing posts. Allow 1/4" space between the treads and any permanent structure or post. Additional blocking may be necessary on the 4x4 for fastening treads.

Step 5: Trim 4x4 post sleeves to length. Post sleeves should be a minimum of 1-1/2" longer than the railing height. Slide a trimmed post sleeve over each 4x4 railing post. Post sleeve should slide easily over the post. DO NOT FORCE post sleeve onto post. Twisted or crooked 4x4s should be replaced. Slide a post base trim over each post sleeve for a finished look.

Note: It is recommended to install the post base trim prior to installing the bottom rail. However, the two-piece design does allow the installer to add the post base trim after the rail has been installed. To install, apply a thin line of clear exterior construction adhesive to the inside of the post trim-where it will contact the post sleeve-and snap into place around the base.

Step 6: Measure the distance between installed post sleeves to determine the length of the top and bottom rails. Place the bottom rail on the stair treads next to the posts and adjust so the distance between the first baluster connector and post is greater than 1-3/4" or equal on both ends. Mark the rail to the proper length and angle. Cut the bottom rail. Cut the top rail to the same length and angle (fig. 9). Make sure both support feet are trimmed to ensure that the baluster connector and stair adaptor at each end contact stair tread and bottom rail properly. **One support foot is required for 6' horizontal rail while two support feet are required for 8' horizontal rail or the stair railing will not be installed correctly.** Baluster connector and stair adaptor must be securely fastened to tread and bottom rail. To install support feet: 1) Set baluster connector with screw into stair tread; 2) Place support foot over baluster connector; 3) Set stair adaptor with screw into bottom rail, ensuring centerline of adaptor is plumb with support foot; 4) Insert stair adaptor into top of support foot (fig. 10a and 10b).

Step 7: *Note: This step is for installing the square composite balusters. To install alternative styles, please refer to the installation instructions provided with the balusters.*

Step 8: Place the proper rail bracket covers and stair brackets on the ends of the bottom rail. Pay particular attention to the brackets being used, as they differ based on top/bottom rail and up/down angle. Prop the bottom rail between the posts on the stair treads (fig. 10b). You may need to place equal shims between two stair tread noses to elevate the bottom rail. Check for requirements in your area. Typically, a 6" sphere may not be allowed to pass through the triangle formed by the bottom rail, tread and riser (refer to previous page for fig. 9). Center the stair bracket on the post. Using the stair bracket as a guide, mark the screw positions

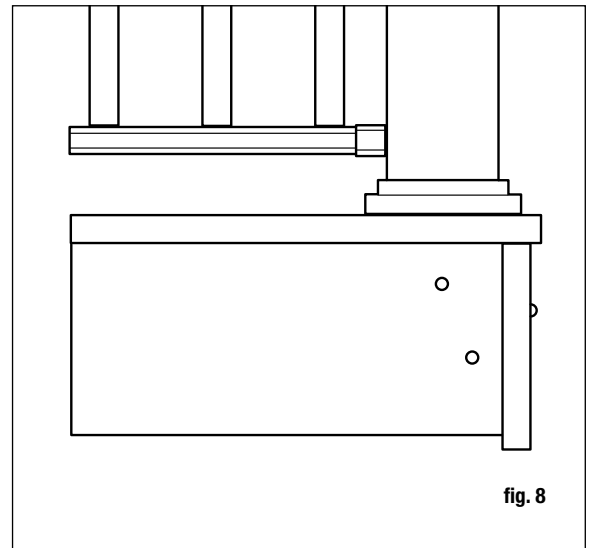


fig. 8

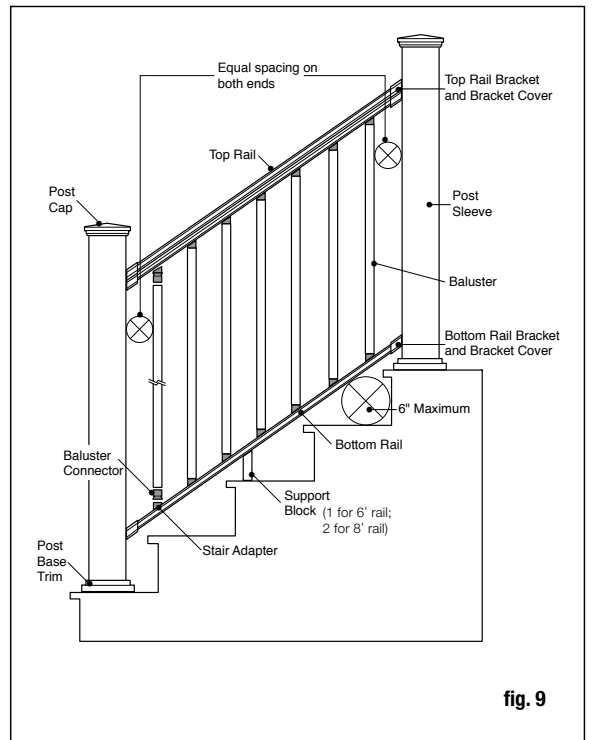


fig. 9

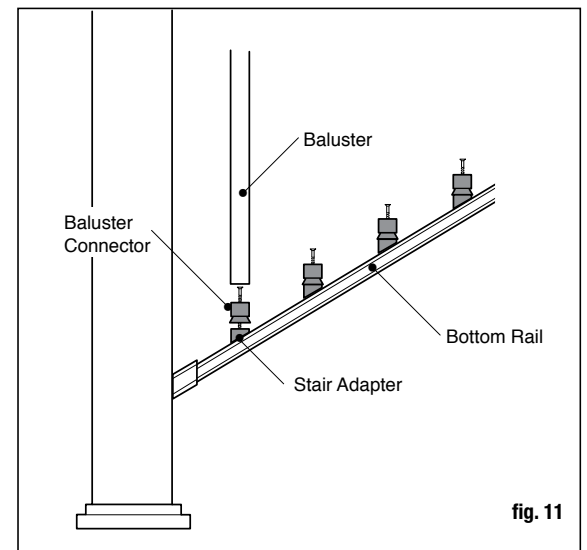
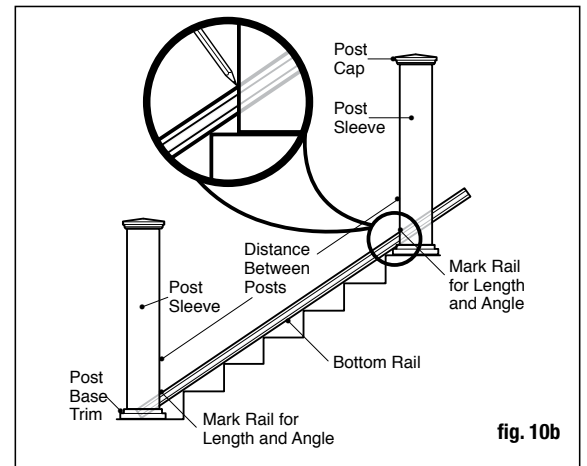
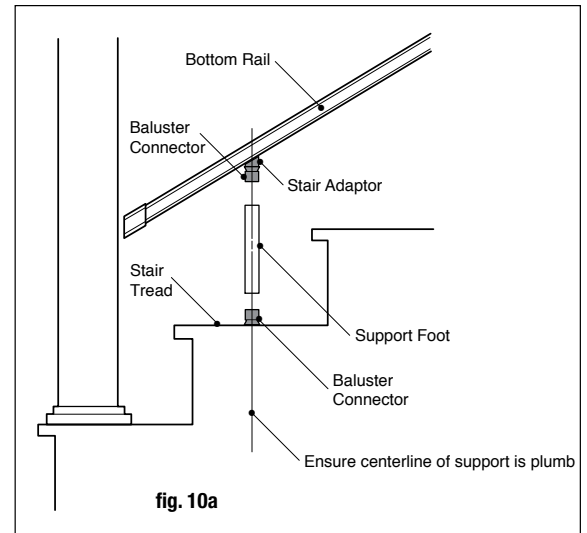
on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the stair bracket to the post sleeve using the #8-15 x 2" - #2 square drive flat head screws and then attach stair bracket to rail using #10-16 x 3/4" - #2 square drive wafer head self-drilling screws.

Step 9: Place a baluster over each baluster connector on the bottom rail. Make sure baluster is fully seated in connector. Gently tap with a rubber mallet if needed.

Step 10: Place the stair rail bracket covers and stair brackets on the ends of the top rail. Position the top rail by placing the baluster connectors inside the balusters, while working from one end to the other. Center the stair bracket on the post. Using the stair bracket as a guide, mark the screw positions on the post sleeve and rail on both ends. Pre-drill 1/8" pilot holes through the post sleeve and rail. Attach the stair bracket to the post sleeve using the #8-15 x 2" - #2 square drive flat head screws and then attach stair bracket to rail using #8-16 x 3/4" - #1 square drive wafer head self-drilling screws.

Step 11: Slide the rail bracket cover over the rail bracket and snap into place.

Step 12: Apply a thin line of clear exterior construction adhesive to the inside rim of a post cap and place firmly on the post. Repeat for each post.



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