

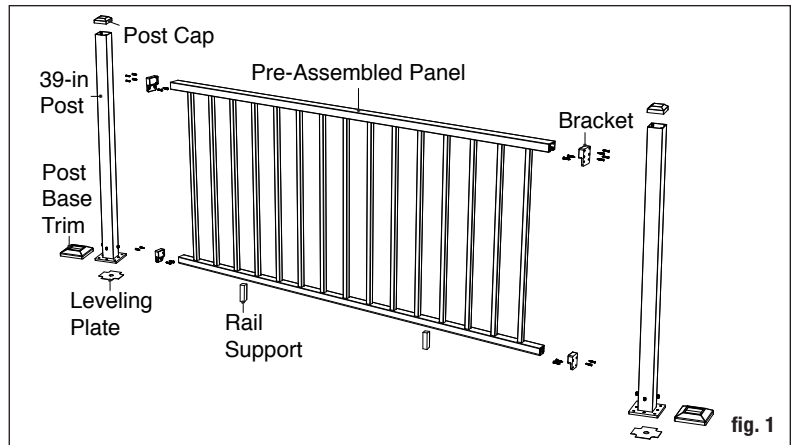
Items and Tools Needed

Parts included

- | | |
|---------------------------|---|
| (1) Pre-assembled panel | (4) Rail support connectors for 6ft |
| (2) Rail supports for 6ft | (6) Rail support connectors for 8ft |
| (3) Rail supports for 8ft | (4) Brackets with hardware |
| | (Posts and stair rail kits sold separately) |

Tools required

- | | | |
|--|--|----------------------|
| • Drill/power screwdriver | • Carpenter's pencil | • Rubber mallet |
| • Miter or circular saw with carbide tip blade | • Adjustable wrench or socket wrench for bolts, etc. | • Tape measure |
| • Marked speed square | • Safety glasses/goggles | • Lag screws |
| • Carpenter's level | | • 3/16" allen wrench |



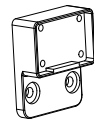
(1) Pre-assembled Panel



(2 or 3) Rail Supports



(4 or 6) Rail Support Connectors



(2) Top Rail Brackets



(2) Bottom Rail Brackets



(12) Metal Screws



(4) Large Screws



(4) Small Screws

In-Line Railing Installation Instructions

Posts Installation

Prior to construction:

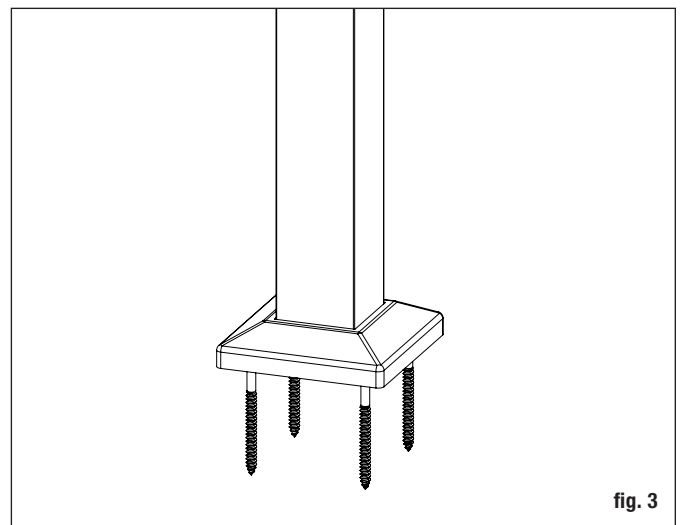
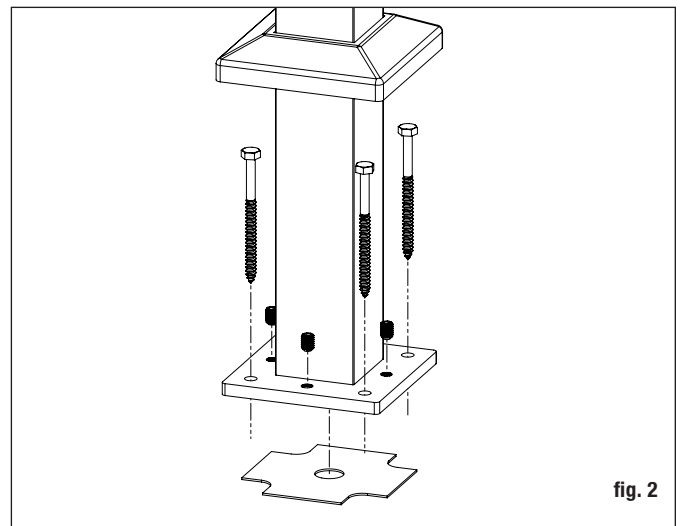
- Check with your local regulatory agency for special code requirements in your area. Common railing height is 36" or 42". Read instructions completely to get an understanding of how the product goes together and how each piece affects the other.
- Determine the number of railing posts needed for your deck. Post spacing is 6' or 8' on-center. Example: A 12' x 16' deck attached to a building with a 4' access opening on one side will need a total of eight posts.

Step 1 Install posts by attaching the aluminum base to the surface of the deck. Position the post so the fastener will go into the floor joist, and make sure the decking is firmly attached to the joist at the location of the posts. If necessary, use wood blocking securely attached to the joist structure as reinforcement underneath the decking where the posts are located. Fasteners that hold the post base to the surface should be able to secure to joist or reinforcement braces, not just the decking itself. *Note: When installing aluminum post on top of a wood surface, screws must be lagged into at least 3" of solid wood (not including the decking). 5/4" or 1 1/2" deck boards do not provide sufficient material for a safe installation. If necessary, add additional material to the underside of the surface (fig. 2).*

Step 2 Position the post assembly onto the location where it will attach to the deck. Four 3/8" diameter mounting holes are provided on the base. When the final position is determined, mark the base hole locations. Remove the post assembly and drill 15/64" holes in the marked locations through the decking and into structural blocking.

Step 3 Reposition the post assembly with the leveling plate inserted between the deck and the post base, and aligned with the predrilled holes. Insert the post fasteners (**NOT INCLUDED**), and partially tighten. Using a level, adjust the leveling set screws with a 3/16" allen wrench until the post is plumb. Fully tighten the post fasteners to secure the base to the deck structure. *Note: Recommended 5/16" x 4" or longer lag screws.*

STOP – Make sure post base trim is installed before continuing.



Railing Installation

Prior to construction:

- Check building code requirements for maximum spacing between deck surface and bottom of rail (sweep). Spacing of 3" is recommended for 36" or 42" finished rail height.

Step 1 Measure the distance between installed posts to determine the length of the top and bottom rails. Position rail adjacent to installed posts. The distance between the post and the first baluster should be less than 4" and equal on both ends. Mark the length on top and bottom rails.

Step 2 Remove an additional 1/2" on both ends (1" overall) for the bracket to fit between the rail and post. Trim the top and bottom rails to length (fig. 4).

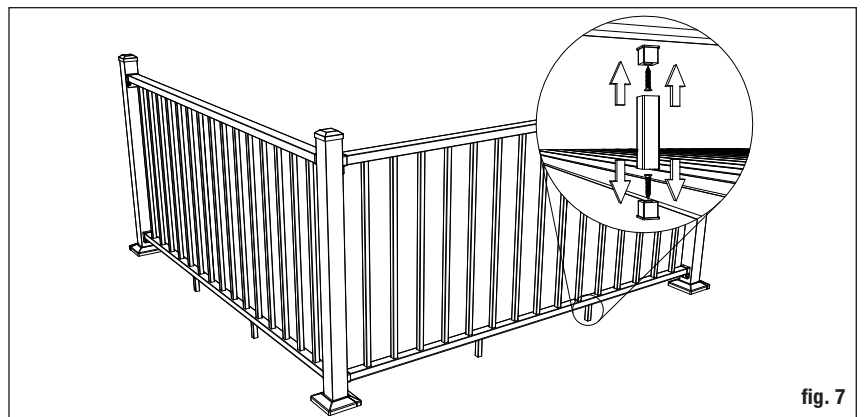
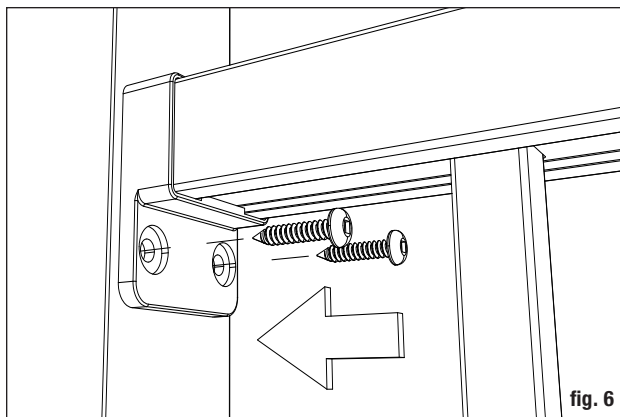
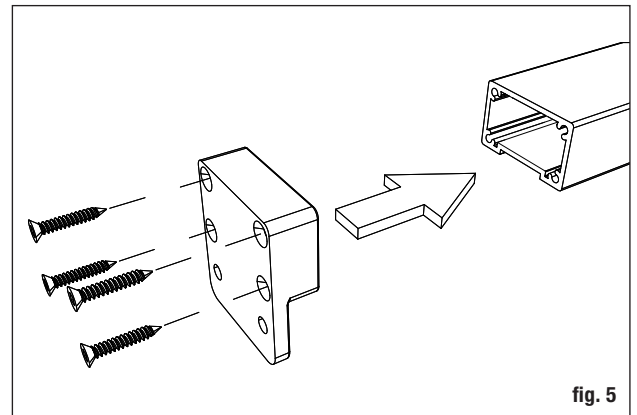
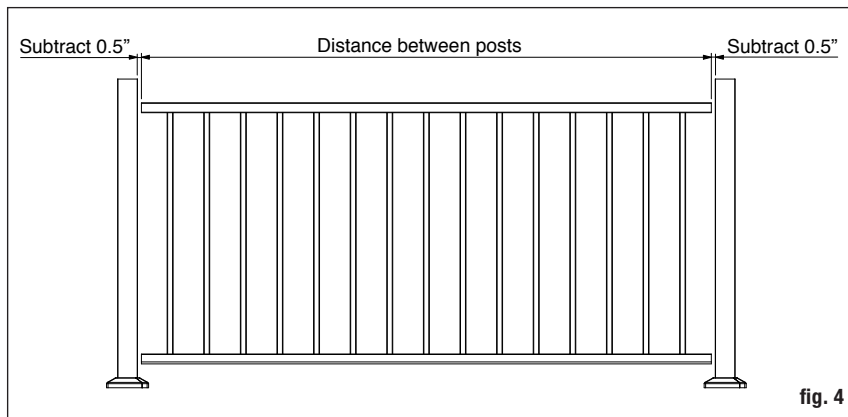
Step 3 Place the brackets on ends of the rails. Attach the brackets to the rails with a screw attached through back of bracket into each internal screw boss (fig. 5).

Step 4 Prop rail in place and mark the bracket holes on both posts. Remove rail. Predrill screw locations through the posts, using a 3/16" drill bit at top bracket locations and 9/64" drill bit at lower bracket locations.

Step 5 A rail support is needed every 2 feet (**2 are included in the 6ft kit, 3 in the 8ft kit**). Attach rail support connectors to the bottom of the lower rail at 2-foot intervals. Predrill using a 1/8" drill bit. Attach the rail supports to the support block connectors. Mark the location of the rail support on the deck surface and attach the other rail support connector to the deck using the included screw (fig. 7). **For Anodized Brushed Titanium Railing drill two 1/4" drain holes through the bottom of the rail to prevent trapping water. Center drain holes between two baluster locations as baluster can block the pathway and stop water from properly draining.**

Step 6 Position the rail between the posts. Check for level end-to-end and vertically. Attach brackets to the post at one end. Repeat for the other end. *Note: Use a driver extension bit to avoid marring the rail with the drill chuck* (fig. 6).

Step 7 Set post caps on each post. Gently tap with rubber mallet to secure.



Stair Railing Installation Instructions

Prior to construction:

- Ensure post location is compatible with railing, prior to securing to the deck, place both posts in position, and lay the bottom rail along the stair nosing from top to bottom adjacent to both posts. On the rail side of the post, measure up from the top of the rail and ensure there is a minimum of 34" to the top of the post. Post location may need to be adjusted to ensure minimum is obtained. Repeat this step for the bottom post.
- For a wood deck, position the post so the fasteners will go into the joists, and make sure the decking is firmly attached to the joists at the location of the posts. Proper structural blocking/framing under the decking material is required when attaching the post to a wood frame deck because decking alone is not approved as structural framing.

Step 1 Begin by determining where the top and bottom post will be located. Mark the desired location of the post.

Step 2 Four 3/8" diameter mounting holes are provided on the base. When final position is determined, mark hole locations and remove the post assembly. Drill the marked locations through decking and into structural blocking.

Step 3 Reposition the post assembly with the leveling plate inserted between the deck and the post base, and aligned with the predrilled holes. Insert the post fasteners (**NOT INCLUDED**), and partially tighten. Using a level, adjust the leveling set screws with a 3/16" allen wrench until the post is plumb. Fully tighten the post fasteners to secure the base to the deck structure.

STOP – Make sure post base trim is installed before continuing.

Step 4 Measure the distance between installed posts to determine the length of the top and bottom rails. Position the railing on the stairs on top of a spacer block along the stair nosings. Ensure the balusters are plumb. The distance between the post and the first baluster should be less than 4" and equal on both ends. Once the railing is in position, clamp the railing to the posts.

Step 5 Temporarily assemble the swivel brackets. Position the swivel bracket in location and mark the rail and post. Repeat for other end of railing. *Note: The distance from the end of the top rail to the first stair baluster will be 1-1/16" longer than the bottom rail to ensure the balusters are plumb. Add 3/4" to the marked location on the railing and cut to length.*

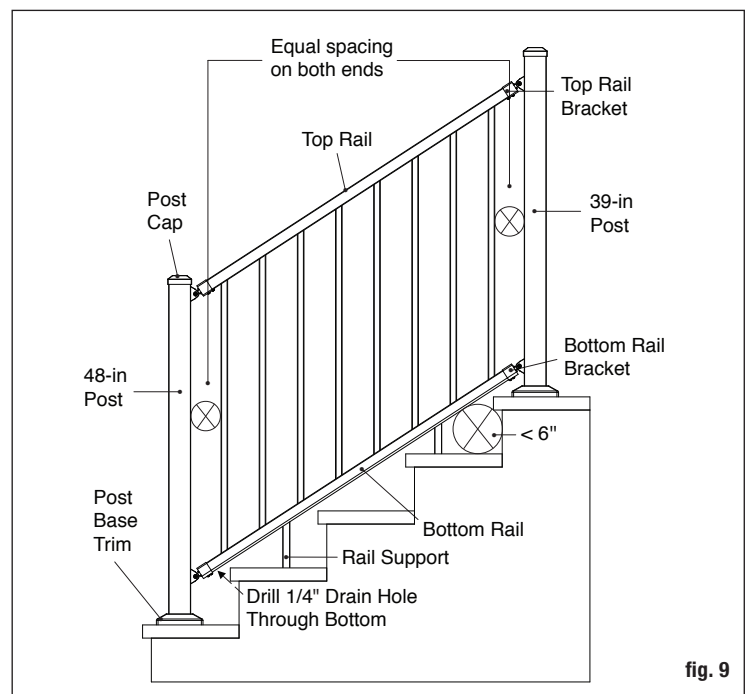
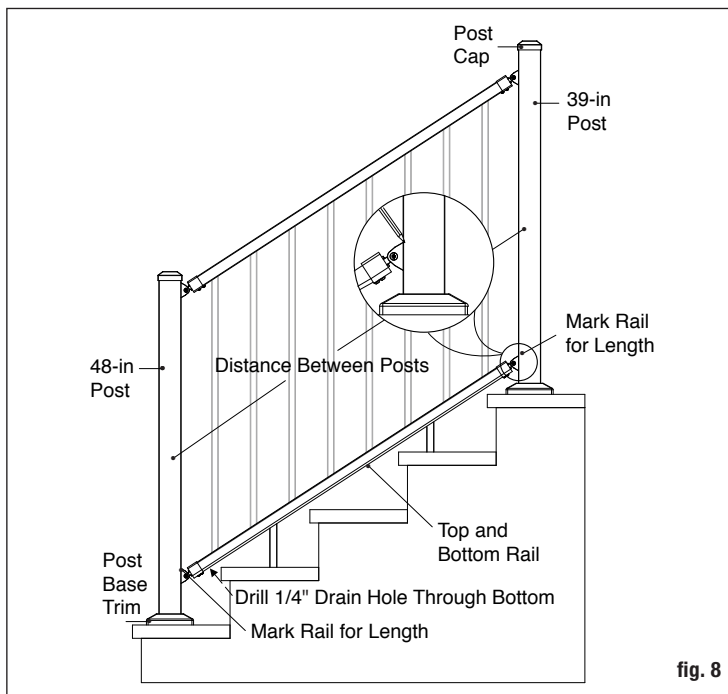
Step 6 Mark locations of the bracket screw holes on the rails. Remove brackets. Predrill through the rail only, using a 9/64" drill bit. Attach the front end of bracket to rails.

Step 7 Mark location of the bracket base screw holes on the post. Include the bracket side cover when determining the center location. Predrill through the post, using a 9/64" drill bit. Position the base of each bracket with the bracket cover side facing the stairs, and attach to the post with two screws.

Step 8 A rail support is needed every 2 feet (**2 are included in the 6ft rail kit, 3 in the 8ft kit**). Attach rail support connectors to the bottom of the lower rail at 2-foot intervals using included screws. Predrill using a 1/8" drill bit. Mark the location of the rail support on the step tread and attach the other rail support connectors to the step tread (fig. 8). **Drill one 1/4" drain hole through the bottom of the rail to prevent trapping water. Position the hole toward the lower end of the rail, roughly 1.5" from rail end to avoid the lower bracket.**

Step 9 Install the bottom railing between the posts by sliding the brackets together. Attach the side of the bracket with the barrel bolt to secure in place.

Step 10 Set post caps on each post. Gently tap with rubber mallet to secure.



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