



ALUMINUM CONTEMPORARY WELDED RAILING INSTALLATION INSTRUCTIONS

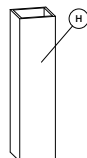
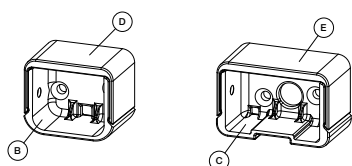
Tools required

- Drill/power screwdriver
- Miter or circular saw with carbide tip blade
- Marked speed square
- Carpenter's level
- Pencil
- Adjustable wrench or socket wrench for bolts, etc.
- Safety glasses/goggles
- Rubber mallet
- Tape measure
- Lag screws
- 3/16" allen wrench
- 1/8" drill bit

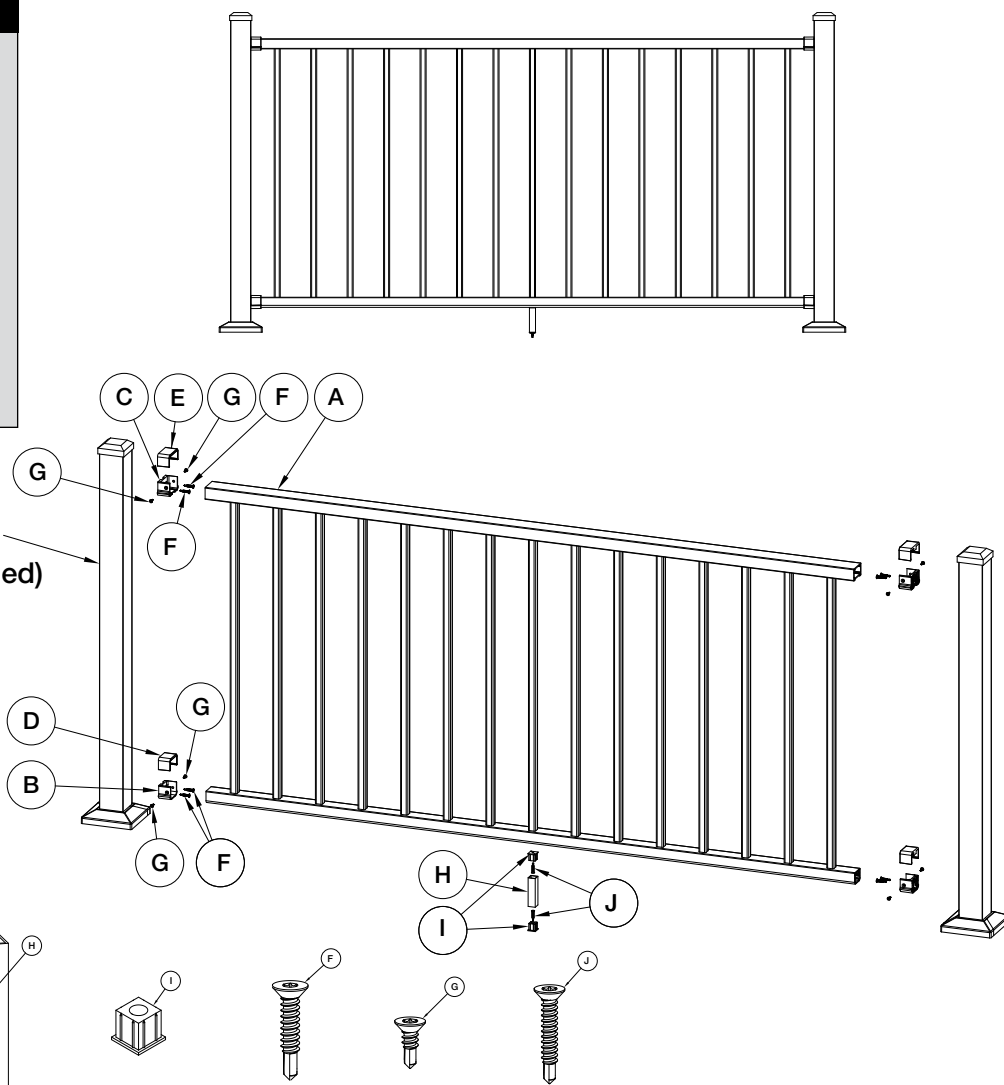
Line Railing Kits

Parts included

- A.** Pre-assembled panel
 - B.** Lower Bracket Base (2)
 - C.** Upper Bracket Base (2)
 - D.** Lower Bracket Caps (2)
 - E.** Upper Bracket Caps (2)
 - F.** #10 x 1" Bracket Post Screws (8)
 - G.** #8 x 1/2" Bracket Rail Screws (8)
 - H.** Rail supports (1)
 - I.** Rail support connectors (2)
 - J.** #8 x 1" Connector screws (2)
- (Posts and stair rail kits sold separately)*



**POST KIT
(not included)**



Note: 6' Rails do not require a rail support, Rails longer than 6' require at least one rail support.

Prior to construction:

- Check building code requirements and your local regulatory agency for required rail height and maximum spacing between deck surface and bottom of rail (sweep). Code requirement is either 36" or 42" minimum. This rail is designed for a 3" sweep.
- 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 and post spacing for your deck. Post spacing maximum will be 69-1/2" between the posts (not including bases) for 6' railing and 93-1/2" between the posts (not including bases) for 8' railing.
- Refer to the post installation instructions to install the proper under deck joists and blocking materials to align with the holes in the post bases prior to installing your decking materials.

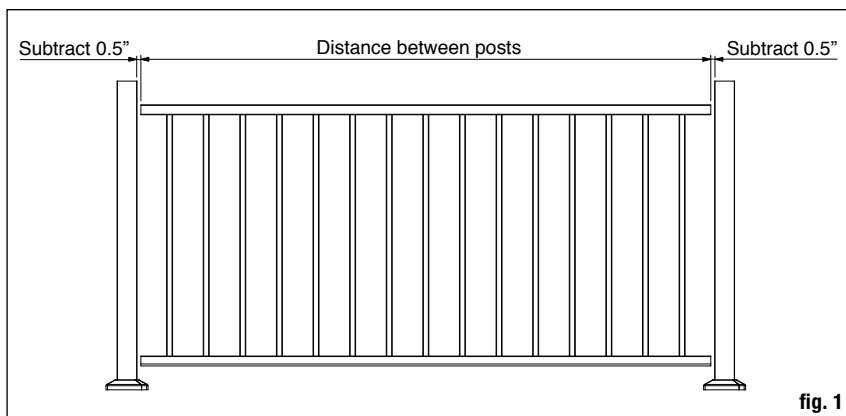
Line Railing Installation

Step 1: Refer to the installation instructions included with your posts to mount your posts to the deck.

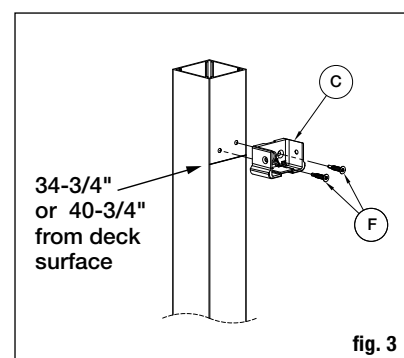
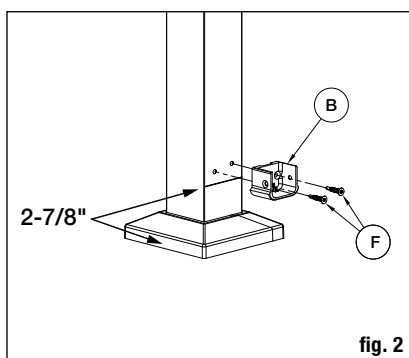
STOP – Make sure post base trim is installed before continuing.

Step 2: Measure the distance between installed posts near the bottom 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 3: Subtract 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. 1**).

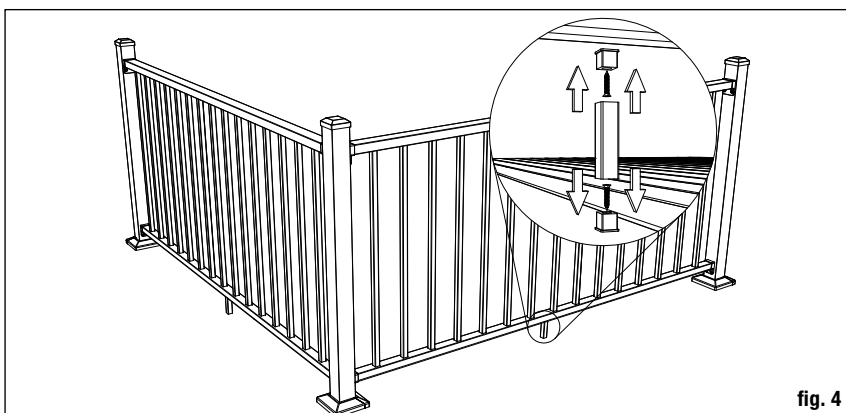


Step 4: Measure up 2-7/8" from the deck surface and make a mark on the post. Position the bottom of the lower bracket base (B) onto the mark, centered with the post as shown. Mark the two-hole locations. Drill Pilot holes in these locations using a 1/8" bit. Secure the bracket base with (2) - #10 x 1" Screws (F). Repeat with the other bracket base on the opposite end Post (**fig. 2**).

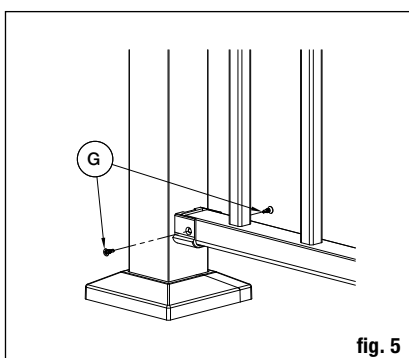


Step 5: Measure up 34-3/4" (36" railing) or 40-3/4" (42" railing) from the deck surface and make a mark on the post. Position the bottom of the upper bracket base (C) onto the mark, centered with the post as shown. Mark the two-hole locations. Drill Pilot holes in these locations using a 1/8" bit. Secure the bracket base with (2) - #10 x 1" Screws (F). Repeat with the other bracket base on the opposite end Post (**fig. 3**).

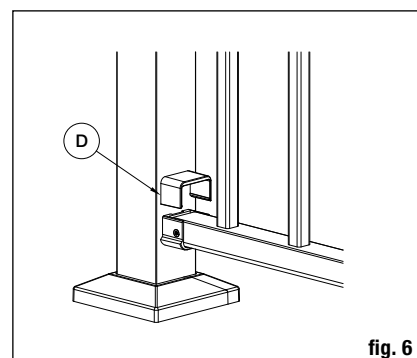
Step 6: One rail support is needed on any rail longer than 6 foot. Attach rail support connector to the bottom of the lower rail at the center of the rail. Predrill using a 1/8" drill bit. Attach the rail support to the support block connectors. Mark the location of the rail support on the deck surface and attach the other rail support connector to the deck using the included screw (**fig. 4**).



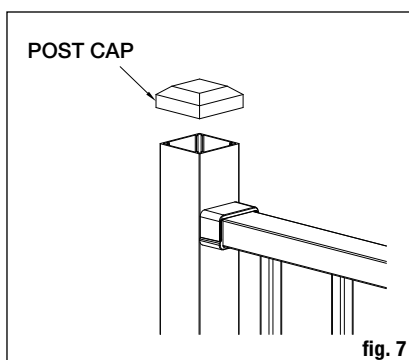
Step 7: Set the railing section (A) onto the installed bracket bases. Using a 1/8" drill bit, drill pilot holes in the rails through the side bracket holes. Secure the rails to the bracket bases using the provided #8 x 1/2" screws (G) as shown (**fig. 5**).



Step 8: Place the lower bracket caps (D) and upper bracket caps (E) onto the upper and lower bracket bases as shown (**fig. 6**).



Step 9: Set post caps on each post. Gently tap with rubber mallet to secure (**fig. 7**).



Stair Railing Installation Instructions

Parts included

A. Pre-assembled stair panel

B. Bracket Components

(1) Upper Bracket Rail Cup

(2) Lower Bracket Rail Cup

(3) Base

(4) Rotator

(5) Side Cover

(6) Barrel Bolt

(7) Barrel Screw

(8) Rubber O-Ring

(9) 1/4 x 1" Pan Head Machine Screw

(10) #10 x 1" Self-Drilling Pan Head Screw

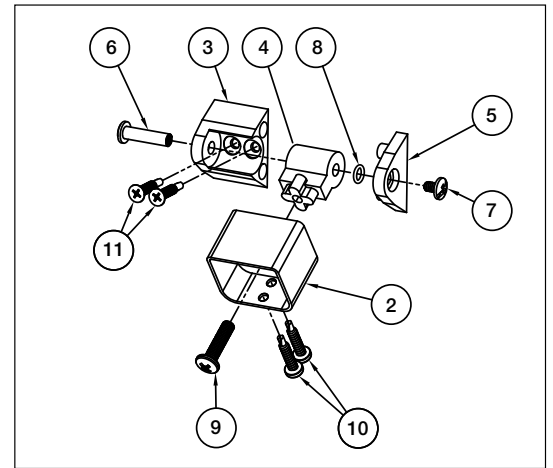
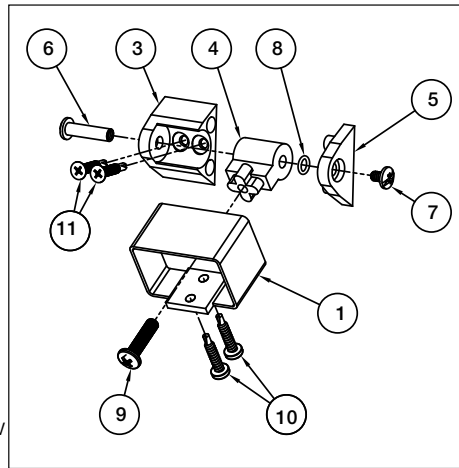
(11) #10 x 1" Self-Drilling Flat Head Screw

C. Rail supports (1-2)

D. Rail support connectors (2-4)

E. #8 x 1" Connector screws (2-4)

(Posts and stair rail kits sold separately)



Note: 6' Stair rails require 1 rail support, Rails longer than 6' require 2 rail supports.

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. Note: when installed, the rail must not allow a 6 inch sphere to be passed between the tread, riser, and rail as depicted in fig. 8.
- Position the post so the fasteners will go through the decking and into the joists and/or blocking. Proper structural blocking/framing under the decking material is required when attaching the post to a frame because decking alone is not approved as structural framing.

Stair Railing Installation

Step 1: Refer to the Installation instructions included with your posts and notes below to mount your posts to the deck.

- Begin by determining where the top and bottom post will be located. Mark the desired location of the post.
- 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.
- 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 2: Measure the distance between installed posts (parallel to the stair angle) 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's nosing. 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. **(See fig. 8)**

Step 3: Temporarily assemble the swivel brackets apart from the rails using parts B1 thru B9 (see parts included). Do not yet fully tighten the screws.

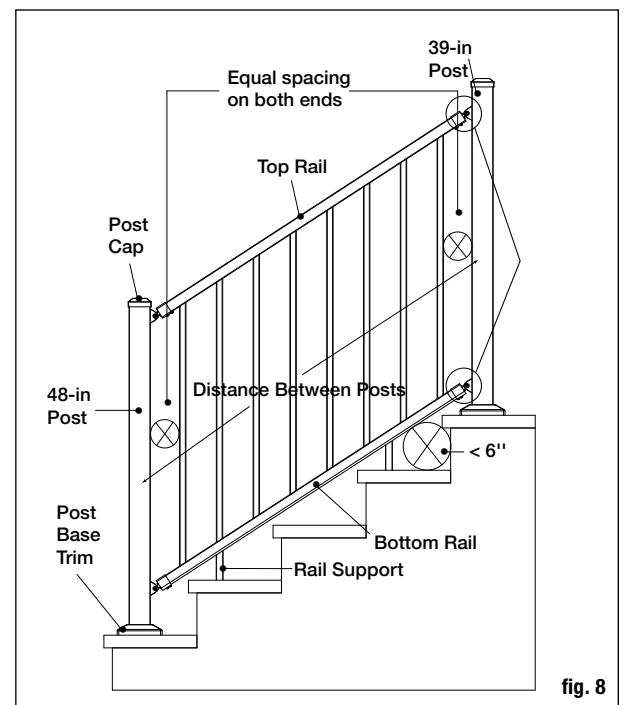


fig. 8

Step 4: Position the swivel bracket in location along the clamped rail. Mark the rail at the end of the bracket, add 3/4" and make a second mark for cutting. Mark the post along the top or bottom of the bracket base (**fig. 9**). Repeat for the other bracket and post locations. Cut the top and bottom rails to length using a miter or circular saw with carbide tipped blade. **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.**

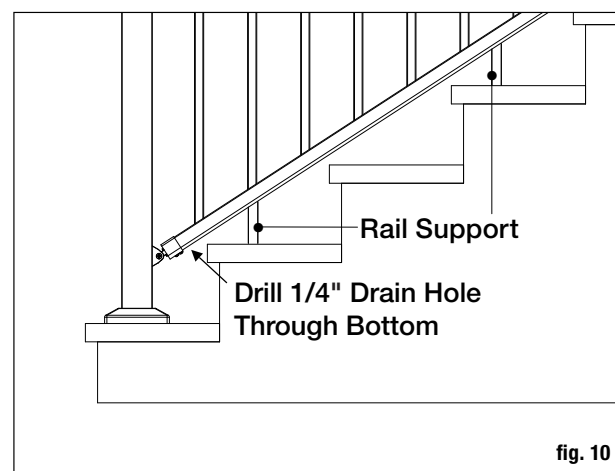
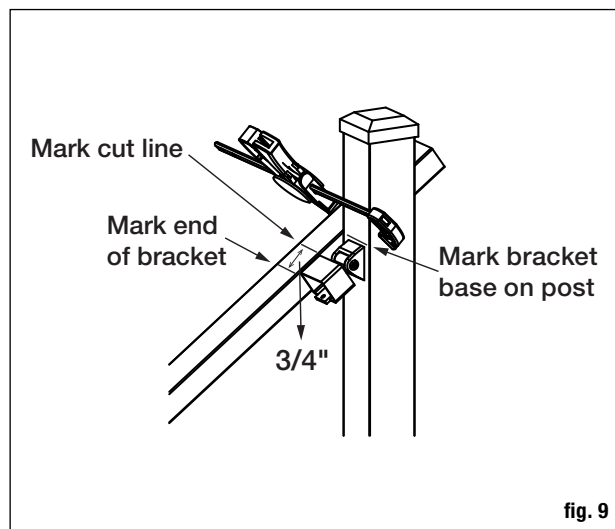
Step 5: Separate the bracket bases and side covers from the bracket assembly. Position the front end of brackets (B-1, B-2) to rails and mark the locations of the screw holes on the rails. Predrill through the rail only, using a 1/8" drill bit. Secure the rail cups to the rails using the (2) - #10 x 1" Pan Head Screws (B-10) provided.

Step 6: Holding the bracket bases, on the posts at the previously marked locations, transfer the location of the bracket base (B-3) screw holes onto the post. Note: Include the bracket side cover (B-4) when determining the center location. Predrill through the post, using a 1/8" drill bit. Position the base of each bracket with the bracket cover side facing the stairs, and attach to the post with the (2) - #10 x 1" Self-Drilling Flat Head Screws (B-11) provided.

Step 7: A rail support is needed every 3 feet max (1 is included in the 6ft rail kit, 2 in the 8ft kit). Insert the angled stair connector and straight connector into the rail support and position between the rail and stair tread so both are in contact. Then mark their locations on the rail and tread. Predrill using a 1/8" drill bit. Attach rail support connectors to the bottom of the lower rail at 3-foot intervals using included screws. 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 1-1/2" from rail end to avoid the lower bracket. (**See fig. 10**).

Step 8: Install the bottom railing between the posts by sliding the bracket components B-3 and B-4 together on each end. Secure the bracket side cover (B-5) with the barrel bolt (B-6) and screw (B-7). Note: to eliminate bracket movement, position the "O"-Ring (B-8) onto the barrel screw before securing the bracket side cover.

Step 9: Set post caps on each post. Gently tap with rubber mallet to secure (**fig. 7**).



THE DIAGRAMS AND INSTRUCTIONS IN THIS BROCHURE ARE FOR ILLUSTRATION PURPOSES ONLY AND ARE NOT MEANT TO REPLACE A LICENSED PROFESSIONAL. ANY CONSTRUCTION OR USE OF THE PRODUCT MUST BE IN ACCORDANCE WITH ALL LOCAL ZONING AND/OR BUILDING CODES. THE CONSUMER ASSUMES ALL RISKS AND LIABILITY ASSOCIATED WITH THE CONSTRUCTION OR USE OF THIS PRODUCT. THE CONSUMER OR CONTRACTOR SHOULD TAKE ALL NECESSARY STEPS TO ENSURE THE SAFETY OF EVERYONE INVOLVED IN THE PROJECT, INCLUDING, BUT NOT LIMITED TO, WEARING THE APPROPRIATE SAFETY EQUIPMENT. EXCEPT AS CONTAINED IN THE WRITTEN LIMITED WARRANTY, THE WARRANTOR DOES NOT PROVIDE ANY OTHER WARRANTY, EITHER EXPRESS OR IMPLIED, AND SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES.