

Tools and Items Needed

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

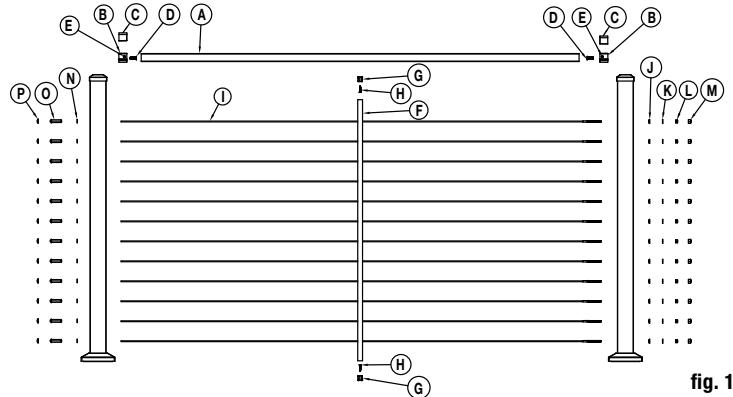
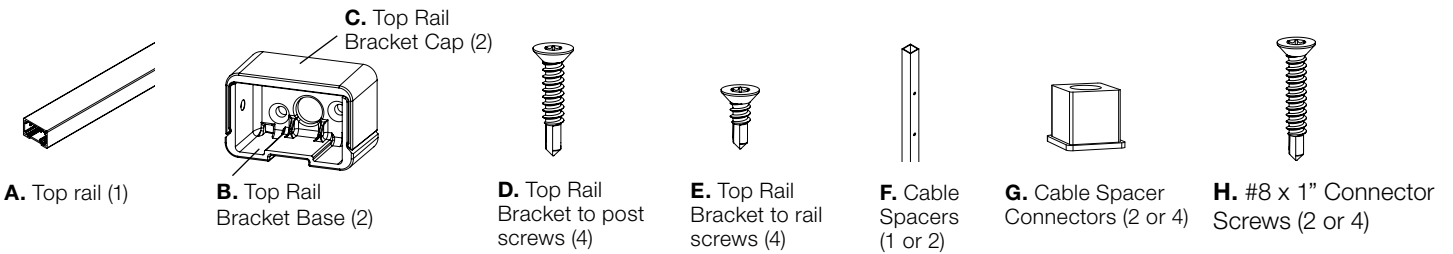


fig. 1



Parts included

- A. Top Rail (1)
- B. Top Rail Bracket Base (2)
- C. Top Rail Bracket Cap (2)
- D. #10 x 1" Bracket Post Screw (4)
- E. #8 x 1/2" Bracket Rail Screws (4)
- F. Cable Spacer (1 or 2)
- G. Spacer Connectors (2 or 4)
- H. #8 x 1" Connector Screws (2 or 4)

Sold Separately:

- **Cable Posts Kits, as needed per the deck layout**
Available in End, Line, Corner, Mid-stair and Bottom Stair
- **10 Cable kits for each 36" height run or 12 for each 42" height run, which contains:**
Note: Cable Kits are available in lengths of 5', 10', 15', 20', 25', 30', 40' or 50'

- I. Cable
- J. Stud Bushing
- K. Stainless Steel Washer for Metal
- L. Brass Locknut
- M. Nut Cover
- N. Delrin Washer
- O. Pull-lock Fitting
- P. Pull-lock Fitting Cap

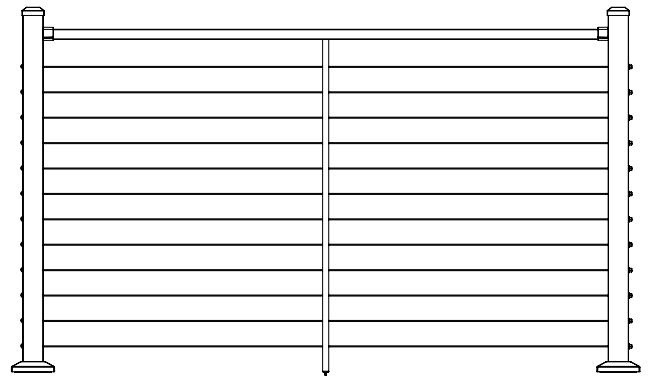


fig. 2

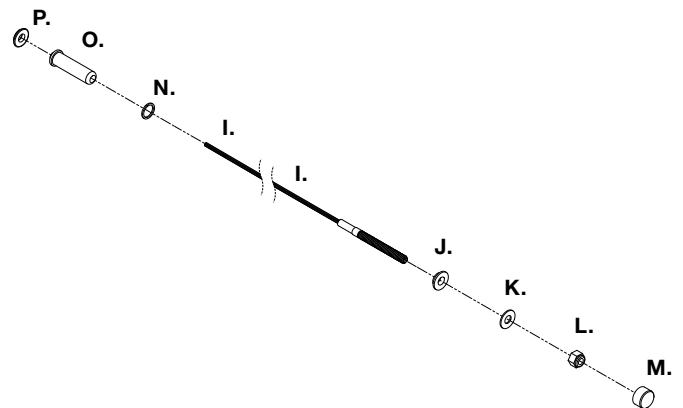


fig. 3

In-Line Railing Installation Instructions

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). Common railing height is 36" or 42". This rail is designed for a 3" sweep. Read In-Line Railing instructions completely to get an understanding of how the product goes together and how each piece affects the other. *Note: Use clean tools in order to reduce contamination on stainless steel surfaces. We recommend using new chrome-plated tools to protect the fittings from raw steel. Avoid installing with rusty tools, as they leave rust deposits on the surface of the fittings. After installation, we recommend cleaning the stainless steel parts completely with a stainless cleaner and a soft clean rag in order to clear carbon deposits from the surface.*

Step 1 Determine the layout and number of railing posts needed for your deck. Post spacing is 6' or 8' on-center. Posts are available pre-drilled for end, line, and corner posts. Many layout options are possible. For 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. 4). The use of more than 2 corner posts per cable span will limit your ability to adequately tension the cables so you may want to position any double posts away from the area requiring the least interference to your view. *Note: Don't install the cable until all of the posts, rails, and spacers have been installed.*

Step 2 Installing Posts: 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. 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 (fig. 5).

Step 3 Ensure the end and line posts are used in the correct location and oriented the proper way. The larger diameter hole on the end posts should face away from the cable run. 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 4 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.* (fig. 6)

Step 5 Finish by sliding a post base trim over each post for a finished look. (fig. 7)

Step 6 Measure the distance between installed posts to determine the length of the top rail. The rails are 68.5" long for 6' and 92.5" long for 8' on-center posts, when using 2-1/2" posts, and includes a 1/2" space on each end for the brackets. If a shorter rail section are needed, measure the distance between the posts and subtract 1". Cut the rail section equally on both ends to the desired length.

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

Step 7 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 upper bracket base 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" bracket post screws (D). Repeat with the other bracket base on the opposite end Post. *Tip: Use a driver extension bit to avoid marring the rail with the drill chuck. Install all rails prior to installing cable.* (fig. 8)

Step 8 A cable spacer (F) is needed at least every 3 feet (1 is included in the 6ft kit, 2 in the 8ft kit). Attach spacer connectors (G) to the bottom of the top rail. Pre-drill using a 1/8" drill bit. Attach the spacers to the spacer connectors. Mark the location of the spacer on the deck surface and attach the other spacer connector to the deck using the included #8 x 1" connector screws (H).

Step 9 Set the railing section back onto the installed bracket bases so that the cable spacers are set onto the spacer connectors previously attached to the deck surface. 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 (2) #8 x 1/2" bracket rail screws (E) as shown. Place the bracket caps onto the bases as shown (fig 9).

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

Step 11 Install cable according to the cable instructions.

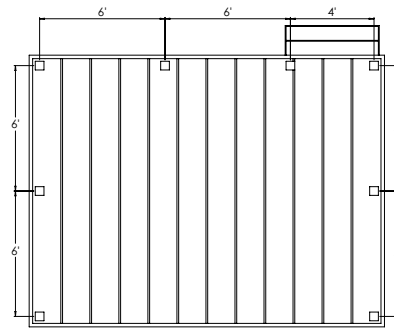


fig. 4

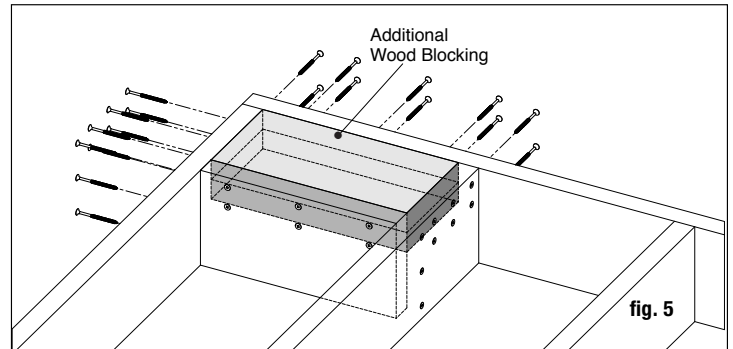


fig. 5

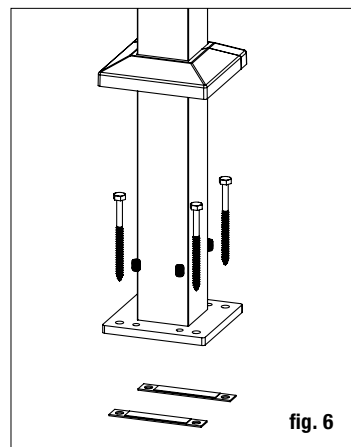


fig. 6

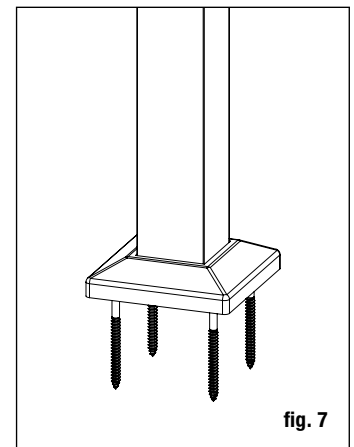


fig. 7

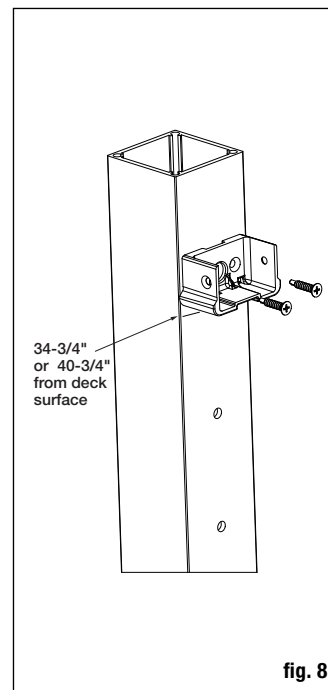


fig. 8

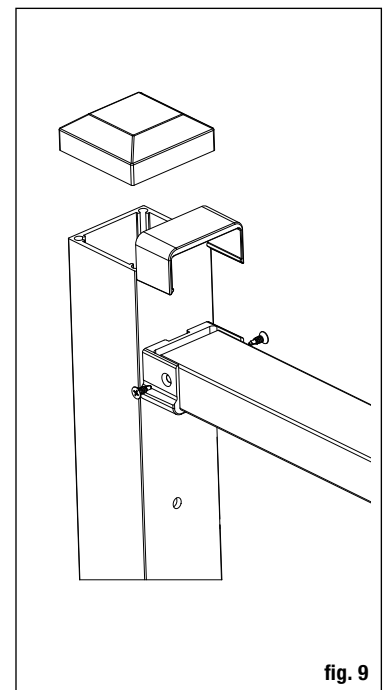


fig. 9

Stair Railing Installation Instructions

Parts included

A. Cable Stair Rail

B. Bracket Components

- (1) Upper Bracket Rail Cup
- (2) Rotator
- (3) Side Cover
- (4) Base
- (5) Barrel Screw
- (6) Barrel Bolt
- (7) #10 x 1" Self-Drilling Flat Head Screw
- (8) 1/4 x 1" Pan Head Machine Screw
- (9) #10 x 1" Self-Drilling Pan Head Screw
- (10) (10) Rubber O-Ring

C. Cable spacer (1-2)

D. Spacer connectors (2-4)

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

(Posts and stair rail kits sold separately)

Prior to construction:

Step 1 Begin by determining where the top and bottom post will be located. Mark the desired location of the post. *For stair rails that are perpendicular or in line with the deck rail, an end post is used to terminate the cable run. The post will need to be drilled for the stair cable.* 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 structural framing.

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.

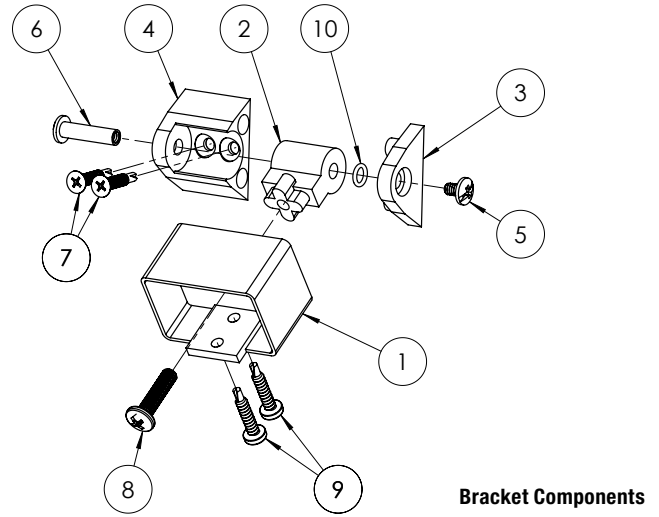
Step 3 Reposition the post assembly with the leveling plate inserted between the deck and the post base, and aligned with the predrilled holes. Insert the post fasteners (**NOT INCLUDED**), and partially tighten. Using a level, adjust the leveling set screws with a 3/16" allen wrench until the post is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

Step 4 Finish by sliding a post base trim over each post sleeve for a finished look.

Step 5 Measure the distance between installed posts to determine the length of the top rail. Position the railing on the stairs on top of a spacer block along the stair nosings. The distance between the post and the cable spacer should be equal on both ends. Once the railing is in position, clamp the railing to the posts. Temporarily assemble the swivel brackets. 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 (B4). See fig. 10. Repeat for the other bracket and post locations.

Step 6 Mark locations of the bracket screw holes on the the bottom of the rails. Remove brackets. Predrill through the rail only, using a 1/8" drill bit. Attach the front end of brackets (B1) to rails using (2) #10 x 1" Pan Head Screws (B9) provided.

Step 7 Holding the bracket bases on the posts at the previously marked locations, transfer the location of the bracket base (B4) screw holes onto the post. Note: Include the bracket side cover (B3) 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 (B7) provided.



Bracket Components

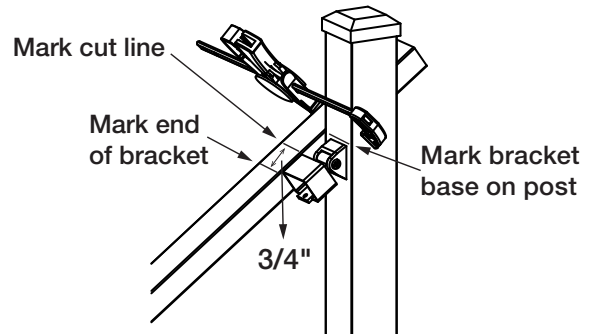


fig. 10

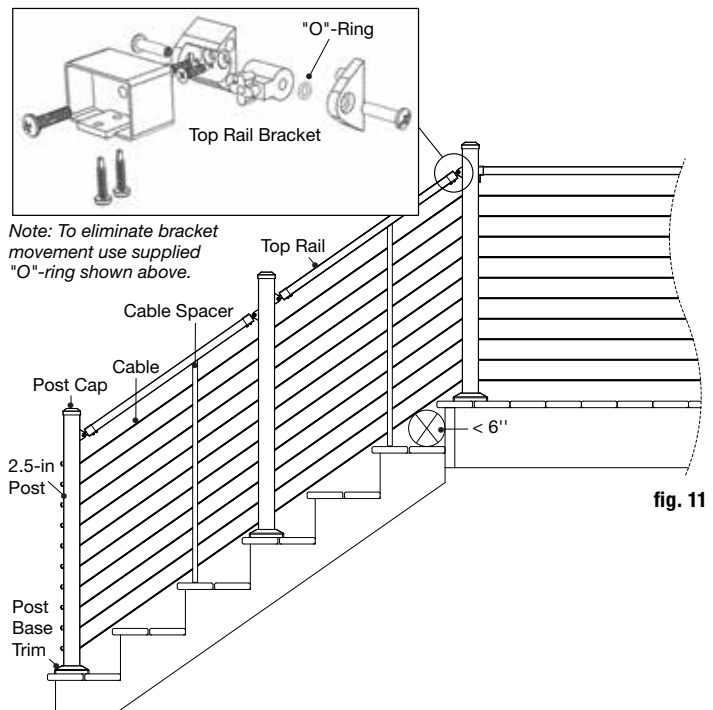


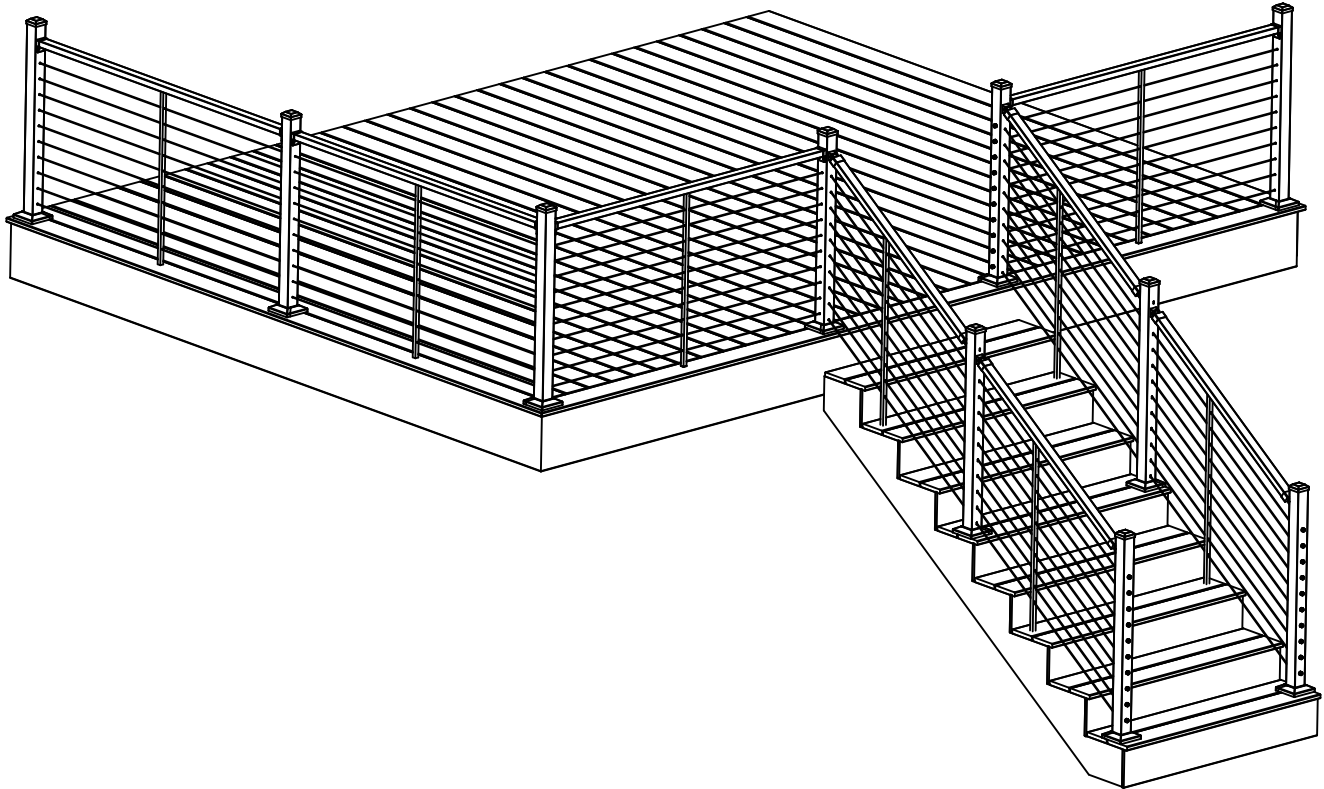
fig. 11

Step 8 A cable spacer is needed at least every 3 feet (1 is included in the 6ft rail kit, 2 in the 8ft kit). Trim the cable spacer as needed. Attach cable spacer connectors to the bottom of the rail using included screws. Predrill using a 1/8" drill bit. Mark the location of the cable spacer on the step tread and attach the other cable spacer connector to the step tread.

Step 9 Install the Top Rail between the posts by sliding the bracket components together on each end. Secure the bracket side cover (B3) with the barrel bolt (B6) and screw (B5). Note: to eliminate bracket movement, position the "O"-Ring (B10) onto the barrel screw (B6) before securing the bracket side cover (B3).

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

Step 11 Install cable according to the cable instructions.



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