



TABLE OF CONTENTS

English

Introduction.....	3
Level Bracket.....	4
Angle Bracket.....	16
Stair Bracket.....	21
Care & Maintenance/ Warranty.....	33

INTRODUCTION

READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

It is the responsibility of the installer to meet all code and safety requirements, and to obtain all required building permits. The deck and railing installer should determine and implement appropriate installation techniques for each installation situation. Fortress Building Products and its distributors shall not be held liable for improper or unsafe installations.

Fortress Posts must always be secured to the deck framing and should never be attached to only the deck boards.

Note

When cutting Inspire Railing, it is very important to complete the following at cut points:

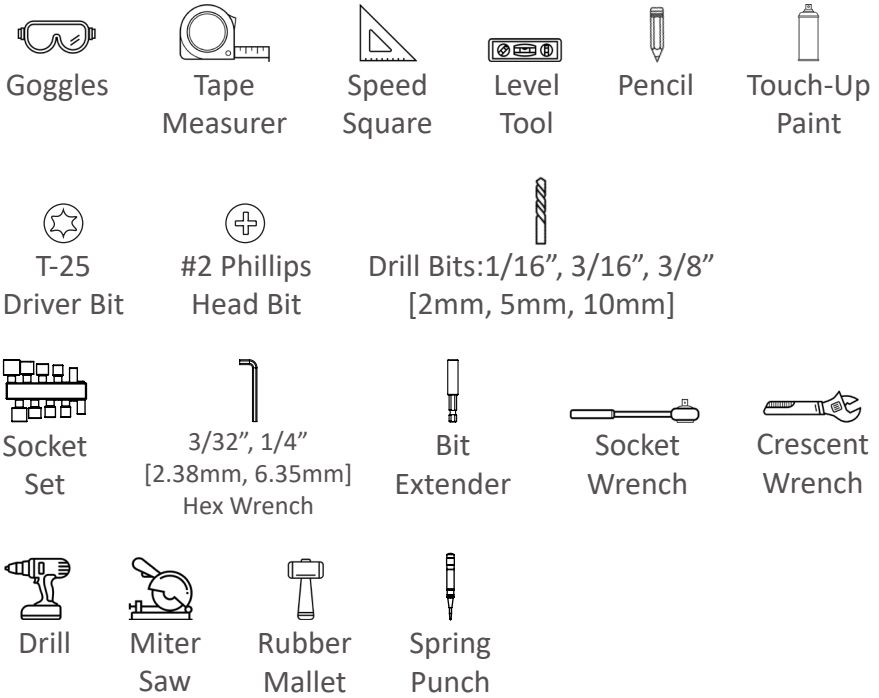
- Remove all metal shavings from the cut area.
- File any sharp edges left by cutting. Thoroughly wipe and remove any filings, grime or dirt from the railing.
- Apply two coats of Fortress zinc based touch-up paint to the cut area. If touch up is at rail ends, allow paint to dry before connecting bracket to post.
- Be sure to remove any metal shavings from the surface of deck, patio or balcony to prevent stains on the deck surface.

Torx Safety Tips

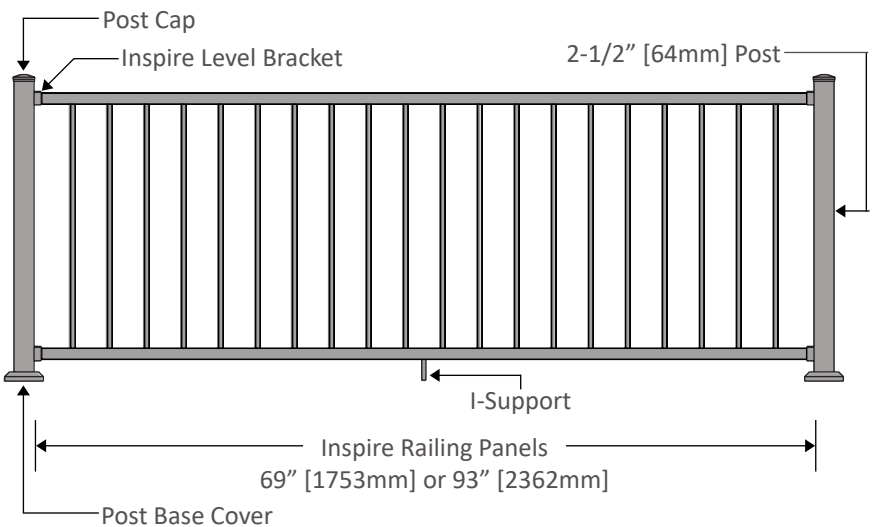
- Always use the lowest speed setting on drill.
- To reduce chance of bit breakage, start tightening with drill on low torque setting and work up until screw is secured.

Tip: Pre-drill holes with 3/16" [5mm] drill bit.

Required Tools



Inspire Railing: Level Bracket Installation option



Inspire Railing Post Configuration

Inspire Railing Panel Height

32-1/2" [826mm]

Inspire Railing Panel

Installed Panel Height*

36" [914mm]

Required Post

39-1/2" [1003mm]

*Installed heights include a 3-1/2" [89mm] space between deck surface and bottom edge of bottom rail.

BRACKET INSTALLATION

Step 1: Install Brackets

1. Locate dimples on post. As shown in Fig. 1. Each post has three faces with dimples for the bracket holes of the top and bottom brackets, fourth face is blank.
2. Pre-drill bracket holes with a 3/16" [5mm] drill bit.
3. Attach brackets into the pre-drilled holes in posts with supplied T-25 thread-cutting screws. As shown in Fig. 2. Use two screws per bracket. Use low speed setting on drill.
4. Remove all metal shavings from post and bracket to prevent corrosion.

Fig. 1

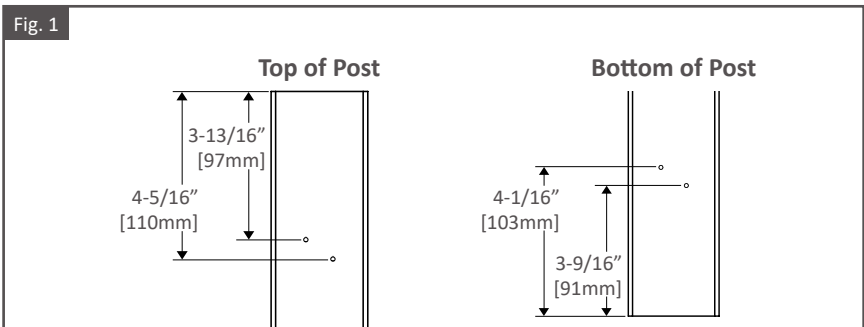
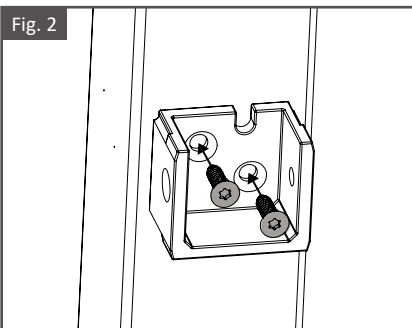


Fig. 2

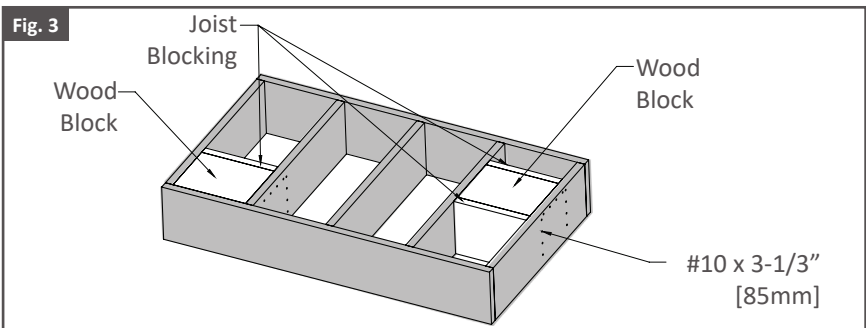


POST MOUNTING

*If using Fortress Evolution Framing, contact Fortress for instructions.

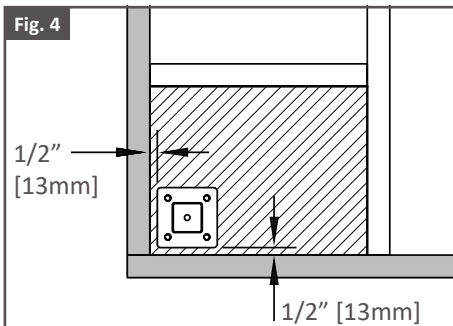
Step 1: Install Wood Blocks

1. Install Wood Block level with top of joist. As shown in Fig. 3.
2. Secure Wood Block to blocking on all four sides with #10 X 3-1/2" [89mm] deck screws.
 - Wood Block must be constructed with treated dimensional lumber with a minimum thickness of 1-1/2" [38mm].



Step 2: Position Base Plate

1. Position the edge of the base plate a minimum of 1/2" [13mm] from the inside edge of rim joist. As shown in Fig. 1 below.

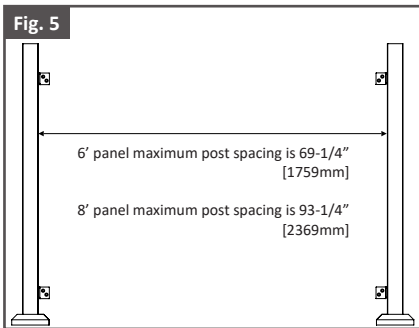


Step 3: Max Post Spacing

- 6' panel maximum post spacing is 69-1/4" [1759mm].
- 8' panel maximum post spacing is 93-1/4" [2369mm].

Note:

- **DO NOT** exceed the maximum post spacing.

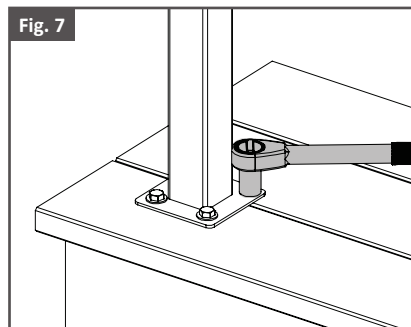
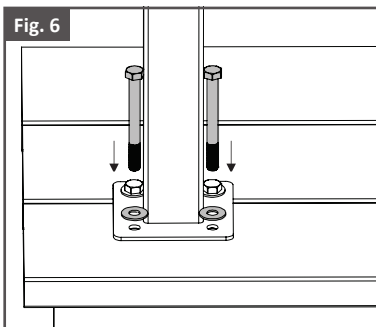


Step 4: Mount Posts

1. Mark mounting hole locations and pre-drill a 3/8" [10mm] hole.
2. Insert 3/8" [10mm] x 3-1/2" [89mm] Hex Head galvanized bolts through 3/8" [10mm] galvanized washer and post base plate.

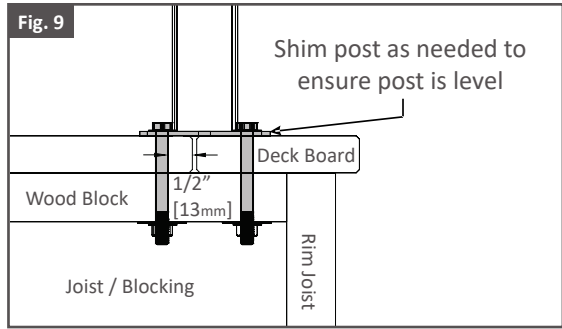
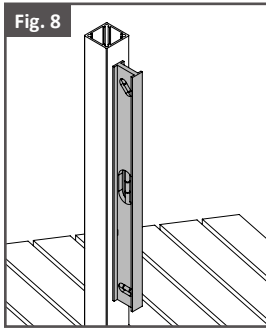
Note:

- Post Base Plate holes **MUST** be positioned a minimum 1/2" [13mm] from edge of deck board.
- Use only 3/8" [10mm] Hex Head Galvanized Bolts. Lag Screws should **NOT** be used. Secure each post with four bolts.



Step 5: Check Mounted Posts

1. Shim post as needed to ensure post is level.



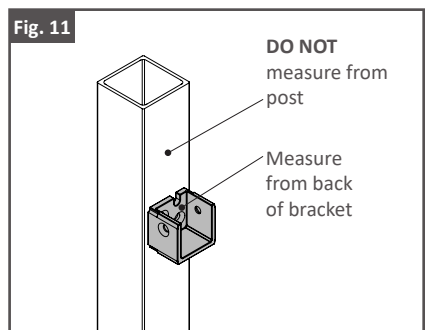
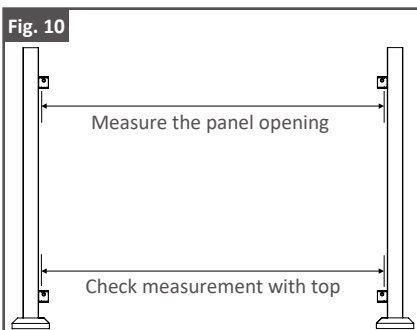
CUTTING DOWN BOTTOM AND TOP RAILS

Step 1: Measure The Panel Opening Length

1. Measure panel opening distance. As shown in Fig. 10.
2. Confirm that the measurements for the top brackets are the same as the bottom brackets.

Tip:

- Measure from the back wall of the bracket to the back wall of the bracket on other post. As shown in Fig. 11.

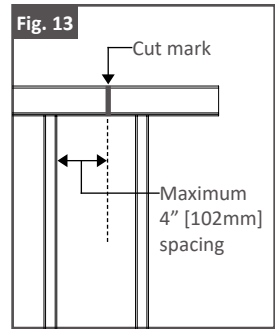
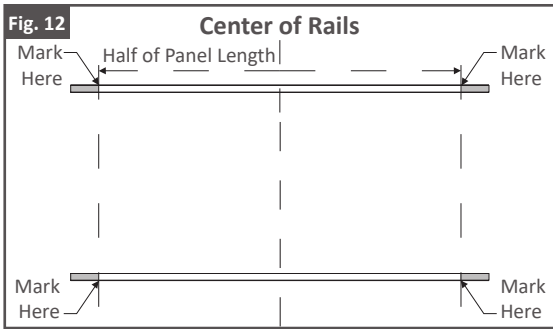


Step 2: Mark Rails Where Cuts Will Be Made

1. Take the measurement found in step 1 above and divide it in half.
2. Find the center of the rails and measure out half of the length each direction. As shown in Fig. 12.
3. Mark the locations with a pencil on the top & bottom rail.

Tip:

- Before cutting rails, confirm spacing between cut mark and outside face of end picket will be less than 4" [102mm]. As shown in Fig. 13. Adjust cut marks as needed.

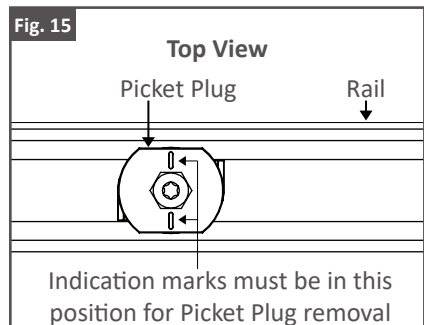
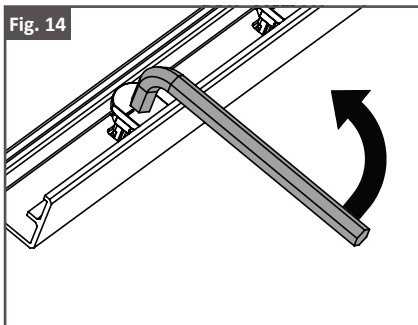


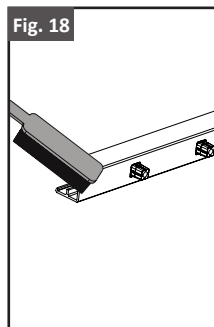
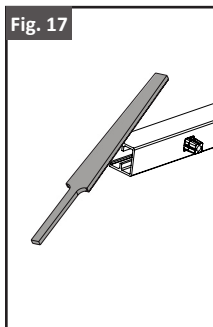
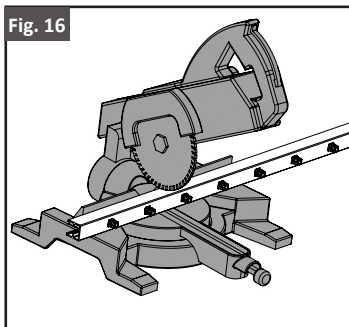
Step 3: Cut & Clean Rails

1. To avoid injury or damage before cutting down rail, remove picket plugs in general area of the cut.
2. To remove picket plugs, use 1/4" [6mm] Hex Wrench and rotate plug to the right until indication marks are perpendicular to rail. As shown in Fig. 14 & 15.
3. Cut rails using a saw with a fine tooth carbide cutting blade. As shown in Fig. 16.
4. Use file to smooth cut edges. As shown in Fig. 17.
5. Remove any metal shavings and dust with a brush or rag. As shown in Fig. 18.
6. Make sure surfaces to be painted are clean.

Note:

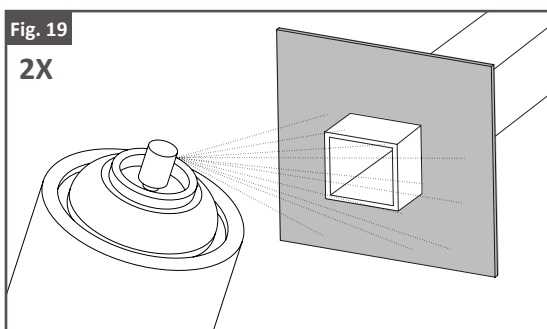
- Top Cap should be cut to the length of the panel opening found on page 8, step 1.
- **DO NOT** cut on deck surface.





Step 4: Apply Spray Paint To Cut Areas

1. Using a piece of cardboard as a mask, apply the 1st coat of Fortress zinc based touch-up paint.
2. Allow to dry before applying second coat.
3. Apply the 2nd coat of Fortress zinc based touch-up paint.
4. Allow to dry and install.



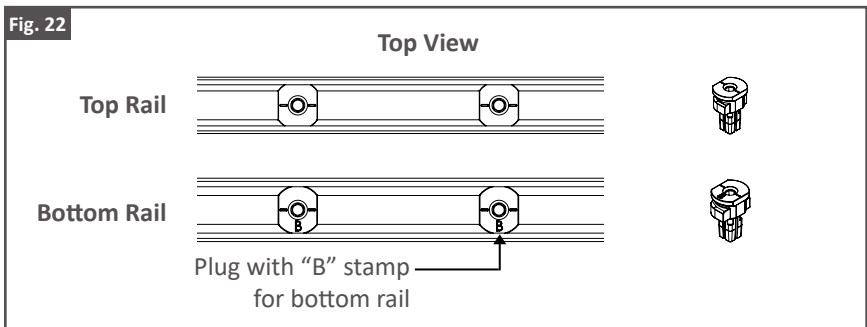
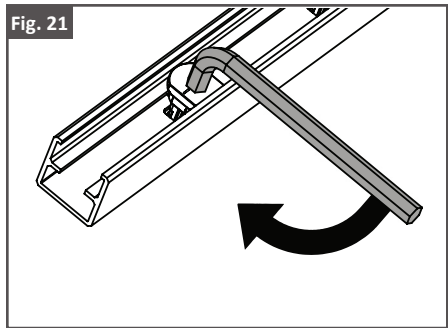
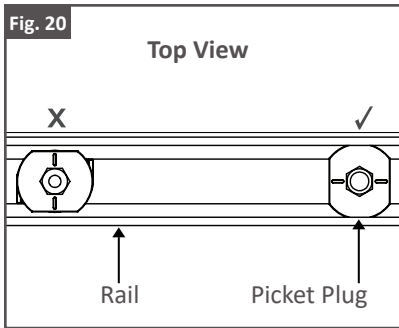
PANEL INSTALLATION

Step 1: Inspect Top and Bottom Rails

1. Confirm that the indication marks on the top of the picket plugs are parallel to the rail. As shown in Fig. 20.
2. If plugs are not parallel, use a 1/4" [6.35mm] Hex Wrench to twist and lock plug into place. As shown in Fig. 21.

Tip:

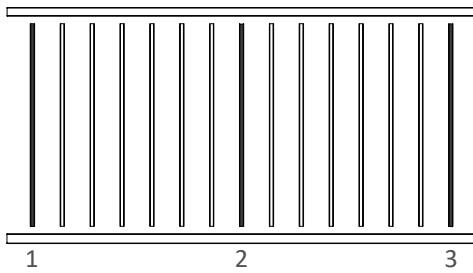
- Top and bottom rails can be identified by the picket plug. Plugs with "B" stamp are used for bottom rails, plain plugs are used for top rails. As shown in Fig. 22.



Step 2: Assemble Panel

1. Level panels have 3 Support Pickets with threaded ends. As shown in Fig. 23.
2. Lay all panel components on a flat surface. Support Pickets are labeled with removable stickers.
3. Place a Support Picket at both ends of the panel and one in the center of panel.
4. Fasten Support Pickets to the **bottom rail** using included T-25 M6 Flat Head Bolt. As shown in Fig. 24.
5. Insert standard pickets into bottom rail. As shown in Fig. 25.
6. Install top rail by starting at one end of the rail with a Support Picket. Loosely fasten one end Support Picket with included T-25 M6 Flat Head Bolt. As shown in Fig. 26.
7. Work your way down the top rail carefully inserting all remaining pickets into the top rail.
8. While keeping pickets engaged into the top & bottom rails, finish tightening bolts into top rail support pickets.
9. Confirm all 6 support screws are fully fastened.

Fig. 23



Support Picket
(Section View)

T-25 M6
Flat Head
Bolt

Thread

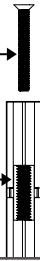


Fig. 24

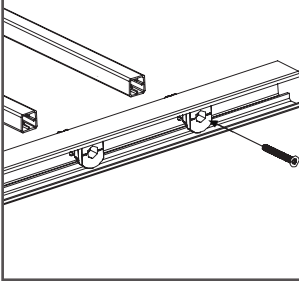


Fig. 25

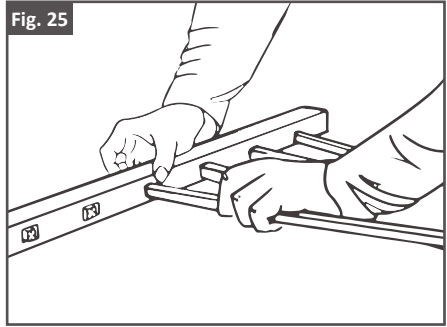
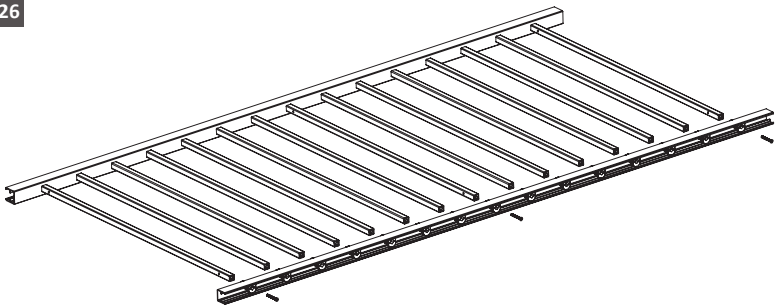


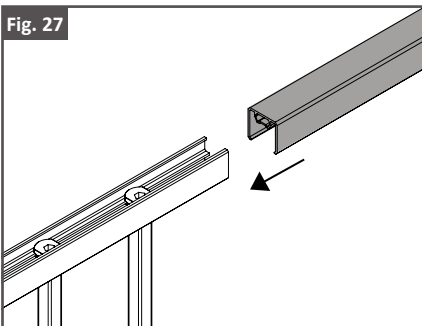
Fig. 26



Step 3: Install Top Rail Cap onto Top Rail

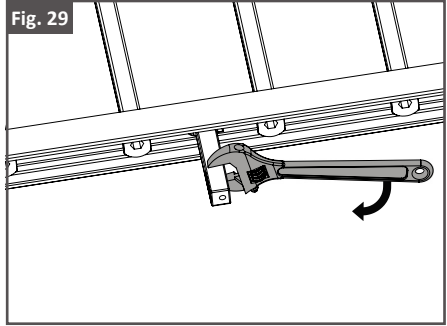
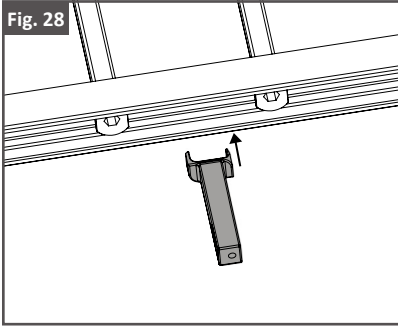
1. Slide the top rail cap on to the top rail. As shown in Fig. 27.

Fig. 27



Step 4: Install I-support onto Bottom Rail

1. Position the I-support as close to the center of the bottom rail as possible. The I-support should be inserted between two pickets. As shown in Fig. 28.
2. Use a Crescent Wrench to twist the I-Support into place As shown in Fig. 29.

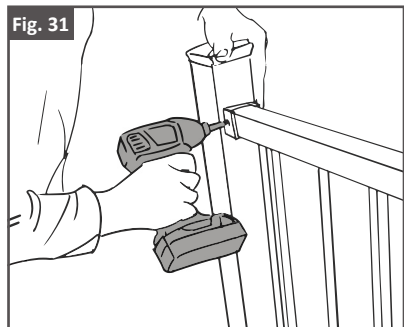


Step 5: Install Panel Into Brackets

1. Install panel into brackets to confirm proper fit. Confirm that pickets are parallel to posts. As shown in Fig. 30.
2. Pre-drill top and bottom bracket holes for screws using a 3/16" [5mm] drill bit.
3. Install T-25 Thread Cutting screws into brackets. As shown in Fig. 31.

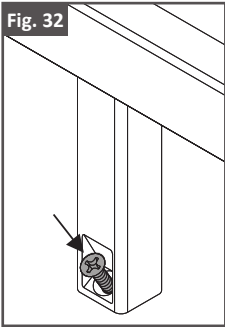
Note:

- Only one screw per bracket is needed to secure the panel to the bracket.
- Screws should be installed on the same side of all brackets.



Step 6: Attach I-Support To Deck

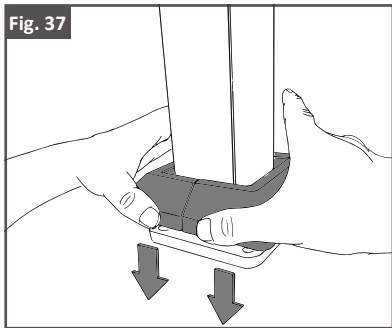
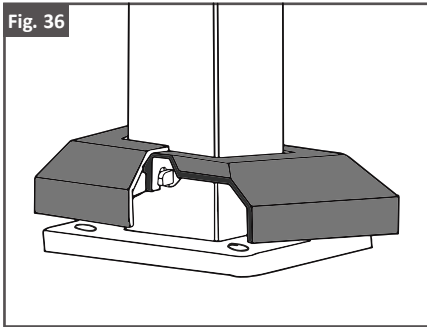
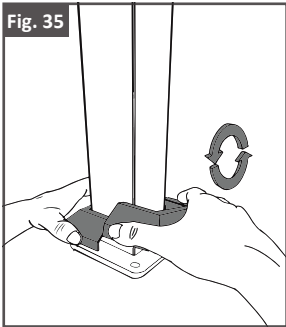
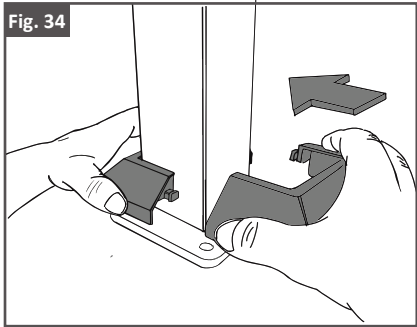
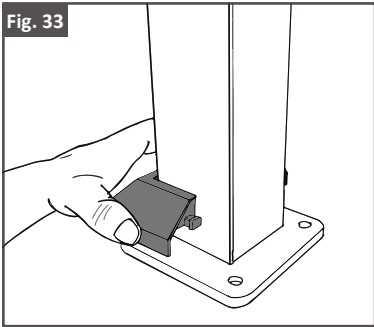
1. Pre-drill I-support screw hole with a 1/16" [2mm] drill bit.
2. Fasten I-Support to deck surface with the supplied Phillips Head Wood Screw. As shown in Fig. 32.



POST BASE COVER & BRACKET CAP INSTALLATION

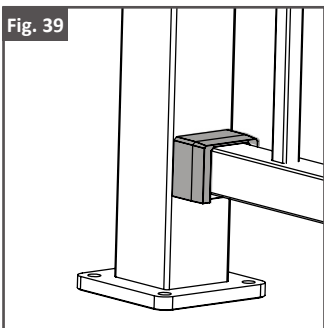
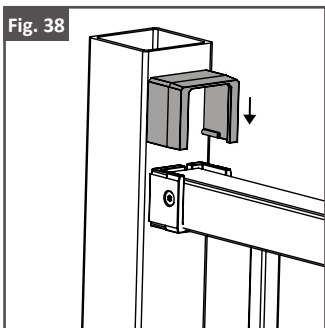
Step 1: Install Post Base Cover

1. Separate the two-piece base plate cover. Hold one side parallel to the post base plate. As shown in Fig. 33.
2. Place 2nd half of the post base cover on the opposite side of the post. Hold 2nd piece slightly under the 1st piece. As shown in Fig. 34.
3. Twist the 2nd cover ¼ turn and move piece until both halves touch. As shown in Fig. 35.
4. Make sure one of the locking pins on the 2nd cover engage with the proper slot on the 1st cover piece. As shown in Fig. 36.
5. Once the first locking pin is started, turn the 2nd cover piece back parallel to the post base plate. One you have confirmed both locking pins have engaged with the opposing slots lower both half's over the post base plate. As shown in Fig. 37.



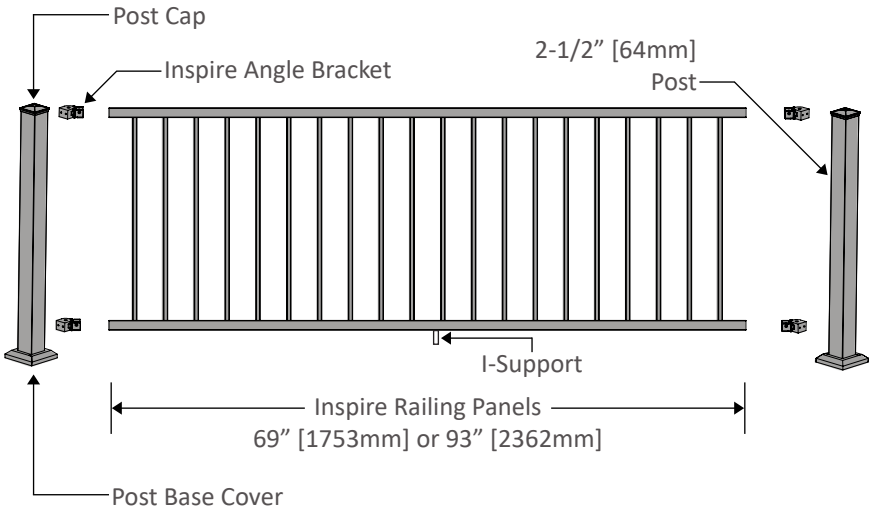
Step 2: Install Bracket Caps

1. Bracket Caps snap over Bracket Cups.



ANGLE BRACKET

Inspire Railing: Angle Bracket Installation option



Inspire Railing Post Configuration		
Inspire Railing Panel Height	Inspire Railing Panel	
	Installed Panel Height*	Required Post
32-1/2" [826mm]	36" [914mm]	39-1/2" [1003mm]
*Installed heights include a 3-1/2" [89mm] space between deck surface and bottom edge of bottom rail.		

ANGLE BRACKET: BRACKET INSTALLATION

Step 1: Mark Bracket Hole Locations

1. Mark the centerline of each post with a pencil.
2. Take measurements used to mark bottom and top bracket hole locations onto posts. Reference Fig. 40 and 41.

Note:

- Installed panel heights include space between the deck surface and underside of bottom rail. Inspire Railing has a spacing of 3-1/2" [89mm] spacing.

Fig. 40

Angle Adapter Bracket Hole Locations

Pre-drill Dimensions: Pre-drilling with a 3/16" [5mm] drill bit is required

A*

B

C

36" [914mm] Panel

4-1/8" [105mm]

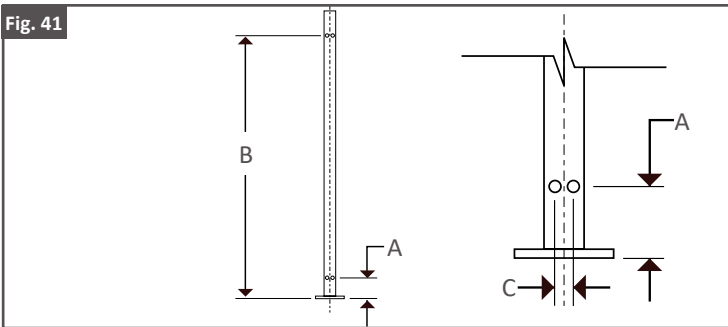
35-3/16" [894mm]

3/4" [19mm]

*Dimension A positions bottom edge of rail 3-1/2" [89mm] above deck surface.

*Dimension A is measured from the bottom surface of post base.

Fig. 41



Step 2: Pre-drill Angle Bracket Holes

Tip:

- **It's important to double check dimensions to confirm accuracy of bracket hole locations before drilling.**
1. Use Spring Punch to mark the holes. As shown in Fig. 42.
 2. Pre-drill bracket holes with a 3/16" [5mm] drill bit. As shown in Fig. 43.
 3. Remove the bolt from the Angle Bracket Assembly.

Fig. 42

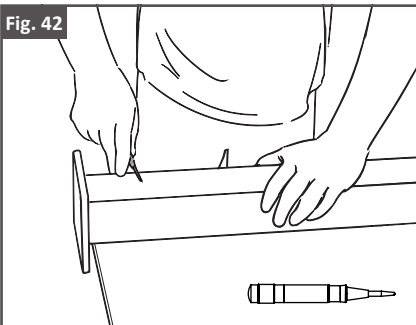
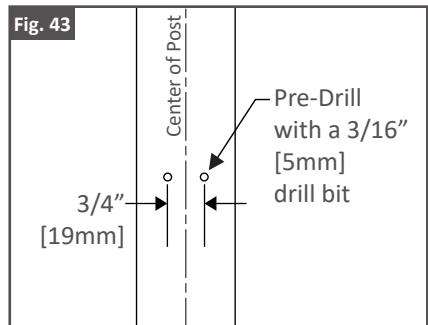


Fig. 43

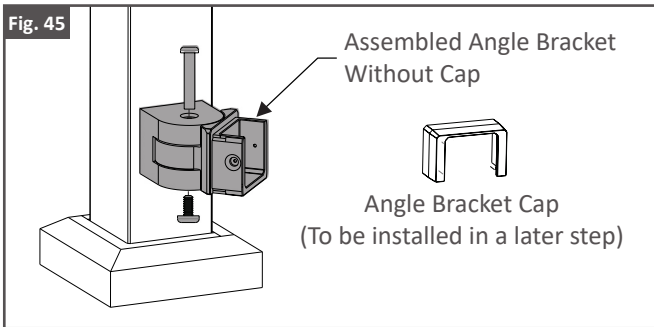
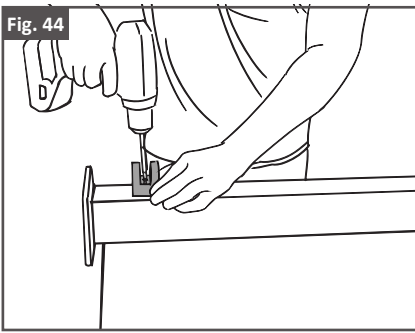


Step 3: Install Angle Brackets

1. Attach Angle Bracket Base piece to the posts with supplied T-25 thread-cutting screws. Use two screws per bracket. Use low speed setting on drill. The side of the base with two holes should be facing downwards. As shown in Fig. 44.
2. Reassemble the Angle Brackets, but **DO NOT** install the Angle Bracket Cap at this time. As shown in Fig. 45.
3. Remove all metal shavings from deck, post base cover, post, and panel before bracket is screwed to post.

Tip:

- Use a Bit Extender.



ANGLE BRACKET: POST MOUNTING

- Reference Post Mounting instructions on page 6.

ANGLE BRACKET: CUTTING DOWN PANELS

Step 1: Determine Panel Length

1. Use 3/32" [2mm] Hex Wrench to tighten Set Screw & lock Bracket at required angle position. As shown in Fig. 46.
2. Check to ensure that all posts are square and straight. Shim posts as required.
3. Ensure that the Angle Bracket Cups are approximately aligned.
4. With another person's help, measure the distance from the inside back of one cup to the inside back of the other cup. This will be the panel length. As shown in Fig. 47 & 48.

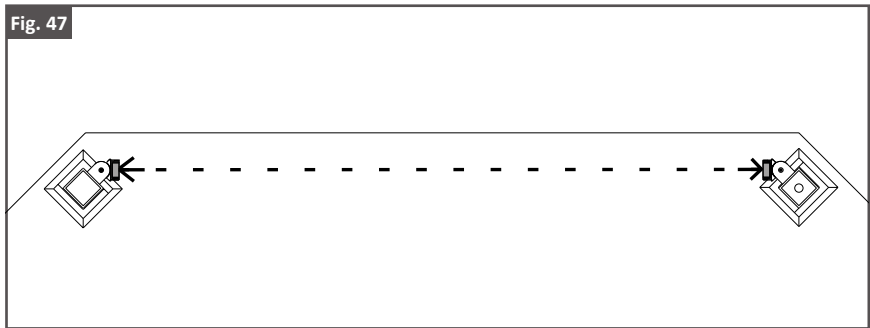
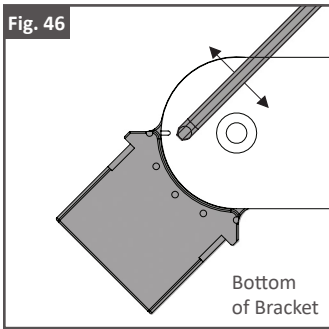
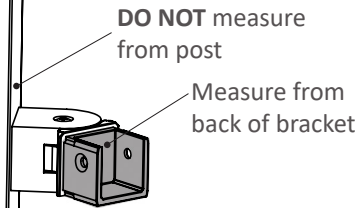


Fig. 48



Step 2: Panel Cutting Steps

- Reference pages 8 - 10 for panel cutting steps.

ANGLE BRACKET: PANEL INSTALLATION

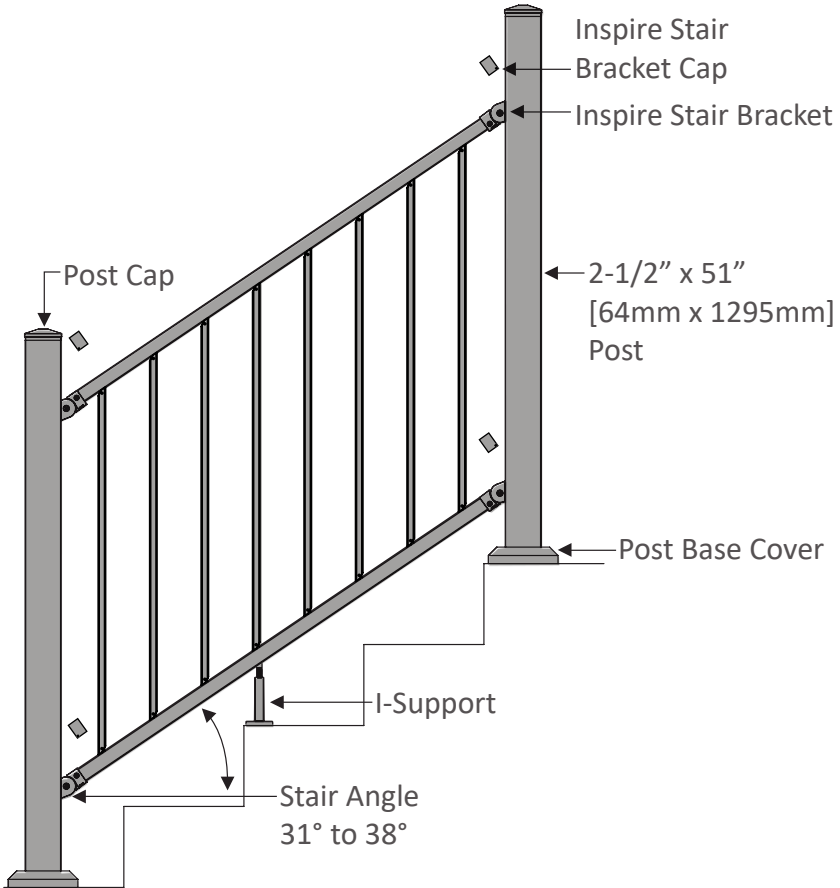
- Reference pages 10 - 14 for Panel Installation steps.

ANGLE BRACKET: POST BASE COVER & BRACKET CAP

- Reference Post Base Cover & Bracket Cap installation instructions on pages 14 & 15.

STAIR BRACKET

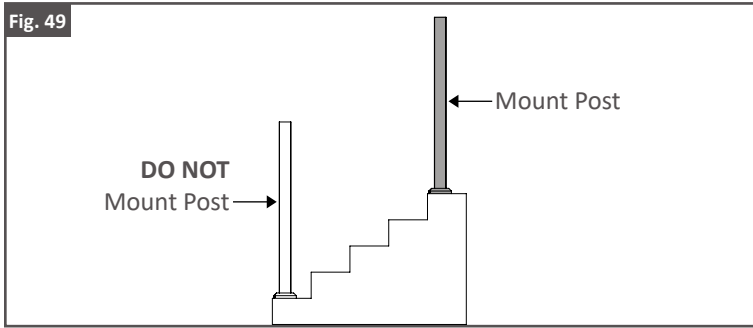
Inspire Railing: Stair Bracket Installation option



Inspire Railing Post Configuration		
Inspire Railing Panel Height <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">32-1/2" [826mm]</div>	Inspire Railing Panel	
	Installed Panel Height* <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">36" [914mm]</div>	Required Post <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">51" [1003mm]</div>

TOP POST MOUNTING

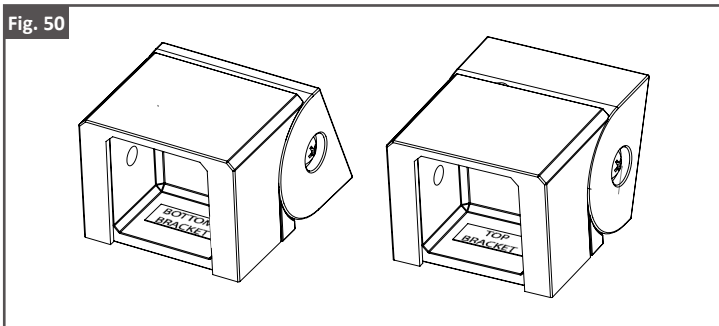
- Reference Post Mounting instructions on page 6.
- Only mount the top post in this step, **DO NOT** mount the bottom post. As shown in Fig. 49.



TOP POST BRACKETS INSTALLATION

Step 1: Confirm Needed Bracket

1. Each Inspire Stair panel comes with two top post brackets and two bottom post brackets. Be sure to reference the sticker on the inside face of the bracket cups to confirm the bracket set being used. As shown in Fig. 50.

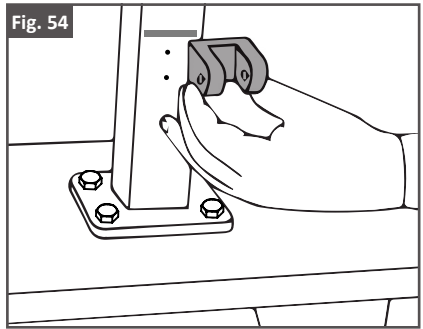
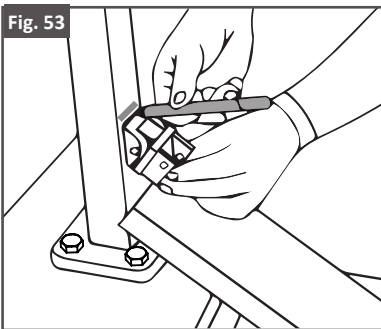
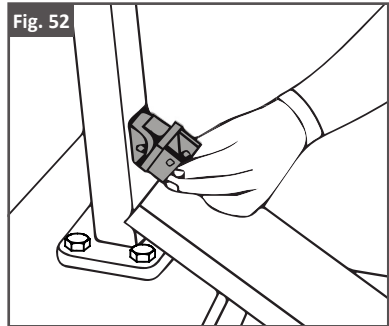
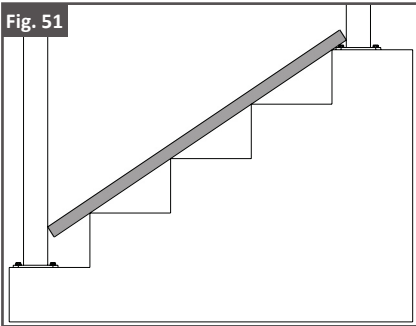


Step 2: Bottom Bracket Installation

1. Position wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]) between posts. As shown in Fig. 51.
2. Position bottom rail brackets centered flat on post & wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]). As shown in Fig. 52.
3. Use pencil to mark top edge of bracket location on post. As shown in Fig. 53.
4. Dis-assemble the brackets by removing the barrel and screw.
5. Place bracket base on previous top edge mark. Center the base on the post and use pencil to add marks for two screw hole locations. As shown in Fig. 54.

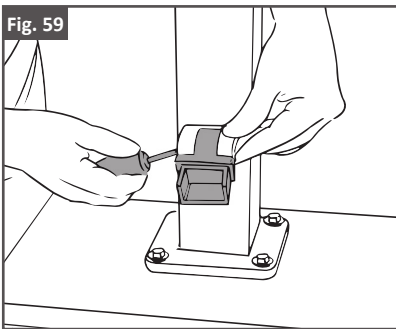
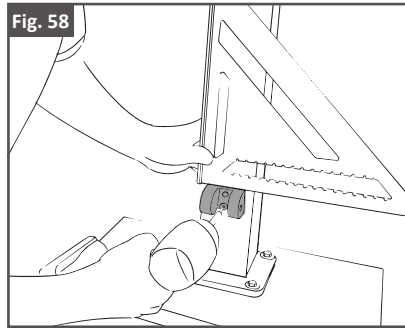
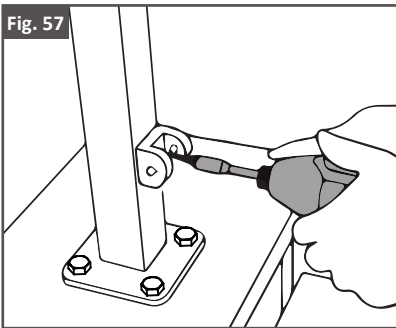
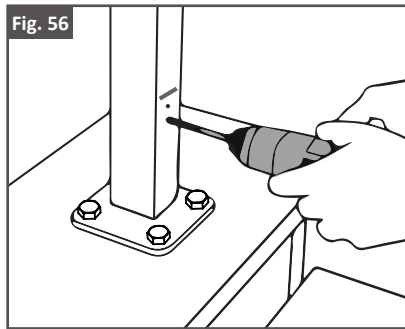
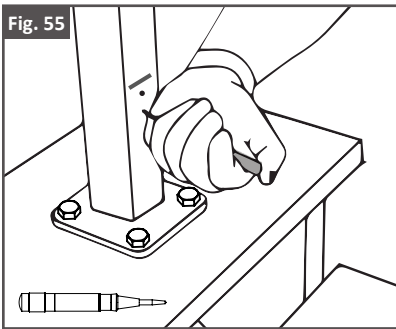
Note:

- For best results, be sure bracket bases are centered on posts when making marks.
- **DO NOT** mount brackets into bottom post in this step.



Step 3: Bottom Bracket Installation Continued

1. Use Spring Punch to mark the holes. As shown in Fig. 55.
2. Drill out bracket holes with a 3/16" [5mm] drill bit. As shown in Fig. 56.
3. Use T-25 Thread-Cutting Screws to attach the bracket base. Begin with top hole then bottom. As shown in Fig. 57.
4. Keep bracket base centered as you install second screw. As shown in Fig. 58.
5. Insert & tighten barrel & screw to re-assemble bracket. As shown in Fig. 59.

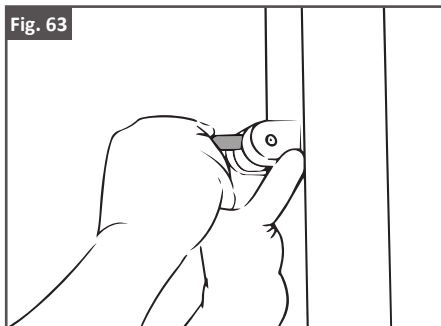
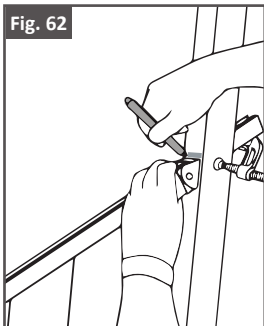
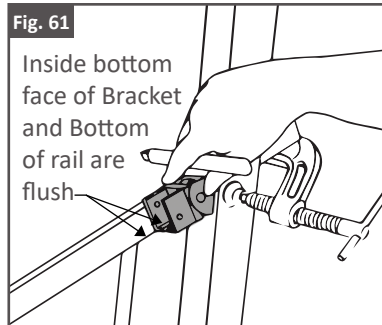
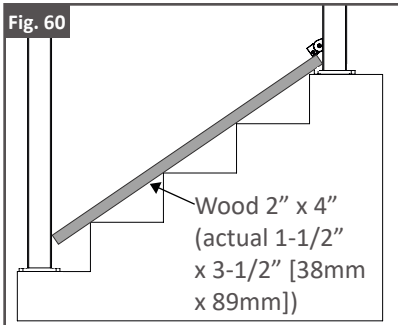


Step 4: Top Bracket Installation

1. Position wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]) under bottom bracket. As shown in Fig. 60.
2. Fully rake and place panel next to posts on top of wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]).
3. Clamp panel to post in 4 places.
4. Use a level to ensure panel and posts are both straight.
5. Position top rail brackets parallel with panel & flat centered on post. **Make sure inside bottom of bracket is flush with bottom of rail.** As shown in Fig. 61.
6. Use pencil to mark top edge of bracket location on post. As shown in Fig. 62.
7. Dis-assemble the brackets by removing the barrel & screw.
8. Place top rail bracket bases on previous top edge mark. Center the base on the post and use pencil to add marks for two screw hole locations. As shown in Fig. 63.

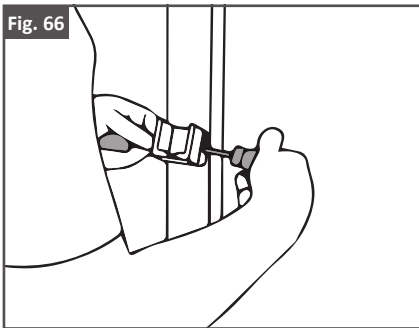
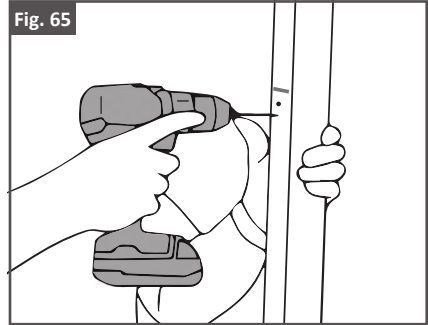
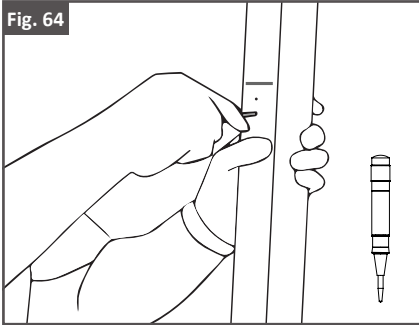
Tip:

- Be sure bases are centered on posts when making marks.
- **DO NOT** mount brackets into bottom post in this step.



Step 5: Top Bracket Installation Continued

1. Use Spring Punch to mark the holes. As shown in Fig. 64.
2. Drill out holes with a 3/16" [5mm] drill bit. As shown in Fig. 65.
3. Use T-25 Thread-Cutting Screws to reattach the base of the top rail bracket to the post.
4. Insert barrel & screw to re-assemble bracket.
5. Tighten barrel & screw. As shown in Fig. 66.

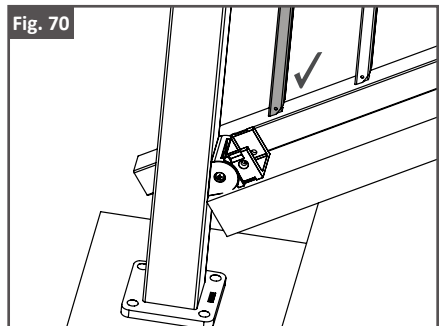
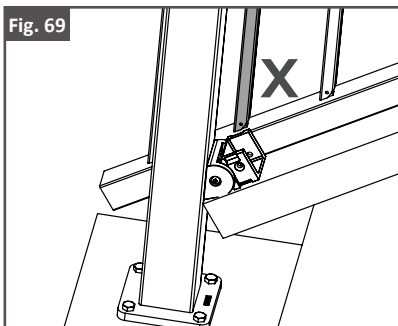
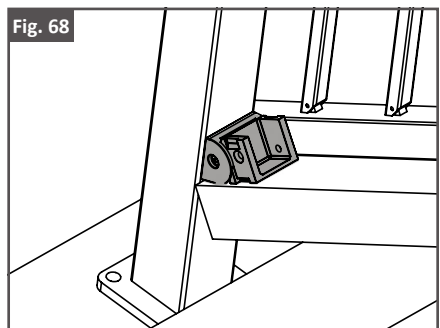
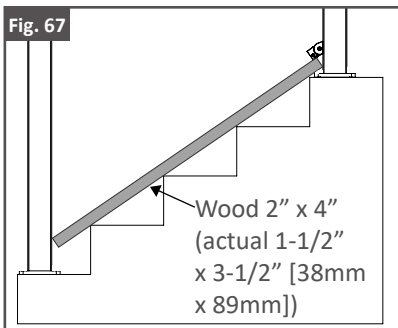


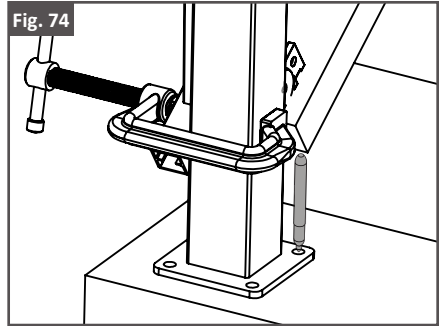
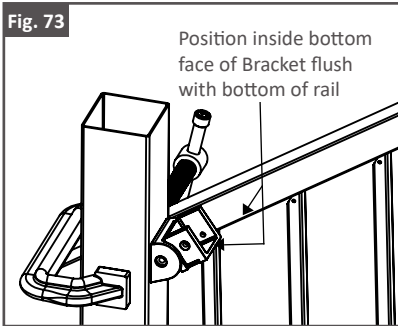
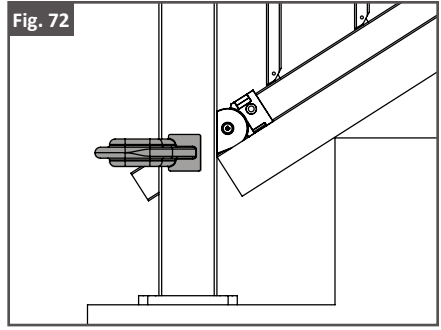
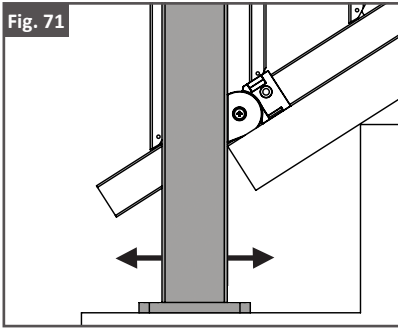
BOTTOM POST MOUNTING

Step 1: Mark Bottom Post Mounting Location

1. Position wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]) between the mounted top post and the unmounted bottom post. As shown in Fig. 67.
2. Fully rake and place panel next to posts on top of wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]).

3. Position bracket centered flat on bottom post & wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]). As shown in Fig. 68.
4. Check end picket positioning on both bottom brackets. Pickets **SHOULD NOT** be positioned inside the bracket cup spacing. As shown in Fig. 69 & 70.
5. Adjust the unmounted bottom post's position to allow for correction to end picket position. As shown in Fig. 71. The post to picket spacing **CANNOT** exceed 4" [102mm].
6. Once bottom bracket spacing is confirmed, clamp the panel onto bottom of both posts. As shown in Fig. 72.
7. Level the panel and clamp onto top of both posts.
8. Position top bracket onto bottom post and confirm picket spacing on both top brackets. Be sure to have bottom face of panel flush with inside bottom face of brackets. As shown in Fig. 73.
9. Once spacing is confirmed, mark bottom post hole locations. As shown in Fig. 74.





Step 2: Mount Bottom Post

- Reference Post Mounting instructions on page 6.

BOTTOM POST BRACKETS INSTALLATION

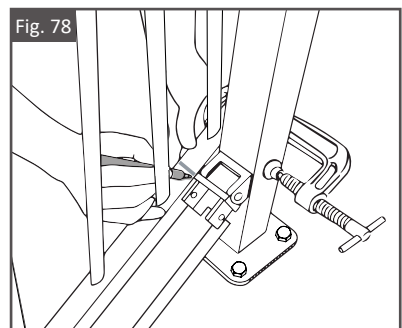
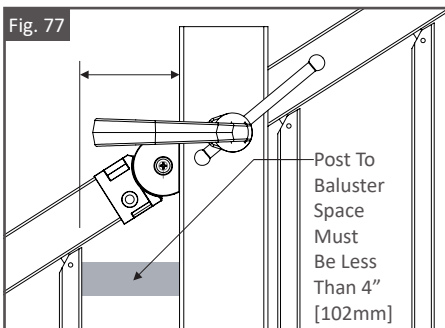
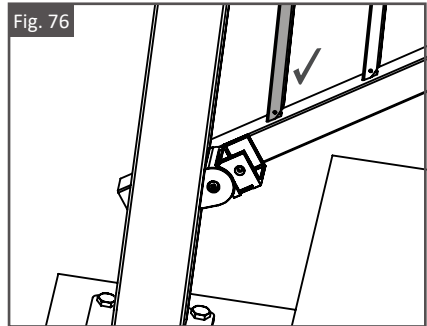
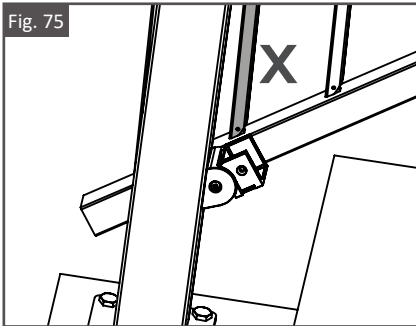
- Reference top post bracket installation instructions on pages 22 - 26.

CUTTING DOWN PANEL

Step 1: Measure & Mark Panels Where Cuts Will Be Made

1. Position wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]) under bottom brackets.
2. Rake and place panel next to posts on top of wood 2" x 4" (actual 1-1/2" [38mm] x 3-1/2" [89mm]).

3. Check end picket positioning on all brackets, pickets **SHOULD NOT** be positioned inside the bracket cup spacing. As shown in Fig. 75 & 76.
4. Measure spacing from inside edge of post to the picket. Spacing **CANNOT** exceed 4" [102mm] on each end. As shown in Fig. 77.
5. Use a level to ensure pickets and posts are both straight.
6. If needed, use shims to level the posts.
7. Clamp panel to post in 4 places.
8. Mark cut points on panels in line with the back of bracket opening. Be sure bottom of bracket is flush with the bottom of the rail. As shown in Fig. 78.
9. Use speed square to ensure markings are perpendicular to panel.



Step 2: Cut & Clean Panel

- Reference panel cut & clean instructions on pages 9 & 10.

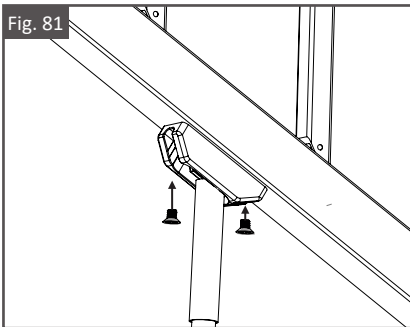
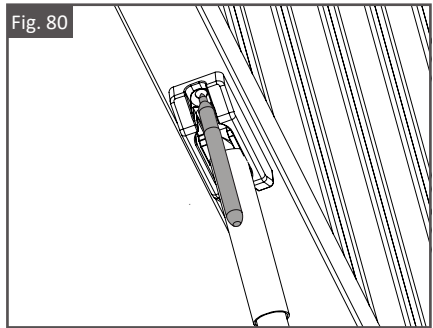
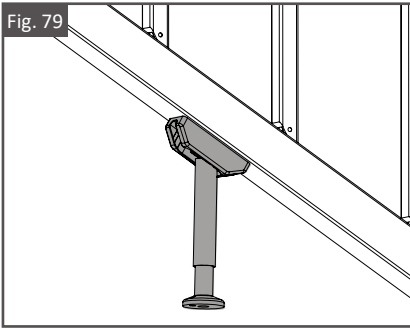
Step 3: Apply Spray Paint To Cut Areas

- Reference spray painting instructions on page 10.

PANEL INSTALLATION

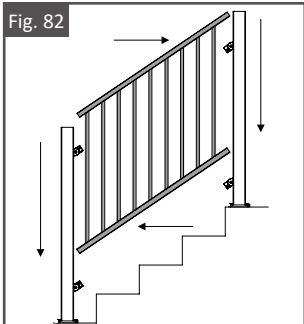
Step 1: Mount I-Support To Bottom Rail

1. Locate the center of the bottom rail. The I-support should be centered and positioned between two pickets. As shown in Fig. 79.
2. Using the I-Support as a guide, mark the center of the 2 screw holes. As shown in Fig. 80.
3. Using a 3/16" [5mm] drill bit, drill through the outside wall. As shown in Fig. 80.
4. Install the I-Support with the provided Phillips Head Thread Cutting Screws. As shown in Fig. 81.



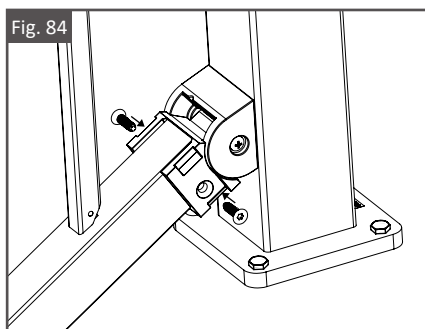
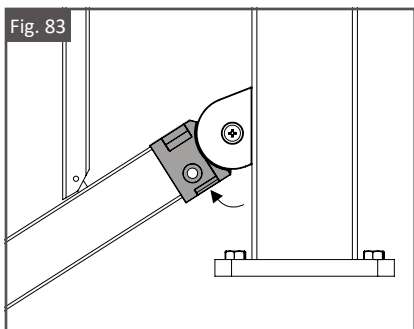
Step 2: Install Panel

1. Rake the panel near to the angle needed to install.
2. Drop the panel down into the brackets. Confirm that the panel is level.
3. Remove any metal shavings after attaching the panel.



Step 3: Attach Panel To Brackets

1. Pre-drill holes for screws using a 3/16" [5mm] drill bit.
2. Push the bracket up so that the bottom face is parallel with the bottom face of rail. As shown in Fig. 83.
3. Attach the panel to brackets using the T-25 thread-cutting screws that came with the brackets. Two screws are required in each bracket. As shown in Fig. 84.
4. Remove any metal shavings after attaching the panel.

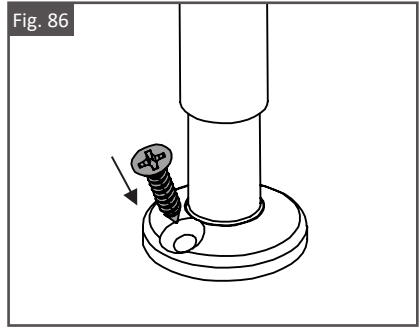
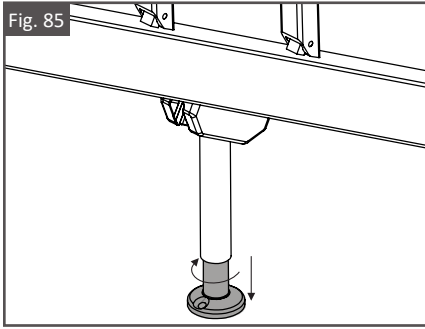


Step 4: Mount I-Support To Deck Surface

1. Unscrew the base until it reaches the stair surface. As shown in Fig. 85.
2. Install the I-Support using the provided wood screw. As shown in Fig. 86. Pre-drill screw hole with a 1/16" [2mm] drill bit.

Note:

- The I-Support can rotate to any angle 0° to 38°. The height of the I-Support can change from 3.3" [84mm] up to 5.7" [145mm].



STAIR BRACKET: POST BASE COVER & BRACKET CAP INSTALLATION

- Reference Post Base Cover & Bracket Cap installation instructions on pages 14 & 15.

CARE & MAINTENANCE

Care And Maintenance Of Fortress Building Products Powder-Coated Products And Surfaces:

- Immediately after installation of your Fortress Building Products, clean powder-coated products and surfaces with a solution of warm water and non-abrasive, pH neutral detergent solution. Surfaces should be thoroughly rinsed after cleaning to remove all residues. All surfaces should be cleaned using a soft cloth or sponge.
- Ensure construction materials such as concrete, plaster, and paint splashes are removed immediately before they have a chance to dry. Failure to remove these materials may cause damage to the powder-coated surfaces.
- The frequency of cleaning depends in part on the standard of appearance and also the requirements to remove deposits that may cause damage to the powder coating after prolonged exposure. Fortress recommends cleaning in three to four monthly intervals all products and powder-coated surfaces. In areas where higher traffic, increased atmospheric substances, or other effects may occur, the time period between cleanings should be increased to monthly intervals.
- **WARNING: DO NOT use strong solvents such as thinners, or solutions containing chlorinated hydrocarbons, esters, or ketones. Abrasive cleaners or cutting compounds should not be used.**

WARRANTY

To obtain and review a copy of the warranty, please go to: <https://Fortressbp.com/warranties>. You can also contact: (844) 909-1999 or write to: Fortress Building Products Warranty, 1720 N 1st St, Garland, TX 75040 to obtain a copy of the warranty.



JOIN THE REVOLUTION.

FortressBP.com | 866.323.4766

© 2021 Fortress Building Products.

Unless otherwise noted, all proprietary names are trademarks of Fortress Iron, LP. All rights reserved.

06/2022