

EVOLUTION[™]

STEEL DECK FRAMING

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INTRODUCTION

READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

General Guidelines

It is the responsibility of the installer to meet all code and safety requirements, and to obtain all required building permits. The framing installer should determine and implement appropriate installation techniques for each installation situation. Fortress Building Products nor its distributors shall **NOT** be held liable for improper or unsafe installations.

Personal Protection Equipment (PPE) must be worn anytime you're using power tools and working with Evolution framing. Eye protection, hearing protection, closed-toe shoes, gloves, long sleeves, and pants must be worn to keep yourself safe.

As the steel parts are cut, all metal shavings and/or chips must be removed from inside the framing parts. At the end of a each day, all steel shavings and/or chips must be cleaned off the job site. Not doing so could result in the staining of surrounding surfaces.

Fortress Building Products **DOES NOT** cover all possible installation scenarios within these instructions. In some cases, it may be necessary for you to consult a professional engineer, building code official, or local dealer.

Reference <https://www.engineeringexpress.com/product/fortress-evolution-steel-deck-framing-master-plan-sheet-mps-21-41498/> for Engineering Express span charts. It is critical to **NOT** exceed defined allowable maximum spans.

Required Tools



Goggles



Safety
Gloves



Ear
Protector



Close-Toed
Shoes



Level
Tool



Clamps



Hex Head Nut Driver Bits:
5/16", 3/8" [8mm, 10mm]



Rubber
Mallet



Bit
Extender



Drill



Pencil



Metal Cutting Saw



Touch-Up Paint



File



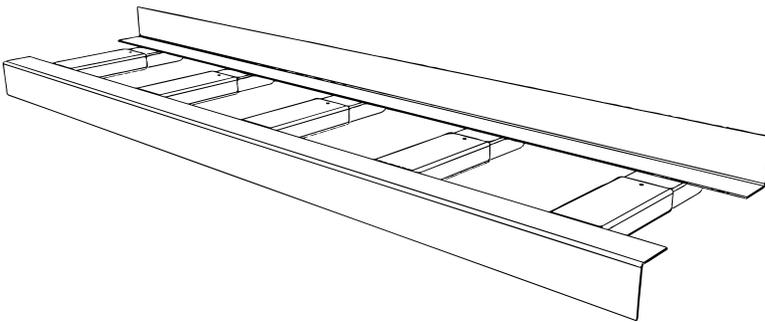
Brush



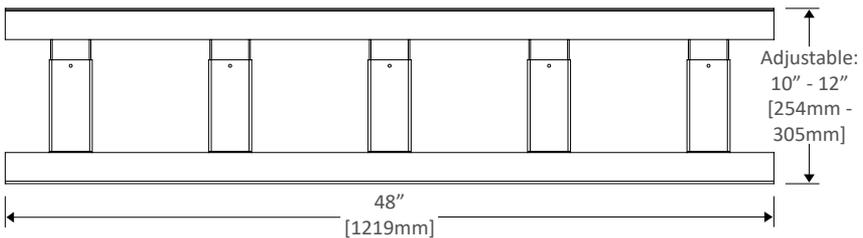
Rag

Components

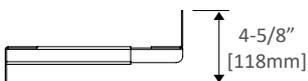
Adjustable Stair Tray



TOP VIEW



SIDE VIEW



INSTALLATION

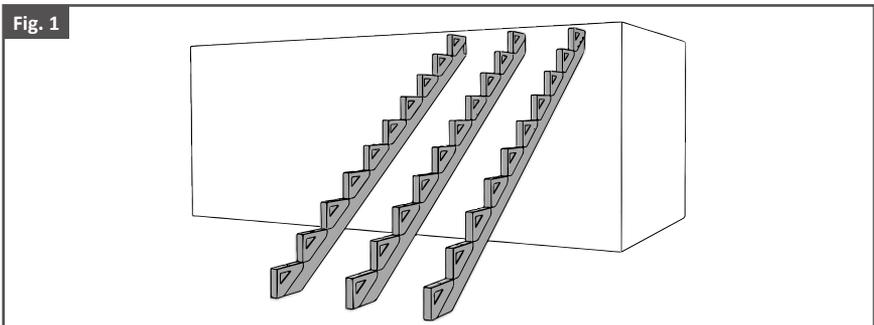
Step 1: Create Stair Frame

1. If not already assembled, reference Stair Framing assembly instructions on the Fortress website.

Link to website:

<https://fortressbp.com/framing/stair-calculator>

Reference <https://www.engineeringexpress.com/product/fortress-evolution-steel-deck-framing-master-plan-sheet-mps-21-41498/> for Engineering Express span charts. It is critical to **NOT** exceed defined allowable maximum spans.



Step 2: Cut Adjustable Stair Tray To Width (If Required)

Note:

- Before cutting the Adjustable Stair Tray, be sure the desired cut tray width **DOES NOT** interfere with the cross braces.
1. Measure the desired Stair Frame opening width. As shown in Fig. 2.
 2. Find the center of the stair tray and measure out half of the previously determined width in each direction.
 3. Mark the cut points with a pencil on the top and bottom lips of the stair tray. As shown in Fig. 3. **Be sure cut marks are in line.**
 4. Cut the stair tray using a metal cutting saw. As shown in Fig. 4.
 5. Use file to smooth cut edges. As shown in Fig. 5.

6. Remove any metal shavings and dust with a brush or rag. As shown in Fig. 6.
7. Make sure surfaces to be painted are clean.
8. Using a piece of cardboard as a mask, apply the 1st coat of Fortress zinc based touch-up paint.
9. Allow to dry before applying second coat.
10. Apply the 2nd coat of Fortress zinc based touch-up paint. As shown in Fig. 7. A minimum of three coats of spray paint will be required for installations within a mile of coastal regions.
11. Allow to dry before continuing installation.

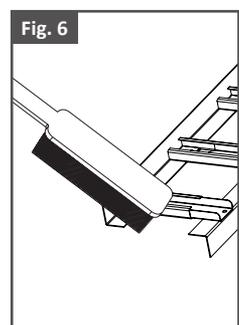
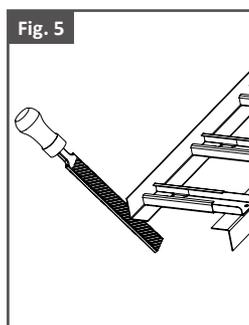
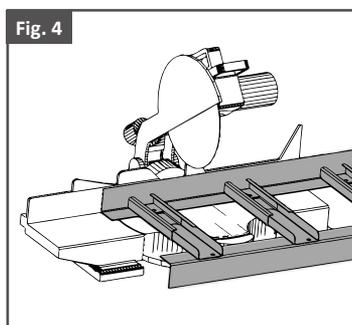
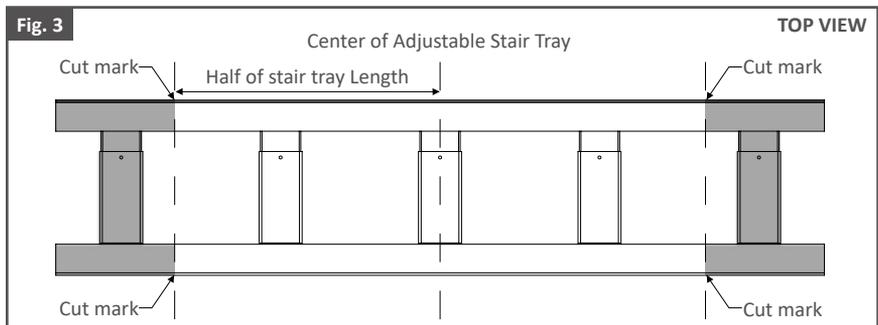
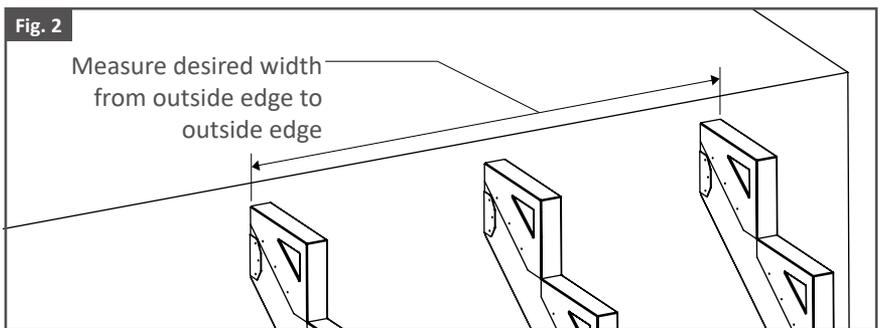
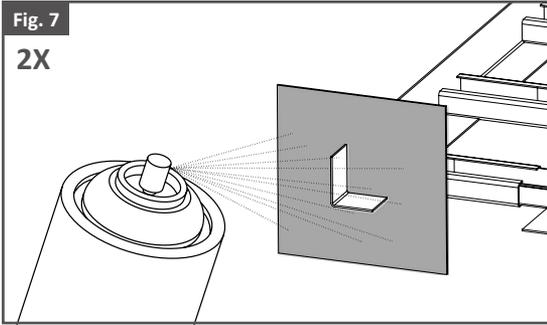


Fig. 7

2X



Step 3: Install Adjustable Stair Tray

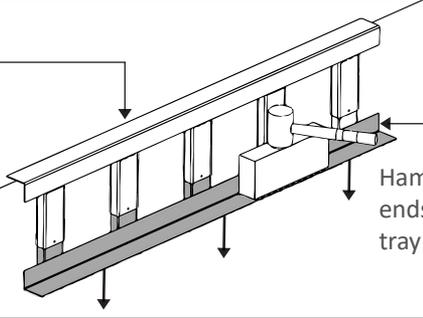
1. Using a Rubber Mallet, hammer the bottom lip of the Adjustable Stair Tray until fully extended. As shown in Fig. 8. Be sure the two ends of the stair tray do not become disengage once extended.
2. Position the top lip of the stair tray flush to the back and outside faces of the top Stair Bracket and the top and outside faces of the bottom Stair Bracket. As shown in Fig. 9.
3. Using Evolution Self-Drilling Screws, fasten the top lip of the stair tray onto the top face of the Stair Brackets. As shown in Fig. 10.
4. Using a Rubber Mallet, hammer the back of the bottom lip of the stair tray until flush with the back face of the bottom Stair Brackets. As shown in Fig. 11 & 12.
5. Using Evolution Self-Drilling Screws, fasten the bottom lip of the stair tray onto the top face of the Stair Brackets. As shown in Fig. 13.

Tip:

- Use a block of wood when hammering the stair tray to prevent damage to the stair tray lip.
- If mounting more than two stair stringers, be sure the additional stringers are offset and do not interfere with the middle cross braces on the Adjustable Stair Tray.
- Be sure the top and bottom lips of the Adjustable Stair Tray are fastened onto to each stair stringer contact point. For example - If 2 stringers use 4 screws, if 3 stringers use 6 screws etc.

Fig. 8

Be sure top edge of Adjustable Stair Tray is stationary



Hammer on both ends so that stair tray extends evenly

Fig. 9

Position the top lip of the Adjustable Stair Tray flush with the top and bottom Stair Brackets

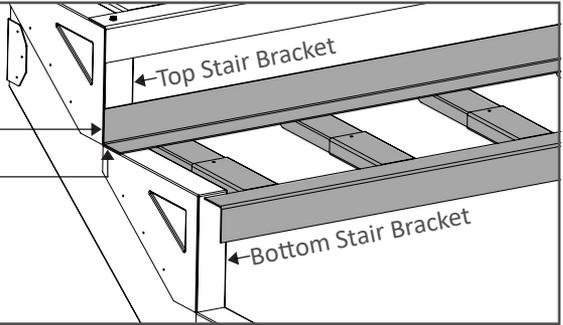


Fig. 10

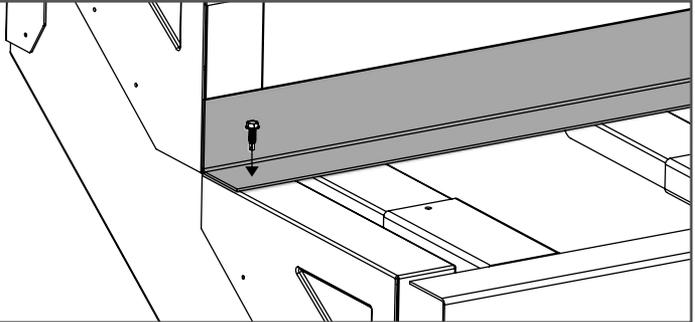


Fig. 11

Bottom Stair Bracket

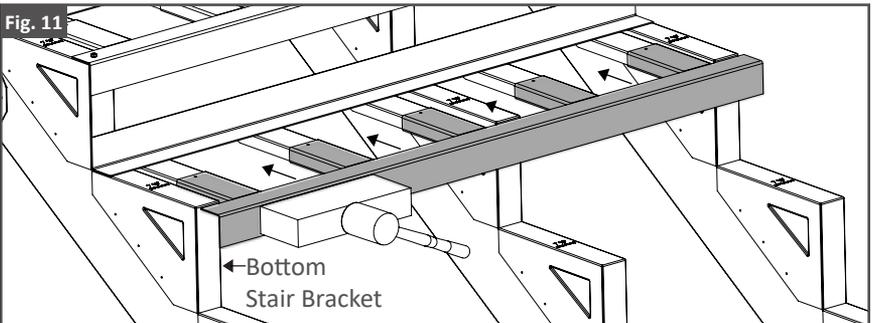
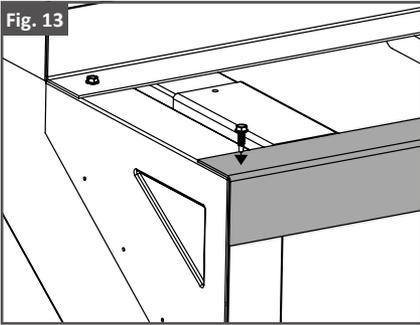


Fig. 12

Bottom lip of Adjustable
Stair Tray flush with back
face of bottom Stair Bracket

←Bottom
Stair Bracket

Fig. 13



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.
- **DO NOT** allow metal shavings and/or chips to get dropped or blown into a pool, hot tub, or any other body of water. Staining could occur if this were to happen.
- 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.
- **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.



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