Straight Stringer
Installation Instructions

Floor-to-Wall Installation

Unpack: What’s included?

• Your Stringer
• Tread Screws – (8) per tread
• (1) Torque Wrench
• (1) Socket (for the brackets that bolt to the stringer)
• (4) Hanger Bolts (for the bottom tread only)
• (1) Hanger Bolt Driver
• (1) FLIGHT Installation Kit (contains hardware for wood and concrete mounting)

Tools You’ll Need

• (1) Level
• (1) Tape Measure
• (1) Come Along Winch (Optional, strongly recommended)
• (2) 1/2” Lag bolts to hold the stringer in place until the through bolts are mounted.

Preparation

• Unbox the stringer and carry it to the installation site.

  Note: These stringers are built from thick, mild steel, so you’re going to need an extra pair of hands to help move and position the stringer.

• Once the stringer is at the installation location, review and verify the accuracy of the measurements provided on your design drawing. If your measurements on the job site do not match the measurements on the drawing, view our bracket adjustment page. Viewrail FLIGHT tread brackets are adjustable up to 1/2”.

• Measure from the finished floor to where the top of the stringer’s header plate will be located on your header. This measurement is provided on your drawing.

• Draw a horizontal line to represent where the top of the header plate will line up on the wall. Use a level to ensure that this line is level. Then find the center of the header and make a mark. (see fig. A)

• Next, place a mark on the center of the header plate. You’ll use these marks to help align your stringer during installation. (see fig. B)

• Lift the stringer with at least two people, or simplify the process with the help of a come-along winch.

  When using a come-along winch, attach the winch to a strong point in the framing of the house. Place a strong strap around the stringer and connect it to the come-along winch. Ratchet the winch up to lift the stringer. Have someone to help guide the stringer into place.

Fig. A

Fig. B
Mount the Stringer

**WARNING:** Do not attempt to mount your stringer to or through drywall. At minimum double LVL header or triple 2x required.

- Set the stringer to the location notated in the drawings. Check to see that the top of the header plate follows the level line you drew on the header. Place a level on the header plate to ensure the center lines on the header and header plate align. *(see fig. C)*

- Insert a lag bolt through one slot of the header plate to help hold it in place. *(see fig. D)*

Reference the *Install Tread Brackets* section on the page 3 to help with the next step.

- Install brackets at the top and next-to-bottom positions. Align the predrilled holes on both treads with the corresponding holes on each bracket.

- If mounting against a wall, ensure the bottom tread, top tread, and stringer are parallel to the adjacent wall. If any of these elements are not parallel, shim the header plate as necessary. *(see fig. E)*

- Next, verify that the treads are level. If they are not, raise one side of the stringer foot plate with shims as needed until treads are level.

- Once everything is level, put a second lag bolt into the header plate to help hold the stringer in place as you through-bolt the stringer.

- Secure your stringer by through-bolting your header and base plates. Populate all (7) holes of the header plate with through bolts. *(see fig. F)* Populate all (8) holes of the base plate with through bolts, lag bolts, concrete wedge anchors, or *Red Head C6+ Adhesive Anchors*. Torque the bolts to 80 ft-lbs.

Touch Up Your Stringer

- Use touch up paint to fix any powder coat that was chipped or scratched during your stringer installation.

*Note: It’s easiest to complete this step before adding your treads because the full stringer is exposed. However, you may repeat this step when your installation is complete.*
Install Tread Brackets

- Set a bracket in place and insert location pins. Location pins ensure that your bracket is precisely where it should be according to the engineering drawing. (see fig. G)
- Hand-start each of the (4) bolts, apply loctite to bolt, then tighten and torque to 70 ft. lbs.
- Repeat this process for all tread brackets.

Mount Nosing

- Remove the inner nosing from the back of the outer nosing. Find the vertical and horizontal centers of the inner nosing and place a mark.
- Drill four (4) evenly spaced holes through the inner nosing appropriate for the fastener size. Countersink these holes to allow fastener to sit flush or just below the face of the inner nosing.
- Mark the vertical and horizontal centers of the outer nosing.
- Hold the outer nosing in the desired mounting location (this is typically level with the finished floor). Make sure it’s level and transfer the centerlines from the outer nosing on to the header.
- Line up inner nosing to the marks on the header and attach with one appropriate fastener. Place outer nosing on inner nosing and verify it is level with the finished floor. Correct as needed.
- Install the remaining inner nosing fasteners.
- Apply construction adhesive to the inside of the of the outer nosing and install on to inner nosing.
- Install trim screws into top of nosing. Fill and finish these holes as desired.
Mount Treads

*Note: There are separate instructions for the bottom tread of the stringer. It will require hanger bolts for installation, giving it a slightly different installation process. Be sure to follow the Installing the Bottom Tread instructions for the bottom tread of your staircase.*

- Place your treads on the tread brackets.
- Position the treads on the brackets so that their predrilled holes align with the holes of each bracket. **If any adjustments are needed, follow the bracket adjustment steps on page 4 before mounting your treads.**
- Make sure the treads are level. Shim if necessary.
- Using a T30 torx bit, install the tread mounting screws.

Installing the Bottom Tread

- There are 8 holes in the bracket, however, only 4 of the holes need to be populated. Use the holes at the corners of the bracket. (red dots on fig. I) Insert the hanger bolts into the tread with the hanger bolt driver (provided). (see fig. J)
- Place the tread back on the bracket.
- Put nuts on the hanger bolts and tighten.

Adjusting Your Tread Brackets

*Remember, this step is only required if the measurements on the installation site do not match the ones we received when we created your drawing. If all actual measurements match your drawing, your tread brackets should be positioned correctly, and you will not need to complete this section.*

Adjusting Tread Location

1. Loosen the bolts on the tread base plate.
2. Slide the base plate up or down until it is at your desired position.
3. Place a level on top of the base plate and verify that it is positioned correctly.
4. Torque the stud plates to 70 lbs.
5. Repeat this process until all tread brackets are level and positioned as needed.
Wall-to-Wall Installation

Unpack: What’s in the Crate?
- Your Stringer
- Tread Screws – (8) per tread
- (1) Torque Wrench
- (1) Socket (for the brackets that bolt to the stringer)
- (1) Container of Touch Up Paint

Tools You’ll Need
- (1) Level
- (1) Tape Measure
- (2) Come Along Winch (Optional, strongly recommended)
- Attaching Hardware – (15) 1/2” through bolts grade 5 min. Grade 8 preferred.
- (4) Lag bolts to temporarily hold the stringer in place until the through bolts are mounted. Not acceptable for permanent mounting.

Preparation
- Unbox the stringer and carry it to the installation site.

  Note: These stringers are built from thick, mild steel, so you’re going to need an extra pair of hands to help move and position the stringer.

- Once the stringer is at the installation location, review and verify the accuracy of the measurements provided on your design drawing. If your measurements on the job site do not match the measurements on the drawing, view our bracket adjustment page. Viewrail FLIGHT tread brackets are adjustable up to 1/2”.

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- Draw a horizontal line to represent where the top of the header plate will line up on the wall. Use a level to ensure that this line is level. Then find the center of the header and make a mark. (see fig. A)

- Next, place a mark on the center of the header plate. You’ll use these marks to help align your stringer during installation. (see fig. B)

- Lift the stringer into position with a come-along winch.

  When using a come-along winch, attach the winch to a strong point in the framing of the house. Place a strong strap around the stringer and connect it to the come-along winch. Ratchet the winch up to lift the stringer. Have someone to help guide the stringer into place.
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- Insert a lag bolt through one slot of the header plate to help hold it in place. (see fig. D)

- Install brackets at the top and next-to-bottom positions. Align the predrilled holes on both treads with the corresponding holes on each bracket.

- If mounting against a wall, ensure the bottom tread, top tread, and stringer are parallel to the adjacent wall. If any of these elements are not parallel, shim the header plate as necessary. (see fig. E)

- Next, verify that the treads are level. If they are not, raise one side of the stringer with shims as needed until treads are level.

- Once everything is level, put a second lag bolt into the header plate to help hold the stringer in place as you through-bolt the stringer.

- Secure your stringer by through-bolting your header and base plates. Populate all (7) holes of the header plate with through bolts. Populate all (8) holes of the base plate with through bolts. Torque the bolts to 80 ft-lbs. (see fig. F)

Touch Up Your Stringer

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Note: It’s easiest to complete this step before adding your treads because the full stringer is exposed. However, you may repeat this step when your installation is complete.
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- Repeat this process for all tread brackets.

Mount Nosing

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- Line up inner nosing to the marks on the header and attach with one appropriate fastener. Place outer nosing on inner nosing and verify it is level with the finished floor. Correct as needed.
- Install the rest of the inner nosing fasteners.
- Apply construction adhesive to the inside of the of the outer nosing and install on to inner nosing.
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