

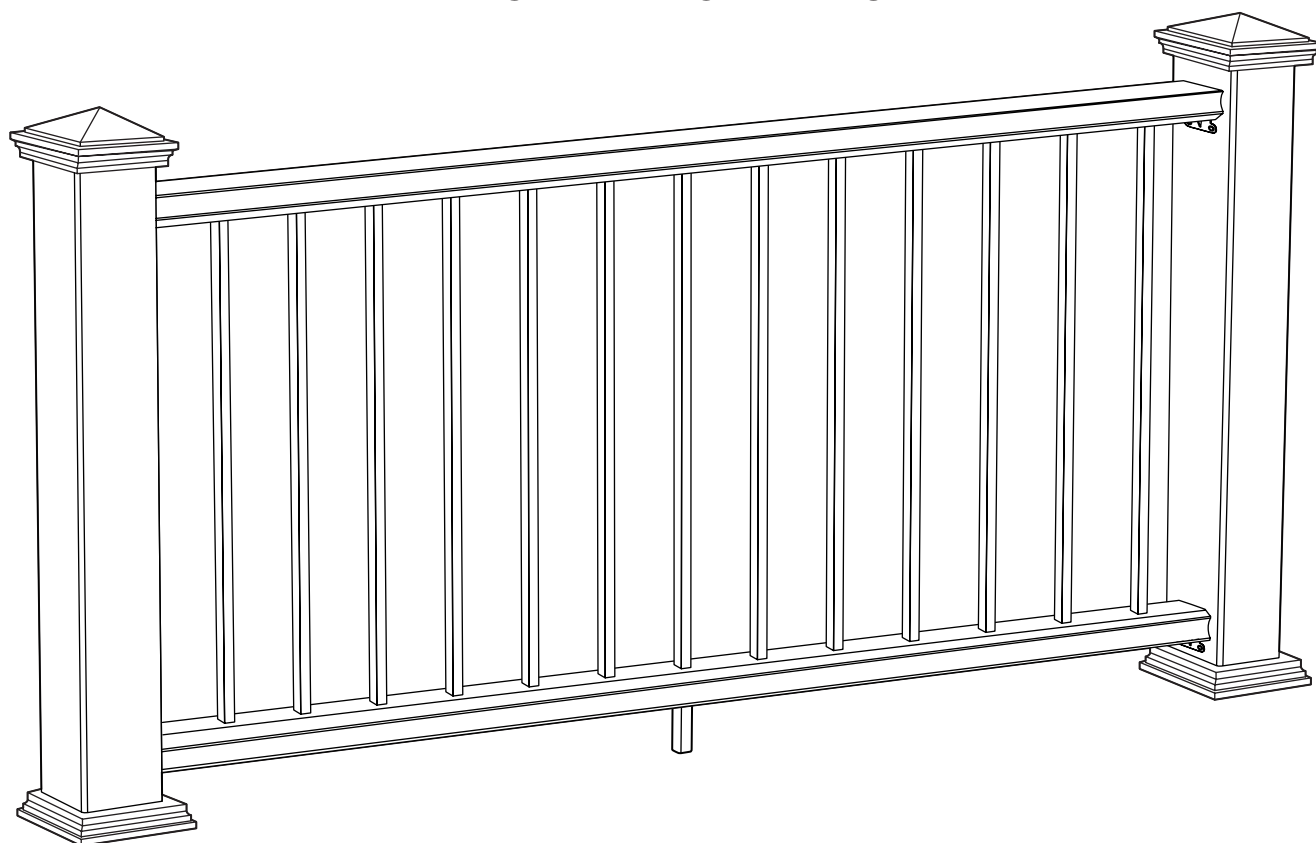
fiberon[®]

Brio[™]

Composite Railing

6- and 8-ft. for Square Balusters

INSTALLATION MANUAL



Questions, problems, missing parts? Before returning to the store,
call Fiberon Customer Service
8 a.m. - 5 p.m., EST, Monday - Friday

1-800-573-8841

FIBERONDECKING.COM

THANK YOU

We appreciate the trust and confidence you have placed in Fiberon through the purchase of this railing. We strive to continually create quality products designed to enhance your home. Visit us online to see our full line of products available for your home improvement needs. Thank you for choosing Fiberon!

Table of Contents


Table of Contents	2	Line Rail Installation.....	7
Safety Information	2	Stair Railing Installation.....	9
Warranty	3	Angle Bracket Installation	12
Pre-Installation.....	4		

Safety Information

Read and understand this entire manual before you begin the installation of your railing.



WARNING: Use extreme caution when using power tools.



IMPORTANT: Please consult local zoning laws in regards to load requirements and bottom space requirements for rails. All supporting structures must be in accordance with applicable building codes. Neighborhood associations and/or historic districts may regulate size, type, placement and ability of railing. Apply for permits if required by local authorities and codes. Ensure compliance prior to installation. Local building code requirements will always supersede any and all suggested procedures and measurements in the following installation. The following installation instructions are intended as a general guideline based on common building practices used in railing installation.

Warranty

25-YEAR PERFORMANCE LIMITED WARRANTY

WHAT IS COVERED

This railing product is covered under a Limited Residential Warranty to protect against checking, splitting, decay, rot and splintering.

WHAT IS NOT COVERED

In no event will the manufacturer be liable for any direct, indirect, incidental, special, consequential, punitive, exemplary, statutory, special, or other, damages based upon the manufacturer products or manufacturer fasteners or resulting, directly or indirectly, from any defect in the manufacturer products or fasteners, including but not limited to damage to, diminution in value of and/or loss of use or enjoyment of, any property or part thereof, whether based on contract, tort, strict liability, statute, regulation or otherwise, even if the manufacturer is expressly advised about the possibility of such damages. Some states do not allow the exclusion or limitation of incidental or consequential damages in certain circumstances, so the above limitation may not apply to you.

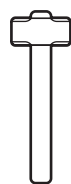
In addition, this Limited Warranty does not cover and the manufacturer shall not be liable for any installation, removal or reinstallation costs. The manufacturer does not warrant against and is not responsible for, and no express or implied warranty shall be deemed to cover, any condition attributable to: (1) improper installation of products and/or failure to abide by the manufacturer's written instructions and any applicable laws or building codes, including but not limited to improper structural support, fastening, ventilation or gapping; (2) use of the manufacturer's products beyond normal use or in an application not recommended or permitted by the manufacturer's written instructions and applicable laws and building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which the manufacturer's products are installed; (4) Defects in or failure arising from decking structure resulting from water caused by improper installation, workmanship, maintenance or repair; (5) any Act of God (including but not limited to flooding, hurricane, tornado, wind, earthquake, lightning, hail, etc.); (6) discoloration, fading, spotting or staining from or caused, in whole or in part, by mold, mildew, other fungal growth, organic materials, metallic oxides or particles (including but not limited to rust or corrosion of any fasteners), dirt, other atmospheric or environmental pollutants, foreign substances such as grease or oil, chemicals (including but not limited to those found in cleaners), or normal weathering (defined as natural efflorescence, exposure to sunlight, weather and atmospheric conditions which causes any colored surface to gradually fade, flake, chalk, or accumulate dirt or stains); (7) damage resulting from casualty, fire or exposure to heat sources such as cooking devices or retro-reflective surfaces; (8) the application of paints, stains, surface treatments or other chemical substances including but not limited to cleaners or pesticides; (9) fading, flaking or other deterioration of any paints, stains or other coatings placed on the manufacturer's products; (10) climate change, environmental conditions, static electricity or any cause beyond the control of the manufacturer; (11) variations or changes in color of the manufacturer's products; (12) improper handling, maintenance, storage, abuse or neglect of the manufacturer's products by Purchaser or others; (13) ordinary wear and tear; (14) impact from objects; or (15) any fasteners not supplied or approved by the manufacturer.

No warranty is given with respect to any fasteners other than the fasteners produced by the manufacturer. Other fasteners, whether approved fasteners or otherwise, are subject to only the warranties provided by the manufacturer of the fastener and Purchaser's sole warranty and remedy is with that manufacturer.

Contact the Customer Service Team at 1-800-573-8841 or visit FIBERONDECKING.COM.

Pre-Installation

TOOLS REQUIRED



Rubber mallet



Safety goggles



Pencil



Level



PVC adhesive



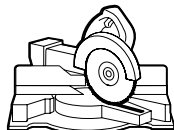
Tape measure



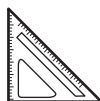
Power drill



5/32-in. drill bit



Miter saw



Speed square

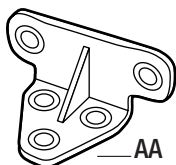


Adjustable square

RAILING HARDWARE KIT



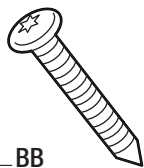
NOTE: Hardware not shown to actual size.



AA



BB



CC



DD

Part	Description	Quantity (per kit)
AA	Railing bracket	4
BB	#10 x 1-in. screw	12
CC	#10 x 2-in. screw	8
DD	Driver bit	1

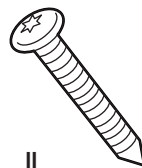
ANGLE BRACKET HARDWARE KIT (OPTIONAL)



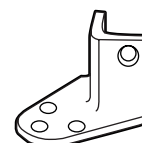
NOTE: Hardware not shown to actual size.



II



JJ



KK



LL

Part	Description	Quantity (per kit)
II	#10 x 1-in. screw	12
JJ	#10 x 2-in. screw	8
KK	Angle bracket	4
LL	Driver bit	1

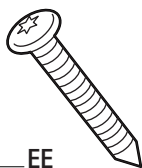
STAIR RAILING HARDWARE KIT



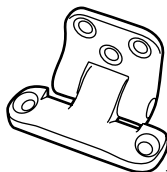
NOTE: Hardware not shown to actual size.



EE



FF



GG



HH

Part	Description	Quantity (per kit)
EE	#10 x 1-in. screw	12
FF	#10 x 2-in. screw	8
GG	Stair rail bracket	4
HH	Driver bit	1

Pre-Installation (continued)

PRIOR TO INSTALLING THE RAILING



IMPORTANT: Please read and follow the instructions in this section before you begin installation of your railing products.



NOTE: Rail and baluster lengths will vary slightly due to manufacturing processes. Make sure rails and balusters are cut properly to correct length, and with hole pattern centered between posts before securing.



NOTE: For best results, cut post sleeves with a carbide-tipped blade, minimum 32-tooth.

- If using post-sleeve moulding, slide the post down into the cove moulding prior to securing any railings (Fig. 1).

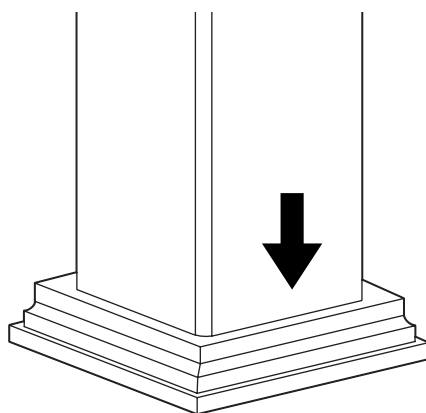


Fig. 1

- Measure the inside distance between properly installed, plumb posts. See Fig. 2 for Line and Stair Railings.

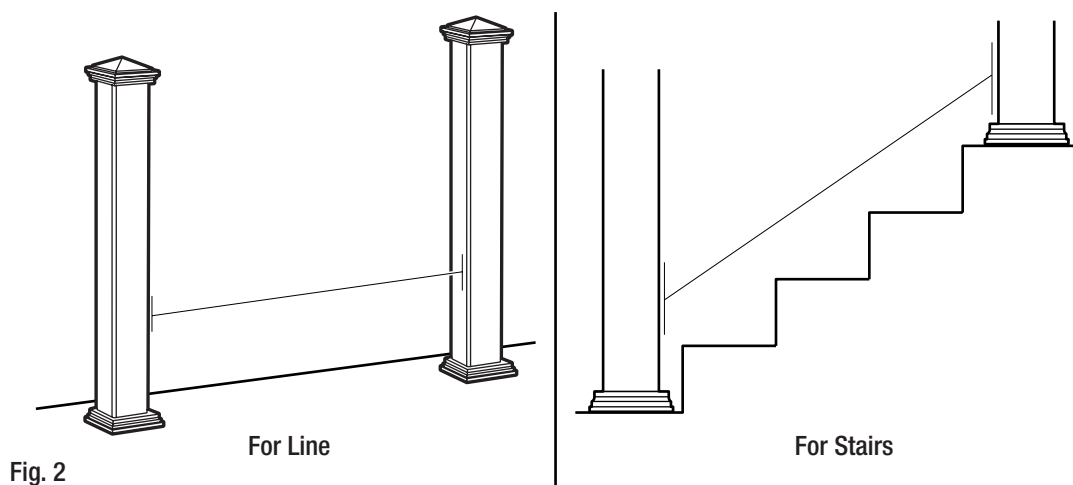


Fig. 2

Pre-Installation (continued)

- Transfer the measurement to the top rail, making sure that the distance from the end of the rail to the first baluster slot is equal on both ends of the rail. The minimum distance from a post to first baluster slot is 1-1/2-in. for clearance from the brackets. (See Fig. 3)

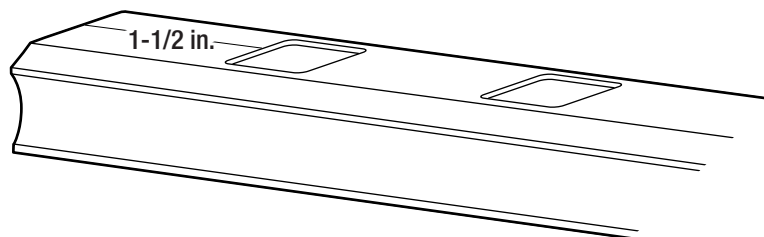


Fig. 3

- Place the rails together so that the top and bottom baluster slots are aligned. Mark the bottom rail for the inside distance between the posts (see Fig. 4). Cut the top and bottom rails to fit tightly between the posts.

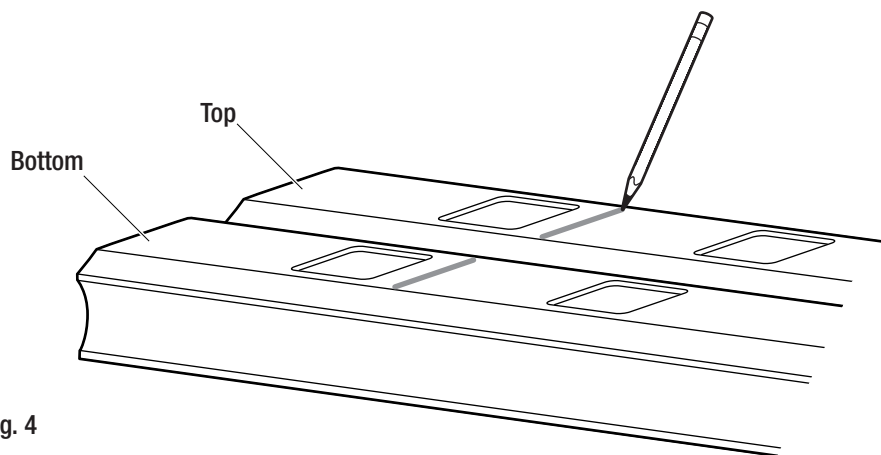
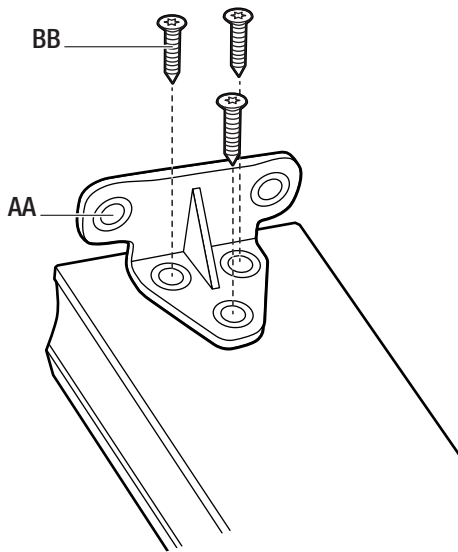


Fig. 4

Line Rail Installation

1 Preparing the bottom rail

- Position railing brackets (AA) 1/32-in. to 1/16-in. from the ends of the bottom rail and mark the hole locations. Ensure the railing brackets (AA) are installed on the opposite side from the baluster holes.
- Pre-drill holes using a 5/32-in. bit and then attach the railing brackets (AA) to the bottom rail using 1-in. screws (BB). DO NOT OVERTIGHTEN THE SCREWS.

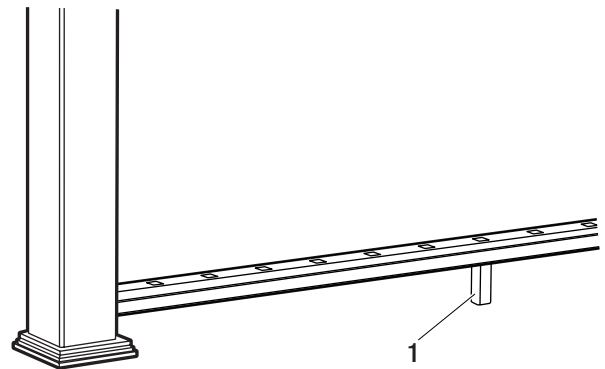


2 Attaching crush blocks

- When installing a rail section, use PVC adhesive to glue one crush block (1) to the bottom of the bottom rail. Position the crush block (1) at the mid point of the rail length to support the rail in a level position.



NOTE: Two crush blocks are required for any length longer than the 67-in. rail section.



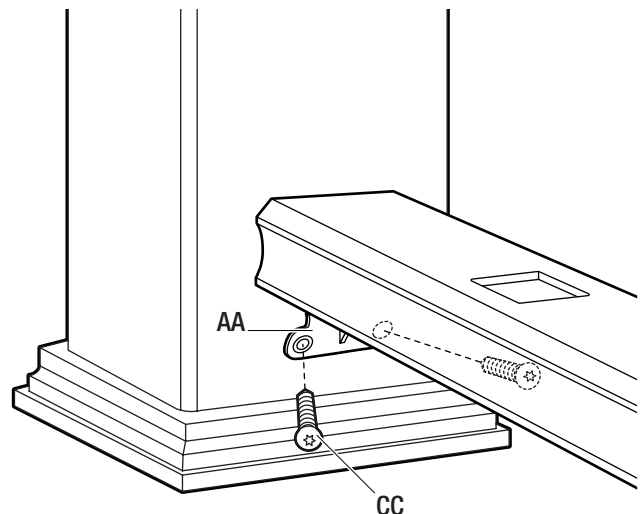
3 Installing the bottom rail

- Completely lower the rail into place between the posts and check to make sure it is level.
- Once the lower rail is level, mark the railing bracket (AA) hole locations. Remove the rail before pre-drilling the holes.
- Pre-drill the holes with a 5/32-in. bit, angling slightly inward to allow for clearance from the rail once repositioned for securing.



NOTE: Using extended drill bits is recommended to prevent damage to the rail, and allow a more perpendicular driving angle.

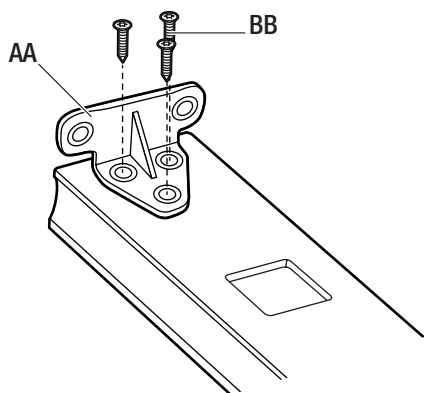
- Secure the bottom railing in place using the 2-in. screws (CC). DO NOT OVERTIGHTEN THE SCREWS.



Line Rail Installation (continued)

4 Preparing the top rail

- Position the railing brackets (AA) 1/32-in. – 1/16-in. from the ends of the top rail and mark the hole locations. Ensure railing brackets are installed on the side of the top rail with the baluster holes.
- Pre-drill holes using a 5/32-in. bit and then attach the railing brackets (AA) to the top rail using 1-in. screws (BB). **DO NOT OVERTIGHTEN THE SCREWS.**

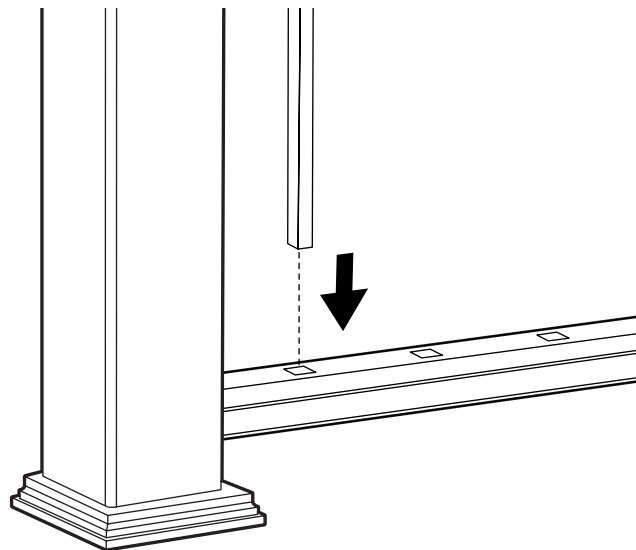


5 Inserting balusters

- Insert a baluster into the first and last baluster holes in the bottom rail.

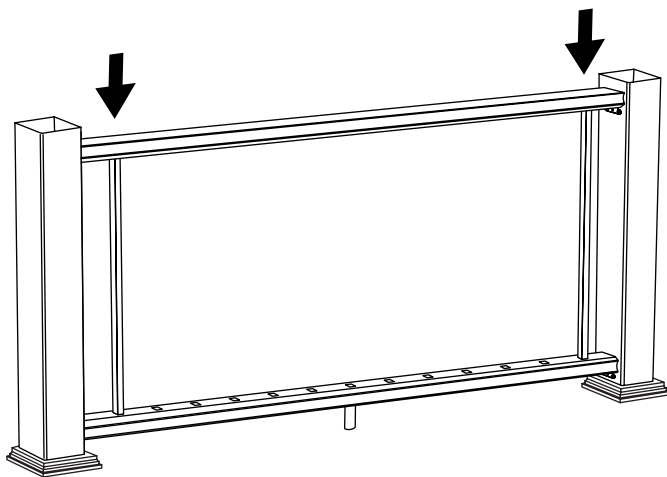


NOTE: Baluster length may vary slightly. Make sure all balusters are cut to the correct length.



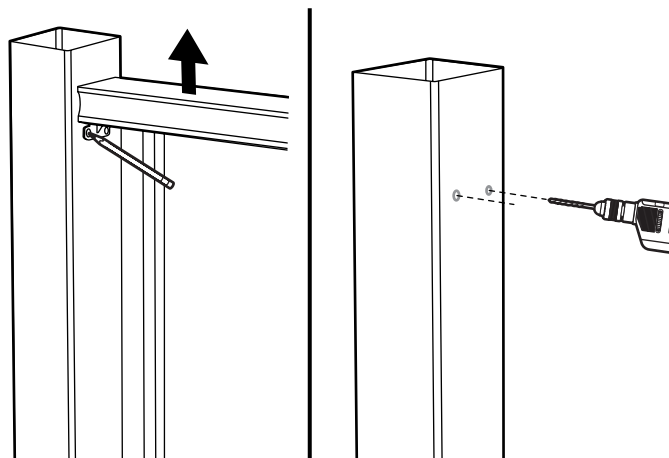
6 Positioning the top rail

- Carefully position the top rail between the posts and lower onto the two balusters. Ensure you fully seat the balusters into the top rail.
- Check the top rail and ensure it is level.



7 Marking and drilling top rail holes

- Mark the location of the bracket holes.
- Remove the top rail and balusters. Pre-drill the holes with a 5/32-in. bit, angling slightly inward to allow for clearance from the rail once repositioned for securing.



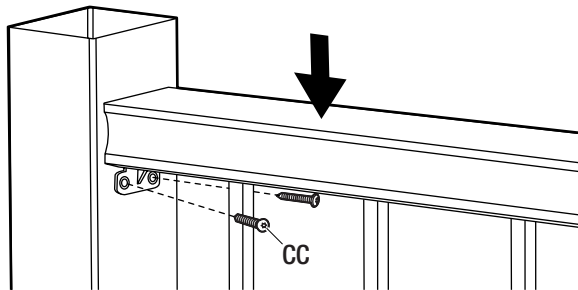
Line Rail Installation (continued)

8 Installing the balusters and top rail

- Insert all balusters into the bottom rail. Reposition the top rail over the balusters, and lower into place between the posts. After the top rail is fully seated, secure using 2-in. screws (CC). DO NOT OVERTIGHTEN THE SCREWS.

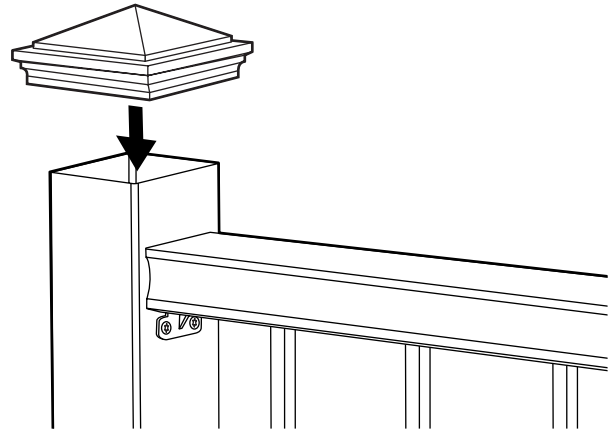


NOTE: Using extended drill bits is recommended to prevent damage to the rail, and allow a more perpendicular driving angle.



9 Installing the post caps

- Complete the installation by installing the post cap in place. You can use a quality exterior adhesive in order to do this, but note that you will not be able to remove the cap at a later time once it is glued.



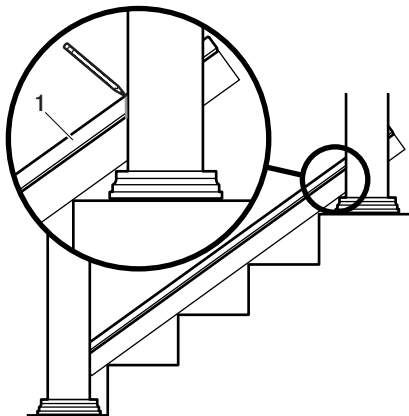
Stair Railing Installation

SPECIAL NOTES ON STAIR RAILING

The stair systems are designed for the typical angles created by an approximate 7-in. rise/11-in. run with allowance for accepted variation in components. The Brio™ stair system allows for a 30-34 degree stair angle. Building codes are very specific on allowable angles and widths. It is very important to consult with your local building code officials and plan your stair layout accordingly. Ensure that you leave adequate space for graspable hand rail if applicable. "Dry fitting" intermediate post placement will result in easier and better looking installations and may avoid placement of post mounting brackets in areas where screws cannot attach to the guardrail.

1 Determining the angle for the railing

- Using a 2 x 4 over the steps to create a consistent angle, place the bottom rail (1) over the 2 x 4 and mark the end angles for the bottom rail.

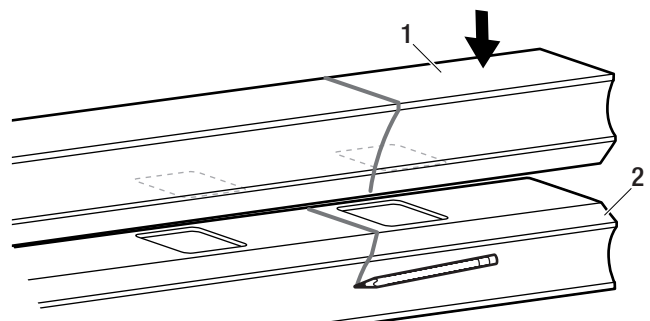


2 Marking the angles

- Align the top rail (1) on top of the bottom rail (2), ensuring the baluster holes are facing each other. Then mark the angle of the bottom rail to the top rail.



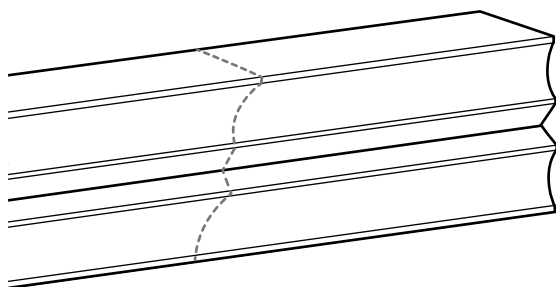
NOTE: Make sure that when the holes are aligned, the stair angle is continuous across both pieces. The minimum distance from post to first baluster slot is 1-1/2-in. for clearance from the brackets.



Stair Railing Installation (continued)

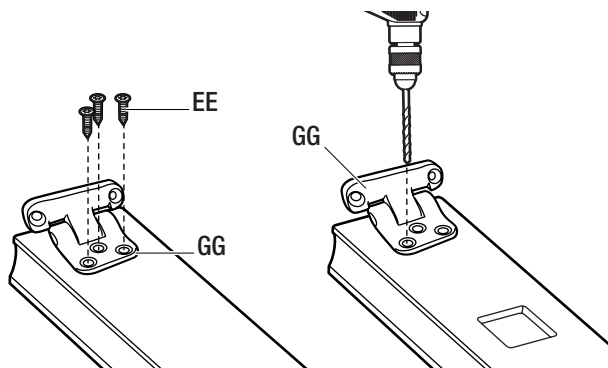
3 Cutting the rail angles

- Cut the top and bottom rails at the marked angles to fit tightly between the posts.
- Transfer the stair angle to the crush block and cut to the desired length (consult your local building official for the proper spacing between the stair tread and the railing).



4 Attaching brackets to the rails

- Place brackets (GG) on each end of the bottom rail (side without baluster holes). Place brackets on each end of the top rail (baluster hole side). Leave 1/32-in.-1/16-in. space from the cut edge of the rail. Mark all bracket hole locations and then drill holes using a 5/32-in. bit.
- Secure all brackets using the 1-in. screws (EE).

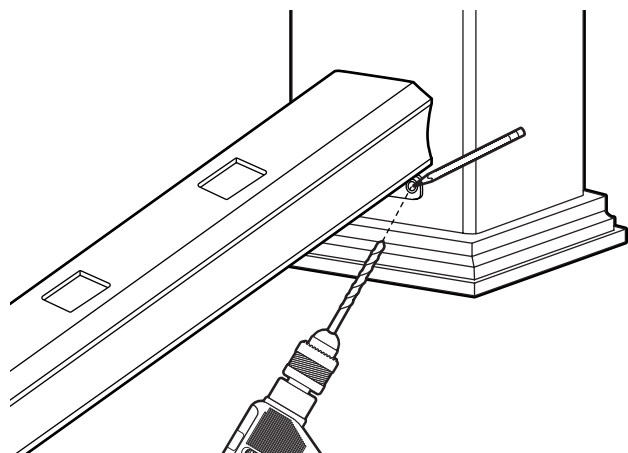


5 Preparing the bottom rail installation

- Place the bottom rail between the posts. Using the bracket as a guide, mark the location of the holes on the posts. Remove the rail before pre-drilling the holes.
- Pre-drill the holes with a 5/32-in. bit, angling slightly inward to allow for clearance from the rail once repositioned for securing.

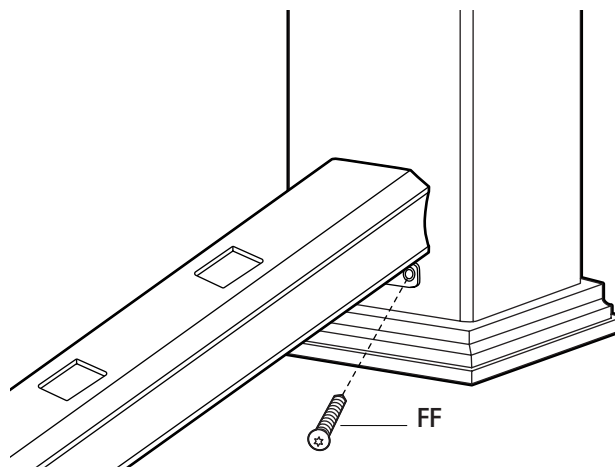


NOTE: Using extended drill bits is recommended to prevent damage to the rail, and allow a more perpendicular driving angle.



6 Installing the bottom rail

- Place the crush block on the stair tread surface midway between the posts and glue to the bottom of the bottom rail.
- Secure the bottom rail to the post at both ends using the 2-in. screws (FF). **DO NOT OVERTIGHTEN THE SCREWS.**



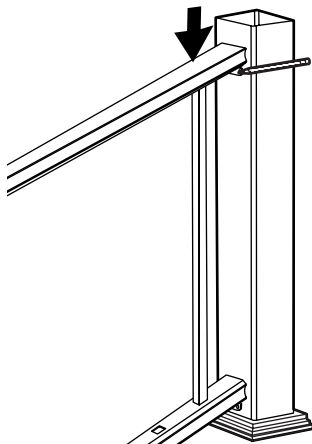
Stair Railing Installation (continued)

7 Positioning the top rail



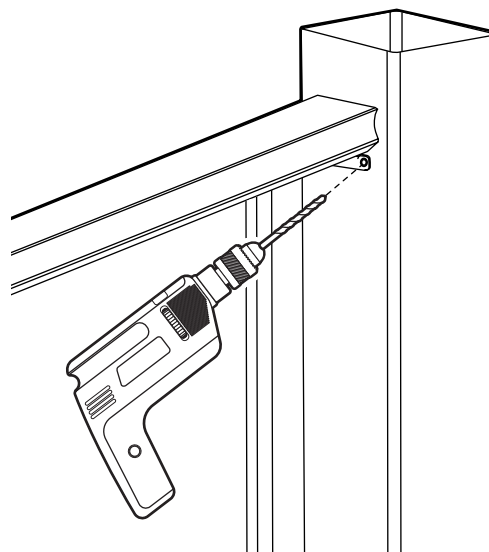
NOTE: Baluster length may vary slightly. Make sure all balusters are cut to the correct length.

- Insert a baluster into the first and last holes in the bottom rail. Carefully position the top rail over the balusters. Lower until the balusters are fully inserted.
- With the top rail fully seated, and using the top bracket as a guide, mark the location of the holes. Remove the rail before pre-drilling the holes.



8 Drilling the top rail holes

- Pre-drill the holes with a 5/32-in. bit, angling slightly inward to allow for clearance from the rail once repositioned for securing.

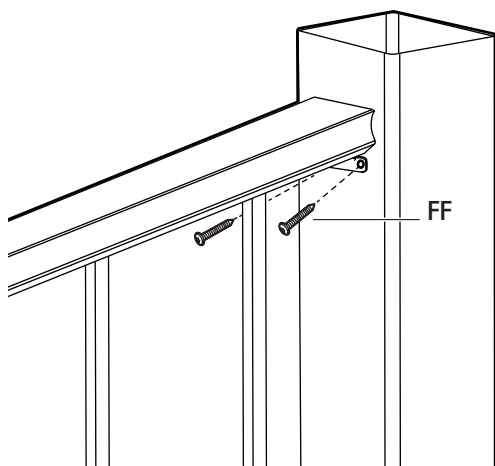


9 Installing the top rail

- Fully insert all balusters and secure the top railing using the 2-in. screws (FF).

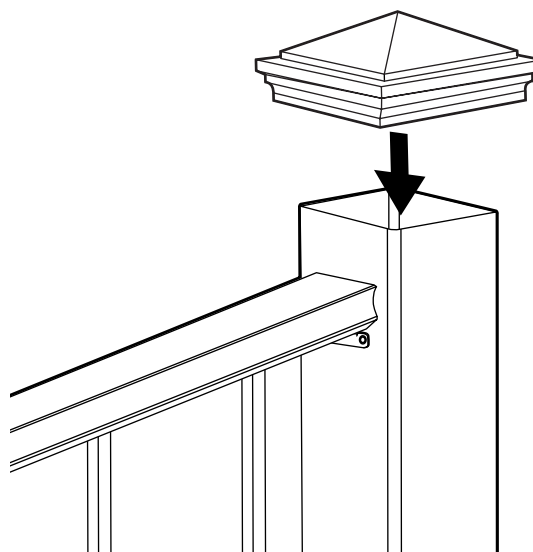


NOTE: Using extended drill bits is recommended to prevent damage to the rail, and allow a more perpendicular driving angle.



10 Installing the caps

- Complete the installation by installing the post cap in place. You can use a quality exterior adhesive in order to do this, but note that you will not be able to remove the cap at a later time once it is glued.



Angle Bracket Installation

1 Determining the angle of installation



NOTE: Not for stair applications.

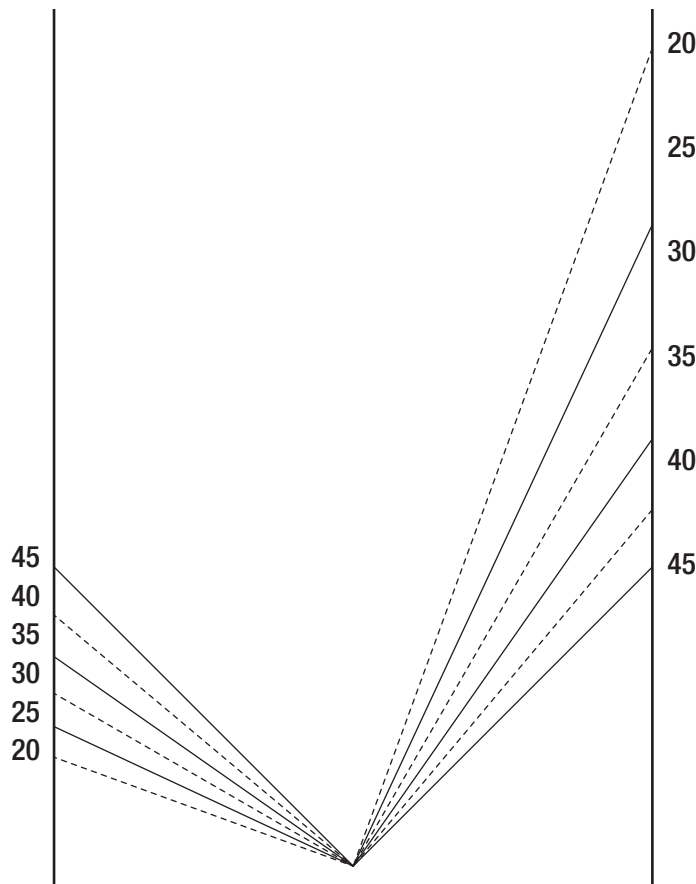
Rails up to 20° may be mounted to the post face by using the In-Line “L” bracket.

Cut rails at the appropriate angle to fit tight against post. Cutting rails greater than 20° will result in a rail that does not fully fit on the post. Angles greater than 20° require the use of the angle bracket. (Sold separately.)



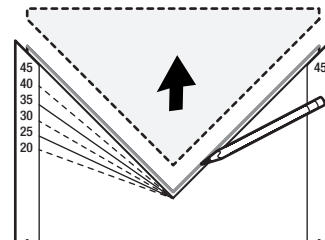
NOTE: The minimum distance from post corner to the first baluster hole is 1-1/2-in.

- Determine the angle of your installation using the supplied template and cut the template out along the appropriate marked lines (you may want to photocopy the template as a backup prior to cutting).
- Position the template on the non-routed, underside surface of the bottom rail. Mark the proper cutting angle. Template will be reversed from the top rail.
- Ensure baluster holes are equidistant from the end of rail to ensure proper vertical alignment of balusters.



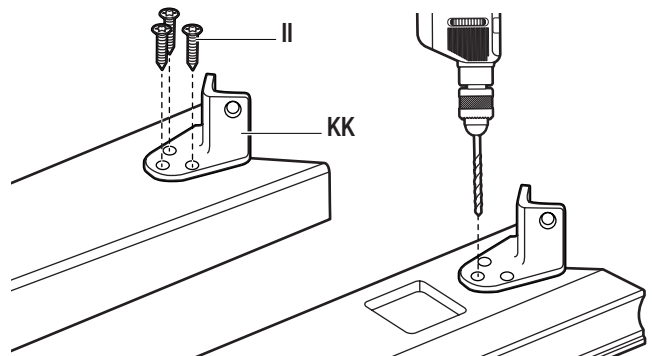
2 Making the angle cuts

- Make the angle cuts in the top and bottom rails.



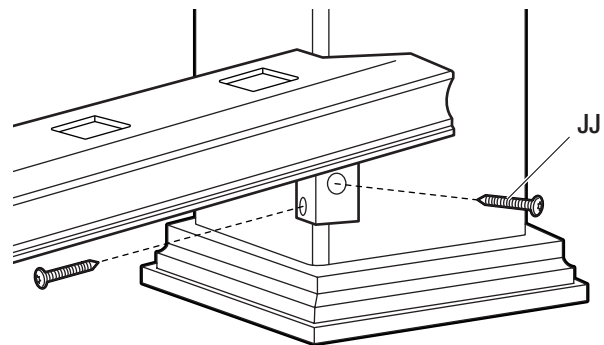
3 Installing the angle brackets

- Align the angle bracket (KK) with the cut in each rail. Inset the bracket 1/16-in. from the rail's end.
- Mark the three screw hole locations on both ends of each rail and pre-drill the holes using a 5/32-in. bit.
- Secure the brackets with the 1-in. screws (II). DO NOT OVERTIGHTEN THE SCREWS.



4 Installing the bottom rail

- Secure the bottom rail to the posts using the 2-in. screws (JJ).
- Follow Steps 5 through 9 in the line rail instructions.



Design Grid





Questions, problems, missing parts? Before returning to the store,
call Fibron Customer Service
8 a.m. - 5 p.m., EST, Monday - Friday

1-800-573-8841

FIBRONDECKING.COM

Retain this manual for future use.