



Refine Rail™ Small Bottom Rail System Installation Instructions

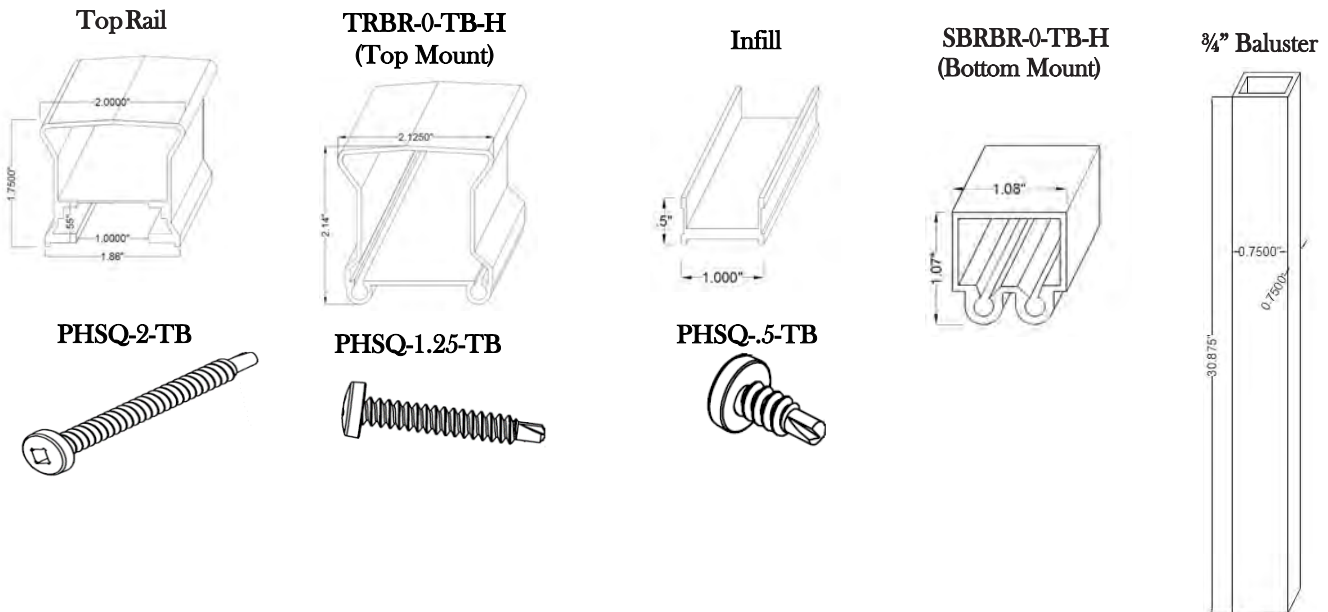
Level Railing Installation Guide - Small Bottom

- Please read **all** instructions *carefully* before starting installation of the Refine Rail™ Aluminum Rail System.
- The installer is solely responsible for meeting all code and safety requirements and obtaining all required electrical and building permits. It is also up to the installer to determine which techniques are suitable for each installing situation, and how to implement them. Neither Refine Rail™ nor its distributors are liable for improper or unsafe installations.
- Proper blocking must be in place before mounting posts.
- Rail Sections come in nominal 3ft, 3ft 6in, and 8ft lengths. (Actual rail lengths are 38", 44" and 98", respectively, from top of base to top of cap).
- The residential default rail height when using the Refine Rail™ Bracket Installation jig is 36-1/8".
- Refine Rail™ Aluminum Railings should be installed using building principles in accordance with local building codes and the installation guidelines. Consult your local building code official and check all Code Requirements before installing railings.
- For questions, contact The Deck Store, the distributor for Refine Rail™ Aluminum Rail System, at 1-877-432-2311.
- **SAFETY FIRST:** Be safe and follow all instructions, when using power tools. Don't forget safety goggles!

Recommended Tools for Installation

- Level
- Rubber Mallet
- 2-speed squares
- Cordless Drill / Impact driver
- Quick clamp grips
- Measuring Tape
- Miter saw with high tooth count Carbide blade
- 1/8" drill bit
- #2 Square bit 6" long
- T-30 Bit (for posts)

Rail Profiles & Hardware



All fasteners for attaching brackets to posts and rails are included in the box kit. Bolts are also included for each post; other types of anchors may also be necessary, depending on application. The post kit contents will vary by post type. Use a #2 square bit for a sure fit.

Proper application is the responsibility of the installer!

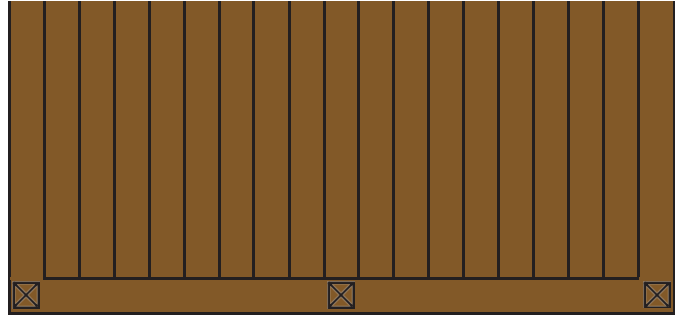


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3" Post Placement & Installation

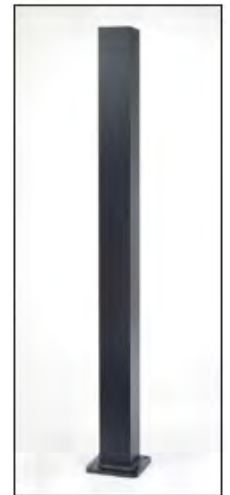
Step 1: Layout

Lay out the placement of the posts. Measure 1-1/2" from the edge of the decking for composite (3-1/2" for cedar). If stairs are involved, it may be beneficial to start with the stairs, as they have some variability.



Step 2: Surface Mount Post

- Set the post mount in place and mark four mounting holes.
- Pre-drill four holes for the 16x5" mounting bolts (through decking only), using a 3/8" drill bit. See Fig. II in the post mounting examples marked below.
- The instructions for wiring are on the next page.



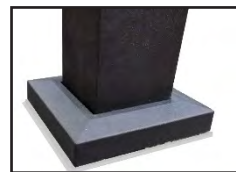
Step 3: Finished Post

Install the included post cap and post skirt for finished look. (The post Skirt comes as one piece, and must be installed **before** mounting the railing brackets).

Installed Cap

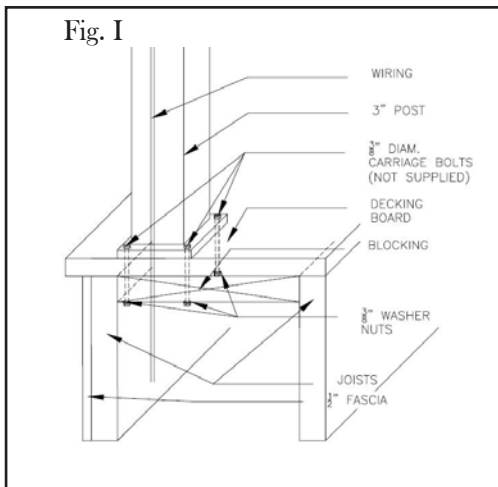


Installed Skirt

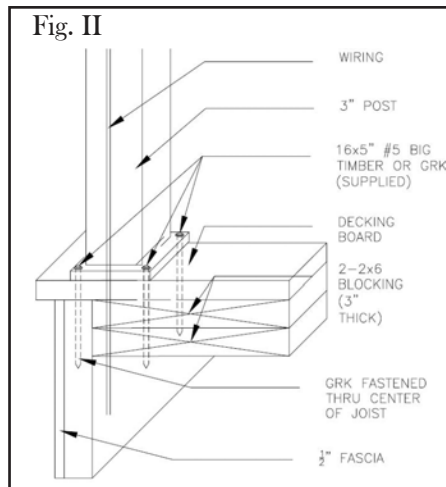


Post Mounting Scenarios

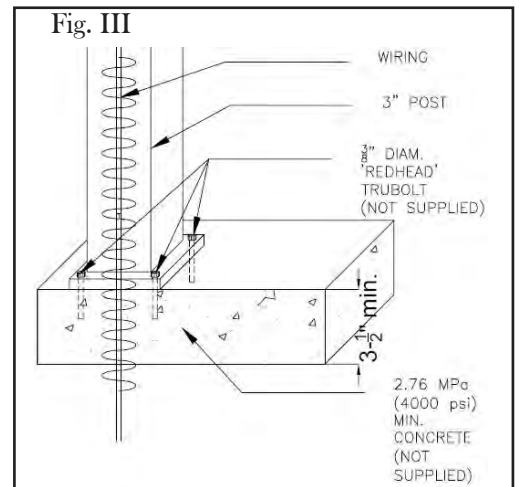
Surface Mount using Carriage Bolt



Surface Mount using Lag Bolt



Surface Mount using Concrete Anchor





Refine Rail™ Small Bottom Rail System Installation Instructions

Level Rail Kit Assembly

Typical Small Bottom Kit Includes:

- 2 – TRBR-0-TB-H (Top) mounting brackets*
- 2 – SBRBR-0-TB-H (Small Bottom) mounting brackets*
- 1 – Infill Panel (48" for 4'; 72" for 6'; 96" for 8')
- 1 – Top Rail (48" for 4'; 72" for 6'; 96" for 8')
- 1 – Rail Support
- 4 – PHSQ-.75-TB
- 2 – PHSQ-1.25-TB (w/ 3pk for 4' kit; 5pk for 6' kit; 6 pk for 8' kit)
- 8 – PHSQ-2-TB



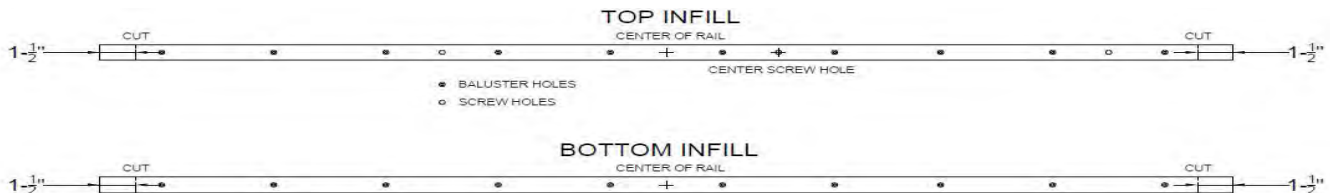
Aluminum Balusters

- 10 Balusters with 4' kit
- 16 Balusters with 6' kit
- 21 Balusters with 8' kit

(All hardware is included to complete rail kit assembly)

Step 1: Cut Rails to Size

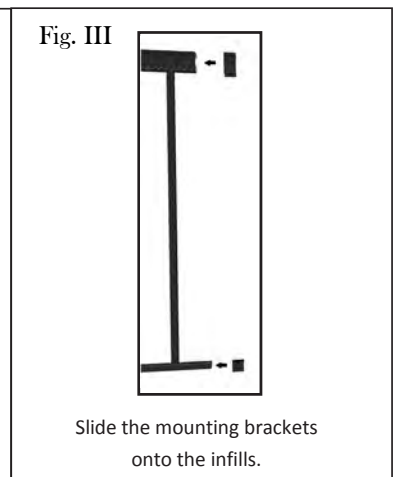
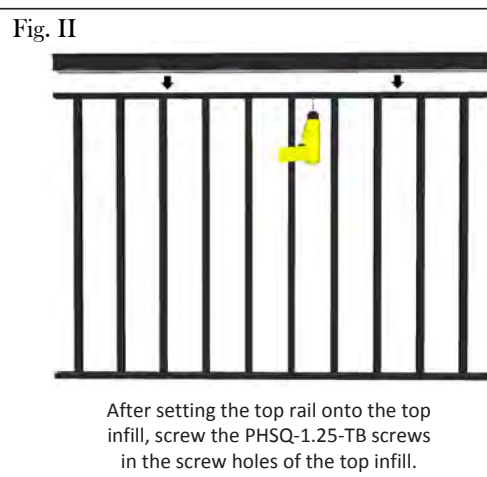
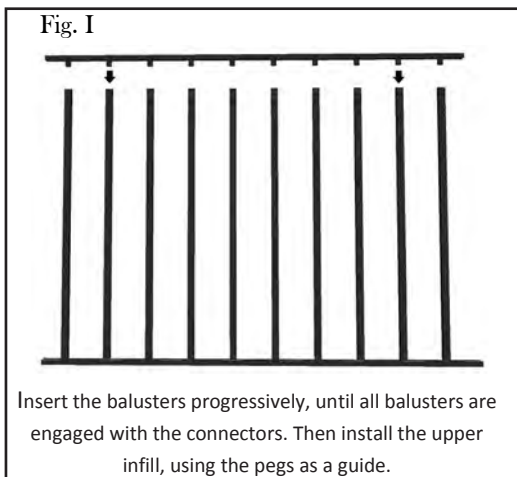
Measure the distance from post to post and deduct 1/4" from each end of the rail (1/4" accounts for Rail Connector). Measure the bottom rail, to ensure equal and maximum spacing from the end of the rail to the first baluster on both ends of the bottom rail. Make sure that 3" are left on either end, by measuring before cutting. Cut the bottom rail with a metal cutting blade (check the manufacturer's specs for Carbide Blade). Center the rails between or at the baluster, so at least 1-1/2" inches remain at either end, with no connectors. Repeat the previous steps, when measuring and cutting the top rail.



Ensure spacing on either end is equal, but greater than 1-1/2"

Step 2: Assemble Rail Kit

Insert the balusters onto the baluster connectors of the bottom rail. Insert the first two balusters from one end of the top rail, and progressively work your way to the other end to attach the top rail to the balusters. After all of the connectors are engaged with the balusters, set the top rail onto the top infill, and use 1-1/4" screws, so that the screws don't go through the top rail. Finally, slide the mounting brackets onto either end of the now-assembled rail panel.



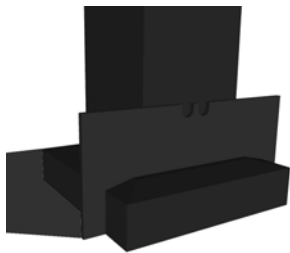


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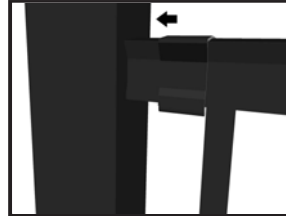
Mounting Rail to Post

Step 3: Attach Brackets to Post

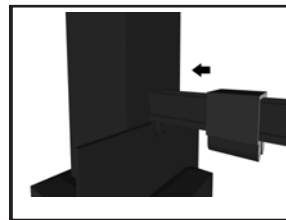
Hold the Refine Rail™ jig to the post, and secure it with a clamp. After placing the assembled rail into position and sliding the brackets against the post, drill the top bracket with the PHSQ-2-TB screws, using the 6" long drillbit. Do the same with the bottom (SBRBR-0-TB-H) rail mounts.



1. Refine SBR Jig



Top



Bottom



2. Slide both brackets to the posts.

3. Attach Bracket

Step 4: Secure Assembled Rail into Brackets

After the brackets are mounted to the post, drill the PHSQ-1.25-TB screws into the top brackets, and the PHSQ-.75-TB screws in the bottom bracket holes to secure the railing, as shown in the illustrations to the right.





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Notes
