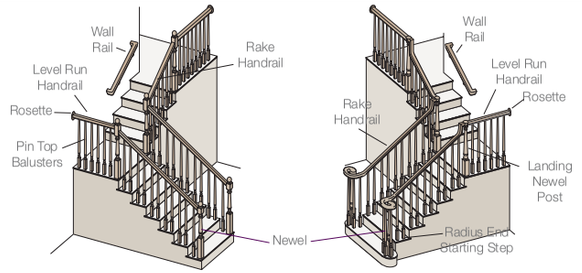
Iron Baluster Installation

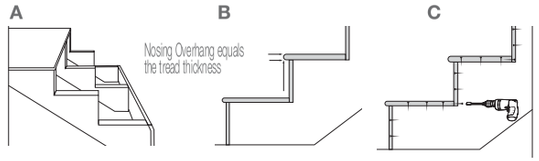
Before preceding with the following steps, the handrail height should already be determined. Read all the steps below before beginning installation. Check out our "How-To Build a Staircase Like a Pro" fold out brochure or **www.sure-wood.com** for more detailed installation instructions.

Post-to-Post | **Over-the-Post**



1 Tread and Riser Installation:

To properly install solid oak treads and risers, you must first remove the existing steps to expose the rough framing. Leave the beginning riser at base of steps (A). Measure and cut each step separately to ensure tight fit. (B). Pre-drill, apply construction adhesive and nail into place. For added strength, screw treads to risers from behind (C). Complete each step before continuing on to next step.

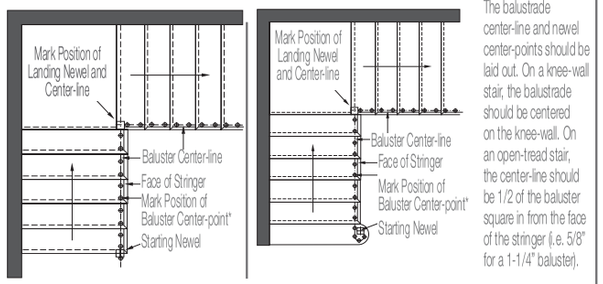


2 Basic Layout:

Marking Your Staircase for Installation

Layout your staircase directly on your treads and landings. Carefully mark Newel and Baluster positions and center-lines.

Post-to-Post | **Over-the-Post**



The balustrade center-line and newel center-points should be laid out. On a knee-wall stair, the balustrade should be centered on the knee-wall. On an open-tread stair, the center-line should be 1/2 of the baluster square in from the face of the stringer (i.e. 5/8" for a 1-1/4" baluster).

*Metal balusters should be installed no wider than 4" on center, so that a 4" sphere cannot pass through anywhere along the handrail. Check your local building codes to ensure compliance.


Turnout Starting Fitting Layout

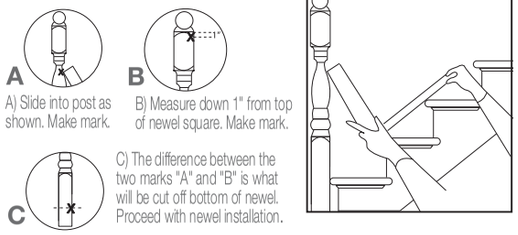
Starting Easing Fitting Layout

3 Newel Post Installation:

Post-to-Post

Starting Newel Height

With newel in position where it is to be mounted, slide short end of framing square along slope of stairway.



A) Slide into post as shown. Make mark.

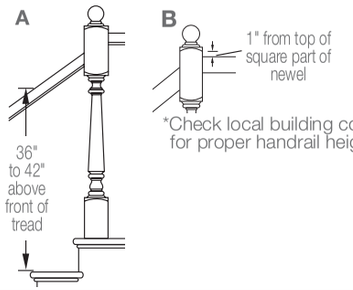
B) Measure down 1" from top of newel square. Make mark.

C) The difference between the two marks "A" and "B" is what will be cut off bottom of newel. Proceed with newel installation.

Landing Newel Height

A) Height of the handrail should be between 36" and 42". Check local building codes.

B) Place the top of the handrail one inch below the top block of the newel.



*Check local building codes for proper handrail height.

Newel Post Attachment

Trim and Fasten the Newel Posts using one of these methods


101 Sure-Tite Newel Fastener

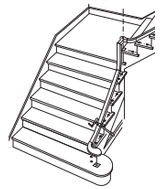
EZLock Newel Post Plate Fastener

Keylock Newel Post Fastener

3 Newel Post Installation:

Over-the-Post

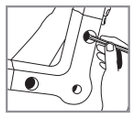
Assemble the Handrail:

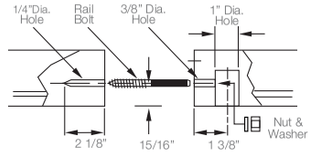


Assemble the handrail on top of the stair treads prior to installing the newel posts. Use rail bolts and glue at each fitting connection. Complete instructions are included with fittings.

Rail Bolt Installation

Apply glue to ends. Assemble and install nut. Tighten nut with wrench. Fill access hole with wood plug.



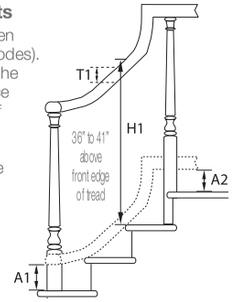


Measure and Trim Newel Posts

The rake rail height should be between 36"– 42" (H1) (check local building codes). Center the assembled handrail over the newel locations. Measure the distance between the tread and the bottom of the handrail fitting (A1 and A2). Also measure the rake rail thickness (T1). Use the following formula to calculate the starting newel height.

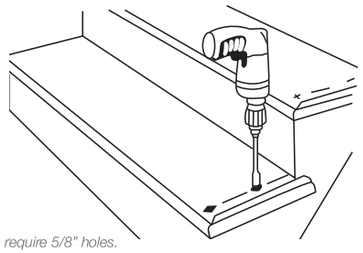
H1 + A1 – T1 = Starting Newel Height

If the newel starts from the floor or a lower tread, add that distance as well.



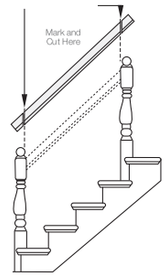
4 Measure and Trim Balusters

Mark baluster placement on treads allowing for equal spacing while following your original design. Drill holes* using 5/8" drill bit a minimum of 3/4" deep into stair treads. Make sure to keep the depths consistent.

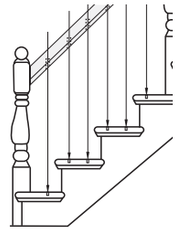


*Note: a. 1/2" balusters require 5/8" holes.
b. 5/8" balusters require 7/8" holes.

Using newels as guides, mark handrail and cut to proper length. Follow instructions for attaching newels and temporarily install handrail.



Using a plum bob, line up with the holes in the treads and mark the handrail for the top of the baluster. Drill holes using 5/8" drill bit a minimum of 3/4" deep into handrail.



5 Trim and Install Balusters

Follow the instruction on the other side of this brochure to trim and install your Iron balusters.

Iron Baluster Installation

SUREWOOD~LNL

A "How-To" Guide for the installation of iron balusters.

Replacing Wood Balusters with Iron Balusters

Wood-to-Iron Retrofit in just a day!

Choose your look ...

2 Balusters per step*

Single Basket Baluster

Double Basket Baluster

3 Balusters per step*

Single Twist Baluster

Double Twist Baluster

Rake Shoe

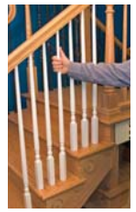
Flat Shoe

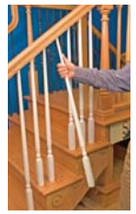
*Check local building codes to ensure compliance

Two Methods for the Removal of Old Balusters:

1st Method:

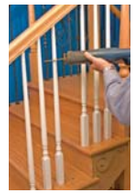
1. A firm twist of the baluster may be all that is necessary to remove baluster from tread and handrail. Remove any nails remaining or fasteners.
2. Once loosened, lift the baluster up into the handrail, enough to clear the stair tread at the bottom, and then tilt it to the side and pull out from the handrail.
3. If glue and/or wood still remains in the holes, a drill with a 1/2" bit can be used to remove any excess.*

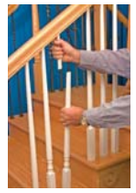


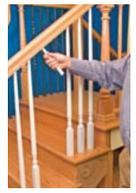


2nd Method

1. Cut baluster in half with a hand or power saw.
2. Twist each half to loosen.
3. Remove each half of the baluster from the stair tread and handrail, and any nails remaining or fasteners.
4. If glue and/or wood still remains in the holes, a drill with a 1/2" bit can be used to remove any excess.*





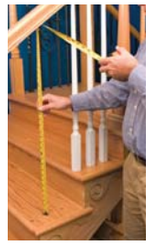


*Note: a. 1/2" balusters require 5/8" holes.
b. 5/8" balusters require 7/8" holes.

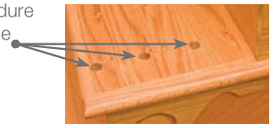
Installing New Iron Balusters

Trim Iron Balusters to fit.

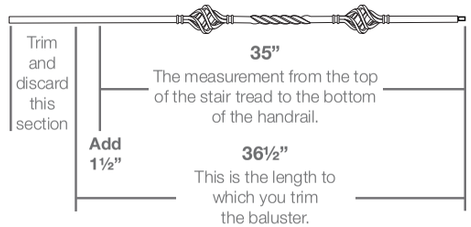
1. Using a metal tape measure, measure the distance from the front hole in the stair tread to the corresponding hole in the bottom of the handrail. It may be necessary to drill the hole deeper into the handrail to accommodate the baluster. Be careful to NOT drill through top of handrail.



2. Do this same procedure for the all holes in the stair tread.



3. To each of these measurements add 1½".
   Example: 35" + 1½" = 36 -½"
   This is your baluster length.



4. Using the above measurement, cut the baluster to the length needed. Be sure to cut from the bottom of your baluster. The top is the end with the rounded tip.

Baluster Top

5. A Chop Saw with a metal-cutting blade is the preferred way to cut the iron balusters. Take care when marking and cutting the balusters. Use safety glasses and follow proper safety precautions while cutting balusters. **Note**: Iron can be extremely hot after cutting.

Install and Secure Balusters

6. Before placing the balusters in the staircase, top and bottom "shoes" must be inserted on both ends. Loosen set screws to insert baluster ends. Face set screws in same direction.

Rake Shoe

7. A RAKE shoe should be placed at the top (Pin end) of each baluster. A FLAT shoe will go at the cut end of each baluster. Tighten in place a few inches from each end. This keeps them secure during placement of the baluster.

Flat Shoe

8. Make sure the "rake" of the shoe coincides with the angle of the handrail. The angle of the rake shoes may have to be adjusted with a grinder or belt sander for the best fit.

TIP: Test-fit all balusters before securing with epoxy.

9. Following manufacturers instructions, place epoxy in the stair tread hole and some on the Pin Top of the baluster.

10. Place the Pin Top into the handrail hole first and then into the stair tread hole. Straighten baluster once inserted. The Pin Top should press firmly against the front of the handrail hole,making sure that the flat shoe at the bottom squares up with the front of the step.

11. Once the epoxy has set, the rake and flat shoes can be put into position and secured with an allen wrench.

Add the Elegance of Iron to your home.