

Stairway Renovation System

Kit contents include:

- 2 - Rake shoe
- 1 - Rake baluster anchor
- 1 - Phillips head wood screw for installation of baluster anchor
- 1 - 5/8 inch rubber baluster adapter
- 1 - 3/4 inch rubber baluster adapter



Knee Wall Installation Instructions:

Please read these instructions *entirely* before beginning your project.

Existing wood balusters can be removed in a number of ways but the cleanest, meaning not messy, way is to use a pair of tree loppers.

Cut the baluster at its smallest diameter, usually at the top but be sure to leave a few inches below the handrail so you can work the short piece of baluster out of the bottom of the rail. Work the rest of the baluster out of the tread and remove any nails. Although the hole in the handrail and the tread will be covered, be careful not to damage the surrounding area.

Once all the balusters have been removed you can begin installing the baluster anchors.

Then begin marking the location of the rake anchors on the top of the knee wall. It may be beneficial to place a piece of wide masking tape on top of your knee wall. Place the tape down the center of the knee wall from top to bottom. This will give you a working surface from which you can mark on and will prevent splintering when drilling pilot holes. The anchor screw should be installed so that it lines up with the center of the hole in the bottom of the handrail.

To accurately mark the location of each baluster you will need to mark the center of each baluster on top of the knee wall. Begin by locating the center of the starting newel on top of the knee wall. This will mark the center line going up the knee wall where the balusters will be installed. Next locate the center of the hole in the bottom of the handrail. Using a pencil, lightly mark the center of the hole on the side of the rail. Using the mark as a reference, hold a level between the handrail and the top of the knee wall so it touches both.



Once the level is plumb (the bubble on the level will be in the center of the hash marks), mark the spot where the level touches the knee wall.



Drill a 3/32 inch pilot hole perpendicular to the knee wall where the center lines intersect on top of the wall.

The knee wall anchor is installed by using the included wood screw. Once your pilot hole is drilled, remove the masking tape. Place the screw through the bottom hole of the anchor and install. The anchor is manufactured so the screw can be installed by holding it perpendicular to the knee wall. The open side of the rake anchor will face the bottom of the stairway.



The knee wall anchor can be adjusted to assure the baluster will be plumb and in line with the hole in the the handrail. Using a pair of pliers, gently bend the anchor where it meets the knee wall as needed to achieve proper alignment.

\*TIP: Once your old balusters are removed, you have drilled your pilot holes for the rake anchors and removed the masking tape, you may want to refinish your knee wall. A fresh coat of paint or stain will enhance the finished look.

Cut your new balusters to length

Measure from inside the anchor to the low side of the hole in the handrail.



Place your measuring tape at the shoulder of the baluster (see photo) and mark the length of the measurement determined in the previous step.



Balusters can be cut with a hack saw or a power miter saw with a metal abrasive cut off blade. When using power tools, be sure to follow the manufacturer's safety instructions. Balusters will all be cut to the same length.

Once the balusters are cut, slide the rake shoe (see photo) on the bottom of the baluster.



Slide the rake shoe (see photo) on the top of the baluster.



There are 2 baluster adapters in your package: one is 5/8 inch and the other is 3/4 inch. Try each in the in the hole in the bottom of the rail and choose the one hat fits best. Place the adapter on the top of the baluster above the shoe (see photo).



Starting from the bottom of the stairs

Pick the assembly up and slide the bottom shoe up a few inches from the bottom so you will be able to slide the baluster into the anchor (see photo). The side with the set screw should face the open side of the baluster anchor.



Slide the top of the baluster with the adapter on top into the hole in the bottom of the rail and swing the bottom of the baluster into the baluster anchor.



Once in place you can lower the shoe down over the anchor. If you need to you can push the baluster up slightly so the shoulder is up to the rail on the low side. You can now tighten the set screw on the bottom shoe.



Push the top shoe up against the bottom of the rail and tighten the set screw (see photo).



Repeat this process for each baluster as you work up the stairs.