

Balustrade Installation Instructions (Revised 9/11/2008) (SEE III., READ & UNDERSTAND ALL INSTRUCTIONS BEFORE STARTING)

Use blue tape on the bottom of your Skil saw when cutting rails to prevent marking of the product, clean final cuts with a belt sander / small grinder. Keep balusters covered until installed to prevent water from possibly getting into the baluster, freezing & cracking it. Store rails on a flat surface & keep covered with a tarp to keep them clean.

1. For 36" rail hgt, (A) lay out 39" tall newel posts in the locations they go, per your plan, make sure the 11" flat surface below the raised panel is to the bottom, if there are stairs off of the deck, set all newel post 2" back from the outside edge of your deck, (Bottom of Stairs)(A) these newel post are 45" tall with one flat panel, make sure the flat panel is toward the stairs & the 11" flat surface below raised panel is to the bottom, these go against the last riser of the steps. Stand each newel post in their location and mark the outside corners of all newel post, lay the post down. (B) Draw an X corner to corner, (B) Concrete decks: Drill 3-3/4" holes, 4" deep and epoxy 3-5/8" x 24" pcs. of non corrosive rebar. Wood decks: Install treated 4x4s X 24" (C) Corner newel has 2- 90* flat panels, Thru newel have 2 flat panels, Stair newel has 1 flat panel installed toward the rail. Note; For 42" rail hgt. you will have 45" tall newel post, the post at the top of the stairs will have one flat panel install this panel toward the stairs, follow above mentioned installation instructions.

2. Figure your cuts on the rails for the entire job before you cut any rails to prevent shortage at the end, start with your longest lengths 1st, saving your shortest lengths to last Measure the distance between the newel posts at the bottom; deduct 1/4" from that measurement for expansion and contraction, cut top & bottom rail the same if the newel post has no base around the bottom. When cutting between columns the top rail will be longer, due to the taper in the column.

3. (G) Cut 1" x 1" support blocks (provided) the width of the bottom rail, bondo them to the bottom of the bottom rail, they will need to be placed at each end and 36" on center, set bottom rail in place, check for bows in the middle of the deck surface, grind blocks or cedar shim accordingly, make sure both ends of the bottom rail is down on the deck surface and the rail is straight.

4. When laying out the balusters, the 4" sphere code applies lay out the balusters & make center & edge lines for each baluster on the bottom rail, lay top rail beside bottom rail & transfer the center lines only to the top rail. Drill 1" holes with a diamond tip bit into the top & bottom rail.

5. (D) Use cedar shims around the bottom of both newel post to plumb, clamp a temporary prop to the post. Install 1/8" pine spacer shims one on each end of the bottom rail, make sure they are not in the way of your four attachment screws. Bottom rail; (E) on the top measure back 1 1/2" from the end of the bottom rail & 1" in from the out side make a mark on both sides of the top, on the sides of the bottom rail measure back 1 1/2" from the end & 1 1/2" up from the bottom, make a mark on both sides. On an 45* angle pre drill four 1/2" holes 3/8" deep to countersink the screw heads, change to a 3/16" X 4" masonry bit, keep the angle at 45* degrees and drill into newel post, install four 1/4" X 3 1/4" masonry screws. Rails between columns, use same above mentioned screw techniques in bottom rail, it is recommended that you split the base on the columns & fit them to bottom rail, caulk all screws holes. (DO NOT USE A HAMMER DRILL ON RAILS) LONG WALLS WITH EXPANSION JOINTS, RAILS MUST BE ATTACHED DIFFERENTLY. CALL FOR SPECS

6. Note; Due to shrinkage of our balusters, their may be up to 3/16" difference in the length of our balusters, you will need to measure each baluster and put matching lengths in each balustrade section. Apply 1 1/2" blue painters tape 28" above the floor around the balustrade section & newel post to keep the balusters from falling over before the top rail is installed. (F) Note landing balusters have 4" tall squares top & bottom, 1" in apply a 1/2" bead of polyurethane premium construction adhesive to the bottom of each baluster and install all, 1" in put 1/2" bead of polyurethane adhesive to the top of each baluster, set one end of top rail down on baluster then work from that end aligning balusters to allow rail to seat.

7. (G) Strap the assembled rail section together loosely, use cardboard material to place under the straps to protect the rails from strap marks, using a tape, align the balusters on the bottom rail, once aligned tighten straps down. Let the adhesive start to dry and remove excess with a putty knife, the next day remove the straps & sand any glue residue off with fine sandpaper.

8. (D) Install 1/8" pine spacer shims on the ends of the top rail, keeping them out of the way of your attachment screws. (E) On the side of the top rail measure back 1 1/2" from the end of the top rail & 5/8" down make a mark on both sides of the top rail, on the bottom of the top rail measure back 1 1/2" from the end & 5/8" up from the bottom, make a mark on both sides. On an 45* angle pre drill four 1/2" holes 3/8" deep to countersink the screw heads, change to a 3/16" X 4" masonry bit keep the angle at 45* degrees and drill into newel post, install four 1/4" X 3 1/4" masonry screws, caulk screw holes.

9. (All Stairs) use the above mentioned installation procedures 1-8, except do not strap these sections. Due to shrinkage, (H) find the shortest stair baluster with 5" tall squares and cut all of the balusters to that length with pitch, keeping them as long as possible. Bevel & install 1/2" CPVC hot/cold pipe into the plastic pipe. (I) When drilling the bottom rail; offset the 1" holes off center to keep the baluster from sliding down off the lay out spacing. (Enclosed steps) (J) The wall height must not be more than 1 1/4" vertically above the finished tread. Caulk top & bottom of all stairs balusters

10. (Curved Stairs to a Round Column) Curved stair rails are labeled inside the rail with TOP & BOTTOM marks, if reversed they WILL NOT work. Fit the bottom rail between newels cut the top rail to the same angle & length. Follow the same installation procedures 1-9 mentioned above, except balusters will have compound miters. (K) Set the column back enough to set your newel post, if you do not have room to do so split the newel post, to fit available space, screw newel to the column. Split the base of the column to receive the newel.

11. (L) After all balustrade sections are completed, mix 1-60lb bag of sacrete with very little water, pour & tamp into each newel post. Use polyurethane adhesive to attach newel post cap & caulk bottom. Remove all pine shims from the rails, caulk all joints from the rails to the newel post also caulk the top & bottom of all balusters, (A) as well as the inside bottom ONLY of deck to newel post. (Owner must maintain caulking yearly to be covered by the Warranty)

12. To clean use a plastic scouring pad with Dawn dish soap, clean one section at a time & spray off with a garden hose. For really stubborn stains use Windex glass cleaner or a brillo pad, if this still will not remove the stain sand it lightly with 100 grit sandpaper, this will remove some of the texture. Do not use a power washer on our products, it can cause streaking.

Tools needed: (Compound miter saw & Skil saw with abrasive blade) (Car bondo) (1" Diamond tip hole saw) (Small grinder abrasive disc) (1" ratchet straps) (1/4"x 3 1/4" Phillips tip masonry screws & 3/16" x 4" masonry bit) (PL Polyurethane adhesive "Lowes") (Blue painters tape) (Stair insert 1/2" CPVC hot & cold pipe) (Cedar & pine shims) (Concrete decks 5/8" non corrosive rebar) (standard carpenter hand tools & bits) (100 grit sandpaper) (1 bag of sacrete per newel post)

Note; Installation & the structural integrity of the balustrade system is the responsibility of the installer, manufacturer will not be held liable or responsible for installations that do not meet national, international, or local building codes. Mitered rails are not covered by warranty, nor have they been tested.

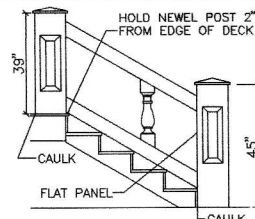


ILLUSTRATION A

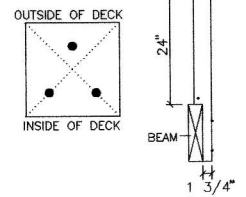


ILLUSTRATION B

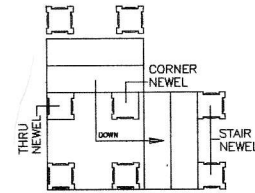


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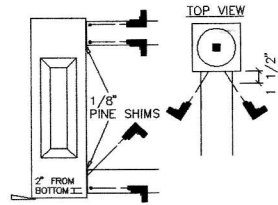


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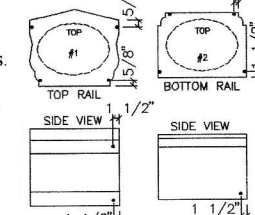


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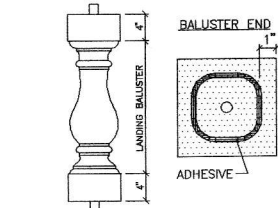


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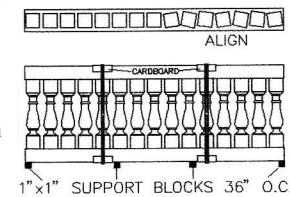


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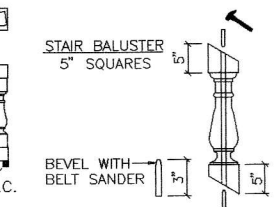


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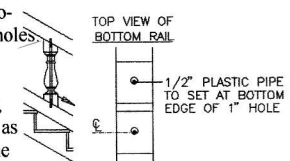


ILLUSTRATION I

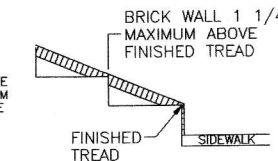


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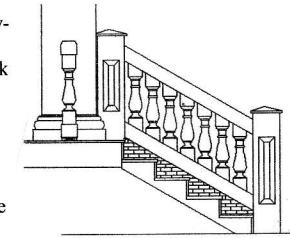


ILLUSTRATION K

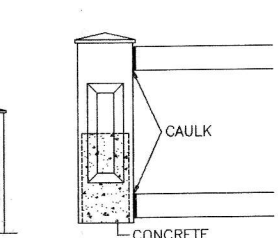


ILLUSTRATION L