RoyalStone™ Balustrade System Installation Manual

CLICK HERE FOR VIDEO INSTALLATION

Read this instruction manual in its entirety prior to beginning assembly!

Thanks for considering our products here at Architectural Mall Inc, where we strive to be the best in our space. This is a quick guide on our RoyalStone™ Balustrade System Installation.

Unload and unpack your order. Make sure all the parts and pieces are there. Make sure everything is stored on a solid, flat surface.

TOOLS AND SAFETY EQUIPMENT REQUIRED

Make sure all tools shown in the diagram below are ready to use and available. Make sure to have all proper protective equipment. We are not liable for any installations/ and or any issues that may arise. We are not liable for any injuries during installation.

TAPE MEASURE

FACE MASK

SCREW GUN

ANGLE GRINDER WITH MASONRY / DIAMOND BLADE

LEVEL

GLOVES

WIRE BRUSH

CAULK GUN

PENCIL

HAMMER DRILL

COMPRESSED AIR

CONCRETE EPOXY

SPEED SQUARE

Relton Hole Saw:
3/4" Saw Dia, 1" Cut Depth
7/8" Saw Dia, 1" Cut Depth

PLASTIC SHIMS

CAULK
BASF Sonolastic NP-1
or Vulkem by Tremco

TOOLS AND SAFETY EQUIPMENT REQUIRED cont.

ADHESIVE

MIXER

DRILL

BUCKET

WOOD WEDGES

RUBBER MALLET

REBAR

OR

FLANGE + PIPE

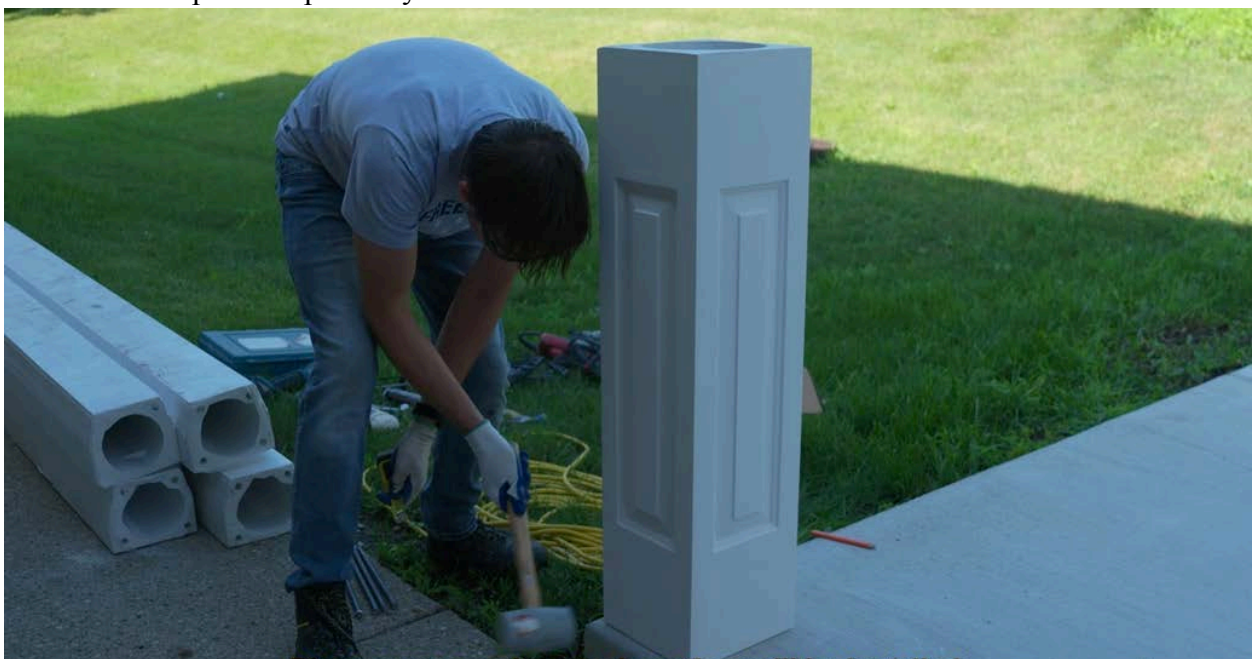
CIRCULAR SAW/
SKILL SAW

PROTECTIVE
EYEWEAR

SCREWS

STEP 1

Place your newel posts where they will be installed. Center them properly, using a rubber mallet to tap them gently in place. Using a pencil, outline the newel post on the substrate. Make sure to level the newel posts using plastic shims. You may need to use a grinder to make sure the newel posts sit perfectly flush on the substrate.



STEP 2

Remove newel posts. Mark locations of Rebar for concrete installations, or Flange & Pipe used for either Concrete or Wood installations. Using a hammer drill, drill the proper diameter holes.

STEP 3

For Rebar installation, make sure to thoroughly clean the hole with wire brush and compressed air to ensure there is no dust left inside.

STEP 4

Using Concrete Epoxy, set the rebars in. For Flange installation, use Tapcons or Wood SS Screws to set the plates. If installing this on a deck that has gaps between boards, use duct tape to cover the gaps within the outline of the newel post. Make sure there is adequate blocking at all newel post locations. The entire balustrade system is anchored by these posts. Once all locations are set, place the Newel posts back in their spots.

STEP 5

Measure each rail length at the bottom of the posts.

Depending on the temps and when you are installing, adjust the rail length accordingly to accommodate for expansion and contraction. **In colder months, have a 3/8" gap on both sides of the rail. In summer months, use 1/8" gap.** Place the rails on sawhorses, and mark them to the length needed.

STEP 6

Using a large speed square, mark the lines around the rail. Using a circular saw with a diamond blade, cut the rail to length. Using a grinder with a diamond blade, clean off each end and bevel edges. Repeat until all rails have been cut to proper lengths. Make sure you identify where each rail goes.

STEP 7

Lay the bottom rail on sawhorses and figure out the spacing for code compliance, which would typically be at 4 inches sphere. This requires some math to be done onsite. Mark the spacing using a speed square, and mark the center point of the rail. Lay the top rail next to the bottom rail, and make sure they are perfectly lined up.

STEP 8

Using the speed square, transfer the baluster spacing to the top rail. Mark the center points, and repeat on all rails

STEP 9

Lay the rails down on flat ground, and using the recommended hole saw, proceed to drill out the holes needed for the balusters. Repeat on all rails.

STEP 10

Place the bottom rail spacers or support blocks using 3-foot centers to make sure that the first set is no more than 12”-16” from each newel post, from there center them roughly 3’ apart.

STEP 11

Use proper adhesive to glue the support blocks to substrate. Put a dab of silicone glue on top of each spacer. Gently set the bottom rails, and make sure not to move the spacers. Use wedges to lock the bottom rail from sliding around on the glue (leave these in place overnight).

STEP 12

Take a small piece of top rail from the cut offs, and cut out a one and a half inch wide center slot on the bottom of that rail.

STEP 13

Using a pencil, outline the bottom rail onto the newel post. Remove the bottom rail, locate and measure the location of the pins. Place a Baluster on each side. Place the top rail, centered on the newel post and trace the top rail on the newel post using a pencil.

Repeat at all locations. Remove the cut off and the baluster that was used to trace the top rail.

STEP 14

Remove the newel post and by using a ruler or wood shims, transfer both the top and bottom rail pin locations with a pencil.

STEP 15

Once all holes have been transferred, drill the holes out using the recommended hole saw.

STEP 16

Set the bottom rails using the pins to lock into the newel posts. The spring-loaded pins should have the spring part inside the rails. Use 2 pins per rail end.

STEP 17

Using the manufacturer suggested adhesive or caulking which would be BASF Sonolastic NP-1 or Vulkem by Tremco, put a bead of adhesive or caulking around each hole on the bottom rail.

STEP 18

Gently set the balusters down and make sure they are all placed right side up, and that the top and bottom flat surface is cleaned off from any residual material. Once they are set, using the same adhesive or caulking, put a bead around the pipe at the top of the baluster, keep about one-half inch away to ensure the bead grabs the top rail.

STEP 19

Gently set the top rail in place. Start on one end and work your way down. You will need three people or more depending on the rail length to do this. Tap each baluster into the respective holes. The newel posts at this point can be gently moved to help with the insertion of pins.

STEP 20

Once the entire system is assembled. Take the RoyalCRETE™ mix out. (Make sure the RoyalCRETE™ has been stored in temperatures of at least 70°F. Using a paddle and mixer, mix the material for 4 to 5 minutes to get it fluid, and to the temperature needed. Add the catalyst and mix thoroughly for another 30 seconds.

STEP 21

Pour roughly 8 to 10 inches of material inside each newel post. The material cures fully within 45 minutes.

STEP 22

Once the material cures, using the recommended caulking, caulk all rails to the newel posts first. Then, put a bead of caulk around the newel post hole. Set the caps. Caulk the underside of the cap to the newel posts. Caulk each baluster top and bottom to the rails.

This concludes the guide on how to install our balustrade system on flat surfaces. There are more videos on stair installations, railing to column installations, as well as other products.

Again, thank you for considering our products for your project.

- Architectural Mall, Inc.