

Melton Classics Inc.
MarbleTex™ Balustrade System
Instructions for Installation Between Round Columns

1. Layout round column locations. Mark an outline of the bottom of each plinth at each location on the deck and mark the location of the column shaft inside the base/plinth at each location.
2. There are three recommended methods of bottom rail attachment between round columns. Choice of an installation method will vary depending on column size, code requirements and application.
 - A. The base/plinth is cut away to allow the rail to pass through the base and allow the rail to attach to the column shaft or internal structure. In some cases, depending on the rail size used, local spacing code, and the height and profile of the base/plinth, this can most easily be achieved by letting the rail into the round base and allowing the rail to rest on top of the square plinth. On some column sizes it may be best to cut away some portion of both the plinth and round base in order to let the rail intersect the column shaft.
 - B. An optional MarbleTex™ column pedestal slightly higher and wider than the column plinth may be supplied by Melton Classics for the column to sit on in order to allow a butt joint at the bottom rail/column intersection.
 - C. Where codes allow, the rail may be raised to a sufficient height so as to intersect the column shaft above the base/plinth. Any one of these methods are acceptable. Cost, column base/plinth size, code compliance, ease of installation and other factors may affect the installer's method of choice.

* For fluted columns a rosette with a reeded and radius side to match the flute pattern and column profile (by others) may be used to allow a smooth vertical butt joint attachment to the column shaft to be achieved, or the column shaft may be altered to achieve a smooth intersection point.

3. Measure to determine the distance between column shafts where rail will attach. Allow additional length for cutting a dedicated template from both ends of each rail section to use in marking of pin locating holes. Also allow extra length for radius on rail end where rail meets column shaft. Caulk joint at rail/column intersection and rail/base/plinth intersection should be 1/8" minimum on each end for an expansion joint. Note: Failure to allow for expansion can cause cracking or deformation of the system.
4. Shape rail end as necessary with abrasive saw or fine diamond tooth saw, and shape rail end with belt sander or dremel tool to achieve radius at column shaft intersection.
5. Determine how many balusters per rail section are needed for local code requirements. Compliance with code requirements is the responsibility of the installing contractor.
6. Measure and mark centers for each baluster location in precut rail sections. Place the first baluster at desired spacing from each end of the bottom rail for your code spacing and evenly space the rest of the balusters in that section. Be sure to check spacing between first baluster location and column for code spacing.
7. Drill holes for baluster pipe locations in bottom rail sections. Use carbide hole saw/drill bit combination with center pilot drill bit. Use at least 1" hole saw size and 1/4" pilot drill size to allow for baluster pipe plumb variance.

Tip: Swimming the drill in a circle while drilling will simplify removing the marble rail plug.

Tip: Delay setting the columns, cutting the rails to length, drilling for balusters and installing rail connectors in one section on each end of the balustrade until the rest of the system is in place to allow for any adjustment that may be necessary.

Tip: If electrical wiring is to be run through the system, put a pilot wire through rail prior to installation of rail connectors to allow wiring to be installed later.

8. Cope base/plinth as necessary to receive bottom rail according to your method of choice using abrasive blade saw, dremel tool and belt sander. Splitting the base in halves will help simplify coping the base to fit the rail. Allow 1/8" minimum caulk joint for expansion and contraction. Note: Failure to allow for expansion can cause cracking or deformation of the system.
9. Beginning in the center of the balustrade run, remove the temporary column supports and install the first column in the location as marked in item #1 and check level. Install the balustrade and columns from the center point toward each end of the run until you reach the last section. Balustrade can be installed between existing round or square columns, but it is normally simpler to install the column along with the railing which provides easier access for rail installation and some ability to adjust column locations as needed.
10. Locate dedicated rail connector template and mark hole locations in columns. Two pins are required for standard rail installation. Locate two single pin connectors one each in opposing corners of each rail end. Pre drill holes in columns for the bottom rail connection. Be sure to use template for the rail section to be installed as pipe locations may vary. Also allow for height of plinth, drainage spacers or rail supports when marking for pin locations.
11. Install drainage spacers or rail supports approximately three feet on center between columns. After marking spacer locations on deck, apply adhesive to the bottom of each drainage spacer and press in place. Quickly apply adhesive to top of drainage spacer/rail support and install bottom rail. Align spacers with bottom rail.
12. Temporarily insert the two tallest premeasured balusters for that rail section in the two extreme baluster hole locations in the bottom rail. Place top rail in position on balusters and mark top rail connector locations on column using the previously installed rail connector as a guide. Note: Due to shrinkage after casting, balusters may vary slightly in overall height. Measure all balusters and group by height so that similar height balusters will be used together in each section.
13. Remove top rail and drill holes in column. Note: For electrical wiring drill center hole also.
14. For single pin connectors apply construction adhesive to spring end of pin prior to placing them in the two pipes in each rail section. Insert rail connector in opposing corners of the rail quickly and align before cement sets. Note: For installation of two pin connectors between columns align rail connection pins vertically for best results. Apply PVC pipe cement to the interior of the pipe in each bottom rail section and on the outside of the railing connector. Recess two pin connector 1/4" into the rail and check alignment.
15. Apply adhesive to edge of each hole in the bottom rail (1/4" bead at edge of hole). Place balusters in each hole in bottom rail, and wipe off any excess adhesive.
16. Install rail connectors in top rail.
17. Apply adhesive around pipe on top of baluster and install top rail starting from one end and aligning each pipe with pre drilled holes. Wipe off excess adhesive. Note: Be sure to check to see if all connector pins are secured in the holes in the column shaft. Immediately check balusters for square before glue sets.
18. After installation of all but the two end sections of rail, predrill and install the last two columns and sections of railing.
19. Insert expansion joint rope "backer rod" in the expansion joint on each end of the top and bottom rail. Recess 1/4" for best caulk bead adhesion.
20. Clean entire system with scrub brush and "Simple Green" Cleaner or similar cleaner to remove any dirt or stains that occurred during installation. Use fine sandpaper for stubborn stains.

21. Caulk the expansion joint between columns or posts and rails, and the ends of all balusters with recommended polyurethane caulk.

IMPORTANT: Melton Classics MarbleTex™ Balustrades & Columns are a prefinished product. Store in a dry area prior to installation, and protect from dirt and stains during installation.

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