

# Endurance® QX RAIL

## INSTALLATION INSTRUCTIONS FOR LEVEL AND STAIR RAIL



### LEVEL RAIL

#### 1.

Prepare all posts and mounting surfaces before installation.

QX Rail must be installed with a 2" space measured from the standing surface to the underside of the bottom rail. (The New England Trim Ring is not compatible with QX Rail )

Measure and mark the posts or mounting surfaces 1 ¼" from the standing surface to determine the placement of the mounting brackets for the bottom rail.

NOTE: If your installation requires a bottom space of more than 2" you will need to use Endurance Original Rail.

\* Southern Building Code maximum bottom space is 2".

**Tip:** If using a power saw, a carbide tip blade of at least 60 teeth is recommended.

#### 4.

Insert a baluster in each routed hole of the bottom rail).

NOTE: Each kit contains 2 crimped balusters, space them evenly in each section.

If you did not cut the top rail in step 2, do so now following the same procedure you used in step 2 for the bottom rail.

**Warning:**  
**Always wear safety goggles.**

#### 2.

Place the Bottom Rail across the opening where it is to be installed. Measure from the mounting surface to the first baluster hole on each end and adjust until these dimensions are equal.

Trace the post onto the bottom rail and mark 1/8" short at each end to allow for expansion.

Cut each end of the rail at the measurement determined above.

Locate and mark the center point on the underside (no baluster holes) of the bottom rail. Using the supplied 1" stainless steel screw, attach the rail support to the bottom rail at this mark.

**Tip:** If all of your mounting surfaces are plumb, transfer your measurements and baluster layout from the bottom rail to the top rail.

NOTE: A minimum of 1" from the edge of the first baluster to the end of the rail is necessary to accommodate the mounting brackets.

#### 5.

Place a T-shaped mounting bracket on each end of the top rail, with the flat side facing the mounting surface. Slide the bracket back past the first baluster hole.

Make sure that the aluminum T-channel is flush with the end of the vinyl top rail.

Use a 7/32" drill bit to drill through both ends of the top rail and aluminum T-channel. The hole should be 5/16" from the end and 7/16" from the bottom of the rail.

Place an aluminum retaining pin through the hole. Slide the bracket over the pin to the end of the rail.

#### 3.

Place a Bottom Mounting Bracket on each end of the Bottom Rail with the flat side facing the mounting surface.

With the bracket flush to the end of the bottom rail, trace the upper slot in the bracket onto the rail. Slide bracket away from the end of rail exposing the tracing. Make a mark inside the tracing 5/16" from the end of the rail and drill a 7/32" hole through both sides of the rail at this mark. Insert an aluminum retaining pin through the hole and slide the bracket over the pin. This locks the bottom rail inside the bracket.

Place on the marks determined in Step 1. Pre-drill the holes for the mounting brackets to avoid stripping the stainless steel screws and attach the rail in place ensuring the open side of the rail support is facing the inside of the rail.

Pre-drill and attach rail support to the standing surface.

Repeat Steps 2 and 3 for each rail section.

#### 6.

Beginning at one end of the rail section, insert each baluster installed in Step 4 into the corresponding baluster hole in the top rail.

To allow for baluster expansion, raise the top rail approximately 1/8". Pre-drill the holes for the mounting brackets to avoid stripping the stainless steel screws and secure in place.

Repeat Steps 4 through 6 for each rail section.

Check entire installation for accuracy before snapping Screw Head Covers into place.

# STAIR RAIL

## 1.

Prepare all posts and mounting surfaces before installation.

Temporarily secure a plank on the noses of the stairs between the posts onto which you are installing the stair rail. The thickness of the plank will determine the space between the stairs and the bottom rail.

## 4.

Insert a baluster in each of the first and last baluster holes of the bottom rail, and set the Top Rail in place by inserting them into the corresponding holes.

Place the top rail inside of the posts to measure accurately.

Adjust for plumb. Slide a Top Mounting Bracket in place at each end of the top rail, and temporarily secure in place with tape.

Trace the posts onto the mounting brackets and mark 1/8" short to allow for expansion.

Leave the mounting brackets taped in place and cut the top rail to fit.

## 2.

Place the Bottom Rail, baluster holes facing up, on the plank with the sticker reading "this end at the top" at the top post.

Slide the rail up or down until the baluster hole spacing is even on each end.

Trace the post onto the rail and mark 1/8" short at each end to allow for expansion.

Now cut the rail to fit.

### Tip:

If using a power saw, a carbide tip blade of at least 60 teeth is recommended.

## 5.

Pull the bracket back from each end approximately 1/4" from the end. Trace the retaining pin channel onto the rail sleeve, and mark 5/16" from the end of the rail.

Make sure the aluminum T-channel is flush with the end of the vinyl and drill (7/32" bit) through both ends of the top rail and the T-channel.

Insert aluminum retaining pin into the drilled hole. Slide the bracket over the dowel to the end of the rail.

## 3.

If installing at an angle between 35 and 38 degrees, snap a small insert (B) into each bottom bracket. If installing at an angle between 32 and 34 degrees, snap a large insert (A) into each bottom bracket.

Orient the bracket being used at the top of the stair with the insert placed inside the bottom of the bracket and the bracket being used at the stair bottom with the insert at the top of the bracket. Slide the brackets onto the rail with the bracket's flat side facing the rail ends. Slide bracket away from the end of the rail exposing the tracing. Make a mark inside the tracing 5/16" from the end of rail and drill a 7/32" hole through both sides of the rail at this mark. Insert an aluminum retaining pin through the hole and slide the bracket over the pin to lock the bottom rail inside the bracket. Set rail in place and pre-drill at all holes in the mounting brackets to avoid stripping the stainless steel screws and secure in place.

## 6.

Insert a Square Baluster in each rout of the bottom rail. Each kit contains 2 crimped balusters; space them evenly in each section.

Set the top rail in place by inserting the first baluster (at the upper post) in the corresponding rout of the top rail, and work toward the bottom.

To allow for baluster expansion, raise the top rail approximately 1/8". Pre-drill the holes for the mounting brackets to avoid stripping the stainless steel screws, and secure in place.

Check entire installation for accuracy before snapping Screw Head Covers into place.



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