

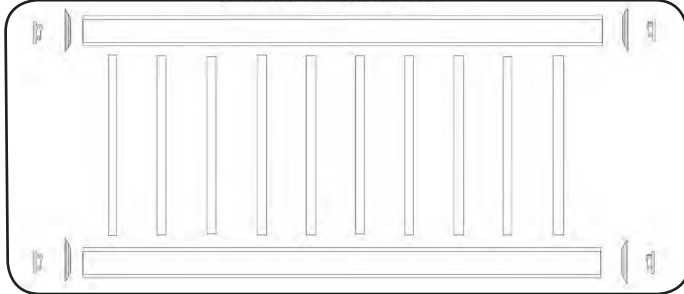
# Standard & Contour Vinyl Railing

## Level Installation Guide

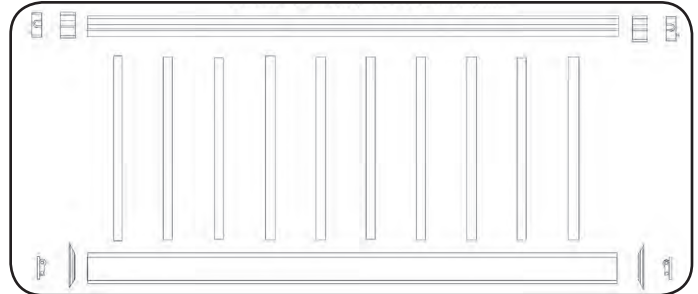
**I** It is the responsibility of the installer to meet or exceed all code and safety requirements, and to obtain all required building permits. These instructions are only a guide and may not address every circumstance. The deck and railing installer should determine and implement appropriate installation techniques for each situation.

**DuraMax Vinyl Systems shall not be held liable for improper or unsafe installations.**

STANDARD VINYL RAIL



CONTOUR VINYL RAIL



**Standard Kit Includes:**

- 2 ea. - 2" x 3½" Vinyl Rails
- 2 ea. - Aluminum "H" Channels
- 4 ea. - 2" x 3½" Standard Mounting Brackets
- 1 ea. - Pack S.S. Mounting Screws

**Number of Vinyl Balusters Included in Kits:**

	Square	Turned
6' Kit	13	14
8' Kit	18	19
10' Kit	22	24

**Contour Kit Includes:**

- 1 ea. - Contour Top Rail
- 1 ea. - 2" x 3½" Standard Bottom Rail
- 1 ea. - Contour Aluminum Insert (Top Rail)
- 1 ea. - Aluminum "H" Channel (Bottom Rail)
- 2 ea. - Contour Mounting Brackets
- 2 ea. - 2" x 3½" Standard Mounting Brackets
- 1 ea. - Pack S.S. Mounting Screws

**Step 1 Safety Precautions**

- a) Check all local building codes for design load requirements for your railing application. DuraMax Vinyl Railing is manufactured to the standards outlined in ASTM F964 and has been tested according to AC-174 criteria and is approved to meet the requirements for Guardrails as outlined for pertaining IRC (Residential) and IBC (Commercial) applications as documented in the Code Compliance Research Report, CCCR-0153.
- b) Always use safety equipment when installing these products.

**Step 2 Mounting Surface Preparation (see Photo Assist page for examples)**

Install and prepare all mounting surfaces and posts to which your new maintenance-free railing will be installed. We suggest covering wood posts with our matching-color vinyl post sleeves or wraps. Finish with one of our many styles of post caps and base trim rings.

**Step 3 Bottom Rail & Bracket Preparation**

- a) Determine the level placement of bottom rail. This should be no more than 4" and no less than 2½" for 36" high railing and no greater than 2" for 42" high railing. (2½" or less use a *Universal post trim ring*.) Make a pencil mark at the bottom of the lower rail on the post. Measure up 3/8" above previous mark, then square and center the bottom of the black mounting bracket. Mark screw holes in the four (4) corners of the bracket and then pre-drill four (4) 5/32" holes. Screw the bracket base into place with four (4) #12 x 1/4" pan head screws. Repeat on opposite post.
- b) After the bottom black mounting bracket is in place, measure from bottom of bracket up and mark with pencil. Please use the following measurements in accordance with product style and height:  
 36" Standard Rail = 31¼" • 36" Contour Rail = 31¼" • 42" Standard Rail = 38¼" • 42" Contour Rail = 37¼"  
 This will be the mounting mark for the bottom of the top bracket. Square and center the top black mounting bracket on mark and pre-drill four (4) 5/32" holes. Screw into place using four (4) #10 x 1/4" for Standard Railing or four (4) #10 x 1/2" pan head screws for Contour Railing. Repeat on opposite post.
- c) Cut bottom rail to length. Measure span between the inside black mounting brackets for bottom rail. (*Make sure you have equal and maximum amount of spacing between baluster and post on each end.*) Cut rail squarely with a power miter box or hacksaw. You may cut vinyl and aluminum insert at same time. (*See saw blade manufacturer's specs for proper blade.*)

**Step 4 Mounting Bottom Rail**

- a) With bottom rail cut to length, slide bracket trim ring onto each end of rail, flat side towards end, facing post. Set rail into place and align bottom rail with level placement mark from **Step 3b**.
- b) With the bottom rail set in place, use the #10 x 1" self-tapping pan head screw through one of the holes along the side of the black mounting bracket through the rail and into the aluminum insert. Only one (1) screw per side is needed. Slide trim ring onto black mounting bracket.

**Step 5 Installing Balusters & Top Rail**

- a) Measure distance from bracket to bracket where top rail will mount. Cut top rail to length to match bottom rail. If post is plumb, top rail should be same length as bottom rail. Make sure distance from post to baluster is the same both top and bottom. Place a baluster in each hole. Slide bracket trim ring on both ends of top rail (*flat side towards end of rail*). From one end, begin to insert top of balusters into corresponding pocket holes.
- b) Once all balusters are in place, the top rail will rest in the black mounting bracket. Using a #10 x 1" self-tapping pan head screw, align rail and the black mounting bracket appropriately and mount screw into the bracket holes provided, then through the side of the rail and into the aluminum insert. One (1) screw per side is needed.
- c) Make sure all four (4) bracket trim ring covers are snapped over black mounting brackets.  
**NOTE:** If ring will not snap on black mounting plate, make sure mounting screws are not over-tightened.

**Step 6 Cutting Vinyl Post Sleeve to Height**

After your railing is installed, you may need to trim the top of the vinyl post sleeves before installing post caps. We recommend measuring up 2½" to 3½" from the top of the mounting bracket trim cover and making a pencil mark prior to cutting.

**NOTE:** Finished post height with post cap may be adjusted for personal preference and appearance. Once all marks are satisfactory, cut the vinyl sleeve using a hand or power saw. (*Be sure to cut top of post square.*) You are now ready to install your post cap. Apply a small amount of PVC glue or silicone caulk to the inside lip of the cap and mount in place.

**Step 7 Cleanup**

Your job is now complete. If your railing has any loose dirt on it from the installation, simply hose it off or wipe with a soft cloth. To remove any stubborn dirt or stains use DuraMax Vinyl Cleaner and #0000 steel wool.

see photo assist >

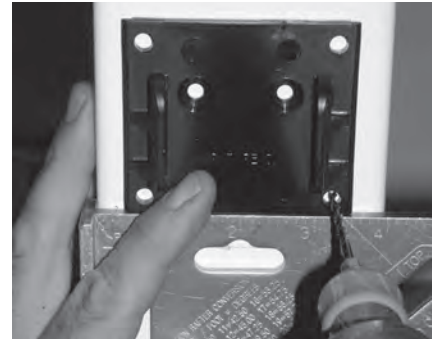
# Standard & Contour v inyl Railing Level L Installation Guide



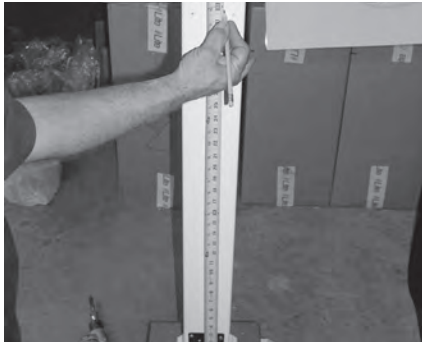
Step 2



Step 3a



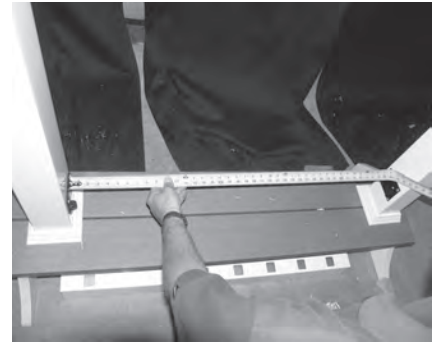
Step 3a



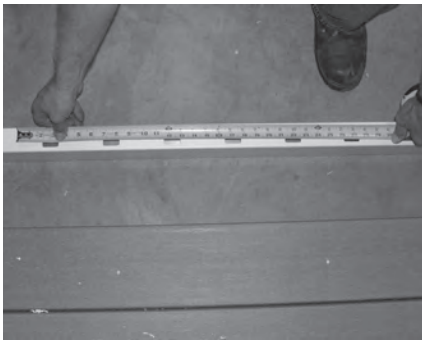
Step 3b



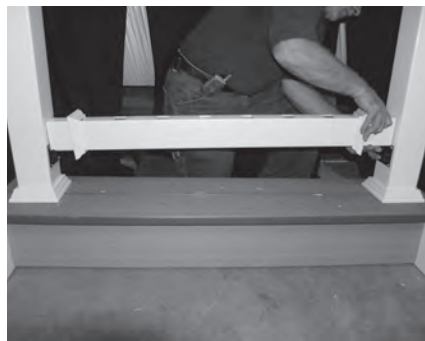
Step 3b



Step 3c



Step 3c



Step 4a



Step 4b



Step 5a



Step 5a



Step 5b



Step 6



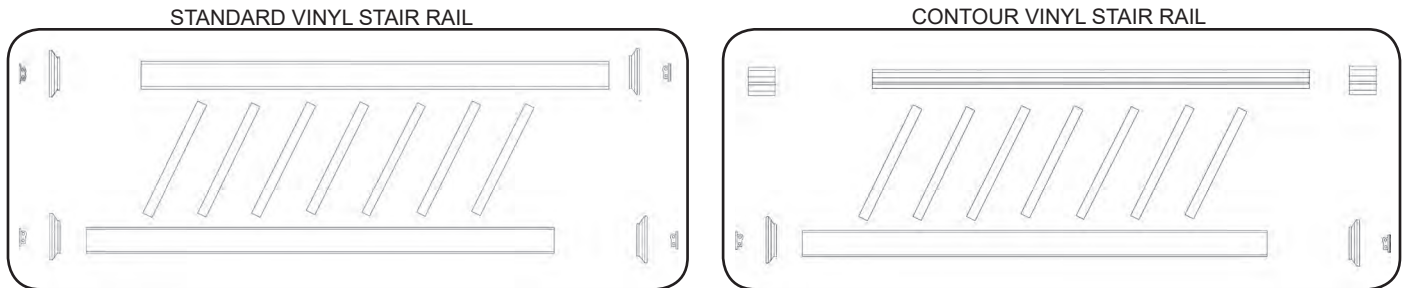
Step 6

# Standard & Contour Vinyl Railing

## Stair Installation Guide (Part 1)

**I** It is the responsibility of the installer to meet or exceed all code and safety requirements, and to obtain all required building permits. These instructions are only a guide and may not address every circumstance. The deck and railing installer should determine and implement appropriate installation techniques for each situation.

**DuraMax Vinyl Systems shall not be held liable for improper or unsafe installations.**



### Standard Kit Includes:

2 ea. - 2" x 3½" Vinyl Rails  
 2 ea. - Standard Aluminum "H" Channels  
 4 ea. - Standard Stair Mounting Brackets  
 1 ea. - Pack S.S. Mounting Screws

### Number of Vinyl Balusters Included in Kits:

	Square	Turned
6' Kit	12	13
8' Kit	17	18

### Contour Kit Includes:

1 ea. - Contour Top Rail  
 1 ea. - Standard Bottom Rail  
 1 ea. - Contour Aluminum Channel  
 1 ea. - Standard Aluminum "H" Channel  
 2 ea. - Contour Stair Mounting Brackets  
 2 ea. - Standard Stair Mounting Brackets  
 1 ea. - Pack S.S. Mounting Screws & Pins

### Step 1 Safety Precautions

- Check all local building codes for design load requirements for your railing application. DuraMax Vinyl Railing is manufactured to the standards outlined in ASTM F964 and has been tested according to AC-174 criteria and is approved to meet the requirements for Guardrails as outlined for pertaining IRC (Residential) and IBC (Commercial) applications as documented in the Code Compliance Research Report, CCRR-0153.
- Always use safety equipment when installing these products.

### Step 2 Mounting Surface Preparation (See Rise/Run for proper angle)

Install and prepare all mounting surfaces and posts to which your new maintenance-free railing will be mounted. We suggest covering wood posts with our matching-color vinyl post sleeves or wraps. Finish with one of our many styles of post caps and base trim rings.

### Step 3 Bottom Rail Preparation

- With posts and mounting surfaces prepared, you are now ready to mark and cut bottom rail to length. First, place the bottom rail on the deck surface and the other end on the last stair tread nosing. (*Baluster pockets up.*)
- Next, you need to check the distance from the mounting surface to the first baluster. Make sure you have maximum and equal distance at both ends of the bottom rail. With the bottom rail set in the proper location, make a vertical pencil mark on the inside of the mounting surface where the post and rail meet.
- With bottom rail marked, deduct ¼" from each rail end to allow for black mounting bracket. You may cut both aluminum and vinyl at the same time with a power miter box or hack saw. (*See saw blade manufacturer's specs for proper blade.*)

### Step 4 Mounting Bottom Rail, Bracket & Top Rail Preparation

- With bottom rail cut to length, slide the black mounting brackets onto the ends of the bottom rail and center on end of rail. Set rail with black mounting bracket between posts. Set to proper height off deck and bottom tread nosing and mark the top of the brackets on post. (*Check with local building code for height requirements.*)
- Remove the black mounting bracket from the ends of the bottom rail and square and center brackets with the mark on the posts. Mark the screw holes in the four (4) corners of the black mounting bracket. Pre-drill four (4) 5/32" holes. Install black mounting brackets with four (4) #12 x 1¼" pan head screws.
- With both black mounting brackets screwed to mounting surfaces, slide trim covers on ends of rail, flat side towards mounting surface. (*TIP: If pitch is greater than 32° cut along marks on inside of bracket.*) Set bottom rail into black mounting brackets making sure rail is centered. (*TIP: You may want to cut blocks to proper height for rail to rest on.*) Make sure mounting screws are not over-tightened, this may prevent trim covers from properly snapping onto bracket. With bottom rail set in place, you may now install one (1) #10 x 1" self-tapping pan head screw into one (1) of the holes along the side of the bracket. Only one (1) screw per side is needed.
- Insert a baluster into the baluster pocket closest to the post at each end of stair. Set top rail in place over balusters. With top rail in place, measure the distance from baluster to post at bottom rail and adjust the top rail to match. Make vertical pencil mark on top rail where mounting surface and top rail intersect to denote stair angle. (*If you wish to adjust the height of the top rail by cutting balusters, you may do so now.*)

### Step 5 Installing Balusters & Top Rail for "Standard Vinyl Railing" (Skip Step 5 if using Contour Rail.)

- With top rail marked, deduct ¼" off both ends of top rail. Cut the top rail same as in **Step 3**.
- With rail cut to proper length, slide black mounting brackets on each end of rail. With two (2) end balusters inserted in bottom rail, match up with top rail and align top rail in between posts. With top rail in place and black mounting bracket centered on rail ends, mark bracket position on post. With this marked, remove rail and brackets. Square and center black mounting brackets to mounting surface and mark the four (4) screw holes in the corners of bracket. Drill four (4) 5/32" holes, set bracket into place and screw in place with four (4) #12 x 1¼" pan head screws.
- With black mounting brackets in place, you may now insert your balusters in bottom rail baluster pockets. With balusters in place, slide trim ring covers on each end of top rail, flat side towards mounting surface. Starting at the bottom of stair run, slide top rail into bracket. Insert balusters into baluster pockets as you work upward to top of stair. Continue up to top of stair run. With top rail in place, install four (4) #10 x 1" self-tapping pan head screws in the same manner as **Step 4**.
- Make sure all four bracket trim ring covers are snapped over black mounting brackets.  
**NOTE:** If ring will not snap on black mounting plate, make sure mounting screws were not over-tightened.
- Skip to Step 10**

continued >

# Standard & Contour Vinyl Railing

## Stair Installation Guide (Part 2)

**I** It is the responsibility of the installer to meet or exceed all code and safety requirements, and to obtain all required building permits. These instructions are only a guide and may not address every circumstance. The deck and railing installer should determine and implement appropriate installation techniques for each situation.

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**NOTE: Steps 6-9 "Contour Stair Railing Installations" only.**

### Step 6 Cutting "Contour Top Rails"

With both ends of top rail marked, place the bottom (*baluster pocket side*) against the back stop of the miter box. Match up miter cut with line marked on top rail and cut. You may cut both aluminum and vinyl at the same time.

### Step 7 Cutting "Contour Stair Bracket"

- a) With top rail cut to length, measure the distance from the end of rail to the baluster pocket (*so mounting bracket will not cover baluster pocket*). Mark bottom of bracket with this measurement. Make sure mounting screws are facing towards balusters.
- b) Slide bracket onto a piece of scrap contour rail and cut at same angle as top rail.  
(*TIP: Use another bracket to hold railing level in miter box for a correct angle cut.*)

### Step 8 Installing "Contour Stair Bracket" & 3/16" S.S. Pins

- a) With both brackets cut to match top rail, you will need to install pins. (*Pins keep rail from pulling out of bracket under load.*) Slide bracket onto top rail and hold flush with end of top rail. With bracket flush with end of top rail, make a mark on both sides of bracket.
- b) With top rail marked, remove bracket. Measure from marks toward the end of the top rail 1/2" and down 1/8" from bottom of bead on the side of top rail. Where the lines intersect, drill a 7/32" hole through the vinyl and aluminum (*make sure aluminum is flush with vinyl*) on both sides of top rail. Slide bracket onto the top rail, insert 3/16" S.S. pin and engage pin into the bracket.

### Step 9 Installing Balusters & "Contour Top Rail"

With top rail brackets mounted to top rail, install all balusters into bottom rail. Start at the bottom of stair run and one by one insert balusters into the top rail. With balusters inserted in top rail, set rail in place and center on mounting surface. Insert two (2) #10 x 4" pan head screws into bracket. While keeping bracket square and centered on mounting surface, start screw enough to mark mounting surface. Push top rail to one side and pre-drill a 5/32" hole at same angle as mounting screw. Set rail in place and install mounting screws. With screws in place, insert fill plugs (two (2) per bracket) using PVC glue or silicone caulk to hold in place.

### Step 10 Cutting Vinyl Post Sleeve to Height

After your railing is installed, you may need to trim the top of the vinyl post sleeves before installing post caps. We recommend measuring up 2 1/2" to 3 1/2" from the top of the mounting bracket trim cover and making a pencil mark prior to cutting. **NOTE:** Finished post height with post cap may be adjusted for personal preference and appearance. Once all marks are satisfactory, cut the vinyl sleeve using a hand or power saw. (*Be sure to cut top of post square.*) You are now ready to install your post cap. Apply a small amount of PVC glue or silicone caulk to the inside lip of the cap and mount in place.

### Step 11 Cleanup

Your job is now complete. If your railing has any loose dirt on it from the installation, simply hose it off or wipe with a soft cloth. To remove any stubborn dirt or stains use DuraMax Vinyl Cleaner and #0000 steel wool.

## RISe Ove R RUN Ca LCULat ION

		RUN in Inches																	
		6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0
RISE in Inches	3.5	28	27	25	24	22	21	20	19	18	18	17	16	16	15	15	14	14	13
	4.0	32	30	28	27	25	24	23	22	21	20	19	18	18	17	17	16	15	15
	4.5	35	33	31	29	28	27	25	24	23	22	21	21	20	19	18	18	17	17
	5.0	38	36	34	32	30	29	28	27	25	24	23	23	22	21	20	20	19	18
	5.5	40	38	36	35	33	31	30	29	28	27	26	25	24	23	22	21	21	20
	6.0	43	41	39	37	35	34	32	31	30	29	28	27	26	25	24	23	22	22
	6.5	45	43	41	39	37	36	34	33	32	31	29	28	27	27	26	25	24	23
	7.0	47	45	43	41	39	38	36	35	34	32	31	30	29	28	27	27	26	25
	7.5	49	47	45	43	41	40	38	37	36	34	33	32	31	30	29	28	27	27
	8.0	51	49	47	45	43	42	40	39	37	36	35	34	33	32	31	30	29	28
8.5	53	51	49	47	45	43	42	40	39	38	36	35	34	33	32	31	30	30	
9.0	54	52	50	48	47	45	43	42	41	39	38	37	36	35	34	33	32	31	
9.5	56	54	52	50	48	47	45	44	42	41	40	38	37	36	35	34	33	32	
10.0	57	55	53	51	50	48	46	45	44	42	41	40	39	38	37	36	35	34	
														36° - 41°		29° - 35°			

Stock Stair Railing Kits are Available with a 29-35° pitch or 36-41° pitch

Calculated Angle in Degrees

# Standard & Contour vinyl Stair Railing Guide



Step 2



Step 3



Step 4a



Step 4b



Step 4c



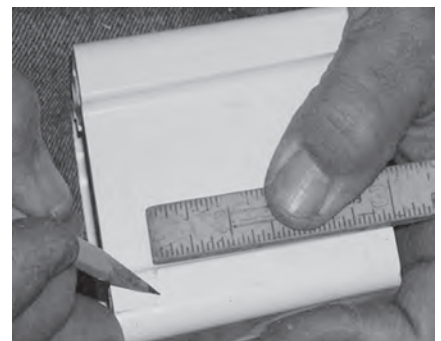
Step 5a



Step 6a



Step 7a



Step 7b



Step 7b



Step 8a



Step 8b



Step 8b



Step 9



Step 10