

Pre-Assembled Railing & Post

TO SELECT REQUIRED RAILING LENGTHS:

Take the measurements of the total area.

Based on railing position, deduct or add the measurements indicated to obtain the length between the posts.

APPLICATIONS	2" x 2" POST (5.08 cm x 5.08 cm)	3" x 3" POST (7.60 cm x 7.60 cm)
Wall to corner 	Deduct 8" (20.3 cm) If the railing is attached directly to the wall without a post, deduct 4½" (11.32 cm)	Deduct 10" (25.4 cm) If the railing is attached directly to the wall without a post, deduct 5½" (14 cm)
Corner to corner 	Deduct 9" (22.9 cm)	Deduct 11" (28 cm)
Corner to stairway 	Deduct 2" (5.08 cm)	Deduct 3" (7.6 cm)
Wall to stairway 	Deduct 1" (2.5 cm) If the railing is attached directly to the wall without a post, add 2½" (6.3 cm)	Deduct 2" (5 cm) If the railing is attached directly to the wall without a post, add 2½" (6.3 cm)
Stairway 	Take the diagonal measurements and add 2½" (6.3 cm)	Take the diagonal measurements and add 4" (10.1 cm)
Each middle post 	Deduct 2" (5.08 cm)	Deduct 3" (7.3 cm)

1 - Position the posts at the appropriate locations and place the base of the posts 1½" (½" if post is installed near a wall) from the outside edge of the surface.

2 - Attach the spindle fittings to the posts with 1¼" screws by following figure 1.1 A and 1.1 B. For angular adaptor applications see figure 1.2

NOTE: If the surface is not level, you can lower the fittings as needed.

3 - **IMPORTANT:** You need two different posts for a stairwell installation: a stair post at the base and a mounting post at the top of the stairwell. Do not install the spindle fitting immediately. Fold the railing at the appropriate level and position it against the posts, then mark the rail showing the angle that it needs to be cut. At the same time mark on the post the height where the spindle fitting must be screwed depending on the position of the railing.

NOTE: For stair applications particulars see figure 1.1 C

4 - Verify the distance between the posts. If necessary cut the railing sections to obtain an equal distance between the posts on the same parallel line.

5 - Join the railing to the fitting system by holding it firmly against the post.

6 - Fasten the top and bottom railing on each side

7 - When all sections are fastened, you can align and adjust your installation. Fasten each post to the surface using appropriate anchors.

NOTE: Installation anchors are not included in any post package. Speak to a sales associate concerning available mounting anchor options.

8 - Once assembly is done, snap the rivet covers into place and tap with a rubber hammer.

9 - Complete your installation by installing the base covers and caps to the posts.

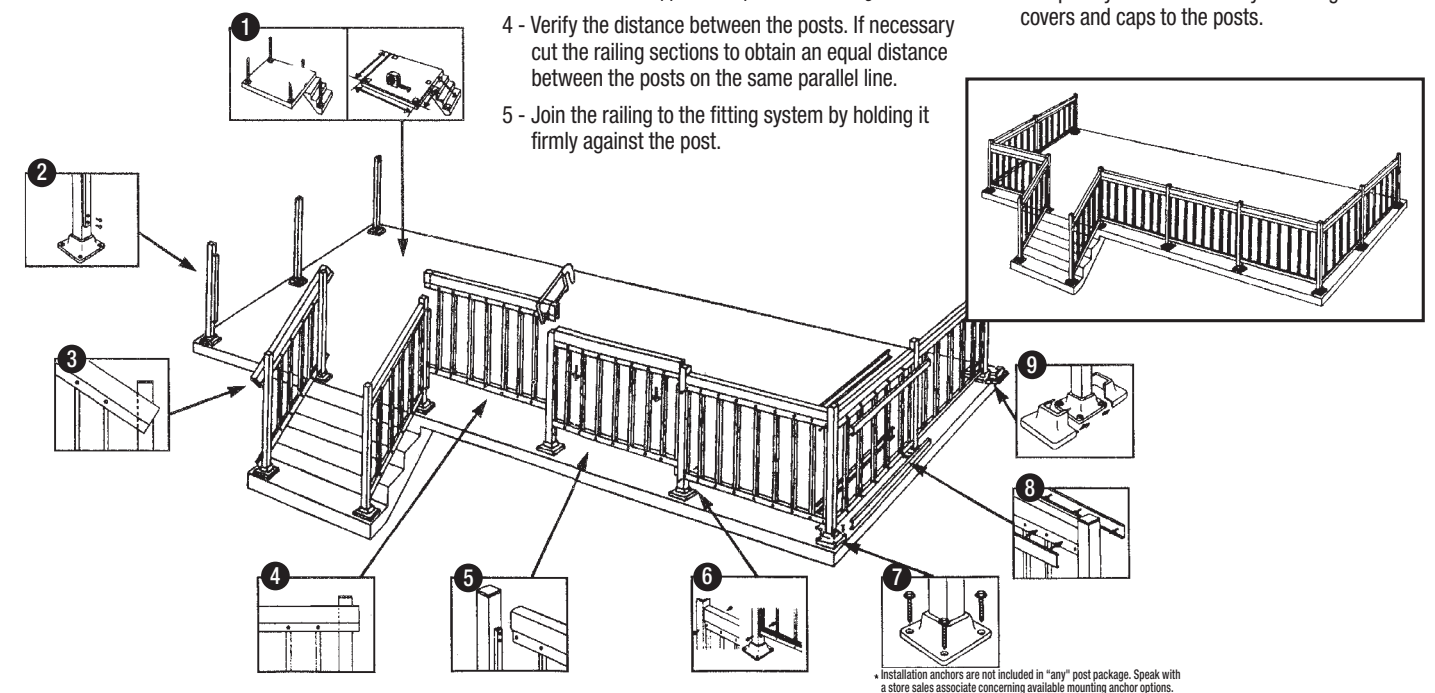
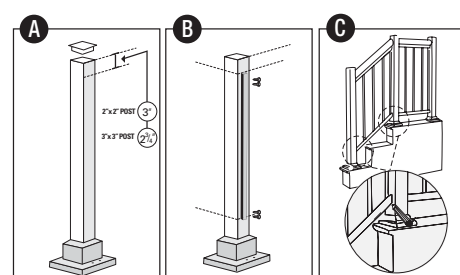


FIGURE 1.1
POST MOUNTING SPINDLE INSTALLATION



A Measure down 3" (for 2"x2" universal post) or 2¾" (for 3"x3" universal post) from top of post and mark with horizontal line. This determines the position of the top of the mounting spindle.

B For Horizontal Railing Applications

Align the top part of the spindle fitting to the horizontal lines marked on post. Center spindle fittings by measuring an equal distance between left and right sides of post.

Mark first hole, drill, and secure spindle with screw. Level spindle, mark next hole, drill, and secure. Do the same for the rest of screws.

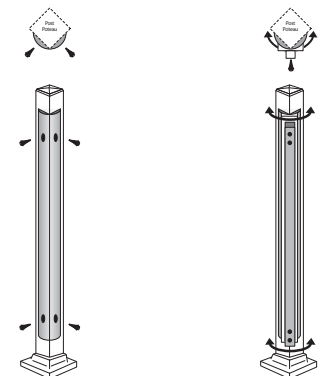
C For Stair Rail Applications

The position of the fitting varies depending on the degree of the stairs. You must place the railing and fitting at the height wanted and mark with a pencil the installation height at the bottom of the fitting.

Place the fitting against the pencil mark, center same and make holes with a 1/8" drill.

You can now fasten the fitting to the post.

FIGURE 1.2
ANGULAR ADAPTOR INSTALLATION



Step 1: Place half moons side by side at 1½" for 1500, 5000 and Empire series from top and screw to post or 1" for Imperial series from top and screw to post.

Step 2: Find desired angle and align adaptor and spindle fitting with bottom of half moons. Drill and screw to post.

GUARANTEE

Only the original consumer buyer receives from Imperial Kool-Ray a guarantee starting from the date of purchase and covering the following points within the normal use of the product:

- Material and manufacturing defect: 20 yrs
- Paint finish parts: 5 yrs
- Plastic parts: 2 yrs

The guarantee is valid for the original consumer buyer only. The guarantee excludes damages caused by a faulty installation, abuse or wrong usage of the product, caused either by the contractor, the service company or the buyer himself. Imperial Kool-Ray cannot be held responsible for labor cost and/or damages incurred during the installation, repair or change, nor for resulting unforeseen damages. Defects or damages caused by the use of parts other than original Imperial Kool-Ray parts cannot be covered by the guarantee as well as the use of an inappropriate anchor to your surface.



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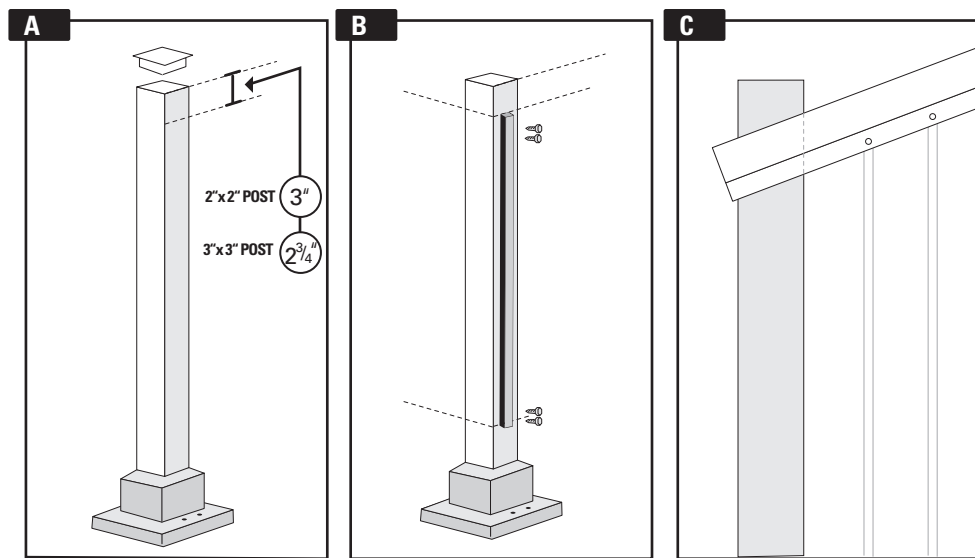
Custom Mounting Bracket Installation Using Universal Post



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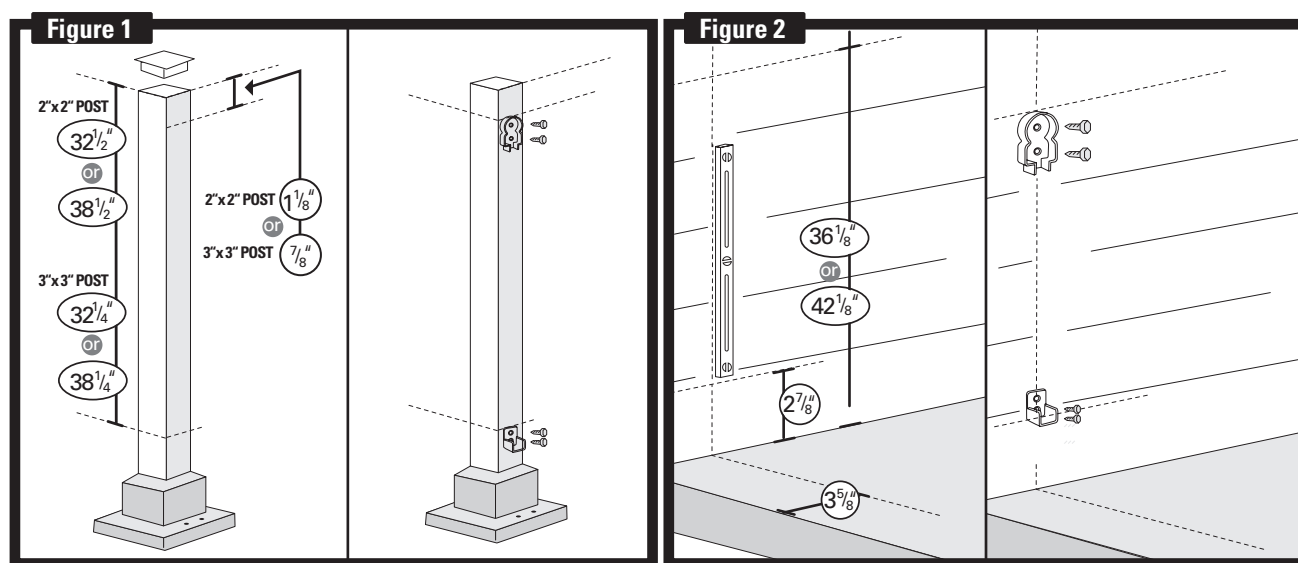
MANUFACTURING FACILITIES: RICHIBUCTO, NB | DIEPPE, NB | DARTMOUTH, NS | MONTREAL, QC | OAKVILLE, ON | ALTON, IL

FOR PRE-ASSEMBLED POST MOUNTING SPINDLE (PMS)



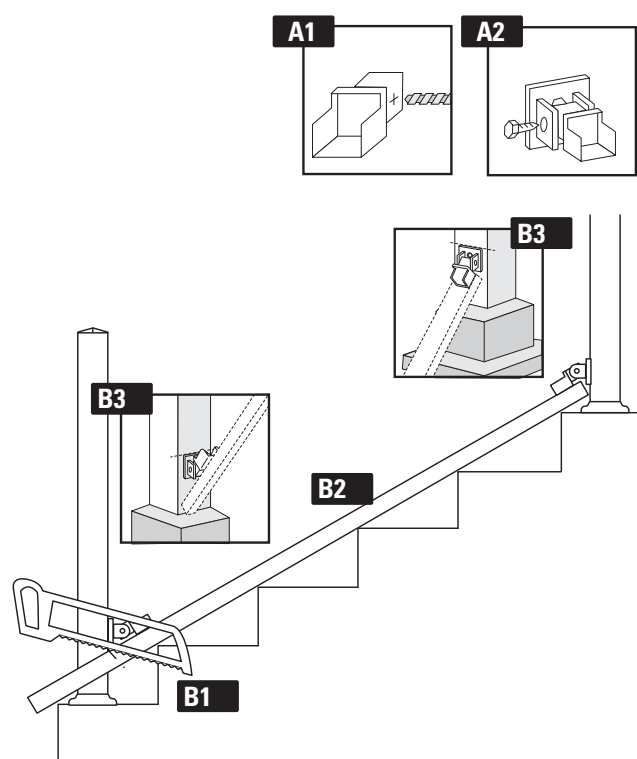
- A** FOR HORIZONTAL RAILING APPLICATIONS
- Measure down 3" (for 2"x2" universal post) or 2-3/4" (for 3"x3" universal post) from top of post and mark with horizontal line. This determines the position of the top of the mounting spindle.
- B** FOR HORIZONTAL RAILING APPLICATIONS
- Align the top part of the mounting spindle to the horizontal lines marked on post. Center mounting spindle by measuring an equal distance between left and right sides of post.
 - Mark first hole, drill, and secure spindle with screw. Level spindle, mark next hole, drill, and secure. Do the same for the rest of screws.
- C** FOR STAIR RAIL APPLICATIONS
- The position of the fitting varies depending on the degree of the stairs. You must place the railing and fitting at the height wanted and mark with a pencil the installation height at the bottom of the fitting.
 - Place the fitting against the pencil mark, center same and make holes with a 1/8" drill.
 - You can now fasten the spindle fitting to the post.

FOR READY-TO-ASSEMBLE STRAIGHT MOUNTING BRACKET (SMB)



- Measure down 1-1/8" (for 2" x 2" universal post) or 7/8" (for 3" x 3" universal post) from top of post and mark with horizontal line. This determines the position of the top of the upper bracket.
- For 2"x2" Universal Posts - Measure down from the top of the post 32-1/2" for 36" high railing and 38-1/2" for 42" high railing.
- For 3"x3" Universal Posts - Measure down from the top of the post 32-1/4" for 36" high railing and 38-1/4" for 42" high railing
- At the measurements specific to your application, mark with a horizontal line. This determines the position of the top of the lower bracket.
- Align the upper and lower brackets to the horizontal lines marked as indicated. Center brackets by measuring an equal distance between left and right sides of post.
- Secure upper and lower brackets with screws.
- To mount brackets to a wall, follow instructions shown in figure 2

FOR READY-TO-ASSEMBLE ANGULAR MOUNTING BRACKETS (AMB)



(AMB) WILL ACCOMMODATE ANY STAIR ANGLE OR INCLINE

Installing lower (AMB) on posts

Temporarily assemble lower Angular Mounting Brackets (AMB):

- A1. Drill pilot hole into lower bracket using "+" sign on (AMB) as guide.
A2. Secure loosely with (1) screw.

B. Positioning lower (AMB) to top and bottom stair posts:

- B1. Following the angle of the stair treads, measure distance between top and bottom stair posts and cut the bottom rail to fit between posts.
B2. Using the bottom rail as a straight edge, lay rail on stair treads between top and bottom stair posts.
B3. Position temporarily assembled lower bracket on top of rail against both top and bottom stair posts and mark positions.

C. Securing lower (AMB) to top and bottom stair posts:

- Disassemble temporarily assembled lower (AMB).
- Align the top of the lower (AMB) to the measured mark and secure to top post with screws.
- Remove bottom stair post, align the top of the lower(AMB) to the measured mark and secure to bottom post with screws.
- Re-install bottom stair post and secure loosely to step with (2) fasteners only.

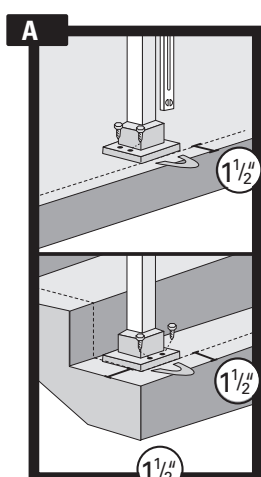
D. Measuring and positioning upper (AMB) to top and bottom stair posts:

- Classica Series** - Measure and mark (30-1/8" for 36" railing) and (36-1/8" for 42" railing)
Elite Series - Measure and mark (27-1/8" for 36" railing) and (33-1/8" for 42" railing)

E. Securing upper (AMB) to top and bottom

- Align the bottom of the upper (AMB) to the measured mark on the top and bottom post. Assemble (AMB) and secure with screws.

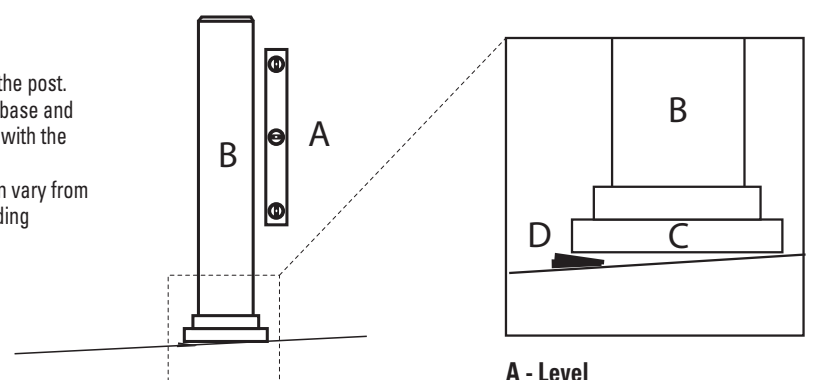
POST POSITIONING & LEVELING



- Place posts at desired locations on stairs & deck.
- Position stair posts with their bases (1-1/2") from front edge of step and (1-1/2") from the side of the step.
- Level the post with shims (optional).
- Secure post to deck.

B Aluminum Shims

- Place the level on the side of the post.
- Insert the shims between the base and the floor until the post is level with the floor.
- The number of shims used can vary from one project to another depending on the angle of the floor



- A - Level
B - Post
C - Base
D - Shim