

Impression Rail Express®

TimberTech
RAILING
BY **AZEK**

Aluminum Railing Installation Guide

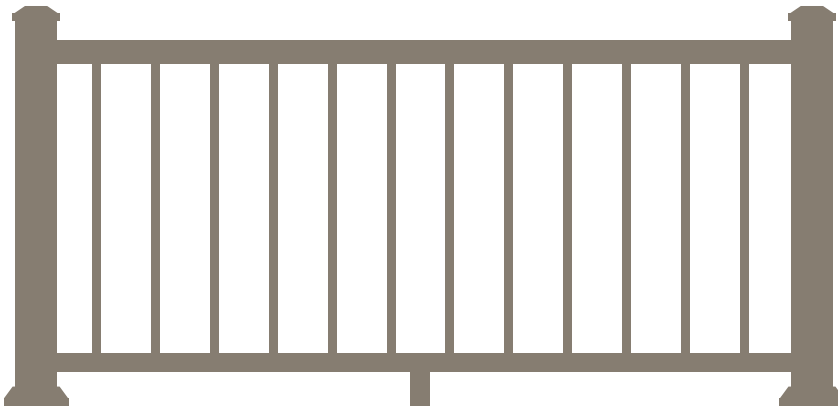


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Important Information

- Please read all instructions completely before starting any part of the installation. Always make sure to visit www.TimberTech.com to ensure you are viewing the most current installation instructions, care and cleaning, technical information, and more.
- Impression Rail Express should be installed using the same good building principles used to install wood, composite, or metal railing and in accordance with the local building codes and the installation guidelines included below.
- AZEK Building Products LLC and its affiliates, successors & assigns accept no liability or responsibility for the improper installation of this product.
- Impression Rail Express may not be suitable for every application, and it is the sole responsibility of the installer to be sure that Impression Rail is fit for the intended use. Since all installations are unique, it is also the installer's responsibility to determine specific requirements in regards to each rail application.
- AZEK recommends that all applications be reviewed by a licensed architect, engineer, or local building official before installation. If you have any questions or need further assistance, please call AZEK Customer Service at 877-ASK-AZEK (877-275-2935), or visit our website at www.TimberTech.com.
- Impression Rail Express is tested as a whole system and should be used that way. It is not intended to be used in conjunction with other railing systems or fasteners.
- The following Installation Guidelines are applicable for installation of Impression Rail Express only.
- **IMPORTANT:** Make sure the DRIVE TOOL/DRILL is configured or set to use the SCREW setting when driving and/or tightening all FASTENERS.
- **SAFETY:** Always wear goggles when handling, cutting, drilling, and fastening materials.
- Failure to install this product in accordance with applicable building codes and Impression Rail Express's written Rail Install Guide may lead to personal injury, affect rail system performance, and void the product warranty.
- The buildup or generation of static electricity is a naturally occurring phenomenon in many plastic based products such as carpeting, upholstery, and clothing, and can occur on alternative decking under certain environmental conditions. This static electricity can discharge once contact is made with hardware, railing, or other conductors of electricity.

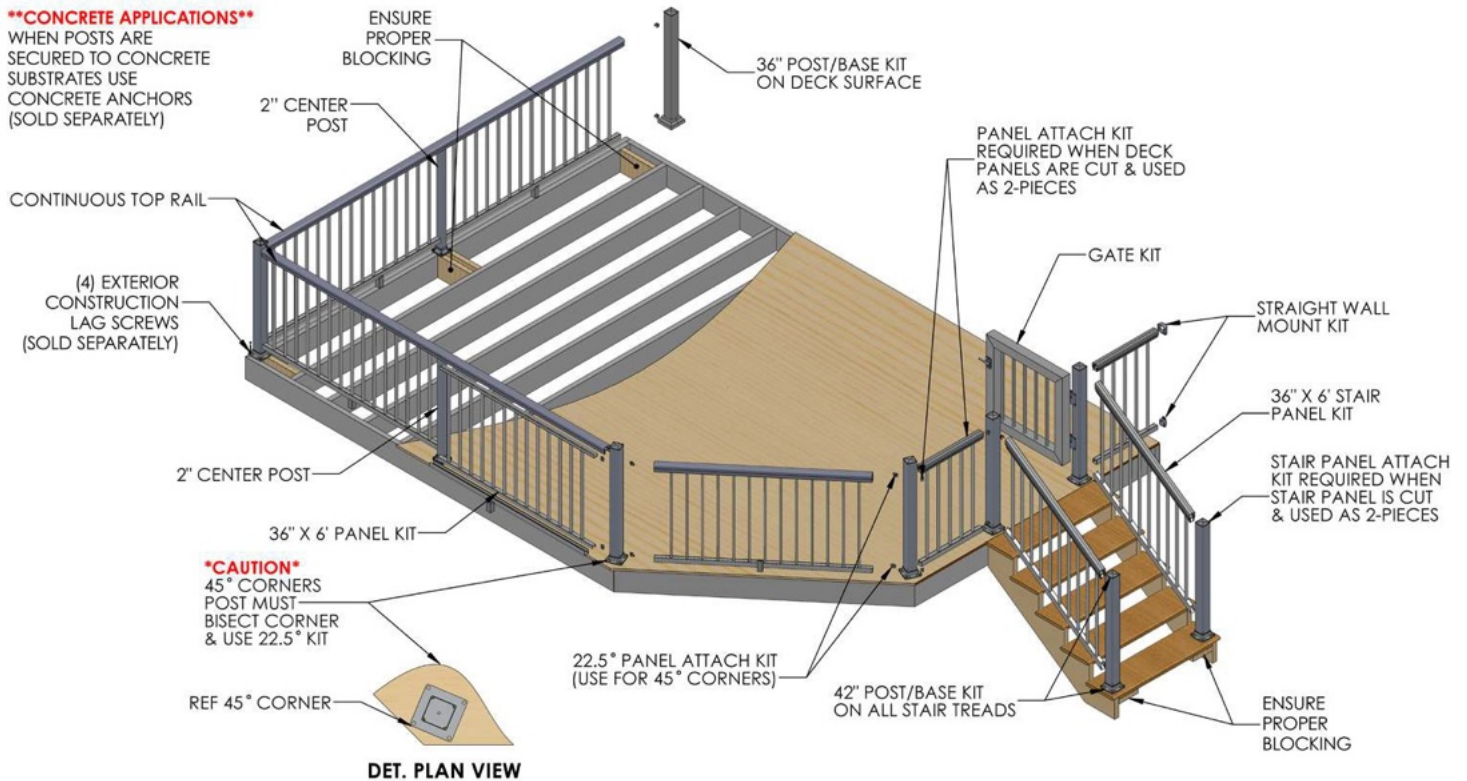


NOTE: IF INSTALLING POST LIGHTING, WIRING MUST BE INSTALLED PRIOR TO SECURING POSTS TO DECK/STAIR SURFACE AND INSTALLING TOP RAIL SNAPS.

It is the responsibility of the installer to meet all local code requirements and obtain all required building permits. The installer should determine and implement appropriate installation techniques for each installation situation. AZEK or its reseller shall not be held responsible for improper or unsafe installations.

Installing Impression Rail Express® Aluminum Railing System

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Important Note:

Prior to construction, check with your local regulatory agency for special code requirements in your area.

Common railing height is 36" or 42". Post spans will vary depending on job site conditions. Never span more than 8' on-center between railing posts. Spans longer than 12' in length will require reduced post spans. For all other applications, consult a design professional or an AZEK railing representative for more information. Read instructions completely to get an understanding of how the product goes together and how each piece affects the other.

Suggested Tools:

- Appropriate fasteners for mounting posts to deck
- Miter saw with carbide-tipped non-ferrous blade
- Cordless drill
- Tape measure
- Level
- Power cords, drop sheets and safety glasses
- 3/16" Drill bit
- 6" #2 Square drive bit
- Installation jig (optional)

Visit www.timbertech.com/installation to view installation videos.

Consult your local building codes for guard and handrail requirements.



Important Note:

Actual Level Panel Lengths Are As Follows:

- 6' panels = 69.43"
- 8' panels = 91.31"
- 3" posts are required to reach 6' & 8' lengths

1

Determine All Posts Needed and Prepare (end, center or corner)



Important Note:

3" posts are required to reach 6' and 8' lengths. 2" posts must be set in-line to panel. **Do not install post caps and vinyl post base covers until railing assembly is completed.**

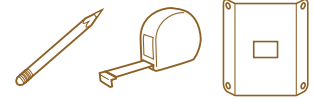
Install Lower Deck Rail Clips – Two Options:

Option A - When No Installation Jig Is Available

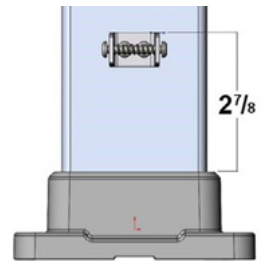
- Measure 2 7/8" from top of casting shoulder and place a pencil mark for location of the top edge of the rail clip. (Dia. #1)
- Center clip on post and secure with (2) - #8x3/4" self-drilling screws. Clips are included in the Panel Kits.

Option B - Using Installation Jig (Sold separately. Accessory pack includes installation jig and touch-up paint.)

- Place installation jig (w/arrow facing base plate) on top of base plate upper edge. (Dia. #2)
- Place clip in hole and fasten with (2) - #8x3/4" self-drilling screws. Clips are included in the panel kits.

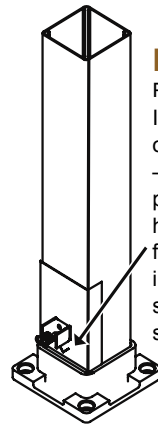


Dia. #1



Dia. #2

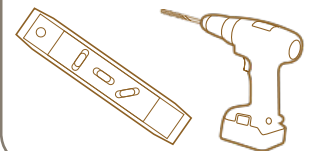
Rest Installation jig on base plate – Arrow down place clip in hole, hold clip firmly while installing (2) self-drilling screws.



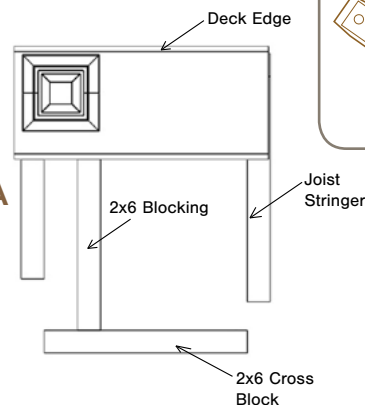
2

How to Secure 3" Posts to Deck

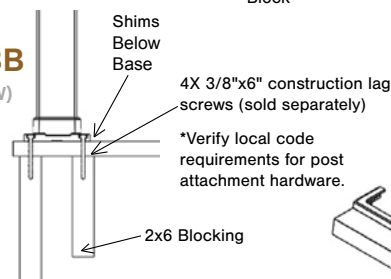
- Install proper post blocking (Dia. #3A & 3B). Use proper attachment screws or anchors shown in diagram. (Hardware for post attachment are not provided with the posts.)
- With 3/16" drill bit, pre-drill through deck boards and into blocking. (Dia. #3C)
- Drill a 5/8" hole in center of four deck screw holes for lighting wires (optional).
- Level and plumb post using shims.
- Secure posts to deck frame with suggested screws. (Dia. #3B)
- *Verify local code requirements for post attachment hardware.
- Install post caps (after panels are installed). (Dia. #4)



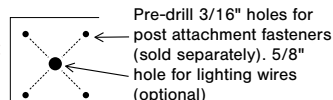
Dia. #3A
(TOP VIEW)



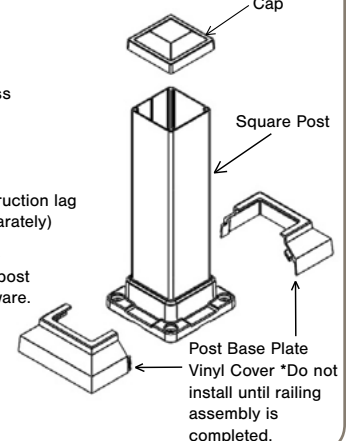
Dia. #3B
(SIDE VIEW)



Dia. #3C
(TOP VIEW)



Dia. #4

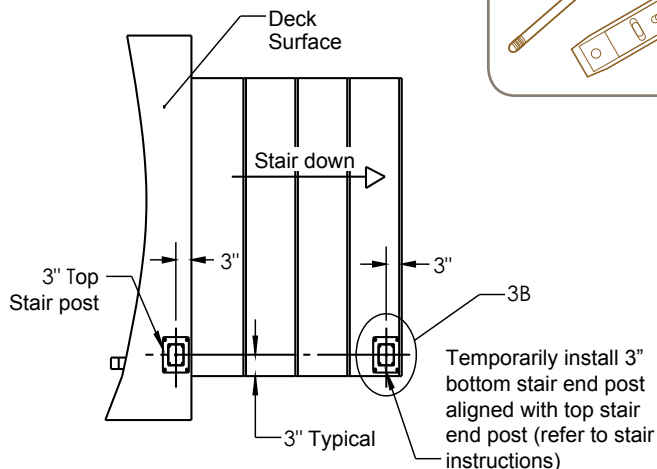


Installing Aluminum Posts

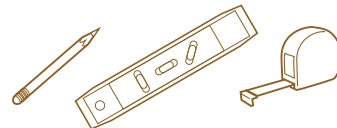
3

Install Stair End Posts (if applicable)

- Temporarily install end stair post so rail centerline aligns with top stair posts installed in Step 1 (if applicable). Recommended post installation locations are shown. (Dia. #5) Confirm with local code officials before installing stair rail sections or stair rail posts to ensure compliance with local code requirements.



Dia. #5



4

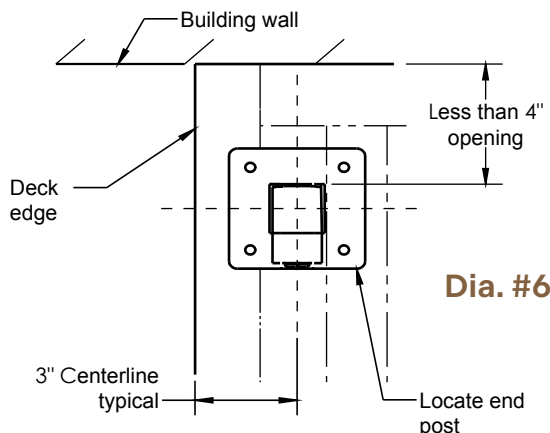
Install End Posts (if applicable)

Install posts at all end locations with maximum gap between post and wall to be less than a 4" opening. (Dia. #6)



Important Note:

3" posts are required at all transitions. 2" posts may not be used to start/end a run or to form a corner.



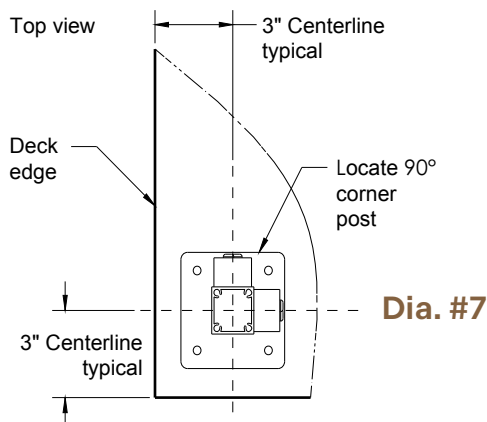
Dia. #6



5

Install 90-degree Corner Posts

Position post on same 3" centerline (typical) and temporarily fasten using a single fastener through base plate mounting hole. (Dia. #7)



Dia. #7

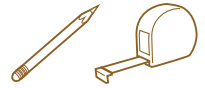
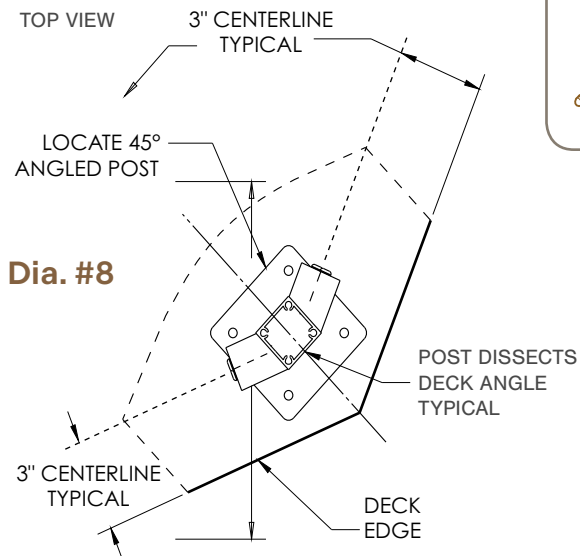


6

Install 45° Corner Posts

(Post to be installed at 22.5° to accommodate a 45° angle.)

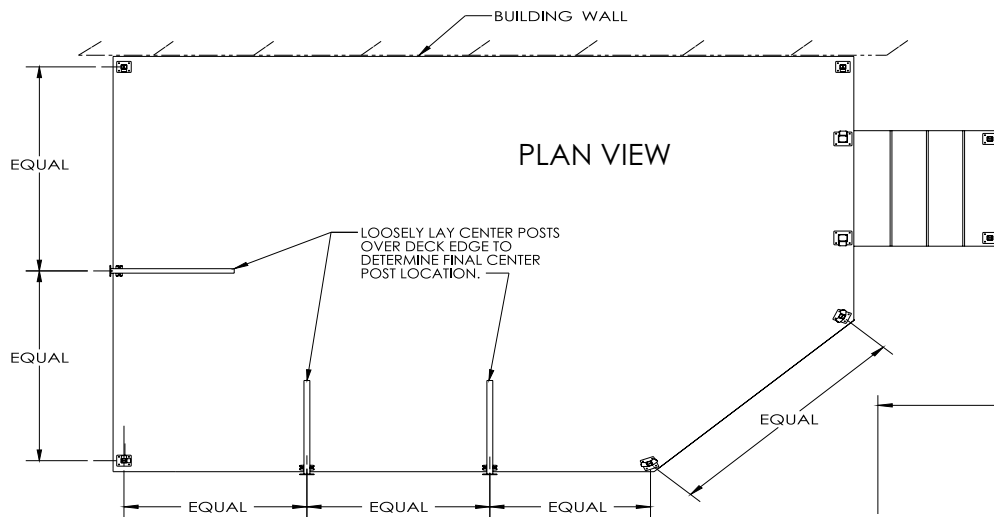
Position post on same 3" centerline (typical) and temporarily fasten to deck surface. Use one 22.5° Panel Attach Kit (purchased separately) to install 45° corner posts. (Dia. #8)



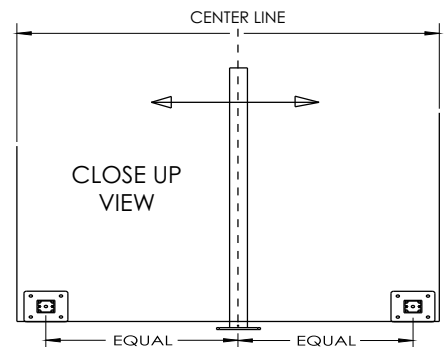
7

Determine Center Post Locations

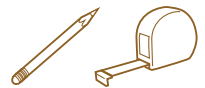
Loosely lay center post over deck edge and adjust as required to determine final center post mounting locations. (Dia. #9 & #10)



Dia. #9



Dia. #10



Installing Aluminum Posts

8

Secure 2" Posts to Deck (center only)

- For continuous top rail systems, install 2" posts centered between 3" end and corner posts.

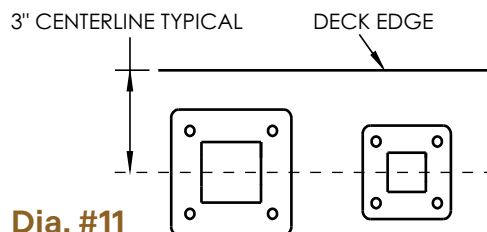
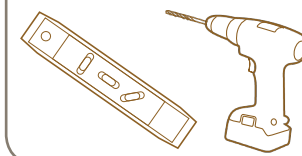
NOTE: 2" Posts must be installed with center screw chases in-line with panel (Dia. #11).

- Follow instructions in step 2 (Dia. #3A to Dia. #4).



Important Note:

3" posts are required at all transitions. 2" posts may not be used to start/end a run or to form a corner.

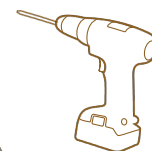


Dia. #11

9

Install Crossover Brackets on 2" Posts

- With 6" #2 square drive bit, fasten straight crossover bracket (included) into post with (2) - #8x1.5" self-drilling screws. (Dia. #12A & #12B)
- NOTE: Self-drilling screws must be installed in screw chases in-line with panels.**
- With 6" #2 square drive bit, fasten H-channel to straight and stair crossover brackets with (4) - #8x3/4" Self-drilling screws. (Dia. #12C & #12D) Repeat for lower clips.
- Install base plate vinyl cover only after railing assembly is completed. (Dia. #4)



LEVEL PANELS

STRAIGHT CROSSOVER BRACKET

Dia. #12A

POST EXTRUSION

CLIP

Dia. #12C

POST BASE PLATE VINYL COVER
*DO NOT INSTALL UNTIL RAILING ASSEMBLY IS COMPLETED.

IMPORTANT NOTE: For continuous rail that goes over the top of posts, taller posts must be used and cut down to fit.

STAIR PANELS

STAIR CROSSOVER BRACKET

Dia. #12B

CLIP

POST EXTRUSION

Dia. #12D

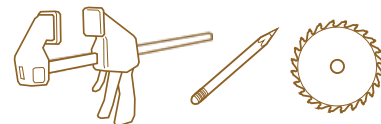
POST BASE PLATE VINYL COVER

1

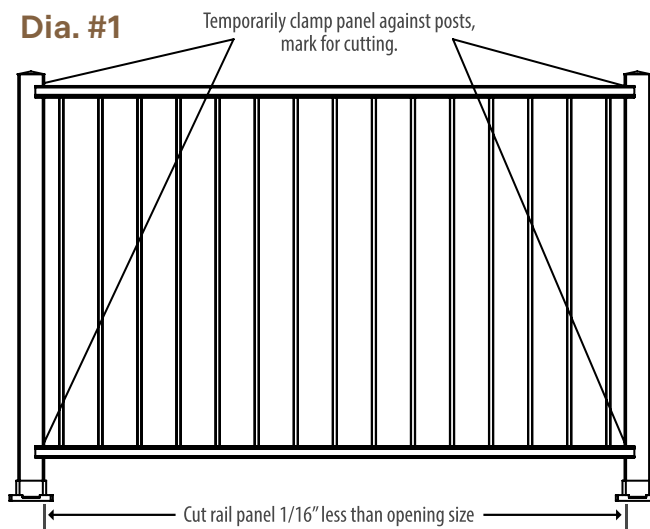
Cut Level Panels

Clamp or hold panel against post, adjust for equal end spacing. (Dia. #1)

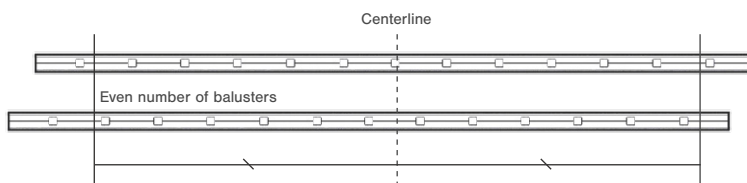
- Determine the desired center of the rail; either a baluster hole or between two baluster holes. (Dia. #2)
- Measuring from the determined center, cut both ends of the rails. Page 8
- Mark the top and bottom rails.
- Cut panel 1/16" less than opening size.
- Clean cut areas and apply touch-up paint on exposed ends. Touch-up paint sold separately.



Dia. #1



Dia. #2



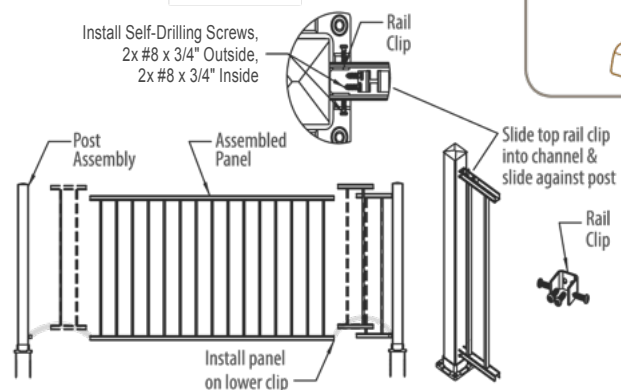
2

Secure Level Panels to Posts

Slide bottom channel of pre-cut panel on to lower clip. (Dia. #2) **Tip:** to avoid scratching the posts, slide rail panel in from the side, then downward onto the brackets.

- Insert clips into top channel of panel on each end.
- Using (4) - #8x3/4" self-drilling screws, attach the upper two clips to the post.
- Using (8) - #8x3/4" self-drilling screws, secure the upper and lower clips to the panel.
- **Tip:** Use a 6" drill bit for easier installation of top attachment clip to post.

Dia. #2



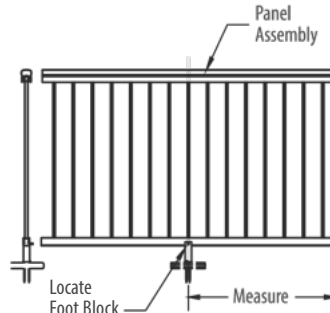
Installing Level Panels

3

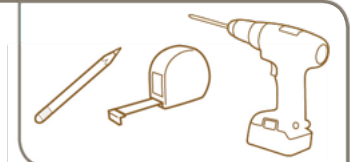
Install Foot Blocks

For openings greater than 4', install foot blocks under center of bottom rail (*Dia. #3*)

- Slide foot block under bottom rail and mark.
- Install two deck screws into deck surface at location of foot block, install foot block over screws.
- Using (1) - #8x3/4" self-drilling screw, secure the foot block to bottom rail, from the outside of the panel so the screw will not be visible from the deck surface. (*Dia. #4*)



Dia. #3



Dia. #4



Important Note:

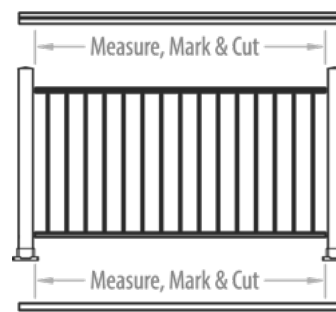
The top snap covers should snap firmly onto the aluminum railing channels. **Do not use a hammer.** The top rails will snap by applying pressure from one end to the other. If you're having issues snapping on the covers, check the clips to ensure that they are bottomed out into the aluminum railing channels. **Foot Blocks must be installed BEFORE installing Top Rail Snaps.**

4

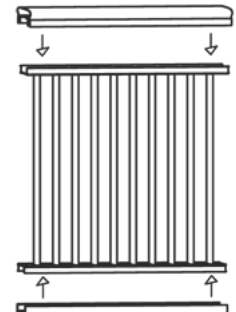
Cut and Install Top and Bottom Rail Snaps

- Measure between posts at the top and bottom. (*Dia. #5*)
- For continuous top rail, measure opening from 3" post to 3" post.
- Cut top & bottom snap covers 1/16" less than opening.
- Clean cut areas & apply touch-up paint on all exposed metal.
- Snap each rail snap over the corresponding rail channel until properly seated. (*Dia. #6*) **TIP:** Roll the top rail snap in place to avoid scratching the posts and put weight down to get to the "second" snap.

NOTE: Do not install top snaps yet if lighting wires will be run through top rails.



Dia. #5

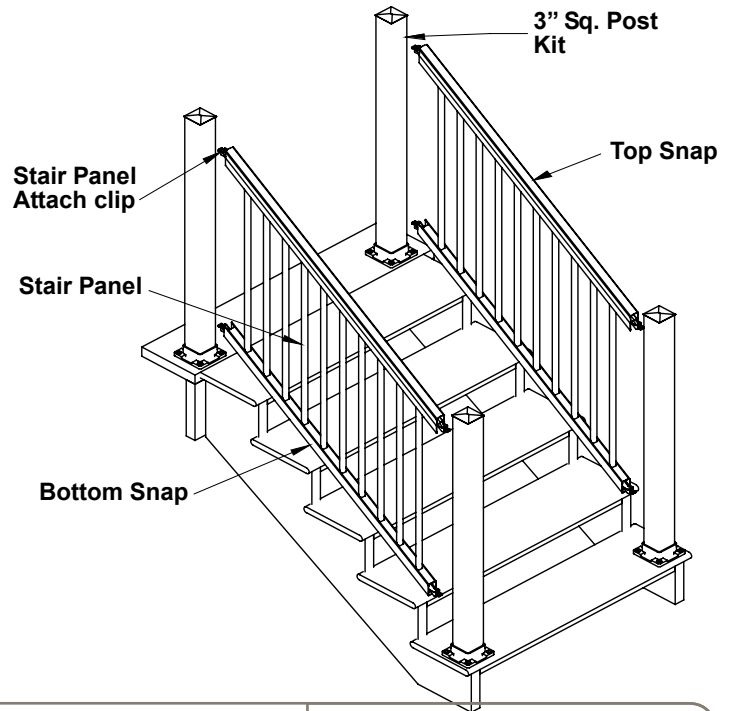


Dia. #6



Important Notes:

- Actual Stair Panel lengths: 6' panels = 69.43" and 8' panels = 91.31". Three posts are required to reach 6' and 8' lengths. **Stair Panel Attach Clip**
- Stair railing panels are shipped at a 37 degree angle. Panels are adjustable +/- 3 degrees. **Stair Panel**
- Maximum post spans on stair railing application is 96" on center. Additional posts are required on any stair application more than 8' in length. **Bottom Snap**

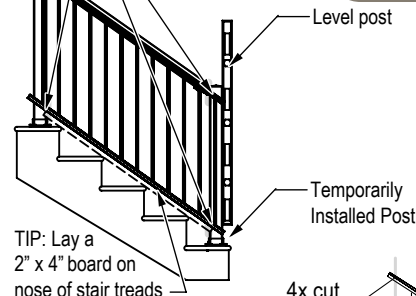
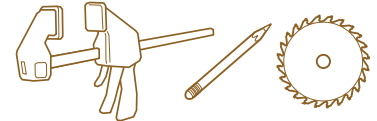


1

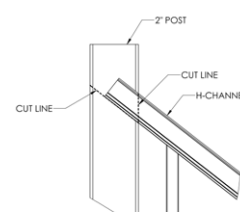
Fit Stair Railing Panels

- Position stair railing panel alongside 3" top stair post and temporarily installed 3" bottom post. (Dia. 1A)
- Determine the desired center of the rail: either a baluster hole or between two baluster holes. (Dia. 1C)
- Measuring from the determined center, cut both ends of the rails.
- Position stair panel approximately 1 1/2" above stair nosing. **Tip: lay a 2x4" board flat on nose of stair treads. This will allow enough room for installation of bottom snap.** Clamp stair panel against top and bottom 3" posts. Using a sharp #2 pencil, mark the stair channels at four (4) locations.
- If using a continuous top rail, after panel has been clamped to post, mark cut lines on the H-channel and the 2" post using the bottom of the H-channel to find your angle for post cut. (Dia. 1B)
- Remove clamps and cut stair panel at all four (4) locations. (Dia. 2) Take care to cut stair channels at appropriate stair angle. Use of Miter saw with a sharp non-ferrous blade is recommended.
- Clean cut areas and apply touch-up paint on all exposed ends.

Temporary clamp panel against posts and mark for miter cuts

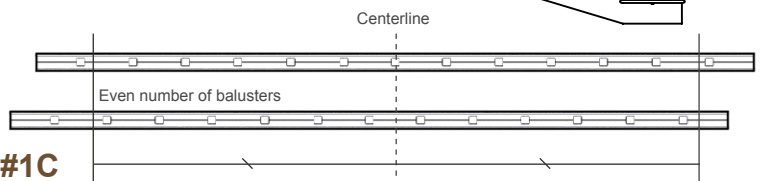
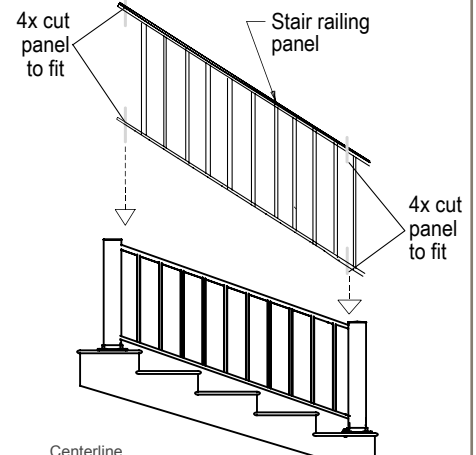


Dia. #1A



Dia. #1B

Dia. #2



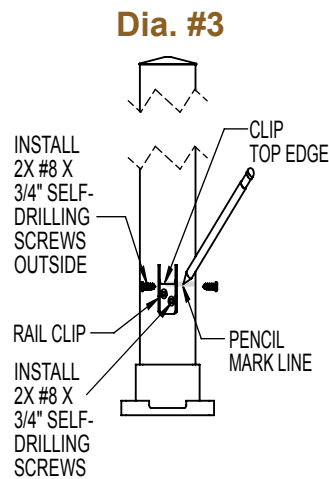
Dia. #1C

Installing Stair Panels

2

Install Stair Clips On Posts

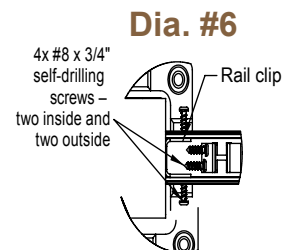
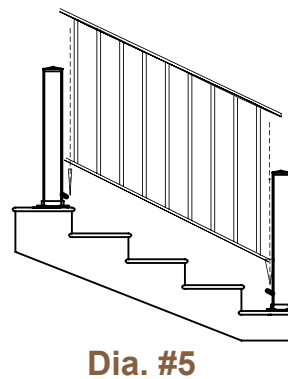
- After stair panel has been cut to proper size and angle, place the panel on the 2x4" (or hold 1 1/2" above stair nosing) board, between the 3" posts. Use a #2 sharp pencil to draw a line across the top of the lower baluster channel in two places (Dia. 3).
- Remove panel and bottom post. Attach stair panel attach clips at marked location as per (Dia. 4) and fasten with #8x3/4" self-drilling screws. Note the direction of the angled stair panel attach clips; they should be parallel to the angle of the stairs.
- **NOTE: Installation jigs are not used for stair panel installation.**



3

Secure Stair Panel To 3" Posts

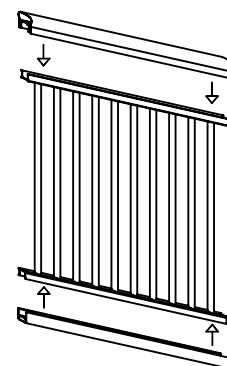
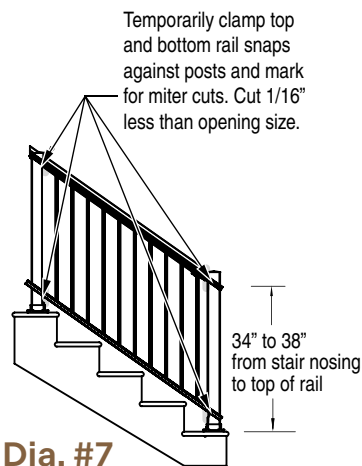
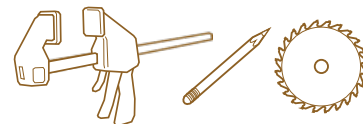
- Once the stair panel attach clips have been installed, re-attach the lower 3" post to the bottom step or landing. Place the stair panel onto the lower stair panel attach clips (Dia. 5).
- Tip:** to avoid scratching the posts, slide stair panel in from the side, then downward onto the brackets.
- When lower extrusion is fully seated on lower clips, insert stair panel attach clips into upper extrusion. Secure attach clips to post with 2-#8x3/4" self-drilling screws, then secure upper extrusion to stair panel attach clip with 2-#8x3/4" self-drilling screws. Repeat this same procedure for bottom post, upper extrusion (Dia. 6).
 - When upper extrusion is secured to attach clips, return to lower extrusion and secure lower extrusion to lower stair clips with 2-#8x3/4" self-drilling Screws at upper post and 2-#8x3/4" Self-drilling screws at lower post.



4

Install Top And Bottom Snap Covers

- Following the same angle as the secured stair panel, clamp or hold top/bottom rail snaps against 3" posts (Dia. 7). Using a sharp #2 pencil, mark the top/bottom rail snaps at all four (4) locations.
- Remove clamps and cut top/bottom rail snaps at all four (4) locations. Take care to cut snaps at appropriate stair angle. Use of miter saw with a sharp non-ferrous blade is recommended. Cut 1/16" less than opening size.
- Clean cut areas and apply touch-up paint on exposed ends.
- Snap each rail snap over the corresponding rail channel until properly seated. (Dia. 8)
- **Tip:** Support panel with a block of wood when installing top rail snap.



Installing Gate Kits

Suggested Tools:

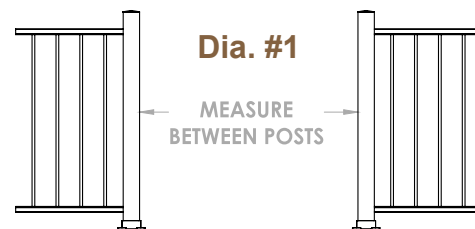
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|------------------|------------------|--------------------|-------------------------------------|
| • Cordless Drill | • Tape Measure | • #2 Sq. Drive Bit | • Miter Saw w/
Non-Ferrous Blade |
| • Pencil | • Safety Glasses | • 1/8" Drill Bit | |

1 Remove all Items From Package

Gate Kit Includes:

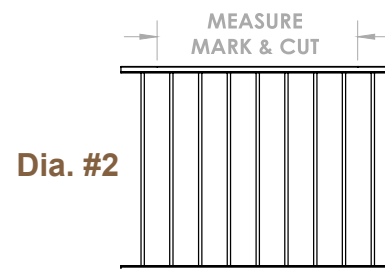
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|--|---|
| • One (1) - Picket Panel | • One (1) - Locking Latch Kit w/ Key |
| • Two (2) - Snap Covers | • Four (4) - Gate Support Brackets |
| • Two (2) - Gate End Posts w/ Welded Rods | • Sixteen (16) - Color Matched Self-Drilling Screws |
| • Sixteen (16) - 3/4" Self-Drilling Screws | • Measure opening between posts. (Dia. #1) |
| • Two (2) - Self-Closing Hinges | |

2 Measure Opening Between Posts (Dia. #1)

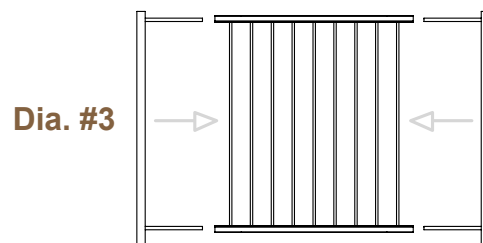


3 Measure, Mark and Cut Picket Gate Panel (without Gate End Posts)

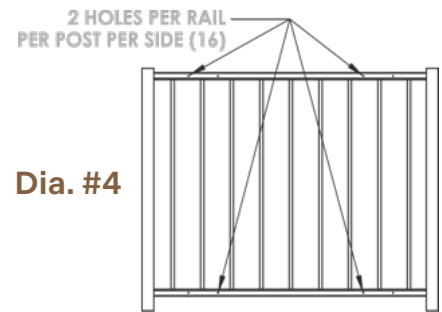
Measurement must be exactly 4.5" less than gate opening. Deduct 4.5" from opening measurement and cut both panel ends, leaving equal picket spacing. (Dia. #2)



4 Insert Gate End Posts Into Panel Upper and Lower Horizontal Channels (Dia. #3)

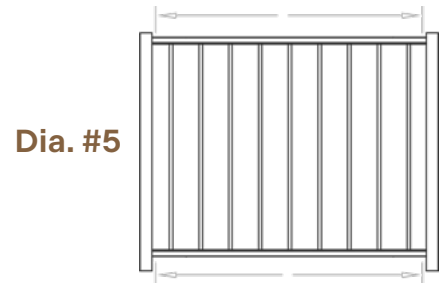


- 5** Drill 16 - 1/8" Holes (Dia. #4) and Install 3/4" Self-Drilling Screws to Secure Gate Ends to Panel



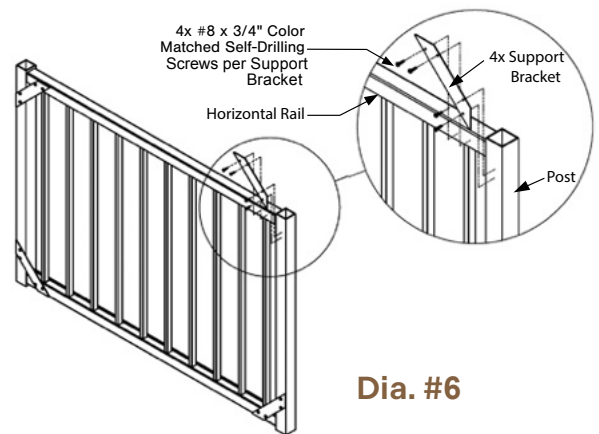
- 6** Measure Between Gate End Posts

Measure between gate end posts, deduct 1/16", and cut top and bottom snap covers. Once cut, position snap covers over top and bottom horizontal channels and press in place. (Dia. #5)



- 7** Install Support Bracket

To install support bracket, first attach support bracket to post using 2x #8 x 3/4" self-drilling screws as shown, then press support bracket against horizontal rail, drill 2x 1/8" pilot holes and secure using remaining 2x #8 x 3/4" self-drilling screws. Repeat for remaining brackets. (Dia. #6)



- 8** Install Gate Hinges Per Instructions Provided In Hinge Package

- 9** Install Gate Latch Per Instructions Provided In Latch Package

Plan Drawings / Notes

A large rectangular area with a light gray grid pattern, intended for drawing or writing. It is bounded by a thin black line and has rounded corners.

Important Note:

The diagrams and instructions in this brochure are for illustration purposes only and are not meant to replace a licensed professional. Any construction or use of the product must be in accordance with all local zoning and/or building codes. The consumer assumes all risks and liability associated with the construction or use of this product. The consumer or contractor should take all necessary steps to ensure the safety of everyone involved in the project, including, but not limited to, wearing the appropriate safety equipment. Except as contained in the written Limited Warranty, AZEK does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

