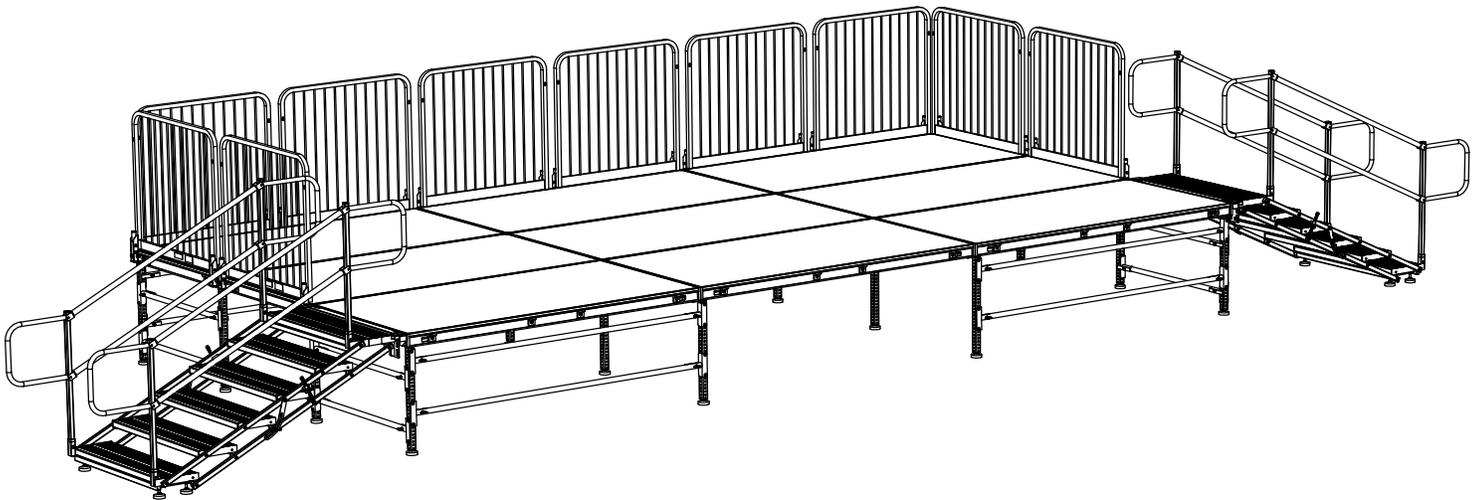


AS2100

Aluminum Staging

Assembly Instructions

All Drawings Are For Illustration Only.

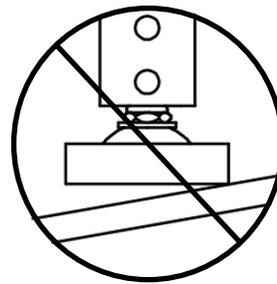
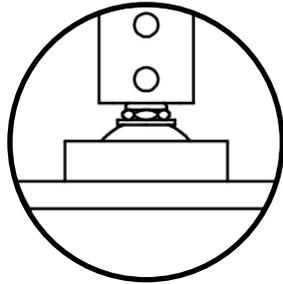


BILJAX
Haulotte 

P/N : LL-204-51
Last Revision: October 2019

STEP 1 - SITE PREPARATION

- A) Determine the exact location where the stage will be erected.
- B) For outdoor stages, mudsills are required to distribute the weight (125PSF to 150PSF) on the stage legs. This will prevent the legs from sinking and ease the leveling of the stage.
- C) All base pads and mudsills should be placed only on a horizontal surface.

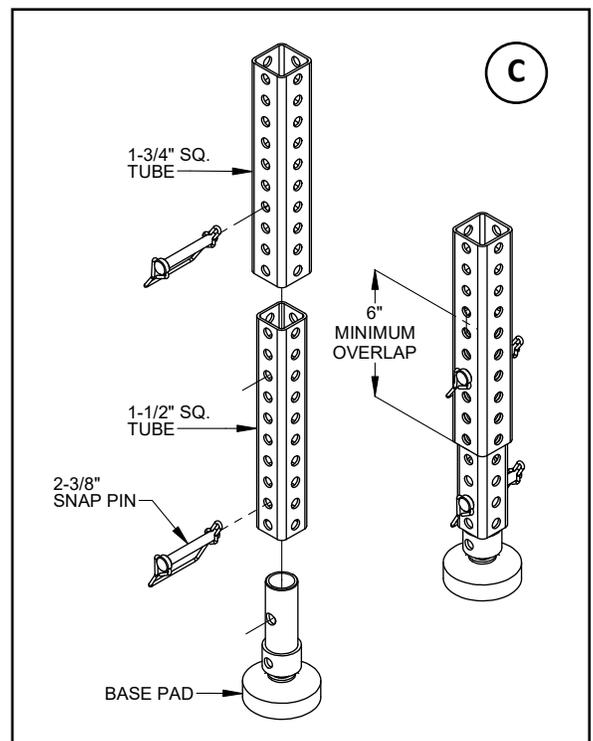
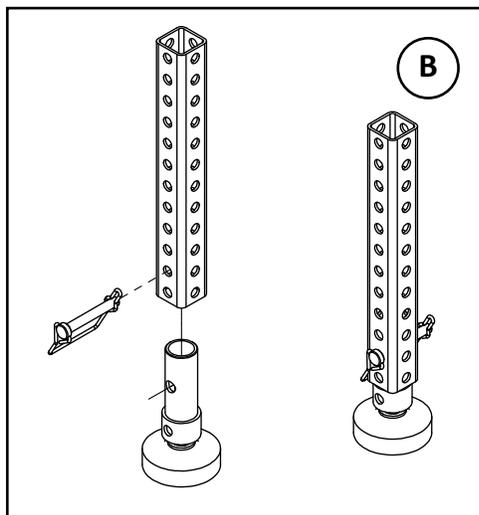
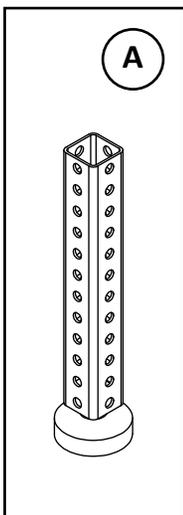


STEP 2 - LEG ASSEMBLY

The leg sockets on the stage deck fit 1-3/4" sq. stage legs. Use any of the following:

- A) 1-3/4" sq. fixed leg with attached adjustable base pad.
- B) 1-3/4" sq. leg plus adjustable base pad with collar. Insert base pad into leg and attach with 2-3/8" snap pin in third hole of leg. **NOTE: Collar of base pad must be in leg for stability.**
- C) Adjustable legs – Insert base pad into 1-1/2" sq. leg and attach with 2-3/8" snap pin in second hole of leg. Place a 1-3/4" sq. leg over the 1-1/2" sq. leg and adjust to desired length. Pin together leg tubes with 2-3/8" snap pin. **NOTE: There must be a minimum of a 6" overlap of tubes for stability.**

NOTE: Leg length (without base pad) is approximately 3" shorter than desired height of stage.



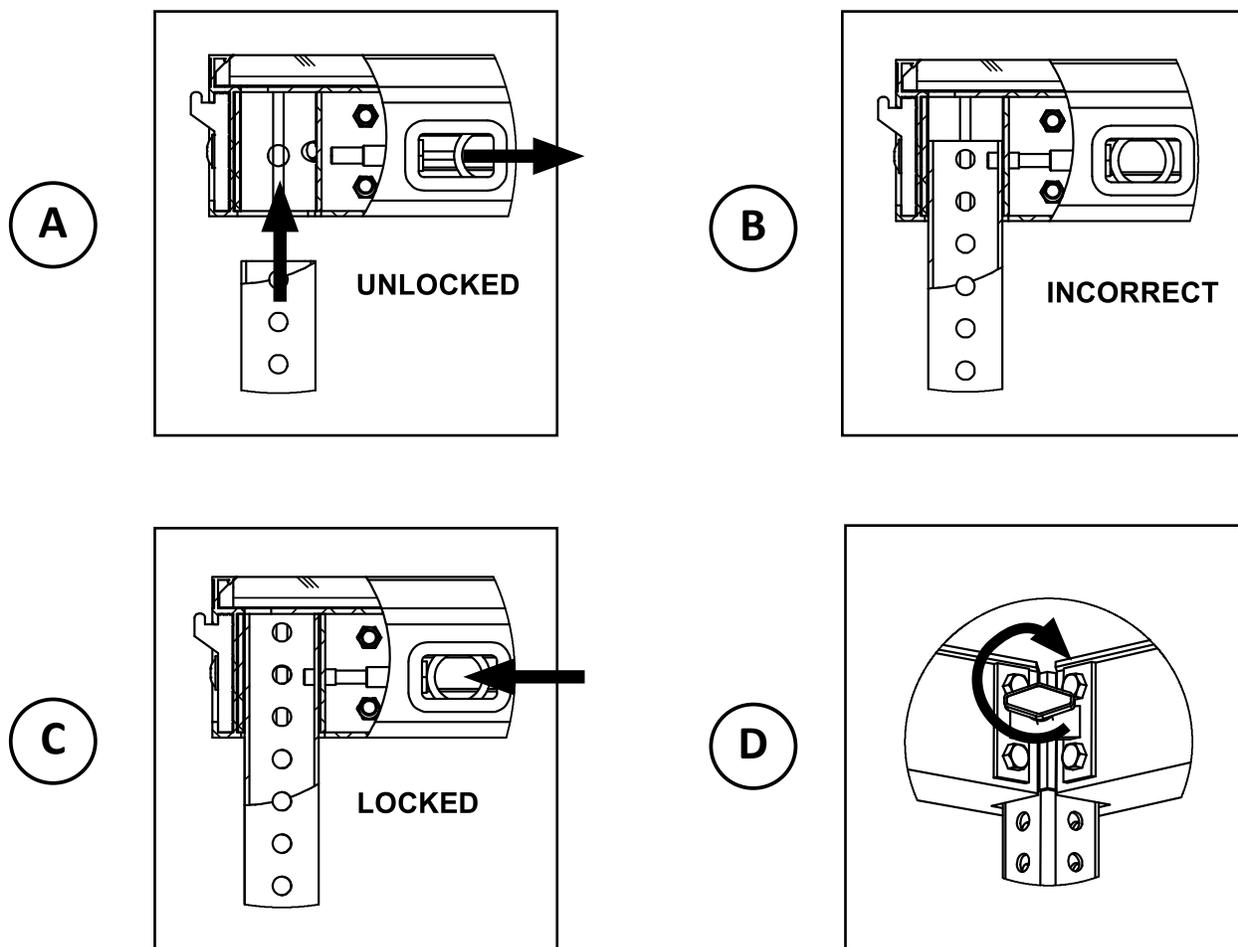
STEP 3 - ATTACHING LEGS

The leg sockets on the stage deck fit 1-3/4" sq. stage legs. Use **only** 1-3/4" sq. legs.

! WARNING ! – Failure to properly install stage legs could result in serious injury or death.

- A) Pull and hold pin in the unlocked position.
- B) Insert a 1-3/4" sq. stage leg in the leg socket so that it touches the bottom of the stage deck.
NOTE: Leg must be FULLY INSERTED. Pin is not a load bearing member.
- C) Release pin to lock leg in place.
- D) Tighten the leg socket wing bolt at each corner socket (underside of stage) where a leg is installed.

Legs required in all four corner sockets of first stage deck. Legs may be required in intermediate sockets depending upon anticipated loads. See load rating table on page below.



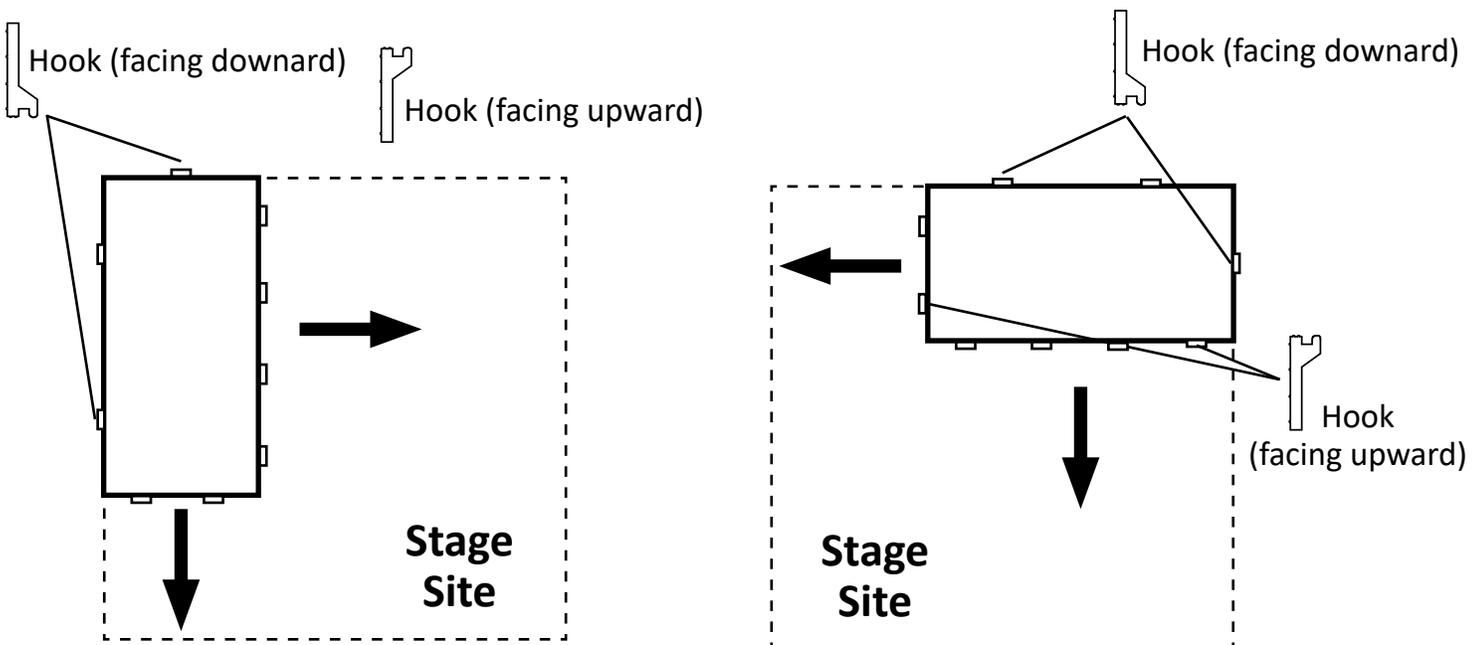
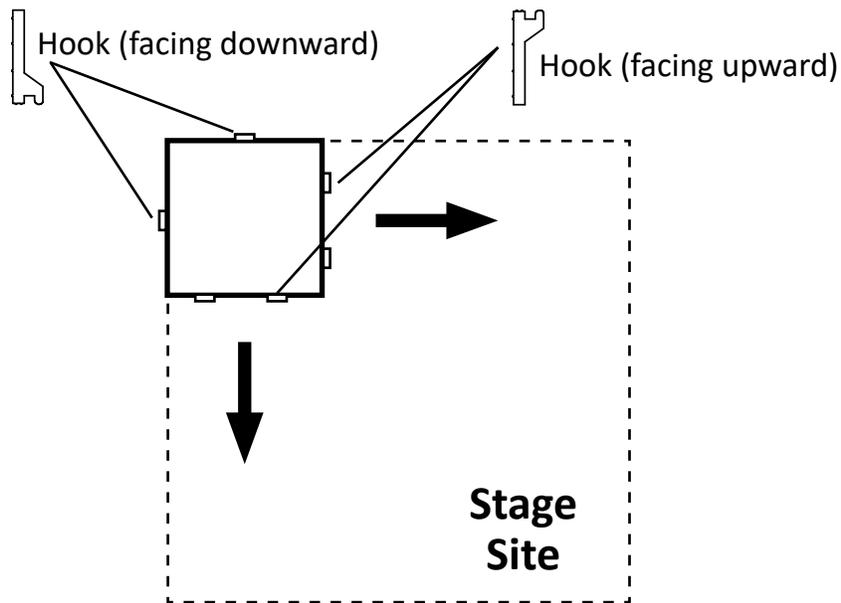
STAGE DECK	NO. OF LEGS	MAX. HEIGHT	LOAD RATING
4ft x 4ft	4	5ft	175 PSF
4ft x 4ft	4	10ft	150 PSF
4ft x 4ft	4	16ft	125 PSF
4ft x 8ft	4	4ft	150 PSF
4ft x 8ft	4	10ft	125 PSF
4ft x 8ft	6	5ft	175 PSF
4ft x 8ft	6	10ft	150 PSF
4ft x 8ft	6	16ft	125 PSF

STEP 4 - SETTING THE STAGE

- A) Place the first stage deck (with legs in all four corner sockets) in back corner of stage site.
- B) Align the stage deck so that the side rail hooks facing upward are toward the inside of the staging site and the side rail hooks facing downward are toward the outside of the staging site.

NOTE: When using 4' x 4 decks exclusively, any corner may be used as a starting point. When using 4' x 8' decks, adjust the starting point to achieve desired position and shape.

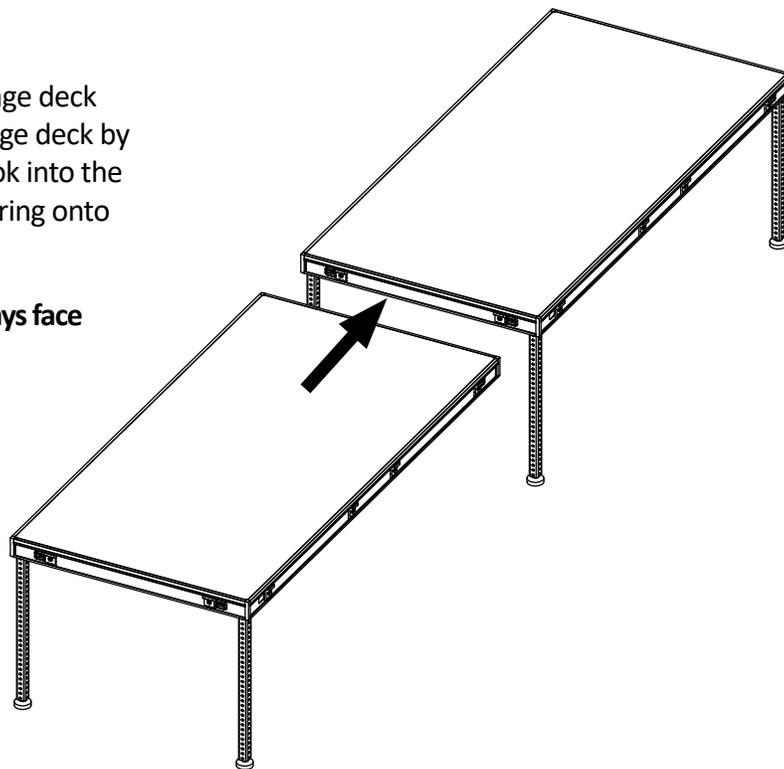
Upward facing side rail hooks must always face toward the stage site.



STEP 5 - SETTING THE STAGE (continued)

- A) Set the back row of stage decks first.
- B) Insert two legs into each additional stage deck (per Step 3) and attach to previous stage deck by inserting the downward facing rail hook into the previous stage deck channel and lowering onto the upward facing rail hooks.

NOTE: Upward facing side rail hooks must always face toward the stage site.

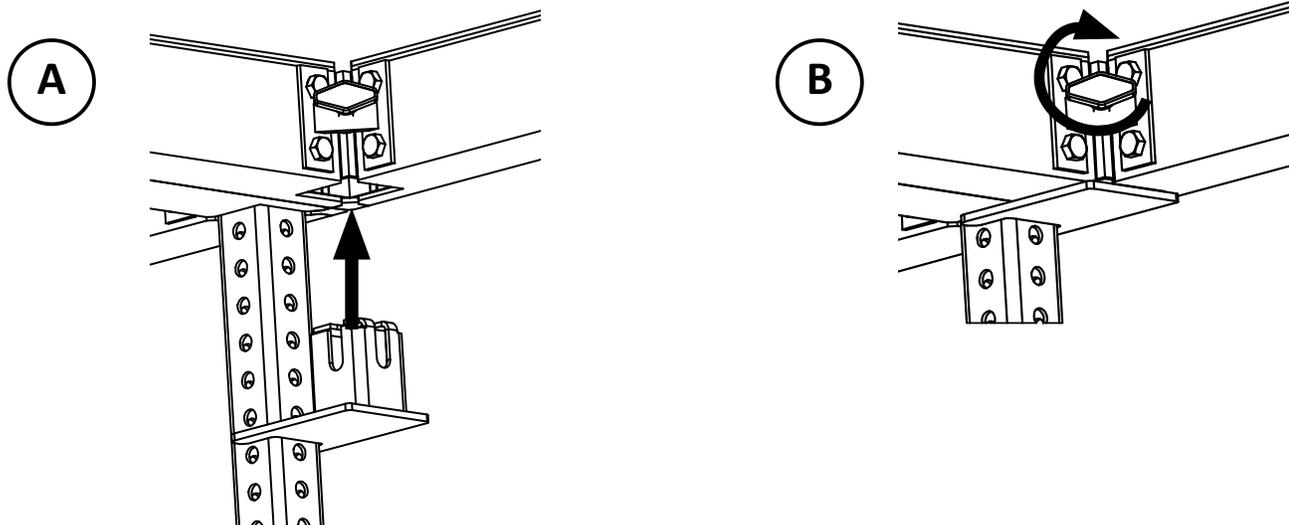


STEP 6 - CORNER ALIGNMENT BRACKET

The corner alignment bracket keeps the decks from shifting to aid assembly and give stability.

- A) FULLY INSERT alignment bracket into deck leg socket so the bottom plate straddles the leg in the previous deck. Use at least one bracket per deck.
- B) Tighten the leg socket wing bolt (underside of stage) against the alignment bracket.

! WARNING ! – Failure to properly install alignment brackets could result in the stage deck shifting and becoming unstable and cause serious injury or death to stage occupants.



STEP 7 - SETTING THE NEXT ROW

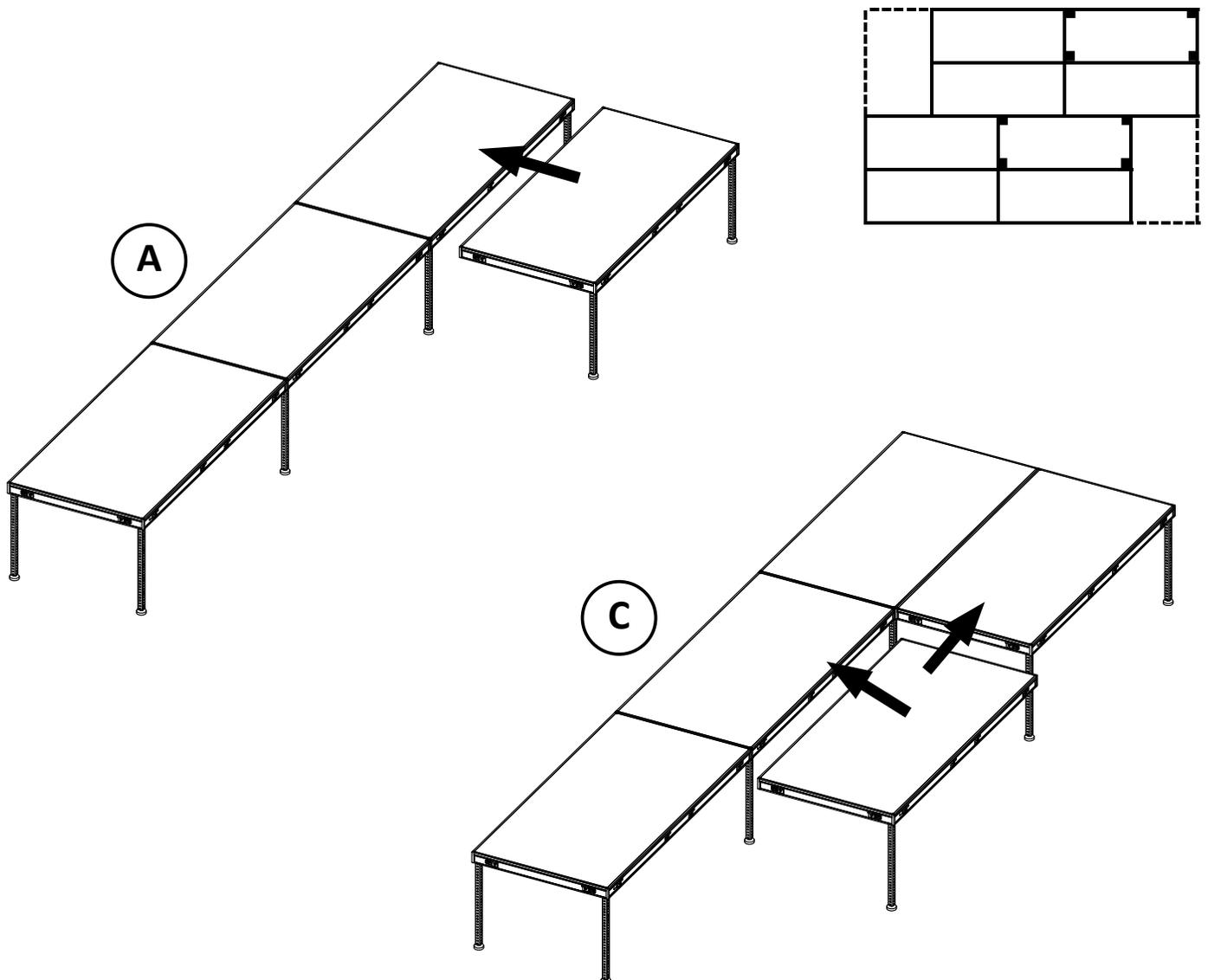
Begin the second row after completing the back row.

- A) Insert two legs into stage deck (per Step 3) and attach to back row stage deck by inserting the downward facing rail hook into the stage deck channel and lowering onto the upward facing rail hooks.

NOTE: Upward facing side rail hooks must always face toward the stage site.

The modular design of the AS2100 allows stage rows to be staggered. When staggering stage decks, install four legs into the first stage deck of each staggered row.

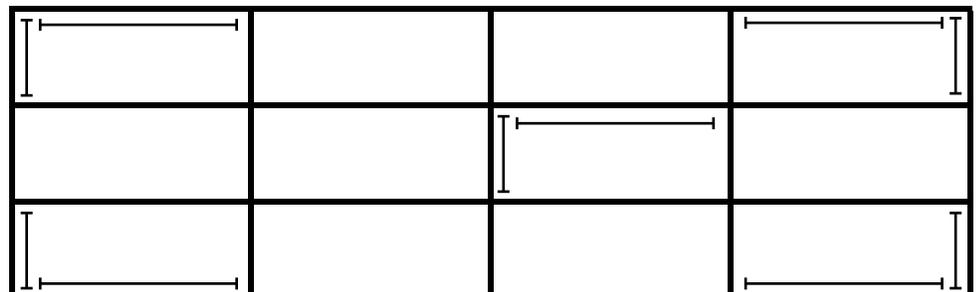
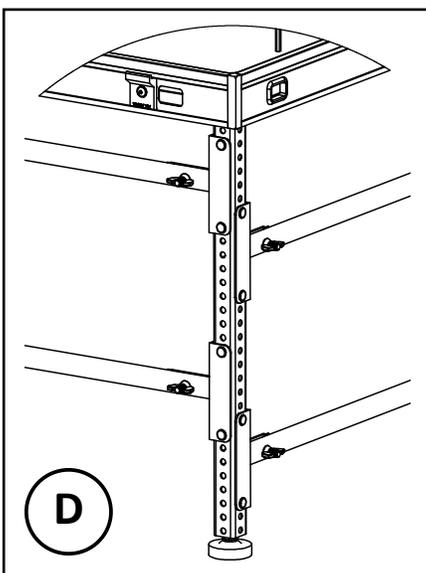
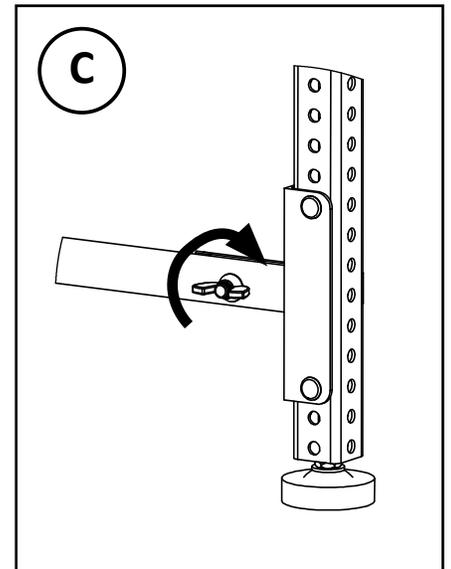
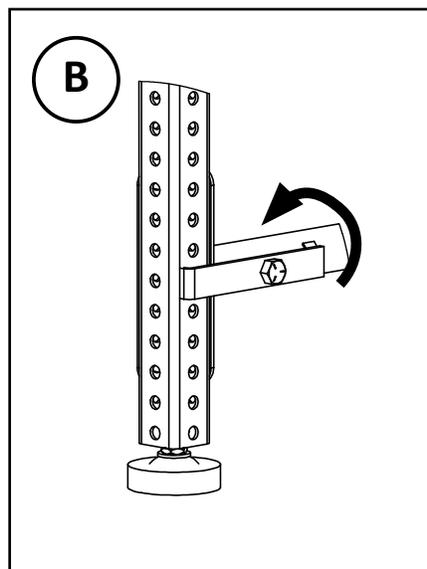
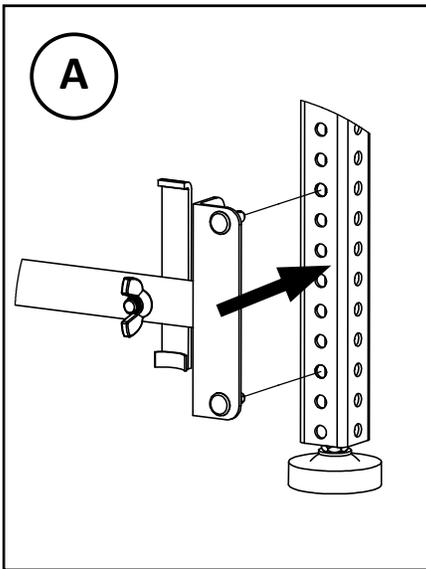
- B) Attach corner alignment bracket. See Step 6.
C) Insert **one** leg into stage deck (per Step 3) and attach to both adjacent decks by inserting the downward facing rail hooks into the adjacent stage deck channels and lowering onto the upward facing rail hooks.
D) Attach a corner alignment bracket per Step 6.
E) Depending on the size of the stage, determine whether any interior bracing is necessary. Add bracing where needed as rows are built. See Step 8 for Bracing.
F) Repeat Steps 7C and 7D to finish row.
G) Repeat Step 7 until desired stage size is complete.



STEP 8 - BRACING

Bracing is required on stages with a height greater than 30". Brace each corner and every third bay along each side, using two braces per bay. Use three braces per bay for heights greater than 48". Internal braces should be placed in different rows than perimeter bracing to increase stability. Spacing between braces is a maximum of 24" and a minimum of 12".

- A) Determine what brace to use. A starter brace will connect two legs in the same deck. A continuous brace will connect a leg in one deck to a leg in the adjacent deck. Insert brace pins into stage legs.
- B) Turn bracket until it is perpendicular with the stage leg. Bracket lip should rest flush against the outer edge of the stage leg.
- C) Tighten the wing nut on the front of the horizontal brace to secure the bracket.
- D) A common leg **must** be braced in two directions. Depending on the height of stage, adjacent braces may overlap **one** hole. Bracket lip should rest against the stage leg and **not** the adjacent brace.
- E) Repeat Step 8 until all bracing is thoroughly attached.



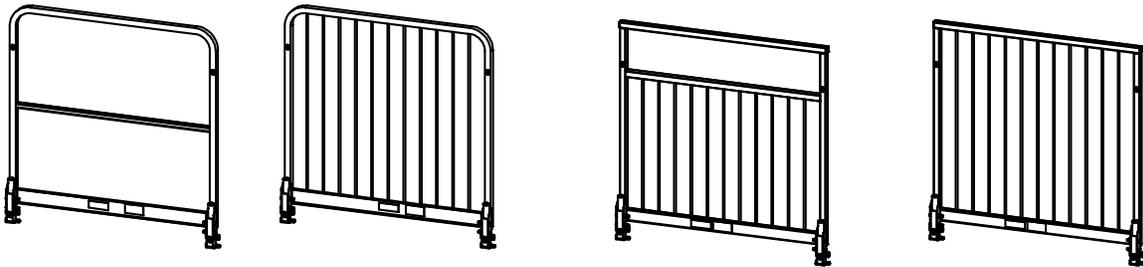
STEP 9 - ATTACHING GUARD RAILS (if necessary)

Bil-Jax recommends guard rails on the stage when the stage height exceeds 24”.

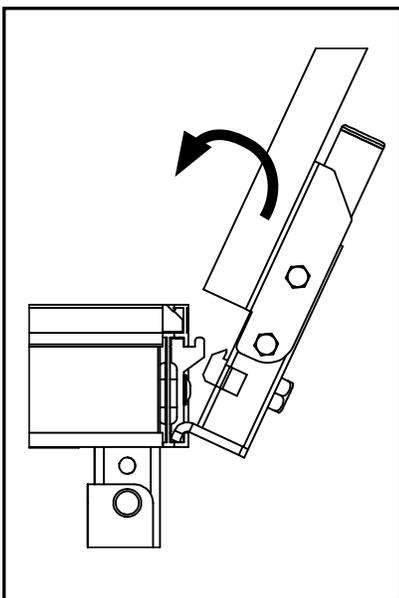
Section 1015 of the International Building Code (IBC) **requires** the use of guard rails with vertical posts no greater than 4” apart when the stage height exceeds 30”.

- A) Set the lower lip of the two guard rail locks inside the stage deck channel along the perimeter of the stage decks.
- B) Pivot guard rail toward the stage until there is a “click” sound. This fully seats the T-Lock within the stage deck channel. Press down on plunger if necessary to seat T-Lock.
- C) Tighten the hex nut on each lock to fully secure guard rail.
- D) To remove guard rail, loosen hex nuts, depress T-Lock plungers and pivot guard rail away from stage.

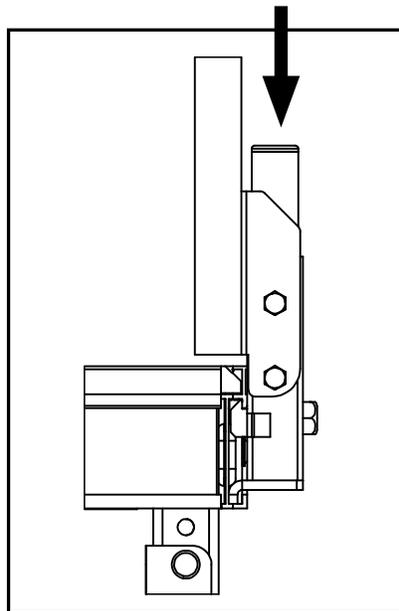
! WARNING ! – Failure to correctly install guard rails could result in serious injury or death. Verify that each T-Lock is fully seated inside the stage deck channel and hex nut is tightened.



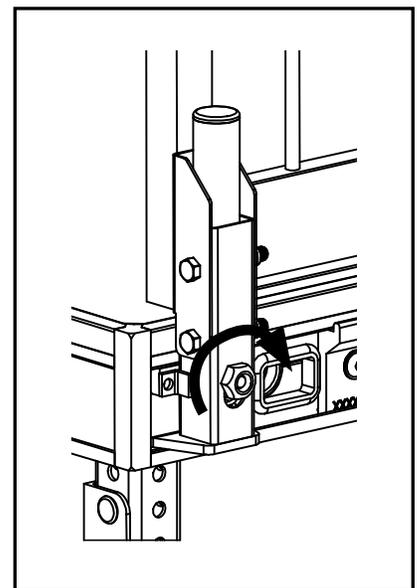
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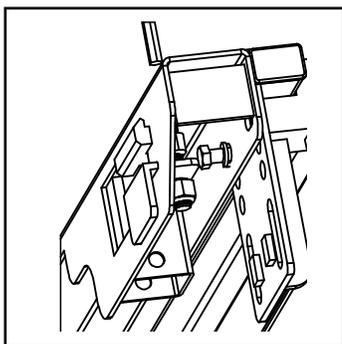


STEP 10 - ATTACHING ULTRA-STAIR UNIT

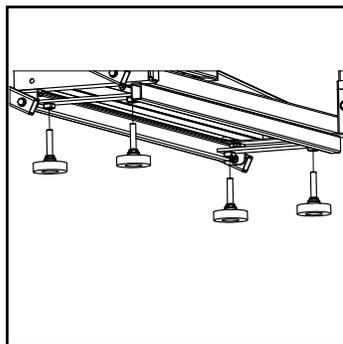
The Bil-Jax Ultra-Stair Units come in a range of sizes that can adjust to stage heights of 12" to 70".

- A) The Ultra-Stair Unit requires an adapter when used with AS2100 stages. Attach adapter by inserting 3/8" x 1" bolt with lock washer through slot in adapter and into threaded block on stair mount plate.
- B) Screw in foot pads in bottom of lower step.
- C) If stage height is over 3', insert 1-3/4" sq. leg into the two sockets of the stair adapter and attach with 2-3/8" snap pin for extra support.
- D) Set the lower lip of the two adapter locks inside the stage deck channel along the perimeter of the stage decks.
- E) Insert 5/16" T-Handle hex wrench in bolt head in the top of the stair adapter and rotate so the T-Lock clamps the adapter to the stage.
- F) Lower the stairs so the foot pads touch the ground. Adjust foot pads so the height of bottom step matches rise of other steps.
- G) Tighten wing nut on slotted lock bar on each side of stairs.
- H) On each side of stairs, rotate threaded lock bar perpendicular to stair stringer tubes. Rotate wing nut so that the saddle weldment is pressed tight against upper stringer tube.
- I) Insert hand rail post into step socket. Attach with washer, 3/8" x 2" bolt and lock nut. Repeat for all four posts.
- J) Place hand rail so it straddles post. Attach with 3/8" x 2-1/4" bolt and lock nut. Repeat on each end for all four hand rails.

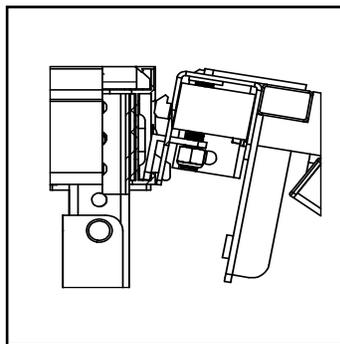
! WARNING ! – Failure to correctly install stairs could result in serious injury or death. Verify that each T-Lock is fully seated inside the stage deck channel and locked in place. Also verify that all nuts on lock bars are tightened.



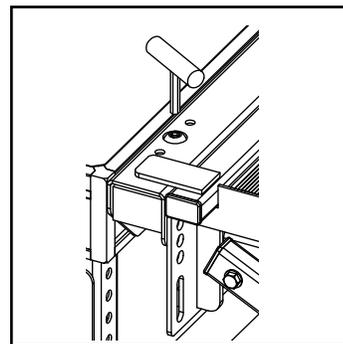
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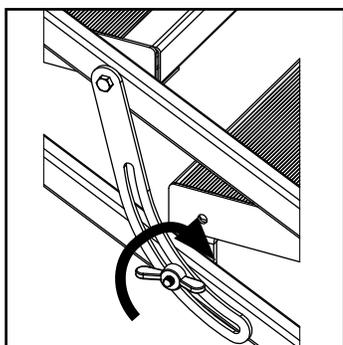
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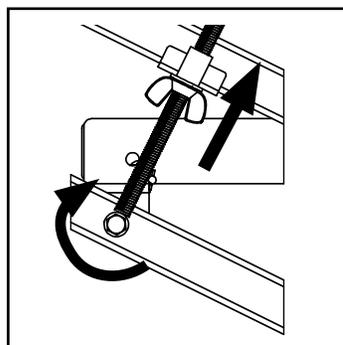
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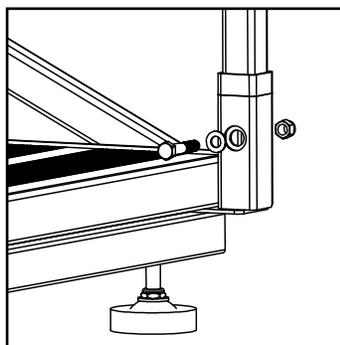
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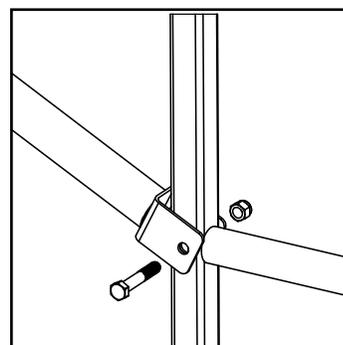
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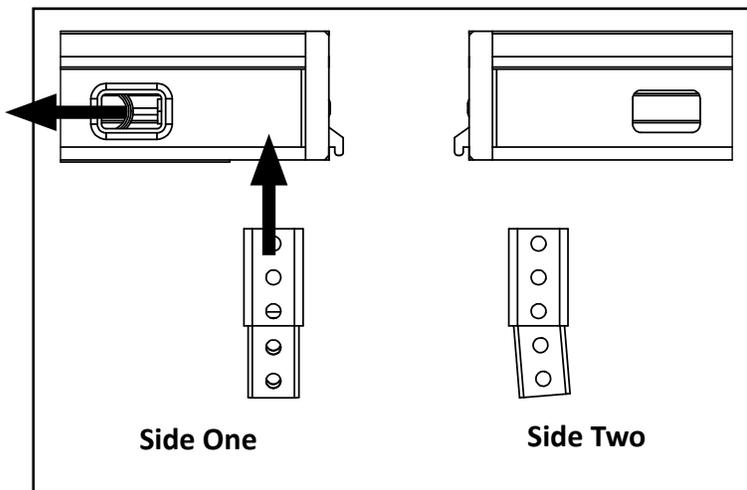
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STEP 11 - INSTALLING FREE STANDING RAMP

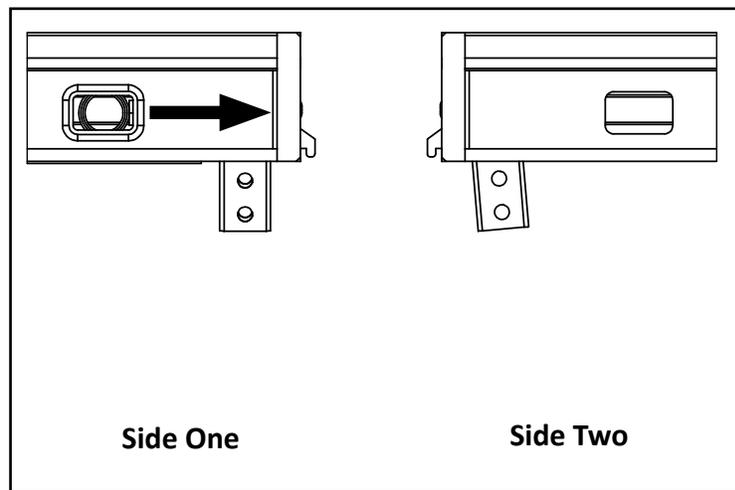
A ramp should be installed at a 1" of rise to 12" of run. The height of a run is limited to 30" maximum before a landing is required. Determine the size and location of ramp. Example: a 24" tall stage will require a 24' long ramp.

- A) Start at top of ramp. Determine amount of decks required. If a 4' x 4' deck is required, begin with it. Example: 24" tall stage = 4' deck + 8' deck + 8' deck + 4' starter ramp.
- B) Pull and hold pin in the unlocked position.
- C) Fully insert a ramp leg adapter in the leg socket so that it touches the bottom of the stage deck.
- D) Release pin to lock leg adapter in place.
- E) Tighten the leg socket wing bolt at each corner socket (underside of stage) where a leg adapter is installed.
- F) Attach 1-3/4" sq. leg to ramp adapter with 2-3/8" snap pin. Leg length (without base pad) is approximately 6" shorter than desired height of ramp at leg position.

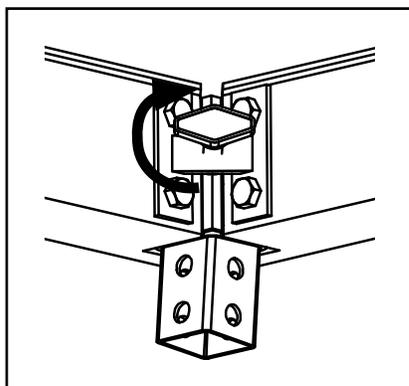
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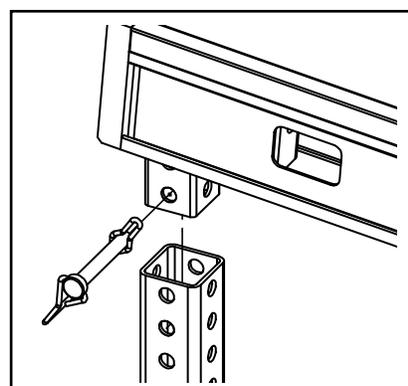
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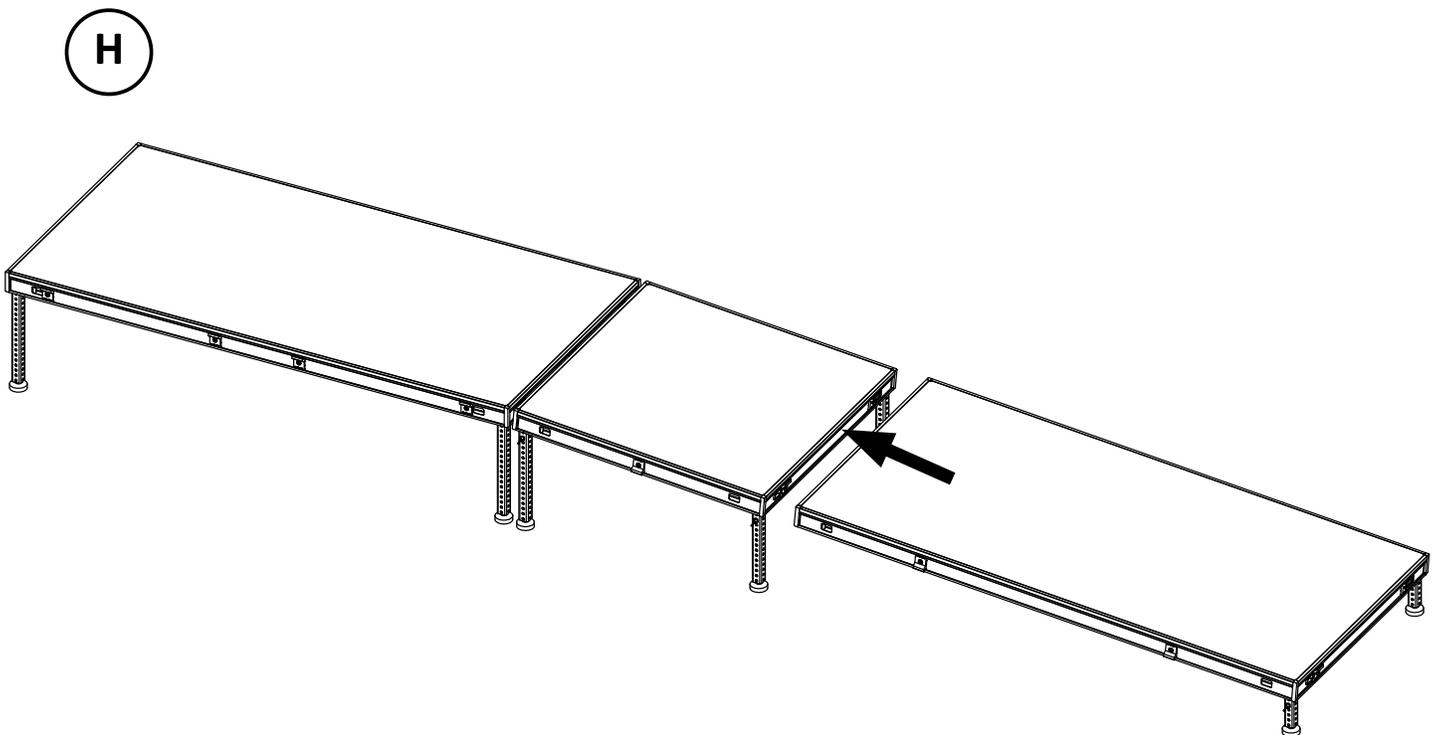
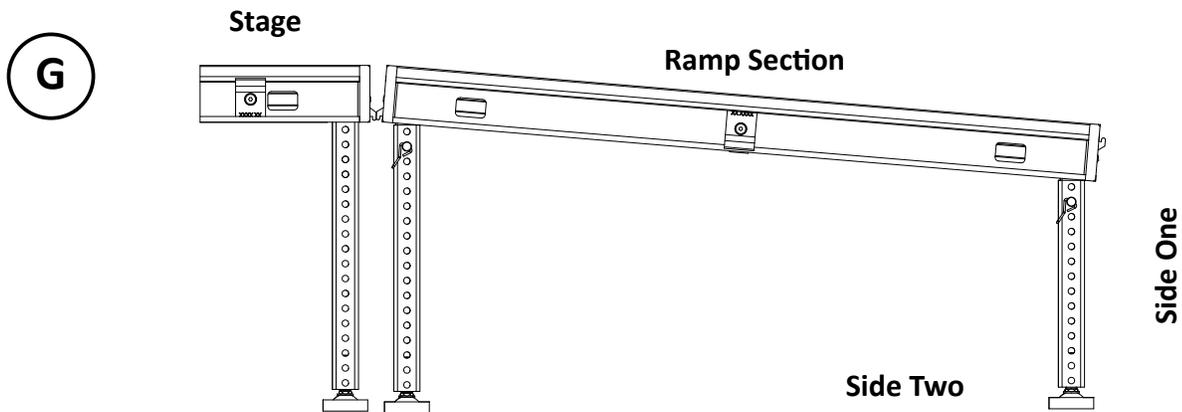


F



STEP 11 - INSTALLING FREE STANDING RAMP (continued)

- G) Place deck with four legs against stage. **NOTE: Downward facing side rail hooks must be against stage and upward facing side rail hooks must be at lower end of ramp.**
- H) Insert two legs into stage deck (per Steps 11B – 11F) and attach to previous stage ramp deck by inserting the downward facing rail hook into the stage deck channel and lowering onto the upward facing rail hooks.

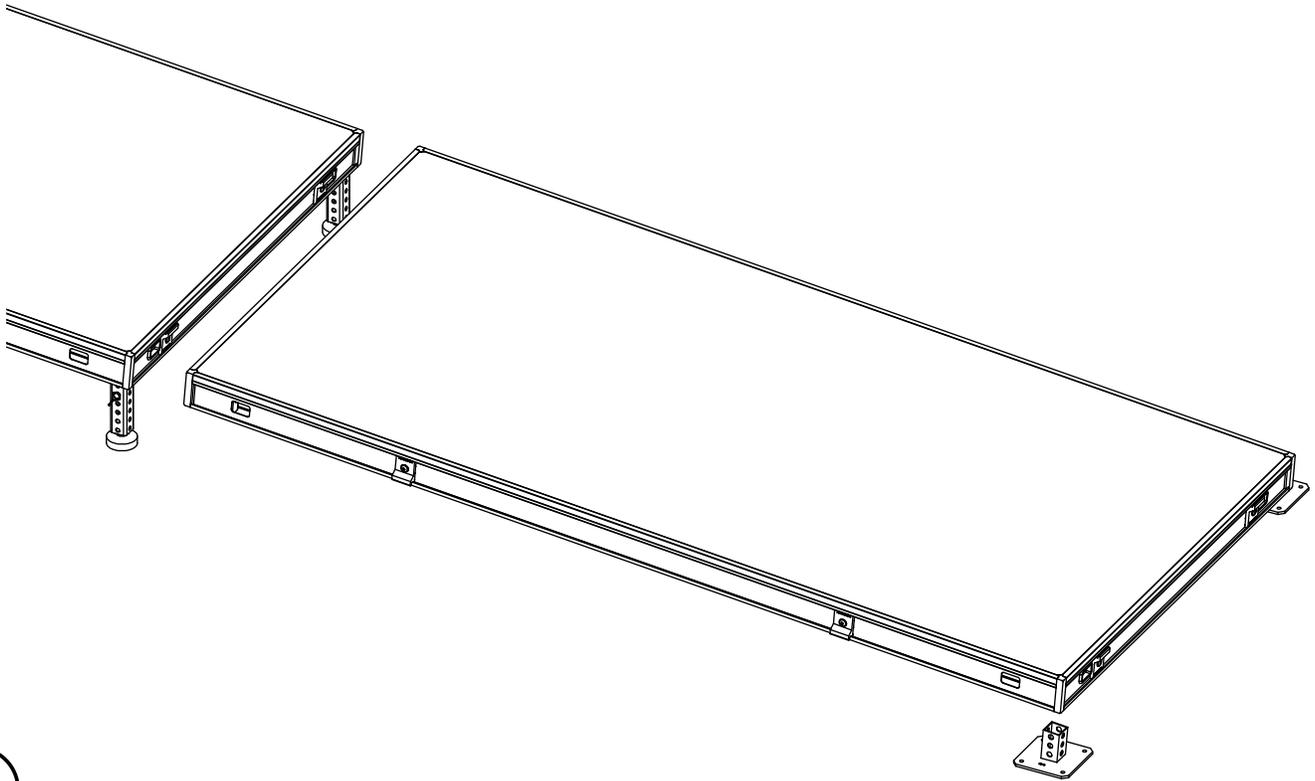


STEP 11 - INSTALLING FREE STANDING RAMP (continued)

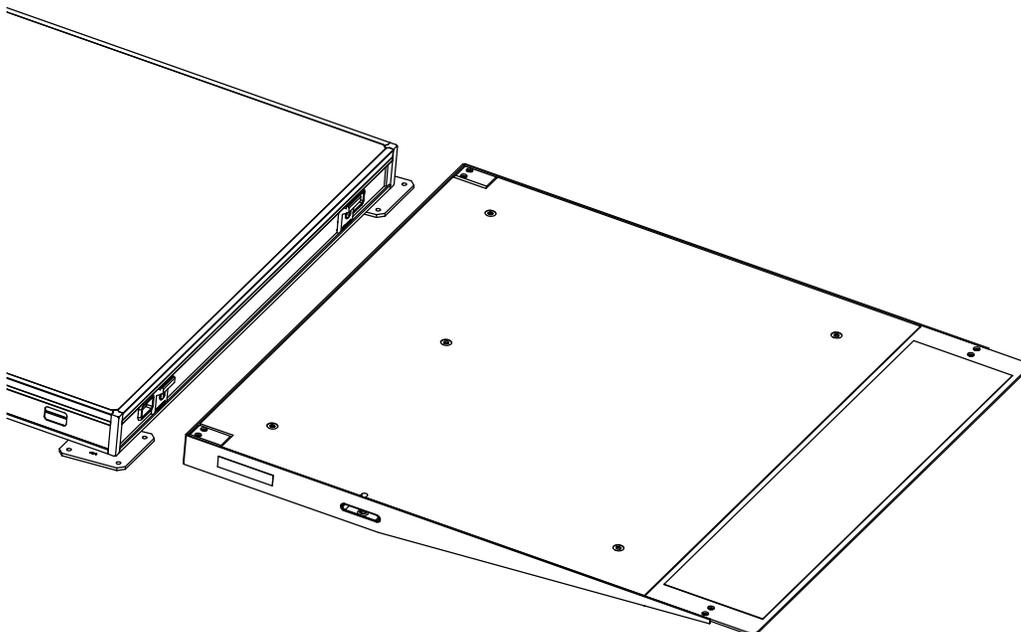
- I) The last ramp stage deck will be approximately 4" above ground level and will require ramp base plates instead of leg adapters and legs.
- J) To complete ramp, place ramp end on upward facing rail hooks of previous ramp.

Note: If a wider ramp is desired, follow instructions but simply attach a second row of stage decks side by side for each step as assembly proceeds.

I



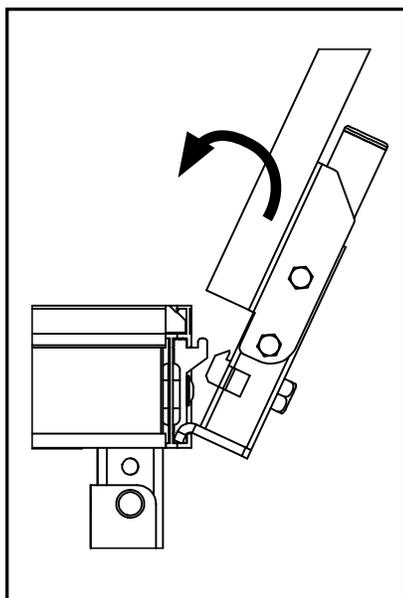
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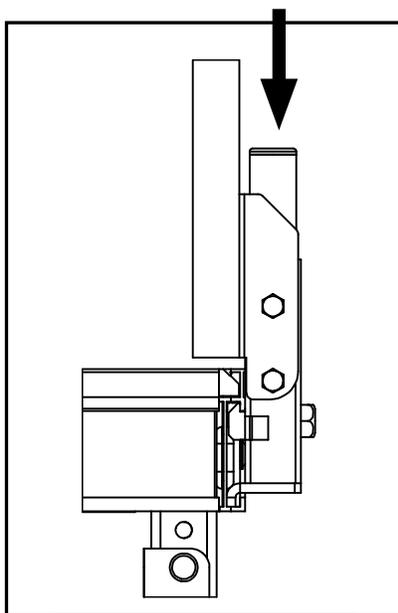
STEP 12 - ATTACHING RAMP GUARD RAILS

- A) Start at top of ramp. Set the lower lip of the two guard rail locks inside the stage deck channel along the sides of the stage deck ramp.
- B) Pivot guard rail toward the ramp until there is a “click” sound. This fully seats the T-Lock within the stage deck channel. Press down on plunger if necessary to seat T-Lock.
- C) Tighten the hex nut on each lock to fully secure guard rail.
- D) The ramp end requires a special guard rail. Attach with four washers and 3/8" x 1" bolts.

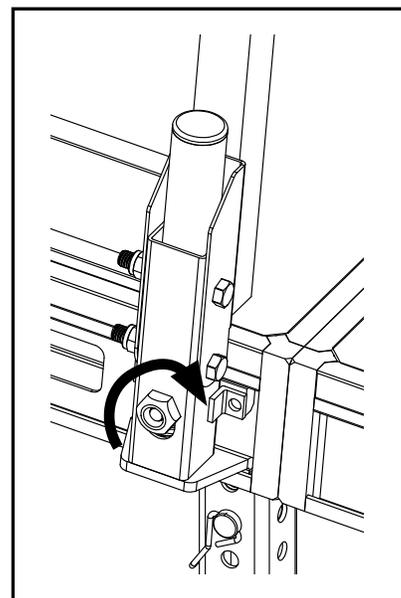
! WARNING ! – Failure to correctly install guard rails could result in serious injury or death. Verify that each T-Lock is fully seated inside the stage deck channel and hex nut is tightened.



A

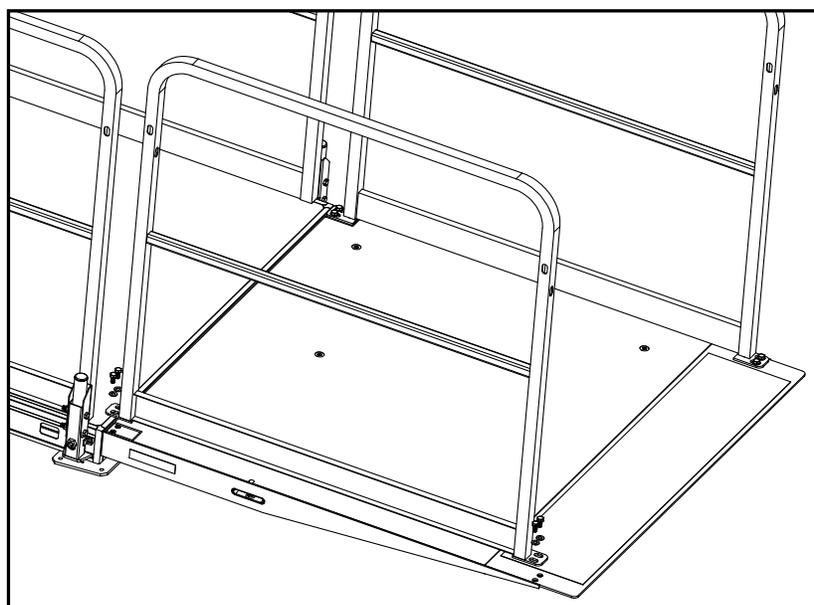


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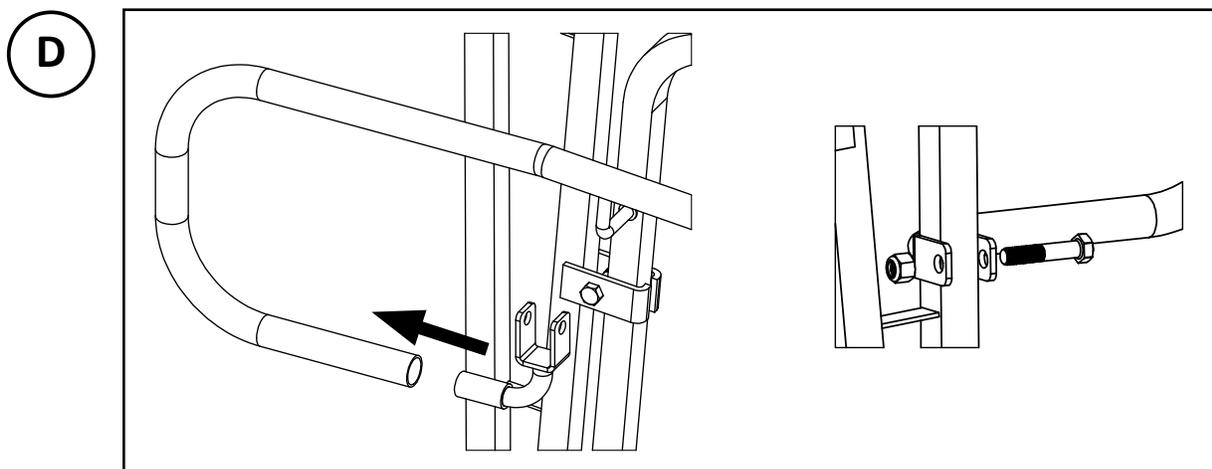
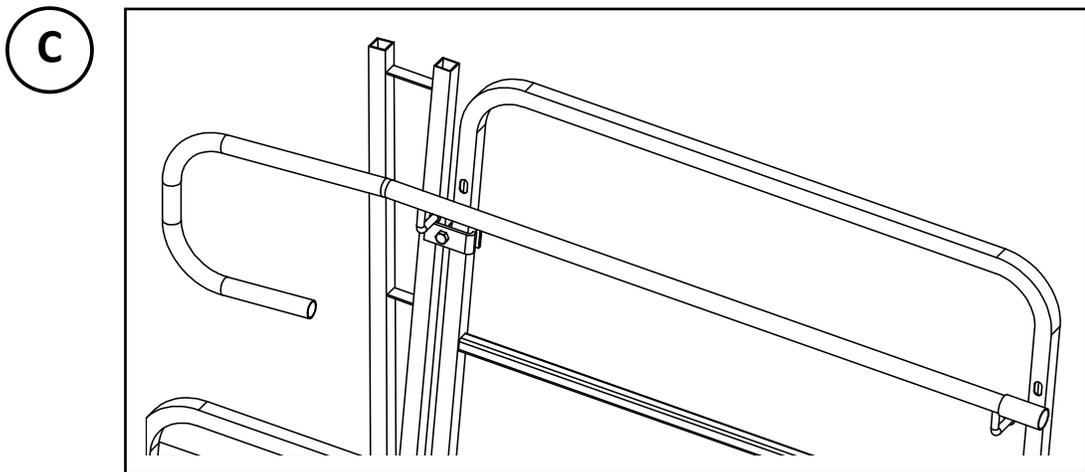
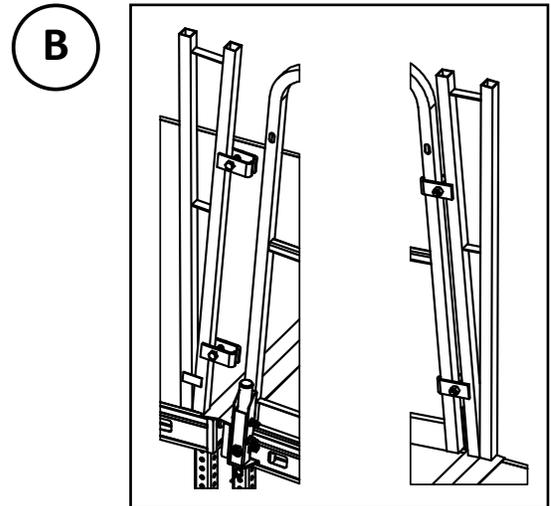
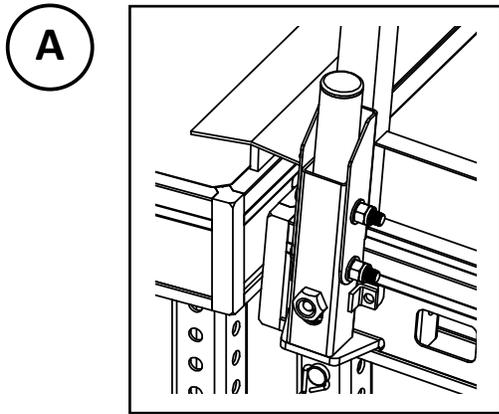
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STEP 13 - INSTALLING RAMP HAND RAILS

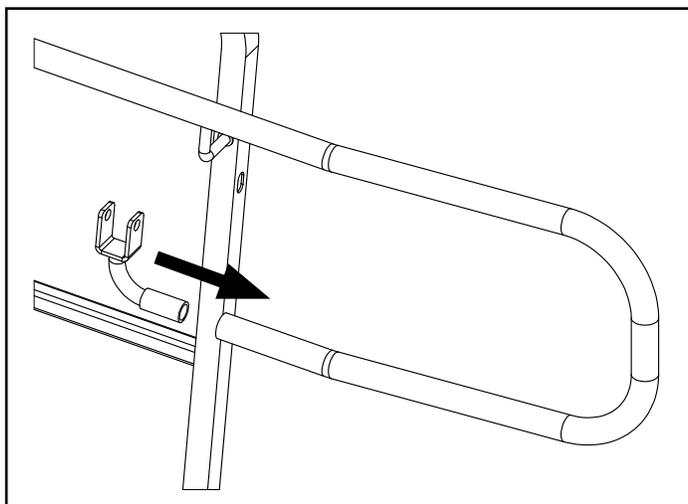
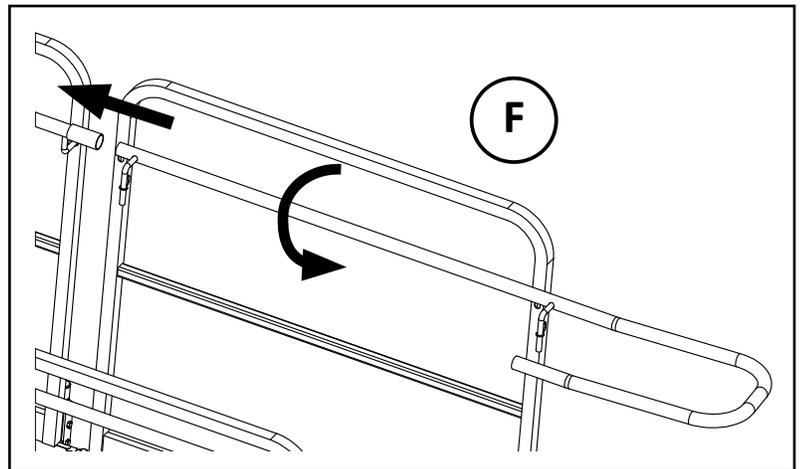
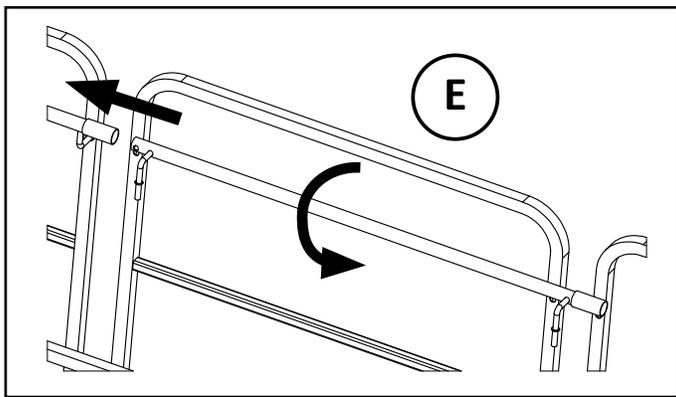
- A) Start at top of ramp. Insert ramp filler plate in gap between stage and ramp.
- B) Attach filler guard rails at top of ramp by placing clamps around guard rail leg and tightening hex nuts.
- C) Attach upper hand rails by placing L-bolts into slots of guard rail. Attach hex nuts. Do not tighten so adjustments can be made as assembled.
- D) Insert end of hand rail support return into end of upper hand rail and rotate so the saddle is around tube of filler guard rail. Insert bolt and attach and tighten hex nut.



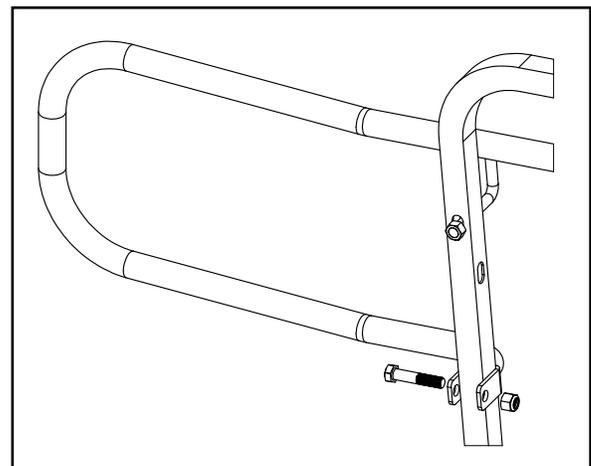
STEP 13 - INSTALLING RAMP HAND RAILS (continued)

- E) Insert 4' hand rail tube into end of upper hand rail and rotate so the L-bolts are in the slots of guard rail. Loosely attach hex nuts. Repeat until reaching ramp end guard rail.
- F) Insert lower hand rail into 4' hand rail tube and rotate so the L-bolts are in the slots of ramp end guard rail. Loosely attach hex nuts.
- G) Insert end of hand rail support return into end of lower hand rail and rotate so the saddle is around tube of guard rail. Insert bolt and attach and tighten hex nut.
- H) Repeat steps for hand rails on other side of ramp.
- I) **Thoroughly tighten all hex nuts.**

! WARNING ! – Failure to correctly install hand rails could result in serious injury or death. Verify that all hex nuts are tightened.



G



AS2100

Aluminum Staging

Assembly Instructions



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