

Installation Instructions, SmokeShield® Elevator

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Section 2 – Safety Check List

The SmokeShield® Elevator is a smoke containment system designed for emergency use. It deploys a smoke-resistant curtain to seal elevator hoistway openings during a fire. This is a life-safety device, and its proper installation and function are critical to ensure the safety of building occupants. Improper installation can lead to system failure, which can result in serious injury or death during a fire.

INSTALLATION, REPAIR, AND MAINTENANCE OF THIS PRODUCT REQUIRES SUBSTANTIAL KNOWLEDGE AND EXPERIENCE WITH THE INSTALLATION, REPAIR, AND MAINTENANCE OF FIRE AND SMOKE CONTAINMENT SYSTEMS, THEIR COMPONENTS, AND ASSOCIATED LIFE-SAFETY SYSTEMS.

THIS PRODUCT SHOULD BE INSTALLED, REPAIRED, AND MAINTAINED ONLY BY A PROFESSIONAL TRAINED IN THE INSTALLATION, REPAIR, AND MAINTENANCE OF SMOKE CONTAINMENT SYSTEMS ("PROFESSIONAL INSTALLER(S)"). HAVING SOMEBODY ELSE INSTALL, REPAIR, OR MAINTAIN THIS PRODUCT CAN COMPROMISE ITS LIFE-SAFETY FUNCTION AND PUT BUILDING OCCUPANTS IN DANGER OF SERIOUS INJURY OR DEATH.

IF ANY PART OF THIS MANUAL IS UNCLEAR (INCLUDING THIS WARNING) OR IF ADDITIONAL INFORMATION IS NEEDED, THE INDIVIDUAL INSTALLING, REPAIRING OR MAINTAINING THE PRODUCT MUST CONTACT CORNELLCOOKSON'S TECHNICAL SUPPORT DEPARTMENT.

- **Review the potential hazards and preventative measures listed below:**

Table 2.1 - Potential Hazards and Preventative Measures

Potential Hazard		Preventative Measure
	⚠ WARNING Electrical shock.	• Make sure electrical operator is properly grounded. • Turn off source power completely prior to servicing the motor. • Make sure wires are clear of any moving or potentially moving parts. • Avoid pinching wires when installing the motor cover. • Use a non-conductive object to change the controller state (battery on/off and alarm on/off).
	⚠ WARNING Pinched by moving components.	• Make sure the motor is turned off and unplugged before working with moving parts such as roller chain and sprockets, drop-out mechanisms, adjusting wheels, etc. • Locate all possible pinch-points of the unit (such as the drive chain, coil area, bottom bar, etc.). The door should be disconnected from power and/or locked down if someone is near or working on these areas.

- **Check the following during installation and before leaving the job site:**
 - a. Check that the keys and/or cotter pins have been set in place and fit properly at all sprockets or gears.
 - b. Check that the setscrews in each sprocket or gear (one over the key and one offset from the key) have been tightened properly.
 - c. Check all fasteners holding the unit to the building structures.
 - d. Check all fasteners used to assemble the components of the unit together.
 - e. Instruct owner or representative in the proper method of operating the door.

Section 3 – Freight Receiving

- Upon delivery, carefully check to make sure all components are included and in undamaged condition.
- If damage to any component has occurred in transit, **do not** proceed with the installation without first receiving authorization from the manufacturer.

NOTICE

If the installation proceeds with damaged components but without manufacturer authorization, neither the carrier nor the manufacturer shall be responsible for replacing damaged material, any operational issues with the door, or any resulting property damage to the door or the facility or injury to persons.

- **If the installation is stopped due to damage, do the following:**
 1. Take pictures of the damage.
 2. Do not move material from point of delivery to other premises once damaged components are discovered.
 3. If damage is visible prior to removing packaging, do not unpack such component/material until an inspection by the carrier has been completed.
 4. If the damage is found while removing contents from packaging, the packaging material must be saved until inspection is made.
 5. Container and packaging should be retained by Dealer until inspection is made by carrier's representative.
 6. Have components inspected by carrier's representative within 15 days from date of delivery.
 7. Dealer must obtain a copy of the Inspection Report from the carrier and provide to manufacturer.
- **Returning damaged components:**
 1. Obtain permission from carrier to return damaged component(s) to manufacturer's original shipping address.
 2. Route the return shipment via the identical carrier(s) involved in the original shipment.
 3. Notify the manufacturer when shipment is returned to manufacture plant.
- **Verify that all components have arrived and check for damage during shipping as soon as practicable, looking for each of the following:**
 1. Job construction drawings featuring different views (elevation, section, plan, etc.)
 2. (2) Wall Guides, (2) Face Guides, and any Additional Guide Filler Pieces if required (see construction drawing for details)
 3. Headbox Assembly (includes Shaft Assembly, Mounting Plate, Brackets, Hood Assembly, Curtain Assembly, Spring Assembly, and Motor). Will be shipped assembled.
 4. Additional Headbox Filler Pieces if required (see construction drawing for details)
 5. Control Box and Control Box Mounting Hardware (shipped loose)
 6. Wired Limit Switch Assemblies (shipped loose)
 7. Mounting Hardware (shipped loose)
 8. Installation Template (shipped loose)
 9. Verify material/finish/color of components matches what is listed on the job construction drawings and/or what was ordered.
- **If the delivery is incomplete, do the following:**
 1. Make note on delivery receipt.
 2. If inspection is completed while driver is present, obtain driver's signature on note identifying missing component(s).
 3. Immediately notify carrier and manufacturer, details are located on the Straight Bill of Lading.

Section 4- Pre-Installation

THESE INSTALLATION INSTRUCTIONS MUST BE READ THOROUGHLY BEFORE STARTING ANY INSTALLATION, REPAIR OR MAINTENANCE.

The Manufacturer will not be held responsible for any charges, damage, or injuries caused by any: (1) improper installation, repair, or maintenance; or (2) installation by anyone other than a person with substantial training, knowledge and experience with the installation of rolling doors, their parts and systems, and risks associated with them.

- **Each unit comes with an individual item number. If the job contains multiple units, be sure to locate all the components for each item and separate each.**

⚠WARNING

DO NOT interchange parts from another door with this door. Interchanging parts may lead to failure of the door components and could cause severe injury including crushing, amputation, internal injuries, and/or head trauma. **ONLY USE AUTHORIZED REPLACEMENT PARTS SPECIFICALLY DESIGNED FOR THIS DOOR.**

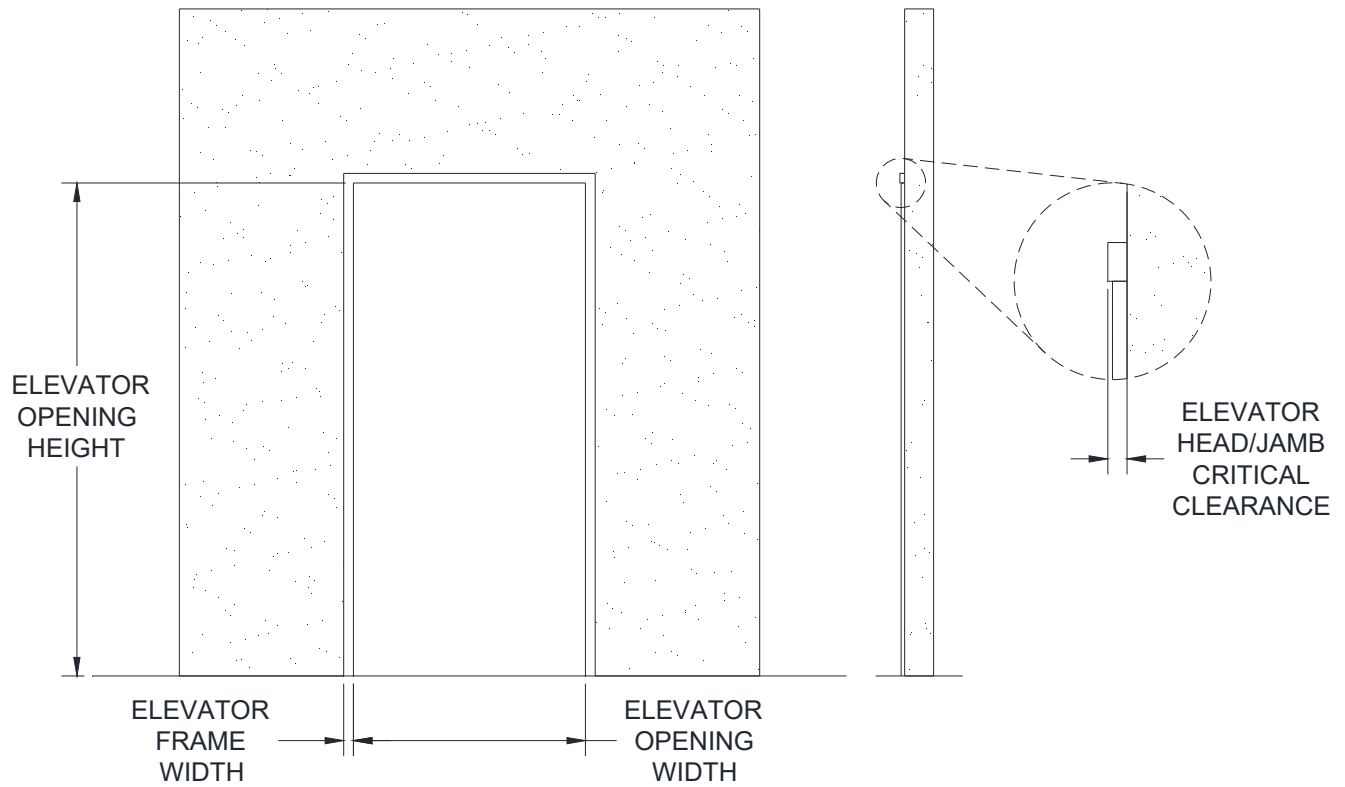
- a. Find the job construction drawings for the unit being installed and check the dimensions of the opening against those on the drawings. To the extent of any conflict or inconsistency between this Installation Manual and the drawings, the drawings govern. If you have any questions or comments, please contact Technical Support at 1-800-233-8366.
- b. Check the dimensions of the opening against the opening dimensions on the drawings. See **Figure 4.1** below.
- c. **Do not proceed** if the opening dimensions* differ from those on the drawings. Check with the distributor/manufacturer to be sure the correct door is being installed
****Note: The height can be adjusted, refer to Section 7 for instructions.***
- d. If the Guides are being installed adjacent to or over the elevator frame, ensure the frame is plumb.

Work Area:

- a. The key to a smooth installation is a clean and well-prepared work environment. Once the components have been inspected and the job construction drawings have been reviewed; lay out the components in the order of installation.
- b. The opening for the door should be cleaned and inspected for rough surfaces and construction debris.
- c. Next, the mounting hardware supplied with the door should correspond with the surface and construction features of the opening.

Section 4- Pre-Installation

Figure 4.1 - Opening Dimensions and Designations



Section 5 – Installation

1. Locate the left-hand (LH) and right-hand (RH) Wall Guides and the #10 wall fasteners provided with the unit. Position the guides as shown in the provided construction drawings.

Note: If guide fillers are required, install them behind the guides as shown in Figure 5.1b. The mounting holes on the Guide Filler Plate are intentionally offset from centerline of part. Ensure correct orientation so that the Guide and Guide Filler are flush with each other.

Figure 5.1a - Wall Guides

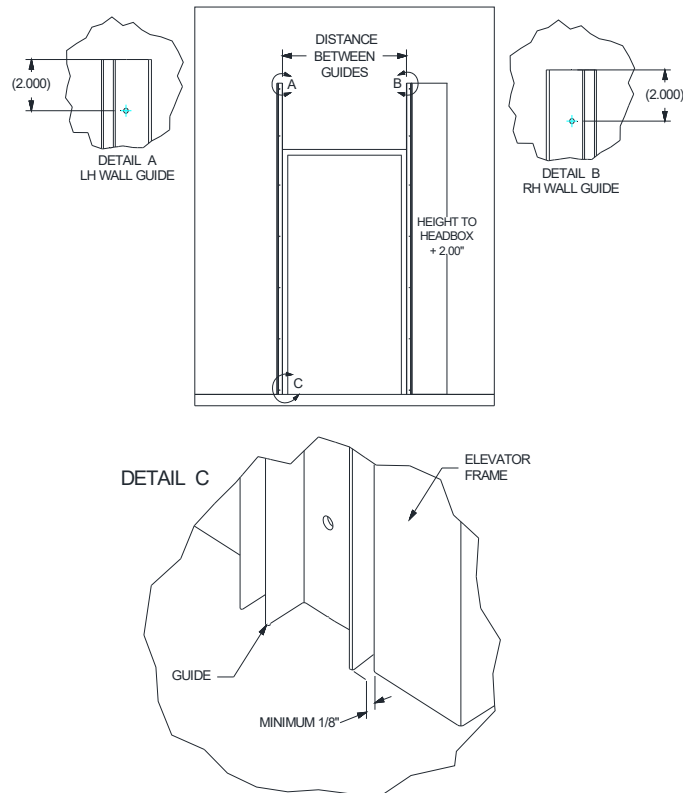
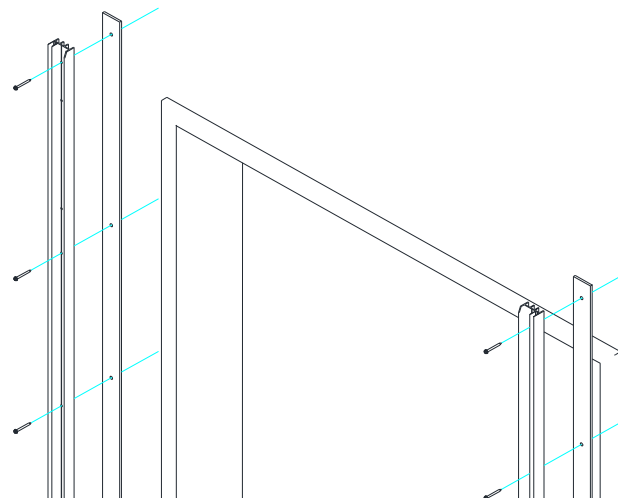


Figure 5.1b – Guide Fillers (if required)



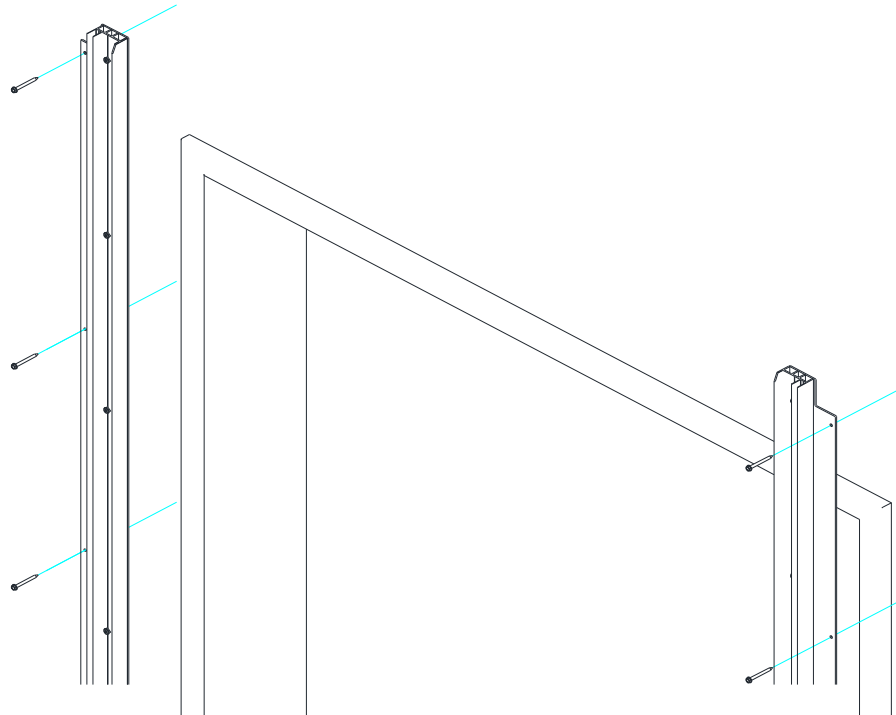
Section 5 – Installation

Over Frame Mounting: If the unit requires over frame mounting, locate the guide assemblies, which include the extrusion and plate. Secure the guide assemblies using the provided hardware through the holes in the plates as shown below in Figure 5.1c.

Refer to the construction drawings for job-specific details, as configurations can vary.

Note: Some configurations may require guide disassembly to create clearance for installing the mounting plate.

Figure 5.1c – Over Frame Mounting (if selected)



2. Before securing the Wall Guides, verify the following:
 - A. The guides are plumb.
 - B. The distance between guides matches that shown on the construction drawings within $\pm 1/8"$, and is consistent throughout the height of the guides.
 - C. The top edge of both the Wall Guides are level with each other, and match the Height to Headbox dimension shown on the construction drawings $\pm 2.00"$. Shimming may be required to match the top edges of the guides to each other.
 - D. If the guides are mounting up against or on top of an elevator frame, ensure that they fit as shown in the construction drawings.
 - E. Ensure a minimum clearance of $1/8"$ from any wall protrusion (e.g. an elevator frame), as shown in Figure 5.1a.
 - F. The Wall guides must be installed without bowing or twisting. Refer to Section 9 for maximum allowable tolerances.

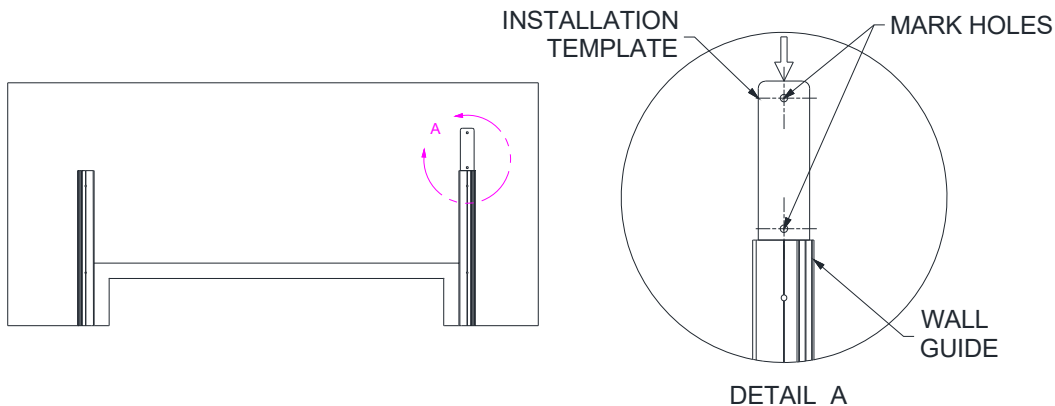
After confirming all conditions are met, secure the Wall Guides using the provided #10 fasteners in the pre-drilled holes. If A, E, or F are not satisfied, see Section 7.

Section 5 – Installation

3. Position the Installation Template flush against the right-hand (RH) guide and mark the hole locations as indicated. Repeat the process for the left-hand (LH) side.

Important: Do not drill holes or install fasteners at this stage.

Figure 5.3 – Marking Wall Fastener Locations



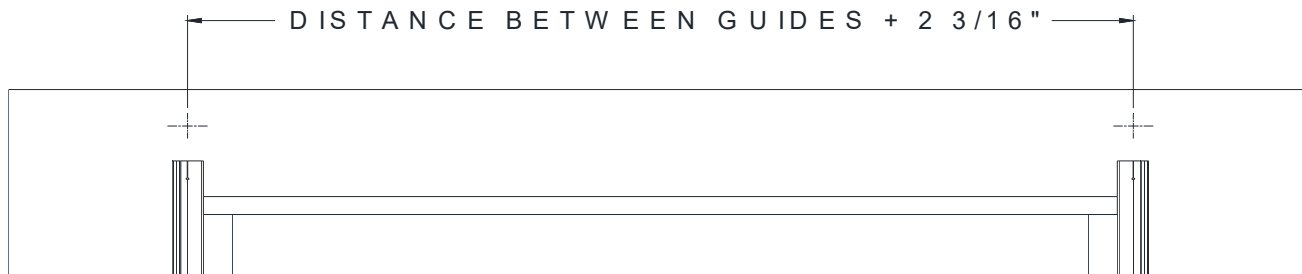
4. Before drilling, measure the center-to-center distance of the marks on each side. The result must conform to the following formula:

$[\text{Distance Between Guides}] + 2 \frac{3}{16}''$ (with a tolerance of $\pm \frac{1}{8}''$)

This verification is critical to ensure the Headbox will be installed correctly.

If the measurement is incorrect, re-verify that the "Distance Between Guides" is set correctly and adjust it if necessary before proceeding.

Figure 5.4 – Measuring Fastener Location Distance



5. Install the (4) #12 Flange Head Tapping screws at each marked location, ensuring the head of each fastener protrudes at least $\frac{5}{16}''$ from the wall.

Note for Over-Frame Mounting Configuration: Head box Fillers are required for this configuration. If applicable to your installation, install them now as shown in Figure 5.5b.

Section 5 – Installation

Figure 5.5a – Installing Wall Fasteners

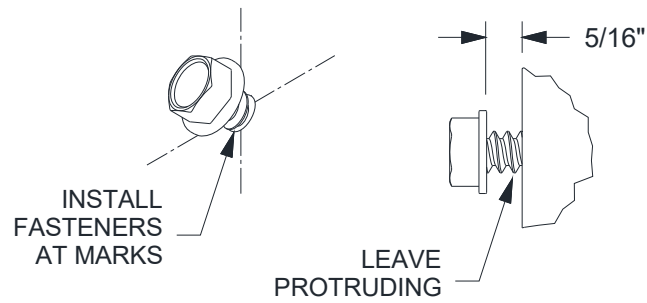
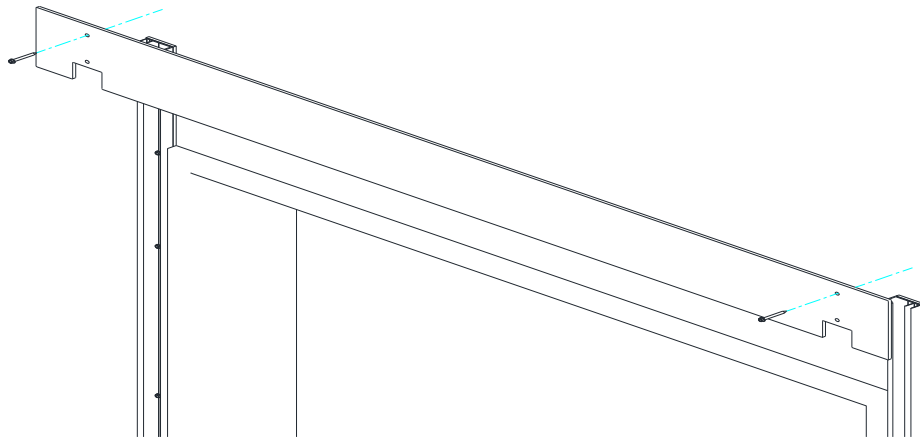
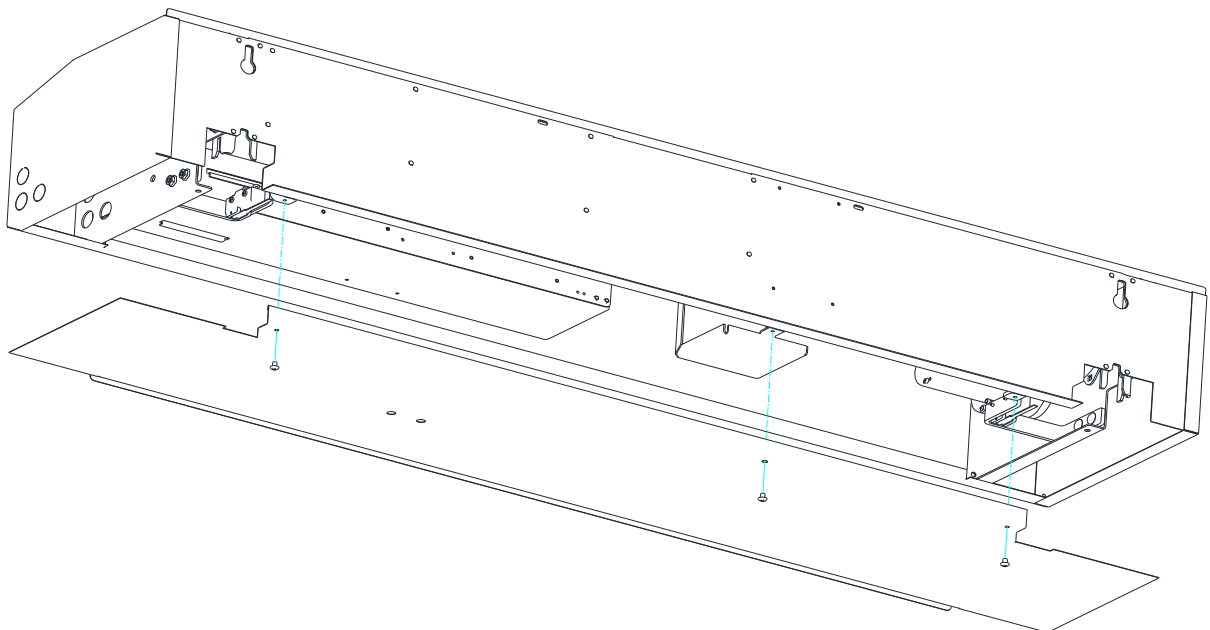


Figure 5.5b – Headbox Filler if Required



6. Locate the Headbox Assembly and remove the Hood Cover by removing the #10 fasteners as shown in Figure 5.6.

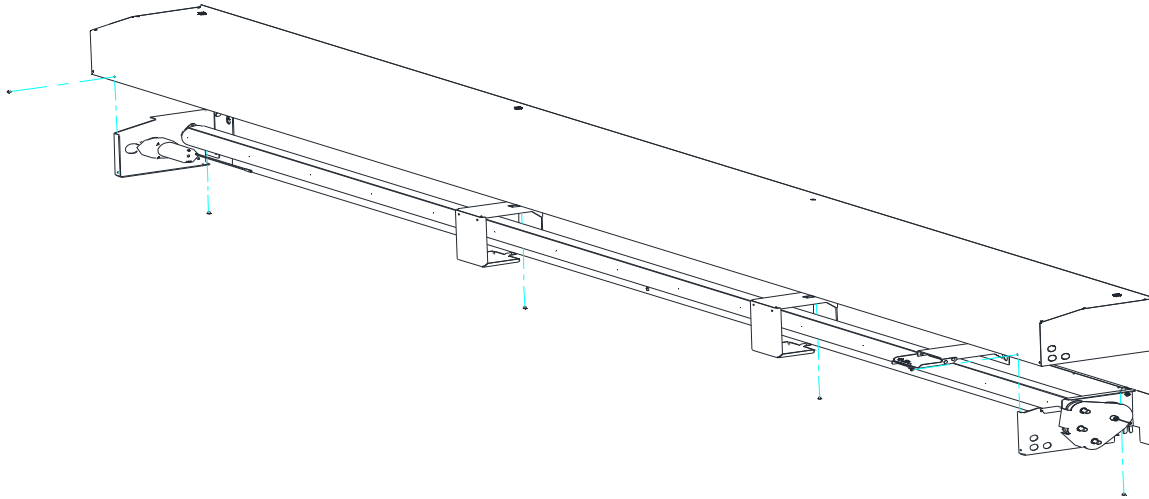
Figure 5.6 – Removing Hood Cover



Section 5 – Installation

7. Remove the Hood by removing the #10 fasteners shown in Figure 5.7.

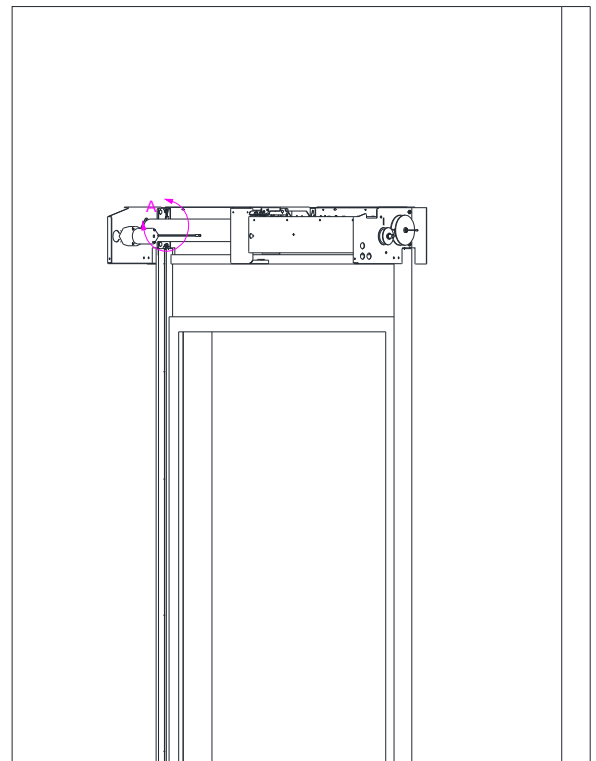
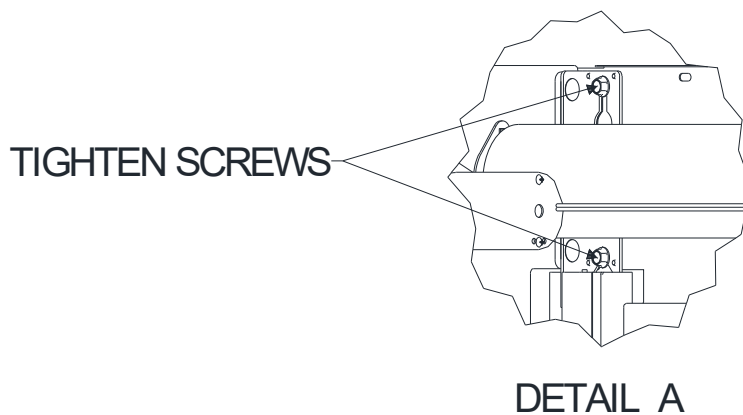
Figure 5.7 – Removing Hood



8. Safely lift the Shaft Assembly and hang it by aligning the Mounting Plate keyholes with the pre-installed #12 flange head fasteners as shown in Figure 5.8. Verify the Shaft Assembly is level before proceeding. Once the Shaft Assembly is level, tighten the pre-installed #12 fasteners to secure the Shaft Assembly into place.

Required Tool: A drill extension is necessary for this step.

Figure 5.8 – Installing Headbox



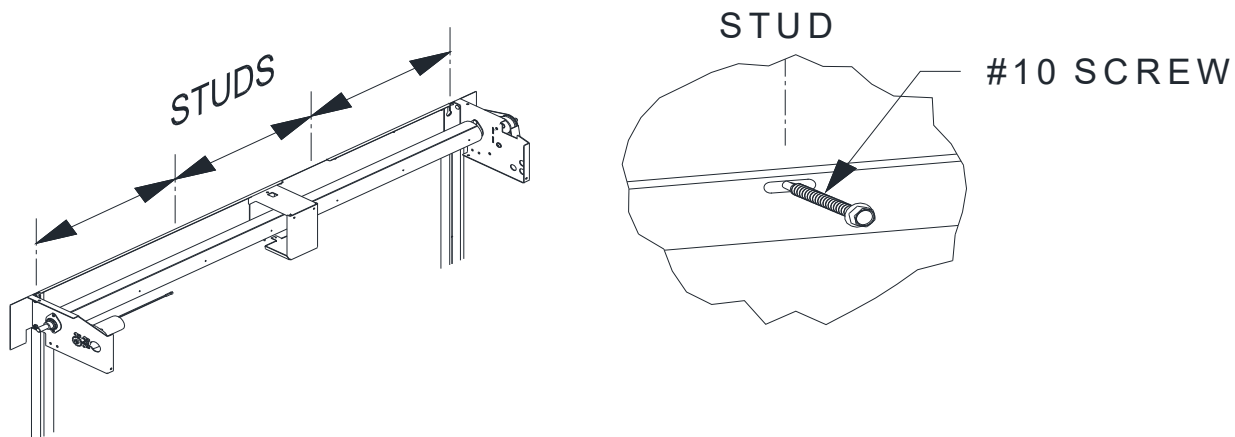
Section 5 – Installation

9. Install the #10 self-drilling screws through the pre-cut slots at each stud location near the top edge of the Mounting Plate (see Figure 5.9).

Required Tool: A drill extension is necessary for this step.

Caution: Exercise extreme care to avoid damaging the curtain while drilling.

Figure 5.9 – Mounting Plate Wall Fasteners

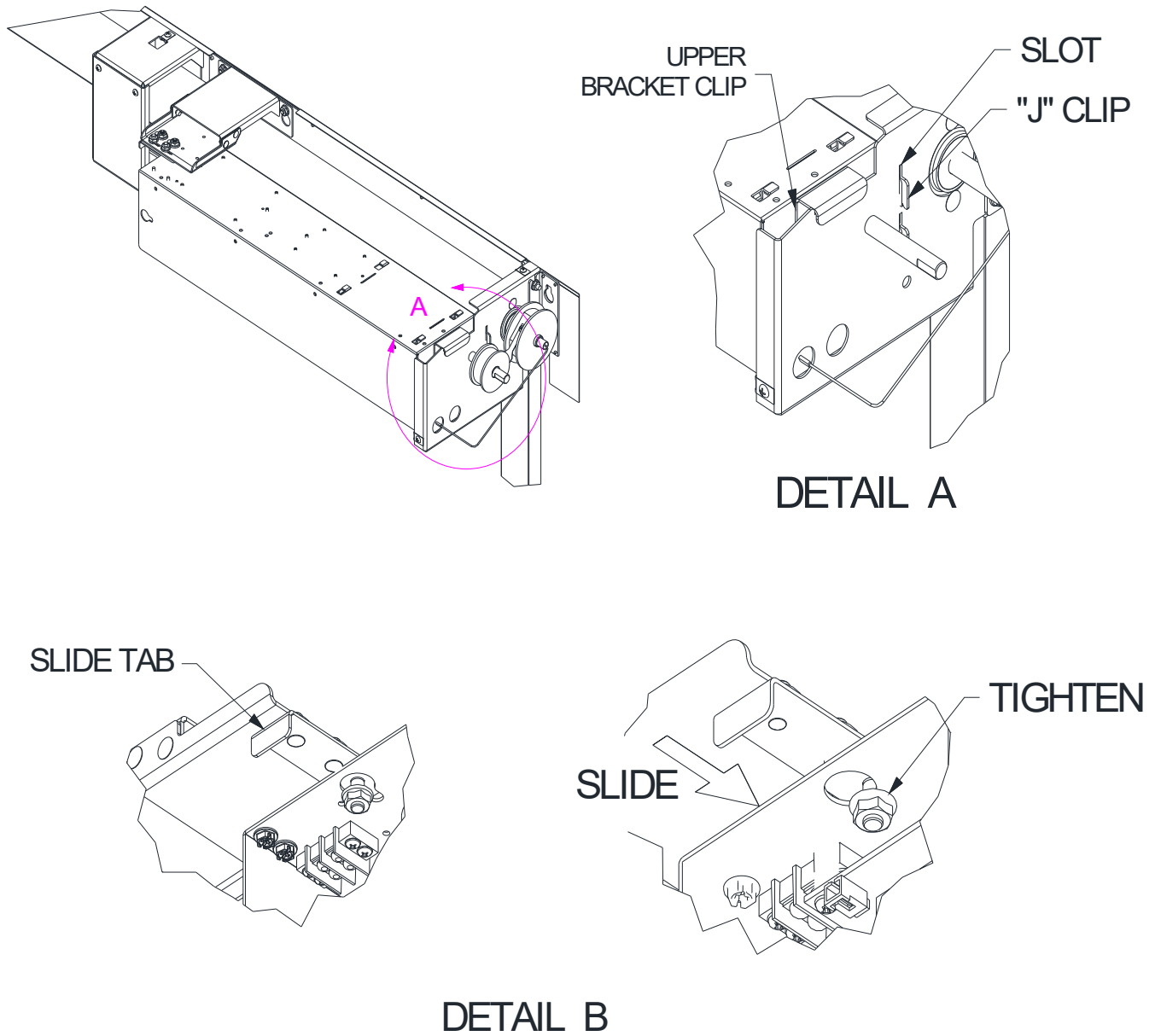


10. Installing the Control Box:
 - A. Before mounting, install the battery into the Control Box.
 - B. Attach the Control Box to the RH Bracket by engaging the “J” clip and upper bracket clip with the corresponding slots (see Figure 5.10a).
 - C. Raise the free end of the Control Box and guide the downward-facing stud on the Support Bracket through the keyhole.
 - D. Slide the locking tab to position the stud within the narrow section of the keyhole.
 - E. Tighten the nut on the keyhole stud and then fully tighten the 1/4-20 fasteners on the Support Bracket.

Note for Above-Ceiling Installation: For units installed above a ceiling, the control box can be mounted facing forward to allow access via a removable panel. See Figure 5.10b

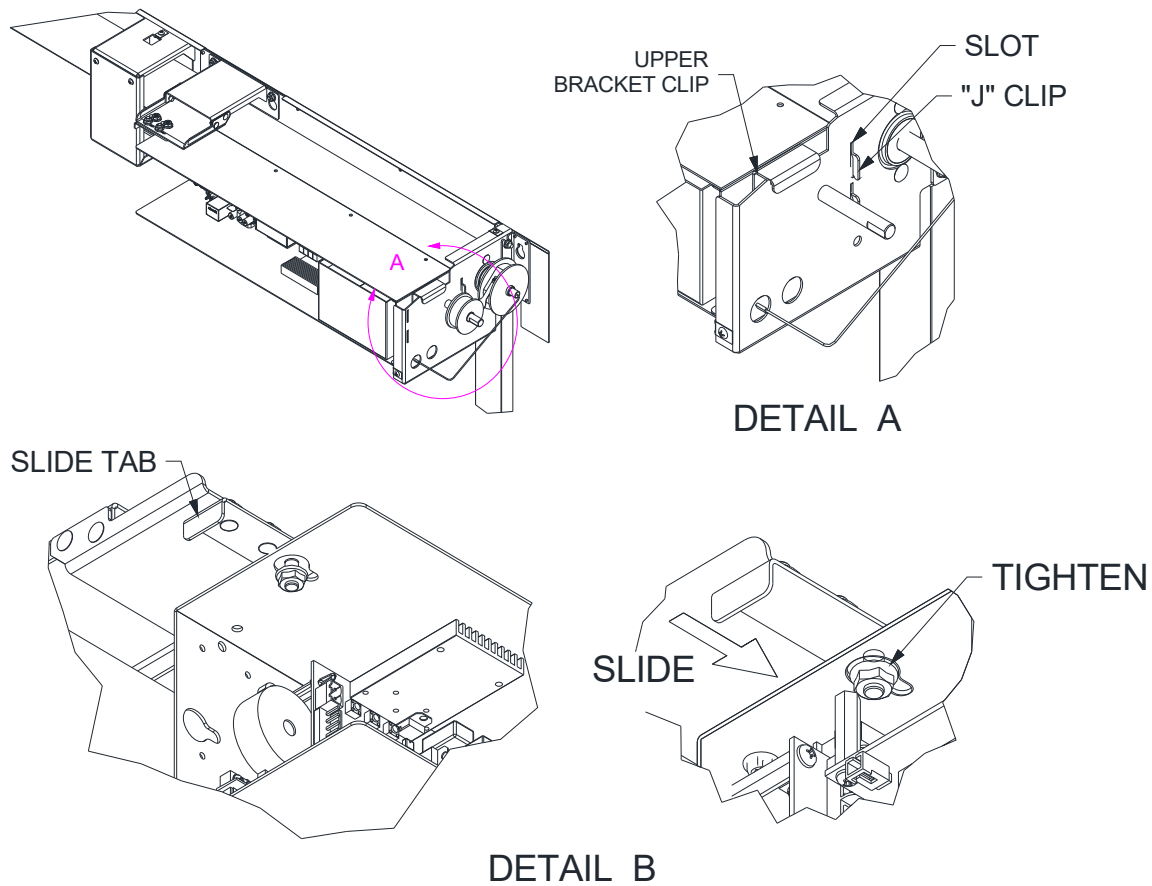
Section 5 – Installation

Figure 5.10a – Installing Standard Control Box



Section 5 – Installation

Figure 5.10b – Installing Upper Access Control Box

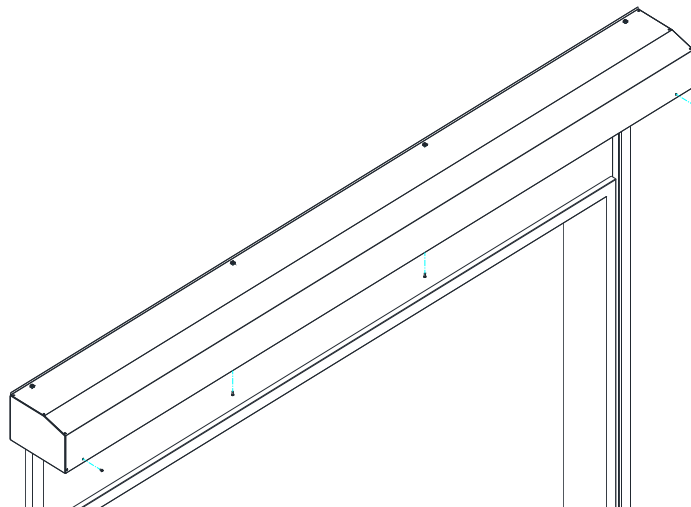


11. Connect the Motor and Egress Switch wires into the Control Box as detailed in the provided Motor Instructions.

Note: Secure any loose wires using the provided cable ties. Ensure that all wires are routed away from the spring so that they do not tangle during operation.

12. Reinstall the Hood using the hardware removed in Step 7.

Figure 5.12 – Installing Hood



Section 5 – Installation

13. Installing the Face Guides, locate the left-hand (LH) and right-hand (RH) Face Guides and position them onto the corresponding Wall Guides as indicated. Using a non-marking rubber mallet, firmly snap the Face Guides onto the Wall Guides.

Caution: To prevent damage, strike the guides only on the designated surfaces as detailed in Figures 5.13a through 5.13c. Striking the incorrect areas can permanently damage the guides.

Important: Leave a small section at the top of each guide unsnapped. This will create the necessary clearance to feed the curtain into the guide in the next step.

Figure 5.13a – Guide Positioning/Strike Area

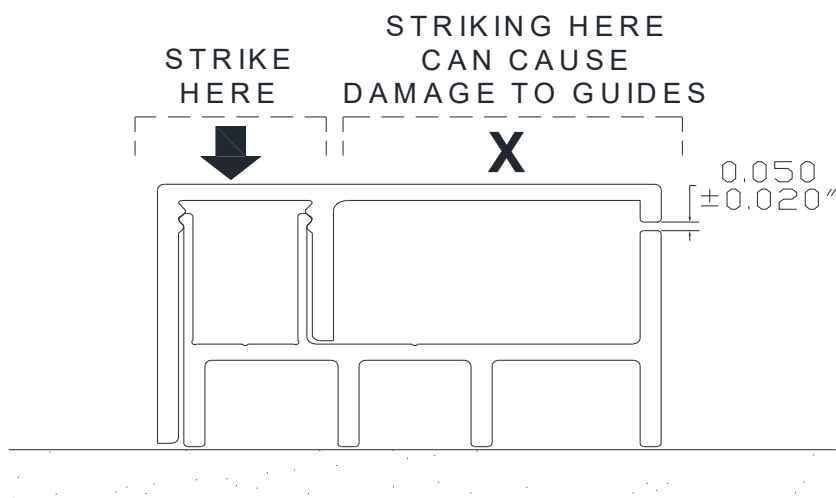
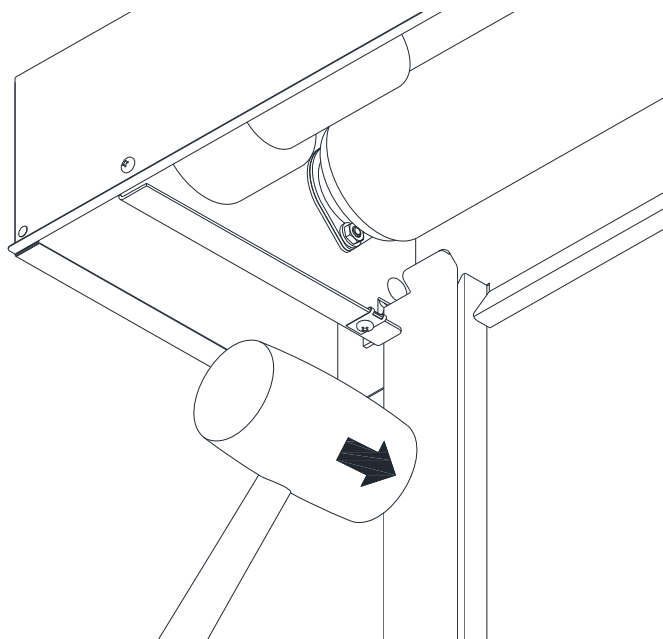
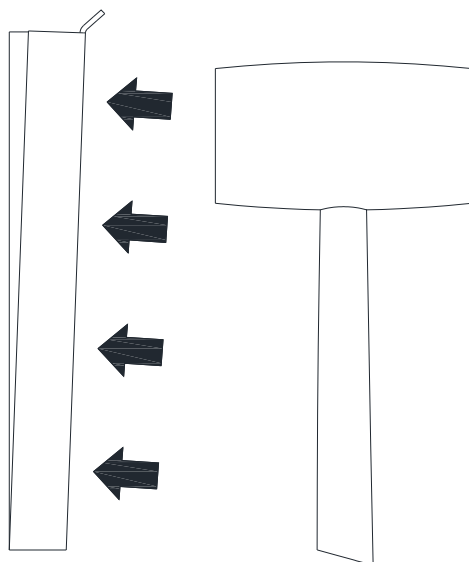


Figure 5.13b – Strike Method



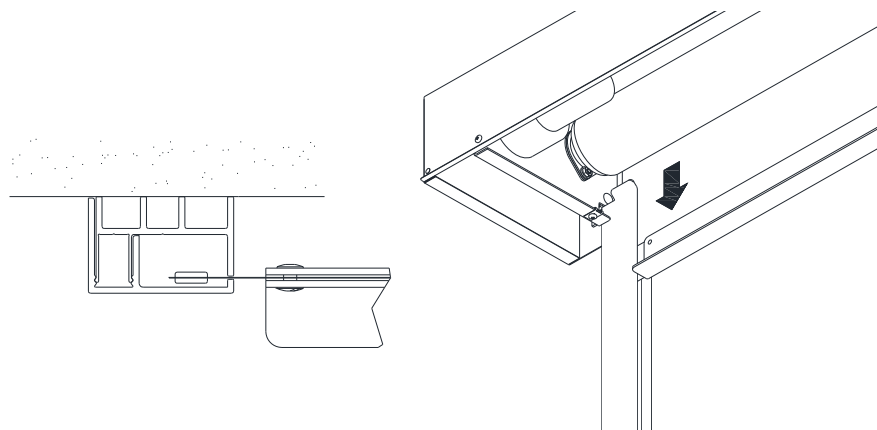
Section 5 – Installation

Figure 5.13c – Snap Direction



14. Unrolling the Curtain: Remove the shipping bands and gently lower the curtain. Verify the Curtain and Edge Retention Buttons feed into the Guides as shown. After the curtain is fully lowered and properly seated in the guides, complete the installation by snapping the remaining top sections of the Face Guides into place.

Figure 5.14 – Installing Curtain into the Guides



15. Verify free movement by lifting the curtain with the handle and then allowing it to close completely under its own weight. The curtain should travel smoothly without binding in the guides. Use the installation template as a gauge to check the guide gap. The template must move freely along the entire length of the gap without binding. If the gap is too narrow and the template does not move freely, refer to Section 9 for adjustment procedures.

Note: Once the motor is connected, you will be able to adjust the door's closing speed.

Section 5 – Installation

16. Locate the input wiring which is attached to the Control Box. The input wiring includes:

- (3) Wires [BLACK, WHITE, and GREEN] to be attached to the AC Power Source
- (2) Wires [PURPLE and GREY] to be connected to Alarm Connection

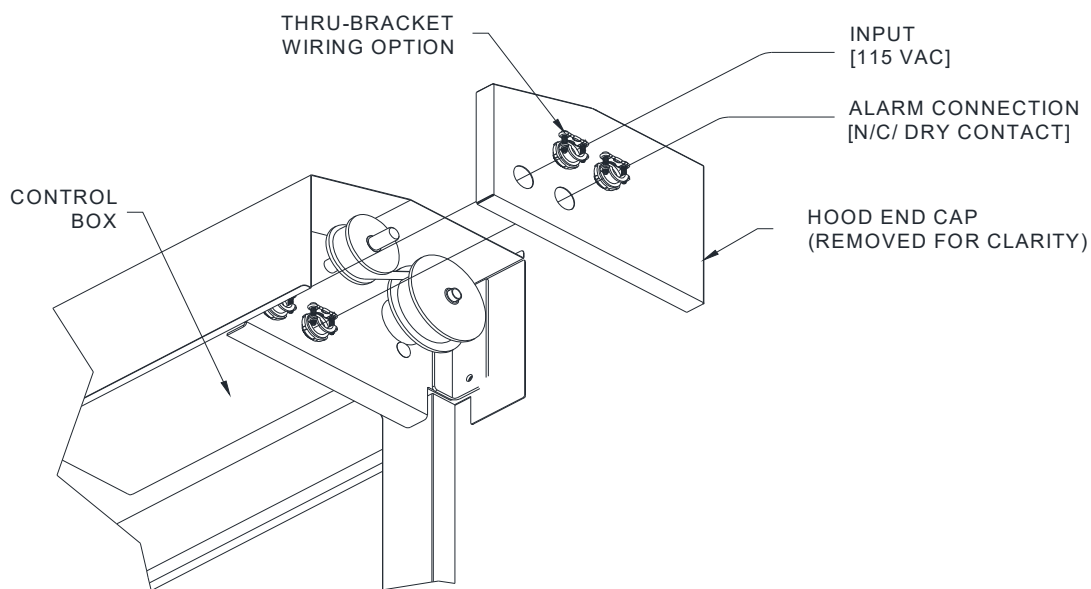
Refer to the provided Operator Owner's Manual for more information.

17. Locate the pre-cut knockouts in the hood where the wiring will exit the Headbox. Remove the knockouts and install the preferred cord grip or conduit adapter. Route the wires through the hood as shown.

18. Make sure to pull the wiring tight or secure with the provided cable ties.

Caution: Loose or excess wire left within the Hood could get caught in the spring assembly during operation.

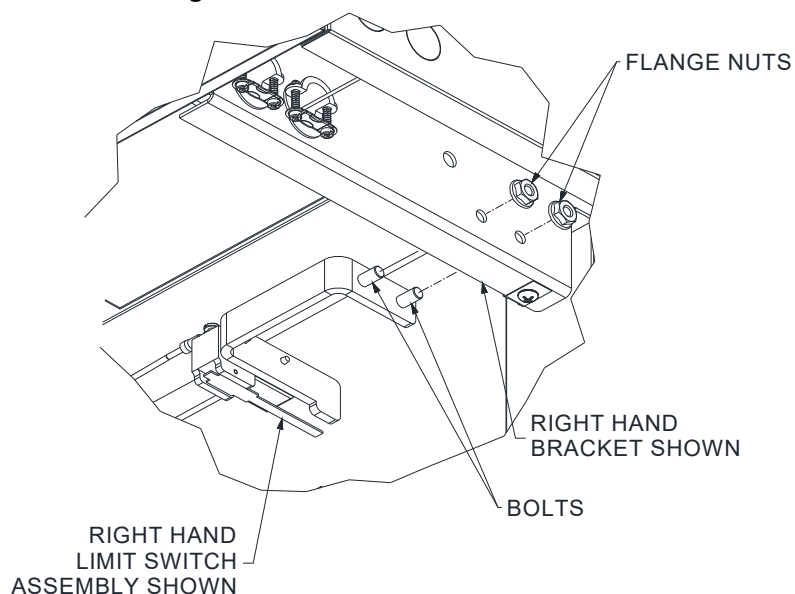
Figure 5.18 – Input Wiring



19. Locate the Limit Switch Assemblies. Note that these components are pre-wired and shipped loose. Mount the appropriate assembly to each bracket by guiding its pre-installed bolts through the corresponding holes in the bracket, as indicated in Figure 5.19. Secure each assembly by fastening the provided 1/4-20 Flange Nuts onto the bolts.

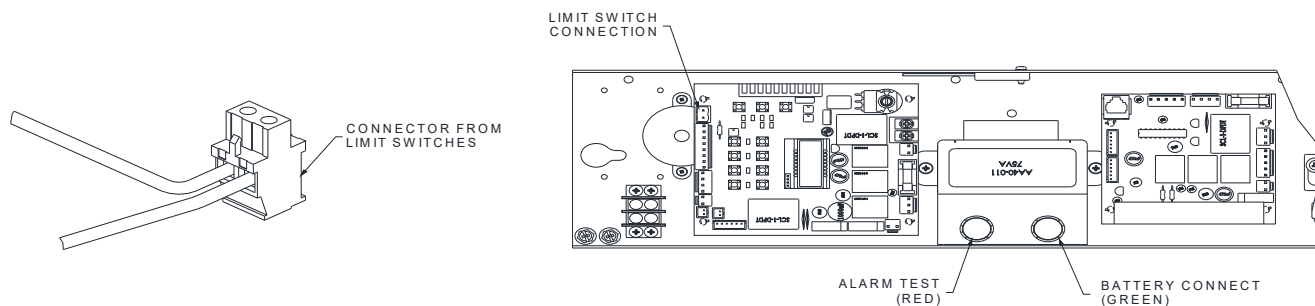
Section 5 – Installation

Figure 5.19 – Limit Switch Installation



20. Install the Limit Switch Connector into the Limit Switch Connection on the Control Board shown in Figure 5.20.

Figure 5.20 – Limit Switch Connector



21. The Control Box is now ready to be wired to the AC Power Source. Refer to the provided Motor Owner's Manual.

22. Operation Testing:

Note: Once the Limit Assemblies are installed and connected, the door can be safely operated with the Hood Cover on or off.

1. Connect the battery (Green Switch ON), ensure the system is in "Alarm Mode" (Red Switch ON), and turn on the power to the unit (115VAC). The door should remain in the closed position.

Note: To make changes to the state of the controller, (battery on/off or alarm on/off), use a non-conductive object that is less than 3/8" in diameter to feed through the hood cover and press the switch.

2. Clear the "alarm mode" (Red LED off). The door should automatically return to the open position.

Section 5 – Installation

Note: The door may perform a few abbreviated “up/down” cycles near the upper limit the first time it reaches the fully open position. The motor is calibrating the force required to hold the unit open.

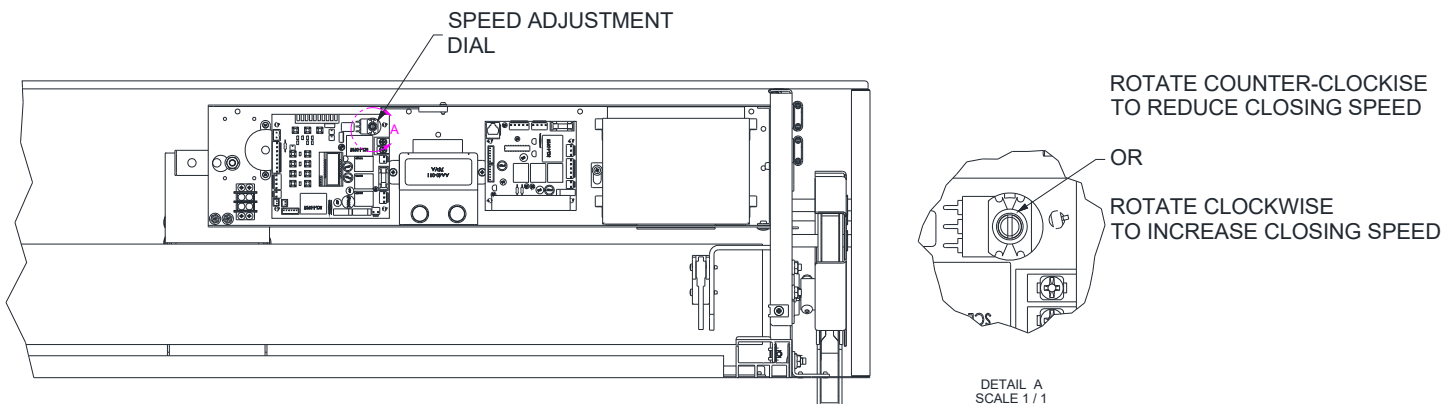
3. Return the system to “Alarm Mode”. The door should close after a 10 second delay.
4. Press the curtain mounted switch labeled “PUSH”. The door should return to the fully open position, pause for approximately 10 seconds and then reclose.
5. Reconfirm manual operation by lifting the door using the handle and then releasing. Door should reclose upon release.

23. Speed Adjustment:

Note: The Control Board features a Speed Adjustment Dial to fine tune the closing speed of the door. The recommended closing speed is 10-12 inches per second.

1. Time the door to determine closing speed before adjustment.
2. Adjust the closing speed by either:
 - a. Turning the Speed Adjustment Dial counter-clockwise to reduce the closing speed.
 - b. Turning the Speed Adjustment Dial clockwise to increase the closing speed.
3. Time the door again to verify the closing speed is within the recommended range.

Figure 5.23 – Speed Adjustment Dial



24. Slow Stop Adjustment:

Note: The Control Board features a Slow Stop Adjustment to fine tune the final opening speed of the door.

- The recommended final opening speed is 40%-50% full speed.
- The recommended slow stop starting position for the bottom bar is 12-18 inches below the headbox.
- Use the following procedures to fine-tune the “Slow Stop” functionality.

To Adjust...

Follow These Steps

Slow Stop
TIMER (*Sets when the
slow-down begins*)

1. Enter Mode: Press and hold T2 and T3 for 5 seconds.
 2. Adjust Value: Use the +/- buttons to set the timer.
 3. Save Setting: Press T2 and T3 again to save.
- Note: The displayed value is 10x the actual timer setting (e.g., a display of 50 equals a 5-second timer).

Section 5 – Installation

Slow Stop
SPEED (*Sets how
fast the door moves
during slow-down*)

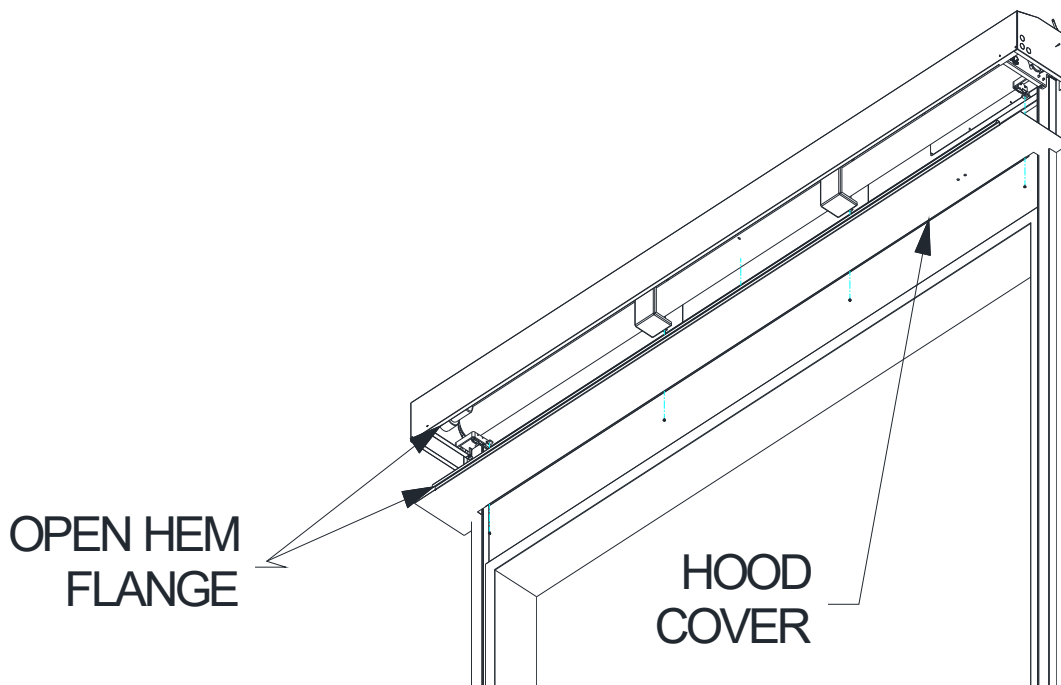
1. Enter Mode: Press and hold T2 and (+) for 5 seconds.
 2. Adjust Value: Use the +/- buttons to set the speed.
 3. Save Setting: Press T2 and (+) again to save.
- Note: The displayed value is the percentage of full opening speed (e.g., a display of 45 equals 45% speed).

- 25. Installing the Hood Cover:** Hook the open hem on the Hood Cover over the flange on the Hood. Align the cover and install the #10 fasteners to secure it in place as shown in Figure 5.25.

After installing the Hood Cover, perform the following checks:

- Verify Clearance: Confirm that the lever arm of each limit switch protrudes freely through the gap in the Hood Cover.
- Check Activation State: Ensure that neither limit switch arm is in an activated state with the cover installed.
 - If an arm is activated or does not have proper clearance, adjust its position before proceeding.

Figure 5.25 – Installing Hood Cover



- 26. Using the Temporary Installation Clip until Operational Turnover.**
- A. Locate the Installation Clip provided with the unit. This clip is used to hold the door open when power is disconnected.
 - B. Manually lift the curtain to the fully open position and remove the center #10 Fastener from the Hood Cover.

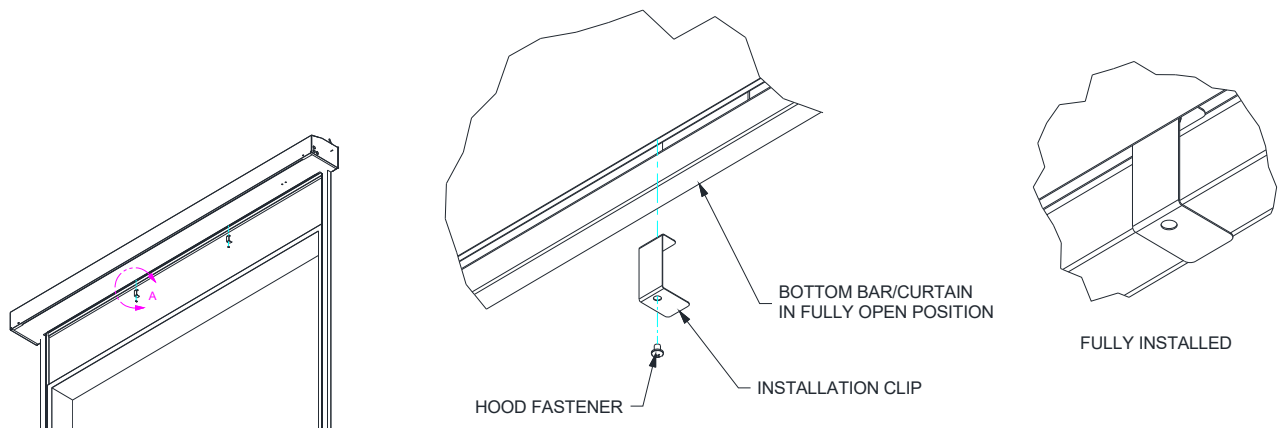
Section 5 – Installation

- C. Position the Installation Clip as shown in the diagram and secure it by reinstalling the #10 fastener through the clip.

Important: The Installation Clip must remain in place until the system is fully commissioned and ready for operational turnover.

Notice: To prevent the battery from being depleted before turnover, ensure the battery disconnect switch (Green Switch) is in the OFF position until permanent power is connected.

Figure 5.26 – Holding Door in Open Position without Power



Section 6 – Curtain Repair

Repairing Small Holes or Tears in Curtain:

In the event of a small hole or tear in the curtain, the curtain can be repaired in the field using a Curtain Repair Kit. The Curtain Repair Kit includes a 2" wide High-Temperature Tape to patch the curtain.

If the Damage Is...	Action Required
* A tear longer than 6 inches, OR * Damage with missing curtain material (requiring a patch, not just closing a tear)	STOP. Do not attempt a repair. Contact the Service Department for guidance.
* A clean tear or hole less than 6 inches long	PROCEED with the repair using a <i>SmokeShield: Elevator Curtain Repair Kit</i> . (If you do not have a kit, contact the Service Department to order one.)

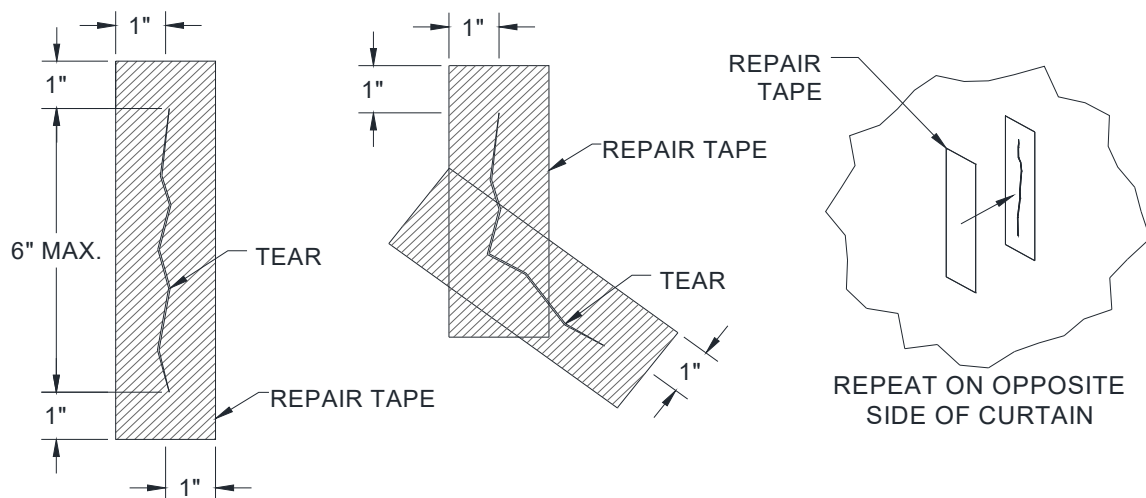
- Clean the surface around the tear to ensure it is free of dust and debris.
- Reposition and flatten the curtain fabric so the edges of the tear are touching, minimizing any gaps.
- To ensure accurate placement, you may faintly mark a 1" border around the damaged area.

Caution: The repair tape adhesive is extremely strong. Once applied it is very difficult to remove and may cause further damage to the curtain. Plan your placement carefully.

- Cut a piece of the repair tape that covers the entire tear and overlaps the edges by at least 1 inch on all sides.
- Carefully place the tape over the damage area, using your marks as a guide. Press down firmly to ensure a strong bond.

To prevent the exposed adhesive from sticking to the curtain when it is coiled, you must apply a second patch to the opposite side.

- Cut a second piece of tape identical in size to the first.
- Place this backing tape directly over the first patch on the reverse side of the curtain, covering the exposed adhesive completely.



Section 7 – Guide Field Adjustments

If the Headbox elevation is too high and needs to be adjusted from the original, this can be accomplished by field adjusting the guides. Follow the procedure that matches the guide assembly on the project.

Offset Exposed Mounting:

1. Measure from the desired bottom of the headbox location to the floor, then add 2".
2. Snap the face guide part and the wall guide part together. Refer to Figure 7.1

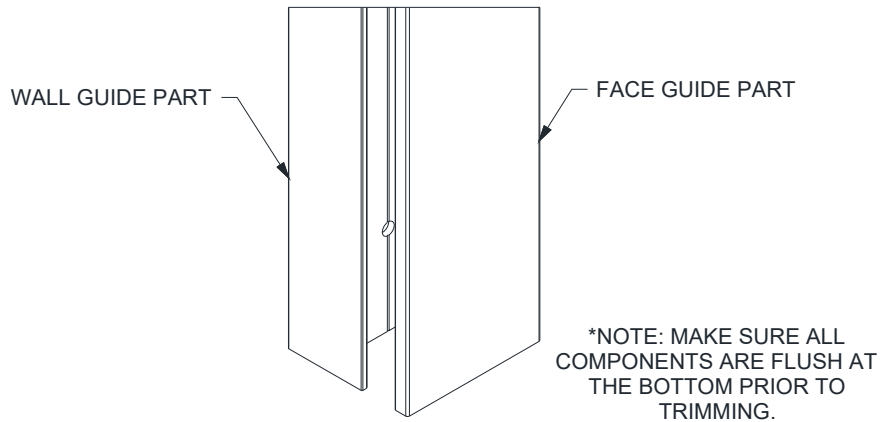


Figure 7.1

3. The bottom of the guide must be cut for the adjustment. Measure from the top of the wall guide part and place a mark at the length that was obtained in step 1.
4. Carefully cut through the entire guide assembly. It is recommended to use a miter saw with a carbide tipped blade.
5. Using a pry bar, separate the face guide part and the wall guide part ensuring to not damage the guide.
6. If the overall height of the guide assembly decreased more than 1", a new bottom mounting hole will need to be drilled. For the placement and detail of the new hole, refer to Figure 7.2.

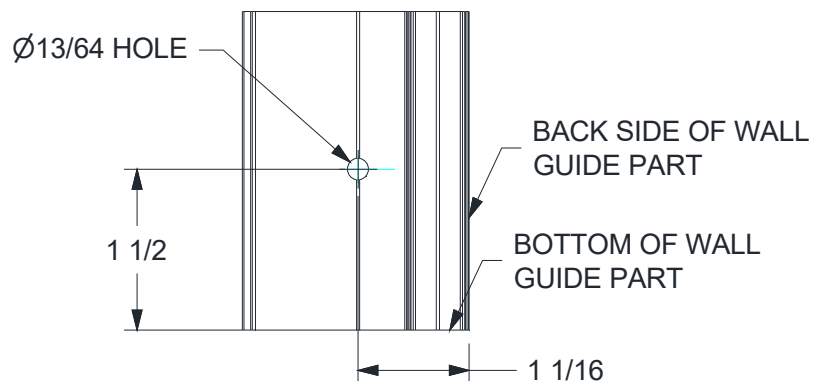


Figure 7.2

7. Using any type of deburring tool, deburr the areas that were just trimmed.
8. Refer back to guide mounting section to complete the installation.

Section 7 – Guide Field Adjustments

OverFrame Guide Mounting:

1. Measure from the desired bottom of the headbox location to the floor then add 2".
2. Using the provided hardware, place the overframe guide part and wall guide part together.
3. Snap the face guide part and wall guide part together. Refer to Figure 7.3

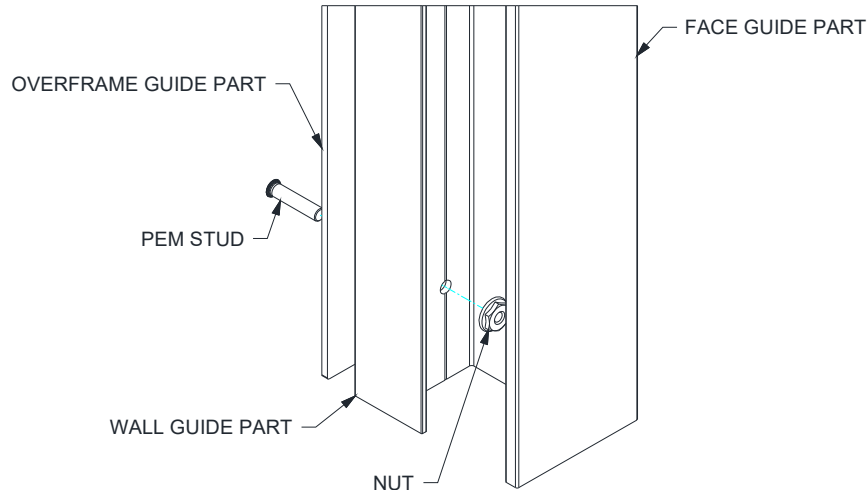


Figure 7.3

4. The bottom of the guide must be cut for the adjustment. Measure from the top of the wall guide part and place a mark at the length that was obtained in step 1.
5. Carefully cut through the entire guide assembly. It is recommended to use a miter saw with a carbide tipped blade.
6. Using a pry bar carefully separate the face guide part and the wall guide part.
7. If the overall height of the guide assembly decreased more than 1", a new bottom mounting hole will need to be drilled. For the placement and detail of the new hole, refer to Figure 7.4. The hole will be drilled through the overframe guide part and the wall guide part.

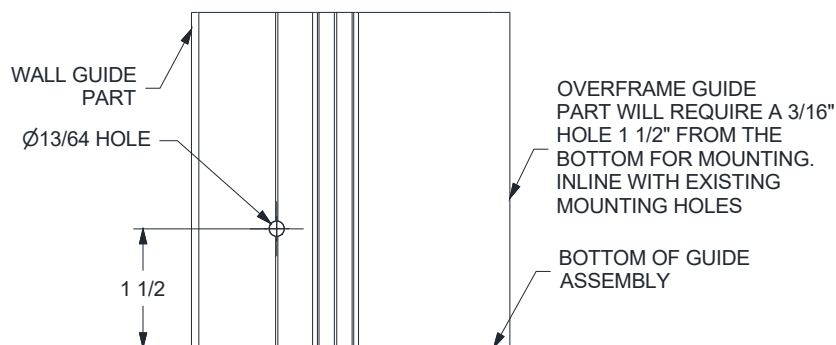


Figure 7.4

8. Using any type of deburring tool, deburr the areas that were just trimmed.
9. Place the PEM stud from the hardware bag in the hole that was just drilled. Using the provide nut, seat the PEM stud. It is recommended to use a ratchet and socket.
10. Refer back to guide mounting section to complete the installation.

Section 7 – Guide Field Adjustments

Mounting surfaces that are not perfectly flat or plumb can deform the guide and headbox assemblies. This misalignment will prevent the door from operating correctly. To resolve this, shimming is required to compensate for surface imperfections and achieve a true, plumb installation.

Shim Requirements: Wood or metal shims

Sealant Requirements: Dow Corning® RTV silicone sealant #732 or equivalent

Guide Shimming Instructions:

1. Place the guide against the wall in the correct location and orientation as described in Section 5.
2. Insert the fasteners to the depth required to hold the guide plumb to the wall while not inducing any bow or twist. Longer fasteners may be required based on site conditions.
3. Insert shims behind the guide above and below each fastener to fill the gap between the wall and the plumb guide.
4. Tighten the fasteners once the shims are in place.
5. Recheck that the guide is still plumb and adjust as needed.
6. Trim all shims flush with the face of the guide.
7. Continue install as normal and then follow the sealing instructions below once the install is complete.

Headbox Shimming Instructions:

1. With the #12 flange head fasteners pre-installed as described in Section 5, lift the Shaft Assembly and hang it by placing the Mounting Plate keyholes on the fasteners and the Mounting Plate tabs into the guides. Longer fasteners may be required based on site conditions.
2. Insert shims behind the headbox on the left and right of each fastener to fill the gap between the wall and headbox. Shims should not create any bow or twist in the back plate of the headbox.
3. Tighten the fasteners once the shims are in place.
4. Repeat steps 2 & 3 for the #10 fasteners in each pre-cut slot along the top of the headbox.
5. Check the alignment of the headbox to the guides and adjust as needed.
6. Trim all shims flush with the outside edges of the headbox.
7. Continue install as normal and then follow the sealing instructions below once the install is complete.

Note:

Depending on the minimum amount of shimming required, additional headbox or guide filler pieces may be necessary to re-align the headbox with the guides in addition to shimming.

After the unit is fully installed, it is critical to inspect for any gaps between the wall and the guide, headbox, or hood assemblies. Even small gaps can compromise the system's smoke and draft control properties.

Sealing Procedure:

1. Select the Correct Sealant: Use only the fire-rated sealant specific in the material list for this unit. Using an incorrect sealant will void the system's rating.
2. Apply a Fillet Bead: Apply a continuous bead of sealant (a fillet) to the exterior edge where the guide, headbox, and the hood meet the wall. The goal is to seal the *outer perimeter* of the entire assembly.

Caution: Do NOT fill the void or gap *behind* the guide or headbox assemblies with sealant.

During a fire, the sealant is designed to expand. If trapped behind the unit, this expansion can generate enough force to tear the assembly from the wall, causing a complete failure of the smoke seal. The sealant fillet must only be applied to the exterior edge.

Section 8 – Maintenance Schedule

▪ **Maintenance Schedule:**

This product requires annual inspection and drop testing per NFPA 80.

Note: If any of the following problems exist, **do not** operate the door until repaired.

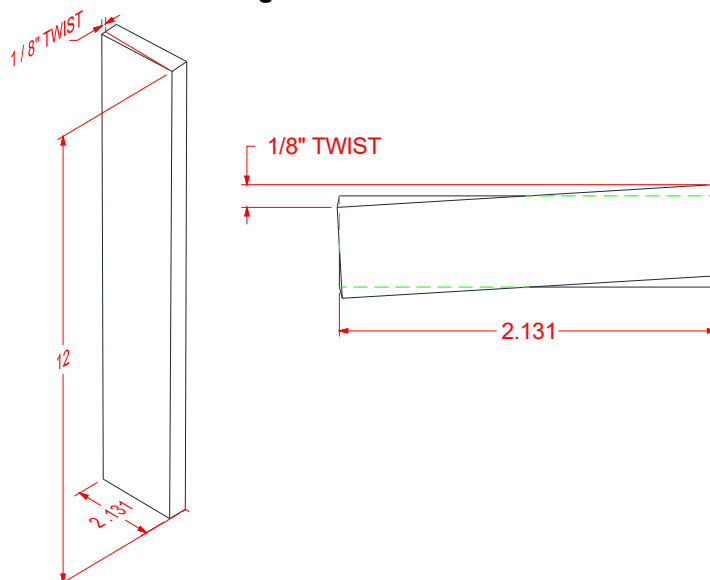
Component	Answer the below as a yes or no during the inspection. If no corrective action is required or the corrective action has been completed, proceed to the next step:	How often the components must be inspected:		If answer matches below, complete the corrective action shown:	Corrective Action:
		Monthly	Annually		
Door operation	Does the door fully close upon alarm?		X	No	Clear any debris from guide gap or opening; retry. Contact Service if issue persists.
	Can the door be easily lifted using the handle?		X	No	Ensure Spring Assembly is functioning properly. Contact Service for details.
	Does the door open when the "Push" switch is activated?		X	No	Check that switch is connected properly in Control Box. Check for breaks or fraying in wire. Contact Service.
	Is Bottom Bar level?		X	No	Check that the curtain is coiling smoothly and evenly. Check for any debris, wrinkles or other issues in the coil. Ensure Hood/Guides are level/plumb.
Curtain & Bottom Bar	Are there any tears, holes or noticeably worn areas visible on the curtain?		X	Yes	If the puncture is within the size limitations, utilize Repair Kit. If not, contact Service.
	Are the curtain graphics worn or illegible?		X	Yes	Contact Service about replacing curtain; provide a photo.
	Is the handle visibly worn, frayed, or no longer fixed to the curtain in the upright and easily accessed position?		X	Yes	Contact Service; provide a photo.
	Is the switch or wiring not fully adhered to the curtain?		X	Yes	Contact Service about replacing switch/curtain.
Guides	Is guide gap dimension correct?	X		No	Check if either of the other "check" items on this list are the cause. Contact Service.
	Are any of the guide parts bent or damaged?	X		Yes	Contact Service about replacing Guides.
	Are the Guides fully snapped together?	X		No	If Guides are accessible, revisit steps 13. Otherwise contact Service.

Section 9 – Guide Gap Troubleshooting

Below are possible causes of the guide gap closing and not allowing the installation template or the curtain to move freely through the guides.

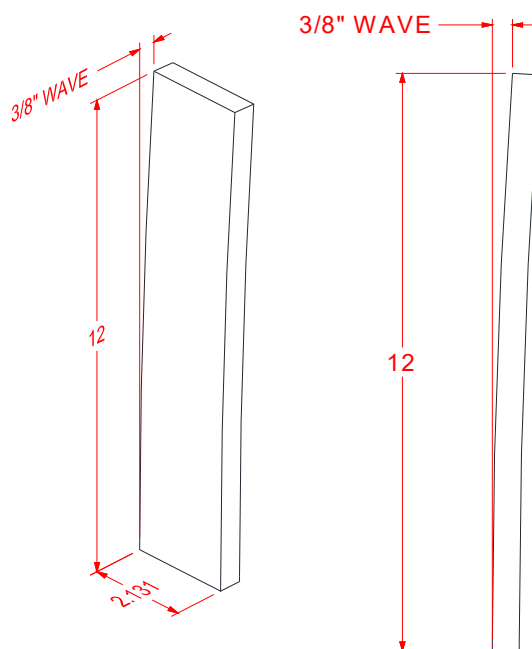
1. There is a twist in the footprint of the guide greater than $1/8$ " per foot height of the guide.

Figure 9.1 – Wall Twist



2. There is a wave in the wall greater than $3/8$ " per foot height of the guide.

Figure 9.2 – Wall Bow



3. The screw torque exceeds 20 inch pounds.

Firstly, attempt to have the wall conditions corrected. If there are still issues, or the wall could not be corrected, remove the face guide part and back out the screws. Install to no greater than 20 inch pounds or install the screws to where they just touch the wall guide part. Reinstall the face guide part and recheck the guide gap using the installation template.

Appendix A – Leakage Rating Information

Leakage Rating Information:

- Leakage rated assemblies — SmokeShield Elevator Curtain file R25122.

Table A.1 Leakage Rating Information

Test Pressure (in. of WC)	Air Temp, °F	Leakage, (cfm/ft ²)
0.05	Ambient	1.76
0.1	Ambient	2.29
0.2	Ambient	4.52
0.3	Ambient	6.96
0.05	400	0.77
0.1	400	0.79
0.2	400	2.26
0.3	400	3.00

Hoistway Shaft Pressures:

- Per Chapter 30 of the International Building Code®, Section 3006, additional doors at the hoistway (smoke doors) are required to be listed for smoke migration only. The test protocol is UL1784, which measures air infiltration under pressure at elevated temperatures. Despite the pressure requirement of the test, there is no provision or requirement in IBC or UL 1784 for the doors to be operable under air pressure, as is similar to the requirements for rolling steel fire doors and other protectives.
- **The elevator car door of the hoistway** is required to be listed for fire protection only and labeled according to the construction of the hoistway itself. The car door is a fire door but does not provide a smoke protection listing. Because of this, there is no requirement in IBC for smoke doors at the hoistway to be redundantly listed for fire protection.
- **IBC does not require smoke doors** for hoistways opening to the exterior of a building or to open parking garages. These doors are not designed or intended for exterior exposure and are not designed, intended or tested to operate correctly under unknown and varying external air and wind pressures/velocities.
- **During the construction phase** it is not uncommon for exterior doors and windows and other building openings to create external air flows and varying pressures throughout the building. These pressures are particularly noticeable at hoistway openings in upper floors and will predictably disallow the doors to close or operate satisfactorily until the source(s) of these pressures are identified and corrected. Hoistway smoke doors should not be tested under these conditions.
- **Hoistway smoke doors are expected to operate** and are to be field tested only when the conditions of the building are (or as what will be) normal at time of completion and occupancy.
- **NFPA 105 2025 Section 5.2.4.2.1 states:** Acceptance testing shall be conducted after the building's mechanical ventilation system has been balanced, in accordance with 5.2.2.