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# Series 96000 Sliding Door

## Installation Instructions

### **DOR-O-MATIC®**

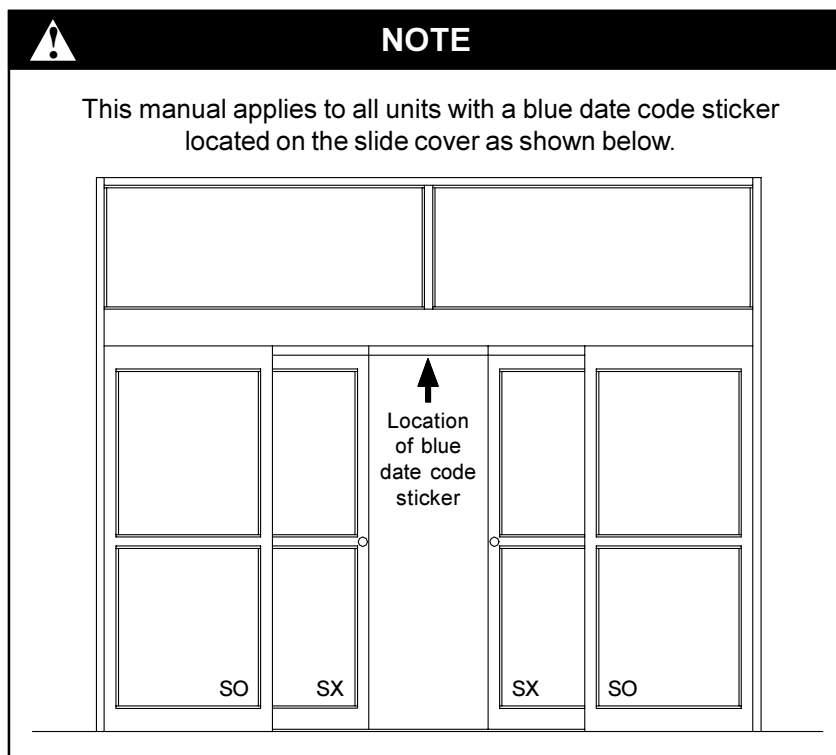
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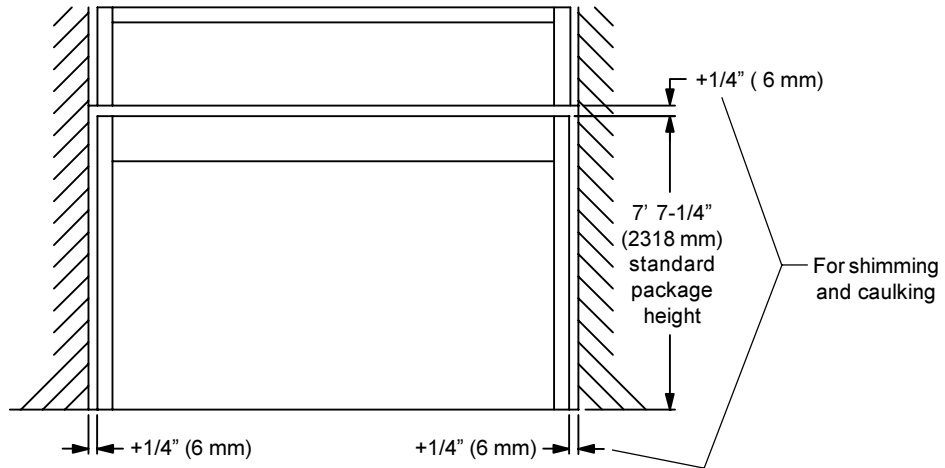
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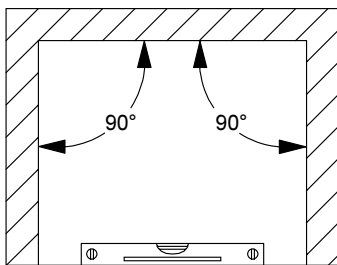
## INSPECTION

1. Verify that the shipped order is complete and correct. Check model number, color, and package width and height.
2. Verify at the **job site** that **all conditions** are correct and in accordance with **final approved shop drawings**.
  - 2.1. Check that the opening is the correct size. Correct size is package width plus 1/2" (13 mm) and package height plus 1/4" (6 mm) for shimming and caulking (**Figure 1**).

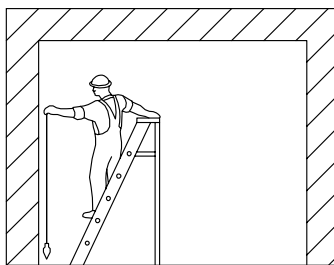


**Figure 1.** Clearance Required at Rough Opening

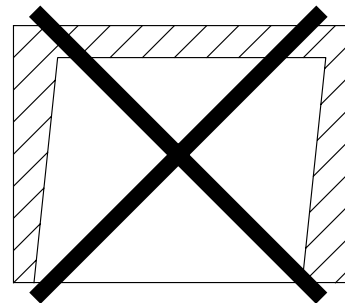
- 2.2. Check that the floor is level. Use a level of 6' 0" (1829 mm) minimum length (**Figure 2**).
- 2.3. Use a plumb bob to check that the rough opening where the jambs will be mounted is vertical (**Figure 3**).
- 2.4. Check diagonal measurements to insure that opening is a true rectangle, not just a parallelogram (**Figure 4**).



**Figure 2.** Floor Must Be Level



**Figure 3.** Jamb Mounting Surface Must Be Vertical



**Figure 4.** Opening Must Be Rectangular, Not a Parallelogram

- 2.5. Check that the electrical feed (115 V, 15 A single phase for North America, 220/240 V, 5 A single phase for Europe, Asia, etc.), conduits, and electrical junction boxes for push plates or other activation devices (if required) are correctly located in accordance with final approved shop drawings.

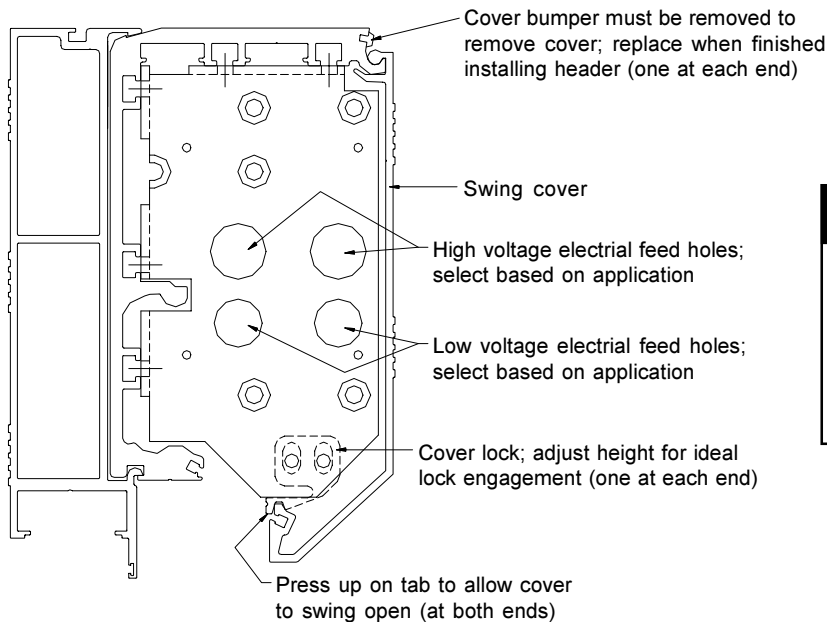


### NOTE

If any of the above items are not correct, **do not attempt to install the Series 96000 Slide package!** Report any incorrect items to the general contractor **immediately**. Do not proceed until all conditions are correct.

## HEADER AND JAMB MOUNTING

1. Open the carton marked "HEADER." Remove the header and set it on a piece of cardboard with the swing cover facing up. Remove the cover bumpers near the cover hinge. Do not lose the cover bumpers, as they must be re-installed to prevent the cover from coming off when opened. Using a screwdriver, press up on the cover lock tab (one on each end) to disengage and open the cover (**Figure 5**).

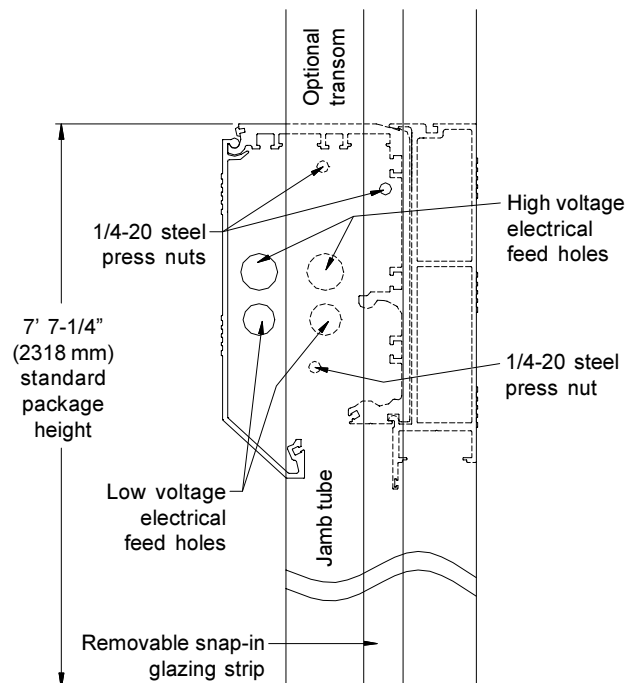


**NOTE**

High voltage (incoming 115 VAC) wires and low voltage wires cannot share the same access hole. High voltage wires must be routed away from all low voltage wires. Use wire clips supplied on parts board.

**Figure 5. Cover Removal**

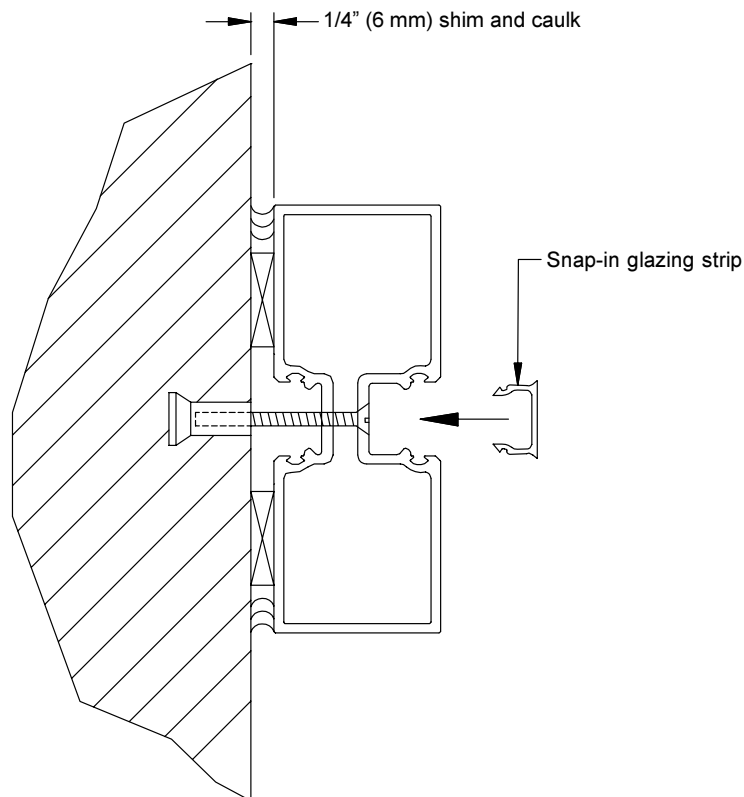
2. Within the header (factory installed) are the motor/gearbox with drive pulley, drive belt, idler pulley and tensioner assembly, control box, transformer box, holding beam control box, any switches, and the terminal block bracket. Additional items are shipped in a blister pack, and these should be laid out in a convenient location.
3. Align the jamb tubes with the ends of the header, making sure that the bolt holes and electrical feed holes line up. Use three 1/4-20 x 1" long bolts on each side to secure the header end cap to each jamb tube. Then install one dress end cap on each side using the #8-32 screws (**Figure 6**).



**Figure 6. Jamb Tube Attachment to Header**

## HEADER AND JAMB MOUNTING (continued)

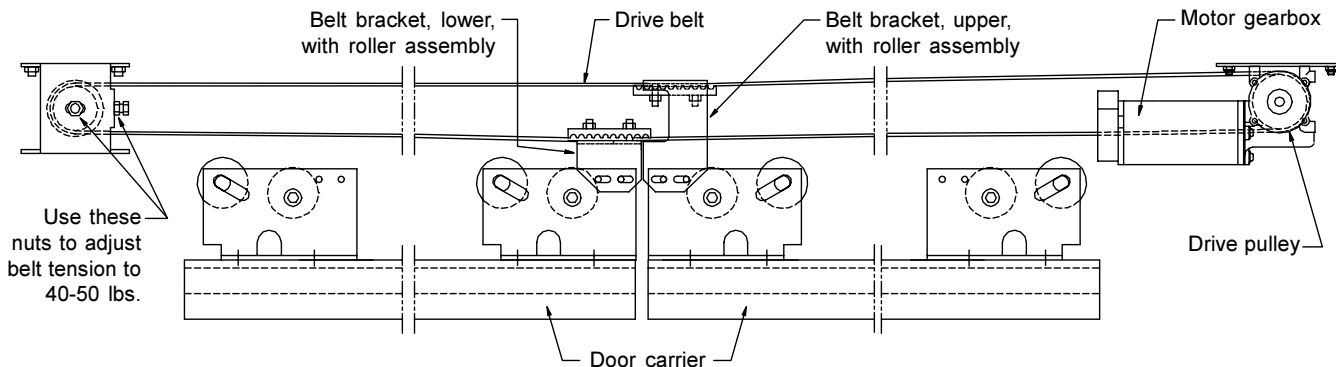
4. For each jamb, insert wood tapered shims to plumb each jamb. Insert 1/4" (6 mm) spacers around the header or horizontal transom tube at anchor locations to keep the tubes from being pulled tight.
5. With a helper, tip up the jamb/header assembly and position it within the rough opening, making sure the swing cover is on the correct side. Verify that the package is located correctly within the rough opening (refer to the final approved shop drawings). The Series 96000 Slide package is **usually** centered within the opening or is mounted flush with the curtain wall, but verify the position with the drawings, contractor, architect, etc.
6. Use appropriate fasteners (four per jamb) to anchor through the glazing recess of the jamb tube to the wall or adjacent framing. Check the jamb tubes with a level to be sure that the tubes have not been pulled in by the anchors. Finally, install the snap-in glazing strips in the jamb tubes (**Figure 7**).
7. The standard package height is 7' 7-1/4" (2318 mm). On occasion, the approved shop drawings require a package height of 7' 6-3/4" (2305 mm). If this is the case, cut off 1/2" (13 mm) from the bottom of each jamb tube in the field. This generally is performed for a recessed threshold application.



**Figure 7.** Anchoring the Jamb Tube

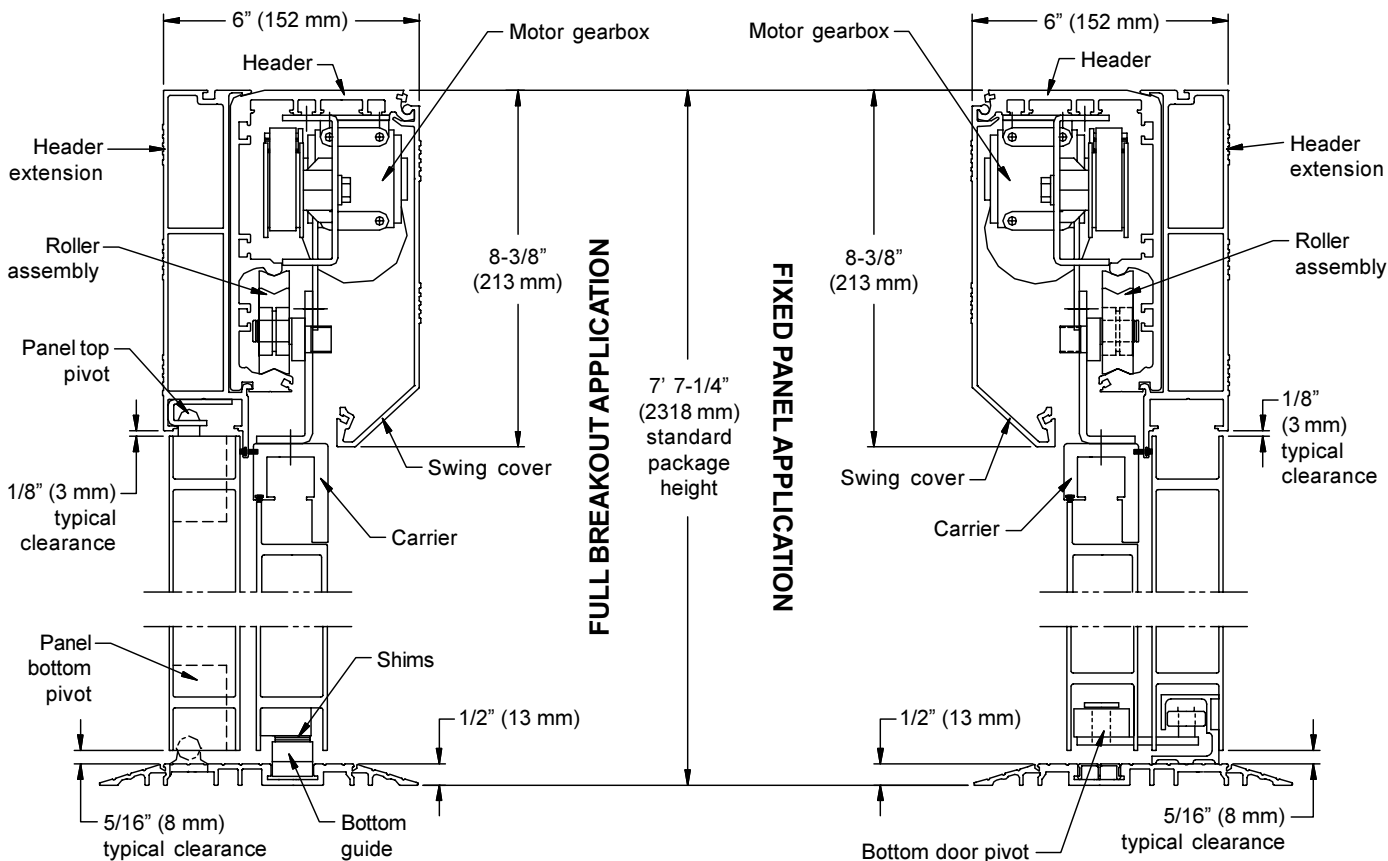
# PACKAGE COMPONENTS

1. Refer to **Figure 8** for a detailed breakdown of internal drive components.



**Figure 8.** Belt Drive Assembly

2. Refer to **Figure 9** for a detailed section view of a typical Series 96000 Slide Full Breakout or Fixed Panel application.



**Figure 9.** Section View through Header, Door, and Panel

**NOTE**

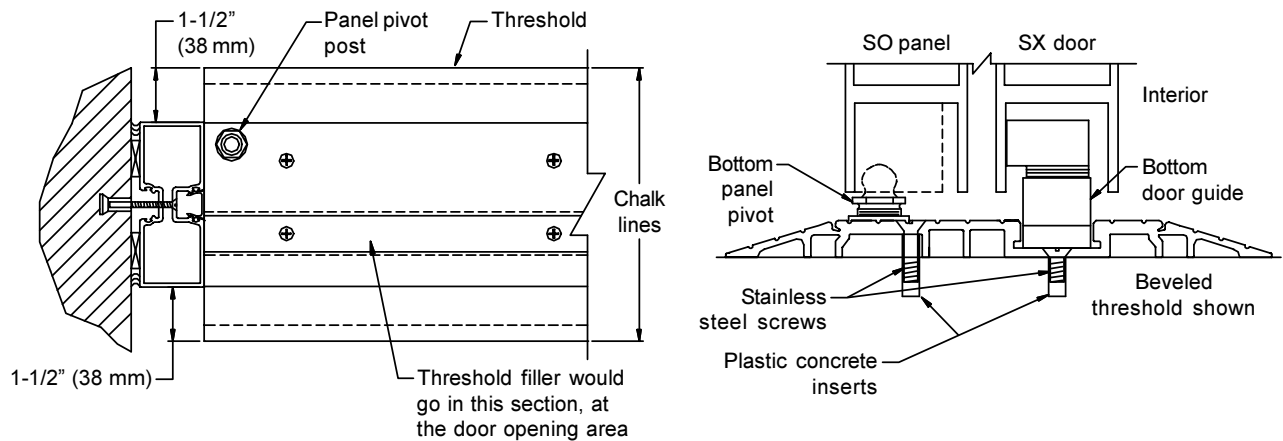
If the package being installed is over 10' 0" (3048 mm) wide and has a transom, a vertical transom tube must be anchored securely to the top transom tube in order to prevent deflection in the header.

## THRESHOLD INSTALLATION – FULL BREAKOUT APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines.
2. Verify that the panel pivot in the threshold is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines, and use it as a guide to drill through holes into the floor. Slide the filler extrusion to the right side when drilling the left side and then repeat for the right side. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 10**).

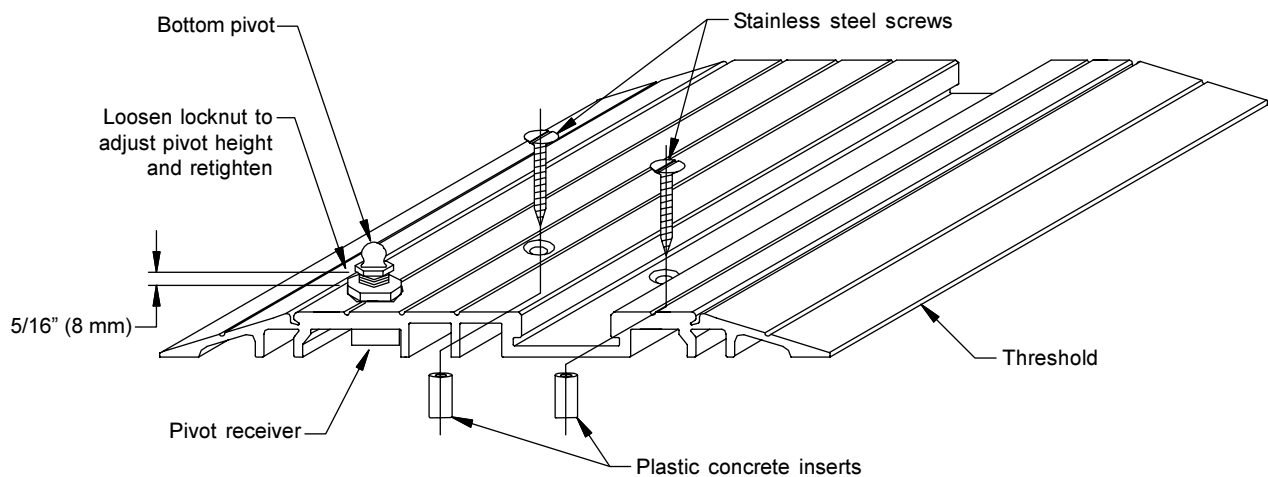
**NOTE**

A different extrusion is provided for a Full Breakout Package with a recessed threshold option.



**Figure 10.** Installation of Threshold

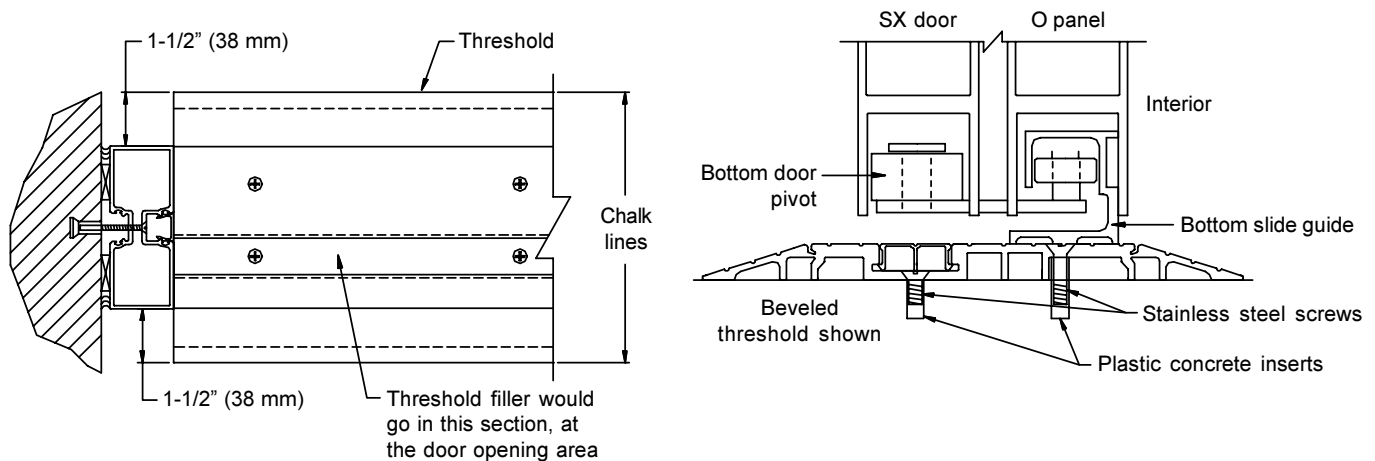
3. Thread panel pivot post (from blister pack) into pivot receiver in threshold and adjust to correct height (**Figure 11**). If threshold filler is not installed, it can be force fit using a one-foot wood block and rubber mallet.



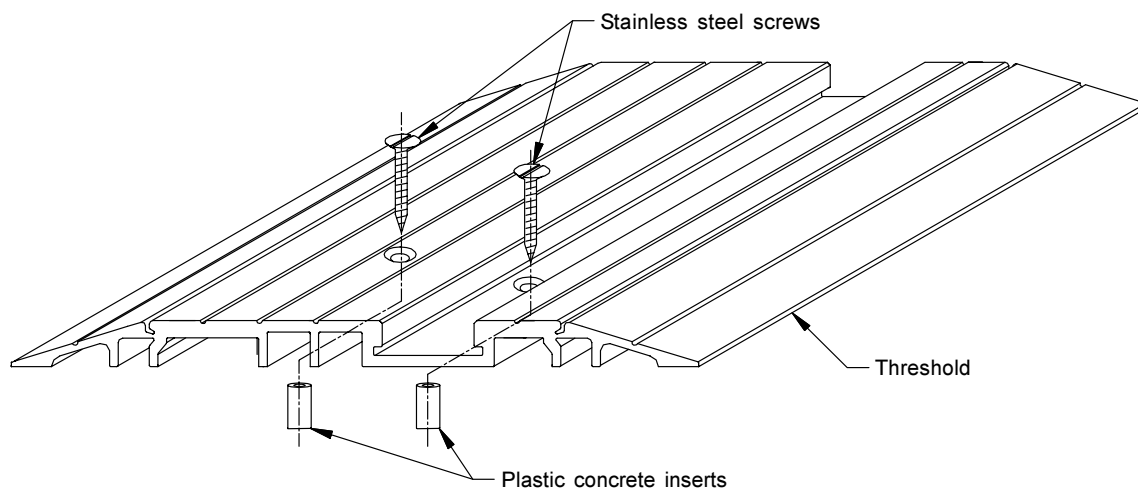
**Figure 11.** Bottom Panel Pivot Attachment

## THRESHOLD INSTALLATION – FIXED PANEL APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines (**Figure 12**).
2. Verify that the track portion in the threshold (where the filler is to be located) is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines and use it as a guide to drill through holes into the floor. Slide the filler extrusion to the right side when drilling the left side and then repeat for the right side. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 13**).



**Figure 12.** Installation of Threshold

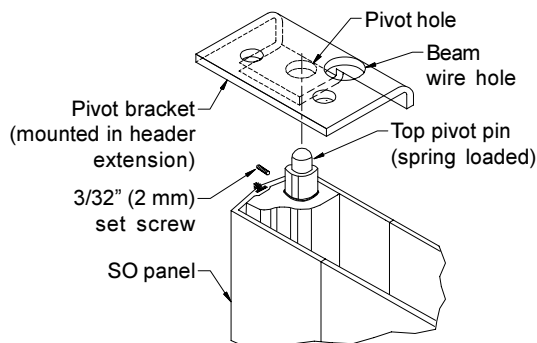


**Figure 13.** Isometric of Threshold



## PANEL INSTALLATION – FULL BREAKOUT APPLICATION

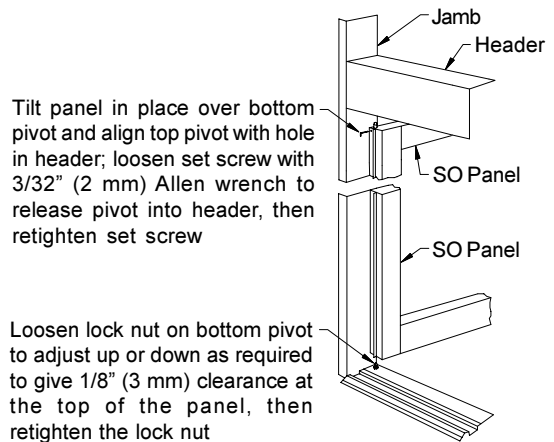
1. Remove panels from carton. Lift panel and place bottom pivot block (factory prepped and installed in bottom panel stile) onto bottom pivot. Swing and proceed to install top pivot pin into pivot bracket mounted in header extension (**Figure 14**).
2. Top pivot pin is shipped in retracted position. Loosen set screw and release top pivot pin into the hole in the bracket (**Figure 14**). Tighten set screw when top pivot pin is set.
3. Adjust lock nut on bottom pivot to give the required 1/8" (3 mm) clearance at the top of the panel (**Figure 15**).
4. Top pivot removal tool #96022-100 is required to remove panel. Loosen set screw and push pin down with the tool (**Figure 16**).
5. Slowly close the panel after securing the pivots in position. The clearance between the top of the panel and the bottom of the header should be 1/8" (3 mm) (**Figure 17**). If the clearance is greater than 1/8" (3 mm), the magnet in the top rail of the panel may not be close enough to the reed switch in the header to complete the circuit for door activation. To correct the clearance, refer to the previous illustrations to remove the panel and adjust the height.



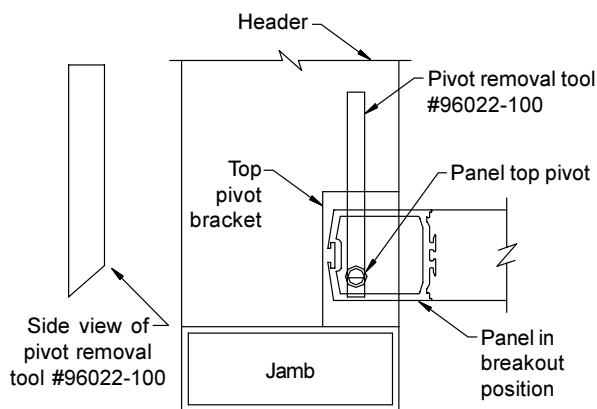
**NOTE**

Top pivot removal tool #96022-100 is required for top pivot removal

**Figure 14.** Panel Top Pivot Detail



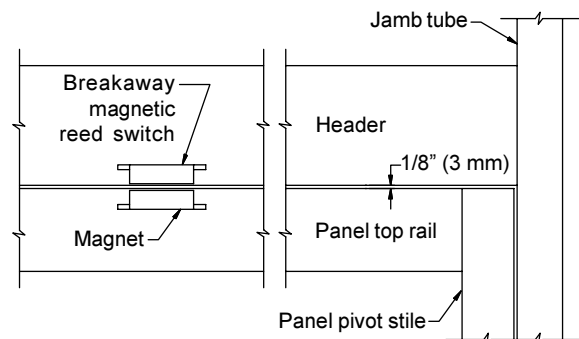
**Figure 15.** Panel Installation Detail



**NOTE**

Be careful not to damage or cut the pencil beam cables that run through the top pivot bracket when removing the panel

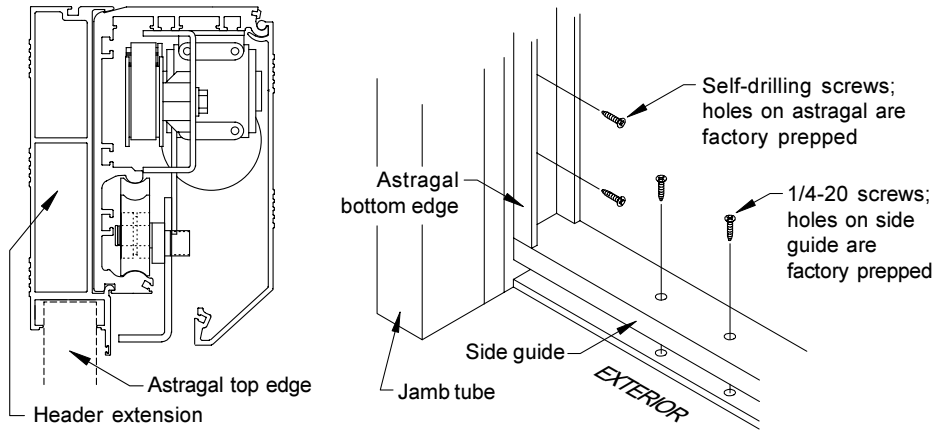
**Figure 16.** Panel Removal Detail



**Figure 17.** Panel (SO) Clearance for Reed Switch and Magnet

## PANEL INSTALLATION – FIXED PANEL APPLICATION

1. Remove side guide and astragal from their packaging. Place astragal against jamb tube surface and into groove under header extension. Place side guide under astragal as shown in **Figure 18**. Mark all holes on target surfaces and remove both pieces for drilling. Remove screws from their packaging for assembly.

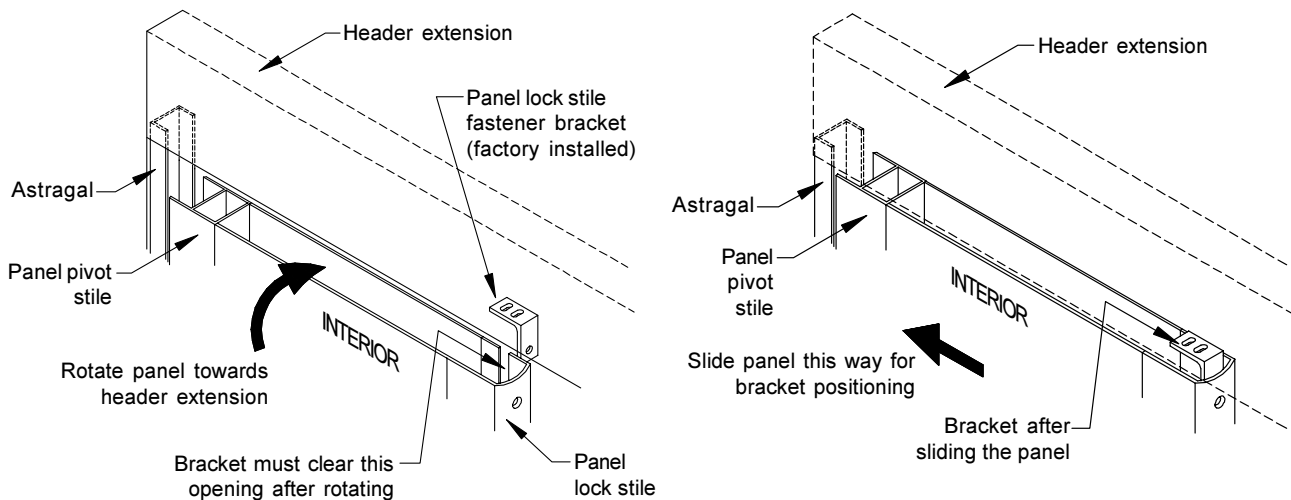


### NOTE

For side guide, drill depth on threshold or floor surface should be approximately 3/8" deep. For astragal, the holes should just clear one surface with the self-drilling screws from the screw bag.

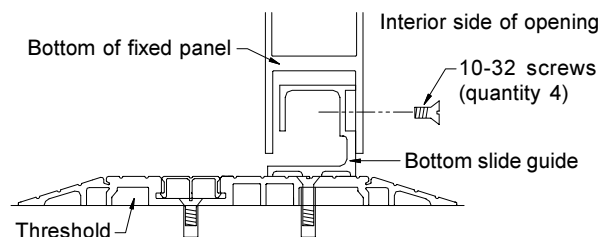
**Figure 18.** Astragal and Side Guide Positioning

2. Remove fixed panel from its carton. Lift panel and place bottom rail (factory prepped stile and rail) onto bottom side guide with four (4) drilled holes at bottom of panel facing interior side of opening. Swing upright, clearing lock stile fastener bracket with slot machined in lock stile of panel (**Figure 19**). Slide panel towards jamb tube and install screws from screw bag.



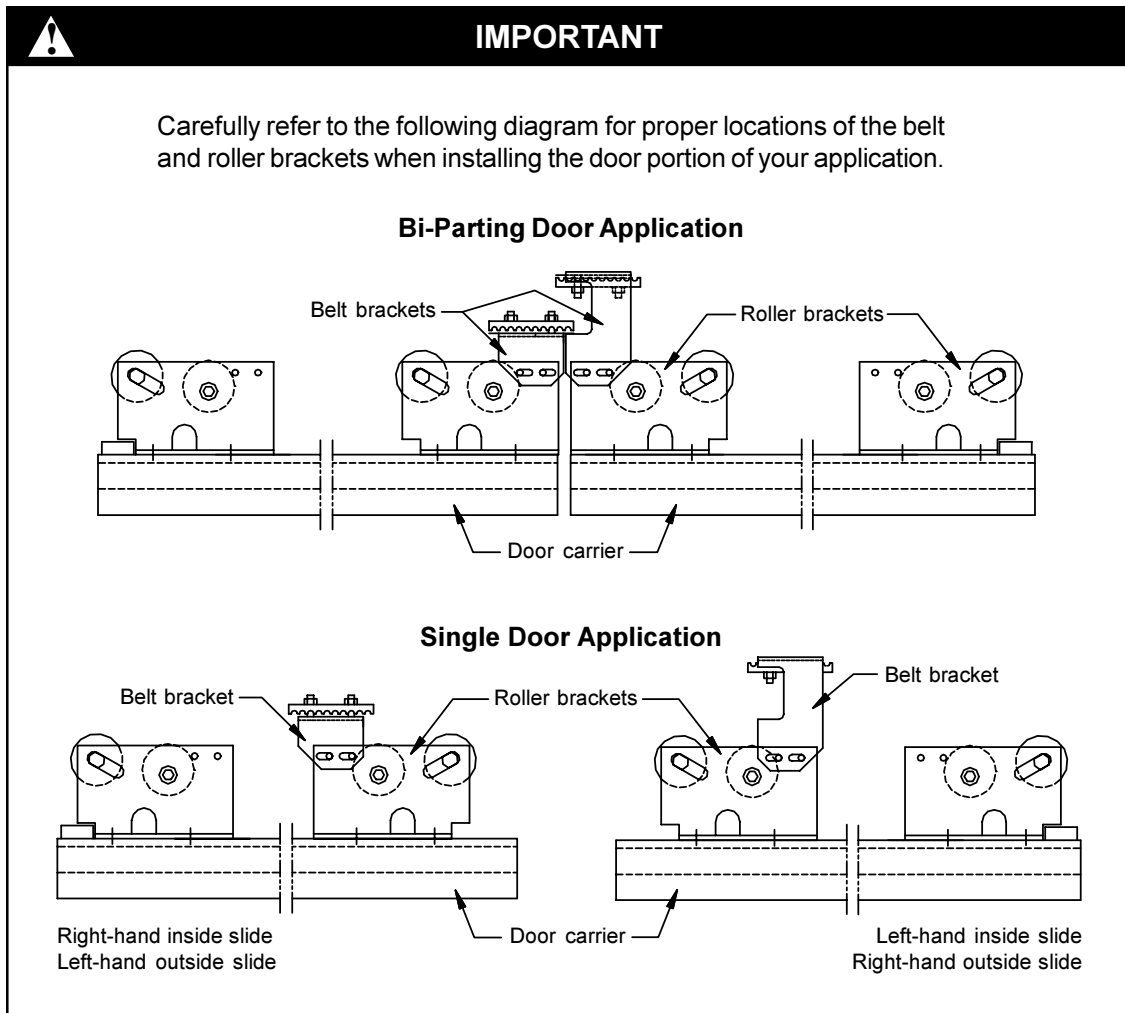
**Figure 19.** Panel Positioning and Attachment

3. Once the top of the panel is properly stabilized, install the 10-32 screws into the holes at the bottom on the interior side of the opening to attach the panel to the slide guide (**Figure 20**).



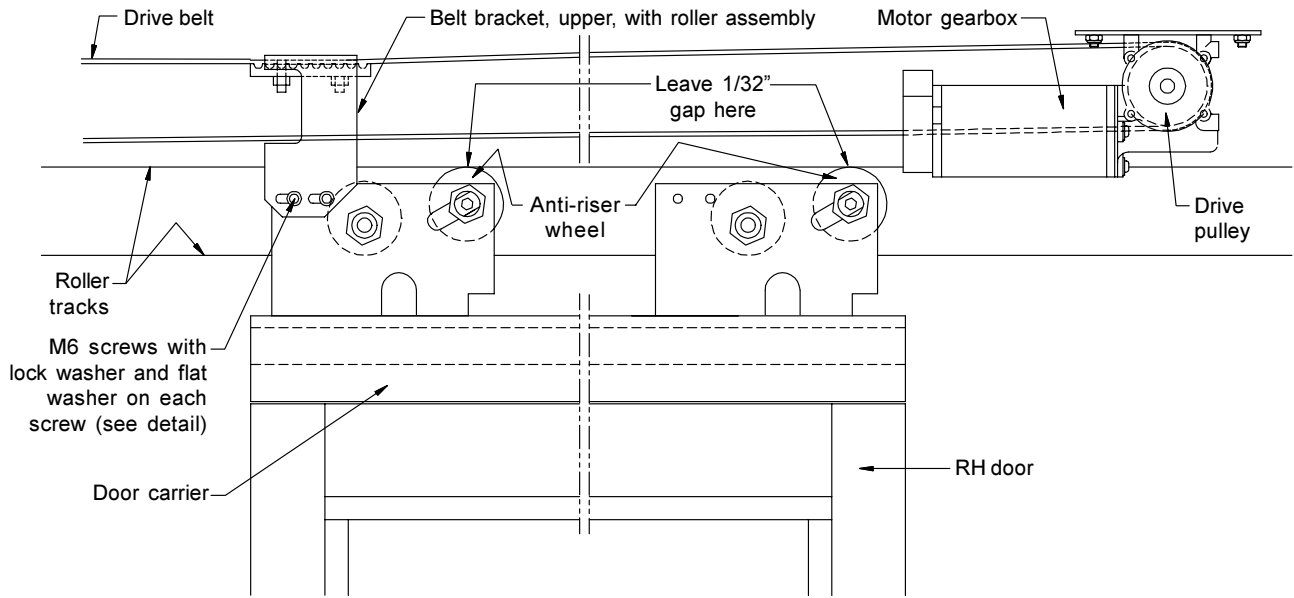
**Figure 20.** Bottom of Panel Installation

## DOOR (SX) INSTALLATION

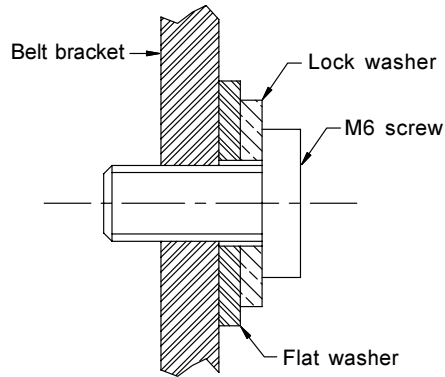


1. Remove the doors from the carton. All mention of M6 nuts and bolts refers to the thread diameter. Use a 10 mm socket or 10 mm open-end wrench when removing or installing these fasteners.
2. Attach the roller assembly to the door carrier using the 5/16-18 socket head screws and lock washers supplied. (Bi-Parting unit has two doors.)
3. Make sure the anti-riser wheel is loosened and in the down position to allow access into the roller track. Afterwards, verify that the anti-riser wheel is NOT engaged with the top track of the header on all roller assemblies, leaving approximately a 1/32" gap in between both the top track and the wheel (**Figure 21**).
4. Attach the belt bracket to the roller assembly on the lock stile of the door using two (2) M6 screws, washers, and lock washers as shown (**Figure 21 and Figure 21 Detail**).
5. Remove the sliding door bottom pivot assembly (which includes the floor guide) from the blister pack. Install the bottom pivot assembly into the bottom of the vertical door stile through the two prepped and countersunk holes with the 1/4-20 x 3/8" long flat head screws provided (**Figure 22**).

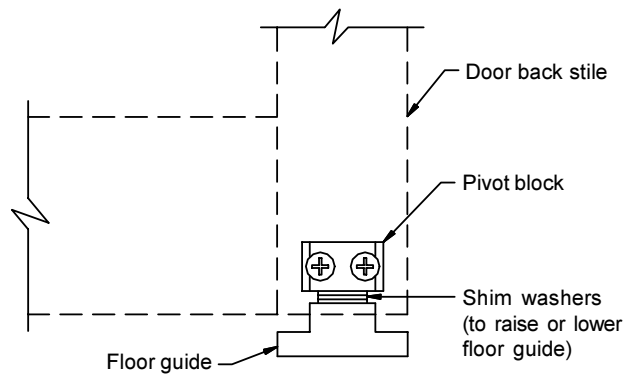
## DOOR (SX) INSTALLATION (continued)



**Figure 21.** Anti-Riser Adjustment and Door (SX) Attachment Procedure



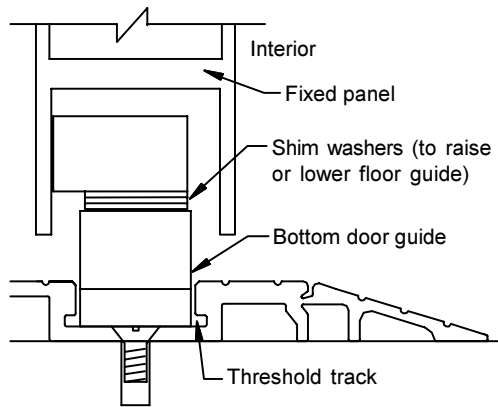
**Figure 21 Detail.** M6 Screw with Lock Washer and Flat Washer



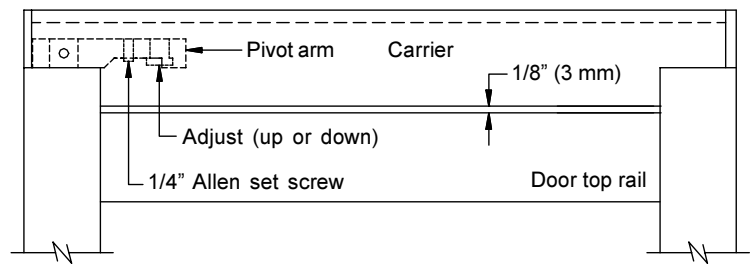
**Figure 22.** Installation of Door (SX) Bottom Pivot Assembly

## DOOR (SX) INSTALLATION (continued)

6. Verify that the bottom guide is in the threshold track and slowly slide the door back and forth to assure smooth operation. Check to see if the floor guide is deep enough in the track. It may be necessary to add or remove shim washers as required (**Figure 23**).
7. Next, break open the door and panel. Slowly close the door and check the clearance between the top of the door and the bottom of the carrier. If the clearance is not 1/8" (3 mm), loosen the 1/4" (6 mm) Allen head set screw at the bottom of the carrier. Adjust the clearances as required by turning the large Allen head bolt. After setting the correct clearance, retighten the 1/4" (6 mm) Allen head set screw (**Figure 24**).

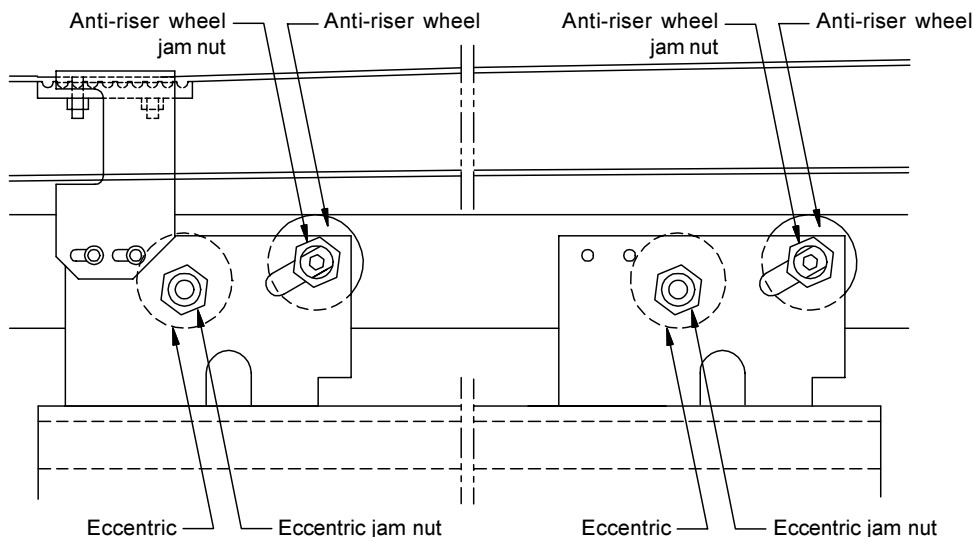


**Figure 23.** Floor Guide Check



**Figure 24.** Door/Carrier Adjustment

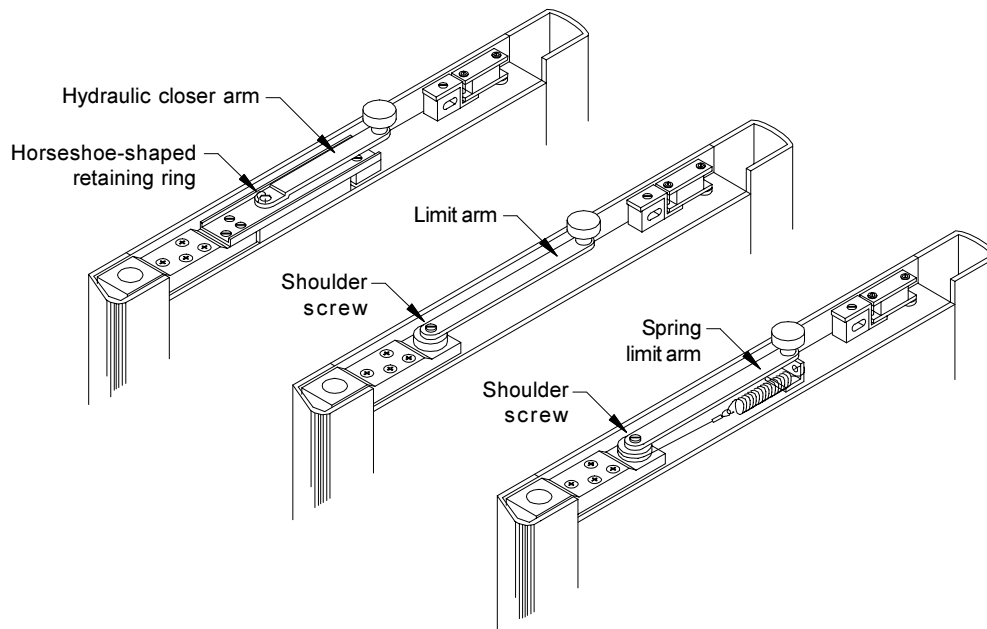
8. Adjust anti-riser wheel:
  - 8.1. Use a 15/16" wrench to loosen jam nuts on eccentrics and anti-riser wheels (**Figure 25**).
  - 8.2. Use a 5/16" Allen wrench to rotate eccentrics for a 5/16" (8 mm) gap between bottom of door and threshold. Snug the jam nut to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.
  - 8.3. Slide anti-riser wheel up for 1/32" clearance between top of anti-riser wheel and top track. Snug anti-riser wheel jam nuts to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.



**Figure 25.** Adjust Anti-Riser Wheel Clearance

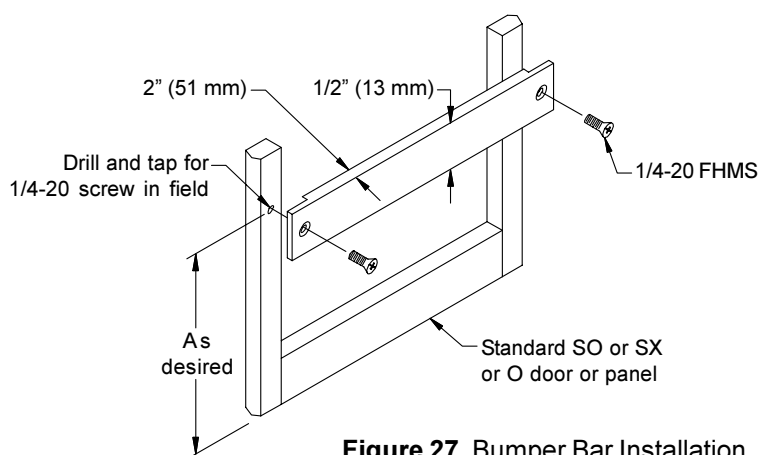
## LIMIT ARM AND BUMPER BAR INSTALLATION

1. Depending on the specific package ordered, Dor-O-Matic provides one of three limit arm types: hydraulic closer arm, limit arm, and spring limit arm (**Figure 26**).
  - 1.1. If the package has a hydraulic closer in the panel, the arm is shipped installed on the closer. Remove the arm by removing the horseshoe-shaped retaining clip from the closer shaft. Install the roller end of the arm into the header extension through the access slot provided. Turn the closer speed adjusting screws to the fully closed position. With a wrench, turn the closer pinion shaft so the slot in the arm will easily slip over the shaft when the door is set in the opening. Re-install the horseshoe-shaped clip through the closer shaft.
  - 1.2. For all other packages, remove the shoulder screw from the limit arm, insert the roller up into the header extension, and re-install the shoulder screw.



**Figure 26.** Limit Arm Details

2. Refer to **Figure 27** for optional Dor-O-Matic bumper bar installation.



**Figure 27.** Bumper Bar Installation

<b>NOTES</b>	
1.	One bar per door.
2.	1/2" (13 mm) max. glass thickness.

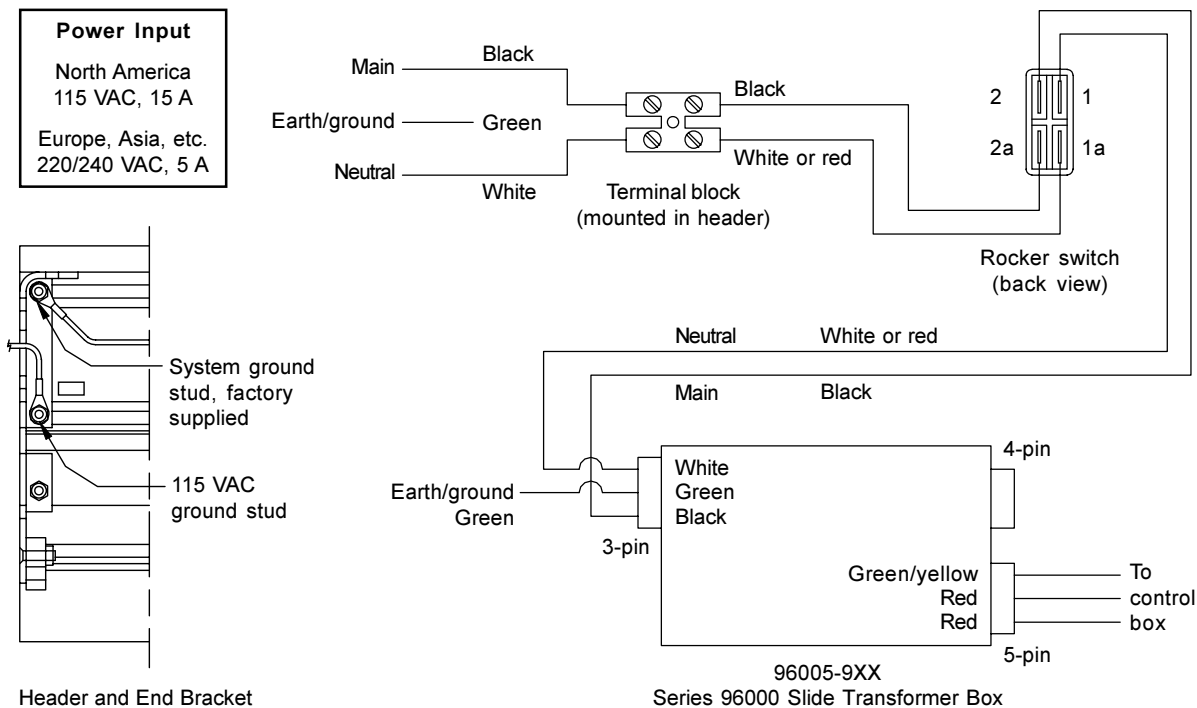
## WIRING DIAGRAM

Refer to **Figure 28** for Series 96000 Slide power connection requirements.



### NOTES

1. Field prepped wire access holes cannot be larger than 1/2" diameter.
2. The ground wire for incoming 115 VAC and the system ground wire cannot share the same grounding stud.
3. All earth/ground wires must be grounded to header. Ground wires cannot share the same grounding stud.



**Figure 28.** Power Connection Requirements

## GLAZING

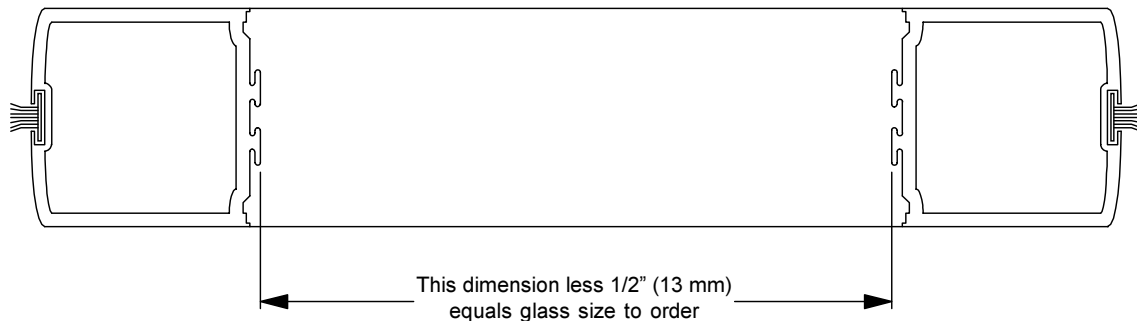
1. Refer to the following chart for maximum weight of door, maximum weight of glass, and maximum glass thickness.

Door/Panel	Max. Weight of Door and Glass*	Max. Glass Thickness
SX Door Inside Slide	150 lbs. (68 kg)	1" (25 mm)
SX Door Outside Slide	150 lbs. (68 kg)	1" (25 mm)
SO Swing Out Panel	200 lbs. (90 kg)	5/8" (16 mm)
O Fixed Panel	200 lbs. (90 kg)	1" (25 mm)
X Sliding Door	200 lbs. (90 kg)	1" (25 mm)
Transom	Varies	1/4" to 1" (6 mm to 25 mm)

\* The average weight of a 42" (1067 mm) door or panel with glass is 40 lbs. (18 kg).

## GLAZING (continued)

- Tempered or laminated glass is required in doors and panels per ANSI Z97.1-1972.
- If the installation is a “standard package,” the glass sizes both with and without 2” (51 mm) muntins are called out in the Dor-O-Matic details and specifications book, along with the model number of the package.
- If the installation is **not** a standard package, measure the width and height between the stile extrusions and **subtract 1/2” (13 mm) (Figure 29)**. This is the glass size to order.
- Order the correct glass stops for the thickness of glass in the application.
- All final opening and closing speed adjustments should be made after the glass is installed.
- Transom glass is measured in the field and can be 1/4” (6 mm) to 1” (25 mm) thick non-tempered glass. Use one or two transom hanger tubes for packages over 10’ 0” (3048 mm) wide to prevent header deflection.



**Figure 29.** Glass Measurement

2. A feature unique to Dor-O-Matic is the “Security Glazing System.” When glazing the doors and panels, snap in two horizontal and two vertical exterior glazing stops. Be sure the stops are securely snapped into the rails and stiles. Place the bottom of the glass onto the nylon glazing blocks and tilt up into vertical position. Have a helper hold the glass in place, and proceed to snap-in the interior glazing stops. This design makes the glass non-removable from the exterior. Finally, check that the rubber trim of the glazing stops is not pinched or tucked against the glass. Run a pocketknife or small scraper around the perimeter of the glass to correct any such problems.

## RELEASE FOR SERVICE

Clean the glass. Install all safety, traffic control, and instruction decals on the door as required. **This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!** Present the keys to the owner or general contractor. Demonstrate the unit; review all safety features as well as the safety check that is to be performed by the owner each morning.



### IMPORTANT

Install all safety, traffic control, and instruction decals on the door as required.