

R Y T E C

Plexline<sup>®</sup>

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## Installation Manual



P.O. Box 403, One Cedar Parkway, Jackson, WI 53037  
Phone: 262-677-9046 Fax: 262-677-2058  
Rytec Website: [www.rytecdoors.com](http://www.rytecdoors.com) Rytec On-line store: [www.rytecparts.com](http://www.rytecparts.com)  
Rytec E-mail: [helpdesk@rytecdoors.com](mailto:helpdesk@rytecdoors.com) Parts E-mail: [parts@rytecdoors.com](mailto:parts@rytecdoors.com)  
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## INTRODUCTION

The information contained in this manual will allow you to install your Rytec Plexline® door in a manner that will ensure maximum life and trouble-free operation.

Any unauthorized changes in procedure, or failure to follow the steps as outlined in this manual, will automatically void the warranty. Any changes to the working parts, assemblies, or specifications as written, that are not authorized by Rytec Corporation, will also cancel the warranty. The responsibility for the successful operation and performance of this door lies with the owner of the door.

**DO NOT OPERATE OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS CONTAINED IN THIS MANUAL.**

If you have any questions, contact your Rytec representative or call the Rytec Technical Support Department at 800-628-1909. Always refer to the serial number of the door when calling the representative or Technical Support. The serial number plate is located inside one of the side columns.

The wiring connections in this manual are for general information purposes only. A wiring schematic is provided with each individual door specifically covering the control panel and electrical components of that door. That schematic was shipped inside the control panel.

## DOOR SERIAL NUMBER(S)

To obtain your **DOOR SERIAL NUMBER**, there are three universal locations where this information can be found. These are at the inside of left side column (approximately eye level), on the drive motor, and on the door of the System 4 control panel. (See Figure 1)

**IMPORTANT:** *When installing multiple doors of the same model but in different sizes, verify the serial number in the control panel with the one in the side column.*

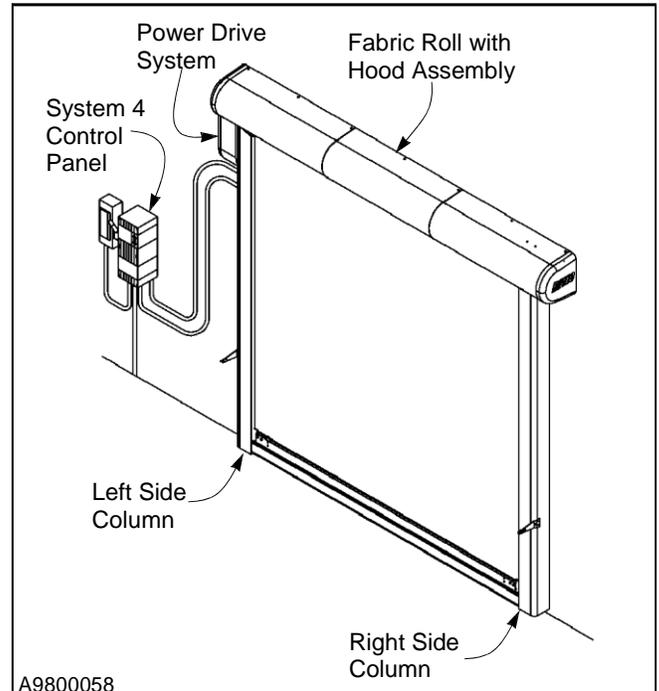


Figure 1

## HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader of potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:



**WARNING** is used to indicate the potential for personal injury, if the procedure is not performed as described.



**CAUTION** is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

**IMPORTANT:** *IMPORTANT is used to relay information that is CRITICAL to the successful completion of the procedure.*

**NOTE:** *NOTE is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.*

## INSTALLATION—TOOLS AND EQUIPMENT REQUIRED

### INSTALLATION

#### TOOLS AND EQUIPMENT REQUIRED

1. Socket and wrench set.
2. Concrete anchor bolts (½-in. diameter).  
(See “ANCHORING METHODS” on page 3.)
3. Threaded rod (½-in. diameter).  
(See “ANCHORING METHODS” on page 3.)
4. Two ladders (taller than the door opening height).
5. Forklift.
6. Carpenter’s level (4-ft. minimum length).
7. Carpenter’s square.
8. Hammer drill.
9. Masonry drill bit (½-in. diameter).
10. Three or four bar clamps (1-ft. length).
11. Hammer and mallets.
12. Crowbar or pry bar.
13. Assorted hand tools (pliers, tape measure, etc.).
14. Assorted shim stock.
15. Water level, line level, or transit.

#### BASIC JOB REQUIREMENTS

1. A forklift must be supplied by the customer, dealer, or installer.
2. Two installers are required.

*NOTE: One installer must be a qualified electrical technician, and all electrical work must meet applicable codes. If the installer is not qualified, an electrician must be present during installation.*

3. The customer must guarantee 100% access to the door opening during the installation. No traffic should be allowed through the door during the installation.
4. If an electrician is used, that person must make all electrical connections. The electrician should be present one hour after installation begins.
5. The Rytec control box and a fusible disconnect should be installed prior to the start of the door installation. (See Figure 1 for layout.)

#### ELECTRICIAN’S RESPONSIBILITIES

For complete details on the responsibilities of the electrician, refer to the Rytec System 4 Drive & Control Installation & Owner’s Manual.

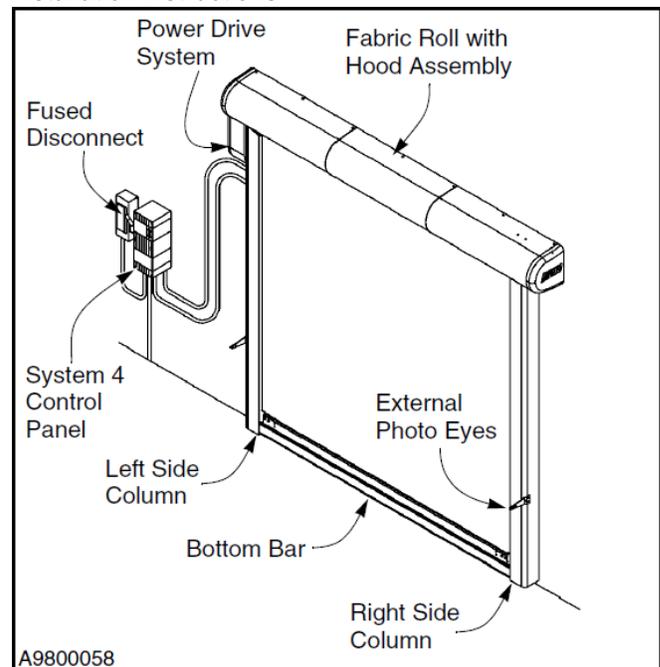
1. Install fused disconnect and Rytec control panel.  
(See Figure 2 for typical installation.)
2. Install all necessary conduit tubing.

**NOTE: Separate high and low voltage conduit.**

3. Run electrical power lines to disconnect.
4. Run power lines from disconnect to control panel.
5. Run power lines from control panel to upper junction box.
6. Run power lines from control panel to door motor.
7. Run low-voltage cables from door to control panel.
8. Mount rear photo eyes.
9. Wire low-voltage safety devices and activators (if used).

#### GENERAL ARRANGEMENT OF DOOR PARTS

Figure 2 shows the location of the major components of your Plexline door. This illustration should be used as reference only and should not be used as part of the installation instructions.



**Figure 2**

*NOTE: The above illustration shows the front side of the door. Left and right are determined when viewing the front side of the door.*

**ANCHORING METHODS**

Correct anchoring of the side columns to the wall and the floor is important for the smooth and safe operation of the door. The wall material should be strong enough to support the weight of the door and all wall anchors.

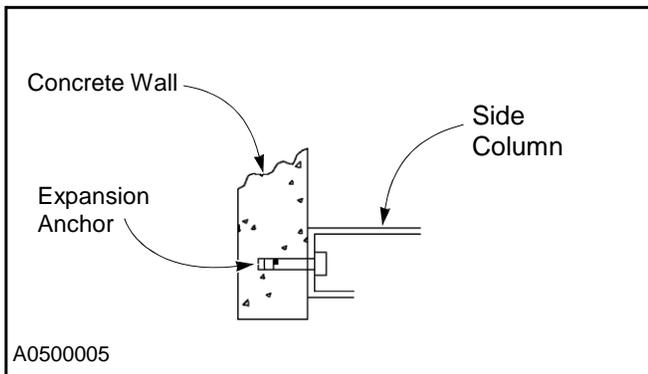
Figure 3 through Figure 6 show anchoring methods for various types of walls. Use the method that is best suited for your particular installation site.

All necessary anchoring hardware and material required for the installation of this door are the responsibility of the door owner. If you have any questions, contact your Rytec representative or the Rytec Technical Support Department at 800-628-1909.

*NOTE: Use 1/2-in. diameter threaded through bolts or 1/2-in. diameter threaded rods to anchor the door to all wall applications. Use 1/2-in. diameter concrete anchor bolts to anchor the door to a concrete floor or wall.*

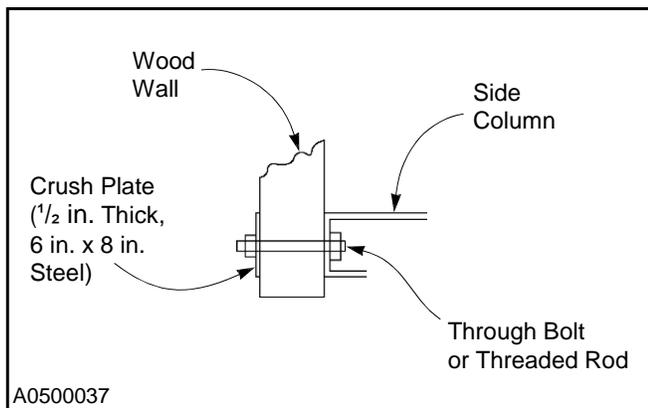
*If expansion anchors are used, a quarterly inspection should be implemented for safe and secure door operation.*

**Concrete, Block, or Brick Walls**



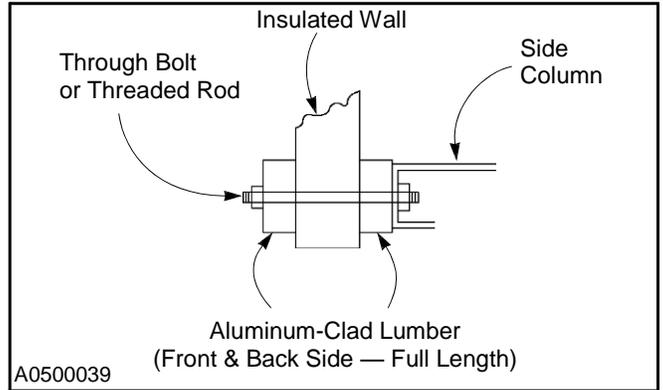
**Figure 3**

**Wood, Block, Brick, or Insulated Walls**

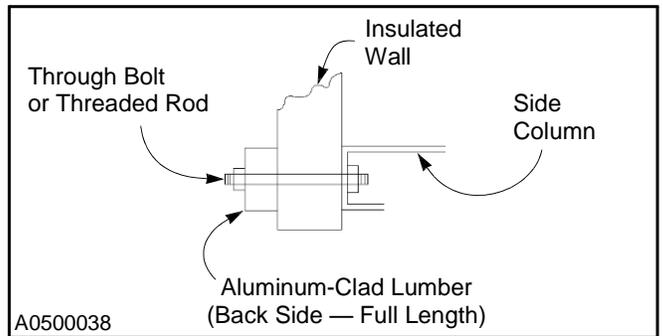


**Figure 4**

**Insulated Walls**



**Figure 5**

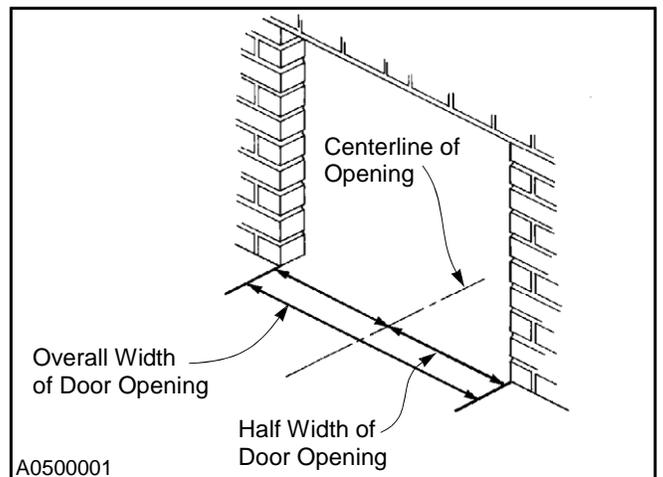


**Figure 6**

**LOCATING CENTERLINE OF DOOR OPENING**

*NOTE: Accurate measurements are critical for the proper installation and operation of your Rytec door. Verify all measurements.*

1. Measure the width of the door opening.
2. Divide the measurement in half to locate the centerline. Then mark the centerline along the floor. (See Figure 7)



**Figure 7**

## INSTALLATION—LOCATING SIDE COLUMNS

### LOCATING SIDE COLUMNS

1. Locate the layout drawing of the door. It should be attached to the small parts carton packed inside the shipping crate. This drawing identifies the production width of your door.
2. Using the centerline as a reference point, lay out and mark half of the door's production width along the floor. (See Figure 8)

### CAUTION

This door is equipped with a breakaway bottom bar assembly. To ensure that it works properly, the width of the door opening must not be smaller (narrower) than the production width of the door.

If the width of the opening is narrower than the width of the door, do not proceed with the installation. Contact your Rytec representative or the Rytec Technical Support Department at 800-628-1909.

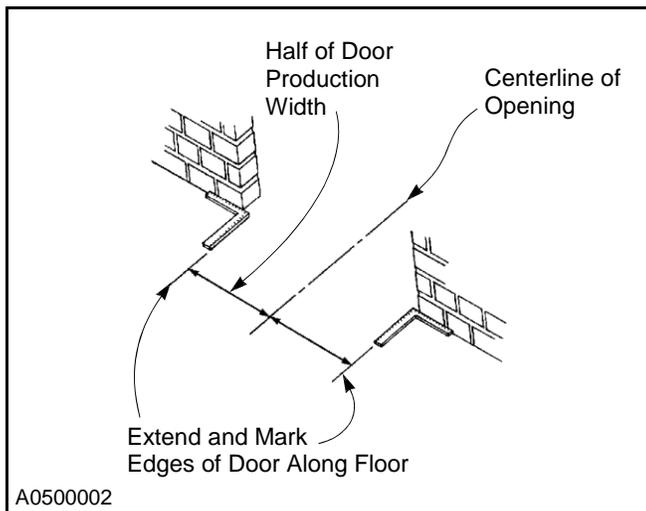


Figure 8

3. With a carpenter's square placed against the wall, mark both sides of the door along the floor. Extend the line along each edge.
4. Check the floor for level across the door opening. The floor must be level within 0.12 in. from side to side. If one side of the opening is higher than the other, a shim under the side panel will be required.

Figure 9 and Figure 10 show two methods that can be used to ensure level side columns.

**NOTE:** Contact the Rytec Technical Support Department if the floor is more than 2 in. out of level.

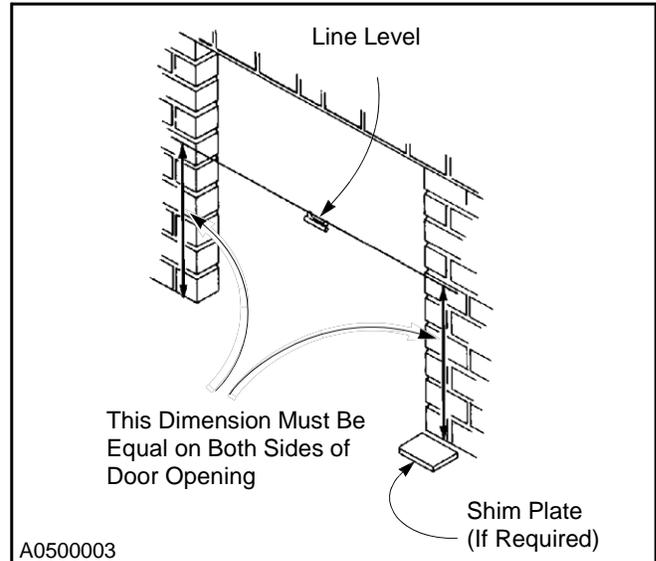


Figure 9

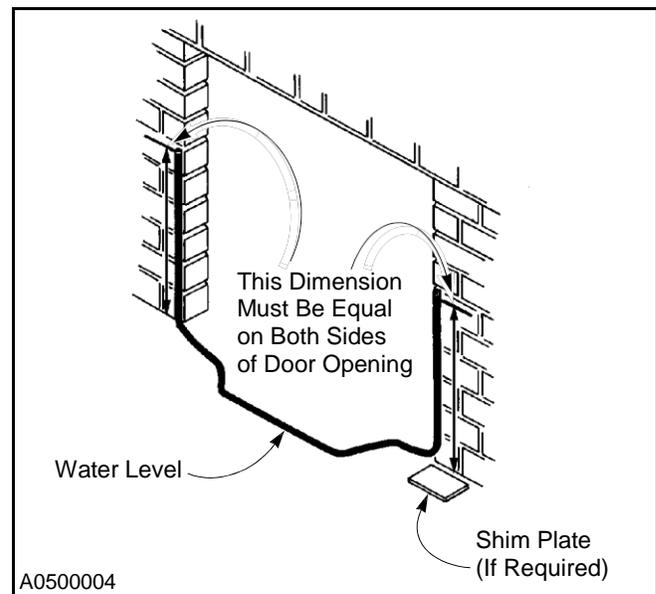


Figure 10

### SIDE COLUMN

**IMPORTANT:** This instruction describes the installation of the left side column. The technician may start on either the left or right or as the circumstances of the door installation dictates.

**NOTE:** The standard mounting location for the motor/gearbox assembly on a Plexline door is on the left but can be ordered to be mounted on the right. DO NOT change the location of the drive motor without first contacting your Rytec representative or the Rytec Technical Support Department at 800-628-1909.

1. Remove the left side column from the shipping crate.

**NOTE:** The left and right side columns are symmetrically the same. The photo eye cable access hole in the rounded corner of the side column faces away from the door panel seal.

The number of anchor points in a side column have been designated by the engineered height of the door. There is a minimum of three anchor points on a side column. (See Figure 11 and Figure 12)

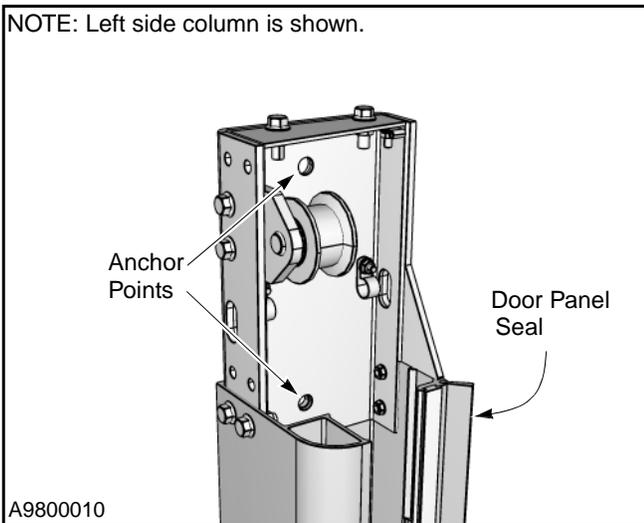


Figure 11

2. Stand the left side column on the floor and tight against the wall. To determine on which side of the door to place the side column, be sure that the photo eye cable access hole or the rounded corner of the side column is facing away from the door opening. (See Figure 12)

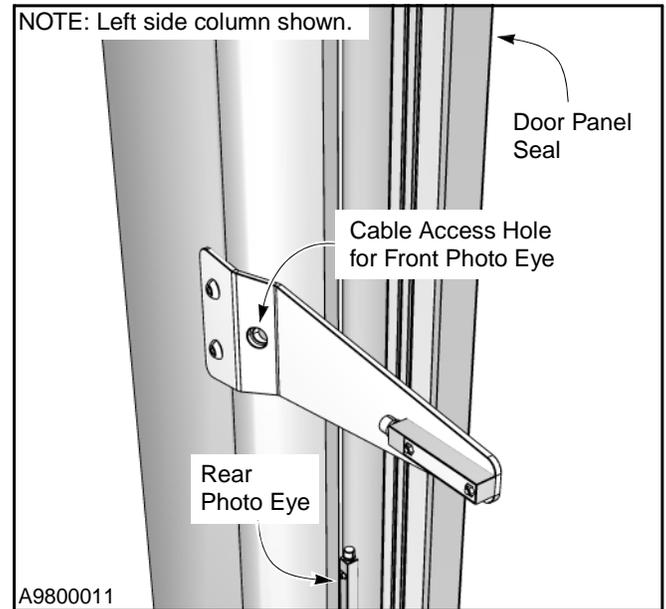


Figure 12

3. Align the inside edge of the side column with the production width line laid out earlier on the floor. The side column must be located on the outside edge of the layout line.

## **CAUTION**

It is critical that the side columns are mounted level and square to the wall and floor, both vertically and horizontally. A 4-ft. level and carpenter's square are recommended for this procedure.

The use of bar clamps to secure the side columns to the wall during installation is recommended, as these hold the columns securely in place, while allowing for slight adjustments of either side column during the installation of the head assembly.

**NOTE:** All necessary anchor hardware and material is the responsibility of the door owner.

4. Once the side column is properly positioned, secure it to the wall using the appropriate anchors. (See "ANCHORING METHODS" on page 3.) Anchor holes have been provided in the side column. DO NOT tighten the anchor hardware at this time.

## INSTALLATION—SPREADER ASSEMBLY

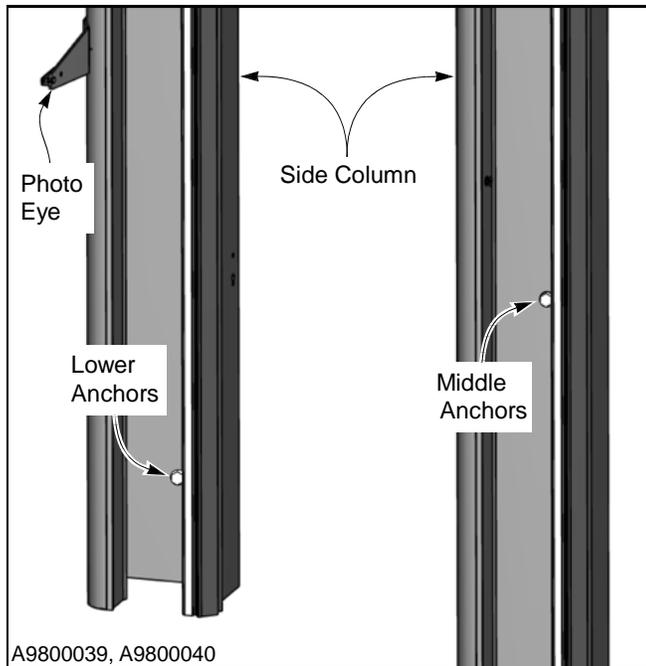


Figure 13

NOTE: Use  $\frac{1}{2}$ -in. diameter expansion shell stud-type anchors for concrete walls or  $\frac{1}{2}$ -in. diameter threaded through bolts for brick walls and other applications where expansion bolts are not acceptable.

Use a tape measure to ensure that proper width alignment is maintained between the side columns, at the top and bottom ends of each column. DO NOT tighten the anchors at this time.

5. Mount the right side column to the wall in the same manner as described above for the left side column.

### SPREADER ASSEMBLY

1. Remove the two  $\frac{1}{4}$ -20 x  $\frac{3}{4}$ -in. hex head capscrews, washers, and nuts from each side column and save the hardware.

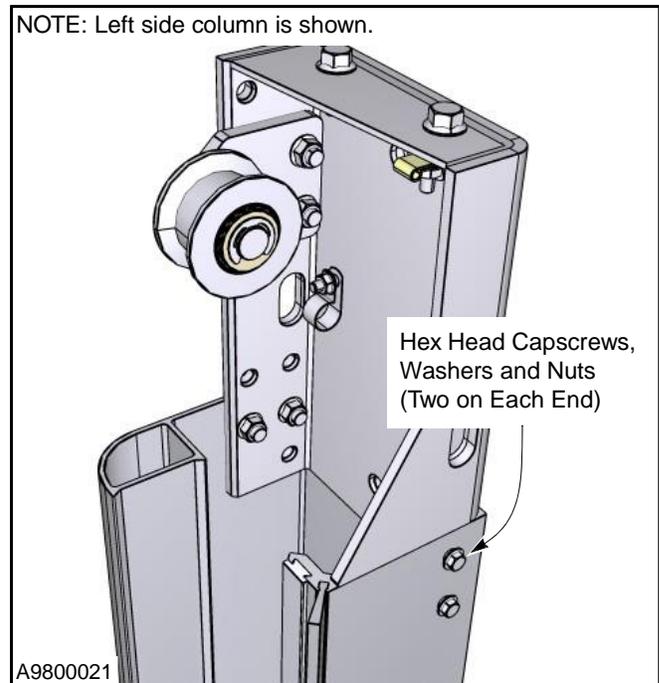


Figure 14

2. Attach the mounting bracket of the rear spreader to each side column and reinstall the hardware that was removed in the previous step. (See Figure 15)

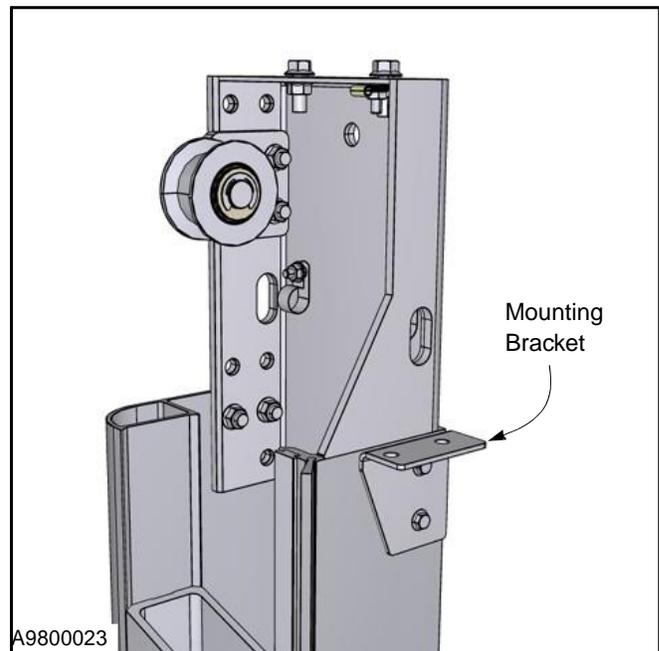


Figure 15

**IMPORTANT:** The rear spreader may be heavy and awkward. The use of a mechanical lift and two people may be required for proper and safe installation of the rear spreader.

- Attach the rear spreader assembly to the inside face of each side column using two  $\frac{1}{4}$ -20 x  $\frac{3}{4}$ -in. hex head capscrews, washers, and nuts at each end of the assembly. Position the spreader so the brush is facing away from the wall. (See Figure 16)

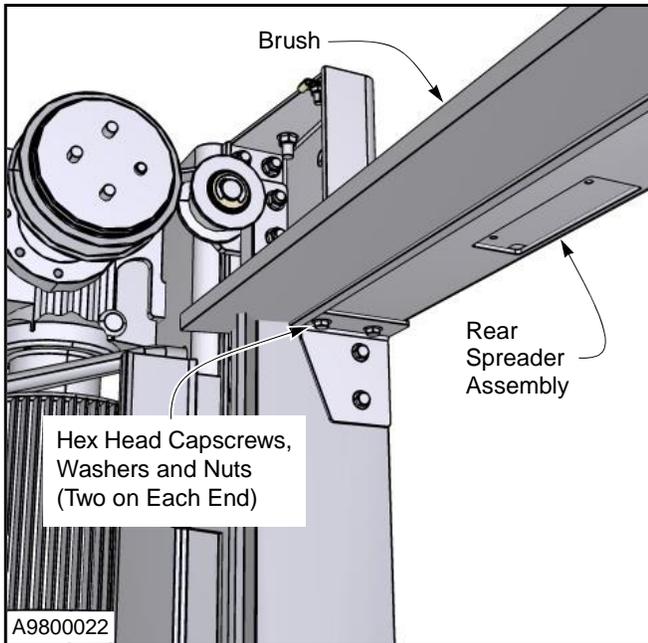


Figure 16

- Check that the side columns are plumb and square with the floor and wall.
- Tighten all anchor hardware securing both side columns to the wall.
- Install anchor hardware securing the rear spreader. (See "ANCHORING METHODS" on page 3.)
- Remove any bar clamps that may have been used to temporarily hold the side columns to the wall.

### ANTENNA

**IMPORTANT:** *The antenna is fragile and a highly sensitive instrument. Extreme care should be used in handling this piece of equipment.*

- Remove the antenna from the small parts carton.
- Carefully remove packing material from the antenna. Inspect for damage.

**NOTE:** *Do not install the antenna if it is found to be damaged. Contact your Rytec representative or the Rytec Technical Support Department at 800-628-1909 for a replacement.*

- Install the antenna into the rear spreader and secure with two  $\frac{1}{4}$ -20 flange nuts.

- Route the antenna cable over the side column to the encoder. (See Figure 17)

**NOTE:** *Wire clips are provided for a clean and direct installation.*

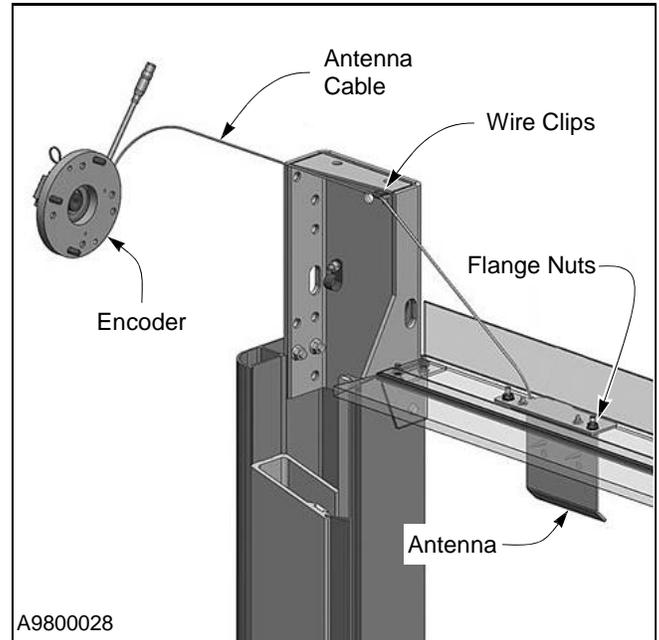


Figure 17

### ENCODER

- Install the encoder coupling shaft to the end of the motor drive shaft using a split lock washer and a Eurodrive washer.
- Install the Feig encoder hub shaft end to the end of the encoder coupling shaft and tighten the set screw.
- NOTE:** *Use a mild thread locker on the set screw.*
- Install the encoder mounting plate with the encoder using four M8 x 1.25 x 18 mm socket head cap screws.
- Connect the encoder cable to the encoder.
- Install a plastic zip tie into the socket head screw and secure the encoder cable. (See Figure 18)

**NOTE:** *The zip tie that is used to secure the encoder cable is of special design. The ribbed end inserts into the valley of the socket head cap screw.*

*All hardware is located in the small parts carton.*

## INSTALLATION—HEAD ASSEMBLY

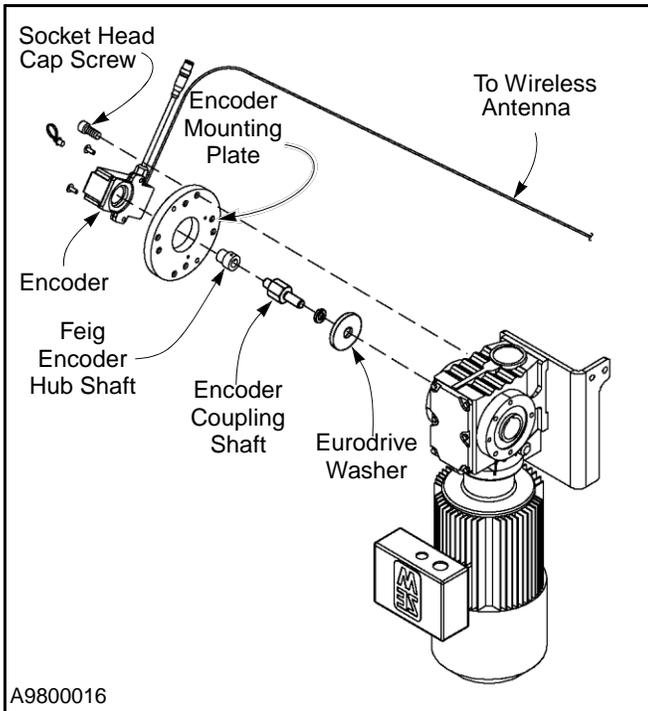


Figure 18

### HEAD ASSEMBLY

1. Before removing the head/fabric roll assembly from the shipping crate, locate four  $\frac{3}{8}$ -16 x  $1\frac{1}{4}$ -in. hex head capscrews, washers,  $\frac{3}{8}$ -16 serrated-flange nuts, and the bearing bracket assembly in the small parts carton.
2. Remove the head/fabric roll assembly from the shipping crate.

### **WARNING**

Before the head/fabric roll assembly is lifted into place, make sure both side columns are secured to the building wall.

Also, the head/fabric roll assembly must be secured to the forklift before lifting it in place. Failure to properly secure the side columns or the head/fabric assembly can result in serious personal injury and property damage. **DO NOT** remove the forklift from under the head/fabric roll assembly until it is secured to both side columns.

### **CAUTION**

Use care when handling the fabric roll to ensure that the fabric is not torn or damaged during installation. **DO NOT** remove the shipping bands holding the fabric to the roll.

3. Using a forklift or a mechanical lift, position the head/fabric roll assembly into place.
4. Position the head assembly so that the holes in the motor mounting bracket align with the holes in the side column. (See Figure 19)
5. Attach the motor mounting bracket to the side column using four  $\frac{3}{8}$ -16 x  $1\frac{1}{4}$ -in. head hex capscrews, washers, and nuts. **DO NOT** tighten the nuts at this time. (See Figure 19)

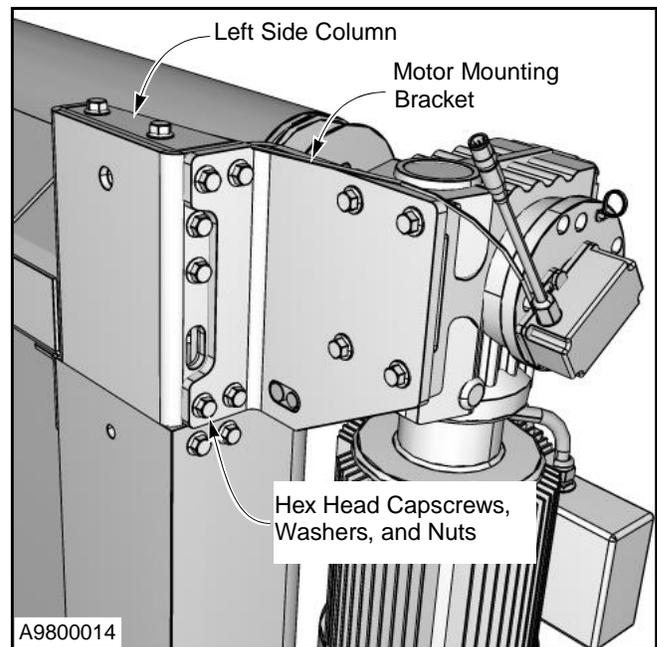


Figure 19

6. Slide the bearing bracket assembly over the drum shaft at the non-drive end of the head/fabric roll assembly.
7. Bolt the bearing bracket assembly to the side column using four  $\frac{3}{8}$ -16 x  $1\frac{1}{4}$ -in. hex head capscrews, washers, and nuts. **DO NOT** tighten the hex nuts at this time. (See Figure 20)

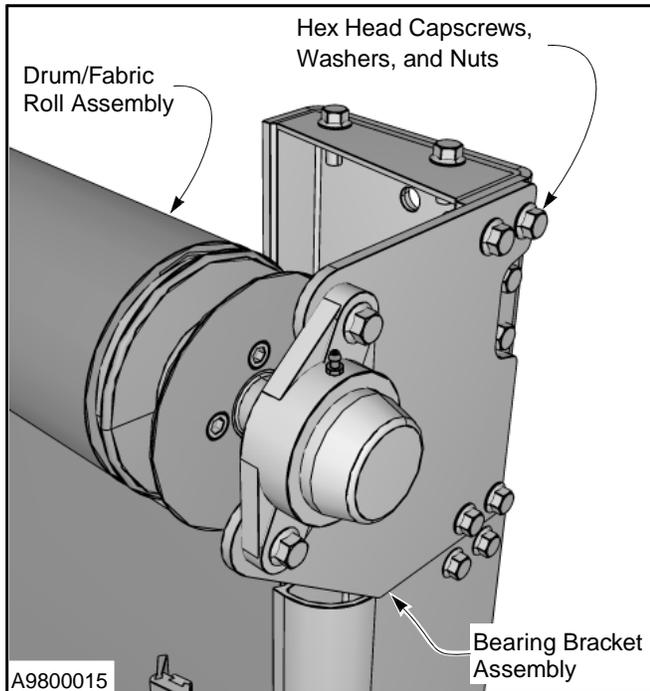


Figure 20

**IMPORTANT:** *If the drum/fabric roll assembly cannot be made level by adjusting the flange bearing mounting bracket up or down, verify that the side columns are plumb, square, and level and make any necessary adjustments.*

- Place a carpenter's level along the length of the drum/fabric roll assembly and adjust the flange bearing mounting bracket up or down, as required, until the drum/fabric roll assembly is level.

Tighten the hardware securing the motor mounting bracket and the bearing bracket assembly to the side columns. Then tighten the set screw to lock the flange bearing to the drum shaft.

## **CAUTION**

**DO NOT** remove the shipping bands holding the fabric material to the drum roll assembly at this time.

- Do not remove the shipping bands securing the fabric material to the drum roll. Only remove the fasteners securing the drum assembly to the forklift. Then lower and move the forklift out of the way.

## DOOR SEALING

Caulk between the side columns, the rear spreader, and the wall. Use a construction grade caulk for sealing the door assembly to the wall.

**IMPORTANT:** *Use caulk as directed on instructions. Improper wall preparation may result in poor adhesion.*

## COUNTERWEIGHT

### **WARNING**

A counterweight can weigh in excess of 100 pounds. Make sure that safe handling procedures are followed and that each counterweight is securely supported during its installation. If not handled properly, a counterweight can damage door components and cause serious personal injury.

- Place the left counterweight in the bottom of the left side column.
- Securely block each counterweight 6 to 8 in. above the bottom of the side column.
- Remove the shipping tape for the counterweight straps.
- Route each counterweight strap over its associated pulley as shown in Figure 21.

**NOTE:** *The counterweight strap will have at least 2 pre-wraps on the spool before routing the strap down the side column. Depending on the door performance during testing, some doors may require additional pre-wraps.*

## INSTALLATION—PHOTO EYE

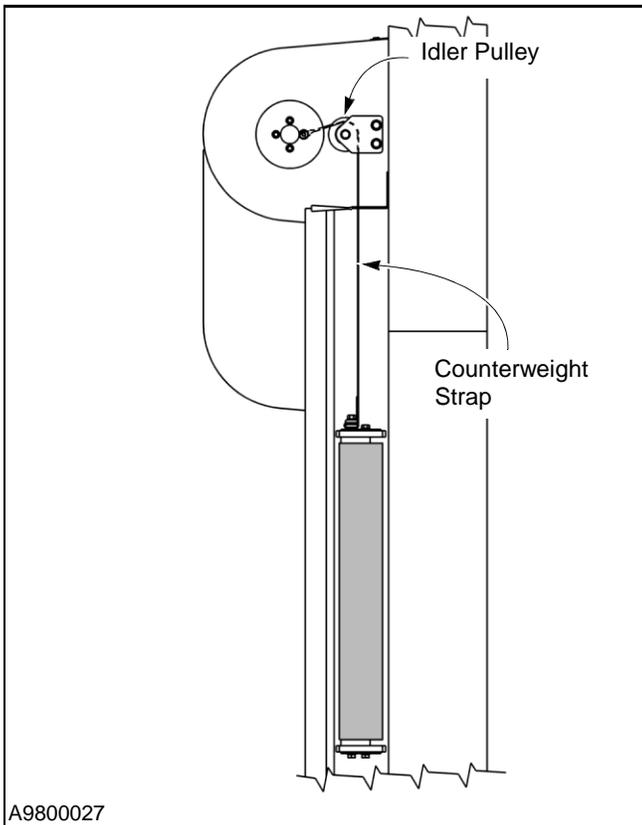


Figure 21

5. With the straps hanging straight, attach them to the counterweights using two  $\frac{3}{8}$ -16 UNC x 2 hex head cap screws,  $\frac{3}{8}$ -in. split lock washers,  $\frac{3}{8}$ -in. flat washers, & clamp bars provided in the small parts carton as shown. (See Figure 22)

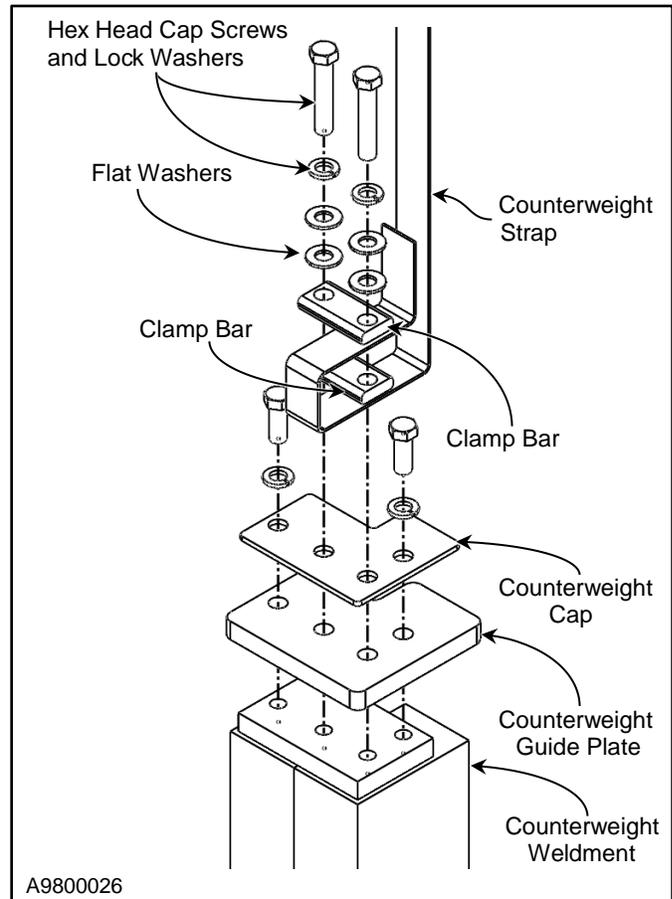


Figure 22

6. Tighten the clamp bars to secure each strap. Then carefully remove the support block from under each counterweight to allow the weights to hang free. If necessary, readjust the straps.
7. After all adjustments are complete, cut off any excess strap to within 6 in. of the upper clamp bar. Use tape or a tie strap to attach the loose end of each strap to the main length of strap.

### PHOTO EYE

*NOTE: Photo eyes and mounting hardware are shipped in the small parts carton. The two sets of photo eyes provided MUST both be properly installed. (See Figure 23)*

**IMPORTANT: The rear photo eyes are pre-installed at the factory. When installing the front set of photo eyes, be sure that the assembly is installed in reverse order from the rear. This is to prevent cross-talk between the photo eyes.**

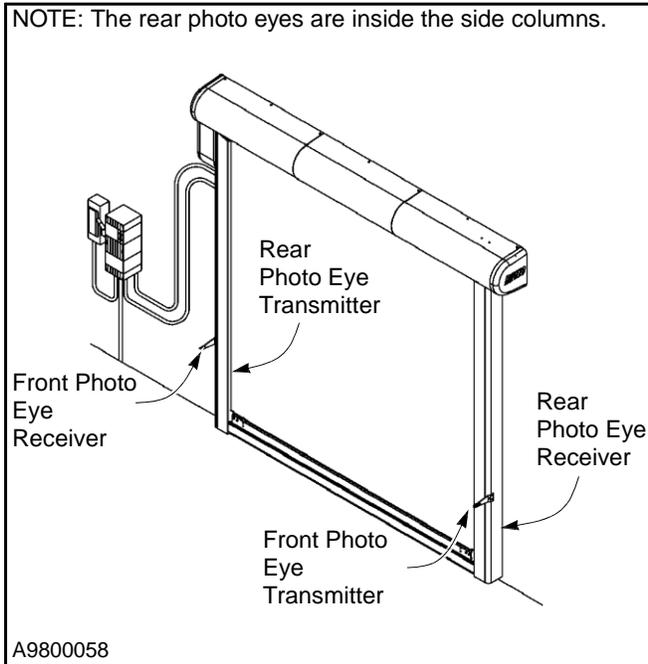


Figure 23

1. Install the photo eye assembly on the left side column with two 1/4-20 UNC x 3/4-in. button head cap screws.
2. Feed photo eye cable through the left side column access hole and connect to front photo eye. Remove all slack in the cord between the photo eye and access hole.
3. Connect photo eye cable to rear photo eye. (See Figure 24)

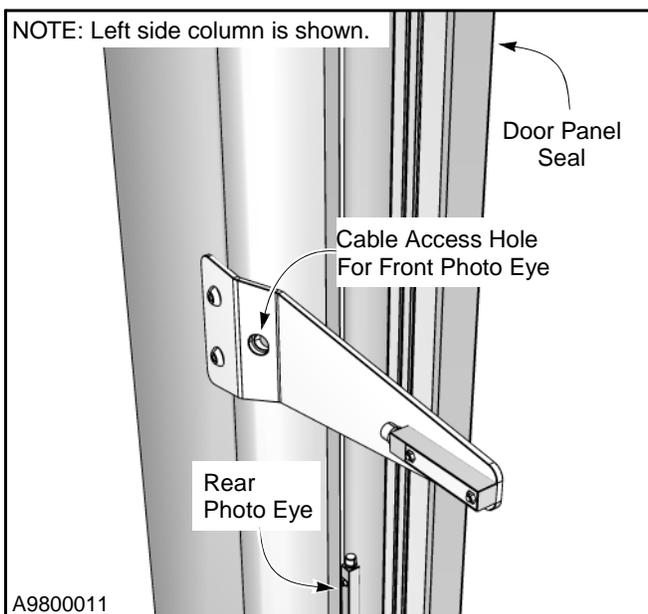


Figure 24

4. Route photo eye cables up the left side column and

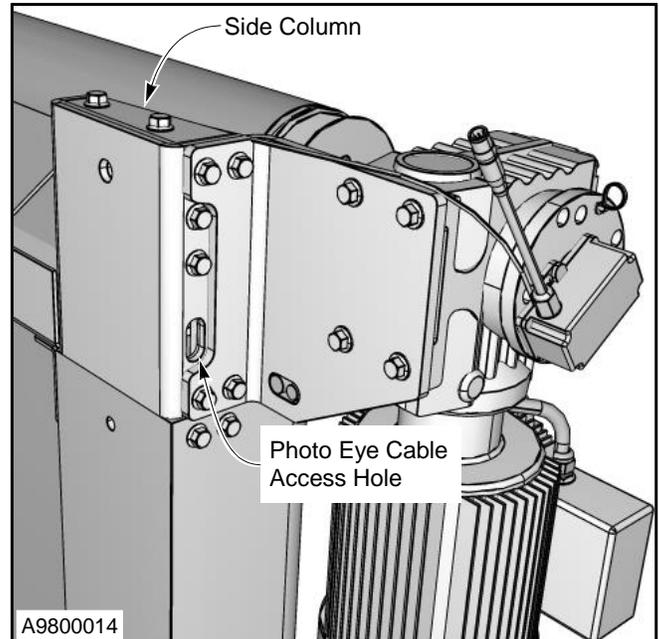


Figure 25

5. out the top access hole of the side column.
  5. Repeat procedure for right side column. Route the photo eye cables across the rear spreader and out the left side column access hole.
- NOTE: If the powerdrive system is mounted on the right, then all photo eye cables exit out the right side column access hole.
6. Route and connect photo eye cables to the System 4 control panel. See wiring schematic, which was shipped with the door.

### BRAKE RELEASE

When this Rytec door is equipped with counterweighted side columns it will also contain a brake release-override system. The brake release allows the door to be manually opened or closed in the event of an emergency or power outage. A steel cable links the electrical brake mechanism, located on the drive motor, to a brake release handle mounted on the drive side column. The brake release handle is typically mounted on the side column but can also be mounted remotely or just remotely (on the opposite side of the wall).

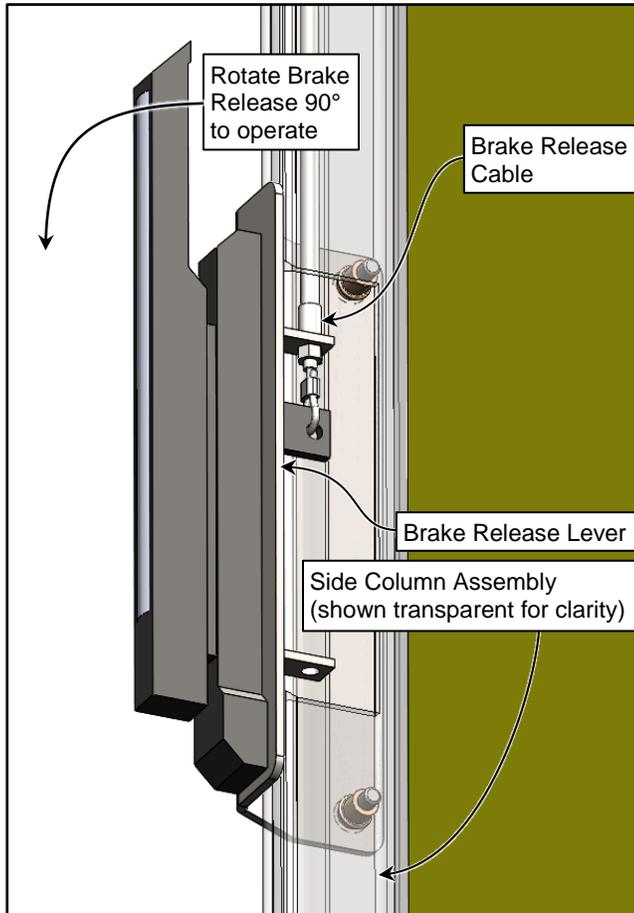
#### Side Column Mounted

The side column mounted brake release is mounted on the front side column of the door's drive side.

## INSTALLATION-BRAKE RELEASE

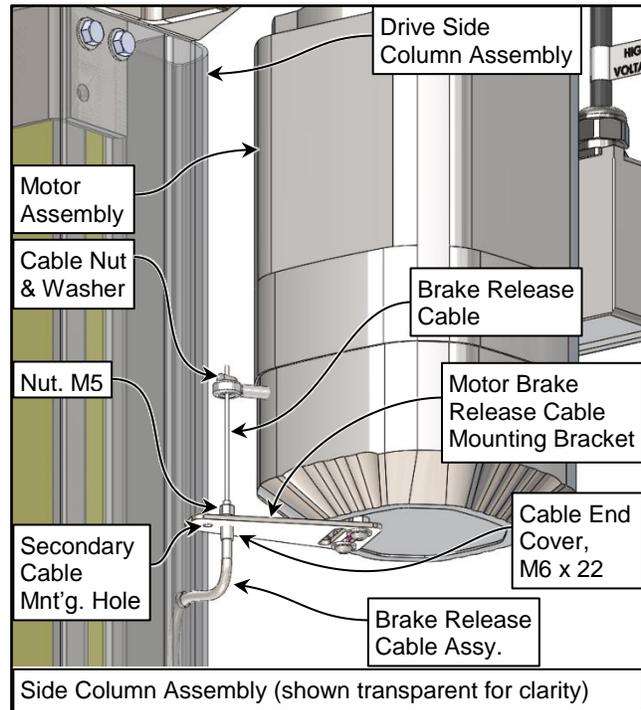
1. One end of the steel cable was connected to the side column assembly brake release at the factory. For shipping, the other end has been routed up through the side column to the top of the side column assembly and should be wound up. Pull the cable through the hole in the side column assembly & route it to the motor assembly brake release cable mounting bracket as shown. (See Figure 26 & Figure 27)

*NOTE: Tug on the free end of the cable to check that it is not caught or hung up.*



**Figure 26**

2. Rotate the brake release handle fully extended out at 90°. Feed the cable through the motor brake release mounting bracket & eyelet of the motor assembly's brake release eye bolt as shown. Slide the cable nut & washer over the end of the cable with the washer tight against the eyelet. Then with the majority of slack removed from the cable, tighten down the cable nut onto the cable. The cable nut & washer are located in the small parts carton. (See Figure 26 & Figure 27)



**Figure 27**

3. Pull the handle several times to stretch the cable and remove any slack. Check the action of the lever on the brake mechanism for proper travel. If necessary, reposition the cable nut.

*NOTE: Ensure that the cable isn't so tight that the brake mechanism cannot re-engage once the lever is released and put back in place.*

4. Cut the cable to length, an inch or two after the cable nut. (See Figure 27)
5. Disengage the electric brake by pulling the brake release handle. Then, by hand, manually lower the door a few inches to verify that the door is not bound or caught up in the head assembly.
6. To re-engage the motor assembly's electric brake and lock the door in place, put the brake release handle back against the side column in the retracted position.

### Remote Mounted

The remote mounted brake release is mounted on the opposite side of the wall to the door. The cable is routed through the wall & connected to the motor's brake release just as the side column mounted release. This feature can be used in combination with or in place of the side column mounted brake release.

## INSTALLATION-SIDE COLUMN COVER

1. One end of the steel cable was connected to the remote mounted brake release at the factory. For shipping, the other end has been coiled for installation in the field. Securely route the brake release cable up the wall along the side column to about 12" above where the front mount brake release is or would be located. (See Figure 28)
2. Using the front brake release or it's mounting holes located on the front of the side column as a placement guide for mounting the remote brake release, drill at least a  $\varnothing 3/8$ " hole through the wall to the opposite side just above it. Route the cable through the wall to the opposite side. (See Figure 28)

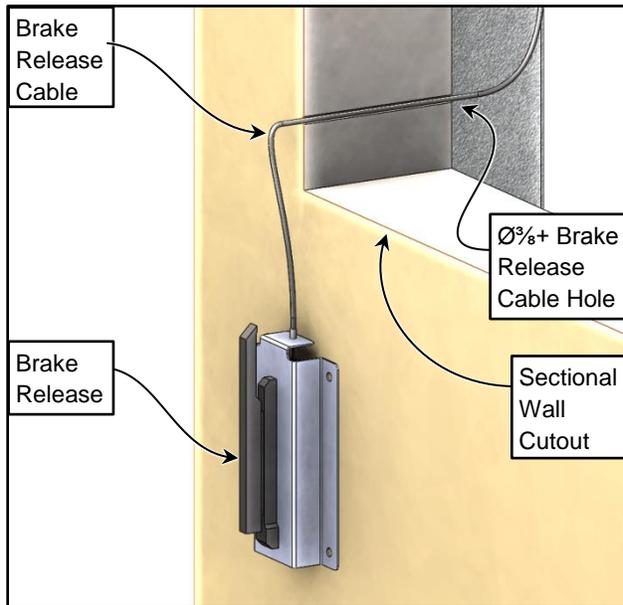


Figure 28

3. Mount the brake release to the wall. Finish routing the cable through to the brake release on the drive motor assembly. (See Figure 28)

*NOTE: Tug on the free end of the cable to check that it is not caught or hung up.*

4. Rotate the brake release handle fully extended out at 90°. Feed the cable through the motor brake release mounting bracket & eyelet of the motor assembly's brake release eye bolt as shown. Slide the cable nut & washer over the end of the cable with the washer tight against the eyelet. Then with the majority of slack removed from the cable, tighten down the cable nut onto the cable. The cable nut & washer are located in the small parts carton. (See Figure & Figure )
5. Pull the handle several times to stretch the cable and remove any slack. Check the action of the lever on the brake mechanism for proper travel. If necessary, reposition the crimp nut.

*NOTE: Ensure that the cable isn't so tight that the brake mechanism cannot re-engage once the lever is released and put back in place.*

6. Cut the cable to length, an inch or two after the cable nut. (See Figure 27)
7. Disengage the electric brake by pulling the brake release handle. Then manually lower the door a few inches to verify that the door is not bound or caught up in the head assembly.
8. To re-engage the motor assembly's electric brake and lock the door in place, put the brake release handle back against the side column in the retracted position.

### SIDE COLUMN COVER

1. Ensure the hardware, counterweights, and electrical connections in the side columns are secure and tight.

*NOTE: Once the side column cover is installed, no adjustments may be made or hardware tightened without removing the cover.*

**IMPORTANT: When installing the cap screws to mount the side column covers, use a screwdriver versus a cordless drill/screw gun. The high torque ratings of some of the powered tools can break loose the rivet nut in a side column, which in turn will render that fitting inoperable and a weaker structure. Should there be any loose rivet nuts, replace them immediately.**

2. Install side column covers using  $1/4$ -20 UNC x 1-in. flat head socket cap screw. (See Figure )

## INSTALLATION—HOOD

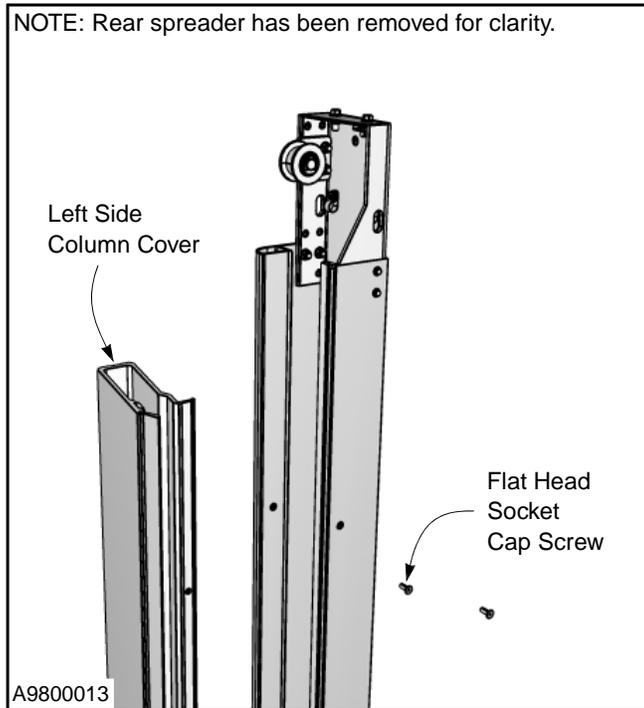


Figure 29

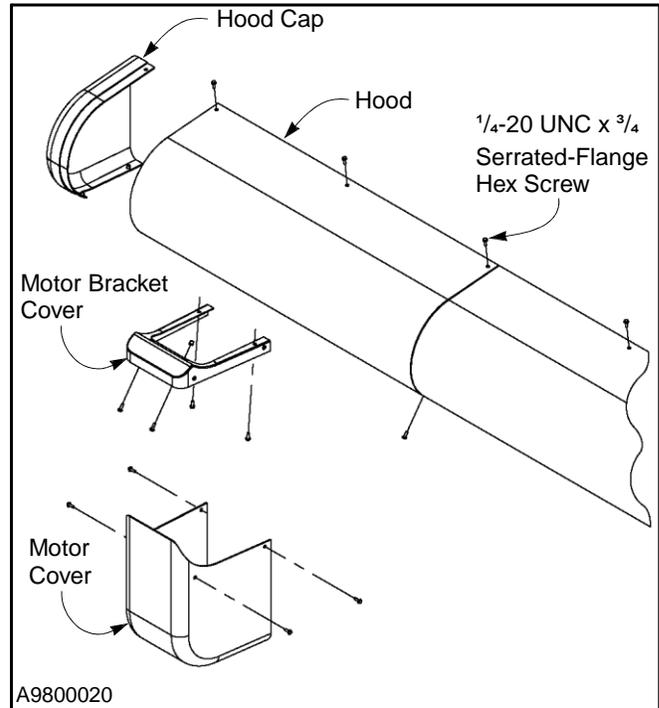


Figure 31

### HOOD

1. Attach the hood support assembly to the top of the side columns using two  $\frac{3}{8}$ -16 x 1-in. serrated-flange hex screws and nuts on each end. (See Figure 30)

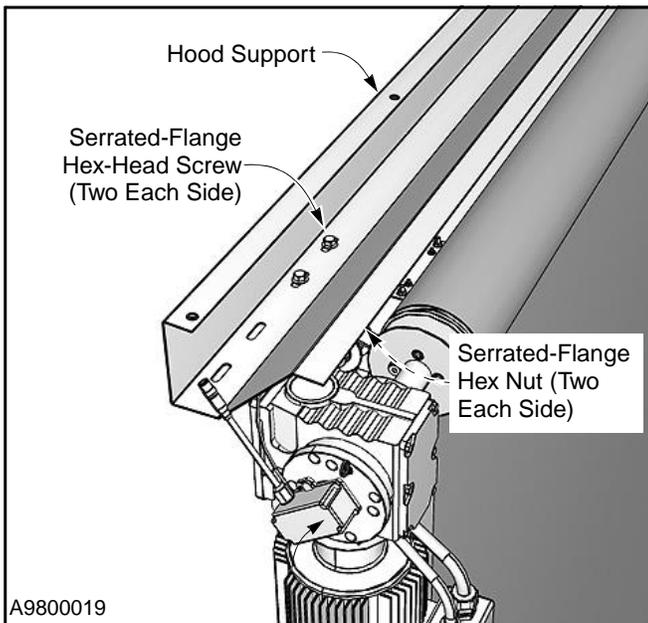


Figure 30

2. Assemble the motor cover, motor bracket, hood cap, and hood using  $\frac{1}{4}$ -20 UNC x  $\frac{3}{4}$  serrated-flange hex screws. (See Figure 31)

3. Install the center hood piece(s) and other hood cap.

### CONTROL PANEL AND ELECTRICAL CONNECTIONS

Once the door has been assembled, see the Rytec System 4 Drive & Control Installation & Owner's Manual for information on control panel installation, electrical connections, door limit settings, and initial door start-up procedure.

**NOTE:** If a floor loop is used, all wiring from the fused disconnect to the control box and from the control box to the motor mount side column, as well as conduit running from the control box to the floor, is provided by the door owner/installer or the electrician. All wiring and conduit must meet all local and state codes. Wires provided with the door are labeled with terminal or contact numbers.

## DOOR OPEN- AND CLOSE-LIMIT POSITIONS

See the Rytec System 4 Drive & Control Installation & Owner's Manual for the proper procedure for setting the open and close door limits. The door open- and close- limit positions are detailed below.

### Close-Limit Position

The close-limit position should be adjusted so that the door travel allows the yellow vinyl loop on the bottom bar to gently seal against the floor. (See Figure 32)

DO NOT allow the rubber reversing edge, enclosed in the yellow vinyl loop, to come in contact with the floor.



**Damage to the rubber reversing edge or other bottom bar parts can occur if the door seal is allowed to seal too tightly against the floor.**

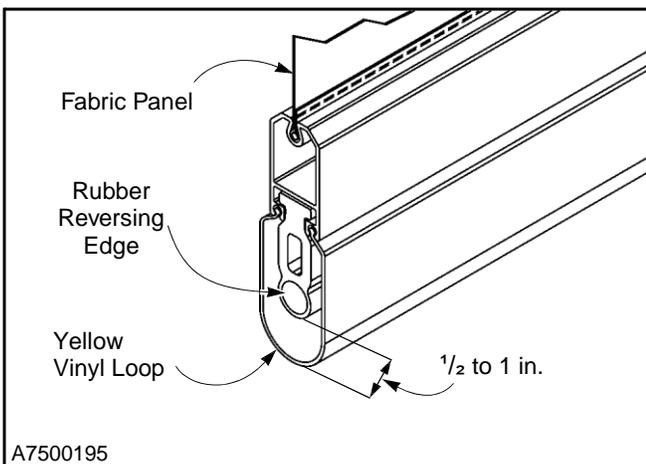


Figure 32

### Open-Limit Position

The open-limit position should be adjusted so that the door travel allows the bottom bar assembly to stop just below the hood assembly. (See Figure 33)

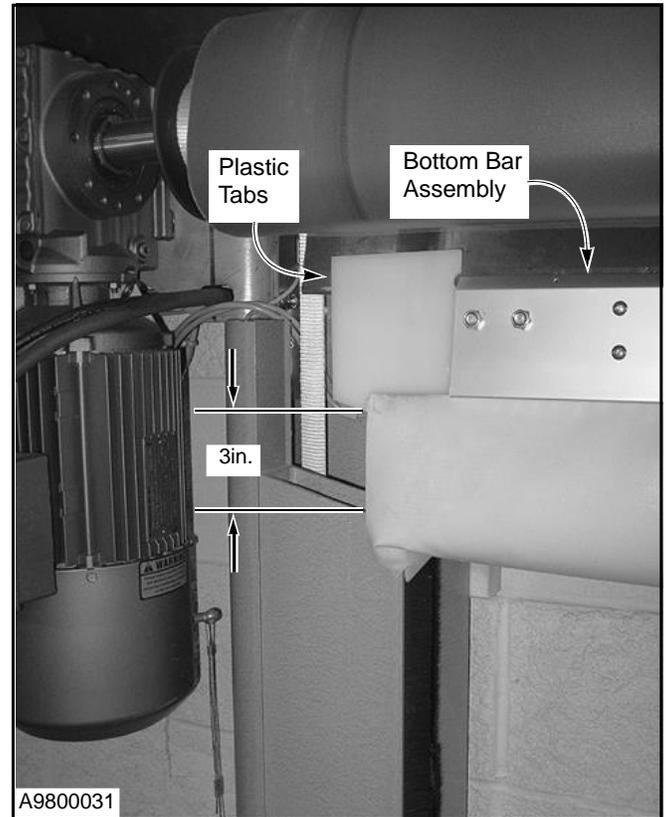


Figure 33

## PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT

*NOTE: The Plexline door is designed with the wireless antenna mounted on the rear of the door or head assembly. Therefore, the mobile unit and access plate are located on the backside of the bottom bar.*

**DO NOT** remove the bottom bar and move the mobile unit to the front of the door. This will prevent proper operation of the wireless reversing edge.



**Do not stand under the door panel when making check. If reversing edge switch is not working properly, panel could strike person performing check.**

To check the reversing edge switch operation, run the door through the down cycle. As the door is lowering, tap the bottom of the reversing edge. If the reversing edge switch is operating properly, the door should immediately reverse and run to the fully open position. Push the control box push button to close the door after the check is completed.

## INSTALLATION—PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT

If the door does not reverse, check the air bleed and sensitivity of the reversing edge switch. The switch is in the bottom bar on the side opposite the door motor.

### Reversing Edge Switch Air Bleed Check

1. The reversing edge switch is located inside the bottom bar assembly. To inspect and/or adjust the switch, remove the access cover from the face of the bottom bar assembly.

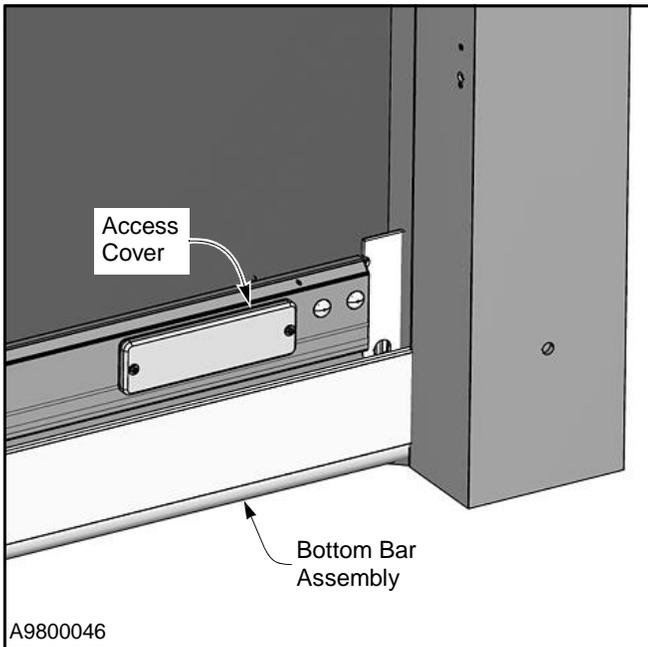


Figure 34

2. Make sure the clear PVC hose is in tight contact with the air input post so that air leakage cannot occur and that vibration will not cause the hose to fall off. Make sure the hose is not kinked. (See Figure 35)
3. The air bleed has been set at the factory and should not require adjustment. To check the air bleed, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise, but do not overtighten. Then turn the screws counterclockwise one full turn. (See Figure 35)

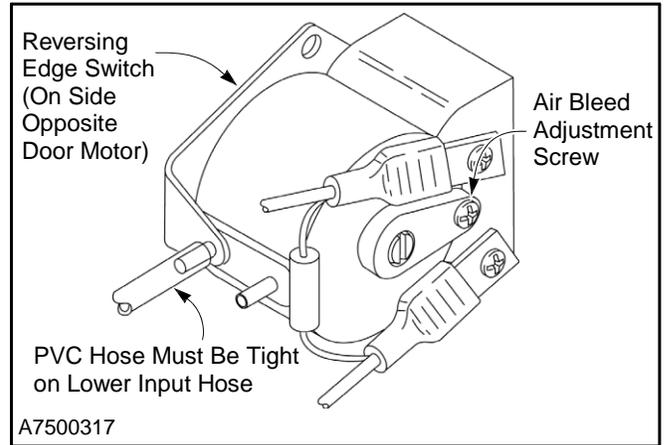


Figure 35

### Reversing Edge Switch Sensitivity Adjustment

1. The reversing edge switch is a normally open contact. The PVC hose is on the lower air input post. To adjust the switch, first remove the wires and resistor from the contact terminals and attach an ohmmeter across the two terminals. (See Figure 36)
2. Turn the adjustment screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved. Then turn the screw  $\frac{3}{4}$  turn counterclockwise. Ohmmeter should no longer show continuity. Turning the screw counterclockwise decreases sensitivity. Turning the screw clockwise increases sensitivity. (See Figure 36)

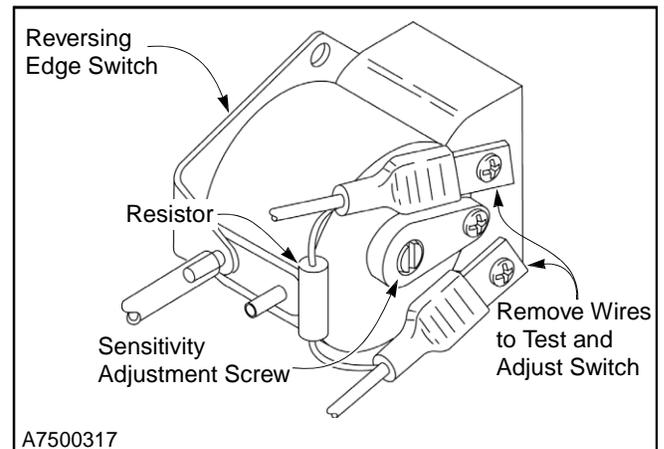


Figure 36

3. Reattach resistor and wires and then replace the access cover on the bottom bar.

**NOTE:** If the reversing edge is set too sensitive, the door may reverse direction during the closing cycle, without the reversing edge coming in contact with an object. If this occurs, readjust the reversing edge switch.

# INSTALLATION—PNEUMATIC KILL SWITCH CHECK AND ADJUSTMENT

## PNEUMATIC KILL SWITCH CHECK AND ADJUSTMENT

A kill switch has been mounted in the bottom bar assembly. The purpose of this switch is to prevent the door from being operated if the breakaway bottom bar becomes separated from either side column.

### Kill Switch Check



Take precautions to prevent the door from being opened or closed while performing the following procedure.

1. Raise or lower the door to approximately head or chest height and stop the door.

*NOTE: It should not be possible to restart the door until the door has been reassembled and the control system reset.*

2. Push the breakaway bottom bar out of the side column. Door should not operate until control box is reset. (See Figure 37)

**If the kill switch did not operate properly:** Adjust the kill switch and then recheck it. (See “Kill Switch Air Bleed Adjustment” on page 17)

**If the kill switch operated properly:** Reinstall the bottom bar into the side column. (See “RESETTING BOTTOM BAR ASSEMBLY” on page 18)

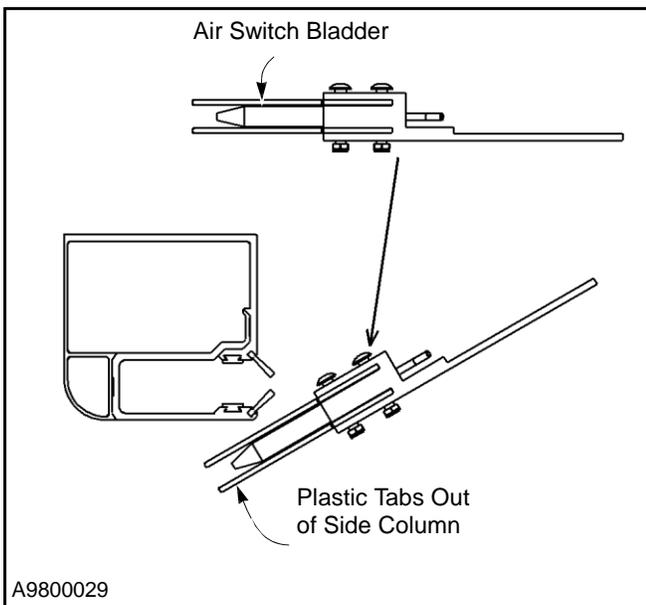


Figure 37

### Kill Switch Air Bleed Adjustment

1. The kill switch is mounted in the bottom bar assembly,

on the same side as the door motor. To access the switch, first remove the access cover.

2. Make sure the clear PVC hose is tight on the air input post so that air leakage cannot occur and vibration will not cause the hose to fall off. Also make sure the hose is not kinked. (See Figure 38)

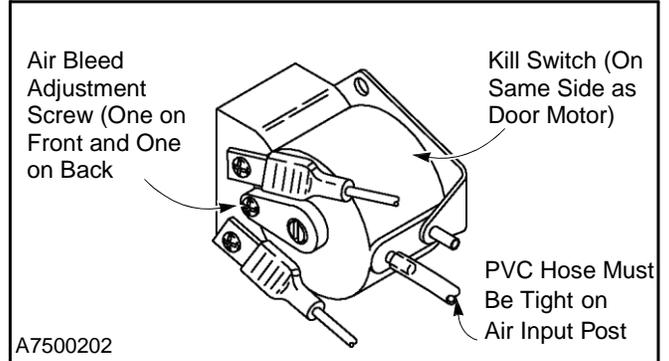


Figure 38

3. The air bleed has been set at the factory and should not require adjustment. To adjust the air bleed, turn the air bleed adjustment screws located on the front and back of the switch fully clockwise, but do not overtighten. Then turn each screw counterclockwise one full turn. (See Figure 38)
4. To adjust the kill switch sensitivity, see “Kill Switch Sensitivity Adjustment” below.

### Kill Switch Sensitivity Adjustment

The kill switch assembly is a normally closed contact. The PVC hose is on the upper air input post.

1. Remove the wires from the contact terminals and attach an ohmmeter across the two terminals. (See Figure 39)
2. To adjust the switch, turn the small adjusting screw, located on the face of the switch, clockwise or counterclockwise until continuity is achieved. Then turn the screw two turns clockwise for final adjustment. Ohmmeter should continue to show continuity. Turning the screw clockwise decreases sensitivity. Turning the screw counterclockwise increases sensitivity. (See Figure 39)

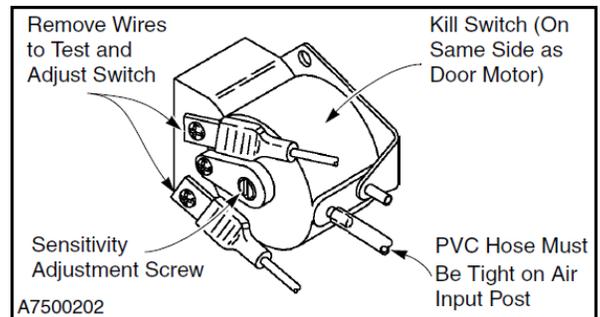


Figure 39

## INSTALLATION—RESETTING BOTTOM BAR ASSEMBLY

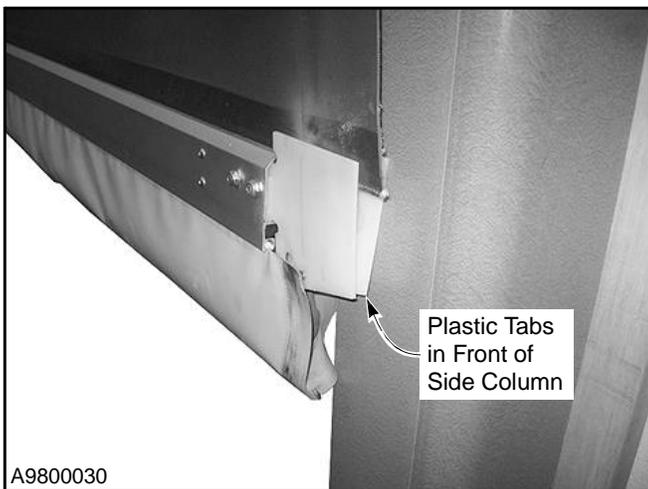
3. Reconnect the wires to the switch. Replace the access cover on the bottom bar.

*NOTE: If the kill switch is set too sensitive, it may cause the door to stop during the opening or closing cycle. If this occurs, readjust the kill switch sensitivity setting.*

### RESETTING BOTTOM BAR ASSEMBLY

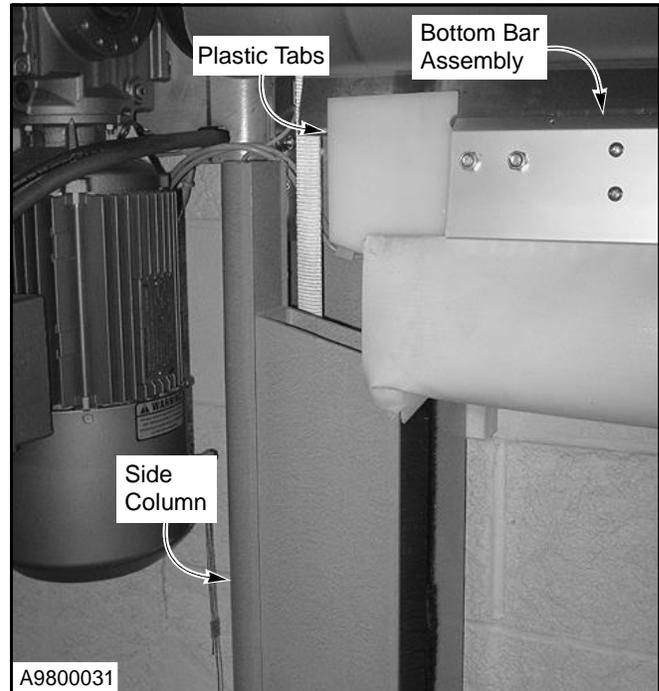
**IMPORTANT: If the bottom bar or door panel assembly has been damaged, remove door from service.**

1. Position the breakaway tabs of the bottom bar in front of the side column. (See Figure 40)



**Figure 40**

2. Press and hold the up arrow on the control panel until the door is in the fully open position. (See Figure 41)



**Figure 41**

3. Press the down arrow and the door will close in automatic mode and be ready for service.

*NOTE: It should not be possible to restart the door until the door has been reassembled and the control system reset.*

*Check to make sure that the fabric is inside each channel.*

4. Perform operations check of the door.

## FINAL CHECKS

**Side Columns:** Check to see that the side columns are installed plumb and square and that all anchor bolts are securely tightened.

**Header Assembly:** Check all mounting hardware to see if it is tight.

**Head Assembly:** Fabric roll must be level. All mounting hardware must be tight.

**Caulking:** See that side columns and head assembly have been caulked where they meet the building wall.

**Bottom Bar:** The bottom bar must travel up and down in the side column without binding.

**Open and Close Limits:** Check that limits are set properly.

**Motor Operation:** Verify that the motor cycles the door in the proper direction when keys on the front of the control box are pressed.

**Reversing Edge Switch:** Door should return to fully open position if reversing edge on the bottom bar comes in contact with an object during the down travel of the door panel. See “PNEUMATIC REVERSING EDGE SWITCH ADJUSTMENT” on page 13 for test and adjustment procedures.

**Kill Switch:** Door travel should stop when the bottom bar is disengaged from one or both of the side columns. See “PNEUMATIC KILL SWITCH CHECK AND ADJUSTMENT” on page 15 for test and adjustment procedures.

**Timers:** Timers must be set to ensure proper closing of the door. See Rytec System 4 Drive & Control Installation & Owner’s Manual for more information on timer settings.

**Activator Settings:** *Recheck all settings and adjust as required.*

**Coil Cord:** Run the door through two or three cycles. Check the coil cord when the door is in the closed position. The coil cord should not contact the floor or hang in front of or interfere in any way with the photo eye.

**Photo Eyes:** Check to see that front and rear photo eyes are operating properly.

Refer to Plexline Owner’s Manual for proper complete operating, inspection, and maintenance procedures.





