



*OPENING QUALITY DOORS
AROUND THE WORLD*



JOB NAME:

JOB LOCATION:

COURION JOB #:

LIFT #:

**Manual Dumbwaiter Entrances
& Car Gate Installation Instructions**

For Immediate Help Call 1-800-533-5760

Dumbwaiter Installation Instructions

Table of Contents

These Instructions, along with Courion's General Layout Drawings, are intended to provide the information necessary to properly install your new Courion Dumbwaiter Doors and Car Gate. Courion strongly suggests that these Instructions be thoroughly understood before you start your installation.

List of Tools	3
Check All Material	3
Identify Door Frames	4
Step 1: Field Survey	4
Step 2: Install Red Heads	5
Step 3: Install Hoistway Door Assemblies	6
Step 4: Adjust Doors	8
Step 5: Install Interlocks	9
Step 6: Install Switch Cams and Lock Out Rod Holders	10
Step 7: Install Lock Out Rods	11
Step 8: Adjust Interlocks	12
Step 9: Install EUDs	13
Step 10: Install Stationary (Fixed) Cam	14
Step 11: Install Gate Guides	15
Step 12: Install Car Gate Panels	16
Step 13: Install Gate Switch	17

Other Installation Data (when applicable)

- General Layout Drawings • Car Enclosure Layout Drawings • Car Installation Instructions
- Other Job Specific Drawings



Dumbwaiter Installation Instructions

List of Tools

Below is a list of tools necessary to install and adjust your Courion Dumbwaiter Doors and Car Gate. To insure a smooth and easy installation, please make sure you have all of these items before starting the installation.

LIST OF NECESSARY TOOLS:

- Normal Elevator Mechanic's Tools
- Hammer Drill
- Red Head Attachment for Hammer drill
- Hacksaw
- Level
- 9/16" Jobber Length Masonry Drill - (masonry walls)
- 7/16" Drill and Countersink
- 1/2" Drill
- Hoisting Device (sufficient capacity to lift Frame Assemblies)
- Lifting Straps (sufficient capacity to lift Frame Assemblies)

IMPORTANT! Before you begin installation of your Courion Dumbwaiter equipment, it is mandatory that you have a running platform with car. Doing a proper installation without a running car is extremely difficult and not advised.

TOOLS PROVIDED BY COURION:

- Jack Bolt Template

Check all Materials

Verify quantity and check all items for damage immediately upon receipt. If any shortage or damage is found, please contact Courion immediately. A copy of your packing list was provided with your Courion shipment.

- You must verify the quantity received with the freight bill and bill of lading immediately upon receipt of your Courion shipment.
- You must inspect all items received for damage immediately upon receipt of your Courion shipment.

Freight Claims !!!

IF AN ITEM IS MISSING OR DAMAGED, HAVE FREIGHT LINE MAKE INSPECTION IMMEDIATELY AND MAKE NOTATION OF THE DAMAGE OR LOSS ON BILL OF LADING. BE SURE TO FILE YOUR FREIGHT CLAIM WITH THE FREIGHT LINE PROMPTLY. THE CARRIER WILL NOT CONSIDER A CLAIM UNLESS PROPERLY PRESENTED. YOU RISK LOSS IF YOU FAIL TO FOLLOW THE PRECAUTIONS STATED ABOVE!



Dumbwaiter Installation Instructions

Identify Door Frames

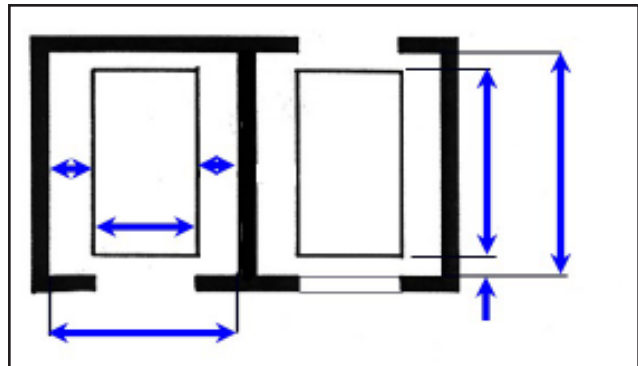
Move all Door Frames to the floor where they will be installed. Experience has taught us that moving the Door Frames to the floor where they will be installed will save time and improve safety.

- All Door Frames are marked with a number that corresponds to a number on the Courion Layout Drawings. Make sure that you check this number and move the Door Frames to the proper floor.

Step 1

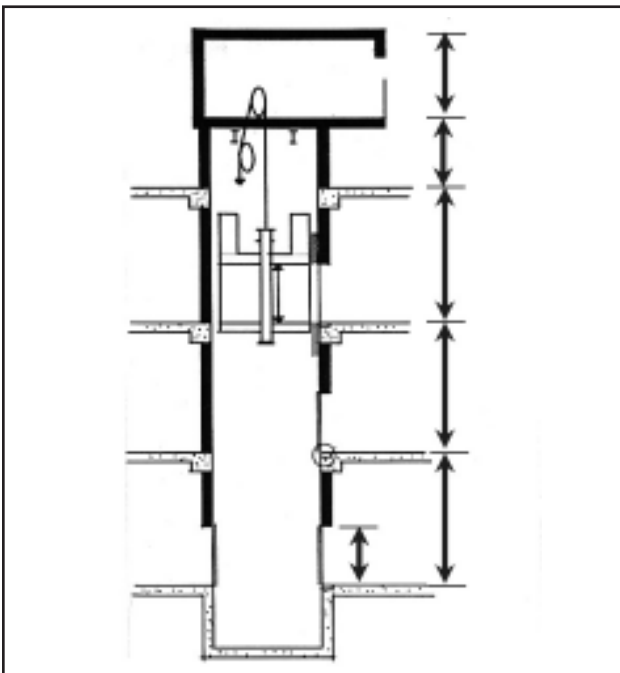
FIELD SURVEY - Check Hoistway Conditions at **ALL FLOORS** against the Courion Layout Drawings included with these Installation Instructions.

- Using a tape measure, carefully check all of the following measurements and compare them to the Courion General Layout Drawings.



Please confirm all of the following measurements -

- Car-to-Wall (check both sides at each opening)
- Front and Rear Openings (must be level with one another)
- Wall-to-Wall
- Platform Dimensions
- Floor-to-Floor
- Pit Depth
- Overhead



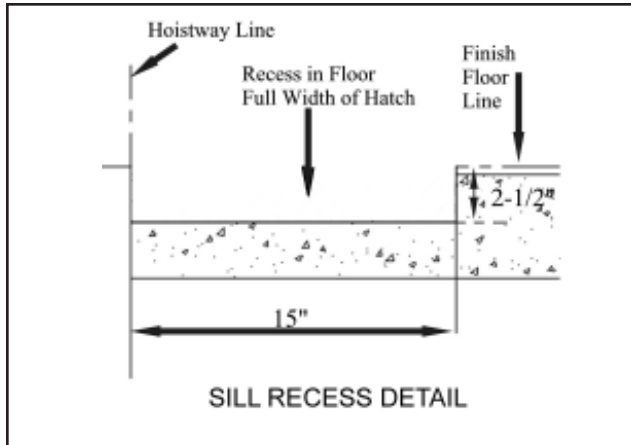
NOTE: If there are any discrepancies found between the Courion Layout Drawings and the actual hoistway - **STOP! DO NOT PROCEED. CALL COURION IMMEDIATELY.**



Dumbwaiter Installation Instructions

Step 2

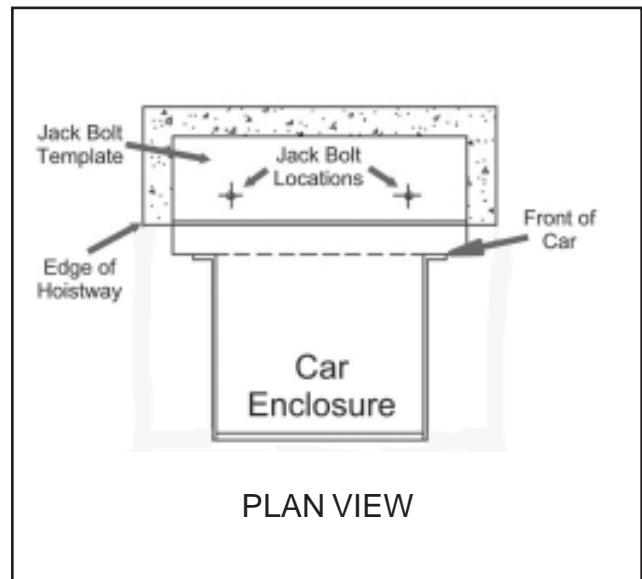
INSTALL RED HEADS - Install Red Heads in floor at each Opening using the wooden Jack Bolt template provided by Courion.



- Using a tape measure, carefully check the Sill Recesses at all Landings.

- The Recess should be the same as set out in the Courion General Layout Drawings supplied with your job.

- Locate the wooden Jack Bolt Template provided by Courion.
- Slide the Jack Bolt Template into the Car with the NOTCH edge held against the front of the Car.
- Using a Red Heads found in the Hoistway Door Hardware Kit #800, start a hole in each position indicated on the Jack Bolt Template.
- Remove the Jack Bolt Template.
- Use a hammer drill to drill and set a 3/8" Red Head anchor into each of the started holes. Use one of the 3/8"-16 x 1-1/2" HHCS to spread the Wedge Anchor in place.
- Follow this procedure at every opening.



IMPORTANT! DO NOT INSTALL THE THREADED JACK BOLT RODS INTO THE JACK BOLT ANCHORS AT THIS POINT.



Dumbwaiter Installation Instructions

Step 3

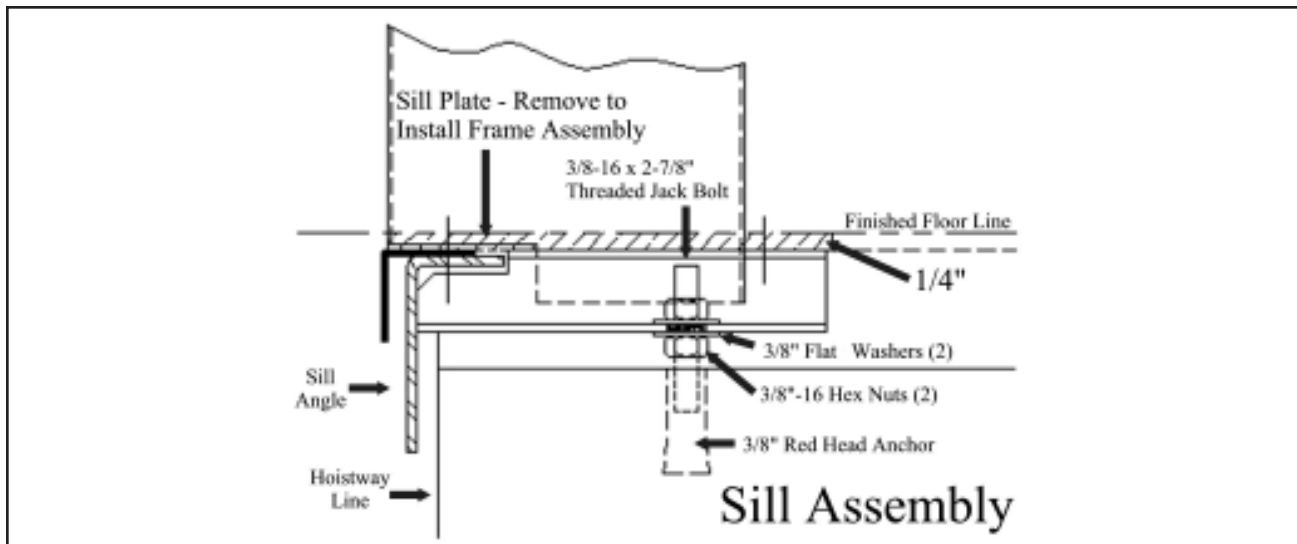
INSTALL HOISTWAY DOOR ASSEMBLIES - For both safety and efficiency, installation of Hoistway Door Assemblies should begin at the **LOWEST** opening and work up the Hoistway.

NOTE: Hoistway Door Assemblies are numbered. These numbers correspond to opening numbers on the Courion Layout Drawings. Make sure that Hoistway Door Assemblies are installed at the proper opening.

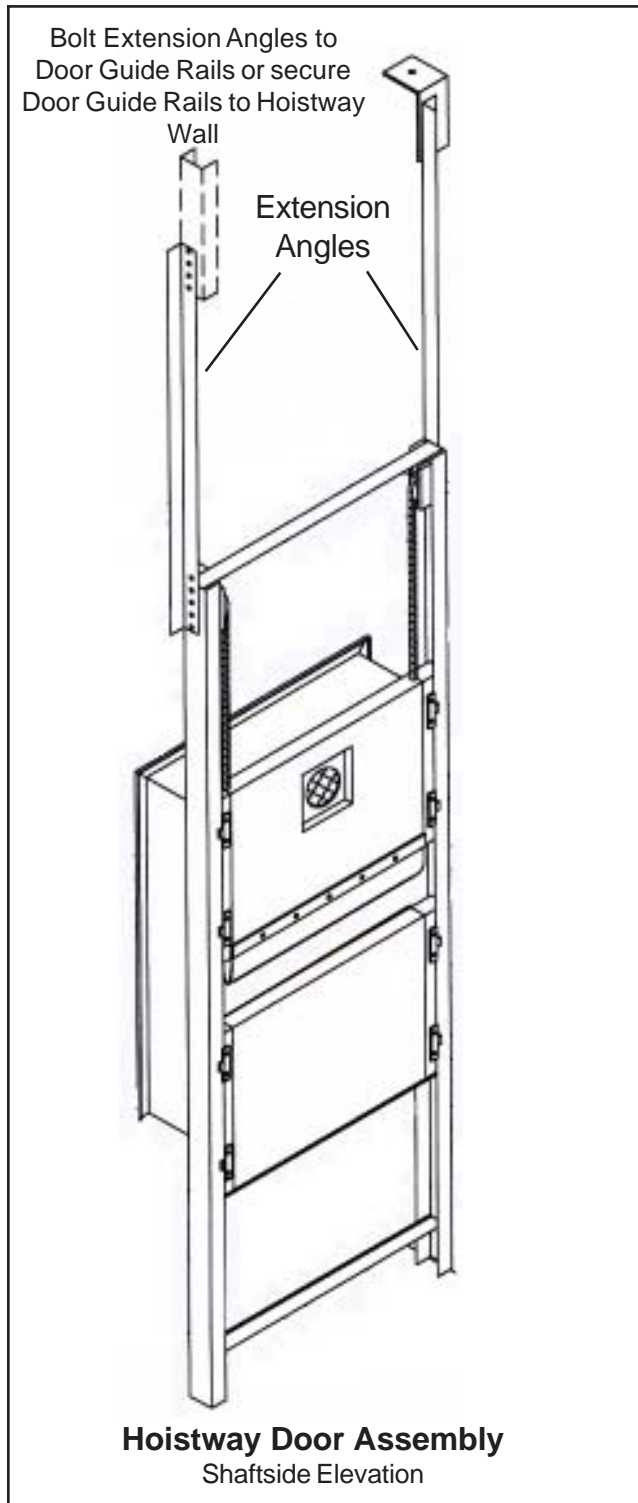
- Assemble the Jack Bolt Rods using the 3/8"-16 x 2-7/8" Threaded Rod, 3/8"-16 Hex Nut, and 3/8" Flat Washer found in the Hoistway Door Hardware Kit #800.
- Install a Jack Bolt Rod into each Red Head Anchor.
- Remove the Sill Plate from the Hoistway Door Assembly and maneuver the Hoistway Door Assembly into the Opening from the hoistway side and position it so that it is resting on the Jack Bolt Rods.

NOTE. Inside of Door Jamb (clear opening dimension) must line up with inside of Car sides - check before continuing.

- Install the top 3/8" Flat Washer and 3/8"-16 Hex Nut found in the Hoistway Door Hardware Kit #800 on the Jack Bolt Assembly.
- Using the **lower** 3/8" Hex Nut on the Jack Bolt Rod, adjust the Sill height so that it is level and **1/4" below the finished floor** at the Opening.



Dumbwaiter Installation Instructions



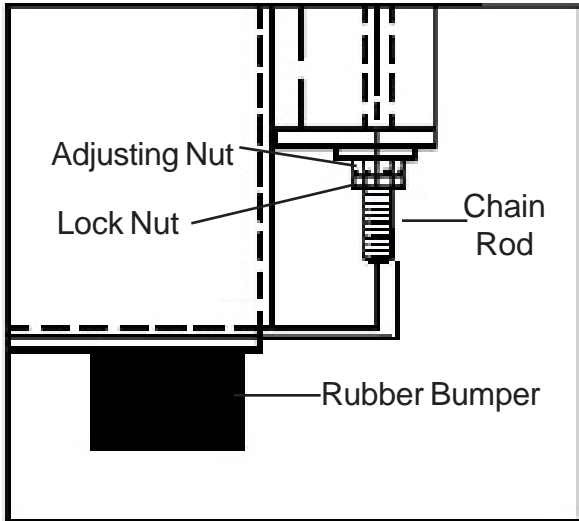
- Adjust the Sill Support Angle (front-to-back) in the slotted holes so that the Car-to-Sill dimensions match those shown on the Courion Layout Drawing.
 - Using the upper 3/8" Hex Nut on the Jack Bolt Rod, lock the Sill Support Angle into place.
 - Temporarily brace or clamp the top of the Hoistway Door Assembly in place. This can often be done by wedging a piece of scrap metal between the back of the Elevator Guide Rails and the upper portion of the Door Guide Rails.
 - On the floor above, install the Hoistway Door Assembly in the same fashion.
 - Use the 5/16" x 1" carriage bolts, washers and nuts found in the Extension Angle Hardware Kit #803, bolt the Extension Angles from the top of the Door Guide Rails on the lower floor to the bottom of the Door Guide Rails on the floor above.
- NOTE:** If the floor heights are such that using Extension Angles is not practical, the top of the Door Guide Rails will need to be permanently secured to the hoistway wall.
- Repeat this procedure at each Opening up the hoistway. At the top floor, the upper Door Guide Rails will need to be permanently secured to the hoistway wall.



Dumbwaiter Installation Instructions

Step 4

ADJUST THE DOOR PANELS - Adjust the Door Panels to their proper opening height and side play.



- Use the Chain Bolt Lock Nut on both sides to secure this adjustment.
- Loosen all four (4) Door Shoes on the Door Panel and slide them out until there is no side-to-side play in the Door Panel.
- Tighten all four (4) shoes.
- Repeat Steps on every Door Panel.

NOTE: For Door Panels with low floor heights, the Chain Rods will connect to Chain Rod Arms on the Lower Door Panel. The other end of the Chain with the Chain Bolt will connect to the Chain Bolt Clip in the Upper Door Panel.

- Remove the Lock Bolt Assembly from the Door Guide above the upper door panel - Save the Lock Bolt Assembly for later use.
- Pull Door Panels into a FULL-OPEN position.
- While making sure the lower Door Panel remains resting on the rubber bumpers, adjust the threaded Chain Rod on one side of the lower Door Panel so that the upper Door Panel contacts its rubber bumper.
- Repeat on the other side of the Door Panel.



When you are done, your doors should move freely up and down in their guides. If not, check your guides to make sure they are true and plumb.



Step 5

INSTALL THE INTERLOCKS - Using hardware found in Hardware Kit #131, attach the INTERLOCK and INTERLOCK MOUNTING ANGLE to the DOOR GUIDE RAIL using the pre-drilled holes provided by Courion.

Courion Parts and Tools Required for Interlock and Lock Out Rod Installation:

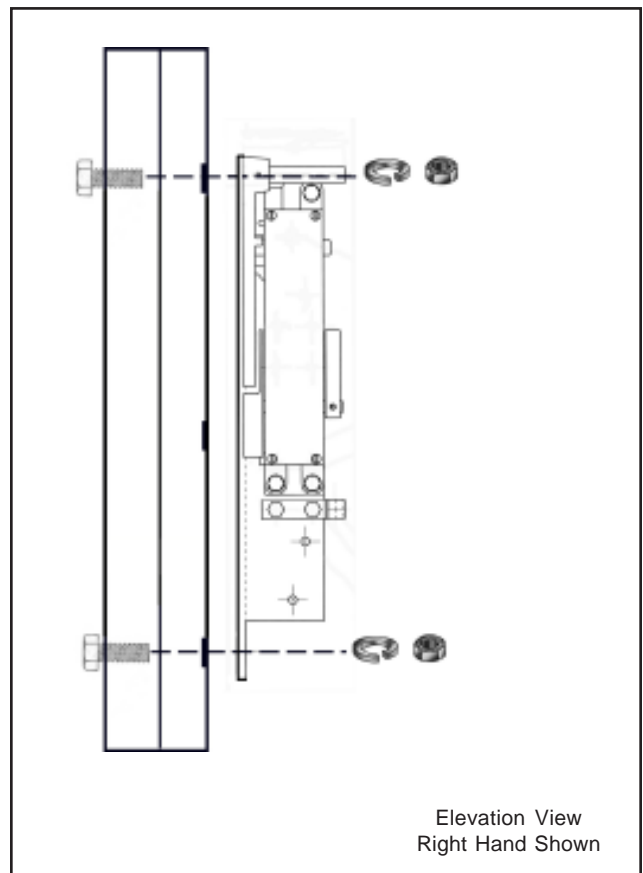
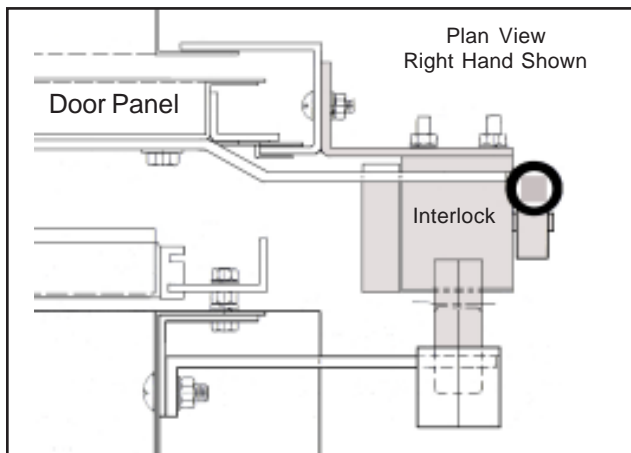
Parts and Hardware: ■ HG-1 Lock and Contact or HG-2 Interlock ■ Lock-Out Rod ■ Lock-Out Rod Holder ■ Switch Cam ■ Hardware Kit #131

INTERLOCK IDENTIFICATION AND SET UP: Please consult Courion's General Layout Drawings to determine the side of the opening that the Interlock will mount.

NOTE: If you have Emergency Unlocking Devices (Pull Chain Boxes), please consult Courion's General Layout Drawings to determine the correct style of Interlock to be used at each opening.

■ **FIRST**, attach the INTERLOCK and INTERLOCK MOUNTING ANGLE to the Door Guide Rail using the pre-drilled mounting hole provided by Courion. Use the mounting hardware found in Hardware Kit #131, to attach the Interlock to the Door Guides.

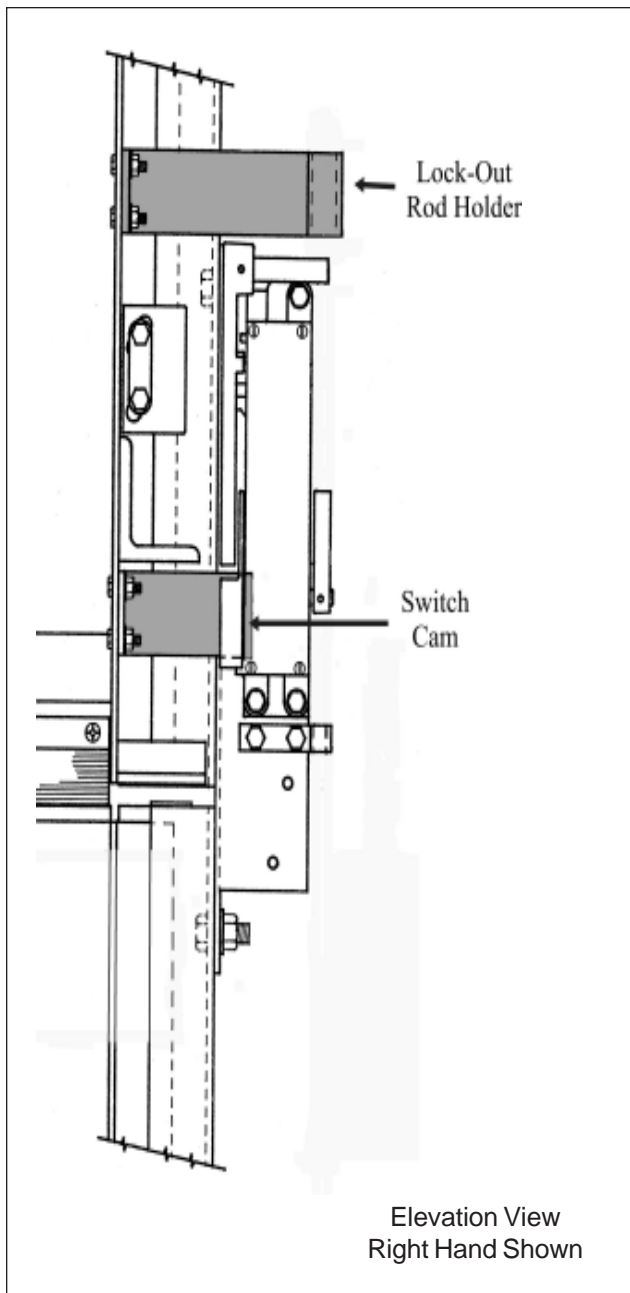
■ Set the INTERLOCK parallel with the DOOR GUIDE RAIL.



Dumbwaiter Installation Instructions

Step 6

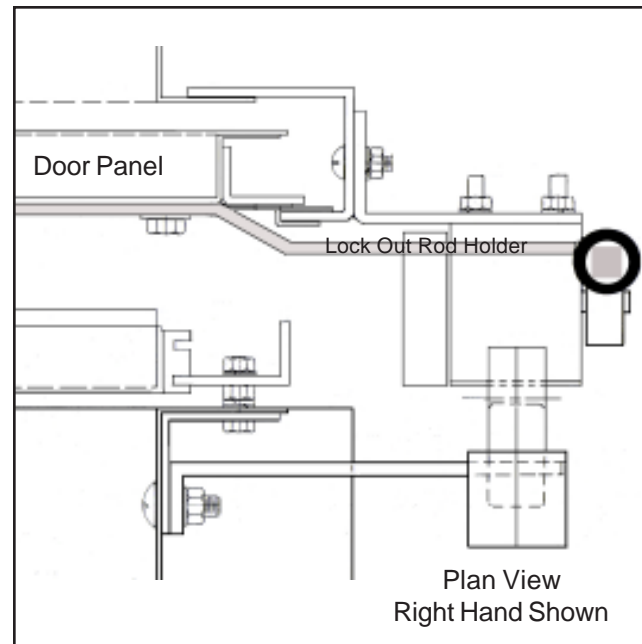
INSTALL THE SWITCH CAM & LOCK OUT ROD HOLDER - Using hardware found with the SWITCH CAM AND LOCK-OUT ROD HOLDER, attach the SWITCH CAM and LOCK-OUT ROD HOLDER to the side angle of the Upper Door Panel using the pre-drilled holes provided by Courion.



- Using two (2) 5/16-18 x 1" hex head cap screws, flat washers, split lock washers, and hex nuts, attach the SWITCH CAM to the side angle of the Upper Door Panel using the pre-drilled holes provided by Courion.

- Using two (2) 5/16-18 x 1" hex head cap screws, attach the LOCK-OUT ROD HOLDER to the side angle of the Upper Door Panel using the pre-drilled holes provided by Courion.

IMPORTANT. Make sure to align the SWITCH CAM so that it enters the INTERLOCK without binding when the doors are in the FULL CLOSED position.



Dumbwaiter Installation Instructions

Step 7

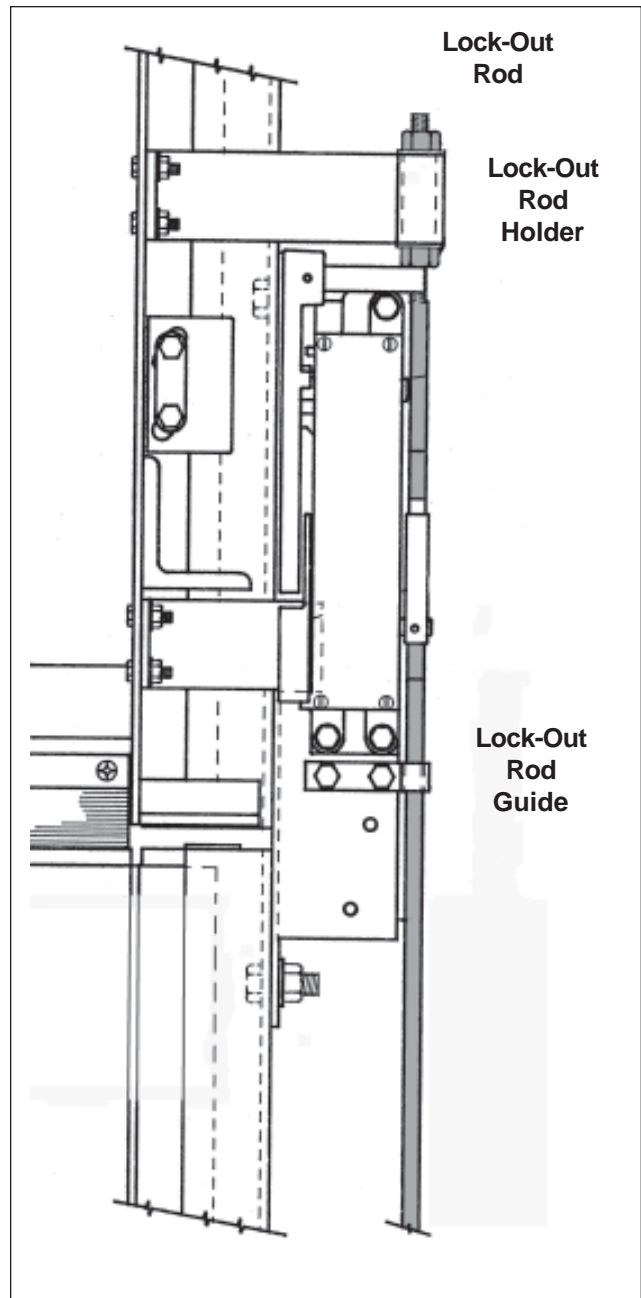
INSTALL THE LOCK OUT ROD - Slide the LOCK-OUT ROD down through the LOCK-OUT ROD GUIDE on the Interlock Mounting Angle and then up through the LOCK-OUT ROD HOLDER. Using hardware found with the LOCK-OUT ROD HOLDER, secure the LOCK-OUT ROD.

- Thread one (1) 1/2"-13 hex nut and flat washer on to the top of the LOCK-OUT ROD. Hex nut and flat washer must be low enough on LOCK-OUT ROD to allow threaded end to extend past LOCK-OUT ROD HOLDER.

- Slide the LOCK-OUT ROD down through the LOCK-OUT ROD GUIDE on the Interlock Mounting Angle and then slide the LOCK-OUT ROD up through the LOCK-OUT ROD HOLDER.

- Thread one (1) 1/2"-13 hex nut and flat washer on to the top of the LOCK-OUT ROD to secure LOCK-OUT ROD in the LOCK-OUT ROD HOLDER.

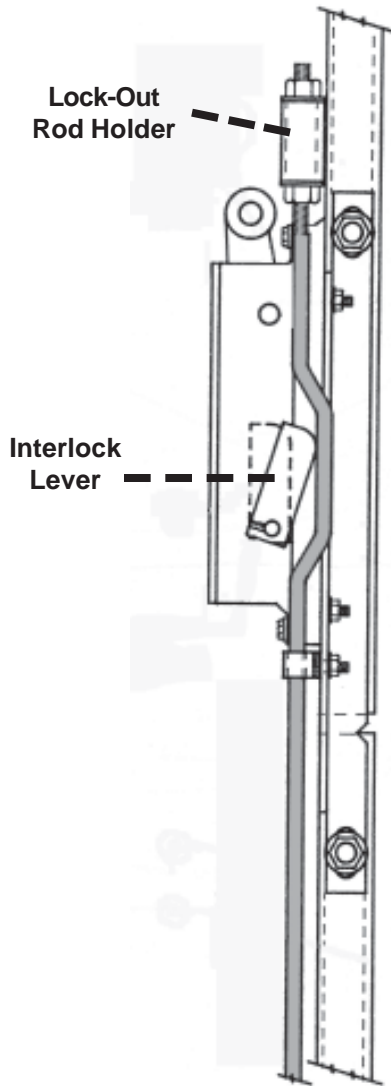
IMPORTANT. Make sure that LOCK-OUT ROD is parallel to the Interlock and Guide Rail.



Dumbwaiter Installation Instructions

Step 8

ADJUST THE INTERLOCK - With the Door Panels in the FULL CLOSED position, align the LOCK-OUT ROD so that the Interlock Lever rests within the indentation of the LOCK-OUT ROD. Use the 1/2"-13 hex nuts that secure the LOCK-OUT ROD to the LOCK-OUT ROD HOLDER to adjust the position of the LOCK-OUT ROD.



Side View

- Position the Door Panels in the FULL CLOSED position.
- Align the LOCK-OUT ROD so that the Interlock Lever rests within the indentation of the LOCK-OUT ROD.
- Use the 1/2"-13 hex nuts that secure the LOCK-OUT ROD to the LOCK-OUT ROD HOLDER to adjust the position of the LOCK-OUT ROD.

IMPORTANT: Using the set screw on the Interlock Lever, adjust the Interlock Lever so that the contacts within the Interlock or Lock & Contact make-up **ONLY** when the Door Panels are the FULL CLOSED position.

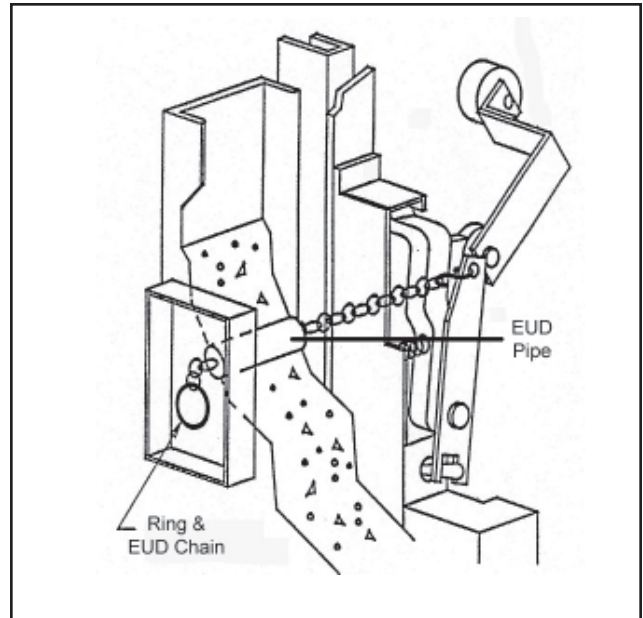


Dumbwaiter Installation Instructions

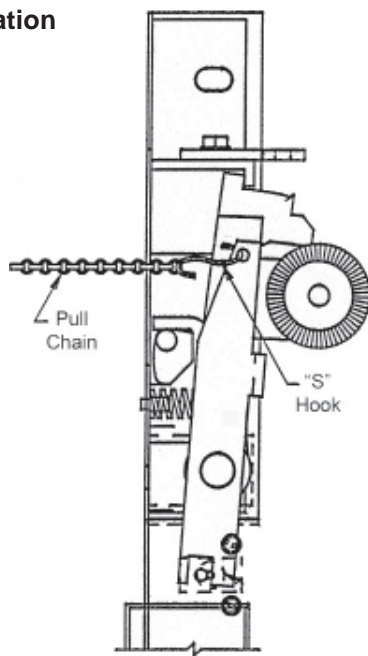
Step 9

INSTALL THE EUD - Install Emergency Unlocking Devices (EUD). Check Courion's Layout Drawings and local code requirements to make sure that Interlocks with EUDs are installed at the proper floors.

- Drill a 9/16" hole through the wall approximately opposite the chain attachment point in the switch arm on the Interlock Roller.
- Slide threaded pipe through the hole and cut to length.
- On the hoistway side, thread on a nut behind the 3" plate washer.
- On the corridor side, insert the threaded pipe through the hole in the back of the EUD box. Use a double nut to secure.
- Anchor the EUD box to the wall.



Side Elevation



- Slide the EUD Chain through the threaded pipe, leaving approximately 2" with the ring loose inside the box.
- Cut the EUD Chain to length on the hoistway side.
- Attach the EUD chain to the Interlock Roller using the S hook provided.

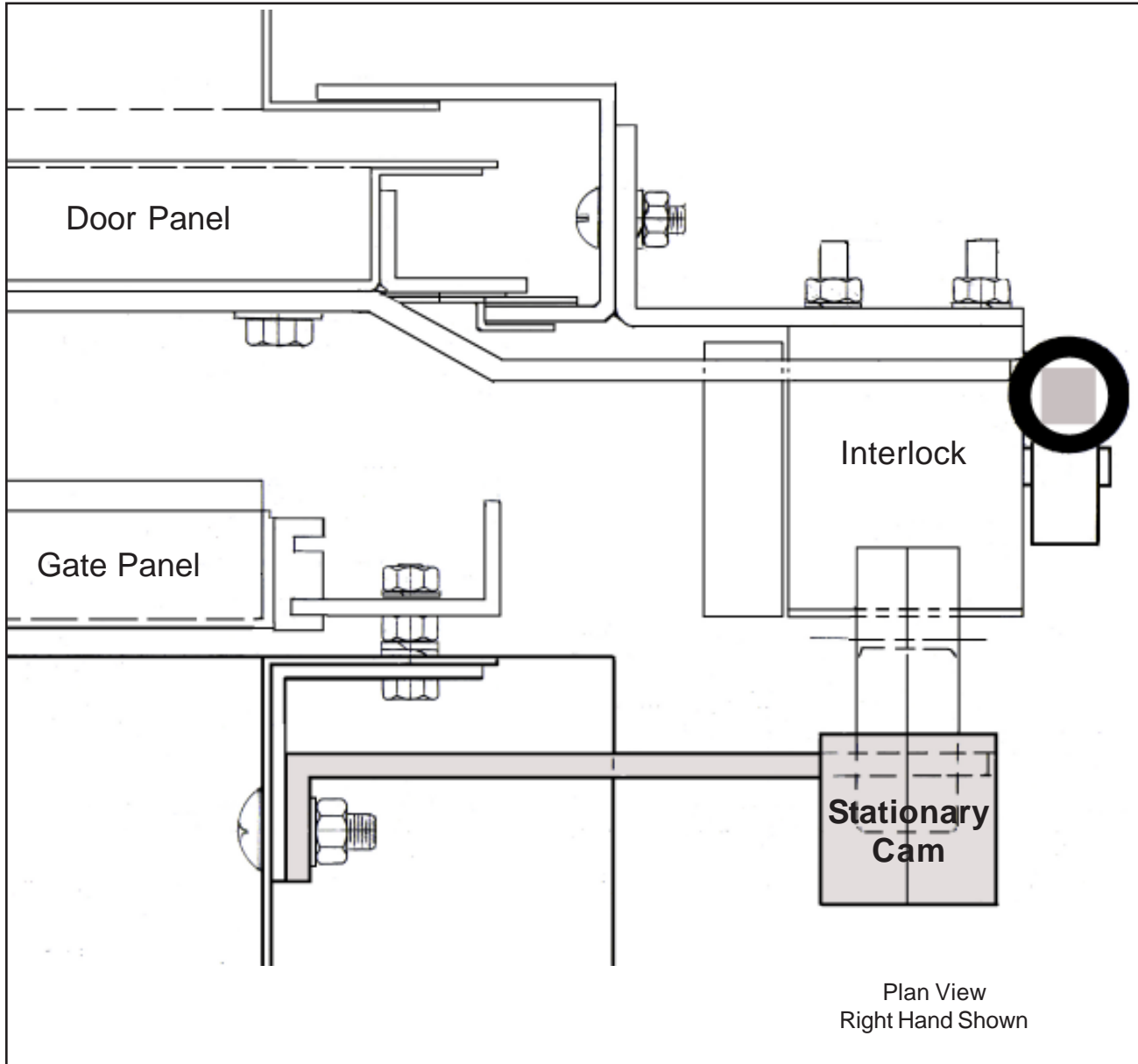


Dumbwaiter Installation Instructions

**Step
10**

INSTALL THE STATIONARY (FIXED) CAM - Install the Stationary Cam(s) using the mounting hardware found in the Retiring Cam Hardware Kit .

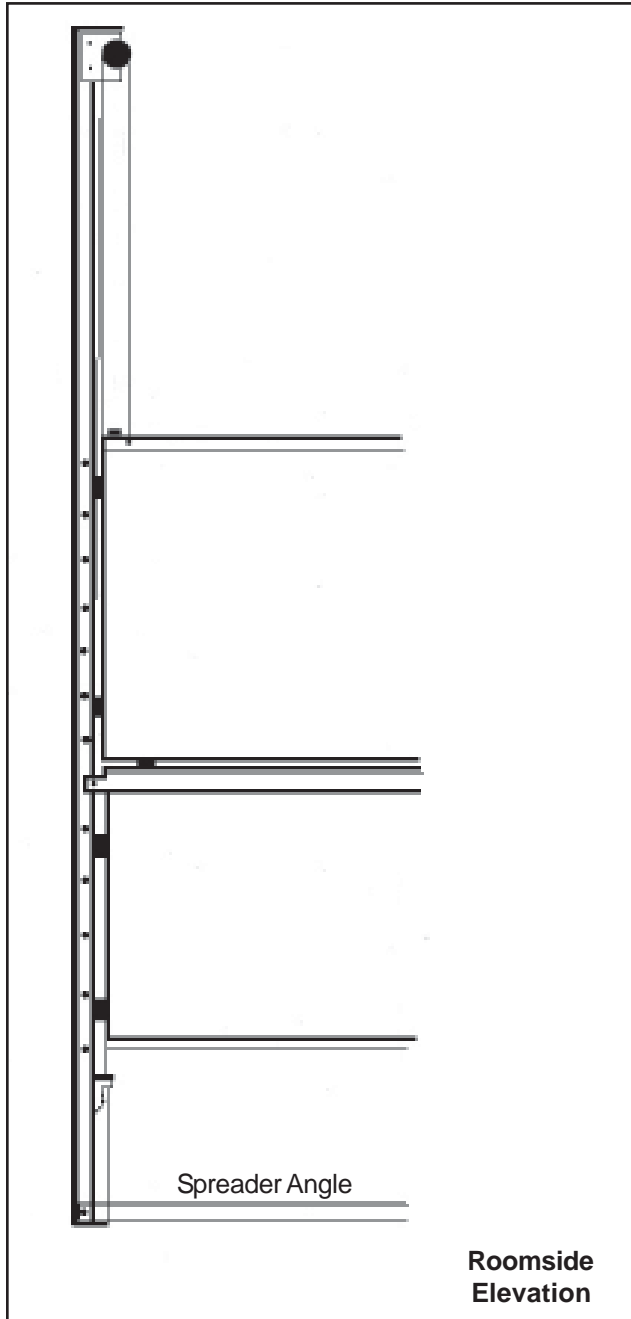
After the CAR ENCLOSURE has been installed on the car platform, install and adjust the STATIONARY CAM as illustrated below. Be sure to carefully check operation and adjustment of the INTERLOCK at each landing



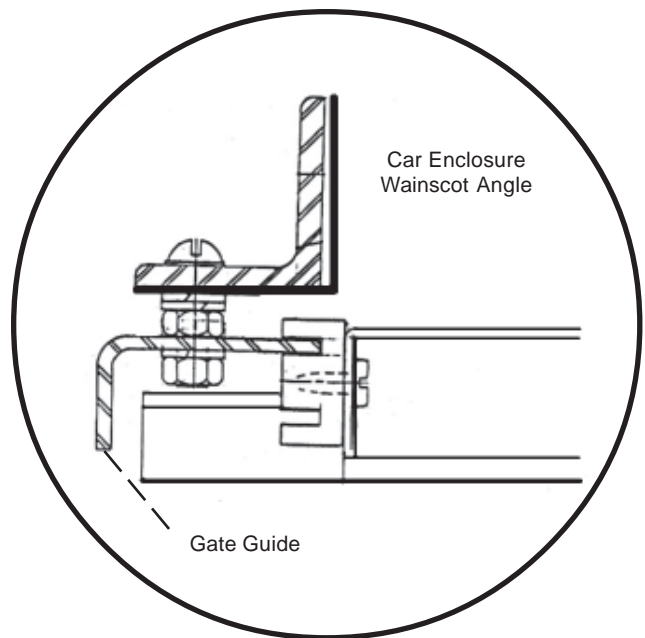
Dumbwaiter Installation Instructions

**Step
11**

INSTALL THE GATE GUIDE RAILS - Install the Gate Guides using the mounting hardware found in the Gate Guide Rail Hardware Kit.



- Slide the pre-drilled holes in the Gate Guides over the 1/4-20 x 1" Hex Head Machine Screws that have been pre-installed in the wainscot angles of the Courion Car Enclosure. NOTE: These instructions assume that you have a Courion Car Enclosure
- Fasten the Gate Guides using the Split Ring Lock Washers and 1/4" Hex Nuts found in the Gate Guide Hardware Kit. DO NOT TIGHTEN AT THIS TIME.
- Using a level, plumb the guides.
- Adjust Guides for proper opening width and tighten all nuts.
- Install the Spreader Angle at the bottom of the Gate Guides using the 1/4-20 x 1" Hex Head Machine Screws, Split Ring Lock Washers, and Hex Nuts found in the Gate Guide Hardware Kit.

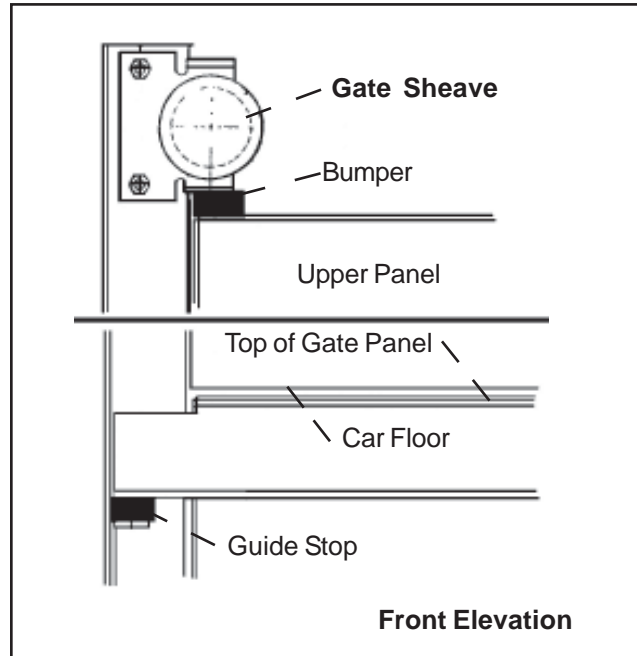
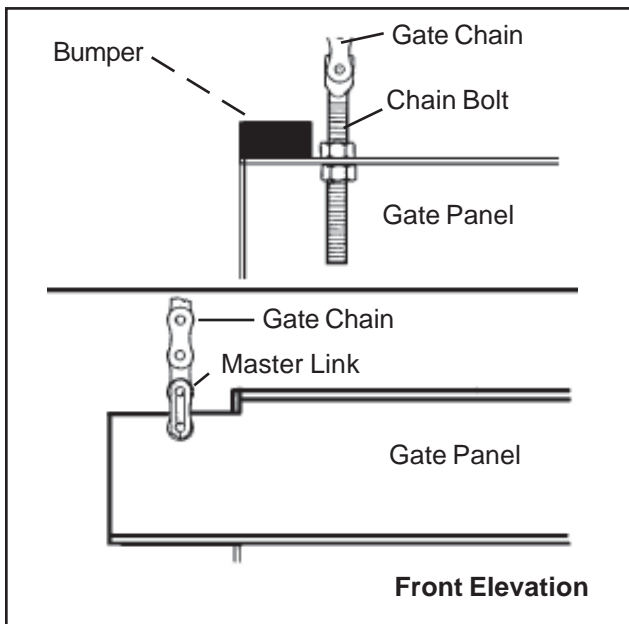


Dumbwaiter Installation Instructions

Step 12

INSTALL THE CAR GATE PANELS - Install the Upper and Lower Gate Panels in the Gate Guides using the Car Gate Hardware Kit #807, and adjust.

- Remove the two (2) guide shoes on one side of both the Upper and Lower Gate Panel.
- Slide the Lower Gate Panel into place in the Gate Guides and loosely re-install the Gate Guide Shoes.
- Slide the Upper Gate Panel into place between the Gate Guides and loosely re-install the Gate Guide Shoes.
- Lift the Upper Gate Panel until the bumpers on top of the Upper Gate Panel reach the stops. Temporarily clamp into position.
- Feed the Gate Chain up and over the Top Sheave, located on the Gate Guide.
- Attach the Gate Chain to the Lower Gate Panel using a 41Master Link found in the Car Gate Hardware Kit #807.



- Attach the Gate Chain Bolts to the Upper Gate Panel, nutted top and bottom, and remove the temporary clamps.
- Using the nuts on the Gate Chain Bolts, adjust the up and down position of the Gate Panels so that both the Upper Gate Panel and Lower Gate Panel are on their stops. Tighten the lock nuts.
- ON ALL GATE PANELS, ADJUST OUT ANY SIDE PLAY BY INSTALLING SHIMS, FOUND IN HARDWARE KIT #CG-1, UNDER THE GATE GUIDE SHOES AS NECESSARY.
- Tighten all lock nuts and check for freedom of movement.

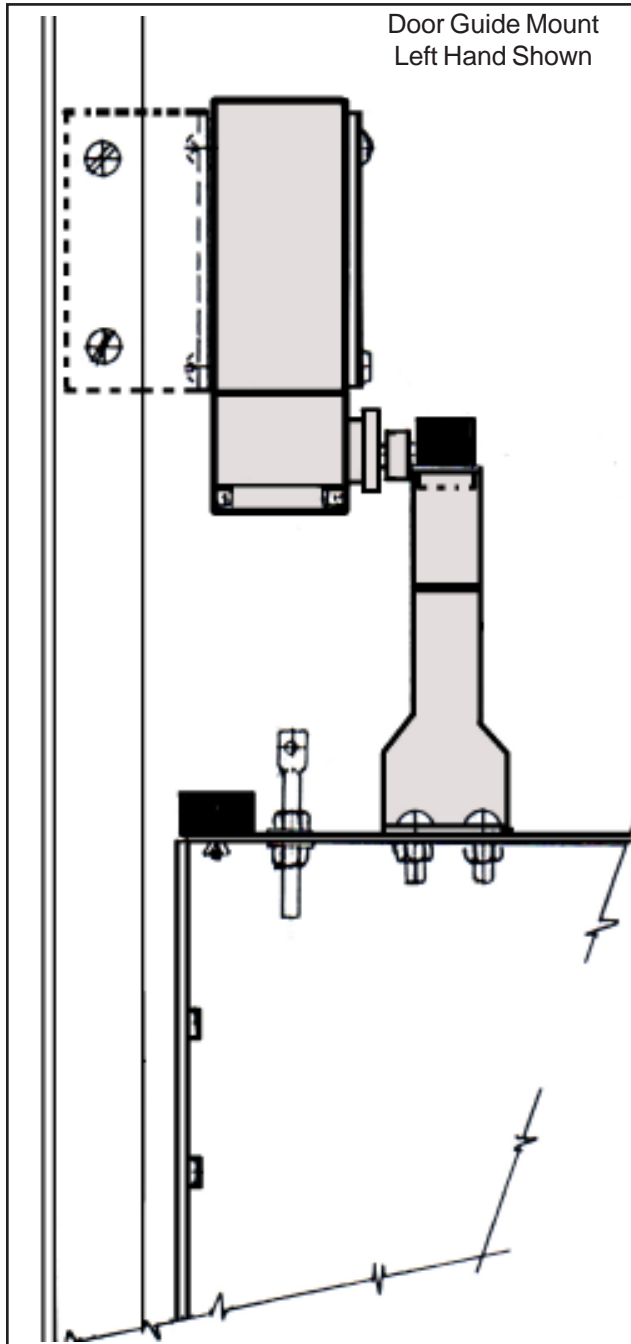
NOTE: Because Lower Gate Panels are slightly heavier than the Upper Gate Panels, the Gate will fall open freely if adjusted properly.



Dumbwaiter Installation Instructions

Step
13

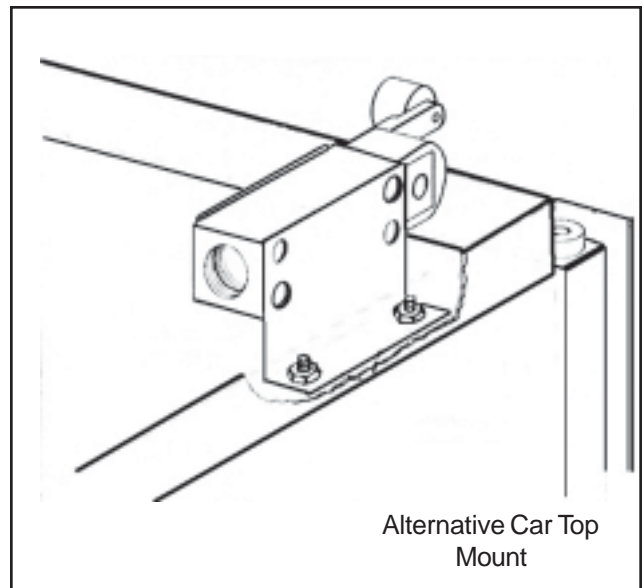
INSTALL THE GATE SWITCH - Install the Gate Switch using the fasteners found in the Gate Switch Hardware Kit #809.



■ Prior to mounting the Gate Switch, wire the Gate Switch in a pigtail and attach a short piece of greenfield, flexi, or conduit.

NOTE: It is much easier to wire the Gate Switch before it is mounted. It is difficult to get wires in place after the Gate Switch is in position.

■ Using the mounting hardware found in the Gate Switch Hardware Kit #809, bolt the Gate Switch through the pre-drilled holes in the Gate Guide Rails or Car Enclosure top (will vary by job).



For Immediate Help Call 1-800-533-5760

Dumbwaiter Installation Instructions



For Immediate Help Call 1-314-533-5700

Dumbwaiter Installation Instructions





**Opening Quality Doors
Around The World**

3044 Lambdin Avenue
St. Louis, Missouri 63115
800-533-5760 or 314-533-5700
314-533-5720 (fax)
sales@couriondoors.com