The DreamView™ Automation System

AUTOMATION INSTALLATION INSTRUCTIONS

ONE-WAY & BI-PART DOORS

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Disclaimer: The information provided here is a general guideline. The representations and drawings included show typical placements and configurations. Refer to shop drawings and building documents for information specific to individual applications.

SAFETY TIPS

Safety is number one priority here at Caldwell. Factory Authorized Installers only, should be installing this product. Please be cautious of your surroundings during installation and use tools the proper way.

Electrical Safety:

Whenever you work with power tools or on electrical circuits, there is a risk of electrical hazards, especially electrical shock. We recommend that all workers pay special attention to electrical hazards while installing this system. Coming in contact with an electrical voltage can cause current to flow through the body, resulting in electrical shock and burns. Serious injury or even death may occur.

Note: Incorrect installation can lead to injury. Read and follow instructions contained in this manual carefully.

Safety Tips:

- Do not wear rings, watches or any loose clothing when installing or servicing the automation system.
- **Safety glasses** must be worn at all times
- Door system must be installed correctly before any automation is installed
- Watch for nails, sharp edges/corners, splintered wood, and uneven surfaces

Recommended Safety Equipment:

- Safety Glasses
- Heavy Duty Gloves
- Hard Toe Shoes
- Knee Pads
- First Aid Kit

PRE-INSTALLATION CHECKLIST

Prior to installing the automation system verify the following:

- Does the door open AND close smoothly and easily?
  - Make sure the door moves freely over its entire length of travel.
- Is the sill track is in good condition and allows smooth door travel?
  - Make sure the track clear of construction debris.
- Is the door level?
  - Make sure the track does not sag or rise excessively over the run.
- Is the door plumb?
  - Verify the door is square “panel to panel” AND “panel to jams”.
- Do we have the required ¾” clearance in the head track for the belt and hardware?
  - Measure and record the distance between the top of the door and head track in several locations over the length of the doors travel.
- Ensure that a 110V, 60Hz, 15A circuit is located at the automation panel.
  - A dedicated circuit is recommended.

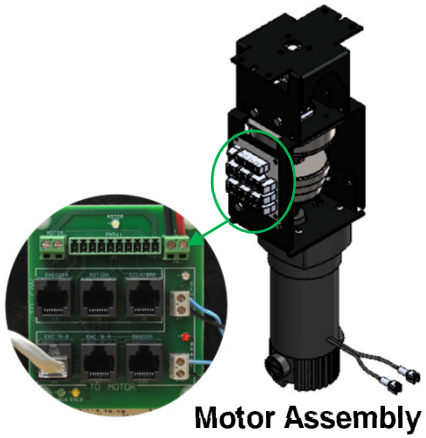
If the above are not correct, have the installation corrected!

TOOL LIST

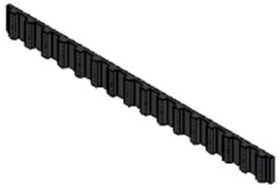
In addition to safety equipment, standard framing contractor or carpenter tools are required.

- Power Drill
- Drill Bit Kit
- 1/8” Shim Spacers
- Tape Measure
- 6’ Jamb Level
- Diagonal Cutting Pliers
- Ladders
- Screw Driver
- Hammer
- 2 1/8” & 1” Hole Saws
- Paddle/Spade Bit Kit

PART IDENTIFICATION



Motor Assembly &
Motor Breakout Board (Green)



Drive Belt

Turnbuckle Belt Clamp &
Mounting Bracket

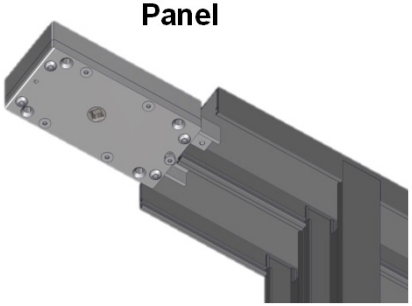
Power Cable

DreamView™ Automation
Panel

900 MHz Wireless Wall
Switch

900 MHz Wireless Receiver
& Remote

900 MHz Wireless Overhead
Motion Detector



Optional Easy Connect
(Comes attached to Extended Head Track)

6 Foot 10 Pin
Connector Cable

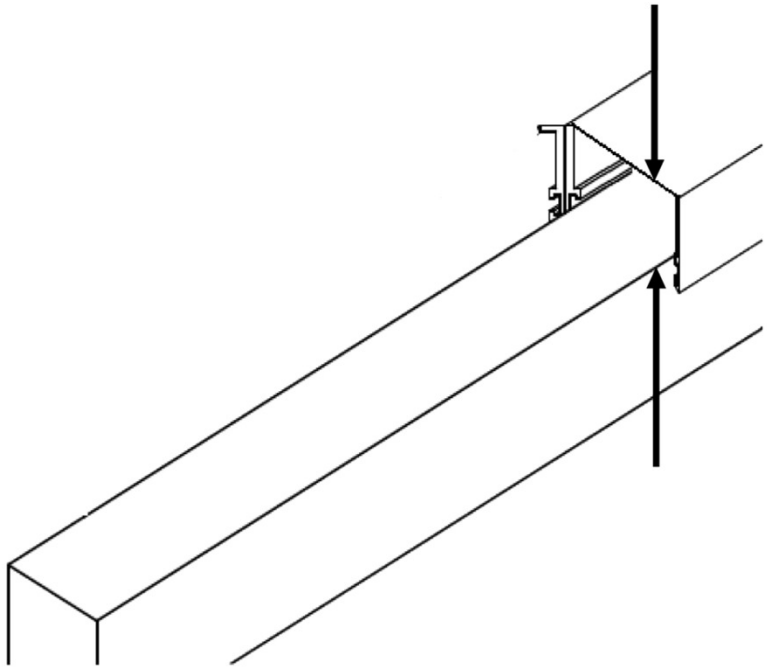
Return Pulley

PRE-INSTALLATION CHECKS

- Before beginning, some things need to be checked to ensure a smooth installation.
- Ensure that a 110V, 60Hz, 15A (dedicated is preferred) circuit is located at the Automation Panel.
- Pre-installation door checks:
  - Door Movement - Make sure that the door moves freely over its entire length of travel, and that it is square panel to panel and panel to jambs. If any problems are detected, contact the door installer or job superintendent to correct them.
  - Head Track Clearance - Sagging or distortion in the door head track may cause an interference with the drive belt or belt clamp assembly. Therefore, before beginning installation, measure and record the distance between the top of the door and the head track. This should be done at several locations over the length of the door travel.

Note: There are different minimum clearance recommendations for different door manufactures.

¾" Head Track Clearance is Required (minimum)*



STANDARD COMPONENT PLACEMENT

When determining component locations, consider the visual impact on the end customer, ease of installation, and future serviceability. Figure below shows the typical location of components.

STANDARD COMPONENTS

- **DreamView™ Automation Panel –** The automation panel is an electrical enclosure box that measures 4 ¼" x 2 ⅛" x 14". To ensure proper system operation, the automation panel, needs to be mounted within 6 feet (wire length) of the motor assembly. This panel needs to be accessible. The Automation Panel comes with an electrical cord, so it can be plugged into a normal 110V, 60Hz, 15A, dedicated circuit.
  The panel features a 24V battery backup to allow the door to be operational for several hours without AC power. A fully changed battery will be able to keep a closed door's magnetic lock engaged for at least 4 hours without AC power.

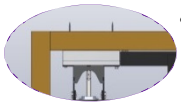
- **Motor Assembly –** On a single pocket door or stacked door, the motor assembly is typically located opposite the lock side jamb or in an extended pocket.

- **Return Pulley –** The return pulley is located on the opposite end of the door from the motor assembly and in many instances can be installed within the head track. The return pulley comes in 2 sizes, 3/8" and 1/2"(shown) based on the belt size.

- **900MHz Wireless Receiver & Remote**– A single 900MHz receiver supports multiple wireless components including remotes, keypads and a motion detector. The operator can open, close, stop and lock/unlock their door remotely. The 900MHz receiver mounts in the wall and attaches directly to the controller via the special 900MHz interface port (near the dual DIP switch on the side). It does not connect to the regular flat cable keypad circuit as the RF remote does. The remote is rechargeable with the included micro USB cable.

- **900MHz Wireless Keypad –** Wireless keypads can be installed anywhere the customer needs remote door access or can be used as wireless direct replacement for the wired keypad. The wireless keypad mounts in a single gang J-box and operates on 2 x CR123 lithium batteries. Any number of keypads can be paired to a single receiver. Wireless keypads do not have a reset button.

- **900 MHz Wireless Motion Detector**– Like the wireless keypad, this motion detector is paired to the same receiver and operates on 2 x CR123 lithium batteries. The unit is mounted above the door entrance and provides the same functionality as the wired version. The sensor module can optionally moved from the front face to the lower edge for better sensitivity on large door installations.

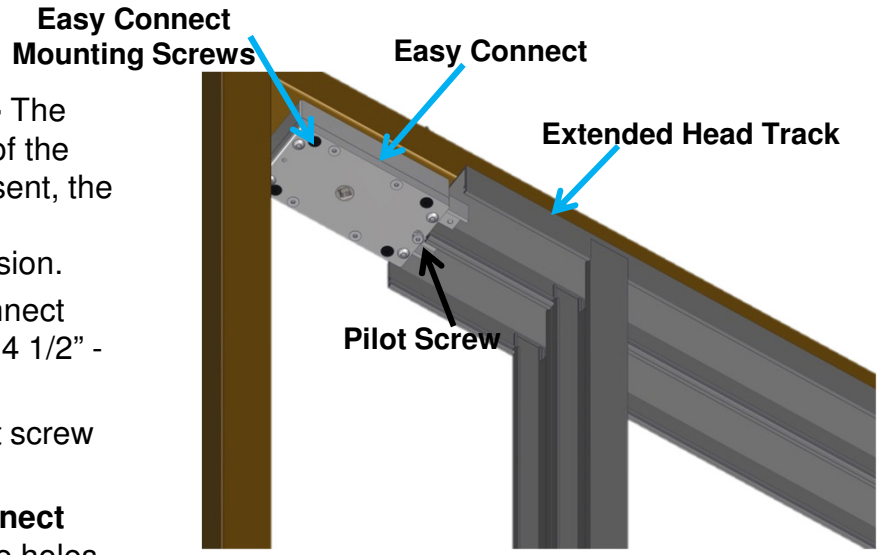


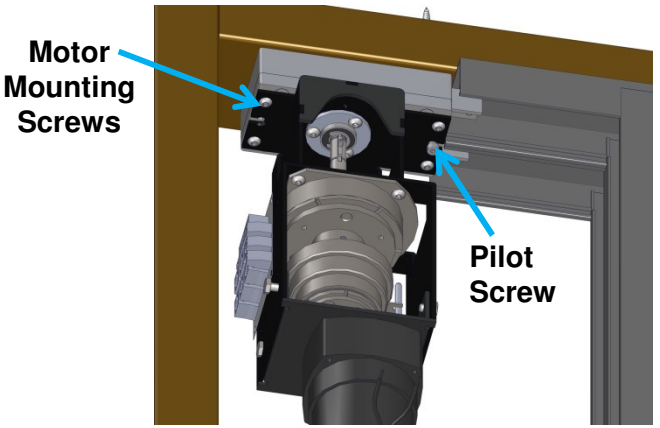
- **Optional Easy Connect** – The Easy Connect box comes attached to an extended head track to provide extremely easy motor placement. Simply mount the Easy Connect to the door frame and hang the motor. The motor pulley is housed inside the Easy Connect.

EASY CONNECT (OPTION)

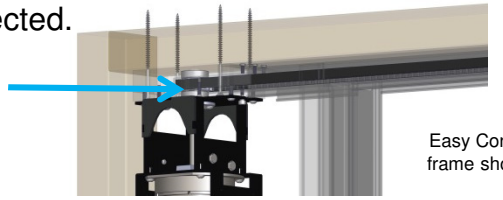
If Easy Connect is not included, skip to next slide.

- **Motor Assembly Installation with Easy Connect -** The motor assembly should be installed beyond the end of the final door panel or door jamb. If Easy Connect is present, the head track will extend beyond the jamb and the Easy Connect box will be attached to the head track extension.
  - Using the holes provided, **Mount** the Easy Connect box to the wooden door frame with the four (4) 4 1/2" - #12 lag screws supplied.
  - **Hang** the motor assembly on the provided pilot screw to support the motor assembly's weight.
  - **Attach the motor assembly to the Easy Connect** using the four (4) 5/8" - screws supplied into the holes of the Easy Connect Box.
  - Once the motor assembly is attached, check to make sure it is centered, square, level and plumb.





- **Belt Track Note for Easy Connect** - The motor pulley is housed inside the Easy Connect Box. Follow Threading the Belt as directed.

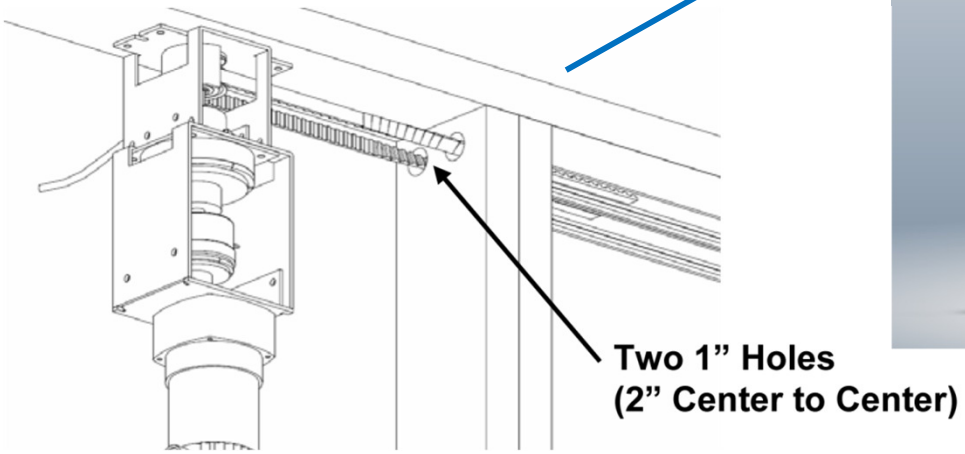


Easy Connect box and door frame shown at 50% opacity

When EZ Install is Complete, proceed to Threading the Belt (Slide 16)

CLEARANCE FOR BELT PATH

- **<u>Clearance for Belt Path</u>** – If the motor assembly is mounted outside the jamb (non-pocketing doors), two 1” holes (2” center to center”) must be drilled for the belt. **Drilling the holes needs to be done <u>before</u> installing the motor assembly.**

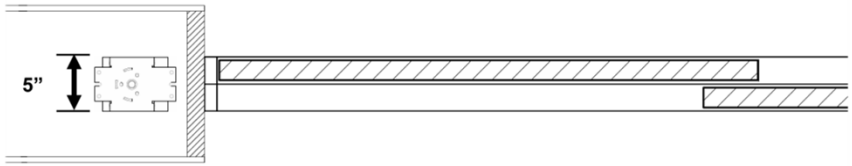


MOTOR ASSEMBLY INSTALLATION

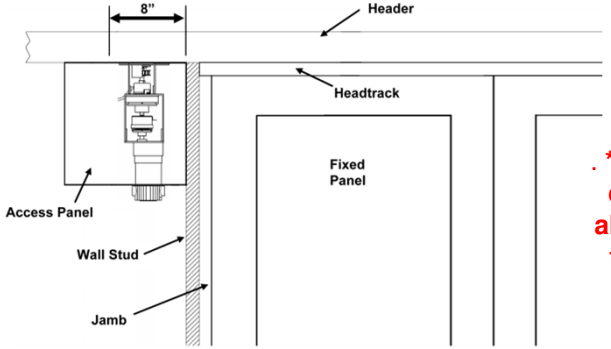
Clearance Needed

Typical Door Motor Placement

- Stacking Door Unit Installation of Motor Assembly - When installing the motor assembly, a minimum of 5 inches of clearance must be allowed, within the wall system. Top View of Clearance Needed for Motor Assembly Installation for Stacking Door Unit

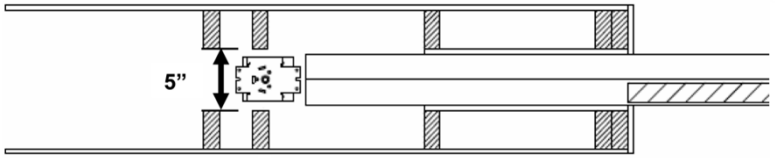


- A minimum of 8 inches* (10” recommended) of clearance must be allowed from the wall stud. Side View of Clearance for Motor Assembly Installation for Stacking Door Unit

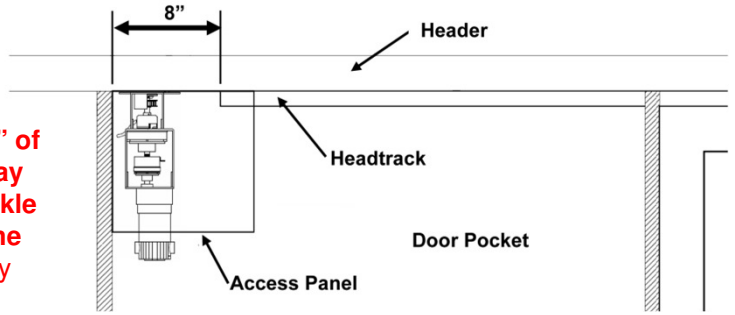


Pocketing Door Motor Placement

- Inside Door Pocket Installation of Motor Assembly - When installing the motor assembly, a minimum of 5 inches of clearance must be allowed, within the wall system. Top View of Clearance Needed for Motor Assembly Installation Inside Door Pocket



- A minimum of 8 inches* (10” recommended) of clearance must be allowed from the end of the head track to the wall stud. Side View of Clearance for Motor Assembly Installation Inside Door Pocket

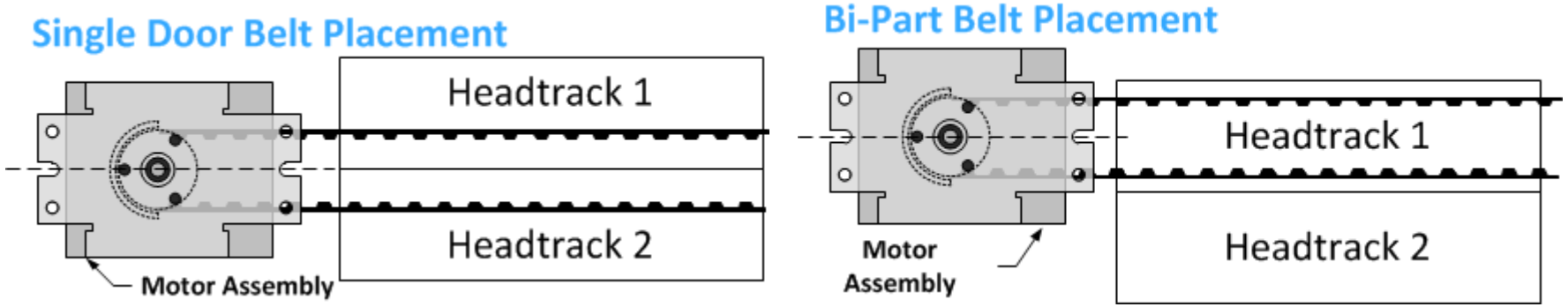


. ***Less than 8” of clearance may allow turnbuckle to run into the motor pulley**

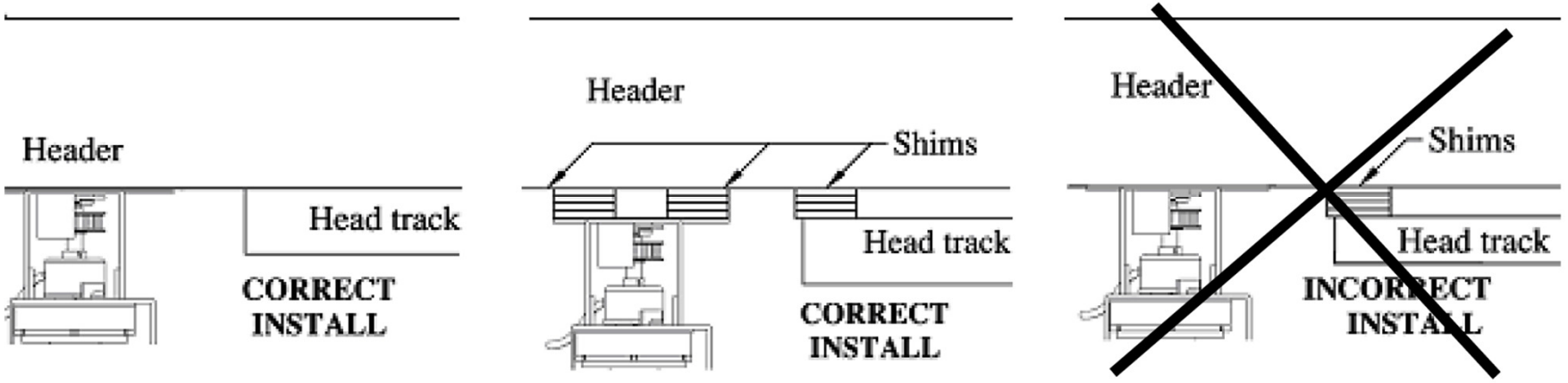
MOTOR ASSEMBLY INSTALLATION

Motor Placement

- Installation of Motor Assembly- Center the motor assembly between the two head tracks.

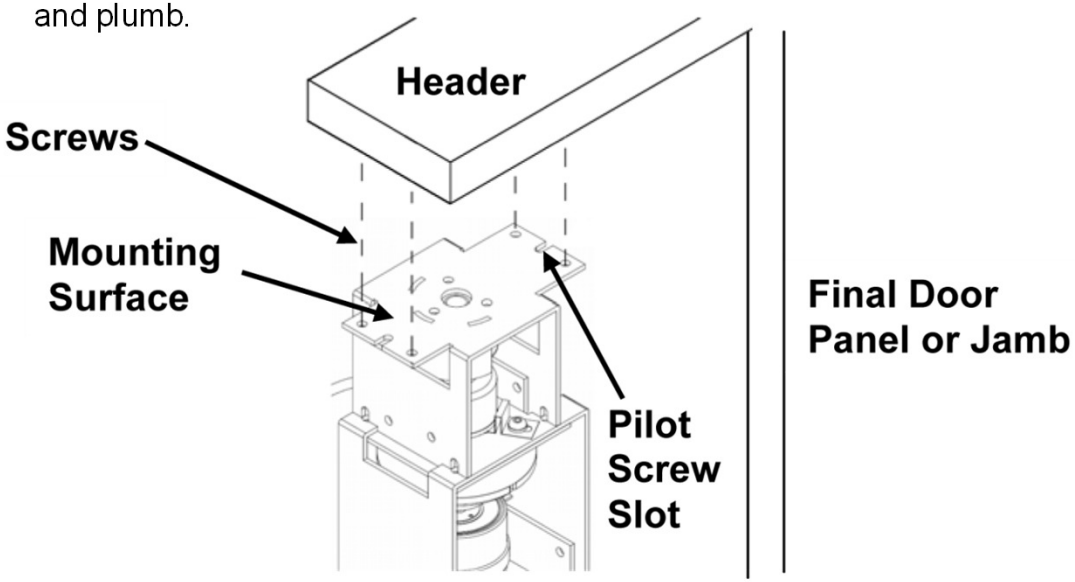


- Alignment - For proper drive belt operation, it is critical that the motor assembly is aligned on the same plane as the head track and that it is level. Under typical conditions, flush mounting the motor to the header will achieve proper alignment; however, if the head track has been shimmed, the motor assembly must be shimmed to match.

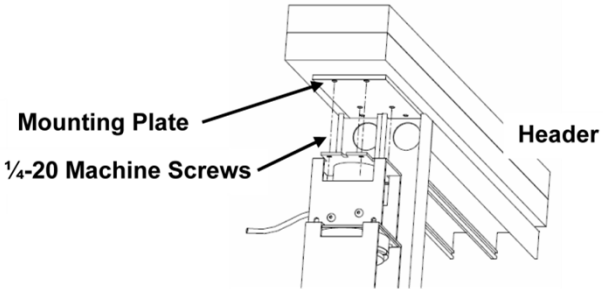


MOTOR ASSEMBLY INSTALLATION

- Motor Assembly Installation - The motor assembly should be installed beyond the end of the final door panel or door jamb.
- **Important Note: The motor assembly must be mounted to a solid support member such as a 2”x8” header.**
- To make installation easier, first install a drywall or wood screw in the pilot screw slot to center and support the motor assembly. Then attach the motor assembly to the header using the four (4) 3” - #12 lag screws supplied. Once the motor assembly is attached, check to make sure that it is centered, square, level, and plumb.



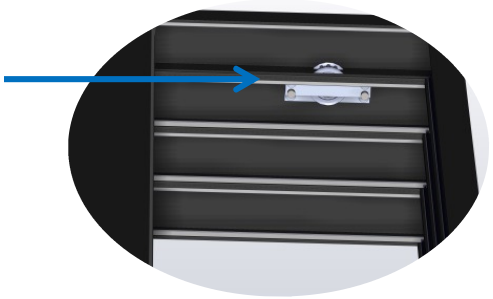
- **Mounting Plate -** To make installation of the motor assembly easier and more accurate, several door manufacturers have incorporated a “mounting plate” as part of their door system. This plate is pre-drilled to directly accept the motor assembly.
- **Important Note: The mounting plate and motor assembly must be anchored to a solid support member such as a 2”x8” header.**



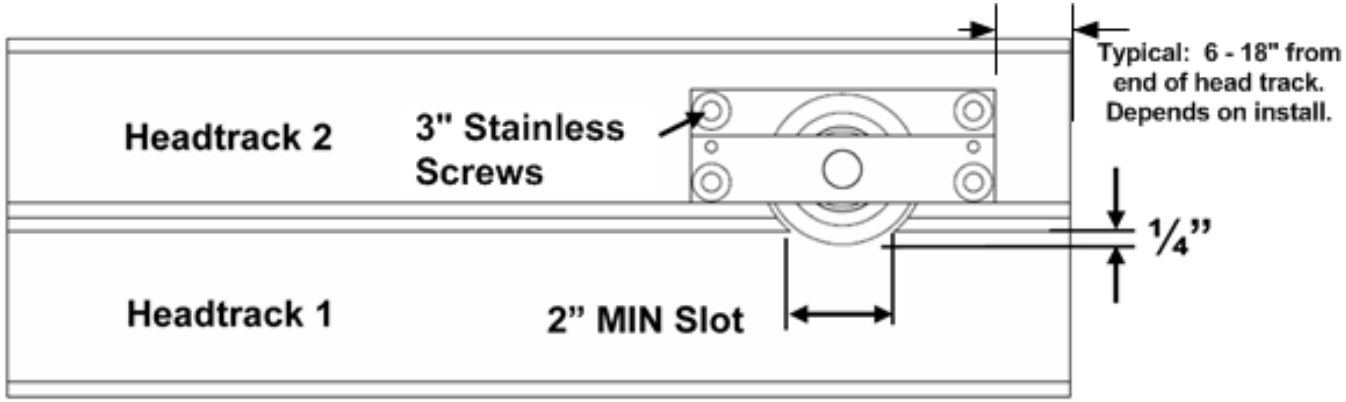
PULLEY INSTALLATION

Note: Inline Return Pulley Installation Shown. Return Pulley can also be installed beyond the end of the door. Contact for Details.

- In-line Installation of Return Pulley: A slot which is a minimum of 2 inches in length needs to be cut into the head tracks. This enables the drive belt to pass through from head track 1 to head track 2. The Return Pulley should only protrude beyond the wall of the head track approximately ¼". Attach the Return Pulley to the head track and header using the supplied 3" stainless screws.



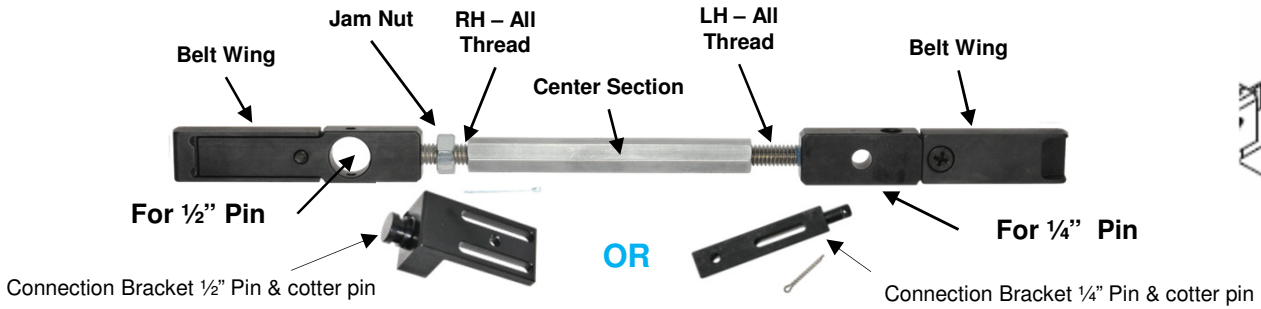
- Bottom View of In-line Return Pulley Installation When Using Two Head Tracks:



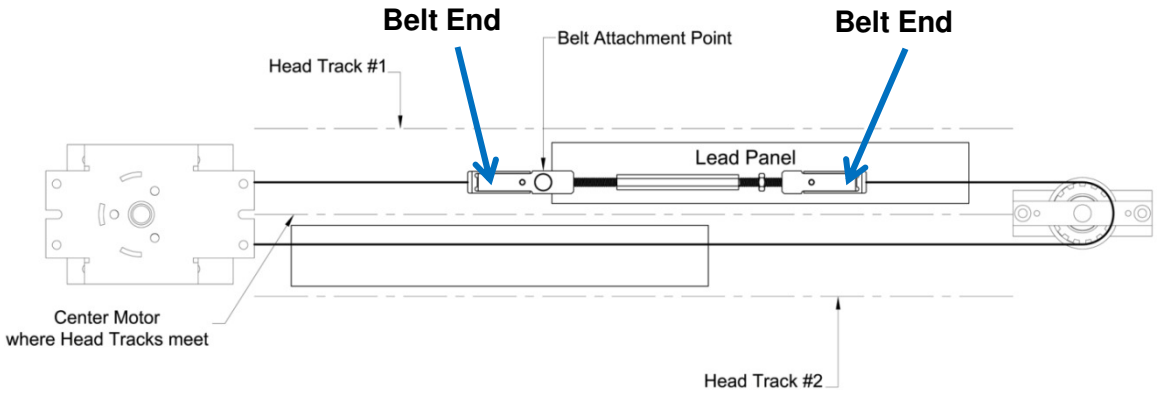
THREADING THE BELT

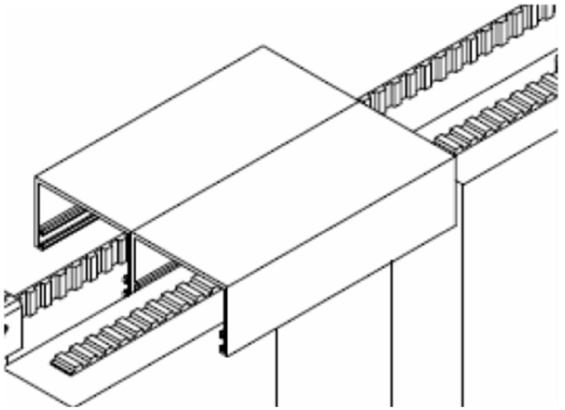
- Belt Path- Each direction of the belt rides in a separate head track unless the door is a bi-part where both belt directions ride in a single track.

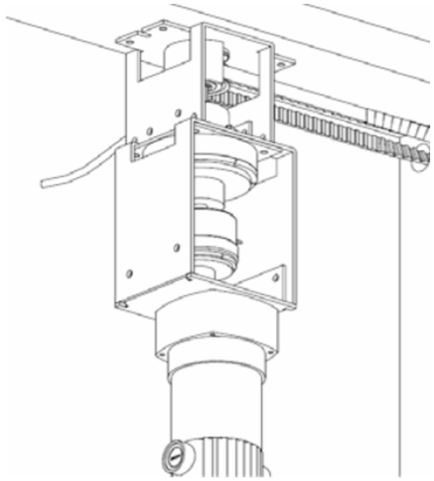
- Thread the belt- First ensure that there aren't any twists in the belt. Then thread the belt through both the Motor's Pulley and the Return Pulley with the opening of the belt where the Turnbuckle will be placed. The open ends of the belt should always end up in the 1st head track.



Reversible Turnbuckle – Supports ¼" AND ½" Pin Sizes







Motor Belt Routing For Reference

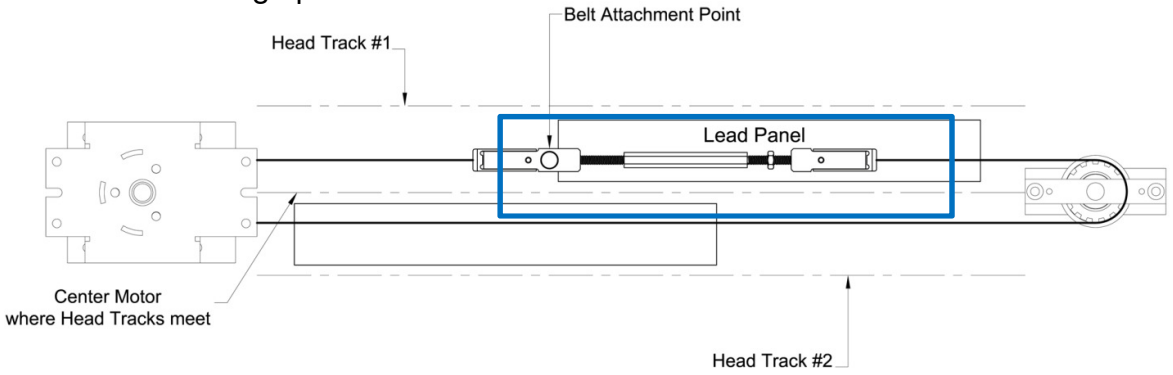
TURNBUCKLE INSTALLATION

Turnbuckle Installation To Belt

- Installation of Turnbuckle Belt Clamp Assembly
  1. Twist to nearly fully extend the turnbuckle while ensuring at least 5 threads of engagement of both the left hand (LH) and right hand (RH) all-thread into the center section.
  2. Cut the belt close to one of the teeth. Ensure that both ends of the belt are facing up AND cut squarely.
  3. Insert the drive belt (teeth up- as shown) through the belt wing and install one 8 – 32 X 3/8"machine screw to hold the belt wing to the belt clamp.

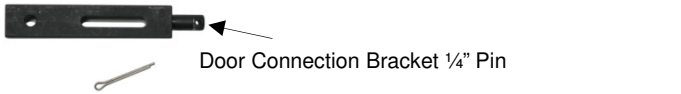
  4. Trimming the Belt: Pull the belt tight-take as much slack out of the belt as possible- without leaving the belt too short and also ensuring full engagement of the belt with the belt clamp. Cut the belt close to one of the teeth. Insert the drive belt (teeth up) through the other belt wing and install one 8 – 32 X 3/8" machine screw to hold belt wing to the belt clamp.
  5. Tighten the turnbuckle belt clamp assembly by rotating the center section initially by hand and then with a 3/8" wrench.
  6. Once the belt has been adequately tensioned, tighten the jam nut against the center section using a 7/16" wrench.
  7. Ensure that both ends of the belt are still facing up and have not rotated relative to each other.

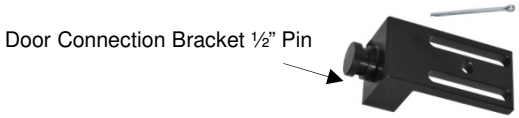
. TIP: Position the turnbuckle near the center of the track for easier tightening!

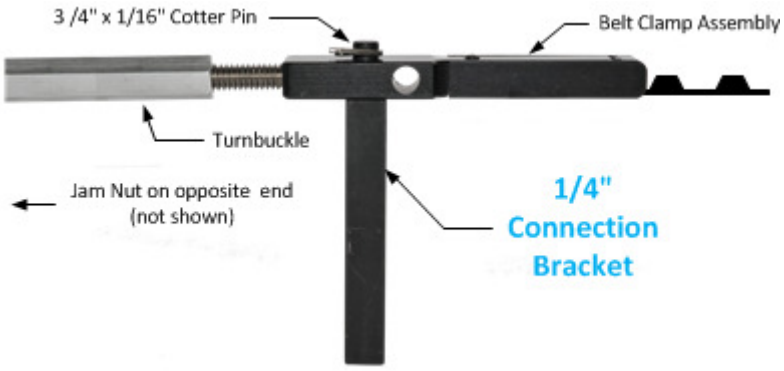


TURNBUCKLE INSTALLATION

- <u>Attach the Turnbuckle to the belt</u> The bracket is installed on the interlocking stile, at the top of the lead door panel.
  1. Make sure the belt is tight and the jam nut is tight!
  2. Pull the belt, belt clamp assembly & turnbuckle over the top of the lead door(panel).
  3. Insert the door connection bracket “pin” through the ½” or ¼” clamp assembly hole.
  4. Complete the attachment by inserting the Cotter Pin through the appropriate hole and bending its pins around the pin. DO THIS PRIOR TO ATTACHING THE BRACKET !







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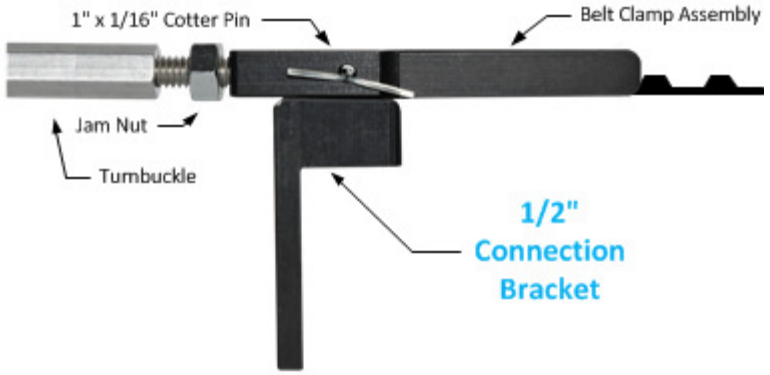
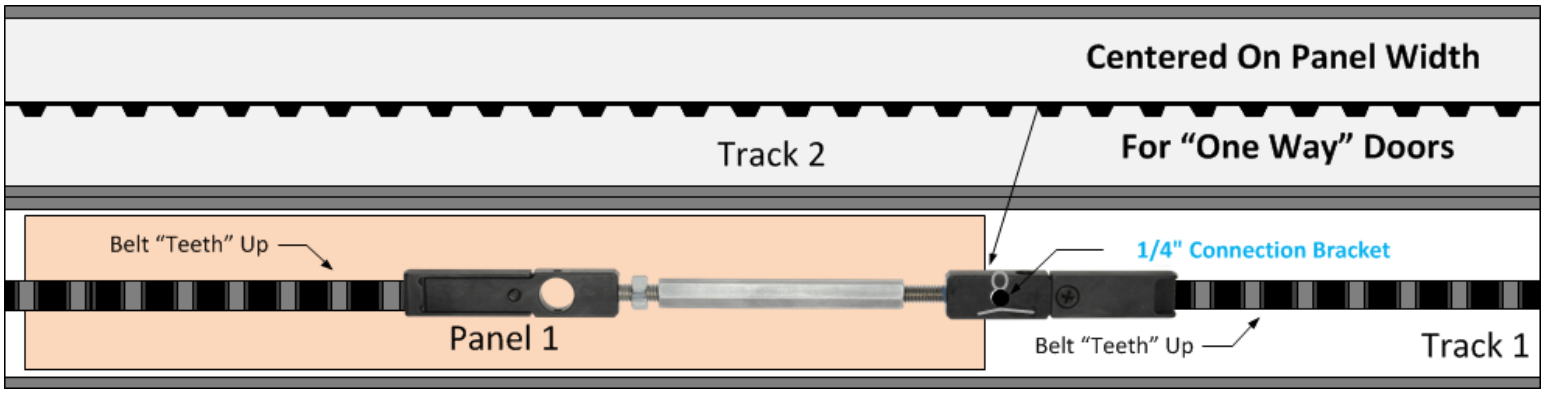
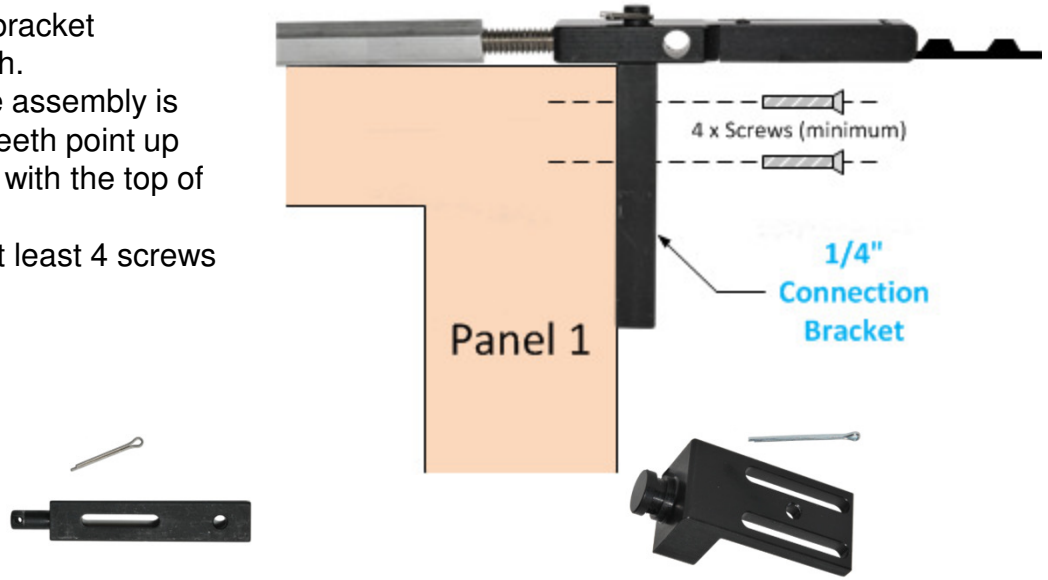


TURNBUCKLE INSTALLATION

“One Way” Door Turnbuckle



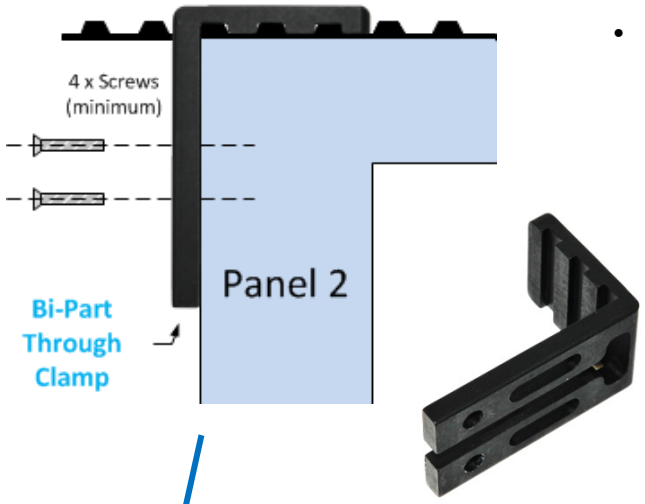
1. **Position** the connection bracket centered on the door width.
2. **Make sure** the turnbuckle assembly is adjusted so that the belt teeth point up and the assembly is flush with the top of the panel.
3. **Attach** the bracket with at least 4 screws to the panel.



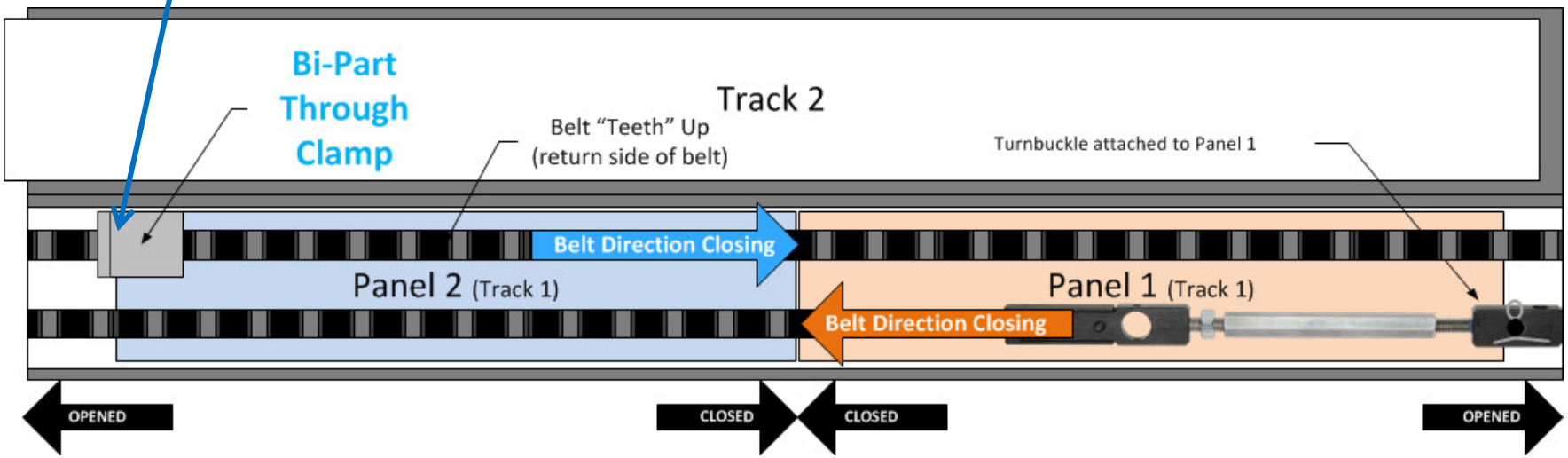
¼” Connection Bracket used for clarity. ½” Connection Bracket can also be used here.

BI-PART THROUGH CLAMP

After the turnbuckle has been installed(Bi-Part Only)

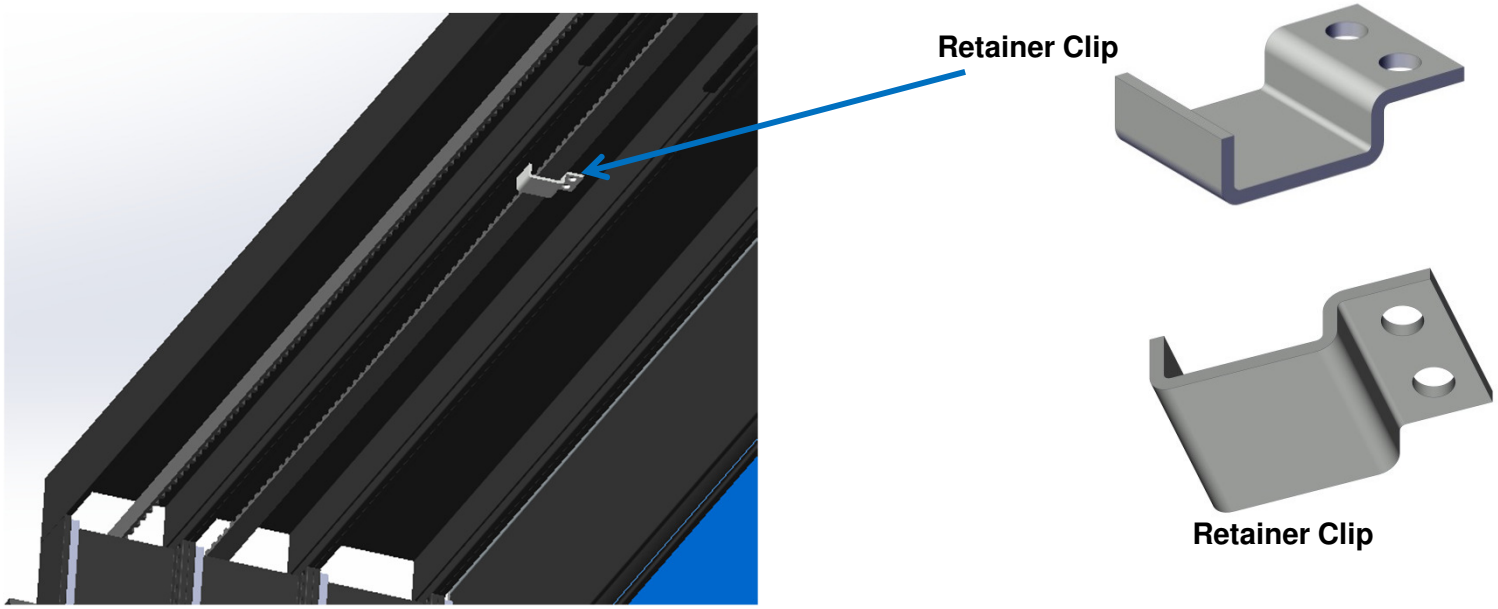


- <u>Installation of "Bi-Part Through Clamp" for Panel 2</u> The "through clamp" attaches to the return side of the belt to panel 2. The return side of the belt runs in the opposite direction as compared to panel 1.
  1. The turnbuckle should be fully tensioned and attached to panel 1 before proceeding.
  2. Position and Center all the doors in their normally closed position. i.e. Bi-Part doors closed at the center.
  3. Slide the "through clamp" over the return side of the belt using the slot on the long edge of the bracket.
  4. Position the "through clamp" over the return belt making sure its teeth fully engage the belt and the Bi-Part doors are held in a closed position with no gap.
  5. Attach the through bracket with four(4) #8 x 1" attachment screws.



BELT RETAINER CLIP INSTALLATION

- Installation of belt retainer clips Belt retainer clips are used to prevent the belt from sagging, flapping, and rubbing. The retainer clips also help keep the belt teeth in the “up” orientation.
- Important Note: Retainer clip is installed in the 2nd head track, in the middle of the daylight opening. Do not place belt retainer clips within the lead door head track. This will interfere with the belt clamp assembly during door travel. Always be sure to keep drive belt teeth facing up.
- Install belt retainer clips using the 8 – 24 X 1” self tapping screws. Multiple clips can be added, throughout the door opening, as needed.



Before connecting electrical components, make sure that the door moves freely over its entire length of travel, and that it is square panel to panel, and panel to jambs.

AUTOMATION SYSTEM INSTALLATION

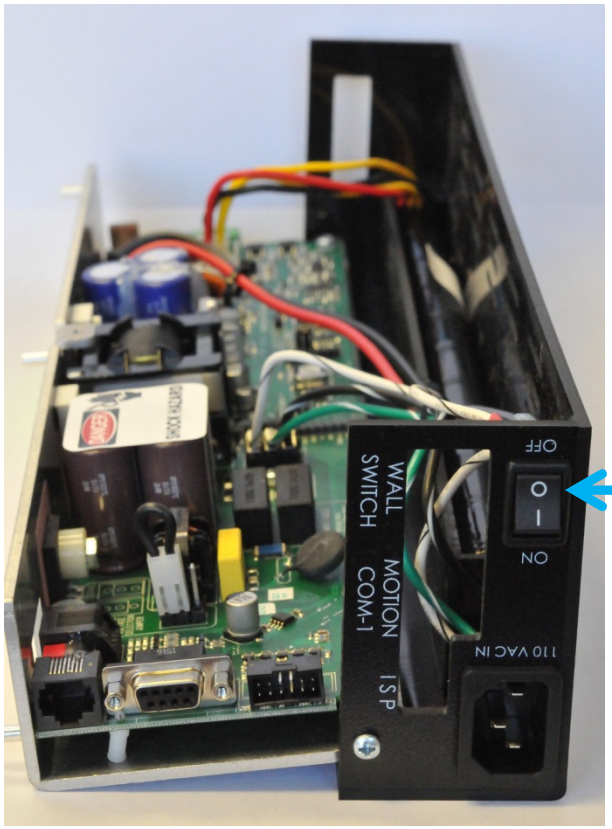
- Mechanical Installation Complete:
  - Before beginning the electrical installation, check for rubs and interferences by manually moving the door over the entire length of its travel. Make sure that the door moves freely over its entire length of travel, and that it is square panel to panel and panel to jambs. If any problems are detected, contact the door installer to correct them. Everything must be working properly mechanically before beginning electrical installation.

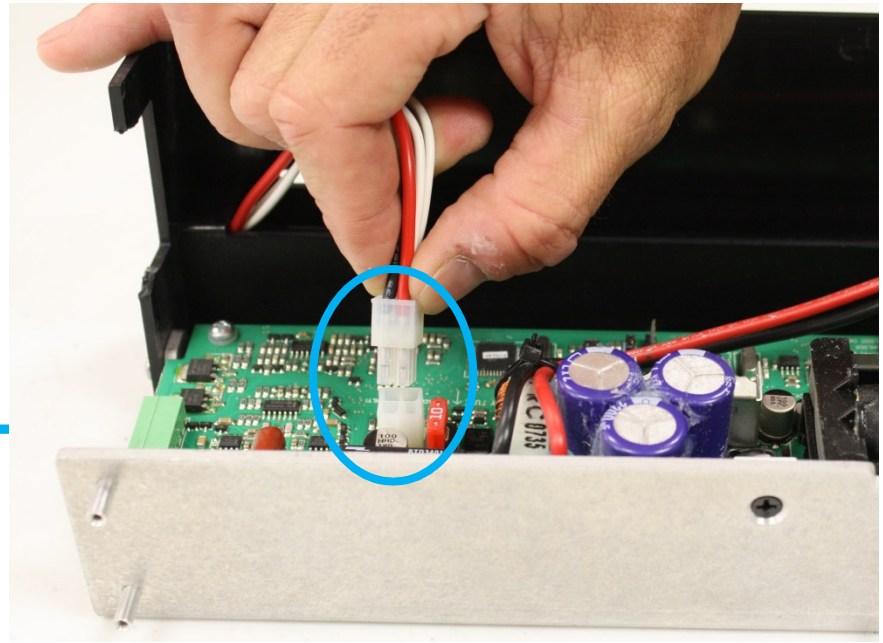
- Electrical Installation Begins:
  - To avoid confusion and to prevent damaging system components, all wires must be labeled with a black marker.
  - For ease of installation and to avoid damaging connectors, wires should be run first and then the connectors should be applied. (Connector Application Instructions Follow Wiring Steps.)
  - **Do not connect motor or control panel to power before instructed.**

AUTOMATION SYSTEM INSTALLATION

Connect the Battery

- Begin with nothing connected, unit open and OFF (“O” pressed in).
- Connect the battery (red and black wire). Close controller cover.





AUTOMATION SYSTEM INSTALLATION

Initial Programming: 123 Set Up

1. Make sure the controller is turned **OFF**

2. Connect the 10pin cable assembly from the controller to the motor **AND** the AC power cord

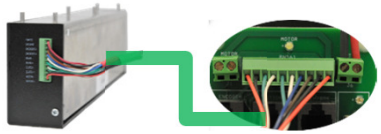
3. Connect the 900 MHz wireless receiver to the controller using the provided 26-8 flatwire
   - Install 2 x CR123 batteries in the back of the keypad.
   - Wireless components come pre-paired from the factory
   - **DO NOT install batteries in the 900MHz motion detector yet!**

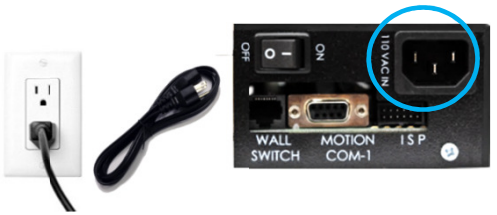
4. Position the lead panel approximately two feet(single) or 4 feet(bi-part) from the fully closed position.

1

"Turn OFF"

2





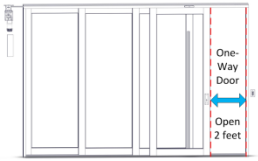
3

"900MHz Receiver"

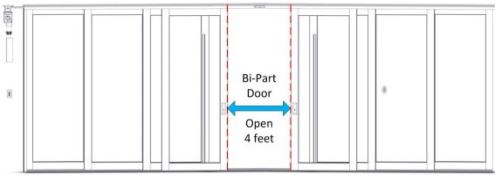
RJ45 Port

900 MHz Wireless Overhead Motion Detector REMOVE BATTERIES

4



One-Way…Open 2 feet



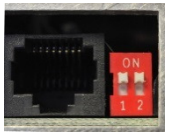
Bi-Part…Open 4 feet

AUTOMATION SYSTEM INSTALLATION

Initial Programming: 123 Set Up

5. Set DIP switch #1 & #2 to the **ON** position – Located on the side of the DREAMVIEW™ Automation Panel.

5

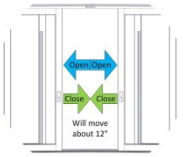


Both UP

6. Power on the DreamView™ controller. The controller LED's will flash the program number,
1x Red, **2x** Yellow then **3x** Green.
Then the panel will either move 6-12 inches towards the **Open** or **Closed** position.

6

One-Way moves 6 inches



Bi-Part moves 12 inches

7. Wait **5 seconds** then press the keypad's the **Open** OR **Close** button depending the direction the door moved in step 6.
The Green LED will illuminate.

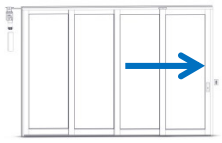
7

Wait 5 Seconds

Open OR Close
Stop
Unlock

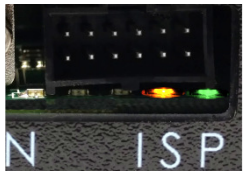
8. Slide the lead panel to the fully closed position and press the **CLOSE** button on the wall switch.
The Yellow & Green LED's will illuminate.

8



Fully CLOSE door(s)

Close

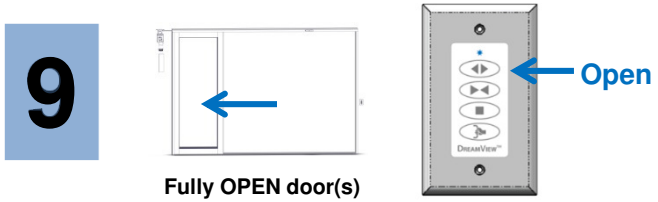


AUTOMATION SYSTEM INSTALLATION

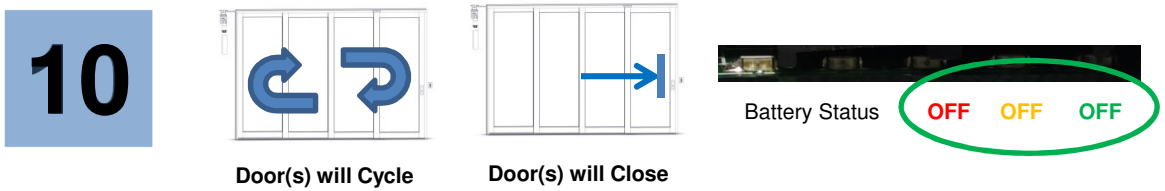
Initial Programming: 123 Set Up

For OPTIONAL manual Run & Crawl speed adjustments skip to step 9opt on NEXT page

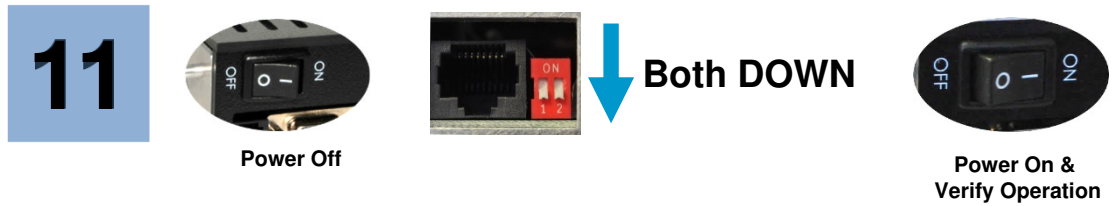
9. Slide all of the panels to the fully open position and press the OPEN button on the wall switch to continue with simple programming.



10. The door(s) will cycle a few times and then fully close. All of the LEDs should be OFF and the door is programmed.



11. Power OFF the DreamView™ controller. Set DIP switch #1 & #2 to the **OFF** position.
Power ON the controller and **VERIFY** operation.



12. Install 2 x CR123 batteries in the wireless motion detector.

The 123 Simple Setup Programming is complete.

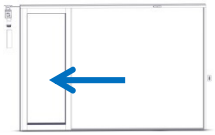
The Wireless Overhead Motion Detector will beep when the batteries need to be replaced.

AUTOMATION SYSTEM INSTALLATION

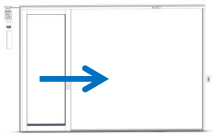
Optional Manual Run/Crawl Speed Adjustments

9. Slide all of the panels to the fully open position and press the **STOP** button on the wall switch.
   The doors will start to close…

9opt



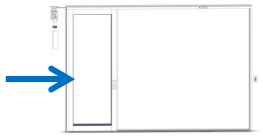
Fully Open door(s)



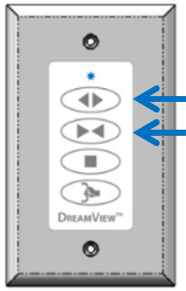
Doors start to close

Run Speed Adjust:
Press **OPEN** to increase the speed or **CLOSE** to decrease the speed.
Adjustment is possible until about 1 foot of fully closed.

Run



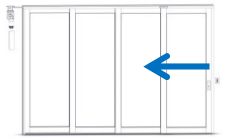
As the doors closes…



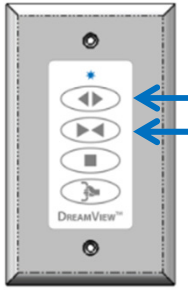
After full closure, the door will start to open…

Crawl Speed Adjust:
Press **OPEN** to increase the speed.
Press **CLOSE** to decrease the speed.
Adjustment possible until about 1 foot of fully open.

Crawl



As the doors opens…



Return to Step 10 on the previous page…

SAFETY COMPONENT TESTING

The motion detector provides a measure of safety when the door is closing and must be tested prior to customer delivery.

Testing

1. With the DreamView™ controller powered up and the door closed, press the “Open” button on a keypad or remote.
2. While the door is opening, press “Stop”, then “Close”
3. During the close operation, cause some detectable “motion” within the sensor range.
4. The door should stop immediately, open a short distance and stop again.
5. After a few moments the door can then be re-commanded to close if motion is NOT detected
6. If this does not occur, verify fresh batteries are installed in the motion detector and that it is paired with the wireless receiver. Correct any issues found and retest.

CARE & TROUBLESHOOTING

Care During Construction:

- **Motors and Electrical Components MUST be protected after installation, before the home is finished being built**. It is recommended to cover the components after installation before the construction is complete.
- **Avoid Duct Tape-** Chemicals in the adhesives can remove finishes. 3M Blue Painter's tape is recommended.
- **Avoid rolling heavy objects over the track**. This can cause damage.
- To prevent clogging or damage to guide bearings**, tracks should be protected from construction debris** at all times.
- Do not leave door system open and exposed in wet weather conditions.

Maintenance:

The Doors In Motion automation system requires little or no maintenance; however, the best protection for the automation system is to keep the door in good working order by following the door manufacturer's recommended maintenance.

CARE & TROUBLESHOOTING

Troubleshooting:

- **Door stops short of fully closed OR won't Open/Close:** Reset the system.
  1. Manually close doors
  2. **WAIT 10 SECONDS**
  3. Press **CLOSE** on the keypad.

- **900MHz keypad works, but 900Mhz Motion Detector does not.** The 900Mhz receiver is plugged into the keypad port. Plug the receiver into the 900MHz port instead near the DIP switches.

- **Belt is sagging while the door is closing:** Detach belt from the lead door and tighten the belt using the turn buckle.

- **LED flashing on 900MHz wireless keypad or beeping from wireless motion detector:** Replace the CR123 batteries in the device.

- **900MHz remote does not work.** Charge the remote with the included micro USB cable. Same as an “Android” USB cable.